



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 12:33 PM UTC

PDB ID : 3J2A / pdb_00003j2a
EMDB ID : EMD-5502
Title : Dissecting the in vivo assembly of the 30S ribosomal subunit reveals the role of RimM
Authors : Guo, Q.; Goto, S.; Chen, Y.; Muto, A.; Himeno, H.; Deng, H.; Lei, J.; Gao, N.
Deposited on : 2012-09-28
Resolution : 13.10 Å (reported)
Based on initial model : 3OFA

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.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

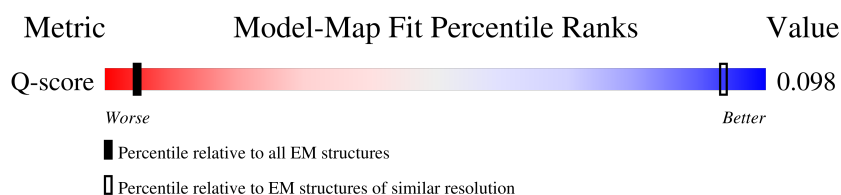
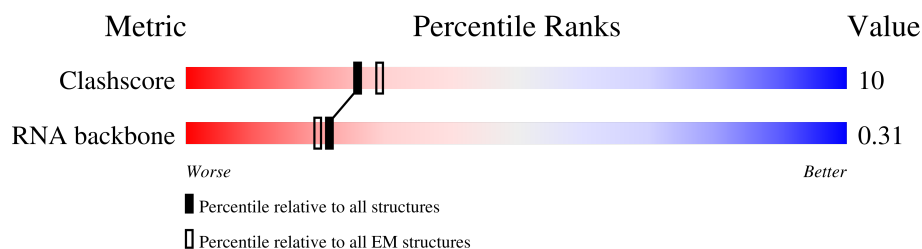
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 13.10 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
RNA backbone	8273	3508	-
Q-score	-	25397	61 (12.60 - 13.60)

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	N	1533	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 49446 atoms, of which 16554 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.

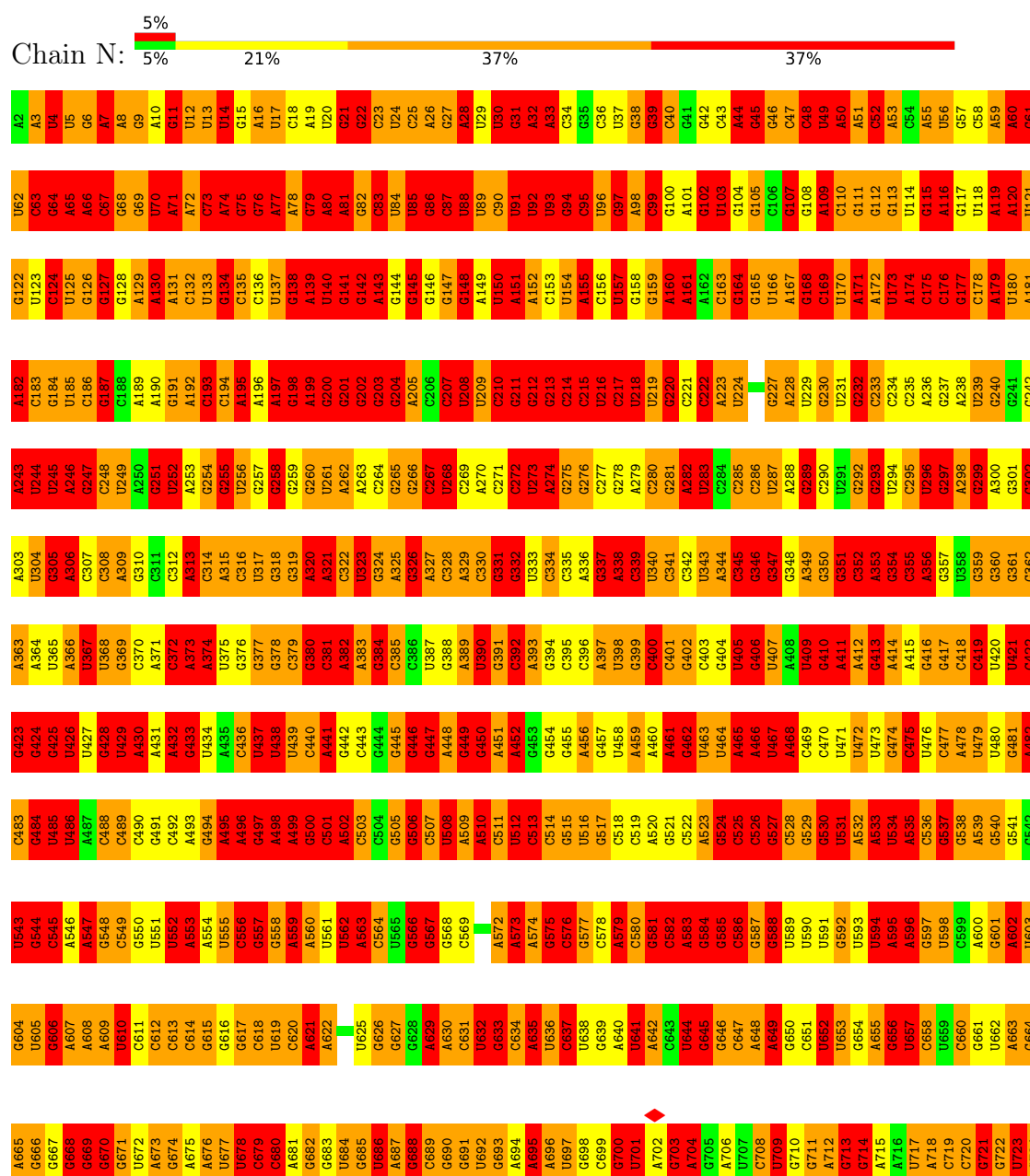
- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	N	1533	Total	C	H	N	O	P	0	0
			49446	14671	16554	6036	10653	1532		

3 Residue-property plots

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

• Molecule 1: 16S rRNA



G1505	U1445	G1385	C1325	G1265	U1205	U965	U905	A845	G785	G725
U1506	A1446	G1386	U1326	G1266	G1026	G966	A906	G846	G786	C726
A1507	A1447	G1387	C1327	C1267	C1027	C967	A907	G847	A787	C727
A1508	C1448	G1388	C1328	G1268	G1028	A968	A908	G848	A788	A728
C1509	C1449	C1389	A1329	A1269	U1029	A969	A909	G849	A789	A729
C1510	C1450	U1390	U1330	G1270	U1030	C970	C910	U850	A790	G730
U1511	U1451	U1391	G1331	A1271	U1031	G971	U911	G851	G791	G731
U1512	U1452	G1392	U1212	G1272	G1032	C972	C912	G852	A792	C732
A1513	G1453	A1393	A1213	G1273	G1033	G973	A913	G853	U793	G733
G1514	G1454	C1394	G1214	A1274	G1034	A974	A914	U854	A794	G734
G1515	G1455	U1395	G1215	A1275	A1035	A975	A915	U855	C795	C735
G1516	G1456	G1396	A1216	G1276	A1036	G976	U916	G856	G796	C736
G1517	G1457	G1397	C1217	G1277	C1037	A977	G917	G857	C797	C737
A1518	A1458	G1398	C1218	G1278	C1038	A978	A918	G858	U798	C738
A1519	G1459	A1399	U1219	G1279	G1039	C979	A919	G859	G799	C739
C1520	G1460	C1400	G1220	A1280	U1040	C980	U920	A860	U740	U740
C1521	G1461	G1401	G1221	C1281	A1041	U981	U921	U861	G741	G741
U1522	C1462	C1402	G1222	G1282	A1042	U982	G922	C862	A802	G742
G1523	G1463	C1403	U1223	U1283	G1043	A983	A923	G863	G803	A743
G1524	U1464	C1404	U1224	C1284	A1044	C984	C924	U864	U804	C744
G1525	U1465	G1405	A1225	A1285	U1045	C985	G925	A865	C805	G745
G1526	U1466	G1406	C1226	U1286	A1046	U986	G926	C866	C806	A746
U1527	U1467	U1407	A1227	A1287	G1047	U987	G927	G867	A807	A747
U1528	U1468	C1407	G1228	U1288	G1048	G988	G928	C868	C808	G748
G1529	A1469	A1408	A1229	A1289	U1049	U989	G929	G869	G809	A749
G1530	A1470	C1409	C1230	G1290	G1050	C990	C830	U870	C810	C750
A1531	A1471	A1410	G1231	A1291	U1051	U991	C931	U871	C811	G751
U1532	C1469	C1411	U1232	G1292	U1052	U992	C932	A872	G812	G752
C1533	U1472	C1412	G1233	G1293	G1053	G993	G933	A873	U813	A753
A1534	U1473	A1413	C1234	G1294	C1054	A994	C934	G874	A814	C754
	U1474	G1414	U1235	U1295	A1055	C995	A935	U875	A815	G755
	U1475	G1415	A1236	C1296	U1056	A996	C936	C876	A816	C756
	A1476	G1416	G1237	G1297	G1057	U997	A937	U877	C817	U757
	U1477	G1417	A1238	U1298	G1058	C998	A938	A878	G818	C758
	U1478	A1418	U1239	A1299	C1059	C999	G939	C879	A819	A759
	U1479	G1419	G1240	G1300	U1060	A1000	G940	U820	U820	G760
	C1479	U1420	G1241	U1301	G1061	C1001	G941	G821	G821	G761
	A1480	U1421	G1242	C1302	U1062	G1002	G942	C822	U822	U762
	U1481	G1422	U1243	G1303	C1063	G1003	U943	C823	C823	G763
	G1482	G1423	C1244	G1304	U1064	A1004	G944	U824	G824	C764
	A1483	U1424	G1245	G1305	U1065	A1005	G945	A825	A825	G765
	G1484	G1425	C1246	A1306	C1066	G1006	A946	G826	C826	A766
	U1485	U1426	U1247	A1307	A1067	U1007	G947	G827	U827	A767
	G1486	G1427	A1248	U1308	G1068	U1008	C948	U828	U828	A768
	A1487	U1428	G1249	G1309	C1069	U1009	A949	G829	G829	G769
	G1488	A1429	A1250	U1310	U1070	C1010	U950	G830	C830	C770
	U1489	U1430	A1251	A1311	G1071	C1011	G951	U831	A831	G771
	A1490	G1431	G1252	G1312	U1072	A1012	U952	G832	G832	U772
	G1491	U1432	U1253	G1313	G1073	G1013	G953	C833	G833	G773
	A1492	A1433	G1254	U1314	G1074	A1014	G954	G834	U834	G774
	U1493	U1434	A1255	C1315	U1075	G1015	U955	G835	U835	G775
	G1494	G1435	G1256	G1316	U1076	A1016	U956	C836	G836	G776
	A1495	U1436	A1257	C1317	G1077	U1017	U957	C837	U837	A777
	C1496	G1437	G1258	A1318	U1078	G1018	A958	G838	G838	G778
	U1497	U1438	U1259	U1319	G1079	A1019	A959	C839	C839	C779
	A1498	A1439	G1260	G1320	A1080	U1020	U960	G840	G840	A780
	U1499	G1440	A1261	U1321	A1081	A1021	U961	A901	C841	A781
	A1500	U1441	U1262	C1322	U1082	A1022	C962	G902	U842	A782
	C1501	G1442	C1263	G1323	A1083	A1023	G963	C903	U843	C783
	A1502	C1443	A1264	A1324	G1084	G1024	A964	U904	G844	A784
	A1503	U1444								
	G1504									

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	30262	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Weiner filter	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1300	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	80000	Depositor
Image detector	GATAN ULTRASCAN 4000 (4k x 4k)	Depositor
Maximum map value	4.176	Depositor
Minimum map value	-6.630	Depositor
Average map value	-3.903	Depositor
Map value standard deviation	0.568	Depositor
Recommended contour level	-2.8	Depositor
Map size ($\text{\AA}$)	345.0, 345.0, 345.0	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	2.76, 2.76, 2.76	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	N	2.06	820/36831 (2.2%)	2.09	1930/57458 (3.4%)

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	N	0	937

All (820) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1246	A	C5'-C4'	10.50	1.67	1.51
1	N	592	G	C4'-C3'	10.01	1.67	1.52
1	N	586	C	C4'-C3'	9.64	1.67	1.52
1	N	1022	A	C4'-C3'	9.22	1.66	1.52
1	N	481	G	C4'-C3'	9.11	1.66	1.53
1	N	773	G	C2'-C1'	-9.03	1.39	1.53
1	N	327	A	O3'-P	-9.00	1.47	1.61
1	N	1267	C	C1'-N1	9.00	1.61	1.48
1	N	128	G	C5'-C4'	8.76	1.64	1.51
1	N	529	G	C4'-C3'	-8.71	1.39	1.52
1	N	982	U	C1'-N1	8.71	1.60	1.47
1	N	1007	U	C1'-N1	8.68	1.61	1.48
1	N	1024	G	C4'-C3'	8.66	1.65	1.52
1	N	903	G	C1'-N9	8.50	1.60	1.48
1	N	1001	C	C5'-C4'	8.44	1.64	1.51
1	N	535	A	C4'-O4'	-8.41	1.32	1.45
1	N	180	U	C1'-N1	8.33	1.60	1.48
1	N	1418	A	C4'-C3'	8.29	1.65	1.52
1	N	1380	U	C2'-C1'	-8.19	1.41	1.53
1	N	1075	U	C5'-C4'	8.14	1.63	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	355	C	C5'-C4'	8.07	1.63	1.51
1	N	1374	A	C2'-C1'	-8.05	1.41	1.53
1	N	410	G	C1'-N9	8.04	1.60	1.48
1	N	425	G	C3'-O3'	8.01	1.54	1.42
1	N	112	G	C1'-N9	7.98	1.59	1.48
1	N	142	G	P-O5'	-7.97	1.47	1.59
1	N	1346	A	O3'-P	-7.93	1.49	1.61
1	N	817	C	O3'-P	-7.92	1.49	1.61
1	N	1223	C	C4'-O4'	-7.91	1.33	1.45
1	N	365	U	P-O5'	-7.86	1.48	1.59
1	N	898	G	C2'-C1'	-7.80	1.41	1.53
1	N	558	G	C2'-C1'	-7.78	1.41	1.53
1	N	346	G	C3'-C2'	7.75	1.64	1.52
1	N	739	C	C1'-N1	7.73	1.60	1.48
1	N	899	C	C2'-C1'	-7.69	1.41	1.53
1	N	1469	C	C2'-C1'	-7.66	1.41	1.53
1	N	837	U	C1'-N1	7.66	1.59	1.48
1	N	34	C	O4'-C1'	7.63	1.53	1.41
1	N	843	U	O4'-C1'	7.62	1.53	1.41
1	N	1348	U	C5'-C4'	7.61	1.62	1.51
1	N	978	A	C2'-C1'	-7.60	1.42	1.53
1	N	978	A	C3'-C2'	7.58	1.64	1.52
1	N	1086	U	C5'-C4'	7.55	1.62	1.51
1	N	185	U	C2'-O2'	-7.54	1.31	1.42
1	N	443	C	C4'-C3'	7.53	1.63	1.52
1	N	919	A	C1'-N9	7.50	1.59	1.48
1	N	1242	G	C3'-O3'	7.48	1.53	1.42
1	N	509	A	O3'-P	-7.46	1.50	1.61
1	N	193	C	C1'-N1	7.46	1.59	1.48
1	N	1111	A	C4'-C3'	7.44	1.63	1.52
1	N	1173	U	C1'-N1	7.43	1.59	1.48
1	N	516	U	P-O5'	-7.41	1.48	1.59
1	N	352	C	O3'-P	-7.39	1.50	1.61
1	N	1331	G	C2'-C1'	-7.39	1.42	1.53
1	N	505	G	C1'-N9	7.39	1.59	1.48
1	N	172	A	C3'-O3'	-7.38	1.31	1.42
1	N	854	U	N3-C4	7.36	1.53	1.38
1	N	1502	A	C4'-O4'	-7.35	1.34	1.45
1	N	1263	C	P-O5'	-7.35	1.48	1.59
1	N	561	U	C3'-C2'	7.33	1.64	1.52
1	N	1420	U	O3'-P	-7.33	1.50	1.61
1	N	739	C	C3'-O3'	7.33	1.53	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	558	G	C1'-N9	7.33	1.58	1.48
1	N	468	A	O3'-P	-7.32	1.50	1.61
1	N	815	A	O3'-P	-7.31	1.50	1.61
1	N	1325	C	C2'-O2'	-7.31	1.31	1.42
1	N	971	G	C4'-C3'	-7.30	1.41	1.52
1	N	1092	A	C3'-C2'	7.29	1.63	1.52
1	N	609	A	P-O5'	-7.29	1.48	1.59
1	N	465	A	C5'-C4'	7.29	1.62	1.51
1	N	1072	G	O4'-C1'	-7.28	1.30	1.41
1	N	998	C	C5'-C4'	7.26	1.62	1.51
1	N	770	C	C1'-N1	7.25	1.59	1.48
1	N	1468	A	C2'-C1'	-7.22	1.42	1.53
1	N	947	G	O3'-P	-7.22	1.50	1.61
1	N	1405	G	C2'-C1'	-7.22	1.42	1.53
1	N	1113	C	C1'-N1	7.20	1.59	1.48
1	N	1234	C	C2'-C1'	-7.20	1.42	1.53
1	N	145	G	C3'-C2'	-7.20	1.42	1.52
1	N	792	A	O3'-P	-7.19	1.50	1.61
1	N	1038	C	C1'-N1	7.19	1.59	1.48
1	N	1288	A	C4'-C3'	7.19	1.63	1.52
1	N	1058	G	O3'-P	-7.17	1.50	1.61
1	N	1078	U	O5'-C5'	7.17	1.53	1.42
1	N	1464	U	O3'-P	-7.17	1.50	1.61
1	N	1288	A	O3'-P	-7.17	1.50	1.61
1	N	1464	U	C5'-C4'	7.17	1.61	1.51
1	N	795	C	C1'-N1	7.14	1.59	1.48
1	N	1062	U	C2'-C1'	-7.13	1.42	1.53
1	N	230	G	C3'-O3'	7.12	1.52	1.42
1	N	281	G	O3'-P	-7.12	1.50	1.61
1	N	18	C	C5'-C4'	7.12	1.61	1.51
1	N	840	C	C1'-N1	7.12	1.59	1.48
1	N	347	G	C5'-C4'	7.11	1.61	1.51
1	N	910	C	C1'-N1	7.11	1.59	1.48
1	N	92	U	C5'-C4'	7.10	1.61	1.51
1	N	1426	G	C5'-C4'	7.10	1.61	1.51
1	N	1420	U	C4'-C3'	7.08	1.63	1.52
1	N	573	A	C5'-C4'	7.07	1.61	1.51
1	N	424	G	C2'-C1'	-7.07	1.42	1.53
1	N	1061	G	C1'-N9	7.06	1.58	1.48
1	N	102	G	O3'-P	-7.06	1.50	1.61
1	N	758	C	C3'-O3'	7.05	1.52	1.42
1	N	670	G	C3'-O3'	7.05	1.52	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1138	G	O3'-P	-7.04	1.50	1.61
1	N	438	U	C3'-O3'	-7.00	1.32	1.43
1	N	923	A	O4'-C1'	6.97	1.52	1.41
1	N	490	C	O4'-C1'	6.97	1.52	1.41
1	N	1282	C	P-O5'	-6.96	1.49	1.59
1	N	1442	G	C1'-N9	6.96	1.58	1.48
1	N	187	G	C4'-O4'	-6.96	1.35	1.45
1	N	776	G	C5'-C4'	6.96	1.61	1.51
1	N	1493	A	C1'-N9	6.96	1.58	1.48
1	N	53	A	C4'-C3'	6.94	1.62	1.52
1	N	1260	G	C4'-O4'	-6.94	1.35	1.45
1	N	543	U	O3'-P	-6.93	1.50	1.61
1	N	769	G	O3'-P	-6.93	1.50	1.61
1	N	908	A	P-O5'	-6.92	1.49	1.59
1	N	1203	C	C1'-N1	6.91	1.58	1.48
1	N	10	A	C1'-N9	6.88	1.58	1.48
1	N	381	C	C1'-N1	6.87	1.58	1.48
1	N	608	A	C5'-C4'	6.85	1.61	1.51
1	N	1302	C	C4'-O4'	6.85	1.55	1.45
1	N	295	C	C1'-N1	6.83	1.58	1.48
1	N	709	U	C4'-C3'	6.83	1.62	1.52
1	N	776	G	O4'-C1'	6.82	1.51	1.41
1	N	86	G	C5'-C4'	6.81	1.61	1.51
1	N	1254	A	C3'-O3'	-6.80	1.31	1.42
1	N	1274	A	P-O5'	-6.80	1.49	1.59
1	N	1447	A	O3'-P	-6.80	1.50	1.61
1	N	1029	U	C4'-O4'	6.79	1.55	1.45
1	N	1417	G	C2'-C1'	-6.79	1.43	1.53
1	N	1231	G	C4'-C3'	6.78	1.62	1.52
1	N	1363	A	C5'-C4'	6.78	1.61	1.51
1	N	934	C	C3'-C2'	6.77	1.63	1.52
1	N	1323	G	C4'-C3'	6.76	1.62	1.52
1	N	614	C	C1'-N1	6.76	1.58	1.48
1	N	1073	U	C1'-N1	6.75	1.58	1.48
1	N	416	G	C1'-N9	6.74	1.58	1.48
1	N	1156	G	O4'-C1'	-6.73	1.31	1.41
1	N	872	A	O3'-P	-6.73	1.51	1.61
1	N	1318	A	P-O5'	-6.73	1.49	1.59
1	N	930	C	O5'-C5'	6.72	1.52	1.42
1	N	1101	A	O3'-P	-6.72	1.51	1.61
1	N	1496	C	C1'-N1	6.72	1.58	1.48
1	N	803	G	C5'-C4'	6.71	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1267	C	C4'-C3'	6.70	1.62	1.52
1	N	1314	C	C2'-C1'	-6.70	1.43	1.53
1	N	1316	G	C3'-C2'	-6.69	1.42	1.52
1	N	1085	U	C3'-O3'	6.68	1.52	1.42
1	N	1165	U	C5'-C4'	6.68	1.61	1.51
1	N	1442	G	C5'-C4'	6.67	1.61	1.51
1	N	1110	A	C4'-O4'	6.66	1.55	1.45
1	N	607	A	C1'-N9	6.66	1.57	1.48
1	N	1177	G	C4'-C3'	6.63	1.62	1.52
1	N	797	C	O5'-C5'	6.62	1.52	1.42
1	N	704	A	C1'-N9	6.60	1.57	1.48
1	N	53	A	O4'-C1'	6.59	1.51	1.41
1	N	876	C	C4'-C3'	6.59	1.62	1.52
1	N	4	U	C1'-N1	6.59	1.57	1.47
1	N	1244	G	O3'-P	-6.59	1.51	1.61
1	N	766	A	C3'-O3'	6.58	1.52	1.42
1	N	197	A	O3'-P	-6.57	1.51	1.61
1	N	937	A	C4'-C3'	6.57	1.62	1.52
1	N	1344	C	C1'-N1	6.57	1.58	1.48
1	N	1095	U	C1'-N1	6.56	1.58	1.48
1	N	1126	U	C5'-C4'	6.56	1.61	1.51
1	N	85	U	C5'-C4'	6.56	1.61	1.51
1	N	938	A	C5'-C4'	6.56	1.61	1.51
1	N	1352	C	C5'-C4'	6.56	1.61	1.51
1	N	432	A	O3'-P	-6.55	1.51	1.61
1	N	251	G	C1'-N9	6.54	1.56	1.47
1	N	796	C	C4'-O4'	-6.53	1.35	1.45
1	N	820	U	C4'-C3'	6.53	1.62	1.53
1	N	868	C	C2'-C1'	-6.53	1.43	1.53
1	N	1044	A	C5'-C4'	6.53	1.61	1.51
1	N	656	G	C1'-N9	6.52	1.57	1.48
1	N	713	G	O3'-P	-6.52	1.51	1.61
1	N	833	G	C5'-C4'	6.52	1.61	1.51
1	N	1121	U	C2'-C1'	-6.51	1.43	1.53
1	N	857	C	C1'-N1	6.51	1.58	1.48
1	N	47	C	C1'-N1	6.51	1.57	1.47
1	N	1190	G	C4'-O4'	6.50	1.55	1.45
1	N	432	A	P-O5'	-6.50	1.50	1.59
1	N	1253	G	C5'-C4'	6.50	1.61	1.51
1	N	227	G	C4'-C3'	6.50	1.62	1.52
1	N	717	U	C5'-C4'	6.50	1.61	1.51
1	N	1281	C	O3'-P	-6.49	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1401	G	C4'-O4'	6.49	1.55	1.45
1	N	295	C	C5'-C4'	6.47	1.60	1.51
1	N	1504	G	O4'-C1'	6.47	1.51	1.42
1	N	622	A	C5'-C4'	6.46	1.60	1.51
1	N	343	U	P-O5'	-6.46	1.50	1.59
1	N	765	G	O3'-P	-6.46	1.51	1.61
1	N	272	C	C3'-C2'	6.45	1.62	1.52
1	N	1058	G	C5'-C4'	6.45	1.60	1.51
1	N	336	A	C4'-C3'	6.45	1.62	1.52
1	N	1027	C	C1'-N1	6.45	1.58	1.48
1	N	360	G	C3'-O3'	6.45	1.51	1.42
1	N	1029	U	C2'-C1'	-6.44	1.43	1.53
1	N	904	U	O3'-P	-6.43	1.51	1.61
1	N	1328	C	C5'-C4'	6.43	1.60	1.51
1	N	1127	G	C2'-C1'	-6.42	1.43	1.53
1	N	365	U	C3'-O3'	6.42	1.51	1.42
1	N	991	U	P-O5'	-6.42	1.50	1.59
1	N	807	A	O3'-P	-6.41	1.51	1.61
1	N	220	G	C3'-O3'	6.41	1.51	1.42
1	N	232	G	C3'-O3'	-6.41	1.32	1.42
1	N	134	G	C4'-O4'	6.41	1.55	1.45
1	N	798	U	O4'-C1'	6.40	1.51	1.41
1	N	706	A	C2'-C1'	-6.40	1.43	1.53
1	N	780	A	C4'-C3'	6.40	1.62	1.52
1	N	261	U	O5'-C5'	6.39	1.52	1.42
1	N	1418	A	P-O5'	-6.39	1.50	1.59
1	N	356	A	C4'-C3'	6.39	1.62	1.52
1	N	1197	A	C2'-C1'	-6.38	1.43	1.53
1	N	272	C	C2'-C1'	-6.37	1.43	1.53
1	N	689	C	C4-N4	6.37	1.46	1.33
1	N	1015	G	C4'-C3'	6.37	1.62	1.52
1	N	1276	G	P-O5'	-6.37	1.50	1.59
1	N	923	A	C4'-O4'	6.37	1.55	1.45
1	N	421	U	C3'-C2'	6.36	1.62	1.52
1	N	1406	U	C1'-N1	6.36	1.57	1.48
1	N	181	A	O4'-C1'	-6.34	1.32	1.41
1	N	287	U	O3'-P	-6.34	1.51	1.61
1	N	962	C	C1'-N1	6.34	1.57	1.48
1	N	1434	A	C4'-C3'	-6.34	1.43	1.52
1	N	1194	U	O3'-P	-6.34	1.51	1.61
1	N	923	A	C2'-C1'	-6.33	1.43	1.53
1	N	406	G	C2'-O2'	-6.33	1.32	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	981	U	C1'-N1	6.32	1.57	1.48
1	N	323	U	P-O5'	-6.32	1.50	1.59
1	N	64	G	O3'-P	-6.31	1.51	1.61
1	N	1424	U	C3'-C2'	6.31	1.62	1.52
1	N	150	U	C5'-C4'	6.30	1.60	1.51
1	N	601	G	C5'-C4'	6.30	1.60	1.51
1	N	851	G	C5'-C4'	6.30	1.60	1.51
1	N	1247	U	C5'-C4'	6.29	1.60	1.51
1	N	906	A	C4'-C3'	6.29	1.61	1.52
1	N	1148	U	O5'-C5'	6.28	1.51	1.42
1	N	1237	C	C3'-O3'	6.28	1.51	1.42
1	N	1311	A	C5'-C4'	6.28	1.60	1.51
1	N	283	U	C1'-N1	6.28	1.57	1.48
1	N	49	U	C1'-N1	6.27	1.57	1.48
1	N	943	U	C5'-C4'	6.27	1.60	1.51
1	N	846	G	C4'-C3'	6.27	1.61	1.52
1	N	1376	U	C4'-C3'	6.26	1.61	1.52
1	N	1184	G	P-O5'	-6.25	1.50	1.59
1	N	1392	G	P-O5'	-6.25	1.50	1.59
1	N	1531	A	C1'-N9	6.24	1.57	1.48
1	N	266	G	C4'-O4'	-6.24	1.36	1.45
1	N	373	A	C2'-C1'	-6.24	1.44	1.53
1	N	675	A	C4'-C3'	6.24	1.61	1.52
1	N	634	C	O4'-C1'	6.23	1.51	1.41
1	N	1461	G	C4'-C3'	6.23	1.61	1.52
1	N	33	A	O3'-P	-6.21	1.51	1.61
1	N	335	C	C5'-C4'	6.21	1.60	1.51
1	N	172	A	O3'-P	-6.21	1.51	1.61
1	N	1183	U	C1'-N1	6.21	1.57	1.48
1	N	1365	G	P-O5'	6.21	1.69	1.59
1	N	713	G	C5'-C4'	6.21	1.60	1.51
1	N	6	G	C1'-N9	6.20	1.57	1.48
1	N	137	U	C1'-N1	6.20	1.57	1.48
1	N	520	A	C5'-C4'	6.19	1.60	1.51
1	N	823	C	C2'-C1'	-6.19	1.44	1.53
1	N	60	A	C1'-N9	6.18	1.56	1.47
1	N	273	U	C5'-C4'	6.18	1.60	1.51
1	N	828	U	C5'-C4'	6.17	1.60	1.51
1	N	506	G	C1'-N9	6.16	1.57	1.48
1	N	1088	G	P-O5'	-6.16	1.50	1.59
1	N	198	G	C4'-C3'	6.15	1.61	1.52
1	N	660	C	C2'-C1'	-6.15	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1456	A	C1'-N9	6.15	1.57	1.48
1	N	197	A	C4'-C3'	6.12	1.62	1.53
1	N	472	U	C3'-O3'	6.12	1.51	1.42
1	N	685	G	C5'-C4'	6.12	1.60	1.51
1	N	1389	C	C4'-C3'	6.11	1.61	1.52
1	N	1340	A	C2'-C1'	-6.11	1.44	1.53
1	N	645	G	C2'-C1'	-6.11	1.44	1.53
1	N	769	G	C4'-C3'	-6.10	1.43	1.52
1	N	503	C	C1'-N1	6.09	1.57	1.48
1	N	555	U	O3'-P	-6.09	1.52	1.61
1	N	182	A	O3'-P	-6.08	1.52	1.61
1	N	551	U	C5'-C4'	6.07	1.60	1.51
1	N	935	A	O5'-C5'	6.07	1.51	1.42
1	N	46	G	P-O5'	-6.07	1.50	1.59
1	N	1240	U	C1'-N1	6.07	1.57	1.48
1	N	245	U	C5'-C4'	6.07	1.60	1.51
1	N	992	U	O3'-P	-6.06	1.52	1.61
1	N	336	A	C1'-N9	6.06	1.57	1.48
1	N	133	U	O3'-P	-6.05	1.52	1.61
1	N	462	G	C4'-C3'	6.05	1.61	1.52
1	N	331	G	C4'-C3'	6.05	1.61	1.52
1	N	1134	G	C5'-C4'	6.04	1.60	1.51
1	N	1113	C	O3'-P	-6.04	1.52	1.61
1	N	1378	C	C1'-N1	6.03	1.57	1.48
1	N	467	U	C4'-C3'	6.03	1.61	1.52
1	N	438	U	C3'-C2'	6.02	1.61	1.52
1	N	77	A	O5'-C5'	6.02	1.51	1.42
1	N	1168	U	O3'-P	-6.02	1.52	1.61
1	N	1063	C	C4'-O4'	6.01	1.54	1.45
1	N	1208	C	C4'-C3'	-6.01	1.43	1.52
1	N	1060	U	C4'-O4'	6.01	1.54	1.45
1	N	682	G	O4'-C1'	6.01	1.50	1.41
1	N	1500	A	C2'-C1'	-6.00	1.44	1.53
1	N	169	C	C1'-N1	6.00	1.57	1.48
1	N	1013	G	C2'-O2'	-5.99	1.33	1.42
1	N	1150	A	C4'-O4'	-5.99	1.36	1.45
1	N	1123	U	O3'-P	-5.99	1.52	1.61
1	N	1440	U	O4'-C1'	5.99	1.50	1.41
1	N	360	G	C5'-C4'	5.98	1.60	1.51
1	N	99	C	C1'-N1	5.97	1.57	1.48
1	N	258	G	C1'-N9	5.97	1.56	1.48
1	N	993	G	C2'-C1'	-5.97	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1318	A	C5'-C4'	5.95	1.60	1.51
1	N	1353	G	C2'-C1'	-5.95	1.44	1.53
1	N	655	A	C2'-C1'	-5.94	1.44	1.53
1	N	135	C	P-O5'	-5.94	1.50	1.59
1	N	1490	U	C1'-N1	5.94	1.57	1.48
1	N	861	G	O3'-P	-5.93	1.52	1.61
1	N	547	A	O4'-C1'	5.93	1.50	1.42
1	N	809	G	C1'-N9	5.93	1.56	1.48
1	N	133	U	C4'-O4'	-5.93	1.36	1.45
1	N	398	U	C5'-C4'	5.93	1.60	1.51
1	N	1299	A	N7-C5	-5.92	1.27	1.39
1	N	1501	C	C1'-N1	5.92	1.57	1.48
1	N	426	U	P-O5'	-5.92	1.50	1.59
1	N	771	G	C5'-C4'	5.92	1.60	1.51
1	N	885	G	O5'-C5'	5.92	1.51	1.42
1	N	1513	A	C2'-C1'	5.92	1.62	1.53
1	N	1519	A	C1'-N9	5.91	1.56	1.48
1	N	1425	U	C2'-C1'	-5.91	1.44	1.53
1	N	91	U	C5'-C4'	5.91	1.60	1.51
1	N	539	A	C6-N6	5.90	1.45	1.33
1	N	712	A	C4'-O4'	5.90	1.54	1.45
1	N	1362	A	O3'-P	-5.90	1.52	1.61
1	N	843	U	C1'-N1	5.89	1.57	1.48
1	N	360	G	C2'-C1'	-5.89	1.44	1.53
1	N	214	C	C5'-C4'	5.89	1.60	1.51
1	N	246	A	O4'-C1'	-5.89	1.33	1.42
1	N	520	A	C3'-O3'	5.89	1.50	1.42
1	N	1531	A	C4'-C3'	5.89	1.61	1.52
1	N	773	G	C4'-O4'	5.88	1.54	1.45
1	N	972	C	O5'-C5'	5.88	1.51	1.42
1	N	1444	U	C5'-C4'	5.88	1.60	1.51
1	N	738	C	C1'-N1	5.87	1.57	1.48
1	N	1084	G	C4'-C3'	5.87	1.61	1.52
1	N	675	A	C4'-O4'	5.86	1.54	1.45
1	N	682	G	C1'-N9	5.86	1.56	1.48
1	N	33	A	C2'-C1'	-5.86	1.44	1.53
1	N	897	C	O3'-P	-5.86	1.52	1.61
1	N	535	A	C1'-N9	5.86	1.56	1.48
1	N	1303	C	C4'-O4'	5.85	1.54	1.45
1	N	761	G	C5'-C4'	5.85	1.60	1.51
1	N	1015	G	C2'-C1'	-5.84	1.44	1.53
1	N	1132	C	C5'-C4'	5.84	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	936	C	C4'-C3'	-5.84	1.43	1.52
1	N	1025	U	C4'-C3'	-5.84	1.43	1.52
1	N	1532	U	C1'-N1	5.84	1.57	1.48
1	N	248	C	C1'-N1	5.84	1.57	1.48
1	N	1447	A	C3'-O3'	5.83	1.50	1.42
1	N	470	C	O3'-P	-5.83	1.52	1.61
1	N	1406	U	O4'-C1'	5.83	1.50	1.41
1	N	1149	C	C4'-O4'	-5.82	1.36	1.45
1	N	1163	A	C1'-N9	5.82	1.56	1.48
1	N	1511	G	O3'-P	-5.82	1.52	1.61
1	N	814	A	O3'-P	-5.82	1.52	1.61
1	N	339	C	C2'-C1'	-5.81	1.44	1.53
1	N	165	G	C4'-C3'	-5.81	1.43	1.52
1	N	1268	G	C2'-C1'	-5.81	1.44	1.53
1	N	1096	C	C3'-O3'	5.80	1.50	1.42
1	N	812	G	O3'-P	-5.80	1.52	1.61
1	N	229	U	C2'-C1'	-5.80	1.44	1.53
1	N	833	G	C2'-C1'	-5.79	1.44	1.53
1	N	51	A	C4'-C3'	-5.79	1.44	1.53
1	N	1239	A	C5'-C4'	5.79	1.60	1.51
1	N	181	A	C4'-C3'	5.78	1.61	1.52
1	N	971	G	C5'-C4'	5.78	1.59	1.51
1	N	1407	C	O3'-P	-5.78	1.52	1.61
1	N	464	U	O3'-P	-5.78	1.52	1.61
1	N	205	A	C4'-O4'	5.78	1.54	1.45
1	N	347	G	O4'-C1'	5.77	1.50	1.41
1	N	874	G	C2'-C1'	-5.77	1.44	1.53
1	N	1365	G	C4'-C3'	5.77	1.61	1.52
1	N	1043	G	C2-N3	5.77	1.44	1.32
1	N	1231	G	P-O5'	-5.76	1.51	1.59
1	N	1504	G	C6-N1	5.76	1.51	1.39
1	N	1078	U	P-O5'	-5.76	1.51	1.59
1	N	1409	C	C4'-O4'	5.76	1.54	1.45
1	N	15	G	C5'-C4'	5.75	1.59	1.51
1	N	711	G	O5'-C5'	5.75	1.51	1.42
1	N	1512	U	O5'-C5'	5.75	1.51	1.42
1	N	73	C	C1'-N1	5.74	1.57	1.48
1	N	973	G	C2'-C1'	-5.74	1.44	1.53
1	N	1358	U	C4'-C3'	5.74	1.61	1.52
1	N	409	U	O3'-P	-5.74	1.52	1.61
1	N	495	A	P-O5'	-5.74	1.51	1.59
1	N	1279	G	C3'-C2'	-5.73	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1122	U	C3'-O3'	5.73	1.50	1.42
1	N	258	G	C3'-C2'	-5.73	1.44	1.52
1	N	881	G	C4'-O4'	-5.72	1.36	1.45
1	N	1390	U	C4'-O4'	-5.72	1.36	1.45
1	N	1171	A	C3'-C2'	-5.71	1.44	1.52
1	N	590	U	C4'-C3'	5.71	1.61	1.52
1	N	1492	A	C5'-C4'	5.71	1.59	1.51
1	N	1006	G	C5'-C4'	5.71	1.59	1.51
1	N	153	C	C2'-C1'	-5.71	1.44	1.53
1	N	393	A	C4'-C3'	5.71	1.61	1.52
1	N	1332	A	O4'-C1'	5.71	1.50	1.41
1	N	1117	A	C4'-C3'	5.71	1.61	1.52
1	N	1236	A	O3'-P	-5.71	1.52	1.61
1	N	249	U	C3'-O3'	5.70	1.50	1.42
1	N	405	U	C4'-C3'	5.70	1.61	1.52
1	N	895	G	C1'-N9	5.70	1.56	1.48
1	N	215	C	C2'-C1'	-5.70	1.44	1.53
1	N	1206	G	C5'-C4'	5.70	1.59	1.51
1	N	1358	U	C1'-N1	5.70	1.56	1.48
1	N	422	C	O3'-P	-5.69	1.52	1.61
1	N	589	U	C2'-C1'	-5.69	1.44	1.53
1	N	701	U	C4'-C3'	5.69	1.61	1.52
1	N	195	A	O3'-P	-5.69	1.52	1.61
1	N	802	A	C1'-N9	5.68	1.56	1.48
1	N	883	C	C3'-O3'	5.68	1.50	1.42
1	N	329	A	O5'-C5'	5.67	1.51	1.42
1	N	1381	U	C1'-N1	5.67	1.56	1.48
1	N	140	U	O3'-P	-5.67	1.52	1.61
1	N	1097	C	C5'-C4'	5.67	1.59	1.51
1	N	953	G	P-O5'	-5.66	1.51	1.59
1	N	1269	A	C3'-O3'	5.66	1.50	1.42
1	N	148	G	C4'-C3'	5.66	1.61	1.52
1	N	926	G	O3'-P	-5.66	1.52	1.61
1	N	584	G	C3'-O3'	5.65	1.50	1.42
1	N	486	U	C1'-N1	5.65	1.56	1.48
1	N	516	U	C5'-C4'	5.65	1.59	1.51
1	N	286	C	C2'-C1'	5.65	1.61	1.53
1	N	958	A	C1'-N9	-5.65	1.39	1.48
1	N	126	G	C5'-C4'	5.65	1.59	1.51
1	N	905	U	C5'-C4'	5.65	1.59	1.51
1	N	1096	C	O5'-C5'	5.65	1.50	1.42
1	N	558	G	N1-C2	5.64	1.49	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1334	G	O3'-P	-5.64	1.52	1.61
1	N	540	G	O3'-P	-5.64	1.52	1.61
1	N	900	A	C1'-N9	5.64	1.56	1.48
1	N	75	G	O4'-C1'	5.64	1.50	1.41
1	N	1122	U	C5'-C4'	5.64	1.59	1.51
1	N	1168	U	C1'-N1	5.63	1.56	1.48
1	N	529	G	O3'-P	-5.63	1.52	1.61
1	N	892	A	C2'-C1'	-5.63	1.45	1.53
1	N	1116	U	C5'-C4'	5.63	1.59	1.51
1	N	597	G	O4'-C1'	5.63	1.50	1.41
1	N	1339	A	P-O5'	-5.63	1.51	1.59
1	N	421	U	C5'-C4'	5.62	1.59	1.51
1	N	1501	C	O3'-P	-5.62	1.52	1.61
1	N	191	G	C2-N3	5.62	1.44	1.32
1	N	1002	G	C5'-C4'	5.61	1.59	1.51
1	N	1085	U	C3'-C2'	5.61	1.61	1.52
1	N	1102	A	C4'-C3'	5.61	1.60	1.52
1	N	1188	A	O3'-P	-5.60	1.52	1.61
1	N	1375	A	O3'-P	-5.60	1.52	1.61
1	N	1037	C	C2'-C1'	-5.59	1.45	1.53
1	N	1201	A	C2'-C1'	-5.59	1.44	1.53
1	N	869	G	P-O5'	-5.59	1.51	1.59
1	N	496	A	C5'-C4'	5.58	1.59	1.51
1	N	872	A	O5'-C5'	5.58	1.51	1.42
1	N	985	C	P-O5'	-5.58	1.51	1.59
1	N	1184	G	C2'-C1'	-5.58	1.45	1.53
1	N	616	G	P-O5'	-5.58	1.51	1.59
1	N	459	A	C2'-C1'	-5.58	1.45	1.53
1	N	216	U	O3'-P	-5.58	1.52	1.61
1	N	1282	C	C1'-N1	5.58	1.56	1.48
1	N	797	C	P-O5'	5.57	1.68	1.59
1	N	129	A	C4'-O4'	-5.57	1.37	1.45
1	N	439	U	O4'-C1'	5.57	1.50	1.41
1	N	449	G	C3'-C2'	5.57	1.61	1.52
1	N	545	C	C2'-C1'	-5.57	1.45	1.53
1	N	603	U	C1'-N1	5.57	1.56	1.48
1	N	1305	G	C5'-C4'	5.57	1.59	1.51
1	N	89	U	C1'-N1	5.57	1.55	1.47
1	N	1173	U	C4'-C3'	5.57	1.60	1.52
1	N	347	G	C2'-C1'	-5.56	1.45	1.53
1	N	988	G	C2'-C1'	-5.56	1.45	1.53
1	N	264	C	P-O5'	-5.56	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1215	G	C2'-C1'	-5.56	1.45	1.53
1	N	1348	U	C4-C5	5.56	1.54	1.43
1	N	633	G	C1'-N9	5.55	1.56	1.48
1	N	355	C	P-O5'	-5.55	1.51	1.59
1	N	928	G	O5'-C5'	5.55	1.50	1.42
1	N	1497	G	C4'-O4'	5.55	1.53	1.45
1	N	220	G	C4'-O4'	5.55	1.53	1.45
1	N	275	G	C1'-N9	5.54	1.56	1.48
1	N	547	A	C3'-C2'	5.54	1.61	1.52
1	N	1439	G	O4'-C1'	-5.54	1.33	1.41
1	N	407	U	C2'-C1'	-5.54	1.45	1.53
1	N	157	U	C1'-N1	5.53	1.56	1.48
1	N	986	U	C5'-C4'	5.53	1.59	1.51
1	N	943	U	C1'-N1	5.53	1.56	1.48
1	N	575	G	C1'-N9	5.53	1.55	1.47
1	N	11	G	C5'-C4'	5.52	1.59	1.51
1	N	652	U	C4'-C3'	5.52	1.60	1.52
1	N	142	G	C2'-O2'	-5.52	1.34	1.42
1	N	919	A	C3'-O3'	5.52	1.50	1.42
1	N	1284	C	C2'-C1'	-5.52	1.45	1.53
1	N	146	G	C4'-O4'	5.51	1.53	1.45
1	N	987	G	C1'-N9	5.51	1.56	1.48
1	N	1337	G	P-O5'	-5.51	1.51	1.59
1	N	265	G	C4'-C3'	-5.51	1.44	1.52
1	N	992	U	C1'-N1	5.51	1.55	1.47
1	N	790	A	C1'-N9	5.50	1.56	1.48
1	N	1337	G	C3'-C2'	5.50	1.61	1.52
1	N	96	U	C4'-O4'	-5.50	1.37	1.45
1	N	151	A	C5'-C4'	5.49	1.59	1.51
1	N	1211	U	C5'-C4'	5.49	1.59	1.51
1	N	1375	A	O4'-C1'	5.49	1.49	1.41
1	N	159	G	C4'-C3'	5.49	1.60	1.52
1	N	619	U	N1-C2	5.49	1.49	1.38
1	N	774	G	C2'-C1'	-5.49	1.45	1.53
1	N	920	U	C2'-C1'	-5.49	1.45	1.53
1	N	1044	A	O3'-P	-5.49	1.52	1.61
1	N	1296	C	C4'-O4'	-5.49	1.37	1.45
1	N	679	C	C3'-O3'	5.49	1.50	1.42
1	N	1031	C	C3'-C2'	5.49	1.60	1.52
1	N	3	A	C2'-C1'	-5.48	1.45	1.53
1	N	1028	C	C1'-N1	5.48	1.56	1.48
1	N	317	U	C1'-N1	5.47	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	380	G	C2'-C1'	-5.47	1.45	1.53
1	N	753	A	C4'-C3'	5.47	1.61	1.53
1	N	1202	U	C5'-C4'	5.47	1.59	1.51
1	N	165	G	C5'-C4'	5.47	1.59	1.51
1	N	954	G	O5'-C5'	5.46	1.50	1.42
1	N	1264	U	P-O5'	-5.46	1.51	1.59
1	N	1394	A	C5'-C4'	5.46	1.59	1.51
1	N	1301	U	C5'-C4'	5.46	1.59	1.51
1	N	470	C	C4'-C3'	5.46	1.60	1.52
1	N	513	C	C5'-C4'	5.46	1.59	1.51
1	N	515	G	C3'-C2'	-5.45	1.44	1.52
1	N	1390	U	C1'-N1	5.44	1.56	1.48
1	N	867	G	O3'-P	-5.44	1.52	1.61
1	N	1505	G	C3'-O3'	5.44	1.50	1.42
1	N	965	U	C1'-N1	5.44	1.55	1.47
1	N	582	C	O5'-C5'	-5.44	1.34	1.42
1	N	402	G	O3'-P	-5.43	1.52	1.61
1	N	693	G	C4'-O4'	5.43	1.53	1.45
1	N	789	U	C3'-O3'	5.43	1.50	1.42
1	N	97	G	C2'-C1'	-5.43	1.45	1.53
1	N	379	C	C1'-N1	5.43	1.56	1.48
1	N	1014	A	C3'-O3'	5.43	1.50	1.42
1	N	59	A	O4'-C1'	-5.43	1.33	1.41
1	N	200	G	C2'-C1'	-5.43	1.45	1.53
1	N	755	G	C4'-O4'	5.43	1.53	1.45
1	N	1071	C	C1'-N1	5.43	1.56	1.48
1	N	737	C	C1'-N1	5.43	1.56	1.48
1	N	1132	C	C3'-O3'	5.42	1.50	1.42
1	N	1408	A	C3'-C2'	-5.42	1.44	1.52
1	N	124	C	O4'-C1'	5.42	1.49	1.41
1	N	452	A	C5'-C4'	5.41	1.59	1.51
1	N	747	A	C3'-C2'	5.41	1.60	1.52
1	N	1524	C	C4'-C3'	5.41	1.60	1.52
1	N	637	C	C5'-C4'	5.41	1.59	1.51
1	N	1470	U	C5'-C4'	5.40	1.59	1.51
1	N	254	G	C2'-C1'	-5.40	1.45	1.53
1	N	378	G	C2'-C1'	-5.40	1.45	1.53
1	N	297	G	C1'-N9	5.39	1.56	1.48
1	N	788	U	O5'-C5'	5.39	1.50	1.42
1	N	1221	G	C2'-C1'	-5.39	1.45	1.53
1	N	451	A	O3'-P	-5.39	1.53	1.61
1	N	794	A	C2'-C1'	-5.39	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1066	C	C1'-N1	5.39	1.56	1.48
1	N	1128	C	C1'-N1	5.39	1.56	1.48
1	N	923	A	C1'-N9	5.39	1.56	1.48
1	N	1170	A	C2-N3	5.39	1.44	1.33
1	N	1354	U	C5'-C4'	5.39	1.59	1.51
1	N	872	A	C2'-C1'	-5.39	1.45	1.53
1	N	1121	U	C4'-C3'	5.38	1.60	1.52
1	N	1474	U	C2'-C1'	-5.38	1.45	1.53
1	N	1200	C	C1'-N1	5.38	1.56	1.48
1	N	1088	G	O3'-P	-5.38	1.53	1.61
1	N	1168	U	O5'-C5'	5.38	1.50	1.42
1	N	213	G	C5'-C4'	5.38	1.59	1.51
1	N	437	U	C5'-C4'	5.38	1.59	1.51
1	N	1060	U	C4'-C3'	-5.38	1.44	1.52
1	N	1350	A	O5'-C5'	5.37	1.50	1.42
1	N	694	A	O4'-C1'	5.37	1.49	1.41
1	N	393	A	C5'-C4'	5.37	1.59	1.51
1	N	621	A	C4'-C3'	5.37	1.60	1.52
1	N	1164	G	C3'-O3'	5.37	1.50	1.42
1	N	1151	A	C3'-C2'	5.36	1.60	1.52
1	N	1172	C	C4'-O4'	-5.36	1.37	1.45
1	N	482	A	C4'-O4'	5.36	1.53	1.45
1	N	429	U	C3'-C2'	-5.35	1.45	1.52
1	N	443	C	O3'-P	5.35	1.69	1.61
1	N	1316	G	C5'-C4'	5.35	1.59	1.51
1	N	989	U	C5'-C4'	5.35	1.59	1.51
1	N	1166	G	C4'-C3'	5.35	1.60	1.52
1	N	32	A	C2'-C1'	-5.35	1.45	1.53
1	N	758	C	C4'-C3'	5.34	1.60	1.52
1	N	847	G	C1'-N9	5.34	1.55	1.48
1	N	779	C	C4'-C3'	5.34	1.60	1.52
1	N	1155	A	C2'-C1'	-5.34	1.45	1.53
1	N	1246	A	O3'-P	-5.34	1.53	1.61
1	N	1198	G	C4'-O4'	-5.33	1.37	1.45
1	N	460	A	C3'-C2'	-5.33	1.44	1.52
1	N	838	G	C5'-C4'	5.33	1.59	1.51
1	N	995	C	C1'-N1	5.33	1.56	1.48
1	N	85	U	C4'-C3'	5.33	1.61	1.53
1	N	512	U	C2'-C1'	-5.33	1.45	1.53
1	N	164	G	C3'-O3'	5.33	1.50	1.42
1	N	725	G	C4'-C3'	5.33	1.60	1.52
1	N	1043	G	C2'-C1'	5.32	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1094	G	C3'-C2'	5.32	1.60	1.52
1	N	1383	C	C1'-N1	5.32	1.56	1.48
1	N	1133	G	O3'-P	-5.32	1.53	1.61
1	N	726	C	P-O5'	-5.32	1.51	1.59
1	N	1045	C	O5'-C5'	5.32	1.50	1.42
1	N	1242	G	C2'-C1'	-5.32	1.45	1.53
1	N	1473	G	C1'-N9	5.32	1.55	1.48
1	N	158	G	P-O5'	-5.31	1.51	1.59
1	N	562	U	C5'-C4'	5.31	1.59	1.51
1	N	1484	C	C3'-C2'	5.31	1.60	1.52
1	N	1293	C	O5'-C5'	5.30	1.50	1.42
1	N	482	A	C2'-C1'	-5.30	1.45	1.53
1	N	828	U	C1'-N1	5.30	1.56	1.48
1	N	896	C	C1'-N1	5.30	1.56	1.48
1	N	22	G	C2'-O2'	-5.30	1.34	1.42
1	N	980	C	C3'-O3'	5.30	1.50	1.42
1	N	1032	G	P-O5'	-5.30	1.51	1.59
1	N	436	C	C2'-C1'	-5.30	1.45	1.53
1	N	884	U	C2'-C1'	-5.29	1.45	1.53
1	N	1140	C	C4'-C3'	5.29	1.61	1.53
1	N	680	C	C1'-N1	5.29	1.56	1.48
1	N	698	G	P-O5'	-5.29	1.51	1.59
1	N	767	A	C2'-C1'	-5.29	1.45	1.53
1	N	954	G	C1'-N9	5.29	1.55	1.48
1	N	1401	G	O3'-P	-5.29	1.53	1.61
1	N	1036	A	C4'-C3'	5.28	1.60	1.52
1	N	497	G	N3-C4	5.28	1.46	1.35
1	N	1193	G	C4'-O4'	-5.28	1.37	1.45
1	N	482	A	O3'-P	-5.27	1.53	1.61
1	N	1259	C	C4'-C3'	5.27	1.60	1.52
1	N	205	A	O4'-C1'	5.27	1.49	1.41
1	N	296	U	P-O5'	-5.26	1.51	1.59
1	N	74	A	C1'-N9	5.26	1.55	1.48
1	N	389	A	C1'-N9	5.26	1.55	1.48
1	N	1053	G	C3'-C2'	5.26	1.60	1.52
1	N	1379	G	C2-N3	5.26	1.43	1.32
1	N	709	U	N3-C4	5.25	1.49	1.38
1	N	104	G	C2-N3	5.25	1.43	1.32
1	N	1189	U	C4'-O4'	-5.25	1.37	1.45
1	N	156	C	O3'-P	-5.24	1.53	1.61
1	N	824	G	O3'-P	-5.24	1.53	1.61
1	N	91	U	C1'-N1	5.24	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1295	U	C2'-C1'	-5.24	1.45	1.53
1	N	372	C	C3'-C2'	5.24	1.60	1.52
1	N	682	G	C2'-C1'	-5.24	1.45	1.53
1	N	770	C	C2'-C1'	-5.24	1.45	1.53
1	N	1085	U	C1'-N1	5.24	1.56	1.48
1	N	1321	U	C4'-C3'	5.23	1.60	1.52
1	N	114	U	O4'-C1'	5.23	1.49	1.41
1	N	956	U	C3'-O3'	5.23	1.50	1.42
1	N	32	A	C3'-C2'	5.23	1.60	1.52
1	N	629	A	C3'-C2'	5.23	1.60	1.52
1	N	741	G	C5'-C4'	-5.23	1.43	1.51
1	N	1316	G	O3'-P	-5.23	1.53	1.61
1	N	762	U	C4'-C3'	5.22	1.60	1.52
1	N	341	C	C1'-N1	5.22	1.56	1.48
1	N	966	G	N9-C4	5.22	1.48	1.38
1	N	1143	G	C4'-C3'	5.22	1.60	1.52
1	N	557	G	N3-C4	-5.21	1.25	1.35
1	N	987	G	O4'-C1'	5.21	1.49	1.41
1	N	1030	U	O5'-C5'	5.21	1.50	1.42
1	N	1266	G	O5'-C5'	5.21	1.50	1.42
1	N	1273	C	O5'-C5'	5.21	1.50	1.42
1	N	1279	G	C2'-C1'	5.21	1.60	1.53
1	N	1461	G	C2'-O2'	-5.21	1.34	1.42
1	N	1099	G	C2'-O2'	-5.21	1.34	1.42
1	N	1154	G	C2-N2	5.21	1.45	1.34
1	N	1429	A	C4'-O4'	-5.20	1.37	1.45
1	N	354	G	O5'-C5'	5.20	1.50	1.42
1	N	1064	G	C4'-C3'	5.20	1.60	1.53
1	N	1372	U	C3'-C2'	-5.20	1.45	1.52
1	N	557	G	O3'-P	-5.20	1.53	1.61
1	N	221	C	C1'-N1	5.20	1.56	1.48
1	N	576	C	O5'-C5'	5.20	1.50	1.42
1	N	81	A	C6-N6	5.19	1.44	1.33
1	N	987	G	P-O5'	-5.19	1.51	1.59
1	N	1327	C	C1'-N1	5.19	1.56	1.48
1	N	858	G	C3'-C2'	-5.19	1.45	1.52
1	N	1227	A	O3'-P	-5.19	1.53	1.61
1	N	1236	A	P-O5'	-5.19	1.51	1.59
1	N	59	A	C1'-N9	5.19	1.55	1.48
1	N	431	A	C1'-N9	5.19	1.55	1.48
1	N	1437	A	C4'-O4'	5.19	1.53	1.45
1	N	580	C	C5'-C4'	5.18	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1315	U	C3'-C2'	5.17	1.60	1.52
1	N	187	G	C6-N1	5.17	1.49	1.39
1	N	1379	G	C2'-C1'	-5.17	1.45	1.53
1	N	907	A	N9-C8	-5.17	1.27	1.37
1	N	1245	C	C1'-N1	5.17	1.56	1.48
1	N	1323	G	C2'-C1'	-5.17	1.45	1.53
1	N	224	U	C1'-N1	5.16	1.56	1.48
1	N	511	C	C1'-N1	5.16	1.55	1.47
1	N	1453	G	N1-C2	5.16	1.48	1.37
1	N	278	G	C6-N1	5.16	1.49	1.39
1	N	862	C	P-O5'	-5.16	1.52	1.59
1	N	1101	A	O4'-C1'	5.16	1.49	1.42
1	N	1239	A	O3'-P	-5.16	1.53	1.61
1	N	332	G	C6-N1	5.16	1.49	1.39
1	N	25	C	C4'-C3'	5.16	1.60	1.52
1	N	1029	U	C4'-C3'	5.16	1.60	1.52
1	N	1227	A	C2'-C1'	-5.16	1.45	1.53
1	N	1521	C	O3'-P	-5.15	1.53	1.61
1	N	714	G	O4'-C1'	-5.15	1.33	1.41
1	N	1306	A	C4'-O4'	5.15	1.53	1.45
1	N	290	C	O5'-C5'	5.15	1.50	1.42
1	N	409	U	C5'-C4'	5.15	1.58	1.51
1	N	477	C	O3'-P	-5.15	1.53	1.61
1	N	423	G	N9-C4	5.14	1.48	1.38
1	N	1295	U	C3'-C2'	5.14	1.60	1.52
1	N	308	C	C4'-C3'	5.14	1.60	1.52
1	N	736	C	C2'-C1'	-5.14	1.45	1.53
1	N	1406	U	C4'-C3'	5.13	1.60	1.52
1	N	93	U	C4'-C3'	5.13	1.60	1.52
1	N	388	G	O3'-P	-5.13	1.53	1.61
1	N	560	A	C1'-N9	5.13	1.55	1.48
1	N	141	G	O3'-P	-5.13	1.53	1.61
1	N	859	G	P-O5'	-5.13	1.52	1.59
1	N	1214	C	C1'-N1	5.13	1.55	1.47
1	N	1522	U	C5'-C4'	5.13	1.58	1.51
1	N	1231	G	O5'-C5'	5.12	1.50	1.42
1	N	1258	G	C2'-C1'	-5.12	1.45	1.53
1	N	115	G	C4'-C3'	5.12	1.60	1.53
1	N	561	U	C5'-C4'	5.12	1.59	1.51
1	N	828	U	C4'-C3'	5.12	1.60	1.52
1	N	840	C	C2'-C1'	-5.12	1.45	1.53
1	N	1142	G	C3'-O3'	5.12	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1468	A	C5'-C4'	5.12	1.58	1.51
1	N	1169	A	C3'-O3'	5.11	1.49	1.42
1	N	1246	A	P-O5'	-5.11	1.52	1.59
1	N	36	C	O4'-C1'	5.11	1.49	1.41
1	N	1445	U	C4'-C3'	-5.11	1.44	1.52
1	N	1024	G	C5'-C4'	5.11	1.58	1.51
1	N	938	A	O3'-P	-5.11	1.53	1.61
1	N	1077	G	O5'-C5'	5.11	1.50	1.42
1	N	433	G	C1'-N9	5.10	1.55	1.48
1	N	1076	U	O3'-P	-5.10	1.53	1.61
1	N	647	C	O3'-P	5.10	1.68	1.61
1	N	1426	G	C2'-C1'	-5.10	1.45	1.53
1	N	793	U	C3'-C2'	5.09	1.60	1.52
1	N	1306	A	C1'-N9	-5.09	1.40	1.48
1	N	1337	G	O3'-P	-5.09	1.53	1.61
1	N	107	G	N1-C2	5.09	1.48	1.37
1	N	754	C	C5'-C4'	5.09	1.58	1.51
1	N	1139	G	C4'-O4'	-5.09	1.38	1.45
1	N	1262	C	O5'-C5'	5.09	1.50	1.42
1	N	1439	G	C4'-C3'	5.09	1.60	1.52
1	N	1356	G	P-O5'	5.09	1.67	1.59
1	N	808	C	C5'-C4'	5.08	1.58	1.51
1	N	1485	U	C3'-O3'	5.08	1.49	1.42
1	N	574	A	C4'-O4'	5.08	1.53	1.45
1	N	746	A	C2'-C1'	-5.08	1.45	1.53
1	N	1474	U	O4'-C1'	5.08	1.49	1.41
1	N	253	A	C3'-C2'	-5.08	1.45	1.52
1	N	963	G	C5'-C4'	5.08	1.58	1.51
1	N	1127	G	P-O5'	-5.08	1.52	1.59
1	N	145	G	C1'-N9	-5.08	1.40	1.48
1	N	885	G	O3'-P	-5.08	1.53	1.61
1	N	900	A	C5'-C4'	5.08	1.58	1.51
1	N	103	U	C1'-N1	5.07	1.56	1.48
1	N	1326	U	C5'-C4'	5.07	1.58	1.51
1	N	5	U	C1'-N1	5.07	1.55	1.47
1	N	448	A	P-O5'	5.07	1.67	1.59
1	N	646	G	C5'-C4'	5.07	1.58	1.51
1	N	1481	U	C1'-N1	5.07	1.56	1.48
1	N	1123	U	C2'-C1'	-5.07	1.45	1.53
1	N	369	G	C3'-O3'	5.06	1.49	1.42
1	N	787	A	N7-C5	-5.06	1.29	1.39
1	N	731	G	C5-C6	-5.06	1.32	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	905	U	C1'-N1	5.06	1.56	1.48
1	N	276	G	C5'-C4'	5.06	1.58	1.51
1	N	437	U	C4'-C3'	5.05	1.60	1.52
1	N	1036	A	C2'-C1'	-5.05	1.45	1.53
1	N	1131	G	C5'-C4'	5.05	1.58	1.51
1	N	1180	A	O4'-C1'	-5.05	1.34	1.41
1	N	328	C	C3'-C2'	5.05	1.60	1.52
1	N	1049	U	O3'-P	-5.05	1.53	1.61
1	N	729	A	C2'-C1'	-5.05	1.45	1.53
1	N	1530	G	C5'-C4'	5.04	1.58	1.51
1	N	168	G	C4'-C3'	5.04	1.60	1.52
1	N	249	U	N1-C6	5.04	1.48	1.38
1	N	1115	U	P-O5'	-5.04	1.52	1.59
1	N	171	A	C5'-C4'	5.04	1.58	1.51
1	N	1056	U	C5'-C4'	5.04	1.58	1.51
1	N	1245	C	C5'-C4'	5.04	1.58	1.51
1	N	1343	G	O5'-C5'	5.04	1.50	1.42
1	N	160	A	O3'-P	-5.04	1.53	1.61
1	N	1427	C	C4'-C3'	5.04	1.60	1.52
1	N	479	U	C4'-O4'	-5.03	1.38	1.45
1	N	390	U	C2-N3	5.03	1.47	1.37
1	N	1106	G	C4'-C3'	5.03	1.60	1.52
1	N	585	G	C2'-C1'	-5.03	1.45	1.53
1	N	227	G	N1-C2	5.03	1.47	1.37
1	N	329	A	C1'-N9	5.03	1.54	1.47
1	N	1451	U	C4-C5	5.03	1.53	1.43
1	N	1391	U	C1'-N1	5.03	1.55	1.48
1	N	791	G	C5'-C4'	5.02	1.58	1.51
1	N	287	U	C4'-C3'	5.02	1.60	1.52
1	N	1257	A	O4'-C1'	5.02	1.49	1.41
1	N	1065	U	C4'-O4'	-5.02	1.38	1.45
1	N	1091	U	C1'-N1	5.02	1.55	1.48
1	N	314	C	C3'-C2'	5.02	1.60	1.52
1	N	1534	A	C1'-N9	5.02	1.54	1.47
1	N	197	A	C3'-O3'	5.02	1.50	1.43
1	N	191	G	O3'-P	-5.02	1.53	1.61
1	N	183	C	C2'-O2'	-5.01	1.34	1.42
1	N	211	G	C5'-C4'	5.01	1.58	1.51
1	N	316	C	C3'-C2'	5.01	1.60	1.52
1	N	1219	A	O3'-P	-5.01	1.53	1.61
1	N	541	G	C3'-O3'	5.01	1.49	1.42
1	N	917	G	O4'-C1'	-5.01	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1230	C	C4'-C3'	5.01	1.60	1.52
1	N	464	U	P-O5'	-5.00	1.52	1.59

