



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 06:19 PM UTC

PDB ID : 3J29 / pdb_00003j29
EMDB ID : EMD-5501
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 : 14.00 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

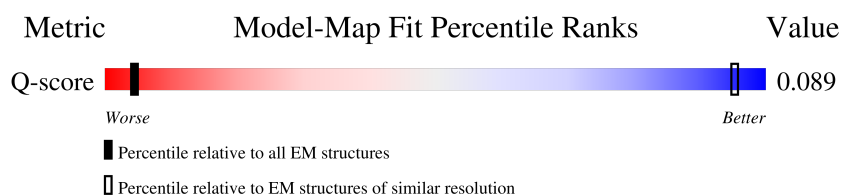
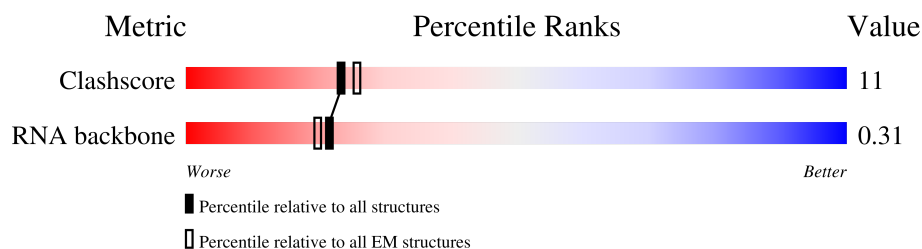
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 14.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
RNA backbone	8273	3508	-
Q-score	-	25397	61 (13.50 - 14.50)

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 [i](#)

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.

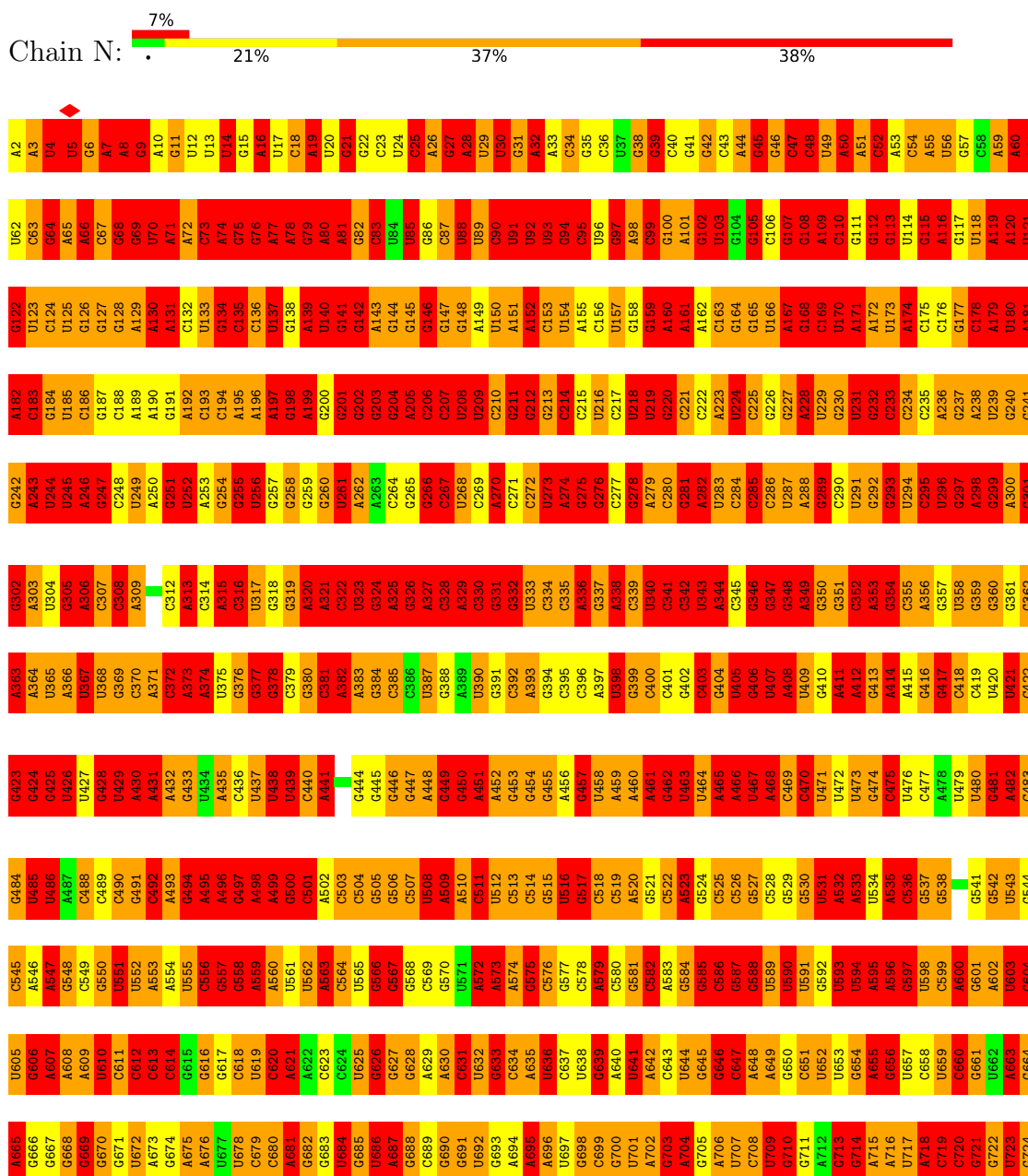
- Molecule 1 is a RNA chain called 16S rRNA.

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



A1507	A1447	G1387	C1327	G1266	G1206	A1146	U1086	G1026	G966	A906	G846	G786	G726
A1508	C1448	C1388	C1328	C1267	G1207	C1147	G1087	C1027	C967	A907	G847	G787	C727
C1509	C1449	C1389	U1329	A1268	C1208	U1148	G1088	C1028	A968	A908	C848	A787	A728
C1510	U1450	U1390	U1330	A1269	C1209	C1149	G1089	C1029	A969	A909	U850	U789	A729
G1511	U1451	U1391	C1331	G1270	U1211	A1151	U1091	U1029	C970	C910	G851	A790	G730
U1512	C1452	A1392	A1332	G1271	U1212	A1152	A1092	U1030	G971	C912	G852	G791	G731
A1513	U1393	U1393	A1333	C1273	U1213	G1153	A1093	U1031	C972	A913	G853	A792	G732
G1514	A1394	C1395	U1335	A1274	C1214	U1154	G1094	G1032	G973	A914	U854	U793	G733
G1515	A1396	A1396	C1336	A1275	G1215	A1155	U1095	G1033	A974	A915	U855	U794	G734
G1516	C1397	C1397	C1337	G1276	G1216	G1156	U1096	G1034	A975	U916	C856	C795	G735
A1517	G1398	G1398	G1338	C1277	G1217	A1157	C1097	G1035	G976	G917	G857	C796	G736
A1518	A1398	A1398	U1339	G1278	C1217	U1158	U1098	A1036	A977	A918	G858	C797	G737
C1519	C1399	C1399	A1340	A1280	A1218	U1159	G1099	A1037	A978	A919	G859	U798	C738
A1520	U1341	C1281	U1341	A1281	C1219	G1160	C1100	C1037	C979	U920	A860	G799	C739
C1521	C1342	C1282	G1342	C1282	G1221	C1161	A1101	C1038	C980	U921	C980	G800	U740
U1522	C1343	U1283	G1343	G1222	G1222	C1162	A1102	G1039	U981	U801	C862	U801	G741
G1523	C1344	C1284	C1344	G1223	U1223	A1163	C1103	U1040	A983	A923	U863	A802	G742
G1524	U1345	A1285	U1345	U1224	G1224	G1164	G1104	G1041	C984	C924	A864	G803	A743
G1525	A1346	U1286	A1346	A1225	C1225	U1165	A1105	G1042	C985	G925	A865	U804	G744
G1526	U1464	A1287	G1347	C1226	C1226	A1167	G1107	G1043	U986	G927	C866	C805	G745
U1527	U1465	U1408	U1348	A1288	C1227	U1168	C1108	A1044	G987	G928	C868	A807	A746
U1528	A1466	A1408	A1349	A1289	C1228	U1169	C1109	C1045	U988	G929	G869	C808	A747
G1530	C1467	C1409	U1350	G1290	A1229	A1170	A1110	U1046	U989	G930	U870	G809	A748
A1531	C1467	A1410	C1352	G1292	C1230	A1171	A1111	G1047	C990	C931	U871	C810	C750
C1532	U1470	C1412	G1353	C1293	G1231	C1172	C1112	G1048	U991	G932	A872	C811	U751
C1533	U1471	A1413	U1354	G1294	U1232	U1173	U1049	G1049	U992	G933	A873	G812	G752
A1534	U1472	A1414	G1355	U1295	C1234	G1174	C1114	G1050	G993	A934	G874	U813	A753
	U1473	G1415	G1356	C1296	U1235	C1175	U1115	G1051	A994	A935	U875	A814	C754
	U1474	G1416	A1357	G1297	U1236	A1176	U1116	G1052	C995	C936	C876	A815	G755
	U1475	G1417	U1358	U1298	C1237	G1177	A1117	G1053	A996	A937	C877	A816	C756
	G1476	A1418	C1359	A1299	A1238	U1178	U1118	C1054	U997	A938	A878	C817	U757
	G1475	G1419	G1360	U1300	C1239	A1179	C1119	A1055	C998	G939	C879	A818	C758
	A1476	U1420	A1361	U1301	U1240	A1180	C1120	U1056	C999	C940	C880	G819	A759
	U1477	G1421	A1362	C1302	G1241	G1181	U1121	G1057	A1000	G941	U820	U820	G760
	U1478	G1422	U1363	G1303	C1242	G1182	U1122	G1058	C1001	G942	G882	G821	G761
	C1479	G1423	G1365	G1304	C1243	G1183	U1123	C1059	G1002	U943	C883	U822	U762
	A1480	U1424	C1366	G1306	G1244	G1184	U1124	G1060	C885	G944	C824	C823	G763
	U1481	G1425	C1367	U1307	C1245	G1185	U1125	G1061	A825	A945	G826	A825	G765
	G1482	G1426	A1368	G1308	U1246	G1186	U1126	U1062	G827	G947	A766	C826	A766
	A1483	C1427	G1370	G1309	U1247	G1187	G1127	C1063	A1004	A948	U827	U827	A767
	C1484	A1428	U1371	A1310	C1248	U1188	C1128	G1064	A1005	A949	A889	U828	A768
	U1485	G1429	G1372	A1311	U1250	G1189	C1129	U1065	G950	U950	G890	G829	G769
	G1486	A1430	U1373	G1312	A1251	A1191	A1130	C1066	U891	G951	A892	A830	C770
	U1487	U1431	A1374	U1313	G1252	C1192	G1131	G1067	C952	U952	G892	A831	C771
	G1488	G1432	U1375	C1314	G1253	G1193	G1133	G1068	G953	C893	G894	G832	U772
	U1489	A1433	U1376	G1315	A1254	U1194	G1134	C1069	G895	G954	G895	G833	G773
	U1490	A1434	A1377	G1316	G1255	C1195	U1135	U1070	C1011	U955	C896	U834	G774
	G1491	U1435	C1378	C1317	A1256	A1196	C1136	G1071	U956	U956	C897	U835	G775
	A1492	A1436	G1379	A1318	U1257	A1197	G1137	G1072	G957	U957	G898	G836	G776
	A1493	U1437	U1380	C1319	G1258	U1198	G1138	U1073	A958	A958	C899	C840	G777
	U1494	A1438	U1381	C1320	C1259	U1199	G1139	G1074	A959	A959	A900	C841	G778
	U1495	G1439	C1382	C1321	G1260	C1200	C1140	U1076	U960	U960	A901	C842	C779
	C1496	U1440	G1383	C1322	A1261	A1201	C1141	G1077	U961	U961	G902	U842	A780
	G1497	A1441	C1384	G1323	C1262	U1202	G1142	U1078	G1018	G962	G903	U843	A781
	U1498	A1442	G1385	A1324	U1263	C1203	G1143	G1079	A1019	C963	U904	C844	C782
	A1499	G1443	U1386	G1325	U1264	A1204	G1144	A1080	G1020	A964	U905	G845	A783
	C1500	U1444	C1386	U1326	C1265	U1205	A1145	A1081	A1021	U965			A784
	A1501	U1445						A1082	U1022				
	A1502	A1446						U1083	U1023				
	A1503							G1084	G1024				
	G1504							U1085	U1025				
	G1505												
	U1506												

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	26670	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Weiner filter	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1300	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	80000	Depositor
Image detector	GATAN ULTRASCAN 4000 (4k x 4k)	Depositor
Maximum map value	3.844	Depositor
Minimum map value	-6.202	Depositor
Average map value	-3.839	Depositor
Map value standard deviation	0.520	Depositor
Recommended contour level	-2.8	Depositor
Map size ($\text{\AA}$)	345.0, 345.0, 345.0	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	2.76, 2.76, 2.76	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	N	2.06	851/36831 (2.3%)	2.09	2031/57458 (3.5%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	N	0	984

