



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 03:45 PM UTC

PDB ID : 3J2G / pdb_00003j2g
EMDB ID : EMD-5509
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 : 16.50 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

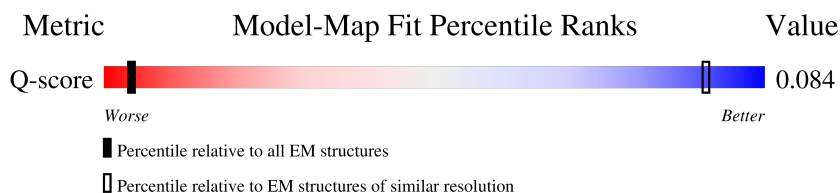
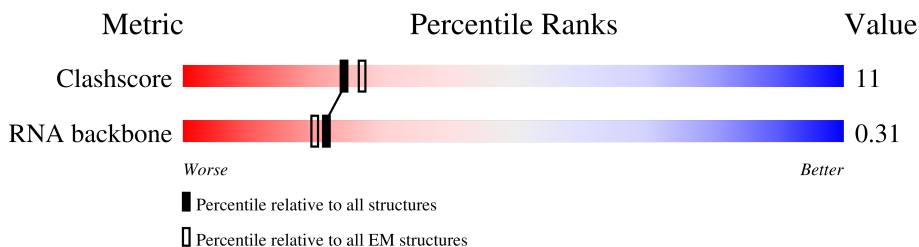
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

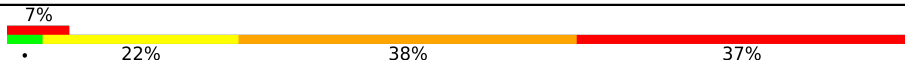
The reported resolution of this entry is 16.50 Å.

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	55 (16.00 - 17.00)

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

Mol	Chain	Length	Quality of chain
1	N	1533	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 49446 atoms, of which 16554 are hydrogens and 0 are deuteriums.

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

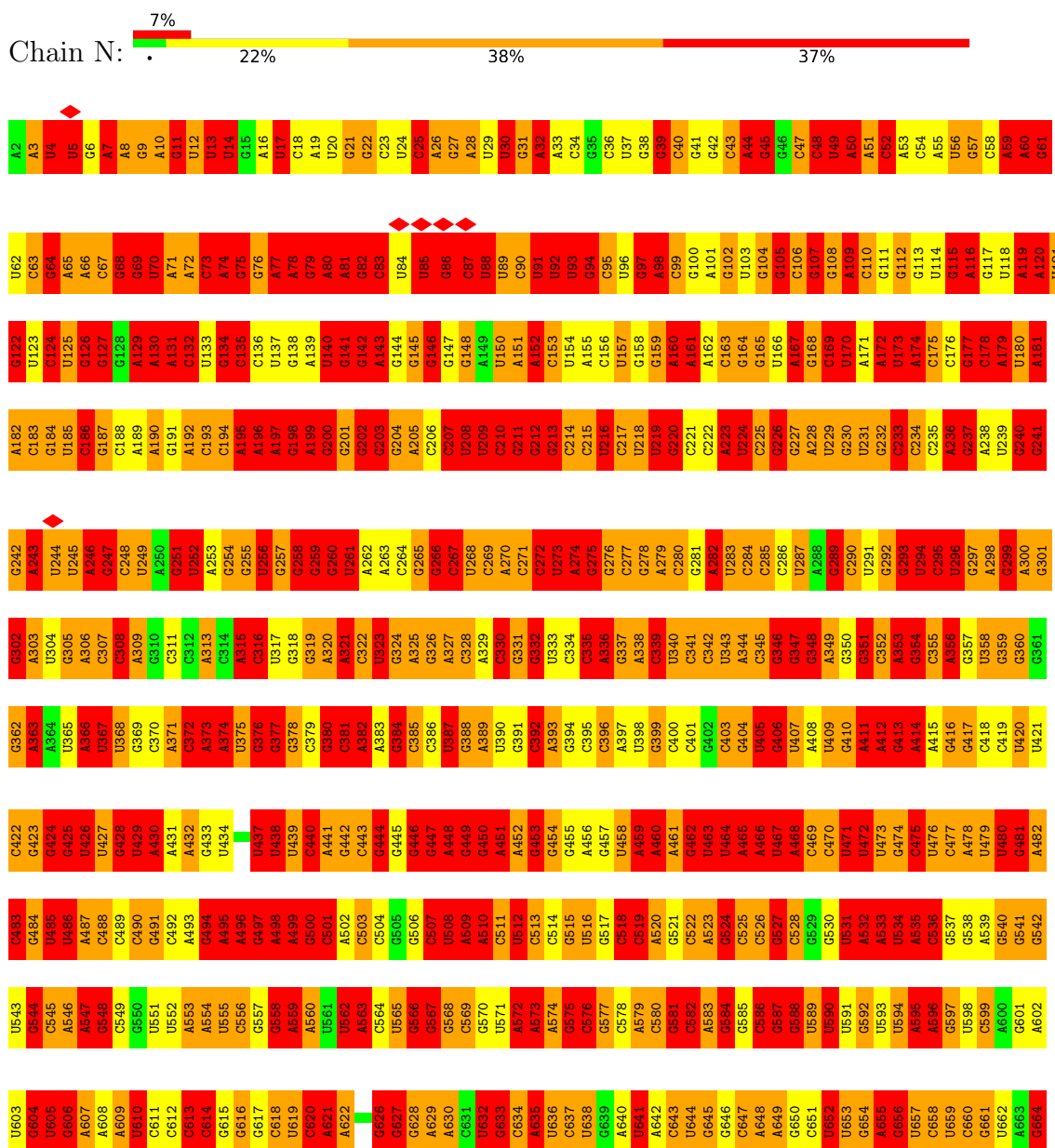
- Molecule 1 is a RNA chain called 16S rRNA.

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

3 Residue-property plots

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

• Molecule 1: 16S rRNA



A1446	G1386	C1265	U1205	A1145	U1085	U1025	U905	A945	G785	G725	A665
A1447	G1387	G1266	G1206	A1146	U1086	G1026	A906	G846	G786	C726	G666
A1448	C1388	G1267	G1207	A1147	G1087	G1027	A907	G847	A787	C727	G667
C1449	C1389	G1268	C1208	U1148	G1088	C1028	A908	G848	A788	A728	G668
U1450	U1390	A1269	C1209	C1149	G1089	C1029	A909	G849	A789	A729	G669
U1451	U1391	U1270	C1210	A1150	U1090	U1029	C910	U850	A790	G730	G670
U1452	G1392	A1271	U1211	A1151	U1091	U1030	U911	G851	G791	G731	G671
G1453	U1393	G1272	U1212	A1152	A1092	C1031	C912	G852	A792	C732	U672
G1454	C1394	C1273	C1213	G1153	A1093	C1032	A913	G853	U793	A673	A673
G1455	U1395	A1274	C1214	G1154	U1094	G1033	A914	U854	A794	G734	G674
G1456	U1396	A1275	G1215	A1155	U1095	G1034	A915	U855	C795	C735	A675
A1457	C1397	G1276	A1216	G1156	C1096	U1035	U916	G856	C796	C736	A676
A1458	U1398	G1277	C1217	A1157	C1097	G1036	G917	G857	C797	C737	U677
G1459	C1399	G1278	C1218	U1158	C1098	A1036	A918	G858	U798	C738	U678
C1460	U1400	A1279	A1219	U1159	G1099	A1037	A919	G859	G799	C739	C679
G1461	C1401	G1280	G1220	G1160	C1100	C1038	U920	A860	U740	C680	A681
G1462	C1402	C1281	G1221	C1161	A1101	U1039	U921	G861	U801	G741	G682
C1463	C1403	U1282	G1222	A1162	A1102	U1040	G922	U862	A802	G742	G683
C1464	C1404	C1283	C1223	G1163	C1103	G1041	C923	U863	G803	A743	G684
U1465	U1405	A1284	U1224	A1164	G1104	G1042	C924	A864	U804	C744	U685
U1466	U1406	U1285	A1225	U1165	A1105	A1043	G925	A865	C805	C745	U686
U1467	U1407	U1286	G1226	G1166	G1106	G1044	G926	C866	C806	A746	U687
A1468	A1408	A1287	A1227	A1167	C1107	U1045	G927	G867	A807	A747	A687
C1469	C1409	C1288	C1228	U1168	G1108	A1046	G928	C868	C808	G748	G688
A1470	U1410	A1289	A1229	A1169	C1109	C1045	G929	G869	G809	A749	C689
U1471	U1411	U1290	C1230	A1170	A1110	A1046	C930	U870	C810	C750	G690
U1472	C1291	U1291	G1231	A1171	A1111	C1047	C931	U871	U751	C751	G691
U1473	C1292	C1292	U1232	C1172	C1112	G1048	C932	A872	G812	C752	U692
U1474	U1354	C1293	G1233	U1173	C1113	U1049	C933	A873	U813	A753	G693
U1475	G1355	G1294	G1234	G1174	C1114	G983	C934	G874	A814	C754	A694
U1476	U1295	U1295	U1235	G1175	U1115	C1050	A935	U875	A815	G755	A695
U1477	C1296	C1296	A1236	A1176	U1116	C1051	C936	C876	A816	C756	A696
U1478	U1297	U1297	C1237	G1177	U1117	A996	A937	G877	C817	U757	U697
U1479	U1358	U1298	U1238	U1178	C1118	A997	A938	A878	G818	C758	G698
U1480	C1359	A1299	A1239	A1179	C1119	C998	G939	A879	A819	A759	C699
U1481	U1360	U1300	U1240	A1180	C1120	C999	C940	C880	U820	G760	G700
U1482	A1361	U1301	G1241	G1181	U1121	A1000	G941	G881	G821	G761	U701
U1483	U1362	C1302	G1242	G1182	U1122	G1001	G942	C882	U822	U762	A702
U1484	C1363	G1303	C1243	U1183	U1123	C883	U943	C884	C823	G763	G703
U1485	U1364	G1304	G1244	G1184	G1124	U884	G944	A885	G824	C764	A704
U1486	C1365	G1305	C1245	G1185	U1125	G885	G945	A886	A825	G765	G705
U1487	C1366	U1306	U1246	G1186	G1126	G886	A946	A887	C826	A766	A706
U1488	C1367	U1307	G1247	G1187	G1127	G947	G947	U827	U827	A767	U707
U1489	A1368	U1308	A1248	A1188	C1128	C1063	C948	G888	U828	A768	C708
U1490	C1369	G1309	C1249	U1189	C1129	G1064	A949	A889	G829	G769	U709
U1491	G1370	A1310	A1250	A1190	A1130	U1065	U950	G890	G830	C770	G710
U1492	U1371	A1311	A1251	A1191	G1131	A1067	G951	U891	G831	G771	G711
U1493	C1372	G1312	G1252	G1192	C1132	U1068	U952	A892	G832	U772	A712
U1494	A1373	U1313	C1253	G1193	G1133	U1069	G953	A893	G833	G773	G713
U1495	A1374	C1314	A1254	U1194	G1134	U1070	G954	G894	U834	G774	G714
U1496	A1375	U1315	G1255	C1195	U1135	C1071	U955	G895	U835	G775	A715
U1497	U1376	G1316	G1256	A1196	C1136	A1012	U956	G896	G836	G776	A716
U1498	C1377	C1317	A1257	A1197	C1137	G1013	U957	C897	U837	A777	A717
U1499	G1378	U1318	G1258	U1198	G1138	A1014	A958	G898	G838	G778	A718
A1492	C1379	A1319	C1259	U1199	G1139	A1016	A859	G899	C839	C779	C719
A1493	U1380	C1320	G1260	C1200	U1076	U1017	U960	A900	C840	A780	C720
U1494	U1381	U1321	A1261	A1201	G1077	G1018	U961	A901	C841	A781	G721
U1495	C1382	C1322	C1262	U1202	U1078	A1019	C962	G902	U842	A782	G722
U1496	C1383	U1323	C1263	C1203	G1079	G1020	G963	G903	U843	C783	U723
U1497	G1384	A1324	U1264	A1204	G1143	A1021	A964	U904	G844	A784	G724
A1499	U1445				G1144	A1022					
A1500	U1446				G1145	U1023					
A1501	C1447				A1080	U1083					
A1502	U1448				A1081	G1084					
A1503	C1449				A1082						
G1504	U1450				A1083						
G1505	U1451				G1084						