All (1930) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	438	U	P-O3'-C3'	22.22	153.54	120.20
1	N	94	G	P-O3'-C3'	18.14	147.41	120.20
1	N	547	A	P-O3'-C3'	17.31	146.17	120.20
1	N	555	U	P-O3'-C3'	17.31	146.16	120.20
1	N	789	U	P-O5'-C5'	16.94	146.30	120.90
1	N	1088	G	P-O5'-C5'	16.75	146.03	120.90
1	N	47	C	P-O3'-C3'	16.70	145.24	120.20
1	N	172	A	P-O3'-C3'	16.38	144.77	120.20
1	N	484	G	P-O3'-C3'	16.22	144.53	120.20
1	N	51	A	P-O3'-C3'	16.13	144.40	120.20
1	N	1362	A	P-O3'-C3'	15.75	143.83	120.20
1	N	776	G	P-O5'-C5'	15.34	143.91	120.90
1	N	991	U	P-O3'-C3'	15.00	142.71	120.20
1	N	266	G	P-O3'-C3'	14.90	142.56	120.20
1	N	119	A	P-O3'-C3'	14.52	141.97	120.20
1	N	1101	A	P-O3'-C3'	14.39	141.79	120.20
1	N	1530	G	P-O3'-C3'	14.07	141.30	120.20
1	N	210	C	P-O3'-C3'	13.66	140.69	120.20
1	N	1035	A	P-O5'-C5'	13.55	141.23	120.90
1	N	264	C	P-O5'-C5'	13.48	141.12	120.90
1	N	1201	A	P-O3'-C3'	13.39	140.28	120.20
1	N	425	G	P-O5'-C5'	13.22	140.73	120.90
1	N	607	A	P-O5'-C5'	13.08	140.52	120.90
1	N	913	A	P-O3'-C3'	13.07	139.81	120.20
1	N	1250	A	P-O5'-C5'	12.98	140.37	120.90
1	N	451	A	P-O3'-C3'	12.93	139.60	120.20
1	N	1529	G	P-O3'-C3'	12.62	139.12	120.20
1	N	1242	G	P-O5'-C5'	12.61	139.81	120.90
1	N	1241	G	P-O5'-C5'	12.53	139.70	120.90
1	N	351	G	P-O3'-C3'	12.12	138.39	120.20
1	N	982	U	P-O3'-C3'	12.11	138.36	120.20
1	N	1531	A	P-O5'-C5'	12.09	139.03	120.90
1	N	1399	C	P-O3'-C3'	12.03	138.24	120.20
1	N	181	A	P-O3'-C3'	12.00	138.20	120.20
1	N	582	C	P-O5'-C5'	11.89	138.73	120.90
1	N	817	C	P-O3'-C3'	11.88	138.02	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1432	G	P-O3'-C3'	11.76	137.84	120.20
1	N	115	G	P-O3'-C3'	11.69	137.73	120.20
1	N	511	C	P-O3'-C3'	11.66	137.69	120.20
1	N	316	C	C5'-C4'-C3'	-11.63	98.55	116.00
1	N	1144	G	P-O3'-C3'	11.61	137.61	120.20
1	N	1319	A	P-O3'-C3'	11.49	137.44	120.20
1	N	557	G	P-O5'-C5'	11.43	138.04	120.90
1	N	1504	G	P-O3'-C3'	11.40	137.31	120.20
1	N	243	A	P-O3'-C3'	11.24	137.05	120.20
1	N	93	U	P-O5'-C5'	11.18	137.67	120.90
1	N	1042	A	P-O5'-C5'	11.07	137.51	120.90
1	N	305	G	C2'-C3'-O3'	11.04	126.06	109.50
1	N	1040	U	P-O5'-C5'	11.01	137.41	120.90
1	N	982	U	C2'-C3'-O3'	10.97	125.95	109.50
1	N	538	G	P-O5'-C5'	10.96	137.34	120.90
1	N	812	G	P-O3'-C3'	10.90	136.55	120.20
1	N	416	G	P-O5'-C5'	10.89	137.24	120.90
1	N	425	G	P-O3'-C3'	-10.87	103.90	120.20
1	N	566	G	P-O3'-C3'	10.86	136.49	120.20
1	N	53	A	P-O5'-C5'	10.69	136.94	120.90
1	N	1336	C	P-O3'-C3'	10.64	136.16	120.20
1	N	212	G	P-O5'-C5'	10.57	136.76	120.90
1	N	1278	G	P-O3'-C3'	10.57	136.06	120.20
1	N	327	A	P-O3'-C3'	10.56	136.04	120.20
1	N	605	U	P-O3'-C3'	10.55	136.03	120.20
1	N	633	G	P-O5'-C5'	10.55	136.72	120.90
1	N	202	G	P-O3'-C3'	10.50	135.95	120.20
1	N	1277	C	P-O3'-C3'	-10.47	104.49	120.20
1	N	788	U	P-O5'-C5'	10.45	136.58	120.90
1	N	1086	U	O5'-C5'-C4'	10.44	127.16	111.50
1	N	184	G	P-O5'-C5'	10.43	136.54	120.90
1	N	934	C	P-O3'-C3'	10.40	135.81	120.20
1	N	70	U	P-O3'-C3'	10.30	135.66	120.20
1	N	499	A	P-O3'-C3'	10.29	135.64	120.20
1	N	511	C	C2'-C3'-O3'	10.28	124.92	109.50
1	N	1195	C	P-O3'-C3'	10.28	135.62	120.20
1	N	179	A	P-O5'-C5'	10.27	136.31	120.90
1	N	575	G	P-O3'-C3'	10.22	135.53	120.20
1	N	1313	U	P-O5'-C5'	10.20	136.20	120.90
1	N	251	G	C4'-C3'-C2'	-10.16	92.44	102.60
1	N	407	U	P-O5'-C5'	10.16	136.14	120.90
1	N	273	U	O3'-P-O5'	-10.13	88.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	270	A	P-O5'-C5'	10.12	136.09	120.90
1	N	140	U	P-O3'-C3'	10.12	135.38	120.20
1	N	686	U	P-O3'-C3'	10.10	135.35	120.20
1	N	598	U	P-O5'-C5'	10.10	136.04	120.90
1	N	509	A	P-O3'-C3'	10.09	135.33	120.20
1	N	120	A	P-O3'-C3'	10.05	135.27	120.20
1	N	802	A	P-O3'-C3'	10.03	135.24	120.20
1	N	1093	A	P-O5'-C5'	10.02	135.94	120.90
1	N	799	G	C4'-C3'-C2'	-10.02	92.58	102.60
1	N	1285	A	P-O3'-C3'	10.01	135.21	120.20
1	N	1374	A	O4'-C4'-C3'	-10.00	94.00	104.00
1	N	866	C	P-O5'-C5'	9.98	135.88	120.90
1	N	1021	A	P-O5'-C5'	9.94	135.81	120.90
1	N	1007	U	P-O3'-C3'	9.90	135.05	120.20
1	N	1389	C	P-O5'-C5'	-9.89	106.06	120.90
1	N	1168	U	P-O3'-C3'	9.82	134.93	120.20
1	N	921	U	P-O3'-C3'	9.78	134.88	120.20
1	N	1208	C	P-O5'-C5'	9.78	135.56	120.90
1	N	1173	U	P-O5'-C5'	9.70	135.46	120.90
1	N	344	A	P-O3'-C3'	9.68	134.72	120.20
1	N	924	C	O4'-C1'-C2'	-9.68	97.92	107.60
1	N	120	A	O4'-C1'-C2'	-9.67	97.93	107.60
1	N	90	C	C5'-C4'-C3'	9.64	129.66	115.20
1	N	586	C	O4'-C1'-N1	9.62	122.93	108.50
1	N	451	A	C1'-O4'-C4'	-9.60	100.10	109.70
1	N	904	U	O4'-C1'-C2'	-9.57	98.03	107.60
1	N	566	G	C2'-C3'-O3'	9.50	123.75	109.50
1	N	788	U	C5'-C4'-C3'	-9.48	101.78	116.00
1	N	495	A	P-O3'-C3'	9.47	134.41	120.20
1	N	1139	G	P-O3'-C3'	9.47	134.41	120.20
1	N	883	C	P-O5'-C5'	9.46	135.08	120.90
1	N	723	U	C4'-C3'-C2'	-9.44	93.16	102.60
1	N	130	A	O4'-C4'-C3'	-9.41	96.69	106.10
1	N	531	U	P-O5'-C5'	9.41	135.01	120.90
1	N	265	G	P-O3'-C3'	9.40	134.29	120.20
1	N	808	C	O4'-C1'-N1	9.36	122.55	108.50
1	N	1145	A	O3'-P-O5'	-9.33	90.01	104.00
1	N	805	C	P-O5'-C5'	9.31	134.87	120.90
1	N	274	A	C2'-C3'-O3'	9.30	123.45	109.50
1	N	256	U	P-O5'-C5'	9.30	134.85	120.90
1	N	1003	G	C4'-C3'-O3'	-9.28	99.08	113.00
1	N	1218	C	C4'-C3'-C2'	-9.27	93.33	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1274	A	P-O5'-C5'	9.27	134.80	120.90
1	N	212	G	P-O3'-C3'	9.24	134.06	120.20
1	N	559	A	C4'-C3'-C2'	9.19	111.79	102.60
1	N	1507	A	P-O5'-C5'	9.18	134.67	120.90
1	N	10	A	P-O5'-C5'	9.16	134.63	120.90
1	N	468	A	P-O3'-C3'	9.13	133.90	120.20
1	N	281	G	P-O3'-C3'	9.12	133.88	120.20
1	N	1472	U	C4'-C3'-C2'	-9.12	93.48	102.60
1	N	616	G	C4'-C3'-C2'	-9.12	93.48	102.60
1	N	890	G	P-O5'-C5'	9.09	134.53	120.90
1	N	1243	C	P-O5'-C5'	9.08	134.51	120.90
1	N	50	A	P-O5'-C5'	9.06	134.49	120.90
1	N	814	A	P-O3'-C3'	9.01	133.72	120.20
1	N	800	G	P-O5'-C5'	9.00	134.40	120.90
1	N	994	A	P-O5'-C5'	8.99	134.38	120.90
1	N	857	C	O4'-C1'-C2'	-8.95	98.65	107.60
1	N	1239	A	C2'-C3'-O3'	8.92	122.88	109.50
1	N	686	U	O4'-C1'-C2'	-8.91	96.89	105.80
1	N	67	C	C4'-C3'-O3'	-8.90	99.64	113.00
1	N	532	A	P-O3'-C3'	8.90	133.55	120.20
1	N	686	U	C2'-C3'-O3'	8.89	122.83	109.50
1	N	822	U	P-O5'-C5'	8.88	134.21	120.90
1	N	1323	G	O4'-C4'-C3'	-8.87	95.13	104.00
1	N	832	G	C5'-C4'-C3'	-8.86	102.71	116.00
1	N	232	G	P-O3'-C3'	8.85	133.48	120.20
1	N	481	G	O4'-C4'-C3'	-8.84	97.26	106.10
1	N	873	A	O5'-C5'-C4'	8.83	124.95	111.70
1	N	81	A	N9-C1'-C2'	8.83	127.24	114.00
1	N	641	U	P-O3'-C3'	8.83	133.44	120.20
1	N	199	A	C1'-O4'-C4'	8.82	118.72	109.90
1	N	757	U	O5'-C5'-C4'	-8.82	98.27	111.50
1	N	896	C	P-O5'-C5'	8.81	134.12	120.90
1	N	314	C	C4'-C3'-C2'	-8.80	93.80	102.60
1	N	254	G	P-O5'-C5'	8.76	134.04	120.90
1	N	1418	A	P-O3'-C3'	8.76	133.33	120.20
1	N	797	C	P-O5'-C5'	-8.75	107.78	120.90
1	N	347	G	P-O5'-C5'	8.74	134.01	120.90
1	N	230	G	P-O3'-C3'	-8.72	107.12	120.20
1	N	631	C	P-O5'-C5'	-8.72	107.82	120.90
1	N	1236	A	O5'-C5'-C4'	-8.71	98.43	111.50
1	N	1102	A	C4'-C3'-O3'	-8.70	99.94	113.00
1	N	172	A	C4'-C3'-O3'	-8.69	99.97	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	772	U	P-O5'-C5'	8.69	133.94	120.90
1	N	129	A	C2'-C3'-O3'	8.68	122.52	109.50
1	N	235	C	O4'-C1'-N1	8.64	121.46	108.50
1	N	339	C	P-O5'-C5'	8.64	133.86	120.90
1	N	109	A	P-O3'-C3'	8.63	133.14	120.20
1	N	513	C	P-O5'-C5'	8.60	133.79	120.90
1	N	634	C	P-O5'-C5'	8.60	133.79	120.90
1	N	378	G	O4'-C4'-C3'	-8.58	95.42	104.00
1	N	1532	U	P-O3'-C3'	8.58	133.06	120.20
1	N	6	G	P-O5'-C5'	8.55	133.72	120.90
1	N	771	G	O3'-P-O5'	-8.54	91.19	104.00
1	N	1127	G	P-O5'-C5'	8.53	133.69	120.90
1	N	201	G	P-O3'-C3'	8.52	132.97	120.20
1	N	273	U	C5'-C4'-C3'	-8.50	103.25	116.00
1	N	992	U	C5'-C4'-C3'	8.50	127.95	115.20
1	N	717	U	C2'-C3'-O3'	8.48	122.22	109.50
1	N	1069	C	O4'-C4'-C3'	-8.47	95.53	104.00
1	N	787	A	P-O5'-C5'	8.47	133.61	120.90
1	N	73	C	O4'-C1'-N1	8.47	121.20	108.50
1	N	1300	G	P-O3'-C3'	8.47	132.90	120.20
1	N	25	C	O4'-C1'-N1	8.46	121.19	108.50
1	N	405	U	P-O5'-C5'	8.46	133.59	120.90
1	N	894	G	C2'-C3'-O3'	8.46	126.39	113.70
1	N	1338	G	O4'-C4'-C3'	-8.45	95.55	104.00
1	N	1041	G	O3'-P-O5'	-8.43	91.35	104.00
1	N	1147	C	C4'-C3'-O3'	-8.43	100.36	113.00
1	N	1418	A	P-O5'-C5'	8.42	133.53	120.90
1	N	718	A	O4'-C1'-N9	8.42	121.13	108.50
1	N	1342	C	C4'-C3'-C2'	-8.42	94.18	102.60
1	N	1331	G	C5'-C4'-C3'	-8.40	103.39	116.00
1	N	1278	G	C2'-C3'-O3'	8.39	122.09	109.50
1	N	535	A	P-O5'-C5'	-8.39	108.32	120.90
1	N	775	G	P-O3'-C3'	-8.38	107.63	120.20
1	N	95	C	P-O5'-C5'	-8.36	108.36	120.90
1	N	999	C	O4'-C4'-C3'	-8.35	95.65	104.00
1	N	464	U	P-O5'-C5'	8.35	133.42	120.90
1	N	1182	G	O4'-C1'-C2'	8.35	114.15	105.80
1	N	305	G	P-O3'-C3'	8.34	132.72	120.20
1	N	972	C	O4'-C1'-N1	8.33	121.00	108.50
1	N	249	U	P-O3'-C3'	-8.31	107.74	120.20
1	N	298	A	P-O3'-C3'	8.31	132.66	120.20
1	N	1278	G	C4'-C3'-C2'	-8.30	94.30	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	531	U	C5'-C4'-O4'	8.29	122.24	109.80
1	N	1331	G	P-O3'-C3'	8.29	132.64	120.20
1	N	432	A	P-O5'-C5'	8.29	133.34	120.90
1	N	592	G	C4'-C3'-C2'	-8.28	94.32	102.60
1	N	752	G	O4'-C1'-N9	8.26	120.89	108.50
1	N	867	G	O4'-C1'-C2'	-8.24	99.36	107.60
1	N	984	C	O4'-C1'-N1	8.24	120.86	108.50
1	N	331	G	P-O5'-C5'	8.24	133.26	120.90
1	N	496	A	C5'-C4'-C3'	-8.23	103.66	116.00
1	N	70	U	O4'-C1'-C2'	-8.22	99.38	107.60
1	N	713	G	C4'-C3'-O3'	-8.21	100.69	113.00
1	N	812	G	O3'-P-O5'	-8.21	91.69	104.00
1	N	181	A	C4'-C3'-C2'	-8.20	94.41	102.60
1	N	1495	U	P-O5'-C5'	8.19	133.19	120.90
1	N	1332	A	O4'-C1'-N9	8.19	120.78	108.50
1	N	89	U	P-O3'-C3'	8.18	132.47	120.20
1	N	144	G	O4'-C4'-C3'	-8.18	95.82	104.00
1	N	342	C	O4'-C1'-C2'	-8.16	99.44	107.60
1	N	798	U	P-O5'-C5'	-8.16	108.67	120.90
1	N	968	A	P-O3'-C3'	8.15	132.43	120.20
1	N	1234	C	P-O5'-C5'	8.14	133.11	120.90
1	N	557	G	P-O3'-C3'	8.13	132.40	120.20
1	N	888	G	P-O3'-C3'	8.12	132.38	120.20
1	N	969	A	P-O5'-C5'	-8.10	108.75	120.90
1	N	590	U	O4'-C4'-C3'	-8.07	95.93	104.00
1	N	37	U	P-O5'-C5'	8.06	132.99	120.90
1	N	770	C	O3'-P-O5'	-8.05	91.92	104.00
1	N	1181	G	C5'-C4'-C3'	-8.04	103.14	115.20
1	N	1218	C	O4'-C1'-C2'	-8.03	99.57	107.60
1	N	837	U	O4'-C4'-C3'	-8.03	95.97	104.00
1	N	608	A	C4'-C3'-C2'	-8.01	94.59	102.60
1	N	256	U	O4'-C1'-N1	7.99	120.49	108.50
1	N	1347	G	P-O3'-C3'	7.98	132.17	120.20
1	N	647	C	P-O5'-C5'	7.96	132.85	120.90
1	N	184	G	O5'-C5'-C4'	-7.95	99.57	111.50
1	N	602	A	P-O5'-C5'	7.94	132.82	120.90
1	N	1240	U	O4'-C1'-C2'	-7.93	99.67	107.60
1	N	1125	U	C5'-C4'-C3'	-7.93	104.10	116.00
1	N	896	C	C5'-C4'-C3'	-7.92	104.12	116.00
1	N	753	A	P-O5'-C5'	-7.92	109.02	120.90
1	N	806	C	O4'-C1'-N1	7.91	120.36	108.50
1	N	658	C	P-O5'-C5'	7.91	132.76	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	98	A	C5'-C4'-C3'	-7.90	104.15	116.00
1	N	629	A	C4'-C3'-C2'	-7.90	94.70	102.60
1	N	199	A	O4'-C4'-C3'	-7.90	96.10	104.00
1	N	1340	A	C4'-C3'-C2'	-7.89	94.71	102.60
1	N	1090	U	P-O5'-C5'	7.88	132.72	120.90
1	N	366	A	P-O3'-C3'	7.86	131.98	120.20
1	N	251	G	C5'-C4'-C3'	7.85	126.98	115.20
1	N	1223	C	P-O3'-C3'	7.85	131.98	120.20
1	N	120	A	O4'-C1'-N9	7.84	120.27	108.50
1	N	763	G	P-O3'-C3'	7.84	131.96	120.20
1	N	274	A	C4'-C3'-O3'	7.83	121.15	109.40
1	N	563	A	C3'-C2'-C1'	7.83	109.13	101.30
1	N	1362	A	C4'-C3'-C2'	-7.82	94.78	102.60
1	N	642	A	P-O5'-C5'	7.81	132.62	120.90
1	N	910	C	P-O5'-C5'	7.81	132.62	120.90
1	N	652	U	C5'-C4'-C3'	-7.79	104.31	116.00
1	N	843	U	O4'-C1'-N1	7.77	120.16	108.50
1	N	1203	C	P-O5'-C5'	7.77	132.56	120.90
1	N	138	G	C4'-C3'-C2'	-7.77	94.83	102.60
1	N	252	U	O4'-C1'-N1	7.76	120.14	108.50
1	N	127	G	O4'-C4'-C3'	-7.76	96.24	104.00
1	N	381	C	C5'-C4'-C3'	7.75	127.63	116.00
1	N	588	G	P-O5'-C5'	7.75	132.53	120.90
1	N	60	A	C2'-C3'-O3'	7.75	121.12	109.50
1	N	1362	A	O4'-C1'-N9	7.75	120.12	108.50
1	N	1120	C	C4'-C3'-C2'	-7.74	94.86	102.60
1	N	252	U	O3'-P-O5'	-7.74	92.39	104.00
1	N	1403	C	O4'-C1'-N1	7.74	120.11	108.50
1	N	1000	A	P-O5'-C5'	7.73	132.50	120.90
1	N	576	C	P-O3'-C3'	7.73	131.79	120.20
1	N	1432	G	C2'-C3'-O3'	7.73	121.09	109.50
1	N	719	C	O4'-C1'-N1	7.72	120.08	108.50
1	N	1469	C	P-O5'-C5'	-7.71	109.33	120.90
1	N	890	G	O4'-C1'-C2'	-7.71	98.09	105.80
1	N	91	U	O4'-C1'-N1	7.70	120.05	108.50
1	N	486	U	P-O5'-C5'	-7.70	109.35	120.90
1	N	766	A	P-O3'-C3'	-7.68	108.67	120.20
1	N	794	A	C4'-C3'-C2'	-7.68	94.92	102.60
1	N	211	G	C4'-C3'-C2'	7.67	110.27	102.60
1	N	1340	A	P-O5'-C5'	7.67	132.41	120.90
1	N	1482	G	C4'-C3'-C2'	-7.67	94.93	102.60
1	N	93	U	O4'-C1'-N1	7.65	119.98	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	173	U	P-O3'-C3'	7.63	131.65	120.20
1	N	1001	C	P-O5'-C5'	7.63	132.35	120.90
1	N	1361	G	O3'-P-O5'	-7.63	92.56	104.00
1	N	610	U	O4'-C1'-N1	7.62	119.92	108.50
1	N	519	C	C5'-C4'-C3'	-7.61	104.58	116.00
1	N	1297	G	C5'-C4'-O4'	7.61	120.51	109.10
1	N	67	C	O4'-C1'-C2'	-7.60	100.00	107.60
1	N	1498	U	P-O3'-C3'	7.59	131.59	120.20
1	N	222	C	O4'-C1'-N1	7.59	119.89	108.50
1	N	10	A	C4'-C3'-C2'	-7.59	95.01	102.60
1	N	714	G	P-O5'-C5'	7.58	132.26	120.90
1	N	1250	A	O5'-C5'-C4'	-7.57	100.14	111.50
1	N	7	A	O3'-P-O5'	-7.56	92.66	104.00
1	N	704	A	O4'-C4'-C3'	-7.55	96.45	104.00
1	N	1395	C	C4'-C3'-O3'	-7.54	101.68	113.00
1	N	122	G	O4'-C1'-C2'	-7.54	100.06	107.60
1	N	99	C	O3'-P-O5'	-7.53	92.71	104.00
1	N	317	U	C5'-C4'-C3'	-7.52	104.71	116.00
1	N	307	C	O4'-C1'-N1	7.52	119.78	108.50
1	N	508	U	C2'-C3'-O3'	7.51	120.77	109.50
1	N	82	G	O3'-P-O5'	7.51	115.27	104.00
1	N	224	U	C4'-C3'-C2'	-7.51	95.09	102.60
1	N	508	U	C3'-C2'-O2'	-7.51	103.34	114.60
1	N	413	G	O4'-C1'-C2'	7.50	113.30	105.80
1	N	428	G	P-O3'-C3'	7.50	131.45	120.20
1	N	1158	C	P-O3'-C3'	7.49	131.44	120.20
1	N	1138	G	P-O3'-C3'	7.49	131.43	120.20
1	N	1077	G	O4'-C1'-N9	7.47	119.71	108.50
1	N	522	C	P-O5'-C5'	7.47	132.10	120.90
1	N	479	U	P-O5'-C5'	7.46	132.10	120.90
1	N	866	C	O4'-C1'-C2'	-7.46	100.14	107.60
1	N	73	C	O4'-C1'-C2'	-7.46	100.14	107.60
1	N	661	G	O4'-C1'-N9	7.45	119.67	108.50
1	N	1436	U	P-O5'-C5'	-7.44	109.74	120.90
1	N	1358	U	N1-C1'-C2'	7.43	123.14	112.00
1	N	709	U	P-O5'-C5'	7.42	132.03	120.90
1	N	360	G	C3'-C2'-C1'	7.42	108.72	101.30
1	N	1156	G	O4'-C4'-C3'	-7.42	96.58	104.00
1	N	1060	U	O4'-C1'-N1	7.42	119.63	108.50
1	N	460	A	P-O5'-C5'	7.42	132.03	120.90
1	N	1269	A	O4'-C1'-N9	7.41	119.62	108.50
1	N	557	G	O3'-P-O5'	-7.41	92.89	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	443	C	P-O3'-C3'	-7.41	109.09	120.20
1	N	99	C	P-O3'-C3'	7.40	131.30	120.20
1	N	1286	U	O3'-P-O5'	-7.40	92.90	104.00
1	N	1053	G	P-O3'-C3'	7.40	131.29	120.20
1	N	1530	G	O4'-C1'-N9	7.40	119.30	108.20
1	N	1035	A	C4'-C3'-C2'	-7.40	95.20	102.60
1	N	734	G	O4'-C1'-N9	7.37	119.56	108.50
1	N	397	A	O4'-C4'-C3'	-7.36	96.64	104.00
1	N	329	A	O5'-C5'-C4'	-7.36	100.66	111.70
1	N	1500	A	C5'-C4'-C3'	7.36	127.04	116.00
1	N	379	C	O4'-C1'-N1	7.34	119.52	108.50
1	N	1393	U	O3'-P-O5'	-7.34	92.98	104.00
1	N	798	U	C5'-C4'-C3'	7.34	127.01	116.00
1	N	1101	A	C2'-C3'-O3'	7.34	120.51	109.50
1	N	1011	C	P-O5'-C5'	7.32	131.89	120.90
1	N	1364	U	O4'-C1'-N1	7.32	119.18	108.20
1	N	309	A	C4'-C3'-C2'	-7.32	95.28	102.60
1	N	1315	U	C4'-C3'-C2'	-7.32	95.28	102.60
1	N	62	U	P-O5'-C5'	7.32	131.87	120.90
1	N	75	G	C4'-C3'-C2'	-7.31	95.29	102.60
1	N	577	G	P-O5'-C5'	-7.31	109.94	120.90
1	N	180	U	C4'-C3'-O3'	-7.31	102.04	113.00
1	N	244	U	C5'-C4'-C3'	-7.30	104.25	115.20
1	N	1435	G	O4'-C1'-C2'	-7.30	100.30	107.60
1	N	1106	G	O4'-C4'-C3'	-7.29	96.71	104.00
1	N	1191	A	P-O5'-C5'	7.29	131.84	120.90
1	N	372	C	P-O3'-C3'	7.29	131.13	120.20
1	N	505	G	P-O3'-C3'	7.29	131.13	120.20
1	N	528	C	O5'-C5'-C4'	-7.29	100.57	111.50
1	N	75	G	O4'-C1'-C2'	-7.28	100.32	107.60
1	N	658	C	C3'-C2'-C1'	-7.28	94.02	101.30
1	N	1108	G	P-O3'-C3'	7.28	131.12	120.20
1	N	508	U	C4'-C3'-C2'	7.27	109.87	102.60
1	N	775	G	C4'-C3'-C2'	-7.27	95.33	102.60
1	N	974	A	P-O3'-C3'	7.26	131.09	120.20
1	N	1374	A	O4'-C1'-N9	7.25	119.37	108.50
1	N	652	U	O4'-C1'-N1	7.24	119.36	108.50
1	N	1279	G	O4'-C4'-C3'	-7.23	98.87	106.10
1	N	1236	A	C4'-C3'-C2'	7.22	109.83	102.60
1	N	1330	U	P-O5'-C5'	7.22	131.73	120.90
1	N	495	A	O4'-C1'-N9	7.22	119.03	108.20
1	N	268	U	P-O5'-C5'	7.22	131.73	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	329	A	P-O3'-C3'	-7.22	109.38	120.20
1	N	533	A	C3'-C2'-C1'	-7.22	94.28	101.50
1	N	690	G	P-O5'-C5'	7.22	131.72	120.90
1	N	96	U	P-O5'-C5'	7.21	131.72	120.90
1	N	950	U	P-O5'-C5'	7.21	131.72	120.90
1	N	1181	G	C2'-C3'-O3'	7.21	120.31	109.50
1	N	941	G	C2'-C3'-O3'	7.20	124.50	113.70
1	N	692	U	P-O5'-C5'	-7.20	110.11	120.90
1	N	426	U	O5'-C5'-C4'	-7.19	100.72	111.50
1	N	877	G	P-O3'-C3'	-7.18	109.42	120.20
1	N	49	U	O5'-C5'-C4'	7.18	122.27	111.50
1	N	166	U	O4'-C1'-C2'	-7.18	100.42	107.60
1	N	1413	A	C4'-C3'-C2'	7.18	109.78	102.60
1	N	671	G	P-O5'-C5'	-7.16	110.16	120.90
1	N	860	A	P-O5'-C5'	7.16	131.64	120.90
1	N	700	G	O3'-P-O5'	7.16	114.74	104.00
1	N	1038	C	P-O3'-C3'	7.16	130.94	120.20
1	N	1335	U	C4'-C3'-O3'	-7.16	102.26	113.00
1	N	813	U	O3'-P-O5'	-7.15	93.27	104.00
1	N	343	U	P-O5'-C5'	7.15	131.62	120.90
1	N	1191	A	C4'-C3'-C2'	7.15	109.75	102.60
1	N	101	A	P-O5'-C5'	7.14	131.62	120.90
1	N	75	G	P-O5'-C5'	-7.13	110.20	120.90
1	N	1363	A	C5'-C4'-C3'	-7.13	104.50	115.20
1	N	199	A	P-O5'-C5'	7.13	131.59	120.90
1	N	524	G	O4'-C1'-C2'	-7.13	100.47	107.60
1	N	1125	U	C4'-C3'-O3'	-7.13	102.31	113.00
1	N	606	G	P-O5'-C5'	-7.12	110.22	120.90
1	N	1094	G	N9-C1'-C2'	7.12	122.68	112.00
1	N	544	G	O5'-C5'-C4'	-7.11	100.84	111.50
1	N	864	A	P-O3'-C3'	7.10	130.84	120.20
1	N	60	A	P-O3'-C3'	7.09	130.84	120.20
1	N	143	A	O4'-C1'-N9	7.09	119.14	108.50
1	N	723	U	O4'-C1'-N1	7.09	119.13	108.50
1	N	772	U	O4'-C4'-C3'	-7.09	96.91	104.00
1	N	812	G	C2'-C3'-O3'	7.09	120.13	109.50
1	N	137	U	C3'-C2'-C1'	-7.09	94.21	101.30
1	N	669	G	P-O5'-C5'	7.08	131.53	120.90
1	N	49	U	O4'-C1'-C2'	-7.08	100.52	107.60
1	N	1336	C	C2'-C3'-O3'	7.08	120.12	109.50
1	N	211	G	P-O3'-C3'	7.08	130.82	120.20
1	N	1471	U	C5'-C4'-C3'	7.08	126.61	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	341	C	C3'-C2'-C1'	-7.05	94.25	101.30
1	N	391	G	O4'-C1'-N9	7.05	119.08	108.50
1	N	429	U	C4'-C3'-O3'	7.05	119.98	109.40
1	N	523	A	O4'-C1'-N9	7.04	119.06	108.50
1	N	55	A	O5'-C5'-C4'	-7.04	100.95	111.50
1	N	853	C	P-O5'-C5'	-7.03	110.35	120.90
1	N	1472	U	O4'-C1'-C2'	-7.03	100.57	107.60
1	N	18	C	C5'-C4'-C3'	7.03	126.54	116.00
1	N	252	U	C4'-C3'-O3'	-7.02	102.47	113.00
1	N	1435	G	O4'-C1'-N9	7.01	119.02	108.50
1	N	105	G	P-O5'-C5'	7.01	131.42	120.90
1	N	447	G	P-O5'-C5'	7.01	131.42	120.90
1	N	729	A	O4'-C4'-C3'	-7.01	96.99	104.00
1	N	894	G	O3'-P-O5'	-7.01	93.49	104.00
1	N	1239	A	C1'-C2'-O2'	7.00	122.31	111.80
1	N	700	G	O4'-C1'-N9	7.00	119.00	108.50
1	N	352	C	C1'-O4'-C4'	7.00	116.90	109.90
1	N	794	A	C3'-C2'-C1'	7.00	108.30	101.30
1	N	1010	U	C4'-C3'-C2'	-7.00	95.60	102.60
1	N	1517	G	O4'-C1'-C2'	-7.00	100.61	107.60
1	N	594	U	O4'-C1'-N1	6.99	118.99	108.50
1	N	207	C	P-O3'-C3'	6.99	130.68	120.20
1	N	1472	U	O4'-C1'-N1	6.99	118.98	108.50
1	N	694	A	C5'-C4'-C3'	6.99	126.48	116.00
1	N	715	A	C4'-C3'-C2'	-6.98	95.62	102.60
1	N	816	A	C4'-C3'-C2'	6.98	109.58	102.60
1	N	739	C	O4'-C1'-N1	6.97	118.96	108.50
1	N	956	U	C4'-C3'-C2'	-6.97	95.63	102.60
1	N	735	C	O5'-C5'-C4'	-6.97	101.05	111.50
1	N	61	G	C1'-O4'-C4'	-6.97	102.93	109.90
1	N	1031	C	O5'-C5'-C4'	6.96	121.94	111.50
1	N	1227	A	P-O5'-C5'	-6.96	110.46	120.90
1	N	1010	U	P-O5'-C5'	6.96	131.33	120.90
1	N	1038	C	C4'-C3'-C2'	-6.95	95.65	102.60
1	N	514	C	P-O5'-C5'	6.95	131.32	120.90
1	N	1131	G	C4'-C3'-C2'	-6.95	95.65	102.60
1	N	1331	G	C4'-C3'-C2'	-6.94	95.66	102.60
1	N	1151	A	C1'-O4'-C4'	6.94	116.84	109.90
1	N	1231	G	C4'-C3'-C2'	-6.94	95.66	102.60
1	N	1352	C	C4'-C3'-C2'	-6.93	95.67	102.60
1	N	970	C	P-O3'-C3'	6.93	130.59	120.20
1	N	909	A	C4'-C3'-C2'	-6.92	95.67	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	173	U	P-O5'-C5'	-6.92	110.52	120.90
1	N	746	A	O4'-C4'-C3'	-6.92	97.08	104.00
1	N	1444	U	C5'-C4'-C3'	-6.92	105.61	116.00
1	N	176	C	P-O5'-C5'	6.91	131.27	120.90
1	N	629	A	P-O3'-C3'	-6.91	109.83	120.20
1	N	750	C	O4'-C1'-C2'	-6.91	100.69	107.60
1	N	20	U	P-O3'-C3'	-6.91	109.83	120.20
1	N	1488	G	O4'-C1'-N9	6.91	118.86	108.50
1	N	519	C	O4'-C1'-N1	6.90	118.86	108.50
1	N	44	A	C4'-C3'-C2'	-6.90	95.70	102.60
1	N	1463	U	O4'-C1'-N1	6.90	118.85	108.50
1	N	866	C	O4'-C1'-N1	6.90	118.85	108.50
1	N	836	G	C5'-C4'-C3'	-6.89	105.66	116.00
1	N	1241	G	C5'-C4'-C3'	-6.89	105.67	116.00
1	N	740	U	P-O3'-C3'	-6.88	109.87	120.20
1	N	1393	U	C4'-C3'-O3'	-6.88	102.68	113.00
1	N	73	C	P-O5'-C5'	-6.88	110.58	120.90
1	N	277	C	C4'-C3'-O3'	-6.88	102.68	113.00
1	N	1323	G	O4'-C1'-N9	6.88	118.82	108.50
1	N	4	U	C5'-C4'-C3'	-6.88	104.89	115.20
1	N	1236	A	P-O3'-C3'	6.88	130.51	120.20
1	N	766	A	C4'-C3'-O3'	-6.87	102.69	113.00
1	N	484	G	C2'-C3'-O3'	6.87	119.81	109.50
1	N	120	A	C1'-O4'-C4'	-6.87	103.03	109.90
1	N	550	G	C4'-C3'-C2'	-6.87	95.73	102.60
1	N	535	A	C2'-C3'-O3'	6.87	124.00	113.70
1	N	95	C	C5'-C4'-C3'	-6.87	105.70	116.00
1	N	544	G	C1'-C2'-O2'	6.87	118.70	108.40
1	N	1043	G	C4'-C3'-O3'	-6.87	102.70	113.00
1	N	931	C	O4'-C1'-N1	6.86	118.80	108.50
1	N	1322	C	C2'-C3'-O3'	6.86	119.80	109.50
1	N	197	A	P-O3'-C3'	6.86	130.49	120.20
1	N	908	A	P-O5'-C5'	6.86	131.18	120.90
1	N	9	G	P-O5'-C5'	6.85	131.18	120.90
1	N	94	G	P-O5'-C5'	-6.85	110.63	120.90
1	N	182	A	O4'-C4'-C3'	-6.85	99.25	106.10
1	N	841	C	O4'-C1'-N1	6.85	118.77	108.50
1	N	1261	A	C4'-C3'-C2'	-6.84	95.76	102.60
1	N	1314	C	O4'-C4'-C3'	-6.84	97.16	104.00
1	N	894	G	P-O5'-C5'	6.83	131.15	120.90
1	N	549	C	P-O5'-C5'	6.83	131.14	120.90
1	N	660	C	C4'-C3'-C2'	-6.83	95.77	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1529	G	O4'-C1'-C2'	6.82	112.62	105.80
1	N	13	U	P-O3'-C3'	6.82	130.43	120.20
1	N	798	U	C4'-C3'-C2'	6.82	109.42	102.60
1	N	296	U	O4'-C1'-C2'	-6.82	100.78	107.60
1	N	422	C	O4'-C1'-C2'	6.82	112.62	105.80
1	N	1229	A	O4'-C1'-N9	6.82	118.72	108.50
1	N	753	A	C4'-C3'-O3'	6.81	119.62	109.40
1	N	99	C	O4'-C1'-N1	6.80	118.71	108.50
1	N	293	G	P-O5'-C5'	6.80	131.10	120.90
1	N	327	A	O4'-C1'-N9	6.79	118.69	108.50
1	N	1146	A	C3'-C2'-C1'	6.79	108.09	101.30
1	N	889	A	C3'-C2'-C1'	6.79	108.29	101.50
1	N	1448	C	O4'-C4'-C3'	-6.79	97.21	104.00
1	N	917	G	C4'-C3'-O3'	-6.78	102.83	113.00
1	N	731	G	O4'-C4'-C3'	-6.78	97.22	104.00
1	N	1066	C	O4'-C1'-N1	6.78	118.66	108.50
1	N	1094	G	P-O3'-C3'	6.77	130.36	120.20
1	N	941	G	P-O3'-C3'	6.77	130.35	120.20
1	N	1265	C	C4'-C3'-C2'	-6.77	95.83	102.60
1	N	1403	C	C5'-C4'-C3'	6.77	126.16	116.00
1	N	1170	A	P-O3'-C3'	6.77	130.35	120.20
1	N	993	G	C4'-C3'-C2'	-6.76	95.83	102.60
1	N	201	G	C1'-O4'-C4'	6.76	116.66	109.90
1	N	832	G	C4'-C3'-C2'	-6.76	95.84	102.60
1	N	878	A	C5'-C4'-C3'	-6.76	105.86	116.00
1	N	1115	U	P-O5'-C5'	6.75	131.03	120.90
1	N	1172	C	C1'-O4'-C4'	6.75	116.65	109.90
1	N	1296	C	O4'-C1'-C2'	6.75	114.35	107.60
1	N	848	C	P-O5'-C5'	6.75	131.03	120.90
1	N	323	U	P-O5'-C5'	6.75	131.02	120.90
1	N	351	G	P-O5'-C5'	6.75	131.02	120.90
1	N	1029	U	O4'-C4'-C3'	-6.75	97.25	104.00
1	N	1159	U	C3'-C2'-C1'	-6.75	94.75	101.50
1	N	429	U	P-O5'-C5'	-6.74	110.79	120.90
1	N	1226	C	C4'-C3'-O3'	6.74	119.51	109.40
1	N	1201	A	C2'-C3'-O3'	6.74	119.61	109.50
1	N	1331	G	P-O5'-C5'	6.74	131.00	120.90
1	N	1283	U	O4'-C1'-N1	6.73	118.60	108.50
1	N	1108	G	C1'-O4'-C4'	-6.73	103.17	109.90
1	N	609	A	P-O5'-C5'	6.73	131.00	120.90
1	N	566	G	C4'-C3'-O3'	6.73	119.49	109.40
1	N	1417	G	C2'-C3'-O3'	6.73	123.79	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	30	U	C1'-O4'-C4'	6.72	116.42	109.70
1	N	488	C	O4'-C4'-C3'	-6.72	97.28	104.00
1	N	1433	A	O3'-P-O5'	-6.72	93.92	104.00
1	N	381	C	C3'-C2'-C1'	-6.71	94.59	101.30
1	N	186	C	O5'-C5'-C4'	-6.71	101.44	111.50
1	N	1388	C	O4'-C4'-C3'	-6.70	97.30	104.00
1	N	823	C	C5'-C4'-C3'	6.70	126.04	116.00
1	N	92	U	O4'-C1'-N1	6.69	118.54	108.50
1	N	660	C	O5'-C5'-C4'	-6.69	101.46	111.50
1	N	374	A	C5'-C4'-C3'	6.68	126.03	116.00
1	N	276	G	P-O3'-C3'	-6.68	110.17	120.20
1	N	1351	U	P-O5'-C5'	-6.68	110.88	120.90
1	N	131	A	C5'-C4'-C3'	-6.68	105.98	116.00
1	N	850	U	P-O5'-C5'	6.68	130.92	120.90
1	N	882	C	P-O5'-C5'	-6.68	110.88	120.90
1	N	1101	A	C4'-C3'-C2'	6.67	109.27	102.60
1	N	918	A	O4'-C1'-N9	6.67	118.50	108.50
1	N	1114	C	P-O5'-C5'	6.67	130.90	120.90
1	N	578	C	O4'-C1'-N1	6.67	118.50	108.50
1	N	1450	U	C5'-C4'-C3'	-6.67	106.00	116.00
1	N	1271	A	O5'-C5'-C4'	-6.66	101.50	111.50
1	N	1184	G	P-O3'-C3'	-6.66	110.21	120.20
1	N	924	C	P-O5'-C5'	6.66	130.89	120.90
1	N	1213	A	P-O3'-C3'	-6.66	110.21	120.20
1	N	88	U	O4'-C1'-N1	6.65	118.18	108.20
1	N	540	G	C4'-C3'-C2'	-6.65	95.95	102.60
1	N	1264	U	O5'-C5'-C4'	-6.65	101.53	111.50
1	N	1376	U	C4'-C3'-C2'	-6.65	95.95	102.60
1	N	1029	U	P-O5'-C5'	6.64	130.86	120.90
1	N	577	G	C1'-O4'-C4'	6.64	116.54	109.90
1	N	26	A	O4'-C1'-N9	6.64	118.46	108.50
1	N	906	A	N9-C1'-C2'	-6.64	102.04	112.00
1	N	1026	G	O4'-C4'-C3'	-6.64	97.36	104.00
1	N	1230	C	P-O5'-C5'	6.64	130.85	120.90
1	N	719	C	O4'-C4'-C3'	-6.63	97.37	104.00
1	N	1281	C	P-O3'-C3'	6.63	130.14	120.20
1	N	814	A	C5'-C4'-C3'	-6.63	106.06	116.00
1	N	858	G	O4'-C1'-C2'	-6.63	100.97	107.60
1	N	1519	A	O4'-C1'-C2'	-6.63	100.97	107.60
1	N	1255	G	P-O5'-C5'	6.62	130.84	120.90
1	N	958	A	C4'-C3'-O3'	-6.62	103.06	113.00
1	N	1441	A	C5'-C4'-C3'	-6.62	106.06	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1010	U	O4'-C1'-N1	6.62	118.42	108.50
1	N	1365	G	P-O5'-C5'	-6.61	110.98	120.90
1	N	274	A	P-O3'-C3'	6.61	130.12	120.20
1	N	465	A	O4'-C4'-C3'	-6.61	97.39	104.00
1	N	899	C	O4'-C1'-N1	6.61	118.42	108.50
1	N	1194	U	N1-C1'-C2'	6.61	121.92	112.00
1	N	216	U	O4'-C1'-N1	6.61	118.41	108.50
1	N	1262	C	P-O3'-C3'	-6.61	110.29	120.20
1	N	535	A	P-O3'-C3'	6.61	130.11	120.20
1	N	1436	U	P-O3'-C3'	6.60	130.10	120.20
1	N	409	U	P-O3'-C3'	6.60	130.10	120.20
1	N	1124	G	O4'-C4'-C3'	-6.60	97.40	104.00
1	N	854	U	O5'-C5'-C4'	-6.60	101.60	111.50
1	N	1262	C	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	430	A	O4'-C1'-N9	6.60	118.39	108.50
1	N	908	A	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	658	C	C1'-C2'-O2'	6.59	118.29	108.40
1	N	1482	G	O5'-C5'-C4'	-6.59	101.62	111.50
1	N	1377	A	O3'-P-O5'	-6.59	94.12	104.00
1	N	1046	A	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	1118	U	O4'-C4'-C3'	-6.59	97.41	104.00
1	N	115	G	C2'-C3'-O3'	6.58	119.37	109.50
1	N	854	U	P-O3'-C3'	-6.58	110.33	120.20
1	N	93	U	P-O3'-C3'	-6.58	110.33	120.20
1	N	1025	U	P-O3'-C3'	6.57	130.06	120.20
1	N	1482	G	P-O5'-C5'	6.57	130.76	120.90
1	N	1134	G	P-O3'-C3'	6.57	130.05	120.20
1	N	192	A	P-O3'-C3'	6.57	130.05	120.20
1	N	759	A	P-O5'-C5'	6.57	130.75	120.90
1	N	1273	C	C5'-C4'-C3'	-6.57	106.15	116.00
1	N	1273	C	O4'-C1'-N1	6.56	118.35	108.50
1	N	136	C	O4'-C1'-N1	6.56	118.34	108.50
1	N	344	A	O4'-C4'-C3'	-6.56	99.54	106.10
1	N	1147	C	O4'-C1'-C2'	-6.56	101.04	107.60
1	N	1349	A	C3'-C2'-O2'	6.56	120.54	110.70
1	N	773	G	O4'-C4'-C3'	-6.55	97.44	104.00
1	N	750	C	C4'-C3'-O3'	-6.54	103.18	113.00
1	N	890	G	C4'-C3'-C2'	-6.53	96.07	102.60
1	N	179	A	O4'-C4'-C3'	-6.53	97.47	104.00
1	N	380	G	C4'-C3'-C2'	-6.53	96.07	102.60
1	N	726	C	P-O3'-C3'	-6.53	110.40	120.20
1	N	189	A	C4'-C3'-C2'	-6.53	96.07	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1399	C	C2'-C3'-O3'	6.53	119.29	109.50
1	N	1466	C	P-O3'-C3'	6.53	129.99	120.20
1	N	785	G	P-O5'-C5'	-6.52	111.12	120.90
1	N	111	G	O5'-C5'-C4'	-6.52	101.72	111.50
1	N	168	G	O3'-P-O5'	-6.52	94.22	104.00
1	N	347	G	O4'-C1'-C2'	-6.52	101.08	107.60
1	N	946	A	C3'-C2'-C1'	6.52	107.82	101.30
1	N	808	C	O4'-C1'-C2'	-6.52	101.08	107.60
1	N	1500	A	O4'-C4'-C3'	-6.51	97.48	104.00
1	N	1147	C	C2'-C3'-O3'	6.51	123.47	113.70
1	N	827	U	O4'-C1'-N1	6.51	118.26	108.50
1	N	886	G	P-O5'-C5'	6.50	130.66	120.90
1	N	909	A	P-O5'-C5'	6.50	130.65	120.90
1	N	1316	G	P-O5'-C5'	-6.50	111.15	120.90
1	N	648	A	P-O5'-C5'	6.50	130.65	120.90
1	N	1263	C	C1'-O4'-C4'	-6.50	103.40	109.90
1	N	24	U	O4'-C1'-N1	6.49	118.24	108.50
1	N	1359	C	P-O5'-C5'	-6.49	111.16	120.90
1	N	692	U	C5'-C4'-C3'	-6.49	106.26	116.00
1	N	934	C	C4'-C3'-C2'	6.49	109.09	102.60
1	N	314	C	O4'-C1'-N1	6.49	118.23	108.50
1	N	1282	C	C5'-C4'-O4'	-6.49	100.07	109.80
1	N	493	A	P-O3'-C3'	6.48	129.93	120.20
1	N	428	G	C2'-C3'-O3'	6.48	119.22	109.50
1	N	610	U	P-O3'-C3'	6.48	129.91	120.20
1	N	756	C	O4'-C4'-C3'	-6.47	97.53	104.00
1	N	1241	G	P-O3'-C3'	-6.47	110.49	120.20
1	N	1054	C	C1'-O4'-C4'	6.47	116.17	109.70
1	N	1218	C	O4'-C1'-N1	6.47	118.20	108.50