All (851) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	172	A	O3'-P	-9.47	1.47	1.61
1	N	765	G	O3'-P	-9.20	1.47	1.61
1	N	1149	C	C1'-N1	8.85	1.61	1.48
1	N	1491	G	C5'-C4'	8.81	1.64	1.51
1	N	1136	C	C1'-N1	8.74	1.60	1.47
1	N	79	G	C5'-C4'	8.70	1.64	1.51
1	N	425	G	P-O5'	-8.66	1.46	1.59
1	N	124	C	C4'-O4'	-8.66	1.32	1.45
1	N	281	G	C1'-N9	8.60	1.59	1.47
1	N	1347	G	C5'-C4'	8.51	1.64	1.51
1	N	1340	A	O3'-P	-8.50	1.48	1.61
1	N	1476	A	C5'-C4'	8.50	1.64	1.51
1	N	966	G	C1'-N9	8.46	1.60	1.48
1	N	508	U	C1'-N1	8.45	1.60	1.47
1	N	189	A	C5'-C4'	8.44	1.64	1.51
1	N	1371	G	C5'-C4'	8.44	1.64	1.51
1	N	1181	G	C1'-N9	8.43	1.59	1.47
1	N	1112	C	O3'-P	-8.41	1.48	1.61
1	N	284	C	C5'-C4'	8.41	1.63	1.51
1	N	1365	G	C5'-C4'	8.35	1.63	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	468	A	C3'-C2'	8.29	1.65	1.52
1	N	1172	C	C1'-N1	8.20	1.60	1.48
1	N	1114	C	C1'-N1	8.15	1.60	1.48
1	N	264	C	C2'-C1'	-8.08	1.41	1.53
1	N	1459	G	C4'-C3'	8.08	1.64	1.52
1	N	192	A	O4'-C1'	8.03	1.53	1.41
1	N	898	G	C3'-C2'	-8.00	1.40	1.52
1	N	1449	C	C1'-N1	8.00	1.60	1.48
1	N	1240	U	C1'-N1	7.98	1.60	1.48
1	N	642	A	C1'-N9	7.96	1.59	1.48
1	N	906	A	C5'-C4'	7.96	1.63	1.51
1	N	1053	G	C2'-C1'	-7.92	1.41	1.53
1	N	1362	A	O5'-C5'	7.87	1.54	1.42
1	N	1058	G	C5'-C4'	7.85	1.63	1.51
1	N	618	C	C4'-O4'	7.83	1.57	1.45
1	N	499	A	O3'-P	-7.79	1.49	1.61
1	N	533	A	C2'-C1'	-7.79	1.41	1.53
1	N	669	G	C1'-N9	7.78	1.59	1.48
1	N	1282	C	P-O5'	-7.76	1.48	1.59
1	N	620	C	C1'-N1	7.75	1.60	1.48
1	N	577	G	C2'-C1'	-7.75	1.41	1.53
1	N	1384	C	C1'-N1	7.72	1.60	1.48
1	N	1292	G	C5'-C4'	7.71	1.62	1.51
1	N	607	A	O3'-P	-7.69	1.49	1.61
1	N	79	G	C3'-O3'	7.68	1.53	1.42
1	N	92	U	C2'-C1'	-7.68	1.41	1.53
1	N	1406	U	C1'-N1	7.62	1.59	1.48
1	N	1381	U	O3'-P	-7.60	1.49	1.61
1	N	762	U	C1'-N1	7.55	1.59	1.48
1	N	252	U	C5'-C4'	7.55	1.62	1.51
1	N	556	C	C5'-C4'	7.54	1.62	1.51
1	N	945	G	P-O5'	-7.52	1.48	1.59
1	N	244	U	C5'-C4'	7.52	1.62	1.51
1	N	1487	G	C5'-C4'	7.51	1.62	1.51
1	N	1179	A	C2'-C1'	-7.50	1.42	1.53
1	N	1264	U	P-O5'	-7.50	1.48	1.59
1	N	758	C	C2'-C1'	-7.49	1.42	1.53
1	N	1485	U	C1'-N1	7.49	1.59	1.48
1	N	585	G	C3'-O3'	7.48	1.53	1.42
1	N	294	U	O4'-C1'	7.47	1.52	1.41
1	N	719	C	C1'-N1	7.46	1.59	1.48
1	N	291	U	C2'-C1'	-7.46	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	963	G	C1'-N9	7.45	1.59	1.48
1	N	984	C	C1'-N1	7.39	1.59	1.48
1	N	67	C	P-O5'	-7.38	1.48	1.59
1	N	1519	A	C1'-N9	7.37	1.59	1.48
1	N	208	U	C1'-N1	7.36	1.59	1.48
1	N	930	C	C4'-O4'	7.34	1.56	1.45
1	N	1064	G	C4'-C3'	7.33	1.64	1.53
1	N	149	A	C2'-C1'	-7.31	1.42	1.53
1	N	1414	U	C5'-C4'	7.30	1.62	1.51
1	N	1255	G	C1'-N9	7.29	1.58	1.48
1	N	86	G	C5'-C4'	7.27	1.62	1.51
1	N	608	A	C1'-N9	7.26	1.58	1.48
1	N	908	A	C4'-O4'	-7.23	1.34	1.45
1	N	714	G	C2'-C1'	-7.22	1.42	1.53
1	N	1366	C	C1'-N1	7.21	1.59	1.48
1	N	484	G	C3'-O3'	-7.21	1.32	1.43
1	N	822	U	C3'-C2'	7.20	1.63	1.52
1	N	1372	U	O4'-C1'	7.20	1.52	1.41
1	N	438	U	O3'-P	-7.19	1.50	1.61
1	N	11	G	C5'-C4'	7.18	1.62	1.51
1	N	243	A	C5'-C4'	7.17	1.62	1.51
1	N	1398	A	C5'-C4'	7.17	1.62	1.51
1	N	853	C	O4'-C1'	7.16	1.52	1.41
1	N	708	C	P-O5'	-7.14	1.49	1.59
1	N	1075	U	C1'-N1	7.12	1.59	1.48
1	N	1331	G	O3'-P	-7.11	1.50	1.61
1	N	91	U	C2'-C1'	-7.10	1.42	1.53
1	N	426	U	C1'-N1	7.09	1.59	1.48
1	N	1467	C	C2'-C1'	-7.08	1.42	1.53
1	N	652	U	P-O5'	-7.08	1.49	1.59
1	N	351	G	O3'-P	-7.07	1.50	1.61
1	N	588	G	C5'-C4'	7.06	1.61	1.51
1	N	1080	A	C5'-C4'	-7.04	1.40	1.51
1	N	560	A	C6-N6	7.03	1.48	1.33
1	N	581	G	C5'-C4'	7.02	1.61	1.51
1	N	367	U	C1'-N1	7.02	1.57	1.47
1	N	247	G	C5'-C4'	7.01	1.61	1.51
1	N	122	G	C4'-O4'	7.01	1.56	1.45
1	N	1400	C	O3'-P	-6.98	1.50	1.61
1	N	287	U	C1'-N1	6.98	1.58	1.48
1	N	5	U	P-O5'	6.97	1.70	1.59
1	N	1138	G	O3'-P	-6.97	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	744	C	C4'-C3'	6.96	1.62	1.52
1	N	261	U	C5'-C4'	6.95	1.61	1.51
1	N	680	C	C1'-N1	6.94	1.58	1.48
1	N	24	U	C3'-C2'	-6.93	1.42	1.52
1	N	407	U	P-O5'	-6.92	1.49	1.59
1	N	373	A	C2'-C1'	-6.92	1.43	1.53
1	N	685	G	O5'-C5'	6.91	1.52	1.42
1	N	1275	A	C5'-C4'	6.91	1.61	1.51
1	N	913	A	O3'-P	-6.90	1.50	1.61
1	N	440	C	C5'-C4'	6.89	1.61	1.51
1	N	647	C	C1'-N1	6.89	1.58	1.48
1	N	401	C	P-O5'	-6.88	1.49	1.59
1	N	739	C	C1'-N1	6.88	1.58	1.48
1	N	182	A	O3'-P	-6.87	1.50	1.61
1	N	949	A	P-O5'	-6.87	1.49	1.59
1	N	789	U	C3'-C2'	6.86	1.63	1.52
1	N	169	C	C1'-N1	6.85	1.58	1.48
1	N	1505	G	O4'-C1'	-6.85	1.31	1.41
1	N	1448	C	C1'-N1	6.85	1.58	1.48
1	N	950	U	C5'-C4'	6.83	1.61	1.51
1	N	50	A	C5'-C4'	6.82	1.61	1.51
1	N	1353	G	C1'-N9	6.82	1.58	1.48
1	N	461	A	O5'-C5'	6.81	1.52	1.42
1	N	1514	G	C3'-C2'	-6.80	1.42	1.52
1	N	509	A	O3'-P	-6.79	1.50	1.61
1	N	1095	U	C2'-C1'	-6.79	1.43	1.53
1	N	597	G	C2'-C1'	-6.78	1.43	1.53
1	N	1142	G	C3'-C2'	6.78	1.62	1.52
1	N	1496	C	C4'-O4'	-6.77	1.35	1.45
1	N	164	G	C5'-C4'	6.77	1.61	1.51
1	N	612	C	C3'-O3'	6.76	1.52	1.42
1	N	549	C	C2'-C1'	-6.75	1.43	1.53
1	N	119	A	C2'-C1'	-6.74	1.43	1.53
1	N	239	U	C4'-C3'	6.72	1.62	1.52
1	N	1151	A	C3'-C2'	6.70	1.62	1.52
1	N	702	A	C5'-C4'	6.69	1.61	1.51
1	N	1043	G	C1'-N9	6.69	1.57	1.48
1	N	1188	A	C4'-O4'	-6.68	1.35	1.45
1	N	519	C	O3'-P	-6.67	1.51	1.61
1	N	388	G	O3'-P	-6.66	1.51	1.61
1	N	1167	A	C5'-C4'	6.66	1.61	1.51
1	N	1173	U	O4'-C1'	6.65	1.51	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	714	G	C3'-O3'	6.64	1.52	1.42
1	N	418	C	C4'-C3'	-6.61	1.42	1.52
1	N	1516	G	P-O5'	-6.60	1.49	1.59
1	N	1417	G	O4'-C1'	6.60	1.51	1.41
1	N	1176	A	C1'-N9	6.59	1.57	1.48
1	N	424	G	C5'-C4'	6.58	1.61	1.51
1	N	747	A	O3'-P	-6.58	1.51	1.61
1	N	331	G	N7-C5	-6.57	1.26	1.39
1	N	692	U	C1'-N1	6.57	1.58	1.48
1	N	1027	C	C2'-C1'	6.56	1.63	1.53
1	N	705	G	C1'-N9	6.56	1.57	1.48
1	N	336	A	C1'-N9	6.54	1.57	1.48
1	N	1274	A	C4'-C3'	6.54	1.62	1.52
1	N	500	G	C4'-C3'	6.53	1.62	1.52
1	N	1293	C	O4'-C1'	6.53	1.51	1.41
1	N	145	G	C5'-C4'	6.53	1.61	1.51
1	N	1232	U	C5'-C4'	6.52	1.61	1.51
1	N	896	C	P-O5'	-6.52	1.50	1.59
1	N	199	A	C2'-C1'	-6.52	1.43	1.53
1	N	1077	G	P-O5'	-6.52	1.50	1.59
1	N	895	G	P-O5'	-6.51	1.50	1.59
1	N	709	U	P-O5'	-6.51	1.50	1.59
1	N	1516	G	C5'-C4'	6.50	1.60	1.51
1	N	246	A	P-O5'	-6.50	1.50	1.59
1	N	285	C	C2'-O2'	-6.50	1.32	1.42
1	N	411	A	C5'-C4'	6.49	1.60	1.51
1	N	501	C	C1'-N1	6.49	1.58	1.48
1	N	30	U	O3'-P	-6.48	1.51	1.61
1	N	122	G	C5'-C4'	6.46	1.60	1.51
1	N	408	A	C3'-O3'	6.45	1.51	1.42
1	N	666	G	O3'-P	-6.45	1.51	1.61
1	N	406	G	C6-N1	6.44	1.52	1.39
1	N	237	G	P-O5'	-6.44	1.50	1.59
1	N	861	G	C2'-C1'	-6.44	1.43	1.53
1	N	1152	A	C4'-O4'	6.43	1.55	1.45
1	N	906	A	C4'-O4'	-6.43	1.35	1.45
1	N	533	A	C1'-N9	6.42	1.56	1.47
1	N	399	G	P-O5'	-6.41	1.50	1.59
1	N	773	G	C3'-O3'	6.41	1.51	1.42
1	N	580	C	P-O5'	-6.41	1.50	1.59
1	N	961	U	C2'-C1'	-6.41	1.43	1.53
1	N	1216	A	C3'-C2'	6.40	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	905	U	C1'-N1	6.40	1.58	1.48
1	N	1452	C	C1'-N1	6.38	1.57	1.47
1	N	820	U	O4'-C1'	-6.38	1.32	1.42
1	N	736	C	O3'-P	-6.37	1.51	1.61
1	N	197	A	C5'-C4'	6.36	1.60	1.51
1	N	697	U	C1'-N1	6.36	1.57	1.48
1	N	129	A	P-O5'	-6.36	1.50	1.59
1	N	1391	U	C2'-C1'	-6.35	1.43	1.53
1	N	1525	G	P-O5'	-6.35	1.50	1.59
1	N	1312	G	O5'-C5'	6.35	1.51	1.42
1	N	1339	A	C2'-C1'	-6.35	1.43	1.53
1	N	998	C	C5'-C4'	6.34	1.60	1.51
1	N	62	U	P-O5'	-6.34	1.50	1.59
1	N	1476	A	C6-N6	6.34	1.46	1.33
1	N	128	G	C5'-C4'	6.34	1.60	1.51
1	N	455	G	C4'-C3'	6.33	1.62	1.52
1	N	897	C	O4'-C1'	6.33	1.51	1.41
1	N	1059	C	C3'-O3'	6.33	1.51	1.42
1	N	1473	G	O4'-C1'	6.33	1.51	1.41
1	N	1167	A	O5'-C5'	6.33	1.52	1.42
1	N	1301	U	C1'-N1	6.33	1.56	1.47
1	N	137	U	O3'-P	-6.32	1.51	1.61
1	N	285	C	C4'-O4'	6.32	1.55	1.45
1	N	1125	U	C1'-N1	6.32	1.57	1.48
1	N	93	U	C1'-N1	6.31	1.57	1.48
1	N	372	C	C1'-N1	6.31	1.56	1.47
1	N	782	A	C2'-C1'	-6.31	1.43	1.53
1	N	1421	G	C2-N2	6.31	1.47	1.34
1	N	834	U	C1'-N1	6.30	1.57	1.48
1	N	826	C	O5'-C5'	6.30	1.51	1.42
1	N	266	G	C4'-O4'	-6.30	1.36	1.45
1	N	772	U	C1'-N1	6.30	1.57	1.48
1	N	244	U	C1'-N1	6.30	1.56	1.47
1	N	272	C	C1'-N1	6.30	1.57	1.48
1	N	1185	G	P-O5'	-6.29	1.50	1.59
1	N	4	U	C4'-C3'	6.29	1.62	1.53
1	N	1329	A	C3'-O3'	6.27	1.51	1.42
1	N	538	G	C5'-C4'	6.27	1.60	1.51
1	N	536	C	C2'-C1'	-6.26	1.44	1.53
1	N	945	G	C1'-N9	6.26	1.57	1.48
1	N	1365	G	O3'-P	-6.26	1.51	1.61
1	N	726	C	C5'-C4'	6.25	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	982	U	C1'-N1	6.25	1.56	1.47
1	N	203	G	O3'-P	-6.25	1.51	1.61
1	N	249	U	C1'-N1	6.24	1.57	1.48
1	N	1232	U	O4'-C1'	6.24	1.51	1.41
1	N	197	A	C2'-C1'	-6.24	1.43	1.53
1	N	191	G	C5'-C4'	6.23	1.60	1.51
1	N	809	G	C1'-N9	6.23	1.57	1.48
1	N	1030	U	C5'-C4'	6.23	1.60	1.51
1	N	1144	G	O4'-C1'	6.22	1.50	1.41
1	N	542	G	C5'-C4'	6.22	1.60	1.51
1	N	232	G	C5'-C4'	6.22	1.60	1.51
1	N	114	U	C4'-O4'	6.22	1.54	1.45
1	N	1003	G	C2'-C1'	-6.21	1.44	1.53
1	N	1474	U	C5'-C4'	6.20	1.60	1.51
1	N	1268	G	O5'-C5'	6.20	1.51	1.42
1	N	248	C	O5'-C5'	6.19	1.51	1.42
1	N	6	G	C4'-C3'	6.19	1.62	1.53
1	N	715	A	C6-N6	6.19	1.46	1.33
1	N	1113	C	C3'-O3'	6.19	1.51	1.42
1	N	1309	G	C2'-C1'	-6.19	1.44	1.53
1	N	1375	A	C1'-N9	6.19	1.57	1.48
1	N	1421	G	C4'-O4'	-6.18	1.36	1.45
1	N	330	C	C4'-C3'	-6.18	1.43	1.52
1	N	999	C	C1'-N1	6.18	1.57	1.48
1	N	1028	C	O3'-P	-6.18	1.51	1.61
1	N	277	C	C4'-O4'	-6.17	1.36	1.45
1	N	1010	U	P-O5'	-6.17	1.50	1.59
1	N	628	G	O4'-C1'	6.16	1.50	1.41
1	N	181	A	C4'-C3'	6.16	1.61	1.52
1	N	368	U	C4'-C3'	6.15	1.61	1.52
1	N	1041	G	C4'-C3'	-6.14	1.43	1.52
1	N	1196	A	P-O5'	-6.14	1.50	1.59
1	N	1397	C	C1'-N1	6.14	1.57	1.48
1	N	110	C	O3'-P	-6.14	1.51	1.61
1	N	349	A	O3'-P	-6.14	1.51	1.61
1	N	152	A	C1'-N9	6.13	1.57	1.48
1	N	385	C	C1'-N1	6.13	1.57	1.48
1	N	81	A	O4'-C1'	-6.12	1.32	1.42
1	N	1358	U	O3'-P	-6.12	1.51	1.61
1	N	936	C	C5'-C4'	6.12	1.60	1.51
1	N	1281	C	O3'-P	-6.12	1.51	1.61
1	N	1469	C	C1'-N1	6.12	1.57	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	891	U	C5'-C4'	6.12	1.60	1.51
1	N	1123	U	C4'-C3'	6.12	1.61	1.52
1	N	139	A	C3'-O3'	6.11	1.51	1.42
1	N	1061	G	C3'-O3'	6.11	1.51	1.42
1	N	528	C	C1'-N1	6.11	1.57	1.48
1	N	806	C	P-O5'	-6.11	1.50	1.59
1	N	1242	G	O5'-C5'	-6.11	1.33	1.42
1	N	189	A	C3'-O3'	6.10	1.51	1.42
1	N	1157	A	C2'-C1'	-6.10	1.44	1.53
1	N	599	C	C1'-N1	6.08	1.57	1.48
1	N	1352	C	C4-N4	6.08	1.46	1.33
1	N	914	A	C2'-C1'	-6.08	1.44	1.53
1	N	21	G	N9-C4	6.08	1.50	1.38
1	N	1504	G	C5'-C4'	6.07	1.60	1.51
1	N	227	G	C2'-C1'	-6.07	1.44	1.53
1	N	956	U	C1'-N1	6.06	1.57	1.48
1	N	175	C	C3'-C2'	6.06	1.61	1.52
1	N	357	G	C4'-O4'	-6.06	1.36	1.45
1	N	49	U	C4'-C3'	6.05	1.61	1.52
1	N	581	G	C2'-C1'	-6.04	1.44	1.53
1	N	1349	A	C2'-C1'	-6.04	1.44	1.53
1	N	340	U	C2'-O2'	-6.04	1.33	1.42
1	N	1506	U	C4'-O4'	-6.04	1.36	1.45
1	N	934	C	C2'-C1'	-6.04	1.44	1.53
1	N	1151	A	P-O5'	-6.04	1.50	1.59
1	N	986	U	C4'-C3'	6.03	1.61	1.52
1	N	191	G	O3'-P	-6.03	1.52	1.61
1	N	255	G	C2-N3	6.03	1.44	1.32
1	N	562	U	P-O5'	-6.03	1.50	1.59
1	N	1112	C	P-O5'	6.01	1.68	1.59
1	N	1178	G	C6-N1	6.01	1.51	1.39
1	N	1219	A	O3'-P	-6.01	1.52	1.61
1	N	609	A	C1'-N9	6.01	1.56	1.48
1	N	133	U	O3'-P	-6.00	1.52	1.61
1	N	797	C	C1'-N1	6.00	1.57	1.48
1	N	83	C	C4'-C3'	5.99	1.61	1.52
1	N	736	C	N3-C4	5.99	1.45	1.33
1	N	1130	A	C3'-O3'	5.99	1.51	1.42
1	N	1236	A	P-O5'	-5.99	1.50	1.59
1	N	1381	U	C3'-C2'	5.98	1.61	1.52
1	N	1352	C	C1'-N1	5.97	1.57	1.48
1	N	754	C	C5'-C4'	5.96	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	651	C	C4'-O4'	-5.96	1.36	1.45
1	N	700	G	P-O5'	-5.96	1.50	1.59
1	N	80	A	C5'-C4'	5.96	1.60	1.51
1	N	1140	C	O4'-C1'	-5.95	1.33	1.42
1	N	997	U	C1'-N1	5.95	1.57	1.48
1	N	951	G	C5'-C4'	5.95	1.60	1.51
1	N	1242	G	C3'-O3'	5.94	1.51	1.42
1	N	621	A	C4'-O4'	-5.94	1.36	1.45
1	N	731	G	C5'-C4'	5.94	1.60	1.51
1	N	771	G	O3'-P	-5.94	1.52	1.61
1	N	38	G	C2'-C1'	-5.94	1.44	1.53
1	N	1197	A	C4'-C3'	5.93	1.61	1.52
1	N	1244	G	C2'-C1'	-5.93	1.44	1.53
1	N	1244	G	C4'-O4'	-5.93	1.36	1.45
1	N	532	A	O3'-P	-5.92	1.52	1.61
1	N	518	C	C2'-C1'	-5.92	1.44	1.53
1	N	1433	A	C2'-C1'	-5.92	1.44	1.53
1	N	774	G	C5'-C4'	5.92	1.60	1.51
1	N	107	G	C4'-O4'	-5.91	1.36	1.45
1	N	371	A	P-O5'	-5.91	1.50	1.59
1	N	209	U	O4'-C1'	5.91	1.50	1.41
1	N	808	C	C1'-N1	5.91	1.57	1.48
1	N	1135	U	O3'-P	-5.90	1.52	1.61
1	N	428	G	O3'-P	-5.90	1.52	1.61
1	N	556	C	C4'-O4'	-5.90	1.36	1.45
1	N	1115	U	C5'-C4'	5.90	1.60	1.51
1	N	1085	U	C1'-N1	5.89	1.56	1.47
1	N	1433	A	C1'-N9	5.89	1.56	1.48
1	N	113	G	C4'-O4'	5.89	1.54	1.45
1	N	591	U	C1'-N1	5.89	1.57	1.48
1	N	1148	U	C1'-N1	5.89	1.57	1.48
1	N	1332	A	C4'-O4'	5.89	1.54	1.45
1	N	909	A	O5'-C5'	-5.88	1.33	1.42
1	N	1432	G	C1'-N9	5.88	1.55	1.47
1	N	1473	G	C4'-C3'	5.88	1.61	1.52
1	N	278	G	C1'-N9	5.88	1.56	1.48
1	N	319	G	O3'-P	-5.87	1.52	1.61
1	N	860	A	C1'-N9	5.87	1.56	1.48
1	N	1210	C	P-O5'	5.87	1.68	1.59
1	N	1469	C	O5'-C5'	5.87	1.51	1.42
1	N	955	U	C5'-C4'	5.86	1.60	1.51
1	N	228	A	C3'-O3'	5.86	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	980	C	O4'-C1'	5.85	1.50	1.41
1	N	98	A	C5'-C4'	5.85	1.60	1.51
1	N	320	A	O5'-C5'	5.85	1.51	1.42
1	N	1335	U	O3'-P	-5.85	1.52	1.61
1	N	416	G	C1'-N9	5.84	1.56	1.48
1	N	1386	G	P-O5'	-5.84	1.50	1.59
1	N	46	G	C5'-C4'	5.84	1.60	1.51
1	N	852	G	O4'-C1'	5.83	1.50	1.41
1	N	1430	A	P-O5'	5.83	1.68	1.59
1	N	516	U	C2'-C1'	-5.82	1.44	1.53
1	N	983	A	C4'-O4'	5.82	1.54	1.45
1	N	1322	C	C5'-C4'	5.81	1.60	1.51
1	N	114	U	C2'-O2'	-5.81	1.33	1.42
1	N	1022	A	C4'-C3'	5.81	1.61	1.52
1	N	481	G	O3'-P	-5.81	1.52	1.61
1	N	932	C	O3'-P	-5.81	1.52	1.61
1	N	46	G	O3'-P	-5.81	1.52	1.61
1	N	77	A	N7-C5	-5.80	1.27	1.39
1	N	742	G	O4'-C1'	5.80	1.50	1.41
1	N	300	A	O3'-P	-5.80	1.52	1.61
1	N	1024	G	O5'-C5'	-5.80	1.33	1.42
1	N	1058	G	P-O5'	-5.80	1.51	1.59
1	N	610	U	C3'-C2'	5.79	1.61	1.52
1	N	1194	U	O5'-C5'	5.79	1.51	1.42
1	N	86	G	C1'-N9	5.79	1.55	1.47
1	N	738	C	C2'-C1'	-5.79	1.44	1.53
1	N	105	G	P-O5'	-5.78	1.51	1.59
1	N	1138	G	C4'-O4'	-5.78	1.36	1.45
1	N	1414	U	O3'-P	-5.77	1.52	1.61
1	N	45	G	C4'-O4'	-5.77	1.36	1.45
1	N	1325	C	O4'-C1'	5.77	1.50	1.41
1	N	781	A	C5'-C4'	5.76	1.59	1.51
1	N	1315	U	P-O5'	-5.76	1.51	1.59
1	N	1350	A	O4'-C1'	5.76	1.50	1.41
1	N	993	G	C1'-N9	5.75	1.55	1.47
1	N	1057	G	O3'-P	-5.75	1.52	1.61
1	N	91	U	C5'-C4'	5.75	1.59	1.51
1	N	360	G	C1'-N9	-5.75	1.39	1.48
1	N	546	A	O4'-C1'	-5.75	1.33	1.41
1	N	1486	G	C2'-C1'	-5.75	1.44	1.53
1	N	216	U	C2'-C1'	-5.75	1.44	1.53
1	N	904	U	O4'-C1'	5.74	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	120	A	C4'-C3'	5.74	1.61	1.52
1	N	95	C	C4'-C3'	5.74	1.61	1.52
1	N	1533	C	C3'-C2'	5.74	1.61	1.52
1	N	94	G	C1'-N9	5.74	1.55	1.47
1	N	1293	C	C1'-N1	-5.74	1.39	1.48
1	N	33	A	C4'-C3'	-5.73	1.44	1.52
1	N	147	G	C2-N2	5.73	1.46	1.34
1	N	471	U	C2'-C1'	-5.73	1.44	1.53
1	N	618	C	O4'-C1'	5.72	1.50	1.41
1	N	41	G	C3'-C2'	5.72	1.61	1.52
1	N	1074	G	C3'-C2'	-5.72	1.44	1.52
1	N	288	A	C2'-C1'	-5.72	1.44	1.53
1	N	302	G	C1'-N9	5.72	1.56	1.48
1	N	751	U	C1'-N1	5.72	1.57	1.48
1	N	1448	C	O3'-P	-5.72	1.52	1.61
1	N	1062	U	C4'-C3'	5.72	1.61	1.52
1	N	887	G	C5'-C4'	5.71	1.59	1.51
1	N	997	U	C4'-C3'	5.71	1.61	1.52
1	N	904	U	C1'-N1	5.71	1.57	1.48
1	N	241	G	N1-C2	5.71	1.49	1.37
1	N	1304	G	O3'-P	-5.71	1.52	1.61
1	N	1529	G	C1'-N9	5.71	1.55	1.47
1	N	831	A	C5'-C4'	5.70	1.59	1.51
1	N	1142	G	P-O5'	-5.70	1.51	1.59
1	N	885	G	N7-C5	-5.70	1.27	1.39
1	N	213	G	C5-C6	-5.70	1.30	1.42
1	N	980	C	C3'-C2'	-5.70	1.44	1.52
1	N	33	A	C2'-C1'	-5.70	1.44	1.53
1	N	426	U	C4'-O4'	-5.70	1.37	1.45
1	N	342	C	C5'-C4'	5.69	1.59	1.51
1	N	1078	U	C3'-O3'	5.69	1.50	1.42
1	N	709	U	C2'-O2'	-5.69	1.33	1.42
1	N	895	G	C1'-N9	5.68	1.56	1.48
1	N	1384	C	C4-N4	5.68	1.45	1.33
1	N	1475	G	C1'-N9	-5.68	1.39	1.48
1	N	558	G	C4'-C3'	5.68	1.61	1.52
1	N	1241	G	C5'-C4'	5.67	1.59	1.51
1	N	1298	U	C5'-C4'	5.67	1.59	1.51
1	N	1354	U	C5'-C4'	5.67	1.59	1.51
1	N	692	U	O4'-C1'	5.67	1.50	1.41
1	N	103	U	C3'-O3'	5.66	1.50	1.42
1	N	971	G	C5'-C4'	5.66	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1020	G	C1'-N9	5.66	1.56	1.48
1	N	492	C	C3'-O3'	-5.66	1.33	1.42
1	N	1004	A	C3'-O3'	5.66	1.50	1.42
1	N	467	U	C2'-C1'	-5.65	1.44	1.53
1	N	1093	A	C4'-O4'	5.65	1.54	1.45
1	N	1345	U	C1'-N1	5.64	1.55	1.47
1	N	880	C	C4'-O4'	5.64	1.54	1.45
1	N	475	C	C1'-N1	5.63	1.56	1.48
1	N	1290	G	C3'-O3'	5.63	1.50	1.42
1	N	505	G	C2-N2	5.63	1.45	1.34
1	N	873	A	C2'-O2'	-5.63	1.33	1.41
1	N	1345	U	O4'-C1'	-5.63	1.33	1.42
1	N	1019	A	C2'-C1'	5.63	1.61	1.53
1	N	278	G	O3'-P	-5.62	1.52	1.61
1	N	927	G	O4'-C1'	5.62	1.50	1.41
1	N	519	C	C3'-O3'	5.62	1.50	1.42
1	N	604	G	C4'-O4'	5.61	1.53	1.45
1	N	1234	C	C5'-C4'	5.61	1.59	1.51
1	N	253	A	C2'-C1'	-5.61	1.45	1.53
1	N	779	C	C4'-C3'	5.61	1.60	1.52
1	N	1435	G	C1'-N9	5.60	1.56	1.48
1	N	506	G	C2'-C1'	-5.60	1.45	1.53
1	N	1317	C	C4'-C3'	5.59	1.60	1.52
1	N	1007	U	C1'-N1	5.59	1.56	1.48
1	N	867	G	P-O5'	-5.59	1.51	1.59
1	N	762	U	O3'-P	-5.58	1.52	1.61
1	N	1484	C	C1'-N1	5.58	1.56	1.48
1	N	409	U	C3'-O3'	5.58	1.50	1.42
1	N	128	G	P-O5'	-5.58	1.51	1.59
1	N	463	U	C1'-N1	5.58	1.56	1.48
1	N	424	G	C1'-N9	5.58	1.56	1.48
1	N	1041	G	C4'-O4'	5.57	1.53	1.45
1	N	1374	A	O4'-C1'	5.57	1.50	1.41
1	N	296	U	C2'-O2'	-5.57	1.34	1.42
1	N	1099	G	P-O5'	-5.57	1.51	1.59
1	N	1246	A	C5'-C4'	5.56	1.59	1.51
1	N	1186	G	C5'-C4'	5.56	1.59	1.51
1	N	834	U	P-O5'	-5.56	1.51	1.59
1	N	1260	G	C1'-N9	5.56	1.56	1.48
1	N	752	G	C2'-C1'	-5.55	1.45	1.53
1	N	271	C	P-O5'	-5.55	1.51	1.59
1	N	1384	C	C2'-C1'	-5.55	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1512	U	P-O5'	5.55	1.68	1.59
1	N	212	G	C2'-C1'	-5.54	1.45	1.53
1	N	210	C	O3'-P	-5.54	1.52	1.61
1	N	293	G	O3'-P	-5.54	1.52	1.61
1	N	875	U	P-O5'	-5.54	1.51	1.59
1	N	1007	U	O3'-P	-5.54	1.52	1.61
1	N	296	U	C3'-O3'	5.53	1.50	1.42
1	N	1033	G	C1'-N9	5.53	1.56	1.48
1	N	686	U	O4'-C1'	-5.53	1.33	1.42
1	N	614	C	O4'-C1'	5.53	1.50	1.41
1	N	1091	U	C2'-O2'	-5.53	1.34	1.42
1	N	530	G	C5'-C4'	5.53	1.59	1.51
1	N	1362	A	C5'-C4'	-5.53	1.43	1.51
1	N	741	G	C5'-C4'	5.52	1.59	1.51
1	N	147	G	O4'-C1'	-5.52	1.33	1.41
1	N	960	U	C1'-N1	5.52	1.55	1.47
1	N	603	U	C4'-O4'	5.52	1.53	1.45
1	N	1259	C	O4'-C1'	5.51	1.50	1.41
1	N	380	G	C3'-C2'	-5.51	1.44	1.52
1	N	100	G	C3'-O3'	5.51	1.50	1.42
1	N	246	A	O3'-P	-5.50	1.52	1.61
1	N	613	C	C2'-C1'	-5.50	1.45	1.53
1	N	857	C	C1'-N1	5.50	1.56	1.48
1	N	96	U	P-O5'	-5.50	1.51	1.59
1	N	1459	G	O4'-C1'	5.49	1.49	1.41
1	N	1397	C	C5'-C4'	5.49	1.59	1.51
1	N	1181	G	O3'-P	-5.48	1.52	1.61
1	N	1150	A	C3'-O3'	5.48	1.50	1.42
1	N	1370	G	C2'-C1'	-5.48	1.45	1.53
1	N	1405	G	C2-N2	5.48	1.45	1.34
1	N	1492	A	C5'-C4'	5.48	1.59	1.51
1	N	843	U	C5'-C4'	5.47	1.59	1.51
1	N	1431	A	P-O5'	-5.47	1.51	1.59
1	N	560	A	C4'-O4'	-5.47	1.37	1.45
1	N	194	C	C4'-C3'	-5.47	1.44	1.52
1	N	431	A	O3'-P	-5.47	1.52	1.61
1	N	1194	U	C2'-C1'	-5.47	1.45	1.53
1	N	227	G	C4'-O4'	-5.47	1.37	1.45
1	N	1264	U	C2'-C1'	-5.47	1.45	1.53
1	N	941	G	C4'-C3'	5.46	1.60	1.52
1	N	301	G	C1'-N9	5.46	1.56	1.48
1	N	56	U	O5'-C5'	5.46	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	305	G	P-O5'	-5.46	1.51	1.59
1	N	221	C	C4'-C3'	5.46	1.60	1.52
1	N	1143	G	C1'-N9	5.46	1.56	1.48
1	N	511	C	O3'-P	-5.45	1.52	1.61
1	N	903	G	C5'-C4'	5.45	1.59	1.51
1	N	1261	A	C3'-O3'	5.45	1.50	1.42
1	N	1383	C	C4'-O4'	5.45	1.53	1.45
1	N	670	G	C4'-C3'	5.45	1.60	1.52
1	N	1210	C	C5'-C4'	5.45	1.59	1.51
1	N	337	G	C5'-C4'	5.45	1.59	1.51
1	N	600	A	O3'-P	-5.45	1.52	1.61
1	N	1084	G	C5-C6	-5.45	1.31	1.42
1	N	1485	U	P-O5'	-5.45	1.51	1.59
1	N	221	C	O3'-P	-5.44	1.52	1.61
1	N	342	C	C1'-N1	5.44	1.56	1.48
1	N	813	U	C4'-O4'	5.44	1.53	1.45
1	N	1444	U	O3'-P	-5.44	1.52	1.61
1	N	9	G	O4'-C1'	5.44	1.49	1.41
1	N	31	G	C4'-O4'	-5.44	1.37	1.45
1	N	290	C	C1'-N1	5.44	1.56	1.48
1	N	1447	A	C3'-C2'	-5.44	1.44	1.52
1	N	147	G	C4'-O4'	-5.43	1.37	1.45
1	N	912	C	P-O5'	-5.43	1.51	1.59
1	N	258	G	N9-C4	-5.43	1.27	1.38
1	N	169	C	C2'-C1'	-5.42	1.45	1.53
1	N	500	G	O3'-P	-5.42	1.53	1.61
1	N	1205	U	C3'-O3'	5.42	1.50	1.42
1	N	1337	G	O5'-C5'	5.42	1.50	1.42
1	N	895	G	C3'-O3'	5.41	1.50	1.42
1	N	1035	A	C1'-N9	5.41	1.56	1.48
1	N	1481	U	C3'-O3'	5.41	1.50	1.42
1	N	326	G	C5'-C4'	5.41	1.59	1.51
1	N	975	A	C2'-C1'	-5.41	1.45	1.53
1	N	826	C	C2'-O2'	-5.41	1.34	1.42
1	N	229	U	O3'-P	-5.40	1.53	1.61
1	N	234	C	C1'-N1	5.40	1.56	1.48
1	N	460	A	C4'-C3'	5.40	1.60	1.52
1	N	445	G	O4'-C1'	5.40	1.49	1.41
1	N	1124	G	O3'-P	-5.40	1.53	1.61
1	N	435	A	C2'-C1'	-5.40	1.45	1.53
1	N	403	C	P-O5'	-5.39	1.51	1.59
1	N	305	G	O5'-C5'	5.39	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	255	G	C1'-N9	5.39	1.56	1.48
1	N	1076	U	N3-C4	5.39	1.49	1.38
1	N	1116	U	O4'-C1'	5.39	1.49	1.41
1	N	810	C	O5'-C5'	5.39	1.50	1.42
1	N	1064	G	C6-N1	5.39	1.50	1.39
1	N	524	G	O4'-C1'	5.39	1.49	1.41
1	N	669	G	C2'-C1'	-5.39	1.45	1.53
1	N	1155	A	P-O5'	-5.39	1.51	1.59
1	N	805	C	C3'-C2'	5.38	1.60	1.52
1	N	965	U	C1'-N1	5.38	1.55	1.47
1	N	236	A	O4'-C1'	-5.38	1.33	1.41
1	N	819	A	O4'-C1'	5.38	1.50	1.42
1	N	354	G	O3'-P	-5.38	1.53	1.61
1	N	429	U	O3'-P	-5.38	1.53	1.61
1	N	1170	A	C2'-C1'	-5.38	1.45	1.53
1	N	81	A	C4'-O4'	-5.37	1.37	1.45
1	N	259	G	P-O5'	5.37	1.67	1.59
1	N	726	C	C1'-N1	5.37	1.56	1.48
1	N	107	G	C2'-C1'	-5.37	1.45	1.53
1	N	305	G	C4'-O4'	-5.36	1.37	1.45
1	N	558	G	O5'-C5'	5.36	1.50	1.42
1	N	1465	A	C1'-N9	5.36	1.55	1.48
1	N	772	U	C2'-C1'	-5.36	1.45	1.53
1	N	1138	G	C1'-N9	5.36	1.55	1.48
1	N	1371	G	O4'-C1'	5.36	1.49	1.41
1	N	1146	A	P-O5'	-5.35	1.51	1.59
1	N	502	A	C4'-O4'	-5.35	1.37	1.45
1	N	513	C	P-O5'	-5.35	1.51	1.59
1	N	1256	A	O4'-C1'	-5.35	1.33	1.42
1	N	57	G	C2'-C1'	-5.35	1.45	1.53
1	N	598	U	C5'-C4'	5.35	1.59	1.51
1	N	1317	C	C1'-N1	5.34	1.56	1.48
1	N	1403	C	P-O5'	-5.34	1.51	1.59
1	N	866	C	O4'-C1'	5.34	1.49	1.41
1	N	698	G	N9-C8	5.33	1.48	1.37
1	N	39	G	C4'-O4'	5.33	1.53	1.45
1	N	1174	G	C5-C6	-5.33	1.31	1.42
1	N	124	C	C1'-N1	5.33	1.56	1.48
1	N	1000	A	P-O5'	-5.33	1.51	1.59
1	N	1400	C	N3-C4	5.33	1.44	1.33
1	N	1228	C	O3'-P	-5.32	1.53	1.61
1	N	359	G	C1'-N9	5.32	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1436	U	O3'-P	-5.32	1.53	1.61
1	N	541	G	C5'-C4'	5.32	1.59	1.51
1	N	332	G	O4'-C1'	5.32	1.49	1.41
1	N	959	A	C2'-C1'	-5.32	1.45	1.53
1	N	1249	C	C1'-N1	5.31	1.56	1.48
1	N	1134	G	C3'-C2'	-5.31	1.44	1.52
1	N	471	U	C3'-O3'	5.31	1.50	1.42
1	N	488	C	C4'-C3'	-5.30	1.44	1.52
1	N	416	G	C4'-C3'	5.30	1.60	1.52
1	N	1074	G	N1-C2	5.30	1.48	1.37
1	N	352	C	C5'-C4'	5.30	1.59	1.51
1	N	784	A	C2'-C1'	-5.29	1.45	1.53
1	N	635	A	C4'-C3'	-5.29	1.44	1.52
1	N	1025	U	O3'-P	-5.29	1.53	1.61
1	N	1164	G	N1-C2	5.29	1.48	1.37
1	N	1509	C	C5'-C4'	5.29	1.59	1.51
1	N	1524	C	C4'-C3'	5.29	1.60	1.52
1	N	493	A	C4'-C3'	5.29	1.60	1.52
1	N	234	C	C2'-C1'	-5.29	1.45	1.53
1	N	154	U	C4'-C3'	5.28	1.60	1.52
1	N	152	A	O3'-P	-5.28	1.53	1.61
1	N	899	C	C1'-N1	5.28	1.56	1.48
1	N	1125	U	C4'-C3'	5.28	1.60	1.52
1	N	1392	G	C5'-C4'	5.28	1.59	1.51
1	N	83	C	C2'-O2'	-5.28	1.34	1.42
1	N	161	A	C3'-O3'	5.28	1.50	1.42
1	N	372	C	C4'-C3'	5.28	1.61	1.53
1	N	997	U	C5'-C4'	5.28	1.59	1.51
1	N	300	A	C2'-C1'	-5.27	1.45	1.53
1	N	68	G	N7-C5	-5.27	1.28	1.39
1	N	753	A	O3'-P	-5.27	1.53	1.61
1	N	1042	A	P-O5'	-5.27	1.51	1.59
1	N	1501	C	O3'-P	-5.27	1.53	1.61
1	N	1356	G	C2'-C1'	-5.27	1.45	1.53
1	N	330	C	C1'-N1	5.27	1.56	1.48
1	N	463	U	C4'-C3'	5.27	1.60	1.52
1	N	256	U	C5'-C4'	5.26	1.59	1.51
1	N	644	U	O4'-C1'	5.26	1.49	1.41
1	N	710	G	C5'-C4'	5.26	1.59	1.51
1	N	191	G	O4'-C1'	-5.26	1.33	1.41
1	N	576	C	O3'-P	-5.26	1.53	1.61
1	N	661	G	O5'-C5'	-5.26	1.34	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	769	G	C2-N3	5.26	1.43	1.32
1	N	1224	U	C4'-C3'	5.26	1.60	1.52
1	N	718	A	C5'-C4'	5.25	1.59	1.51
1	N	1499	A	O3'-P	-5.25	1.53	1.61
1	N	156	C	O5'-C5'	5.25	1.50	1.42
1	N	526	C	C5'-C4'	5.25	1.59	1.51
1	N	1060	U	C3'-O3'	5.25	1.50	1.42
1	N	1066	C	C1'-N1	5.25	1.56	1.48
1	N	608	A	P-O5'	-5.25	1.51	1.59
1	N	358	U	C4'-O4'	-5.24	1.37	1.45
1	N	1317	C	O4'-C1'	5.24	1.49	1.41
1	N	186	C	C4'-C3'	-5.24	1.44	1.52
1	N	699	C	O4'-C1'	5.24	1.49	1.41
1	N	792	A	C6-N6	5.24	1.44	1.33
1	N	322	C	P-O5'	-5.24	1.51	1.59
1	N	988	G	C2-N3	5.24	1.43	1.32
1	N	424	G	P-O5'	-5.24	1.51	1.59
1	N	281	G	O3'-P	-5.23	1.53	1.61
1	N	922	G	C5'-C4'	5.23	1.59	1.51
1	N	198	G	C5'-C4'	5.23	1.59	1.51
1	N	115	G	C2'-C1'	-5.23	1.45	1.53
1	N	6	G	C2'-C1'	-5.22	1.45	1.53
1	N	330	C	C3'-O3'	5.22	1.50	1.42
1	N	1036	A	C5'-C4'	5.22	1.59	1.51
1	N	145	G	C2'-C1'	-5.22	1.45	1.53
1	N	320	A	O4'-C1'	-5.22	1.33	1.41
1	N	620	C	O4'-C1'	5.21	1.49	1.41
1	N	1372	U	O5'-C5'	5.21	1.50	1.42
1	N	492	C	C1'-N1	5.21	1.56	1.48
1	N	886	G	C4'-O4'	5.21	1.53	1.45
1	N	63	C	O3'-P	-5.21	1.53	1.61
1	N	142	G	C2'-C1'	-5.21	1.45	1.53
1	N	639	G	O5'-C5'	5.20	1.50	1.42
1	N	1372	U	C1'-N1	5.20	1.56	1.48
1	N	1477	U	C5'-C4'	5.20	1.59	1.51
1	N	264	C	P-O5'	-5.20	1.51	1.59
1	N	163	C	C4'-C3'	5.20	1.60	1.52
1	N	960	U	C3'-O3'	-5.20	1.35	1.43
1	N	152	A	P-O5'	-5.20	1.51	1.59
1	N	1228	C	O4'-C1'	-5.20	1.33	1.41
1	N	490	C	C2'-C1'	5.19	1.61	1.53
1	N	599	C	C4'-C3'	-5.19	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	804	U	C4'-C3'	5.19	1.60	1.52
1	N	868	C	O5'-C5'	-5.19	1.34	1.42
1	N	1437	A	C5'-C4'	5.19	1.59	1.51
1	N	732	C	C1'-N1	5.18	1.56	1.48
1	N	79	G	C1'-N9	5.18	1.55	1.48
1	N	593	U	C2'-C1'	-5.18	1.45	1.53
1	N	878	A	O5'-C5'	-5.18	1.34	1.42
1	N	985	C	C5'-C4'	5.18	1.59	1.51
1	N	216	U	C4'-C3'	5.17	1.60	1.52
1	N	1249	C	C4-N4	5.17	1.44	1.33
1	N	983	A	C1'-N9	5.17	1.54	1.47
1	N	1295	U	C1'-N1	5.17	1.56	1.48
1	N	1105	A	C3'-C2'	5.17	1.60	1.52
1	N	695	A	O3'-P	-5.17	1.53	1.61
1	N	832	G	C1'-N9	-5.17	1.40	1.48
1	N	377	G	C4'-O4'	-5.17	1.37	1.45
1	N	306	A	C5'-C4'	5.17	1.58	1.51
1	N	475	C	O3'-P	-5.16	1.53	1.61
1	N	333	U	C5'-C4'	5.16	1.58	1.51
1	N	892	A	C4'-O4'	5.16	1.53	1.45
1	N	893	C	C4'-C3'	5.16	1.60	1.52
1	N	321	A	O5'-C5'	5.16	1.50	1.42
1	N	709	U	C5'-C4'	-5.16	1.43	1.51
1	N	920	U	C3'-O3'	5.16	1.49	1.42
1	N	505	G	O3'-P	-5.16	1.53	1.61
1	N	1119	C	O3'-P	5.16	1.68	1.61
1	N	1157	A	C5'-C4'	5.16	1.59	1.51
1	N	1165	U	C4'-O4'	5.15	1.53	1.45
1	N	490	C	C1'-N1	5.15	1.56	1.48
1	N	879	C	C4'-C3'	-5.15	1.44	1.52
1	N	1102	A	P-O5'	-5.15	1.52	1.59
1	N	1451	U	C4'-C3'	5.15	1.60	1.53
1	N	811	C	C3'-O3'	5.14	1.49	1.42
1	N	164	G	O3'-P	-5.14	1.53	1.61
1	N	271	C	C4'-C3'	-5.14	1.44	1.52
1	N	343	U	C2'-O2'	-5.14	1.34	1.42
1	N	1481	U	C2-N3	5.14	1.48	1.37
1	N	952	U	C1'-N1	5.14	1.56	1.48
1	N	1162	C	C3'-O3'	5.14	1.49	1.42
1	N	1458	G	O3'-P	-5.14	1.53	1.61
1	N	524	G	C2'-C1'	-5.14	1.45	1.53
1	N	686	U	C4'-C3'	5.14	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	142	G	C4'-C3'	5.13	1.60	1.52
1	N	77	A	C4'-C3'	5.13	1.60	1.52
1	N	940	C	C5'-C4'	5.13	1.58	1.51
1	N	175	C	C5'-C4'	5.13	1.58	1.51
1	N	498	A	C3'-O3'	5.13	1.49	1.42
1	N	726	C	C2'-C1'	-5.13	1.45	1.53
1	N	903	G	N1-C2	5.13	1.48	1.37
1	N	1153	G	N1-C2	5.13	1.48	1.37
1	N	1264	U	C1'-N1	5.13	1.56	1.48
1	N	1507	A	O3'-P	-5.13	1.53	1.61
1	N	206	C	C5'-C4'	5.12	1.58	1.51
1	N	805	C	C2'-C1'	-5.12	1.45	1.53
1	N	69	G	O5'-C5'	5.12	1.50	1.42
1	N	211	G	C5'-C4'	5.12	1.58	1.51
1	N	160	A	C2'-C1'	-5.12	1.45	1.53
1	N	314	C	C4'-C3'	5.12	1.60	1.52
1	N	275	G	C2-N3	5.11	1.43	1.32
1	N	305	G	C2'-C1'	-5.11	1.45	1.53
1	N	944	G	O4'-C1'	5.11	1.49	1.41
1	N	1399	C	C1'-N1	5.11	1.55	1.47
1	N	1052	U	P-O5'	-5.11	1.52	1.59
1	N	1214	C	C5'-C4'	5.11	1.59	1.51
1	N	378	G	C1'-N9	-5.10	1.40	1.48
1	N	611	C	C1'-N1	5.10	1.56	1.48
1	N	1364	U	C3'-O3'	-5.10	1.35	1.43
1	N	361	G	O3'-P	-5.10	1.53	1.61
1	N	778	G	N1-C2	5.10	1.48	1.37
1	N	1197	A	C6-N6	5.10	1.44	1.33
1	N	445	G	C5'-C4'	5.10	1.58	1.51
1	N	465	A	C1'-N9	5.10	1.55	1.48
1	N	550	G	O5'-C5'	5.10	1.50	1.42
1	N	1525	G	O3'-P	-5.10	1.53	1.61
1	N	597	G	P-O5'	-5.10	1.52	1.59
1	N	1068	G	C4'-C3'	5.10	1.60	1.52
1	N	1480	A	C2'-C1'	-5.09	1.45	1.53
1	N	700	G	C3'-O3'	5.09	1.49	1.42
1	N	740	U	C3'-C2'	5.09	1.60	1.52
1	N	1080	A	C3'-C2'	5.09	1.60	1.52
1	N	77	A	C5'-C4'	5.09	1.58	1.51
1	N	861	G	O3'-P	-5.09	1.53	1.61
1	N	354	G	C2'-O2'	-5.09	1.34	1.42
1	N	1470	U	C3'-O3'	5.09	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1135	U	O5'-C5'	5.09	1.50	1.42
1	N	1036	A	C6-N6	5.08	1.44	1.33
1	N	1049	U	N1-C2	5.08	1.48	1.38
1	N	426	U	P-O5'	-5.08	1.52	1.59
1	N	1179	A	C5'-C4'	5.08	1.58	1.51
1	N	769	G	O3'-P	-5.08	1.53	1.61
1	N	574	A	O5'-C5'	5.08	1.50	1.42
1	N	1139	G	C5'-C4'	5.08	1.58	1.51
1	N	506	G	O4'-C1'	5.07	1.49	1.41
1	N	770	C	C2'-C1'	-5.07	1.45	1.53
1	N	556	C	C2'-C1'	-5.07	1.45	1.53
1	N	1483	A	P-O5'	-5.07	1.52	1.59
1	N	1489	G	C2'-O2'	-5.07	1.34	1.42
1	N	129	A	C4'-O4'	-5.07	1.38	1.45
1	N	728	A	C1'-N9	-5.07	1.40	1.48
1	N	547	A	C3'-O3'	5.06	1.50	1.43
1	N	675	A	C4'-C3'	5.06	1.60	1.52
1	N	870	U	C4'-O4'	-5.06	1.38	1.45
1	N	303	A	C3'-C2'	-5.06	1.45	1.52
1	N	304	U	C1'-N1	5.06	1.56	1.48
1	N	1041	G	O5'-C5'	5.06	1.50	1.42
1	N	1219	A	C2'-C1'	-5.06	1.45	1.53
1	N	300	A	C5'-C4'	5.06	1.58	1.51
1	N	344	A	C5'-C4'	5.06	1.58	1.51
1	N	1202	U	C3'-O3'	5.06	1.49	1.42
1	N	247	G	C4'-C3'	5.05	1.60	1.52
1	N	625	U	C2'-O2'	-5.05	1.34	1.42
1	N	958	A	C4'-O4'	-5.05	1.38	1.45
1	N	1332	A	C3'-O3'	5.05	1.49	1.42
1	N	1519	A	P-O5'	5.05	1.67	1.59
1	N	647	C	P-O5'	-5.05	1.52	1.59
1	N	691	G	P-O5'	-5.05	1.52	1.59
1	N	250	A	O4'-C1'	-5.05	1.34	1.42
1	N	900	A	C2'-C1'	-5.05	1.45	1.53
1	N	1383	C	C1'-N1	5.05	1.56	1.48
1	N	124	C	O3'-P	-5.05	1.53	1.61
1	N	322	C	C4'-C3'	-5.05	1.45	1.52
1	N	971	G	C2'-C1'	-5.04	1.45	1.53
1	N	1222	G	C4'-O4'	-5.04	1.38	1.45
1	N	1098	C	O3'-P	-5.04	1.53	1.61
1	N	1332	A	O3'-P	-5.04	1.53	1.61
1	N	1110	A	C2'-C1'	-5.04	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	991	U	O5'-C5'	-5.04	1.35	1.42
1	N	1028	C	C1'-N1	5.04	1.56	1.48
1	N	1336	C	C4'-C3'	5.04	1.60	1.53
1	N	125	U	C2'-C1'	-5.03	1.45	1.53
1	N	661	G	C2-N3	5.03	1.42	1.32
1	N	273	U	O3'-P	-5.03	1.53	1.61
1	N	682	G	C2'-C1'	-5.03	1.45	1.53
1	N	723	U	C3'-O3'	5.03	1.49	1.42
1	N	1043	G	C3'-O3'	5.03	1.49	1.42
1	N	228	A	C4'-C3'	5.03	1.60	1.52
1	N	915	A	C3'-O3'	5.03	1.49	1.42
1	N	699	C	C3'-O3'	5.02	1.49	1.42
1	N	180	U	C3'-C2'	5.02	1.60	1.52
1	N	602	A	C4'-C3'	5.02	1.60	1.52
1	N	787	A	C3'-C2'	-5.02	1.45	1.52
1	N	870	U	P-O5'	-5.02	1.52	1.59
1	N	1094	G	C3'-O3'	5.02	1.49	1.42
1	N	30	U	O4'-C1'	-5.02	1.34	1.42
1	N	780	A	C5'-C4'	5.02	1.58	1.51
1	N	907	A	P-O5'	5.02	1.67	1.59
1	N	1378	C	C4'-O4'	-5.02	1.38	1.45
1	N	1048	G	P-O5'	-5.01	1.52	1.59
1	N	342	C	P-O5'	-5.01	1.52	1.59
1	N	520	A	P-O5'	-5.01	1.52	1.59
1	N	1165	U	P-O5'	-5.01	1.52	1.59
1	N	685	G	C1'-N9	5.01	1.55	1.48
1	N	1129	C	C4'-C3'	5.01	1.60	1.52
1	N	415	A	C6-N6	5.00	1.44	1.33
1	N	665	A	C2'-C1'	-5.00	1.45	1.53
1	N	73	C	C2'-C1'	-5.00	1.45	1.53
1	N	233	C	P-O5'	-5.00	1.52	1.59
1	N	1124	G	C3'-C2'	5.00	1.60	1.52
1	N	1439	G	C3'-O3'	-5.00	1.34	1.42

