



Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 08:08 am GMT

PDB ID : 6GZZ
EMDB ID : EMD-0105
Title : T. thermophilus hibernating 100S ribosome (amc)
Authors : Flygaard, R.K.; Jenner, L.B.
Deposited on : 2018-07-05
Resolution : 4.13 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

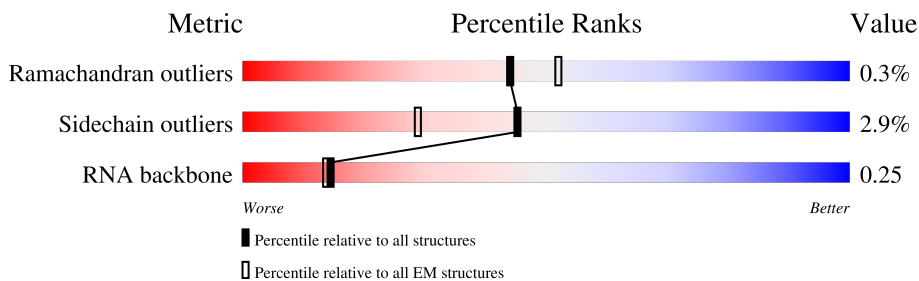
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.13 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	C1	272	
1	C2	272	
2	D1	205	
2	D2	205	
3	E1	208	
3	E2	208	
4	F1	181	
4	F2	181	

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Mol	Chain	Length	Quality of chain
5	G1	170	36% 92% 7% .
5	G2	170	39% 95% 5% .
6	H1	50	36% 94% 6%
6	H2	50	36% 94% 6%
7	I1	138	9% 96% .
7	I2	138	12% 98% .
8	J1	122	34% 95% 5%
8	J2	122	34% 96% .
9	K1	150	39% 92% 7% .
9	K2	150	40% 96% .
10	L1	141	21% 95% ..
10	L2	141	22% 94% 5% ..
11	M1	117	19% 94% 6%
11	M2	117	21% 97% .
12	N1	111	14% 95% 5% .
12	N2	111	13% 96% .
13	O1	137	24% 93% 7%
13	O2	137	20% 94% 6%
14	P1	117	9% 94% 6%
14	P2	117	8% 95% 5%
15	Q1	101	29% 99% .
15	Q2	101	27% 98% .
16	R1	113	12% 97% .
16	R2	113	16% 96% .
17	S1	92	23% 97% .



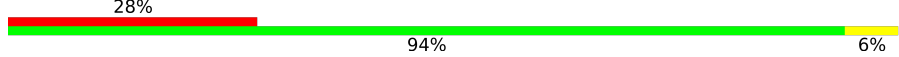
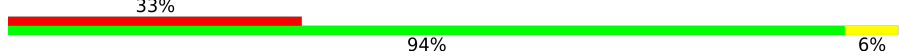
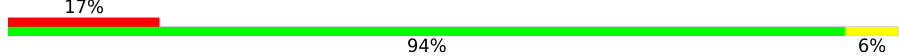
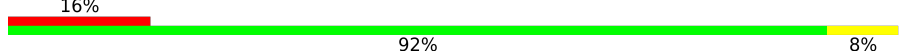
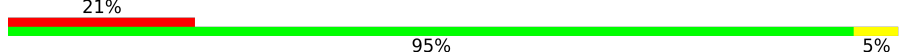
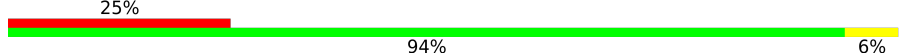
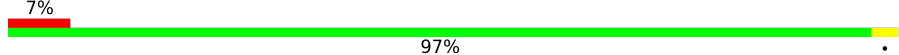
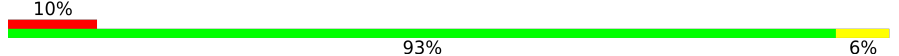
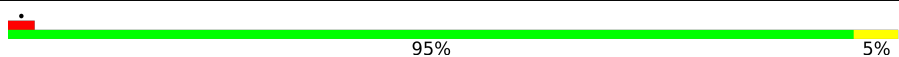
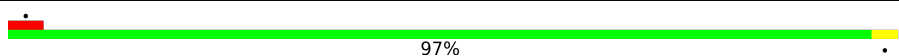
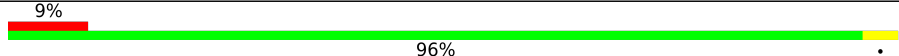
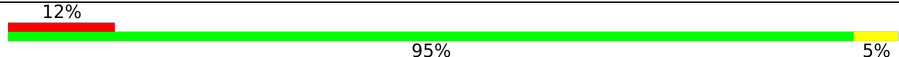
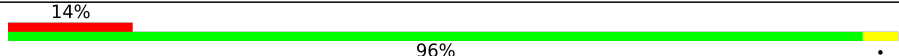
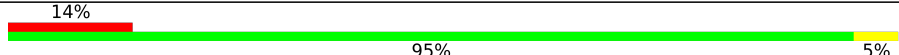
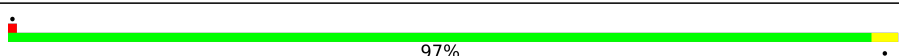
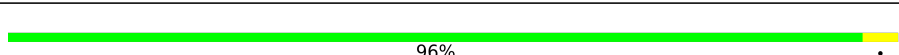
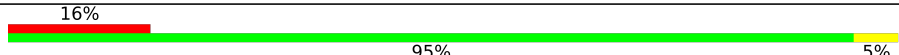
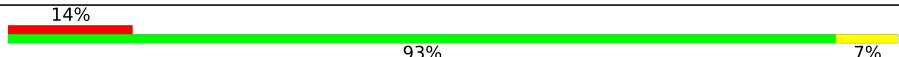
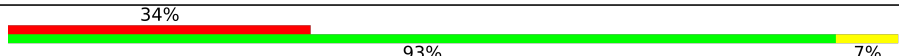
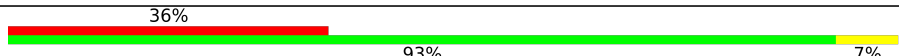
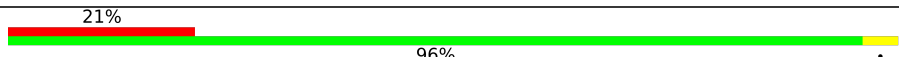
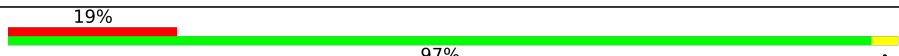
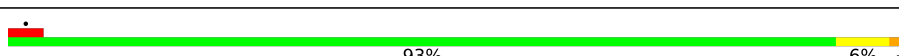
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Mol	Chain	Length	Quality of chain
17	S2	92	24% 97%
18	T1	102	15% 92% 8%
18	T2	102	16% 96%
19	U1	179	42% 99%
19	U2	179	42% 97%
20	V1	77	10% 96%
20	V2	77	10% 97%
21	W1	97	34% 94% 6%
21	W2	97	35% 96%
22	X1	69	22% 97%
22	X2	69	29% 96%
23	Y1	59	12% 100%
23	Y2	59	10% 93% 7%
24	Z1	63	84% 84% 11% 5%
24	Z2	63	79% 86% 14%
25	a1	59	10% 95% 5%
25	a2	59	10% 97%
26	b1	45	18% 93% 7%
26	b2	45	13% 89% 9%
27	c1	49	12% 96%
27	c2	49	6% 94% 6%
28	d1	61	34% 93% 5%
28	d2	61	34% 95%
29	A1	2912	7% 32% 51% 17%
29	A2	2912	7% 33% 49% 18%

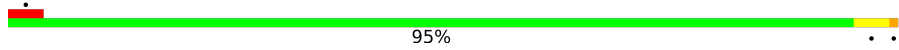
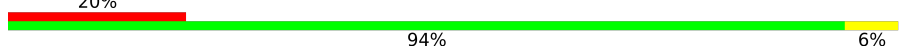
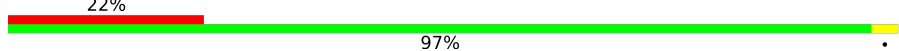
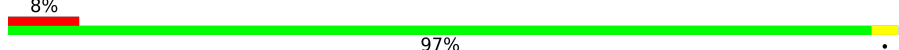

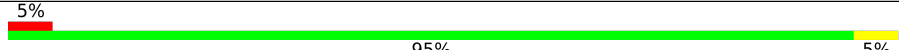
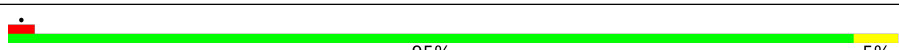
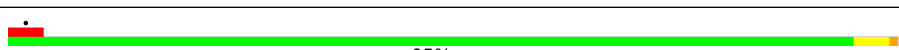
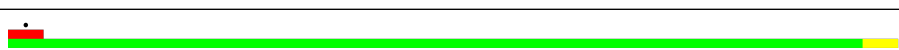
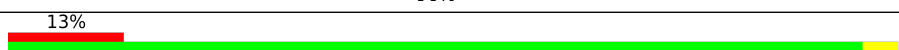
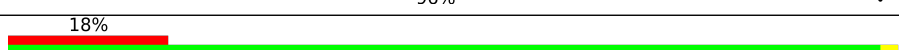
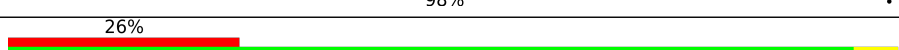
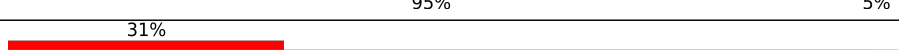
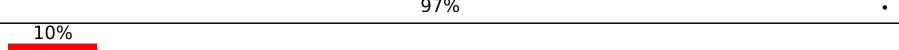
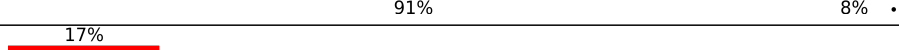
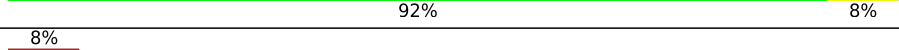
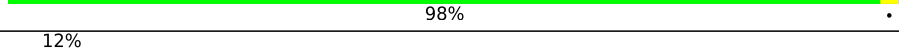
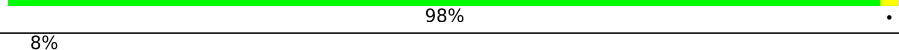
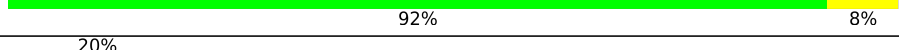
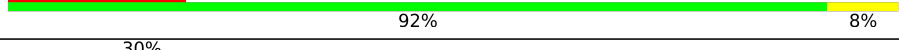

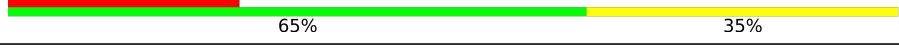
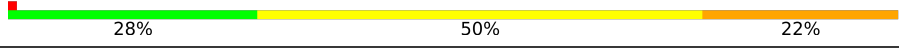
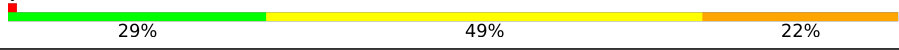

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Mol	Chain	Length	Quality of chain
30	B1	122	
30	B2	122	
31	e1	36	
31	e2	36	
32	B3	237	
32	B4	237	
33	C3	206	
33	C4	206	
34	D3	208	
34	D4	208	
35	E3	151	
35	E4	151	
36	F3	101	
36	F4	101	
37	G3	155	
37	G4	155	
38	H3	138	
38	H4	138	
39	I3	127	
39	I4	127	
40	J3	99	
40	J4	99	
41	K3	118	
41	K4	118	
42	L3	125	

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Mol	Chain	Length	Quality of chain
42	L4	125	 95%
43	M3	117	 20% 94% 6%
43	M4	117	 22% 97%
44	N3	60	 8% 97%
44	N4	60	 8% 92% 8%
45	O3	88	 5% 95% 5%
45	O4	88	 95% 5%
46	P3	84	 95%
46	P4	84	 96%
47	Q3	100	 13% 96%
47	Q4	100	 18% 98%
48	R3	62	 26% 95% 5%
48	R4	62	 31% 97%
49	S3	78	 10% 91% 8%
49	S4	78	 17% 92% 8%
50	T3	99	 8% 98%
50	T4	99	 12% 98%
51	U3	25	 8% 92% 8%
51	U4	25	 20% 92% 8%
52	W4	57	 30% 68% 28%
52	X3	57	 26% 65% 35%
53	A3	1506	 28% 50% 22%
53	A4	1506	 29% 49% 22%
54	V3	119	 10% 88% 11%
54	V4	119	 9% 91% 7%

2 Entry composition [i](#)

There are 54 unique types of molecules in this entry. The entry contains 289175 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	C1	272	Total	C	N	O	S	0	0
			2116	1335	420	358	3		
1	C2	272	Total	C	N	O	S	0	0
			2116	1335	420	358	3		

- Molecule 2 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	D1	205	Total	C	N	O	S	0	0
			1569	991	300	272	6		
2	D2	205	Total	C	N	O	S	0	0
			1569	991	300	272	6		

- Molecule 3 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	E1	208	Total	C	N	O	S	0	0
			1628	1037	304	284	3		
3	E2	208	Total	C	N	O	S	0	0
			1628	1037	304	284	3		

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	F1	181	Total	C	N	O	S	0	0
			1474	942	268	260	4		
4	F2	181	Total	C	N	O	S	0	0
			1474	942	268	260	4		

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G1	170	Total	C	N	O	S	0	0
			1308	829	245	233	1		
5	G2	170	Total	C	N	O	S	0	0
			1308	829	245	233	1		

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	H1	50	Total	C	N	O	S	0	0
			383	245	66	71	1		
6	H2	50	Total	C	N	O	S	0	0
			383	245	66	71	1		

- Molecule 7 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I1	138	Total	C	N	O	S	0	0
			1105	712	206	183	4		
7	I2	138	Total	C	N	O	S	0	0
			1105	712	206	183	4		

- Molecule 8 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J1	122	Total	C	N	O	S	0	0
			933	588	171	170	4		
8	J2	122	Total	C	N	O	S	0	0
			933	588	171	170	4		

- Molecule 9 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K1	150	Total	C	N	O	S	0	0
			1145	712	232	198	3		
9	K2	150	Total	C	N	O	S	0	0
			1145	712	232	198	3		

- Molecule 10 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L1	141	Total	C	N	O	S	0	0
			1122	715	212	188	7		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	L2	141	Total	C	N	O	S	0	0
			1122	715	212	188	7		

- Molecule 11 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				AltConf	Trace
11	M1	117	Total	C	N	O	0	0
			960	599	202	159		
11	M2	117	Total	C	N	O	0	0
			960	599	202	159		

- Molecule 12 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
12	N1	111	Total	C	N	O	0	0
			882	556	176	150		
12	N2	111	Total	C	N	O	0	0
			882	556	176	150		

- Molecule 13 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	O1	137	Total	C	N	O	S	0	0
			1142	710	234	197	1		
13	O2	137	Total	C	N	O	S	0	0
			1142	710	234	197	1		

- Molecule 14 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	P1	117	Total	C	N	O	S	0	0
			964	610	202	151	1		
14	P2	117	Total	C	N	O	S	0	0
			964	610	202	151	1		

- Molecule 15 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Q1	101	Total	C	N	O	S	0	0
			779	501	142	135	1		
15	Q2	101	Total	C	N	O	S	0	0
			779	501	142	135	1		

- Molecule 16 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	R1	113	Total	C	N	O	S	0	0
			900	566	177	155	2		
16	R2	113	Total	C	N	O	S	0	0
			900	566	177	155	2		

- Molecule 17 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	S1	92	Total	C	N	O	0	0
			726	471	131	124		
17	S2	92	Total	C	N	O	0	0
			726	471	131	124		

- Molecule 18 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	T1	102	Total	C	N	O	S	0	0
			786	505	150	126	5		
18	T2	102	Total	C	N	O	S	0	0
			786	505	150	126	5		

- Molecule 19 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	U1	179	Total	C	N	O	S	0	0
			1429	911	255	260	3		
19	U2	179	Total	C	N	O	S	0	0
			1429	911	255	260	3		

- Molecule 20 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	V1	77	Total	C	N	O	S	0	0
			613	379	129	104	1		
20	V2	77	Total	C	N	O	S	0	0
			613	379	129	104	1		

- Molecule 21 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	W1	97	Total	C	N	O	S	0	0
			763	481	150	131	1		
21	W2	97	Total	C	N	O	S	0	0
			763	481	150	131	1		

- Molecule 22 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	X1	69	Total	C	N	O	S	0	0
			581	358	118	104	1		
22	X2	69	Total	C	N	O	S	0	0
			581	358	118	104	1		

- Molecule 23 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	Y1	59	Total	C	N	O	0	0
			469	298	90	81		
23	Y2	59	Total	C	N	O	0	0
			469	298	90	81		

- Molecule 24 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Z1	63	Total	C	N	O	S	0	0
			516	326	93	92	5		
24	Z2	63	Total	C	N	O	S	0	0
			516	326	93	92	5		

- Molecule 25 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	a1	59	Total	C	N	O	S	0	0
			459	288	90	76	5		
25	a2	59	Total	C	N	O	S	0	0
			459	288	90	76	5		

- Molecule 26 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	b1	45	Total	C	N	O	S	0	0
			390	241	79	66	4		

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Mol	Chain	Residues	Atoms					AltConf	Trace
26	b2	45	Total	C	N	O	S	0	0
			390	241	79	66	4		

- Molecule 27 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	c1	49	Total	C	N	O	S	0	0
			430	263	108	57	2		
27	c2	49	Total	C	N	O	S	0	0
			430	263	108	57	2		

- Molecule 28 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	d1	61	Total	C	N	O	S	0	0
			489	312	99	76	2		
28	d2	61	Total	C	N	O	S	0	0
			489	312	99	76	2		

- Molecule 29 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	A1	2912	Total	C	N	O	P	0	0
			62707	27911	11722	20163	2911		
29	A2	2912	Total	C	N	O	P	0	0
			62707	27911	11722	20163	2911		

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A1	156	U	UNK	conflict	GB 55771382
A1	682	A	G	conflict	GB 55771382
A1	686	C	G	conflict	GB 55771382
A1	697	G	C	conflict	GB 55771382
A1	701	A	C	conflict	GB 55771382
A1	1106	U	G	conflict	GB 55771382
A1	1128	A	C	conflict	GB 55771382
A2	156	U	UNK	conflict	GB 55771382
A2	682	A	G	conflict	GB 55771382
A2	686	C	G	conflict	GB 55771382
A2	697	G	C	conflict	GB 55771382
A2	701	A	C	conflict	GB 55771382

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Chain	Residue	Modelled	Actual	Comment	Reference
A2	1106	U	G	conflict	GB 55771382
A2	1128	A	C	conflict	GB 55771382

- Molecule 30 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	B1	122	Total	C	N	O	P	0	0
			2617	1166	486	844	121		
30	B2	122	Total	C	N	O	P	0	0
			2617	1166	486	844	121		

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	e1	36	Total	C	N	O	S	0	0
			299	183	67	46	3		
31	e2	36	Total	C	N	O	S	0	0
			299	183	67	46	3		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	B3	237	Total	C	N	O	S	0	0
			1925	1228	344	348	5		
32	B4	237	Total	C	N	O	S	0	0
			1925	1228	344	348	5		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	C3	206	Total	C	N	O	S	0	0
			1613	1016	314	282	1		
33	C4	206	Total	C	N	O	S	0	0
			1613	1016	314	282	1		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	D3	208	Total	C	N	O	S	0	0
			1703	1066	339	291	7		
34	D4	208	Total	C	N	O	S	0	0
			1703	1066	339	291	7		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	E3	151	Total	C	N	O	S	0	0
			1156	729	218	205	4		
35	E4	151	Total	C	N	O	S	0	0
			1156	729	218	205	4		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	F3	101	Total	C	N	O	S	0	0
			843	531	155	154	3		
36	F4	101	Total	C	N	O	S	0	0
			843	531	155	154	3		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	G3	155	Total	C	N	O	S	0	0
			1257	781	252	218	6		
37	G4	155	Total	C	N	O	S	0	0
			1257	781	252	218	6		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	H3	138	Total	C	N	O	S	0	0
			1116	705	215	193	3		
38	H4	138	Total	C	N	O	S	0	0
			1116	705	215	193	3		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	I3	127	Total	C	N	O	0	0
			1010	639	197	174		
39	I4	127	Total	C	N	O	0	0
			1010	639	197	174		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	J3	99	Total	C	N	O	S	0	0
			802	504	157	140	1		
40	J4	99	Total	C	N	O	S	0	0
			802	504	157	140	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	K3	118	Total	C	N	O	S	0	0
			879	546	167	163	3		
41	K4	118	Total	C	N	O	S	0	0
			879	546	167	163	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	L3	125	Total	C	N	O	S	0	0
			976	614	196	165	1		
42	L4	125	Total	C	N	O	S	0	0
			976	614	196	165	1		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	M3	117	Total	C	N	O	S	0	0
			934	577	192	163	2		
43	M4	117	Total	C	N	O	S	0	0
			934	577	192	163	2		

- Molecule 44 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	N3	60	Total	C	N	O	S	0	0
			492	312	104	72	4		
44	N4	60	Total	C	N	O	S	0	0
			492	312	104	72	4		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	O3	88	Total	C	N	O	S	0	0
			734	459	147	126	2		

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Mol	Chain	Residues	Atoms					AltConf	Trace
45	O4	88	Total	C	N	O	S	0	0
			734	459	147	126	2		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	P3	84	Total	C	N	O	S	0	0
			706	446	140	119	1		
46	P4	84	Total	C	N	O	S	0	0
			706	446	140	119	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Q3	100	Total	C	N	O	S	0	0
			835	534	155	144	2		
47	Q4	100	Total	C	N	O	S	0	0
			835	534	155	144	2		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	R3	62	Total	C	N	O	0	0
			515	328	101	86		
48	R4	62	Total	C	N	O	0	0
			515	328	101	86		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S3	78	Total	C	N	O	S	0	0
			625	398	115	110	2		
49	S4	78	Total	C	N	O	S	0	0
			625	398	115	110	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	T3	99	Total	C	N	O	S	0	0
			763	470	162	129	2		
50	T4	99	Total	C	N	O	S	0	0
			763	470	162	129	2		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
51	U3	25	Total	C	N	O	0	0
			218	134	52	32		
51	U4	25	Total	C	N	O	0	0
			218	134	52	32		

- Molecule 52 is a protein called Ribosome hibernation promoting factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
52	X3	57	Total	C	N	O	S	0	0
			476	304	85	84	3		
52	W4	57	Total	C	N	O	S	0	0
			476	304	85	84	3		

- Molecule 53 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
53	A3	1506	Total	C	N	O	P	0	0
			32369	14408	5997	10459	1505		
53	A4	1506	Total	C	N	O	P	0	0
			32369	14408	5997	10459	1505		

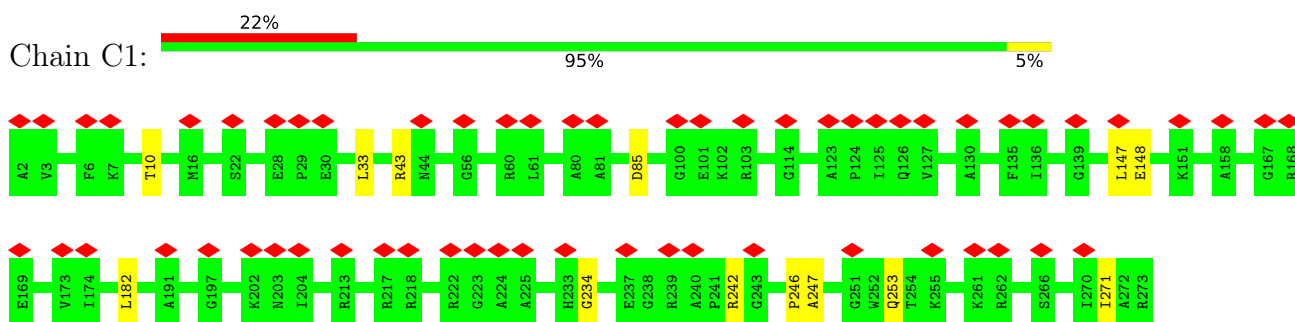
- Molecule 54 is a protein called Ribosome hibernation promoting factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
54	V3	119	Total	C	N	O	S	0	0
			963	603	179	180	1		
54	V4	117	Total	C	N	O	S	0	0
			950	594	177	178	1		

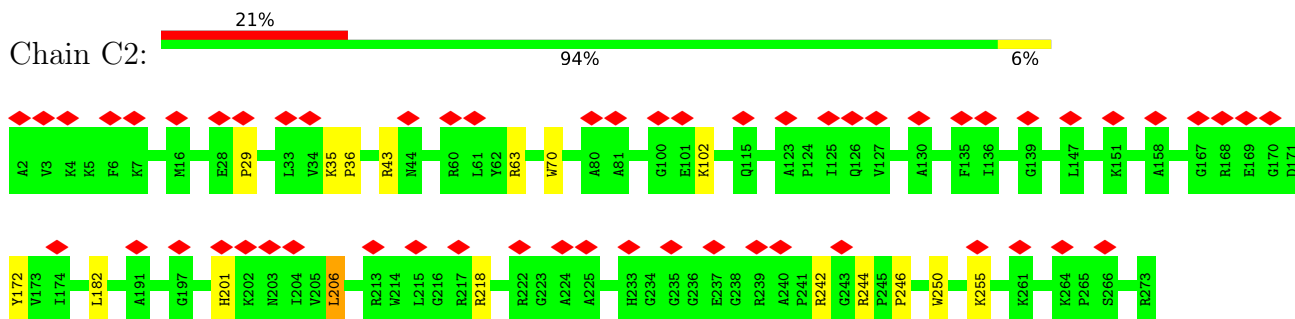
3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

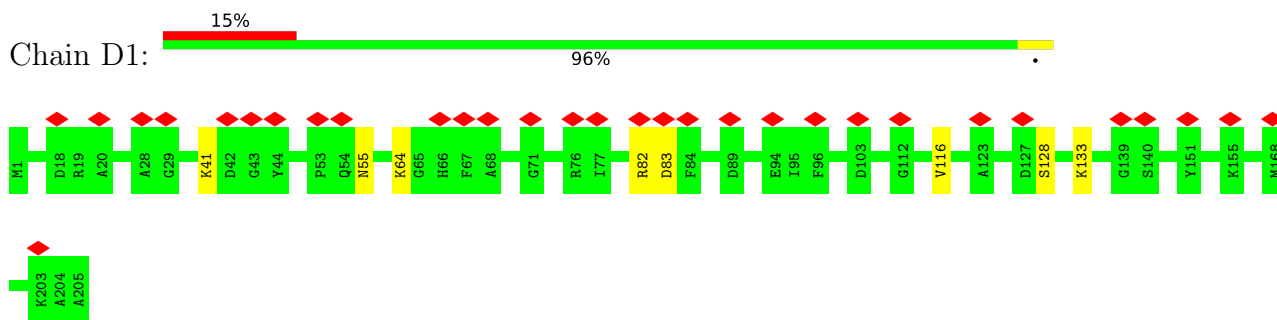
- Molecule 1: 50S ribosomal protein L2



- Molecule 1: 50S ribosomal protein L2

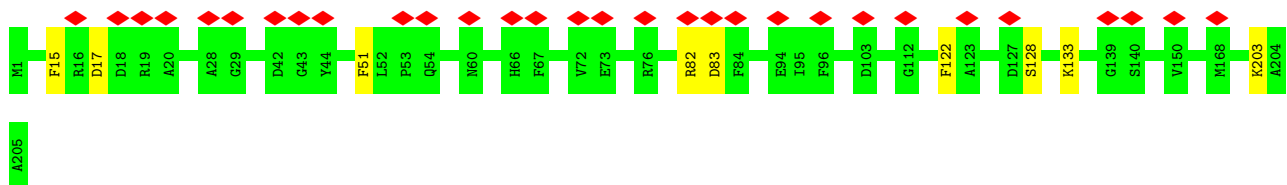


- Molecule 2: 50S ribosomal protein L3

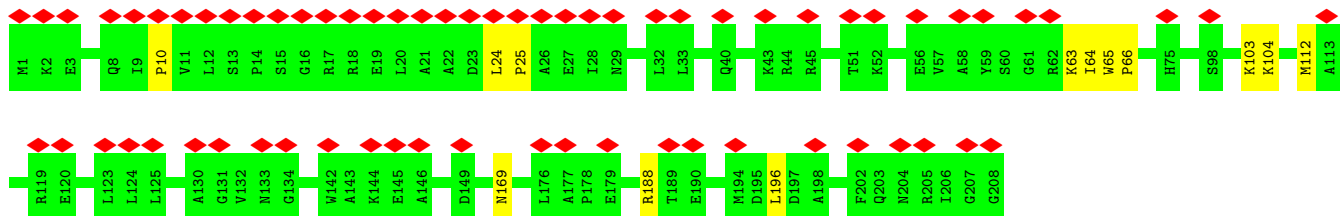


- Molecule 2: 50S ribosomal protein L3

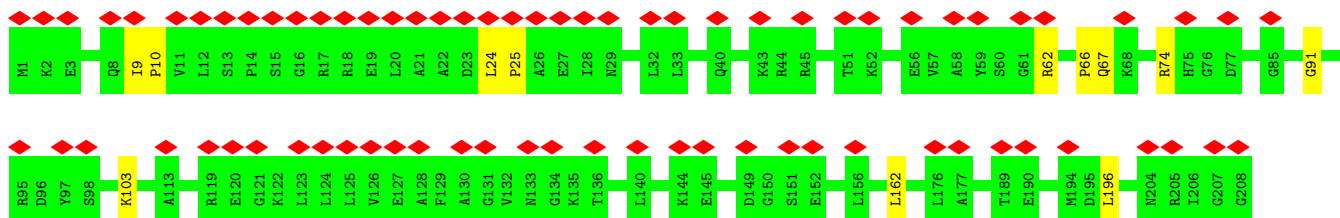




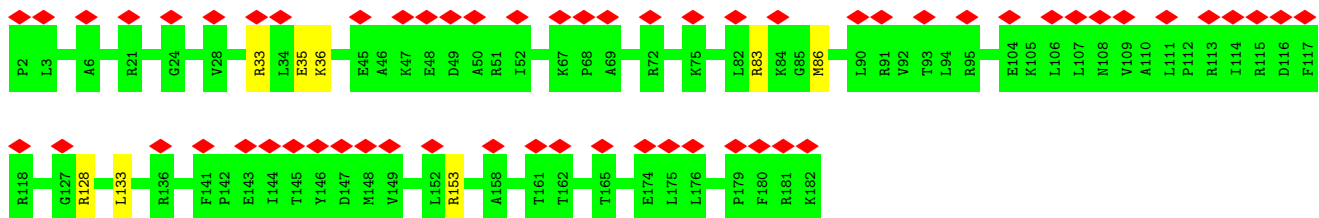
- Molecule 3: 50S ribosomal protein L4



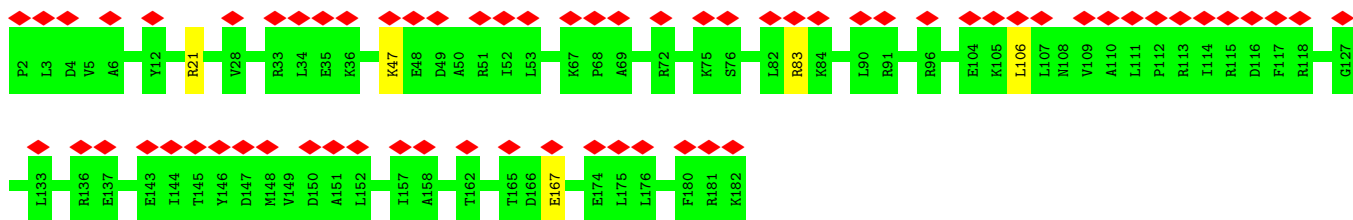
- Molecule 3: 50S ribosomal protein L4



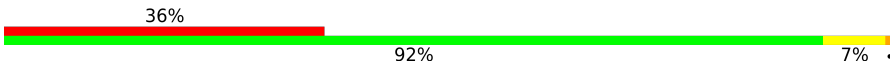
- Molecule 4: 50S ribosomal protein L5

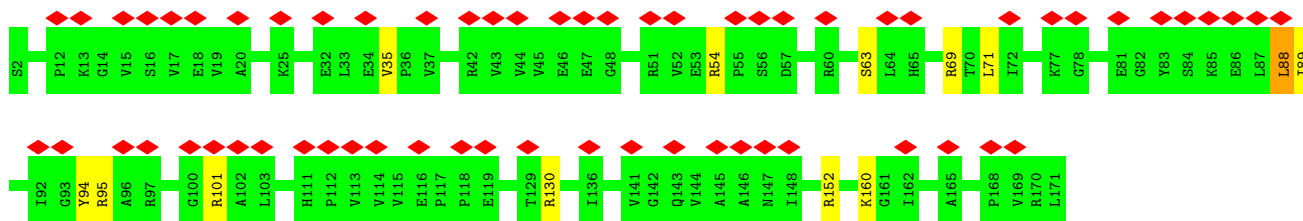


- Molecule 4: 50S ribosomal protein L5

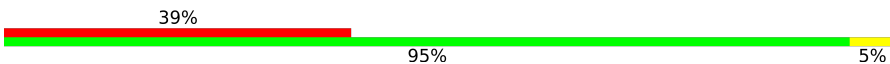


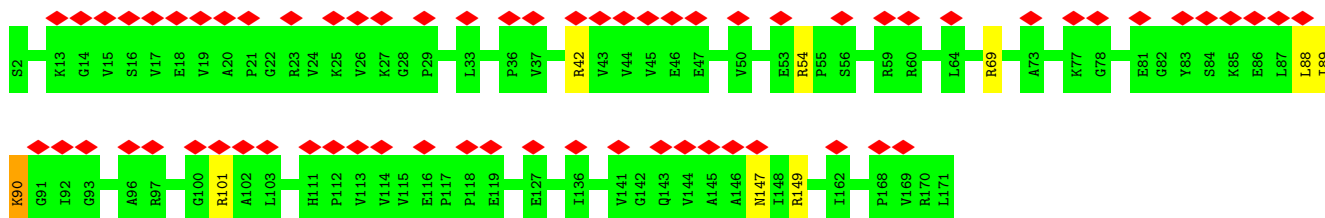
- Molecule 5: 50S ribosomal protein L6

Chain G1: 



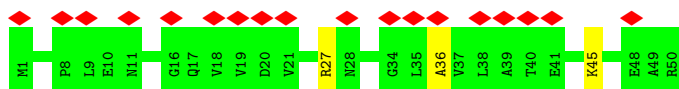
- Molecule 5: 50S ribosomal protein L6

Chain G2: 



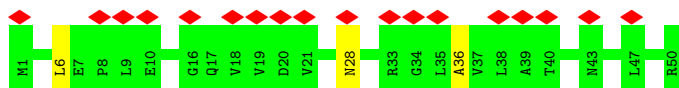
- Molecule 6: 50S ribosomal protein L9

Chain H1: 



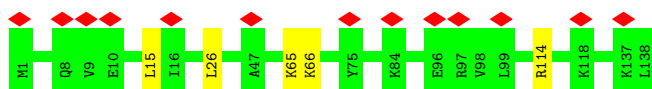
- Molecule 6: 50S ribosomal protein L9

Chain H2: 



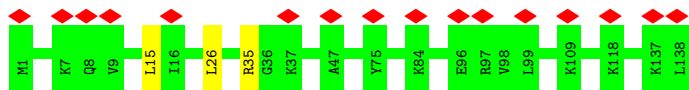
- Molecule 7: 50S ribosomal protein L13

Chain I1: 

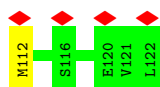
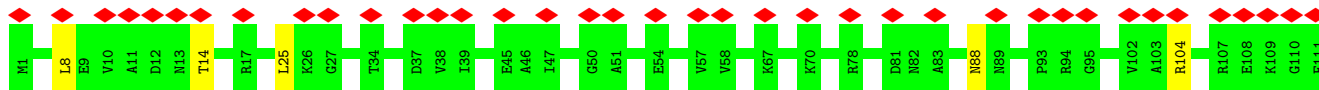


- Molecule 7: 50S ribosomal protein L13

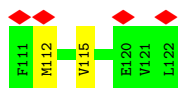
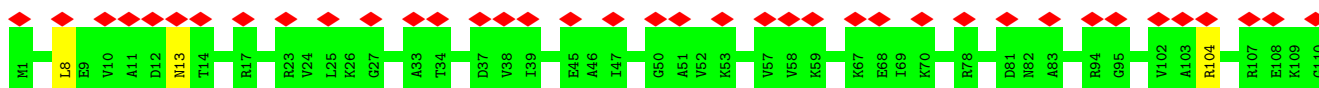
Chain I2: 



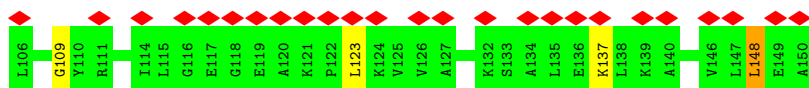
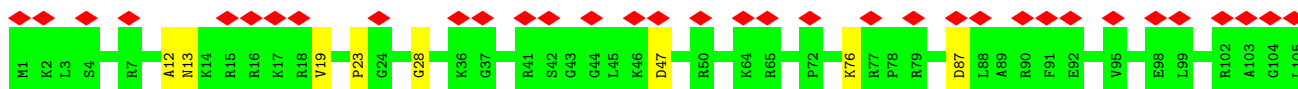
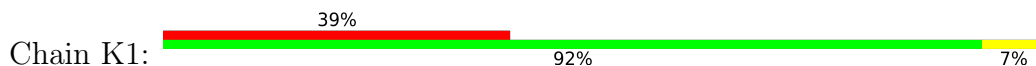
- Molecule 8: 50S ribosomal protein L14



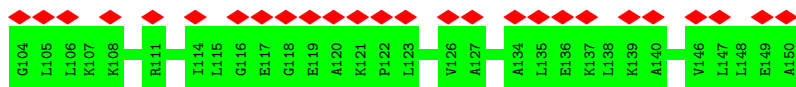
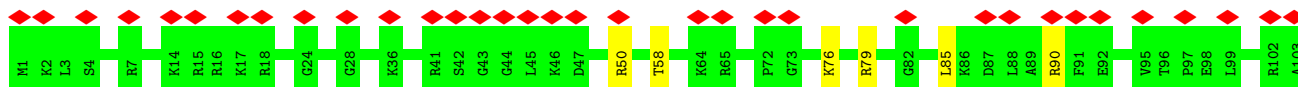
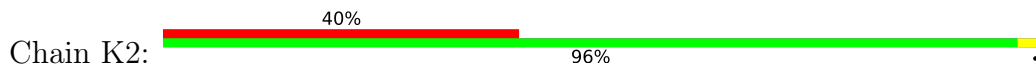
- Molecule 8: 50S ribosomal protein L14



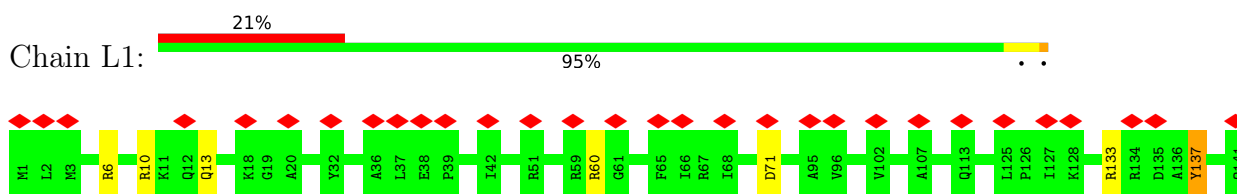
- Molecule 9: 50S ribosomal protein L15



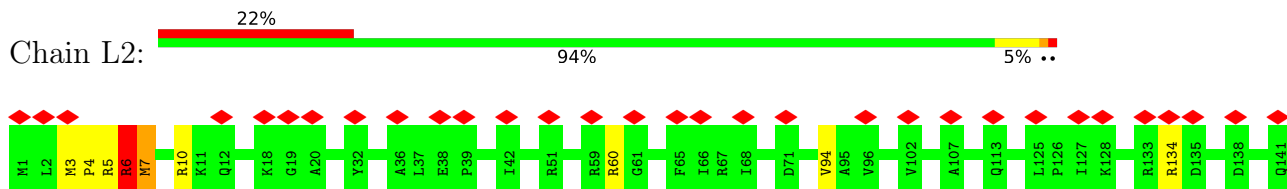
- Molecule 9: 50S ribosomal protein L15



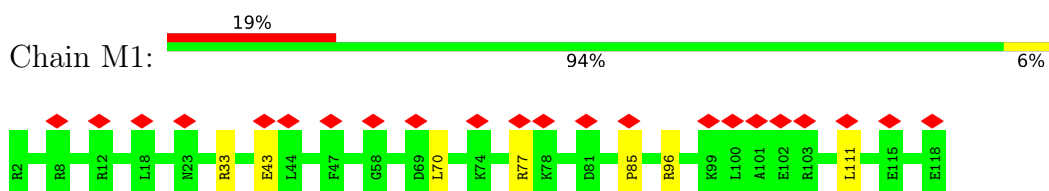
- Molecule 10: 50S ribosomal protein L16



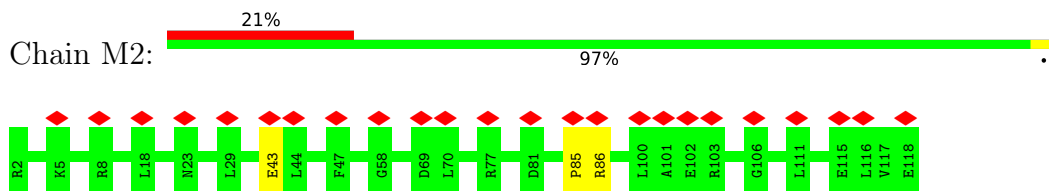
- Molecule 10: 50S ribosomal protein L16



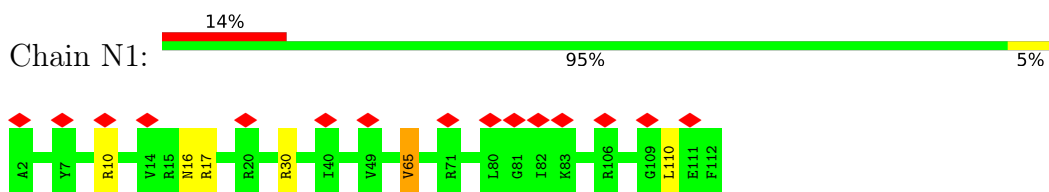
- Molecule 11: 50S ribosomal protein L17



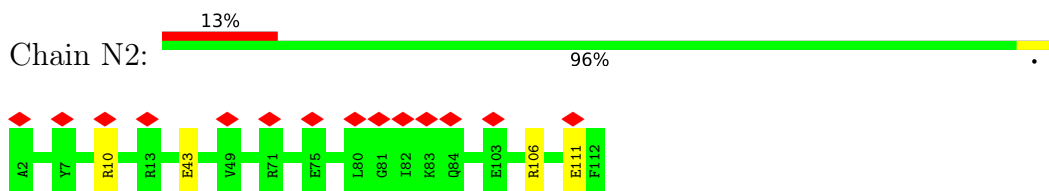
- Molecule 11: 50S ribosomal protein L17



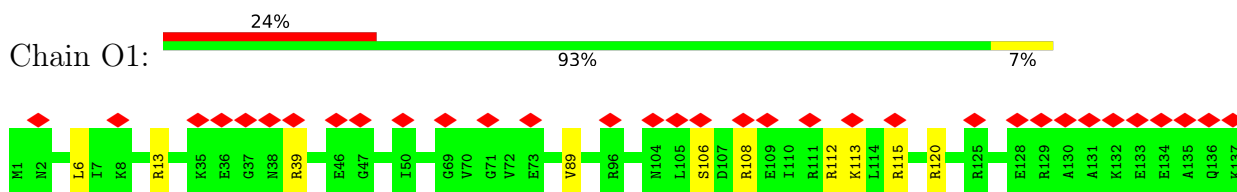
- Molecule 12: 50S ribosomal protein L18



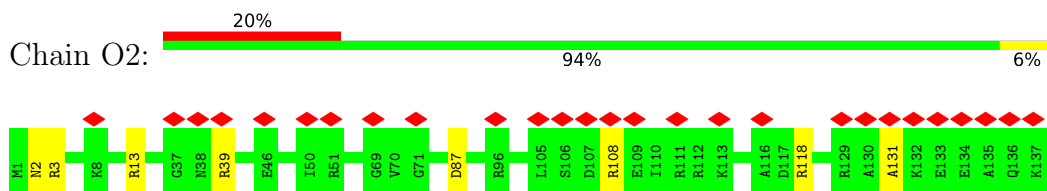
- Molecule 12: 50S ribosomal protein L18



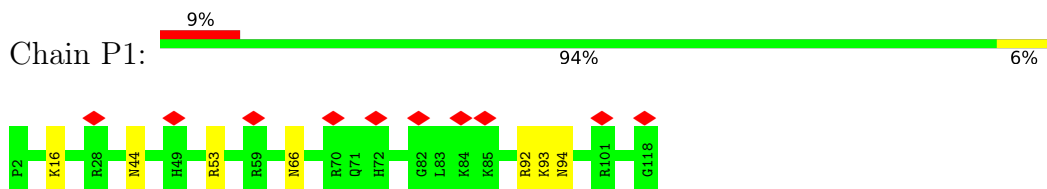
- Molecule 13: 50S ribosomal protein L19



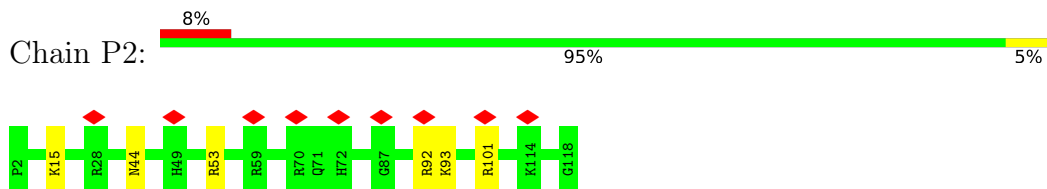
- Molecule 13: 50S ribosomal protein L19



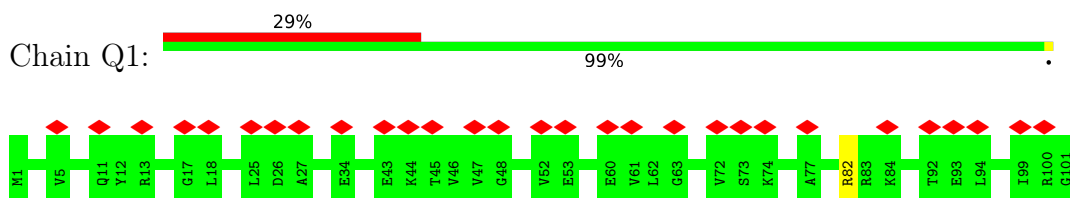
- Molecule 14: 50S ribosomal protein L20



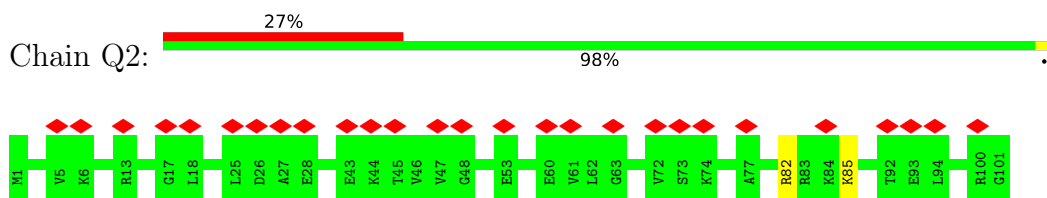
- Molecule 14: 50S ribosomal protein L20



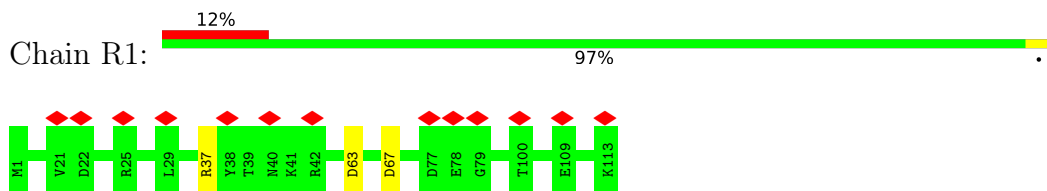
- Molecule 15: 50S ribosomal protein L21



- Molecule 15: 50S ribosomal protein L21

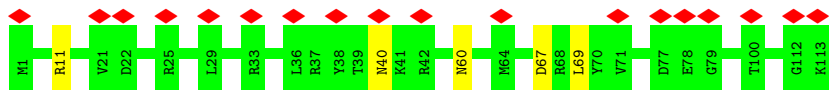


- Molecule 16: 50S ribosomal protein L22

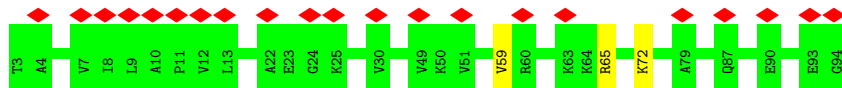


- Molecule 16: 50S ribosomal protein L22

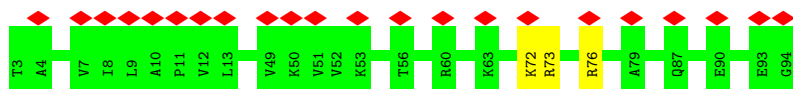




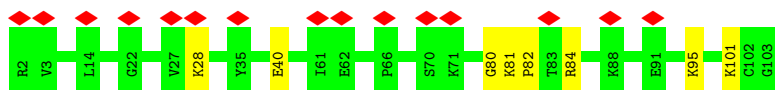
- Molecule 17: 50S ribosomal protein L23



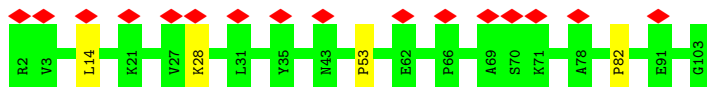
- Molecule 17: 50S ribosomal protein L23



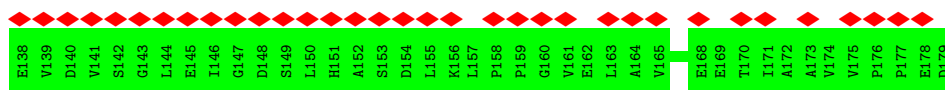
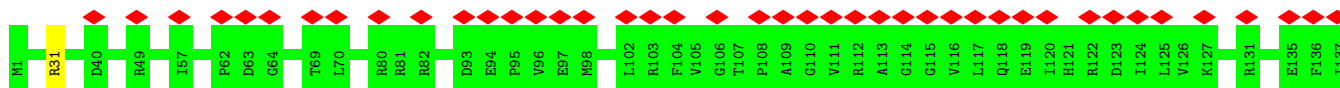
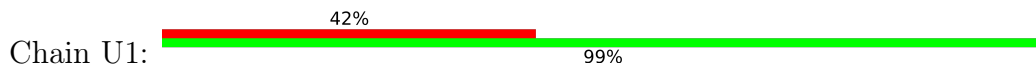
- Molecule 18: 50S ribosomal protein L24



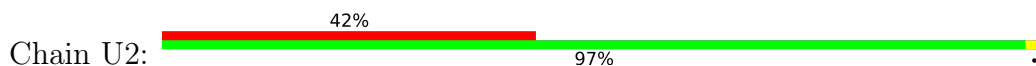
- Molecule 18: 50S ribosomal protein L24

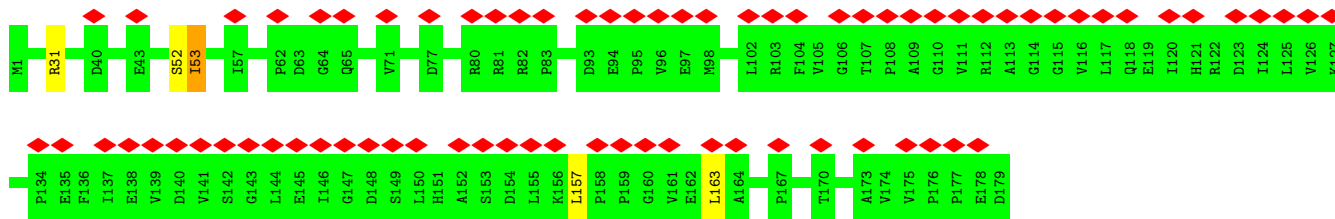


- Molecule 19: 50S ribosomal protein L25



- Molecule 19: 50S ribosomal protein L25

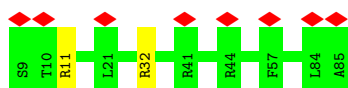




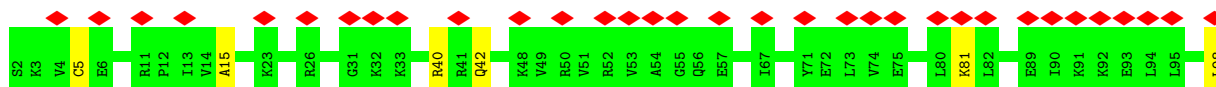
- Molecule 20: 50S ribosomal protein L27



- Molecule 20: 50S ribosomal protein L27



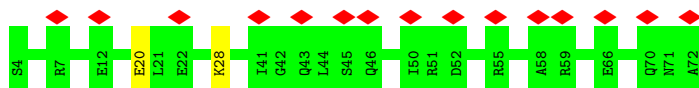
- Molecule 21: 50S ribosomal protein L28



- Molecule 21: 50S ribosomal protein L28

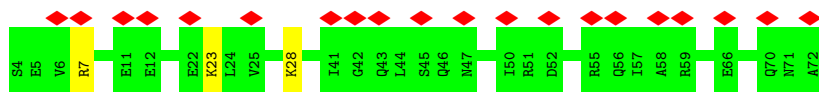


- Molecule 22: 50S ribosomal protein L29

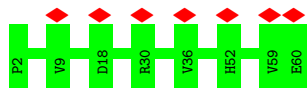


- Molecule 22: 50S ribosomal protein L29

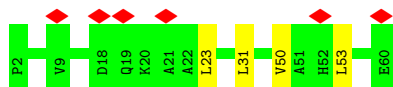




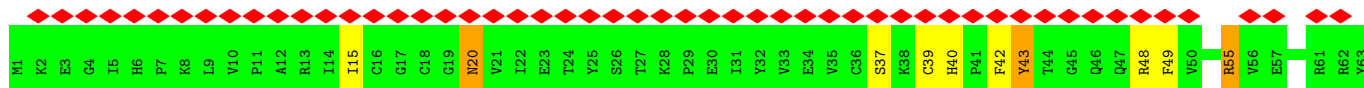
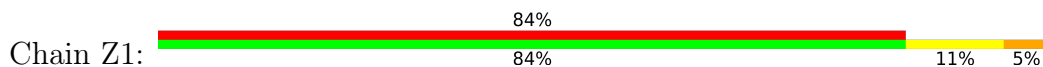
- Molecule 23: 50S ribosomal protein L30



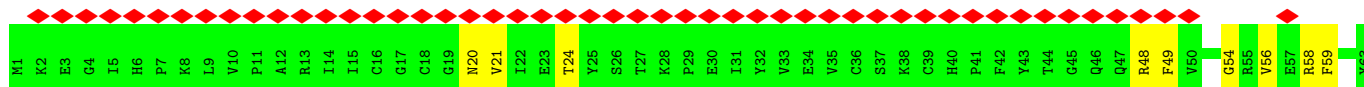
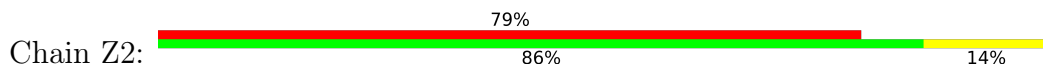
- Molecule 23: 50S ribosomal protein L30



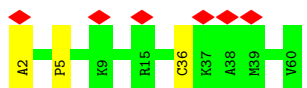
- Molecule 24: 50S ribosomal protein L31



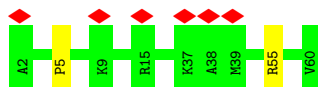
- Molecule 24: 50S ribosomal protein L31



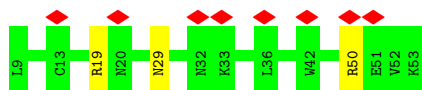
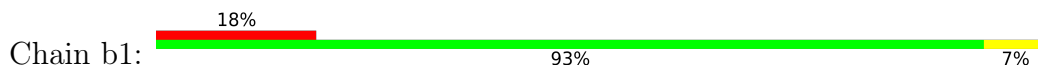
- Molecule 25: 50S ribosomal protein L32



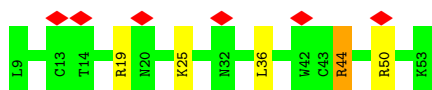
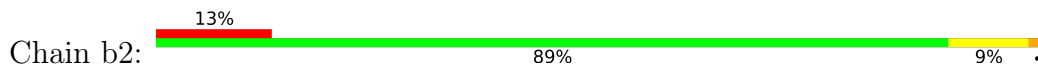
- Molecule 25: 50S ribosomal protein L32



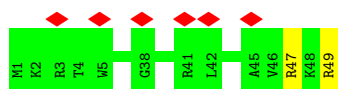
- Molecule 26: 50S ribosomal protein L33



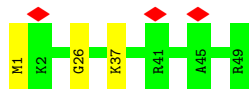
• Molecule 26: 50S ribosomal protein L33



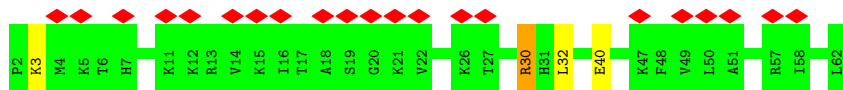
• Molecule 27: 50S ribosomal protein L34



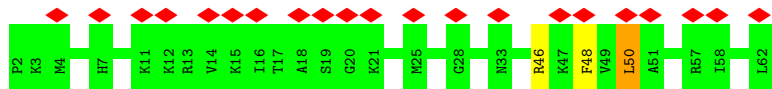
• Molecule 27: 50S ribosomal protein L34



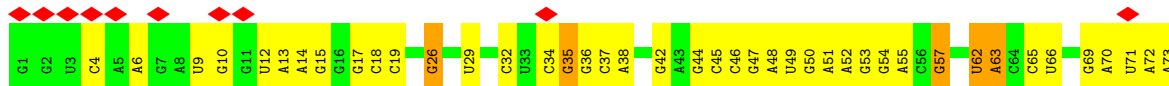
• Molecule 28: 50S ribosomal protein L35

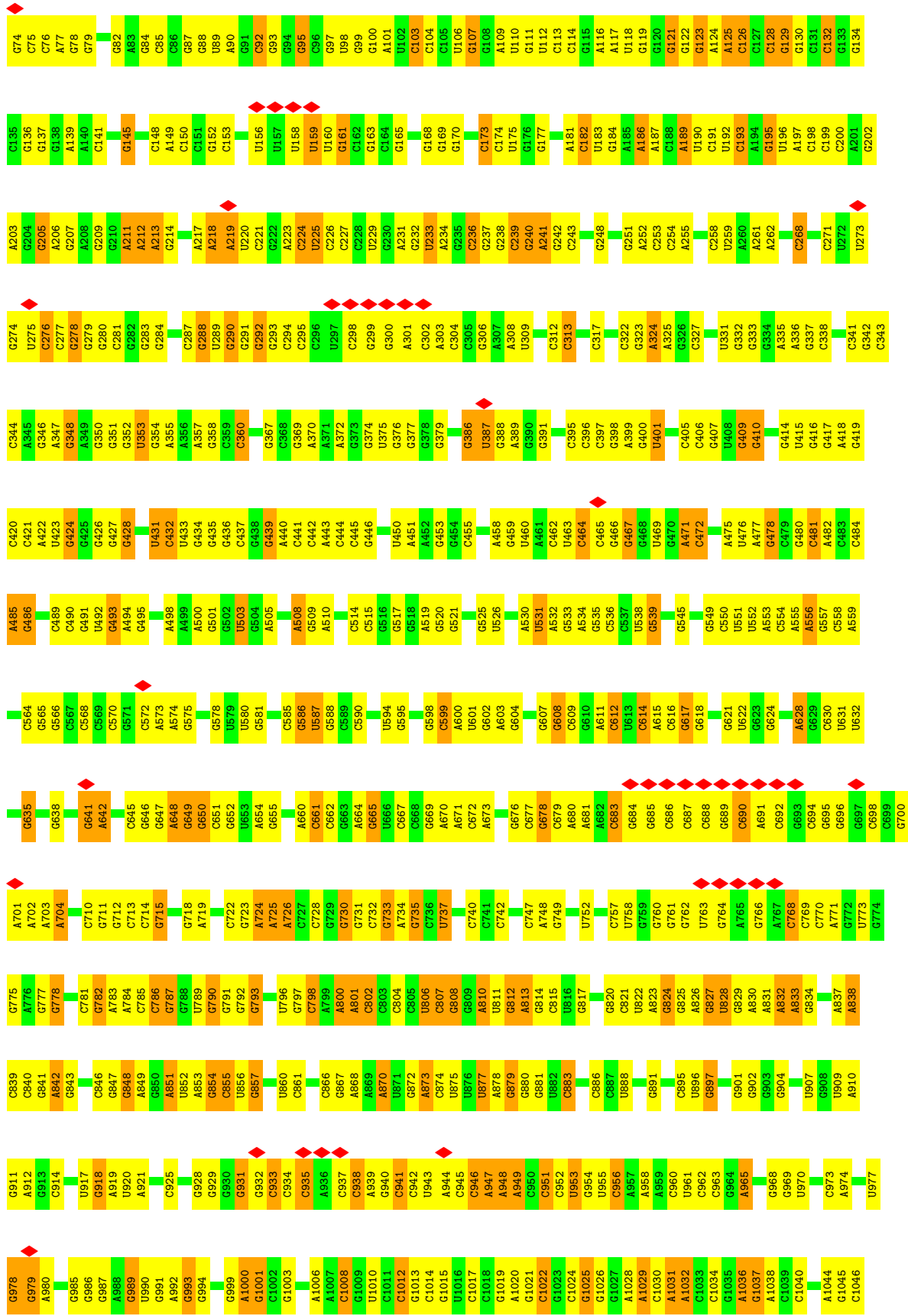


• Molecule 28: 50S ribosomal protein L35



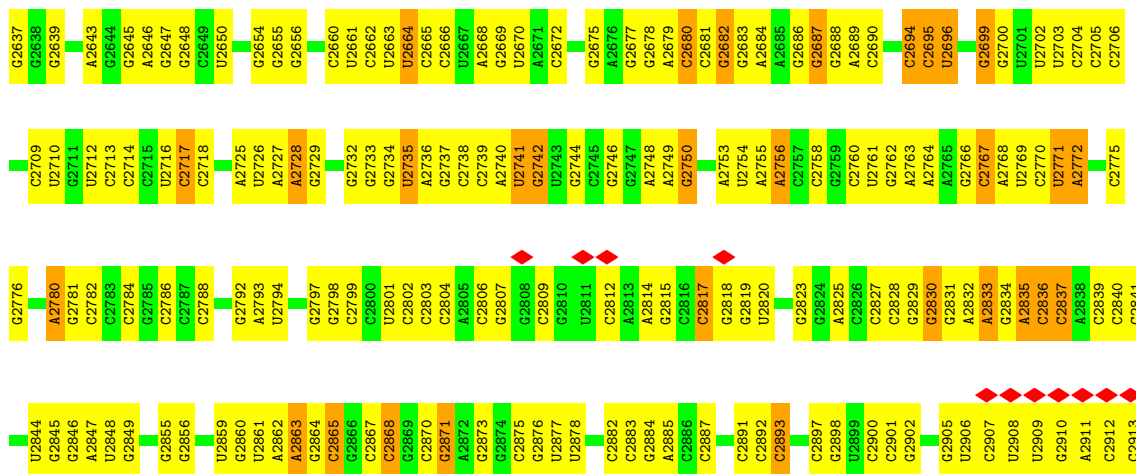
• Molecule 29: 23S ribosomal RNA



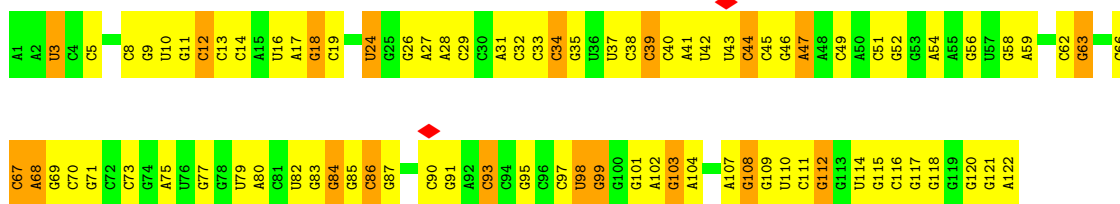


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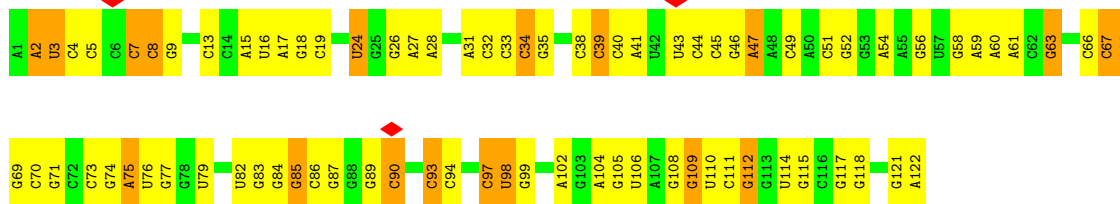
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C1905	C1906	G1907	G1908	G1909	G1910	G1911	G1912	G1913	C1914	C1915	C1916	C1917	C1918	C1919	C1920	G1921	U1922	U1923	U1924	A1925	C1926	G1927	G1928	C1929	C1930	U1931	G1932	C1933	U1934	U1935	A1936	A1937	C1938	U1939	A1940	A1941	A1942	A1943	C1944	G1945	G1946	U1947	C1948	C1949	U1950	A1951	A1952	G1953	U1954	U1955	A1956	G1957	C1958	G1959	A1960	A1961	A1962	G1963	G1964	G1965	G1966	G1967	G1968	G1969	U1970	C1971	G1972	G1973					
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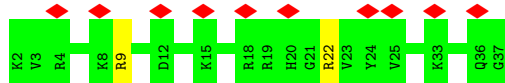
• Molecule 30: 5S ribosomal RNA



• Molecule 30: 5S ribosomal RNA

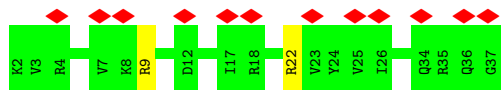


• Molecule 31: 50S ribosomal protein L36

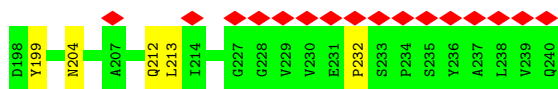
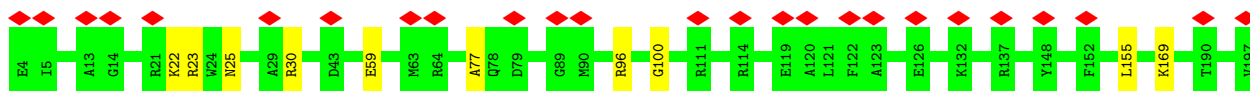


• Molecule 31: 50S ribosomal protein L36

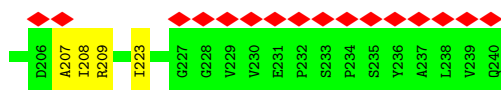
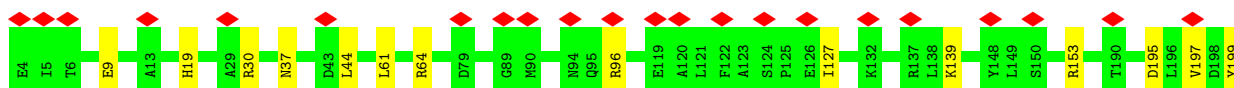
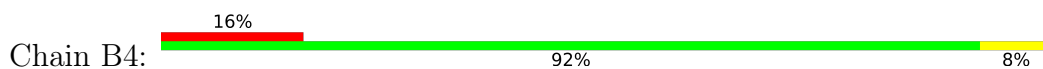




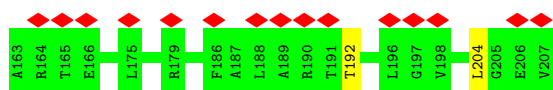
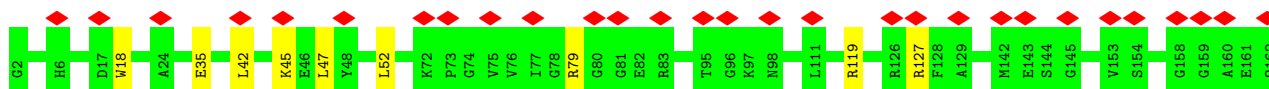
- Molecule 32: 30S ribosomal protein S2



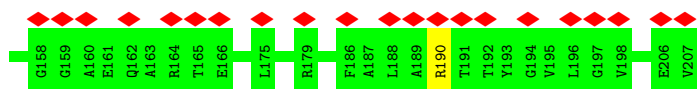
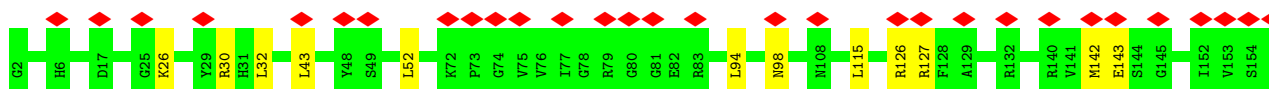
- Molecule 32: 30S ribosomal protein S2



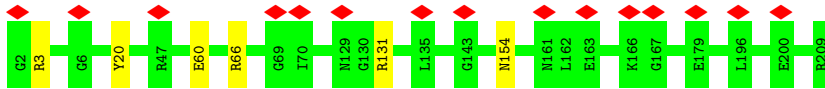
- Molecule 33: 30S ribosomal protein S3



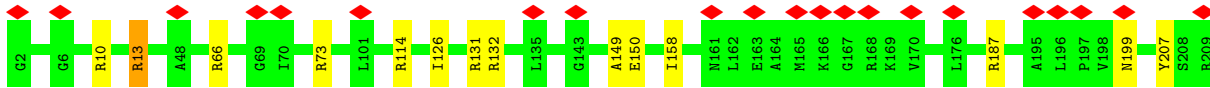
- Molecule 33: 30S ribosomal protein S3



- Molecule 34: 30S ribosomal protein S4



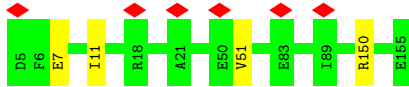
- Molecule 34: 30S ribosomal protein S4



- Molecule 35: 30S ribosomal protein S5



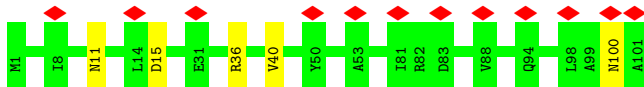
- Molecule 35: 30S ribosomal protein S5



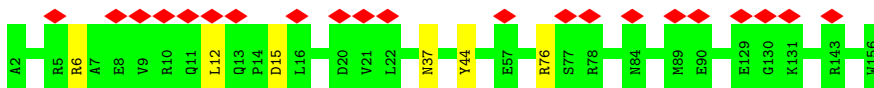
- Molecule 36: 30S ribosomal protein S6



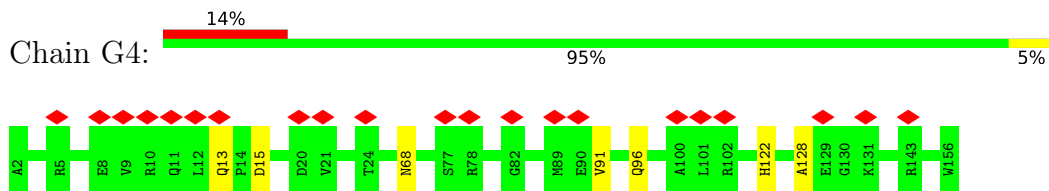
- Molecule 36: 30S ribosomal protein S6



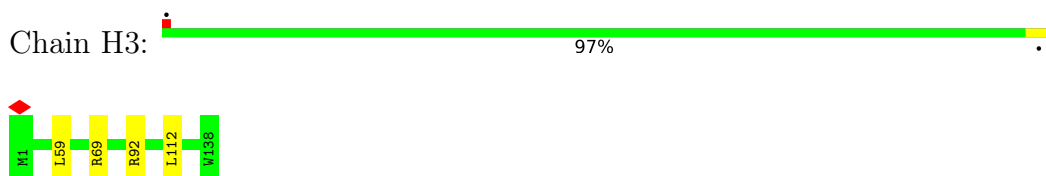
- Molecule 37: 30S ribosomal protein S7



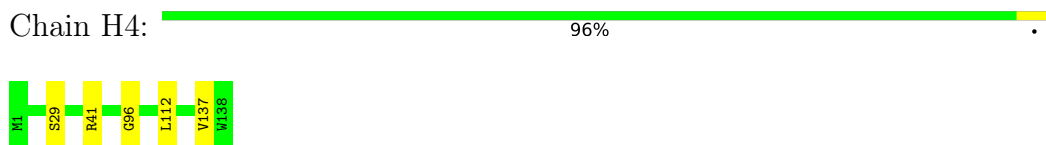
- Molecule 37: 30S ribosomal protein S7



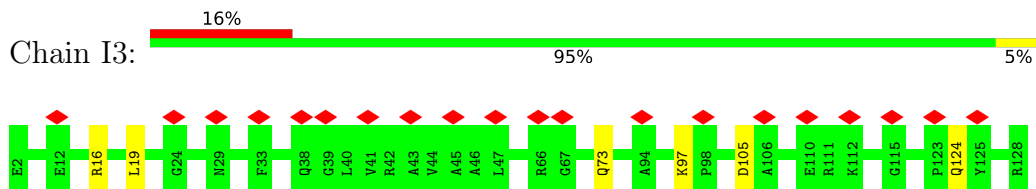
- Molecule 38: 30S ribosomal protein S8



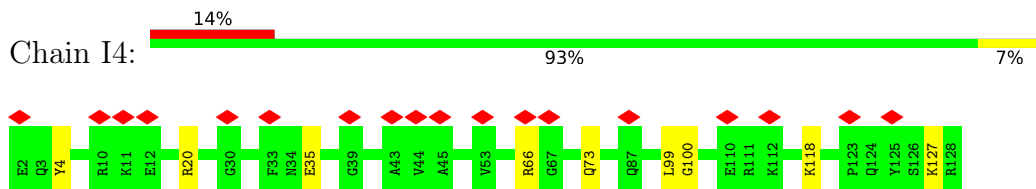
- Molecule 38: 30S ribosomal protein S8



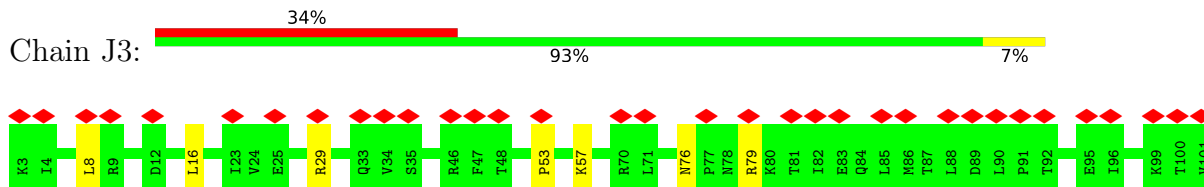
- Molecule 39: 30S ribosomal protein S9



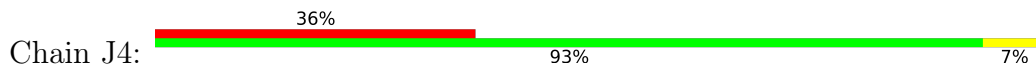
- Molecule 39: 30S ribosomal protein S9

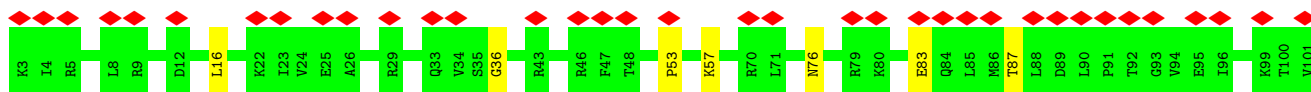


- Molecule 40: 30S ribosomal protein S10

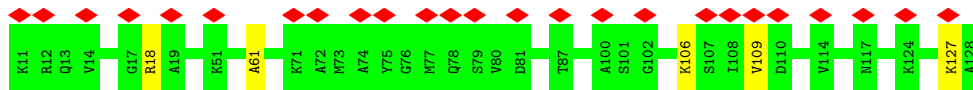


- Molecule 40: 30S ribosomal protein S10

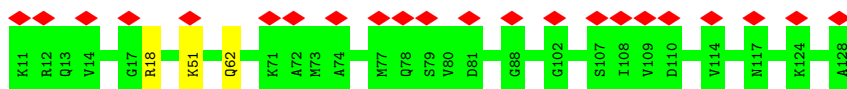




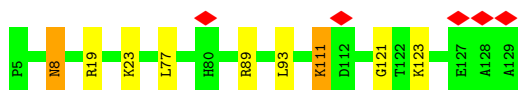
- Molecule 41: 30S ribosomal protein S11



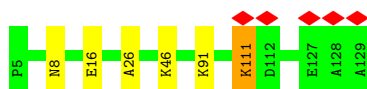
- Molecule 41: 30S ribosomal protein S11



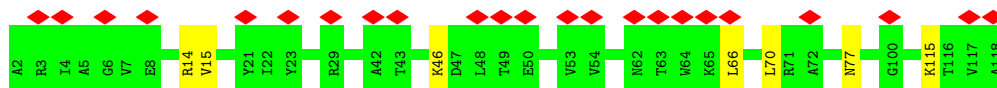
- Molecule 42: 30S ribosomal protein S12



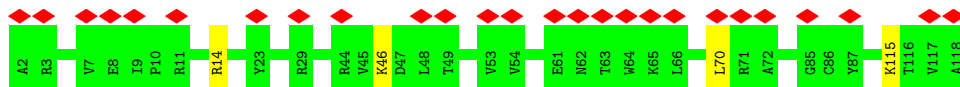
- Molecule 42: 30S ribosomal protein S12



- Molecule 43: 30S ribosomal protein S13



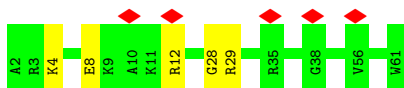
- Molecule 43: 30S ribosomal protein S13



- Molecule 44: 30S ribosomal protein S14 type Z



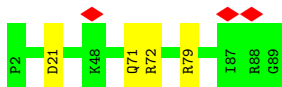
- Molecule 44: 30S ribosomal protein S14 type Z



- Molecule 45: 30S ribosomal protein S15



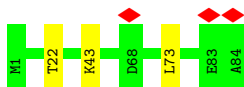
- Molecule 45: 30S ribosomal protein S15



- Molecule 46: 30S ribosomal protein S16



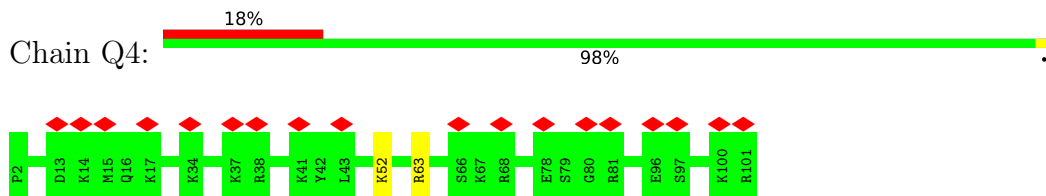
- Molecule 46: 30S ribosomal protein S16



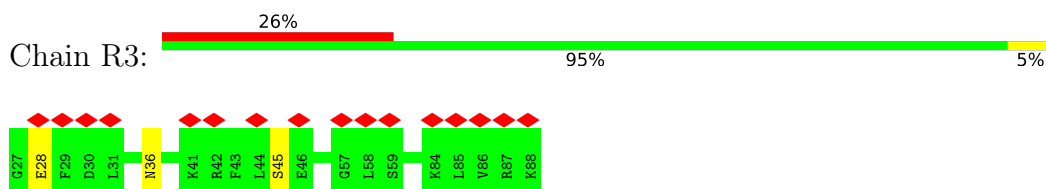
- Molecule 47: 30S ribosomal protein S17



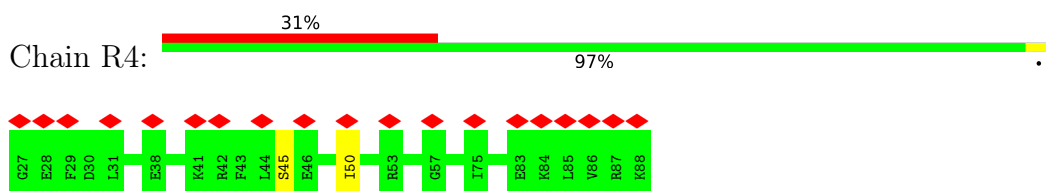
- Molecule 47: 30S ribosomal protein S17



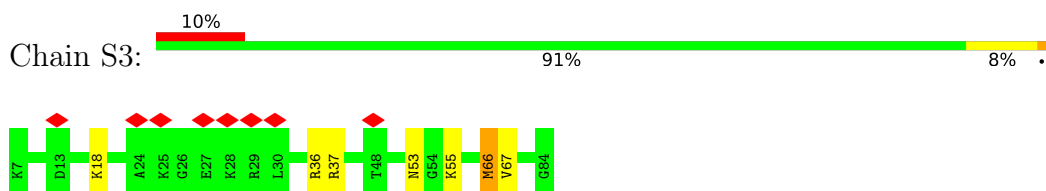
- Molecule 48: 30S ribosomal protein S18



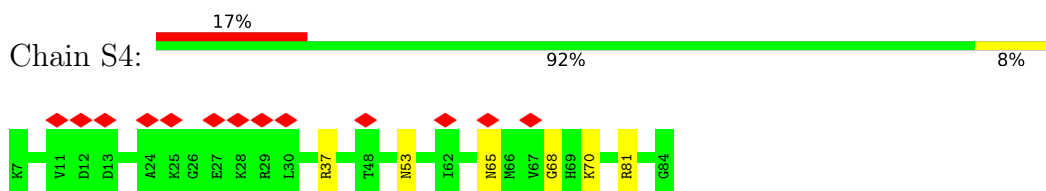
- Molecule 48: 30S ribosomal protein S18



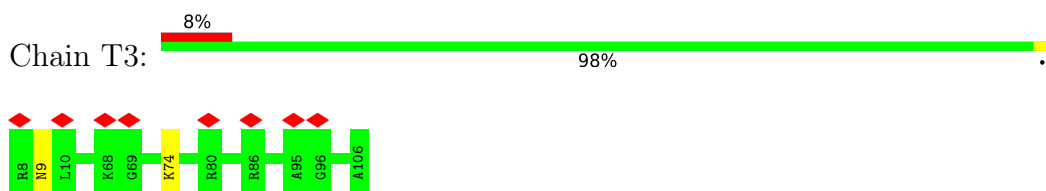
- Molecule 49: 30S ribosomal protein S19



- Molecule 49: 30S ribosomal protein S19

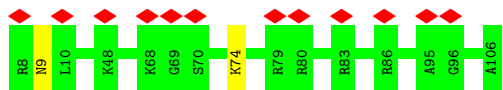


- Molecule 50: 30S ribosomal protein S20

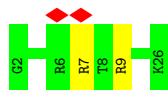
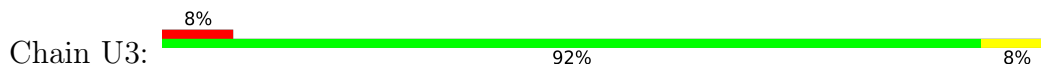


- Molecule 50: 30S ribosomal protein S20

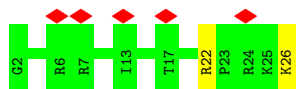
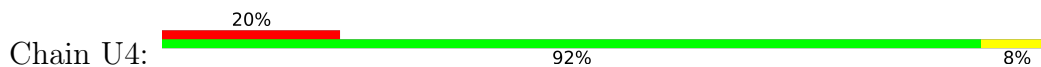




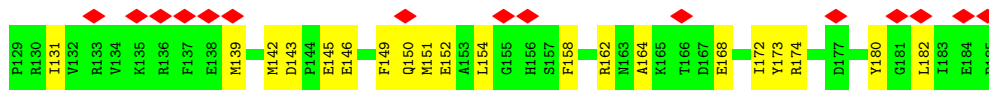
• Molecule 51: 30S ribosomal protein Thx



• Molecule 51: 30S ribosomal protein Thx



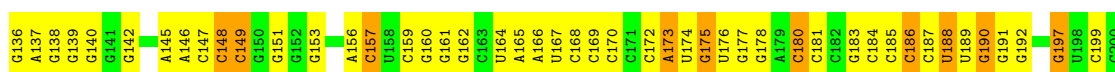
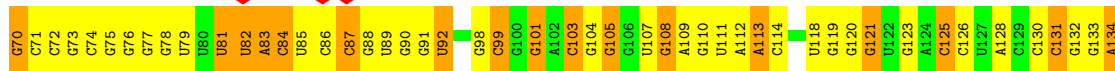
• Molecule 52: Ribosome hibernation promoting factor

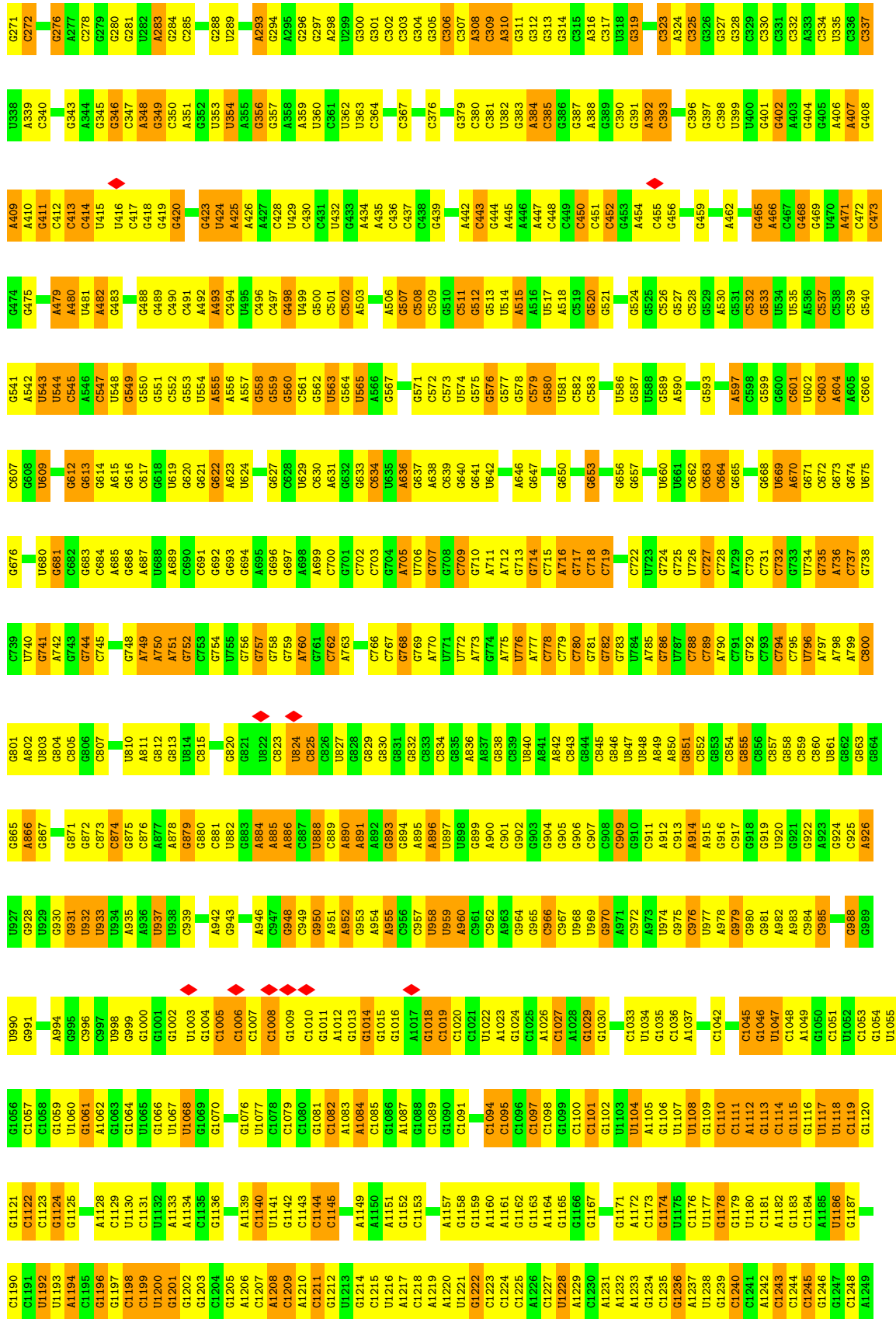


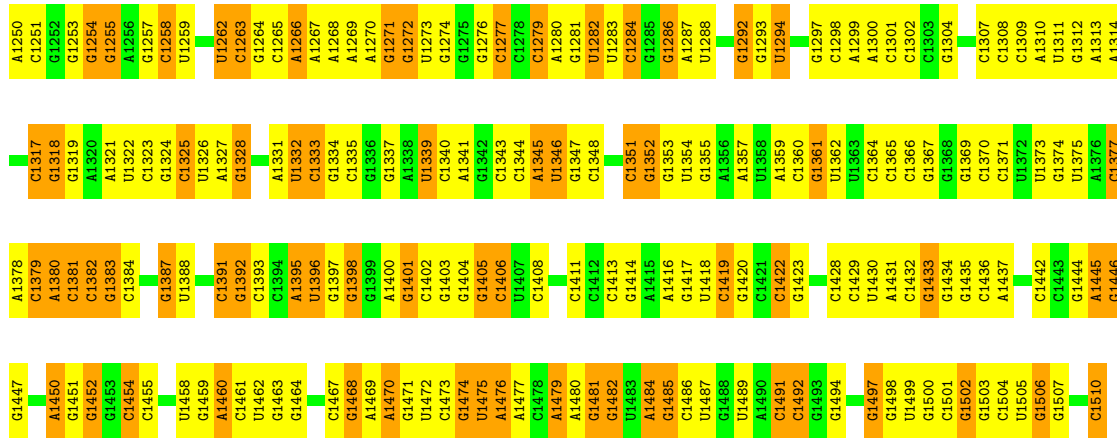
• Molecule 52: Ribosome hibernation promoting factor



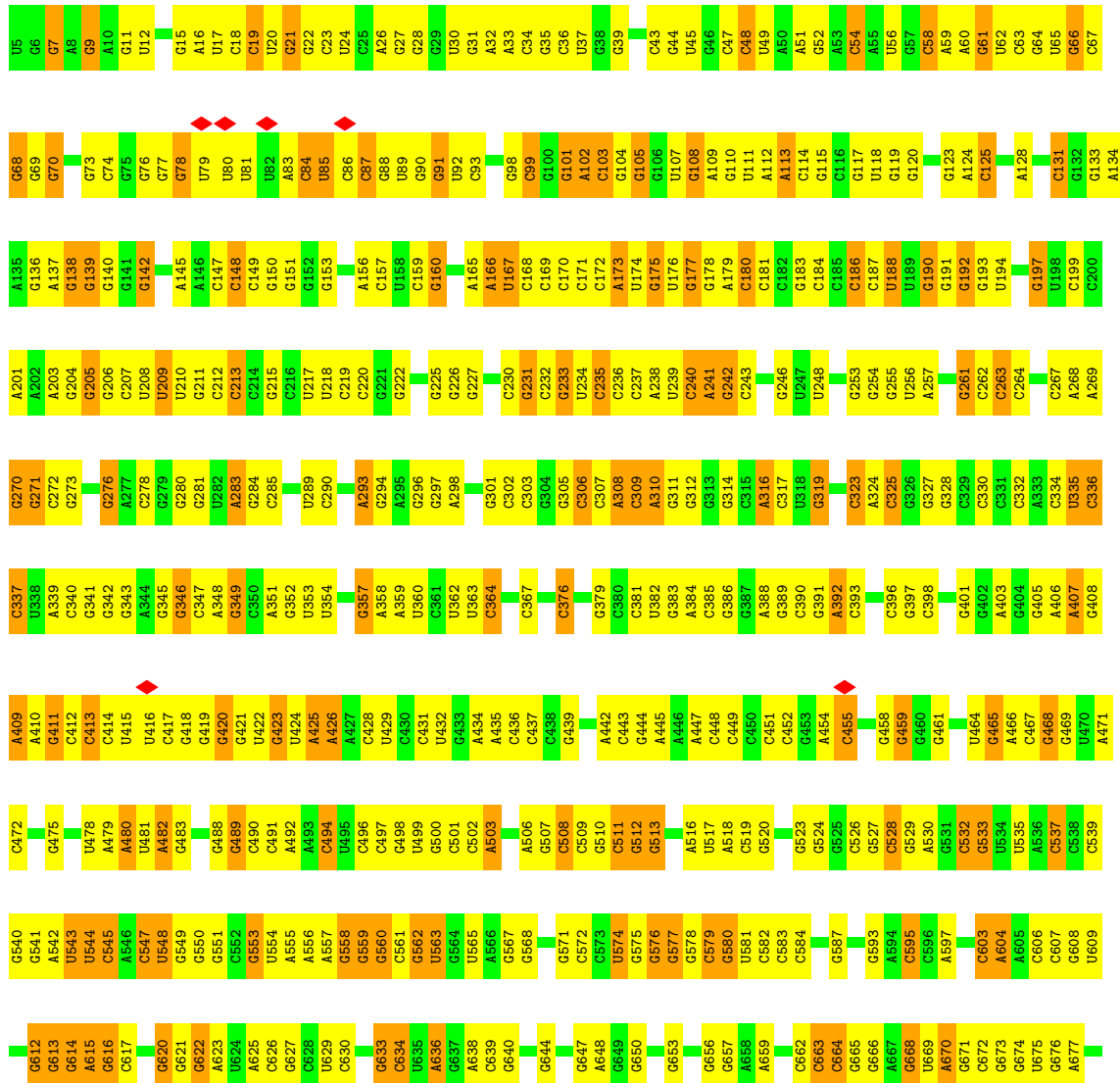
• Molecule 53: 16S ribosomal RNA

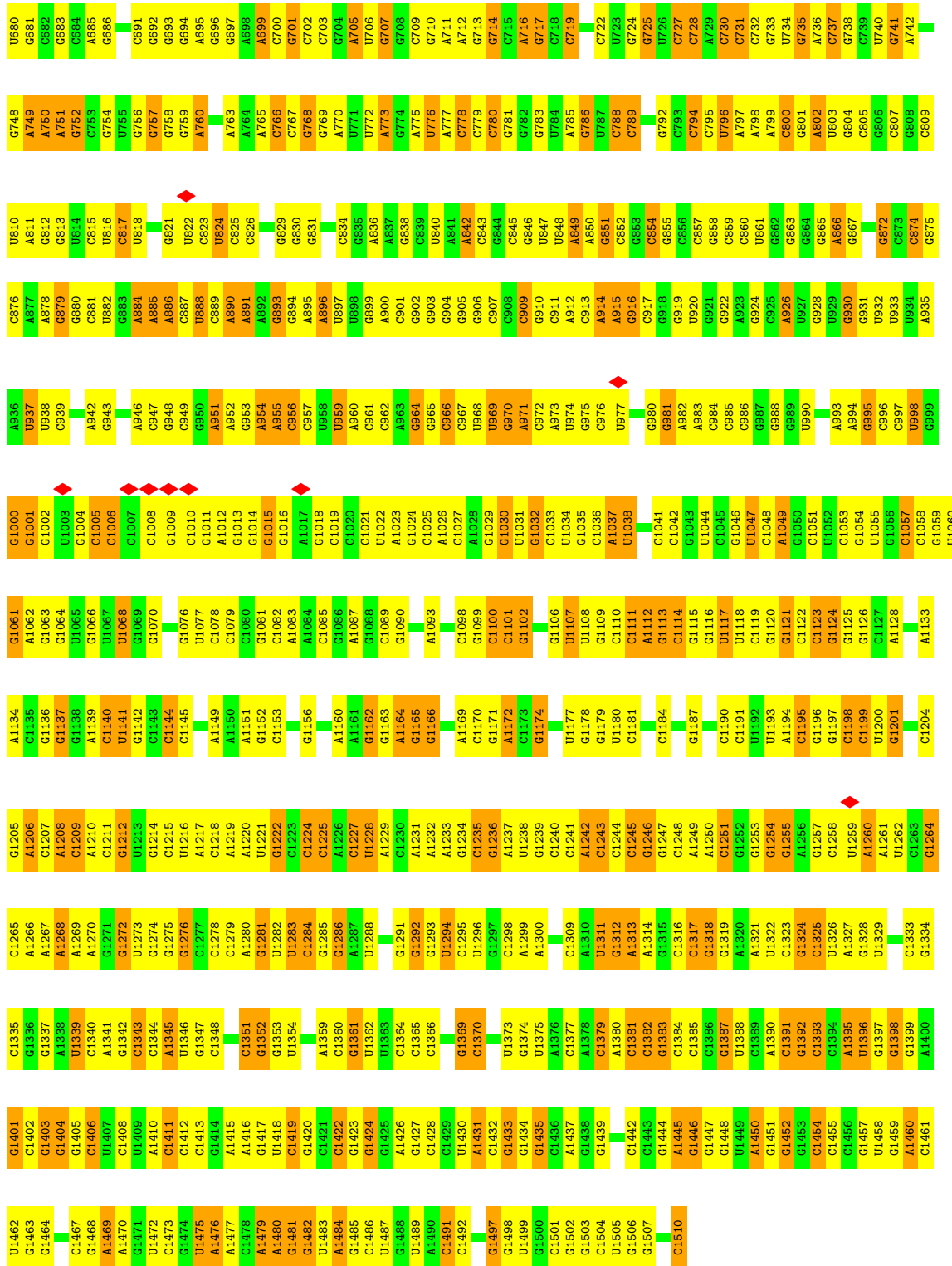




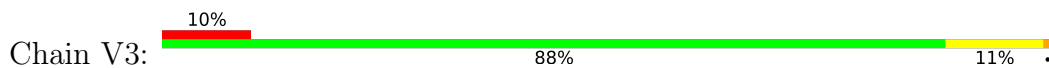


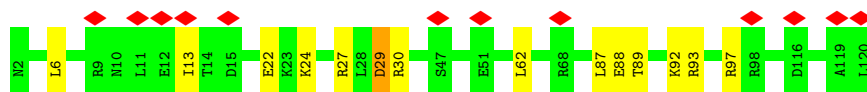
• Molecule 53: 16S ribosomal RNA



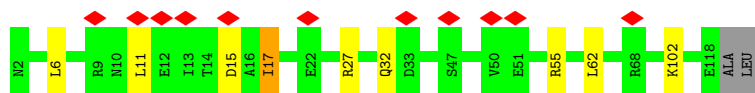
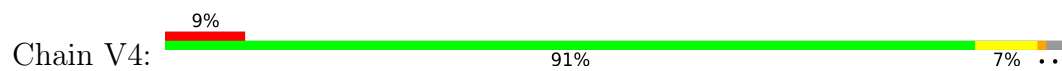


• Molecule 54: Ribosome hibernation promoting factor





- Molecule 54: Ribosome hibernation promoting factor



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	12126	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.06	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	16.115	Depositor
Minimum map value	-7.302	Depositor
Average map value	0.038	Depositor
Map value standard deviation	0.495	Depositor
Recommended contour level	3.1	Depositor
Map size (Å)	770.0, 770.0, 770.0	wwPDB
Map dimensions	700, 700, 700	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1, 1.1, 1.1	Depositor

5 Model quality i

5.1 Standard geometry i

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	C1	0.62	0/2166	0.82	3/2919 (0.1%)
1	C2	0.63	1/2166 (0.0%)	0.81	2/2919 (0.1%)
2	D1	0.65	0/1602	0.79	0/2160
2	D2	0.65	0/1602	0.85	1/2160 (0.0%)
3	E1	0.60	1/1663 (0.1%)	0.80	0/2249
3	E2	0.60	0/1663	0.82	1/2249 (0.0%)
4	F1	0.51	0/1499	0.77	1/2016 (0.0%)
4	F2	0.51	0/1499	0.81	1/2016 (0.0%)
5	G1	0.48	0/1333	0.77	3/1802 (0.2%)
5	G2	0.48	0/1333	0.77	0/1802
6	H1	0.54	0/387	0.83	0/523
6	H2	0.55	1/387 (0.3%)	0.86	0/523
7	I1	0.54	0/1132	0.77	2/1525 (0.1%)
7	I2	0.55	0/1132	0.78	2/1525 (0.1%)
8	J1	0.68	0/943	0.82	1/1269 (0.1%)
8	J2	0.66	0/943	0.81	1/1269 (0.1%)
9	K1	0.53	0/1162	0.92	3/1544 (0.2%)
9	K2	0.55	0/1162	0.87	0/1544
10	L1	0.60	0/1143	0.82	0/1527
10	L2	0.59	0/1143	0.87	1/1527 (0.1%)
11	M1	0.53	0/974	0.82	1/1302 (0.1%)
11	M2	0.54	0/974	0.77	0/1302
12	N1	0.48	0/892	0.82	1/1187 (0.1%)
12	N2	0.50	0/892	0.81	0/1187
13	O1	0.61	0/1156	0.79	0/1542
13	O2	0.58	0/1156	0.78	0/1542
14	P1	0.58	0/982	0.76	0/1306
14	P2	0.57	0/982	0.72	0/1306
15	Q1	0.49	0/790	0.78	0/1057
15	Q2	0.52	0/790	0.74	0/1057
16	R1	0.58	0/911	0.81	2/1220 (0.2%)
16	R2	0.56	0/911	0.77	1/1220 (0.1%)
17	S1	0.55	0/740	0.76	0/993
17	S2	0.50	0/740	0.77	0/993

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
18	T1	0.45	0/799	0.76	0/1064
18	T2	0.49	0/799	0.81	1/1064 (0.1%)
19	U1	0.51	0/1461	0.76	0/1982
19	U2	0.53	0/1461	0.75	1/1982 (0.1%)
20	V1	0.58	0/621	0.81	0/827
20	V2	0.51	0/621	0.79	0/827
21	W1	0.54	0/770	0.86	2/1022 (0.2%)
21	W2	0.60	0/770	0.88	0/1022
22	X1	0.43	0/583	0.69	0/771
22	X2	0.44	0/583	0.78	0/771
23	Y1	0.55	0/474	0.80	0/635
23	Y2	0.57	0/474	0.80	2/635 (0.3%)
24	Z1	0.48	0/528	0.89	0/709
24	Z2	0.52	0/528	0.88	0/709
25	a1	0.68	0/473	0.87	0/639
25	a2	0.62	0/473	0.78	0/639
26	b1	0.54	0/397	1.02	0/529
26	b2	0.56	0/397	0.95	1/529 (0.2%)
27	c1	0.57	0/438	0.75	0/575
27	c2	0.52	0/438	0.70	0/575
28	d1	0.51	0/495	0.92	1/649 (0.2%)
28	d2	0.57	0/495	0.91	1/649 (0.2%)
29	A1	1.35	325/70233 (0.5%)	1.74	2137/109643 (1.9%)
29	A2	1.34	330/70233 (0.5%)	1.73	2157/109643 (2.0%)
30	B1	1.05	3/2928 (0.1%)	1.64	77/4568 (1.7%)
30	B2	1.03	2/2928 (0.1%)	1.61	65/4568 (1.4%)
31	e1	0.50	0/302	0.88	0/397
31	e2	0.49	0/302	0.81	0/397
32	B3	0.60	0/1960	0.90	2/2642 (0.1%)
32	B4	0.58	0/1960	0.81	4/2642 (0.2%)
33	C3	0.51	0/1637	0.86	3/2205 (0.1%)
33	C4	0.53	0/1637	0.82	4/2205 (0.2%)
34	D3	0.55	0/1733	0.82	0/2318
34	D4	0.65	1/1733 (0.1%)	0.86	2/2318 (0.1%)
35	E3	0.59	0/1172	0.81	1/1576 (0.1%)
35	E4	0.59	0/1172	0.85	0/1576
36	F3	0.60	1/856 (0.1%)	0.81	1/1154 (0.1%)
36	F4	0.57	0/856	0.79	0/1154
37	G3	0.67	1/1276 (0.1%)	0.78	0/1709
37	G4	0.68	1/1276 (0.1%)	0.84	1/1709 (0.1%)
38	H3	0.69	0/1136	0.87	3/1527 (0.2%)
38	H4	0.68	0/1136	0.83	1/1527 (0.1%)
39	I3	0.57	0/1029	0.90	3/1379 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
39	I4	0.63	1/1029 (0.1%)	0.86	2/1379 (0.1%)
40	J3	0.44	0/815	0.85	3/1095 (0.3%)
40	J4	0.49	0/815	0.83	1/1095 (0.1%)
41	K3	0.52	0/894	0.75	0/1205
41	K4	0.54	0/894	0.73	0/1205
42	L3	0.61	0/992	0.88	3/1327 (0.2%)
42	L4	0.64	0/992	0.84	0/1327
43	M3	0.51	0/944	0.81	2/1265 (0.2%)
43	M4	0.49	0/944	0.82	1/1265 (0.1%)
44	N3	0.55	0/501	0.78	0/664
44	N4	0.58	0/501	0.85	1/664 (0.2%)
45	O3	0.57	0/745	0.82	1/992 (0.1%)
45	O4	0.55	0/745	0.77	0/992
46	P3	0.58	0/722	0.79	1/970 (0.1%)
46	P4	0.58	0/722	0.83	0/970
47	Q3	0.60	0/848	0.84	0/1131
47	Q4	0.61	0/848	0.80	0/1131
48	R3	0.56	0/520	0.81	0/690
48	R4	0.59	0/520	0.79	1/690 (0.1%)
49	S3	0.55	0/639	0.77	0/860
49	S4	0.47	0/639	0.83	0/860
50	T3	0.48	0/765	0.79	0/1007
50	T4	0.46	0/765	0.75	0/1007
51	U3	0.47	0/222	0.72	0/288
51	U4	0.48	0/222	0.68	0/288
52	W4	0.54	0/487	0.92	2/650 (0.3%)
52	X3	0.43	0/487	0.70	1/650 (0.2%)
53	A3	1.38	190/36234 (0.5%)	1.81	1283/56554 (2.3%)
53	A4	1.38	171/36234 (0.5%)	1.81	1289/56554 (2.3%)
54	V3	0.58	0/977	0.89	1/1316 (0.1%)
54	V4	0.58	0/964	0.94	2/1298 (0.2%)
All	All	1.17	1029/314149 (0.3%)	1.56	7091/469332 (1.5%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C1	0	6
1	C2	0	10
2	D1	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	D2	0	4
3	E1	0	4
3	E2	0	6
4	F1	0	2
4	F2	0	2
5	G1	0	6
5	G2	0	3
6	H1	0	2
6	H2	0	2
7	I1	0	1
8	J1	0	3
8	J2	0	2
9	K1	0	5
9	K2	0	1
10	L1	0	3
10	L2	0	6
11	M1	0	4
11	M2	0	2
12	N1	0	3
12	N2	0	2
13	O1	0	4
13	O2	0	3
14	P1	0	3
14	P2	0	1
15	Q2	0	1
16	R2	0	1
18	T1	0	3
18	T2	0	1
19	U2	0	3
20	V1	0	1
21	W1	0	2
21	W2	0	2
22	X1	0	2
22	X2	0	1
23	Y2	0	1
24	Z1	0	9
24	Z2	0	5
25	a1	0	2
26	b2	0	1
27	c2	0	1
28	d1	0	2
28	d2	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
32	B3	0	9
32	B4	0	7
33	C3	0	4
33	C4	0	6
34	D3	0	5
34	D4	0	7
35	E3	0	3
35	E4	0	3
36	F3	0	1
36	F4	0	1
37	G3	0	1
37	G4	0	4
38	H4	0	3
39	I3	0	3
39	I4	0	3
40	J3	0	4
40	J4	0	5
41	K3	0	2
42	L3	0	3
42	L4	0	4
43	M3	0	2
44	N3	0	1
44	N4	0	3
45	O3	0	3
45	O4	0	3
46	P3	0	2
46	P4	0	3
47	Q3	0	1
47	Q4	0	1
48	R3	0	2
48	R4	0	1
49	S3	0	2
49	S4	0	2
54	V3	0	2
54	V4	0	2
All	All	0	241