1	N	1282	C	P-O3'-C3'	-6.47	110.50	120.20
1	N	26	A	P-O5'-C5'	6.46	130.58	120.90
1	N	800	G	C5'-C4'-C3'	-6.46	106.32	116.00
1	N	647	C	O4'-C4'-C3'	-6.46	97.55	104.00
1	N	510	A	C4'-C3'-C2'	6.45	109.05	102.60
1	N	1348	U	C2'-C3'-O3'	-6.45	104.02	113.70
1	N	1258	G	P-O5'-C5'	6.45	130.58	120.90
1	N	462	G	C3'-C2'-C1'	-6.45	94.85	101.30
1	N	1224	U	P-O3'-C3'	6.45	129.87	120.20
1	N	650	G	O4'-C4'-C3'	6.45	110.45	104.00
1	N	1088	G	O4'-C4'-C3'	-6.45	97.55	104.00
1	N	450	G	C2'-C3'-O3'	6.44	123.36	113.70
1	N	666	G	O4'-C1'-C2'	-6.44	101.16	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	498	A	C4'-C3'-C2'	6.44	109.04	102.60
1	N	31	G	O3'-P-O5'	-6.44	94.34	104.00
1	N	945	G	C4'-C3'-O3'	-6.44	103.34	113.00
1	N	992	U	C3'-C2'-C1'	-6.44	95.06	101.50
1	N	559	A	O4'-C4'-C3'	-6.44	99.66	106.10
1	N	1424	U	O4'-C4'-C3'	6.43	110.43	104.00
1	N	58	C	O4'-C1'-N1	6.43	118.14	108.50
1	N	144	G	O4'-C1'-C2'	-6.43	101.17	107.60
1	N	1342	C	O4'-C1'-N1	6.43	118.14	108.50
1	N	657	U	C5'-C4'-C3'	6.43	125.64	116.00
1	N	771	G	O5'-C5'-C4'	-6.43	101.86	111.50
1	N	613	C	O4'-C1'-N1	6.42	118.14	108.50
1	N	630	A	O3'-P-O5'	-6.42	94.36	104.00
1	N	870	U	P-O3'-C3'	-6.42	110.57	120.20
1	N	156	C	O4'-C1'-C2'	-6.42	101.18	107.60
1	N	960	U	C2'-C3'-O3'	6.42	119.13	109.50
1	N	1042	A	O3'-P-O5'	-6.42	94.37	104.00
1	N	556	C	O4'-C1'-N1	6.42	118.13	108.50
1	N	1420	U	C4'-C3'-C2'	-6.42	96.18	102.60
1	N	1446	A	C4'-C3'-O3'	-6.42	103.37	113.00
1	N	836	G	O5'-C5'-C4'	-6.41	101.88	111.50
1	N	498	A	C5'-C4'-O4'	-6.41	100.19	109.80
1	N	1272	G	C2'-C3'-O3'	6.41	123.31	113.70
1	N	1304	G	P-O5'-C5'	6.41	130.51	120.90
1	N	686	U	O4'-C1'-N1	6.40	117.80	108.20
1	N	1236	A	O4'-C1'-C2'	-6.40	101.20	107.60
1	N	323	U	O5'-C5'-C4'	-6.40	101.91	111.50
1	N	266	G	C2'-C3'-O3'	6.39	119.09	109.50
1	N	694	A	O3'-P-O5'	-6.39	94.41	104.00
1	N	926	G	P-O3'-C3'	6.39	129.79	120.20
1	N	585	G	O4'-C1'-N9	6.39	118.08	108.50
1	N	491	G	C3'-C2'-C1'	-6.39	94.91	101.30
1	N	102	G	O3'-P-O5'	-6.39	94.42	104.00
1	N	17	U	O4'-C4'-C3'	-6.38	97.62	104.00
1	N	25	C	C4'-C3'-C2'	-6.38	96.22	102.60
1	N	1019	A	P-O3'-C3'	-6.38	110.63	120.20
1	N	335	C	C5'-C4'-C3'	6.37	125.56	116.00
1	N	747	A	O5'-C5'-C4'	-6.37	101.94	111.50
1	N	1441	A	O4'-C1'-C2'	-6.37	101.23	107.60
1	N	368	U	C1'-O4'-C4'	-6.37	103.53	109.90
1	N	210	C	O4'-C1'-N1	6.37	117.75	108.20
1	N	366	A	C2'-C3'-O3'	6.36	119.04	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1107	C	O4'-C1'-N1	6.36	118.04	108.50
1	N	1312	G	C5'-C4'-C3'	-6.36	106.46	116.00
1	N	1263	C	P-O5'-C5'	6.36	130.43	120.90
1	N	1323	G	O5'-C5'-C4'	6.35	121.03	111.50
1	N	50	A	C1'-C2'-O2'	6.35	121.32	111.80
1	N	156	C	O4'-C1'-N1	6.35	118.02	108.50
1	N	510	A	P-O3'-C3'	6.35	129.72	120.20
1	N	1028	C	O4'-C1'-N1	6.35	118.02	108.50
1	N	1434	A	O4'-C1'-N9	6.35	118.02	108.50
1	N	384	G	O3'-P-O5'	-6.35	94.48	104.00
1	N	268	U	C4'-C3'-O3'	-6.34	103.48	113.00
1	N	87	C	O4'-C1'-N1	6.34	118.02	108.50
1	N	764	C	O4'-C1'-N1	6.34	118.01	108.50
1	N	559	A	P-O3'-C3'	6.34	129.71	120.20
1	N	1245	C	O4'-C1'-N1	6.34	118.01	108.50
1	N	1269	A	C5'-C4'-C3'	6.34	125.51	116.00
1	N	1295	U	O4'-C1'-N1	6.34	118.01	108.50
1	N	1176	A	P-O5'-C5'	6.34	130.41	120.90
1	N	499	A	C2'-C3'-O3'	6.34	119.01	109.50
1	N	828	U	C5'-C4'-C3'	6.34	125.50	116.00
1	N	1454	G	O3'-P-O5'	6.34	113.50	104.00
1	N	718	A	O4'-C1'-C2'	-6.33	101.27	107.60
1	N	541	G	O4'-C1'-N9	6.33	118.00	108.50
1	N	581	G	P-O5'-C5'	6.33	130.40	120.90
1	N	328	C	O5'-C5'-C4'	6.33	121.00	111.50
1	N	913	A	P-O5'-C5'	-6.33	111.41	120.90
1	N	217	C	C4'-C3'-C2'	-6.32	96.28	102.60
1	N	804	U	O4'-C1'-N1	6.32	117.98	108.50
1	N	1090	U	O4'-C1'-N1	6.32	117.98	108.50
1	N	388	G	C2'-C3'-O3'	6.32	118.97	109.50
1	N	60	A	C5'-C4'-C3'	-6.31	105.73	115.20
1	N	540	G	O4'-C4'-C3'	6.31	110.31	104.00
1	N	1151	A	C3'-C2'-C1'	6.31	107.61	101.30
1	N	837	U	P-O3'-C3'	-6.30	110.75	120.20
1	N	39	G	C5'-C4'-C3'	-6.30	106.55	116.00
1	N	1091	U	P-O3'-C3'	6.30	129.65	120.20
1	N	1275	A	O3'-P-O5'	6.30	113.45	104.00
1	N	195	A	C4'-C3'-C2'	-6.30	96.30	102.60
1	N	275	G	C4'-C3'-O3'	-6.30	103.56	113.00
1	N	723	U	O5'-C5'-C4'	6.29	120.94	111.50
1	N	423	G	C4'-C3'-C2'	6.29	108.89	102.60
1	N	717	U	O3'-P-O5'	-6.29	94.56	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	665	A	C5'-C4'-O4'	-6.29	100.36	109.80
1	N	1000	A	O4'-C1'-C2'	-6.29	101.31	107.60
1	N	1019	A	C1'-C2'-O2'	6.29	117.83	108.40
1	N	312	C	O4'-C4'-C3'	-6.29	97.72	104.00
1	N	384	G	P-O5'-C5'	6.29	130.33	120.90
1	N	493	A	C3'-C2'-C1'	-6.29	95.01	101.30
1	N	286	C	C5'-C4'-C3'	-6.28	106.58	116.00
1	N	985	C	O4'-C1'-N1	6.28	117.92	108.50
1	N	1375	A	O4'-C1'-C2'	-6.28	101.32	107.60
1	N	1216	A	O4'-C4'-C3'	-6.27	97.73	104.00
1	N	1227	A	O3'-P-O5'	-6.27	94.60	104.00
1	N	915	A	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	419	C	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	1080	A	C4'-C3'-O3'	-6.26	103.60	113.00
1	N	203	G	C5'-C4'-C3'	6.26	125.39	116.00
1	N	460	A	O5'-C5'-C4'	-6.26	102.12	111.50
1	N	1110	A	P-O3'-C3'	6.26	129.58	120.20
1	N	273	U	O5'-C5'-C4'	-6.25	102.12	111.50
1	N	76	G	C5'-C4'-C3'	-6.25	106.62	116.00
1	N	679	C	O4'-C1'-N1	6.25	117.88	108.50
1	N	1345	U	C2'-C3'-O3'	6.25	118.88	109.50
1	N	341	C	O4'-C1'-N1	6.25	117.88	108.50
1	N	793	U	P-O3'-C3'	6.25	129.58	120.20
1	N	1386	G	P-O3'-C3'	-6.25	110.82	120.20
1	N	129	A	C5'-C4'-C3'	-6.25	105.83	115.20
1	N	374	A	O4'-C4'-C3'	-6.25	97.75	104.00
1	N	1402	C	C5'-C4'-C3'	6.25	125.37	116.00
1	N	271	C	O3'-P-O5'	-6.25	94.63	104.00
1	N	271	C	C4'-C3'-C2'	-6.25	96.36	102.60
1	N	750	C	O5'-C5'-C4'	-6.24	102.14	111.50
1	N	1121	U	O4'-C1'-N1	6.24	117.86	108.50
1	N	765	G	O3'-P-O5'	-6.24	94.64	104.00
1	N	1086	U	C5'-C4'-C3'	-6.24	106.64	116.00
1	N	1272	G	C4'-C3'-C2'	-6.24	96.36	102.60
1	N	1486	G	C5'-C4'-C3'	6.24	125.36	116.00
1	N	1152	A	P-O5'-C5'	-6.23	111.55	120.90
1	N	1270	G	C4'-C3'-C2'	-6.23	96.37	102.60
1	N	1487	G	P-O5'-C5'	6.23	130.25	120.90
1	N	494	G	C4'-C3'-C2'	-6.23	96.37	102.60
1	N	491	G	C5'-C4'-C3'	-6.22	106.66	116.00
1	N	1224	U	P-O5'-C5'	6.22	130.24	120.90
1	N	811	C	O4'-C1'-N1	6.22	117.83	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1054	C	C2'-C3'-O3'	6.22	118.83	109.50
1	N	1236	A	C4'-C3'-O3'	-6.22	103.67	113.00
1	N	754	C	C4'-C3'-C2'	6.22	108.82	102.60
1	N	766	A	O3'-P-O5'	-6.21	94.68	104.00
1	N	508	U	P-O3'-C3'	6.21	129.52	120.20
1	N	143	A	O4'-C1'-C2'	-6.21	101.39	107.60
1	N	449	G	C1'-O4'-C4'	6.21	116.11	109.90
1	N	526	C	O4'-C1'-N1	6.21	117.81	108.50
1	N	730	G	P-O3'-C3'	6.21	129.51	120.20
1	N	1221	G	C4'-C3'-C2'	-6.21	96.39	102.60
1	N	1034	G	O5'-C5'-C4'	6.20	120.80	111.50
1	N	1160	G	C1'-O4'-C4'	6.20	116.10	109.90
1	N	1270	G	C5'-C4'-C3'	-6.20	106.70	116.00
1	N	83	C	O4'-C1'-N1	6.20	117.80	108.50
1	N	180	U	C2'-C3'-O3'	6.20	123.00	113.70
1	N	1309	G	P-O5'-C5'	-6.20	111.60	120.90
1	N	495	A	C4'-C3'-C2'	6.20	108.80	102.60
1	N	658	C	O4'-C4'-C3'	-6.20	97.80	104.00
1	N	1099	G	O4'-C1'-C2'	-6.20	101.40	107.60
1	N	1238	A	P-O3'-C3'	-6.19	110.91	120.20
1	N	721	G	C1'-O4'-C4'	-6.19	103.51	109.70
1	N	926	G	O4'-C4'-C3'	-6.19	97.81	104.00
1	N	970	C	O4'-C4'-C3'	6.19	110.19	104.00
1	N	669	G	O4'-C1'-C2'	-6.19	101.41	107.60
1	N	914	A	C5'-C4'-C3'	-6.19	106.72	116.00
1	N	346	G	C5'-C4'-C3'	-6.18	106.73	116.00
1	N	1384	C	C4'-C3'-C2'	-6.18	96.42	102.60
1	N	169	C	O4'-C4'-C3'	-6.18	97.82	104.00
1	N	926	G	C4'-C3'-O3'	6.18	122.27	113.00
1	N	334	C	C4'-C3'-C2'	-6.17	96.43	102.60
1	N	1102	A	P-O5'-C5'	6.17	130.16	120.90
1	N	1211	U	O4'-C1'-N1	6.17	117.45	108.20
1	N	1249	C	C1'-O4'-C4'	6.17	116.07	109.90
1	N	440	C	P-O5'-C5'	6.17	130.15	120.90
1	N	529	G	P-O3'-C3'	6.17	129.45	120.20
1	N	1101	A	P-O5'-C5'	6.17	130.15	120.90
1	N	353	A	P-O3'-C3'	6.17	129.45	120.20
1	N	769	G	P-O5'-C5'	6.17	130.15	120.90
1	N	537	G	C5'-C4'-O4'	-6.16	100.56	109.80
1	N	174	A	P-O3'-C3'	-6.16	110.96	120.20
1	N	752	G	P-O3'-C3'	6.16	129.44	120.20
1	N	973	G	P-O3'-C3'	6.16	129.44	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	424	G	P-O5'-C5'	6.15	130.13	120.90
1	N	859	G	O4'-C1'-C2'	-6.15	101.45	107.60
1	N	925	G	C5'-C4'-C3'	-6.15	106.77	116.00
1	N	185	U	O5'-C5'-C4'	-6.15	102.28	111.50
1	N	1031	C	P-O3'-C3'	-6.15	110.98	120.20
1	N	1534	A	O5'-C5'-C4'	6.15	120.92	111.70
1	N	1049	U	O4'-C1'-N1	6.15	117.42	108.20
1	N	1145	A	C3'-C2'-C1'	6.14	107.44	101.30
1	N	868	C	P-O5'-C5'	6.14	130.11	120.90
1	N	1160	G	O4'-C1'-N9	6.14	117.72	108.50
1	N	1083	U	C4'-C3'-O3'	-6.14	103.79	113.00
1	N	9	G	P-O3'-C3'	-6.13	111.00	120.20
1	N	97	G	O5'-C5'-C4'	-6.13	102.30	111.50
1	N	381	C	O4'-C1'-N1	6.13	117.70	108.50
1	N	1236	A	C3'-C2'-C1'	6.13	107.43	101.30
1	N	1380	U	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	125	U	P-O5'-C5'	6.13	130.09	120.90
1	N	718	A	C1'-O4'-C4'	6.13	116.03	109.90
1	N	437	U	P-O3'-C3'	-6.12	111.01	120.20
1	N	360	G	C5'-C4'-C3'	-6.12	106.81	116.00
1	N	1417	G	P-O3'-C3'	-6.12	111.01	120.20
1	N	1423	G	O4'-C4'-C3'	-6.12	97.88	104.00
1	N	891	U	O4'-C1'-N1	6.12	117.68	108.50
1	N	1492	A	P-O5'-C5'	6.12	130.08	120.90
1	N	214	C	O4'-C1'-N1	6.12	117.68	108.50
1	N	928	G	C5'-C4'-C3'	-6.12	106.82	116.00
1	N	1424	U	C4'-C3'-C2'	-6.12	96.48	102.60
1	N	197	A	C5'-C4'-C3'	6.12	124.37	115.20
1	N	647	C	C2'-C3'-O3'	6.12	122.87	113.70
1	N	474	G	C1'-O4'-C4'	6.11	116.01	109.90
1	N	873	A	C5'-C4'-C3'	-6.11	106.03	115.20
1	N	1310	G	C4'-C3'-O3'	-6.11	103.83	113.00
1	N	880	C	P-O5'-C5'	6.11	130.07	120.90
1	N	1134	G	O4'-C4'-C3'	-6.11	97.89	104.00
1	N	1269	A	O3'-P-O5'	-6.11	94.83	104.00
1	N	804	U	P-O3'-C3'	-6.11	111.04	120.20
1	N	123	U	O3'-P-O5'	-6.10	94.84	104.00
1	N	384	G	O4'-C1'-C2'	-6.10	101.50	107.60
1	N	996	A	C4'-C3'-O3'	-6.10	103.85	113.00
1	N	420	U	P-O5'-C5'	-6.10	111.75	120.90
1	N	1180	A	O4'-C1'-C2'	6.10	113.70	107.60
1	N	38	G	O4'-C1'-N9	6.09	117.64	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1232	U	C5'-C4'-C3'	6.09	125.14	116.00
1	N	249	U	O3'-P-O5'	-6.09	94.86	104.00
1	N	1502	A	C2'-C3'-O3'	6.09	118.64	109.50
1	N	326	G	O5'-C5'-C4'	6.09	120.64	111.50
1	N	870	U	C3'-C2'-C1'	6.09	107.59	101.50
1	N	1167	A	C2'-C3'-O3'	6.09	118.64	109.50
1	N	1075	U	O5'-C5'-C4'	-6.09	102.36	111.50
1	N	1273	C	C4'-C3'-C2'	-6.09	96.51	102.60
1	N	1228	C	O4'-C1'-N1	6.08	117.63	108.50
1	N	1251	A	O4'-C1'-N9	6.08	117.63	108.50
1	N	243	A	O4'-C1'-N9	6.08	117.63	108.50
1	N	985	C	O5'-C5'-C4'	-6.08	102.38	111.50
1	N	316	C	O4'-C4'-C3'	-6.08	97.92	104.00
1	N	449	G	P-O3'-C3'	-6.08	111.08	120.20
1	N	1490	U	O4'-C1'-N1	6.08	117.62	108.50
1	N	568	G	C1'-C2'-O2'	6.08	117.52	108.40
1	N	101	A	C4'-C3'-C2'	-6.08	96.53	102.60
1	N	696	A	C5'-C4'-C3'	6.08	125.11	116.00
1	N	1324	A	O4'-C1'-N9	6.08	117.61	108.50
1	N	1349	A	C3'-C2'-C1'	-6.08	95.22	101.30
1	N	1263	C	C2'-C3'-O3'	6.07	122.81	113.70
1	N	485	U	C4'-C3'-O3'	6.07	118.50	109.40
1	N	530	G	P-O3'-C3'	6.07	129.30	120.20
1	N	1022	A	P-O5'-C5'	-6.07	111.80	120.90
1	N	1432	G	O4'-C1'-C2'	-6.07	99.73	105.80
1	N	319	G	O4'-C4'-C3'	6.07	110.06	104.00
1	N	1512	U	C3'-C2'-C1'	6.07	107.37	101.30
1	N	895	G	P-O5'-C5'	6.06	130.00	120.90
1	N	11	G	C3'-C2'-C1'	-6.06	95.24	101.30
1	N	288	A	O5'-C5'-C4'	-6.06	102.41	111.50
1	N	203	G	C4'-C3'-C2'	-6.06	96.54	102.60
1	N	216	U	C5'-C4'-C3'	6.06	125.09	116.00
1	N	946	A	P-O5'-C5'	6.06	129.99	120.90
1	N	969	A	O4'-C1'-N9	6.06	117.29	108.20
1	N	152	A	C4'-C3'-C2'	-6.06	96.54	102.60
1	N	505	G	P-O5'-C5'	-6.05	111.82	120.90
1	N	246	A	P-O3'-C3'	6.05	129.28	120.20
1	N	1384	C	O5'-C5'-C4'	-6.05	102.42	111.50
1	N	428	G	O4'-C4'-C3'	-6.05	100.05	106.10
1	N	1143	G	O4'-C1'-N9	6.05	117.57	108.50
1	N	1368	A	P-O3'-C3'	-6.05	111.13	120.20
1	N	960	U	P-O5'-C5'	6.05	129.97	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1018	G	O4'-C4'-C3'	-6.05	97.95	104.00
1	N	1370	G	C5'-C4'-C3'	-6.05	106.93	116.00
1	N	1020	G	O4'-C1'-C2'	-6.04	101.56	107.60
1	N	1476	A	P-O5'-C5'	-6.04	111.83	120.90
1	N	923	A	C4'-C3'-O3'	-6.04	103.93	113.00
1	N	924	C	O4'-C1'-N1	6.04	117.56	108.50
1	N	1265	C	O4'-C1'-C2'	-6.03	101.57	107.60
1	N	181	A	O3'-P-O5'	-6.03	94.95	104.00
1	N	697	U	O5'-C5'-C4'	-6.03	102.45	111.50
1	N	1494	G	C4'-C3'-C2'	-6.03	96.57	102.60
1	N	1510	C	O4'-C1'-N1	6.03	117.54	108.50
1	N	866	C	C4'-C3'-O3'	-6.02	103.96	113.00
1	N	557	G	O5'-C5'-C4'	-6.02	102.47	111.50
1	N	1039	G	C3'-C2'-C1'	6.02	107.32	101.30
1	N	336	A	O4'-C1'-C2'	-6.02	101.58	107.60
1	N	851	G	P-O5'-C5'	6.02	129.93	120.90
1	N	1321	U	P-O5'-C5'	6.02	129.92	120.90
1	N	1068	G	O4'-C1'-C2'	-6.01	101.58	107.60
1	N	663	A	P-O5'-C5'	6.01	129.92	120.90
1	N	126	G	C4'-C3'-C2'	-6.01	96.59	102.60
1	N	400	C	O4'-C1'-N1	6.01	117.51	108.50
1	N	515	G	P-O5'-C5'	6.01	129.91	120.90
1	N	995	C	O4'-C4'-C3'	-6.01	97.99	104.00
1	N	1388	C	O4'-C1'-N1	6.01	117.51	108.50
1	N	117	G	P-O5'-C5'	6.00	129.91	120.90
1	N	1292	G	P-O3'-C3'	-6.00	111.19	120.20
1	N	669	G	O5'-C5'-C4'	-6.00	102.49	111.50
1	N	848	C	C5'-C4'-C3'	6.00	125.00	116.00
1	N	854	U	C4'-C3'-C2'	-6.00	96.60	102.60
1	N	30	U	C4'-C3'-C2'	6.00	108.60	102.60
1	N	602	A	O3'-P-O5'	-6.00	95.00	104.00
1	N	1435	G	C4'-C3'-O3'	-6.00	104.01	113.00
1	N	77	A	P-O3'-C3'	5.99	129.18	120.20
1	N	796	C	C4'-C3'-C2'	-5.99	96.61	102.60
1	N	528	C	O4'-C1'-C2'	-5.99	101.61	107.60
1	N	788	U	O5'-C5'-C4'	5.98	120.47	111.50
1	N	586	C	C2'-C3'-O3'	5.98	122.67	113.70
1	N	740	U	O4'-C1'-N1	5.98	117.47	108.50
1	N	846	G	C5'-C4'-C3'	-5.98	107.03	116.00
1	N	857	C	O5'-C5'-C4'	-5.98	102.53	111.50
1	N	341	C	P-O5'-C5'	5.97	129.86	120.90
1	N	423	G	C1'-O4'-C4'	-5.97	103.92	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	336	A	O4'-C4'-C3'	-5.97	98.03	104.00
1	N	429	U	C3'-C2'-C1'	-5.97	95.53	101.50
1	N	1174	G	C5'-C4'-C3'	-5.97	107.05	116.00
1	N	1420	U	O5'-C5'-C4'	-5.97	102.55	111.50
1	N	133	U	O3'-P-O5'	-5.97	95.05	104.00
1	N	1067	A	O3'-P-O5'	-5.97	95.05	104.00
1	N	449	G	C3'-C2'-C1'	5.96	107.26	101.30
1	N	155	A	O5'-C5'-C4'	-5.96	102.56	111.50
1	N	77	A	P-O5'-C5'	-5.96	111.96	120.90
1	N	561	U	O4'-C1'-N1	5.96	117.14	108.20
1	N	895	G	O4'-C1'-N9	5.96	117.44	108.50
1	N	120	A	C4'-C3'-C2'	-5.96	96.64	102.60
1	N	774	G	C1'-O4'-C4'	5.96	115.86	109.90
1	N	1179	A	P-O5'-C5'	-5.96	111.97	120.90
1	N	271	C	P-O5'-C5'	5.96	129.83	120.90
1	N	49	U	C5'-C4'-C3'	-5.95	107.07	116.00
1	N	467	U	O4'-C4'-C3'	-5.95	98.05	104.00
1	N	912	C	C3'-C2'-C1'	5.95	107.25	101.30
1	N	451	A	C2'-C3'-O3'	5.95	118.42	109.50
1	N	583	A	O4'-C1'-N9	5.95	117.42	108.50
1	N	986	U	O4'-C1'-C2'	-5.95	101.65	107.60
1	N	1170	A	C5'-C4'-C3'	5.95	124.92	116.00
1	N	1196	A	P-O5'-C5'	-5.95	111.98	120.90
1	N	1364	U	C5'-C4'-C3'	5.95	124.12	115.20
1	N	1393	U	P-O3'-C3'	5.95	129.12	120.20
1	N	315	A	C2'-C3'-O3'	5.94	118.42	109.50
1	N	1147	C	O3'-P-O5'	-5.94	95.09	104.00
1	N	1239	A	C4'-C3'-O3'	5.94	118.31	109.40
1	N	676	A	C5'-C4'-C3'	-5.94	107.09	116.00
1	N	9	G	O5'-C5'-C4'	5.93	120.40	111.50
1	N	1337	G	C4'-C3'-O3'	-5.93	104.10	113.00
1	N	1369	C	O4'-C1'-N1	5.93	117.40	108.50
1	N	1498	U	O4'-C1'-N1	5.93	117.10	108.20
1	N	735	C	P-O3'-C3'	5.93	129.10	120.20
1	N	835	U	O4'-C1'-N1	5.93	117.40	108.50
1	N	102	G	C3'-C2'-O2'	5.93	119.60	110.70
1	N	1174	G	C4'-C3'-C2'	-5.93	96.67	102.60
1	N	86	G	P-O5'-C5'	-5.93	112.01	120.90
1	N	777	A	O3'-P-O5'	-5.93	95.11	104.00
1	N	893	C	C3'-C2'-C1'	5.93	107.23	101.30
1	N	135	C	O4'-C1'-C2'	-5.93	101.67	107.60
1	N	1323	G	C2'-C3'-O3'	-5.92	104.81	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	775	G	O4'-C1'-N9	5.92	117.38	108.50
1	N	1159	U	C4'-C3'-C2'	5.92	108.52	102.60
1	N	1231	G	C5'-C4'-C3'	-5.92	107.12	116.00
1	N	17	U	C3'-C2'-C1'	5.92	107.22	101.30
1	N	243	A	C2'-C3'-O3'	-5.91	104.83	113.70
1	N	726	C	O4'-C1'-N1	5.91	117.36	108.50
1	N	150	U	C1'-O4'-C4'	5.91	115.81	109.90
1	N	791	G	P-O5'-C5'	-5.91	112.04	120.90
1	N	467	U	C5'-C4'-C3'	5.91	124.86	116.00
1	N	641	U	C3'-C2'-O2'	5.91	119.56	110.70
1	N	582	C	C4'-C3'-C2'	-5.91	96.69	102.60
1	N	1041	G	O4'-C4'-C3'	-5.91	98.09	104.00
1	N	1530	G	O5'-C5'-C4'	5.91	120.56	111.70
1	N	1241	G	O4'-C1'-C2'	-5.90	101.70	107.60
1	N	155	A	C3'-C2'-O2'	5.90	119.55	110.70
1	N	1529	G	C2'-C3'-O3'	5.90	118.35	109.50
1	N	665	A	P-O5'-C5'	-5.90	112.06	120.90
1	N	684	U	P-O5'-C5'	-5.90	112.05	120.90
1	N	1509	C	O4'-C1'-N1	5.89	117.34	108.50
1	N	1398	A	P-O3'-C3'	-5.89	111.36	120.20
1	N	1427	C	O4'-C1'-N1	5.89	117.33	108.50
1	N	724	G	C4'-C3'-O3'	-5.89	104.17	113.00
1	N	1196	A	C4'-C3'-O3'	-5.89	104.17	113.00
1	N	252	U	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	548	G	O5'-C5'-C4'	-5.89	102.67	111.50
1	N	949	A	P-O5'-C5'	5.89	129.73	120.90
1	N	1103	C	O4'-C1'-N1	5.89	117.33	108.50
1	N	986	U	P-O5'-C5'	5.88	129.73	120.90
1	N	1090	U	C4'-C3'-C2'	-5.88	96.72	102.60
1	N	1405	G	O5'-C5'-C4'	-5.88	102.67	111.50
1	N	775	G	C1'-C2'-O2'	-5.88	99.58	108.40
1	N	1062	U	C3'-C2'-C1'	5.88	107.18	101.30
1	N	1411	C	P-O3'-C3'	5.88	129.03	120.20
1	N	49	U	O3'-P-O5'	-5.88	95.18	104.00
1	N	1284	C	O4'-C1'-N1	5.88	117.31	108.50
1	N	306	A	C3'-C2'-O2'	-5.87	101.89	110.70
1	N	168	G	C4'-C3'-C2'	-5.87	96.73	102.60
1	N	1516	G	O5'-C5'-C4'	-5.87	102.70	111.50
1	N	467	U	O4'-C1'-N1	5.87	117.30	108.50
1	N	173	U	O4'-C4'-C3'	-5.87	100.23	106.10
1	N	525	C	O4'-C1'-N1	5.87	117.30	108.50
1	N	713	G	C3'-C2'-C1'	-5.87	95.44	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1235	U	C4'-C3'-C2'	-5.87	96.73	102.60
1	N	665	A	C3'-C2'-C1'	5.86	107.16	101.30
1	N	1042	A	C4'-C3'-C2'	-5.86	96.74	102.60
1	N	478	A	P-O3'-C3'	5.86	128.99	120.20
1	N	404	G	P-O3'-C3'	-5.86	111.41	120.20
1	N	1410	A	C2'-C3'-O3'	5.86	122.49	113.70
1	N	1501	C	O4'-C1'-N1	5.86	117.28	108.50
1	N	216	U	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	501	C	O4'-C1'-N1	5.85	117.28	108.50
1	N	466	A	C3'-C2'-C1'	5.85	107.15	101.30
1	N	1271	A	C4'-C3'-C2'	-5.85	96.75	102.60
1	N	1438	G	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	32	A	O5'-C5'-C4'	-5.85	102.72	111.50
1	N	946	A	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	982	U	C4'-C3'-C2'	5.85	108.45	102.60
1	N	1139	G	O3'-P-O5'	-5.84	95.23	104.00
1	N	587	G	C2'-C3'-O3'	5.84	122.46	113.70
1	N	970	C	C2'-C3'-O3'	5.84	122.47	113.70
1	N	1429	A	C3'-C2'-C1'	-5.84	95.46	101.30
1	N	1326	U	C1'-O4'-C4'	5.84	115.74	109.90
1	N	437	U	O4'-C1'-N1	5.84	117.26	108.50
1	N	911	U	O5'-C5'-C4'	-5.84	102.74	111.50
1	N	1070	U	C5'-C4'-C3'	-5.84	107.24	116.00
1	N	1277	C	C5'-C4'-C3'	5.84	124.76	116.00
1	N	500	G	O3'-P-O5'	-5.84	95.24	104.00
1	N	1171	A	P-O3'-C3'	5.84	128.96	120.20
1	N	393	A	P-O5'-C5'	5.84	129.66	120.90
1	N	586	C	P-O5'-C5'	-5.84	112.15	120.90
1	N	1345	U	O5'-C5'-C4'	-5.84	102.95	111.70
1	N	201	G	C3'-C2'-C1'	5.83	107.13	101.30
1	N	80	A	C3'-C2'-C1'	-5.83	95.47	101.30
1	N	1001	C	C4'-C3'-C2'	-5.83	96.77	102.60
1	N	1195	C	O4'-C1'-N1	5.83	117.25	108.50
1	N	121	U	P-O3'-C3'	-5.83	111.46	120.20
1	N	1173	U	O5'-C5'-C4'	-5.83	102.76	111.50
1	N	1124	G	C5'-C4'-C3'	-5.83	107.26	116.00
1	N	667	G	P-O5'-C5'	-5.82	112.17	120.90
1	N	993	G	O4'-C4'-C3'	-5.82	100.28	106.10
1	N	1481	U	O4'-C1'-C2'	-5.82	101.78	107.60
1	N	1008	U	O5'-C5'-C4'	-5.82	102.77	111.50
1	N	1318	A	C3'-C2'-C1'	5.82	107.12	101.30
1	N	1417	G	O3'-P-O5'	-5.82	95.27	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	223	A	N9-C1'-C2'	-5.82	103.27	112.00
1	N	615	G	C5'-C4'-C3'	-5.82	107.27	116.00
1	N	993	G	P-O3'-C3'	5.82	128.93	120.20
1	N	1092	A	O4'-C1'-N9	5.82	117.23	108.50
1	N	1168	U	O4'-C1'-N1	5.81	117.22	108.50
1	N	336	A	O4'-C1'-N9	5.81	117.22	108.50
1	N	1226	C	P-O3'-C3'	5.81	128.92	120.20
1	N	586	C	O5'-C5'-C4'	-5.81	102.79	111.50
1	N	591	U	C5'-C4'-C3'	5.81	124.71	116.00
1	N	875	U	O4'-C1'-N1	5.81	117.21	108.50
1	N	861	G	C5'-C4'-C3'	5.80	124.71	116.00
1	N	385	C	O4'-C1'-N1	5.80	117.20	108.50
1	N	1171	A	C5'-C4'-O4'	5.80	118.50	109.80
1	N	1172	C	O4'-C1'-N1	5.80	117.20	108.50
1	N	541	G	O5'-C5'-C4'	-5.80	102.81	111.50
1	N	38	G	C4'-C3'-C2'	-5.79	96.81	102.60
1	N	679	C	O3'-P-O5'	-5.79	95.31	104.00
1	N	734	G	P-O3'-C3'	5.79	128.89	120.20
1	N	352	C	C3'-C2'-C1'	5.79	107.09	101.30
1	N	393	A	C4'-C3'-C2'	-5.79	96.81	102.60
1	N	1275	A	P-O3'-C3'	-5.79	111.52	120.20
1	N	971	G	C4'-C3'-C2'	5.79	108.39	102.60
1	N	1277	C	O4'-C1'-N1	5.78	117.17	108.50
1	N	1349	A	P-O3'-C3'	-5.78	111.52	120.20
1	N	290	C	C2'-C3'-O3'	5.78	122.37	113.70
1	N	1227	A	P-O3'-C3'	5.78	128.87	120.20
1	N	1247	U	O4'-C1'-N1	5.78	117.17	108.50
1	N	63	C	C4'-C3'-O3'	-5.78	104.33	113.00
1	N	796	C	C2'-C3'-O3'	5.78	122.37	113.70
1	N	21	G	O5'-C5'-C4'	-5.78	102.84	111.50
1	N	144	G	P-O5'-C5'	5.78	129.56	120.90
1	N	1308	U	O4'-C1'-N1	5.78	117.16	108.50
1	N	319	G	C4'-C3'-O3'	-5.77	104.35	113.00
1	N	637	C	C5'-C4'-O4'	5.77	118.45	109.80
1	N	1320	C	O4'-C4'-C3'	-5.76	98.24	104.00
1	N	527	G	C4'-C3'-C2'	-5.76	96.84	102.60
1	N	650	G	C2'-C3'-O3'	5.76	122.34	113.70
1	N	906	A	O4'-C1'-C2'	5.76	113.36	107.60
1	N	1398	A	P-O5'-C5'	-5.76	112.26	120.90
1	N	43	C	P-O5'-C5'	5.76	129.54	120.90
1	N	803	G	P-O5'-C5'	-5.76	112.26	120.90
1	N	811	C	C5'-C4'-C3'	5.76	124.64	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1142	G	C5'-C4'-C3'	-5.76	107.36	116.00
1	N	420	U	O4'-C1'-N1	5.76	117.13	108.50
1	N	412	A	C4'-C3'-C2'	-5.75	96.85	102.60
1	N	1189	U	O4'-C1'-N1	5.75	117.13	108.50
1	N	93	U	C4'-C3'-C2'	-5.75	96.85	102.60
1	N	868	C	C4'-C3'-O3'	-5.75	104.37	113.00
1	N	509	A	C4'-C3'-C2'	-5.75	96.85	102.60
1	N	39	G	P-O5'-C5'	-5.74	112.28	120.90
1	N	378	G	P-O3'-C3'	5.74	128.82	120.20
1	N	857	C	C3'-C2'-O2'	5.74	119.31	110.70
1	N	1331	G	O4'-C1'-N9	5.74	117.11	108.50
1	N	1368	A	C5'-C4'-O4'	5.74	118.41	109.80
1	N	93	U	O4'-C4'-C3'	-5.74	98.26	104.00
1	N	946	A	C1'-O4'-C4'	5.74	115.64	109.90
1	N	1225	A	N1-C6-N6	5.74	135.81	118.60
1	N	400	C	C1'-O4'-C4'	-5.74	104.17	109.90
1	N	644	U	P-O5'-C5'	5.74	129.50	120.90
1	N	913	A	O4'-C4'-C3'	-5.74	100.36	106.10
1	N	264	C	O5'-C5'-C4'	-5.73	102.90	111.50
1	N	658	C	O4'-C1'-N1	5.73	117.10	108.50
1	N	456	A	P-O5'-C5'	-5.73	112.30	120.90
1	N	627	G	N9-C1'-C2'	-5.73	103.40	112.00
1	N	294	U	P-O3'-C3'	-5.73	111.61	120.20
1	N	495	A	C4'-C3'-O3'	5.73	117.99	109.40
1	N	699	C	O5'-C5'-C4'	-5.72	102.91	111.50
1	N	740	U	C4'-C3'-C2'	-5.72	96.88	102.60
1	N	1062	U	O4'-C1'-N1	5.72	117.08	108.50
1	N	263	A	P-O5'-C5'	-5.72	112.32	120.90
1	N	1266	G	O5'-C5'-C4'	-5.72	102.92	111.50
1	N	104	G	C4'-C3'-C2'	-5.72	96.88	102.60
1	N	185	U	C5'-C4'-C3'	-5.72	107.42	116.00
1	N	141	G	O4'-C1'-C2'	-5.71	101.89	107.60
1	N	432	A	O5'-C5'-C4'	-5.71	102.93	111.50
1	N	1082	A	C5'-C4'-C3'	-5.71	107.43	116.00
1	N	50	A	O4'-C1'-N9	5.71	116.77	108.20
1	N	1236	A	C1'-O4'-C4'	5.71	115.61	109.90
1	N	172	A	O5'-C5'-C4'	-5.71	102.94	111.50
1	N	630	A	C4'-C3'-C2'	-5.71	96.89	102.60
1	N	370	C	O4'-C1'-N1	5.71	117.06	108.50
1	N	1325	C	O3'-P-O5'	5.71	112.56	104.00
1	N	869	G	O3'-P-O5'	-5.70	95.44	104.00
1	N	213	G	O4'-C1'-C2'	5.70	113.30	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1419	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	402	G	O5'-C5'-C4'	-5.70	102.95	111.50
1	N	559	A	P-O5'-C5'	5.70	129.45	120.90
1	N	295	C	P-O5'-C5'	5.70	129.45	120.90
1	N	788	U	O4'-C1'-N1	5.70	117.05	108.50
1	N	1435	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	1247	U	C5'-C4'-O4'	-5.70	101.26	109.80
1	N	166	U	P-O3'-C3'	5.69	128.74	120.20
1	N	1473	G	O4'-C4'-C3'	-5.69	98.31	104.00
1	N	1324	A	O4'-C1'-C2'	-5.69	101.91	107.60
1	N	697	U	P-O3'-C3'	-5.69	111.67	120.20
1	N	968	A	O3'-P-O5'	-5.69	95.47	104.00
1	N	345	C	O3'-P-O5'	-5.68	95.47	104.00
1	N	158	G	O4'-C4'-C3'	-5.68	98.32	104.00
1	N	277	C	C4'-C3'-C2'	-5.68	96.92	102.60
1	N	869	G	C5'-C4'-C3'	-5.68	107.48	116.00
1	N	993	G	C2'-C3'-O3'	5.68	118.02	109.50
1	N	1382	C	N1-C1'-C2'	5.68	120.53	112.00
1	N	195	A	O4'-C1'-N9	5.68	117.02	108.50
1	N	652	U	P-O3'-C3'	5.68	128.72	120.20
1	N	1325	C	P-O3'-C3'	-5.68	111.68	120.20
1	N	1343	G	P-O3'-C3'	-5.68	111.68	120.20
1	N	1399	C	O4'-C1'-N1	5.68	116.71	108.20
1	N	778	G	O4'-C1'-N9	5.67	117.01	108.50
1	N	1109	C	O4'-C1'-N1	5.67	117.01	108.50
1	N	51	A	O4'-C1'-C2'	-5.67	100.13	105.80
1	N	1202	U	C3'-C2'-C1'	5.67	106.97	101.30
1	N	135	C	O4'-C1'-N1	5.67	117.00	108.50
1	N	769	G	O5'-C5'-C4'	-5.67	103.00	111.50
1	N	1144	G	P-O5'-C5'	5.67	129.40	120.90
1	N	1139	G	O5'-C5'-C4'	-5.67	103.20	111.70
1	N	1140	C	O4'-C1'-C2'	-5.67	100.14	105.80
1	N	1488	G	O4'-C1'-C2'	-5.67	101.94	107.60
1	N	409	U	C3'-C2'-C1'	-5.66	95.64	101.30
1	N	631	C	O4'-C1'-N1	5.66	116.69	108.20
1	N	776	G	P-O3'-C3'	5.66	128.69	120.20
1	N	96	U	C2'-C3'-O3'	5.66	117.99	109.50
1	N	492	C	P-O3'-C3'	5.66	128.69	120.20
1	N	411	A	P-O5'-C5'	5.66	129.39	120.90
1	N	785	G	O4'-C1'-C2'	-5.66	101.94	107.60
1	N	1381	U	C5'-C4'-C3'	-5.66	107.51	116.00
1	N	1040	U	O5'-C5'-C4'	-5.66	103.01	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1108	G	O5'-C5'-C4'	-5.66	103.01	111.50
1	N	140	U	O3'-P-O5'	-5.66	95.51	104.00
1	N	1238	A	C4'-C3'-O3'	-5.66	104.52	113.00
1	N	1055	A	C5'-C4'-O4'	-5.66	101.32	109.80
1	N	649	A	O4'-C4'-C3'	-5.65	98.35	104.00
1	N	134	G	O4'-C1'-C2'	-5.65	101.95	107.60
1	N	175	C	O4'-C1'-N1	5.65	116.98	108.50
1	N	251	G	P-O3'-C3'	5.65	128.68	120.20
1	N	1349	A	C2'-C3'-O3'	-5.65	105.23	113.70
1	N	818	G	O5'-C5'-C4'	5.65	119.97	111.50
1	N	134	G	O4'-C4'-C3'	-5.64	98.36	104.00
1	N	30	U	C3'-C2'-C1'	5.64	107.14	101.50
1	N	1336	C	O4'-C1'-N1	5.64	116.66	108.20
1	N	738	C	O4'-C1'-N1	5.64	116.96	108.50
1	N	770	C	O4'-C4'-C3'	-5.64	98.36	104.00
1	N	843	U	P-O3'-C3'	-5.64	111.74	120.20
1	N	244	U	O4'-C1'-N1	5.63	116.65	108.20
1	N	737	C	P-O5'-C5'	5.63	129.35	120.90
1	N	1237	C	C4'-C3'-O3'	-5.63	104.55	113.00
1	N	210	C	C2'-C3'-O3'	5.63	117.94	109.50
1	N	449	G	O3'-P-O5'	-5.63	95.56	104.00
1	N	902	G	P-O5'-C5'	5.63	129.34	120.90
1	N	317	U	C4'-C3'-O3'	-5.63	104.56	113.00
1	N	887	G	O5'-C5'-C4'	-5.63	103.06	111.50
1	N	1394	A	P-O5'-C5'	5.63	129.34	120.90
1	N	1327	C	O4'-C4'-C3'	-5.62	98.38	104.00
1	N	31	G	O5'-C5'-C4'	-5.62	103.26	111.70
1	N	1096	C	O4'-C1'-N1	5.62	116.94	108.50
1	N	1297	G	C4'-C3'-O3'	5.62	117.84	109.40
1	N	1317	C	O4'-C1'-N1	5.62	116.94	108.50
1	N	439	U	C4'-C3'-O3'	-5.62	104.57	113.00
1	N	690	G	O3'-P-O5'	-5.62	95.57	104.00
1	N	905	U	C4'-C3'-C2'	5.62	108.22	102.60
1	N	373	A	O4'-C1'-N9	5.62	116.93	108.50
1	N	1251	A	O4'-C4'-C3'	5.62	109.62	104.00
1	N	1099	G	O4'-C4'-C3'	-5.62	98.38	104.00
1	N	1371	G	C1'-C2'-O2'	5.62	116.83	108.40
1	N	136	C	O4'-C1'-C2'	-5.62	101.98	107.60
1	N	1475	G	C5'-C4'-C3'	5.62	124.42	116.00
1	N	47	C	C4'-C3'-C2'	5.61	108.21	102.60
1	N	343	U	O4'-C1'-N1	5.61	116.92	108.50
1	N	1089	G	C5'-C4'-C3'	-5.61	107.58	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	9	G	O4'-C1'-C2'	-5.61	101.99	107.60
1	N	121	U	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	1120	C	P-O3'-C3'	-5.61	111.78	120.20
1	N	1471	U	O5'-C5'-C4'	-5.61	103.08	111.50
1	N	258	G	C5'-C4'-C3'	-5.61	107.59	116.00
1	N	848	C	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	1034	G	C2'-C3'-O3'	5.61	122.11	113.70
1	N	1374	A	C5'-C4'-O4'	5.61	118.21	109.80
1	N	475	C	C4'-C3'-O3'	-5.61	104.59	113.00
1	N	868	C	O4'-C1'-N1	5.61	116.91	108.50
1	N	865	A	C4'-C3'-C2'	-5.60	97.00	102.60
1	N	1056	U	C4'-C3'-C2'	5.60	108.20	102.60
1	N	1167	A	P-O5'-C5'	-5.60	112.50	120.90
1	N	342	C	C3'-C2'-C1'	5.60	106.90	101.30
1	N	246	A	C4'-C3'-O3'	5.60	117.80	109.40
1	N	1396	A	P-O5'-C5'	5.60	129.30	120.90
1	N	1526	G	C5'-C4'-C3'	-5.60	107.60	116.00
1	N	1530	G	P-O5'-C5'	-5.60	112.50	120.90
1	N	928	G	C4'-C3'-C2'	-5.59	97.01	102.60
1	N	1507	A	O4'-C1'-N9	5.59	116.89	108.50
1	N	500	G	O4'-C1'-N9	5.59	116.89	108.50
1	N	891	U	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	830	G	O4'-C1'-N9	5.59	116.89	108.50
1	N	1020	G	O4'-C1'-N9	5.59	116.89	108.50
1	N	205	A	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	1260	G	O5'-C5'-C4'	-5.59	103.12	111.50
1	N	149	A	P-O3'-C3'	5.59	128.58	120.20
1	N	357	G	C4'-C3'-C2'	-5.59	97.01	102.60
1	N	418	C	O5'-C5'-C4'	-5.59	103.12	111.50
1	N	378	G	O4'-C1'-N9	5.58	116.87	108.50
1	N	1485	U	O4'-C1'-N1	5.58	116.88	108.50
1	N	175	C	P-O5'-C5'	5.58	129.27	120.90
1	N	299	G	C3'-C2'-C1'	5.58	106.88	101.30
1	N	1166	G	O4'-C1'-N9	5.58	116.87	108.50
1	N	282	A	O4'-C4'-C3'	-5.58	98.42	104.00
1	N	1282	C	C5'-C4'-C3'	5.58	124.36	116.00
1	N	1473	G	O4'-C1'-C2'	-5.57	102.03	107.60
1	N	394	G	P-O5'-C5'	-5.57	112.55	120.90
1	N	1207	G	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	67	C	O4'-C1'-N1	5.57	116.85	108.50
1	N	1220	G	O4'-C1'-N9	5.57	116.85	108.50