U1506	A1507	A1508	C1509	C1510	G1511	U1512	A1513	G1514	G1515	G1516	G1517	A1518	A1519	C1520	C1521	U1522	G1523	C1524	G1525	G1526	U1527	U1528	G1529	G1530	A1531	U1532	C1533	A1534
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	25631	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Weiner filter	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3800	Depositor
Magnification	59000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	4.704	Depositor
Minimum map value	-7.202	Depositor
Average map value	-4.377	Depositor
Map value standard deviation	0.601	Depositor
Recommended contour level	-2.3	Depositor
Map size ($\text{\AA}$)	375.0, 375.0, 375.0	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	3.00, 3.00, 3.00	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	2.07	851/36831 (2.3%)	2.10	2008/57458 (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	956

All (851) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	896	C	P-O5'	-9.89	1.45	1.59
1	N	245	U	C5'-C4'	9.70	1.65	1.51
1	N	711	G	C2'-C1'	-9.32	1.39	1.53
1	N	79	G	C5'-C4'	9.28	1.65	1.51
1	N	1433	A	C1'-N9	9.27	1.61	1.48
1	N	1170	A	C3'-C2'	-9.00	1.39	1.52
1	N	1240	U	C5'-C4'	8.83	1.64	1.51
1	N	1301	U	C1'-N1	8.79	1.60	1.47
1	N	273	U	C1'-N1	8.77	1.61	1.48
1	N	244	U	C1'-N1	8.69	1.60	1.47
1	N	1447	A	C2'-C1'	-8.69	1.40	1.53
1	N	1296	C	C2'-C1'	-8.68	1.40	1.53
1	N	269	C	C4'-O4'	8.68	1.58	1.45
1	N	466	A	C4'-C3'	8.64	1.65	1.52
1	N	527	G	C5'-C4'	8.64	1.64	1.51
1	N	269	C	P-O5'	-8.54	1.47	1.59
1	N	1137	C	C1'-N1	8.53	1.60	1.47
1	N	1252	A	C5'-C4'	8.53	1.64	1.51
1	N	1357	A	C2'-C1'	-8.50	1.40	1.53
1	N	95	C	C3'-O3'	8.50	1.54	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1312	G	C5'-C4'	8.36	1.63	1.51
1	N	118	U	C1'-N1	8.35	1.60	1.48
1	N	909	A	O3'-P	-8.27	1.48	1.61
1	N	472	U	O3'-P	-8.20	1.48	1.61
1	N	134	G	C4'-C3'	8.20	1.64	1.52
1	N	573	A	C3'-C2'	8.17	1.65	1.52
1	N	1201	A	C1'-N9	8.13	1.59	1.47
1	N	303	A	C5'-C4'	8.12	1.63	1.51
1	N	381	C	C5'-C4'	8.08	1.63	1.51
1	N	411	A	C5'-C4'	8.05	1.63	1.51
1	N	566	G	P-O5'	-8.04	1.47	1.59
1	N	1021	A	O4'-C1'	8.04	1.53	1.41
1	N	936	C	O5'-C5'	8.03	1.54	1.42
1	N	1242	G	P-O5'	-7.97	1.47	1.59
1	N	1038	C	O3'-P	-7.92	1.49	1.61
1	N	509	A	O3'-P	-7.91	1.49	1.61
1	N	1443	C	C1'-N1	7.91	1.60	1.48
1	N	98	A	P-O5'	-7.90	1.47	1.59
1	N	311	C	C3'-O3'	7.83	1.53	1.42
1	N	422	C	C5'-C4'	7.81	1.63	1.51
1	N	1161	C	C5'-C4'	7.80	1.62	1.51
1	N	63	C	O3'-P	-7.80	1.49	1.61
1	N	582	C	C4'-C3'	7.74	1.64	1.52
1	N	1042	A	P-O5'	-7.69	1.48	1.59
1	N	87	C	C3'-C2'	7.68	1.64	1.52
1	N	321	A	C1'-N9	-7.67	1.36	1.48
1	N	1403	C	C2'-C1'	-7.67	1.41	1.53
1	N	700	G	C2'-C1'	-7.65	1.41	1.53
1	N	788	U	C2'-C1'	-7.65	1.41	1.53
1	N	849	G	C1'-N9	7.63	1.59	1.48
1	N	1151	A	C5'-C4'	7.63	1.62	1.51
1	N	827	U	C5'-C4'	7.62	1.62	1.51
1	N	734	G	C1'-N9	7.61	1.59	1.48
1	N	426	U	P-O5'	-7.60	1.48	1.59
1	N	492	C	C4'-C3'	7.56	1.63	1.52
1	N	256	U	P-O5'	-7.56	1.48	1.59
1	N	189	A	C2'-C1'	-7.55	1.42	1.53
1	N	851	G	C4'-C3'	-7.53	1.41	1.52
1	N	513	C	C1'-N1	7.50	1.59	1.48
1	N	205	A	C1'-N9	7.49	1.59	1.48
1	N	1316	G	C5'-C4'	7.46	1.62	1.51
1	N	186	C	C1'-N1	7.44	1.59	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1331	G	O3'-P	-7.43	1.50	1.61
1	N	1497	G	C5'-C4'	7.41	1.62	1.51
1	N	507	C	C1'-N1	7.39	1.59	1.48
1	N	49	U	C3'-C2'	7.38	1.63	1.52
1	N	163	C	C2'-C1'	-7.38	1.42	1.53
1	N	1132	C	O3'-P	-7.38	1.50	1.61
1	N	1439	G	C1'-N9	7.38	1.59	1.48
1	N	266	G	O3'-P	-7.37	1.50	1.61
1	N	1195	C	O5'-C5'	7.37	1.53	1.42
1	N	961	U	C1'-N1	7.36	1.59	1.48
1	N	348	G	O3'-P	-7.35	1.50	1.61
1	N	868	C	C1'-N1	7.35	1.59	1.48
1	N	90	C	O3'-P	-7.33	1.50	1.61
1	N	760	G	C1'-N9	7.31	1.58	1.48
1	N	428	G	C3'-O3'	-7.30	1.32	1.43
1	N	1335	U	O4'-C1'	-7.28	1.31	1.42
1	N	1210	C	C5'-C4'	7.27	1.62	1.51
1	N	299	G	C5'-C4'	7.27	1.62	1.51
1	N	884	U	C4'-C3'	7.26	1.64	1.53
1	N	620	C	C1'-N1	7.25	1.59	1.48
1	N	941	G	O4'-C1'	7.24	1.52	1.41
1	N	829	G	C5'-C4'	7.22	1.62	1.51
1	N	990	C	O4'-C1'	7.21	1.52	1.41
1	N	347	G	C4'-O4'	7.20	1.56	1.45
1	N	198	G	C4'-C3'	7.19	1.63	1.52
1	N	1053	G	C1'-N9	7.18	1.58	1.48
1	N	714	G	C4'-C3'	7.17	1.63	1.52
1	N	126	G	C5'-C4'	7.17	1.62	1.51
1	N	1023	U	C1'-N1	7.14	1.59	1.48
1	N	857	C	C4'-C3'	7.13	1.63	1.52
1	N	629	A	C3'-C2'	7.12	1.63	1.52
1	N	630	A	O3'-P	-7.11	1.50	1.61
1	N	1118	U	C4'-O4'	7.09	1.56	1.45
1	N	1528	U	C4'-C3'	7.08	1.63	1.53
1	N	948	C	C1'-N1	7.07	1.59	1.48
1	N	85	U	C2'-C1'	-7.06	1.42	1.53
1	N	1114	C	C1'-N1	7.06	1.59	1.48
1	N	282	A	O3'-P	-7.05	1.50	1.61
1	N	1494	G	C5'-C4'	7.03	1.61	1.51
1	N	484	G	O3'-P	-7.02	1.50	1.61
1	N	1297	G	C5'-C4'	6.99	1.61	1.51
1	N	861	G	C2'-C1'	-6.99	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	758	C	C3'-O3'	6.98	1.52	1.42
1	N	1269	A	C2'-C1'	-6.98	1.42	1.53
1	N	632	U	C4'-C3'	6.96	1.62	1.52
1	N	934	C	C2'-C1'	-6.96	1.42	1.53
1	N	970	C	C4'-O4'	6.96	1.56	1.45
1	N	235	C	C2'-C1'	-6.95	1.43	1.53
1	N	106	C	C5'-C4'	6.95	1.61	1.51
1	N	1485	U	C3'-O3'	6.94	1.52	1.42
1	N	665	A	C1'-N9	6.94	1.58	1.48
1	N	120	A	C4'-C3'	6.94	1.62	1.52
1	N	1015	G	C4'-C3'	6.92	1.62	1.52
1	N	1302	C	C4'-C3'	6.92	1.62	1.52
1	N	570	G	C5'-C4'	6.90	1.61	1.51
1	N	1462	C	C5'-C4'	6.90	1.61	1.51
1	N	29	U	P-O5'	-6.88	1.49	1.59
1	N	1303	C	C3'-O3'	6.88	1.52	1.42
1	N	556	C	C2'-C1'	-6.88	1.43	1.53
1	N	776	G	N9-C4	-6.88	1.24	1.38
1	N	957	U	C4'-C3'	-6.87	1.42	1.52
1	N	354	G	O3'-P	-6.86	1.50	1.61
1	N	459	A	C5'-C4'	6.86	1.61	1.51
1	N	424	G	C3'-C2'	6.85	1.63	1.52
1	N	337	G	O4'-C1'	-6.85	1.31	1.41
1	N	1102	A	C2'-C1'	-6.84	1.43	1.53
1	N	738	C	C4-N4	6.82	1.47	1.33
1	N	834	U	C3'-C2'	6.80	1.62	1.52
1	N	239	U	C2'-C1'	6.80	1.63	1.53
1	N	1160	G	C4'-C3'	6.80	1.62	1.52
1	N	847	G	C4'-C3'	6.79	1.62	1.52
1	N	790	A	C4'-C3'	6.76	1.62	1.52
1	N	191	G	C4'-C3'	6.75	1.62	1.52
1	N	555	U	C5'-C4'	6.75	1.61	1.51
1	N	397	A	C3'-O3'	6.75	1.52	1.42
1	N	1061	G	C2-N2	6.75	1.48	1.34
1	N	866	C	P-O5'	-6.75	1.49	1.59
1	N	161	A	O5'-C5'	6.74	1.52	1.42
1	N	1183	U	C5'-C4'	6.74	1.61	1.51
1	N	29	U	C2'-O2'	-6.73	1.32	1.42
1	N	691	G	C2'-C1'	-6.73	1.43	1.53
1	N	804	U	C3'-O3'	6.73	1.52	1.42
1	N	553	A	O3'-P	-6.72	1.51	1.61
1	N	767	A	P-O5'	-6.70	1.49	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	80	A	C5'-C4'	6.68	1.61	1.51
