



Full wwPDB EM Validation Report ⓘ

Jul 3, 2024 – 09:13 am BST

PDB ID : 6XU8
EMDB ID : EMD-10624
Title : Drosophila melanogaster Ovary 80S ribosome
Authors : Hopes, T.; Agapiou, M.; Norris, K.; McCarthy, C.G.P.; OConnell, M.J.;
Fontana, J.; Aspden, J.L.
Deposited on : 2020-01-17
Resolution : 3.00 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

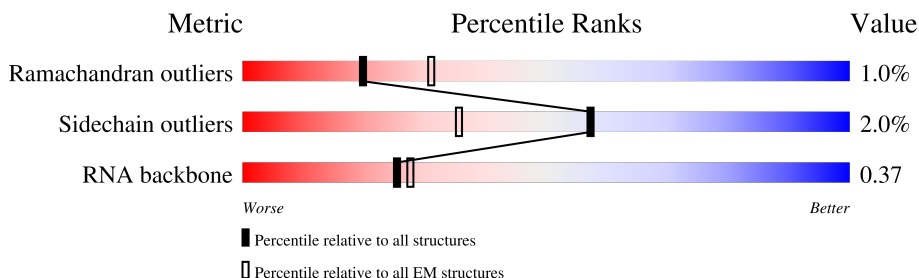
EMDB validation analysis : 0.0.1.dev92
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

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 3.00 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	CO	205	
2	CL	210	
3	CV	134	
4	CM	159	
5	Ca	149	
6	CN	203	
7	CI	217	
8	CD	290	

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Mol	Chain	Length	Quality of chain
9	CQ	187	94% 5% ..
10	CR	203	12% 97% .
11	CA	253	96% .
12	CS	173	85% 14% .
13	CT	158	92% 7% .
14	CP	185	13% 94% 5% .
15	CX	120	95% 5%
16	CY	131	94% 5% .
17	CZ	134	99% .
18	Cr	134	7% 82% 17% .
19	Ch	123	94% 6%
20	Cb	75	88% 11% .
21	CB	414	91% 8%
22	CF	226	95% ..
23	Cc	100	99% .
24	Ce	132	95% ..
25	Cf	157	84% 15% .
26	Ci	113	90% 10%
27	Ck	70	94% ..
28	Cl	50	98% .
29	CC	392	91% 8% .
30	Cm	52	92% 6% .
31	Cn	25	96% .
32	Cp	91	95% 5%
33	Co	104	93% 7%

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Mol	Chain	Length	Quality of chain
34	CJ	182	5% 96% ..
35	CH	190	94% 6%
36	CE	228	9% 84% 14% .
37	CG	241	10% 95% 5% .
38	A9	30	53% 37% 10%
39	A7	120	51% 42% 8%
40	A8	123	31% 56% 13%
41	Ag	318	68% 97% .
42	AU	102	43% 99% .
43	AO	127	96% .
44	AX	143	6% 97% .
45	AM	119	63% 92% 7% .
46	Ad	52	10% 98% .
47	AN	150	99% .
48	AL	155	17% 99% .
49	AR	120	55% 98% .
50	AP	124	22% 94% 6%
51	AB	220	10% 95% ..
52	AA	218	17% 97% .
53	AV	82	23% 96% .
54	AY	126	11% 94% 6%
55	AZ	74	54% 89% 11%
56	Aa	107	13% 94% 6%
57	Ab	84	7% 99% .
58	AD	227	37% 95% 5%

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Mol	Chain	Length	Quality of chain
59	Ae	58	33% 95% 5%
60	Af	80	52% 85% 15%
61	AJ	181	8% 97% ..
62	AE	261	5% 97% .
63	AC	227	11% 97% .
64	AG	231	18% 97% .
65	AH	194	21% 95% 5%
66	AI	207	17% 96% .
67	AQ	148	42% 92% 8%
68	Cz	217	99% 95% 5%
69	A5	3703	6% 37% 46% 17%
70	B2	1936	11% 63% 34% .
71	AW	129	. 99% .
72	AT	126	18% 94% 6%
73	AK	90	7% 97% .
74	AF	189	53% 95% 5%
75	Ac	62	24% 92% 8%
76	CU	99	6% 96% .
77	Cj	87	99% .
78	CW	60	97% .
79	Cg	103	91% 8% .
80	Cd	107	93% 7%
81	AS	136	18% 97% .

2 Entry composition

There are 81 unique types of molecules in this entry. The entry contains 216955 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 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	CO	205	1668	1063	331	268	6	0	0

- Molecule 2 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	CL	210	1695	1066	342	284	3	0	0

- Molecule 3 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	CV	134	998	629	190	173	6	0	0

- Molecule 4 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	CM	159	1302	826	256	218	2	0	0

- Molecule 5 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	Ca	149	1204	769	242	189	4	0	0

- Molecule 6 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	CN	203	1710	1072	362	271	5	0	0

- Molecule 7 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	CI	217	1785	1125	343	304	13	0	0

- Molecule 8 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	CD	290	2334	1471	434	423	6	0	0

- Molecule 9 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	CQ	187	1518	957	306	251	4	0	0

- Molecule 10 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	CR	203	1683	1047	350	277	9	0	0

- Molecule 11 is a protein called 60S ribosomal protein L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	CA	253	1935	1206	395	326	8	0	0

- Molecule 12 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	CS	173	1454	935	275	240	4	0	0

- Molecule 13 is a protein called RE62581p.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	CT	158	1297	829	253	212	3	0	0

- Molecule 14 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	CP	185	Total	C	N	O	S	0	0
			1505	928	305	263	9		

- Molecule 15 is a protein called IP17216p.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	CX	120	Total	C	N	O	S	0	0
			984	625	192	165	2		

- Molecule 16 is a protein called GEO07453p1.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	CY	131	Total	C	N	O	S	0	0
			1078	676	224	176	2		

- Molecule 17 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	CZ	134	Total	C	N	O	S	0	0
			1115	723	209	180	3		

- Molecule 18 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	Cr	134	Total	C	N	O	0	0
			1051	670	205	176		

- Molecule 19 is a protein called FI02809p.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	Ch	123	Total	C	N	O	S	0	0
			1015	646	202	164	3		

- Molecule 20 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	Cb	75	Total	C	N	O	S	0	0
			619	378	133	107	1		

- Molecule 21 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	CB	414	Total	C	N	O	S	0	0
			3287	2083	621	565	18		

- Molecule 22 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	CF	226	Total	C	N	O	S	0	0
			1895	1216	368	308	3		

- Molecule 23 is a protein called RE25263p.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Cc	100	Total	C	N	O	S	0	0
			770	486	132	147	5		

- Molecule 24 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Ce	132	Total	C	N	O	S	0	0
			1110	698	230	177	5		

- Molecule 25 is a protein called GEO07455p1.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Cf	157	Total	C	N	O	S	0	0
			1244	781	255	203	5		

- Molecule 26 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Ci	113	Total	C	N	O	S	0	0
			934	585	193	153	3		

- Molecule 27 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Ck	70	Total	C	N	O	S	0	0
			576	366	108	100	2		

- Molecule 28 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	Cl	50	Total	C	N	O	0	0
			437	276	98	63		

- Molecule 29 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	CC	392	Total	C	N	O	S	0	0
			3109	1959	622	522	6		

- Molecule 30 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Cm	52	Total	C	N	O	S	0	0
			429	267	89	67	6		

- Molecule 31 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Cn	25	Total	C	N	O	S	0	0
			236	143	63	27	3		

- Molecule 32 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Cp	91	Total	C	N	O	S	0	0
			710	441	140	122	7		

- Molecule 33 is a protein called TA01007p.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Co	104	Total	C	N	O	S	0	0
			874	548	180	138	8		

- Molecule 34 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	CJ	182	Total	C	N	O	S	0	0
			1468	926	278	258	6		

- Molecule 35 is a protein called 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	CH	190	Total	C	N	O	S	0	0
			1499	947	265	278	9		

- Molecule 36 is a protein called Ribosomal protein L6, isoform A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	CE	228	Total	C	N	O	S	0	0
			1845	1185	351	305	4		

- Molecule 37 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	CG	241	Total	C	N	O	S	0	0
			1936	1237	368	327	4		

- Molecule 38 is a RNA chain called 2S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	A9	30	Total	C	N	O	P	0	0
			639	286	111	213	29		

- Molecule 39 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	A7	120	Total	C	N	O	P	0	0
			2554	1141	456	838	119		

- Molecule 40 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	A8	123	Total	C	N	O	P	0	0
			2621	1173	474	852	122		

- Molecule 41 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Ag	318	Total	C	N	O	S	0	0
			2511	1577	444	480	10		

- Molecule 42 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
42	AU	102	815	505	161	145	4	0	0

- Molecule 43 is a protein called 40S ribosomal protein S14a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	AO	127	953	587	185	177	4	0	0

- Molecule 44 is a protein called 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	AX	143	1131	712	226	191	2	0	0

- Molecule 45 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	AM	119	924	582	165	171	6	0	0

- Molecule 46 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	Ad	52	433	269	87	72	5	0	0

- Molecule 47 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
47	AN	150	1202	767	229	203	3	0	0

- Molecule 48 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	AL	155	1274	803	254	211	6	0	0

- Molecule 49 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	AR	120	Total	C	N	O	S	0	0
			981	618	183	176	4		

- Molecule 50 is a protein called GEO07301p1.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	AP	124	Total	C	N	O	S	0	0
			1016	652	189	169	6		

- Molecule 51 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	AB	220	Total	C	N	O	S	0	0
			1798	1138	328	324	8		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
52	AA	218	Total	C	N	O	S	0	0
			1737	1113	298	321	5		

- Molecule 53 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	AV	82	Total	C	N	O	S	0	0
			617	373	114	125	5		

There are 13 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AV	2	GLN	GLU	conflict	UNP O76927
AV	8	PHE	ASN	conflict	UNP O76927
AV	25	GLY	HIS	conflict	UNP O76927
AV	32	ILE	VAL	conflict	UNP O76927
AV	34	MET	LEU	conflict	UNP O76927
AV	35	ASN	SER	conflict	UNP O76927
AV	36	VAL	ILE	conflict	UNP O76927
AV	58	ALA	GLU	conflict	UNP O76927
AV	68	SER	CYS	conflict	UNP O76927
AV	70	LEU	VAL	conflict	UNP O76927
AV	75	ALA	LYS	conflict	UNP O76927
AV	79	VAL	ILE	conflict	UNP O76927

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Chain	Residue	Modelled	Actual	Comment	Reference
AV	80	SER	THR	conflict	UNP O76927

- Molecule 54 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
54	AY	126	1016	644	196	171	5	0	0

- Molecule 55 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
55	AZ	74	608	390	112	106	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
56	Aa	107	867	539	182	140	6	0	0

- Molecule 57 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	Ab	84	653	412	123	110	8	0	0

- Molecule 58 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
58	AD	227	1782	1127	319	326	10	0	0

- Molecule 59 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
59	Ae	58	469	289	105	75	0	0

- Molecule 60 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	Af	80	Total	C	N	O	S	0	0
			659	417	128	109	5		

- Molecule 61 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	AJ	181	Total	C	N	O	S	0	0
			1503	957	298	247	1		

- Molecule 62 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	AE	261	Total	C	N	O	S	0	0
			2054	1314	380	353	7		

- Molecule 63 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	AC	227	Total	C	N	O	S	0	0
			1746	1126	302	311	7		

- Molecule 64 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	AG	231	Total	C	N	O	S	0	0
			1866	1172	372	315	7		

- Molecule 65 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	AH	194	Total	C	N	O	S	0	0
			1566	1006	278	281	1		

- Molecule 66 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	AI	207	Total	C	N	O	S	0	0
			1665	1037	329	296	3		

- Molecule 67 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
67	AQ	148	1183	753	223	204	3	0	0

- Molecule 68 is a protein called 60S ribosomal protein L10a-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
68	Cz	217	1702	1084	303	305	10	0	0

- Molecule 69 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
69	A5	3703	77093	34436	13555	25401	3701	0	0

- Molecule 70 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
70	B2	1936	39355	17526	6780	13114	1935	0	0

- Molecule 71 is a protein called 40S ribosomal protein S15Aa.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
71	AW	129	1028	656	189	176	7	0	0

- Molecule 72 is a protein called 40S ribosomal protein S19a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
72	AT	126	1000	635	192	170	3	0	0

There are 13 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AT	?	-	GLU	deletion	UNP P39018
AT	?	-	HIS	deletion	UNP P39018
AT	?	-	ALA	deletion	UNP P39018
AT	?	-	ARG	deletion	UNP P39018
AT	?	-	LEU	deletion	UNP P39018
AT	?	-	VAL	deletion	UNP P39018

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Chain	Residue	Modelled	Actual	Comment	Reference
AT	?	-	GLU	deletion	UNP P39018
AT	?	-	LYS	deletion	UNP P39018
AT	?	-	HIS	deletion	UNP P39018
AT	?	-	PRO	deletion	UNP P39018
AT	?	-	ASP	deletion	UNP P39018
AT	?	-	GLY	deletion	UNP P39018
AT	?	-	GLY	deletion	UNP P39018

- Molecule 73 is a protein called 40S ribosomal protein S10b.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
73	AK	90	760	500	130	127	3	0	0

- Molecule 74 is a protein called 40S ribosomal protein S5b.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
74	AF	189	1481	925	283	266	7	0	0

- Molecule 75 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
75	Ac	62	498	307	100	89	2	0	0

- Molecule 76 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
76	CU	99	825	530	144	149	2	0	0

- Molecule 77 is a protein called Probable 60S ribosomal protein L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
77	Cj	87	704	430	154	115	5	0	0

- Molecule 78 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
78	CW	60	503	326	95	78	4	0	0

- Molecule 79 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
79	Cg	103	844	525	176	138	5	0	0

- Molecule 80 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
80	Cd	107	893	556	176	159	2	0	0

- Molecule 81 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
81	AS	136	1117	701	216	197	3	0	0

3 Residue-property plots [i](#)


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

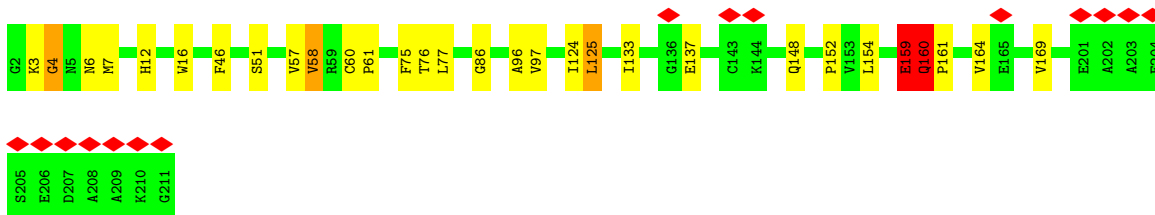
- Molecule 1: 60S ribosomal protein L13a

Chain CO:  94% 5%



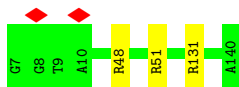
- Molecule 2: 60S ribosomal protein L13

Chain CL:  7% 86% 12% ..



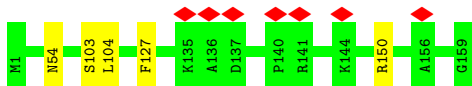
- Molecule 3: 60S ribosomal protein L23

Chain CV:  98%



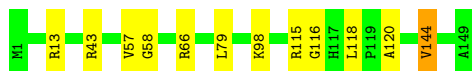
- Molecule 4: 60S ribosomal protein L14

Chain CM:  97%



- Molecule 5: 60S ribosomal protein L27a

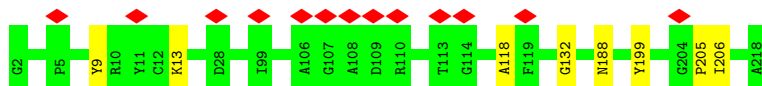
Chain Ca:  92% 7%



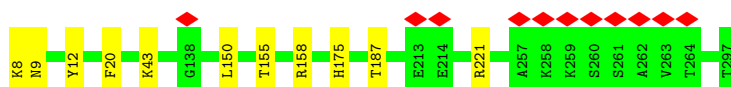
- Molecule 6: 60S ribosomal protein L15



- Molecule 7: 60S ribosomal protein L10



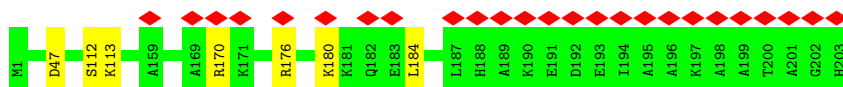
- Molecule 8: 60S ribosomal protein L5



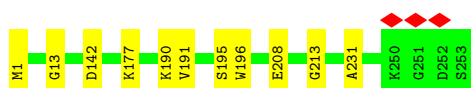
- Molecule 9: 60S ribosomal protein L18




- Molecule 10: 60S ribosomal protein L19

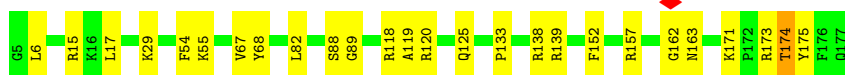


- Molecule 11: 60S ribosomal protein L8



- Molecule 12: 60S ribosomal protein L18a

Chain CS:  85% 14%



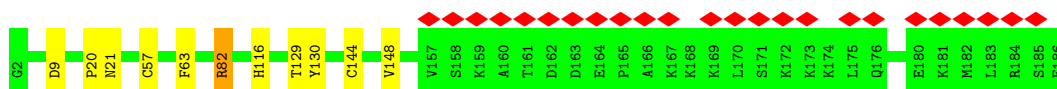
• Molecule 13: RE62581p

Chain CT:  92% 7%



• Molecule 14: 60S ribosomal protein L17

Chain CP:  13% 94% 5%



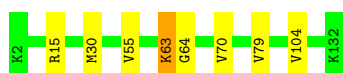
• Molecule 15: IP17216p

Chain CX:  95% 5%



• Molecule 16: GEO07453p1

Chain CY:  94% 5%




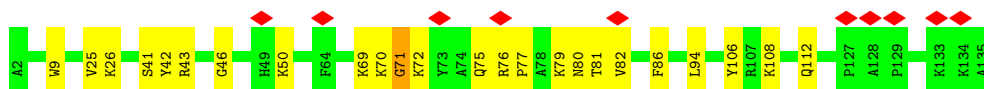
• Molecule 17: 60S ribosomal protein L27

Chain CZ:  99%



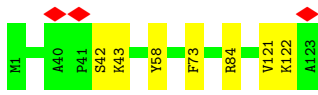
• Molecule 18: 60S ribosomal protein L28

Chain Cr:  7% 82% 17%




- Molecule 19: FI02809p

Chain Ch:  94% 6%



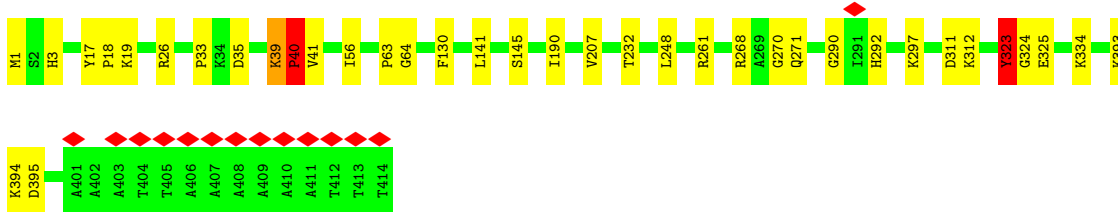
- Molecule 20: 60S ribosomal protein L29

Chain Cb:  88% 11%



- Molecule 21: 60S ribosomal protein L3

Chain CB:  91% 8%



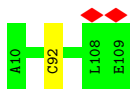
- Molecule 22: 60S ribosomal protein L7

Chain CF:  95%



- Molecule 23: RE25263p

Chain Cc:  99%




- Molecule 24: 60S ribosomal protein L32

Chain Ce:  95%




- Molecule 25: GEO07455p1

Chain Cf:  84% 15%



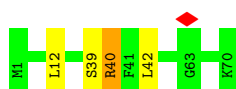
- Molecule 26: 60S ribosomal protein L36

Chain Ci:  90% 10%



- Molecule 27: 60S ribosomal protein L38

Chain Ck:  94%



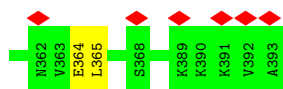
- Molecule 28: 60S ribosomal protein L39

Chain Cl:  98%



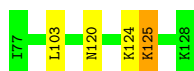
- Molecule 29: 60S ribosomal protein L4

Chain CC:  91% 8%



- Molecule 30: Ubiquitin-60S ribosomal protein L40

Chain Cm:  92% 6%

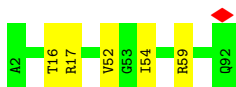


- Molecule 31: 60S ribosomal protein L41

Chain Cn:  96%



- Molecule 32: 60S ribosomal protein L37a



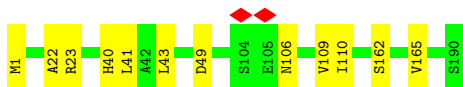
- Molecule 33: TA01007p



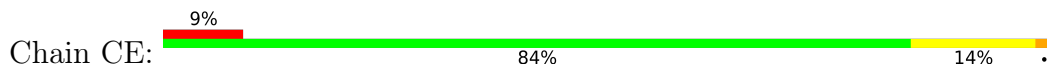
- Molecule 34: 60S ribosomal protein L11



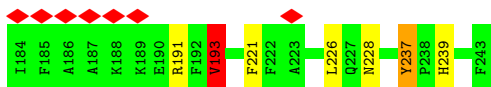
- Molecule 35: 60S ribosomal protein L9

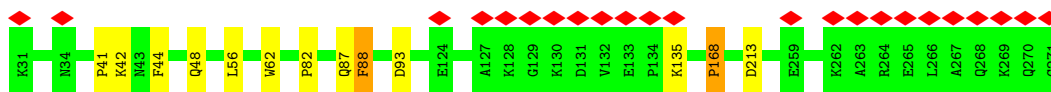


- Molecule 36: Ribosomal protein L6, isoform A



- Molecule 37: 60S ribosomal protein L7a

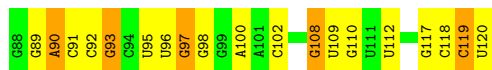
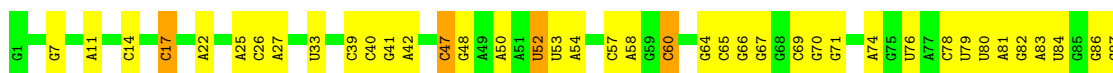




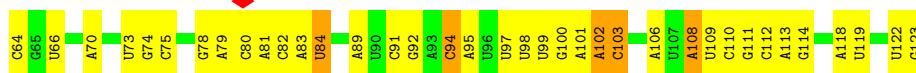
• Molecule 38: 2S ribosomal RNA



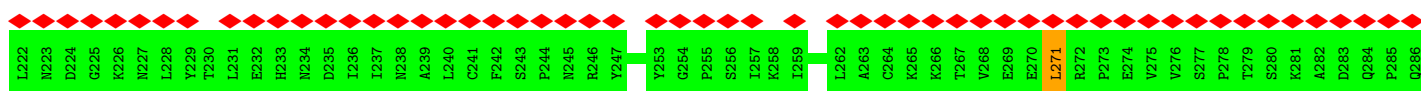
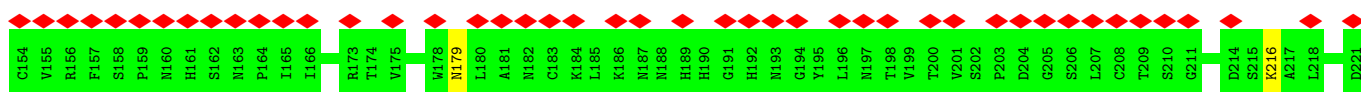
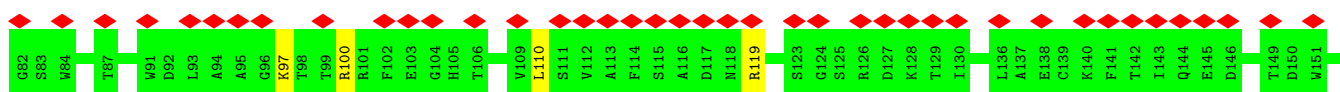
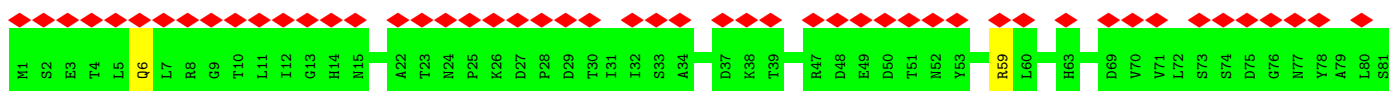
• Molecule 39: 5S ribosomal RNA

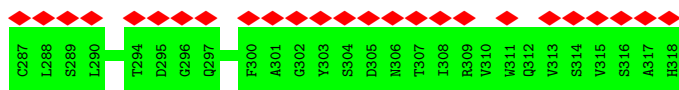


• Molecule 40: 5.8S ribosomal RNA

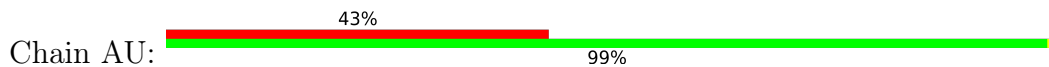


• Molecule 41: Guanine nucleotide-binding protein subunit beta-like protein

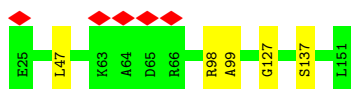




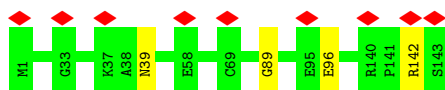
- Molecule 42: 40S ribosomal protein S20



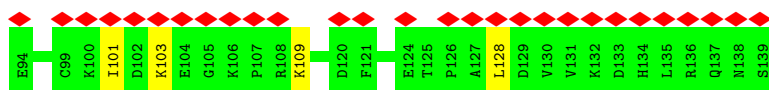
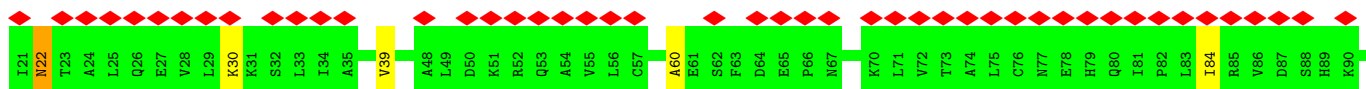
- Molecule 43: 40S ribosomal protein S14a



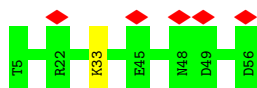
- Molecule 44: 40S ribosomal protein S23



- Molecule 45: 40S ribosomal protein S12



- Molecule 46: 40S ribosomal protein S29

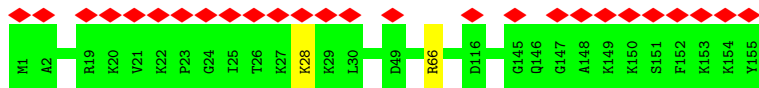


- Molecule 47: 40S ribosomal protein S13

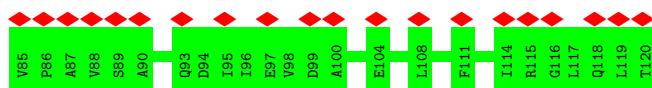
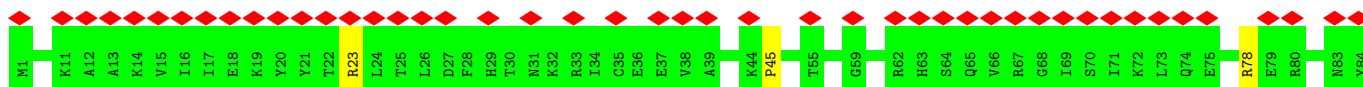




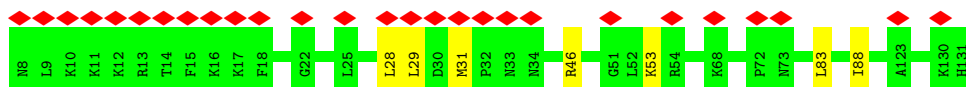
- Molecule 48: 40S ribosomal protein S11



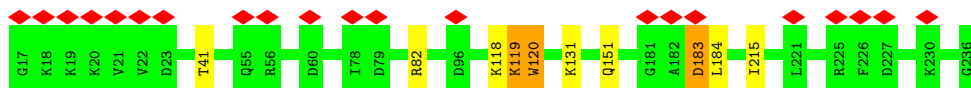
- Molecule 49: 40S ribosomal protein S17



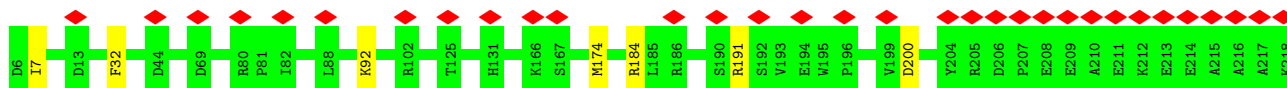
- Molecule 50: GEO07301p1



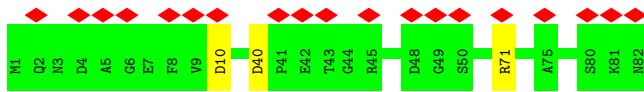
- Molecule 51: 40S ribosomal protein S3a



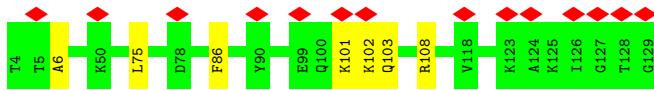
- Molecule 52: 40S ribosomal protein SA



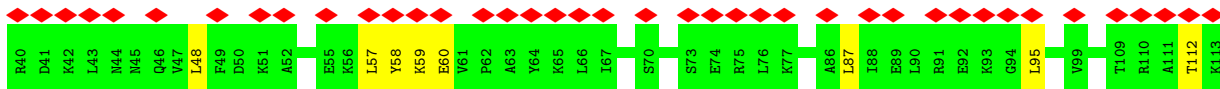
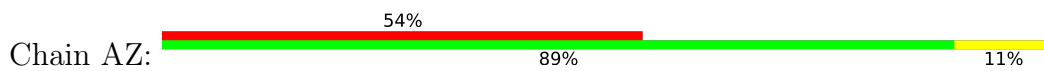
- Molecule 53: 40S ribosomal protein S21



- Molecule 54: 40S ribosomal protein S24



- Molecule 55: 40S ribosomal protein S25



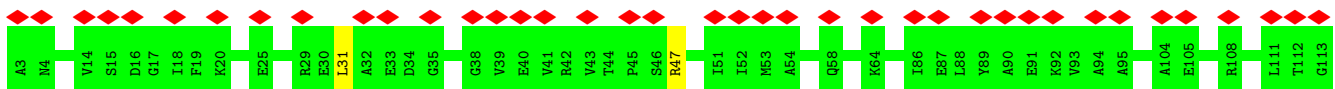
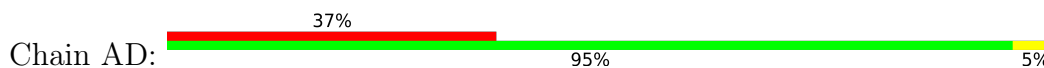
- Molecule 56: 40S ribosomal protein S26



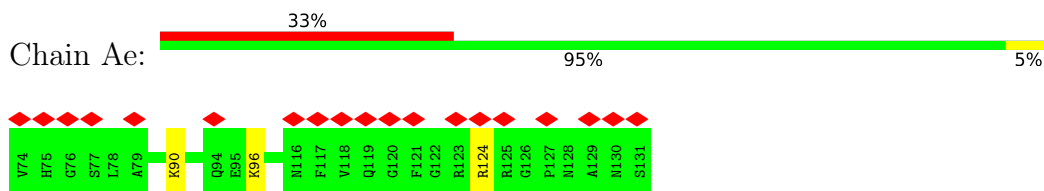
- Molecule 57: 40S ribosomal protein S27



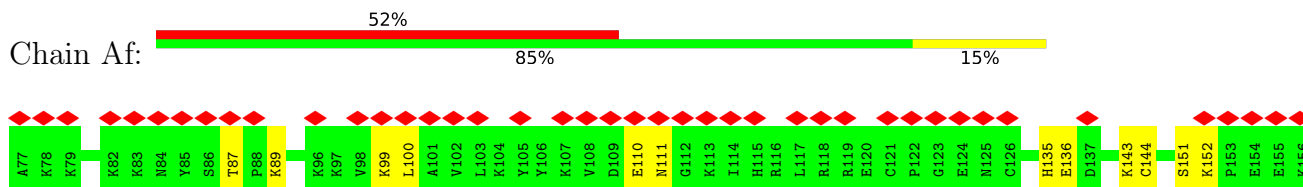
- Molecule 58: 40S ribosomal protein S3



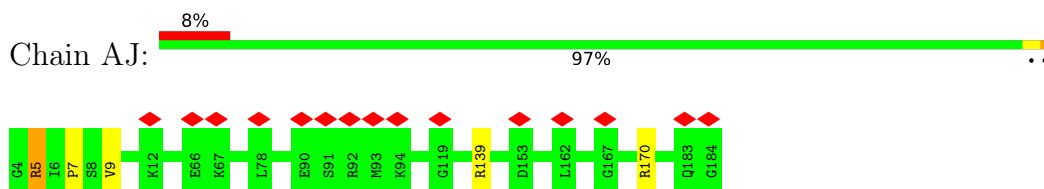
- Molecule 59: 40S ribosomal protein S30



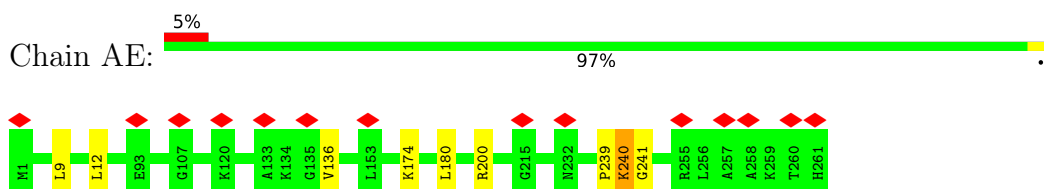
- Molecule 60: Ubiquitin-40S ribosomal protein S27a



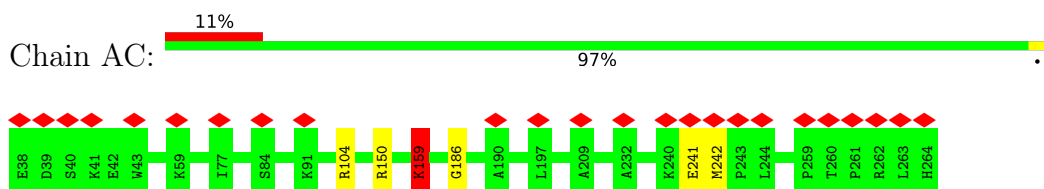
- Molecule 61: 40S ribosomal protein S9



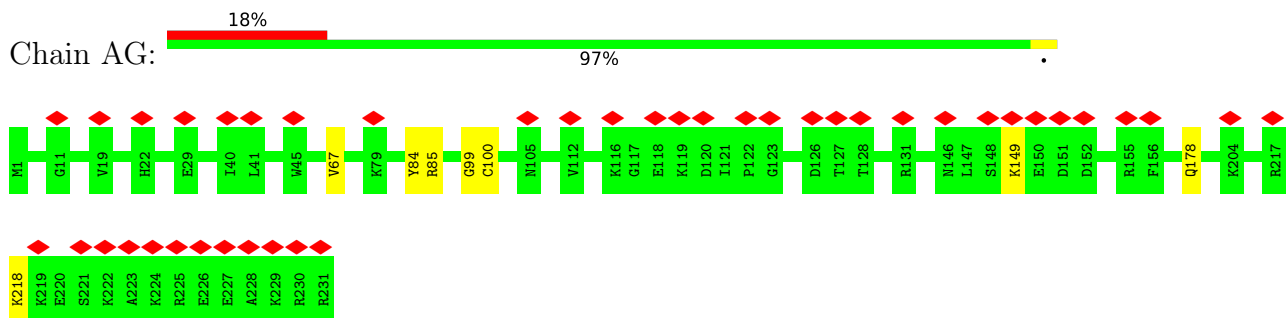
- Molecule 62: 40S ribosomal protein S4



- Molecule 63: 40S ribosomal protein S2

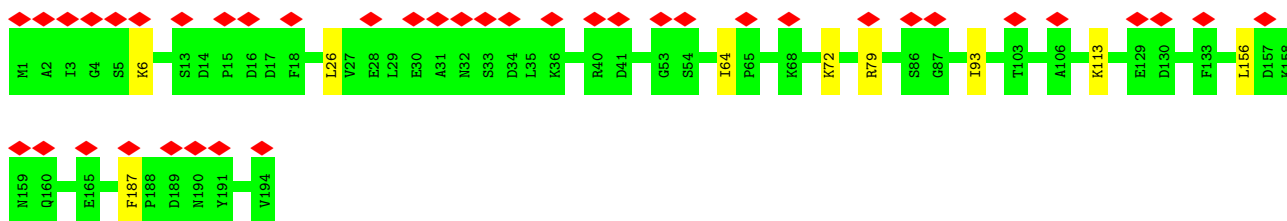


- Molecule 64: 40S ribosomal protein S6



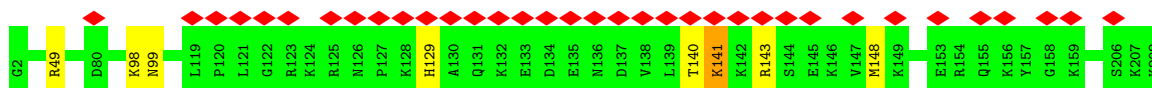
- Molecule 65: 40S ribosomal protein S7

Chain AH: 

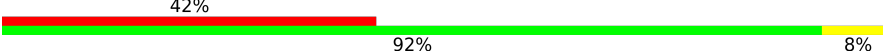


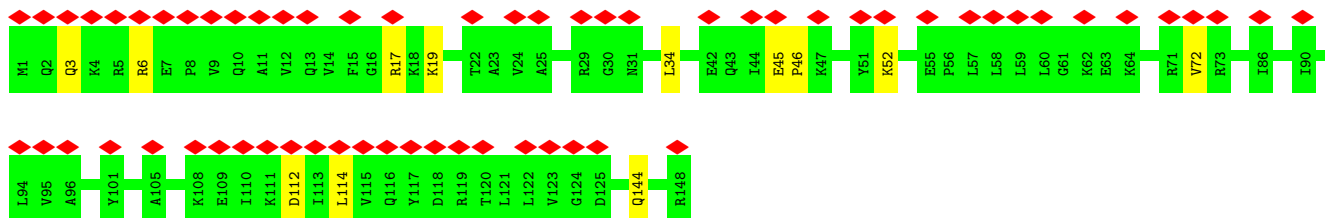
- Molecule 66: 40S ribosomal protein S8

Chain AI: 



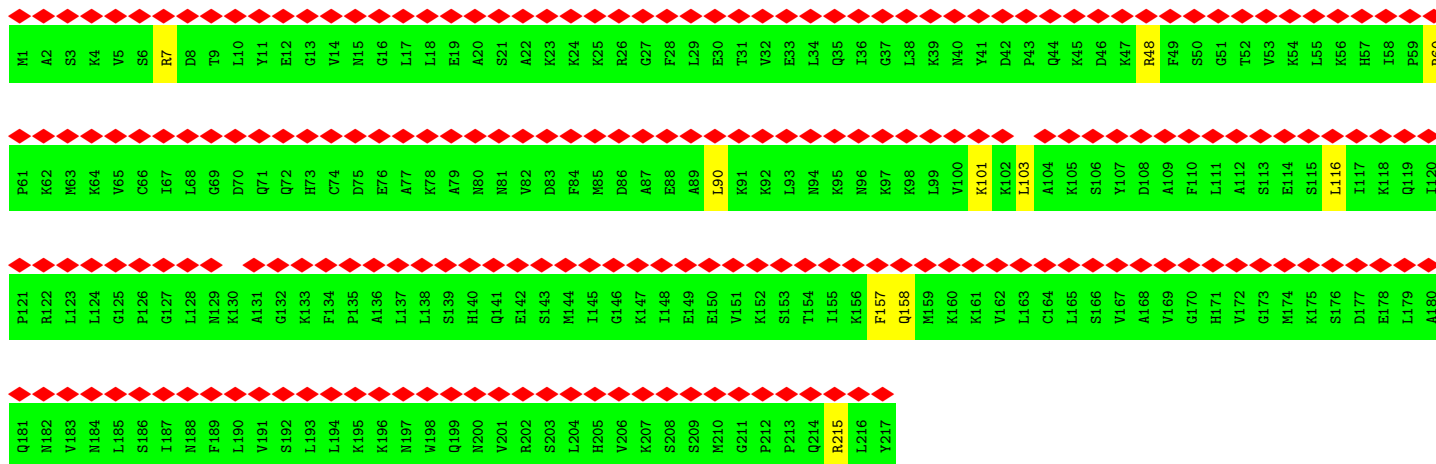
- Molecule 67: 40S ribosomal protein S16

Chain AQ: 



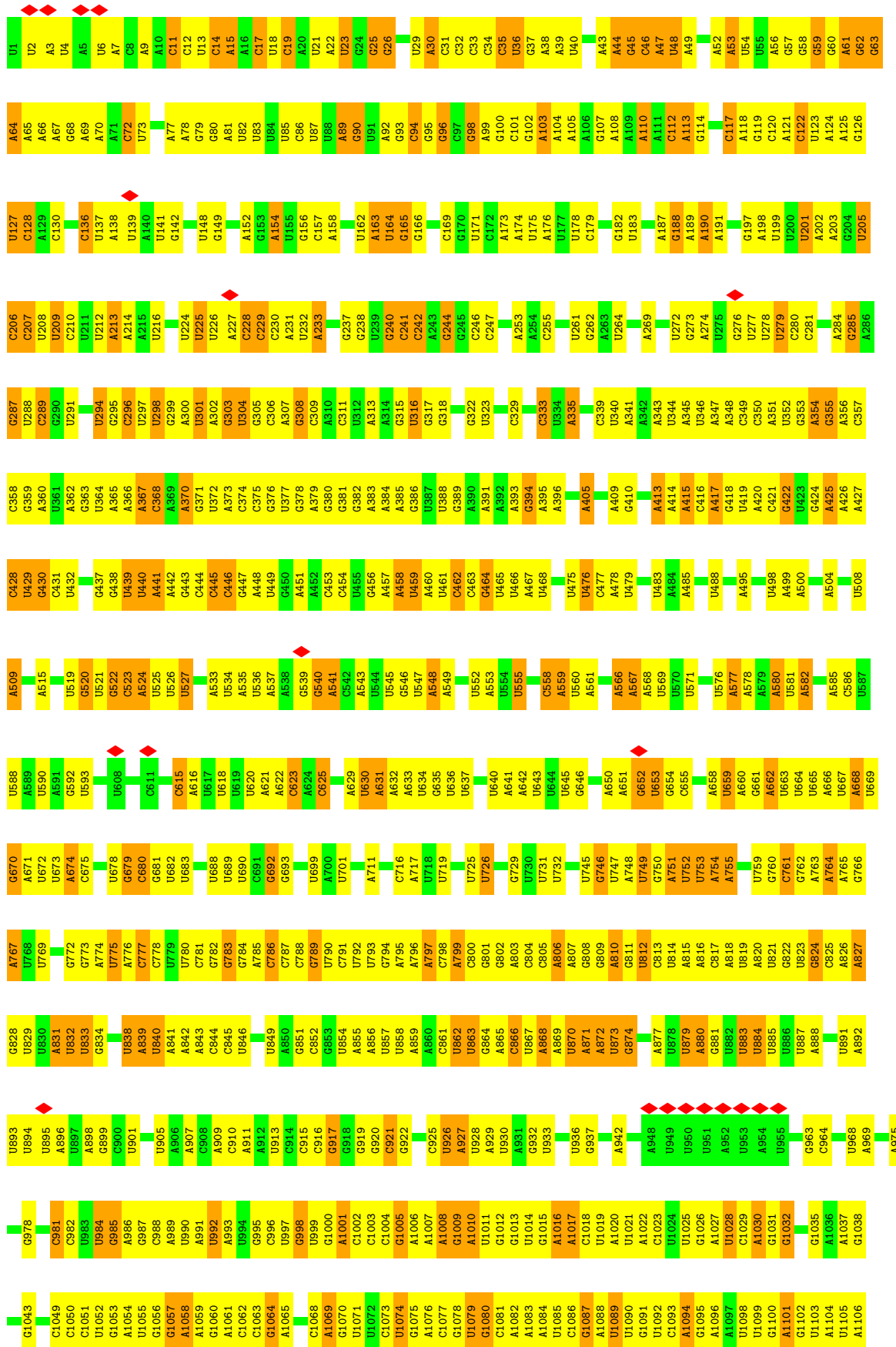
- Molecule 68: 60S ribosomal protein L10a-2

Chain Cz: 

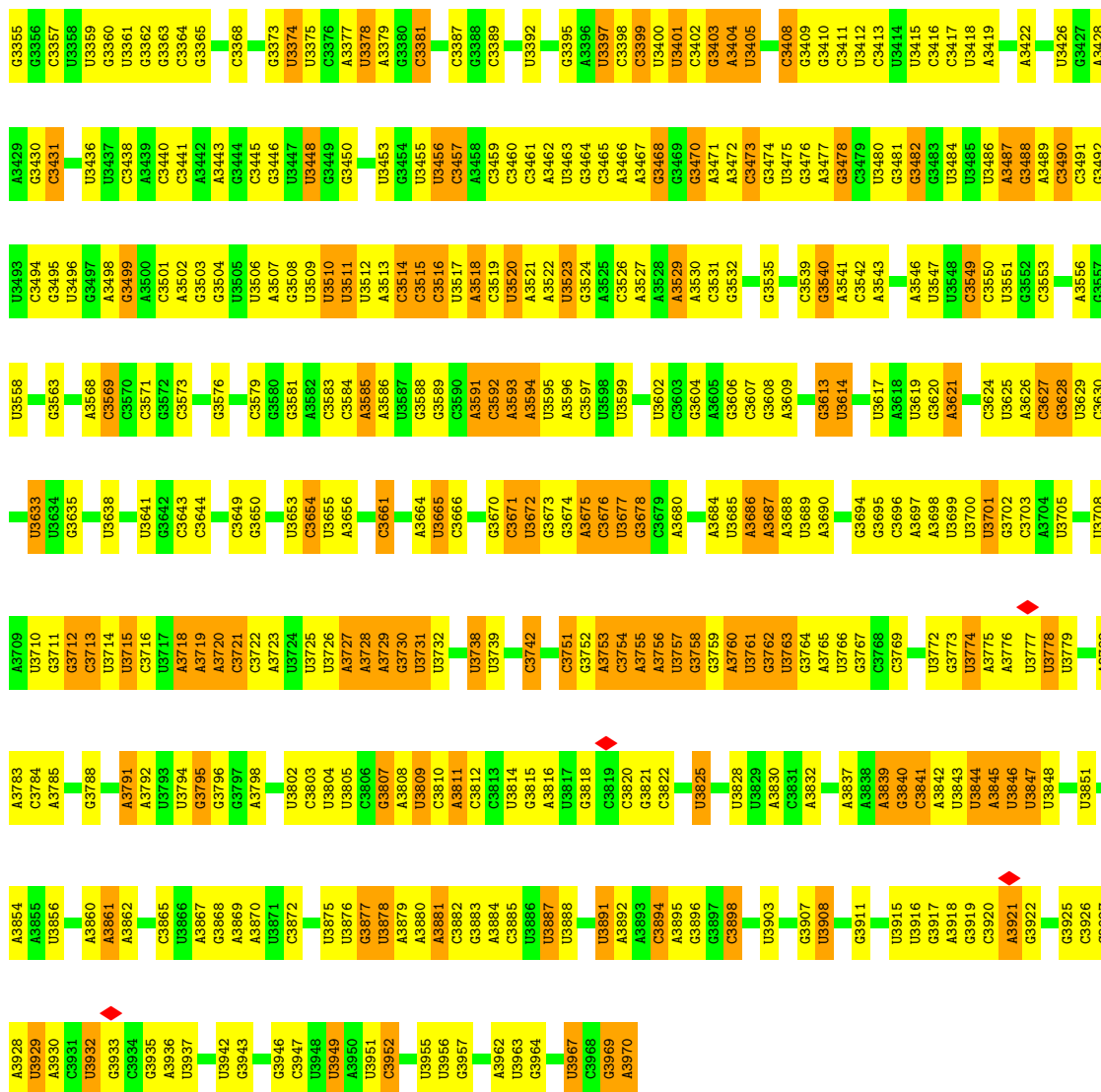


- Molecule 69: 28S ribosomal RNA

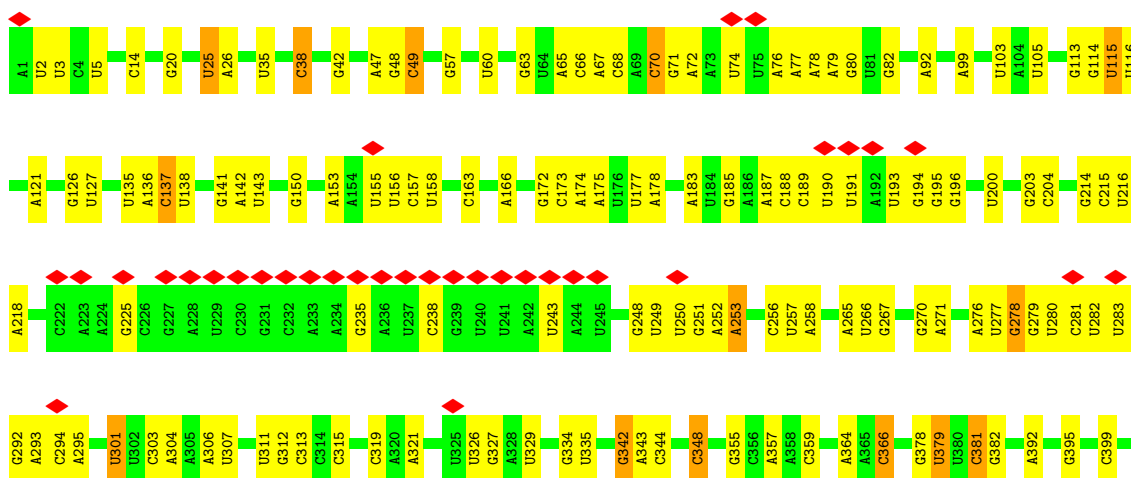
Chain A5: 

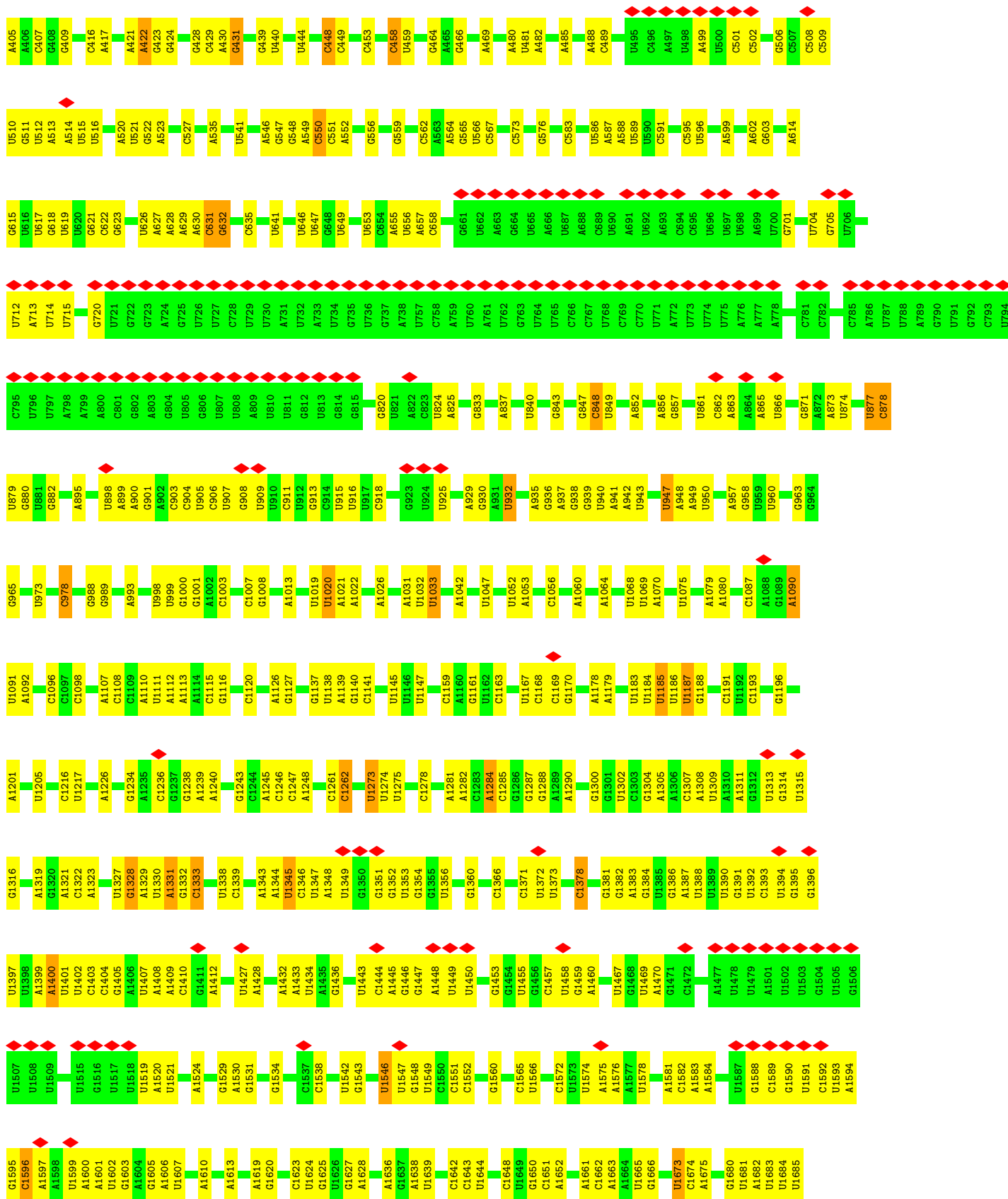


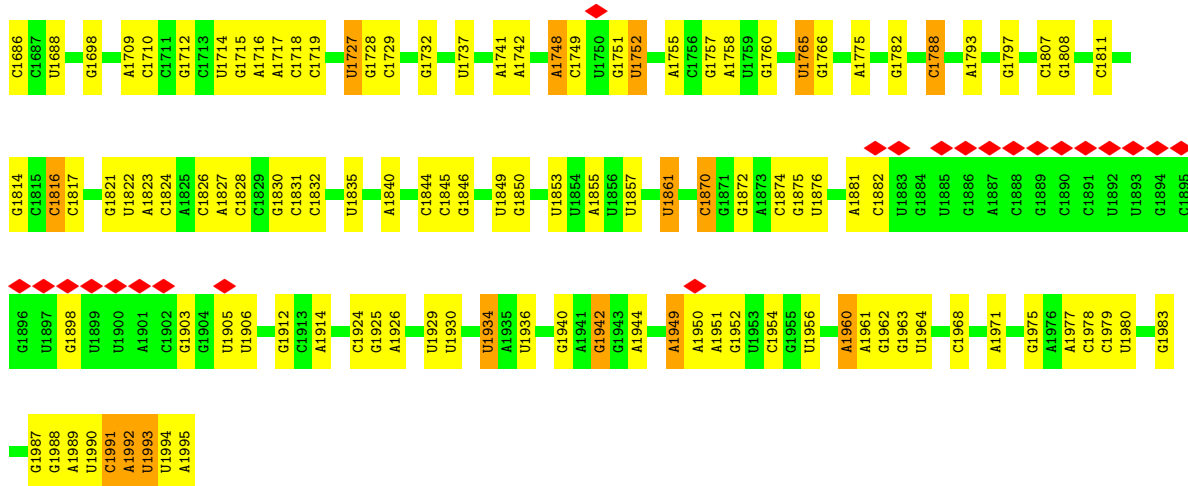
A2075	A1889	A1778	G1715	C1650	G1581	A1516	C1447	U1376	A1313	C1245	A1167	G1107
A2076	U1890	G1779	G1718	C1651	G1582	A1517	G1448	A1377	U1314	U1246	G1168	G1108
A2077	C1891	U1780	G1719	G1652	A1588	A1518	G1449	A1378	G1449	C1250	C1169	G1109
C2078	C1892	U1781	G1720	G1653	A1589	A1519	G1450	U1379	U1316	C1251	U1170	G1110
U2079	C1893	C1782	A1721	C1654	A1590	U1520	G1451	G1380	A1317	A1253	G1171	C1111
U2082	C1898	A1784	G1722	U1655	U1591	G1521	A1452	U1381	A1318	U1954	G1172	C1112
G2083	C1899	U1785	U1723	G1657	U1592	G1522	U1453	U1382	A1319	U1255	U1173	A1113
U2084	U1900	G1786	A1724	G1658	U1593	U1523	C1454	C1383	U1320	C1258	G1174	A1114
C2087	U1903	C1787	G1725	G1659	U1594	U1524	A1455	A1384	G1321	C1259	A1175	A1115
G2088	U1904	U1790	A1726	G1660	U1595	G1525	U1456	G1385	C1324	C1260	A1176	A1116
A2089	U1905	G1791	G1727	G1661	A1596	G1526	G1457	U1386	A1177	A1259	U1177	A1117
U2091	U1906	U1792	U1728	U1662	U1597	C1527	G1458	G1387	A1182	U1260	A1182	C1118
A2092	A1908	A1791	G1729	G1663	U1598	G1528	A1459	C1388	U1183	A1261	U1183	C1119
U2093	U1909	G1792	A1730	C1664	G1599	C1529	A1460	C1389	A1120	C1262	A1120	A1120
G2094	C1910	U1793	U1731	C1665	U1604	U1530	A1461	C1390	A1121	U1263	A1121	A1121
U2095	G1911	G1732	A1732	C1666	U1605	U1531	A1462	A1391	U1222	U1264	U1222	U1222
G2103	U1912	A1733	G1733	U1667	G1606	A1532	U1463	A1392	A1193	U1265	A1193	A1193
A2104	U1913	U1734	U1734	G1668	A1607	G1533	C1464	A1393	A1194	U1266	A1194	A1194
C2105	U1914	G1735	G1735	G1669	G1608	G1534	C1465	U1394	U1195	U1267	U1195	G1124
C2106	U1915	U1736	U1736	G1670	U1609	U1535	A1465	U1395	A1196	U1268	A1196	A1126
U2107	G1916	U1737	U1737	U1671	A1610	G1536	A1466	U1396	A1197	G1270	A1197	C1127
U2108	U1917	A1738	U1738	U1672	G1611	U1537	A1467	A1397	U1203	G1271	U1198	C1128
C2109	U1918	C1740	U1740	G1673	A1612	A1538	U1468	A1398	A1202	G1272	U1199	A1129
U2110	A1919	U1741	G1741	G1674	G1613	U1539	C1469	U1399	A1203	A1275	A1203	A1130
A2111	U1920	U1745	U1745	G1675	A1614	A1540	C1471	A1402	U1204	A1276	C1204	U1132
A2112	U1921	A1746	A1746	U1676	G1615	A1541	C1472	C1403	U1205	G1277	U1205	A1133
A2113	U1922	U1747	U1747	C1677	G1616	C1542	C1473	A1404	U1206	A1278	G1206	G1134
U2114	A1923	A1748	A1748	U1678	U1617	C1543	U1474	U1405	G1207	G1279	G1207	U1135
U2115	U1924	U1749	U1749	U1679	A1618	U1544	C1475	C1406	U1208	C1279	U1208	A1136
U2116	U1925	G1749	G1749	U1680	G1619	A1545	U1476	C1407	U1209	U1282	A1209	G1137
U2117	U1926	U1750	U1750	U1681	U1620	U1546	G1476	A1408	A1210	U1283	A1210	C1138
U2118	U1927	G1751	G1751	U1682	A1621	A1547	G1477	G1409	U1139	U1284	U1139	U1139
G2122	C1931	U1752	U1752	U1683	U1622	U1548	U1478	A1410	G1140	A1285	G1212	G1140
G2123	U1935	A1753	G1753	U1684	G1623	A1549	G1479	U1411	A1350	C1285	G1213	G1141
G2124	U1936	U1754	U1754	U1685	G1624	U1550	U1480	U1412	A1351	U1286	G1214	G1142
G2125	G1937	U1755	U1755	U1686	U1625	U1551	G1481	C1413	C1352	C1287	U1143	U1143
A2126	C1944	U1756	U1756	U1687	A1626	C1552	U1482	C1414	U1288	U1288	C1144	U1144
C2127	U1945	U1757	U1757	U1688	U1627	C1553	U1483	A1415	C1289	U1290	C1144	C1144
C2128	U1946	C1761	U1761	U1689	G1628	C1554	U1484	G1416	U1291	U1291	C1146	C1146
C2129	C1948	U1762	U1762	U1690	U1629	C1555	U1485	G1417	G1292	G1292	U1220	C1146
C2130	U1951	A1763	G1763	U1691	G1630	A1558	A1486	A1418	A1293	U1293	U1221	U1147
C2131	A1952	U1764	U1764	U1692	U1631	U1559	A1487	A1419	A1294	U1294	A1222	C1148
A2132	G1953	U1765	U1765	U1693	G1632	U1560	C1488	A1420	A1295	U1295	G1223	C1149
A2133	U1954	U1766	U1766	U1694	A1633	A1561	A1489	G1421	G1359	U1296	G1224	G1150
C2134	U1955	U1767	U1767	U1695	G1633	U1562	A1490	G1422	U1360	G1297	A1151	A1151
C2135	C1960	U1768	U1768	U1696	U1634	U1563	C1492	C1423	G1361	A1298	G1228	A1152
U2136	U1956	U1769	U1769	U1697	A1635	U1564	A1493	U1418	G1362	A1299	C1228	G1153
U2137	U1957	G1770	G1770	U1698	U1636	U1565	C1494	A1419	G1363	G1300	U1229	G1154
C2140	U1958	U1771	U1771	U1699	G1637	U1566	A1495	A1420	A1364	G1301	U1230	U1155
C2141	U1959	U1772	U1772	U1700	U1638	G1567	C1496	U1425	U1365	A1301	U1231	U1156
C2142	C1961	U1773	U1773	U1701	U1639	U1568	A1497	U1426	G1366	U1302	G1232	U1157
C2143	U1966	C1774	C1774	U1702	U1640	U1570	C1498	G1427	A1367	C1303	G1233	C1157
C2144	U1967	U1775	U1775	U1703	U1641	U1571	A1501	U1430	A1368	A1304	G1234	C1158
U2150	U1968	U1776	U1776	U1704	G1642	U1572	A1502	A1435	A1369	G1306	A1238	C1159
C2072	U1969	A1777	A1777	U1714	G1643	U1573	A1503	A1436	C1370	G1307	A1239	U1160
	G1970	U1778	U1778	U1715	C1644	U1574	A1504	A1437	A1371	U1308	A1240	C1161
		U1779	U1779	U1716	U1645	U1575	A1505	A1438	A1372	U1309	C1241	G1163
		A1777	A1777	U1717	U1646	U1576	A1509	C1442	A1373	A1310	G1242	A1165
		U1777	U1777	U1718	A1647	U1577	A1510		A1374	U1311	A1166	U1166
		U1777	U1777	U1719	A1648	U1578	A1511		A1375	G1312	A1243	
		U1777	U1777	U1714	G1649	U1580	U1512		A1376			
				U1714	U1513		U1513					
				U1714	U1514		U1514					
				U1714	U1515		U1515					



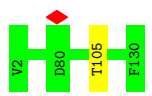
● Molecule 70: 18S ribosomal RNA



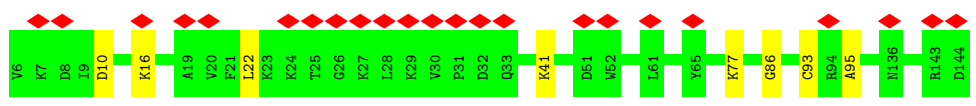




• Molecule 71: 40S ribosomal protein S15Aa



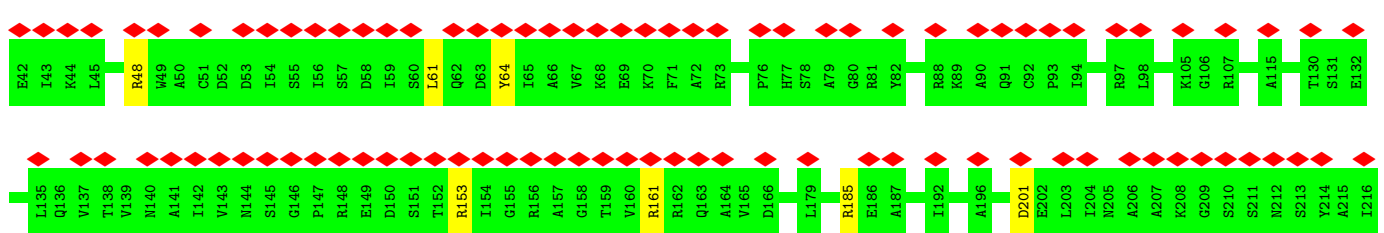
• Molecule 72: 40S ribosomal protein S19a

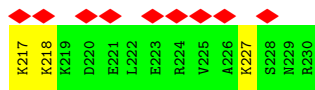


• Molecule 73: 40S ribosomal protein S10b

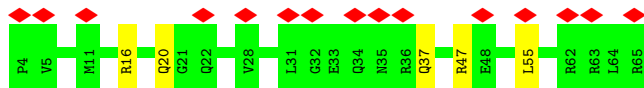


• Molecule 74: 40S ribosomal protein S5b

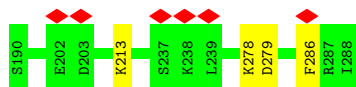




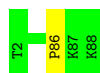
- Molecule 75: 40S ribosomal protein S28



- Molecule 76: 60S ribosomal protein L22



- Molecule 77: Probable 60S ribosomal protein L37-A



- Molecule 78: 60S ribosomal protein L24



- Molecule 79: 60S ribosomal protein L34

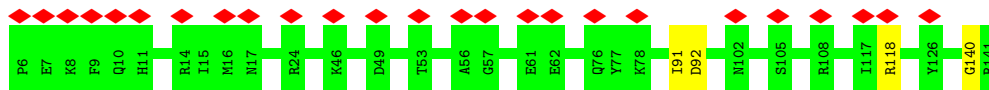


- Molecule 80: 60S ribosomal protein L31



- Molecule 81: 40S ribosomal protein S18





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	185913	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	80	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.861	Depositor
Minimum map value	-0.593	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.035	Depositor
Map size (\AA)	426.00003, 426.00003, 426.00003	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.065, 1.065, 1.065	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	CO	0.89	0/1700	0.90	5/2277 (0.2%)
2	CL	0.74	1/1726 (0.1%)	1.02	5/2308 (0.2%)
3	CV	0.77	0/1014	0.79	1/1362 (0.1%)
4	CM	0.67	0/1326	0.77	0/1780
5	Ca	0.98	1/1235 (0.1%)	1.00	5/1640 (0.3%)
6	CN	1.02	4/1750 (0.2%)	0.99	2/2335 (0.1%)
7	CI	0.53	1/1827 (0.1%)	0.66	1/2447 (0.0%)
8	CD	0.61	0/2379	0.68	1/3196 (0.0%)
9	CQ	0.96	1/1544 (0.1%)	0.93	3/2069 (0.1%)
10	CR	0.61	0/1703	0.67	1/2255 (0.0%)
11	CA	0.84	1/1970 (0.1%)	0.83	3/2635 (0.1%)
12	CS	0.85	0/1491	1.00	4/1998 (0.2%)
13	CT	0.83	1/1326 (0.1%)	0.85	3/1773 (0.2%)
14	CP	0.92	2/1529 (0.1%)	0.87	2/2042 (0.1%)
15	CX	0.66	0/1001	0.84	3/1348 (0.2%)
16	CY	0.79	0/1094	0.81	2/1456 (0.1%)
17	CZ	0.51	0/1141	0.67	0/1517
18	Cr	0.88	2/1069 (0.2%)	1.13	3/1432 (0.2%)
19	Ch	0.65	0/1024	0.78	0/1353
20	Cb	0.62	0/628	0.95	1/832 (0.1%)
21	CB	0.79	1/3356 (0.0%)	0.91	8/4494 (0.2%)
22	CF	0.90	0/1931	0.84	4/2587 (0.2%)
23	Cc	0.55	0/779	0.64	0/1048
24	Ce	1.04	1/1132 (0.1%)	0.94	2/1508 (0.1%)
25	Cf	0.92	2/1270 (0.2%)	1.07	4/1696 (0.2%)
26	Ci	0.58	0/944	0.89	3/1250 (0.2%)
27	Ck	0.60	0/583	0.79	2/774 (0.3%)
28	Cl	0.89	0/445	0.89	1/589 (0.2%)
29	CC	0.91	1/3163 (0.0%)	0.95	8/4253 (0.2%)
30	Cm	0.57	0/435	0.78	0/575
31	Cn	0.57	0/237	0.74	1/300 (0.3%)
32	Cp	0.85	0/719	0.87	0/954
33	Co	0.76	0/887	0.88	1/1162 (0.1%)
34	CJ	0.42	0/1494	0.76	3/2001 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	CH	0.61	0/1519	0.80	3/2042 (0.1%)
36	CE	0.65	1/1883 (0.1%)	0.97	5/2514 (0.2%)
37	CG	0.58	1/1968 (0.1%)	0.77	0/2637
38	A9	1.48	2/714 (0.3%)	1.50	18/1112 (1.6%)
39	A7	1.53	15/2854 (0.5%)	1.51	59/4447 (1.3%)
40	A8	1.93	42/2932 (1.4%)	1.72	96/4568 (2.1%)
41	Ag	0.32	0/2574	0.70	3/3506 (0.1%)
42	AU	0.31	0/825	0.64	0/1111
43	AO	0.35	0/965	0.70	0/1295
44	AX	0.36	0/1152	0.69	0/1540
45	AM	0.34	0/937	0.79	2/1260 (0.2%)
46	Ad	0.33	0/443	0.64	0/589
47	AN	0.38	0/1225	0.63	0/1641
48	AL	0.45	0/1296	0.64	0/1725
49	AR	0.34	0/993	0.74	0/1333
50	AP	0.32	0/1036	0.76	3/1383 (0.2%)
51	AB	0.33	0/1825	0.69	1/2448 (0.0%)
52	AA	0.33	0/1777	0.64	0/2422
53	AV	0.34	0/622	0.64	0/835
54	AY	0.30	0/1032	0.69	1/1373 (0.1%)
55	AZ	0.33	0/616	0.85	3/826 (0.4%)
56	Aa	0.41	0/883	0.69	0/1184
57	Ab	0.30	0/668	0.65	0/898
58	AD	0.31	0/1808	0.71	1/2427 (0.0%)
59	Ae	0.31	0/475	0.65	0/625
60	Af	0.33	0/672	0.74	1/887 (0.1%)
61	AJ	0.32	0/1526	0.64	1/2037 (0.0%)
62	AE	0.34	0/2096	0.67	2/2819 (0.1%)
63	AC	0.37	0/1785	0.70	1/2415 (0.0%)
64	AG	0.32	0/1891	0.67	1/2519 (0.0%)
65	AH	0.32	0/1593	0.68	2/2145 (0.1%)
66	AI	0.41	0/1689	0.80	1/2250 (0.0%)
67	AQ	0.33	0/1202	0.79	3/1608 (0.2%)
68	Cz	0.33	0/1727	0.75	3/2308 (0.1%)
69	A5	1.84	1826/86147 (2.1%)	1.78	3112/134004 (2.3%)
70	B2	0.69	4/43887 (0.0%)	1.11	255/68161 (0.4%)
71	AW	0.37	0/1046	0.60	0/1402
72	AT	0.29	0/1019	0.66	0/1367
73	AK	0.33	0/786	0.78	3/1064 (0.3%)
74	AF	0.33	0/1501	0.70	1/2017 (0.0%)
75	Ac	0.36	0/502	0.75	1/670 (0.1%)
76	CU	0.45	0/838	0.79	1/1123 (0.1%)
77	Cj	1.06	0/717	0.85	0/950

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
78	CW	0.68	0/515	0.77	0/683
79	Cg	0.80	0/855	0.84	2/1142 (0.2%)
80	Cd	0.27	0/908	0.46	0/1221
81	AS	0.28	0/1135	0.67	2/1521 (0.1%)
All	All	1.26	1910/232911 (0.8%)	1.34	3669/341300 (1.1%)

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	CO	0	9
2	CL	0	14
4	CM	0	2
5	Ca	0	5
6	CN	0	7
7	CI	0	5
8	CD	0	5
9	CQ	0	5
10	CR	0	3
11	CA	0	4
12	CS	0	11
13	CT	0	8
14	CP	0	3
16	CY	0	2
18	Cr	0	15
19	Ch	0	5
20	Cb	0	4
21	CB	0	18
22	CF	0	4
24	Ce	0	3
25	Cf	0	11
26	Ci	0	7
27	Ck	0	2
29	CC	0	15
30	Cm	0	2
33	Co	0	3
34	CJ	0	4
35	CH	0	4
36	CE	0	25
37	CG	0	9

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Mol	Chain	#Chirality outliers	#Planarity outliers
43	AO	0	4
44	AX	0	1
45	AM	0	3
46	Ad	0	1
50	AP	0	3
51	AB	0	4
52	AA	0	2
53	AV	0	2
54	AY	0	1
55	AZ	0	4
56	Aa	0	2
57	Ab	0	1
58	AD	0	6
59	Ae	0	1
60	Af	0	10
61	AJ	0	4
62	AE	0	1
63	AC	0	2
64	AG	0	2
65	AH	0	3
66	AI	0	2
67	AQ	0	5
68	Cz	0	2
72	AT	0	3
74	AF	0	2
75	Ac	0	1
76	CU	0	1
78	CW	0	1
79	Cg	0	1
80	Cd	0	1
All	All	0	290