1	N	1231	G	C4'-C3'-O3'	-5.57	104.65	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1320	C	O4'-C1'-N1	5.57	116.85	108.50
1	N	1257	A	O4'-C4'-C3'	-5.57	98.43	104.00
1	N	99	C	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	306	A	C1'-O4'-C4'	5.57	115.47	109.90
1	N	391	G	C4'-C3'-C2'	5.57	108.17	102.60
1	N	554	A	C5'-C4'-C3'	5.57	124.35	116.00
1	N	857	C	C4'-C3'-C2'	-5.56	97.04	102.60
1	N	474	G	O4'-C1'-C2'	-5.56	102.04	107.60
1	N	991	U	C2'-C3'-O3'	5.56	117.84	109.50
1	N	1001	C	O5'-C5'-C4'	-5.56	103.16	111.50
1	N	1307	U	C5'-C4'-C3'	-5.56	107.66	116.00
1	N	338	A	O4'-C1'-C2'	-5.56	102.04	107.60
1	N	517	G	C4'-C3'-O3'	-5.56	104.66	113.00
1	N	42	G	O5'-C5'-C4'	-5.56	103.16	111.50
1	N	470	C	P-O3'-C3'	5.56	128.54	120.20
1	N	417	G	P-O3'-C3'	-5.56	111.86	120.20
1	N	718	A	P-O3'-C3'	5.56	128.54	120.20
1	N	1261	A	O4'-C1'-C2'	-5.55	102.05	107.60
1	N	382	A	O4'-C1'-N9	5.55	116.83	108.50
1	N	732	C	O4'-C1'-N1	5.55	116.83	108.50
1	N	114	U	C4'-C3'-C2'	5.55	108.15	102.60
1	N	962	C	C3'-C2'-C1'	-5.55	95.75	101.30
1	N	1331	G	C2'-C3'-O3'	5.55	122.02	113.70
1	N	1010	U	O3'-P-O5'	-5.54	95.68	104.00
1	N	42	G	C3'-C2'-C1'	-5.54	95.76	101.30
1	N	508	U	O4'-C1'-N1	5.54	116.52	108.20
1	N	842	U	O5'-C5'-C4'	-5.54	103.38	111.70
1	N	500	G	P-O5'-C5'	-5.54	112.59	120.90
1	N	596	A	P-O5'-C5'	5.54	129.21	120.90
1	N	1264	U	O4'-C4'-C3'	-5.54	98.46	104.00
1	N	321	A	C1'-O4'-C4'	5.54	115.44	109.90
1	N	207	C	O4'-C4'-C3'	-5.54	98.47	104.00
1	N	445	G	C4'-C3'-C2'	-5.54	97.06	102.60
1	N	1085	U	C5'-C4'-C3'	-5.54	107.70	116.00
1	N	1115	U	O4'-C1'-C2'	-5.53	102.07	107.60
1	N	737	C	C4'-C3'-C2'	-5.53	97.07	102.60
1	N	1148	U	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	152	A	P-O3'-C3'	-5.53	111.91	120.20
1	N	231	U	O4'-C1'-N1	5.53	116.79	108.50
1	N	620	C	O4'-C1'-N1	5.53	116.79	108.50
1	N	222	C	O4'-C1'-C2'	-5.53	102.08	107.60
1	N	319	G	O5'-C5'-C4'	5.53	119.79	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1417	G	C4'-C3'-O3'	-5.53	104.71	113.00
1	N	486	U	O4'-C1'-C2'	-5.52	102.08	107.60
1	N	774	G	C4'-C3'-C2'	-5.52	97.08	102.60
1	N	1498	U	C3'-C2'-C1'	5.52	107.02	101.50
1	N	618	C	O4'-C1'-C2'	-5.52	102.08	107.60
1	N	1188	A	O3'-P-O5'	-5.52	95.72	104.00
1	N	1252	A	O4'-C1'-N9	5.52	116.78	108.50
1	N	102	G	C4'-C3'-C2'	-5.52	97.08	102.60
1	N	40	C	O4'-C1'-C2'	-5.51	102.09	107.60
1	N	844	G	O4'-C1'-N9	5.51	116.77	108.50
1	N	395	C	O4'-C1'-C2'	-5.51	102.09	107.60
1	N	424	G	O4'-C1'-C2'	-5.51	102.09	107.60
1	N	761	G	O3'-P-O5'	-5.51	95.73	104.00
1	N	1262	C	O5'-C5'-C4'	-5.51	103.23	111.50
1	N	1383	C	O4'-C1'-N1	5.51	116.77	108.50
1	N	1404	C	O5'-C5'-C4'	-5.51	103.24	111.50
1	N	492	C	O4'-C1'-N1	5.51	116.76	108.50
1	N	942	G	C5'-C4'-C3'	-5.50	107.74	116.00
1	N	240	G	O3'-P-O5'	-5.50	95.74	104.00
1	N	496	A	O4'-C1'-N9	5.50	116.75	108.50
1	N	747	A	C4'-C3'-C2'	-5.50	97.10	102.60
1	N	28	A	O3'-P-O5'	-5.50	95.75	104.00
1	N	49	U	P-O5'-C5'	5.50	129.15	120.90
1	N	1131	G	O5'-C5'-C4'	-5.50	103.25	111.50
1	N	45	G	O4'-C1'-N9	5.50	116.75	108.50
1	N	792	A	C4'-C3'-C2'	5.50	108.10	102.60
1	N	876	C	P-O5'-C5'	5.50	129.15	120.90
1	N	367	U	C3'-C2'-O2'	-5.50	106.36	114.60
1	N	910	C	C5'-C4'-O4'	5.50	118.04	109.80
1	N	1021	A	C5'-C4'-C3'	5.50	124.25	116.00
1	N	1133	G	C3'-C2'-O2'	5.50	118.94	110.70
1	N	1378	C	N1-C1'-C2'	5.50	120.24	112.00
1	N	980	C	O4'-C4'-C3'	-5.49	98.51	104.00
1	N	445	G	C5'-C4'-C3'	-5.49	107.76	116.00
1	N	677	U	C1'-O4'-C4'	5.49	115.39	109.90
1	N	88	U	C2'-C3'-O3'	5.49	117.73	109.50
1	N	140	U	O5'-C5'-C4'	-5.49	103.27	111.50
1	N	132	C	C4'-C3'-C2'	5.49	108.09	102.60
1	N	306	A	C3'-C2'-C1'	5.49	106.78	101.30
1	N	879	C	O3'-P-O5'	-5.49	95.77	104.00
1	N	1049	U	C2'-C3'-O3'	5.49	117.73	109.50
1	N	33	A	C5'-C4'-C3'	5.48	124.22	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	197	A	O5'-C5'-C4'	-5.48	103.48	111.70
1	N	595	A	O4'-C1'-C2'	-5.48	100.32	105.80
1	N	987	G	C1'-C2'-O2'	5.48	116.62	108.40
1	N	124	C	O4'-C1'-C2'	-5.48	102.12	107.60
1	N	1349	A	C4'-C3'-C2'	5.48	108.08	102.60
1	N	1087	G	P-O5'-C5'	5.47	129.11	120.90
1	N	781	A	O4'-C1'-C2'	-5.47	102.13	107.60
1	N	1389	C	O4'-C1'-N1	5.47	116.71	108.50
1	N	489	C	C2'-C3'-O3'	5.47	121.91	113.70
1	N	1128	C	P-O5'-C5'	5.47	129.10	120.90
1	N	963	G	O4'-C1'-C2'	-5.47	102.13	107.60
1	N	133	U	C4'-C3'-O3'	-5.47	104.80	113.00
1	N	956	U	P-O3'-C3'	-5.47	112.00	120.20
1	N	670	G	C2'-C3'-O3'	5.46	121.90	113.70
1	N	693	G	C3'-C2'-C1'	5.46	106.76	101.30
1	N	1169	A	C1'-C2'-O2'	5.46	116.59	108.40
1	N	670	G	C5'-C4'-C3'	5.46	124.19	116.00
1	N	1066	C	C3'-C2'-C1'	5.46	106.76	101.30
1	N	1394	A	C2'-C3'-O3'	5.46	117.69	109.50
1	N	939	G	O4'-C1'-N9	5.46	116.69	108.50
1	N	1002	G	C4'-C3'-C2'	-5.46	97.14	102.60
1	N	1486	G	C4'-C3'-C2'	-5.46	97.14	102.60
1	N	388	G	C5'-C4'-C3'	5.46	123.38	115.20
1	N	834	U	O4'-C1'-N1	5.46	116.68	108.50
1	N	1447	A	P-O3'-C3'	5.46	128.38	120.20
1	N	1530	G	C4'-C3'-O3'	5.46	117.58	109.40
1	N	445	G	C1'-O4'-C4'	5.45	115.35	109.90
1	N	601	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	1124	G	P-O5'-C5'	5.45	129.08	120.90
1	N	258	G	O4'-C1'-C2'	-5.45	102.15	107.60
1	N	936	C	O4'-C1'-C2'	-5.45	102.15	107.60
1	N	4	U	P-O3'-C3'	-5.45	112.03	120.20
1	N	392	C	O4'-C1'-N1	5.45	116.67	108.50
1	N	167	A	O5'-C5'-C4'	-5.45	103.33	111.50
1	N	602	A	C2'-C3'-O3'	5.45	121.87	113.70
1	N	1228	C	P-O5'-C5'	-5.45	112.73	120.90
1	N	838	G	P-O5'-C5'	5.44	129.06	120.90
1	N	395	C	O4'-C1'-N1	5.44	116.66	108.50
1	N	1092	A	C5'-C4'-C3'	5.44	124.16	116.00
1	N	1395	C	O3'-P-O5'	-5.44	95.84	104.00
1	N	1116	U	O4'-C1'-N1	5.44	116.66	108.50
1	N	1242	G	P-O3'-C3'	-5.44	112.05	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1500	A	O5'-C5'-C4'	5.44	119.66	111.50
1	N	503	C	P-O5'-C5'	5.43	129.05	120.90
1	N	234	C	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	1110	A	P-O5'-C5'	5.43	129.05	120.90
1	N	1430	A	C5'-C4'-C3'	5.43	124.15	116.00
1	N	205	A	P-O5'-C5'	-5.43	112.75	120.90
1	N	399	G	O5'-C5'-C4'	-5.43	103.35	111.50
1	N	905	U	N1-C1'-C2'	5.43	120.15	112.00
1	N	222	C	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	447	G	N9-C1'-C2'	-5.43	103.86	112.00
1	N	559	A	O4'-C1'-C2'	5.43	111.23	105.80
1	N	720	C	O5'-C5'-C4'	5.43	119.64	111.50
1	N	764	C	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	817	C	C4'-C3'-O3'	5.43	117.55	109.40
1	N	1069	C	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	56	U	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	695	A	P-O3'-C3'	5.43	128.34	120.20
1	N	318	G	P-O3'-C3'	-5.43	112.06	120.20
1	N	891	U	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	678	U	O4'-C1'-N1	5.42	116.64	108.50
1	N	182	A	C1'-O4'-C4'	5.42	115.12	109.70
1	N	204	G	C5'-C4'-C3'	5.42	124.14	116.00
1	N	415	A	O5'-C5'-C4'	-5.42	103.37	111.50
1	N	797	C	O4'-C1'-N1	5.42	116.64	108.50
1	N	185	U	O4'-C1'-N1	5.42	116.63	108.50
1	N	295	C	O3'-P-O5'	-5.42	95.87	104.00
1	N	762	U	O4'-C1'-N1	5.42	116.63	108.50
1	N	393	A	O4'-C4'-C3'	-5.42	98.58	104.00
1	N	77	A	C5'-C4'-C3'	-5.42	107.87	116.00
1	N	168	G	O5'-C5'-C4'	-5.42	103.38	111.50
1	N	1522	U	C5'-C4'-C3'	5.41	124.12	116.00
1	N	927	G	C4'-C3'-C2'	-5.41	97.19	102.60
1	N	329	A	C5'-C4'-C3'	-5.41	107.08	115.20
1	N	1276	G	P-O5'-C5'	5.41	129.01	120.90
1	N	1308	U	O4'-C1'-C2'	-5.41	102.19	107.60
1	N	316	C	O4'-C1'-N1	5.41	116.61	108.50
1	N	120	A	N9-C1'-C2'	5.41	120.11	112.00
1	N	195	A	C4'-C3'-O3'	-5.41	104.89	113.00
1	N	867	G	O4'-C1'-N9	5.41	116.61	108.50
1	N	957	U	P-O3'-C3'	5.41	128.31	120.20
1	N	10	A	P-O3'-C3'	-5.40	112.09	120.20
1	N	1469	C	O4'-C1'-N1	5.40	116.61	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	31	G	C5'-C4'-O4'	5.40	117.20	109.10
1	N	184	G	O4'-C1'-N9	5.40	116.60	108.50
1	N	936	C	C5'-C4'-O4'	5.40	117.90	109.80
1	N	1256	A	P-O3'-C3'	5.40	128.30	120.20
1	N	185	U	C4'-C3'-O3'	-5.40	104.91	113.00
1	N	1284	C	P-O5'-C5'	5.40	128.99	120.90
1	N	1501	C	O4'-C4'-C3'	-5.40	98.60	104.00
1	N	189	A	P-O3'-C3'	-5.39	112.11	120.20
1	N	231	U	P-O3'-C3'	5.39	128.29	120.20
1	N	566	G	C5'-C4'-C3'	-5.39	107.11	115.20
1	N	742	G	C4'-C3'-C2'	-5.39	97.21	102.60
1	N	756	C	O4'-C1'-N1	5.39	116.59	108.50
1	N	792	A	O4'-C4'-C3'	-5.39	100.71	106.10
1	N	815	A	P-O3'-C3'	5.39	128.29	120.20
1	N	1099	G	O4'-C1'-N9	5.39	116.59	108.50
1	N	212	G	C5'-C4'-C3'	5.39	124.09	116.00
1	N	258	G	P-O5'-C5'	5.39	128.99	120.90
1	N	366	A	C4'-C3'-C2'	5.39	107.99	102.60
1	N	996	A	O5'-C5'-C4'	-5.39	103.42	111.50
1	N	184	G	O3'-P-O5'	-5.39	95.92	104.00
1	N	954	G	P-O5'-C5'	5.39	128.98	120.90
1	N	1371	G	C5'-C4'-C3'	-5.38	107.92	116.00
1	N	244	U	C4'-C3'-O3'	5.38	117.47	109.40
1	N	553	A	O4'-C1'-N9	5.38	116.57	108.50
1	N	637	C	P-O5'-C5'	5.38	128.97	120.90
1	N	991	U	C3'-C2'-O2'	-5.38	106.53	114.60
1	N	15	G	C4'-C3'-O3'	-5.38	104.93	113.00
1	N	534	U	O4'-C4'-C3'	-5.38	98.62	104.00
1	N	801	U	O4'-C4'-C3'	-5.38	98.62	104.00
1	N	1015	G	C5'-C4'-C3'	5.38	124.07	116.00
1	N	736	C	O4'-C1'-N1	5.38	116.56	108.50
1	N	871	U	C4'-C3'-C2'	-5.38	97.22	102.60
1	N	115	G	O4'-C1'-N9	5.37	116.26	108.20
1	N	139	A	C4'-C3'-C2'	-5.37	97.23	102.60
1	N	142	G	O4'-C1'-N9	5.37	116.55	108.50
1	N	1374	A	C1'-O4'-C4'	5.37	115.27	109.90
1	N	1385	G	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	52	C	P-O3'-C3'	-5.37	112.15	120.20
1	N	289	G	O4'-C4'-C3'	5.37	109.37	104.00
1	N	445	G	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	558	G	C5'-C4'-C3'	5.37	124.05	116.00
1	N	879	C	O4'-C1'-N1	5.36	116.55	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	220	G	O3'-P-O5'	-5.36	95.96	104.00
1	N	783	C	C5'-C4'-O4'	5.36	117.84	109.80
1	N	966	G	P-O3'-C3'	5.36	128.24	120.20
1	N	1112	C	P-O3'-C3'	-5.36	112.16	120.20
1	N	1206	G	O5'-C5'-C4'	-5.36	103.46	111.50
1	N	361	G	C4'-C3'-O3'	-5.36	104.96	113.00
1	N	1314	C	O4'-C1'-N1	5.36	116.54	108.50
1	N	533	A	O4'-C4'-C3'	-5.36	100.74	106.10
1	N	855	U	C5'-C4'-C3'	-5.36	107.96	116.00
1	N	960	U	C1'-O4'-C4'	-5.36	104.34	109.70
1	N	168	G	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	652	U	O4'-C4'-C3'	5.35	109.35	104.00
1	N	869	G	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	1232	U	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	1489	G	O4'-C1'-N9	5.35	116.52	108.50
1	N	511	C	C1'-O4'-C4'	-5.35	104.35	109.70
1	N	711	G	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	1312	G	P-O5'-C5'	-5.35	112.88	120.90
1	N	151	A	P-O5'-C5'	-5.34	112.88	120.90
1	N	527	G	C1'-O4'-C4'	5.34	115.24	109.90
1	N	656	G	O4'-C1'-N9	5.34	116.52	108.50
1	N	773	G	P-O3'-C3'	5.34	128.22	120.20
1	N	1091	U	O4'-C1'-N1	5.34	116.52	108.50
1	N	1231	G	O4'-C1'-N9	5.34	116.52	108.50
1	N	1275	A	C5'-C4'-C3'	-5.34	107.98	116.00
1	N	1306	A	C5'-C4'-C3'	5.34	124.02	116.00
1	N	891	U	C4'-C3'-C2'	-5.34	97.26	102.60
1	N	94	G	C5'-C4'-C3'	-5.34	107.19	115.20
1	N	272	C	C4'-C3'-C2'	-5.34	97.26	102.60
1	N	306	A	O4'-C1'-C2'	-5.34	102.26	107.60
1	N	835	U	O5'-C5'-C4'	-5.34	103.49	111.50
1	N	869	G	P-O5'-C5'	5.34	128.91	120.90
1	N	1260	G	P-O3'-C3'	5.34	128.21	120.20
1	N	171	A	O4'-C1'-N9	5.34	116.51	108.50
1	N	426	U	C1'-C2'-O2'	5.34	116.41	108.40
1	N	462	G	P-O5'-C5'	5.34	128.91	120.90
1	N	528	C	O4'-C1'-N1	5.34	116.51	108.50
1	N	1471	U	O3'-P-O5'	-5.34	95.99	104.00
1	N	748	G	C1'-O4'-C4'	5.34	115.24	109.90
1	N	466	A	O3'-P-O5'	5.33	112.00	104.00
1	N	493	A	O4'-C1'-C2'	5.33	112.94	107.60
1	N	101	A	C5'-C4'-C3'	-5.33	108.00	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	119	A	O3'-P-O5'	5.33	112.00	104.00
1	N	688	G	C5'-C4'-C3'	-5.33	108.01	116.00
1	N	852	G	C4'-C3'-C2'	-5.33	97.27	102.60
1	N	1036	A	O3'-P-O5'	-5.33	96.01	104.00
1	N	1130	A	N1-C6-N6	5.33	134.58	118.60
1	N	234	C	O4'-C1'-N1	5.33	116.49	108.50
1	N	138	G	C5'-C4'-C3'	5.33	123.99	116.00
1	N	923	A	O4'-C1'-C2'	-5.33	102.28	107.60
1	N	247	G	P-O3'-C3'	-5.32	112.22	120.20
1	N	594	U	C1'-O4'-C4'	5.32	115.22	109.90
1	N	912	C	C2'-C3'-O3'	5.32	121.68	113.70
1	N	1191	A	O4'-C1'-N9	5.32	116.48	108.50
1	N	1371	G	C4'-C3'-O3'	-5.32	105.02	113.00
1	N	917	G	C4'-C3'-C2'	-5.32	97.28	102.60
1	N	1100	C	O4'-C1'-N1	5.32	116.48	108.50
1	N	140	U	C2'-C3'-O3'	5.32	121.68	113.70
1	N	727	G	C3'-C2'-C1'	5.32	106.62	101.30
1	N	194	C	C4'-C3'-O3'	-5.32	105.03	113.00
1	N	675	A	P-O5'-C5'	-5.32	112.93	120.90
1	N	767	A	O3'-P-O5'	5.32	111.97	104.00
1	N	823	C	O4'-C1'-N1	5.32	116.47	108.50
1	N	1085	U	C4'-C3'-O3'	-5.32	105.03	113.00
1	N	1454	G	O4'-C1'-N9	5.32	116.47	108.50
1	N	1107	C	P-O3'-C3'	-5.31	112.23	120.20
1	N	1218	C	C4'-C3'-O3'	-5.31	105.03	113.00
1	N	494	G	N9-C1'-C2'	5.31	119.97	112.00
1	N	1296	C	P-O3'-C3'	5.31	128.16	120.20
1	N	820	U	P-O3'-C3'	5.31	128.16	120.20
1	N	1000	A	O4'-C4'-C3'	-5.31	98.69	104.00
1	N	858	G	C3'-C2'-C1'	-5.31	95.99	101.30
1	N	1201	A	C3'-C2'-C1'	5.30	106.81	101.50
1	N	533	A	C4'-C3'-O3'	5.30	117.36	109.40
1	N	1532	U	O4'-C1'-N1	5.30	116.45	108.50
1	N	272	C	O4'-C1'-N1	5.30	116.45	108.50
1	N	494	G	C5'-C4'-C3'	-5.30	108.05	116.00
1	N	1129	C	O4'-C1'-N1	5.30	116.45	108.50
1	N	1472	U	O4'-C4'-C3'	-5.30	98.70	104.00
1	N	374	A	C3'-C2'-O2'	5.30	118.65	110.70
1	N	920	U	C4'-C3'-C2'	-5.30	97.30	102.60
1	N	97	G	O4'-C4'-C3'	-5.30	98.70	104.00
1	N	793	U	O4'-C1'-N1	5.30	116.45	108.50
1	N	1261	A	O4'-C1'-N9	5.30	116.45	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1118	U	C5'-C4'-C3'	5.29	123.94	116.00
1	N	1303	C	C5'-C4'-O4'	-5.29	101.86	109.80
1	N	865	A	C2'-C3'-O3'	5.29	121.64	113.70
1	N	869	G	C3'-C2'-O2'	5.29	118.63	110.70
1	N	1122	U	P-O5'-C5'	5.29	128.83	120.90
1	N	77	A	C5'-C4'-O4'	5.28	117.72	109.80
1	N	302	G	N9-C1'-C2'	5.28	119.92	112.00
1	N	63	C	O4'-C1'-N1	5.28	116.42	108.50
1	N	84	U	C1'-O4'-C4'	-5.28	104.62	109.90
1	N	441	A	O5'-C5'-C4'	5.28	119.42	111.50
1	N	1222	G	O4'-C1'-N9	5.28	116.42	108.50
1	N	501	C	O3'-P-O5'	-5.28	96.08	104.00
1	N	590	U	O5'-C5'-C4'	-5.28	103.58	111.50
1	N	721	G	P-O3'-C3'	5.28	128.12	120.20
1	N	851	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	N	1198	G	P-O5'-C5'	-5.28	112.98	120.90
1	N	1040	U	C1'-O4'-C4'	5.28	115.18	109.90
1	N	338	A	C4'-C3'-C2'	-5.28	97.33	102.60
1	N	890	G	C1'-O4'-C4'	-5.28	104.42	109.70
1	N	1231	G	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	109	A	O4'-C1'-N9	5.27	116.41	108.50
1	N	689	C	O4'-C1'-N1	5.27	116.41	108.50
1	N	48	C	P-O5'-C5'	-5.27	112.99	120.90
1	N	508	U	C5'-C4'-C3'	-5.27	107.29	115.20
1	N	1143	G	C5'-C4'-C3'	-5.27	108.09	116.00
1	N	617	G	O4'-C4'-C3'	5.27	109.27	104.00
1	N	59	A	P-O3'-C3'	5.26	128.10	120.20
1	N	569	C	C4'-C3'-C2'	5.26	107.86	102.60
1	N	71	A	O3'-P-O5'	-5.26	96.11	104.00
1	N	166	U	O4'-C1'-N1	5.26	116.39	108.50
1	N	855	U	C4'-C3'-O3'	-5.26	105.11	113.00
1	N	1531	A	O4'-C1'-N9	5.26	116.39	108.50
1	N	568	G	C5'-C4'-C3'	-5.26	108.11	116.00
1	N	843	U	C1'-O4'-C4'	-5.26	104.64	109.90
1	N	1414	U	C3'-C2'-O2'	5.26	118.59	110.70
1	N	1315	U	O4'-C1'-N1	5.26	116.39	108.50
1	N	112	G	P-O5'-C5'	-5.26	113.02	120.90
1	N	232	G	O4'-C4'-C3'	-5.26	98.74	104.00
1	N	1062	U	P-O5'-C5'	5.26	128.78	120.90
1	N	186	C	C4'-C3'-C2'	-5.25	97.35	102.60
1	N	815	A	O5'-C5'-C4'	-5.25	103.62	111.50
1	N	664	G	O3'-P-O5'	-5.25	96.12	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	777	A	C5'-C4'-O4'	5.25	117.68	109.80
1	N	373	A	C5'-C4'-O4'	-5.25	101.93	109.80
1	N	90	C	P-O3'-C3'	5.25	128.07	120.20
1	N	176	C	C3'-C2'-C1'	-5.25	96.05	101.30
1	N	668	G	O4'-C1'-N9	5.25	116.37	108.50
1	N	239	U	O4'-C1'-N1	5.24	116.36	108.50
1	N	727	G	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	1024	G	C5'-C4'-C3'	5.24	123.87	116.00
1	N	1147	C	P-O5'-C5'	5.24	128.77	120.90
1	N	1335	U	P-O3'-C3'	5.24	128.07	120.20
1	N	154	U	P-O3'-C3'	-5.24	112.34	120.20
1	N	378	G	C2'-C3'-O3'	-5.24	105.84	113.70
1	N	429	U	O4'-C1'-N1	5.24	116.06	108.20
1	N	559	A	C4'-C3'-O3'	5.24	117.26	109.40
1	N	1387	G	C5'-C4'-C3'	5.24	123.86	116.00
1	N	1467	C	O4'-C1'-N1	5.24	116.36	108.50
1	N	1231	G	O4'-C4'-C3'	-5.24	98.77	104.00
1	N	440	C	C4'-C3'-C2'	5.23	107.83	102.60
1	N	1372	U	O4'-C1'-N1	5.23	116.35	108.50
1	N	1072	G	P-O3'-C3'	5.23	128.05	120.20
1	N	1453	G	O5'-C5'-C4'	-5.23	103.66	111.50
1	N	584	G	O3'-P-O5'	-5.23	96.16	104.00
1	N	1302	C	O5'-C5'-C4'	-5.23	103.66	111.50
1	N	524	G	C1'-O4'-C4'	5.23	115.13	109.90
1	N	905	U	O4'-C1'-N1	5.23	116.34	108.50
1	N	461	A	N9-C1'-C2'	-5.22	104.16	112.00
1	N	739	C	P-O3'-C3'	-5.22	112.36	120.20
1	N	1185	G	O4'-C4'-C3'	-5.22	98.78	104.00
1	N	13	U	C4'-C3'-C2'	5.22	107.82	102.60
1	N	255	G	C5'-C4'-C3'	5.22	123.83	116.00
1	N	346	G	O4'-C4'-C3'	5.22	109.22	104.00
1	N	723	U	P-O3'-C3'	-5.22	112.37	120.20
1	N	1521	C	C5'-C4'-C3'	-5.22	108.17	116.00
1	N	490	C	O4'-C1'-N1	5.22	116.33	108.50
1	N	957	U	O5'-C5'-C4'	-5.22	103.67	111.50
1	N	1437	A	O4'-C1'-N9	5.22	116.33	108.50
1	N	1128	C	C4'-C3'-O3'	-5.21	105.18	113.00
1	N	399	G	O4'-C1'-N9	5.21	116.32	108.50
1	N	631	C	C2'-C3'-O3'	5.21	117.32	109.50
1	N	15	G	P-O5'-C5'	-5.21	113.09	120.90
1	N	17	U	C5'-C4'-C3'	5.21	123.81	116.00
1	N	440	C	C4'-C3'-O3'	-5.21	105.19	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	878	A	O4'-C1'-N9	5.21	116.31	108.50
1	N	1103	C	C4'-C3'-O3'	-5.21	105.19	113.00
1	N	1289	A	P-O5'-C5'	-5.21	113.09	120.90
1	N	126	G	P-O3'-C3'	5.21	128.01	120.20
1	N	794	A	C2'-C3'-O3'	-5.21	105.89	113.70
1	N	904	U	O4'-C1'-N1	5.21	116.31	108.50
1	N	1236	A	C2'-C3'-O3'	5.21	121.51	113.70
1	N	1359	C	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	1489	G	P-O5'-C5'	-5.21	113.09	120.90
1	N	4	U	C3'-C2'-C1'	5.20	106.70	101.50
1	N	566	G	O4'-C1'-N9	5.20	116.00	108.20
1	N	1126	U	O5'-C5'-C4'	-5.20	103.90	111.70
1	N	1151	A	C5'-C4'-O4'	-5.20	102.00	109.80
1	N	1239	A	P-O3'-C3'	5.20	128.00	120.20
1	N	1242	G	O4'-C4'-C3'	-5.20	98.80	104.00
1	N	313	A	C5'-C4'-C3'	-5.20	108.20	116.00
1	N	577	G	C5'-C4'-C3'	5.20	123.80	116.00
1	N	1140	C	O3'-P-O5'	-5.20	96.20	104.00
1	N	299	G	C5'-C4'-C3'	5.20	123.80	116.00
1	N	691	G	P-O5'-C5'	5.20	128.70	120.90
1	N	926	G	C2'-C3'-O3'	-5.20	105.90	113.70
1	N	972	C	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	1153	G	O5'-C5'-C4'	-5.20	103.70	111.50
1	N	40	C	P-O3'-C3'	5.20	127.99	120.20
1	N	1147	C	N1-C1'-C2'	5.20	119.79	112.00
1	N	1190	G	O4'-C1'-N9	5.20	115.99	108.20
1	N	1203	C	C4'-C3'-C2'	-5.20	97.41	102.60
1	N	222	C	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	494	G	O4'-C1'-N9	5.19	116.29	108.50
1	N	948	C	C5'-C4'-O4'	5.19	117.59	109.80
1	N	475	C	O4'-C1'-N1	5.19	116.29	108.50
1	N	771	G	O4'-C1'-C2'	-5.19	102.41	107.60
1	N	1239	A	O4'-C4'-C3'	-5.19	100.91	106.10
1	N	1454	G	C1'-O4'-C4'	5.19	115.09	109.90
1	N	1521	C	O4'-C1'-N1	5.19	116.29	108.50
1	N	1253	G	P-O3'-C3'	-5.19	112.42	120.20
1	N	552	U	O4'-C1'-N1	5.19	116.28	108.50
1	N	1202	U	O4'-C1'-N1	5.19	116.28	108.50
1	N	173	U	C2'-C3'-O3'	5.19	117.28	109.50
1	N	87	C	C2'-C3'-O3'	-5.18	105.92	113.70
1	N	286	C	C3'-C2'-C1'	-5.18	96.12	101.30
1	N	304	U	O4'-C1'-N1	5.18	116.28	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1061	G	O4'-C1'-C2'	-5.18	102.42	107.60
1	N	1283	U	P-O5'-C5'	5.18	128.68	120.90
1	N	86	G	C3'-C2'-O2'	-5.18	106.83	114.60
1	N	337	G	C4'-C3'-C2'	-5.18	97.42	102.60
1	N	630	A	C4'-C3'-O3'	-5.18	105.23	113.00
1	N	1237	C	C2'-C3'-O3'	5.18	121.47	113.70
1	N	164	G	P-O3'-C3'	-5.18	112.43	120.20
1	N	641	U	C1'-O4'-C4'	5.18	115.08	109.90
1	N	1165	U	O5'-C5'-C4'	-5.18	103.73	111.50
1	N	23	C	O4'-C1'-N1	5.18	116.27	108.50
1	N	243	A	C1'-O4'-C4'	5.18	115.08	109.90
1	N	1463	U	O4'-C1'-C2'	-5.18	102.42	107.60
1	N	507	C	P-O3'-C3'	5.18	127.96	120.20
1	N	902	G	P-O3'-C3'	5.18	127.97	120.20
1	N	140	U	P-O5'-C5'	5.17	128.66	120.90
1	N	1302	C	N1-C1'-C2'	5.17	119.76	112.00
1	N	117	G	O3'-P-O5'	-5.17	96.24	104.00
1	N	244	U	O3'-P-O5'	5.17	111.76	104.00
1	N	496	A	O4'-C4'-C3'	5.17	109.17	104.00
1	N	823	C	P-O3'-C3'	5.17	127.96	120.20
1	N	471	U	C4'-C3'-C2'	-5.17	97.43	102.60
1	N	1473	G	C1'-O4'-C4'	5.17	115.07	109.90
1	N	1508	A	C4'-C3'-C2'	-5.17	97.43	102.60
1	N	198	G	O4'-C4'-C3'	5.17	109.17	104.00
1	N	734	G	P-O5'-C5'	5.17	128.65	120.90
1	N	1461	G	P-O3'-C3'	-5.17	112.45	120.20
1	N	313	A	P-O3'-C3'	-5.16	112.45	120.20
1	N	1118	U	C4'-C3'-C2'	5.16	107.76	102.60
1	N	20	U	C4'-C3'-C2'	-5.16	97.44	102.60
1	N	497	G	C3'-C2'-C1'	5.16	106.46	101.30
1	N	594	U	O3'-P-O5'	5.16	111.74	104.00
1	N	245	U	O4'-C1'-N1	5.16	116.24	108.50
1	N	271	C	O5'-C5'-C4'	-5.16	103.76	111.50
1	N	1295	U	O5'-C5'-C4'	-5.16	103.76	111.50
1	N	1304	G	P-O3'-C3'	5.16	127.94	120.20
1	N	1372	U	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	733	G	C2'-C3'-O3'	5.16	117.24	109.50
1	N	1389	C	C4'-C3'-C2'	-5.16	97.44	102.60
1	N	366	A	C4'-C3'-O3'	5.15	117.13	109.40
1	N	1525	G	P-O3'-C3'	-5.15	112.47	120.20
1	N	389	A	N9-C1'-C2'	5.15	119.72	112.00
1	N	891	U	O4'-C4'-C3'	-5.15	98.85	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	935	A	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	294	U	O4'-C1'-N1	5.15	116.22	108.50
1	N	884	U	C2'-C3'-O3'	5.15	117.22	109.50
1	N	683	G	P-O3'-C3'	5.15	127.92	120.20
1	N	1024	G	P-O3'-C3'	-5.15	112.48	120.20
1	N	81	A	O5'-C5'-C4'	-5.14	103.98	111.70
1	N	40	C	O4'-C1'-N1	5.14	116.21	108.50
1	N	502	A	C3'-C2'-C1'	-5.14	96.16	101.30
1	N	701	U	C1'-C2'-O2'	5.14	116.11	108.40
1	N	405	U	C4'-C3'-O3'	-5.14	105.29	113.00
1	N	1192	C	P-O5'-C5'	-5.14	113.19	120.90
1	N	18	C	O4'-C1'-N1	5.14	116.21	108.50
1	N	765	G	O4'-C1'-N9	5.14	116.21	108.50
1	N	1220	G	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	912	C	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	1066	C	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	1509	C	O4'-C4'-C3'	-5.14	98.86	104.00
1	N	1292	G	P-O5'-C5'	5.13	128.60	120.90
1	N	784	A	O4'-C1'-N9	5.13	116.20	108.50
1	N	888	G	C2'-C3'-O3'	5.13	121.40	113.70
1	N	930	C	O4'-C1'-N1	5.13	116.20	108.50
1	N	1239	A	C3'-C2'-C1'	-5.13	96.37	101.50
1	N	1249	C	O4'-C4'-C3'	-5.13	98.87	104.00
1	N	212	G	C4'-C3'-O3'	-5.13	105.31	113.00
1	N	246	A	C2'-C3'-O3'	5.13	117.19	109.50
1	N	412	A	O4'-C1'-C2'	-5.13	100.67	105.80
1	N	1265	C	O4'-C1'-N1	5.13	116.19	108.50
1	N	267	C	P-O5'-C5'	-5.12	113.21	120.90
1	N	979	C	O4'-C1'-N1	5.12	116.19	108.50
1	N	128	G	O4'-C1'-N9	5.12	116.19	108.50
1	N	314	C	P-O3'-C3'	-5.12	112.51	120.20
1	N	95	C	C1'-C2'-O2'	5.12	116.08	108.40
1	N	317	U	O4'-C4'-C3'	-5.12	98.88	104.00
1	N	723	U	O4'-C4'-C3'	-5.12	98.88	104.00
1	N	163	C	O4'-C1'-N1	5.12	116.17	108.50
1	N	717	U	O4'-C1'-N1	5.12	115.87	108.20
1	N	4	U	O5'-C5'-C4'	5.11	119.37	111.70
1	N	147	G	P-O5'-C5'	5.11	128.57	120.90
1	N	18	C	C3'-C2'-O2'	5.11	118.37	110.70
1	N	1216	A	O4'-C1'-N9	5.11	116.17	108.50
1	N	116	A	C4'-C3'-O3'	-5.11	105.34	113.00
1	N	1498	U	C4'-C3'-O3'	5.11	117.06	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	185	U	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	289	G	O4'-C1'-N9	5.11	116.16	108.50
1	N	56	U	P-O3'-C3'	-5.11	112.54	120.20
1	N	325	A	P-O3'-C3'	-5.11	112.54	120.20
1	N	821	G	C5'-C4'-C3'	-5.11	108.34	116.00
1	N	1092	A	P-O5'-C5'	-5.11	113.24	120.90
1	N	1289	A	O3'-P-O5'	5.11	111.66	104.00
1	N	182	A	C5'-C4'-C3'	-5.10	107.55	115.20
1	N	210	C	P-O5'-C5'	5.10	128.55	120.90
1	N	1355	G	C4'-C3'-C2'	-5.10	97.50	102.60
1	N	511	C	O4'-C1'-N1	5.10	115.85	108.20
1	N	562	U	P-O3'-C3'	-5.10	112.55	120.20
1	N	611	C	O4'-C1'-C2'	-5.10	102.50	107.60
1	N	282	A	C1'-O4'-C4'	5.10	115.00	109.90
1	N	695	A	C1'-C2'-O2'	5.10	116.05	108.40
1	N	893	C	C2'-C3'-O3'	5.10	121.35	113.70
1	N	1146	A	P-O5'-C5'	-5.10	113.25	120.90
1	N	1319	A	O3'-P-O5'	-5.10	96.35	104.00
1	N	638	U	O5'-C5'-C4'	-5.10	103.85	111.50
1	N	927	G	C1'-O4'-C4'	-5.10	104.80	109.90
1	N	894	G	O4'-C1'-N9	5.10	116.14	108.50
1	N	109	A	C2'-C3'-O3'	-5.09	106.06	113.70
1	N	1358	U	C3'-C2'-C1'	5.09	106.39	101.30
1	N	446	G	C1'-O4'-C4'	-5.09	104.81	109.90
1	N	510	A	O4'-C1'-N9	5.09	116.14	108.50
1	N	325	A	O4'-C1'-C2'	-5.09	102.51	107.60
1	N	795	C	N1-C1'-C2'	5.09	119.64	112.00
1	N	1046	A	O4'-C4'-C3'	-5.09	98.91	104.00
1	N	646	G	O4'-C1'-C2'	-5.09	102.51	107.60
1	N	1168	U	C5'-C4'-O4'	5.09	117.43	109.80
1	N	218	U	C5'-C4'-O4'	5.09	117.43	109.80
1	N	431	A	O3'-P-O5'	-5.09	96.37	104.00
1	N	13	U	C3'-C2'-C1'	-5.08	96.42	101.50
1	N	1092	A	C5'-C4'-O4'	-5.08	102.18	109.80
1	N	725	G	O4'-C1'-C2'	5.08	112.68	107.60
1	N	1108	G	C5'-C4'-C3'	5.08	123.62	116.00
1	N	401	C	P-O3'-C3'	-5.08	112.58	120.20
1	N	1270	G	O4'-C4'-C3'	5.08	109.08	104.00
1	N	105	G	O5'-C5'-C4'	-5.08	103.88	111.50
1	N	337	G	C1'-C2'-O2'	5.08	116.01	108.40
1	N	582	C	O5'-C5'-C4'	-5.07	103.89	111.50
1	N	701	U	C5'-C4'-O4'	5.07	117.41	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	736	C	C4'-C3'-O3'	-5.07	105.39	113.00
1	N	1112	C	O4'-C4'-C3'	-5.07	98.93	104.00
1	N	171	A	O4'-C1'-C2'	-5.07	102.53	107.60
1	N	1453	G	C5'-C4'-C3'	-5.07	108.39	116.00
1	N	422	C	C5'-C4'-O4'	5.07	116.70	109.10
1	N	662	U	P-O5'-C5'	5.07	128.50	120.90
1	N	1136	C	C2'-C3'-O3'	5.07	117.10	109.50
1	N	1409	C	O4'-C1'-N1	5.07	116.10	108.50
1	N	177	G	P-O3'-C3'	-5.07	112.60	120.20
1	N	470	C	O4'-C1'-N1	5.07	116.10	108.50
1	N	655	A	O4'-C1'-N9	5.06	116.09	108.50
1	N	228	A	P-O5'-C5'	5.06	128.49	120.90
1	N	884	U	C1'-O4'-C4'	-5.06	104.64	109.70
1	N	1164	G	C4'-C3'-C2'	-5.06	97.54	102.60
1	N	955	U	C4'-C3'-C2'	-5.06	97.54	102.60
1	N	362	G	O4'-C1'-N9	5.06	116.09	108.50
1	N	614	C	O4'-C1'-N1	5.06	116.09	108.50
1	N	381	C	P-O3'-C3'	5.06	127.79	120.20
1	N	831	A	C1'-C2'-O2'	5.06	115.98	108.40
1	N	950	U	O4'-C1'-N1	5.06	116.08	108.50
1	N	991	U	N1-C1'-C2'	-5.05	106.42	114.00
1	N	1515	G	O4'-C4'-C3'	-5.05	98.95	104.00
1	N	776	G	C4'-C3'-O3'	-5.05	105.42	113.00
1	N	142	G	C5'-C4'-C3'	-5.05	108.42	116.00
1	N	789	U	O4'-C1'-N1	5.05	116.07	108.50
1	N	148	G	N9-C1'-C2'	-5.05	104.43	112.00
1	N	262	A	C1'-O4'-C4'	-5.05	104.85	109.90
1	N	1029	U	P-O3'-C3'	-5.05	112.63	120.20
1	N	1106	G	P-O5'-C5'	-5.05	113.33	120.90
1	N	1245	C	P-O5'-C5'	5.05	128.47	120.90
1	N	1460	C	P-O5'-C5'	5.05	128.47	120.90
1	N	635	A	P-O3'-C3'	5.04	127.77	120.20
1	N	889	A	N1-C6-N6	5.04	133.73	118.60
1	N	924	C	C1'-O4'-C4'	5.04	114.94	109.90
1	N	1310	G	C2'-C3'-O3'	5.04	121.27	113.70
1	N	1394	A	C5'-C4'-C3'	-5.04	107.63	115.20
1	N	1496	C	P-O5'-C5'	5.04	128.47	120.90
1	N	47	C	O4'-C4'-C3'	-5.04	101.06	106.10
1	N	325	A	O4'-C1'-N9	5.04	116.06	108.50
1	N	1531	A	P-O3'-C3'	5.04	127.76	120.20
1	N	5	U	P-O5'-C5'	-5.04	113.34	120.90
1	N	935	A	C4'-C3'-O3'	-5.04	105.44	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	960	U	P-O3'-C3'	5.04	127.76	120.20
1	N	22	G	C5'-C4'-C3'	5.04	123.56	116.00
1	N	365	U	O4'-C1'-N1	5.04	116.06	108.50
1	N	62	U	O4'-C1'-N1	5.04	116.05	108.50
1	N	351	G	C5'-C4'-C3'	5.03	122.75	115.20
1	N	448	A	C4'-C3'-C2'	-5.03	97.57	102.60
1	N	732	C	C4'-C3'-O3'	-5.03	105.45	113.00
1	N	943	U	C4'-C3'-C2'	5.03	107.63	102.60
1	N	999	C	C5'-C4'-C3'	5.03	123.55	116.00
1	N	1436	U	C4'-C3'-C2'	5.03	107.63	102.60
1	N	512	U	P-O5'-C5'	-5.03	113.35	120.90
1	N	639	G	C3'-C2'-C1'	-5.03	96.27	101.30
1	N	305	G	C5'-C4'-C3'	5.03	122.74	115.20
1	N	438	U	O4'-C1'-C2'	-5.03	100.77	105.80
1	N	807	A	C4'-C3'-C2'	-5.03	97.57	102.60
1	N	262	A	O4'-C4'-C3'	5.03	109.03	104.00
1	N	1076	U	C5'-C4'-C3'	5.03	123.54	116.00
1	N	194	C	C1'-O4'-C4'	-5.03	104.87	109.90
1	N	556	C	O5'-C5'-C4'	5.03	119.04	111.50
1	N	886	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	836	G	C5'-C4'-O4'	5.02	117.33	109.80
1	N	1308	U	C1'-O4'-C4'	5.02	114.92	109.90
1	N	836	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	1427	C	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	1242	G	O5'-C5'-C4'	-5.02	103.97	111.50
1	N	1255	G	O4'-C4'-C3'	-5.02	98.98	104.00
1	N	1523	G	O3'-P-O5'	-5.02	96.48	104.00
1	N	466	A	C2'-C3'-O3'	5.01	121.22	113.70
1	N	750	C	C1'-O4'-C4'	5.01	114.92	109.90
1	N	1000	A	C1'-O4'-C4'	5.01	114.91	109.90
1	N	1426	G	C4'-C3'-C2'	-5.01	97.59	102.60
1	N	1250	A	O4'-C1'-N9	5.01	116.02	108.50
1	N	441	A	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	776	G	O4'-C1'-N9	5.01	116.01	108.50
1	N	1054	C	O5'-C5'-C4'	-5.01	104.19	111.70
1	N	909	A	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	605	U	O4'-C1'-N1	5.01	116.01	108.50
1	N	1107	C	N1-C1'-C2'	-5.01	104.49	112.00
1	N	1357	A	O3'-P-O5'	-5.01	96.49	104.00
1	N	345	C	O4'-C1'-N1	5.00	115.71	108.20
1	N	673	A	C4'-C3'-O3'	-5.00	105.50	113.00
1	N	748	G	N1-C6-O6	5.00	134.91	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1203	C	P-O3'-C3'	5.00	127.71	120.20
1	N	1396	A	O5'-C5'-C4'	-5.00	104.19	111.70
1	N	1455	G	O4'-C1'-C2'	-5.00	102.60	107.60
1	N	1447	A	O3'-P-O5'	-5.00	96.50	104.00

