



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 03:37 PM UTC

PDB ID : 3J2F / pdb_00003j2f
EMDB ID : EMD-5508
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 : 17.60 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

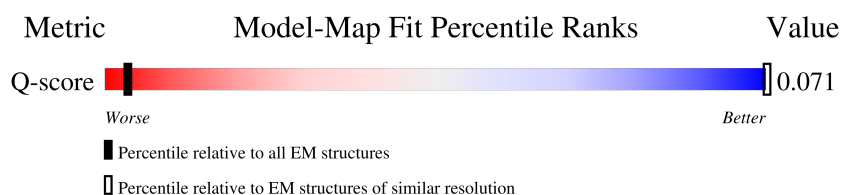
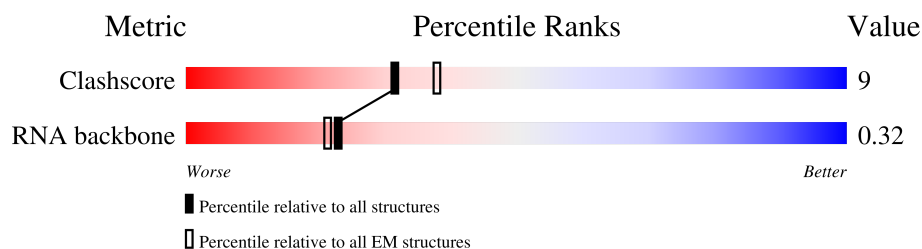
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

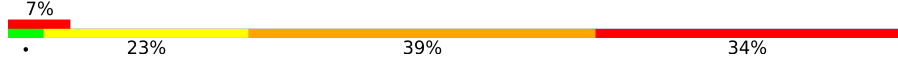
The reported resolution of this entry is 17.60 Å.

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	26 (17.10 - 18.00)

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.

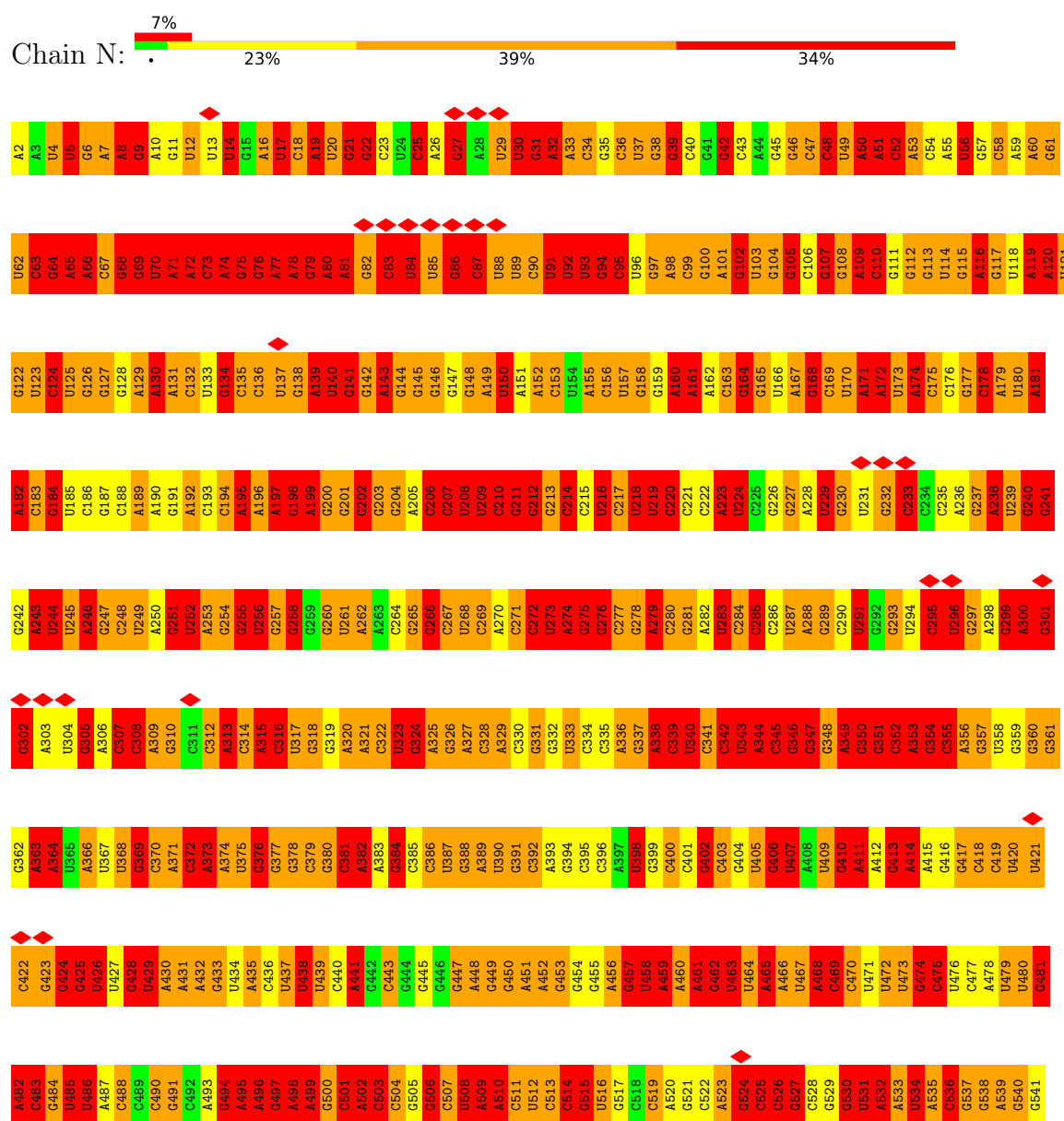
- Molecule 1 is a RNA chain called 16S rRNA.

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



G1325	C1265	U1205	A1345	U1085	U1025	U965	U905	A845	G785	G725	A865	G604	G542
U1326	G1266	G1206	A1346	U1086	G1026	G966	A906	G846	G786	C726	G666	U605	U543
G1327	C1267	G1207	C1347	G1087	C1027	C967	A907	G847	A787	G727	G667	U606	G544
G1328	G1268	G1208	U1348	G1088	C1028	A968	A908	G848	U788	A728	G668	A607	C545
A1329	A1269	U1089	C1349	G1089	U1029	A969	A909	G849	U789	A729	G669	A608	A546
U1330	G1270	C1209	A1350	U1090	U1030	C970	C910	U850	A790	G730	G670	U610	G547
G1331	A1271	G1210	A1351	U1091	U1031	G971	U911	G851	G791	G731	G671	U611	G548
A1332	C1272	U1211	A1352	A1092	G1032	C972	C912	G852	A792	C732	U672	C611	C549
G1333	C1273	U1212	G1353	A1093	G1033	G973	A913	C853	U793	G733	A673	C612	G550
U1334	A1274	G1213	G1354	G1094	G1034	A974	A914	U854	A794	G734	G674	C613	U551
U1335	A1275	G1214	A1355	U1095	A975	A975	A915	U855	C795	G735	A675	C614	U552
G1336	G1276	G1215	A1356	C1096	G976	G976	U916	C856	C796	G736	A676	G615	
G1337	C1277	A1216	A1357	A977	A1036	A977	G917	C857	G797	C737	U677	G616	
G1338	G1278	C1217	C1358	C1097	C1037	A978	A918	G858	U798	C738	U678	G617	U555
A1339	A1279	G1218	U1359	G1098	G1038	C979	A919	G859	G799	C739	C679	G618	U556
A1340	G1280	A1219	U1360	C1099	C1039	C980	A920	A860	U800	U740	C680	U619	G557
U1341	C1281	G1220	A1361	C1100	U1040	U981	U921	G861	U801	G741	A681	C620	G558
C1342	C1282	G1221	C1362	A1101	U1041	U982	G922	G862	A802	G742	A682	C621	A559
G1343	U1283	G1222	A1363	A1102	A1042	A983	G923	U863	A803	G743	A683	A622	A560
C1344	C1284	G1223	G1364	C1103	G1043	C984	C924	A864	U804	G744	U684	C623	U561
U1345	A1285	U1224	G1365	G1104	A1044	C985	G925	A865	C805	A746	G685	U625	U562
A1346	U1286	G1225	G1366	A1105	G1045	U986	G926	C866	U806	G747	U686	G626	C564
G1347	A1287	C1226	G1367	G1106	C1046	G987	G927	G867	A807	A748	A687	G627	U565
U1348	A1288	G1227	A1367	C1107	A1047	C988	G928	C868	C808	G749	C688	G628	G566
A1349	U1289	C1228	U1368	G1108	G1048	U989	G929	G869	G809	C750	C689	A629	G567
C1350	G1290	A1229	A1369	C1109	U1049	C990	C930	U870	C810	C751	G690	A630	G568
U1351	U1291	G1230	A1370	U1110	G1050	U991	C931	U871	C811	U751	G691	C631	C569
C1352	C1292	G1231	A1371	C1111	C1051	U992	C932	A872	G812	G752	G692	U632	G570
G1353	C1293	U1232	U1372	G1112	U1052	G993	G933	A873	U813	A753	G693	U633	G571
U1354	A1294	G1233	G1373	C1113	G1053	A994	C934	G874	A814	C754	A694	G634	
G1355	U1295	G1234	G1374	C1114	G1054	C995	A935	U875	A815	G755	A695	C635	A572
C1356	C1296	U1235	G1375	C1115	C1055	A996	A936	C876	A816	C756	A696		A573
A1357	A1297	A1236	A1376	U1116	A1056	U997	A937	G877	C817	U757	U697	U636	A574
U1358	U1298	C1237	G1377	G1117	G1057	C998	A938	A878	U818	C758	C698	G637	C575
C1359	A1299	A1238	U1378	C1118	G1058	C999	G939	C879	A819	A759	C699		G576
G1360	G1300	U1239	A1379	G1119	C1059	A1000	C940	C880	U820	G760	G700	U640	G577
U1361	U1301	U1240	A1380	C1120	U1060	C1001	G941	G881	G821	G761	U701	U641	C578
A1362	C1302	G1241	G1381	U1121	G1061	G1002	G942	C882	U822	U762	A702	A642	A579
G1363	C1303	C1242	G1382	U1122	C1062	G1003	G943	C883	C823	G763	G703	C643	C580
U1364	G1304	G1243	U1383	U1123	A1063	U884	G944	U884	G824	C764	A704	U644	G581
G1365	G1305	G1244	G1384	C1124	G1064	A1005	G945	G885	A825	G765	G705	G645	C582
C1366	A1306	C1245	G1385	U1125	U1065	G1006	A946	G886	C826	A766	A706	G646	A583
G1367	U1307	A1246	G1386	U1126	C1066	U1007	G947	G887	U827	G767	U707	C647	G584
A1368	U1308	U1247	A1387	G1127	A1067	U1008	C948	G888	U828	A768	C708	A648	G585
C1369	G1309	A1248	U1388	C1128	G1068	U1009	A949	A889	G829	G769	U709	A649	C586
G1370	G1310	U1249	G1389	U1129	C1069	U1010	U950	G890	G830	C770	G710	G650	G587
G1371	A1311	C1250	U1390	U1130	U1070	U1011	G951	U891	A831	G771	G711	G651	G588
U1372	C1312	A1251	C1391	G1131	G1071	G1012	U952	A892	G832	U772	A712	U652	U589
G1373	U1313	G1252	G1392	C1132	G1072	A1013	G953	G893	G833	G773	G713	G653	U590
C1374	C1314	A1253	G1393	G1133	G1073	G1014	G954	G894	U834	G774	G714	G654	U591
U1375	U1315	U1254	U1394	G1134	U1074	A1015	U955	G895	U835	G775	A715	A655	
G1376	C1316	G1255	A1395	C1135	G1075	G1016	U956	C896	G836	G776	A716	G656	U594
A1377	G1317	A1256	U1396	C1137	U1076	U1017	U957	C897	U837	G777	A717	G657	A595
U1378	C1318	U1257	G1397	G1138	U1077	U1018	A958	G898	G838	G778	A718	C658	A596
G1379	A1319	G1258	U1398	G1139	G1078	G1019	A959	C899	C839	A779	C719	U659	G597
U1380	C1320	C1259	U1399	C1140	U1079	A1019	U960	A900	G840	C720	C720	C660	U598
U1381	U1321	G1260	U1400	C1141	G1079	A1020	U961	A901	C841	A781	G721	C661	C599
C1382	C1322	A1261	A1080	G1142	A1080	A1021	G962	G902	U842	A782	G722	A662	A600
U1383	G1323	C1262	A1081	G1143	A1081	A1022	G963	G903	U843	C783	G723	A663	G601
A1324	A1324	C1263	A1082	G1144	A1082	U1023	A964	U904	G844	A784	G724	G664	A602
			U1083		G1084	G1024							U603



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	9609	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Weiner filter	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3800	Depositor
Magnification	59000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	6.063	Depositor
Minimum map value	-8.451	Depositor
Average map value	-4.957	Depositor
Map value standard deviation	0.711	Depositor
Recommended contour level	-2.8	Depositor
Map size (Å)	375.0, 375.0, 375.0	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	3.0, 3.0, 3.0	Depositor

5 Model quality

5.1 Standard geometry

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	816/36831 (2.2%)	2.07	1918/57458 (3.3%)