All (2031) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1399	C	P-O3'-C3'	19.93	150.10	120.20
1	N	484	G	P-O3'-C3'	17.91	147.06	120.20
1	N	1362	A	P-O3'-C3'	17.42	146.33	120.20
1	N	1242	G	P-O5'-C5'	17.16	146.64	120.90
1	N	172	A	P-O3'-C3'	16.43	144.85	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	344	A	P-O3'-C3'	16.32	144.69	120.20
1	N	631	C	P-O3'-C3'	15.68	143.72	120.20
1	N	94	G	P-O3'-C3'	15.59	143.58	120.20
1	N	1053	G	P-O3'-C3'	15.28	143.11	120.20
1	N	511	C	P-O3'-C3'	14.70	142.25	120.20
1	N	1128	C	P-O5'-C5'	14.63	142.85	120.90
1	N	351	G	P-O3'-C3'	14.50	141.95	120.20
1	N	895	G	P-O5'-C5'	14.46	142.59	120.90
1	N	1226	C	P-O3'-C3'	14.40	141.80	120.20
1	N	547	A	P-O3'-C3'	14.36	141.73	120.20
1	N	93	U	P-O5'-C5'	14.19	142.18	120.90
1	N	119	A	P-O3'-C3'	14.14	141.42	120.20
1	N	184	G	P-O5'-C5'	14.05	141.98	120.90
1	N	1146	A	P-O5'-C5'	13.93	141.80	120.90
1	N	789	U	P-O5'-C5'	13.88	141.72	120.90
1	N	109	A	P-O3'-C3'	13.64	140.66	120.20
1	N	438	U	P-O3'-C3'	13.44	140.36	120.20
1	N	633	G	P-O5'-C5'	13.39	140.98	120.90
1	N	1079	G	P-O3'-C3'	13.35	140.22	120.20
1	N	1173	U	P-O5'-C5'	13.31	140.87	120.90
1	N	991	U	P-O3'-C3'	13.12	139.88	120.20
1	N	90	C	C5'-C4'-C3'	13.11	134.87	115.20
1	N	1278	G	P-O3'-C3'	13.04	139.76	120.20
1	N	50	A	P-O5'-C5'	12.86	140.18	120.90
1	N	531	U	P-O5'-C5'	12.64	139.86	120.90
1	N	210	C	P-O3'-C3'	12.48	138.91	120.20
1	N	115	G	P-O3'-C3'	12.35	138.73	120.20
1	N	535	A	P-O3'-C3'	12.35	138.72	120.20
1	N	982	U	P-O3'-C3'	12.16	138.45	120.20
1	N	243	A	P-O3'-C3'	11.92	138.07	120.20
1	N	1065	U	P-O5'-C5'	11.87	138.71	120.90
1	N	95	C	P-O5'-C5'	-11.85	103.13	120.90
1	N	1533	C	P-O5'-C5'	11.81	138.62	120.90
1	N	1096	C	P-O5'-C5'	11.71	138.46	120.90
1	N	1087	G	P-O5'-C5'	11.69	138.44	120.90
1	N	648	A	P-O5'-C5'	11.51	138.17	120.90
1	N	1507	A	P-O5'-C5'	11.51	138.17	120.90
1	N	913	A	P-O3'-C3'	11.47	137.41	120.20
1	N	1127	G	P-O5'-C5'	11.44	138.06	120.90
1	N	372	C	P-O3'-C3'	11.37	137.25	120.20
1	N	802	A	P-O3'-C3'	11.34	137.21	120.20
1	N	93	U	O4'-C4'-C3'	-11.31	92.69	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1358	U	P-O3'-C3'	11.30	137.16	120.20
1	N	1248	A	P-O5'-C5'	11.28	137.82	120.90
1	N	1082	A	P-O5'-C5'	11.26	137.79	120.90
1	N	582	C	P-O5'-C5'	11.22	137.72	120.90
1	N	1064	G	C5'-C4'-C3'	11.18	131.96	115.20
1	N	1331	G	P-O3'-C3'	11.16	136.94	120.20
1	N	776	G	P-O5'-C5'	11.15	137.62	120.90
1	N	1181	G	C5'-C4'-C3'	-11.14	98.50	115.20
1	N	721	G	P-O3'-C3'	11.11	136.87	120.20
1	N	495	A	P-O3'-C3'	11.10	136.85	120.20
1	N	1283	U	P-O5'-C5'	11.03	137.44	120.90
1	N	1432	G	P-O3'-C3'	11.01	136.72	120.20
1	N	412	A	P-O3'-C3'	10.98	136.67	120.20
1	N	264	C	P-O5'-C5'	10.95	137.33	120.90
1	N	47	C	P-O3'-C3'	10.95	136.63	120.20
1	N	51	A	P-O3'-C3'	10.93	136.59	120.20
1	N	934	C	P-O3'-C3'	10.92	136.58	120.20
1	N	674	G	P-O5'-C5'	10.80	137.10	120.90
1	N	896	C	P-O5'-C5'	10.78	137.07	120.90
1	N	1042	A	P-O5'-C5'	10.76	137.04	120.90
1	N	315	A	P-O5'-C5'	10.63	136.85	120.90
1	N	1086	U	C5'-C4'-C3'	-10.62	100.07	116.00
1	N	274	A	C2'-C3'-O3'	10.55	125.32	109.50
1	N	472	U	C4'-C3'-C2'	-10.55	92.05	102.60
1	N	1319	A	P-O3'-C3'	10.53	135.99	120.20
1	N	986	U	P-O5'-C5'	10.50	136.64	120.90
1	N	1476	A	P-O3'-C3'	10.43	135.85	120.20
1	N	812	G	P-O3'-C3'	10.36	135.73	120.20
1	N	878	A	P-O5'-C5'	10.31	136.36	120.90
1	N	1504	G	P-O3'-C3'	10.30	135.65	120.20
1	N	509	A	P-O3'-C3'	10.30	135.65	120.20
1	N	366	A	P-O3'-C3'	10.22	135.52	120.20
1	N	366	A	C2'-C3'-O3'	10.19	124.79	109.50
1	N	486	U	C5'-C4'-C3'	-10.16	100.77	116.00
1	N	559	A	P-O3'-C3'	10.13	135.40	120.20
1	N	361	G	P-O5'-C5'	10.11	136.06	120.90
1	N	1318	A	P-O5'-C5'	10.09	136.04	120.90
1	N	316	C	C5'-C4'-C3'	-10.06	100.90	116.00
1	N	926	G	O3'-P-O5'	10.04	119.06	104.00
1	N	1100	C	P-O5'-C5'	10.04	135.95	120.90
1	N	1274	A	P-O5'-C5'	9.98	135.87	120.90
1	N	1285	A	P-O3'-C3'	9.97	135.15	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	566	G	P-O3'-C3'	9.93	135.09	120.20
1	N	1472	U	O4'-C1'-C2'	-9.92	97.68	107.60
1	N	266	G	P-O3'-C3'	9.92	135.08	120.20
1	N	956	U	P-O5'-C5'	9.88	135.72	120.90
1	N	1050	G	C5'-C4'-C3'	-9.88	101.18	116.00
1	N	1034	G	O5'-C5'-C4'	9.85	126.27	111.50
1	N	230	G	C4'-C3'-C2'	-9.82	92.78	102.60
1	N	1239	A	C5'-C4'-C3'	9.81	129.92	115.20
1	N	555	U	P-O5'-C5'	9.81	135.62	120.90
1	N	1151	A	P-O5'-C5'	9.78	135.57	120.90
1	N	515	G	P-O5'-C5'	9.74	135.51	120.90
1	N	630	A	O4'-C4'-C3'	-9.74	94.26	104.00
1	N	1315	U	P-O5'-C5'	9.73	135.50	120.90
1	N	874	G	P-O5'-C5'	9.71	135.47	120.90
1	N	78	A	P-O3'-C3'	9.71	134.76	120.20
1	N	474	G	O4'-C1'-C2'	-9.68	97.92	107.60
1	N	75	G	P-O5'-C5'	-9.68	106.38	120.90
1	N	1332	A	P-O5'-C5'	-9.67	106.40	120.90
1	N	140	U	P-O5'-C5'	9.67	135.40	120.90
1	N	1132	C	P-O5'-C5'	9.66	135.39	120.90
1	N	1316	G	O3'-P-O5'	-9.63	89.56	104.00
1	N	641	U	P-O3'-C3'	9.55	134.53	120.20
1	N	1201	A	P-O3'-C3'	9.49	134.43	120.20
1	N	119	A	O3'-P-O5'	9.43	118.15	104.00
1	N	1236	A	P-O3'-C3'	9.42	134.33	120.20
1	N	793	U	P-O3'-C3'	9.40	134.30	120.20
1	N	246	A	P-O3'-C3'	9.36	134.25	120.20
1	N	1101	A	P-O3'-C3'	9.36	134.24	120.20
1	N	805	C	P-O5'-C5'	9.32	134.87	120.90
1	N	1284	C	P-O5'-C5'	9.28	134.82	120.90
1	N	598	U	P-O5'-C5'	9.28	134.81	120.90
1	N	181	A	P-O3'-C3'	9.22	134.03	120.20
1	N	1250	A	P-O5'-C5'	9.21	134.72	120.90
1	N	910	C	P-O5'-C5'	9.18	134.67	120.90
1	N	1239	A	C4'-C3'-O3'	9.16	123.15	109.40
1	N	934	C	C5'-C4'-C3'	-9.13	102.30	116.00
1	N	1336	C	P-O3'-C3'	9.12	133.87	120.20
1	N	1414	U	P-O3'-C3'	9.12	133.87	120.20
1	N	1179	A	P-O3'-C3'	9.11	133.87	120.20
1	N	460	A	P-O5'-C5'	9.09	134.53	120.90
1	N	288	A	P-O3'-C3'	-9.09	106.57	120.20
1	N	328	C	O4'-C4'-C3'	-9.08	97.02	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	486	U	P-O5'-C5'	-9.08	107.29	120.90
1	N	1282	C	P-O5'-C5'	9.05	134.48	120.90
1	N	281	G	P-O3'-C3'	9.04	133.76	120.20
1	N	1379	G	C4'-C3'-C2'	-9.02	93.58	102.60
1	N	361	G	C3'-C2'-C1'	8.99	110.29	101.30
1	N	499	A	P-O3'-C3'	8.96	133.65	120.20
1	N	788	U	P-O5'-C5'	8.95	134.32	120.90
1	N	1007	U	P-O3'-C3'	8.93	133.60	120.20
1	N	1043	G	P-O3'-C3'	8.93	133.59	120.20
1	N	828	U	P-O5'-C5'	8.90	134.25	120.90
1	N	575	G	C5'-C4'-O4'	-8.89	95.77	109.10
1	N	594	U	P-O3'-C3'	8.89	133.53	120.20
1	N	120	A	O4'-C1'-C2'	-8.89	98.71	107.60
1	N	121	U	P-O3'-C3'	-8.87	106.90	120.20
1	N	670	G	C4'-C3'-C2'	-8.81	93.78	102.60
1	N	1201	A	C2'-C3'-O3'	8.80	122.70	109.50
1	N	256	U	O5'-C5'-C4'	-8.79	98.31	111.50
1	N	1466	C	C4'-C3'-C2'	-8.79	93.81	102.60
1	N	555	U	P-O3'-C3'	8.77	133.35	120.20
1	N	499	A	C2'-C3'-O3'	8.75	122.63	109.50
1	N	1123	U	P-O5'-C5'	8.75	134.03	120.90
1	N	93	U	O4'-C1'-N1	8.74	121.61	108.50
1	N	1086	U	O5'-C5'-C4'	8.73	124.60	111.50
1	N	866	C	O4'-C4'-C3'	8.73	112.73	104.00
1	N	74	A	C5'-C4'-C3'	-8.72	102.92	116.00
1	N	730	G	P-O3'-C3'	8.70	133.24	120.20
1	N	1263	C	P-O5'-C5'	8.68	133.91	120.90
1	N	655	A	P-O5'-C5'	8.67	133.91	120.90
1	N	508	U	P-O3'-C3'	8.66	133.18	120.20
1	N	66	A	P-O3'-C3'	8.65	133.18	120.20
1	N	811	C	C4'-C3'-C2'	-8.64	93.96	102.60
1	N	120	A	C4'-C3'-C2'	-8.63	93.97	102.60
1	N	1432	G	C2'-C3'-O3'	8.61	122.42	109.50
1	N	1060	U	C4'-C3'-C2'	-8.61	93.99	102.60
1	N	474	G	O4'-C4'-C3'	-8.58	95.42	104.00
1	N	599	C	O4'-C1'-N1	8.58	121.36	108.50
1	N	950	U	P-O5'-C5'	8.56	133.75	120.90
1	N	1138	G	P-O3'-C3'	8.56	133.04	120.20
1	N	474	G	C1'-O4'-C4'	8.56	118.46	109.90
1	N	1336	C	C2'-C3'-O3'	8.56	122.33	109.50
1	N	557	G	P-O3'-C3'	8.55	133.03	120.20
1	N	1190	G	C5'-C4'-O4'	8.54	121.91	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	223	A	P-O5'-C5'	8.53	133.70	120.90
1	N	532	A	P-O3'-C3'	8.53	133.00	120.20
1	N	739	C	P-O5'-C5'	8.53	133.69	120.90
1	N	370	C	C4'-C3'-C2'	-8.52	94.08	102.60
1	N	719	C	O4'-C1'-N1	8.49	121.24	108.50
1	N	1003	G	O5'-C5'-C4'	8.48	124.23	111.50
1	N	1530	G	P-O3'-C3'	8.47	132.91	120.20
1	N	139	A	O3'-P-O5'	-8.47	91.30	104.00
1	N	717	U	C2'-C3'-O3'	8.46	122.19	109.50
1	N	411	A	P-O5'-C5'	8.45	133.58	120.90
1	N	985	C	P-O5'-C5'	8.45	133.57	120.90
1	N	814	A	P-O3'-C3'	8.44	132.87	120.20
1	N	314	C	C4'-C3'-C2'	-8.44	94.16	102.60
1	N	128	G	P-O5'-C5'	8.43	133.55	120.90
1	N	982	U	C4'-C3'-O3'	8.43	122.05	109.40
1	N	275	G	C4'-C3'-O3'	-8.42	100.37	113.00
1	N	427	U	C4'-C3'-O3'	-8.42	100.37	113.00
1	N	1394	A	O4'-C1'-C2'	-8.42	97.38	105.80
1	N	1236	A	P-O5'-C5'	8.41	133.52	120.90
1	N	922	G	P-O3'-C3'	8.41	132.81	120.20
1	N	470	C	O4'-C1'-N1	8.37	121.05	108.50
1	N	158	G	C4'-C3'-C2'	-8.36	94.24	102.60
1	N	210	C	O3'-P-O5'	-8.36	91.47	104.00
1	N	198	G	C5'-C4'-C3'	-8.35	103.47	116.00
1	N	106	C	O4'-C1'-N1	8.34	121.01	108.50
1	N	1325	C	P-O5'-C5'	8.29	133.34	120.90
1	N	130	A	C4'-C3'-C2'	-8.28	94.33	102.60
1	N	54	C	O4'-C1'-C2'	-8.24	99.36	107.60
1	N	1068	G	C5'-C4'-C3'	-8.24	103.64	116.00
1	N	484	G	C2'-C3'-O3'	8.22	121.83	109.50
1	N	173	U	P-O5'-C5'	-8.21	108.58	120.90
1	N	77	A	C4'-C3'-C2'	-8.21	94.39	102.60
1	N	154	U	P-O5'-C5'	8.18	133.16	120.90
1	N	259	G	P-O5'-C5'	-8.16	108.66	120.90
1	N	953	G	O4'-C1'-C2'	-8.16	99.44	107.60
1	N	481	G	O4'-C4'-C3'	-8.13	97.97	106.10
1	N	813	U	O3'-P-O5'	-8.13	91.80	104.00
1	N	101	A	P-O5'-C5'	8.12	133.07	120.90
1	N	73	C	P-O5'-C5'	-8.11	108.74	120.90
1	N	1101	A	C4'-C3'-C2'	8.10	110.70	102.60
1	N	1371	G	P-O5'-C5'	-8.10	108.75	120.90
1	N	1259	C	C4'-C3'-C2'	8.06	110.66	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	639	G	P-O5'-C5'	-8.06	108.81	120.90
1	N	873	A	O5'-C5'-C4'	8.06	123.78	111.70
1	N	88	U	P-O3'-C3'	8.05	132.28	120.20
1	N	1136	C	P-O3'-C3'	8.05	132.28	120.20
1	N	373	A	P-O5'-C5'	-8.04	108.84	120.90
1	N	864	A	P-O3'-C3'	8.03	132.25	120.20
1	N	892	A	C5'-C4'-C3'	8.02	128.02	116.00
1	N	1387	G	P-O5'-C5'	8.02	132.93	120.90
1	N	374	A	O4'-C1'-N9	8.01	120.52	108.50
1	N	411	A	O5'-C5'-C4'	8.01	123.51	111.50
1	N	914	A	C5'-C4'-C3'	-8.01	103.98	116.00
1	N	154	U	P-O3'-C3'	-7.98	108.23	120.20
1	N	1230	C	O5'-C5'-C4'	-7.98	99.53	111.50
1	N	1112	C	P-O5'-C5'	-7.97	108.95	120.90
1	N	1469	C	P-O5'-C5'	-7.97	108.95	120.90
1	N	1285	A	C2'-C3'-O3'	7.95	121.42	109.50
1	N	1345	U	O3'-P-O5'	-7.94	92.09	104.00
1	N	1239	A	C2'-C3'-O3'	7.93	121.39	109.50
1	N	770	C	O4'-C1'-N1	7.91	120.37	108.50
1	N	1172	C	O4'-C4'-C3'	-7.91	96.09	104.00
1	N	1178	G	P-O5'-C5'	7.91	132.77	120.90
1	N	531	U	O4'-C1'-N1	7.91	120.36	108.50
1	N	719	C	O4'-C4'-C3'	-7.89	96.11	104.00
1	N	549	C	P-O5'-C5'	7.89	132.73	120.90
1	N	1501	C	C4'-C3'-C2'	-7.88	94.72	102.60
1	N	561	U	P-O3'-C3'	7.88	132.01	120.20
1	N	305	G	C2'-C3'-O3'	7.87	121.31	109.50
1	N	298	A	P-O3'-C3'	7.86	131.99	120.20
1	N	755	G	C5'-C4'-C3'	-7.86	104.20	116.00
1	N	365	U	P-O5'-C5'	7.86	132.68	120.90
1	N	885	G	C3'-C2'-C1'	-7.86	93.44	101.30
1	N	1445	U	P-O5'-C5'	7.86	132.68	120.90
1	N	49	U	P-O5'-C5'	7.85	132.67	120.90
1	N	795	C	P-O5'-C5'	7.85	132.67	120.90
1	N	797	C	P-O5'-C5'	-7.84	109.14	120.90
1	N	1252	A	O4'-C1'-N9	7.84	120.25	108.50
1	N	742	G	O4'-C4'-C3'	-7.83	96.17	104.00
1	N	811	C	O4'-C1'-N1	7.83	120.25	108.50
1	N	105	G	P-O3'-C3'	7.82	131.94	120.20
1	N	1358	U	C2'-C3'-O3'	7.81	121.22	109.50
1	N	605	U	O3'-P-O5'	7.80	115.70	104.00
1	N	974	A	P-O3'-C3'	7.80	131.90	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	210	C	C2'-C3'-O3'	7.80	121.20	109.50
1	N	894	G	C3'-C2'-C1'	-7.80	93.50	101.30
1	N	111	G	P-O5'-C5'	-7.79	109.21	120.90
1	N	274	A	C4'-C3'-O3'	7.79	121.09	109.40
1	N	1396	A	P-O5'-C5'	7.79	132.59	120.90
1	N	129	A	C2'-C3'-O3'	7.78	121.16	109.50
1	N	1521	C	O4'-C1'-C2'	-7.77	99.83	107.60
1	N	513	C	P-O5'-C5'	7.75	132.53	120.90
1	N	172	A	C3'-C2'-C1'	7.74	109.04	101.30
1	N	69	G	P-O5'-C5'	-7.74	109.29	120.90
1	N	207	C	O4'-C4'-C3'	-7.74	96.27	104.00
1	N	480	U	C1'-O4'-C4'	-7.73	102.17	109.90
1	N	658	C	O4'-C1'-C2'	-7.73	99.87	107.60
1	N	868	C	P-O5'-C5'	7.73	132.50	120.90
1	N	1140	C	C2'-C3'-O3'	7.73	121.09	109.50
1	N	428	G	P-O3'-C3'	7.72	131.78	120.20
1	N	1393	U	O3'-P-O5'	-7.72	92.42	104.00
1	N	591	U	P-O5'-C5'	7.71	132.47	120.90
1	N	1066	C	P-O5'-C5'	7.71	132.47	120.90
1	N	293	G	P-O5'-C5'	7.71	132.47	120.90
1	N	817	C	C4'-C3'-O3'	7.71	120.97	109.40
1	N	742	G	O4'-C1'-C2'	-7.71	99.89	107.60
1	N	1269	A	C5'-C4'-C3'	7.69	127.54	116.00
1	N	260	G	P-O5'-C5'	-7.69	109.37	120.90
1	N	1007	U	C3'-C2'-C1'	7.68	108.98	101.30
1	N	822	U	P-O5'-C5'	7.67	132.41	120.90
1	N	1168	U	P-O3'-C3'	7.66	131.69	120.20
1	N	1323	G	C4'-C3'-C2'	-7.66	94.94	102.60
1	N	1016	A	P-O3'-C3'	7.66	131.68	120.20
1	N	1460	C	P-O5'-C5'	7.65	132.38	120.90
1	N	112	G	C3'-C2'-C1'	-7.65	93.65	101.30
1	N	700	G	O3'-P-O5'	7.64	115.47	104.00
1	N	869	G	C4'-C3'-C2'	-7.64	94.96	102.60
1	N	1184	G	P-O5'-C5'	7.64	132.36	120.90
1	N	211	G	C4'-C3'-C2'	7.63	110.23	102.60
1	N	538	G	O5'-C5'-C4'	-7.61	100.08	111.50
1	N	686	U	P-O3'-C3'	7.61	131.61	120.20
1	N	1413	A	C4'-C3'-C2'	-7.61	94.99	102.60
1	N	605	U	P-O3'-C3'	7.61	131.61	120.20
1	N	246	A	P-O5'-C5'	7.60	132.29	120.90
1	N	735	C	C4'-C3'-C2'	-7.59	95.01	102.60
1	N	1206	G	C5'-C4'-O4'	7.58	121.18	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	214	C	C1'-O4'-C4'	-7.58	102.32	109.90
1	N	946	A	P-O5'-C5'	-7.58	109.54	120.90
1	N	1481	U	O3'-P-O5'	-7.58	92.64	104.00
1	N	1342	C	O4'-C1'-N1	7.57	119.85	108.50
1	N	93	U	P-O3'-C3'	-7.56	108.85	120.20
1	N	554	A	O4'-C1'-N9	7.55	119.83	108.50
1	N	407	U	P-O5'-C5'	7.55	132.23	120.90
1	N	787	A	P-O5'-C5'	7.55	132.23	120.90
1	N	1457	G	C1'-O4'-C4'	-7.55	102.35	109.90
1	N	1409	C	O4'-C1'-N1	7.54	119.82	108.50
1	N	1348	U	C5'-C4'-O4'	-7.54	98.49	109.80
1	N	258	G	O4'-C1'-C2'	-7.53	100.07	107.60
1	N	1406	U	C5'-C4'-C3'	-7.53	104.70	116.00
1	N	856	C	O4'-C4'-C3'	-7.53	96.47	104.00
1	N	324	G	C5'-C4'-C3'	7.52	127.29	116.00
1	N	671	G	C4'-C3'-C2'	-7.51	95.09	102.60
1	N	99	C	O3'-P-O5'	-7.50	92.74	104.00
1	N	323	U	O5'-C5'-C4'	-7.50	100.25	111.50
1	N	308	C	C4'-C3'-C2'	-7.50	95.10	102.60
1	N	276	G	P-O5'-C5'	7.49	132.14	120.90
1	N	803	G	O4'-C1'-C2'	-7.49	100.11	107.60
1	N	1210	C	P-O5'-C5'	-7.47	109.69	120.90
1	N	561	U	P-O5'-C5'	-7.46	109.70	120.90
1	N	576	C	P-O3'-C3'	7.46	131.39	120.20
1	N	1513	A	P-O5'-C5'	-7.45	109.72	120.90
1	N	280	C	P-O3'-C3'	7.45	131.38	120.20
1	N	1054	C	O4'-C4'-C3'	-7.45	98.66	106.10
1	N	1395	C	C4'-C3'-O3'	-7.44	101.84	113.00
1	N	298	A	O3'-P-O5'	-7.43	92.85	104.00
1	N	706	A	P-O5'-C5'	7.43	132.05	120.90
1	N	1000	A	P-O5'-C5'	7.43	132.04	120.90
1	N	1181	G	C2'-C3'-O3'	7.43	120.64	109.50
1	N	1500	A	O4'-C1'-C2'	-7.43	100.17	107.60
1	N	1472	U	C1'-C2'-O2'	7.43	119.54	108.40
1	N	1236	A	C4'-C3'-O3'	-7.42	101.86	113.00
1	N	1509	C	O4'-C1'-N1	7.42	119.63	108.50
1	N	173	U	O3'-P-O5'	7.42	115.13	104.00
1	N	1282	C	C5'-C4'-C3'	-7.42	104.87	116.00
1	N	771	G	O5'-C5'-C4'	-7.41	100.38	111.50
1	N	775	G	O4'-C1'-C2'	-7.41	100.19	107.60
1	N	1282	C	O4'-C1'-N1	7.41	119.62	108.50
1	N	1395	C	P-O3'-C3'	7.41	131.31	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	557	G	O3'-P-O5'	-7.40	92.90	104.00
1	N	709	U	P-O5'-C5'	7.40	132.00	120.90
1	N	485	U	O4'-C1'-N1	7.40	119.30	108.20
1	N	108	G	C2'-C3'-O3'	7.38	124.78	113.70
1	N	179	A	O3'-P-O5'	-7.38	92.92	104.00
1	N	575	G	O4'-C1'-C2'	7.37	113.17	105.80
1	N	851	G	P-O3'-C3'	-7.37	109.14	120.20
1	N	1363	A	C5'-C4'-C3'	-7.37	104.15	115.20
1	N	118	U	P-O5'-C5'	7.37	131.95	120.90
1	N	172	A	C4'-C3'-O3'	-7.36	101.96	113.00
1	N	172	A	C2'-C3'-O3'	7.36	124.74	113.70
1	N	1108	G	P-O3'-C3'	7.35	131.22	120.20
1	N	801	U	P-O5'-C5'	-7.34	109.88	120.90
1	N	1329	A	P-O5'-C5'	-7.34	109.88	120.90
1	N	165	G	P-O5'-C5'	7.34	131.91	120.90
1	N	1050	G	P-O3'-C3'	-7.34	109.19	120.20
1	N	159	G	P-O5'-C5'	-7.33	109.90	120.90
1	N	196	A	C4'-C3'-O3'	-7.33	102.00	113.00
1	N	500	G	O4'-C1'-N9	7.33	119.49	108.50
1	N	435	A	O4'-C4'-C3'	-7.33	96.67	104.00
1	N	462	G	O4'-C4'-C3'	-7.33	96.67	104.00
1	N	1390	U	O4'-C1'-C2'	-7.33	100.27	107.60
1	N	27	G	P-O3'-C3'	-7.32	109.22	120.20
1	N	133	U	O3'-P-O5'	-7.32	93.02	104.00
1	N	716	A	O4'-C1'-N9	7.32	119.47	108.50
1	N	1473	G	C4'-C3'-O3'	-7.32	102.02	113.00
1	N	1411	C	C5'-C4'-C3'	-7.31	105.04	116.00
1	N	901	A	O3'-P-O5'	-7.31	93.04	104.00
1	N	588	G	P-O5'-C5'	7.30	131.85	120.90
1	N	108	G	P-O5'-C5'	7.30	131.85	120.90
1	N	121	U	C4'-C3'-C2'	-7.30	95.30	102.60
1	N	702	A	P-O3'-C3'	7.30	131.15	120.20
1	N	289	G	C5'-C4'-C3'	-7.30	105.06	116.00
1	N	843	U	O4'-C1'-N1	7.29	119.44	108.50
1	N	398	U	O4'-C1'-N1	7.29	119.44	108.50
1	N	1101	A	C2'-C3'-O3'	7.29	120.43	109.50
1	N	425	G	O4'-C1'-N9	7.29	119.43	108.50
1	N	1227	A	C3'-C2'-C1'	-7.28	94.02	101.30
1	N	164	G	O3'-P-O5'	-7.28	93.08	104.00
1	N	1244	G	P-O5'-C5'	7.28	131.82	120.90
1	N	83	C	O4'-C1'-N1	7.28	119.42	108.50
1	N	145	G	C4'-C3'-C2'	-7.28	95.32	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	196	A	O3'-P-O5'	-7.27	93.09	104.00
1	N	751	U	P-O5'-C5'	-7.27	109.99	120.90
1	N	1064	G	P-O5'-C5'	-7.27	109.99	120.90
1	N	1153	G	O4'-C1'-N9	7.27	119.41	108.50
1	N	1393	U	P-O3'-C3'	7.26	131.10	120.20
1	N	595	A	P-O5'-C5'	7.26	131.79	120.90
1	N	854	U	P-O3'-C3'	-7.26	109.31	120.20
1	N	339	C	O4'-C1'-N1	7.25	119.38	108.50
1	N	1506	U	C5'-C4'-C3'	7.25	126.07	115.20
1	N	473	U	C4'-C3'-C2'	-7.25	95.35	102.60
1	N	1377	A	O3'-P-O5'	-7.25	93.13	104.00
1	N	143	A	C3'-C2'-C1'	7.24	108.54	101.30
1	N	723	U	O4'-C1'-N1	7.24	119.36	108.50
1	N	152	A	C5'-C4'-C3'	7.24	126.85	116.00
1	N	1399	C	O4'-C1'-N1	7.23	119.05	108.20
1	N	562	U	P-O5'-C5'	7.23	131.74	120.90
1	N	554	A	C4'-C3'-C2'	-7.22	95.38	102.60
1	N	1531	A	P-O5'-C5'	7.22	131.73	120.90
1	N	54	C	C4'-C3'-C2'	-7.22	95.38	102.60
1	N	368	U	C5'-C4'-C3'	7.22	126.83	116.00
1	N	1123	U	C4'-C3'-C2'	-7.21	95.39	102.60
1	N	212	G	N9-C1'-C2'	7.21	122.82	112.00
1	N	1245	C	P-O5'-C5'	7.20	131.70	120.90
1	N	587	G	C4'-C3'-C2'	-7.20	95.40	102.60
1	N	619	U	O4'-C1'-N1	7.19	119.29	108.50
1	N	34	C	O4'-C1'-N1	7.19	119.28	108.50
1	N	601	G	C4'-C3'-C2'	-7.18	95.42	102.60
1	N	766	A	O3'-P-O5'	-7.17	93.24	104.00
1	N	829	G	P-O3'-C3'	-7.17	109.44	120.20
1	N	746	A	P-O3'-C3'	-7.17	109.44	120.20
1	N	1037	C	P-O3'-C3'	7.17	130.96	120.20
1	N	1046	A	O3'-P-O5'	7.17	114.75	104.00
1	N	1291	U	O5'-C5'-C4'	-7.17	100.75	111.50
1	N	858	G	O4'-C1'-C2'	-7.16	100.44	107.60
1	N	49	U	O5'-C5'-C4'	7.16	122.23	111.50
1	N	496	A	C4'-C3'-O3'	-7.16	102.27	113.00
1	N	1216	A	C4'-C3'-C2'	-7.16	95.44	102.60
1	N	294	U	O3'-P-O5'	-7.15	93.28	104.00
1	N	70	U	C2'-C3'-O3'	7.15	120.22	109.50
1	N	566	G	C4'-C3'-C2'	7.14	109.74	102.60
1	N	1345	U	C2'-C3'-O3'	7.14	120.20	109.50
1	N	286	C	O4'-C1'-N1	7.13	119.19	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1162	C	O4'-C1'-N1	7.13	119.19	108.50
1	N	1279	G	C5'-C4'-O4'	7.13	119.79	109.10
1	N	347	G	C5'-C4'-C3'	-7.13	105.31	116.00
1	N	808	C	O4'-C1'-N1	7.12	119.19	108.50
1	N	819	A	C5'-C4'-C3'	-7.12	104.52	115.20
1	N	1090	U	C4'-C3'-C2'	-7.11	95.49	102.60
1	N	925	G	O3'-P-O5'	-7.11	93.34	104.00
1	N	575	G	C4'-C3'-O3'	7.11	120.06	109.40
1	N	747	A	O4'-C1'-N9	7.10	119.16	108.50
1	N	834	U	C3'-C2'-C1'	7.09	108.39	101.30
1	N	1284	C	O4'-C1'-N1	7.09	119.14	108.50
1	N	197	A	P-O3'-C3'	7.09	130.83	120.20
1	N	1024	G	P-O5'-C5'	7.09	131.53	120.90
1	N	93	U	O3'-P-O5'	7.08	114.63	104.00
1	N	1312	G	C5'-C4'-C3'	-7.08	105.38	116.00
1	N	1117	A	O3'-P-O5'	-7.08	93.38	104.00
1	N	343	U	O5'-C5'-C4'	-7.08	100.88	111.50
1	N	686	U	C2'-C3'-O3'	7.08	120.12	109.50
1	N	855	U	C5'-C4'-C3'	-7.08	105.38	116.00
1	N	1091	U	P-O3'-C3'	7.08	130.82	120.20
1	N	1082	A	C5'-C4'-C3'	-7.07	105.39	116.00
1	N	1197	A	O4'-C1'-C2'	-7.07	100.53	107.60
1	N	602	A	O3'-P-O5'	-7.07	93.40	104.00
1	N	401	C	C4'-C3'-C2'	-7.07	95.53	102.60
1	N	794	A	C5'-C4'-C3'	-7.07	105.40	116.00
1	N	252	U	O3'-P-O5'	-7.06	93.40	104.00
1	N	669	G	O4'-C1'-N9	7.06	119.09	108.50
1	N	1241	G	C5'-C4'-C3'	-7.06	105.41	116.00
1	N	422	C	P-O3'-C3'	7.06	130.79	120.20
1	N	43	C	O4'-C1'-N1	7.05	119.08	108.50
1	N	97	G	P-O5'-C5'	7.05	131.47	120.90
1	N	343	U	P-O5'-C5'	7.05	131.47	120.90
1	N	425	G	P-O5'-C5'	7.05	131.47	120.90
1	N	1313	U	O5'-C5'-C4'	-7.05	100.93	111.50
1	N	1390	U	O4'-C1'-N1	7.05	119.07	108.50
1	N	1165	U	P-O5'-C5'	7.04	131.46	120.90
1	N	710	G	C4'-C3'-C2'	-7.04	95.56	102.60
1	N	1498	U	C4'-C3'-O3'	7.03	119.95	109.40
1	N	865	A	C4'-C3'-C2'	-7.03	95.57	102.60
1	N	1087	G	O4'-C1'-N9	7.03	119.04	108.50
1	N	60	A	C2'-C3'-O3'	7.03	120.04	109.50
1	N	844	G	C4'-C3'-O3'	-7.02	102.47	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1079	G	C4'-C3'-O3'	-7.02	102.47	113.00
1	N	88	U	O4'-C4'-C3'	-7.01	99.08	106.10
1	N	823	C	P-O5'-C5'	-7.01	110.39	120.90
1	N	331	G	P-O5'-C5'	7.00	131.41	120.90
1	N	746	A	O4'-C4'-C3'	-7.00	97.00	104.00
1	N	1428	A	C5'-C4'-C3'	7.00	126.50	116.00
1	N	1485	U	O5'-C5'-C4'	-7.00	101.00	111.50
1	N	1114	C	P-O5'-C5'	7.00	131.39	120.90
1	N	1396	A	O4'-C1'-C2'	6.99	114.59	107.60
1	N	1120	C	C4'-C3'-C2'	-6.99	95.61	102.60
1	N	461	A	C4'-C3'-C2'	6.99	109.59	102.60
1	N	142	G	C5'-C4'-C3'	-6.99	105.52	116.00
1	N	846	G	C5'-C4'-C3'	-6.99	105.52	116.00
1	N	800	G	P-O5'-C5'	6.97	131.36	120.90
1	N	77	A	P-O3'-C3'	6.97	130.66	120.20
1	N	789	U	C4'-C3'-C2'	-6.97	95.63	102.60
1	N	906	A	O4'-C1'-N9	6.97	118.95	108.50
1	N	94	G	C4'-C3'-O3'	6.96	119.85	109.40
1	N	563	A	P-O5'-C5'	-6.96	110.45	120.90
1	N	1168	U	O4'-C1'-N1	6.96	118.95	108.50
1	N	890	G	C3'-C2'-C1'	-6.96	94.54	101.50
1	N	1500	A	C4'-C3'-C2'	-6.96	95.64	102.60
1	N	248	C	C1'-C2'-O2'	6.96	118.84	108.40
1	N	438	U	C5'-C4'-C3'	-6.95	104.78	115.20
1	N	770	C	C3'-C2'-O2'	-6.95	100.28	110.70
1	N	861	G	P-O3'-C3'	6.94	130.61	120.20
1	N	1389	C	C4'-C3'-C2'	-6.93	95.67	102.60
1	N	212	G	P-O5'-C5'	6.93	131.29	120.90
1	N	1170	A	O4'-C1'-C2'	-6.92	100.67	107.60
1	N	723	U	C4'-C3'-C2'	-6.92	95.68	102.60
1	N	1043	G	O5'-C5'-C4'	-6.92	101.12	111.50
1	N	558	G	O4'-C4'-C3'	-6.91	97.09	104.00
1	N	635	A	C5'-C4'-C3'	6.91	126.37	116.00
1	N	1113	C	C5'-C4'-C3'	-6.91	105.64	116.00
1	N	1245	C	C3'-C2'-O2'	6.91	121.06	110.70
1	N	963	G	C4'-C3'-C2'	-6.90	95.70	102.60
1	N	1364	U	O5'-C5'-C4'	6.90	122.05	111.70
1	N	757	U	P-O5'-C5'	6.89	131.24	120.90
1	N	270	A	P-O5'-C5'	6.89	131.24	120.90
1	N	829	G	O4'-C1'-C2'	-6.89	100.71	107.60
1	N	1240	U	O4'-C1'-C2'	-6.89	100.71	107.60
1	N	179	A	P-O5'-C5'	6.88	131.22	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	284	C	O5'-C5'-C4'	-6.88	101.19	111.50
1	N	450	G	C2'-C3'-O3'	6.87	124.01	113.70
1	N	1374	A	O4'-C1'-C2'	-6.87	100.73	107.60
1	N	591	U	P-O3'-C3'	-6.87	109.89	120.20
1	N	1239	A	O4'-C4'-C3'	-6.87	99.23	106.10
1	N	1502	A	P-O3'-C3'	6.87	130.50	120.20
1	N	992	U	C3'-C2'-C1'	-6.86	94.64	101.50
1	N	1139	G	O5'-C5'-C4'	-6.85	101.42	111.70
1	N	1205	U	O4'-C1'-N1	6.85	118.78	108.50
1	N	42	G	P-O5'-C5'	6.85	131.17	120.90
1	N	1519	A	O4'-C1'-N9	6.84	118.77	108.50
1	N	451	A	C2'-C3'-O3'	6.84	119.76	109.50
1	N	1233	G	C2'-C3'-O3'	-6.83	103.45	113.70
1	N	1323	G	O4'-C1'-N9	6.83	118.75	108.50
1	N	1234	C	C4'-C3'-O3'	-6.83	102.76	113.00
1	N	566	G	C2'-C3'-O3'	6.83	119.74	109.50
1	N	867	G	O4'-C1'-C2'	-6.83	100.78	107.60
1	N	889	A	C4'-C3'-C2'	-6.83	95.78	102.60
1	N	1069	C	C4'-C3'-C2'	-6.82	95.78	102.60
1	N	322	C	P-O5'-C5'	6.82	131.13	120.90
1	N	4	U	C5'-C4'-C3'	-6.82	104.97	115.20
1	N	140	U	C2'-C3'-O3'	6.82	123.93	113.70
1	N	944	G	P-O3'-C3'	-6.82	109.97	120.20
1	N	76	G	C5'-C4'-C3'	-6.81	105.78	116.00
1	N	689	C	P-O5'-C5'	6.81	131.11	120.90
1	N	1335	U	P-O3'-C3'	6.80	130.41	120.20
1	N	405	U	P-O3'-C3'	-6.80	110.00	120.20
1	N	907	A	C4'-C3'-O3'	-6.80	102.80	113.00
1	N	430	A	P-O5'-C5'	6.80	131.10	120.90
1	N	76	G	O4'-C1'-C2'	-6.80	100.80	107.60
1	N	347	G	P-O5'-C5'	6.80	131.10	120.90
1	N	456	A	P-O5'-C5'	-6.80	110.70	120.90
1	N	140	U	O5'-C5'-C4'	-6.79	101.32	111.50
1	N	832	G	O4'-C1'-C2'	-6.79	100.81	107.60
1	N	1111	A	O4'-C1'-N9	6.79	118.68	108.50
1	N	1433	A	O3'-P-O5'	-6.78	93.83	104.00
1	N	1332	A	O4'-C1'-N9	6.78	118.67	108.50
1	N	1496	C	P-O5'-C5'	6.78	131.07	120.90
1	N	92	U	O4'-C1'-N1	6.78	118.67	108.50
1	N	64	G	C4'-C3'-C2'	6.77	109.37	102.60
1	N	1335	U	C4'-C3'-O3'	-6.77	102.84	113.00
1	N	1427	C	O4'-C1'-N1	6.77	118.66	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1389	C	P-O5'-C5'	-6.77	110.75	120.90
1	N	170	U	C3'-C2'-O2'	6.76	120.85	110.70
1	N	1088	G	P-O5'-C5'	6.76	131.04	120.90
1	N	896	C	O4'-C1'-N1	6.76	118.63	108.50
1	N	815	A	C1'-O4'-C4'	-6.75	103.15	109.90
1	N	147	G	C4'-C3'-C2'	-6.75	95.85	102.60
1	N	973	G	P-O3'-C3'	6.75	130.33	120.20
1	N	1042	A	C2'-C3'-O3'	6.75	123.83	113.70
1	N	646	G	P-O5'-C5'	6.75	131.02	120.90
1	N	944	G	O4'-C1'-C2'	-6.74	100.86	107.60
1	N	204	G	O5'-C5'-C4'	-6.73	101.40	111.50
1	N	185	U	P-O5'-C5'	6.73	131.00	120.90
1	N	679	C	O3'-P-O5'	-6.73	93.91	104.00
1	N	176	C	C3'-C2'-C1'	-6.72	94.58	101.30
1	N	325	A	O4'-C1'-N9	6.72	118.59	108.50
1	N	795	C	O5'-C5'-C4'	-6.72	101.41	111.50
1	N	636	U	C4'-C3'-C2'	-6.72	95.88	102.60
1	N	113	G	P-O5'-C5'	6.71	130.97	120.90
1	N	1415	G	O4'-C1'-N9	6.71	118.56	108.50
1	N	1502	A	P-O5'-C5'	-6.71	110.84	120.90
1	N	1005	A	O4'-C1'-C2'	-6.71	100.89	107.60
1	N	256	U	O4'-C1'-C2'	-6.71	100.89	107.60
1	N	666	G	C5'-C4'-C3'	6.71	126.06	116.00
1	N	1049	U	C4'-C3'-C2'	6.70	109.30	102.60
1	N	87	C	C3'-C2'-C1'	6.70	108.00	101.30
1	N	173	U	O4'-C1'-C2'	6.70	112.50	105.80
1	N	812	G	O3'-P-O5'	-6.70	93.95	104.00
1	N	817	C	O4'-C1'-N1	6.70	118.25	108.20
1	N	902	G	C4'-C3'-C2'	-6.70	95.91	102.60
1	N	467	U	O4'-C4'-C3'	-6.69	97.31	104.00
1	N	680	C	P-O3'-C3'	6.69	130.24	120.20
1	N	941	G	C2'-C3'-O3'	6.69	123.74	113.70
1	N	705	G	O5'-C5'-C4'	-6.69	101.46	111.50
1	N	823	C	C5'-C4'-C3'	6.69	126.03	116.00
1	N	1146	A	C4'-C3'-C2'	-6.68	95.92	102.60
1	N	1140	C	O4'-C1'-N1	6.68	118.22	108.20
1	N	856	C	O4'-C1'-N1	6.67	118.51	108.50
1	N	344	A	C2'-C3'-O3'	6.67	119.51	109.50
1	N	285	C	O4'-C4'-C3'	-6.67	97.33	104.00
1	N	380	G	P-O5'-C5'	-6.67	110.89	120.90
1	N	134	G	C4'-C3'-C2'	-6.67	95.93	102.60
1	N	154	U	O4'-C1'-N1	6.67	118.50	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	173	U	C2'-C3'-O3'	6.67	119.50	109.50
1	N	920	U	C5'-C4'-C3'	-6.67	106.00	116.00
1	N	586	C	O4'-C1'-N1	6.67	118.50	108.50
1	N	769	G	P-O5'-C5'	6.66	130.90	120.90
1	N	240	G	C5'-C4'-C3'	6.66	125.99	116.00
1	N	1418	A	P-O5'-C5'	6.66	130.89	120.90
1	N	1362	A	O4'-C1'-N9	6.66	118.49	108.50
1	N	451	A	C1'-O4'-C4'	-6.65	103.05	109.70
1	N	836	G	O5'-C5'-C4'	-6.65	101.52	111.50
1	N	80	A	P-O3'-C3'	-6.65	110.23	120.20
1	N	1357	A	O3'-P-O5'	-6.65	94.03	104.00
1	N	451	A	P-O3'-C3'	6.64	130.17	120.20
1	N	770	C	O3'-P-O5'	-6.64	94.03	104.00
1	N	1405	G	C4'-C3'-C2'	-6.64	95.96	102.60
1	N	490	C	P-O3'-C3'	-6.64	110.24	120.20
1	N	1200	C	C5'-C4'-O4'	-6.64	99.84	109.80
1	N	400	C	O4'-C1'-N1	6.64	118.45	108.50
1	N	784	A	P-O5'-C5'	-6.63	110.95	120.90
1	N	87	C	C5'-C4'-C3'	-6.62	106.06	116.00
1	N	957	U	O3'-P-O5'	-6.62	94.07	104.00
1	N	142	G	O5'-C5'-C4'	-6.62	101.57	111.50
1	N	349	A	C4'-C3'-C2'	-6.62	95.98	102.60
1	N	1351	U	O4'-C1'-N1	6.62	118.43	108.50
1	N	492	C	O5'-C5'-C4'	-6.62	101.58	111.50
1	N	1504	G	C4'-C3'-C2'	-6.62	95.98	102.60
1	N	472	U	O4'-C4'-C3'	6.61	110.61	104.00
1	N	1092	A	P-O3'-C3'	6.61	130.12	120.20
1	N	1115	U	C4'-C3'-C2'	-6.61	95.99	102.60
1	N	212	G	C4'-C3'-C2'	-6.61	95.99	102.60
1	N	884	U	P-O3'-C3'	6.60	130.10	120.20
1	N	1097	C	O4'-C1'-N1	6.60	118.40	108.50
1	N	146	G	P-O5'-C5'	6.60	130.80	120.90
1	N	403	C	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	447	G	O4'-C1'-N9	6.59	118.39	108.50
1	N	997	U	O5'-C5'-C4'	-6.59	101.61	111.50
1	N	1374	A	O4'-C1'-N9	6.59	118.39	108.50
1	N	49	U	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	272	C	O4'-C1'-N1	6.58	118.38	108.50
1	N	99	C	P-O3'-C3'	6.58	130.08	120.20
1	N	1465	A	C3'-C2'-C1'	6.58	107.88	101.30
1	N	1516	G	P-O5'-C5'	6.58	130.77	120.90
1	N	20	U	O4'-C1'-C2'	-6.58	101.02	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	363	A	P-O5'-C5'	6.58	130.77	120.90
1	N	502	A	C4'-C3'-C2'	-6.58	96.02	102.60
1	N	1414	U	O4'-C4'-C3'	-6.57	97.43	104.00
1	N	274	A	P-O3'-C3'	6.57	130.06	120.20
1	N	236	A	C4'-C3'-C2'	-6.57	96.03	102.60
1	N	302	G	O4'-C1'-N9	6.57	118.35	108.50
1	N	700	G	O4'-C1'-N9	6.57	118.36	108.50
1	N	511	C	C2'-C3'-O3'	6.57	119.35	109.50
1	N	184	G	O4'-C1'-N9	6.56	118.33	108.50
1	N	832	G	O5'-C5'-C4'	6.56	121.33	111.50
1	N	1129	C	O4'-C1'-N1	6.56	118.33	108.50
1	N	385	C	O4'-C1'-N1	6.55	118.32	108.50
1	N	1353	G	O4'-C1'-C2'	-6.55	101.05	107.60
1	N	1528	U	O4'-C4'-C3'	-6.55	99.55	106.10
1	N	18	C	C4'-C3'-C2'	-6.54	96.06	102.60
1	N	958	A	P-O5'-C5'	6.54	130.71	120.90
1	N	796	C	C4'-C3'-C2'	-6.54	96.06	102.60
1	N	168	G	P-O5'-C5'	6.53	130.70	120.90
1	N	172	A	P-O5'-C5'	6.53	130.70	120.90
1	N	173	U	P-O3'-C3'	6.53	130.00	120.20
1	N	635	A	P-O5'-C5'	-6.53	111.10	120.90
1	N	963	G	P-O3'-C3'	-6.53	110.41	120.20
1	N	592	G	O4'-C1'-N9	6.52	118.29	108.50
1	N	1164	G	O4'-C1'-N9	6.52	118.28	108.50
1	N	678	U	P-O5'-C5'	6.52	130.68	120.90
1	N	1190	G	C3'-C2'-C1'	-6.52	94.98	101.50
1	N	676	A	C4'-C3'-C2'	-6.52	96.08	102.60
1	N	514	C	P-O3'-C3'	-6.51	110.43	120.20
1	N	580	C	O5'-C5'-C4'	-6.51	101.73	111.50
1	N	1063	C	P-O3'-C3'	-6.51	110.43	120.20
1	N	1281	C	P-O3'-C3'	6.51	129.97	120.20
1	N	794	A	O5'-C5'-C4'	6.51	121.26	111.50
1	N	401	C	C1'-C2'-O2'	6.50	118.16	108.40
1	N	239	U	P-O5'-C5'	6.50	130.65	120.90
1	N	257	G	O4'-C4'-C3'	-6.50	97.50	104.00
1	N	538	G	P-O5'-C5'	6.50	130.65	120.90
1	N	1019	A	P-O3'-C3'	-6.50	110.45	120.20
1	N	747	A	P-O3'-C3'	6.50	129.94	120.20
1	N	771	G	O4'-C1'-C2'	-6.50	101.10	107.60
1	N	672	U	O4'-C1'-N1	6.50	118.24	108.50
1	N	81	A	O4'-C4'-C3'	-6.49	99.61	106.10
1	N	1456	A	O5'-C5'-C4'	6.49	121.24	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1500	A	C3'-C2'-C1'	6.49	107.79	101.30
1	N	1291	U	P-O3'-C3'	-6.49	110.47	120.20
1	N	526	C	P-O3'-C3'	6.49	129.93	120.20
1	N	1241	G	P-O5'-C5'	6.49	130.63	120.90
1	N	1465	A	C4'-C3'-C2'	-6.49	96.11	102.60
1	N	504	C	O5'-C5'-C4'	-6.48	101.78	111.50
1	N	589	U	P-O5'-C5'	6.48	130.62	120.90
1	N	1208	C	O4'-C1'-N1	6.48	118.22	108.50
1	N	1505	G	C1'-O4'-C4'	6.48	116.38	109.90
1	N	866	C	C4'-C3'-C2'	-6.48	96.12	102.60
1	N	775	G	O4'-C1'-N9	6.48	118.22	108.50
1	N	127	G	O3'-P-O5'	-6.48	94.28	104.00
1	N	491	G	P-O5'-C5'	-6.48	111.19	120.90
1	N	559	A	P-O5'-C5'	6.48	130.62	120.90
1	N	842	U	C5'-C4'-C3'	-6.48	105.48	115.20
1	N	752	G	O4'-C1'-C2'	6.48	114.08	107.60
1	N	1019	A	C1'-C2'-O2'	6.47	118.11	108.40
1	N	1296	C	O4'-C1'-C2'	6.47	114.07	107.60
1	N	1350	A	P-O3'-C3'	6.47	129.91	120.20
1	N	166	U	O4'-C1'-N1	6.47	118.20	108.50
1	N	562	U	P-O3'-C3'	6.47	129.90	120.20
1	N	960	U	C1'-O4'-C4'	-6.47	103.23	109.70
1	N	1153	G	P-O3'-C3'	-6.47	110.50	120.20
1	N	1185	G	O4'-C1'-N9	6.47	118.20	108.50
1	N	926	G	P-O3'-C3'	6.47	129.90	120.20
1	N	608	A	P-O5'-C5'	6.47	130.60	120.90
1	N	727	G	C4'-C3'-C2'	-6.46	96.14	102.60
1	N	1519	A	O4'-C4'-C3'	-6.46	97.54	104.00
1	N	763	G	C5'-C4'-C3'	-6.46	106.32	116.00
1	N	1115	U	C2'-C3'-O3'	6.45	123.38	113.70
1	N	1309	G	C4'-C3'-C2'	-6.45	96.15	102.60
1	N	1485	U	C5'-C4'-C3'	6.45	125.68	116.00
1	N	14	U	P-O5'-C5'	-6.45	111.22	120.90
1	N	795	C	C5'-C4'-C3'	6.45	125.68	116.00
1	N	1372	U	P-O5'-C5'	-6.45	111.22	120.90
1	N	1485	U	P-O5'-C5'	6.45	130.58	120.90
1	N	860	A	C4'-C3'-C2'	-6.45	96.15	102.60
1	N	595	A	C1'-C2'-O2'	6.45	121.47	111.80
1	N	960	U	C3'-C2'-C1'	6.45	107.95	101.50
1	N	1298	U	O4'-C4'-C3'	-6.45	99.65	106.10
1	N	428	G	C4'-C3'-O3'	6.44	119.07	109.40
1	N	810	C	O4'-C1'-N1	6.44	118.17	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	126	G	C3'-C2'-C1'	6.44	107.74	101.30
1	N	1181	G	P-O3'-C3'	6.44	129.86	120.20
1	N	610	U	P-O3'-C3'	6.44	129.85	120.20
1	N	904	U	O3'-P-O5'	-6.43	94.35	104.00
1	N	1519	A	P-O5'-C5'	-6.43	111.25	120.90
1	N	207	C	O4'-C1'-C2'	-6.43	101.17	107.60
1	N	312	C	C5'-C4'-C3'	6.43	125.64	116.00
1	N	702	A	O4'-C1'-N9	6.42	118.14	108.50
1	N	670	G	O4'-C1'-N9	6.42	118.13	108.50
1	N	1085	U	C2'-C3'-O3'	6.42	119.13	109.50
1	N	1082	A	O4'-C4'-C3'	6.42	110.42	104.00
1	N	957	U	C5'-C4'-C3'	6.42	125.62	116.00
1	N	1404	C	P-O3'-C3'	6.42	129.83	120.20
1	N	732	C	O4'-C1'-N1	6.42	118.12	108.50
1	N	473	U	C3'-C2'-C1'	6.41	107.71	101.30
1	N	682	G	C4'-C3'-C2'	-6.41	96.19	102.60
1	N	754	C	P-O5'-C5'	-6.41	111.29	120.90
1	N	647	C	P-O5'-C5'	6.41	130.51	120.90
1	N	1410	A	O4'-C1'-N9	6.41	118.11	108.50
1	N	64	G	P-O5'-C5'	6.40	130.50	120.90
1	N	322	C	C4'-C3'-O3'	-6.40	103.40	113.00
1	N	1095	U	C1'-C2'-O2'	6.40	118.00	108.40
1	N	429	U	C3'-C2'-O2'	-6.40	105.00	114.60
1	N	696	A	C5'-C4'-C3'	6.40	125.60	116.00
1	N	1037	C	P-O5'-C5'	6.40	130.50	120.90
1	N	1380	U	C2'-C3'-O3'	-6.40	104.10	113.70
1	N	1520	C	O4'-C1'-N1	6.39	118.09	108.50
1	N	980	C	O4'-C1'-N1	6.39	118.09	108.50
1	N	449	G	O3'-P-O5'	-6.39	94.42	104.00
1	N	873	A	C5'-C4'-C3'	-6.39	105.61	115.20
1	N	1448	C	P-O5'-C5'	-6.39	111.32	120.90
1	N	283	U	C5'-C4'-C3'	-6.38	106.42	116.00
1	N	462	G	C1'-O4'-C4'	6.38	116.28	109.90
1	N	5	U	O4'-C4'-C3'	-6.38	99.72	106.10
1	N	676	A	C1'-C2'-O2'	6.38	117.97	108.40
1	N	1232	U	O5'-C5'-C4'	-6.38	101.93	111.50
1	N	126	G	P-O3'-C3'	6.38	129.77	120.20
1	N	372	C	O4'-C4'-C3'	-6.38	99.72	106.10
1	N	116	A	C1'-C2'-O2'	6.37	117.96	108.40
1	N	1521	C	O4'-C1'-N1	6.37	118.06	108.50
1	N	70	U	P-O3'-C3'	6.37	129.76	120.20
1	N	171	A	C3'-C2'-C1'	6.37	107.67	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	463	U	P-O5'-C5'	6.37	130.46	120.90
1	N	869	G	C5'-C4'-C3'	-6.37	106.44	116.00
1	N	906	A	O5'-C5'-C4'	-6.37	101.94	111.50
1	N	1273	C	C4'-C3'-C2'	-6.37	96.23	102.60
1	N	1458	G	O3'-P-O5'	6.37	113.55	104.00
1	N	136	C	O3'-P-O5'	-6.37	94.45	104.00
1	N	769	G	O5'-C5'-C4'	-6.37	101.95	111.50
1	N	1495	U	P-O5'-C5'	6.37	130.45	120.90
1	N	88	U	P-O5'-C5'	6.36	130.44	120.90
1	N	1253	G	C3'-C2'-O2'	-6.36	101.16	110.70
1	N	1364	U	O4'-C1'-N1	6.35	117.73	108.20
1	N	754	C	C4'-C3'-C2'	6.35	108.95	102.60
1	N	1139	G	O3'-P-O5'	-6.34	94.48	104.00
1	N	1363	A	P-O5'-C5'	6.34	130.41	120.90
1	N	346	G	C4'-C3'-C2'	6.34	108.94	102.60
1	N	788	U	O5'-C5'-C4'	6.34	121.01	111.50
1	N	215	C	C3'-C2'-C1'	6.34	107.64	101.30
1	N	272	C	P-O3'-C3'	6.34	129.70	120.20
1	N	1529	G	P-O3'-C3'	6.34	129.71	120.20
1	N	244	U	C5'-C4'-C3'	-6.33	105.70	115.20
1	N	446	G	C4'-C3'-C2'	-6.33	96.27	102.60
1	N	781	A	O4'-C4'-C3'	-6.33	97.67	104.00
1	N	1030	U	O3'-P-O5'	-6.33	94.50	104.00
1	N	1351	U	C1'-C2'-O2'	6.33	117.90	108.40
1	N	681	A	C4'-C3'-C2'	-6.33	96.27	102.60
1	N	31	G	C5'-C4'-C3'	6.33	124.69	115.20
1	N	798	U	O4'-C1'-N1	6.33	117.99	108.50
1	N	894	G	C4'-C3'-C2'	6.33	108.93	102.60
1	N	1331	G	C5'-C4'-C3'	-6.33	106.51	116.00
1	N	517	G	P-O3'-C3'	6.33	129.69	120.20
1	N	523	A	C5'-C4'-C3'	-6.32	106.52	116.00
1	N	222	C	C5'-C4'-O4'	-6.32	100.32	109.80
1	N	484	G	O4'-C1'-N9	6.32	117.68	108.20
1	N	691	G	P-O5'-C5'	6.32	130.38	120.90
1	N	1067	A	O4'-C4'-C3'	-6.32	99.78	106.10
1	N	1274	A	P-O3'-C3'	-6.32	110.72	120.20
1	N	167	A	P-O5'-C5'	6.31	130.37	120.90
1	N	1380	U	C4'-C3'-C2'	-6.31	96.29	102.60
1	N	1242	G	O5'-C5'-C4'	-6.31	102.03	111.50
1	N	663	A	P-O3'-C3'	-6.30	110.74	120.20
1	N	108	G	C4'-C3'-O3'	-6.30	103.55	113.00
1	N	1489	G	O4'-C1'-N9	6.30	117.95	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	273	U	O3'-P-O5'	-6.30	94.55	104.00
1	N	816	A	P-O5'-C5'	6.30	130.35	120.90
1	N	276	G	C3'-C2'-C1'	-6.30	95.00	101.30
1	N	627	G	C4'-C3'-C2'	-6.30	96.30	102.60
1	N	1532	U	P-O5'-C5'	-6.30	111.45	120.90
1	N	1323	G	C5'-C4'-O4'	-6.30	100.36	109.80
1	N	723	U	P-O3'-C3'	-6.29	110.76	120.20
1	N	786	G	C3'-C2'-O2'	-6.29	101.26	110.70
1	N	1252	A	O4'-C1'-C2'	-6.29	101.31	107.60
1	N	532	A	O4'-C1'-N9	6.29	117.93	108.50
1	N	1243	C	C1'-C2'-O2'	6.28	117.83	108.40
1	N	305	G	P-O3'-C3'	6.28	129.62	120.20
1	N	344	A	O3'-P-O5'	-6.28	94.58	104.00
1	N	1474	U	C4'-C3'-C2'	-6.28	96.32	102.60
1	N	60	A	C5'-C4'-C3'	-6.27	105.79	115.20
1	N	373	A	C1'-O4'-C4'	6.27	116.17	109.90
1	N	577	G	C3'-C2'-C1'	6.27	107.57	101.30
1	N	1235	U	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	1005	A	P-O5'-C5'	-6.27	111.50	120.90
1	N	155	A	O3'-P-O5'	-6.26	94.60	104.00
1	N	634	C	P-O5'-C5'	6.26	130.30	120.90
1	N	1311	A	P-O3'-C3'	-6.26	110.81	120.20
1	N	944	G	O4'-C1'-N9	6.26	117.89	108.50
1	N	1398	A	C4'-C3'-O3'	-6.26	103.61	113.00
1	N	33	A	C5'-C4'-C3'	6.25	125.38	116.00
1	N	521	G	P-O5'-C5'	-6.25	111.52	120.90
1	N	978	A	C4'-C3'-C2'	6.25	108.85	102.60
1	N	112	G	O4'-C4'-C3'	-6.25	97.75	104.00
1	N	244	U	O5'-C5'-C4'	6.25	121.07	111.70
1	N	126	G	O4'-C4'-C3'	-6.25	97.75	104.00
1	N	1386	G	P-O3'-C3'	-6.25	110.83	120.20
1	N	99	C	O4'-C1'-N1	6.24	117.86	108.50
1	N	255	G	O3'-P-O5'	-6.24	94.64	104.00
1	N	88	U	C1'-O4'-C4'	6.24	115.94	109.70
1	N	161	A	C1'-O4'-C4'	6.24	116.14	109.90
1	N	32	A	C4'-C3'-O3'	-6.23	103.65	113.00
1	N	616	G	P-O3'-C3'	-6.23	110.85	120.20
1	N	772	U	O3'-P-O5'	-6.23	94.65	104.00
1	N	218	U	C3'-C2'-O2'	6.23	120.05	110.70
1	N	823	C	O5'-C5'-C4'	-6.23	102.16	111.50
1	N	894	G	P-O5'-C5'	6.23	130.24	120.90
1	N	38	G	O4'-C1'-N9	6.23	117.84	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1119	C	P-O3'-C3'	-6.22	110.86	120.20
1	N	1248	A	C3'-C2'-C1'	6.22	107.52	101.30
1	N	652	U	C5'-C4'-C3'	-6.22	106.67	116.00
1	N	88	U	C2'-C3'-O3'	6.22	118.83	109.50
1	N	353	A	P-O3'-C3'	6.22	129.53	120.20
1	N	1147	C	N1-C1'-C2'	6.22	121.33	112.00
1	N	308	C	P-O5'-C5'	6.21	130.22	120.90
1	N	960	U	C2'-C3'-O3'	6.21	118.81	109.50
1	N	99	C	O4'-C1'-C2'	-6.21	101.39	107.60
1	N	652	U	P-O3'-C3'	6.21	129.51	120.20
1	N	141	G	O4'-C1'-C2'	-6.21	101.39	107.60
1	N	166	U	O4'-C1'-C2'	-6.21	101.39	107.60
1	N	206	C	O3'-P-O5'	6.21	113.31	104.00
1	N	215	C	P-O5'-C5'	6.21	130.21	120.90
1	N	1230	C	P-O5'-C5'	6.21	130.21	120.90
1	N	472	U	C1'-O4'-C4'	-6.20	103.70	109.90
1	N	373	A	C5'-C4'-C3'	6.20	125.30	116.00
1	N	533	A	O4'-C4'-C3'	-6.20	99.90	106.10
1	N	1309	G	C4'-C3'-O3'	-6.20	103.70	113.00
1	N	888	G	P-O3'-C3'	6.20	129.50	120.20
1	N	845	A	C4'-C3'-C2'	-6.20	96.40	102.60
1	N	21	G	P-O5'-C5'	6.20	130.19	120.90
1	N	1172	C	C4'-C3'-O3'	-6.19	103.71	113.00
1	N	1123	U	O4'-C1'-N1	6.19	117.79	108.50
1	N	339	C	O5'-C5'-C4'	-6.19	102.22	111.50
1	N	1168	U	C5'-C4'-C3'	6.18	125.27	116.00
1	N	1226	C	C5'-C4'-C3'	-6.18	105.93	115.20
1	N	109	A	C5'-C4'-C3'	-6.18	106.73	116.00
1	N	557	G	P-O5'-C5'	6.18	130.17	120.90
1	N	1378	C	O4'-C1'-N1	6.18	117.77	108.50
1	N	134	G	C3'-C2'-C1'	-6.18	95.12	101.30
1	N	232	G	P-O5'-C5'	6.18	130.17	120.90
1	N	1521	C	C4'-C3'-C2'	-6.18	96.42	102.60
1	N	441	A	C5'-C4'-C3'	-6.17	106.74	116.00
1	N	1151	A	C5'-C4'-O4'	-6.17	100.54	109.80
1	N	75	G	C4'-C3'-C2'	-6.17	96.43	102.60
1	N	463	U	O4'-C4'-C3'	-6.17	97.83	104.00
1	N	805	C	C4'-C3'-C2'	-6.17	96.43	102.60
1	N	199	A	C1'-O4'-C4'	6.17	116.07	109.90
1	N	204	G	C5'-C4'-C3'	6.17	125.25	116.00
1	N	1381	U	C4'-C3'-O3'	-6.17	103.75	113.00
1	N	1519	A	O3'-P-O5'	-6.17	94.75	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	264	C	C4'-C3'-C2'	-6.17	96.44	102.60
1	N	327	A	P-O3'-C3'	6.17	129.45	120.20
1	N	1399	C	C2'-C3'-O3'	6.17	118.75	109.50
1	N	271	C	P-O5'-C5'	6.16	130.15	120.90
1	N	69	G	O5'-C5'-C4'	-6.16	102.26	111.50
1	N	1214	C	O4'-C1'-C2'	-6.16	99.64	105.80
1	N	1448	C	P-O3'-C3'	6.16	129.43	120.20
1	N	492	C	O3'-P-O5'	-6.15	94.77	104.00
1	N	1101	A	O4'-C1'-N9	6.15	117.43	108.20
1	N	160	A	O3'-P-O5'	6.15	113.23	104.00
1	N	1142	G	P-O5'-C5'	6.15	130.12	120.90
1	N	893	C	O4'-C4'-C3'	-6.15	97.85	104.00
1	N	1217	C	O4'-C1'-N1	6.15	117.72	108.50
1	N	1483	A	P-O5'-C5'	6.14	130.12	120.90
1	N	1494	G	O4'-C1'-N9	6.14	117.72	108.50
1	N	273	U	C4'-C3'-O3'	-6.14	103.79	113.00
1	N	474	G	C3'-C2'-C1'	6.14	107.44	101.30
1	N	652	U	O4'-C1'-N1	6.14	117.71	108.50
1	N	685	G	C5'-C4'-C3'	-6.14	106.79	116.00
1	N	152	A	O4'-C4'-C3'	-6.14	97.86	104.00
1	N	908	A	O3'-P-O5'	-6.14	94.80	104.00
1	N	281	G	C2'-C3'-O3'	6.13	118.70	109.50
1	N	194	C	O5'-C5'-C4'	-6.13	102.30	111.50
1	N	219	U	C2'-C3'-O3'	6.13	122.90	113.70
1	N	664	G	O3'-P-O5'	-6.13	94.80	104.00
1	N	280	C	C4'-C3'-O3'	6.13	118.60	109.40
1	N	797	C	O4'-C1'-N1	6.13	117.69	108.50
1	N	251	G	C4'-C3'-C2'	-6.12	96.47	102.60
1	N	1085	U	C4'-C3'-O3'	-6.12	100.21	109.40
1	N	1170	A	C5'-C4'-C3'	6.12	125.19	116.00
1	N	1374	A	O3'-P-O5'	-6.12	94.81	104.00
1	N	141	G	C5'-C4'-C3'	-6.12	106.82	116.00
1	N	934	C	P-O5'-C5'	-6.12	111.72	120.90
1	N	212	G	C5'-C4'-C3'	6.12	125.18	116.00
1	N	183	C	P-O3'-C3'	6.12	129.38	120.20
1	N	563	A	O4'-C1'-N9	6.12	117.67	108.50
1	N	1317	C	C4'-C3'-O3'	-6.12	103.83	113.00
1	N	597	G	O4'-C1'-N9	6.11	117.67	108.50
1	N	776	G	O5'-C5'-C4'	-6.11	102.33	111.50
1	N	83	C	O4'-C4'-C3'	-6.11	97.89	104.00
1	N	264	C	O5'-C5'-C4'	-6.11	102.33	111.50
1	N	972	C	O4'-C1'-N1	6.11	117.67	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	485	U	C5'-C4'-C3'	-6.11	106.04	115.20
1	N	1166	G	P-O3'-C3'	6.11	129.36	120.20
1	N	1177	G	C3'-C2'-C1'	-6.11	95.19	101.30
1	N	89	U	P-O3'-C3'	6.11	129.36	120.20
1	N	1088	G	O4'-C1'-N9	6.10	117.66	108.50
1	N	582	C	C4'-C3'-C2'	-6.10	96.50	102.60
1	N	970	C	O4'-C1'-N1	6.10	117.65	108.50
1	N	411	A	O4'-C4'-C3'	-6.10	97.90	104.00
1	N	1009	U	O4'-C1'-N1	6.10	117.65	108.50
1	N	1102	A	P-O5'-C5'	6.10	130.05	120.90
1	N	246	A	C4'-C3'-C2'	6.09	108.69	102.60
1	N	556	C	C1'-O4'-C4'	6.09	115.99	109.90
1	N	1158	C	N1-C1'-C2'	6.09	121.14	112.00
1	N	1355	G	P-O5'-C5'	6.09	130.04	120.90
1	N	183	C	C1'-O4'-C4'	-6.09	103.81	109.90
1	N	1412	C	O4'-C1'-N1	6.09	117.63	108.50
1	N	1137	C	O5'-C5'-C4'	6.08	120.82	111.70
1	N	809	G	P-O3'-C3'	-6.08	111.08	120.20
1	N	1308	U	O4'-C1'-N1	6.08	117.62	108.50
1	N	456	A	C5'-C4'-C3'	-6.07	106.89	116.00
1	N	1040	U	C5'-C4'-C3'	6.07	125.11	116.00
1	N	1025	U	P-O5'-C5'	6.07	130.00	120.90
1	N	1414	U	C5'-C4'-C3'	6.06	125.10	116.00
1	N	115	G	C2'-C3'-O3'	6.06	118.59	109.50
1	N	492	C	C4'-C3'-O3'	-6.06	103.91	113.00
1	N	944	G	C4'-C3'-C2'	-6.06	96.54	102.60
1	N	933	G	C4'-C3'-C2'	-6.06	96.54	102.60
1	N	375	U	C4'-C3'-O3'	-6.06	103.91	113.00
1	N	1089	G	P-O5'-C5'	-6.06	111.81	120.90
1	N	1393	U	O4'-C1'-N1	6.06	117.59	108.50
1	N	468	A	C4'-C3'-O3'	-6.05	103.92	113.00
1	N	495	A	O4'-C1'-N9	6.05	117.27	108.20
1	N	750	C	P-O5'-C5'	6.05	129.97	120.90
1	N	1314	C	P-O3'-C3'	-6.05	111.13	120.20
1	N	78	A	O4'-C1'-C2'	-6.04	101.56	107.60
1	N	920	U	P-O5'-C5'	6.04	129.96	120.90
1	N	658	C	O4'-C1'-N1	6.04	117.56	108.50
1	N	231	U	C4'-C3'-C2'	-6.04	96.56	102.60
1	N	825	A	O4'-C4'-C3'	6.04	110.04	104.00
1	N	1049	U	O4'-C4'-C3'	-6.04	100.06	106.10
1	N	199	A	P-O5'-C5'	6.03	129.94	120.90
1	N	316	C	O4'-C1'-N1	6.03	117.55	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	360	G	C5'-C4'-C3'	-6.03	106.95	116.00
1	N	772	U	C2'-C3'-O3'	6.03	122.74	113.70
1	N	909	A	P-O5'-C5'	6.03	129.94	120.90
1	N	1436	U	C5'-C4'-C3'	6.03	125.04	116.00
1	N	468	A	P-O3'-C3'	6.03	129.24	120.20
1	N	1373	G	P-O3'-C3'	6.03	129.24	120.20
1	N	856	C	O5'-C5'-C4'	-6.02	102.47	111.50
1	N	869	G	C5'-C4'-O4'	6.02	118.83	109.80
1	N	316	C	O3'-P-O5'	6.02	113.03	104.00
1	N	234	C	O5'-C5'-C4'	-6.02	102.47	111.50
1	N	1173	U	O4'-C1'-N1	6.01	117.52	108.50
1	N	454	G	O5'-C5'-C4'	6.01	120.52	111.50
1	N	1439	G	C4'-C3'-C2'	-6.01	96.59	102.60
1	N	610	U	C4'-C3'-O3'	-6.01	103.99	113.00
1	N	647	C	C4'-C3'-C2'	-6.01	96.59	102.60
1	N	426	U	P-O5'-C5'	6.01	129.91	120.90
1	N	739	C	P-O3'-C3'	-6.00	111.19	120.20
1	N	866	C	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	1241	G	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	1247	U	O4'-C1'-N1	6.00	117.51	108.50
1	N	1489	G	O4'-C4'-C3'	-6.00	98.00	104.00
1	N	666	G	P-O5'-C5'	-6.00	111.90	120.90
1	N	684	U	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	544	G	O5'-C5'-C4'	-6.00	102.50	111.50
1	N	692	U	C4'-C3'-O3'	-6.00	104.00	113.00
1	N	974	A	N9-C1'-C2'	-6.00	105.00	114.00
1	N	228	A	O5'-C5'-C4'	-5.99	102.51	111.50
1	N	691	G	C4'-C3'-O3'	-5.99	104.02	113.00
1	N	1249	C	O3'-P-O5'	5.99	112.98	104.00
1	N	1368	A	P-O3'-C3'	-5.99	111.22	120.20
1	N	193	C	O4'-C1'-N1	5.99	117.48	108.50
1	N	373	A	O4'-C4'-C3'	-5.99	98.01	104.00
1	N	488	C	P-O3'-C3'	-5.99	111.22	120.20
1	N	1035	A	O4'-C1'-N9	5.99	117.48	108.50
1	N	469	C	P-O5'-C5'	-5.99	111.92	120.90
1	N	1002	G	C4'-C3'-C2'	-5.99	96.61	102.60
1	N	367	U	O4'-C1'-C2'	-5.99	99.81	105.80
1	N	606	G	O5'-C5'-C4'	5.99	120.48	111.50
1	N	943	U	O4'-C1'-N1	5.98	117.47	108.50
1	N	1395	C	O3'-P-O5'	-5.98	95.03	104.00
1	N	1361	G	O3'-P-O5'	-5.98	95.03	104.00
1	N	197	A	P-O5'-C5'	5.98	129.87	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	198	G	O4'-C1'-C2'	5.98	113.58	107.60
1	N	578	C	C5'-C4'-C3'	5.98	124.97	116.00
1	N	431	A	O4'-C4'-C3'	-5.97	98.03	104.00
1	N	166	U	P-O5'-C5'	5.97	129.86	120.90
1	N	913	A	C4'-C3'-O3'	5.97	118.36	109.40
1	N	1323	G	O5'-C5'-C4'	5.97	120.46	111.50
1	N	545	C	O4'-C1'-N1	5.97	117.45	108.50
1	N	444	G	O3'-P-O5'	-5.97	95.05	104.00
1	N	986	U	O4'-C1'-N1	5.97	117.45	108.50
1	N	153	C	O4'-C4'-C3'	-5.96	98.04	104.00
1	N	859	G	O4'-C4'-C3'	-5.96	98.04	104.00
1	N	979	C	O4'-C4'-C3'	-5.96	98.04	104.00
1	N	676	A	O4'-C1'-C2'	-5.96	101.64	107.60
1	N	1510	C	O3'-P-O5'	-5.96	95.06	104.00