All (1910) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1313	A	N9-C4	-13.10	1.29	1.37
69	A5	1795	A	C5-C6	-12.81	1.29	1.41
69	A5	1689	G	N7-C5	-12.62	1.31	1.39
69	A5	1686	A	N9-C4	-11.02	1.31	1.37
69	A5	754	A	N9-C4	-10.88	1.31	1.37
69	A5	2734	A	N7-C5	-10.68	1.32	1.39
69	A5	1142	U	C4-O4	-10.57	1.15	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2733	G	C6-O6	-10.55	1.14	1.24
69	A5	3591	A	N9-C4	-10.37	1.31	1.37
69	A5	1687	U	C2-N3	-10.28	1.30	1.37
69	A5	1313	A	N7-C5	-10.21	1.33	1.39
69	A5	807	A	C6-N1	-10.13	1.28	1.35
69	A5	910	C	N3-C4	-10.09	1.26	1.33
69	A5	1366	G	N9-C4	-9.96	1.29	1.38
69	A5	548	A	N9-C4	-9.94	1.31	1.37
69	A5	1784	A	C6-N6	-9.93	1.26	1.33
69	A5	811	G	N9-C4	-9.80	1.30	1.38
69	A5	1712	C	C5-C6	-9.80	1.26	1.34
69	A5	2155	A	N7-C5	-9.73	1.33	1.39
69	A5	1115	A	N9-C4	-9.56	1.32	1.37
69	A5	2091	A	N9-C4	-9.54	1.32	1.37
69	A5	1784	A	C5-C4	-9.48	1.32	1.38
69	A5	2733	G	C5-C4	-9.48	1.31	1.38
69	A5	789	G	C8-N7	-9.40	1.25	1.30
69	A5	2725	U	C2-N3	-9.33	1.31	1.37
69	A5	1545	A	N9-C4	-9.26	1.32	1.37
69	A5	102	G	N7-C5	-9.22	1.33	1.39
69	A5	808	G	C8-N7	-9.18	1.25	1.30
69	A5	2151	A	C6-N1	-9.15	1.29	1.35
69	A5	1075	G	C8-N7	-9.14	1.25	1.30
69	A5	794	G	N7-C5	-9.09	1.33	1.39
69	A5	1115	A	C5-C6	-8.99	1.32	1.41
69	A5	1193	A	N9-C4	-8.97	1.32	1.37
69	A5	2151	A	N9-C4	-8.94	1.32	1.37
69	A5	754	A	N7-C5	-8.91	1.33	1.39
69	A5	2177	G	C6-N1	-8.91	1.33	1.39
69	A5	3514	C	N3-C4	-8.90	1.27	1.33
69	A5	1082	A	N7-C5	-8.90	1.33	1.39
69	A5	2731	G	C6-N1	-8.82	1.33	1.39
69	A5	1675	G	C5-C4	-8.81	1.32	1.38
69	A5	553	A	N7-C5	-8.80	1.33	1.39
69	A5	1981	A	N9-C4	-8.79	1.32	1.37
69	A5	1197	A	C6-N1	-8.76	1.29	1.35
69	A5	322	G	C8-N7	-8.75	1.25	1.30
69	A5	1686	A	C5-C6	-8.75	1.33	1.41
69	A5	1682	G	C5-C4	-8.74	1.32	1.38
69	A5	1699	A	N1-C2	-8.73	1.26	1.34
69	A5	1795	A	N7-C5	-8.71	1.34	1.39
69	A5	382	G	C5-C4	-8.66	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	359	G	C8-N7	-8.62	1.25	1.30
69	A5	2754	G	C8-N7	-8.62	1.25	1.30
69	A5	1109	G	C6-N1	-8.60	1.33	1.39
69	A5	2742	G	C5-C4	-8.59	1.32	1.38
69	A5	1327	G	C8-N7	-8.56	1.25	1.30
69	A5	1318	A	N7-C5	-8.55	1.34	1.39
69	A5	993	A	C6-N1	-8.50	1.29	1.35
69	A5	379	A	C5-C4	-8.47	1.32	1.38
69	A5	1612	G	C6-N1	-8.46	1.33	1.39
69	A5	1318	A	N9-C4	-8.46	1.32	1.37
69	A5	1140	G	C6-N1	-8.45	1.33	1.39
69	A5	808	G	C6-N1	-8.43	1.33	1.39
69	A5	1362	G	C5-C4	-8.41	1.32	1.38
69	A5	1699	A	C5-C6	8.41	1.48	1.41
69	A5	359	G	C5-C4	-8.41	1.32	1.38
69	A5	1797	A	N7-C5	-8.41	1.34	1.39
69	A5	1329	G	N7-C5	-8.40	1.34	1.39
69	A5	2773	G	C5-C4	-8.39	1.32	1.38
69	A5	379	A	N7-C5	-8.36	1.34	1.39
69	A5	2657	A	N9-C4	-8.36	1.32	1.37
69	A5	1126	A	C5-C4	-8.35	1.32	1.38
69	A5	2734	A	C5-C6	-8.34	1.33	1.41
69	A5	1315	A	N9-C4	-8.33	1.32	1.37
69	A5	1799	U	C5-C6	-8.30	1.26	1.34
69	A5	1110	G	C6-N1	-8.29	1.33	1.39
69	A5	2734	A	C6-N6	-8.29	1.27	1.33
69	A5	2492	A	N9-C4	8.28	1.42	1.37
69	A5	1673	C	N1-C6	-8.27	1.32	1.37
69	A5	1715	G	N9-C4	-8.22	1.31	1.38
69	A5	1117	A	C5-C4	-8.21	1.33	1.38
69	A5	981	C	N3-C4	-8.19	1.28	1.33
69	A5	3481	G	C2-N3	-8.15	1.26	1.32
69	A5	2772	G	C8-N7	-8.14	1.26	1.30
69	A5	378	G	N9-C8	-8.12	1.32	1.37
69	A5	1112	G	C8-N7	-8.11	1.26	1.30
69	A5	839	A	N9-C4	-8.08	1.33	1.37
69	A5	366	A	N7-C5	-8.08	1.34	1.39
69	A5	1554	C	N3-C4	-8.08	1.28	1.33
69	A5	1110	G	C8-N7	-8.07	1.26	1.30
69	A5	1169	C	C4-C5	-8.07	1.36	1.43
69	A5	3258	C	N3-C4	-8.06	1.28	1.33
6	CN	129	TYR	CD1-CE1	-8.06	1.27	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1016	A	N7-C5	-8.05	1.34	1.39
69	A5	365	A	N3-C4	-8.03	1.30	1.34
69	A5	1057	G	C5-C4	-8.03	1.32	1.38
69	A5	1111	C	C4-C5	-8.00	1.36	1.43
69	A5	1671	U	C4-O4	-7.99	1.17	1.23
69	A5	1313	A	C5-C6	-7.99	1.33	1.41
69	A5	1164	G	C5-C4	-7.97	1.32	1.38
69	A5	1165	A	C5-C4	-7.96	1.33	1.38
69	A5	1673	C	N3-C4	-7.96	1.28	1.33
69	A5	2528	A	N9-C4	-7.96	1.33	1.37
69	A5	1671	U	C2-N3	-7.95	1.32	1.37
69	A5	2783	C	N3-C4	-7.95	1.28	1.33
69	A5	1151	A	C8-N7	-7.93	1.25	1.31
69	A5	1362	G	N9-C8	-7.92	1.32	1.37
69	A5	2154	A	N9-C4	-7.92	1.33	1.37
69	A5	1795	A	N9-C4	-7.91	1.33	1.37
69	A5	1073	C	N3-C4	-7.90	1.28	1.33
69	A5	986	A	N9-C4	-7.90	1.33	1.37
69	A5	1724	A	N7-C5	-7.90	1.34	1.39
69	A5	2773	G	C2-N3	-7.89	1.26	1.32
69	A5	1595	G	C2-N3	-7.88	1.26	1.32
69	A5	2160	C	N3-C4	-7.88	1.28	1.33
69	A5	2168	G	C6-N1	-7.88	1.34	1.39
69	A5	99	A	N9-C4	-7.88	1.33	1.37
69	A5	755	A	N9-C4	-7.87	1.33	1.37
69	A5	1110	G	C2-N3	-7.87	1.26	1.32
69	A5	3540	G	C6-N1	-7.87	1.34	1.39
69	A5	373	A	N7-C5	-7.83	1.34	1.39
69	A5	2733	G	C8-N7	-7.82	1.26	1.30
69	A5	1691	A	N7-C5	-7.82	1.34	1.39
69	A5	3167	A	N7-C5	-7.81	1.34	1.39
69	A5	3226	A	N9-C4	7.81	1.42	1.37
69	A5	3519	C	N3-C4	-7.81	1.28	1.33
69	A5	1325	C	N1-C6	-7.80	1.32	1.37
69	A5	1752	G	C2-N3	-7.79	1.26	1.32
69	A5	1015	G	C5-C4	-7.79	1.32	1.38
69	A5	1689	G	C5-C6	-7.77	1.34	1.42
69	A5	787	C	N3-C4	-7.76	1.28	1.33
69	A5	1533	A	N7-C5	-7.76	1.34	1.39
69	A5	1080	G	N1-C2	-7.76	1.31	1.37
69	A5	1588	A	N9-C4	7.75	1.42	1.37
69	A5	99	A	N7-C5	-7.75	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1715	G	N3-C4	-7.75	1.30	1.35
69	A5	3478	G	C8-N7	-7.73	1.26	1.30
69	A5	2735	A	C5-C4	-7.72	1.33	1.38
69	A5	1325	C	C2-O2	-7.72	1.17	1.24
69	A5	31	C	C4-C5	-7.71	1.36	1.43
69	A5	805	C	C4-C5	-7.70	1.36	1.43
69	A5	3477	A	N3-C4	-7.70	1.30	1.34
69	A5	1685	G	C5-C4	-7.70	1.32	1.38
69	A5	2741	A	C5-C4	-7.70	1.33	1.38
69	A5	1109	G	C8-N7	-7.69	1.26	1.30
69	A5	1393	A	N9-C4	-7.69	1.33	1.37
69	A5	788	C	C2-N3	-7.68	1.29	1.35
69	A5	1150	G	C8-N7	-7.67	1.26	1.30
69	A5	2186	C	C4-C5	-7.66	1.36	1.43
69	A5	805	C	N3-C4	-7.65	1.28	1.33
69	A5	2528	A	N7-C5	-7.65	1.34	1.39
69	A5	1169	C	N3-C4	-7.62	1.28	1.33
69	A5	1318	A	C5-C6	-7.62	1.34	1.41
69	A5	32	C	N3-C4	-7.61	1.28	1.33
69	A5	1175	C	N3-C4	-7.60	1.28	1.33
69	A5	3489	A	C5-C4	-7.60	1.33	1.38
69	A5	1688	A	N7-C5	-7.58	1.34	1.39
40	A8	36	A	N7-C5	-7.58	1.34	1.39
69	A5	322	G	C5-C6	-7.58	1.34	1.42
69	A5	1327	G	N1-C2	-7.57	1.31	1.37
69	A5	1699	A	C6-N1	-7.57	1.30	1.35
69	A5	1797	A	C8-N7	-7.56	1.26	1.31
69	A5	1383	A	N7-C5	-7.55	1.34	1.39
69	A5	2733	G	C5-C6	-7.55	1.34	1.42
69	A5	3489	A	N7-C5	-7.55	1.34	1.39
69	A5	1796	A	N7-C5	-7.54	1.34	1.39
69	A5	352	U	C2-N3	-7.53	1.32	1.37
14	CP	144	CYS	CB-SG	-7.52	1.69	1.82
69	A5	1675	G	N7-C5	-7.52	1.34	1.39
69	A5	3258	C	C2-O2	-7.51	1.17	1.24
13	CT	40	VAL	CB-CG2	-7.51	1.37	1.52
69	A5	2755	G	C8-N7	-7.51	1.26	1.30
69	A5	788	C	C4-C5	-7.50	1.36	1.43
69	A5	2755	G	C5-C4	-7.49	1.33	1.38
69	A5	2718	U	C2-N3	-7.47	1.32	1.37
69	A5	3472	A	N9-C4	7.46	1.42	1.37
69	A5	1695	A	N7-C5	-7.46	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	44	A	N7-C5	-7.44	1.34	1.39
69	A5	2191	G	C2-N3	-7.43	1.26	1.32
69	A5	809	G	C6-N1	-7.42	1.34	1.39
69	A5	1784	A	N3-C4	-7.42	1.30	1.34
69	A5	1366	G	C2-N3	-7.42	1.26	1.32
69	A5	1692	G	C2-N3	-7.41	1.26	1.32
69	A5	1168	G	C6-N1	-7.40	1.34	1.39
69	A5	2734	A	C8-N7	-7.40	1.26	1.31
40	A8	24	G	N1-C2	-7.40	1.31	1.37
69	A5	379	A	N9-C8	-7.40	1.31	1.37
69	A5	357	C	N3-C4	-7.39	1.28	1.33
69	A5	2741	A	N7-C5	-7.38	1.34	1.39
69	A5	1327	G	C5-C4	-7.38	1.33	1.38
69	A5	1721	C	C4-C5	-7.38	1.37	1.43
69	A5	3675	A	N9-C4	-7.38	1.33	1.37
69	A5	2165	C	N1-C6	-7.37	1.32	1.37
69	A5	1689	G	C8-N7	-7.37	1.26	1.30
69	A5	811	G	C6-N1	-7.37	1.34	1.39
69	A5	3513	A	N3-C4	-7.37	1.30	1.34
69	A5	808	G	C5-C4	-7.37	1.33	1.38
69	A5	1009	G	N1-C2	-7.35	1.31	1.37
69	A5	1086	C	N3-C4	-7.35	1.28	1.33
69	A5	1098	U	C2-N3	-7.34	1.32	1.37
69	A5	1797	A	N9-C8	-7.34	1.31	1.37
69	A5	3173	U	C2-N3	-7.34	1.32	1.37
69	A5	2753	G	C5-C4	-7.33	1.33	1.38
69	A5	1009	G	C6-N1	-7.32	1.34	1.39
69	A5	2066	G	N7-C5	-7.32	1.34	1.39
69	A5	3274	A	C6-N1	-7.32	1.30	1.35
69	A5	1799	U	C4-C5	-7.32	1.36	1.43
69	A5	881	G	C2-N3	-7.31	1.26	1.32
69	A5	372	U	C2-N3	-7.30	1.32	1.37
69	A5	802	G	N9-C8	-7.28	1.32	1.37
69	A5	2733	G	C6-N1	-7.28	1.34	1.39
69	A5	99	A	C8-N7	-7.27	1.26	1.31
69	A5	322	G	C5-C4	-7.27	1.33	1.38
69	A5	2185	U	C2-N3	-7.27	1.32	1.37
69	A5	788	C	N3-C4	-7.26	1.28	1.33
69	A5	1176	A	N9-C4	-7.25	1.33	1.37
69	A5	1375	G	C2-N3	-7.24	1.26	1.32
69	A5	1330	G	C8-N7	-7.24	1.26	1.30
69	A5	1196	A	N9-C4	-7.24	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	809	G	C8-N7	-7.23	1.26	1.30
69	A5	2738	C	N3-C4	-7.23	1.28	1.33
69	A5	1371	A	N7-C5	-7.22	1.34	1.39
69	A5	105	A	N9-C4	-7.22	1.33	1.37
69	A5	1715	G	C2-N3	-7.21	1.26	1.32
69	A5	2760	G	C5-C4	-7.21	1.33	1.38
69	A5	3520	U	C2-N3	-7.21	1.32	1.37
69	A5	1017	A	N7-C5	-7.21	1.34	1.39
69	A5	2699	A	N9-C4	-7.21	1.33	1.37
69	A5	2216	A	N3-C4	-7.20	1.30	1.34
69	A5	784	G	C5-C4	-7.20	1.33	1.38
69	A5	1301	A	N9-C4	-7.20	1.33	1.37
69	A5	2749	G	C8-N7	-7.19	1.26	1.30
69	A5	1110	G	C5-C4	-7.18	1.33	1.38
69	A5	2732	C	N1-C6	-7.18	1.32	1.37
69	A5	92	A	C8-N7	-7.16	1.26	1.31
69	A5	3473	C	C5-C6	-7.15	1.28	1.34
69	A5	823	U	C2-N3	-7.15	1.32	1.37
69	A5	1119	C	C2-N3	-7.14	1.30	1.35
69	A5	1682	G	C6-N1	-7.14	1.34	1.39
40	A8	27	C	N3-C4	-7.14	1.28	1.33
25	Cf	92	CYS	CB-SG	-7.13	1.70	1.82
69	A5	1702	G	N3-C4	-7.13	1.30	1.35
69	A5	1120	A	N7-C5	-7.13	1.34	1.39
69	A5	2066	G	N9-C8	-7.12	1.32	1.37
69	A5	874	G	N9-C8	-7.11	1.32	1.37
40	A8	24	G	C2-N3	-7.11	1.27	1.32
69	A5	800	C	N3-C4	-7.11	1.28	1.33
69	A5	791	C	N3-C4	-7.10	1.28	1.33
69	A5	1718	G	N7-C5	-7.09	1.34	1.39
69	A5	2739	A	N9-C4	-7.09	1.33	1.37
69	A5	296	C	N3-C4	-7.09	1.28	1.33
69	A5	1004	C	N3-C4	-7.07	1.28	1.33
69	A5	1696	A	C5-C4	-7.07	1.33	1.38
69	A5	1119	C	N3-C4	-7.06	1.29	1.33
69	A5	789	G	C6-N1	-7.05	1.34	1.39
69	A5	1001	A	N7-C5	-7.05	1.35	1.39
69	A5	799	A	N7-C5	-7.05	1.35	1.39
69	A5	2155	A	C6-N6	-7.05	1.28	1.33
69	A5	2700	C	N3-C4	-7.04	1.29	1.33
69	A5	2742	G	N9-C8	-7.04	1.32	1.37
69	A5	2547	C	N1-C6	-7.02	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	3620	G	C2-N3	-7.01	1.27	1.32
69	A5	375	C	N3-C4	-7.01	1.29	1.33
69	A5	385	A	N9-C4	-7.00	1.33	1.37
69	A5	3472	A	N7-C5	-7.00	1.35	1.39
69	A5	1100	G	N7-C5	-7.00	1.35	1.39
69	A5	3477	A	N9-C4	-6.99	1.33	1.37
69	A5	874	G	N7-C5	-6.99	1.35	1.39
69	A5	1140	G	C5-C4	-6.99	1.33	1.38
69	A5	2517	A	N3-C4	-6.99	1.30	1.34
69	A5	2742	G	C8-N7	-6.99	1.26	1.30
2	CL	16	TRP	CB-CG	6.98	1.62	1.50
69	A5	1112	G	N9-C8	-6.98	1.32	1.37
69	A5	559	A	N9-C4	-6.96	1.33	1.37
69	A5	798	C	N3-C4	-6.96	1.29	1.33
69	A5	350	C	C4-C5	-6.96	1.37	1.43
69	A5	832	U	C4-C5	-6.95	1.37	1.43
69	A5	57	G	C8-N7	-6.95	1.26	1.30
69	A5	810	A	N9-C4	-6.95	1.33	1.37
69	A5	1158	C	N3-C4	-6.95	1.29	1.33
69	A5	2735	A	N3-C4	-6.94	1.30	1.34
69	A5	553	A	C5-C6	-6.93	1.34	1.41
69	A5	2198	G	C5-C4	-6.93	1.33	1.38
69	A5	783	G	C2-N3	-6.93	1.27	1.32
69	A5	2155	A	C6-N1	-6.92	1.30	1.35
69	A5	1031	G	C5-C4	-6.92	1.33	1.38
69	A5	3477	A	C6-N1	-6.91	1.30	1.35
69	A5	1076	A	C8-N7	-6.91	1.26	1.31
69	A5	1199	C	N3-C4	-6.91	1.29	1.33
69	A5	1364	A	N9-C4	-6.90	1.33	1.37
69	A5	810	A	C8-N7	-6.90	1.26	1.31
69	A5	2186	C	N3-C4	-6.90	1.29	1.33
69	A5	2735	A	C8-N7	-6.90	1.26	1.31
69	A5	39	A	N7-C5	-6.89	1.35	1.39
69	A5	370	A	N7-C5	-6.88	1.35	1.39
69	A5	1313	A	C2-N3	-6.88	1.27	1.33
69	A5	806	A	C8-N7	-6.88	1.26	1.31
69	A5	802	G	C8-N7	-6.88	1.26	1.30
69	A5	1696	A	N9-C4	-6.88	1.33	1.37
69	A5	3475	U	C2-N3	-6.88	1.32	1.37
69	A5	383	A	C8-N7	-6.88	1.26	1.31
69	A5	3672	U	C2-N3	-6.88	1.32	1.37
69	A5	1002	C	N1-C6	-6.87	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2726	A	N3-C4	-6.87	1.30	1.34
69	A5	1681	G	N7-C5	-6.87	1.35	1.39
7	CI	132	GLY	C-N	-6.86	1.18	1.34
69	A5	1168	G	C8-N7	-6.86	1.26	1.30
69	A5	2753	G	C6-N1	-6.86	1.34	1.39
69	A5	2178	U	C2-N3	-6.85	1.32	1.37
69	A5	910	C	C5-C6	-6.85	1.28	1.34
69	A5	1284	A	N9-C4	-6.85	1.33	1.37
69	A5	2769	G	C5-C4	-6.85	1.33	1.38
69	A5	1359	G	C8-N7	-6.83	1.26	1.30
69	A5	1866	G	C5-C6	-6.83	1.35	1.42
69	A5	3519	C	C4-C5	-6.83	1.37	1.43
69	A5	3621	A	N7-C5	-6.83	1.35	1.39
69	A5	1197	A	C2-N3	-6.81	1.27	1.33
69	A5	2723	A	N3-C4	-6.81	1.30	1.34
69	A5	810	A	N7-C5	-6.81	1.35	1.39
69	A5	839	A	C5-C4	-6.80	1.33	1.38
69	A5	1013	G	C6-N1	-6.80	1.34	1.39
69	A5	2739	A	C8-N7	-6.80	1.26	1.31
69	A5	809	G	C5-C4	-6.79	1.33	1.38
69	A5	543	A	N7-C5	-6.78	1.35	1.39
69	A5	2502	G	C5-C4	-6.78	1.33	1.38
69	A5	1368	A	N7-C5	-6.78	1.35	1.39
69	A5	38	A	N7-C5	-6.77	1.35	1.39
69	A5	1775	C	N3-C4	-6.76	1.29	1.33
69	A5	94	C	N3-C4	-6.76	1.29	1.33
69	A5	1087	G	N7-C5	-6.76	1.35	1.39
69	A5	2215	G	C5-C4	-6.76	1.33	1.38
69	A5	1023	C	N3-C4	-6.76	1.29	1.33
69	A5	1100	G	C5-C4	-6.76	1.33	1.38
69	A5	1170	U	C2-N3	-6.76	1.33	1.37
69	A5	1370	C	N3-C4	-6.76	1.29	1.33
69	A5	3518	A	C8-N7	-6.75	1.26	1.31
69	A5	378	G	C5-C4	-6.74	1.33	1.38
69	A5	755	A	N7-C5	-6.74	1.35	1.39
69	A5	811	G	N3-C4	-6.74	1.30	1.35
69	A5	817	C	N3-C4	-6.74	1.29	1.33
69	A5	2768	A	N3-C4	-6.74	1.30	1.34
69	A5	95	G	C5-C4	-6.73	1.33	1.38
69	A5	446	C	N1-C6	-6.73	1.33	1.37
69	A5	2224	A	C8-N7	-6.72	1.26	1.31
69	A5	3402	C	N3-C4	-6.72	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2734	A	C6-N1	-6.72	1.30	1.35
69	A5	3246	G	N9-C4	-6.72	1.32	1.38
69	A5	2755	G	N9-C8	-6.71	1.33	1.37
69	A5	821	U	C5-C6	-6.71	1.28	1.34
69	A5	3513	A	N9-C4	-6.70	1.33	1.37
69	A5	1022	A	N7-C5	-6.70	1.35	1.39
69	A5	2527	A	N7-C5	-6.70	1.35	1.39
69	A5	3540	G	N1-C2	-6.69	1.32	1.37
69	A5	33	C	C4-C5	-6.69	1.37	1.43
69	A5	3517	U	C2-N3	-6.68	1.33	1.37
69	A5	240	G	N7-C5	-6.68	1.35	1.39
69	A5	378	G	C6-N1	-6.68	1.34	1.39
69	A5	424	G	N9-C8	-6.68	1.33	1.37
69	A5	1329	G	N9-C8	-6.68	1.33	1.37
69	A5	1686	A	N7-C5	-6.68	1.35	1.39
69	A5	1797	A	C5-C6	-6.68	1.35	1.41
69	A5	2177	G	N1-C2	-6.67	1.32	1.37
69	A5	1691	A	C5-C6	-6.67	1.35	1.41
69	A5	1675	G	N9-C4	-6.66	1.32	1.38
69	A5	363	G	C8-N7	-6.66	1.26	1.30
69	A5	1075	G	N9-C8	-6.66	1.33	1.37
69	A5	99	A	N9-C8	-6.64	1.32	1.37
69	A5	787	C	C2-N3	-6.64	1.30	1.35
69	A5	1682	G	N1-C2	-6.64	1.32	1.37
69	A5	1784	A	C5-C6	-6.64	1.35	1.41
69	A5	1612	G	N9-C8	-6.63	1.33	1.37
69	A5	378	G	N7-C5	-6.63	1.35	1.39
69	A5	1687	U	N3-C4	-6.63	1.32	1.38
69	A5	365	A	N9-C4	-6.63	1.33	1.37
69	A5	1000	G	C5-C4	-6.63	1.33	1.38
69	A5	444	C	N3-C4	-6.62	1.29	1.33
69	A5	1087	G	N9-C8	-6.62	1.33	1.37
69	A5	3167	A	C5-C4	-6.62	1.34	1.38
69	A5	1134	G	N1-C2	-6.62	1.32	1.37
69	A5	1142	U	C4-C5	-6.62	1.37	1.43
69	A5	1666	A	C5-C4	-6.61	1.34	1.38
69	A5	1315	A	N3-C4	-6.61	1.30	1.34
69	A5	306	C	N3-C4	-6.61	1.29	1.33
69	A5	1626	A	N9-C4	-6.61	1.33	1.37
69	A5	2713	G	C5-C4	-6.61	1.33	1.38
69	A5	1685	G	C6-N1	-6.60	1.34	1.39
69	A5	3520	U	N3-C4	-6.59	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	784	G	N7-C5	-6.58	1.35	1.39
40	A8	16	A	C8-N7	-6.58	1.26	1.31
69	A5	1164	G	C2-N3	-6.58	1.27	1.32
69	A5	1867	A	C5-C6	-6.58	1.35	1.41
69	A5	350	C	N3-C4	-6.57	1.29	1.33
69	A5	1030	A	N9-C4	-6.56	1.33	1.37
69	A5	813	C	N1-C6	-6.56	1.33	1.37
69	A5	1606	G	C8-N7	-6.56	1.27	1.30
69	A5	35	C	N3-C4	-6.56	1.29	1.33
69	A5	1106	A	N9-C4	-6.56	1.33	1.37
69	A5	2521	A	C5-C4	-6.56	1.34	1.38
69	A5	3878	U	C2-N3	-6.55	1.33	1.37
69	A5	1118	C	N3-C4	-6.55	1.29	1.33
69	A5	2503	G	C2-N3	-6.55	1.27	1.32
69	A5	856	A	N9-C8	-6.54	1.32	1.37
69	A5	345	A	N9-C8	-6.54	1.32	1.37
69	A5	381	G	C2-N3	-6.54	1.27	1.32
69	A5	1064	G	C8-N7	-6.54	1.27	1.30
69	A5	1085	U	C2-N3	-6.54	1.33	1.37
69	A5	2738	C	N1-C6	-6.54	1.33	1.37
69	A5	2713	G	N7-C5	-6.53	1.35	1.39
69	A5	3678	G	C6-N1	-6.53	1.34	1.39
69	A5	92	A	N7-C5	-6.53	1.35	1.39
69	A5	353	G	C5-C4	-6.53	1.33	1.38
69	A5	379	A	N3-C4	-6.53	1.30	1.34
69	A5	3506	U	C2-N3	-6.51	1.33	1.37
69	A5	2754	G	N1-C2	-6.51	1.32	1.37
69	A5	424	G	C5-C4	-6.50	1.33	1.38
69	A5	2747	G	C6-N1	-6.50	1.35	1.39
69	A5	1109	G	C5-C6	-6.50	1.35	1.42
69	A5	2755	G	C5-C6	-6.50	1.35	1.42
69	A5	3268	A	N9-C4	-6.49	1.33	1.37
69	A5	1026	G	C6-N1	-6.49	1.35	1.39
69	A5	1597	A	N3-C4	-6.49	1.30	1.34
69	A5	987	G	C8-N7	-6.48	1.27	1.30
40	A8	55	G	C5-C4	-6.48	1.33	1.38
69	A5	376	G	C2-N3	-6.48	1.27	1.32
69	A5	515	A	N9-C4	-6.48	1.33	1.37
24	Ce	7	TYR	CD2-CE2	-6.48	1.29	1.39
69	A5	3488	G	C8-N7	-6.47	1.27	1.30
69	A5	864	G	C8-N7	-6.47	1.27	1.30
69	A5	995	G	C5-C4	-6.47	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1360	U	C2-N3	-6.47	1.33	1.37
69	A5	1383	A	O3'-P	6.47	1.69	1.61
69	A5	2730	A	C6-N1	-6.47	1.31	1.35
69	A5	1675	G	N9-C8	-6.47	1.33	1.37
69	A5	1375	G	C5-C4	-6.46	1.33	1.38
69	A5	846	U	C4-O4	-6.46	1.18	1.23
69	A5	1691	A	C6-N6	-6.46	1.28	1.33
69	A5	2759	G	C8-N7	-6.46	1.27	1.30
69	A5	927	A	N9-C4	6.46	1.41	1.37
69	A5	978	G	C5-C4	-6.46	1.33	1.38
69	A5	1026	G	N7-C5	-6.46	1.35	1.39
69	A5	3504	G	N7-C5	-6.46	1.35	1.39
69	A5	360	A	N7-C5	-6.45	1.35	1.39
69	A5	805	C	C2-N3	-6.45	1.30	1.35
69	A5	991	A	N7-C5	-6.45	1.35	1.39
69	A5	785	A	N9-C4	-6.45	1.33	1.37
69	A5	1000	G	C2-N3	-6.45	1.27	1.32
69	A5	443	G	N9-C4	-6.45	1.32	1.38
69	A5	825	C	N3-C4	-6.44	1.29	1.33
69	A5	2750	A	C5-C4	-6.44	1.34	1.38
69	A5	986	A	N3-C4	-6.44	1.30	1.34
69	A5	1205	U	C2-N3	-6.44	1.33	1.37
69	A5	1726	G	N7-C5	-6.43	1.35	1.39
69	A5	986	A	C5-C4	-6.43	1.34	1.38
69	A5	1675	G	C8-N7	-6.43	1.27	1.30
69	A5	1120	A	C5-C4	-6.43	1.34	1.38
69	A5	359	G	N7-C5	-6.42	1.35	1.39
69	A5	1060	G	C8-N7	-6.42	1.27	1.30
69	A5	3518	A	C5-C4	-6.42	1.34	1.38
69	A5	2517	A	N9-C4	-6.42	1.33	1.37
69	A5	3410	G	C5-C4	-6.42	1.33	1.38
69	A5	1616	G	C2-N3	-6.42	1.27	1.32
69	A5	1104	A	C5-C4	-6.41	1.34	1.38
69	A5	808	G	N9-C8	-6.41	1.33	1.37
69	A5	1753	G	C8-N7	-6.41	1.27	1.30
69	A5	1106	A	N3-C4	-6.40	1.31	1.34
69	A5	1107	G	C8-N7	-6.40	1.27	1.30
69	A5	561	A	N9-C4	-6.40	1.34	1.37
69	A5	809	G	C2-N3	-6.40	1.27	1.32
69	A5	910	C	C2-N3	-6.40	1.30	1.35
69	A5	1001	A	C6-N1	-6.40	1.31	1.35
40	A8	32	G	N9-C8	-6.40	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1026	G	N1-C2	-6.40	1.32	1.37
39	A7	67	G	N9-C4	-6.40	1.32	1.38
69	A5	2742	G	N7-C5	-6.39	1.35	1.39
69	A5	1172	G	C5-C4	-6.39	1.33	1.38
69	A5	1731	G	C5-C4	-6.39	1.33	1.38
69	A5	2750	A	N7-C5	-6.39	1.35	1.39
69	A5	3492	G	C8-N7	-6.38	1.27	1.30
69	A5	46	C	N1-C6	-6.37	1.33	1.37
69	A5	3513	A	N7-C5	-6.37	1.35	1.39
69	A5	815	A	N3-C4	-6.37	1.31	1.34
69	A5	802	G	N7-C5	-6.36	1.35	1.39
69	A5	2785	C	N3-C4	-6.36	1.29	1.33
69	A5	1029	C	N3-C4	-6.36	1.29	1.33
69	A5	1620	A	N9-C8	-6.36	1.32	1.37
69	A5	1691	A	C5-C4	-6.35	1.34	1.38
69	A5	1329	G	C2-N3	-6.35	1.27	1.32
69	A5	1679	U	C4-C5	-6.35	1.37	1.43
69	A5	990	U	C2-N3	-6.35	1.33	1.37
69	A5	1082	A	N9-C8	-6.35	1.32	1.37
69	A5	920	G	N9-C8	-6.34	1.33	1.37
69	A5	2733	G	N1-C2	-6.34	1.32	1.37
69	A5	3259	A	C6-N1	-6.34	1.31	1.35
40	A8	100	G	N9-C4	-6.34	1.32	1.38
69	A5	366	A	N9-C8	-6.34	1.32	1.37
69	A5	746	G	N9-C4	6.34	1.43	1.38
69	A5	1372	A	C5-C4	-6.33	1.34	1.38
69	A5	3508	G	N7-C5	-6.33	1.35	1.39
69	A5	95	G	N7-C5	-6.33	1.35	1.39
69	A5	348	A	N3-C4	-6.33	1.31	1.34
69	A5	2510	A	N7-C5	-6.33	1.35	1.39
69	A5	815	A	N9-C4	-6.33	1.34	1.37
69	A5	2091	A	C5-C6	-6.33	1.35	1.41
69	A5	1172	G	C2-N3	-6.32	1.27	1.32
69	A5	3476	G	C8-N7	-6.32	1.27	1.30
69	A5	1140	G	N1-C2	-6.32	1.32	1.37
69	A5	2517	A	N7-C5	-6.32	1.35	1.39
69	A5	1611	G	C5-C4	-6.32	1.33	1.38
69	A5	3519	C	C2-N3	-6.31	1.30	1.35
69	A5	2760	G	N7-C5	-6.31	1.35	1.39
69	A5	816	A	C5-C4	-6.31	1.34	1.38
69	A5	1736	G	C2-N3	-6.31	1.27	1.32
69	A5	3337	G	C8-N7	-6.31	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	373	A	C8-N7	-6.31	1.27	1.31
69	A5	3235	A	N7-C5	-6.31	1.35	1.39
69	A5	1109	G	N7-C5	-6.30	1.35	1.39
69	A5	2741	A	C8-N7	-6.30	1.27	1.31
69	A5	1526	G	C8-N7	-6.30	1.27	1.30
69	A5	1020	A	C6-N1	-6.30	1.31	1.35
69	A5	1612	G	N1-C2	-6.29	1.32	1.37
69	A5	2735	A	N7-C5	-6.29	1.35	1.39
69	A5	3478	G	C2-N3	-6.29	1.27	1.32
69	A5	2777	A	C5-C4	-6.29	1.34	1.38
69	A5	3585	A	N3-C4	-6.29	1.31	1.34
69	A5	3256	U	C2-N3	-6.28	1.33	1.37
69	A5	3478	G	N7-C5	-6.28	1.35	1.39
69	A5	2168	G	C5-C4	-6.28	1.33	1.38
69	A5	1624	G	C6-N1	-6.28	1.35	1.39
69	A5	1013	G	N1-C2	-6.28	1.32	1.37
69	A5	1361	G	C8-N7	-6.27	1.27	1.30
39	A7	67	G	N3-C4	-6.27	1.31	1.35
69	A5	1377	A	N7-C5	-6.27	1.35	1.39
69	A5	2716	C	N3-C4	-6.27	1.29	1.33
69	A5	1981	A	C6-N1	-6.27	1.31	1.35
69	A5	345	A	C5-C4	-6.27	1.34	1.38
69	A5	2176	G	C6-N1	-6.27	1.35	1.39
69	A5	2723	A	C5-C4	-6.27	1.34	1.38
69	A5	2747	G	N9-C8	-6.27	1.33	1.37
69	A5	322	G	N7-C5	-6.27	1.35	1.39
69	A5	381	G	C8-N7	-6.27	1.27	1.30
69	A5	2741	A	C6-N1	-6.27	1.31	1.35
69	A5	100	G	N1-C2	-6.26	1.32	1.37
69	A5	2664	U	C2-N3	-6.26	1.33	1.37
69	A5	348	A	N9-C4	-6.26	1.34	1.37
69	A5	1115	A	N3-C4	-6.26	1.31	1.34
69	A5	1327	G	C2-N3	-6.26	1.27	1.32
40	A8	31	G	C2-N3	-6.26	1.27	1.32
69	A5	442	A	C5-C4	-6.26	1.34	1.38
69	A5	3539	C	N3-C4	-6.26	1.29	1.33
69	A5	817	C	C4-C5	-6.26	1.38	1.43
69	A5	1313	A	C6-N1	-6.26	1.31	1.35
69	A5	1738	U	C2-O2	-6.25	1.16	1.22
69	A5	2068	A	N9-C4	-6.24	1.34	1.37
69	A5	1779	G	C5-C4	-6.24	1.33	1.38
69	A5	789	G	N1-C2	-6.24	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2209	G	C6-N1	-6.24	1.35	1.39
69	A5	2502	G	C8-N7	-6.24	1.27	1.30
69	A5	15	A	N7-C5	-6.24	1.35	1.39
69	A5	1019	U	N3-C4	-6.23	1.32	1.38
69	A5	1343	A	C5-C4	-6.23	1.34	1.38
69	A5	52	A	C8-N7	-6.23	1.27	1.31
40	A8	23	G	C6-N1	-6.23	1.35	1.39
69	A5	1325	C	N3-C4	-6.23	1.29	1.33
69	A5	3251	C	N3-C4	-6.23	1.29	1.33
69	A5	1606	G	C6-N1	-6.23	1.35	1.39
69	A5	808	G	N1-C2	-6.23	1.32	1.37
69	A5	2741	A	N9-C4	-6.23	1.34	1.37
40	A8	13	U	C2-N3	-6.22	1.33	1.37
39	A7	84	U	C2-N3	-6.22	1.33	1.37
69	A5	794	G	C8-N7	-6.22	1.27	1.30
69	A5	1142	U	C5-C6	-6.21	1.28	1.34
69	A5	3346	G	N1-C2	-6.21	1.32	1.37
69	A5	1076	A	N9-C4	-6.21	1.34	1.37
69	A5	2791	A	N7-C5	-6.21	1.35	1.39
39	A7	83	A	N9-C4	-6.21	1.34	1.37
69	A5	2207	A	C6-N6	-6.21	1.28	1.33
69	A5	358	C	C4-C5	-6.21	1.38	1.43
69	A5	986	A	N9-C8	-6.21	1.32	1.37
69	A5	1866	G	C6-O6	-6.21	1.18	1.24
69	A5	3477	A	C5-C4	-6.21	1.34	1.38
69	A5	2510	A	N9-C4	-6.20	1.34	1.37
69	A5	3259	A	C8-N7	-6.20	1.27	1.31
69	A5	61	A	N7-C5	-6.20	1.35	1.39
69	A5	1111	C	N1-C6	-6.20	1.33	1.37
69	A5	1624	G	C5-C4	-6.20	1.34	1.38
69	A5	822	G	N1-C2	-6.20	1.32	1.37
69	A5	1733	A	C8-N7	-6.20	1.27	1.31
69	A5	3516	C	C2-N3	-6.20	1.30	1.35
69	A5	1174	G	C5-C4	-6.19	1.34	1.38
69	A5	2514	U	C2-N3	-6.19	1.33	1.37
69	A5	1874	G	N1-C2	-6.19	1.32	1.37
69	A5	821	U	C2-N3	-6.18	1.33	1.37
69	A5	1154	U	C2-N3	-6.18	1.33	1.37
69	A5	1346	C	N3-C4	-6.18	1.29	1.33
69	A5	1076	A	C5-C4	-6.18	1.34	1.38
69	A5	789	G	C2-N3	-6.18	1.27	1.32
69	A5	63	G	N1-C2	-6.18	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2780	A	C5-C4	-6.18	1.34	1.38
69	A5	1629	C	N3-C4	-6.18	1.29	1.33
69	A5	1889	A	N7-C5	-6.18	1.35	1.39
69	A5	1692	G	N1-C2	-6.17	1.32	1.37
69	A5	1347	A	C5-C4	-6.17	1.34	1.38
69	A5	2175	A	N9-C4	-6.17	1.34	1.37
69	A5	1087	G	C5-C4	-6.17	1.34	1.38
69	A5	1676	A	N9-C8	-6.17	1.32	1.37
69	A5	95	G	N1-C2	-6.17	1.32	1.37
69	A5	1733	A	C6-N1	-6.17	1.31	1.35
69	A5	3409	G	C6-N1	-6.17	1.35	1.39
69	A5	1002	C	N3-C4	-6.17	1.29	1.33
21	CB	323	TYR	CB-CG	6.17	1.60	1.51
40	A8	20	C	N3-C4	-6.17	1.29	1.33
69	A5	300	A	N7-C5	-6.17	1.35	1.39
69	A5	1412	A	N3-C4	-6.17	1.31	1.34
39	A7	108	G	C2-N3	-6.16	1.27	1.32
69	A5	368	C	N3-C4	-6.16	1.29	1.33
69	A5	819	U	C2-N3	-6.16	1.33	1.37
69	A5	1674	A	N9-C4	-6.16	1.34	1.37
69	A5	382	G	N9-C8	-6.16	1.33	1.37
69	A5	1274	A	C5-C4	-6.15	1.34	1.38
69	A5	1360	U	N3-C4	-6.15	1.32	1.38
69	A5	1392	A	N9-C4	-6.15	1.34	1.37
69	A5	2207	A	C6-N1	-6.15	1.31	1.35
69	A5	2565	G	C8-N7	-6.15	1.27	1.30
69	A5	379	A	N9-C4	-6.15	1.34	1.37
69	A5	307	A	N7-C5	-6.15	1.35	1.39
69	A5	1117	A	N1-C2	-6.15	1.28	1.34
69	A5	2188	C	C5-C6	-6.15	1.29	1.34
69	A5	1107	G	N1-C2	-6.14	1.32	1.37
69	A5	1012	G	N7-C5	-6.14	1.35	1.39
69	A5	1318	A	N3-C4	-6.14	1.31	1.34
69	A5	1723	G	C6-N1	-6.14	1.35	1.39
69	A5	2509	G	N1-C2	-6.14	1.32	1.37
69	A5	828	G	C8-N7	-6.14	1.27	1.30
69	A5	910	C	C4-N4	-6.14	1.28	1.33
69	A5	1624	G	C2-N3	-6.14	1.27	1.32
69	A5	3399	C	C4-C5	-6.14	1.38	1.43
69	A5	1353	G	C6-N1	-6.13	1.35	1.39
40	A8	24	G	C6-N1	-6.13	1.35	1.39
69	A5	383	A	N9-C4	-6.13	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1330	G	N7-C5	-6.13	1.35	1.39
69	A5	3165	U	C2-N3	-6.13	1.33	1.37
69	A5	2158	U	N1-C2	-6.13	1.33	1.38
69	A5	1752	G	C5-C4	-6.13	1.34	1.38
40	A8	102	A	N9-C4	-6.13	1.34	1.37
69	A5	3516	C	C2-O2	-6.12	1.19	1.24
69	A5	2730	A	C8-N7	-6.12	1.27	1.31
69	A5	1031	G	C8-N7	-6.12	1.27	1.30
69	A5	1081	C	N3-C4	-6.12	1.29	1.33
69	A5	1022	A	C8-N7	-6.12	1.27	1.31
69	A5	1325	C	C2-N3	-6.11	1.30	1.35
69	A5	1665	C	N3-C4	-6.11	1.29	1.33
69	A5	379	A	C5-C6	-6.11	1.35	1.41
69	A5	382	G	N1-C2	-6.11	1.32	1.37
69	A5	371	G	C8-N7	-6.10	1.27	1.30
69	A5	1604	G	N7-C5	-6.10	1.35	1.39
69	A5	3149	U	C2-N3	-6.10	1.33	1.37
69	A5	93	G	N7-C5	-6.10	1.35	1.39
69	A5	1312	G	N1-C2	-6.10	1.32	1.37
69	A5	1779	G	C2-N3	-6.10	1.27	1.32
69	A5	2151	A	C8-N7	-6.10	1.27	1.31
69	A5	1595	G	N3-C4	-6.10	1.31	1.35
69	A5	1002	C	C4-C5	-6.09	1.38	1.43
69	A5	1319	A	C5-C6	-6.09	1.35	1.41
69	A5	1784	A	N9-C4	-6.09	1.34	1.37
69	A5	3540	G	C8-N7	-6.09	1.27	1.30
69	A5	543	A	C5-C6	-6.09	1.35	1.41
69	A5	359	G	N3-C4	-6.09	1.31	1.35
69	A5	1686	A	N3-C4	-6.08	1.31	1.34
69	A5	1752	G	N1-C2	-6.08	1.32	1.37
39	A7	95	U	C2-N3	-6.08	1.33	1.37
69	A5	1098	U	C4-O4	-6.08	1.18	1.23
69	A5	818	A	C5-C6	-6.08	1.35	1.41
69	A5	1122	U	N3-C4	-6.08	1.32	1.38
69	A5	3167	A	N9-C4	-6.08	1.34	1.37
29	CC	114	TRP	CE3-CZ3	-6.07	1.28	1.38
69	A5	1005	G	C8-N7	-6.07	1.27	1.30
69	A5	1682	G	C5-C6	-6.07	1.36	1.42
69	A5	105	A	C5-C6	-6.07	1.35	1.41
69	A5	1682	G	N3-C4	-6.07	1.31	1.35
69	A5	1385	G	C2-N3	-6.07	1.27	1.32
69	A5	910	C	C4-C5	-6.06	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	59	G	N9-C8	-6.06	1.33	1.37
69	A5	832	U	N1-C6	-6.06	1.32	1.38
69	A5	2191	G	C5-C4	-6.06	1.34	1.38
69	A5	2516	U	C2-N3	-6.06	1.33	1.37
69	A5	1163	G	N1-C2	-6.05	1.32	1.37
69	A5	2792	G	C5-C4	-6.05	1.34	1.38
69	A5	3495	G	C5-C4	-6.05	1.34	1.38
69	A5	3620	G	C5-C4	-6.05	1.34	1.38
69	A5	367	A	N9-C4	-6.05	1.34	1.37
69	A5	203	A	N9-C4	-6.05	1.34	1.37
69	A5	1108	G	N7-C5	-6.05	1.35	1.39
69	A5	2181	A	C5-C4	-6.05	1.34	1.38
69	A5	3674	G	C5-C4	-6.04	1.34	1.38
39	A7	81	A	N3-C4	-6.04	1.31	1.34
40	A8	42	A	C5-C4	-6.04	1.34	1.38
69	A5	1010	A	C5-C4	-6.04	1.34	1.38
69	A5	3881	A	C6-N1	-6.04	1.31	1.35
69	A5	105	A	N3-C4	-6.04	1.31	1.34
69	A5	1164	G	C8-N7	-6.04	1.27	1.30
69	A5	2222	G	C6-N1	-6.04	1.35	1.39
69	A5	2524	A	C8-N7	-6.04	1.27	1.31
69	A5	299	G	C5-C4	-6.04	1.34	1.38
69	A5	1171	G	C2-N3	-6.04	1.27	1.32
69	A5	1548	C	N3-C4	-6.04	1.29	1.33
69	A5	98	G	N1-C2	-6.03	1.32	1.37
69	A5	788	C	C5-C6	-6.03	1.29	1.34
69	A5	2160	C	C2-N3	-6.03	1.30	1.35
69	A5	2682	C	N3-C4	-6.03	1.29	1.33
69	A5	2062	A	N9-C4	-6.03	1.34	1.37
69	A5	2211	A	N9-C4	-6.03	1.34	1.37
69	A5	2748	G	C5-C4	-6.03	1.34	1.38
69	A5	549	A	N9-C4	-6.02	1.34	1.37
69	A5	2743	C	C4-C5	-6.02	1.38	1.43
69	A5	37	G	C8-N7	-6.02	1.27	1.30
69	A5	356	A	C5-C4	-6.02	1.34	1.38
40	A8	102	A	C6-N1	-6.02	1.31	1.35
69	A5	1176	A	N1-C2	-6.02	1.28	1.34
69	A5	30	A	N9-C8	-6.02	1.32	1.37
69	A5	1059	A	N3-C4	-6.02	1.31	1.34
69	A5	427	A	C5-C4	-6.01	1.34	1.38
69	A5	358	C	N3-C4	-6.01	1.29	1.33
69	A5	2746	A	C6-N1	-6.01	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	348	A	C5-C4	-6.01	1.34	1.38
69	A5	1008	A	C6-N1	-6.00	1.31	1.35
69	A5	1327	G	N9-C8	-6.00	1.33	1.37
69	A5	231	A	N9-C4	-6.00	1.34	1.37
69	A5	2744	C	N3-C4	-6.00	1.29	1.33
69	A5	2798	C	N3-C4	-6.00	1.29	1.33
69	A5	371	G	C5-C6	-6.00	1.36	1.42
69	A5	996	C	N3-C4	-6.00	1.29	1.33
69	A5	1196	A	N7-C5	-6.00	1.35	1.39
69	A5	2671	C	N3-C4	-6.00	1.29	1.33
69	A5	447	G	N1-C2	-5.99	1.32	1.37
69	A5	792	U	C2-N3	-5.99	1.33	1.37
69	A5	99	A	C5-C4	-5.99	1.34	1.38
69	A5	543	A	N9-C4	-5.99	1.34	1.37
69	A5	2161	G	C5-C4	-5.99	1.34	1.38
69	A5	793	U	C2-N3	-5.99	1.33	1.37
69	A5	1908	A	N9-C4	5.99	1.41	1.37
69	A5	2232	U	C2-N3	-5.99	1.33	1.37
69	A5	3337	G	N9-C8	-5.99	1.33	1.37
69	A5	1377	A	C5-C4	-5.99	1.34	1.38
69	A5	2735	A	N9-C4	-5.98	1.34	1.37
69	A5	796	A	N9-C4	-5.98	1.34	1.37
69	A5	1312	G	C6-N1	-5.98	1.35	1.39
69	A5	1131	C	N3-C4	-5.98	1.29	1.33
69	A5	30	A	N7-C5	-5.97	1.35	1.39
69	A5	2513	G	C6-N1	-5.97	1.35	1.39
40	A8	12	G	C8-N7	-5.97	1.27	1.30
69	A5	1410	A	C8-N7	-5.97	1.27	1.31
69	A5	2162	C	C4-C5	-5.97	1.38	1.43
69	A5	214	A	N9-C4	-5.97	1.34	1.37
69	A5	345	A	N7-C5	-5.97	1.35	1.39
69	A5	2741	A	N9-C8	-5.97	1.32	1.37
69	A5	843	A	N9-C4	-5.96	1.34	1.37
69	A5	1734	G	N7-C5	-5.96	1.35	1.39
69	A5	1118	C	C2-N3	-5.96	1.30	1.35
69	A5	3489	A	N9-C4	-5.96	1.34	1.37
69	A5	36	U	C2-N3	-5.96	1.33	1.37
69	A5	1328	U	C2-N3	-5.96	1.33	1.37
69	A5	985	G	C2-N3	-5.96	1.27	1.32
69	A5	367	A	N7-C5	-5.95	1.35	1.39
69	A5	1153	G	N1-C2	-5.95	1.32	1.37
69	A5	371	G	N7-C5	-5.95	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	809	G	C5-C6	-5.95	1.36	1.42
69	A5	1873	A	C6-N6	-5.95	1.29	1.33
69	A5	2181	A	N7-C5	-5.95	1.35	1.39
69	A5	2718	U	N3-C4	-5.94	1.33	1.38
69	A5	546	G	C8-N7	-5.94	1.27	1.30
69	A5	1014	U	C2-N3	-5.94	1.33	1.37
69	A5	102	G	N9-C8	-5.94	1.33	1.37
69	A5	2711	C	N3-C4	-5.94	1.29	1.33
69	A5	1733	A	C5-C4	-5.94	1.34	1.38
69	A5	1730	A	C5-C4	-5.93	1.34	1.38
69	A5	794	G	C5-C4	-5.93	1.34	1.38
69	A5	1358	U	C2-N3	-5.93	1.33	1.37
69	A5	1799	U	C2-N3	-5.93	1.33	1.37
69	A5	2194	G	N7-C5	-5.93	1.35	1.39
69	A5	31	C	N3-C4	-5.93	1.29	1.33
69	A5	754	A	C5-C6	-5.93	1.35	1.41
69	A5	1326	A	C8-N7	-5.93	1.27	1.31
69	A5	3602	U	C2-N3	-5.93	1.33	1.37
40	A8	40	A	N9-C4	-5.92	1.34	1.37
69	A5	802	G	C6-N1	-5.92	1.35	1.39
69	A5	1152	A	C6-N1	-5.92	1.31	1.35
69	A5	381	G	N9-C8	-5.92	1.33	1.37
69	A5	786	C	N3-C4	-5.92	1.29	1.33
69	A5	1152	A	C8-N7	-5.92	1.27	1.31
69	A5	379	A	C2-N3	-5.92	1.28	1.33
69	A5	1069	A	C5-C4	-5.92	1.34	1.38
69	A5	1331	G	C5-C4	-5.92	1.34	1.38
69	A5	1363	G	N9-C8	-5.92	1.33	1.37
69	A5	3673	G	C8-N7	-5.92	1.27	1.30
69	A5	58	G	C2-N3	-5.92	1.28	1.32
69	A5	1144	C	C5-C6	-5.92	1.29	1.34
69	A5	376	G	C5-C4	-5.91	1.34	1.38
69	A5	1685	G	N1-C2	-5.91	1.33	1.37
69	A5	3403	G	C5-C4	-5.91	1.34	1.38
69	A5	1102	G	C8-N7	-5.91	1.27	1.30
69	A5	1152	A	C5-C4	-5.91	1.34	1.38
69	A5	2199	A	C6-N1	-5.91	1.31	1.35
69	A5	1872	A	N7-C5	-5.91	1.35	1.39
69	A5	389	G	C6-N1	-5.91	1.35	1.39
69	A5	1367	A	N9-C4	-5.91	1.34	1.37
69	A5	1117	A	N7-C5	-5.90	1.35	1.39
69	A5	2748	G	C8-N7	-5.90	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	443	G	C5-C4	-5.90	1.34	1.38
69	A5	1414	C	N3-C4	-5.90	1.29	1.33
69	A5	2750	A	N9-C4	-5.90	1.34	1.37
69	A5	1752	G	N3-C4	-5.90	1.31	1.35
69	A5	2243	G	C6-N1	-5.90	1.35	1.39
69	A5	2543	C	N3-C4	-5.90	1.29	1.33
69	A5	821	U	C4-C5	-5.90	1.38	1.43
69	A5	1028	U	C2-N3	-5.90	1.33	1.37
69	A5	3168	A	N7-C5	-5.90	1.35	1.39
69	A5	1749	A	C6-N1	-5.90	1.31	1.35
69	A5	376	G	N9-C8	-5.89	1.33	1.37
69	A5	2091	A	N7-C5	-5.89	1.35	1.39
69	A5	1555	G	N9-C8	-5.89	1.33	1.37
69	A5	1168	G	C5-C4	-5.89	1.34	1.38
69	A5	2724	C	C4-C5	-5.89	1.38	1.43
69	A5	1799	U	N1-C6	-5.88	1.32	1.38
69	A5	92	A	C5-C6	-5.88	1.35	1.41
69	A5	1709	A	N9-C4	-5.88	1.34	1.37
69	A5	2731	G	C8-N7	-5.88	1.27	1.30
69	A5	485	A	N9-C4	-5.88	1.34	1.37
69	A5	1372	A	N9-C8	-5.88	1.33	1.37
69	A5	2736	A	N9-C4	-5.88	1.34	1.37
69	A5	2521	A	N7-C5	-5.87	1.35	1.39
69	A5	845	C	N3-C4	-5.87	1.29	1.33
69	A5	2215	G	N9-C4	-5.87	1.33	1.38
69	A5	2737	C	N3-C4	-5.87	1.29	1.33
69	A5	1115	A	N7-C5	-5.87	1.35	1.39
69	A5	2767	U	C2-N3	-5.87	1.33	1.37
69	A5	809	G	N7-C5	-5.86	1.35	1.39
69	A5	1685	G	C8-N7	-5.86	1.27	1.30
69	A5	3269	G	C8-N7	-5.86	1.27	1.30
69	A5	650	A	N9-C4	-5.86	1.34	1.37
69	A5	2747	G	C8-N7	-5.86	1.27	1.30
69	A5	1117	A	C8-N7	-5.86	1.27	1.31
69	A5	1682	G	C2-N3	-5.86	1.28	1.32
69	A5	427	A	N9-C8	-5.86	1.33	1.37
69	A5	2255	G	C8-N7	-5.85	1.27	1.30
69	A5	1330	G	C5-C4	-5.85	1.34	1.38
69	A5	1197	A	N1-C2	-5.85	1.29	1.34
69	A5	1875	G	C5-C4	-5.85	1.34	1.38
69	A5	2678	G	C5-C4	-5.85	1.34	1.38
69	A5	3348	G	C8-N7	-5.85	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	417	A	C5-C4	-5.85	1.34	1.38
69	A5	795	A	C8-N7	-5.85	1.27	1.31
69	A5	1110	G	N9-C8	-5.85	1.33	1.37
69	A5	1630	G	N7-C5	-5.85	1.35	1.39
69	A5	2708	C	N3-C4	-5.85	1.29	1.33
69	A5	786	C	N1-C6	-5.84	1.33	1.37
69	A5	1696	A	C5-C6	-5.84	1.35	1.41
69	A5	2211	A	C5-C4	-5.84	1.34	1.38
69	A5	982	C	N3-C4	-5.84	1.29	1.33
69	A5	359	G	N9-C4	-5.84	1.33	1.38
69	A5	1030	A	N7-C5	-5.84	1.35	1.39
69	A5	1144	C	C4-C5	-5.84	1.38	1.43
69	A5	2195	A	C6-N1	-5.84	1.31	1.35
18	Cr	9	TRP	CB-CG	-5.84	1.39	1.50
69	A5	1319	A	N7-C5	-5.84	1.35	1.39
69	A5	3518	A	C6-N1	-5.83	1.31	1.35
69	A5	794	G	C6-N1	-5.83	1.35	1.39
69	A5	1612	G	C8-N7	-5.83	1.27	1.30
69	A5	3331	A	N7-C5	-5.83	1.35	1.39
69	A5	1623	G	N7-C5	-5.83	1.35	1.39
69	A5	3140	G	N9-C8	-5.83	1.33	1.37
69	A5	1151	A	C6-N1	-5.83	1.31	1.35
69	A5	1165	A	N9-C8	-5.83	1.33	1.37
69	A5	1731	G	C2-N3	-5.83	1.28	1.32
69	A5	2221	G	C8-N7	-5.82	1.27	1.30
69	A5	2534	G	C2-N3	-5.82	1.28	1.32
69	A5	3346	G	C5-C4	-5.82	1.34	1.38
69	A5	31	C	N1-C6	-5.82	1.33	1.37
69	A5	90	G	C5-C4	-5.82	1.34	1.38
69	A5	991	A	C5-C4	-5.82	1.34	1.38
69	A5	1527	C	N3-C4	-5.82	1.29	1.33
69	A5	1784	A	C6-N1	-5.82	1.31	1.35
69	A5	1613	A	C5-C4	-5.82	1.34	1.38
39	A7	84	U	N3-C4	-5.82	1.33	1.38
69	A5	26	G	N1-C2	-5.82	1.33	1.37
69	A5	81	A	N7-C5	-5.82	1.35	1.39
69	A5	816	A	N3-C4	-5.81	1.31	1.34
69	A5	1331	G	C2-N3	-5.81	1.28	1.32
69	A5	1638	G	C2-N3	-5.81	1.28	1.32
69	A5	1165	A	N1-C2	-5.81	1.29	1.34
69	A5	391	A	N9-C4	-5.81	1.34	1.37
69	A5	308	G	C5-C4	-5.81	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	868	A	N9-C4	5.81	1.41	1.37
69	A5	3142	G	C6-N1	-5.81	1.35	1.39
69	A5	1678	C	N3-C4	-5.80	1.29	1.33
69	A5	1163	G	N9-C8	-5.80	1.33	1.37
69	A5	819	U	N1-C6	-5.80	1.32	1.38
69	A5	3236	A	N9-C4	-5.80	1.34	1.37
69	A5	1793	C	C4-C5	-5.80	1.38	1.43
69	A5	3409	G	C8-N7	-5.80	1.27	1.30
69	A5	371	G	C5-C4	-5.80	1.34	1.38
69	A5	385	A	N3-C4	-5.79	1.31	1.34
69	A5	815	A	C5-C4	-5.79	1.34	1.38
69	A5	2203	A	C8-N7	-5.79	1.27	1.31
69	A5	2229	A	N3-C4	-5.79	1.31	1.34
69	A5	1314	U	C2-N3	-5.79	1.33	1.37
69	A5	663	U	C2-N3	-5.79	1.33	1.37
69	A5	1087	G	C8-N7	-5.79	1.27	1.30
69	A5	1176	A	N7-C5	-5.79	1.35	1.39
69	A5	2176	G	N1-C2	-5.79	1.33	1.37
69	A5	3620	G	C8-N7	-5.79	1.27	1.30
69	A5	352	U	N3-C4	-5.79	1.33	1.38
69	A5	1138	C	N3-C4	-5.79	1.29	1.33
69	A5	1623	G	C5-C6	-5.79	1.36	1.42
69	A5	1702	G	N9-C4	-5.79	1.33	1.38
69	A5	2038	A	N7-C5	-5.78	1.35	1.39
69	A5	2221	G	C5-C4	-5.78	1.34	1.38
69	A5	3625	U	C2-N3	-5.78	1.33	1.37
69	A5	98	G	N7-C5	-5.78	1.35	1.39
69	A5	911	A	N9-C4	-5.78	1.34	1.37
69	A5	1329	G	C8-N7	-5.78	1.27	1.30
69	A5	1333	C	C4-C5	-5.78	1.38	1.43
69	A5	427	A	N9-C4	-5.78	1.34	1.37
69	A5	62	G	C5-C4	-5.77	1.34	1.38
69	A5	1563	A	N9-C4	5.77	1.41	1.37
69	A5	2746	A	N9-C8	-5.77	1.33	1.37
69	A5	3511	U	N3-C4	-5.77	1.33	1.38
69	A5	2513	G	C8-N7	-5.77	1.27	1.30
69	A5	2755	G	N7-C5	-5.77	1.35	1.39
40	A8	11	G	C6-N1	-5.77	1.35	1.39
69	A5	1651	C	N3-C4	-5.77	1.29	1.33
69	A5	1799	U	C4-O4	-5.77	1.19	1.23
69	A5	2733	G	N7-C5	-5.77	1.35	1.39
69	A5	3499	G	N1-C2	-5.77	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	A8	43	A	N9-C4	-5.77	1.34	1.37
69	A5	2683	G	C8-N7	-5.76	1.27	1.30
69	A5	2768	A	C5-C4	-5.76	1.34	1.38
69	A5	357	C	C4-C5	-5.76	1.38	1.43
69	A5	424	G	N1-C2	-5.76	1.33	1.37
69	A5	822	G	C6-N1	-5.76	1.35	1.39
69	A5	832	U	C5-C6	-5.76	1.28	1.34
69	A5	3293	G	N7-C5	-5.76	1.35	1.39
69	A5	1088	A	C6-N1	-5.76	1.31	1.35
69	A5	2251	G	C2-N3	-5.76	1.28	1.32
69	A5	3613	G	N9-C4	-5.76	1.33	1.38
69	A5	30	A	C6-N1	-5.76	1.31	1.35
69	A5	3477	A	C2-N3	-5.76	1.28	1.33
69	A5	1670	G	C5-C4	-5.75	1.34	1.38
69	A5	1687	U	C2-O2	-5.75	1.17	1.22
69	A5	846	U	C2-N3	-5.75	1.33	1.37
40	A8	40	A	C8-N7	-5.75	1.27	1.31
69	A5	1172	G	C8-N7	-5.75	1.27	1.30
69	A5	1369	C	N1-C6	-5.75	1.33	1.37
69	A5	1134	G	C6-N1	-5.75	1.35	1.39
69	A5	1790	A	C5-C4	-5.75	1.34	1.38
69	A5	1074	U	C2-N3	-5.74	1.33	1.37
69	A5	1098	U	N3-C4	-5.74	1.33	1.38
69	A5	1867	A	C5-C4	-5.74	1.34	1.38
69	A5	1064	G	C6-N1	-5.74	1.35	1.39
69	A5	1009	G	C5-C4	-5.74	1.34	1.38
69	A5	2789	U	C2-N3	-5.74	1.33	1.37
69	A5	3348	G	C5-C4	-5.74	1.34	1.38
69	A5	785	A	C5-C4	-5.74	1.34	1.38
69	A5	1372	A	C8-N7	-5.74	1.27	1.31
69	A5	1543	C	N3-C4	-5.74	1.29	1.33
69	A5	1671	U	N3-C4	-5.74	1.33	1.38
69	A5	1098	U	C4-C5	-5.73	1.38	1.43
69	A5	2729	U	C2-N3	-5.73	1.33	1.37
39	A7	97	G	C5-C4	-5.73	1.34	1.38
69	A5	807	A	C2-N3	-5.73	1.28	1.33
69	A5	3882	C	N3-C4	-5.73	1.29	1.33
69	A5	864	G	N9-C8	-5.73	1.33	1.37
69	A5	443	G	N7-C5	-5.72	1.35	1.39
69	A5	1680	U	C4-C5	-5.72	1.38	1.43
69	A5	3193	C	N3-C4	-5.72	1.29	1.33
69	A5	1795	A	C8-N7	-5.72	1.27	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1388	C	N3-C4	-5.72	1.29	1.33
69	A5	1156	U	C2-N3	-5.72	1.33	1.37
69	A5	107	G	N9-C4	-5.72	1.33	1.38
69	A5	3404	A	C8-N7	-5.71	1.27	1.31
69	A5	3405	U	C2-N3	-5.71	1.33	1.37
69	A5	443	G	C8-N7	-5.71	1.27	1.30
69	A5	989	A	N7-C5	-5.71	1.35	1.39
69	A5	2755	G	N9-C4	-5.71	1.33	1.38
69	A5	809	G	N1-C2	-5.71	1.33	1.37
69	A5	1381	U	C2-N3	-5.71	1.33	1.37
69	A5	1409	G	C8-N7	-5.71	1.27	1.30
69	A5	1675	G	N3-C4	-5.71	1.31	1.35
69	A5	2153	C	N1-C6	-5.71	1.33	1.37
69	A5	2699	A	C6-N1	-5.71	1.31	1.35
69	A5	454	C	N3-C4	-5.70	1.29	1.33
69	A5	1771	G	N9-C8	-5.70	1.33	1.37
69	A5	2528	A	C5-C6	-5.70	1.35	1.41
69	A5	546	G	N7-C5	-5.70	1.35	1.39
69	A5	3678	G	N1-C2	-5.70	1.33	1.37
69	A5	353	G	C8-N7	-5.70	1.27	1.30
69	A5	1099	U	C2-N3	-5.70	1.33	1.37
69	A5	1102	G	C2-N3	-5.70	1.28	1.32
69	A5	1144	C	N3-C4	-5.70	1.29	1.33
69	A5	1369	C	N3-C4	-5.70	1.29	1.33
69	A5	1710	G	N7-C5	-5.70	1.35	1.39
69	A5	100	G	C5-C4	-5.69	1.34	1.38
69	A5	1019	U	C2-N3	-5.69	1.33	1.37
69	A5	1027	A	N7-C5	-5.69	1.35	1.39
69	A5	3350	U	C2-N3	-5.69	1.33	1.37
69	A5	1643	G	C8-N7	-5.69	1.27	1.30
69	A5	1791	A	N7-C5	-5.68	1.35	1.39
69	A5	1874	G	C6-N1	-5.68	1.35	1.39
69	A5	2187	U	C2-N3	-5.68	1.33	1.37
69	A5	2194	G	C5-C4	-5.68	1.34	1.38
69	A5	1343	A	N7-C5	-5.68	1.35	1.39
69	A5	1648	A	C8-N7	-5.68	1.27	1.31
69	A5	205	U	C2-N3	-5.68	1.33	1.37
69	A5	118	A	C5-C4	-5.67	1.34	1.38
69	A5	1738	U	N1-C6	-5.67	1.32	1.38
69	A5	3266	A	C6-N1	-5.67	1.31	1.35
69	A5	2155	A	C5-C6	-5.67	1.35	1.41
69	A5	3885	C	N3-C4	-5.67	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	Cf	152	LEU	C-N	-5.67	1.21	1.34
69	A5	3476	G	C5-C4	-5.67	1.34	1.38
69	A5	360	A	N9-C4	-5.67	1.34	1.37
69	A5	95	G	N9-C8	-5.67	1.33	1.37
69	A5	3269	G	C5-C6	-5.67	1.36	1.42
69	A5	1624	G	N1-C2	-5.66	1.33	1.37
69	A5	1002	C	C2-N3	-5.66	1.31	1.35
40	A8	42	A	N3-C4	-5.66	1.31	1.34
69	A5	800	C	C4-C5	-5.66	1.38	1.43
69	A5	102	G	C8-N7	-5.66	1.27	1.30
69	A5	458	A	N9-C4	5.66	1.41	1.37
69	A5	1014	U	N3-C4	-5.66	1.33	1.38
69	A5	2695	A	N9-C4	-5.66	1.34	1.37
40	A8	26	U	N3-C4	-5.65	1.33	1.38
69	A5	1183	U	N1-C6	5.65	1.43	1.38
40	A8	40	A	C5-C4	-5.65	1.34	1.38
69	A5	1523	A	N9-C4	-5.65	1.34	1.37
69	A5	1683	U	C2-N3	-5.65	1.33	1.37
69	A5	2528	A	C8-N7	-5.65	1.27	1.31
69	A5	244	G	C2-N3	-5.65	1.28	1.32
69	A5	1363	G	C6-N1	-5.65	1.35	1.39
69	A5	1383	A	C5-C6	-5.65	1.35	1.41
69	A5	1674	A	N9-C8	-5.65	1.33	1.37
69	A5	2525	C	N1-C6	-5.65	1.33	1.37
69	A5	395	A	N9-C4	-5.64	1.34	1.37
69	A5	1035	G	C5-C4	-5.64	1.34	1.38
69	A5	2207	A	N7-C5	-5.64	1.35	1.39
69	A5	2546	G	N1-C2	-5.64	1.33	1.37
69	A5	2776	A	C5-C6	-5.64	1.35	1.41
69	A5	790	U	C2-N3	-5.64	1.33	1.37
69	A5	62	G	N7-C5	-5.64	1.35	1.39
69	A5	362	A	C5-C4	-5.64	1.34	1.38
69	A5	1100	G	C8-N7	-5.64	1.27	1.30
69	A5	1797	A	C5-C4	-5.64	1.34	1.38
69	A5	2215	G	C8-N7	-5.64	1.27	1.30
69	A5	829	U	C2-N3	-5.64	1.33	1.37
69	A5	1111	C	N3-C4	-5.64	1.30	1.33
69	A5	1596	A	N9-C4	5.64	1.41	1.37
69	A5	2159	C	N3-C4	-5.64	1.30	1.33
69	A5	1150	G	N7-C5	-5.63	1.35	1.39
69	A5	1738	U	C2-N3	-5.63	1.33	1.37
69	A5	3346	G	C8-N7	-5.63	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	68	G	N9-C8	-5.63	1.33	1.37
69	A5	393	A	C5-C4	-5.63	1.34	1.38
69	A5	1031	G	C5-C6	-5.63	1.36	1.42
69	A5	1172	G	N7-C5	-5.63	1.35	1.39
69	A5	2209	G	N7-C5	-5.63	1.35	1.39
69	A5	811	G	C2-N3	-5.62	1.28	1.32
69	A5	851	G	C8-N7	-5.62	1.27	1.30
69	A5	2790	G	N1-C2	-5.62	1.33	1.37
69	A5	2066	G	C8-N7	-5.62	1.27	1.30
69	A5	382	G	C2-N3	-5.61	1.28	1.32
69	A5	790	U	N3-C4	-5.61	1.33	1.38
69	A5	2516	U	N3-C4	-5.61	1.33	1.38
69	A5	1123	C	N3-C4	-5.61	1.30	1.33
69	A5	2529	G	C8-N7	-5.61	1.27	1.30
69	A5	2560	A	N9-C4	-5.61	1.34	1.37
69	A5	2723	A	N7-C5	-5.61	1.35	1.39
69	A5	3413	C	C4-N4	-5.61	1.28	1.33
69	A5	3675	A	N7-C5	5.61	1.42	1.39
69	A5	1126	A	C5-C6	-5.61	1.36	1.41
69	A5	1163	G	C5-C4	-5.61	1.34	1.38
69	A5	1597	A	N9-C4	-5.61	1.34	1.37
69	A5	3428	A	N9-C4	-5.60	1.34	1.37
69	A5	3504	G	C5-C4	-5.60	1.34	1.38
39	A7	82	G	C5-C4	-5.60	1.34	1.38
69	A5	1352	U	C2-N3	-5.60	1.33	1.37
69	A5	1100	G	C5-C6	-5.60	1.36	1.42
69	A5	1670	G	C8-N7	-5.60	1.27	1.30
69	A5	3674	G	C8-N7	-5.60	1.27	1.30
69	A5	1102	G	C5-C4	-5.60	1.34	1.38
69	A5	1626	A	C8-N7	-5.60	1.27	1.31
69	A5	1145	C	N3-C4	-5.59	1.30	1.33
69	A5	2745	A	N9-C4	-5.59	1.34	1.37
40	A8	33	U	C2-N3	-5.59	1.33	1.37
69	A5	1141	G	C2-N3	-5.59	1.28	1.32
69	A5	1176	A	C6-N1	-5.59	1.31	1.35
69	A5	880	A	N9-C4	-5.59	1.34	1.37
69	A5	1020	A	N9-C4	-5.59	1.34	1.37
69	A5	1721	C	N3-C4	-5.59	1.30	1.33
69	A5	3260	G	C5-C4	-5.59	1.34	1.38
69	A5	1107	G	N9-C8	-5.59	1.33	1.37
69	A5	1313	A	N3-C4	-5.59	1.31	1.34
69	A5	1738	U	C5-C6	-5.59	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2524	A	C5-C4	-5.59	1.34	1.38
69	A5	1327	G	N9-C4	-5.58	1.33	1.38
69	A5	384	A	C5-C4	-5.58	1.34	1.38
69	A5	1013	G	C8-N7	-5.58	1.27	1.30
69	A5	2754	G	C6-N1	-5.58	1.35	1.39
69	A5	3260	G	N9-C4	-5.58	1.33	1.38
69	A5	783	G	N1-C2	-5.58	1.33	1.37
69	A5	1327	G	C6-N1	-5.58	1.35	1.39
69	A5	44	A	C5-C4	-5.58	1.34	1.38
69	A5	993	A	C6-N6	-5.58	1.29	1.33
69	A5	2769	G	C6-N1	-5.58	1.35	1.39
69	A5	3491	C	N3-C4	-5.58	1.30	1.33
69	A5	1153	G	N7-C5	-5.57	1.35	1.39
69	A5	1767	A	N9-C8	-5.57	1.33	1.37
69	A5	2167	G	C5-C4	-5.57	1.34	1.38
69	A5	3478	G	N1-C2	-5.57	1.33	1.37
69	A5	825	C	C4-C5	-5.57	1.38	1.43
69	A5	1056	G	C5-C4	-5.57	1.34	1.38
69	A5	2714	U	C4-C5	-5.57	1.38	1.43
69	A5	2776	A	C8-N7	-5.57	1.27	1.31
69	A5	442	A	N7-C5	-5.57	1.35	1.39
69	A5	1359	G	N7-C5	-5.57	1.35	1.39
69	A5	2719	A	C5-C4	-5.57	1.34	1.38
69	A5	3281	G	N9-C4	5.57	1.42	1.38
69	A5	1372	A	N7-C5	-5.57	1.35	1.39
69	A5	1020	A	C6-N6	-5.56	1.29	1.33
69	A5	1613	A	N9-C4	-5.56	1.34	1.37
69	A5	3174	A	N7-C5	-5.56	1.35	1.39
40	A8	15	G	C2-N3	-5.56	1.28	1.32
69	A5	1983	A	N9-C4	-5.56	1.34	1.37
69	A5	2159	C	C2-N3	-5.56	1.31	1.35
69	A5	2509	G	C5-C4	-5.56	1.34	1.38
69	A5	1140	G	C2-N3	-5.56	1.28	1.32
69	A5	2168	G	N1-C2	-5.55	1.33	1.37
69	A5	2239	C	C4-C5	-5.55	1.38	1.43
69	A5	2730	A	C5-C4	-5.55	1.34	1.38
69	A5	86	C	N3-C4	-5.55	1.30	1.33
69	A5	2192	U	C2-N3	-5.55	1.33	1.37
69	A5	383	A	C5-C4	-5.55	1.34	1.38
69	A5	1554	C	C4-C5	-5.55	1.38	1.43
69	A5	2197	A	C6-N1	-5.55	1.31	1.35
69	A5	3178	G	C2-N3	-5.55	1.28	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	CN	129	TYR	CD2-CE2	-5.54	1.31	1.39
69	A5	824	G	C8-N7	-5.54	1.27	1.30
69	A5	26	G	C2-N3	-5.54	1.28	1.32
69	A5	755	A	C5-C6	-5.54	1.36	1.41
69	A5	2163	A	C5-C4	-5.54	1.34	1.38
69	A5	375	C	C4-C5	-5.54	1.38	1.43
69	A5	790	U	N1-C6	-5.54	1.32	1.38
69	A5	2728	C	C4-N4	-5.54	1.28	1.33
69	A5	1272	G	C5-C4	-5.53	1.34	1.38
69	A5	2168	G	C8-N7	-5.53	1.27	1.30
69	A5	3347	G	N1-C2	-5.53	1.33	1.37
69	A5	425	A	N9-C4	-5.53	1.34	1.37
69	A5	801	G	C5-C4	-5.53	1.34	1.38
69	A5	3150	G	C6-N1	-5.53	1.35	1.39
69	A5	1022	A	C5-C6	-5.53	1.36	1.41
69	A5	366	A	C5-C4	-5.53	1.34	1.38
69	A5	426	A	N7-C5	-5.53	1.35	1.39
69	A5	803	A	C8-N7	-5.53	1.27	1.31
69	A5	1021	U	C2-N3	-5.53	1.33	1.37
69	A5	2542	C	N3-C4	-5.53	1.30	1.33
69	A5	781	C	N3-C4	-5.52	1.30	1.33
69	A5	1694	A	N9-C4	-5.52	1.34	1.37
69	A5	2172	C	C4-C5	-5.52	1.38	1.43
69	A5	1168	G	N9-C8	-5.52	1.33	1.37
69	A5	2566	A	N7-C5	-5.52	1.35	1.39
69	A5	985	G	C5-C4	-5.52	1.34	1.38
69	A5	1973	G	N7-C5	-5.52	1.35	1.39
69	A5	2548	G	C6-N1	-5.52	1.35	1.39
69	A5	3672	U	C5-C6	-5.52	1.29	1.34
69	A5	2751	A	N9-C4	-5.51	1.34	1.37
69	A5	3621	A	C8-N7	-5.51	1.27	1.31
69	A5	799	A	C8-N7	-5.51	1.27	1.31
69	A5	415	A	N7-C5	-5.51	1.35	1.39
69	A5	548	A	C6-N1	-5.51	1.31	1.35
69	A5	797	A	N9-C4	-5.51	1.34	1.37
69	A5	1137	G	C2-N3	-5.51	1.28	1.32
11	CA	208	GLU	CB-CG	-5.51	1.41	1.52
69	A5	49	A	N9-C4	-5.51	1.34	1.37
69	A5	104	A	N7-C5	-5.51	1.35	1.39
69	A5	3345	A	N7-C5	-5.51	1.35	1.39
69	A5	414	A	C5-C4	-5.51	1.34	1.38
40	A8	98	U	N1-C2	-5.51	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	661	G	N9-C8	-5.51	1.33	1.37
69	A5	1747	A	N7-C5	-5.51	1.35	1.39
69	A5	2539	G	N9-C8	-5.51	1.33	1.37
69	A5	2702	A	N9-C4	-5.51	1.34	1.37
69	A5	2773	G	N9-C8	-5.51	1.33	1.37
69	A5	360	A	N9-C8	-5.50	1.33	1.37
69	A5	1777	A	C5-C4	-5.50	1.34	1.38
69	A5	856	A	N7-C5	-5.50	1.35	1.39
69	A5	1001	A	N9-C8	-5.50	1.33	1.37
69	A5	2191	G	N3-C4	-5.50	1.31	1.35
69	A5	2202	A	C8-N7	-5.50	1.27	1.31
69	A5	3524	G	C6-N1	-5.50	1.35	1.39
69	A5	382	G	N7-C5	-5.50	1.35	1.39
69	A5	3417	C	N3-C4	-5.50	1.30	1.33
69	A5	2758	U	C2-N3	-5.50	1.33	1.37
69	A5	53	A	N7-C5	-5.50	1.35	1.39
69	A5	1112	G	C5-C4	-5.50	1.34	1.38
69	A5	1606	G	N9-C8	-5.50	1.34	1.37
69	A5	2800	C	N3-C4	-5.50	1.30	1.33
69	A5	2791	A	N9-C4	-5.50	1.34	1.37
69	A5	1018	C	N3-C4	-5.49	1.30	1.33
69	A5	1080	G	C5-C4	-5.49	1.34	1.38
69	A5	1015	G	C5-C6	-5.49	1.36	1.42
69	A5	1383	A	N9-C4	5.49	1.41	1.37
69	A5	2181	A	N3-C4	-5.49	1.31	1.34
69	A5	1107	G	N7-C5	-5.49	1.35	1.39
69	A5	2528	A	C5-C4	-5.49	1.34	1.38
69	A5	2726	A	N9-C4	-5.49	1.34	1.37
69	A5	2783	C	C2-N3	-5.49	1.31	1.35
69	A5	1111	C	C4-N4	-5.49	1.29	1.33
69	A5	2777	A	N9-C4	-5.49	1.34	1.37
69	A5	3332	G	N7-C5	-5.49	1.35	1.39
69	A5	1013	G	N9-C8	-5.48	1.34	1.37
69	A5	1015	G	C2-N3	-5.48	1.28	1.32
69	A5	1108	G	N9-C8	-5.48	1.34	1.37
69	A5	3499	G	C5-C4	-5.48	1.34	1.38
69	A5	418	G	C5-C4	-5.48	1.34	1.38
69	A5	998	G	C8-N7	-5.48	1.27	1.30
69	A5	2515	C	N3-C4	-5.48	1.30	1.33
69	A5	3167	A	N3-C4	-5.48	1.31	1.34
69	A5	422	G	N9-C8	-5.48	1.34	1.37
69	A5	3687	A	N9-C4	5.48	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	359	G	C5-C6	-5.47	1.36	1.42
69	A5	827	A	N7-C5	-5.47	1.35	1.39
69	A5	373	A	C5-C4	-5.47	1.34	1.38
69	A5	380	G	N1-C2	-5.47	1.33	1.37
69	A5	1611	G	N7-C5	-5.47	1.35	1.39
69	A5	1719	G	N7-C5	-5.47	1.35	1.39
69	A5	1117	A	C2-N3	-5.47	1.28	1.33
69	A5	1310	A	N7-C5	-5.47	1.35	1.39
69	A5	1521	G	N1-C2	-5.47	1.33	1.37
69	A5	1614	A	C8-N7	-5.47	1.27	1.31
69	A5	3589	G	N7-C5	-5.47	1.35	1.39
69	A5	3518	A	N9-C8	-5.47	1.33	1.37
5	Ca	120	ALA	C-N	-5.47	1.21	1.34
69	A5	772	G	C8-N7	-5.47	1.27	1.30
69	A5	1112	G	C6-N1	-5.47	1.35	1.39
69	A5	2754	G	N9-C8	-5.47	1.34	1.37
69	A5	2492	A	N7-C5	-5.46	1.35	1.39
69	A5	3488	G	N7-C5	-5.46	1.35	1.39
69	A5	1635	A	C8-N7	-5.46	1.27	1.31
69	A5	2745	A	C6-N1	-5.46	1.31	1.35
69	A5	3337	G	N9-C4	-5.46	1.33	1.38
69	A5	62	G	C8-N7	-5.46	1.27	1.30
69	A5	244	G	C5-C4	-5.46	1.34	1.38
69	A5	373	A	C5-C6	-5.46	1.36	1.41
69	A5	828	G	N7-C5	-5.46	1.35	1.39
69	A5	1110	G	N1-C2	-5.46	1.33	1.37
69	A5	2729	U	C4-C5	-5.46	1.38	1.43
69	A5	1119	C	N1-C2	-5.46	1.34	1.40
69	A5	1272	G	N9-C8	-5.46	1.34	1.37
69	A5	857	U	C2-N3	-5.45	1.33	1.37
69	A5	1015	G	N7-C5	-5.45	1.35	1.39
69	A5	2546	G	C6-N1	-5.45	1.35	1.39
69	A5	2786	U	N3-C4	-5.45	1.33	1.38
69	A5	3409	G	N9-C8	-5.45	1.34	1.37
69	A5	3490	C	N3-C4	-5.45	1.30	1.33
69	A5	1681	G	C5-C4	-5.45	1.34	1.38
69	A5	2155	A	C2-N3	-5.45	1.28	1.33
69	A5	3488	G	N9-C4	-5.45	1.33	1.38
69	A5	1126	A	N9-C4	-5.45	1.34	1.37
69	A5	359	G	C2-N3	-5.44	1.28	1.32
69	A5	1673	C	C2-N3	-5.44	1.31	1.35
69	A5	3518	A	N3-C4	-5.44	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	48	U	C4-O4	-5.44	1.19	1.23
69	A5	1702	G	C5-C4	-5.44	1.34	1.38
69	A5	38	A	C8-N7	-5.44	1.27	1.31
69	A5	1142	U	N3-C4	-5.44	1.33	1.38
69	A5	1611	G	N9-C8	-5.44	1.34	1.37
69	A5	414	A	N9-C4	-5.44	1.34	1.37
69	A5	2657	A	N3-C4	-5.44	1.31	1.34
69	A5	443	G	N9-C8	-5.43	1.34	1.37
69	A5	2230	G	C8-N7	-5.43	1.27	1.30
69	A5	921	C	C4-C5	-5.43	1.38	1.43
69	A5	2523	A	N3-C4	-5.43	1.31	1.34
69	A5	2728	C	N3-C4	-5.43	1.30	1.33
69	A5	803	A	N9-C4	-5.43	1.34	1.37
69	A5	1163	G	N7-C5	-5.43	1.35	1.39
69	A5	2216	A	C2-N3	-5.43	1.28	1.33
69	A5	2221	G	N1-C2	-5.43	1.33	1.37
69	A5	1022	A	C5-C4	-5.43	1.34	1.38
69	A5	2748	G	N1-C2	-5.42	1.33	1.37
69	A5	3268	A	C5-C4	-5.42	1.34	1.38
69	A5	1326	A	C5-C4	-5.42	1.34	1.38
69	A5	3346	G	C6-N1	-5.42	1.35	1.39
69	A5	987	G	N1-C2	-5.41	1.33	1.37
69	A5	1361	G	C2-N3	-5.41	1.28	1.32
69	A5	37	G	N7-C5	-5.41	1.36	1.39
69	A5	382	G	C6-N1	-5.41	1.35	1.39
69	A5	2212	A	C8-N7	-5.41	1.27	1.31
69	A5	3507	A	N7-C5	-5.41	1.36	1.39
40	A8	23	G	C5-C4	-5.41	1.34	1.38
69	A5	1545	A	N7-C5	-5.41	1.36	1.39
69	A5	62	G	N9-C4	-5.41	1.33	1.38
69	A5	2176	G	N9-C8	-5.40	1.34	1.37
69	A5	2727	U	N3-C4	-5.40	1.33	1.38
69	A5	820	A	C2-N3	-5.40	1.28	1.33
69	A5	825	C	N1-C6	-5.40	1.33	1.37
69	A5	1362	G	C6-N1	-5.40	1.35	1.39
69	A5	1675	G	C6-N1	-5.40	1.35	1.39
69	A5	2221	G	N9-C8	-5.40	1.34	1.37
69	A5	68	G	C8-N7	-5.40	1.27	1.30
69	A5	1009	G	C2-N3	-5.40	1.28	1.32
69	A5	2148	C	N3-C4	-5.40	1.30	1.33
69	A5	2721	C	C5-C6	-5.40	1.30	1.34
69	A5	2213	G	C5-C4	-5.40	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	A8	100	G	C8-N7	-5.39	1.27	1.30
69	A5	1005	G	N1-C2	-5.39	1.33	1.37
69	A5	2758	U	N1-C2	-5.39	1.33	1.38
69	A5	856	A	C5-C4	-5.39	1.34	1.38
69	A5	1620	A	C8-N7	-5.39	1.27	1.31
69	A5	1630	G	N9-C8	-5.39	1.34	1.37
69	A5	3880	A	N9-C4	-5.39	1.34	1.37
69	A5	1731	G	N9-C8	-5.39	1.34	1.37
69	A5	49	A	C5-C4	-5.39	1.34	1.38
69	A5	986	A	N7-C5	-5.39	1.36	1.39
69	A5	1553	C	N3-C4	-5.39	1.30	1.33
69	A5	2222	G	C2-N3	-5.39	1.28	1.32
69	A5	2504	A	C6-N1	-5.39	1.31	1.35
69	A5	754	A	N3-C4	-5.38	1.31	1.34
69	A5	3514	C	C4-C5	-5.38	1.38	1.43
69	A5	3753	A	N9-C4	5.38	1.41	1.37
69	A5	3883	G	C5-C4	-5.38	1.34	1.38
69	A5	911	A	C5-C4	-5.38	1.34	1.38
69	A5	3256	U	N3-C4	-5.38	1.33	1.38
69	A5	3870	A	C5-C4	-5.38	1.34	1.38
69	A5	1023	C	C4-C5	-5.38	1.38	1.43
69	A5	1002	C	C5-C6	-5.38	1.30	1.34
69	A5	1137	G	C5-C4	-5.38	1.34	1.38
69	A5	1174	G	C8-N7	-5.38	1.27	1.30
69	A5	1166	U	C4-C5	-5.38	1.38	1.43
69	A5	373	A	N9-C8	-5.37	1.33	1.37
69	A5	3257	U	N3-C4	-5.37	1.33	1.38
69	A5	3620	G	C5-C6	-5.37	1.36	1.42
69	A5	89	A	N7-C5	-5.37	1.36	1.39
69	A5	1114	A	N7-C5	-5.37	1.36	1.39
69	A5	1604	G	N9-C8	-5.37	1.34	1.37
69	A5	1782	C	N3-C4	-5.37	1.30	1.33
69	A5	437	G	C8-N7	-5.37	1.27	1.30
69	A5	807	A	N9-C4	-5.37	1.34	1.37
69	A5	3883	G	C2-N3	-5.37	1.28	1.32
69	A5	1182	A	C5-C6	-5.36	1.36	1.41
69	A5	241	C	N3-C4	-5.36	1.30	1.33
69	A5	63	G	N7-C5	-5.36	1.36	1.39
69	A5	814	U	C2-N3	-5.36	1.33	1.37
69	A5	1675	G	N1-C2	-5.36	1.33	1.37
69	A5	1752	G	N9-C8	-5.36	1.34	1.37
69	A5	3283	U	C5-C6	-5.36	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	447	G	C6-N1	-5.36	1.35	1.39
69	A5	801	G	C2-N3	-5.36	1.28	1.32
69	A5	819	U	C5-C6	-5.36	1.29	1.34
69	A5	1164	G	N9-C4	-5.36	1.33	1.38
69	A5	3670	G	C8-N7	-5.36	1.27	1.30
14	CP	130	TYR	CD1-CE1	-5.36	1.31	1.39
69	A5	65	A	C5-C4	-5.36	1.35	1.38
69	A5	1519	A	N9-C4	-5.36	1.34	1.37
69	A5	790	U	C4-C5	-5.36	1.38	1.43
69	A5	1676	A	C5-C4	-5.36	1.35	1.38
69	A5	443	G	C2-N3	-5.35	1.28	1.32
69	A5	1384	C	N3-C4	-5.35	1.30	1.33
69	A5	1315	A	N7-C5	-5.35	1.36	1.39
69	A5	801	G	N7-C5	-5.35	1.36	1.39
69	A5	1003	C	N3-C4	-5.35	1.30	1.33
69	A5	2659	A	C5-C4	-5.35	1.35	1.38
69	A5	2723	A	C8-N7	-5.35	1.27	1.31
69	A5	3180	G	C2-N3	-5.35	1.28	1.32
69	A5	1063	C	N3-C4	-5.34	1.30	1.33
69	A5	101	C	N3-C4	-5.34	1.30	1.33
69	A5	1523	A	C6-N1	-5.34	1.31	1.35
69	A5	2245	G	N9-C8	-5.34	1.34	1.37
69	A5	46	C	C4-C5	-5.34	1.38	1.43
69	A5	784	G	N1-C2	-5.34	1.33	1.37
69	A5	987	G	N7-C5	-5.34	1.36	1.39
69	A5	1792	G	N1-C2	-5.34	1.33	1.37
69	A5	3293	G	C5-C4	-5.34	1.34	1.38
69	A5	233	A	N7-C5	-5.33	1.36	1.39
69	A5	379	A	C6-N1	-5.33	1.31	1.35
69	A5	1764	G	C5-C4	-5.33	1.34	1.38
69	A5	301	U	C4-O4	-5.33	1.19	1.23
69	A5	1733	A	N3-C4	-5.33	1.31	1.34
69	A5	241	C	N1-C6	-5.33	1.33	1.37
69	A5	456	G	C6-N1	-5.33	1.35	1.39
69	A5	851	G	C5-C4	-5.33	1.34	1.38
69	A5	919	G	C6-N1	-5.33	1.35	1.39
69	A5	746	G	N3-C4	5.33	1.39	1.35
69	A5	796	A	C6-N1	-5.33	1.31	1.35
69	A5	1113	A	C8-N7	-5.33	1.27	1.31
69	A5	1206	G	N7-C5	-5.33	1.36	1.39
69	A5	1777	A	N7-C5	-5.33	1.36	1.39
69	A5	2105	C	N1-C6	-5.33	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1410	A	N9-C4	-5.33	1.34	1.37
69	A5	1644	C	N3-C4	-5.32	1.30	1.33
70	B2	1845	C	N1-C6	-5.32	1.33	1.37
69	A5	1622	U	N1-C2	-5.32	1.33	1.38
69	A5	2151	A	C2-N3	-5.32	1.28	1.33
40	A8	94	C	N3-C4	-5.32	1.30	1.33
69	A5	1633	G	C5-C4	-5.32	1.34	1.38
69	A5	299	G	C2-N3	-5.32	1.28	1.32
69	A5	859	A	N7-C5	-5.32	1.36	1.39
40	A8	42	A	N7-C5	-5.32	1.36	1.39
69	A5	1170	U	C5-C6	-5.32	1.29	1.34
69	A5	2552	G	N9-C8	-5.32	1.34	1.37
69	A5	354	A	C5-C4	-5.32	1.35	1.38
69	A5	3936	A	N9-C4	-5.32	1.34	1.37
69	A5	1011	U	C4-C5	-5.31	1.38	1.43
69	A5	988	C	N3-C4	-5.31	1.30	1.33
69	A5	1363	G	C5-C4	-5.31	1.34	1.38
69	A5	1696	A	N3-C4	-5.31	1.31	1.34
69	A5	1347	A	C6-N1	-5.31	1.31	1.35
69	A5	2038	A	C5-C6	-5.31	1.36	1.41
69	A5	68	G	C5-C4	-5.31	1.34	1.38
69	A5	2200	A	N9-C4	-5.31	1.34	1.37
69	A5	2210	U	C2-N3	-5.31	1.34	1.37
69	A5	214	A	N7-C5	-5.31	1.36	1.39
69	A5	1781	U	N3-C4	-5.31	1.33	1.38
69	A5	1150	G	N9-C8	-5.30	1.34	1.37
69	A5	2502	G	N7-C5	-5.30	1.36	1.39
69	A5	1065	A	N3-C4	-5.30	1.31	1.34
69	A5	295	G	C6-N1	-5.30	1.35	1.39
69	A5	1621	A	C8-N7	-5.30	1.27	1.31
69	A5	1792	G	C5-C4	-5.30	1.34	1.38
69	A5	3613	G	N3-C4	-5.30	1.31	1.35
40	A8	24	G	C8-N7	-5.30	1.27	1.30
69	A5	2769	G	C8-N7	-5.30	1.27	1.30
39	A7	96	U	C2-N3	-5.30	1.34	1.37
69	A5	2703	G	C2-N3	-5.29	1.28	1.32
69	A5	1174	G	N9-C8	-5.29	1.34	1.37
70	B2	1846	G	C5-C4	-5.29	1.34	1.38
69	A5	30	A	N9-C4	-5.29	1.34	1.37
69	A5	921	C	N3-C4	-5.29	1.30	1.33
69	A5	1354	G	C2-N3	-5.29	1.28	1.32
69	A5	3174	A	C5-C6	-5.29	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	39	A	C8-N7	-5.29	1.27	1.31
69	A5	631	A	N9-C4	5.29	1.41	1.37
69	A5	1126	A	N9-C8	-5.29	1.33	1.37
69	A5	1680	U	C5-C6	-5.29	1.29	1.34
69	A5	2246	A	N7-C5	-5.29	1.36	1.39
69	A5	3468	G	C2-N3	-5.29	1.28	1.32
69	A5	818	A	N7-C5	-5.29	1.36	1.39
69	A5	1526	G	C6-N1	-5.29	1.35	1.39
69	A5	377	U	C4-C5	-5.28	1.38	1.43
69	A5	1795	A	N3-C4	-5.28	1.31	1.34
69	A5	3355	G	C8-N7	-5.28	1.27	1.30
40	A8	39	A	N7-C5	-5.28	1.36	1.39
69	A5	49	A	N1-C2	-5.28	1.29	1.34
69	A5	1402	U	C2-N3	-5.28	1.34	1.37
69	A5	2674	A	C8-N7	-5.28	1.27	1.31
69	A5	418	G	N7-C5	-5.28	1.36	1.39
69	A5	3519	C	C5-C6	-5.28	1.30	1.34
69	A5	2720	U	C5-C6	-5.28	1.29	1.34
69	A5	1126	A	N7-C5	-5.27	1.36	1.39
69	A5	1080	G	C6-N1	-5.27	1.35	1.39
69	A5	2197	A	N7-C5	-5.27	1.36	1.39
69	A5	34	C	C4-C5	-5.27	1.38	1.43
69	A5	3347	G	C5-C4	-5.27	1.34	1.38
69	A5	3401	U	C2-N3	-5.27	1.34	1.37
69	A5	772	G	N7-C5	-5.27	1.36	1.39
69	A5	1723	G	N1-C2	-5.27	1.33	1.37
69	A5	2244	G	C8-N7	-5.27	1.27	1.30
69	A5	1107	G	C2-N3	-5.27	1.28	1.32
69	A5	1348	G	C5-C4	-5.27	1.34	1.38
69	A5	1516	A	N9-C4	-5.26	1.34	1.37
69	A5	1722	U	N3-C4	-5.26	1.33	1.38
69	A5	87	U	C2-N3	-5.26	1.34	1.37
69	A5	61	A	C5-C4	-5.26	1.35	1.38
69	A5	783	G	N7-C5	-5.26	1.36	1.39
69	A5	1032	G	C2-N3	-5.26	1.28	1.32
69	A5	1145	C	C4-C5	-5.26	1.38	1.43
69	A5	1735	G	C6-N1	-5.26	1.35	1.39
69	A5	2190	A	N7-C5	-5.26	1.36	1.39
69	A5	2759	G	C6-N1	-5.26	1.35	1.39
69	A5	3233	C	C4-C5	-5.26	1.38	1.43
69	A5	1321	G	C6-N1	-5.26	1.35	1.39
69	A5	83	U	N3-C4	-5.25	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	446	C	N3-C4	-5.25	1.30	1.33
69	A5	1610	A	N9-C8	-5.25	1.33	1.37
69	A5	3325	G	C8-N7	-5.25	1.27	1.30
69	A5	3482	G	N7-C5	-5.25	1.36	1.39
69	A5	782	G	N3-C4	-5.25	1.31	1.35
69	A5	2254	U	C2-N3	-5.25	1.34	1.37
69	A5	1101	A	C6-N1	-5.25	1.31	1.35
69	A5	62	G	C6-N1	-5.25	1.35	1.39
69	A5	2208	G	C6-N1	-5.25	1.35	1.39
9	CQ	105	VAL	CB-CG2	-5.24	1.41	1.52
69	A5	12	C	N3-C4	-5.24	1.30	1.33
69	A5	307	A	C5-C4	-5.24	1.35	1.38
69	A5	1555	G	C5-C4	-5.24	1.34	1.38
69	A5	1675	G	C5-C6	-5.24	1.37	1.42
69	A5	2188	C	N3-C4	-5.24	1.30	1.33
69	A5	3712	G	N9-C4	-5.24	1.33	1.38
69	A5	346	U	C2-N3	-5.24	1.34	1.37
69	A5	1090	U	N3-C4	-5.24	1.33	1.38
69	A5	1613	A	C6-N1	-5.24	1.31	1.35
69	A5	3345	A	N3-C4	-5.24	1.31	1.34
69	A5	817	C	C2-N3	-5.24	1.31	1.35
69	A5	1082	A	C5-C4	-5.24	1.35	1.38
69	A5	816	A	C6-N1	-5.24	1.31	1.35
69	A5	1694	A	C5-C4	-5.24	1.35	1.38
69	A5	3576	G	N7-C5	-5.24	1.36	1.39
69	A5	1348	G	N9-C4	-5.24	1.33	1.38
69	A5	2713	G	N1-C2	-5.24	1.33	1.37
69	A5	3478	G	N9-C8	-5.24	1.34	1.37
69	A5	428	C	N3-C4	-5.23	1.30	1.33
69	A5	856	A	C5-C6	-5.23	1.36	1.41
40	A8	100	G	N9-C8	-5.23	1.34	1.37
69	A5	31	C	C5-C6	-5.23	1.30	1.34
69	A5	843	A	C8-N7	-5.23	1.27	1.31
69	A5	852	C	C4-C5	-5.23	1.38	1.43
69	A5	1197	A	N9-C4	-5.23	1.34	1.37
69	A5	1694	A	C8-N7	-5.23	1.27	1.31
69	A5	504	A	N9-C4	-5.23	1.34	1.37
69	A5	1211	A	N9-C8	-5.23	1.33	1.37
69	A5	1611	G	N1-C2	-5.23	1.33	1.37
69	A5	1771	G	C5-C4	-5.23	1.34	1.38
69	A5	2546	G	C5-C4	-5.23	1.34	1.38
69	A5	2767	U	N3-C4	-5.23	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	3124	G	C5-C4	-5.23	1.34	1.38
69	A5	3511	U	C4-C5	-5.23	1.38	1.43
69	A5	1117	A	C5-C6	-5.22	1.36	1.41
69	A5	3488	G	C5-C4	-5.22	1.34	1.38
39	A7	93	G	N9-C8	-5.22	1.34	1.37
69	A5	230	C	N1-C6	-5.22	1.34	1.37
69	A5	2547	C	C5-C6	-5.22	1.30	1.34
39	A7	90	A	N3-C4	-5.22	1.31	1.34
69	A5	295	G	N1-C2	-5.22	1.33	1.37
69	A5	417	A	N3-C4	-5.22	1.31	1.34
69	A5	3876	U	C2-N3	-5.22	1.34	1.37
69	A5	339	C	C4-C5	-5.22	1.38	1.43
69	A5	2173	C	C4-C5	-5.22	1.38	1.43
69	A5	796	A	C8-N7	-5.21	1.27	1.31
69	A5	2725	U	C4-C5	-5.21	1.38	1.43
69	A5	98	G	N9-C4	-5.21	1.33	1.38
69	A5	3872	C	N3-C4	-5.21	1.30	1.33
69	A5	1391	A	N7-C5	-5.21	1.36	1.39
69	A5	1980	G	C8-N7	-5.21	1.27	1.30
69	A5	2246	A	C8-N7	-5.21	1.27	1.31
69	A5	2715	C	N3-C4	-5.21	1.30	1.33
69	A5	3171	A	C8-N7	-5.21	1.27	1.31
69	A5	1333	C	N3-C4	-5.21	1.30	1.33
69	A5	2160	C	C4-N4	-5.21	1.29	1.33
69	A5	823	U	C4-C5	-5.21	1.38	1.43
69	A5	2109	G	C2-N2	-5.21	1.29	1.34
69	A5	43	A	N3-C4	-5.21	1.31	1.34
69	A5	1151	A	C5-C4	-5.20	1.35	1.38
69	A5	2222	G	C8-N7	-5.20	1.27	1.30
69	A5	1724	A	N3-C4	-5.20	1.31	1.34
69	A5	548	A	N7-C5	-5.20	1.36	1.39
69	A5	1660	G	C2-N3	-5.20	1.28	1.32
6	CN	106	VAL	CB-CG2	-5.20	1.42	1.52
69	A5	1207	G	C5-C4	-5.20	1.34	1.38
69	A5	1330	G	C6-N1	-5.20	1.35	1.39
69	A5	3323	G	C2-N3	-5.20	1.28	1.32
69	A5	1392	A	N7-C5	-5.20	1.36	1.39
69	A5	1738	U	N3-C4	-5.20	1.33	1.38
69	A5	372	U	N3-C4	-5.20	1.33	1.38
69	A5	1535	U	C2-N3	-5.20	1.34	1.37
69	A5	1793	C	C5-C6	-5.20	1.30	1.34
69	A5	2776	A	C6-N1	-5.20	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	A9	23	G	N9-C4	-5.19	1.33	1.38
69	A5	804	C	N3-C4	-5.19	1.30	1.33
69	A5	386	G	C2-N3	-5.19	1.28	1.32
69	A5	1776	U	C2-N3	-5.19	1.34	1.37
69	A5	2177	G	C2-N3	-5.19	1.28	1.32
69	A5	3460	C	N3-C4	-5.19	1.30	1.33
69	A5	3884	A	C5-C4	-5.19	1.35	1.38
69	A5	1772	G	N9-C8	-5.19	1.34	1.37
69	A5	2191	G	C6-N1	-5.19	1.35	1.39
69	A5	3515	C	N3-C4	-5.19	1.30	1.33
69	A5	3672	U	N3-C4	-5.19	1.33	1.38
69	A5	2222	G	N3-C4	-5.19	1.31	1.35
69	A5	3252	G	C5-C4	-5.19	1.34	1.38
69	A5	1733	A	C5-C6	-5.19	1.36	1.41
69	A5	2746	A	C2-N3	-5.19	1.28	1.33
40	A8	36	A	C5-C4	-5.18	1.35	1.38
69	A5	363	G	N7-C5	-5.18	1.36	1.39
69	A5	802	G	N9-C4	-5.18	1.33	1.38
69	A5	1021	U	C4-C5	-5.18	1.38	1.43
69	A5	1774	C	C4-C5	-5.18	1.38	1.43
69	A5	2091	A	C6-N1	-5.18	1.31	1.35
69	A5	2527	A	C5-C6	-5.18	1.36	1.41
69	A5	818	A	C8-N7	-5.18	1.27	1.31
69	A5	2524	A	N7-C5	-5.18	1.36	1.39
69	A5	110	A	C6-N1	-5.18	1.31	1.35
69	A5	2704	A	N7-C5	-5.18	1.36	1.39
69	A5	3164	C	N3-C4	-5.18	1.30	1.33
69	A5	1606	G	C5-C4	-5.18	1.34	1.38
69	A5	101	C	C2-N3	-5.18	1.31	1.35
69	A5	1983	A	C6-N1	-5.18	1.31	1.35
69	A5	2679	U	N1-C6	-5.18	1.33	1.38
69	A5	907	A	N7-C5	-5.17	1.36	1.39
69	A5	1199	C	C4-C5	-5.17	1.38	1.43
69	A5	2658	A	N9-C4	-5.17	1.34	1.37
69	A5	3158	A	N9-C4	-5.17	1.34	1.37
69	A5	3175	A	C5-C4	-5.17	1.35	1.38
69	A5	989	A	N9-C8	-5.17	1.33	1.37
69	A5	753	U	C2-N3	-5.17	1.34	1.37
69	A5	818	A	C2-N3	-5.17	1.28	1.33
69	A5	2713	G	C6-N1	-5.17	1.35	1.39
69	A5	1678	C	C4-C5	-5.17	1.38	1.43
69	A5	1175	C	N1-C6	-5.17	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1801	U	C4'-C3'	-5.17	1.47	1.52
69	A5	1083	A	N7-C5	-5.17	1.36	1.39
69	A5	3847	U	N1-C2	5.17	1.43	1.38
40	A8	32	G	C6-N1	-5.17	1.35	1.39
69	A5	65	A	C8-N7	-5.17	1.27	1.31
69	A5	3349	A	C6-N1	-5.17	1.31	1.35
69	A5	1533	A	C8-N7	-5.16	1.27	1.31
69	A5	1624	G	N3-C4	-5.16	1.31	1.35
69	A5	384	A	N9-C8	-5.16	1.33	1.37
69	A5	799	A	C5-C6	-5.16	1.36	1.41
69	A5	2502	G	N9-C8	-5.16	1.34	1.37
69	A5	3627	C	N1-C6	-5.16	1.34	1.37
69	A5	99	A	N3-C4	-5.16	1.31	1.34
69	A5	1085	U	N3-C4	-5.16	1.33	1.38
69	A5	1271	G	C6-N1	-5.16	1.35	1.39
69	A5	355	G	N9-C4	-5.16	1.33	1.38
69	A5	1013	G	C5-C4	-5.16	1.34	1.38
69	A5	1781	U	C2-N3	-5.16	1.34	1.37
69	A5	351	A	C6-N6	-5.16	1.29	1.33
69	A5	2216	A	C6-N1	-5.16	1.31	1.35
69	A5	2748	G	N7-C5	-5.16	1.36	1.39
69	A5	3175	A	N7-C5	-5.16	1.36	1.39
36	CE	237	TYR	C-N	-5.15	1.24	1.34
39	A7	86	G	C5-C4	-5.15	1.34	1.38
69	A5	105	A	C6-N1	-5.15	1.31	1.35
69	A5	1695	A	N3-C4	-5.15	1.31	1.34
69	A5	783	G	N9-C8	-5.15	1.34	1.37
69	A5	1076	A	N7-C5	-5.15	1.36	1.39
69	A5	1095	G	N9-C8	5.15	1.41	1.37
69	A5	2163	A	N7-C5	-5.15	1.36	1.39
69	A5	1103	U	C2-N3	-5.15	1.34	1.37
69	A5	1366	G	N3-C4	-5.15	1.31	1.35
69	A5	2181	A	C8-N7	-5.15	1.27	1.31
69	A5	2719	A	C6-N6	-5.15	1.29	1.33
69	A5	2753	G	C8-N7	-5.15	1.27	1.30
69	A5	371	G	C6-N1	-5.15	1.35	1.39
69	A5	1621	A	C6-N1	-5.15	1.31	1.35
69	A5	3260	G	C8-N7	-5.15	1.27	1.30
69	A5	1670	G	N9-C8	-5.15	1.34	1.37
69	A5	112	C	N3-C4	-5.14	1.30	1.33
69	A5	809	G	N9-C8	-5.14	1.34	1.37
69	A5	2163	A	C5-C6	-5.14	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	3918	A	N7-C5	-5.14	1.36	1.39
69	A5	233	A	N9-C4	-5.14	1.34	1.37
69	A5	370	A	C6-N6	-5.14	1.29	1.33
69	A5	2503	G	N3-C4	-5.14	1.31	1.35
69	A5	2674	A	N7-C5	-5.14	1.36	1.39
69	A5	3678	G	C5-C4	-5.14	1.34	1.38
69	A5	3758	G	N9-C4	5.14	1.42	1.38
69	A5	1676	A	C6-N6	-5.14	1.29	1.33
69	A5	2731	G	C5-C4	-5.14	1.34	1.38
69	A5	1361	G	C6-N1	-5.14	1.35	1.39
69	A5	1380	G	C2-N3	-5.14	1.28	1.32
69	A5	3350	U	N1-C2	-5.14	1.33	1.38
69	A5	357	C	N1-C6	-5.14	1.34	1.37
69	A5	381	G	C5-C4	-5.14	1.34	1.38
69	A5	1383	A	P-O5'	5.14	1.64	1.59
69	A5	1414	C	C4-N4	-5.14	1.29	1.33
69	A5	2734	A	C5-C4	-5.14	1.35	1.38
38	A9	22	A	C5-C4	-5.13	1.35	1.38
69	A5	827	A	N9-C8	-5.13	1.33	1.37
69	A5	772	G	C5-C4	-5.13	1.34	1.38
69	A5	2727	U	C4-C5	-5.13	1.39	1.43
40	A8	103	C	C4-C5	-5.13	1.38	1.43
69	A5	394	G	C6-N1	-5.13	1.35	1.39
69	A5	2197	A	N9-C8	-5.13	1.33	1.37
69	A5	3413	C	N3-C4	-5.13	1.30	1.33
69	A5	1873	A	C5-C4	-5.13	1.35	1.38
69	A5	44	A	N9-C8	-5.13	1.33	1.37
69	A5	348	A	C6-N1	-5.13	1.31	1.35
69	A5	1734	G	C5-C4	-5.13	1.34	1.38
69	A5	68	G	N7-C5	-5.12	1.36	1.39
69	A5	1381	U	N3-C4	-5.12	1.33	1.38
69	A5	2500	G	N7-C5	-5.12	1.36	1.39
69	A5	2549	G	C6-N1	-5.12	1.35	1.39
69	A5	3263	C	N3-C4	-5.12	1.30	1.33
69	A5	1170	U	C4-C5	-5.12	1.39	1.43
69	A5	1362	G	C2-N3	-5.12	1.28	1.32
69	A5	1110	G	C5-C6	-5.12	1.37	1.42
69	A5	1176	A	C5-C6	-5.12	1.36	1.41
69	A5	1688	A	C5-C4	-5.12	1.35	1.38
69	A5	1016	A	C8-N7	-5.12	1.27	1.31
69	A5	1730	A	C8-N7	-5.12	1.27	1.31
69	A5	3470	G	C6-N1	-5.12	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	90	G	N3-C4	-5.12	1.31	1.35
69	A5	247	C	N3-C4	-5.12	1.30	1.33
69	A5	296	C	C4-C5	-5.12	1.38	1.43
69	A5	383	A	N9-C8	-5.12	1.33	1.37
69	A5	1684	G	C5-C4	-5.12	1.34	1.38
69	A5	1771	G	C2-N3	-5.12	1.28	1.32
69	A5	3539	C	C2-N3	-5.12	1.31	1.35
69	A5	806	A	C5-C4	-5.11	1.35	1.38
69	A5	831	A	C8-N7	-5.11	1.27	1.31
69	A5	1202	A	C5-C4	-5.11	1.35	1.38
69	A5	1792	G	C2-N3	-5.11	1.28	1.32
69	A5	2176	G	C5-C4	-5.11	1.34	1.38
69	A5	1539	A	N7-C5	-5.11	1.36	1.39
69	A5	2175	A	N3-C4	-5.11	1.31	1.34
69	A5	3491	C	C2-N3	-5.11	1.31	1.35
69	A5	3614	U	C4-O4	-5.11	1.19	1.23
69	A5	1080	G	N9-C4	-5.11	1.33	1.38
69	A5	63	G	C5-C4	-5.11	1.34	1.38
69	A5	1163	G	C2-N3	-5.11	1.28	1.32
69	A5	1638	G	C6-N1	-5.11	1.35	1.39
69	A5	1645	G	N7-C5	-5.11	1.36	1.39
69	A5	1661	C	N3-C4	-5.11	1.30	1.33
69	A5	2768	A	N7-C5	-5.11	1.36	1.39
69	A5	880	A	C8-N7	-5.10	1.27	1.31
69	A5	360	A	C5-C4	-5.10	1.35	1.38
69	A5	877	A	C6-N1	-5.10	1.31	1.35
69	A5	1592	U	C4-C5	-5.10	1.39	1.43
69	A5	1733	A	N7-C5	-5.10	1.36	1.39
69	A5	2738	C	C5-C6	-5.10	1.30	1.34
69	A5	3138	G	N9-C8	-5.10	1.34	1.37
69	A5	3480	U	C2-N3	-5.10	1.34	1.37
40	A8	32	G	C5-C4	-5.10	1.34	1.38
69	A5	1012	G	N9-C8	-5.10	1.34	1.37
69	A5	1314	U	N3-C4	-5.10	1.33	1.38
69	A5	1680	U	P-OP1	-5.10	1.40	1.49
69	A5	1891	U	N3-C4	-5.10	1.33	1.38
69	A5	2173	C	N3-C4	-5.10	1.30	1.33
69	A5	2565	G	N9-C8	-5.10	1.34	1.37
69	A5	3628	G	C8-N7	-5.10	1.27	1.30
69	A5	64	A	N7-C5	-5.10	1.36	1.39
69	A5	819	U	C4-C5	-5.10	1.39	1.43
69	A5	2580	C	N3-C4	-5.10	1.30	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2772	G	C5-C4	-5.10	1.34	1.38
69	A5	49	A	C2-N3	-5.10	1.28	1.33
69	A5	1777	A	C5-C6	-5.10	1.36	1.41
69	A5	2753	G	N1-C2	-5.10	1.33	1.37
69	A5	3728	A	C5-C4	-5.09	1.35	1.38
69	A5	3508	G	C8-N7	-5.09	1.27	1.30
69	A5	1099	U	C2-O2	-5.09	1.17	1.22
69	A5	1167	A	C8-N7	-5.09	1.27	1.31
69	A5	1332	C	N1-C6	-5.09	1.34	1.37
69	A5	1334	A	N7-C5	-5.09	1.36	1.39
69	A5	1615	G	C6-N1	-5.09	1.35	1.39
69	A5	2772	G	C6-N1	-5.09	1.35	1.39
69	A5	3498	A	N9-C8	-5.09	1.33	1.37
18	Cr	112	GLN	CB-CG	-5.09	1.38	1.52
69	A5	1120	A	C6-N1	-5.09	1.31	1.35
69	A5	1358	U	N3-C4	-5.09	1.33	1.38
69	A5	1611	G	C8-N7	-5.09	1.27	1.30
37	CG	62	TRP	CB-CG	-5.09	1.41	1.50
69	A5	989	A	N1-C2	-5.09	1.29	1.34
69	A5	2765	A	C8-N7	-5.09	1.27	1.31
69	A5	3152	G	N9-C8	-5.09	1.34	1.37
69	A5	910	C	N1-C6	-5.09	1.34	1.37
69	A5	1132	U	C2-N3	-5.09	1.34	1.37
69	A5	3176	C	N3-C4	-5.09	1.30	1.33
69	A5	1017	A	C8-N7	-5.08	1.27	1.31
69	A5	1376	U	N3-C4	-5.08	1.33	1.38
69	A5	2215	G	N7-C5	-5.08	1.36	1.39
69	A5	1692	G	C8-N7	-5.08	1.27	1.30
69	A5	1693	C	N1-C6	-5.08	1.34	1.37
69	A5	3298	U	C2-N3	-5.08	1.34	1.37
69	A5	3446	G	N1-C2	-5.08	1.33	1.37
69	A5	3518	A	N9-C4	-5.08	1.34	1.37
69	A5	3907	G	C5-C4	-5.08	1.34	1.38
40	A8	106	A	N7-C5	-5.08	1.36	1.39
69	A5	2107	U	N1-C2	-5.08	1.33	1.38
69	A5	796	A	C2-N3	-5.08	1.28	1.33
69	A5	2234	C	C4-C5	-5.08	1.38	1.43
69	A5	410	G	C2-N3	-5.08	1.28	1.32
69	A5	456	G	N1-C2	-5.08	1.33	1.37
69	A5	2232	U	N3-C4	-5.08	1.33	1.38
6	CN	152	CYS	CB-SG	-5.07	1.73	1.81
69	A5	365	A	C8-N7	-5.07	1.27	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	2744	C	C4-C5	-5.07	1.38	1.43
69	A5	38	A	C5-C4	-5.07	1.35	1.38
69	A5	63	G	C8-N7	-5.07	1.27	1.30
69	A5	823	U	N3-C4	-5.07	1.33	1.38
69	A5	1319	A	C8-N7	-5.07	1.27	1.31
69	A5	1692	G	C2-N2	-5.07	1.29	1.34
69	A5	2753	G	C5-C6	-5.07	1.37	1.42
69	A5	3480	U	C5-C6	-5.07	1.29	1.34
69	A5	822	G	C5-C4	-5.07	1.34	1.38
69	A5	861	C	N1-C6	-5.07	1.34	1.37
69	A5	1615	G	N1-C2	-5.07	1.33	1.37
69	A5	1874	G	C8-N7	-5.07	1.27	1.30
39	A7	11	A	N9-C4	-5.07	1.34	1.37
69	A5	808	G	N9-C4	-5.07	1.33	1.38
69	A5	919	G	N1-C2	-5.07	1.33	1.37
69	A5	1207	G	N1-C2	-5.07	1.33	1.37
69	A5	782	G	C5-C4	-5.07	1.34	1.38
69	A5	843	A	C5-C4	-5.07	1.35	1.38
69	A5	987	G	C5-C4	-5.07	1.34	1.38
69	A5	2221	G	N7-C5	-5.07	1.36	1.39
69	A5	3230	G	C5-C4	-5.07	1.34	1.38
69	A5	3328	G	N7-C5	-5.07	1.36	1.39
69	A5	3586	A	C5-C4	-5.07	1.35	1.38
69	A5	422	G	C8-N7	-5.06	1.27	1.30
69	A5	1031	G	C2-N3	-5.06	1.28	1.32
69	A5	2230	G	N9-C8	-5.06	1.34	1.37
69	A5	3337	G	N1-C2	-5.06	1.33	1.37
70	B2	1944	A	N9-C4	-5.06	1.34	1.37
40	A8	12	G	C5-C4	-5.06	1.34	1.38
69	A5	348	A	C2-N3	-5.06	1.28	1.33
69	A5	1588	A	N3-C4	5.06	1.37	1.34
69	A5	1719	G	C8-N7	-5.06	1.27	1.30
69	A5	916	C	N3-C4	-5.06	1.30	1.33
69	A5	2216	A	N1-C2	-5.06	1.29	1.34
69	A5	2780	A	N9-C4	-5.06	1.34	1.37
69	A5	370	A	C6-N1	-5.06	1.32	1.35
69	A5	443	G	C5-C6	-5.06	1.37	1.42
69	A5	58	G	C5-C4	-5.05	1.34	1.38
69	A5	441	A	C5-C4	-5.05	1.35	1.38
69	A5	1389	C	N3-C4	-5.05	1.30	1.33
69	A5	3474	G	C8-N7	-5.05	1.27	1.30
69	A5	1005	G	N7-C5	-5.05	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1643	G	N9-C8	-5.05	1.34	1.37
69	A5	2721	C	N1-C6	-5.05	1.34	1.37
69	A5	2735	A	C6-N1	-5.05	1.32	1.35
69	A5	1391	A	C8-N7	-5.05	1.28	1.31
69	A5	3481	G	N1-C2	-5.05	1.33	1.37
69	A5	389	G	N1-C2	-5.05	1.33	1.37
69	A5	2196	U	C2-N3	-5.05	1.34	1.37
69	A5	3471	A	C5-C6	-5.05	1.36	1.41
69	A5	353	G	N7-C5	-5.05	1.36	1.39
69	A5	1387	G	N7-C5	-5.05	1.36	1.39
69	A5	2773	G	N1-C2	-5.05	1.33	1.37
69	A5	2524	A	N3-C4	-5.05	1.31	1.34
69	A5	2774	G	N1-C2	-5.05	1.33	1.37
69	A5	3357	C	N3-C4	-5.05	1.30	1.33
69	A5	3408	C	C4-C5	-5.05	1.39	1.43
69	A5	1732	A	C8-N7	-5.04	1.28	1.31
69	A5	1369	C	C4-C5	-5.04	1.39	1.43
69	A5	1530	U	N1-C2	-5.04	1.34	1.38
69	A5	1792	G	C6-N1	-5.04	1.36	1.39
69	A5	2509	G	C6-N1	-5.04	1.36	1.39
69	A5	2679	U	C4-C5	-5.04	1.39	1.43
69	A5	2739	A	N7-C5	-5.04	1.36	1.39
69	A5	3673	G	C5-C4	-5.04	1.34	1.38
40	A8	40	A	N7-C5	-5.04	1.36	1.39
69	A5	98	G	C5-C6	-5.04	1.37	1.42
69	A5	1080	G	C6-O6	-5.04	1.19	1.24
69	A5	1522	G	C5-C4	-5.04	1.34	1.38
69	A5	1981	A	N1-C2	-5.04	1.29	1.34
69	A5	2184	G	N3-C4	-5.04	1.31	1.35
69	A5	1348	G	N3-C4	-5.04	1.31	1.35
69	A5	1618	A	C6-N1	-5.04	1.32	1.35
69	A5	1792	G	N9-C8	-5.04	1.34	1.37
69	A5	1000	G	N1-C2	-5.04	1.33	1.37
69	A5	1535	U	N1-C2	-5.04	1.34	1.38
69	A5	1624	G	N7-C5	-5.04	1.36	1.39
69	A5	1797	A	C6-N1	-5.04	1.32	1.35
69	A5	2750	A	C6-N1	-5.04	1.32	1.35
69	A5	3762	G	N9-C4	-5.04	1.33	1.38
69	A5	2549	G	C8-N7	-5.04	1.27	1.30
69	A5	864	G	N7-C5	-5.04	1.36	1.39
69	A5	1060	G	C2-N3	-5.04	1.28	1.32
69	A5	2791	A	C5-C6	-5.04	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	62	G	C5-C6	-5.03	1.37	1.42
69	A5	1019	U	C4-O4	-5.03	1.19	1.23
69	A5	2196	U	N3-C4	-5.03	1.33	1.38
69	A5	2528	A	N9-C8	-5.03	1.33	1.37
69	A5	2781	G	N7-C5	-5.03	1.36	1.39
69	A5	807	A	N1-C2	-5.03	1.29	1.34
40	A8	101	A	N7-C5	-5.03	1.36	1.39
69	A5	803	A	C6-N1	-5.03	1.32	1.35
69	A5	1612	G	C5-C4	-5.03	1.34	1.38
69	A5	1698	A	C6-N1	-5.03	1.32	1.35
69	A5	1736	G	C5-C4	-5.03	1.34	1.38
69	A5	1787	C	N1-C6	-5.03	1.34	1.37
69	A5	444	C	N1-C6	-5.03	1.34	1.37
69	A5	1377	A	N9-C8	-5.03	1.33	1.37
69	A5	1392	A	C5-C4	-5.03	1.35	1.38
69	A5	1551	U	C2-N3	-5.03	1.34	1.37
69	A5	3670	G	N7-C5	-5.03	1.36	1.39
69	A5	371	G	C6-O6	-5.03	1.19	1.24
69	A5	654	G	N7-C5	-5.03	1.36	1.39
69	A5	2727	U	C2-N3	-5.03	1.34	1.37
69	A5	2739	A	N9-C8	-5.03	1.33	1.37
70	B2	1846	G	N7-C5	-5.03	1.36	1.39
69	A5	1005	G	C6-N1	-5.02	1.36	1.39
69	A5	1381	U	C4-O4	-5.02	1.19	1.23
69	A5	3403	G	C8-N7	-5.02	1.27	1.30
69	A5	1318	A	C6-N1	-5.02	1.32	1.35
69	A5	1734	G	N1-C2	-5.02	1.33	1.37
69	A5	1319	A	C5-C4	-5.02	1.35	1.38
69	A5	33	C	C5-C6	-5.02	1.30	1.34
69	A5	1626	A	N7-C5	-5.02	1.36	1.39
69	A5	2771	G	N1-C2	-5.02	1.33	1.37
69	A5	378	G	C5-C6	-5.02	1.37	1.42
69	A5	1115	A	C8-N7	-5.02	1.28	1.31
69	A5	1100	G	N9-C8	-5.02	1.34	1.37
69	A5	3508	G	C5-C4	-5.02	1.34	1.38
69	A5	229	C	N3-C4	-5.01	1.30	1.33
69	A5	803	A	N9-C8	-5.01	1.33	1.37
69	A5	1012	G	C8-N7	-5.01	1.27	1.30
69	A5	1679	U	C2-N3	-5.01	1.34	1.37
69	A5	1875	G	C8-N7	-5.01	1.27	1.30
69	A5	230	C	N3-C4	-5.01	1.30	1.33
69	A5	1063	C	N1-C6	-5.01	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	A5	1375	G	N9-C8	-5.01	1.34	1.37
69	A5	1771	G	C8-N7	-5.01	1.27	1.30
69	A5	2177	G	N3-C4	-5.01	1.31	1.35
69	A5	2225	A	N9-C4	-5.01	1.34	1.37
69	A5	783	G	C6-N1	-5.01	1.36	1.39
69	A5	1111	C	C2-N3	-5.01	1.31	1.35
69	A5	3620	G	N9-C4	-5.01	1.33	1.38
69	A5	1035	G	C5-C6	-5.01	1.37	1.42
69	A5	1610	A	N7-C5	-5.01	1.36	1.39
69	A5	1747	A	C5-C4	-5.01	1.35	1.38
69	A5	1339	U	C2-N3	-5.00	1.34	1.37
69	A5	2161	G	C2-N3	-5.00	1.28	1.32
69	A5	1025	U	C2-N3	-5.00	1.34	1.37