1	N	1190	G	C3'-O3'	6.68	1.52	1.42
1	N	141	G	C4'-C3'	6.67	1.62	1.52
1	N	160	A	C1'-N9	6.67	1.57	1.48
1	N	528	C	C5'-C4'	6.67	1.61	1.51
1	N	170	U	C1'-N1	6.66	1.58	1.48
1	N	158	G	C5'-C4'	6.66	1.61	1.51
1	N	772	U	C4'-O4'	6.65	1.55	1.45
1	N	1331	G	C2'-C1'	-6.65	1.43	1.53
1	N	1136	C	O3'-P	-6.64	1.51	1.61
1	N	508	U	C1'-N1	6.64	1.57	1.47
1	N	582	C	C1'-N1	6.64	1.58	1.48
1	N	1289	A	C4'-C3'	6.64	1.62	1.52
1	N	793	U	P-O5'	-6.63	1.49	1.59
1	N	263	A	C2'-C1'	-6.62	1.43	1.53
1	N	1219	A	C4'-O4'	-6.62	1.35	1.45
1	N	569	C	C3'-O3'	6.62	1.52	1.42
1	N	557	G	C2'-C1'	-6.62	1.43	1.53
1	N	1119	C	O4'-C1'	6.62	1.51	1.41
1	N	1372	U	C1'-N1	6.61	1.58	1.48
1	N	905	U	C3'-O3'	6.60	1.52	1.42
1	N	437	U	C2'-C1'	-6.59	1.43	1.53
1	N	1316	G	O3'-P	-6.59	1.51	1.61
1	N	949	A	C3'-C2'	-6.59	1.42	1.52
1	N	773	G	C4'-O4'	6.57	1.55	1.45
1	N	604	G	C2'-C1'	-6.57	1.43	1.53
1	N	682	G	C5'-C4'	6.57	1.61	1.51
1	N	1036	A	O3'-P	-6.56	1.51	1.61
1	N	1289	A	C1'-N9	6.56	1.57	1.48
1	N	1213	A	C1'-N9	6.55	1.57	1.48
1	N	1482	G	C4'-C3'	6.55	1.62	1.52
1	N	1522	U	C3'-O3'	6.55	1.51	1.42
1	N	82	G	C2'-C1'	-6.54	1.43	1.53
1	N	589	U	C5'-C4'	6.54	1.61	1.51
1	N	879	C	C2'-C1'	-6.54	1.43	1.53
1	N	767	A	C4'-O4'	6.53	1.55	1.45
1	N	103	U	C3'-C2'	-6.52	1.43	1.52
1	N	1163	A	P-O5'	-6.52	1.50	1.59
1	N	1000	A	C5'-C4'	6.52	1.61	1.51
1	N	744	C	C5'-C4'	6.51	1.61	1.51
1	N	248	C	O5'-C5'	6.51	1.52	1.42
1	N	1374	A	C5'-C4'	6.50	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1282	C	C1'-N1	6.49	1.58	1.48
1	N	1239	A	C4'-C3'	6.49	1.62	1.53
1	N	1329	A	C5'-C4'	6.48	1.60	1.51
1	N	997	U	C4'-C3'	6.47	1.62	1.52
1	N	1521	C	O5'-C5'	6.47	1.52	1.42
1	N	1297	G	C2'-C1'	-6.47	1.43	1.53
1	N	1169	A	C1'-N9	6.46	1.57	1.48
1	N	64	G	C1'-N9	6.45	1.57	1.48
1	N	207	C	C4'-C3'	-6.45	1.42	1.52
1	N	574	A	P-O5'	-6.44	1.50	1.59
1	N	1416	G	C3'-O3'	6.44	1.51	1.42
1	N	294	U	C2'-C1'	-6.44	1.43	1.53
1	N	1490	U	C1'-N1	6.44	1.58	1.48
1	N	573	A	C4'-C3'	6.43	1.62	1.52
1	N	271	C	P-O5'	-6.43	1.50	1.59
1	N	1087	G	O5'-C5'	6.42	1.52	1.42
1	N	304	U	O4'-C1'	6.42	1.51	1.41
1	N	994	A	C5'-C4'	6.41	1.60	1.51
1	N	1377	A	O3'-P	-6.41	1.51	1.61
1	N	763	G	P-O5'	-6.40	1.50	1.59
1	N	424	G	C4'-O4'	6.40	1.55	1.45
1	N	502	A	P-O5'	-6.40	1.50	1.59
1	N	1491	G	C5'-C4'	6.39	1.60	1.51
1	N	1365	G	O3'-P	-6.39	1.51	1.61
1	N	93	U	C1'-N1	6.39	1.58	1.48
1	N	1051	C	C1'-N1	6.39	1.58	1.48
1	N	249	U	C4'-C3'	6.38	1.62	1.52
1	N	148	G	O5'-C5'	6.38	1.52	1.42
1	N	1059	C	C1'-N1	6.38	1.58	1.48
1	N	1182	G	C1'-N9	6.38	1.56	1.47
1	N	1316	G	C2'-C1'	-6.38	1.43	1.53
1	N	797	C	C2'-C1'	-6.38	1.43	1.53
1	N	678	U	P-O5'	-6.37	1.50	1.59
1	N	1450	U	C1'-N1	6.36	1.57	1.48
1	N	1350	A	C5'-C4'	6.36	1.60	1.51
1	N	1075	U	C1'-N1	6.35	1.57	1.48
1	N	1126	U	C4'-O4'	6.35	1.55	1.45
1	N	1250	A	C2'-C1'	-6.35	1.43	1.53
1	N	398	U	C2'-C1'	-6.35	1.43	1.53
1	N	695	A	P-O5'	-6.34	1.50	1.59
1	N	633	G	C2'-C1'	-6.33	1.43	1.53
1	N	283	U	C3'-O3'	6.32	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	682	G	O3'-P	-6.32	1.51	1.61
1	N	686	U	C5'-C4'	6.31	1.60	1.51
1	N	1279	G	C5'-C4'	6.31	1.60	1.51
1	N	438	U	O3'-P	-6.31	1.51	1.61
1	N	454	G	C3'-O3'	6.29	1.51	1.42
1	N	362	G	C2'-C1'	-6.27	1.44	1.53
1	N	1322	C	C2'-C1'	-6.26	1.43	1.53
1	N	491	G	C5'-C4'	6.26	1.60	1.51
1	N	162	A	C5'-C4'	6.25	1.60	1.51
1	N	1140	C	C1'-N1	6.25	1.57	1.48
1	N	808	C	O4'-C1'	6.25	1.51	1.41
1	N	1043	G	C4'-C3'	-6.24	1.43	1.52
1	N	223	A	C5'-C4'	6.22	1.60	1.51
1	N	368	U	C5'-C4'	6.22	1.60	1.51
1	N	52	C	C4'-O4'	6.22	1.54	1.45
1	N	553	A	C4'-C3'	-6.22	1.43	1.52
1	N	248	C	C2'-C1'	-6.22	1.44	1.53
1	N	999	C	O4'-C1'	-6.22	1.32	1.41
1	N	826	C	C1'-N1	-6.21	1.39	1.48
1	N	926	G	C2'-C1'	-6.21	1.44	1.53
1	N	66	A	C1'-N9	6.21	1.57	1.48
1	N	859	G	C1'-N9	6.21	1.57	1.48
1	N	813	U	O3'-P	-6.20	1.51	1.61
1	N	234	C	C4'-C3'	-6.20	1.43	1.52
1	N	64	G	C3'-O3'	6.20	1.51	1.42
1	N	1261	A	C5'-C4'	6.20	1.60	1.51
1	N	213	G	O5'-C5'	6.19	1.51	1.42
1	N	997	U	C2'-C1'	-6.19	1.44	1.53
1	N	217	C	C2'-C1'	-6.19	1.44	1.53
1	N	812	G	O3'-P	-6.17	1.51	1.61
1	N	974	A	C1'-N9	6.17	1.56	1.47
1	N	682	G	C4'-C3'	6.17	1.61	1.52
1	N	777	A	C2'-C1'	-6.17	1.44	1.53
1	N	774	G	O5'-C5'	6.16	1.51	1.42
1	N	634	C	C1'-N1	6.16	1.57	1.48
1	N	481	G	O3'-P	-6.15	1.51	1.61
1	N	1373	G	O3'-P	-6.15	1.51	1.61
1	N	30	U	O3'-P	-6.15	1.51	1.61
1	N	1431	A	O4'-C1'	6.15	1.50	1.41
1	N	43	C	C2'-O2'	-6.15	1.33	1.42
1	N	305	G	O3'-P	-6.15	1.51	1.61
1	N	428	G	C3'-C2'	6.15	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	469	C	C4'-O4'	-6.14	1.36	1.45
1	N	87	C	C1'-N1	6.14	1.57	1.48
1	N	1117	A	O3'-P	-6.14	1.51	1.61
1	N	776	G	P-O5'	-6.14	1.50	1.59
1	N	843	U	C4'-C3'	6.14	1.61	1.52
1	N	616	G	C2'-O2'	-6.12	1.33	1.42
1	N	740	U	C4'-O4'	-6.12	1.36	1.45
1	N	234	C	C1'-N1	6.12	1.57	1.48
1	N	323	U	P-O5'	-6.12	1.50	1.59
1	N	523	A	O4'-C1'	6.11	1.50	1.41
1	N	1086	U	C1'-N1	6.11	1.57	1.48
1	N	1101	A	C2'-C1'	-6.11	1.43	1.53
1	N	1501	C	C1'-N1	6.11	1.57	1.48
1	N	1200	C	C4'-C3'	6.10	1.61	1.52
1	N	174	A	C5'-C4'	6.10	1.60	1.51
1	N	1103	C	C2'-C1'	-6.10	1.44	1.53
1	N	253	A	P-O5'	-6.09	1.50	1.59
1	N	367	U	C3'-O3'	6.09	1.52	1.43
1	N	723	U	C5'-C4'	6.08	1.60	1.51
1	N	1010	U	P-O5'	-6.08	1.50	1.59
1	N	204	G	C4'-O4'	6.07	1.54	1.45
1	N	1409	C	C1'-N1	6.06	1.57	1.48
1	N	650	G	C1'-N9	6.06	1.57	1.48
1	N	1146	A	C4'-O4'	-6.06	1.36	1.45
1	N	751	U	C3'-O3'	6.05	1.51	1.42
1	N	471	U	O4'-C1'	6.05	1.50	1.41
1	N	1088	G	C5'-C4'	6.05	1.60	1.51
1	N	945	G	C1'-N9	6.04	1.57	1.48
1	N	1027	C	O4'-C1'	6.04	1.50	1.41
1	N	614	C	P-O5'	-6.04	1.50	1.59
1	N	347	G	P-O5'	-6.04	1.50	1.59
1	N	1134	G	O3'-P	-6.04	1.52	1.61
1	N	1221	G	C1'-N9	6.04	1.57	1.48
1	N	597	G	P-O5'	-6.04	1.50	1.59
1	N	998	C	C5'-C4'	6.04	1.60	1.51
1	N	161	A	N7-C5	-6.03	1.27	1.39
1	N	593	U	C5'-C4'	6.02	1.60	1.51
1	N	1240	U	O5'-C5'	6.02	1.51	1.42
1	N	1412	C	C4'-C3'	6.02	1.61	1.52
1	N	54	C	C1'-N1	6.02	1.57	1.48
1	N	610	U	O4'-C1'	6.02	1.50	1.41
1	N	208	U	O3'-P	-6.01	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	910	C	C5'-C4'	6.01	1.60	1.51
1	N	1458	G	O3'-P	-6.01	1.52	1.61
1	N	442	G	P-O5'	-6.01	1.50	1.59
1	N	716	A	C2'-C1'	-6.00	1.44	1.53
1	N	1501	C	C5'-C4'	6.00	1.60	1.51
1	N	673	A	C1'-N9	-5.99	1.39	1.48
1	N	1189	U	C4'-O4'	-5.99	1.36	1.45
1	N	662	U	C1'-N1	5.99	1.57	1.48
1	N	1292	G	C2'-O2'	-5.99	1.33	1.42