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	941

All (816) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1132	C	C5'-C4'	10.16	1.66	1.51
1	N	1094	G	C5'-C4'	9.86	1.66	1.51
1	N	347	G	C5'-C4'	9.82	1.66	1.51
1	N	74	A	C5'-C4'	9.25	1.65	1.51
1	N	687	A	C5'-C4'	9.16	1.65	1.51
1	N	316	C	O3'-P	-9.13	1.47	1.61
1	N	145	G	C5'-C4'	9.11	1.65	1.51
1	N	557	G	C3'-C2'	9.02	1.66	1.52
1	N	1197	A	C3'-O3'	8.90	1.55	1.42
1	N	772	U	C1'-N1	8.80	1.61	1.48
1	N	717	U	C5'-C4'	8.68	1.64	1.51
1	N	608	A	C5'-C4'	8.57	1.64	1.51
1	N	665	A	C4'-C3'	8.56	1.65	1.52
1	N	1416	G	C5'-C4'	8.55	1.64	1.51
1	N	1281	C	O3'-P	-8.54	1.48	1.61
1	N	1235	U	C1'-N1	8.46	1.61	1.48
1	N	1252	A	C5'-C4'	8.38	1.63	1.51
1	N	1346	A	C5'-C4'	8.38	1.64	1.51
1	N	1128	C	P-O5'	-8.31	1.47	1.59
1	N	936	C	C1'-N1	8.29	1.60	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	435	A	O3'-P	-8.22	1.48	1.61
1	N	1249	C	P-O5'	8.19	1.72	1.59
1	N	207	C	C1'-N1	8.16	1.60	1.48
1	N	1217	C	C5'-C4'	8.16	1.63	1.51
1	N	1279	G	C5'-C4'	8.15	1.63	1.51
1	N	1305	G	C2'-C1'	-8.12	1.41	1.53
1	N	118	U	O3'-P	-8.09	1.49	1.61
1	N	1358	U	C1'-N1	8.07	1.60	1.48
1	N	1160	G	O4'-C1'	8.00	1.53	1.41
1	N	805	C	P-O5'	-7.94	1.47	1.59
1	N	1292	G	P-O5'	-7.90	1.47	1.59
1	N	1322	C	C4'-C3'	7.90	1.65	1.53
1	N	860	A	P-O5'	-7.90	1.48	1.59
1	N	468	A	C4'-O4'	-7.89	1.34	1.45
1	N	1065	U	C4'-C3'	7.87	1.65	1.53
1	N	1320	C	C1'-N1	7.84	1.60	1.48
1	N	1068	G	C1'-N9	7.84	1.59	1.48
1	N	252	U	C1'-N1	7.79	1.60	1.48
1	N	1075	U	C1'-N1	7.79	1.60	1.48
1	N	578	C	C1'-N1	7.78	1.60	1.48
1	N	733	G	C4'-C3'	7.74	1.64	1.53
1	N	684	U	C1'-N1	7.73	1.60	1.48
1	N	434	U	C1'-N1	7.69	1.59	1.48
1	N	150	U	P-O5'	7.68	1.71	1.59
1	N	86	G	C5'-C4'	7.66	1.62	1.51
1	N	113	G	C5'-C4'	7.63	1.62	1.51
1	N	532	A	C2'-C1'	-7.59	1.42	1.53
1	N	1161	C	O3'-P	-7.56	1.49	1.61
1	N	1531	A	C1'-N9	7.54	1.59	1.48
1	N	1147	C	C2'-C1'	-7.52	1.42	1.53
1	N	1283	U	C1'-N1	7.51	1.59	1.48
1	N	1236	A	O3'-P	-7.49	1.50	1.61
1	N	884	U	C1'-N1	7.46	1.58	1.47
1	N	12	U	O5'-C5'	7.46	1.53	1.42
1	N	494	G	C2'-C1'	-7.44	1.42	1.53
1	N	150	U	C2'-C1'	-7.41	1.42	1.53
1	N	700	G	C2'-C1'	-7.41	1.42	1.53
1	N	604	G	O5'-C5'	7.39	1.53	1.42
1	N	132	C	C5'-C4'	7.39	1.62	1.51
1	N	698	G	P-O5'	-7.39	1.48	1.59
1	N	65	A	C2'-C1'	-7.38	1.42	1.53
1	N	157	U	C5'-C4'	7.38	1.62	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1103	C	C4'-O4'	-7.37	1.34	1.45
1	N	608	A	P-O5'	-7.35	1.48	1.59
1	N	1087	G	C1'-N9	7.35	1.58	1.48
1	N	947	G	C4'-O4'	-7.34	1.34	1.45
1	N	163	C	C2'-C1'	-7.34	1.42	1.53
1	N	613	C	C5'-C4'	7.32	1.62	1.51
1	N	857	C	C3'-O3'	7.30	1.53	1.42
1	N	860	A	C5'-C4'	7.28	1.62	1.51
1	N	1352	C	C5'-C4'	7.26	1.62	1.51
1	N	792	A	C1'-N9	-7.25	1.36	1.47
1	N	1280	A	C2'-O2'	-7.25	1.30	1.41
1	N	577	G	C4'-C3'	7.22	1.63	1.52
1	N	1506	U	C1'-N1	7.22	1.58	1.47
1	N	1301	U	C1'-N1	7.22	1.58	1.47
1	N	1326	U	C3'-C2'	7.17	1.63	1.52
1	N	371	A	C4'-C3'	7.16	1.63	1.52
1	N	863	U	P-O5'	-7.16	1.49	1.59
1	N	1412	C	O3'-P	-7.16	1.50	1.61
1	N	1149	C	C4'-O4'	-7.15	1.34	1.45
1	N	39	G	C2'-C1'	-7.13	1.42	1.53
1	N	231	U	C4'-O4'	-7.12	1.34	1.45
1	N	765	G	O3'-P	-7.12	1.50	1.61
1	N	1085	U	C1'-N1	7.10	1.59	1.48
1	N	918	A	C3'-O3'	7.09	1.52	1.42
1	N	271	C	C2'-C1'	-7.08	1.42	1.53
1	N	464	U	O3'-P	-7.07	1.50	1.61
1	N	322	C	C1'-N1	7.05	1.59	1.48
1	N	45	G	C2'-C1'	-7.04	1.42	1.53
1	N	662	U	C5'-C4'	7.04	1.61	1.51
1	N	108	G	C1'-N9	7.03	1.58	1.48
1	N	903	G	C4'-C3'	7.03	1.63	1.52
1	N	1312	G	C1'-N9	7.03	1.58	1.48
1	N	40	C	O5'-C5'	7.00	1.52	1.42
1	N	421	U	C5'-C4'	6.99	1.61	1.51
1	N	70	U	O3'-P	-6.98	1.50	1.61
1	N	727	G	C4'-C3'	6.98	1.63	1.52
1	N	338	A	C1'-N9	6.97	1.58	1.48
1	N	1131	G	C2'-C1'	-6.97	1.43	1.53
1	N	798	U	C5'-C4'	6.96	1.61	1.51
1	N	314	C	C1'-N1	6.95	1.58	1.48
1	N	1215	G	C2'-C1'	-6.95	1.43	1.53
1	N	1093	A	C6-N6	6.94	1.47	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	549	C	C2'-C1'	-6.94	1.43	1.53
1	N	1127	G	C4'-O4'	6.94	1.55	1.45
1	N	620	C	C1'-N1	6.92	1.58	1.48
1	N	1053	G	O5'-C5'	6.91	1.52	1.42
1	N	440	C	C1'-N1	6.90	1.58	1.48
1	N	1052	U	C5'-C4'	6.89	1.61	1.51
1	N	1341	U	C5'-C4'	6.89	1.61	1.51
1	N	1071	C	C1'-N1	6.88	1.58	1.48
1	N	313	A	O3'-P	-6.87	1.50	1.61
1	N	1139	G	C2'-C1'	-6.86	1.42	1.53
1	N	744	C	C4'-C3'	6.85	1.62	1.52
1	N	1435	G	P-O5'	-6.85	1.49	1.59
1	N	1137	C	C1'-N1	6.84	1.57	1.47
1	N	603	U	P-O5'	-6.83	1.49	1.59
1	N	335	C	C2'-C1'	-6.83	1.43	1.53
1	N	1486	G	O4'-C1'	6.83	1.51	1.41
1	N	562	U	C5'-C4'	6.82	1.61	1.51
1	N	54	C	C1'-N1	6.82	1.58	1.48
1	N	1296	C	C4'-C3'	6.81	1.62	1.52
1	N	340	U	C2'-C1'	-6.80	1.43	1.53
1	N	1295	U	O3'-P	-6.80	1.50	1.61
1	N	628	G	C5'-C4'	6.79	1.61	1.51
1	N	198	G	C2'-C1'	-6.78	1.43	1.53
1	N	770	C	C4'-O4'	6.76	1.55	1.45
1	N	1041	G	C5'-C4'	6.75	1.61	1.51
1	N	34	C	C1'-N1	6.73	1.58	1.48
1	N	1063	C	O4'-C1'	6.73	1.51	1.41
1	N	31	G	P-O5'	-6.73	1.49	1.59
1	N	1353	G	C3'-O3'	6.73	1.52	1.42
1	N	792	A	C5'-C4'	6.72	1.61	1.51
1	N	674	G	C2'-C1'	-6.71	1.43	1.53
1	N	1103	C	P-O5'	-6.70	1.49	1.59
1	N	335	C	C1'-N1	6.68	1.58	1.48
1	N	315	A	O3'-P	-6.68	1.51	1.61
1	N	333	U	C1'-N1	6.68	1.58	1.48
1	N	955	U	O3'-P	-6.68	1.51	1.61
1	N	1283	U	C3'-O3'	6.65	1.52	1.42
1	N	293	G	O5'-C5'	-6.65	1.32	1.42
1	N	931	C	O3'-P	-6.64	1.51	1.61
1	N	877	G	C4'-O4'	-6.64	1.35	1.45
1	N	1181	G	C2'-C1'	-6.63	1.43	1.53
1	N	778	G	C2'-C1'	-6.63	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	172	A	O4'-C1'	6.61	1.51	1.41
1	N	908	A	C5'-C4'	6.61	1.61	1.51
1	N	284	C	C1'-N1	6.61	1.58	1.48
1	N	118	U	C1'-N1	6.61	1.58	1.48
1	N	1308	U	C3'-C2'	6.61	1.62	1.52
1	N	89	U	C5'-C4'	6.61	1.61	1.51
1	N	443	C	C1'-N1	6.61	1.58	1.48
1	N	1170	A	C4'-O4'	-6.60	1.35	1.45
1	N	1461	G	O5'-C5'	6.58	1.52	1.42
1	N	1265	C	C5'-C4'	6.58	1.61	1.51
1	N	197	A	P-O5'	-6.57	1.49	1.59
1	N	743	A	C3'-C2'	6.56	1.62	1.52
1	N	552	U	C3'-O3'	6.55	1.51	1.42
1	N	965	U	O4'-C1'	-6.55	1.32	1.42
1	N	39	G	C4'-O4'	-6.54	1.35	1.45
1	N	91	U	O3'-P	-6.54	1.51	1.61
1	N	343	U	C1'-N1	6.54	1.58	1.48
1	N	558	G	C2'-C1'	-6.53	1.43	1.53
1	N	79	G	C5'-C4'	6.52	1.61	1.51
1	N	1170	A	C1'-N9	6.52	1.57	1.48
1	N	1364	U	C4'-C3'	6.52	1.62	1.53
1	N	945	G	C3'-C2'	6.52	1.62	1.52
1	N	1127	G	C4'-C3'	6.52	1.62	1.52
1	N	189	A	C5'-C4'	6.52	1.61	1.51
1	N	586	C	C2'-C1'	-6.50	1.43	1.53
1	N	784	A	C4'-O4'	6.50	1.55	1.45
1	N	579	A	C5'-C4'	6.50	1.60	1.51
1	N	165	G	C1'-N9	6.50	1.57	1.48
1	N	819	A	C5'-C4'	6.49	1.61	1.51
1	N	1507	A	C6-N6	6.48	1.47	1.33
1	N	224	U	O4'-C1'	6.47	1.51	1.41
1	N	526	C	O4'-C1'	6.45	1.51	1.41
1	N	1129	C	C3'-C2'	6.45	1.62	1.52
1	N	168	G	O4'-C1'	6.44	1.51	1.41
1	N	193	C	O4'-C1'	6.43	1.51	1.41
1	N	109	A	O5'-C5'	-6.42	1.32	1.42
1	N	1120	C	C3'-O3'	6.42	1.51	1.42
1	N	1359	C	C1'-N1	6.41	1.58	1.48
1	N	882	C	P-O5'	-6.41	1.50	1.59
1	N	957	U	C1'-N1	6.41	1.58	1.48
1	N	321	A	O5'-C5'	6.39	1.52	1.42
1	N	763	G	C5'-C4'	6.39	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1175	G	O5'-C5'	6.39	1.52	1.42
1	N	1292	G	C3'-O3'	6.39	1.51	1.42
1	N	318	G	O3'-P	6.39	1.70	1.61
1	N	485	U	C1'-N1	6.38	1.57	1.47
1	N	1170	A	C2'-C1'	-6.38	1.43	1.53
1	N	501	C	C1'-N1	6.37	1.58	1.48
1	N	793	U	O3'-P	-6.37	1.51	1.61
1	N	888	G	O3'-P	-6.36	1.51	1.61
1	N	1225	A	C1'-N9	6.36	1.56	1.47
1	N	1496	C	C3'-C2'	6.36	1.62	1.52
1	N	1267	C	C4'-O4'	-6.35	1.36	1.45
1	N	720	C	C5'-C4'	6.35	1.60	1.51
1	N	1462	C	C2'-O2'	-6.35	1.32	1.42
1	N	925	G	O3'-P	-6.34	1.51	1.61
1	N	5	U	C4'-C3'	6.34	1.62	1.53
1	N	542	G	C5'-C4'	6.33	1.60	1.51
1	N	1094	G	C3'-O3'	6.33	1.51	1.42
1	N	643	C	C3'-O3'	6.33	1.51	1.42
1	N	1103	C	C2'-C1'	-6.32	1.43	1.53
1	N	134	G	C5'-C4'	6.31	1.60	1.51
1	N	1209	C	C3'-O3'	6.30	1.51	1.42
1	N	420	U	O3'-P	-6.29	1.51	1.61
1	N	808	C	C5'-C4'	6.28	1.60	1.51
1	N	886	G	C2'-C1'	-6.27	1.44	1.53
1	N	163	C	O4'-C1'	6.27	1.51	1.41
1	N	431	A	C4'-C3'	6.27	1.61	1.52
1	N	984	C	C2'-C1'	-6.26	1.44	1.53
1	N	248	C	C5'-C4'	6.25	1.60	1.51
1	N	197	A	C4'-C3'	6.24	1.62	1.53
1	N	1242	G	P-O5'	-6.24	1.50	1.59
1	N	1367	C	O3'-P	-6.24	1.51	1.61
1	N	622	A	O4'-C1'	6.23	1.51	1.41
1	N	527	G	C5'-C4'	6.23	1.60	1.51
1	N	1403	C	P-O5'	-6.22	1.50	1.59
1	N	206	C	C1'-N1	6.22	1.57	1.48
1	N	805	C	O3'-P	-6.21	1.51	1.61
1	N	1099	G	C2'-O2'	-6.21	1.33	1.42
1	N	209	U	C3'-C2'	6.21	1.62	1.52
1	N	961	U	O4'-C1'	6.21	1.50	1.41
1	N	909	A	C5'-C4'	6.20	1.60	1.51
1	N	807	A	C1'-N9	6.20	1.57	1.48
1	N	165	G	C5'-C4'	6.19	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	241	G	C3'-O3'	6.19	1.51	1.42
1	N	794	A	C3'-O3'	6.19	1.51	1.42
1	N	528	C	C4'-C3'	6.18	1.61	1.52
1	N	1524	C	O3'-P	-6.18	1.51	1.61
1	N	520	A	C5'-C4'	6.18	1.60	1.51
1	N	570	G	C4'-C3'	6.18	1.61	1.52
1	N	1232	U	C5'-C4'	6.17	1.60	1.51
1	N	151	A	C3'-O3'	6.17	1.51	1.42
1	N	321	A	C5'-C4'	6.17	1.60	1.51
1	N	533	A	C1'-N9	6.17	1.56	1.47
1	N	1434	A	O5'-C5'	6.16	1.51	1.42
1	N	1013	G	C5'-C4'	6.16	1.60	1.51
1	N	521	G	C3'-C2'	6.16	1.61	1.52
1	N	822	U	C5'-C4'	6.15	1.60	1.51
1	N	1430	A	C4'-C3'	-6.15	1.43	1.52
1	N	544	G	O5'-C5'	6.15	1.51	1.42
1	N	667	G	O3'-P	-6.14	1.51	1.61
1	N	632	U	C4'-C3'	6.14	1.61	1.52
1	N	773	G	C1'-N9	6.13	1.57	1.48
1	N	171	A	C4'-C3'	-6.12	1.43	1.52
1	N	291	U	C3'-O3'	6.12	1.51	1.42
1	N	16	A	O5'-C5'	6.12	1.51	1.42
1	N	764	C	C4'-C3'	6.12	1.61	1.52
1	N	1502	A	C1'-N9	6.12	1.56	1.47
1	N	513	C	P-O5'	-6.11	1.50	1.59
1	N	1140	C	C1'-N1	6.11	1.56	1.47
1	N	925	G	C5'-C4'	6.11	1.60	1.51
1	N	1414	U	O3'-P	-6.10	1.52	1.61
1	N	676	A	C3'-C2'	6.10	1.61	1.52
1	N	1009	U	C1'-N1	6.09	1.57	1.48
1	N	464	U	C5'-C4'	6.08	1.60	1.51
1	N	972	C	C4'-C3'	6.08	1.61	1.52
1	N	1340	A	P-O5'	-6.08	1.50	1.59
1	N	951	G	C1'-N9	6.08	1.57	1.48
1	N	1296	C	C2'-C1'	-6.08	1.44	1.53
1	N	1328	C	C1'-N1	-6.08	1.39	1.48
1	N	729	A	O4'-C1'	-6.07	1.32	1.41
1	N	396	C	C4-N4	6.07	1.46	1.33
1	N	1024	G	P-O5'	-6.07	1.50	1.59
1	N	1063	C	C3'-C2'	6.07	1.61	1.52
1	N	1354	U	C5'-C4'	6.07	1.60	1.51
1	N	193	C	C5'-C4'	6.06	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	185	U	O3'-P	-6.05	1.52	1.61
1	N	978	A	C4'-O4'	-6.05	1.36	1.45
1	N	310	G	C4'-C3'	6.05	1.61	1.52
1	N	955	U	C3'-O3'	6.04	1.51	1.42
1	N	22	G	P-O5'	-6.04	1.50	1.59
1	N	1215	G	O3'-P	-6.04	1.52	1.61
1	N	1019	A	C5'-C4'	6.04	1.60	1.51
1	N	616	G	C3'-C2'	6.03	1.61	1.52
1	N	100	G	C1'-N9	6.03	1.56	1.48
1	N	962	C	C3'-O3'	6.02	1.51	1.42
1	N	1070	U	P-O5'	-6.02	1.50	1.59
1	N	414	A	O3'-P	-6.01	1.52	1.61
1	N	499	A	O3'-P	-6.00	1.52	1.61
1	N	580	C	C1'-N1	6.00	1.57	1.48
1	N	252	U	O3'-P	-6.00	1.52	1.61
1	N	275	G	C5'-C4'	6.00	1.60	1.51
1	N	516	U	C1'-N1	6.00	1.57	1.48
1	N	210	C	C1'-N1	6.00	1.56	1.47
1	N	1188	A	C4'-O4'	-6.00	1.36	1.45
1	N	293	G	O3'-P	-5.99	1.52	1.61
1	N	536	C	C5'-C4'	5.99	1.60	1.51
1	N	258	G	C4'-C3'	5.99	1.61	1.52
1	N	1078	U	O3'-P	-5.98	1.52	1.61
1	N	1385	G	P-O5'	-5.98	1.50	1.59
1	N	1391	U	C5'-C4'	5.98	1.60	1.51
1	N	876	C	O3'-P	-5.98	1.52	1.61
1	N	703	G	C2-N2	5.97	1.46	1.34
1	N	1173	U	P-O5'	-5.97	1.50	1.59
1	N	1024	G	C5'-C4'	5.96	1.60	1.51
1	N	180	U	O3'-P	-5.96	1.52	1.61
1	N	461	A	C5'-C4'	5.96	1.60	1.51
1	N	959	A	O3'-P	-5.96	1.52	1.61
1	N	297	G	C3'-C2'	-5.96	1.43	1.52
1	N	981	U	C2'-C1'	-5.95	1.44	1.53
1	N	567	G	O4'-C1'	5.94	1.50	1.41
1	N	245	U	C5'-C4'	5.94	1.60	1.51
1	N	106	C	P-O5'	-5.93	1.50	1.59
1	N	673	A	C4'-C3'	5.93	1.61	1.52
1	N	928	G	C2-N3	5.93	1.44	1.32
1	N	1335	U	O5'-C5'	5.93	1.51	1.42
1	N	651	C	P-O5'	-5.92	1.50	1.59
1	N	175	C	C3'-C2'	5.91	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1530	G	C4'-C3'	5.91	1.62	1.53
1	N	411	A	C5'-C4'	5.91	1.60	1.51
1	N	840	C	C4'-C3'	5.91	1.61	1.52
1	N	1388	C	C5'-C4'	5.90	1.60	1.51
1	N	106	C	C2'-C1'	-5.90	1.44	1.53
1	N	185	U	P-O5'	-5.89	1.50	1.59
1	N	514	C	O4'-C1'	5.89	1.50	1.41
1	N	601	G	C5'-C4'	5.89	1.60	1.51
1	N	419	C	C2'-C1'	-5.88	1.44	1.53
1	N	373	A	C2'-C1'	-5.88	1.44	1.53
1	N	101	A	C1'-N9	5.88	1.56	1.48
1	N	372	C	C4'-O4'	-5.88	1.37	1.45
1	N	550	G	O5'-C5'	5.88	1.51	1.42
1	N	1413	A	C2'-C1'	-5.88	1.44	1.53
1	N	1055	A	C5'-C4'	5.87	1.60	1.51
1	N	241	G	C1'-N9	5.87	1.56	1.48
1	N	961	U	C4'-C3'	5.87	1.61	1.52
1	N	1035	A	C3'-O3'	5.87	1.50	1.42
1	N	173	U	O3'-P	-5.86	1.52	1.61
1	N	342	C	C1'-N1	5.86	1.57	1.48
1	N	402	G	C4'-O4'	-5.86	1.36	1.45
1	N	1332	A	C6-N6	5.86	1.45	1.33
1	N	453	G	C2-N3	5.86	1.44	1.32
1	N	1498	U	O4'-C1'	-5.86	1.33	1.42
1	N	1335	U	C5'-C4'	5.86	1.60	1.51
1	N	272	C	C1'-N1	5.85	1.57	1.48
1	N	23	C	C5'-C4'	5.85	1.60	1.51
1	N	1331	G	C5'-C4'	5.84	1.60	1.51
1	N	1308	U	C5'-C4'	5.84	1.60	1.51
1	N	1035	A	C4'-C3'	5.83	1.61	1.52
1	N	196	A	C5'-C4'	5.83	1.59	1.51
1	N	389	A	O4'-C1'	5.83	1.50	1.41
1	N	564	C	P-O5'	-5.83	1.51	1.59
1	N	413	G	C5'-C4'	5.82	1.60	1.51
1	N	930	C	C1'-N1	-5.82	1.39	1.48
1	N	739	C	C1'-N1	5.81	1.57	1.48
1	N	1469	C	O3'-P	-5.81	1.52	1.61
1	N	1040	U	O3'-P	-5.81	1.52	1.61
1	N	1457	G	C4'-C3'	5.80	1.61	1.52
1	N	1480	A	C5'-C4'	5.79	1.59	1.51
1	N	270	A	C4'-O4'	5.79	1.54	1.45
1	N	955	U	O5'-C5'	5.79	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1222	G	C2'-C1'	-5.79	1.44	1.53
1	N	241	G	O3'-P	-5.79	1.52	1.61
1	N	1504	G	O5'-C5'	5.79	1.51	1.42
1	N	719	C	C2'-O2'	-5.78	1.33	1.42
1	N	172	A	O3'-P	-5.77	1.52	1.61
1	N	854	U	C2'-C1'	-5.77	1.44	1.53
1	N	1115	U	C5'-C4'	5.77	1.59	1.51
1	N	616	G	P-O5'	-5.76	1.51	1.59
1	N	294	U	O3'-P	-5.76	1.52	1.61
1	N	285	C	C3'-C2'	-5.76	1.44	1.52
1	N	565	U	C5'-C4'	5.76	1.59	1.51
1	N	428	G	C4'-O4'	-5.75	1.37	1.45
1	N	700	G	C1'-N9	5.75	1.56	1.48
1	N	426	U	P-O5'	-5.75	1.51	1.59
1	N	944	G	C5'-C4'	5.75	1.59	1.51
1	N	403	C	C5'-C4'	5.74	1.59	1.51
1	N	1105	A	C5'-C4'	5.74	1.59	1.51
1	N	829	G	C4'-C3'	5.74	1.61	1.52
1	N	195	A	C4'-C3'	5.74	1.61	1.52
1	N	626	G	P-O5'	-5.74	1.51	1.59
1	N	777	A	C5'-C4'	5.74	1.59	1.51
1	N	1441	A	C3'-C2'	-5.74	1.44	1.52
1	N	271	C	C1'-N1	5.74	1.57	1.48
1	N	340	U	C1'-N1	5.74	1.57	1.48
1	N	510	A	C5'-C4'	5.74	1.59	1.51
1	N	710	G	C5'-C4'	5.74	1.59	1.51
1	N	823	C	O3'-P	-5.73	1.52	1.61
1	N	706	A	C1'-N9	5.73	1.56	1.48
1	N	328	C	O5'-C5'	5.73	1.51	1.42
1	N	1062	U	C2'-C1'	-5.73	1.44	1.53
1	N	287	U	C3'-O3'	5.73	1.50	1.42
1	N	604	G	C5'-C4'	5.73	1.59	1.51
1	N	924	C	O5'-C5'	-5.72	1.33	1.42
1	N	563	A	C3'-O3'	5.72	1.50	1.42
1	N	1290	G	O5'-C5'	5.71	1.51	1.42
1	N	1038	C	C4'-O4'	-5.71	1.36	1.45
1	N	1511	G	C1'-N9	5.71	1.56	1.48
1	N	714	G	O4'-C1'	-5.71	1.33	1.41
1	N	840	C	C1'-N1	5.71	1.57	1.48
1	N	698	G	C4'-C3'	-5.71	1.44	1.52
1	N	1288	A	C3'-O3'	5.71	1.50	1.42
1	N	1458	G	P-O5'	-5.71	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	245	U	C3'-O3'	5.71	1.50	1.42
1	N	476	U	C1'-N1	5.70	1.57	1.48
1	N	718	A	C5'-C4'	5.70	1.59	1.51
1	N	1395	C	O3'-P	-5.70	1.52	1.61
1	N	1299	A	N9-C4	5.70	1.49	1.37
1	N	285	C	O3'-P	-5.70	1.52	1.61
1	N	1090	U	C5'-C4'	5.70	1.59	1.51
1	N	1489	G	O5'-C5'	5.70	1.50	1.42
1	N	40	C	C5'-C4'	5.70	1.59	1.51
1	N	101	A	C5'-C4'	5.70	1.59	1.51
1	N	675	A	P-O5'	-5.70	1.51	1.59
1	N	821	G	C3'-O3'	5.70	1.50	1.42
1	N	498	A	C5'-C4'	5.69	1.59	1.51
1	N	493	A	C5'-C4'	-5.69	1.42	1.51
1	N	805	C	C5'-C4'	5.69	1.59	1.51
1	N	980	C	O3'-P	-5.69	1.52	1.61
1	N	1166	G	C2'-C1'	-5.69	1.44	1.53
1	N	972	C	C2'-C1'	-5.68	1.44	1.53
1	N	23	C	C2'-C1'	-5.68	1.44	1.53
1	N	565	U	C1'-N1	5.68	1.56	1.48
1	N	435	A	C1'-N9	5.67	1.56	1.48
1	N	70	U	C3'-C2'	5.67	1.61	1.52
1	N	1494	G	N1-C2	5.67	1.49	1.37
1	N	1490	U	O4'-C1'	5.67	1.50	1.41
1	N	256	U	P-O5'	-5.67	1.51	1.59
1	N	1453	G	C3'-C2'	5.67	1.61	1.52
1	N	1002	G	C3'-O3'	5.66	1.50	1.42
1	N	496	A	C4'-C3'	5.66	1.61	1.52
1	N	717	U	P-O5'	-5.66	1.51	1.59
1	N	145	G	C2-N3	5.66	1.44	1.32
1	N	1261	A	C4'-O4'	-5.66	1.37	1.45
1	N	524	G	P-O5'	-5.65	1.51	1.59
1	N	1248	A	C3'-O3'	5.65	1.50	1.42
1	N	618	C	C4'-C3'	-5.65	1.44	1.52
1	N	709	U	C5'-C4'	5.65	1.59	1.51
1	N	269	C	C3'-O3'	5.65	1.50	1.42
1	N	286	C	C5'-C4'	5.64	1.59	1.51
1	N	642	A	O4'-C1'	5.64	1.50	1.41
1	N	658	C	C1'-N1	5.64	1.56	1.48
1	N	865	A	C1'-N9	5.64	1.56	1.48
1	N	1495	U	C4'-O4'	5.64	1.54	1.45
1	N	30	U	C4'-O4'	-5.63	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	223	A	C4'-C3'	-5.63	1.44	1.52
1	N	1291	U	C3'-O3'	5.63	1.50	1.42
1	N	105	G	C2'-O2'	-5.63	1.34	1.42
1	N	1429	A	C5'-C4'	5.63	1.59	1.51
1	N	1510	C	C1'-N1	5.63	1.56	1.48
1	N	983	A	C1'-N9	5.63	1.55	1.47
1	N	1454	G	C5'-C4'	5.63	1.59	1.51
1	N	1298	U	O3'-P	-5.62	1.52	1.61
1	N	1334	G	C5'-C4'	5.62	1.59	1.51
1	N	119	A	C1'-N9	5.62	1.55	1.47
1	N	785	G	C1'-N9	5.62	1.56	1.48
1	N	52	C	C4'-C3'	5.61	1.60	1.52
1	N	487	A	C2'-C1'	5.61	1.61	1.53
1	N	135	C	C1'-N1	5.61	1.56	1.48
1	N	609	A	C2'-C1'	-5.61	1.45	1.53
1	N	153	C	C3'-O3'	5.61	1.50	1.42
1	N	497	G	C5'-C4'	5.61	1.59	1.51
1	N	267	C	C5'-C4'	5.60	1.59	1.51
1	N	691	G	C3'-C2'	5.60	1.61	1.52
1	N	912	C	O3'-P	-5.60	1.52	1.61
1	N	1227	A	C5'-C4'	5.60	1.59	1.51
1	N	288	A	C1'-N9	5.59	1.56	1.48
1	N	516	U	C5'-C4'	5.59	1.59	1.51
1	N	1178	G	C5'-C4'	5.59	1.59	1.51
1	N	990	C	C3'-C2'	-5.59	1.44	1.52
1	N	1393	U	C4'-O4'	5.59	1.53	1.45
1	N	1025	U	C2'-C1'	-5.58	1.45	1.53
1	N	49	U	O3'-P	-5.58	1.52	1.61
1	N	628	G	C3'-O3'	5.58	1.50	1.42
1	N	1248	A	C2'-C1'	-5.58	1.45	1.53
1	N	1463	U	C2'-C1'	-5.58	1.45	1.53
1	N	1266	G	C2'-C1'	-5.57	1.45	1.53
1	N	349	A	O5'-C5'	5.57	1.50	1.42
1	N	1496	C	C1'-N1	5.57	1.56	1.48
1	N	1517	G	N1-C2	5.57	1.48	1.37
1	N	826	C	C3'-O3'	5.57	1.50	1.42
1	N	1098	C	P-O5'	-5.56	1.51	1.59
1	N	516	U	N3-C4	5.56	1.49	1.38
1	N	1460	C	C1'-N1	5.56	1.56	1.48
1	N	52	C	P-O5'	-5.56	1.51	1.59
1	N	1285	A	O3'-P	-5.56	1.52	1.61
1	N	1230	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	713	G	C4'-O4'	-5.55	1.37	1.45
1	N	1456	A	C5'-C4'	5.55	1.59	1.51
1	N	1477	U	C5'-C4'	5.55	1.59	1.51
1	N	563	A	O3'-P	-5.55	1.52	1.61
1	N	605	U	C4'-O4'	-5.54	1.37	1.45
1	N	1358	U	C3'-O3'	5.54	1.50	1.42
1	N	1434	A	P-O5'	-5.54	1.51	1.59
1	N	400	C	C3'-O3'	5.54	1.50	1.42
1	N	1236	A	C4'-O4'	5.54	1.53	1.45
1	N	253	A	O3'-P	-5.54	1.52	1.61
1	N	1433	A	C5'-C4'	5.54	1.59	1.51
1	N	242	G	C3'-O3'	5.53	1.50	1.42
1	N	942	G	C4'-O4'	5.53	1.53	1.45
1	N	295	C	C1'-N1	5.53	1.56	1.48
1	N	919	A	P-O5'	-5.53	1.51	1.59
1	N	1012	A	C3'-C2'	-5.53	1.44	1.52
1	N	155	A	P-O5'	-5.52	1.51	1.59
1	N	300	A	C3'-O3'	5.52	1.50	1.42
1	N	572	A	C4'-O4'	-5.52	1.37	1.45
1	N	307	C	O5'-C5'	5.51	1.50	1.42
1	N	380	G	O3'-P	-5.51	1.52	1.61
1	N	1517	G	P-O5'	5.51	1.68	1.59
1	N	1158	C	C1'-N1	5.51	1.56	1.48
1	N	809	G	O5'-C5'	5.50	1.50	1.42
1	N	1375	A	P-O5'	-5.50	1.51	1.59
1	N	227	G	C5'-C4'	5.50	1.59	1.51
1	N	481	G	C4'-C3'	5.50	1.61	1.53
1	N	711	G	O5'-C5'	5.50	1.50	1.42
1	N	158	G	O5'-C5'	5.50	1.50	1.42
1	N	1414	U	C3'-C2'	5.50	1.61	1.52
1	N	1457	G	C5-C6	-5.50	1.31	1.42
1	N	195	A	O3'-P	-5.50	1.52	1.61
1	N	1129	C	C5'-C4'	5.50	1.59	1.51
1	N	264	C	O3'-P	-5.49	1.52	1.61
1	N	355	C	C5'-C4'	5.49	1.59	1.51
1	N	533	A	C4'-O4'	-5.49	1.37	1.45
1	N	30	U	O4'-C1'	-5.49	1.33	1.42
1	N	1376	U	C2'-C1'	-5.48	1.45	1.53
1	N	134	G	O4'-C1'	5.48	1.49	1.41
1	N	1286	U	C5'-C4'	5.48	1.59	1.51
1	N	1528	U	C1'-N1	5.48	1.55	1.47
1	N	1084	G	O3'-P	-5.47	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	810	C	C3'-O3'	5.47	1.50	1.42
1	N	1400	C	C1'-N1	5.47	1.56	1.48
1	N	69	G	C3'-O3'	5.47	1.50	1.42
1	N	1199	U	C3'-O3'	5.47	1.50	1.42
1	N	655	A	C1'-N9	5.47	1.56	1.48
1	N	868	C	O4'-C1'	5.47	1.49	1.41
1	N	92	U	C5'-C4'	5.46	1.59	1.51
1	N	71	A	O5'-C5'	5.45	1.50	1.42
1	N	56	U	C4'-O4'	5.45	1.53	1.45
1	N	807	A	O3'-P	5.44	1.69	1.61
1	N	1420	U	C4'-C3'	5.44	1.60	1.52
1	N	1079	G	C4'-C3'	5.44	1.60	1.52
1	N	218	U	C1'-N1	5.44	1.56	1.48
1	N	1238	A	C3'-C2'	-5.44	1.44	1.52
1	N	347	G	C2'-C1'	-5.43	1.45	1.53
1	N	418	C	C3'-C2'	5.43	1.60	1.52
1	N	121	U	C4'-C3'	5.42	1.60	1.52
1	N	360	G	O3'-P	-5.42	1.53	1.61
1	N	823	C	C4'-C3'	5.42	1.60	1.52
1	N	903	G	C3'-O3'	-5.42	1.34	1.42
1	N	910	C	C5'-C4'	5.41	1.59	1.51
1	N	526	C	C1'-N1	5.41	1.56	1.48
1	N	569	C	C3'-O3'	5.41	1.50	1.42
1	N	141	G	P-O5'	5.41	1.67	1.59
1	N	577	G	O4'-C1'	-5.41	1.33	1.41
1	N	447	G	C4'-C3'	5.41	1.60	1.52
1	N	740	U	C5'-C4'	5.41	1.59	1.51
1	N	91	U	C2'-C1'	-5.40	1.45	1.53
1	N	128	G	C2'-C1'	-5.40	1.45	1.53
1	N	1394	A	C2'-C1'	-5.39	1.45	1.53
1	N	641	U	C5'-C4'	5.39	1.59	1.51
1	N	1074	G	O3'-P	-5.39	1.53	1.61
1	N	868	C	C4'-C3'	5.39	1.60	1.52
1	N	1040	U	C5'-C4'	5.38	1.59	1.51
1	N	250	A	C6-N6	5.38	1.44	1.33
1	N	525	C	C1'-N1	5.38	1.56	1.48
1	N	1521	C	C5'-C4'	5.38	1.59	1.51
1	N	796	C	C4'-C3'	5.38	1.60	1.52
1	N	166	U	C1'-N1	5.38	1.56	1.48
1	N	1180	A	C4'-C3'	5.38	1.60	1.52
1	N	220	G	C1'-N9	5.37	1.56	1.48
1	N	1116	U	C1'-N1	5.37	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	737	C	C1'-N1	5.37	1.56	1.48
1	N	250	A	N7-C5	-5.37	1.28	1.39
1	N	336	A	C5'-C4'	5.37	1.59	1.51
1	N	449	G	C5'-C4'	5.37	1.59	1.51
1	N	957	U	C2'-C1'	5.37	1.61	1.53
1	N	850	U	C5'-C4'	5.37	1.59	1.51
1	N	899	C	C2'-C1'	-5.37	1.45	1.53
1	N	1234	C	C4'-O4'	5.36	1.53	1.45
1	N	797	C	C4'-C3'	5.36	1.60	1.52
1	N	1466	C	C1'-N1	5.36	1.56	1.48
1	N	102	G	O3'-P	-5.36	1.53	1.61
1	N	986	U	C1'-N1	5.36	1.56	1.48
1	N	1486	G	C2'-C1'	-5.36	1.45	1.53
1	N	327	A	O3'-P	-5.35	1.53	1.61
1	N	1245	C	P-O5'	-5.35	1.51	1.59
1	N	450	G	C2'-C1'	5.35	1.61	1.53
1	N	813	U	C1'-N1	5.35	1.56	1.48
1	N	1085	U	C3'-C2'	5.35	1.60	1.52
1	N	1161	C	C4'-O4'	5.35	1.53	1.45
1	N	1323	G	O5'-C5'	5.34	1.50	1.42
1	N	820	U	C4'-C3'	5.34	1.61	1.53
1	N	1168	U	O4'-C1'	-5.34	1.33	1.41
1	N	759	A	C3'-O3'	5.34	1.50	1.42
1	N	156	C	O5'-C5'	5.34	1.50	1.42
1	N	1109	C	C2'-C1'	-5.34	1.45	1.53
1	N	214	C	C5'-C4'	5.34	1.59	1.51
1	N	344	A	C5'-C4'	5.34	1.59	1.51
1	N	844	G	C1'-N9	-5.34	1.40	1.48
1	N	64	G	C2'-C1'	-5.33	1.45	1.53
1	N	1151	A	P-O5'	-5.33	1.51	1.59
1	N	769	G	C4'-C3'	-5.32	1.44	1.52
1	N	1219	A	C6-N6	5.32	1.44	1.33
1	N	242	G	C5'-C4'	5.32	1.59	1.51
1	N	985	C	P-O5'	-5.32	1.51	1.59
1	N	914	A	C1'-N9	5.32	1.55	1.48
1	N	399	G	C5'-C4'	5.32	1.59	1.51
1	N	1143	G	C3'-O3'	5.32	1.50	1.42
1	N	29	U	C4'-O4'	-5.32	1.37	1.45
1	N	384	G	C2'-C1'	-5.31	1.45	1.53
1	N	67	C	C1'-N1	5.30	1.56	1.48
1	N	38	G	C1'-N9	5.30	1.55	1.48
1	N	356	A	C1'-N9	5.30	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1457	G	C4'-O4'	-5.30	1.37	1.45
1	N	245	U	C1'-N1	5.30	1.56	1.48
1	N	1042	A	P-O5'	-5.30	1.51	1.59
1	N	309	A	C3'-O3'	5.30	1.50	1.42
1	N	1238	A	C2'-O2'	-5.30	1.34	1.42
1	N	121	U	C3'-C2'	-5.29	1.44	1.52
1	N	644	U	O5'-C5'	5.29	1.50	1.42
1	N	132	C	N3-C4	5.29	1.44	1.33
1	N	1076	U	O5'-C5'	5.29	1.50	1.42
1	N	1027	C	C1'-N1	5.29	1.56	1.48
1	N	125	U	C1'-N1	5.29	1.56	1.48
1	N	530	G	C1'-N9	5.28	1.55	1.48
1	N	208	U	O3'-P	-5.28	1.53	1.61
1	N	276	G	O5'-C5'	5.28	1.50	1.42
1	N	730	G	C5-C6	-5.28	1.31	1.42
1	N	789	U	C4'-O4'	5.28	1.53	1.45
1	N	242	G	P-O5'	-5.28	1.51	1.59
1	N	880	C	C2'-C1'	-5.28	1.45	1.53
1	N	211	G	C4'-C3'	-5.28	1.44	1.52
1	N	277	C	C2'-C1'	-5.28	1.45	1.53
1	N	769	G	C1'-N9	-5.28	1.40	1.48
1	N	853	C	C1'-N1	5.27	1.56	1.48
1	N	174	A	P-O5'	-5.27	1.51	1.59
1	N	351	G	O4'-C1'	-5.27	1.34	1.42
1	N	1163	A	C5'-C4'	5.27	1.59	1.51
1	N	1100	C	C5'-C4'	5.27	1.59	1.51
1	N	1170	A	O5'-C5'	5.27	1.50	1.42
1	N	112	G	C2'-C1'	-5.27	1.45	1.53
1	N	1392	G	C4'-C3'	5.27	1.60	1.52
1	N	141	G	C2'-O2'	-5.27	1.34	1.42
1	N	1044	A	C4'-C3'	5.26	1.60	1.52
1	N	19	A	C1'-N9	5.26	1.55	1.48
1	N	207	C	C4-N4	5.26	1.44	1.33
1	N	953	G	C4'-C3'	5.26	1.60	1.52
1	N	1134	G	C5'-C4'	5.26	1.59	1.51
1	N	656	G	C1'-N9	5.26	1.55	1.48
1	N	1248	A	P-O5'	-5.26	1.51	1.59
1	N	77	A	C5'-C4'	5.26	1.59	1.51
1	N	1234	C	C2'-O2'	-5.26	1.34	1.42
1	N	582	C	C3'-O3'	5.25	1.50	1.42
1	N	81	A	C1'-N9	5.25	1.54	1.47
1	N	1086	U	C4'-C3'	5.25	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1312	G	C4'-C3'	5.25	1.60	1.52
1	N	734	G	O3'-P	-5.25	1.53	1.61
1	N	915	A	C4'-O4'	5.25	1.53	1.45
1	N	952	U	C3'-O3'	5.25	1.50	1.42
1	N	301	G	C2'-C1'	-5.25	1.45	1.53
1	N	1288	A	C5'-C4'	5.25	1.59	1.51
1	N	390	U	C4'-C3'	5.25	1.60	1.52
1	N	688	G	C4'-O4'	5.25	1.53	1.45
1	N	280	C	C5'-C4'	5.24	1.59	1.51
1	N	561	U	C5'-C4'	5.24	1.59	1.51
1	N	804	U	C2'-O2'	-5.24	1.34	1.42
1	N	1173	U	C1'-N1	5.24	1.56	1.48
1	N	1038	C	C1'-N1	5.24	1.56	1.48
1	N	1349	A	C5'-C4'	5.24	1.59	1.51
1	N	296	U	C3'-O3'	5.24	1.50	1.42
1	N	1152	A	C4'-C3'	5.24	1.60	1.52
1	N	989	U	C1'-N1	5.24	1.56	1.48
1	N	1175	G	C1'-N9	5.23	1.55	1.48
1	N	942	G	N7-C5	-5.23	1.28	1.39
1	N	1032	G	C4'-C3'	5.23	1.60	1.52
1	N	1377	A	C4'-O4'	-5.23	1.37	1.45
1	N	1136	C	O5'-C5'	5.22	1.50	1.42
1	N	1274	A	C3'-O3'	5.22	1.50	1.42
1	N	117	G	O3'-P	-5.22	1.53	1.61
1	N	1025	U	C5'-C4'	5.22	1.59	1.51
1	N	34	C	C4'-C3'	-5.22	1.44	1.52
1	N	734	G	C2'-O2'	-5.22	1.34	1.42
1	N	1064	G	C5'-C4'	5.22	1.59	1.51
1	N	1194	U	C2'-C1'	5.22	1.61	1.53
1	N	1389	C	C1'-N1	5.21	1.56	1.48
1	N	1424	U	C2'-C1'	5.21	1.61	1.53
1	N	37	U	N1-C6	5.21	1.48	1.38
1	N	56	U	C2'-C1'	5.21	1.61	1.53
1	N	146	G	C2-N3	5.21	1.43	1.32
1	N	379	C	O4'-C1'	5.21	1.49	1.41
1	N	895	G	P-O5'	-5.21	1.51	1.59
1	N	139	A	C1'-N9	-5.21	1.40	1.48
1	N	118	U	P-O5'	-5.20	1.51	1.59
1	N	744	C	C2'-C1'	-5.20	1.45	1.53
1	N	347	G	C1'-N9	5.20	1.55	1.48
1	N	331	G	C5-C6	-5.20	1.31	1.42
1	N	1330	U	C4'-O4'	5.20	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	740	U	O5'-C5'	5.19	1.50	1.42
1	N	1325	C	C2'-C1'	-5.19	1.45	1.53
1	N	123	U	C2'-O2'	-5.19	1.34	1.42
1	N	1225	A	C5'-C4'	5.19	1.59	1.51
1	N	1519	A	C4'-O4'	5.19	1.53	1.45
1	N	87	C	C4'-C3'	5.18	1.60	1.52
1	N	90	C	O3'-P	-5.17	1.53	1.61
1	N	576	C	C1'-N1	5.17	1.56	1.48
1	N	1162	C	C3'-O3'	5.17	1.50	1.42
1	N	1240	U	C5'-C4'	5.17	1.59	1.51
1	N	1242	G	C3'-O3'	5.17	1.50	1.42
1	N	25	C	C4'-O4'	5.17	1.53	1.45
1	N	48	C	C2'-C1'	-5.17	1.45	1.53
1	N	580	C	O3'-P	-5.17	1.53	1.61
1	N	462	G	C4'-O4'	5.17	1.53	1.45
1	N	572	A	C5'-C4'	5.17	1.58	1.51
1	N	710	G	N7-C5	-5.17	1.28	1.39
1	N	914	A	C2'-O2'	-5.17	1.34	1.42
1	N	1276	G	C4'-O4'	-5.17	1.37	1.45
1	N	155	A	C4'-C3'	5.16	1.60	1.52
1	N	276	G	P-O5'	-5.16	1.52	1.59
1	N	1466	C	C5'-C4'	5.16	1.58	1.51
1	N	302	G	C4'-C3'	5.16	1.60	1.52
1	N	1432	G	C3'-O3'	5.16	1.50	1.43
1	N	1154	G	C1'-N9	5.16	1.55	1.48
1	N	509	A	C3'-C2'	5.15	1.60	1.52
1	N	1487	G	P-O5'	-5.15	1.52	1.59
1	N	867	G	C1'-N9	5.15	1.55	1.48
1	N	1072	G	C2'-C1'	-5.15	1.45	1.53
1	N	1210	C	O3'-P	-5.14	1.53	1.61
1	N	254	G	C2'-C1'	-5.14	1.45	1.53
1	N	550	G	C5'-C4'	5.14	1.58	1.51
1	N	1269	A	C4'-O4'	5.14	1.53	1.45
1	N	631	C	O4'-C1'	-5.14	1.34	1.42
1	N	687	A	O3'-P	-5.13	1.53	1.61
1	N	796	C	O3'-P	5.13	1.68	1.61
1	N	505	G	C3'-O3'	5.13	1.49	1.42
1	N	868	C	C2'-C1'	-5.13	1.45	1.53
1	N	415	A	C4'-C3'	5.13	1.60	1.52
1	N	774	G	C3'-O3'	5.13	1.49	1.42
1	N	1065	U	O3'-P	-5.13	1.53	1.61
1	N	1365	G	C2-N3	5.12	1.43	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	464	U	C4'-C3'	5.12	1.60	1.52
1	N	842	U	N3-C4	5.12	1.48	1.38
1	N	1469	C	C1'-N1	5.12	1.56	1.48
1	N	1105	A	C4'-C3'	-5.12	1.44	1.52
1	N	1214	C	C3'-C2'	5.12	1.60	1.52
1	N	124	C	O3'-P	-5.12	1.53	1.61
1	N	1162	C	C5'-C4'	5.12	1.58	1.51
1	N	1403	C	C3'-C2'	-5.12	1.45	1.52
1	N	588	G	N1-C2	5.11	1.48	1.37
1	N	734	G	C1'-N9	5.11	1.55	1.48
1	N	963	G	C2'-C1'	-5.11	1.45	1.53
1	N	1397	C	C3'-C2'	-5.11	1.45	1.52
1	N	989	U	O4'-C1'	5.11	1.49	1.41
1	N	1470	U	O4'-C1'	5.11	1.49	1.41
1	N	20	U	C5'-C4'	5.11	1.58	1.51
1	N	349	A	P-O5'	-5.11	1.52	1.59
1	N	614	C	C1'-N1	5.11	1.56	1.48
1	N	661	G	C3'-C2'	5.11	1.60	1.52
1	N	149	A	C4'-O4'	-5.10	1.37	1.45
1	N	990	C	C3'-O3'	5.10	1.49	1.42
1	N	202	G	O3'-P	-5.10	1.53	1.61
1	N	1310	G	C3'-C2'	5.10	1.60	1.52
1	N	1435	G	C2'-C1'	-5.09	1.45	1.53
1	N	709	U	P-O5'	-5.09	1.52	1.59
1	N	1439	G	C4'-C3'	5.09	1.60	1.52
1	N	1409	C	C2'-C1'	-5.08	1.45	1.53
1	N	808	C	C3'-C2'	5.08	1.60	1.52
1	N	1290	G	O4'-C1'	5.08	1.49	1.41
1	N	83	C	C4'-O4'	5.08	1.53	1.45
1	N	346	G	N9-C4	-5.08	1.27	1.38
1	N	568	G	P-O5'	5.08	1.67	1.59
1	N	1044	A	C5'-C4'	5.08	1.58	1.51
1	N	76	G	C4'-C3'	5.07	1.60	1.52
1	N	348	G	O5'-C5'	5.07	1.50	1.42
1	N	723	U	O4'-C1'	5.07	1.49	1.41
1	N	1087	G	C5'-C4'	5.07	1.58	1.51
1	N	94	G	P-O5'	5.07	1.67	1.59
1	N	714	G	C1'-N9	5.07	1.55	1.48
1	N	1530	G	P-O5'	5.07	1.67	1.59
1	N	1354	U	O5'-C5'	-5.06	1.34	1.42
1	N	658	C	P-O5'	-5.06	1.52	1.59
1	N	1073	U	O3'-P	-5.06	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	919	A	C2'-C1'	-5.06	1.45	1.53
1	N	1313	U	C3'-O3'	5.06	1.49	1.42
1	N	451	A	C1'-N9	5.05	1.54	1.47
1	N	538	G	C4'-C3'	5.05	1.60	1.52
1	N	776	G	P-O5'	-5.05	1.52	1.59
1	N	1440	U	C4'-C3'	-5.05	1.45	1.52
1	N	856	C	C2'-C1'	-5.04	1.45	1.53
1	N	1463	U	C1'-N1	5.04	1.56	1.48
1	N	55	A	C4'-C3'	5.04	1.60	1.52
1	N	951	G	C3'-C2'	-5.04	1.45	1.52
1	N	1269	A	N9-C8	-5.04	1.27	1.37
1	N	114	U	C2'-C1'	-5.04	1.45	1.53
1	N	1302	C	C2'-C1'	-5.04	1.45	1.53
1	N	699	C	O5'-C5'	5.04	1.50	1.42
1	N	830	G	P-O5'	-5.04	1.52	1.59
1	N	1329	A	C4'-C3'	5.04	1.60	1.52
1	N	673	A	O3'-P	5.03	1.68	1.61
1	N	1087	G	O3'-P	-5.03	1.53	1.61
1	N	1183	U	C2'-C1'	-5.03	1.45	1.53
1	N	423	G	C3'-C2'	5.03	1.60	1.52
1	N	637	C	N3-C4	5.03	1.44	1.33
1	N	233	C	C5'-C4'	5.03	1.58	1.51
1	N	642	A	C3'-O3'	5.03	1.49	1.42
1	N	1462	C	O3'-P	-5.03	1.53	1.61
1	N	795	C	O5'-C5'	-5.02	1.34	1.42
1	N	1057	G	C4'-C3'	5.02	1.60	1.52
1	N	1154	G	C4'-C3'	5.02	1.60	1.52
1	N	1309	G	O5'-C5'	5.02	1.50	1.42
1	N	643	C	C4-C5	5.01	1.52	1.43
1	N	1005	A	O4'-C1'	5.01	1.49	1.41
1	N	899	C	C4'-C3'	5.01	1.60	1.52
1	N	918	A	C1'-N9	5.01	1.55	1.48
1	N	1375	A	C4'-O4'	5.01	1.53	1.45
1	N	84	U	C5'-C4'	5.01	1.58	1.51
1	N	229	U	C3'-O3'	5.01	1.49	1.42
1	N	341	C	C4'-O4'	5.01	1.53	1.45
1	N	58	C	C1'-N1	5.00	1.55	1.48
1	N	1161	C	O5'-C5'	5.00	1.50	1.42
1	N	1239	A	C4'-C3'	5.00	1.60	1.53
1	N	1114	C	C4'-C3'	5.00	1.60	1.52