All (1029) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	D4	187	ARG	C-N	-12.08	1.06	1.34
37	G3	12	LEU	C-N	-11.02	1.08	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	G4	91	VAL	C-N	10.68	1.58	1.34
29	A2	1824	A	N9-C4	-9.55	1.32	1.37
29	A1	1616	A	N9-C4	-9.19	1.32	1.37
29	A1	1820	A	N9-C4	-8.96	1.32	1.37
29	A1	873	A	N9-C4	-8.94	1.32	1.37
29	A2	1820	A	N9-C4	-8.89	1.32	1.37
29	A1	2044	A	N9-C4	-8.85	1.32	1.37
29	A1	1824	A	N9-C4	-8.72	1.32	1.37
29	A1	2043	A	N9-C4	-8.70	1.32	1.37
29	A2	830	A	N9-C4	-8.61	1.32	1.37
29	A2	1717	A	N9-C4	-8.54	1.32	1.37
29	A1	1717	A	N9-C4	-8.51	1.32	1.37
29	A1	2025	A	N7-C5	-8.41	1.34	1.39
29	A2	2256	G	N7-C5	-8.31	1.34	1.39
29	A1	830	A	N9-C4	-8.31	1.32	1.37
29	A1	2728	A	N9-C4	-8.25	1.32	1.37
29	A1	2580	A	N9-C4	-8.23	1.32	1.37
29	A2	2728	A	N9-C4	-8.14	1.32	1.37
29	A2	1960	A	N7-C5	-7.94	1.34	1.39
53	A3	1232	A	N9-C4	-7.94	1.33	1.37
53	A3	1374	G	N7-C5	-7.87	1.34	1.39
29	A2	1962	A	N9-C4	-7.86	1.33	1.37
29	A2	2025	A	N7-C5	-7.86	1.34	1.39
29	A2	2043	A	N9-C4	-7.84	1.33	1.37
53	A4	1395	A	N9-C4	-7.84	1.33	1.37
29	A1	1962	A	N9-C4	-7.84	1.33	1.37
53	A3	482	A	N9-C4	-7.83	1.33	1.37
53	A4	699	A	N9-C4	-7.83	1.33	1.37
29	A1	1960	A	N7-C5	-7.81	1.34	1.39
29	A2	2580	A	N9-C4	-7.78	1.33	1.37
29	A1	2604	A	N9-C4	-7.76	1.33	1.37
53	A3	1451	G	N7-C5	-7.75	1.34	1.39
29	A1	726	A	N9-C4	-7.72	1.33	1.37
29	A2	1806	A	N9-C4	-7.70	1.33	1.37
29	A2	1923	G	N7-C5	-7.70	1.34	1.39
53	A4	482	A	N9-C4	-7.68	1.33	1.37
53	A3	1395	A	N9-C4	-7.65	1.33	1.37
29	A1	2700	G	N7-C5	-7.65	1.34	1.39
29	A2	2622	G	N9-C4	-7.63	1.31	1.38
29	A1	2054	A	N9-C4	-7.63	1.33	1.37
53	A4	1374	G	N7-C5	-7.59	1.34	1.39
29	A1	2256	G	N7-C5	-7.56	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	2450	G	C6-N1	-7.50	1.34	1.39
29	A1	1913	A	N9-C4	-7.50	1.33	1.37
29	A2	726	A	N9-C4	-7.49	1.33	1.37
29	A2	878	A	N9-C4	-7.49	1.33	1.37
29	A1	1806	A	N9-C4	-7.46	1.33	1.37
53	A4	1026	A	N9-C4	7.42	1.42	1.37
29	A2	123	G	N9-C4	-7.39	1.32	1.38
29	A1	2076	G	N7-C5	-7.37	1.34	1.39
29	A1	1819	A	N9-C4	-7.37	1.33	1.37
29	A2	2604	A	N9-C4	-7.34	1.33	1.37
53	A4	785	A	N9-C4	-7.32	1.33	1.37
29	A1	2602	G	N7-C5	-7.31	1.34	1.39
29	A2	1984	A	N9-C4	-7.31	1.33	1.37
53	A3	557	A	N9-C4	-7.29	1.33	1.37
29	A2	2001	A	N9-C4	-7.22	1.33	1.37
29	A1	1715	G	N7-C5	-7.22	1.34	1.39
29	A2	832	A	N9-C4	-7.22	1.33	1.37
29	A2	2602	G	N7-C5	-7.19	1.34	1.39
29	A2	2079	C	N1-C6	-7.19	1.32	1.37
29	A2	733	G	C6-N1	-7.19	1.34	1.39
29	A2	2076	G	N7-C5	-7.19	1.34	1.39
29	A2	2044	A	N9-C4	-7.18	1.33	1.37
29	A1	669	G	N9-C4	-7.17	1.32	1.38
29	A1	723	G	N7-C5	-7.17	1.34	1.39
29	A1	792	G	N9-C4	-7.16	1.32	1.38
53	A3	785	A	N9-C4	-7.14	1.33	1.37
53	A3	798	A	N9-C4	-7.13	1.33	1.37
29	A1	870	A	N7-C5	-7.12	1.34	1.39
29	A2	1802	G	N7-C5	-7.11	1.34	1.39
29	A1	1802	G	N7-C5	-7.11	1.34	1.39
53	A4	541	G	N7-C5	-7.10	1.34	1.39
29	A2	1718	A	C6-N1	-7.06	1.30	1.35
29	A1	1984	A	N9-C4	-7.05	1.33	1.37
29	A1	2622	G	N9-C4	-7.04	1.32	1.38
29	A2	669	G	N9-C4	-7.04	1.32	1.38
29	A1	595	G	N7-C5	-7.02	1.35	1.39
29	A2	1819	A	N9-C4	-7.00	1.33	1.37
29	A1	2468	G	N7-C5	-7.00	1.35	1.39
29	A2	870	A	N7-C5	-6.96	1.35	1.39
53	A4	798	A	N9-C4	-6.95	1.33	1.37
29	A1	2078	A	N9-C4	-6.93	1.33	1.37
29	A1	2001	A	N9-C4	-6.92	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A4	872	G	N7-C5	-6.91	1.35	1.39
29	A2	2072	G	C6-N1	-6.90	1.34	1.39
29	A1	2603	A	N9-C4	-6.90	1.33	1.37
29	A2	784	A	N9-C4	-6.89	1.33	1.37
29	A2	2042	G	N9-C4	-6.89	1.32	1.38
29	A1	2450	G	N3-C4	-6.86	1.30	1.35
29	A1	1347	G	N9-C4	-6.86	1.32	1.38
29	A2	2450	G	N3-C4	-6.86	1.30	1.35
29	A2	2559	G	C6-N1	-6.83	1.34	1.39
29	A1	493	G	N3-C4	-6.83	1.30	1.35
29	A2	2078	A	N9-C4	-6.82	1.33	1.37
29	A1	2079	C	N1-C6	-6.82	1.33	1.37
29	A1	2559	G	C6-N1	-6.82	1.34	1.39
29	A2	873	A	N9-C4	-6.81	1.33	1.37
53	A3	872	G	C5-C6	-6.80	1.35	1.42
29	A1	993	G	C6-N1	-6.79	1.34	1.39
29	A1	878	A	N9-C4	-6.79	1.33	1.37
53	A4	1059	G	N7-C5	-6.78	1.35	1.39
29	A1	813	A	N9-C4	-6.77	1.33	1.37
29	A1	784	A	N9-C4	-6.77	1.33	1.37
29	A2	1690	A	N9-C4	-6.76	1.33	1.37
53	A4	560	G	C6-N1	-6.74	1.34	1.39
29	A1	1300	G	N9-C4	-6.73	1.32	1.38
53	A4	1451	G	N7-C5	-6.72	1.35	1.39
29	A2	1347	G	N9-C4	-6.72	1.32	1.38
29	A1	1852	A	N9-C4	-6.71	1.33	1.37
29	A1	1820	A	N3-C4	-6.71	1.30	1.34
53	A3	553	G	N1-C2	-6.71	1.32	1.37
29	A1	1806	A	C5-C4	-6.69	1.34	1.38
29	A2	2405	G	N7-C5	-6.69	1.35	1.39
29	A2	2360	A	N9-C4	-6.68	1.33	1.37
53	A3	553	G	C6-N1	-6.68	1.34	1.39
29	A1	595	G	N3-C4	-6.68	1.30	1.35
29	A1	1690	A	N9-C4	-6.67	1.33	1.37
29	A1	2072	G	C6-N1	-6.66	1.34	1.39
29	A2	1820	A	C5-C4	-6.66	1.34	1.38
29	A1	1718	A	N7-C5	-6.66	1.35	1.39
29	A2	1913	A	N9-C4	-6.65	1.33	1.37
29	A2	1806	A	C5-C4	-6.64	1.34	1.38
29	A2	595	G	N3-C4	-6.62	1.30	1.35
29	A1	1820	A	C5-C4	-6.62	1.34	1.38
30	B2	68	A	N9-C4	-6.61	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A4	553	G	N1-C2	-6.61	1.32	1.37
53	A4	615	A	N7-C5	-6.58	1.35	1.39
53	A3	120	G	C2-N3	-6.58	1.27	1.32
29	A2	1718	A	N7-C5	-6.58	1.35	1.39
29	A1	2700	G	C6-N1	-6.57	1.34	1.39
29	A2	1923	G	C8-N7	-6.57	1.27	1.30
53	A3	763	A	C5-C6	-6.57	1.35	1.41
29	A1	2054	A	C5-C4	-6.57	1.34	1.38
29	A1	1718	A	C6-N1	-6.56	1.30	1.35
29	A2	1421	A	N9-C4	-6.56	1.33	1.37
29	A2	2469	G	C8-N7	-6.55	1.27	1.30
29	A1	1923	G	N7-C5	-6.55	1.35	1.39
29	A1	1019	G	N7-C5	-6.54	1.35	1.39
53	A3	540	G	N7-C5	-6.54	1.35	1.39
53	A3	1481	G	C5-C4	-6.54	1.33	1.38
53	A3	1479	A	N7-C5	-6.54	1.35	1.39
53	A3	872	G	N7-C5	-6.53	1.35	1.39
29	A1	1817	A	N7-C5	-6.52	1.35	1.39
29	A2	213	A	N9-C4	-6.52	1.33	1.37
29	A1	477	A	N9-C4	-6.52	1.33	1.37
53	A3	884	A	N7-C5	-6.52	1.35	1.39
29	A2	792	G	N9-C4	-6.51	1.32	1.38
53	A3	1459	G	N7-C5	-6.50	1.35	1.39
53	A4	293	A	N7-C5	-6.50	1.35	1.39
29	A1	1704	A	N7-C5	-6.49	1.35	1.39
29	A1	123	G	N9-C4	-6.49	1.32	1.38
29	A2	184	G	N7-C5	-6.49	1.35	1.39
53	A3	902	G	N1-C2	-6.49	1.32	1.37
29	A2	2016	G	N3-C4	-6.49	1.30	1.35
53	A4	261	G	N9-C4	-6.48	1.32	1.38
29	A1	2450	G	C5-C4	-6.47	1.33	1.38
29	A2	595	G	N7-C5	-6.47	1.35	1.39
53	A3	560	G	C6-N1	-6.46	1.35	1.39
53	A3	799	A	C5-C4	-6.46	1.34	1.38
29	A1	1978	G	N7-C5	-6.46	1.35	1.39
29	A1	1880	A	N9-C4	-6.45	1.33	1.37
29	A2	2054	A	C5-C4	-6.45	1.34	1.38
53	A4	1314	A	N9-C4	-6.45	1.33	1.37
53	A4	902	G	N1-C2	-6.44	1.32	1.37
29	A2	1837	C	N1-C6	-6.43	1.33	1.37
53	A4	102	A	C6-N1	-6.43	1.31	1.35
29	A2	2054	A	N9-C4	-6.43	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	541	G	N7-C5	-6.42	1.35	1.39
53	A4	1318	G	C6-N1	-6.42	1.35	1.39
53	A4	1481	G	C6-N1	-6.41	1.35	1.39
53	A3	1314	A	N9-C4	-6.41	1.34	1.37
29	A2	2700	G	N7-C5	-6.41	1.35	1.39
53	A4	878	A	N7-C5	-6.39	1.35	1.39
29	A1	829	G	N7-C5	-6.38	1.35	1.39
29	A1	184	G	N7-C5	-6.38	1.35	1.39
29	A2	829	G	N7-C5	-6.38	1.35	1.39
29	A2	1978	G	N7-C5	-6.38	1.35	1.39
29	A1	2742	G	N1-C2	-6.37	1.32	1.37
53	A4	1463	G	N9-C4	-6.37	1.32	1.38
53	A3	878	A	N7-C5	-6.37	1.35	1.39
29	A2	1820	A	N7-C5	-6.36	1.35	1.39
29	A1	2810	G	N7-C5	-6.36	1.35	1.39
53	A4	884	A	N7-C5	-6.36	1.35	1.39
29	A1	824	G	C5-C6	-6.35	1.36	1.42
29	A2	1704	A	N7-C5	-6.35	1.35	1.39
53	A4	799	A	C5-C4	-6.35	1.34	1.38
29	A2	2469	G	C6-N1	-6.34	1.35	1.39
29	A1	2519	G	N9-C4	6.34	1.43	1.38
29	A2	1317	A	N9-C4	-6.33	1.34	1.37
29	A2	1820	A	N3-C4	-6.33	1.31	1.34
29	A2	1300	G	N9-C4	-6.33	1.32	1.38
53	A3	1463	G	N9-C4	-6.33	1.32	1.38
29	A1	2733	G	C6-N1	-6.33	1.35	1.39
29	A1	855	C	N1-C6	-6.32	1.33	1.37
53	A3	550	G	C6-N1	-6.32	1.35	1.39
53	A4	1220	A	N9-C4	-6.30	1.34	1.37
53	A3	17	U	C2-N3	-6.30	1.33	1.37
53	A4	1479	A	N7-C5	-6.30	1.35	1.39
53	A4	557	A	N9-C4	-6.29	1.34	1.37
29	A1	1031	A	N3-C4	-6.28	1.31	1.34
53	A3	1087	A	C5-C6	-6.27	1.35	1.41
53	A3	1481	G	C6-N1	-6.27	1.35	1.39
29	A1	824	G	N7-C5	-6.27	1.35	1.39
53	A3	1397	G	N9-C4	-6.26	1.32	1.38
53	A4	17	U	C2-N3	-6.26	1.33	1.37
29	A2	1611	A	N9-C4	-6.25	1.34	1.37
53	A3	884	A	C5-C6	-6.24	1.35	1.41
53	A4	885	A	N7-C5	-6.24	1.35	1.39
29	A2	725	A	N9-C4	-6.24	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	2076	G	C5-C6	-6.23	1.36	1.42
29	A2	723	G	N1-C2	-6.23	1.32	1.37
29	A1	724	A	N7-C5	-6.23	1.35	1.39
29	A2	2756	A	N9-C4	-6.22	1.34	1.37
29	A1	2016	G	C6-N1	-6.22	1.35	1.39
53	A3	1059	G	C6-N1	-6.22	1.35	1.39
29	A2	2444	A	N7-C5	-6.21	1.35	1.39
29	A1	1317	A	N9-C4	-6.21	1.34	1.37
29	A2	1616	A	N9-C4	-6.20	1.34	1.37
29	A1	2073	G	C6-N1	-6.20	1.35	1.39
29	A2	603	A	N9-C4	-6.20	1.34	1.37
53	A4	1087	A	C5-C6	-6.20	1.35	1.41
53	A4	551	G	N7-C5	-6.19	1.35	1.39
29	A1	1421	A	N9-C4	-6.19	1.34	1.37
53	A4	540	G	N7-C5	-6.19	1.35	1.39
29	A2	813	A	N9-C4	-6.19	1.34	1.37
53	A3	1059	G	N7-C5	-6.18	1.35	1.39
53	A4	553	G	C6-N1	-6.18	1.35	1.39
53	A4	872	G	C5-C6	-6.18	1.36	1.42
29	A1	1857	G	N9-C8	-6.18	1.33	1.37
29	A1	2450	G	C6-N1	-6.18	1.35	1.39
53	A3	858	G	N7-C5	-6.18	1.35	1.39
53	A3	316	A	N9-C4	-6.17	1.34	1.37
29	A1	2076	G	C5-C6	-6.17	1.36	1.42
53	A3	549	G	N7-C5	-6.17	1.35	1.39
29	A2	1880	A	N9-C4	-6.16	1.34	1.37
53	A4	1464	G	N7-C5	-6.16	1.35	1.39
53	A3	885	A	N7-C5	-6.16	1.35	1.39
53	A3	763	A	N7-C5	-6.16	1.35	1.39
29	A2	801	A	N9-C4	-6.16	1.34	1.37
29	A1	725	A	N9-C4	-6.15	1.34	1.37
53	A4	22	G	C6-N1	-6.14	1.35	1.39
29	A2	1180	A	N7-C5	-6.14	1.35	1.39
29	A1	195	G	N9-C4	-6.14	1.33	1.38
29	A2	2458	G	C8-N7	-6.14	1.27	1.30
29	A1	2079	C	N3-C4	-6.14	1.29	1.33
53	A4	884	A	C5-C6	-6.13	1.35	1.41
29	A2	1854	A	N9-C4	-6.13	1.34	1.37
29	A1	800	A	N7-C5	-6.13	1.35	1.39
53	A4	852	C	N1-C6	-6.12	1.33	1.37
29	A1	782	G	C5-C6	-6.12	1.36	1.42
29	A1	801	A	N9-C4	-6.11	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	1993	A	N7-C5	-6.11	1.35	1.39
29	A1	855	C	N3-C4	-6.11	1.29	1.33
29	A2	2059	G	N3-C4	-6.11	1.31	1.35
29	A2	2073	G	C6-N1	-6.10	1.35	1.39
53	A3	710	G	N1-C2	-6.10	1.32	1.37
53	A4	1398	G	N7-C5	-6.09	1.35	1.39
53	A3	261	G	C5-C6	-6.09	1.36	1.42
29	A1	2601	A	N9-C4	-6.09	1.34	1.37
53	A3	221	G	N3-C4	-6.09	1.31	1.35
53	A3	22	G	C6-N1	-6.08	1.35	1.39
53	A4	1481	G	C5-C4	-6.08	1.34	1.38
53	A3	1498	G	C6-N1	-6.08	1.35	1.39
53	A4	1374	G	C6-N1	-6.08	1.35	1.39
29	A1	2458	G	C8-N7	-6.08	1.27	1.30
29	A1	2586	A	N9-C4	-6.08	1.34	1.37
29	A2	834	G	N7-C5	-6.07	1.35	1.39
29	A1	2742	G	C6-N1	-6.07	1.35	1.39
53	A3	549	G	C5-C6	-6.07	1.36	1.42
29	A1	1836	A	N9-C4	-6.07	1.34	1.37
29	A2	125	A	N9-C4	-6.07	1.34	1.37
53	A4	550	G	C6-N1	-6.07	1.35	1.39
53	A3	1318	G	C6-N1	-6.07	1.35	1.39
29	A2	2504	G	N3-C4	-6.06	1.31	1.35
53	A3	293	A	N7-C5	-6.06	1.35	1.39
29	A1	2612	A	N9-C8	-6.05	1.32	1.37
30	B1	68	A	N9-C4	-6.04	1.34	1.37
53	A3	852	C	N1-C6	-6.04	1.33	1.37
53	A4	763	A	N7-C5	-6.04	1.35	1.39
29	A1	838	A	N7-C5	-6.04	1.35	1.39
53	A4	901	C	N3-C4	-6.04	1.29	1.33
29	A1	2780	A	N9-C4	6.04	1.41	1.37
29	A1	1711	C	N3-C4	-6.03	1.29	1.33
29	A1	2428	G	N7-C5	-6.03	1.35	1.39
29	A2	2011	G	C6-N1	-6.02	1.35	1.39
53	A3	901	C	N3-C4	-6.02	1.29	1.33
29	A1	125	A	N9-C4	-6.02	1.34	1.37
53	A3	1061	G	N7-C5	-6.02	1.35	1.39
29	A2	2593	C	N1-C6	-6.01	1.33	1.37
29	A1	1820	A	N7-C5	-6.01	1.35	1.39
53	A3	1124	G	C2-N3	-6.01	1.27	1.32
29	A1	189	A	N9-C4	-6.00	1.34	1.37
29	A1	1837	C	N1-C6	-6.00	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A1	2580	A	C5-C4	-6.00	1.34	1.38
29	A2	733	G	N3-C4	-6.00	1.31	1.35
29	A2	993	G	C6-N1	-6.00	1.35	1.39
29	A2	2603	A	N7-C5	-6.00	1.35	1.39
53	A4	742	A	N7-C5	-6.00	1.35	1.39
29	A2	2585	C	N3-C4	-6.00	1.29	1.33
53	A4	797	A	N9-C4	-5.99	1.34	1.37
29	A2	1999	G	N7-C5	-5.99	1.35	1.39
53	A4	1059	G	C6-N1	-5.99	1.35	1.39
29	A1	1180	A	N7-C5	-5.99	1.35	1.39
29	A1	2606	G	N7-C5	-5.98	1.35	1.39
29	A1	211	A	N9-C4	-5.97	1.34	1.37
29	A1	2593	C	N1-C6	-5.97	1.33	1.37
53	A3	1026	A	N9-C4	5.97	1.41	1.37
29	A1	2863	A	N7-C5	-5.97	1.35	1.39
29	A1	1820	A	N9-C8	-5.97	1.32	1.37
29	A1	2737	G	N7-C5	-5.97	1.35	1.39
29	A2	2468	G	C6-N1	-5.97	1.35	1.39
29	A2	2579	A	N9-C4	-5.97	1.34	1.37
53	A4	604	A	N9-C4	-5.97	1.34	1.37
29	A1	2042	G	N9-C4	-5.96	1.33	1.38
53	A4	120	G	C2-N3	-5.95	1.27	1.32
29	A2	782	G	C5-C6	-5.95	1.36	1.42
29	A1	879	G	N9-C4	-5.95	1.33	1.38
29	A1	2585	C	N3-C4	-5.94	1.29	1.33
29	A2	824	G	C5-C6	-5.94	1.36	1.42
53	A3	551	G	N7-C5	-5.94	1.35	1.39
53	A3	1395	A	N3-C4	-5.94	1.31	1.34
53	A3	1374	G	C8-N7	-5.94	1.27	1.30
29	A1	1833	C	N1-C6	-5.93	1.33	1.37
29	A2	879	G	N9-C4	-5.93	1.33	1.38
29	A1	834	G	N7-C5	-5.93	1.35	1.39
29	A2	477	A	N9-C4	-5.93	1.34	1.37
53	A3	866	A	N7-C5	-5.93	1.35	1.39
29	A2	2601	A	N9-C4	-5.92	1.34	1.37
29	A1	1854	A	N9-C4	-5.92	1.34	1.37
53	A3	797	A	N9-C4	-5.92	1.34	1.37
29	A2	2072	G	N1-C2	-5.91	1.33	1.37
29	A1	1611	A	N9-C4	-5.91	1.34	1.37
53	A3	1374	G	C6-N1	-5.91	1.35	1.39
29	A2	2077	G	N7-C5	-5.91	1.35	1.39
53	A4	763	A	C5-C6	-5.91	1.35	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	873	A	C5-C4	-5.91	1.34	1.38
53	A4	799	A	C5-C6	-5.90	1.35	1.41
53	A4	1459	G	N7-C5	-5.90	1.35	1.39
29	A2	2639	G	C6-N1	-5.90	1.35	1.39
29	A1	555	A	N9-C4	-5.90	1.34	1.37
29	A1	2011	G	C6-N1	-5.90	1.35	1.39
29	A2	2863	A	N7-C5	-5.89	1.35	1.39
53	A3	1459	G	C6-N1	-5.89	1.35	1.39
53	A4	1502	G	C6-N1	-5.89	1.35	1.39
29	A1	873	A	N3-C4	-5.89	1.31	1.34
53	A3	858	G	N3-C4	-5.89	1.31	1.35
53	A3	799	A	C5-C6	-5.89	1.35	1.41
29	A1	790	G	C6-N1	-5.88	1.35	1.39
29	A1	2603	A	C5-C4	-5.88	1.34	1.38
29	A1	2078	A	C5-C4	-5.88	1.34	1.38
29	A1	2579	A	N9-C4	-5.88	1.34	1.37
29	A2	2612	A	N9-C4	-5.88	1.34	1.37
29	A1	1819	A	N7-C5	-5.87	1.35	1.39
29	A2	1833	C	N1-C6	-5.87	1.33	1.37
29	A2	2472	G	C6-N1	-5.87	1.35	1.39
29	A1	2472	G	C6-N1	-5.86	1.35	1.39
29	A2	2612	A	N9-C8	-5.86	1.33	1.37
53	A3	638	A	N9-C4	-5.85	1.34	1.37
29	A2	1836	A	N9-C4	-5.85	1.34	1.37
53	A3	641	G	N9-C4	-5.84	1.33	1.38
29	A2	2078	A	C5-C4	-5.84	1.34	1.38
29	A1	553	A	N9-C4	-5.83	1.34	1.37
29	A2	723	G	N9-C4	-5.82	1.33	1.38
29	A2	2096	G	N7-C5	-5.82	1.35	1.39
29	A1	1825	G	C5-C4	-5.82	1.34	1.38
53	A4	1061	G	N7-C5	-5.82	1.35	1.39
29	A2	2737	G	N7-C5	-5.82	1.35	1.39
29	A2	2021	G	N9-C4	-5.81	1.33	1.38
29	A1	1806	A	N7-C5	-5.81	1.35	1.39
29	A1	2096	G	N7-C5	-5.81	1.35	1.39
29	A2	1177	A	N7-C5	-5.81	1.35	1.39
29	A1	2072	G	N1-C2	-5.81	1.33	1.37
29	A1	2077	G	N7-C5	-5.80	1.35	1.39
53	A3	297	G	C6-N1	-5.80	1.35	1.39
29	A2	2586	A	N9-C4	-5.80	1.34	1.37
29	A2	2639	G	C5-C4	-5.80	1.34	1.38
29	A2	2742	G	C6-N1	-5.80	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	1706	C	N1-C6	-5.79	1.33	1.37
29	A1	873	A	C5-C4	-5.79	1.34	1.38
29	A1	2756	A	N9-C4	-5.79	1.34	1.37
29	A1	723	G	N3-C4	-5.79	1.31	1.35
29	A2	2458	G	N7-C5	-5.79	1.35	1.39
53	A4	1395	A	N3-C4	-5.79	1.31	1.34
29	A1	1244	G	N9-C8	-5.79	1.33	1.37
29	A2	800	A	N7-C5	-5.78	1.35	1.39
29	A2	195	G	N9-C4	-5.78	1.33	1.38
53	A3	742	A	N7-C5	-5.78	1.35	1.39
53	A4	1326	U	C2-N3	-5.78	1.33	1.37
29	A2	211	A	N9-C4	-5.78	1.34	1.37
29	A1	1295	A	N9-C4	-5.78	1.34	1.37
29	A2	2580	A	C5-C4	-5.77	1.34	1.38
29	A2	801	A	N3-C4	-5.77	1.31	1.34
53	A4	1460	A	N7-C5	-5.77	1.35	1.39
29	A2	212	A	N9-C4	-5.76	1.34	1.37
29	A2	1716	G	C6-N1	-5.76	1.35	1.39
29	A2	2001	A	C5-C6	-5.76	1.35	1.41
29	A2	1798	C	N3-C4	-5.75	1.29	1.33
53	A4	280	G	C6-N1	-5.75	1.35	1.39
29	A2	1668	G	N3-C4	-5.75	1.31	1.35
29	A1	782	G	N9-C4	-5.75	1.33	1.38
29	A1	2426	A	N9-C4	-5.75	1.34	1.37
53	A3	1400	A	N9-C4	-5.75	1.34	1.37
29	A1	2596	G	N7-C5	-5.74	1.35	1.39
29	A1	603	A	N9-C4	-5.74	1.34	1.37
29	A1	195	G	N3-C4	-5.74	1.31	1.35
29	A1	723	G	N9-C8	-5.74	1.33	1.37
29	A1	2612	A	N9-C4	-5.74	1.34	1.37
53	A3	1464	G	N7-C5	-5.74	1.35	1.39
29	A2	2606	G	N7-C5	-5.73	1.35	1.39
53	A4	813	G	C6-N1	-5.73	1.35	1.39
29	A1	879	G	C5-C4	-5.73	1.34	1.38
29	A1	801	A	N3-C4	-5.73	1.31	1.34
29	A2	790	G	C6-N1	-5.73	1.35	1.39
29	A2	2287	A	N9-C4	-5.73	1.34	1.37
53	A3	1310	A	N9-C4	-5.72	1.34	1.37
53	A3	1142	G	N7-C5	-5.72	1.35	1.39
29	A2	1857	G	N9-C8	-5.72	1.33	1.37
29	A2	2469	G	N7-C5	-5.72	1.35	1.39
29	A2	2376	G	N9-C4	-5.71	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	2596	G	N7-C5	-5.71	1.35	1.39
29	A2	724	A	N7-C5	-5.71	1.35	1.39
29	A2	791	G	C6-N1	-5.71	1.35	1.39
53	A3	717	G	N9-C8	-5.71	1.33	1.37
53	A3	27	G	N9-C4	-5.70	1.33	1.38
29	A2	1825	G	N7-C5	-5.70	1.35	1.39
53	A4	261	G	C5-C6	-5.70	1.36	1.42
29	A2	52	A	N9-C4	-5.70	1.34	1.37
53	A3	852	C	N3-C4	-5.70	1.29	1.33
53	A3	1194	A	N9-C4	-5.70	1.34	1.37
53	A4	1061	G	N9-C8	-5.70	1.33	1.37
53	A4	852	C	N3-C4	-5.69	1.29	1.33
29	A1	2001	A	C5-C6	-5.69	1.35	1.41
53	A4	616	G	C5-C4	-5.69	1.34	1.38
29	A1	1658	A	N9-C4	-5.69	1.34	1.37
53	A4	297	G	C6-N1	-5.69	1.35	1.39
29	A1	1958	C	N3-C4	-5.69	1.29	1.33
29	A2	1658	A	N9-C4	-5.69	1.34	1.37
6	H2	6	LEU	C-N	-5.68	1.21	1.34
29	A2	879	G	C5-C4	-5.68	1.34	1.38
29	A2	195	G	N3-C4	-5.67	1.31	1.35
53	A3	281	G	N7-C5	-5.67	1.35	1.39
53	A4	1498	G	C6-N1	-5.67	1.35	1.39
29	A1	2736	A	N7-C5	-5.67	1.35	1.39
53	A4	1481	G	N1-C2	-5.67	1.33	1.37
29	A1	2458	G	N7-C5	-5.67	1.35	1.39
29	A1	2603	A	N7-C5	-5.67	1.35	1.39
29	A2	1013	G	N7-C5	-5.67	1.35	1.39
53	A4	1061	G	C6-N1	-5.67	1.35	1.39
53	A3	280	G	C6-N1	-5.66	1.35	1.39
29	A1	1244	G	C5-C4	-5.66	1.34	1.38
1	C2	250	TRP	CB-CG	-5.66	1.40	1.50
29	A2	1819	A	N7-C5	-5.66	1.35	1.39
29	A1	778	G	C6-N1	-5.66	1.35	1.39
29	A2	1806	A	N7-C5	-5.66	1.35	1.39
53	A4	281	G	N7-C5	-5.66	1.35	1.39
29	A1	1999	G	N7-C5	-5.66	1.35	1.39
29	A1	2072	G	N3-C4	-5.66	1.31	1.35
29	A1	1798	C	N3-C4	-5.66	1.29	1.33
29	A2	2742	G	N1-C2	-5.65	1.33	1.37
29	A2	2054	A	C5-C6	-5.65	1.35	1.41
53	A3	637	G	C6-N1	-5.65	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A4	113	A	N9-C4	-5.65	1.34	1.37
53	A4	783	G	N9-C4	-5.65	1.33	1.38
29	A1	2511	A	C5-C6	-5.64	1.35	1.41
53	A3	493	A	N9-C4	-5.64	1.34	1.37
53	A4	549	G	N7-C5	-5.64	1.35	1.39
53	A3	297	G	C5-C4	-5.64	1.34	1.38
29	A1	843	G	C6-N1	-5.64	1.35	1.39
29	A2	2016	G	C6-N1	-5.64	1.35	1.39
29	A1	2054	A	N3-C4	-5.63	1.31	1.34
29	A2	800	A	C5-C6	-5.63	1.35	1.41
29	A2	2622	G	N3-C4	-5.63	1.31	1.35
29	A1	1180	A	C5-C6	-5.63	1.35	1.41
29	A2	2376	G	N3-C4	-5.63	1.31	1.35
29	A2	1711	C	N1-C6	-5.63	1.33	1.37
53	A3	560	G	N3-C4	-5.63	1.31	1.35
53	A4	1401	G	C6-N1	-5.63	1.35	1.39
29	A2	829	G	C5-C6	-5.63	1.36	1.42
29	A2	881	G	N7-C5	-5.63	1.35	1.39
29	A1	2695	C	N1-C6	-5.62	1.33	1.37
29	A1	2444	A	N7-C5	-5.62	1.35	1.39
29	A2	2461	G	C5-C4	-5.62	1.34	1.38
29	A1	501	G	N9-C4	-5.62	1.33	1.38
29	A1	213	A	N9-C4	-5.62	1.34	1.37
29	A2	2600	C	C2-N3	-5.62	1.31	1.35
29	A1	829	G	C5-C6	-5.62	1.36	1.42
53	A3	261	G	N9-C4	-5.62	1.33	1.38
29	A1	1306	C	N1-C6	-5.61	1.33	1.37
29	A2	1806	A	N3-C4	-5.61	1.31	1.34
29	A2	2049	C	N1-C6	-5.61	1.33	1.37
29	A2	2859	U	C2-N3	-5.61	1.33	1.37
53	A4	851	G	N7-C5	-5.61	1.35	1.39
53	A4	866	A	N7-C5	-5.61	1.35	1.39
30	B1	98	U	C2-N3	-5.61	1.33	1.37
29	A2	2736	A	N7-C5	-5.61	1.35	1.39
29	A1	853	A	N7-C5	-5.60	1.35	1.39
29	A2	2511	A	C5-C6	-5.60	1.36	1.41
53	A3	254	G	N7-C5	-5.60	1.35	1.39
53	A4	749	A	N7-C5	-5.60	1.35	1.39
53	A3	1401	G	C6-N1	-5.60	1.35	1.39
29	A1	1923	G	N9-C4	-5.60	1.33	1.38
29	A2	873	A	N3-C4	-5.60	1.31	1.34
29	A2	824	G	N7-C5	-5.59	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A1	2021	G	N9-C8	-5.59	1.33	1.37
29	A2	602	G	N7-C5	-5.59	1.35	1.39
29	A2	1820	A	N9-C8	-5.59	1.33	1.37
53	A4	1484	A	N7-C5	-5.58	1.35	1.39
29	A1	602	G	N7-C5	-5.58	1.35	1.39
29	A2	1819	A	C5-C6	-5.58	1.36	1.41
29	A2	2296	G	C6-N1	-5.58	1.35	1.39
53	A4	879	G	N9-C4	-5.57	1.33	1.38
29	A1	1806	A	N3-C4	-5.57	1.31	1.34
29	A2	1190	A	N9-C4	-5.57	1.34	1.37
29	A1	52	A	N9-C4	-5.57	1.34	1.37
29	A1	1978	G	C6-N1	-5.57	1.35	1.39
53	A4	1498	G	C5-C4	-5.57	1.34	1.38
29	A1	35	G	C6-N1	-5.57	1.35	1.39
29	A1	2022	G	C6-N1	-5.57	1.35	1.39
29	A2	1923	G	C6-N1	-5.57	1.35	1.39
53	A4	297	G	C5-C4	-5.57	1.34	1.38
29	A1	2526	C	C5-C6	-5.57	1.29	1.34
53	A3	156	A	N7-C5	-5.57	1.35	1.39
53	A3	1326	U	C2-N3	-5.56	1.33	1.37
53	A3	1452	G	N7-C5	-5.56	1.35	1.39
29	A2	1817	A	N7-C5	-5.56	1.35	1.39
53	A4	1383	G	C5-C4	-5.56	1.34	1.38
53	A4	1374	G	C8-N7	-5.56	1.27	1.30
29	A1	1864	G	N7-C5	-5.55	1.35	1.39
29	A2	1429	G	N7-C5	-5.55	1.35	1.39
29	A2	2025	A	C5-C6	-5.55	1.36	1.41
53	A4	550	G	N1-C2	-5.55	1.33	1.37
29	A1	1177	A	N7-C5	-5.55	1.35	1.39
53	A4	1459	G	C6-N1	-5.54	1.35	1.39
29	A1	2756	A	C5-C4	-5.54	1.34	1.38
53	A3	1502	G	C6-N1	-5.54	1.35	1.39
53	A4	1124	G	N7-C5	-5.54	1.35	1.39
53	A3	1324	G	N9-C4	-5.54	1.33	1.38
53	A4	156	A	N7-C5	-5.54	1.35	1.39
29	A1	2614	A	N7-C5	-5.54	1.35	1.39
53	A3	865	G	N9-C4	-5.54	1.33	1.38
53	A3	1151	A	N9-C4	-5.54	1.34	1.37
29	A1	2639	G	C6-N1	-5.53	1.35	1.39
29	A2	1864	G	N7-C5	-5.53	1.35	1.39
29	A2	2563	G	C6-N1	-5.53	1.35	1.39
53	A3	813	G	C6-N1	-5.53	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	2042	G	N3-C4	-5.53	1.31	1.35
29	A1	1706	C	N1-C6	-5.53	1.33	1.37
29	A1	2639	G	C5-C4	-5.53	1.34	1.38
29	A1	1668	G	N9-C4	-5.53	1.33	1.38
53	A4	1464	G	C5-C6	-5.53	1.36	1.42
29	A1	2565	C	N1-C6	-5.53	1.33	1.37
29	A1	2073	G	N1-C2	-5.53	1.33	1.37
29	A2	2695	C	N1-C6	-5.53	1.33	1.37
53	A3	112	A	N7-C5	-5.52	1.35	1.39
53	A3	1502	G	N1-C2	-5.52	1.33	1.37
29	A1	2563	G	C6-N1	-5.52	1.35	1.39
29	A1	733	G	C6-N1	-5.51	1.35	1.39
53	A4	549	G	C5-C6	-5.51	1.36	1.42
53	A4	1447	G	C6-N1	-5.51	1.35	1.39
29	A1	1261	A	N9-C4	-5.51	1.34	1.37
29	A2	2021	G	C6-N1	-5.51	1.35	1.39
29	A1	288	G	C8-N7	-5.51	1.27	1.30
29	A1	1848	A	N9-C4	-5.51	1.34	1.37
29	A2	1924	A	N9-C4	-5.51	1.34	1.37
29	A1	2287	A	N9-C4	-5.50	1.34	1.37
29	A2	1978	G	C6-N1	-5.50	1.35	1.39
53	A3	749	A	N7-C5	-5.50	1.35	1.39
29	A1	911	G	N7-C5	-5.50	1.35	1.39
53	A3	1061	G	N9-C8	-5.50	1.33	1.37
53	A4	112	A	N7-C5	-5.50	1.35	1.39
29	A1	1803	G	C6-N1	-5.50	1.35	1.39
29	A1	1924	A	N9-C4	-5.50	1.34	1.37
29	A2	1202	G	C5-C4	-5.50	1.34	1.38
53	A4	798	A	C5-C4	-5.50	1.34	1.38
29	A1	2028	G	C6-N1	-5.50	1.35	1.39
29	A1	2054	A	N7-C5	-5.49	1.35	1.39
29	A2	2005	A	N7-C5	-5.49	1.35	1.39
53	A3	113	A	N9-C4	-5.49	1.34	1.37
53	A4	858	G	N7-C5	-5.49	1.35	1.39
53	A4	851	G	N9-C8	-5.48	1.34	1.37
29	A1	1031	A	N9-C4	-5.48	1.34	1.37
29	A2	1243	C	N3-C4	-5.48	1.30	1.33
53	A3	736	A	C5-C4	-5.48	1.34	1.38
29	A2	1177	A	C5-C6	-5.48	1.36	1.41
29	A2	2526	C	C5-C6	-5.48	1.29	1.34
29	A2	737	U	C2-N3	-5.47	1.33	1.37
29	A2	1952	A	N9-C4	-5.47	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	798	A	C5-C4	-5.47	1.34	1.38
53	A3	1397	G	C5-C4	-5.47	1.34	1.38
29	A1	2049	C	N1-C6	-5.47	1.33	1.37
53	A4	559	G	N3-C4	-5.47	1.31	1.35
53	A3	797	A	N7-C5	-5.47	1.35	1.39
53	A3	1498	G	C5-C4	-5.47	1.34	1.38
53	A4	902	G	C5-C6	-5.47	1.36	1.42
29	A1	1013	G	N7-C5	-5.46	1.35	1.39
29	A1	1668	G	N7-C5	-5.46	1.35	1.39
29	A2	1978	G	C5-C6	-5.46	1.36	1.42
53	A3	21	G	C6-N1	-5.46	1.35	1.39
53	A4	237	C	N3-C4	-5.46	1.30	1.33
29	A2	2054	A	N7-C5	-5.46	1.35	1.39
3	E1	65	TRP	CB-CG	-5.46	1.40	1.50
29	A1	833	A	N7-C5	-5.46	1.35	1.39
29	A2	834	G	C5-C6	-5.46	1.36	1.42
29	A2	1306	C	N1-C6	-5.46	1.33	1.37
29	A2	1923	G	C5-C6	-5.46	1.36	1.42
29	A2	2028	G	C6-N1	-5.46	1.35	1.39
29	A2	2073	G	N1-C2	-5.46	1.33	1.37
53	A3	280	G	N7-C5	-5.45	1.35	1.39
53	A3	710	G	C6-N1	-5.45	1.35	1.39
53	A4	891	A	N7-C5	-5.45	1.35	1.39
53	A3	550	G	N1-C2	-5.45	1.33	1.37
53	A4	220	C	N3-C4	-5.45	1.30	1.33
29	A1	2022	G	N9-C8	-5.45	1.34	1.37
29	A1	881	G	N7-C5	-5.44	1.35	1.39
53	A3	750	A	N7-C5	-5.44	1.35	1.39
29	A2	1339	C	N1-C6	-5.44	1.33	1.37
53	A4	891	A	N9-C4	-5.44	1.34	1.37
29	A1	2836	C	N3-C4	-5.43	1.30	1.33
53	A3	1447	G	C6-N1	-5.43	1.35	1.39
53	A4	830	G	C6-N1	-5.43	1.35	1.39
29	A1	2342	A	C5-C6	-5.43	1.36	1.41
29	A2	2700	G	C6-N1	-5.43	1.35	1.39
29	A1	1978	G	C5-C6	-5.43	1.36	1.42
29	A2	1725	A	N7-C5	-5.43	1.35	1.39
53	A4	1502	G	N1-C2	-5.43	1.33	1.37
29	A1	737	U	C2-N3	-5.42	1.33	1.37
29	A2	1031	A	N3-C4	-5.42	1.31	1.34
29	A2	2072	G	N3-C4	-5.42	1.31	1.35
53	A4	902	G	C6-N1	-5.42	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A1	1717	A	N7-C5	-5.42	1.35	1.39
29	A2	1804	C	N3-C4	-5.42	1.30	1.33
29	A2	2528	U	C2-N3	-5.42	1.33	1.37
29	A1	1825	G	N7-C5	-5.42	1.35	1.39
29	A1	1429	G	N7-C5	-5.42	1.36	1.39
29	A2	723	G	C5-C4	-5.42	1.34	1.38
53	A4	750	A	N7-C5	-5.42	1.36	1.39
29	A2	2502	A	N9-C4	-5.42	1.34	1.37
29	A1	2461	G	C6-N1	-5.41	1.35	1.39
53	A4	21	G	C6-N1	-5.41	1.35	1.39
29	A2	2603	A	C5-C6	-5.41	1.36	1.41
29	A1	1202	G	C5-C4	-5.41	1.34	1.38
29	A1	853	A	C5-C6	-5.41	1.36	1.41
53	A4	1390	A	N9-C4	-5.40	1.34	1.37
29	A1	2251	G	C5-C6	-5.40	1.36	1.42
29	A1	733	G	N3-C4	-5.40	1.31	1.35
29	A1	824	G	C5-C4	-5.40	1.34	1.38
53	A4	751	A	C5-C6	-5.40	1.36	1.41
29	A2	1803	G	C6-N1	-5.40	1.35	1.39
53	A3	559	G	C6-N1	-5.39	1.35	1.39
29	A1	2467	A	N7-C5	-5.39	1.36	1.39
53	A3	1387	G	N9-C4	-5.39	1.33	1.38
29	A2	1244	G	C5-C4	-5.39	1.34	1.38
29	A2	2251	G	C5-C6	-5.38	1.36	1.42
29	A1	1177	A	C5-C6	-5.38	1.36	1.41
29	A1	1792	A	N9-C4	-5.38	1.34	1.37
29	A2	911	G	N7-C5	-5.38	1.36	1.39
29	A2	1317	A	N9-C8	-5.38	1.33	1.37
29	A2	2614	A	N7-C5	-5.38	1.36	1.39
29	A1	595	G	C5-C6	-5.37	1.36	1.42
53	A3	751	A	C5-C6	-5.37	1.36	1.41
53	A4	560	G	N3-C4	-5.37	1.31	1.35
29	A1	1725	A	N7-C5	-5.37	1.36	1.39
29	A2	1668	G	N9-C4	-5.37	1.33	1.38
29	A2	1820	A	C5-C6	-5.37	1.36	1.41
53	A3	1369	G	N1-C2	-5.37	1.33	1.37
53	A3	1450	A	N9-C4	5.37	1.41	1.37
29	A1	424	G	C6-N1	-5.37	1.35	1.39
29	A1	1804	C	N3-C4	-5.37	1.30	1.33
53	A4	754	G	C6-N1	-5.37	1.35	1.39
53	A3	559	G	N3-C4	-5.37	1.31	1.35
29	A1	965	A	N7-C5	-5.36	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	1464	G	C5-C6	-5.36	1.36	1.42
53	A4	1062	A	N7-C5	-5.36	1.36	1.39
29	A2	2836	C	N3-C4	-5.36	1.30	1.33
53	A3	1087	A	N7-C5	-5.36	1.36	1.39
29	A1	493	G	C6-N1	-5.36	1.35	1.39
29	A1	2058	U	N1-C2	-5.36	1.33	1.38
29	A2	2561	U	N1-C2	-5.36	1.33	1.38
53	A3	544	U	C2-N3	-5.36	1.33	1.37
29	A1	2072	G	C5-C4	-5.36	1.34	1.38
29	A2	1294	A	N7-C5	-5.35	1.36	1.39
53	A3	1459	G	C8-N7	-5.35	1.27	1.30
53	A4	357	G	N9-C4	-5.35	1.33	1.38
53	A3	265	A	N9-C4	-5.35	1.34	1.37
53	A3	752	G	C5-C4	-5.35	1.34	1.38
53	A3	851	G	C8-N7	-5.35	1.27	1.30
29	A1	2528	U	C2-N3	-5.35	1.34	1.37
29	A1	2609	G	C5-C4	-5.35	1.34	1.38
29	A2	2508	G	N7-C5	-5.35	1.36	1.39
53	A3	540	G	C5-C6	-5.35	1.37	1.42
29	A2	833	A	N7-C5	-5.34	1.36	1.39
29	A1	2461	G	C5-C4	-5.34	1.34	1.38
53	A3	891	A	N7-C5	-5.34	1.36	1.39
29	A1	834	G	C5-C6	-5.34	1.37	1.42
29	A2	2461	G	C6-N1	-5.34	1.35	1.39
29	A1	723	G	N9-C4	-5.34	1.33	1.38
29	A1	1668	G	N3-C4	-5.34	1.31	1.35
29	A2	782	G	N9-C4	-5.34	1.33	1.38
29	A2	2468	G	N3-C4	-5.34	1.31	1.35
29	A2	555	A	N7-C5	-5.33	1.36	1.39
29	A2	824	G	N3-C4	-5.33	1.31	1.35
29	A2	1750	A	C5-C6	-5.33	1.36	1.41
53	A3	1460	A	N7-C5	-5.33	1.36	1.39
53	A3	1061	G	C6-N1	-5.33	1.35	1.39
53	A4	803	U	C2-N3	-5.33	1.34	1.37
29	A1	2218	G	N9-C4	-5.32	1.33	1.38
53	A4	597	A	C5-C6	-5.32	1.36	1.41
29	A1	832	A	N9-C4	-5.32	1.34	1.37
29	A1	1721	C	N1-C6	-5.32	1.33	1.37
53	A3	902	G	C5-C6	-5.32	1.37	1.42
53	A4	615	A	C5-C6	-5.32	1.36	1.41
29	A1	2622	G	N3-C4	-5.32	1.31	1.35
29	A2	424	G	C6-N1	-5.32	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A4	885	A	C5-C6	-5.32	1.36	1.41
53	A3	23	C	N1-C6	-5.31	1.33	1.37
29	A2	1721	C	N1-C6	-5.31	1.33	1.37
29	A2	2565	C	N1-C6	-5.31	1.33	1.37
29	A1	1923	G	C6-N1	-5.31	1.35	1.39
29	A2	870	A	C5-C6	-5.31	1.36	1.41
29	A2	2072	G	C5-C4	-5.31	1.34	1.38
29	A1	2580	A	N3-C4	-5.31	1.31	1.34
29	A2	1962	A	N3-C4	-5.31	1.31	1.34
29	A1	2296	G	C6-N1	-5.31	1.35	1.39
53	A3	255	G	N9-C4	-5.31	1.33	1.38
53	A3	539	C	N3-C4	-5.31	1.30	1.33
29	A2	1739	A	N7-C5	-5.31	1.36	1.39
29	A2	2609	G	C5-C4	-5.30	1.34	1.38
29	A1	791	G	C6-N1	-5.30	1.35	1.39
29	A1	2097	C	N1-C6	-5.30	1.33	1.37
29	A1	2504	G	N3-C4	-5.30	1.31	1.35
29	A2	2021	G	C5-C4	-5.30	1.34	1.38
53	A4	800	C	N3-C4	-5.30	1.30	1.33
53	A3	752	G	N7-C5	-5.30	1.36	1.39
53	A3	237	C	N3-C4	-5.30	1.30	1.33
29	A2	1947	U	C4-O4	-5.29	1.19	1.23
29	A1	2468	G	N3-C4	-5.29	1.31	1.35
29	A2	1295	A	N9-C4	-5.29	1.34	1.37
29	A1	2005	A	N7-C5	-5.29	1.36	1.39
29	A1	2504	G	N9-C4	-5.29	1.33	1.38
29	A2	1803	G	N3-C4	-5.29	1.31	1.35
53	A4	1482	G	C5-C4	-5.29	1.34	1.38
29	A2	1656	A	N7-C5	-5.29	1.36	1.39
29	A1	2472	G	N7-C5	-5.29	1.36	1.39
29	A2	1261	A	N9-C4	-5.29	1.34	1.37
53	A3	799	A	N9-C4	-5.29	1.34	1.37
29	A1	2018	C	C4-C5	-5.28	1.38	1.43
53	A4	851	G	C8-N7	-5.28	1.27	1.30
29	A1	1716	G	C6-N1	-5.28	1.35	1.39
29	A2	778	G	C6-N1	-5.28	1.35	1.39
29	A2	2021	G	N9-C8	-5.28	1.34	1.37
53	A4	1087	A	N7-C5	-5.28	1.36	1.39
29	A1	2025	A	C5-C6	-5.28	1.36	1.41
53	A4	1469	A	N9-C4	-5.28	1.34	1.37
53	A4	1452	G	N7-C5	-5.27	1.36	1.39
29	A1	595	G	N9-C4	-5.27	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A1	1962	A	N3-C4	-5.27	1.31	1.34
29	A1	2021	G	N9-C4	-5.27	1.33	1.38
29	A2	1750	A	N7-C5	-5.27	1.36	1.39
53	A3	855	G	N7-C5	-5.27	1.36	1.39
29	A1	1739	A	N7-C5	-5.27	1.36	1.39
29	A1	555	A	C5-C6	-5.27	1.36	1.41
29	A2	170	G	N7-C5	-5.27	1.36	1.39
53	A3	914	A	N7-C5	-5.27	1.36	1.39
53	A3	1220	A	N9-C4	-5.27	1.34	1.37
53	A3	891	A	N9-C4	-5.27	1.34	1.37
53	A4	799	A	N9-C4	-5.26	1.34	1.37
53	A3	1485	G	C5-C4	-5.26	1.34	1.38
53	A4	1059	G	C5-C6	-5.26	1.37	1.42
29	A2	595	G	C5-C6	-5.26	1.37	1.42
29	A2	1819	A	C8-N7	-5.26	1.27	1.31
53	A3	800	C	N3-C4	-5.26	1.30	1.33
29	A1	1037	G	C6-N1	-5.26	1.35	1.39
29	A2	1825	G	N9-C8	-5.26	1.34	1.37
29	A2	2265	G	C6-N1	-5.26	1.35	1.39
29	A1	919	A	N9-C4	-5.25	1.34	1.37
29	A1	2584	G	C6-N1	-5.25	1.35	1.39
29	A2	723	G	N9-C8	-5.25	1.34	1.37
53	A4	297	G	N1-C2	-5.25	1.33	1.37
53	A4	1457	G	N9-C4	-5.25	1.33	1.38
29	A2	1622	G	N7-C5	-5.25	1.36	1.39
29	A2	2504	G	N9-C4	-5.25	1.33	1.38
29	A1	486	G	N9-C4	-5.25	1.33	1.38
53	A3	851	G	C6-N1	-5.25	1.35	1.39
53	A3	851	G	N9-C8	-5.25	1.34	1.37
29	A1	2603	A	C5-C6	-5.24	1.36	1.41
29	A1	2736	A	C5-C6	-5.24	1.36	1.41
29	A2	1037	G	C6-N1	-5.24	1.35	1.39
29	A1	2600	C	C2-N3	-5.24	1.31	1.35
53	A4	280	G	N7-C5	-5.24	1.36	1.39
53	A4	752	G	N7-C5	-5.24	1.36	1.39
53	A4	1485	G	C5-C4	-5.24	1.34	1.38
29	A2	1176	A	N9-C4	-5.24	1.34	1.37
29	A2	1661	G	N7-C5	-5.24	1.36	1.39
39	I4	4	TYR	CD2-CE2	-5.24	1.31	1.39
29	A2	595	G	N9-C4	-5.24	1.33	1.38
53	A4	1151	A	N9-C4	-5.24	1.34	1.37
53	A3	1503	G	N9-C8	-5.23	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	1825	G	C5-C4	-5.23	1.34	1.38
29	A1	1803	G	N3-C4	-5.23	1.31	1.35
53	A4	553	G	C5-C4	-5.23	1.34	1.38
53	A3	1046	G	C5-C4	-5.23	1.34	1.38
53	A3	851	G	N7-C5	-5.22	1.36	1.39
29	A1	1717	A	N9-C8	-5.22	1.33	1.37
29	A2	2022	G	C6-N1	-5.22	1.35	1.39
29	A2	2511	A	N7-C5	-5.21	1.36	1.39
53	A3	800	C	N1-C6	-5.21	1.34	1.37
53	A4	789	C	N1-C6	-5.21	1.34	1.37
53	A4	541	G	C5-C6	-5.21	1.37	1.42
53	A4	1491	C	N3-C4	-5.21	1.30	1.33
53	A4	752	G	C5-C4	-5.21	1.34	1.38
53	A3	859	C	N1-C6	-5.21	1.34	1.37
53	A3	1474	G	N3-C4	-5.21	1.31	1.35
53	A4	1383	G	N9-C4	-5.21	1.33	1.38
29	A2	1717	A	N7-C5	-5.21	1.36	1.39
29	A2	2095	A	N9-C4	-5.21	1.34	1.37
53	A4	751	A	N7-C5	-5.21	1.36	1.39
29	A2	2341	A	N9-C4	-5.21	1.34	1.37
29	A1	501	G	N3-C4	-5.20	1.31	1.35
29	A2	853	A	N7-C5	-5.20	1.36	1.39
29	A2	2756	A	C5-C4	-5.20	1.35	1.38
53	A3	281	G	C6-N1	-5.20	1.35	1.39
53	A4	901	C	C2-N3	-5.20	1.31	1.35
29	A1	1664	A	N7-C5	-5.20	1.36	1.39
53	A4	1369	G	N1-C2	-5.20	1.33	1.37
29	A2	886	C	N1-C6	-5.19	1.34	1.37
29	A2	2617	G	N3-C4	-5.19	1.31	1.35
29	A2	978	G	N9-C4	-5.19	1.33	1.38
29	A2	2055	A	N7-C5	-5.19	1.36	1.39
29	A1	2256	G	C6-N1	-5.19	1.35	1.39
29	A2	2563	G	C5-C4	-5.19	1.34	1.38
29	A1	1317	A	N9-C8	-5.19	1.33	1.37
29	A2	1923	G	N9-C4	-5.18	1.33	1.38
29	A1	1754	G	N7-C5	-5.18	1.36	1.39
53	A3	297	G	N1-C2	-5.18	1.33	1.37
29	A1	2042	G	N3-C4	-5.17	1.31	1.35
53	A3	616	G	N3-C4	-5.17	1.31	1.35
29	A1	2617	G	N3-C4	-5.17	1.31	1.35
29	A1	1274	A	N7-C5	-5.17	1.36	1.39
29	A2	2029	A	C5-C6	-5.17	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	1491	C	N3-C4	-5.17	1.30	1.33
29	A1	2733	G	N1-C2	-5.17	1.33	1.37
29	A2	2027	G	C6-N1	-5.17	1.35	1.39
53	A3	786	G	C6-N1	-5.17	1.35	1.39
53	A4	297	G	N3-C4	-5.17	1.31	1.35
53	A3	895	A	C5-C4	-5.17	1.35	1.38
29	A2	1180	A	C5-C6	-5.17	1.36	1.41
29	A2	1668	G	N7-C5	-5.16	1.36	1.39
30	B2	104	A	N9-C4	-5.16	1.34	1.37
29	A1	2502	A	C5-C4	-5.16	1.35	1.38
53	A3	754	G	C6-N1	-5.16	1.35	1.39
53	A3	540	G	C5-C4	-5.16	1.34	1.38
29	A1	2252	G	N7-C5	-5.16	1.36	1.39
29	A2	2022	G	N9-C8	-5.16	1.34	1.37
29	A2	2252	G	N7-C5	-5.16	1.36	1.39
53	A4	539	C	N3-C4	-5.16	1.30	1.33
29	A2	2602	G	C5-C6	-5.15	1.37	1.42
29	A2	356	A	N9-C4	-5.15	1.34	1.37
29	A2	1717	A	N9-C8	-5.15	1.33	1.37
53	A3	991	G	N9-C4	-5.15	1.33	1.38
29	A2	1825	G	C8-N7	-5.15	1.27	1.30
53	A4	798	A	N9-C8	-5.15	1.33	1.37
53	A4	1498	G	N3-C4	-5.15	1.31	1.35
29	A1	63	A	N7-C5	-5.15	1.36	1.39
29	A1	1628	A	N9-C4	-5.15	1.34	1.37
29	A1	1825	G	C5-C6	-5.15	1.37	1.42
53	A3	885	A	C5-C6	-5.15	1.36	1.41
29	A1	2376	G	N9-C4	-5.14	1.33	1.38
29	A2	2559	G	N1-C2	-5.14	1.33	1.37
53	A4	741	G	N7-C5	-5.14	1.36	1.39
29	A2	988	A	N9-C4	-5.14	1.34	1.37
29	A1	2523	G	C5-C6	-5.14	1.37	1.42
29	A2	2096	G	N9-C8	-5.14	1.34	1.37
53	A4	336	C	N3-C4	-5.14	1.30	1.33
53	A4	710	G	N1-C2	-5.14	1.33	1.37
29	A1	2059	G	C6-N1	-5.14	1.35	1.39
29	A1	733	G	N7-C5	-5.13	1.36	1.39
29	A2	2736	A	C5-C6	-5.13	1.36	1.41
53	A3	735	G	N3-C4	-5.13	1.31	1.35
53	A3	1383	G	C5-C4	-5.13	1.34	1.38
53	A4	1054	G	N1-C2	-5.13	1.33	1.37
29	A1	195	G	C5-C4	-5.13	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	A2	827	G	N7-C5	-5.12	1.36	1.39
53	A3	1397	G	N3-C4	-5.12	1.31	1.35
53	A3	1484	A	N7-C5	-5.12	1.36	1.39
53	A4	553	G	N9-C4	-5.12	1.33	1.38
53	A4	786	G	C6-N1	-5.12	1.35	1.39
29	A1	233	U	N1-C6	-5.12	1.33	1.38
29	A2	2469	G	N1-C2	-5.12	1.33	1.37
53	A4	294	G	N7-C5	-5.12	1.36	1.39
53	A4	560	G	N1-C2	-5.12	1.33	1.37
29	A2	1754	G	N7-C5	-5.12	1.36	1.39
53	A4	285	C	C4-C5	-5.12	1.38	1.43
29	A1	1317	A	N7-C5	-5.12	1.36	1.39
29	A1	2638	G	C6-N1	-5.12	1.35	1.39
29	A2	1951	A	C5-C6	-5.12	1.36	1.41
29	A2	2054	A	N3-C4	-5.12	1.31	1.34
29	A2	2584	G	C6-N1	-5.12	1.35	1.39
53	A3	858	G	C5-C4	-5.12	1.34	1.38
29	A2	820	G	C5-C4	-5.11	1.34	1.38
29	A2	843	G	N3-C4	-5.11	1.31	1.35
53	A3	146	A	N7-C5	-5.11	1.36	1.39
53	A3	902	G	C6-N1	-5.11	1.35	1.39
53	A4	915	A	N9-C4	-5.11	1.34	1.37
29	A1	1664	A	N9-C4	-5.11	1.34	1.37
53	A4	308	A	N9-C4	-5.11	1.34	1.37
29	A2	1988	G	N9-C4	-5.11	1.33	1.38
53	A3	1398	G	N7-C5	-5.11	1.36	1.39
53	A4	830	G	N7-C5	-5.11	1.36	1.39
29	A2	326	G	N7-C5	-5.10	1.36	1.39
29	A2	1714	A	N7-C5	-5.10	1.36	1.39
53	A3	1054	G	N1-C2	-5.10	1.33	1.37
29	A1	2586	A	C5-C4	-5.10	1.35	1.38
29	A2	1259	G	N9-C4	-5.10	1.33	1.38
29	A2	2600	C	N3-C4	-5.10	1.30	1.33
29	A1	1749	A	N7-C5	-5.10	1.36	1.39
29	A2	2079	C	N3-C4	-5.10	1.30	1.33
29	A2	600	A	C5-C4	-5.10	1.35	1.38
29	A2	1749	A	N7-C5	-5.09	1.36	1.39
53	A4	254	G	N9-C4	-5.09	1.33	1.38
53	A3	896	A	C5-C4	-5.09	1.35	1.38
29	A2	986	G	N7-C5	-5.09	1.36	1.39
29	A2	1119	G	N9-C4	5.09	1.42	1.38
29	A2	2523	G	C5-C6	-5.09	1.37	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	120	G	N3-C4	-5.08	1.31	1.35
53	A3	384	A	N9-C4	-5.08	1.34	1.37
29	A1	2078	A	N3-C4	-5.08	1.31	1.34
29	A1	2591	A	C5-C6	-5.08	1.36	1.41
53	A3	1328	G	N9-C4	-5.08	1.33	1.38
29	A2	2363	G	N9-C8	-5.08	1.34	1.37
29	A2	2472	G	N7-C5	-5.08	1.36	1.39
29	A2	2502	A	C5-C4	-5.08	1.35	1.38
53	A3	879	G	N9-C4	-5.08	1.33	1.38
29	A1	2029	A	C5-C6	-5.08	1.36	1.41
29	A2	195	G	C5-C4	-5.08	1.34	1.38
53	A4	254	G	N7-C5	-5.08	1.36	1.39
53	A4	305	G	N7-C5	-5.08	1.36	1.39
29	A1	886	C	N1-C6	-5.08	1.34	1.37
53	A3	297	G	N3-C4	-5.08	1.31	1.35
53	A4	548	U	C2-N3	-5.08	1.34	1.37
53	A4	1218	C	N3-C4	-5.08	1.30	1.33
29	A2	2018	C	C4-C5	-5.07	1.38	1.43
29	A1	2847	A	N9-C4	-5.07	1.34	1.37
53	A4	705	A	N7-C5	-5.07	1.36	1.39
29	A2	2738	C	N1-C6	-5.07	1.34	1.37
53	A3	830	G	C6-N1	-5.07	1.36	1.39
53	A4	816	U	C2-N3	-5.07	1.34	1.37
36	F3	54	LYS	C-N	-5.07	1.22	1.34
53	A3	308	A	N9-C4	-5.07	1.34	1.37
53	A4	638	A	N9-C4	-5.07	1.34	1.37
29	A1	1873	G	N7-C5	-5.07	1.36	1.39
29	A2	2390	A	N7-C5	-5.07	1.36	1.39
53	A4	895	A	C5-C4	-5.07	1.35	1.38
29	A1	2590	G	N3-C4	-5.07	1.31	1.35
29	A2	2591	A	C5-C6	-5.07	1.36	1.41
29	A1	678	G	N9-C4	-5.06	1.33	1.38
29	A2	1797	G	C6-N1	-5.06	1.36	1.39
29	A1	1604	G	N7-C5	-5.06	1.36	1.39
53	A3	798	A	N9-C8	-5.06	1.33	1.37
29	A1	2469	G	C6-N1	-5.06	1.36	1.39
29	A2	723	G	C6-N1	-5.06	1.36	1.39
53	A3	356	G	N7-C5	-5.06	1.36	1.39
29	A2	2628	A	N7-C5	-5.06	1.36	1.39
53	A3	293	A	N3-C4	-5.06	1.31	1.34
53	A3	669	U	C2-N3	-5.06	1.34	1.37
29	A1	2559	G	N3-C4	-5.05	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	1474	G	N9-C4	-5.05	1.33	1.38
29	A1	237	G	C8-N7	-5.05	1.27	1.30
29	A1	2296	G	N1-C2	-5.05	1.33	1.37
29	A2	1699	G	C5-C4	-5.05	1.34	1.38
53	A3	1378	A	N7-C5	-5.05	1.36	1.39
53	A4	914	A	N7-C5	-5.05	1.36	1.39
29	A1	730	G	C5-C6	-5.05	1.37	1.42
53	A3	1492	C	N1-C6	-5.05	1.34	1.37
29	A1	2511	A	N7-C5	-5.05	1.36	1.39
29	A1	2738	C	N1-C6	-5.04	1.34	1.37
29	A1	2834	G	C6-N1	-5.04	1.36	1.39
29	A2	778	G	N7-C5	-5.04	1.36	1.39
53	A3	705	A	N7-C5	-5.04	1.36	1.39
29	A1	2559	G	N1-C2	-5.04	1.33	1.37
30	B1	99	G	N9-C4	-5.04	1.33	1.38
53	A4	9	G	C5-C4	-5.04	1.34	1.38
53	A4	659	A	N9-C4	-5.04	1.34	1.37
29	A2	424	G	N1-C2	-5.04	1.33	1.37
53	A3	294	G	N7-C5	-5.04	1.36	1.39
53	A4	758	G	N9-C4	-5.04	1.33	1.38
29	A1	1952	A	N9-C4	-5.03	1.34	1.37
29	A2	726	A	N7-C5	-5.03	1.36	1.39
29	A2	1614	C	N1-C6	-5.03	1.34	1.37
53	A3	580	G	C5-C4	-5.03	1.34	1.38
53	A4	797	A	N7-C5	-5.03	1.36	1.39
29	A1	1861	G	N7-C5	-5.03	1.36	1.39
29	A1	2027	G	C6-N1	-5.03	1.36	1.39
29	A1	2628	A	N7-C5	-5.03	1.36	1.39
53	A4	855	G	N7-C5	-5.03	1.36	1.39
29	A1	827	G	C5-C6	-5.03	1.37	1.42
29	A2	428	G	N7-C5	-5.03	1.36	1.39
29	A2	723	G	C8-N7	-5.02	1.27	1.30
29	A2	2097	C	N1-C6	-5.02	1.34	1.37
53	A3	22	G	N3-C4	-5.02	1.31	1.35
53	A4	1503	G	N9-C8	-5.02	1.34	1.37
29	A2	1711	C	N3-C4	-5.02	1.30	1.33
29	A2	2607	U	C2-N3	-5.02	1.34	1.37
53	A3	1468	G	N7-C5	-5.02	1.36	1.39
29	A1	2604	A	N3-C4	-5.02	1.31	1.34
29	A2	2529	C	N1-C6	-5.02	1.34	1.37
53	A3	561	C	N3-C4	-5.02	1.30	1.33
29	A2	185	A	N9-C4	-5.02	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	A3	901	C	C2-N3	-5.02	1.31	1.35
29	A1	813	A	N3-C4	-5.02	1.31	1.34
53	A4	580	G	C5-C6	-5.01	1.37	1.42
53	A3	1481	G	N1-C2	-5.01	1.33	1.37
29	A1	1802	G	C5-C6	-5.01	1.37	1.42
29	A1	2021	G	C5-C4	-5.01	1.34	1.38
29	A1	2457	C	N1-C6	-5.01	1.34	1.37
29	A1	2833	A	N7-C5	-5.01	1.36	1.39
53	A3	580	G	C5-C6	-5.01	1.37	1.42
53	A4	540	G	C5-C6	-5.01	1.37	1.42
29	A1	1656	A	N7-C5	-5.01	1.36	1.39
29	A2	241	A	C5-C4	-5.01	1.35	1.38
29	A2	1664	A	N9-C4	-5.01	1.34	1.37
29	A2	2022	G	N1-C2	-5.00	1.33	1.37
29	A1	2529	C	N1-C6	-5.00	1.34	1.37
29	A2	1861	G	N7-C5	-5.00	1.36	1.39
53	A3	550	G	N7-C5	-5.00	1.36	1.39
53	A3	758	G	N9-C4	-5.00	1.33	1.38
53	A3	803	U	C2-N3	-5.00	1.34	1.37