All (3669) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1699	A	N1-C6-N6	-37.41	96.15	118.60
69	A5	3472	A	C8-N9-C4	-20.68	97.53	105.80
69	A5	1699	A	C5-C6-N6	20.58	140.17	123.70
69	A5	840	U	O5'-P-OP1	-19.48	87.32	110.70
69	A5	33	C	C6-N1-C2	-17.17	113.43	120.30
69	A5	3594	A	O5'-P-OP1	-16.97	90.34	110.70
69	A5	1799	U	C2-N1-C1'	16.70	137.74	117.70
69	A5	1689	G	N1-C6-O6	16.64	129.88	119.90
69	A5	1383	A	C8-N9-C4	-16.28	99.29	105.80
69	A5	1803	C	C6-N1-C2	-16.25	113.80	120.30
69	A5	3847	U	N3-C2-O2	-16.23	110.84	122.20
69	A5	1366	G	N3-C4-N9	-16.22	116.27	126.00
69	A5	2492	A	C8-N9-C4	-16.12	99.35	105.80
69	A5	811	G	N3-C4-N9	-16.07	116.36	126.00
69	A5	322	G	C5-C6-O6	-15.86	119.08	128.60
69	A5	1795	A	C4-C5-N7	15.24	118.32	110.70
69	A5	3847	U	N1-C2-O2	15.05	133.34	122.80
69	A5	1796	A	C8-N9-C4	-14.98	99.81	105.80
69	A5	805	C	N1-C2-O2	14.97	127.88	118.90
69	A5	2162	C	C5-C6-N1	14.97	128.48	121.00
69	A5	1801	U	O4'-C1'-N1	14.95	120.16	108.20
69	A5	1799	U	C6-N1-C1'	-14.89	100.35	121.20
69	A5	1799	U	C5-C4-O4	-14.70	117.08	125.90
69	A5	1689	G	N7-C8-N9	14.31	120.25	113.10
69	A5	477	C	N1-C2-O2	14.24	127.44	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	322	G	C4-C5-N7	14.20	116.48	110.80
69	A5	1718	G	C8-N9-C4	-14.17	100.73	106.40
69	A5	1699	A	C6-C5-N7	14.06	142.14	132.30
69	A5	1689	G	C6-C5-N7	-13.96	122.02	130.40
69	A5	3676	C	N1-C2-O2	13.90	127.24	118.90
69	A5	322	G	N9-C4-C5	-13.86	99.86	105.40
69	A5	2151	A	C6-N1-C2	13.82	126.89	118.60
69	A5	1699	A	N9-C4-C5	13.80	111.32	105.80
69	A5	1289	C	C6-N1-C2	-13.73	114.81	120.30
69	A5	1197	A	C6-N1-C2	13.64	126.79	118.60
69	A5	1366	G	N3-C4-C5	13.62	135.41	128.60
69	A5	322	G	N1-C6-O6	13.58	128.05	119.90
69	A5	1689	G	C8-N9-C4	-13.55	100.98	106.40
69	A5	2733	G	C5-C6-N1	13.54	118.27	111.50
69	A5	296	C	C6-N1-C2	-13.47	114.91	120.30
69	A5	3677	U	O4'-C1'-N1	13.47	118.97	108.20
69	A5	2733	G	C4-C5-N7	13.47	116.19	110.80
69	A5	3281	G	C2-N3-C4	13.41	118.61	111.90
69	A5	3472	A	N7-C8-N9	13.40	120.50	113.80
69	A5	1095	G	C8-N9-C4	-13.31	101.08	106.40
69	A5	3676	C	N3-C2-O2	-13.21	112.65	121.90
69	A5	2162	C	C5-C4-N4	-13.20	110.96	120.20
69	A5	2733	G	C5-C6-O6	-13.12	120.73	128.60
69	A5	1796	A	N7-C8-N9	13.02	120.31	113.80
69	A5	1784	A	C5-C6-N1	12.92	124.16	117.70
69	A5	3141	A	O5'-P-OP1	-12.91	94.08	105.70
69	A5	1718	G	N7-C8-N9	12.84	119.52	113.10
69	A5	1160	U	O5'-P-OP2	-12.79	94.19	105.70
40	A8	27	C	C6-N1-C2	-12.78	115.19	120.30
69	A5	1169	C	C6-N1-C2	-12.77	115.19	120.30
69	A5	3226	A	C2-N3-C4	12.74	116.97	110.60
69	A5	1689	G	C5-C6-O6	-12.69	120.99	128.60
69	A5	1795	A	N9-C4-C5	-12.66	100.73	105.80
69	A5	2492	A	N7-C8-N9	12.62	120.11	113.80
69	A5	3591	A	C2-N3-C4	-12.61	104.30	110.60
69	A5	805	C	N3-C2-O2	-12.58	113.09	121.90
69	A5	1738	U	C4-C5-C6	12.57	127.24	119.70
69	A5	1384	C	C6-N1-C2	-12.52	115.29	120.30
69	A5	866	C	C6-N1-C2	-12.51	115.30	120.30
69	A5	2517	A	C8-N9-C4	-12.50	100.80	105.80
69	A5	3675	A	N1-C6-N6	-12.48	111.11	118.60
69	A5	1699	A	C4-C5-N7	-12.44	104.48	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2155	A	C8-N9-C4	-12.44	100.83	105.80
69	A5	33	C	C5-C6-N1	12.42	127.21	121.00
69	A5	2155	A	N7-C8-N9	12.38	119.99	113.80
69	A5	663	U	N3-C2-O2	-12.36	113.55	122.20
69	A5	46	C	C6-N1-C2	-12.34	115.37	120.30
69	A5	866	C	C5-C6-N1	12.33	127.17	121.00
69	A5	3754	C	O5'-P-OP1	12.33	125.50	110.70
69	A5	477	C	C2-N1-C1'	12.25	132.27	118.80
69	A5	3258	C	N3-C2-O2	-12.19	113.37	121.90
69	A5	3258	C	C6-N1-C2	-12.17	115.43	120.30
69	A5	3847	U	O5'-P-OP1	-12.12	94.79	105.70
69	A5	1803	C	C5-C6-N1	12.10	127.05	121.00
69	A5	3730	G	C8-N9-C4	-12.10	101.56	106.40
70	B2	932	U	C2-N1-C1'	12.04	132.15	117.70
69	A5	2517	A	N7-C8-N9	12.04	119.82	113.80
69	A5	1117	A	N1-C2-N3	-12.01	123.29	129.30
69	A5	1866	G	C5-C6-O6	-12.00	121.40	128.60
69	A5	1699	A	C5-C6-N1	11.96	123.68	117.70
69	A5	1589	A	C8-N9-C4	-11.93	101.03	105.80
69	A5	699	U	C2-N1-C1'	11.93	132.01	117.70
69	A5	1795	A	C5-N7-C8	-11.91	97.94	103.90
69	A5	981	C	C6-N1-C2	-11.84	115.57	120.30
69	A5	1801	U	C6-N1-C2	-11.82	113.91	121.00
69	A5	1738	U	N3-C2-O2	-11.82	113.93	122.20
69	A5	1784	A	C5-C6-N6	-11.74	114.31	123.70
69	A5	1715	G	N3-C4-N9	-11.73	118.96	126.00
69	A5	811	G	N3-C4-C5	11.69	134.44	128.60
69	A5	35	C	N3-C2-O2	-11.68	113.72	121.90
70	B2	315	C	C6-N1-C2	-11.67	115.63	120.30
69	A5	35	C	N1-C2-O2	11.65	125.89	118.90
69	A5	548	A	C6-N1-C2	11.64	125.59	118.60
69	A5	548	A	N1-C2-N3	-11.60	123.50	129.30
69	A5	1592	U	C5-C6-N1	11.59	128.50	122.70
69	A5	3281	G	N3-C4-C5	-11.57	122.81	128.60
69	A5	1671	U	N3-C4-O4	-11.52	111.34	119.40
69	A5	1718	G	N3-C4-C5	-11.51	122.85	128.60
69	A5	3714	U	N1-C2-O2	11.50	130.85	122.80
69	A5	874	G	N7-C8-N9	11.49	118.84	113.10
69	A5	3475	U	O5'-P-OP1	-11.49	95.36	105.70
69	A5	881	G	C6-C5-N7	11.48	137.29	130.40
69	A5	2162	C	N3-C4-N4	11.46	126.02	118.00
69	A5	1017	A	N7-C8-N9	11.43	119.52	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3847	U	C2-N1-C1'	11.43	131.42	117.70
69	A5	3714	U	C2-N1-C1'	11.42	131.40	117.70
69	A5	1145	C	C6-N1-C2	-11.39	115.74	120.30
69	A5	1325	C	N3-C2-O2	-11.38	113.94	121.90
69	A5	3515	C	N1-C2-O2	11.36	125.71	118.90
69	A5	1785	G	C8-N9-C4	-11.34	101.86	106.40
69	A5	1313	A	C2-N3-C4	-11.33	104.94	110.60
69	A5	3728	A	N1-C6-N6	-11.30	111.82	118.60
69	A5	1715	G	N3-C2-N2	-11.30	111.99	119.90
69	A5	1017	A	C8-N9-C4	-11.25	101.30	105.80
69	A5	1689	G	O5'-P-OP2	11.24	124.19	110.70
69	A5	2239	C	C6-N1-C2	-11.23	115.81	120.30
69	A5	1803	C	C2-N1-C1'	11.23	131.15	118.80
69	A5	1197	A	N1-C2-N3	-11.20	123.70	129.30
69	A5	1108	G	N3-C4-C5	-11.20	123.00	128.60
69	A5	3714	U	N3-C2-O2	-11.14	114.40	122.20
69	A5	866	C	N1-C2-O2	11.14	125.58	118.90
70	B2	932	U	N1-C2-O2	11.12	130.58	122.80
70	B2	631	C	N3-C2-O2	-11.12	114.12	121.90
69	A5	3841	C	O4'-C1'-N1	11.11	117.09	108.20
69	A5	3471	A	N1-C2-N3	-11.04	123.78	129.30
69	A5	1670	G	C5-C6-O6	-11.02	121.99	128.60
69	A5	3675	A	C4-C5-C6	-10.99	111.50	117.00
69	A5	2517	A	C5-N7-C8	-10.97	98.42	103.90
70	B2	631	C	N1-C2-O2	10.96	125.47	118.90
69	A5	2733	G	N9-C4-C5	-10.93	101.03	105.40
69	A5	798	C	C6-N1-C2	-10.93	115.93	120.30
69	A5	3292	C	N1-C2-O2	10.88	125.43	118.90
69	A5	839	A	C8-N9-C4	10.87	110.15	105.80
69	A5	477	C	N3-C2-O2	-10.86	114.30	121.90
70	B2	932	U	N3-C2-O2	-10.83	114.62	122.20
69	A5	1689	G	C4-C5-N7	10.83	115.13	110.80
69	A5	1095	G	N7-C8-N9	10.82	118.51	113.10
69	A5	1718	G	C4-N9-C1'	10.77	140.51	126.50
69	A5	546	G	C4-C5-N7	10.76	115.11	110.80
69	A5	3891	U	C2-N1-C1'	10.75	130.60	117.70
69	A5	3569	C	C2-N1-C1'	10.72	130.59	118.80
69	A5	1170	U	N1-C2-O2	10.71	130.30	122.80
70	B2	878	C	N1-C2-O2	10.69	125.32	118.90
69	A5	1115	A	C2-N3-C4	-10.69	105.26	110.60
69	A5	798	C	N3-C2-O2	-10.68	114.42	121.90
69	A5	1803	C	N1-C2-O2	10.65	125.29	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	38	A	N1-C2-N3	-10.64	123.98	129.30
69	A5	2155	A	C5-N7-C8	-10.62	98.59	103.90
69	A5	1383	A	N7-C8-N9	10.60	119.10	113.80
69	A5	910	C	N3-C4-N4	-10.59	110.59	118.00
69	A5	3246	G	N3-C4-C5	10.59	133.89	128.60
69	A5	1325	C	C2-N1-C1'	10.57	130.43	118.80
69	A5	1142	U	C5-C4-O4	-10.57	119.56	125.90
39	A7	78	C	C6-N1-C2	-10.56	116.08	120.30
69	A5	301	U	N1-C2-O2	10.55	130.19	122.80
69	A5	1795	A	C6-C5-N7	-10.55	124.92	132.30
69	A5	761	C	C5-C6-N1	10.54	126.27	121.00
69	A5	1000	G	C2-N3-C4	10.53	117.17	111.90
70	B2	1596	C	C2-N1-C1'	10.51	130.37	118.80
69	A5	339	C	C5-C6-N1	10.51	126.25	121.00
69	A5	34	C	C6-N1-C2	-10.50	116.10	120.30
69	A5	3515	C	N3-C2-O2	-10.48	114.56	121.90
69	A5	1318	A	C5-N7-C8	-10.44	98.68	103.90
69	A5	1751	U	O5'-P-OP1	-10.44	96.30	105.70
69	A5	1689	G	C2-N3-C4	-10.43	106.68	111.90
69	A5	2797	A	O5'-P-OP1	-10.39	96.34	105.70
69	A5	1671	U	O5'-P-OP1	-10.39	96.35	105.70
69	A5	2744	C	C6-N1-C2	-10.38	116.15	120.30
69	A5	2224	A	N7-C8-N9	10.38	118.99	113.80
69	A5	3292	C	N3-C2-O2	-10.37	114.64	121.90
69	A5	3677	U	N1-C1'-C2'	10.37	127.48	114.00
69	A5	3149	U	N3-C2-O2	-10.37	114.94	122.20
69	A5	553	A	N7-C8-N9	10.36	118.98	113.80
69	A5	813	C	C5-C6-N1	10.36	126.18	121.00
69	A5	555	U	N3-C2-O2	-10.33	114.97	122.20
69	A5	1898	C	C6-N1-C2	-10.33	116.17	120.30
69	A5	1678	C	C6-N1-C2	-10.30	116.18	120.30
69	A5	981	C	N3-C2-O2	-10.29	114.70	121.90
70	B2	635	C	N1-C2-O2	10.28	125.07	118.90
69	A5	1671	U	N1-C2-O2	10.27	129.99	122.80
40	A8	84	U	N1-C2-O2	10.27	129.99	122.80
69	A5	1699	A	C6-N1-C2	-10.25	112.45	118.60
69	A5	1785	G	N7-C8-N9	10.25	118.23	113.10
69	A5	1689	G	OP1-P-OP2	-10.25	104.22	119.60
69	A5	800	C	O5'-P-OP1	-10.24	96.48	105.70
69	A5	1689	G	C5-N7-C8	-10.20	99.20	104.30
69	A5	2091	A	C2-N3-C4	-10.20	105.50	110.60
69	A5	3461	C	C6-N1-C2	-10.20	116.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	A8	17	U	O5'-P-OP1	-10.18	96.53	105.70
69	A5	3405	U	N3-C2-O2	-10.17	115.08	122.20
69	A5	105	A	C5-N7-C8	-10.17	98.81	103.90
69	A5	3891	U	N1-C2-O2	10.13	129.89	122.80
69	A5	424	G	O4'-C1'-N9	10.06	116.25	108.20
69	A5	3193	C	N3-C2-O2	-10.05	114.86	121.90
69	A5	1799	U	O4'-C1'-N1	10.04	116.23	108.20
69	A5	2194	G	C2-N3-C4	10.03	116.92	111.90
69	A5	1688	A	O4'-C1'-N9	10.03	116.22	108.20
21	CB	324	GLY	N-CA-C	10.02	138.14	113.10
69	A5	1670	G	N1-C6-O6	10.00	125.90	119.90
69	A5	754	A	C2-N3-C4	-9.98	105.61	110.60
69	A5	659	U	N3-C2-O2	-9.98	115.21	122.20
69	A5	1115	A	C5-N7-C8	-9.98	98.91	103.90
69	A5	868	A	C8-N9-C4	-9.97	101.81	105.80
69	A5	1288	U	N1-C2-O2	9.96	129.77	122.80
69	A5	1865	U	C2-N1-C1'	9.95	129.64	117.70
69	A5	2037	C	O4'-C1'-N1	9.95	116.16	108.20
69	A5	1355	C	N1-C2-O2	9.95	124.87	118.90
69	A5	3140	G	OP1-P-O3'	9.90	126.98	105.20
69	A5	558	C	N3-C2-O2	-9.90	114.97	121.90
69	A5	2239	C	C5-C6-N1	9.90	125.95	121.00
69	A5	915	C	C6-N1-C2	-9.89	116.34	120.30
40	A8	84	U	C2-N1-C1'	9.86	129.53	117.70
70	B2	631	C	C6-N1-C2	-9.86	116.36	120.30
69	A5	301	U	N3-C2-O2	-9.86	115.30	122.20
69	A5	3472	A	N3-C4-C5	-9.85	119.90	126.80
69	A5	546	G	C6-C5-N7	-9.85	124.49	130.40
69	A5	553	A	C8-N9-C4	-9.85	101.86	105.80
69	A5	2160	C	N3-C2-O2	-9.85	115.01	121.90
69	A5	3472	A	N9-C4-C5	9.84	109.73	105.80
69	A5	3417	C	C6-N1-C2	-9.84	116.37	120.30
69	A5	1407	C	N1-C2-O2	9.83	124.80	118.90
69	A5	3542	C	C6-N1-C2	-9.83	116.37	120.30
40	A8	64	C	C6-N1-C2	-9.82	116.37	120.30
69	A5	322	G	C6-C5-N7	-9.81	124.51	130.40
69	A5	1866	G	C4-C5-N7	9.81	114.72	110.80
69	A5	2530	C	C6-N1-C2	-9.81	116.38	120.30
69	A5	3751	C	C2-N1-C1'	9.81	129.59	118.80
69	A5	1370	C	C6-N1-C2	-9.80	116.38	120.30
69	A5	1090	U	N3-C2-O2	-9.79	115.34	122.20
69	A5	1136	A	O5'-P-OP1	-9.79	96.89	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2743	C	C5-C6-N1	9.78	125.89	121.00
69	A5	1671	U	N3-C4-C5	9.77	120.46	114.60
69	A5	1739	U	C5-C6-N1	9.76	127.58	122.70
69	A5	761	C	C6-N1-C2	-9.75	116.40	120.30
69	A5	749	U	C5-C6-N1	9.75	127.58	122.70
69	A5	2692	U	N1-C2-O2	9.75	129.63	122.80
69	A5	201	U	N3-C2-O2	-9.74	115.38	122.20
69	A5	1311	U	N3-C2-O2	-9.74	115.38	122.20
69	A5	2127	C	C6-N1-C2	-9.72	116.41	120.30
69	A5	1799	U	N3-C4-C5	9.70	120.42	114.60
69	A5	2090	U	N3-C2-O2	-9.70	115.41	122.20
69	A5	658	A	N1-C2-N3	-9.69	124.46	129.30
69	A5	3591	A	N3-C4-C5	9.67	133.57	126.80
69	A5	1108	G	C8-N9-C4	-9.67	102.53	106.40
69	A5	1318	A	C2-N3-C4	-9.64	105.78	110.60
69	A5	1738	U	C5-C6-N1	-9.64	117.88	122.70
69	A5	32	C	N1-C2-O2	9.61	124.67	118.90
69	A5	2734	A	N9-C4-C5	-9.61	101.96	105.80
69	A5	1026	G	N3-C2-N2	9.60	126.62	119.90
69	A5	1678	C	N1-C2-O2	9.58	124.65	118.90
69	A5	1318	A	N7-C8-N9	9.57	118.59	113.80
69	A5	982	C	N1-C2-O2	9.57	124.64	118.90
69	A5	2170	C	N1-C2-O2	9.55	124.63	118.90
69	A5	3398	C	C6-N1-C2	-9.55	116.48	120.30
69	A5	852	C	C6-N1-C2	-9.55	116.48	120.30
69	A5	881	G	C8-N9-C1'	9.54	139.40	127.00
69	A5	3569	C	N1-C2-O2	9.53	124.62	118.90
69	A5	2159	C	N3-C2-O2	-9.52	115.24	121.90
69	A5	1588	A	C2-N3-C4	9.52	115.36	110.60
69	A5	1784	A	C6-N1-C2	-9.51	112.89	118.60
69	A5	1793	C	C2-N1-C1'	9.50	129.25	118.80
69	A5	811	G	N9-C4-C5	9.49	109.20	105.40
69	A5	3738	U	N1-C2-O2	9.49	129.44	122.80
69	A5	3475	U	N3-C2-O2	-9.49	115.56	122.20
69	A5	350	C	C6-N1-C2	-9.48	116.51	120.30
69	A5	3389	C	N3-C2-O2	-9.47	115.27	121.90
69	A5	1520	U	O5'-P-OP2	-9.47	97.18	105.70
69	A5	881	G	N3-C4-N9	-9.46	120.32	126.00
69	A5	1313	A	C5-N7-C8	-9.46	99.17	103.90
69	A5	811	G	C2-N3-C4	-9.46	107.17	111.90
69	A5	2718	U	N3-C2-O2	-9.45	115.59	122.20
69	A5	811	G	C5-C6-O6	9.43	134.26	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	839	A	P-O3'-C3'	9.43	131.02	119.70
69	A5	1111	C	O5'-P-OP2	-9.43	97.21	105.70
69	A5	1527	C	N3-C2-O2	-9.42	115.31	121.90
69	A5	1865	U	C5-C6-N1	9.41	127.41	122.70
69	A5	2067	C	C6-N1-C2	-9.40	116.54	120.30
69	A5	1997	C	N1-C2-O2	9.40	124.54	118.90
69	A5	1183	U	C5-C6-N1	9.40	127.40	122.70
69	A5	2511	C	C6-N1-C2	-9.40	116.54	120.30
40	A8	10	C	C6-N1-C2	-9.37	116.55	120.30
69	A5	1314	U	N3-C2-O2	-9.37	115.64	122.20
69	A5	3416	C	C6-N1-C2	-9.37	116.55	120.30
69	A5	1738	U	N1-C2-N3	9.36	120.52	114.90
69	A5	3481	G	C2-N3-C4	9.34	116.57	111.90
69	A5	3686	A	O4'-C1'-N9	9.34	115.67	108.20
69	A5	3841	C	C6-N1-C2	-9.33	116.57	120.30
69	A5	3675	A	C6-C5-N7	9.32	138.83	132.30
69	A5	3758	G	N3-C4-C5	-9.31	123.94	128.60
69	A5	46	C	C5-C6-N1	9.30	125.65	121.00
69	A5	1079	U	N3-C2-O2	-9.29	115.69	122.20
69	A5	984	U	N1-C2-O2	9.28	129.29	122.80
69	A5	1360	U	N3-C2-O2	-9.27	115.72	122.20
69	A5	3342	C	N1-C2-O2	9.26	124.45	118.90
69	A5	1687	U	N3-C2-O2	-9.25	115.72	122.20
69	A5	3730	G	N7-C8-N9	9.25	117.72	113.10
69	A5	3510	U	O4'-C1'-N1	9.24	115.59	108.20
69	A5	1865	U	N1-C2-O2	9.23	129.26	122.80
69	A5	1149	C	C6-N1-C2	-9.23	116.61	120.30
81	AS	92	ASP	CB-CG-OD1	9.23	126.60	118.30
69	A5	201	U	C6-N1-C2	-9.22	115.47	121.00
69	A5	1068	C	C6-N1-C2	-9.21	116.62	120.30
69	A5	699	U	N1-C2-O2	9.21	129.25	122.80
69	A5	3891	U	N3-C2-O2	-9.20	115.76	122.20
69	A5	3592	C	N1-C2-O2	9.20	124.42	118.90
39	A7	67	G	N3-C2-N2	-9.20	113.46	119.90
69	A5	3472	A	C2-N3-C4	9.20	115.20	110.60
69	A5	3283	U	C2-N1-C1'	9.19	128.73	117.70
69	A5	296	C	C5-C6-N1	9.18	125.59	121.00
69	A5	1135	U	C5-C6-N1	9.18	127.29	122.70
69	A5	881	G	C4-N9-C1'	-9.18	114.56	126.50
69	A5	3949	U	N3-C2-O2	-9.17	115.78	122.20
69	A5	881	G	N3-C2-N2	-9.17	113.48	119.90
69	A5	3389	C	N1-C2-O2	9.17	124.40	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1383	A	OP1-P-O3'	9.16	125.35	105.20
69	A5	2151	A	C5-C6-N1	-9.16	113.12	117.70
69	A5	1527	C	C6-N1-C2	-9.15	116.64	120.30
69	A5	93	G	C8-N9-C4	-9.15	102.74	106.40
69	A5	2517	A	C2-N3-C4	-9.15	106.03	110.60
69	A5	3661	C	N1-C2-O2	9.15	124.39	118.90
69	A5	2160	C	N1-C2-O2	9.14	124.39	118.90
69	A5	1801	U	C5'-C4'-O4'	9.14	120.07	109.10
69	A5	754	A	C5-N7-C8	-9.14	99.33	103.90
69	A5	240	G	N7-C8-N9	9.13	117.66	113.10
69	A5	2162	C	C4-C5-C6	-9.12	112.84	117.40
69	A5	2751	A	O5'-P-OP1	-9.12	97.49	105.70
69	A5	2802	A	O5'-P-OP1	-9.11	97.50	105.70
70	B2	635	C	N3-C2-O2	-9.11	115.53	121.90
69	A5	1803	C	N3-C2-O2	-9.10	115.53	121.90
69	A5	2763	U	C2-N1-C1'	9.10	128.62	117.70
69	A5	3520	U	N3-C4-O4	-9.10	113.03	119.40
70	B2	14	C	C6-N1-C2	-9.09	116.66	120.30
69	A5	658	A	C2-N3-C4	9.08	115.14	110.60
69	A5	1631	U	C2-N1-C1'	9.08	128.60	117.70
69	A5	240	G	C5-N7-C8	-9.08	99.76	104.30
40	A8	27	C	N3-C2-O2	-9.08	115.55	121.90
69	A5	240	G	C8-N9-C4	-9.08	102.77	106.40
69	A5	1430	U	N3-C2-O2	-9.07	115.85	122.20
69	A5	2684	C	N1-C2-O2	9.07	124.34	118.90
70	B2	313	C	N1-C2-O2	9.06	124.34	118.90
69	A5	546	G	N9-C4-C5	-9.05	101.78	105.40
69	A5	1797	A	N7-C8-N9	9.03	118.32	113.80
69	A5	1086	C	N3-C2-O2	-9.03	115.58	121.90
69	A5	3758	G	C8-N9-C4	-9.03	102.79	106.40
69	A5	1389	C	N1-C2-O2	9.01	124.31	118.90
69	A5	1390	C	N1-C2-O2	9.01	124.31	118.90
69	A5	1390	C	N3-C2-O2	-9.01	115.59	121.90
69	A5	11	C	N1-C2-O2	9.01	124.30	118.90
69	A5	3730	G	O4'-C1'-N9	9.01	115.41	108.20
69	A5	3597	C	C6-N1-C2	-9.00	116.70	120.30
69	A5	775	U	N3-C2-O2	-9.00	115.90	122.20
69	A5	1866	G	C6-C5-N7	-8.98	125.01	130.40
69	A5	2091	A	C6-N1-C2	8.98	123.99	118.60
69	A5	787	C	N3-C4-N4	-8.97	111.72	118.00
69	A5	1981	A	C6-N1-C2	8.97	123.98	118.60
69	A5	553	A	C5-N7-C8	-8.96	99.42	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1108	G	C2-N3-C4	8.96	116.38	111.90
69	A5	1288	U	C2-N1-C1'	8.94	128.43	117.70
69	A5	1699	A	C2-N3-C4	8.94	115.07	110.60
69	A5	120	C	C6-N1-C2	-8.93	116.73	120.30
69	A5	3517	U	N1-C2-O2	8.93	129.05	122.80
69	A5	1384	C	N3-C2-O2	-8.93	115.65	121.90
69	A5	927	A	C2-N3-C4	8.93	115.06	110.60
69	A5	2171	U	C5-C6-N1	8.92	127.16	122.70
40	A8	84	U	N3-C2-O2	-8.91	115.96	122.20
70	B2	1596	C	N1-C2-O2	8.91	124.25	118.90
69	A5	545	U	N3-C2-O2	-8.91	115.96	122.20
69	A5	35	C	C6-N1-C2	-8.90	116.74	120.30
69	A5	3193	C	N1-C2-O2	8.90	124.24	118.90
69	A5	839	A	C4-N9-C1'	-8.90	110.28	126.30
69	A5	791	C	C6-N1-C2	-8.90	116.74	120.30
69	A5	1671	U	C4-C5-C6	-8.88	114.37	119.70
69	A5	699	U	C6-N1-C1'	-8.88	108.77	121.20
69	A5	881	G	N1-C6-O6	-8.88	114.57	119.90
39	A7	91	C	C6-N1-C2	-8.87	116.75	120.30
12	CS	89	GLY	N-CA-C	8.87	135.27	113.10
69	A5	1193	A	N3-C4-N9	-8.87	120.31	127.40
69	A5	1366	G	C2-N3-C4	-8.87	107.47	111.90
69	A5	1690	U	C6-N1-C2	-8.86	115.68	121.00
69	A5	1799	U	C4-C5-C6	-8.86	114.39	119.70
69	A5	1199	C	O5'-P-OP1	-8.85	97.73	105.70
69	A5	477	C	C6-N1-C1'	-8.85	110.18	120.80
69	A5	1172	G	O5'-P-OP1	-8.84	97.74	105.70
69	A5	440	U	O4'-C1'-N1	8.84	115.27	108.20
69	A5	1296	U	C5-C6-N1	8.82	127.11	122.70
69	A5	2186	C	C6-N1-C2	-8.82	116.77	120.30
69	A5	805	C	C6-N1-C2	-8.81	116.78	120.30
40	A8	27	C	N3-C4-C5	-8.81	118.38	121.90
70	B2	550	C	N1-C2-O2	8.81	124.18	118.90
69	A5	1198	U	N3-C2-O2	-8.80	116.04	122.20
69	A5	1566	U	P-O3'-C3'	8.80	130.26	119.70
69	A5	3738	U	N3-C2-O2	-8.79	116.04	122.20
69	A5	2127	C	N1-C2-O2	8.77	124.16	118.90
69	A5	1093	C	C5-C6-N1	8.77	125.39	121.00
69	A5	1379	U	O5'-P-OP1	-8.76	97.81	105.70
70	B2	550	C	C2-N1-C1'	8.76	128.44	118.80
69	A5	816	A	O5'-P-OP2	-8.75	97.82	105.70
69	A5	322	G	N3-C4-N9	8.75	131.25	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1169	C	C5-C6-N1	8.75	125.37	121.00
69	A5	1678	C	N3-C2-O2	-8.75	115.78	121.90
69	A5	1899	C	C6-N1-C2	-8.75	116.80	120.30
69	A5	1108	G	C4-N9-C1'	8.74	137.87	126.50
69	A5	2184	G	O5'-P-OP1	-8.74	97.83	105.70
69	A5	3540	G	N1-C6-O6	-8.74	114.66	119.90
69	A5	1542	C	C6-N1-C2	-8.74	116.81	120.30
69	A5	2159	C	N1-C2-O2	8.74	124.14	118.90
39	A7	47	C	N1-C2-O2	8.73	124.14	118.90
2	CL	159	GLU	C-N-CA	8.73	143.53	121.70
69	A5	1723	G	O4'-C1'-N9	8.73	115.18	108.20
40	A8	64	C	C5-C6-N1	8.72	125.36	121.00
69	A5	802	G	N1-C6-O6	-8.71	114.67	119.90
69	A5	1554	C	C6-N1-C2	-8.71	116.81	120.30
69	A5	3969	G	C4-C5-N7	8.71	114.28	110.80
69	A5	1529	C	N1-C2-O2	8.70	124.12	118.90
69	A5	1117	A	C2-N3-C4	8.70	114.95	110.60
69	A5	2684	C	C2-N1-C1'	8.70	128.37	118.80
69	A5	1176	A	N1-C2-N3	-8.69	124.95	129.30
69	A5	3198	C	C6-N1-C2	-8.70	116.82	120.30
69	A5	1379	U	C5-C6-N1	8.69	127.05	122.70
69	A5	1430	U	N1-C2-O2	8.69	128.88	122.80
69	A5	3281	G	N3-C4-N9	8.69	131.21	126.00
69	A5	811	G	C8-N9-C1'	8.68	138.28	127.00
69	A5	311	C	C6-N1-C2	-8.66	116.83	120.30
69	A5	1086	C	N1-C2-O2	8.66	124.10	118.90
69	A5	699	U	C5-C6-N1	8.66	127.03	122.70
69	A5	2692	U	C2-N1-C1'	8.66	128.09	117.70
69	A5	543	A	N1-C6-N6	8.66	123.80	118.60
69	A5	3880	A	C5-N7-C8	-8.66	99.57	103.90
69	A5	1079	U	N1-C2-O2	8.65	128.85	122.80
70	B2	313	C	C2-N1-C1'	8.63	128.30	118.80
69	A5	2038	A	N7-C8-N9	8.63	118.11	113.80
69	A5	445	C	N1-C2-O2	8.62	124.07	118.90
69	A5	2554	U	C5-C6-N1	8.62	127.01	122.70
69	A5	2224	A	C5-N7-C8	-8.61	99.59	103.90
69	A5	831	A	C2-N3-C4	8.61	114.90	110.60
69	A5	1589	A	N7-C8-N9	8.61	118.10	113.80
69	A5	3712	G	C8-N9-C4	8.61	109.84	106.40
69	A5	3847	U	C6-N1-C1'	-8.60	109.16	121.20
69	A5	3593	A	C8-N9-C4	-8.60	102.36	105.80
69	A5	1799	U	N1-C2-O2	8.60	128.82	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1288	U	N3-C2-O2	-8.59	116.19	122.20
41	Ag	271	LEU	CA-CB-CG	8.59	135.06	115.30
69	A5	3491	C	N3-C2-O2	-8.59	115.89	121.90
69	A5	803	A	O5'-P-OP2	-8.59	97.97	105.70
70	B2	1924	C	N1-C2-O2	8.59	124.05	118.90
69	A5	883	U	C5-C6-N1	8.58	126.99	122.70
69	A5	2127	C	C5-C6-N1	8.58	125.29	121.00
70	B2	915	U	N1-C2-O2	8.58	128.80	122.80
38	A9	24	G	C8-N9-C4	-8.57	102.97	106.40
69	A5	883	U	N1-C2-O2	8.57	128.80	122.80
69	A5	2155	A	C4-C5-N7	8.57	114.98	110.70
69	A5	1115	A	N7-C8-N9	8.57	118.08	113.80
69	A5	3569	C	N3-C2-O2	-8.57	115.90	121.90
69	A5	300	A	C8-N9-C4	-8.56	102.37	105.80
69	A5	1689	G	N3-C2-N2	-8.56	113.90	119.90
69	A5	105	A	C4-C5-N7	8.56	114.98	110.70
69	A5	2090	U	N1-C2-O2	8.55	128.78	122.80
69	A5	1680	U	O5'-P-OP1	-8.54	98.02	105.70
69	A5	2066	G	N7-C8-N9	8.54	117.37	113.10
69	A5	798	C	N1-C2-O2	8.53	124.02	118.90
69	A5	1122	U	C5-C4-O4	8.53	131.02	125.90
69	A5	3844	U	N3-C2-O2	-8.53	116.23	122.20
69	A5	884	U	C2-N1-C1'	8.53	127.93	117.70
69	A5	884	U	N1-C2-O2	8.53	128.77	122.80
69	A5	1130	U	C5-C6-N1	8.53	126.96	122.70
69	A5	1165	A	N9-C4-C5	8.53	109.21	105.80
69	A5	2692	U	N3-C2-O2	-8.53	116.23	122.20
69	A5	3675	A	C8-N9-C4	8.53	109.21	105.80
69	A5	663	U	C5-C4-O4	8.52	131.01	125.90
69	A5	1785	G	O5'-P-OP2	-8.52	98.03	105.70
69	A5	3677	U	N3-C2-O2	-8.52	116.23	122.20
70	B2	1187	U	C2-N1-C1'	8.52	127.92	117.70
39	A7	91	C	C5-C6-N1	8.52	125.26	121.00
69	A5	884	U	C5-C6-N1	8.52	126.96	122.70
40	A8	37	U	N3-C2-O2	-8.51	116.24	122.20
69	A5	3677	U	C2-N1-C1'	8.51	127.91	117.70
69	A5	374	C	C6-N1-C2	-8.50	116.90	120.30
69	A5	240	G	C4-C5-N7	8.49	114.20	110.80
69	A5	1220	U	N1-C2-O2	8.49	128.75	122.80
69	A5	1391	A	O5'-P-OP1	-8.48	98.07	105.70
70	B2	359	C	C5-C6-N1	8.47	125.24	121.00
69	A5	1294	U	O5'-P-OP1	8.47	120.86	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	866	C	N3-C2-O2	-8.46	115.97	121.90
69	A5	1338	U	N1-C2-O2	8.46	128.72	122.80
69	A5	2159	C	C6-N1-C2	-8.46	116.92	120.30
69	A5	2733	G	N3-C4-N9	8.46	131.07	126.00
69	A5	348	A	N1-C6-N6	-8.45	113.53	118.60
69	A5	439	U	N3-C4-O4	-8.44	113.49	119.40
69	A5	2066	G	C8-N9-C4	-8.44	103.02	106.40
69	A5	1027	A	N1-C2-N3	-8.43	125.08	129.30
69	A5	753	U	N3-C2-O2	-8.42	116.31	122.20
69	A5	1366	G	C5-N7-C8	-8.42	100.09	104.30
69	A5	2580	C	C6-N1-C2	-8.42	116.93	120.30
69	A5	2655	C	C6-N1-C2	-8.42	116.93	120.30
69	A5	1998	U	N3-C2-O2	-8.39	116.32	122.20
69	A5	2657	A	C2-N3-C4	-8.39	106.40	110.60
69	A5	746	G	N3-C4-C5	-8.38	124.41	128.60
69	A5	1366	G	C8-N9-C4	-8.38	103.05	106.40
35	CH	41	LEU	CB-CG-CD2	-8.38	96.75	111.00
69	A5	2676	U	C2-N1-C1'	8.38	127.76	117.70
70	B2	1978	C	C6-N1-C2	-8.38	116.95	120.30
69	A5	3378	U	N3-C2-O2	-8.37	116.34	122.20
69	A5	2194	G	OP2-P-O3'	8.37	123.62	105.20
69	A5	242	C	C6-N1-C2	-8.37	116.95	120.30
69	A5	1713	U	O4'-C1'-N1	8.37	114.89	108.20
69	A5	2091	A	C5-C6-N1	-8.35	113.52	117.70
69	A5	746	G	C2-N3-C4	8.35	116.07	111.90
69	A5	1609	U	C5-C6-N1	8.35	126.87	122.70
69	A5	1715	G	N3-C4-C5	8.35	132.77	128.60
69	A5	3463	U	C6-N1-C2	-8.34	116.00	121.00
69	A5	874	G	C4-N9-C1'	8.33	137.33	126.50
69	A5	2091	A	N3-C4-C5	8.33	132.63	126.80
69	A5	2177	G	N1-C6-O6	-8.33	114.90	119.90
69	A5	3846	U	OP1-P-O3'	8.33	123.53	105.20
69	A5	1629	C	C6-N1-C2	-8.33	116.97	120.30
69	A5	3936	A	C5-N7-C8	-8.33	99.74	103.90
69	A5	839	A	N7-C8-N9	-8.32	109.64	113.80
69	A5	3738	U	C2-N1-C1'	8.32	127.68	117.70
40	A8	6	U	C5-C6-N1	8.31	126.86	122.70
40	A8	10	C	C5-C6-N1	8.31	125.16	121.00
69	A5	1142	U	C5-C6-N1	8.30	126.85	122.70
69	A5	1801	U	C6-N1-C1'	8.30	132.82	121.20
69	A5	1079	U	O5'-P-OP1	-8.30	98.23	105.70
25	Cf	48	GLY	N-CA-C	8.30	133.84	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1656	U	N1-C2-O2	8.30	128.61	122.80
69	A5	2162	C	N1-C2-O2	8.30	123.88	118.90
69	A5	2087	C	N1-C2-O2	8.29	123.88	118.90
69	A5	1090	U	C6-N1-C2	-8.29	116.03	121.00
69	A5	306	C	C6-N1-C2	-8.28	116.99	120.30
69	A5	1542	C	N1-C2-O2	8.28	123.87	118.90
69	A5	1718	G	C6-C5-N7	-8.28	125.43	130.40
69	A5	1710	G	N1-C6-O6	8.28	124.87	119.90
69	A5	522	G	C4-N9-C1'	8.27	137.25	126.50
69	A5	422	G	O5'-P-OP1	-8.26	98.26	105.70
69	A5	555	U	N1-C2-O2	8.26	128.58	122.80
69	A5	1374	C	N3-C4-C5	8.26	125.20	121.90
69	A5	1390	C	C2-N1-C1'	8.26	127.89	118.80
69	A5	1793	C	C6-N1-C2	-8.26	117.00	120.30
69	A5	679	G	N3-C4-C5	-8.26	124.47	128.60
69	A5	2750	A	P-O3'-C3'	8.25	129.60	119.70
69	A5	1366	G	C8-N9-C1'	8.25	137.73	127.00
69	A5	2151	A	N1-C2-N3	-8.24	125.18	129.30
70	B2	878	C	C2-N1-C1'	8.24	127.87	118.80
69	A5	846	U	N3-C4-O4	-8.23	113.64	119.40
69	A5	2728	C	N3-C4-C5	8.22	125.19	121.90
70	B2	313	C	N3-C2-O2	-8.22	116.15	121.90
69	A5	1686	A	C2-N3-C4	-8.22	106.49	110.60
69	A5	2170	C	N3-C2-O2	-8.22	116.15	121.90
70	B2	1111	U	N3-C2-O2	-8.22	116.45	122.20
39	A7	47	C	N3-C2-O2	-8.21	116.15	121.90
70	B2	1403	C	N1-C2-O2	8.21	123.83	118.90
70	B2	359	C	C6-N1-C2	-8.21	117.02	120.30
69	A5	1529	C	C2-N1-C1'	8.20	127.81	118.80
69	A5	2584	G	C4-N9-C1'	8.19	137.15	126.50
69	A5	1784	A	P-O3'-C3'	8.19	129.53	119.70
70	B2	1650	G	N3-C4-N9	8.19	130.91	126.00
69	A5	2755	G	N9-C4-C5	-8.19	102.13	105.40
69	A5	498	U	C5-C6-N1	8.18	126.79	122.70
69	A5	910	C	N1-C2-O2	8.18	123.81	118.90
69	A5	3542	C	C5-C6-N1	8.18	125.09	121.00
69	A5	1318	A	C4-C5-N7	8.18	114.79	110.70
69	A5	1574	A	C2-N3-C4	8.18	114.69	110.60
69	A5	1892	C	N1-C2-O2	8.17	123.80	118.90
69	A5	3246	G	N3-C4-N9	-8.17	121.10	126.00
69	A5	3936	A	O4'-C1'-N9	8.17	114.73	108.20
69	A5	352	U	N3-C2-O2	-8.17	116.48	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	868	A	N7-C8-N9	8.16	117.88	113.80
69	A5	546	G	C5-N7-C8	-8.16	100.22	104.30
69	A5	2796	G	O4'-C1'-N9	8.16	114.73	108.20
69	A5	2734	A	C6-C5-N7	-8.15	126.59	132.30
35	CH	49	ASP	CB-CG-OD1	8.15	125.64	118.30
69	A5	3245	U	C2-N1-C1'	8.15	127.48	117.70
69	A5	1784	A	C8-N9-C4	8.15	109.06	105.80
69	A5	3258	C	C5-C4-N4	8.14	125.90	120.20
69	A5	128	C	C6-N1-C2	-8.14	117.04	120.30
69	A5	2756	C	N1-C2-O2	8.14	123.79	118.90
69	A5	3756	A	C2-N3-C4	8.14	114.67	110.60
69	A5	716	C	C6-N1-C2	-8.14	117.04	120.30
69	A5	3405	U	N1-C2-O2	8.13	128.49	122.80
40	A8	20	C	N3-C2-O2	-8.13	116.21	121.90
69	A5	2515	C	N3-C2-O2	-8.12	116.22	121.90
69	A5	35	C	C2-N1-C1'	8.12	127.73	118.80
69	A5	1021	U	O5'-P-OP2	-8.12	98.40	105.70
69	A5	1077	C	C6-N1-C2	-8.11	117.06	120.30
69	A5	3263	C	C6-N1-C2	-8.11	117.06	120.30
69	A5	2035	C	N1-C2-O2	8.10	123.76	118.90
69	A5	833	U	N1-C2-O2	8.09	128.47	122.80
69	A5	1699	A	N1-C2-N3	8.09	133.35	129.30
69	A5	2743	C	C6-N1-C2	-8.09	117.06	120.30
69	A5	1712	C	C5-C6-N1	8.09	125.05	121.00
69	A5	1529	C	C6-N1-C2	-8.09	117.07	120.30
69	A5	811	G	C8-N9-C4	-8.08	103.17	106.40
69	A5	2800	C	N1-C2-O2	8.08	123.75	118.90
69	A5	3774	U	N1-C2-O2	8.07	128.45	122.80
69	A5	1702	G	N3-C2-N2	-8.07	114.25	119.90
69	A5	2785	C	C6-N1-C2	-8.07	117.07	120.30
69	A5	2734	A	C5-C6-N6	-8.07	117.25	123.70
69	A5	1092	U	O5'-P-OP2	-8.06	98.44	105.70
69	A5	746	G	C8-N9-C4	-8.06	103.17	106.40
69	A5	1156	U	C5-C6-N1	8.06	126.73	122.70
69	A5	1686	A	N3-C4-C5	8.05	132.44	126.80
38	A9	14	U	N3-C2-O2	-8.05	116.57	122.20
69	A5	2623	C	N1-C2-O2	8.05	123.73	118.90
69	A5	1150	G	C8-N9-C4	-8.04	103.18	106.40
69	A5	2728	C	C2-N3-C4	-8.04	115.88	119.90
69	A5	1384	C	O5'-P-OP1	-8.04	98.46	105.70
69	A5	49	A	C4-C5-C6	-8.03	112.98	117.00
1	CO	4	LEU	CA-CB-CG	8.02	133.75	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	AE	12	LEU	CA-CB-CG	8.02	133.75	115.30
69	A5	1220	U	N3-C2-O2	-8.02	116.59	122.20
69	A5	3299	U	C5-C6-N1	8.01	126.71	122.70
69	A5	1092	U	N3-C2-O2	-8.01	116.59	122.20
69	A5	1652	U	C5-C6-N1	8.01	126.70	122.70
69	A5	655	C	N3-C2-O2	-8.00	116.30	121.90
69	A5	3569	C	C6-N1-C2	-8.00	117.10	120.30
69	A5	3713	C	C5-C4-N4	-8.00	114.60	120.20
70	B2	1648	C	C2-N1-C1'	8.00	127.60	118.80
69	A5	1547	A	O5'-P-OP2	-8.00	98.50	105.70
69	A5	1713	U	N3-C2-O2	-8.00	116.60	122.20
69	A5	3233	C	C5-C6-N1	8.00	125.00	121.00
69	A5	1736	G	O4'-C1'-N9	7.99	114.59	108.20
69	A5	3526	C	C6-N1-C2	-7.99	117.10	120.30
69	A5	1000	G	N3-C4-N9	7.99	130.79	126.00
69	A5	1540	U	C5-C6-N1	7.98	126.69	122.70
69	A5	1542	C	N3-C2-O2	-7.98	116.31	121.90
69	A5	1644	C	C6-N1-C2	-7.97	117.11	120.30
21	CB	323	TYR	CA-CB-CG	7.96	128.53	113.40
55	AZ	95	LEU	CA-CB-CG	7.96	133.62	115.30
69	A5	752	U	C6-N1-C1'	7.96	132.34	121.20
39	A7	78	C	C5-C6-N1	7.96	124.98	121.00
69	A5	1864	U	N3-C2-O2	-7.96	116.63	122.20
70	B2	915	U	N3-C2-O2	-7.96	116.63	122.20
69	A5	48	U	N3-C2-O2	-7.96	116.63	122.20
69	A5	425	A	N1-C2-N3	-7.95	125.32	129.30
69	A5	2507	C	N3-C2-O2	-7.95	116.33	121.90
70	B2	1033	U	N1-C2-O2	7.95	128.37	122.80
69	A5	424	G	N1-C6-O6	-7.95	115.13	119.90
69	A5	631	A	C2-N3-C4	7.95	114.58	110.60
69	A5	1569	U	N3-C2-O2	-7.95	116.64	122.20
69	A5	3872	C	C6-N1-C2	-7.95	117.12	120.30
69	A5	46	C	O5'-P-OP1	-7.94	98.55	105.70
70	B2	1650	G	C4-N9-C1'	7.94	136.82	126.50
69	A5	2758	U	O5'-P-OP1	-7.94	98.56	105.70
69	A5	1083	A	C8-N9-C4	-7.93	102.63	105.80
69	A5	778	C	C6-N1-C2	-7.93	117.13	120.30
69	A5	3464	G	N3-C2-N2	-7.92	114.35	119.90
69	A5	881	G	C5-C6-O6	7.92	133.35	128.60
69	A5	1745	G	O4'-C1'-N9	7.92	114.53	108.20
69	A5	1166	U	O5'-P-OP2	-7.92	98.58	105.70
69	A5	19	C	C6-N1-C2	-7.92	117.13	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1715	G	C8-N9-C4	-7.91	103.24	106.40
69	A5	207	C	N1-C2-O2	7.90	123.64	118.90
69	A5	1206	G	O4'-C1'-N9	7.90	114.52	108.20
70	B2	915	U	C2-N1-C1'	7.90	127.17	117.70
69	A5	1313	A	C5-C6-N1	-7.89	113.75	117.70
69	A5	3398	C	C5-C6-N1	7.89	124.95	121.00
69	A5	3716	C	N3-C2-O2	-7.89	116.38	121.90
69	A5	1748	C	N3-C4-C5	7.88	125.05	121.90
69	A5	3477	A	C6-C5-N7	7.87	137.81	132.30
69	A5	3607	C	C6-N1-C2	-7.87	117.15	120.30
69	A5	281	C	N3-C2-O2	-7.87	116.39	121.90
69	A5	1176	A	C6-N1-C2	7.87	123.32	118.60
69	A5	2755	G	C8-N9-C4	7.87	109.55	106.40
69	A5	1866	G	N1-C6-O6	7.87	124.62	119.90
69	A5	241	C	N1-C2-O2	7.86	123.62	118.90
69	A5	1793	C	C5-C6-N1	7.86	124.93	121.00
69	A5	874	G	C8-N9-C4	-7.86	103.25	106.40
70	B2	1069	U	N1-C2-O2	7.86	128.30	122.80
69	A5	1776	U	N3-C2-O2	-7.86	116.70	122.20
69	A5	3751	C	C6-N1-C1'	-7.86	111.37	120.80
69	A5	1109	G	O5'-P-OP1	-7.85	98.63	105.70
69	A5	1115	A	C4-C5-N7	7.85	114.63	110.70
69	A5	2194	G	N3-C4-C5	-7.85	124.67	128.60
69	A5	3517	U	N3-C2-O2	-7.85	116.70	122.20
69	A5	11	C	N3-C2-O2	-7.85	116.41	121.90
69	A5	1197	A	C4-C5-C6	-7.84	113.08	117.00
69	A5	1531	U	N3-C4-O4	-7.84	113.91	119.40
40	A8	26	U	C6-N1-C2	-7.84	116.29	121.00
69	A5	1142	U	N3-C4-C5	7.84	119.31	114.60
69	A5	1369	C	N1-C2-O2	7.84	123.61	118.90
69	A5	874	G	C5-N7-C8	-7.84	100.38	104.30
69	A5	984	U	N3-C2-O2	-7.84	116.71	122.20
69	A5	3643	C	N1-C2-O2	7.84	123.60	118.90
69	A5	2793	C	C6-N1-C2	-7.84	117.17	120.30
69	A5	89	A	OP1-P-O3'	7.83	122.43	105.20
69	A5	798	C	C5-C4-N4	7.83	125.68	120.20
69	A5	867	U	C5-C6-N1	7.82	126.61	122.70
69	A5	1688	A	P-O3'-C3'	7.82	129.09	119.70
69	A5	2755	G	C5-C6-O6	-7.82	123.91	128.60
70	B2	1069	U	N3-C2-O2	-7.82	116.72	122.20
69	A5	1699	A	C5-N7-C8	7.82	107.81	103.90
69	A5	910	C	N3-C4-C5	7.82	125.03	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1389	C	N3-C2-O2	-7.82	116.43	121.90
69	A5	3671	C	N1-C2-O2	7.82	123.59	118.90
69	A5	3592	C	N3-C2-O2	-7.81	116.43	121.90
69	A5	1080	G	O4'-C1'-N9	7.81	114.45	108.20
69	A5	2684	C	N3-C2-O2	-7.81	116.43	121.90
69	A5	3471	A	C8-N9-C4	7.81	108.92	105.80
69	A5	3128	U	C5-C6-N1	7.81	126.61	122.70
69	A5	746	G	C4-N9-C1'	7.81	136.65	126.50
69	A5	1313	A	N3-C4-C5	7.81	132.26	126.80
69	A5	982	C	N3-C2-O2	-7.80	116.44	121.90
69	A5	1296	U	C6-N1-C2	-7.80	116.32	121.00
69	A5	1498	C	N1-C2-O2	7.80	123.58	118.90
69	A5	839	A	C4-C5-C6	-7.80	113.10	117.00
69	A5	1553	C	O5'-P-OP1	-7.80	98.68	105.70
69	A5	1143	U	C5-C4-O4	7.79	130.57	125.90
69	A5	2087	C	N3-C2-O2	-7.78	116.45	121.90
70	B2	1107	A	C8-N9-C4	-7.78	102.69	105.80
69	A5	1799	U	C5-C6-N1	7.78	126.59	122.70
69	A5	1264	U	N1-C2-O2	7.77	128.24	122.80
69	A5	58	G	C2-N3-C4	7.77	115.78	111.90
69	A5	800	C	C6-N1-C2	-7.77	117.19	120.30
70	B2	1087	C	C2-N1-C1'	7.77	127.34	118.80
69	A5	1543	C	N1-C2-O2	7.76	123.56	118.90
69	A5	3936	A	N7-C8-N9	7.76	117.68	113.80
69	A5	2714	U	C6-N1-C2	-7.76	116.34	121.00
69	A5	2744	C	C2-N1-C1'	7.76	127.34	118.80
69	A5	2731	G	O5'-P-OP1	-7.75	98.72	105.70
69	A5	2523	A	C8-N9-C4	-7.75	102.70	105.80
69	A5	1134	G	N1-C6-O6	-7.75	115.25	119.90
69	A5	34	C	C5-C6-N1	7.75	124.88	121.00
40	A8	112	C	C6-N1-C2	-7.74	117.20	120.30
69	A5	130	C	N1-C2-O2	7.74	123.55	118.90
68	Cz	103	LEU	CA-CB-CG	7.74	133.10	115.30
69	A5	663	U	N1-C2-O2	7.73	128.21	122.80
69	A5	880	A	N1-C2-N3	-7.73	125.44	129.30
69	A5	1315	A	C5-N7-C8	-7.73	100.03	103.90
69	A5	2093	U	P-O3'-C3'	7.72	128.97	119.70
70	B2	344	C	C6-N1-C2	-7.72	117.21	120.30
69	A5	1998	U	C2-N1-C1'	7.72	126.97	117.70
69	A5	2054	U	C2-N1-C1'	7.72	126.97	117.70
69	A5	3613	G	C5-N7-C8	-7.72	100.44	104.30
29	CC	195	GLY	C-N-CA	7.72	140.99	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	A7	52	U	N3-C2-O2	-7.72	116.80	122.20
40	A8	20	C	N1-C2-O2	7.71	123.53	118.90
69	A5	2734	A	N3-C4-N9	7.71	133.57	127.40
69	A5	1529	C	C5-C6-N1	7.71	124.86	121.00
69	A5	1865	U	N3-C2-O2	-7.71	116.80	122.20
69	A5	1597	A	C8-N9-C4	-7.70	102.72	105.80
69	A5	1597	A	N7-C8-N9	7.70	117.65	113.80
69	A5	3460	C	C6-N1-C2	-7.70	117.22	120.30
70	B2	932	U	C6-N1-C1'	-7.70	110.42	121.20
70	B2	1163	C	C5-C6-N1	7.70	124.85	121.00
69	A5	372	U	N3-C2-O2	-7.69	116.82	122.20
69	A5	1795	A	N1-C6-N6	7.69	123.22	118.60
69	A5	2789	U	N1-C2-O2	7.69	128.19	122.80
69	A5	2516	U	C5-C6-N1	-7.69	118.86	122.70
69	A5	558	C	N1-C2-O2	7.68	123.51	118.90
69	A5	692	G	C4-N9-C1'	7.68	136.49	126.50
69	A5	752	U	O5'-P-OP2	-7.68	98.79	105.70
69	A5	1383	A	N1-C6-N6	7.68	123.21	118.60
69	A5	1423	C	N1-C2-O2	7.68	123.51	118.90
69	A5	1596	A	C2-N3-C4	7.68	114.44	110.60
69	A5	3365	G	N7-C8-N9	7.68	116.94	113.10
69	A5	3415	U	C5-C6-N1	7.68	126.54	122.70
69	A5	3472	A	P-O3'-C3'	7.68	128.92	119.70
69	A5	3226	A	N3-C4-N9	7.68	133.54	127.40
69	A5	1592	U	C2-N1-C1'	7.67	126.91	117.70
69	A5	2734	A	C4-C5-N7	7.67	114.54	110.70
69	A5	1718	G	C4-C5-C6	7.67	123.40	118.80
69	A5	2174	A	O4'-C1'-N9	7.67	114.33	108.20
69	A5	1774	C	C5-C6-N1	7.67	124.83	121.00
69	A5	3350	U	O5'-P-OP2	-7.66	98.81	105.70
69	A5	1318	A	N1-C6-N6	7.66	123.20	118.60
69	A5	281	C	N1-C2-O2	7.66	123.50	118.90
69	A5	3368	C	C2-N1-C1'	7.66	127.22	118.80
69	A5	1347	A	C8-N9-C4	7.66	108.86	105.80
69	A5	3671	C	C6-N1-C2	-7.66	117.24	120.30
69	A5	786	C	C6-N1-C2	-7.65	117.24	120.30
1	CO	134	ASP	CB-CG-OD1	7.65	125.19	118.30
69	A5	1075	G	N9-C4-C5	-7.65	102.34	105.40
69	A5	3192	C	C6-N1-C2	-7.65	117.24	120.30
69	A5	856	A	N1-C6-N6	7.64	123.19	118.60
69	A5	1974	U	N3-C2-O2	-7.64	116.85	122.20
69	A5	3514	C	N3-C2-O2	-7.64	116.55	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	813	C	C6-N1-C2	-7.64	117.24	120.30
69	A5	881	G	C4-C5-C6	-7.64	114.22	118.80
69	A5	119	G	C8-N9-C4	-7.63	103.35	106.40
69	A5	3413	C	N3-C4-N4	-7.63	112.66	118.00
69	A5	1803	C	O4'-C1'-N1	7.63	114.30	108.20
69	A5	3245	U	C5-C6-N1	7.63	126.51	122.70
69	A5	458	A	C2-N3-C4	7.62	114.41	110.60
69	A5	778	C	N1-C2-O2	7.62	123.47	118.90
69	A5	3471	A	N9-C4-C5	-7.62	102.75	105.80
69	A5	1115	A	N3-C4-C5	7.62	132.13	126.80
69	A5	1197	A	C5-C6-N6	7.62	129.80	123.70
69	A5	1588	A	N3-C4-C5	-7.62	121.47	126.80
70	B2	1090	A	O4'-C1'-N9	7.62	114.30	108.20
69	A5	201	U	N1-C2-O2	7.62	128.13	122.80
69	A5	2714	U	N3-C2-O2	-7.62	116.87	122.20
69	A5	1389	C	C6-N1-C2	-7.62	117.25	120.30
69	A5	1553	C	C6-N1-C2	-7.61	117.25	120.30
69	A5	1997	C	C2-N1-C1'	7.61	127.17	118.80
69	A5	3463	U	N3-C2-O2	-7.61	116.87	122.20
69	A5	3758	G	C4-N9-C1'	7.61	136.40	126.50
69	A5	2507	C	N1-C2-O2	7.61	123.47	118.90
69	A5	2512	U	O5'-P-OP2	-7.61	98.85	105.70
69	A5	2744	C	N3-C2-O2	-7.60	116.58	121.90
69	A5	1155	U	N3-C2-O2	-7.60	116.88	122.20
69	A5	2194	G	C5-C6-N1	7.60	115.30	111.50
69	A5	3891	U	C6-N1-C1'	-7.60	110.56	121.20
40	A8	11	G	N1-C6-O6	-7.60	115.34	119.90
69	A5	754	A	N7-C8-N9	7.60	117.60	113.80
69	A5	833	U	N3-C2-O2	-7.60	116.88	122.20
70	B2	1216	C	C6-N1-C2	-7.60	117.26	120.30
69	A5	60	G	O5'-P-OP2	-7.59	98.87	105.70
69	A5	692	G	N3-C4-N9	7.59	130.56	126.00
69	A5	2532	U	C6-N1-C2	-7.59	116.45	121.00
69	A5	32	C	N3-C2-O2	-7.59	116.59	121.90
69	A5	105	A	N7-C8-N9	7.59	117.59	113.80
69	A5	3347	G	C5-C6-N1	7.59	115.29	111.50
69	A5	2786	U	N3-C2-O2	-7.58	116.89	122.20
69	A5	1355	C	C4-C5-C6	-7.58	113.61	117.40
69	A5	1726	G	C4-C5-N7	7.58	113.83	110.80
69	A5	305	G	C8-N9-C4	-7.58	103.37	106.40
69	A5	1157	C	C6-N1-C2	-7.58	117.27	120.30
69	A5	1774	C	C6-N1-C2	-7.57	117.27	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3756	A	N1-C6-N6	-7.57	114.06	118.60
69	A5	2796	G	N9-C4-C5	-7.57	102.37	105.40
69	A5	884	U	N3-C2-O2	-7.57	116.91	122.20
69	A5	3258	C	C2-N1-C1'	7.56	127.11	118.80
69	A5	3891	U	O4'-C1'-N1	7.55	114.24	108.20
69	A5	3932	U	C2-N1-C1'	7.55	126.77	117.70
70	B2	878	C	N3-C2-O2	-7.55	116.61	121.90
69	A5	997	U	N3-C2-O2	-7.55	116.92	122.20
69	A5	1614	A	N7-C8-N9	7.55	117.57	113.80
69	A5	3606	G	N3-C4-C5	-7.55	124.83	128.60
69	A5	3471	A	OP2-P-O3'	7.54	121.79	105.20
69	A5	3402	C	C6-N1-C1'	7.54	129.84	120.80
69	A5	880	A	C6-N1-C2	7.54	123.12	118.60
69	A5	1997	C	N3-C2-O2	-7.53	116.63	121.90
69	A5	1383	A	C5-C6-N6	-7.53	117.68	123.70
69	A5	3596	A	N7-C8-N9	7.53	117.56	113.80
3	CV	51	ARG	NE-CZ-NH1	7.52	124.06	120.30
69	A5	3540	G	C5-C6-O6	7.52	133.11	128.60
69	A5	163	A	N1-C6-N6	-7.52	114.09	118.60
69	A5	242	C	C2-N1-C1'	7.51	127.06	118.80
69	A5	284	A	O5'-P-OP1	-7.51	98.94	105.70
69	A5	1060	G	N3-C4-N9	7.51	130.50	126.00
69	A5	3758	G	N3-C4-N9	7.51	130.50	126.00
69	A5	3296	C	C6-N1-C2	-7.50	117.30	120.30
69	A5	910	C	N3-C2-O2	-7.50	116.65	121.90
69	A5	775	U	C6-N1-C2	-7.50	116.50	121.00
69	A5	3514	C	C6-N1-C2	-7.50	117.30	120.30
69	A5	778	C	N3-C2-O2	-7.50	116.65	121.90
69	A5	1127	C	C6-N1-C2	-7.49	117.30	120.30
69	A5	852	C	C5-C6-N1	7.48	124.74	121.00
69	A5	1111	C	C6-N1-C2	-7.48	117.31	120.30
69	A5	3841	C	N1-C1'-C2'	7.48	123.73	114.00
69	A5	2793	C	C5-C6-N1	7.48	124.74	121.00
69	A5	3774	U	N3-C2-O2	-7.48	116.97	122.20
69	A5	1951	C	N1-C2-O2	7.47	123.38	118.90
69	A5	1195	U	N3-C2-O2	-7.47	116.97	122.20
69	A5	3362	G	C8-N9-C4	-7.47	103.41	106.40
69	A5	1183	U	C6-N1-C2	-7.47	116.52	121.00
69	A5	2187	U	N3-C2-O2	-7.47	116.97	122.20
69	A5	3755	A	N9-C4-C5	7.46	108.79	105.80
70	B2	1765	U	OP2-P-O3'	7.46	121.61	105.20
69	A5	2225	A	N1-C2-N3	-7.46	125.57	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	39	A	N7-C8-N9	7.46	117.53	113.80
69	A5	3297	C	N1-C2-O2	7.46	123.38	118.90
69	A5	2724	C	N3-C4-C5	7.45	124.88	121.90
69	A5	3477	A	C4-C5-C6	-7.45	113.28	117.00
69	A5	3494	C	C6-N1-C2	-7.45	117.32	120.30
69	A5	38	A	C2-N3-C4	7.45	114.32	110.60
69	A5	2165	C	C4-C5-C6	7.45	121.12	117.40
69	A5	1013	G	N1-C6-O6	-7.45	115.43	119.90
69	A5	2187	U	N1-C2-O2	7.44	128.01	122.80
69	A5	3283	U	N3-C2-O2	-7.44	116.99	122.20
70	B2	1596	C	C6-N1-C1'	-7.44	111.87	120.80
69	A5	3756	A	O4'-C1'-N9	7.44	114.15	108.20
69	A5	1086	C	C6-N1-C2	-7.44	117.33	120.30
69	A5	3503	G	N1-C6-O6	-7.44	115.44	119.90
69	A5	2127	C	N3-C2-O2	-7.43	116.70	121.90
69	A5	2773	G	C6-C5-N7	7.43	134.86	130.40
69	A5	3846	U	C5-C6-N1	7.43	126.42	122.70
69	A5	431	C	C6-N1-C2	-7.43	117.33	120.30
69	A5	3761	U	O4'-C1'-N1	7.43	114.15	108.20
29	CC	365	LEU	CA-CB-CG	7.42	132.38	115.30
69	A5	1156	U	C6-N1-C2	-7.42	116.55	121.00
40	A8	5	C	C6-N1-C2	-7.42	117.33	120.30
69	A5	1142	U	C4-C5-C6	-7.41	115.25	119.70
69	A5	2731	G	N1-C6-O6	-7.41	115.45	119.90
69	A5	3226	A	N3-C4-C5	-7.41	121.61	126.80
69	A5	3671	C	C2-N1-C1'	7.41	126.95	118.80
69	A5	800	C	C5-C6-N1	7.41	124.70	121.00
69	A5	813	C	N3-C4-N4	7.41	123.19	118.00
69	A5	2514	U	N3-C2-O2	-7.41	117.02	122.20
69	A5	788	C	N1-C2-O2	7.41	123.34	118.90
39	A7	87	G	N1-C6-O6	-7.40	115.46	119.90
69	A5	1592	U	C6-N1-C2	-7.40	116.56	121.00
70	B2	315	C	N3-C2-O2	-7.40	116.72	121.90
69	A5	339	C	C6-N1-C2	-7.40	117.34	120.30
69	A5	692	G	N3-C4-C5	-7.40	124.90	128.60
70	B2	315	C	C5-C6-N1	7.40	124.70	121.00
70	B2	1187	U	N1-C2-O2	7.39	127.98	122.80
69	A5	1599	C	C6-N1-C2	-7.39	117.34	120.30
69	A5	1627	U	C2-N1-C1'	7.39	126.57	117.70
69	A5	1656	U	N3-C2-O2	-7.39	117.03	122.20
69	A5	1672	A	N1-C6-N6	-7.39	114.17	118.60
69	A5	476	U	N3-C2-O2	-7.38	117.03	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	152	A	O5'-P-OP1	-7.38	99.06	105.70
69	A5	1313	A	N7-C8-N9	7.38	117.49	113.80
69	A5	1319	A	N1-C2-N3	-7.38	125.61	129.30
69	A5	3514	C	OP2-P-O3'	7.38	121.44	105.20
69	A5	854	U	N3-C2-O2	-7.38	117.03	122.20
69	A5	2711	C	C6-N1-C2	-7.38	117.35	120.30
69	A5	3807	G	N3-C4-N9	7.38	130.43	126.00
69	A5	1297	G	C8-N9-C1'	-7.38	117.41	127.00
69	A5	3675	A	C4-N9-C1'	-7.38	113.03	126.30
69	A5	1721	C	N1-C2-O2	7.37	123.32	118.90
69	A5	3671	C	N3-C2-O2	-7.37	116.74	121.90
70	B2	1650	G	C8-N9-C1'	-7.37	117.41	127.00
40	A8	24	G	N1-C6-O6	-7.37	115.48	119.90
69	A5	1865	U	C6-N1-C2	-7.37	116.58	121.00
69	A5	3132	C	C5-C6-N1	7.37	124.68	121.00
69	A5	48	U	N1-C2-O2	7.36	127.95	122.80
69	A5	3675	A	C5-C6-N6	7.36	129.59	123.70
69	A5	3368	C	N1-C2-O2	7.36	123.32	118.90
69	A5	794	G	C5-C6-N1	7.36	115.18	111.50
69	A5	305	G	N7-C8-N9	7.36	116.78	113.10
69	A5	3758	G	N7-C8-N9	7.36	116.78	113.10
69	A5	1325	C	C6-N1-C1'	-7.35	111.98	120.80
69	A5	3727	A	C8-N9-C4	7.35	108.74	105.80
69	A5	240	G	C6-C5-N7	-7.35	125.99	130.40
69	A5	1570	U	N1-C2-O2	7.35	127.94	122.80
69	A5	1037	A	O5'-P-OP2	-7.34	99.09	105.70
69	A5	1738	U	C2-N3-C4	-7.34	122.59	127.00
69	A5	228	C	C5-C6-N1	7.34	124.67	121.00
39	A7	52	U	N1-C2-O2	7.34	127.94	122.80
69	A5	3413	C	N3-C4-C5	7.33	124.83	121.90
15	CX	186	VAL	C-N-CD	-7.33	104.47	120.60
69	A5	281	C	C6-N1-C2	-7.33	117.37	120.30
69	A5	1386	U	O5'-P-OP1	-7.33	99.10	105.70
69	A5	2497	C	C5-C6-N1	7.33	124.67	121.00
40	A8	19	A	O5'-P-OP2	-7.33	99.10	105.70
69	A5	1554	C	O5'-P-OP1	-7.33	99.10	105.70
69	A5	66	A	N7-C8-N9	7.33	117.47	113.80
69	A5	240	G	O4'-C1'-N9	7.32	114.06	108.20
69	A5	1193	A	P-O3'-C3'	7.32	128.49	119.70
69	A5	981	C	N1-C2-O2	7.32	123.29	118.90
69	A5	2559	C	C6-N1-C2	-7.32	117.37	120.30
69	A5	3300	U	C5-C6-N1	7.32	126.36	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	100	G	C2-N3-C4	7.31	115.56	111.90
69	A5	1713	U	C5'-C4'-O4'	7.31	117.87	109.10
69	A5	3316	U	C6-N1-C2	-7.31	116.61	121.00
69	A5	1366	G	N9-C4-C5	7.30	108.32	105.40
69	A5	3491	C	N1-C2-O2	7.30	123.28	118.90
69	A5	3969	G	C4-N9-C1'	7.30	135.99	126.50
40	A8	84	U	C5-C6-N1	7.30	126.35	122.70
69	A5	2708	C	N3-C2-O2	-7.30	116.79	121.90
69	A5	1165	A	N1-C6-N6	-7.30	114.22	118.60
69	A5	1566	U	OP2-P-O3'	7.29	121.25	105.20
69	A5	2798	C	C6-N1-C2	-7.29	117.38	120.30
69	A5	1715	G	N1-C2-N2	7.29	122.76	116.20
69	A5	1801	U	C5-C6-N1	7.29	126.34	122.70
40	A8	94	C	N1-C2-O2	7.29	123.27	118.90
69	A5	3880	A	C4-C5-N7	7.29	114.34	110.70
69	A5	3448	U	N1-C2-O2	7.28	127.90	122.80
69	A5	94	C	N3-C2-O2	-7.28	116.81	121.90
69	A5	3661	C	N3-C2-O2	-7.28	116.81	121.90
69	A5	1258	C	N1-C2-O2	7.27	123.26	118.90
69	A5	1678	C	C5-C6-N1	7.27	124.64	121.00
69	A5	2783	C	C5-C4-N4	7.27	125.29	120.20
69	A5	309	C	C6-N1-C2	-7.27	117.39	120.30
69	A5	1718	G	N3-C4-N9	7.27	130.36	126.00
69	A5	1150	G	N7-C8-N9	7.27	116.73	113.10
69	A5	1366	G	C6-N1-C2	7.27	129.46	125.10
69	A5	543	A	C5-N7-C8	-7.27	100.27	103.90
69	A5	291	U	C5-C6-N1	7.26	126.33	122.70
69	A5	812	U	C5-C6-N1	7.26	126.33	122.70
69	A5	3464	G	C8-N9-C4	-7.26	103.50	106.40
39	A7	119	C	C6-N1-C2	-7.26	117.40	120.30
69	A5	301	U	C2-N1-C1'	7.25	126.41	117.70
69	A5	522	G	C8-N9-C1'	-7.25	117.57	127.00
69	A5	754	A	N3-C4-C5	7.25	131.88	126.80
69	A5	1173	U	O5'-P-OP1	-7.25	99.17	105.70
69	A5	1699	A	C4-C5-C6	-7.25	113.38	117.00
69	A5	3714	U	C6-N1-C1'	-7.25	111.05	121.20
69	A5	1303	C	N1-C2-O2	7.25	123.25	118.90
69	A5	1095	G	C5-N7-C8	-7.25	100.68	104.30
70	B2	1968	C	C6-N1-C2	-7.25	117.40	120.30
69	A5	1998	U	N1-C2-O2	7.25	127.87	122.80
69	A5	2038	A	C5-N7-C8	-7.25	100.28	103.90
69	A5	653	U	C5-C4-O4	-7.24	121.56	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1355	C	C5-C6-N1	7.24	124.62	121.00
69	A5	811	G	N1-C6-O6	-7.24	115.56	119.90
69	A5	3445	C	C6-N1-C2	-7.24	117.41	120.30
69	A5	1155	U	N1-C2-O2	7.24	127.86	122.80
70	B2	635	C	C6-N1-C2	-7.24	117.41	120.30
14	CP	82	ARG	NE-CZ-NH1	-7.23	116.68	120.30
69	A5	746	G	N3-C4-N9	7.23	130.34	126.00
29	CC	364	GLU	C-N-CA	7.23	139.78	121.70
69	A5	3569	C	C6-N1-C1'	-7.23	112.12	120.80
69	A5	1083	A	N7-C8-N9	7.22	117.41	113.80
69	A5	1752	G	N9-C4-C5	7.22	108.29	105.40
69	A5	1866	G	N3-C4-N9	7.22	130.34	126.00
69	A5	2227	U	N3-C2-O2	-7.22	117.14	122.20
69	A5	2525	C	N1-C2-O2	7.22	123.23	118.90
70	B2	1163	C	C6-N1-C2	-7.22	117.41	120.30
69	A5	3795	G	C4-N9-C1'	7.22	135.88	126.50
69	A5	1329	G	C4-N9-C1'	7.22	135.88	126.50
69	A5	3630	C	C6-N1-C2	-7.22	117.41	120.30
69	A5	3677	U	C6-N1-C1'	-7.21	111.10	121.20
69	A5	3712	G	C4-N9-C1'	-7.21	117.12	126.50
69	A5	2734	A	N1-C6-N6	7.21	122.93	118.60
69	A5	3712	G	N7-C8-N9	-7.21	109.49	113.10
55	AZ	48	LEU	CA-CB-CG	7.21	131.88	115.30
69	A5	2623	C	N3-C2-O2	-7.20	116.86	121.90
69	A5	3281	G	N1-C6-O6	-7.20	115.58	119.90
69	A5	2651	G	O4'-C1'-N9	7.20	113.96	108.20
69	A5	1724	A	C8-N9-C4	-7.20	102.92	105.80
70	B2	313	C	C6-N1-C2	-7.20	117.42	120.30
69	A5	547	U	N3-C2-O2	-7.20	117.16	122.20
69	A5	1597	A	C5-N7-C8	-7.20	100.30	103.90
70	B2	1193	C	N1-C2-O2	7.20	123.22	118.90
70	B2	1596	C	N3-C2-O2	-7.20	116.86	121.90
69	A5	2757	U	C5-C6-N1	7.19	126.30	122.70
69	A5	3716	C	N1-C2-O2	7.19	123.21	118.90
69	A5	631	A	C8-N9-C4	-7.19	102.93	105.80
69	A5	3503	G	C5-C6-O6	7.18	132.91	128.60
69	A5	19	C	C5-C6-N1	7.18	124.59	121.00
69	A5	881	G	N9-C4-C5	7.18	108.27	105.40
40	A8	106	A	C2-N3-C4	7.18	114.19	110.60
69	A5	660	A	N7-C8-N9	7.17	117.39	113.80
69	A5	3516	C	N3-C4-C5	7.17	124.77	121.90
69	A5	3240	U	C5-C6-N1	7.17	126.29	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1149	C	C5-C6-N1	7.17	124.58	121.00
69	A5	31	C	N1-C2-O2	7.17	123.20	118.90
69	A5	476	U	N1-C2-O2	7.17	127.82	122.80
69	A5	545	U	N1-C2-O2	7.17	127.82	122.80
69	A5	1782	C	C6-N1-C2	-7.17	117.43	120.30
69	A5	863	U	N1-C2-O2	7.17	127.81	122.80
69	A5	1974	U	N1-C2-O2	7.17	127.81	122.80
69	A5	1017	A	O4'-C1'-N9	-7.16	102.47	108.20
69	A5	2151	A	C5-C6-N6	7.16	129.43	123.70
69	A5	1588	A	C8-N9-C4	-7.16	102.94	105.80
69	A5	1715	G	N9-C4-C5	7.16	108.26	105.40
69	A5	3918	A	C4-C5-N7	7.16	114.28	110.70
69	A5	439	U	N3-C4-C5	7.16	118.89	114.60
69	A5	874	G	C6-C5-N7	-7.16	126.11	130.40
69	A5	1384	C	N1-C2-O2	7.16	123.19	118.90
69	A5	1193	A	N3-C4-C5	7.15	131.81	126.80
69	A5	449	U	C5-C6-N1	7.15	126.28	122.70
69	A5	3258	C	N3-C4-N4	-7.15	113.00	118.00
69	A5	1599	C	N3-C2-O2	-7.15	116.90	121.90
69	A5	752	U	C6-N1-C2	-7.14	116.71	121.00
69	A5	1908	A	C2-N3-C4	7.14	114.17	110.60
39	A7	78	C	N1-C2-O2	7.14	123.18	118.90
40	A8	33	U	N3-C2-O2	-7.14	117.20	122.20
69	A5	354	A	N1-C2-N3	-7.14	125.73	129.30
69	A5	299	G	N9-C4-C5	7.14	108.25	105.40
70	B2	1582	C	C2-N1-C1'	7.13	126.64	118.80
69	A5	1026	G	N1-C2-N2	-7.13	109.79	116.20
69	A5	1055	U	O5'-P-OP1	-7.12	99.29	105.70
69	A5	3591	A	N3-C4-N9	-7.12	121.70	127.40
69	A5	477	C	C6-N1-C2	-7.12	117.45	120.30
69	A5	1384	C	O5'-P-OP2	-7.12	99.29	105.70
69	A5	93	G	N3-C2-N2	-7.12	114.92	119.90
69	A5	788	C	C4-C5-C6	-7.12	113.84	117.40
69	A5	1759	C	N3-C2-O2	-7.11	116.92	121.90
69	A5	3918	A	O4'-C1'-N9	7.11	113.89	108.20
69	A5	1090	U	N1-C2-N3	7.11	119.17	114.90
69	A5	1981	A	N1-C2-N3	-7.11	125.75	129.30
69	A5	3687	A	C2-N3-C4	7.10	114.15	110.60
69	A5	117	C	N3-C2-O2	-7.10	116.93	121.90
69	A5	3378	U	N1-C2-O2	7.10	127.77	122.80
69	A5	3877	G	O4'-C1'-N9	7.10	113.88	108.20
39	A7	95	U	N3-C4-O4	-7.10	114.43	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1346	C	N1-C2-O2	7.10	123.16	118.90
69	A5	1740	C	C6-N1-C2	-7.09	117.46	120.30
70	B2	1187	U	C5-C6-N1	7.09	126.25	122.70
70	B2	1191	C	C6-N1-C2	-7.09	117.46	120.30
69	A5	94	C	C6-N1-C2	-7.09	117.46	120.30
69	A5	1689	G	P-O3'-C3'	7.09	128.20	119.70
69	A5	360	A	N1-C6-N6	-7.08	114.35	118.60
69	A5	3400	U	OP1-P-O3'	7.08	120.78	105.20
69	A5	458	A	N3-C4-C5	-7.08	121.84	126.80
69	A5	2649	A	O4'-C1'-N9	7.08	113.86	108.20
69	A5	1892	C	N3-C2-O2	-7.08	116.95	121.90
69	A5	3364	C	C6-N1-C2	-7.07	117.47	120.30
69	A5	805	C	C5-C6-N1	7.07	124.54	121.00
69	A5	3520	U	N3-C2-O2	-7.07	117.25	122.20
69	A5	289	C	C6-N1-C2	-7.07	117.47	120.30
70	B2	25	U	P-O3'-C3'	7.07	128.18	119.70
69	A5	1000	G	C5-C6-O6	-7.07	124.36	128.60
70	B2	1991	C	N3-C2-O2	-7.07	116.95	121.90
69	A5	1258	C	N3-C2-O2	-7.06	116.96	121.90
70	B2	1924	C	N3-C2-O2	-7.06	116.96	121.90
69	A5	3755	A	C8-N9-C4	-7.06	102.98	105.80
69	A5	2054	U	N1-C2-O2	7.06	127.74	122.80
69	A5	3344	U	N3-C2-O2	-7.06	117.26	122.20
69	A5	3417	C	C5-C6-N1	7.06	124.53	121.00
69	A5	3275	G	C5-C6-O6	-7.06	124.37	128.60
36	CE	95	LEU	CA-CB-CG	7.05	131.51	115.30
69	A5	1687	U	N1-C2-N3	7.05	119.13	114.90
69	A5	1690	U	N3-C2-O2	-7.05	117.27	122.20
69	A5	3613	G	N7-C8-N9	7.04	116.62	113.10
69	A5	3918	A	C5-N7-C8	-7.04	100.38	103.90
70	B2	635	C	C2-N1-C1'	7.04	126.54	118.80
70	B2	1033	U	N3-C2-O2	-7.04	117.28	122.20
69	A5	1693	C	C5-C6-N1	7.03	124.52	121.00
69	A5	2763	U	N3-C2-O2	-7.03	117.28	122.20
26	Ci	11	LEU	CA-CB-CG	7.03	131.47	115.30
69	A5	997	U	N1-C2-O2	7.03	127.72	122.80
69	A5	1658	G	C5-C6-O6	7.03	132.82	128.60
69	A5	2013	C	N1-C2-O2	7.03	123.12	118.90
69	A5	3381	C	C5-C6-N1	7.03	124.51	121.00
70	B2	550	C	N3-C2-O2	-7.03	116.98	121.90
69	A5	101	C	N3-C2-O2	-7.03	116.98	121.90
69	A5	1196	A	C5-N7-C8	-7.03	100.39	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1359	G	C5-C6-O6	-7.03	124.38	128.60
69	A5	3643	C	N3-C2-O2	-7.02	116.98	121.90
69	A5	1108	G	N9-C4-C5	7.02	108.21	105.40
69	A5	2700	C	C6-N1-C2	-7.01	117.49	120.30
1	CO	202	GLY	N-CA-C	7.01	130.63	113.10
69	A5	246	C	C6-N1-C2	-7.01	117.50	120.30
69	A5	3149	U	C5-C4-O4	7.01	130.10	125.90
69	A5	625	C	C6-N1-C2	-7.01	117.50	120.30
69	A5	1145	C	C5-C6-N1	7.01	124.50	121.00
69	A5	1146	U	C5-C6-N1	7.01	126.20	122.70
69	A5	3292	C	C6-N1-C2	-7.00	117.50	120.30
70	B2	550	C	C6-N1-C2	-7.00	117.50	120.30
69	A5	567	A	C8-N9-C4	-7.00	103.00	105.80
69	A5	1545	A	C5-N7-C8	-7.00	100.40	103.90
69	A5	631	A	N7-C8-N9	7.00	117.30	113.80
69	A5	1527	C	N1-C2-O2	7.00	123.10	118.90
40	A8	32	G	N1-C6-O6	-6.99	115.70	119.90
69	A5	866	C	C2-N1-C1'	6.99	126.49	118.80
69	A5	92	A	C4-C5-N7	6.99	114.19	110.70
69	A5	1151	A	N1-C6-N6	-6.99	114.41	118.60
69	A5	2530	C	C5-C6-N1	6.99	124.49	121.00
6	CN	184	ILE	CG1-CB-CG2	-6.99	96.03	111.40
69	A5	540	G	C4-N9-C1'	6.99	135.58	126.50
69	A5	2715	C	N1-C2-O2	6.98	123.09	118.90
69	A5	2764	A	N9-C4-C5	-6.98	103.01	105.80
70	B2	1861	U	C5-C6-N1	6.98	126.19	122.70
69	A5	1264	U	C5-C6-N1	6.98	126.19	122.70
69	A5	1724	A	C4-N9-C1'	6.97	138.85	126.30
69	A5	1326	A	N9-C4-C5	-6.97	103.01	105.80
40	A8	112	C	C5-C6-N1	6.97	124.48	121.00
69	A5	1167	A	O5'-P-OP2	-6.96	99.43	105.70
69	A5	1796	A	C5-N7-C8	-6.96	100.42	103.90
69	A5	2696	U	N3-C2-O2	-6.95	117.33	122.20
69	A5	3774	U	C2-N1-C1'	6.95	126.04	117.70
69	A5	3757	U	O4'-C1'-N1	6.95	113.76	108.20
69	A5	1316	U	C5-C4-O4	6.95	130.07	125.90
69	A5	1317	A	C8-N9-C4	-6.95	103.02	105.80
69	A5	3397	U	N3-C2-O2	-6.94	117.34	122.20
69	A5	1156	U	O5'-P-OP2	-6.94	99.45	105.70
69	A5	749	U	C6-N1-C2	-6.94	116.84	121.00
69	A5	1080	G	N3-C2-N2	6.94	124.76	119.90
69	A5	566	A	C8-N9-C4	-6.94	103.03	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1135	U	C5-C4-O4	-6.94	121.74	125.90
69	A5	136	C	N1-C2-O2	6.93	123.06	118.90
40	A8	53	C	C6-N1-C2	-6.93	117.53	120.30
69	A5	439	U	N1-C2-O2	6.92	127.65	122.80
69	A5	3463	U	C5-C6-N1	6.92	126.16	122.70
69	A5	3193	C	C2-N1-C1'	6.92	126.41	118.80
36	CE	226	LEU	CA-CB-CG	6.91	131.20	115.30
69	A5	675	C	N3-C2-O2	-6.91	117.06	121.90
69	A5	1004	C	N3-C2-O2	-6.91	117.06	121.90
69	A5	1339	U	C5-C6-N1	6.91	126.16	122.70
8	CD	150	LEU	CA-CB-CG	6.91	131.20	115.30
69	A5	2584	G	C8-N9-C1'	-6.91	118.02	127.00
69	A5	3350	U	C5-C6-N1	6.91	126.16	122.70
69	A5	1303	C	N3-C2-O2	-6.91	117.06	121.90
69	A5	3839	A	P-O3'-C3'	6.91	127.99	119.70
69	A5	2087	C	C2-N1-C1'	6.90	126.39	118.80
69	A5	1618	A	C2-N3-C4	6.90	114.05	110.60
69	A5	2054	U	N3-C2-O2	-6.90	117.37	122.20
69	A5	3387	C	C6-N1-C2	-6.90	117.54	120.30
69	A5	3522	A	O5'-P-OP1	-6.90	99.49	105.70
69	A5	2733	G	C6-N1-C2	-6.90	120.96	125.10
69	A5	3141	A	N7-C8-N9	6.89	117.25	113.80
69	A5	1726	G	O4'-C1'-N9	6.89	113.72	108.20
69	A5	2212	A	N9-C4-C5	-6.89	103.04	105.80
69	A5	2233	C	N3-C2-O2	-6.89	117.08	121.90
69	A5	1099	U	N3-C2-O2	-6.89	117.38	122.20
69	A5	72	C	C6-N1-C2	-6.89	117.55	120.30
69	A5	1025	U	N3-C2-O2	-6.89	117.38	122.20
69	A5	3259	A	N1-C6-N6	-6.88	114.47	118.60
69	A5	2181	A	N1-C6-N6	-6.88	114.47	118.60
69	A5	1366	G	C5-C6-N1	-6.88	108.06	111.50
69	A5	2763	U	C6-N1-C1'	-6.88	111.57	121.20
69	A5	3000	G	N7-C8-N9	6.88	116.54	113.10
69	A5	1734	G	C5-C6-O6	-6.87	124.48	128.60
69	A5	439	U	C5-C6-N1	-6.87	119.27	122.70
69	A5	454	C	N3-C2-O2	-6.87	117.09	121.90
69	A5	1569	U	N1-C2-O2	6.87	127.61	122.80
69	A5	816	A	N1-C6-N6	-6.86	114.48	118.60
69	A5	3398	C	N1-C2-O2	6.86	123.02	118.90
40	A8	37	U	N1-C2-O2	6.86	127.60	122.80
69	A5	543	A	C4-C5-N7	6.86	114.13	110.70
69	A5	1713	U	C6-N1-C2	-6.86	116.88	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1093	C	C6-N1-C2	-6.86	117.56	120.30
69	A5	2243	G	C5-C6-N1	6.85	114.93	111.50
69	A5	3887	U	N3-C2-O2	-6.85	117.41	122.20
69	A5	1545	A	N7-C8-N9	6.85	117.22	113.80
69	A5	984	U	C2-N1-C1'	6.84	125.91	117.70
69	A5	3381	C	C2-N1-C1'	6.84	126.33	118.80
69	A5	3751	C	N1-C2-O2	6.84	123.01	118.90
69	A5	3269	G	C4-C5-N7	6.84	113.54	110.80
69	A5	1316	U	C2-N1-C1'	6.84	125.90	117.70
69	A5	1776	U	N1-C2-O2	6.83	127.58	122.80
69	A5	777	C	C6-N1-C2	-6.83	117.57	120.30
69	A5	3492	G	C8-N9-C4	-6.83	103.67	106.40
69	A5	883	U	N3-C2-O2	-6.83	117.42	122.20
69	A5	1366	G	C5-C6-O6	6.83	132.70	128.60
69	A5	1797	A	C8-N9-C4	-6.83	103.07	105.80
70	B2	1003	C	C6-N1-C2	-6.82	117.57	120.30
69	A5	1142	U	OP1-P-O3'	6.81	120.19	105.20
69	A5	1198	U	N1-C2-O2	6.81	127.57	122.80