1	N	887	G	C5'-C4'-C3'	-5.96	107.06	116.00
1	N	1030	U	C5'-C4'-C3'	5.96	124.94	116.00
1	N	1473	G	P-O3'-C3'	-5.96	111.26	120.20
1	N	1444	U	O4'-C1'-N1	5.95	117.43	108.50
1	N	697	U	O4'-C1'-N1	5.95	117.43	108.50
1	N	913	A	C2'-C3'-O3'	5.95	118.43	109.50
1	N	203	G	N9-C1'-C2'	-5.95	103.08	112.00
1	N	307	C	C4'-C3'-C2'	-5.95	96.65	102.60
1	N	451	A	C4'-C3'-O3'	5.95	118.32	109.40
1	N	516	U	P-O3'-C3'	5.95	129.12	120.20
1	N	1045	C	P-O5'-C5'	5.95	129.82	120.90
1	N	1095	U	O4'-C1'-N1	5.95	117.42	108.50
1	N	458	U	O4'-C1'-C2'	-5.94	101.66	107.60
1	N	1230	C	P-O3'-C3'	5.94	129.11	120.20
1	N	245	U	O4'-C4'-C3'	-5.94	98.06	104.00
1	N	352	C	O4'-C4'-C3'	5.94	109.94	104.00
1	N	366	A	O4'-C4'-C3'	-5.94	100.16	106.10
1	N	808	C	O4'-C1'-C2'	-5.94	101.66	107.60
1	N	1278	G	C4'-C3'-C2'	-5.94	96.66	102.60
1	N	199	A	O4'-C4'-C3'	-5.94	98.06	104.00
1	N	752	G	O4'-C1'-N9	5.94	117.41	108.50
1	N	344	A	C4'-C3'-C2'	5.93	108.53	102.60
1	N	661	G	O4'-C1'-N9	5.93	117.40	108.50
1	N	185	U	C5'-C4'-C3'	-5.93	107.10	116.00
1	N	295	C	P-O5'-C5'	5.93	129.80	120.90
1	N	1472	U	C4'-C3'-C2'	-5.93	96.67	102.60
1	N	1384	C	P-O5'-C5'	5.93	129.79	120.90
1	N	81	A	P-O5'-C5'	5.92	129.79	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	803	G	C1'-O4'-C4'	5.92	115.83	109.90
1	N	1289	A	O4'-C1'-C2'	-5.92	101.67	107.60
1	N	873	A	C3'-C2'-C1'	5.92	107.42	101.50
1	N	1140	C	O4'-C1'-C2'	-5.92	99.88	105.80
1	N	1422	G	O4'-C4'-C3'	-5.92	98.08	104.00
1	N	832	G	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	631	C	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	1210	C	O4'-C1'-N1	5.92	117.38	108.50
1	N	144	G	O5'-C5'-C4'	-5.92	102.62	111.50
1	N	204	G	O3'-P-O5'	5.91	112.87	104.00
1	N	1160	G	C1'-O4'-C4'	5.91	115.61	109.70
1	N	297	G	O3'-P-O5'	-5.91	95.14	104.00
1	N	568	G	P-O5'-C5'	-5.91	112.03	120.90
1	N	865	A	O4'-C1'-N9	5.91	117.37	108.50
1	N	306	A	P-O3'-C3'	5.91	129.06	120.20
1	N	709	U	O4'-C1'-N1	5.91	117.36	108.50
1	N	1160	G	C3'-C2'-C1'	5.91	107.41	101.50
1	N	1409	C	O4'-C4'-C3'	-5.91	98.09	104.00
1	N	152	A	P-O5'-C5'	5.90	129.76	120.90
1	N	433	G	O5'-C5'-C4'	-5.90	102.64	111.50
1	N	1395	C	O4'-C1'-N1	5.90	117.36	108.50
1	N	607	A	P-O5'-C5'	5.90	129.75	120.90
1	N	210	C	O4'-C1'-N1	5.89	117.04	108.20
1	N	793	U	O4'-C1'-N1	5.89	117.04	108.20
1	N	1152	A	C5'-C4'-C3'	-5.89	107.16	116.00
1	N	523	A	O3'-P-O5'	-5.89	95.16	104.00
1	N	815	A	P-O5'-C5'	-5.89	112.06	120.90
1	N	182	A	C5'-C4'-C3'	-5.89	106.37	115.20
1	N	688	G	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	1031	C	P-O5'-C5'	5.89	129.73	120.90
1	N	438	U	C4'-C3'-O3'	-5.89	100.57	109.40
1	N	202	G	C5'-C4'-C3'	5.88	124.83	116.00
1	N	380	G	O4'-C1'-N9	5.88	117.33	108.50
1	N	658	C	C4'-C3'-C2'	-5.88	96.72	102.60
1	N	1000	A	O4'-C1'-N9	5.88	117.33	108.50
1	N	1203	C	O4'-C1'-N1	5.88	117.33	108.50
1	N	1525	G	C3'-C2'-C1'	-5.88	95.42	101.30
1	N	915	A	C4'-C3'-C2'	-5.88	96.72	102.60
1	N	380	G	O5'-C5'-C4'	-5.88	102.68	111.50
1	N	501	C	O4'-C1'-N1	5.88	117.32	108.50
1	N	216	U	O4'-C1'-N1	5.88	117.32	108.50
1	N	423	G	O5'-C5'-C4'	-5.88	102.68	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	877	G	C5'-C4'-C3'	5.88	124.82	116.00
1	N	776	G	P-O3'-C3'	5.88	129.01	120.20
1	N	327	A	C1'-O4'-C4'	-5.87	104.03	109.90
1	N	409	U	O4'-C1'-C2'	-5.87	101.73	107.60
1	N	656	G	O4'-C1'-C2'	-5.87	101.73	107.60
1	N	1504	G	C5'-C4'-C3'	5.87	124.01	115.20
1	N	45	G	C4'-C3'-C2'	-5.87	96.73	102.60
1	N	293	G	O4'-C1'-C2'	5.87	113.47	107.60
1	N	1194	U	O4'-C1'-N1	5.87	117.30	108.50
1	N	1322	C	P-O3'-C3'	5.87	129.00	120.20
1	N	1066	C	C5'-C4'-C3'	-5.87	107.20	116.00
1	N	1247	U	P-O3'-C3'	-5.87	111.40	120.20
1	N	26	A	P-O3'-C3'	5.86	128.99	120.20
1	N	28	A	O4'-C4'-C3'	-5.86	98.14	104.00
1	N	1370	G	C4'-C3'-C2'	-5.86	96.74	102.60
1	N	207	C	P-O5'-C5'	-5.86	112.11	120.90
1	N	162	A	P-O3'-C3'	5.86	128.99	120.20
1	N	286	C	O4'-C1'-C2'	-5.86	101.74	107.60
1	N	1150	A	C3'-C2'-C1'	5.86	107.16	101.30
1	N	1466	C	P-O5'-C5'	5.86	129.69	120.90
1	N	659	U	C4'-C3'-C2'	-5.86	96.75	102.60
1	N	743	A	O4'-C1'-N9	5.86	117.28	108.50
1	N	914	A	O4'-C1'-N9	5.85	117.28	108.50
1	N	1249	C	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	256	U	C1'-O4'-C4'	5.85	115.75	109.90
1	N	768	A	C3'-C2'-C1'	5.85	107.15	101.30
1	N	1041	G	P-O5'-C5'	-5.85	112.13	120.90
1	N	550	G	O4'-C1'-C2'	-5.84	101.76	107.60
1	N	1047	G	P-O3'-C3'	5.84	128.97	120.20
1	N	1230	C	O4'-C1'-N1	5.84	117.27	108.50
1	N	1372	U	O4'-C1'-C2'	-5.84	101.76	107.60
1	N	581	G	P-O5'-C5'	5.84	129.66	120.90
1	N	839	C	O4'-C1'-N1	5.84	117.27	108.50
1	N	313	A	P-O5'-C5'	5.84	129.66	120.90
1	N	1157	A	C2'-C3'-O3'	5.84	118.26	109.50
1	N	480	U	N1-C1'-C2'	-5.84	103.24	112.00
1	N	812	G	C2'-C3'-O3'	5.84	118.26	109.50
1	N	842	U	C4'-C3'-C2'	5.84	108.44	102.60
1	N	1105	A	C1'-O4'-C4'	5.84	115.74	109.90
1	N	90	C	O3'-P-O5'	-5.83	95.25	104.00
1	N	267	C	C5'-C4'-O4'	-5.83	101.05	109.80
1	N	978	A	C3'-C2'-C1'	-5.83	95.47	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	75	G	N9-C1'-C2'	-5.83	103.25	112.00
1	N	1337	G	O4'-C1'-C2'	-5.83	101.77	107.60
1	N	351	G	O5'-C5'-C4'	-5.83	102.96	111.70
1	N	30	U	C1'-O4'-C4'	5.83	115.53	109.70
1	N	522	C	O4'-C1'-N1	5.83	117.24	108.50
1	N	1422	G	O4'-C1'-C2'	-5.83	101.77	107.60
1	N	1463	U	O4'-C1'-N1	5.83	117.24	108.50
1	N	271	C	O3'-P-O5'	-5.83	95.26	104.00
1	N	312	C	O5'-C5'-C4'	-5.82	102.76	111.50
1	N	747	A	O4'-C4'-C3'	-5.82	98.18	104.00
1	N	887	G	C4'-C3'-C2'	-5.82	96.78	102.60
1	N	1098	C	O4'-C1'-N1	5.82	117.23	108.50
1	N	333	U	O5'-C5'-C4'	-5.82	102.77	111.50
1	N	995	C	P-O3'-C3'	-5.82	111.47	120.20
1	N	1207	G	O5'-C5'-C4'	-5.82	102.77	111.50
1	N	610	U	O4'-C1'-N1	5.82	117.22	108.50
1	N	784	A	P-O3'-C3'	-5.82	111.48	120.20
1	N	1263	C	O5'-C5'-C4'	-5.82	102.78	111.50
1	N	323	U	C4'-C3'-C2'	-5.81	96.79	102.60
1	N	982	U	C2'-C3'-O3'	5.81	118.22	109.50
1	N	1413	A	O4'-C1'-N9	5.81	117.22	108.50
1	N	1417	G	C5'-C4'-C3'	5.81	124.72	116.00
1	N	85	U	C1'-O4'-C4'	-5.81	103.89	109.70
1	N	1013	G	O4'-C4'-C3'	-5.81	98.19	104.00
1	N	1227	A	O5'-C5'-C4'	5.81	120.22	111.50
1	N	617	G	C4'-C3'-C2'	-5.81	96.79	102.60
1	N	1377	A	P-O3'-C3'	5.81	128.91	120.20
1	N	922	G	C3'-C2'-C1'	-5.81	95.49	101.30
1	N	1331	G	O4'-C1'-N9	5.81	117.21	108.50
1	N	1390	U	P-O5'-C5'	5.80	129.61	120.90
1	N	1188	A	O4'-C1'-N9	5.80	116.90	108.20
1	N	1359	C	O4'-C4'-C3'	-5.80	98.20	104.00
1	N	901	A	O5'-C5'-C4'	-5.79	102.81	111.50
1	N	1405	G	O4'-C1'-N9	5.79	117.19	108.50
1	N	574	A	O4'-C1'-N9	5.79	117.19	108.50
1	N	142	G	P-O3'-C3'	5.79	128.88	120.20
1	N	610	U	C5'-C4'-C3'	5.79	124.68	116.00
1	N	968	A	P-O5'-C5'	-5.79	112.22	120.90
1	N	134	G	C5'-C4'-O4'	5.79	118.48	109.80
1	N	373	A	C5'-C4'-O4'	-5.78	101.12	109.80
1	N	317	U	O5'-C5'-C4'	-5.78	102.84	111.50
1	N	1428	A	P-O5'-C5'	5.78	129.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1118	U	O4'-C1'-N1	5.77	117.16	108.50
1	N	1264	U	C4'-C3'-C2'	-5.77	96.83	102.60
1	N	241	G	P-O5'-C5'	5.77	129.55	120.90
1	N	67	C	O5'-C5'-C4'	-5.76	102.85	111.50
1	N	595	A	C4'-C3'-C2'	-5.76	96.84	102.60
1	N	1197	A	C1'-O4'-C4'	5.76	115.66	109.90
1	N	883	C	P-O3'-C3'	-5.76	111.56	120.20
1	N	299	G	C4'-C3'-C2'	-5.76	96.84	102.60
1	N	370	C	O5'-C5'-C4'	-5.76	102.86	111.50
1	N	182	A	P-O5'-C5'	-5.76	112.27	120.90
1	N	502	A	O5'-C5'-C4'	-5.76	102.86	111.50
1	N	373	A	P-O3'-C3'	-5.75	111.57	120.20
1	N	414	A	P-O5'-C5'	5.75	129.53	120.90
1	N	1209	C	O4'-C1'-N1	5.75	117.12	108.50
1	N	4	U	O5'-C5'-C4'	5.75	120.32	111.70
1	N	102	G	C1'-C2'-O2'	5.75	117.02	108.40
1	N	242	G	O4'-C1'-N9	5.75	117.12	108.50
1	N	868	C	O4'-C1'-N1	5.75	117.12	108.50
1	N	1112	C	C5'-C4'-C3'	-5.75	106.58	115.20
1	N	818	G	C4'-C3'-O3'	-5.74	104.39	113.00
1	N	93	U	O4'-C1'-C2'	-5.74	101.86	107.60
1	N	127	G	P-O5'-C5'	5.74	129.51	120.90
1	N	670	G	C2'-C3'-O3'	5.74	122.31	113.70
1	N	1358	U	C4'-C3'-C2'	5.74	108.34	102.60
1	N	766	A	P-O3'-C3'	-5.74	111.59	120.20
1	N	426	U	C2'-C3'-O3'	5.74	122.30	113.70
1	N	224	U	P-O5'-C5'	5.73	129.50	120.90
1	N	528	C	O4'-C1'-C2'	-5.73	101.87	107.60
1	N	753	A	P-O3'-C3'	5.73	128.79	120.20
1	N	939	G	P-O5'-C5'	-5.73	112.31	120.90
1	N	686	U	C1'-C2'-O2'	-5.73	103.21	111.80
1	N	1145	A	P-O5'-C5'	5.73	129.49	120.90
1	N	517	G	O4'-C1'-N9	5.72	117.08	108.50
1	N	724	G	P-O5'-C5'	-5.72	112.32	120.90
1	N	708	C	O4'-C1'-C2'	-5.72	101.88	107.60
1	N	209	U	O4'-C1'-N1	5.71	117.07	108.50
1	N	1136	C	C4'-C3'-O3'	5.71	117.97	109.40
1	N	1391	U	O4'-C1'-N1	5.71	117.07	108.50
1	N	620	C	O4'-C1'-N1	5.71	117.07	108.50
1	N	49	U	P-O3'-C3'	-5.71	111.64	120.20
1	N	631	C	C2'-C3'-O3'	5.71	118.06	109.50
1	N	1201	A	P-O5'-C5'	-5.71	112.34	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1435	G	C4'-C3'-O3'	-5.70	104.44	113.00
1	N	587	G	C3'-C2'-O2'	5.70	119.25	110.70
1	N	382	A	N9-C1'-C2'	5.70	120.55	112.00
1	N	441	A	P-O5'-C5'	-5.70	112.35	120.90
1	N	120	A	O4'-C1'-N9	5.69	117.04	108.50
1	N	1136	C	C5'-C4'-C3'	-5.69	106.66	115.20
1	N	49	U	O4'-C1'-C2'	-5.69	101.91	107.60
1	N	567	G	P-O5'-C5'	5.69	129.44	120.90
1	N	967	C	C1'-C2'-O2'	5.69	116.93	108.40
1	N	531	U	C5'-C4'-O4'	5.69	118.33	109.80
1	N	999	C	C4'-C3'-C2'	-5.68	96.92	102.60
1	N	256	U	O3'-P-O5'	-5.68	95.48	104.00
1	N	291	U	O3'-P-O5'	5.68	112.52	104.00
1	N	387	U	O4'-C1'-N1	5.68	117.02	108.50
1	N	550	G	O4'-C1'-N9	5.68	117.02	108.50
1	N	264	C	P-O3'-C3'	5.68	128.72	120.20
1	N	428	G	C5'-C4'-O4'	-5.68	100.58	109.10
1	N	1037	C	C1'-O4'-C4'	-5.68	104.22	109.90
1	N	19	A	C4'-C3'-O3'	-5.68	104.48	113.00
1	N	479	U	C5'-C4'-C3'	-5.67	107.49	116.00
1	N	842	U	C5'-C4'-O4'	5.67	117.61	109.10
1	N	904	U	C5'-C4'-C3'	5.67	124.51	116.00
1	N	1173	U	O5'-C5'-C4'	-5.67	102.99	111.50
1	N	287	U	C2'-C3'-O3'	5.67	122.21	113.70
1	N	325	A	C4'-C3'-O3'	-5.67	104.49	113.00
1	N	617	G	P-O5'-C5'	5.67	129.41	120.90
1	N	1076	U	O5'-C5'-C4'	-5.67	102.99	111.50
1	N	605	U	O4'-C1'-N1	5.67	117.00	108.50
1	N	847	G	C3'-C2'-C1'	-5.67	95.63	101.30
1	N	628	G	P-O3'-C3'	-5.67	111.70	120.20
1	N	868	C	O4'-C1'-C2'	-5.67	101.94	107.60
1	N	78	A	C3'-C2'-C1'	5.66	106.96	101.30
1	N	411	A	C4'-C3'-C2'	5.66	108.26	102.60
1	N	792	A	C1'-O4'-C4'	5.66	115.36	109.70
1	N	243	A	C5'-C4'-C3'	5.66	124.49	116.00
1	N	537	G	O4'-C4'-C3'	-5.66	98.34	104.00
1	N	1514	G	O4'-C1'-N9	5.66	116.99	108.50
1	N	1069	C	C1'-O4'-C4'	-5.66	104.24	109.90
1	N	1395	C	C4'-C3'-C2'	-5.66	96.94	102.60
1	N	945	G	C4'-C3'-C2'	-5.66	96.94	102.60
1	N	1337	G	O4'-C4'-C3'	-5.66	98.34	104.00
1	N	194	C	C1'-O4'-C4'	-5.65	104.25	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1282	C	C4'-C3'-O3'	-5.65	104.52	113.00
1	N	505	G	C2'-C3'-O3'	5.65	122.18	113.70
1	N	42	G	P-O3'-C3'	-5.65	111.73	120.20
1	N	1128	C	O5'-C5'-C4'	-5.65	103.03	111.50
1	N	1263	C	O4'-C1'-N1	5.65	116.97	108.50
1	N	299	G	O4'-C1'-N9	5.65	116.97	108.50
1	N	177	G	P-O3'-C3'	-5.65	111.73	120.20
1	N	1242	G	O4'-C1'-C2'	-5.65	101.95	107.60
1	N	788	U	C5'-C4'-C3'	-5.64	107.53	116.00
1	N	93	U	C4'-C3'-O3'	5.64	121.46	113.00
1	N	294	U	P-O5'-C5'	5.64	129.36	120.90
1	N	1406	U	O4'-C1'-N1	5.64	116.96	108.50
1	N	94	G	O4'-C1'-N9	5.64	116.66	108.20
1	N	858	G	C4'-C3'-C2'	-5.64	96.96	102.60
1	N	233	C	C4'-C3'-C2'	-5.64	96.96	102.60
1	N	302	G	O4'-C1'-C2'	-5.64	101.96	107.60
1	N	1050	G	O4'-C1'-N9	5.64	116.96	108.50
1	N	201	G	O4'-C4'-C3'	5.64	109.64	104.00
1	N	330	C	C1'-C2'-O2'	5.64	116.86	108.40
1	N	680	C	O4'-C1'-N1	5.64	116.95	108.50
1	N	1005	A	C3'-C2'-C1'	5.63	106.94	101.30
1	N	1124	G	O3'-P-O5'	-5.63	95.55	104.00
1	N	36	C	C4'-C3'-C2'	-5.63	96.97	102.60
1	N	229	U	O4'-C1'-N1	5.63	116.95	108.50
1	N	866	C	C4'-C3'-O3'	-5.63	104.55	113.00
1	N	105	G	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	186	C	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	678	U	O4'-C1'-N1	5.63	116.94	108.50
1	N	340	U	O4'-C1'-N1	5.62	116.94	108.50
1	N	1038	C	C5'-C4'-C3'	5.62	124.43	116.00
1	N	1504	G	C2'-C3'-O3'	5.62	117.93	109.50
1	N	157	U	O4'-C1'-N1	5.62	116.93	108.50
1	N	128	G	O5'-C5'-C4'	-5.61	103.08	111.50
1	N	433	G	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	674	G	C2'-C3'-O3'	-5.61	105.29	113.70
1	N	772	U	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	1255	G	C5'-C4'-C3'	-5.61	107.59	116.00
1	N	536	C	C5'-C4'-O4'	-5.61	101.39	109.80
1	N	883	C	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	33	A	O4'-C1'-C2'	-5.61	101.99	107.60
1	N	421	U	O4'-C1'-C2'	-5.61	100.19	105.80
1	N	439	U	O4'-C4'-C3'	-5.61	98.39	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	815	A	C4'-C3'-O3'	-5.61	104.59	113.00
1	N	254	G	O5'-C5'-C4'	-5.60	103.09	111.50
1	N	253	A	C4'-C3'-C2'	-5.60	97.00	102.60
1	N	968	A	O3'-P-O5'	-5.60	95.60	104.00
1	N	476	U	O4'-C1'-N1	5.60	116.90	108.50
1	N	827	U	O4'-C1'-N1	5.60	116.90	108.50
1	N	867	G	O4'-C1'-N9	5.60	116.90	108.50
1	N	981	U	P-O3'-C3'	-5.60	111.80	120.20
1	N	459	A	C5'-C4'-C3'	-5.60	107.61	116.00
1	N	737	C	C4'-C3'-C2'	-5.60	97.00	102.60
1	N	377	G	O4'-C1'-N9	5.59	116.89	108.50
1	N	248	C	P-O3'-C3'	-5.59	111.82	120.20
1	N	630	A	P-O5'-C5'	5.59	129.28	120.90
1	N	896	C	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	680	C	P-O5'-C5'	5.59	129.28	120.90
1	N	1216	A	C5'-C4'-C3'	5.59	124.38	116.00
1	N	330	C	O3'-P-O5'	-5.58	95.62	104.00
1	N	951	G	C5'-C4'-C3'	5.58	124.38	116.00
1	N	1450	U	P-O5'-C5'	5.58	129.28	120.90
1	N	185	U	C5'-C4'-O4'	5.58	118.17	109.80
1	N	1079	G	C5'-C4'-C3'	5.58	124.37	116.00
1	N	1347	G	O4'-C1'-N9	5.58	116.57	108.20
1	N	273	U	C2'-C3'-O3'	5.58	122.07	113.70
1	N	783	C	O4'-C1'-N1	5.58	116.87	108.50
1	N	1368	A	O3'-P-O5'	5.58	112.37	104.00
1	N	1482	G	C1'-O4'-C4'	-5.58	104.32	109.90
1	N	500	G	O4'-C1'-C2'	-5.58	102.03	107.60
1	N	621	A	P-O5'-C5'	5.58	129.26	120.90
1	N	1205	U	O4'-C1'-C2'	-5.58	102.02	107.60
1	N	98	A	O4'-C1'-N9	5.57	116.86	108.50
1	N	1031	C	P-O3'-C3'	-5.57	111.84	120.20
1	N	1125	U	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	270	A	O4'-C1'-N9	5.57	116.86	108.50
1	N	189	A	P-O3'-C3'	-5.57	111.85	120.20
1	N	203	G	O4'-C4'-C3'	-5.57	98.44	104.00
1	N	935	A	O4'-C1'-N9	5.57	116.85	108.50
1	N	1231	G	O5'-C5'-C4'	-5.57	103.15	111.50
1	N	1273	C	O4'-C1'-N1	5.57	116.85	108.50
1	N	1348	U	O4'-C1'-N1	5.57	116.85	108.50
1	N	1010	U	C5'-C4'-C3'	5.56	124.34	116.00
1	N	1294	G	O4'-C1'-C2'	-5.56	102.04	107.60
1	N	794	A	N9-C1'-C2'	-5.56	103.66	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	4	U	O4'-C1'-N1	5.56	116.54	108.20
1	N	165	G	P-O3'-C3'	-5.56	111.86	120.20
1	N	1170	A	C1'-O4'-C4'	5.56	115.46	109.90
1	N	806	C	P-O3'-C3'	-5.56	111.86	120.20
1	N	317	U	C5'-C4'-C3'	-5.55	107.67	116.00
1	N	655	A	O4'-C1'-C2'	-5.55	102.05	107.60
1	N	16	A	C5'-C4'-C3'	5.55	124.33	116.00
1	N	126	G	C4'-C3'-C2'	-5.55	97.05	102.60
1	N	1049	U	C5'-C4'-C3'	5.55	123.53	115.20
1	N	146	G	C1'-O4'-C4'	-5.55	104.35	109.90
1	N	369	G	O4'-C1'-N9	5.55	116.83	108.50
1	N	480	U	O5'-C5'-C4'	-5.55	103.17	111.50
1	N	1087	G	O4'-C1'-C2'	-5.55	102.05	107.60
1	N	39	G	P-O5'-C5'	-5.55	112.58	120.90
1	N	605	U	C4'-C3'-C2'	-5.55	97.05	102.60
1	N	678	U	C1'-O4'-C4'	5.54	115.44	109.90
1	N	868	C	O3'-P-O5'	-5.54	95.68	104.00
1	N	758	C	C4'-C3'-C2'	-5.54	97.06	102.60
1	N	792	A	O4'-C4'-C3'	-5.54	100.56	106.10
1	N	1243	C	P-O5'-C5'	5.54	129.22	120.90
1	N	608	A	O5'-C5'-C4'	-5.54	103.19	111.50
1	N	1068	G	C4'-C3'-O3'	-5.54	104.69	113.00
1	N	1342	C	P-O3'-C3'	-5.54	111.89	120.20
1	N	184	G	C5'-C4'-O4'	-5.54	101.49	109.80
1	N	283	U	P-O3'-C3'	-5.54	111.89	120.20
1	N	145	G	C1'-C2'-O2'	5.54	116.70	108.40
1	N	361	G	P-O3'-C3'	5.54	128.50	120.20
1	N	1006	G	O4'-C1'-N9	5.54	116.80	108.50
1	N	127	G	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	475	C	O4'-C1'-N1	5.53	116.80	108.50
1	N	498	A	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	256	U	C2'-C3'-O3'	5.53	122.00	113.70
1	N	34	C	C4'-C3'-O3'	-5.53	104.70	113.00
1	N	685	G	C4'-C3'-O3'	-5.53	104.71	113.00
1	N	545	C	P-O3'-C3'	5.53	128.49	120.20
1	N	1215	G	C2'-C3'-O3'	-5.53	105.41	113.70
1	N	621	A	C4'-C3'-O3'	-5.52	104.71	113.00
1	N	1116	U	P-O3'-C3'	-5.52	111.92	120.20
1	N	1421	G	O4'-C1'-N9	5.52	116.78	108.50
1	N	206	C	O4'-C1'-N1	5.52	116.78	108.50
1	N	390	U	C5'-C4'-C3'	-5.52	107.72	116.00
1	N	446	G	O5'-C5'-C4'	-5.52	103.22	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1253	G	O4'-C1'-C2'	5.52	113.12	107.60
1	N	1154	G	O5'-C5'-C4'	-5.52	103.22	111.50
1	N	801	U	C5'-C4'-C3'	5.51	124.27	116.00
1	N	1460	C	C4'-C3'-O3'	-5.51	104.73	113.00
1	N	169	C	O4'-C4'-C3'	-5.51	98.49	104.00
1	N	654	G	C1'-O4'-C4'	5.51	115.41	109.90
1	N	1211	U	C5'-C4'-O4'	5.51	117.37	109.10
1	N	29	U	C2'-C3'-O3'	5.51	121.96	113.70
1	N	1224	U	O4'-C1'-N1	5.51	116.77	108.50
1	N	70	U	C5'-C4'-O4'	5.51	117.36	109.10
1	N	91	U	C5'-C4'-O4'	-5.51	101.54	109.80
1	N	305	G	O5'-C5'-C4'	-5.50	103.44	111.70
1	N	342	C	O4'-C1'-N1	5.50	116.76	108.50
1	N	449	G	O4'-C1'-N9	5.50	116.75	108.50
1	N	962	C	O5'-C5'-C4'	-5.50	103.25	111.50
1	N	148	G	P-O5'-C5'	5.50	129.15	120.90
1	N	463	U	C5'-C4'-C3'	5.50	124.25	116.00
1	N	965	U	O4'-C1'-N1	5.50	116.45	108.20
1	N	39	G	C5'-C4'-C3'	-5.50	107.75	116.00
1	N	1035	A	O4'-C4'-C3'	-5.50	98.50	104.00
1	N	1054	C	C2'-C3'-O3'	5.50	117.75	109.50
1	N	56	U	O5'-C5'-C4'	-5.50	103.26	111.50
1	N	341	C	C1'-O4'-C4'	5.50	115.40	109.90
1	N	661	G	P-O3'-C3'	-5.49	111.96	120.20
1	N	767	A	C5'-C4'-C3'	5.49	124.24	116.00
1	N	1190	G	C1'-O4'-C4'	-5.49	104.21	109.70
1	N	89	U	C5'-C4'-C3'	5.49	123.44	115.20
1	N	437	U	O4'-C1'-N1	5.49	116.74	108.50
1	N	1397	C	C1'-O4'-C4'	5.49	115.39	109.90
1	N	205	A	C2'-C3'-O3'	5.49	121.94	113.70
1	N	1049	U	P-O3'-C3'	5.49	128.43	120.20
1	N	1191	A	C4'-C3'-C2'	5.49	108.09	102.60
1	N	1007	U	C5'-C4'-C3'	-5.49	107.77	116.00
1	N	1517	G	O4'-C1'-N9	5.49	116.73	108.50
1	N	219	U	O4'-C1'-N1	5.49	116.73	108.50
1	N	280	C	O4'-C1'-N1	5.49	116.43	108.20
1	N	350	G	C4'-C3'-C2'	-5.49	97.11	102.60
1	N	519	C	C5'-C4'-C3'	-5.49	107.77	116.00
1	N	315	A	C2'-C3'-O3'	5.48	117.72	109.50
1	N	989	U	O4'-C1'-C2'	-5.48	102.12	107.60
1	N	848	C	P-O5'-C5'	5.48	129.12	120.90
1	N	492	C	P-O5'-C5'	-5.48	112.68	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	505	G	O3'-P-O5'	-5.47	95.79	104.00
1	N	690	G	C1'-C2'-O2'	5.47	116.61	108.40
1	N	713	G	C4'-C3'-O3'	-5.47	104.79	113.00
1	N	771	G	O3'-P-O5'	-5.47	95.79	104.00
1	N	692	U	C1'-O4'-C4'	-5.47	104.43	109.90
1	N	426	U	C4'-C3'-O3'	-5.47	104.80	113.00
1	N	600	A	O4'-C1'-N9	5.47	116.70	108.50
1	N	374	A	P-O5'-C5'	-5.47	112.70	120.90
1	N	444	G	C4'-C3'-C2'	-5.47	97.13	102.60
1	N	960	U	C4'-C3'-C2'	-5.47	97.13	102.60
1	N	840	C	O4'-C1'-N1	5.47	116.70	108.50
1	N	286	C	C3'-C2'-O2'	5.46	118.90	110.70
1	N	8	A	O4'-C1'-N9	5.46	116.39	108.20
1	N	418	C	C1'-C2'-O2'	5.46	116.59	108.40
1	N	687	A	C5'-C4'-C3'	5.46	123.39	115.20
1	N	1081	A	O4'-C1'-N9	5.46	116.69	108.50
1	N	769	G	C5'-C4'-C3'	5.46	124.19	116.00
1	N	1501	C	C3'-C2'-C1'	5.46	106.76	101.30
1	N	87	C	O4'-C1'-N1	5.46	116.69	108.50
1	N	857	C	C2'-C3'-O3'	5.46	121.89	113.70
1	N	992	U	O5'-C5'-C4'	5.46	119.89	111.70
1	N	560	A	C3'-C2'-O2'	5.46	118.89	110.70
1	N	1185	G	O4'-C4'-C3'	-5.46	98.54	104.00
1	N	1269	A	O3'-P-O5'	-5.46	95.81	104.00
1	N	1069	C	O3'-P-O5'	-5.46	95.81	104.00
1	N	1466	C	O4'-C1'-N1	5.46	116.69	108.50
1	N	66	A	C2'-C3'-O3'	-5.45	105.52	113.70
1	N	1125	U	P-O3'-C3'	5.45	128.38	120.20
1	N	845	A	O4'-C1'-N9	5.45	116.68	108.50
1	N	1239	A	C3'-C2'-O2'	-5.45	106.42	114.60
1	N	128	G	O4'-C1'-N9	5.45	116.67	108.50
1	N	266	G	O4'-C4'-C3'	-5.45	100.65	106.10
1	N	899	C	O4'-C1'-N1	5.45	116.67	108.50
1	N	906	A	P-O5'-C5'	5.45	129.07	120.90
1	N	1398	A	P-O5'-C5'	5.45	129.07	120.90
1	N	416	G	C1'-O4'-C4'	-5.45	104.45	109.90
1	N	627	G	O4'-C1'-C2'	-5.45	102.15	107.60
1	N	393	A	O4'-C4'-C3'	-5.44	98.56	104.00
1	N	438	U	C5'-C4'-O4'	5.44	117.27	109.10
1	N	1380	U	O4'-C1'-N1	5.44	116.66	108.50
1	N	206	C	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	262	A	C4'-C3'-C2'	5.44	108.04	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1447	A	O4'-C1'-C2'	5.44	113.04	107.60
1	N	533	A	C3'-C2'-O2'	-5.44	106.44	114.60
1	N	271	C	C2'-C3'-O3'	5.44	121.86	113.70
1	N	793	U	C2'-C3'-O3'	5.44	117.66	109.50
1	N	1188	A	C5'-C4'-O4'	5.44	117.26	109.10
1	N	6	G	O4'-C4'-C3'	-5.44	100.66	106.10
1	N	592	G	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	814	A	C5'-C4'-C3'	-5.43	107.85	116.00
1	N	910	C	O4'-C1'-N1	5.43	116.65	108.50
1	N	246	A	C2'-C3'-O3'	5.43	117.65	109.50
1	N	1437	A	O5'-C5'-C4'	-5.43	103.35	111.50
1	N	120	A	P-O3'-C3'	5.43	128.35	120.20
1	N	115	G	C3'-C2'-C1'	5.43	106.93	101.50
1	N	245	U	O4'-C1'-N1	5.43	116.64	108.50
1	N	272	C	C4'-C3'-O3'	-5.43	104.86	113.00
1	N	1224	U	P-O5'-C5'	5.43	129.04	120.90
1	N	63	C	O4'-C4'-C3'	5.42	109.42	104.00
1	N	1335	U	O4'-C4'-C3'	-5.42	98.58	104.00
1	N	100	G	O5'-C5'-C4'	-5.42	103.36	111.50
1	N	26	A	C1'-O4'-C4'	-5.42	104.48	109.90
1	N	322	C	C2'-C3'-O3'	5.42	121.83	113.70
1	N	501	C	C4'-C3'-O3'	-5.42	104.87	113.00
1	N	1165	U	O4'-C1'-N1	5.42	116.63	108.50
1	N	393	A	P-O3'-C3'	-5.42	112.07	120.20
1	N	861	G	O5'-C5'-C4'	-5.42	103.37	111.50
1	N	1310	G	P-O5'-C5'	-5.42	112.77	120.90
1	N	1416	G	C4'-C3'-C2'	-5.42	97.18	102.60
1	N	1433	A	C5'-C4'-C3'	5.42	124.13	116.00
1	N	777	A	C5'-C4'-O4'	5.42	117.93	109.80
1	N	371	A	C2'-C3'-O3'	5.42	121.83	113.70
1	N	565	U	C5'-C4'-C3'	5.42	124.13	116.00
1	N	575	G	P-O3'-C3'	5.42	128.32	120.20
1	N	264	C	C1'-O4'-C4'	-5.42	104.48	109.90
1	N	554	A	O3'-P-O5'	-5.42	95.88	104.00
1	N	665	A	C5'-C4'-C3'	5.42	124.12	116.00
1	N	69	G	C3'-C2'-C1'	5.41	106.71	101.30
1	N	351	G	C2'-C3'-O3'	5.41	117.62	109.50
1	N	974	A	P-O5'-C5'	5.41	129.02	120.90
1	N	802	A	O5'-C5'-C4'	5.41	119.62	111.50
1	N	1351	U	O3'-P-O5'	-5.41	95.88	104.00
1	N	495	A	O4'-C1'-C2'	5.41	111.21	105.80
1	N	1125	U	O4'-C1'-N1	5.41	116.61	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1347	G	C2'-C3'-O3'	5.41	117.61	109.50
1	N	953	G	C4'-C3'-C2'	-5.41	97.19	102.60
1	N	969	A	P-O5'-C5'	-5.40	112.80	120.90
1	N	1194	U	O3'-P-O5'	5.40	112.10	104.00
1	N	55	A	O5'-C5'-C4'	-5.40	103.40	111.50
1	N	737	C	O4'-C1'-C2'	-5.40	102.20	107.60
1	N	1472	U	O4'-C1'-N1	5.40	116.60	108.50
1	N	689	C	O4'-C1'-N1	5.40	116.60	108.50
1	N	924	C	O4'-C1'-C2'	-5.40	102.20	107.60
1	N	1037	C	O4'-C4'-C3'	-5.40	98.60	104.00
1	N	1482	G	O5'-C5'-C4'	-5.40	103.40	111.50
1	N	229	U	C1'-O4'-C4'	5.40	115.30	109.90
1	N	763	G	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	95	C	C5'-C4'-C3'	-5.39	107.91	116.00
1	N	273	U	P-O5'-C5'	5.39	128.99	120.90
1	N	1005	A	O4'-C1'-N9	5.39	116.59	108.50
1	N	1091	U	C4'-C3'-O3'	-5.39	104.91	113.00
1	N	849	G	C5'-C4'-C3'	-5.39	107.91	116.00
1	N	839	C	P-O5'-C5'	5.39	128.99	120.90
1	N	868	C	P-O3'-C3'	-5.39	112.11	120.20
1	N	1472	U	C5'-C4'-C3'	5.39	124.08	116.00
1	N	47	C	O3'-P-O5'	5.39	112.08	104.00
1	N	405	U	C4'-C3'-O3'	-5.39	104.92	113.00
1	N	578	C	C4'-C3'-C2'	-5.39	97.21	102.60
1	N	784	A	O3'-P-O5'	5.39	112.08	104.00
1	N	852	G	P-O3'-C3'	-5.39	112.12	120.20
1	N	834	U	C5'-C4'-C3'	-5.38	107.92	116.00
1	N	1275	A	C5'-C4'-C3'	-5.38	107.92	116.00
1	N	90	C	O4'-C1'-N1	-5.38	100.13	108.20
1	N	71	A	C3'-C2'-C1'	5.38	106.68	101.30
1	N	275	G	P-O3'-C3'	-5.38	112.14	120.20
1	N	1283	U	O4'-C1'-N1	5.38	116.56	108.50
1	N	525	C	O4'-C1'-N1	5.37	116.56	108.50
1	N	1067	A	P-O3'-C3'	-5.37	112.14	120.20
1	N	1211	U	O4'-C4'-C3'	-5.37	100.73	106.10
1	N	1530	G	O5'-C5'-C4'	5.37	119.76	111.70
1	N	80	A	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	336	A	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	1515	G	O4'-C4'-C3'	-5.37	98.63	104.00
1	N	344	A	N9-C1'-C2'	-5.37	105.95	114.00
1	N	767	A	P-O5'-C5'	5.37	128.95	120.90
1	N	429	U	O4'-C1'-N1	5.36	116.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	750	C	C4'-C3'-O3'	-5.36	104.95	113.00
1	N	262	A	C1'-C2'-O2'	5.36	116.44	108.40
1	N	533	A	C5'-C4'-C3'	-5.36	107.16	115.20
1	N	813	U	C4'-C3'-O3'	-5.36	104.96	113.00
1	N	381	C	C3'-C2'-C1'	-5.36	95.94	101.30
1	N	50	A	P-O3'-C3'	-5.36	112.16	120.20
1	N	538	G	C3'-C2'-O2'	-5.36	102.66	110.70
1	N	758	C	C5'-C4'-C3'	5.36	124.04	116.00
1	N	341	C	O5'-C5'-C4'	-5.36	103.46	111.50
1	N	651	C	C5'-C4'-C3'	-5.36	107.96	116.00
1	N	1090	U	O4'-C1'-N1	5.36	116.53	108.50
1	N	1214	C	P-O3'-C3'	-5.36	112.16	120.20
1	N	79	G	P-O5'-C5'	5.36	128.93	120.90
1	N	139	A	O4'-C1'-C2'	-5.36	102.25	107.60
1	N	471	U	P-O5'-C5'	5.36	128.93	120.90
1	N	761	G	O4'-C1'-C2'	-5.35	102.25	107.60
1	N	699	C	C2'-C3'-O3'	5.35	121.73	113.70
1	N	1422	G	O4'-C1'-N9	5.35	116.53	108.50
1	N	1469	C	C2'-C3'-O3'	5.35	121.73	113.70
1	N	1508	A	P-O5'-C5'	5.35	128.93	120.90
1	N	235	C	P-O5'-C5'	5.35	128.93	120.90
1	N	759	A	N9-C1'-C2'	-5.35	103.97	112.00
1	N	1414	U	C4'-C3'-C2'	5.35	107.95	102.60
1	N	19	A	O5'-C5'-C4'	5.35	119.53	111.50
1	N	136	C	O4'-C1'-N1	5.35	116.52	108.50
1	N	496	A	C3'-C2'-O2'	5.35	118.72	110.70
1	N	871	U	O4'-C1'-N1	5.35	116.53	108.50
1	N	1172	C	C1'-O4'-C4'	5.35	115.25	109.90
1	N	316	C	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	449	G	C5'-C4'-C3'	-5.35	107.98	116.00
1	N	982	U	C3'-C2'-C1'	5.35	106.85	101.50
1	N	462	G	O4'-C1'-C2'	-5.35	102.25	107.60
1	N	91	U	P-O3'-C3'	5.34	128.22	120.20
1	N	156	C	C3'-C2'-C1'	-5.34	95.96	101.30
1	N	220	G	O5'-C5'-C4'	-5.34	103.48	111.50
1	N	48	C	O5'-C5'-C4'	5.34	119.51	111.50
1	N	671	G	O4'-C1'-C2'	-5.34	102.26	107.60
1	N	1017	U	P-O3'-C3'	5.34	128.21	120.20
1	N	276	G	C5'-C4'-C3'	5.34	124.01	116.00
1	N	572	A	P-O3'-C3'	5.34	128.21	120.20
1	N	1369	C	C4'-C3'-C2'	-5.33	97.27	102.60
1	N	83	C	P-O5'-C5'	5.33	128.90	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	708	C	C3'-C2'-C1'	5.33	106.63	101.30
1	N	1131	G	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	1160	G	O4'-C1'-N9	5.33	116.20	108.20
1	N	1292	G	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	639	G	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	1239	A	C3'-C2'-C1'	-5.33	96.17	101.50
1	N	1240	U	P-O3'-C3'	5.33	128.20	120.20
1	N	83	C	C4'-C3'-C2'	5.33	107.93	102.60
1	N	1277	C	O4'-C1'-N1	5.33	116.49	108.50
1	N	1457	G	C4'-C3'-C2'	-5.33	97.27	102.60
1	N	198	G	O4'-C1'-N9	5.33	116.49	108.50
1	N	369	G	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	422	C	C5'-C4'-C3'	5.33	123.19	115.20
1	N	583	A	P-O5'-C5'	5.33	128.89	120.90
1	N	626	G	C1'-O4'-C4'	5.33	115.23	109.90
1	N	796	C	O4'-C1'-N1	5.33	116.49	108.50
1	N	472	U	O4'-C1'-N1	5.33	116.49	108.50
1	N	1515	G	P-O3'-C3'	-5.32	112.21	120.20
1	N	334	C	O4'-C1'-N1	5.32	116.48	108.50
1	N	802	A	N9-C1'-C2'	5.32	119.98	112.00
1	N	448	A	C4'-C3'-C2'	-5.32	97.28	102.60
1	N	19	A	C4'-C3'-C2'	-5.32	97.28	102.60
1	N	672	U	C5'-C4'-C3'	-5.32	108.02	116.00
1	N	924	C	C4'-C3'-C2'	-5.32	97.28	102.60
1	N	961	U	O4'-C1'-N1	5.32	116.48	108.50
1	N	318	G	O4'-C1'-N9	5.32	116.47	108.50
1	N	551	U	O4'-C1'-N1	5.31	116.47	108.50
1	N	1115	U	O5'-C5'-C4'	-5.31	103.53	111.50
1	N	429	U	P-O3'-C3'	5.31	128.16	120.20
1	N	476	U	P-O5'-C5'	5.31	128.86	120.90
1	N	565	U	O4'-C1'-N1	5.31	116.46	108.50
1	N	1369	C	P-O5'-C5'	5.31	128.86	120.90
1	N	77	A	P-O5'-C5'	-5.31	112.94	120.90
1	N	102	G	C3'-C2'-C1'	-5.31	95.99	101.30
1	N	898	G	C1'-C2'-O2'	-5.30	100.44	108.40
1	N	946	A	C4'-C3'-C2'	-5.30	97.30	102.60
1	N	56	U	O4'-C1'-C2'	-5.30	102.30	107.60
1	N	304	U	O5'-C5'-C4'	-5.30	103.55	111.50
1	N	803	G	O4'-C1'-N9	5.30	116.45	108.50
1	N	829	G	C4'-C3'-C2'	-5.30	97.30	102.60
1	N	819	A	C2'-C3'-O3'	5.30	117.45	109.50
1	N	1059	C	O4'-C1'-C2'	-5.30	102.30	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1069	C	P-O5'-C5'	5.30	128.85	120.90
1	N	1094	G	N9-C1'-C2'	5.30	119.95	112.00
1	N	567	G	C5'-C4'-C3'	5.30	123.95	116.00
1	N	1418	A	O5'-C5'-C4'	-5.30	103.55	111.50
1	N	282	A	C4'-C3'-C2'	5.30	107.90	102.60
1	N	484	G	C4'-C3'-O3'	5.30	117.34	109.40
1	N	370	C	C1'-O4'-C4'	-5.29	104.61	109.90
1	N	372	C	P-O5'-C5'	-5.29	112.96	120.90
1	N	645	G	O5'-C5'-C4'	-5.29	103.56	111.50
1	N	1198	G	O4'-C1'-C2'	-5.29	102.31	107.60
1	N	669	G	P-O5'-C5'	5.29	128.84	120.90
1	N	731	G	O4'-C4'-C3'	-5.29	98.71	104.00
1	N	1237	C	O4'-C1'-C2'	-5.29	102.31	107.60
1	N	93	U	C3'-C2'-O2'	5.29	118.63	110.70
1	N	596	A	P-O5'-C5'	5.29	128.83	120.90
1	N	319	G	O5'-C5'-C4'	5.28	119.42	111.50
1	N	341	C	C5'-C4'-C3'	5.28	123.92	116.00
1	N	347	G	C2'-C3'-O3'	-5.28	105.78	113.70
1	N	523	A	P-O3'-C3'	-5.28	112.28	120.20
1	N	1225	A	C5'-C4'-O4'	5.28	117.02	109.10
1	N	338	A	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	1141	C	P-O5'-C5'	5.28	128.82	120.90
1	N	1290	G	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	887	G	P-O3'-C3'	-5.28	112.29	120.20
1	N	1469	C	C5'-C4'-O4'	-5.28	101.89	109.80
1	N	950	U	O4'-C1'-N1	5.27	116.41	108.50
1	N	30	U	P-O3'-C3'	5.27	128.11	120.20
1	N	216	U	P-O3'-C3'	5.27	128.11	120.20
1	N	991	U	O4'-C1'-C2'	-5.27	100.53	105.80
1	N	1212	U	C2'-C3'-O3'	5.27	121.61	113.70
1	N	948	C	O4'-C4'-C3'	-5.27	98.73	104.00
1	N	1482	G	O3'-P-O5'	-5.27	96.09	104.00
1	N	453	G	C5'-C4'-C3'	-5.27	108.10	116.00
1	N	678	U	O4'-C4'-C3'	-5.27	98.73	104.00
1	N	858	G	O3'-P-O5'	-5.27	96.10	104.00
1	N	1135	U	C4'-C3'-O3'	-5.27	105.10	113.00
1	N	120	A	C5'-C4'-C3'	5.26	123.90	116.00
1	N	1256	A	O4'-C1'-N9	5.26	116.09	108.20
1	N	447	G	O4'-C1'-C2'	-5.26	102.34	107.60
1	N	464	U	O5'-C5'-C4'	-5.26	103.61	111.50
1	N	590	U	P-O5'-C5'	-5.26	113.01	120.90
1	N	1175	G	C3'-C2'-O2'	5.26	118.59	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1239	A	O4'-C1'-C2'	-5.26	100.54	105.80
1	N	1325	C	P-O3'-C3'	-5.26	112.31	120.20
1	N	1522	U	P-O5'-C5'	5.26	128.79	120.90
1	N	38	G	C4'-C3'-O3'	-5.26	105.11	113.00
1	N	273	U	C1'-O4'-C4'	5.26	115.16	109.90
1	N	613	C	C3'-C2'-C1'	5.26	106.56	101.30
1	N	783	C	O4'-C4'-C3'	-5.26	98.74	104.00
1	N	1247	U	P-O5'-C5'	5.26	128.79	120.90
1	N	598	U	C4'-C3'-C2'	5.26	107.86	102.60
1	N	1335	U	O4'-C1'-N1	5.26	116.39	108.50
1	N	95	C	O4'-C1'-N1	5.26	116.39	108.50
1	N	262	A	O4'-C1'-N9	5.26	116.39	108.50
1	N	88	U	C5'-C4'-O4'	5.25	116.98	109.10
1	N	801	U	O4'-C1'-N1	5.25	116.38	108.50
1	N	1299	A	N1-C6-N6	5.25	134.35	118.60
1	N	131	A	O4'-C1'-C2'	5.25	112.85	107.60
1	N	56	U	O4'-C1'-N1	5.25	116.37	108.50
1	N	99	C	C4'-C3'-O3'	-5.25	105.13	113.00
1	N	869	G	O3'-P-O5'	-5.25	96.13	104.00
1	N	364	A	O4'-C1'-N9	5.25	116.37	108.50
1	N	612	C	C2'-C3'-O3'	5.25	121.57	113.70
1	N	641	U	C2'-C3'-O3'	5.25	121.57	113.70
1	N	53	A	O5'-C5'-C4'	-5.24	103.63	111.50
1	N	645	G	O4'-C4'-C3'	-5.24	98.76	104.00
1	N	614	C	C4'-C3'-O3'	-5.24	105.14	113.00
1	N	1168	U	C3'-C2'-O2'	5.24	118.56	110.70
1	N	209	U	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	481	G	C1'-C2'-O2'	-5.24	103.95	111.80
1	N	888	G	O5'-C5'-C4'	-5.24	103.65	111.50
1	N	1293	C	O4'-C1'-N1	5.24	116.35	108.50
1	N	1155	A	O5'-C5'-C4'	-5.23	103.65	111.50
1	N	94	G	C3'-C2'-C1'	5.23	106.73	101.50
1	N	352	C	O3'-P-O5'	-5.23	96.15	104.00
1	N	473	U	O4'-C1'-C2'	-5.23	102.37	107.60
1	N	599	C	O4'-C1'-C2'	-5.23	102.37	107.60
1	N	724	G	O5'-C5'-C4'	-5.23	103.65	111.50
1	N	960	U	O4'-C1'-C2'	-5.23	100.57	105.80
1	N	1365	G	O4'-C1'-N9	5.23	116.35	108.50
1	N	1388	C	O4'-C1'-N1	5.23	116.35	108.50
1	N	806	C	O4'-C1'-N1	5.23	116.34	108.50
1	N	248	C	C3'-C2'-C1'	-5.23	96.07	101.30
1	N	595	A	C3'-C2'-O2'	-5.23	106.76	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	595	A	O5'-C5'-C4'	-5.22	103.86	111.70
1	N	428	G	C2'-C3'-O3'	5.22	117.33	109.50
1	N	494	G	C5'-C4'-C3'	-5.22	108.17	116.00
1	N	1357	A	P-O3'-C3'	5.22	128.03	120.20
1	N	1487	G	P-O5'-C5'	-5.22	113.07	120.90
1	N	412	A	C2'-C3'-O3'	5.22	117.33	109.50
1	N	541	G	O4'-C1'-N9	5.22	116.33	108.50
1	N	366	A	C4'-C3'-O3'	5.22	117.22	109.40
1	N	546	A	P-O3'-C3'	-5.22	112.38	120.20
1	N	139	A	O4'-C1'-N9	5.21	116.32	108.50
1	N	197	A	C5'-C4'-C3'	5.21	123.02	115.20
1	N	516	U	O4'-C1'-N1	5.21	116.32	108.50
1	N	552	U	O4'-C1'-C2'	-5.21	102.39	107.60
1	N	832	G	P-O3'-C3'	-5.21	112.38	120.20
1	N	94	G	P-O5'-C5'	-5.21	113.08	120.90
1	N	1525	G	O4'-C1'-N9	5.21	116.32	108.50
1	N	1516	G	P-O3'-C3'	-5.21	112.38	120.20
1	N	969	A	C2'-C3'-O3'	5.21	117.31	109.50
1	N	338	A	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	835	U	O4'-C1'-N1	5.21	116.31	108.50
1	N	1075	U	O3'-P-O5'	-5.21	96.19	104.00
1	N	1246	A	P-O5'-C5'	-5.21	113.09	120.90
1	N	393	A	C3'-C2'-C1'	-5.21	96.09	101.30
1	N	658	C	O4'-C4'-C3'	-5.21	98.79	104.00
1	N	868	C	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	1139	G	P-O3'-C3'	5.21	128.01	120.20
1	N	447	G	O4'-C4'-C3'	-5.21	98.80	104.00
1	N	457	G	C1'-O4'-C4'	-5.21	104.69	109.90
1	N	984	C	P-O3'-C3'	-5.21	112.39	120.20
1	N	1223	C	O4'-C1'-N1	5.21	116.31	108.50
1	N	47	C	O4'-C1'-N1	5.20	116.00	108.20
1	N	80	A	C2'-C3'-O3'	5.20	121.51	113.70
1	N	637	C	O5'-C5'-C4'	-5.20	103.69	111.50
1	N	843	U	O4'-C4'-C3'	-5.20	98.80	104.00
1	N	974	A	C4'-C3'-C2'	5.20	107.80	102.60
1	N	660	C	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	352	C	C3'-C2'-C1'	5.20	106.50	101.30
1	N	7	A	O5'-C5'-C4'	5.20	119.50	111.70
1	N	644	U	O4'-C1'-N1	5.20	116.30	108.50
1	N	340	U	O4'-C1'-C2'	-5.20	102.40	107.60
1	N	676	A	N9-C1'-C2'	5.20	119.79	112.00
1	N	886	G	C5'-C4'-O4'	5.20	117.59	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1069	C	O4'-C1'-N1	5.19	116.29	108.50
1	N	684	U	O4'-C1'-N1	5.19	116.29	108.50
1	N	889	A	P-O3'-C3'	-5.19	112.41	120.20
1	N	1163	A	P-O5'-C5'	5.19	128.69	120.90
1	N	1479	C	O3'-P-O5'	5.19	111.79	104.00
1	N	928	G	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1049	U	P-O5'-C5'	5.19	128.69	120.90
1	N	1348	U	C2'-C3'-O3'	-5.19	105.91	113.70
1	N	628	G	O5'-C5'-C4'	5.19	119.28	111.50
1	N	1117	A	P-O3'-C3'	5.19	127.98	120.20
1	N	1406	U	O3'-P-O5'	5.19	111.78	104.00
1	N	593	U	C4'-C3'-C2'	-5.18	97.42	102.60
1	N	169	C	O4'-C1'-N1	5.18	116.28	108.50
1	N	508	U	C2'-C3'-O3'	5.18	117.28	109.50
1	N	930	C	P-O3'-C3'	-5.18	112.43	120.20
1	N	993	G	O4'-C1'-C2'	-5.18	100.62	105.80
1	N	427	U	O4'-C4'-C3'	-5.18	98.82	104.00
1	N	694	A	O3'-P-O5'	-5.18	96.23	104.00
1	N	1496	C	O4'-C1'-N1	5.18	116.27	108.50
1	N	1509	C	P-O3'-C3'	-5.18	112.43	120.20
1	N	1180	A	P-O5'-C5'	-5.18	113.13	120.90
1	N	507	C	C4'-C3'-O3'	-5.18	105.23	113.00
1	N	9	G	C4'-C3'-O3'	-5.17	105.24	113.00
1	N	253	A	O5'-C5'-C4'	-5.17	103.74	111.50
1	N	1157	A	P-O5'-C5'	5.17	128.66	120.90
1	N	1294	G	O4'-C4'-C3'	-5.17	98.83	104.00
1	N	206	C	C5'-C4'-O4'	5.17	117.56	109.80
1	N	860	A	O5'-C5'-C4'	-5.17	103.74	111.50
1	N	995	C	C5'-C4'-C3'	5.17	123.76	116.00
1	N	1244	G	C5'-C4'-C3'	5.17	123.76	116.00
1	N	1288	A	C5'-C4'-O4'	-5.17	102.05	109.80
1	N	641	U	P-O5'-C5'	5.17	128.65	120.90
1	N	291	U	O4'-C4'-C3'	-5.17	98.83	104.00
1	N	809	G	C5'-C4'-C3'	-5.17	108.25	116.00
1	N	695	A	P-O3'-C3'	5.16	127.94	120.20
1	N	765	G	C5'-C4'-C3'	-5.16	108.25	116.00
1	N	1287	A	C3'-C2'-C1'	5.16	106.46	101.30
1	N	144	G	C4'-C3'-O3'	-5.16	105.26	113.00
1	N	829	G	P-O5'-C5'	5.16	128.64	120.90
1	N	1013	G	P-O3'-C3'	5.16	127.94	120.20
1	N	1529	G	C2'-C3'-O3'	5.16	117.24	109.50
1	N	721	G	C2'-C3'-O3'	5.16	117.24	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	255	G	C5'-C4'-C3'	5.16	123.74	116.00
1	N	1256	A	O4'-C4'-C3'	-5.16	100.94	106.10
1	N	773	G	O4'-C1'-C2'	-5.16	102.44	107.60
1	N	1141	C	O4'-C4'-C3'	5.16	109.16	104.00
1	N	1488	G	C5'-C4'-C3'	-5.16	108.26	116.00
1	N	1405	G	P-O3'-C3'	-5.16	112.47	120.20
1	N	1156	G	C2'-C3'-O3'	5.15	121.43	113.70
1	N	1054	C	O5'-C5'-C4'	-5.15	103.97	111.70
1	N	1411	C	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	915	A	N9-C1'-C2'	-5.15	104.28	112.00
1	N	1438	G	O3'-P-O5'	5.15	111.72	104.00
1	N	1046	A	C5'-C4'-C3'	5.15	123.72	116.00
1	N	362	G	P-O3'-C3'	5.15	127.92	120.20
1	N	380	G	C8-N9-C1'	5.15	142.44	127.00
1	N	507	C	C5'-C4'-C3'	5.15	123.72	116.00
1	N	7	A	C3'-C2'-C1'	-5.15	96.35	101.50
1	N	371	A	C3'-C2'-C1'	-5.15	96.15	101.30
1	N	704	A	O4'-C1'-N9	5.14	116.22	108.50
1	N	1129	C	C3'-C2'-C1'	5.14	106.44	101.30
1	N	1014	A	O3'-P-O5'	5.14	111.71	104.00
1	N	1113	C	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	446	G	C3'-C2'-C1'	5.14	106.44	101.30
1	N	579	A	O3'-P-O5'	-5.14	96.29	104.00
1	N	754	C	O3'-P-O5'	5.14	111.71	104.00
1	N	866	C	C3'-C2'-C1'	5.14	106.44	101.30
1	N	1015	G	O3'-P-O5'	5.14	111.71	104.00
1	N	142	G	O4'-C1'-N9	5.14	116.20	108.50
1	N	633	G	N1-C6-O6	5.14	135.31	119.90
1	N	688	G	O4'-C1'-N9	5.14	116.21	108.50
1	N	480	U	O4'-C1'-N1	5.13	116.20	108.50
1	N	1042	A	C4'-C3'-O3'	-5.13	105.30	113.00
1	N	641	U	C4'-C3'-O3'	-5.13	105.30	113.00
1	N	704	A	C4'-C3'-O3'	-5.13	105.30	113.00
1	N	905	U	O4'-C1'-N1	5.13	116.20	108.50
1	N	996	A	C4'-C3'-C2'	-5.13	97.47	102.60
1	N	1396	A	O4'-C4'-C3'	5.13	109.13	104.00
1	N	1152	A	O4'-C1'-N9	5.13	116.19	108.50
1	N	218	U	O4'-C1'-N1	5.13	116.19	108.50
1	N	1422	G	C3'-C2'-O2'	5.13	118.39	110.70
1	N	1043	G	C3'-C2'-C1'	5.13	106.43	101.30
1	N	1330	U	C5'-C4'-C3'	5.13	123.69	116.00
1	N	28	A	O3'-P-O5'	-5.12	96.31	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	81	A	O5'-C5'-C4'	-5.12	104.01	111.70
1	N	316	C	P-O5'-C5'	5.12	128.59	120.90
1	N	424	G	P-O5'-C5'	5.12	128.59	120.90
1	N	543	U	C1'-O4'-C4'	5.12	115.03	109.90
1	N	937	A	O5'-C5'-C4'	-5.12	103.81	111.50
1	N	1282	C	O4'-C1'-C2'	-5.12	102.47	107.60
1	N	1530	G	C4'-C3'-O3'	5.12	117.09	109.40
1	N	45	G	P-O5'-C5'	5.12	128.59	120.90
1	N	81	A	N9-C1'-C2'	5.12	121.69	114.00
1	N	467	U	C5'-C4'-C3'	5.12	123.69	116.00
1	N	687	A	O4'-C4'-C3'	-5.12	100.98	106.10
1	N	1066	C	C3'-C2'-C1'	5.12	106.42	101.30
1	N	93	U	C3'-C2'-C1'	-5.12	96.18	101.30
1	N	417	G	P-O5'-C5'	5.12	128.58	120.90
1	N	440	C	O5'-C5'-C4'	-5.12	103.82	111.50
1	N	485	U	C4'-C3'-O3'	5.12	117.08	109.40
1	N	1377	A	N9-C1'-C2'	-5.12	104.32	112.00
1	N	147	G	O5'-C5'-C4'	-5.12	103.83	111.50
1	N	3	A	C5'-C4'-C3'	5.11	123.67	116.00
1	N	135	C	P-O3'-C3'	-5.11	112.53	120.20
1	N	569	C	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	830	G	P-O5'-C5'	5.11	128.57	120.90
1	N	72	A	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	628	G	C4'-C3'-O3'	-5.11	105.33	113.00
1	N	1131	G	C5'-C4'-C3'	-5.11	108.33	116.00
1	N	1459	G	P-O5'-C5'	5.11	128.56	120.90
1	N	75	G	O4'-C1'-N9	5.11	116.16	108.50
1	N	737	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	1403	C	P-O5'-C5'	5.11	128.56	120.90
1	N	517	G	C5'-C4'-C3'	5.11	123.66	116.00
1	N	738	C	C4'-C3'-O3'	-5.11	105.34	113.00
1	N	926	G	C5'-C4'-C3'	5.11	123.66	116.00
1	N	1081	A	C5'-C4'-C3'	-5.11	108.34	116.00
1	N	1112	C	C5'-C4'-O4'	5.11	116.76	109.10
1	N	161	A	O4'-C4'-C3'	-5.10	98.90	104.00
1	N	225	C	C2'-C3'-O3'	5.10	121.36	113.70
1	N	383	A	P-O5'-C5'	5.10	128.55	120.90
1	N	656	G	C4'-C3'-O3'	-5.10	105.34	113.00
1	N	723	U	C5'-C4'-C3'	5.10	123.65	116.00
1	N	1290	G	C4'-C3'-O3'	-5.10	105.34	113.00
1	N	1262	C	C5'-C4'-C3'	5.10	123.65	116.00
1	N	1054	C	C1'-O4'-C4'	5.10	114.80	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1434	A	O4'-C1'-N9	5.10	116.15	108.50
1	N	67	C	C5'-C4'-C3'	5.10	123.65	116.00
1	N	197	A	C2'-C3'-O3'	5.10	117.15	109.50
1	N	243	A	O5'-C5'-C4'	5.10	119.14	111.50
1	N	726	C	C5'-C4'-C3'	-5.10	108.35	116.00
1	N	935	A	O4'-C1'-C2'	-5.10	102.50	107.60
1	N	1016	A	C1'-C2'-O2'	5.10	116.05	108.40
1	N	1444	U	C5'-C4'-C3'	-5.10	108.35	116.00
1	N	98	A	C5'-C4'-C3'	-5.10	108.36	116.00
1	N	1329	A	C2'-C3'-O3'	5.09	121.34	113.70
1	N	194	C	C5'-C4'-C3'	-5.09	108.36	116.00
1	N	166	U	C1'-O4'-C4'	5.09	114.99	109.90
1	N	485	U	P-O3'-C3'	5.09	127.84	120.20
1	N	623	C	O4'-C1'-N1	5.09	116.14	108.50
1	N	874	G	C3'-C2'-O2'	5.09	118.34	110.70
1	N	910	C	C2'-C3'-O3'	5.09	121.34	113.70
1	N	945	G	P-O3'-C3'	-5.09	112.56	120.20
1	N	978	A	P-O3'-C3'	5.09	127.84	120.20
1	N	1058	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	316	C	C5'-C4'-O4'	5.09	117.43	109.80
1	N	788	U	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	296	U	O4'-C1'-N1	5.09	116.13	108.50
1	N	502	A	O4'-C4'-C3'	5.09	109.09	104.00
1	N	605	U	P-O5'-C5'	5.09	128.53	120.90
1	N	1124	G	O4'-C1'-N9	5.09	116.13	108.50
1	N	1132	C	O4'-C1'-N1	5.09	116.13	108.50
1	N	1158	C	P-O5'-C5'	5.09	128.53	120.90
1	N	1306	A	O4'-C1'-C2'	-5.08	102.52	107.60
1	N	94	G	C5'-C4'-C3'	-5.08	107.58	115.20
1	N	145	G	O5'-C5'-C4'	-5.08	103.88	111.50
1	N	420	U	O4'-C1'-N1	5.08	116.12	108.50
1	N	266	G	C5'-C4'-O4'	5.08	116.72	109.10
1	N	196	A	C5'-C4'-C3'	5.08	123.61	116.00
1	N	848	C	O4'-C1'-N1	5.08	116.11	108.50
1	N	985	C	O4'-C1'-N1	5.08	116.11	108.50
1	N	1084	G	C4'-C3'-C2'	5.08	107.67	102.60
1	N	192	A	O4'-C1'-C2'	-5.07	102.53	107.60
1	N	24	U	O4'-C1'-N1	5.07	116.10	108.50
1	N	1523	G	P-O5'-C5'	-5.07	113.30	120.90
1	N	293	G	C1'-O4'-C4'	-5.07	104.83	109.90
1	N	1409	C	O4'-C1'-C2'	-5.07	102.53	107.60
1	N	429	U	P-O5'-C5'	-5.07	113.30	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	686	U	C3'-C2'-C1'	5.07	106.57	101.50
1	N	404	G	P-O3'-C3'	-5.06	112.61	120.20
1	N	990	C	P-O5'-C5'	-5.06	113.30	120.90
1	N	67	C	P-O5'-C5'	5.06	128.49	120.90
1	N	246	A	C1'-O4'-C4'	5.06	114.76	109.70
1	N	735	C	O4'-C1'-N1	5.06	116.09	108.50
1	N	876	C	C4'-C3'-O3'	-5.06	105.41	113.00
1	N	1216	A	O4'-C1'-C2'	-5.06	102.54	107.60
1	N	447	G	P-O5'-C5'	5.06	128.49	120.90
1	N	511	C	O4'-C1'-C2'	-5.06	100.74	105.80
1	N	568	G	C4'-C3'-C2'	-5.06	97.54	102.60
1	N	1396	A	C5'-C4'-O4'	-5.06	102.21	109.80
1	N	61	G	P-O5'-C5'	-5.06	113.32	120.90
1	N	143	A	O5'-C5'-C4'	5.06	119.08	111.50
1	N	737	C	O5'-C5'-C4'	-5.06	103.92	111.50
1	N	1468	A	O4'-C4'-C3'	5.06	109.06	104.00
1	N	198	G	O4'-C4'-C3'	5.05	109.06	104.00
1	N	315	A	C3'-C2'-C1'	5.05	106.55	101.50
1	N	332	G	O4'-C1'-N9	5.05	116.08	108.50
1	N	1530	G	O4'-C1'-N9	5.05	115.78	108.20
1	N	602	A	C5'-C4'-C3'	-5.05	108.42	116.00
1	N	740	U	P-O5'-C5'	-5.05	113.32	120.90
1	N	1252	A	C4'-C3'-C2'	-5.05	97.55	102.60
1	N	185	U	C2'-C3'-O3'	5.05	121.27	113.70
1	N	393	A	O3'-P-O5'	-5.05	96.43	104.00
1	N	401	C	O4'-C1'-N1	5.05	116.07	108.50
1	N	551	U	C2'-C3'-O3'	5.05	121.27	113.70
1	N	913	A	O4'-C4'-C3'	-5.05	101.05	106.10
1	N	348	G	O5'-C5'-C4'	-5.04	103.93	111.50
1	N	470	C	C5'-C4'-O4'	5.04	117.36	109.80
1	N	687	A	O3'-P-O5'	-5.04	96.44	104.00
1	N	1262	C	P-O3'-C3'	-5.04	112.64	120.20
1	N	1309	G	C5'-C4'-C3'	5.04	123.56	116.00
1	N	617	G	O5'-C5'-C4'	-5.04	103.94	111.50
1	N	11	G	O4'-C1'-N9	5.04	116.06	108.50
1	N	468	A	O4'-C1'-N9	5.04	116.06	108.50
1	N	597	G	P-O5'-C5'	5.04	128.46	120.90
1	N	921	U	O5'-C5'-C4'	-5.04	103.94	111.50
1	N	1234	C	O4'-C1'-N1	5.04	116.06	108.50
1	N	1384	C	C3'-C2'-C1'	-5.04	96.26	101.30
1	N	577	G	C5'-C4'-O4'	-5.04	102.24	109.80
1	N	1531	A	C4'-C3'-O3'	-5.04	105.44	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	981	U	O4'-C4'-C3'	-5.04	98.97	104.00
1	N	61	G	P-O3'-C3'	-5.03	112.65	120.20
1	N	549	C	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	861	G	O4'-C1'-N9	5.03	116.05	108.50
1	N	1126	U	P-O3'-C3'	-5.03	112.65	120.20
1	N	1433	A	N9-C1'-C2'	5.03	119.55	112.00
1	N	855	U	C5'-C4'-O4'	5.03	117.35	109.80
1	N	607	A	C5'-C4'-C3'	-5.03	108.45	116.00
1	N	1365	G	O3'-P-O5'	-5.03	96.46	104.00
1	N	1033	G	C1'-C2'-O2'	5.03	115.94	108.40
1	N	889	A	N9-C1'-C2'	-5.03	106.46	114.00
1	N	1439	G	O5'-C5'-C4'	-5.03	103.96	111.50
1	N	250	A	C2'-C3'-O3'	5.03	117.04	109.50
1	N	1481	U	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	444	G	C1'-O4'-C4'	-5.02	104.88	109.90
1	N	591	U	C5'-C4'-C3'	5.02	123.54	116.00
1	N	831	A	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	1021	A	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	1433	A	O4'-C4'-C3'	-5.02	98.98	104.00
1	N	1107	C	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	1191	A	P-O5'-C5'	5.02	128.43	120.90
1	N	314	C	P-O5'-C5'	5.02	128.43	120.90
1	N	506	G	C1'-O4'-C4'	-5.02	104.88	109.90
1	N	115	G	C1'-C2'-O2'	-5.02	104.27	111.80
1	N	163	C	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	361	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	414	A	C4'-C3'-O3'	-5.02	105.47	113.00
1	N	891	U	O4'-C1'-N1	5.02	116.03	108.50
1	N	952	U	C5'-C4'-C3'	-5.02	108.47	116.00
1	N	980	C	O4'-C4'-C3'	-5.02	98.98	104.00
1	N	1471	U	O5'-C5'-C4'	-5.02	103.97	111.50
1	N	614	C	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	1115	U	P-O3'-C3'	-5.02	112.67	120.20
1	N	1064	G	O4'-C1'-C2'	5.02	110.82	105.80
1	N	1295	U	C3'-C2'-C1'	5.02	106.32	101.30
1	N	130	A	C3'-C2'-C1'	-5.01	96.49	101.50
1	N	1315	U	O4'-C1'-N1	5.01	116.02	108.50
1	N	41	G	C4'-C3'-C2'	-5.01	97.59	102.60
1	N	11	G	C5'-C4'-C3'	-5.01	108.48	116.00
1	N	860	A	P-O5'-C5'	5.01	128.41	120.90
1	N	178	C	O5'-C5'-C4'	-5.01	103.99	111.50
1	N	356	A	O5'-C5'-C4'	-5.01	103.99	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	582	C	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	617	G	C5'-C4'-C3'	-5.01	108.49	116.00
1	N	920	U	C4'-C3'-C2'	-5.01	97.59	102.60
1	N	1495	U	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	123	U	C4'-C3'-O3'	-5.00	105.49	113.00
1	N	1237	C	O5'-C5'-C4'	-5.00	103.99	111.50
1	N	25	C	O4'-C1'-N1	5.00	116.00	108.50
1	N	875	U	C4'-C3'-C2'	-5.00	97.60	102.60
1	N	1059	C	C5'-C4'-C3'	5.00	123.50	116.00
1	N	1317	C	O3'-P-O5'	5.00	111.50	104.00