All (1918) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1399	C	P-O3'-C3'	22.12	153.38	120.20
1	N	913	A	P-O3'-C3'	21.60	152.60	120.20
1	N	1128	C	P-O5'-C5'	20.45	151.57	120.90
1	N	776	G	P-O5'-C5'	19.06	149.49	120.90
1	N	47	C	P-O3'-C3'	17.36	146.24	120.20
1	N	1362	A	P-O3'-C3'	17.04	145.76	120.20
1	N	210	C	P-O3'-C3'	16.18	144.46	120.20
1	N	812	G	P-O3'-C3'	15.45	143.37	120.20
1	N	1283	U	P-O5'-C5'	15.26	143.79	120.90
1	N	185	U	P-O5'-C5'	15.25	143.77	120.90
1	N	1201	A	P-O3'-C3'	14.77	142.35	120.20
1	N	1285	A	P-O3'-C3'	14.67	142.20	120.20
1	N	94	G	P-O3'-C3'	14.33	141.70	120.20
1	N	1529	G	P-O3'-C3'	14.07	141.31	120.20
1	N	1088	G	P-O5'-C5'	13.81	141.61	120.90
1	N	1315	U	P-O5'-C5'	13.54	141.20	120.90
1	N	1531	A	P-O5'-C5'	13.53	141.19	120.90
1	N	316	C	C5'-C4'-C3'	-13.51	95.74	116.00
1	N	559	A	P-O3'-C3'	13.03	139.74	120.20
1	N	184	G	P-O5'-C5'	12.97	140.35	120.90
1	N	93	U	P-O5'-C5'	12.95	140.32	120.90
1	N	119	A	P-O3'-C3'	12.85	139.47	120.20
1	N	198	G	C3'-C2'-C1'	12.83	114.13	101.30
1	N	438	U	P-O3'-C3'	12.69	139.24	120.20
1	N	1530	G	P-O3'-C3'	12.64	139.16	120.20
1	N	581	G	P-O5'-C5'	12.42	139.53	120.90
1	N	1101	A	P-O3'-C3'	12.25	138.58	120.20
1	N	1242	G	P-O5'-C5'	12.18	139.17	120.90
1	N	428	G	P-O3'-C3'	12.14	138.40	120.20
1	N	575	G	P-O3'-C3'	12.01	138.21	120.20
1	N	451	A	P-O3'-C3'	12.00	138.20	120.20
1	N	1331	G	P-O3'-C3'	11.96	138.14	120.20
1	N	1502	A	P-O3'-C3'	11.95	138.12	120.20
1	N	789	U	P-O5'-C5'	11.94	138.81	120.90
1	N	199	A	P-O5'-C5'	11.91	138.76	120.90
1	N	484	G	P-O3'-C3'	11.87	138.00	120.20
1	N	547	A	P-O3'-C3'	11.80	137.91	120.20
1	N	555	U	P-O3'-C3'	11.75	137.82	120.20
1	N	515	G	P-O5'-C5'	11.73	138.50	120.90
1	N	1432	G	C2'-C3'-O3'	11.70	127.04	109.50
1	N	905	U	P-O5'-C5'	11.66	138.39	120.90
1	N	532	A	P-O3'-C3'	11.55	137.53	120.20
1	N	1263	C	P-O5'-C5'	11.50	138.15	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1145	A	P-O5'-C5'	11.50	138.15	120.90
1	N	183	C	P-O3'-C3'	11.46	137.39	120.20
1	N	1065	U	P-O5'-C5'	11.46	138.09	120.90
1	N	588	G	P-O5'-C5'	11.43	138.05	120.90
1	N	1274	A	P-O5'-C5'	11.39	137.99	120.90
1	N	1264	U	P-O5'-C5'	11.37	137.96	120.90
1	N	197	A	C5'-C4'-C3'	11.34	132.21	115.20
1	N	1241	G	P-O5'-C5'	11.34	137.91	120.90
1	N	495	A	P-O3'-C3'	11.28	137.11	120.20
1	N	895	G	P-O5'-C5'	11.25	137.77	120.90
1	N	589	U	P-O5'-C5'	11.23	137.75	120.90
1	N	1040	U	P-O3'-C3'	11.20	137.00	120.20
1	N	535	A	P-O3'-C3'	11.16	136.94	120.20
1	N	1087	G	P-O5'-C5'	11.04	137.47	120.90
1	N	481	G	O4'-C4'-C3'	-11.02	95.08	106.10
1	N	805	C	P-O5'-C5'	11.02	137.43	120.90
1	N	197	A	P-O3'-C3'	10.99	136.69	120.20
1	N	266	G	P-O3'-C3'	10.96	136.63	120.20
1	N	1096	C	P-O5'-C5'	10.87	137.20	120.90
1	N	846	G	C5'-C4'-C3'	-10.85	99.72	116.00
1	N	686	U	P-O3'-C3'	10.75	136.33	120.20
1	N	204	G	P-O5'-C5'	10.74	137.01	120.90
1	N	1336	C	P-O3'-C3'	10.70	136.26	120.20
1	N	985	C	P-O5'-C5'	10.67	136.91	120.90
1	N	1053	G	P-O3'-C3'	10.67	136.20	120.20
1	N	1078	U	P-O3'-C3'	10.62	136.13	120.20
1	N	1239	A	C4'-C3'-O3'	10.60	125.30	109.40
1	N	934	C	P-O3'-C3'	10.56	136.04	120.20
1	N	51	A	P-O3'-C3'	10.49	135.94	120.20
1	N	842	U	P-O5'-C5'	10.48	136.63	120.90
1	N	605	U	P-O3'-C3'	10.40	135.80	120.20
1	N	212	G	P-O5'-C5'	10.39	136.48	120.90
1	N	606	G	P-O3'-C3'	10.26	135.58	120.20
1	N	1241	G	C5'-C4'-C3'	-10.19	100.71	116.00
1	N	431	A	O4'-C4'-C3'	-10.19	93.81	104.00
1	N	1100	C	P-O3'-C3'	-10.14	104.99	120.20
1	N	128	G	P-O5'-C5'	10.13	136.09	120.90
1	N	511	C	P-O3'-C3'	10.10	135.34	120.20
1	N	1042	A	P-O5'-C5'	10.09	136.03	120.90
1	N	361	G	P-O3'-C3'	10.08	135.32	120.20
1	N	1298	U	P-O3'-C3'	10.00	135.21	120.20
1	N	88	U	P-O3'-C3'	9.97	135.16	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	90	C	C5'-C4'-C3'	9.95	130.13	115.20
1	N	1418	A	P-O3'-C3'	9.95	135.13	120.20
1	N	498	A	P-O5'-C5'	9.92	135.78	120.90
1	N	729	A	P-O5'-C5'	9.91	135.76	120.90
1	N	70	U	C2'-C3'-O3'	9.90	124.35	109.50
1	N	1500	A	O4'-C1'-C2'	-9.83	97.77	107.60
1	N	968	A	O3'-P-O5'	-9.81	89.28	104.00
1	N	982	U	P-O3'-C3'	9.81	134.91	120.20
1	N	1278	G	P-O3'-C3'	9.80	134.90	120.20
1	N	1224	U	P-O3'-C3'	9.76	134.84	120.20
1	N	796	C	C4'-C3'-O3'	-9.76	98.37	113.00
1	N	366	A	P-O3'-C3'	9.74	134.80	120.20
1	N	1168	U	P-O3'-C3'	9.71	134.77	120.20
1	N	198	G	C5'-C4'-C3'	-9.71	101.44	116.00
1	N	264	C	P-O5'-C5'	9.68	135.42	120.90
1	N	172	A	P-O3'-C3'	9.63	134.64	120.20
1	N	800	G	P-O5'-C5'	9.61	135.31	120.90
1	N	1445	U	P-O5'-C5'	9.60	135.29	120.90
1	N	269	C	P-O5'-C5'	9.57	135.25	120.90
1	N	1384	C	P-O3'-C3'	9.57	134.55	120.20
1	N	274	A	P-O5'-C5'	9.55	135.22	120.90
1	N	460	A	P-O5'-C5'	9.54	135.21	120.90
1	N	788	U	P-O5'-C5'	9.54	135.21	120.90
1	N	982	U	P-O5'-C5'	9.48	135.12	120.90
1	N	914	A	C5'-C4'-C3'	-9.46	101.81	116.00
1	N	197	A	P-O5'-C5'	9.44	135.06	120.90
1	N	377	G	P-O5'-C5'	9.43	135.05	120.90
1	N	277	C	O4'-C4'-C3'	-9.41	94.58	104.00
1	N	1433	A	O3'-P-O5'	-9.39	89.91	104.00
1	N	50	A	P-O5'-C5'	9.39	134.99	120.90
1	N	4	U	C5'-C4'-C3'	-9.38	101.13	115.20
1	N	196	A	O3'-P-O5'	-9.34	90.00	104.00
1	N	1102	A	P-O5'-C5'	9.32	134.88	120.90
1	N	1277	C	C4'-C3'-C2'	-9.32	93.28	102.60
1	N	1086	U	O5'-C5'-C4'	9.31	125.46	111.50
1	N	58	C	P-O3'-C3'	9.22	134.03	120.20
1	N	440	C	O5'-C5'-C4'	-9.21	97.68	111.50
1	N	814	A	P-O3'-C3'	9.16	133.93	120.20
1	N	56	U	O4'-C1'-C2'	-9.15	98.45	107.60
1	N	1236	A	P-O3'-C3'	9.14	133.91	120.20
1	N	702	A	P-O3'-C3'	9.12	133.89	120.20
1	N	53	A	P-O5'-C5'	9.12	134.58	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	30	U	C1'-O4'-C4'	9.10	118.80	109.70
1	N	426	U	O5'-C5'-C4'	-9.07	97.90	111.50
1	N	817	C	P-O3'-C3'	9.06	133.79	120.20
1	N	65	A	O4'-C1'-N9	9.05	121.77	108.20
1	N	218	U	P-O5'-C5'	9.00	134.41	120.90
1	N	350	G	C5'-C4'-C3'	-9.00	102.50	116.00
1	N	999	C	P-O5'-C5'	8.99	134.38	120.90
1	N	1129	C	P-O5'-C5'	8.98	134.38	120.90
1	N	120	A	P-O3'-C3'	8.98	133.67	120.20
1	N	533	A	C5'-C4'-C3'	-8.97	101.74	115.20
1	N	1138	G	P-O3'-C3'	8.97	133.65	120.20
1	N	1432	G	P-O3'-C3'	8.97	133.65	120.20
1	N	1184	G	P-O5'-C5'	8.94	134.31	120.90
1	N	1239	A	O3'-P-O5'	8.94	117.41	104.00
1	N	1319	A	P-O3'-C3'	8.94	133.60	120.20
1	N	1203	C	P-O5'-C5'	8.92	134.28	120.90
1	N	866	C	P-O5'-C5'	8.91	134.26	120.90
1	N	1513	A	C5'-C4'-C3'	8.91	129.36	116.00
1	N	1333	A	O4'-C1'-C2'	-8.90	98.70	107.60
1	N	129	A	C2'-C3'-O3'	8.88	122.82	109.50
1	N	499	A	C2'-C3'-O3'	8.87	122.80	109.50
1	N	84	U	P-O3'-C3'	8.84	133.46	120.20
1	N	723	U	C1'-O4'-C4'	-8.81	101.08	109.90
1	N	860	A	O5'-C5'-C4'	-8.80	98.29	111.50
1	N	206	C	P-O3'-C3'	8.79	133.39	120.20
1	N	856	C	O4'-C4'-C3'	-8.79	95.21	104.00
1	N	648	A	P-O5'-C5'	8.78	134.07	120.90
1	N	1284	C	P-O5'-C5'	8.78	134.06	120.90
1	N	1144	G	P-O3'-C3'	8.77	133.36	120.20
1	N	440	C	P-O5'-C5'	8.76	134.04	120.90
1	N	759	A	P-O5'-C5'	8.75	134.03	120.90
1	N	317	U	P-O5'-C5'	8.74	134.01	120.90
1	N	486	U	P-O5'-C5'	-8.73	107.80	120.90
1	N	208	U	P-O5'-C5'	-8.73	107.81	120.90
1	N	1265	C	O4'-C1'-N1	8.72	121.58	108.50
1	N	294	U	C5'-C4'-C3'	8.71	129.06	116.00
1	N	94	G	C4'-C3'-O3'	8.70	122.45	109.40
1	N	991	U	P-O3'-C3'	8.69	133.24	120.20
1	N	216	U	C5'-C4'-C3'	8.68	129.02	116.00
1	N	229	U	P-O5'-C5'	8.68	133.92	120.90
1	N	1199	U	P-O5'-C5'	8.68	133.92	120.90
1	N	1337	G	C4'-C3'-O3'	-8.67	99.99	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1377	A	P-O3'-C3'	8.66	133.19	120.20
1	N	1208	C	P-O5'-C5'	8.66	133.88	120.90
1	N	1310	G	C4'-C3'-C2'	-8.65	93.94	102.60
1	N	796	C	C4'-C3'-C2'	-8.65	93.95	102.60
1	N	854	U	P-O3'-C3'	-8.64	107.24	120.20
1	N	770	C	C4'-C3'-C2'	-8.62	93.98	102.60
1	N	646	G	C5'-C4'-C3'	8.62	128.93	116.00
1	N	89	U	P-O3'-C3'	8.55	133.02	120.20
1	N	1260	G	O4'-C4'-C3'	8.55	112.55	104.00
1	N	378	G	O4'-C4'-C3'	-8.52	95.48	104.00
1	N	724	G	O4'-C1'-C2'	-8.52	99.08	107.60
1	N	1101	A	C2'-C3'-O3'	8.52	122.28	109.50
1	N	115	G	C4'-C3'-O3'	8.51	122.17	109.40
1	N	531	U	C5'-C4'-C3'	8.51	128.76	116.00
1	N	109	A	P-O3'-C3'	8.49	132.94	120.20
1	N	632	U	P-O5'-C5'	8.49	133.64	120.90
1	N	511	C	C2'-C3'-O3'	8.49	122.23	109.50
1	N	548	G	C3'-C2'-O2'	8.48	123.42	110.70
1	N	566	G	P-O3'-C3'	8.48	132.91	120.20
1	N	211	G	C4'-C3'-C2'	8.47	111.07	102.60
1	N	1488	G	C5'-C4'-C3'	-8.47	103.29	116.00
1	N	1068	G	C5'-C4'-C3'	-8.45	103.32	116.00
1	N	875	U	C4'-C3'-C2'	-8.43	94.17	102.60
1	N	181	A	C4'-C3'-O3'	8.42	125.64	113.00
1	N	733	G	O4'-C4'-C3'	-8.39	97.71	106.10
1	N	1361	G	O3'-P-O5'	-8.39	91.42	104.00
1	N	173	U	P-O3'-C3'	8.38	132.78	120.20
1	N	407	U	P-O5'-C5'	8.37	133.46	120.90
1	N	1412	C	O4'-C1'-N1	8.37	121.06	108.50
1	N	55	A	C2'-C3'-O3'	8.36	126.25	113.70
1	N	754	C	C4'-C3'-C2'	8.36	110.96	102.60
1	N	250	A	P-O5'-C5'	8.36	133.44	120.90
1	N	120	A	C1'-O4'-C4'	-8.34	101.56	109.90
1	N	421	U	P-O3'-C3'	8.34	132.71	120.20
1	N	992	U	C5'-C4'-C3'	8.34	127.70	115.20
1	N	345	C	P-O3'-C3'	8.32	132.68	120.20
1	N	1401	G	P-O5'-C5'	8.31	133.37	120.90
1	N	96	U	P-O5'-C5'	8.31	133.37	120.90
1	N	126	G	P-O3'-C3'	8.30	132.65	120.20
1	N	366	A	C2'-C3'-O3'	8.29	121.93	109.50
1	N	274	A	C4'-C3'-O3'	8.27	121.81	109.40
1	N	431	A	C5'-C4'-C3'	8.26	128.40	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	931	C	C4'-C3'-C2'	-8.26	94.34	102.60
1	N	672	U	P-O3'-C3'	-8.25	107.82	120.20
1	N	443	C	P-O5'-C5'	8.24	133.26	120.90
1	N	485	U	C2'-C3'-O3'	8.24	121.86	109.50
1	N	1076	U	O4'-C4'-C3'	-8.24	95.76	104.00
1	N	1375	A	C4'-C3'-C2'	-8.23	94.37	102.60
1	N	595	A	P-O5'-C5'	8.19	133.19	120.90
1	N	926	G	C5'-C4'-C3'	8.19	128.29	116.00
1	N	1090	U	P-O3'-C3'	8.19	132.48	120.20
1	N	339	C	P-O5'-C5'	8.16	133.15	120.90
1	N	530	G	P-O3'-C3'	8.16	132.44	120.20
1	N	172	A	O3'-P-O5'	-8.14	91.79	104.00
1	N	747	A	C4'-C3'-C2'	-8.14	94.46	102.60
1	N	1418	A	P-O5'-C5'	8.13	133.09	120.90
1	N	787	A	P-O5'-C5'	8.13	133.09	120.90
1	N	1303	C	P-O5'-C5'	8.11	133.07	120.90
1	N	578	C	C5'-C4'-C3'	8.11	128.16	116.00
1	N	273	U	O3'-P-O5'	-8.09	91.87	104.00
1	N	200	G	O3'-P-O5'	-8.08	91.87	104.00
1	N	894	G	P-O5'-C5'	8.07	133.00	120.90
1	N	130	A	C4'-C3'-C2'	-8.06	94.53	102.60
1	N	538	G	P-O5'-C5'	8.05	132.98	120.90
1	N	850	U	P-O5'-C5'	8.05	132.98	120.90
1	N	1151	A	P-O5'-C5'	8.05	132.98	120.90
1	N	820	U	O3'-P-O5'	8.05	116.07	104.00
1	N	1269	A	O4'-C4'-C3'	-8.04	95.96	104.00
1	N	878	A	P-O5'-C5'	8.03	132.94	120.90
1	N	630	A	P-O3'-C3'	8.02	132.22	120.20
1	N	127	G	O4'-C1'-C2'	-8.00	99.60	107.60
1	N	500	G	O4'-C1'-C2'	-8.00	99.60	107.60
1	N	1148	U	C5'-C4'-C3'	7.99	127.98	116.00
1	N	182	A	C5'-C4'-C3'	-7.97	103.24	115.20
1	N	1282	C	O4'-C1'-C2'	-7.96	99.64	107.60
1	N	1170	A	C5'-C4'-C3'	7.96	127.94	116.00
1	N	1108	G	O5'-C5'-C4'	-7.94	99.58	111.50
1	N	195	A	P-O5'-C5'	7.93	132.80	120.90
1	N	1050	G	C5'-C4'-C3'	-7.92	104.12	116.00
1	N	36	C	P-O3'-C3'	-7.91	108.33	120.20
1	N	1117	A	O5'-C5'-C4'	-7.90	99.65	111.50
1	N	519	C	O4'-C1'-N1	7.90	120.34	108.50
1	N	91	U	O4'-C1'-N1	7.89	120.34	108.50
1	N	895	G	O5'-C5'-C4'	-7.89	99.66	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	388	G	C1'-O4'-C4'	7.88	117.58	109.70
1	N	559	A	C4'-C3'-C2'	7.87	110.47	102.60
1	N	181	A	P-O3'-C3'	7.85	131.98	120.20
1	N	864	A	P-O3'-C3'	7.85	131.97	120.20
1	N	260	G	P-O3'-C3'	7.85	131.97	120.20
1	N	474	G	C4'-C3'-O3'	-7.85	101.23	113.00
1	N	1049	U	C2'-C3'-O3'	7.84	121.26	109.50
1	N	76	G	C5'-C4'-C3'	-7.84	104.25	116.00
1	N	732	C	P-O5'-C5'	7.84	132.65	120.90
1	N	1512	U	O4'-C1'-N1	7.83	120.25	108.50
1	N	567	G	C4'-C3'-C2'	-7.83	94.77	102.60
1	N	246	A	P-O3'-C3'	7.82	131.93	120.20
1	N	691	G	P-O5'-C5'	7.81	132.62	120.90
1	N	695	A	O5'-C5'-C4'	-7.81	99.78	111.50
1	N	1230	C	P-O5'-C5'	7.81	132.62	120.90
1	N	513	C	P-O5'-C5'	7.80	132.60	120.90
1	N	810	C	P-O3'-C3'	-7.80	108.50	120.20
1	N	431	A	C1'-O4'-C4'	7.79	117.69	109.90
1	N	576	C	P-O3'-C3'	7.78	131.88	120.20
1	N	342	C	O4'-C1'-C2'	-7.78	99.82	107.60
1	N	1333	A	C4'-C3'-C2'	-7.77	94.83	102.60
1	N	202	G	P-O3'-C3'	7.77	131.86	120.20
1	N	1121	U	O4'-C1'-N1	7.76	120.15	108.50
1	N	1280	A	O5'-C5'-C4'	7.76	123.34	111.70
1	N	340	U	P-O5'-C5'	7.76	132.54	120.90
1	N	1186	G	P-O5'-C5'	-7.76	109.26	120.90
1	N	557	G	O3'-P-O5'	-7.74	92.39	104.00
1	N	1283	U	O3'-P-O5'	7.73	115.59	104.00
1	N	1484	C	P-O5'-C5'	7.72	132.49	120.90
1	N	256	U	P-O5'-C5'	7.72	132.49	120.90
1	N	884	U	P-O3'-C3'	7.72	131.78	120.20
1	N	10	A	P-O5'-C5'	7.71	132.47	120.90
1	N	623	C	O4'-C1'-N1	7.70	120.05	108.50
1	N	425	G	P-O3'-C3'	-7.70	108.65	120.20
1	N	480	U	P-O3'-C3'	7.70	131.75	120.20
1	N	711	G	O4'-C1'-N9	7.70	120.05	108.50
1	N	1482	G	P-O5'-C5'	7.70	132.44	120.90
1	N	1495	U	O4'-C1'-C2'	-7.68	99.92	107.60
1	N	924	C	P-O5'-C5'	7.68	132.42	120.90
1	N	207	C	O4'-C4'-C3'	-7.67	96.33	104.00
1	N	464	U	O3'-P-O5'	-7.67	92.50	104.00
1	N	1191	A	P-O5'-C5'	7.66	132.39	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	240	G	O3'-P-O5'	-7.66	92.51	104.00
1	N	948	C	C5'-C4'-O4'	7.66	121.29	109.80
1	N	5	U	O4'-C4'-C3'	-7.65	98.45	106.10
1	N	1150	A	P-O5'-C5'	7.65	132.37	120.90
1	N	73	C	O4'-C1'-C2'	-7.64	99.96	107.60
1	N	256	U	C4'-C3'-C2'	7.63	110.23	102.60
1	N	216	U	P-O3'-C3'	7.63	131.65	120.20
1	N	632	U	O3'-P-O5'	-7.63	92.55	104.00
1	N	227	G	P-O3'-C3'	-7.63	108.76	120.20
1	N	1370	G	C5'-C4'-C3'	-7.62	104.58	116.00
1	N	235	C	O4'-C1'-N1	7.61	119.92	108.50
1	N	169	C	O4'-C1'-N1	7.61	119.92	108.50
1	N	400	C	O4'-C1'-N1	7.61	119.92	108.50
1	N	265	G	P-O3'-C3'	7.61	131.61	120.20
1	N	296	U	P-O3'-C3'	-7.60	108.80	120.20
1	N	747	A	P-O5'-C5'	7.59	132.29	120.90
1	N	280	C	P-O3'-C3'	7.59	131.59	120.20
1	N	543	U	P-O5'-C5'	7.59	132.28	120.90
1	N	508	U	C2'-C3'-O3'	7.58	120.88	109.50
1	N	788	U	O5'-C5'-C4'	7.57	122.86	111.50
1	N	315	A	C2'-C3'-O3'	7.57	120.86	109.50
1	N	243	A	P-O5'-C5'	7.57	132.25	120.90
1	N	1269	A	C5'-C4'-C3'	7.56	127.34	116.00
1	N	60	A	P-O3'-C3'	7.53	131.50	120.20
1	N	1235	U	C4'-C3'-C2'	-7.53	95.07	102.60
1	N	792	A	P-O5'-C5'	-7.53	109.61	120.90
1	N	641	U	C2'-C3'-O3'	7.52	124.97	113.70
1	N	369	G	O4'-C4'-C3'	-7.50	96.50	104.00
1	N	1226	C	P-O3'-C3'	7.50	131.46	120.20
1	N	587	G	P-O3'-C3'	7.50	131.45	120.20
1	N	1320	C	O4'-C1'-N1	7.49	119.74	108.50
1	N	752	G	O4'-C1'-N9	7.49	119.74	108.50
1	N	928	G	C5'-C4'-C3'	-7.49	104.77	116.00
1	N	771	G	C5'-C4'-C3'	7.49	127.23	116.00
1	N	686	U	O4'-C1'-N1	7.49	119.43	108.20
1	N	1202	U	O4'-C1'-N1	7.48	119.72	108.50
1	N	960	U	C2'-C3'-O3'	7.48	120.72	109.50
1	N	1452	C	O4'-C1'-N1	7.47	119.41	108.20
1	N	1458	G	O3'-P-O5'	7.47	115.21	104.00
1	N	1267	C	P-O5'-C5'	-7.47	109.70	120.90
1	N	435	A	P-O5'-C5'	7.46	132.10	120.90
1	N	146	G	P-O5'-C5'	7.46	132.09	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	179	A	P-O5'-C5'	7.45	132.08	120.90
1	N	335	C	O4'-C4'-C3'	-7.43	96.57	104.00
1	N	714	G	C5'-C4'-C3'	-7.42	104.86	116.00
1	N	1019	A	P-O5'-C5'	7.42	132.03	120.90
1	N	274	A	C2'-C3'-O3'	7.42	120.63	109.50
1	N	373	A	C5'-C4'-O4'	-7.42	98.67	109.80
1	N	1333	A	P-O5'-C5'	7.42	132.03	120.90
1	N	582	C	O4'-C4'-C3'	-7.41	96.59	104.00
1	N	1107	C	P-O3'-C3'	-7.41	109.09	120.20
1	N	1278	G	C4'-C3'-C2'	-7.41	95.19	102.60
1	N	438	U	O4'-C1'-N1	7.40	119.31	108.20
1	N	1139	G	P-O3'-C3'	7.40	131.31	120.20
1	N	299	G	C5'-C4'-C3'	7.39	127.09	116.00
1	N	305	G	C2'-C3'-O3'	7.38	120.57	109.50
1	N	121	U	O4'-C1'-N1	7.37	119.56	108.50
1	N	730	G	O4'-C1'-N9	7.36	119.54	108.50
1	N	733	G	C2'-C3'-O3'	7.36	120.55	109.50
1	N	763	G	C4'-C3'-C2'	-7.36	95.24	102.60
1	N	9	G	P-O3'-C3'	-7.36	109.17	120.20
1	N	1129	C	O4'-C1'-N1	7.35	119.23	108.20
1	N	1051	C	O3'-P-O5'	-7.35	92.98	104.00
1	N	436	C	O4'-C1'-N1	7.34	119.51	108.50
1	N	1533	C	O4'-C1'-C2'	-7.34	98.46	105.80
1	N	120	A	O4'-C1'-N9	7.34	119.51	108.50
1	N	686	U	C2'-C3'-O3'	7.34	120.51	109.50
1	N	1020	G	O4'-C1'-C2'	-7.34	100.26	107.60
1	N	1276	G	P-O5'-C5'	7.33	131.90	120.90
1	N	710	G	C4'-C3'-C2'	-7.33	95.27	102.60
1	N	1501	C	O4'-C1'-N1	7.33	119.49	108.50
1	N	899	C	O4'-C1'-N1	7.33	119.49	108.50
1	N	1296	C	O4'-C1'-C2'	7.32	114.92	107.60
1	N	1469	C	O4'-C4'-C3'	7.32	111.32	104.00
1	N	692	U	P-O3'-C3'	7.32	131.18	120.20
1	N	872	A	P-O3'-C3'	7.32	131.18	120.20
1	N	693	G	C4'-C3'-C2'	-7.32	95.28	102.60
1	N	896	C	O4'-C1'-N1	7.32	119.47	108.50
1	N	316	C	C4'-C3'-C2'	-7.30	95.30	102.60
1	N	345	C	O4'-C1'-N1	7.30	119.15	108.20
1	N	1389	C	O4'-C1'-N1	7.30	119.45	108.50
1	N	566	G	C4'-C3'-C2'	7.30	109.90	102.60
1	N	95	C	P-O5'-C5'	-7.29	109.96	120.90
1	N	972	C	O4'-C1'-N1	7.29	119.44	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	750	C	P-O5'-C5'	7.28	131.82	120.90
1	N	484	G	O4'-C1'-N9	7.28	119.12	108.20
1	N	308	C	C4'-C3'-C2'	-7.28	95.33	102.60
1	N	995	C	O4'-C1'-C2'	-7.28	100.33	107.60
1	N	1490	U	O4'-C1'-N1	7.28	119.41	108.50
1	N	1100	C	C4'-C3'-O3'	-7.27	102.09	113.00
1	N	1345	U	O3'-P-O5'	-7.27	93.09	104.00
1	N	373	A	O4'-C1'-C2'	-7.27	100.33	107.60
1	N	480	U	O3'-P-O5'	-7.27	93.10	104.00
1	N	217	C	O4'-C1'-N1	7.26	119.39	108.50
1	N	895	G	O4'-C1'-N9	7.26	119.39	108.50
1	N	372	C	P-O3'-C3'	7.26	131.08	120.20
1	N	1385	G	O4'-C4'-C3'	-7.26	96.74	104.00
1	N	652	U	P-O5'-C5'	7.25	131.78	120.90
1	N	1239	A	O4'-C1'-N9	7.25	119.07	108.20
1	N	1306	A	P-O5'-C5'	7.25	131.77	120.90
1	N	1404	C	P-O3'-C3'	7.25	131.07	120.20
1	N	635	A	C5'-C4'-C3'	7.24	126.86	116.00
1	N	1048	G	O4'-C1'-C2'	-7.22	100.38	107.60
1	N	284	C	O5'-C5'-C4'	-7.21	100.69	111.50
1	N	1025	U	P-O5'-C5'	7.20	131.70	120.90
1	N	1122	U	P-O5'-C5'	7.20	131.70	120.90
1	N	474	G	O4'-C1'-C2'	-7.20	100.40	107.60
1	N	1086	U	C5'-C4'-C3'	-7.20	105.20	116.00
1	N	1457	G	C4'-C3'-O3'	-7.19	102.21	113.00
1	N	50	A	C3'-C2'-C1'	-7.19	94.31	101.50
1	N	87	C	C5'-C4'-C3'	-7.19	105.21	116.00
1	N	1469	C	P-O3'-C3'	7.19	130.99	120.20
1	N	381	C	C4'-C3'-C2'	-7.18	95.42	102.60
1	N	422	C	P-O3'-C3'	7.18	130.97	120.20
1	N	121	U	P-O3'-C3'	-7.18	109.44	120.20
1	N	579	A	P-O5'-C5'	7.16	131.65	120.90
1	N	1324	A	P-O5'-C5'	7.16	131.64	120.90
1	N	100	G	C4'-C3'-C2'	-7.16	95.44	102.60
1	N	1348	U	C4'-C3'-O3'	-7.16	102.27	113.00
1	N	239	U	O4'-C1'-N1	7.15	119.23	108.50
1	N	1405	G	C4'-C3'-C2'	-7.15	95.45	102.60
1	N	581	G	P-O3'-C3'	-7.14	109.49	120.20
1	N	641	U	O3'-P-O5'	-7.13	93.30	104.00
1	N	1166	G	P-O3'-C3'	7.13	130.90	120.20
1	N	1527	U	O4'-C1'-N1	7.13	119.19	108.50
1	N	1436	U	P-O3'-C3'	7.12	130.89	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	499	A	P-O3'-C3'	7.12	130.88	120.20
1	N	1443	C	P-O3'-C3'	-7.12	109.52	120.20
1	N	1125	U	P-O3'-C3'	7.11	130.86	120.20
1	N	1002	G	C4'-C3'-C2'	-7.11	95.49	102.60
1	N	389	A	C3'-C2'-O2'	7.11	121.36	110.70
1	N	338	A	O5'-C5'-C4'	-7.10	100.85	111.50
1	N	878	A	O5'-C5'-C4'	-7.10	100.85	111.50
1	N	944	G	C5'-C4'-C3'	7.10	126.65	116.00
1	N	80	A	O4'-C1'-C2'	-7.10	100.50	107.60
1	N	1101	A	C4'-C3'-C2'	7.09	109.69	102.60
1	N	561	U	C2'-C3'-O3'	7.09	120.13	109.50
1	N	900	A	C4'-C3'-C2'	-7.08	95.52	102.60
1	N	1448	C	P-O5'-C5'	-7.08	110.28	120.90
1	N	1379	G	P-O5'-C5'	-7.08	110.28	120.90
1	N	296	U	O4'-C1'-C2'	-7.07	100.53	107.60
1	N	1375	A	C3'-C2'-C1'	7.07	108.37	101.30
1	N	1333	A	C1'-O4'-C4'	7.07	116.97	109.90
1	N	1009	U	O4'-C1'-N1	7.07	119.10	108.50
1	N	1500	A	C4'-C3'-C2'	-7.07	95.53	102.60
1	N	1364	U	O4'-C1'-N1	7.07	118.80	108.20
1	N	298	A	P-O3'-C3'	7.06	130.79	120.20
1	N	1326	U	C4'-C3'-C2'	-7.06	95.54	102.60
1	N	549	C	P-O5'-C5'	7.06	131.49	120.90
1	N	1240	U	O4'-C1'-C2'	-7.05	100.55	107.60
1	N	1312	G	C5'-C4'-C3'	-7.05	105.42	116.00
1	N	897	C	O4'-C4'-C3'	-7.05	96.95	104.00
1	N	598	U	P-O5'-C5'	7.05	131.47	120.90
1	N	499	A	C5'-C4'-C3'	-7.05	104.63	115.20
1	N	913	A	O5'-C5'-C4'	7.05	122.27	111.70
1	N	603	U	C4'-C3'-C2'	-7.04	95.56	102.60
1	N	801	U	P-O5'-C5'	-7.04	110.33	120.90
1	N	212	G	C4'-C3'-O3'	-7.04	102.44	113.00
1	N	1088	G	P-O3'-C3'	-7.04	109.64	120.20
1	N	818	G	P-O5'-C5'	-7.04	110.34	120.90
1	N	503	C	O4'-C1'-N1	7.04	119.06	108.50
1	N	215	C	C3'-C2'-C1'	7.04	108.34	101.30
1	N	606	G	C5'-C4'-C3'	-7.04	105.45	116.00
1	N	66	A	O4'-C1'-C2'	-7.03	100.57	107.60
1	N	762	U	O4'-C1'-N1	7.03	119.05	108.50
1	N	763	G	C5'-C4'-C3'	-7.03	105.46	116.00
1	N	325	A	P-O5'-C5'	-7.03	110.36	120.90
1	N	631	C	O5'-C5'-C4'	-7.03	101.16	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	774	G	P-O5'-C5'	-7.03	110.36	120.90
1	N	80	A	C1'-O4'-C4'	7.01	116.92	109.90
1	N	832	G	C5'-C4'-C3'	-7.01	105.48	116.00
1	N	14	U	P-O5'-C5'	-7.01	110.39	120.90
1	N	1012	A	O4'-C1'-N9	7.00	118.99	108.50
1	N	1282	C	P-O3'-C3'	-6.99	109.72	120.20
1	N	120	A	N9-C1'-C2'	6.98	122.47	112.00
1	N	635	A	P-O5'-C5'	-6.97	110.44	120.90
1	N	1123	U	P-O5'-C5'	6.97	131.35	120.90
1	N	1119	C	P-O3'-C3'	-6.97	109.75	120.20
1	N	998	C	O4'-C1'-C2'	-6.97	100.63	107.60
1	N	1028	C	O4'-C1'-C2'	-6.96	100.64	107.60
1	N	112	G	O4'-C4'-C3'	-6.96	97.04	104.00
1	N	279	A	C2'-C3'-O3'	6.95	119.93	109.50
1	N	1300	G	P-O3'-C3'	6.95	130.63	120.20
1	N	73	C	P-O5'-C5'	-6.95	110.48	120.90
1	N	1230	C	C5'-C4'-C3'	6.94	126.42	116.00
1	N	1242	G	O5'-C5'-C4'	-6.93	101.11	111.50
1	N	1377	A	C4'-C3'-O3'	-6.93	102.61	113.00
1	N	702	A	O4'-C1'-N9	6.92	118.89	108.50
1	N	1484	C	O4'-C1'-N1	6.92	118.88	108.50
1	N	1511	G	C5'-C4'-C3'	-6.92	105.62	116.00
1	N	984	C	O4'-C1'-N1	6.92	118.88	108.50
1	N	1386	G	P-O3'-C3'	-6.91	109.83	120.20
1	N	1498	U	P-O3'-C3'	6.91	130.56	120.20
1	N	979	C	C5'-C4'-C3'	-6.91	105.64	116.00
1	N	858	G	C4'-C3'-O3'	6.90	123.36	113.00
1	N	617	G	P-O5'-C5'	6.90	131.25	120.90
1	N	252	U	O3'-P-O5'	-6.90	93.65	104.00
1	N	869	G	P-O3'-C3'	-6.90	109.85	120.20
1	N	307	C	P-O5'-C5'	-6.89	110.56	120.90
1	N	723	U	P-O3'-C3'	-6.89	109.86	120.20
1	N	899	C	P-O5'-C5'	6.89	131.24	120.90
1	N	1134	G	C5'-C4'-C3'	6.89	126.34	116.00
1	N	1154	G	C4'-C3'-C2'	-6.89	95.70	102.60
1	N	1062	U	C4'-C3'-C2'	-6.89	95.71	102.60
1	N	616	G	C4'-C3'-C2'	-6.89	95.71	102.60
1	N	212	G	C5'-C4'-C3'	6.89	126.33	116.00
1	N	1147	C	N1-C1'-C2'	6.89	122.33	112.00
1	N	533	A	C5'-C4'-O4'	6.88	119.42	109.10
1	N	1399	C	C1'-O4'-C4'	-6.88	102.82	109.70
1	N	1515	G	O4'-C1'-C2'	-6.88	100.72	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	546	A	P-O5'-C5'	-6.88	110.59	120.90
1	N	1019	A	P-O3'-C3'	-6.88	109.89	120.20
1	N	1046	A	C4'-C3'-C2'	-6.88	95.72	102.60
1	N	1061	G	O5'-C5'-C4'	-6.88	101.19	111.50
1	N	1504	G	C5'-C4'-C3'	6.87	125.51	115.20
1	N	890	G	O4'-C1'-C2'	-6.87	98.93	105.80
1	N	63	C	P-O3'-C3'	6.87	130.50	120.20
1	N	280	C	P-O5'-C5'	6.87	131.20	120.90
1	N	894	G	C2'-C3'-O3'	6.87	124.00	113.70
1	N	832	G	O4'-C1'-C2'	-6.86	100.74	107.60
1	N	1496	C	O4'-C1'-C2'	-6.86	100.74	107.60
1	N	1032	G	P-O5'-C5'	6.85	131.18	120.90
1	N	1274	A	O3'-P-O5'	-6.85	93.73	104.00
1	N	80	A	P-O3'-C3'	-6.84	109.94	120.20
1	N	36	C	C5'-C4'-C3'	6.84	126.26	116.00
1	N	730	G	C1'-O4'-C4'	6.83	116.73	109.90
1	N	381	C	O4'-C1'-N1	6.83	118.75	108.50
1	N	1125	U	O4'-C1'-N1	6.83	118.75	108.50
1	N	1118	U	C5'-C4'-O4'	-6.83	99.56	109.80
1	N	1313	U	P-O5'-C5'	6.83	131.14	120.90
1	N	95	C	O4'-C1'-N1	6.83	118.74	108.50
1	N	92	U	C5'-C4'-C3'	-6.82	105.76	116.00
1	N	458	U	P-O5'-C5'	-6.82	110.66	120.90
1	N	777	A	C5'-C4'-O4'	6.82	120.03	109.80
1	N	967	C	O4'-C1'-N1	6.82	118.73	108.50
1	N	49	U	P-O3'-C3'	-6.82	109.97	120.20
1	N	1362	A	C4'-C3'-C2'	-6.82	95.78	102.60
1	N	845	A	P-O5'-C5'	-6.81	110.68	120.90
1	N	1239	A	C2'-C3'-O3'	6.81	119.72	109.50
1	N	963	G	P-O3'-C3'	-6.81	109.98	120.20
1	N	65	A	C1'-O4'-C4'	-6.81	102.89	109.70
1	N	11	G	C4'-C3'-C2'	-6.80	95.80	102.60
1	N	221	C	C1'-O4'-C4'	6.79	116.69	109.90
1	N	127	G	O4'-C1'-N9	6.79	118.69	108.50
1	N	652	U	P-O3'-C3'	6.79	130.39	120.20
1	N	851	G	P-O5'-C5'	6.79	131.09	120.90
1	N	1185	G	P-O3'-C3'	-6.79	110.01	120.20
1	N	1447	A	O4'-C1'-C2'	6.79	114.39	107.60
1	N	55	A	C1'-O4'-C4'	6.79	116.69	109.90
1	N	992	U	P-O5'-C5'	-6.79	110.72	120.90
1	N	575	G	C2'-C3'-O3'	6.78	119.68	109.50
1	N	926	G	P-O3'-C3'	6.78	130.38	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	327	A	P-O3'-C3'	6.78	130.37	120.20
1	N	94	G	P-O5'-C5'	-6.77	110.74	120.90
1	N	147	G	P-O5'-C5'	6.77	131.06	120.90
1	N	1530	G	C4'-C3'-O3'	6.77	119.56	109.40
1	N	1085	U	P-O3'-C3'	-6.76	110.05	120.20
1	N	1390	U	P-O3'-C3'	6.76	130.35	120.20
1	N	982	U	C4'-C3'-O3'	6.76	119.54	109.40
1	N	619	U	O4'-C1'-N1	6.76	118.64	108.50
1	N	815	A	C1'-O4'-C4'	-6.76	103.14	109.90
1	N	559	A	C2'-C3'-O3'	6.75	119.62	109.50
1	N	523	A	O4'-C1'-N9	6.75	118.62	108.50
1	N	1337	G	C5'-C4'-O4'	-6.75	99.68	109.80
1	N	764	C	C4'-C3'-C2'	-6.74	95.86	102.60
1	N	1496	C	C1'-O4'-C4'	6.74	116.64	109.90
1	N	1223	C	C1'-O4'-C4'	-6.74	103.16	109.90
1	N	454	G	C2'-C3'-O3'	6.74	123.80	113.70
1	N	1399	C	O4'-C1'-N1	6.73	118.30	108.20
1	N	1261	A	O4'-C1'-N9	6.73	118.59	108.50
1	N	323	U	P-O5'-C5'	6.73	130.99	120.90
1	N	980	C	P-O3'-C3'	6.73	130.29	120.20
1	N	1011	C	P-O5'-C5'	6.73	130.99	120.90
1	N	244	U	O4'-C1'-N1	6.72	118.28	108.20
1	N	1198	G	C4'-C3'-C2'	-6.72	95.88	102.60
1	N	18	C	C5'-C4'-C3'	6.72	126.08	116.00
1	N	563	A	C3'-C2'-C1'	6.72	108.02	101.30
1	N	669	G	P-O5'-C5'	6.72	130.97	120.90
1	N	267	C	C5'-C4'-O4'	-6.70	99.75	109.80
1	N	200	G	P-O5'-C5'	-6.70	110.85	120.90
1	N	690	G	P-O5'-C5'	6.70	130.95	120.90
1	N	303	A	P-O3'-C3'	-6.70	110.15	120.20
1	N	869	G	C5'-C4'-C3'	-6.70	105.95	116.00
1	N	829	G	O4'-C4'-C3'	-6.70	97.31	104.00
1	N	70	U	P-O3'-C3'	6.69	130.24	120.20
1	N	1336	C	O4'-C1'-N1	6.69	118.24	108.20
1	N	333	U	O5'-C5'-C4'	-6.69	101.46	111.50
1	N	995	C	C4'-C3'-C2'	-6.69	95.91	102.60
1	N	1333	A	C3'-C2'-C1'	6.68	107.98	101.30
1	N	1115	U	P-O3'-C3'	-6.68	110.18	120.20
1	N	936	C	C5'-C4'-C3'	-6.68	105.98	116.00
1	N	1321	U	P-O5'-C5'	6.68	130.92	120.90
1	N	136	C	O4'-C1'-N1	6.68	118.52	108.50
1	N	136	C	P-O5'-C5'	6.67	130.91	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	522	C	P-O5'-C5'	6.67	130.90	120.90
1	N	1336	C	C2'-C3'-O3'	6.67	119.50	109.50
1	N	171	A	P-O3'-C3'	-6.67	110.20	120.20
1	N	83	C	O4'-C4'-C3'	-6.66	97.34	104.00
1	N	119	A	C4'-C3'-O3'	6.66	119.39	109.40
1	N	481	G	O3'-P-O5'	-6.66	94.01	104.00
1	N	787	A	C4'-C3'-O3'	-6.66	103.01	113.00
1	N	1085	U	C3'-C2'-C1'	6.66	107.96	101.30
1	N	1037	C	P-O5'-C5'	6.66	130.88	120.90
1	N	1042	A	O3'-P-O5'	-6.65	94.02	104.00
1	N	1091	U	P-O3'-C3'	6.65	130.18	120.20
1	N	599	C	P-O3'-C3'	-6.64	110.23	120.20
1	N	180	U	C4'-C3'-C2'	-6.64	95.96	102.60
1	N	730	G	P-O3'-C3'	6.63	130.15	120.20
1	N	1140	C	C2'-C3'-O3'	6.63	119.45	109.50
1	N	1421	G	O4'-C1'-N9	6.63	118.45	108.50
1	N	235	C	P-O5'-C5'	6.62	130.84	120.90
1	N	449	G	P-O3'-C3'	-6.62	110.26	120.20
1	N	351	G	C4'-C3'-O3'	6.62	119.33	109.40
1	N	105	G	P-O5'-C5'	6.62	130.83	120.90
1	N	995	C	O4'-C1'-N1	6.62	118.42	108.50
1	N	51	A	O4'-C4'-C3'	-6.62	99.48	106.10
1	N	686	U	P-O5'-C5'	6.62	130.82	120.90
1	N	504	C	P-O3'-C3'	-6.61	110.28	120.20
1	N	23	C	O4'-C4'-C3'	-6.60	97.40	104.00
1	N	327	A	O4'-C4'-C3'	-6.60	99.50	106.10
1	N	471	U	P-O5'-C5'	6.59	130.79	120.90
1	N	721	G	P-O3'-C3'	6.59	130.09	120.20
1	N	1222	G	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	636	U	O4'-C1'-N1	6.59	118.38	108.50
1	N	1114	C	C5'-C4'-C3'	-6.59	106.12	116.00
1	N	37	U	C4'-C3'-O3'	-6.58	103.12	113.00
1	N	1395	C	P-O3'-C3'	6.58	130.07	120.20
1	N	555	U	C5'-C4'-O4'	-6.58	99.93	109.80
1	N	969	A	C5'-C4'-C3'	-6.58	105.33	115.20
1	N	283	U	C5'-C4'-O4'	6.57	119.66	109.80
1	N	49	U	O5'-C5'-C4'	6.57	121.35	111.50
1	N	1000	A	P-O5'-C5'	6.57	130.75	120.90
1	N	246	A	C4'-C3'-C2'	6.57	109.17	102.60
1	N	1240	U	P-O3'-C3'	6.57	130.05	120.20
1	N	1181	G	C2'-C3'-O3'	6.57	119.35	109.50
1	N	1524	C	O4'-C1'-N1	6.57	118.35	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1500	A	P-O5'-C5'	6.56	130.75	120.90
1	N	793	U	P-O5'-C5'	-6.56	111.06	120.90
1	N	1162	C	O4'-C1'-N1	6.55	118.33	108.50
1	N	586	C	C2'-C3'-O3'	6.55	123.53	113.70
1	N	1362	A	O4'-C1'-N9	6.55	118.33	108.50
1	N	460	A	C1'-O4'-C4'	-6.55	103.35	109.90
1	N	30	U	C5'-C4'-C3'	6.55	125.02	115.20
1	N	448	A	O4'-C1'-N9	6.55	118.32	108.50
1	N	366	A	O4'-C1'-N9	6.54	118.02	108.20
1	N	1030	U	P-O5'-C5'	-6.54	111.08	120.90
1	N	169	C	P-O5'-C5'	6.54	130.71	120.90
1	N	426	U	P-O3'-C3'	6.54	130.00	120.20
1	N	663	A	P-O5'-C5'	6.54	130.70	120.90
1	N	34	C	O4'-C1'-N1	6.53	118.30	108.50
1	N	532	A	P-O5'-C5'	6.53	130.70	120.90
1	N	776	G	O5'-C5'-C4'	-6.53	101.70	111.50
1	N	794	A	C4'-C3'-C2'	-6.53	96.07	102.60
1	N	946	A	C4'-C3'-C2'	-6.53	96.07	102.60
1	N	352	C	O3'-P-O5'	-6.53	94.21	104.00