69	A5	2725	U	N1-C2-O2	6.81	127.57	122.80
69	A5	3149	U	C6-N1-C2	-6.81	116.91	121.00
69	A5	3305	U	C5-C6-N1	6.81	126.11	122.70
69	A5	1540	U	C6-N1-C2	-6.80	116.92	121.00
69	A5	3665	U	N3-C2-O2	-6.80	117.44	122.20
69	A5	1026	G	N9-C4-C5	-6.80	102.68	105.40
69	A5	1325	C	C6-N1-C2	-6.80	117.58	120.30
69	A5	3540	G	N1-C2-N2	-6.80	110.08	116.20
69	A5	999	U	N1-C2-O2	6.80	127.56	122.80
69	A5	1761	C	N1-C2-O2	6.80	122.98	118.90
69	A5	755	A	C5-N7-C8	-6.79	100.50	103.90
69	A5	2800	C	N3-C2-O2	-6.79	117.14	121.90
69	A5	2696	U	N1-C2-O2	6.79	127.55	122.80
70	B2	1648	C	N1-C2-O2	6.79	122.97	118.90
69	A5	1366	G	N7-C8-N9	6.79	116.49	113.10
69	A5	1079	U	C2-N1-C1'	6.78	125.84	117.70
69	A5	128	C	C5-C6-N1	6.78	124.39	121.00
65	AH	26	LEU	CA-CB-CG	6.78	130.89	115.30
69	A5	1699	A	N3-C4-C5	-6.78	122.06	126.80
69	A5	1315	A	N7-C8-N9	6.78	117.19	113.80
69	A5	429	U	C5-C6-N1	6.77	126.09	122.70
69	A5	1611	G	N1-C6-O6	-6.77	115.84	119.90
69	A5	2789	U	N3-C2-O2	-6.77	117.46	122.20
69	A5	296	C	P-O3'-C3'	6.77	127.83	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	679	G	N3-C4-N9	6.77	130.06	126.00
69	A5	1050	C	N1-C2-O2	6.77	122.96	118.90
69	A5	3593	A	OP1-P-O3'	6.77	120.08	105.20
69	A5	1570	U	C5-C6-N1	6.76	126.08	122.70
69	A5	540	G	C8-N9-C4	-6.76	103.69	106.40
69	A5	352	U	N1-C2-O2	6.76	127.53	122.80
69	A5	2243	G	N3-C4-N9	6.76	130.06	126.00
69	A5	3822	C	C6-N1-C2	-6.76	117.60	120.30
40	A8	18	C	C6-N1-C2	-6.76	117.60	120.30
69	A5	3431	C	N3-C2-O2	-6.76	117.17	121.90
69	A5	831	A	N1-C6-N6	-6.76	114.55	118.60
69	A5	1715	G	C8-N9-C1'	6.75	135.78	127.00
69	A5	2147	C	C6-N1-C2	-6.75	117.60	120.30
69	A5	1145	C	N3-C2-O2	-6.75	117.17	121.90
69	A5	1172	G	O5'-P-OP2	6.75	118.80	110.70
69	A5	1383	A	C6-C5-N7	-6.75	127.57	132.30
69	A5	3671	C	C5-C6-N1	6.75	124.38	121.00
69	A5	3880	A	N7-C8-N9	6.75	117.18	113.80
69	A5	2511	C	N3-C2-O2	-6.75	117.17	121.90
69	A5	3316	U	N3-C2-O2	-6.75	117.47	122.20
69	A5	1360	U	N1-C2-O2	6.75	127.52	122.80
69	A5	3472	A	C4-N9-C1'	6.75	138.45	126.30
69	A5	304	U	C6-N1-C2	-6.75	116.95	121.00
69	A5	110	A	N1-C6-N6	-6.75	114.55	118.60
69	A5	2224	A	C8-N9-C4	-6.75	103.10	105.80
69	A5	179	C	N1-C2-O2	6.74	122.95	118.90
69	A5	454	C	N1-C2-O2	6.74	122.94	118.90
69	A5	1498	C	N3-C2-O2	-6.74	117.18	121.90
69	A5	1866	G	N9-C4-C5	-6.74	102.70	105.40
69	A5	3969	G	N7-C8-N9	6.74	116.47	113.10
40	A8	99	U	C2-N1-C1'	6.74	125.79	117.70
69	A5	1658	G	N1-C6-O6	-6.74	115.86	119.90
69	A5	3269	G	N9-C4-C5	-6.74	102.70	105.40
69	A5	3550	C	C6-N1-C2	-6.74	117.60	120.30
70	B2	1582	C	N1-C2-O2	6.74	122.94	118.90
69	A5	3283	U	C6-N1-C1'	-6.74	111.77	121.20
70	B2	315	C	N1-C2-O2	6.74	122.94	118.90
69	A5	3473	C	OP2-P-O3'	6.74	120.02	105.20
69	A5	3713	C	N3-C4-N4	6.74	122.71	118.00
69	A5	1316	U	O4'-C1'-N1	6.73	113.59	108.20
69	A5	2035	C	N3-C2-O2	-6.73	117.19	121.90
69	A5	546	G	N3-C2-N2	6.73	124.61	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1383	A	C4'-C3'-O3'	6.73	126.46	113.00
70	B2	1120	C	C6-N1-C2	-6.73	117.61	120.30
69	A5	679	G	C2-N3-C4	6.73	115.27	111.90
69	A5	2207	A	C5-C6-N6	-6.73	118.32	123.70
69	A5	1297	G	C4-N9-C1'	6.73	135.25	126.50
69	A5	2516	U	N1-C2-N3	6.73	118.94	114.90
40	A8	94	C	N3-C2-O2	-6.72	117.19	121.90
69	A5	117	C	C2-N1-C1'	6.72	126.20	118.80
69	A5	1353	G	N7-C8-N9	6.72	116.46	113.10
69	A5	2725	U	N3-C2-O2	-6.72	117.49	122.20
69	A5	791	C	N1-C2-N3	6.72	123.90	119.20
69	A5	1752	G	N1-C6-O6	-6.72	115.87	119.90
69	A5	1529	C	N3-C2-O2	-6.72	117.20	121.90
69	A5	1799	U	O5'-P-OP1	6.72	118.76	110.70
69	A5	2779	A	O4'-C1'-N9	6.72	113.58	108.20
69	A5	813	C	C5-C4-N4	-6.72	115.50	120.20
69	A5	1156	U	N3-C2-O2	-6.72	117.50	122.20
69	A5	1595	G	C8-N9-C4	-6.72	103.71	106.40
69	A5	2796	G	C8-N9-C1'	-6.72	118.27	127.00
69	A5	3448	U	N3-C2-O2	-6.72	117.50	122.20
69	A5	3880	A	O4'-C1'-N9	6.72	113.57	108.20
69	A5	1715	G	C5-N7-C8	-6.71	100.94	104.30
69	A5	2218	G	C4-C5-N7	6.71	113.48	110.80
69	A5	663	U	N3-C4-O4	-6.71	114.70	119.40
69	A5	1013	G	C8-N9-C1'	-6.71	118.28	127.00
69	A5	1797	A	N1-C2-N3	-6.71	125.95	129.30
70	B2	1765	U	P-O3'-C3'	6.71	127.75	119.70
69	A5	1105	U	N3-C2-O2	-6.71	117.51	122.20
69	A5	1739	U	N1-C2-O2	6.71	127.49	122.80
38	A9	26	U	C5-C6-N1	6.70	126.05	122.70
69	A5	822	G	N1-C6-O6	-6.70	115.88	119.90
69	A5	2728	C	N3-C2-O2	-6.70	117.21	121.90
69	A5	851	G	C5-C6-O6	-6.70	124.58	128.60
69	A5	1555	G	O5'-P-OP2	-6.70	99.67	105.70
69	A5	2554	U	C6-N1-C2	-6.70	116.98	121.00
69	A5	394	G	C4-C5-N7	6.70	113.48	110.80
69	A5	1421	G	C4-N9-C1'	6.70	135.20	126.50
69	A5	1803	C	C2-N3-C4	6.70	123.25	119.90
69	A5	3654	C	N1-C2-O2	6.70	122.92	118.90
69	A5	40	U	N3-C2-O2	-6.69	117.52	122.20
69	A5	1872	A	N7-C8-N9	6.69	117.15	113.80
69	A5	3477	A	O5'-P-OP2	-6.69	99.68	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	213	A	N9-C4-C5	-6.69	103.12	105.80
40	A8	108	A	N7-C8-N9	6.69	117.14	113.80
69	A5	3553	C	N1-C2-O2	6.69	122.91	118.90
70	B2	1788	C	N1-C2-O2	6.68	122.91	118.90
70	B2	877	U	N1-C2-O2	6.68	127.47	122.80
69	A5	3162	C	N1-C2-O2	6.68	122.91	118.90
69	A5	117	C	C6-N1-C2	-6.67	117.63	120.30
69	A5	1000	G	N3-C4-C5	-6.67	125.26	128.60
40	A8	49	C	N1-C2-O2	6.67	122.90	118.90
69	A5	318	G	C8-N9-C4	-6.67	103.73	106.40
69	A5	797	A	C8-N9-C4	-6.67	103.13	105.80
69	A5	368	C	O4'-C1'-N1	-6.67	102.87	108.20
69	A5	752	U	N3-C4-O4	-6.67	114.73	119.40
69	A5	1654	C	C6-N1-C2	-6.66	117.64	120.30
73	AK	55	LEU	CA-CB-CG	6.66	130.62	115.30
69	A5	1060	G	N9-C4-C5	-6.66	102.74	105.40
69	A5	1197	A	N1-C6-N6	-6.66	114.61	118.60
69	A5	1020	A	N1-C6-N6	-6.66	114.61	118.60
69	A5	1000	G	O5'-P-OP2	-6.66	99.71	105.70
69	A5	3161	U	N3-C2-O2	-6.65	117.54	122.20
69	A5	3235	A	N1-C2-N3	-6.65	125.97	129.30
69	A5	2573	C	C5-C6-N1	6.65	124.33	121.00
39	A7	102	C	N3-C2-O2	-6.65	117.25	121.90
69	A5	1588	A	N1-C6-N6	-6.65	114.61	118.60
69	A5	1614	A	C5-N7-C8	-6.65	100.58	103.90
69	A5	527	U	N1-C2-O2	6.64	127.45	122.80
69	A5	364	U	C5-C6-N1	-6.64	119.38	122.70
69	A5	2185	U	N1-C2-O2	6.64	127.45	122.80
38	A9	26	U	C2-N1-C1'	6.64	125.66	117.70
69	A5	1726	G	N7-C8-N9	6.63	116.42	113.10
69	A5	664	U	C5-C4-O4	-6.63	121.92	125.90
69	A5	66	A	C5-N7-C8	-6.63	100.59	103.90
69	A5	301	U	C6-N1-C1'	-6.63	111.92	121.20
69	A5	427	A	N1-C6-N6	-6.63	114.62	118.60
69	A5	1313	A	N3-C4-N9	-6.63	122.10	127.40
69	A5	1563	A	C2-N3-C4	6.63	113.91	110.60
69	A5	807	A	N1-C6-N6	-6.62	114.63	118.60
69	A5	2492	A	C5-C6-N6	-6.62	118.40	123.70
69	A5	287	G	C5-C6-O6	-6.62	124.63	128.60
69	A5	1353	G	C8-N9-C4	-6.62	103.75	106.40
69	A5	3258	C	N1-C2-O2	6.62	122.87	118.90
69	A5	2225	A	C4-C5-C6	-6.62	113.69	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2150	U	O5'-P-OP2	-6.61	99.75	105.70
69	A5	2492	A	C6-C5-N7	-6.61	127.67	132.30
69	A5	3399	C	C5-C6-N1	6.61	124.31	121.00
69	A5	3309	A	N7-C8-N9	6.61	117.10	113.80
69	A5	1294	U	O5'-P-OP2	-6.61	99.75	105.70
69	A5	3911	G	N3-C4-N9	6.61	129.97	126.00
69	A5	1136	A	N9-C4-C5	-6.61	103.16	105.80
69	A5	553	A	C6-C5-N7	-6.60	127.68	132.30
69	A5	1028	U	N3-C2-O2	-6.60	117.58	122.20
69	A5	1731	G	C2-N3-C4	6.60	115.20	111.90
69	A5	1798	A	N7-C8-N9	6.60	117.10	113.80
69	A5	2067	C	N3-C2-O2	-6.60	117.28	121.90
69	A5	3152	G	O5'-P-OP1	-6.60	99.76	105.70
69	A5	3368	C	N3-C2-O2	-6.60	117.28	121.90
69	A5	3235	A	C2-N3-C4	6.60	113.90	110.60
69	A5	3298	U	N3-C2-O2	-6.60	117.58	122.20
69	A5	1068	C	N3-C2-O2	-6.59	117.28	121.90
70	B2	1978	C	C5-C6-N1	6.59	124.30	121.00
69	A5	2583	U	N1-C2-O2	6.59	127.42	122.80
69	A5	3481	G	O4'-C1'-N9	6.59	113.47	108.20
69	A5	1199	C	C6-N1-C2	-6.59	117.66	120.30
69	A5	3729	A	P-O3'-C3'	6.59	127.61	119.70
69	A5	322	G	C8-N9-C4	6.58	109.03	106.40
69	A5	2224	A	C4-C5-N7	6.58	113.99	110.70
69	A5	840	U	O4'-C1'-N1	6.58	113.47	108.20
69	A5	1548	C	O5'-P-OP1	-6.58	99.78	105.70
69	A5	839	A	C8-N9-C1'	6.58	139.55	127.70
69	A5	1127	C	C5-C6-N1	6.58	124.29	121.00
69	A5	21	U	N3-C2-O2	-6.58	117.59	122.20
69	A5	1333	C	N1-C2-O2	6.58	122.85	118.90
69	A5	3397	U	N1-C2-O2	6.58	127.41	122.80
69	A5	3243	C	C6-N1-C2	-6.58	117.67	120.30
69	A5	1768	G	C8-N9-C1'	-6.57	118.45	127.00
79	Cg	58	ARG	NE-CZ-NH1	6.57	123.59	120.30
69	A5	2763	U	N1-C2-O2	6.57	127.40	122.80
69	A5	1596	A	C5-C6-N1	6.57	120.98	117.70
69	A5	451	A	N1-C2-N3	-6.57	126.02	129.30
69	A5	3710	U	C5-C6-N1	6.57	125.98	122.70
69	A5	3400	U	N1-C2-O2	6.56	127.39	122.80
70	B2	1960	A	N7-C8-N9	6.56	117.08	113.80
69	A5	3473	C	N3-C4-C5	6.56	124.52	121.90
69	A5	1035	G	O4'-C1'-N9	6.56	113.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1725	A	N1-C6-N6	6.56	122.54	118.60
69	A5	660	A	C8-N9-C4	-6.56	103.18	105.80
69	A5	1010	A	N1-C2-N3	-6.56	126.02	129.30
69	A5	1689	G	C4-C5-C6	6.56	122.73	118.80
69	A5	652	G	C5-N7-C8	6.55	107.58	104.30
69	A5	2727	U	OP1-P-OP2	-6.55	109.77	119.60
70	B2	618	G	C4-N9-C1'	6.55	135.02	126.50
39	A7	65	C	N3-C2-O2	-6.55	117.31	121.90
69	A5	311	C	C5-C6-N1	6.55	124.28	121.00
69	A5	1752	G	C6-C5-N7	6.55	134.33	130.40
69	A5	3845	A	N7-C8-N9	6.55	117.08	113.80
69	A5	1102	G	C8-N9-C4	-6.55	103.78	106.40
69	A5	2712	U	C6-N1-C2	-6.55	117.07	121.00
69	A5	2714	U	C5-C6-N1	6.54	125.97	122.70
65	AH	156	LEU	CA-CB-CG	6.54	130.35	115.30
69	A5	1798	A	C8-N9-C4	-6.54	103.18	105.80
69	A5	1009	G	N1-C6-O6	-6.54	115.97	119.90
69	A5	3617	U	C5-C6-N1	6.54	125.97	122.70
69	A5	553	A	C4-C5-N7	6.54	113.97	110.70
69	A5	2760	G	O4'-C1'-N9	6.54	113.43	108.20
69	A5	1157	C	C5-C6-N1	6.54	124.27	121.00
69	A5	2849	U	C5-C6-N1	6.54	125.97	122.70
70	B2	1650	G	N3-C4-C5	-6.54	125.33	128.60
69	A5	1592	U	N3-C4-O4	6.54	123.98	119.40
69	A5	3553	C	C6-N1-C2	-6.54	117.69	120.30
69	A5	2492	A	C5-N7-C8	-6.54	100.63	103.90
69	A5	3378	U	C2-N1-C1'	6.54	125.54	117.70
69	A5	3550	C	C5-C6-N1	6.54	124.27	121.00
69	A5	2767	U	N3-C2-O2	-6.53	117.63	122.20
69	A5	1141	G	C8-N9-C4	-6.53	103.79	106.40
69	A5	1631	U	N3-C2-O2	-6.53	117.63	122.20
69	A5	1065	A	C2-N3-C4	6.53	113.86	110.60
69	A5	2773	G	C2-N3-C4	6.53	115.16	111.90
69	A5	3342	C	C5-C6-N1	6.53	124.26	121.00
69	A5	2163	A	N9-C4-C5	-6.52	103.19	105.80
69	A5	1288	U	C6-N1-C1'	-6.52	112.07	121.20
69	A5	1718	G	C8-N9-C1'	-6.52	118.53	127.00
69	A5	3461	C	N3-C2-O2	-6.51	117.34	121.90
70	B2	1111	U	N1-C2-O2	6.51	127.36	122.80
69	A5	1671	U	N3-C2-O2	-6.51	117.64	122.20
9	CQ	31	LEU	CA-CB-CG	6.50	130.26	115.30
69	A5	207	C	N3-C2-O2	-6.50	117.35	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3374	U	N3-C2-O2	-6.50	117.65	122.20
69	A5	3431	C	C2-N1-C1'	6.50	125.95	118.80
69	A5	872	A	P-O3'-C3'	6.50	127.50	119.70
69	A5	3258	C	N1-C2-N3	6.50	123.75	119.20
69	A5	1369	C	C2-N1-C1'	6.50	125.94	118.80
69	A5	2511	C	C5-C6-N1	6.50	124.25	121.00
70	B2	1087	C	N1-C2-O2	6.49	122.79	118.90
69	A5	1165	A	C4-C5-N7	-6.49	107.46	110.70
69	A5	3347	G	N1-C6-O6	-6.49	116.01	119.90
39	A7	78	C	N3-C2-O2	-6.49	117.36	121.90
69	A5	2067	C	C5-C6-N1	6.49	124.24	121.00
69	A5	1752	G	N3-C2-N2	-6.48	115.36	119.90
69	A5	224	U	P-O3'-C3'	6.48	127.48	119.70
69	A5	3000	G	C5-N7-C8	-6.48	101.06	104.30
69	A5	318	G	N9-C4-C5	6.48	107.99	105.40
69	A5	1960	C	C5-C6-N1	6.47	124.24	121.00
69	A5	866	C	C4-C5-C6	-6.47	114.17	117.40
69	A5	2803	A	N7-C8-N9	6.47	117.03	113.80
69	A5	2268	G	N3-C4-N9	6.47	129.88	126.00
69	A5	356	A	O5'-P-OP1	-6.47	99.88	105.70
70	B2	1817	C	N1-C2-O2	6.46	122.78	118.90
69	A5	2796	G	P-O3'-C3'	6.46	127.45	119.70
69	A5	3365	G	C8-N9-C4	-6.46	103.82	106.40
69	A5	1801	U	C2'-C3'-O3'	6.46	124.03	113.70
69	A5	3596	A	C5-N7-C8	-6.46	100.67	103.90
69	A5	3969	G	C5-N7-C8	-6.46	101.07	104.30
69	A5	49	A	N1-C2-N3	-6.46	126.07	129.30
69	A5	925	C	C2-N1-C1'	6.46	125.90	118.80
70	B2	1991	C	C2-N1-C1'	6.46	125.90	118.80
69	A5	122	C	N3-C2-O2	-6.45	117.38	121.90
39	A7	67	G	N3-C4-N9	-6.45	122.13	126.00
70	B2	1333	C	C2-N1-C1'	6.45	125.90	118.80
69	A5	1594	U	P-O3'-C3'	6.45	127.44	119.70
69	A5	540	G	N7-C8-N9	6.45	116.33	113.10
69	A5	445	C	C5-C6-N1	6.45	124.22	121.00
69	A5	2038	A	C8-N9-C4	-6.44	103.22	105.80
69	A5	2521	A	N7-C8-N9	-6.44	110.58	113.80
69	A5	3320	C	C6-N1-C2	-6.44	117.72	120.30
69	A5	350	C	C5-C6-N1	6.44	124.22	121.00
69	A5	1565	A	C2-N3-C4	6.44	113.82	110.60
69	A5	12	C	C6-N1-C2	-6.43	117.73	120.30
69	A5	1631	U	N1-C2-O2	6.43	127.30	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2170	C	C6-N1-C2	-6.43	117.73	120.30
69	A5	1117	A	OP1-P-OP2	-6.43	109.95	119.60
70	B2	1681	U	C2-N1-C1'	6.43	125.42	117.70
69	A5	3405	U	C5-C4-O4	6.43	129.76	125.90
69	A5	1069	A	C2-N3-C4	6.43	113.81	110.60
69	A5	1518	A	C8-N9-C4	6.43	108.37	105.80
13	CT	144	LEU	CA-CB-CG	6.42	130.07	115.30
69	A5	790	U	C5-C4-O4	-6.42	122.05	125.90
69	A5	692	G	C8-N9-C1'	-6.42	118.65	127.00
40	A8	25	C	C6-N1-C2	-6.42	117.73	120.30
69	A5	2257	C	C6-N1-C2	-6.42	117.73	120.30
69	A5	3721	C	N3-C2-O2	-6.42	117.41	121.90
69	A5	1089	U	C6-N1-C2	-6.42	117.15	121.00
69	A5	1686	A	C4-C5-N7	6.42	113.91	110.70
69	A5	2068	A	C5-N7-C8	-6.42	100.69	103.90
69	A5	92	A	N9-C4-C5	-6.42	103.23	105.80
69	A5	2699	A	C4-C5-C6	-6.41	113.79	117.00
69	A5	1771	G	O5'-P-OP1	-6.41	99.93	105.70
69	A5	2063	A	O4'-C1'-N9	6.41	113.33	108.20
69	A5	2772	G	N3-C4-C5	-6.41	125.40	128.60
69	A5	2798	C	C5-C6-N1	6.41	124.20	121.00
69	A5	2210	U	N3-C4-C5	6.41	118.44	114.60
69	A5	477	C	C5-C6-N1	6.40	124.20	121.00
69	A5	1739	U	C2-N1-C1'	6.40	125.38	117.70
69	A5	3441	C	N3-C2-O2	-6.40	117.42	121.90
69	A5	754	A	C5-C6-N1	-6.40	114.50	117.70
69	A5	1140	G	N1-C6-O6	-6.40	116.06	119.90
69	A5	1274	A	C5-C6-N1	6.40	120.90	117.70
69	A5	2683	G	O4'-C1'-N9	6.40	113.32	108.20
69	A5	3627	C	P-O3'-C3'	6.40	127.38	119.70
69	A5	759	U	C2-N3-C4	-6.39	123.16	127.00
69	A5	1313	A	C4-C5-N7	6.39	113.90	110.70
69	A5	1262	C	N3-C2-O2	-6.39	117.43	121.90
69	A5	3405	U	N3-C4-O4	-6.39	114.93	119.40
69	A5	1724	A	N7-C8-N9	6.39	116.99	113.80
69	A5	2676	U	C6-N1-C1'	-6.39	112.26	121.20
69	A5	2171	U	C2-N1-C1'	6.38	125.36	117.70
69	A5	3186	C	C6-N1-C2	-6.38	117.75	120.30
69	A5	3655	U	P-O3'-C3'	6.38	127.36	119.70
69	A5	541	A	C6-C5-N7	6.38	136.77	132.30
69	A5	3402	C	C2-N1-C1'	-6.38	111.78	118.80
69	A5	1318	A	C8-N9-C4	-6.38	103.25	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3402	C	N1-C2-N3	6.38	123.66	119.20
69	A5	3644	C	N1-C2-O2	6.38	122.73	118.90
69	A5	3185	C	N1-C2-O2	6.37	122.72	118.90
69	A5	2516	U	C4-C5-C6	6.37	123.52	119.70
69	A5	3949	U	N1-C2-O2	6.37	127.26	122.80
69	A5	753	U	N1-C2-O2	6.37	127.26	122.80
69	A5	1357	C	OP2-P-O3'	6.37	119.21	105.20
69	A5	3553	C	C5-C6-N1	6.37	124.18	121.00
70	B2	932	U	C5-C6-N1	6.37	125.88	122.70
69	A5	39	A	C8-N9-C4	-6.37	103.25	105.80
69	A5	881	G	N1-C2-N2	6.37	121.93	116.20
69	A5	1209	A	C2-N3-C4	6.37	113.78	110.60
69	A5	40	U	N1-C2-O2	6.36	127.25	122.80
69	A5	3161	U	N1-C2-O2	6.36	127.25	122.80
69	A5	432	U	N3-C2-O2	-6.36	117.75	122.20
69	A5	811	G	C5-N7-C8	-6.36	101.12	104.30
69	A5	2691	A	N1-C6-N6	-6.36	114.78	118.60
50	AP	83	LEU	CA-CB-CG	6.36	129.93	115.30
69	A5	3226	A	C5-C6-N1	6.36	120.88	117.70
40	A8	64	C	C2-N1-C1'	6.36	125.80	118.80
69	A5	2188	C	N1-C2-O2	6.36	122.72	118.90
69	A5	678	U	N3-C2-O2	-6.36	117.75	122.20
69	A5	1318	A	C6-C5-N7	-6.36	127.85	132.30
69	A5	1689	G	O5'-P-OP1	-6.36	99.98	105.70
69	A5	3844	U	C2-N3-C4	-6.36	123.19	127.00
69	A5	1784	A	C4-C5-C6	-6.36	113.82	117.00
39	A7	82	G	N1-C6-O6	-6.35	116.09	119.90
69	A5	349	C	O5'-P-OP1	-6.35	99.98	105.70
69	A5	911	A	C8-N9-C4	6.35	108.34	105.80
69	A5	2583	U	N3-C2-O2	-6.35	117.75	122.20
69	A5	660	A	C5-N7-C8	-6.35	100.72	103.90
7	CI	132	GLY	C-N-CA	6.34	137.56	121.70
69	A5	1683	U	N1-C2-O2	6.34	127.24	122.80
69	A5	1873	A	C8-N9-C4	6.34	108.34	105.80
69	A5	1407	C	N3-C2-O2	-6.34	117.46	121.90
69	A5	3316	U	C5-C6-N1	6.34	125.87	122.70
69	A5	1627	U	C6-N1-C1'	-6.34	112.32	121.20
69	A5	2492	A	C4-C5-N7	6.34	113.87	110.70
69	A5	3875	U	C5-C6-N1	6.34	125.87	122.70
70	B2	1596	C	C6-N1-C2	-6.34	117.76	120.30
69	A5	2185	U	N3-C2-O2	-6.34	117.76	122.20
69	A5	2780	A	N1-C2-N3	-6.34	126.13	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	201	U	C5-C6-N1	6.34	125.87	122.70
69	A5	752	U	C5-C4-O4	6.34	129.70	125.90
69	A5	2656	C	C6-N1-C2	-6.34	117.77	120.30
69	A5	716	C	C5-C6-N1	6.33	124.17	121.00
69	A5	839	A	N1-C2-N3	-6.33	126.13	129.30
69	A5	429	U	C6-N1-C2	-6.33	117.20	121.00
69	A5	2995	U	C2-N1-C1'	6.33	125.29	117.70
69	A5	1413	C	N3-C4-C5	6.32	124.43	121.90
69	A5	3234	A	C8-N9-C4	6.32	108.33	105.80
69	A5	3404	A	C4-C5-N7	6.32	113.86	110.70
69	A5	3619	U	C6-N1-C2	-6.32	117.21	121.00
70	B2	626	U	C2-N1-C1'	6.32	125.29	117.70
69	A5	3198	C	N3-C2-O2	-6.32	117.47	121.90
69	A5	1389	C	C5-C6-N1	6.32	124.16	121.00
69	A5	1553	C	N3-C2-O2	-6.32	117.47	121.90
69	A5	2219	U	C5-C6-N1	6.32	125.86	122.70
69	A5	2787	U	O4'-C1'-N1	6.32	113.25	108.20
69	A5	995	G	C8-N9-C4	6.31	108.93	106.40
69	A5	522	G	N3-C4-N9	6.31	129.79	126.00
69	A5	1060	G	C8-N9-C1'	-6.31	118.80	127.00
69	A5	3506	U	N3-C2-O2	-6.31	117.78	122.20
69	A5	1325	C	N1-C2-N3	6.31	123.62	119.20
69	A5	3342	C	C4-C5-C6	-6.31	114.25	117.40
69	A5	3374	U	N1-C2-O2	6.31	127.22	122.80
69	A5	3846	U	C4-C5-C6	-6.31	115.91	119.70
69	A5	3389	C	C6-N1-C2	-6.31	117.78	120.30
70	B2	1087	C	N3-C2-O2	-6.31	117.48	121.90
69	A5	33	C	O5'-P-OP1	-6.30	100.03	105.70
69	A5	791	C	C2-N3-C4	-6.30	116.75	119.90
69	A5	1749	A	N1-C6-N6	-6.30	114.82	118.60
69	A5	615	C	C5-C6-N1	6.30	124.15	121.00
69	A5	1543	C	N3-C2-O2	-6.30	117.49	121.90
69	A5	3258	C	O4'-C1'-N1	6.30	113.24	108.20
69	A5	775	U	N1-C2-N3	6.30	118.68	114.90
69	A5	1971	C	O5'-P-OP1	-6.29	100.03	105.70
69	A5	2114	U	C5-C6-N1	6.29	125.85	122.70
69	A5	2268	G	C4-N9-C1'	6.29	134.68	126.50
69	A5	2729	U	N1-C2-O2	6.29	127.21	122.80
69	A5	339	C	C4-C5-C6	-6.29	114.25	117.40
69	A5	3520	U	C5-C4-O4	6.29	129.68	125.90
70	B2	840	U	N3-C2-O2	-6.29	117.80	122.20
70	B2	1193	C	N3-C2-O2	-6.29	117.50	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
70	B2	1870	C	N1-C2-O2	6.29	122.68	118.90
69	A5	1627	U	N1-C2-O2	6.29	127.20	122.80
70	B2	626	U	N1-C2-O2	6.29	127.20	122.80
69	A5	2248	A	C2-N3-C4	6.29	113.74	110.60
50	AP	29	LEU	CA-CB-CG	6.28	129.75	115.30
69	A5	925	C	N1-C2-O2	6.28	122.67	118.90
69	A5	1981	A	C5-N7-C8	-6.28	100.76	103.90
69	A5	3755	A	N1-C6-N6	-6.28	114.83	118.60
69	A5	441	A	N1-C2-N3	-6.28	126.16	129.30
69	A5	1019	U	C6-N1-C2	-6.28	117.23	121.00
69	A5	1621	A	N9-C4-C5	-6.28	103.29	105.80
69	A5	1313	A	O5'-P-OP2	-6.28	100.05	105.70
69	A5	1691	A	N1-C2-N3	-6.28	126.16	129.30
38	A9	26	U	N3-C2-O2	-6.28	117.80	122.20
69	A5	368	C	C5-C6-N1	-6.28	117.86	121.00
69	A5	1116	G	P-O3'-C3'	6.28	127.23	119.70
69	A5	1898	C	C5-C6-N1	6.28	124.14	121.00
69	A5	1265	U	C6-N1-C2	-6.28	117.23	121.00
69	A5	2055	G	C4-C5-N7	6.28	113.31	110.80
69	A5	3362	G	N7-C8-N9	6.28	116.24	113.10
1	CO	112	SER	C-N-CD	-6.27	106.80	120.60
68	Cz	90	LEU	CA-CB-CG	6.27	129.73	115.30
69	A5	120	C	C5-C6-N1	6.27	124.14	121.00
69	A5	780	U	C5-C6-N1	6.27	125.84	122.70
70	B2	366	C	C6-N1-C2	-6.27	117.79	120.30
69	A5	553	A	C2-N3-C4	-6.27	107.47	110.60
69	A5	871	A	P-O3'-C3'	6.27	127.22	119.70
69	A5	1091	G	N1-C6-O6	-6.27	116.14	119.90
69	A5	1676	A	N1-C6-N6	-6.27	114.84	118.60
69	A5	2148	C	C6-N1-C2	-6.27	117.79	120.30
69	A5	2796	G	C4-C5-N7	6.27	113.31	110.80
69	A5	3872	C	N3-C2-O2	-6.27	117.51	121.90
69	A5	1369	C	N3-C2-O2	-6.26	117.52	121.90
69	A5	2733	G	N3-C2-N2	6.26	124.28	119.90
70	B2	1187	U	N3-C2-O2	-6.26	117.82	122.20
14	CP	82	ARG	NE-CZ-NH2	6.26	123.43	120.30
69	A5	984	U	C6-N1-C1'	-6.26	112.44	121.20
69	A5	997	U	N3-C4-O4	-6.26	115.02	119.40
69	A5	2744	C	N1-C2-O2	6.26	122.66	118.90
70	B2	38	C	N1-C2-O2	6.26	122.66	118.90
69	A5	3932	U	C5-C6-N1	6.26	125.83	122.70
70	B2	1844	C	C2-N1-C1'	6.25	125.68	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1019	U	O5'-P-OP1	-6.25	100.07	105.70
69	A5	444	C	N1-C2-O2	6.25	122.65	118.90
69	A5	1085	U	N3-C2-O2	-6.25	117.82	122.20
70	B2	978	C	N1-C2-O2	6.25	122.65	118.90
39	A7	119	C	C5-C6-N1	6.25	124.12	121.00
69	A5	1134	G	C5-C6-O6	6.25	132.35	128.60
69	A5	3494	C	N3-C2-O2	-6.25	117.53	121.90
69	A5	1122	U	N1-C2-N3	6.24	118.65	114.90
69	A5	1872	A	N1-C6-N6	6.24	122.35	118.60
69	A5	3345	A	C8-N9-C4	-6.24	103.30	105.80
69	A5	230	C	N3-C2-O2	-6.24	117.53	121.90
69	A5	1801	U	N1-C2-N3	6.24	118.64	114.90
69	A5	3218	C	C6-N1-C2	-6.24	117.80	120.30
69	A5	2783	C	C6-N1-C2	-6.24	117.81	120.30
38	A9	23	G	N3-C4-C5	6.24	131.72	128.60
39	A7	83	A	OP2-P-O3'	6.24	118.92	105.20
40	A8	84	U	C6-N1-C1'	-6.24	112.47	121.20
69	A5	237	G	C5-C6-O6	-6.24	124.86	128.60
69	A5	3670	G	N3-C4-N9	6.24	129.74	126.00
69	A5	372	U	N1-C2-O2	6.23	127.16	122.80
40	A8	98	U	C5-C4-O4	6.23	129.64	125.90
69	A5	1142	U	O5'-P-OP1	-6.23	100.09	105.70
69	A5	3501	C	O5'-P-OP1	-6.23	100.09	105.70
70	B2	1147	U	C2-N1-C1'	6.23	125.18	117.70
60	Af	100	LEU	CA-CB-CG	6.23	129.63	115.30
69	A5	749	U	N3-C4-O4	6.23	123.76	119.40
69	A5	1018	C	C6-N1-C2	-6.23	117.81	120.30
70	B2	1788	C	C2-N1-C1'	6.23	125.65	118.80
64	AG	84	TYR	C-N-CA	-6.23	106.13	121.70
69	A5	654	G	C5-N7-C8	-6.23	101.19	104.30
69	A5	2525	C	N3-C2-O2	-6.22	117.54	121.90
70	B2	1991	C	C6-N1-C2	-6.22	117.81	120.30
66	AI	148	MET	CA-C-N	6.22	130.89	117.20
69	A5	1369	C	C6-N1-C2	-6.22	117.81	120.30
69	A5	1531	U	C5-C6-N1	-6.22	119.59	122.70
69	A5	1592	U	C5-C4-O4	-6.22	122.17	125.90
69	A5	1864	U	N1-C2-O2	6.22	127.15	122.80
12	CS	82	LEU	CA-CB-CG	6.22	129.60	115.30
69	A5	1080	G	N1-C6-O6	-6.21	116.17	119.90
69	A5	2692	U	C6-N1-C1'	-6.21	112.50	121.20
69	A5	811	G	C4-N9-C1'	-6.21	118.42	126.50
70	B2	1169	C	C6-N1-C2	-6.21	117.81	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1544	U	C6-N1-C2	-6.21	117.27	121.00
69	A5	2147	C	N1-C2-O2	6.21	122.63	118.90
40	A8	44	C	N1-C2-O2	6.21	122.63	118.90
69	A5	3840	G	C8-N9-C4	-6.21	103.92	106.40
40	A8	11	G	C5-C6-O6	6.21	132.32	128.60
69	A5	2812	U	C2-N1-C1'	6.21	125.15	117.70
69	A5	3929	U	N1-C2-O2	6.21	127.15	122.80
40	A8	13	U	N3-C4-O4	-6.21	115.06	119.40
69	A5	100	G	N3-C4-C5	-6.21	125.50	128.60
69	A5	2172	C	C6-N1-C2	-6.21	117.82	120.30
69	A5	301	U	N3-C4-O4	-6.21	115.06	119.40
69	A5	3320	C	C5-C6-N1	6.21	124.10	121.00
69	A5	3936	A	C4-C5-N7	6.21	113.80	110.70
69	A5	72	C	N1-C2-O2	6.20	122.62	118.90
69	A5	2216	A	N1-C6-N6	-6.20	114.88	118.60
75	Ac	55	LEU	CA-CB-CG	6.20	129.57	115.30
69	A5	2191	G	C5-C6-O6	6.20	132.32	128.60
69	A5	3381	C	N1-C2-O2	6.20	122.62	118.90
69	A5	1801	U	O4'-C4'-C3'	-6.20	97.80	104.00
69	A5	2062	A	N9-C4-C5	-6.20	103.32	105.80
69	A5	2995	U	N3-C2-O2	-6.20	117.86	122.20
69	A5	1793	C	C6-N1-C1'	-6.20	113.36	120.80
40	A8	6	U	C6-N1-C2	-6.20	117.28	121.00
69	A5	1143	U	N3-C2-O2	-6.20	117.86	122.20
69	A5	213	A	C8-N9-C4	6.19	108.28	105.80
69	A5	1319	A	N9-C4-C5	-6.19	103.32	105.80
69	A5	1591	U	C5-C6-N1	6.19	125.80	122.70
69	A5	3167	A	N9-C4-C5	6.19	108.28	105.80
70	B2	1844	C	N1-C2-O2	6.19	122.61	118.90
69	A5	751	A	OP2-P-O3'	6.19	118.82	105.20
69	A5	1599	C	N1-C2-O2	6.19	122.61	118.90
69	A5	1726	G	C5-N7-C8	-6.19	101.20	104.30
69	A5	1981	A	C4-C5-C6	-6.19	113.91	117.00
69	A5	3489	A	O5'-P-OP2	-6.19	100.13	105.70
69	A5	3606	G	N3-C4-N9	6.19	129.72	126.00
69	A5	759	U	N3-C2-O2	-6.19	117.87	122.20
40	A8	44	C	OP1-P-OP2	-6.19	110.32	119.60
69	A5	561	A	C2-N3-C4	-6.19	107.51	110.60
69	A5	2546	G	N1-C6-O6	-6.19	116.19	119.90
69	A5	3482	G	N3-C4-C5	-6.19	125.51	128.60
69	A5	2584	G	N3-C4-N9	6.19	129.71	126.00
69	A5	1193	A	C8-N9-C1'	6.18	138.83	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3841	C	O5'-P-OP1	-6.18	100.13	105.70
69	A5	46	C	C2-N1-C1'	6.18	125.60	118.80
69	A5	2530	C	C5-C4-N4	-6.18	115.87	120.20
69	A5	3514	C	C2-N1-C1'	6.18	125.60	118.80
69	A5	1998	U	C5-C6-N1	6.18	125.79	122.70
69	A5	1159	C	P-O3'-C3'	6.18	127.11	119.70
40	A8	37	U	C2-N1-C1'	6.18	125.11	117.70
69	A5	1293	A	C8-N9-C4	-6.18	103.33	105.80
69	A5	849	U	N3-C2-O2	-6.18	117.88	122.20
69	A5	1542	C	C2-N1-C1'	6.18	125.59	118.80
69	A5	2729	U	N3-C2-O2	-6.18	117.88	122.20
69	A5	1164	G	C5-C6-O6	-6.17	124.90	128.60
69	A5	1274	A	C4-C5-C6	-6.17	113.91	117.00
69	A5	1005	G	OP2-P-O3'	6.17	118.78	105.20
69	A5	1026	G	C4-C5-N7	6.17	113.27	110.80
69	A5	1130	U	C6-N1-C2	-6.17	117.30	121.00
69	A5	1355	C	N3-C4-C5	6.17	124.37	121.90
69	A5	1390	C	N3-C4-C5	6.17	124.37	121.90
69	A5	1553	C	N1-C2-O2	6.17	122.60	118.90
69	A5	650	A	C6-N1-C2	6.17	122.30	118.60
69	A5	1193	A	C4-N9-C1'	-6.17	115.20	126.30
69	A5	3353	C	C6-N1-C2	-6.17	117.83	120.30
69	A5	796	A	N1-C6-N6	-6.17	114.90	118.60
69	A5	2198	G	N7-C8-N9	-6.17	110.02	113.10
69	A5	1794	G	C4-N9-C1'	6.16	134.51	126.50
69	A5	2193	C	C4-C5-C6	-6.16	114.32	117.40
69	A5	2786	U	N1-C2-O2	6.16	127.11	122.80
69	A5	279	U	C5-C6-N1	6.16	125.78	122.70
69	A5	1661	C	N3-C2-O2	-6.16	117.59	121.90
69	A5	2708	C	N1-C2-O2	6.16	122.60	118.90
69	A5	760	G	N3-C4-C5	6.16	131.68	128.60
69	A5	3730	G	N3-C4-C5	-6.16	125.52	128.60
69	A5	755	A	C4-C5-N7	6.16	113.78	110.70
69	A5	1725	A	C5-C6-N6	-6.16	118.77	123.70
69	A5	1893	C	C6-N1-C2	-6.16	117.84	120.30
69	A5	3398	C	N3-C2-O2	-6.16	117.59	121.90
69	A5	3846	U	N1-C2-N3	-6.16	111.21	114.90
39	A7	95	U	C5-C4-O4	6.16	129.59	125.90
69	A5	1070	G	OP1-P-O3'	6.16	118.74	105.20
69	A5	1861	A	C8-N9-C4	6.16	108.26	105.80
69	A5	999	U	C5-C6-N1	6.15	125.78	122.70
69	A5	1104	A	C5-C6-N1	6.15	120.78	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1594	U	C2-N1-C1'	6.15	125.08	117.70
69	A5	826	A	N1-C6-N6	-6.15	114.91	118.60
69	A5	874	G	C4-C5-N7	6.15	113.26	110.80
69	A5	2656	C	N1-C2-O2	6.15	122.59	118.90
69	A5	1388	C	C6-N1-C2	-6.14	117.84	120.30
69	A5	2727	U	C2-N1-C1'	6.14	125.07	117.70
38	A9	26	U	N1-C2-O2	6.14	127.10	122.80
69	A5	357	C	N1-C2-O2	6.14	122.58	118.90
69	A5	1364	A	N1-C2-N3	-6.14	126.23	129.30
70	B2	1107	A	N7-C8-N9	6.14	116.87	113.80
69	A5	1133	A	C5-C6-N1	6.14	120.77	117.70
69	A5	3607	C	N3-C4-C5	-6.14	119.44	121.90
69	A5	1725	A	N9-C4-C5	-6.14	103.34	105.80
11	CA	1	MET	CB-CG-SD	6.13	130.80	112.40
69	A5	2709	U	N3-C2-O2	-6.13	117.91	122.20
69	A5	3712	G	C6-C5-N7	6.13	134.08	130.40
70	B2	1924	C	C2-N1-C1'	6.13	125.55	118.80
10	CR	184	LEU	CA-CB-CG	6.13	129.40	115.30
40	A8	102	A	N3-C4-N9	-6.13	122.50	127.40
69	A5	2728	C	C5-C4-N4	-6.13	115.91	120.20
69	A5	2780	A	C8-N9-C4	6.13	108.25	105.80
70	B2	1991	C	N1-C2-O2	6.13	122.58	118.90
69	A5	1565	A	P-O3'-C3'	6.13	127.05	119.70
70	B2	1403	C	N3-C2-O2	-6.13	117.61	121.90
69	A5	375	C	C6-N1-C2	-6.12	117.85	120.30
39	A7	98	G	N3-C2-N2	-6.12	115.61	119.90
36	CE	119	LEU	CA-CB-CG	6.12	129.38	115.30
69	A5	915	C	N3-C2-O2	-6.12	117.61	121.90
15	CX	248	LEU	CA-CB-CG	6.12	129.38	115.30
69	A5	427	A	C5-C6-N1	6.12	120.76	117.70
69	A5	1004	C	N3-C4-C5	6.12	124.35	121.90
69	A5	807	A	C5-C6-N6	6.12	128.59	123.70
69	A5	1008	A	N7-C8-N9	6.12	116.86	113.80
69	A5	1134	G	N3-C2-N2	6.12	124.18	119.90
69	A5	1797	A	C4-N9-C1'	6.12	137.31	126.30
69	A5	33	C	N3-C4-C5	-6.12	119.45	121.90
69	A5	93	G	N9-C4-C5	6.12	107.85	105.40
69	A5	3281	G	C5-C6-N1	6.12	114.56	111.50
69	A5	3511	U	N1-C2-O2	6.12	127.08	122.80
69	A5	1069	A	N1-C6-N6	-6.11	114.93	118.60
69	A5	1085	U	N1-C2-O2	6.11	127.08	122.80
40	A8	44	C	C5-C6-N1	6.11	124.06	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1077	C	N3-C2-O2	-6.11	117.62	121.90
69	A5	1531	U	C5-C4-O4	6.11	129.57	125.90
69	A5	1719	G	C8-N9-C4	-6.11	103.96	106.40
69	A5	3236	A	C5-N7-C8	-6.11	100.85	103.90
69	A5	3474	G	O5'-P-OP2	-6.11	100.20	105.70
69	A5	37	G	N7-C8-N9	6.11	116.15	113.10
69	A5	754	A	C4-C5-N7	6.11	113.75	110.70
69	A5	2489	G	C4-C5-N7	6.11	113.24	110.80
69	A5	3342	C	C2-N3-C4	6.10	122.95	119.90
69	A5	870	U	N1-C2-O2	6.10	127.07	122.80
69	A5	1004	C	N1-C2-O2	6.10	122.56	118.90
69	A5	688	U	N1-C2-O2	6.10	127.07	122.80
69	A5	802	G	C5-C6-O6	6.10	132.26	128.60
69	A5	3613	G	C8-N9-C4	-6.10	103.96	106.40
69	A5	843	A	C8-N9-C4	6.10	108.24	105.80
69	A5	917	G	N1-C6-O6	-6.10	116.24	119.90
69	A5	1793	C	O5'-P-OP2	-6.10	100.21	105.70
69	A5	2517	A	N3-C4-N9	-6.10	122.52	127.40
40	A8	34	C	C5-C6-N1	6.09	124.05	121.00
69	A5	1164	G	C8-N9-C4	6.09	108.84	106.40
40	A8	108	A	C8-N9-C4	-6.09	103.36	105.80
69	A5	1008	A	C8-N9-C4	-6.09	103.36	105.80
69	A5	1018	C	N1-C2-O2	6.09	122.55	118.90
40	A8	30	G	C8-N9-C4	6.09	108.83	106.40
69	A5	1062	C	C6-N1-C2	-6.09	117.86	120.30
69	A5	1170	U	N3-C2-O2	-6.09	117.94	122.20
69	A5	3294	A	C2-N3-C4	6.09	113.64	110.60
70	B2	49	C	N1-C2-O2	6.09	122.55	118.90
40	A8	35	G	N1-C6-O6	-6.08	116.25	119.90
69	A5	1329	G	C8-N9-C1'	-6.08	119.09	127.00
69	A5	2676	U	O4'-C1'-N1	6.08	113.07	108.20
69	A5	2492	A	N1-C6-N6	6.08	122.25	118.60
70	B2	1960	A	C4-N9-C1'	6.08	137.25	126.30
69	A5	1542	C	C5-C6-N1	6.08	124.04	121.00
69	A5	2544	U	O5'-P-OP1	-6.08	100.23	105.70
69	A5	3680	A	N1-C6-N6	-6.08	114.95	118.60
69	A5	1333	C	N3-C2-O2	-6.08	117.65	121.90
69	A5	1768	G	C4-N9-C1'	6.08	134.40	126.50
69	A5	802	G	N9-C4-C5	-6.08	102.97	105.40
69	A5	12	C	O5'-P-OP1	-6.08	100.23	105.70
69	A5	348	A	C5-C6-N6	6.08	128.56	123.70
70	B2	348	C	N1-C2-O2	6.08	122.55	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
70	B2	335	U	N1-C2-O2	6.07	127.05	122.80
69	A5	1134	G	C8-N9-C4	-6.07	103.97	106.40
70	B2	1205	U	C6-N1-C2	-6.07	117.36	121.00
69	A5	136	C	N3-C2-O2	-6.07	117.65	121.90
69	A5	1713	U	N1-C2-O2	6.07	127.05	122.80
69	A5	3167	A	O5'-P-OP2	-6.07	100.24	105.70
69	A5	1199	C	C5-C6-N1	6.07	124.03	121.00
69	A5	1513	C	C5-C6-N1	6.07	124.03	121.00
69	A5	1733	A	C4-C5-N7	6.07	113.73	110.70
69	A5	2248	A	N1-C6-N6	-6.07	114.96	118.60
69	A5	2663	C	C6-N1-C2	-6.07	117.87	120.30
69	A5	2683	G	N3-C4-N9	6.07	129.64	126.00
69	A5	3167	A	C8-N9-C4	-6.07	103.37	105.80
69	A5	3309	A	O4'-C1'-N9	-6.07	103.35	108.20
39	A7	65	C	N1-C2-O2	6.06	122.54	118.90
69	A5	812	U	C6-N1-C2	-6.06	117.36	121.00
69	A5	1759	C	N1-C2-O2	6.06	122.54	118.90
69	A5	462	C	N1-C2-O2	6.06	122.54	118.90
69	A5	1796	A	C6-C5-N7	-6.06	128.06	132.30
69	A5	1748	C	C4-C5-C6	-6.06	114.37	117.40
69	A5	208	U	N1-C2-O2	6.06	127.04	122.80
69	A5	2684	C	C6-N1-C1'	-6.06	113.53	120.80
69	A5	788	C	C5-C6-N1	6.06	124.03	121.00
69	A5	2800	C	C6-N1-C2	-6.06	117.88	120.30
69	A5	3757	U	C5-C6-N1	6.06	125.73	122.70
69	A5	822	G	C2-N3-C4	6.06	114.93	111.90
40	A8	114	G	N7-C8-N9	6.05	116.13	113.10
69	A5	998	G	C5-C6-O6	-6.05	124.97	128.60
69	A5	1647	A	N1-C2-N3	-6.05	126.27	129.30
69	A5	340	U	N3-C2-O2	-6.05	117.96	122.20
69	A5	3269	G	C6-C5-N7	-6.05	126.77	130.40
69	A5	3969	G	C8-N9-C1'	-6.05	119.13	127.00
26	Ci	4	ARG	C-N-CA	6.05	136.82	121.70
69	A5	316	U	N3-C2-O2	-6.05	117.97	122.20
69	A5	926	U	P-O3'-C3'	6.05	126.96	119.70
69	A5	1370	C	N3-C2-O2	-6.05	117.67	121.90
69	A5	1756	G	N1-C6-O6	-6.05	116.27	119.90
69	A5	3712	G	N1-C6-O6	-6.05	116.27	119.90
70	B2	626	U	N3-C2-O2	-6.05	117.97	122.20
69	A5	130	C	N3-C2-O2	-6.05	117.67	121.90
69	A5	3450	G	OP1-P-O3'	6.05	118.50	105.20
69	A5	2804	U	C5-C6-N1	6.04	125.72	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1316	U	C6-N1-C2	-6.04	117.37	121.00
40	A8	43	A	N1-C6-N6	-6.04	114.97	118.60
69	A5	23	U	N1-C2-O2	6.04	127.03	122.80
69	A5	25	G	O5'-P-OP1	-6.04	100.26	105.70
69	A5	1027	A	C2-N3-C4	6.04	113.62	110.60
69	A5	1753	G	N1-C6-O6	6.04	123.52	119.90
69	A5	2129	C	P-O3'-C3'	6.04	126.95	119.70
70	B2	1273	U	N1-C2-O2	6.04	127.03	122.80
69	A5	439	U	C6-N1-C2	6.04	124.62	121.00
69	A5	1694	A	N1-C2-N3	-6.04	126.28	129.30
18	Cr	76	ARG	C-N-CD	-6.04	107.32	120.60
69	A5	3751	C	O4'-C1'-N1	6.04	113.03	108.20
29	CC	307	ASP	CB-CG-OD1	6.04	123.73	118.30
22	CF	172	ILE	CG1-CB-CG2	-6.03	98.13	111.40
39	A7	26	C	C6-N1-C2	-6.03	117.89	120.30
40	A8	25	C	C5-C6-N1	6.03	124.02	121.00
40	A8	102	A	C4-C5-C6	-6.03	113.98	117.00
70	B2	1033	U	C2-N1-C1'	6.03	124.94	117.70
69	A5	3440	C	C6-N1-C2	-6.03	117.89	120.30
69	A5	654	G	C4-C5-N7	6.03	113.21	110.80
69	A5	1142	U	C2-N1-C1'	6.03	124.93	117.70
69	A5	3415	U	C6-N1-C2	-6.03	117.39	121.00
70	B2	932	U	C6-N1-C2	-6.02	117.39	121.00
40	A8	15	G	O4'-C1'-N9	6.02	113.01	108.20
69	A5	1396	A	C4-N9-C1'	6.02	137.13	126.30
69	A5	17	C	C6-N1-C2	-6.01	117.89	120.30
69	A5	645	U	C6-N1-C2	-6.01	117.39	121.00
69	A5	652	G	C4-C5-N7	-6.01	108.39	110.80
69	A5	287	G	N9-C4-C5	-6.01	103.00	105.40
69	A5	301	U	N3-C4-C5	6.01	118.21	114.60
69	A5	1313	A	C6-N1-C2	6.01	122.21	118.60
69	A5	1390	C	C6-N1-C1'	-6.01	113.58	120.80
69	A5	1421	G	N3-C4-C5	-6.01	125.59	128.60
69	A5	1997	C	C6-N1-C2	-6.01	117.90	120.30
40	A8	9	G	N7-C8-N9	6.01	116.10	113.10
69	A5	780	U	C6-N1-C2	-6.01	117.39	121.00
69	A5	1140	G	C5-C6-O6	6.01	132.21	128.60
69	A5	1604	G	N3-C4-C5	-6.01	125.60	128.60
69	A5	2162	C	C2-N1-C1'	6.01	125.41	118.80
69	A5	1311	U	N1-C2-O2	6.01	127.00	122.80
69	A5	3481	G	N1-C6-O6	-6.00	116.30	119.90
69	A5	104	A	N7-C8-N9	6.00	116.80	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
70	B2	1832	C	C6-N1-C2	-6.00	117.90	120.30
69	A5	1101	A	N1-C6-N6	-6.00	115.00	118.60
69	A5	11	C	C6-N1-C2	-6.00	117.90	120.30
69	A5	879	U	N3-C2-O2	-6.00	118.00	122.20
69	A5	2194	G	C4-N9-C1'	6.00	134.30	126.50
69	A5	3235	A	C5-C6-N6	-6.00	118.90	123.70
69	A5	552	U	N3-C2-O2	-5.99	118.00	122.20
69	A5	631	A	N3-C4-C5	-5.99	122.61	126.80
69	A5	3462	A	N1-C2-N3	-5.99	126.30	129.30
69	A5	1284	A	O4'-C1'-N9	5.99	112.99	108.20
69	A5	2212	A	C4-C5-N7	5.99	113.69	110.70
69	A5	2721	C	C5-C6-N1	5.99	124.00	121.00
69	A5	1484	U	C2-N1-C1'	5.99	124.89	117.70
69	A5	2743	C	C4-C5-C6	-5.99	114.41	117.40
69	A5	1015	G	C5-C6-N1	5.99	114.49	111.50
69	A5	3551	U	C5-C6-N1	5.99	125.69	122.70
69	A5	3716	C	N3-C4-C5	5.99	124.30	121.90
69	A5	1108	G	C4-C5-C6	5.99	122.39	118.80
70	B2	1120	C	N3-C2-O2	-5.99	117.71	121.90
69	A5	1724	A	C6-C5-N7	-5.98	128.11	132.30
69	A5	3727	A	N7-C8-N9	-5.98	110.81	113.80
69	A5	370	A	OP1-P-OP2	-5.98	110.62	119.60
69	A5	1971	C	C6-N1-C2	-5.98	117.91	120.30
69	A5	527	U	N3-C2-O2	-5.98	118.02	122.20
69	A5	31	C	N3-C2-O2	-5.98	117.72	121.90
69	A5	298	U	OP1-P-OP2	-5.98	110.64	119.60
69	A5	2513	G	N3-C4-N9	5.97	129.59	126.00
69	A5	3633	U	C5-C6-N1	5.97	125.69	122.70
69	A5	440	U	C6-N1-C2	-5.97	117.42	121.00
69	A5	1094	A	C5-C6-N1	5.97	120.69	117.70
69	A5	1177	U	C5-C6-N1	5.97	125.69	122.70
69	A5	1710	G	C4-C5-N7	5.97	113.19	110.80
69	A5	1145	C	C2-N1-C1'	5.97	125.36	118.80
39	A7	60	C	C5-C6-N1	5.97	123.98	121.00
40	A8	95	A	O5'-P-OP2	-5.97	100.33	105.70
69	A5	883	U	C4-C5-C6	-5.97	116.12	119.70
69	A5	1681	G	N1-C6-O6	-5.97	116.32	119.90
69	A5	2740	C	C5-C6-N1	5.97	123.98	121.00
69	A5	3193	C	C6-N1-C2	-5.97	117.91	120.30
69	A5	3593	A	N1-C6-N6	-5.97	115.02	118.60
69	A5	842	A	O5'-P-OP1	-5.96	100.33	105.70
69	A5	1165	A	C2-N3-C4	5.96	113.58	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2530	C	N3-C4-N4	5.96	122.17	118.00
69	A5	3718	A	O5'-P-OP2	-5.96	100.33	105.70
40	A8	114	G	C8-N9-C4	-5.96	104.02	106.40
69	A5	3714	U	C6-N1-C2	-5.96	117.42	121.00
69	A5	3716	C	C2-N1-C1'	5.96	125.36	118.80
69	A5	1176	A	O5'-P-OP2	-5.96	100.34	105.70
69	A5	1605	U	N1-C2-O2	5.96	126.97	122.80
69	A5	2194	G	N3-C4-N9	5.96	129.58	126.00
69	A5	3184	U	N3-C2-O2	-5.96	118.03	122.20
69	A5	1909	U	C5-C6-N1	5.96	125.68	122.70
69	A5	2523	A	N9-C4-C5	5.96	108.18	105.80
69	A5	798	C	C2-N1-C1'	5.95	125.35	118.80
69	A5	995	G	N7-C8-N9	-5.95	110.12	113.10
69	A5	1062	C	C5-C6-N1	5.95	123.98	121.00
69	A5	1659	A	O4'-C1'-N9	-5.95	103.44	108.20
69	A5	2106	C	O5'-P-OP1	-5.95	100.34	105.70
69	A5	2177	G	C5-C6-O6	5.95	132.17	128.60
5	Ca	66	ARG	C-N-CA	5.95	136.57	121.70
69	A5	1122	U	N3-C4-O4	-5.95	115.23	119.40
69	A5	2561	A	N1-C6-N6	-5.95	115.03	118.60
69	A5	3887	U	C5-C4-O4	5.95	129.47	125.90
69	A5	1739	U	C6-N1-C2	-5.95	117.43	121.00
69	A5	2603	U	C5-C6-N1	5.95	125.67	122.70
69	A5	3138	G	N3-C4-N9	5.95	129.57	126.00
70	B2	1844	C	C6-N1-C2	-5.95	117.92	120.30
69	A5	524	A	O5'-P-OP2	-5.95	100.35	105.70
39	A7	91	C	C2-N1-C1'	5.95	125.34	118.80
69	A5	630	U	N1-C2-O2	5.95	126.96	122.80
69	A5	1407	C	P-O3'-C3'	5.95	126.83	119.70
69	A5	3251	C	N3-C4-N4	-5.94	113.84	118.00
69	A5	789	G	C4-C5-N7	5.94	113.18	110.80
69	A5	3192	C	C5-C6-N1	5.94	123.97	121.00
69	A5	567	A	N7-C8-N9	5.94	116.77	113.80
69	A5	3624	C	C5-C6-N1	5.94	123.97	121.00
69	A5	1735	G	N1-C6-O6	-5.94	116.34	119.90
69	A5	1608	G	N7-C8-N9	5.94	116.07	113.10
69	A5	242	C	N3-C2-O2	-5.93	117.75	121.90
69	A5	285	G	C6-C5-N7	-5.93	126.84	130.40
69	A5	1208	U	N3-C2-O2	-5.93	118.05	122.20
69	A5	831	A	N1-C2-N3	-5.93	126.33	129.30
69	A5	1423	C	C6-N1-C2	-5.93	117.93	120.30
69	A5	2109	G	O5'-P-OP2	-5.93	100.36	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2469	U	N1-C2-O2	5.93	126.95	122.80
69	A5	2812	U	N3-C2-O2	-5.93	118.05	122.20
69	A5	1338	U	N3-C2-O2	-5.93	118.05	122.20
69	A5	1588	A	N3-C4-N9	5.93	132.15	127.40
69	A5	2092	U	C5-C6-N1	5.93	125.67	122.70
69	A5	3795	G	N3-C4-C5	-5.93	125.64	128.60
70	B2	416	C	N1-C2-O2	5.93	122.46	118.90
69	A5	874	G	C8-N9-C1'	-5.93	119.29	127.00
69	A5	3343	A	C8-N9-C4	-5.93	103.43	105.80
69	A5	1369	C	C5-C6-N1	5.93	123.96	121.00
69	A5	1676	A	N1-C2-N3	-5.93	126.34	129.30
69	A5	3539	C	N3-C4-C5	5.93	124.27	121.90
69	A5	802	G	N3-C2-N2	5.93	124.05	119.90
69	A5	1383	A	C3'-C2'-C1'	-5.93	96.76	101.50
69	A5	1631	U	C5-C6-N1	5.93	125.66	122.70
70	B2	1929	U	N1-C2-O2	5.93	126.95	122.80
69	A5	910	C	C5-C4-N4	5.92	124.35	120.20
69	A5	752	U	OP2-P-O3'	5.92	118.23	105.20
69	A5	425	A	C6-N1-C2	5.92	122.15	118.60
69	A5	1551	U	OP2-P-O3'	5.92	118.22	105.20
70	B2	1546	U	P-O3'-C3'	5.92	126.81	119.70
69	A5	426	A	N1-C6-N6	-5.92	115.05	118.60
69	A5	3846	U	N1-C2-O2	5.92	126.94	122.80
69	A5	3918	A	N7-C8-N9	5.92	116.76	113.80
69	A5	448	A	N1-C2-N3	-5.92	126.34	129.30
69	A5	3677	U	N1-C2-O2	5.92	126.94	122.80
69	A5	1078	G	C8-N9-C4	-5.91	104.04	106.40
69	A5	2700	C	N3-C2-O2	-5.91	117.76	121.90
69	A5	37	G	C8-N9-C4	-5.91	104.04	106.40
69	A5	752	U	C5-C6-N1	5.91	125.66	122.70
69	A5	1325	C	N1-C2-O2	5.91	122.44	118.90
69	A5	3487	A	N7-C8-N9	5.91	116.75	113.80
70	B2	1949	A	P-O3'-C3'	5.91	126.79	119.70
39	A7	52	U	C2-N1-C1'	5.91	124.79	117.70
69	A5	844	C	C6-N1-C2	-5.91	117.94	120.30
69	A5	1332	C	N3-C2-O2	-5.91	117.77	121.90
69	A5	3461	C	C5-C6-N1	5.91	123.95	121.00
69	A5	1264	U	N3-C2-O2	-5.91	118.07	122.20
69	A5	1423	C	N3-C2-O2	-5.91	117.77	121.90
69	A5	2755	G	C4-C5-N7	5.91	113.16	110.80
69	A5	2038	A	N1-C6-N6	5.90	122.14	118.60
69	A5	2155	A	N1-C2-N3	5.90	132.25	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3677	U	C3'-C2'-C1'	-5.90	96.78	101.50
69	A5	680	C	C6-N1-C2	-5.90	117.94	120.30
69	A5	1028	U	N3-C4-O4	-5.90	115.27	119.40
69	A5	1680	U	C5-C6-N1	5.90	125.65	122.70
69	A5	2649	A	N7-C8-N9	5.90	116.75	113.80
69	A5	2543	C	N1-C2-O2	5.89	122.44	118.90
69	A5	3264	A	O5'-P-OP2	-5.89	100.39	105.70
69	A5	3758	G	C6-C5-N7	-5.89	126.86	130.40
69	A5	778	C	C5-C6-N1	5.89	123.95	121.00
69	A5	1148	C	C6-N1-C2	-5.89	117.94	120.30
69	A5	2062	A	C8-N9-C4	5.89	108.16	105.80
69	A5	3492	G	N7-C8-N9	5.89	116.05	113.10
2	CL	160	GLN	N-CA-C	5.89	126.91	111.00
69	A5	96	G	O4'-C1'-N9	5.89	112.91	108.20
69	A5	1000	G	C5-C6-N1	5.89	114.44	111.50
69	A5	1100	G	C4-C5-N7	5.89	113.16	110.80
69	A5	1131	C	C6-N1-C2	-5.89	117.94	120.30
69	A5	3512	U	N3-C2-O2	-5.89	118.08	122.20
69	A5	2169	U	C4-C5-C6	-5.89	116.17	119.70
70	B2	1648	C	C6-N1-C1'	-5.89	113.73	120.80
69	A5	425	A	N1-C6-N6	5.89	122.13	118.60
69	A5	662	A	N1-C2-N3	-5.89	126.36	129.30
69	A5	862	U	C5-C4-O4	5.89	129.43	125.90
69	A5	1863	U	C6-N1-C2	-5.89	117.47	121.00
69	A5	3908	U	N3-C2-O2	-5.89	118.08	122.20
39	A7	80	U	N3-C2-O2	-5.88	118.08	122.20
69	A5	173	A	C8-N9-C4	-5.88	103.45	105.80
69	A5	1359	G	N3-C4-N9	5.88	129.53	126.00
69	A5	1574	A	N3-C4-N9	5.88	132.11	127.40
69	A5	3399	C	N1-C2-O2	5.88	122.43	118.90
27	Ck	42	LEU	CA-CB-CG	5.88	128.83	115.30
69	A5	767	A	C4-C5-N7	5.88	113.64	110.70
69	A5	868	A	C2-N3-C4	5.88	113.54	110.60
70	B2	422	A	P-O3'-C3'	5.88	126.76	119.70
40	A8	14	G	C8-N9-C4	-5.88	104.05	106.40
69	A5	814	U	O5'-P-OP1	-5.88	100.41	105.70
69	A5	1726	G	C6-C5-N7	-5.88	126.87	130.40
70	B2	116	U	C5-C6-N1	5.88	125.64	122.70
69	A5	751	A	O5'-P-OP1	-5.88	100.41	105.70
69	A5	1074	U	N1-C2-O2	5.88	126.91	122.80
69	A5	1426	U	C6-N1-C2	-5.88	117.47	121.00
69	A5	1567	G	O5'-P-OP2	-5.88	100.41	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2153	C	N3-C4-C5	5.88	124.25	121.90
69	A5	3422	A	N1-C6-N6	-5.88	115.07	118.60
69	A5	1350	A	C4-C5-N7	5.88	113.64	110.70
69	A5	3184	U	N1-C2-O2	5.88	126.91	122.80
70	B2	849	U	C2-N1-C1'	5.88	124.75	117.70
70	B2	1824	C	N1-C2-O2	5.88	122.42	118.90
69	A5	3506	U	N1-C2-O2	5.87	126.91	122.80
69	A5	3710	U	N1-C2-O2	5.87	126.91	122.80
69	A5	3753	A	O4'-C1'-N9	5.87	112.90	108.20
69	A5	1739	U	N3-C2-O2	-5.87	118.09	122.20
69	A5	3226	A	N1-C6-N6	-5.87	115.08	118.60
69	A5	3491	C	N3-C4-N4	-5.87	113.89	118.00
69	A5	117	C	N1-C2-O2	5.87	122.42	118.90
69	A5	2147	C	N3-C2-O2	-5.87	117.79	121.90
70	B2	1185	U	P-O3'-C3'	5.87	126.74	119.70
70	B2	1345	U	C2-N1-C1'	5.87	124.74	117.70
70	B2	1727	U	C2-N1-C1'	5.87	124.74	117.70
69	A5	100	G	C5-C6-N1	5.87	114.43	111.50
69	A5	1512	C	C5-C6-N1	5.87	123.93	121.00
69	A5	225	U	P-O3'-C3'	5.86	126.74	119.70
69	A5	3795	G	C2-N3-C4	5.86	114.83	111.90
69	A5	3569	C	C5-C6-N1	5.86	123.93	121.00
25	Cf	63	LEU	CB-CG-CD1	-5.86	101.04	111.00
39	A7	66	G	O5'-P-OP1	-5.86	100.43	105.70
70	B2	1816	C	N1-C2-O2	5.86	122.42	118.90
40	A8	108	A	P-O3'-C3'	5.86	126.73	119.70
39	A7	102	C	C6-N1-C2	-5.86	117.96	120.30
69	A5	1193	A	C2-N3-C4	-5.86	107.67	110.60
69	A5	2160	C	C6-N1-C2	-5.86	117.96	120.30
40	A8	102	A	N3-C4-C5	5.86	130.90	126.80
69	A5	990	U	N1-C2-O2	5.86	126.90	122.80
69	A5	2199	A	C4-C5-C6	-5.86	114.07	117.00
70	B2	399	C	C6-N1-C2	-5.86	117.96	120.30
69	A5	1153	G	O5'-P-OP1	-5.85	100.43	105.70
69	A5	1175	C	N1-C2-O2	5.85	122.41	118.90
69	A5	1793	C	N1-C2-O2	5.85	122.41	118.90
69	A5	2148	C	N1-C2-O2	5.85	122.41	118.90
69	A5	3246	G	C2-N3-C4	-5.85	108.97	111.90
69	A5	427	A	O5'-P-OP2	-5.85	100.43	105.70
39	A7	95	U	N1-C2-O2	5.85	126.89	122.80
69	A5	1196	A	C4-C5-N7	5.85	113.62	110.70
69	A5	1631	U	C6-N1-C1'	-5.85	113.01	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2718	U	N1-C2-O2	5.85	126.89	122.80
69	A5	1011	U	C5-C6-N1	5.85	125.62	122.70
69	A5	1515	U	C6-N1-C2	-5.85	117.49	121.00
69	A5	1080	G	C8-N9-C4	5.84	108.74	106.40
69	A5	1596	A	C8-N9-C4	-5.84	103.46	105.80
69	A5	664	U	C5-C6-N1	5.84	125.62	122.70
69	A5	1686	A	C5-N7-C8	-5.84	100.98	103.90
69	A5	1316	U	N3-C4-C5	-5.84	111.10	114.60
69	A5	1332	C	N1-C2-O2	5.84	122.40	118.90
69	A5	2055	G	C6-C5-N7	-5.84	126.90	130.40
69	A5	2476	U	C5-C6-N1	5.84	125.62	122.70
69	A5	546	G	N1-C6-O6	5.84	123.40	119.90
69	A5	2726	A	O5'-P-OP1	5.84	117.70	110.70
69	A5	3809	U	N3-C2-O2	-5.84	118.11	122.20
15	CX	186	VAL	C-N-CA	5.83	146.50	122.00
69	A5	1688	A	N1-C2-N3	-5.83	126.38	129.30
69	A5	2162	C	C6-N1-C2	-5.83	117.97	120.30
69	A5	1365	U	C6-N1-C2	-5.83	117.50	121.00
69	A5	1659	A	N1-C6-N6	-5.83	115.10	118.60
40	A8	27	C	C5-C4-N4	5.83	124.28	120.20
69	A5	1568	A	N1-C2-N3	-5.83	126.39	129.30
69	A5	1712	C	C6-N1-C2	-5.83	117.97	120.30
70	B2	49	C	C5-C6-N1	5.83	123.91	121.00
69	A5	72	C	N3-C2-O2	-5.83	117.82	121.90
69	A5	103	A	C4-C5-C6	-5.83	114.09	117.00
69	A5	2580	C	C5-C6-N1	5.83	123.91	121.00
69	A5	3481	G	C8-N9-C4	-5.83	104.07	106.40
69	A5	3403	G	OP1-P-O3'	5.82	118.01	105.20
29	CC	93	GLY	N-CA-C	5.82	127.66	113.10
69	A5	1673	C	C6-N1-C2	-5.82	117.97	120.30
69	A5	1892	C	C6-N1-C2	-5.82	117.97	120.30
69	A5	772	G	N9-C4-C5	-5.82	103.07	105.40
69	A5	787	C	C5-C4-N4	5.82	124.27	120.20
69	A5	3661	C	C6-N1-C2	-5.82	117.97	120.30
69	A5	3811	A	C6-N1-C2	5.82	122.09	118.60
70	B2	618	G	C8-N9-C1'	-5.82	119.44	127.00
69	A5	1515	U	C5-C6-N1	5.82	125.61	122.70
69	A5	856	A	N9-C4-C5	-5.81	103.47	105.80
69	A5	1733	A	N9-C4-C5	-5.81	103.47	105.80
40	A8	17	U	N3-C2-O2	-5.81	118.13	122.20
69	A5	856	A	C5-C6-N6	-5.81	119.05	123.70
69	A5	3141	A	C5-N7-C8	-5.81	100.99	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3363	G	N7-C8-N9	5.81	116.01	113.10
69	A5	2510	A	N7-C8-N9	5.81	116.71	113.80
69	A5	675	C	N1-C2-O2	5.81	122.39	118.90
69	A5	1316	U	N3-C2-O2	-5.81	118.13	122.20
69	A5	3149	U	N1-C2-O2	5.81	126.87	122.80
69	A5	1679	U	C5-C6-N1	5.81	125.60	122.70
69	A5	2745	A	N1-C2-N3	-5.81	126.40	129.30
69	A5	3760	A	P-O3'-C3'	5.81	126.67	119.70
69	A5	3822	C	C5-C6-N1	5.81	123.90	121.00
16	CY	30	MET	CA-CB-CG	5.80	123.17	113.30
39	A7	95	U	N3-C2-O2	-5.80	118.14	122.20
69	A5	541	A	C8-N9-C4	5.80	108.12	105.80
69	A5	1527	C	OP2-P-O3'	5.80	117.97	105.20
5	Ca	13	ARG	NE-CZ-NH2	-5.80	117.40	120.30
69	A5	1143	U	OP2-P-O3'	5.80	117.97	105.20
69	A5	1784	A	N7-C8-N9	-5.80	110.90	113.80
69	A5	2772	G	C2-N3-C4	5.80	114.80	111.90
69	A5	2995	U	N1-C2-O2	5.80	126.86	122.80
69	A5	1146	U	C6-N1-C2	-5.80	117.52	121.00
69	A5	1360	U	C5-C4-O4	5.80	129.38	125.90
69	A5	2007	U	O4'-C1'-N1	5.80	112.84	108.20
69	A5	2796	G	N1-C6-O6	5.80	123.38	119.90
70	B2	1020	U	N3-C2-O2	-5.80	118.14	122.20
69	A5	1565	A	N7-C8-N9	5.80	116.70	113.80
69	A5	2512	U	N3-C2-O2	-5.80	118.14	122.20
70	B2	1273	U	C2-N1-C1'	5.80	124.66	117.70
38	A9	12	C	C5-C6-N1	5.80	123.90	121.00
69	A5	2169	U	C2-N3-C4	5.80	130.48	127.00
55	AZ	87	LEU	CA-CB-CG	5.79	128.62	115.30
69	A5	1146	U	O5'-P-OP1	-5.79	100.48	105.70
70	B2	307	U	C5-C6-N1	5.79	125.60	122.70
69	A5	1420	A	C8-N9-C4	-5.79	103.48	105.80
69	A5	2573	C	C6-N1-C2	-5.79	117.98	120.30
70	B2	38	C	C6-N1-C2	-5.79	117.98	120.30
69	A5	1566	U	N3-C2-O2	-5.79	118.15	122.20
69	A5	1800	U	N1-C2-O2	5.79	126.85	122.80
69	A5	2155	A	C6-C5-N7	-5.79	128.25	132.30
69	A5	2163	A	C8-N9-C4	5.79	108.11	105.80
69	A5	2777	A	C4-C5-C6	-5.79	114.11	117.00
69	A5	1079	U	C6-N1-C1'	-5.78	113.10	121.20
69	A5	1358	U	N3-C4-O4	-5.78	115.35	119.40
69	A5	1538	U	C5-C6-N1	5.78	125.59	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2712	U	N3-C2-O2	-5.78	118.15	122.20
69	A5	3549	C	C6-N1-C2	-5.78	117.99	120.30
70	B2	1163	C	C2-N3-C4	5.78	122.79	119.90
69	A5	764	A	OP1-P-O3'	5.78	117.92	105.20
69	A5	881	G	C4-C5-N7	-5.78	108.49	110.80
69	A5	1116	G	O5'-P-OP2	-5.78	100.50	105.70
69	A5	1000	G	N1-C2-N2	5.78	121.40	116.20
69	A5	1595	G	O4'-C1'-N9	5.78	112.82	108.20
69	A5	2268	G	C8-N9-C1'	-5.78	119.49	127.00
69	A5	2812	U	N1-C2-O2	5.78	126.84	122.80
69	A5	3591	A	C4-N9-C1'	-5.78	115.90	126.30
69	A5	3929	U	N3-C2-O2	-5.78	118.16	122.20
70	B2	878	C	C6-N1-C1'	-5.77	113.87	120.80
69	A5	1709	A	C4-C5-C6	-5.77	114.11	117.00
69	A5	3297	C	C5-C6-N1	5.77	123.88	121.00
69	A5	3431	C	C6-N1-C2	-5.77	117.99	120.30
40	A8	18	C	N3-C2-O2	-5.77	117.86	121.90
69	A5	2243	G	N3-C4-C5	-5.77	125.72	128.60
69	A5	1026	G	N3-C4-N9	5.77	129.46	126.00
69	A5	1801	U	N1-C1'-C2'	-5.77	105.66	112.00
69	A5	1741	G	C8-N9-C4	-5.76	104.09	106.40
69	A5	1866	G	C6-N1-C2	-5.76	121.64	125.10
69	A5	2091	A	O4'-C1'-N9	5.76	112.81	108.20
69	A5	2773	G	C4-C5-N7	-5.76	108.49	110.80
69	A5	1019	U	N3-C2-O2	-5.76	118.17	122.20
40	A8	32	G	C5-C6-O6	5.76	132.06	128.60
36	CE	193	VAL	C-N-CD	-5.76	107.93	120.60
69	A5	2110	A	C2-N3-C4	5.76	113.48	110.60
69	A5	3438	C	C5-C6-N1	5.76	123.88	121.00
70	B2	1930	U	N3-C2-O2	-5.76	118.17	122.20
69	A5	1023	C	C6-N1-C2	-5.76	118.00	120.30
69	A5	2737	C	C6-N1-C2	-5.76	118.00	120.30
69	A5	3143	U	N1-C2-O2	5.76	126.83	122.80
69	A5	3969	G	C6-C5-N7	-5.76	126.95	130.40
69	A5	1063	C	N3-C2-O2	-5.75	117.87	121.90
69	A5	1137	G	OP1-P-O3'	5.75	117.86	105.20
69	A5	405	A	N1-C6-N6	5.75	122.05	118.60
69	A5	797	A	N1-C6-N6	-5.75	115.15	118.60
69	A5	3807	G	C6-C5-N7	-5.75	126.95	130.40
69	A5	3245	U	C6-N1-C2	-5.75	117.55	121.00
69	A5	122	C	N1-C2-O2	5.75	122.35	118.90
69	A5	1158	C	N3-C2-O2	-5.75	117.88	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1158	C	C6-N1-C2	-5.75	118.00	120.30
69	A5	2768	A	N1-C2-N3	-5.75	126.43	129.30
58	AD	31	LEU	CA-CB-CG	5.75	128.52	115.30
69	A5	1139	U	N1-C2-O2	5.75	126.82	122.80
69	A5	3757	U	C4-C5-C6	-5.74	116.25	119.70
9	CQ	65	ARG	CG-CD-NE	5.74	123.86	111.80
69	A5	1166	U	C5-C6-N1	5.74	125.57	122.70
69	A5	2655	C	N3-C2-O2	-5.74	117.88	121.90
69	A5	1733	A	O5'-P-OP2	-5.74	100.53	105.70
11	CA	1	MET	C-N-CA	5.74	134.35	122.30
21	CB	141	LEU	CA-CB-CG	5.74	128.50	115.30
69	A5	826	A	C8-N9-C4	-5.74	103.50	105.80
69	A5	2523	A	N7-C8-N9	5.74	116.67	113.80
69	A5	67	A	C8-N9-C4	-5.74	103.50	105.80
25	Cf	110	ARG	C-N-CA	5.74	136.04	121.70
69	A5	333	C	C6-N1-C2	-5.74	118.01	120.30
69	A5	458	A	C8-N9-C4	-5.74	103.51	105.80
69	A5	1134	G	N1-C2-N2	-5.74	111.04	116.20
69	A5	1784	A	N9-C4-C5	-5.74	103.51	105.80
69	A5	1294	U	C5-C6-N1	5.73	125.57	122.70
69	A5	3003	C	C2-N1-C1'	5.73	125.11	118.80
69	A5	1069	A	C5-C6-N1	5.73	120.56	117.70
69	A5	1370	C	N1-C2-O2	5.73	122.34	118.90
69	A5	772	G	C4-C5-N7	5.73	113.09	110.80
69	A5	868	A	N1-C2-N3	-5.73	126.44	129.30
69	A5	17	C	C5-C6-N1	5.72	123.86	121.00
69	A5	255	C	C6-N1-C2	-5.72	118.01	120.30
69	A5	444	C	N3-C2-O2	-5.72	117.89	121.90
69	A5	670	G	C8-N9-C1'	5.72	134.44	127.00
69	A5	3807	G	C8-N9-C1'	-5.72	119.56	127.00
69	A5	1370	C	C5-C6-N1	5.72	123.86	121.00
69	A5	2792	G	N1-C6-O6	-5.72	116.47	119.90
69	A5	3131	C	C5-C6-N1	5.72	123.86	121.00
70	B2	840	U	N1-C2-O2	5.72	126.81	122.80
69	A5	1095	G	C4-N9-C1'	5.72	133.94	126.50
69	A5	1101	A	O5'-P-OP1	5.72	117.56	110.70
69	A5	880	A	C8-N9-C4	5.72	108.09	105.80
69	A5	1173	U	C5-C6-N1	5.72	125.56	122.70
69	A5	3673	G	N9-C4-C5	-5.72	103.11	105.40
69	A5	56	A	OP1-P-OP2	-5.72	111.03	119.60
69	A5	1112	G	N3-C2-N2	5.72	123.90	119.90
69	A5	1116	G	C5-C6-N1	5.72	114.36	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1713	U	C5-C6-N1	5.72	125.56	122.70
69	A5	2243	G	N1-C6-O6	-5.72	116.47	119.90
70	B2	1992	A	P-O3'-C3'	5.72	126.56	119.70
34	CJ	160	HIS	N-CA-C	5.71	126.43	111.00
69	A5	767	A	C5-N7-C8	-5.71	101.04	103.90
69	A5	3368	C	C6-N1-C1'	-5.71	113.94	120.80
70	B2	366	C	C5-C6-N1	5.71	123.86	121.00
69	A5	1176	A	C4-C5-C6	-5.71	114.14	117.00
20	Cb	76	LEU	CA-CB-CG	5.71	128.43	115.30
69	A5	440	U	C5-C6-N1	5.71	125.56	122.70
69	A5	3400	U	N3-C2-O2	-5.71	118.20	122.20
69	A5	2239	C	N1-C2-O2	5.71	122.33	118.90
69	A5	2517	A	C4-C5-N7	5.71	113.55	110.70
69	A5	2715	C	N3-C2-O2	-5.71	117.90	121.90
2	CL	86	GLY	N-CA-C	-5.71	98.83	113.10
69	A5	58	G	N1-C2-N3	-5.71	120.48	123.90
69	A5	1417	G	N3-C4-N9	5.71	129.42	126.00
69	A5	3655	U	OP1-P-O3'	5.71	117.76	105.20
69	A5	1418	A	C5-C6-N1	5.70	120.55	117.70
69	A5	1710	G	C5-C6-O6	-5.70	125.18	128.60
40	A8	26	U	N3-C2-O2	-5.70	118.21	122.20
40	A8	29	U	N3-C2-O2	-5.70	118.21	122.20
69	A5	1057	G	O4'-C1'-N9	5.70	112.76	108.20
69	A5	3462	A	O4'-C1'-N9	5.70	112.76	108.20
69	A5	1753	G	C5-C6-O6	-5.70	125.18	128.60
69	A5	1908	A	N3-C4-N9	5.70	131.96	127.40
69	A5	1983	A	C6-N1-C2	5.70	122.02	118.60
69	A5	662	A	C2-N3-C4	5.69	113.45	110.60
69	A5	1108	G	C8-N9-C1'	-5.69	119.60	127.00
69	A5	1115	A	C8-N9-C4	-5.69	103.52	105.80
69	A5	1144	C	C5-C6-N1	5.69	123.85	121.00
69	A5	3459	C	N1-C2-O2	5.69	122.32	118.90
21	CB	248	LEU	CA-CB-CG	5.69	128.39	115.30
69	A5	995	G	N3-C4-N9	5.69	129.41	126.00
69	A5	1095	G	N9-C4-C5	5.69	107.67	105.40
69	A5	1118	C	N3-C4-N4	-5.69	114.02	118.00
69	A5	1676	A	N7-C8-N9	-5.69	110.96	113.80
39	A7	47	C	C6-N1-C2	-5.69	118.03	120.30
69	A5	3807	G	C4-N9-C1'	5.69	133.89	126.50
69	A5	3932	U	N1-C2-O2	5.69	126.78	122.80
69	A5	1799	U	OP1-P-O3'	5.69	117.71	105.20
50	AP	28	LEU	CA-CB-CG	5.68	128.38	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1075	G	C8-N9-C4	5.68	108.67	106.40
34	CJ	103	ASN	N-CA-C	5.68	126.34	111.00
39	A7	17	C	N1-C2-O2	5.68	122.31	118.90
69	A5	819	U	C5-C4-O4	-5.68	122.49	125.90
69	A5	927	A	C8-N9-C4	-5.68	103.53	105.80
70	B2	379	U	O5'-P-OP1	-5.68	100.59	105.70
69	A5	1676	A	C5-N7-C8	5.68	106.74	103.90
69	A5	3347	G	OP2-P-O3'	5.68	117.70	105.20
69	A5	90	G	OP1-P-OP2	-5.68	111.08	119.60
69	A5	240	G	C4-N9-C1'	5.68	133.88	126.50
69	A5	2649	A	C5-N7-C8	-5.68	101.06	103.90
69	A5	1194	A	O5'-P-OP2	-5.68	100.59	105.70
69	A5	1801	U	C2-N1-C1'	-5.68	110.89	117.70
40	A8	100	G	N3-C4-C5	5.68	131.44	128.60
69	A5	2739	A	N1-C6-N6	-5.68	115.19	118.60
69	A5	2783	C	N3-C4-N4	-5.68	114.03	118.00
69	A5	3309	A	C5-N7-C8	-5.68	101.06	103.90
69	A5	825	C	C6-N1-C2	-5.67	118.03	120.30
69	A5	3281	G	N1-C2-N2	5.67	121.31	116.20
69	A5	1785	G	O4'-C1'-N9	5.67	112.74	108.20
69	A5	294	U	C2-N3-C4	-5.67	123.60	127.00
69	A5	752	U	C2-N1-C1'	-5.67	110.89	117.70
69	A5	1609	U	N1-C2-O2	5.67	126.77	122.80
69	A5	2700	C	N1-C2-O2	5.67	122.30	118.90
69	A5	1121	A	O4'-C1'-N9	-5.67	103.66	108.20
69	A5	1685	G	N1-C6-O6	-5.67	116.50	119.90
69	A5	3729	A	C8-N9-C4	-5.67	103.53	105.80
69	A5	3894	C	N1-C2-O2	5.67	122.30	118.90
69	A5	3969	G	N3-C4-N9	5.67	129.40	126.00
69	A5	825	C	C5-C6-N1	5.67	123.83	121.00
69	A5	1193	A	C6-C5-N7	5.67	136.26	132.30
69	A5	1355	C	N3-C2-O2	-5.67	117.93	121.90
69	A5	664	U	C4-C5-C6	-5.66	116.30	119.70
69	A5	1784	A	OP1-P-O3'	5.66	117.66	105.20
69	A5	21	U	N1-C2-O2	5.66	126.76	122.80
69	A5	630	U	N3-C2-O2	-5.66	118.24	122.20
69	A5	2162	C	N1-C2-N3	-5.66	115.24	119.20
69	A5	2131	C	C6-N1-C2	-5.66	118.03	120.30
69	A5	623	C	O5'-P-OP1	5.66	117.49	110.70
69	A5	1531	U	C2-N1-C1'	-5.66	110.91	117.70
69	A5	2516	U	O4'-C1'-N1	5.66	112.73	108.20
69	A5	2622	A	O5'-P-OP1	-5.66	100.61	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2777	A	O5'-P-OP1	-5.66	100.61	105.70
69	A5	3003	C	C5-C6-N1	5.66	123.83	121.00
69	A5	1366	G	C4-N9-C1'	-5.66	119.15	126.50
69	A5	3917	G	N3-C2-N2	5.66	123.86	119.90
69	A5	839	A	OP1-P-O3'	5.66	117.64	105.20
69	A5	3185	C	C5-C6-N1	5.66	123.83	121.00
69	A5	3277	A	C4-C5-C6	-5.65	114.17	117.00
69	A5	3630	C	N3-C4-C5	-5.65	119.64	121.90
69	A5	1065	A	C5-C6-N1	5.65	120.53	117.70
69	A5	1784	A	C4-C5-N7	5.65	113.53	110.70
69	A5	3341	C	C4-C5-C6	-5.65	114.58	117.40
69	A5	548	A	N3-C4-N9	-5.65	122.88	127.40
69	A5	884	U	C6-N1-C2	-5.65	117.61	121.00
70	B2	1960	A	C5-N7-C8	-5.65	101.08	103.90
69	A5	2234	C	N1-C2-O2	5.65	122.29	118.90
69	A5	2747	G	N1-C2-N2	-5.65	111.12	116.20
69	A5	545	U	C2-N1-C1'	5.65	124.48	117.70
69	A5	2657	A	N3-C4-C5	5.65	130.75	126.80
70	B2	1108	C	N3-C2-O2	-5.65	117.95	121.90
69	A5	1710	G	C6-C5-N7	-5.64	127.01	130.40
69	A5	1798	A	P-O3'-C3'	5.64	126.47	119.70
69	A5	3476	G	N9-C4-C5	-5.64	103.14	105.40
70	B2	1648	C	N3-C2-O2	-5.64	117.95	121.90
69	A5	1618	A	C5-C6-N1	5.64	120.52	117.70
69	A5	2567	U	N3-C2-O2	-5.64	118.25	122.20