There are no chirality outliers.

All (984) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	N	10	A	Sidechain
1	N	100	G	Sidechain
1	N	1002	G	Sidechain
1	N	1004	A	Sidechain
1	N	1005	A	Sidechain
1	N	1006	G	Sidechain
1	N	1009	U	Sidechain
1	N	101	A	Sidechain
1	N	1013	G	Sidechain
1	N	1014	A	Sidechain
1	N	1015	G	Sidechain
1	N	1016	A	Sidechain
1	N	1018	G	Sidechain
1	N	102	G	Sidechain
1	N	1022	A	Sidechain
1	N	1023	U	Sidechain
1	N	1024	G	Sidechain
1	N	1025	U	Sidechain
1	N	1026	G	Sidechain
1	N	1029	U	Sidechain
1	N	103	U	Sidechain
1	N	1031	C	Sidechain
1	N	1033	G	Sidechain
1	N	1034	G	Sidechain
1	N	1035	A	Sidechain
1	N	1037	C	Sidechain
1	N	1039	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1040	U	Sidechain
1	N	1041	G	Sidechain
1	N	1043	G	Sidechain
1	N	1045	C	Sidechain
1	N	1047	G	Sidechain
1	N	1048	G	Sidechain
1	N	1049	U	Sidechain
1	N	105	G	Sidechain
1	N	1052	U	Sidechain
1	N	1055	A	Sidechain
1	N	1056	U	Sidechain
1	N	1058	G	Sidechain
1	N	1059	C	Sidechain
1	N	1060	U	Sidechain
1	N	1061	G	Sidechain
1	N	1064	G	Sidechain
1	N	1065	U	Sidechain
1	N	1068	G	Sidechain
1	N	107	G	Sidechain
1	N	1070	U	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	1078	U	Sidechain
1	N	1080	A	Sidechain
1	N	1083	U	Sidechain
1	N	1085	U	Sidechain
1	N	1087	G	Sidechain
1	N	1089	G	Sidechain
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	1099	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	11	G	Sidechain
1	N	110	C	Sidechain
1	N	1101	A	Sidechain
1	N	1102	A	Sidechain
1	N	1104	G	Sidechain
1	N	1105	A	Sidechain
1	N	1107	C	Sidechain
1	N	1108	G	Sidechain
1	N	1110	A	Sidechain
1	N	1111	A	Sidechain
1	N	1113	C	Sidechain
1	N	1114	C	Sidechain
1	N	1115	U	Sidechain
1	N	1116	U	Sidechain
1	N	1117	A	Sidechain
1	N	1119	C	Sidechain
1	N	112	G	Sidechain
1	N	1121	U	Sidechain
1	N	1122	U	Sidechain
1	N	1124	G	Sidechain
1	N	1126	U	Sidechain
1	N	1129	C	Sidechain
1	N	113	G	Sidechain
1	N	1131	G	Sidechain
1	N	1132	C	Sidechain
1	N	1134	G	Sidechain
1	N	1135	U	Sidechain
1	N	1136	C	Sidechain
1	N	1137	C	Sidechain
1	N	1139	G	Sidechain
1	N	1141	C	Sidechain
1	N	1142	G	Sidechain
1	N	1143	G	Sidechain
1	N	1144	G	Sidechain
1	N	1147	C	Sidechain
1	N	1148	U	Sidechain
1	N	1149	C	Sidechain
1	N	115	G	Sidechain
1	N	1150	A	Sidechain
1	N	1151	A	Sidechain
1	N	1156	G	Sidechain
1	N	1157	A	Sidechain