1	N	395	C	O5'-C5'-C4'	-6.53	101.71	111.50
1	N	1079	G	P-O3'-C3'	6.51	129.97	120.20
1	N	1353	G	O4'-C1'-C2'	-6.51	101.08	107.60
1	N	906	A	C4'-C3'-C2'	-6.50	96.09	102.60
1	N	134	G	O4'-C4'-C3'	-6.50	97.50	104.00
1	N	1252	A	C4'-C3'-C2'	-6.50	96.10	102.60
1	N	60	A	O4'-C1'-N9	6.50	117.95	108.20
1	N	1059	C	C4'-C3'-O3'	-6.50	103.26	113.00
1	N	659	U	O4'-C1'-N1	6.49	118.24	108.50
1	N	644	U	C4'-C3'-C2'	-6.49	96.11	102.60
1	N	1228	C	P-O5'-C5'	-6.49	111.16	120.90
1	N	855	U	P-O5'-C5'	-6.49	111.17	120.90
1	N	812	G	C2'-C3'-O3'	6.48	119.23	109.50
1	N	70	U	C5'-C4'-C3'	-6.48	105.48	115.20
1	N	273	U	P-O5'-C5'	6.48	130.62	120.90
1	N	1458	G	P-O5'-C5'	6.48	130.62	120.90
1	N	1502	A	C2'-C3'-O3'	6.48	119.22	109.50
1	N	390	U	C4'-C3'-C2'	-6.48	96.12	102.60
1	N	1533	C	O5'-C5'-C4'	6.48	121.41	111.70
1	N	146	G	C5'-C4'-C3'	-6.47	106.29	116.00
1	N	705	G	P-O5'-C5'	6.47	130.61	120.90
1	N	1473	G	C4'-C3'-O3'	-6.47	103.30	113.00
1	N	67	C	C4'-C3'-O3'	-6.47	103.30	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1514	G	O4'-C4'-C3'	-6.46	97.54	104.00
1	N	84	U	C2'-C3'-O3'	6.46	119.19	109.50
1	N	684	U	O4'-C1'-N1	6.46	118.19	108.50
1	N	1510	C	O3'-P-O5'	-6.46	94.31	104.00
1	N	83	C	O4'-C1'-C2'	-6.46	101.14	107.60
1	N	318	G	P-O5'-C5'	-6.46	111.22	120.90
1	N	508	U	O4'-C1'-N1	6.46	117.88	108.20
1	N	460	A	C5'-C4'-O4'	-6.45	100.12	109.80
1	N	843	U	P-O3'-C3'	-6.45	110.52	120.20
1	N	1170	A	P-O5'-C5'	-6.45	111.22	120.90
1	N	892	A	C5'-C4'-C3'	6.45	125.68	116.00
1	N	238	A	O4'-C1'-C2'	-6.45	101.15	107.60
1	N	150	U	C4'-C3'-O3'	-6.45	103.33	113.00
1	N	548	G	O4'-C1'-N9	6.45	118.17	108.50
1	N	254	G	O5'-C5'-C4'	-6.45	101.83	111.50
1	N	49	U	P-O5'-C5'	6.45	130.57	120.90
1	N	75	G	C4'-C3'-C2'	-6.44	96.16	102.60
1	N	998	C	O4'-C1'-N1	6.44	118.16	108.50
1	N	1442	G	O4'-C1'-C2'	-6.44	101.16	107.60
1	N	717	U	C2'-C3'-O3'	6.44	119.16	109.50
1	N	1056	U	O4'-C1'-C2'	-6.44	101.16	107.60
1	N	855	U	O4'-C1'-N1	6.43	118.15	108.50
1	N	1041	G	O4'-C4'-C3'	-6.43	97.56	104.00
1	N	352	C	C2'-C3'-O3'	6.43	123.35	113.70
1	N	914	A	P-O3'-C3'	-6.43	110.55	120.20
1	N	1068	G	O4'-C1'-C2'	-6.43	101.17	107.60
1	N	718	A	C5'-C4'-C3'	-6.43	106.36	116.00
1	N	986	U	O4'-C1'-N1	6.43	118.14	108.50
1	N	1468	A	C5'-C4'-O4'	6.43	119.44	109.80
1	N	657	U	P-O5'-C5'	6.42	130.54	120.90
1	N	629	A	C4'-C3'-C2'	-6.42	96.18	102.60
1	N	896	C	C3'-C2'-C1'	6.41	107.71	101.30
1	N	1331	G	O4'-C1'-N9	6.41	118.11	108.50
1	N	1459	G	O5'-C5'-C4'	-6.40	101.90	111.50
1	N	1498	U	C4'-C3'-O3'	6.40	119.00	109.40
1	N	83	C	O4'-C1'-N1	6.40	118.10	108.50
1	N	176	C	P-O5'-C5'	6.40	130.50	120.90
1	N	369	G	O5'-C5'-C4'	6.40	121.10	111.50
1	N	353	A	P-O3'-C3'	6.40	129.79	120.20
1	N	633	G	O4'-C4'-C3'	-6.40	97.60	104.00
1	N	722	G	C4'-C3'-C2'	6.39	109.00	102.60
1	N	608	A	P-O3'-C3'	-6.39	110.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	809	G	O4'-C1'-N9	6.38	118.07	108.50
1	N	1140	C	C4'-C3'-C2'	-6.38	96.22	102.60
1	N	1043	G	C4'-C3'-O3'	-6.38	103.44	113.00
1	N	1128	C	O4'-C1'-N1	6.38	118.07	108.50
1	N	1205	U	C5'-C4'-C3'	6.38	125.56	116.00
1	N	251	G	C4'-C3'-C2'	-6.37	96.23	102.60
1	N	1154	G	C5'-C4'-C3'	-6.37	106.45	116.00
1	N	175	C	C4'-C3'-C2'	-6.37	96.23	102.60
1	N	183	C	C2'-C3'-O3'	6.37	123.25	113.70
1	N	67	C	C4'-C3'-C2'	-6.36	96.24	102.60
1	N	1092	A	P-O3'-C3'	6.36	129.73	120.20
1	N	386	C	O3'-P-O5'	-6.35	94.48	104.00
1	N	612	C	C5'-C4'-C3'	6.35	125.53	116.00
1	N	447	G	O4'-C1'-N9	6.35	118.02	108.50
1	N	1194	U	P-O5'-C5'	-6.35	111.38	120.90
1	N	30	U	C4'-C3'-O3'	6.35	118.92	109.40
1	N	1217	C	O4'-C1'-N1	6.34	118.02	108.50
1	N	1091	U	N1-C1'-C2'	6.34	121.52	112.00
1	N	270	A	O5'-C5'-C4'	-6.34	101.99	111.50
1	N	257	G	O4'-C1'-C2'	-6.34	101.26	107.60
1	N	1278	G	C2'-C3'-O3'	6.34	119.01	109.50
1	N	1534	A	P-O5'-C5'	-6.34	111.39	120.90
1	N	253	A	O5'-C5'-C4'	-6.33	102.00	111.50
1	N	566	G	O4'-C4'-C3'	-6.33	99.77	106.10
1	N	1064	G	P-O5'-C5'	-6.33	111.41	120.90
1	N	497	G	P-O5'-C5'	6.33	130.39	120.90
1	N	337	G	O4'-C4'-C3'	6.33	110.33	104.00
1	N	712	A	P-O5'-C5'	6.33	130.39	120.90
1	N	1058	G	P-O5'-C5'	6.33	130.39	120.90
1	N	1074	G	O3'-P-O5'	-6.33	94.51	104.00
1	N	1033	G	C4'-C3'-C2'	-6.32	96.28	102.60
1	N	60	A	C2'-C3'-O3'	6.32	118.98	109.50
1	N	520	A	O4'-C4'-C3'	-6.31	97.69	104.00
1	N	820	U	P-O5'-C5'	6.31	130.37	120.90
1	N	986	U	O4'-C4'-C3'	-6.31	97.69	104.00
1	N	1211	U	P-O5'-C5'	-6.31	111.44	120.90
1	N	1212	U	P-O3'-C3'	-6.31	110.73	120.20
1	N	425	G	P-O5'-C5'	6.30	130.36	120.90
1	N	1165	U	O4'-C1'-N1	6.30	117.95	108.50
1	N	501	C	N1-C1'-C2'	6.30	121.45	112.00
1	N	566	G	C2'-C3'-O3'	6.30	118.95	109.50
1	N	1522	U	P-O3'-C3'	-6.30	110.75	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1308	U	O4'-C1'-C2'	-6.30	101.30	107.60
1	N	140	U	C2'-C3'-O3'	6.29	123.14	113.70
1	N	652	U	O4'-C1'-N1	6.29	117.94	108.50
1	N	1098	C	O4'-C1'-N1	6.29	117.94	108.50
1	N	756	C	O4'-C4'-C3'	-6.29	97.71	104.00
1	N	975	A	P-O5'-C5'	6.29	130.33	120.90
1	N	22	G	O4'-C1'-C2'	-6.28	101.32	107.60
1	N	1400	C	P-O5'-C5'	-6.28	111.47	120.90
1	N	47	C	C4'-C3'-C2'	6.28	108.88	102.60
1	N	257	G	O4'-C4'-C3'	-6.28	97.72	104.00
1	N	318	G	P-O3'-C3'	-6.28	110.78	120.20
1	N	628	G	O4'-C1'-C2'	-6.28	101.32	107.60
1	N	308	C	O4'-C1'-N1	6.28	117.92	108.50
1	N	555	U	C5'-C4'-C3'	6.27	125.41	116.00
1	N	1206	G	P-O5'-C5'	6.27	130.31	120.90
1	N	562	U	C3'-C2'-O2'	6.27	120.11	110.70
1	N	490	C	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	1318	A	P-O5'-C5'	6.27	130.30	120.90
1	N	839	C	C3'-C2'-C1'	6.26	107.56	101.30
1	N	511	C	O4'-C1'-C2'	-6.26	99.54	105.80
1	N	5	U	P-O5'-C5'	-6.26	111.51	120.90
1	N	1153	G	P-O3'-C3'	-6.26	110.81	120.20
1	N	795	C	P-O5'-C5'	6.26	130.29	120.90
1	N	1367	C	P-O5'-C5'	6.25	130.28	120.90
1	N	77	A	P-O5'-C5'	-6.25	111.52	120.90
1	N	1164	G	O4'-C1'-N9	6.25	117.87	108.50
1	N	1045	C	O4'-C1'-C2'	-6.25	101.35	107.60
1	N	565	U	P-O5'-C5'	-6.24	111.54	120.90
1	N	668	G	O4'-C4'-C3'	-6.24	97.76	104.00
1	N	670	G	C4'-C3'-C2'	-6.24	96.36	102.60
1	N	386	C	C4'-C3'-C2'	-6.24	96.36	102.60
1	N	274	A	O3'-P-O5'	6.23	113.35	104.00
1	N	42	G	O4'-C1'-N9	6.23	117.85	108.50
1	N	996	A	P-O3'-C3'	-6.23	110.85	120.20
1	N	5	U	O4'-C1'-C2'	6.23	112.03	105.80
1	N	75	G	C5'-C4'-C3'	-6.23	106.66	116.00
1	N	764	C	O4'-C1'-N1	6.23	117.85	108.50
1	N	780	A	P-O5'-C5'	6.23	130.25	120.90
1	N	450	G	P-O3'-C3'	6.23	129.54	120.20
1	N	46	G	P-O3'-C3'	6.23	129.54	120.20
1	N	327	A	C2'-C3'-O3'	6.23	118.84	109.50
1	N	895	G	C4'-C3'-C2'	-6.22	96.38	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1472	U	O4'-C1'-N1	6.22	117.83	108.50
1	N	1245	C	P-O5'-C5'	6.22	130.23	120.90
1	N	1066	C	P-O3'-C3'	-6.21	110.88	120.20
1	N	172	A	C4'-C3'-O3'	-6.21	103.68	113.00
1	N	243	A	C1'-O4'-C4'	6.21	116.11	109.90
1	N	502	A	O5'-C5'-C4'	-6.21	102.18	111.50
1	N	585	G	P-O5'-C5'	-6.21	111.58	120.90
1	N	641	U	P-O3'-C3'	6.21	129.52	120.20
1	N	680	C	O5'-C5'-C4'	-6.21	102.19	111.50
1	N	871	U	P-O3'-C3'	6.21	129.51	120.20
1	N	175	C	O4'-C4'-C3'	6.21	110.21	104.00
1	N	230	G	C4'-C3'-C2'	-6.21	96.39	102.60
1	N	1228	C	P-O3'-C3'	6.21	129.51	120.20
1	N	317	U	O4'-C1'-N1	6.21	117.81	108.50
1	N	770	C	C3'-C2'-C1'	6.20	107.50	101.30
1	N	1469	C	O5'-C5'-C4'	6.20	120.81	111.50
1	N	543	U	C1'-C2'-O2'	-6.20	99.10	108.40
1	N	815	A	C4'-C3'-O3'	-6.20	103.70	113.00
1	N	936	C	C3'-C2'-C1'	6.20	107.50	101.30
1	N	1113	C	P-O3'-C3'	6.19	129.49	120.20
1	N	1029	U	O4'-C1'-N1	6.19	117.78	108.50
1	N	1177	G	O4'-C1'-N9	6.19	117.79	108.50
1	N	837	U	O4'-C1'-C2'	-6.19	101.41	107.60
1	N	1159	U	O3'-P-O5'	-6.19	94.72	104.00
1	N	1438	G	C4'-C3'-C2'	-6.19	96.41	102.60
1	N	1424	U	O4'-C4'-C3'	6.18	110.18	104.00
1	N	390	U	O4'-C1'-N1	6.18	117.77	108.50
1	N	1050	G	O4'-C1'-N9	6.18	117.76	108.50
1	N	141	G	C4'-C3'-O3'	-6.17	103.74	113.00
1	N	1368	A	O4'-C1'-N9	6.17	117.76	108.50
1	N	525	C	O4'-C1'-N1	6.17	117.75	108.50
1	N	30	U	P-O3'-C3'	6.17	129.45	120.20
1	N	1368	A	C4'-C3'-C2'	-6.17	96.43	102.60
1	N	220	G	C4'-C3'-C2'	-6.17	96.43	102.60
1	N	587	G	C2'-C3'-O3'	6.17	122.95	113.70
1	N	870	U	O5'-C5'-C4'	-6.16	102.45	111.70
1	N	221	C	O4'-C1'-C2'	-6.16	101.44	107.60
1	N	723	U	O4'-C1'-N1	6.16	117.74	108.50
1	N	1224	U	N1-C1'-C2'	6.15	121.23	112.00
1	N	1003	G	C4'-C3'-O3'	-6.15	103.77	113.00
1	N	1108	G	C4'-C3'-C2'	-6.15	96.45	102.60
1	N	1264	U	O5'-C5'-C4'	-6.15	102.28	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	584	G	P-O5'-C5'	6.14	130.12	120.90
1	N	982	U	C2'-C3'-O3'	6.14	118.72	109.50
1	N	391	G	O4'-C1'-N9	6.14	117.71	108.50
1	N	547	A	C1'-O4'-C4'	-6.13	103.57	109.70
1	N	1274	A	P-O3'-C3'	-6.13	111.00	120.20
1	N	919	A	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	1367	C	O4'-C1'-N1	6.13	117.69	108.50
1	N	1380	U	P-O3'-C3'	6.13	129.39	120.20
1	N	1395	C	O4'-C1'-N1	6.13	117.69	108.50
1	N	54	C	P-O3'-C3'	-6.12	111.03	120.20
1	N	859	G	O4'-C1'-C2'	-6.12	101.48	107.60
1	N	770	C	C5'-C4'-C3'	6.12	125.17	116.00
1	N	411	A	C4'-C3'-C2'	6.11	108.71	102.60
1	N	509	A	O3'-P-O5'	-6.11	94.83	104.00
1	N	37	U	O4'-C1'-N1	6.11	117.67	108.50
1	N	1212	U	C4'-C3'-C2'	-6.11	96.49	102.60
1	N	294	U	O4'-C1'-C2'	-6.11	101.50	107.60
1	N	123	U	O3'-P-O5'	-6.10	94.84	104.00
1	N	737	C	P-O5'-C5'	6.10	130.05	120.90
1	N	1028	C	P-O5'-C5'	-6.10	111.75	120.90
1	N	1049	U	P-O3'-C3'	6.10	129.35	120.20
1	N	540	G	C4'-C3'-C2'	-6.10	96.50	102.60
1	N	960	U	C5'-C4'-C3'	6.10	124.34	115.20
1	N	1111	A	P-O5'-C5'	-6.09	111.76	120.90
1	N	98	A	C1'-O4'-C4'	6.08	115.98	109.90
1	N	794	A	P-O3'-C3'	-6.08	111.07	120.20
1	N	1007	U	C3'-C2'-C1'	6.08	107.38	101.30
1	N	312	C	O4'-C1'-N1	6.08	117.62	108.50
1	N	790	A	O3'-P-O5'	-6.08	94.88	104.00
1	N	973	G	O5'-C5'-C4'	-6.08	102.38	111.50
1	N	1280	A	C4'-C3'-C2'	6.08	108.68	102.60
1	N	1499	A	O5'-C5'-C4'	6.08	120.62	111.50
1	N	818	G	O4'-C1'-N9	6.07	117.61	108.50
1	N	829	G	C1'-O4'-C4'	6.07	115.97	109.90
1	N	1173	U	O5'-C5'-C4'	-6.07	102.40	111.50
1	N	181	A	C4'-C3'-C2'	-6.07	96.53	102.60
1	N	1380	U	O4'-C1'-N1	6.06	117.59	108.50
1	N	256	U	C3'-C2'-C1'	-6.06	95.24	101.30
1	N	627	G	C4'-C3'-C2'	-6.06	96.54	102.60
1	N	610	U	O4'-C1'-N1	6.06	117.59	108.50
1	N	1353	G	C1'-O4'-C4'	6.06	115.96	109.90
1	N	484	G	C4'-C3'-C2'	6.05	108.65	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	634	C	P-O3'-C3'	6.05	129.28	120.20
1	N	879	C	C1'-O4'-C4'	-6.05	103.85	109.90
1	N	166	U	O4'-C1'-C2'	-6.04	101.56	107.60
1	N	1395	C	O4'-C4'-C3'	-6.04	97.96	104.00
1	N	22	G	O4'-C1'-N9	6.04	117.56	108.50
1	N	699	C	P-O3'-C3'	-6.04	111.14	120.20
1	N	90	C	C4'-C3'-C2'	-6.04	96.56	102.60
1	N	600	A	C1'-C2'-O2'	6.04	117.45	108.40
1	N	1152	A	C5'-C4'-C3'	-6.04	106.95	116.00
1	N	893	C	C5'-C4'-C3'	6.03	125.05	116.00
1	N	1453	G	C5'-C4'-O4'	-6.03	100.75	109.80
1	N	844	G	P-O3'-C3'	6.03	129.25	120.20
1	N	1096	C	O4'-C1'-N1	6.03	117.55	108.50
1	N	375	U	C1'-C2'-O2'	6.03	117.44	108.40
1	N	560	A	P-O3'-C3'	6.02	129.24	120.20
1	N	1459	G	C1'-C2'-O2'	6.02	117.43	108.40
1	N	679	C	O3'-P-O5'	-6.02	94.97	104.00
1	N	1256	A	O4'-C4'-C3'	-6.02	100.08	106.10
1	N	67	C	O4'-C1'-C2'	-6.01	101.59	107.60
1	N	109	A	P-O5'-C5'	6.01	129.92	120.90
1	N	198	G	O4'-C1'-N9	6.01	117.52	108.50
1	N	540	G	C5'-C4'-O4'	-6.01	100.78	109.80
1	N	148	G	P-O3'-C3'	-6.01	111.18	120.20
1	N	55	A	P-O3'-C3'	-6.01	111.18	120.20
1	N	457	G	P-O5'-C5'	-6.01	111.89	120.90
1	N	151	A	C5'-C4'-C3'	-6.00	107.00	116.00
1	N	966	G	C4'-C3'-O3'	-6.00	104.00	113.00
1	N	1300	G	C4'-C3'-C2'	-6.00	96.60	102.60
1	N	995	C	C1'-C2'-O2'	6.00	117.40	108.40
1	N	173	U	C2'-C3'-O3'	6.00	118.50	109.50
1	N	140	U	C4'-C3'-C2'	-6.00	96.60	102.60
1	N	1018	G	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	254	G	P-O5'-C5'	5.99	129.89	120.90
1	N	709	U	N1-C1'-C2'	-5.99	103.01	112.00
1	N	1472	U	C5'-C4'-C3'	5.99	124.99	116.00
1	N	4	U	C3'-C2'-C1'	5.99	107.49	101.50
1	N	569	C	P-O5'-C5'	5.99	129.88	120.90
1	N	1216	A	C4'-C3'-C2'	-5.99	96.61	102.60
1	N	586	C	O4'-C1'-N1	5.99	117.48	108.50
1	N	729	A	O4'-C4'-C3'	-5.99	98.02	104.00
1	N	136	C	C5'-C4'-C3'	5.98	124.97	116.00
1	N	273	U	C1'-O4'-C4'	5.98	115.88	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	861	G	O4'-C1'-N9	5.98	117.47	108.50
1	N	1075	U	P-O3'-C3'	-5.98	111.23	120.20
1	N	1204	A	O4'-C4'-C3'	-5.98	98.02	104.00
1	N	1078	U	C3'-C2'-C1'	5.98	107.28	101.30
1	N	109	A	C3'-C2'-C1'	5.98	107.28	101.30
1	N	1140	C	O4'-C1'-C2'	-5.98	99.82	105.80
1	N	441	A	C5'-C4'-O4'	5.97	118.76	109.80
1	N	908	A	P-O5'-C5'	5.97	129.86	120.90
1	N	1458	G	C4'-C3'-C2'	-5.97	96.63	102.60
1	N	856	C	C4'-C3'-C2'	-5.97	96.63	102.60
1	N	72	A	O4'-C1'-N9	5.97	117.45	108.50
1	N	1027	C	C5'-C4'-O4'	5.97	118.75	109.80
1	N	582	C	P-O5'-C5'	5.96	129.85	120.90
1	N	633	G	P-O5'-C5'	5.96	129.85	120.90
1	N	543	U	C4'-C3'-O3'	-5.96	104.06	113.00
1	N	769	G	O4'-C1'-C2'	-5.96	101.64	107.60
1	N	127	G	P-O5'-C5'	5.96	129.84	120.90
1	N	717	U	O4'-C1'-N1	5.96	117.14	108.20
1	N	1202	U	C5'-C4'-C3'	5.96	124.94	116.00
1	N	92	U	O4'-C4'-C3'	5.96	109.95	104.00
1	N	1025	U	C3'-C2'-C1'	5.96	107.25	101.30
1	N	313	A	O5'-C5'-C4'	-5.95	102.58	111.50
1	N	403	C	P-O3'-C3'	-5.95	111.28	120.20
1	N	654	G	O4'-C1'-C2'	-5.95	101.65	107.60
1	N	353	A	O4'-C4'-C3'	-5.95	98.05	104.00
1	N	498	A	C1'-C2'-O2'	-5.95	99.48	108.40
1	N	1044	A	C5'-C4'-C3'	-5.95	107.08	116.00
1	N	307	C	O4'-C1'-N1	5.94	117.42	108.50
1	N	896	C	C4'-C3'-C2'	-5.94	96.66	102.60
1	N	248	C	O4'-C1'-C2'	-5.94	101.66	107.60
1	N	1264	U	C5'-C4'-C3'	5.94	124.91	116.00
1	N	71	A	O3'-P-O5'	-5.93	95.10	104.00
1	N	204	G	C4'-C3'-O3'	5.93	121.90	113.00
1	N	483	C	N1-C1'-C2'	5.93	120.90	112.00
1	N	117	G	P-O5'-C5'	5.93	129.79	120.90
1	N	21	G	P-O5'-C5'	5.93	129.79	120.90
1	N	1042	A	C2'-C3'-O3'	5.93	122.59	113.70
1	N	416	G	O5'-C5'-C4'	-5.93	102.61	111.50
1	N	843	U	O4'-C1'-N1	5.93	117.39	108.50
1	N	718	A	P-O5'-C5'	5.92	129.78	120.90
1	N	337	G	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	501	C	P-O3'-C3'	-5.92	111.32	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	131	A	C4'-C3'-C2'	5.92	108.52	102.60
1	N	463	U	P-O3'-C3'	5.92	129.08	120.20
1	N	464	U	O4'-C1'-N1	5.92	117.38	108.50
1	N	574	A	O4'-C4'-C3'	-5.92	98.08	104.00
1	N	814	A	P-O5'-C5'	-5.92	112.03	120.90
1	N	18	C	C4'-C3'-O3'	-5.91	104.13	113.00
1	N	153	C	C1'-C2'-O2'	5.91	117.27	108.40
1	N	803	G	O4'-C4'-C3'	-5.91	98.09	104.00
1	N	95	C	C4'-C3'-C2'	5.91	108.51	102.60
1	N	940	C	P-O5'-C5'	5.91	129.77	120.90
1	N	1405	G	O4'-C1'-N9	5.91	117.37	108.50
1	N	140	U	C4'-C3'-O3'	-5.91	104.14	113.00
1	N	350	G	P-O3'-C3'	-5.91	111.33	120.20
1	N	608	A	C4'-C3'-C2'	-5.91	96.69	102.60
1	N	981	U	O4'-C1'-N1	5.91	117.36	108.50
1	N	139	A	O4'-C1'-N9	5.91	117.36	108.50
1	N	657	U	C5'-C4'-C3'	5.91	124.86	116.00
1	N	121	U	O4'-C4'-C3'	-5.90	98.10	104.00
1	N	299	G	O4'-C1'-C2'	-5.90	101.70	107.60
1	N	396	C	O4'-C1'-N1	5.90	117.35	108.50
1	N	462	G	C3'-C2'-C1'	5.90	107.40	101.50
1	N	536	C	C5'-C4'-O4'	-5.90	100.95	109.80
1	N	1193	G	O4'-C1'-N9	5.90	117.05	108.20
1	N	813	U	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	357	G	P-O3'-C3'	-5.89	111.36	120.20
1	N	1090	U	C4'-C3'-C2'	-5.89	96.71	102.60
1	N	631	C	O4'-C1'-C2'	-5.89	99.91	105.80
1	N	1463	U	O4'-C4'-C3'	-5.89	98.11	104.00
1	N	120	A	C1'-C2'-O2'	5.89	117.23	108.40
1	N	788	U	C5'-C4'-C3'	-5.89	107.17	116.00
1	N	98	A	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	1412	C	C4'-C3'-C2'	-5.88	96.72	102.60
1	N	484	G	O3'-P-O5'	5.88	112.81	104.00
1	N	1046	A	P-O5'-C5'	-5.88	112.08	120.90
1	N	1517	G	C5'-C4'-C3'	-5.88	107.19	116.00
1	N	811	C	C5'-C4'-O4'	5.87	118.61	109.80
1	N	33	A	C3'-C2'-C1'	-5.87	95.43	101.30
1	N	959	A	P-O3'-C3'	5.87	129.01	120.20
1	N	1435	G	O5'-C5'-C4'	-5.87	102.69	111.50
1	N	568	G	P-O5'-C5'	-5.87	112.10	120.90
1	N	1118	U	C5'-C4'-C3'	5.87	124.80	116.00
1	N	314	C	P-O5'-C5'	5.86	129.69	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1213	A	P-O5'-C5'	5.86	129.70	120.90
1	N	1201	A	C2'-C3'-O3'	5.86	118.29	109.50
1	N	1524	C	C5'-C4'-C3'	-5.86	107.21	116.00
1	N	382	A	O3'-P-O5'	5.86	112.79	104.00
1	N	717	U	C5'-C4'-O4'	5.86	117.89	109.10
1	N	1069	C	O3'-P-O5'	-5.85	95.22	104.00
1	N	508	U	C4'-C3'-O3'	5.85	118.18	109.40
1	N	660	C	O4'-C1'-N1	5.85	117.28	108.50
1	N	1509	C	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	1094	G	C2'-C3'-O3'	5.85	122.47	113.70
1	N	173	U	O4'-C1'-N1	5.84	116.97	108.20
1	N	1393	U	O3'-P-O5'	-5.84	95.24	104.00
1	N	1396	A	C5'-C4'-O4'	-5.84	101.04	109.80
1	N	93	U	O4'-C4'-C3'	-5.84	98.16	104.00
1	N	113	G	O4'-C1'-C2'	-5.83	101.77	107.60
1	N	1129	C	O4'-C1'-C2'	5.83	111.64	105.80
1	N	1015	G	O4'-C1'-N9	5.83	117.25	108.50
1	N	1348	U	O4'-C1'-N1	5.83	117.25	108.50
1	N	697	U	C4'-C3'-C2'	-5.83	96.77	102.60
1	N	569	C	O4'-C1'-N1	5.83	117.24	108.50
1	N	1022	A	O4'-C1'-N9	5.83	117.24	108.50
1	N	546	A	C2'-C3'-O3'	5.83	122.44	113.70
1	N	590	U	C5'-C4'-C3'	5.83	124.74	116.00
1	N	1001	C	C4'-C3'-C2'	-5.83	96.78	102.60
1	N	658	C	O4'-C1'-N1	5.82	117.23	108.50
1	N	1336	C	O4'-C1'-C2'	-5.82	99.98	105.80
1	N	491	G	C4'-C3'-C2'	5.82	108.42	102.60
1	N	1026	G	O4'-C1'-C2'	-5.82	101.78	107.60
1	N	258	G	P-O5'-C5'	5.82	129.63	120.90
1	N	865	A	O4'-C4'-C3'	-5.82	98.18	104.00
1	N	960	U	C3'-C2'-C1'	5.82	107.32	101.50
1	N	1331	G	C5'-C4'-C3'	-5.82	107.28	116.00
1	N	379	C	C3'-C2'-O2'	5.81	119.42	110.70
1	N	980	C	O4'-C1'-N1	5.81	117.22	108.50
1	N	558	G	O5'-C5'-C4'	-5.81	102.79	111.50
1	N	1532	U	P-O3'-C3'	5.81	128.92	120.20
1	N	368	U	P-O3'-C3'	5.81	128.91	120.20
1	N	497	G	C3'-C2'-C1'	5.81	107.11	101.30
1	N	1367	C	C5'-C4'-C3'	5.81	124.71	116.00
1	N	422	C	O4'-C1'-N1	5.80	116.90	108.20
1	N	598	U	O4'-C1'-N1	5.80	117.19	108.50
1	N	802	A	C4'-C3'-C2'	-5.80	96.80	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1062	U	C3'-C2'-C1'	5.80	107.10	101.30
1	N	1031	C	O5'-C5'-C4'	5.79	120.19	111.50
1	N	1112	C	O4'-C1'-N1	5.79	117.19	108.50
1	N	198	G	C3'-C2'-O2'	5.79	119.39	110.70
1	N	602	A	P-O3'-C3'	-5.79	111.51	120.20
1	N	603	U	O4'-C1'-C2'	-5.79	101.81	107.60
1	N	416	G	P-O5'-C5'	5.79	129.59	120.90
1	N	264	C	O5'-C5'-C4'	-5.79	102.82	111.50
1	N	349	A	C4'-C3'-O3'	-5.79	104.32	113.00
1	N	1202	U	O4'-C4'-C3'	-5.79	98.21	104.00
1	N	1232	U	O4'-C4'-C3'	-5.79	98.21	104.00
1	N	1292	G	O4'-C4'-C3'	-5.79	98.22	104.00
1	N	1485	U	P-O5'-C5'	5.79	129.58	120.90
1	N	138	G	O4'-C1'-N9	5.78	117.18	108.50
1	N	215	C	O4'-C1'-N1	5.78	117.18	108.50
1	N	261	U	P-O5'-C5'	5.78	129.58	120.90
1	N	1254	A	P-O5'-C5'	5.78	129.58	120.90
1	N	27	G	O4'-C1'-N9	5.78	117.17	108.50
1	N	21	G	P-O3'-C3'	-5.78	111.53	120.20
1	N	235	C	C4'-C3'-O3'	-5.78	104.33	113.00
1	N	1252	A	O4'-C1'-N9	5.78	117.16	108.50
1	N	1314	C	O4'-C1'-C2'	-5.78	101.83	107.60
1	N	380	G	C5'-C4'-O4'	-5.77	101.14	109.80
1	N	931	C	C3'-C2'-C1'	5.77	107.07	101.30
1	N	1002	G	P-O3'-C3'	-5.77	111.54	120.20
1	N	1158	C	C1'-C2'-O2'	-5.77	99.74	108.40
1	N	1170	A	P-O3'-C3'	5.77	128.86	120.20
1	N	1480	A	C5'-C4'-C3'	5.77	124.65	116.00
1	N	494	G	C3'-C2'-C1'	5.76	107.06	101.30
1	N	381	C	P-O5'-C5'	-5.76	112.26	120.90
1	N	393	A	O4'-C1'-C2'	-5.76	101.84	107.60
1	N	1375	A	O4'-C4'-C3'	5.76	109.76	104.00
1	N	59	A	C5'-C4'-C3'	-5.76	107.36	116.00
1	N	611	C	C4'-C3'-O3'	-5.76	104.36	113.00
1	N	664	G	C4'-C3'-O3'	-5.76	104.36	113.00
1	N	1393	U	C4'-C3'-O3'	-5.76	104.36	113.00
1	N	366	A	O4'-C1'-C2'	-5.76	100.04	105.80
1	N	555	U	C4'-C3'-O3'	-5.76	104.36	113.00
1	N	1305	G	O4'-C1'-N9	5.76	117.13	108.50
1	N	388	G	C4'-C3'-C2'	5.75	108.36	102.60
1	N	1041	G	O3'-P-O5'	-5.75	95.37	104.00
1	N	1380	U	C4'-C3'-C2'	-5.75	96.84	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	678	U	O4'-C4'-C3'	-5.75	98.25	104.00
1	N	596	A	P-O5'-C5'	5.75	129.52	120.90
1	N	1293	C	P-O5'-C5'	-5.75	112.28	120.90
1	N	1181	G	C5'-C4'-C3'	-5.74	106.59	115.20
1	N	1478	U	O4'-C1'-N1	5.74	117.11	108.50
1	N	91	U	C2'-C3'-O3'	-5.74	105.09	113.70
1	N	839	C	C2'-C3'-O3'	5.74	122.31	113.70
1	N	1239	A	C5'-C4'-C3'	5.74	123.81	115.20
1	N	1046	A	C5'-C4'-O4'	5.74	118.40	109.80
1	N	139	A	P-O5'-C5'	5.73	129.50	120.90
1	N	670	G	O4'-C1'-C2'	-5.73	101.87	107.60
1	N	724	G	P-O5'-C5'	-5.73	112.30	120.90
1	N	90	C	O5'-C5'-C4'	-5.73	103.11	111.70
1	N	838	G	P-O5'-C5'	5.73	129.49	120.90
1	N	1207	G	P-O5'-C5'	5.73	129.49	120.90
1	N	1470	U	C4'-C3'-C2'	-5.73	96.87	102.60
1	N	1530	G	O5'-C5'-C4'	5.73	120.29	111.70
1	N	949	A	O5'-C5'-C4'	-5.73	102.91	111.50
1	N	386	C	C4'-C3'-O3'	-5.72	104.41	113.00
1	N	766	A	P-O3'-C3'	-5.72	111.61	120.20
1	N	475	C	O4'-C1'-N1	5.72	117.08	108.50
1	N	467	U	O4'-C4'-C3'	-5.72	98.28	104.00
1	N	1027	C	O3'-P-O5'	-5.72	95.42	104.00
1	N	1298	U	C5'-C4'-O4'	5.72	117.68	109.10
1	N	278	G	O4'-C1'-N9	5.72	117.08	108.50
1	N	779	C	C5'-C4'-C3'	-5.72	107.43	116.00
1	N	873	A	P-O3'-C3'	-5.72	111.63	120.20
1	N	1175	G	O4'-C1'-N9	5.72	117.08	108.50
1	N	903	G	C4'-C3'-C2'	-5.71	96.89	102.60
1	N	956	U	P-O5'-C5'	5.71	129.47	120.90
1	N	775	G	O3'-P-O5'	5.71	112.57	104.00
1	N	1106	G	P-O5'-C5'	-5.71	112.33	120.90
1	N	133	U	C4'-C3'-O3'	-5.71	104.44	113.00
1	N	844	G	O5'-C5'-C4'	-5.71	102.94	111.50
1	N	721	G	O4'-C1'-N9	5.71	116.76	108.20
1	N	635	A	O3'-P-O5'	-5.70	95.44	104.00
1	N	750	C	C4'-C3'-O3'	-5.70	104.44	113.00
1	N	153	C	O4'-C1'-C2'	-5.70	101.90	107.60
1	N	871	U	C5'-C4'-C3'	5.70	124.55	116.00
1	N	1374	A	O4'-C4'-C3'	-5.70	98.30	104.00
1	N	568	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	649	A	O4'-C1'-N9	5.70	117.05	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	879	C	P-O5'-C5'	-5.70	112.35	120.90
1	N	890	G	O5'-C5'-C4'	5.70	120.25	111.70
1	N	11	G	P-O5'-C5'	5.70	129.44	120.90
1	N	1261	A	O4'-C4'-C3'	-5.70	98.30	104.00
1	N	314	C	O4'-C1'-N1	5.69	117.04	108.50
1	N	340	U	O4'-C4'-C3'	-5.69	98.31	104.00
1	N	561	U	P-O3'-C3'	5.69	128.74	120.20
1	N	192	A	C5'-C4'-C3'	5.69	124.54	116.00
1	N	388	G	O4'-C4'-C3'	-5.69	100.41	106.10
1	N	462	G	O4'-C4'-C3'	-5.69	100.41	106.10
1	N	50	A	O5'-C5'-C4'	5.69	120.23	111.70
1	N	321	A	C4'-C3'-O3'	-5.69	104.47	113.00
1	N	415	A	C3'-C2'-O2'	5.69	119.23	110.70
1	N	403	C	C4'-C3'-C2'	-5.69	96.91	102.60
1	N	847	G	C1'-C2'-O2'	5.69	116.93	108.40
1	N	81	A	C5'-C4'-C3'	5.68	123.73	115.20
1	N	137	U	P-O5'-C5'	5.68	129.43	120.90
1	N	1015	G	P-O5'-C5'	-5.68	112.37	120.90
1	N	694	A	O3'-P-O5'	-5.68	95.48	104.00
1	N	950	U	C4'-C3'-C2'	-5.68	96.92	102.60
1	N	1075	U	O4'-C1'-N1	5.68	117.03	108.50
1	N	54	C	C5'-C4'-C3'	-5.68	107.48	116.00
1	N	108	G	C2'-C3'-O3'	5.68	122.22	113.70
1	N	873	A	O5'-C5'-C4'	5.68	120.22	111.70
1	N	670	G	O4'-C1'-N9	5.68	117.02	108.50
1	N	240	G	C4'-C3'-C2'	-5.68	96.92	102.60
1	N	1379	G	O4'-C1'-N9	5.68	117.01	108.50
1	N	493	A	C1'-C2'-O2'	5.67	116.91	108.40
1	N	520	A	O3'-P-O5'	-5.67	95.49	104.00
1	N	171	A	N9-C1'-C2'	5.67	120.51	112.00
1	N	1263	C	O5'-C5'-C4'	-5.67	102.99	111.50
1	N	1358	U	C4'-C3'-C2'	5.67	108.27	102.60
1	N	17	U	C3'-C2'-C1'	5.67	106.97	101.30
1	N	201	G	C3'-C2'-C1'	5.67	106.97	101.30
1	N	598	U	O4'-C1'-C2'	-5.67	101.93	107.60
1	N	75	G	C3'-C2'-O2'	5.67	119.20	110.70
1	N	252	U	C4'-C3'-O3'	-5.67	104.50	113.00
1	N	373	A	C1'-O4'-C4'	5.67	115.57	109.90
1	N	549	C	O4'-C1'-N1	5.67	117.00	108.50
1	N	1450	U	O4'-C1'-N1	5.67	117.00	108.50
1	N	8	A	O5'-C5'-C4'	5.66	120.19	111.70
1	N	14	U	O4'-C1'-C2'	-5.66	101.94	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1268	G	P-O3'-C3'	5.66	128.70	120.20
1	N	1364	U	C5'-C4'-C3'	5.66	123.70	115.20
1	N	1314	C	P-O3'-C3'	-5.66	111.71	120.20
1	N	319	G	C3'-C2'-C1'	5.66	106.96	101.30
1	N	778	G	C4'-C3'-O3'	-5.66	104.51	113.00
1	N	1421	G	O3'-P-O5'	-5.66	95.51	104.00
1	N	698	G	O5'-C5'-C4'	-5.66	103.02	111.50
1	N	373	A	P-O5'-C5'	-5.65	112.42	120.90
1	N	380	G	O4'-C1'-N9	5.65	116.97	108.50
1	N	1469	C	C5'-C4'-O4'	-5.65	101.32	109.80
1	N	543	U	O4'-C1'-C2'	-5.65	101.95	107.60
1	N	1297	G	C3'-C2'-C1'	5.65	107.15	101.50
1	N	393	A	C4'-C3'-C2'	-5.64	96.95	102.60
1	N	1095	U	O4'-C4'-C3'	-5.64	98.36	104.00
1	N	796	C	C2'-C3'-O3'	5.64	122.16	113.70
1	N	837	U	C4'-C3'-C2'	-5.64	96.96	102.60
1	N	1281	C	C4'-C3'-C2'	5.64	108.24	102.60
1	N	1460	C	C1'-O4'-C4'	5.64	115.54	109.90
1	N	990	C	O4'-C4'-C3'	-5.64	98.36	104.00
1	N	344	A	P-O3'-C3'	5.64	128.65	120.20
1	N	1446	A	P-O5'-C5'	-5.63	112.45	120.90
1	N	456	A	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	264	C	O4'-C1'-N1	5.63	116.95	108.50
1	N	727	G	P-O3'-C3'	5.63	128.65	120.20
1	N	969	A	O4'-C1'-N9	5.63	116.65	108.20
1	N	974	A	P-O5'-C5'	5.63	129.35	120.90
1	N	1066	C	C3'-C2'-C1'	5.63	106.93	101.30
1	N	1132	C	P-O5'-C5'	5.63	129.35	120.90
1	N	1133	G	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	1138	G	C2'-C3'-O3'	-5.63	105.25	113.70
1	N	49	U	C5'-C4'-C3'	-5.63	107.56	116.00
1	N	69	G	O3'-P-O5'	-5.63	95.56	104.00
1	N	210	C	O3'-P-O5'	-5.63	95.56	104.00
1	N	1149	C	C2'-C3'-O3'	5.63	122.14	113.70
1	N	200	G	O4'-C1'-N9	5.63	116.94	108.50
1	N	525	C	C5'-C4'-C3'	5.63	124.44	116.00
1	N	1506	U	C4'-C3'-C2'	5.63	108.23	102.60
1	N	1377	A	C3'-C2'-O2'	5.62	119.14	110.70
1	N	1513	A	C3'-C2'-O2'	5.62	119.14	110.70
1	N	454	G	O4'-C1'-C2'	-5.62	101.98	107.60
1	N	777	A	O4'-C1'-N9	5.62	116.93	108.50
1	N	1046	A	N9-C1'-C2'	-5.62	103.57	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	319	G	C5'-C4'-O4'	5.62	118.23	109.80
1	N	399	G	C5'-C4'-C3'	5.62	124.43	116.00
1	N	973	G	C5'-C4'-C3'	5.62	124.43	116.00
1	N	580	C	P-O3'-C3'	5.62	128.63	120.20
1	N	606	G	C4'-C3'-C2'	5.62	108.22	102.60
1	N	916	U	O4'-C1'-N1	5.62	116.92	108.50
1	N	1490	U	C3'-C2'-C1'	5.62	106.92	101.30
1	N	775	G	O4'-C1'-C2'	-5.61	101.99	107.60
1	N	1487	G	O4'-C1'-N9	5.61	116.92	108.50
1	N	1396	A	C1'-O4'-C4'	5.61	115.51	109.90
1	N	1435	G	O4'-C1'-N9	5.61	116.92	108.50
1	N	1501	C	O4'-C4'-C3'	-5.61	98.39	104.00
1	N	99	C	P-O3'-C3'	5.61	128.61	120.20
1	N	813	U	O3'-P-O5'	-5.61	95.59	104.00
1	N	1136	C	P-O5'-C5'	-5.60	112.50	120.90
1	N	1245	C	C5'-C4'-C3'	-5.60	107.60	116.00
1	N	527	G	O4'-C4'-C3'	-5.60	98.40	104.00
1	N	1163	A	O4'-C1'-C2'	-5.60	102.00	107.60
1	N	542	G	O4'-C4'-C3'	-5.60	98.40	104.00
1	N	1280	A	O4'-C1'-N9	5.60	116.59	108.20
1	N	1343	G	O4'-C1'-N9	5.59	116.89	108.50
1	N	1378	C	O4'-C1'-N1	5.59	116.89	108.50
1	N	358	U	C4'-C3'-O3'	-5.59	104.62	113.00
1	N	21	G	O3'-P-O5'	5.59	112.38	104.00
1	N	581	G	O4'-C1'-N9	5.59	116.88	108.50
1	N	765	G	O4'-C1'-N9	5.59	116.88	108.50
1	N	786	G	P-O3'-C3'	5.59	128.58	120.20
1	N	755	G	C5'-C4'-C3'	-5.58	107.62	116.00
1	N	349	A	P-O3'-C3'	-5.58	111.83	120.20
1	N	675	A	O4'-C1'-C2'	-5.58	102.02	107.60
1	N	802	A	P-O3'-C3'	5.58	128.58	120.20
1	N	775	G	C3'-C2'-C1'	5.58	106.88	101.30
1	N	1048	G	O4'-C1'-N9	5.58	116.87	108.50
1	N	1146	A	C4'-C3'-O3'	-5.58	104.63	113.00
1	N	519	C	C4'-C3'-O3'	-5.58	104.63	113.00
1	N	1390	U	C4'-C3'-O3'	-5.58	104.63	113.00
1	N	71	A	P-O5'-C5'	-5.58	112.53	120.90
1	N	1113	C	O4'-C1'-N1	5.58	116.87	108.50
1	N	1424	U	C4'-C3'-C2'	-5.58	97.02	102.60
1	N	167	A	C2'-C3'-O3'	5.58	122.06	113.70
1	N	664	G	C4'-C3'-C2'	-5.58	97.03	102.60
1	N	760	G	P-O3'-C3'	-5.58	111.84	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	801	U	C5'-C4'-C3'	5.58	124.36	116.00
1	N	905	U	C4'-C3'-O3'	-5.57	104.64	113.00
1	N	718	A	C3'-C2'-C1'	5.57	106.87	101.30
1	N	496	A	O4'-C4'-C3'	5.57	109.57	104.00
1	N	1143	G	O3'-P-O5'	5.57	112.36	104.00
1	N	237	G	C5'-C4'-C3'	-5.57	107.65	116.00
1	N	845	A	C1'-C2'-O2'	5.57	116.75	108.40
1	N	1190	G	N9-C1'-C2'	-5.57	105.65	114.00
1	N	535	A	C5'-C4'-O4'	5.56	118.15	109.80
1	N	972	C	C4'-C3'-C2'	-5.56	97.04	102.60
1	N	1273	C	C4'-C3'-C2'	-5.56	97.04	102.60
1	N	214	C	C2'-C3'-O3'	5.56	122.04	113.70
1	N	1273	C	O4'-C1'-C2'	-5.56	102.04	107.60
1	N	1405	G	P-O3'-C3'	-5.55	111.87	120.20
1	N	411	A	O4'-C1'-N9	5.55	116.83	108.50
1	N	647	C	C2'-C3'-O3'	5.55	122.03	113.70
1	N	1014	A	O4'-C1'-N9	5.55	116.83	108.50
1	N	613	C	C3'-C2'-O2'	5.55	119.03	110.70
1	N	1232	U	C4'-C3'-C2'	5.55	108.15	102.60
1	N	1362	A	O4'-C4'-C3'	-5.55	98.45	104.00
1	N	462	G	O4'-C1'-N9	5.55	116.52	108.20
1	N	535	A	C2'-C3'-O3'	5.55	122.02	113.70
1	N	378	G	O4'-C1'-N9	5.54	116.81	108.50
1	N	548	G	P-O3'-C3'	-5.54	111.89	120.20
1	N	993	G	O3'-P-O5'	-5.54	95.69	104.00
1	N	1149	C	C4'-C3'-O3'	-5.54	104.69	113.00
1	N	1432	G	P-O5'-C5'	5.54	129.21	120.90
1	N	799	G	O4'-C1'-N9	5.54	116.81	108.50
1	N	1016	A	P-O5'-C5'	-5.54	112.59	120.90
1	N	1021	A	O3'-P-O5'	5.54	112.31	104.00