1	N	347	G	O3'-P	5.99	1.70	1.61
1	N	1104	G	C2'-C1'	-5.98	1.44	1.53
1	N	993	G	C2'-C1'	-5.98	1.44	1.53
1	N	333	U	C1'-N1	5.98	1.57	1.48
1	N	885	G	C2'-C1'	-5.97	1.44	1.53
1	N	1500	A	C2'-C1'	-5.97	1.44	1.53
1	N	126	G	C4'-O4'	-5.97	1.36	1.45
1	N	94	G	O3'-P	-5.97	1.52	1.61
1	N	1078	U	C1'-N1	5.97	1.57	1.48
1	N	607	A	C1'-N9	5.96	1.56	1.48
1	N	194	C	C4'-O4'	-5.96	1.36	1.45
1	N	363	A	C2'-C1'	-5.96	1.44	1.53
1	N	723	U	C3'-C2'	5.96	1.61	1.52
1	N	102	G	C2'-C1'	-5.96	1.44	1.53
1	N	264	C	O4'-C1'	5.96	1.50	1.41
1	N	913	A	O3'-P	-5.94	1.52	1.61
1	N	932	C	O3'-P	-5.94	1.52	1.61
1	N	200	G	O4'-C1'	5.94	1.50	1.41
1	N	66	A	C4'-C3'	5.94	1.61	1.52
1	N	429	U	C2'-C1'	-5.93	1.44	1.53
1	N	215	C	C1'-N1	5.93	1.57	1.48
1	N	264	C	P-O5'	-5.93	1.50	1.59
1	N	1396	A	O3'-P	-5.93	1.52	1.61
1	N	1103	C	O3'-P	-5.93	1.52	1.61
1	N	1439	G	C5'-C4'	5.93	1.60	1.51
1	N	1504	G	C1'-N9	5.93	1.55	1.47
1	N	967	C	C5'-C4'	5.92	1.60	1.51
1	N	877	G	P-O5'	-5.92	1.50	1.59
1	N	1074	G	P-O5'	-5.92	1.50	1.59
1	N	533	A	C3'-C2'	-5.92	1.44	1.52
1	N	654	G	P-O5'	-5.92	1.50	1.59
1	N	486	U	C3'-C2'	-5.91	1.43	1.52
1	N	439	U	C5'-C4'	5.91	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	684	U	C1'-N1	5.91	1.57	1.48
1	N	1220	G	P-O5'	-5.91	1.50	1.59
1	N	737	C	P-O5'	-5.90	1.50	1.59
1	N	1267	C	C1'-N1	5.90	1.57	1.48
1	N	895	G	N9-C4	-5.90	1.26	1.38
1	N	25	C	C4'-O4'	-5.89	1.36	1.45
1	N	302	G	O5'-C5'	5.89	1.51	1.42
1	N	24	U	C1'-N1	5.89	1.57	1.48
1	N	1292	G	O4'-C1'	5.89	1.50	1.41
1	N	1224	U	O5'-C5'	5.89	1.51	1.42
1	N	773	G	P-O5'	-5.89	1.50	1.59
1	N	31	G	C1'-N9	-5.88	1.38	1.47
1	N	1025	U	O3'-P	-5.88	1.52	1.61
1	N	522	C	C1'-N1	5.88	1.57	1.48
1	N	1467	C	C4-N4	5.88	1.45	1.33
1	N	324	G	C2'-C1'	-5.87	1.44	1.53
1	N	920	U	C2'-C1'	-5.87	1.44	1.53
1	N	51	A	C5'-C4'	5.87	1.60	1.51
1	N	1199	U	O4'-C1'	-5.87	1.32	1.41
1	N	1086	U	C5'-C4'	5.86	1.60	1.51
1	N	1320	C	C1'-N1	5.86	1.57	1.48
1	N	342	C	C2'-C1'	-5.86	1.44	1.53
1	N	280	C	O3'-P	-5.86	1.52	1.61
1	N	1091	U	O3'-P	-5.86	1.52	1.61
1	N	1114	C	P-O5'	-5.86	1.50	1.59
1	N	28	A	O5'-C5'	5.86	1.51	1.42
1	N	912	C	P-O5'	-5.86	1.50	1.59
1	N	473	U	C1'-N1	5.85	1.57	1.48
1	N	449	G	O3'-P	-5.85	1.52	1.61
1	N	672	U	C3'-O3'	5.85	1.50	1.42
1	N	153	C	O4'-C1'	5.84	1.50	1.41
1	N	464	U	O3'-P	-5.84	1.52	1.61
1	N	246	A	C4'-C3'	5.83	1.61	1.53
1	N	668	G	C2'-C1'	-5.83	1.44	1.53
1	N	347	G	C3'-C2'	5.83	1.61	1.52
1	N	862	C	C2'-O2'	-5.83	1.33	1.42
1	N	1510	C	O3'-P	-5.82	1.52	1.61
1	N	441	A	C5'-C4'	5.82	1.59	1.51
1	N	535	A	C5'-C4'	5.82	1.60	1.51
1	N	80	A	C3'-O3'	5.81	1.50	1.42
1	N	269	C	C4'-C3'	5.81	1.61	1.52
1	N	626	G	C4'-C3'	5.81	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	604	G	C5'-C4'	5.80	1.59	1.51
1	N	1327	C	C4'-C3'	-5.80	1.43	1.52
1	N	1345	U	C2'-C1'	-5.80	1.44	1.53
1	N	1239	A	O3'-P	-5.80	1.52	1.61
1	N	1278	G	C5'-C4'	5.80	1.60	1.51
1	N	1361	G	O5'-C5'	5.79	1.51	1.42
1	N	697	U	P-O5'	-5.78	1.51	1.59
1	N	1209	C	C2'-O2'	-5.78	1.33	1.42
1	N	1382	C	P-O5'	-5.78	1.51	1.59
1	N	545	C	C5'-C4'	5.78	1.59	1.51
1	N	736	C	C1'-N1	5.78	1.57	1.48
1	N	179	A	P-O5'	-5.78	1.51	1.59
1	N	261	U	O5'-C5'	5.78	1.51	1.42
1	N	140	U	C2'-O2'	-5.77	1.33	1.42
1	N	638	U	C1'-N1	5.76	1.57	1.48
1	N	297	G	P-O5'	-5.76	1.51	1.59
1	N	1150	A	P-O5'	-5.76	1.51	1.59
1	N	1237	C	C2'-C1'	-5.76	1.44	1.53
1	N	615	G	P-O5'	-5.75	1.51	1.59
1	N	1429	A	C4'-C3'	5.75	1.61	1.52
1	N	248	C	C1'-N1	5.75	1.57	1.48
1	N	198	G	C2'-C1'	-5.74	1.44	1.53
1	N	1377	A	C3'-C2'	-5.72	1.44	1.52
1	N	986	U	P-O5'	-5.72	1.51	1.59
1	N	1417	G	C3'-C2'	5.72	1.61	1.52
1	N	1137	C	P-O5'	-5.72	1.51	1.59
1	N	1364	U	C4'-C3'	5.72	1.61	1.53
1	N	828	U	C1'-N1	5.72	1.57	1.48
1	N	148	G	C4'-C3'	5.71	1.61	1.52
1	N	646	G	C3'-O3'	5.71	1.50	1.42
1	N	504	C	P-O5'	-5.71	1.51	1.59
1	N	1399	C	O3'-P	-5.71	1.52	1.61
1	N	551	U	P-O5'	-5.69	1.51	1.59
1	N	83	C	C5'-C4'	5.69	1.59	1.51
1	N	193	C	P-O5'	-5.69	1.51	1.59
1	N	707	U	C3'-O3'	5.69	1.50	1.42
1	N	151	A	C5'-C4'	5.69	1.59	1.51
1	N	1233	G	P-O5'	-5.69	1.51	1.59
1	N	246	A	C5'-C4'	5.68	1.59	1.51
1	N	1093	A	O3'-P	-5.68	1.52	1.61
1	N	219	U	C5'-C4'	5.68	1.59	1.51
1	N	1174	G	C5'-C4'	5.68	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1268	G	C2'-O2'	-5.68	1.33	1.42
1	N	16	A	C6-N6	5.67	1.45	1.33
1	N	242	G	C2'-C1'	-5.67	1.44	1.53
1	N	644	U	C4'-C3'	-5.67	1.44	1.52
1	N	136	C	C3'-O3'	5.67	1.50	1.42
1	N	558	G	C4'-O4'	5.67	1.54	1.45
1	N	710	G	O3'-P	-5.67	1.52	1.61
1	N	76	G	P-O5'	-5.66	1.51	1.59
1	N	273	U	P-O5'	-5.66	1.51	1.59
1	N	365	U	O4'-C1'	5.66	1.50	1.41
1	N	560	A	C2'-C1'	-5.66	1.44	1.53
1	N	1023	U	C2-N3	5.66	1.49	1.37
1	N	458	U	O5'-C5'	5.66	1.50	1.42
1	N	960	U	C1'-N1	5.66	1.56	1.48
1	N	973	G	C3'-C2'	5.64	1.61	1.52
1	N	59	A	P-O5'	-5.64	1.51	1.59
1	N	343	U	C4'-O4'	-5.64	1.37	1.45
1	N	890	G	C4'-C3'	5.64	1.61	1.53
1	N	1153	G	C3'-O3'	5.63	1.50	1.42
1	N	1218	C	C1'-N1	5.63	1.56	1.48
1	N	962	C	C1'-N1	5.63	1.56	1.48
1	N	1393	U	O3'-P	-5.63	1.52	1.61
1	N	512	U	C4'-O4'	5.63	1.53	1.45
1	N	91	U	O4'-C1'	5.63	1.50	1.41
1	N	1068	G	C5'-C4'	5.62	1.59	1.51
1	N	571	U	N3-C4	5.62	1.49	1.38
1	N	404	G	P-O5'	5.62	1.68	1.59
1	N	980	C	O4'-C1'	5.62	1.50	1.41
1	N	1417	G	C3'-O3'	-5.62	1.33	1.42
1	N	253	A	C2'-C1'	-5.61	1.45	1.53
1	N	465	A	P-O5'	-5.61	1.51	1.59
1	N	484	G	C4'-C3'	5.61	1.61	1.53
1	N	37	U	P-O5'	-5.60	1.51	1.59
1	N	1117	A	O4'-C1'	-5.60	1.33	1.41
1	N	69	G	O3'-P	5.60	1.69	1.61
1	N	1360	A	C2'-C1'	5.60	1.61	1.53
1	N	984	C	C2'-C1'	-5.59	1.45	1.53
1	N	1403	C	C4'-C3'	5.59	1.60	1.52
1	N	672	U	O4'-C1'	-5.59	1.33	1.41
1	N	1169	A	C2'-O2'	-5.59	1.34	1.42
1	N	16	A	C2'-C1'	-5.59	1.45	1.53
1	N	218	U	P-O5'	-5.59	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1417	G	C5'-C4'	5.59	1.59	1.51
1	N	1178	G	O3'-P	-5.59	1.52	1.61
1	N	1204	A	C4'-O4'	-5.59	1.37	1.45
1	N	580	C	C4'-C3'	5.58	1.60	1.52
1	N	1289	A	C5'-C4'	5.58	1.59	1.51
1	N	619	U	C2'-C1'	-5.58	1.45	1.53
1	N	636	U	C1'-N1	5.58	1.56	1.48
1	N	1187	G	O4'-C1'	-5.58	1.33	1.41
1	N	899	C	O4'-C1'	5.58	1.50	1.41
1	N	423	G	C4'-C3'	-5.57	1.44	1.52
1	N	1133	G	O4'-C1'	5.57	1.50	1.41
1	N	917	G	P-O5'	-5.57	1.51	1.59
1	N	990	C	C2'-C1'	-5.56	1.45	1.53
1	N	858	G	C5'-C4'	5.56	1.59	1.51
1	N	355	C	O3'-P	-5.56	1.52	1.61
1	N	1113	C	C1'-N1	5.56	1.56	1.48
1	N	1440	U	C5'-C4'	5.56	1.59	1.51