69	A5	1683	U	N3-C2-O2	-5.64	118.25	122.20
69	A5	2516	U	N3-C2-O2	-5.64	118.25	122.20
70	B2	550	C	C6-N1-C1'	-5.64	114.03	120.80
38	A9	26	U	C6-N1-C2	-5.64	117.62	121.00
69	A5	1870	G	C8-N9-C4	-5.64	104.14	106.40
69	A5	520	G	C4-C5-N7	5.63	113.05	110.80
69	A5	1010	A	C2-N3-C4	5.63	113.42	110.60
69	A5	991	A	C5-C6-N1	5.63	120.52	117.70
69	A5	1366	G	O5'-P-OP1	-5.63	100.63	105.70
69	A5	1654	C	C5-C6-N1	5.63	123.82	121.00
69	A5	2584	G	N3-C4-C5	-5.63	125.78	128.60
69	A5	1690	U	C5-C6-N1	5.63	125.52	122.70
69	A5	2910	C	O5'-P-OP1	-5.63	100.63	105.70
69	A5	3294	A	C5-C6-N1	5.63	120.52	117.70
13	CT	144	LEU	C-N-CA	5.63	135.77	121.70
67	AQ	144	GLN	C-N-CA	5.63	135.77	121.70
69	A5	1265	U	C2-N1-C1'	5.63	124.45	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2469	U	C2-N1-C1'	5.63	124.45	117.70
69	A5	289	C	N3-C2-O2	-5.63	117.96	121.90
69	A5	1661	C	C6-N1-C2	-5.63	118.05	120.30
69	A5	1664	C	N1-C2-O2	5.63	122.28	118.90
69	A5	3549	C	C5-C6-N1	5.63	123.81	121.00
69	A5	68	G	C2-N3-C4	5.62	114.71	111.90
69	A5	854	U	N1-C2-O2	5.62	126.74	122.80
70	B2	631	C	C2-N1-C1'	5.62	124.99	118.80
69	A5	2195	A	N1-C6-N6	-5.62	115.22	118.60
69	A5	3251	C	C5-C4-N4	5.62	124.14	120.20
69	A5	3791	A	O5'-P-OP1	5.62	117.44	110.70
69	A5	1108	G	C4-C5-N7	-5.62	108.55	110.80
69	A5	3921	A	C2-N3-C4	5.62	113.41	110.60
69	A5	1112	G	N9-C4-C5	-5.62	103.15	105.40
69	A5	1644	C	C5-C6-N1	5.62	123.81	121.00
69	A5	1795	A	C5-C6-N6	-5.62	119.20	123.70
69	A5	1795	A	C8-N9-C1'	-5.62	117.59	127.70
69	A5	2777	A	N1-C2-N3	-5.62	126.49	129.30
45	AM	128	LEU	CA-CB-CG	5.62	128.22	115.30
69	A5	1074	U	N3-C4-C5	5.62	117.97	114.60
39	A7	60	C	N1-C2-O2	5.62	122.27	118.90
69	A5	45	G	OP2-P-O3'	5.62	117.56	105.20
69	A5	1294	U	C6-N1-C2	-5.62	117.63	121.00
5	Ca	43	ARG	NE-CZ-NH1	5.61	123.11	120.30
69	A5	754	A	N3-C4-N9	-5.61	122.91	127.40
69	A5	1093	C	C4-C5-C6	-5.61	114.59	117.40
69	A5	309	C	C5-C6-N1	5.61	123.81	121.00
70	B2	381	C	C6-N1-C2	-5.61	118.06	120.30
2	CL	4	GLY	N-CA-C	5.61	127.13	113.10
69	A5	1682	G	C8-N9-C4	5.61	108.64	106.40
69	A5	165	G	N3-C4-N9	5.61	129.37	126.00
69	A5	1347	A	N7-C8-N9	-5.61	111.00	113.80
69	A5	2156	U	N3-C4-O4	-5.61	115.47	119.40
69	A5	2243	G	C4-N9-C1'	5.61	133.79	126.50
70	B2	1068	U	C5-C4-O4	5.61	129.26	125.90
70	B2	1752	U	C2-N1-C1'	5.61	124.43	117.70
69	A5	688	U	N3-C2-O2	-5.60	118.28	122.20
69	A5	1131	C	O5'-P-OP1	-5.60	100.66	105.70
69	A5	1307	G	OP2-P-O3'	5.60	117.53	105.20
69	A5	103	A	C2-N3-C4	5.60	113.40	110.60
69	A5	2219	U	C6-N1-C2	-5.60	117.64	121.00
69	A5	566	A	N7-C8-N9	5.60	116.60	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2066	G	C4-C5-C6	5.60	122.16	118.80
69	A5	2218	G	C5-N7-C8	-5.60	101.50	104.30
69	A5	289	C	N1-C2-O2	5.60	122.26	118.90
69	A5	1113	A	N7-C8-N9	5.60	116.60	113.80
69	A5	1798	A	C2-N3-C4	5.60	113.40	110.60
69	A5	2499	U	C5-C6-N1	5.60	125.50	122.70
69	A5	701	U	C5-C6-N1	5.60	125.50	122.70
69	A5	2716	C	C6-N1-C2	-5.59	118.06	120.30
69	A5	442	A	C5-C6-N1	5.59	120.50	117.70
69	A5	553	A	N1-C6-N6	5.59	121.95	118.60
69	A5	1196	A	N7-C8-N9	5.59	116.60	113.80
69	A5	2912	U	N3-C2-O2	-5.59	118.29	122.20
69	A5	3350	U	C4-C5-C6	-5.59	116.34	119.70
69	A5	3571	C	C5-C6-N1	5.59	123.80	121.00
69	A5	3675	A	C8-N9-C1'	5.59	137.76	127.70
69	A5	540	G	C2-N3-C4	5.59	114.69	111.90
70	B2	1284	A	P-O3'-C3'	5.59	126.41	119.70
69	A5	316	U	N1-C2-O2	5.59	126.71	122.80
70	B2	344	C	N3-C2-O2	-5.59	117.99	121.90
69	A5	1785	G	C4-C5-C6	5.59	122.15	118.80
69	A5	2065	A	C4-C5-N7	5.59	113.49	110.70
69	A5	2727	U	O5'-P-OP1	5.59	117.41	110.70
40	A8	56	U	N3-C2-O2	-5.58	118.29	122.20
69	A5	3144	U	C5-C6-N1	5.58	125.49	122.70
1	CO	33	GLY	N-CA-C	5.58	127.06	113.10
38	A9	14	U	C6-N1-C2	-5.58	117.65	121.00
69	A5	1050	C	N3-C2-O2	-5.58	117.99	121.90
69	A5	1284	A	N3-C4-C5	5.58	130.71	126.80
69	A5	1724	A	O5'-P-OP2	-5.58	100.67	105.70
70	B2	1333	C	N1-C2-O2	5.58	122.25	118.90
21	CB	323	TYR	CB-CG-CD1	5.58	124.35	121.00
69	A5	662	A	C5-C6-N1	5.58	120.49	117.70
69	A5	1687	U	C5-C4-O4	5.58	129.25	125.90
69	A5	3593	A	N9-C4-C5	5.58	108.03	105.80
70	B2	1983	G	C8-N9-C4	5.58	108.63	106.40
69	A5	2090	U	C2-N1-C1'	5.58	124.39	117.70
69	A5	2688	U	N3-C2-O2	-5.58	118.30	122.20
69	A5	3132	C	C4-C5-C6	-5.58	114.61	117.40
69	A5	3256	U	N3-C2-O2	-5.58	118.29	122.20
69	A5	3595	U	C5-C6-N1	5.58	125.49	122.70
70	B2	137	C	N1-C2-O2	5.58	122.25	118.90
69	A5	3621	A	N9-C4-C5	-5.58	103.57	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1512	C	C6-N1-C2	-5.58	118.07	120.30
69	A5	3540	G	N1-C2-N3	5.58	127.25	123.90
69	A5	3936	A	N1-C6-N6	5.58	121.95	118.60
69	A5	541	A	N1-C6-N6	-5.57	115.26	118.60
69	A5	769	U	O5'-P-OP1	-5.57	100.69	105.70
69	A5	1609	U	C2-N1-C1'	5.57	124.39	117.70
69	A5	1800	U	C2-N1-C1'	5.57	124.39	117.70
70	B2	848	C	N1-C2-O2	5.57	122.24	118.90
29	CC	297	LYS	C-N-CA	5.57	135.63	121.70
69	A5	548	A	C4-C5-C6	-5.57	114.21	117.00
69	A5	2124	G	C4-N9-C1'	5.57	133.74	126.50
69	A5	816	A	C5-C6-N1	5.57	120.48	117.70
70	B2	49	C	C6-N1-C2	-5.57	118.07	120.30
69	A5	1536	U	N3-C2-O2	-5.57	118.30	122.20
69	A5	1758	U	C6-N1-C2	-5.57	117.66	121.00
69	A5	23	U	N3-C2-O2	-5.57	118.30	122.20
69	A5	322	G	C5-N7-C8	-5.57	101.52	104.30
69	A5	654	G	N7-C8-N9	5.57	115.88	113.10
69	A5	1052	U	N3-C2-O2	-5.57	118.30	122.20
69	A5	1108	G	N7-C8-N9	5.57	115.88	113.10
76	CU	278	LYS	C-N-CA	5.57	135.62	121.70
69	A5	1273	U	N3-C2-O2	-5.57	118.30	122.20
70	B2	1366	C	C6-N1-C2	-5.57	118.07	120.30
69	A5	777	C	C5-C6-N1	5.56	123.78	121.00
69	A5	1019	U	N1-C2-N3	5.56	118.24	114.90
69	A5	287	G	C8-N9-C4	5.56	108.62	106.40
69	A5	1595	G	N3-C2-N2	-5.56	116.01	119.90
69	A5	1688	A	OP1-P-O3'	5.56	117.44	105.20
69	A5	1713	U	C5-C4-O4	5.56	129.24	125.90
69	A5	1725	A	C4-C5-N7	5.56	113.48	110.70
69	A5	2031	C	C6-N1-C2	-5.56	118.08	120.30
69	A5	2733	G	C8-N9-C4	5.56	108.62	106.40
69	A5	802	G	O5'-P-OP2	-5.56	100.69	105.70
69	A5	926	U	N1-C2-O2	5.56	126.69	122.80
69	A5	105	A	O4'-C1'-N9	5.56	112.65	108.20
69	A5	1900	U	C6-N1-C2	-5.56	117.67	121.00
69	A5	3675	A	N7-C8-N9	-5.56	111.02	113.80
39	A7	69	C	N1-C2-O2	5.56	122.23	118.90
69	A5	1193	A	C5-C6-N6	5.56	128.15	123.70
69	A5	1794	G	C8-N9-C1'	-5.56	119.78	127.00
70	B2	1147	U	N1-C2-O2	5.56	126.69	122.80
69	A5	498	U	C5-C4-O4	-5.55	122.57	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	659	U	C4-C5-C6	5.55	123.03	119.70
69	A5	2774	G	N3-C2-N2	5.55	123.79	119.90
69	A5	383	A	C8-N9-C1'	-5.55	117.71	127.70
69	A5	804	C	N3-C2-O2	-5.55	118.02	121.90
69	A5	1387	G	C5-N7-C8	-5.55	101.53	104.30
69	A5	653	U	O5'-P-OP2	5.55	117.36	110.70
69	A5	1404	A	C4-N9-C1'	5.55	136.29	126.30
69	A5	1715	G	N7-C8-N9	5.55	115.88	113.10
69	A5	3644	C	N3-C2-O2	-5.55	118.02	121.90
69	A5	546	G	C2-N3-C4	-5.55	109.13	111.90
69	A5	663	U	N1-C2-N3	5.54	118.23	114.90
69	A5	761	C	C2-N3-C4	5.54	122.67	119.90
69	A5	1282	U	N1-C2-O2	5.54	126.68	122.80
69	A5	3591	A	C8-N9-C4	5.54	108.02	105.80
39	A7	26	C	C5-C6-N1	5.54	123.77	121.00
69	A5	615	C	P-O3'-C3'	5.54	126.35	119.70
69	A5	1144	C	N1-C2-O2	5.54	122.23	118.90
69	A5	1869	C	N3-C4-C5	5.54	124.12	121.90
69	A5	3309	A	C8-N9-C4	-5.54	103.58	105.80
69	A5	3551	U	C6-N1-C2	-5.54	117.67	121.00
26	Ci	71	LEU	CA-CB-CG	5.54	128.04	115.30
69	A5	1172	G	C4-C5-N7	5.54	113.02	110.80
69	A5	2487	C	C6-N1-C2	-5.54	118.08	120.30
69	A5	2764	A	C4-C5-N7	5.54	113.47	110.70
69	A5	3245	U	N1-C2-O2	5.54	126.68	122.80
69	A5	3257	U	C5-C6-N1	-5.54	119.93	122.70
69	A5	3331	A	N9-C4-C5	-5.54	103.58	105.80
69	A5	3543	A	C8-N9-C4	-5.54	103.58	105.80
70	B2	622	C	C5-C6-N1	5.54	123.77	121.00
69	A5	993	A	C6-N1-C2	5.54	121.92	118.60
69	A5	1004	C	N3-C4-N4	-5.54	114.12	118.00
69	A5	1273	U	O5'-P-OP2	-5.54	100.72	105.70
69	A5	1684	G	O5'-P-OP1	-5.54	100.72	105.70
69	A5	3751	C	N3-C2-O2	-5.54	118.02	121.90
69	A5	3399	C	O5'-P-OP1	-5.54	100.72	105.70
69	A5	811	G	C4-C5-C6	-5.54	115.48	118.80
69	A5	1874	G	O5'-P-OP1	-5.54	100.72	105.70
69	A5	2733	G	C5-N7-C8	-5.54	101.53	104.30
69	A5	209	U	N3-C2-O2	-5.53	118.33	122.20
69	A5	1328	U	O5'-P-OP2	5.53	117.34	110.70
69	A5	3920	C	C6-N1-C2	-5.53	118.09	120.30
69	A5	916	C	C6-N1-C2	-5.53	118.09	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2751	A	N1-C6-N6	-5.53	115.28	118.60
69	A5	3234	A	N9-C4-C5	-5.53	103.59	105.80
70	B2	1979	C	C6-N1-C2	-5.53	118.09	120.30
69	A5	1544	U	C5-C6-N1	5.53	125.46	122.70
69	A5	3170	U	N3-C4-O4	-5.53	115.53	119.40
69	A5	3542	C	OP1-P-OP2	-5.53	111.31	119.60
69	A5	659	U	N1-C2-O2	5.53	126.67	122.80
69	A5	1618	A	N3-C4-N9	5.53	131.82	127.40
69	A5	3477	A	N3-C4-N9	-5.53	122.98	127.40
24	Ce	7	TYR	CA-CB-CG	5.52	123.89	113.40
69	A5	1333	C	C6-N1-C2	-5.52	118.09	120.30
33	Co	47	GLY	C-N-CA	5.52	135.51	121.70
69	A5	237	G	C4-C5-N7	5.52	113.01	110.80
69	A5	382	G	N7-C8-N9	-5.52	110.34	113.10
69	A5	1141	G	C5-C6-N1	5.52	114.26	111.50
69	A5	3936	A	C6-C5-N7	-5.52	128.44	132.30
69	A5	1693	C	C6-N1-C2	-5.52	118.09	120.30
69	A5	3653	U	C5-C6-N1	5.52	125.46	122.70
69	A5	3947	C	N3-C2-O2	-5.52	118.03	121.90
69	A5	1127	C	N3-C2-O2	-5.52	118.04	121.90
69	A5	1145	C	OP1-P-O3'	5.52	117.34	105.20
69	A5	1421	G	N3-C4-N9	5.52	129.31	126.00
69	A5	3946	G	C4-C5-N7	-5.52	108.59	110.80
70	B2	1378	C	N1-C2-O2	5.52	122.21	118.90
69	A5	299	G	C4-C5-N7	-5.52	108.59	110.80
69	A5	457	A	C4-C5-N7	5.52	113.46	110.70
69	A5	1106	A	C4-C5-C6	-5.52	114.24	117.00
69	A5	1135	U	C2-N1-C1'	5.52	124.32	117.70
69	A5	3520	U	C5-C6-N1	-5.52	119.94	122.70
69	A5	476	U	C2-N1-C1'	5.52	124.32	117.70
69	A5	844	C	N3-C2-O2	-5.52	118.04	121.90
69	A5	3573	C	C6-N1-C2	-5.52	118.09	120.30
69	A5	3795	G	C8-N9-C1'	-5.52	119.83	127.00
69	A5	652	G	N7-C8-N9	-5.51	110.34	113.10
69	A5	828	G	N7-C8-N9	5.51	115.86	113.10
69	A5	2170	C	C5-C6-N1	5.51	123.76	121.00
69	A5	3597	C	C5-C6-N1	5.51	123.76	121.00
39	A7	98	G	C8-N9-C4	-5.51	104.19	106.40
69	A5	394	G	O5'-P-OP2	-5.51	100.74	105.70
69	A5	541	A	C4-C5-C6	-5.51	114.25	117.00
69	A5	654	G	N1-C6-O6	5.51	123.21	119.90
69	A5	1325	C	C2-N3-C4	-5.51	117.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2169	U	C5-C6-N1	5.51	125.45	122.70
69	A5	63	G	N1-C6-O6	-5.51	116.59	119.90
69	A5	173	A	N7-C8-N9	5.51	116.55	113.80
69	A5	3519	C	N1-C2-O2	5.51	122.21	118.90
70	B2	1020	U	N1-C2-O2	5.51	126.66	122.80
24	Ce	52	TYR	CA-CB-CG	-5.51	102.93	113.40
40	A8	40	A	N1-C2-N3	-5.51	126.55	129.30
69	A5	1396	A	C8-N9-C1'	-5.51	117.79	127.70
69	A5	1685	G	C5-C6-N1	5.51	114.25	111.50
69	A5	3620	G	C8-N9-C4	5.51	108.60	106.40
70	B2	1087	C	C6-N1-C1'	-5.51	114.19	120.80
67	AQ	34	LEU	CA-CB-CG	5.50	127.96	115.30
69	A5	14	C	N3-C2-O2	-5.50	118.05	121.90
69	A5	3402	C	N3-C4-N4	-5.50	114.15	118.00
40	A8	66	U	N3-C2-O2	-5.50	118.35	122.20
69	A5	3381	C	C6-N1-C2	-5.50	118.10	120.30
69	A5	3674	G	N9-C4-C5	-5.50	103.20	105.40
69	A5	3970	A	O5'-P-OP2	-5.50	100.75	105.70
70	B2	1273	U	N3-C2-O2	-5.50	118.35	122.20
69	A5	2684	C	C6-N1-C2	-5.50	118.10	120.30
69	A5	3309	A	C4-C5-N7	5.50	113.45	110.70
69	A5	228	C	N1-C2-O2	5.50	122.20	118.90
69	A5	3233	C	C6-N1-C2	-5.50	118.10	120.30
69	A5	3593	A	P-O3'-C3'	5.50	126.30	119.70
69	A5	773	G	N1-C6-O6	-5.50	116.60	119.90
69	A5	999	U	N3-C2-O2	-5.50	118.35	122.20
69	A5	3404	A	N9-C4-C5	-5.50	103.60	105.80
70	B2	1681	U	N1-C2-O2	5.50	126.65	122.80
69	A5	355	G	C4-C5-C6	-5.49	115.50	118.80
69	A5	362	A	N1-C6-N6	-5.49	115.30	118.60
69	A5	2135	C	N1-C2-O2	5.49	122.20	118.90
69	A5	3330	C	C6-N1-C2	-5.49	118.10	120.30
69	A5	3620	G	N9-C4-C5	-5.49	103.20	105.40
69	A5	2164	G	N3-C4-C5	5.49	131.34	128.60
69	A5	2608	G	N3-C2-N2	-5.49	116.06	119.90
40	A8	106	A	N1-C2-N3	-5.49	126.56	129.30
69	A5	881	G	N3-C4-C5	5.49	131.34	128.60
69	A5	3728	A	C5-C6-N6	5.49	128.09	123.70
69	A5	459	U	N1-C2-O2	5.49	126.64	122.80
69	A5	2233	C	N1-C2-O2	5.49	122.19	118.90
40	A8	44	C	C4-C5-C6	-5.49	114.66	117.40
69	A5	289	C	C2-N1-C1'	5.49	124.83	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	344	U	C5-C6-N1	5.49	125.44	122.70
69	A5	546	G	N7-C8-N9	5.49	115.84	113.10
69	A5	580	A	P-O3'-C3'	5.49	126.28	119.70
69	A5	2105	C	O4'-C1'-N1	5.49	112.59	108.20
69	A5	3282	C	P-O3'-C3'	5.49	126.28	119.70
69	A5	1752	G	C4-C5-N7	-5.48	108.61	110.80
69	A5	3774	U	C6-N1-C1'	-5.48	113.52	121.20
69	A5	1378	A	N9-C4-C5	-5.48	103.61	105.80
69	A5	1797	A	C5-N7-C8	-5.48	101.16	103.90
69	A5	3148	C	N1-C2-O2	5.48	122.19	118.90
69	A5	3475	U	N1-C2-O2	5.48	126.64	122.80
69	A5	3844	U	C5-C6-N1	-5.48	119.96	122.70
69	A5	1484	U	N1-C2-O2	5.48	126.64	122.80
69	A5	3145	U	C5-C6-N1	5.48	125.44	122.70
69	A5	3471	A	C6-N1-C2	5.48	121.89	118.60
69	A5	3712	G	N3-C4-C5	5.48	131.34	128.60
69	A5	1574	A	N3-C4-C5	-5.48	122.97	126.80
69	A5	237	G	O5'-P-OP2	-5.48	100.77	105.70
69	A5	800	C	C4-C5-C6	-5.47	114.66	117.40
69	A5	1793	C	N3-C2-O2	-5.47	118.07	121.90
69	A5	3235	A	N1-C6-N6	5.47	121.89	118.60
69	A5	67	A	N7-C8-N9	5.47	116.54	113.80
70	B2	335	U	C5-C6-N1	5.47	125.44	122.70
69	A5	3274	A	N1-C6-N6	-5.47	115.32	118.60
39	A7	96	U	O5'-P-OP1	-5.47	100.78	105.70
69	A5	300	A	N7-C8-N9	5.47	116.53	113.80
69	A5	1981	A	N3-C4-C5	5.47	130.63	126.80
69	A5	1998	U	C6-N1-C2	-5.47	117.72	121.00
69	A5	3149	U	N1-C2-N3	5.47	118.18	114.90
22	CF	237	PHE	CB-CG-CD1	5.47	124.63	120.80
40	A8	99	U	C6-N1-C1'	-5.47	113.55	121.20
69	A5	2626	C	N3-C2-O2	-5.46	118.08	121.90
69	A5	1020	A	OP2-P-O3'	5.46	117.22	105.20
69	A5	811	G	C6-C5-N7	5.46	133.68	130.40
69	A5	927	A	N3-C4-N9	5.46	131.77	127.40
69	A5	1018	C	C5-C6-N1	5.46	123.73	121.00
69	A5	2659	A	O4'-C1'-N9	5.46	112.57	108.20
69	A5	3411	C	N1-C2-O2	5.46	122.18	118.90
69	A5	3464	G	N9-C4-C5	5.46	107.58	105.40
69	A5	3676	C	N3-C4-C5	5.46	124.08	121.90
69	A5	3844	U	N1-C2-N3	5.46	118.18	114.90
69	A5	1145	C	N1-C2-O2	5.46	122.18	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	838	U	C5-C6-N1	5.46	125.43	122.70
69	A5	851	G	N3-C4-N9	5.46	129.28	126.00
69	A5	1664	C	C6-N1-C2	-5.46	118.12	120.30
70	B2	550	C	C5-C6-N1	5.46	123.73	121.00
70	B2	1582	C	C6-N1-C1'	-5.46	114.25	120.80
29	CC	123	ARG	NE-CZ-NH1	-5.46	117.57	120.30
69	A5	1759	C	C6-N1-C2	-5.46	118.12	120.30
70	B2	313	C	C6-N1-C1'	-5.46	114.25	120.80
69	A5	1387	G	N7-C8-N9	5.46	115.83	113.10
69	A5	3461	C	N1-C2-O2	5.46	122.17	118.90
69	A5	3523	U	C5-C6-N1	5.46	125.43	122.70
69	A5	1012	G	N1-C2-N2	-5.45	111.29	116.20
69	A5	3825	U	N3-C2-O2	-5.45	118.38	122.20
70	B2	70	C	N1-C2-O2	5.45	122.17	118.90
69	A5	1092	U	N1-C2-O2	5.45	126.62	122.80
70	B2	589	U	C2-N1-C1'	5.45	124.24	117.70
69	A5	289	C	C5-C6-N1	5.45	123.72	121.00
69	A5	1080	G	N1-C2-N2	-5.45	111.29	116.20
69	A5	1150	G	N3-C4-C5	-5.45	125.87	128.60
69	A5	3675	A	N1-C2-N3	-5.45	126.58	129.30
70	B2	1003	C	C5-C6-N1	5.45	123.72	121.00
69	A5	1324	C	OP1-P-OP2	-5.45	111.43	119.60
69	A5	1404	A	C2-N3-C4	5.45	113.32	110.60
69	A5	1761	C	N3-C2-O2	-5.45	118.09	121.90
70	B2	1979	C	N1-C2-O2	5.45	122.17	118.90
69	A5	855	A	C8-N9-C4	5.45	107.98	105.80
69	A5	1141	G	C2-N3-C4	5.45	114.62	111.90
69	A5	1626	A	C5-N7-C8	-5.45	101.18	103.90
69	A5	1689	G	C4-N9-C1'	5.45	133.58	126.50
69	A5	3588	G	C2-N3-C4	5.45	114.62	111.90
69	A5	3607	C	N3-C4-N4	5.45	121.81	118.00
69	A5	1013	G	C4-N9-C1'	5.44	133.57	126.50
69	A5	2092	U	O5'-P-OP2	-5.44	100.80	105.70
69	A5	2198	G	C8-N9-C4	5.44	108.58	106.40
69	A5	3218	C	C5-C6-N1	5.44	123.72	121.00
69	A5	3932	U	N3-C2-O2	-5.44	118.39	122.20
69	A5	241	C	N3-C2-O2	-5.44	118.09	121.90
69	A5	548	A	N3-C4-C5	5.44	130.61	126.80
69	A5	2774	G	N3-C4-C5	-5.44	125.88	128.60
70	B2	344	C	C5-C6-N1	5.44	123.72	121.00
69	A5	1753	G	N7-C8-N9	5.44	115.82	113.10
38	A9	27	U	N3-C2-O2	-5.44	118.39	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	670	G	C4-N9-C1'	-5.44	119.43	126.50
69	A5	802	G	C8-N9-C4	5.44	108.58	106.40
69	A5	1606	G	N3-C4-N9	5.44	129.26	126.00
69	A5	2562	U	C5-C6-N1	5.44	125.42	122.70
69	A5	821	U	C4-C5-C6	-5.44	116.44	119.70
69	A5	986	A	N1-C2-N3	-5.44	126.58	129.30
69	A5	2239	C	N3-C2-O2	-5.43	118.10	121.90
69	A5	3295	U	N1-C2-O2	5.43	126.60	122.80
69	A5	749	U	O4'-C1'-N1	5.43	112.55	108.20
69	A5	3553	C	N3-C2-O2	-5.43	118.10	121.90
69	A5	3932	U	C6-N1-C2	-5.43	117.74	121.00
69	A5	2095	U	C2-N1-C1'	5.43	124.22	117.70
34	CJ	96	GLU	CA-CB-CG	5.43	125.35	113.40
70	B2	1147	U	N3-C2-O2	-5.43	118.40	122.20
69	A5	428	C	N3-C4-C5	5.43	124.07	121.90
69	A5	798	C	N3-C4-N4	-5.43	114.20	118.00
38	A9	21	G	P-O3'-C3'	5.43	126.21	119.70
40	A8	34	C	C6-N1-C2	-5.43	118.13	120.30
69	A5	1116	G	OP1-P-O3'	5.43	117.14	105.20
69	A5	3353	C	N1-C2-O2	5.43	122.16	118.90
69	A5	3675	A	N3-C4-C5	5.43	130.60	126.80
69	A5	3791	A	C2-N3-C4	5.43	113.31	110.60
69	A5	926	U	N3-C2-O2	-5.42	118.40	122.20
69	A5	2742	G	O5'-P-OP1	-5.42	100.82	105.70
69	A5	3877	G	OP1-P-O3'	5.42	117.13	105.20
70	B2	1185	U	O5'-P-OP2	-5.42	100.82	105.70
70	B2	1728	G	C4-N9-C1'	5.42	133.55	126.50
69	A5	692	G	C2-N3-C4	5.42	114.61	111.90
69	A5	2711	C	C5-C6-N1	5.42	123.71	121.00
69	A5	543	A	C5-C6-N6	-5.42	119.36	123.70
69	A5	821	U	C5-C6-N1	5.42	125.41	122.70
69	A5	1689	G	N1-C2-N3	5.42	127.15	123.90
40	A8	49	C	N3-C2-O2	-5.42	118.11	121.90
69	A5	383	A	N9-C4-C5	-5.42	103.63	105.80
69	A5	789	G	N7-C8-N9	5.42	115.81	113.10
69	A5	1874	G	C4-N9-C1'	5.42	133.54	126.50
35	CH	43	LEU	CA-CB-CG	5.42	127.76	115.30
39	A7	14	C	N1-C2-O2	5.42	122.15	118.90
69	A5	278	U	N1-C2-O2	5.42	126.59	122.80
69	A5	1118	C	O5'-P-OP2	-5.42	100.82	105.70
69	A5	3665	U	N1-C2-O2	5.42	126.59	122.80
69	A5	3606	G	C4-N9-C1'	5.42	133.54	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	819	U	N3-C4-O4	5.41	123.19	119.40
69	A5	1314	U	N1-C2-O2	5.41	126.59	122.80
69	A5	2656	C	C5-C6-N1	5.41	123.71	121.00
69	A5	3591	A	C3'-C2'-C1'	-5.41	97.17	101.50
69	A5	782	G	O5'-P-OP1	-5.41	100.83	105.70
69	A5	1675	G	OP1-P-OP2	-5.41	111.48	119.60
69	A5	3235	A	N7-C8-N9	5.41	116.51	113.80
69	A5	296	C	N3-C2-O2	-5.41	118.11	121.90
69	A5	846	U	C5-C4-O4	5.41	129.15	125.90
69	A5	1661	C	N1-C2-O2	5.41	122.15	118.90
69	A5	1785	G	N3-C4-C5	-5.41	125.89	128.60
69	A5	3003	C	N1-C2-O2	5.41	122.15	118.90
69	A5	870	U	OP1-P-O3'	5.41	117.10	105.20
70	B2	1681	U	N3-C2-O2	-5.41	118.41	122.20
69	A5	1131	C	N1-C2-O2	5.41	122.14	118.90
39	A7	78	C	C2-N3-C4	5.41	122.60	119.90
69	A5	26	G	OP1-P-O3'	5.41	117.09	105.20
69	A5	93	G	N7-C8-N9	5.41	115.80	113.10
69	A5	1604	G	C8-N9-C4	-5.41	104.24	106.40
69	A5	1696	A	O5'-P-OP1	-5.41	100.83	105.70
69	A5	1770	C	N1-C2-O2	5.41	122.14	118.90
69	A5	2720	U	C5-C6-N1	5.41	125.40	122.70
70	B2	1108	C	N1-C2-O2	5.41	122.14	118.90
69	A5	1725	A	O5'-P-OP2	-5.40	100.84	105.70
69	A5	3588	G	C5-C6-N1	5.40	114.20	111.50
69	A5	360	A	OP1-P-O3'	5.40	117.08	105.20
69	A5	2002	C	N1-C2-O2	5.40	122.14	118.90
69	A5	2164	G	N3-C4-N9	-5.40	122.76	126.00
69	A5	3678	G	N1-C6-O6	-5.40	116.66	119.90
69	A5	1170	U	C2-N3-C4	5.40	130.24	127.00
69	A5	1787	C	C6-N1-C2	-5.40	118.14	120.30
69	A5	3409	G	N3-C4-C5	-5.40	125.90	128.60
69	A5	394	G	C6-C5-N7	-5.40	127.16	130.40
69	A5	1055	U	N3-C2-O2	-5.40	118.42	122.20
69	A5	1379	U	C6-N1-C2	-5.40	117.76	121.00
69	A5	1563	A	C5-C6-N6	-5.40	119.38	123.70
69	A5	2118	U	C5-C6-N1	5.40	125.40	122.70
69	A5	2767	U	N1-C2-O2	5.40	126.58	122.80
69	A5	2886	C	C6-N1-C2	-5.40	118.14	120.30
69	A5	3281	G	C4-N9-C1'	5.40	133.52	126.50
70	B2	137	C	N3-C2-O2	-5.40	118.12	121.90
69	A5	103	A	N1-C6-N6	-5.39	115.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	394	G	O4'-C1'-N9	5.39	112.52	108.20
69	A5	1115	A	N3-C4-N9	-5.39	123.08	127.40
69	A5	2185	U	C5-C6-N1	5.39	125.40	122.70
69	A5	2532	U	C5-C6-N1	5.39	125.40	122.70
69	A5	2705	U	O5'-P-OP2	-5.39	100.84	105.70
69	A5	3000	G	O4'-C1'-N9	5.39	112.52	108.20
69	A5	2493	C	C6-N1-C2	-5.39	118.14	120.30
69	A5	93	G	OP1-P-OP2	-5.39	111.51	119.60
69	A5	430	G	N7-C8-N9	5.39	115.80	113.10
69	A5	2067	C	N1-C2-O2	5.39	122.14	118.90
69	A5	3573	C	N1-C2-O2	5.39	122.14	118.90
70	B2	988	G	O4'-C1'-N9	5.39	112.51	108.20
70	B2	1954	C	C6-N1-C2	-5.39	118.14	120.30
39	A7	69	C	N3-C2-O2	-5.39	118.13	121.90
69	A5	873	U	P-O3'-C3'	5.39	126.17	119.70
69	A5	1197	A	P-O3'-C3'	5.39	126.17	119.70
69	A5	3409	G	N1-C6-O6	-5.39	116.67	119.90
69	A5	1570	U	N3-C2-O2	-5.39	118.43	122.20
69	A5	3307	A	N1-C2-N3	-5.39	126.61	129.30
69	A5	3474	G	OP1-P-OP2	-5.39	111.52	119.60
69	A5	296	C	C2'-C3'-O3'	5.39	122.32	113.70
69	A5	699	U	N3-C2-O2	-5.39	118.43	122.20
69	A5	1209	A	N1-C6-N6	-5.38	115.37	118.60
69	A5	1781	U	N3-C2-O2	-5.38	118.43	122.20
69	A5	3309	A	C4-N9-C1'	5.38	135.99	126.30
61	AJ	5	ARG	C-N-CA	5.38	135.16	121.70
39	A7	108	G	N3-C2-N2	-5.38	116.13	119.90
69	A5	2232	U	N3-C2-O2	-5.38	118.43	122.20
69	A5	2657	A	O5'-P-OP2	-5.38	100.86	105.70
69	A5	2770	C	C6-N1-C2	-5.38	118.15	120.30
69	A5	925	C	C5-C6-N1	5.38	123.69	121.00
69	A5	1617	U	OP2-P-O3'	5.38	117.04	105.20
69	A5	98	G	C4-C5-N7	5.38	112.95	110.80
69	A5	367	A	O4'-C1'-N9	-5.38	103.90	108.20
69	A5	668	A	C2-N3-C4	5.38	113.29	110.60
69	A5	1656	U	C2-N1-C1'	5.38	124.15	117.70
69	A5	1676	A	C6-C5-N7	5.38	136.06	132.30
69	A5	1909	U	OP1-P-O3'	5.38	117.03	105.20
69	A5	3583	C	C6-N1-C2	-5.38	118.15	120.30
69	A5	3952	C	O5'-P-OP1	-5.38	100.86	105.70
69	A5	1079	U	O4'-C1'-N1	5.38	112.50	108.20
69	A5	1712	C	C6-N1-C1'	5.38	127.25	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	CN	134	LEU	CB-CG-CD1	-5.37	101.86	111.00
69	A5	209	U	N1-C2-O2	5.37	126.56	122.80
69	A5	775	U	C5-C4-O4	5.37	129.12	125.90
69	A5	1026	G	C6-C5-N7	-5.37	127.18	130.40
69	A5	1626	A	N1-C2-N3	-5.37	126.61	129.30
69	A5	1643	G	N3-C4-N9	5.37	129.22	126.00
69	A5	1734	G	C8-N9-C4	-5.37	104.25	106.40
69	A5	2714	U	N1-C2-O2	5.37	126.56	122.80
69	A5	3365	G	C5-N7-C8	-5.37	101.61	104.30
70	B2	342	G	N3-C4-C5	-5.37	125.91	128.60
73	AK	54	GLY	C-N-CA	5.37	135.13	121.70
40	A8	40	A	O5'-P-OP1	-5.37	100.86	105.70
69	A5	1872	A	C8-N9-C4	-5.37	103.65	105.80
69	A5	3168	A	C4-C5-N7	5.37	113.39	110.70
69	A5	3757	U	OP1-P-OP2	-5.37	111.54	119.60
70	B2	631	C	C5-C6-N1	5.37	123.69	121.00
70	B2	1870	C	N3-C2-O2	-5.37	118.14	121.90
69	A5	373	A	N9-C4-C5	-5.37	103.65	105.80
69	A5	1050	C	C6-N1-C2	-5.37	118.15	120.30
69	A5	1749	A	C8-N9-C4	-5.37	103.65	105.80
69	A5	3309	A	C6-C5-N7	-5.37	128.54	132.30
69	A5	3487	A	OP1-P-OP2	-5.37	111.55	119.60
69	A5	1135	U	N3-C4-O4	5.37	123.16	119.40
69	A5	1739	U	C4-C5-C6	-5.37	116.48	119.70
2	CL	60	CYS	CA-CB-SG	5.37	123.66	114.00
69	A5	255	C	C5-C6-N1	5.37	123.68	121.00
69	A5	1511	C	C6-N1-C2	-5.37	118.15	120.30
69	A5	280	C	C6-N1-C2	-5.36	118.15	120.30
69	A5	820	A	C4-C5-C6	-5.36	114.32	117.00
69	A5	1155	U	N3-C4-C5	5.36	117.82	114.60
70	B2	1262	C	N1-C2-O2	5.36	122.12	118.90
70	B2	1934	U	N3-C2-O2	-5.36	118.44	122.20
69	A5	659	U	N1-C2-N3	5.36	118.12	114.90
69	A5	998	G	C4-C5-N7	5.36	112.94	110.80
69	A5	1383	A	C4-C5-N7	5.36	113.38	110.70
69	A5	1524	U	N1-C2-N3	5.36	118.12	114.90
69	A5	343	A	N1-C2-N3	-5.36	126.62	129.30
69	A5	1038	G	C5-C6-O6	-5.36	125.38	128.60
69	A5	1715	G	C2-N3-C4	-5.36	109.22	111.90
69	A5	3729	A	OP1-P-O3'	5.36	116.99	105.20
74	AF	217	LYS	C-N-CA	5.36	135.10	121.70
69	A5	3000	G	C4-N9-C1'	5.36	133.47	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1035	G	C4-C5-N7	5.36	112.94	110.80
69	A5	1284	A	C4-C5-C6	-5.36	114.32	117.00
69	A5	1866	G	C5-N7-C8	-5.36	101.62	104.30
69	A5	760	G	C5-N7-C8	-5.36	101.62	104.30
70	B2	38	C	N3-C2-O2	-5.36	118.15	121.90
70	B2	877	U	N3-C2-O2	-5.36	118.45	122.20
38	A9	12	C	C6-N1-C2	-5.35	118.16	120.30
69	A5	3281	G	N3-C2-N2	-5.35	116.15	119.90
69	A5	154	A	C5-N7-C8	-5.35	101.22	103.90
69	A5	789	G	C5-N7-C8	-5.35	101.62	104.30
69	A5	1423	C	C5-C6-N1	5.35	123.68	121.00
69	A5	1758	U	N3-C2-O2	-5.35	118.45	122.20
69	A5	1882	G	C4-C5-N7	5.35	112.94	110.80
69	A5	3365	G	C4-N9-C1'	5.35	133.46	126.50
39	A7	67	G	N3-C4-C5	5.35	131.28	128.60
69	A5	1124	G	N1-C6-O6	-5.35	116.69	119.90
69	A5	1265	U	C5-C6-N1	5.35	125.38	122.70
69	A5	113	A	OP1-P-O3'	5.35	116.96	105.20
69	A5	631	A	N3-C4-N9	5.35	131.68	127.40
69	A5	3731	U	N3-C2-O2	-5.35	118.46	122.20
70	B2	342	G	N3-C4-N9	5.35	129.21	126.00
69	A5	1945	U	N3-C2-O2	-5.35	118.46	122.20
69	A5	2682	C	N3-C4-C5	5.35	124.04	121.90
69	A5	3127	A	N7-C8-N9	5.35	116.47	113.80
69	A5	3457	C	C5-C6-N1	5.35	123.67	121.00
69	A5	992	U	N1-C2-O2	5.34	126.54	122.80
69	A5	1519	A	OP2-P-O3'	5.34	116.96	105.20
69	A5	1614	A	C8-N9-C4	-5.34	103.66	105.80
69	A5	1693	C	N1-C2-O2	5.34	122.11	118.90
69	A5	2194	G	N1-C6-O6	-5.34	116.69	119.90
69	A5	2714	U	C2-N1-C1'	5.34	124.11	117.70
69	A5	3665	U	C2-N1-C1'	5.34	124.11	117.70
39	A7	14	C	N3-C2-O2	-5.34	118.16	121.90
69	A5	2565	G	N3-C2-N2	5.34	123.64	119.90
69	A5	3951	U	C4-C5-C6	-5.34	116.49	119.70
38	A9	24	G	N9-C4-C5	5.34	107.54	105.40
69	A5	47	A	OP1-P-O3'	5.34	116.95	105.20
69	A5	1694	A	C8-N9-C4	5.34	107.94	105.80
69	A5	3795	G	C8-N9-C4	-5.34	104.26	106.40
45	AM	39	VAL	C-N-CA	5.34	135.05	121.70
69	A5	2570	C	C6-N1-C2	-5.34	118.16	120.30
69	A5	3464	G	N7-C8-N9	5.34	115.77	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1393	A	C4-C5-C6	-5.34	114.33	117.00
38	A9	2	G	O4'-C1'-N9	5.34	112.47	108.20
41	Ag	271	LEU	CB-CG-CD2	5.34	120.07	111.00
69	A5	1080	G	C5-C6-N1	5.34	114.17	111.50
69	A5	3470	G	N1-C6-O6	-5.34	116.70	119.90
69	A5	1409	G	C4-C5-N7	5.33	112.93	110.80
69	A5	2912	U	N1-C2-O2	5.33	126.53	122.80
69	A5	3281	G	C4-C5-N7	-5.33	108.67	110.80
70	B2	1650	G	C6-C5-N7	-5.33	127.20	130.40
69	A5	2127	C	C2-N1-C1'	5.33	124.67	118.80
70	B2	1844	C	C5-C6-N1	5.33	123.67	121.00
40	A8	5	C	C5-C6-N1	5.33	123.67	121.00
69	A5	1005	G	N1-C6-O6	-5.33	116.70	119.90
69	A5	2148	C	C5-C6-N1	5.33	123.67	121.00
69	A5	3641	U	N3-C2-O2	-5.33	118.47	122.20
31	Cn	13	LEU	CB-CG-CD1	-5.33	101.94	111.00
39	A7	57	C	C6-N1-C2	-5.33	118.17	120.30
39	A7	98	G	N7-C8-N9	5.33	115.76	113.10
69	A5	1795	A	N1-C2-N3	-5.33	126.64	129.30
69	A5	1966	A	N7-C8-N9	5.33	116.46	113.80
69	A5	1105	U	N1-C2-O2	5.33	126.53	122.80
69	A5	1165	A	O4'-C1'-N9	5.33	112.46	108.20
69	A5	2727	U	N3-C2-O2	-5.33	118.47	122.20
69	A5	3917	G	N1-C2-N2	-5.33	111.41	116.20
69	A5	2254	U	N1-C2-N3	5.32	118.09	114.90
70	B2	448	C	N1-C2-O2	5.32	122.09	118.90
69	A5	1310	A	P-O3'-C3'	5.32	126.09	119.70
69	A5	1325	C	O4'-C1'-N1	5.32	112.46	108.20
69	A5	1515	U	N3-C2-O2	-5.32	118.48	122.20
69	A5	2066	G	C6-C5-N7	-5.32	127.21	130.40
69	A5	2490	G	N3-C4-C5	5.32	131.26	128.60
69	A5	2657	A	O4'-C1'-N9	-5.32	103.94	108.20
69	A5	3673	G	O5'-P-OP1	-5.32	100.91	105.70
69	A5	285	G	C4-C5-N7	5.32	112.93	110.80
69	A5	655	C	N1-C2-O2	5.32	122.09	118.90
69	A5	1318	A	N3-C4-C5	5.32	130.52	126.80
69	A5	1370	C	C2-N3-C4	5.32	122.56	119.90
69	A5	1566	U	C2-N1-C1'	5.32	124.08	117.70
69	A5	375	C	C5-C6-N1	5.32	123.66	121.00
69	A5	1269	U	N1-C2-O2	5.32	126.52	122.80
69	A5	1614	A	C4-C5-N7	5.32	113.36	110.70
69	A5	2188	C	N3-C2-O2	-5.32	118.18	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	2608	G	N3-C4-N9	-5.32	122.81	126.00
69	A5	3522	A	O5'-P-OP2	5.32	117.08	110.70
70	B2	1111	U	C2-N1-C1'	5.32	124.08	117.70
69	A5	1550	U	C6-N1-C2	-5.31	117.81	121.00
38	A9	24	G	C8-N9-C1'	5.31	133.91	127.00
69	A5	1136	A	N1-C2-N3	-5.31	126.64	129.30
69	A5	2782	A	O4'-C1'-N9	5.31	112.45	108.20
69	A5	3715	U	N3-C2-O2	-5.31	118.48	122.20
69	A5	1143	U	N1-C2-N3	5.31	118.09	114.90
69	A5	2998	U	N1-C2-O2	5.31	126.52	122.80
40	A8	35	G	C5-C6-O6	5.31	131.78	128.60
69	A5	354	A	C8-N9-C4	5.31	107.92	105.80
69	A5	824	G	OP1-P-OP2	-5.31	111.64	119.60
69	A5	1264	U	C2-N1-C1'	5.31	124.07	117.70
69	A5	1383	A	C5-N7-C8	-5.31	101.25	103.90
69	A5	1865	U	C6-N1-C1'	-5.31	113.77	121.20
69	A5	229	C	N1-C2-O2	5.31	122.08	118.90
69	A5	1516	A	C8-N9-C4	5.31	107.92	105.80
69	A5	1568	A	C2-N3-C4	5.31	113.25	110.60
69	A5	2676	U	C5-C6-N1	5.31	125.35	122.70
69	A5	2798	C	N3-C2-O2	-5.31	118.19	121.90
69	A5	2043	G	O4'-C1'-N9	5.31	112.44	108.20
69	A5	438	G	N1-C2-N2	-5.30	111.43	116.20
69	A5	726	U	N3-C2-O2	-5.30	118.49	122.20
69	A5	3807	G	N9-C4-C5	-5.30	103.28	105.40
69	A5	476	U	C6-N1-C2	-5.30	117.82	121.00
69	A5	228	C	C6-N1-C2	-5.30	118.18	120.30
69	A5	1570	U	C2-N1-C1'	5.30	124.06	117.70
69	A5	3186	C	C5-C6-N1	5.30	123.65	121.00
69	A5	3289	U	C5-C6-N1	5.30	125.35	122.70
69	A5	3410	G	C4-C5-N7	5.30	112.92	110.80
69	A5	2006	U	N3-C2-O2	-5.30	118.49	122.20
69	A5	2542	C	C6-N1-C2	-5.30	118.18	120.30
69	A5	3841	C	N3-C2-O2	-5.30	118.19	121.90
69	A5	3911	G	N3-C4-C5	-5.30	125.95	128.60
69	A5	1117	A	C6-N1-C2	5.30	121.78	118.60
69	A5	1498	C	C2-N1-C1'	5.29	124.62	118.80
69	A5	86	C	C6-N1-C2	-5.29	118.18	120.30
69	A5	238	G	N7-C8-N9	5.29	115.75	113.10
69	A5	760	G	C2-N3-C4	-5.29	109.25	111.90
69	A5	1139	U	N3-C2-O2	-5.29	118.50	122.20
69	A5	1785	G	C4-N9-C1'	5.29	133.38	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1055	U	N1-C2-O2	5.29	126.50	122.80
69	A5	2554	U	C2-N1-C1'	5.29	124.05	117.70
69	A5	3283	U	C4-C5-C6	5.29	122.88	119.70
69	A5	3936	A	C2-N3-C4	-5.29	107.95	110.60
69	A5	746	G	C8-N9-C1'	-5.29	120.12	127.00
69	A5	810	A	O5'-P-OP1	5.29	117.05	110.70
69	A5	1166	U	C5-C4-O4	-5.29	122.73	125.90
69	A5	1588	A	N7-C8-N9	5.29	116.44	113.80
69	A5	2213	G	O5'-P-OP1	-5.29	100.94	105.70
69	A5	3701	U	C5-C6-N1	5.29	125.34	122.70
69	A5	3918	A	C6-C5-N7	-5.29	128.60	132.30
69	A5	188	G	C4-N9-C1'	5.29	133.37	126.50
69	A5	1355	C	N3-C4-N4	-5.29	114.30	118.00
69	A5	3441	C	N1-C2-O2	5.29	122.07	118.90
22	CF	219	THR	N-CA-C	-5.28	96.73	111.00
69	A5	2054	U	C5-C6-N1	5.28	125.34	122.70
70	B2	1064	A	N1-C6-N6	-5.28	115.43	118.60
69	A5	877	A	C5-C6-N1	5.28	120.34	117.70
69	A5	3969	G	N9-C4-C5	-5.28	103.29	105.40
69	A5	335	A	O5'-P-OP2	-5.28	100.95	105.70
69	A5	866	C	C2-N3-C4	5.28	122.54	119.90
69	A5	1220	U	C5-C6-N1	5.28	125.34	122.70
69	A5	1297	G	C6-C5-N7	-5.28	127.23	130.40
69	A5	1676	A	OP2-P-O3'	-5.28	93.59	105.20
69	A5	1862	U	P-O3'-C3'	5.28	126.03	119.70
70	B2	1940	G	N3-C2-N2	5.28	123.59	119.90
69	A5	93	G	N1-C2-N2	5.28	120.95	116.20
69	A5	3297	C	N3-C2-O2	-5.28	118.21	121.90
69	A5	3330	C	OP1-P-O3'	5.28	116.81	105.20
69	A5	3738	U	C6-N1-C1'	-5.28	113.81	121.20
70	B2	1748	A	C4-N9-C1'	5.28	135.79	126.30
69	A5	679	G	C4-N9-C1'	5.27	133.35	126.50
69	A5	1102	G	N7-C8-N9	5.27	115.74	113.10
69	A5	3514	C	C4-C5-C6	5.27	120.04	117.40
69	A5	3438	C	C6-N1-C2	-5.27	118.19	120.30
11	CA	213	GLY	N-CA-C	5.27	126.27	113.10
54	AY	75	LEU	CA-CB-CG	5.27	127.42	115.30
69	A5	1014	U	N1-C2-N3	5.27	118.06	114.90
69	A5	831	A	C6-C5-N7	5.27	135.99	132.30
69	A5	1023	C	C5-C6-N1	5.27	123.63	121.00
70	B2	399	C	C5-C6-N1	5.27	123.63	121.00
69	A5	867	U	C6-N1-C2	-5.26	117.84	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1220	U	C2-N1-C1'	5.26	124.02	117.70
69	A5	2692	U	O4'-C1'-N1	5.26	112.41	108.20
69	A5	2809	C	C6-N1-C2	-5.26	118.19	120.30
69	A5	3138	G	O5'-P-OP2	-5.26	100.96	105.70
69	A5	1270	G	N3-C4-N9	5.26	129.16	126.00
69	A5	1759	C	OP1-P-O3'	5.26	116.78	105.20
69	A5	555	U	C5-C4-O4	5.26	129.06	125.90
69	A5	801	G	O5'-P-OP1	-5.26	100.96	105.70
69	A5	1724	A	C8-N9-C1'	-5.26	118.23	127.70
69	A5	2775	A	O5'-P-OP2	-5.26	100.96	105.70
69	A5	3296	C	N3-C2-O2	-5.26	118.22	121.90
70	B2	115	U	N1-C2-O2	5.26	126.48	122.80
70	B2	416	C	N3-C2-O2	-5.26	118.22	121.90
39	A7	26	C	N1-C2-O2	5.26	122.06	118.90
69	A5	3573	C	N3-C2-O2	-5.26	118.22	121.90
69	A5	1208	U	N1-C2-O2	5.26	126.48	122.80
18	Cr	94	LEU	CA-CB-CG	5.26	127.39	115.30
69	A5	3152	G	C8-N9-C4	-5.26	104.30	106.40
69	A5	476	U	C5-C6-N1	5.25	125.33	122.70
69	A5	2165	C	C2-N3-C4	-5.25	117.27	119.90
69	A5	3471	A	C4-C5-C6	-5.25	114.37	117.00
70	B2	1934	U	N1-C2-O2	5.25	126.48	122.80
39	A7	118	C	N1-C2-O2	5.25	122.05	118.90
69	A5	1262	C	N1-C2-O2	5.25	122.05	118.90
69	A5	3477	A	N9-C4-C5	5.25	107.90	105.80
69	A5	3928	A	C2-N3-C4	5.25	113.22	110.60
40	A8	40	A	C5-N7-C8	-5.25	101.28	103.90
69	A5	846	U	C4-C5-C6	-5.25	116.55	119.70
69	A5	1891	U	N1-C2-N3	5.25	118.05	114.90
69	A5	3168	A	C5-N7-C8	-5.25	101.28	103.90
69	A5	2222	G	C4-C5-N7	5.25	112.90	110.80
69	A5	127	U	C5-C6-N1	5.25	125.32	122.70
69	A5	1384	C	C5-C6-N1	5.25	123.62	121.00
69	A5	2246	A	N7-C8-N9	5.25	116.42	113.80
69	A5	2492	A	N3-C4-C5	-5.25	123.13	126.80
69	A5	3292	C	N3-C4-N4	-5.25	114.33	118.00
70	B2	1683	U	C2-N1-C1'	5.25	124.00	117.70
70	B2	1968	C	C5-C6-N1	5.25	123.62	121.00
12	CS	173	ARG	C-N-CA	5.24	134.81	121.70
69	A5	1761	C	C6-N1-C2	-5.24	118.20	120.30
69	A5	2017	A	C5-N7-C8	-5.24	101.28	103.90
69	A5	3511	U	N3-C2-O2	-5.24	118.53	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	AE	180	LEU	CA-CB-CG	5.24	127.36	115.30
69	A5	457	A	C5-N7-C8	-5.24	101.28	103.90
69	A5	978	G	C2-N3-C4	5.24	114.52	111.90
69	A5	1013	G	C5-C6-O6	5.24	131.75	128.60
69	A5	1255	U	N3-C2-O2	-5.24	118.53	122.20
69	A5	1393	A	N3-C4-C5	5.24	130.47	126.80
69	A5	1981	A	C4-C5-N7	5.24	113.32	110.70
69	A5	2162	C	OP1-P-OP2	-5.24	111.74	119.60
69	A5	839	A	N9-C1'-C2'	5.24	120.81	114.00
69	A5	1165	A	C6-C5-N7	5.24	135.97	132.30
70	B2	632	G	N1-C6-O6	5.24	123.04	119.90
69	A5	917	G	C5-C6-O6	5.24	131.74	128.60
69	A5	1109	G	C4-C5-N7	5.24	112.89	110.80
69	A5	2129	C	OP2-P-O3'	5.24	116.72	105.20
69	A5	3520	U	O5'-P-OP1	-5.24	100.99	105.70
70	B2	1832	C	C5-C6-N1	5.23	123.62	121.00
70	B2	1979	C	N3-C2-O2	-5.23	118.24	121.90
69	A5	1083	A	OP2-P-O3'	5.23	116.71	105.20
69	A5	1170	U	N1-C2-N3	-5.23	111.76	114.90
69	A5	1362	G	O5'-P-OP1	-5.23	100.99	105.70
69	A5	1872	A	C4-N9-C1'	5.23	135.72	126.30
69	A5	3727	A	O4'-C1'-N9	5.23	112.39	108.20
70	B2	878	C	C5-C6-N1	5.23	123.62	121.00
69	A5	394	G	N9-C4-C5	-5.23	103.31	105.40
69	A5	1698	A	O4'-C1'-N9	-5.23	104.02	108.20
21	CB	261	ARG	NE-CZ-NH1	5.23	122.92	120.30
69	A5	1780	U	C5-C4-O4	-5.23	122.76	125.90
69	A5	2755	G	N3-C4-N9	5.23	129.14	126.00
69	A5	520	G	N3-C4-N9	5.23	129.14	126.00
69	A5	791	C	O5'-P-OP2	-5.23	101.00	105.70
69	A5	1872	A	C6-C5-N7	-5.23	128.64	132.30
69	A5	3298	U	N1-C2-O2	5.23	126.46	122.80
69	A5	2800	C	C2-N1-C1'	5.23	124.55	118.80
69	A5	3267	C	N1-C2-O2	5.23	122.04	118.90
69	A5	101	C	N1-C2-O2	5.22	122.03	118.90
69	A5	2796	G	C8-N9-C4	5.22	108.49	106.40
40	A8	45	G	N3-C2-N2	-5.22	116.24	119.90
69	A5	1013	G	N1-C2-N3	5.22	127.03	123.90
69	A5	1126	A	C5-C6-N1	5.22	120.31	117.70
69	A5	1177	U	C6-N1-C2	-5.22	117.87	121.00
69	A5	1204	C	C6-N1-C2	-5.22	118.21	120.30
69	A5	1792	G	OP2-P-O3'	5.22	116.69	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3117	A	O4'-C1'-N9	5.22	112.38	108.20
81	AS	91	ILE	C-N-CA	5.22	134.76	121.70
69	A5	3317	U	OP1-P-O3'	5.22	116.69	105.20
69	A5	3624	C	C6-N1-C2	-5.22	118.21	120.30
70	B2	1187	U	C6-N1-C2	-5.22	117.87	121.00
69	A5	163	A	C5-C6-N1	5.22	120.31	117.70
69	A5	348	A	C4-C5-C6	-5.22	114.39	117.00
69	A5	812	U	N3-C2-O2	-5.22	118.55	122.20
69	A5	1985	C	N3-C2-O2	-5.22	118.25	121.90
21	CB	40	PRO	N-CA-C	5.22	125.67	112.10
69	A5	1193	A	C4-C5-C6	-5.22	114.39	117.00
69	A5	1903	U	C5-C6-N1	5.22	125.31	122.70
69	A5	2481	U	N3-C2-O2	-5.22	118.55	122.20
39	A7	92	C	O5'-P-OP1	-5.22	101.01	105.70
69	A5	1127	C	N3-C4-C5	5.22	123.99	121.90
69	A5	1129	A	N1-C6-N6	5.22	121.73	118.60
69	A5	1389	C	C5-C4-N4	5.22	123.85	120.20
70	B2	1087	C	O4'-C1'-N1	5.22	112.37	108.20
69	A5	725	U	C5-C6-N1	5.21	125.31	122.70
69	A5	856	A	C8-N9-C4	5.21	107.89	105.80
69	A5	1687	U	C5-C6-N1	-5.21	120.09	122.70
69	A5	1710	G	N9-C4-C5	-5.21	103.31	105.40
69	A5	2200	A	C5-N7-C8	-5.21	101.29	103.90
69	A5	2510	A	C5-N7-C8	-5.21	101.29	103.90
70	B2	1949	A	OP2-P-O3'	5.21	116.67	105.20
67	AQ	112	ASP	CB-CG-OD1	5.21	122.99	118.30
69	A5	522	G	N3-C4-C5	-5.21	126.00	128.60
69	A5	1712	C	O5'-P-OP1	-5.21	101.01	105.70
69	A5	2059	U	N3-C2-O2	-5.21	118.55	122.20
69	A5	2171	U	C4-C5-C6	-5.21	116.57	119.70
69	A5	3620	G	C4-C5-N7	5.21	112.88	110.80
69	A5	3703	C	C6-N1-C2	-5.21	118.22	120.30
70	B2	1328	G	N3-C4-N9	5.21	129.13	126.00
70	B2	1929	U	N3-C2-O2	-5.21	118.55	122.20
39	A7	112	U	N1-C2-O2	5.21	126.44	122.80
69	A5	72	C	C5-C6-N1	5.21	123.61	121.00
69	A5	1951	C	N3-C2-O2	-5.21	118.25	121.90
69	A5	1001	A	N1-C6-N6	-5.21	115.48	118.60
69	A5	1721	C	C5-C6-N1	5.21	123.60	121.00
69	A5	2774	G	O4'-C1'-N9	5.21	112.36	108.20
69	A5	11	C	C2-N1-C1'	5.20	124.52	118.80
69	A5	1262	C	C6-N1-C2	-5.20	118.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1080	G	N9-C4-C5	-5.20	103.32	105.40
69	A5	1202	A	N1-C6-N6	-5.20	115.48	118.60
69	A5	1421	G	C8-N9-C1'	-5.20	120.24	127.00
69	A5	1563	A	OP2-P-O3'	5.20	116.64	105.20
69	A5	3271	G	C4-C5-N7	5.20	112.88	110.80
69	A5	303	G	N3-C4-C5	-5.20	126.00	128.60
69	A5	1112	G	N1-C2-N2	-5.20	111.52	116.20
70	B2	1052	U	C2-N1-C1'	5.20	123.93	117.70
69	A5	1969	A	N7-C8-N9	5.19	116.40	113.80
69	A5	3898	C	C5-C6-N1	5.19	123.60	121.00
69	A5	1321	G	N3-C4-C5	-5.19	126.00	128.60
69	A5	1799	U	C5'-C4'-O4'	5.19	115.33	109.10
69	A5	2812	U	C6-N1-C1'	-5.19	113.93	121.20
69	A5	1567	G	N3-C4-N9	5.19	129.11	126.00
69	A5	3126	C	C6-N1-C2	-5.19	118.22	120.30
69	A5	3730	G	C6-C5-N7	-5.19	127.28	130.40
69	A5	244	G	C2-N3-C4	5.19	114.49	111.90
69	A5	348	A	N1-C2-N3	-5.19	126.70	129.30
69	A5	1327	G	C5-C6-N1	5.19	114.09	111.50
39	A7	87	G	C5-C6-O6	5.19	131.71	128.60
69	A5	831	A	C4-C5-N7	-5.19	108.11	110.70
69	A5	1951	C	C5-C6-N1	5.19	123.59	121.00
22	CF	182	LEU	CA-CB-CG	5.19	127.23	115.30
40	A8	49	C	C5-C6-N1	5.19	123.59	121.00
69	A5	883	U	C2-N1-C1'	5.19	123.92	117.70
69	A5	1017	A	N9-C1'-C2'	5.19	120.74	114.00
69	A5	1548	C	OP2-P-O3'	5.19	116.61	105.20
69	A5	3275	G	N3-C4-N9	5.19	129.11	126.00
69	A5	241	C	C2-N1-C1'	5.18	124.50	118.80
69	A5	1063	C	N1-C2-O2	5.18	122.01	118.90
69	A5	3153	G	N3-C4-C5	-5.18	126.01	128.60
69	A5	3579	C	C6-N1-C2	-5.18	118.23	120.30
69	A5	3661	C	C2-N1-C1'	5.18	124.50	118.80
29	CC	205	ILE	CG1-CB-CG2	-5.18	100.00	111.40
69	A5	925	C	C6-N1-C2	-5.18	118.23	120.30
69	A5	2780	A	C6-N1-C2	5.18	121.71	118.60
69	A5	2796	G	C4-N9-C1'	5.18	133.24	126.50
69	A5	3891	U	N1-C1'-C2'	5.18	120.74	114.00
69	A5	746	G	N7-C8-N9	5.18	115.69	113.10
70	B2	253	A	C2-N3-C4	5.18	113.19	110.60
69	A5	432	U	N1-C2-O2	5.18	126.43	122.80
69	A5	1555	G	C5-C6-N1	5.18	114.09	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	3409	G	N3-C4-N9	5.18	129.11	126.00
40	A8	29	U	N1-C2-O2	5.18	126.42	122.80
69	A5	2490	G	C6-N1-C2	5.18	128.21	125.10
40	A8	36	A	C8-N9-C4	-5.17	103.73	105.80
69	A5	439	U	N3-C2-O2	-5.17	118.58	122.20
69	A5	794	G	N3-C4-N9	5.17	129.10	126.00
69	A5	826	A	N9-C4-C5	5.17	107.87	105.80
69	A5	832	U	C6-N1-C2	5.17	124.11	121.00
69	A5	1109	G	N9-C4-C5	-5.17	103.33	105.40
69	A5	3141	A	C8-N9-C4	-5.17	103.73	105.80
69	A5	807	A	C6-N1-C2	5.17	121.70	118.60
69	A5	2736	A	N1-C2-N3	-5.17	126.71	129.30
21	CB	130	PHE	CB-CG-CD2	-5.17	117.18	120.80
69	A5	1050	C	C2-N1-C1'	5.17	124.49	118.80
69	A5	2241	U	O4'-C1'-N1	-5.17	104.06	108.20
69	A5	3304	U	N1-C2-O2	5.17	126.42	122.80
69	A5	298	U	C6-N1-C2	-5.17	117.90	121.00
28	C1	2	ALA	C-N-CA	5.17	134.62	121.70
40	A8	49	C	C6-N1-C2	-5.17	118.23	120.30
69	A5	1193	A	N9-C4-C5	5.17	107.87	105.80
69	A5	2147	C	C5-C6-N1	5.17	123.58	121.00
69	A5	2184	G	O5'-P-OP2	5.17	116.90	110.70
69	A5	2756	C	C2-N3-C4	5.17	122.48	119.90
69	A5	126	G	C4-N9-C1'	5.17	133.22	126.50
69	A5	439	U	O4'-C1'-N1	5.16	112.33	108.20
69	A5	3167	A	N1-C6-N6	-5.16	115.50	118.60
69	A5	3473	C	O5'-C5'-C4'	5.16	121.51	111.70
69	A5	3738	U	C5-C6-N1	5.16	125.28	122.70
69	A5	246	C	N3-C2-O2	-5.16	118.29	121.90
69	A5	659	U	C2-N1-C1'	5.16	123.89	117.70
69	A5	3969	G	P-O3'-C3'	5.16	125.89	119.70
70	B2	965	G	O5'-P-OP1	-5.16	101.06	105.70
69	A5	982	C	OP2-P-O3'	5.16	116.55	105.20
69	A5	1317	A	N7-C8-N9	5.16	116.38	113.80
69	A5	2542	C	N3-C2-O2	-5.16	118.29	121.90
69	A5	3456	U	O4'-C1'-N1	5.16	112.33	108.20
69	A5	3613	G	O4'-C1'-N9	5.16	112.33	108.20
5	Ca	118	LEU	CA-CB-CG	5.16	127.16	115.30
69	A5	577	A	C8-N9-C4	-5.16	103.74	105.80
69	A5	1353	G	OP1-P-OP2	-5.16	111.86	119.60
69	A5	2560	A	N1-C6-N6	-5.16	115.51	118.60
40	A8	91	C	C5-C6-N1	5.16	123.58	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	264	U	N1-C2-O2	5.16	126.41	122.80
69	A5	1134	G	N3-C4-C5	-5.16	126.02	128.60
69	A5	2672	U	C6-N1-C2	-5.16	117.91	121.00
69	A5	1722	U	OP2-P-O3'	5.15	116.54	105.20
69	A5	3763	U	N1-C2-O2	-5.15	119.19	122.80
69	A5	56	A	OP1-P-O3'	5.15	116.53	105.20
69	A5	1339	U	C4-C5-C6	-5.15	116.61	119.70
69	A5	2154	A	C5-N7-C8	-5.15	101.32	103.90
69	A5	3484	U	N3-C2-O2	-5.15	118.59	122.20
69	A5	3666	C	C6-N1-C2	-5.15	118.24	120.30
69	A5	3967	U	N3-C2-O2	-5.15	118.59	122.20
70	B2	871	G	C4-N9-C1'	5.15	133.20	126.50
70	B2	1400	A	P-O3'-C3'	5.15	125.88	119.70
69	A5	316	U	C2-N1-C1'	5.15	123.88	117.70
69	A5	3674	G	C4-C5-N7	5.15	112.86	110.80
70	B2	998	U	N3-C2-O2	-5.15	118.59	122.20
69	A5	1791	A	N7-C8-N9	5.15	116.37	113.80
69	A5	927	A	N3-C4-C5	-5.15	123.20	126.80
69	A5	3952	C	N1-C2-O2	5.15	121.99	118.90
25	Cf	46	ARG	N-CA-C	5.15	124.89	111.00
69	A5	1865	U	C2-N3-C4	5.15	130.09	127.00
69	A5	839	A	N3-C4-C5	5.14	130.40	126.80
70	B2	849	U	N3-C2-O2	-5.14	118.60	122.20
70	B2	1853	U	N1-C2-O2	5.14	126.40	122.80
69	A5	453	C	C6-N1-C2	-5.14	118.24	120.30
69	A5	2170	C	C2-N1-C1'	5.14	124.46	118.80
69	A5	2488	U	C6-N1-C2	-5.14	117.91	121.00
69	A5	2736	A	C5-N7-C8	-5.14	101.33	103.90
69	A5	2798	C	N1-C2-O2	5.14	121.98	118.90
69	A5	3185	C	C6-N1-C2	-5.14	118.24	120.30
69	A5	3236	A	C2-N3-C4	-5.14	108.03	110.60
69	A5	3362	G	N3-C4-C5	-5.14	126.03	128.60
69	A5	3714	U	C5-C6-N1	5.14	125.27	122.70
69	A5	3921	A	N3-C4-C5	-5.14	123.20	126.80
70	B2	1191	C	C5-C6-N1	5.14	123.57	121.00
69	A5	1718	G	C5-N7-C8	-5.14	101.73	104.30
69	A5	3120	C	N1-C2-O2	5.14	121.98	118.90
69	A5	1055	U	C2-N1-C1'	5.14	123.87	117.70
69	A5	1131	C	N3-C2-O2	-5.14	118.30	121.90
69	A5	1138	C	OP1-P-O3'	5.14	116.51	105.20
69	A5	3413	C	N1-C2-O2	5.14	121.98	118.90
69	A5	2168	G	N1-C6-O6	-5.14	116.82	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
70	B2	878	C	C6-N1-C2	-5.14	118.25	120.30
40	A8	66	U	N1-C2-O2	5.14	126.39	122.80
69	A5	464	G	N1-C6-O6	-5.14	116.82	119.90
69	A5	1101	A	N7-C8-N9	5.14	116.37	113.80
69	A5	3607	C	C5-C6-N1	5.14	123.57	121.00
69	A5	315	G	C4-N9-C1'	5.13	133.18	126.50
69	A5	1359	G	N1-C6-O6	5.13	122.98	119.90
70	B2	1193	C	C6-N1-C2	-5.13	118.25	120.30
70	B2	1662	C	C6-N1-C2	-5.13	118.25	120.30
69	A5	1095	G	C5-C6-O6	5.13	131.68	128.60
69	A5	3728	A	C2-N3-C4	5.13	113.17	110.60
70	B2	1187	U	C6-N1-C1'	-5.13	114.01	121.20
40	A8	34	C	C2-N3-C4	5.13	122.47	119.90
69	A5	1295	A	C2-N3-C4	5.13	113.17	110.60
69	A5	1775	C	C6-N1-C2	-5.13	118.25	120.30
69	A5	651	A	O5'-P-OP2	-5.13	101.08	105.70
69	A5	2177	G	C6-C5-N7	5.13	133.48	130.40
69	A5	3267	C	N3-C2-O2	-5.13	118.31	121.90
69	A5	811	G	N7-C8-N9	5.13	115.66	113.10
69	A5	1374	C	N1-C2-O2	5.13	121.98	118.90
69	A5	1800	U	C5-C6-N1	5.13	125.27	122.70
69	A5	3226	A	N1-C2-N3	-5.13	126.74	129.30
69	A5	108	A	C8-N9-C4	-5.13	103.75	105.80
69	A5	2469	U	N3-C2-O2	-5.13	118.61	122.20
69	A5	3364	C	C5-C6-N1	5.13	123.56	121.00
69	A5	3529	A	N9-C4-C5	-5.13	103.75	105.80
70	B2	278	G	P-O3'-C3'	5.13	125.85	119.70
40	A8	112	C	O5'-P-OP1	-5.12	101.09	105.70
69	A5	108	A	N7-C8-N9	5.12	116.36	113.80
39	A7	65	C	C6-N1-C2	-5.12	118.25	120.30
69	A5	92	A	C5-N7-C8	-5.12	101.34	103.90
69	A5	832	U	C4-C5-C6	5.12	122.77	119.70
69	A5	3168	A	C5-C6-N6	-5.12	119.60	123.70
69	A5	3670	G	N3-C4-C5	-5.12	126.04	128.60
70	B2	1331	A	P-O3'-C3'	5.12	125.85	119.70
69	A5	316	U	C5-C6-N1	5.12	125.26	122.70
69	A5	792	U	N3-C2-O2	-5.12	118.61	122.20
69	A5	1721	C	C2-N3-C4	5.12	122.46	119.90
69	A5	1803	C	C6-N1-C1'	-5.12	114.65	120.80
70	B2	1844	C	N3-C2-O2	-5.12	118.31	121.90
69	A5	1414	C	N3-C4-C5	5.12	123.95	121.90
69	A5	2240	U	O5'-P-OP1	-5.12	101.09	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
70	B2	1960	A	C6-C5-N7	-5.12	128.72	132.30
69	A5	2507	C	C6-N1-C2	-5.12	118.25	120.30
69	A5	3591	A	O4'-C1'-N9	5.12	112.29	108.20
70	B2	1673	U	P-O3'-C3'	5.12	125.84	119.70
12	CS	6	LEU	CA-CB-CG	5.12	127.06	115.30
69	A5	394	G	N3-C4-N9	5.12	129.07	126.00
69	A5	1591	U	C6-N1-C2	-5.12	117.93	121.00
70	B2	301	U	N1-C2-O2	5.12	126.38	122.80
70	B2	947	U	C2-N1-C1'	5.12	123.84	117.70
39	A7	102	C	N1-C2-O2	5.11	121.97	118.90
69	A5	791	C	O4'-C1'-N1	5.11	112.29	108.20
69	A5	2790	G	N3-C4-N9	5.11	129.07	126.00
69	A5	3317	U	C6-N1-C2	-5.11	117.93	121.00
69	A5	3453	U	C5-C6-N1	5.11	125.26	122.70
69	A5	3730	G	C2-N3-C4	5.11	114.46	111.90
70	B2	1980	U	C5-C6-N1	5.11	125.26	122.70
69	A5	797	A	OP2-P-O3'	5.11	116.45	105.20
69	A5	2572	G	C4-C5-N7	5.11	112.84	110.80
69	A5	2774	G	C2-N3-C4	5.11	114.45	111.90
69	A5	1058	A	C2-N3-C4	5.11	113.15	110.60
69	A5	1365	U	N3-C4-C5	-5.11	111.53	114.60
69	A5	3643	C	C2-N1-C1'	5.11	124.42	118.80
69	A5	863	U	N3-C2-O2	-5.11	118.62	122.20
69	A5	990	U	N3-C2-O2	-5.11	118.62	122.20
69	A5	2656	C	N3-C2-O2	-5.11	118.33	121.90
69	A5	85	U	OP1-P-O3'	5.11	116.43	105.20
69	A5	1132	U	OP1-P-O3'	5.11	116.43	105.20
69	A5	1910	C	O5'-P-OP1	-5.11	101.11	105.70
69	A5	2038	A	O4'-C1'-N9	5.11	112.28	108.20
69	A5	2584	G	N7-C8-N9	5.11	115.65	113.10
69	A5	3969	G	OP1-P-O3'	5.11	116.43	105.20
69	A5	658	A	N3-C4-N9	5.10	131.48	127.40
69	A5	1662	U	O5'-P-OP1	-5.10	101.11	105.70
69	A5	3264	A	C4-C5-N7	5.10	113.25	110.70
69	A5	822	G	O5'-P-OP2	-5.10	101.11	105.70
69	A5	3139	G	N3-C4-N9	5.10	129.06	126.00
69	A5	3839	A	O5'-P-OP1	5.10	116.82	110.70
70	B2	431	G	C4-N9-C1'	5.10	133.13	126.50
27	Ck	12	LEU	CA-CB-CG	5.10	127.03	115.30
69	A5	2016	U	O4'-C1'-N1	5.10	112.28	108.20
69	A5	1141	G	C6-C5-N7	5.10	133.46	130.40
69	A5	1607	A	N1-C6-N6	-5.10	115.54	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1736	G	C8-N9-C4	-5.10	104.36	106.40
69	A5	1795	A	C4-N9-C1'	5.10	135.48	126.30
41	Ag	110	LEU	CA-CB-CG	5.10	127.02	115.30
69	A5	3417	C	O5'-P-OP1	-5.10	101.11	105.70
70	B2	1960	A	C8-N9-C1'	-5.10	118.52	127.70
69	A5	1350	A	N9-C4-C5	-5.10	103.76	105.80
70	B2	1552	C	N1-C2-O2	5.10	121.96	118.90
69	A5	164	U	C6-N1-C2	-5.09	117.94	121.00
69	A5	3404	A	C5-N7-C8	-5.09	101.35	103.90
38	A9	24	G	N7-C8-N9	5.09	115.64	113.10
69	A5	1367	A	N1-C6-N6	-5.09	115.55	118.60
69	A5	3676	C	N3-C4-N4	-5.09	114.44	118.00
69	A5	126	G	N3-C4-C5	-5.09	126.06	128.60
69	A5	1207	G	C5-C6-N1	5.09	114.05	111.50
51	AB	120	TRP	CA-CB-CG	-5.09	104.03	113.70
69	A5	445	C	N3-C2-O2	-5.09	118.34	121.90
69	A5	832	U	C5-C6-N1	-5.09	120.16	122.70
69	A5	1594	U	C5-C6-N1	5.09	125.24	122.70
69	A5	1750	G	N3-C2-N2	-5.09	116.34	119.90
69	A5	654	G	C6-C5-N7	-5.08	127.35	130.40
69	A5	805	C	C2-N1-C1'	5.08	124.39	118.80
69	A5	1651	C	C6-N1-C2	-5.08	118.27	120.30
70	B2	1788	C	C6-N1-C1'	-5.08	114.70	120.80
13	CT	40	VAL	CG1-CB-CG2	-5.08	102.77	110.90
36	CE	65	SER	C-N-CA	5.08	134.41	121.70
40	A8	84	U	C6-N1-C2	-5.08	117.95	121.00
69	A5	920	G	C8-N9-C4	5.08	108.43	106.40
69	A5	2534	G	C8-N9-C4	-5.08	104.37	106.40
69	A5	2567	U	N1-C2-O2	5.08	126.36	122.80
69	A5	2679	U	C5-C4-O4	-5.08	122.85	125.90
69	A5	3283	U	O4'-C1'-N1	5.08	112.27	108.20
69	A5	3778	U	C5-C6-N1	5.08	125.24	122.70
18	Cr	76	ARG	C-N-CA	5.08	143.34	122.00
40	A8	15	G	N3-C4-C5	5.08	131.14	128.60
69	A5	1026	G	C8-N9-C1'	-5.08	120.39	127.00
69	A5	1269	U	N3-C2-O2	-5.08	118.64	122.20
69	A5	3142	G	N1-C6-O6	-5.08	116.85	119.90
69	A5	3512	U	N1-C2-O2	5.08	126.36	122.80
69	A5	760	G	C4-C5-N7	5.08	112.83	110.80
69	A5	2517	A	O4'-C1'-N9	5.08	112.26	108.20
69	A5	190	A	P-O3'-C3'	5.08	125.80	119.70
69	A5	826	A	C2-N3-C4	5.08	113.14	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1374	C	N3-C2-O2	-5.08	118.35	121.90
39	A7	47	C	C2-N1-C1'	5.08	124.39	118.80
69	A5	103	A	N1-C2-N3	-5.08	126.76	129.30
68	Cz	116	LEU	CA-CB-CG	5.08	126.97	115.30
69	A5	1795	A	N7-C8-N9	5.08	116.34	113.80
69	A5	2515	C	N1-C2-O2	5.08	121.94	118.90
69	A5	2652	U	N1-C2-O2	5.07	126.35	122.80
40	A8	24	G	C5-C6-O6	5.07	131.64	128.60
69	A5	2513	G	N3-C4-C5	-5.07	126.06	128.60
9	CQ	156	PRO	N-CA-C	5.07	125.28	112.10
69	A5	772	G	N3-C4-N9	5.07	129.04	126.00
69	A5	1588	A	C4-N9-C1'	5.07	135.43	126.30
69	A5	1668	U	C2-N1-C1'	5.07	123.78	117.70
69	A5	1734	G	N3-C4-C5	-5.07	126.07	128.60
69	A5	3281	G	C5-N7-C8	5.07	106.83	104.30
69	A5	3399	C	C6-N1-C2	-5.07	118.27	120.30
70	B2	458	C	C6-N1-C2	-5.07	118.27	120.30
70	B2	1056	C	C6-N1-C2	-5.07	118.27	120.30
40	A8	28	A	N1-C6-N6	-5.07	115.56	118.60
69	A5	804	C	N1-C2-O2	5.07	121.94	118.90
69	A5	828	G	C8-N9-C4	-5.07	104.37	106.40
69	A5	2509	G	N1-C6-O6	-5.07	116.86	119.90
69	A5	2747	G	N3-C2-N2	5.07	123.45	119.90
69	A5	3742	C	C6-N1-C2	-5.07	118.27	120.30
69	A5	582	A	N7-C8-N9	5.06	116.33	113.80
69	A5	3644	C	C6-N1-C2	-5.06	118.27	120.30
69	A5	523	C	P-O3'-C3'	5.06	125.78	119.70
69	A5	379	A	N1-C2-N3	-5.06	126.77	129.30
69	A5	2072	C	N1-C2-O2	5.06	121.94	118.90
69	A5	2731	G	N3-C2-N2	5.06	123.44	119.90
69	A5	3719	A	P-O3'-C3'	5.06	125.77	119.70
69	A5	1000	G	C4-C5-N7	5.06	112.82	110.80
69	A5	1997	C	C5-C6-N1	5.06	123.53	121.00
69	A5	2662	C	N1-C2-O2	5.06	121.94	118.90
39	A7	79	U	N3-C2-O2	-5.06	118.66	122.20
69	A5	1351	C	N3-C4-C5	5.06	123.92	121.90
69	A5	1722	U	N1-C2-O2	5.06	126.34	122.80
69	A5	3445	C	C5-C6-N1	5.06	123.53	121.00
69	A5	3517	U	C2-N1-C1'	5.06	123.77	117.70
69	A5	206	C	N3-C2-O2	-5.05	118.36	121.90
69	A5	241	C	C6-N1-C1'	-5.05	114.73	120.80
69	A5	413	A	C5-N7-C8	-5.05	101.37	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	1880	A	O5'-P-OP2	-5.05	101.15	105.70
69	A5	2556	A	N1-C6-N6	-5.05	115.57	118.60
69	A5	2803	A	C8-N9-C4	-5.05	103.78	105.80
69	A5	831	A	N9-C4-C5	5.05	107.82	105.80
69	A5	2584	G	C6-C5-N7	-5.05	127.37	130.40
69	A5	3879	A	N1-C6-N6	-5.05	115.57	118.60
70	B2	1853	U	N3-C2-O2	-5.05	118.66	122.20
69	A5	488	U	N3-C2-O2	-5.05	118.66	122.20
69	A5	726	U	N1-C2-O2	5.05	126.34	122.80
69	A5	927	A	N1-C2-N3	-5.05	126.77	129.30
70	B2	1596	C	C5-C6-N1	5.05	123.53	121.00
70	B2	1993	U	C6-N1-C2	-5.05	117.97	121.00
39	A7	76	U	N1-C2-O2	5.05	126.33	122.80
69	A5	3412	U	OP2-P-O3'	5.05	116.31	105.20
69	A5	100	G	N1-C6-O6	-5.05	116.87	119.90
69	A5	3720	A	O4'-C1'-N9	-5.05	104.16	108.20
70	B2	1960	A	C4-C5-N7	5.05	113.22	110.70
69	A5	68	G	C8-N9-C4	-5.04	104.38	106.40
69	A5	1293	A	C2-N3-C4	5.04	113.12	110.60
69	A5	1546	U	O4'-C1'-N1	-5.04	104.16	108.20
69	A5	2207	A	N1-C6-N6	5.04	121.63	118.60
69	A5	3246	G	C4-N9-C1'	-5.04	119.94	126.50
16	CY	15	ARG	NE-CZ-NH1	5.04	122.82	120.30
40	A8	44	C	N3-C2-O2	-5.04	118.37	121.90
69	A5	1590	A	C8-N9-C4	-5.04	103.78	105.80
69	A5	3619	U	C5-C6-N1	5.04	125.22	122.70
70	B2	623	G	C8-N9-C4	-5.04	104.38	106.40
69	A5	68	G	C5-C6-N1	5.04	114.02	111.50
69	A5	104	A	C5-N7-C8	-5.04	101.38	103.90
69	A5	1198	U	C6-N1-C2	-5.04	117.97	121.00
69	A5	3139	G	N3-C4-C5	-5.04	126.08	128.60
69	A5	3271	G	C5-N7-C8	-5.04	101.78	104.30
69	A5	3334	A	C8-N9-C4	5.04	107.82	105.80
73	AK	35	LEU	CA-CB-CG	5.04	126.89	115.30
69	A5	163	A	C6-N1-C2	-5.04	115.58	118.60
69	A5	1051	C	N1-C2-O2	5.04	121.92	118.90
69	A5	1297	G	N9-C4-C5	-5.04	103.38	105.40
40	A8	14	G	OP2-P-O3'	5.04	116.28	105.20
69	A5	1009	G	C5-C6-O6	5.04	131.62	128.60
69	A5	1609	U	C6-N1-C2	-5.04	117.98	121.00
69	A5	3292	C	C5-C4-N4	5.04	123.73	120.20
69	A5	3222	G	O4'-C1'-N9	5.04	112.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	335	A	OP1-P-O3'	5.04	116.28	105.20
69	A5	631	A	C4-N9-C1'	5.04	135.37	126.30
69	A5	541	A	N7-C8-N9	-5.03	111.28	113.80
69	A5	792	U	C4-C5-C6	-5.03	116.68	119.70
69	A5	988	C	C6-N1-C2	-5.03	118.29	120.30
69	A5	1709	A	N1-C6-N6	-5.03	115.58	118.60
69	A5	1801	U	C1'-O4'-C4'	-5.03	105.87	109.90
69	A5	3845	A	C8-N9-C4	-5.03	103.79	105.80
70	B2	1940	G	C8-N9-C4	5.03	108.41	106.40
69	A5	1161	C	OP1-P-OP2	-5.03	112.05	119.60
69	A5	2517	A	N1-C2-N3	5.03	131.82	129.30
69	A5	3620	G	N3-C4-C5	5.03	131.12	128.60
40	A8	18	C	OP2-P-O3'	5.03	116.27	105.20
69	A5	577	A	C2-N3-C4	5.03	113.11	110.60
69	A5	3861	A	P-O3'-C3'	5.03	125.74	119.70
70	B2	1582	C	N3-C2-O2	-5.03	118.38	121.90
70	B2	1861	U	N1-C2-O2	5.03	126.32	122.80
39	A7	71	G	N1-C6-O6	5.03	122.92	119.90
69	A5	128	C	N1-C2-O2	5.03	121.92	118.90
69	A5	284	A	C8-N9-C4	-5.03	103.79	105.80
69	A5	823	U	N1-C2-O2	5.03	126.32	122.80
69	A5	2553	U	O5'-P-OP2	-5.03	101.17	105.70
70	B2	1345	U	N1-C2-O2	5.03	126.32	122.80
69	A5	522	G	C6-C5-N7	-5.03	127.39	130.40
69	A5	541	A	O4'-C1'-N9	5.03	112.22	108.20
69	A5	1734	G	C5-C6-N1	5.03	114.01	111.50
69	A5	3000	G	C8-N9-C4	-5.03	104.39	106.40
69	A5	3365	G	C6-C5-N7	-5.03	127.38	130.40
69	A5	1103	U	N3-C2-O2	-5.02	118.68	122.20
69	A5	2731	G	O5'-P-OP2	5.02	116.73	110.70
69	A5	3809	U	N1-C2-O2	5.02	126.32	122.80
39	A7	48	G	O4'-C1'-N9	5.02	112.22	108.20
69	A5	1626	A	C4-C5-N7	5.02	113.21	110.70
69	A5	2771	G	C5-N7-C8	-5.02	101.79	104.30
79	Cg	58	ARG	NE-CZ-NH2	-5.02	117.79	120.30
69	A5	1128	C	C5-C6-N1	5.02	123.51	121.00
69	A5	2205	G	O5'-P-OP2	-5.02	101.18	105.70
69	A5	2670	U	C5-C6-N1	5.02	125.21	122.70
69	A5	2769	G	C5-C6-N1	5.02	114.01	111.50
69	A5	3687	A	C8-N9-C4	-5.02	103.79	105.80
38	A9	27	U	N1-C2-O2	5.02	126.31	122.80
69	A5	394	G	C5-C6-O6	-5.02	125.59	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	A5	509	A	C5-C6-N1	5.02	120.21	117.70
69	A5	2511	C	N1-C2-O2	5.02	121.91	118.90
69	A5	2621	A	N1-C6-N6	-5.02	115.59	118.60
70	B2	342	G	N1-C2-N2	-5.02	111.68	116.20
69	A5	674	A	C5-N7-C8	-5.01	101.39	103.90
69	A5	2622	A	C8-N9-C4	-5.01	103.79	105.80
69	A5	1750	G	O5'-P-OP2	-5.01	101.19	105.70
69	A5	802	G	N1-C2-N2	-5.01	111.69	116.20
69	A5	1055	U	C5-C6-N1	5.01	125.21	122.70
69	A5	2014	C	N1-C2-O2	5.01	121.91	118.90
63	AC	159	LYS	CA-CB-CG	5.01	124.42	113.40
69	A5	299	G	C8-N9-C4	-5.01	104.40	106.40
69	A5	838	U	N3-C2-O2	-5.01	118.69	122.20
69	A5	1638	G	N1-C6-O6	-5.01	116.89	119.90
69	A5	3402	C	C6-N1-C2	-5.01	118.30	120.30
69	A5	1639	U	OP1-P-O3'	5.01	116.22	105.20
69	A5	383	A	C8-N9-C4	5.01	107.80	105.80
69	A5	1005	G	O4'-C1'-N9	5.01	112.21	108.20
69	A5	1289	C	C5-C6-N1	5.01	123.50	121.00
69	A5	2683	G	C8-N9-C1'	-5.01	120.49	127.00
70	B2	1942	G	C4-C5-N7	5.01	112.80	110.80
5	Ca	116	GLY	N-CA-C	5.00	125.61	113.10
69	A5	464	G	C4-N9-C1'	-5.00	120.00	126.50
69	A5	805	C	N3-C4-N4	-5.00	114.50	118.00
69	A5	1098	U	N3-C4-O4	-5.00	115.90	119.40
69	A5	206	C	C6-N1-C2	-5.00	118.30	120.30
69	A5	546	G	C5-C6-N1	-5.00	109.00	111.50
69	A5	1701	C	O5'-P-OP2	-5.00	101.20	105.70
69	A5	2546	G	C5-C6-N1	5.00	114.00	111.50
69	A5	2658	A	C8-N9-C4	5.00	107.80	105.80
69	A5	3129	U	C5-C6-N1	5.00	125.20	122.70
70	B2	294	C	C6-N1-C2	-5.00	118.30	120.30