All (7091) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	728	C	C2-N1-C1'	15.68	136.04	118.80
29	A2	590	C	C6-N1-C2	-15.62	114.05	120.30
53	A3	148	C	N1-C2-O2	14.95	127.87	118.90
29	A2	2681	C	C5-C6-N1	14.62	128.31	121.00
29	A2	1932	C	C2-N1-C1'	14.50	134.75	118.80
32	B3	232	PRO	C-N-CA	14.43	157.78	121.70
29	A1	590	C	C6-N1-C2	-14.33	114.57	120.30
29	A1	2224	C	N1-C2-O2	13.77	127.16	118.90
29	A2	1932	C	N1-C2-O2	13.40	126.94	118.90
53	A4	1377	C	N1-C2-O2	13.30	126.88	118.90
29	A1	2513	C	C6-N1-C2	-13.20	115.02	120.30
53	A3	1377	C	N1-C2-O2	13.18	126.81	118.90
53	A3	539	C	C6-N1-C2	-13.14	115.04	120.30
53	A3	539	C	N3-C2-O2	-13.00	112.80	121.90
53	A3	148	C	C2-N1-C1'	12.99	133.09	118.80
29	A1	2702	U	N1-C2-O2	12.87	131.81	122.80
53	A4	1228	U	N1-C2-O2	12.77	131.74	122.80
53	A3	1228	U	N1-C2-O2	12.77	131.74	122.80
53	A4	772	U	N3-C2-O2	-12.77	113.26	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2702	U	N1-C2-O2	12.64	131.65	122.80
53	A3	1244	C	N1-C2-O2	12.60	126.46	118.90
29	A1	728	C	C6-N1-C1'	-12.56	105.73	120.80
53	A4	539	C	N3-C2-O2	-12.44	113.19	121.90
29	A2	692	C	N1-C2-O2	12.39	126.33	118.90
29	A1	2702	U	C2-N1-C1'	12.36	132.53	117.70
53	A3	148	C	N3-C2-O2	-12.32	113.27	121.90
29	A2	2702	U	C2-N1-C1'	12.29	132.45	117.70
29	A2	728	C	C2-N1-C1'	12.29	132.32	118.80
29	A2	1226	C	N1-C2-O2	12.28	126.27	118.90
53	A4	199	C	N1-C2-O2	12.26	126.26	118.90
53	A3	263	C	N1-C2-O2	12.16	126.20	118.90
29	A2	1958	C	N3-C2-O2	-12.08	113.44	121.90
53	A4	539	C	C6-N1-C2	-12.08	115.47	120.30
53	A4	360	U	C2-N1-C1'	12.08	132.19	117.70
53	A4	539	C	N1-C2-O2	12.07	126.14	118.90
29	A1	1702	G	N3-C4-N9	12.07	133.24	126.00
29	A1	1867	U	C2-N1-C1'	12.06	132.18	117.70
53	A4	1360	C	C6-N1-C2	-12.06	115.48	120.30
29	A2	1303	U	N3-C2-O2	-12.05	113.77	122.20
29	A1	2224	C	C2-N1-C1'	11.98	131.98	118.80
29	A2	639	U	C2-N1-C1'	11.97	132.06	117.70
29	A2	1867	U	C2-N1-C1'	11.95	132.04	117.70
53	A4	217	U	C2-N1-C1'	11.91	132.00	117.70
29	A2	692	C	C2-N1-C1'	11.88	131.87	118.80
29	A1	1863	C	C6-N1-C2	-11.82	115.57	120.30
53	A3	1198	C	N1-C2-O2	11.76	125.96	118.90
29	A1	2717	C	C6-N1-C2	-11.75	115.60	120.30
53	A4	263	C	N1-C2-O2	11.74	125.94	118.90
29	A2	1863	C	C6-N1-C2	-11.72	115.61	120.30
29	A2	1354	C	C6-N1-C2	-11.69	115.62	120.30
29	A1	1354	C	N3-C2-O2	-11.66	113.74	121.90
53	A4	772	U	N1-C2-O2	11.64	130.95	122.80
29	A1	1303	U	N3-C2-O2	-11.63	114.06	122.20
53	A4	932	U	N3-C2-O2	-11.61	114.07	122.20
29	A2	1274	A	C8-N9-C4	-11.58	101.17	105.80
29	A2	1354	C	N3-C2-O2	-11.53	113.83	121.90
29	A1	531	U	C2-N1-C1'	11.47	131.47	117.70
29	A2	639	U	N1-C2-O2	11.46	130.82	122.80
29	A2	2119	C	C6-N1-C2	-11.46	115.72	120.30
29	A1	722	C	C2-N1-C1'	11.44	131.38	118.80
29	A2	2582	C	N1-C2-O2	11.41	125.75	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1218	C	N1-C2-O2	11.39	125.74	118.90
53	A3	1198	C	C2-N1-C1'	11.39	131.33	118.80
29	A1	1354	C	N1-C2-O2	11.35	125.71	118.90
29	A2	1932	C	C6-N1-C1'	-11.34	107.19	120.80
53	A3	718	C	N1-C2-O2	11.33	125.70	118.90
29	A1	90	A	C8-N9-C4	-11.26	101.29	105.80
29	A1	1929	C	C2-N1-C1'	11.26	131.19	118.80
29	A1	1300	G	C8-N9-C4	11.25	110.90	106.40
29	A1	2076	G	C6-C5-N7	-11.23	123.66	130.40
29	A2	2681	C	C6-N1-C2	-11.20	115.82	120.30
53	A4	672	C	C2-N1-C1'	11.19	131.11	118.80
53	A4	360	U	N1-C2-O2	11.16	130.61	122.80
29	A2	946	C	C6-N1-C2	-11.15	115.84	120.30
29	A1	1274	A	C8-N9-C4	-11.14	101.34	105.80
53	A4	1198	C	C6-N1-C2	-11.13	115.85	120.30
29	A2	2582	C	N3-C2-O2	-11.13	114.11	121.90
30	B1	33	C	C5-C6-N1	11.10	126.55	121.00
53	A4	634	C	C5-C6-N1	11.09	126.55	121.00
29	A2	2767	C	C6-N1-C2	-11.06	115.87	120.30
30	B2	33	C	C5-C6-N1	11.06	126.53	121.00
53	A4	217	U	N1-C2-O2	11.01	130.50	122.80
53	A4	443	C	N1-C2-O2	10.99	125.49	118.90
29	A1	798	C	C5-C6-N1	10.98	126.49	121.00
29	A1	2505	U	C2-N1-C1'	10.98	130.87	117.70
29	A1	722	C	N1-C2-O2	10.97	125.48	118.90
29	A2	2076	G	C6-C5-N7	-10.95	123.83	130.40
53	A4	805	C	N1-C2-O2	10.95	125.47	118.90
29	A2	2505	U	C2-N1-C1'	10.94	130.83	117.70
53	A3	526	C	N1-C2-O2	10.93	125.46	118.90
53	A3	1047	U	N1-C2-O2	10.93	130.45	122.80
29	A2	590	C	C5-C6-N1	10.91	126.46	121.00
29	A2	798	C	C2-N1-C1'	10.90	130.79	118.80
53	A3	1198	C	N3-C2-O2	-10.87	114.29	121.90
29	A1	2786	C	N1-C2-O2	10.87	125.42	118.90
29	A1	798	C	C2-N1-C1'	10.86	130.75	118.80
29	A2	1819	A	N9-C4-C5	-10.85	101.46	105.80
29	A1	1435	C	C6-N1-C2	-10.83	115.97	120.30
29	A1	2702	U	C6-N1-C1'	-10.82	106.05	121.20
29	A2	2063	C	C6-N1-C2	-10.81	115.98	120.30
53	A4	1228	U	C2-N1-C1'	10.79	130.65	117.70
29	A2	798	C	C5-C6-N1	10.78	126.39	121.00
29	A2	690	C	N1-C2-O2	10.78	125.37	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	39	C	N1-C2-O2	10.76	125.36	118.90
29	A2	2702	U	C6-N1-C1'	-10.76	106.13	121.20
29	A2	1867	U	N1-C2-O2	10.74	130.32	122.80
29	A1	2063	C	C6-N1-C2	-10.72	116.01	120.30
53	A3	443	C	N1-C2-O2	10.70	125.32	118.90
29	A1	802	C	N1-C2-O2	10.69	125.31	118.90
53	A3	270	G	N3-C4-N9	10.69	132.41	126.00
29	A2	1354	C	N1-C2-O2	10.68	125.31	118.90
29	A2	2497	C	C6-N1-C2	-10.67	116.03	120.30
53	A3	1474	G	N3-C4-N9	-10.67	119.60	126.00
29	A1	1054	C	N1-C2-O2	10.63	125.28	118.90
53	A4	1228	U	N3-C2-O2	-10.57	114.80	122.20
29	A1	2054	A	O4'-C1'-N9	10.57	116.66	108.20
53	A3	199	C	N1-C2-O2	10.57	125.24	118.90
29	A1	1354	C	C6-N1-C2	-10.55	116.08	120.30
29	A2	690	C	C2-N1-C1'	10.53	130.38	118.80
29	A1	2119	C	C6-N1-C2	-10.52	116.09	120.30
53	A4	217	U	N3-C2-O2	-10.50	114.85	122.20
29	A1	1867	U	N1-C2-O2	10.49	130.14	122.80
29	A1	1361	U	N1-C2-O2	10.48	130.13	122.80
29	A2	2829	G	N3-C4-C5	-10.47	123.37	128.60
29	A1	2076	G	C4-C5-N7	10.46	114.98	110.80
53	A3	780	C	N1-C2-O2	10.46	125.18	118.90
29	A2	1303	U	N1-C2-O2	10.44	130.10	122.80
29	A1	728	C	N1-C2-O2	10.42	125.15	118.90
29	A1	1019	G	N7-C8-N9	10.40	118.30	113.10
29	A2	2626	C	C6-N1-C2	10.38	124.45	120.30
53	A4	1000	G	N3-C4-C5	-10.38	123.41	128.60
53	A3	874	C	N1-C2-O2	10.37	125.12	118.90
53	A3	1228	U	C2-N1-C1'	10.37	130.14	117.70
53	A4	261	G	C4-C5-N7	10.37	114.95	110.80
29	A2	1435	C	C6-N1-C2	-10.35	116.16	120.30
29	A1	2254	C	C6-N1-C2	-10.34	116.16	120.30
29	A1	2226	C	C6-N1-C2	-10.34	116.17	120.30
29	A2	62	U	C6-N1-C2	-10.32	114.81	121.00
53	A3	539	C	C2-N1-C1'	10.31	130.15	118.80
29	A1	1523	C	C5-C6-N1	10.31	126.15	121.00
53	A3	737	C	C2-N1-C1'	10.29	130.12	118.80
53	A3	872	G	C4-C5-N7	10.29	114.92	110.80
53	A4	909	C	C5-C6-N1	10.27	126.14	121.00
29	A1	173	C	N1-C2-O2	10.27	125.06	118.90
53	A3	1451	G	C8-N9-C4	-10.27	102.29	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1463	U	C5-C6-N1	10.25	127.83	122.70
53	A3	1198	C	C6-N1-C2	-10.24	116.20	120.30
29	A1	1131	U	C2-N1-C1'	10.24	129.99	117.70
29	A1	1361	U	N3-C2-O2	-10.22	115.05	122.20
29	A2	1243	C	N3-C2-O2	-10.22	114.75	121.90
29	A2	1361	U	C2-N1-C1'	10.21	129.96	117.70
29	A2	639	U	N3-C2-O2	-10.21	115.05	122.20
53	A4	1063	G	N3-C2-N2	-10.20	112.76	119.90
29	A1	2582	C	N3-C2-O2	-10.20	114.76	121.90
29	A2	728	C	N3-C2-O2	-10.19	114.77	121.90
29	A2	2369	C	C2-N1-C1'	10.19	130.01	118.80
53	A3	479	A	N7-C8-N9	10.19	118.89	113.80
29	A1	1303	U	N1-C2-O2	10.16	129.91	122.80
53	A3	1381	C	N3-C4-C5	10.16	125.96	121.90
53	A3	1218	C	N3-C2-O2	-10.15	114.80	121.90
30	B2	33	C	C6-N1-C2	-10.13	116.25	120.30
53	A3	1228	U	N3-C2-O2	-10.12	115.11	122.20
29	A2	173	C	N1-C2-O2	10.12	124.97	118.90
29	A1	1274	A	N7-C8-N9	10.11	118.86	113.80
53	A3	1244	C	C6-N1-C2	-10.11	116.25	120.30
53	A4	186	C	N1-C2-O2	10.11	124.97	118.90
53	A4	1142	G	N7-C8-N9	10.11	118.16	113.10
29	A1	879	G	C8-N9-C4	10.09	110.43	106.40
29	A1	2786	C	N3-C2-O2	-10.07	114.85	121.90
53	A3	1122	C	N1-C2-O2	10.07	124.94	118.90
29	A1	1929	C	C6-N1-C2	-10.06	116.28	120.30
53	A3	215	G	C4-N9-C1'	10.05	139.56	126.50
29	A1	2468	G	C8-N9-C4	-10.01	102.39	106.40
29	A2	1361	U	N3-C2-O2	-10.01	115.19	122.20
29	A2	2076	G	C4-C5-N7	10.01	114.80	110.80
29	A1	2369	C	N1-C2-O2	10.00	124.90	118.90
29	A2	1837	C	C6-N1-C2	9.98	124.29	120.30
29	A1	2468	G	C6-C5-N7	-9.98	124.41	130.40
53	A3	1408	C	N1-C2-O2	9.97	124.88	118.90
29	A1	1702	G	C8-N9-C1'	-9.96	114.06	127.00
29	A1	2513	C	N3-C2-O2	-9.95	114.94	121.90
29	A1	2224	C	C6-N1-C1'	-9.94	108.88	120.80
29	A2	798	C	N1-C2-O2	9.94	124.86	118.90
29	A2	1837	C	N3-C4-C5	9.94	125.87	121.90
29	A1	798	C	N1-C2-O2	9.91	124.85	118.90
53	A3	1047	U	N3-C2-O2	-9.91	115.26	122.20
29	A2	1361	U	N1-C2-O2	9.90	129.73	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	276	G	N7-C8-N9	9.89	118.05	113.10
53	A4	526	C	N1-C2-O2	9.89	124.84	118.90
29	A2	123	G	C8-N9-C4	9.87	110.35	106.40
53	A4	1377	C	C2-N1-C1'	9.86	129.64	118.80
30	B2	38	C	N1-C2-O2	9.86	124.81	118.90
53	A3	1377	C	C2-N1-C1'	9.85	129.64	118.80
53	A4	1408	C	N1-C2-O2	9.84	124.80	118.90
29	A1	2767	C	C6-N1-C2	-9.83	116.37	120.30
30	B2	39	C	C6-N1-C2	-9.83	116.37	120.30
53	A3	419	G	N7-C8-N9	9.83	118.01	113.10
53	A4	872	G	C4-C5-N7	9.83	114.73	110.80
29	A2	728	C	C6-N1-C2	-9.82	116.37	120.30
29	A1	2786	C	C2-N1-C1'	9.80	129.58	118.80
29	A1	1867	U	C5-C6-N1	9.80	127.60	122.70
29	A2	1819	A	C4-C5-N7	9.80	115.60	110.70
53	A3	1276	G	N3-C4-N9	9.78	131.87	126.00
53	A3	1248	C	N1-C2-O2	9.77	124.76	118.90
29	A1	1361	U	C2-N1-C1'	9.77	129.42	117.70
53	A4	872	G	C6-C5-N7	-9.77	124.54	130.40
29	A1	1019	G	C8-N9-C4	-9.77	102.49	106.40
53	A3	1360	C	C6-N1-C2	-9.76	116.39	120.30
29	A2	2717	C	N1-C2-O2	9.76	124.76	118.90
53	A3	1244	C	N3-C2-O2	-9.76	115.07	121.90
29	A1	227	C	C2-N1-C1'	9.75	129.53	118.80
29	A1	182	C	C6-N1-C2	-9.74	116.40	120.30
30	B2	90	C	N1-C2-O2	9.74	124.74	118.90
53	A3	413	C	C6-N1-C2	-9.73	116.41	120.30
29	A1	1702	G	C6-C5-N7	-9.72	124.57	130.40
29	A1	2598	U	C2-N1-C1'	9.72	129.36	117.70
53	A3	572	C	C5-C6-N1	9.72	125.86	121.00
29	A1	2780	A	C2-N3-C4	9.71	115.45	110.60
29	A1	946	C	C6-N1-C2	-9.71	116.42	120.30
29	A2	1958	C	C6-N1-C2	-9.70	116.42	120.30
29	A1	2203	C	N3-C4-C5	9.70	125.78	121.90
29	A1	353	U	C2-N1-C1'	9.69	129.33	117.70
30	B1	39	C	C6-N1-C2	-9.67	116.43	120.30
53	A3	572	C	C6-N1-C2	-9.67	116.43	120.30
53	A4	1282	U	N1-C2-O2	9.67	129.57	122.80
30	B1	84	G	C8-N9-C4	-9.66	102.54	106.40
29	A1	2519	G	N3-C4-N9	9.64	131.78	126.00
29	A1	2468	G	N7-C8-N9	9.64	117.92	113.10
29	A1	1024	C	N1-C2-O2	9.64	124.68	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	199	C	N3-C2-O2	-9.63	115.16	121.90
34	D4	187	ARG	C-N-CA	9.62	145.76	121.70
53	A4	1142	G	C8-N9-C4	-9.62	102.55	106.40
29	A2	723	G	C8-N9-C4	9.62	110.25	106.40
53	A4	1282	U	N3-C2-O2	-9.61	115.47	122.20
30	B1	90	C	N1-C2-O2	9.60	124.66	118.90
29	A1	1024	C	N3-C2-O2	-9.60	115.18	121.90
29	A2	39	C	C5-C6-N1	9.59	125.80	121.00
29	A2	2598	U	C2-N1-C1'	9.59	129.20	117.70
29	A2	802	C	N1-C2-O2	9.58	124.65	118.90
29	A2	444	C	C5-C6-N1	9.57	125.78	121.00
29	A2	1338	C	N1-C2-O2	9.55	124.63	118.90
29	A2	1127	C	N1-C2-O2	9.54	124.62	118.90
53	A3	996	C	C6-N1-C2	-9.53	116.49	120.30
53	A4	1377	C	N3-C2-O2	-9.52	115.23	121.90
29	A1	2526	C	N1-C2-O2	9.52	124.61	118.90
53	A3	539	C	N1-C2-O2	9.52	124.61	118.90
53	A4	1491	C	N3-C2-O2	-9.52	115.24	121.90
53	A3	323	C	C6-N1-C2	-9.52	116.49	120.30
53	A3	805	C	N1-C2-O2	9.51	124.61	118.90
29	A1	669	G	N3-C4-C5	9.51	133.35	128.60
53	A4	772	U	C2-N1-C1'	9.51	129.11	117.70
53	A4	874	C	N1-C2-O2	9.50	124.60	118.90
53	A4	917	C	C6-N1-C2	-9.50	116.50	120.30
29	A1	1465	C	C6-N1-C2	-9.49	116.50	120.30
29	A1	2582	C	N1-C2-O2	9.49	124.59	118.90
29	A1	2717	C	C2-N1-C1'	9.49	129.24	118.80
29	A2	2254	C	C6-N1-C2	-9.48	116.51	120.30
53	A4	1351	C	N1-C2-O2	9.48	124.59	118.90
53	A4	909	C	C6-N1-C2	-9.47	116.51	120.30
29	A1	1352	C	C5-C6-N1	9.47	125.73	121.00
29	A2	2254	C	N1-C2-O2	9.46	124.58	118.90
53	A4	672	C	N1-C2-O2	9.44	124.56	118.90
29	A2	1274	A	N7-C8-N9	9.43	118.51	113.80
53	A3	1361	G	N9-C4-C5	-9.42	101.63	105.40
29	A2	692	C	N3-C2-O2	-9.42	115.31	121.90
53	A3	909	C	C5-C6-N1	9.41	125.70	121.00
53	A4	1361	G	N9-C4-C5	-9.41	101.64	105.40
29	A2	2309	C	C5-C6-N1	9.40	125.70	121.00
29	A1	2829	G	N3-C4-C5	-9.40	123.90	128.60
29	A1	683	C	C6-N1-C2	-9.39	116.55	120.30
29	A1	520	G	N7-C8-N9	9.38	117.79	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	322	C	C6-N1-C2	-9.37	116.55	120.30
29	A1	1019	G	C6-C5-N7	-9.37	124.78	130.40
29	A2	1836	A	N1-C6-N6	-9.36	112.98	118.60
53	A4	1087	A	C5-N7-C8	-9.34	99.23	103.90
53	A3	1282	U	N3-C2-O2	-9.33	115.67	122.20
29	A1	1438	U	C5-C6-N1	9.32	127.36	122.70
29	A2	1300	G	C8-N9-C4	9.31	110.12	106.40
53	A3	1377	C	N3-C2-O2	-9.31	115.38	121.90
53	A4	1087	A	N7-C8-N9	9.31	118.45	113.80
29	A2	2786	C	C2-N1-C1'	9.31	129.04	118.80
29	A1	786	C	C6-N1-C2	-9.30	116.58	120.30
29	A2	1119	G	N3-C4-C5	-9.30	123.95	128.60
29	A1	2717	C	C5-C6-N1	9.30	125.65	121.00
53	A4	842	A	O5'-P-OP1	-9.29	97.34	105.70
29	A2	1867	U	C5-C6-N1	9.29	127.35	122.70
53	A3	901	C	N3-C2-O2	-9.29	115.40	121.90
16	R1	63	ASP	CB-CG-OD1	9.29	126.66	118.30
29	A2	608	G	C8-N9-C4	-9.28	102.69	106.40
53	A3	964	G	C8-N9-C4	-9.28	102.69	106.40
53	A4	1026	A	C2-N3-C4	9.28	115.24	110.60
29	A2	1338	C	N3-C2-O2	-9.28	115.41	121.90
53	A4	959	U	C2-N1-C1'	9.28	128.83	117.70
53	A4	1451	G	C8-N9-C4	-9.27	102.69	106.40
53	A3	307	C	N1-C2-O2	9.27	124.46	118.90
53	A3	703	C	C6-N1-C2	-9.27	116.59	120.30
53	A4	539	C	C2-N1-C1'	9.26	128.99	118.80
53	A3	609	U	N1-C2-O2	9.26	129.28	122.80
53	A4	851	G	C4-N9-C1'	9.26	138.54	126.50
29	A1	2700	G	C6-C5-N7	-9.26	124.85	130.40
29	A2	786	C	C6-N1-C2	-9.25	116.60	120.30
53	A3	872	G	C6-C5-N7	-9.25	124.85	130.40
53	A4	170	C	C5-C6-N1	9.25	125.62	121.00
29	A1	572	C	N1-C2-O2	9.23	124.44	118.90
53	A4	1184	C	C6-N1-C2	-9.22	116.61	120.30
29	A1	2702	U	N3-C2-O2	-9.22	115.75	122.20
53	A3	901	C	N1-C2-O2	9.22	124.43	118.90
29	A2	2505	U	N1-C2-O2	9.21	129.25	122.80
29	A1	1131	U	N1-C2-O2	9.20	129.24	122.80
29	A2	1945	G	N1-C6-O6	-9.20	114.38	119.90
53	A4	1042	C	N1-C2-O2	9.20	124.42	118.90
53	A3	672	C	N1-C2-O2	9.20	124.42	118.90
53	A4	901	C	N3-C2-O2	-9.19	115.47	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2786	C	N3-C2-O2	-9.19	115.47	121.90
29	A2	2480	C	N1-C2-O2	9.19	124.41	118.90
29	A2	728	C	N1-C2-O2	9.19	124.41	118.90
53	A3	851	G	C4-N9-C1'	9.18	138.44	126.50
29	A1	227	C	N1-C2-O2	9.18	124.41	118.90
29	A1	2586	A	C8-N9-C4	9.17	109.47	105.80
53	A3	728	C	N1-C2-O2	9.17	124.40	118.90
30	B1	33	C	C6-N1-C2	-9.16	116.64	120.30
29	A2	2626	C	C5-C6-N1	-9.16	116.42	121.00
29	A2	2702	U	N3-C2-O2	-9.16	115.79	122.20
29	A2	2717	C	C2-N1-C1'	9.16	128.87	118.80
29	A1	1808	U	N3-C2-O2	-9.15	115.79	122.20
29	A1	1702	G	C4-N9-C1'	9.15	138.40	126.50
53	A3	718	C	N3-C2-O2	-9.15	115.49	121.90
53	A3	1087	A	C5-N7-C8	-9.14	99.33	103.90
53	A3	1208	A	C8-N9-C4	-9.14	102.14	105.80
53	A4	285	C	C5-C6-N1	9.14	125.57	121.00
53	A4	1361	G	C4-C5-N7	9.14	114.46	110.80
29	A1	90	A	N7-C8-N9	9.14	118.37	113.80
29	A2	2063	C	N3-C2-O2	-9.13	115.51	121.90
29	A2	2829	G	N1-C6-O6	-9.12	114.43	119.90
53	A3	1087	A	N7-C8-N9	9.11	118.36	113.80
53	A3	1491	C	N3-C2-O2	-9.11	115.53	121.90
29	A2	2309	C	C6-N1-C2	-9.10	116.66	120.30
53	A4	180	C	N1-C2-O2	9.10	124.36	118.90
29	A2	182	C	C6-N1-C2	-9.10	116.66	120.30
53	A3	1027	C	N1-C2-O2	9.10	124.36	118.90
53	A4	285	C	C6-N1-C2	-9.09	116.66	120.30
29	A1	2063	C	N3-C2-O2	-9.09	115.54	121.90
53	A3	662	C	C6-N1-C2	-9.08	116.67	120.30
53	A3	276	G	N7-C8-N9	9.08	117.64	113.10
53	A4	1178	G	N3-C4-N9	9.07	131.44	126.00
29	A2	1338	C	C2-N1-C1'	9.07	128.78	118.80
53	A4	307	C	N1-C2-O2	9.07	124.34	118.90
53	A4	1419	C	N1-C2-O2	9.07	124.34	118.90
53	A4	263	C	N3-C2-O2	-9.06	115.55	121.90
53	A3	215	G	C8-N9-C1'	-9.06	115.22	127.00
53	A3	749	A	P-O3'-C3'	9.06	130.57	119.70
29	A1	2620	C	N1-C2-O2	9.04	124.32	118.90
53	A4	672	C	C6-N1-C2	-9.03	116.69	120.30
53	A4	1122	C	C6-N1-C2	-9.02	116.69	120.30
53	A3	772	U	N3-C2-O2	-9.02	115.89	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	913	C	N1-C2-O2	9.02	124.31	118.90
53	A4	363	U	N3-C2-O2	-9.01	115.89	122.20
29	A1	227	C	C6-N1-C2	-9.00	116.70	120.30
29	A1	2289	C	C6-N1-C2	-9.00	116.70	120.30
29	A2	2700	G	C6-C5-N7	-9.00	125.00	130.40
29	A1	856	U	C5-C6-N1	-9.00	118.20	122.70
29	A1	1354	C	C2-N1-C1'	8.99	128.69	118.80
53	A4	662	C	C6-N1-C2	-8.99	116.70	120.30
53	A4	737	C	C2-N1-C1'	8.99	128.69	118.80
53	A4	496	C	N1-C2-O2	8.98	124.29	118.90
29	A1	722	C	N3-C2-O2	-8.97	115.62	121.90
29	A1	1808	U	N1-C2-O2	8.97	129.08	122.80
53	A4	1240	C	C6-N1-C2	-8.96	116.71	120.30
29	A1	1836	A	N1-C6-N6	-8.96	113.22	118.60
53	A3	332	C	C6-N1-C2	-8.96	116.72	120.30
53	A3	780	C	N3-C2-O2	-8.96	115.63	121.90
29	A1	2505	U	N1-C2-O2	8.95	129.07	122.80
29	A2	1354	C	C2-N1-C1'	8.95	128.65	118.80
53	A3	1419	C	N1-C2-O2	8.96	124.27	118.90
29	A2	1958	C	N1-C2-O2	8.94	124.27	118.90
53	A3	1263	C	N1-C2-O2	8.94	124.26	118.90
29	A1	1465	C	N1-C2-O2	8.93	124.26	118.90
29	A2	2054	A	O4'-C1'-N9	8.93	115.34	108.20
53	A4	360	U	N3-C2-O2	-8.93	115.95	122.20
30	B2	38	C	N3-C2-O2	-8.93	115.65	121.90
53	A3	1255	G	C8-N9-C4	-8.92	102.83	106.40
30	B2	7	C	N1-C2-O2	8.92	124.25	118.90
53	A3	425	A	N1-C6-N6	8.91	123.95	118.60
53	A3	148	C	C6-N1-C1'	-8.90	110.12	120.80
53	A3	186	C	N1-C2-O2	8.90	124.24	118.90
29	A2	258	C	N1-C2-O2	8.90	124.24	118.90
29	A1	1465	C	C5-C6-N1	8.88	125.44	121.00
29	A2	444	C	C6-N1-C2	-8.87	116.75	120.30
29	A1	590	C	C5-C6-N1	8.87	125.44	121.00
29	A2	1826	C	N1-C2-O2	8.87	124.22	118.90
53	A4	1377	C	C6-N1-C1'	-8.86	110.16	120.80
29	A2	1932	C	N3-C2-O2	-8.86	115.70	121.90
29	A1	1300	G	N9-C4-C5	-8.85	101.86	105.40
29	A2	2526	C	N1-C2-O2	8.85	124.21	118.90
53	A3	1377	C	C6-N1-C1'	-8.85	110.18	120.80
29	A1	2513	C	N1-C2-O2	8.85	124.21	118.90
29	A2	2063	C	N1-C2-O2	8.85	124.21	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	B2	34	C	C6-N1-C2	-8.85	116.76	120.30
29	A2	2786	C	N1-C2-O2	8.85	124.21	118.90
53	A3	285	C	C5-C6-N1	8.84	125.42	121.00
29	A2	1724	C	N1-C2-O2	8.84	124.20	118.90
53	A3	261	G	C4-C5-N7	8.83	114.33	110.80
29	A1	2060	C	O5'-P-OP2	-8.82	97.76	105.70
53	A3	263	C	N3-C2-O2	-8.82	115.73	121.90
53	A4	956	C	C6-N1-C2	-8.82	116.77	120.30
53	A4	951	A	C2-N3-C4	8.81	115.00	110.60
53	A3	217	U	C2-N1-C1'	8.80	128.27	117.70
29	A1	2829	G	N1-C6-O6	-8.80	114.62	119.90
29	A2	669	G	N3-C4-C5	8.80	133.00	128.60
53	A4	959	U	N3-C2-O2	-8.79	116.04	122.20
29	A1	62	U	O4'-C1'-N1	8.79	115.23	108.20
29	A2	2622	G	N3-C4-N9	-8.78	120.73	126.00
29	A2	1808	U	N3-C2-O2	-8.78	116.06	122.20
53	A3	148	C	C6-N1-C2	-8.78	116.79	120.30
29	A1	2224	C	N3-C2-O2	-8.77	115.76	121.90
29	A2	1867	U	N3-C2-O2	-8.77	116.06	122.20
53	A3	1142	G	C6-C5-N7	-8.76	125.15	130.40
53	A4	749	A	P-O3'-C3'	8.75	130.21	119.70
53	A4	360	U	C6-N1-C1'	-8.75	108.95	121.20
53	A4	1000	G	C2-N3-C4	8.75	116.28	111.90
53	A4	1087	A	N1-C6-N6	8.75	123.85	118.60
29	A2	1450	C	C6-N1-C2	-8.73	116.81	120.30
53	A3	1361	G	C4-C5-N7	8.73	114.29	110.80
53	A4	443	C	C2-N1-C1'	8.73	128.41	118.80
53	A4	779	C	N1-C2-O2	8.73	124.14	118.90
53	A3	1397	G	N3-C4-N9	-8.72	120.77	126.00
29	A1	2129	C	C6-N1-C2	-8.72	116.81	120.30
29	A1	2700	G	N3-C4-C5	-8.72	124.24	128.60
53	A3	1087	A	C4-C5-N7	8.72	115.06	110.70
53	A4	851	G	C8-N9-C1'	-8.72	115.67	127.00
53	A3	270	G	N3-C2-N2	8.71	126.00	119.90
29	A2	1724	C	N3-C2-O2	-8.71	115.81	121.90
29	A2	2863	A	N7-C8-N9	8.70	118.15	113.80
53	A3	248	U	N3-C2-O2	-8.70	116.11	122.20
53	A3	909	C	C6-N1-C2	-8.69	116.83	120.30
53	A4	558	G	O5'-P-OP1	8.69	121.12	110.70
29	A1	417	G	N3-C4-C5	-8.68	124.26	128.60
29	A1	2717	C	N1-C2-O2	8.68	124.11	118.90
30	B1	16	U	N1-C2-O2	8.68	128.88	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1959	G	C8-N9-C4	8.68	109.87	106.40
29	A2	2863	A	C8-N9-C4	-8.67	102.33	105.80
29	A1	1724	C	N1-C2-O2	8.67	124.10	118.90
29	A2	132	C	N1-C2-O2	8.67	124.10	118.90
29	A2	1174	A	N1-C6-N6	-8.67	113.40	118.60
29	A1	2063	C	N1-C2-O2	8.67	124.10	118.90
29	A1	2478	C	C5-C6-N1	8.66	125.33	121.00
29	A1	821	C	N1-C2-O2	8.66	124.10	118.90
53	A3	1335	C	N1-C2-O2	8.66	124.10	118.90
30	B1	34	C	C6-N1-C2	-8.66	116.84	120.30
29	A2	227	C	C2-N1-C1'	8.65	128.32	118.80
29	A2	1127	C	N3-C2-O2	-8.65	115.84	121.90
29	A2	963	C	N1-C2-O2	8.64	124.09	118.90
53	A4	1087	A	C4-C5-N7	8.64	115.02	110.70
29	A1	2478	C	C6-N1-C2	-8.64	116.84	120.30
53	A3	772	U	N1-C2-O2	8.64	128.85	122.80
29	A1	2254	C	C5-C6-N1	8.63	125.32	121.00
29	A2	123	G	C4-N9-C1'	-8.63	115.28	126.50
29	A2	1399	C	C6-N1-C2	-8.63	116.85	120.30
53	A3	199	C	N3-C2-O2	-8.63	115.86	121.90
29	A2	2760	C	C6-N1-C2	-8.63	116.85	120.30
29	A2	2559	G	N1-C6-O6	-8.62	114.73	119.90
29	A1	935	C	C6-N1-C2	-8.62	116.85	120.30
29	A2	1819	A	C5-N7-C8	-8.62	99.59	103.90
29	A2	2570	C	N3-C2-O2	-8.62	115.87	121.90
29	A2	1808	U	N1-C2-O2	8.59	128.81	122.80
53	A3	1408	C	N3-C2-O2	-8.59	115.89	121.90
29	A1	2454	C	N3-C4-C5	8.58	125.33	121.90
29	A1	608	G	C8-N9-C4	-8.58	102.97	106.40
29	A1	2369	C	N3-C2-O2	-8.58	115.89	121.90
53	A3	1087	A	N1-C6-N6	8.58	123.75	118.60
53	A4	1333	C	C6-N1-C2	-8.58	116.87	120.30
53	A3	215	G	N3-C4-N9	8.58	131.15	126.00
29	A1	343	C	C5-C6-N1	8.58	125.29	121.00
29	A1	2480	C	N1-C2-O2	8.57	124.04	118.90
30	B1	16	U	N3-C2-O2	-8.57	116.20	122.20
53	A4	697	G	C8-N9-C4	-8.57	102.97	106.40
29	A1	1787	C	C2-N1-C1'	8.56	128.22	118.80
29	A1	1022	C	C6-N1-C2	-8.56	116.88	120.30
29	A2	2251	G	C4-C5-N7	8.56	114.22	110.80
53	A3	792	G	C8-N9-C4	8.56	109.82	106.40
53	A3	1333	C	C6-N1-C2	-8.55	116.88	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	156	A	C8-N9-C4	-8.55	102.38	105.80
29	A2	1127	C	C2-N1-C1'	8.54	128.19	118.80
53	A4	767	C	N1-C2-O2	8.54	124.02	118.90
53	A4	464	U	C5-C6-N1	8.54	126.97	122.70
29	A2	2620	C	N1-C2-O2	8.53	124.02	118.90
29	A2	2700	G	N3-C4-C5	-8.54	124.33	128.60
29	A1	722	C	C6-N1-C1'	-8.53	110.56	120.80
53	A3	1266	A	C8-N9-C4	-8.53	102.39	105.80
53	A3	360	U	N3-C2-O2	-8.52	116.23	122.20
53	A3	1331	A	N7-C8-N9	8.52	118.06	113.80
29	A1	344	C	N1-C2-O2	8.52	124.01	118.90
29	A1	852	U	C5-C6-N1	8.52	126.96	122.70
30	B1	10	U	N3-C2-O2	-8.52	116.24	122.20
53	A3	672	C	C2-N1-C1'	8.52	128.17	118.80
29	A1	2311	C	C5-C6-N1	8.51	125.26	121.00
53	A3	1331	A	C8-N9-C4	-8.51	102.39	105.80
53	A3	1046	G	C8-N9-C4	8.51	109.80	106.40
53	A3	1474	G	N3-C2-N2	-8.51	113.94	119.90
53	A4	1408	C	N3-C2-O2	-8.51	115.95	121.90
53	A3	125	C	N1-C2-O2	8.50	124.00	118.90
53	A4	215	G	N3-C4-N9	8.50	131.10	126.00
53	A4	1000	G	N3-C4-N9	8.50	131.10	126.00
53	A3	363	U	N3-C2-O2	-8.50	116.25	122.20
29	A1	2492	A	C5-C6-N1	8.50	121.95	117.70
29	A1	2559	G	N1-C6-O6	-8.50	114.80	119.90
53	A3	180	C	N1-C2-O2	8.50	124.00	118.90
53	A3	1122	C	N3-C2-O2	-8.49	115.95	121.90
29	A2	1787	C	C6-N1-C2	-8.49	116.91	120.30
53	A4	1463	G	N3-C4-C5	8.49	132.84	128.60
29	A1	1724	C	N3-C2-O2	-8.49	115.96	121.90
29	A2	1226	C	N3-C2-O2	-8.48	115.96	121.90
53	A3	156	A	C8-N9-C4	-8.48	102.41	105.80
53	A3	762	C	C2-N1-C1'	8.48	128.13	118.80
29	A2	1837	C	C2-N3-C4	-8.48	115.66	119.90
29	A1	417	G	N3-C4-N9	8.48	131.09	126.00
53	A3	1387	G	N3-C4-C5	8.48	132.84	128.60
29	A2	2167	C	C6-N1-C2	-8.48	116.91	120.30
53	A3	549	G	C4-C5-N7	8.48	114.19	110.80
53	A3	1248	C	N3-C2-O2	-8.48	115.97	121.90
53	A3	703	C	O5'-P-OP1	-8.47	98.07	105.70
29	A1	1454	U	N1-C2-O2	8.47	128.73	122.80
29	A2	103	C	C5-C6-N1	8.47	125.24	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	353	U	N1-C2-O2	8.47	128.73	122.80
29	A2	2254	C	C5-C6-N1	8.47	125.24	121.00
29	A2	1127	C	C6-N1-C2	-8.47	116.91	120.30
53	A3	913	C	N1-C2-O2	8.47	123.98	118.90
29	A2	879	G	C8-N9-C4	8.46	109.79	106.40
29	A2	2321	G	C4-N9-C1'	8.47	137.51	126.50
53	A3	1419	C	N3-C2-O2	-8.46	115.97	121.90
53	A4	84	C	N1-C2-O2	8.46	123.98	118.90
53	A3	597	A	N9-C4-C5	-8.46	102.42	105.80
53	A4	1473	C	C6-N1-C2	-8.46	116.92	120.30
29	A1	1931	G	N3-C4-N9	8.45	131.07	126.00
29	A1	2468	G	C4-N9-C1'	8.45	137.49	126.50
29	A1	417	G	C4-N9-C1'	8.45	137.49	126.50
53	A3	1068	U	N1-C2-O2	8.45	128.72	122.80
29	A1	1596	C	N1-C2-O2	8.45	123.97	118.90
29	A1	609	C	N1-C2-O2	8.45	123.97	118.90
29	A2	1024	C	N3-C2-O2	-8.45	115.99	121.90
21	W1	42	GLN	C-N-CA	8.44	142.80	121.70
53	A4	332	C	C6-N1-C2	-8.44	116.92	120.30
29	A1	2570	C	N3-C2-O2	-8.44	116.00	121.90
53	A4	357	G	C8-N9-C4	8.44	109.77	106.40
29	A2	62	U	C5-C6-N1	8.42	126.91	122.70
29	A2	236	C	C6-N1-C2	-8.42	116.93	120.30
29	A2	2512	C	C6-N1-C2	-8.42	116.93	120.30
29	A2	227	C	C6-N1-C2	-8.42	116.93	120.30
53	A4	967	C	C2-N1-C1'	8.42	128.06	118.80
29	A2	272	U	N3-C2-O2	-8.41	116.31	122.20
29	A2	2454	C	N3-C4-C5	8.41	125.27	121.90
29	A1	472	C	C6-N1-C2	-8.41	116.94	120.30
29	A1	520	G	C8-N9-C4	-8.41	103.04	106.40
29	A2	126	C	C6-N1-C2	-8.41	116.94	120.30
29	A1	2254	C	N1-C2-O2	8.41	123.94	118.90
53	A4	276	G	C5-N7-C8	-8.41	100.10	104.30
53	A4	1068	U	N1-C2-O2	8.41	128.69	122.80
29	A1	1787	C	C6-N1-C2	-8.40	116.94	120.30
53	A3	717	G	C4-N9-C1'	8.40	137.42	126.50
29	A1	2519	G	N3-C4-C5	-8.40	124.40	128.60
30	B2	90	C	N3-C2-O2	-8.40	116.02	121.90
29	A1	802	C	N3-C2-O2	-8.39	116.02	121.90
53	A4	727	C	C6-N1-C2	-8.39	116.94	120.30
29	A1	1903	C	C6-N1-C2	-8.39	116.94	120.30
29	A2	2505	U	N3-C2-O2	-8.39	116.33	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1119	C	C6-N1-C2	-8.39	116.94	120.30
29	A2	609	C	N1-C2-O2	8.39	123.93	118.90
53	A3	479	A	C5-N7-C8	-8.38	99.71	103.90
53	A3	717	G	C8-N9-C1'	-8.38	116.11	127.00
53	A4	966	C	C5-C4-N4	-8.38	114.33	120.20
29	A2	1550	C	C6-N1-C2	-8.37	116.95	120.30
29	A1	1450	C	C6-N1-C2	-8.37	116.95	120.30
29	A1	2758	C	C6-N1-C2	-8.37	116.95	120.30
53	A4	907	C	N3-C4-C5	8.37	125.25	121.90
29	A1	2369	C	C2-N1-C1'	8.36	128.00	118.80
53	A3	851	G	C8-N9-C1'	-8.36	116.13	127.00
29	A2	1748	G	C4-C5-N7	8.36	114.14	110.80
53	A4	24	U	C5-C6-N1	8.36	126.88	122.70
53	A4	419	G	C6-C5-N7	-8.35	125.39	130.40
29	A1	1604	G	N3-C4-N9	8.35	131.01	126.00
53	A3	917	C	C6-N1-C2	-8.35	116.96	120.30
53	A4	582	C	N1-C2-O2	8.35	123.91	118.90
53	A3	1463	G	N3-C4-C5	8.34	132.77	128.60
29	A1	132	C	N1-C2-O2	8.34	123.90	118.90
29	A2	1624	C	N1-C2-O2	8.34	123.90	118.90
53	A3	776	U	C2-N1-C1'	8.34	127.71	117.70
29	A2	1837	C	C5-C4-N4	-8.34	114.36	120.20
53	A3	727	C	N1-C2-O2	8.34	123.90	118.90
29	A1	782	G	C4-C5-N7	8.34	114.13	110.80
29	A1	2521	C	N1-C2-O2	8.33	123.90	118.90
53	A3	1397	G	C4-N9-C1'	-8.33	115.67	126.50
29	A2	2119	C	C5-C6-N1	8.33	125.17	121.00
29	A1	2129	C	N1-C2-O2	8.33	123.90	118.90
29	A2	2755	A	N1-C6-N6	-8.32	113.61	118.60
29	A2	1791	G	C4-N9-C1'	8.32	137.31	126.50
29	A2	1799	U	N3-C2-O2	-8.32	116.38	122.20
53	A3	360	U	N1-C2-O2	8.32	128.62	122.80
53	A3	1110	C	C6-N1-C2	-8.31	116.97	120.30
29	A2	692	C	C6-N1-C2	-8.31	116.97	120.30
29	A2	1799	U	N1-C2-O2	8.31	128.62	122.80
53	A4	197	G	C5-C6-O6	-8.31	123.61	128.60
29	A1	1869	C	C6-N1-C2	-8.31	116.98	120.30
29	A2	2005	A	C8-N9-C4	-8.31	102.48	105.80
53	A3	24	U	C5-C6-N1	8.31	126.85	122.70
29	A2	2717	C	N3-C2-O2	-8.30	116.09	121.90
53	A3	511	C	N3-C2-O2	-8.30	116.09	121.90
29	A2	2716	U	N1-C2-O2	8.30	128.61	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	344	C	N3-C2-O2	-8.29	116.10	121.90
29	A1	854	G	C8-N9-C4	8.29	109.72	106.40
29	A2	1399	C	C2-N1-C1'	8.29	127.92	118.80
29	A2	2335	G	C4-N9-C1'	8.29	137.27	126.50
29	A2	2132	C	C5-C6-N1	8.28	125.14	121.00
29	A1	1480	C	C2-N1-C1'	8.28	127.91	118.80
29	A2	2505	U	C6-N1-C1'	-8.28	109.61	121.20
29	A1	1362	C	C6-N1-C2	-8.27	116.99	120.30
29	A2	98	U	C2-N1-C1'	8.27	127.63	117.70
53	A4	1419	C	N3-C2-O2	-8.27	116.11	121.90
29	A1	2505	U	C6-N1-C1'	-8.27	109.62	121.20
29	A1	258	C	N1-C2-O2	8.26	123.86	118.90
29	A2	937	C	C6-N1-C2	-8.26	117.00	120.30
29	A1	1362	C	N3-C2-O2	-8.26	116.12	121.90
29	A2	332	G	C8-N9-C4	-8.26	103.10	106.40
29	A1	1867	U	C6-N1-C1'	-8.26	109.64	121.20
29	A1	2005	A	C8-N9-C4	-8.25	102.50	105.80
29	A1	1799	U	N3-C2-O2	-8.25	116.43	122.20
53	A3	1325	C	N1-C2-O2	8.25	123.85	118.90
29	A1	2480	C	N3-C2-O2	-8.25	116.13	121.90
29	A1	1748	G	C4-C5-N7	8.24	114.10	110.80
29	A2	1202	G	C8-N9-C4	8.24	109.70	106.40
53	A4	323	C	C6-N1-C2	-8.24	117.00	120.30
29	A1	1819	A	C4-C5-N7	8.24	114.82	110.70
29	A2	1624	C	C2-N1-C1'	8.24	127.86	118.80
29	A1	1702	G	N3-C4-C5	-8.24	124.48	128.60
29	A1	2519	G	N1-C2-N2	-8.23	108.79	116.20
29	A2	1869	C	C6-N1-C2	-8.23	117.01	120.30
53	A3	560	G	N1-C2-N2	-8.22	108.80	116.20
29	A2	2480	C	C5-C6-N1	8.21	125.11	121.00
29	A2	1399	C	C5-C6-N1	8.21	125.10	121.00
29	A1	1454	U	C2-N1-C1'	8.21	127.55	117.70
53	A4	1406	C	O4'-C1'-N1	8.20	114.76	108.20
29	A2	1776	C	C5-C6-N1	8.20	125.10	121.00
29	A2	1823	C	C6-N1-C2	-8.20	117.02	120.30
30	B2	3	U	O5'-P-OP2	-8.20	98.32	105.70
29	A1	821	C	N3-C2-O2	-8.20	116.16	121.90
29	A2	678	G	C8-N9-C4	8.20	109.68	106.40
29	A2	2700	G	C4-N9-C1'	8.20	137.16	126.50
29	A2	1024	C	N1-C2-O2	8.20	123.82	118.90
53	A3	1397	G	C8-N9-C1'	8.20	137.66	127.00
29	A1	1480	C	N1-C2-O2	8.19	123.82	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	B1	49	C	C6-N1-C2	-8.20	117.02	120.30
53	A3	673	G	O4'-C1'-N9	8.19	114.75	108.20
29	A2	2478	C	C5-C6-N1	8.19	125.09	121.00
29	A1	2512	C	C6-N1-C2	-8.18	117.03	120.30
29	A2	1814	C	N1-C2-O2	8.18	123.81	118.90
29	A2	1867	U	C6-N1-C1'	-8.18	109.74	121.20
53	A3	1255	G	N7-C8-N9	8.18	117.19	113.10
53	A4	419	G	C4-C5-N7	8.18	114.07	110.80
29	A2	123	G	N3-C4-C5	8.18	132.69	128.60
29	A1	1819	A	C5-N7-C8	-8.18	99.81	103.90
53	A4	560	G	N1-C2-N2	-8.18	108.84	116.20
29	A2	1708	U	C5-C6-N1	8.17	126.78	122.70
29	A2	690	C	N3-C2-O2	-8.17	116.18	121.90
29	A2	2570	C	N1-C2-O2	8.17	123.80	118.90
53	A4	730	C	N1-C2-O2	8.17	123.80	118.90
29	A2	2521	C	N1-C2-O2	8.16	123.80	118.90
29	A2	2229	G	N3-C4-N9	8.16	130.90	126.00
29	A1	1957	G	N7-C8-N9	8.16	117.18	113.10
53	A4	597	A	N9-C4-C5	-8.16	102.54	105.80
29	A2	802	C	N3-C2-O2	-8.16	116.19	121.90
29	A2	1485	C	N1-C2-O2	8.16	123.79	118.90
29	A1	1303	U	C2-N1-C1'	8.15	127.49	117.70
29	A1	1799	U	N1-C2-O2	8.15	128.51	122.80
30	B1	90	C	C2-N1-C1'	8.15	127.77	118.80
29	A1	1867	U	N3-C2-O2	-8.15	116.50	122.20
29	A2	2376	G	N3-C4-N9	-8.15	121.11	126.00
53	A3	1311	U	N1-C2-O2	8.15	128.50	122.80
53	A4	1491	C	N1-C2-O2	8.15	123.79	118.90
29	A2	2622	G	N3-C4-C5	8.14	132.67	128.60
29	A1	2505	U	N3-C2-O2	-8.14	116.50	122.20
29	A2	854	G	C8-N9-C4	8.14	109.66	106.40
29	A2	1579	C	N1-C2-O2	8.14	123.78	118.90
29	A1	2710	U	C5-C6-N1	8.14	126.77	122.70
29	A1	1604	G	C8-N9-C1'	-8.13	116.43	127.00
29	A2	1071	U	N3-C2-O2	-8.13	116.51	122.20
53	A4	901	C	N1-C2-O2	8.13	123.78	118.90
29	A2	2586	A	C8-N9-C4	8.12	109.05	105.80
53	A4	1365	C	N1-C2-O2	8.12	123.77	118.90
29	A1	1202	G	C8-N9-C4	8.12	109.65	106.40
53	A3	289	U	N3-C2-O2	-8.12	116.51	122.20
53	A4	959	U	N1-C2-O2	8.12	128.48	122.80
29	A2	32	C	N3-C2-O2	-8.12	116.22	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	735	G	C4-C5-N7	8.12	114.05	110.80
29	A1	661	C	C6-N1-C2	-8.12	117.05	120.30
29	A1	841	G	N3-C4-C5	-8.11	124.55	128.60
29	A1	2084	A	O5'-P-OP2	-8.11	98.40	105.70
53	A3	1282	U	N1-C2-O2	8.11	128.48	122.80
53	A4	452	C	N1-C2-O2	8.11	123.77	118.90
29	A2	1140	C	C6-N1-C2	-8.11	117.06	120.30
53	A4	1228	U	C5-C6-N1	8.11	126.75	122.70
29	A1	661	C	C5-C6-N1	8.10	125.05	121.00
53	A3	1379	C	N1-C2-O2	8.10	123.76	118.90
53	A4	776	U	C2-N1-C1'	8.10	127.42	117.70
29	A1	1164	C	C6-N1-C2	-8.10	117.06	120.30
29	A2	1592	C	C2-N1-C1'	8.10	127.71	118.80
29	A1	2076	G	C5-N7-C8	-8.10	100.25	104.30
29	A1	444	C	C6-N1-C2	-8.09	117.06	120.30
53	A3	1325	C	N3-C2-O2	-8.09	116.24	121.90
29	A2	1957	G	N7-C8-N9	8.09	117.14	113.10
53	A3	964	G	N7-C8-N9	8.08	117.14	113.10
29	A1	2016	G	P-O3'-C3'	8.08	129.39	119.70
29	A1	287	C	N3-C2-O2	-8.07	116.25	121.90
29	A1	2251	G	C4-C5-N7	8.07	114.03	110.80
29	A1	2871	G	C4-C5-N7	8.07	114.03	110.80
53	A3	760	A	N9-C4-C5	-8.07	102.57	105.80
29	A2	1226	C	C2-N1-C1'	8.07	127.67	118.80
53	A4	497	C	C5-C6-N1	8.07	125.03	121.00
29	A2	2326	U	C5-C6-N1	8.06	126.73	122.70
29	A2	1523	C	C5-C6-N1	8.06	125.03	121.00
29	A1	2417	C	C6-N1-C2	-8.05	117.08	120.30
53	A4	1025	C	C6-N1-C2	-8.05	117.08	120.30
53	A3	413	C	C5-C6-N1	8.05	125.02	121.00
53	A3	1079	C	N3-C2-O2	-8.05	116.27	121.90
29	A2	1454	U	C2-N1-C1'	8.04	127.35	117.70
30	B2	90	C	C2-N1-C1'	8.04	127.65	118.80
29	A2	1604	G	N3-C4-N9	8.04	130.83	126.00
53	A3	1366	C	C6-N1-C2	-8.04	117.08	120.30
53	A3	285	C	C6-N1-C2	-8.04	117.08	120.30
29	A2	692	C	C6-N1-C1'	-8.04	111.16	120.80
53	A3	1366	C	C5-C6-N1	8.03	125.02	121.00
29	A1	2863	A	C8-N9-C4	-8.03	102.59	105.80
29	A2	1454	U	N1-C2-O2	8.03	128.42	122.80
29	A1	1604	G	C4-N9-C1'	8.03	136.94	126.50
53	A3	1476	A	C8-N9-C4	8.02	109.01	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1790	U	C2-N1-C1'	8.02	127.32	117.70
29	A1	1485	C	N1-C2-O2	8.02	123.71	118.90
29	A2	798	C	C6-N1-C2	-8.02	117.09	120.30
29	A1	1837	C	N3-C4-C5	8.02	125.11	121.90
53	A4	932	U	C6-N1-C2	-8.02	116.19	121.00
29	A1	227	C	N3-C2-O2	-8.01	116.29	121.90
53	A3	1335	C	N3-C2-O2	-8.01	116.29	121.90
29	A2	173	C	N3-C2-O2	-8.01	116.30	121.90
30	B2	49	C	C6-N1-C2	-8.01	117.10	120.30
53	A3	872	G	C5-N7-C8	-8.01	100.30	104.30
29	A1	1823	C	C6-N1-C2	-8.00	117.10	120.30
53	A3	776	U	N1-C2-O2	8.00	128.40	122.80
53	A3	606	C	C5-C4-N4	-8.00	114.60	120.20
29	A1	173	C	N3-C2-O2	-8.00	116.30	121.90
29	A2	1303	U	C2-N1-C1'	8.00	127.30	117.70
53	A3	959	U	N3-C2-O2	-8.00	116.60	122.20
29	A2	1916	C	C5-C6-N1	8.00	125.00	121.00
29	A2	782	G	C4-C5-N7	8.00	114.00	110.80
53	A3	1284	C	N3-C2-O2	-7.99	116.30	121.90
29	A2	2480	C	C2-N1-C1'	7.99	127.59	118.80
29	A1	1247	C	C6-N1-C2	-7.99	117.11	120.30
2	D2	17	ASP	CB-CG-OD1	7.99	125.49	118.30
29	A2	58	U	N3-C2-O2	-7.99	116.61	122.20
53	A4	276	G	C6-C5-N7	-7.98	125.61	130.40
53	A4	496	C	N3-C2-O2	-7.98	116.31	121.90
53	A4	148	C	C2-N1-C1'	7.98	127.58	118.80
29	A1	733	G	C6-N1-C2	-7.98	120.31	125.10
29	A1	126	C	C6-N1-C2	-7.97	117.11	120.30
29	A2	1790	U	C2-N1-C1'	7.97	127.26	117.70
29	A2	728	C	C6-N1-C1'	-7.97	111.24	120.80
53	A3	1459	G	C6-C5-N7	-7.97	125.62	130.40
29	A1	2570	C	N1-C2-O2	7.97	123.68	118.90
53	A4	780	C	N1-C2-O2	7.97	123.68	118.90
29	A1	1808	U	C2-N1-C1'	7.96	127.25	117.70
29	A1	2132	C	C5-C6-N1	7.96	124.98	121.00
53	A3	443	C	N3-C2-O2	-7.96	116.33	121.90
53	A3	1381	C	C2-N3-C4	-7.96	115.92	119.90
53	A4	212	C	C6-N1-C2	-7.96	117.12	120.30
53	A3	669	U	N3-C4-O4	-7.96	113.83	119.40
53	A4	215	G	N3-C4-C5	-7.96	124.62	128.60
29	A2	667	C	C6-N1-C2	-7.95	117.12	120.30
53	A3	1366	C	C2-N1-C1'	7.95	127.55	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	728	C	N3-C2-O2	-7.95	116.33	121.90
29	A1	1708	U	C5-C6-N1	7.95	126.67	122.70
29	A2	1438	U	C5-C6-N1	7.95	126.68	122.70
53	A3	561	C	C6-N1-C2	-7.95	117.12	120.30
29	A1	2030	C	N1-C2-O2	7.95	123.67	118.90
30	B1	116	C	N1-C2-O2	7.95	123.67	118.90
53	A3	328	G	C8-N9-C4	7.94	109.58	106.40
53	A4	502	C	C5-C6-N1	7.94	124.97	121.00
53	A3	907	C	N3-C4-C5	7.94	125.08	121.90
53	A4	805	C	N3-C2-O2	-7.94	116.34	121.90
29	A1	1711	C	N3-C2-O2	-7.93	116.35	121.90
53	A4	770	A	C5-C6-N6	-7.93	117.35	123.70
29	A1	2566	U	C5-C6-N1	7.93	126.67	122.70
53	A4	199	C	C2-N1-C1'	7.93	127.52	118.80
53	A4	1360	C	C6-N1-C1'	7.93	130.31	120.80
29	A1	1523	C	C6-N1-C2	-7.92	117.13	120.30
30	B1	84	G	C4-N9-C1'	7.92	136.80	126.50
53	A3	889	C	C6-N1-C2	-7.92	117.13	120.30
29	A2	1243	C	N1-C2-O2	7.92	123.65	118.90
29	A2	227	C	C5-C6-N1	7.92	124.96	121.00
29	A2	2829	G	N3-C4-N9	7.92	130.75	126.00
53	A4	703	C	C6-N1-C2	-7.92	117.13	120.30
53	A4	964	G	C8-N9-C4	-7.92	103.23	106.40
29	A2	1803	G	C5-C6-O6	7.91	133.35	128.60
29	A2	2573	C	N3-C2-O2	-7.91	116.36	121.90
29	A1	1702	G	N9-C4-C5	-7.91	102.24	105.40
53	A3	276	G	C5-N7-C8	-7.91	100.35	104.30
53	A3	872	G	N1-C6-O6	7.91	124.64	119.90
29	A2	2478	C	C6-N1-C2	-7.91	117.14	120.30
29	A2	1604	G	C8-N9-C1'	-7.91	116.72	127.00
29	A2	2369	C	C6-N1-C2	-7.91	117.14	120.30
29	A2	2152	C	C6-N1-C2	-7.90	117.14	120.30
30	B1	84	G	N3-C4-C5	-7.90	124.65	128.60
53	A4	306	C	C6-N1-C2	-7.90	117.14	120.30
53	A4	930	G	N3-C4-N9	7.90	130.74	126.00
29	A1	979	G	N3-C4-N9	7.89	130.74	126.00
29	A1	1300	G	C5-C6-O6	-7.89	123.86	128.60
29	A1	2810	G	C6-C5-N7	-7.89	125.66	130.40
29	A1	1819	A	N9-C4-C5	-7.89	102.64	105.80
53	A4	235	C	C6-N1-C2	-7.89	117.14	120.30
30	B2	34	C	C5-C6-N1	7.89	124.94	121.00
29	A1	332	G	C8-N9-C4	-7.89	103.25	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2382	C	C5-C6-N1	7.89	124.94	121.00
53	A4	526	C	C2-N1-C1'	7.89	127.47	118.80
29	A1	2205	G	C8-N9-C4	-7.88	103.25	106.40
53	A4	215	G	C4-N9-C1'	7.88	136.75	126.50
29	A2	2566	U	C5-C6-N1	7.88	126.64	122.70
53	A3	363	U	N1-C2-O2	7.88	128.32	122.80
53	A3	788	C	N3-C2-O2	-7.88	116.39	121.90
11	M1	111	LEU	CA-CB-CG	7.88	133.41	115.30
53	A4	1208	A	C8-N9-C4	-7.88	102.65	105.80
29	A1	798	C	C6-N1-C2	-7.87	117.15	120.30
53	A3	185	C	C6-N1-C2	-7.87	117.15	120.30
29	A1	531	U	N3-C2-O2	-7.87	116.69	122.20
53	A4	289	U	N3-C2-O2	-7.87	116.69	122.20
29	A2	466	G	N3-C4-C5	-7.87	124.67	128.60
29	A2	1833	C	C5-C6-N1	-7.87	117.07	121.00
53	A4	1318	G	N3-C2-N2	7.87	125.41	119.90
29	A2	1975	U	N3-C2-O2	-7.87	116.69	122.20
29	A2	1173	G	N7-C8-N9	7.86	117.03	113.10
53	A4	231	G	C8-N9-C4	7.86	109.55	106.40
53	A4	1469	A	C8-N9-C4	7.86	108.94	105.80
29	A2	2030	C	N1-C2-O2	7.86	123.62	118.90
53	A4	580	G	C4-C5-N7	7.86	113.94	110.80
53	A3	580	G	C4-C5-N7	7.86	113.94	110.80
29	A1	1234	G	N3-C4-N9	7.86	130.71	126.00
53	A3	261	G	C5-C6-O6	-7.85	123.89	128.60
29	A1	1916	C	C5-C6-N1	7.85	124.92	121.00
29	A2	2382	C	C5-C6-N1	7.85	124.92	121.00
53	A3	1387	G	N3-C4-N9	-7.85	121.29	126.00
29	A2	1949	C	C6-N1-C2	-7.85	117.16	120.30
29	A1	790	G	N1-C6-O6	-7.84	115.19	119.90
29	A2	191	C	C6-N1-C2	-7.84	117.16	120.30
29	A1	1130	U	C5-C6-N1	7.84	126.62	122.70
29	A2	1898	G	O4'-C1'-N9	7.84	114.47	108.20
29	A2	226	C	C6-N1-C2	-7.84	117.17	120.30
29	A1	455	C	C5-C6-N1	7.84	124.92	121.00
30	B1	79	U	N3-C2-O2	-7.84	116.71	122.20
29	A1	1837	C	C6-N1-C2	7.83	123.43	120.30
53	A4	451	C	N1-C2-O2	7.83	123.60	118.90
53	A4	792	G	C8-N9-C4	7.83	109.53	106.40
29	A2	187	A	C8-N9-C4	7.83	108.93	105.80
29	A2	2076	G	C5-N7-C8	-7.83	100.39	104.30
29	A2	227	C	N1-C2-O2	7.83	123.60	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2865	C	N1-C2-O2	7.82	123.59	118.90
29	A2	1557	C	C6-N1-C2	-7.82	117.17	120.30
29	A2	1604	G	C4-N9-C1'	7.82	136.67	126.50
53	A4	663	C	N1-C2-O2	7.82	123.59	118.90
29	A1	1120	C	N1-C2-O2	7.82	123.59	118.90
29	A1	2004	G	C8-N9-C1'	-7.81	116.85	127.00
53	A4	261	G	C5-C6-O6	-7.81	123.92	128.60
29	A1	343	C	C6-N1-C2	-7.80	117.18	120.30
29	A1	1131	U	N3-C2-O2	-7.80	116.74	122.20
29	A1	2345	G	C4-C5-N7	7.80	113.92	110.80
29	A1	599	C	C6-N1-C2	-7.80	117.18	120.30
53	A4	125	C	N1-C2-O2	7.80	123.58	118.90
29	A2	2016	G	P-O3'-C3'	7.80	129.06	119.70
29	A1	1580	C	C5-C6-N1	7.80	124.90	121.00
29	A1	2573	C	N3-C2-O2	-7.80	116.44	121.90
29	A2	661	C	C6-N1-C2	-7.80	117.18	120.30
53	A3	549	G	C6-C5-N7	-7.80	125.72	130.40
29	A1	2737	G	C4-N9-C1'	7.79	136.63	126.50
53	A4	1254	G	C4-C5-N7	7.79	113.92	110.80
29	A2	667	C	C5-C6-N1	7.79	124.89	121.00
53	A3	788	C	N1-C2-O2	7.79	123.57	118.90
29	A2	103	C	C6-N1-C2	-7.79	117.18	120.30
29	A1	901	G	N3-C4-N9	7.79	130.67	126.00
29	A1	2494	C	C6-N1-C2	-7.78	117.19	120.30
29	A2	2767	C	C5-C6-N1	7.78	124.89	121.00
29	A1	353	U	N3-C2-O2	-7.78	116.75	122.20
29	A2	1661	G	C6-C5-N7	-7.78	125.73	130.40
29	A2	2369	C	N3-C2-O2	-7.78	116.45	121.90
53	A3	511	C	N1-C2-O2	7.78	123.57	118.90
53	A4	1370	C	N3-C2-O2	-7.78	116.45	121.90
29	A2	595	G	C2-N3-C4	-7.78	108.01	111.90
29	A1	1957	G	C6-C5-N7	-7.78	125.73	130.40
29	A1	834	G	C6-C5-N7	-7.78	125.73	130.40
53	A3	951	A	O5'-P-OP2	-7.78	98.70	105.70
29	A1	669	G	C2-N3-C4	-7.77	108.01	111.90
29	A1	287	C	N1-C2-O2	7.77	123.56	118.90
29	A1	595	G	C2-N3-C4	-7.77	108.02	111.90
29	A2	946	C	C5-C6-N1	7.77	124.88	121.00
29	A2	2228	C	O4'-C1'-N1	7.77	114.41	108.20
29	A1	2227	U	N3-C2-O2	-7.77	116.76	122.20
29	A1	2863	A	N7-C8-N9	7.76	117.68	113.80
29	A2	1454	U	N3-C2-O2	-7.76	116.77	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	328	G	N9-C4-C5	-7.76	102.30	105.40
53	A4	930	G	C5-C6-O6	-7.76	123.94	128.60
40	J3	8	LEU	CA-CB-CG	7.75	133.13	115.30
53	A4	217	U	C6-N1-C1'	-7.75	110.34	121.20
29	A1	821	C	N3-C4-N4	-7.75	112.58	118.00
29	A1	960	C	C6-N1-C2	-7.75	117.20	120.30
53	A4	930	G	C8-N9-C1'	-7.75	116.93	127.00
29	A2	1932	C	C5-C6-N1	7.74	124.87	121.00
53	A4	455	C	C6-N1-C2	-7.74	117.20	120.30
29	A1	1398	C	N1-C2-O2	7.74	123.54	118.90
29	A2	1436	G	C4-N9-C1'	7.74	136.56	126.50
53	A4	1079	C	N3-C2-O2	-7.74	116.48	121.90
29	A1	2030	C	N3-C2-O2	-7.73	116.49	121.90
29	A2	1173	G	C4-N9-C1'	7.73	136.55	126.50
53	A4	779	C	N3-C2-O2	-7.73	116.49	121.90
29	A2	2321	G	C8-N9-C1'	-7.73	116.95	127.00
53	A3	1396	U	N1-C2-O2	7.73	128.21	122.80
53	A4	845	C	N1-C2-O2	7.73	123.54	118.90
29	A2	1787	C	C2-N1-C1'	7.73	127.30	118.80
53	A4	1170	C	C6-N1-C2	-7.73	117.21	120.30
29	A2	723	G	N1-C2-N2	-7.72	109.25	116.20
29	A2	1791	G	C8-N9-C1'	-7.72	116.96	127.00
29	A2	126	C	C5-C6-N1	7.72	124.86	121.00
53	A4	932	U	N1-C2-O2	7.72	128.20	122.80
29	A2	790	G	N1-C6-O6	-7.72	115.27	119.90
53	A3	1276	G	N9-C4-C5	-7.72	102.31	105.40
53	A3	221	G	N9-C4-C5	7.71	108.48	105.40
29	A1	1840	G	N3-C4-N9	-7.71	121.37	126.00
29	A2	259	U	O4'-C1'-N1	7.71	114.37	108.20
29	A2	2004	G	C8-N9-C1'	-7.71	116.97	127.00
29	A2	639	U	C6-N1-C1'	-7.71	110.41	121.20
29	A2	830	A	C8-N9-C4	7.71	108.88	105.80
53	A3	496	C	N1-C2-O2	7.71	123.53	118.90
53	A4	932	U	C2-N1-C1'	7.71	126.95	117.70
29	A1	531	U	N1-C2-O2	7.71	128.19	122.80
29	A1	2152	C	C6-N1-C2	-7.71	117.22	120.30
29	A2	2710	U	C5-C6-N1	7.71	126.55	122.70
53	A4	1404	G	C6-C5-N7	-7.71	125.78	130.40
29	A2	2030	C	N3-C2-O2	-7.70	116.51	121.90
53	A4	131	C	C6-N1-C2	-7.70	117.22	120.30
29	A1	733	G	C6-C5-N7	-7.70	125.78	130.40
53	A4	270	G	C4-N9-C1'	7.70	136.51	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	938	C	C2-N1-C1'	7.70	127.27	118.80
29	A1	1347	G	C8-N9-C4	7.70	109.48	106.40
29	A1	2675	G	C8-N9-C4	-7.70	103.32	106.40
53	A4	981	G	N7-C8-N9	7.70	116.95	113.10
29	A1	830	A	C8-N9-C4	7.70	108.88	105.80
29	A1	1274	A	C5-N7-C8	-7.69	100.05	103.90
29	A2	841	G	N3-C4-C5	-7.69	124.75	128.60
53	A4	170	C	C6-N1-C2	-7.69	117.22	120.30
29	A2	1071	U	N1-C2-O2	7.69	128.18	122.80
29	A2	764	G	O5'-P-OP2	-7.69	98.78	105.70
53	A3	306	C	C6-N1-C2	-7.69	117.22	120.30
29	A1	1131	U	C5-C6-N1	7.68	126.54	122.70
53	A3	663	C	N1-C2-O2	7.68	123.51	118.90
29	A1	1254	C	C6-N1-C2	-7.68	117.23	120.30
53	A3	1360	C	C6-N1-C1'	7.68	130.02	120.80
29	A2	1916	C	N1-C2-O2	7.68	123.51	118.90
29	A2	2028	G	N3-C4-C5	-7.68	124.76	128.60
53	A4	48	C	O4'-C1'-N1	7.68	114.34	108.20
53	A4	1123	C	C6-N1-C2	-7.68	117.23	120.30
29	A1	2205	G	N7-C8-N9	7.67	116.94	113.10
53	A3	1379	C	C2-N1-C1'	7.67	127.24	118.80
53	A4	749	A	OP1-P-O3'	7.67	122.08	105.20
30	B1	34	C	C5-C6-N1	7.67	124.84	121.00
53	A3	763	A	N1-C6-N6	7.67	123.20	118.60
53	A3	1027	C	N3-C2-O2	-7.67	116.53	121.90
53	A4	672	C	C5-C6-N1	7.67	124.83	121.00
53	A3	1333	C	C5-C6-N1	7.67	124.83	121.00
29	A1	802	C	C2-N1-C1'	7.66	127.23	118.80
53	A4	1379	C	C2-N1-C1'	7.66	127.23	118.80
29	A2	2067	C	N1-C2-O2	7.66	123.50	118.90
29	A2	2004	G	N3-C4-N9	7.66	130.60	126.00
53	A4	889	C	C6-N1-C2	-7.66	117.24	120.30
29	A1	2179	G	N3-C4-C5	-7.66	124.77	128.60
29	A2	1399	C	N1-C2-O2	7.66	123.49	118.90
53	A3	1186	U	C6-N1-C2	-7.66	116.41	121.00
29	A2	609	C	C6-N1-C2	-7.66	117.24	120.30
29	A2	1347	G	C8-N9-C4	7.65	109.46	106.40
29	A1	2519	G	N3-C2-N2	7.65	125.25	119.90
53	A3	1473	C	C6-N1-C2	-7.65	117.24	120.30
29	A2	2115	U	N3-C2-O2	-7.65	116.85	122.20
53	A4	87	C	C6-N1-C2	-7.65	117.24	120.30
53	A4	776	U	N1-C2-O2	7.65	128.15	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	98	U	N1-C2-O2	7.64	128.15	122.80
53	A4	1124	G	O4'-C1'-N9	7.64	114.31	108.20
29	A2	2181	G	N3-C4-N9	-7.64	121.42	126.00
53	A4	563	U	C2-N1-C1'	7.64	126.87	117.70
53	A4	1218	C	N1-C2-O2	7.64	123.48	118.90
29	A2	2251	G	C6-C5-N7	-7.64	125.82	130.40
29	A2	243	C	C5-C6-N1	7.63	124.82	121.00
53	A3	270	G	N3-C4-C5	-7.63	124.78	128.60
53	A3	735	G	C8-N9-C4	-7.63	103.35	106.40
53	A4	1311	U	N1-C2-O2	7.63	128.14	122.80
29	A2	191	C	C5-C6-N1	7.63	124.82	121.00
29	A1	287	C	C6-N1-C2	-7.63	117.25	120.30
53	A4	986	C	C5-C6-N1	7.63	124.81	121.00
29	A1	749	G	C4-C5-N7	7.62	113.85	110.80
53	A3	780	C	C2-N1-C1'	7.62	127.19	118.80
53	A4	1178	G	C4-C5-N7	7.62	113.85	110.80
29	A2	219	A	P-O3'-C3'	7.62	128.84	119.70
29	A2	1209	C	C6-N1-C2	-7.62	117.25	120.30
29	A1	1771	G	N3-C4-C5	-7.62	124.79	128.60
29	A1	2004	G	N3-C4-N9	7.62	130.57	126.00
29	A1	2687	G	C4-C5-N7	7.62	113.85	110.80
53	A4	1379	C	N1-C2-O2	7.62	123.47	118.90
29	A1	1833	C	C5-C6-N1	-7.61	117.19	121.00
29	A1	2840	C	O4'-C1'-N1	7.61	114.29	108.20
29	A2	1830	C	N1-C2-O2	7.61	123.47	118.90
53	A4	1476	A	C8-N9-C4	7.61	108.84	105.80
29	A1	1754	G	C8-N9-C4	-7.61	103.36	106.40
53	A3	675	U	C5-C6-N1	7.61	126.50	122.70
53	A4	335	U	N1-C2-O2	7.61	128.13	122.80
53	A4	1215	C	C6-N1-C2	-7.61	117.26	120.30
29	A1	1071	U	N3-C2-O2	-7.61	116.88	122.20
53	A4	986	C	C2-N3-C4	7.61	123.70	119.90
29	A1	1457	C	C6-N1-C2	-7.60	117.26	120.30
29	A1	1931	G	N9-C4-C5	-7.60	102.36	105.40
29	A2	126	C	C2-N1-C1'	7.59	127.15	118.80
53	A3	87	C	C6-N1-C2	-7.59	117.26	120.30
53	A3	653	G	C5-C6-N1	7.59	115.30	111.50
53	A3	1047	U	C2-N1-C1'	7.59	126.81	117.70
29	A1	912	A	N7-C8-N9	7.59	117.59	113.80
53	A3	979	G	C8-N9-C4	-7.59	103.36	106.40
29	A1	397	C	N3-C4-C5	7.58	124.93	121.90
29	A2	1957	G	C6-C5-N7	-7.58	125.85	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	24	U	C6-N1-C2	-7.58	116.45	121.00
53	A4	1281	G	C4-N9-C1'	-7.58	116.64	126.50
29	A2	1247	C	C6-N1-C2	-7.58	117.27	120.30
29	A1	669	G	N3-C4-N9	-7.58	121.45	126.00
29	A1	2028	G	N3-C4-C5	-7.58	124.81	128.60
29	A1	609	C	C6-N1-C2	-7.58	117.27	120.30
53	A4	1366	C	C6-N1-C2	-7.58	117.27	120.30
29	A2	661	C	C5-C6-N1	7.58	124.79	121.00
29	A2	2700	G	C8-N9-C4	-7.58	103.37	106.40
29	A1	2717	C	N3-C2-O2	-7.57	116.60	121.90
53	A4	673	G	O4'-C1'-N9	7.57	114.26	108.20
29	A1	2700	G	N3-C4-N9	7.57	130.54	126.00
29	A2	1831	U	C5-C6-N1	7.57	126.48	122.70
29	A2	1754	G	C8-N9-C4	-7.56	103.38	106.40
29	A1	1454	U	N3-C2-O2	-7.56	116.91	122.20
29	A1	1787	C	N1-C2-O2	7.56	123.44	118.90
29	A1	2675	G	C4-N9-C1'	7.56	136.33	126.50
29	A2	39	C	C2-N1-C1'	7.56	127.11	118.80
53	A4	1205	G	C5-C6-O6	-7.56	124.06	128.60
29	A1	1297	U	N3-C2-O2	-7.56	116.91	122.20
53	A3	834	C	N1-C2-O2	7.56	123.44	118.90
29	A2	1951	A	C5-N7-C8	-7.55	100.12	103.90
29	A2	2335	G	C8-N9-C1'	-7.55	117.18	127.00
53	A3	1244	C	C5-C6-N1	7.55	124.78	121.00
29	A2	2553	C	N1-C2-O2	7.55	123.43	118.90
29	A2	2725	A	C8-N9-C4	-7.55	102.78	105.80
53	A3	360	U	C2-N1-C1'	7.55	126.76	117.70
29	A2	1944	C	C6-N1-C2	-7.54	117.28	120.30
53	A3	148	C	C5-C6-N1	7.54	124.77	121.00
29	A2	812	G	C8-N9-C4	7.54	109.41	106.40
53	A3	270	G	N1-C2-N2	-7.54	109.42	116.20
53	A4	1227	C	N1-C2-O2	7.54	123.42	118.90
29	A1	243	C	C5-C6-N1	7.53	124.77	121.00
29	A2	353	U	C2-N1-C1'	7.53	126.74	117.70
29	A1	963	C	N1-C2-O2	7.53	123.42	118.90
29	A1	1716	G	N3-C4-C5	-7.53	124.83	128.60
29	A2	170	G	C8-N9-C4	-7.53	103.39	106.40
53	A3	1284	C	N1-C2-O2	7.53	123.42	118.90
29	A2	834	G	C6-C5-N7	-7.53	125.88	130.40
29	A2	2115	U	N1-C2-O2	7.53	128.07	122.80
29	A2	1978	G	C6-C5-N7	-7.53	125.88	130.40
53	A3	1326	U	C5-C6-N1	-7.53	118.94	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1702	G	O4'-C1'-N9	-7.53	102.18	108.20
53	A3	714	G	C4-N9-C1'	7.52	136.28	126.50
29	A2	1743	C	P-O3'-C3'	7.52	128.73	119.70
53	A3	909	C	C2-N3-C4	7.52	123.66	119.90
29	A1	2620	C	N3-C2-O2	-7.52	116.64	121.90
29	A1	93	G	N7-C8-N9	7.52	116.86	113.10
53	A3	1404	G	C4-C5-N7	7.52	113.81	110.80
29	A2	1226	C	C5-C6-N1	7.52	124.76	121.00
53	A4	815	C	N3-C2-O2	-7.51	116.64	121.90
29	A2	2321	G	N3-C4-N9	7.51	130.51	126.00
53	A3	1236	G	C5-C6-O6	-7.51	124.09	128.60
29	A1	1754	G	N7-C8-N9	7.51	116.86	113.10
53	A3	612	G	N3-C4-N9	7.51	130.50	126.00
29	A2	2417	C	C6-N1-C2	-7.51	117.30	120.30
29	A2	1622	G	N7-C8-N9	7.50	116.85	113.10
29	A1	1363	C	N3-C2-O2	-7.50	116.65	121.90
29	A1	824	G	C5-C6-O6	-7.50	124.10	128.60
29	A1	2725	A	C8-N9-C4	-7.50	102.80	105.80
29	A2	2417	C	C2-N1-C1'	7.50	127.05	118.80
53	A4	1111	C	C6-N1-C2	-7.50	117.30	120.30
29	A1	953	U	O4'-C1'-N1	7.50	114.20	108.20
53	A3	1244	C	C2-N1-C1'	7.50	127.05	118.80
29	A2	2428	G	C6-C5-N7	-7.50	125.90	130.40
53	A3	231	G	C8-N9-C4	7.50	109.40	106.40
53	A3	1262	U	C2-N1-C1'	7.50	126.69	117.70
29	A1	2004	G	C4-N9-C1'	7.49	136.24	126.50
53	A4	909	C	C2-N3-C4	7.49	123.65	119.90
29	A1	2629	U	N3-C2-O2	-7.49	116.96	122.20
29	A2	1243	C	C6-N1-C2	-7.49	117.31	120.30
53	A4	170	C	N1-C2-O2	7.49	123.39	118.90
29	A1	1771	G	C8-N9-C4	-7.48	103.41	106.40
53	A4	672	C	N3-C2-O2	-7.48	116.66	121.90
29	A1	317	C	C6-N1-C2	-7.48	117.31	120.30
29	A1	95	G	C4-N9-C1'	-7.48	116.78	126.50
53	A4	1068	U	N3-C2-O2	-7.48	116.97	122.20
29	A2	692	C	C5-C6-N1	7.47	124.74	121.00
29	A2	1890	G	N7-C8-N9	7.47	116.84	113.10
29	A1	1281	C	N1-C2-O2	7.47	123.38	118.90
29	A2	2369	C	N1-C2-O2	7.47	123.38	118.90
53	A3	70	G	N3-C4-N9	7.47	130.48	126.00
53	A4	276	G	C8-N9-C4	-7.47	103.41	106.40
29	A1	2096	G	C6-C5-N7	-7.47	125.92	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2132	C	C6-N1-C2	-7.47	117.31	120.30
29	A1	417	G	C8-N9-C1'	-7.47	117.29	127.00
29	A1	103	C	C6-N1-C2	-7.47	117.31	120.30
53	A3	1068	U	N3-C2-O2	-7.47	116.97	122.20
53	A4	363	U	N1-C2-O2	7.47	128.03	122.80
29	A2	2758	C	C6-N1-C2	-7.46	117.31	120.30
29	A2	433	U	C2-N1-C1'	7.46	126.66	117.70
53	A3	979	G	C6-C5-N7	-7.46	125.92	130.40
29	A2	1274	A	C5-N7-C8	-7.46	100.17	103.90
29	A2	2417	C	N1-C2-O2	7.46	123.38	118.90
29	A2	609	C	N3-C2-O2	-7.46	116.68	121.90
53	A3	199	C	C2-N1-C1'	7.45	127.00	118.80
53	A3	1311	U	C2-N1-C1'	7.45	126.64	117.70
53	A3	1365	C	N1-C2-O2	7.45	123.37	118.90
53	A3	1184	C	C6-N1-C2	-7.45	117.32	120.30
29	A2	1904	C	C6-N1-C2	-7.45	117.32	120.30
29	A1	1732	C	C6-N1-C2	-7.45	117.32	120.30
29	A2	2004	G	C4-N9-C1'	7.45	136.18	126.50
29	A2	2829	G	C5-C6-N1	7.45	115.22	111.50
29	A1	733	G	C4-C5-N7	7.45	113.78	110.80
29	A1	1234	G	C6-C5-N7	-7.45	125.93	130.40
29	A1	1399	C	C6-N1-C2	-7.45	117.32	120.30
29	A1	2400	C	O5'-P-OP1	-7.45	99.00	105.70
29	A2	1626	C	C2-N1-C1'	7.45	126.99	118.80
29	A2	1732	C	C6-N1-C2	-7.45	117.32	120.30
29	A1	1741	U	N1-C2-O2	7.44	128.01	122.80
29	A2	317	C	C6-N1-C2	-7.44	117.32	120.30
29	A2	1754	G	N7-C8-N9	7.44	116.82	113.10
29	A2	2105	C	C6-N1-C2	-7.44	117.32	120.30
53	A4	212	C	C2-N1-C1'	7.44	126.99	118.80
29	A2	2254	C	N3-C2-O2	-7.44	116.69	121.90
53	A3	1351	C	N1-C2-O2	7.44	123.36	118.90
29	A1	1743	C	P-O3'-C3'	7.44	128.63	119.70
29	A1	344	C	C6-N1-C2	-7.44	117.33	120.30
53	A4	957	C	N3-C4-C5	7.44	124.87	121.90
29	A1	1363	C	N1-C2-O2	7.43	123.36	118.90
29	A1	1803	G	C5-C6-O6	7.43	133.06	128.60
53	A3	1248	C	C6-N1-C2	-7.43	117.33	120.30
53	A3	1501	C	N1-C2-O2	7.43	123.36	118.90
53	A4	325	C	N1-C2-O2	7.43	123.36	118.90
29	A1	515	C	C6-N1-C2	-7.43	117.33	120.30
29	A1	1576	A	O4'-C1'-N9	7.43	114.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2021	G	C8-N9-C4	7.43	109.37	106.40
53	A4	1260	A	N1-C6-N6	-7.43	114.14	118.60
29	A1	444	C	C5-C6-N1	7.43	124.72	121.00
53	A3	1178	G	N3-C4-N9	7.43	130.46	126.00
29	A1	1607	A	P-O3'-C3'	7.43	128.62	119.70
29	A2	1281	C	N1-C2-O2	7.43	123.36	118.90
29	A2	2115	U	C2-N1-C1'	7.43	126.62	117.70
29	A1	1026	G	N3-C4-N9	7.43	130.46	126.00
29	A1	2085	G	N1-C6-O6	-7.43	115.44	119.90
29	A2	1622	G	C6-C5-N7	-7.43	125.94	130.40
29	A2	857	G	N9-C4-C5	7.42	108.37	105.40
29	A2	1428	G	C8-N9-C4	-7.42	103.43	106.40
29	A2	1770	U	C2-N1-C1'	7.42	126.61	117.70
53	A4	1178	G	C5-C6-O6	-7.42	124.15	128.60
53	A4	1199	C	C4-C5-C6	7.42	121.11	117.40
29	A1	1436	G	C8-N9-C4	-7.42	103.43	106.40
29	A2	2687	G	C4-C5-N7	7.42	113.77	110.80
53	A4	1224	C	C6-N1-C2	-7.42	117.33	120.30
29	A1	2553	C	N1-C2-O2	7.42	123.35	118.90
29	A1	2784	C	N1-C2-O2	7.42	123.35	118.90
29	A2	1803	G	C4-C5-N7	-7.42	107.83	110.80
29	A1	2149	G	C8-N9-C4	-7.41	103.44	106.40
29	A2	1948	C	C6-N1-C2	-7.41	117.33	120.30
53	A4	398	C	N3-C2-O2	-7.41	116.71	121.90
53	A3	1091	C	O5'-P-OP1	-7.41	99.03	105.70
53	A3	1117	U	N1-C2-O2	7.41	127.99	122.80
53	A3	1451	G	C6-C5-N7	-7.41	125.95	130.40
53	A4	1047	U	C5-C6-N1	7.41	126.40	122.70
29	A1	1814	C	N1-C2-O2	7.40	123.34	118.90
53	A3	1474	G	N3-C4-C5	7.40	132.30	128.60
53	A4	276	G	C4-C5-N7	7.40	113.76	110.80
53	A4	526	C	N3-C2-O2	-7.40	116.72	121.90
29	A1	828	U	N3-C2-O2	-7.40	117.02	122.20
53	A4	937	U	C2-N1-C1'	7.40	126.58	117.70
29	A1	2602	G	C6-C5-N7	-7.40	125.96	130.40
29	A2	2137	U	N3-C2-O2	-7.39	117.02	122.20
53	A3	186	C	N3-C2-O2	-7.39	116.72	121.90
53	A3	479	A	C8-N9-C4	-7.39	102.84	105.80
53	A4	582	C	C2-N1-C1'	7.39	126.94	118.80
53	A4	1422	C	C6-N1-C2	-7.39	117.34	120.30
29	A1	827	G	C4-C5-N7	7.39	113.76	110.80
29	A2	757	C	C5-C6-N1	7.39	124.69	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1808	U	C2-N1-C1'	7.39	126.57	117.70
7	I2	26	LEU	CA-CB-CG	7.39	132.29	115.30
29	A1	1019	G	C4-N9-C1'	7.38	136.10	126.50
29	A1	2600	C	N3-C4-C5	7.38	124.85	121.90
33	C4	115	LEU	CA-CB-CG	-7.38	98.32	115.30
29	A1	609	C	N3-C2-O2	-7.38	116.73	121.90
53	A3	197	G	C5-C6-O6	-7.38	124.17	128.60
53	A4	1292	G	C4-C5-N7	7.38	113.75	110.80
53	A3	541	G	N1-C6-O6	7.38	124.33	119.90
29	A2	1958	C	C2-N1-C1'	7.38	126.92	118.80
53	A4	1451	G	C6-C5-N7	-7.38	125.97	130.40
30	B1	84	G	N7-C8-N9	7.38	116.79	113.10
29	A2	32	C	N1-C2-O2	7.38	123.33	118.90
53	A3	805	C	C5-C6-N1	7.38	124.69	121.00
29	A1	1113	U	C2-N1-C1'	7.38	126.55	117.70
39	I3	16	ARG	NE-CZ-NH2	-7.38	116.61	120.30
53	A4	539	C	C5-C6-N1	7.37	124.69	121.00
53	A4	461	G	O5'-P-OP2	-7.37	99.07	105.70
29	A1	798	C	C6-N1-C1'	-7.37	111.96	120.80
29	A1	714	C	N1-C2-O2	7.36	123.32	118.90
29	A2	2427	G	C8-N9-C4	-7.36	103.45	106.40
53	A4	571	G	C4-C5-N7	7.36	113.75	110.80
29	A1	718	G	C4-N9-C1'	7.36	136.07	126.50
29	A1	2675	G	N7-C8-N9	7.36	116.78	113.10
53	A4	1369	G	N3-C2-N2	7.36	125.05	119.90
53	A3	996	C	C5-C6-N1	7.36	124.68	121.00
29	A2	2786	C	C6-N1-C2	-7.36	117.36	120.30
29	A1	856	U	C6-N1-C2	7.35	125.41	121.00
53	A4	1351	C	N3-C2-O2	-7.35	116.75	121.90
53	A3	697	G	C8-N9-C4	-7.35	103.46	106.40
29	A2	912	A	N7-C8-N9	7.35	117.47	113.80
53	A4	789	C	C5-C4-N4	-7.35	115.06	120.20
29	A2	1959	G	N9-C4-C5	-7.35	102.46	105.40
29	A1	268	C	N1-C2-O2	7.34	123.31	118.90
53	A3	1087	A	C5-C6-N6	-7.34	117.83	123.70
29	A1	812	G	C8-N9-C4	7.34	109.34	106.40
29	A2	182	C	N1-C2-O2	7.34	123.30	118.90
29	A1	993	G	C8-N9-C4	-7.34	103.47	106.40
29	A1	1790	U	N1-C2-O2	7.34	127.94	122.80
29	A1	782	G	N3-C4-C5	7.33	132.27	128.60
29	A1	1300	G	N1-C6-O6	7.33	124.30	119.90
29	A2	2772	A	N7-C8-N9	7.33	117.47	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1140	C	N1-C2-O2	7.33	123.30	118.90
53	A4	1198	C	C5-C6-N1	7.33	124.67	121.00
29	A2	1916	C	C6-N1-C2	-7.33	117.37	120.30
29	A1	1215	U	N3-C2-O2	-7.33	117.07	122.20
29	A1	1473	G	N3-C4-N9	7.33	130.40	126.00
29	A2	1607	A	P-O3'-C3'	7.33	128.49	119.70
29	A2	2184	G	C8-N9-C4	-7.33	103.47	106.40
53	A4	412	C	N1-C2-O2	7.33	123.30	118.90
29	A2	798	C	C6-N1-C1'	-7.33	112.01	120.80
53	A3	430	C	N1-C2-O2	7.33	123.30	118.90
53	A3	532	C	C6-N1-C2	-7.33	117.37	120.30
29	A1	52	A	C2-N3-C4	-7.32	106.94	110.60
29	A1	455	C	N1-C2-O2	7.32	123.29	118.90
29	A2	1741	U	N1-C2-O2	7.32	127.92	122.80
29	A1	182	C	N3-C2-O2	-7.32	116.78	121.90
29	A2	1300	G	N9-C4-C5	-7.32	102.47	105.40
29	A2	1748	G	C6-C5-N7	-7.32	126.01	130.40
29	A2	2829	G	C6-N1-C2	-7.32	120.71	125.10
53	A4	1121	G	C8-N9-C4	-7.32	103.47	106.40
53	A3	398	C	N3-C2-O2	-7.32	116.78	121.90
29	A2	1661	G	C4-N9-C1'	7.31	136.01	126.50
29	A1	1475	A	P-O3'-C3'	7.31	128.47	119.70
53	A4	1087	A	C5-C6-N6	-7.31	117.85	123.70
29	A1	1436	G	C4-N9-C1'	7.31	136.00	126.50
53	A4	1398	G	N7-C8-N9	7.31	116.76	113.10
29	A1	123	G	N3-C4-C5	7.31	132.25	128.60
29	A1	1428	G	C8-N9-C4	-7.31	103.48	106.40
29	A1	2477	C	C6-N1-C2	-7.31	117.38	120.30
53	A3	261	G	N1-C6-O6	7.31	124.28	119.90
53	A3	1079	C	C6-N1-C2	-7.31	117.38	120.30
53	A4	917	C	O4'-C1'-N1	7.31	114.05	108.20
53	A4	303	C	N3-C2-O2	-7.31	116.79	121.90
53	A4	1387	G	N3-C4-C5	7.31	132.25	128.60
29	A1	1761	C	N3-C2-O2	-7.30	116.79	121.90
29	A1	2829	G	N3-C4-N9	7.30	130.38	126.00
53	A4	670	A	P-O3'-C3'	7.30	128.47	119.70
53	A4	714	G	C4-N9-C1'	7.30	136.00	126.50
29	A1	1120	C	C6-N1-C2	-7.30	117.38	120.30
29	A2	1632	A	C2-N3-C4	7.30	114.25	110.60
53	A3	815	C	N3-C2-O2	-7.30	116.79	121.90
29	A1	2513	C	C5-C6-N1	7.30	124.65	121.00
53	A3	149	C	O5'-P-OP1	7.30	119.46	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1228	U	C5-C6-N1	7.30	126.35	122.70
53	A4	1451	G	N7-C8-N9	7.29	116.75	113.10
29	A1	2305	U	N3-C2-O2	-7.29	117.09	122.20
29	A2	241	A	N9-C4-C5	7.29	108.72	105.80
53	A3	263	C	C2-N1-C1'	7.29	126.82	118.80
53	A3	737	C	C6-N1-C1'	-7.29	112.05	120.80
53	A3	800	C	N3-C4-C5	7.29	124.82	121.90
30	B2	109	G	C5-C6-O6	-7.29	124.22	128.60
53	A3	749	A	OP1-P-O3'	7.29	121.24	105.20
29	A2	455	C	N1-C2-O2	7.29	123.27	118.90
29	A2	199	C	N1-C2-O2	7.29	123.27	118.90
53	A3	419	G	C4-C5-N7	7.29	113.72	110.80
29	A1	714	C	C6-N1-C2	-7.29	117.39	120.30
53	A3	874	C	N3-C2-O2	-7.29	116.80	121.90
53	A3	1404	G	C6-C5-N7	-7.29	126.03	130.40
53	A4	235	C	C5-C6-N1	7.29	124.64	121.00
29	A1	1398	C	N3-C2-O2	-7.28	116.80	121.90
29	A2	1635	A	C5-C6-N6	-7.28	117.87	123.70
29	A1	2309	C	C5-C6-N1	7.28	124.64	121.00
29	A1	2876	G	C8-N9-C4	7.28	109.31	106.40
29	A2	1363	C	C6-N1-C2	-7.28	117.39	120.30
53	A4	672	C	C6-N1-C1'	-7.28	112.07	120.80
53	A4	714	G	C8-N9-C1'	-7.28	117.54	127.00
53	A4	735	G	C8-N9-C4	-7.28	103.49	106.40
29	A1	879	G	N7-C8-N9	-7.27	109.46	113.10
30	B1	93	C	N1-C2-O2	7.27	123.27	118.90
53	A4	9	G	C4-C5-N7	7.27	113.71	110.80
53	A4	1431	A	C8-N9-C4	-7.27	102.89	105.80
29	A2	2332	G	C4-C5-N7	7.27	113.71	110.80
29	A1	965	A	C8-N9-C4	-7.27	102.89	105.80
30	B1	31	A	C8-N9-C4	-7.27	102.89	105.80
53	A4	1066	G	N7-C8-N9	7.27	116.73	113.10
29	A2	1297	U	N3-C2-O2	-7.27	117.11	122.20
53	A4	913	C	N3-C2-O2	-7.27	116.81	121.90
53	A4	443	C	N3-C2-O2	-7.27	116.81	121.90
29	A1	1944	C	C6-N1-C2	-7.26	117.39	120.30
29	A2	1215	U	N3-C2-O2	-7.26	117.11	122.20
53	A3	54	C	C6-N1-C2	-7.26	117.39	120.30
53	A3	560	G	C2-N3-C4	-7.26	108.27	111.90
29	A1	170	G	C8-N9-C4	-7.26	103.50	106.40
29	A1	262	A	N7-C8-N9	7.26	117.43	113.80
53	A3	451	C	N1-C2-O2	7.26	123.26	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1479	A	C8-N9-C4	-7.26	102.89	105.80
29	A2	1711	C	N3-C2-O2	-7.26	116.82	121.90
53	A4	933	U	C6-N1-C2	-7.26	116.64	121.00
53	A3	276	G	C6-C5-N7	-7.26	126.05	130.40
53	A4	24	U	C6-N1-C2	-7.26	116.64	121.00
53	A4	54	C	C6-N1-C2	-7.26	117.40	120.30
53	A4	240	C	N1-C2-O2	7.26	123.25	118.90
53	A4	419	G	N7-C8-N9	7.26	116.73	113.10
29	A2	1970	U	N1-C2-O2	7.25	127.88	122.80
53	A4	1199	C	N3-C4-C5	-7.25	119.00	121.90
29	A1	290	G	N3-C4-N9	7.25	130.35	126.00
29	A1	609	C	C2-N1-C1'	7.25	126.77	118.80
29	A2	1140	C	N1-C2-O2	7.25	123.25	118.90
29	A2	2064	C	N3-C2-O2	-7.25	116.83	121.90
53	A4	549	G	C6-C5-N7	-7.25	126.05	130.40
29	A1	1978	G	C6-C5-N7	-7.25	126.05	130.40
29	A1	1071	U	N1-C2-O2	7.24	127.87	122.80
29	A1	1120	C	C5-C6-N1	7.24	124.62	121.00
29	A2	595	G	N3-C4-N9	-7.24	121.66	126.00
53	A3	425	A	C5-C6-N6	-7.24	117.91	123.70
29	A2	1714	A	C8-N9-C4	-7.24	102.90	105.80
53	A3	582	C	N1-C2-O2	7.24	123.24	118.90
53	A4	1333	C	C5-C6-N1	7.24	124.62	121.00
29	A1	1435	C	C5-C6-N1	7.24	124.62	121.00
53	A4	815	C	N1-C2-O2	7.24	123.24	118.90
53	A4	1299	A	N7-C8-N9	7.24	117.42	113.80
53	A3	778	C	C6-N1-C2	7.23	123.19	120.30
53	A4	541	G	N1-C6-O6	7.23	124.24	119.90
53	A4	27	G	N3-C4-N9	7.23	130.34	126.00
29	A1	1561	C	C6-N1-C2	-7.23	117.41	120.30
29	A2	690	C	C6-N1-C1'	-7.23	112.12	120.80
29	A2	2688	G	C4-C5-N7	7.23	113.69	110.80
53	A3	1222	G	C6-C5-N7	-7.23	126.06	130.40
29	A2	669	G	C2-N3-C4	-7.23	108.29	111.90
53	A3	756	G	C4-C5-N7	7.23	113.69	110.80
53	A4	360	U	C5-C6-N1	7.22	126.31	122.70
29	A1	182	C	N1-C2-O2	7.22	123.23	118.90
29	A1	1929	C	C6-N1-C1'	-7.22	112.13	120.80
29	A2	2067	C	N3-C2-O2	-7.22	116.84	121.90
30	B2	98	U	O4'-C1'-N1	7.22	113.98	108.20
29	A2	881	G	C6-C5-N7	-7.22	126.07	130.40
29	A2	2064	C	N1-C2-O2	7.22	123.23	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1931	G	C4-C5-N7	7.22	113.69	110.80
53	A3	1501	C	N3-C2-O2	-7.22	116.85	121.90
29	A1	1592	C	C5-C6-N1	7.22	124.61	121.00
53	A3	1198	C	C5-C6-N1	7.22	124.61	121.00
53	A4	524	G	C8-N9-C4	7.22	109.29	106.40
53	A4	1404	G	C4-C5-N7	7.22	113.69	110.80
29	A2	1541	C	N3-C4-N4	-7.21	112.95	118.00
53	A4	572	C	N1-C2-O2	7.21	123.23	118.90
53	A4	261	G	C5-N7-C8	-7.21	100.69	104.30
29	A2	2865	C	N1-C2-O2	7.21	123.23	118.90
29	A1	1580	C	C6-N1-C2	-7.21	117.42	120.30
29	A1	2080	G	C4-C5-N7	7.21	113.68	110.80
29	A2	1761	C	C5-C6-N1	7.21	124.60	121.00
53	A4	532	C	C6-N1-C2	-7.21	117.42	120.30
29	A1	177	G	N3-C4-C5	-7.21	125.00	128.60
29	A1	2129	C	C5-C6-N1	7.20	124.60	121.00
29	A1	718	G	C8-N9-C1'	-7.20	117.64	127.00
29	A1	2385	G	C8-N9-C4	-7.20	103.52	106.40
29	A2	669	G	N3-C4-N9	-7.20	121.68	126.00
29	A2	1758	U	N3-C2-O2	-7.20	117.16	122.20
53	A4	93	C	C5-C6-N1	7.20	124.60	121.00
29	A2	2717	C	C6-N1-C2	-7.20	117.42	120.30
53	A3	419	G	C8-N9-C4	-7.20	103.52	106.40
29	A1	1929	C	C5-C6-N1	7.20	124.60	121.00
29	A2	749	G	C4-C5-N7	7.20	113.68	110.80
53	A3	662	C	C5-C6-N1	7.20	124.60	121.00
29	A2	52	A	C2-N3-C4	-7.19	107.00	110.60
53	A4	1184	C	C5-C6-N1	7.19	124.60	121.00
29	A1	828	U	C6-N1-C2	-7.19	116.68	121.00
29	A1	1918	C	N1-C2-O2	7.19	123.22	118.90
29	A1	2650	U	C2-N1-C1'	7.19	126.33	117.70
29	A2	2185	C	O4'-C1'-N1	7.19	113.95	108.20
53	A4	805	C	C5-C6-N1	7.19	124.60	121.00
53	A3	905	G	C4-N9-C1'	7.19	135.85	126.50
29	A2	1925	A	N1-C6-N6	-7.19	114.29	118.60
29	A1	2491	C	N1-C2-O2	7.19	123.21	118.90
53	A3	425	A	C4-C5-N7	7.18	114.29	110.70
53	A3	1117	U	C5-C6-N1	7.18	126.29	122.70
29	A1	1282	U	N3-C2-O2	-7.18	117.17	122.20
29	A1	2864	G	C6-C5-N7	-7.18	126.09	130.40
29	A1	1622	G	C4-C5-N7	7.18	113.67	110.80
53	A3	714	G	C8-N9-C1'	-7.18	117.67	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1993	A	C8-N9-C4	-7.18	102.93	105.80
29	A1	857	G	C8-N9-C4	-7.17	103.53	106.40
29	A1	994	G	C8-N9-C4	-7.17	103.53	106.40
53	A4	1218	C	N3-C2-O2	-7.17	116.88	121.90
29	A2	604	G	C4-C5-N7	7.17	113.67	110.80
53	A3	1491	C	N1-C2-O2	7.17	123.20	118.90
53	A4	424	U	O4'-C1'-N1	7.17	113.94	108.20
53	A3	215	G	C6-C5-N7	-7.17	126.10	130.40
53	A4	26	A	C5-C6-N1	7.17	121.28	117.70
29	A2	2131	C	C6-N1-C2	-7.17	117.43	120.30
29	A2	1301	A	N1-C6-N6	-7.16	114.30	118.60
29	A2	802	C	C2-N1-C1'	7.16	126.68	118.80
29	A2	945	C	O4'-C1'-N1	7.16	113.93	108.20
53	A4	1398	G	C4-N9-C1'	7.16	135.81	126.50
29	A2	1890	G	C8-N9-C4	-7.16	103.54	106.40
53	A3	672	C	C6-N1-C2	-7.16	117.44	120.30
29	A1	262	A	C8-N9-C4	-7.16	102.94	105.80
29	A2	2675	G	C8-N9-C4	-7.16	103.54	106.40
53	A3	419	G	C5-N7-C8	-7.16	100.72	104.30
53	A3	221	G	O4'-C1'-N9	7.16	113.92	108.20
29	A2	2376	G	C4-N9-C1'	-7.15	117.20	126.50
29	A2	2488	C	C6-N1-C2	-7.15	117.44	120.30
29	A1	2105	C	C6-N1-C2	-7.15	117.44	120.30
29	A1	1398	C	C2-N1-C1'	7.15	126.67	118.80
29	A2	714	C	N1-C2-O2	7.15	123.19	118.90
29	A2	733	G	N1-C2-N3	7.15	128.19	123.90
29	A1	2710	U	C6-N1-C2	-7.15	116.71	121.00
29	A2	1635	A	N1-C6-N6	7.15	122.89	118.60
53	A4	1473	C	C5-C6-N1	7.15	124.57	121.00
53	A3	552	C	N3-C2-O2	-7.15	116.90	121.90
29	A2	2322	G	N3-C4-N9	7.14	130.29	126.00
29	A1	1314	G	C8-N9-C4	7.14	109.26	106.40
29	A2	1626	C	N3-C2-O2	-7.14	116.90	121.90
29	A1	126	C	C5-C6-N1	7.14	124.57	121.00
53	A4	424	U	C5-C6-N1	-7.14	119.13	122.70
53	A3	815	C	N1-C2-O2	7.14	123.18	118.90
53	A4	662	C	C5-C6-N1	7.14	124.57	121.00
53	A4	1366	C	C5-C6-N1	7.14	124.57	121.00
29	A1	1716	G	N3-C4-N9	7.14	130.28	126.00
29	A1	1748	G	C6-C5-N7	-7.14	126.12	130.40
29	A2	2802	C	N1-C2-O2	7.14	123.18	118.90
29	A1	683	C	N3-C2-O2	-7.13	116.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2081	A	C8-N9-C4	-7.13	102.95	105.80
29	A1	2209	C	O4'-C1'-N1	7.13	113.91	108.20
29	A1	846	C	C6-N1-C2	-7.13	117.45	120.30
53	A3	979	G	N7-C8-N9	7.13	116.67	113.10
29	A1	437	C	C6-N1-C2	-7.13	117.45	120.30
29	A1	2780	A	N3-C4-C5	-7.13	121.81	126.80
29	A2	426	G	N1-C6-O6	7.13	124.18	119.90
53	A4	142	G	C4-C5-N7	7.13	113.65	110.80
53	A4	663	C	C2-N1-C1'	7.13	126.64	118.80
29	A1	1465	C	N3-C2-O2	-7.13	116.91	121.90
29	A2	489	C	C6-N1-C2	-7.13	117.45	120.30
29	A1	531	U	C6-N1-C1'	-7.12	111.23	121.20
29	A1	595	G	N3-C4-N9	-7.12	121.73	126.00
29	A2	858	G	N3-C4-N9	7.12	130.27	126.00
53	A4	1220	A	C4-C5-N7	7.12	114.26	110.70
29	A2	1157	C	N3-C4-C5	7.12	124.75	121.90
29	A2	1497	G	N3-C4-C5	-7.12	125.04	128.60
53	A3	415	U	N3-C2-O2	-7.12	117.22	122.20
53	A3	621	G	C5-C6-O6	-7.12	124.33	128.60
29	A2	520	G	N7-C8-N9	7.12	116.66	113.10
53	A3	1026	A	C2-N3-C4	7.12	114.16	110.60
29	A2	1282	U	N3-C2-O2	-7.11	117.22	122.20
29	A2	1298	G	C8-N9-C1'	-7.11	117.75	127.00
29	A2	2385	G	C8-N9-C4	-7.11	103.56	106.40
29	A1	1454	U	C5-C6-N1	7.11	126.25	122.70
53	A4	1392	G	C4-C5-N7	7.11	113.64	110.80
29	A1	1790	U	N3-C2-O2	-7.11	117.23	122.20
53	A4	1266	A	C5-N7-C8	7.11	107.45	103.90
53	A4	697	G	N7-C8-N9	7.10	116.65	113.10
29	A1	2251	G	C6-C5-N7	-7.10	126.14	130.40
29	A2	690	C	C6-N1-C2	-7.10	117.46	120.30
53	A3	1452	G	C5-N7-C8	-7.10	100.75	104.30
53	A4	413	C	C6-N1-C2	-7.10	117.46	120.30
29	A1	2735	U	C6-N1-C2	-7.10	116.74	121.00
53	A3	511	C	C2-N1-C1'	7.10	126.61	118.80
29	A2	1119	G	C8-N9-C4	-7.09	103.56	106.40
53	A3	1228	U	C6-N1-C1'	-7.09	111.27	121.20
29	A1	1877	C	C6-N1-C2	7.09	123.14	120.30
29	A2	322	C	N3-C2-O2	-7.09	116.94	121.90
29	A2	1761	C	C2-N1-C1'	7.09	126.59	118.80
29	A2	1791	G	N3-C4-N9	7.09	130.25	126.00
53	A4	1236	G	N3-C4-N9	7.09	130.25	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1957	G	C8-N9-C4	-7.08	103.57	106.40
29	A2	1449	G	N3-C4-N9	7.08	130.25	126.00
29	A2	1661	G	C4-C5-N7	7.08	113.63	110.80
53	A3	215	G	N3-C4-C5	-7.08	125.06	128.60
53	A3	325	C	N1-C2-O2	7.08	123.15	118.90
29	A2	2180	G	C5-N7-C8	-7.08	100.76	104.30
53	A4	1404	G	N1-C6-O6	7.08	124.15	119.90
29	A2	177	G	N3-C4-C5	-7.08	125.06	128.60
29	A2	1622	G	C4-C5-N7	7.08	113.63	110.80
53	A4	675	U	C5-C6-N1	7.08	126.24	122.70
29	A1	1750	A	C5-N7-C8	-7.08	100.36	103.90
29	A2	1718	A	C5-C6-N1	7.08	121.24	117.70
53	A3	149	C	O5'-P-OP2	-7.08	99.33	105.70
29	A1	2851	G	C6-C5-N7	-7.08	126.16	130.40
29	A2	2081	A	C8-N9-C4	-7.07	102.97	105.80
29	A2	730	G	C8-N9-C4	-7.07	103.57	106.40
53	A3	272	C	C6-N1-C2	-7.07	117.47	120.30
53	A4	561	C	N3-C2-O2	-7.07	116.95	121.90
53	A3	496	C	N3-C2-O2	-7.07	116.95	121.90
53	A4	511	C	N3-C2-O2	-7.07	116.95	121.90
29	A2	1732	C	N1-C2-O2	7.07	123.14	118.90
53	A4	148	C	OP1-P-O3'	7.07	120.75	105.20
29	A1	1975	U	N3-C2-O2	-7.06	117.25	122.20
29	A1	2737	G	N7-C8-N9	7.06	116.63	113.10
29	A2	170	G	C6-C5-N7	-7.06	126.16	130.40
29	A2	2600	C	N3-C4-C5	7.06	124.73	121.90
29	A1	409	G	N3-C4-C5	-7.06	125.07	128.60
53	A3	636	A	O4'-C1'-N9	7.06	113.85	108.20
53	A3	783	G	N7-C8-N9	7.06	116.63	113.10
53	A4	1475	U	OP2-P-O3'	7.06	120.74	105.20
29	A1	191	C	C6-N1-C2	-7.06	117.48	120.30
29	A1	2254	C	N3-C2-O2	-7.06	116.96	121.90
29	A1	2622	G	N3-C4-N9	-7.06	121.76	126.00
29	A2	1626	C	C6-N1-C2	-7.06	117.48	120.30
53	A4	142	G	C6-C5-N7	-7.06	126.16	130.40
29	A1	2376	G	C4-N9-C1'	-7.06	117.32	126.50
29	A2	182	C	N3-C2-O2	-7.06	116.96	121.90
40	J3	8	LEU	CB-CG-CD1	-7.06	99.00	111.00
53	A3	663	C	C2-N1-C1'	7.06	126.56	118.80
53	A3	1042	C	C5-C4-N4	-7.06	115.26	120.20
53	A3	1198	C	C6-N1-C1'	-7.06	112.33	120.80
29	A1	728	C	N3-C4-N4	7.06	122.94	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2265	G	C4-C5-N7	7.06	113.62	110.80
53	A4	1165	G	C6-C5-N7	-7.06	126.17	130.40
29	A1	2595	G	C4-N9-C1'	7.06	135.67	126.50
29	A1	993	G	N3-C4-C5	-7.05	125.07	128.60
29	A1	1012	C	C6-N1-C2	-7.05	117.48	120.30
29	A2	1957	G	C8-N9-C4	-7.05	103.58	106.40
53	A3	276	G	C4-C5-N7	7.05	113.62	110.80
53	A4	415	U	N3-C2-O2	-7.05	117.26	122.20
53	A4	1281	G	O4'-C1'-N9	7.05	113.84	108.20
29	A2	312	C	C5-C6-N1	7.05	124.53	121.00
53	A3	263	C	C5-C6-N1	7.05	124.53	121.00
53	A3	502	C	C6-N1-C2	-7.05	117.48	120.30
53	A4	800	C	N3-C4-C5	7.05	124.72	121.90
53	A4	131	C	C5-C6-N1	7.05	124.52	121.00
29	A2	177	G	N3-C4-N9	7.04	130.23	126.00
29	A2	1298	G	C4-N9-C1'	7.04	135.66	126.50
53	A3	1452	G	C4-C5-N7	7.04	113.62	110.80
29	A2	1790	U	N1-C2-O2	7.04	127.73	122.80
29	A2	2784	C	N1-C2-O2	7.04	123.12	118.90
53	A4	502	C	C6-N1-C2	-7.04	117.48	120.30
53	A4	874	C	N3-C2-O2	-7.04	116.97	121.90
29	A1	1194	C	C5-C6-N1	7.04	124.52	121.00
29	A1	1592	C	C2-N1-C1'	7.04	126.54	118.80
53	A4	1165	G	C4-C5-N7	7.04	113.61	110.80
53	A4	1506	G	C8-N9-C1'	-7.04	117.85	127.00
29	A1	2265	G	N3-C4-N9	7.04	130.22	126.00
29	A2	2629	U	N3-C2-O2	-7.04	117.28	122.20
53	A4	425	A	N9-C4-C5	-7.04	102.99	105.80
53	A3	789	C	C5-C4-N4	-7.03	115.28	120.20
29	A1	1834	G	C4-N9-C1'	7.03	135.64	126.50
29	A2	2840	C	O4'-C1'-N1	7.03	113.83	108.20
29	A2	828	U	C6-N1-C2	-7.03	116.78	121.00
53	A3	959	U	N1-C2-O2	7.03	127.72	122.80
53	A4	748	G	C8-N9-C4	-7.03	103.59	106.40
53	A4	872	G	N1-C6-O6	7.03	124.12	119.90
53	A4	997	C	C5-C6-N1	7.03	124.51	121.00
29	A1	2237	G	C4-C5-N7	7.03	113.61	110.80
53	A4	1506	G	C4-N9-C1'	7.02	135.63	126.50
29	A1	1853	U	C5-C6-N1	7.02	126.21	122.70
29	A1	2688	G	C4-C5-N7	7.02	113.61	110.80
29	A2	901	G	N3-C4-C5	-7.02	125.09	128.60
29	A2	857	G	C8-N9-C4	-7.02	103.59	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1165	G	C4-N9-C1'	7.02	135.63	126.50
53	A3	240	C	N1-C2-O2	7.02	123.11	118.90
29	A1	1449	G	N3-C4-N9	7.02	130.21	126.00
29	A1	1579	C	C6-N1-C2	-7.02	117.49	120.30
53	A3	285	C	C2-N1-C1'	7.02	126.52	118.80
53	A4	511	C	N1-C2-O2	7.02	123.11	118.90
29	A1	2051	G	N3-C4-C5	-7.01	125.09	128.60
29	A1	1126	U	N1-C2-O2	7.01	127.71	122.80
29	A2	2226	C	C6-N1-C2	-7.01	117.50	120.30
53	A3	1124	G	N3-C2-N2	-7.01	114.99	119.90
53	A4	763	A	N1-C6-N6	7.01	122.81	118.60
29	A2	609	C	C2-N1-C1'	7.01	126.51	118.80
29	A1	1761	C	N1-C2-O2	7.01	123.10	118.90
29	A2	2573	C	N1-C2-O2	7.00	123.10	118.90
53	A4	917	C	C6-N1-C1'	7.00	129.21	120.80
29	A2	1777	C	C5-C6-N1	7.00	124.50	121.00
53	A3	83	A	O4'-C1'-N9	7.00	113.80	108.20
53	A3	582	C	C2-N1-C1'	7.00	126.50	118.80
29	A2	847	G	C4-C5-N7	7.00	113.60	110.80
53	A3	937	U	N1-C2-O2	7.00	127.70	122.80
29	A1	960	C	N3-C2-O2	-7.00	117.00	121.90
29	A1	1817	A	O5'-P-OP1	7.00	119.10	110.70
29	A2	828	U	N3-C2-O2	-7.00	117.30	122.20
29	A2	1046	C	N1-C2-O2	7.00	123.10	118.90
29	A2	2620	C	N3-C2-O2	-7.00	117.00	121.90
29	A2	2273	G	N3-C4-N9	6.99	130.19	126.00
53	A3	468	G	P-O3'-C3'	6.99	128.09	119.70
53	A4	241	A	P-O3'-C3'	6.99	128.09	119.70
42	L3	77	LEU	CA-CB-CG	-6.99	99.23	115.30
29	A1	1399	C	C5-C6-N1	6.99	124.49	121.00
29	A2	2373	C	C5-C6-N1	6.99	124.49	121.00
29	A2	35	G	N3-C4-C5	-6.98	125.11	128.60
29	A2	802	C	C6-N1-C2	-6.98	117.51	120.30
30	B2	90	C	C6-N1-C2	-6.98	117.51	120.30
29	A1	126	C	C2-N1-C1'	6.98	126.48	118.80
29	A2	2265	G	N1-C6-O6	-6.98	115.71	119.90
53	A4	1276	G	N9-C4-C5	-6.98	102.61	105.40
29	A1	219	A	P-O3'-C3'	6.98	128.07	119.70
53	A4	981	G	C8-N9-C4	-6.98	103.61	106.40
29	A1	1393	C	N3-C4-C5	6.98	124.69	121.90
29	A2	174	C	O4'-C1'-N1	6.98	113.78	108.20
53	A3	512	G	N3-C2-N2	6.98	124.78	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	215	G	C8-N9-C1'	-6.98	117.93	127.00
29	A2	2735	U	C6-N1-C2	-6.97	116.81	121.00
53	A3	235	C	C6-N1-C2	-6.97	117.51	120.30
53	A4	421	G	N7-C8-N9	6.97	116.59	113.10
29	A2	2700	G	N3-C4-N9	6.97	130.18	126.00
53	A4	170	C	C2-N1-C1'	6.97	126.47	118.80
53	A4	571	G	N9-C4-C5	-6.97	102.61	105.40
29	A1	2260	G	C4-C5-N7	6.97	113.59	110.80
29	A1	1054	C	C2-N1-C1'	6.97	126.47	118.80
29	A1	1799	U	C2-N1-C1'	6.97	126.06	117.70
29	A2	1800	C	N1-C2-O2	6.97	123.08	118.90
53	A3	419	G	C6-C5-N7	-6.97	126.22	130.40
53	A3	696	G	C8-N9-C4	-6.97	103.61	106.40
53	A4	84	C	C5-C6-N1	6.96	124.48	121.00
29	A1	728	C	C5-C4-N4	-6.96	115.33	120.20
53	A3	1243	C	N1-C2-O2	6.96	123.08	118.90
30	B1	49	C	N3-C2-O2	-6.96	117.03	121.90
53	A3	1029	G	C4-N9-C1'	-6.96	117.45	126.50
29	A1	564	C	C6-N1-C2	-6.96	117.52	120.30
29	A1	2129	C	C2-N1-C1'	6.96	126.45	118.80
29	A1	2756	A	C8-N9-C4	6.96	108.58	105.80
53	A3	1369	G	N3-C2-N2	6.96	124.77	119.90
53	A3	1487	U	C5-C6-N1	6.96	126.18	122.70
53	A4	872	G	C5-N7-C8	-6.96	100.82	104.30
29	A1	2327	C	C5-C6-N1	6.95	124.48	121.00
29	A1	2497	C	C6-N1-C2	-6.95	117.52	120.30
29	A2	2322	G	C2-N3-C4	6.95	115.38	111.90
29	A1	2132	C	C2-N3-C4	6.95	123.38	119.90
29	A1	2309	C	C6-N1-C2	-6.95	117.52	120.30
29	A2	2315	C	N3-C2-O2	-6.95	117.03	121.90
53	A3	520	G	N3-C4-N9	6.95	130.17	126.00
53	A3	526	C	N3-C2-O2	-6.95	117.03	121.90
53	A4	465	G	N3-C2-N2	-6.95	115.04	119.90
29	A1	1970	U	N1-C2-O2	6.95	127.66	122.80
29	A1	938	C	C6-N1-C2	-6.95	117.52	120.30
29	A2	993	G	N3-C4-C5	-6.95	125.13	128.60
29	A2	1019	G	C2-N3-C4	-6.95	108.43	111.90
29	A1	2240	C	C5-C6-N1	6.94	124.47	121.00
29	A2	268	C	N1-C2-O2	6.94	123.07	118.90
29	A2	1270	C	N3-C4-C5	6.94	124.68	121.90
29	A2	2595	G	C4-N9-C1'	6.94	135.53	126.50
29	A1	730	G	C4-C5-N7	6.94	113.58	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	827	G	C6-C5-N7	-6.94	126.24	130.40
29	A2	2833	A	C5-C6-N1	6.94	121.17	117.70
53	A4	188	U	C2-N1-C1'	6.94	126.03	117.70
53	A3	1215	C	C6-N1-C2	-6.94	117.53	120.30
29	A1	2700	G	C4-N9-C1'	6.93	135.52	126.50
29	A2	2696	U	N3-C2-O2	-6.93	117.35	122.20
29	A1	1622	G	N7-C8-N9	6.93	116.57	113.10
53	A3	254	G	C6-C5-N7	-6.93	126.24	130.40
53	A3	409	A	N1-C6-N6	-6.93	114.44	118.60
53	A3	1006	C	C6-N1-C2	-6.93	117.53	120.30
29	A1	123	G	C8-N9-C4	6.93	109.17	106.40
29	A1	1932	C	N1-C2-O2	6.93	123.06	118.90
53	A4	285	C	N1-C2-O2	6.93	123.06	118.90
53	A4	524	G	N9-C4-C5	-6.93	102.63	105.40
29	A1	960	C	N1-C2-O2	6.93	123.06	118.90
53	A3	552	C	C6-N1-C2	-6.93	117.53	120.30
53	A3	1059	G	C5-C6-N1	-6.93	108.04	111.50
53	A4	789	C	N3-C4-C5	6.93	124.67	121.90
29	A1	2786	C	C6-N1-C1'	-6.92	112.49	120.80
53	A4	423	G	N3-C4-N9	6.92	130.16	126.00
29	A1	1791	G	C4-N9-C1'	6.92	135.50	126.50
29	A2	769	C	C6-N1-C2	6.92	123.07	120.30
29	A2	2494	C	C6-N1-C2	-6.92	117.53	120.30
53	A3	1339	U	N1-C2-O2	6.92	127.64	122.80
53	A4	1165	G	C8-N9-C1'	-6.92	118.00	127.00
53	A4	1480	A	OP1-P-O3'	6.92	120.43	105.20
29	A1	174	C	O4'-C1'-N1	6.92	113.74	108.20
53	A3	1236	G	N3-C4-N9	6.92	130.15	126.00
29	A2	966	A	N7-C8-N9	6.92	117.26	113.80
29	A1	2335	G	C4-N9-C1'	6.92	135.49	126.50
53	A4	1396	U	N1-C2-O2	6.92	127.64	122.80
29	A1	2273	G	N3-C4-N9	6.91	130.15	126.00
29	A2	472	C	C6-N1-C2	-6.91	117.53	120.30
5	G1	88	LEU	CA-CB-CG	6.91	131.19	115.30
53	A3	236	C	N3-C2-O2	-6.91	117.06	121.90
53	A4	1005	C	P-O3'-C3'	6.91	127.99	119.70
29	A2	2710	U	C6-N1-C2	-6.91	116.86	121.00
53	A4	967	C	N1-C2-O2	6.91	123.04	118.90
53	A4	1487	U	C5-C6-N1	6.91	126.15	122.70
29	A2	1646	C	N1-C2-O2	6.90	123.04	118.90
29	A1	1463	U	C5-C6-N1	6.90	126.15	122.70
29	A2	854	G	N9-C4-C5	-6.90	102.64	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1108	U	P-O3'-C3'	6.90	127.98	119.70
53	A3	241	A	P-O3'-C3'	6.90	127.98	119.70
53	A3	1406	C	O4'-C1'-N1	6.90	113.72	108.20
29	A1	1270	C	N3-C4-C5	6.90	124.66	121.90
29	A1	2849	G	C5-C6-N1	6.90	114.95	111.50
29	A2	1750	A	C4-C5-N7	6.90	114.15	110.70
53	A3	276	G	C8-N9-C4	-6.90	103.64	106.40
29	A1	2417	C	N1-C2-O2	6.90	123.04	118.90
53	A3	991	G	N3-C4-C5	6.90	132.05	128.60
53	A4	620	G	N3-C4-N9	6.90	130.14	126.00
29	A2	458	A	N1-C6-N6	-6.90	114.46	118.60
29	A1	1720	U	C6-N1-C2	-6.89	116.86	121.00
29	A1	1254	C	C5-C6-N1	6.89	124.45	121.00
29	A2	2477	C	C6-N1-C2	-6.89	117.54	120.30
53	A4	1047	U	P-O3'-C3'	6.89	127.97	119.70
29	A2	2480	C	C6-N1-C2	-6.89	117.54	120.30
29	A2	807	C	N1-C2-O2	6.89	123.03	118.90
30	B2	67	C	C6-N1-C2	-6.89	117.54	120.30
53	A3	772	U	C2-N1-C1'	6.89	125.97	117.70
29	A1	2829	G	C5-C6-N1	6.89	114.94	111.50
44	N4	29	ARG	NE-CZ-NH1	-6.89	116.86	120.30
29	A1	807	C	N1-C2-O2	6.88	123.03	118.90
29	A2	212	A	C8-N9-C4	6.88	108.55	105.80
53	A4	1101	C	C6-N1-C2	-6.88	117.55	120.30
29	A1	236	C	C6-N1-C2	-6.88	117.55	120.30
29	A2	1720	U	C6-N1-C2	-6.88	116.87	121.00
29	A1	2417	C	C2-N1-C1'	6.88	126.37	118.80
29	A1	1436	G	N3-C4-C5	-6.88	125.16	128.60
53	A3	1033	C	C6-N1-C2	-6.88	117.55	120.30
29	A2	1202	G	N7-C8-N9	-6.88	109.66	113.10
53	A4	1122	C	C5-C6-N1	6.88	124.44	121.00
29	A1	1768	G	C4-C5-N7	6.88	113.55	110.80
29	A2	2334	A	N7-C8-N9	6.88	117.24	113.80
53	A3	156	A	N7-C8-N9	6.88	117.24	113.80
29	A1	2115	U	N1-C2-O2	6.87	127.61	122.80
29	A1	2014	C	C6-N1-C2	-6.87	117.55	120.30
29	A2	1012	C	C6-N1-C2	-6.87	117.55	120.30
29	A2	2624	C	OP2-P-O3'	6.87	120.32	105.20
53	A3	665	G	C4-C5-N7	6.87	113.55	110.80
29	A1	1652	C	C6-N1-C2	-6.87	117.55	120.30
29	A2	1530	U	C2-N1-C1'	6.87	125.94	117.70
29	A2	1596	C	N1-C2-O2	6.87	123.02	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1973	G	C6-C5-N7	-6.87	126.28	130.40
29	A2	1684	G	N7-C8-N9	6.87	116.53	113.10
53	A3	1101	C	C6-N1-C2	-6.87	117.55	120.30
29	A1	2837	C	N1-C2-O2	6.86	123.02	118.90
29	A2	1804	C	C2-N3-C4	-6.86	116.47	119.90
53	A3	303	C	N3-C2-O2	-6.86	117.10	121.90
53	A3	1087	A	C6-C5-N7	-6.86	127.50	132.30
29	A1	901	G	C6-C5-N7	-6.86	126.28	130.40
29	A2	1951	A	N7-C8-N9	6.86	117.23	113.80
29	A2	2681	C	C4-C5-C6	-6.86	113.97	117.40
53	A3	1318	G	N3-C2-N2	6.86	124.70	119.90
53	A4	1459	G	C6-C5-N7	-6.86	126.28	130.40
53	A3	1029	G	N3-C4-C5	6.86	132.03	128.60
29	A2	1614	C	C5-C6-N1	-6.86	117.57	121.00
29	A2	1702	G	OP1-P-O3'	6.86	120.29	105.20
53	A4	1477	A	C8-N9-C4	-6.86	103.06	105.80
29	A1	1222	U	N1-C2-O2	6.86	127.60	122.80
30	B2	7	C	N3-C2-O2	-6.86	117.10	121.90
53	A3	1452	G	C6-C5-N7	-6.86	126.29	130.40
53	A3	670	A	P-O3'-C3'	6.85	127.92	119.70
53	A3	672	C	N3-C2-O2	-6.85	117.10	121.90
29	A2	1475	A	C8-N9-C4	-6.85	103.06	105.80
29	A2	1883	G	N3-C2-N2	-6.85	115.10	119.90
29	A2	2480	C	N3-C2-O2	-6.85	117.10	121.90
29	A2	1896	G	C8-N9-C4	-6.85	103.66	106.40
53	A3	28	G	N9-C4-C5	6.85	108.14	105.40
29	A1	182	C	C5-C6-N1	6.85	124.42	121.00
29	A2	2584	G	N1-C2-N3	6.85	128.01	123.90
53	A3	235	C	C5-C6-N1	6.85	124.42	121.00
53	A4	1042	C	N3-C2-O2	-6.85	117.11	121.90
29	A1	489	C	C6-N1-C2	-6.85	117.56	120.30
29	A1	1008	C	C6-N1-C2	6.85	123.04	120.30
29	A2	345	A	C8-N9-C4	6.85	108.54	105.80
29	A2	639	U	C5-C6-N1	6.85	126.12	122.70
53	A3	289	U	N1-C2-O2	6.85	127.59	122.80
29	A1	2833	A	C5-C6-N1	6.84	121.12	117.70
29	A2	1714	A	N7-C8-N9	6.84	117.22	113.80
29	A2	2322	G	N3-C4-C5	-6.84	125.18	128.60
53	A4	1381	C	N3-C4-C5	6.84	124.64	121.90
29	A1	1120	C	N3-C2-O2	-6.84	117.11	121.90
29	A1	2517	A	C5-C6-N1	6.84	121.12	117.70
29	A2	2382	C	C6-N1-C2	-6.84	117.56	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	897	G	N3-C2-N2	6.84	124.69	119.90
29	A1	1958	C	N3-C2-O2	-6.84	117.11	121.90
29	A2	420	C	C6-N1-C2	-6.84	117.56	120.30
30	B1	49	C	N1-C2-O2	6.84	123.00	118.90
53	A3	1477	A	C8-N9-C4	-6.84	103.06	105.80
53	A4	99	C	N1-C2-O2	6.84	123.00	118.90
29	A1	1750	A	C4-C5-N7	6.84	114.12	110.70
53	A3	1310	A	C5-N7-C8	-6.84	100.48	103.90
29	A2	2176	G	C4-N9-C1'	6.83	135.39	126.50
53	A4	139	G	C4-C5-N7	6.83	113.53	110.80
29	A1	1716	G	N1-C2-N2	-6.83	110.05	116.20
29	A1	2129	C	N3-C2-O2	-6.83	117.12	121.90
29	A1	2165	G	N3-C4-N9	6.83	130.10	126.00
29	A1	2559	G	C5-C6-O6	6.83	132.70	128.60
53	A3	558	G	O5'-P-OP1	6.83	118.90	110.70
53	A3	716	A	O4'-C1'-N9	6.83	113.67	108.20
53	A4	1228	U	C6-N1-C1'	-6.83	111.63	121.20
29	A2	1281	C	N3-C2-O2	-6.83	117.12	121.90
53	A3	719	C	N1-C2-O2	6.83	123.00	118.90
53	A4	1059	G	C2-N3-C4	-6.83	108.48	111.90
29	A1	2851	G	C4-N9-C1'	6.83	135.38	126.50
30	B2	79	U	N3-C2-O2	-6.83	117.42	122.20
53	A3	955	A	N9-C4-C5	-6.83	103.07	105.80
53	A3	1506	G	C4-N9-C1'	6.83	135.38	126.50
53	A4	1243	C	N1-C2-O2	6.83	123.00	118.90
53	A4	563	U	N3-C2-O2	-6.83	117.42	122.20
29	A1	1281	C	N3-C2-O2	-6.82	117.12	121.90
29	A1	1803	G	N1-C6-O6	-6.82	115.81	119.90
29	A1	2573	C	N1-C2-O2	6.82	122.99	118.90
29	A1	2781	G	O5'-P-OP2	-6.82	99.56	105.70
53	A4	156	A	N7-C8-N9	6.82	117.21	113.80
53	A4	1254	G	N9-C4-C5	-6.82	102.67	105.40
53	A3	511	C	N3-C4-C5	6.82	124.63	121.90
29	A2	722	C	N3-C2-O2	-6.82	117.13	121.90
29	A2	2737	G	N7-C8-N9	6.82	116.51	113.10
53	A3	236	C	N1-C2-O2	6.82	122.99	118.90
53	A3	1455	C	N1-C2-O2	6.82	122.99	118.90
29	A2	1375	C	N1-C2-O2	6.82	122.99	118.90
29	A2	2849	G	C5-C6-N1	6.82	114.91	111.50
29	A2	2737	G	C4-N9-C1'	6.81	135.36	126.50
53	A4	1325	C	N3-C2-O2	-6.81	117.13	121.90
29	A1	585	C	O4'-C1'-N1	6.81	113.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	622	G	C4-C5-N7	6.81	113.52	110.80
29	A1	1929	C	N1-C2-O2	6.81	122.98	118.90
29	A1	2076	G	N7-C8-N9	6.81	116.50	113.10
29	A2	2369	C	C6-N1-C1'	-6.81	112.63	120.80
53	A4	139	G	N9-C4-C5	-6.81	102.68	105.40
53	A4	357	G	N3-C4-C5	6.81	132.00	128.60
53	A4	1431	A	N7-C8-N9	6.81	117.20	113.80
29	A1	1944	C	C5-C6-N1	6.81	124.40	121.00
53	A3	248	U	N1-C2-O2	6.81	127.56	122.80
53	A4	967	C	C6-N1-C1'	-6.81	112.63	120.80
29	A1	17	G	C8-N9-C4	-6.81	103.68	106.40
29	A1	227	C	C5-C6-N1	6.81	124.40	121.00
29	A2	396	C	C6-N1-C2	-6.81	117.58	120.30
29	A2	478	G	C8-N9-C4	6.80	109.12	106.40
53	A3	415	U	N1-C2-O2	6.80	127.56	122.80
53	A3	560	G	N1-C2-N3	6.80	127.98	123.90
53	A4	737	C	C6-N1-C2	-6.80	117.58	120.30
53	A4	1220	A	N9-C4-C5	-6.80	103.08	105.80
53	A3	905	G	C8-N9-C1'	-6.80	118.16	127.00
29	A1	2829	G	C6-N1-C2	-6.80	121.02	125.10
29	A2	2650	U	C2-N1-C1'	6.80	125.86	117.70
53	A3	675	U	C6-N1-C2	-6.80	116.92	121.00
53	A3	1047	U	C5-C6-N1	6.80	126.10	122.70
53	A4	840	U	N3-C2-O2	-6.80	117.44	122.20
29	A1	533	G	C8-N9-C4	6.80	109.12	106.40
29	A2	782	G	N3-C4-C5	6.80	132.00	128.60
29	A1	241	A	N9-C4-C5	6.80	108.52	105.80
29	A2	2362	U	C2-N1-C1'	6.80	125.86	117.70
29	A1	1457	C	N3-C2-O2	-6.80	117.14	121.90
29	A2	1790	U	N3-C2-O2	-6.80	117.44	122.20
29	A1	1086	C	N1-C2-O2	6.79	122.98	118.90
29	A1	2237	G	C6-C5-N7	-6.79	126.32	130.40
53	A3	767	C	N1-C2-O2	6.79	122.98	118.90
53	A4	180	C	N3-C4-C5	6.79	124.62	121.90
53	A4	215	G	C6-C5-N7	-6.79	126.32	130.40
30	B1	37	U	C5-C6-N1	6.79	126.09	122.70
29	A2	1454	U	C5-C6-N1	6.79	126.10	122.70
53	A4	148	C	C6-N1-C1'	-6.79	112.65	120.80
29	A1	2342	A	C4-C5-N7	6.79	114.09	110.70
53	A3	363	U	C2-N1-C1'	6.79	125.85	117.70
29	A2	1140	C	N3-C2-O2	-6.79	117.15	121.90
30	B2	38	C	C2-N1-C1'	6.79	126.27	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	7	G	N3-C4-N9	6.79	130.07	126.00
29	A1	2700	G	C8-N9-C4	-6.79	103.69	106.40
29	A2	2735	U	N1-C2-N3	6.79	118.97	114.90
53	A4	285	C	C2-N1-C1'	6.79	126.26	118.80
29	A2	428	G	C6-C5-N7	-6.78	126.33	130.40
30	B2	112	G	O4'-C1'-N9	6.78	113.63	108.20
53	A3	965	G	N7-C8-N9	6.78	116.49	113.10
29	A1	2598	U	C6-N1-C1'	-6.78	111.70	121.20
53	A4	966	C	N3-C4-N4	6.78	122.75	118.00
29	A2	182	C	C5-C6-N1	6.78	124.39	121.00
53	A4	780	C	N3-C2-O2	-6.78	117.15	121.90
29	A1	555	A	C4-C5-N7	6.78	114.09	110.70
53	A3	1332	U	N1-C2-O2	6.78	127.54	122.80
29	A1	360	C	N1-C2-O2	6.77	122.96	118.90
53	A3	926	A	N1-C6-N6	-6.77	114.53	118.60
29	A1	1973	G	C6-C5-N7	-6.77	126.34	130.40
29	A1	2265	G	C6-C5-N7	-6.77	126.34	130.40
29	A2	2087	C	N3-C4-C5	6.77	124.61	121.90
29	A1	2417	C	C5-C6-N1	6.77	124.39	121.00
29	A1	827	G	C6-C5-N7	-6.77	126.34	130.40
29	A1	2382	C	C6-N1-C2	-6.76	117.59	120.30
29	A2	851	A	N9-C4-C5	-6.76	103.09	105.80
29	A2	925	C	N1-C2-O2	6.76	122.96	118.90
29	A2	1819	A	C6-C5-N7	-6.76	127.56	132.30
53	A3	760	A	C4-C5-N7	6.76	114.08	110.70
53	A4	110	G	N7-C8-N9	6.76	116.48	113.10
29	A1	1464	G	O4'-C1'-N9	6.76	113.61	108.20
29	A1	1600	C	C5-C6-N1	6.76	124.38	121.00
29	A1	2165	G	N3-C4-C5	-6.76	125.22	128.60
29	A2	2863	A	C5-N7-C8	-6.76	100.52	103.90
29	A2	1787	C	N3-C2-O2	-6.76	117.17	121.90
53	A3	589	G	C4-C5-N7	6.76	113.50	110.80
53	A4	677	A	N1-C6-N6	6.76	122.66	118.60
53	A4	1506	G	O4'-C1'-N9	6.76	113.61	108.20
29	A1	1578	G	C5-C6-O6	-6.76	124.55	128.60
53	A3	1339	U	N3-C2-O2	-6.76	117.47	122.20
53	A4	563	U	C5-C6-N1	6.76	126.08	122.70
29	A2	1626	C	N1-C2-O2	6.75	122.95	118.90
53	A4	665	G	C4-C5-N7	6.75	113.50	110.80
29	A1	1202	G	N7-C8-N9	-6.75	109.72	113.10
29	A1	1840	G	N3-C4-C5	6.75	131.98	128.60
29	A1	1938	C	N1-C2-O2	6.75	122.95	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2868	C	N1-C2-O2	6.75	122.95	118.90
29	A2	1551	U	N3-C2-O2	-6.75	117.47	122.20
29	A2	2076	G	N1-C6-O6	6.75	123.95	119.90
29	A2	2330	C	C6-N1-C2	-6.75	117.60	120.30
53	A3	1445	A	N1-C6-N6	6.75	122.65	118.60
53	A4	1178	G	C6-C5-N7	-6.75	126.35	130.40
29	A1	397	C	N3-C4-N4	-6.75	113.27	118.00
29	A1	730	G	C8-N9-C4	-6.75	103.70	106.40
29	A1	1649	G	N1-C6-O6	-6.75	115.85	119.90
29	A1	2851	G	C8-N9-C1'	-6.75	118.22	127.00
29	A2	735	G	C5-N7-C8	-6.75	100.92	104.30
29	A2	1814	C	N3-C2-O2	-6.75	117.17	121.90
29	A2	2227	U	N3-C2-O2	-6.75	117.47	122.20
29	A1	1282	U	N1-C2-O2	6.75	127.53	122.80
53	A3	1474	G	N9-C4-C5	6.75	108.10	105.40
53	A3	1475	U	OP2-P-O3'	6.75	120.05	105.20
53	A4	1087	A	C6-C5-N7	-6.75	127.58	132.30
29	A1	847	G	N1-C6-O6	-6.74	115.85	119.90
29	A2	1158	G	C8-N9-C4	-6.74	103.70	106.40
29	A2	2238	G	C6-C5-N7	-6.74	126.35	130.40
29	A2	1777	C	C6-N1-C2	-6.74	117.60	120.30
53	A3	543	U	N3-C2-O2	-6.74	117.48	122.20
53	A3	1464	G	C4-C5-N7	6.74	113.50	110.80
29	A1	1732	C	N1-C2-O2	6.74	122.94	118.90
29	A1	2535	C	N3-C2-O2	-6.74	117.18	121.90
53	A3	603	C	C6-N1-C2	-6.74	117.60	120.30
53	A4	212	C	N3-C2-O2	-6.74	117.18	121.90
53	A4	261	G	N1-C6-O6	6.74	123.94	119.90
29	A1	1804	C	C2-N3-C4	-6.74	116.53	119.90
29	A1	2005	A	N7-C8-N9	6.74	117.17	113.80
29	A1	2517	A	C2-N3-C4	6.74	113.97	110.60
29	A2	490	C	C6-N1-C2	-6.74	117.61	120.30
29	A2	1883	G	N9-C4-C5	6.74	108.09	105.40
53	A3	407	A	P-O3'-C3'	6.74	127.78	119.70
53	A4	964	G	N7-C8-N9	6.74	116.47	113.10
29	A1	2260	G	N9-C4-C5	-6.73	102.71	105.40
29	A1	2810	G	C8-N9-C4	-6.73	103.71	106.40
53	A4	1000	G	C4-N9-C1'	6.73	135.25	126.50
29	A1	490	C	C6-N1-C2	-6.73	117.61	120.30
29	A2	2390	A	N1-C6-N6	6.73	122.64	118.60
53	A4	187	C	C5-C6-N1	6.73	124.37	121.00
53	A4	261	G	N9-C4-C5	-6.73	102.71	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2865	C	N3-C2-O2	-6.73	117.19	121.90
30	B1	90	C	N3-C2-O2	-6.73	117.19	121.90
53	A3	135	A	C8-N9-C4	-6.73	103.11	105.80
53	A3	1248	C	C2-N1-C1'	6.73	126.20	118.80
53	A4	334	C	N3-C2-O2	-6.73	117.19	121.90
53	A4	1033	C	C6-N1-C2	-6.73	117.61	120.30
16	R1	67	ASP	CB-CG-OD1	6.73	124.36	118.30
29	A2	875	U	O5'-P-OP1	-6.73	99.65	105.70
29	A2	2051	G	N3-C4-C5	-6.73	125.24	128.60
29	A1	2076	G	N1-C6-O6	6.73	123.94	119.90
29	A1	446	G	C4-C5-N7	6.72	113.49	110.80
29	A1	1787	C	N3-C2-O2	-6.72	117.19	121.90
29	A1	2077	G	C6-C5-N7	-6.72	126.37	130.40
29	A2	1045	G	C4-N9-C1'	6.72	135.24	126.50
53	A3	1481	G	C5-C6-N1	6.72	114.86	111.50
46	P3	73	LEU	CA-CB-CG	-6.72	99.84	115.30
29	A1	1300	G	C4-C5-N7	6.72	113.49	110.80
29	A1	2675	G	N3-C4-C5	-6.72	125.24	128.60
29	A2	2602	G	C6-C5-N7	-6.72	126.37	130.40
29	A1	187	A	C8-N9-C4	6.72	108.49	105.80
29	A2	935	C	C6-N1-C2	-6.72	117.61	120.30
29	A2	1119	G	N3-C4-N9	6.72	130.03	126.00
29	A1	1929	C	N3-C2-O2	-6.71	117.20	121.90
29	A2	860	U	C5-C4-O4	6.71	129.93	125.90
29	A2	1143	A	C8-N9-C4	-6.71	103.11	105.80
29	A1	1817	A	C5-N7-C8	-6.71	100.54	103.90
29	A2	1652	C	C6-N1-C2	-6.71	117.61	120.30
53	A3	672	C	C5-C6-N1	6.71	124.36	121.00
7	I1	26	LEU	CA-CB-CG	6.71	130.73	115.30
29	A1	2694	C	N3-C4-C5	6.71	124.58	121.90
29	A2	1026	G	N3-C4-N9	6.71	130.03	126.00
29	A2	1812	U	N1-C2-O2	6.71	127.50	122.80
53	A4	148	C	P-O3'-C3'	6.71	127.75	119.70
53	A4	1178	G	N9-C4-C5	-6.71	102.72	105.40
30	B2	4	C	C6-N1-C2	-6.71	117.62	120.30
53	A3	70	G	C6-C5-N7	-6.71	126.38	130.40
29	A1	531	U	C5-C6-N1	6.70	126.05	122.70
29	A1	1826	C	N1-C2-O2	6.70	122.92	118.90
29	A2	798	C	C2-N3-C4	6.70	123.25	119.90
53	A3	1142	G	N3-C4-N9	6.70	130.02	126.00
53	A4	905	G	C4-C5-N7	6.70	113.48	110.80
53	A4	1318	G	N1-C2-N2	-6.70	110.17	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1732	C	C2-N1-C1'	6.70	126.17	118.80
29	A1	2864	G	N7-C8-N9	6.70	116.45	113.10
29	A2	861	C	N1-C2-O2	6.70	122.92	118.90
29	A2	2180	G	C4-C5-N7	6.70	113.48	110.80
53	A3	526	C	C2-N1-C1'	6.70	126.17	118.80
53	A4	826	C	N3-C2-O2	-6.70	117.21	121.90
29	A1	2334	A	O4'-C1'-N9	6.70	113.56	108.20
53	A3	639	C	C5-C6-N1	6.70	124.35	121.00
53	A3	800	C	C2-N3-C4	-6.70	116.55	119.90
29	A1	641	G	C4-N9-C1'	6.70	135.21	126.50
29	A1	1375	C	N1-C2-O2	6.70	122.92	118.90
29	A2	126	C	C5-C4-N4	-6.70	115.51	120.20
29	A2	2190	G	C8-N9-C4	-6.70	103.72	106.40
53	A4	826	C	N1-C2-O2	6.70	122.92	118.90
53	A4	1063	G	N1-C2-N2	6.70	122.23	116.20
29	A1	1771	G	C4-N9-C1'	6.69	135.20	126.50
29	A2	2005	A	N7-C8-N9	6.69	117.15	113.80
53	A4	1124	G	C2-N3-C4	-6.69	108.55	111.90
29	A2	2376	G	N3-C2-N2	-6.69	115.22	119.90
53	A3	1276	G	C5-C6-N1	6.69	114.85	111.50
29	A1	493	G	C2-N3-C4	-6.69	108.56	111.90
29	A1	2169	C	C6-N1-C2	-6.69	117.62	120.30
29	A2	1352	C	C5-C6-N1	6.69	124.34	121.00
29	A2	1436	G	N3-C4-C5	-6.69	125.25	128.60
53	A4	1334	G	C8-N9-C4	6.69	109.08	106.40
29	A2	426	G	C4-C5-N7	6.69	113.48	110.80
29	A1	375	U	N3-C2-O2	-6.69	117.52	122.20
53	A3	1209	C	C2-N1-C1'	6.69	126.16	118.80
53	A4	910	G	N3-C4-C5	6.69	131.94	128.60
29	A2	1812	U	N3-C2-O2	-6.69	117.52	122.20
29	A2	1282	U	N1-C2-O2	6.68	127.48	122.80
29	A2	2321	G	O4'-C1'-N9	6.68	113.55	108.20
53	A3	1140	C	C2-N1-C1'	6.68	126.15	118.80
29	A1	2622	G	N3-C4-C5	6.68	131.94	128.60
53	A4	1510	C	C6-N1-C2	-6.68	117.63	120.30
53	A3	1451	G	N7-C8-N9	6.68	116.44	113.10
53	A4	1455	C	N1-C2-O2	6.68	122.91	118.90
29	A1	1120	C	C2-N1-C1'	6.68	126.15	118.80
29	A2	110	U	O4'-C1'-N1	6.68	113.54	108.20
29	A2	298	C	C6-N1-C2	-6.68	117.63	120.30
53	A3	1145	C	N3-C2-O2	-6.68	117.22	121.90
53	A4	1468	G	C6-C5-N7	-6.68	126.39	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2092	U	N3-C2-O2	-6.68	117.53	122.20
29	A1	828	U	C2-N1-C1'	6.68	125.71	117.70
29	A1	2468	G	C4-C5-C6	6.68	122.81	118.80
29	A2	481	C	N3-C2-O2	-6.68	117.23	121.90
29	A2	1600	C	C5-C6-N1	6.68	124.34	121.00
53	A4	1299	A	C5-C6-N6	-6.68	118.36	123.70
29	A1	2360	A	O5'-P-OP2	-6.67	99.69	105.70
29	A1	2376	G	N3-C4-N9	-6.67	122.00	126.00
29	A2	1358	G	N3-C4-C5	-6.67	125.26	128.60
53	A3	490	C	C6-N1-C2	-6.67	117.63	120.30
29	A2	1435	C	C5-C6-N1	6.67	124.34	121.00
29	A1	2584	G	N1-C2-N3	6.67	127.90	123.90
53	A4	1042	C	C5-C4-N4	-6.67	115.53	120.20
1	C1	85	ASP	CB-CG-OD1	6.67	124.30	118.30
29	A2	2452	U	C5-C4-O4	-6.67	121.90	125.90
53	A4	1452	G	C6-C5-N7	-6.67	126.40	130.40
29	A1	224	C	N3-C2-O2	-6.67	117.23	121.90
29	A1	730	G	N7-C8-N9	6.67	116.43	113.10
29	A2	2868	C	N1-C2-O2	6.67	122.90	118.90
29	A2	2242	G	C6-C5-N7	-6.67	126.40	130.40
29	A1	781	C	C6-N1-C2	6.66	122.97	120.30
53	A3	798	A	C8-N9-C4	6.66	108.47	105.80
53	A4	420	G	N3-C4-N9	6.66	130.00	126.00
29	A1	288	G	C4-N9-C1'	6.66	135.16	126.50
29	A2	17	G	C8-N9-C4	-6.66	103.73	106.40
29	A2	1475	A	P-O3'-C3'	6.66	127.69	119.70
29	A2	2321	G	N3-C4-C5	-6.66	125.27	128.60
29	A1	375	U	N1-C2-O2	6.66	127.46	122.80
29	A1	2312	A	O4'-C1'-N9	6.66	113.53	108.20
29	A2	714	C	C6-N1-C2	-6.66	117.64	120.30
53	A3	203	A	N9-C4-C5	-6.66	103.14	105.80
29	A2	268	C	N3-C2-O2	-6.66	117.24	121.90
29	A2	2076	G	N7-C8-N9	6.66	116.43	113.10
29	A2	2616	A	O4'-C1'-N9	6.66	113.53	108.20
53	A3	886	A	C2-N3-C4	6.65	113.93	110.60
53	A4	798	A	C8-N9-C4	6.65	108.46	105.80
53	A4	1209	C	N3-C4-C5	6.65	124.56	121.90
29	A2	1354	C	C5-C6-N1	6.65	124.33	121.00
29	A1	1832	G	P-O3'-C3'	6.65	127.68	119.70
29	A2	2488	C	C5-C6-N1	6.65	124.33	121.00
53	A3	893	G	C8-N9-C1'	-6.65	118.35	127.00
29	A1	1837	C	C2-N3-C4	-6.65	116.58	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	690	C	C5-C6-N1	6.65	124.32	121.00
53	A3	727	C	N3-C2-O2	-6.65	117.25	121.90
53	A4	549	G	C4-C5-N7	6.65	113.46	110.80
53	A4	1272	G	C6-C5-N7	-6.65	126.41	130.40
29	A2	2573	C	C6-N1-C2	-6.65	117.64	120.30
29	A1	2240	C	C6-N1-C2	-6.64	117.64	120.30
29	A2	1528	G	N7-C8-N9	6.64	116.42	113.10
29	A2	2909	U	N1-C2-O2	6.64	127.45	122.80
30	B1	112	G	O4'-C1'-N9	6.64	113.51	108.20
53	A3	1392	G	N7-C8-N9	6.64	116.42	113.10
29	A1	2044	A	N3-C4-N9	-6.64	122.09	127.40
29	A1	2452	U	C5-C4-O4	-6.64	121.92	125.90
29	A1	2573	C	C6-N1-C2	-6.64	117.64	120.30
53	A4	1370	C	N1-C2-O2	6.64	122.88	118.90
29	A2	1014	C	C5-C6-N1	6.64	124.32	121.00
53	A4	1244	C	C5-C6-N1	6.64	124.32	121.00
29	A2	1457	C	N3-C2-O2	-6.64	117.25	121.90
29	A2	2181	G	N3-C2-N2	-6.64	115.25	119.90
29	A1	823	A	N1-C2-N3	6.63	132.62	129.30
29	A1	2786	C	C6-N1-C2	-6.63	117.65	120.30
29	A2	98	U	N3-C2-O2	-6.63	117.56	122.20
29	A2	212	A	N9-C4-C5	-6.63	103.15	105.80
53	A4	668	G	C8-N9-C4	-6.63	103.75	106.40
53	A4	1360	C	N3-C4-C5	-6.63	119.25	121.90
29	A2	1450	C	C5-C6-N1	6.63	124.32	121.00
29	A2	1787	C	N1-C2-O2	6.63	122.88	118.90
53	A4	560	G	N1-C2-N3	6.63	127.88	123.90
29	A1	749	G	N9-C4-C5	-6.63	102.75	105.40
29	A2	586	G	C8-N9-C4	6.63	109.05	106.40
29	A2	1107	G	N3-C4-C5	-6.63	125.28	128.60
33	C3	52	LEU	CA-CB-CG	6.63	130.54	115.30
53	A3	1396	U	N3-C2-O2	-6.63	117.56	122.20
29	A1	1480	C	N3-C2-O2	-6.63	117.26	121.90
29	A1	1616	A	N3-C4-C5	6.63	131.44	126.80
29	A2	1452	C	N1-C2-O2	6.63	122.88	118.90
29	A1	586	G	C8-N9-C4	6.62	109.05	106.40
29	A1	1393	C	N1-C2-O2	6.62	122.88	118.90
29	A2	2598	U	C6-N1-C1'	-6.62	111.92	121.20
29	A1	1925	A	N1-C6-N6	-6.62	114.63	118.60
29	A2	90	A	C8-N9-C4	-6.62	103.15	105.80
29	A2	599	C	C6-N1-C2	-6.62	117.65	120.30
29	A2	1362	C	C6-N1-C2	-6.62	117.65	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2454	C	N1-C2-O2	6.62	122.87	118.90
29	A2	2580	A	P-O3'-C3'	6.62	127.65	119.70
53	A3	1408	C	C2-N1-C1'	6.62	126.08	118.80
53	A4	407	A	P-O3'-C3'	6.62	127.65	119.70
29	A1	2212	C	N1-C2-O2	6.62	122.87	118.90
29	A1	2416	C	C6-N1-C2	-6.62	117.65	120.30
29	A2	520	G	C8-N9-C4	-6.62	103.75	106.40
53	A3	473	C	C6-N1-C2	-6.62	117.65	120.30
29	A1	2871	G	C6-C5-N7	-6.62	126.43	130.40
29	A2	2378	C	N1-C2-O2	6.62	122.87	118.90
29	A2	1362	C	N3-C2-O2	-6.62	117.27	121.90
29	A1	2286	U	C6-N1-C2	-6.61	117.03	121.00
29	A2	963	C	C2-N1-C1'	6.61	126.08	118.80
53	A3	676	G	C6-C5-N7	-6.61	126.43	130.40
29	A1	2311	C	C6-N1-C2	-6.61	117.66	120.30
29	A2	1834	G	C4-N9-C1'	6.61	135.10	126.50
29	A2	2819	G	C5-C6-O6	-6.61	124.63	128.60
29	A1	2626	C	C5-C6-N1	-6.61	117.69	121.00
29	A2	426	G	C5-C6-O6	-6.61	124.63	128.60
29	A2	2780	A	C2-N3-C4	6.61	113.91	110.60
53	A3	1236	G	N9-C4-C5	-6.61	102.76	105.40
29	A2	757	C	C6-N1-C2	-6.61	117.66	120.30
29	A1	1312	G	N7-C8-N9	6.61	116.40	113.10
29	A2	1008	C	C6-N1-C2	6.61	122.94	120.30
53	A3	527	G	N7-C8-N9	6.61	116.40	113.10
53	A3	1110	C	C5-C6-N1	6.61	124.30	121.00
37	G4	91	VAL	C-N-CA	6.61	138.22	121.70
53	A4	1397	G	C8-N9-C1'	6.61	135.59	127.00
29	A1	387	U	C5-C6-N1	6.61	126.00	122.70
29	A1	730	G	C5-N7-C8	-6.61	101.00	104.30
29	A1	2580	A	P-O3'-C3'	6.61	127.63	119.70
53	A3	1468	G	C6-C5-N7	-6.61	126.44	130.40
29	A2	2315	C	C6-N1-C2	-6.60	117.66	120.30
29	A2	1622	G	C5-N7-C8	-6.60	101.00	104.30
29	A2	1896	G	N7-C8-N9	6.60	116.40	113.10
29	A2	2716	U	N3-C2-O2	-6.60	117.58	122.20
29	A2	1420	U	N1-C2-O2	6.60	127.42	122.80
29	A2	1647	C	C5-C6-N1	6.60	124.30	121.00
29	A2	2521	C	N3-C2-O2	-6.60	117.28	121.90
53	A4	289	U	N1-C2-O2	6.60	127.42	122.80
29	A1	205	G	C8-N9-C4	6.59	109.04	106.40
29	A1	2059	G	C8-N9-C1'	-6.59	118.43	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1746	G	C4-C5-N7	6.59	113.44	110.80
29	A2	1948	C	N1-C2-O2	6.59	122.86	118.90
29	A1	2028	G	N3-C4-N9	6.59	129.96	126.00
32	B4	61	LEU	CA-CB-CG	6.59	130.46	115.30
29	A2	2595	G	C8-N9-C1'	-6.59	118.43	127.00
53	A3	323	C	C2-N1-C1'	6.59	126.05	118.80
53	A4	930	G	C4-N9-C1'	6.59	135.07	126.50
29	A1	420	C	C6-N1-C2	-6.59	117.66	120.30
29	A1	1026	G	N3-C4-C5	-6.59	125.31	128.60
30	B2	16	U	N1-C2-O2	6.59	127.41	122.80
53	A3	443	C	C2-N1-C1'	6.59	126.05	118.80
29	A1	1019	G	N3-C4-C5	-6.58	125.31	128.60
53	A3	756	G	N9-C4-C5	-6.58	102.77	105.40
53	A4	415	U	N1-C2-O2	6.58	127.41	122.80
29	A1	969	G	C4-N9-C1'	6.58	135.06	126.50
29	A1	2378	C	C6-N1-C2	-6.58	117.67	120.30
29	A1	2521	C	N3-C2-O2	-6.58	117.29	121.90
29	A2	2080	G	C4-C5-N7	6.58	113.43	110.80
53	A3	1236	G	C4-C5-N7	6.58	113.43	110.80
53	A4	1264	G	N3-C4-N9	6.58	129.95	126.00
29	A1	1852	A	P-O3'-C3'	6.58	127.60	119.70
29	A1	2454	C	N1-C2-O2	6.58	122.85	118.90
30	B1	63	G	C8-N9-C1'	-6.58	118.44	127.00
53	A3	425	A	N9-C4-C5	-6.58	103.17	105.80
53	A3	1506	G	C8-N9-C1'	-6.58	118.44	127.00
29	A2	352	G	C8-N9-C4	-6.58	103.77	106.40
29	A1	287	C	C2-N1-C1'	6.58	126.04	118.80
53	A4	561	C	N1-C2-O2	6.58	122.85	118.90
53	A4	1215	C	C5-C6-N1	6.58	124.29	121.00
29	A2	2356	C	C5-C6-N1	6.58	124.29	121.00
53	A3	423	G	C4-C5-N7	6.58	113.43	110.80
29	A1	669	G	C4-N9-C1'	-6.58	117.95	126.50
29	A1	1517	C	C2-N1-C1'	6.58	126.03	118.80
29	A2	126	C	N3-C4-N4	6.58	122.60	118.00
29	A2	2376	G	C8-N9-C1'	6.58	135.55	127.00
53	A3	845	C	N1-C2-O2	6.58	122.84	118.90
29	A1	798	C	C2-N3-C4	6.57	123.19	119.90
29	A1	2068	C	C2-N3-C4	-6.57	116.61	119.90
53	A3	71	C	C6-N1-C2	-6.57	117.67	120.30
53	A3	673	G	C8-N9-C4	-6.57	103.77	106.40
53	A4	511	C	C2-N1-C1'	6.57	126.03	118.80
53	A3	676	G	C4-C5-N7	6.57	113.43	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2851	G	N3-C4-N9	6.57	129.94	126.00
30	B2	63	G	N3-C4-N9	6.57	129.94	126.00
53	A4	490	C	C6-N1-C2	-6.57	117.67	120.30
29	A2	2670	U	C5-C6-N1	6.57	125.98	122.70
53	A3	240	C	C2-N1-C1'	6.57	126.03	118.80
29	A1	1480	C	C6-N1-C1'	-6.57	112.92	120.80
53	A4	261	G	N3-C4-C5	6.56	131.88	128.60
29	A1	1622	G	C5-N7-C8	-6.56	101.02	104.30
29	A2	2332	G	C6-C5-N7	-6.56	126.46	130.40
53	A4	737	C	N3-C2-O2	-6.56	117.31	121.90
53	A3	285	C	N1-C2-O2	6.56	122.84	118.90
53	A4	1339	U	N1-C2-O2	6.56	127.39	122.80
29	A1	458	A	N1-C6-N6	-6.56	114.67	118.60
53	A4	480	A	C2-N3-C4	6.56	113.88	110.60
29	A1	1748	G	O4'-C1'-N9	-6.56	102.95	108.20
29	A1	2700	G	C4-C5-C6	6.56	122.73	118.80
29	A2	1832	G	P-O3'-C3'	6.56	127.57	119.70
53	A3	1244	C	C2-N3-C4	6.56	123.18	119.90
53	A4	615	A	N1-C6-N6	6.56	122.53	118.60
29	A2	2742	G	N3-C4-C5	-6.56	125.32	128.60
29	A1	1702	G	C4-C5-C6	6.55	122.73	118.80
29	A2	963	C	N3-C2-O2	-6.55	117.31	121.90
29	A2	1457	C	C6-N1-C2	-6.55	117.68	120.30
29	A2	90	A	N7-C8-N9	6.55	117.08	113.80
29	A2	1215	U	N1-C2-O2	6.55	127.39	122.80
53	A4	995	G	N3-C4-N9	6.55	129.93	126.00
29	A1	1741	U	N3-C2-O2	-6.55	117.61	122.20
29	A1	1804	C	N3-C4-C5	6.55	124.52	121.90
29	A2	236	C	C5-C6-N1	6.55	124.28	121.00
29	A2	1614	C	C6-N1-C2	6.55	122.92	120.30
53	A3	270	G	C8-N9-C1'	-6.55	118.48	127.00
29	A2	1517	C	C2-N1-C1'	6.55	126.00	118.80
29	A2	1791	G	O4'-C1'-N9	6.55	113.44	108.20
29	A2	2417	C	N3-C2-O2	-6.55	117.31	121.90
53	A3	237	C	N3-C2-O2	-6.55	117.32	121.90
53	A3	852	C	C2-N3-C4	-6.55	116.62	119.90
53	A3	1066	G	N7-C8-N9	6.55	116.38	113.10
53	A4	886	A	C2-N3-C4	6.55	113.88	110.60
29	A1	1718	A	C4-N9-C1'	6.55	138.09	126.30
53	A3	240	C	N3-C2-O2	-6.55	117.32	121.90
30	B1	63	G	N3-C4-N9	6.55	129.93	126.00
53	A4	419	G	C5-N7-C8	-6.55	101.03	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1418	C	N1-C2-O2	6.54	122.83	118.90
29	A2	272	U	N1-C2-O2	6.54	127.38	122.80
53	A4	572	C	N3-C2-O2	-6.54	117.32	121.90
53	A4	1479	A	C4-N9-C1'	6.54	138.08	126.30
29	A1	455	C	C2-N1-C1'	6.54	126.00	118.80
30	B1	67	C	C6-N1-C2	-6.54	117.68	120.30
53	A3	609	U	N3-C2-O2	-6.54	117.62	122.20
53	A4	222	G	N3-C4-N9	-6.54	122.07	126.00
53	A4	939	C	C5-C6-N1	6.54	124.27	121.00
53	A4	1506	G	C6-C5-N7	-6.54	126.47	130.40
53	A3	976	C	C6-N1-C2	-6.54	117.68	120.30
53	A4	240	C	C2-N1-C1'	6.54	126.00	118.80
29	A1	2620	C	C2-N1-C1'	6.54	125.99	118.80
29	A2	348	G	N3-C4-N9	6.54	129.92	126.00
29	A2	993	G	C8-N9-C4	-6.54	103.78	106.40
29	A2	2084	A	C5-C6-N1	6.54	120.97	117.70
29	A2	2180	G	N7-C8-N9	6.54	116.37	113.10
53	A3	1059	G	C6-N1-C2	6.54	129.02	125.10
53	A4	148	C	N1-C2-O2	6.54	122.82	118.90
53	A4	270	G	C8-N9-C1'	-6.54	118.50	127.00
29	A2	1029	A	C8-N9-C4	-6.54	103.19	105.80
53	A3	1452	G	N7-C8-N9	6.54	116.37	113.10
29	A1	969	G	C8-N9-C1'	-6.53	118.51	127.00
29	A1	2523	G	C4-C5-N7	6.53	113.41	110.80
29	A2	262	A	N7-C8-N9	6.53	117.07	113.80
29	A2	830	A	N3-C4-C5	6.53	131.37	126.80
29	A2	2416	C	C6-N1-C2	-6.53	117.69	120.30
53	A3	1005	C	P-O3'-C3'	6.53	127.54	119.70
29	A1	298	C	C6-N1-C2	-6.53	117.69	120.30
29	A1	872	G	C4-C5-N7	6.53	113.41	110.80
29	A1	979	G	C8-N9-C1'	-6.53	118.51	127.00
29	A1	2424	G	C2-N3-C4	6.53	115.17	111.90
29	A2	2322	G	C4-N9-C1'	6.53	134.99	126.50
53	A3	270	G	N9-C4-C5	-6.53	102.79	105.40
53	A4	27	G	N9-C4-C5	-6.53	102.79	105.40
29	A2	749	G	N9-C4-C5	-6.53	102.79	105.40
29	A1	2741	U	N1-C2-O2	6.53	127.37	122.80
29	A2	2265	G	N3-C4-C5	-6.53	125.34	128.60
53	A3	597	A	C4-C5-N7	6.53	113.96	110.70
53	A4	443	C	C5-C6-N1	6.53	124.26	121.00
29	A1	1616	A	C4-C5-C6	-6.53	113.74	117.00
29	A2	181	A	C8-N9-C4	-6.53	103.19	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1741	U	N3-C2-O2	-6.53	117.63	122.20
29	A2	1748	G	O4'-C1'-N9	-6.53	102.98	108.20
53	A4	1292	G	N9-C4-C5	-6.53	102.79	105.40
29	A1	1923	G	C2-N3-C4	-6.52	108.64	111.90
29	A1	841	G	N3-C4-N9	6.52	129.91	126.00
29	A1	1418	C	N3-C2-O2	-6.52	117.33	121.90
29	A1	1903	C	C2-N1-C1'	6.52	125.97	118.80
29	A1	2210	G	C6-C5-N7	-6.52	126.49	130.40
29	A2	879	G	N3-C4-C5	6.52	131.86	128.60
29	A1	1889	G	C4-N9-C1'	6.52	134.97	126.50
29	A2	802	C	C5-C6-N1	6.52	124.26	121.00
29	A2	1957	G	C5-N7-C8	-6.52	101.04	104.30
53	A4	905	G	C6-C5-N7	-6.52	126.49	130.40
28	d1	32	LEU	CA-CB-CG	6.51	130.28	115.30
29	A1	2204	U	C2-N1-C1'	6.51	125.52	117.70
29	A2	2871	G	C4-C5-N7	6.51	113.41	110.80
29	A1	2875	C	C6-N1-C2	6.51	122.91	120.30
53	A4	560	G	C2-N3-C4	-6.51	108.64	111.90
29	A1	1718	A	O4'-C1'-N9	6.51	113.41	108.20
53	A3	184	C	N1-C2-O2	6.51	122.81	118.90
29	A1	792	G	N3-C4-C5	6.51	131.85	128.60
53	A3	1144	C	N3-C2-O2	-6.51	117.34	121.90
53	A4	1079	C	C6-N1-C2	-6.51	117.70	120.30
29	A2	62	U	C2-N1-C1'	6.51	125.51	117.70
53	A3	337	C	N1-C2-O2	6.51	122.81	118.90
53	A3	913	C	N3-C2-O2	-6.51	117.34	121.90
53	A4	1398	G	C6-C5-N7	-6.51	126.50	130.40
29	A1	439	G	C4-C5-N7	6.50	113.40	110.80
29	A1	1019	G	C4-C5-C6	6.50	122.70	118.80
29	A1	1251	A	C8-N9-C4	-6.50	103.20	105.80
29	A2	1189	U	C2-N1-C1'	6.50	125.50	117.70
29	A1	1925	A	C5-C6-N1	6.50	120.95	117.70
29	A1	2735	U	N1-C2-N3	6.50	118.80	114.90
53	A4	205	G	C2-N3-C4	-6.50	108.65	111.90
29	A2	2141	A	N1-C6-N6	6.50	122.50	118.60
29	A1	730	G	C6-C5-N7	-6.50	126.50	130.40
29	A1	1713	A	C5-C6-N1	6.50	120.95	117.70
29	A2	533	G	N3-C4-C5	6.50	131.85	128.60
29	A1	280	G	N3-C4-C5	-6.50	125.35	128.60
29	A1	786	C	N3-C2-O2	-6.50	117.35	121.90
29	A2	104	C	C6-N1-C2	-6.49	117.70	120.30
53	A4	443	C	C6-N1-C1'	-6.49	113.01	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1750	A	C5-N7-C8	-6.49	100.66	103.90
53	A3	1450	A	C2-N3-C4	6.49	113.85	110.60
53	A4	673	G	C8-N9-C4	-6.49	103.80	106.40
29	A2	1804	C	N3-C4-C5	6.49	124.49	121.90
53	A3	1373	U	C6-N1-C1'	6.49	130.28	121.20
29	A2	881	G	C4-N9-C1'	6.48	134.93	126.50
29	A1	2526	C	N3-C2-O2	-6.48	117.36	121.90
53	A3	480	A	C2-N3-C4	6.48	113.84	110.60
29	A2	515	C	C6-N1-C2	-6.48	117.71	120.30
53	A4	496	C	C2-N1-C1'	6.48	125.93	118.80
29	A1	1740	C	N3-C4-C5	6.48	124.49	121.90
29	A1	1014	C	C5-C6-N1	6.48	124.24	121.00
29	A2	1826	C	N3-C2-O2	-6.48	117.37	121.90
29	A2	2552	C	N1-C2-O2	6.48	122.79	118.90
53	A3	970	G	C2-N3-C4	6.48	115.14	111.90
29	A1	1718	A	C5-C6-N1	6.48	120.94	117.70
29	A2	648	A	C8-N9-C4	-6.48	103.21	105.80
29	A2	2341	A	O4'-C1'-N9	6.48	113.38	108.20
29	A1	259	U	O4'-C1'-N1	6.47	113.38	108.20
29	A1	879	G	N3-C4-C5	6.47	131.84	128.60
29	A1	1312	G	C8-N9-C4	-6.47	103.81	106.40
29	A1	1796	G	C8-N9-C4	-6.47	103.81	106.40
29	A1	1957	G	C5-N7-C8	-6.47	101.06	104.30
29	A2	224	C	N3-C2-O2	-6.47	117.37	121.90
29	A2	572	C	C6-N1-C2	-6.47	117.71	120.30
29	A2	662	C	C6-N1-C2	-6.47	117.71	120.30
29	A2	1005	U	C5-C6-N1	-6.47	119.46	122.70
53	A3	1479	A	C4-N9-C1'	6.47	137.95	126.30
53	A4	696	G	C8-N9-C4	-6.47	103.81	106.40
29	A2	437	C	C6-N1-C2	-6.47	117.71	120.30
53	A3	872	G	C5-C6-O6	-6.47	124.72	128.60
29	A2	2178	G	C8-N9-C4	-6.47	103.81	106.40
53	A3	1029	G	C8-N9-C4	6.47	108.99	106.40