1	N	444	G	C1'-N9	5.56	1.56	1.48
1	N	1196	A	C1'-N9	5.55	1.56	1.48
1	N	339	C	C4'-C3'	5.55	1.60	1.52
1	N	828	U	C3'-O3'	5.55	1.50	1.42
1	N	1509	C	C4-N4	5.55	1.45	1.33
1	N	1274	A	C2'-O2'	-5.55	1.34	1.42
1	N	1379	G	C4'-C3'	5.55	1.60	1.52
1	N	256	U	C5'-C4'	5.54	1.59	1.51
1	N	117	G	C2'-C1'	-5.54	1.45	1.53
1	N	1480	A	C5'-C4'	5.54	1.59	1.51
1	N	916	U	C3'-C2'	-5.54	1.44	1.52
1	N	994	A	O4'-C1'	5.53	1.50	1.41
1	N	1472	U	C2-N3	5.53	1.48	1.37
1	N	165	G	C2'-C1'	-5.53	1.45	1.53
1	N	543	U	C1'-N1	5.53	1.56	1.48
1	N	1512	U	C5'-C4'	5.53	1.59	1.51
1	N	635	A	O3'-P	-5.52	1.52	1.61
1	N	1317	C	C4'-O4'	-5.52	1.37	1.45
1	N	375	U	O5'-C5'	5.52	1.50	1.42
1	N	97	G	C5'-C4'	5.52	1.59	1.51
1	N	116	A	C5'-C4'	5.52	1.59	1.51
1	N	661	G	C2'-C1'	5.52	1.61	1.53
1	N	304	U	C3'-O3'	5.52	1.50	1.42
1	N	369	G	C2'-C1'	-5.52	1.45	1.53
1	N	749	A	C4'-C3'	-5.50	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1504	G	C4'-C3'	5.50	1.61	1.53
1	N	503	C	C1'-N1	5.50	1.56	1.48
1	N	1299	A	O3'-P	-5.50	1.52	1.61
1	N	1012	A	N7-C5	-5.50	1.28	1.39
1	N	542	G	P-O5'	5.50	1.68	1.59
1	N	882	C	C3'-O3'	5.49	1.50	1.42
1	N	1342	C	C5'-C4'	5.49	1.59	1.51
1	N	177	G	P-O5'	-5.49	1.51	1.59
1	N	542	G	C2'-C1'	-5.49	1.45	1.53
1	N	847	G	C5'-C4'	5.49	1.59	1.51
1	N	1110	A	C3'-O3'	-5.48	1.33	1.42
1	N	1206	G	C4'-O4'	5.48	1.53	1.45
1	N	1107	C	C1'-N1	5.48	1.56	1.48
1	N	1380	U	C4'-O4'	5.47	1.53	1.45
1	N	1489	G	O4'-C1'	-5.47	1.33	1.41
1	N	275	G	N9-C4	5.47	1.48	1.38
1	N	622	A	C3'-O3'	5.47	1.50	1.42
1	N	811	C	O3'-P	-5.47	1.52	1.61
1	N	1224	U	C4'-O4'	5.46	1.53	1.45
1	N	726	C	C3'-O3'	5.46	1.50	1.42
1	N	1200	C	C2'-C1'	-5.46	1.45	1.53
1	N	309	A	C4'-C3'	5.45	1.60	1.52
1	N	259	G	C3'-C2'	5.45	1.60	1.52
1	N	448	A	C2'-C1'	-5.45	1.45	1.53
1	N	688	G	C1'-N9	5.44	1.56	1.48
1	N	549	C	P-O5'	-5.44	1.51	1.59
1	N	1441	A	C2'-O2'	-5.44	1.34	1.42
1	N	902	G	O3'-P	-5.44	1.52	1.61
1	N	1310	G	C4'-O4'	-5.44	1.37	1.45
1	N	1310	G	O4'-C1'	5.44	1.49	1.41
1	N	440	C	C4'-C3'	5.43	1.60	1.52
1	N	928	G	C4'-O4'	-5.43	1.37	1.45
1	N	1348	U	O4'-C1'	5.43	1.49	1.41
1	N	1254	A	C5'-C4'	5.43	1.59	1.51
1	N	5	U	C5'-C4'	5.43	1.59	1.51
1	N	613	C	C1'-N1	5.43	1.56	1.48
1	N	1484	C	C3'-O3'	5.43	1.50	1.42
1	N	609	A	C1'-N9	5.42	1.56	1.48
1	N	699	C	C4'-O4'	5.42	1.53	1.45
1	N	195	A	C4'-C3'	-5.42	1.44	1.52
1	N	373	A	C4'-C3'	5.42	1.60	1.52
1	N	537	G	C5'-C4'	5.42	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	670	G	C2'-C1'	-5.42	1.45	1.53
1	N	977	A	C6-N6	5.42	1.44	1.33
1	N	1195	C	C5'-C4'	5.42	1.59	1.51
1	N	1477	U	O4'-C1'	5.41	1.49	1.41
1	N	1449	C	C3'-C2'	-5.41	1.44	1.52
1	N	759	A	C4'-O4'	5.41	1.53	1.45
1	N	771	G	N7-C5	-5.41	1.28	1.39
1	N	268	U	C4'-C3'	5.41	1.60	1.52
1	N	513	C	P-O5'	-5.41	1.51	1.59
1	N	467	U	C5'-C4'	5.41	1.59	1.51
1	N	1294	G	C3'-O3'	5.40	1.50	1.42
1	N	365	U	C4'-O4'	5.40	1.53	1.45
1	N	73	C	O5'-C5'	5.40	1.50	1.42
1	N	969	A	O3'-P	-5.40	1.53	1.61
1	N	829	G	C4'-C3'	5.39	1.60	1.52
1	N	93	U	C5'-C4'	5.39	1.59	1.51
1	N	748	G	C5'-C4'	5.38	1.59	1.51
1	N	54	C	N1-C6	5.38	1.48	1.37
1	N	575	G	C1'-N9	5.38	1.55	1.47
1	N	746	A	C2'-C1'	-5.38	1.45	1.53
1	N	291	U	C3'-O3'	5.38	1.50	1.42
1	N	950	U	C3'-O3'	5.38	1.50	1.42
1	N	1065	U	O3'-P	-5.38	1.53	1.61
1	N	115	G	C4'-O4'	-5.38	1.37	1.45
1	N	895	G	P-O5'	-5.38	1.51	1.59
1	N	20	U	C2'-C1'	-5.38	1.45	1.53
1	N	673	A	C2'-C1'	-5.38	1.45	1.53
1	N	253	A	C3'-O3'	5.38	1.50	1.42
1	N	359	G	C3'-O3'	5.38	1.50	1.42
1	N	1175	G	C1'-N9	5.37	1.56	1.48
1	N	1179	A	P-O5'	-5.37	1.51	1.59
1	N	1266	G	C4'-O4'	5.37	1.53	1.45
1	N	1002	G	C5'-C4'	5.37	1.59	1.51
1	N	1165	U	C5'-C4'	5.37	1.59	1.51
1	N	1204	A	C2'-C1'	-5.37	1.45	1.53
1	N	10	A	C5'-C4'	5.36	1.59	1.51
1	N	1310	G	P-O5'	-5.36	1.51	1.59
1	N	205	A	C3'-O3'	5.36	1.50	1.42
1	N	28	A	C4'-C3'	5.36	1.60	1.52
1	N	1116	U	P-O5'	-5.36	1.51	1.59
1	N	842	U	C4'-C3'	5.35	1.61	1.53
1	N	418	C	C1'-N1	5.35	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	891	U	C5'-C4'	5.35	1.59	1.51
1	N	1010	U	C2'-C1'	-5.35	1.45	1.53
1	N	1213	A	C5'-C4'	5.35	1.59	1.51
1	N	1216	A	C4'-O4'	-5.35	1.37	1.45
1	N	1224	U	C4'-C3'	5.35	1.60	1.52
1	N	1512	U	O4'-C1'	5.35	1.49	1.41
1	N	1387	G	P-O5'	-5.35	1.51	1.59
1	N	715	A	C5'-C4'	5.34	1.59	1.51
1	N	218	U	C1'-N1	5.34	1.56	1.48
1	N	812	G	O4'-C1'	-5.34	1.33	1.42
1	N	825	A	O3'-P	-5.33	1.53	1.61
1	N	650	G	O3'-P	-5.33	1.53	1.61
1	N	776	G	O4'-C1'	5.33	1.49	1.41
1	N	1172	C	O3'-P	-5.33	1.53	1.61
1	N	1222	G	C2'-C1'	-5.33	1.45	1.53
1	N	945	G	O4'-C1'	5.33	1.49	1.41
1	N	1110	A	C5'-C4'	5.33	1.59	1.51
1	N	119	A	O3'-P	-5.32	1.53	1.61
1	N	638	U	C2'-C1'	-5.32	1.45	1.53
1	N	91	U	C2'-C1'	-5.32	1.45	1.53
1	N	960	U	O4'-C1'	-5.32	1.33	1.41
1	N	113	G	O4'-C1'	5.32	1.49	1.41
1	N	969	A	C3'-O3'	5.32	1.51	1.43
1	N	396	C	C4'-C3'	5.32	1.60	1.52
1	N	256	U	C1'-N1	5.31	1.56	1.48
1	N	1179	A	C3'-O3'	5.31	1.50	1.42
1	N	252	U	C5'-C4'	-5.31	1.43	1.51
1	N	1369	C	C3'-C2'	5.30	1.60	1.52
1	N	1060	U	P-O5'	-5.30	1.51	1.59
1	N	643	C	O4'-C1'	5.30	1.49	1.41
1	N	798	U	C2'-O2'	-5.30	1.34	1.42
1	N	909	A	P-O5'	-5.30	1.51	1.59
1	N	125	U	C4'-C3'	5.29	1.60	1.52
1	N	669	G	C1'-N9	5.29	1.55	1.48
1	N	79	G	C3'-O3'	5.29	1.50	1.42
1	N	1334	G	C3'-C2'	5.29	1.60	1.52
1	N	192	A	C3'-O3'	-5.29	1.34	1.42
1	N	1499	A	C3'-C2'	5.29	1.60	1.52
1	N	78	A	C1'-N9	5.28	1.55	1.48
1	N	1508	A	C3'-O3'	5.28	1.50	1.42
1	N	1226	C	O3'-P	-5.28	1.53	1.61
1	N	319	G	O3'-P	-5.28	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1378	C	C4'-C3'	5.28	1.60	1.52
1	N	1045	C	C1'-N1	5.28	1.56	1.48
1	N	1241	G	C5'-C4'	5.27	1.59	1.51
1	N	81	A	O4'-C1'	-5.27	1.34	1.42
1	N	127	G	C5'-C4'	5.27	1.59	1.51
1	N	1315	U	C3'-C2'	5.27	1.60	1.52
1	N	118	U	C4'-O4'	5.27	1.53	1.45
1	N	338	A	O3'-P	-5.26	1.53	1.61
1	N	805	C	P-O5'	-5.26	1.51	1.59
1	N	351	G	O3'-P	-5.26	1.53	1.61
1	N	1163	A	C4'-C3'	5.26	1.60	1.52
1	N	1468	A	O4'-C1'	5.26	1.49	1.41
1	N	108	G	C4'-O4'	-5.26	1.37	1.45
1	N	1027	C	C4'-C3'	5.26	1.60	1.52
1	N	1103	C	P-O5'	-5.26	1.51	1.59
1	N	44	A	O5'-C5'	5.25	1.50	1.42
1	N	3	A	N7-C5	-5.24	1.28	1.39
1	N	335	C	N1-C6	5.24	1.47	1.37
1	N	1256	A	O3'-P	5.24	1.69	1.61
1	N	453	G	P-O5'	-5.24	1.51	1.59
1	N	255	G	O4'-C1'	5.24	1.49	1.41
1	N	1118	U	C2'-C1'	-5.24	1.45	1.53
1	N	834	U	C5'-C4'	5.23	1.59	1.51
1	N	406	G	O3'-P	-5.23	1.53	1.61
1	N	959	A	C3'-O3'	5.23	1.50	1.42