There are no chirality outliers.

All (290) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	AA	200	ASP	Peptide
52	AA	7	ILE	Peptide
51	AB	118	LYS	Peptide
51	AB	119	LYS	Peptide
51	AB	183	ASP	Peptide

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Mol	Chain	Res	Type	Group
51	AB	215	ILE	Peptide
63	AC	186	GLY	Peptide
63	AC	241	GLU	Peptide
58	AD	145	ARG	Peptide
58	AD	195	ASP	Peptide
58	AD	199	LYS	Peptide
58	AD	204	LYS	Peptide
58	AD	205	PRO	Peptide
58	AD	224	PRO	Peptide
62	AE	240	LYS	Peptide
74	AF	218	LYS	Peptide
74	AF	61	LEU	Peptide
64	AG	218	LYS	Peptide
64	AG	99	GLY	Peptide
65	AH	113	LYS	Peptide
65	AH	187	PHE	Peptide
65	AH	64	ILE	Peptide
66	AI	49	ARG	Peptide
66	AI	98	LYS	Peptide
61	AJ	139	ARG	Peptide
61	AJ	170	ARG	Peptide
61	AJ	5	ARG	Peptide
61	AJ	9	VAL	Peptide
45	AM	101	ILE	Peptide
45	AM	22	ASN	Peptide
45	AM	60	ALA	Peptide
43	AO	127	GLY	Peptide
43	AO	137	SER	Peptide
43	AO	98	ARG	Peptide
43	AO	99	ALA	Peptide
50	AP	31	MET	Peptide
50	AP	53	LYS	Peptide
50	AP	88	ILE	Peptide
67	AQ	114	LEU	Peptide
67	AQ	17	ARG	Peptide
67	AQ	19	LYS	Peptide
67	AQ	3	GLN	Peptide
67	AQ	45	GLU	Peptide
72	AT	10	ASP	Peptide
72	AT	41	LYS	Peptide
72	AT	95	ALA	Peptide
53	AV	10	ASP	Peptide