There are no chirality outliers.

All (937) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	N	100	G	Sidechain
1	N	1000	A	Sidechain
1	N	1003	G	Sidechain
1	N	1004	A	Sidechain
1	N	1005	A	Sidechain
1	N	1006	G	Sidechain
1	N	1007	U	Sidechain
1	N	1008	U	Sidechain
1	N	1010	U	Sidechain
1	N	1015	G	Sidechain
1	N	1019	A	Sidechain
1	N	102	G	Sidechain
1	N	1020	G	Sidechain
1	N	1022	A	Sidechain
1	N	1024	G	Sidechain
1	N	1025	U	Sidechain
1	N	1026	G	Sidechain
1	N	1028	C	Sidechain
1	N	103	U	Sidechain
1	N	1031	C	Sidechain
1	N	1033	G	Sidechain
1	N	1034	G	Sidechain
1	N	1036	A	Sidechain
1	N	1039	G	Sidechain
1	N	1041	G	Sidechain
1	N	1043	G	Sidechain
1	N	1045	C	Sidechain
1	N	1047	G	Sidechain
1	N	1048	G	Sidechain
1	N	1049	U	Sidechain
1	N	105	G	Sidechain
1	N	1051	C	Sidechain
1	N	1052	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1054	C	Sidechain
1	N	1055	A	Sidechain
1	N	1058	G	Sidechain
1	N	1060	U	Sidechain
1	N	1062	U	Sidechain
1	N	1064	G	Sidechain
1	N	1065	U	Sidechain
1	N	1066	C	Sidechain
1	N	1067	A	Sidechain
1	N	1068	G	Sidechain
1	N	107	G	Sidechain
1	N	1071	C	Sidechain
1	N	1072	G	Sidechain
1	N	1073	U	Sidechain
1	N	1074	G	Sidechain
1	N	1076	U	Sidechain
1	N	1077	G	Sidechain
1	N	1078	U	Sidechain
1	N	1079	G	Sidechain
1	N	1080	A	Sidechain
1	N	1083	U	Sidechain
1	N	1084	G	Sidechain
1	N	1085	U	Sidechain
1	N	1087	G	Sidechain
1	N	109	A	Sidechain
1	N	1093	A	Sidechain
1	N	1094	G	Sidechain
1	N	1096	C	Sidechain
1	N	1098	C	Sidechain
1	N	1099	G	Sidechain
1	N	11	G	Sidechain
1	N	110	C	Sidechain
1	N	1101	A	Sidechain
1	N	1102	A	Sidechain
1	N	1103	C	Sidechain
1	N	1104	G	Sidechain
1	N	1105	A	Sidechain
1	N	1108	G	Sidechain
1	N	111	G	Sidechain
1	N	1112	C	Sidechain
1	N	1115	U	Sidechain
1	N	1116	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1117	A	Sidechain
1	N	112	G	Sidechain
1	N	1120	C	Sidechain
1	N	1121	U	Sidechain
1	N	1123	U	Sidechain
1	N	1124	G	Sidechain
1	N	1126	U	Sidechain
1	N	1127	G	Sidechain
1	N	113	G	Sidechain
1	N	1130	A	Sidechain
1	N	1131	G	Sidechain
1	N	1132	C	Sidechain
1	N	1133	G	Sidechain
1	N	1134	G	Sidechain
1	N	1136	C	Sidechain
1	N	1139	G	Sidechain
1	N	1141	C	Sidechain
1	N	1143	G	Sidechain
1	N	1144	G	Sidechain
1	N	1145	A	Sidechain
1	N	1148	U	Sidechain
1	N	1149	C	Sidechain
1	N	115	G	Sidechain
1	N	1150	A	Sidechain
1	N	1152	A	Sidechain
1	N	1155	A	Sidechain
1	N	1156	G	Sidechain
1	N	1157	A	Sidechain
1	N	1159	U	Sidechain
1	N	116	A	Sidechain
1	N	1160	G	Sidechain
1	N	1162	C	Sidechain
1	N	1163	A	Sidechain
1	N	1164	G	Sidechain
1	N	1165	U	Sidechain
1	N	1166	G	Sidechain
1	N	1167	A	Sidechain
1	N	1168	U	Sidechain
1	N	1169	A	Sidechain
1	N	1170	A	Sidechain
1	N	1171	A	Sidechain
1	N	1172	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1174	G	Sidechain
1	N	1175	G	Sidechain
1	N	1176	A	Sidechain
1	N	1177	G	Sidechain
1	N	1178	G	Sidechain
1	N	1179	A	Sidechain
1	N	1180	A	Sidechain
1	N	1181	G	Sidechain
1	N	1182	G	Sidechain
1	N	1184	G	Sidechain
1	N	1185	G	Sidechain
1	N	1186	G	Sidechain
1	N	1187	G	Sidechain
1	N	1188	A	Sidechain
1	N	119	A	Sidechain
1	N	1190	G	Sidechain
1	N	1191	A	Sidechain
1	N	1193	G	Sidechain
1	N	1195	C	Sidechain
1	N	1197	A	Sidechain
1	N	1198	G	Sidechain
1	N	12	U	Sidechain
1	N	120	A	Sidechain
1	N	1200	C	Sidechain
1	N	1201	A	Sidechain
1	N	1202	U	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	Sidechain
1	N	1206	G	Sidechain
1	N	1209	C	Sidechain
1	N	1210	C	Sidechain
1	N	1213	A	Sidechain
1	N	1214	C	Sidechain
1	N	1216	A	Sidechain
1	N	1218	C	Sidechain
1	N	1222	G	Sidechain
1	N	1223	C	Sidechain
1	N	1224	U	Sidechain
1	N	1225	A	Sidechain
1	N	1226	C	Sidechain
1	N	1227	A	Sidechain
1	N	1228	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1231	G	Sidechain
1	N	1232	U	Sidechain
1	N	1234	C	Sidechain
1	N	1235	U	Sidechain
1	N	1239	A	Sidechain
1	N	124	C	Sidechain
1	N	1240	U	Sidechain
1	N	1241	G	Sidechain
1	N	1242	G	Sidechain
1	N	1245	C	Sidechain
1	N	125	U	Sidechain
1	N	1250	A	Sidechain
1	N	1251	A	Sidechain
1	N	1254	A	Sidechain
1	N	1255	G	Sidechain
1	N	1257	A	Sidechain
1	N	1258	G	Sidechain
1	N	126	G	Sidechain
1	N	1261	A	Sidechain
1	N	1262	C	Sidechain
1	N	1263	C	Sidechain
1	N	1264	U	Sidechain
1	N	1265	C	Sidechain
1	N	1266	G	Sidechain
1	N	1267	C	Sidechain
1	N	1268	G	Sidechain
1	N	127	G	Sidechain
1	N	1270	G	Sidechain
1	N	1271	A	Sidechain
1	N	1273	C	Sidechain
1	N	1274	A	Sidechain
1	N	1275	A	Sidechain
1	N	1276	G	Sidechain
1	N	1277	C	Sidechain
1	N	1281	C	Sidechain
1	N	1282	C	Sidechain
1	N	1283	U	Sidechain
1	N	1285	A	Sidechain
1	N	1286	U	Sidechain
1	N	1287	A	Sidechain
1	N	1288	A	Sidechain
1	N	1289	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1292	G	Sidechain
1	N	1293	C	Sidechain
1	N	1296	C	Sidechain
1	N	1297	G	Sidechain
1	N	1298	U	Sidechain
1	N	1299	A	Sidechain
1	N	130	A	Sidechain
1	N	1302	C	Sidechain
1	N	1304	G	Sidechain
1	N	1305	G	Sidechain
1	N	1306	A	Sidechain
1	N	1307	U	Sidechain
1	N	1308	U	Sidechain
1	N	1310	G	Sidechain
1	N	1314	C	Sidechain
1	N	1315	U	Sidechain
1	N	1316	G	Sidechain
1	N	1317	C	Sidechain
1	N	1318	A	Sidechain
1	N	1319	A	Sidechain
1	N	1322	C	Sidechain
1	N	1324	A	Sidechain
1	N	1329	A	Sidechain
1	N	133	U	Sidechain
1	N	1331	G	Sidechain
1	N	1332	A	Sidechain
1	N	1334	G	Sidechain
1	N	1335	U	Sidechain
1	N	1337	G	Sidechain
1	N	1338	G	Sidechain
1	N	1339	A	Sidechain
1	N	134	G	Sidechain
1	N	1344	C	Sidechain
1	N	1345	U	Sidechain
1	N	1346	A	Sidechain
1	N	1348	U	Sidechain
1	N	1349	A	Sidechain
1	N	1350	A	Sidechain
1	N	1356	G	Sidechain
1	N	1357	A	Sidechain
1	N	1358	U	Sidechain
1	N	1359	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1360	A	Sidechain
1	N	1361	G	Sidechain
1	N	1362	A	Sidechain
1	N	1364	U	Sidechain
1	N	1365	G	Sidechain
1	N	1366	C	Sidechain
1	N	1367	C	Sidechain
1	N	137	U	Sidechain
1	N	1370	G	Sidechain
1	N	1373	G	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1378	C	Sidechain
1	N	1379	G	Sidechain
1	N	138	G	Sidechain
1	N	1381	U	Sidechain
1	N	1382	C	Sidechain
1	N	1383	C	Sidechain
1	N	1385	G	Sidechain
1	N	139	A	Sidechain
1	N	1391	U	Sidechain
1	N	1392	G	Sidechain
1	N	1395	C	Sidechain
1	N	1396	A	Sidechain
1	N	14	U	Sidechain
1	N	140	U	Sidechain
1	N	1401	G	Sidechain
1	N	1404	C	Sidechain
1	N	1405	G	Sidechain
1	N	1406	U	Sidechain
1	N	1407	C	Sidechain
1	N	1409	C	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain
1	N	1411	C	Sidechain
1	N	1413	A	Sidechain
1	N	1414	U	Sidechain
1	N	1417	G	Sidechain
1	N	1419	G	Sidechain
1	N	142	G	Sidechain
1	N	1420	U	Sidechain
1	N	1421	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1422	G	Sidechain
1	N	1423	G	Sidechain
1	N	1425	U	Sidechain
1	N	143	A	Sidechain
1	N	1430	A	Sidechain
1	N	1431	A	Sidechain
1	N	1432	G	Sidechain
1	N	1433	A	Sidechain
1	N	1434	A	Sidechain
1	N	1435	G	Sidechain
1	N	1437	A	Sidechain
1	N	1438	G	Sidechain
1	N	1439	G	Sidechain
1	N	1440	U	Sidechain
1	N	1441	A	Sidechain
1	N	1447	A	Sidechain
1	N	1448	C	Sidechain
1	N	145	G	Sidechain
1	N	1450	U	Sidechain
1	N	1451	U	Sidechain
1	N	1452	C	Sidechain
1	N	1453	G	Sidechain
1	N	1454	G	Sidechain
1	N	1456	A	Sidechain
1	N	1457	G	Sidechain
1	N	1461	G	Sidechain
1	N	1463	U	Sidechain
1	N	1464	U	Sidechain
1	N	1468	A	Sidechain
1	N	1469	C	Sidechain
1	N	147	G	Sidechain
1	N	1473	G	Sidechain
1	N	1474	U	Sidechain
1	N	1476	A	Sidechain
1	N	1478	U	Sidechain
1	N	148	G	Sidechain
1	N	1481	U	Sidechain
1	N	1485	U	Sidechain
1	N	1488	G	Sidechain
1	N	1489	G	Sidechain
1	N	1490	U	Sidechain
1	N	1494	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1496	C	Sidechain
1	N	1497	G	Sidechain
1	N	1498	U	Sidechain
1	N	1499	A	Sidechain
1	N	150	U	Sidechain
1	N	1500	A	Sidechain
1	N	1502	A	Sidechain
1	N	1503	A	Sidechain
1	N	1504	G	Sidechain
1	N	1505	G	Sidechain
1	N	1508	A	Sidechain
1	N	151	A	Sidechain
1	N	1510	C	Sidechain
1	N	1512	U	Sidechain
1	N	1514	G	Sidechain
1	N	1515	G	Sidechain
1	N	1516	G	Sidechain
1	N	1518	A	Sidechain
1	N	152	A	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1525	G	Sidechain
1	N	1527	U	Sidechain
1	N	1528	U	Sidechain
1	N	1529	G	Sidechain
1	N	1530	G	Sidechain
1	N	1531	A	Sidechain
1	N	1532	U	Sidechain
1	N	1533	C	Sidechain
1	N	1534	A	Sidechain
1	N	155	A	Sidechain
1	N	157	U	Sidechain
1	N	16	A	Sidechain
1	N	160	A	Sidechain
1	N	161	A	Sidechain
1	N	164	G	Sidechain
1	N	166	U	Sidechain
1	N	169	C	Sidechain
1	N	17	U	Sidechain
1	N	170	U	Sidechain
1	N	171	A	Sidechain
1	N	174	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	175	C	Sidechain
1	N	176	C	Sidechain
1	N	177	G	Sidechain
1	N	178	C	Sidechain
1	N	179	A	Sidechain
1	N	184	G	Sidechain
1	N	185	U	Sidechain
1	N	187	G	Sidechain
1	N	190	A	Sidechain
1	N	191	G	Sidechain
1	N	192	A	Sidechain
1	N	193	C	Sidechain
1	N	194	C	Sidechain
1	N	195	A	Sidechain
1	N	196	A	Sidechain
1	N	197	A	Sidechain
1	N	199	A	Sidechain
1	N	200	G	Sidechain
1	N	201	G	Sidechain
1	N	202	G	Sidechain
1	N	203	G	Sidechain
1	N	204	G	Sidechain
1	N	207	C	Sidechain
1	N	208	U	Sidechain
1	N	21	G	Sidechain
1	N	210	C	Sidechain
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	213	G	Sidechain
1	N	215	C	Sidechain
1	N	216	U	Sidechain
1	N	217	C	Sidechain
1	N	218	U	Sidechain
1	N	220	G	Sidechain
1	N	222	C	Sidechain
1	N	224	U	Sidechain
1	N	227	G	Sidechain
1	N	228	A	Sidechain
1	N	230	G	Sidechain
1	N	232	G	Sidechain
1	N	233	C	Sidechain
1	N	236	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	237	G	Sidechain
1	N	239	U	Sidechain
1	N	24	U	Sidechain
1	N	242	G	Sidechain
1	N	243	A	Sidechain
1	N	244	U	Sidechain
1	N	245	U	Sidechain
1	N	246	A	Sidechain
1	N	247	G	Sidechain
1	N	248	C	Sidechain
1	N	249	U	Sidechain
1	N	25	C	Sidechain
1	N	251	G	Sidechain
1	N	252	U	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	259	G	Sidechain
1	N	26	A	Sidechain
1	N	260	G	Sidechain
1	N	262	A	Sidechain
1	N	265	G	Sidechain
1	N	267	C	Sidechain
1	N	268	U	Sidechain
1	N	269	C	Sidechain
1	N	27	G	Sidechain
1	N	272	C	Sidechain
1	N	273	U	Sidechain
1	N	274	A	Sidechain
1	N	276	G	Sidechain
1	N	279	A	Sidechain
1	N	28	A	Sidechain
1	N	280	C	Sidechain
1	N	282	A	Sidechain
1	N	283	U	Sidechain
1	N	287	U	Sidechain
1	N	29	U	Sidechain
1	N	292	G	Sidechain
1	N	293	G	Sidechain
1	N	296	U	Sidechain
1	N	297	G	Sidechain
1	N	299	G	Sidechain
1	N	30	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	300	A	Sidechain
1	N	302	G	Sidechain
1	N	303	A	Sidechain
1	N	304	U	Sidechain
1	N	305	G	Sidechain
1	N	309	A	Sidechain
1	N	31	G	Sidechain
1	N	310	G	Sidechain
1	N	313	A	Sidechain
1	N	314	C	Sidechain
1	N	315	A	Sidechain
1	N	317	U	Sidechain
1	N	318	G	Sidechain
1	N	319	G	Sidechain
1	N	320	A	Sidechain
1	N	321	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	324	G	Sidechain
1	N	326	G	Sidechain
1	N	33	A	Sidechain
1	N	330	C	Sidechain
1	N	331	G	Sidechain
1	N	332	G	Sidechain
1	N	334	C	Sidechain
1	N	337	G	Sidechain
1	N	338	A	Sidechain
1	N	339	C	Sidechain
1	N	340	U	Sidechain
1	N	341	C	Sidechain
1	N	343	U	Sidechain
1	N	345	C	Sidechain
1	N	347	G	Sidechain
1	N	348	G	Sidechain
1	N	349	A	Sidechain
1	N	350	G	Sidechain
1	N	351	G	Sidechain
1	N	352	C	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain
1	N	355	C	Sidechain
1	N	356	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	359	G	Sidechain
1	N	360	G	Sidechain
1	N	361	G	Sidechain
1	N	362	G	Sidechain
1	N	363	A	Sidechain
1	N	364	A	Sidechain
1	N	367	U	Sidechain
1	N	369	G	Sidechain
1	N	371	A	Sidechain
1	N	372	C	Sidechain
1	N	374	A	Sidechain
1	N	375	U	Sidechain
1	N	377	G	Sidechain
1	N	378	G	Sidechain
1	N	38	G	Sidechain
1	N	380	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain
1	N	383	A	Sidechain
1	N	387	U	Sidechain
1	N	39	G	Sidechain
1	N	390	U	Sidechain
1	N	391	G	Sidechain
1	N	392	C	Sidechain
1	N	393	A	Sidechain
1	N	396	C	Sidechain
1	N	4	U	Sidechain
1	N	40	C	Sidechain
1	N	400	C	Sidechain
1	N	401	C	Sidechain
1	N	402	G	Sidechain
1	N	403	C	Sidechain
1	N	405	U	Sidechain
1	N	409	U	Sidechain
1	N	410	G	Sidechain
1	N	411	A	Sidechain
1	N	413	G	Sidechain
1	N	414	A	Sidechain
1	N	416	G	Sidechain
1	N	417	G	Sidechain
1	N	419	C	Sidechain
1	N	421	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	422	C	Sidechain
1	N	423	G	Sidechain
1	N	424	G	Sidechain
1	N	425	G	Sidechain
1	N	426	U	Sidechain
1	N	427	U	Sidechain
1	N	428	G	Sidechain
1	N	430	A	Sidechain
1	N	432	A	Sidechain
1	N	433	G	Sidechain
1	N	434	U	Sidechain
1	N	436	C	Sidechain
1	N	437	U	Sidechain
1	N	44	A	Sidechain
1	N	440	C	Sidechain
1	N	441	A	Sidechain
1	N	442	G	Sidechain
1	N	445	G	Sidechain
1	N	446	G	Sidechain
1	N	447	G	Sidechain
1	N	449	G	Sidechain
1	N	45	G	Sidechain
1	N	450	G	Sidechain
1	N	452	A	Sidechain
1	N	454	G	Sidechain
1	N	455	G	Sidechain
1	N	456	A	Sidechain
1	N	457	G	Sidechain
1	N	46	G	Sidechain
1	N	461	A	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	464	U	Sidechain
1	N	465	A	Sidechain
1	N	466	A	Sidechain
1	N	472	U	Sidechain
1	N	473	U	Sidechain
1	N	475	C	Sidechain
1	N	476	U	Sidechain
1	N	479	U	Sidechain
1	N	480	U	Sidechain
1	N	482	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	483	C	Sidechain
1	N	484	G	Sidechain
1	N	486	U	Sidechain
1	N	488	C	Sidechain
1	N	49	U	Sidechain
1	N	496	A	Sidechain
1	N	497	G	Sidechain
1	N	498	A	Sidechain
1	N	499	A	Sidechain
1	N	50	A	Sidechain
1	N	500	G	Sidechain
1	N	501	C	Sidechain
1	N	502	A	Sidechain
1	N	505	G	Sidechain
1	N	506	G	Sidechain
1	N	508	U	Sidechain
1	N	510	A	Sidechain
1	N	512	U	Sidechain
1	N	513	C	Sidechain
1	N	514	C	Sidechain
1	N	515	G	Sidechain
1	N	52	C	Sidechain
1	N	521	G	Sidechain
1	N	524	G	Sidechain
1	N	525	C	Sidechain
1	N	526	C	Sidechain
1	N	527	G	Sidechain
1	N	528	C	Sidechain
1	N	529	G	Sidechain
1	N	530	G	Sidechain
1	N	531	U	Sidechain
1	N	533	A	Sidechain
1	N	534	U	Sidechain
1	N	536	C	Sidechain
1	N	537	G	Sidechain
1	N	540	G	Sidechain
1	N	543	U	Sidechain
1	N	544	G	Sidechain
1	N	545	C	Sidechain
1	N	547	A	Sidechain
1	N	55	A	Sidechain
1	N	552	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	553	A	Sidechain
1	N	556	C	Sidechain
1	N	557	G	Sidechain
1	N	559	A	Sidechain
1	N	56	U	Sidechain
1	N	562	U	Sidechain
1	N	563	A	Sidechain
1	N	566	G	Sidechain
1	N	567	G	Sidechain
1	N	572	A	Sidechain
1	N	573	A	Sidechain
1	N	575	G	Sidechain
1	N	576	C	Sidechain
1	N	579	A	Sidechain
1	N	580	C	Sidechain
1	N	581	G	Sidechain
1	N	582	C	Sidechain
1	N	583	A	Sidechain
1	N	584	G	Sidechain
1	N	585	G	Sidechain
1	N	586	C	Sidechain
1	N	587	G	Sidechain
1	N	588	G	Sidechain
1	N	592	G	Sidechain
1	N	593	U	Sidechain
1	N	594	U	Sidechain
1	N	595	A	Sidechain
1	N	597	G	Sidechain
1	N	598	U	Sidechain
1	N	60	A	Sidechain
1	N	600	A	Sidechain
1	N	601	G	Sidechain
1	N	602	A	Sidechain
1	N	606	G	Sidechain
1	N	608	A	Sidechain
1	N	609	A	Sidechain
1	N	61	G	Sidechain
1	N	612	C	Sidechain
1	N	613	C	Sidechain
1	N	614	C	Sidechain
1	N	615	G	Sidechain
1	N	617	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	618	C	Sidechain
1	N	619	U	Sidechain
1	N	621	A	Sidechain
1	N	622	A	Sidechain
1	N	626	G	Sidechain
1	N	627	G	Sidechain
1	N	629	A	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	632	U	Sidechain
1	N	633	G	Sidechain
1	N	634	C	Sidechain
1	N	635	A	Sidechain
1	N	636	U	Sidechain
1	N	64	G	Sidechain
1	N	640	A	Sidechain
1	N	641	U	Sidechain
1	N	644	U	Sidechain
1	N	645	G	Sidechain
1	N	646	G	Sidechain
1	N	647	C	Sidechain
1	N	648	A	Sidechain
1	N	649	A	Sidechain
1	N	65	A	Sidechain
1	N	652	U	Sidechain
1	N	653	U	Sidechain
1	N	654	G	Sidechain
1	N	656	G	Sidechain
1	N	657	U	Sidechain
1	N	658	C	Sidechain
1	N	66	A	Sidechain
1	N	660	C	Sidechain
1	N	666	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	67	C	Sidechain
1	N	670	G	Sidechain
1	N	671	G	Sidechain
1	N	672	U	Sidechain
1	N	674	G	Sidechain
1	N	678	U	Sidechain
1	N	679	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	68	G	Sidechain
1	N	680	C	Sidechain
1	N	682	G	Sidechain
1	N	684	U	Sidechain
1	N	685	G	Sidechain
1	N	686	U	Sidechain
1	N	687	A	Sidechain
1	N	688	G	Sidechain
1	N	689	C	Sidechain
1	N	69	G	Sidechain
1	N	690	G	Sidechain
1	N	691	G	Sidechain
1	N	692	U	Sidechain
1	N	693	G	Sidechain
1	N	695	A	Sidechain
1	N	696	A	Sidechain
1	N	697	U	Sidechain
1	N	7	A	Sidechain
1	N	700	G	Sidechain
1	N	701	U	Sidechain
1	N	703	G	Sidechain
1	N	704	A	Sidechain
1	N	708	C	Sidechain
1	N	709	U	Sidechain
1	N	71	A	Sidechain
1	N	711	G	Sidechain
1	N	713	G	Sidechain
1	N	714	G	Sidechain
1	N	72	A	Sidechain
1	N	721	G	Sidechain
1	N	722	G	Sidechain
1	N	723	U	Sidechain
1	N	725	G	Sidechain
1	N	726	C	Sidechain
1	N	728	A	Sidechain
1	N	73	C	Sidechain
1	N	732	C	Sidechain
1	N	733	G	Sidechain
1	N	734	G	Sidechain
1	N	735	C	Sidechain
1	N	737	C	Sidechain
1	N	738	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	739	C	Sidechain
1	N	74	A	Sidechain
1	N	740	U	Sidechain
1	N	743	A	Sidechain
1	N	744	C	Sidechain
1	N	745	G	Sidechain
1	N	747	A	Sidechain
1	N	748	G	Sidechain
1	N	749	A	Sidechain
1	N	75	G	Sidechain
1	N	750	C	Sidechain
1	N	751	U	Sidechain
1	N	752	G	Sidechain
1	N	755	G	Sidechain
1	N	757	U	Sidechain
1	N	76	G	Sidechain
1	N	761	G	Sidechain
1	N	762	U	Sidechain
1	N	766	A	Sidechain
1	N	769	G	Sidechain
1	N	77	A	Sidechain
1	N	770	C	Sidechain
1	N	771	G	Sidechain
1	N	772	U	Sidechain
1	N	773	G	Sidechain
1	N	775	G	Sidechain
1	N	776	G	Sidechain
1	N	777	A	Sidechain
1	N	778	G	Sidechain
1	N	779	C	Sidechain
1	N	78	A	Sidechain
1	N	781	A	Sidechain
1	N	782	A	Sidechain
1	N	783	C	Sidechain
1	N	784	A	Sidechain
1	N	785	G	Sidechain
1	N	787	A	Sidechain
1	N	788	U	Sidechain
1	N	789	U	Sidechain
1	N	79	G	Sidechain
1	N	792	A	Sidechain
1	N	795	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	796	C	Sidechain
1	N	798	U	Sidechain
1	N	799	G	Sidechain
1	N	8	A	Sidechain
1	N	80	A	Sidechain
1	N	800	G	Sidechain
1	N	801	U	Sidechain
1	N	802	A	Sidechain
1	N	803	G	Sidechain
1	N	804	U	Sidechain
1	N	805	C	Sidechain
1	N	806	C	Sidechain
1	N	807	A	Sidechain
1	N	808	C	Sidechain
1	N	81	A	Sidechain
1	N	810	C	Sidechain
1	N	811	C	Sidechain
1	N	812	G	Sidechain
1	N	814	A	Sidechain
1	N	815	A	Sidechain
1	N	816	A	Sidechain
1	N	817	C	Sidechain
1	N	818	G	Sidechain
1	N	819	A	Sidechain
1	N	821	G	Sidechain
1	N	822	U	Sidechain
1	N	828	U	Sidechain
1	N	83	C	Sidechain
1	N	831	A	Sidechain
1	N	832	G	Sidechain
1	N	833	G	Sidechain
1	N	834	U	Sidechain
1	N	835	U	Sidechain
1	N	837	U	Sidechain
1	N	838	G	Sidechain
1	N	842	U	Sidechain
1	N	843	U	Sidechain
1	N	847	G	Sidechain
1	N	85	U	Sidechain
1	N	851	G	Sidechain
1	N	852	G	Sidechain
1	N	853	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	854	U	Sidechain
1	N	855	U	Sidechain
1	N	857	C	Sidechain
1	N	858	G	Sidechain
1	N	859	G	Sidechain
1	N	86	G	Sidechain
1	N	860	A	Sidechain
1	N	861	G	Sidechain
1	N	862	C	Sidechain
1	N	863	U	Sidechain
1	N	864	A	Sidechain
1	N	865	A	Sidechain
1	N	868	C	Sidechain
1	N	869	G	Sidechain
1	N	870	U	Sidechain
1	N	871	U	Sidechain
1	N	873	A	Sidechain
1	N	874	G	Sidechain
1	N	875	U	Sidechain
1	N	876	C	Sidechain
1	N	877	G	Sidechain
1	N	878	A	Sidechain
1	N	88	U	Sidechain
1	N	881	G	Sidechain
1	N	882	C	Sidechain
1	N	883	C	Sidechain
1	N	885	G	Sidechain
1	N	886	G	Sidechain
1	N	888	G	Sidechain
1	N	889	A	Sidechain
1	N	890	G	Sidechain
1	N	891	U	Sidechain
1	N	894	G	Sidechain
1	N	895	G	Sidechain
1	N	896	C	Sidechain
1	N	899	C	Sidechain
1	N	900	A	Sidechain
1	N	901	A	Sidechain
1	N	902	G	Sidechain
1	N	903	G	Sidechain
1	N	904	U	Sidechain
1	N	905	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	906	A	Sidechain
1	N	908	A	Sidechain
1	N	91	U	Sidechain
1	N	911	U	Sidechain
1	N	919	A	Sidechain
1	N	92	U	Sidechain
1	N	920	U	Sidechain
1	N	921	U	Sidechain
1	N	923	A	Sidechain
1	N	926	G	Sidechain
1	N	927	G	Sidechain
1	N	928	G	Sidechain
1	N	93	U	Sidechain
1	N	930	C	Sidechain
1	N	932	C	Sidechain
1	N	933	G	Sidechain
1	N	934	C	Sidechain
1	N	935	A	Sidechain
1	N	938	A	Sidechain
1	N	939	G	Sidechain
1	N	94	G	Sidechain
1	N	941	G	Sidechain
1	N	942	G	Sidechain
1	N	943	U	Sidechain
1	N	944	G	Sidechain
1	N	947	G	Sidechain
1	N	948	C	Sidechain
1	N	95	C	Sidechain
1	N	950	U	Sidechain
1	N	951	G	Sidechain
1	N	952	U	Sidechain
1	N	954	G	Sidechain
1	N	955	U	Sidechain
1	N	957	U	Sidechain
1	N	958	A	Sidechain
1	N	962	C	Sidechain
1	N	963	G	Sidechain
1	N	964	A	Sidechain
1	N	966	G	Sidechain
1	N	967	C	Sidechain
1	N	969	A	Sidechain
1	N	97	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	971	G	Sidechain
1	N	972	C	Sidechain
1	N	973	G	Sidechain
1	N	974	A	Sidechain
1	N	975	A	Sidechain
1	N	978	A	Sidechain
1	N	980	C	Sidechain
1	N	981	U	Sidechain