1	N	212	G	O4'-C1'-N9	5.54	116.80	108.50
1	N	316	C	C1'-O4'-C4'	-5.54	104.36	109.90
1	N	484	G	C2'-C3'-O3'	5.54	117.80	109.50
1	N	1121	U	C4'-C3'-C2'	-5.54	97.06	102.60
1	N	288	A	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	123	U	O4'-C1'-N1	5.53	116.80	108.50
1	N	83	C	C5'-C4'-C3'	-5.53	107.70	116.00
1	N	290	C	O5'-C5'-C4'	-5.53	103.20	111.50
1	N	975	A	C1'-O4'-C4'	-5.53	104.37	109.90
1	N	1354	U	P-O5'-C5'	5.53	129.19	120.90
1	N	155	A	P-O5'-C5'	5.53	129.19	120.90
1	N	249	U	O3'-P-O5'	-5.53	95.71	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	775	G	C1'-O4'-C4'	5.53	115.42	109.90
1	N	173	U	C5'-C4'-C3'	5.52	123.48	115.20
1	N	1434	A	C4'-C3'-O3'	-5.52	104.72	113.00
1	N	1181	G	C1'-C2'-O2'	-5.52	103.52	111.80
1	N	307	C	C5'-C4'-C3'	5.52	124.28	116.00
1	N	1253	G	P-O3'-C3'	-5.52	111.92	120.20
1	N	1037	C	O4'-C4'-C3'	-5.51	98.49	104.00
1	N	516	U	O4'-C1'-N1	5.51	116.77	108.50
1	N	948	C	O4'-C1'-N1	5.51	116.77	108.50
1	N	191	G	C3'-C2'-O2'	5.51	118.97	110.70
1	N	652	U	C3'-C2'-O2'	5.51	118.97	110.70
1	N	693	G	C3'-C2'-C1'	5.51	106.81	101.30
1	N	823	C	O4'-C4'-C3'	-5.51	98.49	104.00
1	N	1007	U	O4'-C1'-N1	5.51	116.77	108.50
1	N	1465	A	C4'-C3'-C2'	-5.51	97.09	102.60
1	N	447	G	O4'-C4'-C3'	-5.51	98.49	104.00
1	N	709	U	C2'-C3'-O3'	5.51	121.96	113.70
1	N	1188	A	C5'-C4'-C3'	-5.51	107.74	116.00
1	N	814	A	C5'-C4'-C3'	-5.50	107.74	116.00
1	N	1394	A	C5'-C4'-C3'	-5.50	106.94	115.20
1	N	324	G	C5'-C4'-C3'	5.50	124.26	116.00
1	N	320	A	C5'-C4'-C3'	-5.50	107.75	116.00
1	N	454	G	P-O3'-C3'	-5.50	111.95	120.20
1	N	1259	C	O3'-P-O5'	-5.50	95.75	104.00
1	N	972	C	P-O5'-C5'	-5.50	112.65	120.90
1	N	1258	G	C3'-C2'-C1'	5.50	106.80	101.30
1	N	739	C	P-O5'-C5'	5.50	129.15	120.90
1	N	1104	G	C1'-C2'-O2'	5.50	116.65	108.40
1	N	1449	C	N1-C1'-C2'	5.50	120.25	112.00
1	N	339	C	O4'-C1'-N1	5.50	116.74	108.50
1	N	1282	C	O4'-C1'-N1	5.49	116.74	108.50
1	N	1334	G	C3'-C2'-C1'	5.49	106.79	101.30
1	N	1350	A	O4'-C1'-N9	5.49	116.74	108.50
1	N	562	U	N1-C1'-C2'	5.49	120.23	112.00
1	N	998	C	O5'-C5'-C4'	-5.49	103.27	111.50
1	N	1216	A	P-O5'-C5'	-5.49	112.66	120.90
1	N	654	G	C4'-C3'-O3'	-5.49	104.77	113.00
1	N	865	A	C4'-C3'-C2'	-5.48	97.12	102.60
1	N	310	G	C2'-C3'-O3'	5.48	121.92	113.70
1	N	1035	A	O4'-C1'-N9	5.48	116.72	108.50
1	N	29	U	C5'-C4'-C3'	5.48	124.22	116.00
1	N	609	A	C3'-C2'-C1'	5.48	106.78	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	271	C	O4'-C1'-N1	5.48	116.72	108.50
1	N	601	G	C4'-C3'-C2'	-5.48	97.12	102.60
1	N	957	U	O4'-C1'-C2'	-5.48	102.12	107.60
1	N	1031	C	P-O5'-C5'	5.48	129.11	120.90
1	N	1089	G	P-O5'-C5'	-5.48	112.69	120.90
1	N	1071	C	O4'-C1'-N1	5.47	116.71	108.50
1	N	1161	C	C5'-C4'-C3'	-5.47	107.79	116.00
1	N	1467	C	O4'-C4'-C3'	-5.47	98.53	104.00
1	N	428	G	C5'-C4'-O4'	-5.47	100.89	109.10
1	N	1285	A	C4'-C3'-O3'	5.47	117.61	109.40
1	N	428	G	C2'-C3'-O3'	5.47	117.71	109.50
1	N	704	A	O4'-C1'-N9	5.47	116.71	108.50
1	N	49	U	C1'-O4'-C4'	5.47	115.37	109.90
1	N	174	A	O4'-C1'-C2'	-5.47	102.13	107.60
1	N	401	C	C4'-C3'-O3'	-5.47	104.80	113.00
1	N	937	A	N9-C1'-C2'	5.47	120.20	112.00
1	N	1129	C	C2'-C3'-O3'	5.47	117.70	109.50
1	N	334	C	P-O5'-C5'	5.47	129.10	120.90
1	N	38	G	O4'-C1'-N9	5.46	116.70	108.50
1	N	433	G	O4'-C4'-C3'	-5.46	98.53	104.00
1	N	856	C	O4'-C1'-C2'	-5.46	102.14	107.60
1	N	1197	A	C3'-C2'-C1'	5.46	106.76	101.30
1	N	1494	G	C5'-C4'-O4'	5.46	117.99	109.80
1	N	770	C	O4'-C1'-C2'	-5.46	102.14	107.60
1	N	949	A	C4'-C3'-C2'	-5.46	97.14	102.60
1	N	1493	A	O4'-C1'-N9	5.46	116.69	108.50
1	N	985	C	O4'-C1'-N1	5.46	116.68	108.50
1	N	1283	U	C3'-C2'-C1'	5.46	106.76	101.30
1	N	315	A	C5'-C4'-C3'	5.46	123.38	115.20
1	N	196	A	C5'-C4'-C3'	5.45	124.18	116.00
1	N	251	G	P-O3'-C3'	5.45	128.37	120.20
1	N	296	U	C3'-C2'-C1'	5.45	106.75	101.30
1	N	346	G	O4'-C4'-C3'	5.45	109.45	104.00
1	N	531	U	O4'-C1'-N1	5.45	116.67	108.50
1	N	1252	A	P-O5'-C5'	-5.45	112.73	120.90
1	N	513	C	O5'-C5'-C4'	-5.45	103.33	111.50
1	N	1013	G	C3'-C2'-C1'	-5.45	95.86	101.30
1	N	1154	G	P-O5'-C5'	-5.45	112.73	120.90
1	N	204	G	C4'-C3'-C2'	5.44	108.04	102.60
1	N	213	G	C1'-C2'-O2'	5.44	116.56	108.40
1	N	632	U	O4'-C1'-N1	5.44	116.67	108.50
1	N	808	C	O4'-C1'-C2'	-5.44	102.16	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	874	G	C3'-C2'-O2'	5.44	118.86	110.70
1	N	432	A	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	739	C	O4'-C1'-N1	5.44	116.66	108.50
1	N	991	U	C3'-C2'-C1'	5.44	106.94	101.50
1	N	1099	G	P-O3'-C3'	5.44	128.36	120.20
1	N	1236	A	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	1473	G	O4'-C1'-C2'	-5.44	102.16	107.60
1	N	17	U	O4'-C1'-C2'	-5.43	102.17	107.60
1	N	86	G	O4'-C4'-C3'	-5.43	100.67	106.10
1	N	514	C	O4'-C1'-N1	5.43	116.65	108.50
1	N	562	U	C4'-C3'-O3'	-5.43	104.85	113.00
1	N	862	C	C4'-C3'-O3'	-5.43	104.85	113.00
1	N	1254	A	C5'-C4'-C3'	-5.43	107.85	116.00
1	N	42	G	C3'-C2'-C1'	-5.43	95.87	101.30
1	N	721	G	O5'-C5'-C4'	5.43	119.85	111.70
1	N	500	G	O4'-C1'-N9	5.43	116.65	108.50
1	N	1030	U	O4'-C1'-N1	5.43	116.64	108.50
1	N	1474	U	P-O5'-C5'	5.43	129.04	120.90
1	N	761	G	O3'-P-O5'	-5.43	95.86	104.00
1	N	1027	C	C5'-C4'-C3'	-5.43	107.86	116.00
1	N	1110	A	C4'-C3'-O3'	-5.43	104.86	113.00
1	N	240	G	O4'-C1'-C2'	-5.42	102.18	107.60
1	N	628	G	C1'-C2'-O2'	-5.42	100.27	108.40
1	N	1067	A	C4'-C3'-O3'	5.42	117.53	109.40
1	N	1092	A	C5'-C4'-C3'	5.42	124.13	116.00
1	N	7	A	P-O3'-C3'	5.42	128.33	120.20
1	N	794	A	C2'-C3'-O3'	-5.41	105.58	113.70
1	N	944	G	O3'-P-O5'	-5.41	95.88	104.00
1	N	653	U	C4'-C3'-C2'	5.41	108.01	102.60
1	N	1380	U	O4'-C4'-C3'	-5.41	98.59	104.00
1	N	1440	U	C3'-C2'-O2'	5.41	118.81	110.70
1	N	168	G	N1-C6-O6	5.41	136.13	119.90
1	N	212	G	O4'-C4'-C3'	-5.41	98.59	104.00
1	N	1118	U	O4'-C1'-N1	5.41	116.61	108.50
1	N	708	C	O4'-C1'-N1	5.41	116.61	108.50
1	N	1045	C	O4'-C1'-N1	5.41	116.61	108.50
1	N	1215	G	O4'-C1'-N9	5.40	116.61	108.50
1	N	830	G	P-O5'-C5'	5.40	129.00	120.90
1	N	113	G	O4'-C4'-C3'	-5.40	98.60	104.00
1	N	156	C	C5'-C4'-C3'	5.40	124.10	116.00
1	N	546	A	O5'-C5'-C4'	-5.40	103.40	111.50
1	N	846	G	C5'-C4'-O4'	5.40	117.90	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1143	G	C5'-C4'-C3'	-5.40	107.90	116.00
1	N	507	C	O4'-C1'-N1	5.40	116.60	108.50
1	N	547	A	C4'-C3'-O3'	5.40	117.50	109.40
1	N	750	C	O5'-C5'-C4'	-5.40	103.40	111.50
1	N	762	U	P-O5'-C5'	5.40	129.00	120.90
1	N	1413	A	C3'-C2'-C1'	5.40	106.70	101.30
1	N	893	C	C2'-C3'-O3'	5.39	121.79	113.70
1	N	1371	G	P-O5'-C5'	-5.39	112.81	120.90
1	N	1491	G	C3'-C2'-C1'	5.39	106.69	101.30
1	N	1249	C	P-O5'-C5'	-5.39	112.81	120.90
1	N	1392	G	P-O5'-C5'	5.39	128.99	120.90
1	N	443	C	O4'-C1'-N1	5.39	116.58	108.50
1	N	1494	G	O4'-C4'-C3'	-5.39	98.61	104.00
1	N	911	U	O4'-C1'-N1	5.38	116.58	108.50
1	N	1220	G	P-O3'-C3'	-5.38	112.12	120.20
1	N	629	A	P-O3'-C3'	-5.38	112.13	120.20
1	N	908	A	O4'-C4'-C3'	-5.38	98.62	104.00
1	N	1048	G	C1'-O4'-C4'	5.38	115.28	109.90
1	N	680	C	O4'-C1'-N1	5.38	116.57	108.50
1	N	747	A	O4'-C1'-N9	5.38	116.57	108.50
1	N	748	G	C5'-C4'-C3'	-5.38	107.93	116.00
1	N	410	G	P-O3'-C3'	5.38	128.27	120.20
1	N	1429	A	C5'-C4'-C3'	5.38	124.06	116.00
1	N	160	A	P-O5'-C5'	5.37	128.96	120.90
1	N	188	C	O3'-P-O5'	-5.37	95.94	104.00
1	N	750	C	O3'-P-O5'	-5.37	95.94	104.00
1	N	895	G	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	1120	C	P-O3'-C3'	-5.37	112.14	120.20
1	N	1184	G	P-O3'-C3'	-5.37	112.14	120.20
1	N	249	U	P-O3'-C3'	-5.37	112.14	120.20
1	N	76	G	O3'-P-O5'	5.37	112.06	104.00
1	N	180	U	C3'-C2'-O2'	5.37	118.75	110.70
1	N	201	G	C3'-C2'-O2'	5.37	118.75	110.70
1	N	465	A	C5'-C4'-C3'	5.37	124.05	116.00
1	N	370	C	C4'-C3'-C2'	-5.37	97.23	102.60
1	N	135	C	C4'-C3'-C2'	-5.37	97.23	102.60
1	N	1282	C	C4'-C3'-O3'	-5.37	104.95	113.00
1	N	393	A	P-O3'-C3'	-5.36	112.16	120.20
1	N	224	U	O4'-C1'-C2'	-5.36	102.24	107.60
1	N	591	U	O4'-C1'-N1	5.36	116.54	108.50
1	N	1148	U	O4'-C1'-N1	5.36	116.54	108.50
1	N	1247	U	C4'-C3'-C2'	-5.36	97.24	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	63	C	C4'-C3'-O3'	-5.35	104.97	113.00
1	N	239	U	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	905	U	C3'-C2'-O2'	5.35	118.73	110.70
1	N	431	A	O4'-C1'-C2'	-5.35	102.25	107.60
1	N	989	U	C5'-C4'-C3'	-5.35	107.97	116.00
1	N	315	A	O4'-C1'-N9	5.35	116.22	108.20
1	N	1423	G	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	39	G	O4'-C1'-N9	5.35	116.52	108.50
1	N	100	G	O4'-C1'-C2'	-5.35	102.25	107.60
1	N	136	C	O5'-C5'-C4'	-5.35	103.48	111.50
1	N	164	G	O4'-C1'-N9	5.35	116.52	108.50
1	N	486	U	C5'-C4'-C3'	-5.35	107.98	116.00
1	N	647	C	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	736	C	O4'-C1'-N1	5.35	116.52	108.50
1	N	488	C	C5'-C4'-C3'	5.34	124.02	116.00
1	N	87	C	O4'-C1'-N1	5.34	116.52	108.50
1	N	227	G	C5'-C4'-C3'	5.34	124.02	116.00
1	N	387	U	O3'-P-O5'	-5.34	95.99	104.00
1	N	1073	U	O4'-C1'-N1	5.34	116.51	108.50
1	N	1205	U	C5'-C4'-O4'	-5.34	101.79	109.80
1	N	1208	C	O5'-C5'-C4'	-5.34	103.49	111.50
1	N	317	U	C5'-C4'-O4'	5.34	117.81	109.80
1	N	989	U	O4'-C1'-C2'	-5.34	102.26	107.60
1	N	1321	U	O3'-P-O5'	-5.34	95.99	104.00
1	N	1512	U	O3'-P-O5'	5.34	112.01	104.00
1	N	103	U	O4'-C1'-N1	5.34	116.51	108.50
1	N	615	G	O5'-C5'-C4'	-5.34	103.50	111.50
1	N	298	A	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	322	C	C1'-O4'-C4'	-5.33	104.57	109.90
1	N	1030	U	O3'-P-O5'	-5.33	96.00	104.00
1	N	438	U	O4'-C1'-C2'	-5.33	100.47	105.80
1	N	1240	U	O5'-C5'-C4'	5.33	119.50	111.50
1	N	1281	C	P-O3'-C3'	5.33	128.19	120.20
1	N	1298	U	C4'-C3'-O3'	5.33	117.39	109.40
1	N	870	U	O4'-C1'-C2'	5.33	111.13	105.80
1	N	1181	G	C3'-C2'-C1'	5.33	106.83	101.50
1	N	195	A	C2'-C3'-O3'	5.33	121.69	113.70
1	N	892	A	O4'-C1'-N9	5.32	116.48	108.50
1	N	338	A	P-O3'-C3'	-5.32	112.22	120.20
1	N	1284	C	O4'-C4'-C3'	-5.32	98.68	104.00
1	N	1036	A	C5'-C4'-O4'	5.32	117.78	109.80
1	N	1072	G	C1'-C2'-O2'	5.32	116.38	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	108	G	P-O5'-C5'	5.32	128.88	120.90
1	N	265	G	O4'-C1'-N9	5.32	116.48	108.50
1	N	295	C	O5'-C5'-C4'	-5.32	103.53	111.50
1	N	557	G	C1'-O4'-C4'	5.32	115.22	109.90
1	N	1092	A	O4'-C1'-N9	5.32	116.47	108.50
1	N	104	G	C1'-C2'-O2'	5.31	116.37	108.40
1	N	808	C	C4'-C3'-C2'	-5.31	97.29	102.60
1	N	809	G	C1'-C2'-O2'	5.31	116.37	108.40
1	N	804	U	C5'-C4'-C3'	5.31	123.97	116.00
1	N	1218	C	O4'-C4'-C3'	-5.31	98.69	104.00
1	N	717	U	C1'-O4'-C4'	5.31	115.01	109.70
1	N	127	G	C4'-C3'-C2'	-5.31	97.29	102.60
1	N	175	C	O4'-C1'-N1	5.31	116.46	108.50
1	N	579	A	C3'-C2'-O2'	5.31	118.67	110.70
1	N	719	C	O4'-C1'-N1	5.31	116.46	108.50
1	N	985	C	O5'-C5'-C4'	-5.31	103.53	111.50
1	N	1533	C	P-O5'-C5'	5.31	128.86	120.90
1	N	418	C	P-O5'-C5'	5.31	128.86	120.90
1	N	910	C	O4'-C1'-N1	5.31	116.46	108.50
1	N	998	C	P-O3'-C3'	5.31	128.16	120.20
1	N	1126	U	C1'-C2'-O2'	5.31	119.76	111.80
1	N	1366	C	C4'-C3'-O3'	-5.31	105.04	113.00
1	N	1503	A	O4'-C4'-C3'	-5.31	100.79	106.10
1	N	549	C	C3'-C2'-O2'	5.30	118.66	110.70
1	N	734	G	C5'-C4'-C3'	5.30	123.96	116.00
1	N	769	G	P-O5'-C5'	-5.30	112.94	120.90
1	N	1490	U	O4'-C1'-C2'	-5.30	102.30	107.60
1	N	325	A	C1'-O4'-C4'	-5.30	104.60	109.90
1	N	1102	A	O5'-C5'-C4'	-5.30	103.55	111.50
1	N	178	C	C5'-C4'-C3'	5.30	123.95	116.00
1	N	201	G	P-O5'-C5'	5.30	128.85	120.90
1	N	1530	G	C2'-C3'-O3'	5.30	117.45	109.50
1	N	1063	C	O4'-C1'-N1	5.30	116.45	108.50
1	N	142	G	P-O3'-C3'	5.30	128.15	120.20
1	N	752	G	P-O5'-C5'	-5.30	112.95	120.90
1	N	194	C	O4'-C1'-N1	5.30	116.44	108.50
1	N	515	G	O4'-C1'-C2'	-5.30	102.30	107.60
1	N	1476	A	O4'-C1'-N9	5.30	116.45	108.50
1	N	706	A	C4'-C3'-C2'	-5.29	97.31	102.60
1	N	50	A	O4'-C1'-N9	5.29	116.14	108.20
1	N	255	G	O4'-C4'-C3'	-5.29	98.71	104.00
1	N	1160	G	C3'-C2'-O2'	5.29	118.64	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	30	U	O4'-C4'-C3'	-5.29	100.81	106.10
1	N	657	U	P-O3'-C3'	5.29	128.14	120.20
1	N	171	A	P-O5'-C5'	-5.29	112.97	120.90
1	N	272	C	C4'-C3'-O3'	-5.29	105.06	113.00
1	N	1364	U	O4'-C1'-C2'	-5.29	100.51	105.80
1	N	230	G	P-O5'-C5'	5.29	128.83	120.90
1	N	732	C	O4'-C1'-N1	5.29	116.43	108.50
1	N	753	A	C5'-C4'-C3'	-5.29	107.27	115.20
1	N	840	C	O4'-C1'-N1	5.29	116.43	108.50
1	N	884	U	O4'-C4'-C3'	-5.29	100.81	106.10
1	N	1169	A	O3'-P-O5'	5.29	111.93	104.00
1	N	703	G	O3'-P-O5'	-5.29	96.07	104.00
1	N	986	U	P-O5'-C5'	5.29	128.83	120.90
1	N	1236	A	C2'-C3'-O3'	5.29	121.63	113.70
1	N	902	G	P-O5'-C5'	5.28	128.82	120.90
1	N	952	U	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	1148	U	C4'-C3'-O3'	-5.28	105.08	113.00
1	N	1201	A	O4'-C1'-C2'	-5.28	100.52	105.80
1	N	450	G	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	1094	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	N	1467	C	O4'-C1'-N1	5.28	116.42	108.50
1	N	123	U	C1'-O4'-C4'	5.28	115.17	109.90
1	N	947	G	O4'-C4'-C3'	5.28	109.28	104.00
1	N	1038	C	O4'-C1'-N1	5.28	116.41	108.50
1	N	1139	G	O3'-P-O5'	-5.28	96.09	104.00
1	N	176	C	O5'-C5'-C4'	-5.27	103.59	111.50
1	N	641	U	O4'-C4'-C3'	5.27	109.27	104.00
1	N	721	G	P-O5'-C5'	-5.27	112.99	120.90
1	N	42	G	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	563	A	O3'-P-O5'	-5.27	96.10	104.00
1	N	815	A	O5'-C5'-C4'	-5.27	103.59	111.50
1	N	1350	A	C4'-C3'-O3'	-5.27	105.09	113.00
1	N	134	G	C4'-C3'-O3'	5.27	120.90	113.00
1	N	948	C	P-O3'-C3'	-5.27	112.30	120.20
1	N	1466	C	P-O5'-C5'	5.27	128.80	120.90
1	N	823	C	O4'-C1'-N1	5.26	116.39	108.50
1	N	79	G	O4'-C1'-N9	5.26	116.39	108.50
1	N	371	A	P-O5'-C5'	5.26	128.79	120.90
1	N	1362	A	C3'-C2'-O2'	5.26	118.59	110.70
1	N	45	G	C3'-C2'-C1'	5.26	106.56	101.30
1	N	130	A	O4'-C4'-C3'	-5.26	100.84	106.10
1	N	438	U	C5'-C4'-O4'	5.26	116.99	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	52	C	O4'-C1'-N1	5.26	116.38	108.50
1	N	1050	G	P-O5'-C5'	5.25	128.78	120.90
1	N	439	U	O4'-C1'-C2'	-5.25	102.35	107.60
1	N	650	G	P-O3'-C3'	5.25	128.08	120.20
1	N	141	G	O4'-C1'-N9	5.25	116.38	108.50
1	N	144	G	O4'-C1'-N9	5.25	116.38	108.50
1	N	407	U	O3'-P-O5'	-5.25	96.12	104.00
1	N	682	G	C4'-C3'-O3'	-5.25	105.12	113.00
1	N	1225	A	C1'-O4'-C4'	5.25	114.95	109.70
1	N	1439	G	O4'-C1'-C2'	-5.25	102.35	107.60
1	N	270	A	C5'-C4'-C3'	5.25	123.87	116.00
1	N	602	A	C5'-C4'-C3'	-5.25	108.13	116.00
1	N	1124	G	C4'-C3'-C2'	-5.25	97.35	102.60
1	N	67	C	O4'-C1'-N1	5.25	116.37	108.50
1	N	143	A	P-O3'-C3'	-5.25	112.33	120.20
1	N	403	C	C5'-C4'-C3'	-5.24	108.14	116.00
1	N	1124	G	O4'-C1'-N9	5.24	116.36	108.50
1	N	1354	U	C1'-C2'-O2'	5.24	116.26	108.40
1	N	66	A	P-O3'-C3'	5.24	128.06	120.20
1	N	616	G	P-O3'-C3'	-5.24	112.34	120.20
1	N	617	G	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	759	A	O5'-C5'-C4'	-5.24	103.64	111.50
1	N	1323	G	O5'-C5'-C4'	5.24	119.36	111.50
1	N	918	A	O4'-C1'-N9	5.24	116.36	108.50
1	N	1366	C	O5'-C5'-C4'	-5.24	103.64	111.50
1	N	542	G	P-O5'-C5'	5.24	128.76	120.90
1	N	963	G	O4'-C4'-C3'	-5.24	98.76	104.00
1	N	1088	G	O4'-C1'-N9	5.24	116.36	108.50
1	N	460	A	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	912	C	O4'-C1'-C2'	-5.24	102.36	107.60
1	N	1484	C	C5'-C4'-C3'	-5.24	108.15	116.00
1	N	1134	G	O5'-C5'-C4'	-5.23	103.65	111.50
1	N	368	U	O4'-C1'-N1	5.23	116.05	108.20
1	N	398	U	C3'-C2'-O2'	5.23	118.55	110.70
1	N	267	C	O3'-P-O5'	5.23	111.84	104.00
1	N	66	A	C1'-O4'-C4'	5.23	115.13	109.90
1	N	305	G	C5'-C4'-C3'	5.23	123.04	115.20
1	N	962	C	C5'-C4'-C3'	5.23	123.84	116.00
1	N	1338	G	P-O3'-C3'	5.23	128.04	120.20
1	N	36	C	O4'-C1'-N1	5.22	116.34	108.50
1	N	79	G	P-O3'-C3'	5.22	128.04	120.20
1	N	120	A	O4'-C4'-C3'	5.22	109.22	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	262	A	C4'-C3'-O3'	-5.22	105.16	113.00
1	N	317	U	O5'-C5'-C4'	-5.22	103.66	111.50
1	N	1468	A	P-O3'-C3'	5.22	128.04	120.20
1	N	1514	G	C1'-O4'-C4'	5.22	115.12	109.90
1	N	1499	A	C3'-C2'-C1'	5.22	106.52	101.30
1	N	376	G	C3'-C2'-C1'	5.22	106.52	101.30
1	N	839	C	C5'-C4'-C3'	-5.22	108.17	116.00
1	N	866	C	C2'-C3'-O3'	5.22	121.53	113.70
1	N	1160	G	N9-C1'-C2'	-5.22	104.17	112.00
1	N	179	A	O3'-P-O5'	-5.21	96.18	104.00
1	N	204	G	C5'-C4'-C3'	5.21	123.82	116.00
1	N	644	U	O4'-C1'-N1	5.21	116.32	108.50
1	N	1346	A	O4'-C4'-C3'	-5.21	100.89	106.10
1	N	138	G	C5'-C4'-C3'	5.21	123.82	116.00
1	N	1374	A	O4'-C1'-N9	5.21	116.32	108.50
1	N	1433	A	O4'-C4'-C3'	-5.21	98.79	104.00
1	N	406	G	C5'-C4'-C3'	-5.21	108.19	116.00
1	N	822	U	C2'-C3'-O3'	5.21	121.51	113.70
1	N	59	A	P-O3'-C3'	5.21	128.01	120.20
1	N	210	C	C5'-C4'-C3'	-5.21	107.39	115.20
1	N	222	C	O4'-C1'-N1	5.21	116.31	108.50
1	N	828	U	C5'-C4'-C3'	5.21	123.81	116.00
1	N	1272	G	O4'-C1'-C2'	-5.21	102.39	107.60
1	N	143	A	P-O5'-C5'	5.21	128.71	120.90
1	N	770	C	O3'-P-O5'	-5.21	96.19	104.00
1	N	869	G	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	1157	A	N1-C6-N6	5.21	134.21	118.60
1	N	1269	A	O3'-P-O5'	-5.21	96.19	104.00
1	N	17	U	O4'-C1'-N1	5.20	116.30	108.50
1	N	257	G	C1'-O4'-C4'	5.20	115.10	109.90
1	N	399	G	P-O5'-C5'	5.20	128.71	120.90
1	N	474	G	C1'-O4'-C4'	5.20	115.10	109.90
1	N	720	C	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	869	G	O3'-P-O5'	-5.20	96.20	104.00
1	N	1474	U	C4'-C3'-O3'	-5.20	105.19	113.00
1	N	506	G	O4'-C1'-N9	5.20	116.30	108.50
1	N	732	C	C4'-C3'-O3'	-5.20	105.20	113.00
1	N	794	A	C5'-C4'-C3'	-5.20	108.20	116.00
1	N	141	G	C1'-C2'-O2'	5.20	116.20	108.40
1	N	601	G	O4'-C1'-N9	5.20	116.30	108.50
1	N	820	U	C2'-C3'-O3'	5.20	117.29	109.50
1	N	60	A	C4'-C3'-C2'	5.19	107.79	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	745	G	C4'-C3'-O3'	-5.19	105.21	113.00
1	N	457	G	C1'-O4'-C4'	-5.19	104.71	109.90
1	N	534	U	C5'-C4'-C3'	5.19	123.78	116.00
1	N	666	G	P-O5'-C5'	-5.19	113.11	120.90
1	N	676	A	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1088	G	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1278	G	N9-C1'-C2'	-5.19	106.22	114.00
1	N	1384	C	O4'-C4'-C3'	-5.19	98.81	104.00
1	N	1440	U	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1441	A	O4'-C1'-N9	5.19	116.28	108.50
1	N	488	C	P-O3'-C3'	5.19	127.98	120.20
1	N	476	U	C1'-O4'-C4'	5.18	115.08	109.90
1	N	925	G	O3'-P-O5'	-5.18	96.23	104.00
1	N	1353	G	P-O3'-C3'	-5.18	112.43	120.20
1	N	340	U	O5'-C5'-C4'	-5.18	103.73	111.50
1	N	606	G	P-O5'-C5'	-5.18	113.13	120.90
1	N	355	C	P-O5'-C5'	-5.18	113.13	120.90
1	N	1157	A	O4'-C4'-C3'	-5.18	100.92	106.10
1	N	594	U	P-O3'-C3'	5.17	127.96	120.20
1	N	1305	G	C3'-C2'-C1'	5.17	106.47	101.30
1	N	168	G	C5-C6-O6	-5.17	113.09	128.60
1	N	1260	G	C4'-C3'-C2'	-5.17	97.43	102.60
1	N	243	A	P-O3'-C3'	5.17	127.95	120.20
1	N	1235	U	C2'-C3'-O3'	5.17	121.45	113.70
1	N	94	G	C3'-C2'-C1'	5.17	106.67	101.50
1	N	204	G	C3'-C2'-C1'	-5.17	96.13	101.30
1	N	565	U	O4'-C1'-N1	5.17	116.25	108.50
1	N	934	C	C1'-C2'-O2'	-5.17	104.05	111.80
1	N	1429	A	P-O3'-C3'	5.17	127.95	120.20
1	N	1438	G	N9-C1'-C2'	-5.17	104.25	112.00
1	N	1483	A	O4'-C1'-N9	5.17	116.25	108.50
1	N	71	A	C1'-O4'-C4'	5.17	115.07	109.90
1	N	1163	A	O3'-P-O5'	-5.17	96.25	104.00
1	N	531	U	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	1254	A	C4'-C3'-C2'	-5.16	97.44	102.60
1	N	439	U	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	1366	C	P-O5'-C5'	5.16	128.64	120.90
1	N	810	C	O4'-C1'-N1	5.16	116.24	108.50
1	N	78	A	C4'-C3'-C2'	-5.16	97.44	102.60
1	N	607	A	O5'-C5'-C4'	-5.16	103.76	111.50
1	N	50	A	N1-C6-N6	5.16	134.07	118.60
1	N	42	G	O5'-C5'-C4'	-5.15	103.77	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	114	U	C1'-C2'-O2'	5.15	116.13	108.40
1	N	402	G	O4'-C1'-C2'	-5.15	102.45	107.60
1	N	974	A	C4'-C3'-O3'	5.15	117.13	109.40
1	N	1434	A	O4'-C1'-C2'	-5.15	102.45	107.60
1	N	1267	C	C5'-C4'-C3'	5.15	123.72	116.00
1	N	521	G	C4'-C3'-O3'	-5.15	105.28	113.00
1	N	1435	G	C2'-C3'-O3'	5.15	121.42	113.70
1	N	1489	G	O4'-C4'-C3'	-5.15	98.85	104.00
1	N	648	A	P-O3'-C3'	5.15	127.92	120.20
1	N	1090	U	O4'-C1'-N1	5.15	116.22	108.50
1	N	1402	C	O4'-C1'-N1	5.15	116.22	108.50
1	N	43	C	O4'-C1'-N1	5.14	116.22	108.50
1	N	256	U	O5'-C5'-C4'	-5.14	103.78	111.50
1	N	476	U	P-O5'-C5'	5.14	128.61	120.90
1	N	584	G	O3'-P-O5'	-5.14	96.29	104.00
1	N	708	C	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	869	G	C5'-C4'-O4'	5.14	117.51	109.80
1	N	1530	G	C5'-C4'-O4'	5.14	116.81	109.10
1	N	1033	G	P-O3'-C3'	-5.14	112.49	120.20
1	N	238	A	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	1000	A	C4'-C3'-O3'	-5.14	105.29	113.00
1	N	1277	C	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	437	U	P-O3'-C3'	-5.14	112.49	120.20
1	N	562	U	C5'-C4'-O4'	5.14	117.51	109.80
1	N	976	G	P-O3'-C3'	-5.14	112.49	120.20
1	N	1480	A	C1'-O4'-C4'	5.14	115.04	109.90
1	N	68	G	N9-C1'-C2'	5.14	119.70	112.00
1	N	1127	G	C4'-C3'-C2'	5.14	107.74	102.60
1	N	1332	A	C4'-C3'-O3'	-5.14	105.29	113.00
1	N	406	G	C3'-C2'-C1'	5.13	106.43	101.30
1	N	910	C	O5'-C5'-C4'	-5.13	103.80	111.50
1	N	1370	G	C4'-C3'-C2'	-5.13	97.47	102.60
1	N	364	A	C3'-C2'-C1'	5.13	106.43	101.30
1	N	941	G	C2'-C3'-O3'	5.13	121.40	113.70
1	N	1503	A	O4'-C1'-N9	5.13	115.90	108.20
1	N	1531	A	P-O3'-C3'	5.13	127.90	120.20
1	N	55	A	O5'-C5'-C4'	-5.13	103.81	111.50
1	N	308	C	C5'-C4'-O4'	-5.13	102.10	109.80
1	N	94	G	C1'-C2'-O2'	-5.13	104.11	111.80
1	N	346	G	C3'-C2'-C1'	5.13	106.43	101.30
1	N	1024	G	C4'-C3'-C2'	-5.13	97.47	102.60
1	N	118	U	P-O5'-C5'	5.13	128.59	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	210	C	P-O5'-C5'	5.13	128.59	120.90
1	N	1276	G	O4'-C1'-C2'	-5.13	102.47	107.60
1	N	1393	U	C2'-C3'-O3'	5.13	121.39	113.70
1	N	1099	G	C1'-O4'-C4'	-5.12	104.78	109.90
1	N	953	G	P-O5'-C5'	5.12	128.59	120.90
1	N	1246	A	C2'-C3'-O3'	-5.12	106.01	113.70
1	N	1303	C	O4'-C1'-N1	5.12	116.19	108.50
1	N	429	U	C2'-C3'-O3'	5.12	117.18	109.50
1	N	839	C	P-O3'-C3'	-5.12	112.52	120.20
1	N	226	G	C5'-C4'-C3'	-5.12	108.32	116.00
1	N	429	U	P-O3'-C3'	5.12	127.88	120.20
1	N	1290	G	P-O3'-C3'	-5.12	112.53	120.20
1	N	155	A	O5'-C5'-C4'	-5.12	103.83	111.50
1	N	315	A	O5'-C5'-C4'	-5.11	104.03	111.70
1	N	936	C	C5'-C4'-O4'	5.11	117.47	109.80
1	N	318	G	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	1422	G	N9-C1'-C2'	-5.11	104.33	112.00
1	N	1447	A	P-O3'-C3'	5.11	127.87	120.20
1	N	84	U	O4'-C1'-N1	5.11	115.87	108.20
1	N	659	U	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	685	G	C4'-C3'-O3'	-5.11	105.33	113.00
1	N	902	G	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	1387	G	C3'-C2'-C1'	5.11	106.41	101.30
1	N	1256	A	C3'-C2'-O2'	-5.11	106.94	114.60
1	N	1519	A	O4'-C4'-C3'	-5.11	98.89	104.00
1	N	246	A	O4'-C1'-C2'	5.11	110.91	105.80
1	N	340	U	C3'-C2'-O2'	5.11	118.36	110.70
1	N	736	C	P-O3'-C3'	5.11	127.86	120.20
1	N	974	A	C5'-C4'-C3'	5.11	122.86	115.20
1	N	283	U	C1'-O4'-C4'	5.10	115.00	109.90
1	N	1032	G	O4'-C1'-N9	5.10	116.15	108.50
1	N	1526	G	C4'-C3'-C2'	-5.10	97.50	102.60
1	N	343	U	O3'-P-O5'	-5.10	96.35	104.00
1	N	961	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	454	G	C3'-C2'-C1'	5.10	106.40	101.30
1	N	1305	G	C4'-C3'-O3'	-5.10	105.35	113.00
1	N	724	G	O4'-C1'-N9	5.10	116.15	108.50
1	N	740	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	780	A	C2'-C3'-O3'	5.10	121.35	113.70
1	N	1054	C	C2'-C3'-O3'	5.10	117.15	109.50
1	N	1068	G	O4'-C1'-N9	5.10	116.14	108.50
1	N	1111	A	O4'-C1'-N9	5.10	116.14	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	443	C	N1-C1'-C2'	-5.09	104.36	112.00
1	N	594	U	C5'-C4'-C3'	-5.09	108.36	116.00
1	N	396	C	O4'-C1'-C2'	-5.09	102.51	107.60
1	N	534	U	O4'-C4'-C3'	-5.09	98.91	104.00
1	N	1255	G	C3'-C2'-C1'	5.09	106.39	101.30
1	N	92	U	O5'-C5'-C4'	5.09	119.14	111.50
1	N	141	G	C2'-C3'-O3'	5.09	121.34	113.70
1	N	1102	A	C4'-C3'-O3'	-5.09	105.36	113.00
1	N	450	G	O5'-C5'-C4'	-5.09	103.86	111.50
1	N	578	C	O5'-C5'-C4'	-5.09	103.86	111.50
1	N	580	C	P-O5'-C5'	5.09	128.53	120.90
1	N	1081	A	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	418	C	C2'-C3'-O3'	5.09	121.33	113.70
1	N	998	C	O3'-P-O5'	-5.09	96.37	104.00
1	N	1372	U	O4'-C1'-N1	5.09	116.13	108.50
1	N	1385	G	P-O3'-C3'	-5.09	112.57	120.20
1	N	1007	U	N1-C1'-C2'	5.08	119.63	112.00
1	N	2	A	O4'-C1'-N9	5.08	116.12	108.50
1	N	581	G	O5'-C5'-C4'	-5.08	103.88	111.50
1	N	625	U	C4'-C3'-O3'	-5.08	105.38	113.00
1	N	948	C	C5'-C4'-C3'	-5.08	108.37	116.00
1	N	329	A	P-O3'-C3'	-5.08	112.58	120.20
1	N	1091	U	C4'-C3'-O3'	-5.08	105.38	113.00
1	N	1390	U	C2'-C3'-O3'	5.08	121.32	113.70
1	N	181	A	C2'-C3'-O3'	-5.08	106.08	113.70
1	N	1038	C	C4'-C3'-C2'	-5.08	97.52	102.60
1	N	571	U	C3'-C2'-C1'	5.08	106.38	101.30
1	N	957	U	C5'-C4'-C3'	5.08	123.61	116.00
1	N	123	U	P-O3'-C3'	5.07	127.81	120.20
1	N	1190	G	C2'-C3'-O3'	5.07	117.11	109.50
1	N	1255	G	C5'-C4'-C3'	-5.07	108.39	116.00
1	N	1278	G	C1'-O4'-C4'	5.07	114.77	109.70
1	N	983	A	O4'-C4'-C3'	-5.07	101.03	106.10
1	N	74	A	P-O5'-C5'	-5.07	113.30	120.90
1	N	901	A	O4'-C1'-C2'	-5.07	102.53	107.60
1	N	898	G	O4'-C1'-N9	5.07	116.10	108.50
1	N	664	G	C3'-C2'-C1'	5.06	106.36	101.30
1	N	1143	G	C4'-C3'-C2'	-5.06	97.54	102.60
1	N	372	C	O4'-C4'-C3'	-5.06	101.04	106.10
1	N	1199	U	O4'-C1'-N1	5.06	116.09	108.50
1	N	1458	G	C2'-C3'-O3'	5.06	121.29	113.70
1	N	277	C	C4'-C3'-O3'	-5.06	105.42	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	747	A	C3'-C2'-O2'	5.06	118.28	110.70
1	N	1446	A	O5'-C5'-C4'	-5.06	103.92	111.50
1	N	907	A	P-O3'-C3'	5.05	127.78	120.20
1	N	1019	A	C4'-C3'-C2'	-5.05	97.55	102.60
1	N	1303	C	C5'-C4'-O4'	-5.05	102.22	109.80
1	N	1375	A	C4'-C3'-O3'	-5.05	105.42	113.00
1	N	976	G	O4'-C4'-C3'	-5.05	98.95	104.00
1	N	1021	A	C3'-C2'-C1'	-5.05	96.25	101.30
1	N	817	C	O4'-C1'-C2'	-5.05	100.75	105.80
1	N	92	U	O4'-C1'-N1	5.05	116.07	108.50
1	N	1444	U	C5'-C4'-C3'	-5.05	108.43	116.00
1	N	1357	A	O3'-P-O5'	-5.05	96.43	104.00
1	N	1510	C	C1'-C2'-O2'	5.05	115.97	108.40
1	N	449	G	O4'-C1'-C2'	-5.04	102.56	107.60
1	N	153	C	O4'-C1'-N1	5.04	116.06	108.50
1	N	1344	C	C3'-C2'-C1'	5.04	106.34	101.30
1	N	1449	C	O4'-C4'-C3'	-5.04	98.96	104.00
1	N	12	U	O4'-C1'-N1	5.04	116.06	108.50
1	N	220	G	O4'-C1'-N9	5.04	116.06	108.50
1	N	508	U	C3'-C2'-O2'	-5.04	107.04	114.60
1	N	557	G	P-O3'-C3'	5.04	127.76	120.20
1	N	294	U	O4'-C4'-C3'	-5.04	98.96	104.00
1	N	1036	A	P-O5'-C5'	5.04	128.46	120.90
1	N	1100	C	O5'-C5'-C4'	5.04	119.05	111.50
1	N	1226	C	C5'-C4'-C3'	-5.04	107.65	115.20
1	N	1221	G	O4'-C1'-C2'	-5.03	102.57	107.60
1	N	458	U	N1-C1'-C2'	5.03	119.55	112.00
1	N	1356	G	C1'-O4'-C4'	5.03	114.93	109.90
1	N	320	A	C3'-C2'-C1'	5.03	106.33	101.30
1	N	349	A	C2'-C3'-O3'	5.03	121.24	113.70
1	N	524	G	O3'-P-O5'	-5.03	96.46	104.00
1	N	729	A	O4'-C1'-N9	5.03	116.04	108.50
1	N	129	A	C1'-C2'-O2'	-5.03	104.26	111.80
1	N	194	C	P-O5'-C5'	5.03	128.44	120.90
1	N	597	G	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	809	G	O5'-C5'-C4'	-5.03	103.96	111.50
1	N	1482	G	O5'-C5'-C4'	-5.03	103.96	111.50
1	N	790	A	O4'-C1'-N9	5.02	116.04	108.50
1	N	1206	G	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	563	A	P-O5'-C5'	-5.02	113.37	120.90
1	N	468	A	P-O3'-C3'	5.02	127.73	120.20
1	N	780	A	N1-C6-N6	5.02	133.66	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1077	G	C4'-C3'-O3'	-5.02	105.47	113.00
1	N	1437	A	O4'-C4'-C3'	-5.02	98.98	104.00
1	N	169	C	O3'-P-O5'	-5.02	96.47	104.00
1	N	418	C	O4'-C1'-N1	5.02	116.03	108.50
1	N	1185	G	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	1253	G	O3'-P-O5'	5.02	111.53	104.00
1	N	1500	A	C1'-O4'-C4'	5.02	114.92	109.90
1	N	7	A	C2'-C3'-O3'	5.01	117.02	109.50
1	N	952	U	C4'-C3'-C2'	-5.01	97.58	102.60
1	N	830	G	O4'-C4'-C3'	-5.01	98.99	104.00
1	N	1271	A	C3'-C2'-O2'	5.01	118.22	110.70
1	N	753	A	C4'-C3'-O3'	5.01	116.92	109.40
1	N	1035	A	P-O3'-C3'	-5.01	112.69	120.20
1	N	1195	C	C4'-C3'-C2'	5.01	107.61	102.60
1	N	1348	U	N1-C1'-C2'	-5.01	104.49	112.00
1	N	273	U	C4'-C3'-O3'	-5.01	105.49	113.00
1	N	1111	A	C1'-O4'-C4'	-5.01	104.89	109.90
1	N	1176	A	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	68	G	C5'-C4'-O4'	-5.01	102.29	109.80
1	N	937	A	O5'-C5'-C4'	-5.01	103.99	111.50
1	N	1125	U	C4'-C3'-C2'	-5.01	97.59	102.60
1	N	1481	U	P-O5'-C5'	5.01	128.41	120.90
1	N	1506	U	P-O3'-C3'	5.01	127.71	120.20
1	N	110	C	C3'-C2'-C1'	5.00	106.30	101.30
1	N	210	C	C5'-C4'-O4'	5.00	116.61	109.10
1	N	1446	A	C4'-C3'-O3'	-5.00	105.50	113.00
1	N	1485	U	O4'-C1'-N1	5.00	116.00	108.50