1	N	11	G	C3'-O3'	5.23	1.50	1.42
1	N	212	G	C3'-O3'	5.23	1.50	1.42
1	N	578	C	C1'-N1	5.23	1.56	1.48
1	N	543	U	O3'-P	-5.22	1.53	1.61
1	N	1367	C	C5'-C4'	5.22	1.59	1.51
1	N	182	A	P-O5'	5.22	1.67	1.59
1	N	590	U	P-O5'	-5.22	1.51	1.59
1	N	604	G	P-O5'	-5.22	1.51	1.59
1	N	833	G	O4'-C1'	-5.22	1.33	1.41
1	N	1047	G	O3'-P	-5.22	1.53	1.61
1	N	1231	G	C2'-C1'	-5.22	1.45	1.53
1	N	30	U	C4'-O4'	5.21	1.53	1.45
1	N	817	C	O3'-P	-5.21	1.53	1.61
1	N	1525	G	O3'-P	-5.21	1.53	1.61
1	N	395	C	C4'-C3'	5.21	1.60	1.52
1	N	854	U	C2'-C1'	-5.21	1.45	1.53
1	N	900	A	C2'-C1'	-5.21	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	914	A	P-O5'	5.21	1.67	1.59
1	N	937	A	C5'-C4'	5.21	1.59	1.51
1	N	563	A	C3'-C2'	5.21	1.60	1.52
1	N	1041	G	O4'-C1'	5.21	1.49	1.41
1	N	1241	G	C3'-O3'	5.20	1.50	1.42
1	N	68	G	C4'-C3'	5.20	1.60	1.52
1	N	994	A	C4'-C3'	5.20	1.60	1.52
1	N	186	C	C2'-C1'	-5.20	1.45	1.53
1	N	1228	C	C5'-C4'	5.20	1.59	1.51
1	N	1241	G	C2-N3	5.20	1.43	1.32
1	N	604	G	O4'-C1'	5.19	1.49	1.41
1	N	843	U	C3'-O3'	5.19	1.50	1.42
1	N	772	U	N3-C4	5.19	1.48	1.38
1	N	910	C	C1'-N1	5.19	1.56	1.48
1	N	381	C	C4-N4	5.19	1.44	1.33
1	N	946	A	C2'-O2'	-5.19	1.34	1.42
1	N	305	G	O4'-C1'	-5.19	1.34	1.42
1	N	37	U	C2'-C1'	-5.18	1.45	1.53
1	N	292	G	C4'-C3'	5.18	1.60	1.52
1	N	300	A	C3'-C2'	-5.18	1.45	1.52
1	N	654	G	O3'-P	-5.18	1.53	1.61
1	N	1133	G	C1'-N9	5.18	1.55	1.48
1	N	396	C	C2'-O2'	-5.18	1.34	1.42
1	N	1024	G	C4'-C3'	5.18	1.60	1.52
1	N	1503	A	C2'-C1'	-5.18	1.45	1.53
1	N	1133	G	C2'-O2'	-5.18	1.34	1.42
1	N	218	U	C2'-O2'	-5.18	1.34	1.42
1	N	1119	C	C5'-C4'	5.18	1.59	1.51
1	N	1192	C	C2'-O2'	-5.17	1.34	1.42
1	N	1370	G	C1'-N9	-5.17	1.40	1.48
1	N	460	A	O3'-P	-5.17	1.53	1.61
1	N	1010	U	O5'-C5'	5.17	1.50	1.42
1	N	961	U	C3'-O3'	5.17	1.49	1.42
1	N	49	U	C4'-C3'	5.16	1.60	1.52
1	N	1098	C	P-O5'	-5.16	1.52	1.59
1	N	1237	C	O5'-C5'	5.16	1.50	1.42
1	N	904	U	C2'-C1'	-5.16	1.45	1.53
1	N	1337	G	C4'-C3'	5.16	1.60	1.52
1	N	862	C	P-O5'	-5.16	1.52	1.59
1	N	20	U	C4'-C3'	5.15	1.60	1.52
1	N	757	U	C4'-C3'	5.15	1.60	1.52
1	N	1158	C	O3'-P	-5.15	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	330	C	C4'-C3'	5.15	1.60	1.52
1	N	279	A	O3'-P	-5.15	1.53	1.61
1	N	700	G	C2-N3	5.15	1.43	1.32
1	N	662	U	O4'-C1'	5.15	1.49	1.41
1	N	690	G	C3'-O3'	5.14	1.49	1.42
1	N	691	G	C2'-O2'	-5.14	1.34	1.42
1	N	481	G	C6-N1	5.14	1.49	1.39
1	N	718	A	C1'-N9	5.14	1.55	1.48
1	N	621	A	C3'-O3'	5.14	1.49	1.42
1	N	501	C	C5'-C4'	5.13	1.58	1.51
1	N	1216	A	C3'-C2'	5.13	1.60	1.52
1	N	1491	G	P-O5'	-5.13	1.52	1.59
1	N	255	G	C2'-C1'	-5.13	1.45	1.53
1	N	296	U	C3'-O3'	5.13	1.49	1.42
1	N	465	A	C2'-C1'	-5.13	1.45	1.53
1	N	644	U	C1'-N1	5.13	1.56	1.48
1	N	1034	G	O5'-C5'	5.13	1.50	1.42
1	N	1453	G	C3'-O3'	-5.13	1.34	1.42
1	N	581	G	O5'-C5'	-5.13	1.34	1.42
1	N	1138	G	C2-N3	5.13	1.43	1.32
1	N	1160	G	C2-N3	5.13	1.43	1.32
1	N	438	U	P-O5'	-5.12	1.52	1.59
1	N	189	A	O5'-C5'	5.12	1.50	1.42
1	N	1327	C	P-O5'	-5.12	1.52	1.59
1	N	1331	G	P-O5'	-5.12	1.52	1.59
1	N	1222	G	O5'-C5'	5.12	1.50	1.42
1	N	517	G	O3'-P	-5.11	1.53	1.61
1	N	606	G	O5'-C5'	5.11	1.50	1.42
1	N	1057	G	N7-C5	-5.11	1.29	1.39
1	N	538	G	O3'-P	-5.11	1.53	1.61
1	N	1368	A	P-O5'	-5.11	1.52	1.59
1	N	343	U	C1'-N1	5.11	1.56	1.48
1	N	880	C	O4'-C1'	5.10	1.49	1.41
1	N	157	U	C1'-N1	5.10	1.56	1.48
1	N	819	A	C6-N6	5.10	1.44	1.33
1	N	666	G	O5'-C5'	5.10	1.50	1.42
1	N	1313	U	C2'-O2'	5.09	1.50	1.42
1	N	1426	G	C5'-C4'	5.09	1.58	1.51
1	N	986	U	C1'-N1	5.09	1.56	1.48
1	N	1227	A	C3'-O3'	5.09	1.49	1.42
1	N	1019	A	C3'-O3'	5.09	1.49	1.42
1	N	193	C	O4'-C1'	5.08	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	987	G	C4'-C3'	5.08	1.60	1.52
1	N	1054	C	C4-N4	5.08	1.44	1.33
1	N	366	A	C5-C4	5.08	1.49	1.38
1	N	761	G	O5'-C5'	5.08	1.50	1.42
1	N	1240	U	C1'-N1	5.08	1.56	1.48
1	N	317	U	O4'-C1'	5.07	1.49	1.41
1	N	387	U	C1'-N1	5.07	1.56	1.48
1	N	893	C	C1'-N1	5.07	1.56	1.48
1	N	1267	C	C5'-C4'	5.07	1.58	1.51
1	N	133	U	O4'-C1'	5.07	1.49	1.41
1	N	461	A	O3'-P	-5.07	1.53	1.61
1	N	835	U	C1'-N1	5.07	1.56	1.48
1	N	1140	C	C4'-O4'	5.07	1.53	1.45
1	N	99	C	O3'-P	-5.07	1.53	1.61
1	N	224	U	C5'-C4'	5.07	1.58	1.51
1	N	658	C	C4-N4	5.07	1.44	1.33
1	N	999	C	C3'-O3'	-5.07	1.34	1.42
1	N	267	C	C1'-N1	-5.07	1.40	1.48
1	N	341	C	P-O5'	-5.07	1.52	1.59
1	N	723	U	C4'-O4'	5.07	1.53	1.45
1	N	1353	G	C2-N2	5.07	1.44	1.34
1	N	1406	U	C4'-C3'	5.06	1.60	1.52
1	N	66	A	C4'-O4'	-5.06	1.38	1.45
1	N	208	U	C4'-C3'	5.06	1.60	1.52
1	N	74	A	C4'-C3'	5.05	1.60	1.52
1	N	107	G	O5'-C5'	5.05	1.50	1.42
1	N	220	G	C3'-O3'	5.05	1.49	1.42
1	N	1351	U	O5'-C5'	5.05	1.50	1.42
1	N	1362	A	O3'-P	-5.05	1.53	1.61
1	N	334	C	C3'-O3'	5.05	1.49	1.42
1	N	1465	A	P-O5'	-5.05	1.52	1.59
1	N	1487	G	O5'-C5'	5.05	1.50	1.42
1	N	249	U	C3'-O3'	5.05	1.49	1.42
1	N	81	A	C1'-N9	5.05	1.54	1.47
1	N	1079	G	C3'-C2'	-5.05	1.45	1.52
1	N	1070	U	C2'-C1'	5.05	1.60	1.53
1	N	1257	A	N7-C5	-5.04	1.29	1.39
1	N	234	C	C3'-C2'	5.04	1.60	1.52
1	N	520	A	C3'-C2'	-5.04	1.45	1.52
1	N	848	C	C2'-C1'	-5.04	1.45	1.53
1	N	913	A	P-O5'	-5.04	1.52	1.59
1	N	271	C	C4'-C3'	-5.04	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	933	G	C3'-O3'	5.04	1.49	1.42
1	N	1241	G	P-O5'	-5.04	1.52	1.59
1	N	413	G	C2-N3	5.03	1.42	1.32
1	N	942	G	C2'-C1'	-5.03	1.45	1.53
1	N	265	G	O3'-P	-5.03	1.53	1.61
1	N	766	A	P-O5'	-5.03	1.52	1.59
1	N	815	A	C6-N6	5.03	1.44	1.33
1	N	1192	C	P-O5'	-5.03	1.52	1.59
1	N	48	C	O4'-C1'	5.03	1.49	1.41
1	N	1411	C	C3'-C2'	5.03	1.60	1.52
1	N	421	U	C2'-C1'	-5.02	1.45	1.53
1	N	908	A	C1'-N9	5.02	1.55	1.48
1	N	424	G	C5'-C4'	5.02	1.58	1.51
1	N	1179	A	C2'-C1'	-5.02	1.45	1.53
1	N	1023	U	N3-C4	5.02	1.48	1.38
1	N	1348	U	C5'-C4'	5.02	1.58	1.51
1	N	592	G	C1'-N9	5.02	1.55	1.48
1	N	838	G	C5'-C4'	5.01	1.58	1.51
1	N	1095	U	C4'-O4'	5.01	1.53	1.45
1	N	1132	C	C1'-N1	5.01	1.55	1.48
1	N	330	C	O3'-P	-5.01	1.53	1.61
1	N	1122	U	C3'-O3'	5.01	1.49	1.42
1	N	599	C	C3'-O3'	5.01	1.49	1.42
1	N	692	U	C4'-C3'	5.01	1.60	1.52
1	N	1259	C	C1'-N1	5.01	1.55	1.48
1	N	384	G	C2'-C1'	-5.01	1.45	1.53
1	N	552	U	C3'-C2'	-5.01	1.45	1.52
1	N	1038	C	C4'-C3'	5.01	1.60	1.52
1	N	1045	C	O3'-P	-5.01	1.53	1.61
1	N	658	C	C1'-N1	5.00	1.55	1.48
1	N	132	C	O3'-P	-5.00	1.53	1.61
1	N	196	A	C3'-C2'	5.00	1.60	1.52
1	N	1221	G	O3'-P	-5.00	1.53	1.61