1	N	982	U	Sidechain
1	N	984	C	Sidechain
1	N	985	C	Sidechain
1	N	986	U	Sidechain
1	N	988	G	Sidechain
1	N	99	C	Sidechain
1	N	990	C	Sidechain
1	N	991	U	Sidechain
1	N	992	U	Sidechain
1	N	993	G	Sidechain
1	N	994	A	Sidechain
1	N	995	C	Sidechain
1	N	996	A	Sidechain
1	N	998	C	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	N	32892	16554	16528	504	0
All	All	32892	16554	16528	504	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (504) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:928:G:H21	1:N:1533:C:H42	1.24	0.85
1:N:67:C:H2'	1:N:68:G:C8	2.13	0.83
1:N:50:A:H1'	1:N:52:C:C6	2.23	0.73
1:N:1266:G:H21	1:N:1269:A:H8	1.39	0.70
1:N:1394:A:H3'	1:N:1395:C:H5'	1.74	0.69
1:N:94:G:H4'	1:N:95:C:H5''	1.74	0.68
1:N:596:A:H61	1:N:644:U:H3	1.40	0.68
1:N:998:C:H42	1:N:1042:A:H61	1.42	0.68
1:N:1240:U:C6	1:N:1241:G:H5'	2.28	0.68
1:N:79:G:H2'	1:N:80:A:C8	2.28	0.67
1:N:116:A:H61	1:N:313:A:H1'	1.60	0.67
1:N:635:A:C2	1:N:636:U:C2	2.82	0.66
1:N:272:C:C4	1:N:273:U:C4	2.84	0.66
1:N:1244:G:C6	1:N:1294:G:C6	2.83	0.66
1:N:668:G:C6	1:N:669:G:C6	2.85	0.65
1:N:664:G:H22	1:N:741:G:H1	1.43	0.65
1:N:373:A:C2	1:N:374:A:C4	2.85	0.64
1:N:1149:C:H2'	1:N:1150:A:C8	2.31	0.64
1:N:1184:G:C5	1:N:1185:G:C8	2.85	0.64
1:N:947:G:H1'	1:N:1332:A:H62	1.62	0.64
1:N:198:G:H2'	1:N:199:A:C8	2.34	0.63
1:N:858:G:H1	1:N:869:G:H2'	1.63	0.62
1:N:1255:G:H3'	1:N:1279:G:H22	1.64	0.62
1:N:1433:A:H1'	1:N:1468:A:C2	2.36	0.61
1:N:1255:G:H2'	1:N:1279:G:H1	1.65	0.61
1:N:949:A:H61	1:N:1232:U:H3	1.48	0.61
1:N:1065:U:H1'	1:N:1067:A:H61	1.66	0.61
1:N:1391:U:H2'	1:N:1392:G:C8	2.35	0.61
1:N:410:G:H2'	1:N:429:U:C5	2.36	0.60
1:N:713:G:C5	1:N:714:G:C6	2.89	0.60
1:N:1001:C:H42	1:N:1038:C:H42	1.48	0.60
1:N:1037:C:H2'	1:N:1038:C:C6	2.37	0.59
1:N:1282:C:H2'	1:N:1283:U:C6	2.38	0.59
1:N:1102:A:C2	1:N:1103:C:C2	2.90	0.59
1:N:1071:C:H2'	1:N:1072:G:C8	2.37	0.59
1:N:1315:U:H2'	1:N:1316:G:C8	2.38	0.59
1:N:507:C:H3'	1:N:508:U:H5''	1.85	0.58
1:N:584:G:C6	1:N:585:G:C6	2.91	0.58
1:N:1090:U:H2'	1:N:1091:U:C6	2.38	0.58
1:N:139:A:C6	1:N:140:U:C4	2.91	0.58
1:N:292:G:C5	1:N:293:G:H1'	2.38	0.58
1:N:1004:A:C5'	1:N:1024:G:H22	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:19:A:C2	1:N:917:G:C5	2.92	0.58
1:N:1315:U:C4	1:N:1316:G:C6	2.92	0.58
1:N:859:G:C6	1:N:860:A:C6	2.92	0.58
1:N:1268:G:H21	1:N:1326:U:H1'	1.69	0.57
1:N:78:A:C6	1:N:79:G:C6	2.92	0.57
1:N:113:G:H21	1:N:353:A:H2'	1.70	0.57
1:N:840:C:C2'	1:N:843:U:H3	2.17	0.57
1:N:1240:U:C2	1:N:1240:U:OP1	2.57	0.57
1:N:78:A:C5	1:N:79:G:C6	2.91	0.57
1:N:923:A:C2	1:N:924:C:C2	2.93	0.57
1:N:486:U:C6	1:N:486:U:H5''	2.40	0.56
1:N:120:A:C2	1:N:122:G:C6	2.93	0.56
1:N:260:G:H2'	1:N:261:U:C6	2.41	0.56
1:N:322:C:H2'	1:N:323:U:C6	2.40	0.56
1:N:946:A:C2	1:N:1236:A:C2	2.92	0.56
1:N:1095:U:C4	1:N:1096:C:C4	2.93	0.56
1:N:1144:G:C6	1:N:1145:A:C5	2.94	0.56
1:N:339:C:C4	1:N:340:U:C4	2.93	0.56
1:N:50:A:C2	1:N:52:C:N3	2.74	0.56
1:N:776:G:H21	1:N:779:C:N4	2.04	0.56
1:N:780:A:C2	1:N:801:U:C5	2.93	0.56
1:N:794:A:H2'	1:N:795:C:H5'	1.87	0.55
1:N:1094:G:H2'	1:N:1108:G:H1	1.70	0.55
1:N:1244:G:C6	1:N:1245:C:C4	2.94	0.55
1:N:585:G:C2	1:N:586:C:C2	2.95	0.55
1:N:447:G:C5	1:N:485:U:C6	2.95	0.55
1:N:449:G:C6	1:N:450:G:C6	2.94	0.55
1:N:858:G:H1	1:N:869:G:C2'	2.20	0.55
1:N:494:G:C4	1:N:496:A:C8	2.95	0.55
1:N:688:G:C8	1:N:688:G:H5''	2.41	0.55
1:N:65:A:H4'	1:N:66:A:H5'	1.88	0.55
1:N:197:A:H2	1:N:198:G:C4	2.25	0.54
1:N:946:A:H2'	1:N:947:G:C8	2.41	0.54
1:N:1483:A:C8	1:N:1484:C:C6	2.95	0.54
1:N:172:A:C8	1:N:174:A:C8	2.95	0.54
1:N:169:C:C4	1:N:170:U:C4	2.95	0.54
1:N:1434:A:C5	1:N:1435:G:C5	2.95	0.54
1:N:811:C:H2'	1:N:812:G:H5'	1.89	0.54
1:N:1072:G:C6	1:N:1073:U:N3	2.76	0.54
1:N:1184:G:C6	1:N:1185:G:C5	2.95	0.54
1:N:410:G:H2'	1:N:429:U:C4	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:70:U:C5	1:N:94:G:H2'	2.43	0.54
1:N:73:C:C6	1:N:73:C:H5''	2.42	0.54
1:N:524:G:C2	1:N:525:C:C2	2.96	0.54
1:N:69:G:C6	1:N:70:U:C4	2.96	0.53
1:N:349:A:C6	1:N:350:G:C6	2.95	0.53
1:N:1301:U:H2'	1:N:1303:C:C5	2.43	0.53
1:N:354:G:C6	1:N:355:C:C4	2.96	0.53
1:N:803:G:C6	1:N:804:U:C4	2.97	0.53
1:N:182:A:H5''	1:N:193:C:H41	1.74	0.53
1:N:80:A:C5	1:N:81:A:H1'	2.44	0.53
1:N:552:U:H2'	1:N:553:A:C8	2.44	0.53
1:N:558:G:H2'	1:N:559:A:C2	2.44	0.53
1:N:955:U:H3	1:N:1225:A:H2	1.55	0.53
1:N:355:C:H2'	1:N:356:A:C8	2.43	0.53
1:N:1314:C:N3	1:N:1315:U:C5	2.77	0.53
1:N:1074:G:C5	1:N:1075:U:C4	2.97	0.53
1:N:772:U:H2'	1:N:773:G:C8	2.44	0.53
1:N:1191:A:H5'	1:N:1191:A:C8	2.44	0.53
1:N:438:U:C4	1:N:494:G:C8	2.98	0.52
1:N:734:G:H2'	1:N:735:C:C6	2.44	0.52
1:N:209:U:C4	1:N:211:G:N1	2.77	0.52
1:N:141:G:H22	1:N:195:A:H2	1.58	0.52
1:N:904:U:C4	1:N:905:U:C4	2.98	0.52
1:N:173:U:H3	1:N:198:G:H21	1.57	0.52
1:N:668:G:C5	1:N:669:G:C5	2.97	0.52
1:N:501:C:H2'	1:N:502:A:C8	2.45	0.52
1:N:1068:G:C6	1:N:1069:C:C5	2.98	0.52
1:N:563:A:C2	1:N:567:G:C5	2.98	0.52
1:N:1159:U:H5	1:N:1162:C:H42	1.58	0.52
1:N:1385:G:C6	1:N:1386:G:C6	2.97	0.52
1:N:406:G:C6	1:N:407:U:C4	2.98	0.52
1:N:928:G:H21	1:N:1533:C:N4	2.01	0.52
1:N:596:A:N6	1:N:644:U:H3	2.08	0.51
1:N:186:C:H2'	1:N:187:G:O4'	2.10	0.51
1:N:496:A:C2	1:N:497:G:C5	2.99	0.51
1:N:895:G:C5	1:N:896:C:C4	2.98	0.51
1:N:425:G:C5	1:N:426:U:C4	2.98	0.51
1:N:160:A:H2'	1:N:161:A:C8	2.45	0.51
1:N:829:G:C6	1:N:830:G:C5	2.99	0.51
1:N:1191:A:C2	1:N:1192:C:C5	2.98	0.51
1:N:1423:G:C5	1:N:1424:U:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1436:U:H2'	1:N:1437:A:C8	2.46	0.51
1:N:384:G:C6	1:N:385:C:C4	2.98	0.51
1:N:1056:U:H5''	1:N:1056:U:H6	1.75	0.51
1:N:1357:A:C6	1:N:1363:A:C2	2.98	0.51
1:N:323:U:C5	1:N:324:G:C5	2.99	0.51
1:N:506:G:C2	1:N:507:C:C2	2.99	0.51
1:N:895:G:C6	1:N:896:C:C4	2.99	0.51
1:N:1004:A:H5''	1:N:1024:G:H22	1.76	0.51
1:N:1058:G:C5	1:N:1059:C:C6	2.99	0.51
1:N:381:C:C5	1:N:382:A:C5	2.99	0.50
1:N:803:G:C5	1:N:804:U:C5	2.99	0.50
1:N:1135:U:H3	1:N:1140:C:H42	1.58	0.50
1:N:1210:C:C5	1:N:1211:U:C5	2.99	0.50
1:N:788:U:H2'	1:N:789:U:C6	2.46	0.50
1:N:1287:A:H2'	1:N:1288:A:C8	2.46	0.50
1:N:1194:U:H2'	1:N:1195:C:C6	2.47	0.50
1:N:424:G:C6	1:N:425:G:C6	2.99	0.50
1:N:807:A:H2'	1:N:808:C:O4'	2.12	0.50
1:N:64:G:C5	1:N:99:C:C2	2.99	0.50
1:N:594:U:C4	1:N:595:A:C6	2.99	0.50
1:N:807:A:C6	1:N:808:C:C4	2.99	0.50
1:N:1072:G:C2	1:N:1073:U:C2	3.00	0.50
1:N:1146:A:C2	1:N:1147:C:H1'	2.47	0.50
1:N:425:G:C6	1:N:426:U:N3	2.79	0.50
1:N:461:A:H3'	1:N:462:G:C5'	2.42	0.50
1:N:134:G:C5	1:N:325:A:N6	2.80	0.50
1:N:482:A:C6	1:N:483:C:C2	3.00	0.50
1:N:688:G:H21	1:N:704:A:H2	1.60	0.50
1:N:896:C:H2'	1:N:897:C:H6	1.76	0.49
1:N:160:A:H2	1:N:347:G:C2	2.30	0.49
1:N:861:G:H21	1:N:874:G:H5'	1.77	0.49
1:N:840:C:H1'	1:N:843:U:H3	1.76	0.49
1:N:1142:G:C2	1:N:1143:G:H1'	2.47	0.49
1:N:81:A:C8	1:N:83:C:C2	3.00	0.49
1:N:21:G:H1'	1:N:914:A:H61	1.77	0.49
1:N:32:A:H4'	1:N:48:C:H42	1.78	0.49
1:N:213:G:C8	1:N:214:C:C5	3.01	0.49
1:N:917:G:C6	1:N:918:A:C6	3.00	0.49
1:N:81:A:OP2	1:N:83:C:C5	2.65	0.49
1:N:243:A:C2	1:N:282:A:N6	2.81	0.49
1:N:922:G:H21	1:N:1398:A:H1'	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1177:G:H3'	1:N:1178:G:C8	2.48	0.49
1:N:247:G:H1'	1:N:282:A:C2	2.48	0.49
1:N:383:A:C5	1:N:384:G:H1'	2.48	0.49
1:N:1385:G:C6	1:N:1386:G:C5	3.01	0.49
1:N:171:A:C2	1:N:172:A:C2	3.01	0.49
1:N:575:G:C5	1:N:821:G:C8	3.00	0.49
1:N:945:G:H5'	1:N:1339:A:H61	1.78	0.49
1:N:1064:G:H1'	1:N:1066:C:C5	2.48	0.48
1:N:282:A:C5	1:N:283:U:C4	3.01	0.48
1:N:673:A:C2	1:N:674:G:C6	3.01	0.48
1:N:761:G:C5	1:N:762:U:C4	3.01	0.48
1:N:1423:G:C6	1:N:1424:U:C4	3.00	0.48
1:N:215:C:C5	1:N:216:U:C4	3.01	0.48
1:N:815:A:C2	1:N:1529:G:C4	3.01	0.48
1:N:949:A:N6	1:N:1232:U:H3	2.11	0.48
1:N:1056:U:H5''	1:N:1056:U:C6	2.47	0.48
1:N:1239:A:H1'	1:N:1241:G:C8	2.48	0.48
1:N:1254:A:N1	1:N:1255:G:C5	2.82	0.48
1:N:1287:A:C6	1:N:1288:A:C6	3.01	0.48
1:N:909:A:C8	1:N:910:C:C6	3.01	0.48
1:N:115:G:C6	1:N:289:G:C6	3.01	0.48
1:N:1160:G:O6	1:N:1181:G:C6	2.67	0.48
1:N:64:G:C5	1:N:99:C:N3	2.81	0.48
1:N:216:U:H2'	1:N:217:C:C6	2.49	0.48
1:N:273:U:C4	1:N:274:A:C6	3.01	0.48
1:N:708:C:H2'	1:N:709:U:C6	2.48	0.48
1:N:301:G:C2	1:N:302:G:C4	3.02	0.48
1:N:160:A:C2	1:N:346:G:N1	2.82	0.48
1:N:849:G:C5	1:N:850:U:C5	3.02	0.47
1:N:899:C:C4	1:N:900:A:C5	3.01	0.47
1:N:1148:U:C5	1:N:1149:C:C4	3.02	0.47
1:N:80:A:C4	1:N:81:A:H1'	2.49	0.47
1:N:148:G:H1'	1:N:1447:A:H1'	1.96	0.47
1:N:322:C:H3'	1:N:323:U:C5	2.49	0.47
1:N:208:U:C6	1:N:210:C:C6	3.02	0.47
1:N:373:A:C2	1:N:374:A:N3	2.83	0.47
1:N:676:A:H2'	1:N:677:U:C6	2.50	0.47
1:N:887:G:H21	1:N:1489:G:H5''	1.79	0.47
1:N:1184:G:C4	1:N:1185:G:C8	3.02	0.47
1:N:201:G:N2	1:N:468:A:H62	2.12	0.47
1:N:800:G:N3	1:N:801:U:H5	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1066:C:H3'	1:N:1067:A:C8	2.49	0.47
1:N:296:U:H2'	1:N:297:G:C8	2.49	0.47
1:N:982:U:H4'	1:N:983:A:O5'	2.15	0.47
1:N:1023:U:H2'	1:N:1024:G:C8	2.49	0.47
1:N:1385:G:C5	1:N:1386:G:C5	3.03	0.47
1:N:118:U:H2'	1:N:121:U:C5	2.50	0.47
1:N:501:C:H2'	1:N:502:A:H8	1.79	0.47
1:N:771:G:H2'	1:N:772:U:O4'	2.15	0.47
1:N:1011:C:C2	1:N:1019:A:C2	3.02	0.47
1:N:1083:U:H3'	1:N:1084:G:C8	2.50	0.47
1:N:141:G:C6	1:N:223:A:C6	3.03	0.46
1:N:145:G:C2	1:N:178:C:C2	3.03	0.46
1:N:176:C:H1'	1:N:1447:A:H2'	1.97	0.46
1:N:1177:G:C5	1:N:1178:G:C5	3.04	0.46
1:N:1177:G:C6	1:N:1178:G:C2	3.03	0.46
1:N:405:U:C5'	1:N:495:A:C2	2.99	0.46
1:N:651:C:C4	1:N:652:U:C4	3.04	0.46
1:N:681:A:C6	1:N:710:G:C6	3.04	0.46
1:N:418:C:C5	1:N:419:C:C5	3.04	0.46
1:N:466:A:H2'	1:N:467:U:C2	2.51	0.46
1:N:936:C:H1'	1:N:1382:C:H42	1.80	0.46
1:N:1001:C:H42	1:N:1038:C:N4	2.13	0.46
1:N:70:U:H5	1:N:94:G:H2'	1.80	0.46
1:N:219:U:H2'	1:N:220:G:C8	2.49	0.46
1:N:376:G:C6	1:N:377:G:C6	3.03	0.46
1:N:604:G:C6	1:N:605:U:N3	2.83	0.46
1:N:678:U:H3	1:N:712:A:H61	1.62	0.46
1:N:738:C:C4	1:N:739:C:C4	3.03	0.46
1:N:1266:G:N2	1:N:1269:A:H8	2.11	0.46
1:N:61:G:N2	1:N:379:C:H4'	2.30	0.46
1:N:525:C:C4	1:N:526:C:C4	3.03	0.46
1:N:14:U:H3	1:N:16:A:H3'	1.80	0.46
1:N:39:G:C2	1:N:498:A:H2	2.34	0.46
1:N:102:G:C6	1:N:103:U:C4	3.04	0.46
1:N:756:C:C4	1:N:757:U:C4	3.03	0.46
1:N:124:C:C2	1:N:238:A:C2	3.04	0.46
1:N:595:A:H4'	1:N:596:A:H5'	1.98	0.46
1:N:603:U:H2'	1:N:604:G:C8	2.50	0.46
1:N:896:C:H2'	1:N:897:C:C6	2.50	0.46
1:N:109:A:C5	1:N:326:G:C5	3.04	0.46
1:N:297:G:N2	1:N:301:G:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:761:G:C6	1:N:762:U:C4	3.03	0.46
1:N:1530:G:C4	1:N:1531:A:C2	3.04	0.46
1:N:747:A:C6	1:N:748:G:C6	3.04	0.46
1:N:991:U:HO2'	1:N:993:G:H8	1.64	0.46
1:N:1433:A:C1'	1:N:1468:A:C2	2.99	0.46
1:N:121:U:C6	1:N:122:G:C8	3.04	0.45
1:N:668:G:C6	1:N:669:G:C5	3.04	0.45
1:N:1353:G:C2	1:N:1370:G:C2	3.04	0.45
1:N:44:A:C2	1:N:45:G:C4	3.05	0.45
1:N:929:G:C6	1:N:930:C:C4	3.05	0.45
1:N:1157:A:C4	1:N:1181:G:C6	3.04	0.45
1:N:1439:G:C5	1:N:1440:U:C6	3.04	0.45
1:N:68:G:C8	1:N:69:G:C8	3.04	0.45
1:N:121:U:C5	1:N:122:G:C8	3.04	0.45
1:N:595:A:C2	1:N:596:A:N6	2.84	0.45
1:N:832:G:C5	1:N:855:U:N3	2.85	0.45
1:N:1170:A:C5	1:N:1171:A:C4	3.04	0.45
1:N:1290:G:C5	1:N:1291:U:C5	3.05	0.45
1:N:1438:G:C6	1:N:1464:U:N3	2.84	0.45
1:N:1042:A:C6	1:N:1043:G:C6	3.04	0.45
1:N:1075:U:H2'	1:N:1076:U:O4'	2.17	0.45
1:N:213:G:C8	1:N:214:C:C6	3.04	0.45
1:N:610:U:H2'	1:N:612:C:H41	1.82	0.45
1:N:898:G:C2	1:N:902:G:C5	3.03	0.45
1:N:1177:G:H3'	1:N:1178:G:H8	1.81	0.45
1:N:337:G:C2	1:N:338:A:C5	3.05	0.45
1:N:512:U:H3	1:N:539:A:H61	1.63	0.45
1:N:57:G:C6	1:N:356:A:N1	2.84	0.45
1:N:688:G:C6	1:N:700:G:C6	3.05	0.45
1:N:840:C:C1'	1:N:843:U:H3	2.30	0.45
1:N:1255:G:C4	1:N:1279:G:C6	3.05	0.45
1:N:655:A:C2	1:N:656:G:C4	3.05	0.45
1:N:830:G:C2	1:N:857:C:O2	2.69	0.45
1:N:830:G:N1	1:N:857:C:C2	2.85	0.45
1:N:858:G:H1	1:N:869:G:C3'	2.30	0.45
1:N:1433:A:C8	1:N:1468:A:C6	3.05	0.45
1:N:301:G:C6	1:N:302:G:C6	3.05	0.44
1:N:1254:A:C2	1:N:1255:G:C4	3.05	0.44
1:N:22:G:C6	1:N:23:C:C4	3.06	0.44
1:N:44:A:C2	1:N:45:G:C5	3.05	0.44
1:N:301:G:C6	1:N:302:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:381:C:C4	1:N:382:A:C4	3.05	0.44
1:N:738:C:H2'	1:N:739:C:C6	2.52	0.44
1:N:298:A:H3'	1:N:299:G:C8	2.52	0.44
1:N:424:G:C2	1:N:425:G:C4	3.06	0.44
1:N:563:A:H2'	1:N:563:A:N3	2.31	0.44
1:N:397:A:H4'	1:N:398:U:C5	2.52	0.44
1:N:482:A:N7	1:N:483:C:C4	2.86	0.44
1:N:934:C:C5	1:N:1344:C:H2'	2.53	0.44
1:N:64:G:C4	1:N:99:C:C4	3.05	0.44
1:N:150:U:C5	1:N:170:U:C5	3.06	0.44
1:N:174:A:C5	1:N:175:C:C5	3.05	0.44
1:N:195:A:H1'	1:N:223:A:H5'	2.00	0.44
1:N:257:G:C2	1:N:258:G:C4	3.06	0.44
1:N:604:G:C2	1:N:605:U:C2	3.06	0.44
1:N:688:G:H5''	1:N:688:G:H8	1.82	0.44
1:N:872:A:C5	1:N:874:G:C8	3.06	0.44
1:N:978:A:H4'	1:N:1322:C:C6	2.51	0.44
1:N:232:G:C6	1:N:233:C:C4	3.06	0.44
1:N:981:U:C6	1:N:982:U:H2'	2.53	0.44
1:N:985:C:C4	1:N:986:U:C4	3.06	0.44
1:N:285:C:H2'	1:N:286:C:C6	2.52	0.44
1:N:558:G:C8	1:N:559:A:H2'	2.52	0.44
1:N:1025:U:H2'	1:N:1031:C:C5	2.53	0.44
1:N:1369:C:H2'	1:N:1370:G:C8	2.53	0.44
1:N:663:A:C2	1:N:743:A:C2	3.05	0.44
1:N:65:A:C5	1:N:200:G:H1'	2.53	0.44
1:N:202:G:C2	1:N:203:G:C8	3.06	0.44
1:N:320:A:H2'	1:N:321:A:C8	2.53	0.44
1:N:474:G:C6	1:N:475:C:N3	2.86	0.44
1:N:1144:G:H21	1:N:1146:A:H62	1.66	0.44
1:N:677:U:C4	1:N:678:U:C4	3.06	0.43
1:N:1285:A:H61	1:N:1355:G:C5'	2.30	0.43
1:N:243:A:H4'	1:N:244:U:H5''	1.99	0.43
1:N:922:G:H2'	1:N:923:A:C8	2.53	0.43
1:N:1006:G:N2	1:N:1024:G:H1'	2.32	0.43
1:N:61:G:H21	1:N:379:C:H4'	1.82	0.43
1:N:68:G:C4	1:N:69:G:H1'	2.53	0.43
1:N:94:G:H4'	1:N:95:C:C5'	2.43	0.43
1:N:295:C:H2'	1:N:296:U:O4'	2.18	0.43
1:N:380:G:C2	1:N:384:G:C6	3.07	0.43
1:N:533:A:C2	1:N:535:A:H8	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1375:A:H2'	1:N:1376:U:O4'	2.18	0.43
1:N:1513:A:C5	1:N:1523:G:C6	3.07	0.43
1:N:157:U:C2	1:N:165:G:N1	2.87	0.43
1:N:323:U:N3	1:N:324:G:C4	2.87	0.43
1:N:1143:G:H2'	1:N:1144:G:H8	1.83	0.43
1:N:1148:U:N3	1:N:1149:C:C2	2.86	0.43
1:N:87:C:C5	1:N:88:U:C5	3.07	0.43
1:N:207:C:H2'	1:N:208:U:C5	2.54	0.43
1:N:322:C:H3'	1:N:323:U:C6	2.53	0.43
1:N:687:A:C2	1:N:704:A:C6	3.06	0.43
1:N:1283:U:H2'	1:N:1284:C:C6	2.53	0.43
1:N:78:A:C2	1:N:79:G:C2	3.06	0.43
1:N:320:A:H4'	1:N:1466:C:O2	2.18	0.43
1:N:321:A:H2'	1:N:322:C:H6	1.84	0.43
1:N:503:C:O2	1:N:510:A:C2	2.71	0.43
1:N:749:A:H2'	1:N:750:C:C6	2.54	0.43
1:N:843:U:H2'	1:N:846:G:H21	1.83	0.43
1:N:909:A:C8	1:N:910:C:C5	3.07	0.43
1:N:1072:G:C2	1:N:1104:G:C2	3.07	0.43
1:N:1501:C:C5	1:N:1504:G:C4	3.06	0.43
1:N:102:G:C5	1:N:103:U:C5	3.06	0.43
1:N:151:A:C6	1:N:171:A:C6	3.06	0.43
1:N:582:C:H3'	1:N:582:C:C6	2.53	0.43
1:N:39:G:C4	1:N:498:A:C2	3.06	0.43
1:N:93:U:H3'	1:N:93:U:C6	2.54	0.43
1:N:255:G:C4	1:N:256:U:C6	3.06	0.43
1:N:635:A:C5	1:N:636:U:C4	3.07	0.43
1:N:1129:C:C4	1:N:1139:G:C4	3.07	0.43
1:N:197:A:C2	1:N:198:G:C4	3.07	0.43
1:N:644:U:C2	1:N:645:G:C8	3.07	0.43
1:N:1004:A:H5'	1:N:1024:G:H22	1.83	0.43
1:N:64:G:C2	1:N:67:C:C5	3.07	0.42
1:N:69:G:H2'	1:N:70:U:C6	2.54	0.42
1:N:179:A:C5	1:N:180:U:C4	3.07	0.42
1:N:338:A:H61	1:N:351:G:H1	1.66	0.42
1:N:980:C:H3'	1:N:981:U:C6	2.54	0.42
1:N:160:A:C5	1:N:161:A:C6	3.06	0.42
1:N:247:G:H1'	1:N:282:A:H2	1.83	0.42
1:N:432:A:H3'	1:N:433:G:H8	1.82	0.42
1:N:474:G:C5	1:N:475:C:C4	3.07	0.42
1:N:537:G:C6	1:N:538:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:708:C:C4	1:N:709:U:C4	3.07	0.42
1:N:1047:G:C2	1:N:1213:A:C2	3.08	0.42
1:N:1195:C:H2'	1:N:1197:A:H5'	2.02	0.42
1:N:1394:A:H3'	1:N:1395:C:C5'	2.46	0.42
1:N:155:A:C4	1:N:167:A:C2	3.07	0.42
1:N:581:G:N2	1:N:761:G:C6	2.87	0.42
1:N:1171:A:C2	1:N:1172:C:C2	3.07	0.42
1:N:1416:G:C6	1:N:1417:G:C4	3.07	0.42
1:N:424:G:C4	1:N:425:G:C8	3.07	0.42
1:N:679:C:H2'	1:N:680:C:O4'	2.19	0.42
1:N:749:A:C5	1:N:750:C:C4	3.08	0.42
1:N:1068:G:C6	1:N:1108:G:C5	3.07	0.42
1:N:1239:A:C2	1:N:1241:G:C6	3.07	0.42
1:N:1433:A:H3'	1:N:1434:A:H8	1.85	0.42
1:N:28:A:H2	1:N:555:U:H3	1.66	0.42
1:N:64:G:H2'	1:N:99:C:N4	2.35	0.42
1:N:68:G:C6	1:N:102:G:N1	2.88	0.42
1:N:143:A:N3	1:N:143:A:H2'	2.35	0.42
1:N:424:G:C5	1:N:425:G:C5	3.07	0.42
1:N:465:A:C6	1:N:466:A:C6	3.08	0.42
1:N:604:G:C5	1:N:605:U:C4	3.07	0.42
1:N:1162:C:H2'	1:N:1163:A:C8	2.54	0.42
1:N:1223:C:H5''	1:N:1224:U:H3'	2.01	0.42
1:N:1345:U:C2	1:N:1375:A:N1	2.87	0.42
1:N:794:A:C2'	1:N:795:C:H5'	2.50	0.42
1:N:826:C:N3	1:N:827:U:C5	2.87	0.42
1:N:39:G:H1'	1:N:497:G:H21	1.85	0.42
1:N:64:G:C2	1:N:69:G:C6	3.08	0.42
1:N:68:G:N1	1:N:102:G:C2	2.88	0.42
1:N:92:U:H2'	1:N:93:U:C6	2.55	0.42
1:N:584:G:H2'	1:N:585:G:O4'	2.20	0.42
1:N:749:A:C2	1:N:750:C:C2	3.08	0.42
1:N:958:A:C2	1:N:959:A:C2	3.07	0.42
1:N:1047:G:C2	1:N:1213:A:H2	2.37	0.42
1:N:1239:A:H4'	1:N:1240:U:OP1	2.20	0.42
1:N:218:U:C5	1:N:219:U:C4	3.08	0.42
1:N:446:G:C2	1:N:489:C:C2	3.07	0.42
1:N:64:G:H2'	1:N:99:C:H41	1.85	0.42
1:N:141:G:C2	1:N:223:A:C2	3.08	0.42
1:N:399:G:C6	1:N:400:C:C5	3.08	0.42
1:N:579:A:C6	1:N:763:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:620:C:N4	1:N:621:A:C2	2.88	0.42
1:N:1484:C:C4	1:N:1485:U:N3	2.88	0.42
1:N:154:U:H2'	1:N:155:A:C8	2.55	0.42
1:N:301:G:H4'	1:N:564:C:H42	1.84	0.42
1:N:1074:G:C6	1:N:1075:U:C4	3.07	0.42
1:N:142:G:C2	1:N:222:C:C6	3.07	0.41
1:N:215:C:C6	1:N:216:U:C5	3.08	0.41
1:N:293:G:H21	1:N:306:A:H2	1.57	0.41
1:N:669:G:C6	1:N:670:G:C6	3.07	0.41
1:N:1129:C:C2	1:N:1144:G:C2	3.08	0.41
1:N:1511:G:C6	1:N:1512:U:C4	3.08	0.41
1:N:68:G:C5	1:N:69:G:H1'	2.54	0.41
1:N:73:C:H5''	1:N:73:C:H6	1.85	0.41
1:N:635:A:C6	1:N:636:U:C4	3.08	0.41
1:N:872:A:N3	1:N:872:A:H2'	2.35	0.41
1:N:1006:G:C6	1:N:1024:G:C2	3.08	0.41
1:N:1041:G:C6	1:N:1042:A:C6	3.09	0.41
1:N:1229:A:C5	1:N:1230:C:C5	3.07	0.41
1:N:1366:C:C4	1:N:1367:C:C4	3.08	0.41
1:N:555:U:H6	1:N:555:U:O5'	2.04	0.41
1:N:625:U:H2'	1:N:626:G:C8	2.55	0.41
1:N:923:A:H1'	1:N:1398:A:H2'	2.02	0.41
1:N:1307:U:C4	1:N:1308:U:C5	3.08	0.41
1:N:1391:U:H2'	1:N:1392:G:H8	1.83	0.41
1:N:320:A:H61	1:N:333:U:H3	1.68	0.41
1:N:411:A:C4	1:N:429:U:C4	3.08	0.41
1:N:516:U:C5	1:N:517:G:C8	3.08	0.41
1:N:749:A:C6	1:N:750:C:C4	3.09	0.41
1:N:811:C:C2'	1:N:812:G:H5'	2.51	0.41
1:N:1205:U:H2'	1:N:1206:G:C8	2.55	0.41
1:N:272:C:C2	1:N:273:U:C6	3.09	0.41
1:N:411:A:C4	1:N:429:U:C5	3.08	0.41
1:N:438:U:C5	1:N:494:G:C8	3.08	0.41
1:N:583:A:C5	1:N:584:G:C8	3.09	0.41
1:N:620:C:C5	1:N:621:A:C5	3.08	0.41
1:N:62:U:N3	1:N:63:C:C4	2.89	0.41
1:N:76:G:C6	1:N:77:A:C5	3.09	0.41
1:N:168:G:N1	1:N:169:C:C4	2.89	0.41
1:N:409:U:H2'	1:N:410:G:C8	2.56	0.41
1:N:803:G:C2	1:N:804:U:C2	3.09	0.41
1:N:824:G:N1	1:N:877:G:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1258:G:H2'	1:N:1259:C:H6	1.86	0.41
1:N:65:A:C6	1:N:200:G:H1'	2.56	0.41
1:N:544:G:C6	1:N:545:C:C4	3.09	0.41
1:N:596:A:N1	1:N:645:G:C2	2.88	0.41
1:N:1083:U:H1'	1:N:1101:A:C8	2.56	0.41
1:N:1254:A:C2	1:N:1255:G:C5	3.09	0.41
1:N:78:A:C6	1:N:79:G:N1	2.88	0.41
1:N:91:U:C5	1:N:92:U:C2	3.09	0.41
1:N:620:C:H3'	1:N:621:A:C8	2.55	0.41
1:N:804:U:H5	1:N:805:C:C4	2.39	0.41
1:N:862:C:H1'	1:N:874:G:H5''	2.03	0.41
1:N:1043:G:H2'	1:N:1044:A:C8	2.56	0.41
1:N:1074:G:C6	1:N:1075:U:N3	2.88	0.41
1:N:1255:G:C6	1:N:1279:G:C5	3.08	0.41
1:N:1316:G:C2	1:N:1319:A:C8	3.08	0.41
1:N:69:G:C4	1:N:70:U:C5	3.09	0.41
1:N:405:U:H5''	1:N:495:A:C2	2.56	0.41
1:N:437:U:C4	1:N:438:U:C5	3.09	0.41
1:N:582:C:C6	1:N:582:C:C3'	3.03	0.41
1:N:872:A:N7	1:N:874:G:C8	2.88	0.41
1:N:894:G:H2'	1:N:895:G:O4'	2.20	0.41
1:N:951:G:C6	1:N:1231:G:C6	3.09	0.41
1:N:1066:C:C6	1:N:1066:C:H5''	2.56	0.41
1:N:656:G:C6	1:N:657:U:C4	3.09	0.41
1:N:1314:C:C2	1:N:1324:A:C2	3.09	0.41
1:N:53:A:C2	1:N:359:G:C5	3.08	0.40
1:N:207:C:H2'	1:N:208:U:C2	2.56	0.40
1:N:670:G:N2	1:N:737:C:C2	2.89	0.40
1:N:1007:U:O2	1:N:1023:U:C2	2.74	0.40
1:N:27:G:C5	1:N:557:G:C2	3.10	0.40
1:N:602:A:C2	1:N:637:C:C2	3.10	0.40
1:N:606:G:H1'	1:N:632:U:C4	2.56	0.40
1:N:701:U:H5''	1:N:703:G:H5'	2.03	0.40
1:N:98:A:C6	1:N:99:C:C4	3.10	0.40
1:N:199:A:C2	1:N:219:U:O2	2.74	0.40
1:N:770:C:H2'	1:N:771:G:C8	2.56	0.40
1:N:1218:C:C2	1:N:1219:A:C8	3.10	0.40
1:N:1349:A:C8	1:N:1350:A:C8	3.09	0.40
1:N:69:G:C5	1:N:70:U:C5	3.09	0.40
1:N:200:G:C6	1:N:201:G:C6	3.09	0.40
1:N:502:A:H61	1:N:543:U:H3	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:663:A:N1	1:N:743:A:C2	2.89	0.40
1:N:850:U:C2	1:N:851:G:C8	3.10	0.40
1:N:979:C:C5	1:N:980:C:C6	3.09	0.40
1:N:1016:A:C8	1:N:1017:U:H1'	2.57	0.40
1:N:1032:G:C2	1:N:1033:G:C8	3.10	0.40
1:N:1049:U:H4'	1:N:1050:G:H5'	2.04	0.40
1:N:1184:G:C5	1:N:1185:G:N7	2.89	0.40
1:N:11:G:C6	1:N:12:U:N3	2.89	0.40
1:N:477:C:H2'	1:N:478:A:C8	2.56	0.40
1:N:737:C:N3	1:N:738:C:C4	2.90	0.40
1:N:989:U:N3	1:N:990:C:C5	2.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	N	1532/1533 (99%)	472 (30%)	145 (9%)