53	A4	188	U	N1-C2-O2	6.47	127.33	122.80
53	A3	700	C	N1-C2-O2	6.47	122.78	118.90
53	A4	1025	C	N3-C2-O2	-6.46	117.37	121.90
29	A2	1449	G	N3-C4-C5	-6.46	125.37	128.60
29	A1	1180	A	C4-C5-N7	6.46	113.93	110.70
53	A3	1276	G	C4-C5-N7	6.46	113.38	110.80
53	A4	1348	C	C5-C6-N1	6.46	124.23	121.00
29	A2	1343	C	C6-N1-C2	-6.46	117.72	120.30
53	A4	263	C	C5-C6-N1	6.46	124.23	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1046	C	N1-C2-O2	6.46	122.78	118.90
29	A1	1649	G	C4-N9-C1'	-6.46	118.10	126.50
29	A2	1913	A	N3-C4-N9	-6.46	122.23	127.40
32	B4	208	ILE	CG1-CB-CG2	-6.46	97.19	111.40
29	A1	232	G	C2-N3-C4	-6.46	108.67	111.90
29	A1	897	G	N1-C2-N2	-6.46	110.39	116.20
29	A1	2265	G	C8-N9-C1'	-6.46	118.61	127.00
29	A1	2275	C	N3-C2-O2	-6.46	117.38	121.90
29	A2	2242	G	C8-N9-C4	-6.46	103.82	106.40
29	A2	2251	G	N9-C4-C5	-6.46	102.82	105.40
53	A4	263	C	C2-N1-C1'	6.46	125.90	118.80
53	A4	896	A	C5-C6-N1	6.46	120.93	117.70
29	A2	2014	C	C6-N1-C2	-6.46	117.72	120.30
29	A2	2875	C	C6-N1-C2	6.46	122.88	120.30
53	A3	840	U	N3-C2-O2	-6.46	117.68	122.20
29	A1	1243	C	N3-C2-O2	-6.45	117.38	121.90
29	A1	2281	A	O4'-C1'-N9	6.45	113.36	108.20
29	A2	2373	C	N1-C2-O2	6.45	122.77	118.90
53	A3	874	C	C2-N1-C1'	6.45	125.90	118.80
53	A4	236	C	N3-C2-O2	-6.45	117.38	121.90
53	A3	762	C	N3-C2-O2	-6.45	117.39	121.90
53	A3	813	G	C8-N9-C4	-6.45	103.82	106.40
29	A1	979	G	C4-N9-C1'	6.45	134.88	126.50
29	A2	1799	U	C2-N1-C1'	6.45	125.44	117.70
29	A2	1951	A	N1-C6-N6	6.45	122.47	118.60
53	A3	597	A	C5-C6-N6	-6.45	118.54	123.70
53	A4	240	C	N3-C2-O2	-6.45	117.39	121.90
29	A2	1803	G	N1-C6-O6	-6.45	116.03	119.90
29	A1	2696	U	N3-C2-O2	-6.45	117.69	122.20
53	A4	620	G	C4-C5-N7	6.44	113.38	110.80
29	A1	604	G	C4-C5-N7	6.44	113.38	110.80
29	A1	2242	G	C8-N9-C4	-6.44	103.82	106.40
53	A3	348	A	C8-N9-C4	6.44	108.38	105.80
53	A4	770	A	C4-C5-N7	6.44	113.92	110.70
29	A1	2472	G	C4-N9-C1'	6.44	134.87	126.50
29	A2	679	C	C6-N1-C2	-6.44	117.72	120.30
29	A2	1528	G	C4-C5-N7	6.44	113.38	110.80
29	A2	1647	C	N1-C2-O2	6.44	122.77	118.90
29	A2	1817	A	C4-C5-N7	6.44	113.92	110.70
53	A4	1235	C	N3-C2-O2	-6.44	117.39	121.90
53	A4	1361	G	C6-C5-N7	-6.44	126.53	130.40
29	A1	1830	C	N1-C2-O2	6.44	122.76	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1481	U	N3-C2-O2	-6.44	117.69	122.20
29	A2	2771	U	OP1-P-O3'	6.44	119.37	105.20
29	A1	107	G	N3-C4-N9	6.44	129.86	126.00
29	A1	410	G	C6-C5-N7	-6.44	126.54	130.40
29	A1	1450	C	C5-C6-N1	6.44	124.22	121.00
29	A2	1194	C	C5-C6-N1	6.44	124.22	121.00
29	A2	1740	C	N3-C4-C5	6.44	124.47	121.90
29	A2	2428	G	C4-N9-C1'	6.44	134.87	126.50
29	A1	1831	U	C5-C6-N1	6.44	125.92	122.70
29	A2	360	C	N1-C2-O2	6.43	122.76	118.90
29	A2	1175	A	C2-N3-C4	-6.43	107.38	110.60
29	A2	1338	C	C6-N1-C2	-6.43	117.73	120.30
29	A2	2620	C	C2-N1-C1'	6.43	125.88	118.80
29	A2	2893	C	C5-C4-N4	-6.43	115.70	120.20
53	A3	805	C	N3-C2-O2	-6.43	117.40	121.90
53	A4	1038	U	C5-C6-N1	6.43	125.92	122.70
29	A1	830	A	N3-C4-C5	6.43	131.30	126.80
29	A1	1672	G	C5-C6-O6	-6.43	124.74	128.60
29	A1	1905	C	C6-N1-C2	-6.43	117.73	120.30
29	A1	2450	G	C6-N1-C2	-6.43	121.24	125.10
29	A2	2396	G	C8-N9-C4	-6.43	103.83	106.40
53	A3	160	G	C4-C5-N7	6.43	113.37	110.80
53	A4	1369	G	N1-C2-N2	-6.43	110.41	116.20
29	A1	1732	C	C2-N1-C1'	6.43	125.87	118.80
29	A1	1822	A	C4-C5-N7	6.43	113.92	110.70
29	A1	2595	G	C8-N9-C1'	-6.43	118.64	127.00
29	A2	786	C	N3-C2-O2	-6.43	117.40	121.90
53	A3	637	G	C5-C6-N1	6.43	114.71	111.50
53	A3	1482	G	O5'-P-OP2	-6.43	99.92	105.70
29	A1	1765	G	C4-C5-N7	6.43	113.37	110.80
53	A4	1124	G	C5-C6-N1	-6.43	108.29	111.50
53	A4	1222	G	C2-N3-C4	-6.43	108.69	111.90
29	A2	221	C	N1-C2-O2	6.42	122.75	118.90
29	A2	2396	G	N7-C8-N9	6.42	116.31	113.10
53	A3	1472	U	O4'-C1'-N1	6.42	113.34	108.20
29	A2	466	G	N3-C4-N9	6.42	129.85	126.00
29	A2	2276	U	N3-C2-O2	-6.42	117.70	122.20
53	A3	392	A	C2-N3-C4	6.42	113.81	110.60
53	A3	533	G	C4-N9-C1'	6.42	134.85	126.50
53	A4	337	C	N1-C2-O2	6.42	122.75	118.90
53	A4	1326	U	C5-C6-N1	-6.42	119.49	122.70
29	A2	57	G	N9-C4-C5	-6.42	102.83	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2700	G	N7-C8-N9	6.42	116.31	113.10
29	A2	2750	G	C5-C6-O6	-6.42	124.75	128.60
53	A4	160	G	C5-C6-O6	-6.42	124.75	128.60
29	A1	1134	A	C4-N9-C1'	6.42	137.86	126.30
29	A1	1418	C	C6-N1-C2	-6.42	117.73	120.30
29	A2	262	A	C8-N9-C4	-6.42	103.23	105.80
53	A3	118	U	C5-C6-N1	6.42	125.91	122.70
53	A3	1474	G	C8-N9-C1'	6.42	135.34	127.00
53	A4	701	G	C4-N9-C1'	6.42	134.84	126.50
53	A4	834	C	C6-N1-C2	6.42	122.87	120.30
29	A2	58	U	N1-C2-O2	6.42	127.29	122.80
29	A2	2295	C	N1-C2-O2	6.42	122.75	118.90
29	A2	2353	G	N3-C4-N9	6.42	129.85	126.00
29	A2	1240	G	O4'-C1'-N9	6.42	113.33	108.20
29	A2	1485	C	C5-C6-N1	6.42	124.21	121.00
53	A4	1452	G	C4-C5-N7	6.42	113.37	110.80
29	A1	2735	U	N3-C2-O2	-6.41	117.71	122.20
29	A2	2675	G	C4-N9-C1'	6.41	134.84	126.50
29	A1	2771	U	OP1-P-O3'	6.41	119.30	105.20
29	A1	1723	G	C4-C5-N7	6.41	113.36	110.80
53	A3	99	C	N1-C2-O2	6.41	122.75	118.90
53	A4	653	G	N3-C4-N9	6.41	129.84	126.00
29	A1	2260	G	C8-N9-C1'	-6.41	118.67	127.00
29	A2	363	G	N7-C8-N9	6.41	116.30	113.10
29	A2	26	G	O5'-P-OP1	-6.41	99.94	105.70
29	A2	107	G	N3-C4-N9	6.41	129.84	126.00
29	A2	806	U	C5-C6-N1	6.41	125.90	122.70
29	A2	1528	G	C5-N7-C8	-6.41	101.10	104.30
29	A2	2675	G	N7-C8-N9	6.41	116.30	113.10
53	A4	520	G	C5-C6-N1	6.40	114.70	111.50
29	A1	1249	C	N1-C2-O2	6.40	122.74	118.90
29	A1	1352	C	C2-N3-C4	6.40	123.10	119.90
29	A1	1413	A	N1-C6-N6	-6.40	114.76	118.60
29	A1	2640	C	N3-C2-O2	-6.40	117.42	121.90
29	A2	2281	A	O4'-C1'-N9	6.40	113.32	108.20
53	A4	1224	C	C5-C6-N1	6.40	124.20	121.00
29	A1	443	A	C8-N9-C4	-6.40	103.24	105.80
29	A2	1706	C	C2-N3-C4	-6.40	116.70	119.90
29	A2	2011	G	N1-C6-O6	-6.40	116.06	119.90
29	A2	353	U	C5-C6-N1	6.40	125.90	122.70
29	A2	2229	G	N3-C4-C5	-6.40	125.40	128.60
53	A4	995	G	N3-C4-C5	-6.40	125.40	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1396	U	N3-C2-O2	-6.40	117.72	122.20
29	A1	993	G	N1-C6-O6	-6.40	116.06	119.90
29	A1	2756	A	N9-C4-C5	-6.39	103.24	105.80
29	A2	2782	C	C6-N1-C2	-6.39	117.74	120.30
53	A3	1459	G	N3-C4-N9	6.39	129.84	126.00
29	A2	852	U	C6-N1-C2	-6.39	117.16	121.00
29	A2	1363	C	N3-C2-O2	-6.39	117.43	121.90
30	B2	38	C	C6-N1-C2	-6.39	117.74	120.30
53	A3	955	A	C4-C5-N7	6.39	113.90	110.70
54	V4	11	LEU	CA-CB-CG	6.39	130.00	115.30
29	A1	1622	G	C6-C5-N7	-6.39	126.57	130.40
29	A2	1983	G	N9-C4-C5	-6.39	102.84	105.40
53	A3	281	G	C4-C5-N7	6.39	113.36	110.80
53	A3	1506	G	O4'-C1'-N9	6.39	113.31	108.20
53	A4	1015	G	P-O3'-C3'	6.39	127.37	119.70
29	A2	278	G	O4'-C1'-N9	6.39	113.31	108.20
29	A1	969	G	N1-C2-N2	-6.39	110.45	116.20
29	A1	1079	G	C4-C5-N7	6.39	113.35	110.80
29	A2	55	A	C8-N9-C4	-6.38	103.25	105.80
29	A2	925	C	C6-N1-C2	-6.38	117.75	120.30
29	A2	2750	G	C4-C5-N7	6.38	113.35	110.80
53	A4	597	A	C4-C5-N7	6.38	113.89	110.70
53	A4	1165	G	N3-C4-N9	6.38	129.83	126.00
53	A4	772	U	N3-C4-O4	-6.38	114.93	119.40
29	A1	1706	C	C2-N3-C4	-6.38	116.71	119.90
29	A1	2896	U	O5'-P-OP1	-6.38	99.96	105.70
53	A4	541	G	C8-N9-C4	-6.38	103.85	106.40
29	A2	481	C	N1-C2-O2	6.38	122.73	118.90
29	A2	1045	G	C8-N9-C1'	-6.38	118.71	127.00
29	A2	2700	G	C4-C5-C6	6.38	122.63	118.80
29	A1	1696	G	C8-N9-C4	-6.38	103.85	106.40
29	A2	628	A	C8-N9-C4	-6.38	103.25	105.80
29	A2	941	C	N1-C2-O2	6.38	122.73	118.90
29	A2	994	G	C8-N9-C4	-6.38	103.85	106.40
29	A2	2315	C	N1-C2-O2	6.38	122.73	118.90
53	A4	533	G	C4-N9-C1'	6.38	134.79	126.50
29	A1	1438	U	C6-N1-C2	-6.38	117.17	121.00
29	A1	2115	U	N3-C2-O2	-6.38	117.74	122.20
29	A2	1923	G	C2-N3-C4	-6.38	108.71	111.90
29	A2	2581	G	C6-C5-N7	-6.38	126.57	130.40
53	A4	1001	G	N3-C4-N9	6.38	129.83	126.00
29	A1	1592	C	C6-N1-C2	-6.38	117.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	397	C	C4-C5-C6	-6.37	114.21	117.40
29	A2	2022	G	N1-C2-N2	-6.37	110.46	116.20
29	A2	2523	G	C4-C5-N7	6.37	113.35	110.80
53	A3	593	G	N3-C4-N9	6.37	129.82	126.00
9	K1	47	ASP	C-N-CD	-6.37	106.58	120.60
53	A3	110	G	N7-C8-N9	6.37	116.29	113.10
53	A3	1373	U	C2-N1-C1'	-6.37	110.05	117.70
53	A4	281	G	C4-C5-N7	6.37	113.35	110.80
29	A1	1452	C	N1-C2-O2	6.37	122.72	118.90
53	A3	1510	C	C6-N1-C2	-6.37	117.75	120.30
29	A1	2450	G	N1-C2-N3	6.37	127.72	123.90
29	A2	647	G	C5-C6-N1	6.37	114.68	111.50
29	A2	825	G	C8-N9-C1'	-6.37	118.72	127.00
29	A2	1119	G	C2-N3-C4	6.37	115.08	111.90
29	A2	1723	G	C4-C5-N7	6.37	113.35	110.80
53	A4	970	G	C5-C6-N1	6.37	114.68	111.50
29	A2	1174	A	C8-N9-C4	-6.37	103.25	105.80
53	A4	1392	G	N7-C8-N9	6.37	116.28	113.10
29	A1	791	G	C8-N9-C4	6.37	108.95	106.40
53	A3	1019	C	C6-N1-C2	-6.37	117.75	120.30
53	A4	65	U	N3-C2-O2	-6.36	117.75	122.20
53	A4	554	U	C4-C5-C6	6.36	123.52	119.70
29	A1	2596	G	C2-N3-C4	-6.36	108.72	111.90
29	A1	2097	C	N1-C2-O2	6.36	122.72	118.90
29	A2	981	G	C6-C5-N7	-6.36	126.58	130.40
29	A2	2482	G	C2-N3-C4	-6.36	108.72	111.90
53	A3	269	A	C5-N7-C8	-6.36	100.72	103.90
53	A4	676	G	N1-C6-O6	-6.36	116.08	119.90
53	A4	1037	A	N9-C4-C5	-6.36	103.26	105.80
29	A1	2624	C	P-O3'-C3'	6.36	127.33	119.70
29	A2	2020	C	C6-N1-C2	6.36	122.84	120.30
53	A4	541	G	C6-C5-N7	-6.36	126.58	130.40
29	A1	714	C	N3-C2-O2	-6.36	117.45	121.90
29	A1	2830	G	N1-C6-O6	-6.36	116.08	119.90
29	A2	1837	C	C5-C6-N1	-6.36	117.82	121.00
43	M3	66	LEU	CA-CB-CG	6.36	129.92	115.30
53	A3	1352	G	C8-N9-C4	-6.36	103.86	106.40
53	A4	571	G	N3-C4-N9	6.36	129.81	126.00
53	A4	603	C	C6-N1-C2	-6.36	117.76	120.30
29	A1	1696	G	C6-C5-N7	-6.36	126.59	130.40
53	A3	520	G	C5-C6-N1	6.36	114.68	111.50
53	A3	1381	C	N1-C2-O2	6.36	122.71	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1085	C	N3-C4-C5	6.35	124.44	121.90
29	A1	1398	C	C6-N1-C2	-6.35	117.76	120.30
29	A1	2468	G	N3-C4-C5	-6.35	125.42	128.60
29	A2	1661	G	C8-N9-C1'	-6.35	118.74	127.00
29	A2	2551	U	C6-N1-C2	-6.35	117.19	121.00
53	A3	937	U	C2-N1-C1'	6.35	125.32	117.70
53	A3	1479	A	C8-N9-C4	-6.35	103.26	105.80
53	A4	1450	A	C2-N3-C4	6.35	113.78	110.60
29	A1	360	C	N3-C2-O2	-6.35	117.45	121.90
29	A2	287	C	O4'-C1'-N1	6.35	113.28	108.20
29	A2	1622	G	N1-C6-O6	6.35	123.71	119.90
29	A2	2624	C	P-O3'-C3'	6.35	127.32	119.70
29	A1	531	U	C6-N1-C2	-6.35	117.19	121.00
16	R2	67	ASP	CB-CG-OD1	6.35	124.01	118.30
29	A2	1542	A	N9-C4-C5	-6.35	103.26	105.80
29	A2	1942	A	C8-N9-C4	6.35	108.34	105.80
53	A4	994	A	C8-N9-C4	-6.35	103.26	105.80
29	A1	2021	G	C8-N9-C4	6.35	108.94	106.40
29	A2	205	G	C8-N9-C4	6.35	108.94	106.40
53	A3	737	C	C6-N1-C2	-6.35	117.76	120.30
53	A3	553	G	N1-C2-N2	-6.34	110.49	116.20
53	A3	1381	C	N3-C2-O2	-6.34	117.46	121.90
53	A4	276	G	C4-N9-C1'	6.34	134.75	126.50
53	A4	1042	C	N3-C4-C5	6.34	124.44	121.90
29	A1	648	A	C8-N9-C4	-6.34	103.26	105.80
29	A1	2624	C	OP2-P-O3'	6.34	119.15	105.20
29	A2	2596	G	C2-N3-C4	-6.34	108.73	111.90
53	A3	1122	C	C6-N1-C2	-6.34	117.76	120.30
53	A3	1459	G	C4-N9-C1'	6.34	134.75	126.50
53	A4	581	U	C5-C6-N1	6.34	125.87	122.70
53	A3	1186	U	C5-C6-N1	6.34	125.87	122.70
53	A3	1263	C	C2-N1-C1'	6.34	125.78	118.80
53	A4	209	U	C2-N1-C1'	6.34	125.31	117.70
29	A1	442	C	N3-C4-C5	6.34	124.44	121.90
29	A1	1113	U	N3-C2-O2	-6.34	117.76	122.20
53	A4	730	C	C5-C6-N1	6.34	124.17	121.00
53	A4	1172	A	C5-C6-N1	6.34	120.87	117.70
53	A3	1369	G	N1-C2-N2	-6.34	110.50	116.20
29	A2	1254	C	C6-N1-C2	-6.34	117.77	120.30
29	A2	2905	G	C6-C5-N7	-6.34	126.60	130.40
30	B2	102	A	C8-N9-C4	-6.34	103.27	105.80
53	A4	334	C	N1-C2-O2	6.34	122.70	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1454	C	N3-C2-O2	-6.34	117.46	121.90
53	A4	668	G	N7-C8-N9	6.33	116.27	113.10
29	A1	2568	U	O4'-C1'-N1	6.33	113.27	108.20
53	A3	1331	A	O5'-P-OP1	-6.33	100.00	105.70
53	A4	421	G	C5-N7-C8	-6.33	101.13	104.30
29	A1	572	C	N3-C2-O2	-6.33	117.47	121.90
29	A1	616	C	C6-N1-C2	-6.33	117.77	120.30
53	A3	634	C	N3-C4-C5	6.33	124.43	121.90
53	A3	896	A	C5-C6-N1	6.33	120.87	117.70
53	A4	1397	G	C4-N9-C1'	-6.33	118.27	126.50
29	A1	2204	U	N3-C2-O2	-6.33	117.77	122.20
29	A2	2580	A	OP2-P-O3'	6.33	119.12	105.20
53	A3	1473	C	C5-C6-N1	6.33	124.16	121.00
29	A1	931	G	N3-C4-C5	6.33	131.76	128.60
29	A2	2754	U	C5-C6-N1	6.33	125.86	122.70
53	A3	1506	G	C6-C5-N7	-6.33	126.60	130.40
53	A4	118	U	C4-C5-C6	-6.33	115.90	119.70
29	A1	2265	G	C4-N9-C1'	6.33	134.72	126.50
29	A2	107	G	N9-C4-C5	-6.33	102.87	105.40
29	A2	2169	C	C6-N1-C2	-6.33	117.77	120.30
29	A2	2334	A	C5-N7-C8	-6.33	100.74	103.90
29	A2	2520	U	N3-C2-O2	-6.33	117.77	122.20
29	A2	2582	C	C6-N1-C2	-6.33	117.77	120.30
29	A1	2260	G	C6-C5-N7	-6.32	126.61	130.40
29	A2	660	A	C8-N9-C4	-6.32	103.27	105.80
53	A4	805	C	C2-N1-C1'	6.32	125.76	118.80
53	A3	229	C	N3-C2-O2	-6.32	117.47	121.90
29	A1	733	G	N1-C2-N3	6.32	127.69	123.90
29	A1	2224	C	C5-C6-N1	6.32	124.16	121.00
29	A2	858	G	N3-C4-C5	-6.32	125.44	128.60
29	A2	879	G	N7-C8-N9	-6.32	109.94	113.10
53	A4	65	U	N1-C2-O2	6.32	127.22	122.80
29	A1	1130	U	C6-N1-C2	-6.32	117.21	121.00
29	A1	2849	G	N1-C6-O6	-6.32	116.11	119.90
29	A1	842	A	N7-C8-N9	6.32	116.96	113.80
29	A2	2311	C	C5-C6-N1	6.32	124.16	121.00
53	A3	561	C	N3-C2-O2	-6.32	117.48	121.90
53	A4	1397	G	N3-C4-N9	-6.32	122.21	126.00
29	A1	1883	G	N3-C2-N2	-6.32	115.48	119.90
29	A2	410	G	C6-C5-N7	-6.32	126.61	130.40
29	A2	428	G	C4-C5-N7	6.32	113.33	110.80
29	A2	1000	A	C8-N9-C4	6.32	108.33	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1824	A	C8-N9-C4	6.32	108.33	105.80
29	A2	2028	G	N3-C4-N9	6.32	129.79	126.00
53	A3	1392	G	C4-C5-N7	6.32	113.33	110.80
29	A2	1822	A	C4-C5-N7	6.31	113.86	110.70
53	A4	382	U	C5-C6-N1	-6.31	119.54	122.70
7	I2	15	LEU	CA-CB-CG	6.31	129.81	115.30
53	A3	311	G	N3-C4-N9	6.31	129.79	126.00
29	A2	2356	C	C2-N1-C1'	6.31	125.74	118.80
30	B2	5	C	C6-N1-C2	-6.31	117.78	120.30
53	A3	890	A	P-O3'-C3'	6.31	127.27	119.70
53	A4	890	A	P-O3'-C3'	6.31	127.27	119.70
30	B1	12	C	C6-N1-C2	-6.31	117.78	120.30
29	A2	2428	G	C4-C5-N7	6.31	113.32	110.80
53	A4	1457	G	N3-C4-N9	-6.31	122.22	126.00
29	A2	2202	C	C6-N1-C2	-6.31	117.78	120.30
53	A4	118	U	C5-C6-N1	6.31	125.85	122.70
53	A4	1201	G	C4-N9-C1'	-6.31	118.30	126.50
29	A1	288	G	P-O3'-C3'	6.30	127.27	119.70
29	A1	586	G	N9-C4-C5	-6.30	102.88	105.40
29	A1	2242	G	C6-C5-N7	-6.30	126.62	130.40
53	A4	1398	G	C5-N7-C8	-6.30	101.15	104.30
53	A3	414	C	C6-N1-C2	-6.30	117.78	120.30
29	A1	1354	C	C5-C6-N1	6.30	124.15	121.00
29	A1	1449	G	N3-C4-C5	-6.30	125.45	128.60
29	A1	2606	G	C8-N9-C4	-6.30	103.88	106.40
29	A2	723	G	N3-C2-N2	6.30	124.31	119.90
29	A2	2830	G	N1-C6-O6	-6.30	116.12	119.90
53	A4	874	C	C2-N1-C1'	6.30	125.73	118.80
29	A2	977	U	N1-C2-O2	6.30	127.21	122.80
29	A2	1563	C	C5-C4-N4	-6.30	115.79	120.20
53	A3	404	G	C6-C5-N7	-6.30	126.62	130.40
53	A4	965	G	N7-C8-N9	6.30	116.25	113.10
29	A1	1361	U	C6-N1-C1'	-6.30	112.38	121.20
29	A1	1596	C	N3-C2-O2	-6.30	117.49	121.90
53	A3	1459	G	N3-C4-C5	-6.30	125.45	128.60
29	A2	791	G	C2-N3-C4	-6.30	108.75	111.90
30	B2	63	G	C8-N9-C1'	-6.30	118.81	127.00
53	A4	423	G	C4-C5-N7	6.30	113.32	110.80
53	A4	425	A	C8-N9-C4	6.30	108.32	105.80
53	A4	673	G	N7-C8-N9	6.30	116.25	113.10
29	A1	1761	C	C2-N1-C1'	6.29	125.72	118.80
29	A1	2602	G	C8-N9-C4	-6.29	103.88	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	442	C	C6-N1-C2	-6.29	117.78	120.30
29	A2	1671	G	C4-N9-C1'	-6.29	118.32	126.50
29	A2	1758	U	N1-C2-O2	6.29	127.21	122.80
53	A4	423	G	N9-C4-C5	-6.29	102.88	105.40
29	A1	901	G	C4-C5-N7	6.29	113.32	110.80
29	A1	2755	A	N1-C6-N6	-6.29	114.83	118.60
29	A2	32	C	C6-N1-C2	-6.29	117.78	120.30
29	A2	1297	U	N1-C2-N3	6.29	118.67	114.90
29	A1	1234	G	C4-N9-C1'	6.29	134.68	126.50
29	A2	2260	G	C4-C5-N7	6.29	113.32	110.80
53	A4	335	U	C2-N1-C1'	6.29	125.25	117.70
29	A1	2760	C	N1-C2-O2	6.29	122.67	118.90
29	A2	1054	C	C2-N1-C1'	6.29	125.72	118.80
29	A2	1718	A	C4-N9-C1'	6.29	137.62	126.30
29	A2	1899	C	C6-N1-C2	-6.29	117.78	120.30
53	A3	430	C	N3-C2-O2	-6.29	117.50	121.90
29	A1	375	U	C2-N1-C1'	6.29	125.24	117.70
29	A1	925	C	C6-N1-C2	-6.29	117.79	120.30
29	A1	1758	U	N3-C2-O2	-6.29	117.80	122.20
53	A4	1101	C	N1-C2-O2	6.29	122.67	118.90
29	A1	1771	G	N7-C8-N9	6.28	116.24	113.10
29	A2	62	U	N3-C2-O2	-6.28	117.80	122.20
29	A2	2417	C	C5-C6-N1	6.28	124.14	121.00
53	A4	1112	A	O4'-C1'-N9	6.28	113.23	108.20
53	A4	1281	G	C8-N9-C4	6.28	108.91	106.40
29	A1	1614	C	C5-C6-N1	-6.28	117.86	121.00
29	A2	2626	C	C2-N1-C1'	-6.28	111.89	118.80
53	A3	54	C	O4'-C1'-N1	6.28	113.23	108.20
53	A4	1142	G	C5-N7-C8	-6.28	101.16	104.30
29	A1	353	U	C6-N1-C1'	-6.28	112.41	121.20
29	A1	2491	C	N3-C2-O2	-6.28	117.50	121.90
29	A2	2105	C	C5-C6-N1	6.28	124.14	121.00
53	A3	748	G	C8-N9-C4	-6.28	103.89	106.40
29	A2	1770	U	N1-C2-O2	6.28	127.19	122.80
53	A3	527	G	C8-N9-C4	-6.28	103.89	106.40
29	A1	931	G	N3-C4-N9	-6.28	122.23	126.00
29	A2	2229	G	C4-N9-C1'	6.28	134.66	126.50
53	A3	399	U	N1-C2-O2	6.28	127.19	122.80
53	A3	770	A	C5-C6-N6	-6.28	118.68	123.70
53	A4	231	G	N7-C8-N9	-6.28	109.96	113.10
53	A4	1245	C	C6-N1-C2	-6.28	117.79	120.30
29	A1	842	A	C8-N9-C4	-6.28	103.29	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1249	C	N3-C2-O2	-6.28	117.51	121.90
29	A1	2602	G	N7-C8-N9	6.28	116.24	113.10
29	A2	2076	G	C2-N3-C4	-6.28	108.76	111.90
53	A3	893	G	C4-N9-C1'	6.28	134.66	126.50
53	A4	582	C	C5-C6-N1	6.28	124.14	121.00
53	A4	1387	G	N3-C4-N9	-6.27	122.23	126.00
29	A1	467	G	C4-N9-C1'	-6.27	118.35	126.50
29	A1	2868	C	C2-N1-C1'	6.27	125.70	118.80
30	B1	9	G	C8-N9-C4	6.27	108.91	106.40
29	A2	1436	G	C8-N9-C4	-6.27	103.89	106.40
53	A3	540	G	C6-C5-N7	-6.27	126.64	130.40
53	A4	187	C	N1-C2-O2	6.27	122.66	118.90
53	A4	527	G	N7-C8-N9	6.27	116.24	113.10
29	A1	1604	G	N3-C4-C5	-6.27	125.47	128.60
29	A2	807	C	N3-C2-O2	-6.27	117.51	121.90
53	A4	893	G	C8-N9-C1'	-6.27	118.85	127.00
53	A4	1501	C	O5'-P-OP1	-6.27	100.06	105.70
29	A2	332	G	N7-C8-N9	6.27	116.23	113.10
29	A2	1361	U	C6-N1-C1'	-6.27	112.42	121.20
29	A2	2893	C	N3-C4-C5	6.27	124.41	121.90
29	A1	224	C	N1-C2-O2	6.26	122.66	118.90
29	A1	446	G	C6-C5-N7	-6.26	126.64	130.40
29	A1	807	C	N3-C2-O2	-6.26	117.52	121.90
29	A2	1852	A	P-O3'-C3'	6.26	127.22	119.70
29	A2	1949	C	O5'-P-OP1	-6.26	100.06	105.70
53	A3	1481	G	O5'-P-OP1	-6.26	100.06	105.70
53	A4	845	C	N3-C2-O2	-6.26	117.52	121.90
53	A4	1339	U	N3-C2-O2	-6.26	117.81	122.20
29	A1	26	G	O5'-P-OP1	-6.26	100.06	105.70
29	A2	353	U	N1-C2-O2	6.26	127.18	122.80
29	A2	1819	A	C8-N9-C1'	-6.26	116.43	127.70
53	A3	180	C	N3-C4-C5	6.26	124.41	121.90
53	A3	621	G	N9-C4-C5	-6.26	102.89	105.40
29	A2	1732	C	N3-C2-O2	-6.26	117.52	121.90
53	A4	699	A	C5-N7-C8	-6.26	100.77	103.90
29	A2	556	A	N7-C8-N9	6.26	116.93	113.80
29	A2	2001	A	N9-C4-C5	-6.26	103.30	105.80
53	A3	770	A	C4-C5-N7	6.26	113.83	110.70
53	A4	1335	C	N1-C2-O2	6.26	122.66	118.90
29	A1	205	G	N9-C4-C5	-6.26	102.90	105.40
29	A1	268	C	N3-C2-O2	-6.26	117.52	121.90
29	A1	1955	U	N3-C2-O2	-6.26	117.82	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1485	C	C2-N1-C1'	6.26	125.68	118.80
29	A2	2849	G	N1-C6-O6	-6.26	116.15	119.90
53	A3	217	U	N1-C2-O2	6.26	127.18	122.80
53	A4	1464	G	C4-C5-N7	6.26	113.30	110.80
29	A1	1485	C	C2-N1-C1'	6.25	125.68	118.80
29	A1	555	A	C5-N7-C8	-6.25	100.77	103.90
29	A1	647	G	C5-C6-N1	6.25	114.63	111.50
29	A1	758	U	N3-C2-O2	-6.25	117.82	122.20
29	A1	1297	U	N1-C2-N3	6.25	118.65	114.90
29	A1	2051	G	N3-C4-N9	6.25	129.75	126.00
29	A1	2226	C	N3-C2-O2	-6.25	117.52	121.90
29	A1	2714	C	C5-C6-N1	6.25	124.13	121.00
29	A2	227	C	N3-C2-O2	-6.25	117.52	121.90
53	A3	118	U	C4-C5-C6	-6.25	115.95	119.70
29	A1	683	C	O5'-P-OP2	-6.25	100.07	105.70
29	A1	1215	U	N1-C2-O2	6.25	127.18	122.80
29	A1	1391	G	C4-N9-C1'	6.25	134.63	126.50
29	A1	2679	A	O4'-C1'-N9	6.25	113.20	108.20
29	A2	2786	C	C6-N1-C1'	-6.25	113.30	120.80
53	A3	781	G	C5-C6-N1	6.25	114.63	111.50
29	A1	1791	G	C8-N9-C1'	-6.25	118.88	127.00
29	A2	205	G	N9-C4-C5	-6.25	102.90	105.40
29	A2	2059	G	OP2-P-O3'	6.25	118.95	105.20
29	A2	2836	C	N3-C2-O2	-6.25	117.53	121.90
53	A4	756	G	C4-C5-N7	6.25	113.30	110.80
29	A2	1157	C	C5-C4-N4	-6.25	115.83	120.20
53	A4	28	G	N7-C8-N9	6.25	116.22	113.10
53	A4	907	C	C2-N3-C4	-6.25	116.78	119.90
29	A1	1584	A	C8-N9-C4	-6.25	103.30	105.80
29	A1	2850	G	C5-C6-O6	-6.25	124.85	128.60
29	A2	2373	C	C4-C5-C6	-6.25	114.28	117.40
53	A4	1276	G	C4-C5-N7	6.25	113.30	110.80
29	A1	1726	A	C8-N9-C4	-6.25	103.30	105.80
29	A2	2577	U	C2-N1-C1'	6.25	125.19	117.70
53	A3	307	C	N3-C2-O2	-6.25	117.53	121.90
29	A1	1000	A	C8-N9-C4	6.24	108.30	105.80
29	A2	1025	G	C4-C5-N7	6.24	113.30	110.80
29	A2	1226	C	C6-N1-C2	-6.24	117.80	120.30
53	A3	637	G	N1-C6-O6	-6.24	116.15	119.90
53	A3	663	C	C6-N1-C2	-6.24	117.80	120.30
53	A4	677	A	N9-C4-C5	-6.24	103.30	105.80
53	A4	1101	C	N3-C2-O2	-6.24	117.53	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	292	G	N3-C2-N2	-6.24	115.53	119.90
29	A1	1983	G	N9-C4-C5	-6.24	102.90	105.40
29	A2	170	G	N7-C8-N9	6.24	116.22	113.10
53	A3	502	C	C5-C6-N1	6.24	124.12	121.00
29	A2	1272	C	C6-N1-C2	6.24	122.80	120.30
53	A3	188	U	C2-N1-C1'	6.24	125.19	117.70
53	A4	872	G	C5-C6-O6	-6.24	124.86	128.60
29	A1	1948	C	C5-C6-N1	6.24	124.12	121.00
29	A2	123	G	N7-C8-N9	-6.24	109.98	113.10
29	A2	827	G	C4-C5-N7	6.24	113.30	110.80
53	A4	663	C	N3-C2-O2	-6.24	117.53	121.90
29	A1	2656	G	C4-C5-N7	6.24	113.30	110.80
29	A2	1173	G	C8-N9-C1'	-6.24	118.89	127.00
29	A2	1175	A	N1-C2-N3	6.24	132.42	129.30
53	A3	553	G	N3-C2-N2	6.24	124.27	119.90
53	A3	917	C	O4'-C1'-N1	6.24	113.19	108.20
53	A4	1264	G	N9-C4-C5	-6.24	102.91	105.40
29	A1	733	G	N1-C2-N2	-6.24	110.59	116.20
29	A2	687	C	C6-N1-C2	-6.24	117.81	120.30
29	A2	1137	G	N3-C4-N9	6.24	129.74	126.00
53	A3	1311	U	C6-N1-C1'	-6.24	112.47	121.20
29	A1	2836	C	N3-C2-O2	-6.23	117.54	121.90
53	A3	204	G	C6-C5-N7	-6.23	126.66	130.40
29	A2	1624	C	C6-N1-C1'	-6.23	113.32	120.80
29	A2	1978	G	C4-C5-N7	6.23	113.29	110.80
53	A3	214	C	C5-C6-N1	6.23	124.11	121.00
53	A4	27	G	C8-N9-C1'	-6.23	118.90	127.00
53	A3	613	G	C4-C5-N7	6.23	113.29	110.80
53	A4	125	C	N3-C2-O2	-6.23	117.54	121.90
53	A4	183	G	N3-C4-N9	6.23	129.74	126.00
53	A4	748	G	N7-C8-N9	6.23	116.21	113.10
29	A2	1713	A	C5-C6-N1	6.23	120.81	117.70
29	A2	2559	G	C5-C6-O6	6.23	132.34	128.60
29	A1	1017	C	N1-C2-O2	6.22	122.64	118.90
29	A1	2053	G	C6-C5-N7	-6.22	126.67	130.40
29	A2	1036	A	C4-C5-C6	-6.22	113.89	117.00
53	A3	622	G	C4-C5-N7	6.22	113.29	110.80
53	A4	176	U	C5-C6-N1	6.22	125.81	122.70
29	A1	969	G	N3-C4-N9	6.22	129.73	126.00
29	A2	735	G	C6-C5-N7	-6.22	126.67	130.40
29	A2	1542	A	N1-C6-N6	6.22	122.33	118.60
38	H3	112	LEU	CA-CB-CG	6.22	129.61	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	334	C	N1-C2-O2	6.22	122.63	118.90
30	B1	63	G	C4-N9-C1'	6.22	134.59	126.50
29	A2	57	G	C4-C5-N7	6.22	113.29	110.80
29	A2	685	G	N3-C4-N9	6.22	129.73	126.00
29	A2	1918	C	C6-N1-C2	6.22	122.79	120.30
53	A4	212	C	N1-C2-O2	6.22	122.63	118.90
53	A4	776	U	N3-C2-O2	-6.22	117.85	122.20
53	A4	1433	G	OP2-P-O3'	6.22	118.88	105.20
29	A1	1134	A	N7-C8-N9	6.22	116.91	113.80
29	A1	1864	G	C6-C5-N7	-6.22	126.67	130.40
29	A1	445	C	O4'-C1'-N1	6.22	113.17	108.20
53	A3	1317	C	P-O3'-C3'	6.22	127.16	119.70
53	A3	1345	A	C4-C5-N7	6.22	113.81	110.70
29	A1	912	A	C5-N7-C8	-6.21	100.79	103.90
53	A3	737	C	N1-C2-O2	6.21	122.63	118.90
29	A2	1853	U	C5-C6-N1	6.21	125.81	122.70
53	A3	601	C	C6-N1-C2	-6.21	117.81	120.30
53	A3	1288	U	C6-N1-C2	-6.21	117.27	121.00
53	A4	180	C	N3-C2-O2	-6.21	117.55	121.90
53	A4	634	C	C4-C5-C6	-6.21	114.29	117.40
29	A1	874	C	O4'-C1'-N1	6.21	113.17	108.20
29	A1	2780	A	N3-C4-N9	6.21	132.37	127.40
29	A2	901	G	N3-C4-N9	6.21	129.73	126.00
29	A2	2802	C	C2-N1-C1'	6.21	125.63	118.80
53	A3	737	C	N3-C2-O2	-6.21	117.55	121.90
29	A1	103	C	C5-C6-N1	6.21	124.11	121.00
29	A2	49	U	N3-C2-O2	-6.21	117.85	122.20
29	A2	2591	A	C5-N7-C8	-6.21	100.80	103.90
53	A3	860	C	O5'-P-OP1	-6.21	100.11	105.70
53	A3	1379	C	N3-C2-O2	-6.21	117.55	121.90
53	A4	561	C	C6-N1-C2	-6.21	117.82	120.30
53	A4	634	C	C6-N1-C2	-6.21	117.82	120.30
29	A1	2732	G	C5-C6-N1	6.21	114.60	111.50
29	A2	787	G	C6-C5-N7	-6.21	126.68	130.40
53	A3	314	G	N3-C4-C5	-6.21	125.50	128.60
53	A3	663	C	N3-C2-O2	-6.21	117.56	121.90
53	A4	719	C	N1-C2-O2	6.21	122.62	118.90
53	A4	1335	C	N3-C2-O2	-6.21	117.56	121.90
29	A2	2600	C	N1-C2-O2	6.21	122.62	118.90
53	A4	1281	G	N3-C4-C5	6.21	131.70	128.60
29	A1	556	A	N7-C8-N9	6.20	116.90	113.80
29	A1	2063	C	C2-N1-C1'	6.20	125.62	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1338	C	C6-N1-C1'	-6.20	113.36	120.80
29	A2	1726	A	C8-N9-C4	-6.20	103.32	105.80
29	A2	2421	G	C4-C5-N7	6.20	113.28	110.80
53	A4	1408	C	C2-N1-C1'	6.20	125.62	118.80
29	A1	1702	G	O4'-C1'-N9	-6.20	103.24	108.20
29	A1	2313	G	C8-N9-C4	-6.20	103.92	106.40
29	A2	709	G	N3-C4-N9	-6.20	122.28	126.00
29	A2	800	A	C5-N7-C8	-6.20	100.80	103.90
29	A2	1732	C	C5-C6-N1	6.20	124.10	121.00
29	A2	1912	G	C4-N9-C1'	6.20	134.56	126.50
29	A2	2161	C	C6-N1-C2	-6.20	117.82	120.30
53	A3	541	G	C8-N9-C4	-6.20	103.92	106.40
53	A4	431	C	N1-C2-O2	6.20	122.62	118.90
53	A4	1205	G	N3-C4-N9	6.20	129.72	126.00
29	A1	824	G	C4-C5-N7	6.20	113.28	110.80
29	A1	1746	G	C4-C5-N7	6.20	113.28	110.80
53	A3	703	C	C5-C6-N1	6.20	124.10	121.00
29	A1	428	G	C4-C5-N7	6.20	113.28	110.80
29	A1	678	G	C2-N3-C4	-6.20	108.80	111.90
29	A1	985	G	C8-N9-C4	-6.20	103.92	106.40
29	A1	1690	A	C4-C5-N7	6.20	113.80	110.70
29	A2	685	G	N3-C4-C5	-6.20	125.50	128.60
53	A4	307	C	N3-C2-O2	-6.20	117.56	121.90
53	A4	354	U	C5-C4-O4	-6.20	122.18	125.90
29	A2	1770	U	N3-C2-O2	-6.19	117.86	122.20
29	A1	1164	C	C5-C6-N1	6.19	124.10	121.00
29	A1	2746	G	C4-C5-N7	6.19	113.28	110.80
29	A2	1527	G	C4-C5-N7	6.19	113.28	110.80
29	A2	2867	C	N3-C2-O2	-6.19	117.56	121.90
29	A2	2875	C	N3-C4-C5	6.19	124.38	121.90
29	A1	1131	U	C6-N1-C1'	-6.19	112.53	121.20
29	A1	2368	G	C4-N9-C1'	6.19	134.55	126.50
29	A1	2396	G	C8-N9-C4	-6.19	103.92	106.40
53	A4	363	U	C2-N1-C1'	6.19	125.13	117.70
53	A4	1452	G	C5-N7-C8	-6.19	101.20	104.30
29	A1	2151	G	C8-N9-C1'	6.19	135.05	127.00
29	A2	2905	G	N1-C6-O6	6.19	123.61	119.90
53	A4	1235	C	N1-C2-O2	6.19	122.61	118.90
29	A1	970	U	C5-C6-N1	6.19	125.79	122.70
29	A2	587	U	C6-N1-C2	-6.19	117.29	121.00
53	A3	443	C	C5-C6-N1	6.19	124.09	121.00
29	A2	2450	G	N1-C2-N3	6.19	127.61	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	184	C	N1-C2-O2	6.19	122.61	118.90
29	A1	787	G	C6-C5-N7	-6.18	126.69	130.40
29	A1	824	G	C5-N7-C8	-6.18	101.21	104.30
30	B1	116	C	N3-C2-O2	-6.18	117.57	121.90
29	A2	669	G	C4-N9-C1'	-6.18	118.46	126.50
29	A1	834	G	C4-N9-C1'	6.18	134.54	126.50
29	A2	1474	G	C4-C5-N7	6.18	113.27	110.80
29	A2	1539	G	OP1-P-O3'	6.18	118.80	105.20
53	A3	187	C	C5-C6-N1	6.18	124.09	121.00
29	A1	55	A	C8-N9-C4	-6.18	103.33	105.80
29	A1	426	G	N3-C4-C5	6.18	131.69	128.60
29	A2	322	C	C5-C6-N1	6.18	124.09	121.00
53	A3	750	A	O5'-P-OP2	-6.18	100.14	105.70
29	A1	2700	G	N1-C2-N3	6.18	127.61	123.90
53	A3	1277	C	C6-N1-C2	-6.18	117.83	120.30
29	A1	288	G	C8-N9-C1'	-6.18	118.97	127.00
29	A1	1393	C	N3-C2-O2	-6.18	117.58	121.90
29	A1	2598	U	O4'-C1'-N1	6.18	113.14	108.20
53	A3	754	G	N3-C4-C5	-6.18	125.51	128.60
53	A3	1196	G	N1-C6-O6	6.18	123.61	119.90
39	I4	99	LEU	CA-CB-CG	6.18	129.51	115.30
53	A4	482	A	C4-C5-C6	-6.18	113.91	117.00
29	A1	792	G	N3-C4-N9	-6.17	122.30	126.00
29	A1	2105	C	C5-C6-N1	6.17	124.09	121.00
29	A1	2690	C	N1-C2-O2	6.17	122.61	118.90
29	A2	1189	U	N3-C2-O2	-6.17	117.88	122.20
29	A2	1844	G	C8-N9-C4	-6.17	103.93	106.40
29	A2	1961	A	N1-C6-N6	-6.17	114.89	118.60
29	A2	2434	C	N3-C2-O2	-6.17	117.58	121.90
53	A3	125	C	N3-C2-O2	-6.17	117.58	121.90
53	A3	1292	G	C4-C5-N7	6.17	113.27	110.80
29	A2	433	U	C6-N1-C2	-6.17	117.30	121.00
53	A3	970	G	N3-C4-C5	-6.17	125.51	128.60
29	A1	2064	C	N1-C2-O2	6.17	122.60	118.90
53	A3	1085	C	N3-C4-C5	6.17	124.37	121.90
29	A2	1647	C	C2-N1-C1'	6.17	125.59	118.80
29	A1	2064	C	N3-C2-O2	-6.17	117.58	121.90
29	A1	2185	C	O4'-C1'-N1	6.17	113.13	108.20
29	A2	622	U	N3-C2-O2	-6.17	117.88	122.20
29	A2	1592	C	N1-C2-O2	6.17	122.60	118.90
29	A2	2735	U	N3-C2-O2	-6.17	117.88	122.20
29	A1	409	G	N3-C4-N9	6.17	129.70	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	723	G	N9-C4-C5	-6.17	102.93	105.40
53	A4	817	C	N1-C2-O2	6.17	122.60	118.90
21	W1	98	LEU	CA-CB-CG	6.17	129.48	115.30
29	A1	1095	G	N3-C4-N9	6.17	129.70	126.00
29	A2	258	C	N3-C2-O2	-6.17	117.58	121.90
53	A3	700	C	C2-N1-C1'	6.17	125.58	118.80
53	A4	634	C	C5-C4-N4	-6.17	115.88	120.20
29	A1	806	U	C5-C6-N1	6.16	125.78	122.70
29	A2	2591	A	N7-C8-N9	6.16	116.88	113.80
53	A3	105	G	C4-N9-C1'	6.16	134.51	126.50
53	A3	792	G	N7-C8-N9	-6.16	110.02	113.10
53	A3	1157	A	N9-C4-C5	-6.16	103.33	105.80
53	A4	663	C	C6-N1-C2	-6.16	117.83	120.30
29	A1	2322	G	N3-C4-C5	-6.16	125.52	128.60
29	A1	1343	C	C6-N1-C2	-6.16	117.84	120.30
29	A1	1732	C	C5-C6-N1	6.16	124.08	121.00
29	A2	1046	C	N3-C2-O2	-6.16	117.59	121.90
53	A3	354	U	C5-C6-N1	6.16	125.78	122.70
53	A3	779	C	N1-C2-O2	6.16	122.60	118.90
53	A4	765	A	C8-N9-C4	-6.16	103.34	105.80
29	A1	98	U	N1-C2-O2	6.16	127.11	122.80
53	A3	162	G	C4-C5-N7	6.16	113.26	110.80
53	A3	539	C	C5-C6-N1	6.16	124.08	121.00
53	A4	860	C	O5'-P-OP1	-6.16	100.16	105.70
53	A4	1201	G	N3-C4-N9	-6.16	122.30	126.00
53	A4	1313	A	C2-N3-C4	6.16	113.68	110.60
29	A1	1831	U	O5'-P-OP1	6.16	118.09	110.70
53	A4	167	U	C2-N1-C1'	6.16	125.09	117.70
29	A1	1473	G	C4-N9-C1'	6.15	134.50	126.50
29	A2	199	C	N3-C2-O2	-6.15	117.59	121.90
29	A2	612	C	N3-C4-C5	6.15	124.36	121.90
53	A3	482	A	N1-C2-N3	-6.15	126.22	129.30
29	A1	280	G	N3-C4-N9	6.15	129.69	126.00
29	A1	599	C	N3-C2-O2	-6.15	117.59	121.90
29	A1	802	C	C5-C6-N1	6.15	124.08	121.00
29	A2	440	A	C2-N3-C4	6.15	113.68	110.60
29	A2	1825	G	C4-C5-N7	6.15	113.26	110.80
29	A2	1836	A	C5-C6-N6	6.15	128.62	123.70
29	A1	478	G	C8-N9-C4	6.15	108.86	106.40
29	A1	1942	A	C8-N9-C4	6.15	108.26	105.80
29	A2	1690	A	C4-C5-N7	6.15	113.78	110.70
29	A2	2001	A	C4-C5-N7	6.15	113.78	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2072	G	N1-C2-N2	-6.15	110.67	116.20
29	A2	2696	U	N1-C2-O2	6.15	127.11	122.80
53	A3	1045	C	N1-C2-O2	6.15	122.59	118.90
29	A1	2629	U	N1-C2-O2	6.15	127.10	122.80
29	A2	1086	C	C6-N1-C2	-6.15	117.84	120.30
53	A4	614	G	N3-C4-N9	6.15	129.69	126.00
53	A4	789	C	C2-N3-C4	-6.15	116.83	119.90
53	A4	951	A	C5-C6-N1	6.15	120.78	117.70
29	A1	2276	U	N3-C2-O2	-6.15	117.90	122.20
29	A2	1945	G	O5'-P-OP1	-6.15	100.17	105.70
29	A2	2562	G	N9-C4-C5	-6.15	102.94	105.40
53	A3	783	G	C5-N7-C8	-6.15	101.23	104.30
29	A2	1713	A	N9-C4-C5	-6.14	103.34	105.80
53	A4	766	C	N1-C2-O2	6.14	122.59	118.90
30	B1	70	C	C6-N1-C2	-6.14	117.84	120.30
53	A3	1351	C	N3-C2-O2	-6.14	117.60	121.90
29	A1	650	G	C8-N9-C4	-6.14	103.94	106.40
29	A2	941	C	C6-N1-C2	-6.14	117.84	120.30
53	A3	763	A	C4-C5-N7	6.14	113.77	110.70
29	A1	344	C	C2-N1-C1'	6.14	125.55	118.80
29	A1	1485	C	C5-C6-N1	6.14	124.07	121.00
29	A2	625	G	C6-C5-N7	-6.14	126.72	130.40
29	A2	1347	G	N3-C4-C5	6.14	131.67	128.60
29	A2	2096	G	C6-C5-N7	-6.14	126.72	130.40
53	A4	169	C	N3-C2-O2	-6.14	117.60	121.90
53	A4	526	C	C6-N1-C2	-6.14	117.84	120.30
29	A2	409	G	N3-C4-C5	-6.13	125.53	128.60
29	A2	1883	G	N3-C4-N9	-6.13	122.32	126.00
29	A1	126	C	N3-C4-N4	6.13	122.29	118.00
29	A2	1287	G	C4-C5-N7	6.13	113.25	110.80
29	A2	1748	G	N9-C4-C5	-6.13	102.95	105.40
29	A2	2017	U	N3-C2-O2	-6.13	117.91	122.20
53	A4	349	G	C8-N9-C4	-6.13	103.95	106.40
29	A1	401	U	N3-C4-O4	6.13	123.69	119.40
29	A1	628	A	C8-N9-C4	-6.13	103.35	105.80
29	A1	1956	A	O4'-C1'-N9	6.13	113.11	108.20
53	A3	385	C	N3-C2-O2	-6.13	117.61	121.90
29	A1	1168	G	N3-C4-N9	6.13	129.68	126.00
29	A1	2001	A	N9-C4-C5	-6.13	103.35	105.80
29	A1	665	G	C4-N9-C1'	6.13	134.47	126.50
29	A1	2396	G	N7-C8-N9	6.13	116.17	113.10
29	A2	675	G	C8-N9-C4	-6.13	103.95	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1152	G	N3-C2-N2	-6.13	115.61	119.90
29	A1	552	U	N1-C2-O2	6.13	127.09	122.80
29	A1	572	C	C2-N1-C1'	6.13	125.54	118.80
29	A1	1624	C	N1-C2-O2	6.13	122.58	118.90
29	A1	2417	C	N3-C2-O2	-6.13	117.61	121.90
30	B1	10	U	N1-C2-O2	6.13	127.09	122.80
53	A3	653	G	C4-C5-N7	6.13	113.25	110.80
53	A4	571	G	C6-C5-N7	-6.13	126.72	130.40
53	A4	1201	G	C8-N9-C1'	6.13	134.97	127.00
29	A2	96	C	C6-N1-C2	-6.12	117.85	120.30
29	A2	2298	C	N1-C2-O2	6.12	122.58	118.90
29	A1	1761	C	C6-N1-C2	-6.12	117.85	120.30
29	A1	1812	U	N3-C2-O2	-6.12	117.91	122.20
53	A3	183	G	N3-C4-N9	6.12	129.68	126.00
53	A4	1123	C	C5-C6-N1	6.12	124.06	121.00
29	A1	2219	C	N1-C2-O2	6.12	122.57	118.90
29	A2	1718	A	N1-C6-N6	-6.12	114.93	118.60
53	A4	852	C	C2-N3-C4	-6.12	116.84	119.90
29	A1	2523	G	C6-C5-N7	-6.12	126.73	130.40
30	B1	86	C	C5-C6-N1	6.12	124.06	121.00
29	A1	1126	U	N3-C2-O2	-6.12	117.92	122.20
29	A2	1062	U	C5-C6-N1	6.12	125.76	122.70
29	A1	431	U	C6-N1-C2	6.12	124.67	121.00
29	A1	1844	G	C8-N9-C4	-6.12	103.95	106.40
53	A3	1263	C	N3-C2-O2	-6.12	117.62	121.90
53	A3	1360	C	C5-C6-N1	6.12	124.06	121.00
53	A4	1481	G	O5'-P-OP2	-6.12	100.19	105.70
29	A1	595	G	N3-C4-C5	6.11	131.66	128.60
29	A1	1347	G	N3-C4-C5	6.11	131.66	128.60
53	A4	725	G	N3-C4-C5	-6.11	125.54	128.60
53	A4	965	G	C6-C5-N7	-6.11	126.73	130.40
29	A1	1436	G	N7-C8-N9	6.11	116.16	113.10
29	A1	1800	C	N1-C2-O2	6.11	122.57	118.90
29	A1	2051	G	C4-N9-C1'	6.11	134.44	126.50
29	A1	2636	C	C5-C6-N1	6.11	124.06	121.00
53	A4	905	G	C8-N9-C1'	-6.11	119.06	127.00
53	A3	776	U	C6-N1-C1'	-6.11	112.65	121.20
29	A1	897	G	N3-C4-N9	6.11	129.66	126.00
29	A1	2238	G	C6-C5-N7	-6.11	126.73	130.40
29	A2	812	G	N7-C8-N9	-6.11	110.05	113.10
53	A3	261	G	C5-N7-C8	-6.11	101.25	104.30
29	A1	170	G	C6-C5-N7	-6.11	126.74	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	968	G	C8-N9-C4	6.11	108.84	106.40
29	A1	1651	A	N7-C8-N9	6.11	116.85	113.80
29	A2	978	G	N3-C4-C5	6.11	131.65	128.60
29	A2	1951	A	C4-C5-N7	6.11	113.75	110.70
29	A2	2408	C	C6-N1-C2	-6.11	117.86	120.30
29	A2	2837	C	N1-C2-O2	6.11	122.56	118.90
53	A4	222	G	N9-C4-C5	6.11	107.84	105.40
29	A2	1519	G	C8-N9-C4	-6.10	103.96	106.40
29	A2	2690	C	N1-C2-O2	6.10	122.56	118.90
29	A2	1842	A	N1-C6-N6	-6.10	114.94	118.60
53	A3	612	G	C6-C5-N7	-6.10	126.74	130.40
29	A1	2656	G	C6-C5-N7	-6.10	126.74	130.40
29	A1	654	A	N7-C8-N9	6.10	116.85	113.80
29	A1	1180	A	N9-C4-C5	-6.10	103.36	105.80
53	A3	1222	G	C4-N9-C1'	6.10	134.43	126.50
53	A4	1089	C	N3-C2-O2	-6.10	117.63	121.90
53	A4	1392	G	C5-N7-C8	-6.10	101.25	104.30
29	A2	2675	G	N3-C4-C5	-6.10	125.55	128.60
53	A4	1403	G	C4-C5-N7	6.10	113.24	110.80
53	A3	1055	U	N3-C2-O2	-6.10	117.93	122.20
53	A4	253	G	C4-C5-N7	6.10	113.24	110.80
29	A1	829	G	C6-C5-N7	-6.09	126.74	130.40
29	A1	1265	C	N1-C2-O2	6.09	122.56	118.90
29	A1	2016	G	C4-N9-C1'	6.09	134.42	126.50
29	A2	791	G	C8-N9-C4	6.09	108.84	106.40
29	A2	1803	G	N9-C4-C5	6.09	107.84	105.40
29	A2	2260	G	C6-C5-N7	-6.09	126.74	130.40
29	A2	2421	G	C6-C5-N7	-6.09	126.74	130.40
53	A3	1192	U	N1-C2-O2	6.09	127.07	122.80
53	A4	526	C	C5-C6-N1	6.09	124.05	121.00
53	A4	1445	A	N1-C6-N6	6.09	122.26	118.60
29	A1	2376	G	C8-N9-C1'	6.09	134.92	127.00
29	A2	2198	C	N1-C2-O2	6.09	122.56	118.90
29	A2	2512	C	N3-C4-C5	-6.09	119.46	121.90
42	L3	93	LEU	CA-CB-CG	6.09	129.31	115.30
29	A1	471	A	O4'-C1'-N9	6.09	113.07	108.20
29	A2	1540	G	C8-N9-C4	-6.09	103.96	106.40
53	A4	1431	A	C5-N7-C8	-6.09	100.85	103.90
29	A2	2631	C	C5-C6-N1	6.09	124.05	121.00
53	A3	19	C	N1-C2-O2	6.09	122.55	118.90
53	A3	497	C	C5-C6-N1	6.09	124.04	121.00
53	A4	563	U	N1-C2-O2	6.09	127.06	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1375	U	C5-C6-N1	-6.09	119.66	122.70
29	A1	1850	G	C8-N9-C1'	-6.09	119.09	127.00
53	A4	452	C	N3-C2-O2	-6.09	117.64	121.90
29	A1	1921	G	C4-N9-C1'	6.09	134.41	126.50
29	A2	758	U	N3-C2-O2	-6.09	117.94	122.20
29	A2	1265	C	N1-C2-O2	6.09	122.55	118.90
29	A2	1947	U	N3-C4-O4	-6.09	115.14	119.40
53	A3	130	C	N3-C2-O2	-6.09	117.64	121.90
53	A3	1361	G	C8-N9-C4	6.09	108.83	106.40
29	A1	1031	A	N1-C6-N6	-6.08	114.95	118.60
29	A1	2132	C	C4-C5-C6	-6.08	114.36	117.40
53	A4	1506	G	N3-C4-N9	6.08	129.65	126.00
29	A2	2235	G	C8-N9-C4	6.08	108.83	106.40
29	A2	2870	C	C5-C6-N1	6.08	124.04	121.00
53	A3	323	C	N3-C2-O2	-6.08	117.64	121.90
53	A4	1345	A	N9-C4-C5	-6.08	103.37	105.80
29	A1	2096	G	N3-C4-N9	6.08	129.65	126.00
29	A1	2589	C	O5'-P-OP1	-6.08	100.23	105.70
29	A2	1412	G	P-O3'-C3'	6.08	127.00	119.70
29	A1	1194	C	C5-C4-N4	-6.08	115.94	120.20
29	A1	1649	G	C6-C5-N7	6.08	134.05	130.40
29	A1	2428	G	C6-C5-N7	-6.08	126.75	130.40
29	A1	2863	A	C5-N7-C8	-6.08	100.86	103.90
29	A2	2873	G	N3-C4-N9	6.08	129.65	126.00
53	A3	221	G	C4-C5-N7	-6.08	108.37	110.80
53	A3	1272	G	N7-C8-N9	6.08	116.14	113.10
53	A3	673	G	N7-C8-N9	6.08	116.14	113.10
53	A4	906	G	N1-C6-O6	-6.08	116.25	119.90
29	A2	830	A	C6-N1-C2	6.08	122.25	118.60
29	A2	1239	G	C4-C5-N7	6.08	113.23	110.80
29	A2	1461	G	C8-N9-C4	-6.07	103.97	106.40
29	A2	1945	G	C2-N3-C4	6.07	114.94	111.90
29	A2	2526	C	N3-C2-O2	-6.07	117.65	121.90
53	A3	541	G	C6-C5-N7	-6.07	126.76	130.40
53	A3	744	G	C2-N3-C4	6.07	114.94	111.90
29	A1	2265	G	N9-C4-C5	-6.07	102.97	105.40
29	A2	1417	G	N7-C8-N9	6.07	116.14	113.10
29	A2	1420	U	C2-N1-C1'	6.07	124.98	117.70
29	A2	2244	G	N3-C4-C5	-6.07	125.56	128.60
53	A3	1387	G	C4-N9-C1'	-6.07	118.61	126.50
53	A4	236	C	N1-C2-O2	6.07	122.54	118.90
29	A1	1013	G	C8-N9-C4	-6.07	103.97	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1649	G	C8-N9-C1'	6.07	134.89	127.00
29	A1	2053	G	C4-C5-N7	6.07	113.23	110.80
29	A1	2257	U	N1-C2-O2	6.07	127.05	122.80
29	A1	2631	C	C5-C6-N1	6.07	124.03	121.00
29	A2	2341	A	N1-C6-N6	-6.07	114.96	118.60
53	A3	621	G	C4-C5-N7	6.07	113.23	110.80
29	A1	1853	U	O4'-C1'-N1	-6.07	103.35	108.20
53	A4	1479	A	N7-C8-N9	6.07	116.83	113.80
29	A1	1308	G	N1-C6-O6	-6.06	116.26	119.90
29	A1	1396	G	N3-C4-N9	6.06	129.64	126.00
29	A2	1628	A	C5-N7-C8	-6.06	100.87	103.90
53	A4	970	G	C4-C5-N7	6.06	113.23	110.80
29	A1	2672	C	C5-C6-N1	6.06	124.03	121.00
30	B1	110	U	C5-C6-N1	6.06	125.73	122.70
53	A3	1309	C	C6-N1-C2	6.06	122.72	120.30
39	I3	105	ASP	CB-CG-OD1	6.06	123.75	118.30
53	A3	762	C	N1-C2-O2	6.06	122.54	118.90
29	A2	970	U	C5-C6-N1	6.06	125.73	122.70
29	A2	2335	G	C6-C5-N7	-6.06	126.76	130.40
29	A2	2680	C	C6-N1-C2	-6.06	117.88	120.30
53	A3	928	G	N9-C4-C5	-6.06	102.98	105.40
53	A4	263	C	C6-N1-C2	-6.06	117.88	120.30
29	A2	141	C	O4'-C1'-N1	6.06	113.05	108.20
29	A2	1300	G	N3-C4-C5	6.06	131.63	128.60
29	A2	1956	A	O4'-C1'-N9	6.06	113.05	108.20
29	A2	2260	G	N9-C4-C5	-6.06	102.98	105.40
29	A2	2687	G	C6-C5-N7	-6.06	126.77	130.40
53	A4	1285	G	C6-C5-N7	-6.06	126.77	130.40
53	A4	1469	A	N9-C4-C5	-6.06	103.38	105.80
29	A1	1702	G	N1-C2-N2	-6.05	110.75	116.20
29	A2	1249	C	N3-C2-O2	-6.05	117.66	121.90
29	A2	2870	C	C6-N1-C2	-6.05	117.88	120.30
29	A2	926	U	C5-C6-N1	6.05	125.73	122.70
29	A2	2100	U	N1-C2-O2	6.05	127.04	122.80
29	A1	2076	G	C2-N3-C4	-6.05	108.87	111.90
29	A2	2051	G	N3-C4-N9	6.05	129.63	126.00
29	A2	2328	C	C5-C6-N1	6.05	124.03	121.00
53	A3	263	C	C6-N1-C2	-6.05	117.88	120.30
53	A3	958	U	N3-C2-O2	-6.05	117.96	122.20
53	A3	1142	G	C4-N9-C1'	6.05	134.37	126.50
29	A2	1912	G	O4'-C1'-N9	6.05	113.04	108.20
29	A2	2523	G	C6-C5-N7	-6.05	126.77	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	639	C	C5-C6-N1	6.05	124.03	121.00
29	A1	2737	G	C8-N9-C1'	-6.05	119.14	127.00
29	A2	39	C	C4-C5-C6	-6.05	114.38	117.40
29	A2	290	G	N3-C4-C5	6.05	131.62	128.60
53	A4	311	G	N3-C4-N9	6.05	129.63	126.00
53	A4	519	C	C6-N1-C2	-6.05	117.88	120.30
29	A1	834	G	C5-C6-O6	-6.05	124.97	128.60
29	A1	1240	G	O4'-C1'-N9	6.05	113.04	108.20
29	A2	586	G	N9-C4-C5	-6.05	102.98	105.40
29	A2	1080	A	C8-N9-C4	-6.05	103.38	105.80
29	A1	660	A	C8-N9-C4	-6.04	103.38	105.80
29	A1	1714	A	C8-N9-C4	-6.04	103.38	105.80
29	A1	2237	G	N9-C4-C5	-6.04	102.98	105.40
29	A1	2416	C	N3-C2-O2	-6.04	117.67	121.90
29	A2	1604	G	N3-C4-C5	-6.04	125.58	128.60
29	A1	881	G	C4-N9-C1'	6.04	134.36	126.50
29	A1	1883	G	N9-C4-C5	6.04	107.82	105.40
29	A1	2289	C	N3-C2-O2	-6.04	117.67	121.90
29	A1	2656	G	N7-C8-N9	6.04	116.12	113.10
29	A2	2608	C	C5-C6-N1	6.04	124.02	121.00
53	A3	28	G	N3-C4-N9	-6.04	122.37	126.00
53	A3	1405	G	C6-N1-C2	-6.04	121.47	125.10
29	A1	177	G	N3-C4-N9	6.04	129.62	126.00
29	A1	1113	U	N1-C2-O2	6.04	127.03	122.80
29	A1	1383	U	C5-C6-N1	6.04	125.72	122.70
29	A1	1978	G	C4-C5-N7	6.04	113.22	110.80
29	A1	2591	A	C5-N7-C8	-6.04	100.88	103.90
29	A2	941	C	N3-C2-O2	-6.04	117.67	121.90
53	A3	173	A	C2-N3-C4	6.04	113.62	110.60
53	A4	955	A	C4-N9-C1'	6.04	137.17	126.30
29	A1	1300	G	N3-C4-C5	6.04	131.62	128.60
29	A1	2296	G	C4-C5-N7	6.04	113.22	110.80
29	A2	1523	C	C6-N1-C2	-6.04	117.88	120.30
29	A1	773	U	N1-C2-O2	6.04	127.03	122.80
29	A1	2492	A	C4-C5-C6	-6.04	113.98	117.00
29	A1	2871	G	C5-N7-C8	-6.04	101.28	104.30
29	A2	985	G	C8-N9-C4	-6.04	103.98	106.40
29	A1	1822	A	C5-N7-C8	-6.04	100.88	103.90
29	A2	834	G	C5-C6-O6	-6.04	124.98	128.60
29	A2	2868	C	C2-N1-C1'	6.04	125.44	118.80
53	A3	349	G	N3-C4-C5	-6.04	125.58	128.60
53	A3	1223	C	C6-N1-C2	-6.04	117.89	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	183	G	C4-C5-N7	6.04	113.21	110.80
29	A2	834	G	C4-N9-C1'	6.03	134.34	126.50
29	A2	1223	G	N3-C4-N9	-6.03	122.38	126.00
29	A2	2094	G	C6-C5-N7	-6.03	126.78	130.40
53	A3	580	G	C5-C6-O6	-6.03	124.98	128.60
29	A1	1916	C	C6-N1-C2	-6.03	117.89	120.30
29	A2	925	C	N3-C2-O2	-6.03	117.68	121.90
29	A1	1834	G	C8-N9-C1'	-6.03	119.16	127.00
53	A4	543	U	N3-C2-O2	-6.03	117.98	122.20
29	A1	2080	G	C5-C6-N1	6.03	114.51	111.50
29	A1	2484	G	N3-C2-N2	-6.03	115.68	119.90
29	A1	2754	U	C5-C6-N1	6.03	125.71	122.70
53	A3	676	G	N1-C6-O6	6.03	123.52	119.90
53	A4	813	G	C8-N9-C4	-6.03	103.99	106.40
29	A2	637	C	C5-C6-N1	6.03	124.01	121.00
29	A2	1517	C	N1-C2-O2	6.03	122.52	118.90
29	A2	2044	A	N3-C4-N9	-6.03	122.58	127.40
53	A3	1142	G	C4-C5-C6	6.03	122.42	118.80
53	A3	1324	G	C5-C6-N1	-6.03	108.49	111.50
53	A3	1375	U	C5-C6-N1	-6.03	119.69	122.70
53	A3	1475	U	P-O3'-C3'	6.03	126.93	119.70
53	A4	1288	U	C6-N1-C2	-6.03	117.38	121.00
29	A1	1358	G	N3-C4-C5	-6.03	125.59	128.60
29	A2	740	C	N1-C2-O2	6.03	122.52	118.90
29	A2	1809	G	C4-N9-C1'	6.03	134.33	126.50
30	B2	85	G	N9-C4-C5	-6.03	102.99	105.40
53	A3	813	G	C4-C5-N7	6.03	113.21	110.80
53	A3	1318	G	N1-C2-N2	-6.03	110.78	116.20
29	A1	2001	A	C4-C5-N7	6.02	113.71	110.70
53	A3	190	G	O4'-C1'-N9	6.02	113.02	108.20
53	A3	349	G	C4-N9-C1'	6.02	134.33	126.50
53	A3	776	U	N3-C2-O2	-6.02	117.98	122.20
53	A3	882	U	C2-N1-C1'	6.02	124.93	117.70
29	A1	1092	G	O4'-C1'-N9	6.02	113.02	108.20
29	A2	445	C	C6-N1-C2	-6.02	117.89	120.30
29	A2	1070	G	P-O3'-C3'	6.02	126.93	119.70
29	A2	2022	G	C8-N9-C4	6.02	108.81	106.40
29	A2	2717	C	C6-N1-C1'	-6.02	113.57	120.80
53	A3	61	G	N3-C4-N9	6.02	129.61	126.00
53	A3	217	U	C6-N1-C1'	-6.02	112.77	121.20
29	A1	1791	G	N3-C4-N9	6.02	129.61	126.00
29	A2	1410	C	N3-C2-O2	-6.02	117.69	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1119	C	C5-C6-N1	6.02	124.01	121.00
53	A3	1157	A	C5-C6-N6	-6.02	118.88	123.70
29	A1	758	U	N1-C2-O2	6.02	127.01	122.80
29	A1	901	G	N3-C4-C5	-6.02	125.59	128.60
29	A1	1175	A	O4'-C1'-N9	6.02	113.02	108.20
29	A1	1911	C	C6-N1-C2	-6.02	117.89	120.30
29	A1	2896	U	N3-C2-O2	-6.02	117.99	122.20
29	A2	860	U	N3-C4-O4	-6.02	115.19	119.40
53	A4	190	G	O4'-C1'-N9	6.02	113.02	108.20
29	A1	1095	G	C4-N9-C1'	6.02	134.32	126.50
29	A1	1812	U	N1-C2-O2	6.02	127.01	122.80
29	A2	2794	U	N1-C2-O2	6.02	127.01	122.80
53	A3	710	G	N3-C2-N2	6.02	124.11	119.90
53	A4	227	G	C6-C5-N7	-6.02	126.79	130.40
29	A1	278	G	N3-C4-N9	6.02	129.61	126.00
53	A3	1211	C	C5-C4-N4	-6.02	115.99	120.20
29	A1	1732	C	N3-C2-O2	-6.01	117.69	121.90
29	A1	2165	G	C4-N9-C1'	6.01	134.32	126.50
29	A2	1361	U	C5-C6-N1	6.01	125.71	122.70
29	A2	1718	A	O4'-C1'-N9	6.01	113.01	108.20
29	A2	1817	A	C5-N7-C8	-6.01	100.89	103.90
53	A3	1451	G	C4-C5-C6	6.01	122.41	118.80
53	A4	1343	C	C6-N1-C2	-6.01	117.89	120.30
29	A1	520	G	C5-N7-C8	-6.01	101.29	104.30
29	A1	126	C	C5-C4-N4	-6.01	115.99	120.20
29	A2	1022	C	C6-N1-C2	-6.01	117.90	120.30
29	A2	1970	U	N3-C2-O2	-6.01	117.99	122.20
29	A1	1025	G	C4-C5-N7	6.01	113.20	110.80
29	A1	1903	C	C5-C6-N1	6.01	124.00	121.00
29	A1	2072	G	N1-C2-N2	-6.01	110.79	116.20
29	A2	912	A	C5-N7-C8	-6.01	100.90	103.90
53	A3	130	C	N1-C2-O2	6.01	122.50	118.90
53	A3	697	G	N7-C8-N9	6.01	116.10	113.10
29	A1	1777	C	C5-C6-N1	6.01	124.00	121.00
29	A2	1013	G	C8-N9-C4	-6.01	104.00	106.40
29	A2	1779	G	C8-N9-C4	6.01	108.80	106.40
29	A1	1935	U	C6-N1-C2	-6.00	117.40	121.00
29	A1	2472	G	C6-C5-N7	-6.00	126.80	130.40
53	A4	270	G	N3-C4-N9	6.00	129.60	126.00
53	A4	1325	C	N1-C2-O2	6.00	122.50	118.90
29	A2	2479	C	N1-C2-O2	6.00	122.50	118.90
53	A3	1220	A	N9-C4-C5	-6.00	103.40	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	65	U	C2-N1-C1'	6.00	124.90	117.70
29	A1	1523	C	C2-N1-C1'	6.00	125.40	118.80
29	A2	800	A	N7-C8-N9	6.00	116.80	113.80
29	A2	1774	C	C6-N1-C2	-6.00	117.90	120.30
53	A3	735	G	N7-C8-N9	6.00	116.10	113.10
53	A4	1392	G	C6-C5-N7	-6.00	126.80	130.40
29	A1	1652	C	C4-C5-C6	6.00	120.40	117.40
30	B1	47	A	C2-N3-C4	6.00	113.60	110.60
29	A2	80	G	C4-C5-N7	6.00	113.20	110.80
53	A3	142	G	N1-C2-N2	-6.00	110.80	116.20
53	A4	710	G	C4-C5-N7	6.00	113.20	110.80
29	A1	587	U	C6-N1-C2	-6.00	117.40	121.00
29	A1	1473	G	C8-N9-C1'	-6.00	119.21	127.00
29	A1	1889	G	N3-C4-C5	-6.00	125.60	128.60
29	A2	2396	G	C5-N7-C8	-6.00	101.30	104.30
30	B2	85	G	C4-C5-N7	6.00	113.20	110.80
53	A3	507	G	C6-C5-N7	-6.00	126.80	130.40
53	A3	689	A	C5-C6-N6	-6.00	118.90	123.70
29	A1	2011	G	N1-C6-O6	-5.99	116.30	119.90
29	A2	2833	A	N1-C6-N6	-5.99	115.00	118.60
53	A4	296	G	N9-C4-C5	-5.99	103.00	105.40
53	A4	576	G	N7-C8-N9	5.99	116.10	113.10
53	A4	783	G	C2-N3-C4	-5.99	108.90	111.90
29	A1	241	A	N1-C6-N6	-5.99	115.00	118.60
29	A1	2210	G	C4-C5-N7	5.99	113.20	110.80
29	A2	621	G	C8-N9-C4	5.99	108.80	106.40
29	A2	910	A	C8-N9-C4	-5.99	103.40	105.80
53	A4	550	G	N3-C4-N9	5.99	129.59	126.00
29	A2	426	G	C5-N7-C8	-5.99	101.30	104.30
29	A2	1684	G	C8-N9-C4	-5.99	104.00	106.40
53	A3	253	G	C4-C5-N7	5.99	113.20	110.80
53	A3	1326	U	C6-N1-C2	5.99	124.59	121.00
29	A1	1604	G	C6-C5-N7	-5.99	126.81	130.40
29	A1	1787	C	C5-C6-N1	5.99	123.99	121.00
29	A1	1809	G	C4-N9-C1'	5.99	134.28	126.50
29	A1	2468	G	C5-N7-C8	-5.99	101.31	104.30
29	A2	2709	C	N1-C2-O2	5.99	122.49	118.90
53	A3	12	U	N3-C2-O2	-5.99	118.01	122.20
53	A3	617	C	N3-C4-C5	5.99	124.30	121.90
53	A3	668	G	C2-N3-C4	-5.99	108.91	111.90
53	A3	1392	G	C5-N7-C8	-5.99	101.31	104.30
53	A4	763	A	C4-C5-N7	5.99	113.69	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1195	C	C6-N1-C2	-5.99	117.91	120.30
29	A1	212	A	C8-N9-C4	5.99	108.19	105.80
29	A1	1352	C	C6-N1-C2	-5.99	117.91	120.30
29	A1	1571	U	N1-C2-O2	5.99	126.99	122.80
53	A3	466	A	N9-C4-C5	-5.99	103.41	105.80
53	A3	571	G	N3-C4-N9	5.99	129.59	126.00
53	A3	696	G	N7-C8-N9	5.99	116.09	113.10
53	A3	1208	A	N7-C8-N9	5.99	116.79	113.80
53	A4	1345	A	C4-C5-N7	5.99	113.69	110.70
29	A1	49	U	N3-C2-O2	-5.98	118.01	122.20
29	A1	1874	U	N3-C2-O2	-5.98	118.01	122.20
29	A2	2053	G	C4-C5-N7	5.98	113.19	110.80
53	A3	354	U	C5-C4-O4	-5.98	122.31	125.90
29	A1	1684	G	N7-C8-N9	5.98	116.09	113.10
29	A2	1776	C	C4-C5-C6	-5.98	114.41	117.40
53	A3	334	C	N3-C2-O2	-5.98	117.71	121.90
53	A3	540	G	C4-C5-N7	5.98	113.19	110.80
53	A4	424	U	C2-N1-C1'	-5.98	110.52	117.70
53	A4	1114	C	C6-N1-C2	-5.98	117.91	120.30
29	A1	207	G	C8-N9-C4	5.98	108.79	106.40
29	A1	830	A	C6-N1-C2	5.98	122.19	118.60
29	A1	2479	C	N1-C2-O2	5.98	122.49	118.90
29	A2	2051	G	C4-N9-C1'	5.98	134.28	126.50
53	A4	503	A	C8-N9-C4	-5.98	103.41	105.80
29	A2	1878	G	C8-N9-C4	5.98	108.79	106.40
29	A1	1363	C	C6-N1-C2	-5.98	117.91	120.30
29	A2	544	C	C6-N1-C2	-5.98	117.91	120.30
29	A2	2063	C	C2-N1-C1'	5.98	125.38	118.80
29	A2	2224	C	N1-C2-O2	5.98	122.49	118.90
53	A3	203	A	C8-N9-C4	5.98	108.19	105.80
29	A1	485	A	OP1-P-O3'	5.97	118.34	105.20
29	A2	828	U	C2-N1-C1'	5.97	124.87	117.70
29	A2	1646	C	N3-C2-O2	-5.97	117.72	121.90
53	A3	741	G	N1-C6-O6	5.97	123.48	119.90
53	A3	1089	C	N3-C2-O2	-5.97	117.72	121.90
53	A4	813	G	C4-C5-N7	5.97	113.19	110.80
29	A1	227	C	C6-N1-C1'	-5.97	113.63	120.80
29	A2	1862	A	C5-N7-C8	-5.97	100.91	103.90
53	A3	26	A	N1-C6-N6	-5.97	115.02	118.60
53	A3	187	C	N1-C2-O2	5.97	122.48	118.90
53	A3	1328	G	C8-N9-C4	5.97	108.79	106.40
29	A1	662	C	C6-N1-C2	-5.97	117.91	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	910	A	C8-N9-C4	-5.97	103.41	105.80
29	A1	1054	C	N3-C2-O2	-5.97	117.72	121.90
29	A1	501	G	N3-C4-N9	-5.97	122.42	126.00
29	A1	768	C	C6-N1-C2	-5.97	117.91	120.30
29	A1	901	G	C4-N9-C1'	5.97	134.26	126.50
29	A1	2472	G	C8-N9-C1'	-5.97	119.24	127.00
29	A2	969	G	C4-N9-C1'	5.97	134.26	126.50
29	A2	1865	C	C5-C6-N1	5.97	123.98	121.00
29	A2	2568	U	O4'-C1'-N1	5.97	112.98	108.20
53	A3	188	U	N1-C2-O2	5.97	126.98	122.80
53	A3	965	G	C8-N9-C4	-5.97	104.01	106.40
53	A3	1370	C	N3-C2-O2	-5.97	117.72	121.90
53	A4	580	G	C5-C6-O6	-5.97	125.02	128.60
29	A1	2449	A	C5-C6-N1	5.97	120.68	117.70
29	A2	1173	G	C6-C5-N7	-5.97	126.82	130.40
29	A2	2608	C	C6-N1-C2	-5.97	117.91	120.30
53	A4	43	C	N1-C2-O2	5.97	122.48	118.90
29	A1	1938	C	C2-N3-C4	5.97	122.88	119.90
29	A2	968	G	C8-N9-C4	5.97	108.79	106.40
29	A2	2636	C	C5-C6-N1	5.97	123.98	121.00
30	B2	16	U	N3-C2-O2	-5.97	118.02	122.20
53	A3	1463	G	C4-C5-N7	5.97	113.19	110.80
29	A1	918	G	C8-N9-C4	5.96	108.79	106.40
29	A1	2886	C	C6-N1-C2	-5.96	117.91	120.30
40	J3	16	LEU	CB-CG-CD1	-5.96	100.86	111.00
53	A3	762	C	C6-N1-C2	-5.96	117.91	120.30
29	A2	1663	C	C6-N1-C2	-5.96	117.92	120.30
29	A2	2772	A	C5-N7-C8	-5.96	100.92	103.90
53	A3	544	U	C6-N1-C2	5.96	124.58	121.00
53	A4	768	G	C4-C5-N7	5.96	113.19	110.80
53	A3	304	G	C4-C5-N7	5.96	113.18	110.80
29	A2	202	G	N1-C6-O6	-5.96	116.33	119.90
29	A2	1798	C	N3-C2-O2	-5.96	117.73	121.90
29	A2	2260	G	C8-N9-C1'	-5.96	119.25	127.00
53	A3	1332	U	N3-C2-O2	-5.96	118.03	122.20
53	A4	1019	C	N3-C2-O2	-5.96	117.73	121.90
29	A1	2094	G	C6-C5-N7	-5.96	126.83	130.40
29	A2	2040	U	C2-N1-C1'	5.96	124.85	117.70
29	A2	2376	G	N3-C4-C5	5.96	131.58	128.60
29	A2	2539	G	C4-C5-N7	5.96	113.18	110.80
53	A3	473	C	C5-C6-N1	5.96	123.98	121.00
53	A4	186	C	N3-C2-O2	-5.96	117.73	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	576	G	C8-N9-C4	-5.96	104.02	106.40
29	A2	960	C	C6-N1-C2	-5.96	117.92	120.30
29	A1	2600	C	C6-N1-C2	5.95	122.68	120.30
29	A2	2196	U	O4'-C1'-N1	5.95	112.96	108.20
53	A3	1059	G	C2-N3-C4	-5.95	108.92	111.90
53	A4	175	G	O4'-C1'-N9	5.95	112.96	108.20
53	A4	986	C	C6-N1-C2	-5.95	117.92	120.30
29	A1	1957	G	C2-N3-C4	-5.95	108.92	111.90
29	A2	2308	C	C6-N1-C2	-5.95	117.92	120.30
29	A2	2421	G	C5-C6-O6	-5.95	125.03	128.60
53	A4	800	C	C2-N3-C4	-5.95	116.92	119.90
29	A1	1465	C	C2-N1-C1'	5.95	125.34	118.80
29	A2	834	G	N1-C6-O6	5.95	123.47	119.90
29	A2	1399	C	N3-C2-O2	-5.95	117.73	121.90
53	A3	552	C	C2-N1-C1'	5.95	125.34	118.80
29	A1	107	G	N9-C4-C5	-5.95	103.02	105.40
53	A3	134	A	C8-N9-C4	-5.95	103.42	105.80
53	A4	905	G	C4-N9-C1'	5.95	134.23	126.50
29	A1	877	U	N1-C2-O2	5.95	126.96	122.80
53	A3	276	G	C4-N9-C1'	5.95	134.23	126.50
53	A4	990	U	C5-C6-N1	5.95	125.67	122.70
53	A4	1058	C	C6-N1-C1'	5.95	127.94	120.80
53	A4	1292	G	C6-C5-N7	-5.95	126.83	130.40
29	A1	742	C	C6-N1-C2	-5.95	117.92	120.30
29	A2	433	U	N3-C2-O2	-5.95	118.04	122.20
29	A2	1078	G	C5-C6-O6	-5.95	125.03	128.60
53	A4	696	G	N7-C8-N9	5.95	116.07	113.10
29	A1	2209	C	C2-N1-C1'	-5.94	112.26	118.80
29	A2	114	C	N3-C2-O2	-5.94	117.74	121.90
29	A2	2859	U	N3-C4-O4	-5.94	115.24	119.40
53	A3	907	C	C2-N3-C4	-5.94	116.93	119.90
53	A4	1326	U	C6-N1-C2	5.94	124.57	121.00
29	A1	1473	G	N3-C4-C5	-5.94	125.63	128.60
53	A3	1381	C	C6-N1-C2	5.94	122.68	120.30
53	A4	173	A	N1-C2-N3	-5.94	126.33	129.30
53	A4	1475	U	P-O3'-C3'	5.94	126.83	119.70
29	A2	6	A	C8-N9-C4	-5.94	103.42	105.80
29	A2	714	C	N3-C2-O2	-5.94	117.74	121.90
53	A4	1201	G	N3-C4-C5	5.94	131.57	128.60
29	A1	2740	A	C8-N9-C4	-5.94	103.42	105.80
29	A1	2084	A	C5-C6-N1	5.94	120.67	117.70
29	A2	2335	G	N3-C4-N9	5.94	129.56	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1331	A	C5-N7-C8	-5.94	100.93	103.90
53	A4	169	C	N1-C2-O2	5.94	122.46	118.90
53	A4	497	C	C5-C4-N4	-5.94	116.04	120.20
53	A4	1206	A	P-O3'-C3'	5.94	126.83	119.70
53	A4	1433	G	P-O3'-C3'	5.94	126.83	119.70
53	A4	1404	G	N9-C4-C5	-5.94	103.03	105.40
29	A1	191	C	C5-C6-N1	5.93	123.97	121.00
29	A1	409	G	C8-N9-C4	-5.93	104.03	106.40
29	A1	1036	A	C4-C5-C6	-5.93	114.03	117.00
29	A1	2345	G	C6-C5-N7	-5.93	126.84	130.40
29	A2	2257	U	N1-C2-O2	5.93	126.95	122.80
29	A2	2472	G	C4-N9-C1'	5.93	134.22	126.50
53	A3	642	U	N3-C2-O2	-5.93	118.05	122.20
53	A4	770	A	N1-C6-N6	5.93	122.16	118.60
53	A4	1281	G	C6-C5-N7	5.93	133.96	130.40
29	A1	1508	G	C4-C5-N7	5.93	113.17	110.80
29	A1	1817	A	C4-C5-N7	5.93	113.67	110.70
29	A2	1541	C	N3-C4-C5	5.93	124.27	121.90
30	B2	31	A	C8-N9-C4	-5.93	103.43	105.80
53	A4	420	G	N3-C4-C5	-5.93	125.63	128.60
53	A4	799	A	C5-C6-N1	5.93	120.67	117.70
29	A1	258	C	N3-C4-C5	5.93	124.27	121.90
29	A1	1032	A	C5-C6-N1	5.93	120.67	117.70
29	A1	2499	G	C6-C5-N7	-5.93	126.84	130.40
29	A1	2851	G	C4-C5-N7	5.93	113.17	110.80
29	A2	2390	A	C5-C6-N6	-5.93	118.96	123.70
29	A1	1062	U	C2-N1-C1'	5.93	124.81	117.70
29	A1	722	C	C5-C6-N1	5.93	123.96	121.00
29	A1	1814	C	N3-C2-O2	-5.93	117.75	121.90
53	A3	105	G	C8-N9-C1'	-5.93	119.30	127.00
53	A3	558	G	C4-N9-C1'	-5.93	118.80	126.50
53	A3	1212	G	C6-C5-N7	-5.93	126.84	130.40
53	A4	84	C	C6-N1-C2	-5.93	117.93	120.30
53	A4	701	G	N3-C4-N9	5.93	129.56	126.00
29	A1	32	C	N3-C2-O2	-5.92	117.75	121.90
29	A1	635	G	N3-C4-N9	5.92	129.56	126.00
29	A1	1054	C	C5-C6-N1	5.92	123.96	121.00
29	A1	1404	G	C4-C5-N7	5.92	113.17	110.80
29	A2	595	G	N3-C4-C5	5.92	131.56	128.60
29	A2	854	G	C2-N3-C4	-5.92	108.94	111.90
29	A2	1939	U	C5-C6-N1	5.92	125.66	122.70
53	A3	508	C	C5-C4-N4	-5.92	116.05	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1292	G	N9-C4-C5	-5.92	103.03	105.40
53	A4	860	C	C2-N1-C1'	5.92	125.32	118.80
29	A1	948	A	C5-N7-C8	-5.92	100.94	103.90
29	A1	141	C	O4'-C1'-N1	5.92	112.94	108.20
53	A3	772	U	O4'-C1'-N1	5.92	112.94	108.20
53	A4	735	G	O4'-C1'-N9	5.92	112.94	108.20
29	A1	145	G	C4-C5-N7	5.92	113.17	110.80
29	A2	2865	C	N3-C2-O2	-5.92	117.76	121.90
29	A1	979	G	C4-C5-N7	5.92	113.17	110.80
29	A1	2161	C	C6-N1-C2	-5.92	117.93	120.30
30	B1	16	U	C2-N1-C1'	5.92	124.80	117.70
29	A2	1418	C	C2-N1-C1'	5.92	125.31	118.80
53	A3	589	G	N9-C4-C5	-5.92	103.03	105.40
53	A4	12	U	N3-C2-O2	-5.92	118.06	122.20
53	A4	926	A	N1-C6-N6	-5.92	115.05	118.60
29	A1	1228	C	O4'-C1'-N1	5.92	112.93	108.20
29	A1	2870	C	C5-C6-N1	5.92	123.96	121.00
53	A3	231	G	N7-C8-N9	-5.92	110.14	113.10
53	A3	612	G	N3-C4-C5	-5.92	125.64	128.60
53	A4	177	G	C4-C5-N7	5.92	113.17	110.80
53	A4	1165	G	N9-C4-C5	-5.92	103.03	105.40
29	A1	820	G	N9-C4-C5	-5.92	103.03	105.40
29	A1	2059	G	C6-C5-N7	-5.92	126.85	130.40
29	A1	2566	U	C6-N1-C2	-5.92	117.45	121.00
29	A2	1474	G	C5-C6-O6	-5.92	125.05	128.60
53	A3	906	G	N1-C6-O6	-5.92	116.35	119.90
53	A3	1470	A	O4'-C1'-N9	5.92	112.93	108.20
1	C2	182	LEU	CA-CB-CG	5.91	128.90	115.30
29	A2	384	A	N7-C8-N9	5.91	116.76	113.80
29	A2	730	G	N7-C8-N9	5.91	116.06	113.10
29	A2	1916	C	C2-N1-C1'	5.91	125.30	118.80
53	A3	669	U	C5-C4-O4	5.91	129.45	125.90
53	A4	1212	G	C6-C5-N7	-5.91	126.85	130.40
29	A2	1249	C	N1-C2-O2	5.91	122.45	118.90
29	A2	862	U	N3-C2-O2	-5.91	118.06	122.20
29	A2	1819	A	C5-C6-N6	-5.91	118.97	123.70
53	A4	1042	C	C2-N1-C1'	5.91	125.30	118.80
29	A1	391	G	C4-N9-C1'	-5.91	118.82	126.50
29	A1	782	G	C5-C6-O6	-5.91	125.06	128.60
29	A2	952	C	C6-N1-C2	-5.91	117.94	120.30
29	A2	2714	C	C5-C6-N1	5.91	123.95	121.00
53	A3	714	G	C6-C5-N7	-5.91	126.86	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1018	G	N3-C4-C5	-5.91	125.64	128.60
53	A4	489	G	C6-C5-N7	-5.91	126.85	130.40
53	A3	1276	G	C8-N9-C1'	-5.91	119.32	127.00
29	A1	1131	U	C6-N1-C2	-5.91	117.46	121.00
29	A1	2251	G	N9-C4-C5	-5.91	103.04	105.40
29	A1	2767	C	C5-C6-N1	5.91	123.95	121.00
53	A3	270	G	C4-N9-C1'	5.91	134.18	126.50
53	A3	1236	G	C6-C5-N7	-5.91	126.86	130.40
53	A4	966	C	C5-C6-N1	5.91	123.95	121.00
53	A4	1140	C	C2-N1-C1'	5.91	125.30	118.80
29	A1	630	C	C6-N1-C2	-5.90	117.94	120.30
29	A2	1173	G	C5-N7-C8	-5.90	101.35	104.30
53	A3	1194	A	C8-N9-C4	5.90	108.16	105.80
29	A2	1913	A	C4-C5-C6	-5.90	114.05	117.00
29	A2	2868	C	N3-C2-O2	-5.90	117.77	121.90
53	A4	54	C	O4'-C1'-N1	5.90	112.92	108.20
53	A4	1041	C	C6-N1-C2	-5.90	117.94	120.30
53	A4	1142	G	C4-N9-C1'	5.90	134.18	126.50
29	A1	1019	G	C5-N7-C8	-5.90	101.35	104.30
29	A2	1382	G	C4-N9-C1'	5.90	134.17	126.50
29	A2	1553	C	N3-C2-O2	-5.90	117.77	121.90
30	B2	63	G	C4-N9-C1'	5.90	134.17	126.50
29	A2	466	G	N1-C6-O6	-5.90	116.36	119.90
53	A4	337	C	C6-N1-C2	-5.90	117.94	120.30
29	A1	722	C	C6-N1-C2	-5.90	117.94	120.30
29	A1	941	C	C6-N1-C2	-5.90	117.94	120.30
29	A1	1062	U	C5-C6-N1	5.90	125.65	122.70
53	A3	350	C	N3-C2-O2	-5.90	117.77	121.90
53	A3	799	A	C5-C6-N1	5.90	120.65	117.70
53	A4	237	C	N3-C2-O2	-5.90	117.77	121.90
53	A4	773	A	C8-N9-C4	-5.90	103.44	105.80
53	A4	1468	G	C4-C5-N7	5.90	113.16	110.80
29	A1	848	G	C4-C5-N7	5.90	113.16	110.80
29	A1	1748	G	N9-C4-C5	-5.90	103.04	105.40
29	A1	1889	G	N3-C4-N9	5.90	129.54	126.00
29	A2	53	G	C8-N9-C4	-5.90	104.04	106.40
29	A2	1251	A	C8-N9-C4	-5.90	103.44	105.80
29	A2	2893	C	C2-N3-C4	-5.90	116.95	119.90
29	A1	2492	A	C2-N3-C4	5.89	113.55	110.60
29	A2	2016	G	C6-N1-C2	-5.89	121.56	125.10
29	A2	2519	G	N3-C4-C5	-5.89	125.65	128.60
53	A3	84	C	N3-C2-O2	-5.89	117.77	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1097	C	N1-C2-O2	5.89	122.44	118.90
33	C4	43	LEU	CA-CB-CG	5.89	128.86	115.30
53	A4	98	G	N3-C4-N9	5.89	129.54	126.00
29	A2	272	U	C2-N1-C1'	5.89	124.77	117.70
29	A2	860	U	C5-C6-N1	-5.89	119.75	122.70
29	A2	1417	G	C8-N9-C4	-5.89	104.04	106.40
29	A2	1571	U	N3-C2-O2	-5.89	118.08	122.20
53	A4	737	C	C6-N1-C1'	-5.89	113.73	120.80
29	A1	2163	C	N1-C2-O2	5.89	122.43	118.90
29	A2	1661	G	N3-C4-N9	5.89	129.53	126.00
29	A2	2581	G	C4-C5-N7	5.89	113.16	110.80
53	A3	717	G	O4'-C1'-N9	5.89	112.91	108.20
29	A1	791	G	C2-N3-C4	-5.89	108.96	111.90
53	A3	950	G	N3-C4-C5	-5.89	125.66	128.60
53	A3	1486	C	O4'-C1'-N1	5.89	112.91	108.20
53	A4	1246	G	C6-C5-N7	-5.89	126.87	130.40
29	A1	685	G	N3-C4-C5	-5.88	125.66	128.60
29	A1	2096	G	C4-N9-C1'	5.88	134.15	126.50
29	A2	310	C	C6-N1-C2	-5.88	117.95	120.30
29	A2	1217	G	C4-C5-N7	5.88	113.15	110.80
53	A4	663	C	C5-C6-N1	5.88	123.94	121.00
53	A4	882	U	C2-N1-C1'	5.88	124.76	117.70
29	A1	2016	G	N1-C2-N2	-5.88	110.91	116.20
29	A1	2396	G	N1-C6-O6	5.88	123.43	119.90
29	A2	1388	U	O4'-C1'-N1	5.88	112.91	108.20
29	A2	2396	G	C4-C5-N7	5.88	113.15	110.80
29	A2	2517	A	C5-C6-N1	5.88	120.64	117.70
53	A3	452	C	N1-C2-O2	5.88	122.43	118.90
53	A4	772	U	C6-N1-C1'	-5.88	112.96	121.20
29	A1	458	A	C2-N3-C4	5.88	113.54	110.60
29	A1	2019	U	C6-N1-C2	-5.88	117.47	121.00
30	B1	104	A	C5-N7-C8	-5.88	100.96	103.90
29	A2	1754	G	C5-N7-C8	-5.88	101.36	104.30
53	A3	933	U	N3-C2-O2	-5.88	118.08	122.20
53	A4	108	G	C8-N9-C4	-5.88	104.05	106.40
29	A1	757	C	N3-C2-O2	-5.88	117.78	121.90
29	A1	1616	A	N3-C4-N9	-5.88	122.70	127.40
29	A1	2087	C	C2-N3-C4	-5.88	116.96	119.90
29	A2	1579	C	N3-C2-O2	-5.88	117.78	121.90
29	A1	254	C	N1-C2-O2	5.88	122.43	118.90
29	A1	1086	C	C6-N1-C2	-5.88	117.95	120.30
53	A3	763	A	C5-N7-C8	-5.88	100.96	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1548	G	C6-C5-N7	-5.88	126.88	130.40
29	A1	1926	C	N1-C2-O2	5.88	122.43	118.90
29	A1	2119	C	N3-C2-O2	-5.88	117.79	121.90
29	A2	145	G	C4-C5-N7	5.88	113.15	110.80
53	A4	177	G	C6-C5-N7	-5.88	126.87	130.40
29	A1	2867	C	N3-C2-O2	-5.88	117.79	121.90
29	A2	956	C	N1-C2-O2	5.88	122.42	118.90
29	A1	1517	C	N1-C2-O2	5.87	122.42	118.90
29	A1	2414	G	C8-N9-C4	-5.87	104.05	106.40
29	A2	159	U	C2-N1-C1'	5.87	124.75	117.70
29	A2	2286	U	C6-N1-C2	-5.87	117.48	121.00
53	A3	960	A	C2-N3-C4	5.87	113.54	110.60
8	J1	8	LEU	CA-CB-CG	5.87	128.81	115.30
29	A1	1672	G	C4-C5-N7	5.87	113.15	110.80
53	A3	221	G	N1-C6-O6	-5.87	116.38	119.90
29	A2	104	C	N3-C2-O2	-5.87	117.79	121.90
29	A1	1112	C	C6-N1-C2	-5.87	117.95	120.30
29	A1	1716	G	C6-N1-C2	-5.87	121.58	125.10
29	A2	2631	C	C6-N1-C2	-5.87	117.95	120.30
29	A2	2688	G	C5-N7-C8	-5.87	101.37	104.30
53	A4	893	G	C4-N9-C1'	5.87	134.13	126.50
29	A1	1571	U	N3-C2-O2	-5.87	118.09	122.20
29	A2	2709	C	N3-C2-O2	-5.87	117.79	121.90
29	A1	1078	G	C4-C5-N7	5.87	113.15	110.80
29	A1	1508	G	C8-N9-C1'	5.87	134.62	127.00
29	A2	2100	U	C2-N1-C1'	5.87	124.74	117.70
53	A3	289	U	C2-N1-C1'	5.87	124.74	117.70
53	A4	924	G	C4-N9-C1'	5.87	134.13	126.50
29	A1	128	C	N3-C4-C5	5.86	124.25	121.90
29	A1	2580	A	OP2-P-O3'	5.86	118.10	105.20
29	A2	2053	G	C6-C5-N7	-5.86	126.88	130.40
53	A3	1196	G	C5-C6-O6	-5.86	125.08	128.60
53	A4	540	G	C6-C5-N7	-5.86	126.88	130.40
29	A1	812	G	N7-C8-N9	-5.86	110.17	113.10
29	A1	1817	A	N7-C8-N9	5.86	116.73	113.80
53	A3	214	C	C6-N1-C2	-5.86	117.95	120.30
53	A3	1215	C	C5-C6-N1	5.86	123.93	121.00
29	A1	1394	G	C4-N9-C1'	5.86	134.12	126.50
29	A1	2237	G	C5-C6-O6	-5.86	125.08	128.60
29	A1	2369	C	C6-N1-C1'	-5.86	113.77	120.80
29	A2	1627	U	C5-C6-N1	5.86	125.63	122.70
29	A2	2396	G	N1-C6-O6	5.86	123.42	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2864	G	N7-C8-N9	5.86	116.03	113.10
29	A1	432	C	P-O3'-C3'	5.86	126.73	119.70
29	A2	1624	C	N3-C2-O2	-5.86	117.80	121.90
29	A2	1802	G	C6-C5-N7	-5.86	126.89	130.40
29	A2	1993	A	N7-C8-N9	5.86	116.73	113.80
53	A3	160	G	N9-C4-C5	-5.86	103.06	105.40
29	A1	1209	C	N3-C2-O2	-5.86	117.80	121.90
29	A2	841	G	N3-C4-N9	5.86	129.51	126.00
53	A3	952	A	C2-N3-C4	5.86	113.53	110.60
53	A4	568	G	O5'-P-OP1	-5.86	100.43	105.70
29	A2	604	G	C5-N7-C8	-5.86	101.37	104.30
29	A2	1710	G	N1-C2-N2	-5.86	110.93	116.20
53	A3	1122	C	C2-N1-C1'	5.86	125.24	118.80
53	A4	110	G	C8-N9-C4	-5.86	104.06	106.40
29	A1	1189	U	N3-C2-O2	-5.85	118.10	122.20
53	A4	930	G	N9-C4-C5	-5.85	103.06	105.40
29	A1	1234	G	C8-N9-C1'	-5.85	119.39	127.00
29	A1	1754	G	C5-N7-C8	-5.85	101.37	104.30
29	A2	639	U	C6-N1-C2	-5.85	117.49	121.00
29	A2	1708	U	C2-N1-C1'	5.85	124.72	117.70
29	A1	740	C	N3-C2-O2	-5.85	117.81	121.90
29	A1	938	C	N1-C2-O2	5.85	122.41	118.90
29	A1	1272	C	C6-N1-C2	5.85	122.64	120.30
29	A2	1790	U	C5-C6-N1	5.85	125.62	122.70
53	A3	131	C	C5-C6-N1	5.85	123.92	121.00
53	A4	497	C	C4-C5-C6	-5.85	114.47	117.40
53	A4	620	G	C4-N9-C1'	5.85	134.10	126.50
53	A4	672	C	C2-N3-C4	5.85	122.82	119.90
29	A2	1083	U	C5-C6-N1	5.85	125.62	122.70
29	A2	1298	G	N3-C4-C5	-5.85	125.68	128.60
29	A2	2566	U	C6-N1-C2	-5.85	117.49	121.00
33	C3	204	LEU	CA-CB-CG	5.85	128.75	115.30
53	A3	511	C	C6-N1-C1'	-5.85	113.78	120.80
53	A4	332	C	N3-C2-O2	-5.85	117.81	121.90
53	A4	788	C	N3-C2-O2	-5.85	117.81	121.90
53	A3	1152	G	N3-C2-N2	-5.85	115.81	119.90
53	A4	757	G	C4-C5-N7	5.85	113.14	110.80
29	A1	857	G	N9-C4-C5	5.84	107.74	105.40
29	A1	883	C	N1-C2-O2	5.84	122.41	118.90
29	A1	1526	A	C5-C6-N6	-5.84	119.02	123.70
53	A3	412	C	N3-C2-O2	-5.84	117.81	121.90
53	A3	1391	C	C5-C6-N1	5.84	123.92	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1468	G	C4-N9-C1'	5.84	134.10	126.50
53	A4	1442	C	N1-C2-O2	5.84	122.41	118.90
29	A1	1958	C	C6-N1-C2	-5.84	117.96	120.30
30	B1	54	A	N1-C2-N3	-5.84	126.38	129.30
29	A2	2599	U	N1-C2-O2	5.84	126.89	122.80
53	A4	994	A	N7-C8-N9	5.84	116.72	113.80
29	A2	2009	G	C4-N9-C1'	5.84	134.09	126.50
29	A2	2228	C	C2-N1-C1'	-5.84	112.37	118.80
29	A1	1614	C	C2-N3-C4	-5.84	116.98	119.90
29	A1	2322	G	C4-N9-C1'	5.84	134.09	126.50
29	A1	2837	C	N3-C4-C5	5.84	124.24	121.90
29	A2	1685	C	N3-C2-O2	-5.84	117.81	121.90
29	A2	1714	A	N1-C6-N6	5.84	122.10	118.60
53	A3	240	C	C6-N1-C2	-5.84	117.96	120.30
53	A3	1332	U	C2-N1-C1'	5.84	124.71	117.70
53	A4	1442	C	N3-C4-C5	5.84	124.24	121.90
29	A2	2620	C	N3-C4-C5	-5.84	119.56	121.90
29	A1	1790	U	C5-C6-N1	5.84	125.62	122.70
29	A1	2348	G	N7-C8-N9	5.84	116.02	113.10
29	A2	1123	C	C6-N1-C2	-5.84	117.97	120.30
29	A2	2746	G	C4-C5-N7	5.84	113.14	110.80
53	A3	1018	G	C4-N9-C1'	5.83	134.09	126.50
29	A2	288	G	P-O3'-C3'	5.83	126.70	119.70
29	A2	2819	G	N1-C6-O6	5.83	123.40	119.90
53	A3	183	G	C4-C5-N7	5.83	113.13	110.80
53	A3	261	G	N3-C4-C5	5.83	131.52	128.60
53	A4	701	G	C8-N9-C1'	-5.83	119.42	127.00
53	A3	526	C	C5-C6-N1	5.83	123.92	121.00
53	A3	749	A	N1-C2-N3	-5.83	126.38	129.30
29	A2	409	G	N3-C4-N9	5.83	129.50	126.00
29	A2	2755	A	N9-C4-C5	5.83	108.13	105.80
29	A1	646	G	C6-C5-N7	-5.83	126.90	130.40
29	A1	963	C	N3-C2-O2	-5.83	117.82	121.90
29	A1	2873	G	N3-C4-N9	5.83	129.50	126.00
29	A2	187	A	N9-C4-C5	-5.83	103.47	105.80
29	A2	472	C	O4'-C1'-N1	5.83	112.86	108.20
29	A2	1973	G	N1-C6-O6	5.83	123.40	119.90
29	A1	802	C	C6-N1-C2	-5.83	117.97	120.30
29	A2	1597	C	N1-C2-O2	5.83	122.40	118.90
29	A1	1490	G	C8-N9-C4	-5.83	104.07	106.40
29	A1	1501	C	C5-C4-N4	-5.83	116.12	120.20
29	A1	1836	A	C5-C6-N6	5.83	128.36	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2272	C	N3-C4-C5	5.83	124.23	121.90
29	A1	2867	C	N1-C2-O2	5.83	122.39	118.90
29	A2	1685	C	N1-C2-O2	5.83	122.39	118.90
29	A2	1794	C	C6-N1-C2	-5.83	117.97	120.30
29	A2	2666	C	C6-N1-C2	-5.83	117.97	120.30
53	A3	1481	G	C6-N1-C2	-5.83	121.61	125.10
53	A4	359	A	N7-C8-N9	5.83	116.71	113.80
53	A4	606	C	C5-C4-N4	-5.83	116.12	120.20
53	A4	1032	G	C4-N9-C1'	-5.83	118.93	126.50
53	A4	1281	G	N7-C8-N9	-5.83	110.19	113.10
29	A1	768	C	C5-C6-N1	5.82	123.91	121.00
29	A2	800	A	C8-N9-C4	-5.82	103.47	105.80
53	A4	411	G	C8-N9-C4	-5.82	104.07	106.40
53	A3	1112	A	C5-C6-N6	-5.82	119.04	123.70
53	A3	1381	C	C5-C4-N4	-5.82	116.12	120.20
29	A1	304	C	N1-C2-O2	5.82	122.39	118.90
29	A1	1291	G	N1-C6-O6	-5.82	116.41	119.90
29	A1	241	A	C5-C6-N1	5.82	120.61	117.70
29	A1	495	G	C4-C5-N7	5.82	113.13	110.80
29	A2	192	U	C6-N1-C2	-5.82	117.51	121.00
53	A4	998	U	C5-C6-N1	5.82	125.61	122.70
29	A1	768	C	N3-C4-N4	5.82	122.07	118.00
29	A1	860	U	C5-C4-O4	5.82	129.39	125.90
29	A1	977	U	N1-C2-O2	5.82	126.87	122.80
29	A1	1883	G	O4'-C1'-N9	5.82	112.86	108.20
29	A1	2512	C	N3-C4-C5	-5.82	119.57	121.90
29	A2	1822	A	C5-N7-C8	-5.82	100.99	103.90
53	A3	781	G	N3-C4-C5	-5.82	125.69	128.60
53	A3	1286	G	N1-C2-N2	-5.82	110.96	116.20
53	A4	792	G	N7-C8-N9	-5.82	110.19	113.10
53	A4	1299	A	C5-N7-C8	-5.82	100.99	103.90
53	A4	1391	C	C5-C6-N1	5.82	123.91	121.00
29	A2	931	G	C8-N9-C4	5.82	108.73	106.40
29	A2	1093	A	C8-N9-C4	-5.82	103.47	105.80
29	A2	1394	G	C4-N9-C1'	5.82	134.06	126.50
29	A2	1541	C	O5'-P-OP1	-5.82	100.47	105.70
29	A2	2430	C	N1-C2-O2	5.82	122.39	118.90
53	A3	397	G	N3-C4-C5	-5.82	125.69	128.60
53	A3	465	G	N3-C2-N2	-5.82	115.83	119.90
53	A4	776	U	C6-N1-C1'	-5.82	113.06	121.20
29	A1	57	G	N9-C4-C5	-5.81	103.07	105.40
29	A2	2004	G	N3-C4-C5	-5.81	125.69	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	576	G	N7-C8-N9	5.81	116.01	113.10
29	A1	1925	A	C2-N3-C4	5.81	113.51	110.60
53	A3	604	A	N1-C6-N6	-5.81	115.11	118.60
53	A3	1277	C	C5-C6-N1	5.81	123.91	121.00
53	A3	1365	C	N3-C2-O2	-5.81	117.83	121.90
53	A4	19	C	N1-C2-O2	5.81	122.39	118.90
29	A1	218	A	C4-C5-N7	5.81	113.61	110.70
29	A1	1819	A	C6-C5-N7	-5.81	128.23	132.30
29	A2	825	G	N3-C4-N9	5.81	129.49	126.00
53	A3	1481	G	N1-C2-N2	-5.81	110.97	116.20
53	A3	1506	G	N3-C4-N9	5.81	129.49	126.00
29	A1	324	A	C5-C6-N1	5.81	120.61	117.70
29	A1	873	A	C4-C5-C6	-5.81	114.09	117.00
29	A2	589	C	C6-N1-C2	-5.81	117.98	120.30
29	A2	1361	U	C6-N1-C2	-5.81	117.51	121.00
29	A2	2629	U	N1-C2-O2	5.81	126.87	122.80
53	A3	813	G	C6-C5-N7	-5.81	126.92	130.40
29	A1	2620	C	N3-C4-C5	-5.81	119.58	121.90
29	A2	800	A	C4-C5-N7	5.81	113.60	110.70
29	A2	1434	C	O4'-C1'-N1	5.81	112.85	108.20
29	A2	2407	A	N1-C2-N3	-5.81	126.40	129.30
29	A2	2540	G	C8-N9-C4	-5.81	104.08	106.40
30	B2	122	A	C8-N9-C4	5.81	108.12	105.80
53	A4	7	G	C6-C5-N7	-5.81	126.92	130.40
29	A1	1036	A	N1-C2-N3	-5.81	126.40	129.30
29	A1	2492	A	N1-C2-N3	-5.81	126.40	129.30
29	A2	121	G	C4-C5-N7	5.81	113.12	110.80
30	B2	68	A	C8-N9-C4	5.81	108.12	105.80
53	A3	70	G	C8-N9-C1'	-5.81	119.45	127.00
29	A1	332	G	N7-C8-N9	5.80	116.00	113.10
29	A1	614	C	C5-C4-N4	-5.80	116.14	120.20
29	A1	757	C	C6-N1-C2	-5.80	117.98	120.30
29	A2	1112	C	C6-N1-C2	-5.80	117.98	120.30
29	A2	1877	C	C6-N1-C2	5.80	122.62	120.30
53	A3	1272	G	C8-N9-C4	-5.80	104.08	106.40
53	A4	305	G	C6-C5-N7	-5.80	126.92	130.40
53	A4	1317	C	P-O3'-C3'	5.80	126.66	119.70
53	A4	1424	G	C4-N9-C1'	-5.80	118.95	126.50
29	A1	159	U	C2-N1-C1'	5.80	124.66	117.70
29	A1	2586	A	N7-C8-N9	-5.80	110.90	113.80
29	A2	322	C	C2-N1-C1'	5.80	125.18	118.80
29	A2	1616	A	C2-N3-C4	-5.80	107.70	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2876	G	O4'-C1'-N9	5.80	112.84	108.20
29	A1	630	C	N3-C2-O2	-5.80	117.84	121.90
29	A1	1046	C	N3-C2-O2	-5.80	117.84	121.90
29	A2	444	C	C2-N3-C4	5.80	122.80	119.90
29	A2	1945	G	N9-C4-C5	5.80	107.72	105.40
29	A2	2700	G	C8-N9-C1'	-5.80	119.46	127.00
53	A4	1373	U	C6-N1-C1'	5.80	129.32	121.20
53	A4	1398	G	C4-C5-N7	5.80	113.12	110.80
29	A2	637	C	C6-N1-C2	-5.80	117.98	120.30
29	A2	969	G	C8-N9-C1'	-5.80	119.46	127.00
29	A2	1604	G	C6-C5-N7	-5.80	126.92	130.40
29	A2	2582	C	C2-N1-C1'	5.80	125.18	118.80
53	A3	1502	G	N1-C2-N2	-5.80	110.98	116.20
53	A4	84	C	N3-C2-O2	-5.80	117.84	121.90
53	A4	283	A	N9-C4-C5	-5.80	103.48	105.80
29	A1	2513	C	C2-N1-C1'	5.80	125.18	118.80
29	A1	1389	U	N3-C2-O2	-5.80	118.14	122.20
29	A1	1708	U	C2-N1-C1'	5.80	124.66	117.70
29	A1	2059	G	C4-N9-C1'	5.80	134.03	126.50
29	A1	2260	G	C4-N9-C1'	5.80	134.04	126.50
29	A2	604	G	C6-C5-N7	-5.80	126.92	130.40
29	A2	2716	U	C2-N1-C1'	5.80	124.66	117.70
53	A4	108	G	N3-C4-C5	-5.80	125.70	128.60
53	A4	562	G	C4-C5-N7	5.80	113.12	110.80
53	A4	930	G	C6-N1-C2	-5.80	121.62	125.10
29	A1	32	C	C6-N1-C2	-5.79	117.98	120.30
29	A1	1561	C	C5-C6-N1	5.79	123.90	121.00
29	A2	1137	G	N3-C4-C5	-5.79	125.70	128.60
53	A3	319	G	C8-N9-C4	-5.79	104.08	106.40
53	A4	27	G	C4-C5-N7	5.79	113.12	110.80
29	A1	290	G	C8-N9-C1'	-5.79	119.47	127.00
29	A2	141	C	C6-N1-C2	-5.79	117.98	120.30
29	A2	628	A	O4'-C1'-N9	5.79	112.83	108.20
29	A1	229	U	O4'-C1'-N1	5.79	112.83	108.20
29	A1	352	G	C8-N9-C4	-5.79	104.08	106.40
29	A1	1070	G	P-O3'-C3'	5.79	126.65	119.70
29	A1	1420	U	N1-C2-O2	5.79	126.85	122.80
29	A1	1803	G	C4-C5-N7	-5.79	108.48	110.80
29	A1	1955	U	N1-C2-O2	5.79	126.86	122.80
53	A4	1373	U	C2-N1-C1'	-5.79	110.75	117.70
53	A4	1405	G	C6-N1-C2	-5.79	121.63	125.10
29	A1	1833	C	N1-C2-O2	5.79	122.37	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2009	G	C4-N9-C1'	5.79	134.02	126.50
29	A2	782	G	C5-C6-O6	-5.79	125.13	128.60
29	A2	1758	U	C2-N1-C1'	5.79	124.65	117.70
29	A1	57	G	C5-C6-O6	-5.79	125.13	128.60
29	A1	1231	G	N3-C2-N2	-5.79	115.85	119.90
29	A2	1062	U	C2-N1-C1'	5.79	124.64	117.70
29	A2	2229	G	C8-N9-C1'	-5.79	119.48	127.00
53	A3	70	G	N9-C4-C5	-5.79	103.08	105.40
53	A3	653	G	N3-C4-N9	5.79	129.47	126.00
29	A1	1080	A	N9-C4-C5	5.79	108.11	105.80
29	A1	1661	G	C8-N9-C4	-5.79	104.08	106.40
29	A1	47	G	C8-N9-C4	5.78	108.71	106.40
29	A1	1548	G	C4-C5-N7	5.78	113.11	110.80
29	A1	2335	G	C8-N9-C1'	-5.78	119.48	127.00
29	A2	2229	G	C6-C5-N7	-5.78	126.93	130.40
53	A3	1068	U	C2-N1-C1'	5.78	124.64	117.70
53	A4	1166	G	C5-C6-O6	-5.78	125.13	128.60
53	A4	1211	C	C6-N1-C2	-5.78	117.99	120.30
53	A4	1452	G	N7-C8-N9	5.78	115.99	113.10
29	A1	278	G	C6-C5-N7	-5.78	126.93	130.40
29	A1	2700	G	N1-C2-N2	-5.78	111.00	116.20
29	A2	2867	C	N1-C2-O2	5.78	122.37	118.90
53	A3	760	A	N3-C4-N9	5.78	132.03	127.40
29	A2	114	C	N1-C2-O2	5.78	122.37	118.90
29	A2	1032	A	C5-C6-N1	5.78	120.59	117.70
29	A2	1106	U	C6-N1-C2	-5.78	117.53	121.00
29	A2	1168	G	N3-C4-N9	5.78	129.47	126.00
53	A3	1055	U	N1-C2-O2	5.78	126.85	122.80
53	A3	1262	U	N3-C2-O2	-5.78	118.15	122.20
53	A4	716	A	N3-C4-N9	5.78	132.03	127.40
53	A4	1424	G	C8-N9-C1'	5.78	134.51	127.00
29	A1	1460	A	C5-C6-N6	-5.78	119.08	123.70
29	A2	2009	G	C8-N9-C1'	-5.78	119.49	127.00
29	A1	221	C	N1-C2-O2	5.78	122.37	118.90
29	A1	817	G	C8-N9-C4	-5.78	104.09	106.40
29	A1	1274	A	C4-C5-N7	5.78	113.59	110.70
29	A2	2909	U	C2-N1-C1'	5.78	124.63	117.70
53	A3	185	C	C5-C6-N1	5.78	123.89	121.00
53	A3	827	U	C5-C6-N1	5.78	125.59	122.70
53	A3	1450	A	C8-N9-C4	-5.78	103.49	105.80
53	A4	467	C	C5-C6-N1	5.78	123.89	121.00
53	A4	519	C	N3-C2-O2	-5.78	117.86	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2172	G	C4-N9-C1'	5.78	134.01	126.50
29	A2	793	G	C4-C5-N7	5.78	113.11	110.80
53	A4	323	C	C2-N1-C1'	5.78	125.15	118.80
53	A3	1479	A	N7-C8-N9	5.77	116.69	113.80
29	A2	116	A	O5'-P-OP2	-5.77	100.50	105.70
29	A2	2598	U	O4'-C1'-N1	5.77	112.82	108.20
53	A3	760	A	C6-C5-N7	-5.77	128.26	132.30
29	A1	1624	C	C2-N1-C1'	5.77	125.15	118.80
29	A2	635	G	N3-C4-N9	5.77	129.46	126.00
29	A2	2270	G	C8-N9-C4	-5.77	104.09	106.40
29	A1	846	C	C5-C6-N1	5.77	123.88	121.00
29	A2	1490	G	C8-N9-C4	-5.77	104.09	106.40
29	A2	1571	U	N1-C2-O2	5.77	126.84	122.80
29	A2	2799	C	N1-C2-O2	5.77	122.36	118.90
53	A3	762	C	C6-N1-C1'	-5.77	113.88	120.80
53	A4	550	G	N3-C4-C5	-5.77	125.72	128.60
29	A1	212	A	N9-C4-C5	-5.77	103.49	105.80
29	A1	979	G	N9-C4-C5	-5.77	103.09	105.40
29	A1	1460	A	C4-C5-N7	5.77	113.58	110.70
29	A1	2386	G	N3-C4-C5	-5.77	125.72	128.60
29	A2	872	G	C4-C5-N7	5.77	113.11	110.80
29	A2	1916	C	N3-C2-O2	-5.77	117.86	121.90
29	A2	2224	C	C2-N1-C1'	5.77	125.14	118.80
29	A2	2494	C	C5-C6-N1	5.77	123.88	121.00
53	A3	1279	C	C2-N3-C4	5.77	122.78	119.90
29	A2	665	G	C8-N9-C4	-5.77	104.09	106.40
29	A2	2802	C	C6-N1-C2	-5.77	117.99	120.30
29	A1	1597	C	N1-C2-O2	5.76	122.36	118.90
29	A1	1679	C	C6-N1-C2	-5.76	117.99	120.30
29	A1	1973	G	N1-C6-O6	5.76	123.36	119.90
29	A2	1436	G	C8-N9-C1'	-5.76	119.50	127.00
29	A2	2687	G	N9-C4-C5	-5.76	103.09	105.40
53	A3	323	C	C5-C6-N1	5.76	123.88	121.00
53	A3	397	G	N3-C4-N9	5.76	129.46	126.00
53	A3	781	G	N3-C4-N9	5.76	129.46	126.00
29	A2	1194	C	C5-C4-N4	-5.76	116.17	120.20
29	A1	466	G	C4-N9-C1'	5.76	133.99	126.50
29	A1	2631	C	N1-C2-O2	5.76	122.36	118.90
53	A3	1404	G	N9-C4-C5	-5.76	103.09	105.40
53	A4	105	G	C4-N9-C1'	5.76	133.99	126.50
29	A1	2868	C	N3-C2-O2	-5.76	117.87	121.90
29	A2	730	G	C4-C5-N7	5.76	113.10	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	934	C	C6-N1-C2	-5.76	118.00	120.30
53	A3	878	A	N1-C6-N6	5.76	122.06	118.60
53	A4	346	G	N9-C4-C5	-5.76	103.10	105.40
29	A2	678	G	N3-C4-C5	5.76	131.48	128.60
29	A1	421	C	C5-C6-N1	5.76	123.88	121.00
29	A2	2153	C	C6-N1-C2	-5.76	118.00	120.30
53	A3	210	U	N3-C2-O2	-5.76	118.17	122.20
53	A4	636	A	O4'-C1'-N9	5.76	112.81	108.20
53	A4	1089	C	C6-N1-C2	-5.76	118.00	120.30
29	A1	202	G	N1-C6-O6	-5.75	116.45	119.90
29	A1	2063	C	C5-C6-N1	5.75	123.88	121.00
30	B1	90	C	C6-N1-C1'	-5.75	113.89	120.80
53	A4	1066	G	C8-N9-C4	-5.75	104.10	106.40
29	A1	735	G	C4-C5-N7	5.75	113.10	110.80
29	A2	241	A	C5-C6-N1	5.75	120.58	117.70
29	A2	321	C	C6-N1-C2	-5.75	118.00	120.30
29	A2	1446	C	N1-C2-O2	5.75	122.35	118.90
29	A2	1761	C	C6-N1-C2	-5.75	118.00	120.30
29	A2	1855	G	N3-C4-N9	5.75	129.45	126.00
53	A3	204	G	C4-N9-C1'	5.75	133.98	126.50
53	A3	1464	G	C6-C5-N7	-5.75	126.95	130.40
53	A4	101	G	C4-N9-C1'	5.75	133.98	126.50
53	A4	959	U	C6-N1-C1'	-5.75	113.15	121.20
29	A1	641	G	C8-N9-C1'	-5.75	119.52	127.00
29	A1	1834	G	C6-C5-N7	-5.75	126.95	130.40
29	A1	1862	A	C5-N7-C8	-5.75	101.02	103.90
29	A2	188	C	N1-C2-O2	5.75	122.35	118.90
29	A2	343	C	C5-C6-N1	5.75	123.88	121.00
29	A2	1874	U	N3-C2-O2	-5.75	118.17	122.20
29	A2	2449	A	C5-C6-N1	5.75	120.58	117.70
53	A3	217	U	N3-C2-O2	-5.75	118.17	122.20
53	A3	1454	C	N3-C2-O2	-5.75	117.87	121.90
29	A1	95	G	C8-N9-C1'	5.75	134.47	127.00
29	A1	827	G	N3-C2-N2	-5.75	115.88	119.90
29	A1	2273	G	N9-C4-C5	-5.75	103.10	105.40
29	A2	1592	C	C6-N1-C2	-5.75	118.00	120.30
29	A1	428	G	C6-C5-N7	-5.75	126.95	130.40
29	A1	2356	C	C2-N1-C1'	5.75	125.12	118.80
29	A2	484	C	C5-C6-N1	5.75	123.87	121.00
29	A2	730	G	C6-C5-N7	-5.75	126.95	130.40
29	A2	2369	C	C5-C6-N1	5.75	123.87	121.00
29	A2	2699	G	N3-C4-C5	-5.75	125.73	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	932	U	N1-C2-O2	5.75	126.82	122.80
53	A4	1463	G	C4-C5-N7	5.75	113.10	110.80
29	A1	17	G	N7-C8-N9	5.75	115.97	113.10
29	A1	1946	G	C4-C5-N7	5.75	113.10	110.80
29	A1	2362	U	C2-N1-C1'	5.75	124.60	117.70
29	A2	1973	G	C4-C5-N7	5.75	113.10	110.80
29	A2	2077	G	C6-C5-N7	-5.75	126.95	130.40
52	W4	161	PHE	CA-C-N	-5.75	104.56	117.20
29	A1	873	A	N1-C6-N6	-5.75	115.15	118.60
29	A2	1054	C	N1-C2-O2	5.75	122.35	118.90
29	A2	1312	G	C8-N9-C4	-5.75	104.10	106.40
29	A1	878	A	C8-N9-C4	5.74	108.10	105.80
29	A1	2799	C	N1-C2-O2	5.74	122.35	118.90
29	A2	1653	C	C6-N1-C2	-5.74	118.00	120.30
53	A3	337	C	C6-N1-C2	-5.74	118.00	120.30
53	A3	1184	C	C5-C6-N1	5.74	123.87	121.00
53	A3	1397	G	N9-C4-C5	5.74	107.70	105.40
29	A1	2498	G	C4-C5-N7	5.74	113.10	110.80
29	A2	2742	G	N1-C6-O6	-5.74	116.46	119.90
53	A3	653	G	C5-C6-O6	-5.74	125.16	128.60
53	A4	609	U	N1-C2-O2	5.74	126.82	122.80
53	A4	613	G	C6-C5-N7	5.74	133.84	130.40
29	A1	199	C	N3-C2-O2	-5.74	117.88	121.90
29	A2	1955	U	N1-C2-O2	5.74	126.82	122.80
29	A2	2244	G	N1-C6-O6	-5.74	116.46	119.90
29	A2	2469	G	C6-C5-N7	-5.74	126.96	130.40
53	A4	1255	G	C8-N9-C4	-5.74	104.10	106.40
53	A4	1457	G	N3-C4-C5	5.74	131.47	128.60
29	A1	1652	C	O4'-C1'-N1	5.74	112.79	108.20
29	A1	2356	C	C5-C6-N1	5.74	123.87	121.00
29	A1	2579	A	N3-C4-N9	-5.74	122.81	127.40
29	A1	2608	C	C6-N1-C2	-5.74	118.01	120.30
29	A2	2859	U	N3-C2-O2	-5.74	118.19	122.20
53	A3	173	A	C5-C6-N1	5.74	120.57	117.70
53	A3	1446	G	N9-C4-C5	-5.74	103.11	105.40
53	A4	1463	G	C5-N7-C8	-5.74	101.43	104.30
29	A1	1983	G	C8-N9-C4	5.73	108.69	106.40
53	A3	1047	U	OP2-P-O3'	5.73	117.81	105.20
53	A4	716	A	O4'-C1'-N9	5.73	112.79	108.20
29	A1	688	C	C6-N1-C2	5.73	122.59	120.30
42	L3	123	LYS	C-N-CA	5.73	136.03	121.70
53	A3	587	G	C8-N9-C4	-5.73	104.11	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	757	G	C4-C5-N7	5.73	113.09	110.80
53	A3	1486	C	N3-C2-O2	-5.73	117.89	121.90
53	A4	528	C	C6-N1-C2	-5.73	118.01	120.30
53	A4	1117	U	C5-C6-N1	5.73	125.57	122.70
53	A4	1361	G	C5-C6-O6	-5.73	125.16	128.60
29	A1	2780	A	N1-C6-N6	-5.73	115.16	118.60
29	A2	947	A	C8-N9-C4	-5.73	103.51	105.80
29	A2	1883	G	O4'-C1'-N9	5.73	112.78	108.20
29	A2	1896	G	N1-C6-O6	5.73	123.34	119.90
53	A3	349	G	C8-N9-C4	-5.73	104.11	106.40
53	A3	1005	C	OP1-P-O3'	5.73	117.81	105.20
53	A3	1018	G	N3-C4-N9	5.73	129.44	126.00
53	A4	459	G	N3-C4-N9	5.73	129.44	126.00
29	A1	187	A	N9-C4-C5	-5.73	103.51	105.80
29	A2	1300	G	C2-N3-C4	-5.73	109.04	111.90
53	A3	653	G	C6-N1-C2	-5.73	121.66	125.10
53	A3	959	U	C2-N1-C1'	5.73	124.57	117.70
53	A4	750	A	OP1-P-OP2	-5.73	111.01	119.60
53	A4	1467	C	N3-C2-O2	-5.73	117.89	121.90
29	A1	2413	G	C8-N9-C4	5.73	108.69	106.40
29	A2	2909	U	N3-C2-O2	-5.73	118.19	122.20
29	A1	114	C	N3-C2-O2	-5.72	117.89	121.90
29	A1	1660	C	N3-C4-N4	5.72	122.01	118.00
29	A2	2456	C	C6-N1-C2	-5.72	118.01	120.30
53	A3	1286	G	N9-C4-C5	-5.72	103.11	105.40
53	A4	1361	G	C8-N9-C4	5.72	108.69	106.40
29	A1	1703	A	O5'-P-OP1	-5.72	100.55	105.70
29	A2	955	U	C2-N1-C1'	5.72	124.57	117.70
29	A2	1671	G	C8-N9-C1'	5.72	134.44	127.00
53	A3	606	C	N3-C4-C5	5.72	124.19	121.90
53	A3	1200	U	O4'-C1'-N1	5.72	112.78	108.20
53	A4	183	G	N9-C4-C5	-5.72	103.11	105.40
53	A4	289	U	C2-N1-C1'	5.72	124.57	117.70
53	A4	770	A	N1-C2-N3	-5.72	126.44	129.30
53	A4	813	G	C6-C5-N7	-5.72	126.97	130.40
53	A4	1479	A	O4'-C1'-N9	5.72	112.78	108.20
29	A2	2404	U	N1-C2-O2	5.72	126.81	122.80
53	A4	1228	U	C2-N3-C4	5.72	130.43	127.00
29	A1	1736	G	C4-N9-C1'	5.72	133.94	126.50
29	A1	2742	G	N3-C4-C5	-5.72	125.74	128.60
29	A2	57	G	C5-C6-O6	-5.72	125.17	128.60
29	A2	1598	C	C6-N1-C2	-5.72	118.01	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2215	G	C4-N9-C1'	-5.72	119.07	126.50
53	A3	663	C	C5-C6-N1	5.72	123.86	121.00
53	A4	597	A	C5-C6-N6	-5.72	119.12	123.70
53	A4	826	C	C2-N1-C1'	5.72	125.09	118.80
53	A4	1361	G	N1-C6-O6	5.72	123.33	119.90
53	A4	1467	C	N1-C2-O2	5.72	122.33	118.90
29	A2	1945	G	C5-C6-O6	5.72	132.03	128.60
29	A1	2396	G	C5-N7-C8	-5.72	101.44	104.30
29	A1	2446	A	C2-N3-C4	5.72	113.46	110.60
29	A2	1468	U	C5-C6-N1	5.72	125.56	122.70
29	A2	1622	G	C5-C6-O6	-5.72	125.17	128.60
53	A3	846	G	N7-C8-N9	5.72	115.96	113.10
53	A4	1459	G	C4-N9-C1'	5.72	133.93	126.50
29	A1	612	C	N3-C4-C5	5.71	124.19	121.90
29	A2	1189	U	N1-C2-O2	5.71	126.80	122.80
29	A2	2040	U	C5-C6-N1	5.71	125.56	122.70
30	B2	49	C	N3-C2-O2	-5.71	117.90	121.90
53	A3	98	G	N3-C4-N9	5.71	129.43	126.00
53	A3	794	C	C6-N1-C2	-5.71	118.01	120.30
29	A1	1955	U	C2-N1-C1'	5.71	124.56	117.70
29	A2	1382	G	N3-C4-C5	-5.71	125.74	128.60
29	A1	1394	G	N3-C4-N9	5.71	129.43	126.00
29	A1	2687	G	C6-C5-N7	-5.71	126.97	130.40
29	A2	1383	U	C5-C6-N1	5.71	125.56	122.70
29	A2	1925	A	C5-C6-N1	5.71	120.56	117.70
29	A2	2756	A	C8-N9-C4	5.71	108.08	105.80
53	A3	1326	U	C2-N1-C1'	-5.71	110.85	117.70
53	A4	349	G	N3-C4-C5	-5.71	125.75	128.60
53	A4	1047	U	OP2-P-O3'	5.71	117.77	105.20
29	A2	2181	G	N3-C4-C5	5.71	131.46	128.60
29	A1	290	G	N9-C4-C5	-5.71	103.12	105.40
29	A1	733	G	N3-C4-N9	5.71	129.43	126.00
29	A1	782	G	C5-N7-C8	-5.71	101.45	104.30
29	A2	1389	U	N1-C2-O2	5.71	126.80	122.80
29	A2	2396	G	C5-C6-O6	-5.71	125.17	128.60
53	A3	1387	G	C2-N3-C4	-5.71	109.05	111.90
53	A3	1433	G	OP2-P-O3'	5.71	117.76	105.20
29	A1	1918	C	N3-C4-C5	5.71	124.18	121.90
29	A2	224	C	N1-C2-O2	5.71	122.32	118.90
29	A2	2601	A	O5'-P-OP2	-5.71	100.56	105.70
53	A3	332	C	N3-C2-O2	-5.71	117.91	121.90
29	A1	2396	G	C4-C5-N7	5.70	113.08	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2457	C	C2-N3-C4	-5.70	117.05	119.90
29	A1	2687	G	C4-N9-C1'	5.70	133.91	126.50
29	A1	2688	G	C5-N7-C8	-5.70	101.45	104.30
29	A2	360	C	N3-C2-O2	-5.70	117.91	121.90
53	A4	61	G	N3-C4-N9	5.70	129.42	126.00
53	A4	455	C	C5-C6-N1	5.70	123.85	121.00
53	A3	103	C	N3-C4-C5	5.70	124.18	121.90
29	A1	2009	G	C8-N9-C1'	-5.70	119.59	127.00
29	A2	2687	G	C4-N9-C1'	5.70	133.91	126.50
53	A3	805	C	C2-N1-C1'	5.70	125.07	118.80
53	A3	840	U	C6-N1-C2	-5.70	117.58	121.00
53	A3	1286	G	N3-C2-N2	5.70	123.89	119.90
29	A2	348	G	N3-C4-C5	-5.70	125.75	128.60
29	A2	1684	G	C6-C5-N7	-5.70	126.98	130.40
30	B2	54	A	N1-C2-N3	-5.70	126.45	129.30
53	A3	874	C	C6-N1-C1'	-5.70	113.96	120.80
53	A4	316	A	C2-N3-C4	5.70	113.45	110.60
53	A4	579	C	O4'-C1'-N1	5.70	112.76	108.20
29	A2	1119	G	C4-N9-C1'	5.70	133.91	126.50
53	A4	1361	G	C5-N7-C8	-5.70	101.45	104.30
29	A2	1993	A	N1-C6-N6	5.70	122.02	118.60
29	A1	2696	U	N1-C2-O2	5.69	126.79	122.80
29	A2	521	G	N3-C4-C5	-5.69	125.75	128.60
29	A2	1454	U	C6-N1-C2	-5.69	117.58	121.00
53	A3	1348	C	C5-C6-N1	5.69	123.85	121.00
29	A1	931	G	C4-N9-C1'	-5.69	119.10	126.50
29	A1	1706	C	N3-C2-O2	-5.69	117.92	121.90
29	A2	664	A	O4'-C1'-N9	-5.69	103.64	108.20
29	A2	2019	U	C6-N1-C2	-5.69	117.58	121.00
53	A3	110	G	C8-N9-C4	-5.69	104.12	106.40
30	B1	108	G	N3-C4-N9	5.69	129.41	126.00
29	A2	446	G	C4-C5-N7	5.69	113.08	110.80
29	A2	792	G	N3-C4-C5	5.69	131.44	128.60
29	A2	1389	U	N3-C2-O2	-5.69	118.22	122.20
29	A2	2378	C	N3-C2-O2	-5.69	117.92	121.90
53	A3	423	G	N9-C4-C5	-5.69	103.12	105.40
53	A3	1112	A	C5-C6-N1	5.69	120.55	117.70
29	A2	1017	C	N1-C2-O2	5.69	122.31	118.90
53	A3	581	U	C5-C6-N1	5.69	125.54	122.70
53	A4	468	G	P-O3'-C3'	5.69	126.53	119.70
29	A1	733	G	C4-N9-C1'	5.69	133.89	126.50
29	A1	834	G	C4-C5-N7	5.69	113.08	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	970	U	C6-N1-C2	-5.69	117.59	121.00
29	A1	1029	A	C8-N9-C4	-5.69	103.53	105.80
29	A1	2210	G	N7-C8-N9	5.69	115.94	113.10
29	A1	2810	G	N7-C8-N9	5.69	115.94	113.10
53	A4	464	U	C6-N1-C2	-5.69	117.59	121.00
29	A1	2870	C	C6-N1-C2	-5.69	118.03	120.30
29	A2	1038	A	N1-C6-N6	-5.69	115.19	118.60
29	A2	1140	C	C2-N1-C1'	5.69	125.05	118.80
29	A2	1637	C	C6-N1-C2	-5.69	118.03	120.30
53	A4	754	G	N3-C4-C5	-5.69	125.76	128.60
29	A1	821	C	C5-C4-N4	5.68	124.18	120.20
29	A1	1034	C	C5-C6-N1	5.68	123.84	121.00
29	A1	1086	C	C5-C6-N1	5.68	123.84	121.00
29	A1	2305	U	N1-C2-O2	5.68	126.78	122.80
29	A2	343	C	C6-N1-C2	-5.68	118.03	120.30
29	A2	1172	C	C2-N1-C1'	5.68	125.05	118.80
29	A2	1547	C	C6-N1-C2	-5.68	118.03	120.30
53	A3	233	G	C8-N9-C1'	-5.68	119.61	127.00
53	A4	233	G	C8-N9-C1'	-5.68	119.61	127.00
53	A4	1200	U	O4'-C1'-N1	5.68	112.75	108.20
29	A2	259	U	C2-N1-C1'	-5.68	110.88	117.70
29	A2	2155	G	C8-N9-C4	-5.68	104.13	106.40
53	A3	337	C	N3-C2-O2	-5.68	117.92	121.90
53	A4	955	A	O4'-C1'-N9	-5.68	103.66	108.20
29	A1	1926	C	N3-C2-O2	-5.68	117.92	121.90
29	A2	961	U	C5-C6-N1	5.68	125.54	122.70
29	A2	1649	G	N1-C6-O6	-5.68	116.49	119.90
53	A4	703	C	C5-C6-N1	5.68	123.84	121.00
53	A4	971	A	C2-N3-C4	5.68	113.44	110.60
29	A2	185	A	C8-N9-C4	5.68	108.07	105.80
29	A2	2242	G	N3-C4-C5	-5.68	125.76	128.60
53	A3	593	G	C8-N9-C1'	-5.68	119.62	127.00
53	A3	1371	C	N1-C2-O2	5.68	122.31	118.90
29	A1	1651	A	C8-N9-C4	-5.68	103.53	105.80
29	A2	2378	C	C6-N1-C2	-5.68	118.03	120.30
53	A3	849	A	C4-C5-N7	5.68	113.54	110.70
53	A4	1068	U	C2-N1-C1'	5.68	124.51	117.70
29	A1	1802	G	C6-C5-N7	-5.68	127.00	130.40
29	A1	1970	U	N3-C2-O2	-5.68	118.23	122.20
29	A2	1948	C	N3-C2-O2	-5.68	117.93	121.90
4	F1	133	LEU	CA-CB-CG	5.67	128.35	115.30
29	A1	933	C	N1-C2-O2	5.67	122.31	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2016	G	C6-N1-C2	-5.67	121.69	125.10
29	A1	2179	G	C2-N3-C4	5.67	114.74	111.90
30	B2	110	U	C5-C6-N1	5.67	125.54	122.70
53	A4	799	A	C4-C5-N7	5.67	113.54	110.70
29	A1	768	C	C5-C4-N4	-5.67	116.23	120.20
29	A1	1519	G	C8-N9-C4	-5.67	104.13	106.40
29	A1	2044	A	N3-C4-C5	5.67	130.77	126.80
29	A2	2780	A	N3-C4-C5	-5.67	122.83	126.80
53	A3	184	C	N3-C2-O2	-5.67	117.93	121.90
53	A3	1142	G	N3-C4-C5	-5.67	125.76	128.60
53	A4	85	U	C5-C6-N1	5.67	125.54	122.70
29	A1	69	G	C4-N9-C1'	-5.67	119.13	126.50
29	A2	1734	C	N3-C4-C5	5.67	124.17	121.90
29	A2	2597	G	C4-N9-C1'	5.67	133.87	126.50
53	A3	119	G	N1-C6-O6	5.67	123.30	119.90
53	A4	834	C	N3-C4-C5	5.67	124.17	121.90
29	A1	1653	C	C6-N1-C2	-5.67	118.03	120.30
29	A1	2069	C	C5-C6-N1	5.67	123.83	121.00
29	A1	2776	G	N3-C4-N9	5.67	129.40	126.00
29	A2	827	G	N7-C8-N9	5.67	115.94	113.10
29	A2	1410	C	N1-C2-O2	5.67	122.30	118.90
29	A2	2474	U	N1-C2-O2	5.67	126.77	122.80
29	A2	2905	G	C4-C5-N7	5.67	113.07	110.80
53	A3	1240	C	C5-C6-N1	5.67	123.83	121.00
29	A1	98	U	C2-N1-C1'	5.67	124.50	117.70
29	A2	1983	G	C8-N9-C4	5.67	108.67	106.40
53	A4	227	G	C4-C5-N7	5.67	113.07	110.80
53	A4	335	U	N3-C2-O2	-5.67	118.23	122.20
29	A2	345	A	N7-C8-N9	-5.67	110.97	113.80
29	A2	2173	G	N1-C6-O6	-5.67	116.50	119.90
29	A1	2675	G	N3-C4-N9	5.66	129.40	126.00
29	A2	758	U	N1-C2-O2	5.66	126.77	122.80
29	A2	2063	C	C5-C6-N1	5.66	123.83	121.00
53	A3	466	A	N3-C4-N9	5.66	131.93	127.40
53	A4	577	G	C6-C5-N7	-5.66	127.00	130.40
53	A4	878	A	N1-C6-N6	5.66	122.00	118.60
30	B2	39	C	C5-C6-N1	5.66	123.83	121.00
53	A3	781	G	C6-N1-C2	-5.66	121.70	125.10
53	A3	882	U	N3-C2-O2	-5.66	118.24	122.20
53	A4	166	A	C8-N9-C4	-5.66	103.53	105.80
29	A1	2242	G	N3-C4-C5	-5.66	125.77	128.60
30	B1	83	G	C4-C5-N7	5.66	113.06	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	98	U	C6-N1-C1'	-5.66	113.28	121.20
29	A2	733	G	N1-C2-N2	-5.66	111.11	116.20
53	A3	597	A	N3-C4-N9	5.66	131.93	127.40
53	A4	680	U	C5-C6-N1	5.66	125.53	122.70
29	A1	810	A	C4-C5-C6	-5.66	114.17	117.00
29	A1	2717	C	C2-N3-C4	5.66	122.73	119.90
29	A2	2687	G	C8-N9-C1'	-5.66	119.64	127.00
53	A4	187	C	C6-N1-C2	-5.66	118.04	120.30
53	A4	498	G	C6-C5-N7	-5.66	127.00	130.40
29	A1	2728	A	O4'-C1'-N9	-5.66	103.67	108.20
53	A3	1157	A	C4-C5-N7	5.66	113.53	110.70
53	A4	544	U	O4'-C1'-N1	5.66	112.72	108.20
29	A1	1973	G	C4-C5-N7	5.66	113.06	110.80
29	A1	2179	G	C8-N9-C4	-5.66	104.14	106.40
29	A2	104	C	N1-C2-O2	5.66	122.29	118.90
29	A2	1389	U	C5-C6-N1	5.66	125.53	122.70
29	A2	446	G	C6-C5-N7	-5.65	127.01	130.40
29	A2	2688	G	C6-C5-N7	-5.65	127.01	130.40
53	A3	893	G	N3-C4-N9	5.65	129.39	126.00
29	A1	2133	U	C2-N1-C1'	5.65	124.48	117.70
29	A1	599	C	N1-C2-O2	5.65	122.29	118.90
29	A1	2385	G	N7-C8-N9	5.65	115.93	113.10
29	A2	829	G	C6-C5-N7	-5.65	127.01	130.40
29	A2	1352	C	N1-C2-O2	5.65	122.29	118.90
29	A2	1663	C	C2-N1-C1'	5.65	125.02	118.80
53	A4	412	C	N3-C2-O2	-5.65	117.94	121.90
29	A2	1896	G	C6-C5-N7	-5.65	127.01	130.40
29	A2	2633	C	C2-N3-C4	-5.65	117.08	119.90
29	A1	1417	G	N7-C8-N9	5.65	115.92	113.10
29	A1	1614	C	C6-N1-C2	5.65	122.56	120.30
29	A2	2053	G	N1-C6-O6	5.65	123.29	119.90
53	A3	1371	C	C5-C6-N1	5.65	123.82	121.00
53	A4	28	G	C8-N9-C4	-5.65	104.14	106.40
29	A1	2782	C	C6-N1-C2	-5.65	118.04	120.30
29	A1	641	G	C6-C5-N7	-5.64	127.01	130.40
29	A1	951	C	P-O3'-C3'	5.64	126.47	119.70
29	A1	1180	A	C6-C5-N7	-5.64	128.35	132.30
29	A1	1930	G	OP1-P-O3'	5.64	117.62	105.20
30	B1	62	C	C5-C6-N1	5.64	123.82	121.00
29	A2	76	C	C5-C6-N1	5.64	123.82	121.00
29	A1	804	C	N3-C2-O2	-5.64	117.95	121.90
29	A1	1391	G	C8-N9-C1'	-5.64	119.66	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1713	A	C8-N9-C4	5.64	108.06	105.80
30	B2	109	G	N3-C4-N9	5.64	129.39	126.00
53	A3	502	C	O4'-C1'-N1	5.64	112.71	108.20
53	A4	955	A	C8-N9-C1'	-5.64	117.54	127.70
29	A1	123	G	N3-C4-N9	-5.64	122.61	126.00
29	A1	192	U	C6-N1-C2	-5.64	117.61	121.00
29	A1	2232	U	C6-N1-C2	-5.64	117.61	121.00
29	A1	2690	C	N3-C2-O2	-5.64	117.95	121.90
29	A2	350	G	N3-C4-N9	5.64	129.38	126.00
53	A3	169	C	N1-C2-O2	5.64	122.28	118.90
29	A1	240	G	P-O3'-C3'	5.64	126.47	119.70
29	A1	1841	U	N1-C2-O2	5.64	126.75	122.80
29	A1	2252	G	N3-C4-C5	-5.64	125.78	128.60
29	A2	123	G	C8-N9-C1'	5.64	134.33	127.00
53	A3	1117	U	C2-N1-C1'	5.64	124.47	117.70
53	A3	1401	G	N3-C4-C5	-5.64	125.78	128.60
53	A4	565	U	N1-C2-O2	5.64	126.75	122.80
29	A1	1702	G	N3-C2-N2	5.64	123.85	119.90
29	A2	1918	C	N3-C4-C5	5.64	124.16	121.90
29	A2	1957	G	C4-C5-N7	5.64	113.06	110.80
29	A2	2616	A	C8-N9-C4	-5.64	103.55	105.80
53	A3	580	G	C6-C5-N7	-5.64	127.02	130.40
26	b2	36	LEU	CA-CB-CG	5.64	128.26	115.30
29	A2	1651	A	N7-C8-N9	5.64	116.62	113.80
29	A2	2238	G	N7-C8-N9	5.64	115.92	113.10
53	A4	1309	C	C6-N1-C2	5.64	122.55	120.30
29	A1	1271	G	C8-N9-C4	-5.63	104.15	106.40
29	A1	2204	U	N1-C2-O2	5.63	126.74	122.80
29	A2	1896	G	C5-N7-C8	-5.63	101.48	104.30
29	A2	2004	G	C6-C5-N7	-5.63	127.02	130.40
53	A4	780	C	C2-N1-C1'	5.63	125.00	118.80
53	A4	930	G	C6-C5-N7	-5.63	127.02	130.40
53	A4	1144	C	C6-N1-C2	-5.63	118.05	120.30
29	A2	2416	C	N3-C2-O2	-5.63	117.96	121.90
53	A4	954	A	N9-C4-C5	-5.63	103.55	105.80
53	A4	1472	U	O4'-C1'-N1	5.63	112.71	108.20
29	A1	186	A	C5-C6-N1	5.63	120.52	117.70
29	A1	1434	C	O4'-C1'-N1	5.63	112.71	108.20
29	A1	2710	U	C2-N1-C1'	5.63	124.46	117.70
29	A2	1592	C	C5-C6-N1	5.63	123.82	121.00
29	A2	1635	A	N9-C4-C5	-5.63	103.55	105.80
29	A2	1652	C	O4'-C1'-N1	5.63	112.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2690	C	N3-C2-O2	-5.63	117.96	121.90
53	A3	63	C	O4'-C1'-N1	5.63	112.70	108.20
53	A3	82	U	C5-C6-N1	5.63	125.52	122.70
53	A3	1145	C	N1-C2-O2	5.63	122.28	118.90
53	A4	701	G	N3-C4-C5	-5.63	125.78	128.60
53	A4	778	C	C6-N1-C2	5.63	122.55	120.30
29	A1	76	C	C6-N1-C2	-5.63	118.05	120.30
29	A1	737	U	C4-C5-C6	-5.63	116.32	119.70
29	A1	834	G	N1-C6-O6	5.63	123.28	119.90
53	A4	1026	A	N3-C4-N9	5.63	131.90	127.40
53	A4	1374	G	C6-C5-N7	-5.63	127.02	130.40
29	A1	787	G	C4-N9-C1'	5.63	133.82	126.50
29	A1	932	G	C4-C5-N7	5.63	113.05	110.80
29	A2	1269	C	N3-C4-C5	5.63	124.15	121.90
29	A2	2233	G	O4'-C1'-N9	5.63	112.70	108.20
29	A2	2591	A	C8-N9-C4	-5.63	103.55	105.80
53	A3	149	C	OP1-P-OP2	-5.63	111.16	119.60
53	A3	638	A	C5-N7-C8	-5.63	101.09	103.90
53	A4	988	G	C4-C5-N7	5.63	113.05	110.80
29	A1	1045	G	N3-C4-N9	5.63	129.38	126.00
29	A1	1961	A	N1-C6-N6	-5.63	115.22	118.60
29	A1	2163	C	C5-C6-N1	5.63	123.81	121.00
29	A2	660	A	N7-C8-N9	5.63	116.61	113.80
29	A2	1158	G	N7-C8-N9	5.63	115.91	113.10
29	A2	1312	G	N7-C8-N9	5.63	115.91	113.10
29	A2	2694	C	N3-C2-O2	-5.63	117.96	121.90
53	A4	409	A	N1-C6-N6	-5.63	115.22	118.60
53	A4	580	G	C6-C5-N7	-5.63	127.02	130.40
53	A4	1379	C	N3-C2-O2	-5.63	117.96	121.90
53	A4	1388	U	N3-C2-O2	-5.63	118.26	122.20
29	A1	1095	G	C8-N9-C1'	-5.62	119.69	127.00
29	A2	1461	G	N7-C8-N9	5.62	115.91	113.10
29	A1	829	G	C4-C5-N7	5.62	113.05	110.80
29	A1	1082	G	C5-C6-O6	-5.62	125.23	128.60
29	A1	2302	A	C4-N9-C1'	5.62	136.42	126.30
29	A2	35	G	N1-C6-O6	-5.62	116.53	119.90
29	A2	177	G	C5-C6-N1	5.62	114.31	111.50
29	A2	938	C	C6-N1-C2	-5.62	118.05	120.30
29	A2	1923	G	C4-C5-N7	5.62	113.05	110.80
53	A4	271	G	C2-N3-C4	5.62	114.71	111.90
53	A4	1178	G	C5-C6-N1	5.62	114.31	111.50
53	A4	1464	G	C6-C5-N7	-5.62	127.03	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	757	C	N1-C2-O2	5.62	122.27	118.90
29	A1	820	G	C4-C5-N7	5.62	113.05	110.80
29	A1	1598	C	C6-N1-C2	-5.62	118.05	120.30
29	A1	1833	C	C6-N1-C2	5.62	122.55	120.30
29	A1	2700	G	C6-N1-C2	-5.62	121.73	125.10
29	A2	295	C	O4'-C1'-N1	5.62	112.70	108.20
29	A2	2386	G	N3-C4-C5	-5.62	125.79	128.60
29	A2	2472	G	C8-N9-C1'	-5.62	119.69	127.00
53	A3	905	G	C4-C5-N7	5.62	113.05	110.80
53	A4	267	C	N1-C2-O2	5.62	122.27	118.90
29	A1	76	C	C5-C6-N1	5.62	123.81	121.00
29	A2	2218	G	C4-C5-N7	5.62	113.05	110.80
53	A4	845	C	C2-N1-C1'	5.62	124.98	118.80
53	A4	1058	C	C2-N1-C1'	-5.62	112.62	118.80
53	A4	1240	C	C5-C6-N1	5.62	123.81	121.00
29	A1	714	C	C5-C6-N1	5.62	123.81	121.00
29	A1	1437	G	N3-C4-N9	5.62	129.37	126.00
29	A2	1145	U	C6-N1-C2	-5.62	117.63	121.00
29	A2	2356	C	C6-N1-C2	-5.62	118.05	120.30
29	A2	2472	G	C6-C5-N7	-5.62	127.03	130.40
29	A2	2686	G	N3-C4-C5	5.62	131.41	128.60
53	A3	641	G	C2-N3-C4	-5.62	109.09	111.90
53	A3	1374	G	C6-C5-N7	-5.62	127.03	130.40
53	A4	184	C	N3-C2-O2	-5.62	117.97	121.90
53	A4	719	C	C5-C6-N1	5.62	123.81	121.00
53	A4	959	U	C6-N1-C2	-5.62	117.63	121.00
29	A2	2579	A	N3-C4-N9	-5.62	122.91	127.40
53	A3	1464	G	C5-C6-O6	-5.62	125.23	128.60
53	A4	887	C	O5'-P-OP1	-5.62	100.64	105.70
29	A1	941	C	N3-C2-O2	-5.62	117.97	121.90
29	A2	387	U	C5-C6-N1	5.62	125.51	122.70
29	A2	403	C	C6-N1-C2	-5.62	118.05	120.30
29	A2	1714	A	C5-N7-C8	-5.62	101.09	103.90
29	A2	1817	A	C2-N3-C4	5.62	113.41	110.60
29	A2	1932	C	C6-N1-C2	-5.62	118.05	120.30
53	A4	1333	C	N1-C2-O2	-5.62	115.53	118.90
29	A1	467	G	N3-C4-C5	5.61	131.41	128.60
29	A1	628	A	O4'-C1'-N9	5.61	112.69	108.20
29	A1	1873	G	C4-N9-C1'	5.61	133.80	126.50
53	A4	63	C	O5'-P-OP1	-5.61	100.65	105.70
53	A4	199	C	C6-N1-C1'	-5.61	114.06	120.80
29	A1	925	C	C5-C6-N1	5.61	123.81	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1299	A	C8-N9-C4	-5.61	103.56	105.80
30	B1	37	U	C6-N1-C2	-5.61	117.63	121.00
29	A2	740	C	N3-C2-O2	-5.61	117.97	121.90
29	A2	1614	C	C2-N3-C4	-5.61	117.09	119.90
29	A2	1679	C	C6-N1-C2	-5.61	118.06	120.30
29	A2	1954	G	O4'-C1'-N9	5.61	112.69	108.20
29	A2	2740	A	C8-N9-C4	-5.61	103.56	105.80
53	A3	1397	G	N3-C4-C5	5.61	131.41	128.60
53	A4	1333	C	C6-N1-C1'	5.61	127.53	120.80
29	A1	1863	C	N3-C4-C5	-5.61	119.66	121.90
29	A1	2478	C	N1-C2-O2	5.61	122.27	118.90
30	B1	102	A	C8-N9-C4	-5.61	103.56	105.80
29	A2	2602	G	N7-C8-N9	5.61	115.90	113.10
53	A3	397	G	C6-C5-N7	-5.61	127.03	130.40
53	A3	672	C	C2-N3-C4	5.61	122.70	119.90
53	A3	1404	G	N1-C6-O6	5.61	123.26	119.90
29	A1	205	G	C4-C5-N7	5.61	113.04	110.80
29	A1	539	G	C2-N3-C4	-5.61	109.10	111.90
29	A2	39	C	C6-N1-C1'	-5.61	114.07	120.80
29	A2	421	C	N1-C2-O2	5.61	122.26	118.90
53	A3	979	G	C4-C5-N7	5.61	113.04	110.80
53	A4	68	G	N3-C4-C5	5.61	131.40	128.60
53	A4	1393	C	C6-N1-C2	5.61	122.54	120.30
53	A4	854	C	N3-C2-O2	-5.60	117.98	121.90
29	A1	114	C	C6-N1-C2	-5.60	118.06	120.30
29	A1	1019	G	N3-C4-N9	5.60	129.36	126.00
29	A1	1358	G	N1-C6-O6	-5.60	116.54	119.90
29	A1	1957	G	C4-C5-N7	5.60	113.04	110.80
29	A1	2218	G	C4-C5-N7	5.60	113.04	110.80
29	A2	508	A	N1-C6-N6	-5.60	115.24	118.60
29	A2	1209	C	N3-C2-O2	-5.60	117.98	121.90
29	A2	1225	C	C2-N3-C4	5.60	122.70	119.90
29	A2	1358	G	N1-C6-O6	-5.60	116.54	119.90
53	A3	388	A	N9-C4-C5	-5.60	103.56	105.80
53	A4	779	C	N3-C4-C5	5.60	124.14	121.90
29	A2	1457	C	N1-C2-O2	5.60	122.26	118.90
29	A2	1645	A	C8-N9-C4	-5.60	103.56	105.80
29	A1	57	G	C4-C5-N7	5.60	113.04	110.80
29	A2	231	A	C8-N9-C4	-5.60	103.56	105.80
29	A2	564	C	C6-N1-C2	-5.60	118.06	120.30
29	A2	2430	C	N3-C4-C5	5.60	124.14	121.90
29	A2	2833	A	C6-N1-C2	-5.60	115.24	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	23	C	N3-C4-C5	5.60	124.14	121.90
53	A4	335	U	C6-N1-C1'	-5.60	113.36	121.20
29	A1	2146	U	N1-C2-O2	5.60	126.72	122.80
29	A1	2737	G	C8-N9-C4	-5.60	104.16	106.40
29	A1	2801	U	C5-C6-N1	5.60	125.50	122.70
29	A2	1026	G	N3-C4-C5	-5.60	125.80	128.60
29	A2	2265	G	N3-C4-N9	5.60	129.36	126.00
53	A3	313	G	C6-C5-N7	-5.60	127.04	130.40
53	A4	1284	C	O4'-C1'-N1	5.60	112.68	108.20
53	A4	1352	G	C8-N9-C4	-5.60	104.16	106.40
29	A2	630	C	C6-N1-C2	-5.60	118.06	120.30
29	A2	1366	C	C6-N1-C2	5.60	122.54	120.30
29	A2	1862	A	N7-C8-N9	5.60	116.60	113.80
29	A2	2457	C	C2-N3-C4	-5.60	117.10	119.90
53	A3	1346	U	N1-C2-O2	5.60	126.72	122.80
29	A1	153	C	C6-N1-C2	-5.59	118.06	120.30
29	A2	646	G	C6-C5-N7	-5.59	127.04	130.40
29	A2	1319	G	O4'-C1'-N9	5.59	112.67	108.20
53	A3	1101	C	N1-C2-O2	5.59	122.26	118.90
53	A4	714	G	C6-C5-N7	-5.59	127.04	130.40
53	A4	1087	A	C8-N9-C4	-5.59	103.56	105.80
29	A1	409	G	C2-N3-C4	5.59	114.70	111.90
29	A1	2810	G	C4-C5-C6	5.59	122.16	118.80
29	A2	714	C	C5-C6-N1	5.59	123.80	121.00
53	A3	508	C	N3-C4-C5	5.59	124.14	121.90
53	A4	70	G	C4-N9-C1'	5.59	133.77	126.50
53	A4	93	C	C5-C4-N4	-5.59	116.28	120.20
53	A4	593	G	N3-C4-N9	5.59	129.36	126.00
29	A1	1197	G	C6-C5-N7	5.59	133.75	130.40
29	A2	735	G	N7-C8-N9	5.59	115.90	113.10
29	A2	2090	C	N3-C2-O2	-5.59	117.99	121.90
53	A3	1008	C	C6-N1-C2	-5.59	118.06	120.30
54	V3	6	LEU	CA-CB-CG	5.59	128.16	115.30
53	A4	583	C	N3-C2-O2	-5.59	117.99	121.90
29	A1	93	G	C8-N9-C4	-5.59	104.16	106.40
29	A1	401	U	C6-N1-C2	-5.59	117.65	121.00
29	A2	716	U	N3-C2-O2	-5.59	118.29	122.20
53	A3	183	G	N9-C4-C5	-5.59	103.16	105.40
53	A3	613	G	C8-N9-C1'	5.59	134.26	127.00
53	A3	1497	G	C8-N9-C4	5.59	108.64	106.40
53	A4	497	C	C6-N1-C2	-5.59	118.06	120.30
53	A4	893	G	N3-C4-N9	5.59	129.35	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2084	A	P-O3'-C3'	5.59	126.41	119.70
29	A1	700	G	N3-C4-C5	5.59	131.39	128.60
29	A2	787	G	C4-N9-C1'	5.59	133.76	126.50
29	A2	1382	G	C8-N9-C4	-5.59	104.17	106.40
29	A2	1436	G	N3-C4-N9	5.59	129.35	126.00
29	A2	2585	C	N3-C2-O2	-5.59	117.99	121.90
53	A3	43	C	N1-C2-O2	5.59	122.25	118.90
53	A3	269	A	N7-C8-N9	5.59	116.59	113.80
53	A3	1381	C	C5-C6-N1	-5.59	118.21	121.00
53	A3	1392	G	C6-C5-N7	-5.59	127.05	130.40
39	I4	100	GLY	C-N-CA	5.59	135.67	121.70
53	A4	664	C	C6-N1-C2	-5.59	118.07	120.30
53	A4	1199	C	C6-N1-C2	-5.59	118.06	120.30
29	A2	1651	A	C8-N9-C4	-5.58	103.57	105.80
29	A2	2732	G	N1-C6-O6	-5.58	116.55	119.90
53	A4	1209	C	N1-C2-O2	5.58	122.25	118.90
29	A1	1001	G	N3-C4-N9	5.58	129.35	126.00
29	A1	1517	C	C5-C6-N1	5.58	123.79	121.00
29	A2	495	G	C4-C5-N7	5.58	113.03	110.80
29	A2	1883	G	C8-N9-C1'	5.58	134.26	127.00
29	A2	2003	C	C6-N1-C2	-5.58	118.07	120.30
53	A4	255	G	C4-C5-N7	5.58	113.03	110.80
53	A4	1222	G	C4-C5-N7	5.58	113.03	110.80
29	A1	258	C	N3-C2-O2	-5.58	117.99	121.90
29	A1	963	C	C2-N1-C1'	5.58	124.94	118.80
29	A1	979	G	C5-C6-N1	5.58	114.29	111.50
29	A1	999	G	C8-N9-C4	5.58	108.63	106.40
29	A1	2004	G	C6-C5-N7	-5.58	127.05	130.40
29	A2	2539	G	C6-C5-N7	-5.58	127.05	130.40
53	A4	511	C	C6-N1-C1'	-5.58	114.10	120.80
53	A4	882	U	N3-C2-O2	-5.58	118.29	122.20
29	A1	1748	G	N1-C6-O6	5.58	123.25	119.90
53	A3	825	C	C6-N1-C1'	5.58	127.50	120.80
29	A2	1825	G	N9-C4-C5	-5.58	103.17	105.40
29	A2	1923	G	C6-C5-N7	-5.58	127.05	130.40
53	A3	813	G	N7-C8-N9	5.58	115.89	113.10
29	A1	119	G	C5-C6-O6	-5.58	125.25	128.60
29	A1	2875	C	N3-C4-C5	5.58	124.13	121.90
29	A2	1204	A	C8-N9-C4	5.58	108.03	105.80
53	A3	136	G	C2-N3-C4	-5.58	109.11	111.90
53	A3	952	A	N1-C2-N3	-5.58	126.51	129.30
29	A1	1622	G	C5-C6-O6	-5.58	125.25	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2741	U	N3-C2-O2	-5.58	118.30	122.20
29	A1	2817	C	C6-N1-C2	-5.58	118.07	120.30
29	A2	259	U	C5-C6-N1	-5.58	119.91	122.70
29	A2	2405	G	C2-N3-C4	-5.58	109.11	111.90
53	A3	1101	C	N3-C2-O2	-5.58	118.00	121.90
53	A3	1388	U	N3-C2-O2	-5.58	118.30	122.20
53	A4	886	A	C4-N9-C1'	5.58	136.34	126.30
53	A4	1051	C	C6-N1-C2	-5.58	118.07	120.30
29	A1	808	G	C4-C5-N7	5.57	113.03	110.80
29	A1	2606	G	C6-C5-N7	-5.57	127.06	130.40
29	A2	322	C	N1-C2-O2	5.57	122.24	118.90
29	A2	1519	G	N7-C8-N9	5.57	115.89	113.10
29	A2	2162	C	N1-C2-O2	5.57	122.24	118.90
29	A2	2591	A	N1-C6-N6	5.57	121.94	118.60
53	A3	354	U	C6-N1-C2	-5.57	117.66	121.00
53	A4	794	C	C6-N1-C2	-5.57	118.07	120.30
29	A1	1873	G	C6-C5-N7	-5.57	127.06	130.40
29	A1	1997	G	C8-N9-C1'	-5.57	119.76	127.00
29	A2	1497	G	N3-C4-N9	5.57	129.34	126.00
29	A1	854	G	N9-C4-C5	-5.57	103.17	105.40
29	A1	1702	G	OP1-P-O3'	5.57	117.46	105.20
29	A1	1705	C	N3-C4-C5	5.57	124.13	121.90
53	A3	1220	A	C4-C5-N7	5.57	113.48	110.70
53	A3	1459	G	C4-C5-C6	5.57	122.14	118.80
53	A4	217	U	C6-N1-C2	-5.57	117.66	121.00
53	A4	524	G	N1-C2-N2	-5.57	111.19	116.20
29	A1	1720	U	C5-C6-N1	5.57	125.48	122.70
29	A1	2687	G	C8-N9-C1'	-5.57	119.76	127.00
53	A3	1276	G	N3-C4-C5	-5.57	125.81	128.60
53	A4	1000	G	C5-C6-N1	5.57	114.28	111.50
29	A1	2749	A	C2-N3-C4	5.57	113.38	110.60
53	A3	269	A	C4-C5-N7	5.57	113.48	110.70
53	A3	728	C	N3-C2-O2	-5.57	118.00	121.90
53	A4	725	G	C4-N9-C1'	5.57	133.74	126.50
53	A4	749	A	N1-C2-N3	-5.57	126.52	129.30
53	A4	813	G	N7-C8-N9	5.57	115.88	113.10
53	A4	937	U	N1-C2-O2	5.57	126.70	122.80
53	A4	1294	U	O4'-C1'-N1	5.57	112.65	108.20
53	A4	1422	C	C5-C6-N1	5.57	123.78	121.00
29	A1	1034	C	C5-C4-N4	-5.57	116.31	120.20
29	A1	1997	G	N3-C4-N9	5.57	129.34	126.00
29	A2	970	U	C6-N1-C2	-5.57	117.66	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2302	A	C4-N9-C1'	5.57	136.32	126.30
29	A2	2405	G	C6-C5-N7	-5.57	127.06	130.40
53	A3	131	C	C4-C5-C6	-5.57	114.62	117.40
53	A3	754	G	C8-N9-C4	-5.57	104.17	106.40
53	A4	915	A	C8-N9-C4	5.57	108.03	105.80
29	A1	907	U	C2-N1-C1'	5.56	124.38	117.70
29	A1	1054	C	C6-N1-C1'	-5.56	114.12	120.80
53	A4	388	A	N9-C4-C5	-5.56	103.57	105.80
29	A2	2405	G	N1-C6-O6	5.56	123.24	119.90
53	A3	1345	A	N9-C4-C5	-5.56	103.58	105.80
9	K1	28	GLY	N-CA-C	5.56	127.00	113.10
29	A1	292	G	C8-N9-C4	-5.56	104.17	106.40
29	A1	1152	C	C6-N1-C2	-5.56	118.08	120.30
53	A3	716	A	N3-C4-N9	5.56	131.85	127.40
53	A3	1408	C	C6-N1-C2	-5.56	118.08	120.30
29	A1	2430	C	N1-C2-O2	5.56	122.23	118.90
29	A2	1300	G	C4-C5-N7	5.56	113.02	110.80
29	A2	2265	G	C4-N9-C1'	5.56	133.73	126.50
29	A2	2599	U	C5-C6-N1	5.56	125.48	122.70
53	A3	1059	G	C6-C5-N7	-5.56	127.06	130.40
29	A2	933	C	C6-N1-C2	5.56	122.52	120.30
53	A3	1222	G	C8-N9-C1'	-5.56	119.78	127.00
53	A4	1026	A	N3-C4-C5	-5.56	122.91	126.80
29	A1	1141	G	N3-C4-N9	5.56	129.33	126.00
29	A2	1227	C	C5-C4-N4	-5.56	116.31	120.20
29	A2	1394	G	N3-C4-N9	5.56	129.33	126.00
53	A3	48	C	C6-N1-C2	5.56	122.52	120.30
53	A4	609	U	C6-N1-C2	5.56	124.33	121.00
29	A1	148	C	C5-C6-N1	5.55	123.78	121.00
29	A1	2150	A	C2-N3-C4	5.55	113.38	110.60
29	A1	2369	C	C6-N1-C2	-5.55	118.08	120.30
29	A1	2581	G	C6-C5-N7	-5.55	127.07	130.40
29	A2	1826	C	C2-N1-C1'	5.55	124.91	118.80
29	A1	1865	C	C5-C6-N1	5.55	123.78	121.00
29	A1	1932	C	N3-C2-O2	-5.55	118.01	121.90
30	B1	86	C	C6-N1-C2	-5.55	118.08	120.30
29	A2	2602	G	C8-N9-C4	-5.55	104.18	106.40
53	A3	1334	G	C8-N9-C4	5.55	108.62	106.40
53	A4	716	A	C5-C6-N6	-5.55	119.26	123.70
29	A1	2004	G	N3-C4-C5	-5.55	125.82	128.60
23	Y2	31	LEU	CA-CB-CG	5.55	128.07	115.30
29	A2	585	C	O4'-C1'-N1	5.55	112.64	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2553	C	C5-C6-N1	5.55	123.78	121.00
29	A2	2725	A	N7-C8-N9	5.55	116.58	113.80
29	A2	2737	G	C8-N9-C4	-5.55	104.18	106.40