All (2008) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	438	U	P-O3'-C3'	23.36	155.24	120.20
1	N	547	A	P-O3'-C3'	18.06	147.28	120.20
1	N	184	G	P-O5'-C5'	17.93	147.79	120.90
1	N	264	C	P-O5'-C5'	17.49	147.14	120.90
1	N	776	G	P-O5'-C5'	17.36	146.94	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	484	G	P-O3'-C3'	16.95	145.63	120.20
1	N	93	U	P-O5'-C5'	16.88	146.22	120.90
1	N	119	A	P-O3'-C3'	16.71	145.27	120.20
1	N	950	U	P-O5'-C5'	16.71	145.97	120.90
1	N	94	G	P-O3'-C3'	16.69	145.24	120.20
1	N	1285	A	P-O3'-C3'	15.57	143.56	120.20
1	N	895	G	P-O5'-C5'	15.51	144.16	120.90
1	N	535	A	P-O3'-C3'	15.16	142.94	120.20
1	N	896	C	P-O5'-C5'	15.14	143.62	120.90
1	N	47	C	P-O3'-C3'	14.32	141.68	120.20
1	N	1242	G	P-O5'-C5'	14.28	142.32	120.90
1	N	982	U	P-O3'-C3'	14.13	141.39	120.20
1	N	185	U	P-O5'-C5'	14.11	142.07	120.90
1	N	1248	A	P-O5'-C5'	14.03	141.95	120.90
1	N	1362	A	P-O3'-C3'	13.93	141.09	120.20
1	N	1315	U	P-O5'-C5'	13.88	141.72	120.90
1	N	1201	A	P-O3'-C3'	13.77	140.85	120.20
1	N	115	G	P-O3'-C3'	13.62	140.63	120.20
1	N	515	G	P-O5'-C5'	13.62	141.33	120.90
1	N	1530	G	P-O3'-C3'	13.44	140.36	120.20
1	N	1064	G	C5'-C4'-C3'	13.23	135.05	115.20
1	N	605	U	P-O3'-C3'	13.19	139.98	120.20
1	N	557	G	P-O3'-C3'	13.12	139.88	120.20
1	N	464	U	P-O3'-C3'	13.11	139.86	120.20
1	N	1319	A	P-O3'-C3'	12.97	139.65	120.20
1	N	1531	A	P-O5'-C5'	12.70	139.94	120.90
1	N	1101	A	P-O3'-C3'	12.35	138.73	120.20
1	N	486	U	P-O5'-C5'	-12.30	102.46	120.90
1	N	1336	C	C2'-C3'-O3'	12.22	127.83	109.50
1	N	199	A	P-O5'-C5'	12.12	139.09	120.90
1	N	1399	C	P-O3'-C3'	12.01	138.21	120.20
1	N	1114	C	P-O5'-C5'	11.81	138.62	120.90
1	N	1226	C	P-O3'-C3'	11.80	137.90	120.20
1	N	575	G	P-O3'-C3'	11.79	137.88	120.20
1	N	1086	U	O5'-C5'-C4'	11.78	129.17	111.50
1	N	120	A	P-O3'-C3'	11.77	137.85	120.20
1	N	1117	A	P-O5'-C5'	11.76	138.54	120.90
1	N	1380	U	P-O3'-C3'	11.70	137.74	120.20
1	N	51	A	P-O3'-C3'	11.69	137.74	120.20
1	N	495	A	P-O3'-C3'	11.54	137.51	120.20
1	N	210	C	P-O3'-C3'	11.53	137.49	120.20
1	N	511	C	P-O3'-C3'	11.51	137.47	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	913	A	P-O3'-C3'	11.46	137.40	120.20
1	N	658	C	O4'-C4'-C3'	-11.35	92.65	104.00
1	N	1331	G	P-O5'-C5'	11.31	137.86	120.90
1	N	109	A	P-O3'-C3'	11.29	137.14	120.20
1	N	1236	A	P-O3'-C3'	11.09	136.83	120.20
1	N	176	C	P-O5'-C5'	11.04	137.46	120.90
1	N	172	A	C4'-C3'-O3'	-10.86	96.71	113.00
1	N	1088	G	P-O5'-C5'	10.83	137.15	120.90
1	N	172	A	P-O3'-C3'	10.79	136.39	120.20
1	N	1283	U	P-O5'-C5'	10.76	137.04	120.90
1	N	866	C	P-O5'-C5'	10.74	137.01	120.90
1	N	90	C	P-O5'-C5'	10.73	137.00	120.90
1	N	372	C	P-O3'-C3'	10.72	136.29	120.20
1	N	344	A	P-O5'-C5'	10.69	136.94	120.90
1	N	793	U	P-O3'-C3'	10.64	136.15	120.20
1	N	674	G	P-O5'-C5'	10.54	136.72	120.90
1	N	991	U	P-O3'-C3'	10.35	135.73	120.20
1	N	1144	G	P-O3'-C3'	10.31	135.66	120.20
1	N	1086	U	C5'-C4'-C3'	-10.30	100.55	116.00
1	N	1529	G	P-O3'-C3'	10.26	135.59	120.20
1	N	677	U	P-O5'-C5'	10.22	136.23	120.90
1	N	718	A	P-O3'-C3'	10.21	135.52	120.20
1	N	440	C	P-O5'-C5'	10.20	136.19	120.90
1	N	633	G	P-O5'-C5'	10.15	136.13	120.90
1	N	1243	C	P-O5'-C5'	10.14	136.11	120.90
1	N	1365	G	P-O5'-C5'	-10.12	105.73	120.90
1	N	800	G	P-O5'-C5'	10.11	136.07	120.90
1	N	1064	G	O5'-C5'-C4'	10.11	126.86	111.70
1	N	423	G	P-O5'-C5'	10.10	136.04	120.90
1	N	530	G	P-O3'-C3'	10.05	135.28	120.20
1	N	764	C	C4'-C3'-C2'	-10.05	92.55	102.60
1	N	412	A	P-O3'-C3'	10.02	135.23	120.20
1	N	689	C	P-O5'-C5'	10.02	135.92	120.90
1	N	284	C	P-O5'-C5'	9.99	135.88	120.90
1	N	120	A	O4'-C1'-C2'	-9.98	97.62	107.60
1	N	1433	A	O3'-P-O5'	-9.96	89.06	104.00
1	N	1110	A	P-O3'-C3'	9.96	135.14	120.20
1	N	1170	A	C5'-C4'-C3'	9.96	130.94	116.00
1	N	88	U	P-O3'-C3'	9.94	135.10	120.20
1	N	464	U	P-O5'-C5'	9.94	135.80	120.90
1	N	1331	G	C5'-C4'-C3'	-9.92	101.12	116.00
1	N	1418	A	P-O5'-C5'	9.89	135.74	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	816	A	O5'-C5'-C4'	-9.88	96.68	111.50
1	N	323	U	P-O5'-C5'	9.87	135.71	120.90
1	N	481	G	O4'-C4'-C3'	-9.86	96.24	106.10
1	N	1115	U	P-O3'-C3'	-9.86	105.42	120.20
1	N	1091	U	P-O3'-C3'	9.70	134.74	120.20
1	N	50	A	P-O5'-C5'	9.66	135.39	120.90
1	N	273	U	C1'-O4'-C4'	9.65	119.55	109.90
1	N	460	A	P-O5'-C5'	9.65	135.37	120.90
1	N	317	U	C5'-C4'-C3'	-9.62	101.57	116.00
1	N	73	C	P-O5'-C5'	-9.60	106.51	120.90
1	N	517	G	P-O3'-C3'	9.59	134.58	120.20
1	N	1160	G	P-O5'-C5'	9.58	135.28	120.90
1	N	1449	C	P-O5'-C5'	9.58	135.27	120.90
1	N	1109	C	P-O3'-C3'	9.57	134.56	120.20
1	N	582	C	P-O5'-C5'	9.56	135.25	120.90
1	N	1063	C	C2'-C3'-O3'	9.54	123.81	109.50
1	N	274	A	C4'-C3'-O3'	9.53	123.69	109.40
1	N	1053	G	P-O3'-C3'	9.53	134.49	120.20
1	N	607	A	P-O5'-C5'	9.52	135.18	120.90
1	N	535	A	C2'-C3'-O3'	9.51	123.77	109.50
1	N	1173	U	O5'-C5'-C4'	-9.48	97.28	111.50
1	N	75	G	P-O5'-C5'	-9.46	106.70	120.90
1	N	264	C	P-O3'-C3'	9.47	134.40	120.20
1	N	1153	G	P-O3'-C3'	-9.46	106.00	120.20
1	N	562	U	C5'-C4'-C3'	9.45	130.18	116.00
1	N	90	C	P-O3'-C3'	9.42	134.34	120.20