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Mol	Chain	Res	Type	Group
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	1167	A	Sidechain
1	N	1168	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	1175	G	Sidechain
1	N	1177	G	Sidechain
1	N	1178	G	Sidechain
1	N	118	U	Sidechain
1	N	1180	A	Sidechain
1	N	1181	G	Sidechain
1	N	1182	G	Sidechain
1	N	1183	U	Sidechain
1	N	1184	G	Sidechain
1	N	1185	G	Sidechain
1	N	1186	G	Sidechain
1	N	1187	G	Sidechain
1	N	1189	U	Sidechain
1	N	119	A	Sidechain
1	N	1190	G	Sidechain
1	N	1192	C	Sidechain
1	N	1193	G	Sidechain
1	N	1194	U	Sidechain
1	N	1195	C	Sidechain
1	N	1196	A	Sidechain
1	N	1197	A	Sidechain
1	N	12	U	Sidechain
1	N	120	A	Sidechain
1	N	1202	U	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	Sidechain
1	N	121	U	Sidechain
1	N	1210	C	Sidechain
1	N	1211	U	Sidechain
1	N	1213	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1215	G	Sidechain
1	N	1218	C	Sidechain
1	N	1219	A	Sidechain
1	N	122	G	Sidechain
1	N	1220	G	Sidechain
1	N	1221	G	Sidechain
1	N	1223	C	Sidechain
1	N	1225	A	Sidechain
1	N	1226	C	Sidechain
1	N	1227	A	Sidechain
1	N	1228	C	Sidechain
1	N	123	U	Sidechain
1	N	1232	U	Sidechain
1	N	1233	G	Sidechain
1	N	1238	A	Sidechain
1	N	1239	A	Sidechain
1	N	1240	U	Sidechain
1	N	1241	G	Sidechain
1	N	1245	C	Sidechain
1	N	1249	C	Sidechain
1	N	125	U	Sidechain
1	N	1250	A	Sidechain
1	N	1252	A	Sidechain
1	N	1254	A	Sidechain
1	N	1255	G	Sidechain
1	N	1256	A	Sidechain
1	N	1257	A	Sidechain
1	N	1259	C	Sidechain
1	N	126	G	Sidechain
1	N	1260	G	Sidechain
1	N	1262	C	Sidechain
1	N	1265	C	Sidechain
1	N	1267	C	Sidechain
1	N	1268	G	Sidechain
1	N	1269	A	Sidechain
1	N	1270	G	Sidechain
1	N	1273	C	Sidechain
1	N	1275	A	Sidechain
1	N	1276	G	Sidechain
1	N	1277	C	Sidechain
1	N	1278	G	Sidechain
1	N	1279	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	128	G	Sidechain
1	N	1281	C	Sidechain
1	N	1282	C	Sidechain
1	N	1283	U	Sidechain
1	N	1287	A	Sidechain
1	N	1288	A	Sidechain
1	N	1291	U	Sidechain
1	N	1292	G	Sidechain
1	N	1293	C	Sidechain
1	N	1294	G	Sidechain
1	N	1298	U	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	1304	G	Sidechain
1	N	1305	G	Sidechain
1	N	1306	A	Sidechain
1	N	1308	U	Sidechain
1	N	1309	G	Sidechain
1	N	131	A	Sidechain
1	N	1310	G	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	1321	U	Sidechain
1	N	1323	G	Sidechain
1	N	1327	C	Sidechain
1	N	1328	C	Sidechain
1	N	133	U	Sidechain
1	N	1330	U	Sidechain
1	N	1332	A	Sidechain
1	N	1333	A	Sidechain
1	N	1334	G	Sidechain
1	N	1335	U	Sidechain
1	N	1337	G	Sidechain
1	N	134	G	Sidechain
1	N	1340	A	Sidechain
1	N	1341	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1343	G	Sidechain
1	N	1345	U	Sidechain
1	N	1346	A	Sidechain
1	N	1347	G	Sidechain
1	N	1348	U	Sidechain
1	N	1349	A	Sidechain
1	N	135	C	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	1356	G	Sidechain
1	N	1357	A	Sidechain
1	N	1359	C	Sidechain
1	N	1360	A	Sidechain
1	N	1361	G	Sidechain
1	N	1362	A	Sidechain
1	N	1364	U	Sidechain
1	N	1365	G	Sidechain
1	N	1366	C	Sidechain
1	N	1367	C	Sidechain
1	N	1368	A	Sidechain
1	N	1369	C	Sidechain
1	N	137	U	Sidechain
1	N	1370	G	Sidechain
1	N	1371	G	Sidechain
1	N	1372	U	Sidechain
1	N	1373	G	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1377	A	Sidechain
1	N	1378	C	Sidechain
1	N	1380	U	Sidechain
1	N	1383	C	Sidechain
1	N	1385	G	Sidechain
1	N	1386	G	Sidechain
1	N	1387	G	Sidechain
1	N	1388	C	Sidechain
1	N	139	A	Sidechain
1	N	1392	G	Sidechain
1	N	1393	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1394	A	Sidechain
1	N	1395	C	Sidechain
1	N	1396	A	Sidechain
1	N	1397	C	Sidechain
1	N	1399	C	Sidechain
1	N	14	U	Sidechain
1	N	140	U	Sidechain
1	N	1402	C	Sidechain
1	N	1405	G	Sidechain
1	N	1406	U	Sidechain
1	N	1407	C	Sidechain
1	N	1409	C	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain
1	N	1412	C	Sidechain
1	N	1416	G	Sidechain
1	N	1417	G	Sidechain
1	N	1419	G	Sidechain
1	N	142	G	Sidechain
1	N	1420	U	Sidechain
1	N	1421	G	Sidechain
1	N	1422	G	Sidechain
1	N	1423	G	Sidechain
1	N	1424	U	Sidechain
1	N	1425	U	Sidechain
1	N	1429	A	Sidechain
1	N	1431	A	Sidechain
1	N	1432	G	Sidechain
1	N	1433	A	Sidechain
1	N	1434	A	Sidechain
1	N	1435	G	Sidechain
1	N	1437	A	Sidechain
1	N	144	G	Sidechain
1	N	1440	U	Sidechain
1	N	1441	A	Sidechain
1	N	1442	G	Sidechain
1	N	1443	C	Sidechain
1	N	1446	A	Sidechain
1	N	1449	C	Sidechain
1	N	1453	G	Sidechain
1	N	1456	A	Sidechain
1	N	1457	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	146	G	Sidechain
1	N	1460	C	Sidechain
1	N	1461	G	Sidechain
1	N	1463	U	Sidechain
1	N	1464	U	Sidechain
1	N	1465	A	Sidechain
1	N	1466	C	Sidechain
1	N	1467	C	Sidechain
1	N	1468	A	Sidechain
1	N	1469	C	Sidechain
1	N	147	G	Sidechain
1	N	1470	U	Sidechain
1	N	1472	U	Sidechain
1	N	1473	G	Sidechain
1	N	1474	U	Sidechain
1	N	1475	G	Sidechain
1	N	1476	A	Sidechain
1	N	1477	U	Sidechain
1	N	1479	C	Sidechain
1	N	148	G	Sidechain
1	N	1481	U	Sidechain
1	N	1482	G	Sidechain
1	N	1483	A	Sidechain
1	N	1485	U	Sidechain
1	N	1486	G	Sidechain
1	N	1487	G	Sidechain
1	N	1488	G	Sidechain
1	N	1489	G	Sidechain
1	N	1490	U	Sidechain
1	N	1491	G	Sidechain
1	N	1494	G	Sidechain
1	N	1495	U	Sidechain
1	N	1496	C	Sidechain
1	N	1497	G	Sidechain
1	N	1498	U	Sidechain
1	N	1499	A	Sidechain
1	N	15	G	Sidechain
1	N	150	U	Sidechain
1	N	1500	A	Sidechain
1	N	1502	A	Sidechain
1	N	1504	G	Sidechain
1	N	1505	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1506	U	Sidechain
1	N	1507	A	Sidechain
1	N	151	A	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	1519	A	Sidechain
1	N	152	A	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1525	G	Sidechain
1	N	1526	G	Sidechain
1	N	1529	G	Sidechain
1	N	1533	C	Sidechain
1	N	1534	A	Sidechain
1	N	154	U	Sidechain
1	N	157	U	Sidechain
1	N	159	G	Sidechain
1	N	16	A	Sidechain
1	N	160	A	Sidechain
1	N	161	A	Sidechain
1	N	167	A	Sidechain
1	N	169	C	Sidechain
1	N	170	U	Sidechain
1	N	171	A	Sidechain
1	N	174	A	Sidechain
1	N	178	C	Sidechain
1	N	179	A	Sidechain
1	N	180	U	Sidechain
1	N	181	A	Sidechain
1	N	182	A	Sidechain
1	N	183	C	Sidechain
1	N	184	G	Sidechain
1	N	185	U	Sidechain
1	N	188	C	Sidechain
1	N	19	A	Sidechain
1	N	190	A	Sidechain
1	N	192	A	Sidechain
1	N	193	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	194	C	Sidechain
1	N	195	A	Sidechain
1	N	196	A	Sidechain
1	N	197	A	Sidechain
1	N	198	G	Sidechain
1	N	199	A	Sidechain
1	N	2	A	Sidechain
1	N	201	G	Sidechain
1	N	202	G	Sidechain
1	N	203	G	Sidechain
1	N	204	G	Sidechain
1	N	206	C	Sidechain
1	N	208	U	Sidechain
1	N	209	U	Sidechain
1	N	21	G	Sidechain
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	216	U	Sidechain
1	N	217	C	Sidechain
1	N	218	U	Sidechain
1	N	220	G	Sidechain
1	N	221	C	Sidechain
1	N	224	U	Sidechain
1	N	225	C	Sidechain
1	N	226	G	Sidechain
1	N	227	G	Sidechain
1	N	228	A	Sidechain
1	N	23	C	Sidechain
1	N	231	U	Sidechain
1	N	232	G	Sidechain
1	N	233	C	Sidechain
1	N	234	C	Sidechain
1	N	236	A	Sidechain
1	N	237	G	Sidechain
1	N	238	A	Sidechain
1	N	239	U	Sidechain
1	N	241	G	Sidechain
1	N	243	A	Sidechain
1	N	244	U	Sidechain
1	N	245	U	Sidechain
1	N	246	A	Sidechain
1	N	247	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	249	U	Sidechain
1	N	25	C	Sidechain
1	N	251	G	Sidechain
1	N	252	U	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	256	U	Sidechain
1	N	261	U	Sidechain
1	N	262	A	Sidechain
1	N	265	G	Sidechain
1	N	266	G	Sidechain
1	N	267	C	Sidechain
1	N	268	U	Sidechain
1	N	269	C	Sidechain
1	N	27	G	Sidechain
1	N	270	A	Sidechain
1	N	273	U	Sidechain
1	N	274	A	Sidechain
1	N	275	G	Sidechain
1	N	276	G	Sidechain
1	N	278	G	Sidechain
1	N	279	A	Sidechain
1	N	28	A	Sidechain
1	N	281	G	Sidechain
1	N	282	A	Sidechain
1	N	283	U	Sidechain
1	N	284	C	Sidechain
1	N	285	C	Sidechain
1	N	286	C	Sidechain
1	N	287	U	Sidechain
1	N	288	A	Sidechain
1	N	29	U	Sidechain
1	N	292	G	Sidechain
1	N	293	G	Sidechain
1	N	294	U	Sidechain
1	N	295	C	Sidechain
1	N	296	U	Sidechain
1	N	297	G	Sidechain
1	N	298	A	Sidechain
1	N	299	G	Sidechain
1	N	30	U	Sidechain
1	N	300	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	301	G	Sidechain
1	N	302	G	Sidechain
1	N	305	G	Sidechain
1	N	306	A	Sidechain
1	N	307	C	Sidechain
1	N	308	C	Sidechain
1	N	309	A	Sidechain
1	N	313	A	Sidechain
1	N	315	A	Sidechain
1	N	317	U	Sidechain
1	N	319	G	Sidechain
1	N	32	A	Sidechain
1	N	320	A	Sidechain
1	N	321	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	324	G	Sidechain
1	N	325	A	Sidechain
1	N	326	G	Sidechain
1	N	327	A	Sidechain
1	N	329	A	Sidechain
1	N	331	G	Sidechain
1	N	333	U	Sidechain
1	N	334	C	Sidechain
1	N	335	C	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	344	A	Sidechain
1	N	347	G	Sidechain
1	N	348	G	Sidechain
1	N	349	A	Sidechain
1	N	35	G	Sidechain
1	N	352	C	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	355	C	Sidechain
1	N	358	U	Sidechain
1	N	359	G	Sidechain
1	N	360	G	Sidechain
1	N	362	G	Sidechain
1	N	363	A	Sidechain
1	N	365	U	Sidechain
1	N	367	U	Sidechain
1	N	369	G	Sidechain
1	N	370	C	Sidechain
1	N	371	A	Sidechain
1	N	372	C	Sidechain
1	N	373	A	Sidechain
1	N	374	A	Sidechain
1	N	376	G	Sidechain
1	N	377	G	Sidechain
1	N	378	G	Sidechain
1	N	38	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain
1	N	387	U	Sidechain
1	N	39	G	Sidechain
1	N	391	G	Sidechain
1	N	392	C	Sidechain
1	N	393	A	Sidechain
1	N	394	G	Sidechain
1	N	395	C	Sidechain
1	N	396	C	Sidechain
1	N	397	A	Sidechain
1	N	398	U	Sidechain
1	N	4	U	Sidechain
1	N	40	C	Sidechain
1	N	403	C	Sidechain
1	N	404	G	Sidechain
1	N	405	U	Sidechain
1	N	406	G	Sidechain
1	N	407	U	Sidechain
1	N	408	A	Sidechain
1	N	411	A	Sidechain
1	N	412	A	Sidechain
1	N	413	G	Sidechain
1	N	414	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	416	G	Sidechain
1	N	417	G	Sidechain
1	N	419	C	Sidechain
1	N	42	G	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	428	G	Sidechain
1	N	429	U	Sidechain
1	N	430	A	Sidechain
1	N	432	A	Sidechain
1	N	433	G	Sidechain
1	N	436	C	Sidechain
1	N	437	U	Sidechain
1	N	439	U	Sidechain
1	N	44	A	Sidechain
1	N	446	G	Sidechain
1	N	447	G	Sidechain
1	N	449	G	Sidechain
1	N	45	G	Sidechain
1	N	450	G	Sidechain
1	N	451	A	Sidechain
1	N	452	A	Sidechain
1	N	453	G	Sidechain
1	N	454	G	Sidechain
1	N	455	G	Sidechain
1	N	457	G	Sidechain
1	N	46	G	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	464	U	Sidechain
1	N	465	A	Sidechain
1	N	466	A	Sidechain
1	N	467	U	Sidechain
1	N	468	A	Sidechain
1	N	47	C	Sidechain
1	N	470	C	Sidechain
1	N	473	U	Sidechain
1	N	475	C	Sidechain
1	N	477	C	Sidechain

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Mol	Chain	Res	Type	Group
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	489	C	Sidechain
1	N	490	C	Sidechain
1	N	491	G	Sidechain
1	N	492	C	Sidechain
1	N	494	G	Sidechain
1	N	495	A	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	503	C	Sidechain
1	N	504	C	Sidechain
1	N	508	U	Sidechain
1	N	509	A	Sidechain
1	N	510	A	Sidechain
1	N	511	C	Sidechain
1	N	512	U	Sidechain
1	N	513	C	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	522	C	Sidechain
1	N	523	A	Sidechain
1	N	525	C	Sidechain
1	N	526	C	Sidechain
1	N	527	G	Sidechain
1	N	529	G	Sidechain
1	N	530	G	Sidechain
1	N	531	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	535	A	Sidechain
1	N	536	C	Sidechain
1	N	538	G	Sidechain
1	N	54	C	Sidechain
1	N	542	G	Sidechain
1	N	543	U	Sidechain
1	N	545	C	Sidechain
1	N	547	A	Sidechain
1	N	548	G	Sidechain
1	N	55	A	Sidechain
1	N	551	U	Sidechain
1	N	552	U	Sidechain
1	N	553	A	Sidechain
1	N	556	C	Sidechain
1	N	557	G	Sidechain
1	N	558	G	Sidechain
1	N	56	U	Sidechain
1	N	563	A	Sidechain
1	N	564	C	Sidechain
1	N	566	G	Sidechain
1	N	570	G	Sidechain
1	N	573	A	Sidechain
1	N	575	G	Sidechain
1	N	579	A	Sidechain
1	N	581	G	Sidechain
1	N	582	C	Sidechain
1	N	584	G	Sidechain
1	N	585	G	Sidechain
1	N	586	C	Sidechain
1	N	587	G	Sidechain
1	N	588	G	Sidechain
1	N	59	A	Sidechain
1	N	590	U	Sidechain
1	N	591	U	Sidechain
1	N	593	U	Sidechain
1	N	594	U	Sidechain
1	N	595	A	Sidechain
1	N	596	A	Sidechain
1	N	597	G	Sidechain
1	N	599	C	Sidechain
1	N	60	A	Sidechain
1	N	600	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	601	G	Sidechain
1	N	602	A	Sidechain
1	N	603	U	Sidechain
1	N	606	G	Sidechain
1	N	608	A	Sidechain
1	N	609	A	Sidechain
1	N	61	G	Sidechain
1	N	610	U	Sidechain
1	N	611	C	Sidechain
1	N	612	C	Sidechain
1	N	613	C	Sidechain
1	N	614	C	Sidechain
1	N	616	G	Sidechain
1	N	618	C	Sidechain
1	N	620	C	Sidechain
1	N	621	A	Sidechain
1	N	625	U	Sidechain
1	N	626	G	Sidechain
1	N	628	G	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	631	C	Sidechain
1	N	632	U	Sidechain
1	N	633	G	Sidechain
1	N	634	C	Sidechain
1	N	636	U	Sidechain
1	N	638	U	Sidechain
1	N	639	G	Sidechain
1	N	64	G	Sidechain
1	N	641	U	Sidechain
1	N	643	C	Sidechain
1	N	646	G	Sidechain
1	N	647	C	Sidechain
1	N	648	A	Sidechain
1	N	649	A	Sidechain
1	N	650	G	Sidechain
1	N	651	C	Sidechain
1	N	652	U	Sidechain
1	N	653	U	Sidechain
1	N	654	G	Sidechain
1	N	655	A	Sidechain
1	N	656	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	657	U	Sidechain
1	N	66	A	Sidechain
1	N	660	C	Sidechain
1	N	661	G	Sidechain
1	N	667	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	672	U	Sidechain
1	N	673	A	Sidechain
1	N	676	A	Sidechain
1	N	678	U	Sidechain
1	N	679	C	Sidechain
1	N	68	G	Sidechain
1	N	680	C	Sidechain
1	N	681	A	Sidechain
1	N	682	G	Sidechain
1	N	683	G	Sidechain
1	N	684	U	Sidechain
1	N	685	G	Sidechain
1	N	686	U	Sidechain
1	N	687	A	Sidechain
1	N	69	G	Sidechain
1	N	690	G	Sidechain
1	N	691	G	Sidechain
1	N	692	U	Sidechain
1	N	693	G	Sidechain
1	N	695	A	Sidechain
1	N	698	G	Sidechain
1	N	699	C	Sidechain
1	N	7	A	Sidechain
1	N	700	G	Sidechain
1	N	701	U	Sidechain
1	N	703	G	Sidechain
1	N	704	A	Sidechain
1	N	707	U	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	715	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	720	C	Sidechain
1	N	722	G	Sidechain
1	N	723	U	Sidechain
1	N	727	G	Sidechain
1	N	728	A	Sidechain
1	N	73	C	Sidechain
1	N	730	G	Sidechain
1	N	732	C	Sidechain
1	N	734	G	Sidechain
1	N	735	C	Sidechain
1	N	736	C	Sidechain
1	N	738	C	Sidechain
1	N	739	C	Sidechain
1	N	74	A	Sidechain
1	N	740	U	Sidechain
1	N	742	G	Sidechain
1	N	744	C	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	751	U	Sidechain
1	N	752	G	Sidechain
1	N	755	G	Sidechain
1	N	757	U	Sidechain
1	N	76	G	Sidechain
1	N	760	G	Sidechain
1	N	761	G	Sidechain
1	N	762	U	Sidechain
1	N	763	G	Sidechain
1	N	765	G	Sidechain
1	N	766	A	Sidechain
1	N	769	G	Sidechain
1	N	77	A	Sidechain
1	N	770	C	Sidechain
1	N	771	G	Sidechain
1	N	772	U	Sidechain
1	N	773	G	Sidechain
1	N	774	G	Sidechain
1	N	775	G	Sidechain
1	N	776	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	777	A	Sidechain
1	N	778	G	Sidechain
1	N	78	A	Sidechain
1	N	780	A	Sidechain
1	N	781	A	Sidechain
1	N	782	A	Sidechain
1	N	784	A	Sidechain
1	N	785	G	Sidechain
1	N	788	U	Sidechain
1	N	79	G	Sidechain
1	N	791	G	Sidechain
1	N	793	U	Sidechain
1	N	795	C	Sidechain
1	N	796	C	Sidechain
1	N	798	U	Sidechain
1	N	8	A	Sidechain
1	N	80	A	Sidechain
1	N	803	G	Sidechain
1	N	804	U	Sidechain
1	N	805	C	Sidechain
1	N	806	C	Sidechain
1	N	807	A	Sidechain
1	N	808	C	Sidechain
1	N	81	A	Sidechain
1	N	810	C	Sidechain
1	N	811	C	Sidechain
1	N	812	G	Sidechain
1	N	814	A	Sidechain
1	N	815	A	Sidechain
1	N	816	A	Sidechain
1	N	818	G	Sidechain
1	N	82	G	Sidechain
1	N	820	U	Sidechain
1	N	822	U	Sidechain
1	N	828	U	Sidechain
1	N	829	G	Sidechain
1	N	83	C	Sidechain
1	N	830	G	Sidechain
1	N	831	A	Sidechain
1	N	832	G	Sidechain
1	N	833	G	Sidechain
1	N	834	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	835	U	Sidechain
1	N	842	U	Sidechain
1	N	844	G	Sidechain
1	N	846	G	Sidechain
1	N	847	G	Sidechain
1	N	85	U	Sidechain
1	N	850	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	860	A	Sidechain
1	N	861	G	Sidechain
1	N	862	C	Sidechain
1	N	864	A	Sidechain
1	N	865	A	Sidechain
1	N	866	C	Sidechain
1	N	867	G	Sidechain
1	N	869	G	Sidechain
1	N	870	U	Sidechain
1	N	871	U	Sidechain
1	N	872	A	Sidechain
1	N	873	A	Sidechain
1	N	874	G	Sidechain
1	N	877	G	Sidechain
1	N	88	U	Sidechain
1	N	881	G	Sidechain
1	N	884	U	Sidechain
1	N	885	G	Sidechain
1	N	888	G	Sidechain
1	N	892	A	Sidechain
1	N	894	G	Sidechain
1	N	895	G	Sidechain
1	N	896	C	Sidechain
1	N	898	G	Sidechain
1	N	899	C	Sidechain
1	N	9	G	Sidechain
1	N	90	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	901	A	Sidechain
1	N	902	G	Sidechain
1	N	903	G	Sidechain
1	N	904	U	Sidechain
1	N	905	U	Sidechain
1	N	906	A	Sidechain
1	N	907	A	Sidechain
1	N	908	A	Sidechain
1	N	91	U	Sidechain
1	N	911	U	Sidechain
1	N	912	C	Sidechain
1	N	914	A	Sidechain
1	N	915	A	Sidechain
1	N	916	U	Sidechain
1	N	917	G	Sidechain
1	N	919	A	Sidechain
1	N	92	U	Sidechain
1	N	920	U	Sidechain
1	N	921	U	Sidechain
1	N	923	A	Sidechain
1	N	925	G	Sidechain
1	N	927	G	Sidechain
1	N	928	G	Sidechain
1	N	929	G	Sidechain
1	N	930	C	Sidechain
1	N	931	C	Sidechain
1	N	932	C	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	945	G	Sidechain
1	N	946	A	Sidechain
1	N	950	U	Sidechain
1	N	951	G	Sidechain
1	N	952	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	954	G	Sidechain
1	N	955	U	Sidechain
1	N	957	U	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	963	G	Sidechain
1	N	965	U	Sidechain
1	N	966	G	Sidechain
1	N	967	C	Sidechain
1	N	968	A	Sidechain
1	N	969	A	Sidechain
1	N	97	G	Sidechain
1	N	972	C	Sidechain
1	N	973	G	Sidechain
1	N	975	A	Sidechain
1	N	976	G	Sidechain
1	N	978	A	Sidechain
1	N	980	C	Sidechain
1	N	981	U	Sidechain
1	N	982	U	Sidechain
1	N	983	A	Sidechain
1	N	984	C	Sidechain
1	N	985	C	Sidechain
1	N	987	G	Sidechain
1	N	99	C	Sidechain
1	N	991	U	Sidechain
1	N	993	G	Sidechain
1	N	995	C	Sidechain
1	N	997	U	Sidechain
1	N	998	C	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	N	32892	16554	16524	542	0
All	All	32892	16554	16524	542	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 11.