53	A3	359	A	C8-N9-C4	-5.55	103.58	105.80
53	A3	599	G	N3-C4-N9	5.55	129.33	126.00
29	A1	2416	C	N1-C2-O2	5.55	122.23	118.90
4	F2	106	LEU	CA-CB-CG	5.55	128.06	115.30
53	A3	185	C	N1-C2-O2	5.55	122.23	118.90
53	A4	763	A	C5-N7-C8	-5.55	101.13	103.90
53	A4	1351	C	C2-N1-C1'	5.55	124.90	118.80
29	A1	1957	G	N1-C6-O6	5.55	123.23	119.90
29	A2	768	C	C2-N3-C4	5.55	122.67	119.90
29	A2	798	C	N3-C2-O2	-5.55	118.02	121.90
29	A1	1031	A	N9-C4-C5	5.55	108.02	105.80
29	A1	1225	C	C6-N1-C1'	5.55	127.45	120.80
29	A2	533	G	N3-C4-N9	-5.55	122.67	126.00
29	A2	1955	U	C2-N1-C1'	5.55	124.36	117.70
53	A3	1463	G	C5-N7-C8	-5.55	101.53	104.30
29	A1	1045	G	C4-N9-C1'	5.54	133.71	126.50
29	A1	2027	G	N1-C2-N2	-5.54	111.21	116.20
29	A1	2044	A	C4-C5-C6	-5.54	114.23	117.00
29	A2	1271	G	C8-N9-C4	-5.54	104.18	106.40
53	A3	1422	C	N1-C2-O2	5.54	122.23	118.90
53	A4	91	G	O4'-C1'-N9	5.54	112.64	108.20
29	A1	1904	C	C6-N1-C2	-5.54	118.08	120.30
29	A1	2017	U	N3-C2-O2	-5.54	118.32	122.20
29	A2	768	C	C6-N1-C2	-5.54	118.08	120.30
29	A2	978	G	N3-C4-N9	-5.54	122.67	126.00
29	A2	2680	C	N3-C2-O2	-5.54	118.02	121.90
53	A4	735	G	N7-C8-N9	5.54	115.87	113.10
29	A1	1596	C	C6-N1-C2	-5.54	118.08	120.30
29	A2	213	A	N1-C6-N6	-5.54	115.28	118.60
29	A2	243	C	C6-N1-C2	-5.54	118.08	120.30
29	A2	1848	A	C8-N9-C4	5.54	108.02	105.80
29	A2	2092	U	N1-C2-O2	5.54	126.68	122.80
53	A3	411	G	N7-C8-N9	5.54	115.87	113.10
53	A3	550	G	N1-C2-N2	-5.54	111.21	116.20
53	A4	634	C	N3-C4-N4	5.54	121.88	118.00
53	A4	675	U	C6-N1-C2	-5.54	117.67	121.00
53	A3	931	G	C8-N9-C4	-5.54	104.18	106.40
53	A4	673	G	C4-N9-C1'	5.54	133.70	126.50
29	A1	458	A	C5-C6-N1	5.54	120.47	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2165	G	C6-C5-N7	-5.54	127.08	130.40
53	A4	1398	G	C8-N9-C4	-5.54	104.18	106.40
29	A1	278	G	N3-C4-C5	-5.54	125.83	128.60
29	A1	685	G	N3-C4-N9	5.54	129.32	126.00
29	A1	2028	G	C5-C6-N1	5.54	114.27	111.50
29	A2	1955	U	N3-C2-O2	-5.54	118.32	122.20
29	A2	1957	G	C2-N3-C4	-5.54	109.13	111.90
53	A4	544	U	C2-N1-C1'	-5.54	111.06	117.70
53	A4	805	C	C6-N1-C2	-5.54	118.08	120.30
29	A1	129	G	C8-N9-C4	5.54	108.61	106.40
29	A1	455	C	C6-N1-C2	-5.54	118.09	120.30
29	A1	1930	G	C8-N9-C4	5.54	108.61	106.40
29	A1	1931	G	C5-C6-N1	5.54	114.27	111.50
29	A1	2149	G	N7-C8-N9	5.54	115.87	113.10
29	A2	119	G	C4-C5-N7	5.54	113.02	110.80
29	A2	212	A	C4-C5-N7	5.54	113.47	110.70
29	A2	827	G	N3-C2-N2	-5.54	116.03	119.90
29	A2	1263	G	C6-C5-N7	-5.54	127.08	130.40
29	A2	1397	A	N1-C6-N6	-5.54	115.28	118.60
53	A3	108	G	P-O3'-C3'	5.54	126.34	119.70
53	A3	302	C	N1-C2-O2	5.54	122.22	118.90
29	A1	112	U	C5-C6-N1	-5.53	119.93	122.70
29	A1	417	G	C2-N3-C4	5.53	114.67	111.90
29	A1	986	G	N7-C8-N9	5.53	115.87	113.10
29	A1	1242	G	C4-C5-N7	5.53	113.01	110.80
29	A2	1179	G	N1-C6-O6	-5.53	116.58	119.90
29	A2	1513	C	O4'-C1'-N1	5.53	112.63	108.20
53	A3	267	C	N1-C2-O2	5.53	122.22	118.90
53	A4	1025	C	N1-C2-O2	5.53	122.22	118.90
53	A4	1481	G	C5-C6-N1	5.53	114.27	111.50
29	A1	95	G	C8-N9-C4	5.53	108.61	106.40
53	A3	1157	A	N1-C6-N6	5.53	121.92	118.60
53	A4	1381	C	C2-N3-C4	-5.53	117.13	119.90
29	A1	672	C	C6-N1-C2	-5.53	118.09	120.30
29	A1	1644	A	C5-C6-N6	-5.53	119.28	123.70
29	A1	2190	G	N1-C6-O6	5.53	123.22	119.90
29	A2	808	G	C4-C5-N7	5.53	113.01	110.80
53	A4	970	G	C5-C6-O6	-5.53	125.28	128.60
53	A4	1446	G	N3-C4-N9	5.53	129.32	126.00
29	A2	1420	U	N3-C2-O2	-5.53	118.33	122.20
53	A4	550	G	N1-C2-N2	-5.53	111.22	116.20
29	A1	409	G	C4-N9-C1'	5.53	133.69	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1352	C	C4-C5-C6	-5.53	114.64	117.40
29	A1	1425	G	C8-N9-C4	-5.53	104.19	106.40
29	A2	768	C	C5-C6-N1	5.53	123.76	121.00
29	A2	1425	G	C8-N9-C4	-5.53	104.19	106.40
29	A2	1648	C	N1-C2-O2	5.53	122.22	118.90
53	A3	84	C	N1-C2-O2	5.53	122.22	118.90
53	A4	969	U	P-O3'-C3'	5.53	126.33	119.70
29	A1	938	C	N3-C2-O2	-5.53	118.03	121.90
29	A1	1834	G	N3-C4-N9	5.53	129.32	126.00
29	A2	1905	C	C5-C6-N1	5.53	123.76	121.00
29	A2	2273	G	N9-C4-C5	-5.53	103.19	105.40
53	A3	1348	C	C6-N1-C2	-5.52	118.09	120.30
29	A1	973	C	C5-C4-N4	-5.52	116.33	120.20
29	A1	2853	C	N3-C4-C5	5.52	124.11	121.90
29	A2	1622	G	C8-N9-C4	-5.52	104.19	106.40
29	A2	1857	G	C2-N3-C4	-5.52	109.14	111.90
29	A2	2198	C	N3-C2-O2	-5.52	118.03	121.90
53	A4	770	A	N9-C4-C5	-5.52	103.59	105.80
53	A4	1178	G	N3-C4-C5	-5.52	125.84	128.60
29	A1	421	C	N1-C2-O2	5.52	122.21	118.90
29	A1	624	G	N3-C4-N9	-5.52	122.69	126.00
29	A1	1298	G	C4-N9-C1'	5.52	133.68	126.50
29	A1	1951	A	C4-C5-N7	5.52	113.46	110.70
29	A1	2353	G	N3-C4-N9	5.52	129.31	126.00
29	A2	810	A	C4-C5-C6	-5.52	114.24	117.00
29	A2	1530	U	C5-C6-N1	5.52	125.46	122.70
29	A2	2228	C	C6-N1-C1'	5.52	127.42	120.80
53	A3	283	A	N9-C4-C5	-5.52	103.59	105.80
53	A3	545	C	C6-N1-C2	-5.52	118.09	120.30
53	A3	1504	C	N3-C2-O2	-5.52	118.04	121.90
53	A4	769	G	C5-C6-N1	5.52	114.26	111.50
53	A4	1222	G	C6-C5-N7	-5.52	127.09	130.40
29	A1	1833	C	N3-C2-O2	-5.52	118.04	121.90
29	A1	2061	G	C4-C5-N7	5.52	113.01	110.80
29	A2	877	U	O4'-C1'-N1	5.52	112.61	108.20
29	A2	2873	G	N3-C4-C5	-5.52	125.84	128.60
53	A3	58	C	N1-C2-O2	5.52	122.21	118.90
53	A4	397	G	C8-N9-C4	-5.52	104.19	106.40
29	A1	1189	U	C2-N1-C1'	5.52	124.32	117.70
29	A1	2051	G	C8-N9-C1'	-5.52	119.83	127.00
29	A2	17	G	N7-C8-N9	5.52	115.86	113.10
29	A2	2841	C	C2-N3-C4	-5.52	117.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	690	C	C2-N1-C1'	5.51	124.87	118.80
29	A1	1417	G	C8-N9-C4	-5.51	104.19	106.40
29	A1	1734	C	N3-C4-C5	5.51	124.11	121.90
29	A1	1889	G	C6-C5-N7	-5.51	127.09	130.40
29	A1	2012	C	N3-C2-O2	-5.51	118.04	121.90
29	A2	973	C	N3-C4-C5	5.51	124.11	121.90
29	A2	1199	G	N3-C4-N9	5.51	129.31	126.00
29	A2	1404	G	C4-C5-N7	5.51	113.01	110.80
29	A2	1716	G	N3-C4-C5	-5.51	125.84	128.60
53	A4	494	C	C5-C4-N4	-5.51	116.34	120.20
29	A1	624	G	N3-C4-C5	5.51	131.36	128.60
29	A1	2650	U	N1-C2-O2	5.51	126.66	122.80
29	A1	2664	U	C5-C6-N1	5.51	125.46	122.70
29	A2	1608	G	C4-N9-C1'	5.51	133.67	126.50
53	A3	699	A	C5-N7-C8	-5.51	101.14	103.90
29	A1	1386	G	O4'-C1'-N9	5.51	112.61	108.20
29	A1	1921	G	N7-C8-N9	5.51	115.86	113.10
29	A2	1461	G	C6-C5-N7	-5.51	127.09	130.40
29	A2	2100	U	O4'-C1'-N1	5.51	112.61	108.20
53	A3	185	C	N3-C2-O2	-5.51	118.04	121.90
53	A4	949	C	C6-N1-C2	-5.51	118.09	120.30
53	A4	1205	G	C4-C5-N7	5.51	113.00	110.80
29	A1	322	C	N3-C2-O2	-5.51	118.04	121.90
29	A1	2737	G	C6-C5-N7	-5.51	127.09	130.40
29	A2	1045	G	N3-C4-N9	5.51	129.31	126.00
53	A4	750	A	O5'-P-OP2	-5.51	100.74	105.70
53	A4	1381	C	N3-C2-O2	-5.51	118.04	121.90
29	A1	2243	C	C5-C6-N1	5.51	123.75	121.00
29	A1	2474	U	N1-C2-O2	5.51	126.66	122.80
29	A1	2687	G	N9-C4-C5	-5.51	103.20	105.40
29	A2	1905	C	N1-C2-O2	5.51	122.20	118.90
29	A2	2706	C	N1-C2-O2	5.51	122.20	118.90
53	A3	571	G	C5-C6-N1	5.51	114.25	111.50
53	A3	1307	C	C5-C4-N4	-5.51	116.34	120.20
29	A2	1834	G	C6-C5-N7	-5.51	127.10	130.40
29	A2	2027	G	N1-C2-N2	-5.51	111.24	116.20
29	A2	2322	G	C8-N9-C1'	-5.51	119.84	127.00
30	B2	47	A	C2-N3-C4	5.51	113.35	110.60
53	A4	78	G	C5-C6-O6	-5.51	125.30	128.60
29	A2	1850	G	C8-N9-C1'	-5.50	119.84	127.00
53	A4	620	G	C8-N9-C1'	-5.50	119.84	127.00
53	A4	730	C	C2-N1-C1'	5.50	124.86	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2656	G	C5-N7-C8	-5.50	101.55	104.30
29	A2	1972	G	C8-N9-C4	5.50	108.60	106.40
29	A2	2254	C	C2-N3-C4	5.50	122.65	119.90
29	A2	2401	U	C5-C6-N1	5.50	125.45	122.70
53	A3	1446	G	N3-C4-N9	5.50	129.30	126.00
29	A1	121	G	C4-C5-N7	5.50	113.00	110.80
29	A1	1269	C	N3-C4-C5	5.50	124.10	121.90
29	A1	1546	C	C6-N1-C2	-5.50	118.10	120.30
29	A1	2456	C	C6-N1-C2	-5.50	118.10	120.30
29	A2	1830	C	N3-C2-O2	-5.50	118.05	121.90
29	A1	2572	C	C6-N1-C2	-5.50	118.10	120.30
53	A3	311	G	N3-C4-C5	-5.50	125.85	128.60
29	A1	1705	C	C2-N3-C4	-5.50	117.15	119.90
29	A1	2539	G	C4-C5-N7	5.50	113.00	110.80
29	A2	1706	C	N3-C2-O2	-5.50	118.05	121.90
29	A2	1957	G	N1-C6-O6	5.50	123.20	119.90
29	A1	481	C	C2-N1-C1'	5.50	124.85	118.80
29	A1	1905	C	C5-C6-N1	5.50	123.75	121.00
29	A1	2260	G	N3-C4-N9	5.50	129.30	126.00
29	A2	929	G	C8-N9-C4	-5.50	104.20	106.40
29	A2	1756	G	C6-C5-N7	-5.50	127.10	130.40
29	A2	2040	U	N3-C2-O2	-5.50	118.35	122.20
53	A3	1087	A	N9-C4-C5	-5.50	103.60	105.80
53	A3	1158	G	N3-C2-N2	5.50	123.75	119.90
53	A4	242	G	N1-C6-O6	5.50	123.20	119.90
29	A2	1238	G	C8-N9-C4	5.50	108.60	106.40
53	A3	1380	A	C2-N3-C4	5.50	113.35	110.60
29	A1	1624	C	N3-C2-O2	-5.49	118.05	121.90
29	A1	1718	A	C8-N9-C1'	-5.49	117.81	127.70
29	A1	1850	G	N9-C4-C5	-5.49	103.20	105.40
29	A1	2178	G	C8-N9-C4	-5.49	104.20	106.40
29	A2	999	G	C8-N9-C4	5.49	108.60	106.40
53	A3	714	G	C5-C6-N1	-5.49	108.75	111.50
53	A3	1014	G	N3-C4-C5	-5.49	125.85	128.60
53	A4	620	G	N9-C4-C5	-5.49	103.20	105.40
53	A4	1311	U	C2-N1-C1'	5.49	124.29	117.70
29	A1	921	A	C8-N9-C4	-5.49	103.60	105.80
29	A1	1864	G	C4-C5-N7	5.49	113.00	110.80
29	A2	803	C	N3-C2-O2	-5.49	118.06	121.90
53	A3	233	G	C4-N9-C1'	5.49	133.64	126.50
29	A1	353	U	C5-C6-N1	5.49	125.44	122.70
29	A1	1727	G	C5-N7-C8	-5.49	101.55	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2243	C	C5-C4-N4	-5.49	116.36	120.20
29	A2	1172	C	N1-C2-O2	5.49	122.19	118.90
29	A2	1720	U	C5-C6-N1	5.49	125.44	122.70
53	A4	1228	U	C6-N1-C2	-5.49	117.70	121.00
53	A4	1299	A	N1-C6-N6	5.49	121.89	118.60
53	A4	1405	G	N3-C4-C5	-5.49	125.86	128.60
29	A1	93	G	C6-C5-N7	-5.49	127.11	130.40
29	A1	2591	A	N7-C8-N9	5.49	116.54	113.80
53	A3	323	C	N1-C2-O2	5.49	122.19	118.90
53	A4	64	G	C8-N9-C4	-5.49	104.20	106.40
29	A1	881	G	C6-C5-N7	-5.49	127.11	130.40
29	A1	1382	G	C4-N9-C1'	5.49	133.63	126.50
30	B1	79	U	N1-C2-O2	5.49	126.64	122.80
53	A3	1387	G	C8-N9-C1'	5.49	134.13	127.00
29	A1	1420	U	C2-N1-C1'	5.49	124.28	117.70
29	A1	1649	G	C5-C6-N1	5.49	114.24	111.50
29	A2	39	C	N3-C2-O2	-5.49	118.06	121.90
29	A2	2090	C	N1-C2-O2	5.49	122.19	118.90
53	A4	582	C	C6-N1-C1'	-5.49	114.22	120.80
53	A3	1339	U	C2-N1-C1'	5.48	124.28	117.70
53	A4	838	G	N3-C4-N9	5.48	129.29	126.00
29	A1	2523	G	C5-C6-O6	-5.48	125.31	128.60
29	A2	35	G	C6-N1-C2	-5.48	121.81	125.10
29	A2	408	U	C6-N1-C2	-5.48	117.71	121.00
29	A2	1255	C	N3-C2-O2	-5.48	118.06	121.90
53	A3	184	C	N3-C4-C5	5.48	124.09	121.90
53	A3	580	G	C5-N7-C8	-5.48	101.56	104.30
53	A4	308	A	N1-C6-N6	-5.48	115.31	118.60
53	A4	1504	C	N3-C2-O2	-5.48	118.06	121.90
29	A1	481	C	C6-N1-C2	-5.48	118.11	120.30
29	A1	1239	G	C4-C5-N7	5.48	112.99	110.80
29	A2	2864	G	C6-C5-N7	-5.48	127.11	130.40
53	A4	1387	G	C2-N3-C4	-5.48	109.16	111.90
53	A4	1404	G	C5-C6-O6	-5.48	125.31	128.60
29	A1	690	C	N1-C2-O2	5.48	122.19	118.90
29	A1	1389	U	N1-C2-O2	5.48	126.64	122.80
29	A1	1825	G	C4-C5-N7	5.48	112.99	110.80
53	A3	873	C	N1-C2-O2	5.48	122.19	118.90
53	A3	930	G	C5-C6-N1	5.48	114.24	111.50
29	A1	191	C	C2-N1-C1'	5.48	124.83	118.80
29	A2	2081	A	N7-C8-N9	5.48	116.54	113.80
53	A4	103	C	N3-C4-C5	5.48	124.09	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1548	G	C5-C6-O6	-5.48	125.31	128.60
29	A1	2864	G	C8-N9-C4	-5.48	104.21	106.40
29	A2	1418	C	C6-N1-C2	-5.48	118.11	120.30
29	A1	2096	G	C8-N9-C1'	-5.47	119.88	127.00
29	A2	1417	G	C6-C5-N7	-5.47	127.11	130.40
29	A2	1673	C	C5-C6-N1	5.47	123.74	121.00
29	A2	2053	G	C5-C6-O6	-5.47	125.31	128.60
53	A3	197	G	C4-C5-N7	5.47	112.99	110.80
53	A3	207	C	C6-N1-C2	-5.47	118.11	120.30
53	A4	171	C	N1-C2-O2	5.47	122.19	118.90
53	A4	1463	G	N3-C4-N9	-5.47	122.72	126.00
29	A1	1352	C	N1-C2-O2	5.47	122.18	118.90
29	A1	2080	G	C5-N7-C8	-5.47	101.56	104.30
29	A1	2128	G	O4'-C1'-N9	5.47	112.58	108.20
29	A2	343	C	N1-C2-O2	5.47	122.18	118.90
29	A2	1703	A	O5'-P-OP1	-5.47	100.78	105.70
53	A4	933	U	N1-C2-N3	5.47	118.18	114.90
29	A1	2742	G	N1-C6-O6	-5.47	116.62	119.90
29	A2	2414	G	C8-N9-C4	-5.47	104.21	106.40
53	A3	964	G	C5-N7-C8	-5.47	101.56	104.30
29	A2	95	G	C4-N9-C1'	-5.47	119.39	126.50
29	A2	2552	C	N3-C2-O2	-5.47	118.07	121.90
29	A2	2572	C	C6-N1-C2	-5.47	118.11	120.30
29	A2	2603	A	C5-C6-N1	5.47	120.44	117.70
29	A2	2664	U	C5-C6-N1	5.47	125.44	122.70
53	A4	1506	G	C4-C5-N7	5.47	112.99	110.80
29	A1	2085	G	O4'-C1'-N9	5.47	112.57	108.20
53	A3	135	A	N7-C8-N9	5.47	116.53	113.80
29	A1	1549	C	C2-N1-C1'	5.47	124.81	118.80
29	A1	2832	A	O4'-C1'-N9	5.47	112.57	108.20
29	A2	503	U	C5-C6-N1	5.47	125.43	122.70
29	A2	969	G	N1-C2-N2	-5.47	111.28	116.20
29	A2	1308	G	C8-N9-C4	5.47	108.59	106.40
29	A2	1889	G	N3-C4-C5	-5.47	125.87	128.60
29	A2	2684	A	C5-C6-N1	5.47	120.43	117.70
53	A3	424	U	O4'-C1'-N1	5.47	112.57	108.20
53	A3	672	C	C6-N1-C1'	-5.47	114.24	120.80
29	A1	141	C	C6-N1-C2	-5.46	118.11	120.30
29	A1	2216	G	C5-N7-C8	5.46	107.03	104.30
29	A2	986	G	N7-C8-N9	5.46	115.83	113.10
29	A2	1706	C	N3-C4-C5	5.46	124.09	121.90
29	A2	2051	G	C8-N9-C1'	-5.46	119.89	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2227	U	C6-N1-C2	-5.46	117.72	121.00
29	A2	95	G	C8-N9-C4	5.46	108.58	106.40
29	A2	1804	C	C5-C6-N1	-5.46	118.27	121.00
53	A4	1236	G	N9-C4-C5	-5.46	103.22	105.40
29	A1	872	G	C5-N7-C8	-5.46	101.57	104.30
29	A1	2184	G	C8-N9-C4	-5.46	104.22	106.40
29	A2	205	G	C4-C5-N7	5.46	112.98	110.80
53	A3	794	C	C5-C6-N1	5.46	123.73	121.00
53	A3	1222	G	N3-C4-N9	5.46	129.28	126.00
53	A4	597	A	N1-C6-N6	5.46	121.88	118.60
53	A4	638	A	C4-C5-C6	-5.46	114.27	117.00
29	A1	909	U	N1-C2-O2	5.46	126.62	122.80
29	A1	1454	U	C6-N1-C2	-5.46	117.72	121.00
29	A2	852	U	C5-C6-N1	5.46	125.43	122.70
29	A2	1137	G	C4-N9-C1'	5.46	133.60	126.50
29	A2	1907	G	C4-N9-C1'	5.46	133.60	126.50
29	A1	1415	A	N7-C8-N9	5.46	116.53	113.80
29	A1	1652	C	N1-C2-N3	5.46	123.02	119.20
29	A1	2059	G	C4-C5-N7	5.46	112.98	110.80
29	A1	2059	G	N1-C2-N2	-5.46	111.29	116.20
29	A2	237	G	N3-C4-N9	5.46	129.28	126.00
29	A2	1463	U	N1-C2-O2	5.46	126.62	122.80
29	A2	2428	G	C8-N9-C1'	-5.46	119.90	127.00
53	A4	1281	G	C8-N9-C1'	5.46	134.10	127.00
53	A4	1390	A	C5-N7-C8	-5.46	101.17	103.90
29	A1	989	G	C8-N9-C4	5.46	108.58	106.40
29	A1	1636	C	C5-C6-N1	5.46	123.73	121.00
29	A2	595	G	C8-N9-C4	-5.46	104.22	106.40
29	A2	1549	C	C6-N1-C2	-5.46	118.12	120.30
29	A2	2251	G	N1-C6-O6	5.46	123.17	119.90
29	A1	1916	C	C2-N1-C1'	5.46	124.80	118.80
29	A1	2088	C	C6-N1-C2	-5.46	118.12	120.30
53	A4	309	C	C6-N1-C2	-5.46	118.12	120.30
53	A4	1248	C	C6-N1-C2	-5.46	118.12	120.30
29	A1	503	U	C5-C6-N1	5.45	125.43	122.70
29	A1	854	G	C4-N9-C1'	-5.45	119.41	126.50
29	A2	17	G	C6-C5-N7	-5.45	127.13	130.40
29	A2	1727	G	C5-N7-C8	-5.45	101.57	104.30
29	A2	2176	G	C8-N9-C1'	-5.45	119.91	127.00
29	A2	2718	C	C6-N1-C2	-5.45	118.12	120.30
53	A3	589	G	C6-C5-N7	-5.45	127.13	130.40
53	A3	763	A	C6-C5-N7	-5.45	128.48	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	948	G	OP2-P-O3'	5.45	117.20	105.20
53	A4	1397	G	N9-C4-C5	5.45	107.58	105.40
29	A1	119	G	C6-C5-N7	-5.45	127.13	130.40
29	A1	2139	G	N7-C8-N9	5.45	115.83	113.10
29	A1	2516	G	C5-C6-N1	5.45	114.23	111.50
29	A1	2781	G	N7-C8-N9	5.45	115.83	113.10
29	A1	2841	C	C2-N3-C4	-5.45	117.17	119.90
53	A3	459	G	C4-C5-N7	5.45	112.98	110.80
53	A4	142	G	N3-C4-N9	5.45	129.27	126.00
29	A1	1037	G	N3-C4-C5	-5.45	125.88	128.60
29	A1	1855	G	N3-C4-N9	5.45	129.27	126.00
29	A2	2395	C	N3-C4-C5	5.45	124.08	121.90
53	A3	1098	C	C6-N1-C2	-5.45	118.12	120.30
29	A1	1825	G	N9-C4-C5	-5.45	103.22	105.40
29	A1	1916	C	C4-C5-C6	-5.45	114.67	117.40
29	A1	2688	G	C6-C5-N7	-5.45	127.13	130.40
53	A3	27	G	C8-N9-C4	5.45	108.58	106.40
53	A3	1400	A	O4'-C1'-N9	5.45	112.56	108.20
53	A4	337	C	N3-C2-O2	-5.45	118.09	121.90
53	A4	540	G	C4-C5-N7	5.45	112.98	110.80
29	A1	17	G	C6-C5-N7	-5.45	127.13	130.40
29	A1	2586	A	N9-C4-C5	-5.45	103.62	105.80
29	A2	464	C	N1-C2-O2	5.45	122.17	118.90
29	A2	616	C	N3-C2-O2	-5.45	118.09	121.90
29	A2	2252	G	N3-C4-C5	-5.45	125.88	128.60
30	B2	79	U	N1-C2-O2	5.45	126.61	122.80
29	A1	464	C	N1-C2-O2	5.45	122.17	118.90
29	A1	1842	A	N1-C6-N6	-5.45	115.33	118.60
29	A1	2165	G	C2-N3-C4	5.45	114.62	111.90
29	A1	2606	G	N3-C4-C5	-5.45	125.88	128.60
29	A2	476	U	C5-C6-N1	5.45	125.42	122.70
29	A2	825	G	C4-N9-C1'	5.45	133.58	126.50
29	A2	827	G	C8-N9-C4	-5.45	104.22	106.40
53	A3	549	G	N9-C4-C5	-5.45	103.22	105.40
53	A3	748	G	N7-C8-N9	5.45	115.82	113.10
53	A3	931	G	N3-C4-N9	-5.45	122.73	126.00
53	A4	620	G	C6-C5-N7	-5.45	127.13	130.40
53	A4	1450	A	C4-N9-C1'	5.45	136.10	126.30
29	A1	585	C	N3-C2-O2	-5.44	118.09	121.90
29	A1	851	A	C5-C6-N1	5.44	120.42	117.70
29	A2	679	C	N3-C2-O2	-5.44	118.09	121.90
29	A2	1429	G	C6-C5-N7	-5.44	127.13	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	114	C	N1-C2-O2	5.44	122.17	118.90
29	A1	183	U	C6-N1-C2	-5.44	117.73	121.00
29	A1	870	A	C8-N9-C4	-5.44	103.62	105.80
29	A2	2849	G	N3-C2-N2	5.44	123.71	119.90
29	A1	466	G	N3-C4-C5	-5.44	125.88	128.60
29	A2	1632	A	N3-C4-C5	-5.44	122.99	126.80
30	B2	97	C	C6-N1-C2	-5.44	118.12	120.30
53	A4	1276	G	N3-C4-N9	5.44	129.26	126.00
29	A2	1948	C	C5-C6-N1	5.44	123.72	121.00
29	A2	2877	U	O4'-C1'-N1	5.44	112.55	108.20
53	A3	576	G	C8-N9-C4	-5.44	104.22	106.40
53	A3	825	C	C2-N1-C1'	-5.44	112.82	118.80
53	A3	1288	U	C5-C6-N1	5.44	125.42	122.70
53	A4	955	A	C2-N3-C4	5.44	113.32	110.60
53	A4	1268	A	C8-N9-C4	-5.44	103.62	105.80
29	A1	236	C	C5-C6-N1	5.44	123.72	121.00
29	A1	641	G	O4'-C1'-N9	5.44	112.55	108.20
29	A1	1239	G	N1-C6-O6	5.44	123.16	119.90
29	A1	1756	G	C6-C5-N7	-5.44	127.14	130.40
53	A3	1198	C	O4'-C1'-N1	5.44	112.55	108.20
53	A4	87	C	N3-C2-O2	-5.44	118.09	121.90
29	A1	2022	G	N1-C2-N2	-5.44	111.31	116.20
29	A2	590	C	N3-C2-O2	-5.44	118.09	121.90
29	A2	1197	G	C6-C5-N7	5.44	133.66	130.40
29	A2	1765	G	C5-C6-O6	-5.44	125.34	128.60
53	A3	1193	U	N3-C2-O2	-5.44	118.39	122.20
53	A4	550	G	C6-C5-N7	-5.44	127.14	130.40
29	A1	197	A	C4-C5-N7	5.43	113.42	110.70
29	A1	1076	A	N1-C6-N6	-5.43	115.34	118.60
29	A1	1209	C	C6-N1-C2	-5.43	118.13	120.30
29	A1	1301	A	N1-C6-N6	-5.43	115.34	118.60
29	A1	1804	C	C5-C6-N1	-5.43	118.28	121.00
29	A1	95	G	N3-C4-C5	5.43	131.32	128.60
29	A1	391	G	C8-N9-C1'	5.43	134.06	127.00
29	A1	1307	G	N1-C6-O6	-5.43	116.64	119.90
29	A1	1711	C	N1-C2-N3	5.43	123.00	119.20
29	A1	2252	G	N3-C4-N9	5.43	129.26	126.00
29	A1	2626	C	C6-N1-C2	5.43	122.47	120.30
29	A2	1592	C	C6-N1-C1'	-5.43	114.28	120.80
29	A2	2423	G	N3-C2-N2	5.43	123.70	119.90
29	A2	2444	A	C5-C6-N6	-5.43	119.35	123.70
29	A2	2552	C	C6-N1-C2	-5.43	118.13	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1481	G	O5'-P-OP2	-5.43	100.81	105.70
53	A4	1047	U	C5-C4-O4	-5.43	122.64	125.90
29	A1	1014	C	C6-N1-C2	-5.43	118.13	120.30
29	A1	938	C	O4'-C1'-N1	5.43	112.54	108.20
29	A2	170	G	N1-C6-O6	5.43	123.16	119.90
29	A2	737	U	C4-C5-C6	-5.43	116.44	119.70
29	A2	1921	G	C4-N9-C1'	5.43	133.56	126.50
53	A3	496	C	C2-N1-C1'	5.43	124.77	118.80
33	C4	52	LEU	CA-CB-CG	5.43	127.79	115.30
53	A4	98	G	C6-N1-C2	-5.43	121.84	125.10
53	A4	160	G	N9-C4-C5	-5.43	103.23	105.40
53	A4	580	G	C5-N7-C8	-5.43	101.58	104.30
53	A4	767	C	C2-N1-C1'	5.43	124.77	118.80
29	A1	170	G	N7-C8-N9	5.43	115.81	113.10
29	A1	181	A	C8-N9-C4	-5.43	103.63	105.80
29	A1	2760	C	C6-N1-C2	-5.43	118.13	120.30
29	A2	1300	G	N1-C6-O6	5.43	123.16	119.90
53	A4	285	C	N3-C2-O2	-5.43	118.10	121.90
30	B1	85	G	C4-C5-N7	5.43	112.97	110.80
29	A2	290	G	N3-C4-N9	-5.43	122.74	126.00
29	A2	323	G	N9-C4-C5	-5.43	103.23	105.40
29	A2	2005	A	C5-N7-C8	-5.43	101.19	103.90
53	A3	160	G	N3-C4-N9	5.43	129.26	126.00
53	A3	349	G	C6-C5-N7	-5.43	127.14	130.40
53	A3	776	U	C5-C6-N1	5.43	125.41	122.70
53	A3	1262	U	N1-C2-O2	5.43	126.60	122.80
53	A4	212	C	O4'-C1'-N1	5.43	112.54	108.20
53	A4	766	C	N3-C2-O2	-5.43	118.10	121.90
53	A4	772	U	C5-C4-O4	5.43	129.16	125.90
53	A4	1244	C	C5-C4-N4	-5.43	116.40	120.20
5	G1	152	ARG	C-N-CA	5.42	135.26	121.70
29	A1	199	C	N1-C2-O2	5.42	122.16	118.90
29	A1	1673	C	C5-C6-N1	5.42	123.71	121.00
29	A1	1809	G	C8-N9-C1'	-5.42	119.95	127.00
29	A1	1868	G	N9-C4-C5	-5.42	103.23	105.40
29	A2	76	C	C6-N1-C2	-5.42	118.13	120.30
29	A2	909	U	C5-C6-N1	5.42	125.41	122.70
53	A3	267	C	N3-C2-O2	-5.42	118.10	121.90
53	A3	579	C	O4'-C1'-N1	5.42	112.54	108.20
53	A3	1474	G	C4-N9-C1'	-5.42	119.45	126.50
53	A4	917	C	N1-C2-N3	5.42	123.00	119.20
29	A2	1138	U	N1-C2-O2	5.42	126.60	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1824	A	N3-C4-C5	5.42	130.60	126.80
29	A2	2028	G	C5-C6-N1	5.42	114.21	111.50
53	A3	210	U	N1-C2-O2	5.42	126.59	122.80
53	A4	58	C	N1-C2-O2	5.42	122.15	118.90
53	A4	74	C	C6-N1-C2	-5.42	118.13	120.30
53	A4	754	G	C8-N9-C4	-5.42	104.23	106.40
53	A4	1446	G	N9-C4-C5	-5.42	103.23	105.40
29	A1	2521	C	C2-N1-C1'	5.42	124.76	118.80
29	A1	955	U	C5-C6-N1	5.42	125.41	122.70
29	A1	1497	G	N3-C4-C5	-5.42	125.89	128.60
29	A1	1685	C	N3-C2-O2	-5.42	118.11	121.90
29	A1	1862	A	N7-C8-N9	5.42	116.51	113.80
29	A1	1935	U	C5-C6-N1	5.42	125.41	122.70
29	A2	996	C	N3-C2-O2	-5.42	118.11	121.90
29	A2	2662	C	N3-C4-C5	5.42	124.07	121.90
53	A3	71	C	C5-C6-N1	5.42	123.71	121.00
53	A3	750	A	OP1-P-OP2	-5.42	111.47	119.60
53	A3	1026	A	N3-C4-N9	5.42	131.73	127.40
53	A4	314	G	N3-C4-C5	-5.42	125.89	128.60
53	A4	939	C	C6-N1-C2	-5.42	118.13	120.30
53	A4	1502	G	O4'-C1'-N9	5.42	112.53	108.20
29	A2	1680	A	O4'-C1'-N9	5.42	112.53	108.20
29	A2	1809	G	C8-N9-C1'	-5.42	119.96	127.00
53	A3	565	U	N1-C2-O2	5.42	126.59	122.80
1	C1	234	GLY	N-CA-C	-5.41	99.57	113.10
29	A1	622	U	N3-C2-O2	-5.41	118.41	122.20
29	A1	2475	C	N3-C2-O2	-5.41	118.11	121.90
29	A1	2672	C	C6-N1-C2	-5.41	118.13	120.30
29	A2	830	A	C2-N3-C4	-5.41	107.89	110.60
29	A2	1636	C	C6-N1-C2	-5.41	118.14	120.30
29	A2	2265	G	N1-C2-N2	-5.41	111.33	116.20
29	A2	2497	C	C5-C6-N1	5.41	123.71	121.00
53	A3	1104	U	C5-C6-N1	-5.41	119.99	122.70
53	A4	932	U	C5-C4-O4	5.41	129.15	125.90
29	A1	1714	A	N1-C6-N6	5.41	121.85	118.60
29	A1	2016	G	N3-C4-C5	-5.41	125.89	128.60
29	A2	782	G	C5-N7-C8	-5.41	101.59	104.30
29	A2	1308	G	N1-C6-O6	-5.41	116.65	119.90
30	B2	19	C	C6-N1-C2	-5.41	118.14	120.30
53	A3	1029	G	N3-C4-N9	-5.41	122.75	126.00
53	A4	1464	G	C5-C6-O6	-5.41	125.35	128.60
29	A1	549	G	C4-C5-N7	5.41	112.96	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1242	G	C4-C5-N7	5.41	112.96	110.80
53	A4	1311	U	C5-C6-N1	5.41	125.40	122.70
29	A1	649	G	C4-N9-C1'	5.41	133.53	126.50
30	B1	24	U	N1-C2-O2	5.41	126.58	122.80
19	U2	163	LEU	CA-CB-CG	5.41	127.74	115.30
29	A2	1924	A	P-O3'-C3'	5.41	126.19	119.70
29	A2	2281	A	C4-N9-C1'	5.41	136.03	126.30
53	A3	346	G	N9-C4-C5	-5.41	103.24	105.40
53	A4	1000	G	C8-N9-C4	-5.41	104.24	106.40
29	A1	1449	G	C5-C6-O6	-5.41	125.36	128.60
29	A1	1796	G	N7-C8-N9	5.41	115.80	113.10
29	A2	1239	G	C6-C5-N7	-5.41	127.16	130.40
29	A2	1833	C	N3-C2-O2	-5.41	118.12	121.90
53	A3	991	G	C2-N3-C4	-5.41	109.20	111.90
53	A4	614	G	C8-N9-C1'	-5.41	119.97	127.00
53	A4	1281	G	N3-C4-N9	-5.41	122.76	126.00
29	A1	2845	G	C4-N9-C1'	5.40	133.53	126.50
29	A2	2251	G	C5-C6-O6	-5.40	125.36	128.60
53	A3	889	C	N3-C2-O2	-5.40	118.12	121.90
29	A1	1704	A	N1-C6-N6	5.40	121.84	118.60
29	A1	2192	G	N1-C2-N2	5.40	121.06	116.20
29	A1	2468	G	N1-C2-N3	5.40	127.14	123.90
29	A1	2650	U	C6-N1-C1'	-5.40	113.64	121.20
29	A2	2230	G	C8-N9-C4	-5.40	104.24	106.40
29	A2	2296	G	C4-C5-N7	5.40	112.96	110.80
29	A2	2606	G	C8-N9-C4	-5.40	104.24	106.40
53	A3	872	G	N7-C8-N9	5.40	115.80	113.10
53	A3	1144	C	N1-C2-O2	5.40	122.14	118.90
29	A1	1167	C	C6-N1-C2	-5.40	118.14	120.30
29	A1	2781	G	C4-N9-C1'	5.40	133.52	126.50
29	A2	491	G	C6-C5-N7	-5.40	127.16	130.40
29	A2	1833	C	N1-C2-O2	5.40	122.14	118.90
29	A2	1952	A	C5-N7-C8	-5.40	101.20	103.90
29	A2	2802	C	C5-C6-N1	5.40	123.70	121.00
53	A3	360	U	C6-N1-C1'	-5.40	113.64	121.20
53	A3	621	G	C8-N9-C4	5.40	108.56	106.40
53	A4	437	C	N1-C2-O2	5.40	122.14	118.90
29	A1	1184	G	C8-N9-C4	-5.40	104.24	106.40
53	A3	26	A	C5-C6-N1	5.40	120.40	117.70
53	A4	965	G	C4-N9-C1'	5.40	133.52	126.50
29	A1	2005	A	C5-N7-C8	-5.40	101.20	103.90
29	A2	1031	A	N1-C6-N6	-5.40	115.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1973	G	C2-N3-C4	-5.40	109.20	111.90
29	A2	2780	A	N3-C4-N9	5.40	131.72	127.40
53	A3	932	U	C2-N1-C1'	5.40	124.18	117.70
53	A4	1387	G	C4-N9-C1'	-5.40	119.48	126.50
29	A2	1298	G	N3-C4-N9	5.40	129.24	126.00
29	A2	1853	U	O4'-C1'-N1	-5.40	103.88	108.20
29	A1	1204	A	C8-N9-C4	5.39	107.96	105.80
29	A1	2591	A	C4-C5-N7	5.39	113.40	110.70
29	A2	2100	U	N3-C2-O2	-5.39	118.42	122.20
29	A2	2260	G	C4-N9-C1'	5.39	133.51	126.50
53	A3	272	C	N3-C2-O2	-5.39	118.12	121.90
53	A3	420	G	N3-C4-N9	5.39	129.24	126.00
53	A3	709	C	C6-N1-C2	-5.39	118.14	120.30
53	A3	917	C	C6-N1-C1'	5.39	127.27	120.80
53	A4	138	G	C5-N7-C8	-5.39	101.60	104.30
53	A4	1373	U	N1-C2-N3	5.39	118.14	114.90
53	A4	1398	G	C8-N9-C1'	-5.39	119.99	127.00
29	A1	824	G	N1-C6-O6	5.39	123.14	119.90
29	A1	2327	C	N1-C2-O2	5.39	122.14	118.90
29	A1	2407	A	N1-C2-N3	-5.39	126.60	129.30
29	A2	1528	G	C5-C6-O6	-5.39	125.36	128.60
53	A4	119	G	N1-C6-O6	5.39	123.14	119.90
53	A4	520	G	N3-C4-N9	5.39	129.24	126.00
53	A4	574	U	C6-N1-C2	-5.39	117.77	121.00
53	A4	794	C	C5-C6-N1	5.39	123.70	121.00
29	A1	728	C	C6-N1-C2	-5.39	118.14	120.30
29	A1	1300	G	C2-N3-C4	-5.39	109.20	111.90
29	A2	439	G	C4-C5-N7	5.39	112.95	110.80
29	A2	2577	U	N1-C2-O2	5.39	126.57	122.80
53	A3	573	C	N1-C2-O2	5.39	122.13	118.90
53	A3	639	C	C4-C5-C6	-5.39	114.71	117.40
53	A3	1272	G	C6-C5-N7	-5.39	127.17	130.40
33	C4	32	LEU	CA-CB-CG	5.39	127.69	115.30
53	A4	105	G	C8-N9-C1'	-5.39	119.99	127.00
53	A4	528	C	C2-N1-C1'	5.39	124.73	118.80
53	A4	730	C	N3-C2-O2	-5.39	118.13	121.90
53	A4	770	A	C5-C6-N1	5.39	120.39	117.70
54	V4	6	LEU	CA-CB-CG	5.39	127.70	115.30
29	A2	2520	U	C6-N1-C2	-5.39	117.77	121.00
29	A1	161	G	O4'-C1'-N9	5.39	112.51	108.20
29	A2	2492	A	C5-C6-N1	5.39	120.39	117.70
29	A2	2758	C	O4'-C1'-N1	5.39	112.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	74	C	C6-N1-C2	-5.39	118.14	120.30
29	A1	1836	A	C4-C5-C6	-5.38	114.31	117.00
29	A1	2414	G	N7-C8-N9	5.38	115.79	113.10
29	A1	2742	G	N3-C2-N2	5.38	123.67	119.90
30	B1	28	A	C5-C6-N1	5.38	120.39	117.70
30	B1	68	A	C8-N9-C4	5.38	107.95	105.80
29	A2	248	G	C5-C6-O6	-5.38	125.37	128.60
29	A2	647	G	N3-C4-N9	5.38	129.23	126.00
29	A2	839	C	C6-N1-C2	5.38	122.45	120.30
53	A3	459	G	C5-C6-O6	-5.38	125.37	128.60
53	A3	1098	C	C2-N1-C1'	5.38	124.72	118.80
53	A4	781	G	C5-C6-N1	5.38	114.19	111.50
29	A1	1312	G	C6-C5-N7	-5.38	127.17	130.40
29	A1	1680	A	O4'-C1'-N9	5.38	112.51	108.20
29	A1	2132	C	N1-C2-O2	5.38	122.13	118.90
29	A2	2728	A	O4'-C1'-N9	-5.38	103.89	108.20
53	A4	213	C	C6-N1-C2	-5.38	118.15	120.30
29	A1	616	C	N3-C2-O2	-5.38	118.13	121.90
29	A1	1460	A	N7-C8-N9	5.38	116.49	113.80
29	A2	2742	G	C5-C6-N1	5.38	114.19	111.50
53	A3	392	A	C5-C6-N1	5.38	120.39	117.70
53	A3	1361	G	C6-C5-N7	-5.38	127.17	130.40
53	A4	731	C	N3-C4-C5	-5.38	119.75	121.90
53	A4	772	U	C6-N1-C2	-5.38	117.77	121.00
53	A4	1090	G	C4-N9-C1'	-5.38	119.50	126.50
29	A1	1234	G	N9-C4-C5	-5.38	103.25	105.40
29	A2	1009	G	N3-C4-C5	-5.38	125.91	128.60
53	A3	768	G	C4-C5-N7	5.38	112.95	110.80
53	A3	928	G	N3-C4-N9	5.38	129.23	126.00
53	A4	615	A	C4-C5-N7	5.38	113.39	110.70
29	A1	1681	A	C8-N9-C4	-5.38	103.65	105.80
8	J2	8	LEU	CA-CB-CG	5.38	127.67	115.30
29	A2	1127	C	C5-C6-N1	5.38	123.69	121.00
29	A1	1684	G	C8-N9-C4	-5.38	104.25	106.40
29	A2	1997	G	C8-N9-C1'	-5.38	120.01	127.00
53	A3	387	G	C8-N9-C4	5.38	108.55	106.40
53	A4	337	C	C5-C6-N1	5.38	123.69	121.00
53	A4	1392	G	C4-N9-C1'	5.38	133.49	126.50
29	A1	1095	G	C6-C5-N7	-5.38	127.17	130.40
29	A2	1307	G	N1-C6-O6	-5.38	116.67	119.90
29	A2	2776	G	N3-C4-N9	5.38	129.22	126.00
53	A3	859	C	N3-C2-O2	-5.38	118.14	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	78	G	C6-C5-N7	-5.37	127.18	130.40
29	A1	426	G	N3-C4-N9	-5.37	122.78	126.00
29	A2	81	G	N3-C4-C5	-5.37	125.91	128.60
29	A2	1978	G	N1-C2-N2	-5.37	111.36	116.20
29	A2	2067	C	C6-N1-C2	-5.37	118.15	120.30
29	A2	2760	C	C5-C6-N1	5.37	123.69	121.00
53	A3	554	U	C4-C5-C6	5.37	122.92	119.70
53	A3	582	C	C5-C6-N1	5.37	123.69	121.00
53	A3	875	G	C8-N9-C4	5.37	108.55	106.40
53	A4	11	G	C8-N9-C4	5.37	108.55	106.40
53	A4	261	G	C6-C5-N7	-5.37	127.18	130.40
29	A1	860	U	C5-C6-N1	-5.37	120.01	122.70
29	A2	87	G	C5-C6-O6	-5.37	125.38	128.60
29	A2	1711	C	C2-N3-C4	-5.37	117.21	119.90
29	A2	2256	G	C8-N9-C4	-5.37	104.25	106.40
29	A2	2802	C	N3-C2-O2	-5.37	118.14	121.90
53	A3	278	C	C6-N1-C2	-5.37	118.15	120.30
53	A3	508	C	C2-N3-C4	-5.37	117.22	119.90
53	A3	558	G	C8-N9-C1'	5.37	133.98	127.00
53	A3	637	G	C6-N1-C2	-5.37	121.88	125.10
53	A3	937	U	N3-C2-O2	-5.37	118.44	122.20
53	A3	1212	G	N7-C8-N9	5.37	115.79	113.10
53	A4	886	A	C8-N9-C4	-5.37	103.65	105.80
53	A4	1299	A	C4-C5-N7	5.37	113.39	110.70
53	A4	1379	C	C6-N1-C1'	-5.37	114.35	120.80
53	A3	161	G	C4-C5-N7	5.37	112.95	110.80
53	A4	1272	G	N7-C8-N9	5.37	115.78	113.10
29	A1	1596	C	C5-C6-N1	5.37	123.68	121.00
29	A2	1889	G	N3-C4-N9	5.37	129.22	126.00
53	A4	489	G	C4-C5-N7	5.37	112.95	110.80
29	A2	654	A	C8-N9-C4	5.37	107.95	105.80
30	B2	9	G	C8-N9-C4	5.37	108.55	106.40
53	A3	1087	A	C8-N9-C4	-5.37	103.65	105.80
53	A4	741	G	N1-C6-O6	5.37	123.12	119.90
29	A1	1836	A	N3-C4-N9	-5.37	123.11	127.40
29	A2	186	A	C5-C6-N1	5.37	120.38	117.70
29	A2	556	A	C8-N9-C4	-5.37	103.65	105.80
29	A2	1478	C	C6-N1-C2	-5.37	118.15	120.30
29	A2	2022	G	N9-C4-C5	-5.37	103.25	105.40
53	A3	520	G	N3-C4-C5	-5.37	125.92	128.60
53	A3	985	C	C6-N1-C2	-5.37	118.15	120.30
53	A3	1178	G	C4-N9-C1'	5.37	133.47	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	I1	15	LEU	CA-CB-CG	5.36	127.64	115.30
29	A1	358	G	C4-C5-N7	5.36	112.94	110.80
29	A1	978	G	N3-C4-C5	5.36	131.28	128.60
29	A1	1969	G	C8-N9-C4	-5.36	104.25	106.40
29	A1	2018	C	C5-C6-N1	5.36	123.68	121.00
29	A1	2893	C	C5-C4-N4	-5.36	116.45	120.20
29	A2	966	A	C5-N7-C8	-5.36	101.22	103.90
29	A2	1449	G	C5-C6-O6	-5.36	125.38	128.60
29	A2	1834	G	C8-N9-C1'	-5.36	120.03	127.00
35	E3	43	LEU	CB-CG-CD2	-5.36	101.88	111.00
53	A3	348	A	N9-C4-C5	-5.36	103.66	105.80
29	A1	417	G	C6-C5-N7	-5.36	127.18	130.40
29	A1	1447	C	C2-N1-C1'	5.36	124.70	118.80
29	A2	1710	G	N3-C2-N2	5.36	123.65	119.90
53	A3	160	G	C6-C5-N7	-5.36	127.18	130.40
53	A3	482	A	C8-N9-C4	5.36	107.94	105.80
53	A3	1499	U	N3-C2-O2	-5.36	118.45	122.20
53	A4	527	G	C8-N9-C4	-5.36	104.25	106.40
29	A2	1481	U	N1-C2-O2	5.36	126.55	122.80
29	A2	2224	C	N3-C2-O2	-5.36	118.15	121.90
53	A3	1232	A	C4-C5-C6	-5.36	114.32	117.00
53	A3	1379	C	C6-N1-C2	-5.36	118.16	120.30
29	A1	1134	A	C8-N9-C1'	-5.36	118.05	127.70
29	A1	1727	G	C4-C5-N7	5.36	112.94	110.80
29	A2	495	G	C6-C5-N7	-5.36	127.19	130.40
53	A3	845	C	N3-C2-O2	-5.36	118.15	121.90
53	A4	577	G	N1-C2-N2	-5.36	111.38	116.20
29	A1	1791	G	O4'-C1'-N9	5.36	112.49	108.20
29	A1	2686	G	N3-C4-C5	5.36	131.28	128.60
29	A2	1819	A	N1-C6-N6	5.36	121.81	118.60
53	A4	240	C	C6-N1-C2	-5.36	118.16	120.30
29	A1	1418	C	C2-N1-C1'	5.36	124.69	118.80
29	A1	1928	G	C6-C5-N7	-5.36	127.19	130.40
29	A2	358	G	C4-C5-N7	5.36	112.94	110.80
29	A2	2385	G	N7-C8-N9	5.36	115.78	113.10
53	A3	210	U	C2-N1-C1'	5.36	124.13	117.70
53	A3	642	U	N1-C2-O2	5.36	126.55	122.80
53	A4	87	C	N1-C2-O2	5.36	122.11	118.90
53	A4	390	C	C6-N1-C2	-5.36	118.16	120.30
53	A4	587	G	C8-N9-C4	-5.36	104.26	106.40
53	A4	937	U	C5-C6-N1	5.36	125.38	122.70
29	A1	1199	G	N3-C4-N9	5.35	129.21	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2003	C	C6-N1-C2	-5.35	118.16	120.30
29	A1	2368	G	C8-N9-C1'	-5.35	120.04	127.00
29	A2	433	U	C5-C6-N1	5.35	125.38	122.70
29	A2	2117	G	C8-N9-C4	5.35	108.54	106.40
29	A2	2336	A	C8-N9-C4	-5.35	103.66	105.80
53	A3	411	G	C8-N9-C4	-5.35	104.26	106.40
53	A4	233	G	C4-N9-C1'	5.35	133.46	126.50
29	A1	508	A	N1-C6-N6	-5.35	115.39	118.60
29	A1	1319	G	O4'-C1'-N9	5.35	112.48	108.20
29	A2	782	G	OP2-P-O3'	5.35	116.97	105.20
29	A2	1391	G	C4-N9-C1'	5.35	133.46	126.50
29	A2	2178	G	N3-C4-C5	-5.35	125.92	128.60
29	A2	2521	C	C2-N1-C1'	5.35	124.69	118.80
29	A2	2694	C	N1-C2-O2	5.35	122.11	118.90
53	A3	1042	C	C2-N1-C1'	5.35	124.69	118.80
53	A3	1059	G	C5-N7-C8	-5.35	101.62	104.30
53	A3	1446	G	C8-N9-C4	5.35	108.54	106.40
29	A1	683	C	N1-C2-O2	5.35	122.11	118.90
29	A1	842	A	C5-N7-C8	-5.35	101.23	103.90
29	A1	1385	G	C4-N9-C1'	5.35	133.46	126.50
29	A1	1773	G	N7-C8-N9	5.35	115.77	113.10
29	A2	1939	U	C6-N1-C2	-5.35	117.79	121.00
29	A2	2311	C	C6-N1-C2	-5.35	118.16	120.30
53	A3	237	C	N1-C2-O2	5.35	122.11	118.90
53	A3	305	G	C6-C5-N7	-5.35	127.19	130.40
29	A1	2608	C	C5-C6-N1	5.35	123.67	121.00
30	B1	38	C	N3-C2-O2	-5.35	118.16	121.90
29	A2	1540	G	O4'-C1'-N9	5.35	112.48	108.20
29	A2	2469	G	N3-C4-N9	5.35	129.21	126.00
29	A2	2900	C	N1-C2-O2	5.35	122.11	118.90
53	A4	27	G	C4-N9-C1'	5.35	133.45	126.50
53	A4	884	A	C5-N7-C8	-5.35	101.23	103.90
53	A4	947	C	C6-N1-C2	-5.35	118.16	120.30
53	A4	1450	A	N3-C4-N9	5.35	131.68	127.40
29	A1	130	G	N3-C4-N9	5.35	129.21	126.00
29	A1	1225	C	P-O3'-C3'	5.35	126.11	119.70
29	A1	2043	A	C8-N9-C4	5.35	107.94	105.80
29	A2	2028	G	C8-N9-C4	-5.35	104.26	106.40
29	A2	2434	C	N1-C2-O2	5.35	122.11	118.90
29	A2	2453	A	P-O3'-C3'	5.35	126.11	119.70
53	A3	884	A	C5-N7-C8	-5.35	101.23	103.90
53	A3	948	G	P-O3'-C3'	5.35	126.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1254	G	C6-C5-N7	-5.35	127.19	130.40
29	A1	647	G	N3-C4-N9	5.34	129.21	126.00
29	A1	1366	C	C6-N1-C2	5.34	122.44	120.30
29	A1	1578	G	N1-C6-O6	5.34	123.11	119.90
53	A3	197	G	N9-C4-C5	-5.34	103.26	105.40
53	A4	227	G	N7-C8-N9	5.34	115.77	113.10
53	A4	799	A	C4-C5-C6	-5.34	114.33	117.00
29	A1	824	G	C8-N9-C1'	5.34	133.94	127.00
29	A1	2081	A	N7-C8-N9	5.34	116.47	113.80
29	A1	2468	G	N1-C6-O6	5.34	123.10	119.90
29	A2	28	A	N7-C8-N9	5.34	116.47	113.80
29	A2	130	G	N3-C4-N9	5.34	129.21	126.00
29	A2	2442	G	N1-C6-O6	5.34	123.11	119.90
53	A3	550	G	N3-C4-C5	-5.34	125.93	128.60
53	A4	261	G	C2-N3-C4	-5.34	109.23	111.90
53	A4	392	A	C2-N3-C4	5.34	113.27	110.60
53	A4	1140	C	N3-C2-O2	-5.34	118.16	121.90
29	A1	2305	U	C6-N1-C2	-5.34	117.80	121.00
29	A1	2396	G	C6-C5-N7	-5.34	127.20	130.40
29	A1	2597	G	C4-N9-C1'	5.34	133.44	126.50
29	A2	1272	C	N3-C4-C5	5.34	124.04	121.90
53	A3	879	G	C8-N9-C4	5.34	108.54	106.40
53	A3	1178	G	N3-C4-C5	-5.34	125.93	128.60
53	A4	866	A	C4-N9-C1'	5.34	135.91	126.30
53	A4	1001	G	N3-C4-C5	-5.34	125.93	128.60
53	A4	1114	C	C6-N1-C1'	5.34	127.21	120.80
29	A2	2772	A	C8-N9-C4	-5.34	103.67	105.80
53	A4	614	G	C4-N9-C1'	5.34	133.44	126.50
53	A4	933	U	C5-C6-N1	5.34	125.37	122.70
29	A2	599	C	C5-C6-N1	5.34	123.67	121.00
29	A2	1034	C	C5-C6-N1	5.34	123.67	121.00
29	A2	1624	C	O4'-C1'-N1	5.34	112.47	108.20
29	A2	1795	A	C2-N3-C4	5.34	113.27	110.60
29	A2	1863	C	N3-C4-C5	-5.34	119.77	121.90
53	A3	527	G	C6-C5-N7	-5.34	127.20	130.40
38	H4	112	LEU	CA-CB-CG	5.34	127.58	115.30
29	A1	2133	U	N3-C2-O2	-5.33	118.47	122.20
29	A1	2633	C	C2-N3-C4	-5.33	117.23	119.90
29	A2	1240	G	C8-N9-C1'	5.33	133.94	127.00
29	A2	1904	C	C5-C6-N1	5.33	123.67	121.00
43	M3	70	LEU	CA-CB-CG	5.33	127.57	115.30
29	A1	1167	C	N3-C2-O2	-5.33	118.17	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1517	C	C5-C6-N1	5.33	123.67	121.00
29	A2	2164	C	N3-C4-N4	-5.33	114.27	118.00
29	A2	2421	G	N1-C6-O6	5.33	123.10	119.90
53	A3	1445	A	C5-C6-N6	-5.33	119.43	123.70
53	A4	138	G	C4-C5-N7	5.33	112.93	110.80
53	A4	204	G	C4-N9-C1'	5.33	133.43	126.50
53	A4	867	G	N1-C6-O6	-5.33	116.70	119.90
29	A1	1696	G	C4-N9-C1'	5.33	133.43	126.50
29	A1	2376	G	C6-C5-N7	5.33	133.60	130.40
29	A2	2212	C	C5-C6-N1	5.33	123.67	121.00
53	A3	270	G	C6-C5-N7	-5.33	127.20	130.40
53	A3	515	A	C2-N3-C4	5.33	113.27	110.60
53	A3	1396	U	C2-N1-C1'	5.33	124.10	117.70
53	A4	170	C	C4-C5-C6	-5.33	114.73	117.40
53	A4	444	G	C5-C6-O6	5.33	131.80	128.60
53	A3	455	C	C5-C6-N1	5.33	123.67	121.00
29	A1	348	G	N3-C4-C5	-5.33	125.94	128.60
29	A1	354	G	C8-N9-C4	5.33	108.53	106.40
29	A1	830	A	C2-N3-C4	-5.33	107.94	110.60
29	A1	2186	G	C6-C5-N7	-5.33	127.20	130.40
29	A1	2255	A	N1-C6-N6	-5.33	115.40	118.60
30	B1	70	C	C5-C6-N1	5.33	123.66	121.00
29	A2	178	G	C8-N9-C4	-5.33	104.27	106.40
29	A2	218	A	C4-C5-N7	5.33	113.36	110.70
53	A4	319	G	N3-C4-N9	-5.33	122.80	126.00
53	A4	533	G	C8-N9-C1'	-5.33	120.07	127.00
29	A2	324	A	C2-N3-C4	5.33	113.26	110.60
29	A2	2487	U	C5-C6-N1	5.33	125.36	122.70
29	A2	2656	G	C6-C5-N7	-5.33	127.20	130.40
29	A1	901	G	C8-N9-C1'	-5.33	120.08	127.00
29	A1	1696	G	N7-C8-N9	5.33	115.76	113.10
29	A1	2693	A	C5-C6-N1	5.33	120.36	117.70
29	A2	24	G	C8-N9-C4	5.33	108.53	106.40
29	A2	481	C	C2-N1-C1'	5.33	124.66	118.80
29	A2	981	G	C4-N9-C1'	5.33	133.42	126.50
53	A3	550	G	N3-C4-N9	5.33	129.19	126.00
53	A3	1059	G	N7-C8-N9	5.33	115.76	113.10
53	A3	1266	A	N1-C6-N6	-5.33	115.41	118.60
29	A1	1634	A	O4'-C1'-N9	5.32	112.46	108.20
29	A2	2863	A	C4-C5-N7	5.32	113.36	110.70
53	A3	385	C	C6-N1-C2	-5.32	118.17	120.30
53	A3	503	A	C8-N9-C4	-5.32	103.67	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1459	G	N1-C2-N2	-5.32	111.41	116.20
53	A4	376	C	C6-N1-C2	-5.32	118.17	120.30
53	A4	615	A	C5-C6-N6	-5.32	119.44	123.70
53	A4	849	A	C4-C5-N7	5.32	113.36	110.70
29	A1	234	A	C2-N3-C4	5.32	113.26	110.60
29	A2	163	G	O4'-C1'-N9	5.32	112.46	108.20
29	A2	692	C	C2-N3-C4	5.32	122.56	119.90
29	A2	2656	G	C8-N9-C4	-5.32	104.27	106.40
53	A3	180	C	N3-C2-O2	-5.32	118.17	121.90
53	A4	584	C	N3-C4-C5	5.32	124.03	121.90
29	A1	1449	G	C6-C5-N7	-5.32	127.21	130.40
29	A2	861	C	N3-C2-O2	-5.32	118.18	121.90
29	A2	1843	A	C5-C6-N1	5.32	120.36	117.70
53	A3	412	C	N1-C2-O2	5.32	122.09	118.90
53	A3	599	G	C4-C5-N7	5.32	112.93	110.80
53	A3	867	G	N1-C6-O6	-5.32	116.71	119.90
53	A4	1312	G	N3-C4-C5	-5.32	125.94	128.60
29	A1	2491	C	N3-C4-C5	5.32	124.03	121.90
29	A1	2725	A	N7-C8-N9	5.32	116.46	113.80
53	A3	1474	G	C2-N3-C4	-5.32	109.24	111.90
53	A4	550	G	C4-N9-C1'	5.32	133.41	126.50
53	A4	1164	A	C6-C5-N7	-5.32	128.58	132.30
53	A4	1313	A	C5-C6-N1	5.32	120.36	117.70
29	A1	225	U	C6-N1-C2	-5.32	117.81	121.00
29	A1	1380	G	N3-C4-C5	-5.32	125.94	128.60
29	A1	1973	G	C2-N3-C4	-5.32	109.24	111.90
29	A1	2404	U	C2-N1-C1'	5.32	124.08	117.70
29	A1	2539	G	C6-C5-N7	-5.32	127.21	130.40
29	A1	2709	C	N3-C2-O2	-5.32	118.18	121.90
18	T2	14	LEU	CA-CB-CG	5.32	127.53	115.30
29	A2	258	C	N3-C4-C5	5.32	124.03	121.90
29	A2	1975	U	N1-C2-O2	5.32	126.52	122.80
29	A2	2137	U	C6-N1-C2	-5.32	117.81	121.00
53	A3	480	A	N3-C4-C5	-5.32	123.08	126.80
53	A3	1258	C	C5-C6-N1	5.32	123.66	121.00
29	A1	1274	A	C6-C5-N7	-5.32	128.58	132.30
29	A1	1911	C	N3-C4-N4	5.32	121.72	118.00
29	A1	2404	U	N1-C2-O2	5.32	126.52	122.80
29	A1	2709	C	N1-C2-O2	5.32	122.09	118.90
30	B1	18	G	O5'-P-OP2	-5.32	100.92	105.70
29	A2	1436	G	N7-C8-N9	5.32	115.76	113.10
29	A2	2817	C	C5-C6-N1	5.32	123.66	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	533	G	C8-N9-C1'	-5.32	120.09	127.00
53	A3	1381	C	C6-N1-C1'	-5.32	114.42	120.80
29	A2	1833	C	C6-N1-C2	5.31	122.43	120.30
29	A2	2650	U	N1-C2-O2	5.31	126.52	122.80
53	A4	7	G	C4-N9-C1'	5.31	133.41	126.50
29	A1	954	G	O4'-C1'-N9	5.31	112.45	108.20
29	A2	1945	G	C6-C5-N7	5.31	133.59	130.40
29	A2	2523	G	C5-C6-O6	-5.31	125.41	128.60
53	A3	98	G	C6-N1-C2	-5.31	121.91	125.10
53	A4	270	G	N7-C8-N9	5.31	115.76	113.10
53	A4	349	G	C4-N9-C1'	5.31	133.41	126.50
53	A4	778	C	C2-N1-C1'	-5.31	112.95	118.80
53	A4	1241	C	C5-C6-N1	5.31	123.66	121.00
29	A1	2640	C	N1-C2-O2	5.31	122.09	118.90
30	B1	104	A	N7-C8-N9	5.31	116.45	113.80
29	A1	1644	A	C8-N9-C4	5.31	107.92	105.80
29	A1	2559	G	N9-C4-C5	5.31	107.52	105.40
29	A2	1849	G	C2-N3-C4	5.31	114.55	111.90
29	A2	2309	C	C4-C5-C6	-5.31	114.75	117.40
53	A3	92	U	O4'-C1'-N1	5.31	112.45	108.20
53	A3	1379	C	C6-N1-C1'	-5.31	114.43	120.80
53	A4	310	A	C5-C6-N6	-5.31	119.45	123.70
53	A4	423	G	C5-C6-O6	-5.31	125.42	128.60
53	A4	1497	G	C8-N9-C4	5.31	108.52	106.40
29	A1	1505	G	C4-N9-C1'	5.31	133.40	126.50
29	A2	421	C	C5-C6-N1	5.31	123.65	121.00
29	A2	657	G	C8-N9-C4	5.31	108.52	106.40
29	A2	2334	A	C4-C5-N7	5.31	113.35	110.70
29	A2	2411	G	C8-N9-C4	5.31	108.52	106.40
53	A3	437	C	N1-C2-O2	5.31	122.08	118.90
53	A4	875	G	C8-N9-C4	5.31	108.52	106.40
53	A4	932	U	O4'-C1'-N1	5.31	112.45	108.20
53	A4	970	G	N3-C4-N9	5.31	129.18	126.00
29	A1	1924	A	P-O3'-C3'	5.31	126.07	119.70
29	A1	2737	G	C4-C5-N7	5.31	112.92	110.80
29	A2	1572	G	N3-C4-C5	5.31	131.25	128.60
29	A2	1612	G	C5-C6-N1	5.31	114.15	111.50
29	A2	2737	G	C5-N7-C8	-5.31	101.65	104.30
30	B2	94	C	C6-N1-C2	5.31	122.42	120.30
53	A3	404	G	N7-C8-N9	5.31	115.75	113.10
53	A3	515	A	C4-N9-C1'	5.31	135.85	126.30
53	A4	35	G	N3-C4-C5	-5.31	125.95	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	613	G	N1-C6-O6	-5.31	116.72	119.90
29	A1	1273	G	C8-N9-C4	-5.30	104.28	106.40
29	A2	2092	U	C2-N1-C1'	5.30	124.07	117.70
53	A3	813	G	C5-N7-C8	-5.30	101.65	104.30
53	A3	1051	C	C6-N1-C2	-5.30	118.18	120.30
29	A1	241	A	C8-N9-C4	-5.30	103.68	105.80
53	A3	939	C	C5-C6-N1	5.30	123.65	121.00
53	A4	707	G	C4-C5-N7	5.30	112.92	110.80
29	A1	947	A	N1-C2-N3	-5.30	126.65	129.30
29	A1	1076	A	C8-N9-C4	-5.30	103.68	105.80
29	A2	1750	A	C6-C5-N7	-5.30	128.59	132.30
29	A2	1791	G	C6-C5-N7	-5.30	127.22	130.40
30	B2	32	C	C6-N1-C2	-5.30	118.18	120.30
53	A3	539	C	C6-N1-C1'	-5.30	114.44	120.80
53	A3	1143	C	N1-C2-O2	5.30	122.08	118.90
53	A3	1422	C	N3-C2-O2	-5.30	118.19	121.90
29	A1	491	G	C6-C5-N7	-5.30	127.22	130.40
29	A1	1930	G	N9-C4-C5	-5.30	103.28	105.40
29	A1	2498	G	C6-C5-N7	-5.30	127.22	130.40
29	A2	1864	G	C6-C5-N7	-5.30	127.22	130.40
29	A2	2623	U	N1-C2-N3	5.30	118.08	114.90
29	A2	2700	G	N1-C2-N3	5.30	127.08	123.90
53	A4	168	C	C2-N3-C4	5.30	122.55	119.90
53	A4	1032	G	N3-C4-N9	-5.30	122.82	126.00
29	A2	955	U	N3-C2-O2	-5.30	118.49	122.20
53	A3	261	G	C2-N3-C4	-5.30	109.25	111.90
53	A3	309	C	C6-N1-C2	-5.30	118.18	120.30
53	A3	673	G	C4-N9-C1'	5.30	133.39	126.50
29	A1	119	G	C4-C5-N7	5.30	112.92	110.80
29	A1	130	G	N3-C4-C5	-5.30	125.95	128.60
29	A1	938	C	C5-C6-N1	5.30	123.65	121.00
29	A1	2059	G	N9-C4-C5	-5.30	103.28	105.40
29	A1	2442	G	C5-C6-O6	-5.30	125.42	128.60
53	A3	680	U	C5-C6-N1	5.30	125.35	122.70
53	A4	167	U	C5-C6-N1	5.30	125.35	122.70
29	A1	2468	G	C8-N9-C1'	-5.29	120.12	127.00
29	A2	1702	G	C8-N9-C4	5.29	108.52	106.40
29	A2	2750	G	N9-C4-C5	-5.29	103.28	105.40
53	A3	886	A	C4-N9-C1'	5.29	135.83	126.30
53	A4	1254	G	N3-C4-N9	5.29	129.18	126.00
29	A1	92	C	N3-C2-O2	-5.29	118.19	121.90
29	A1	248	G	C5-C6-O6	-5.29	125.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1447	C	C5-C6-N1	5.29	123.65	121.00
29	A2	1014	C	C6-N1-C2	-5.29	118.18	120.30
53	A3	664	C	C6-N1-C2	-5.29	118.18	120.30
53	A3	780	C	C6-N1-C1'	-5.29	114.45	120.80
53	A4	1032	G	N3-C4-C5	5.29	131.25	128.60
29	A1	798	C	N3-C2-O2	-5.29	118.20	121.90
29	A1	925	C	C2-N1-C1'	5.29	124.62	118.80
30	B1	45	C	C6-N1-C2	-5.29	118.18	120.30
29	A2	1649	G	C6-C5-N7	5.29	133.57	130.40
29	A2	1798	C	N1-C2-O2	5.29	122.08	118.90
30	B2	122	A	N9-C4-C5	-5.29	103.68	105.80
38	H3	59	LEU	CA-CB-CG	5.29	127.47	115.30
53	A4	1059	G	C6-C5-N7	-5.29	127.22	130.40
29	A1	1972	G	N9-C4-C5	-5.29	103.28	105.40
29	A1	2139	G	C8-N9-C4	-5.29	104.28	106.40
53	A3	310	A	C5-C6-N6	-5.29	119.47	123.70
53	A4	364	C	N3-C2-O2	-5.29	118.20	121.90
53	A4	1049	A	O5'-P-OP1	-5.29	100.94	105.70
29	A1	1399	C	C2-N1-C1'	5.29	124.62	118.80
29	A2	883	C	C6-N1-C2	-5.29	118.18	120.30
29	A2	2622	G	C2-N3-C4	-5.29	109.25	111.90
29	A2	2780	A	C4-N9-C1'	5.29	135.82	126.30
53	A3	482	A	C4-C5-C6	-5.29	114.36	117.00
53	A3	558	G	N3-C4-C5	5.29	131.25	128.60
53	A3	1042	C	N3-C4-N4	5.29	121.70	118.00
53	A3	1201	G	N3-C4-C5	5.29	131.24	128.60
53	A3	1294	U	O4'-C1'-N1	5.29	112.43	108.20
53	A3	1451	G	N3-C4-C5	-5.29	125.95	128.60
29	A1	2251	G	C5-C6-O6	-5.29	125.43	128.60
29	A2	1428	G	C6-C5-N7	-5.29	127.23	130.40
53	A4	381	C	N3-C2-O2	-5.29	118.20	121.90
53	A4	572	C	C6-N1-C2	-5.29	118.19	120.30
29	A1	464	C	N3-C2-O2	-5.29	118.20	121.90
29	A1	1508	G	C5-N7-C8	-5.29	101.66	104.30
29	A2	965	A	C8-N9-C4	-5.29	103.69	105.80
29	A2	1393	C	N1-C2-O2	5.29	122.07	118.90
53	A3	885	A	C5-C6-N1	5.29	120.34	117.70
53	A4	63	C	O4'-C1'-N1	5.29	112.43	108.20
29	A1	651	C	C6-N1-C2	-5.28	118.19	120.30
29	A1	1080	A	C8-N9-C4	-5.28	103.69	105.80
23	Y2	53	LEU	CA-CB-CG	5.28	127.45	115.30
29	A2	1029	A	N7-C8-N9	5.28	116.44	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1681	A	C8-N9-C4	-5.28	103.69	105.80
29	A2	2521	C	C6-N1-C2	-5.28	118.19	120.30
53	A3	606	C	C2-N1-C1'	5.28	124.61	118.80
53	A4	173	A	C2-N3-C4	5.28	113.24	110.60
53	A4	423	G	C8-N9-C1'	-5.28	120.13	127.00
53	A4	1264	G	C4-C5-N7	5.28	112.91	110.80
53	A4	1448	G	C4-C5-N7	5.28	112.91	110.80
29	A1	2662	C	N3-C4-C5	5.28	124.01	121.90
29	A2	2252	G	C6-C5-N7	-5.28	127.23	130.40
29	A2	2252	G	N3-C4-N9	5.28	129.17	126.00
29	A2	2540	G	N7-C8-N9	5.28	115.74	113.10
53	A3	563	U	C5-C6-N1	5.28	125.34	122.70
29	A1	443	A	N9-C4-C5	5.28	107.91	105.80
29	A1	601	U	C6-N1-C2	-5.28	117.83	121.00
29	A1	1460	A	N9-C4-C5	-5.28	103.69	105.80
29	A1	1937	A	C8-N9-C4	-5.28	103.69	105.80
29	A1	1991	C	N1-C2-O2	5.28	122.07	118.90
29	A2	678	G	N9-C4-C5	-5.28	103.29	105.40
53	A3	663	C	OP1-P-O3'	5.28	116.81	105.20
29	A1	1242	G	N9-C4-C5	-5.28	103.29	105.40
29	A1	1924	A	C5-C6-N1	5.28	120.34	117.70
53	A3	512	G	N9-C4-C5	-5.28	103.29	105.40
53	A3	1144	C	C6-N1-C2	-5.28	118.19	120.30
53	A3	1328	G	N7-C8-N9	-5.28	110.46	113.10
53	A4	872	G	N7-C8-N9	5.28	115.74	113.10
29	A1	852	U	C6-N1-C2	-5.28	117.83	121.00
29	A1	1624	C	O4'-C1'-N1	5.28	112.42	108.20
29	A1	2873	G	N3-C4-C5	-5.28	125.96	128.60
53	A3	824	U	C2-N1-C1'	5.28	124.03	117.70
53	A4	1288	U	C5-C6-N1	5.28	125.34	122.70
29	A2	1568	U	C5-C6-N1	5.27	125.34	122.70
53	A3	1276	G	C5-C6-O6	-5.27	125.44	128.60
53	A4	110	G	C4-N9-C1'	5.27	133.36	126.50
53	A4	328	G	N3-C4-N9	5.27	129.16	126.00
29	A1	2090	C	N3-C2-O2	-5.27	118.21	121.90
30	B1	90	C	C5-C6-N1	5.27	123.64	121.00
29	A2	312	C	C4-C5-C6	-5.27	114.76	117.40
53	A3	70	G	C4-N9-C1'	5.27	133.35	126.50
53	A3	149	C	N1-C2-O2	5.27	122.06	118.90
53	A4	290	C	N3-C4-C5	5.27	124.01	121.90
29	A1	2296	G	N3-C4-N9	5.27	129.16	126.00
29	A2	1169	C	C6-N1-C2	-5.27	118.19	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1674	G	C8-N9-C4	-5.27	104.29	106.40
53	A3	603	C	C5-C6-N1	5.27	123.64	121.00
29	A2	343	C	C2-N1-C1'	5.27	124.60	118.80
29	A2	857	G	N3-C2-N2	-5.27	116.21	119.90
29	A2	2421	G	N9-C4-C5	-5.27	103.29	105.40
53	A3	1122	C	C5-C6-N1	5.27	123.64	121.00
53	A3	1450	A	N7-C8-N9	5.27	116.44	113.80
29	A1	2059	G	O4'-C1'-N9	-5.27	103.99	108.20
29	A2	1299	C	C6-N1-C2	5.27	122.41	120.30
29	A2	2443	G	C4-C5-N7	5.27	112.91	110.80
53	A3	169	C	N3-C2-O2	-5.27	118.21	121.90
53	A4	66	G	N3-C4-N9	5.27	129.16	126.00
53	A4	443	C	C4-C5-C6	-5.27	114.77	117.40
53	A4	482	A	C8-N9-C4	5.27	107.91	105.80
29	A2	1438	U	C6-N1-C2	-5.27	117.84	121.00
53	A3	1046	G	N7-C8-N9	-5.27	110.47	113.10
29	A1	191	C	N1-C2-O2	5.26	122.06	118.90
29	A1	733	G	C8-N9-C1'	-5.26	120.16	127.00
29	A1	1303	U	C6-N1-C1'	-5.26	113.83	121.20
29	A1	2523	G	C5-N7-C8	-5.26	101.67	104.30
29	A2	237	G	C8-N9-C1'	-5.26	120.16	127.00
29	A2	290	G	C4-N9-C1'	-5.26	119.66	126.50
29	A2	483	C	C5-C4-N4	-5.26	116.52	120.20
29	A2	1932	C	C2-N3-C4	5.26	122.53	119.90
29	A2	2218	G	N9-C4-C5	-5.26	103.29	105.40
29	A2	2396	G	C6-C5-N7	-5.26	127.24	130.40
53	A3	134	A	N7-C8-N9	5.26	116.43	113.80
53	A3	199	C	C6-N1-C1'	-5.26	114.48	120.80
53	A3	583	C	N3-C4-C5	5.26	124.01	121.90
53	A3	1266	A	N9-C4-C5	5.26	107.91	105.80
53	A3	1373	U	N1-C2-N3	5.26	118.06	114.90
53	A4	7	G	C4-C5-N7	5.26	112.91	110.80
53	A4	728	C	C5-C6-N1	5.26	123.63	121.00
53	A4	846	G	N7-C8-N9	5.26	115.73	113.10
53	A4	1220	A	C5-N7-C8	-5.26	101.27	103.90
53	A4	1442	C	N3-C2-O2	-5.26	118.22	121.90
29	A1	969	G	C6-C5-N7	-5.26	127.24	130.40
29	A1	1959	G	N3-C2-N2	5.26	123.58	119.90
29	A2	1849	G	N3-C4-C5	-5.26	125.97	128.60
29	A2	1850	G	C4-N9-C1'	5.26	133.34	126.50
53	A4	606	C	C2-N1-C1'	5.26	124.59	118.80
29	A1	618	G	C2-N3-C4	-5.26	109.27	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1394	G	C6-C5-N7	-5.26	127.24	130.40
29	A1	1690	A	C5-C6-N6	-5.26	119.49	123.70
29	A1	2528	U	N1-C2-O2	5.26	126.48	122.80
29	A1	2737	G	C5-N7-C8	-5.26	101.67	104.30
29	A2	1086	C	C5-C6-N1	5.26	123.63	121.00
29	A2	1190	A	N1-C6-N6	5.26	121.76	118.60
29	A2	1272	C	C5-C6-N1	-5.26	118.37	121.00
29	A2	1896	G	C4-C5-N7	5.26	112.91	110.80
53	A3	1271	G	N3-C4-N9	5.26	129.16	126.00
29	A1	66	U	C5-C4-O4	-5.26	122.74	125.90
29	A1	877	U	C2-N1-C1'	5.26	124.01	117.70
29	A1	941	C	N1-C2-O2	5.26	122.06	118.90
29	A1	1978	G	N1-C2-N2	-5.26	111.47	116.20
29	A1	2154	U	C6-N1-C1'	5.26	128.56	121.20
29	A2	2741	U	N1-C2-O2	5.26	126.48	122.80
53	A3	871	G	C8-N9-C4	-5.26	104.30	106.40
53	A4	781	G	N1-C6-O6	-5.26	116.74	119.90
53	A4	905	G	N9-C4-C5	-5.26	103.30	105.40
29	A1	1549	C	N1-C2-O2	5.26	122.06	118.90
29	A1	2004	G	N1-C2-N2	-5.26	111.47	116.20
29	A1	2226	C	C5-C6-N1	5.26	123.63	121.00
29	A2	32	C	C2-N1-C1'	5.26	124.58	118.80
53	A3	1297	G	N3-C2-N2	5.26	123.58	119.90
53	A4	1254	G	C5-N7-C8	-5.26	101.67	104.30
29	A1	935	C	C5-C6-N1	5.26	123.63	121.00
29	A1	977	U	C2-N1-C1'	5.26	124.01	117.70
29	A1	2029	A	N1-C6-N6	5.26	121.75	118.60
29	A1	2053	G	N1-C6-O6	5.26	123.05	119.90
29	A2	235	G	C4-C5-N7	5.26	112.90	110.80
29	A2	599	C	C2-N1-C1'	5.26	124.58	118.80
29	A2	856	U	C5-C6-N1	-5.26	120.07	122.70
29	A2	1053	C	C2-N1-C1'	5.26	124.58	118.80
29	A2	1463	U	C6-N1-C2	-5.26	117.85	121.00
29	A2	1549	C	C2-N1-C1'	5.26	124.58	118.80
29	A2	1913	A	N1-C6-N6	-5.26	115.45	118.60
53	A3	838	G	N3-C4-N9	5.26	129.15	126.00
53	A4	1055	U	N3-C2-O2	-5.26	118.52	122.20
53	A4	1286	G	N7-C8-N9	5.26	115.73	113.10
29	A2	730	G	C5-N7-C8	-5.25	101.67	104.30
29	A2	812	G	C4-N9-C1'	-5.25	119.67	126.50
29	A2	1819	A	C4-N9-C1'	5.25	135.76	126.30
29	A2	2347	A	C8-N9-C4	5.25	107.90	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	217	U	C5-C6-N1	5.25	125.33	122.70
53	A4	482	A	N1-C2-N3	-5.25	126.67	129.30
53	A4	1487	U	C6-N1-C2	-5.25	117.85	121.00
29	A1	2746	G	N3-C4-N9	5.25	129.15	126.00
29	A1	2780	A	C5-C6-N1	5.25	120.33	117.70
29	A2	881	G	N3-C4-N9	5.25	129.15	126.00
53	A3	1101	C	C5-C6-N1	5.25	123.63	121.00
53	A3	1142	G	N1-C6-O6	5.25	123.05	119.90
29	A1	19	C	C6-N1-C2	-5.25	118.20	120.30
29	A2	605	C	C5-C4-N4	-5.25	116.52	120.20
29	A2	929	G	N7-C8-N9	5.25	115.72	113.10
29	A2	1583	U	C6-N1-C2	-5.25	117.85	121.00
53	A3	544	U	C5-C6-N1	-5.25	120.07	122.70
53	A3	719	C	N3-C4-C5	5.25	124.00	121.90
53	A3	754	G	N3-C4-N9	5.25	129.15	126.00
53	A3	769	G	C5-C6-N1	5.25	114.13	111.50
53	A3	1262	U	O4'-C1'-N1	5.25	112.40	108.20
53	A4	278	C	C6-N1-C2	-5.25	118.20	120.30
29	A2	2739	C	N3-C2-O2	-5.25	118.22	121.90
29	A1	1624	C	C6-N1-C2	-5.25	118.20	120.30
30	B1	44	C	C5-C4-N4	-5.25	116.53	120.20
30	B1	49	C	C2-N1-C1'	5.25	124.57	118.80
29	A2	114	C	C6-N1-C2	-5.25	118.20	120.30
29	A2	616	C	C6-N1-C2	-5.25	118.20	120.30
29	A2	1226	C	C6-N1-C1'	-5.25	114.50	120.80
53	A4	256	U	N3-C2-O2	-5.25	118.53	122.20
53	A4	705	A	C4-N9-C1'	5.25	135.75	126.30
53	A4	813	G	C5-N7-C8	-5.25	101.68	104.30
29	A1	827	G	C5-N7-C8	-5.25	101.68	104.30
29	A1	2252	G	C6-C5-N7	-5.25	127.25	130.40
29	A1	2540	G	C8-N9-C4	-5.25	104.30	106.40
29	A2	439	G	C6-C5-N7	-5.25	127.25	130.40
29	A2	1243	C	C2-N1-C1'	5.25	124.57	118.80
29	A2	1446	C	C5-C6-N1	5.25	123.62	121.00
29	A2	1991	C	N1-C2-O2	5.25	122.05	118.90
30	B2	24	U	N3-C2-O2	-5.25	118.53	122.20
53	A4	663	C	OP1-P-O3'	5.25	116.74	105.20
53	A4	889	C	N3-C2-O2	-5.25	118.23	121.90
29	A1	2044	A	C6-N1-C2	5.25	121.75	118.60
29	A2	2128	G	C8-N9-C4	-5.25	104.30	106.40
53	A3	157	C	C6-N1-C2	-5.25	118.20	120.30
53	A3	1115	G	N3-C4-N9	-5.25	122.85	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	222	G	N3-C2-N2	-5.25	116.23	119.90
29	A2	1920	G	N3-C4-N9	5.24	129.15	126.00
53	A3	288	G	C4-C5-N7	5.24	112.90	110.80
53	A4	421	G	C4-C5-N7	5.24	112.90	110.80
29	A1	1436	G	N3-C4-N9	5.24	129.15	126.00
29	A1	1883	G	N3-C4-N9	-5.24	122.86	126.00
29	A2	484	C	C4-C5-C6	-5.24	114.78	117.40
29	A2	2068	C	C2-N3-C4	-5.24	117.28	119.90
29	A2	2586	A	N7-C8-N9	-5.24	111.18	113.80
53	A3	1113	G	C5-C6-O6	-5.24	125.45	128.60
53	A4	357	G	N7-C8-N9	-5.24	110.48	113.10
29	A1	322	C	N1-C2-O2	5.24	122.04	118.90
29	A1	829	G	C2-N3-C4	-5.24	109.28	111.90
29	A1	2362	U	N1-C2-O2	5.24	126.47	122.80
29	A1	2810	G	N3-C4-C5	-5.24	125.98	128.60
29	A2	749	G	C5-C6-O6	-5.24	125.46	128.60
29	A2	1362	C	C2-N1-C1'	5.24	124.56	118.80
29	A2	1836	A	N3-C4-N9	-5.24	123.21	127.40
53	A3	572	C	C2-N1-C1'	5.24	124.56	118.80
53	A3	638	A	C4-C5-N7	5.24	113.32	110.70
53	A3	846	G	C8-N9-C4	-5.24	104.30	106.40
53	A4	535	U	N3-C2-O2	-5.24	118.53	122.20
53	A4	840	U	C6-N1-C2	-5.24	117.86	121.00
29	A1	1930	G	P-O3'-C3'	5.24	125.99	119.70
29	A1	2616	A	O4'-C1'-N9	5.24	112.39	108.20
29	A2	1596	C	N3-C2-O2	-5.24	118.23	121.90
29	A2	1895	G	C4-N9-C1'	5.24	133.31	126.50
29	A2	1919	C	N3-C2-O2	-5.24	118.23	121.90
53	A3	1398	G	C6-C5-N7	-5.24	127.26	130.40
53	A4	256	U	N1-C2-O2	5.24	126.47	122.80
29	A1	2254	C	C2-N3-C4	5.24	122.52	119.90
29	A2	2712	U	N3-C2-O2	-5.24	118.53	122.20
9	K1	148	LEU	CA-CB-CG	5.24	127.34	115.30
29	A1	2017	U	C5-C6-N1	-5.24	120.08	122.70
53	A3	11	G	C8-N9-C4	5.24	108.49	106.40
53	A3	770	A	N1-C2-N3	-5.24	126.68	129.30
53	A4	1205	G	N9-C4-C5	-5.24	103.31	105.40
53	A4	1457	G	C2-N3-C4	-5.24	109.28	111.90
29	A1	78	G	C4-N9-C1'	5.23	133.30	126.50
29	A1	1736	G	C8-N9-C1'	-5.23	120.20	127.00
29	A1	1799	U	C6-N1-C1'	-5.23	113.88	121.20
29	A1	2430	C	N3-C4-C5	5.23	123.99	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	489	C	N3-C2-O2	-5.23	118.24	121.90
29	A2	1865	C	C4-C5-C6	-5.23	114.78	117.40
29	A2	2186	G	C4-N9-C1'	5.23	133.30	126.50
29	A2	2511	A	C4-C5-N7	5.23	113.32	110.70
29	A2	2737	G	C4-C5-N7	5.23	112.89	110.80
53	A3	119	G	C5-C6-O6	-5.23	125.46	128.60
53	A3	1392	G	C4-N9-C1'	5.23	133.30	126.50
29	A1	1889	G	C8-N9-C1'	-5.23	120.20	127.00
29	A2	1822	A	N9-C4-C5	-5.23	103.71	105.80
29	A2	1993	A	C6-C5-N7	-5.23	128.64	132.30
29	A2	2699	G	N3-C4-N9	5.23	129.14	126.00
53	A3	161	G	C6-C5-N7	-5.23	127.26	130.40
53	A3	557	A	C8-N9-C4	5.23	107.89	105.80
53	A3	579	C	C6-N1-C2	-5.23	118.21	120.30
53	A3	1366	C	N1-C2-O2	5.23	122.04	118.90
53	A4	582	C	C2-N3-C4	5.23	122.52	119.90
53	A4	796	U	N1-C2-N3	-5.23	111.76	114.90
29	A2	1265	C	N3-C2-O2	-5.23	118.24	121.90
53	A4	545	C	N1-C2-O2	-5.23	115.76	118.90
29	A1	935	C	N3-C4-C5	-5.23	119.81	121.90
29	A1	1748	G	C5-C6-O6	-5.23	125.46	128.60
29	A1	1867	U	C2-N3-C4	5.23	130.14	127.00
29	A2	940	G	N3-C4-N9	5.23	129.14	126.00
29	A2	1705	C	N3-C4-C5	5.23	123.99	121.90
29	A2	2878	U	C2-N1-C1'	5.23	123.97	117.70
30	B2	3	U	C2-N1-C1'	5.23	123.97	117.70
53	A3	754	G	C6-C5-N7	-5.23	127.26	130.40
53	A4	93	C	N3-C4-N4	5.23	121.66	118.00
53	A4	768	G	C6-C5-N7	-5.23	127.26	130.40
53	A4	1026	A	C8-N9-C4	-5.23	103.71	105.80
53	A4	1392	G	N9-C4-C5	-5.23	103.31	105.40
53	A4	1435	G	C4-C5-N7	5.23	112.89	110.80
29	A2	488	A	C4-C5-N7	5.23	113.31	110.70
29	A2	635	G	C5-C6-O6	-5.23	125.46	128.60
29	A2	969	G	N3-C4-N9	5.23	129.14	126.00
29	A2	1107	G	N3-C4-N9	5.23	129.14	126.00
33	C3	42	LEU	CA-CB-CG	5.23	127.32	115.30
53	A3	1111	C	O5'-P-OP2	-5.23	101.00	105.70
53	A4	1486	C	O4'-C1'-N1	5.23	112.38	108.20
29	A1	239	C	N1-C2-O2	5.22	122.03	118.90
29	A1	1459	C	C2-N3-C4	5.22	122.51	119.90
29	A1	1600	C	C6-N1-C2	-5.22	118.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1921	G	C8-N9-C4	-5.22	104.31	106.40
29	A1	2294	G	C8-N9-C1'	-5.22	120.21	127.00
29	A1	2510	C	N1-C2-O2	-5.22	115.77	118.90
29	A2	357	A	N9-C4-C5	5.22	107.89	105.80
29	A2	1608	G	O4'-C1'-N9	5.22	112.38	108.20
29	A2	2234	G	C8-N9-C4	-5.22	104.31	106.40
53	A3	1245	C	C6-N1-C2	-5.22	118.21	120.30
53	A4	995	G	C4-N9-C1'	5.22	133.29	126.50
29	A1	197	A	C5-C6-N6	-5.22	119.52	123.70
29	A1	198	C	C6-N1-C2	5.22	122.39	120.30
29	A1	1385	G	N3-C2-N2	-5.22	116.24	119.90
29	A1	1814	C	C2-N1-C1'	5.22	124.54	118.80
29	A2	154	G	N3-C4-N9	-5.22	122.87	126.00
29	A2	468	G	C4-C5-N7	5.22	112.89	110.80
29	A2	1898	G	N3-C4-C5	-5.22	125.99	128.60
29	A2	2400	C	O5'-P-OP1	-5.22	101.00	105.70
53	A3	547	C	C6-N1-C2	-5.22	118.21	120.30
53	A4	267	C	N3-C2-O2	-5.22	118.25	121.90
53	A4	997	C	C5-C4-N4	-5.22	116.55	120.20
29	A2	1716	G	N1-C6-O6	-5.22	116.77	119.90
53	A4	74	C	N3-C2-O2	-5.22	118.25	121.90
29	A1	55	A	N7-C8-N9	5.22	116.41	113.80
29	A2	1346	C	C6-N1-C2	-5.22	118.21	120.30
29	A2	1690	A	C5-N7-C8	-5.22	101.29	103.90
29	A2	2454	C	N3-C2-O2	-5.22	118.25	121.90
53	A3	1047	U	P-O3'-C3'	5.22	125.96	119.70
53	A4	197	G	N1-C6-O6	5.22	123.03	119.90
53	A4	1030	G	C8-N9-C4	5.22	108.49	106.40
29	A2	790	G	N1-C2-N2	-5.22	111.50	116.20
53	A3	1450	A	C4-N9-C1'	5.22	135.69	126.30
5	G1	71	LEU	CA-CB-CG	-5.22	103.30	115.30
29	A1	798	C	C4-C5-C6	-5.22	114.79	117.40
29	A1	1107	G	C8-N9-C4	-5.22	104.31	106.40
29	A1	2277	C	C5-C6-N1	5.22	123.61	121.00
30	B1	85	G	N3-C4-N9	5.22	129.13	126.00
29	A2	234	A	C2-N3-C4	5.22	113.21	110.60
29	A2	608	G	N7-C8-N9	5.22	115.71	113.10
29	A2	1597	C	N3-C2-O2	-5.22	118.25	121.90
29	A2	2408	C	P-O3'-C3'	5.22	125.96	119.70
29	A2	2539	G	N1-C6-O6	5.22	123.03	119.90
53	A3	229	C	N1-C2-O2	5.22	122.03	118.90
53	A3	233	G	C6-C5-N7	-5.22	127.27	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	98	U	N3-C2-O2	-5.21	118.55	122.20
29	A1	163	G	O4'-C1'-N9	5.21	112.37	108.20
29	A2	1239	G	N9-C4-C5	-5.21	103.31	105.40
29	A2	1748	G	N1-C6-O6	5.21	123.03	119.90
29	A2	2362	U	N1-C2-O2	5.21	126.45	122.80
53	A4	799	A	N1-C2-N3	-5.21	126.69	129.30
29	A1	1219	G	N3-C2-N2	-5.21	116.25	119.90
29	A1	1346	C	C6-N1-C2	-5.21	118.22	120.30
29	A1	2376	G	N3-C4-C5	5.21	131.21	128.60
29	A2	834	G	C4-C5-N7	5.21	112.89	110.80
53	A3	772	U	C6-N1-C1'	-5.21	113.90	121.20
53	A3	1037	A	C4-C5-N7	5.21	113.31	110.70
53	A4	756	G	N9-C4-C5	-5.21	103.31	105.40
29	A1	1508	G	N3-C4-C5	5.21	131.21	128.60
29	A1	1787	C	C6-N1-C1'	-5.21	114.55	120.80
29	A1	1812	U	C2-N1-C1'	5.21	123.95	117.70
29	A1	2396	G	C5-C6-O6	-5.21	125.47	128.60
29	A1	2585	C	N3-C2-O2	-5.21	118.25	121.90
29	A2	975	G	C4-N9-C1'	5.21	133.28	126.50
29	A2	2374	A	N1-C6-N6	5.21	121.73	118.60
53	A3	623	A	N7-C8-N9	5.21	116.41	113.80
53	A4	681	G	N1-C6-O6	5.21	123.03	119.90
53	A4	1037	A	C4-C5-N7	5.21	113.31	110.70
53	A4	1324	G	C5-C6-N1	-5.21	108.89	111.50
29	A2	1447	C	C6-N1-C2	-5.21	118.22	120.30
53	A3	1037	A	N9-C4-C5	-5.21	103.72	105.80
53	A4	354	U	C5-C6-N1	5.21	125.31	122.70
29	A1	1660	C	C5-C4-N4	-5.21	116.55	120.20
29	A1	2150	A	O4'-C1'-N9	-5.21	104.03	108.20
29	A1	2675	G	C8-N9-C1'	-5.21	120.23	127.00
29	A1	2833	A	C6-N1-C2	-5.21	115.47	118.60
30	B1	80	A	C8-N9-C4	-5.21	103.72	105.80
29	A2	155	C	C6-N1-C2	-5.21	118.22	120.30
29	A2	1363	C	N1-C2-O2	5.21	122.03	118.90
29	A2	2147	G	O4'-C1'-N9	5.21	112.37	108.20
53	A3	1067	U	C5-C4-O4	5.21	129.03	125.90
29	A1	1080	A	O4'-C1'-N9	5.21	112.36	108.20
29	A1	1748	G	C5-N7-C8	-5.21	101.70	104.30
29	A1	1874	U	N1-C2-O2	5.21	126.44	122.80
29	A2	352	G	N7-C8-N9	5.21	115.70	113.10
29	A2	969	G	N1-C2-N3	5.21	127.02	123.90
29	A2	2829	G	C2-N3-C4	5.21	114.50	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	751	A	C4-C5-N7	5.21	113.30	110.70
53	A3	799	A	C4-C5-N7	5.21	113.30	110.70
53	A4	421	G	C8-N9-C4	-5.21	104.32	106.40
53	A4	1283	U	O5'-P-OP2	-5.21	101.01	105.70
29	A1	851	A	C4-C5-N7	5.21	113.30	110.70
29	A1	872	G	C6-C5-N7	-5.21	127.28	130.40
29	A2	1947	U	C2-N1-C1'	-5.21	111.45	117.70
53	A4	1295	C	C6-N1-C2	-5.21	118.22	120.30
29	A2	1991	C	C2-N1-C1'	5.20	124.52	118.80
30	B2	2	A	C5-C6-N1	5.20	120.30	117.70
53	A3	390	C	C6-N1-C2	-5.20	118.22	120.30
29	A1	2801	U	N1-C2-O2	5.20	126.44	122.80
29	A2	1916	C	C4-C5-C6	-5.20	114.80	117.40
29	A2	2511	A	N1-C6-N6	5.20	121.72	118.60
53	A4	1242	A	C2-N3-C4	5.20	113.20	110.60
29	A1	1716	G	N1-C2-N3	5.20	127.02	123.90
29	A1	1852	A	C8-N9-C4	5.20	107.88	105.80
29	A1	2794	U	N1-C2-O2	5.20	126.44	122.80
3	E2	162	LEU	CA-CB-CG	-5.20	103.34	115.30
29	A2	536	C	C5-C6-N1	-5.20	118.40	121.00
29	A2	1652	C	C4-C5-C6	5.20	120.00	117.40
29	A2	2265	G	C8-N9-C1'	-5.20	120.24	127.00
29	A2	2281	A	C4-C5-N7	5.20	113.30	110.70
53	A3	502	C	N1-C2-O2	5.20	122.02	118.90
53	A3	796	U	N1-C2-N3	-5.20	111.78	114.90
53	A3	1171	G	N3-C4-N9	-5.20	122.88	126.00
53	A4	237	C	N3-C4-C5	5.20	123.98	121.90
53	A4	264	C	N1-C2-O2	5.20	122.02	118.90
53	A4	1098	C	C5-C6-N1	5.20	123.60	121.00
29	A1	77	A	C2-N3-C4	5.20	113.20	110.60
29	A1	841	G	C4-N9-C1'	5.20	133.26	126.50
29	A1	1298	G	C6-C5-N7	-5.20	127.28	130.40
29	A1	2454	C	N3-C2-O2	-5.20	118.26	121.90
30	B1	19	C	C6-N1-C2	-5.20	118.22	120.30
29	A2	363	G	C5-N7-C8	-5.20	101.70	104.30
29	A2	1394	G	N3-C4-C5	-5.20	126.00	128.60
29	A2	1665	C	C2-N1-C1'	5.20	124.52	118.80
29	A2	1715	G	C2-N3-C4	-5.20	109.30	111.90
29	A2	1802	G	C4-C5-N7	5.20	112.88	110.80
53	A3	27	G	N1-C6-O6	-5.20	116.78	119.90
53	A3	350	C	N1-C2-O2	5.20	122.02	118.90
53	A3	397	G	C8-N9-C4	-5.20	104.32	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	625	A	C8-N9-C1'	-5.20	118.34	127.70
53	A4	768	G	C5-C6-O6	-5.20	125.48	128.60
53	A4	1334	G	N7-C8-N9	-5.20	110.50	113.10
29	A1	822	U	O5'-P-OP1	-5.20	101.02	105.70
29	A1	973	C	N3-C4-C5	5.20	123.98	121.90
29	A1	1714	A	N7-C8-N9	5.20	116.40	113.80
53	A3	660	U	C5-C4-O4	5.20	129.02	125.90
53	A4	381	C	N1-C2-O2	5.20	122.02	118.90
29	A1	608	G	C6-C5-N7	-5.20	127.28	130.40
29	A1	790	G	N1-C2-N2	-5.20	111.52	116.20
29	A1	1710	G	N1-C2-N2	-5.20	111.52	116.20
30	B2	24	U	N1-C2-O2	5.20	126.44	122.80
53	A3	700	C	N3-C2-O2	-5.20	118.26	121.90
53	A3	939	C	C6-N1-C2	-5.20	118.22	120.30
43	M4	70	LEU	CA-CB-CG	5.20	127.25	115.30
53	A4	1206	A	OP1-P-O3'	5.20	116.63	105.20
29	A1	2400	C	C6-N1-C2	-5.19	118.22	120.30
29	A2	2717	C	C5-C6-N1	5.19	123.60	121.00
53	A3	308	A	N1-C6-N6	-5.19	115.48	118.60
53	A4	459	G	C4-C5-N7	5.19	112.88	110.80
29	A1	2272	C	O4'-C1'-N1	5.19	112.35	108.20
29	A1	2342	A	C5-N7-C8	-5.19	101.30	103.90
29	A1	2603	A	C5-C6-N1	5.19	120.30	117.70
29	A2	790	G	C5-C6-O6	5.19	131.72	128.60
29	A2	1727	G	C4-C5-N7	5.19	112.88	110.80
29	A2	1921	G	N7-C8-N9	5.19	115.70	113.10
29	A2	2243	C	C5-C4-N4	-5.19	116.56	120.20
29	A2	2626	C	C2-N3-C4	-5.19	117.30	119.90
29	A2	2827	C	C5-C6-N1	5.19	123.60	121.00
30	B2	76	U	N3-C2-O2	-5.19	118.56	122.20
53	A3	108	G	N3-C4-C5	-5.19	126.00	128.60
53	A3	404	G	C4-C5-N7	5.19	112.88	110.80
53	A3	480	A	C4-N9-C1'	5.19	135.65	126.30
53	A3	593	G	N3-C4-C5	-5.19	126.00	128.60
53	A3	705	A	C4-N9-C1'	5.19	135.65	126.30
53	A3	1308	C	C6-N1-C2	-5.19	118.22	120.30
53	A4	139	G	C8-N9-C4	5.19	108.48	106.40
53	A4	1142	G	C6-C5-N7	-5.19	127.28	130.40
29	A1	800	A	C8-N9-C4	-5.19	103.72	105.80
29	A2	1632	A	C4-N9-C1'	5.19	135.64	126.30
53	A3	75	G	C8-N9-C4	-5.19	104.32	106.40
53	A4	170	C	C2-N3-C4	5.19	122.50	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	193	G	N3-C4-N9	5.19	129.11	126.00
53	A4	220	C	C2-N1-C1'	-5.19	113.09	118.80
53	A4	1099	G	N9-C4-C5	-5.19	103.32	105.40
29	A1	99	G	N3-C4-N9	5.19	129.11	126.00
29	A2	491	G	C8-N9-C4	-5.19	104.32	106.40
53	A4	885	A	C5-C6-N1	5.19	120.30	117.70
29	A1	1079	G	C5-C6-O6	-5.19	125.49	128.60
29	A1	1477	G	N3-C4-C5	-5.19	126.01	128.60
29	A1	2273	G	C8-N9-C4	5.19	108.47	106.40
29	A2	1065	G	C8-N9-C1'	-5.19	120.26	127.00
29	A2	1418	C	N1-C2-O2	5.19	122.01	118.90
29	A2	1633	C	O5'-P-OP1	-5.19	101.03	105.70
53	A3	768	G	C6-C5-N7	-5.19	127.29	130.40
53	A4	444	G	N1-C6-O6	-5.19	116.79	119.90
53	A4	1051	C	C5-C6-N1	5.19	123.59	121.00
29	A1	2210	G	C5-N7-C8	-5.19	101.71	104.30
29	A2	116	A	N7-C8-N9	5.19	116.39	113.80
29	A2	1452	C	N3-C2-O2	-5.19	118.27	121.90
30	B2	98	U	N1-C2-N3	5.19	118.01	114.90
53	A3	637	G	N3-C4-C5	-5.19	126.01	128.60
29	A1	667	C	C6-N1-C2	-5.18	118.23	120.30
29	A1	2348	G	C5-N7-C8	-5.18	101.71	104.30
29	A1	2559	G	C4-C5-N7	-5.18	108.73	110.80
29	A1	2716	U	N3-C2-O2	-5.18	118.57	122.20
29	A2	225	U	C6-N1-C2	-5.18	117.89	121.00
29	A2	1870	C	N3-C4-C5	5.18	123.97	121.90
29	A2	2023	C	N3-C2-O2	-5.18	118.27	121.90
29	A2	2284	G	N3-C4-N9	-5.18	122.89	126.00
53	A4	303	C	C2-N3-C4	-5.18	117.31	119.90
53	A4	1428	C	N3-C4-C5	5.18	123.97	121.90
29	A1	53	G	C8-N9-C4	-5.18	104.33	106.40
29	A1	2722	G	C8-N9-C4	-5.18	104.33	106.40
30	B1	103	G	N7-C8-N9	5.18	115.69	113.10
29	A2	35	G	O4'-C1'-N9	5.18	112.35	108.20
29	A2	232	G	C2-N3-C4	-5.18	109.31	111.90
29	A2	1592	C	N3-C2-O2	-5.18	118.27	121.90
29	A2	1656	A	N1-C6-N6	5.18	121.71	118.60
29	A2	2258	U	C5-C6-N1	5.18	125.29	122.70
53	A3	81	U	N1-C2-O2	5.18	126.43	122.80
53	A3	1271	G	C4-N9-C1'	5.18	133.24	126.50
53	A4	1258	C	C6-N1-C2	-5.18	118.23	120.30
29	A1	2290	G	C4-C5-N7	5.18	112.87	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	986	G	C5-N7-C8	-5.18	101.71	104.30
29	A2	2680	C	N1-C2-O2	5.18	122.01	118.90
53	A3	443	C	C6-N1-C2	-5.18	118.23	120.30
53	A4	802	A	C8-N9-C4	-5.18	103.73	105.80
53	A4	896	A	C5-C6-N6	-5.18	119.56	123.70
29	A1	439	G	N9-C4-C5	-5.18	103.33	105.40
29	A2	2541	C	N3-C2-O2	-5.18	118.28	121.90
53	A3	337	C	C5-C6-N1	5.18	123.59	121.00
53	A3	779	C	N3-C2-O2	-5.18	118.28	121.90
53	A4	217	U	C5-C6-N1	5.18	125.29	122.70
12	N1	30	ARG	NE-CZ-NH1	-5.18	117.71	120.30
29	A1	1189	U	N1-C2-O2	5.18	126.42	122.80
29	A2	688	C	O4'-C1'-N1	5.18	112.34	108.20
29	A2	1065	G	C4-N9-C1'	5.18	133.23	126.50
29	A1	196	U	N3-C2-O2	-5.18	118.58	122.20
29	A1	324	A	C2-N3-C4	5.18	113.19	110.60
29	A1	628	A	N7-C8-N9	5.18	116.39	113.80
29	A2	468	G	C5-C6-O6	-5.18	125.49	128.60
29	A2	2523	G	C5-N7-C8	-5.18	101.71	104.30
29	A2	2535	C	N3-C2-O2	-5.18	118.28	121.90
53	A3	613	G	C5-N7-C8	-5.18	101.71	104.30
53	A4	1087	A	N9-C4-C5	-5.18	103.73	105.80
53	A4	1455	C	C2-N1-C1'	5.18	124.50	118.80
29	A1	406	C	C5-C6-N1	5.17	123.59	121.00
29	A1	641	G	N3-C4-N9	5.17	129.10	126.00
29	A1	1883	G	C8-N9-C1'	5.17	133.73	127.00
30	B1	39	C	C5-C6-N1	5.17	123.59	121.00
29	A2	879	G	C4-N9-C1'	-5.17	119.77	126.50
29	A2	1716	G	C6-N1-C2	-5.17	122.00	125.10
29	A2	1718	A	C8-N9-C1'	-5.17	118.39	127.70
53	A4	910	G	N3-C4-N9	-5.17	122.90	126.00
29	A1	556	A	C5-N7-C8	-5.17	101.31	103.90
29	A1	1169	C	C6-N1-C2	-5.17	118.23	120.30
29	A1	1711	C	C2-N3-C4	-5.17	117.31	119.90
29	A1	2016	G	C6-C5-N7	-5.17	127.30	130.40
29	A2	241	A	N1-C6-N6	-5.17	115.50	118.60
29	A2	555	A	C4-C5-N7	5.17	113.29	110.70
29	A2	1385	G	N3-C2-N2	-5.17	116.28	119.90
29	A2	1708	U	C6-N1-C2	-5.17	117.90	121.00
30	B2	118	G	C8-N9-C4	-5.17	104.33	106.40
53	A4	1038	U	C6-N1-C2	-5.17	117.90	121.00
53	A4	1348	C	C2-N3-C4	5.17	122.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1298	G	N3-C4-C5	-5.17	126.02	128.60
29	A1	2487	U	O4'-C1'-N1	5.17	112.34	108.20
29	A2	1447	C	C2-N1-C1'	5.17	124.49	118.80
29	A2	1477	G	N3-C4-C5	-5.17	126.01	128.60
29	A2	1913	A	N3-C4-C5	5.17	130.42	126.80
53	A3	148	C	P-O3'-C3'	5.17	125.91	119.70
53	A4	7	G	C8-N9-C1'	-5.17	120.28	127.00
53	A4	897	U	O5'-P-OP1	-5.17	101.05	105.70
29	A1	860	U	N3-C4-O4	-5.17	115.78	119.40
29	A1	1941	U	C2-N1-C1'	5.17	123.90	117.70
29	A2	1167	C	C6-N1-C2	-5.17	118.23	120.30
29	A2	1889	G	C4-N9-C1'	5.17	133.22	126.50
29	A1	19	C	N1-C2-O2	5.17	122.00	118.90
29	A1	1619	A	N1-C6-N6	-5.17	115.50	118.60
29	A1	1674	G	C8-N9-C4	-5.17	104.33	106.40
29	A1	1765	G	C5-N7-C8	-5.17	101.72	104.30
29	A1	2342	A	N9-C4-C5	-5.17	103.73	105.80
29	A2	68	C	C5-C6-N1	5.17	123.58	121.00
29	A2	155	C	O4'-C1'-N1	5.17	112.33	108.20
29	A2	1972	G	N9-C4-C5	-5.17	103.33	105.40
29	A2	2233	G	N1-C2-N3	5.17	127.00	123.90
53	A3	1018	G	C8-N9-C1'	-5.17	120.28	127.00
53	A3	1335	C	C6-N1-C2	-5.17	118.23	120.30
53	A3	1442	C	N3-C2-O2	-5.17	118.28	121.90
34	D4	13	ARG	C-N-CA	5.17	134.62	121.70
29	A1	1790	U	C6-N1-C2	-5.17	117.90	121.00
29	A1	2258	U	C5-C4-O4	-5.17	122.80	125.90
29	A2	1036	A	N1-C2-N3	-5.17	126.72	129.30
29	A2	1139	G	C6-C5-N7	-5.17	127.30	130.40
29	A2	1291	G	N1-C6-O6	-5.17	116.80	119.90
29	A2	1960	A	O5'-P-OP2	-5.17	101.05	105.70
53	A3	1422	C	C6-N1-C2	-5.17	118.23	120.30
53	A4	760	A	N9-C4-C5	-5.17	103.73	105.80
53	A4	885	A	C8-N9-C4	-5.17	103.73	105.80
53	A4	1174	G	C4-C5-N7	5.17	112.87	110.80
29	A1	150	C	O4'-C1'-N1	5.17	112.33	108.20
29	A1	1126	U	C2-N1-C1'	5.17	123.90	117.70
29	A1	1815	C	C2-N1-C1'	-5.17	113.12	118.80
29	A2	2001	A	C8-N9-C4	5.17	107.87	105.80
53	A3	1442	C	N3-C4-C5	5.17	123.97	121.90
53	A4	1348	C	C6-N1-C2	-5.17	118.23	120.30
29	A1	459	G	N1-C6-O6	-5.16	116.80	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1086	C	N3-C2-O2	-5.16	118.29	121.90
29	A1	2085	G	N9-C4-C5	5.16	107.47	105.40
29	A2	2461	G	C4-C5-N7	5.16	112.86	110.80
29	A2	2864	G	C8-N9-C4	-5.16	104.33	106.40
29	A2	2867	C	C6-N1-C2	-5.16	118.23	120.30
53	A4	311	G	N3-C4-C5	-5.16	126.02	128.60
28	d2	50	LEU	CA-CB-CG	5.16	127.17	115.30
29	A2	446	G	C5-N7-C8	-5.16	101.72	104.30
53	A3	905	G	N3-C4-N9	5.16	129.10	126.00
53	A4	342	G	C8-N9-C4	-5.16	104.33	106.40
29	A1	848	G	C5-C6-O6	-5.16	125.50	128.60
29	A1	855	C	C6-N1-C1'	5.16	126.99	120.80
29	A1	910	A	N7-C8-N9	5.16	116.38	113.80
29	A1	1726	A	N9-C4-C5	5.16	107.86	105.80
29	A2	1026	G	C6-C5-N7	-5.16	127.30	130.40
29	A2	1425	G	C6-C5-N7	-5.16	127.30	130.40
29	A2	2656	G	N7-C8-N9	5.16	115.68	113.10
53	A3	261	G	N9-C4-C5	-5.16	103.34	105.40
53	A4	1141	U	C6-N1-C2	-5.16	117.90	121.00
29	A1	2165	G	C8-N9-C1'	-5.16	120.29	127.00
30	B1	3	U	N3-C2-O2	-5.16	118.59	122.20
29	A2	955	U	N1-C2-O2	5.16	126.41	122.80
29	A2	1944	C	O4'-C1'-N1	5.16	112.33	108.20
53	A3	296	G	C6-C5-N7	-5.16	127.31	130.40
29	A1	232	G	N1-C2-N3	5.16	126.99	123.90
29	A1	735	G	C5-N7-C8	-5.16	101.72	104.30
29	A2	237	G	C4-N9-C1'	5.16	133.20	126.50
29	A1	493	G	N1-C2-N3	5.16	126.99	123.90
29	A1	790	G	C5-C6-O6	5.16	131.69	128.60
29	A1	1265	C	N3-C2-O2	-5.16	118.29	121.90
29	A1	2208	G	C4-N9-C1'	5.16	133.20	126.50
29	A1	2359	G	C8-N9-C4	5.16	108.46	106.40
29	A2	1071	U	C2-N1-C1'	5.16	123.89	117.70
53	A3	669	U	C2-N1-C1'	-5.16	111.51	117.70
53	A3	1500	G	C5-C6-O6	-5.16	125.51	128.60
53	A4	834	C	N1-C2-O2	5.16	121.99	118.90
29	A2	2829	G	N1-C2-N2	-5.15	111.56	116.20
29	A1	182	C	C2-N1-C1'	5.15	124.47	118.80
29	A1	237	G	C8-N9-C1'	-5.15	120.30	127.00
29	A1	1837	C	C5-C4-N4	-5.15	116.59	120.20
29	A2	16	G	C5-C6-O6	-5.15	125.51	128.60
29	A2	713	C	C6-N1-C2	-5.15	118.24	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	665	G	N9-C4-C5	-5.15	103.34	105.40
53	A3	896	A	C5-C6-N6	-5.15	119.58	123.70
53	A3	1171	G	N9-C4-C5	5.15	107.46	105.40
53	A4	608	G	O4'-C1'-N9	5.15	112.32	108.20
53	A4	1113	G	C4-C5-N7	5.15	112.86	110.80
29	A1	2080	G	C5-C6-O6	-5.15	125.51	128.60
29	A1	2146	U	C5-C6-N1	5.15	125.28	122.70
29	A1	2709	C	C2-N1-C1'	5.15	124.47	118.80
29	A2	2650	U	C6-N1-C1'	-5.15	113.99	121.20
53	A3	99	C	N3-C4-C5	5.15	123.96	121.90
53	A3	1373	U	C5-C4-O4	5.15	128.99	125.90
53	A4	824	U	C2-N1-C1'	5.15	123.88	117.70
53	A4	1365	C	O5'-P-OP1	-5.15	101.06	105.70
29	A1	243	C	C6-N1-C2	-5.15	118.24	120.30
29	A1	295	C	O4'-C1'-N1	5.15	112.32	108.20
29	A2	200	C	C4-C5-C6	-5.15	114.83	117.40
53	A4	1433	G	O4'-C1'-N9	5.15	112.32	108.20
29	A1	660	A	N7-C8-N9	5.15	116.37	113.80
29	A1	1038	A	N1-C6-N6	-5.15	115.51	118.60
29	A1	1715	G	C5-C6-N1	-5.15	108.93	111.50
29	A1	1868	G	C5-C6-O6	-5.15	125.51	128.60
29	A1	2176	G	C8-N9-C4	-5.15	104.34	106.40
29	A1	2190	G	C4-C5-N7	5.15	112.86	110.80
29	A1	2511	A	C4-C5-N7	5.15	113.27	110.70
29	A1	2612	A	N7-C8-N9	5.15	116.37	113.80
29	A2	881	G	C8-N9-C1'	-5.15	120.31	127.00
29	A2	2203	C	C6-N1-C2	-5.15	118.24	120.30
53	A4	188	U	C5-C6-N1	5.15	125.27	122.70
53	A4	513	G	C2-N3-C4	5.15	114.47	111.90
53	A4	858	G	N3-C4-N9	5.15	129.09	126.00
53	A4	1220	A	C8-N9-C4	5.15	107.86	105.80
29	A1	897	G	N9-C4-C5	-5.15	103.34	105.40
29	A1	1443	A	N1-C6-N6	-5.15	115.51	118.60
29	A2	458	A	C2-N3-C4	5.15	113.17	110.60
29	A2	847	G	C6-C5-N7	-5.15	127.31	130.40
29	A2	2235	G	N9-C4-C5	-5.15	103.34	105.40
53	A3	175	G	C6-C5-N7	-5.15	127.31	130.40
53	A3	363	U	O5'-P-OP1	-5.15	101.07	105.70
29	A1	740	C	N1-C2-O2	5.14	121.99	118.90
29	A1	1275	G	N3-C4-C5	-5.14	126.03	128.60
29	A1	2577	U	C2-N1-C1'	5.14	123.87	117.70
29	A2	348	G	C4-N9-C1'	5.14	133.19	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2700	G	N1-C2-N2	-5.14	111.57	116.20
53	A3	754	G	C4-N9-C1'	5.14	133.19	126.50
53	A3	882	U	N1-C2-O2	5.14	126.40	122.80
53	A3	1115	G	N3-C4-C5	5.14	131.17	128.60
53	A4	131	C	N3-C2-O2	-5.14	118.30	121.90
53	A4	583	C	N1-C2-O2	5.14	121.99	118.90
53	A4	1225	C	N3-C4-C5	5.14	123.96	121.90
29	A1	259	U	C2-N1-C1'	-5.14	111.53	117.70
29	A1	313	C	N1-C2-O2	5.14	121.99	118.90
29	A1	1172	C	C5-C4-N4	-5.14	116.60	120.20
29	A1	2780	A	C4-N9-C1'	5.14	135.56	126.30
29	A2	2341	A	C4-N9-C1'	-5.14	117.04	126.30
53	A3	805	C	C6-N1-C2	-5.14	118.24	120.30
53	A3	888	U	C2-N3-C4	5.14	130.09	127.00
53	A3	1018	G	C2-N3-C4	5.14	114.47	111.90
53	A4	1382	C	O4'-C1'-N1	-5.14	104.09	108.20
53	A4	1385	C	N1-C2-O2	5.14	121.99	118.90
29	A1	1242	G	C5-C6-O6	-5.14	125.52	128.60
29	A1	2456	C	C6-N1-C1'	5.14	126.97	120.80
29	A2	2905	G	C5-C6-O6	-5.14	125.52	128.60
53	A3	197	G	C6-C5-N7	-5.14	127.32	130.40
53	A3	1118	U	O4'-C1'-N1	5.14	112.31	108.20
53	A3	1391	C	C6-N1-C2	-5.14	118.24	120.30
29	A1	989	G	N9-C4-C5	-5.14	103.34	105.40
29	A1	1546	C	C5-C6-N1	5.14	123.57	121.00
29	A1	2633	C	C5-C6-N1	-5.14	118.43	121.00
29	A2	183	U	C6-N1-C2	-5.14	117.92	121.00
29	A2	1690	A	C5-C6-N6	-5.14	119.59	123.70
53	A3	779	C	N3-C4-C5	5.14	123.96	121.90
53	A4	768	G	N3-C4-N9	5.14	129.08	126.00
53	A4	1026	A	N1-C2-N3	-5.14	126.73	129.30
53	A4	1343	C	C5-C6-N1	5.14	123.57	121.00
53	A4	1459	G	N3-C4-N9	5.14	129.08	126.00
29	A1	651	C	C5-C6-N1	5.14	123.57	121.00
29	A1	1925	A	O4'-C1'-N9	5.14	112.31	108.20
29	A1	1999	G	C8-N9-C4	-5.14	104.34	106.40
29	A2	1174	A	N7-C8-N9	5.14	116.37	113.80
53	A3	533	G	C6-C5-N7	-5.14	127.32	130.40
53	A4	1379	C	C6-N1-C2	-5.14	118.25	120.30
53	A4	1467	C	C6-N1-C2	-5.14	118.25	120.30
29	A1	834	G	N3-C4-N9	5.14	129.08	126.00
29	A2	628	A	N7-C8-N9	5.14	116.37	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2348	G	N1-C6-O6	5.14	122.98	119.90
53	A4	1450	A	N7-C8-N9	5.14	116.37	113.80
29	A1	804	C	O4'-C1'-N1	5.13	112.31	108.20
29	A1	1234	G	N3-C4-C5	-5.13	126.03	128.60
29	A1	1405	U	N1-C2-O2	5.13	126.39	122.80
29	A1	1519	G	N7-C8-N9	5.13	115.67	113.10
10	L2	6	ARG	C-N-CA	5.13	134.54	121.70
29	A2	796	U	N1-C2-O2	5.13	126.39	122.80
32	B3	100	GLY	N-CA-C	-5.13	100.27	113.10
53	A3	760	A	C8-N9-C1'	-5.13	118.46	127.70
53	A3	1382	C	O4'-C1'-N1	-5.13	104.09	108.20
29	A1	1551	U	O4'-C1'-N1	5.13	112.31	108.20
29	A1	1946	G	C5-C6-N1	5.13	114.07	111.50
29	A2	433	U	N1-C2-O2	5.13	126.39	122.80
29	A1	193	C	O4'-C1'-N1	5.13	112.31	108.20
29	A1	1197	G	N9-C4-C5	5.13	107.45	105.40
29	A2	1026	G	C4-N9-C1'	5.13	133.17	126.50
29	A2	1037	G	OP2-P-O3'	5.13	116.49	105.20
29	A2	1840	G	N3-C4-C5	5.13	131.17	128.60
30	B2	93	C	N1-C2-O2	5.13	121.98	118.90
53	A3	215	G	N7-C8-N9	5.13	115.67	113.10
53	A4	267	C	C6-N1-C2	-5.13	118.25	120.30
53	A4	1015	G	OP2-P-O3'	5.13	116.49	105.20
30	B1	85	G	C5-C6-N1	5.13	114.06	111.50
29	A2	827	G	C5-N7-C8	-5.13	101.73	104.30
29	A2	2120	U	C5-C6-N1	5.13	125.27	122.70
29	A2	2184	G	N3-C4-C5	-5.13	126.03	128.60
30	B2	49	C	N1-C2-O2	5.13	121.98	118.90
53	A3	728	C	C2-N1-C1'	5.13	124.44	118.80
29	A1	17	G	N3-C4-C5	-5.13	126.04	128.60
29	A1	1067	U	O5'-P-OP1	-5.13	101.08	105.70
29	A1	1672	G	N3-C4-N9	5.13	129.08	126.00
29	A1	2248	G	C4-N9-C1'	-5.13	119.83	126.50
30	B1	84	G	N3-C4-N9	5.13	129.08	126.00
29	A2	324	A	C5-C6-N1	5.13	120.26	117.70
29	A2	937	C	C5-C6-N1	5.13	123.56	121.00
29	A2	993	G	N1-C2-N2	-5.13	111.58	116.20
29	A2	1628	A	N7-C8-N9	5.13	116.36	113.80
29	A2	2320	C	C6-N1-C2	-5.13	118.25	120.30
29	A2	2362	U	N3-C2-O2	-5.13	118.61	122.20
29	A2	2403	G	C8-N9-C4	5.13	108.45	106.40
29	A2	2694	C	C2-N1-C1'	5.13	124.44	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	966	C	C2-N3-C4	5.13	122.46	119.90
32	B4	44	LEU	CA-CB-CG	5.13	127.10	115.30
53	A4	1162	G	C2-N3-C4	5.13	114.47	111.90
1	C1	182	LEU	CA-CB-CG	5.13	127.09	115.30
29	A1	931	G	C8-N9-C1'	5.13	133.66	127.00
29	A1	1312	G	C5-N7-C8	-5.13	101.74	104.30
29	A1	1986	C	C6-N1-C2	-5.13	118.25	120.30
29	A1	2760	C	N3-C2-O2	-5.13	118.31	121.90
30	B1	47	A	C5-C6-N1	5.13	120.26	117.70
29	A2	321	C	O4'-C1'-N1	5.13	112.30	108.20
29	A2	2281	A	N7-C8-N9	5.13	116.36	113.80
29	A2	2596	G	N1-C6-O6	5.13	122.98	119.90
29	A2	2597	G	C6-C5-N7	-5.13	127.32	130.40
53	A3	261	G	C6-C5-N7	-5.13	127.32	130.40
53	A3	555	A	OP2-P-O3'	5.13	116.48	105.20
53	A4	526	C	C6-N1-C1'	-5.13	114.65	120.80
53	A4	1170	C	C5-C6-N1	5.13	123.56	121.00
53	A4	1457	G	C4-N9-C1'	-5.13	119.83	126.50
29	A2	2332	G	N1-C6-O6	5.12	122.97	119.90
53	A4	1055	U	N1-C2-O2	5.12	126.39	122.80
29	A1	1822	A	N9-C4-C5	-5.12	103.75	105.80
29	A1	2513	C	O4'-C1'-N1	5.12	112.30	108.20
29	A1	2515	C	N1-C2-O2	-5.12	115.83	118.90
29	A2	227	C	C6-N1-C1'	-5.12	114.65	120.80
29	A2	1790	U	C6-N1-C2	-5.12	117.93	121.00
53	A3	314	G	N1-C6-O6	-5.12	116.83	119.90
53	A3	1097	C	O4'-C1'-N1	5.12	112.30	108.20
53	A4	27	G	C6-C5-N7	-5.12	127.33	130.40
29	A1	749	G	C5-C6-O6	-5.12	125.53	128.60
29	A2	77	A	C2-N3-C4	5.12	113.16	110.60
29	A2	847	G	N9-C4-C5	-5.12	103.35	105.40
29	A2	1119	G	N1-C6-O6	-5.12	116.83	119.90
29	A2	1743	C	OP2-P-O3'	5.12	116.47	105.20
29	A2	2600	C	N3-C2-O2	-5.12	118.32	121.90
38	H3	92	ARG	NE-CZ-NH1	-5.12	117.74	120.30
53	A3	349	G	N3-C4-N9	5.12	129.07	126.00
53	A3	393	C	C6-N1-C2	-5.12	118.25	120.30
53	A3	527	G	C5-N7-C8	-5.12	101.74	104.30
53	A3	832	G	C6-C5-N7	-5.12	127.33	130.40
53	A3	1145	C	C6-N1-C2	-5.12	118.25	120.30
53	A3	1467	C	N3-C2-O2	-5.12	118.31	121.90
53	A4	302	C	N1-C2-O2	5.12	121.97	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1058	A	C4-C5-N7	5.12	113.26	110.70
29	A2	2510	C	C5-C6-N1	-5.12	118.44	121.00
53	A3	121	G	C4-C5-N7	5.12	112.85	110.80
29	A1	288	G	N7-C8-N9	5.12	115.66	113.10
29	A1	386	G	C8-N9-C4	-5.12	104.35	106.40
29	A1	881	G	C8-N9-C1'	-5.12	120.35	127.00
29	A1	949	A	C5-N7-C8	-5.12	101.34	103.90
29	A1	1597	C	N3-C2-O2	-5.12	118.32	121.90
29	A2	1704	A	N1-C6-N6	5.12	121.67	118.60
29	A2	2152	C	C5-C6-N1	5.12	123.56	121.00
53	A3	296	G	N9-C4-C5	-5.12	103.35	105.40
53	A3	700	C	O4'-C1'-N1	5.12	112.29	108.20
29	A1	437	C	C5-C6-N1	5.12	123.56	121.00
29	A1	1234	G	C4-C5-N7	5.12	112.85	110.80
29	A1	2028	G	N1-C2-N2	-5.12	111.59	116.20
29	A2	1542	A	C5-C6-N6	-5.12	119.61	123.70
53	A4	192	G	N3-C4-N9	5.12	129.07	126.00
29	A1	485	A	P-O3'-C3'	5.12	125.84	119.70
29	A1	969	G	N1-C2-N3	5.12	126.97	123.90
29	A1	993	G	N1-C2-N2	-5.12	111.60	116.20
29	A1	1823	C	N3-C2-O2	-5.12	118.32	121.90
30	B1	83	G	C6-C5-N7	-5.12	127.33	130.40
1	C2	206	LEU	CA-CB-CG	-5.12	103.54	115.30
29	A2	787	G	C4-C5-N7	5.12	112.85	110.80
29	A2	1242	G	C5-C6-O6	-5.12	125.53	128.60
29	A2	1530	U	O4'-C1'-N1	5.12	112.29	108.20
29	A2	2016	G	N1-C2-N3	5.12	126.97	123.90
53	A3	132	G	N1-C6-O6	-5.12	116.83	119.90
53	A3	1094	C	C5-C6-N1	5.12	123.56	121.00
53	A4	117	G	C6-C5-N7	-5.12	127.33	130.40
29	A1	1239	G	C5-C6-O6	-5.11	125.53	128.60
29	A1	1620	A	C5-C6-N6	-5.11	119.61	123.70
29	A1	1776	C	C5-C6-N1	5.11	123.56	121.00
29	A1	2251	G	N1-C6-O6	5.11	122.97	119.90
29	A1	2348	G	C8-N9-C4	-5.11	104.36	106.40
30	B1	103	G	C5-N7-C8	-5.11	101.74	104.30
29	A2	363	G	C8-N9-C4	-5.11	104.36	106.40
29	A2	679	C	O4'-C1'-N1	5.11	112.29	108.20
29	A2	1600	C	C6-N1-C2	-5.11	118.25	120.30
29	A2	2084	A	C5-C6-N6	-5.11	119.61	123.70
29	A2	2625	U	N3-C2-O2	-5.11	118.62	122.20
53	A3	450	C	N3-C2-O2	-5.11	118.32	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	780	C	C6-N1-C2	-5.11	118.25	120.30
53	A3	1455	C	C2-N1-C1'	5.11	124.42	118.80
53	A4	1057	C	C6-N1-C2	-5.11	118.25	120.30
53	A4	1379	C	C5-C6-N1	5.11	123.56	121.00
29	A1	533	G	N9-C4-C5	-5.11	103.36	105.40
29	A2	2080	G	C5-N7-C8	-5.11	101.74	104.30
53	A3	1026	A	N3-C4-C5	-5.11	123.22	126.80
29	A1	1071	U	C6-N1-C2	-5.11	117.93	121.00
29	A1	2076	G	N9-C4-C5	-5.11	103.36	105.40
29	A2	1058	A	C4-C5-N7	5.11	113.26	110.70
29	A2	1127	C	C6-N1-C1'	-5.11	114.67	120.80
29	A2	2150	A	C2-N3-C4	5.11	113.16	110.60
29	A2	2360	A	C5-N7-C8	-5.11	101.34	103.90
30	B2	70	C	C6-N1-C2	-5.11	118.26	120.30
53	A3	1200	U	C2-N1-C1'	-5.11	111.57	117.70
53	A4	194	U	C5-C4-O4	-5.11	122.83	125.90
29	A1	2581	G	C4-N9-C1'	5.11	133.14	126.50
29	A2	1928	G	C8-N9-C4	-5.11	104.36	106.40
53	A3	110	G	C4-N9-C1'	5.11	133.14	126.50
53	A4	33	A	C5-C6-N1	5.11	120.25	117.70
29	A1	1355	A	O4'-C1'-N9	5.11	112.28	108.20
29	A1	2243	C	N3-C4-N4	5.11	121.58	118.00
29	A2	1925	A	C2-N3-C4	5.11	113.15	110.60
29	A2	2290	G	C4-C5-N7	5.11	112.84	110.80
53	A4	101	G	O4'-C1'-N9	5.11	112.29	108.20
53	A4	574	U	C5-C6-N1	5.11	125.25	122.70
29	A1	119	G	N3-C4-N9	5.11	129.06	126.00
29	A1	177	G	N1-C2-N2	-5.11	111.61	116.20
29	A1	955	U	N1-C2-O2	5.11	126.37	122.80
29	A1	1656	A	N1-C6-N6	5.11	121.66	118.60
29	A1	2273	G	C6-N1-C2	-5.11	122.04	125.10
29	A1	2453	A	P-O3'-C3'	5.11	125.83	119.70
29	A2	95	G	N3-C4-C5	5.11	131.15	128.60
29	A2	1037	G	N3-C4-C5	-5.11	126.05	128.60
29	A2	1718	A	C6-N1-C2	-5.11	115.54	118.60
29	A2	1896	G	C5-C6-O6	-5.11	125.54	128.60
53	A3	716	A	C4-N9-C1'	5.11	135.49	126.30
53	A3	988	G	N3-C4-N9	-5.11	122.94	126.00
53	A3	1098	C	C5-C6-N1	5.11	123.55	121.00
53	A3	1450	A	N3-C4-N9	5.11	131.49	127.40
53	A4	547	C	C6-N1-C2	-5.11	118.26	120.30
53	A4	707	G	N1-C6-O6	-5.11	116.84	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1006	C	C6-N1-C2	-5.11	118.26	120.30
29	A1	1168	G	C5-C6-O6	-5.10	125.54	128.60
29	A1	1578	G	C4-C5-N7	5.10	112.84	110.80
29	A2	2591	A	C4-C5-N7	5.10	113.25	110.70
29	A1	237	G	N3-C4-N9	5.10	129.06	126.00
29	A1	622	U	O4'-C1'-N1	5.10	112.28	108.20
29	A1	698	C	C5-C6-N1	5.10	123.55	121.00
29	A1	1797	G	C2-N3-C4	-5.10	109.35	111.90
30	B1	108	G	N3-C4-C5	-5.10	126.05	128.60
29	A2	55	A	N7-C8-N9	5.10	116.35	113.80
29	A2	712	G	N1-C6-O6	5.10	122.96	119.90
29	A2	1954	G	N3-C2-N2	5.10	123.47	119.90
29	A2	2590	G	C4-C5-N7	5.10	112.84	110.80
30	B2	8	C	C6-N1-C2	-5.10	118.26	120.30
53	A3	673	G	C2-N3-C4	-5.10	109.35	111.90
53	A3	1387	G	N3-C2-N2	-5.10	116.33	119.90
29	A1	993	G	N1-C2-N3	5.10	126.96	123.90
29	A1	1022	C	N3-C2-O2	-5.10	118.33	121.90
29	A1	2834	G	N1-C6-O6	-5.10	116.84	119.90
29	A2	1834	G	N3-C4-N9	5.10	129.06	126.00
29	A2	2750	G	N3-C4-N9	5.10	129.06	126.00
53	A3	512	G	N3-C4-N9	5.10	129.06	126.00
53	A3	681	G	N1-C6-O6	5.10	122.96	119.90
29	A1	1919	C	N3-C4-C5	5.10	123.94	121.90
29	A1	2691	G	N3-C4-C5	-5.10	126.05	128.60
29	A2	1464	G	O4'-C1'-N9	5.10	112.28	108.20
29	A2	1978	G	C8-N9-C1'	-5.10	120.37	127.00
53	A4	386	G	C4-C5-N7	5.10	112.84	110.80
53	A4	714	G	C5-C6-N1	-5.10	108.95	111.50
29	A1	259	U	C5-C6-N1	-5.10	120.15	122.70
29	A1	1972	G	C8-N9-C4	5.10	108.44	106.40
29	A2	154	G	N3-C4-C5	5.10	131.15	128.60
29	A2	1819	A	N3-C4-N9	5.10	131.48	127.40
29	A2	2670	U	C2-N3-C4	5.10	130.06	127.00
53	A3	237	C	N3-C4-C5	5.10	123.94	121.90
53	A3	550	G	C6-C5-N7	-5.10	127.34	130.40
53	A3	754	G	N7-C8-N9	5.10	115.65	113.10
53	A4	502	C	O4'-C1'-N1	5.10	112.28	108.20
53	A4	541	G	N7-C8-N9	5.10	115.65	113.10
53	A4	1030	G	C4-N9-C1'	-5.10	119.87	126.50
29	A1	883	C	N3-C2-O2	-5.10	118.33	121.90
29	A1	2023	C	N3-C2-O2	-5.10	118.33	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2186	G	C6-C5-N7	-5.10	127.34	130.40
30	B2	47	A	N1-C6-N6	-5.10	115.54	118.60
53	A4	843	C	N3-C2-O2	-5.10	118.33	121.90
29	A1	1727	G	N7-C8-N9	5.09	115.65	113.10
29	A1	2289	C	C2-N1-C1'	5.09	124.40	118.80
29	A1	2428	G	C4-N9-C1'	5.09	133.12	126.50
29	A2	428	G	C5-N7-C8	-5.09	101.75	104.30
29	A2	2672	C	N3-C2-O2	-5.09	118.33	121.90
53	A3	1308	C	C5-C6-N1	5.09	123.55	121.00
53	A4	716	A	C4-C5-N7	5.09	113.25	110.70
29	A2	585	C	N3-C2-O2	-5.09	118.33	121.90
53	A3	1046	G	N9-C4-C5	-5.09	103.36	105.40
29	A1	635	G	C5-C6-O6	-5.09	125.55	128.60
29	A1	812	G	C4-N9-C1'	-5.09	119.88	126.50
29	A1	2234	G	C4-C5-N7	-5.09	108.76	110.80
30	B1	93	C	N3-C4-C5	5.09	123.94	121.90
29	A2	129	G	C8-N9-C4	5.09	108.44	106.40
29	A2	855	C	C2-N3-C4	-5.09	117.35	119.90
29	A2	2510	C	N1-C2-O2	-5.09	115.84	118.90
29	A2	2746	G	C5-C6-N1	5.09	114.05	111.50
53	A3	66	G	N3-C4-N9	5.09	129.06	126.00
53	A3	537	C	N3-C4-C5	5.09	123.94	121.90
53	A4	78	G	N9-C4-C5	-5.09	103.36	105.40
53	A4	352	G	N3-C4-C5	-5.09	126.05	128.60
53	A4	1396	U	C2-N1-C1'	5.09	123.81	117.70
29	A1	665	G	C8-N9-C1'	-5.09	120.38	127.00
29	A1	821	C	O4'-C1'-N1	5.09	112.27	108.20
29	A1	1358	G	N9-C4-C5	5.09	107.44	105.40
29	A1	2226	C	C2-N1-C1'	5.09	124.40	118.80
29	A1	2233	G	C4-N9-C1'	-5.09	119.88	126.50
29	A1	2596	G	N1-C6-O6	5.09	122.95	119.90
29	A2	1907	G	C8-N9-C1'	-5.09	120.39	127.00
29	A2	2441	C	O4'-C1'-N1	5.09	112.27	108.20
53	A3	61	G	N3-C4-C5	-5.09	126.06	128.60
53	A3	479	A	O4'-C1'-N9	-5.09	104.13	108.20
53	A3	582	C	C6-N1-C1'	-5.09	114.69	120.80
53	A3	699	A	C4-C5-N7	5.09	113.25	110.70
53	A4	512	G	N9-C4-C5	-5.09	103.36	105.40
53	A4	1251	C	C6-N1-C1'	5.09	126.91	120.80
29	A2	1184	G	C8-N9-C4	-5.09	104.36	106.40
29	A2	2265	G	N3-C2-N2	5.09	123.46	119.90
29	A2	2520	U	C2-N1-C1'	5.09	123.81	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	763	A	C5-C6-N6	-5.09	119.63	123.70
53	A4	1102	G	C4-N9-C1'	-5.09	119.89	126.50
29	A1	92	C	N1-C2-O2	5.09	121.95	118.90
29	A1	678	G	N3-C4-C5	5.09	131.14	128.60
29	A1	2096	G	C4-C5-N7	5.09	112.83	110.80
29	A2	1787	C	N3-C4-C5	-5.09	119.86	121.90
39	I3	19	LEU	CA-CB-CG	5.09	127.00	115.30
29	A1	1180	A	C5-N7-C8	-5.08	101.36	103.90
53	A3	205	G	N7-C8-N9	5.08	115.64	113.10
53	A4	1100	C	N1-C2-O2	5.08	121.95	118.90
29	A1	1225	C	C2-N1-C1'	-5.08	113.21	118.80
29	A1	2405	G	N3-C2-N2	-5.08	116.34	119.90
29	A1	2491	C	C2-N1-C1'	5.08	124.39	118.80
29	A2	119	G	C5-C6-O6	-5.08	125.55	128.60
29	A2	947	A	N7-C8-N9	5.08	116.34	113.80
29	A2	1997	G	N3-C4-N9	5.08	129.05	126.00
53	A3	1332	U	C5-C6-N1	5.08	125.24	122.70
29	A1	800	A	C5-N7-C8	-5.08	101.36	103.90
29	A1	1258	U	N3-C2-O2	-5.08	118.64	122.20
29	A1	1460	A	N1-C6-N6	5.08	121.65	118.60
29	A1	1568	U	C5-C6-N1	5.08	125.24	122.70
29	A1	2069	C	N1-C2-O2	5.08	121.95	118.90
29	A1	2154	U	C2-N1-C1'	-5.08	111.60	117.70
29	A1	2834	G	C5-C6-N1	5.08	114.04	111.50
29	A2	181	A	N7-C8-N9	5.08	116.34	113.80
29	A2	2258	U	C5-C4-O4	-5.08	122.85	125.90
53	A3	544	U	N1-C2-O2	5.08	126.36	122.80
53	A4	167	U	N1-C2-O2	5.08	126.36	122.80
29	A1	1399	C	N1-C2-O2	5.08	121.95	118.90
29	A1	1868	G	C8-N9-C4	5.08	108.43	106.40
29	A2	1044	A	C5-C6-N1	5.08	120.24	117.70
29	A2	2841	C	N3-C2-O2	-5.08	118.34	121.90
53	A3	1263	C	C5-C6-N1	5.08	123.54	121.00
53	A4	420	G	C4-N9-C1'	5.08	133.10	126.50
53	A4	604	A	C4-C5-C6	-5.08	114.46	117.00
53	A4	1066	G	C5-N7-C8	-5.08	101.76	104.30
29	A1	533	G	N3-C4-C5	5.08	131.14	128.60
29	A1	1690	A	C5-N7-C8	-5.08	101.36	103.90
29	A1	2510	C	C5-C6-N1	-5.08	118.46	121.00
29	A2	841	G	C6-N1-C2	-5.08	122.05	125.10
29	A2	1791	G	N3-C4-C5	-5.08	126.06	128.60
29	A2	2255	A	N1-C6-N6	-5.08	115.55	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	656	G	C4-C5-N7	5.08	112.83	110.80
53	A3	1307	C	C6-N1-C2	-5.08	118.27	120.30
53	A4	809	C	C5-C4-N4	-5.08	116.65	120.20
29	A2	990	U	O5'-P-OP2	-5.08	101.13	105.70
53	A3	242	G	N3-C4-C5	5.08	131.14	128.60
53	A3	535	U	N3-C2-O2	-5.08	118.65	122.20
53	A3	1354	U	N1-C2-O2	5.08	126.35	122.80
53	A4	579	C	C6-N1-C2	-5.08	118.27	120.30
29	A1	782	G	OP2-P-O3'	5.08	116.36	105.20
29	A1	793	G	C4-C5-N7	5.08	112.83	110.80
29	A2	2597	G	C8-N9-C1'	-5.08	120.40	127.00
29	A2	2737	G	C8-N9-C1'	-5.08	120.40	127.00
53	A3	782	G	N3-C4-N9	5.08	129.04	126.00
53	A4	227	G	C5-N7-C8	-5.08	101.76	104.30
53	A4	537	C	N3-C4-C5	5.08	123.93	121.90
29	A1	782	G	C4-N9-C1'	-5.07	119.91	126.50
29	A1	1525	C	C6-N1-C2	-5.07	118.27	120.30
29	A1	1768	G	N3-C4-N9	5.07	129.04	126.00
29	A1	1867	U	C6-N1-C2	-5.07	117.96	121.00
29	A1	1878	G	C8-N9-C4	5.07	108.43	106.40
30	B1	83	G	C4-N9-C1'	5.07	133.10	126.50
29	A2	800	A	C6-C5-N7	-5.07	128.75	132.30
29	A2	1833	C	C4-C5-C6	5.07	119.94	117.40
36	F3	10	LEU	CA-CB-CG	5.07	126.97	115.30
53	A4	888	U	C2-N3-C4	5.07	130.04	127.00
53	A4	1284	C	N3-C2-O2	-5.07	118.35	121.90
29	A1	2442	G	P-O3'-C3'	5.07	125.79	119.70
29	A2	1921	G	C8-N9-C4	-5.07	104.37	106.40
29	A2	1969	G	C8-N9-C4	-5.07	104.37	106.40
53	A3	1059	G	C8-N9-C4	-5.07	104.37	106.40
29	A1	667	C	C5-C6-N1	5.07	123.53	121.00
29	A1	1803	G	N9-C4-C5	5.07	107.43	105.40
29	A1	2597	G	C6-C5-N7	-5.07	127.36	130.40
29	A2	1137	G	C8-N9-C1'	-5.07	120.41	127.00
29	A2	1421	A	C4-C5-C6	-5.07	114.46	117.00
29	A2	2682	G	C8-N9-C4	5.07	108.43	106.40
29	A2	2758	C	C6-N1-C1'	5.07	126.89	120.80
29	A2	2876	G	C4-N9-C1'	-5.07	119.91	126.50
53	A3	574	U	C6-N1-C2	-5.07	117.96	121.00
53	A3	1475	U	C6-N1-C2	-5.07	117.96	121.00
53	A4	937	U	C6-N1-C1'	-5.07	114.10	121.20
29	A2	549	G	C4-C5-N7	5.07	112.83	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	1748	G	C5-N7-C8	-5.07	101.77	104.30
29	A2	2601	A	C5-N7-C8	-5.07	101.36	103.90
53	A4	160	G	C4-C5-N7	5.07	112.83	110.80
53	A4	1292	G	C5-C6-O6	-5.07	125.56	128.60
29	A1	704	A	OP2-P-O3'	5.07	116.35	105.20
29	A1	715	G	C6-C5-N7	-5.07	127.36	130.40
29	A1	787	G	C4-C5-N7	5.07	112.83	110.80
29	A1	1429	G	C6-C5-N7	-5.07	127.36	130.40
29	A1	2656	G	C8-N9-C4	-5.07	104.37	106.40
29	A2	1394	G	C6-C5-N7	-5.07	127.36	130.40
52	X3	131	ILE	CG1-CB-CG2	-5.07	100.25	111.40
53	A4	772	U	O4'-C1'-N1	5.07	112.25	108.20
29	A1	93	G	C4-N9-C1'	5.07	133.09	126.50
29	A1	432	C	OP2-P-O3'	5.07	116.34	105.20
29	A1	2315	C	O4'-C1'-N1	5.07	112.25	108.20
29	A1	2606	G	C4-N9-C1'	5.07	133.09	126.50
29	A2	851	A	C4-C5-N7	5.07	113.23	110.70
29	A2	2330	C	N3-C4-C5	-5.07	119.87	121.90
29	A2	2521	C	C5-C6-N1	5.07	123.53	121.00
30	B2	75	A	C5-C6-N6	-5.07	119.65	123.70
53	A3	1108	U	C2-N1-C1'	5.07	123.78	117.70
53	A3	1174	G	C4-C5-N7	5.07	112.83	110.80
53	A4	253	G	C6-C5-N7	-5.07	127.36	130.40
29	A1	2345	G	N9-C4-C5	-5.06	103.37	105.40
29	A2	685	G	C4-N9-C1'	5.06	133.08	126.50
29	A2	1714	A	C6-C5-N7	-5.06	128.75	132.30
29	A2	2699	G	N1-C6-O6	-5.06	116.86	119.90
53	A3	402	G	C4-C5-N7	5.06	112.83	110.80
53	A3	689	A	N1-C6-N6	5.06	121.64	118.60
53	A4	852	C	N3-C2-O2	-5.06	118.36	121.90
29	A1	617	G	C6-C5-N7	-5.06	127.36	130.40
29	A1	1548	G	N3-C4-N9	5.06	129.04	126.00
30	B1	24	U	N3-C2-O2	-5.06	118.66	122.20
30	B1	90	C	C6-N1-C2	-5.06	118.28	120.30
29	A2	1249	C	C6-N1-C2	-5.06	118.28	120.30
29	A2	2281	A	C5-N7-C8	-5.06	101.37	103.90
29	A2	2296	G	C6-C5-N7	-5.06	127.36	130.40
29	A2	2694	C	C6-N1-C2	-5.06	118.28	120.30
45	O3	89	GLY	N-CA-C	5.06	125.76	113.10
53	A4	26	A	C6-N1-C2	-5.06	115.56	118.60
53	A4	717	G	C5-N7-C8	-5.06	101.77	104.30
53	A4	916	G	N1-C6-O6	-5.06	116.86	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A4	1410	A	C4-C5-N7	5.06	113.23	110.70
29	A1	387	U	C6-N1-C2	-5.06	117.96	121.00
29	A1	1997	G	C4-N9-C1'	5.06	133.08	126.50
29	A1	2194	A	OP1-P-O3'	5.06	116.33	105.20
53	A3	1254	G	N3-C4-N9	5.06	129.04	126.00
29	A1	669	G	C8-N9-C4	5.06	108.42	106.40
29	A2	1054	C	C6-N1-C1'	-5.06	114.73	120.80
29	A2	2273	G	C8-N9-C4	5.06	108.42	106.40
29	A2	2386	G	C4-C5-N7	-5.06	108.78	110.80
29	A2	2416	C	N1-C2-O2	5.06	121.94	118.90
29	A2	2517	A	C2-N3-C4	5.06	113.13	110.60
53	A3	593	G	C4-N9-C1'	5.06	133.08	126.50
53	A4	595	C	N3-C2-O2	-5.06	118.36	121.90
53	A4	763	A	C5-C6-N6	-5.06	119.65	123.70
29	A1	1553	C	C6-N1-C1'	5.06	126.87	120.80
29	A1	1758	U	C2-N1-C1'	5.06	123.77	117.70
29	A1	1854	A	N1-C6-N6	-5.06	115.57	118.60
29	A1	2742	G	C5-C6-N1	5.06	114.03	111.50
29	A1	2871	G	N9-C4-C5	-5.06	103.38	105.40
29	A1	2904	G	C4-C5-N7	5.06	112.82	110.80
29	A2	1460	A	C2-N3-C4	5.06	113.13	110.60
29	A2	1485	C	C6-N1-C2	-5.06	118.28	120.30
29	A2	1597	C	C6-N1-C2	-5.06	118.28	120.30
29	A2	2835	A	C5-N7-C8	-5.06	101.37	103.90
29	A2	2859	U	N1-C2-O2	5.06	126.34	122.80
53	A4	443	C	O4'-C1'-N1	5.06	112.25	108.20
53	A4	737	C	N1-C2-O2	5.06	121.93	118.90
29	A1	669	G	C8-N9-C1'	5.06	133.57	127.00
29	A1	2896	U	N1-C2-O2	5.06	126.34	122.80
53	A4	568	G	N1-C6-O6	-5.06	116.87	119.90
29	A1	1297	U	O4'-C1'-N1	5.05	112.24	108.20
29	A1	1951	A	C5-N7-C8	-5.05	101.37	103.90
29	A2	2746	G	N3-C4-N9	5.05	129.03	126.00
30	B2	90	C	C5-C6-N1	5.05	123.53	121.00
53	A3	425	A	C6-C5-N7	-5.05	128.76	132.30
53	A3	466	A	C8-N9-C1'	-5.05	118.60	127.70
53	A3	653	G	N3-C4-C5	-5.05	126.07	128.60
53	A3	1397	G	N3-C2-N2	-5.05	116.36	119.90
53	A3	1433	G	P-O3'-C3'	5.05	125.77	119.70
53	A3	1463	G	N3-C4-N9	-5.05	122.97	126.00
29	A1	1826	C	C2-N1-C1'	5.05	124.36	118.80
29	A2	604	G	N1-C6-O6	5.05	122.93	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	2709	C	C2-N1-C1'	5.05	124.36	118.80
30	B2	109	G	N9-C4-C5	-5.05	103.38	105.40
53	A4	717	G	N3-C4-C5	5.05	131.13	128.60
29	A1	928	G	C4-C5-N7	5.05	112.82	110.80
29	A1	1620	A	O4'-C1'-N9	5.05	112.24	108.20
29	A1	2210	G	C8-N9-C4	-5.05	104.38	106.40
29	A2	254	C	N1-C2-O2	5.05	121.93	118.90
29	A2	842	A	O5'-P-OP2	-5.05	101.15	105.70
29	A2	1303	U	C6-N1-C1'	-5.05	114.13	121.20
29	A2	1940	A	C8-N9-C4	-5.05	103.78	105.80
29	A2	2596	G	C6-C5-N7	-5.05	127.37	130.40
29	A2	2656	G	C4-C5-N7	5.05	112.82	110.80
53	A3	1014	G	C4-N9-C1'	5.05	133.07	126.50
53	A3	1442	C	N3-C4-N4	-5.05	114.46	118.00
53	A4	524	G	C2-N3-C4	-5.05	109.37	111.90
53	A4	1477	A	O4'-C1'-N9	5.05	112.24	108.20
29	A1	678	G	N3-C4-N9	-5.05	122.97	126.00
29	A1	1255	C	N1-C2-O2	5.05	121.93	118.90
29	A2	232	G	C6-C5-N7	-5.05	127.37	130.40
29	A2	723	G	N7-C8-N9	-5.05	110.58	113.10
29	A2	1485	C	N3-C2-O2	-5.05	118.36	121.90
29	A2	2718	C	N3-C2-O2	-5.05	118.36	121.90
53	A3	101	G	C4-N9-C1'	5.05	133.06	126.50
53	A3	455	C	C6-N1-C2	-5.05	118.28	120.30
53	A4	763	A	C6-C5-N7	-5.05	128.76	132.30
29	A1	446	G	C5-N7-C8	-5.05	101.78	104.30
29	A1	901	G	N1-C2-N2	-5.05	111.66	116.20
29	A1	1843	A	C5-C6-N1	5.05	120.22	117.70
29	A2	539	G	C2-N3-C4	-5.05	109.38	111.90
29	A2	826	A	N7-C8-N9	5.05	116.32	113.80
29	A2	2480	C	C4-C5-C6	-5.05	114.88	117.40
29	A1	854	G	N3-C4-C5	5.05	131.12	128.60
29	A1	2296	G	C6-C5-N7	-5.05	127.37	130.40
29	A2	241	A	C8-N9-C4	-5.05	103.78	105.80
29	A2	458	A	C5-C6-N1	5.05	120.22	117.70
29	A2	712	G	C6-C5-N7	-5.05	127.37	130.40
29	A2	1339	C	C6-N1-C2	5.05	122.32	120.30
29	A2	1486	U	N1-C2-O2	5.05	126.33	122.80
29	A2	1948	C	C2-N1-C1'	5.05	124.35	118.80
29	A2	2302	A	C4-C5-N7	5.05	113.22	110.70
29	A2	2577	U	N3-C2-O2	-5.05	118.67	122.20
53	A3	62	U	N1-C2-O2	5.05	126.33	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	553	G	C4-C5-N7	5.05	112.82	110.80
53	A3	799	A	C4-C5-C6	-5.05	114.48	117.00
53	A3	1298	C	C6-N1-C2	-5.05	118.28	120.30
53	A4	160	G	N3-C4-N9	5.05	129.03	126.00
53	A4	562	G	C5-C6-O6	-5.05	125.57	128.60
29	A1	2061	G	C6-C5-N7	-5.04	127.37	130.40
29	A2	1528	G	N1-C6-O6	5.04	122.93	119.90
53	A3	631	A	C8-N9-C4	5.04	107.82	105.80
29	A1	1684	G	C6-C5-N7	-5.04	127.37	130.40
29	A1	1773	G	C8-N9-C4	-5.04	104.38	106.40
29	A1	2155	G	C8-N9-C4	-5.04	104.38	106.40
29	A1	2772	A	N7-C8-N9	5.04	116.32	113.80
29	A2	2137	U	N1-C2-O2	5.04	126.33	122.80
29	A2	2233	G	N1-C2-N2	-5.04	111.66	116.20
29	A2	2347	A	N7-C8-N9	-5.04	111.28	113.80
29	A2	2592	G	C8-N9-C1'	-5.04	120.44	127.00
53	A3	564	G	C5-N7-C8	-5.04	101.78	104.30
53	A3	1029	G	C8-N9-C1'	5.04	133.56	127.00
53	A4	255	G	C6-C5-N7	-5.04	127.37	130.40
29	A1	991	G	C6-C5-N7	-5.04	127.38	130.40
29	A1	1394	G	N3-C4-C5	-5.04	126.08	128.60
29	A1	1997	G	C6-C5-N7	-5.04	127.38	130.40
29	A1	2237	G	N3-C4-N9	5.04	129.03	126.00
29	A1	2279	U	C5-C4-O4	5.04	128.93	125.90
29	A2	2519	G	N3-C4-N9	5.04	129.02	126.00
29	A1	1457	C	N1-C2-O2	5.04	121.92	118.90
29	A1	1622	G	N1-C6-O6	5.04	122.92	119.90
29	A2	2359	G	C8-N9-C4	5.04	108.42	106.40
53	A4	1479	A	C4-C5-C6	5.04	119.52	117.00
29	A1	276	C	N3-C2-O2	-5.04	118.37	121.90
29	A1	428	G	C5-N7-C8	-5.04	101.78	104.30
29	A1	1134	A	C8-N9-C4	-5.04	103.78	105.80
29	A1	1743	C	OP2-P-O3'	5.04	116.29	105.20
29	A2	1705	C	C2-N3-C4	-5.04	117.38	119.90
29	A2	2801	U	N1-C2-O2	5.04	126.33	122.80
30	B2	90	C	C6-N1-C1'	-5.04	114.75	120.80
53	A3	612	G	C4-N9-C1'	5.04	133.05	126.50
53	A3	732	C	N1-C2-O2	5.04	121.92	118.90
53	A4	119	G	C5-C6-O6	-5.04	125.58	128.60
29	A1	1920	G	N3-C4-N9	5.04	129.02	126.00
29	A1	911	G	C8-N9-C4	-5.04	104.39	106.40
29	A1	1375	C	C5-C6-N1	5.04	123.52	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	2697	C	N3-C4-C5	5.04	123.91	121.90
29	A2	829	G	C2-N3-C4	-5.04	109.38	111.90
29	A2	854	G	C4-C5-N7	5.04	112.81	110.80
53	A3	300	G	C8-N9-C4	-5.04	104.39	106.40
53	A3	472	C	C5-C6-N1	5.04	123.52	121.00
53	A3	1199	C	C6-N1-C2	-5.04	118.29	120.30
53	A4	204	G	C8-N9-C1'	-5.04	120.45	127.00
29	A2	2219	C	N3-C2-O2	-5.03	118.38	121.90
53	A3	624	U	N1-C2-N3	5.03	117.92	114.90
53	A3	988	G	N3-C4-C5	5.03	131.12	128.60
53	A3	1084	A	C5-C6-N1	5.03	120.22	117.70
53	A3	1452	G	C2-N3-C4	-5.03	109.38	111.90
53	A3	1467	C	N1-C2-O2	5.03	121.92	118.90
53	A4	1374	G	N3-C4-C5	-5.03	126.08	128.60
29	A2	1300	G	C5-C6-O6	-5.03	125.58	128.60
53	A3	450	C	N1-C2-O2	5.03	121.92	118.90
53	A4	151	G	N3-C4-C5	5.03	131.12	128.60
29	A1	1227	C	N1-C2-O2	5.03	121.92	118.90
29	A1	1428	G	C6-C5-N7	-5.03	127.38	130.40
29	A1	1771	G	N3-C4-N9	5.03	129.02	126.00
29	A2	1449	G	C6-C5-N7	-5.03	127.38	130.40
29	A2	2633	C	C5-C6-N1	-5.03	118.48	121.00
53	A3	415	U	C6-N1-C2	-5.03	117.98	121.00
53	A3	420	G	N3-C4-C5	-5.03	126.08	128.60
53	A3	471	A	C5-C6-N6	-5.03	119.67	123.70
53	A4	264	C	C2-N1-C1'	5.03	124.33	118.80
53	A4	553	G	N3-C2-N2	5.03	123.42	119.90
53	A4	1392	G	N3-C4-N9	5.03	129.02	126.00
29	A1	1647	C	C5-C4-N4	-5.03	116.68	120.20
29	A1	2593	C	C2-N1-C1'	5.03	124.33	118.80
29	A2	2241	A	C5-C6-N1	5.03	120.22	117.70
53	A3	1117	U	C2-N3-C4	5.03	130.02	127.00
53	A4	1411	C	N1-C2-O2	5.03	121.92	118.90
29	A1	49	U	C2-N1-C1'	5.03	123.73	117.70
29	A1	1690	A	C4-C5-C6	-5.03	114.49	117.00
29	A1	1704	A	C5-N7-C8	-5.03	101.39	103.90
29	A1	1822	A	N7-C8-N9	5.03	116.31	113.80
29	A1	2541	C	N3-C2-O2	-5.03	118.38	121.90
30	B1	85	G	N9-C4-C5	-5.03	103.39	105.40
29	A2	886	C	C2-N3-C4	-5.03	117.39	119.90
29	A2	2863	A	C6-C5-N7	-5.03	128.78	132.30
53	A3	498	G	C6-C5-N7	-5.03	127.38	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	A3	1404	G	C5-C6-O6	-5.03	125.58	128.60
53	A4	612	G	N1-C6-O6	-5.03	116.88	119.90
53	A4	666	G	N7-C8-N9	5.03	115.61	113.10
53	A4	778	C	C5-C6-N1	-5.03	118.49	121.00
29	A1	642	A	O5'-P-OP2	-5.03	101.18	105.70
29	A1	841	G	C6-N1-C2	-5.03	122.08	125.10
29	A2	17	G	N3-C4-C5	-5.03	126.09	128.60
29	A2	358	G	C6-C5-N7	-5.03	127.38	130.40
29	A2	1025	G	C5-N7-C8	-5.03	101.79	104.30
29	A2	1542	A	C4-C5-N7	5.03	113.21	110.70
53	A3	480	A	N3-C4-N9	5.03	131.42	127.40
53	A3	895	A	C5-C6-N1	5.03	120.21	117.70
29	A1	956	C	N1-C2-O2	5.02	121.91	118.90
29	A1	2776	G	N9-C4-C5	-5.02	103.39	105.40
29	A2	1446	C	C2-N1-C1'	5.02	124.33	118.80
53	A4	1431	A	C4-C5-N7	5.02	113.21	110.70
29	A1	614	C	C5-C6-N1	5.02	123.51	121.00
29	A1	728	C	C5-C6-N1	5.02	123.51	121.00
29	A2	2366	A	C5-C6-N1	5.02	120.21	117.70
29	A2	2450	G	N1-C2-N2	-5.02	111.68	116.20
53	A4	593	G	C8-N9-C1'	-5.02	120.47	127.00
53	A4	917	C	N3-C4-N4	-5.02	114.48	118.00
53	A4	1354	U	N3-C2-O2	-5.02	118.68	122.20
29	A1	495	G	C6-C5-N7	-5.02	127.39	130.40
29	A2	52	A	N9-C4-C5	-5.02	103.79	105.80
29	A2	818	G	C8-N9-C4	5.02	108.41	106.40
29	A2	1770	U	C6-N1-C1'	-5.02	114.17	121.20
29	A2	1831	U	C2-N1-C1'	5.02	123.72	117.70
29	A2	2097	C	N3-C4-C5	5.02	123.91	121.90
53	A3	1095	C	C6-N1-C2	-5.02	118.29	120.30
53	A3	1131	C	C6-N1-C2	-5.02	118.29	120.30
29	A1	1490	G	C6-C5-N7	-5.02	127.39	130.40
29	A1	1750	A	N7-C8-N9	5.02	116.31	113.80
29	A1	1765	G	N7-C8-N9	5.02	115.61	113.10
29	A1	2511	A	N1-C6-N6	5.02	121.61	118.60
29	A1	2591	A	N1-C6-N6	5.02	121.61	118.60
29	A2	630	C	N3-C2-O2	-5.02	118.39	121.90
29	A2	1443	A	N1-C6-N6	-5.02	115.59	118.60
30	B2	5	C	N3-C2-O2	-5.02	118.39	121.90
53	A3	1447	G	N1-C6-O6	-5.02	116.89	119.90
53	A4	1335	C	C6-N1-C2	-5.02	118.29	120.30
29	A1	786	C	C5-C6-N1	5.02	123.51	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	1704	A	C6-C5-N7	-5.02	128.79	132.30
29	A1	1815	C	C6-N1-C1'	5.02	126.82	120.80
29	A1	1928	G	C4-C5-N7	5.02	112.81	110.80
29	A2	1056	C	N3-C4-N4	-5.02	114.49	118.00
29	A2	1881	A	C2-N3-C4	5.02	113.11	110.60
29	A2	2084	A	C2-N3-C4	5.02	113.11	110.60
53	A3	970	G	C5-C6-N1	5.02	114.01	111.50
53	A3	1114	C	C6-N1-C2	-5.02	118.29	120.30
29	A1	323	G	C6-C5-N7	-5.02	127.39	130.40
29	A2	130	G	N3-C4-C5	-5.02	126.09	128.60
29	A2	786	C	C5-C6-N1	5.02	123.51	121.00
48	R4	50	ILE	CG1-CB-CG2	-5.02	100.36	111.40
53	A4	1107	U	N3-C2-O2	-5.02	118.69	122.20
29	A1	608	G	N7-C8-N9	5.01	115.61	113.10
29	A1	1294	A	N7-C8-N9	5.01	116.31	113.80
29	A1	2054	A	C4-N9-C1'	-5.01	117.28	126.30
29	A1	2413	G	N7-C8-N9	-5.01	110.59	113.10
29	A2	132	C	N3-C2-O2	-5.01	118.39	121.90
29	A2	1727	G	N7-C8-N9	5.01	115.61	113.10
29	A2	1814	C	C2-N1-C1'	5.01	124.31	118.80
29	A2	2595	G	N3-C4-N9	5.01	129.01	126.00
29	A2	2755	A	C5-C6-N6	5.01	127.71	123.70
53	A3	227	G	C6-C5-N7	-5.01	127.39	130.40
53	A3	707	G	N1-C6-O6	-5.01	116.89	119.90
53	A3	1082	C	C5-C6-N1	-5.01	118.49	121.00
40	J4	53	PRO	C-N-CA	5.01	134.24	121.70
53	A4	215	G	C4-C5-C6	5.01	121.81	118.80
29	A2	851	A	C8-N9-C4	5.01	107.81	105.80
29	A2	1168	G	C4-C5-N7	5.01	112.81	110.80
29	A1	197	A	N9-C4-C5	-5.01	103.80	105.80
29	A1	2357	C	C6-N1-C2	5.01	122.31	120.30
29	A1	2798	G	C8-N9-C4	5.01	108.41	106.40
29	A2	1912	G	C8-N9-C1'	-5.01	120.48	127.00
29	A2	2683	G	C8-N9-C4	5.01	108.41	106.40
53	A3	221	G	C6-N1-C2	-5.01	122.09	125.10
53	A3	444	G	C5-C6-O6	5.01	131.61	128.60
53	A3	601	C	N3-C2-O2	-5.01	118.39	121.90
53	A3	744	G	N7-C8-N9	5.01	115.61	113.10
32	B4	223	ILE	CG1-CB-CG2	-5.01	100.38	111.40
53	A4	142	G	N9-C4-C5	-5.01	103.39	105.40
53	A4	639	C	C4-C5-C6	-5.01	114.89	117.40
53	A4	959	U	N1-C1'-C2'	5.01	120.52	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A1	471	A	O5'-P-OP2	-5.01	101.19	105.70
29	A1	855	C	N3-C4-N4	-5.01	114.49	118.00
29	A2	579	U	N1-C2-O2	5.01	126.31	122.80
29	A2	819	G	N1-C2-N2	-5.01	111.69	116.20
29	A2	1297	U	O4'-C1'-N1	5.01	112.21	108.20
29	A2	1959	G	OP2-P-O3'	5.01	116.22	105.20
29	A2	2428	G	N7-C8-N9	5.01	115.61	113.10
29	A2	2528	U	C6-N1-C2	5.01	124.00	121.00
53	A3	497	C	C4-C5-C6	-5.01	114.90	117.40
53	A3	641	G	N3-C4-C5	5.01	131.10	128.60
53	A3	770	A	N9-C4-C5	-5.01	103.80	105.80
53	A3	1223	C	C5-C6-N1	5.01	123.50	121.00
53	A4	117	G	C4-N9-C1'	5.01	133.01	126.50
53	A4	426	A	C2-N3-C4	5.01	113.10	110.60
53	A4	633	G	N7-C8-N9	5.01	115.60	113.10
53	A4	1373	U	C5-C4-O4	5.01	128.91	125.90
29	A1	802	C	C6-N1-C1'	-5.01	114.79	120.80
29	A1	1685	C	N1-C2-O2	5.01	121.91	118.90
29	A1	1775	C	N3-C4-C5	5.01	123.90	121.90
29	A1	1910	C	C5-C6-N1	5.01	123.50	121.00
29	A2	1244	G	C8-N9-C4	5.01	108.40	106.40
53	A4	906	G	C4-N9-C1'	-5.01	119.99	126.50
29	A1	713	C	C6-N1-C1'	5.01	126.81	120.80
29	A1	800	A	N7-C8-N9	5.01	116.30	113.80
29	A1	1715	G	C4-C5-C6	5.01	121.80	118.80
29	A1	2163	C	C6-N1-C2	-5.01	118.30	120.30
29	A2	159	U	O4'-C1'-N1	5.01	112.20	108.20
29	A2	1004	A	C8-N9-C4	5.01	107.80	105.80
29	A2	1071	U	C6-N1-C2	-5.01	118.00	121.00
29	A2	1187	C	N3-C4-C5	5.01	123.90	121.90
29	A2	1593	A	C4-C5-C6	-5.01	114.50	117.00
29	A2	2341	A	C8-N9-C1'	5.01	136.71	127.70
53	A3	177	G	C4-N9-C1'	5.01	133.01	126.50
53	A3	849	A	C5-N7-C8	-5.01	101.40	103.90
53	A4	508	C	C2-N3-C4	-5.01	117.40	119.90
53	A4	548	U	N3-C4-O4	-5.01	115.89	119.40
29	A2	1275	G	N3-C4-C5	-5.00	126.10	128.60
29	A2	1905	C	C6-N1-C2	-5.00	118.30	120.30
29	A2	2314	G	C8-N9-C4	-5.00	104.40	106.40
53	A3	716	A	C5-C6-N6	-5.00	119.70	123.70
53	A4	309	C	C6-N1-C1'	5.00	126.81	120.80
29	A1	2873	G	C4-N9-C1'	5.00	133.00	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A2	207	G	C8-N9-C4	5.00	108.40	106.40
29	A2	740	C	C2-N1-C1'	5.00	124.30	118.80
29	A2	1997	G	C6-C5-N7	-5.00	127.40	130.40
53	A3	843	C	C2-N3-C4	-5.00	117.40	119.90
53	A4	930	G	C5-C6-N1	5.00	114.00	111.50
29	A1	1037	G	C4-N9-C1'	5.00	133.00	126.50
29	A1	1597	C	C6-N1-C2	-5.00	118.30	120.30
29	A1	1776	C	C6-N1-C1'	5.00	126.80	120.80
29	A1	2405	G	C2-N3-C4	-5.00	109.40	111.90
30	B1	32	C	C6-N1-C2	-5.00	118.30	120.30
29	A2	1651	A	C4-N9-C1'	5.00	135.30	126.30
29	A2	2459	G	N9-C4-C5	-5.00	103.40	105.40
52	W4	162	ARG	O-C-N	5.00	130.70	122.70
53	A4	849	A	N7-C8-N9	5.00	116.30	113.80
53	A4	1137	G	N1-C2-N2	-5.00	111.70	116.20
53	A4	1387	G	N1-C6-O6	5.00	122.90	119.90