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Mol	Chain	Res	Type	Group
53	AV	40	ASP	Peptide
44	AX	89	GLY	Peptide
54	AY	86	PHE	Peptide
55	AZ	57	LEU	Peptide
55	AZ	58	TYR	Peptide
55	AZ	59	LYS	Peptide
55	AZ	60	GLU	Peptide
56	Aa	85	ARG	Peptide
56	Aa	99	LEU	Peptide
57	Ab	49	HIS	Peptide
75	Ac	20	GLN	Peptide
46	Ad	33	LYS	Peptide
59	Ae	96	LYS	Peptide
60	Af	110	GLU	Peptide
60	Af	111	ASN	Peptide
60	Af	135	HIS	Peptide
60	Af	136	GLU	Peptide
60	Af	143	LYS	Peptide
60	Af	144	CYS	Peptide
60	Af	151	SER	Peptide
60	Af	152	LYS	Peptide
60	Af	87	THR	Peptide
60	Af	89	LYS	Peptide
11	CA	13	GLY	Peptide
11	CA	142	ASP	Peptide
11	CA	195	SER	Peptide
11	CA	196	TRP	Peptide
21	CB	145	SER	Peptide
21	CB	17	TYR	Peptide
21	CB	18	PRO	Peptide
21	CB	270	GLY	Peptide
21	CB	290	GLY	Peptide
21	CB	292	HIS	Peptide
21	CB	3	HIS	Peptide
21	CB	311	ASP	Peptide
21	CB	323	TYR	Peptide
21	CB	325	GLU	Peptide
21	CB	33	PRO	Peptide
21	CB	334	LYS	Peptide
21	CB	35	ASP	Peptide
21	CB	39	LYS	Peptide
21	CB	393	LYS	Peptide

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Mol	Chain	Res	Type	Group
21	CB	40	PRO	Peptide
21	CB	56	ILE	Peptide
21	CB	63	PRO	Peptide
29	CC	105	PHE	Peptide
29	CC	134	SER	Peptide
29	CC	17	ASN	Peptide
29	CC	203	ARG	Peptide
29	CC	297	LYS	Peptide
29	CC	309	ARG	Peptide
29	CC	312	VAL	Peptide
29	CC	314	ARG	Peptide
29	CC	316	VAL	Peptide
29	CC	6	ALA	Peptide
29	CC	69	SER	Peptide
29	CC	8	PRO	Peptide
29	CC	91	GLY	Peptide,Mainchain
29	CC	92	GLN	Peptide
8	CD	175	HIS	Peptide
8	CD	187	THR	Peptide
8	CD	43	LYS	Peptide
8	CD	8	LYS	Peptide
8	CD	9	ASN	Peptide
36	CE	170	ARG	Peptide
36	CE	175	LYS	Peptide
36	CE	19	LYS	Peptide
36	CE	191	ARG	Peptide
36	CE	193	VAL	Peptide
36	CE	221	PHE	Peptide
36	CE	228	ASN	Peptide
36	CE	23	ASN	Peptide
36	CE	237	TYR	Peptide
36	CE	239	HIS	Peptide
36	CE	25	TYR	Peptide
36	CE	26	LEU	Peptide
36	CE	32	ARG	Peptide
36	CE	35	LYS	Peptide
36	CE	48	LYS	Peptide
36	CE	60	VAL	Peptide
36	CE	64	LYS	Peptide
36	CE	68	SER	Peptide
36	CE	69	TYR	Peptide
36	CE	71	THR	Peptide

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Mol	Chain	Res	Type	Group
36	CE	72	LYS	Peptide
36	CE	75	VAL	Peptide
36	CE	82	ALA	Peptide
36	CE	83	ASN	Peptide
36	CE	88	LYS	Peptide
22	CF	171	PRO	Peptide
22	CF	235	GLY	Peptide,Mainchain
22	CF	99	ARG	Peptide
37	CG	168	PRO	Peptide
37	CG	213	ASP	Peptide
37	CG	41	PRO	Peptide
37	CG	42	LYS	Peptide
37	CG	48	GLN	Peptide
37	CG	82	PRO	Peptide
37	CG	87	GLN	Peptide
37	CG	88	PHE	Peptide
37	CG	93	ASP	Peptide
35	CH	106	ASN	Peptide
35	CH	162	SER	Peptide
35	CH	22	ALA	Peptide
35	CH	40	HIS	Peptide
7	CI	118	ALA	Peptide
7	CI	13	LYS	Peptide
7	CI	188	ASN	Peptide
7	CI	199	TYR	Peptide
7	CI	9	TYR	Peptide
34	CJ	102	GLU	Peptide
34	CJ	160	HIS	Peptide
34	CJ	85	GLU	Peptide
34	CJ	96	GLU	Peptide
2	CL	124	ILE	Peptide
2	CL	133	ILE	Peptide
2	CL	154	LEU	Peptide
2	CL	159	GLU	Peptide
2	CL	160	GLN	Peptide
2	CL	169	VAL	Peptide
2	CL	3	LYS	Peptide
2	CL	4	GLY	Peptide
2	CL	51	SER	Peptide
2	CL	57	VAL	Peptide
2	CL	58	VAL	Peptide
2	CL	6	ASN	Peptide

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Mol	Chain	Res	Type	Group
2	CL	75	PHE	Peptide
2	CL	96	ALA	Peptide
4	CM	103	SER	Peptide
4	CM	127	PHE	Peptide
6	CN	182	GLN	Peptide
6	CN	186	GLY	Peptide
6	CN	28	TRP	Peptide
6	CN	41	ARG	Peptide
6	CN	64	ILE	Peptide
6	CN	66	VAL	Peptide
6	CN	78	GLY	Peptide
1	CO	109	GLY	Peptide
1	CO	111	PRO	Peptide
1	CO	112	SER	Peptide
1	CO	177	LYS	Peptide
1	CO	190	ALA	Peptide
1	CO	191	ALA	Peptide
1	CO	198	ILE	Peptide
1	CO	201	TYR	Peptide
1	CO	202	GLY	Peptide
14	CP	20	PRO	Peptide
14	CP	63	PHE	Peptide
14	CP	9	ASP	Peptide
9	CQ	156	PRO	Peptide
9	CQ	160	HIS	Peptide
9	CQ	163	THR	Peptide
9	CQ	4	ASP	Peptide
9	CQ	5	ILE	Peptide
10	CR	112	SER	Peptide
10	CR	113	LYS	Peptide
10	CR	170	ARG	Peptide
12	CS	118	ARG	Peptide
12	CS	120	ARG	Peptide
12	CS	138	ARG	Peptide
12	CS	15	ARG	Peptide
12	CS	157	ARG	Peptide
12	CS	162	GLY	Peptide
12	CS	163	ASN	Peptide
12	CS	175	TYR	Peptide
12	CS	55	LYS	Peptide
12	CS	67	VAL	Peptide
12	CS	88	SER	Peptide

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Mol	Chain	Res	Type	Group
13	CT	135	PRO	Peptide
13	CT	145	GLU	Peptide
13	CT	147	PRO	Peptide
13	CT	157	PHE	Peptide
13	CT	3	ASN	Peptide
13	CT	4	SER	Peptide
13	CT	54	TYR	Peptide
13	CT	6	GLY	Peptide
76	CU	286	PHE	Peptide
78	CW	60	ARG	Peptide
16	CY	63	LYS	Peptide
16	CY	64	GLY	Peptide
5	Ca	115	ARG	Peptide
5	Ca	144	VAL	Peptide
5	Ca	57	VAL	Peptide
5	Ca	58	GLY	Peptide
5	Ca	98	LYS	Peptide
20	Cb	19	ASN	Peptide
20	Cb	21	ILE	Peptide
20	Cb	3	LYS	Peptide
20	Cb	43	GLN	Peptide
80	Cd	39	ALA	Peptide
24	Ce	14	LYS	Peptide
24	Ce	2	THR	Peptide
24	Ce	5	PRO	Peptide
25	Cf	101	LYS	Peptide
25	Cf	108	PRO	Peptide
25	Cf	137	ARG	Peptide
25	Cf	37	ALA	Peptide
25	Cf	39	VAL	Peptide
25	Cf	42	LYS	Peptide
25	Cf	44	TYR	Peptide
25	Cf	45	LYS	Peptide
25	Cf	46	ARG	Peptide
25	Cf	47	HIS	Peptide
25	Cf	49	ARG	Peptide
79	Cg	72	VAL	Peptide
19	Ch	121	VAL	Peptide
19	Ch	42	SER	Peptide
19	Ch	43	LYS	Peptide
19	Ch	73	PHE	Peptide
19	Ch	84	ARG	Peptide

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Mol	Chain	Res	Type	Group
26	Ci	12	ASN	Peptide
26	Ci	3	VAL	Peptide
26	Ci	37	SER	Peptide
26	Ci	41	ASN	Peptide
26	Ci	43	GLN	Peptide
26	Ci	87	LEU	Peptide
26	Ci	9	ILE	Peptide
27	Ck	39	SER	Peptide
27	Ck	40	ARG	Peptide
30	Cm	124	LYS	Peptide
30	Cm	125	LYS	Peptide
33	Co	26	TYR	Peptide
33	Co	34	GLY	Peptide
33	Co	46	GLN	Peptide
18	Cr	108	LYS	Peptide
18	Cr	25	VAL	Peptide
18	Cr	26	LYS	Peptide
18	Cr	41	SER	Peptide
18	Cr	43	ARG	Peptide
18	Cr	46	GLY	Peptide
18	Cr	50	LYS	Peptide
18	Cr	69	LYS	Peptide
18	Cr	71	GLY	Peptide
18	Cr	72	LYS	Peptide
18	Cr	75	GLN	Peptide
18	Cr	79	LYS	Peptide
18	Cr	80	ASN	Peptide
18	Cr	81	THR	Peptide
18	Cr	86	PHE	Peptide
68	Cz	101	LYS	Peptide
68	Cz	158	GLN	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	CO	203/205 (99%)	177 (87%)	24 (12%)	2 (1%)	15	53
2	CL	208/210 (99%)	154 (74%)	42 (20%)	12 (6%)	1	10
3	CV	132/134 (98%)	122 (92%)	10 (8%)	0	100	100
4	CM	157/159 (99%)	129 (82%)	27 (17%)	1 (1%)	25	64
5	Ca	147/149 (99%)	113 (77%)	33 (22%)	1 (1%)	22	60
6	CN	201/203 (99%)	166 (83%)	32 (16%)	3 (2%)	10	42
7	CI	215/217 (99%)	183 (85%)	30 (14%)	2 (1%)	17	55
8	CD	288/290 (99%)	247 (86%)	39 (14%)	2 (1%)	22	60
9	CQ	185/187 (99%)	160 (86%)	25 (14%)	0	100	100
10	CR	201/203 (99%)	183 (91%)	18 (9%)	0	100	100
11	CA	251/253 (99%)	211 (84%)	39 (16%)	1 (0%)	34	72
12	CS	171/173 (99%)	126 (74%)	37 (22%)	8 (5%)	2	14
13	CT	156/158 (99%)	130 (83%)	25 (16%)	1 (1%)	25	64
14	CP	183/185 (99%)	163 (89%)	19 (10%)	1 (0%)	29	68
15	CX	118/120 (98%)	98 (83%)	19 (16%)	1 (1%)	19	57
16	CY	129/131 (98%)	112 (87%)	16 (12%)	1 (1%)	19	57
17	CZ	132/134 (98%)	110 (83%)	21 (16%)	1 (1%)	19	57
18	Cr	132/134 (98%)	81 (61%)	47 (36%)	4 (3%)	4	24
19	Ch	121/123 (98%)	106 (88%)	15 (12%)	0	100	100
20	Cb	73/75 (97%)	59 (81%)	11 (15%)	3 (4%)	3	16
21	CB	412/414 (100%)	346 (84%)	56 (14%)	10 (2%)	6	29
22	CF	224/226 (99%)	199 (89%)	20 (9%)	5 (2%)	6	31
23	Cc	98/100 (98%)	94 (96%)	4 (4%)	0	100	100
24	Ce	130/132 (98%)	118 (91%)	11 (8%)	1 (1%)	19	57
25	Cf	155/157 (99%)	113 (73%)	36 (23%)	6 (4%)	3	17
26	Ci	111/113 (98%)	82 (74%)	28 (25%)	1 (1%)	17	55
27	Ck	68/70 (97%)	61 (90%)	7 (10%)	0	100	100
28	Cl	48/50 (96%)	45 (94%)	3 (6%)	0	100	100
29	CC	390/392 (100%)	318 (82%)	67 (17%)	5 (1%)	12	45

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	Cm	50/52 (96%)	43 (86%)	6 (12%)	1 (2%)	7	34
31	Cn	23/25 (92%)	21 (91%)	2 (9%)	0	100	100
32	Cp	89/91 (98%)	80 (90%)	9 (10%)	0	100	100
33	Co	102/104 (98%)	82 (80%)	18 (18%)	2 (2%)	7	34
34	CJ	180/182 (99%)	149 (83%)	30 (17%)	1 (1%)	25	64
35	CH	188/190 (99%)	164 (87%)	21 (11%)	3 (2%)	9	40
36	CE	226/228 (99%)	157 (70%)	62 (27%)	7 (3%)	4	23
37	CG	239/241 (99%)	194 (81%)	43 (18%)	2 (1%)	19	57
41	Ag	316/318 (99%)	265 (84%)	51 (16%)	0	100	100
42	AU	100/102 (98%)	89 (89%)	11 (11%)	0	100	100
43	AO	125/127 (98%)	100 (80%)	25 (20%)	0	100	100
44	AX	141/143 (99%)	120 (85%)	20 (14%)	1 (1%)	22	60
45	AM	117/119 (98%)	85 (73%)	32 (27%)	0	100	100
46	Ad	50/52 (96%)	33 (66%)	17 (34%)	0	100	100
47	AN	148/150 (99%)	137 (93%)	11 (7%)	0	100	100
48	AL	153/155 (99%)	133 (87%)	19 (12%)	1 (1%)	22	60
49	AR	118/120 (98%)	92 (78%)	25 (21%)	1 (1%)	19	57
50	AP	122/124 (98%)	96 (79%)	26 (21%)	0	100	100
51	AB	218/220 (99%)	176 (81%)	37 (17%)	5 (2%)	6	30
52	AA	216/218 (99%)	179 (83%)	36 (17%)	1 (0%)	29	68
53	AV	80/82 (98%)	67 (84%)	13 (16%)	0	100	100
54	AY	124/126 (98%)	101 (82%)	22 (18%)	1 (1%)	19	57
55	AZ	72/74 (97%)	56 (78%)	16 (22%)	0	100	100
56	Aa	105/107 (98%)	86 (82%)	18 (17%)	1 (1%)	15	53
57	Ab	82/84 (98%)	64 (78%)	18 (22%)	0	100	100
58	AD	225/227 (99%)	179 (80%)	44 (20%)	2 (1%)	17	55
59	Ae	56/58 (97%)	39 (70%)	17 (30%)	0	100	100
60	Af	78/80 (98%)	57 (73%)	21 (27%)	0	100	100
61	AJ	179/181 (99%)	152 (85%)	26 (14%)	1 (1%)	25	64
62	AE	259/261 (99%)	215 (83%)	42 (16%)	2 (1%)	19	57
63	AC	225/227 (99%)	188 (84%)	35 (16%)	2 (1%)	17	55

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
64	AG	229/231 (99%)	197 (86%)	30 (13%)	2 (1%)	17	55
65	AH	192/194 (99%)	161 (84%)	31 (16%)	0	100	100
66	AI	205/207 (99%)	161 (78%)	41 (20%)	3 (2%)	10	42
67	AQ	146/148 (99%)	116 (80%)	29 (20%)	1 (1%)	22	60
68	Cz	215/217 (99%)	175 (81%)	40 (19%)	0	100	100
71	AW	127/129 (98%)	117 (92%)	10 (8%)	0	100	100
72	AT	122/126 (97%)	92 (75%)	29 (24%)	1 (1%)	19	57
73	AK	88/90 (98%)	64 (73%)	24 (27%)	0	100	100
74	AF	187/189 (99%)	146 (78%)	41 (22%)	0	100	100
75	Ac	60/62 (97%)	49 (82%)	11 (18%)	0	100	100
76	CU	97/99 (98%)	73 (75%)	23 (24%)	1 (1%)	15	53
77	Cj	85/87 (98%)	74 (87%)	10 (12%)	1 (1%)	13	48
78	CW	58/60 (97%)	53 (91%)	5 (9%)	0	100	100
79	Cg	101/103 (98%)	90 (89%)	10 (10%)	1 (1%)	15	53
80	Cd	105/107 (98%)	97 (92%)	8 (8%)	0	100	100
81	AS	134/136 (98%)	117 (87%)	16 (12%)	1 (1%)	22	60
All	All	11596/11750 (99%)	9587 (83%)	1892 (16%)	117 (1%)	20	53

All (117) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	CO	112	SER
1	CO	113	PRO
2	CL	7	MET
2	CL	148	GLN
2	CL	160	GLN
8	CD	20	PHE
21	CB	19	LYS
21	CB	41	VAL
22	CF	171	PRO
22	CF	236	ASP
22	CF	237	PHE
26	Ci	44	THR
29	CC	6	ALA
34	CJ	97	TYR
36	CE	69	TYR

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Mol	Chain	Res	Type
51	AB	120	TRP
51	AB	183	ASP
51	AB	184	LEU
66	AI	99	ASN
2	CL	46	PHE
2	CL	76	THR
2	CL	77	LEU
2	CL	97	VAL
5	Ca	79	LEU
12	CS	54	PHE
12	CS	68	TYR
12	CS	119	ALA
12	CS	133	PRO
12	CS	174	THR
13	CT	5	LYS
16	CY	63	LYS
21	CB	40	PRO
21	CB	64	GLY
21	CB	271	GLN
21	CB	394	LYS
21	CB	395	ASP
22	CF	100	GLY
24	Ce	15	ARG
29	CC	92	GLN
33	Co	27	LYS
35	CH	110	ILE
36	CE	24	SER
51	AB	119	LYS
52	AA	32	PHE
76	CU	279	ASP
2	CL	125	LEU
2	CL	161	PRO
4	CM	104	LEU
6	CN	149	ASN
11	CA	231	ALA
12	CS	139	ARG
17	CZ	97	PRO
18	Cr	70	LYS
18	Cr	82	VAL
20	Cb	7	HIS
20	Cb	24	PRO
29	CC	313	PHE

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Mol	Chain	Res	Type
35	CH	23	ARG
37	CG	44	PHE
66	AI	141	LYS
79	Cg	73	SER
2	CL	159	GLU
7	CI	205	PRO
20	Cb	4	SER
21	CB	312	LYS
25	Cf	21	PRO
25	Cf	138	ASN
29	CC	204	ARG
36	CE	60	VAL
56	Aa	100	ARG
58	AD	202	PRO
62	AE	241	GLY
63	AC	242	MET
64	AG	149	LYS
67	AQ	46	PRO
77	Cj	86	PRO
2	CL	152	PRO
6	CN	187	SER
8	CD	221	ARG
12	CS	171	LYS
14	CP	21	ASN
25	Cf	38	LYS
30	Cm	125	LYS
36	CE	61	PRO
36	CE	193	VAL
44	AX	96	GLU
48	AL	28	LYS
51	AB	41	THR
54	AY	6	ALA
64	AG	100	CYS
66	AI	143	ARG
6	CN	188	ARG
15	CX	227	LYS
21	CB	190	ILE
25	Cf	108	PRO
33	Co	30	LYS
35	CH	109	VAL
36	CE	89	ARG
12	CS	152	PHE

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Mol	Chain	Res	Type
18	Cr	71	GLY
49	AR	45	PRO
72	AT	86	GLY
81	AS	140	GLY
21	CB	39	LYS
22	CF	172	ILE
29	CC	93	GLY
58	AD	200	ILE
63	AC	159	LYS
2	CL	61	PRO
25	Cf	139	LEU
36	CE	70	PRO
61	AJ	7	PRO
25	Cf	107	HIS
62	AE	239	PRO
7	CI	206	ILE
37	CG	168	PRO
18	Cr	77	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	CO	175/175 (100%)	175 (100%)	0	100	100
2	CL	173/173 (100%)	168 (97%)	5 (3%)	42	76
3	CV	101/101 (100%)	99 (98%)	2 (2%)	55	83
4	CM	138/138 (100%)	136 (99%)	2 (1%)	67	88
5	Ca	122/122 (100%)	121 (99%)	1 (1%)	81	93
6	CN	174/174 (100%)	169 (97%)	5 (3%)	42	76
7	CI	187/187 (100%)	187 (100%)	0	100	100
8	CD	241/241 (100%)	238 (99%)	3 (1%)	71	90
9	CQ	164/164 (100%)	159 (97%)	5 (3%)	41	75
10	CR	176/176 (100%)	173 (98%)	3 (2%)	60	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	CA	195/195 (100%)	192 (98%)	3 (2%)	65	87
12	CS	156/156 (100%)	152 (97%)	4 (3%)	46	78
13	CT	137/137 (100%)	135 (98%)	2 (2%)	65	87
14	CP	160/160 (100%)	155 (97%)	5 (3%)	40	75
15	CX	106/106 (100%)	103 (97%)	3 (3%)	43	77
16	CY	116/116 (100%)	112 (97%)	4 (3%)	37	72
17	CZ	121/121 (100%)	121 (100%)	0	100	100
18	Cr	112/112 (100%)	110 (98%)	2 (2%)	59	85
19	Ch	112/112 (100%)	110 (98%)	2 (2%)	59	85
20	Cb	67/67 (100%)	65 (97%)	2 (3%)	41	75
21	CB	349/349 (100%)	342 (98%)	7 (2%)	55	83
22	CF	200/200 (100%)	198 (99%)	2 (1%)	76	91
23	Cc	84/84 (100%)	83 (99%)	1 (1%)	71	90
24	Ce	120/120 (100%)	119 (99%)	1 (1%)	81	93
25	Cf	123/123 (100%)	119 (97%)	4 (3%)	38	73
26	Ci	100/100 (100%)	100 (100%)	0	100	100
27	Ck	65/65 (100%)	64 (98%)	1 (2%)	65	87
28	Cl	45/45 (100%)	45 (100%)	0	100	100
29	CC	323/323 (100%)	311 (96%)	12 (4%)	34	70
30	Cm	48/48 (100%)	46 (96%)	2 (4%)	30	66
31	Cn	23/23 (100%)	23 (100%)	0	100	100
32	Cp	74/74 (100%)	69 (93%)	5 (7%)	16	48
33	Co	94/94 (100%)	93 (99%)	1 (1%)	73	90
34	CJ	155/155 (100%)	154 (99%)	1 (1%)	86	95
35	CH	169/169 (100%)	167 (99%)	2 (1%)	71	90
36	CE	197/197 (100%)	190 (96%)	7 (4%)	35	70
37	CG	210/210 (100%)	207 (99%)	3 (1%)	67	88
41	Ag	280/280 (100%)	272 (97%)	8 (3%)	42	76
42	AU	95/95 (100%)	94 (99%)	1 (1%)	73	90
43	AO	98/98 (100%)	97 (99%)	1 (1%)	76	91
44	AX	116/116 (100%)	114 (98%)	2 (2%)	60	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	AM	104/104 (100%)	99 (95%)	5 (5%)	25	62
46	Ad	45/45 (100%)	45 (100%)	0	100	100
47	AN	130/130 (100%)	129 (99%)	1 (1%)	81	93
48	AL	138/138 (100%)	137 (99%)	1 (1%)	84	94
49	AR	108/108 (100%)	106 (98%)	2 (2%)	57	84
50	AP	111/111 (100%)	110 (99%)	1 (1%)	78	92
51	AB	199/199 (100%)	196 (98%)	3 (2%)	65	87
52	AA	190/190 (100%)	186 (98%)	4 (2%)	53	82
53	AV	67/67 (100%)	66 (98%)	1 (2%)	65	87
54	AY	105/106 (99%)	101 (96%)	4 (4%)	33	69
55	AZ	67/67 (100%)	66 (98%)	1 (2%)	65	87
56	Aa	94/94 (100%)	91 (97%)	3 (3%)	39	74
57	Ab	72/72 (100%)	72 (100%)	0	100	100
58	AD	192/192 (100%)	189 (98%)	3 (2%)	62	86
59	Ae	47/47 (100%)	45 (96%)	2 (4%)	29	66
60	Af	70/70 (100%)	69 (99%)	1 (1%)	67	88
61	AJ	161/161 (100%)	161 (100%)	0	100	100
62	AE	220/220 (100%)	215 (98%)	5 (2%)	50	80
63	AC	188/188 (100%)	185 (98%)	3 (2%)	62	86
64	AG	200/200 (100%)	197 (98%)	3 (2%)	65	87
65	AH	175/175 (100%)	171 (98%)	4 (2%)	50	80
66	AI	175/175 (100%)	172 (98%)	3 (2%)	60	85
67	AQ	122/122 (100%)	119 (98%)	3 (2%)	47	79
68	Cz	190/190 (100%)	185 (97%)	5 (3%)	46	78
71	AW	113/113 (100%)	112 (99%)	1 (1%)	78	92
72	AT	104/104 (100%)	100 (96%)	4 (4%)	33	69
73	AK	81/81 (100%)	81 (100%)	0	100	100
74	AF	157/157 (100%)	150 (96%)	7 (4%)	27	64
75	Ac	54/54 (100%)	51 (94%)	3 (6%)	21	56
76	CU	92/92 (100%)	91 (99%)	1 (1%)	73	90
77	Cj	74/74 (100%)	74 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
78	CW	54/54 (100%)	53 (98%)	1 (2%)	57	84
79	Cg	95/95 (100%)	88 (93%)	7 (7%)	13	44
80	Cd	99/99 (100%)	93 (94%)	6 (6%)	18	53
81	AS	122/122 (100%)	121 (99%)	1 (1%)	81	93
All	All	10116/10117 (100%)	9913 (98%)	203 (2%)	57	83

All (203) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	CL	12	HIS
2	CL	58	VAL
2	CL	125	LEU
2	CL	137	GLU
2	CL	164	VAL
3	CV	48	ARG
3	CV	131	ARG
4	CM	54	ASN
4	CM	150	ARG
5	Ca	144	VAL
6	CN	23	LEU
6	CN	64	ILE
6	CN	114	ARG
6	CN	134	LEU
6	CN	155	VAL
8	CD	12	TYR
8	CD	155	THR
8	CD	158	ARG
9	CQ	85	THR
9	CQ	97	LYS
9	CQ	110	ARG
9	CQ	156	PRO
9	CQ	163	THR
10	CR	47	ASP
10	CR	176	ARG
10	CR	180	LYS
11	CA	177	LYS
11	CA	190	LYS
11	CA	191	VAL
12	CS	17	LEU
12	CS	29	LYS
12	CS	125	GLN

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Mol	Chain	Res	Type
12	CS	174	THR
13	CT	4	SER
13	CT	80	VAL
14	CP	57	CYS
14	CP	82	ARG
14	CP	116	HIS
14	CP	129	THR
14	CP	148	VAL
15	CX	169	ARG
15	CX	189	ARG
15	CX	196	ASN
16	CY	55	VAL
16	CY	70	VAL
16	CY	79	VAL
16	CY	104	VAL
18	Cr	42	TYR
18	Cr	106	TYR
19	Ch	58	TYR
19	Ch	122	LYS
20	Cb	43	GLN
20	Cb	53	ARG
21	CB	1	MET
21	CB	26	ARG
21	CB	207	VAL
21	CB	232	THR
21	CB	268	ARG
21	CB	297	LYS
21	CB	323	TYR
22	CF	163	VAL
22	CF	247	LEU
23	Cc	92	CYS
24	Ce	2	THR
25	Cf	60	LYS
25	Cf	95	VAL
25	Cf	111	LYS
25	Cf	131	VAL
27	Ck	40	ARG
29	CC	45	GLN
29	CC	98	MET
29	CC	100	ARG
29	CC	103	ARG
29	CC	122	GLN

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Mol	Chain	Res	Type
29	CC	235	VAL
29	CC	278	LYS
29	CC	311	ARG
29	CC	323	THR
29	CC	324	ASN
29	CC	327	GLN
29	CC	359	LYS
30	Cm	103	LEU
30	Cm	120	ASN
32	Cp	16	THR
32	Cp	17	ARG
32	Cp	52	VAL
32	Cp	54	ILE
32	Cp	59	ARG
33	Co	57	ARG
34	CJ	68	ARG
35	CH	1	MET
35	CH	165	VAL
36	CE	25	TYR
36	CE	41	ARG
36	CE	73	THR
36	CE	78	ARG
36	CE	79	PRO
36	CE	95	LEU
36	CE	193	VAL
37	CG	56	LEU
37	CG	88	PHE
37	CG	135	LYS
41	Ag	6	GLN
41	Ag	59	ARG
41	Ag	97	LYS
41	Ag	100	ARG
41	Ag	119	ARG
41	Ag	179	ASN
41	Ag	216	LYS
41	Ag	271	LEU
42	AU	101	LYS
43	AO	47	LEU
44	AX	39	ASN
44	AX	142	ARG
45	AM	22	ASN
45	AM	30	LYS

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Mol	Chain	Res	Type
45	AM	84	ILE
45	AM	103	LYS
45	AM	109	LYS
47	AN	38	LYS
48	AL	66	ARG
49	AR	23	ARG
49	AR	78	ARG
50	AP	46	ARG
51	AB	82	ARG
51	AB	131	LYS
51	AB	151	GLN
52	AA	92	LYS
52	AA	174	MET
52	AA	184	ARG
52	AA	191	ARG
53	AV	71	ARG
54	AY	101	LYS
54	AY	102	LYS
54	AY	103	GLN
54	AY	108	ARG
55	AZ	112	THR
56	Aa	11	ASN
56	Aa	13	HIS
56	Aa	73	TYR
58	AD	47	ARG
58	AD	126	ARG
58	AD	177	VAL
59	Ae	90	LYS
59	Ae	124	ARG
60	Af	99	LYS
62	AE	9	LEU
62	AE	136	VAL
62	AE	174	LYS
62	AE	200	ARG
62	AE	240	LYS
63	AC	104	ARG
63	AC	150	ARG
63	AC	159	LYS
64	AG	67	VAL
64	AG	85	ARG
64	AG	178	GLN
65	AH	6	LYS

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Mol	Chain	Res	Type
65	AH	72	LYS
65	AH	79	ARG
65	AH	93	ILE
66	AI	129	HIS
66	AI	140	THR
66	AI	141	LYS
67	AQ	6	ARG
67	AQ	52	LYS
67	AQ	72	VAL
68	Cz	7	ARG
68	Cz	48	ARG
68	Cz	60	ARG
68	Cz	157	PHE
68	Cz	215	ARG
71	AW	105	THR
72	AT	16	LYS
72	AT	22	LEU
72	AT	77	LYS
72	AT	93	CYS
74	AF	48	ARG
74	AF	64	TYR
74	AF	153	ARG
74	AF	161	ARG
74	AF	185	ARG
74	AF	201	ASP
74	AF	227	LYS
75	Ac	16	ARG
75	Ac	37	GLN
75	Ac	47	ARG
76	CU	213	LYS
78	CW	52	THR
79	Cg	2	VAL
79	Cg	3	GLN
79	Cg	22	ILE
79	Cg	32	TYR
79	Cg	33	GLN
79	Cg	58	ARG
79	Cg	75	THR
80	Cd	17	VAL
80	Cd	24	ILE
80	Cd	30	VAL
80	Cd	83	VAL

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Mol	Chain	Res	Type
80	Cd	91	ASP
80	Cd	94	ASP
81	AS	118	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
14	CP	115	HIS
26	Ci	15	HIS
29	CC	327	GLN
55	AZ	46	GLN
66	AI	64	ASN
79	Cg	3	GLN
81	AS	42	ASN
81	AS	73	ASN
81	AS	87	GLN
81	AS	135	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
38	A9	29/30 (96%)	8 (27%)	1 (3%)
39	A7	119/120 (99%)	30 (25%)	1 (0%)
40	A8	122/123 (99%)	45 (36%)	1 (0%)
69	A5	3561/3703 (96%)	1353 (37%)	81 (2%)
70	B2	1792/1936 (92%)	630 (35%)	32 (1%)
All	All	5623/5912 (95%)	2066 (36%)	116 (2%)

All (2066) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
38	A9	4	U
38	A9	9	C
38	A9	20	U
38	A9	21	G
38	A9	22	A
38	A9	25	G
38	A9	26	U
38	A9	30	A
39	A7	7	G

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Mol	Chain	Res	Type
39	A7	17	C
39	A7	22	A
39	A7	25	A
39	A7	27	A
39	A7	33	U
39	A7	39	C
39	A7	40	C
39	A7	41	G
39	A7	42	A
39	A7	47	C
39	A7	50	A
39	A7	52	U
39	A7	53	U
39	A7	54	A
39	A7	58	A
39	A7	60	C
39	A7	64	G
39	A7	70	G
39	A7	74	A
39	A7	89	G
39	A7	90	A
39	A7	93	G
39	A7	97	G
39	A7	100	A
39	A7	108	G
39	A7	109	U
39	A7	110	G
39	A7	117	G
39	A7	120	U
40	A8	2	A
40	A8	6	U
40	A8	13	U
40	A8	15	G
40	A8	20	C
40	A8	22	C
40	A8	23	G
40	A8	32	G
40	A8	33	U
40	A8	34	C
40	A8	37	U
40	A8	38	G
40	A8	45	G

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Mol	Chain	Res	Type
40	A8	47	A
40	A8	50	A
40	A8	56	U
40	A8	57	G
40	A8	59	G
40	A8	61	C
40	A8	62	A
40	A8	70	A
40	A8	73	U
40	A8	74	G
40	A8	75	C
40	A8	78	G
40	A8	79	A
40	A8	80	C
40	A8	81	A
40	A8	82	C
40	A8	83	A
40	A8	84	U
40	A8	89	A
40	A8	92	G
40	A8	94	C
40	A8	97	U
40	A8	102	A
40	A8	103	C
40	A8	109	U
40	A8	110	C
40	A8	111	G
40	A8	113	A
40	A8	118	A
40	A8	119	U
40	A8	122	U
40	A8	123	G
69	A5	2	U
69	A5	3	A
69	A5	4	U
69	A5	6	U
69	A5	7	A
69	A5	9	A
69	A5	11	C
69	A5	13	U
69	A5	14	C
69	A5	15	A

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Mol	Chain	Res	Type
69	A5	17	C
69	A5	18	U
69	A5	19	C
69	A5	22	A
69	A5	23	U
69	A5	25	G
69	A5	26	G
69	A5	29	U
69	A5	30	A
69	A5	35	C
69	A5	36	U
69	A5	44	A
69	A5	45	G
69	A5	46	C
69	A5	47	A
69	A5	48	U
69	A5	53	A
69	A5	54	U
69	A5	59	G
69	A5	61	A
69	A5	62	G
69	A5	63	G
69	A5	64	A
69	A5	69	A
69	A5	70	A
69	A5	72	C
69	A5	73	U
69	A5	77	A
69	A5	78	A
69	A5	79	G
69	A5	80	G
69	A5	82	U
69	A5	90	G
69	A5	94	C
69	A5	96	G
69	A5	98	G
69	A5	103	A
69	A5	110	A
69	A5	112	C
69	A5	113	A
69	A5	114	G
69	A5	117	C

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Mol	Chain	Res	Type
69	A5	121	A
69	A5	122	C
69	A5	123	U
69	A5	124	A
69	A5	125	A
69	A5	127	U
69	A5	128	C
69	A5	136	C
69	A5	137	U
69	A5	138	A
69	A5	139	U
69	A5	141	U
69	A5	142	G
69	A5	148	U
69	A5	149	G
69	A5	154	A
69	A5	156	G
69	A5	157	C
69	A5	158	A
69	A5	162	U
69	A5	163	A
69	A5	164	U
69	A5	165	G
69	A5	166	G
69	A5	169	C
69	A5	171	U
69	A5	174	A
69	A5	175	U
69	A5	176	A
69	A5	178	U
69	A5	182	G
69	A5	183	U
69	A5	187	A
69	A5	188	G
69	A5	189	A
69	A5	190	A
69	A5	191	A
69	A5	197	G
69	A5	198	A
69	A5	199	U
69	A5	201	U
69	A5	202	A

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Mol	Chain	Res	Type
69	A5	205	U
69	A5	206	C
69	A5	207	C
69	A5	209	U
69	A5	210	C
69	A5	212	U
69	A5	213	A
69	A5	216	U
69	A5	225	U
69	A5	226	U
69	A5	227	A
69	A5	228	C
69	A5	229	C
69	A5	232	U
69	A5	233	A
69	A5	240	G
69	A5	241	C
69	A5	242	C
69	A5	244	G
69	A5	253	A
69	A5	261	U
69	A5	262	G
69	A5	269	A
69	A5	272	U
69	A5	273	G
69	A5	274	A
69	A5	276	G
69	A5	277	U
69	A5	279	U
69	A5	285	G
69	A5	287	G
69	A5	288	U
69	A5	289	C
69	A5	294	U
69	A5	297	U
69	A5	298	U
69	A5	301	U
69	A5	302	A
69	A5	303	G
69	A5	304	U
69	A5	308	G
69	A5	313	A

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Mol	Chain	Res	Type
69	A5	316	U
69	A5	317	G
69	A5	323	U
69	A5	329	C
69	A5	333	C
69	A5	335	A
69	A5	341	A
69	A5	347	A
69	A5	354	A
69	A5	355	G
69	A5	367	A
69	A5	368	C
69	A5	370	A
69	A5	388	U
69	A5	394	G
69	A5	396	A
69	A5	405	A
69	A5	409	A
69	A5	413	A
69	A5	415	A
69	A5	416	C
69	A5	417	A
69	A5	420	A
69	A5	421	C
69	A5	422	G
69	A5	425	A
69	A5	428	C
69	A5	429	U
69	A5	430	G
69	A5	439	U
69	A5	440	U
69	A5	441	A
69	A5	445	C
69	A5	446	C
69	A5	458	A
69	A5	459	U
69	A5	460	A
69	A5	461	U
69	A5	462	C
69	A5	463	C
69	A5	464	G
69	A5	465	U

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Mol	Chain	Res	Type
69	A5	466	U
69	A5	467	A
69	A5	468	U
69	A5	475	U
69	A5	476	U
69	A5	478	A
69	A5	479	U
69	A5	483	U
69	A5	495	A
69	A5	499	A
69	A5	500	A
69	A5	508	U
69	A5	509	A
69	A5	519	U
69	A5	520	G
69	A5	521	U
69	A5	522	G
69	A5	523	C
69	A5	524	A
69	A5	525	U
69	A5	526	U
69	A5	527	U
69	A5	533	A
69	A5	534	U
69	A5	535	A
69	A5	536	U
69	A5	537	A
69	A5	539	G
69	A5	540	G
69	A5	541	A
69	A5	548	A
69	A5	555	U
69	A5	558	C
69	A5	559	A
69	A5	560	U
69	A5	566	A
69	A5	567	A
69	A5	568	A
69	A5	569	U
69	A5	571	U
69	A5	576	U
69	A5	577	A

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Mol	Chain	Res	Type
69	A5	578	A
69	A5	580	A
69	A5	581	U
69	A5	582	A
69	A5	585	A
69	A5	586	C
69	A5	588	U
69	A5	590	U
69	A5	592	G
69	A5	593	U
69	A5	616	A
69	A5	618	U
69	A5	620	U
69	A5	621	A
69	A5	622	A
69	A5	623	C
69	A5	625	C
69	A5	629	A
69	A5	630	U
69	A5	631	A
69	A5	632	A
69	A5	633	A
69	A5	634	U
69	A5	635	G
69	A5	636	U
69	A5	637	U
69	A5	640	U
69	A5	641	A
69	A5	642	A
69	A5	643	U
69	A5	646	G
69	A5	652	G
69	A5	653	U
69	A5	659	U
69	A5	665	U
69	A5	666	A
69	A5	667	U
69	A5	668	A
69	A5	669	U
69	A5	670	G
69	A5	671	A
69	A5	672	U

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Mol	Chain	Res	Type
69	A5	673	U
69	A5	674	A
69	A5	679	G
69	A5	680	C
69	A5	681	G
69	A5	682	U
69	A5	683	U
69	A5	689	U
69	A5	690	U
69	A5	692	G
69	A5	693	G
69	A5	711	A
69	A5	717	A
69	A5	719	U
69	A5	726	U
69	A5	729	G
69	A5	731	U
69	A5	732	U
69	A5	745	U
69	A5	746	G
69	A5	747	U
69	A5	748	A
69	A5	749	U
69	A5	750	G
69	A5	751	A
69	A5	752	U
69	A5	753	U
69	A5	754	A
69	A5	755	A
69	A5	761	C
69	A5	762	G
69	A5	763	A
69	A5	764	A
69	A5	765	A
69	A5	766	G
69	A5	767	A
69	A5	774	A
69	A5	775	U
69	A5	776	A
69	A5	777	C
69	A5	783	G
69	A5	786	C

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Mol	Chain	Res	Type
69	A5	789	G
69	A5	797	A
69	A5	799	A
69	A5	806	A
69	A5	810	A
69	A5	812	U
69	A5	824	G
69	A5	827	A
69	A5	831	A
69	A5	832	U
69	A5	833	U
69	A5	834	G
69	A5	838	U
69	A5	840	U
69	A5	841	A
69	A5	858	U
69	A5	862	U
69	A5	863	U
69	A5	865	A
69	A5	866	C
69	A5	868	A
69	A5	869	A
69	A5	870	U
69	A5	872	A
69	A5	873	U
69	A5	874	G
69	A5	879	U
69	A5	880	A
69	A5	883	U
69	A5	884	U
69	A5	885	U
69	A5	887	U
69	A5	888	A
69	A5	891	U
69	A5	892	A
69	A5	893	U
69	A5	894	U
69	A5	895	U
69	A5	896	A
69	A5	898	A
69	A5	899	G
69	A5	901	U

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Mol	Chain	Res	Type
69	A5	905	U
69	A5	909	A
69	A5	913	U
69	A5	917	G
69	A5	921	C
69	A5	922	G
69	A5	926	U
69	A5	927	A
69	A5	928	U
69	A5	929	A
69	A5	930	U
69	A5	932	G
69	A5	933	U
69	A5	936	U
69	A5	937	G
69	A5	942	A
69	A5	963	G
69	A5	964	C
69	A5	968	U
69	A5	969	A
69	A5	975	A
69	A5	981	C
69	A5	984	U
69	A5	985	G
69	A5	992	U
69	A5	998	G
69	A5	1001	A
69	A5	1005	G
69	A5	1006	A
69	A5	1007	A
69	A5	1008	A
69	A5	1009	G
69	A5	1010	A
69	A5	1016	A
69	A5	1017	A
69	A5	1028	U
69	A5	1030	A
69	A5	1032	G
69	A5	1043	G
69	A5	1049	C
69	A5	1053	G
69	A5	1054	A

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Mol	Chain	Res	Type
69	A5	1057	G
69	A5	1058	A
69	A5	1061	A
69	A5	1064	G
69	A5	1069	A
69	A5	1071	U
69	A5	1074	U
69	A5	1079	U
69	A5	1080	G
69	A5	1084	A
69	A5	1087	G
69	A5	1089	U
69	A5	1094	A
69	A5	1096	A
69	A5	1101	A
69	A5	1107	G
69	A5	1108	G
69	A5	1114	A
69	A5	1116	G
69	A5	1117	A
69	A5	1118	C
69	A5	1120	A
69	A5	1121	A
69	A5	1123	C
69	A5	1124	G
69	A5	1126	A
69	A5	1132	U
69	A5	1137	G
69	A5	1138	C
69	A5	1144	C
69	A5	1145	C
69	A5	1159	C
69	A5	1160	U
69	A5	1162	A
69	A5	1163	G
69	A5	1183	U
69	A5	1192	A
69	A5	1193	A
69	A5	1194	A
69	A5	1195	U
69	A5	1197	A
69	A5	1198	U

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Mol	Chain	Res	Type
69	A5	1199	C
69	A5	1206	G
69	A5	1207	G
69	A5	1212	G
69	A5	1213	C
69	A5	1214	G
69	A5	1219	A
69	A5	1220	U
69	A5	1222	A
69	A5	1223	G
69	A5	1226	G
69	A5	1227	C
69	A5	1228	C
69	A5	1229	U
69	A5	1231	A
69	A5	1232	G
69	A5	1233	G
69	A5	1234	G
69	A5	1240	A
69	A5	1241	C
69	A5	1242	G
69	A5	1243	A
69	A5	1245	C
69	A5	1246	U
69	A5	1250	C
69	A5	1253	A
69	A5	1258	C
69	A5	1259	A
69	A5	1260	A
69	A5	1264	U
69	A5	1265	U
69	A5	1270	G
69	A5	1276	G
69	A5	1277	A
69	A5	1279	C
69	A5	1282	U
69	A5	1284	A
69	A5	1285	C
69	A5	1288	U
69	A5	1289	C
69	A5	1290	U
69	A5	1291	U

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Mol	Chain	Res	Type
69	A5	1292	G
69	A5	1293	A
69	A5	1294	U
69	A5	1295	A
69	A5	1296	U
69	A5	1297	G
69	A5	1299	A
69	A5	1303	C
69	A5	1304	A
69	A5	1305	A
69	A5	1307	G
69	A5	1308	U
69	A5	1309	U
69	A5	1310	A
69	A5	1311	U
69	A5	1315	A
69	A5	1316	U
69	A5	1317	A
69	A5	1318	A
69	A5	1321	G
69	A5	1324	C
69	A5	1326	A
69	A5	1330	G
69	A5	1331	G
69	A5	1341	G
69	A5	1342	U
69	A5	1345	G
69	A5	1349	A
69	A5	1350	A
69	A5	1357	C
69	A5	1358	U
69	A5	1359	G
69	A5	1360	U
69	A5	1367	A
69	A5	1368	A
69	A5	1369	C
69	A5	1373	A
69	A5	1374	C
69	A5	1376	U
69	A5	1383	A
69	A5	1384	C
69	A5	1389	C