All (542) 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:67:C:H2'	1:N:68:G:C8	2.21	0.76
1:N:664:G:H22	1:N:741:G:H1	1.34	0.76
1:N:858:G:H1	1:N:869:G:H2'	1.50	0.75
1:N:507:C:H3'	1:N:508:U:H5''	1.70	0.74
1:N:840:C:H1'	1:N:843:U:H3	1.51	0.74
1:N:1063:C:H41	1:N:1193:G:H1	1.38	0.71
1:N:116:A:H61	1:N:313:A:H1'	1.56	0.70
1:N:1366:C:C4	1:N:1367:C:C4	2.81	0.69
1:N:1239:A:C2	1:N:1241:G:C6	2.82	0.67
1:N:301:G:C6	1:N:302:G:C5	2.85	0.65
1:N:688:G:C8	1:N:688:G:H5''	2.31	0.65
1:N:620:C:C5	1:N:621:A:C5	2.85	0.64
1:N:169:C:C4	1:N:170:U:C4	2.86	0.64
1:N:644:U:H2'	1:N:645:G:C8	2.34	0.63
1:N:596:A:H61	1:N:644:U:H3	1.47	0.63
1:N:172:A:C8	1:N:174:A:C8	2.86	0.63
1:N:859:G:C6	1:N:860:A:C6	2.87	0.63
1:N:80:A:C5	1:N:81:A:H1'	2.34	0.63
1:N:978:A:C4	1:N:1319:A:C2	2.87	0.62
1:N:61:G:H21	1:N:379:C:H4'	1.65	0.62
1:N:507:C:C3'	1:N:508:U:H5''	2.30	0.61
1:N:1255:G:H2'	1:N:1279:G:H1	1.65	0.61
1:N:803:G:C5	1:N:804:U:C5	2.88	0.61
1:N:668:G:C6	1:N:669:G:C6	2.89	0.61
1:N:50:A:H1'	1:N:52:C:C6	2.36	0.61
1:N:1394:A:H3'	1:N:1395:C:H5'	1.83	0.60
1:N:1240:U:C6	1:N:1241:G:H5'	2.37	0.60
1:N:1076:U:H3	1:N:1081:A:H61	1.49	0.60
1:N:981:U:C2	1:N:982:U:C5	2.90	0.59
1:N:500:G:C6	1:N:501:C:C4	2.90	0.59
1:N:171:A:C2	1:N:172:A:C2	2.90	0.59
1:N:595:A:C2	1:N:596:A:N6	2.70	0.59
1:N:381:C:C5	1:N:382:A:C5	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:207:C:H2'	1:N:208:U:C2	2.37	0.59
1:N:60:A:H62	1:N:378:G:H1'	1.67	0.59
1:N:858:G:H1	1:N:869:G:C2'	2.16	0.59
1:N:19:A:C2	1:N:917:G:C5	2.91	0.59
1:N:1053:G:H2'	1:N:1199:U:C5	2.38	0.59
1:N:1436:U:H2'	1:N:1437:A:C8	2.38	0.59
1:N:780:A:C2	1:N:801:U:C5	2.90	0.58
1:N:14:U:H3	1:N:16:A:H3'	1.68	0.58
1:N:663:A:C2	1:N:743:A:C2	2.91	0.58
1:N:707:U:H2'	1:N:708:C:C6	2.39	0.58
1:N:65:A:H4'	1:N:66:A:H5'	1.86	0.58
1:N:372:C:H4'	1:N:373:A:OP1	2.05	0.57
1:N:603:U:H2'	1:N:604:G:C8	2.40	0.57
1:N:604:G:C5	1:N:605:U:C4	2.92	0.57
1:N:64:G:C4	1:N:99:C:C4	2.93	0.57
1:N:346:G:N2	1:N:347:G:C6	2.73	0.56
1:N:1434:A:C5	1:N:1435:G:C5	2.94	0.56
1:N:438:U:C4	1:N:494:G:C8	2.93	0.56
1:N:584:G:C6	1:N:585:G:C6	2.93	0.56
1:N:688:G:H5''	1:N:688:G:H8	1.70	0.56
1:N:1006:G:C6	1:N:1007:U:C4	2.94	0.56
1:N:1184:G:C5	1:N:1185:G:C8	2.93	0.56
1:N:1240:U:C2	1:N:1240:U:OP1	2.58	0.56
1:N:1244:G:C6	1:N:1245:C:C4	2.94	0.56
1:N:21:G:H1'	1:N:914:A:H61	1.70	0.56
1:N:50:A:C2	1:N:52:C:N3	2.74	0.55
1:N:160:A:H4'	1:N:344:A:C6	2.42	0.55
1:N:141:G:C6	1:N:223:A:C6	2.94	0.55
1:N:354:G:C6	1:N:355:C:C4	2.95	0.55
1:N:1315:U:C4	1:N:1316:G:C6	2.95	0.54
1:N:1343:G:C5	1:N:1344:C:C4	2.95	0.54
1:N:449:G:C5	1:N:450:G:C5	2.95	0.54
1:N:804:U:C5	1:N:805:C:C4	2.95	0.54
1:N:1100:C:H4'	1:N:1102:A:H4'	1.88	0.54
1:N:112:G:C2	1:N:330:C:C5	2.96	0.54
1:N:301:G:C2	1:N:302:G:C4	2.95	0.54
1:N:669:G:C6	1:N:670:G:C6	2.96	0.54
1:N:275:G:C8	1:N:275:G:H5''	2.43	0.54
1:N:209:U:C5	1:N:211:G:C2	2.95	0.54
1:N:1024:G:C6	1:N:1025:U:C5	2.96	0.54
1:N:482:A:C6	1:N:483:C:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:589:U:H2'	1:N:590:U:H6	1.73	0.54
1:N:59:A:C2	1:N:331:G:C5	2.96	0.53
1:N:449:G:C6	1:N:450:G:C6	2.95	0.53
1:N:73:C:C6	1:N:73:C:H5''	2.44	0.53
1:N:131:A:H2	1:N:231:U:H3	1.56	0.53
1:N:243:A:H61	1:N:281:G:H1'	1.73	0.53
1:N:438:U:C5	1:N:494:G:C8	2.96	0.53
1:N:1219:A:C2	1:N:1220:G:C4	2.97	0.53
1:N:30:U:H3	1:N:553:A:H61	1.55	0.53
1:N:209:U:C4	1:N:211:G:N1	2.77	0.53
1:N:410:G:H2'	1:N:429:U:C4	2.44	0.53
1:N:635:A:C2	1:N:636:U:C2	2.95	0.53
1:N:936:C:C4	1:N:937:A:C5	2.97	0.53
1:N:1102:A:C2	1:N:1103:C:C2	2.96	0.53
1:N:1219:A:C6	1:N:1220:G:C6	2.96	0.53
1:N:120:A:C2	1:N:122:G:C6	2.97	0.53
1:N:197:A:C2	1:N:198:G:C4	2.97	0.53
1:N:594:U:C4	1:N:595:A:C6	2.96	0.53
1:N:203:G:H1'	1:N:465:A:H61	1.74	0.53
1:N:582:C:C2	1:N:760:G:N1	2.77	0.53
1:N:66:A:C6	1:N:67:C:C4	2.97	0.53
1:N:322:C:H3'	1:N:323:U:C6	2.44	0.53
1:N:78:A:C5	1:N:79:G:C6	2.96	0.52
1:N:942:G:H21	1:N:1231:G:H5''	1.72	0.52
1:N:1433:A:H1'	1:N:1468:A:C2	2.45	0.52
1:N:141:G:H21	1:N:182:A:H61	1.57	0.52
1:N:986:U:H2'	1:N:987:G:C8	2.44	0.52
1:N:70:U:C5	1:N:94:G:H2'	2.44	0.52
1:N:197:A:H2	1:N:198:G:C4	2.28	0.52
1:N:1149:C:H2'	1:N:1150:A:C8	2.45	0.52
1:N:1066:C:C6	1:N:1066:C:H5''	2.45	0.52
1:N:102:G:C6	1:N:103:U:C4	2.98	0.52
1:N:1006:G:C5	1:N:1007:U:C5	2.98	0.52
1:N:171:A:C5	1:N:172:A:C6	2.98	0.52
1:N:1006:G:C6	1:N:1007:U:C5	2.98	0.52
1:N:1282:C:H2'	1:N:1283:U:C6	2.44	0.52
1:N:1495:U:N3	1:N:1496:C:C4	2.78	0.52
1:N:784:A:C6	1:N:799:G:C6	2.98	0.51
1:N:32:A:H4'	1:N:48:C:H42	1.76	0.51
1:N:840:C:C1'	1:N:843:U:H3	2.21	0.51
1:N:585:G:C6	1:N:586:C:N3	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1301:U:H2'	1:N:1303:C:C5	2.45	0.51
1:N:681:A:C6	1:N:710:G:C6	2.99	0.51
1:N:272:C:C4	1:N:273:U:C4	2.98	0.51
1:N:749:A:C2	1:N:750:C:C2	2.99	0.51
1:N:946:A:H2'	1:N:947:G:C8	2.46	0.51
1:N:985:C:H2'	1:N:986:U:O4'	2.11	0.51
1:N:79:G:C6	1:N:80:A:C6	2.99	0.51
1:N:675:A:N1	1:N:716:A:C2	2.78	0.51
1:N:684:U:H3	1:N:706:A:H61	1.59	0.51
1:N:291:U:H3	1:N:309:A:H61	1.59	0.51
1:N:342:C:C5	1:N:343:U:C4	2.99	0.51
1:N:620:C:C5	1:N:621:A:C6	2.99	0.51
1:N:665:A:C8	1:N:733:G:C2	2.99	0.51
1:N:895:G:C6	1:N:896:C:N3	2.79	0.51
1:N:301:G:C4	1:N:302:G:C8	2.99	0.51
1:N:1072:G:C2	1:N:1073:U:C2	2.99	0.51
1:N:659:U:C4	1:N:660:C:C5	2.99	0.50
1:N:771:G:H2'	1:N:772:U:O4'	2.11	0.50
1:N:896:C:H2'	1:N:897:C:H6	1.76	0.50
1:N:1433:A:C6	1:N:1434:A:C6	2.99	0.50
1:N:115:G:C6	1:N:289:G:C6	3.00	0.50
1:N:384:G:C6	1:N:385:C:C4	2.99	0.50
1:N:978:A:C5	1:N:1319:A:C2	2.99	0.50
1:N:1266:G:N2	1:N:1269:A:C8	2.80	0.50
1:N:295:C:C4	1:N:296:U:C4	3.00	0.50
1:N:335:C:H2'	1:N:336:A:C8	2.47	0.50
1:N:260:G:H2'	1:N:261:U:C6	2.46	0.50
1:N:1468:A:H2'	1:N:1469:C:H5'	1.94	0.50
1:N:205:A:C5	1:N:206:C:C4	3.00	0.50
1:N:207:C:H2'	1:N:208:U:C5	2.46	0.50
1:N:772:U:H2'	1:N:773:G:C8	2.47	0.50
1:N:917:G:C6	1:N:918:A:C6	3.00	0.50
1:N:112:G:H22	1:N:315:A:H2	1.59	0.50
1:N:430:A:C2	1:N:431:A:H1'	2.47	0.50
1:N:701:U:H5''	1:N:703:G:H5'	1.94	0.50
1:N:69:G:H2'	1:N:70:U:C6	2.47	0.50
1:N:811:C:H2'	1:N:812:G:H5'	1.94	0.50
1:N:1009:U:C2	1:N:1021:A:C2	3.00	0.50
1:N:655:A:C2	1:N:656:G:C4	3.00	0.49
1:N:761:G:C6	1:N:762:U:C4	2.99	0.49
1:N:782:A:C8	1:N:783:C:C6	2.99	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1104:G:C6	1:N:1105:A:C6	3.00	0.49
1:N:52:C:C6	1:N:52:C:H3'	2.47	0.49
1:N:594:U:H3'	1:N:595:A:C8	2.48	0.49
1:N:738:C:C4	1:N:739:C:C4	3.00	0.49
1:N:934:C:H2'	1:N:1344:C:C5	2.47	0.49
1:N:1135:U:H3	1:N:1138:G:H22	1.61	0.49
1:N:782:A:C6	1:N:783:C:C2	3.01	0.49
1:N:1095:U:C4	1:N:1096:C:C4	3.01	0.49
1:N:247:G:C6	1:N:278:G:C5	3.01	0.49
1:N:596:A:N6	1:N:644:U:H3	2.09	0.49
1:N:803:G:C6	1:N:804:U:C4	3.01	0.49
1:N:829:G:C6	1:N:830:G:C5	3.01	0.49
1:N:954:G:C6	1:N:955:U:C4	3.01	0.49
1:N:986:U:H3	1:N:1219:A:H61	1.59	0.49
1:N:1238:A:H4'	1:N:1336:C:H42	1.77	0.49
1:N:1483:A:C8	1:N:1484:C:C6	3.00	0.49
1:N:1511:G:C6	1:N:1512:U:C4	3.01	0.49
1:N:669:G:C5	1:N:670:G:C5	3.01	0.49
1:N:1433:A:C1'	1:N:1468:A:C2	2.96	0.49
1:N:1068:G:O6	1:N:1108:G:C6	2.66	0.49
1:N:168:G:C6	1:N:169:C:C5	3.00	0.48
1:N:424:G:C6	1:N:425:G:C6	3.00	0.48
1:N:1349:A:H1'	1:N:1374:A:C6	2.48	0.48
1:N:832:G:C5	1:N:855:U:N3	2.81	0.48
1:N:1004:A:H2	1:N:1029:U:H3	1.61	0.48
1:N:785:G:C2	1:N:786:G:C8	3.01	0.48
1:N:68:G:C4	1:N:69:G:H1'	2.48	0.48
1:N:201:G:H2'	1:N:202:G:C8	2.49	0.48
1:N:425:G:C6	1:N:426:U:N3	2.81	0.48
1:N:572:A:H2'	1:N:573:A:H62	1.79	0.48
1:N:1357:A:N1	1:N:1363:A:C6	2.82	0.48
1:N:1438:G:C6	1:N:1464:U:N3	2.82	0.48
1:N:936:C:N4	1:N:937:A:C6	2.81	0.48
1:N:69:G:C4	1:N:70:U:C5	3.02	0.48
1:N:80:A:C4	1:N:81:A:H1'	2.49	0.48
1:N:152:A:C6	1:N:153:C:H1'	2.49	0.48
1:N:771:G:C5	1:N:772:U:C4	3.02	0.48
1:N:1072:G:C5	1:N:1073:U:C4	3.02	0.48
1:N:211:G:N2	1:N:213:G:C8	2.82	0.48
1:N:1239:A:H4'	1:N:1240:U:OP1	2.14	0.48
1:N:1266:G:N2	1:N:1269:A:H8	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:171:A:C6	1:N:172:A:N1	2.81	0.48
1:N:297:G:H22	1:N:299:G:H3'	1.77	0.48
1:N:417:G:C5	1:N:418:C:C4	3.01	0.48
1:N:807:A:C2	1:N:808:C:C2	3.02	0.48
1:N:1011:C:C2	1:N:1019:A:C2	3.00	0.48
1:N:466:A:H2'	1:N:467:U:C2	2.49	0.48
1:N:820:U:H3'	1:N:821:G:C5'	2.43	0.48
1:N:771:G:C6	1:N:772:U:N3	2.82	0.47
1:N:776:G:H21	1:N:779:C:H42	1.62	0.47
1:N:1147:C:H2'	1:N:1148:U:C6	2.48	0.47
1:N:331:G:O5'	1:N:331:G:C8	2.68	0.47
1:N:462:G:O6	1:N:468:A:H5''	2.14	0.47
1:N:1420:U:H3	1:N:1480:A:H61	1.63	0.47
1:N:79:G:H2'	1:N:80:A:C8	2.50	0.47
1:N:198:G:H2'	1:N:199:A:C8	2.49	0.47
1:N:585:G:C5	1:N:586:C:C4	3.03	0.47
1:N:1144:G:C6	1:N:1145:A:C5	3.03	0.47
1:N:1511:G:C6	1:N:1525:G:C6	3.03	0.47
1:N:1400:C:H3'	1:N:1401:G:H5'	1.96	0.47
1:N:376:G:H2'	1:N:377:G:C8	2.50	0.47
1:N:409:U:C4	1:N:410:G:C6	3.02	0.47
1:N:646:G:C6	1:N:647:C:C4	3.03	0.47
1:N:914:A:C2	1:N:915:A:C8	3.03	0.47
1:N:1072:G:C6	1:N:1073:U:N3	2.83	0.47
1:N:1090:U:H2'	1:N:1091:U:C6	2.50	0.47
1:N:892:A:O2'	1:N:1485:U:H4'	2.14	0.47
1:N:980:C:H3'	1:N:981:U:C6	2.50	0.47
1:N:1244:G:C6	1:N:1245:C:N3	2.83	0.47
1:N:27:G:C5	1:N:557:G:C2	3.03	0.47
1:N:273:U:C4	1:N:274:A:C6	3.03	0.47
1:N:1032:G:C5	1:N:1033:G:H1'	2.50	0.47
1:N:17:U:H2'	1:N:18:C:C6	2.50	0.47
1:N:160:A:H2'	1:N:161:A:C8	2.49	0.47
1:N:1400:C:H3'	1:N:1401:G:C5'	2.45	0.47
1:N:1041:G:C6	1:N:1042:A:C6	3.03	0.46
1:N:1160:G:O6	1:N:1181:G:C6	2.68	0.46
1:N:1227:A:C6	1:N:1228:C:C2	3.03	0.46
1:N:355:C:H2'	1:N:356:A:C8	2.50	0.46
1:N:460:A:H2	1:N:471:U:H3	1.62	0.46
1:N:626:G:H2'	1:N:627:G:C8	2.50	0.46
1:N:751:U:H5	1:N:752:G:C5	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1068:G:C6	1:N:1069:C:C5	3.03	0.46
1:N:1383:C:C4	1:N:1384:C:C4	3.03	0.46
1:N:1385:G:C6	1:N:1386:G:C6	3.04	0.46
1:N:78:A:C6	1:N:79:G:N1	2.83	0.46
1:N:486:U:C6	1:N:486:U:H5''	2.50	0.46
1:N:582:C:C2	1:N:760:G:C6	3.04	0.46
1:N:585:G:C6	1:N:586:C:C4	3.03	0.46
1:N:610:U:H2'	1:N:612:C:H41	1.80	0.46
1:N:893:C:C4	1:N:894:G:C6	3.03	0.46
1:N:954:G:C4	1:N:955:U:C5	3.04	0.46
1:N:301:G:C6	1:N:302:G:C6	3.03	0.46
1:N:1439:G:C5	1:N:1440:U:C6	3.03	0.46
1:N:505:G:H2'	1:N:506:G:C8	2.51	0.46
1:N:804:U:H5	1:N:805:C:C4	2.34	0.46
1:N:1365:G:N1	1:N:1366:C:C2	2.84	0.46
1:N:465:A:C6	1:N:466:A:C6	3.03	0.46
1:N:1239:A:C5	1:N:1241:G:C2	3.04	0.46
1:N:1434:A:C6	1:N:1435:G:C6	3.04	0.46
1:N:136:C:C2	1:N:137:U:C6	3.04	0.46
1:N:505:G:H2'	1:N:506:G:H8	1.80	0.46
1:N:613:C:H2'	1:N:614:C:O4'	2.16	0.46
1:N:978:A:H4'	1:N:1322:C:C6	2.51	0.46
1:N:1500:A:C6	1:N:1501:C:C5	3.04	0.46
1:N:407:U:H3	1:N:435:A:H61	1.62	0.46
1:N:516:U:O4	1:N:517:G:C8	2.69	0.46
1:N:713:G:C6	1:N:714:G:C6	3.04	0.46
1:N:1283:U:H2'	1:N:1284:C:C6	2.51	0.46
1:N:39:G:C2	1:N:498:A:H2	2.34	0.45
1:N:64:G:C5	1:N:99:C:C2	3.03	0.45
1:N:363:A:C6	1:N:364:A:C6	3.04	0.45
1:N:687:A:C2	1:N:704:A:C6	3.04	0.45
1:N:1068:G:C6	1:N:1108:G:C6	3.03	0.45
1:N:27:G:C6	1:N:557:G:C2	3.04	0.45
1:N:321:A:N7	1:N:328:C:H1'	2.31	0.45
1:N:399:G:C6	1:N:400:C:C5	3.04	0.45
1:N:403:C:H41	1:N:547:A:H5''	1.81	0.45
1:N:145:G:C2	1:N:178:C:C2	3.04	0.45
1:N:256:U:H3	1:N:270:A:H61	1.65	0.45
1:N:340:U:H2'	1:N:341:C:C6	2.51	0.45
1:N:1230:C:H2'	1:N:1231:G:H8	1.81	0.45
1:N:1342:C:H2'	1:N:1343:G:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:105:G:N2	1:N:380:G:H5'	2.32	0.45
1:N:243:A:C2	1:N:282:A:N6	2.83	0.45
1:N:342:C:C4	1:N:343:U:C4	3.04	0.45
1:N:860:A:C5	1:N:861:G:C4	3.05	0.45
1:N:938:A:H2	1:N:1375:A:H2	1.63	0.45
1:N:947:G:H1'	1:N:1332:A:H62	1.81	0.45
1:N:981:U:C2	1:N:982:U:C6	3.04	0.45
1:N:64:G:N1	1:N:69:G:C2	2.85	0.45
1:N:424:G:C5	1:N:425:G:C5	3.05	0.45
1:N:958:A:C2	1:N:959:A:C2	3.04	0.45
1:N:113:G:H21	1:N:353:A:H2'	1.81	0.45
1:N:322:C:H3'	1:N:323:U:C5	2.51	0.45
1:N:1416:G:C6	1:N:1417:G:C4	3.05	0.45
1:N:25:C:H41	1:N:559:A:H61	1.65	0.45
1:N:94:G:H4'	1:N:95:C:H5''	1.98	0.45
1:N:219:U:H2'	1:N:220:G:C8	2.52	0.45
1:N:920:U:C4	1:N:921:U:C4	3.04	0.45
1:N:856:C:H2'	1:N:857:C:C6	2.52	0.45
1:N:1043:G:H2'	1:N:1044:A:C8	2.51	0.45
1:N:1207:G:C6	1:N:1208:C:C5	3.05	0.45
1:N:179:A:C2	1:N:180:U:C2	3.05	0.45
1:N:406:G:C6	1:N:407:U:C4	3.04	0.45
1:N:410:G:H2'	1:N:429:U:C5	2.51	0.45
1:N:44:A:H2'	1:N:45:G:C8	2.52	0.45
1:N:563:A:C2	1:N:567:G:C6	3.04	0.45
1:N:830:G:C6	1:N:831:A:C6	3.05	0.45
1:N:976:G:C8	1:N:1359:C:H1'	2.52	0.45
1:N:1068:G:C5	1:N:1108:G:C2	3.05	0.45
1:N:1076:U:H3	1:N:1081:A:N6	2.15	0.45
1:N:151:A:C2	1:N:152:A:H1'	2.52	0.44
1:N:223:A:C6	1:N:224:U:N3	2.85	0.44
1:N:1049:U:H4'	1:N:1050:G:H5'	1.98	0.44
1:N:587:G:H22	1:N:754:C:C5'	2.30	0.44
1:N:820:U:H3'	1:N:821:G:H5''	1.99	0.44
1:N:896:C:H2'	1:N:897:C:C6	2.52	0.44
1:N:620:C:C5	1:N:621:A:C4	3.05	0.44
1:N:1130:A:H61	1:N:1144:G:H21	1.65	0.44
1:N:68:G:C6	1:N:102:G:N1	2.86	0.44
1:N:414:A:H8	1:N:428:G:H22	1.65	0.44
1:N:98:A:H2'	1:N:99:C:O4'	2.18	0.44
1:N:179:A:C5	1:N:180:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:199:A:C2	1:N:219:U:O2	2.71	0.44
1:N:320:A:H2'	1:N:321:A:C8	2.52	0.44
1:N:1048:G:H1'	1:N:1215:G:H4'	1.99	0.44
1:N:1215:G:H2'	1:N:1216:A:H5'	2.00	0.44
1:N:68:G:C5	1:N:69:G:H1'	2.52	0.44
1:N:378:G:C6	1:N:379:C:C4	3.05	0.44
1:N:587:G:C2	1:N:755:G:C8	3.06	0.44
1:N:668:G:N2	1:N:739:C:H1'	2.33	0.44
1:N:921:U:C6	1:N:921:U:H3'	2.52	0.44
1:N:991:U:H4'	1:N:992:U:OP1	2.17	0.44
1:N:1071:C:H2'	1:N:1072:G:C8	2.53	0.44
1:N:1292:G:C6	1:N:1293:C:C4	3.06	0.44
1:N:255:G:C6	1:N:256:U:N3	2.86	0.44
1:N:474:G:C6	1:N:475:C:N3	2.86	0.44
1:N:1055:A:C6	1:N:1206:G:C5	3.06	0.44
1:N:69:G:C6	1:N:70:U:C4	3.05	0.44
1:N:482:A:C5	1:N:483:C:C2	3.06	0.44
1:N:516:U:O2	1:N:520:A:C2	2.71	0.44
1:N:600:A:C6	1:N:639:G:C6	3.06	0.44
1:N:829:G:C5	1:N:830:G:C8	3.06	0.44
1:N:1170:A:C5	1:N:1171:A:C4	3.06	0.44
1:N:1255:G:C6	1:N:1279:G:C5	3.06	0.44
1:N:68:G:N1	1:N:102:G:C2	2.86	0.43
1:N:197:A:C2	1:N:198:G:N9	2.86	0.43
1:N:440:C:H42	1:N:496:A:N6	2.16	0.43
1:N:575:G:C5	1:N:821:G:C8	3.06	0.43
1:N:604:G:C6	1:N:605:U:N3	2.85	0.43
1:N:1075:U:H2'	1:N:1076:U:O4'	2.18	0.43
1:N:1375:A:H2'	1:N:1376:U:O4'	2.18	0.43
1:N:160:A:C2	1:N:346:G:N1	2.86	0.43
1:N:204:G:H3'	1:N:204:G:C8	2.52	0.43
1:N:218:U:C4	1:N:219:U:N3	2.86	0.43
1:N:595:A:H4'	1:N:596:A:H5'	2.00	0.43
1:N:1230:C:H2'	1:N:1231:G:C8	2.52	0.43
1:N:1239:A:N3	1:N:1241:G:C6	2.85	0.43
1:N:495:A:H1'	1:N:496:A:C5	2.53	0.43
1:N:620:C:H3'	1:N:621:A:C8	2.53	0.43
1:N:719:C:H3'	1:N:719:C:C6	2.53	0.43
1:N:1074:G:C5	1:N:1075:U:C4	3.06	0.43
1:N:68:G:C2	1:N:102:G:C2	3.06	0.43
1:N:105:G:H21	1:N:380:G:H5'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:703:G:H3'	1:N:704:A:H5'	2.00	0.43
1:N:719:C:H3'	1:N:719:C:H6	1.83	0.43
1:N:770:C:H2'	1:N:771:G:C8	2.54	0.43
1:N:804:U:C6	1:N:805:C:C5	3.06	0.43
1:N:1148:U:H2'	1:N:1149:C:O4'	2.18	0.43
1:N:1219:A:C5	1:N:1220:G:C5	3.05	0.43
1:N:441:A:H1'	1:N:497:G:C2	2.53	0.43
1:N:563:A:C2	1:N:567:G:C5	3.07	0.43
1:N:39:G:C2	1:N:498:A:C2	3.07	0.43
1:N:298:A:H3'	1:N:299:G:C8	2.53	0.43
1:N:655:A:C4	1:N:656:G:C8	3.06	0.43
1:N:665:A:C5	1:N:733:G:C5	3.06	0.43
1:N:922:G:H2'	1:N:923:A:C8	2.54	0.43
1:N:1025:U:H2'	1:N:1031:C:C5	2.54	0.43
1:N:1219:A:C6	1:N:1220:G:C5	3.06	0.43
1:N:1299:A:C2	1:N:1301:U:C2	3.07	0.43
1:N:16:A:H2'	1:N:17:U:H5'	2.01	0.43
1:N:39:G:C4	1:N:498:A:C2	3.06	0.43
1:N:64:G:C8	1:N:99:C:C5	3.06	0.43
1:N:109:A:C5	1:N:326:G:C5	3.07	0.43
1:N:323:U:C5	1:N:324:G:C5	3.06	0.43
1:N:928:G:H21	1:N:1533:C:N4	2.16	0.43
1:N:1357:A:C4	1:N:1358:U:C2	3.06	0.43
1:N:247:G:C5	1:N:278:G:C2	3.07	0.43
1:N:295:C:C2	1:N:303:A:C2	3.06	0.43
1:N:381:C:C5	1:N:382:A:C6	3.07	0.43
1:N:593:U:C2	1:N:594:U:C5	3.06	0.43
1:N:124:C:C2	1:N:238:A:C2	3.07	0.43
1:N:335:C:C2	1:N:336:A:C8	3.07	0.43
1:N:496:A:C2	1:N:497:G:C5	3.07	0.43
1:N:688:G:H21	1:N:704:A:H2	1.66	0.43
1:N:708:C:C4	1:N:709:U:C4	3.07	0.43
1:N:954:G:C5	1:N:955:U:C5	3.07	0.43
1:N:1500:A:C5	1:N:1501:C:C5	3.07	0.43
1:N:1502:A:H3'	1:N:1503:A:H5''	2.01	0.43
1:N:316:C:O2	1:N:338:A:C2	2.71	0.43
1:N:894:G:C6	1:N:895:G:C6	3.07	0.43
1:N:937:A:C2	1:N:1379:G:O6	2.72	0.43
1:N:946:A:C2	1:N:1236:A:C2	3.06	0.43
1:N:1100:C:H5''	1:N:1101:A:H4'	2.01	0.43
1:N:165:G:C6	1:N:166:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:228:A:C2	1:N:229:U:H1'	2.54	0.42
1:N:349:A:N1	1:N:350:G:C6	2.87	0.42
1:N:461:A:H3'	1:N:462:G:C5'	2.48	0.42
1:N:503:C:O2	1:N:510:A:C2	2.72	0.42
1:N:761:G:C2	1:N:762:U:C2	3.07	0.42
1:N:904:U:C5	1:N:905:U:C4	3.07	0.42
1:N:1289:A:C8	1:N:1290:G:C8	3.07	0.42
1:N:108:G:C4	1:N:109:A:N1	2.87	0.42
1:N:782:A:C8	1:N:783:C:C5	3.07	0.42
1:N:1415:G:H2'	1:N:1416:G:C8	2.55	0.42
1:N:1423:G:C6	1:N:1424:U:C4	3.07	0.42
1:N:121:U:C4	1:N:122:G:C8	3.07	0.42
1:N:579:A:C6	1:N:763:G:C6	3.07	0.42
1:N:1314:C:C2	1:N:1315:U:C5	3.08	0.42
1:N:151:A:C6	1:N:171:A:C6	3.06	0.42
1:N:411:A:C4	1:N:429:U:C4	3.07	0.42
1:N:1249:C:H3'	1:N:1250:A:H5''	2.01	0.42
1:N:16:A:C2	1:N:920:U:O2	2.72	0.42
1:N:201:G:N2	1:N:468:A:H62	2.17	0.42
1:N:342:C:C4	1:N:343:U:N3	2.87	0.42
1:N:467:U:H3'	1:N:467:U:O2	2.20	0.42
1:N:738:C:H2'	1:N:739:C:C6	2.55	0.42
1:N:939:G:C2	1:N:1375:A:C2	3.08	0.42
1:N:296:U:H2'	1:N:297:G:C8	2.54	0.42
1:N:1184:G:C6	1:N:1185:G:C5	3.08	0.42
1:N:16:A:C2	1:N:920:U:C2	3.07	0.42
1:N:213:G:C8	1:N:214:C:C6	3.07	0.42
1:N:598:U:H3	1:N:640:A:H61	1.67	0.42
1:N:734:G:H2'	1:N:735:C:C6	2.54	0.42
1:N:606:G:H3'	1:N:607:A:C5'	2.49	0.42
1:N:736:C:H2'	1:N:737:C:C6	2.54	0.42
1:N:893:C:C4	1:N:894:G:C5	3.07	0.42
1:N:1423:G:C6	1:N:1424:U:N3	2.88	0.42
1:N:1444:U:C5	1:N:1455:G:OP1	2.73	0.42
1:N:1530:G:H1'	1:N:1531:A:H3'	2.01	0.42
1:N:293:G:H21	1:N:306:A:H2	1.61	0.42
1:N:408:A:C2	1:N:435:A:C5	3.08	0.42
1:N:718:A:H3'	1:N:719:C:C6	2.55	0.42
1:N:1117:A:C5	1:N:1156:G:N2	2.87	0.42
1:N:30:U:H3	1:N:553:A:N6	2.17	0.42
1:N:160:A:C6	1:N:346:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:496:A:H2'	1:N:497:G:C8	2.55	0.42
1:N:604:G:C2	1:N:605:U:C2	3.08	0.42
1:N:701:U:C5'	1:N:703:G:H5'	2.50	0.42
1:N:807:A:C6	1:N:808:C:C4	3.07	0.42
1:N:1014:A:C5	1:N:1015:G:C6	3.08	0.42
1:N:1239:A:C4	1:N:1241:G:C5	3.08	0.42
1:N:1315:U:C2	1:N:1323:G:C2	3.07	0.42
1:N:1343:G:C5	1:N:1344:C:C5	3.08	0.42
1:N:1396:A:H4'	1:N:1397:C:O5'	2.20	0.42
1:N:1423:G:C5	1:N:1424:U:C4	3.08	0.42
1:N:200:G:C2	1:N:218:U:C2	3.08	0.41
1:N:695:A:C2	1:N:696:A:C4	3.08	0.41
1:N:98:A:C8	1:N:99:C:C5	3.09	0.41
1:N:202:G:H1'	1:N:468:A:H8	1.85	0.41
1:N:341:C:H2'	1:N:342:C:C6	2.56	0.41
1:N:506:G:C2	1:N:507:C:C2	3.08	0.41
1:N:659:U:C2	1:N:660:C:C6	3.08	0.41
1:N:1501:C:C4	1:N:1504:G:N3	2.88	0.41
1:N:207:C:H2'	1:N:208:U:C6	2.55	0.41
1:N:347:G:C2	1:N:348:G:H1'	2.55	0.41
1:N:509:A:C4	1:N:510:A:C2	3.08	0.41
1:N:786:G:C6	1:N:797:C:N3	2.88	0.41
1:N:1399:C:C2	1:N:1502:A:C2	3.09	0.41
1:N:145:G:N2	1:N:146:G:C4	2.89	0.41
1:N:532:A:H3'	1:N:533:A:H5'	2.02	0.41
1:N:587:G:H22	1:N:754:C:H5'	1.85	0.41
1:N:751:U:C5	1:N:752:G:C5	3.09	0.41
1:N:756:C:C4	1:N:757:U:C4	3.08	0.41
1:N:895:G:C6	1:N:896:C:C2	3.09	0.41
1:N:1148:U:N3	1:N:1149:C:C2	2.88	0.41
1:N:19:A:C2	1:N:917:G:C6	3.08	0.41
1:N:272:C:H2'	1:N:273:U:O4'	2.20	0.41
1:N:383:A:C5	1:N:384:G:H1'	2.55	0.41
1:N:492:C:H2'	1:N:493:A:C8	2.56	0.41
1:N:597:G:C6	1:N:598:U:C2	3.08	0.41
1:N:646:G:C5	1:N:647:C:C5	3.09	0.41
1:N:292:G:C5	1:N:293:G:H1'	2.56	0.41
1:N:373:A:C4	1:N:374:A:C8	3.09	0.41
1:N:411:A:C4	1:N:429:U:C5	3.08	0.41
1:N:830:G:C6	1:N:831:A:C5	3.09	0.41
1:N:831:A:C2	1:N:832:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:98:A:C5	1:N:99:C:C4	3.08	0.41
1:N:186:C:N3	1:N:187:G:C5	2.89	0.41
1:N:229:U:C2	1:N:230:G:C8	3.09	0.41
1:N:720:C:H5''	1:N:721:G:OP2	2.21	0.41
1:N:803:G:C2	1:N:804:U:C2	3.09	0.41
1:N:1319:A:H4'	1:N:1320:C:OP1	2.21	0.41
1:N:1434:A:H2'	1:N:1435:G:O4'	2.21	0.41
1:N:150:U:O2	1:N:151:A:C8	2.73	0.41
1:N:209:U:C4	1:N:211:G:C2	3.09	0.41
1:N:939:G:N3	1:N:1375:A:C2	2.89	0.41
1:N:1129:C:C2	1:N:1144:G:C2	3.09	0.41
1:N:150:U:C2	1:N:151:A:C8	3.09	0.41
1:N:181:A:H4'	1:N:182:A:O5'	2.20	0.41
1:N:706:A:C6	1:N:707:U:N3	2.89	0.41
1:N:807:A:H2'	1:N:808:C:O4'	2.21	0.41
1:N:857:C:C6	1:N:858:G:C8	3.09	0.41
1:N:894:G:C4	1:N:895:G:C8	3.09	0.41
1:N:1094:G:H2'	1:N:1108:G:H1	1.84	0.41
1:N:1262:C:H2'	1:N:1263:C:H5'	2.03	0.41
1:N:1441:A:H62	1:N:1461:G:N2	2.19	0.41
1:N:139:A:C6	1:N:140:U:C4	3.09	0.41
1:N:340:U:H1'	1:N:350:G:N2	2.35	0.41
1:N:723:U:O2	1:N:723:U:H2'	2.20	0.41
1:N:886:G:H4'	1:N:915:A:H1'	2.03	0.41
1:N:1122:U:H3	1:N:1151:A:H2	1.69	0.41
1:N:1140:C:C2	1:N:1141:C:C5	3.09	0.41
1:N:1311:A:C2	1:N:1327:C:N3	2.89	0.41
1:N:1385:G:C5	1:N:1386:G:C5	3.09	0.41
1:N:26:A:H61	1:N:558:G:H2'	1.86	0.40
1:N:52:C:C6	1:N:52:C:C3'	3.03	0.40
1:N:93:U:H5	1:N:94:G:C8	2.39	0.40
1:N:405:U:H5''	1:N:495:A:C2	2.57	0.40
1:N:1239:A:C2	1:N:1241:G:O6	2.73	0.40
1:N:1360:A:H3'	1:N:1361:G:H8	1.85	0.40
1:N:329:A:H2'	1:N:332:G:N7	2.35	0.40
1:N:496:A:N1	1:N:497:G:C6	2.89	0.40
1:N:1047:G:H1	1:N:1210:C:H42	1.68	0.40
1:N:28:A:H2	1:N:555:U:H3	1.64	0.40
1:N:61:G:H21	1:N:379:C:C4'	2.34	0.40
1:N:142:G:N3	1:N:142:G:H2'	2.35	0.40
1:N:550:G:C6	1:N:551:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1017:U:H2'	1:N:1018:G:C8	2.56	0.40
1:N:1241:G:C8	1:N:1241:G:O5'	2.74	0.40
1:N:130:A:N1	1:N:233:C:O2	2.55	0.40
1:N:209:U:O4	1:N:211:G:N2	2.54	0.40
1:N:242:G:N1	1:N:285:C:C2	2.90	0.40
1:N:402:G:H1'	1:N:620:C:H42	1.87	0.40
1:N:917:G:C6	1:N:918:A:C5	3.09	0.40
1:N:1117:A:C6	1:N:1156:G:C2	3.09	0.40
1:N:1276:G:N2	1:N:1283:U:H1'	2.37	0.40
1:N:64:G:C5	1:N:99:C:N3	2.90	0.40
1:N:92:U:H2'	1:N:93:U:C6	2.56	0.40
1:N:134:G:C5	1:N:325:A:N6	2.89	0.40
1:N:145:G:C2	1:N:146:G:N9	2.90	0.40
1:N:373:A:C2	1:N:374:A:C4	3.09	0.40
1:N:494:G:C4	1:N:496:A:C8	3.09	0.40
1:N:728:A:C2	1:N:763:G:N2	2.90	0.40
1:N:950:U:H6	1:N:950:U:O5'	2.05	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%)	459 (29%)	148 (9%)