There are no chirality outliers.

All (941) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	N	1000	A	Sidechain
1	N	1002	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	1011	C	Sidechain
1	N	1013	G	Sidechain
1	N	1015	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	102	G	Sidechain
1	N	1020	G	Sidechain
1	N	1023	U	Sidechain
1	N	1031	C	Sidechain
1	N	1033	G	Sidechain
1	N	1035	A	Sidechain
1	N	1039	G	Sidechain
1	N	104	G	Sidechain
1	N	1040	U	Sidechain
1	N	1041	G	Sidechain
1	N	1042	A	Sidechain
1	N	1043	G	Sidechain
1	N	1046	A	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
1	N	1053	G	Sidechain
1	N	1055	A	Sidechain
1	N	1057	G	Sidechain
1	N	1058	G	Sidechain
1	N	1059	C	Sidechain
1	N	1060	U	Sidechain
1	N	1066	C	Sidechain
1	N	1067	A	Sidechain
1	N	107	G	Sidechain
1	N	1070	U	Sidechain
1	N	1071	C	Sidechain
1	N	1072	G	Sidechain
1	N	1073	U	Sidechain
1	N	1074	G	Sidechain
1	N	1075	U	Sidechain
1	N	1076	U	Sidechain
1	N	1077	G	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	1086	U	Sidechain
1	N	1088	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	109	A	Sidechain
1	N	1090	U	Sidechain
1	N	1091	U	Sidechain
1	N	1093	A	Sidechain
1	N	1094	G	Sidechain
1	N	1095	U	Sidechain
1	N	1096	C	Sidechain
1	N	1097	C	Sidechain
1	N	1098	C	Sidechain
1	N	110	C	Sidechain
1	N	1102	A	Sidechain
1	N	1104	G	Sidechain
1	N	1105	A	Sidechain
1	N	1106	G	Sidechain
1	N	1108	G	Sidechain
1	N	1109	C	Sidechain
1	N	111	G	Sidechain
1	N	1110	A	Sidechain
1	N	1111	A	Sidechain
1	N	1113	C	Sidechain
1	N	1116	U	Sidechain
1	N	1117	A	Sidechain
1	N	1119	C	Sidechain
1	N	112	G	Sidechain
1	N	1120	C	Sidechain
1	N	1121	U	Sidechain
1	N	1125	U	Sidechain
1	N	1126	U	Sidechain
1	N	1127	G	Sidechain
1	N	1129	C	Sidechain
1	N	1130	A	Sidechain
1	N	1132	C	Sidechain
1	N	1134	G	Sidechain
1	N	1135	U	Sidechain
1	N	1138	G	Sidechain
1	N	1139	G	Sidechain
1	N	114	U	Sidechain
1	N	1140	C	Sidechain
1	N	1142	G	Sidechain
1	N	1143	G	Sidechain
1	N	1144	G	Sidechain
1	N	1148	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1149	C	Sidechain
1	N	1150	A	Sidechain
1	N	1153	G	Sidechain
1	N	1154	G	Sidechain
1	N	1155	A	Sidechain
1	N	1156	G	Sidechain
1	N	1158	C	Sidechain
1	N	1159	U	Sidechain
1	N	116	A	Sidechain
1	N	1160	G	Sidechain
1	N	1161	C	Sidechain
1	N	1165	U	Sidechain
1	N	1169	A	Sidechain
1	N	117	G	Sidechain
1	N	1170	A	Sidechain
1	N	1173	U	Sidechain
1	N	1174	G	Sidechain
1	N	1177	G	Sidechain
1	N	1179	A	Sidechain
1	N	1181	G	Sidechain
1	N	1184	G	Sidechain
1	N	1185	G	Sidechain
1	N	1189	U	Sidechain
1	N	119	A	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	1202	U	Sidechain
1	N	1203	C	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	Sidechain
1	N	1206	G	Sidechain
1	N	1207	G	Sidechain
1	N	1208	C	Sidechain
1	N	121	U	Sidechain
1	N	1211	U	Sidechain
1	N	1214	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1215	G	Sidechain
1	N	1218	C	Sidechain
1	N	122	G	Sidechain
1	N	1220	G	Sidechain
1	N	1221	G	Sidechain
1	N	1223	C	Sidechain
1	N	1226	C	Sidechain
1	N	1227	A	Sidechain
1	N	1229	A	Sidechain
1	N	123	U	Sidechain
1	N	1231	G	Sidechain
1	N	1232	U	Sidechain
1	N	1234	C	Sidechain
1	N	1235	U	Sidechain
1	N	1237	C	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	1243	C	Sidechain
1	N	1244	G	Sidechain
1	N	1245	C	Sidechain
1	N	1249	C	Sidechain
1	N	125	U	Sidechain
1	N	1251	A	Sidechain
1	N	1252	A	Sidechain
1	N	1254	A	Sidechain
1	N	1256	A	Sidechain
1	N	1258	G	Sidechain
1	N	1259	C	Sidechain
1	N	126	G	Sidechain
1	N	1260	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	1269	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1270	G	Sidechain
1	N	1271	A	Sidechain
1	N	1272	G	Sidechain
1	N	1274	A	Sidechain
1	N	1275	A	Sidechain
1	N	1276	G	Sidechain
1	N	1278	G	Sidechain
1	N	1282	C	Sidechain
1	N	1283	U	Sidechain
1	N	1286	U	Sidechain
1	N	1287	A	Sidechain
1	N	1288	A	Sidechain
1	N	1289	A	Sidechain
1	N	1291	U	Sidechain
1	N	1293	C	Sidechain
1	N	1294	G	Sidechain
1	N	1299	A	Sidechain
1	N	130	A	Sidechain
1	N	1300	G	Sidechain
1	N	1301	U	Sidechain
1	N	1302	C	Sidechain
1	N	1305	G	Sidechain
1	N	1306	A	Sidechain
1	N	1307	U	Sidechain
1	N	1309	G	Sidechain
1	N	1310	G	Sidechain
1	N	1311	A	Sidechain
1	N	1312	G	Sidechain
1	N	1314	C	Sidechain
1	N	1315	U	Sidechain
1	N	1316	G	Sidechain
1	N	1318	A	Sidechain
1	N	1319	A	Sidechain
1	N	1321	U	Sidechain
1	N	1322	C	Sidechain
1	N	1323	G	Sidechain
1	N	1326	U	Sidechain
1	N	1330	U	Sidechain
1	N	1331	G	Sidechain
1	N	1332	A	Sidechain
1	N	1334	G	Sidechain
1	N	1339	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	134	G	Sidechain
1	N	1343	G	Sidechain
1	N	1344	C	Sidechain
1	N	1345	U	Sidechain
1	N	1347	G	Sidechain
1	N	1348	U	Sidechain
1	N	1350	A	Sidechain
1	N	1351	U	Sidechain
1	N	1353	G	Sidechain
1	N	1354	U	Sidechain
1	N	1355	G	Sidechain
1	N	1357	A	Sidechain
1	N	1358	U	Sidechain
1	N	1359	C	Sidechain
1	N	1361	G	Sidechain
1	N	1362	A	Sidechain
1	N	1363	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	1371	G	Sidechain
1	N	1373	G	Sidechain
1	N	1374	A	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1377	A	Sidechain
1	N	1378	C	Sidechain
1	N	1379	G	Sidechain
1	N	1380	U	Sidechain
1	N	1381	U	Sidechain
1	N	1383	C	Sidechain
1	N	1385	G	Sidechain
1	N	1386	G	Sidechain
1	N	1387	G	Sidechain
1	N	139	A	Sidechain
1	N	1392	G	Sidechain
1	N	1394	A	Sidechain
1	N	1395	C	Sidechain
1	N	1397	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1399	C	Sidechain
1	N	14	U	Sidechain
1	N	140	U	Sidechain
1	N	1401	G	Sidechain
1	N	1402	C	Sidechain
1	N	1403	C	Sidechain
1	N	1404	C	Sidechain
1	N	1405	G	Sidechain
1	N	1406	U	Sidechain
1	N	1408	A	Sidechain
1	N	1409	C	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain
1	N	1411	C	Sidechain
1	N	1414	U	Sidechain
1	N	1415	G	Sidechain
1	N	1417	G	Sidechain
1	N	1419	G	Sidechain
1	N	142	G	Sidechain
1	N	1421	G	Sidechain
1	N	1422	G	Sidechain
1	N	1426	G	Sidechain
1	N	1427	C	Sidechain
1	N	1429	A	Sidechain
1	N	143	A	Sidechain
1	N	1431	A	Sidechain
1	N	1433	A	Sidechain
1	N	1434	A	Sidechain
1	N	1435	G	Sidechain
1	N	1437	A	Sidechain
1	N	1439	G	Sidechain
1	N	144	G	Sidechain
1	N	1440	U	Sidechain
1	N	1441	A	Sidechain
1	N	1442	G	Sidechain
1	N	1445	U	Sidechain
1	N	1448	C	Sidechain
1	N	1450	U	Sidechain
1	N	1451	U	Sidechain
1	N	1455	G	Sidechain
1	N	1459	G	Sidechain
1	N	1462	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1467	C	Sidechain
1	N	1468	A	Sidechain
1	N	1469	C	Sidechain
1	N	1472	U	Sidechain
1	N	1475	G	Sidechain
1	N	1478	U	Sidechain
1	N	148	G	Sidechain
1	N	1481	U	Sidechain
1	N	1483	A	Sidechain
1	N	1485	U	Sidechain
1	N	1488	G	Sidechain
1	N	1490	U	Sidechain
1	N	1492	A	Sidechain
1	N	1493	A	Sidechain
1	N	1494	G	Sidechain
1	N	1495	U	Sidechain
1	N	1496	C	Sidechain
1	N	1497	G	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	1509	C	Sidechain
1	N	1510	C	Sidechain
1	N	1511	G	Sidechain
1	N	1512	U	Sidechain
1	N	1514	G	Sidechain
1	N	1515	G	Sidechain
1	N	1516	G	Sidechain
1	N	1517	G	Sidechain
1	N	152	A	Sidechain
1	N	1521	C	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1525	G	Sidechain
1	N	1526	G	Sidechain
1	N	1527	U	Sidechain
1	N	1529	G	Sidechain
1	N	1530	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1532	U	Sidechain
1	N	1533	C	Sidechain
1	N	155	A	Sidechain
1	N	156	C	Sidechain
1	N	157	U	Sidechain
1	N	158	G	Sidechain
1	N	160	A	Sidechain
1	N	161	A	Sidechain
1	N	162	A	Sidechain
1	N	164	G	Sidechain
1	N	165	G	Sidechain
1	N	168	G	Sidechain
1	N	17	U	Sidechain
1	N	170	U	Sidechain
1	N	171	A	Sidechain
1	N	172	A	Sidechain
1	N	175	C	Sidechain
1	N	177	G	Sidechain
1	N	178	C	Sidechain
1	N	179	A	Sidechain
1	N	180	U	Sidechain
1	N	181	A	Sidechain
1	N	184	G	Sidechain
1	N	186	C	Sidechain
1	N	187	G	Sidechain
1	N	19	A	Sidechain
1	N	190	A	Sidechain
1	N	192	A	Sidechain
1	N	194	C	Sidechain
1	N	195	A	Sidechain
1	N	196	A	Sidechain
1	N	199	A	Sidechain
1	N	20	U	Sidechain
1	N	200	G	Sidechain
1	N	201	G	Sidechain
1	N	202	G	Sidechain
1	N	203	G	Sidechain
1	N	206	C	Sidechain
1	N	207	C	Sidechain
1	N	208	U	Sidechain
1	N	21	G	Sidechain
1	N	210	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	213	G	Sidechain
1	N	214	C	Sidechain
1	N	216	U	Sidechain
1	N	218	U	Sidechain
1	N	219	U	Sidechain
1	N	22	G	Sidechain
1	N	220	G	Sidechain
1	N	223	A	Sidechain
1	N	224	U	Sidechain
1	N	227	G	Sidechain
1	N	229	U	Sidechain
1	N	230	G	Sidechain
1	N	233	C	Sidechain
1	N	236	A	Sidechain
1	N	237	G	Sidechain
1	N	238	A	Sidechain
1	N	239	U	Sidechain
1	N	240	G	Sidechain
1	N	241	G	Sidechain
1	N	244	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	253	A	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	256	U	Sidechain
1	N	26	A	Sidechain
1	N	260	G	Sidechain
1	N	261	U	Sidechain
1	N	262	A	Sidechain
1	N	265	G	Sidechain
1	N	266	G	Sidechain
1	N	268	U	Sidechain
1	N	269	C	Sidechain
1	N	27	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	271	C	Sidechain
1	N	272	C	Sidechain
1	N	273	U	Sidechain
1	N	274	A	Sidechain
1	N	275	G	Sidechain
1	N	276	G	Sidechain
1	N	277	C	Sidechain
1	N	278	G	Sidechain
1	N	279	A	Sidechain
1	N	282	A	Sidechain
1	N	283	U	Sidechain
1	N	285	C	Sidechain
1	N	287	U	Sidechain
1	N	288	A	Sidechain
1	N	289	G	Sidechain
1	N	29	U	Sidechain
1	N	291	U	Sidechain
1	N	293	G	Sidechain
1	N	295	C	Sidechain
1	N	296	U	Sidechain
1	N	299	G	Sidechain
1	N	30	U	Sidechain
1	N	300	A	Sidechain
1	N	301	G	Sidechain
1	N	302	G	Sidechain
1	N	304	U	Sidechain
1	N	305	G	Sidechain
1	N	308	C	Sidechain
1	N	31	G	Sidechain
1	N	310	G	Sidechain
1	N	312	C	Sidechain
1	N	313	A	Sidechain
1	N	314	C	Sidechain
1	N	315	A	Sidechain
1	N	316	C	Sidechain
1	N	317	U	Sidechain
1	N	318	G	Sidechain
1	N	32	A	Sidechain
1	N	320	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	324	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	325	A	Sidechain
1	N	326	G	Sidechain
1	N	333	U	Sidechain
1	N	336	A	Sidechain
1	N	337	G	Sidechain
1	N	338	A	Sidechain
1	N	339	C	Sidechain
1	N	34	C	Sidechain
1	N	340	U	Sidechain
1	N	341	C	Sidechain
1	N	342	C	Sidechain
1	N	343	U	Sidechain
1	N	345	C	Sidechain
1	N	346	G	Sidechain
1	N	347	G	Sidechain
1	N	348	G	Sidechain
1	N	349	A	Sidechain
1	N	35	G	Sidechain
1	N	350	G	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain
1	N	355	C	Sidechain
1	N	357	G	Sidechain
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	369	G	Sidechain
1	N	370	C	Sidechain
1	N	371	A	Sidechain
1	N	372	C	Sidechain
1	N	374	A	Sidechain
1	N	375	U	Sidechain
1	N	376	G	Sidechain
1	N	377	G	Sidechain
1	N	378	G	Sidechain
1	N	379	C	Sidechain
1	N	38	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	386	C	Sidechain
1	N	387	U	Sidechain
1	N	389	A	Sidechain
1	N	39	G	Sidechain
1	N	391	G	Sidechain
1	N	392	C	Sidechain
1	N	394	G	Sidechain
1	N	398	U	Sidechain
1	N	400	C	Sidechain
1	N	402	G	Sidechain
1	N	404	G	Sidechain
1	N	405	U	Sidechain
1	N	406	G	Sidechain
1	N	407	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	417	G	Sidechain
1	N	419	C	Sidechain
1	N	42	G	Sidechain
1	N	420	U	Sidechain
1	N	421	U	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	429	U	Sidechain
1	N	430	A	Sidechain
1	N	431	A	Sidechain
1	N	432	A	Sidechain
1	N	433	G	Sidechain
1	N	435	A	Sidechain
1	N	437	U	Sidechain
1	N	441	A	Sidechain
1	N	443	C	Sidechain
1	N	445	G	Sidechain
1	N	447	G	Sidechain
1	N	449	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	450	G	Sidechain
1	N	452	A	Sidechain
1	N	453	G	Sidechain
1	N	456	A	Sidechain
1	N	457	G	Sidechain
1	N	458	U	Sidechain
1	N	459	A	Sidechain
1	N	46	G	Sidechain
1	N	460	A	Sidechain
1	N	461	A	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	465	A	Sidechain
1	N	468	A	Sidechain
1	N	469	C	Sidechain
1	N	470	C	Sidechain
1	N	472	U	Sidechain
1	N	473	U	Sidechain
1	N	474	G	Sidechain
1	N	475	C	Sidechain
1	N	477	C	Sidechain
1	N	479	U	Sidechain
1	N	48	C	Sidechain
1	N	480	U	Sidechain
1	N	481	G	Sidechain
1	N	482	A	Sidechain
1	N	483	C	Sidechain
1	N	485	U	Sidechain
1	N	486	U	Sidechain
1	N	488	C	Sidechain
1	N	490	C	Sidechain
1	N	491	G	Sidechain
1	N	494	G	Sidechain
1	N	497	G	Sidechain
1	N	498	A	Sidechain
1	N	499	A	Sidechain
1	N	5	U	Sidechain
1	N	50	A	Sidechain
1	N	501	C	Sidechain
1	N	502	A	Sidechain
1	N	503	C	Sidechain
1	N	504	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	506	G	Sidechain
1	N	508	U	Sidechain
1	N	51	A	Sidechain
1	N	510	A	Sidechain
1	N	514	C	Sidechain
1	N	515	G	Sidechain
1	N	516	U	Sidechain
1	N	517	G	Sidechain
1	N	519	C	Sidechain
1	N	52	C	Sidechain
1	N	524	G	Sidechain
1	N	525	C	Sidechain
1	N	526	C	Sidechain
1	N	527	G	Sidechain
1	N	529	G	Sidechain
1	N	53	A	Sidechain
1	N	530	G	Sidechain
1	N	531	U	Sidechain
1	N	532	A	Sidechain
1	N	534	U	Sidechain
1	N	536	C	Sidechain
1	N	538	G	Sidechain
1	N	539	A	Sidechain
1	N	541	G	Sidechain
1	N	542	G	Sidechain
1	N	544	G	Sidechain
1	N	547	A	Sidechain
1	N	548	G	Sidechain
1	N	550	G	Sidechain
1	N	556	C	Sidechain
1	N	558	G	Sidechain
1	N	559	A	Sidechain
1	N	56	U	Sidechain
1	N	561	U	Sidechain
1	N	562	U	Sidechain
1	N	563	A	Sidechain
1	N	565	U	Sidechain
1	N	566	G	Sidechain
1	N	570	G	Sidechain
1	N	571	U	Sidechain
1	N	572	A	Sidechain
1	N	573	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	575	G	Sidechain
1	N	578	C	Sidechain
1	N	579	A	Sidechain
1	N	58	C	Sidechain
1	N	581	G	Sidechain
1	N	582	C	Sidechain
1	N	583	A	Sidechain
1	N	584	G	Sidechain
1	N	586	C	Sidechain
1	N	587	G	Sidechain
1	N	590	U	Sidechain
1	N	594	U	Sidechain
1	N	595	A	Sidechain
1	N	598	U	Sidechain
1	N	599	C	Sidechain
1	N	6	G	Sidechain
1	N	601	G	Sidechain
1	N	602	A	Sidechain
1	N	604	G	Sidechain
1	N	605	U	Sidechain
1	N	606	G	Sidechain
1	N	609	A	Sidechain
1	N	61	G	Sidechain
1	N	611	C	Sidechain
1	N	613	C	Sidechain
1	N	614	C	Sidechain
1	N	615	G	Sidechain
1	N	616	G	Sidechain
1	N	617	G	Sidechain
1	N	618	C	Sidechain
1	N	619	U	Sidechain
1	N	62	U	Sidechain
1	N	620	C	Sidechain
1	N	621	A	Sidechain
1	N	626	G	Sidechain
1	N	627	G	Sidechain
1	N	628	G	Sidechain
1	N	629	A	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	634	C	Sidechain
1	N	636	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	64	G	Sidechain
1	N	640	A	Sidechain
1	N	645	G	Sidechain
1	N	646	G	Sidechain
1	N	648	A	Sidechain
1	N	65	A	Sidechain
1	N	651	C	Sidechain
1	N	652	U	Sidechain
1	N	654	G	Sidechain
1	N	655	A	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	664	G	Sidechain
1	N	665	A	Sidechain
1	N	666	G	Sidechain
1	N	667	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	670	G	Sidechain
1	N	671	G	Sidechain
1	N	673	A	Sidechain
1	N	674	G	Sidechain
1	N	676	A	Sidechain
1	N	678	U	Sidechain
1	N	68	G	Sidechain
1	N	680	C	Sidechain
1	N	682	G	Sidechain
1	N	683	G	Sidechain
1	N	684	U	Sidechain
1	N	685	G	Sidechain
1	N	687	A	Sidechain
1	N	688	G	Sidechain
1	N	69	G	Sidechain
1	N	693	G	Sidechain
1	N	695	A	Sidechain
1	N	698	G	Sidechain
1	N	7	A	Sidechain
1	N	700	G	Sidechain
1	N	701	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	702	A	Sidechain
1	N	703	G	Sidechain
1	N	704	A	Sidechain
1	N	705	G	Sidechain
1	N	708	C	Sidechain
1	N	709	U	Sidechain
1	N	71	A	Sidechain
1	N	710	G	Sidechain
1	N	711	G	Sidechain
1	N	713	G	Sidechain
1	N	714	G	Sidechain
1	N	716	A	Sidechain
1	N	717	U	Sidechain
1	N	719	C	Sidechain
1	N	72	A	Sidechain
1	N	721	G	Sidechain
1	N	722	G	Sidechain
1	N	723	U	Sidechain
1	N	724	G	Sidechain
1	N	725	G	Sidechain
1	N	726	C	Sidechain
1	N	728	A	Sidechain
1	N	729	A	Sidechain
1	N	73	C	Sidechain
1	N	730	G	Sidechain
1	N	731	G	Sidechain
1	N	733	G	Sidechain
1	N	735	C	Sidechain
1	N	736	C	Sidechain
1	N	737	C	Sidechain
1	N	738	C	Sidechain
1	N	739	C	Sidechain
1	N	74	A	Sidechain
1	N	740	U	Sidechain
1	N	741	G	Sidechain
1	N	745	G	Sidechain
1	N	748	G	Sidechain
1	N	749	A	Sidechain
1	N	75	G	Sidechain
1	N	750	C	Sidechain
1	N	753	A	Sidechain
1	N	755	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	757	U	Sidechain
1	N	760	G	Sidechain
1	N	762	U	Sidechain
1	N	763	G	Sidechain
1	N	765	G	Sidechain
1	N	767	A	Sidechain
1	N	768	A	Sidechain
1	N	769	G	Sidechain
1	N	77	A	Sidechain
1	N	771	G	Sidechain
1	N	772	U	Sidechain
1	N	773	G	Sidechain
1	N	774	G	Sidechain
1	N	775	G	Sidechain
1	N	776	G	Sidechain
1	N	777	A	Sidechain
1	N	779	C	Sidechain
1	N	78	A	Sidechain
1	N	780	A	Sidechain
1	N	782	A	Sidechain
1	N	783	C	Sidechain
1	N	784	A	Sidechain
1	N	785	G	Sidechain
1	N	786	G	Sidechain
1	N	788	U	Sidechain
1	N	79	G	Sidechain
1	N	790	A	Sidechain
1	N	791	G	Sidechain
1	N	792	A	Sidechain
1	N	794	A	Sidechain
1	N	795	C	Sidechain
1	N	796	C	Sidechain
1	N	799	G	Sidechain
1	N	8	A	Sidechain
1	N	80	A	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	807	A	Sidechain
1	N	808	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	809	G	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	818	G	Sidechain
1	N	82	G	Sidechain
1	N	820	U	Sidechain
1	N	821	G	Sidechain
1	N	822	U	Sidechain
1	N	824	G	Sidechain
1	N	828	U	Sidechain
1	N	829	G	Sidechain
1	N	83	C	Sidechain
1	N	830	G	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	84	U	Sidechain
1	N	840	C	Sidechain
1	N	841	C	Sidechain
1	N	842	U	Sidechain
1	N	845	A	Sidechain
1	N	846	G	Sidechain
1	N	849	G	Sidechain
1	N	85	U	Sidechain
1	N	851	G	Sidechain
1	N	852	G	Sidechain
1	N	853	C	Sidechain
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	864	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	865	A	Sidechain
1	N	866	C	Sidechain
1	N	867	G	Sidechain
1	N	868	C	Sidechain
1	N	869	G	Sidechain
1	N	87	C	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	877	G	Sidechain
1	N	879	C	Sidechain
1	N	881	G	Sidechain
1	N	884	U	Sidechain
1	N	886	G	Sidechain
1	N	887	G	Sidechain
1	N	888	G	Sidechain
1	N	891	U	Sidechain
1	N	892	A	Sidechain
1	N	894	G	Sidechain
1	N	895	G	Sidechain
1	N	896	C	Sidechain
1	N	899	C	Sidechain
1	N	9	G	Sidechain
1	N	900	A	Sidechain
1	N	901	A	Sidechain
1	N	902	G	Sidechain
1	N	904	U	Sidechain
1	N	905	U	Sidechain
1	N	908	A	Sidechain
1	N	91	U	Sidechain
1	N	911	U	Sidechain
1	N	913	A	Sidechain
1	N	914	A	Sidechain
1	N	915	A	Sidechain
1	N	916	U	Sidechain
1	N	917	G	Sidechain
1	N	918	A	Sidechain
1	N	919	A	Sidechain
1	N	92	U	Sidechain
1	N	920	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	923	A	Sidechain
1	N	925	G	Sidechain
1	N	928	G	Sidechain
1	N	929	G	Sidechain
1	N	93	U	Sidechain
1	N	933	G	Sidechain
1	N	934	C	Sidechain
1	N	937	A	Sidechain
1	N	938	A	Sidechain
1	N	939	G	Sidechain
1	N	94	G	Sidechain
1	N	940	C	Sidechain
1	N	941	G	Sidechain
1	N	943	U	Sidechain
1	N	944	G	Sidechain
1	N	946	A	Sidechain
1	N	947	G	Sidechain
1	N	948	C	Sidechain
1	N	949	A	Sidechain
1	N	951	G	Sidechain
1	N	953	G	Sidechain
1	N	954	G	Sidechain
1	N	958	A	Sidechain
1	N	959	A	Sidechain
1	N	960	U	Sidechain
1	N	961	U	Sidechain
1	N	962	C	Sidechain
1	N	965	U	Sidechain
1	N	969	A	Sidechain
1	N	97	G	Sidechain
1	N	970	C	Sidechain
1	N	973	G	Sidechain
1	N	974	A	Sidechain
1	N	976	G	Sidechain
1	N	977	A	Sidechain
1	N	978	A	Sidechain
1	N	981	U	Sidechain
1	N	982	U	Sidechain
1	N	983	A	Sidechain
1	N	985	C	Sidechain
1	N	987	G	Sidechain
1	N	988	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	990	C	Sidechain
1	N	991	U	Sidechain
1	N	992	U	Sidechain
1	N	994	A	Sidechain
1	N	995	C	Sidechain
1	N	996	A	Sidechain
1	N	997	U	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	N	32892	16554	16526	428	0
All	All	32892	16554	16526	428	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 9.