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Mol	Chain	Res	Type
69	A5	1391	A
69	A5	1393	A
69	A5	1394	U
69	A5	1395	U
69	A5	1396	A
69	A5	1399	A
69	A5	1403	C
69	A5	1404	A
69	A5	1405	U
69	A5	1406	G
69	A5	1407	C
69	A5	1408	A
69	A5	1411	U
69	A5	1416	U
69	A5	1422	G
69	A5	1423	C
69	A5	1424	G
69	A5	1425	U
69	A5	1427	G
69	A5	1435	A
69	A5	1436	A
69	A5	1437	A
69	A5	1438	A
69	A5	1442	C
69	A5	1447	C
69	A5	1448	G
69	A5	1449	G
69	A5	1450	U
69	A5	1451	G
69	A5	1452	A
69	A5	1453	U
69	A5	1455	A
69	A5	1456	U
69	A5	1457	G
69	A5	1458	G
69	A5	1459	A
69	A5	1460	A
69	A5	1461	G
69	A5	1462	U
69	A5	1471	G
69	A5	1472	C
69	A5	1473	U

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Mol	Chain	Res	Type
69	A5	1474	A
69	A5	1475	A
69	A5	1477	G
69	A5	1478	A
69	A5	1479	G
69	A5	1480	U
69	A5	1481	G
69	A5	1482	U
69	A5	1483	G
69	A5	1484	U
69	A5	1485	A
69	A5	1486	A
69	A5	1487	C
69	A5	1488	A
69	A5	1489	A
69	A5	1493	A
69	A5	1498	C
69	A5	1501	A
69	A5	1502	A
69	A5	1505	A
69	A5	1509	A
69	A5	1510	G
69	A5	1520	U
69	A5	1522	G
69	A5	1524	U
69	A5	1531	U
69	A5	1532	A
69	A5	1540	U
69	A5	1546	U
69	A5	1552	A
69	A5	1558	A
69	A5	1564	G
69	A5	1566	U
69	A5	1567	G
69	A5	1568	A
69	A5	1573	U
69	A5	1576	U
69	A5	1578	C
69	A5	1579	U
69	A5	1580	U
69	A5	1581	G
69	A5	1590	A

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Mol	Chain	Res	Type
69	A5	1592	U
69	A5	1593	U
69	A5	1594	U
69	A5	1595	G
69	A5	1596	A
69	A5	1606	G
69	A5	1607	A
69	A5	1619	C
69	A5	1621	A
69	A5	1626	A
69	A5	1627	U
69	A5	1628	G
69	A5	1629	C
69	A5	1632	A
69	A5	1633	G
69	A5	1641	U
69	A5	1643	G
69	A5	1648	A
69	A5	1649	G
69	A5	1658	G
69	A5	1659	A
69	A5	1669	G
69	A5	1671	U
69	A5	1672	A
69	A5	1675	G
69	A5	1678	C
69	A5	1687	U
69	A5	1688	A
69	A5	1689	G
69	A5	1690	U
69	A5	1692	G
69	A5	1697	U
69	A5	1698	A
69	A5	1699	A
69	A5	1712	C
69	A5	1713	U
69	A5	1714	U
69	A5	1723	G
69	A5	1724	A
69	A5	1727	U
69	A5	1728	G
69	A5	1730	A

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Mol	Chain	Res	Type
69	A5	1731	G
69	A5	1736	G
69	A5	1745	G
69	A5	1746	A
69	A5	1750	G
69	A5	1751	U
69	A5	1754	U
69	A5	1755	U
69	A5	1763	A
69	A5	1765	U
69	A5	1766	U
69	A5	1769	U
69	A5	1774	C
69	A5	1776	U
69	A5	1778	A
69	A5	1779	G
69	A5	1782	C
69	A5	1784	A
69	A5	1785	G
69	A5	1786	G
69	A5	1792	G
69	A5	1793	C
69	A5	1794	G
69	A5	1795	A
69	A5	1796	A
69	A5	1797	A
69	A5	1798	A
69	A5	1799	U
69	A5	1800	U
69	A5	1801	U
69	A5	1802	U
69	A5	1803	C
69	A5	1804	A
69	A5	1807	U
69	A5	1808	A
69	A5	1809	A
69	A5	1811	A
69	A5	1812	C
69	A5	1813	A
69	A5	1860	A
69	A5	1861	A
69	A5	1863	U

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Mol	Chain	Res	Type
69	A5	1864	U
69	A5	1865	U
69	A5	1866	G
69	A5	1867	A
69	A5	1871	A
69	A5	1872	A
69	A5	1873	A
69	A5	1874	G
69	A5	1877	A
69	A5	1885	U
69	A5	1889	A
69	A5	1892	C
69	A5	1908	A
69	A5	1910	C
69	A5	1911	C
69	A5	1913	U
69	A5	1914	U
69	A5	1918	U
69	A5	1923	A
69	A5	1924	A
69	A5	1925	U
69	A5	1926	A
69	A5	1927	U
69	A5	1931	C
69	A5	1934	C
69	A5	1935	G
69	A5	1937	G
69	A5	1944	C
69	A5	1948	C
69	A5	1951	C
69	A5	1952	A
69	A5	1954	G
69	A5	1956	A
69	A5	1957	C
69	A5	1958	G
69	A5	1959	A
69	A5	1960	C
69	A5	1961	C
69	A5	1970	G
69	A5	1973	G
69	A5	1986	G
69	A5	1997	C

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Mol	Chain	Res	Type
69	A5	1998	U
69	A5	2004	G
69	A5	2005	U
69	A5	2013	C
69	A5	2014	C
69	A5	2015	G
69	A5	2016	U
69	A5	2017	A
69	A5	2030	U
69	A5	2035	C
69	A5	2037	C
69	A5	2038	A
69	A5	2052	G
69	A5	2053	A
69	A5	2054	U
69	A5	2055	G
69	A5	2057	G
69	A5	2061	G
69	A5	2062	A
69	A5	2063	A
69	A5	2064	G
69	A5	2065	A
69	A5	2066	G
69	A5	2070	G
69	A5	2075	A
69	A5	2076	U
69	A5	2077	A
69	A5	2078	C
69	A5	2079	U
69	A5	2082	U
69	A5	2084	U
69	A5	2088	G
69	A5	2091	A
69	A5	2092	U
69	A5	2093	U
69	A5	2094	U
69	A5	2103	G
69	A5	2104	A
69	A5	2105	C
69	A5	2106	C
69	A5	2110	A
69	A5	2112	A

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Mol	Chain	Res	Type
69	A5	2122	G
69	A5	2125	G
69	A5	2126	A
69	A5	2127	C
69	A5	2128	A
69	A5	2129	C
69	A5	2130	G
69	A5	2131	C
69	A5	2132	A
69	A5	2133	A
69	A5	2134	A
69	A5	2135	C
69	A5	2136	U
69	A5	2137	U
69	A5	2140	C
69	A5	2148	C
69	A5	2151	A
69	A5	2155	A
69	A5	2156	U
69	A5	2157	A
69	A5	2158	U
69	A5	2166	U
69	A5	2167	G
69	A5	2170	C
69	A5	2171	U
69	A5	2174	A
69	A5	2183	A
69	A5	2194	G
69	A5	2195	A
69	A5	2196	U
69	A5	2202	A
69	A5	2205	G
69	A5	2206	U
69	A5	2212	A
69	A5	2216	A
69	A5	2222	G
69	A5	2224	A
69	A5	2230	G
69	A5	2239	C
69	A5	2241	U
69	A5	2242	C
69	A5	2247	U

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Mol	Chain	Res	Type
69	A5	2258	U
69	A5	2259	C
69	A5	2267	U
69	A5	2268	G
69	A5	2269	A
69	A5	2270	G
69	A5	2272	U
69	A5	2273	A
69	A5	2274	G
69	A5	2277	G
69	A5	2462	U
69	A5	2464	A
69	A5	2467	A
69	A5	2469	U
69	A5	2470	U
69	A5	2471	A
69	A5	2472	A
69	A5	2475	A
69	A5	2479	A
69	A5	2480	U
69	A5	2483	A
69	A5	2490	G
69	A5	2491	C
69	A5	2493	C
69	A5	2499	U
69	A5	2500	G
69	A5	2501	G
69	A5	2505	A
69	A5	2510	A
69	A5	2513	G
69	A5	2519	U
69	A5	2523	A
69	A5	2525	C
69	A5	2528	A
69	A5	2529	G
69	A5	2534	G
69	A5	2537	A
69	A5	2538	U
69	A5	2545	A
69	A5	2546	G
69	A5	2547	C
69	A5	2548	G

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Mol	Chain	Res	Type
69	A5	2549	G
69	A5	2554	U
69	A5	2555	G
69	A5	2557	C
69	A5	2562	U
69	A5	2565	G
69	A5	2566	A
69	A5	2570	C
69	A5	2572	G
69	A5	2575	C
69	A5	2583	U
69	A5	2584	G
69	A5	2585	A
69	A5	2586	A
69	A5	2587	U
69	A5	2588	G
69	A5	2601	A
69	A5	2603	U
69	A5	2609	U
69	A5	2610	A
69	A5	2622	A
69	A5	2626	C
69	A5	2627	G
69	A5	2633	A
69	A5	2634	A
69	A5	2635	C
69	A5	2640	A
69	A5	2641	C
69	A5	2643	C
69	A5	2646	U
69	A5	2650	G
69	A5	2651	G
69	A5	2654	G
69	A5	2659	A
69	A5	2660	U
69	A5	2663	C
69	A5	2665	C
69	A5	2666	G
69	A5	2676	U
69	A5	2681	A
69	A5	2683	G
69	A5	2684	C

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Mol	Chain	Res	Type
69	A5	2685	G
69	A5	2686	C
69	A5	2688	U
69	A5	2691	A
69	A5	2693	G
69	A5	2701	G
69	A5	2708	C
69	A5	2713	G
69	A5	2714	U
69	A5	2725	U
69	A5	2727	U
69	A5	2733	G
69	A5	2741	A
69	A5	2743	C
69	A5	2744	C
69	A5	2745	A
69	A5	2750	A
69	A5	2751	A
69	A5	2752	C
69	A5	2753	G
69	A5	2754	G
69	A5	2760	G
69	A5	2768	A
69	A5	2771	G
69	A5	2775	A
69	A5	2779	A
69	A5	2780	A
69	A5	2781	G
69	A5	2789	U
69	A5	2792	G
69	A5	2796	G
69	A5	2797	A
69	A5	2803	A
69	A5	2813	G
69	A5	2815	A
69	A5	2816	A
69	A5	2817	G
69	A5	2819	A
69	A5	2821	A
69	A5	2822	C
69	A5	2825	A
69	A5	2826	A

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Mol	Chain	Res	Type
69	A5	2828	A
69	A5	2831	U
69	A5	2832	G
69	A5	2834	A
69	A5	2836	A
69	A5	2837	A
69	A5	2839	A
69	A5	2840	A
69	A5	2842	U
69	A5	2844	G
69	A5	2845	G
69	A5	2847	G
69	A5	2848	A
69	A5	2869	U
69	A5	2870	C
69	A5	2871	G
69	A5	2873	C
69	A5	2876	U
69	A5	2877	G
69	A5	2880	A
69	A5	2881	U
69	A5	2882	A
69	A5	2883	C
69	A5	2884	C
69	A5	2886	C
69	A5	2887	U
69	A5	2888	A
69	A5	2891	C
69	A5	2893	U
69	A5	2895	U
69	A5	2896	U
69	A5	2898	U
69	A5	2899	U
69	A5	2900	U
69	A5	2901	C
69	A5	2902	C
69	A5	2908	U
69	A5	2916	U
69	A5	2917	A
69	A5	2918	A
69	A5	2922	G
69	A5	2923	A

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Mol	Chain	Res	Type
69	A5	2925	C
69	A5	2931	U
69	A5	2932	C
69	A5	2989	G
69	A5	2990	C
69	A5	2991	A
69	A5	2992	A
69	A5	2994	C
69	A5	2995	U
69	A5	2997	C
69	A5	2998	U
69	A5	3000	G
69	A5	3003	C
69	A5	3004	A
69	A5	3005	A
69	A5	3008	U
69	A5	3011	C
69	A5	3014	G
69	A5	3015	A
69	A5	3016	G
69	A5	3101	A
69	A5	3103	U
69	A5	3104	C
69	A5	3105	A
69	A5	3116	A
69	A5	3117	A
69	A5	3118	U
69	A5	3119	U
69	A5	3123	G
69	A5	3125	A
69	A5	3126	C
69	A5	3128	U
69	A5	3129	U
69	A5	3132	C
69	A5	3138	G
69	A5	3139	G
69	A5	3140	G
69	A5	3146	G
69	A5	3147	A
69	A5	3158	A
69	A5	3169	A
69	A5	3170	U

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Mol	Chain	Res	Type
69	A5	3173	U
69	A5	3174	A
69	A5	3183	G
69	A5	3184	U
69	A5	3185	C
69	A5	3188	A
69	A5	3189	A
69	A5	3190	G
69	A5	3191	G
69	A5	3204	G
69	A5	3209	G
69	A5	3211	A
69	A5	3212	A
69	A5	3213	C
69	A5	3219	A
69	A5	3220	U
69	A5	3221	A
69	A5	3223	A
69	A5	3227	A
69	A5	3228	A
69	A5	3229	A
69	A5	3233	C
69	A5	3235	A
69	A5	3236	A
69	A5	3241	G
69	A5	3244	U
69	A5	3245	U
69	A5	3246	G
69	A5	3247	A
69	A5	3248	U
69	A5	3252	G
69	A5	3258	C
69	A5	3259	A
69	A5	3260	G
69	A5	3261	U
69	A5	3266	A
69	A5	3270	G
69	A5	3272	A
69	A5	3278	A
69	A5	3280	A
69	A5	3281	G
69	A5	3282	C

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Mol	Chain	Res	Type
69	A5	3283	U
69	A5	3284	C
69	A5	3285	G
69	A5	3287	C
69	A5	3294	A
69	A5	3298	U
69	A5	3299	U
69	A5	3300	U
69	A5	3303	G
69	A5	3304	U
69	A5	3305	U
69	A5	3306	U
69	A5	3308	A
69	A5	3309	A
69	A5	3311	A
69	A5	3319	A
69	A5	3321	A
69	A5	3324	A
69	A5	3326	G
69	A5	3328	G
69	A5	3329	U
69	A5	3331	A
69	A5	3332	G
69	A5	3333	A
69	A5	3334	A
69	A5	3337	G
69	A5	3341	C
69	A5	3342	C
69	A5	3345	A
69	A5	3346	G
69	A5	3348	G
69	A5	3349	A
69	A5	3350	U
69	A5	3359	U
69	A5	3360	G
69	A5	3361	U
69	A5	3373	G
69	A5	3374	U
69	A5	3375	U
69	A5	3377	A
69	A5	3378	U
69	A5	3379	A

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Mol	Chain	Res	Type
69	A5	3381	C
69	A5	3392	U
69	A5	3395	G
69	A5	3397	U
69	A5	3399	C
69	A5	3401	U
69	A5	3403	G
69	A5	3404	A
69	A5	3405	U
69	A5	3408	C
69	A5	3418	U
69	A5	3419	A
69	A5	3426	U
69	A5	3430	G
69	A5	3431	C
69	A5	3436	U
69	A5	3443	A
69	A5	3448	U
69	A5	3455	U
69	A5	3456	U
69	A5	3457	C
69	A5	3465	C
69	A5	3466	A
69	A5	3467	A
69	A5	3468	G
69	A5	3470	G
69	A5	3473	C
69	A5	3478	G
69	A5	3482	G
69	A5	3486	U
69	A5	3487	A
69	A5	3488	G
69	A5	3490	C
69	A5	3496	U
69	A5	3499	G
69	A5	3502	A
69	A5	3509	U
69	A5	3510	U
69	A5	3511	U
69	A5	3514	C
69	A5	3515	C
69	A5	3516	C

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Mol	Chain	Res	Type
69	A5	3518	A
69	A5	3520	U
69	A5	3521	A
69	A5	3523	U
69	A5	3527	A
69	A5	3529	A
69	A5	3530	A
69	A5	3531	C
69	A5	3532	G
69	A5	3535	G
69	A5	3540	G
69	A5	3541	A
69	A5	3546	A
69	A5	3547	U
69	A5	3549	C
69	A5	3556	A
69	A5	3558	U
69	A5	3563	G
69	A5	3568	A
69	A5	3569	C
69	A5	3581	G
69	A5	3584	C
69	A5	3585	A
69	A5	3591	A
69	A5	3592	C
69	A5	3593	A
69	A5	3594	A
69	A5	3599	U
69	A5	3604	G
69	A5	3608	G
69	A5	3609	A
69	A5	3613	G
69	A5	3614	U
69	A5	3621	A
69	A5	3626	A
69	A5	3627	C
69	A5	3628	G
69	A5	3629	U
69	A5	3633	U
69	A5	3635	G
69	A5	3638	U
69	A5	3649	C

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Mol	Chain	Res	Type
69	A5	3650	G
69	A5	3654	C
69	A5	3656	A
69	A5	3661	C
69	A5	3664	A
69	A5	3665	U
69	A5	3671	C
69	A5	3672	U
69	A5	3675	A
69	A5	3676	C
69	A5	3677	U
69	A5	3678	G
69	A5	3684	A
69	A5	3685	U
69	A5	3686	A
69	A5	3687	A
69	A5	3688	A
69	A5	3689	U
69	A5	3690	A
69	A5	3694	G
69	A5	3695	G
69	A5	3696	C
69	A5	3697	A
69	A5	3698	A
69	A5	3699	U
69	A5	3700	U
69	A5	3701	U
69	A5	3702	G
69	A5	3705	U
69	A5	3708	U
69	A5	3711	G
69	A5	3712	G
69	A5	3713	C
69	A5	3715	U
69	A5	3718	A
69	A5	3719	A
69	A5	3720	A
69	A5	3721	C
69	A5	3722	C
69	A5	3723	A
69	A5	3725	U
69	A5	3726	U

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Mol	Chain	Res	Type
69	A5	3727	A
69	A5	3728	A
69	A5	3729	A
69	A5	3730	G
69	A5	3731	U
69	A5	3732	U
69	A5	3738	U
69	A5	3739	U
69	A5	3742	C
69	A5	3751	C
69	A5	3752	G
69	A5	3753	A
69	A5	3754	C
69	A5	3755	A
69	A5	3756	A
69	A5	3757	U
69	A5	3758	G
69	A5	3759	G
69	A5	3761	U
69	A5	3762	G
69	A5	3763	U
69	A5	3764	G
69	A5	3765	A
69	A5	3766	U
69	A5	3767	G
69	A5	3769	C
69	A5	3772	U
69	A5	3773	G
69	A5	3774	U
69	A5	3775	A
69	A5	3776	A
69	A5	3777	U
69	A5	3778	U
69	A5	3779	U
69	A5	3782	A
69	A5	3783	A
69	A5	3784	C
69	A5	3785	A
69	A5	3788	G
69	A5	3791	A
69	A5	3792	A
69	A5	3794	U

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Mol	Chain	Res	Type
69	A5	3795	G
69	A5	3796	G
69	A5	3798	A
69	A5	3802	U
69	A5	3803	C
69	A5	3804	U
69	A5	3805	U
69	A5	3807	G
69	A5	3808	A
69	A5	3809	U
69	A5	3810	C
69	A5	3811	A
69	A5	3812	C
69	A5	3814	U
69	A5	3815	G
69	A5	3816	A
69	A5	3818	G
69	A5	3820	C
69	A5	3821	G
69	A5	3825	U
69	A5	3828	U
69	A5	3830	A
69	A5	3832	A
69	A5	3837	A
69	A5	3839	A
69	A5	3840	G
69	A5	3841	C
69	A5	3842	A
69	A5	3843	U
69	A5	3844	U
69	A5	3845	A
69	A5	3846	U
69	A5	3847	U
69	A5	3848	U
69	A5	3851	U
69	A5	3854	A
69	A5	3856	U
69	A5	3860	A
69	A5	3861	A
69	A5	3862	A
69	A5	3865	C
69	A5	3867	A

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Mol	Chain	Res	Type
69	A5	3868	G
69	A5	3869	A
69	A5	3877	G
69	A5	3878	U
69	A5	3881	A
69	A5	3887	U
69	A5	3888	U
69	A5	3891	U
69	A5	3892	A
69	A5	3894	C
69	A5	3895	A
69	A5	3896	G
69	A5	3898	C
69	A5	3903	U
69	A5	3908	U
69	A5	3915	U
69	A5	3916	U
69	A5	3919	G
69	A5	3921	A
69	A5	3922	G
69	A5	3925	G
69	A5	3926	C
69	A5	3927	C
69	A5	3929	U
69	A5	3930	A
69	A5	3932	U
69	A5	3933	G
69	A5	3935	G
69	A5	3937	U
69	A5	3942	U
69	A5	3943	G
69	A5	3949	U
69	A5	3952	C
69	A5	3955	U
69	A5	3956	U
69	A5	3957	G
69	A5	3962	A
69	A5	3963	U
69	A5	3964	G
69	A5	3967	U
69	A5	3970	A
70	B2	2	U

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Mol	Chain	Res	Type
70	B2	3	U
70	B2	5	U
70	B2	20	G
70	B2	25	U
70	B2	26	A
70	B2	35	U
70	B2	38	C
70	B2	42	G
70	B2	47	A
70	B2	48	G
70	B2	49	C
70	B2	57	G
70	B2	60	U
70	B2	63	G
70	B2	65	A
70	B2	66	C
70	B2	67	A
70	B2	68	C
70	B2	70	C
70	B2	71	G
70	B2	72	A
70	B2	74	U
70	B2	76	A
70	B2	77	A
70	B2	78	A
70	B2	79	A
70	B2	80	G
70	B2	82	G
70	B2	92	A
70	B2	99	A
70	B2	103	U
70	B2	105	U
70	B2	113	G
70	B2	114	G
70	B2	115	U
70	B2	121	A
70	B2	126	G
70	B2	127	U
70	B2	135	U
70	B2	136	A
70	B2	137	C
70	B2	138	U

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Mol	Chain	Res	Type
70	B2	141	G
70	B2	142	A
70	B2	143	U
70	B2	150	G
70	B2	153	A
70	B2	155	U
70	B2	156	U
70	B2	157	C
70	B2	158	U
70	B2	163	C
70	B2	166	A
70	B2	173	C
70	B2	174	A
70	B2	175	A
70	B2	177	U
70	B2	178	A
70	B2	183	A
70	B2	185	G
70	B2	187	A
70	B2	188	C
70	B2	189	C
70	B2	190	U
70	B2	191	U
70	B2	193	U
70	B2	194	G
70	B2	195	G
70	B2	196	G
70	B2	200	U
70	B2	203	G
70	B2	204	C
70	B2	214	G
70	B2	215	C
70	B2	216	U
70	B2	217	A
70	B2	218	A
70	B2	225	G
70	B2	235	G
70	B2	238	C
70	B2	243	U
70	B2	248	G
70	B2	249	U
70	B2	250	U

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Mol	Chain	Res	Type
70	B2	251	G
70	B2	252	A
70	B2	253	A
70	B2	256	C
70	B2	257	U
70	B2	258	A
70	B2	265	A
70	B2	266	U
70	B2	267	G
70	B2	270	G
70	B2	271	A
70	B2	276	A
70	B2	277	U
70	B2	279	G
70	B2	280	U
70	B2	281	C
70	B2	282	U
70	B2	283	U
70	B2	284	G
70	B2	285	U
70	B2	286	A
70	B2	287	C
70	B2	288	C
70	B2	289	G
70	B2	292	G
70	B2	293	A
70	B2	295	A
70	B2	301	U
70	B2	303	C
70	B2	304	A
70	B2	306	A
70	B2	311	U
70	B2	312	G
70	B2	319	C
70	B2	321	A
70	B2	326	U
70	B2	327	G
70	B2	329	U
70	B2	334	G
70	B2	342	G
70	B2	343	A
70	B2	348	C

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Mol	Chain	Res	Type
70	B2	355	G
70	B2	357	A
70	B2	364	A
70	B2	366	C
70	B2	379	U
70	B2	382	G
70	B2	392	A
70	B2	395	G
70	B2	405	A
70	B2	407	C
70	B2	409	G
70	B2	417	A
70	B2	421	A
70	B2	422	A
70	B2	423	G
70	B2	424	G
70	B2	428	G
70	B2	429	C
70	B2	430	A
70	B2	431	G
70	B2	439	G
70	B2	440	U
70	B2	444	U
70	B2	448	C
70	B2	449	C
70	B2	453	C
70	B2	458	C
70	B2	459	U
70	B2	464	G
70	B2	466	G
70	B2	469	A
70	B2	480	A
70	B2	481	U
70	B2	482	A
70	B2	485	A
70	B2	489	C
70	B2	499	A
70	B2	501	C
70	B2	502	C
70	B2	506	G
70	B2	508	C
70	B2	509	C

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Mol	Chain	Res	Type
70	B2	510	U
70	B2	512	U
70	B2	513	A
70	B2	514	A
70	B2	515	U
70	B2	516	U
70	B2	520	A
70	B2	521	U
70	B2	522	G
70	B2	523	A
70	B2	527	C
70	B2	535	A
70	B2	541	U
70	B2	546	A
70	B2	547	G
70	B2	548	G
70	B2	549	A
70	B2	550	C
70	B2	551	C
70	B2	552	A
70	B2	556	G
70	B2	559	G
70	B2	562	C
70	B2	564	A
70	B2	565	G
70	B2	566	U
70	B2	567	C
70	B2	573	C
70	B2	576	G
70	B2	583	C
70	B2	586	U
70	B2	587	A
70	B2	588	A
70	B2	591	C
70	B2	595	C
70	B2	596	U
70	B2	599	A
70	B2	602	A
70	B2	603	G
70	B2	614	A
70	B2	615	G
70	B2	617	U

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Mol	Chain	Res	Type
70	B2	619	U
70	B2	621	G
70	B2	627	A
70	B2	628	A
70	B2	629	A
70	B2	630	A
70	B2	631	C
70	B2	632	G
70	B2	641	U
70	B2	646	U
70	B2	647	U
70	B2	649	U
70	B2	653	U
70	B2	655	A
70	B2	656	U
70	B2	657	A
70	B2	658	C
70	B2	701	G
70	B2	705	G
70	B2	712	U
70	B2	713	A
70	B2	714	U
70	B2	715	U
70	B2	720	G
70	B2	820	G
70	B2	824	U
70	B2	825	A
70	B2	833	G
70	B2	837	A
70	B2	843	G
70	B2	847	G
70	B2	848	C
70	B2	852	A
70	B2	856	A
70	B2	857	G
70	B2	861	U
70	B2	862	C
70	B2	863	A
70	B2	865	A
70	B2	866	U
70	B2	873	A
70	B2	874	U

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Mol	Chain	Res	Type
70	B2	877	U
70	B2	878	C
70	B2	879	U
70	B2	880	G
70	B2	882	G
70	B2	895	A
70	B2	898	U
70	B2	899	A
70	B2	900	A
70	B2	901	G
70	B2	903	C
70	B2	904	C
70	B2	905	U
70	B2	906	C
70	B2	907	U
70	B2	908	G
70	B2	909	U
70	B2	911	C
70	B2	913	G
70	B2	916	U
70	B2	918	C
70	B2	925	U
70	B2	929	A
70	B2	930	G
70	B2	932	U
70	B2	935	A
70	B2	936	G
70	B2	937	A
70	B2	938	G
70	B2	939	G
70	B2	940	U
70	B2	941	A
70	B2	942	A
70	B2	943	U
70	B2	947	U
70	B2	948	A
70	B2	949	A
70	B2	950	U
70	B2	957	A
70	B2	958	G
70	B2	960	U
70	B2	963	G

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Mol	Chain	Res	Type
70	B2	973	U
70	B2	978	C
70	B2	989	G
70	B2	993	A
70	B2	999	U
70	B2	1000	G
70	B2	1001	G
70	B2	1007	C
70	B2	1008	G
70	B2	1013	A
70	B2	1019	U
70	B2	1020	U
70	B2	1021	A
70	B2	1022	A
70	B2	1026	A
70	B2	1031	A
70	B2	1032	U
70	B2	1033	U
70	B2	1042	A
70	B2	1047	U
70	B2	1053	A
70	B2	1060	A
70	B2	1070	A
70	B2	1075	U
70	B2	1079	A
70	B2	1080	A
70	B2	1090	A
70	B2	1091	U
70	B2	1092	A
70	B2	1096	C
70	B2	1098	C
70	B2	1110	A
70	B2	1112	A
70	B2	1113	A
70	B2	1115	C
70	B2	1116	G
70	B2	1126	A
70	B2	1127	G
70	B2	1137	G
70	B2	1138	U
70	B2	1139	A
70	B2	1140	G

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Mol	Chain	Res	Type
70	B2	1141	C
70	B2	1145	U
70	B2	1159	C
70	B2	1161	G
70	B2	1167	U
70	B2	1168	C
70	B2	1170	G
70	B2	1178	A
70	B2	1179	A
70	B2	1183	U
70	B2	1184	U
70	B2	1185	U
70	B2	1186	U
70	B2	1187	U
70	B2	1188	G
70	B2	1201	A
70	B2	1217	U
70	B2	1226	A
70	B2	1234	G
70	B2	1236	C
70	B2	1238	G
70	B2	1239	A
70	B2	1240	A
70	B2	1243	G
70	B2	1245	A
70	B2	1246	C
70	B2	1247	C
70	B2	1248	A
70	B2	1261	C
70	B2	1262	C
70	B2	1273	U
70	B2	1274	U
70	B2	1275	U
70	B2	1278	C
70	B2	1281	A
70	B2	1282	A
70	B2	1284	A
70	B2	1285	C
70	B2	1287	G
70	B2	1288	G
70	B2	1290	A
70	B2	1300	G

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Mol	Chain	Res	Type
70	B2	1302	U
70	B2	1304	G
70	B2	1305	A
70	B2	1307	C
70	B2	1308	A
70	B2	1309	U
70	B2	1311	A
70	B2	1313	U
70	B2	1314	G
70	B2	1315	U
70	B2	1316	G
70	B2	1319	A
70	B2	1321	A
70	B2	1322	C
70	B2	1323	A
70	B2	1327	U
70	B2	1328	G
70	B2	1329	A
70	B2	1330	U
70	B2	1331	A
70	B2	1332	G
70	B2	1333	C
70	B2	1338	U
70	B2	1339	C
70	B2	1343	A
70	B2	1344	A
70	B2	1345	U
70	B2	1346	C
70	B2	1347	U
70	B2	1348	A
70	B2	1349	U
70	B2	1351	G
70	B2	1352	G
70	B2	1353	U
70	B2	1354	G
70	B2	1356	U
70	B2	1360	G
70	B2	1371	C
70	B2	1372	U
70	B2	1373	U
70	B2	1378	C
70	B2	1381	G

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Mol	Chain	Res	Type
70	B2	1382	G
70	B2	1383	A
70	B2	1384	G
70	B2	1386	G
70	B2	1387	A
70	B2	1388	U
70	B2	1390	U
70	B2	1391	G
70	B2	1392	U
70	B2	1393	C
70	B2	1394	U
70	B2	1395	G
70	B2	1396	G
70	B2	1397	U
70	B2	1399	A
70	B2	1400	A
70	B2	1401	U
70	B2	1402	U
70	B2	1404	C
70	B2	1405	G
70	B2	1407	U
70	B2	1408	A
70	B2	1409	A
70	B2	1410	C
70	B2	1412	A
70	B2	1427	U
70	B2	1428	A
70	B2	1432	A
70	B2	1433	A
70	B2	1434	U
70	B2	1436	G
70	B2	1443	U
70	B2	1444	C
70	B2	1445	A
70	B2	1446	G
70	B2	1447	G
70	B2	1448	A
70	B2	1449	U
70	B2	1450	U
70	B2	1453	G
70	B2	1455	U
70	B2	1457	C

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Mol	Chain	Res	Type
70	B2	1458	U
70	B2	1459	G
70	B2	1460	A
70	B2	1467	U
70	B2	1469	U
70	B2	1470	A
70	B2	1519	U
70	B2	1520	A
70	B2	1521	U
70	B2	1524	A
70	B2	1529	G
70	B2	1530	A
70	B2	1531	G
70	B2	1534	G
70	B2	1538	C
70	B2	1542	U
70	B2	1543	G
70	B2	1546	U
70	B2	1547	U
70	B2	1548	G
70	B2	1549	U
70	B2	1551	C
70	B2	1560	G
70	B2	1565	C
70	B2	1566	U
70	B2	1572	C
70	B2	1574	U
70	B2	1575	A
70	B2	1576	A
70	B2	1578	U
70	B2	1581	A
70	B2	1583	A
70	B2	1584	A
70	B2	1588	G
70	B2	1589	C
70	B2	1590	G
70	B2	1591	U
70	B2	1592	C
70	B2	1593	U
70	B2	1594	A
70	B2	1596	C
70	B2	1597	A

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Mol	Chain	Res	Type
70	B2	1599	U
70	B2	1600	A
70	B2	1601	A
70	B2	1602	U
70	B2	1603	G
70	B2	1605	G
70	B2	1606	A
70	B2	1607	U
70	B2	1610	A
70	B2	1613	A
70	B2	1619	A
70	B2	1620	G
70	B2	1623	C
70	B2	1624	U
70	B2	1625	G
70	B2	1627	G
70	B2	1628	A
70	B2	1636	A
70	B2	1638	A
70	B2	1639	U
70	B2	1642	C
70	B2	1643	C
70	B2	1644	U
70	B2	1651	C
70	B2	1652	A
70	B2	1661	A
70	B2	1663	A
70	B2	1665	U
70	B2	1666	G
70	B2	1674	C
70	B2	1675	A
70	B2	1680	G
70	B2	1682	A
70	B2	1684	U
70	B2	1685	U
70	B2	1686	C
70	B2	1688	U
70	B2	1698	G
70	B2	1709	A
70	B2	1710	C
70	B2	1712	G
70	B2	1714	U

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Mol	Chain	Res	Type
70	B2	1715	G
70	B2	1716	A
70	B2	1717	A
70	B2	1718	C
70	B2	1719	C
70	B2	1727	U
70	B2	1729	C
70	B2	1732	G
70	B2	1737	U
70	B2	1741	A
70	B2	1742	A
70	B2	1749	C
70	B2	1751	G
70	B2	1752	U
70	B2	1755	A
70	B2	1757	G
70	B2	1758	A
70	B2	1760	G
70	B2	1765	U
70	B2	1766	G
70	B2	1775	A
70	B2	1782	G
70	B2	1788	C
70	B2	1793	A
70	B2	1797	G
70	B2	1808	G
70	B2	1811	C
70	B2	1814	G
70	B2	1816	C
70	B2	1821	G
70	B2	1822	U
70	B2	1823	A
70	B2	1826	C
70	B2	1827	A
70	B2	1828	C
70	B2	1830	G
70	B2	1831	C
70	B2	1835	U
70	B2	1840	A
70	B2	1849	U
70	B2	1850	G
70	B2	1855	A

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Mol	Chain	Res	Type
70	B2	1857	U
70	B2	1861	U
70	B2	1870	C
70	B2	1872	G
70	B2	1874	C
70	B2	1875	G
70	B2	1876	U
70	B2	1881	A
70	B2	1882	C
70	B2	1898	G
70	B2	1903	G
70	B2	1905	U
70	B2	1906	U
70	B2	1912	G
70	B2	1914	A
70	B2	1925	G
70	B2	1926	A
70	B2	1934	U
70	B2	1936	U
70	B2	1942	G
70	B2	1949	A
70	B2	1950	A
70	B2	1951	A
70	B2	1952	G
70	B2	1956	U
70	B2	1960	A
70	B2	1961	A
70	B2	1962	G
70	B2	1963	G
70	B2	1964	U
70	B2	1971	A
70	B2	1975	G
70	B2	1977	A
70	B2	1987	G
70	B2	1988	G
70	B2	1989	A
70	B2	1990	U
70	B2	1991	C
70	B2	1993	U
70	B2	1994	U
70	B2	1995	A

All (116) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
38	A9	21	G
39	A7	119	C
40	A8	108	A
69	A5	29	U
69	A5	47	A
69	A5	89	A
69	A5	123	U
69	A5	190	A
69	A5	296	C
69	A5	419	U
69	A5	440	U
69	A5	523	C
69	A5	580	A
69	A5	615	C
69	A5	621	A
69	A5	640	U
69	A5	652	G
69	A5	662	A
69	A5	670	G
69	A5	750	G
69	A5	751	A
69	A5	774	A
69	A5	775	U
69	A5	839	A
69	A5	840	U
69	A5	871	A
69	A5	872	A
69	A5	926	U
69	A5	1096	A
69	A5	1116	G
69	A5	1159	C
69	A5	1197	A
69	A5	1206	G
69	A5	1290	U
69	A5	1293	A
69	A5	1294	U
69	A5	1308	U
69	A5	1310	A
69	A5	1324	C
69	A5	1407	C
69	A5	1565	A
69	A5	1566	U
69	A5	1594	U

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Mol	Chain	Res	Type
69	A5	1659	A
69	A5	1688	A
69	A5	1689	G
69	A5	1713	U
69	A5	1784	A
69	A5	1785	G
69	A5	1798	A
69	A5	1799	U
69	A5	1801	U
69	A5	1862	U
69	A5	1889	A
69	A5	1909	U
69	A5	2062	A
69	A5	2093	U
69	A5	2125	G
69	A5	2129	C
69	A5	2155	A
69	A5	2174	A
69	A5	2491	C
69	A5	2750	A
69	A5	2796	G
69	A5	2868	A
69	A5	2993	G
69	A5	3118	U
69	A5	3247	A
69	A5	3350	U
69	A5	3359	U
69	A5	3591	A
69	A5	3608	G
69	A5	3627	C
69	A5	3711	G
69	A5	3728	A
69	A5	3729	A
69	A5	3730	G
69	A5	3754	C
69	A5	3757	U
69	A5	3760	A
69	A5	3761	U
69	A5	3839	A
69	A5	3861	A
69	A5	3969	G
70	B2	25	U

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Mol	Chain	Res	Type
70	B2	113	G
70	B2	172	G
70	B2	256	C
70	B2	278	G
70	B2	378	G
70	B2	381	C
70	B2	422	A
70	B2	488	A
70	B2	511	G
70	B2	566	U
70	B2	704	U
70	B2	878	C
70	B2	937	A
70	B2	1138	U
70	B2	1185	U
70	B2	1186	U
70	B2	1196	G
70	B2	1245	A
70	B2	1284	A
70	B2	1329	A
70	B2	1331	A
70	B2	1400	A
70	B2	1519	U
70	B2	1546	U
70	B2	1595	G
70	B2	1673	U
70	B2	1748	A
70	B2	1765	U
70	B2	1807	C
70	B2	1949	A
70	B2	1992	A

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
69	A5	7
70	B2	5
72	AT	1
7	CI	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AT	107:LEU	C	121:ARG	N	19.55
1	A5	2293:C	O3'	2390:U	P	18.82
1	A5	2941:G	O3'	2976:A	P	18.19
1	B2	738:A	O3'	757:U	P	14.79
1	A5	2406:A	O3'	2452:A	P	13.09
1	A5	3039:A	O3'	3083:U	P	11.82
1	B2	1236:C	O3'	1237:G	P	9.97
1	B2	1479:U	O3'	1501:A	P	6.62
1	A5	1177:U	O3'	1182:A	P	6.09
1	A5	2896:U	O3'	2897:G	P	5.83
1	A5	2819:A	O3'	2820:G	P	5.66
1	B2	666:A	O3'	687:U	P	5.55
1	B2	1817:C	O3'	1818:U	P	3.74
1	CI	132:GLY	C	133:GLN	N	1.18

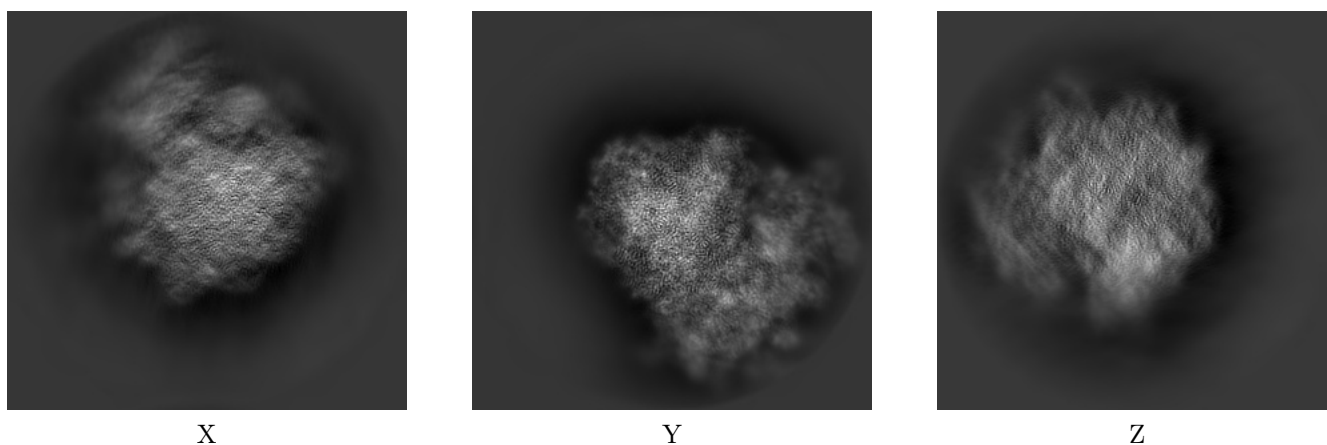
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10624. 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](#)

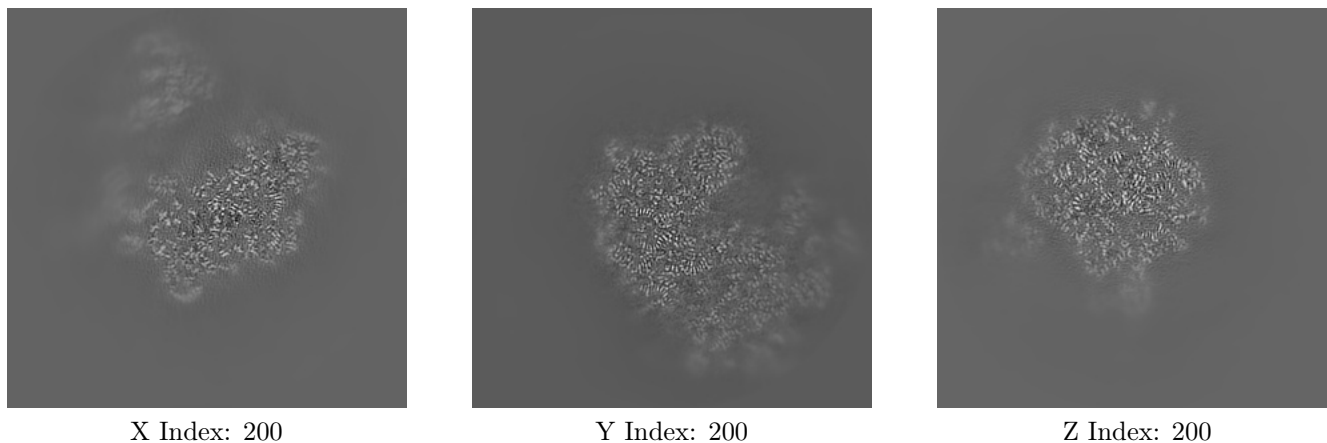
6.1.1 Primary map



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

6.2 Central slices [i](#)

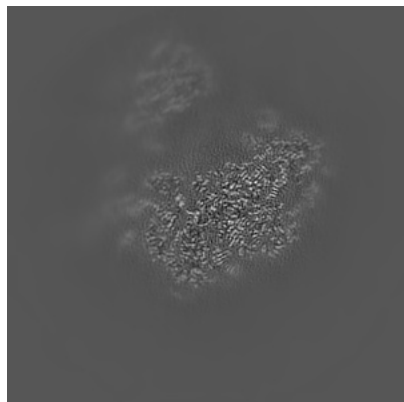
6.2.1 Primary map



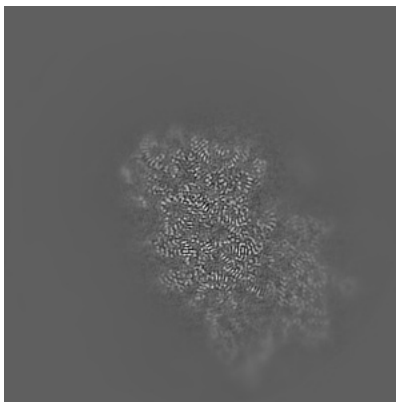
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

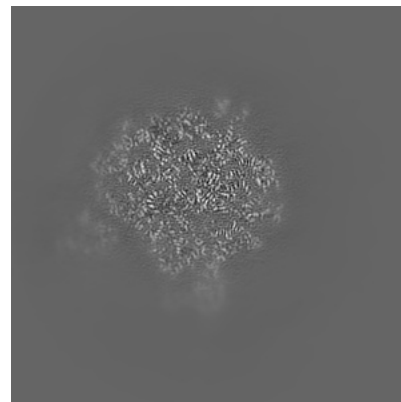
6.3.1 Primary map



X Index: 206



Y Index: 225

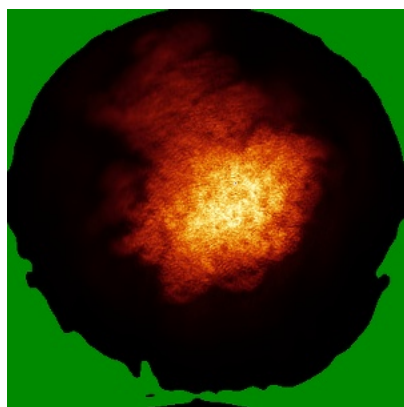


Z Index: 200

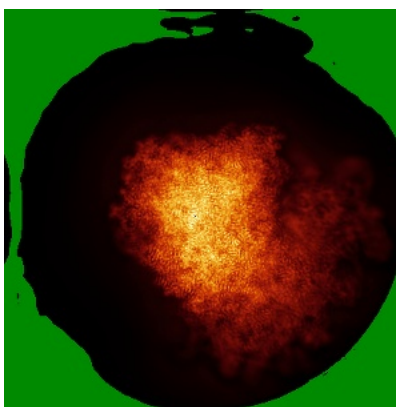
The images above show the largest variance slices of the map in three orthogonal directions.

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

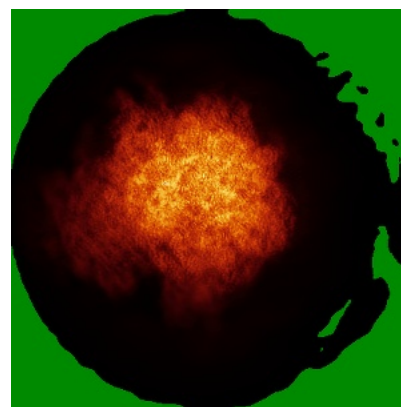
6.4.1 Primary map



X



Y



Z

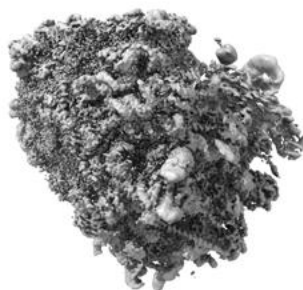
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

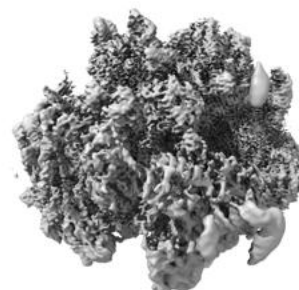
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.035. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

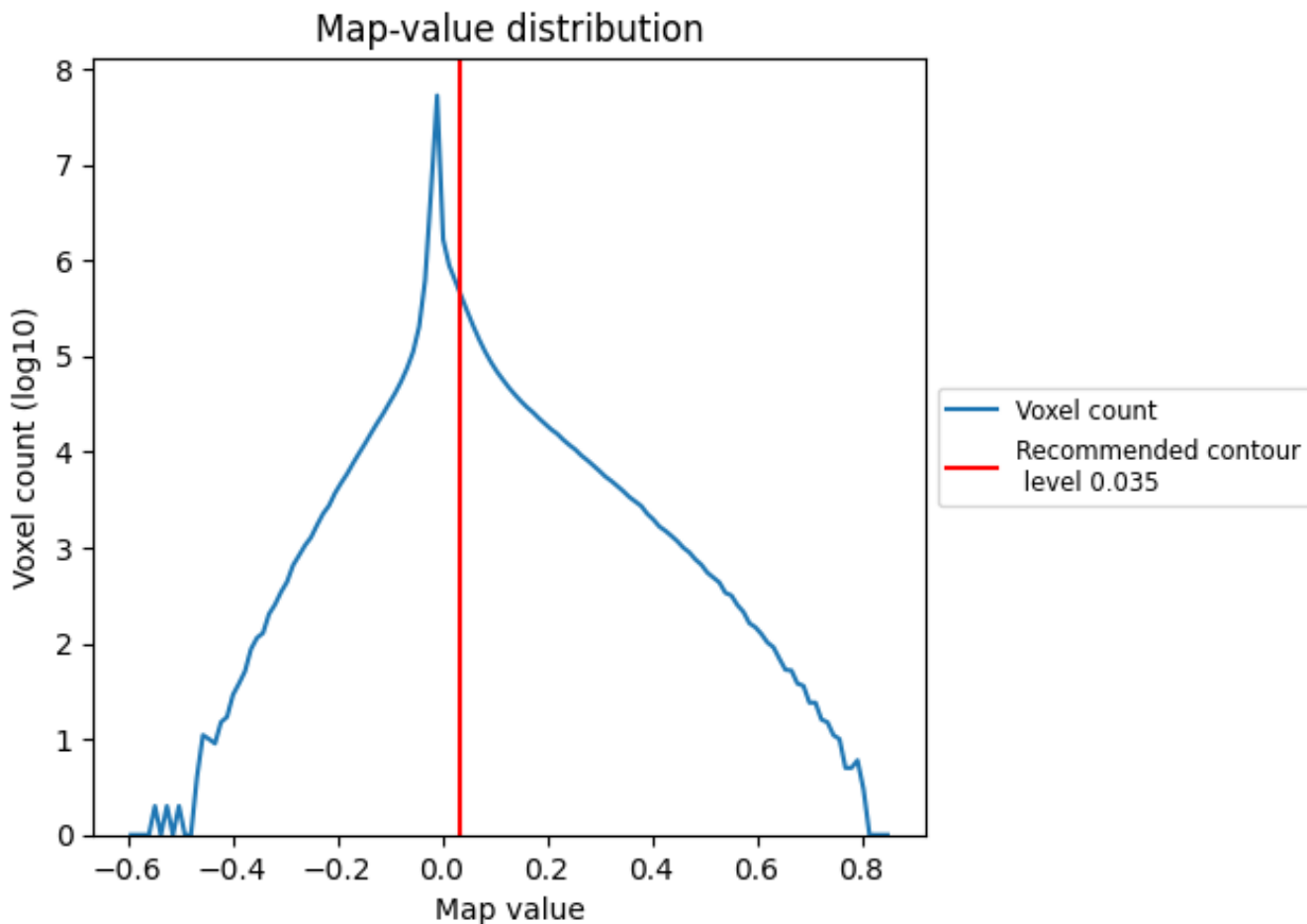
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

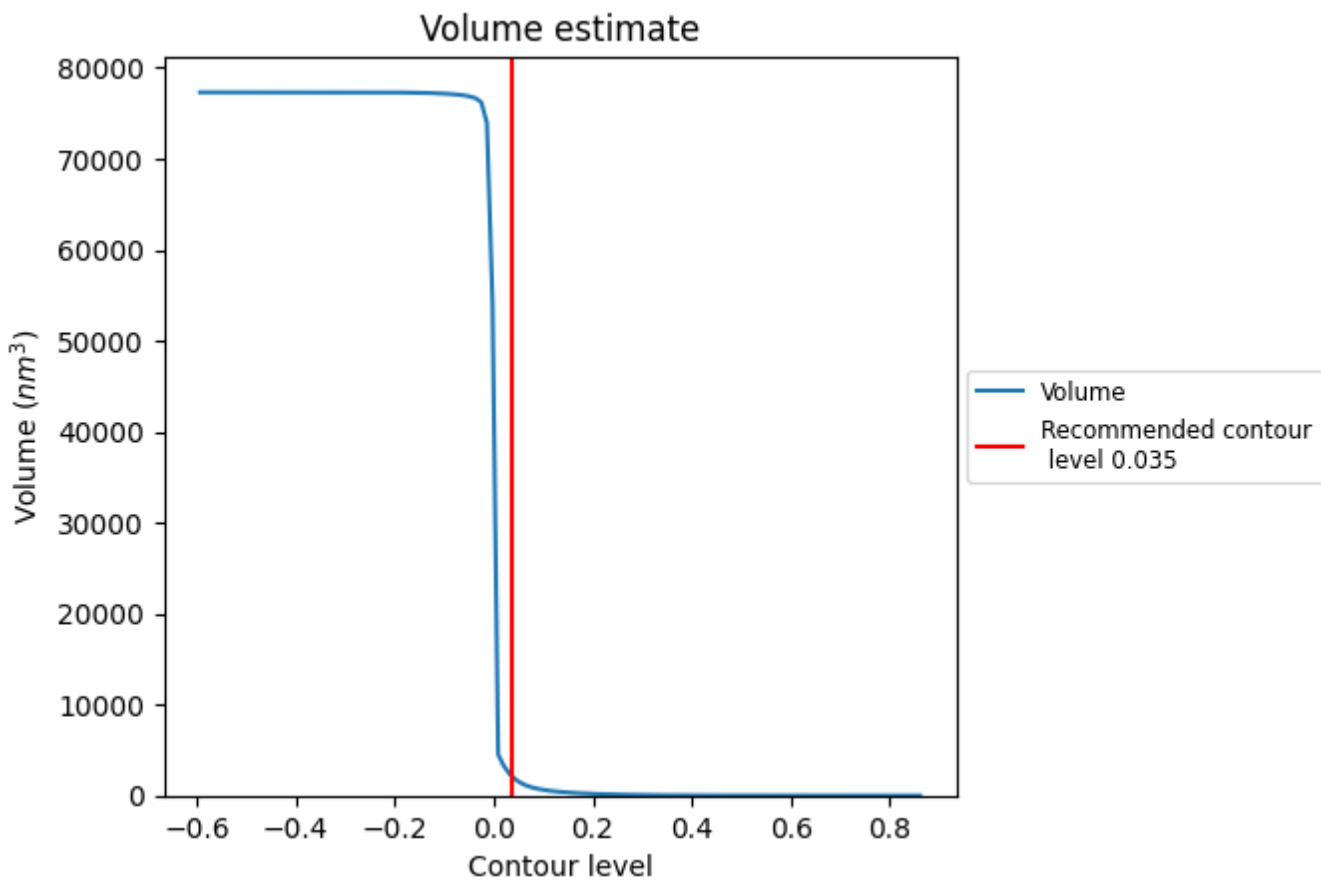
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

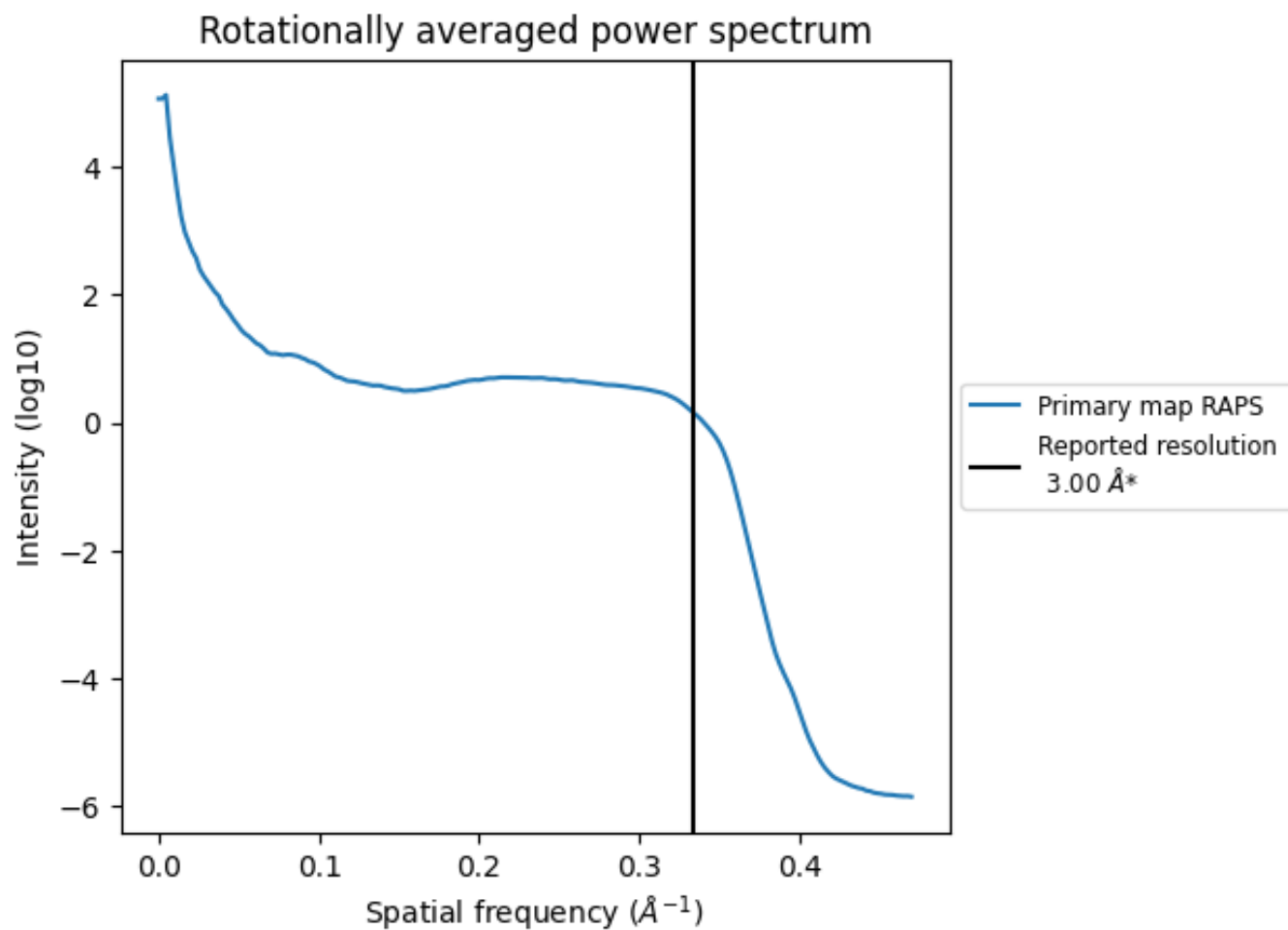
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2221 nm³; this corresponds to an approximate mass of 2007 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

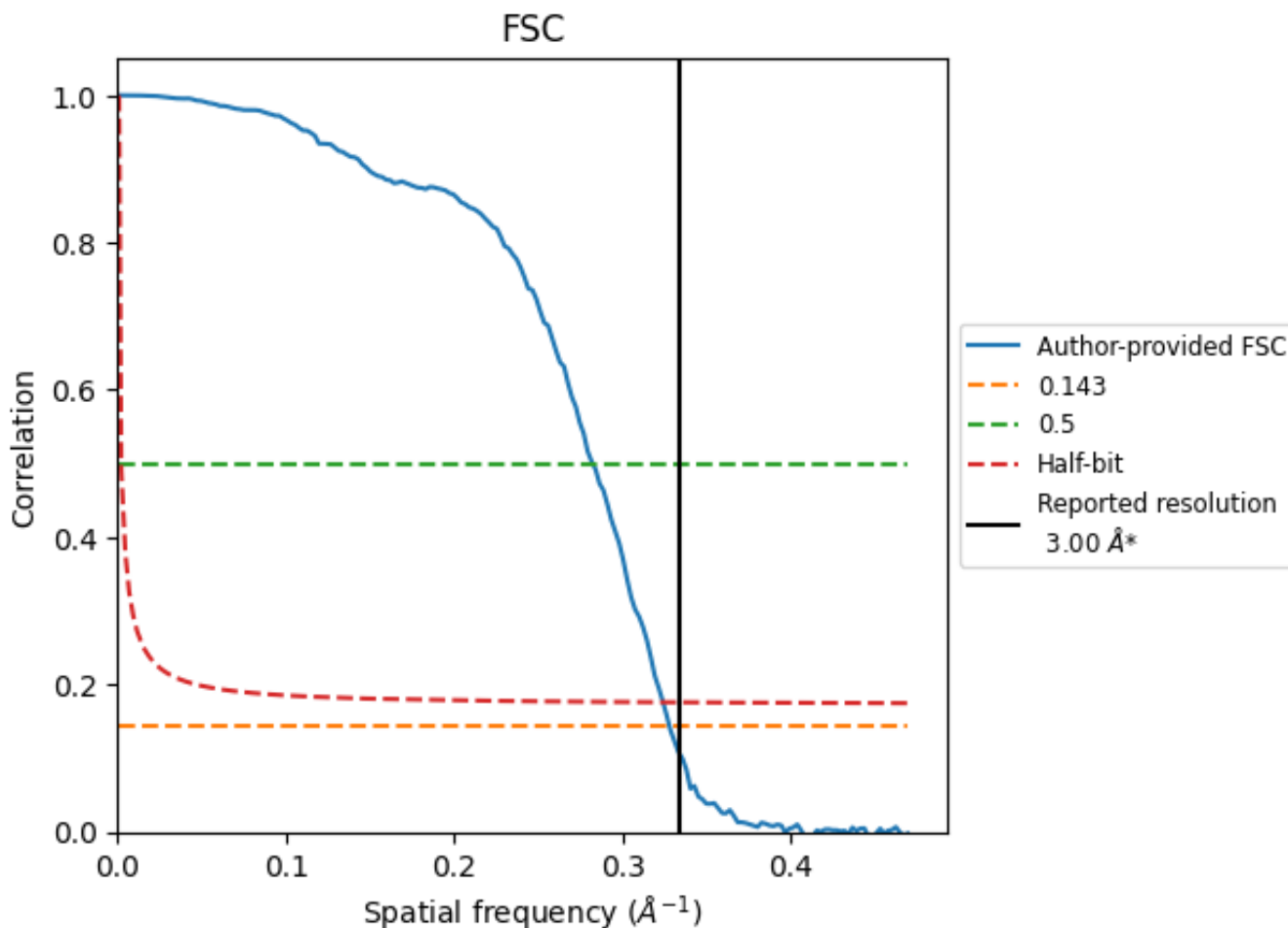


*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

8 Fourier-Shell correlation [\(i\)](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [\(i\)](#)



*Reported resolution corresponds to spatial frequency of 0.333 Å⁻¹

8.2 Resolution estimates [i](#)

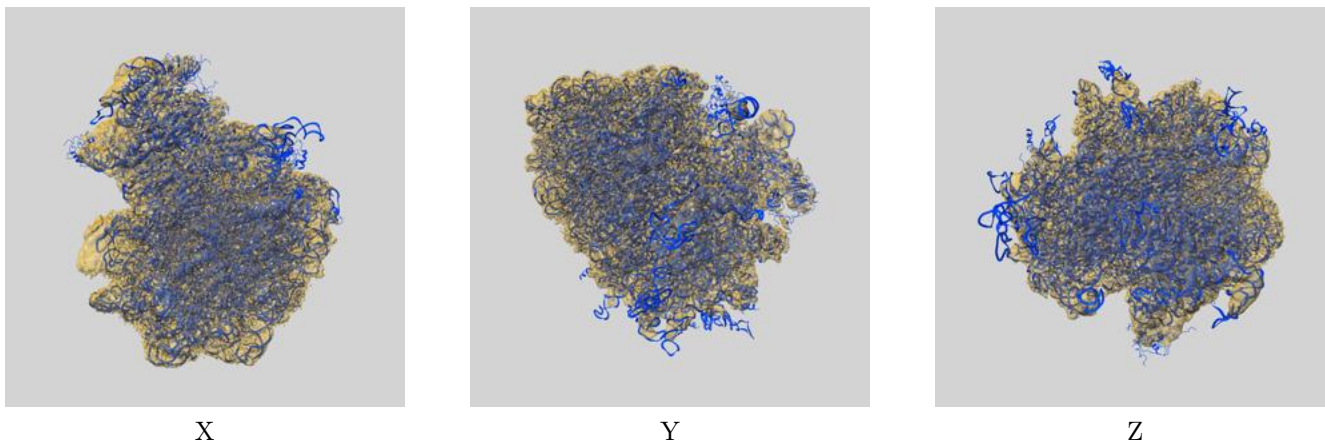
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.00	-	-
Author-provided FSC curve	3.05	3.54	3.09
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

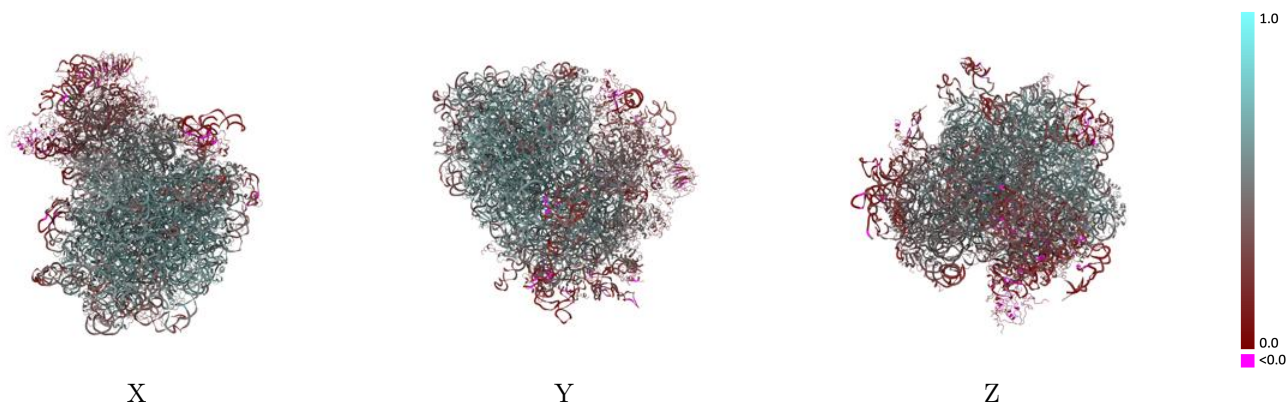
This section contains information regarding the fit between EMDB map EMD-10624 and PDB model 6XU8. Per-residue inclusion information can be found in section 3 on page 19.

9.1 Map-model overlay [i](#)



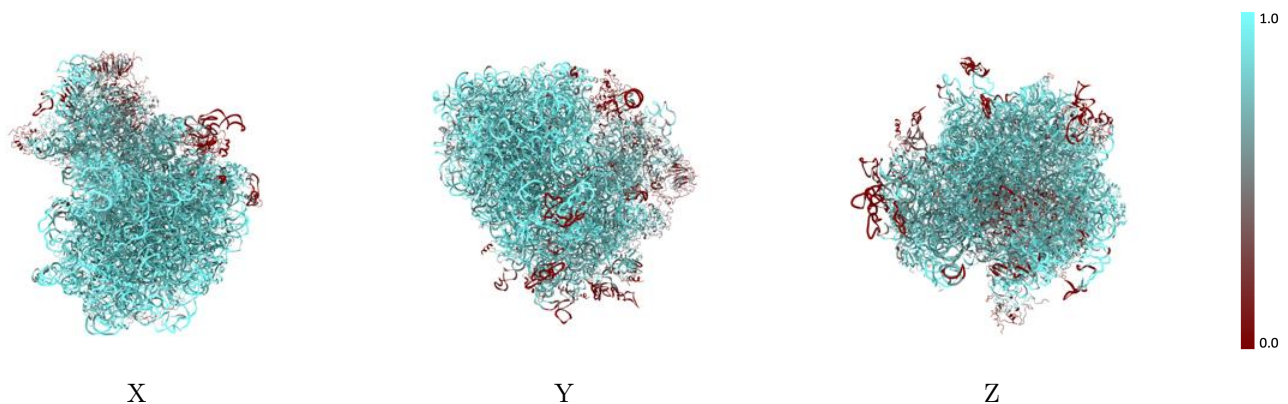
The images above show the 3D surface view of the map at the recommended contour level 0.035 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



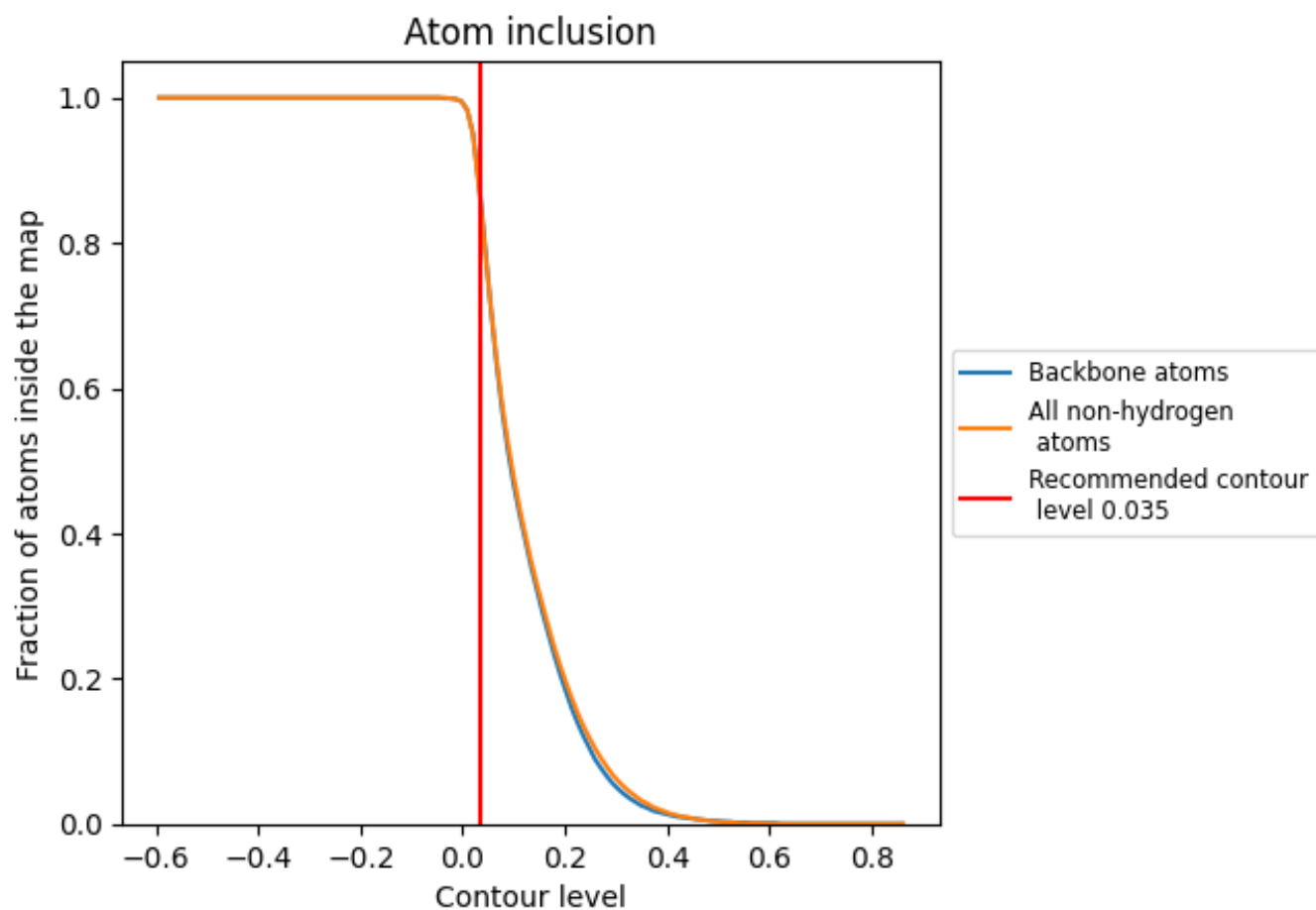
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.035).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 86% of all backbone atoms, 86% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.035) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8560	 0.4690
A5	 0.9300	 0.5240
A7	 0.9890	 0.5620
A8	 0.9790	 0.5900
A9	 0.9890	 0.5630
AA	 0.6440	 0.3570
AB	 0.7850	 0.4240
AC	 0.7080	 0.4180
AD	 0.4960	 0.2880
AE	 0.7810	 0.4400
AF	 0.4030	 0.2890
AG	 0.6770	 0.3620
AH	 0.6720	 0.3350
AI	 0.7140	 0.4450
AJ	 0.7860	 0.3840
AK	 0.8310	 0.1820
AL	 0.7310	 0.4760
AM	 0.3340	 0.0880
AN	 0.8370	 0.4940
AO	 0.8010	 0.4400
AP	 0.6410	 0.2030
AQ	 0.4760	 0.2430
AR	 0.3860	 0.2720
AS	 0.6640	 0.2790
AT	 0.6780	 0.2540
AU	 0.4620	 0.2850
AV	 0.6100	 0.3970
AW	 0.8340	 0.4890
AX	 0.7800	 0.4840
AY	 0.7450	 0.3580
AZ	 0.3970	 0.2280
Aa	 0.7760	 0.4720
Ab	 0.7900	 0.3890
Ac	 0.5360	 0.3050
Ad	 0.8290	 0.3120













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Chain	Atom inclusion	Q-score
Ae	0.6000	0.3500
Af	0.4230	0.0970
Ag	0.2740	0.1760
B2	0.8560	0.3880
CA	0.9590	0.5900
CB	0.9340	0.5680
CC	0.9430	0.5700
CD	0.8930	0.4970
CE	0.8360	0.4500
CF	0.9770	0.5970
CG	0.8210	0.4880
CH	0.9590	0.5270
CI	0.8560	0.4890
CJ	0.8410	0.4420
CL	0.8710	0.5180
CM	0.9020	0.4850
CN	0.9670	0.5880
CO	0.9580	0.5830
CP	0.8400	0.5490
CQ	0.9720	0.5970
CR	0.8270	0.4900
CS	0.9540	0.5590
CT	0.9520	0.5600
CU	0.8200	0.4670
CV	0.9580	0.5910
CW	0.9510	0.5770
CX	0.9120	0.5480
CY	0.9670	0.5800
CZ	0.9260	0.5180
Ca	0.9520	0.5710
Cb	0.9330	0.5120
Cc	0.9350	0.5380
Cd	0.9530	0.5620
Ce	0.9680	0.6060
Cf	0.9070	0.5050
Cg	0.9730	0.5870
Ch	0.9340	0.5600
Ci	0.8650	0.4810
Cj	0.9780	0.6210
Ck	0.8650	0.4890
Cl	0.9810	0.6090
Cm	0.9740	0.5340

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Chain	Atom inclusion	Q-score
Cn	 0.9350	 0.5760
Co	 0.9480	 0.5650
Cp	 0.9560	 0.5900
Cr	 0.8540	 0.5020
Cz	 0.0230	 0.1440