There are no chirality outliers.

All (241) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
32	B3	155	LEU	Peptide
32	B3	169	LYS	Peptide
32	B3	199	TYR	Peptide
32	B3	204	ASN	Peptide
32	B3	212	GLN	Peptide
32	B3	213	LEU	Peptide
32	B3	22	LYS	Peptide
32	B3	59	GLU	Peptide
32	B3	77	ALA	Peptide
32	B4	127	ILE	Peptide
32	B4	139	LYS	Peptide
32	B4	19	HIS	Peptide
32	B4	195	ASP	Peptide
32	B4	199	TYR	Peptide
32	B4	207	ALA	Peptide
32	B4	9	GLU	Peptide
1	C1	10	THR	Peptide
1	C1	148	GLU	Peptide
1	C1	242	ARG	Peptide
1	C1	246	PRO	Peptide
1	C1	247	ALA	Peptide

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Mol	Chain	Res	Type	Group
1	C1	33	LEU	Peptide
1	C2	172	TYR	Peptide
1	C2	201	HIS	Peptide
1	C2	206	LEU	Peptide
1	C2	218	ARG	Peptide
1	C2	244	ARG	Peptide
1	C2	246	PRO	Peptide
1	C2	35	LYS	Peptide
1	C2	36	PRO	Peptide
1	C2	63	ARG	Peptide
1	C2	70	TRP	Peptide
33	C3	18	TRP	Peptide
33	C3	192	THR	Peptide
33	C3	35	GLU	Peptide
33	C3	47	LEU	Peptide
33	C4	127	ARG	Peptide
33	C4	142	MET	Peptide
33	C4	143	GLU	Peptide
33	C4	190	ARG	Peptide
33	C4	94	LEU	Peptide
33	C4	98	ASN	Peptide
2	D1	128	SER	Peptide
2	D1	133	LYS	Peptide
2	D2	128	SER	Peptide
2	D2	133	LYS	Peptide
2	D2	15	PHE	Peptide
2	D2	51	PHE	Peptide
34	D3	131	ARG	Peptide
34	D3	154	ASN	Peptide
34	D3	20	TYR	Peptide
34	D3	60	GLU	Peptide
34	D3	66	ARG	Peptide
34	D4	126	ILE	Peptide
34	D4	131	ARG	Peptide
34	D4	149	ALA	Peptide
34	D4	150	GLU	Peptide
34	D4	158	ILE	Peptide
34	D4	207	TYR	Peptide
34	D4	66	ARG	Peptide
3	E1	10	PRO	Peptide
3	E1	24	LEU	Peptide
3	E1	25	PRO	Peptide