All (428) 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:203:G:H22	1:N:206:C:H41	1.34	0.73
1:N:594:U:C4	1:N:595:A:C6	2.77	0.73
1:N:67:C:H2'	1:N:68:G:C8	2.25	0.72
1:N:664:G:H22	1:N:741:G:H1	1.39	0.70
1:N:780:A:C2	1:N:801:U:C5	2.80	0.70
1:N:94:G:H4'	1:N:95:C:H5''	1.73	0.69
1:N:50:A:H1'	1:N:52:C:C6	2.29	0.68
1:N:169:C:C4	1:N:170:U:C4	2.82	0.68
1:N:65:A:H2'	1:N:381:C:C4	2.30	0.67
1:N:858:G:H1	1:N:869:G:H2'	1.61	0.66
1:N:596:A:H61	1:N:644:U:H3	1.44	0.64
1:N:1011:C:C2	1:N:1019:A:C2	2.86	0.63
1:N:80:A:C4	1:N:81:A:H1'	2.33	0.63
1:N:581:G:C5	1:N:758:C:C5	2.87	0.63
1:N:795:C:C5	1:N:796:C:C4	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:272:C:C4	1:N:273:U:C4	2.87	0.63
1:N:668:G:C6	1:N:669:G:C6	2.87	0.63
1:N:171:A:C5	1:N:172:A:C6	2.87	0.62
1:N:840:C:H1'	1:N:843:U:H3	1.64	0.62
1:N:79:G:H2'	1:N:80:A:C8	2.35	0.61
1:N:1255:G:H2'	1:N:1279:G:H1	1.66	0.61
1:N:283:U:C5	1:N:284:C:C5	2.88	0.61
1:N:934:C:C2	1:N:1344:C:C4	2.89	0.61
1:N:338:A:H61	1:N:351:G:H1	1.48	0.60
1:N:947:G:H1'	1:N:1332:A:H62	1.65	0.60
1:N:998:C:H42	1:N:1042:A:H61	1.47	0.60
1:N:372:C:H4'	1:N:373:A:OP1	2.00	0.60
1:N:141:G:H21	1:N:182:A:H61	1.49	0.60
1:N:32:A:H4'	1:N:48:C:H42	1.67	0.59
1:N:673:A:H61	1:N:717:U:H3	1.51	0.58
1:N:803:G:C5	1:N:804:U:C5	2.91	0.58
1:N:755:G:C6	1:N:756:C:C4	2.91	0.58
1:N:1090:U:H2'	1:N:1091:U:C6	2.38	0.58
1:N:1423:G:C6	1:N:1424:U:C4	2.92	0.58
1:N:19:A:C2	1:N:917:G:C5	2.92	0.58
1:N:69:G:H2'	1:N:70:U:C6	2.39	0.58
1:N:1266:G:H21	1:N:1269:A:H8	1.45	0.57
1:N:120:A:C2	1:N:122:G:C6	2.92	0.57
1:N:669:G:C6	1:N:670:G:C6	2.92	0.57
1:N:655:A:C6	1:N:656:G:C5	2.92	0.57
1:N:352:C:H1'	1:N:355:C:H41	1.70	0.57
1:N:1301:U:H2'	1:N:1303:C:C5	2.40	0.57
1:N:668:G:C5	1:N:669:G:C5	2.93	0.57
1:N:859:G:C6	1:N:860:A:C6	2.93	0.57
1:N:1004:A:H5'	1:N:1024:G:H22	1.70	0.57
1:N:1142:G:C2	1:N:1143:G:H1'	2.40	0.57
1:N:1225:A:H2'	1:N:1226:C:C6	2.40	0.57
1:N:78:A:C6	1:N:79:G:C6	2.93	0.56
1:N:171:A:H2'	1:N:172:A:C8	2.39	0.56
1:N:718:A:H3'	1:N:719:C:C6	2.40	0.56
1:N:198:G:C6	1:N:220:G:C4	2.94	0.56
1:N:1055:A:C6	1:N:1206:G:C5	2.94	0.56
1:N:1385:G:C6	1:N:1386:G:C6	2.92	0.56
1:N:507:C:H3'	1:N:508:U:H5''	1.88	0.56
1:N:1500:A:C6	1:N:1501:C:C5	2.94	0.56
1:N:949:A:H61	1:N:1232:U:H3	1.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1023:U:H2'	1:N:1024:G:C8	2.41	0.56
1:N:1240:U:C6	1:N:1241:G:H5'	2.41	0.56
1:N:1038:C:H2'	1:N:1039:G:C8	2.41	0.55
1:N:749:A:C2	1:N:750:C:C2	2.95	0.55
1:N:1316:G:C2	1:N:1319:A:C8	2.94	0.55
1:N:985:C:C4	1:N:986:U:C4	2.95	0.55
1:N:904:U:C4	1:N:905:U:C4	2.94	0.55
1:N:301:G:C4	1:N:302:G:C8	2.95	0.55
1:N:73:C:C6	1:N:73:C:H5''	2.42	0.55
1:N:946:A:H2'	1:N:947:G:C8	2.42	0.54
1:N:1483:A:C8	1:N:1484:C:C6	2.95	0.54
1:N:1072:G:C2	1:N:1104:G:C2	2.96	0.54
1:N:1177:G:C6	1:N:1178:G:C2	2.96	0.54
1:N:1240:U:C2	1:N:1240:U:OP1	2.61	0.54
1:N:1272:G:C6	1:N:1273:C:C5	2.95	0.54
1:N:273:U:C4	1:N:274:A:C6	2.96	0.54
1:N:1239:A:H4'	1:N:1240:U:OP1	2.07	0.54
1:N:307:C:C5	1:N:308:C:C5	2.95	0.54
1:N:384:G:C6	1:N:385:C:C4	2.97	0.53
1:N:1071:C:H2'	1:N:1072:G:C8	2.43	0.53
1:N:1075:U:C4	1:N:1076:U:C4	2.96	0.53
1:N:665:A:C8	1:N:733:G:C2	2.97	0.53
1:N:197:A:H2	1:N:198:G:C4	2.26	0.53
1:N:17:U:H2'	1:N:18:C:C6	2.44	0.53
1:N:339:C:C4	1:N:340:U:C4	2.97	0.52
1:N:425:G:C6	1:N:426:U:N3	2.77	0.52
1:N:474:G:C5	1:N:475:C:C4	2.98	0.52
1:N:184:G:C8	1:N:224:U:H4'	2.44	0.52
1:N:342:C:C4	1:N:343:U:C4	2.98	0.52
1:N:1511:G:C6	1:N:1525:G:C6	2.97	0.52
1:N:232:G:C6	1:N:233:C:C4	2.97	0.52
1:N:581:G:C6	1:N:758:C:C5	2.98	0.52
1:N:1218:C:H2'	1:N:1219:A:C8	2.45	0.52
1:N:581:G:C6	1:N:758:C:C6	2.97	0.52
1:N:595:A:H4'	1:N:596:A:H5'	1.92	0.52
1:N:1225:A:H2'	1:N:1226:C:C5	2.45	0.52
1:N:349:A:H2'	1:N:350:G:C8	2.45	0.52
1:N:50:A:C2	1:N:52:C:N3	2.78	0.51
1:N:946:A:C2	1:N:1236:A:C2	2.98	0.51
1:N:1258:G:H2'	1:N:1259:C:C6	2.45	0.51
1:N:1419:G:C6	1:N:1420:U:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:782:A:C6	1:N:783:C:C2	2.99	0.51
1:N:1305:G:H22	1:N:1331:G:H2'	1.74	0.51
1:N:62:U:H4'	1:N:384:G:H21	1.76	0.51
1:N:109:A:C5	1:N:326:G:C5	2.98	0.51
1:N:1433:A:C1'	1:N:1468:A:C2	2.93	0.51
1:N:139:A:C6	1:N:140:U:C4	2.98	0.51
1:N:381:C:C5	1:N:382:A:C5	2.97	0.51
1:N:438:U:C5	1:N:494:G:C8	2.98	0.51
1:N:506:G:C5	1:N:507:C:C4	2.98	0.51
1:N:512:U:H5''	1:N:512:U:H6	1.75	0.51
1:N:723:U:H3	1:N:832:G:N2	2.08	0.51
1:N:811:C:H2'	1:N:812:G:H5'	1.92	0.51
1:N:582:C:N3	1:N:760:G:C6	2.79	0.51
1:N:771:G:C6	1:N:772:U:N3	2.78	0.51
1:N:840:C:C1'	1:N:843:U:H3	2.23	0.51
1:N:1239:A:C5	1:N:1241:G:C2	2.98	0.51
1:N:496:A:C2	1:N:497:G:C5	2.99	0.51
1:N:1170:A:C5	1:N:1171:A:C4	2.98	0.51
1:N:1343:G:C5	1:N:1344:C:C4	2.99	0.51
1:N:1415:G:C2	1:N:1416:G:C5	2.99	0.51
1:N:1483:A:C8	1:N:1484:C:C5	2.99	0.51
1:N:171:A:C6	1:N:172:A:C6	2.99	0.51
1:N:856:C:OP2	1:N:871:U:C6	2.64	0.51
1:N:932:C:H2'	1:N:933:G:C8	2.46	0.51
1:N:978:A:C8	1:N:979:C:C5	2.99	0.51
1:N:1102:A:C2	1:N:1103:C:C2	2.99	0.51
1:N:1123:U:H3	1:N:1150:A:H61	1.59	0.50
1:N:1282:C:H2'	1:N:1283:U:C6	2.47	0.50
1:N:677:U:C4	1:N:678:U:C4	3.00	0.50
1:N:116:A:H61	1:N:313:A:H1'	1.77	0.50
1:N:701:U:H5''	1:N:703:G:H5'	1.93	0.50
1:N:738:C:C4	1:N:739:C:C4	3.00	0.50
1:N:1006:G:N2	1:N:1024:G:H1'	2.26	0.50
1:N:1241:G:C8	1:N:1241:G:O5'	2.64	0.50
1:N:482:A:C6	1:N:483:C:C2	2.99	0.50
1:N:344:A:H4'	1:N:345:C:OP2	2.11	0.50
1:N:424:G:C6	1:N:425:G:C6	2.99	0.50
1:N:1255:G:H3'	1:N:1279:G:H22	1.77	0.50
1:N:1391:U:H2'	1:N:1392:G:C8	2.47	0.50
1:N:1530:G:C4	1:N:1531:A:C2	2.99	0.50
1:N:1104:G:C6	1:N:1105:A:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1213:A:H2'	1:N:1215:G:C8	2.47	0.50
1:N:1357:A:C4	1:N:1358:U:C2	2.99	0.50
1:N:39:G:C2	1:N:498:A:H2	2.30	0.49
1:N:102:G:C6	1:N:103:U:C4	3.00	0.49
1:N:209:U:C4	1:N:211:G:N1	2.80	0.49
1:N:218:U:C4	1:N:219:U:N3	2.80	0.49
1:N:64:G:N2	1:N:69:G:C5	2.80	0.49
1:N:216:U:H4'	1:N:464:U:H4'	1.94	0.49
1:N:413:G:H4'	1:N:428:G:N2	2.27	0.49
1:N:478:A:C6	1:N:479:U:C5	3.00	0.49
1:N:1315:U:C4	1:N:1316:G:C6	3.00	0.49
1:N:955:U:H3	1:N:1225:A:H2	1.55	0.49
1:N:1523:G:C6	1:N:1524:C:C4	3.00	0.49
1:N:381:C:C5	1:N:382:A:C6	3.00	0.49
1:N:1433:A:C6	1:N:1434:A:C6	3.00	0.49
1:N:232:G:C5	1:N:233:C:C5	3.01	0.49
1:N:354:G:C6	1:N:355:C:C4	3.00	0.49
1:N:207:C:H2'	1:N:208:U:C5	2.48	0.49
1:N:297:G:C2	1:N:301:G:C6	3.01	0.48
1:N:803:G:C4	1:N:804:U:C6	3.01	0.48
1:N:542:G:C6	1:N:543:U:C4	3.01	0.48
1:N:1357:A:C5	1:N:1358:U:N3	2.81	0.48
1:N:524:G:C2	1:N:525:C:C2	3.00	0.48
1:N:584:G:C6	1:N:585:G:C6	3.02	0.48
1:N:604:G:C6	1:N:605:U:N3	2.81	0.48
1:N:1287:A:H2'	1:N:1288:A:C8	2.48	0.48
1:N:68:G:C4	1:N:69:G:H1'	2.48	0.48
1:N:141:G:C6	1:N:223:A:C6	3.01	0.48
1:N:291:U:H3	1:N:309:A:H61	1.61	0.48
1:N:595:A:C2	1:N:596:A:N6	2.81	0.48
1:N:596:A:N6	1:N:644:U:H3	2.11	0.48
1:N:976:G:H1	1:N:1362:A:H3'	1.78	0.48
1:N:62:U:N3	1:N:63:C:C4	2.82	0.48
1:N:474:G:C6	1:N:475:C:N3	2.81	0.48
1:N:503:C:O2	1:N:510:A:C2	2.66	0.48
1:N:635:A:C2	1:N:636:U:C2	3.01	0.48
1:N:1032:G:C2	1:N:1033:G:C8	3.01	0.48
1:N:1072:G:C2	1:N:1073:U:C2	3.01	0.48
1:N:19:A:C2	1:N:917:G:C6	3.01	0.48
1:N:208:U:C2	1:N:209:U:C5	3.02	0.48
1:N:772:U:H3'	1:N:772:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1148:U:N3	1:N:1149:C:C2	2.82	0.47
1:N:872:A:C5	1:N:874:G:C8	3.02	0.47
1:N:1083:U:C5	1:N:1084:G:C6	3.02	0.47
1:N:1116:U:N3	1:N:1185:G:C6	2.82	0.47
1:N:1266:G:N2	1:N:1269:A:H8	2.10	0.47
1:N:94:G:H4'	1:N:95:C:C5'	2.42	0.47
1:N:207:C:H2'	1:N:208:U:C2	2.50	0.47
1:N:384:G:C2	1:N:385:C:C2	3.03	0.47
1:N:780:A:H2'	1:N:800:G:N1	2.29	0.47
1:N:1266:G:N2	1:N:1269:A:C8	2.74	0.47
1:N:171:A:C6	1:N:172:A:N1	2.82	0.47
1:N:172:A:C8	1:N:174:A:C8	3.01	0.47
1:N:978:A:C4	1:N:1319:A:C2	3.03	0.47
1:N:1365:G:C6	1:N:1366:C:C4	3.02	0.47
1:N:301:G:C2	1:N:302:G:C4	3.02	0.47
1:N:582:C:C2	1:N:760:G:C6	3.02	0.47
1:N:1066:C:H3'	1:N:1067:A:C8	2.49	0.47
1:N:958:A:C2	1:N:959:A:C2	3.03	0.47
1:N:669:G:H2'	1:N:670:G:O4'	2.15	0.47
1:N:557:G:N1	1:N:558:G:C2	2.83	0.47
1:N:558:G:H2'	1:N:559:A:C2	2.50	0.47
1:N:838:G:C6	1:N:849:G:C5	3.02	0.47
1:N:1256:A:C2	1:N:1258:G:C6	3.03	0.47
1:N:296:U:H2'	1:N:297:G:C8	2.51	0.46
1:N:402:G:H1'	1:N:620:C:H42	1.79	0.46
1:N:495:A:H1'	1:N:496:A:C5	2.49	0.46
1:N:651:C:C4	1:N:652:U:C4	3.03	0.46
1:N:760:G:C6	1:N:761:G:C4	3.03	0.46
1:N:1255:G:C6	1:N:1279:G:C5	3.03	0.46
1:N:1380:U:H5'	1:N:1381:U:OP1	2.15	0.46
1:N:410:G:H2'	1:N:429:U:C5	2.50	0.46
1:N:152:A:C8	1:N:153:C:C6	3.03	0.46
1:N:557:G:C2	1:N:558:G:C2	3.03	0.46
1:N:1075:U:C5	1:N:1076:U:C5	3.04	0.46
1:N:301:G:C6	1:N:302:G:C6	3.03	0.46
1:N:1366:C:C4	1:N:1367:C:C4	3.02	0.46
1:N:1383:C:C4	1:N:1384:C:C4	3.03	0.46
1:N:383:A:OP1	1:N:455:G:H4'	2.16	0.46
1:N:780:A:H4'	1:N:1523:G:H5''	1.96	0.46
1:N:33:A:N7	1:N:398:U:H4'	2.31	0.46
1:N:895:G:N7	1:N:896:C:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1001:C:H2'	1:N:1002:G:C8	2.51	0.46
1:N:1024:G:C6	1:N:1025:U:C5	3.04	0.46
1:N:714:G:H2'	1:N:715:A:C8	2.51	0.46
1:N:1055:A:C6	1:N:1206:G:C6	3.03	0.46
1:N:1287:A:C6	1:N:1288:A:C6	3.04	0.46
1:N:150:U:C4	1:N:170:U:C4	3.04	0.46
1:N:1244:G:C6	1:N:1245:C:C4	3.04	0.46
1:N:1383:C:C2	1:N:1384:C:C6	3.04	0.46
1:N:1434:A:C5	1:N:1435:G:C5	3.04	0.46
1:N:240:G:C6	1:N:241:G:C6	3.04	0.45
1:N:355:C:H2'	1:N:356:A:C8	2.51	0.45
1:N:515:G:C6	1:N:537:G:C6	3.04	0.45
1:N:323:U:C4	1:N:324:G:C5	3.04	0.45
1:N:713:G:C5	1:N:714:G:C6	3.05	0.45
1:N:717:U:H2'	1:N:734:G:C8	2.51	0.45
1:N:830:G:N1	1:N:857:C:C2	2.83	0.45
1:N:92:U:H2'	1:N:93:U:C6	2.51	0.45
1:N:100:G:C6	1:N:101:A:C6	3.05	0.45
1:N:941:G:N1	1:N:1343:G:C6	2.85	0.45
1:N:36:C:C4	1:N:37:U:C5	3.04	0.45
1:N:482:A:C5	1:N:483:C:C2	3.04	0.45
1:N:806:C:H2'	1:N:807:A:C8	2.51	0.45
1:N:934:C:C5	1:N:1344:C:H2'	2.51	0.45
1:N:1128:C:N3	1:N:1145:A:C2	2.85	0.45
1:N:1501:C:C5	1:N:1504:G:C4	3.04	0.45
1:N:756:C:C4	1:N:757:U:C4	3.05	0.45
1:N:585:G:C6	1:N:586:C:N3	2.84	0.45
1:N:782:A:N7	1:N:783:C:C4	2.85	0.45
1:N:1479:C:H2'	1:N:1480:A:C8	2.52	0.45
1:N:509:A:H2'	1:N:510:A:C4	2.51	0.45
1:N:673:A:C6	1:N:674:G:C6	3.05	0.45
1:N:961:U:H2'	1:N:962:C:C6	2.51	0.45
1:N:338:A:C8	1:N:339:C:C5	3.05	0.45
1:N:604:G:C5	1:N:605:U:C4	3.05	0.45
1:N:160:A:H2'	1:N:161:A:C8	2.51	0.44
1:N:756:C:C2	1:N:757:U:C6	3.06	0.44
1:N:1433:A:C8	1:N:1468:A:C6	3.04	0.44
1:N:738:C:H2'	1:N:739:C:C6	2.52	0.44
1:N:949:A:N6	1:N:1232:U:H3	2.15	0.44
1:N:1321:U:H2'	1:N:1322:C:H2'	1.99	0.44
1:N:1350:A:N1	1:N:1373:G:C2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:354:G:N1	1:N:355:C:C2	2.85	0.44
1:N:760:G:C4	1:N:761:G:C8	3.05	0.44
1:N:1135:U:H3	1:N:1138:G:H22	1.64	0.44
1:N:216:U:H2'	1:N:217:C:C6	2.52	0.44
1:N:228:A:C6	1:N:229:U:C2	3.06	0.44
1:N:124:C:C2	1:N:238:A:C2	3.06	0.44
1:N:465:A:C6	1:N:466:A:C6	3.06	0.44
1:N:794:A:C8	1:N:795:C:C6	3.05	0.44
1:N:809:G:H22	1:N:899:C:N4	2.16	0.44
1:N:1104:G:C6	1:N:1105:A:C5	3.06	0.44
1:N:1484:C:C4	1:N:1485:U:N3	2.86	0.44
1:N:25:C:H41	1:N:559:A:N6	2.16	0.44
1:N:255:G:C4	1:N:256:U:C6	3.06	0.44
1:N:39:G:C8	1:N:498:A:H1'	2.52	0.44
1:N:688:G:C6	1:N:700:G:C6	3.06	0.44
1:N:1224:U:H5	1:N:1322:C:C5	2.36	0.44
1:N:78:A:C6	1:N:79:G:N1	2.86	0.44
1:N:668:G:C6	1:N:669:G:C5	3.05	0.44
1:N:679:C:H2'	1:N:680:C:O4'	2.18	0.44
1:N:72:A:C4	1:N:73:C:C6	3.06	0.44
1:N:25:C:H41	1:N:559:A:H61	1.65	0.43
1:N:57:G:C6	1:N:356:A:N1	2.86	0.43
1:N:409:U:H2'	1:N:410:G:C8	2.53	0.43
1:N:1163:A:C2	1:N:1164:G:C4	3.06	0.43
1:N:168:G:C6	1:N:169:C:C5	3.06	0.43
1:N:496:A:N1	1:N:497:G:C6	2.87	0.43
1:N:628:G:C4	1:N:629:A:C8	3.05	0.43
1:N:275:G:C8	1:N:275:G:H5''	2.54	0.43
1:N:405:U:H5'	1:N:495:A:C2	2.54	0.43
1:N:579:A:C6	1:N:763:G:C6	3.06	0.43
1:N:197:A:C2	1:N:220:G:N3	2.87	0.43
1:N:243:A:H61	1:N:281:G:H1'	1.84	0.43
1:N:1041:G:C6	1:N:1042:A:C6	3.07	0.43
1:N:406:G:C6	1:N:407:U:C4	3.06	0.43
1:N:585:G:C2	1:N:586:C:C2	3.06	0.43
1:N:991:U:H4'	1:N:992:U:OP1	2.19	0.43
1:N:1315:U:H2'	1:N:1316:G:C8	2.53	0.43
1:N:65:A:H62	1:N:469:C:H2'	1.82	0.43
1:N:339:C:H2'	1:N:340:U:C6	2.53	0.43
1:N:417:G:C5	1:N:418:C:C4	3.06	0.43
1:N:585:G:H2'	1:N:586:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:895:G:C6	1:N:896:C:C4	3.07	0.43
1:N:1004:A:C5'	1:N:1024:G:H22	2.32	0.43
1:N:1177:G:H3'	1:N:1178:G:C8	2.53	0.43
1:N:1423:G:C5	1:N:1424:U:C4	3.07	0.43
1:N:410:G:H2'	1:N:429:U:C4	2.54	0.43
1:N:473:U:N3	1:N:474:G:C6	2.86	0.43
1:N:669:G:C6	1:N:670:G:C5	3.07	0.43
1:N:687:A:C2	1:N:704:A:C6	3.06	0.43
1:N:929:G:C6	1:N:930:C:C4	3.06	0.43
1:N:1095:U:H2'	1:N:1096:C:O4'	2.18	0.43
1:N:1501:C:H5	1:N:1504:G:HO2'	1.65	0.43
1:N:145:G:C2	1:N:178:C:C2	3.07	0.42
1:N:208:U:C2	1:N:209:U:C4	3.07	0.42
1:N:272:C:H2'	1:N:273:U:O4'	2.18	0.42
1:N:1306:A:N6	1:N:1331:G:H1'	2.33	0.42
1:N:513:C:H2'	1:N:514:C:C6	2.54	0.42
1:N:1256:A:N7	1:N:1279:G:C6	2.87	0.42
1:N:525:C:H2'	1:N:526:C:C6	2.54	0.42
1:N:594:U:C4	1:N:595:A:N6	2.87	0.42
1:N:804:U:C5	1:N:805:C:C5	3.07	0.42
1:N:39:G:H1'	1:N:497:G:H21	1.85	0.42
1:N:42:G:C8	1:N:42:G:H3'	2.54	0.42
1:N:257:G:C2	1:N:258:G:C4	3.08	0.42
1:N:301:G:C6	1:N:302:G:C5	3.07	0.42
1:N:998:C:C5	1:N:999:C:C5	3.07	0.42
1:N:1244:G:C6	1:N:1294:G:C6	3.07	0.42
1:N:98:A:H2'	1:N:99:C:O4'	2.19	0.42
1:N:198:G:C6	1:N:199:A:C6	3.07	0.42
1:N:580:C:H42	1:N:762:U:H3	1.68	0.42
1:N:663:A:H2	1:N:742:G:H22	1.67	0.42
1:N:807:A:C2	1:N:808:C:C2	3.08	0.42
1:N:39:G:N7	1:N:547:A:C8	2.87	0.42
1:N:76:G:H2'	1:N:76:G:N3	2.35	0.42
1:N:908:A:C2	1:N:909:A:C4	3.07	0.42
1:N:1006:G:C6	1:N:1007:U:C4	3.08	0.42
1:N:584:G:C6	1:N:585:G:C5	3.07	0.42
1:N:778:G:O6	1:N:805:C:C2	2.72	0.42
1:N:920:U:C4	1:N:921:U:C4	3.08	0.42
1:N:982:U:H4'	1:N:983:A:O5'	2.20	0.42
1:N:243:A:H4'	1:N:244:U:H5''	2.02	0.42
1:N:342:C:C2	1:N:343:U:N1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:525:C:C4	1:N:526:C:C4	3.08	0.42
1:N:1043:G:H2'	1:N:1044:A:C8	2.54	0.42
1:N:1072:G:C6	1:N:1073:U:N3	2.88	0.42
1:N:1349:A:N1	1:N:1374:A:H1'	2.34	0.42
1:N:1509:C:H2'	1:N:1510:C:C6	2.55	0.42
1:N:299:G:C6	1:N:300:A:C6	3.08	0.42
1:N:582:C:N3	1:N:760:G:C5	2.88	0.42
1:N:852:G:C6	1:N:853:C:N3	2.88	0.42
1:N:1062:U:H2'	1:N:1063:C:C6	2.54	0.42
1:N:1127:G:H21	1:N:1148:U:H3	1.66	0.42
1:N:1436:U:H2'	1:N:1437:A:C8	2.54	0.42
1:N:323:U:H2'	1:N:324:G:O4'	2.20	0.41
1:N:954:G:C6	1:N:955:U:C4	3.08	0.41
1:N:21:G:H2'	1:N:22:G:C8	2.55	0.41
1:N:69:G:C6	1:N:70:U:C4	3.08	0.41
1:N:143:A:N3	1:N:143:A:H2'	2.35	0.41
1:N:373:A:C2	1:N:482:A:C6	3.08	0.41
1:N:755:G:C6	1:N:756:C:C5	3.08	0.41
1:N:786:G:C6	1:N:797:C:N3	2.88	0.41
1:N:1434:A:H2'	1:N:1435:G:O4'	2.19	0.41
1:N:152:A:C8	1:N:153:C:C5	3.08	0.41
1:N:207:C:H2'	1:N:208:U:C6	2.56	0.41
1:N:403:C:H41	1:N:547:A:H5''	1.85	0.41
1:N:539:A:C5	1:N:540:G:C5	3.08	0.41
1:N:675:A:N1	1:N:716:A:C2	2.88	0.41
1:N:283:U:C6	1:N:284:C:C5	3.09	0.41
1:N:803:G:C2	1:N:804:U:C2	3.08	0.41
1:N:171:A:C2	1:N:172:A:C2	3.09	0.41
1:N:405:U:C5'	1:N:495:A:C2	3.04	0.41
1:N:107:G:H5''	1:N:134:G:H21	1.84	0.41
1:N:964:A:H1'	1:N:970:C:OP2	2.20	0.41
1:N:1066:C:C6	1:N:1066:C:H5''	2.56	0.41
1:N:373:A:C2	1:N:374:A:C4	3.09	0.41
1:N:953:G:C4	1:N:1229:A:C2	3.09	0.41
1:N:1265:C:C2	1:N:1271:A:C2	3.08	0.41
1:N:1316:G:N2	1:N:1319:A:C8	2.89	0.41
1:N:363:A:C6	1:N:364:A:C6	3.09	0.41
1:N:701:U:C5'	1:N:703:G:H5'	2.51	0.41
1:N:1064:G:H4'	1:N:1065:U:H4'	2.02	0.41
1:N:1125:U:H2'	1:N:1126:U:H2'	2.03	0.41
1:N:1309:G:C6	1:N:1310:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:18:C:N3	1:N:918:A:C2	2.89	0.41
1:N:78:A:C2	1:N:79:G:C2	3.09	0.41
1:N:105:G:H21	1:N:380:G:H5'	1.86	0.41
1:N:136:C:C2	1:N:228:A:C2	3.08	0.41
1:N:223:A:C6	1:N:224:U:C4	3.08	0.41
1:N:240:G:C6	1:N:241:G:C5	3.09	0.41
1:N:295:C:C4	1:N:296:U:C4	3.09	0.41
1:N:459:A:H61	1:N:472:U:H3	1.68	0.41
1:N:486:U:C6	1:N:486:U:H5''	2.56	0.41
1:N:625:U:H2'	1:N:626:G:C8	2.55	0.41
1:N:677:U:H3	1:N:713:G:H1	1.68	0.41
1:N:829:G:C6	1:N:830:G:C5	3.09	0.41
1:N:858:G:H1	1:N:869:G:C2'	2.32	0.41
1:N:901:A:C5	1:N:902:G:H1'	2.56	0.41
1:N:1010:U:N3	1:N:1011:C:C5	2.89	0.41
1:N:1047:G:C2	1:N:1213:A:C2	3.09	0.41
1:N:1129:C:C2	1:N:1144:G:C2	3.09	0.41
1:N:1143:G:H2'	1:N:1144:G:H8	1.85	0.41
1:N:1379:G:C6	1:N:1380:U:C4	3.09	0.41
1:N:130:A:H2	1:N:232:G:H22	1.69	0.41
1:N:14:U:H3	1:N:16:A:H3'	1.86	0.40
1:N:73:C:H3'	1:N:74:A:H5''	2.03	0.40
1:N:411:A:H61	1:N:428:G:H1'	1.86	0.40
1:N:462:G:OP1	1:N:464:U:C5	2.74	0.40
1:N:936:C:H1'	1:N:1382:C:H42	1.86	0.40
1:N:1088:G:C6	1:N:1089:G:C5	3.08	0.40
1:N:1128:C:C2	1:N:1145:A:C2	3.08	0.40
1:N:1431:A:C5	1:N:1432:G:C6	3.09	0.40
1:N:542:G:C6	1:N:543:U:C5	3.09	0.40
1:N:1198:G:C5	1:N:1199:U:C4	3.09	0.40
1:N:1378:C:C4	1:N:1379:G:C5	3.08	0.40
1:N:149:A:C6	1:N:174:A:C2	3.09	0.40
1:N:655:A:C2	1:N:656:G:C4	3.09	0.40
1:N:786:G:C2	1:N:797:C:C2	3.09	0.40
1:N:942:G:C5	1:N:943:U:C5	3.09	0.40
1:N:223:A:C6	1:N:224:U:N3	2.90	0.40
1:N:585:G:C6	1:N:586:C:C4	3.09	0.40
1:N:894:G:C4	1:N:895:G:C8	3.10	0.40
1:N:1171:A:C2	1:N:1172:C:C2	3.10	0.40
1:N:113:G:H21	1:N:353:A:H2'	1.86	0.40
1:N:218:U:C5	1:N:219:U:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:502:A:H2'	1:N:503:C:O4'	2.21	0.40
1:N:506:G:C2	1:N:507:C:C2	3.10	0.40
1:N:1207:G:C6	1:N:1208:C:C4	3.09	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%)	460 (30%)	147 (9%)