All (472) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	3	A
1	N	4	U
1	N	5	U
1	N	6	G
1	N	7	A
1	N	8	A
1	N	9	G

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Mol	Chain	Res	Type
1	N	13	U
1	N	14	U
1	N	22	G
1	N	31	G
1	N	32	A
1	N	33	A
1	N	39	G
1	N	47	C
1	N	48	C
1	N	49	U
1	N	50	A
1	N	51	A
1	N	52	C
1	N	59	A
1	N	60	A
1	N	61	G
1	N	64	G
1	N	65	A
1	N	66	A
1	N	70	U
1	N	71	A
1	N	72	A
1	N	73	C
1	N	74	A
1	N	75	G
1	N	76	G
1	N	77	A
1	N	79	G
1	N	81	A
1	N	82	G
1	N	83	C
1	N	84	U
1	N	85	U
1	N	86	G
1	N	87	C
1	N	88	U
1	N	89	U
1	N	90	C
1	N	91	U
1	N	92	U
1	N	94	G
1	N	95	C

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Mol	Chain	Res	Type
1	N	96	U
1	N	97	G
1	N	107	G
1	N	108	G
1	N	109	A
1	N	110	C
1	N	115	G
1	N	116	A
1	N	119	A
1	N	120	A
1	N	127	G
1	N	129	A
1	N	130	A
1	N	131	A
1	N	132	C
1	N	134	G
1	N	135	C
1	N	138	G
1	N	141	G
1	N	143	A
1	N	159	G
1	N	160	A
1	N	161	A
1	N	163	C
1	N	164	G
1	N	168	G
1	N	169	C
1	N	173	U
1	N	174	A
1	N	177	G
1	N	181	A
1	N	182	A
1	N	183	C
1	N	195	A
1	N	197	A
1	N	198	G
1	N	199	A
1	N	202	G
1	N	205	A
1	N	207	C
1	N	208	U
1	N	209	U