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Mol	Chain	Res	Type	Group
3	E1	66	PRO	Peptide
3	E2	24	LEU	Peptide
3	E2	25	PRO	Peptide
3	E2	62	ARG	Peptide
3	E2	66	PRO	Peptide
3	E2	9	ILE	Peptide
3	E2	91	GLY	Peptide
35	E3	130	ASN	Peptide
35	E3	153	LYS	Peptide
35	E3	51	VAL	Peptide
35	E4	11	ILE	Peptide
35	E4	51	VAL	Peptide
35	E4	7	GLU	Peptide
4	F1	128	ARG	Peptide
4	F1	35	GLU	Peptide
4	F2	167	GLU	Peptide
4	F2	47	LYS	Peptide
36	F3	85	VAL	Peptide
36	F4	11	ASN	Peptide
5	G1	160	LYS	Peptide
5	G1	35	VAL	Peptide
5	G1	63	SER	Peptide
5	G1	88	LEU	Peptide
5	G1	89	ILE	Peptide
5	G1	94	TYR	Peptide
5	G2	88	LEU	Peptide
5	G2	89	ILE	Peptide
5	G2	90	LYS	Peptide
37	G3	15	ASP	Peptide
37	G4	122	HIS	Peptide
37	G4	128	ALA	Peptide
37	G4	15	ASP	Peptide
37	G4	96	GLN	Peptide
6	H1	36	ALA	Peptide
6	H1	45	LYS	Peptide
6	H2	28	ASN	Peptide
6	H2	36	ALA	Peptide
38	H4	29	SER	Peptide
38	H4	41	ARG	Peptide
38	H4	96	GLY	Peptide
7	I1	66	LYS	Peptide
39	I3	124	GLN	Peptide

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Mol	Chain	Res	Type	Group
39	I3	73	GLN	Peptide
39	I3	97	LYS	Peptide
39	I4	118	LYS	Peptide
39	I4	35	GLU	Peptide
39	I4	73	GLN	Peptide
8	J1	112	MET	Peptide
8	J1	14	THR	Peptide
8	J1	25	LEU	Peptide
8	J2	112	MET	Peptide
8	J2	115	VAL	Peptide
40	J3	29	ARG	Peptide
40	J3	53	PRO	Peptide
40	J3	57	LYS	Peptide
40	J3	76	ASN	Peptide
40	J4	16	LEU	Peptide
40	J4	36	GLY	Peptide
40	J4	57	LYS	Peptide
40	J4	83	GLU	Peptide
40	J4	87	THR	Peptide
9	K1	109	GLY	Peptide
9	K1	12	ALA	Peptide
9	K1	123	LEU	Peptide
9	K1	23	PRO	Peptide
9	K1	87	ASP	Peptide
9	K2	90	ARG	Peptide
41	K3	109	VAL	Peptide
41	K3	61	ALA	Peptide
10	L1	13	GLN	Peptide
10	L1	137	TYR	Peptide
10	L1	71	ASP	Peptide
10	L2	134	ARG	Peptide
10	L2	4	PRO	Peptide
10	L2	5	ARG	Peptide
10	L2	6	ARG	Peptide
10	L2	7	MET	Peptide
10	L2	94	VAL	Peptide
42	L3	111	LYS	Peptide
42	L3	121	GLY	Peptide
42	L3	8	ASN	Peptide
42	L4	111	LYS	Peptide
42	L4	16	GLU	Peptide
42	L4	26	ALA	Peptide

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Mol	Chain	Res	Type	Group
42	L4	91	LYS	Peptide
11	M1	43	GLU	Peptide
11	M1	70	LEU	Peptide
11	M1	77	ARG	Peptide
11	M1	85	PRO	Peptide
11	M2	43	GLU	Peptide
11	M2	85	PRO	Peptide
43	M3	15	VAL	Peptide
43	M3	77	ASN	Peptide
12	N1	16	ASN	Peptide
12	N1	17	ARG	Peptide
12	N1	65	VAL	Peptide
12	N2	111	GLU	Peptide
12	N2	43	GLU	Peptide
44	N3	26	ARG	Peptide
44	N4	28	GLY	Peptide
44	N4	4	LYS	Peptide
44	N4	8	GLU	Peptide
13	O1	106	SER	Peptide
13	O1	113	LYS	Peptide
13	O1	115	ARG	Peptide
13	O1	6	LEU	Peptide
13	O2	131	ALA	Peptide
13	O2	3	ARG	Peptide
13	O2	87	ASP	Peptide
45	O3	32	LEU	Peptide
45	O3	76	GLU	Peptide
45	O3	82	ILE	Peptide
45	O4	21	ASP	Peptide
45	O4	71	GLN	Peptide
45	O4	72	ARG	Peptide
14	P1	53	ARG	Peptide
14	P1	93	LYS	Peptide
14	P1	94	ASN	Peptide
14	P2	93	LYS	Peptide
46	P3	21	VAL	Peptide
46	P3	73	LEU	Peptide
46	P4	22	THR	Peptide
46	P4	43	LYS	Peptide
46	P4	73	LEU	Peptide
15	Q2	85	LYS	Peptide
47	Q3	58	GLU	Peptide

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Mol	Chain	Res	Type	Group
47	Q4	63	ARG	Peptide
16	R2	69	LEU	Peptide
48	R3	28	GLU	Peptide
48	R3	45	SER	Peptide
48	R4	45	SER	Peptide
49	S3	18	LYS	Peptide
49	S3	66	MET	Peptide
49	S4	65	ASN	Peptide
49	S4	68	GLY	Peptide
18	T1	101	LYS	Peptide
18	T1	40	GLU	Peptide
18	T1	82	PRO	Peptide
18	T2	82	PRO	Peptide
19	U2	157	LEU	Peptide
19	U2	52	SER	Peptide
19	U2	53	ILE	Peptide
20	V1	72	ARG	Peptide
54	V3	22	GLU	Peptide
54	V3	24	LYS	Peptide
54	V4	102	LYS	Peptide
54	V4	32	GLN	Peptide
21	W1	15	ALA	Peptide
21	W1	5	CYS	Peptide
21	W2	5	CYS	Peptide
21	W2	93	GLU	Peptide
22	X1	20	GLU	Peptide
22	X1	28	LYS	Peptide
22	X2	28	LYS	Peptide
23	Y2	23	LEU	Peptide
24	Z1	15	ILE	Peptide
24	Z1	20	ASN	Peptide
24	Z1	37	SER	Peptide
24	Z1	39	CYS	Peptide
24	Z1	40	HIS	Peptide
24	Z1	42	PHE	Peptide
24	Z1	43	TYR	Peptide
24	Z1	49	PHE	Peptide
24	Z1	55	ARG	Peptide
24	Z2	21	VAL	Peptide
24	Z2	49	PHE	Peptide
24	Z2	54	GLY	Peptide
24	Z2	58	ARG	Peptide

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Mol	Chain	Res	Type	Group
24	Z2	59	PHE	Peptide
25	a1	2	ALA	Peptide
25	a1	36	CYS	Peptide
26	b2	44	ARG	Peptide
27	c2	26	GLY	Peptide
28	d1	30	ARG	Peptide
28	d1	40	GLU	Peptide
28	d2	46	ARG	Peptide
28	d2	48	PHE	Peptide
28	d2	50	LEU	Peptide

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C1	270/272 (99%)	205 (76%)	65 (24%)	0	100	100
1	C2	270/272 (99%)	210 (78%)	59 (22%)	1 (0%)	34	71
2	D1	203/205 (99%)	152 (75%)	49 (24%)	2 (1%)	15	53
2	D2	203/205 (99%)	144 (71%)	57 (28%)	2 (1%)	15	53
3	E1	206/208 (99%)	163 (79%)	43 (21%)	0	100	100
3	E2	206/208 (99%)	160 (78%)	45 (22%)	1 (0%)	29	67
4	F1	179/181 (99%)	146 (82%)	33 (18%)	0	100	100
4	F2	179/181 (99%)	142 (79%)	37 (21%)	0	100	100
5	G1	168/170 (99%)	127 (76%)	41 (24%)	0	100	100
5	G2	168/170 (99%)	124 (74%)	43 (26%)	1 (1%)	25	64
6	H1	48/50 (96%)	38 (79%)	10 (21%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	H2	48/50 (96%)	35 (73%)	13 (27%)	0	100	100
7	I1	136/138 (99%)	110 (81%)	26 (19%)	0	100	100
7	I2	136/138 (99%)	108 (79%)	28 (21%)	0	100	100
8	J1	120/122 (98%)	95 (79%)	25 (21%)	0	100	100
8	J2	120/122 (98%)	103 (86%)	17 (14%)	0	100	100
9	K1	148/150 (99%)	102 (69%)	46 (31%)	0	100	100
9	K2	148/150 (99%)	105 (71%)	42 (28%)	1 (1%)	22	61
10	L1	139/141 (99%)	112 (81%)	27 (19%)	0	100	100
10	L2	139/141 (99%)	106 (76%)	31 (22%)	2 (1%)	11	46
11	M1	115/117 (98%)	97 (84%)	18 (16%)	0	100	100
11	M2	115/117 (98%)	94 (82%)	21 (18%)	0	100	100
12	N1	109/111 (98%)	89 (82%)	20 (18%)	0	100	100
12	N2	109/111 (98%)	88 (81%)	21 (19%)	0	100	100
13	O1	135/137 (98%)	105 (78%)	30 (22%)	0	100	100
13	O2	135/137 (98%)	107 (79%)	28 (21%)	0	100	100
14	P1	115/117 (98%)	100 (87%)	15 (13%)	0	100	100
14	P2	115/117 (98%)	99 (86%)	16 (14%)	0	100	100
15	Q1	99/101 (98%)	75 (76%)	24 (24%)	0	100	100
15	Q2	99/101 (98%)	80 (81%)	19 (19%)	0	100	100
16	R1	111/113 (98%)	92 (83%)	19 (17%)	0	100	100
16	R2	111/113 (98%)	83 (75%)	28 (25%)	0	100	100
17	S1	90/92 (98%)	71 (79%)	19 (21%)	0	100	100
17	S2	90/92 (98%)	71 (79%)	19 (21%)	0	100	100
18	T1	100/102 (98%)	72 (72%)	27 (27%)	1 (1%)	15	53
18	T2	100/102 (98%)	67 (67%)	32 (32%)	1 (1%)	15	53
19	U1	177/179 (99%)	129 (73%)	48 (27%)	0	100	100
19	U2	177/179 (99%)	129 (73%)	47 (27%)	1 (1%)	25	64
20	V1	75/77 (97%)	59 (79%)	16 (21%)	0	100	100
20	V2	75/77 (97%)	55 (73%)	20 (27%)	0	100	100
21	W1	95/97 (98%)	71 (75%)	24 (25%)	0	100	100
21	W2	95/97 (98%)	81 (85%)	14 (15%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	X1	67/69 (97%)	56 (84%)	11 (16%)	0	100	100
22	X2	67/69 (97%)	54 (81%)	13 (19%)	0	100	100
23	Y1	57/59 (97%)	46 (81%)	11 (19%)	0	100	100
23	Y2	57/59 (97%)	45 (79%)	12 (21%)	0	100	100
24	Z1	61/63 (97%)	42 (69%)	18 (30%)	1 (2%)	9	44
24	Z2	61/63 (97%)	39 (64%)	21 (34%)	1 (2%)	9	44
25	a1	57/59 (97%)	38 (67%)	19 (33%)	0	100	100
25	a2	57/59 (97%)	42 (74%)	15 (26%)	0	100	100
26	b1	43/45 (96%)	28 (65%)	15 (35%)	0	100	100
26	b2	43/45 (96%)	33 (77%)	10 (23%)	0	100	100
27	c1	47/49 (96%)	42 (89%)	5 (11%)	0	100	100
27	c2	47/49 (96%)	41 (87%)	6 (13%)	0	100	100
28	d1	59/61 (97%)	47 (80%)	12 (20%)	0	100	100
28	d2	59/61 (97%)	44 (75%)	15 (25%)	0	100	100
31	e1	34/36 (94%)	27 (79%)	7 (21%)	0	100	100
31	e2	34/36 (94%)	26 (76%)	8 (24%)	0	100	100
32	B3	235/237 (99%)	184 (78%)	51 (22%)	0	100	100
32	B4	235/237 (99%)	190 (81%)	45 (19%)	0	100	100
33	C3	204/206 (99%)	158 (78%)	46 (22%)	0	100	100
33	C4	204/206 (99%)	162 (79%)	42 (21%)	0	100	100
34	D3	206/208 (99%)	159 (77%)	47 (23%)	0	100	100
34	D4	206/208 (99%)	161 (78%)	44 (21%)	1 (0%)	29	67
35	E3	149/151 (99%)	121 (81%)	28 (19%)	0	100	100
35	E4	149/151 (99%)	119 (80%)	30 (20%)	0	100	100
36	F3	99/101 (98%)	84 (85%)	15 (15%)	0	100	100
36	F4	99/101 (98%)	86 (87%)	13 (13%)	0	100	100
37	G3	153/155 (99%)	129 (84%)	24 (16%)	0	100	100
37	G4	153/155 (99%)	120 (78%)	33 (22%)	0	100	100
38	H3	136/138 (99%)	112 (82%)	24 (18%)	0	100	100
38	H4	136/138 (99%)	113 (83%)	23 (17%)	0	100	100
39	I3	125/127 (98%)	89 (71%)	36 (29%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	I4	125/127 (98%)	92 (74%)	33 (26%)	0	100	100
40	J3	97/99 (98%)	74 (76%)	23 (24%)	0	100	100
40	J4	97/99 (98%)	72 (74%)	25 (26%)	0	100	100
41	K3	116/118 (98%)	91 (78%)	25 (22%)	0	100	100
41	K4	116/118 (98%)	97 (84%)	19 (16%)	0	100	100
42	L3	123/125 (98%)	102 (83%)	21 (17%)	0	100	100
42	L4	123/125 (98%)	95 (77%)	28 (23%)	0	100	100
43	M3	115/117 (98%)	99 (86%)	16 (14%)	0	100	100
43	M4	115/117 (98%)	87 (76%)	28 (24%)	0	100	100
44	N3	58/60 (97%)	45 (78%)	13 (22%)	0	100	100
44	N4	58/60 (97%)	46 (79%)	12 (21%)	0	100	100
45	O3	86/88 (98%)	72 (84%)	14 (16%)	0	100	100
45	O4	86/88 (98%)	74 (86%)	12 (14%)	0	100	100
46	P3	82/84 (98%)	69 (84%)	13 (16%)	0	100	100
46	P4	82/84 (98%)	64 (78%)	18 (22%)	0	100	100
47	Q3	98/100 (98%)	78 (80%)	20 (20%)	0	100	100
47	Q4	98/100 (98%)	78 (80%)	20 (20%)	0	100	100
48	R3	60/62 (97%)	50 (83%)	10 (17%)	0	100	100
48	R4	60/62 (97%)	50 (83%)	10 (17%)	0	100	100
49	S3	76/78 (97%)	68 (90%)	6 (8%)	2 (3%)	5	34
49	S4	76/78 (97%)	57 (75%)	18 (24%)	1 (1%)	12	48
50	T3	97/99 (98%)	82 (84%)	14 (14%)	1 (1%)	15	53
50	T4	97/99 (98%)	80 (82%)	16 (16%)	1 (1%)	15	53
51	U3	23/25 (92%)	18 (78%)	5 (22%)	0	100	100
51	U4	23/25 (92%)	19 (83%)	4 (17%)	0	100	100
52	W4	55/57 (96%)	40 (73%)	12 (22%)	3 (6%)	2	21
52	X3	55/57 (96%)	39 (71%)	14 (26%)	2 (4%)	3	28
54	V3	117/119 (98%)	90 (77%)	25 (21%)	2 (2%)	9	43
54	V4	115/119 (97%)	90 (78%)	23 (20%)	2 (2%)	9	43
All	All	11544/11750 (98%)	9056 (78%)	2458 (21%)	30 (0%)	44	76

All (30) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
50	T3	74	LYS
52	X3	143	ASP
52	X3	164	ALA
54	V3	93	ARG
50	T4	74	LYS
52	W4	163	ASN
52	W4	174	ARG
54	V4	17	ILE
24	Z1	43	TYR
9	K2	58	THR
19	U2	53	ILE
24	Z2	24	THR
34	D4	10	ARG
49	S4	70	LYS
52	W4	164	ALA
5	G2	90	LYS
10	L2	7	MET
49	S3	67	VAL
54	V3	29	ASP
2	D1	83	ASP
2	D1	82	ARG
54	V4	15	ASP
2	D2	82	ARG
2	D2	83	ASP
10	L2	6	ARG
49	S3	66	MET
1	C2	29	PRO
3	E2	10	PRO
18	T2	53	PRO
18	T1	80	GLY

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	C1	214/214 (100%)	210 (98%)	4 (2%)	57 74
1	C2	214/214 (100%)	210 (98%)	4 (2%)	57 74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	D1	165/165 (100%)	161 (98%)	4 (2%)	49	68
2	D2	165/165 (100%)	163 (99%)	2 (1%)	71	83
3	E1	165/165 (100%)	157 (95%)	8 (5%)	25	52
3	E2	165/165 (100%)	161 (98%)	4 (2%)	49	68
4	F1	155/155 (100%)	150 (97%)	5 (3%)	39	62
4	F2	155/155 (100%)	153 (99%)	2 (1%)	69	82
5	G1	142/142 (100%)	137 (96%)	5 (4%)	36	60
5	G2	142/142 (100%)	136 (96%)	6 (4%)	30	55
6	H1	41/41 (100%)	40 (98%)	1 (2%)	49	68
6	H2	41/41 (100%)	41 (100%)	0	100	100
7	I1	117/117 (100%)	115 (98%)	2 (2%)	60	78
7	I2	117/117 (100%)	116 (99%)	1 (1%)	78	88
8	J1	100/100 (100%)	98 (98%)	2 (2%)	55	73
8	J2	100/100 (100%)	98 (98%)	2 (2%)	55	73
9	K1	116/116 (100%)	111 (96%)	5 (4%)	29	55
9	K2	116/116 (100%)	112 (97%)	4 (3%)	37	61
10	L1	111/111 (100%)	106 (96%)	5 (4%)	27	54
10	L2	111/111 (100%)	108 (97%)	3 (3%)	44	66
11	M1	100/100 (100%)	98 (98%)	2 (2%)	55	73
11	M2	100/100 (100%)	99 (99%)	1 (1%)	76	86
12	N1	87/87 (100%)	84 (97%)	3 (3%)	37	61
12	N2	87/87 (100%)	85 (98%)	2 (2%)	50	70
13	O1	120/120 (100%)	114 (95%)	6 (5%)	24	51
13	O2	120/120 (100%)	115 (96%)	5 (4%)	30	55
14	P1	93/93 (100%)	89 (96%)	4 (4%)	29	55
14	P2	93/93 (100%)	88 (95%)	5 (5%)	22	49
15	Q1	82/82 (100%)	81 (99%)	1 (1%)	71	83
15	Q2	82/82 (100%)	81 (99%)	1 (1%)	71	83
16	R1	92/92 (100%)	91 (99%)	1 (1%)	73	84
16	R2	92/92 (100%)	89 (97%)	3 (3%)	38	61
17	S1	74/74 (100%)	71 (96%)	3 (4%)	30	56

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	S2	74/74 (100%)	71 (96%)	3 (4%)	30	56
18	T1	85/85 (100%)	81 (95%)	4 (5%)	26	53
18	T2	85/85 (100%)	84 (99%)	1 (1%)	71	83
19	U1	158/158 (100%)	157 (99%)	1 (1%)	86	92
19	U2	158/158 (100%)	157 (99%)	1 (1%)	86	92
20	V1	62/62 (100%)	60 (97%)	2 (3%)	39	62
20	V2	62/62 (100%)	60 (97%)	2 (3%)	39	62
21	W1	82/82 (100%)	80 (98%)	2 (2%)	49	68
21	W2	82/82 (100%)	80 (98%)	2 (2%)	49	68
22	X1	64/64 (100%)	64 (100%)	0	100	100
22	X2	64/64 (100%)	62 (97%)	2 (3%)	40	63
23	Y1	51/51 (100%)	51 (100%)	0	100	100
23	Y2	51/51 (100%)	50 (98%)	1 (2%)	55	73
24	Z1	57/57 (100%)	54 (95%)	3 (5%)	22	50
24	Z2	57/57 (100%)	54 (95%)	3 (5%)	22	50
25	a1	51/51 (100%)	50 (98%)	1 (2%)	55	73
25	a2	51/51 (100%)	49 (96%)	2 (4%)	32	57
26	b1	44/44 (100%)	41 (93%)	3 (7%)	16	43
26	b2	44/44 (100%)	40 (91%)	4 (9%)	9	32
27	c1	42/42 (100%)	40 (95%)	2 (5%)	25	52
27	c2	42/42 (100%)	40 (95%)	2 (5%)	25	52
28	d1	51/51 (100%)	49 (96%)	2 (4%)	32	57
28	d2	51/51 (100%)	51 (100%)	0	100	100
31	e1	33/33 (100%)	31 (94%)	2 (6%)	18	46
31	e2	33/33 (100%)	31 (94%)	2 (6%)	18	46
32	B3	205/205 (100%)	201 (98%)	4 (2%)	55	73
32	B4	205/205 (100%)	198 (97%)	7 (3%)	37	61
33	C3	160/160 (100%)	156 (98%)	4 (2%)	47	68
33	C4	160/160 (100%)	157 (98%)	3 (2%)	57	74
34	D3	180/180 (100%)	179 (99%)	1 (1%)	86	92
34	D4	180/180 (100%)	175 (97%)	5 (3%)	43	65

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	E3	116/116 (100%)	113 (97%)	3 (3%)	46	67
35	E4	116/116 (100%)	115 (99%)	1 (1%)	78	88
36	F3	90/90 (100%)	89 (99%)	1 (1%)	73	84
36	F4	90/90 (100%)	86 (96%)	4 (4%)	28	54
37	G3	126/126 (100%)	122 (97%)	4 (3%)	39	62
37	G4	126/126 (100%)	124 (98%)	2 (2%)	62	79
38	H3	119/119 (100%)	118 (99%)	1 (1%)	81	89
38	H4	119/119 (100%)	118 (99%)	1 (1%)	81	89
39	I3	98/98 (100%)	98 (100%)	0	100	100
39	I4	98/98 (100%)	95 (97%)	3 (3%)	40	63
40	J3	89/89 (100%)	88 (99%)	1 (1%)	73	84
40	J4	89/89 (100%)	88 (99%)	1 (1%)	73	84
41	K3	89/89 (100%)	86 (97%)	3 (3%)	37	61
41	K4	89/89 (100%)	86 (97%)	3 (3%)	37	61
42	L3	104/104 (100%)	99 (95%)	5 (5%)	25	52
42	L4	104/104 (100%)	101 (97%)	3 (3%)	42	64
43	M3	94/94 (100%)	91 (97%)	3 (3%)	39	62
43	M4	94/94 (100%)	91 (97%)	3 (3%)	39	62
44	N3	49/49 (100%)	48 (98%)	1 (2%)	55	73
44	N4	49/49 (100%)	48 (98%)	1 (2%)	55	73
45	O3	79/79 (100%)	79 (100%)	0	100	100
45	O4	79/79 (100%)	78 (99%)	1 (1%)	69	82
46	P3	72/72 (100%)	70 (97%)	2 (3%)	43	65
46	P4	72/72 (100%)	72 (100%)	0	100	100
47	Q3	95/95 (100%)	92 (97%)	3 (3%)	39	62
47	Q4	95/95 (100%)	94 (99%)	1 (1%)	73	84
48	R3	55/55 (100%)	54 (98%)	1 (2%)	59	76
48	R4	55/55 (100%)	55 (100%)	0	100	100
49	S3	67/67 (100%)	63 (94%)	4 (6%)	19	47
49	S4	67/67 (100%)	64 (96%)	3 (4%)	27	54
50	T3	76/76 (100%)	75 (99%)	1 (1%)	69	82

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	T4	76/76 (100%)	75 (99%)	1 (1%)	69	82
51	U3	20/20 (100%)	18 (90%)	2 (10%)	7	28
51	U4	20/20 (100%)	18 (90%)	2 (10%)	7	28
52	W4	50/50 (100%)	35 (70%)	15 (30%)	0	2
52	X3	50/50 (100%)	33 (66%)	17 (34%)	0	1
54	V3	101/101 (100%)	91 (90%)	10 (10%)	8	29
54	V4	100/101 (99%)	96 (96%)	4 (4%)	31	57
All	All	9775/9776 (100%)	9487 (97%)	288 (3%)	45	64

All (288) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C1	43	ARG
1	C1	147	LEU
1	C1	253	GLN
1	C1	271	ILE
2	D1	41	LYS
2	D1	55	ASN
2	D1	64	LYS
2	D1	116	VAL
3	E1	63	LYS
3	E1	64	ILE
3	E1	103	LYS
3	E1	104	LYS
3	E1	112	MET
3	E1	169	ASN
3	E1	188	ARG
3	E1	196	LEU
4	F1	33	ARG
4	F1	36	LYS
4	F1	83	ARG
4	F1	86	MET
4	F1	153	ARG
5	G1	54	ARG
5	G1	69	ARG
5	G1	95	ARG
5	G1	101	ARG
5	G1	130	ARG
6	H1	27	ARG
7	I1	65	LYS

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Mol	Chain	Res	Type
7	I1	114	ARG
8	J1	88	ASN
8	J1	104	ARG
9	K1	13	ASN
9	K1	19	VAL
9	K1	76	LYS
9	K1	137	LYS
9	K1	148	LEU
10	L1	6	ARG
10	L1	10	ARG
10	L1	60	ARG
10	L1	133	ARG
10	L1	137	TYR
11	M1	33	ARG
11	M1	96	ARG
12	N1	10	ARG
12	N1	65	VAL
12	N1	110	LEU
13	O1	13	ARG
13	O1	39	ARG
13	O1	89	VAL
13	O1	108	ARG
13	O1	112	ARG
13	O1	120	ARG
14	P1	16	LYS
14	P1	44	ASN
14	P1	66	ASN
14	P1	92	ARG
15	Q1	82	ARG
16	R1	37	ARG
17	S1	59	VAL
17	S1	65	ARG
17	S1	72	LYS
18	T1	28	LYS
18	T1	81	LYS
18	T1	84	ARG
18	T1	95	LYS
19	U1	31	ARG
20	V1	14	ARG
20	V1	74	ARG
21	W1	40	ARG
21	W1	81	LYS

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Mol	Chain	Res	Type
24	Z1	20	ASN
24	Z1	48	ARG
24	Z1	55	ARG
25	a1	5	PRO
26	b1	19	ARG
26	b1	29	ASN
26	b1	50	ARG
27	c1	47	ARG
27	c1	49	ARG
28	d1	3	LYS
28	d1	30	ARG
31	e1	9	ARG
31	e1	22	ARG
1	C2	43	ARG
1	C2	102	LYS
1	C2	242	ARG
1	C2	255	LYS
2	D2	122	PHE
2	D2	203	LYS
3	E2	67	GLN
3	E2	74	ARG
3	E2	103	LYS
3	E2	196	LEU
4	F2	21	ARG
4	F2	83	ARG
5	G2	42	ARG
5	G2	54	ARG
5	G2	69	ARG
5	G2	101	ARG
5	G2	147	ASN
5	G2	149	ARG
7	I2	35	ARG
8	J2	13	ASN
8	J2	104	ARG
9	K2	50	ARG
9	K2	76	LYS
9	K2	79	ARG
9	K2	85	LEU
10	L2	3	MET
10	L2	10	ARG
10	L2	60	ARG
11	M2	86	ARG

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Mol	Chain	Res	Type
12	N2	10	ARG
12	N2	106	ARG
13	O2	2	ASN
13	O2	13	ARG
13	O2	39	ARG
13	O2	108	ARG
13	O2	118	ARG
14	P2	15	LYS
14	P2	44	ASN
14	P2	53	ARG
14	P2	92	ARG
14	P2	101	ARG
15	Q2	82	ARG
16	R2	11	ARG
16	R2	40	ASN
16	R2	60	ASN
17	S2	72	LYS
17	S2	73	ARG
17	S2	76	ARG
18	T2	28	LYS
19	U2	31	ARG
20	V2	11	ARG
20	V2	32	ARG
21	W2	23	LYS
21	W2	40	ARG
22	X2	7	ARG
22	X2	23	LYS
23	Y2	50	VAL
24	Z2	20	ASN
24	Z2	48	ARG
24	Z2	56	VAL
25	a2	5	PRO
25	a2	55	ARG
26	b2	19	ARG
26	b2	25	LYS
26	b2	44	ARG
26	b2	50	ARG
27	c2	1	MET
27	c2	37	LYS
31	e2	9	ARG
31	e2	22	ARG
32	B3	23	ARG

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Mol	Chain	Res	Type
32	B3	25	ASN
32	B3	30	ARG
32	B3	96	ARG
33	C3	45	LYS
33	C3	79	ARG
33	C3	119	ARG
33	C3	127	ARG
34	D3	3	ARG
35	E3	37	ARG
35	E3	126	ARG
35	E3	150	ARG
36	F3	40	VAL
37	G3	6	ARG
37	G3	37	ASN
37	G3	44	TYR
37	G3	76	ARG
38	H3	69	ARG
40	J3	79	ARG
41	K3	18	ARG
41	K3	106	LYS
41	K3	127	LYS
42	L3	8	ASN
42	L3	19	ARG
42	L3	23	LYS
42	L3	89	ARG
42	L3	111	LYS
43	M3	14	ARG
43	M3	46	LYS
43	M3	115	LYS
44	N3	35	ARG
46	P3	5	ARG
46	P3	72	ARG
47	Q3	52	LYS
47	Q3	91	ARG
47	Q3	101	ARG
48	R3	36	ASN
49	S3	36	ARG
49	S3	37	ARG
49	S3	53	ASN
49	S3	55	LYS
50	T3	9	ASN
51	U3	7	ARG

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Mol	Chain	Res	Type
51	U3	9	ARG
52	X3	139	MET
52	X3	142	MET
52	X3	145	GLU
52	X3	146	GLU
52	X3	149	PHE
52	X3	150	GLN
52	X3	151	MET
52	X3	152	GLU
52	X3	154	LEU
52	X3	158	PHE
52	X3	162	ARG
52	X3	168	GLU
52	X3	172	ILE
52	X3	173	TYR
52	X3	174	ARG
52	X3	180	TYR
52	X3	182	LEU
54	V3	13	ILE
54	V3	27	ARG
54	V3	29	ASP
54	V3	30	ARG
54	V3	62	LEU
54	V3	87	LEU
54	V3	88	GLU
54	V3	89	THR
54	V3	92	LYS
54	V3	97	ARG
32	B4	30	ARG
32	B4	37	ASN
32	B4	64	ARG
32	B4	96	ARG
32	B4	153	ARG
32	B4	197	VAL
32	B4	209	ARG
33	C4	26	LYS
33	C4	30	ARG
33	C4	126	ARG
34	D4	13	ARG
34	D4	73	ARG
34	D4	114	ARG
34	D4	132	ARG

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Mol	Chain	Res	Type
34	D4	199	ASN
35	E4	150	ARG
36	F4	15	ASP
36	F4	36	ARG
36	F4	40	VAL
36	F4	100	ASN
37	G4	13	GLN
37	G4	68	ASN
38	H4	137	VAL
39	I4	20	ARG
39	I4	66	ARG
39	I4	127	LYS
40	J4	76	ASN
41	K4	18	ARG
41	K4	51	LYS
41	K4	62	GLN
42	L4	8	ASN
42	L4	46	LYS
42	L4	111	LYS
43	M4	14	ARG
43	M4	46	LYS
43	M4	115	LYS
44	N4	12	ARG
45	O4	79	ARG
47	Q4	52	LYS
49	S4	37	ARG
49	S4	53	ASN
49	S4	81	ARG
50	T4	9	ASN
51	U4	22	ARG
51	U4	26	LYS
52	W4	145	GLU
52	W4	146	GLU
52	W4	149	PHE
52	W4	150	GLN
52	W4	160	VAL
52	W4	162	ARG
52	W4	169	ILE
52	W4	171	VAL
52	W4	172	ILE
52	W4	173	TYR
52	W4	174	ARG

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Mol	Chain	Res	Type
52	W4	175	ARG
52	W4	180	TYR
52	W4	182	LEU
52	W4	184	GLU
54	V4	17	ILE
54	V4	27	ARG
54	V4	55	ARG
54	V4	62	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (140) such sidechains are listed below:

Mol	Chain	Res	Type
1	C1	87	ASN
1	C1	116	GLN
1	C1	166	GLN
1	C1	203	ASN
1	C1	253	GLN
2	D1	48	GLN
2	D1	55	ASN
2	D1	135	HIS
2	D1	137	HIS
2	D1	180	ASN
3	E1	40	GLN
3	E1	169	ASN
3	E1	203	GLN
6	H1	28	ASN
6	H1	43	ASN
8	J1	82	ASN
8	J1	88	ASN
9	K1	13	ASN
9	K1	70	GLN
10	L1	46	GLN
10	L1	141	GLN
11	M1	11	ASN
11	M1	23	ASN
12	N1	16	ASN
12	N1	68	GLN
13	O1	84	GLN
14	P1	44	ASN
14	P1	66	ASN
14	P1	75	ASN
16	R1	61	ASN

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Mol	Chain	Res	Type
16	R1	111	HIS
17	S1	55	ASN
19	U1	32	HIS
19	U1	118	GLN
20	V1	12	ASN
20	V1	29	GLN
20	V1	35	ASN
20	V1	80	HIS
21	W1	19	GLN
23	Y1	32	GLN
24	Z1	20	ASN
26	b1	49	HIS
31	e1	34	GLN
1	C2	115	GLN
1	C2	186	HIS
1	C2	203	ASN
2	D2	54	GLN
2	D2	135	HIS
2	D2	137	HIS
4	F2	40	ASN
4	F2	66	GLN
5	G2	147	ASN
7	I2	8	GLN
7	I2	101	HIS
8	J2	5	GLN
8	J2	82	ASN
9	K2	68	GLN
9	K2	70	GLN
10	L2	123	HIS
11	M2	71	GLN
12	N2	16	ASN
12	N2	38	GLN
13	O2	2	ASN
13	O2	84	GLN
14	P2	44	ASN
15	Q2	11	GLN
16	R2	40	ASN
16	R2	62	HIS
17	S2	55	ASN
19	U2	85	HIS
20	V2	70	GLN
21	W2	56	GLN

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Mol	Chain	Res	Type
22	X2	46	GLN
22	X2	65	ASN
22	X2	71	ASN
24	Z2	20	ASN
26	b2	26	ASN
27	c2	6	GLN
31	e2	36	GLN
32	B3	76	GLN
33	C3	63	ASN
33	C3	110	ASN
34	D3	199	ASN
36	F3	64	GLN
37	G3	56	GLN
37	G3	106	GLN
37	G3	148	ASN
38	H3	70	GLN
38	H3	78	GLN
39	I3	23	ASN
39	I3	117	HIS
41	K3	22	HIS
41	K3	116	HIS
42	L3	75	HIS
43	M3	40	ASN
43	M3	77	ASN
43	M3	101	GLN
43	M3	106	ASN
45	O3	51	HIS
47	Q3	94	ASN
48	R3	36	ASN
49	S3	47	HIS
49	S3	83	HIS
50	T3	9	ASN
32	B4	19	HIS
32	B4	37	ASN
32	B4	76	GLN
32	B4	135	GLN
32	B4	212	GLN
33	C4	28	GLN
33	C4	98	ASN
33	C4	102	ASN
33	C4	108	ASN
33	C4	110	ASN

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Mol	Chain	Res	Type
33	C4	136	GLN
33	C4	162	GLN
34	D4	62	GLN
34	D4	199	ASN
34	D4	201	GLN
36	F4	100	ASN
37	G4	28	ASN
37	G4	37	ASN
37	G4	68	ASN
37	G4	84	ASN
37	G4	148	ASN
40	J4	62	HIS
40	J4	68	HIS
40	J4	76	ASN
41	K4	13	GLN
41	K4	22	HIS
41	K4	93	GLN
41	K4	116	HIS
42	L4	75	HIS
45	O4	28	GLN
45	O4	37	ASN
49	S4	23	ASN
50	T4	26	ASN
52	W4	163	ASN
54	V4	49	HIS
54	V4	107	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
29	A1	2911/2912 (99%)	1374 (47%)	31 (1%)
29	A2	2911/2912 (99%)	1347 (46%)	39 (1%)
30	B1	121/122 (99%)	61 (50%)	1 (0%)
30	B2	121/122 (99%)	61 (50%)	0
53	A3	1505/1506 (99%)	771 (51%)	28 (1%)
53	A4	1505/1506 (99%)	757 (50%)	27 (1%)
All	All	9074/9080 (99%)	4371 (48%)	126 (1%)

All (4371) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
29	A1	4	C
29	A1	6	A
29	A1	9	U
29	A1	10	G
29	A1	12	U
29	A1	13	A
29	A1	14	A
29	A1	15	G
29	A1	18	C
29	A1	26	G
29	A1	29	U
29	A1	34	C
29	A1	35	G
29	A1	36	G
29	A1	37	C
29	A1	38	A
29	A1	42	G
29	A1	44	G
29	A1	45	C
29	A1	46	C
29	A1	48	A
29	A1	50	G
29	A1	51	A
29	A1	54	G
29	A1	57	G
29	A1	62	U
29	A1	63	A
29	A1	65	C
29	A1	70	A
29	A1	71	U
29	A1	72	A
29	A1	73	A
29	A1	74	G
29	A1	75	C
29	A1	79	G
29	A1	82	G
29	A1	84	G
29	A1	85	C
29	A1	87	G
29	A1	88	G
29	A1	89	U
29	A1	92	C
29	A1	95	G

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Mol	Chain	Res	Type
29	A1	97	G
29	A1	100	G
29	A1	101	A
29	A1	103	C
29	A1	104	C
29	A1	106	U
29	A1	107	G
29	A1	109	A
29	A1	110	U
29	A1	111	G
29	A1	113	C
29	A1	116	A
29	A1	117	A
29	A1	118	U
29	A1	121	G
29	A1	122	G
29	A1	124	A
29	A1	125	A
29	A1	126	C
29	A1	128	C
29	A1	129	G
29	A1	132	C
29	A1	134	G
29	A1	136	G
29	A1	137	G
29	A1	139	A
29	A1	145	G
29	A1	149	A
29	A1	152	G
29	A1	156	U
29	A1	158	U
29	A1	159	U
29	A1	160	U
29	A1	161	G
29	A1	165	G
29	A1	168	G
29	A1	169	G
29	A1	173	C
29	A1	175	U
29	A1	182	C
29	A1	186	A
29	A1	189	A

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Mol	Chain	Res	Type
29	A1	190	U
29	A1	193	C
29	A1	195	G
29	A1	200	C
29	A1	203	A
29	A1	205	G
29	A1	206	A
29	A1	209	G
29	A1	211	A
29	A1	212	A
29	A1	213	A
29	A1	214	G
29	A1	217	A
29	A1	218	A
29	A1	219	A
29	A1	220	U
29	A1	223	A
29	A1	224	C
29	A1	225	U
29	A1	226	C
29	A1	231	A
29	A1	233	U
29	A1	236	C
29	A1	238	G
29	A1	239	C
29	A1	240	G
29	A1	241	A
29	A1	242	G
29	A1	251	G
29	A1	252	A
29	A1	253	C
29	A1	255	A
29	A1	261	A
29	A1	268	C
29	A1	271	C
29	A1	273	U
29	A1	274	G
29	A1	275	U
29	A1	276	C
29	A1	277	C
29	A1	278	G
29	A1	279	G

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Mol	Chain	Res	Type
29	A1	281	C
29	A1	283	G
29	A1	284	G
29	A1	289	U
29	A1	290	G
29	A1	291	G
29	A1	292	G
29	A1	293	G
29	A1	294	C
29	A1	299	G
29	A1	300	G
29	A1	301	A
29	A1	302	C
29	A1	303	A
29	A1	306	G
29	A1	308	A
29	A1	309	U
29	A1	312	C
29	A1	313	C
29	A1	324	A
29	A1	325	A
29	A1	327	C
29	A1	331	U
29	A1	333	G
29	A1	335	A
29	A1	336	A
29	A1	337	G
29	A1	338	C
29	A1	341	C
29	A1	342	G
29	A1	346	G
29	A1	347	A
29	A1	348	G
29	A1	350	G
29	A1	351	G
29	A1	353	U
29	A1	355	A
29	A1	357	A
29	A1	360	C
29	A1	367	G
29	A1	369	G
29	A1	370	A

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Mol	Chain	Res	Type
29	A1	372	A
29	A1	374	G
29	A1	376	G
29	A1	377	G
29	A1	379	G
29	A1	386	G
29	A1	387	U
29	A1	388	G
29	A1	389	A
29	A1	395	C
29	A1	396	C
29	A1	398	G
29	A1	399	A
29	A1	400	G
29	A1	401	U
29	A1	405	C
29	A1	407	G
29	A1	409	G
29	A1	410	G
29	A1	414	G
29	A1	415	U
29	A1	416	G
29	A1	418	A
29	A1	419	G
29	A1	422	A
29	A1	424	G
29	A1	427	G
29	A1	428	G
29	A1	431	U
29	A1	432	C
29	A1	433	U
29	A1	434	G
29	A1	435	G
29	A1	436	G
29	A1	439	G
29	A1	440	A
29	A1	441	C
29	A1	450	U
29	A1	451	A
29	A1	453	G
29	A1	460	U
29	A1	462	C

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Mol	Chain	Res	Type
29	A1	463	U
29	A1	464	C
29	A1	465	C
29	A1	467	G
29	A1	469	U
29	A1	471	A
29	A1	472	C
29	A1	475	A
29	A1	476	U
29	A1	478	G
29	A1	480	G
29	A1	481	C
29	A1	482	A
29	A1	484	C
29	A1	485	A
29	A1	486	G
29	A1	492	U
29	A1	493	G
29	A1	494	A
29	A1	498	A
29	A1	500	A
29	A1	503	U
29	A1	505	A
29	A1	508	A
29	A1	509	G
29	A1	510	A
29	A1	514	C
29	A1	517	G
29	A1	519	A
29	A1	521	G
29	A1	525	G
29	A1	526	U
29	A1	531	U
29	A1	532	A
29	A1	534	A
29	A1	535	G
29	A1	536	C
29	A1	538	U
29	A1	539	G
29	A1	545	G
29	A1	550	C
29	A1	551	U

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Mol	Chain	Res	Type
29	A1	554	C
29	A1	556	A
29	A1	557	G
29	A1	558	C
29	A1	559	A
29	A1	565	G
29	A1	566	G
29	A1	568	C
29	A1	570	C
29	A1	573	A
29	A1	574	A
29	A1	575	G
29	A1	578	G
29	A1	580	U
29	A1	581	G
29	A1	586	G
29	A1	587	U
29	A1	588	G
29	A1	594	U
29	A1	598	G
29	A1	599	C
29	A1	600	A
29	A1	607	G
29	A1	608	G
29	A1	611	A
29	A1	612	C
29	A1	614	C
29	A1	615	A
29	A1	617	G
29	A1	621	G
29	A1	628	A
29	A1	631	U
29	A1	632	U
29	A1	635	G
29	A1	638	G
29	A1	641	G
29	A1	642	A
29	A1	645	C
29	A1	648	A
29	A1	649	G
29	A1	650	G
29	A1	652	G

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Mol	Chain	Res	Type
29	A1	655	G
29	A1	661	C
29	A1	664	A
29	A1	665	G
29	A1	670	A
29	A1	671	A
29	A1	673	A
29	A1	676	G
29	A1	677	C
29	A1	678	G
29	A1	679	C
29	A1	680	A
29	A1	681	A
29	A1	683	C
29	A1	684	G
29	A1	686	C
29	A1	687	C
29	A1	689	G
29	A1	690	C
29	A1	691	A
29	A1	692	C
29	A1	694	C
29	A1	695	G
29	A1	696	G
29	A1	701	A
29	A1	702	A
29	A1	703	A
29	A1	704	A
29	A1	710	C
29	A1	711	G
29	A1	712	G
29	A1	715	G
29	A1	719	A
29	A1	724	A
29	A1	725	A
29	A1	726	A
29	A1	730	G
29	A1	731	G
29	A1	732	C
29	A1	733	G
29	A1	734	A
29	A1	735	G

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Mol	Chain	Res	Type
29	A1	737	U
29	A1	747	C
29	A1	748	A
29	A1	752	U
29	A1	760	G
29	A1	761	G
29	A1	762	G
29	A1	763	U
29	A1	764	G
29	A1	766	G
29	A1	768	C
29	A1	769	C
29	A1	770	C
29	A1	771	A
29	A1	775	G
29	A1	777	G
29	A1	778	G
29	A1	782	G
29	A1	783	A
29	A1	785	C
29	A1	786	C
29	A1	787	G
29	A1	789	U
29	A1	790	G
29	A1	793	G
29	A1	796	U
29	A1	797	G
29	A1	798	C
29	A1	800	A
29	A1	801	A
29	A1	802	C
29	A1	806	U
29	A1	807	C
29	A1	808	G
29	A1	810	A
29	A1	811	U
29	A1	812	G
29	A1	813	A
29	A1	814	G
29	A1	815	C
29	A1	824	G
29	A1	825	G

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Mol	Chain	Res	Type
29	A1	826	A
29	A1	827	G
29	A1	828	U
29	A1	831	A
29	A1	832	A
29	A1	833	A
29	A1	837	A
29	A1	838	A
29	A1	839	C
29	A1	840	C
29	A1	842	A
29	A1	848	G
29	A1	849	A
29	A1	851	A
29	A1	854	G
29	A1	855	C
29	A1	857	G
29	A1	861	C
29	A1	866	C
29	A1	867	G
29	A1	868	A
29	A1	870	A
29	A1	873	A
29	A1	875	U
29	A1	877	U
29	A1	879	G
29	A1	880	G
29	A1	883	C
29	A1	888	U
29	A1	891	G
29	A1	895	C
29	A1	896	U
29	A1	897	G
29	A1	902	G
29	A1	904	G
29	A1	914	C
29	A1	917	U
29	A1	918	G
29	A1	920	U
29	A1	929	G
29	A1	931	G
29	A1	933	C

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Mol	Chain	Res	Type
29	A1	934	C
29	A1	935	C
29	A1	937	C
29	A1	938	C
29	A1	939	A
29	A1	940	G
29	A1	941	C
29	A1	942	C
29	A1	943	U
29	A1	944	A
29	A1	945	C
29	A1	946	C
29	A1	947	A
29	A1	948	A
29	A1	949	A
29	A1	952	C
29	A1	953	U
29	A1	956	C
29	A1	958	A
29	A1	961	U
29	A1	962	C
29	A1	965	A
29	A1	974	A
29	A1	978	G
29	A1	979	G
29	A1	980	A
29	A1	987	G
29	A1	989	G
29	A1	990	U
29	A1	992	A
29	A1	993	G
29	A1	1000	A
29	A1	1001	G
29	A1	1003	G
29	A1	1006	A
29	A1	1008	C
29	A1	1010	U
29	A1	1012	C
29	A1	1015	G
29	A1	1020	A
29	A1	1021	G
29	A1	1022	C

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Mol	Chain	Res	Type
29	A1	1025	G
29	A1	1028	A
29	A1	1029	A
29	A1	1030	C
29	A1	1031	A
29	A1	1032	A
29	A1	1036	A
29	A1	1037	G
29	A1	1040	C
29	A1	1044	A
29	A1	1051	G
29	A1	1052	C
29	A1	1053	C
29	A1	1055	C
29	A1	1059	G
29	A1	1060	U
29	A1	1061	C
29	A1	1063	G
29	A1	1065	G
29	A1	1068	A
29	A1	1069	A
29	A1	1070	G
29	A1	1071	U
29	A1	1072	G
29	A1	1073	G
29	A1	1074	U
29	A1	1075	A
29	A1	1078	G
29	A1	1081	U
29	A1	1082	G
29	A1	1085	G
29	A1	1086	C
29	A1	1087	G
29	A1	1088	C
29	A1	1092	G
29	A1	1093	A
29	A1	1094	A
29	A1	1095	G
29	A1	1098	A
29	A1	1100	C
29	A1	1101	C
29	A1	1103	G

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Mol	Chain	Res	Type
29	A1	1104	G
29	A1	1105	A
29	A1	1106	U
29	A1	1107	G
29	A1	1109	U
29	A1	1110	G
29	A1	1111	G
29	A1	1112	C
29	A1	1115	A
29	A1	1116	G
29	A1	1117	A
29	A1	1118	A
29	A1	1119	G
29	A1	1121	A
29	A1	1122	G
29	A1	1123	C
29	A1	1124	C
29	A1	1125	A
29	A1	1126	U
29	A1	1127	C
29	A1	1129	U
29	A1	1130	U
29	A1	1131	U
29	A1	1132	A
29	A1	1133	A
29	A1	1134	A
29	A1	1135	G
29	A1	1136	A
29	A1	1138	U
29	A1	1139	G
29	A1	1140	C
29	A1	1145	U
29	A1	1146	A
29	A1	1148	C
29	A1	1149	U
29	A1	1150	C
29	A1	1153	U
29	A1	1154	G
29	A1	1158	G
29	A1	1159	A
29	A1	1162	G
29	A1	1173	G

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Mol	Chain	Res	Type
29	A1	1174	A
29	A1	1176	A
29	A1	1177	A
29	A1	1178	U
29	A1	1179	G
29	A1	1180	A
29	A1	1181	U
29	A1	1182	C
29	A1	1183	G
29	A1	1184	G
29	A1	1185	G
29	A1	1186	G
29	A1	1188	U
29	A1	1189	U
29	A1	1190	A
29	A1	1191	A
29	A1	1192	G
29	A1	1196	A
29	A1	1199	G
29	A1	1200	C
29	A1	1203	A
29	A1	1204	A
29	A1	1206	C
29	A1	1208	G
29	A1	1211	G
29	A1	1214	C
29	A1	1219	G
29	A1	1220	G
29	A1	1221	A
29	A1	1222	U
29	A1	1223	G
29	A1	1224	A
29	A1	1225	C
29	A1	1226	C
29	A1	1227	C
29	A1	1228	C
29	A1	1229	A
29	A1	1230	G
29	A1	1233	G
29	A1	1235	U
29	A1	1237	G
29	A1	1249	C

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Mol	Chain	Res	Type
29	A1	1250	G
29	A1	1251	A
29	A1	1252	U
29	A1	1257	A
29	A1	1258	U
29	A1	1259	G
29	A1	1260	A
29	A1	1262	G
29	A1	1267	A
29	A1	1272	C
29	A1	1273	G
29	A1	1277	G
29	A1	1281	C
29	A1	1284	G
29	A1	1289	A
29	A1	1290	A
29	A1	1291	G
29	A1	1292	G
29	A1	1293	G
29	A1	1299	C
29	A1	1301	A
29	A1	1302	A
29	A1	1303	U
29	A1	1304	G
29	A1	1306	C
29	A1	1307	G
29	A1	1309	C
29	A1	1313	A
29	A1	1315	U
29	A1	1319	G
29	A1	1320	A
29	A1	1321	U
29	A1	1323	A
29	A1	1326	A
29	A1	1328	G
29	A1	1336	U
29	A1	1337	C
29	A1	1339	C
29	A1	1348	U
29	A1	1349	A
29	A1	1350	A
29	A1	1351	G

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Mol	Chain	Res	Type
29	A1	1359	G
29	A1	1360	U
29	A1	1361	U
29	A1	1362	C
29	A1	1363	C
29	A1	1364	U
29	A1	1369	A
29	A1	1371	U
29	A1	1373	G
29	A1	1377	U
29	A1	1378	C
29	A1	1381	C
29	A1	1386	G
29	A1	1388	U
29	A1	1390	A
29	A1	1391	G
29	A1	1398	C
29	A1	1401	A
29	A1	1402	A
29	A1	1403	G
29	A1	1404	G
29	A1	1405	U
29	A1	1407	A
29	A1	1408	A
29	A1	1409	G
29	A1	1411	C
29	A1	1413	A
29	A1	1416	G
29	A1	1417	G
29	A1	1418	C
29	A1	1419	G
29	A1	1427	A
29	A1	1428	G
29	A1	1429	G
29	A1	1432	A
29	A1	1433	G
29	A1	1434	C
29	A1	1440	A
29	A1	1441	A
29	A1	1443	A
29	A1	1444	U
29	A1	1445	U

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Mol	Chain	Res	Type
29	A1	1446	C
29	A1	1449	G
29	A1	1451	C
29	A1	1452	C
29	A1	1453	U
29	A1	1457	C
29	A1	1460	A
29	A1	1462	G
29	A1	1464	G
29	A1	1467	A
29	A1	1469	G
29	A1	1472	G
29	A1	1474	G
29	A1	1476	C
29	A1	1480	C
29	A1	1482	A
29	A1	1483	G
29	A1	1485	C
29	A1	1486	U
29	A1	1488	G
29	A1	1489	G
29	A1	1491	G
29	A1	1493	A
29	A1	1494	C
29	A1	1497	G
29	A1	1498	A
29	A1	1499	G
29	A1	1500	C
29	A1	1502	A
29	A1	1503	U
29	A1	1505	G
29	A1	1509	A
29	A1	1510	G
29	A1	1513	C
29	A1	1515	G
29	A1	1516	C
29	A1	1520	A
29	A1	1524	G
29	A1	1525	C
29	A1	1531	G
29	A1	1532	G
29	A1	1533	G

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Mol	Chain	Res	Type
29	A1	1534	A
29	A1	1535	G
29	A1	1536	G
29	A1	1537	U
29	A1	1538	A
29	A1	1539	G
29	A1	1540	G
29	A1	1541	C
29	A1	1542	A
29	A1	1543	A
29	A1	1544	A
29	A1	1545	U
29	A1	1546	C
29	A1	1547	C
29	A1	1548	G
29	A1	1551	U
29	A1	1553	C
29	A1	1554	C
29	A1	1555	A
29	A1	1557	C
29	A1	1558	A
29	A1	1559	A
29	A1	1560	G
29	A1	1561	C
29	A1	1562	U
29	A1	1563	C
29	A1	1565	G
29	A1	1566	C
29	A1	1568	U
29	A1	1569	G
29	A1	1571	U
29	A1	1572	G
29	A1	1573	G
29	A1	1576	A
29	A1	1578	G
29	A1	1580	C
29	A1	1582	G
29	A1	1583	U
29	A1	1584	A
29	A1	1585	C
29	A1	1586	G
29	A1	1589	U

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Mol	Chain	Res	Type
29	A1	1592	C
29	A1	1593	A
29	A1	1594	A
29	A1	1595	C
29	A1	1596	C
29	A1	1603	A
29	A1	1604	G
29	A1	1607	A
29	A1	1608	G
29	A1	1609	G
29	A1	1612	G
29	A1	1615	A
29	A1	1617	G
29	A1	1618	A
29	A1	1620	A
29	A1	1623	C
29	A1	1625	U
29	A1	1626	C
29	A1	1627	U
29	A1	1630	G
29	A1	1631	C
29	A1	1637	C
29	A1	1638	U
29	A1	1639	G
29	A1	1641	G
29	A1	1642	G
29	A1	1648	C
29	A1	1649	G
29	A1	1651	A
29	A1	1655	C
29	A1	1657	A
29	A1	1658	A
29	A1	1659	C
29	A1	1661	G
29	A1	1663	C
29	A1	1664	A
29	A1	1665	C
29	A1	1666	A
29	A1	1667	G
29	A1	1673	C
29	A1	1683	A
29	A1	1684	G

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Mol	Chain	Res	Type
29	A1	1688	U
29	A1	1697	C
29	A1	1701	A
29	A1	1702	G
29	A1	1703	A
29	A1	1708	U
29	A1	1716	G
29	A1	1717	A
29	A1	1721	C
29	A1	1722	U
29	A1	1723	G
29	A1	1726	A
29	A1	1732	C
29	A1	1735	C
29	A1	1740	C
29	A1	1743	C
29	A1	1744	G
29	A1	1746	G
29	A1	1747	A
29	A1	1748	G
29	A1	1749	A
29	A1	1750	A
29	A1	1755	U
29	A1	1756	G
29	A1	1757	C
29	A1	1761	C
29	A1	1762	U
29	A1	1764	G
29	A1	1768	G
29	A1	1770	U
29	A1	1771	G
29	A1	1775	C
29	A1	1776	C
29	A1	1781	G
29	A1	1784	C
29	A1	1786	G
29	A1	1787	C
29	A1	1789	G
29	A1	1790	U
29	A1	1791	G
29	A1	1792	A
29	A1	1793	A

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Mol	Chain	Res	Type
29	A1	1796	G
29	A1	1797	G
29	A1	1798	C
29	A1	1799	U
29	A1	1800	C
29	A1	1806	A
29	A1	1808	U
29	A1	1810	U
29	A1	1811	U
29	A1	1813	A
29	A1	1814	C
29	A1	1815	C
29	A1	1816	A
29	A1	1817	A
29	A1	1818	A
29	A1	1820	A
29	A1	1822	A
29	A1	1824	A
29	A1	1829	U
29	A1	1832	G
29	A1	1833	C
29	A1	1834	G
29	A1	1835	A
29	A1	1838	U
29	A1	1840	G
29	A1	1841	U
29	A1	1842	A
29	A1	1843	A
29	A1	1844	G
29	A1	1846	G
29	A1	1847	G
29	A1	1848	A
29	A1	1849	G
29	A1	1852	A
29	A1	1853	U
29	A1	1854	A
29	A1	1861	G
29	A1	1862	A
29	A1	1867	U
29	A1	1869	C
29	A1	1870	C
29	A1	1872	G

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Mol	Chain	Res	Type
29	A1	1876	C
29	A1	1877	C
29	A1	1879	G
29	A1	1880	A
29	A1	1881	A
29	A1	1885	C
29	A1	1888	G
29	A1	1890	G
29	A1	1891	G
29	A1	1893	G
29	A1	1894	G
29	A1	1895	G
29	A1	1896	G
29	A1	1898	G
29	A1	1900	A
29	A1	1901	A
29	A1	1902	G
29	A1	1903	C
29	A1	1904	C
29	A1	1907	G
29	A1	1911	C
29	A1	1912	G
29	A1	1913	A
29	A1	1916	C
29	A1	1920	G
29	A1	1921	G
29	A1	1924	A
29	A1	1925	A
29	A1	1927	G
29	A1	1930	G
29	A1	1931	G
29	A1	1932	C
29	A1	1933	C
29	A1	1934	G
29	A1	1935	U
29	A1	1936	A
29	A1	1939	U
29	A1	1940	A
29	A1	1941	U
29	A1	1942	A
29	A1	1943	A
29	A1	1946	G

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Mol	Chain	Res	Type
29	A1	1947	U
29	A1	1949	C
29	A1	1950	U
29	A1	1953	G
29	A1	1954	G
29	A1	1955	U
29	A1	1959	G
29	A1	1961	A
29	A1	1962	A
29	A1	1969	G
29	A1	1970	U
29	A1	1976	A
29	A1	1979	U
29	A1	1980	U
29	A1	1981	C
29	A1	1987	U
29	A1	1988	G
29	A1	1989	C
29	A1	1991	C
29	A1	1993	A
29	A1	1994	A
29	A1	1995	A
29	A1	1996	A
29	A1	1999	G
29	A1	2006	C
29	A1	2009	G
29	A1	2013	G
29	A1	2016	G
29	A1	2017	U
29	A1	2018	C
29	A1	2020	C
29	A1	2021	G
29	A1	2023	C
29	A1	2024	G
29	A1	2026	G
29	A1	2027	G
29	A1	2034	G
29	A1	2036	G
29	A1	2039	A
29	A1	2040	U
29	A1	2042	G
29	A1	2043	A

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Mol	Chain	Res	Type
29	A1	2044	A
29	A1	2045	C
29	A1	2046	U
29	A1	2047	G
29	A1	2050	C
29	A1	2055	A
29	A1	2056	G
29	A1	2057	A
29	A1	2058	U
29	A1	2060	C
29	A1	2063	C
29	A1	2066	A
29	A1	2067	C
29	A1	2069	C
29	A1	2075	A
29	A1	2076	G
29	A1	2080	G
29	A1	2083	A
29	A1	2084	A
29	A1	2085	G
29	A1	2086	A
29	A1	2087	C
29	A1	2089	C
29	A1	2091	G
29	A1	2092	U
29	A1	2093	G
29	A1	2099	U
29	A1	2101	A
29	A1	2109	C
29	A1	2114	G
29	A1	2116	U
29	A1	2117	G
29	A1	2118	G
29	A1	2120	U
29	A1	2122	U
29	A1	2123	U
29	A1	2125	G
29	A1	2127	C
29	A1	2128	G
29	A1	2130	G
29	A1	2131	C
29	A1	2132	C

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Mol	Chain	Res	Type
29	A1	2133	U
29	A1	2134	G
29	A1	2135	C
29	A1	2136	G
29	A1	2137	U
29	A1	2139	G
29	A1	2140	G
29	A1	2141	A
29	A1	2142	U
29	A1	2143	A
29	A1	2145	G
29	A1	2146	U
29	A1	2148	G
29	A1	2149	G
29	A1	2150	A
29	A1	2151	G
29	A1	2153	C
29	A1	2154	U
29	A1	2155	G
29	A1	2156	U
29	A1	2159	A
29	A1	2160	C
29	A1	2161	C
29	A1	2162	C
29	A1	2163	C
29	A1	2164	C
29	A1	2166	C
29	A1	2167	C
29	A1	2168	U
29	A1	2169	C
29	A1	2170	C
29	A1	2171	G
29	A1	2172	G
29	A1	2174	U
29	A1	2175	G
29	A1	2176	G
29	A1	2177	G
29	A1	2178	G
29	A1	2179	G
29	A1	2182	A
29	A1	2183	G
29	A1	2184	G

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Mol	Chain	Res	Type
29	A1	2185	C
29	A1	2187	C
29	A1	2190	G
29	A1	2192	G
29	A1	2195	A
29	A1	2197	A
29	A1	2198	C
29	A1	2199	C
29	A1	2201	C
29	A1	2207	C
29	A1	2210	G
29	A1	2213	U
29	A1	2215	G
29	A1	2216	G
29	A1	2217	G
29	A1	2222	A
29	A1	2223	A
29	A1	2224	C
29	A1	2226	C
29	A1	2228	C
29	A1	2229	G
29	A1	2230	G
29	A1	2231	A
29	A1	2232	U
29	A1	2236	G
29	A1	2239	A
29	A1	2242	G
29	A1	2243	C
29	A1	2246	U
29	A1	2247	U
29	A1	2252	G
29	A1	2253	G
29	A1	2254	C
29	A1	2256	G
29	A1	2257	U
29	A1	2260	G
29	A1	2261	A
29	A1	2263	U
29	A1	2265	G
29	A1	2268	C
29	A1	2269	G
29	A1	2270	G

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Mol	Chain	Res	Type
29	A1	2271	U
29	A1	2273	G
29	A1	2277	C
29	A1	2282	A
29	A1	2285	G
29	A1	2288	A
29	A1	2289	C
29	A1	2294	G
29	A1	2297	C
29	A1	2298	C
29	A1	2300	A
29	A1	2302	A
29	A1	2303	G
29	A1	2304	G
29	A1	2308	C
29	A1	2309	C
29	A1	2310	U
29	A1	2311	C
29	A1	2314	G
29	A1	2315	C
29	A1	2320	C
29	A1	2323	A
29	A1	2326	U
29	A1	2329	G
29	A1	2332	G
29	A1	2333	G
29	A1	2334	A
29	A1	2335	G
29	A1	2336	A
29	A1	2339	G
29	A1	2341	A
29	A1	2342	A
29	A1	2346	U
29	A1	2347	A
29	A1	2348	G
29	A1	2350	A
29	A1	2354	G
29	A1	2356	C
29	A1	2360	A
29	A1	2361	C
29	A1	2362	U
29	A1	2363	G