All (459) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	3	A

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Mol	Chain	Res	Type
1	N	4	U
1	N	5	U
1	N	6	G
1	N	7	A
1	N	8	A
1	N	9	G
1	N	13	U
1	N	14	U
1	N	22	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
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	80	A
1	N	81	A
1	N	82	G
1	N	83	C
1	N	85	U
1	N	87	C
1	N	88	U
1	N	89	U
1	N	90	C
1	N	91	U
1	N	92	U

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Mol	Chain	Res	Type
1	N	93	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
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	142	G
1	N	143	A
1	N	159	G
1	N	160	A
1	N	161	A
1	N	163	C
1	N	164	G
1	N	173	U
1	N	174	A
1	N	177	G
1	N	181	A
1	N	182	A
1	N	183	C
1	N	195	A
1	N	197	A
1	N	198	G
1	N	202	G
1	N	205	A
1	N	207	C
1	N	208	U
1	N	209	U

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Mol	Chain	Res	Type
1	N	210	C
1	N	211	G
1	N	212	G
1	N	214	C
1	N	219	U
1	N	232	G
1	N	240	G
1	N	243	A
1	N	244	U
1	N	245	U
1	N	247	G
1	N	251	G
1	N	252	U
1	N	258	G
1	N	266	G
1	N	267	C
1	N	268	U
1	N	273	U
1	N	274	A
1	N	275	G
1	N	276	G
1	N	279	A
1	N	281	G
1	N	285	C
1	N	289	G
1	N	305	G
1	N	306	A
1	N	308	C
1	N	316	C
1	N	320	A
1	N	321	A
1	N	328	C
1	N	329	A
1	N	330	C
1	N	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

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Mol	Chain	Res	Type
1	N	354	G
1	N	363	A
1	N	366	A
1	N	367	U
1	N	368	U
1	N	372	C
1	N	373	A
1	N	384	G
1	N	390	U
1	N	392	C
1	N	398	U
1	N	406	G
1	N	411	A
1	N	412	A
1	N	413	G
1	N	414	A
1	N	421	U
1	N	422	C
1	N	423	G
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	431	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

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Mol	Chain	Res	Type
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
1	N	518	C
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	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	579	A
1	N	588	G
1	N	595	A
1	N	596	A
1	N	604	G

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Mol	Chain	Res	Type
1	N	606	G
1	N	607	A
1	N	610	U
1	N	619	U
1	N	629	A
1	N	631	C
1	N	632	U
1	N	633	G
1	N	642	A
1	N	649	A
1	N	663	A
1	N	665	A
1	N	702	A
1	N	703	G
1	N	718	A
1	N	719	C
1	N	720	C
1	N	721	G
1	N	722	G
1	N	723	U
1	N	724	G
1	N	731	G
1	N	733	G
1	N	748	G
1	N	754	C
1	N	755	G
1	N	767	A
1	N	768	A
1	N	776	G
1	N	777	A
1	N	787	A
1	N	788	U
1	N	794	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	828	U
1	N	829	G

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Mol	Chain	Res	Type
1	N	832	G
1	N	843	U
1	N	844	G
1	N	846	G
1	N	855	U
1	N	861	G
1	N	870	U
1	N	871	U
1	N	884	U
1	N	885	G
1	N	889	A
1	N	914	A
1	N	915	A
1	N	926	G
1	N	927	G
1	N	932	C
1	N	934	C
1	N	935	A
1	N	944	G
1	N	960	U
1	N	961	U
1	N	965	U
1	N	966	G
1	N	967	C
1	N	968	A
1	N	969	A
1	N	970	C
1	N	971	G
1	N	972	C
1	N	974	A
1	N	975	A
1	N	977	A
1	N	982	U
1	N	983	A
1	N	992	U
1	N	993	G
1	N	1003	G
1	N	1004	A
1	N	1008	U
1	N	1014	A
1	N	1017	U
1	N	1018	G

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Mol	Chain	Res	Type
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	1050	G
1	N	1052	U
1	N	1053	G
1	N	1054	C
1	N	1055	A
1	N	1063	C
1	N	1064	G
1	N	1065	U
1	N	1066	C
1	N	1067	A
1	N	1078	U
1	N	1079	G
1	N	1085	U
1	N	1086	U
1	N	1087	G
1	N	1091	U
1	N	1092	A
1	N	1093	A
1	N	1094	G
1	N	1095	U
1	N	1100	C
1	N	1101	A
1	N	1102	A
1	N	1104	G
1	N	1111	A
1	N	1113	C
1	N	1124	G
1	N	1125	U
1	N	1126	U
1	N	1127	G
1	N	1129	C
1	N	1130	A
1	N	1133	G
1	N	1135	U

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Mol	Chain	Res	Type
1	N	1136	C
1	N	1137	C
1	N	1138	G
1	N	1139	G
1	N	1140	C
1	N	1141	C
1	N	1144	G
1	N	1145	A
1	N	1151	A
1	N	1152	A
1	N	1158	C
1	N	1159	U
1	N	1160	G
1	N	1161	C
1	N	1167	A
1	N	1168	U
1	N	1169	A
1	N	1181	G
1	N	1182	G
1	N	1185	G
1	N	1186	G
1	N	1188	A
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

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Mol	Chain	Res	Type
1	N	1239	A
1	N	1240	U
1	N	1241	G
1	N	1250	A
1	N	1252	A
1	N	1256	A
1	N	1258	G
1	N	1275	A
1	N	1278	G
1	N	1279	G
1	N	1280	A
1	N	1282	C
1	N	1283	U
1	N	1286	U
1	N	1287	A
1	N	1293	C
1	N	1297	G
1	N	1298	U
1	N	1299	A
1	N	1303	C
1	N	1305	G
1	N	1308	U
1	N	1315	U
1	N	1316	G
1	N	1320	C
1	N	1322	C
1	N	1323	G
1	N	1332	A
1	N	1336	C
1	N	1337	G
1	N	1338	G
1	N	1345	U
1	N	1346	A
1	N	1348	U
1	N	1349	A
1	N	1353	G
1	N	1358	U
1	N	1359	C
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1365	G

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Mol	Chain	Res	Type
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	1432	G
1	N	1433	A
1	N	1440	U
1	N	1441	A
1	N	1446	A
1	N	1448	C
1	N	1453	G
1	N	1456	A
1	N	1457	G
1	N	1469	C
1	N	1470	U
1	N	1476	A
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	1529	G
1	N	1530	G
1	N	1531	A
1	N	1532	U
1	N	1533	C
1	N	1534	A

All (148) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
1	N	5	U
1	N	13	U
1	N	30	U
1	N	31	G
1	N	47	C
1	N	49	U
1	N	51	A
1	N	60	A
1	N	65	A
1	N	70	U
1	N	71	A
1	N	73	C
1	N	75	G
1	N	81	A
1	N	87	C
1	N	90	C
1	N	92	U
1	N	94	G
1	N	108	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	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

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Mol	Chain	Res	Type
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	352	C
1	N	366	A
1	N	372	C
1	N	373	A
1	N	412	A
1	N	421	U
1	N	428	G
1	N	429	U
1	N	430	A
1	N	432	A
1	N	438	U
1	N	451	A
1	N	467	U
1	N	481	G
1	N	484	G
1	N	485	U
1	N	495	A
1	N	496	A
1	N	499	A
1	N	500	G
1	N	508	U
1	N	511	C
1	N	531	U
1	N	532	A
1	N	535	A
1	N	536	C
1	N	547	A
1	N	548	G
1	N	559	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	641	U
1	N	686	U
1	N	717	U
1	N	721	G

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Mol	Chain	Res	Type
1	N	723	U
1	N	733	G
1	N	754	C
1	N	793	U
1	N	817	C
1	N	870	U
1	N	884	U
1	N	889	A
1	N	913	A
1	N	914	A
1	N	934	C
1	N	960	U
1	N	974	A
1	N	982	U
1	N	991	U
1	N	1049	U
1	N	1053	G
1	N	1064	G
1	N	1066	C
1	N	1078	U
1	N	1085	U
1	N	1087	G
1	N	1093	A
1	N	1094	G
1	N	1101	A
1	N	1129	C
1	N	1136	C
1	N	1151	A
1	N	1167	A
1	N	1168	U
1	N	1185	G
1	N	1190	G
1	N	1191	A
1	N	1197	A
1	N	1201	A
1	N	1224	U
1	N	1228	C
1	N	1239	A
1	N	1263	C
1	N	1282	C
1	N	1285	A
1	N	1298	U

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Mol	Chain	Res	Type
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	1348	U
1	N	1358	U
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1380	U
1	N	1396	A
1	N	1399	C
1	N	1432	G
1	N	1440	U
1	N	1457	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 ⓘ

There are no chain breaks in this entry.

6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5501. These allow visual inspection of the internal detail of the map and identification of artifacts.

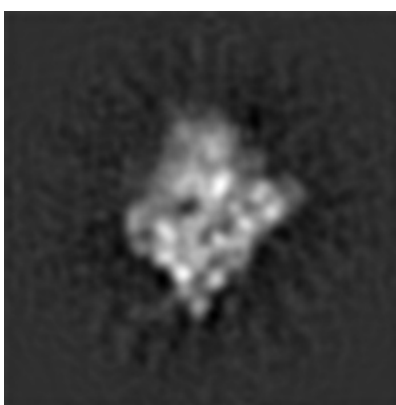
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

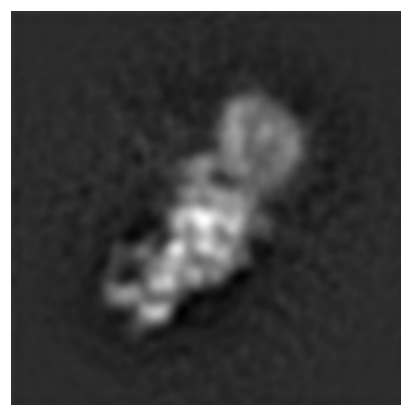
6.1.1 Primary map



X



Y

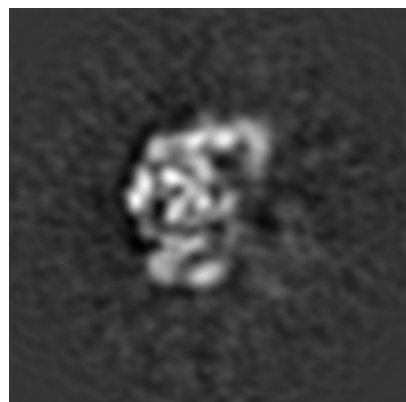


Z

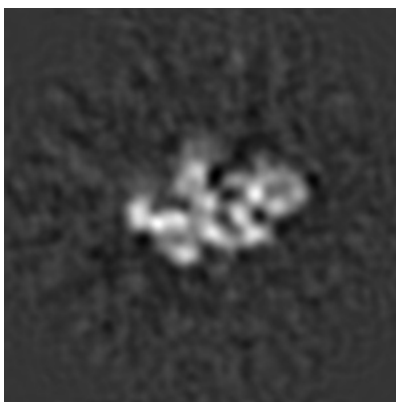
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

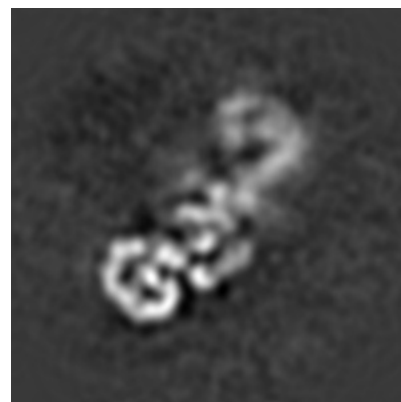
6.2.1 Primary map



X Index: 62



Y Index: 62

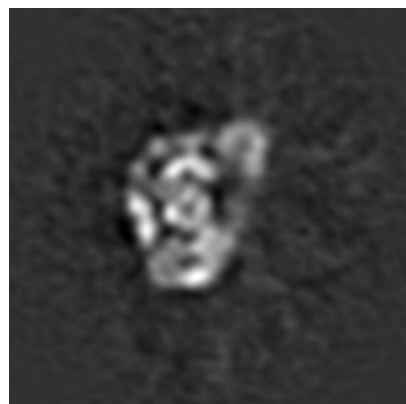


Z Index: 62

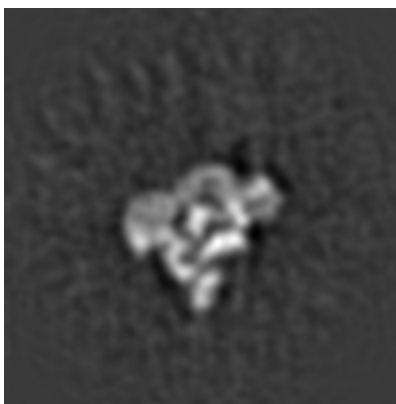
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

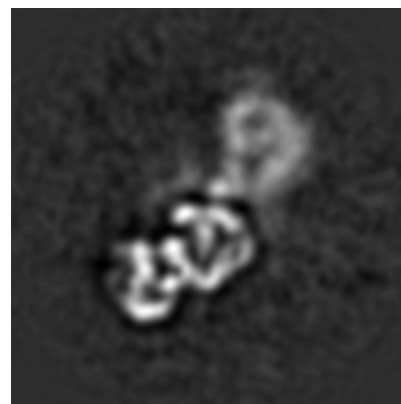
6.3.1 Primary map



X Index: 59



Y Index: 50

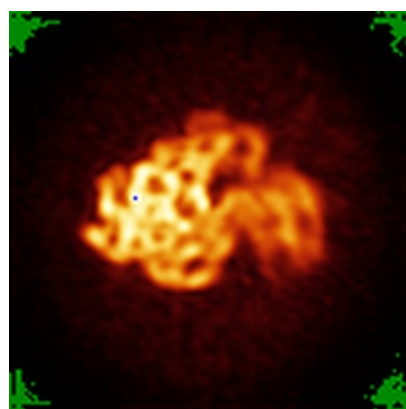


Z Index: 65

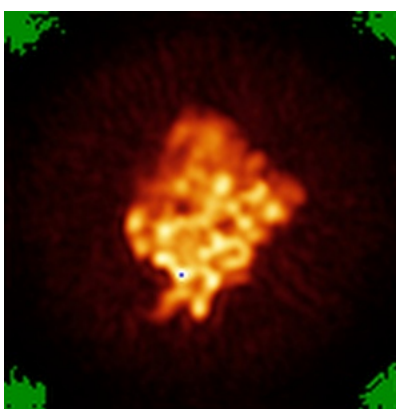
The images above show the largest variance slices of the map in three orthogonal directions.

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

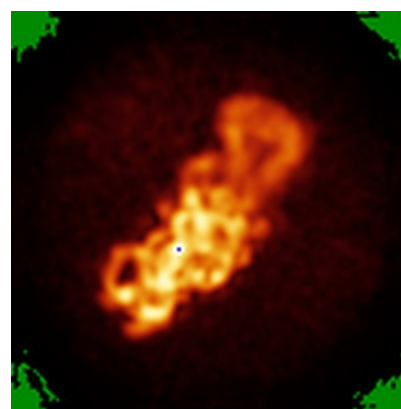
6.4.1 Primary map



X



Y

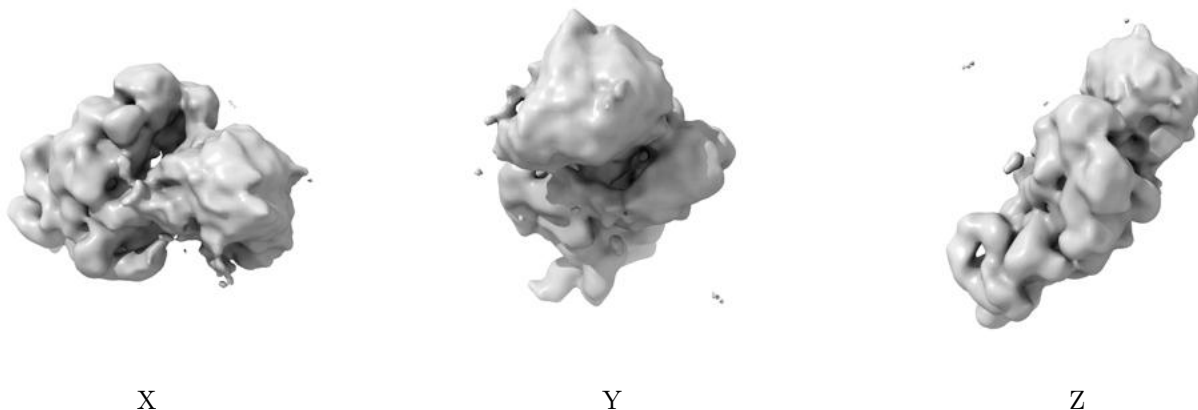


Z

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.

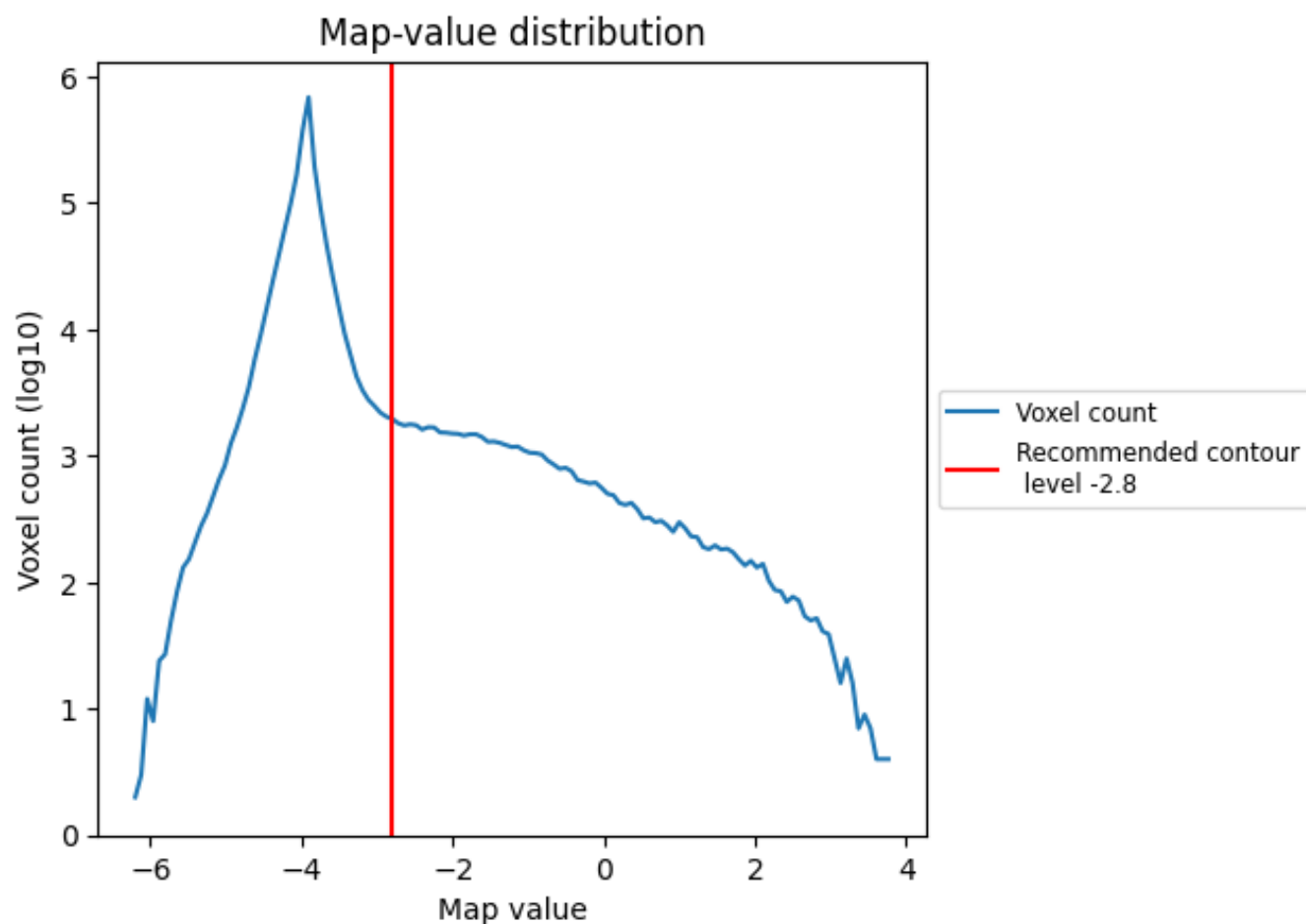
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

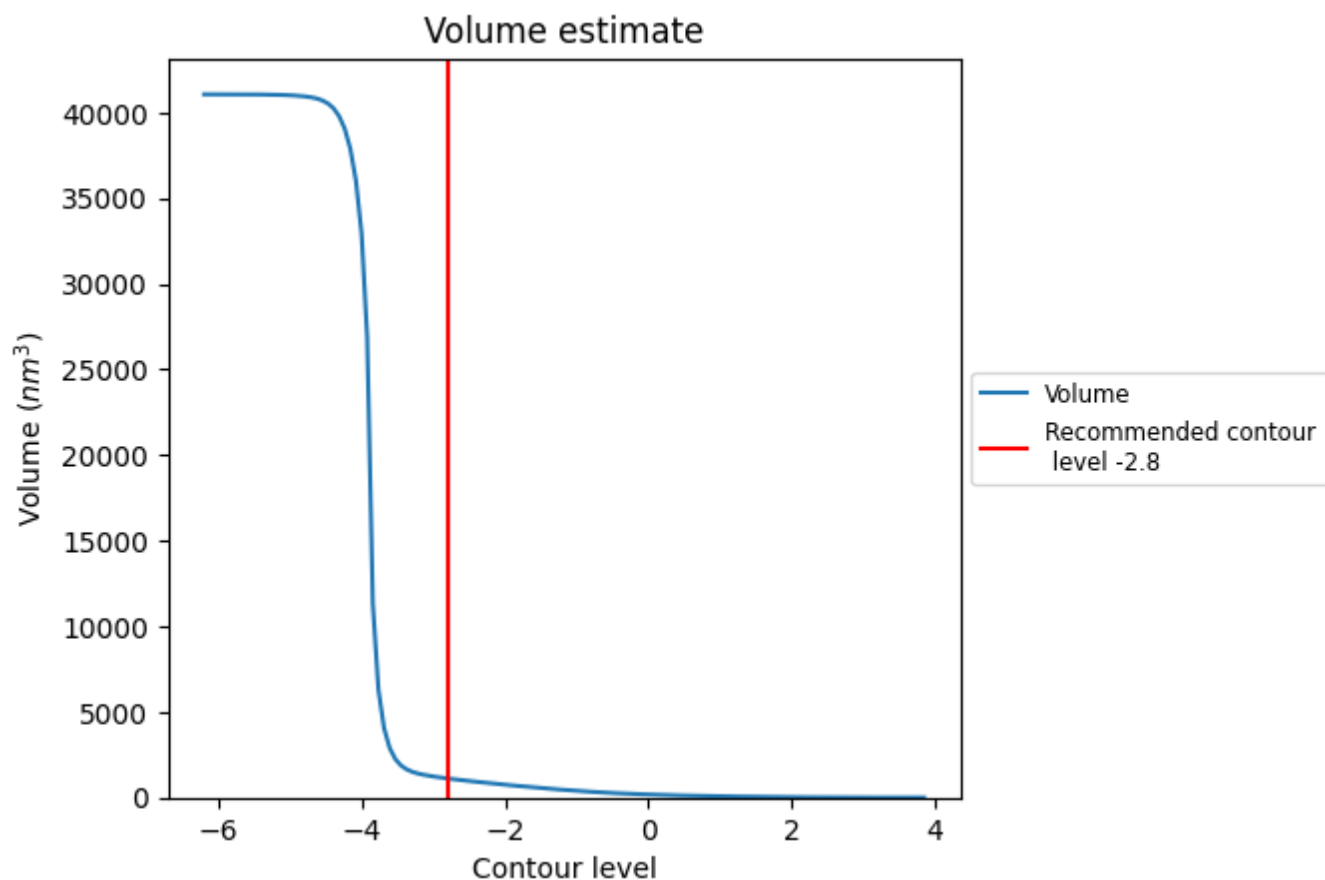
This section contains the results of statistical analysis of the map.

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.

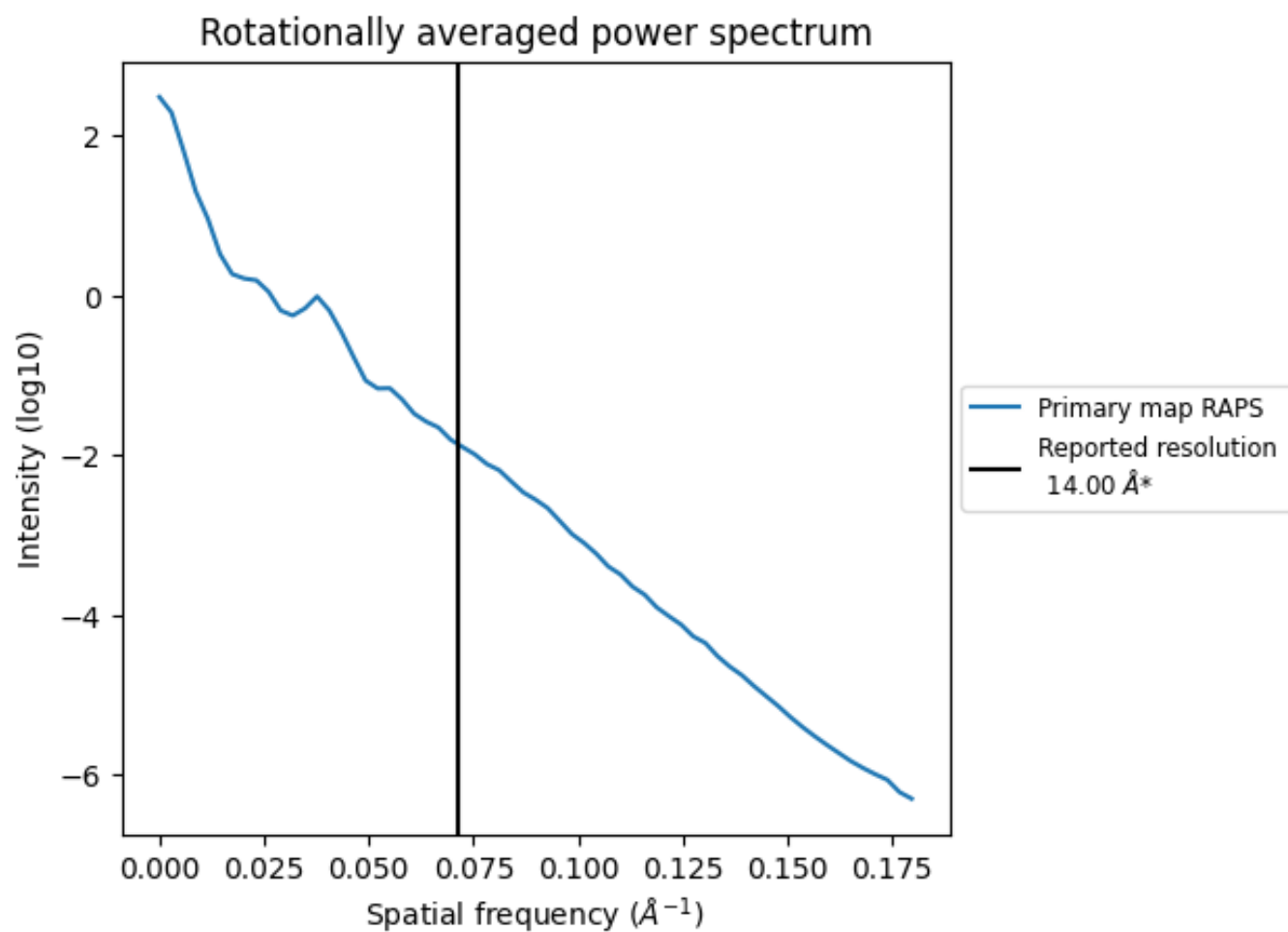
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1112 nm^3 ; this corresponds to an approximate mass of 1005 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 0.071 Å⁻¹

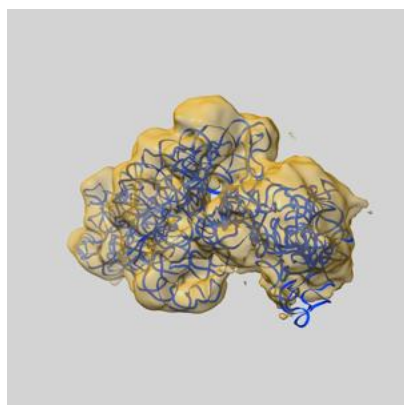
8 Fourier-Shell correlation

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

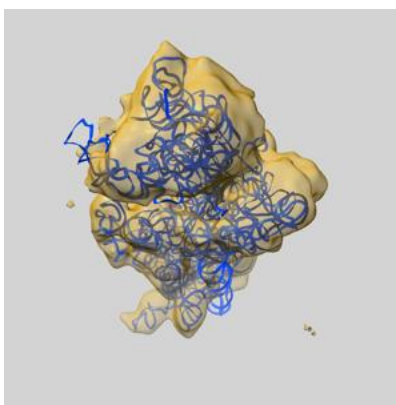
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5501 and PDB model 3J29. Per-residue inclusion information can be found in section [3](#) on page [4](#).

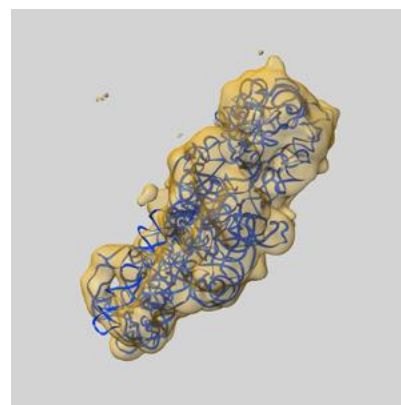
9.1 Map-model overlay [i](#)



X



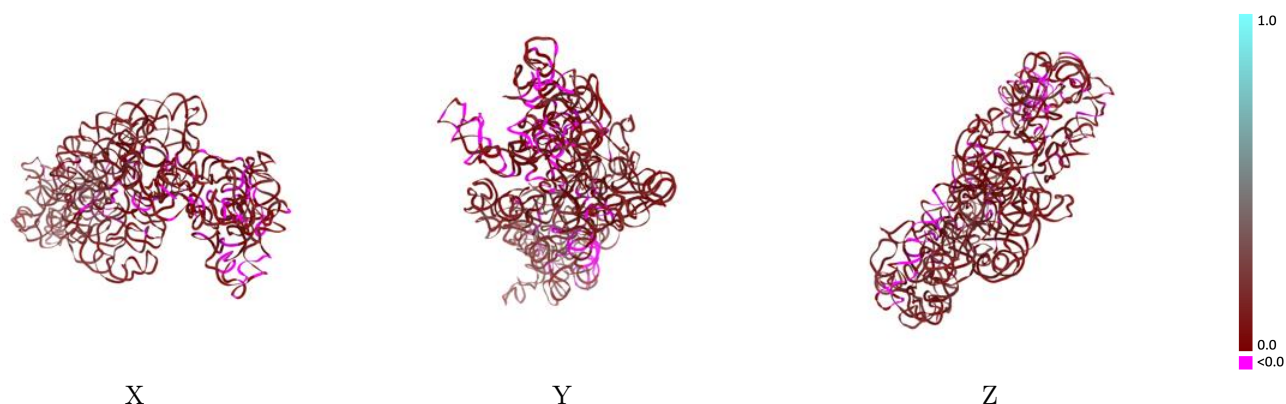
Y



Z

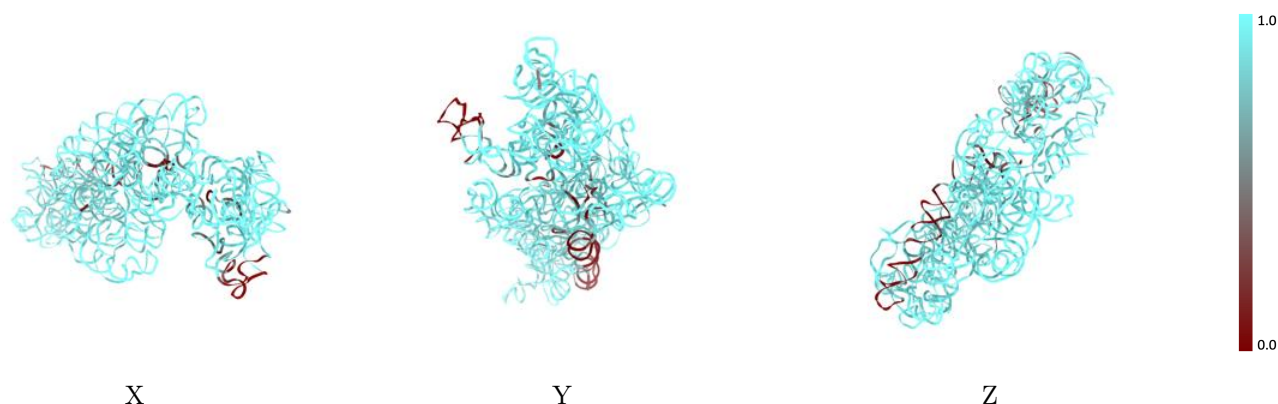
The images above show the 3D surface view of the map at the recommended contour level -2.8 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



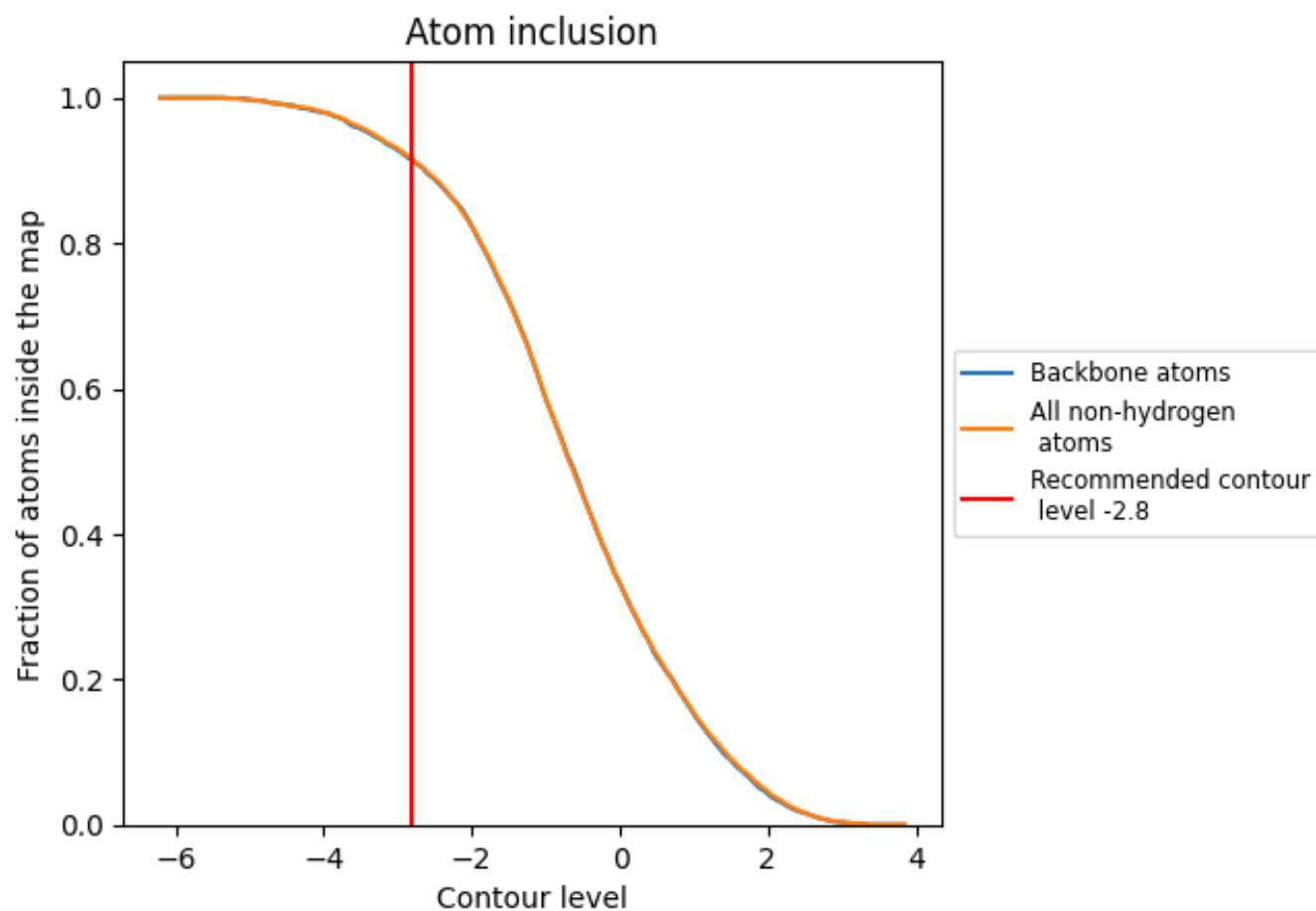
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



At the recommended contour level, 91% of all backbone atoms, 92% 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	0.9160	0.0890
N	0.9160	0.0890