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Mol	Chain	Res	Type
1	N	210	C
1	N	211	G
1	N	212	G
1	N	214	C
1	N	219	U
1	N	232	G
1	N	240	G
1	N	243	A
1	N	244	U
1	N	245	U
1	N	246	A
1	N	247	G
1	N	251	G
1	N	252	U
1	N	258	G
1	N	266	G
1	N	267	C
1	N	268	U
1	N	273	U
1	N	274	A
1	N	275	G
1	N	280	C
1	N	281	G
1	N	285	C
1	N	289	G
1	N	305	G
1	N	306	A
1	N	308	C
1	N	316	C
1	N	320	A
1	N	321	A
1	N	328	C
1	N	329	A
1	N	330	C
1	N	331	G
1	N	332	G
1	N	344	A
1	N	345	C
1	N	346	G
1	N	347	G
1	N	351	G
1	N	352	C

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Mol	Chain	Res	Type
1	N	353	A
1	N	354	G
1	N	363	A
1	N	366	A
1	N	367	U
1	N	368	U
1	N	373	A
1	N	384	G
1	N	389	A
1	N	390	U
1	N	392	C
1	N	406	G
1	N	411	A
1	N	412	A
1	N	413	G
1	N	414	A
1	N	421	U
1	N	422	C
1	N	423	G
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	438	U
1	N	439	U
1	N	441	A
1	N	448	A
1	N	451	A
1	N	452	A
1	N	458	U
1	N	459	A
1	N	461	A
1	N	462	G
1	N	463	U
1	N	466	A
1	N	467	U
1	N	468	A
1	N	469	C
1	N	481	G
1	N	482	A
1	N	484	G
1	N	485	U

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Mol	Chain	Res	Type
1	N	486	U
1	N	496	A
1	N	497	G
1	N	498	A
1	N	499	A
1	N	500	G
1	N	501	C
1	N	508	U
1	N	509	A
1	N	511	C
1	N	512	U
1	N	518	C
1	N	523	A
1	N	527	G
1	N	530	G
1	N	531	U
1	N	532	A
1	N	533	A
1	N	534	U
1	N	535	A
1	N	536	C
1	N	537	G
1	N	546	A
1	N	548	G
1	N	549	C
1	N	556	C
1	N	559	A
1	N	560	A
1	N	562	U
1	N	563	A
1	N	564	C
1	N	566	G
1	N	567	G
1	N	572	A
1	N	573	A
1	N	574	A
1	N	575	G
1	N	576	C
1	N	577	G
1	N	579	A
1	N	588	G
1	N	595	A

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Mol	Chain	Res	Type
1	N	596	A
1	N	604	G
1	N	606	G
1	N	607	A
1	N	610	U
1	N	629	A
1	N	631	C
1	N	632	U
1	N	633	G
1	N	642	A
1	N	649	A
1	N	653	U
1	N	665	A
1	N	702	A
1	N	703	G
1	N	718	A
1	N	719	C
1	N	720	C
1	N	721	G
1	N	722	G
1	N	723	U
1	N	724	G
1	N	731	G
1	N	733	G
1	N	748	G
1	N	754	C
1	N	755	G
1	N	767	A
1	N	768	A
1	N	776	G
1	N	777	A
1	N	787	A
1	N	788	U
1	N	790	A
1	N	793	U
1	N	794	A
1	N	811	C
1	N	812	G
1	N	813	U
1	N	814	A
1	N	815	A
1	N	816	A

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Mol	Chain	Res	Type
1	N	817	C
1	N	818	G
1	N	819	A
1	N	820	U
1	N	821	G
1	N	828	U
1	N	829	G
1	N	832	G
1	N	843	U
1	N	844	G
1	N	845	A
1	N	846	G
1	N	855	U
1	N	861	G
1	N	870	U
1	N	871	U
1	N	884	U
1	N	885	G
1	N	914	A
1	N	926	G
1	N	927	G
1	N	932	C
1	N	934	C
1	N	935	A
1	N	944	G
1	N	960	U
1	N	961	U
1	N	965	U
1	N	966	G
1	N	967	C
1	N	968	A
1	N	969	A
1	N	970	C
1	N	971	G
1	N	972	C
1	N	974	A
1	N	975	A
1	N	976	G
1	N	977	A
1	N	982	U
1	N	983	A
1	N	992	U

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Mol	Chain	Res	Type
1	N	993	G
1	N	1003	G
1	N	1004	A
1	N	1008	U
1	N	1017	U
1	N	1018	G
1	N	1022	A
1	N	1028	C
1	N	1029	U
1	N	1030	U
1	N	1031	C
1	N	1032	G
1	N	1033	G
1	N	1034	G
1	N	1036	A
1	N	1050	G
1	N	1052	U
1	N	1053	G
1	N	1054	C
1	N	1055	A
1	N	1064	G
1	N	1065	U
1	N	1066	C
1	N	1067	A
1	N	1085	U
1	N	1086	U
1	N	1087	G
1	N	1088	G
1	N	1091	U
1	N	1092	A
1	N	1094	G
1	N	1095	U
1	N	1100	C
1	N	1101	A
1	N	1102	A
1	N	1104	G
1	N	1111	A
1	N	1113	C
1	N	1124	G
1	N	1125	U
1	N	1126	U
1	N	1127	G

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Mol	Chain	Res	Type
1	N	1129	C
1	N	1130	A
1	N	1133	G
1	N	1135	U
1	N	1136	C
1	N	1137	C
1	N	1138	G
1	N	1139	G
1	N	1140	C
1	N	1141	C
1	N	1144	G
1	N	1145	A
1	N	1151	A
1	N	1152	A
1	N	1158	C
1	N	1159	U
1	N	1160	G
1	N	1161	C
1	N	1167	A
1	N	1168	U
1	N	1169	A
1	N	1181	G
1	N	1182	G
1	N	1189	U
1	N	1190	G
1	N	1191	A
1	N	1192	C
1	N	1193	G
1	N	1194	U
1	N	1196	A
1	N	1197	A
1	N	1198	G
1	N	1200	C
1	N	1201	A
1	N	1202	U
1	N	1211	U
1	N	1213	A
1	N	1223	C
1	N	1224	U
1	N	1225	A
1	N	1226	C
1	N	1227	A

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Mol	Chain	Res	Type
1	N	1228	C
1	N	1229	A
1	N	1238	A
1	N	1239	A
1	N	1240	U
1	N	1241	G
1	N	1250	A
1	N	1252	A
1	N	1256	A
1	N	1257	A
1	N	1258	G
1	N	1275	A
1	N	1278	G
1	N	1279	G
1	N	1280	A
1	N	1281	C
1	N	1282	C
1	N	1283	U
1	N	1286	U
1	N	1287	A
1	N	1293	C
1	N	1297	G
1	N	1298	U
1	N	1299	A
1	N	1300	G
1	N	1303	C
1	N	1305	G
1	N	1308	U
1	N	1315	U
1	N	1316	G
1	N	1320	C
1	N	1322	C
1	N	1323	G
1	N	1332	A
1	N	1336	C
1	N	1337	G
1	N	1338	G
1	N	1345	U
1	N	1346	A
1	N	1348	U
1	N	1349	A
1	N	1353	G

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Mol	Chain	Res	Type
1	N	1358	U
1	N	1359	C
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1365	G
1	N	1370	G
1	N	1371	G
1	N	1380	U
1	N	1381	U
1	N	1394	A
1	N	1396	A
1	N	1397	C
1	N	1398	A
1	N	1399	C
1	N	1400	C
1	N	1401	G
1	N	1406	U
1	N	1432	G
1	N	1433	A
1	N	1440	U
1	N	1441	A
1	N	1446	A
1	N	1448	C
1	N	1452	C
1	N	1453	G
1	N	1469	C
1	N	1470	U
1	N	1492	A
1	N	1493	A
1	N	1494	G
1	N	1497	G
1	N	1498	U
1	N	1499	A
1	N	1502	A
1	N	1503	A
1	N	1505	G
1	N	1506	U
1	N	1507	A
1	N	1517	G
1	N	1529	G
1	N	1530	G

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Mol	Chain	Res	Type
1	N	1531	A
1	N	1533	C
1	N	1534	A

All (145) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	N	5	U
1	N	7	A
1	N	13	U
1	N	30	U
1	N	31	G
1	N	47	C
1	N	51	A
1	N	60	A
1	N	65	A
1	N	71	A
1	N	73	C
1	N	75	G
1	N	81	A
1	N	87	C
1	N	90	C
1	N	94	G
1	N	95	C
1	N	107	G
1	N	109	A
1	N	115	G
1	N	119	A
1	N	120	A
1	N	129	A
1	N	130	A
1	N	131	A
1	N	134	G
1	N	168	G
1	N	181	A
1	N	197	A
1	N	198	G
1	N	204	G
1	N	210	C
1	N	243	A
1	N	246	A
1	N	251	G

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Mol	Chain	Res	Type
1	N	266	G
1	N	267	C
1	N	274	A
1	N	280	C
1	N	305	G
1	N	327	A
1	N	344	A
1	N	346	G
1	N	351	G
1	N	366	A
1	N	372	C
1	N	428	G
1	N	429	U
1	N	430	A
1	N	438	U
1	N	451	A
1	N	467	U
1	N	481	G
1	N	484	G
1	N	485	U
1	N	495	A
1	N	496	A
1	N	499	A
1	N	500	G
1	N	508	U
1	N	511	C
1	N	513	C
1	N	530	G
1	N	531	U
1	N	532	A
1	N	535	A
1	N	547	A
1	N	548	G
1	N	559	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	637	C
1	N	641	U
1	N	652	U
1	N	686	U
1	N	695	A

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Mol	Chain	Res	Type
1	N	717	U
1	N	721	G
1	N	723	U
1	N	733	G
1	N	754	C
1	N	777	A
1	N	817	C
1	N	820	U
1	N	843	U
1	N	845	A
1	N	870	U
1	N	884	U
1	N	913	A
1	N	934	C
1	N	941	G
1	N	960	U
1	N	965	U
1	N	974	A
1	N	982	U
1	N	991	U
1	N	1049	U
1	N	1053	G
1	N	1064	G
1	N	1066	C
1	N	1087	G
1	N	1094	G
1	N	1101	A
1	N	1126	U
1	N	1129	C
1	N	1136	C
1	N	1151	A
1	N	1167	A
1	N	1168	U
1	N	1185	G
1	N	1191	A
1	N	1197	A
1	N	1201	A
1	N	1224	U
1	N	1228	C
1	N	1232	U
1	N	1239	A
1	N	1263	C

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Mol	Chain	Res	Type
1	N	1282	C
1	N	1285	A
1	N	1299	A
1	N	1319	A
1	N	1331	G
1	N	1336	C
1	N	1337	G
1	N	1345	U
1	N	1348	U
1	N	1358	U
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1380	U
1	N	1396	A
1	N	1398	A
1	N	1399	C
1	N	1400	C
1	N	1432	G
1	N	1440	U
1	N	1494	G
1	N	1498	U
1	N	1502	A
1	N	1506	U
1	N	1530	G
1	N	1533	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides 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](#)

There are no chain breaks in this entry.

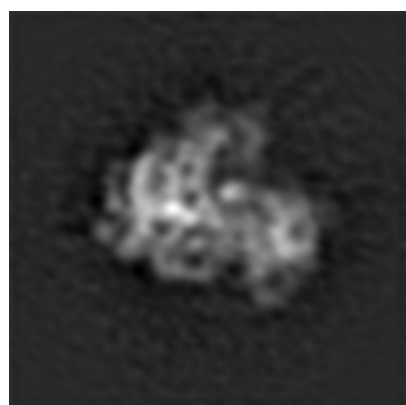
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5502. These allow visual inspection of the internal detail of the map and identification of artifacts.

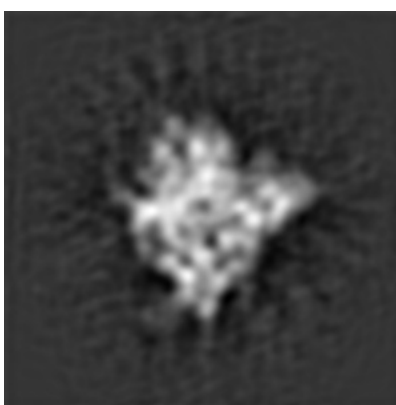
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

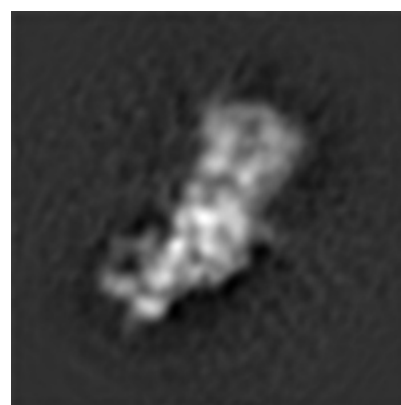
6.1.1 Primary map



X



Y

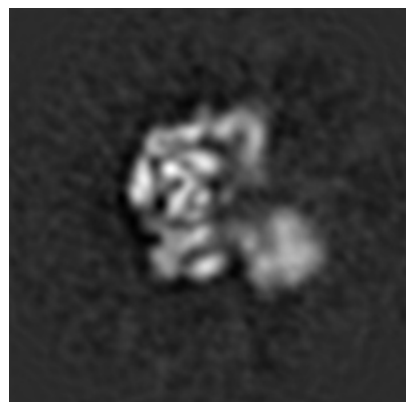


Z

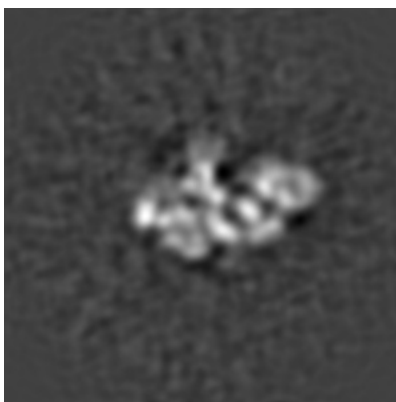
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

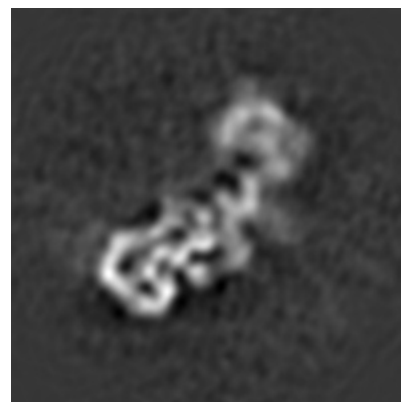
6.2.1 Primary map



X Index: 62



Y Index: 62

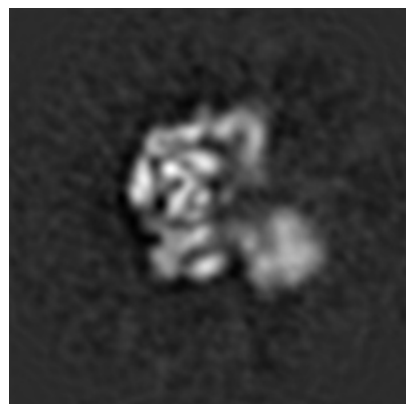


Z Index: 62

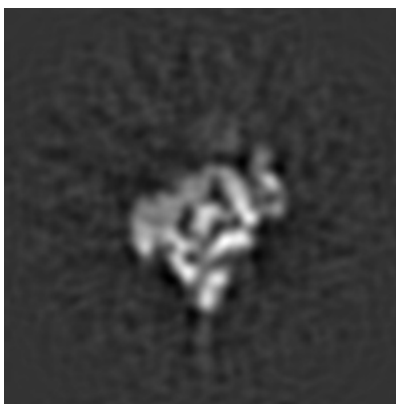
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

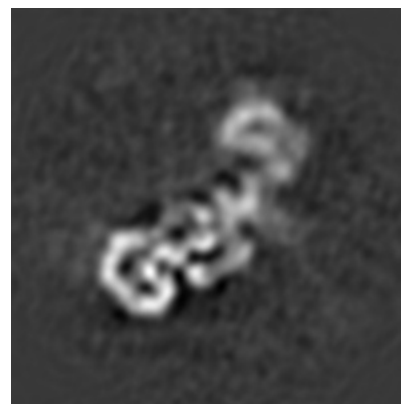
6.3.1 Primary map



X Index: 62



Y Index: 51

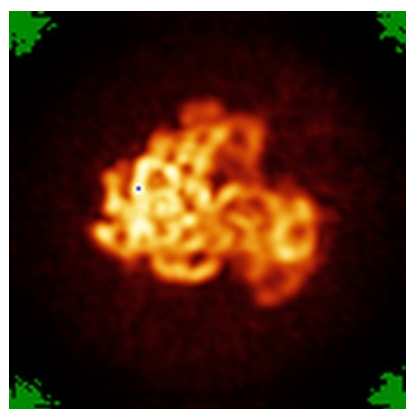


Z Index: 63

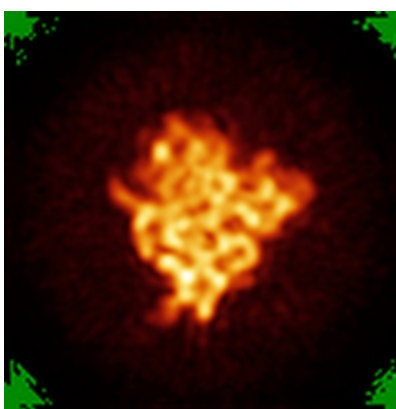
The images above show the largest variance slices of the map in three orthogonal directions.

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

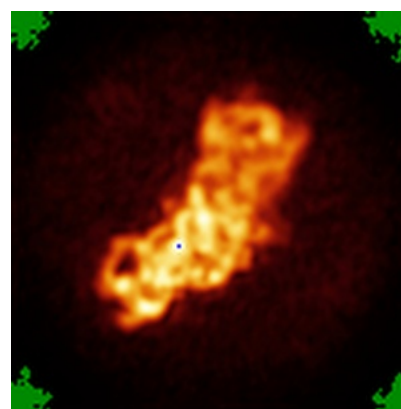
6.4.1 Primary map



X



Y

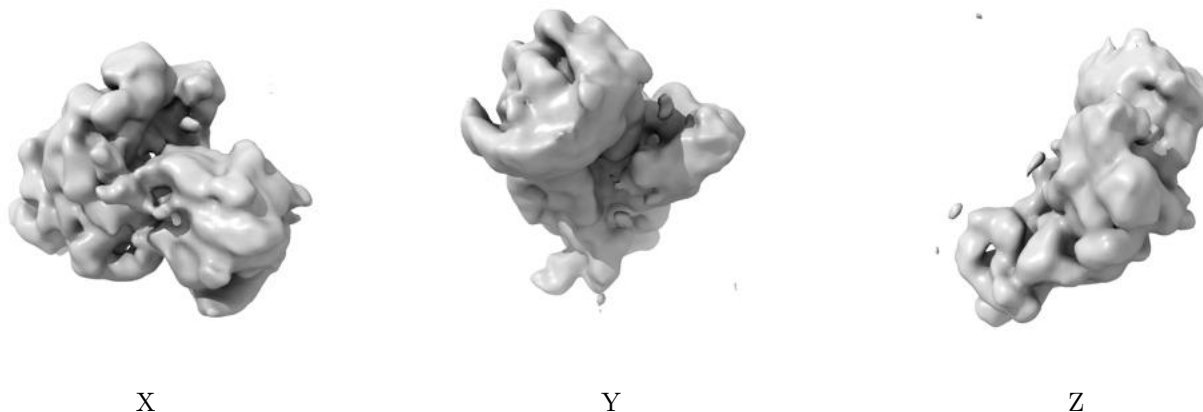


Z

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



The images above show the 3D surface view of the map at the recommended contour level - 2.8. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

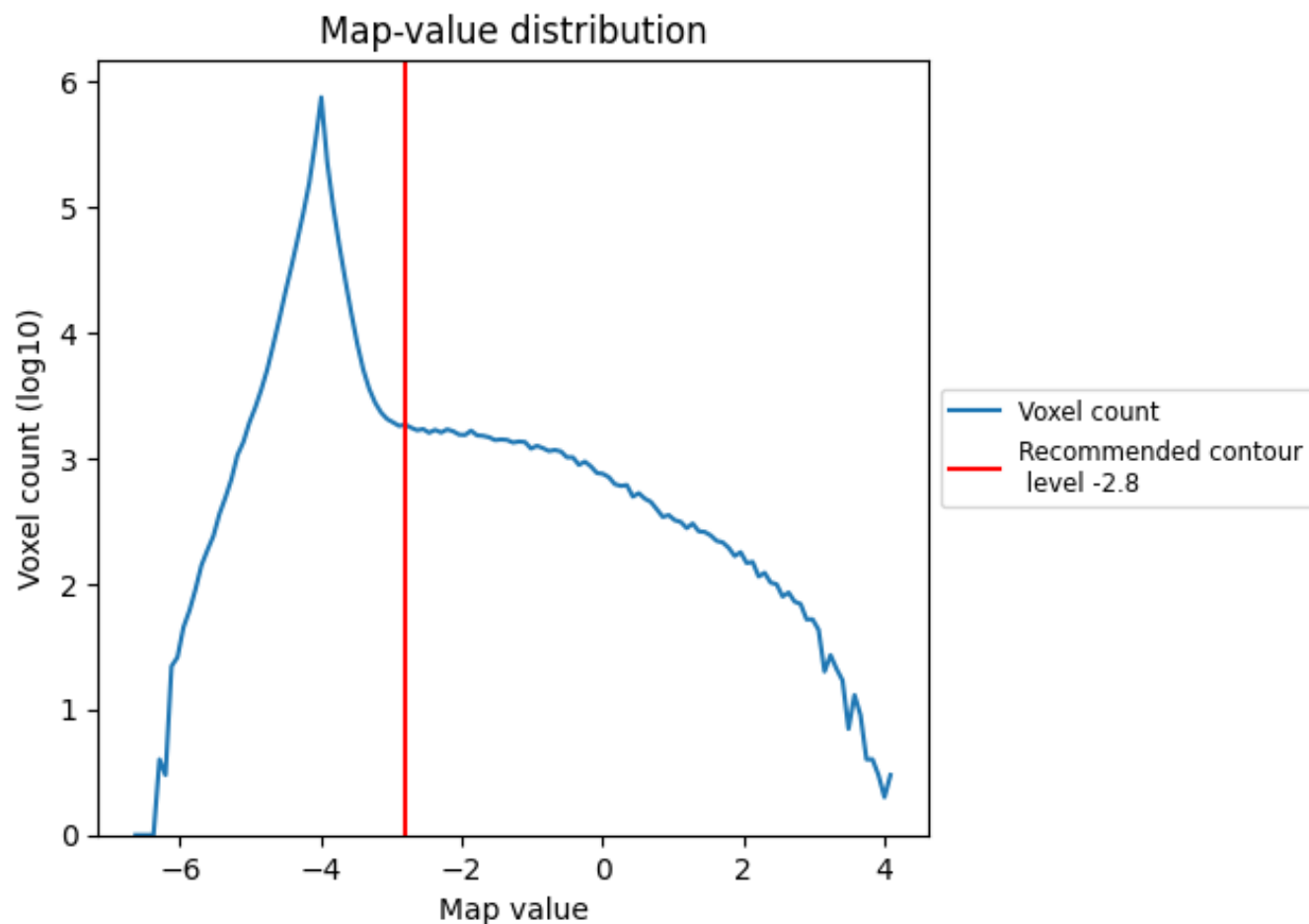
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

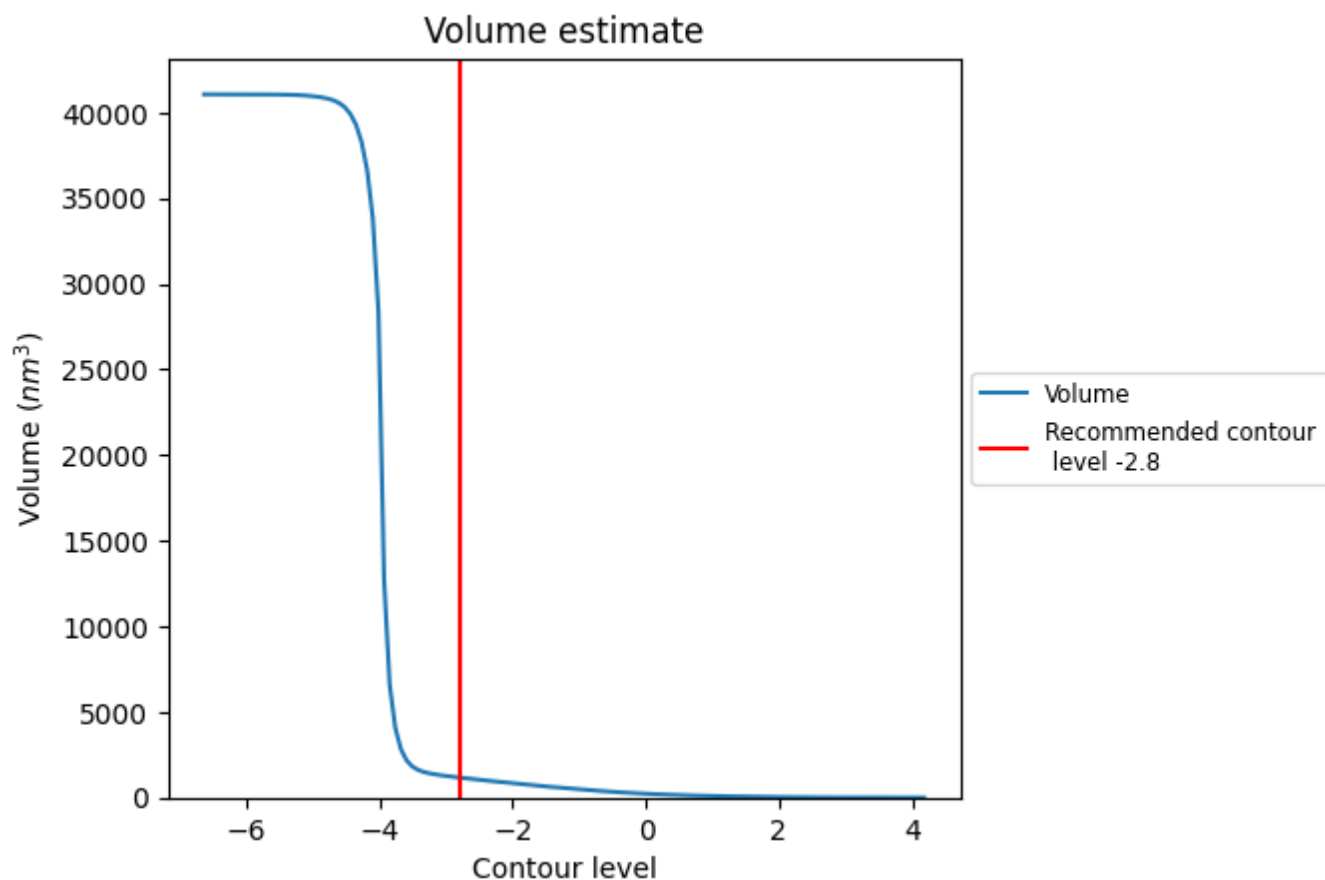
This section contains the results of statistical analysis of the map.

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.

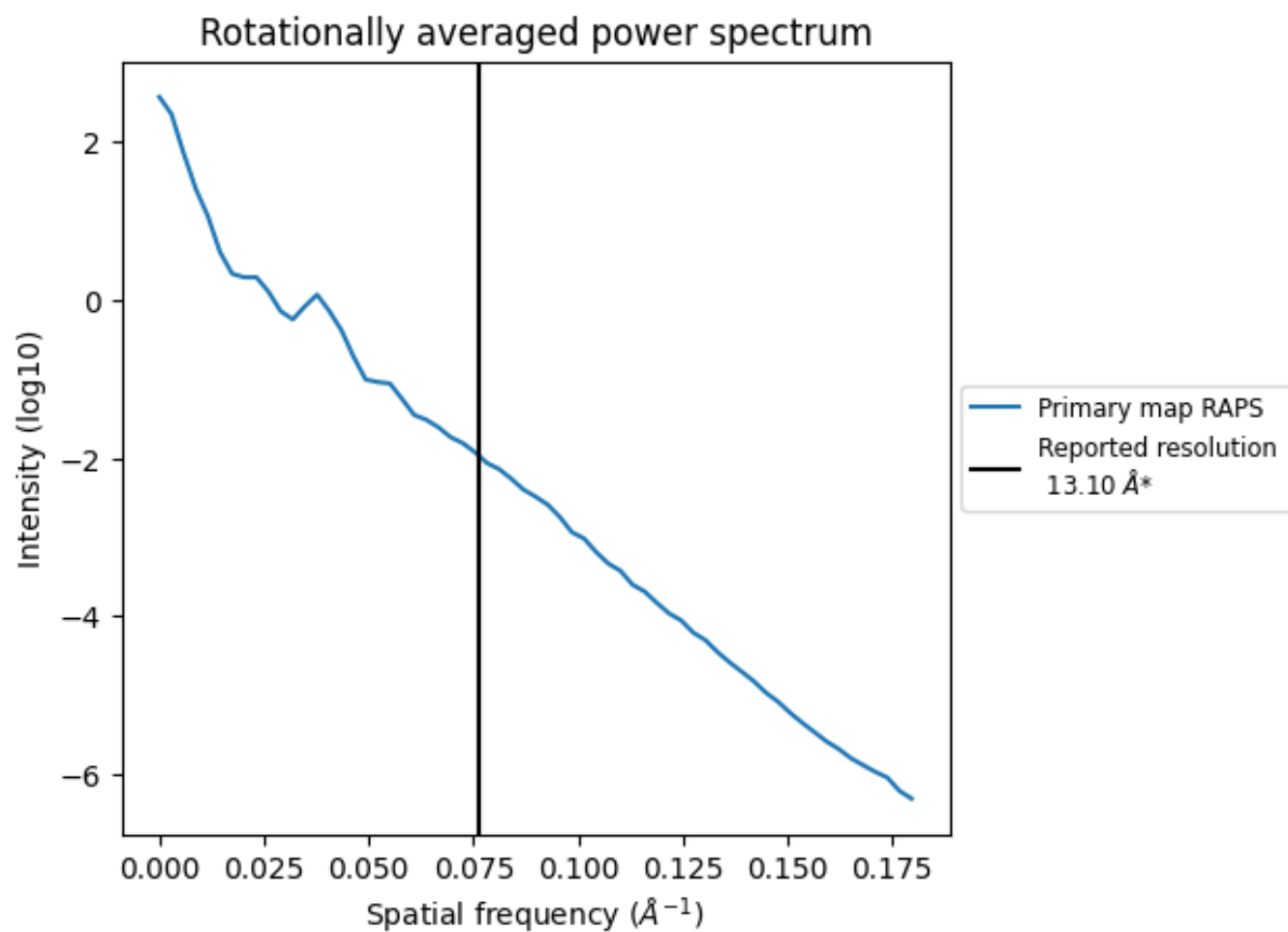
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1168 nm³; this corresponds to an approximate mass of 1055 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.076 Å⁻¹

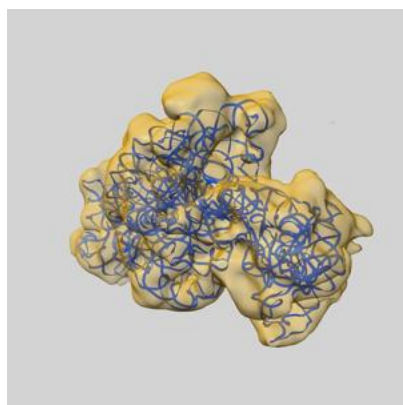
8 Fourier-Shell correlation

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

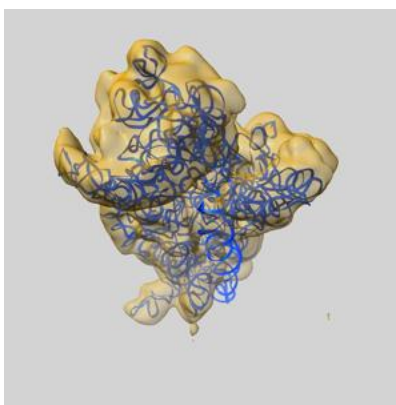
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5502 and PDB model 3J2A. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

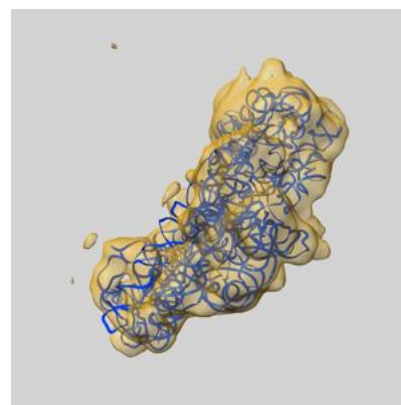
9.1 Map-model overlay [i](#)



X



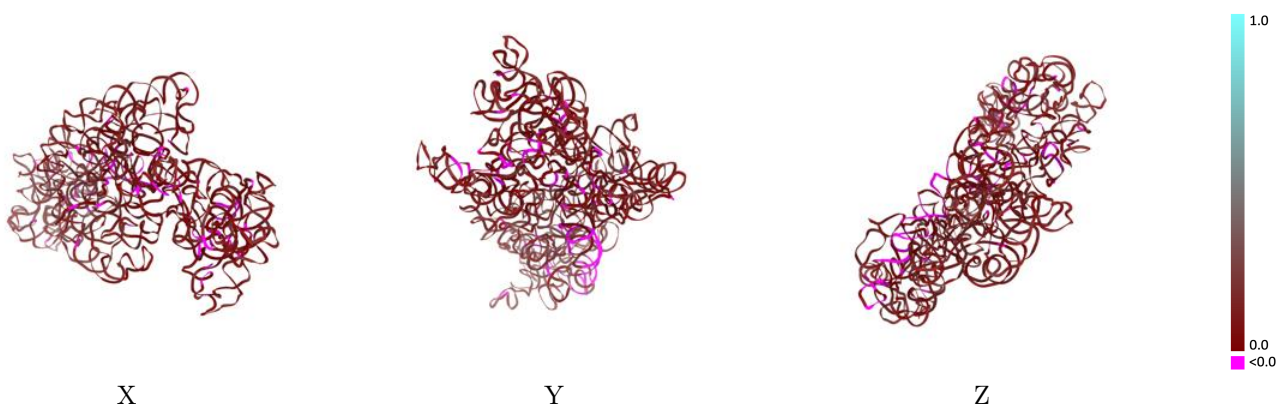
Y



Z

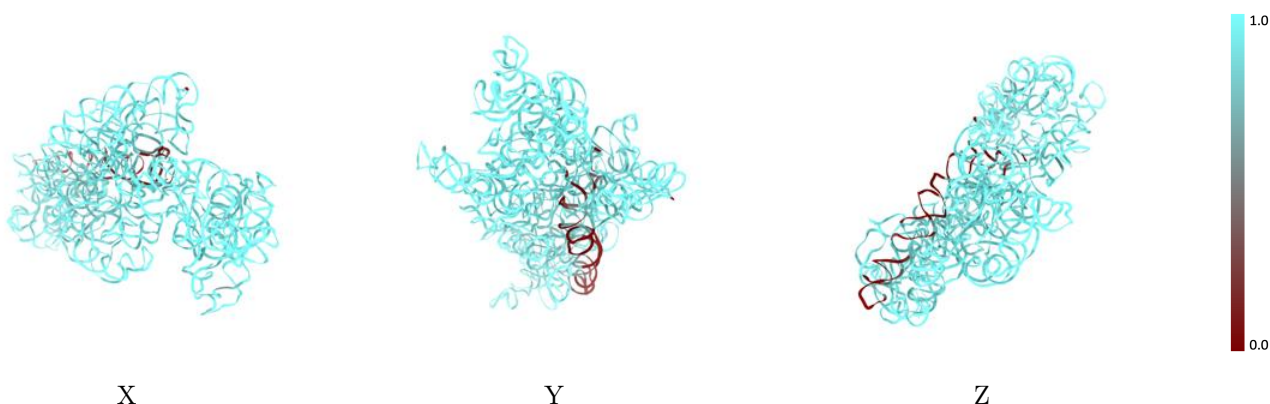
The images above show the 3D surface view of the map at the recommended contour level -2.8 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



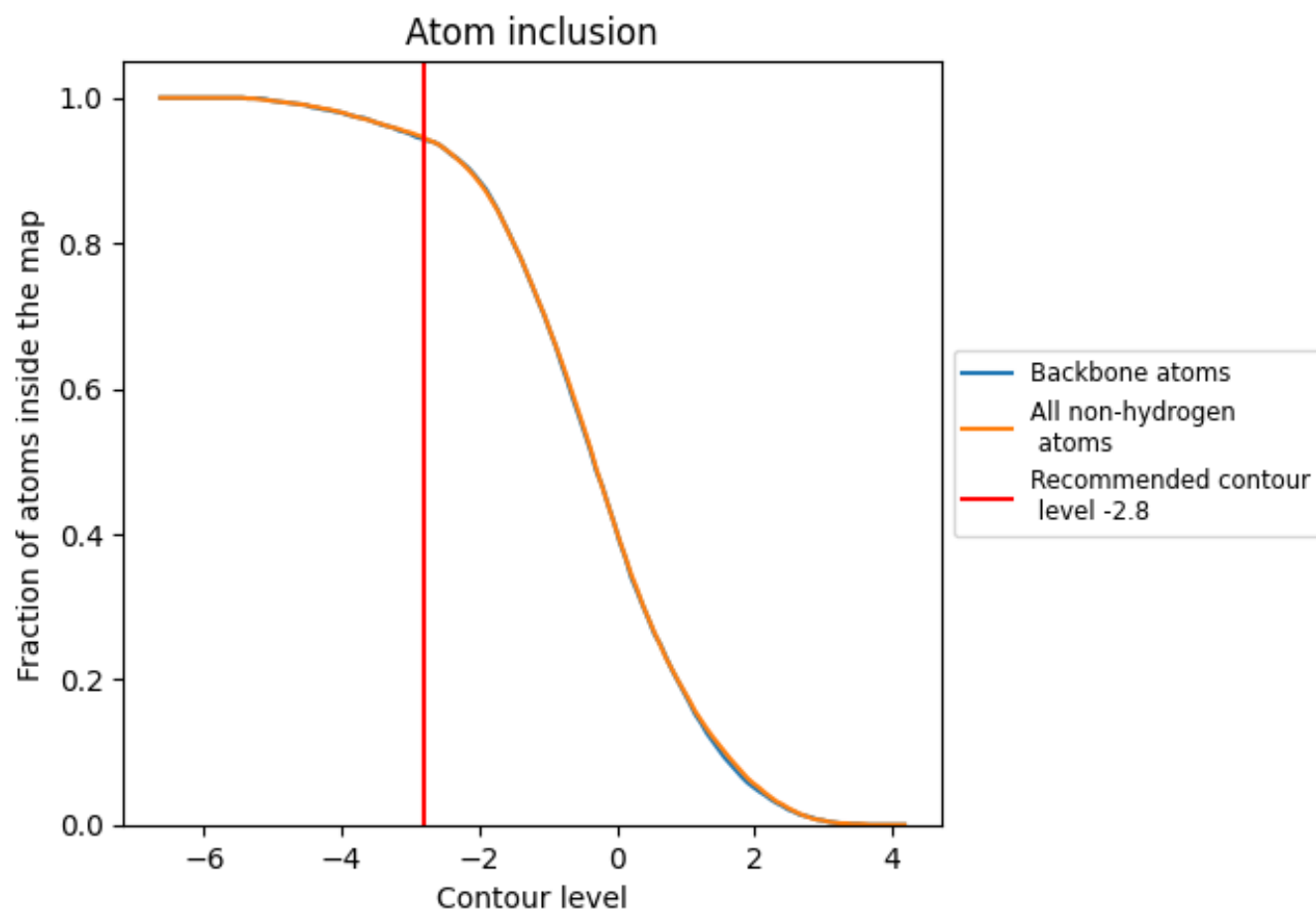
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (-2.8).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 94% 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 (-2.8) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9450	0.0980
N	0.9450	0.0980