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Mol	Chain	Res	Type
29	A1	2364	C
29	A1	2366	A
29	A1	2369	C
29	A1	2372	G
29	A1	2373	C
29	A1	2374	A
29	A1	2375	A
29	A1	2376	G
29	A1	2379	G
29	A1	2381	G
29	A1	2383	A
29	A1	2386	G
29	A1	2389	G
29	A1	2391	A
29	A1	2395	C
29	A1	2396	G
29	A1	2397	G
29	A1	2398	G
29	A1	2399	C
29	A1	2401	U
29	A1	2402	A
29	A1	2404	U
29	A1	2405	G
29	A1	2406	A
29	A1	2409	C
29	A1	2411	G
29	A1	2415	U
29	A1	2416	C
29	A1	2417	C
29	A1	2420	U
29	A1	2421	G
29	A1	2422	U
29	A1	2424	G
29	A1	2426	A
29	A1	2429	G
29	A1	2432	A
29	A1	2433	U
29	A1	2434	C
29	A1	2437	U
29	A1	2439	A
29	A1	2440	A
29	A1	2441	C

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Mol	Chain	Res	Type
29	A1	2442	G
29	A1	2443	G
29	A1	2444	A
29	A1	2445	U
29	A1	2447	A
29	A1	2450	G
29	A1	2451	U
29	A1	2453	A
29	A1	2454	C
29	A1	2455	C
29	A1	2461	G
29	A1	2462	A
29	A1	2464	A
29	A1	2470	C
29	A1	2475	C
29	A1	2476	U
29	A1	2477	C
29	A1	2482	G
29	A1	2483	A
29	A1	2485	C
29	A1	2486	G
29	A1	2487	U
29	A1	2488	C
29	A1	2490	A
29	A1	2491	C
29	A1	2492	A
29	A1	2493	G
29	A1	2499	G
29	A1	2504	G
29	A1	2506	U
29	A1	2512	C
29	A1	2513	C
29	A1	2515	C
29	A1	2516	G
29	A1	2517	A
29	A1	2518	U
29	A1	2519	G
29	A1	2522	G
29	A1	2530	G
29	A1	2532	A
29	A1	2534	C
29	A1	2540	G

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Mol	Chain	Res	Type
29	A1	2543	G
29	A1	2544	A
29	A1	2546	G
29	A1	2548	A
29	A1	2549	G
29	A1	2550	G
29	A1	2551	U
29	A1	2552	C
29	A1	2555	A
29	A1	2556	A
29	A1	2557	G
29	A1	2561	U
29	A1	2568	U
29	A1	2574	C
29	A1	2575	A
29	A1	2578	A
29	A1	2579	A
29	A1	2580	A
29	A1	2581	G
29	A1	2586	A
29	A1	2587	C
29	A1	2591	A
29	A1	2592	G
29	A1	2596	G
29	A1	2599	U
29	A1	2601	A
29	A1	2611	G
29	A1	2612	A
29	A1	2616	A
29	A1	2617	G
29	A1	2620	C
29	A1	2621	G
29	A1	2622	G
29	A1	2623	U
29	A1	2625	U
29	A1	2626	C
29	A1	2627	U
29	A1	2628	A
29	A1	2629	U
29	A1	2631	C
29	A1	2637	G
29	A1	2643	A

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Mol	Chain	Res	Type
29	A1	2644	G
29	A1	2647	G
29	A1	2654	G
29	A1	2656	G
29	A1	2657	G
29	A1	2660	C
29	A1	2661	U
29	A1	2663	U
29	A1	2664	U
29	A1	2665	C
29	A1	2668	A
29	A1	2669	G
29	A1	2678	G
29	A1	2679	A
29	A1	2681	C
29	A1	2687	G
29	A1	2689	A
29	A1	2695	C
29	A1	2696	U
29	A1	2699	G
29	A1	2703	U
29	A1	2704	C
29	A1	2705	C
29	A1	2706	C
29	A1	2713	C
29	A1	2714	C
29	A1	2716	U
29	A1	2717	C
29	A1	2726	U
29	A1	2727	A
29	A1	2728	A
29	A1	2734	G
29	A1	2735	U
29	A1	2741	U
29	A1	2742	G
29	A1	2744	G
29	A1	2748	A
29	A1	2749	A
29	A1	2750	G
29	A1	2751	G
29	A1	2753	A
29	A1	2756	A

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Mol	Chain	Res	Type
29	A1	2759	G
29	A1	2760	C
29	A1	2762	G
29	A1	2765	A
29	A1	2766	G
29	A1	2767	C
29	A1	2768	A
29	A1	2769	U
29	A1	2770	C
29	A1	2771	U
29	A1	2772	A
29	A1	2774	G
29	A1	2775	C
29	A1	2780	A
29	A1	2781	G
29	A1	2784	C
29	A1	2785	G
29	A1	2793	A
29	A1	2796	A
29	A1	2797	G
29	A1	2798	G
29	A1	2804	C
29	A1	2806	C
29	A1	2808	G
29	A1	2811	U
29	A1	2812	C
29	A1	2813	A
29	A1	2814	A
29	A1	2815	G
29	A1	2817	C
29	A1	2819	G
29	A1	2820	U
29	A1	2823	G
29	A1	2825	A
29	A1	2828	C
29	A1	2830	G
29	A1	2831	G
29	A1	2832	A
29	A1	2834	G
29	A1	2835	A
29	A1	2836	C
29	A1	2839	C

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Mol	Chain	Res	Type
29	A1	2844	U
29	A1	2846	G
29	A1	2847	A
29	A1	2848	U
29	A1	2851	G
29	A1	2855	G
29	A1	2856	G
29	A1	2860	G
29	A1	2861	U
29	A1	2862	A
29	A1	2863	A
29	A1	2865	C
29	A1	2870	C
29	A1	2882	C
29	A1	2884	G
29	A1	2885	A
29	A1	2886	C
29	A1	2889	G
29	A1	2891	C
29	A1	2892	C
29	A1	2893	C
29	A1	2897	C
29	A1	2898	G
29	A1	2902	G
29	A1	2903	A
29	A1	2906	U
29	A1	2910	G
29	A1	2911	A
29	A1	2912	C
30	B1	3	U
30	B1	5	C
30	B1	8	C
30	B1	11	G
30	B1	12	C
30	B1	13	C
30	B1	14	C
30	B1	17	A
30	B1	18	G
30	B1	24	U
30	B1	26	G
30	B1	27	A
30	B1	29	C

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Mol	Chain	Res	Type
30	B1	34	C
30	B1	35	G
30	B1	39	C
30	B1	40	C
30	B1	41	A
30	B1	42	U
30	B1	43	U
30	B1	44	C
30	B1	46	G
30	B1	47	A
30	B1	51	C
30	B1	52	G
30	B1	56	G
30	B1	58	G
30	B1	59	A
30	B1	63	G
30	B1	66	C
30	B1	67	C
30	B1	68	A
30	B1	69	G
30	B1	71	G
30	B1	73	C
30	B1	75	A
30	B1	77	G
30	B1	82	U
30	B1	84	G
30	B1	86	C
30	B1	87	G
30	B1	91	G
30	B1	93	C
30	B1	95	G
30	B1	97	C
30	B1	98	U
30	B1	99	G
30	B1	101	G
30	B1	103	G
30	B1	107	A
30	B1	108	G
30	B1	109	G
30	B1	111	C
30	B1	112	G
30	B1	114	U

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Mol	Chain	Res	Type
30	B1	115	G
30	B1	117	G
30	B1	118	G
30	B1	120	G
30	B1	121	G
30	B1	122	A
29	A2	3	U
29	A2	4	C
29	A2	6	A
29	A2	7	G
29	A2	12	U
29	A2	15	G
29	A2	18	C
29	A2	29	U
29	A2	33	U
29	A2	34	C
29	A2	35	G
29	A2	36	G
29	A2	37	C
29	A2	38	A
29	A2	44	G
29	A2	45	C
29	A2	46	C
29	A2	47	G
29	A2	48	A
29	A2	49	U
29	A2	50	G
29	A2	53	G
29	A2	54	G
29	A2	57	G
29	A2	60	G
29	A2	61	C
29	A2	62	U
29	A2	63	A
29	A2	65	C
29	A2	69	G
29	A2	70	A
29	A2	71	U
29	A2	72	A
29	A2	73	A
29	A2	74	G
29	A2	75	C

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Mol	Chain	Res	Type
29	A2	82	G
29	A2	84	G
29	A2	87	G
29	A2	88	G
29	A2	89	U
29	A2	95	G
29	A2	98	U
29	A2	99	G
29	A2	100	G
29	A2	106	U
29	A2	107	G
29	A2	109	A
29	A2	110	U
29	A2	112	U
29	A2	116	A
29	A2	117	A
29	A2	118	U
29	A2	121	G
29	A2	122	G
29	A2	123	G
29	A2	126	C
29	A2	128	C
29	A2	134	G
29	A2	136	G
29	A2	139	A
29	A2	145	G
29	A2	149	A
29	A2	153	C
29	A2	155	C
29	A2	156	U
29	A2	157	U
29	A2	160	U
29	A2	161	G
29	A2	169	G
29	A2	173	C
29	A2	175	U
29	A2	182	C
29	A2	186	A
29	A2	188	C
29	A2	189	A
29	A2	193	C
29	A2	195	G

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Mol	Chain	Res	Type
29	A2	200	C
29	A2	203	A
29	A2	205	G
29	A2	206	A
29	A2	209	G
29	A2	211	A
29	A2	213	A
29	A2	214	G
29	A2	217	A
29	A2	218	A
29	A2	219	A
29	A2	220	U
29	A2	223	A
29	A2	224	C
29	A2	225	U
29	A2	227	C
29	A2	231	A
29	A2	233	U
29	A2	236	C
29	A2	237	G
29	A2	238	G
29	A2	239	C
29	A2	240	G
29	A2	242	G
29	A2	251	G
29	A2	252	A
29	A2	253	C
29	A2	255	A
29	A2	261	A
29	A2	268	C
29	A2	272	U
29	A2	274	G
29	A2	275	U
29	A2	276	C
29	A2	277	C
29	A2	279	G
29	A2	280	G
29	A2	281	C
29	A2	283	G
29	A2	284	G
29	A2	287	C
29	A2	288	G

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Mol	Chain	Res	Type
29	A2	289	U
29	A2	290	G
29	A2	291	G
29	A2	292	G
29	A2	293	G
29	A2	294	C
29	A2	295	C
29	A2	299	G
29	A2	300	G
29	A2	301	A
29	A2	303	A
29	A2	307	A
29	A2	308	A
29	A2	309	U
29	A2	312	C
29	A2	313	C
29	A2	314	A
29	A2	324	A
29	A2	325	A
29	A2	328	U
29	A2	331	U
29	A2	334	G
29	A2	335	A
29	A2	336	A
29	A2	337	G
29	A2	338	C
29	A2	341	C
29	A2	342	G
29	A2	344	C
29	A2	347	A
29	A2	348	G
29	A2	350	G
29	A2	351	G
29	A2	354	G
29	A2	355	A
29	A2	357	A
29	A2	360	C
29	A2	363	G
29	A2	367	G
29	A2	372	A
29	A2	374	G
29	A2	376	G

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Mol	Chain	Res	Type
29	A2	377	G
29	A2	379	G
29	A2	380	G
29	A2	381	G
29	A2	386	G
29	A2	389	A
29	A2	392	G
29	A2	394	A
29	A2	395	C
29	A2	396	C
29	A2	397	C
29	A2	398	G
29	A2	400	G
29	A2	401	U
29	A2	404	C
29	A2	405	C
29	A2	409	G
29	A2	414	G
29	A2	415	U
29	A2	416	G
29	A2	419	G
29	A2	422	A
29	A2	424	G
29	A2	427	G
29	A2	428	G
29	A2	432	C
29	A2	433	U
29	A2	435	G
29	A2	436	G
29	A2	439	G
29	A2	440	A
29	A2	441	C
29	A2	442	C
29	A2	443	A
29	A2	451	A
29	A2	453	G
29	A2	460	U
29	A2	462	C
29	A2	464	C
29	A2	465	C
29	A2	466	G
29	A2	467	G

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Mol	Chain	Res	Type
29	A2	469	U
29	A2	470	G
29	A2	471	A
29	A2	472	C
29	A2	476	U
29	A2	480	G
29	A2	481	C
29	A2	482	A
29	A2	484	C
29	A2	485	A
29	A2	486	G
29	A2	492	U
29	A2	494	A
29	A2	498	A
29	A2	500	A
29	A2	501	G
29	A2	503	U
29	A2	505	A
29	A2	508	A
29	A2	509	G
29	A2	511	A
29	A2	512	C
29	A2	517	G
29	A2	519	A
29	A2	521	G
29	A2	532	A
29	A2	533	G
29	A2	534	A
29	A2	535	G
29	A2	536	C
29	A2	537	C
29	A2	538	U
29	A2	539	G
29	A2	547	G
29	A2	551	U
29	A2	554	C
29	A2	555	A
29	A2	556	A
29	A2	558	C
29	A2	559	A
29	A2	560	G
29	A2	564	C

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Mol	Chain	Res	Type
29	A2	565	G
29	A2	566	G
29	A2	568	C
29	A2	570	C
29	A2	573	A
29	A2	575	G
29	A2	578	G
29	A2	580	U
29	A2	581	G
29	A2	583	G
29	A2	586	G
29	A2	587	U
29	A2	588	G
29	A2	593	U
29	A2	594	U
29	A2	598	G
29	A2	600	A
29	A2	607	G
29	A2	608	G
29	A2	611	A
29	A2	612	C
29	A2	613	U
29	A2	615	A
29	A2	617	G
29	A2	618	G
29	A2	621	G
29	A2	628	A
29	A2	631	U
29	A2	632	U
29	A2	634	A
29	A2	635	G
29	A2	638	G
29	A2	641	G
29	A2	642	A
29	A2	645	C
29	A2	648	A
29	A2	649	G
29	A2	652	G
29	A2	655	G
29	A2	661	C
29	A2	664	A
29	A2	669	G

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Mol	Chain	Res	Type
29	A2	670	A
29	A2	671	A
29	A2	672	C
29	A2	676	G
29	A2	677	C
29	A2	678	G
29	A2	679	C
29	A2	682	A
29	A2	684	G
29	A2	689	G
29	A2	690	C
29	A2	692	C
29	A2	694	C
29	A2	695	G
29	A2	696	G
29	A2	697	G
29	A2	698	C
29	A2	700	G
29	A2	701	A
29	A2	702	A
29	A2	703	A
29	A2	705	G
29	A2	710	C
29	A2	711	G
29	A2	712	G
29	A2	715	G
29	A2	718	G
29	A2	725	A
29	A2	726	A
29	A2	730	G
29	A2	731	G
29	A2	735	G
29	A2	737	U
29	A2	747	C
29	A2	748	A
29	A2	752	U
29	A2	760	G
29	A2	761	G
29	A2	762	G
29	A2	763	U
29	A2	768	C
29	A2	769	C

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Mol	Chain	Res	Type
29	A2	772	G
29	A2	777	G
29	A2	778	G
29	A2	783	A
29	A2	785	C
29	A2	786	C
29	A2	787	G
29	A2	789	U
29	A2	790	G
29	A2	796	U
29	A2	797	G
29	A2	798	C
29	A2	800	A
29	A2	801	A
29	A2	802	C
29	A2	803	C
29	A2	804	C
29	A2	806	U
29	A2	807	C
29	A2	808	G
29	A2	810	A
29	A2	811	U
29	A2	812	G
29	A2	813	A
29	A2	814	G
29	A2	815	C
29	A2	820	G
29	A2	821	C
29	A2	823	A
29	A2	824	G
29	A2	825	G
29	A2	826	A
29	A2	828	U
29	A2	831	A
29	A2	832	A
29	A2	833	A
29	A2	834	G
29	A2	837	A
29	A2	839	C
29	A2	840	C
29	A2	841	G
29	A2	842	A

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Mol	Chain	Res	Type
29	A2	846	C
29	A2	849	A
29	A2	851	A
29	A2	854	G
29	A2	855	C
29	A2	857	G
29	A2	859	U
29	A2	861	C
29	A2	868	A
29	A2	870	A
29	A2	875	U
29	A2	876	U
29	A2	877	U
29	A2	878	A
29	A2	879	G
29	A2	880	G
29	A2	881	G
29	A2	888	U
29	A2	890	A
29	A2	895	C
29	A2	897	G
29	A2	904	G
29	A2	907	U
29	A2	908	G
29	A2	909	U
29	A2	914	C
29	A2	915	A
29	A2	917	U
29	A2	918	G
29	A2	920	U
29	A2	921	A
29	A2	927	A
29	A2	929	G
29	A2	931	G
29	A2	932	G
29	A2	933	C
29	A2	934	C
29	A2	936	A
29	A2	937	C
29	A2	940	G
29	A2	941	C
29	A2	942	C

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Mol	Chain	Res	Type
29	A2	943	U
29	A2	944	A
29	A2	945	C
29	A2	946	C
29	A2	947	A
29	A2	949	A
29	A2	953	U
29	A2	958	A
29	A2	961	U
29	A2	962	C
29	A2	963	C
29	A2	965	A
29	A2	974	A
29	A2	978	G
29	A2	979	G
29	A2	980	A
29	A2	981	G
29	A2	988	A
29	A2	991	G
29	A2	992	A
29	A2	993	G
29	A2	1000	A
29	A2	1001	G
29	A2	1003	G
29	A2	1005	U
29	A2	1006	A
29	A2	1008	C
29	A2	1010	U
29	A2	1011	C
29	A2	1012	C
29	A2	1015	G
29	A2	1021	G
29	A2	1022	C
29	A2	1025	G
29	A2	1028	A
29	A2	1029	A
29	A2	1030	C
29	A2	1031	A
29	A2	1033	C
29	A2	1034	C
29	A2	1036	A
29	A2	1044	A

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Mol	Chain	Res	Type
29	A2	1045	G
29	A2	1051	G
29	A2	1052	C
29	A2	1053	C
29	A2	1054	C
29	A2	1056	C
29	A2	1059	G
29	A2	1060	U
29	A2	1061	C
29	A2	1063	G
29	A2	1065	G
29	A2	1068	A
29	A2	1069	A
29	A2	1070	G
29	A2	1071	U
29	A2	1072	G
29	A2	1073	G
29	A2	1074	U
29	A2	1075	A
29	A2	1080	A
29	A2	1081	U
29	A2	1082	G
29	A2	1085	G
29	A2	1090	G
29	A2	1091	C
29	A2	1092	G
29	A2	1095	G
29	A2	1098	A
29	A2	1100	C
29	A2	1101	C
29	A2	1103	G
29	A2	1104	G
29	A2	1105	A
29	A2	1108	U
29	A2	1109	U
29	A2	1110	G
29	A2	1111	G
29	A2	1115	A
29	A2	1117	A
29	A2	1118	A
29	A2	1119	G
29	A2	1120	C

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Mol	Chain	Res	Type
29	A2	1121	A
29	A2	1122	G
29	A2	1123	C
29	A2	1124	C
29	A2	1125	A
29	A2	1127	C
29	A2	1130	U
29	A2	1131	U
29	A2	1132	A
29	A2	1133	A
29	A2	1134	A
29	A2	1135	G
29	A2	1136	A
29	A2	1137	G
29	A2	1138	U
29	A2	1141	G
29	A2	1142	U
29	A2	1143	A
29	A2	1144	A
29	A2	1145	U
29	A2	1146	A
29	A2	1148	C
29	A2	1153	U
29	A2	1156	U
29	A2	1159	A
29	A2	1160	G
29	A2	1162	G
29	A2	1165	G
29	A2	1172	C
29	A2	1173	G
29	A2	1174	A
29	A2	1177	A
29	A2	1178	U
29	A2	1179	G
29	A2	1180	A
29	A2	1182	C
29	A2	1183	G
29	A2	1184	G
29	A2	1185	G
29	A2	1186	G
29	A2	1187	C
29	A2	1188	U

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Mol	Chain	Res	Type
29	A2	1189	U
29	A2	1190	A
29	A2	1191	A
29	A2	1192	G
29	A2	1196	A
29	A2	1199	G
29	A2	1200	C
29	A2	1203	A
29	A2	1204	A
29	A2	1206	C
29	A2	1208	G
29	A2	1211	G
29	A2	1214	C
29	A2	1219	G
29	A2	1220	G
29	A2	1222	U
29	A2	1223	G
29	A2	1224	A
29	A2	1225	C
29	A2	1226	C
29	A2	1227	C
29	A2	1230	G
29	A2	1231	G
29	A2	1233	G
29	A2	1237	G
29	A2	1249	C
29	A2	1251	A
29	A2	1252	U
29	A2	1253	G
29	A2	1257	A
29	A2	1258	U
29	A2	1259	G
29	A2	1260	A
29	A2	1262	G
29	A2	1267	A
29	A2	1272	C
29	A2	1277	G
29	A2	1281	C
29	A2	1284	G
29	A2	1285	A
29	A2	1289	A
29	A2	1290	A

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Mol	Chain	Res	Type
29	A2	1291	G
29	A2	1292	G
29	A2	1293	G
29	A2	1299	C
29	A2	1300	G
29	A2	1301	A
29	A2	1302	A
29	A2	1303	U
29	A2	1304	G
29	A2	1306	C
29	A2	1307	G
29	A2	1309	C
29	A2	1311	U
29	A2	1313	A
29	A2	1314	G
29	A2	1315	U
29	A2	1316	A
29	A2	1319	G
29	A2	1320	A
29	A2	1321	U
29	A2	1323	A
29	A2	1326	A
29	A2	1328	G
29	A2	1333	G
29	A2	1336	U
29	A2	1337	C
29	A2	1348	U
29	A2	1349	A
29	A2	1350	A
29	A2	1351	G
29	A2	1356	A
29	A2	1359	G
29	A2	1360	U
29	A2	1361	U
29	A2	1362	C
29	A2	1363	C
29	A2	1364	U
29	A2	1373	G
29	A2	1377	U
29	A2	1378	C
29	A2	1382	G
29	A2	1386	G

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Mol	Chain	Res	Type
29	A2	1390	A
29	A2	1391	G
29	A2	1397	A
29	A2	1401	A
29	A2	1402	A
29	A2	1403	G
29	A2	1404	G
29	A2	1405	U
29	A2	1407	A
29	A2	1408	A
29	A2	1409	G
29	A2	1411	C
29	A2	1413	A
29	A2	1416	G
29	A2	1418	C
29	A2	1419	G
29	A2	1423	C
29	A2	1427	A
29	A2	1428	G
29	A2	1432	A
29	A2	1433	G
29	A2	1434	C
29	A2	1440	A
29	A2	1441	A
29	A2	1443	A
29	A2	1444	U
29	A2	1445	U
29	A2	1446	C
29	A2	1449	G
29	A2	1451	C
29	A2	1452	C
29	A2	1453	U
29	A2	1457	C
29	A2	1459	C
29	A2	1460	A
29	A2	1462	G
29	A2	1464	G
29	A2	1466	G
29	A2	1467	A
29	A2	1468	U
29	A2	1469	G
29	A2	1473	G

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Mol	Chain	Res	Type
29	A2	1474	G
29	A2	1475	A
29	A2	1476	C
29	A2	1481	U
29	A2	1483	G
29	A2	1485	C
29	A2	1486	U
29	A2	1488	G
29	A2	1489	G
29	A2	1491	G
29	A2	1493	A
29	A2	1494	C
29	A2	1497	G
29	A2	1498	A
29	A2	1499	G
29	A2	1500	C
29	A2	1502	A
29	A2	1505	G
29	A2	1508	G
29	A2	1509	A
29	A2	1510	G
29	A2	1511	C
29	A2	1513	C
29	A2	1515	G
29	A2	1516	C
29	A2	1520	A
29	A2	1524	G
29	A2	1531	G
29	A2	1535	G
29	A2	1537	U
29	A2	1538	A
29	A2	1539	G
29	A2	1540	G
29	A2	1541	C
29	A2	1542	A
29	A2	1543	A
29	A2	1546	C
29	A2	1547	C
29	A2	1550	C
29	A2	1552	C
29	A2	1556	A
29	A2	1557	C

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Mol	Chain	Res	Type
29	A2	1559	A
29	A2	1560	G
29	A2	1561	C
29	A2	1562	U
29	A2	1563	C
29	A2	1564	U
29	A2	1565	G
29	A2	1566	C
29	A2	1568	U
29	A2	1569	G
29	A2	1571	U
29	A2	1572	G
29	A2	1573	G
29	A2	1575	G
29	A2	1577	A
29	A2	1578	G
29	A2	1580	C
29	A2	1582	G
29	A2	1584	A
29	A2	1585	C
29	A2	1586	G
29	A2	1587	G
29	A2	1591	A
29	A2	1592	C
29	A2	1593	A
29	A2	1595	C
29	A2	1596	C
29	A2	1603	A
29	A2	1607	A
29	A2	1608	G
29	A2	1609	G
29	A2	1612	G
29	A2	1615	A
29	A2	1618	A
29	A2	1620	A
29	A2	1623	C
29	A2	1625	U
29	A2	1627	U
29	A2	1630	G
29	A2	1632	A
29	A2	1633	C
29	A2	1634	A

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Mol	Chain	Res	Type
29	A2	1635	A
29	A2	1638	U
29	A2	1639	G
29	A2	1641	G
29	A2	1642	G
29	A2	1644	A
29	A2	1648	C
29	A2	1649	G
29	A2	1655	C
29	A2	1657	A
29	A2	1658	A
29	A2	1659	C
29	A2	1661	G
29	A2	1663	C
29	A2	1664	A
29	A2	1665	C
29	A2	1666	A
29	A2	1667	G
29	A2	1673	C
29	A2	1684	G
29	A2	1686	A
29	A2	1688	U
29	A2	1696	G
29	A2	1697	C
29	A2	1702	G
29	A2	1703	A
29	A2	1708	U
29	A2	1717	A
29	A2	1721	C
29	A2	1722	U
29	A2	1723	G
29	A2	1726	A
29	A2	1732	C
29	A2	1740	C
29	A2	1743	C
29	A2	1744	G
29	A2	1746	G
29	A2	1747	A
29	A2	1748	G
29	A2	1749	A
29	A2	1750	A
29	A2	1755	U

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Mol	Chain	Res	Type
29	A2	1756	G
29	A2	1757	C
29	A2	1761	C
29	A2	1762	U
29	A2	1764	G
29	A2	1765	G
29	A2	1766	G
29	A2	1768	G
29	A2	1769	A
29	A2	1770	U
29	A2	1771	G
29	A2	1774	C
29	A2	1775	C
29	A2	1777	C
29	A2	1781	G
29	A2	1784	C
29	A2	1786	G
29	A2	1787	C
29	A2	1789	G
29	A2	1790	U
29	A2	1791	G
29	A2	1792	A
29	A2	1793	A
29	A2	1794	C
29	A2	1796	G
29	A2	1797	G
29	A2	1798	C
29	A2	1799	U
29	A2	1800	C
29	A2	1806	A
29	A2	1808	U
29	A2	1810	U
29	A2	1811	U
29	A2	1813	A
29	A2	1814	C
29	A2	1815	C
29	A2	1817	A
29	A2	1818	A
29	A2	1822	A
29	A2	1824	A
29	A2	1825	G
29	A2	1829	U

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Mol	Chain	Res	Type
29	A2	1832	G
29	A2	1833	C
29	A2	1834	G
29	A2	1835	A
29	A2	1838	U
29	A2	1840	G
29	A2	1843	A
29	A2	1844	G
29	A2	1846	G
29	A2	1847	G
29	A2	1848	A
29	A2	1849	G
29	A2	1850	G
29	A2	1852	A
29	A2	1853	U
29	A2	1854	A
29	A2	1861	G
29	A2	1862	A
29	A2	1864	G
29	A2	1867	U
29	A2	1869	C
29	A2	1870	C
29	A2	1871	C
29	A2	1876	C
29	A2	1877	C
29	A2	1880	A
29	A2	1881	A
29	A2	1885	C
29	A2	1886	A
29	A2	1888	G
29	A2	1891	G
29	A2	1893	G
29	A2	1895	G
29	A2	1896	G
29	A2	1899	C
29	A2	1900	A
29	A2	1901	A
29	A2	1902	G
29	A2	1904	C
29	A2	1907	G
29	A2	1913	A
29	A2	1916	C

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Mol	Chain	Res	Type
29	A2	1920	G
29	A2	1921	G
29	A2	1923	G
29	A2	1924	A
29	A2	1925	A
29	A2	1927	G
29	A2	1930	G
29	A2	1932	C
29	A2	1933	C
29	A2	1934	G
29	A2	1935	U
29	A2	1936	A
29	A2	1937	A
29	A2	1938	C
29	A2	1939	U
29	A2	1940	A
29	A2	1941	U
29	A2	1942	A
29	A2	1943	A
29	A2	1944	C
29	A2	1945	G
29	A2	1947	U
29	A2	1948	C
29	A2	1953	G
29	A2	1954	G
29	A2	1955	U
29	A2	1958	C
29	A2	1960	A
29	A2	1961	A
29	A2	1962	A
29	A2	1969	G
29	A2	1970	U
29	A2	1976	A
29	A2	1979	U
29	A2	1980	U
29	A2	1981	C
29	A2	1985	C
29	A2	1987	U
29	A2	1988	G
29	A2	1989	C
29	A2	1990	A
29	A2	1991	C

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Mol	Chain	Res	Type
29	A2	1993	A
29	A2	1994	A
29	A2	1995	A
29	A2	1996	A
29	A2	2006	C
29	A2	2009	G
29	A2	2013	G
29	A2	2016	G
29	A2	2017	U
29	A2	2018	C
29	A2	2020	C
29	A2	2023	C
29	A2	2024	G
29	A2	2026	G
29	A2	2027	G
29	A2	2036	G
29	A2	2039	A
29	A2	2040	U
29	A2	2043	A
29	A2	2044	A
29	A2	2045	C
29	A2	2046	U
29	A2	2047	G
29	A2	2050	C
29	A2	2055	A
29	A2	2056	G
29	A2	2057	A
29	A2	2058	U
29	A2	2063	C
29	A2	2067	C
29	A2	2075	A
29	A2	2076	G
29	A2	2079	C
29	A2	2080	G
29	A2	2084	A
29	A2	2085	G
29	A2	2086	A
29	A2	2087	C
29	A2	2089	C
29	A2	2091	G
29	A2	2092	U
29	A2	2093	G

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Mol	Chain	Res	Type
29	A2	2099	U
29	A2	2101	A
29	A2	2109	C
29	A2	2111	G
29	A2	2114	G
29	A2	2115	U
29	A2	2116	U
29	A2	2117	G
29	A2	2120	U
29	A2	2122	U
29	A2	2123	U
29	A2	2124	G
29	A2	2125	G
29	A2	2126	U
29	A2	2127	C
29	A2	2128	G
29	A2	2130	G
29	A2	2131	C
29	A2	2132	C
29	A2	2133	U
29	A2	2134	G
29	A2	2135	C
29	A2	2136	G
29	A2	2137	U
29	A2	2139	G
29	A2	2140	G
29	A2	2141	A
29	A2	2142	U
29	A2	2143	A
29	A2	2145	G
29	A2	2146	U
29	A2	2148	G
29	A2	2149	G
29	A2	2150	A
29	A2	2151	G
29	A2	2152	C
29	A2	2153	C
29	A2	2154	U
29	A2	2155	G
29	A2	2156	U
29	A2	2157	G
29	A2	2160	C

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Mol	Chain	Res	Type
29	A2	2161	C
29	A2	2162	C
29	A2	2163	C
29	A2	2164	C
29	A2	2165	G
29	A2	2166	C
29	A2	2168	U
29	A2	2169	C
29	A2	2170	C
29	A2	2171	G
29	A2	2172	G
29	A2	2174	U
29	A2	2176	G
29	A2	2177	G
29	A2	2178	G
29	A2	2179	G
29	A2	2181	G
29	A2	2183	G
29	A2	2184	G
29	A2	2185	C
29	A2	2186	G
29	A2	2187	C
29	A2	2190	G
29	A2	2192	G
29	A2	2197	A
29	A2	2199	C
29	A2	2200	A
29	A2	2201	C
29	A2	2202	C
29	A2	2204	U
29	A2	2205	G
29	A2	2207	C
29	A2	2209	C
29	A2	2212	C
29	A2	2213	U
29	A2	2215	G
29	A2	2217	G
29	A2	2222	A
29	A2	2224	C
29	A2	2226	C
29	A2	2228	C
29	A2	2229	G

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Mol	Chain	Res	Type
29	A2	2230	G
29	A2	2231	A
29	A2	2232	U
29	A2	2233	G
29	A2	2236	G
29	A2	2239	A
29	A2	2242	G
29	A2	2243	C
29	A2	2246	U
29	A2	2247	U
29	A2	2252	G
29	A2	2253	G
29	A2	2256	G
29	A2	2257	U
29	A2	2260	G
29	A2	2261	A
29	A2	2263	U
29	A2	2265	G
29	A2	2266	G
29	A2	2270	G
29	A2	2271	U
29	A2	2277	C
29	A2	2280	A
29	A2	2282	A
29	A2	2285	G
29	A2	2286	U
29	A2	2288	A
29	A2	2289	C
29	A2	2297	C
29	A2	2298	C
29	A2	2299	C
29	A2	2302	A
29	A2	2303	G
29	A2	2304	G
29	A2	2310	U
29	A2	2311	C
29	A2	2312	A
29	A2	2321	G
29	A2	2322	G
29	A2	2323	A
29	A2	2326	U
29	A2	2329	G

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Mol	Chain	Res	Type
29	A2	2333	G
29	A2	2334	A
29	A2	2336	A
29	A2	2337	G
29	A2	2339	G
29	A2	2341	A
29	A2	2342	A
29	A2	2346	U
29	A2	2347	A
29	A2	2348	G
29	A2	2349	A
29	A2	2350	A
29	A2	2356	C
29	A2	2360	A
29	A2	2361	C
29	A2	2363	G
29	A2	2364	C
29	A2	2366	A
29	A2	2373	C
29	A2	2375	A
29	A2	2379	G
29	A2	2381	G
29	A2	2383	A
29	A2	2386	G
29	A2	2389	G
29	A2	2393	G
29	A2	2394	C
29	A2	2395	C
29	A2	2396	G
29	A2	2397	G
29	A2	2398	G
29	A2	2399	C
29	A2	2402	A
29	A2	2403	G
29	A2	2404	U
29	A2	2405	G
29	A2	2406	A
29	A2	2407	A
29	A2	2409	C
29	A2	2415	U
29	A2	2416	C
29	A2	2417	C

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Mol	Chain	Res	Type
29	A2	2421	G
29	A2	2422	U
29	A2	2424	G
29	A2	2426	A
29	A2	2428	G
29	A2	2429	G
29	A2	2432	A
29	A2	2433	U
29	A2	2434	C
29	A2	2436	A
29	A2	2437	U
29	A2	2439	A
29	A2	2440	A
29	A2	2441	C
29	A2	2442	G
29	A2	2443	G
29	A2	2444	A
29	A2	2445	U
29	A2	2446	A
29	A2	2447	A
29	A2	2450	G
29	A2	2451	U
29	A2	2453	A
29	A2	2454	C
29	A2	2455	C
29	A2	2461	G
29	A2	2462	A
29	A2	2464	A
29	A2	2470	C
29	A2	2474	U
29	A2	2475	C
29	A2	2476	U
29	A2	2477	C
29	A2	2480	C
29	A2	2482	G
29	A2	2483	A
29	A2	2484	G
29	A2	2485	C
29	A2	2490	A
29	A2	2491	C
29	A2	2492	A
29	A2	2494	C

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Mol	Chain	Res	Type
29	A2	2498	G
29	A2	2504	G
29	A2	2506	U
29	A2	2508	G
29	A2	2512	C
29	A2	2516	G
29	A2	2517	A
29	A2	2518	U
29	A2	2519	G
29	A2	2520	U
29	A2	2522	G
29	A2	2532	A
29	A2	2534	C
29	A2	2535	C
29	A2	2543	G
29	A2	2544	A
29	A2	2546	G
29	A2	2547	A
29	A2	2548	A
29	A2	2549	G
29	A2	2550	G
29	A2	2552	C
29	A2	2555	A
29	A2	2556	A
29	A2	2561	U
29	A2	2568	U
29	A2	2574	C
29	A2	2575	A
29	A2	2578	A
29	A2	2579	A
29	A2	2580	A
29	A2	2581	G
29	A2	2586	A
29	A2	2587	C
29	A2	2588	G
29	A2	2591	A
29	A2	2592	G
29	A2	2596	G
29	A2	2599	U
29	A2	2600	C
29	A2	2601	A
29	A2	2606	G

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Mol	Chain	Res	Type
29	A2	2611	G
29	A2	2612	A
29	A2	2616	A
29	A2	2617	G
29	A2	2620	C
29	A2	2621	G
29	A2	2622	G
29	A2	2623	U
29	A2	2625	U
29	A2	2626	C
29	A2	2627	U
29	A2	2628	A
29	A2	2629	U
29	A2	2631	C
29	A2	2637	G
29	A2	2643	A
29	A2	2645	G
29	A2	2646	A
29	A2	2647	G
29	A2	2648	G
29	A2	2654	G
29	A2	2655	G
29	A2	2660	C
29	A2	2661	U
29	A2	2663	U
29	A2	2664	U
29	A2	2665	C
29	A2	2668	A
29	A2	2669	G
29	A2	2677	G
29	A2	2678	G
29	A2	2679	A
29	A2	2680	C
29	A2	2682	G
29	A2	2687	G
29	A2	2689	A
29	A2	2694	C
29	A2	2695	C
29	A2	2696	U
29	A2	2699	G
29	A2	2703	U
29	A2	2704	C

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Mol	Chain	Res	Type
29	A2	2705	C
29	A2	2713	C
29	A2	2717	C
29	A2	2726	U
29	A2	2727	A
29	A2	2728	A
29	A2	2729	G
29	A2	2733	G
29	A2	2734	G
29	A2	2735	U
29	A2	2741	U
29	A2	2742	G
29	A2	2744	G
29	A2	2748	A
29	A2	2749	A
29	A2	2750	G
29	A2	2753	A
29	A2	2756	A
29	A2	2761	U
29	A2	2762	G
29	A2	2763	A
29	A2	2764	A
29	A2	2766	G
29	A2	2767	C
29	A2	2768	A
29	A2	2769	U
29	A2	2770	C
29	A2	2771	U
29	A2	2772	A
29	A2	2775	C
29	A2	2780	A
29	A2	2781	G
29	A2	2788	C
29	A2	2792	G
29	A2	2793	A
29	A2	2797	G
29	A2	2798	G
29	A2	2803	C
29	A2	2804	C
29	A2	2806	C
29	A2	2807	G
29	A2	2809	C

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Mol	Chain	Res	Type
29	A2	2812	C
29	A2	2814	A
29	A2	2815	G
29	A2	2817	C
29	A2	2818	G
29	A2	2820	U
29	A2	2823	G
29	A2	2825	A
29	A2	2828	C
29	A2	2830	G
29	A2	2831	G
29	A2	2832	A
29	A2	2833	A
29	A2	2834	G
29	A2	2835	A
29	A2	2836	C
29	A2	2837	C
29	A2	2839	C
29	A2	2844	U
29	A2	2845	G
29	A2	2846	G
29	A2	2847	A
29	A2	2848	U
29	A2	2855	G
29	A2	2856	G
29	A2	2860	G
29	A2	2861	U
29	A2	2862	A
29	A2	2863	A
29	A2	2865	C
29	A2	2868	C
29	A2	2871	G
29	A2	2882	C
29	A2	2883	C
29	A2	2884	G
29	A2	2885	A
29	A2	2887	C
29	A2	2891	C
29	A2	2892	C
29	A2	2893	C
29	A2	2897	C
29	A2	2898	G

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Mol	Chain	Res	Type
29	A2	2901	C
29	A2	2902	G
29	A2	2906	U
29	A2	2907	C
29	A2	2908	U
29	A2	2910	G
29	A2	2911	A
29	A2	2912	C
29	A2	2913	C
30	B2	2	A
30	B2	3	U
30	B2	7	C
30	B2	8	C
30	B2	13	C
30	B2	15	A
30	B2	17	A
30	B2	18	G
30	B2	24	U
30	B2	26	G
30	B2	27	A
30	B2	28	A
30	B2	34	C
30	B2	35	G
30	B2	39	C
30	B2	40	C
30	B2	41	A
30	B2	43	U
30	B2	44	C
30	B2	45	C
30	B2	46	G
30	B2	47	A
30	B2	51	C
30	B2	52	G
30	B2	56	G
30	B2	58	G
30	B2	59	A
30	B2	60	A
30	B2	61	A
30	B2	63	G
30	B2	66	C
30	B2	67	C
30	B2	68	A

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Mol	Chain	Res	Type
30	B2	69	G
30	B2	71	G
30	B2	73	C
30	B2	74	G
30	B2	75	A
30	B2	77	G
30	B2	82	U
30	B2	83	G
30	B2	84	G
30	B2	85	G
30	B2	86	C
30	B2	87	G
30	B2	89	G
30	B2	90	C
30	B2	93	C
30	B2	97	C
30	B2	98	U
30	B2	99	G
30	B2	105	G
30	B2	106	U
30	B2	108	G
30	B2	109	G
30	B2	111	C
30	B2	112	G
30	B2	114	U
30	B2	115	G
30	B2	117	G
30	B2	121	G
53	A3	7	G
53	A3	8	A
53	A3	9	G
53	A3	15	G
53	A3	16	A
53	A3	18	C
53	A3	19	C
53	A3	21	G
53	A3	23	C
53	A3	30	U
53	A3	31	G
53	A3	32	A
53	A3	34	C
53	A3	36	C

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Mol	Chain	Res	Type
53	A3	37	U
53	A3	39	G
53	A3	44	G
53	A3	45	U
53	A3	47	C
53	A3	48	C
53	A3	49	U
53	A3	51	A
53	A3	52	G
53	A3	54	C
53	A3	55	A
53	A3	58	C
53	A3	59	A
53	A3	60	A
53	A3	61	G
53	A3	62	U
53	A3	66	G
53	A3	67	C
53	A3	68	G
53	A3	69	G
53	A3	70	G
53	A3	72	C
53	A3	73	G
53	A3	76	G
53	A3	77	G
53	A3	78	G
53	A3	79	U
53	A3	81	U
53	A3	82	U
53	A3	83	A
53	A3	84	C
53	A3	85	U
53	A3	86	C
53	A3	87	C
53	A3	88	G
53	A3	89	U
53	A3	90	G
53	A3	91	G
53	A3	92	U
53	A3	99	C
53	A3	101	G
53	A3	103	C

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Mol	Chain	Res	Type
53	A3	104	G
53	A3	107	U
53	A3	108	G
53	A3	109	A
53	A3	111	U
53	A3	113	A
53	A3	114	C
53	A3	121	G
53	A3	123	G
53	A3	125	C
53	A3	126	C
53	A3	128	A
53	A3	131	C
53	A3	133	G
53	A3	134	A
53	A3	137	A
53	A3	138	G
53	A3	139	G
53	A3	140	G
53	A3	145	A
53	A3	147	C
53	A3	148	C
53	A3	149	C
53	A3	151	G
53	A3	153	G
53	A3	157	C
53	A3	159	C
53	A3	164	U
53	A3	165	A
53	A3	166	A
53	A3	167	U
53	A3	168	C
53	A3	170	C
53	A3	172	C
53	A3	173	A
53	A3	174	U
53	A3	175	G
53	A3	176	U
53	A3	178	G
53	A3	180	C
53	A3	181	C
53	A3	186	C

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Mol	Chain	Res	Type
53	A3	188	U
53	A3	189	U
53	A3	190	G
53	A3	191	G
53	A3	192	G
53	A3	197	G
53	A3	201	A
53	A3	202	A
53	A3	203	A
53	A3	204	G
53	A3	206	G
53	A3	207	C
53	A3	208	U
53	A3	209	U
53	A3	210	U
53	A3	211	G
53	A3	213	C
53	A3	215	G
53	A3	218	U
53	A3	224	U
53	A3	225	G
53	A3	226	G
53	A3	230	C
53	A3	231	G
53	A3	232	C
53	A3	235	C
53	A3	238	A
53	A3	239	U
53	A3	240	C
53	A3	242	G
53	A3	243	C
53	A3	246	G
53	A3	248	U
53	A3	254	G
53	A3	261	G
53	A3	262	C
53	A3	263	C
53	A3	264	C
53	A3	268	A
53	A3	269	A
53	A3	270	G
53	A3	271	G

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Mol	Chain	Res	Type
53	A3	272	C
53	A3	276	G
53	A3	283	A
53	A3	284	G
53	A3	293	A
53	A3	298	A
53	A3	301	G
53	A3	306	C
53	A3	308	A
53	A3	309	C
53	A3	310	A
53	A3	312	G
53	A3	317	C
53	A3	319	G
53	A3	323	C
53	A3	324	A
53	A3	325	C
53	A3	327	G
53	A3	330	C
53	A3	335	U
53	A3	337	C
53	A3	339	A
53	A3	340	C
53	A3	343	G
53	A3	345	G
53	A3	346	G
53	A3	347	C
53	A3	348	A
53	A3	349	G
53	A3	351	A
53	A3	353	U
53	A3	354	U
53	A3	356	G
53	A3	357	G
53	A3	362	U
53	A3	364	C
53	A3	367	C
53	A3	376	C
53	A3	379	G
53	A3	380	C
53	A3	381	C
53	A3	382	U

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Mol	Chain	Res	Type
53	A3	383	G
53	A3	384	A
53	A3	385	C
53	A3	391	G
53	A3	392	A
53	A3	393	C
53	A3	396	C
53	A3	401	G
53	A3	402	G
53	A3	406	A
53	A3	408	G
53	A3	409	A
53	A3	410	A
53	A3	411	G
53	A3	413	C
53	A3	414	C
53	A3	416	U
53	A3	417	C
53	A3	418	G
53	A3	420	G
53	A3	423	G
53	A3	424	U
53	A3	425	A
53	A3	426	A
53	A3	428	C
53	A3	429	U
53	A3	432	U
53	A3	434	A
53	A3	435	A
53	A3	436	C
53	A3	439	G
53	A3	442	A
53	A3	443	C
53	A3	445	A
53	A3	447	A
53	A3	448	C
53	A3	450	C
53	A3	452	C
53	A3	454	A
53	A3	456	G
53	A3	462	A
53	A3	465	G

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Mol	Chain	Res	Type
53	A3	466	A
53	A3	469	G
53	A3	471	A
53	A3	473	C
53	A3	475	G
53	A3	479	A
53	A3	480	A
53	A3	481	U
53	A3	482	A
53	A3	483	G
53	A3	488	G
53	A3	489	G
53	A3	491	C
53	A3	492	A
53	A3	493	A
53	A3	494	C
53	A3	498	G
53	A3	499	U
53	A3	500	G
53	A3	501	C
53	A3	502	C
53	A3	506	A
53	A3	507	G
53	A3	508	C
53	A3	509	C
53	A3	511	C
53	A3	512	G
53	A3	513	G
53	A3	514	U
53	A3	515	A
53	A3	517	U
53	A3	518	A
53	A3	520	G
53	A3	521	G
53	A3	524	G
53	A3	528	C
53	A3	530	A
53	A3	532	C
53	A3	533	G
53	A3	537	C
53	A3	542	A
53	A3	543	U

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Mol	Chain	Res	Type
53	A3	544	U
53	A3	545	C
53	A3	547	C
53	A3	548	U
53	A3	549	G
53	A3	555	A
53	A3	556	A
53	A3	558	G
53	A3	559	G
53	A3	560	G
53	A3	562	G
53	A3	563	U
53	A3	565	U
53	A3	567	G
53	A3	575	G
53	A3	576	G
53	A3	577	G
53	A3	578	G
53	A3	579	C
53	A3	580	G
53	A3	586	U
53	A3	590	A
53	A3	597	A
53	A3	601	C
53	A3	602	U
53	A3	603	C
53	A3	604	A
53	A3	607	C
53	A3	609	U
53	A3	612	G
53	A3	613	G
53	A3	614	G
53	A3	615	A
53	A3	619	U
53	A3	620	G
53	A3	622	G
53	A3	627	G
53	A3	629	U
53	A3	630	C
53	A3	633	G
53	A3	634	C
53	A3	636	A

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Mol	Chain	Res	Type
53	A3	640	G
53	A3	646	A
53	A3	647	G
53	A3	650	G
53	A3	653	G
53	A3	657	G
53	A3	663	C
53	A3	664	C
53	A3	669	U
53	A3	670	A
53	A3	671	G
53	A3	674	G
53	A3	681	G
53	A3	683	G
53	A3	684	C
53	A3	685	A
53	A3	686	G
53	A3	687	A
53	A3	691	C
53	A3	692	G
53	A3	693	G
53	A3	694	G
53	A3	702	C
53	A3	705	A
53	A3	706	U
53	A3	707	G
53	A3	709	C
53	A3	711	A
53	A3	712	A
53	A3	713	G
53	A3	714	G
53	A3	715	C
53	A3	716	A
53	A3	717	G
53	A3	718	C
53	A3	719	C
53	A3	722	C
53	A3	724	G
53	A3	725	G
53	A3	726	U
53	A3	727	C
53	A3	730	C

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Mol	Chain	Res	Type
53	A3	731	C
53	A3	732	C
53	A3	734	U
53	A3	735	G
53	A3	736	A
53	A3	737	C
53	A3	738	G
53	A3	740	U
53	A3	741	G
53	A3	744	G
53	A3	745	C
53	A3	749	A
53	A3	750	A
53	A3	751	A
53	A3	752	G
53	A3	757	G
53	A3	759	G
53	A3	760	A
53	A3	762	C
53	A3	766	C
53	A3	768	G
53	A3	773	A
53	A3	775	A
53	A3	776	U
53	A3	777	A
53	A3	778	C
53	A3	780	C
53	A3	782	G
53	A3	786	G
53	A3	788	C
53	A3	789	C
53	A3	790	A
53	A3	794	C
53	A3	795	C
53	A3	796	U
53	A3	800	C
53	A3	801	G
53	A3	802	A
53	A3	804	G
53	A3	807	C
53	A3	810	U
53	A3	811	A

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Mol	Chain	Res	Type
53	A3	812	G
53	A3	820	G
53	A3	823	C
53	A3	824	U
53	A3	825	C
53	A3	829	G
53	A3	836	A
53	A3	842	A
53	A3	847	U
53	A3	848	U
53	A3	850	A
53	A3	851	G
53	A3	854	C
53	A3	855	G
53	A3	857	C
53	A3	861	U
53	A3	863	G
53	A3	866	A
53	A3	874	C
53	A3	876	C
53	A3	879	G
53	A3	880	G
53	A3	881	C
53	A3	884	A
53	A3	885	A
53	A3	886	A
53	A3	888	U
53	A3	890	A
53	A3	891	A
53	A3	893	G
53	A3	894	G
53	A3	896	A
53	A3	897	U
53	A3	899	G
53	A3	900	A
53	A3	904	G
53	A3	909	C
53	A3	911	C
53	A3	912	A
53	A3	914	A
53	A3	915	A
53	A3	916	G

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Mol	Chain	Res	Type
53	A3	919	G
53	A3	920	U
53	A3	922	G
53	A3	924	G
53	A3	925	C
53	A3	926	A
53	A3	931	G
53	A3	932	U
53	A3	933	U
53	A3	935	A
53	A3	937	U
53	A3	942	A
53	A3	943	G
53	A3	946	A
53	A3	948	G
53	A3	949	C
53	A3	950	G
53	A3	952	A
53	A3	953	G
53	A3	954	A
53	A3	955	A
53	A3	957	C
53	A3	958	U
53	A3	959	U
53	A3	960	A
53	A3	962	C
53	A3	966	C
53	A3	967	C
53	A3	968	U
53	A3	969	U
53	A3	970	G
53	A3	972	C
53	A3	974	U
53	A3	975	G
53	A3	976	C
53	A3	977	U
53	A3	978	A
53	A3	979	G
53	A3	980	G
53	A3	981	G
53	A3	982	A
53	A3	983	A

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Mol	Chain	Res	Type
53	A3	984	C
53	A3	985	C
53	A3	988	G
53	A3	990	U
53	A3	994	A
53	A3	998	U
53	A3	999	G
53	A3	1000	G
53	A3	1002	G
53	A3	1003	U
53	A3	1004	G
53	A3	1005	C
53	A3	1006	C
53	A3	1007	C
53	A3	1008	C
53	A3	1009	G
53	A3	1010	C
53	A3	1011	G
53	A3	1012	A
53	A3	1013	G
53	A3	1014	G
53	A3	1015	G
53	A3	1016	G
53	A3	1018	G
53	A3	1019	C
53	A3	1020	C
53	A3	1022	U
53	A3	1023	A
53	A3	1024	G
53	A3	1027	C
53	A3	1029	G
53	A3	1030	G
53	A3	1034	U
53	A3	1035	G
53	A3	1036	C
53	A3	1045	C
53	A3	1046	G
53	A3	1047	U
53	A3	1048	C
53	A3	1049	A
53	A3	1053	C
53	A3	1057	C

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Mol	Chain	Res	Type
53	A3	1060	U
53	A3	1061	G
53	A3	1062	A
53	A3	1064	G
53	A3	1068	U
53	A3	1070	G
53	A3	1076	G
53	A3	1077	U
53	A3	1081	G
53	A3	1082	C
53	A3	1083	A
53	A3	1084	A
53	A3	1094	C
53	A3	1095	C
53	A3	1097	C
53	A3	1100	C
53	A3	1101	C
53	A3	1102	G
53	A3	1104	U
53	A3	1105	A
53	A3	1106	G
53	A3	1107	U
53	A3	1108	U
53	A3	1109	G
53	A3	1110	C
53	A3	1111	C
53	A3	1112	A
53	A3	1113	G
53	A3	1114	C
53	A3	1115	G
53	A3	1116	G
53	A3	1118	U
53	A3	1119	C
53	A3	1120	G
53	A3	1121	G
53	A3	1122	C
53	A3	1123	C
53	A3	1124	G
53	A3	1125	G
53	A3	1128	A
53	A3	1129	C
53	A3	1130	U

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Mol	Chain	Res	Type
53	A3	1133	A
53	A3	1134	A
53	A3	1136	G
53	A3	1139	A
53	A3	1140	C
53	A3	1141	U
53	A3	1145	C
53	A3	1149	A
53	A3	1153	C
53	A3	1159	G
53	A3	1160	A
53	A3	1161	A
53	A3	1162	G
53	A3	1163	G
53	A3	1164	A
53	A3	1165	G
53	A3	1167	G
53	A3	1172	A
53	A3	1173	C
53	A3	1174	G
53	A3	1176	C
53	A3	1177	U
53	A3	1178	G
53	A3	1179	G
53	A3	1180	U
53	A3	1181	C
53	A3	1182	A
53	A3	1183	G
53	A3	1186	U
53	A3	1187	G
53	A3	1190	C
53	A3	1192	U
53	A3	1194	A
53	A3	1196	G
53	A3	1197	G
53	A3	1198	C
53	A3	1199	C
53	A3	1200	U
53	A3	1201	G
53	A3	1202	G
53	A3	1203	G
53	A3	1205	G

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Mol	Chain	Res	Type
53	A3	1206	A
53	A3	1207	C
53	A3	1208	A
53	A3	1209	C
53	A3	1210	A
53	A3	1211	C
53	A3	1214	G
53	A3	1216	U
53	A3	1217	A
53	A3	1219	A
53	A3	1221	U
53	A3	1222	G
53	A3	1224	C
53	A3	1225	C
53	A3	1227	C
53	A3	1228	U
53	A3	1229	A
53	A3	1231	A
53	A3	1233	A
53	A3	1234	G
53	A3	1235	C
53	A3	1236	G
53	A3	1237	A
53	A3	1238	U
53	A3	1239	G
53	A3	1240	C
53	A3	1242	A
53	A3	1243	C
53	A3	1245	C
53	A3	1246	G
53	A3	1250	A
53	A3	1251	C
53	A3	1253	G
53	A3	1254	G
53	A3	1255	G
53	A3	1257	G
53	A3	1258	C
53	A3	1259	U
53	A3	1262	U
53	A3	1263	C
53	A3	1264	G
53	A3	1265	C

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Mol	Chain	Res	Type
53	A3	1266	A
53	A3	1267	A
53	A3	1268	A
53	A3	1269	A
53	A3	1270	A
53	A3	1271	G
53	A3	1272	G
53	A3	1273	U
53	A3	1277	C
53	A3	1279	C
53	A3	1280	A
53	A3	1281	G
53	A3	1282	U
53	A3	1283	U
53	A3	1284	C
53	A3	1286	G
53	A3	1287	A
53	A3	1292	G
53	A3	1293	G
53	A3	1294	U
53	A3	1299	A
53	A3	1300	A
53	A3	1301	C
53	A3	1302	C
53	A3	1304	G
53	A3	1312	G
53	A3	1313	A
53	A3	1317	C
53	A3	1318	G
53	A3	1319	G
53	A3	1321	A
53	A3	1322	U
53	A3	1323	C
53	A3	1325	C
53	A3	1327	A
53	A3	1328	G
53	A3	1332	U
53	A3	1333	C
53	A3	1337	G
53	A3	1339	U
53	A3	1340	C
53	A3	1341	A

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Mol	Chain	Res	Type
53	A3	1343	C
53	A3	1344	C
53	A3	1345	A
53	A3	1346	U
53	A3	1347	G
53	A3	1351	C
53	A3	1352	G
53	A3	1353	G
53	A3	1355	G
53	A3	1357	A
53	A3	1359	A
53	A3	1361	G
53	A3	1362	U
53	A3	1364	C
53	A3	1367	G
53	A3	1377	C
53	A3	1379	C
53	A3	1380	A
53	A3	1381	C
53	A3	1382	C
53	A3	1383	G
53	A3	1384	C
53	A3	1387	G
53	A3	1391	C
53	A3	1392	G
53	A3	1393	C
53	A3	1395	A
53	A3	1396	U
53	A3	1398	G
53	A3	1401	G
53	A3	1402	C
53	A3	1403	G
53	A3	1405	G
53	A3	1406	C
53	A3	1411	C
53	A3	1413	C
53	A3	1414	G
53	A3	1416	A
53	A3	1417	G
53	A3	1418	U
53	A3	1419	C
53	A3	1420	G

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Mol	Chain	Res	Type
53	A3	1422	C
53	A3	1423	G
53	A3	1428	C
53	A3	1429	C
53	A3	1430	U
53	A3	1431	A
53	A3	1432	C
53	A3	1433	G
53	A3	1434	G
53	A3	1435	G
53	A3	1436	C
53	A3	1437	A
53	A3	1444	G
53	A3	1445	A
53	A3	1446	G
53	A3	1450	A
53	A3	1452	G
53	A3	1454	C
53	A3	1458	U
53	A3	1460	A
53	A3	1461	C
53	A3	1462	U
53	A3	1468	G
53	A3	1469	A
53	A3	1470	A
53	A3	1471	G
53	A3	1474	G
53	A3	1476	A
53	A3	1479	A
53	A3	1480	A
53	A3	1481	G
53	A3	1482	G
53	A3	1484	A
53	A3	1485	G
53	A3	1489	U
53	A3	1492	C
53	A3	1494	G
53	A3	1497	G
53	A3	1502	G
53	A3	1505	U
53	A3	1506	G
53	A3	1507	G

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Mol	Chain	Res	Type
53	A3	1510	C
53	A4	7	G
53	A4	9	G
53	A4	15	G
53	A4	16	A
53	A4	18	C
53	A4	19	C
53	A4	20	U
53	A4	21	G
53	A4	23	C
53	A4	30	U
53	A4	31	G
53	A4	32	A
53	A4	34	C
53	A4	36	C
53	A4	37	U
53	A4	39	G
53	A4	44	G
53	A4	45	U
53	A4	47	C
53	A4	48	C
53	A4	49	U
53	A4	51	A
53	A4	52	G
53	A4	54	C
53	A4	56	U
53	A4	58	C
53	A4	59	A
53	A4	60	A
53	A4	61	G
53	A4	62	U
53	A4	66	G
53	A4	67	C
53	A4	68	G
53	A4	69	G
53	A4	70	G
53	A4	73	G
53	A4	76	G
53	A4	77	G
53	A4	78	G
53	A4	79	U
53	A4	80	U

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Mol	Chain	Res	Type
53	A4	81	U
53	A4	83	A
53	A4	84	C
53	A4	85	U
53	A4	86	C
53	A4	87	C
53	A4	88	G
53	A4	89	U
53	A4	90	G
53	A4	91	G
53	A4	92	U
53	A4	99	C
53	A4	101	G
53	A4	102	A
53	A4	103	C
53	A4	104	G
53	A4	107	U
53	A4	109	A
53	A4	111	U
53	A4	113	A
53	A4	114	C
53	A4	115	G
53	A4	123	G
53	A4	124	A
53	A4	125	C
53	A4	128	A
53	A4	131	C
53	A4	133	G
53	A4	134	A
53	A4	136	G
53	A4	137	A
53	A4	138	G
53	A4	139	G
53	A4	140	G
53	A4	142	G
53	A4	145	A
53	A4	147	C
53	A4	148	C
53	A4	149	C
53	A4	150	G
53	A4	153	G
53	A4	157	C

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Mol	Chain	Res	Type
53	A4	159	C
53	A4	160	G
53	A4	165	A
53	A4	166	A
53	A4	167	U
53	A4	172	C
53	A4	173	A
53	A4	174	U
53	A4	175	G
53	A4	177	G
53	A4	178	G
53	A4	179	A
53	A4	180	C
53	A4	181	C
53	A4	186	C
53	A4	188	U
53	A4	190	G
53	A4	191	G
53	A4	192	G
53	A4	197	G
53	A4	201	A
53	A4	203	A
53	A4	206	G
53	A4	207	C
53	A4	208	U
53	A4	209	U
53	A4	210	U
53	A4	211	G
53	A4	213	C
53	A4	218	U
53	A4	219	C
53	A4	225	G
53	A4	226	G
53	A4	230	C
53	A4	231	G
53	A4	232	C
53	A4	233	G
53	A4	234	U
53	A4	235	C
53	A4	238	A
53	A4	239	U
53	A4	240	C

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Mol	Chain	Res	Type
53	A4	242	G
53	A4	243	C
53	A4	246	G
53	A4	248	U
53	A4	257	A
53	A4	261	G
53	A4	262	C
53	A4	263	C
53	A4	268	A
53	A4	269	A
53	A4	270	G
53	A4	271	G
53	A4	272	C
53	A4	273	G
53	A4	276	G
53	A4	283	A
53	A4	284	G
53	A4	293	A
53	A4	298	A
53	A4	301	G
53	A4	306	C
53	A4	308	A
53	A4	309	C
53	A4	310	A
53	A4	312	G
53	A4	316	A
53	A4	317	C
53	A4	319	G
53	A4	323	C
53	A4	324	A
53	A4	325	C
53	A4	327	G
53	A4	330	C
53	A4	335	U
53	A4	336	C
53	A4	337	C
53	A4	339	A
53	A4	340	C
53	A4	341	G
53	A4	343	G
53	A4	345	G
53	A4	346	G

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Mol	Chain	Res	Type
53	A4	347	C
53	A4	348	A
53	A4	349	G
53	A4	351	A
53	A4	353	U
53	A4	357	G
53	A4	358	A
53	A4	362	U
53	A4	364	C
53	A4	367	C
53	A4	376	C
53	A4	379	G
53	A4	383	G
53	A4	384	A
53	A4	385	C
53	A4	389	G
53	A4	391	G
53	A4	392	A
53	A4	393	C
53	A4	396	C
53	A4	401	G
53	A4	403	A
53	A4	405	G
53	A4	406	A
53	A4	408	G
53	A4	409	A
53	A4	410	A
53	A4	411	G
53	A4	413	C
53	A4	414	C
53	A4	416	U
53	A4	417	C
53	A4	418	G
53	A4	420	G
53	A4	422	U
53	A4	423	G
53	A4	425	A
53	A4	426	A
53	A4	428	C
53	A4	429	U
53	A4	432	U
53	A4	434	A

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Mol	Chain	Res	Type
53	A4	435	A
53	A4	436	C
53	A4	439	G
53	A4	442	A
53	A4	445	A
53	A4	447	A
53	A4	448	C
53	A4	449	C
53	A4	454	A
53	A4	455	C
53	A4	458	G
53	A4	459	G
53	A4	465	G
53	A4	466	A
53	A4	469	G
53	A4	471	A
53	A4	472	C
53	A4	475	G
53	A4	478	U
53	A4	479	A
53	A4	480	A
53	A4	481	U
53	A4	482	A
53	A4	483	G
53	A4	488	G
53	A4	489	G
53	A4	491	C
53	A4	492	A
53	A4	494	C
53	A4	499	U
53	A4	500	G
53	A4	501	C
53	A4	503	A
53	A4	506	A
53	A4	507	G
53	A4	508	C
53	A4	509	C
53	A4	510	G
53	A4	511	C
53	A4	512	G
53	A4	513	G
53	A4	516	A

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Mol	Chain	Res	Type
53	A4	517	U
53	A4	518	A
53	A4	523	G
53	A4	528	C
53	A4	529	G
53	A4	530	A
53	A4	532	C
53	A4	533	G
53	A4	537	C
53	A4	542	A
53	A4	543	U
53	A4	544	U
53	A4	545	C
53	A4	547	C
53	A4	548	U
53	A4	553	G
53	A4	555	A
53	A4	556	A
53	A4	558	G
53	A4	559	G
53	A4	560	G
53	A4	562	G
53	A4	563	U
53	A4	567	G
53	A4	574	U
53	A4	575	G
53	A4	576	G
53	A4	577	G
53	A4	578	G
53	A4	579	C
53	A4	580	G
53	A4	595	C
53	A4	603	C
53	A4	604	A
53	A4	607	C
53	A4	612	G
53	A4	613	G
53	A4	614	G
53	A4	615	A
53	A4	616	G
53	A4	617	C
53	A4	620	G

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Mol	Chain	Res	Type
53	A4	621	G
53	A4	622	G
53	A4	623	A
53	A4	626	C
53	A4	627	G
53	A4	629	U
53	A4	630	C
53	A4	633	G
53	A4	634	C
53	A4	636	A
53	A4	640	G
53	A4	644	G
53	A4	647	G
53	A4	648	A
53	A4	650	G
53	A4	656	G
53	A4	657	G
53	A4	663	C
53	A4	664	C
53	A4	668	G
53	A4	669	U
53	A4	670	A
53	A4	671	G
53	A4	674	G
53	A4	683	G
53	A4	685	A
53	A4	686	G
53	A4	691	C
53	A4	692	G
53	A4	693	G
53	A4	694	G
53	A4	695	A
53	A4	699	A
53	A4	700	C
53	A4	701	G
53	A4	702	C
53	A4	705	A
53	A4	706	U
53	A4	707	G
53	A4	709	C
53	A4	711	A
53	A4	712	A

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Mol	Chain	Res	Type
53	A4	713	G
53	A4	714	G
53	A4	716	A
53	A4	717	G
53	A4	719	C
53	A4	722	C
53	A4	724	G
53	A4	725	G
53	A4	727	C
53	A4	728	C
53	A4	730	C
53	A4	731	C
53	A4	732	C
53	A4	733	G
53	A4	734	U
53	A4	735	G
53	A4	736	A
53	A4	737	C
53	A4	738	G
53	A4	740	U
53	A4	741	G
53	A4	749	A
53	A4	750	A
53	A4	751	A
53	A4	752	G
53	A4	757	G
53	A4	759	G
53	A4	760	A
53	A4	766	C
53	A4	768	G
53	A4	773	A
53	A4	775	A
53	A4	776	U
53	A4	777	A
53	A4	778	C
53	A4	780	C
53	A4	786	G
53	A4	788	C
53	A4	789	C
53	A4	794	C
53	A4	795	C
53	A4	796	U

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Mol	Chain	Res	Type
53	A4	800	C
53	A4	801	G
53	A4	802	A
53	A4	804	G
53	A4	807	C
53	A4	810	U
53	A4	811	A
53	A4	812	G
53	A4	817	C
53	A4	818	U
53	A4	821	G
53	A4	822	U
53	A4	823	C
53	A4	824	U
53	A4	825	C
53	A4	829	G
53	A4	831	G
53	A4	836	A
53	A4	842	A
53	A4	847	U
53	A4	848	U
53	A4	849	A
53	A4	850	A
53	A4	851	G
53	A4	854	C
53	A4	857	C
53	A4	859	C
53	A4	861	U
53	A4	863	G
53	A4	865	G
53	A4	866	A
53	A4	872	G
53	A4	874	C
53	A4	876	C
53	A4	879	G
53	A4	880	G
53	A4	881	C
53	A4	884	A
53	A4	885	A
53	A4	886	A
53	A4	888	U
53	A4	890	A

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Mol	Chain	Res	Type
53	A4	891	A
53	A4	893	G
53	A4	894	G
53	A4	896	A
53	A4	899	G
53	A4	900	A
53	A4	903	G
53	A4	904	G
53	A4	909	C
53	A4	911	C
53	A4	912	A
53	A4	914	A
53	A4	915	A
53	A4	916	G
53	A4	919	G
53	A4	920	U
53	A4	922	G
53	A4	926	A
53	A4	928	G
53	A4	930	G
53	A4	931	G
53	A4	935	A
53	A4	937	U
53	A4	938	U
53	A4	942	A
53	A4	943	G
53	A4	946	A
53	A4	948	G
53	A4	951	A
53	A4	952	A
53	A4	953	G
53	A4	954	A
53	A4	955	A
53	A4	956	C
53	A4	959	U
53	A4	960	A
53	A4	961	C
53	A4	962	C
53	A4	964	G
53	A4	966	C
53	A4	968	U
53	A4	969	U

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Mol	Chain	Res	Type
53	A4	970	G
53	A4	971	A
53	A4	972	C
53	A4	973	A
53	A4	974	U
53	A4	975	G
53	A4	976	C
53	A4	977	U
53	A4	980	G
53	A4	981	G
53	A4	982	A
53	A4	983	A
53	A4	984	C
53	A4	985	C
53	A4	993	A
53	A4	995	G
53	A4	996	C
53	A4	998	U
53	A4	1000	G
53	A4	1001	G
53	A4	1002	G
53	A4	1004	G
53	A4	1005	C
53	A4	1006	C
53	A4	1008	C
53	A4	1009	G
53	A4	1010	C
53	A4	1011	G
53	A4	1012	A
53	A4	1013	G
53	A4	1014	G
53	A4	1015	G
53	A4	1016	G
53	A4	1018	G
53	A4	1021	C
53	A4	1022	U
53	A4	1023	A
53	A4	1024	G
53	A4	1027	C
53	A4	1029	G
53	A4	1030	G
53	A4	1031	U

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Mol	Chain	Res	Type
53	A4	1032	G
53	A4	1034	U
53	A4	1035	G
53	A4	1036	C
53	A4	1037	A
53	A4	1038	U
53	A4	1044	U
53	A4	1046	G
53	A4	1047	U
53	A4	1048	C
53	A4	1049	A
53	A4	1053	C
53	A4	1057	C
53	A4	1060	U
53	A4	1061	G
53	A4	1064	G
53	A4	1068	U
53	A4	1070	G
53	A4	1076	G
53	A4	1077	U
53	A4	1078	C
53	A4	1081	G
53	A4	1082	C
53	A4	1083	A
53	A4	1093	A
53	A4	1100	C
53	A4	1101	C
53	A4	1102	G
53	A4	1106	G
53	A4	1107	U
53	A4	1108	U
53	A4	1109	G
53	A4	1110	C
53	A4	1111	C
53	A4	1112	A
53	A4	1113	G
53	A4	1114	C
53	A4	1115	G
53	A4	1116	G
53	A4	1117	U
53	A4	1118	U
53	A4	1119	C

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Mol	Chain	Res	Type
53	A4	1120	G
53	A4	1121	G
53	A4	1123	C
53	A4	1124	G
53	A4	1125	G
53	A4	1126	G
53	A4	1128	A
53	A4	1133	A
53	A4	1134	A
53	A4	1136	G
53	A4	1137	G
53	A4	1139	A
53	A4	1140	C
53	A4	1141	U
53	A4	1145	C
53	A4	1149	A
53	A4	1153	C
53	A4	1156	G
53	A4	1160	A
53	A4	1162	G
53	A4	1163	G
53	A4	1164	A
53	A4	1165	G
53	A4	1166	G
53	A4	1169	A
53	A4	1171	G
53	A4	1172	A
53	A4	1174	G
53	A4	1177	U
53	A4	1179	G
53	A4	1180	U
53	A4	1181	C
53	A4	1187	G
53	A4	1190	C
53	A4	1191	C
53	A4	1193	U
53	A4	1194	A
53	A4	1195	C
53	A4	1196	G
53	A4	1197	G
53	A4	1198	C
53	A4	1199	C

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Mol	Chain	Res	Type
53	A4	1201	G
53	A4	1204	C
53	A4	1206	A
53	A4	1207	C
53	A4	1208	A
53	A4	1209	C
53	A4	1210	A
53	A4	1212	G
53	A4	1214	G
53	A4	1216	U
53	A4	1217	A
53	A4	1219	A
53	A4	1221	U
53	A4	1222	G
53	A4	1224	C
53	A4	1225	C
53	A4	1227	C
53	A4	1228	U
53	A4	1229	A
53	A4	1231	A
53	A4	1232	A
53	A4	1233	A
53	A4	1234	G
53	A4	1235	C
53	A4	1236	G
53	A4	1237	A
53	A4	1238	U
53	A4	1239	G
53	A4	1242	A
53	A4	1243	C
53	A4	1245	C
53	A4	1246	G
53	A4	1247	G
53	A4	1249	A
53	A4	1250	A
53	A4	1251	C
53	A4	1253	G
53	A4	1254	G
53	A4	1255	G
53	A4	1257	G
53	A4	1259	U
53	A4	1260	A

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Mol	Chain	Res	Type
53	A4	1261	A
53	A4	1262	U
53	A4	1264	G
53	A4	1265	C
53	A4	1267	A
53	A4	1268	A
53	A4	1269	A
53	A4	1270	A
53	A4	1272	G
53	A4	1273	U
53	A4	1274	G
53	A4	1275	G
53	A4	1276	G
53	A4	1278	C
53	A4	1279	C
53	A4	1280	A
53	A4	1281	G
53	A4	1283	U
53	A4	1284	C
53	A4	1286	G
53	A4	1291	G
53	A4	1292	G
53	A4	1293	G
53	A4	1294	U
53	A4	1296	U
53	A4	1298	C
53	A4	1300	A
53	A4	1311	U
53	A4	1312	G
53	A4	1313	A
53	A4	1316	C
53	A4	1317	C
53	A4	1318	G
53	A4	1319	G
53	A4	1321	A
53	A4	1322	U
53	A4	1323	C
53	A4	1324	G
53	A4	1325	C
53	A4	1327	A
53	A4	1328	G
53	A4	1329	U

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Mol	Chain	Res	Type
53	A4	1337	G
53	A4	1339	U
53	A4	1340	C
53	A4	1341	A
53	A4	1342	G
53	A4	1343	C
53	A4	1344	C
53	A4	1345	A
53	A4	1346	U
53	A4	1347	G
53	A4	1351	C
53	A4	1352	G
53	A4	1353	G
53	A4	1359	A
53	A4	1361	G
53	A4	1362	U
53	A4	1364	C
53	A4	1369	G
53	A4	1370	C
53	A4	1379	C
53	A4	1380	A
53	A4	1381	C
53	A4	1382	C
53	A4	1383	G
53	A4	1384	C
53	A4	1387	G
53	A4	1391	C
53	A4	1392	G
53	A4	1393	C
53	A4	1395	A
53	A4	1396	U
53	A4	1398	G
53	A4	1399	G
53	A4	1401	G
53	A4	1402	C
53	A4	1403	G
53	A4	1404	G
53	A4	1406	C
53	A4	1411	C
53	A4	1412	C
53	A4	1413	C
53	A4	1415	A

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Mol	Chain	Res	Type
53	A4	1416	A
53	A4	1417	G
53	A4	1418	U
53	A4	1419	C
53	A4	1420	G
53	A4	1422	C
53	A4	1423	G
53	A4	1424	G
53	A4	1426	A
53	A4	1427	G
53	A4	1430	U
53	A4	1431	A
53	A4	1432	C
53	A4	1433	G
53	A4	1434	G
53	A4	1435	G
53	A4	1437	A
53	A4	1439	G
53	A4	1444	G
53	A4	1445	A
53	A4	1446	G
53	A4	1450	A
53	A4	1452	G
53	A4	1454	C
53	A4	1458	U
53	A4	1460	A
53	A4	1461	C
53	A4	1462	U
53	A4	1469	A
53	A4	1470	A
53	A4	1476	A
53	A4	1479	A
53	A4	1480	A
53	A4	1481	G
53	A4	1482	G
53	A4	1483	U
53	A4	1484	A
53	A4	1489	U
53	A4	1492	C
53	A4	1497	G
53	A4	1499	U
53	A4	1505	U

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Mol	Chain	Res	Type
53	A4	1507	G
53	A4	1510	C

All (126) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
29	A1	123	G
29	A1	219	A
29	A1	240	G
29	A1	288	G
29	A1	423	U
29	A1	432	C
29	A1	485	A
29	A1	530	A
29	A1	951	C
29	A1	1070	G
29	A1	1179	G
29	A1	1225	C
29	A1	1257	A
29	A1	1418	C
29	A1	1475	A
29	A1	1607	A
29	A1	1743	C
29	A1	1832	G
29	A1	1852	A
29	A1	1890	G
29	A1	1930	G
29	A1	2004	G
29	A1	2016	G
29	A1	2041	U
29	A1	2042	G
29	A1	2059	G
29	A1	2453	A
29	A1	2556	A
29	A1	2580	A
29	A1	2624	C
29	A1	2771	U
30	B1	17	A
29	A2	111	G
29	A2	219	A
29	A2	271	C
29	A2	288	G

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Mol	Chain	Res	Type
29	A2	833	A
29	A2	854	G
29	A2	1070	G
29	A2	1108	U
29	A2	1179	G
29	A2	1180	A
29	A2	1181	U
29	A2	1257	A
29	A2	1390	A
29	A2	1412	G
29	A2	1427	A
29	A2	1475	A
29	A2	1545	U
29	A2	1607	A
29	A2	1702	G
29	A2	1743	C
29	A2	1832	G
29	A2	1852	A
29	A2	1890	G
29	A2	1937	A
29	A2	1942	A
29	A2	2004	G
29	A2	2016	G
29	A2	2041	U
29	A2	2042	G
29	A2	2084	A
29	A2	2168	U
29	A2	2296	G
29	A2	2408	C
29	A2	2453	A
29	A2	2580	A
29	A2	2616	A
29	A2	2623	U
29	A2	2624	C
29	A2	2771	U
53	A3	105	G
53	A3	108	G
53	A3	205	G
53	A3	241	A
53	A3	339	A
53	A3	407	A
53	A3	424	U

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Mol	Chain	Res	Type
53	A3	468	G
53	A3	480	A
53	A3	562	G
53	A3	670	A
53	A3	705	A
53	A3	749	A
53	A3	890	A
53	A3	942	A
53	A3	948	G
53	A3	1005	C
53	A3	1047	U
53	A3	1111	C
53	A3	1117	U
53	A3	1144	C
53	A3	1272	G
53	A3	1274	G
53	A3	1317	C
53	A3	1433	G
53	A3	1469	A
53	A3	1475	U
53	A3	1491	C
53	A4	101	G
53	A4	105	G
53	A4	108	G
53	A4	148	C
53	A4	205	G
53	A4	241	A
53	A4	407	A
53	A4	468	G
53	A4	615	A
53	A4	670	A
53	A4	705	A
53	A4	717	G
53	A4	749	A
53	A4	890	A
53	A4	969	U
53	A4	1005	C
53	A4	1015	G
53	A4	1047	U
53	A4	1111	C
53	A4	1144	C
53	A4	1206	A

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Mol	Chain	Res	Type
53	A4	1272	G
53	A4	1317	C
53	A4	1433	G
53	A4	1469	A
53	A4	1475	U
53	A4	1491	C

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
37	G3	1
34	D4	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G3	12:LEU	C	13:GLN	N	1.08
1	D4	187:ARG	C	188:LEU	N	1.06

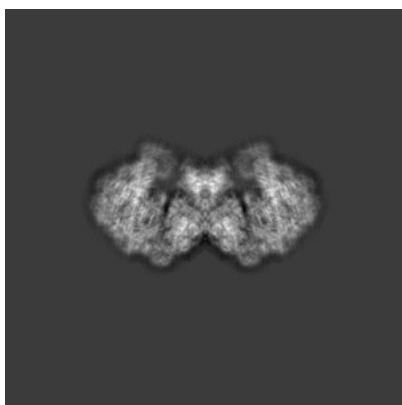
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-0105. These allow visual inspection of the internal detail of the map and identification of artifacts.

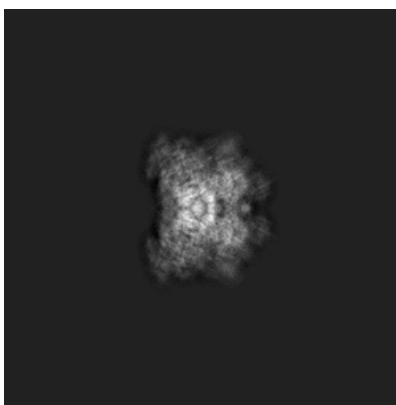
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

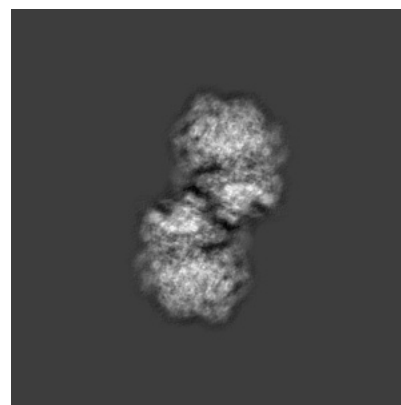
6.1.1 Primary map



X



Y

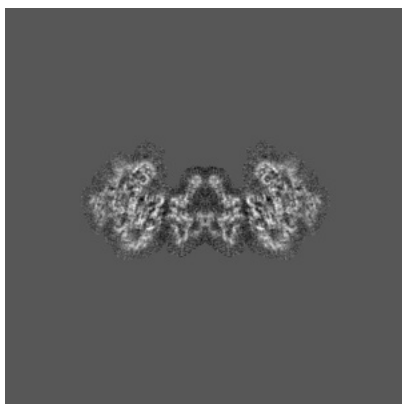


Z

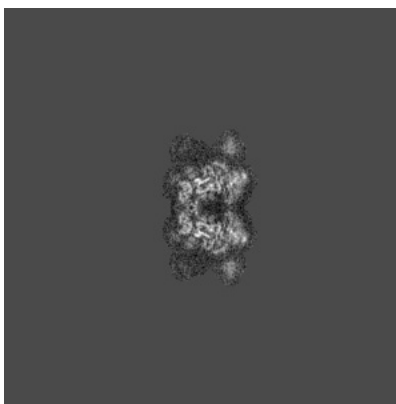
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

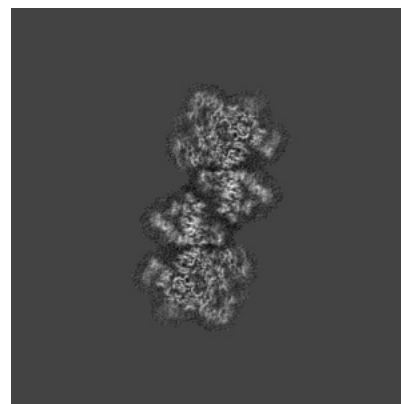
6.2.1 Primary map



X Index: 350



Y Index: 350

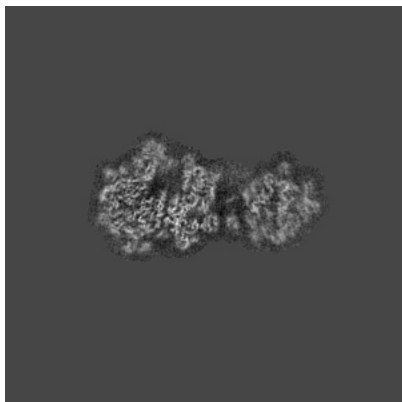


Z Index: 350

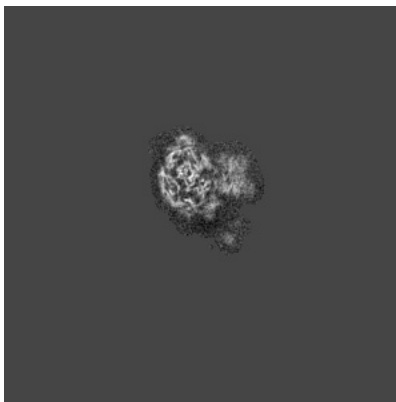
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

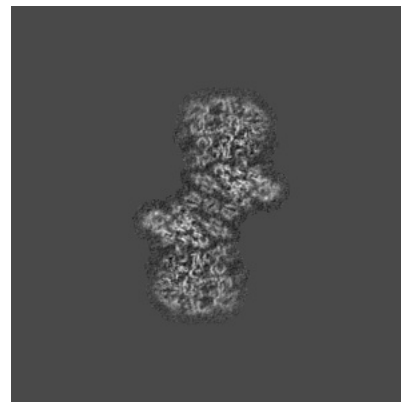
6.3.1 Primary map



X Index: 324



Y Index: 384

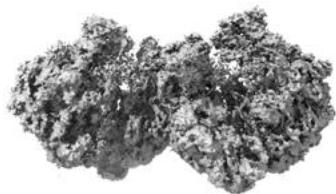


Z Index: 327

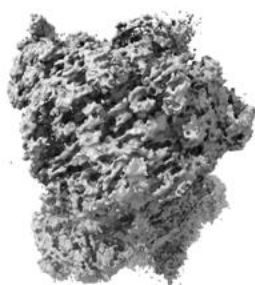
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

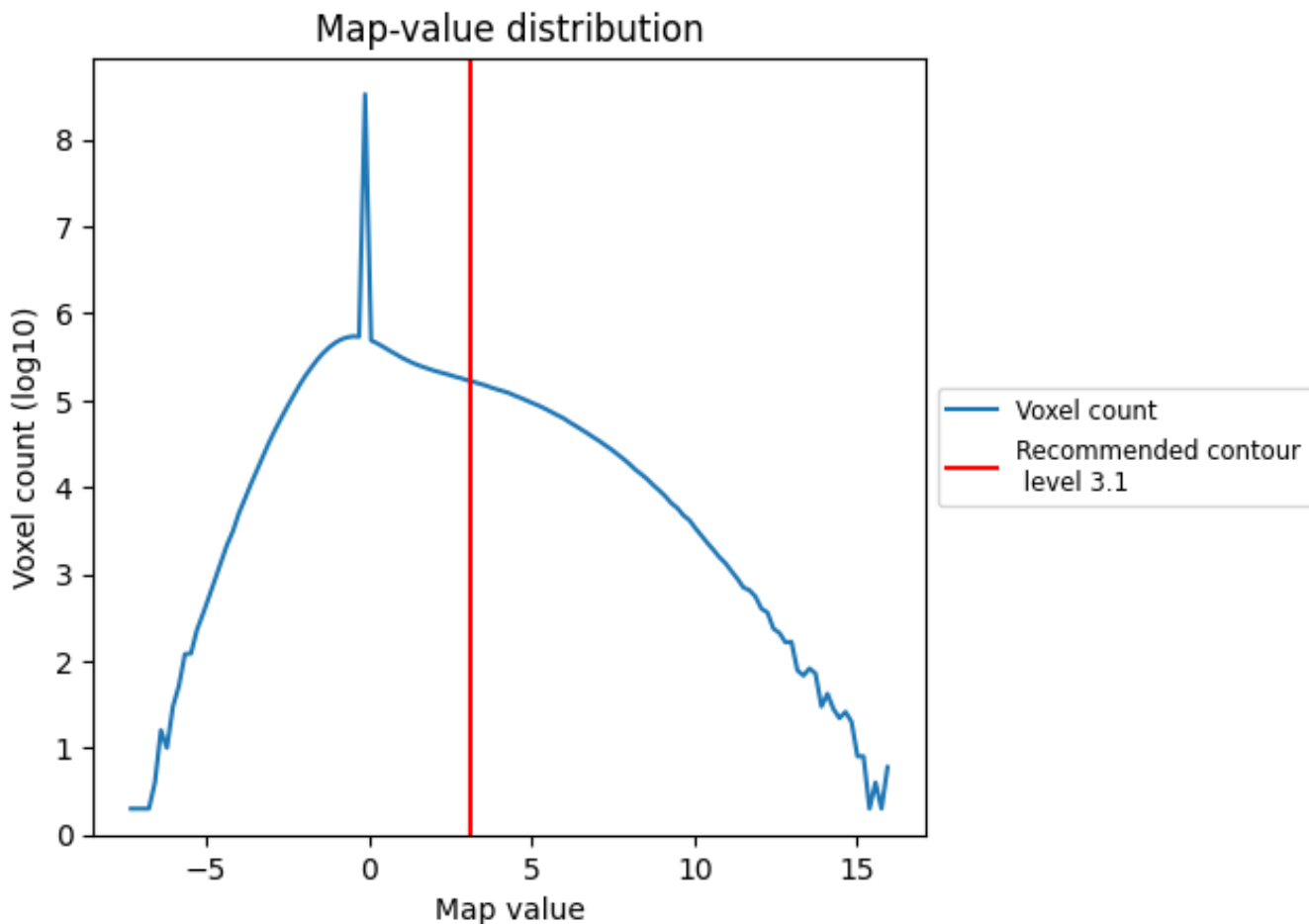
6.5 Mask visualisation

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

7 Map analysis [i](#)

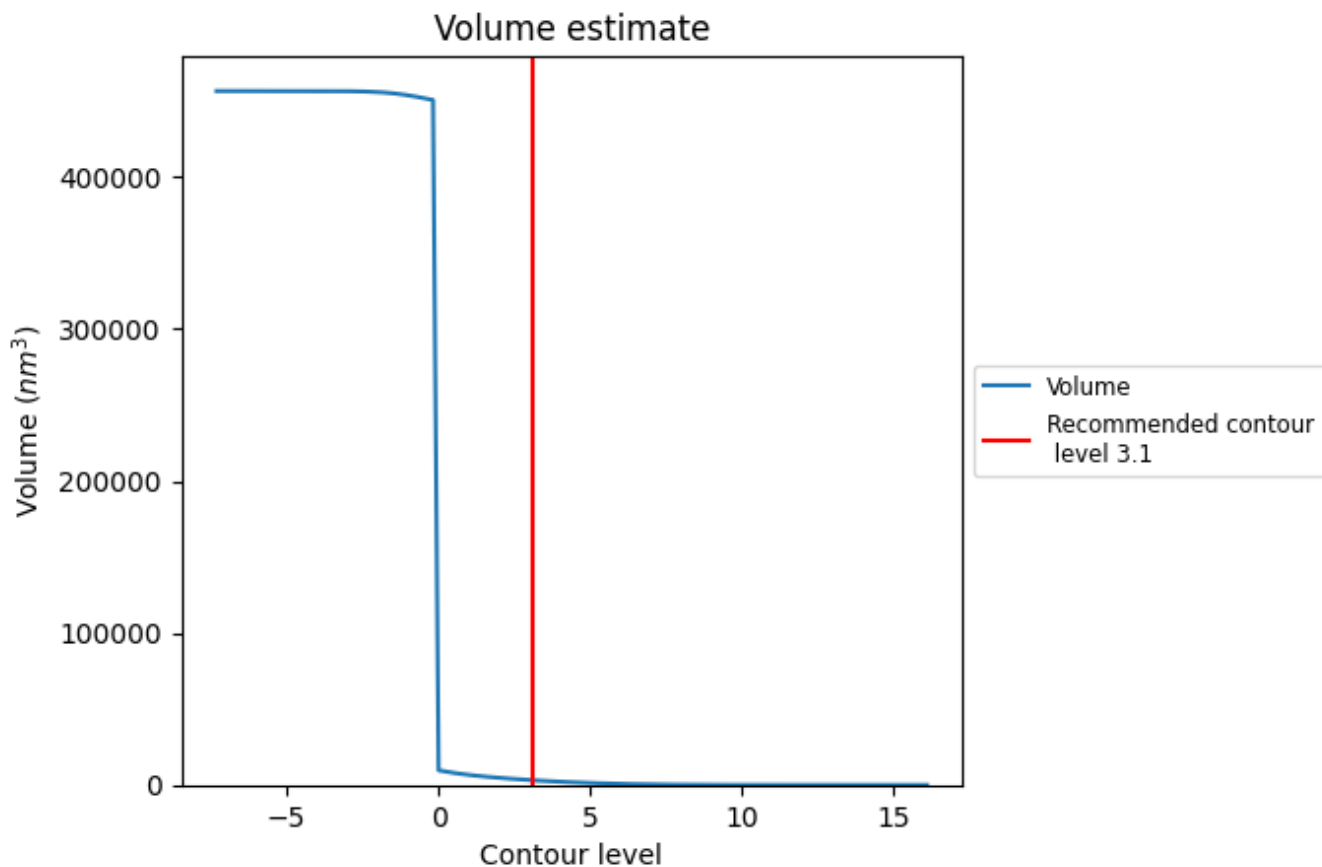
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

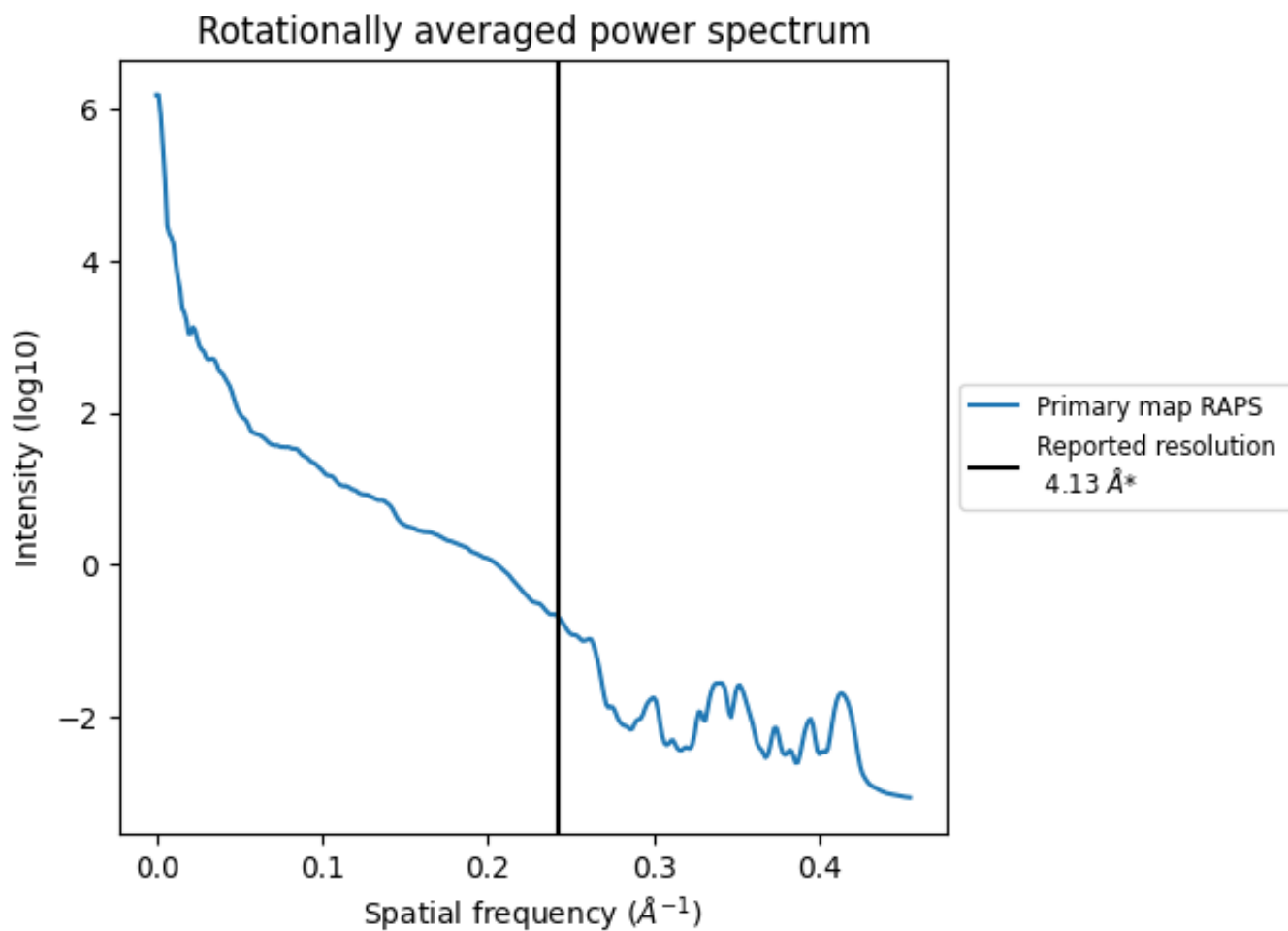
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3146 nm^3 ; this corresponds to an approximate mass of 2842 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.242\AA^{-1}

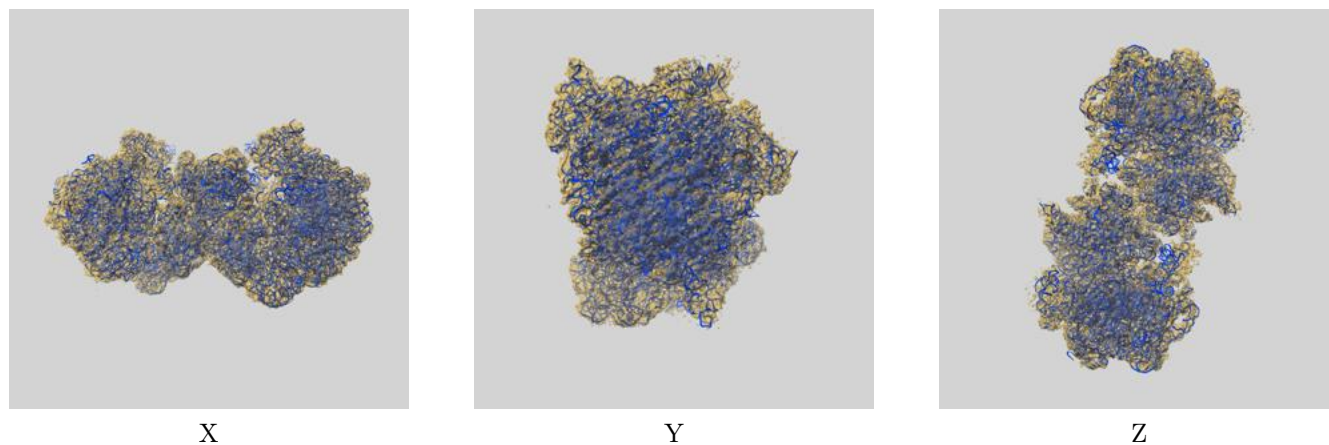
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

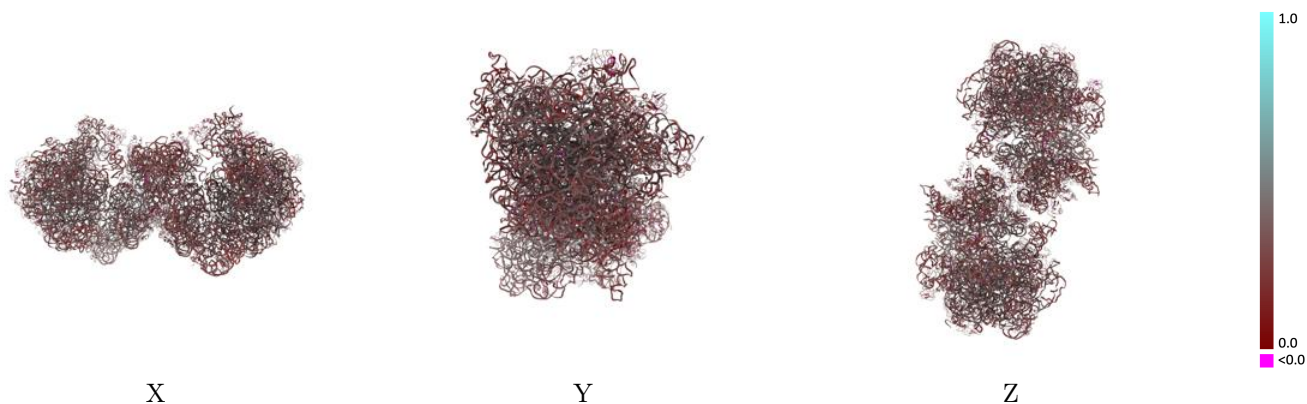
This section contains information regarding the fit between EMDB map EMD-0105 and PDB model 6GZZ. Per-residue inclusion information can be found in section 3 on page 18.

9.1 Map-model overlay [i](#)



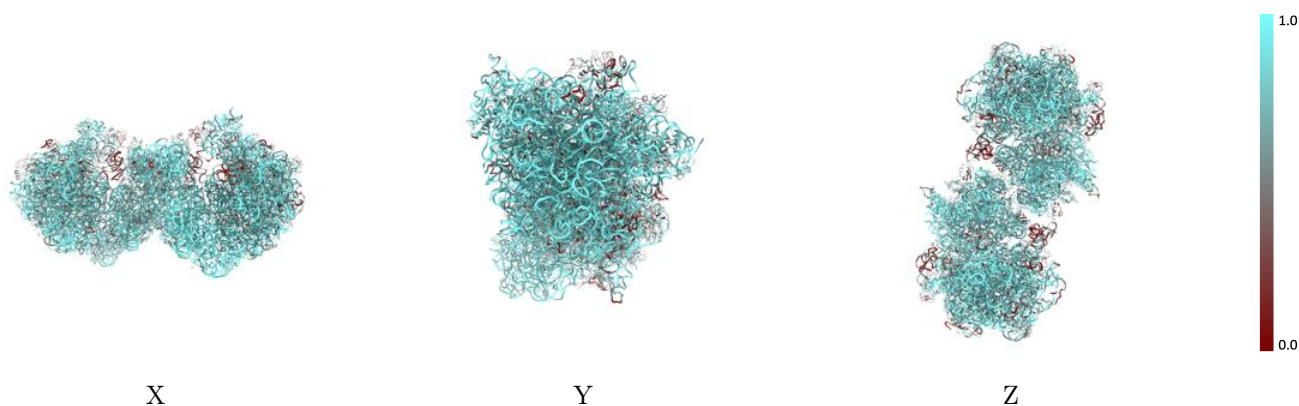
The images above show the 3D surface view of the map at the recommended contour level 3.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



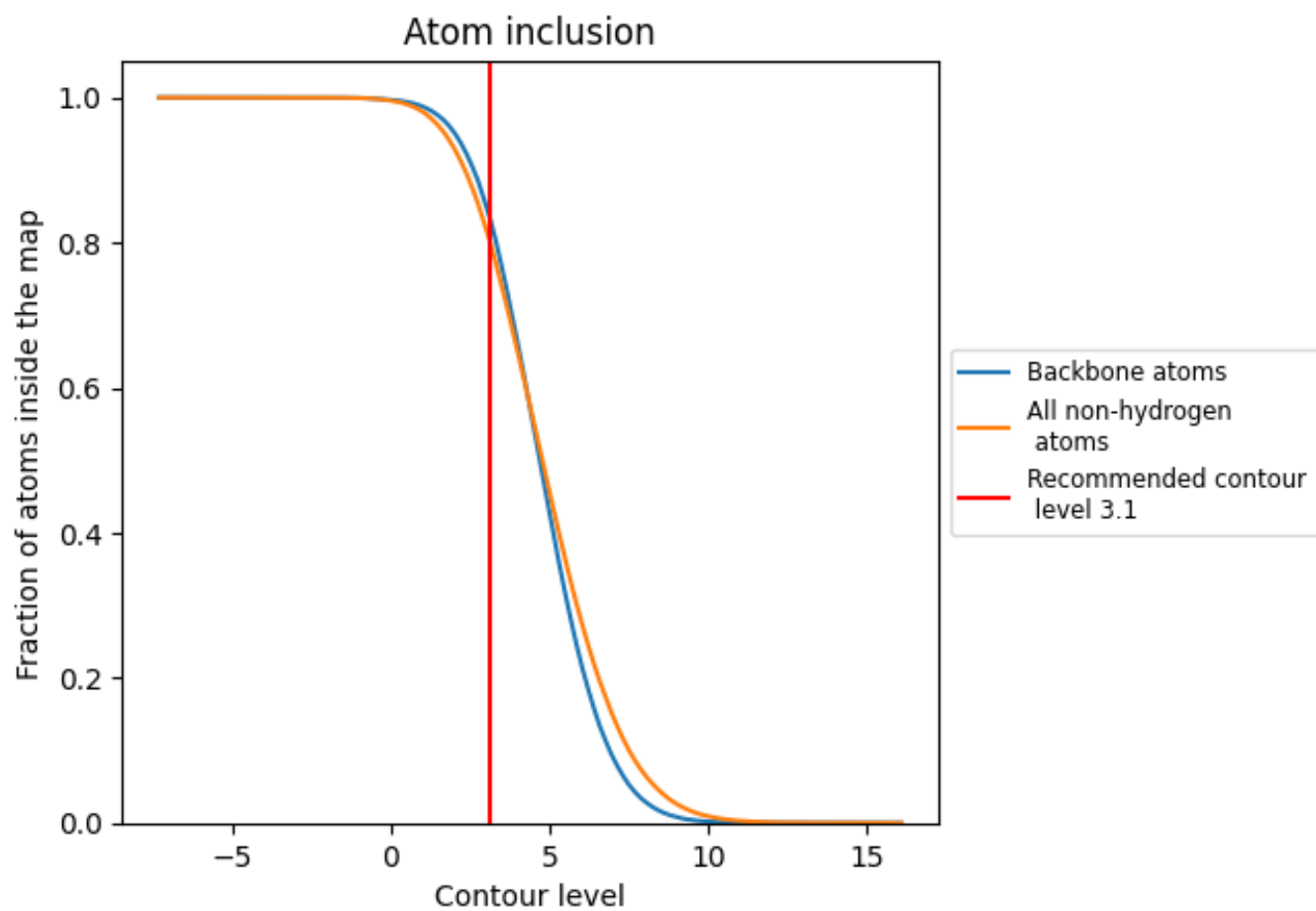
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3.1).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 81% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary





















































































The table lists the average atom inclusion at the recommended contour level (3.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8062	 0.3170
A1	 0.8439	 0.3320
A2	 0.8453	 0.3330
A3	 0.9343	 0.3190
A4	 0.9325	 0.3200
B1	 0.8961	 0.2920
B2	 0.9014	 0.2950
B3	 0.7010	 0.2960
B4	 0.6957	 0.2900
C1	 0.6582	 0.3220
C2	 0.6528	 0.3320
C3	 0.6386	 0.2870
C4	 0.6341	 0.2840
D1	 0.6560	 0.3400
D2	 0.6514	 0.3470
D3	 0.8079	 0.2650
D4	 0.8042	 0.2600
E1	 0.5365	 0.3020
E2	 0.5428	 0.3040
E3	 0.8207	 0.3280
E4	 0.8216	 0.3330
F1	 0.5445	 0.2530
F2	 0.5333	 0.2540
F3	 0.7146	 0.2650
F4	 0.7319	 0.2600
G1	 0.5272	 0.2670
G2	 0.5366	 0.2700
G3	 0.7061	 0.2940
G4	 0.7127	 0.3000
H1	 0.4827	 0.2930
H2	 0.4853	 0.2940
H3	 0.8597	 0.3210
H4	 0.8559	 0.3260
I1	 0.6887	 0.3250
I2	 0.7017	 0.3330



































































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Chain	Atom inclusion	Q-score
I3	 0.7109	 0.2810
I4	 0.7315	 0.2790
J1	 0.4918	 0.3600
J2	 0.5027	 0.3650
J3	 0.5270	 0.2370
J4	 0.5488	 0.2530
K1	 0.4824	 0.3110
K2	 0.4734	 0.3130
K3	 0.6756	 0.2940
K4	 0.6849	 0.3010
L1	 0.6562	 0.3190
L2	 0.6359	 0.3150
L3	 0.8059	 0.3260
L4	 0.7996	 0.3310
M1	 0.6344	 0.3170
M2	 0.6409	 0.3180
M3	 0.6566	 0.2640
M4	 0.6442	 0.2450
N1	 0.7630	 0.2860
N2	 0.7594	 0.2970
N3	 0.7302	 0.2420
N4	 0.7281	 0.2440
O1	 0.6480	 0.3300
O2	 0.6471	 0.3260
O3	 0.7938	 0.2790
O4	 0.7952	 0.2930
P1	 0.7061	 0.2950
P2	 0.6974	 0.2980
P3	 0.8187	 0.3120
P4	 0.8306	 0.3210
Q1	 0.5617	 0.3240
Q2	 0.5774	 0.3220
Q3	 0.6943	 0.3090
Q4	 0.6856	 0.3160
R1	 0.6736	 0.3260
R2	 0.6563	 0.3210
R3	 0.5749	 0.3050
R4	 0.5486	 0.2890
S1	 0.6259	 0.2830
S2	 0.6231	 0.2910
S3	 0.8020	 0.2330
S4	 0.7774	 0.2300

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Chain	Atom inclusion	Q-score
T1	 0.6866	 0.2750
T2	 0.7022	 0.2860
T3	 0.6793	 0.2830
T4	 0.6861	 0.2860
U1	 0.5183	 0.2520
U2	 0.5298	 0.2610
U3	 0.7065	 0.2710
U4	 0.6965	 0.2680
V1	 0.7726	 0.2890
V2	 0.7709	 0.2880
V3	 0.6954	 0.2990
V4	 0.7140	 0.3000
W1	 0.5196	 0.3120
W2	 0.5047	 0.3020
W4	 0.6212	 0.2710
X1	 0.6114	 0.2770
X2	 0.6007	 0.2820
X3	 0.6320	 0.2780
Y1	 0.6842	 0.3300
Y2	 0.6601	 0.3210
Z1	 0.1540	 0.1940
Z2	 0.2160	 0.1880
a1	 0.7629	 0.3140
a2	 0.7360	 0.3190
b1	 0.7467	 0.2680
b2	 0.7787	 0.2410
c1	 0.6859	 0.2960
c2	 0.7111	 0.2980
d1	 0.5690	 0.3180
d2	 0.5502	 0.3160
e1	 0.6154	 0.2360
e2	 0.5944	 0.2760