All (460) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	4	U
1	N	5	U
1	N	6	G
1	N	8	A
1	N	9	G
1	N	13	U
1	N	14	U
1	N	22	G
1	N	27	G
1	N	31	G
1	N	32	A
1	N	39	G
1	N	47	C
1	N	48	C
1	N	49	U

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Mol	Chain	Res	Type
1	N	50	A
1	N	51	A
1	N	52	C
1	N	60	A
1	N	61	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
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

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Mol	Chain	Res	Type
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	146	G
1	N	159	G
1	N	160	A
1	N	161	A
1	N	163	C
1	N	164	G
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	189	A
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
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	247	G
1	N	251	G
1	N	252	U

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Mol	Chain	Res	Type
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	276	G
1	N	279	A
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	307	C
1	N	315	A
1	N	316	C
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
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	369	G
1	N	373	A
1	N	376	G
1	N	384	G
1	N	388	G
1	N	390	U

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Mol	Chain	Res	Type
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	422	C
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	439	U
1	N	441	A
1	N	448	A
1	N	451	A
1	N	452	A
1	N	457	G
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	470	C
1	N	481	G
1	N	482	A
1	N	484	G
1	N	485	U
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

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Mol	Chain	Res	Type
1	N	523	A
1	N	527	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	548	G
1	N	556	C
1	N	559	A
1	N	560	A
1	N	561	U
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
1	N	596	A
1	N	604	G
1	N	606	G
1	N	607	A
1	N	610	U
1	N	619	U
1	N	629	A
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

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Mol	Chain	Res	Type
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	774	G
1	N	776	G
1	N	777	A
1	N	787	A
1	N	788	U
1	N	792	A
1	N	793	U
1	N	794	A
1	N	802	A
1	N	812	G
1	N	813	U
1	N	815	A
1	N	816	A
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

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Mol	Chain	Res	Type
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	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	977	A
1	N	982	U
1	N	983	A
1	N	992	U
1	N	993	G
1	N	994	A
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	1034	G
1	N	1036	A
1	N	1037	C

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Mol	Chain	Res	Type
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	1079	G
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	1112	C
1	N	1113	C
1	N	1124	G
1	N	1125	U
1	N	1126	U
1	N	1127	G
1	N	1129	C
1	N	1130	A
1	N	1133	G
1	N	1135	U
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

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Mol	Chain	Res	Type
1	N	1159	U
1	N	1160	G
1	N	1161	C
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	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
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	1252	A
1	N	1256	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

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Mol	Chain	Res	Type
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	1304	G
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	1331	G
1	N	1332	A
1	N	1336	C
1	N	1337	G
1	N	1345	U
1	N	1346	A
1	N	1353	G
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	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	1406	U
1	N	1432	G
1	N	1433	A
1	N	1440	U
1	N	1441	A

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Mol	Chain	Res	Type
1	N	1446	A
1	N	1448	C
1	N	1452	C
1	N	1453	G
1	N	1454	G
1	N	1457	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
1	N	1531	A
1	N	1533	C
1	N	1534	A

All (147) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	N	5	U
1	N	13	U
1	N	30	U
1	N	47	C
1	N	49	U
1	N	51	A
1	N	56	U
1	N	60	A
1	N	65	A
1	N	70	U
1	N	71	A
1	N	73	C
1	N	75	G

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Mol	Chain	Res	Type
1	N	81	A
1	N	84	U
1	N	87	C
1	N	90	C
1	N	94	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	167	A
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
1	N	266	G
1	N	267	C
1	N	274	A
1	N	275	G
1	N	279	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	438	U
1	N	451	A
1	N	462	G
1	N	467	U

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Mol	Chain	Res	Type
1	N	468	A
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	530	G
1	N	531	U
1	N	532	A
1	N	535	A
1	N	547	A
1	N	559	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	631	C
1	N	641	U
1	N	686	U
1	N	721	G
1	N	723	U
1	N	733	G
1	N	754	C
1	N	774	G
1	N	792	A
1	N	817	C
1	N	819	A
1	N	820	U
1	N	845	A
1	N	870	U
1	N	884	U
1	N	913	A
1	N	934	C
1	N	960	U
1	N	974	A
1	N	982	U
1	N	991	U
1	N	993	G
1	N	1018	G

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Mol	Chain	Res	Type
1	N	1036	A
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	1111	A
1	N	1129	C
1	N	1140	C
1	N	1151	A
1	N	1160	G
1	N	1168	U
1	N	1185	G
1	N	1191	A
1	N	1197	A
1	N	1201	A
1	N	1214	C
1	N	1224	U
1	N	1228	C
1	N	1239	A
1	N	1251	A
1	N	1263	C
1	N	1282	C
1	N	1285	A
1	N	1298	U
1	N	1299	A
1	N	1303	C
1	N	1319	A
1	N	1331	G
1	N	1336	C
1	N	1337	G
1	N	1345	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	1399	C
1	N	1432	G

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Mol	Chain	Res	Type
1	N	1440	U
1	N	1492	A
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.

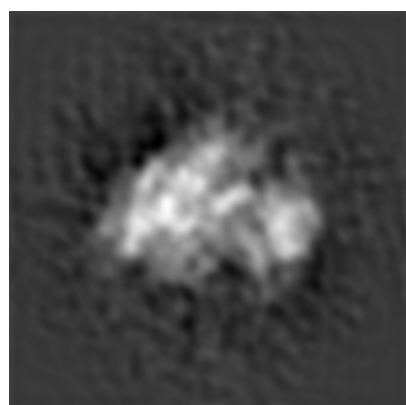
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5508. These allow visual inspection of the internal detail of the map and identification of artifacts.

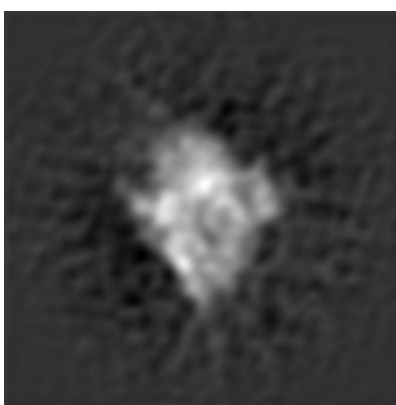
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

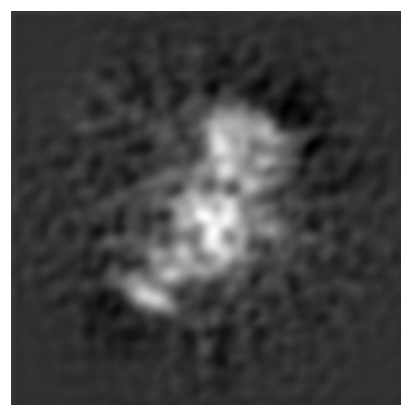
6.1.1 Primary map



X



Y

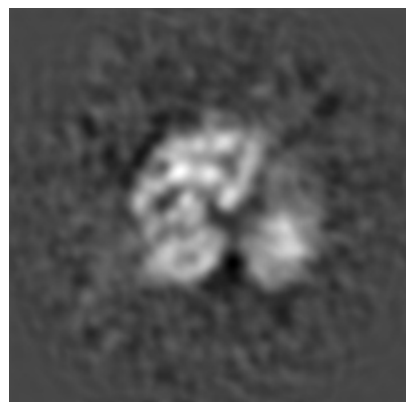


Z

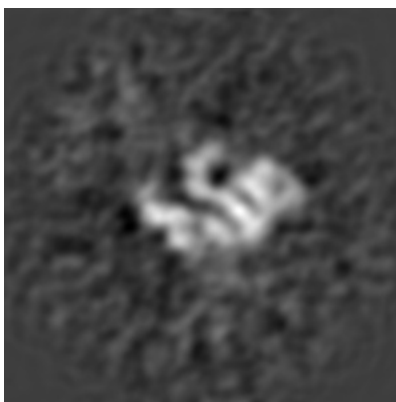
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

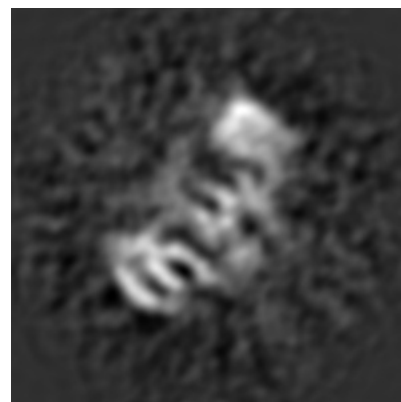
6.2.1 Primary map



X Index: 62



Y Index: 62

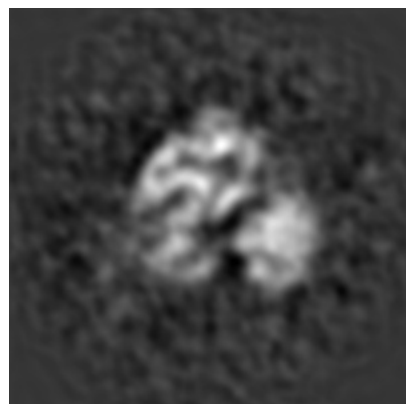


Z Index: 62

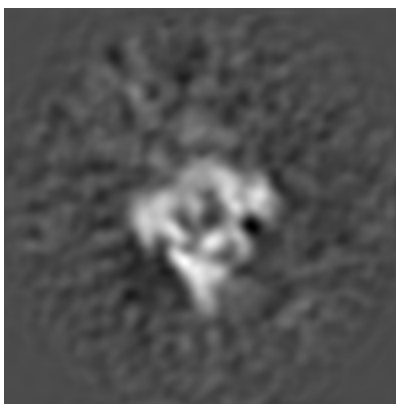
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

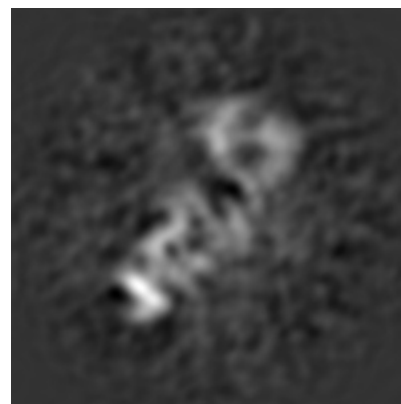
6.3.1 Primary map



X Index: 65



Y Index: 50

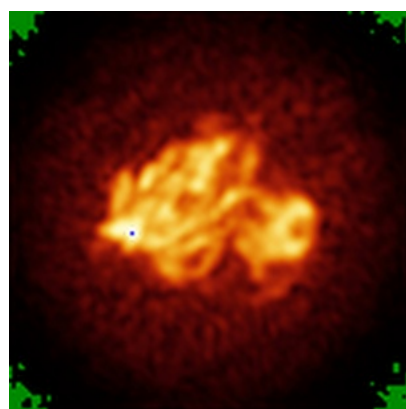


Z Index: 57

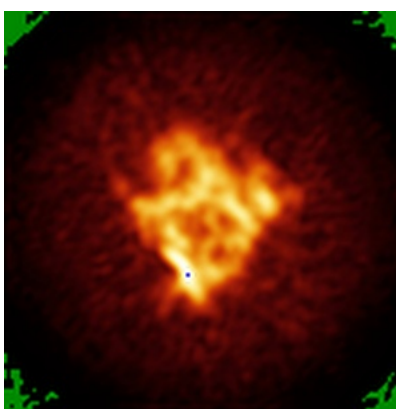
The images above show the largest variance slices of the map in three orthogonal directions.

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

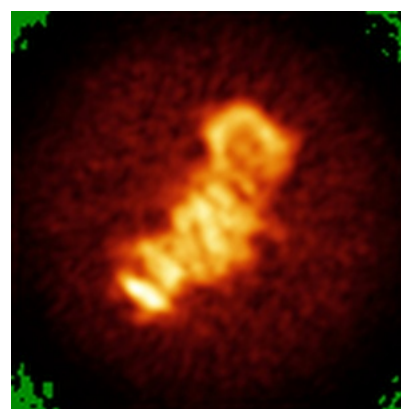
6.4.1 Primary map



X



Y

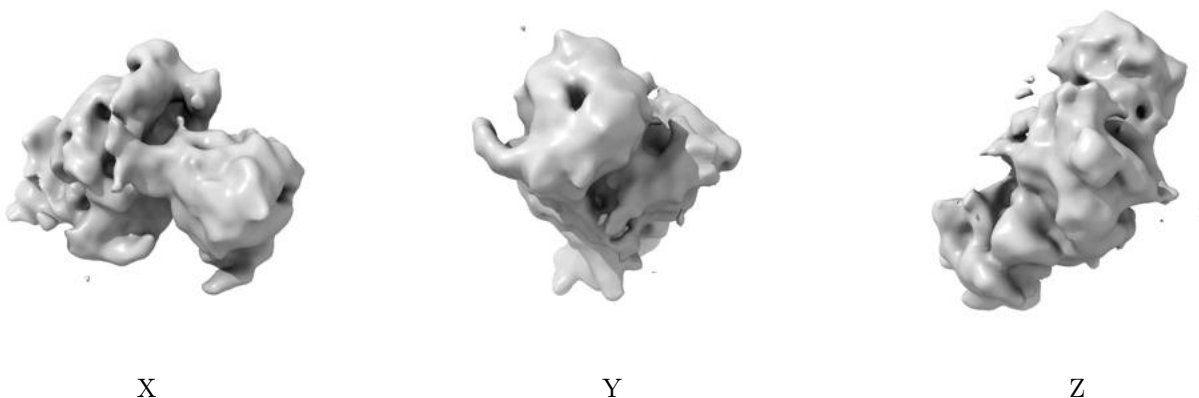


Z

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.

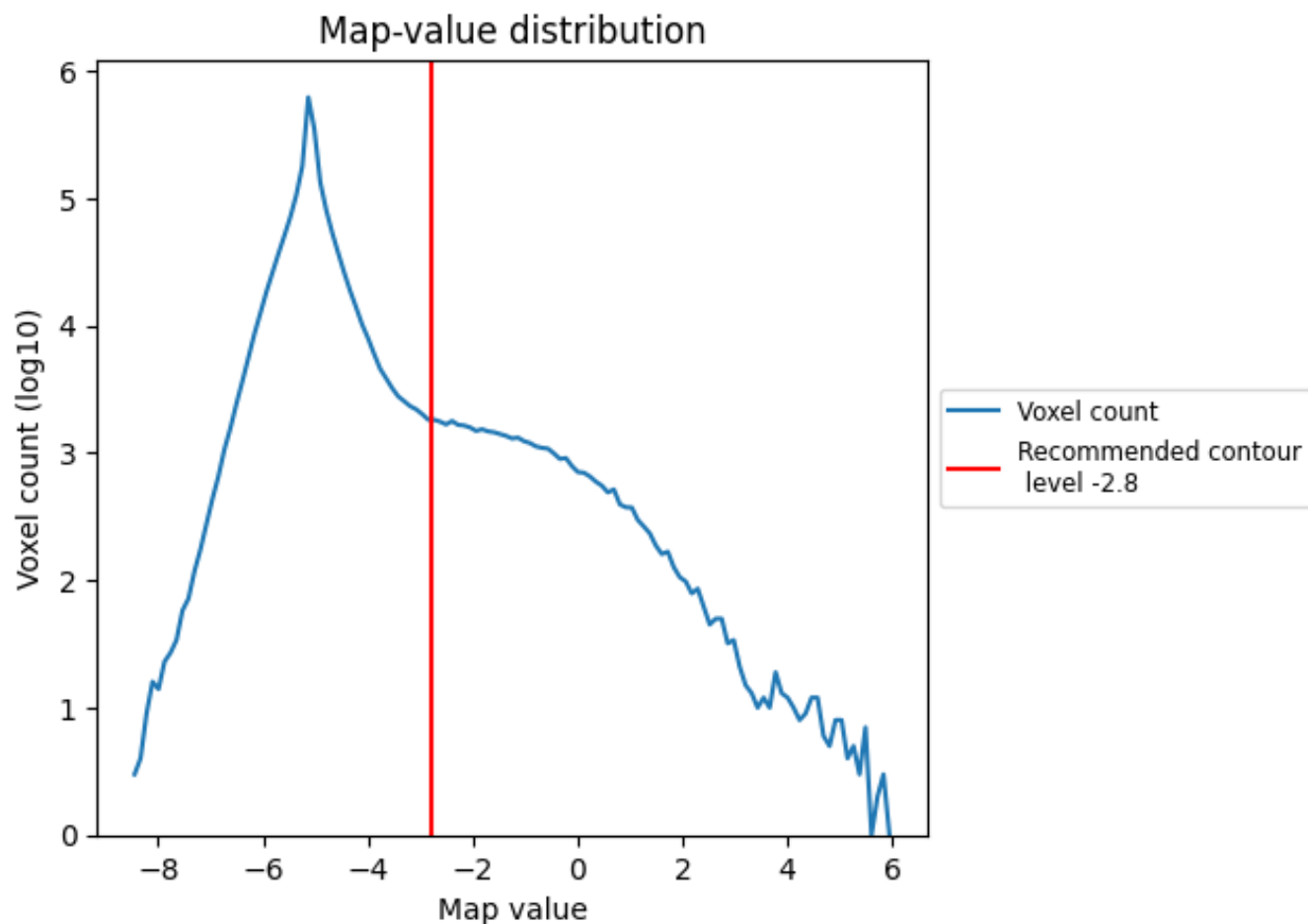
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

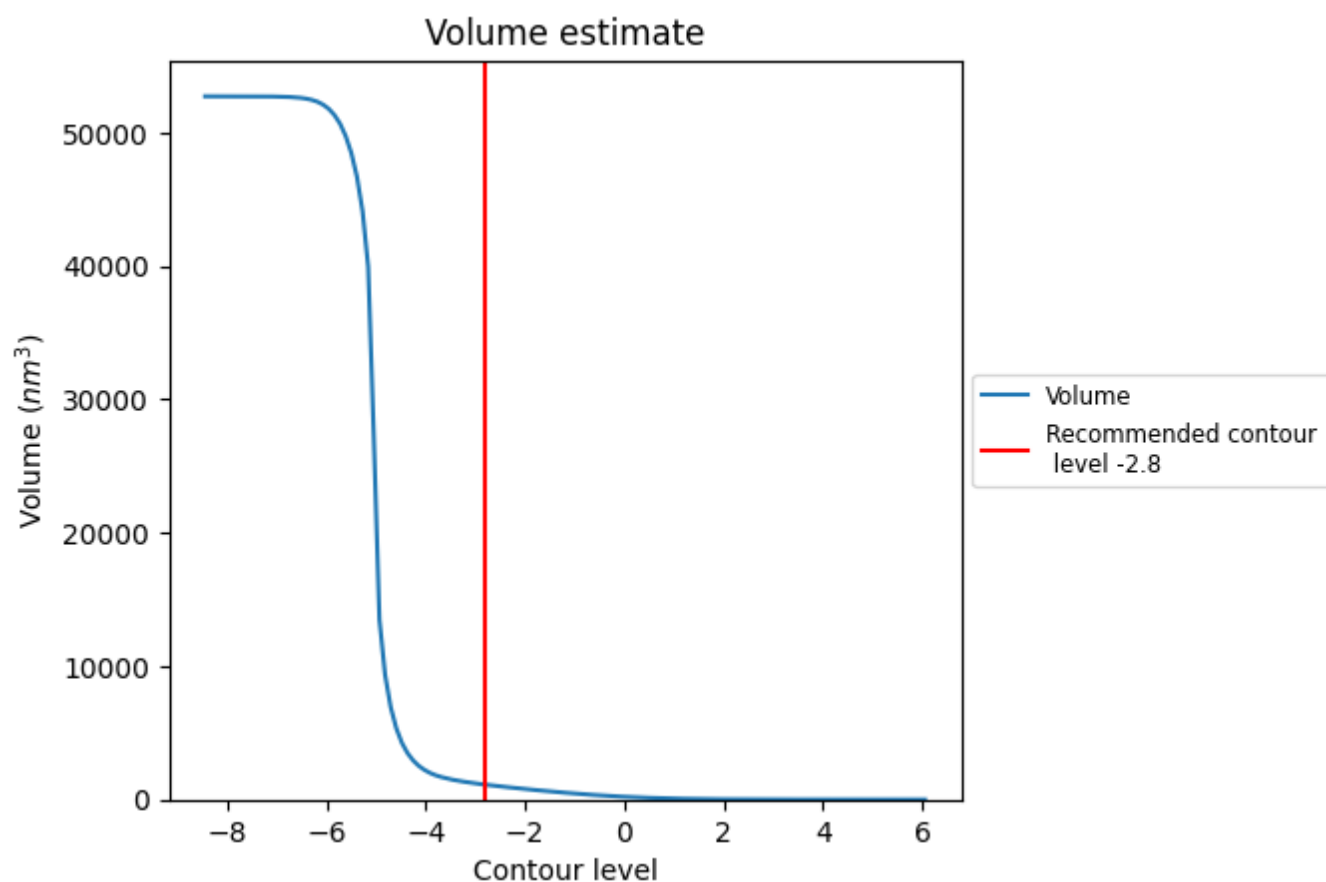
This section contains the results of statistical analysis of the map.

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.

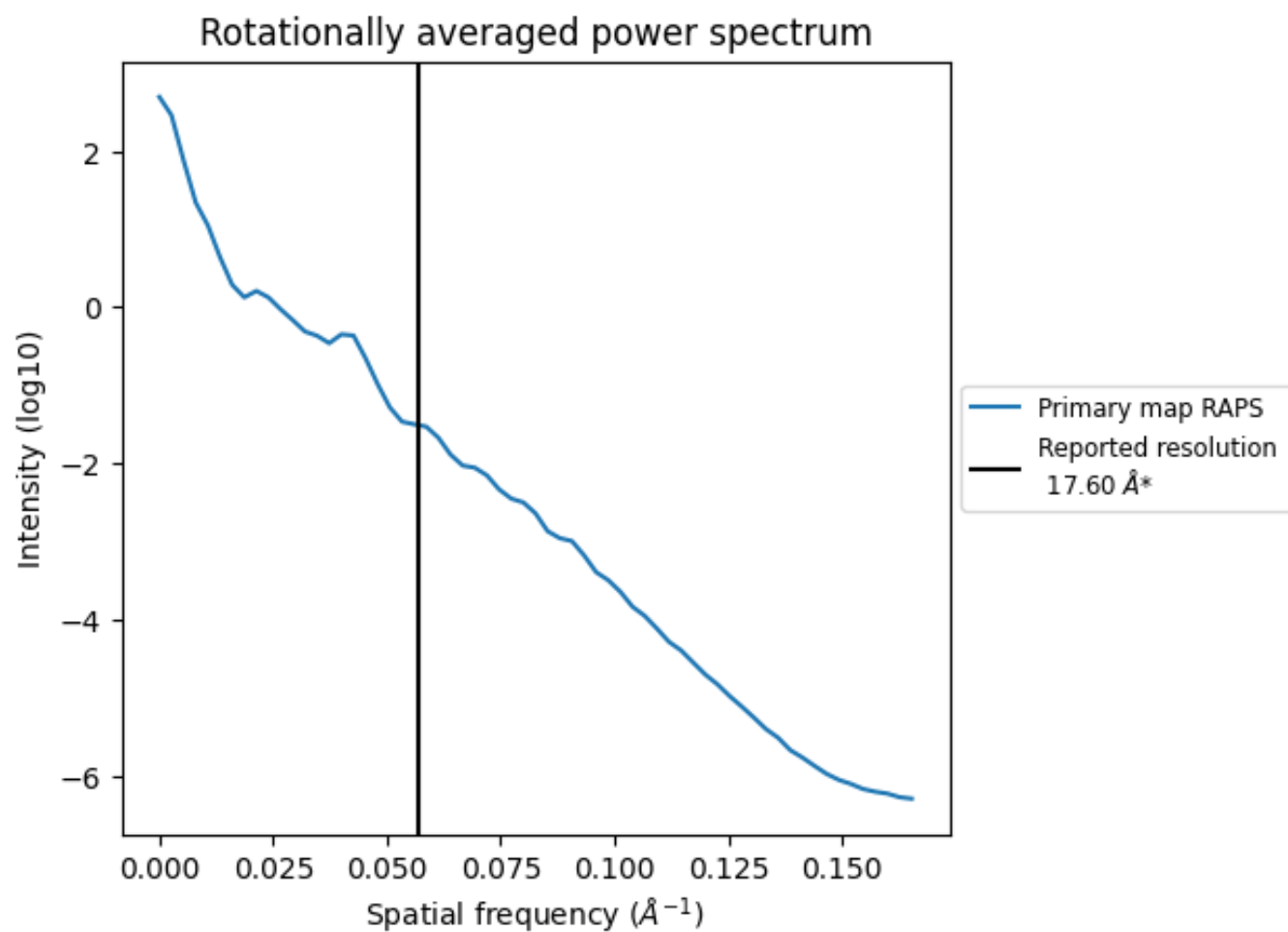
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1116 nm³; this corresponds to an approximate mass of 1009 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 0.057 Å⁻¹

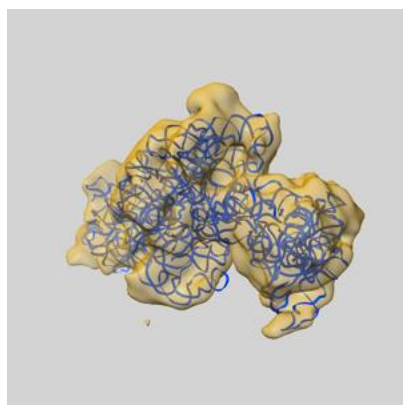
8 Fourier-Shell correlation

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

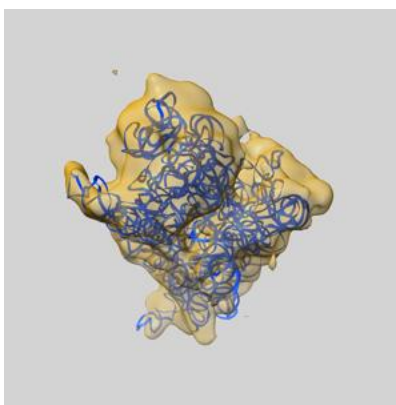
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5508 and PDB model 3J2F. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

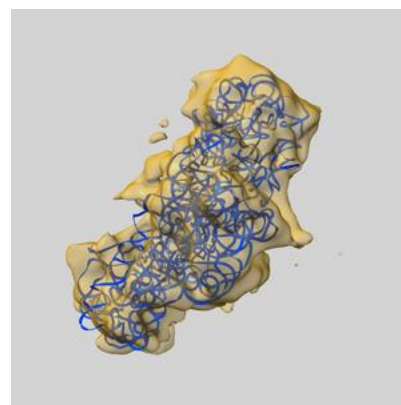
9.1 Map-model overlay [i](#)



X



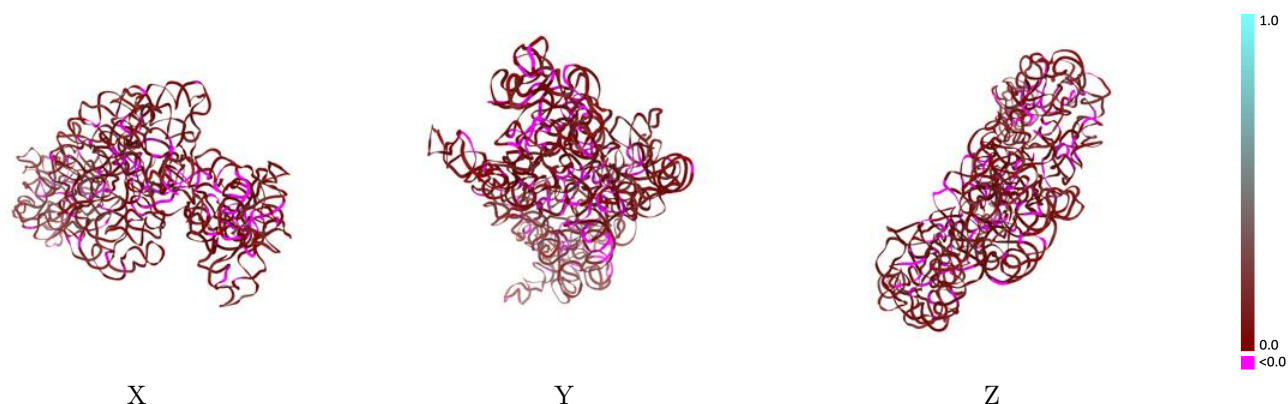
Y



Z

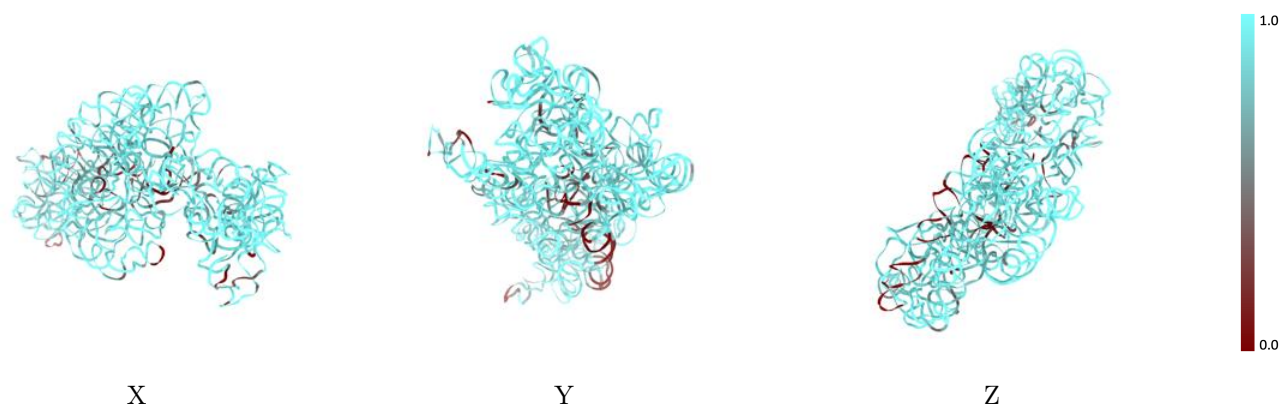
The images above show the 3D surface view of the map at the recommended contour level -2.8 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



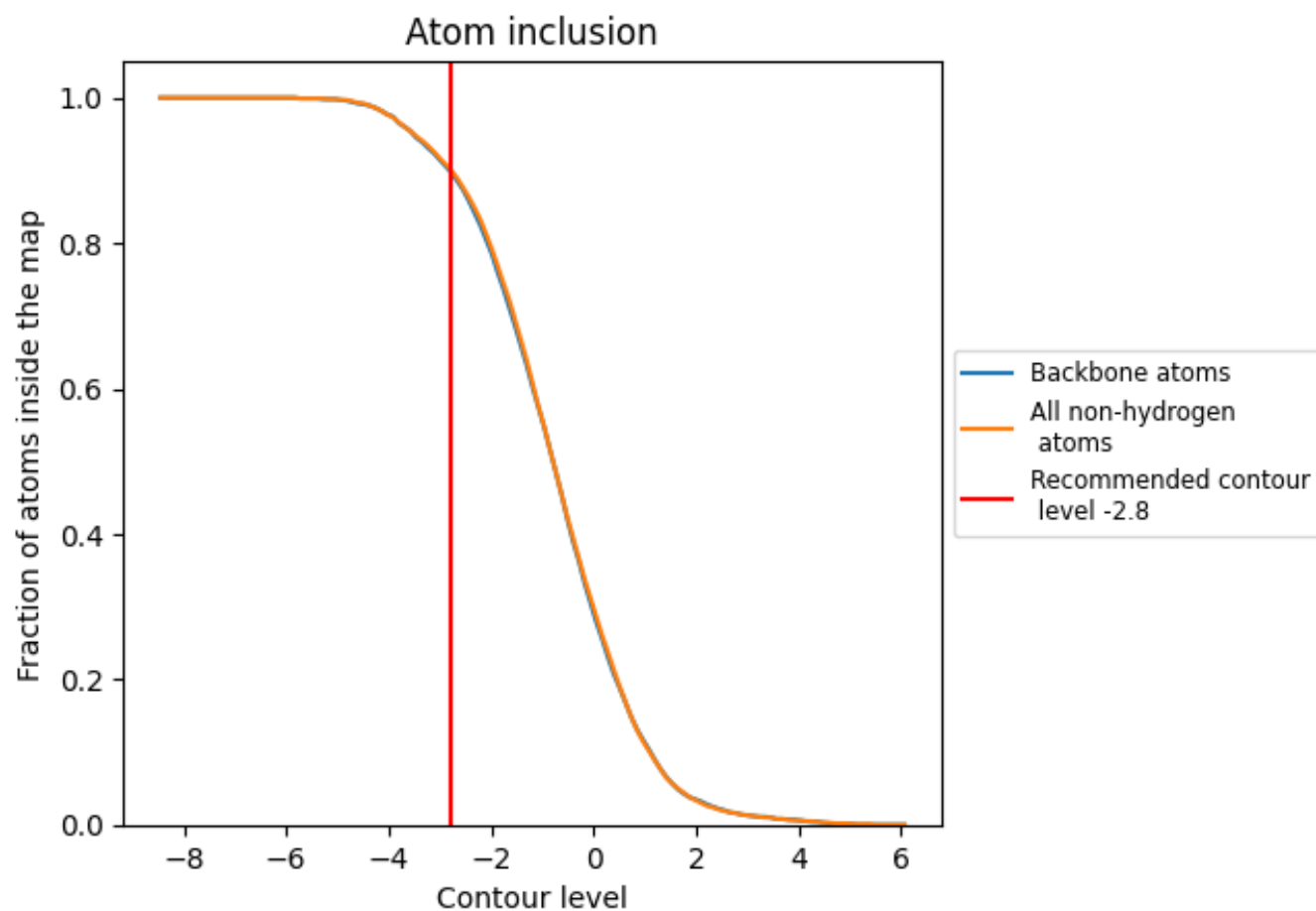
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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, 90% of all backbone atoms, 90% 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	0.9020	0.0710
N	0.9020	0.0710