1	N	4	U	C5'-C4'-C3'	-9.40	101.09	115.20
1	N	566	G	P-O3'-C3'	9.40	134.29	120.20
1	N	912	C	P-O5'-C5'	9.39	134.99	120.90
1	N	414	A	P-O5'-C5'	9.39	134.99	120.90
1	N	243	A	P-O3'-C3'	9.38	134.27	120.20
1	N	641	U	P-O3'-C3'	9.35	134.23	120.20
1	N	327	A	P-O3'-C3'	9.35	134.22	120.20
1	N	1362	A	C4'-C3'-C2'	-9.34	93.26	102.60
1	N	842	U	P-O5'-C5'	9.32	134.88	120.90
1	N	1395	C	C4'-C3'-O3'	-9.32	99.02	113.00
1	N	1492	A	P-O5'-C5'	9.29	134.83	120.90
1	N	860	A	P-O3'-C3'	9.26	134.10	120.20
1	N	1239	A	C4'-C3'-O3'	9.26	123.30	109.40
1	N	993	G	P-O3'-C3'	9.24	134.07	120.20
1	N	197	A	C5'-C4'-C3'	9.18	128.97	115.20
1	N	1363	A	P-O5'-C5'	9.18	134.67	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	156	C	O4'-C1'-C2'	-9.14	98.46	107.60
1	N	1485	U	P-O5'-C5'	9.13	134.60	120.90
1	N	215	C	P-O5'-C5'	9.11	134.57	120.90
1	N	23	C	P-O5'-C5'	9.10	134.56	120.90
1	N	49	U	O3'-P-O5'	-9.10	90.36	104.00
1	N	1125	U	P-O3'-C3'	9.07	133.81	120.20
1	N	958	A	P-O5'-C5'	9.04	134.47	120.90
1	N	858	G	C4'-C3'-C2'	-9.04	93.56	102.60
1	N	1502	A	C2'-C3'-O3'	9.03	123.05	109.50
1	N	1480	A	O4'-C1'-C2'	-9.01	98.59	107.60
1	N	281	G	P-O3'-C3'	9.01	133.71	120.20
1	N	1322	C	C2'-C3'-O3'	9.01	123.01	109.50
1	N	1173	U	P-O5'-C5'	9.00	134.40	120.90
1	N	94	G	P-O5'-C5'	-8.98	107.43	120.90
1	N	1406	U	C5'-C4'-C3'	-8.97	102.54	116.00
1	N	1241	G	P-O5'-C5'	8.97	134.35	120.90
1	N	1335	U	C2'-C3'-O3'	8.93	122.89	109.50
1	N	70	U	C2'-C3'-O3'	8.92	122.88	109.50
1	N	812	G	P-O3'-C3'	8.92	133.58	120.20
1	N	1236	A	C4'-C3'-O3'	-8.91	99.63	113.00
1	N	94	G	C3'-C2'-C1'	8.91	110.41	101.50
1	N	1381	U	C5'-C4'-C3'	-8.91	102.63	116.00
1	N	87	C	C5'-C4'-C3'	-8.90	102.66	116.00
1	N	140	U	C2'-C3'-O3'	8.86	126.99	113.70
1	N	246	A	P-O3'-C3'	8.86	133.49	120.20
1	N	1068	G	C5'-C4'-C3'	-8.81	102.78	116.00
1	N	496	A	C4'-C3'-C2'	8.81	111.41	102.60
1	N	98	A	C5'-C4'-C3'	-8.79	102.82	116.00
1	N	1362	A	O4'-C1'-N9	8.78	121.67	108.50
1	N	891	U	O4'-C1'-N1	8.77	121.65	108.50
1	N	992	U	C5'-C4'-C3'	8.75	128.33	115.20
1	N	316	C	C5'-C4'-C3'	-8.74	102.88	116.00
1	N	1370	G	C5'-C4'-C3'	-8.74	102.88	116.00
1	N	315	A	P-O5'-C5'	8.72	133.99	120.90
1	N	729	A	P-O5'-C5'	8.68	133.93	120.90
1	N	440	C	O5'-C5'-C4'	-8.66	98.50	111.50
1	N	447	G	P-O5'-C5'	8.66	133.89	120.90
1	N	264	C	C4'-C3'-C2'	-8.66	93.94	102.60
1	N	176	C	P-O3'-C3'	8.64	133.16	120.20
1	N	960	U	O4'-C1'-C2'	-8.63	98.97	107.60
1	N	519	C	O4'-C1'-N1	8.62	121.43	108.50
1	N	218	U	P-O5'-C5'	8.59	133.79	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	804	U	P-O3'-C3'	-8.59	107.31	120.20
1	N	251	G	C4'-C3'-C2'	-8.57	94.03	102.60
1	N	197	A	P-O3'-C3'	8.56	133.05	120.20
1	N	499	A	P-O3'-C3'	8.54	133.00	120.20
1	N	850	U	P-O5'-C5'	8.54	133.70	120.90
1	N	559	A	C4'-C3'-C2'	8.53	111.13	102.60
1	N	135	C	P-O3'-C3'	-8.51	107.43	120.20
1	N	366	A	C2'-C3'-O3'	8.51	122.26	109.50
1	N	1040	U	P-O5'-C5'	8.50	133.65	120.90
1	N	198	G	C5'-C4'-C3'	-8.49	103.26	116.00
1	N	805	C	P-O5'-C5'	8.48	133.63	120.90
1	N	204	G	O4'-C4'-C3'	-8.46	95.54	104.00
1	N	469	C	C5'-C4'-C3'	8.45	128.68	116.00
1	N	211	G	P-O3'-C3'	8.45	132.87	120.20
1	N	1042	A	P-O5'-C5'	8.44	133.56	120.90
1	N	915	A	C4'-C3'-C2'	-8.42	94.18	102.60
1	N	1049	U	C2'-C3'-O3'	8.42	122.13	109.50
1	N	246	A	P-O5'-C5'	8.40	133.50	120.90
1	N	1050	G	C5'-C4'-C3'	-8.40	103.40	116.00
1	N	513	C	O5'-C5'-C4'	-8.38	98.93	111.50
1	N	305	G	P-O3'-C3'	8.38	132.77	120.20
1	N	426	U	C2'-C3'-O3'	8.36	126.24	113.70
1	N	1399	C	O5'-C5'-C4'	-8.34	99.19	111.70
1	N	739	C	P-O5'-C5'	8.33	133.40	120.90
1	N	1241	G	C5'-C4'-C3'	-8.33	103.51	116.00
1	N	180	U	P-O5'-C5'	8.32	133.38	120.90
1	N	1239	A	O3'-P-O5'	8.31	116.46	104.00
1	N	1263	C	P-O5'-C5'	8.30	133.35	120.90
1	N	582	C	C4'-C3'-C2'	-8.29	94.31	102.60
1	N	1002	G	C4'-C3'-C2'	-8.29	94.31	102.60
1	N	956	U	C4'-C3'-C2'	-8.26	94.34	102.60
1	N	415	A	P-O5'-C5'	8.25	133.28	120.90
1	N	1323	G	O4'-C4'-C3'	-8.25	95.75	104.00
1	N	795	C	O4'-C1'-N1	8.24	120.86	108.50
1	N	40	C	O4'-C1'-N1	8.23	120.85	108.50
1	N	787	A	P-O5'-C5'	8.23	133.25	120.90
1	N	130	A	C4'-C3'-C2'	-8.23	94.37	102.60
1	N	972	C	C5'-C4'-C3'	-8.23	103.66	116.00
1	N	1046	A	P-O5'-C5'	-8.23	108.56	120.90
1	N	1045	C	O4'-C1'-N1	8.22	120.83	108.50
1	N	317	U	P-O5'-C5'	8.21	133.22	120.90
1	N	666	G	C5'-C4'-C3'	8.20	128.30	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1239	A	C2'-C3'-O3'	8.20	121.80	109.50
1	N	1303	C	P-O5'-C5'	8.20	133.20	120.90
1	N	473	U	P-O5'-C5'	8.20	133.19	120.90
1	N	467	U	C5'-C4'-C3'	8.19	128.29	116.00
1	N	886	G	C4'-C3'-C2'	-8.18	94.42	102.60
1	N	345	C	C4'-C3'-C2'	-8.16	94.44	102.60
1	N	812	G	O3'-P-O5'	-8.16	91.76	104.00
1	N	1291	U	P-O5'-C5'	8.16	133.14	120.90
1	N	1096	C	P-O5'-C5'	8.15	133.12	120.90
1	N	909	A	P-O5'-C5'	8.12	133.09	120.90
1	N	1462	C	O4'-C4'-C3'	-8.12	95.88	104.00
1	N	1380	U	C4'-C3'-C2'	-8.11	94.49	102.60
1	N	1042	A	O3'-P-O5'	-8.11	91.84	104.00
1	N	416	G	P-O5'-C5'	8.10	133.06	120.90
1	N	926	G	P-O3'-C3'	8.10	132.35	120.20
1	N	428	G	P-O3'-C3'	8.10	132.35	120.20
1	N	612	C	C4'-C3'-C2'	-8.10	94.50	102.60
1	N	547	A	C2'-C3'-O3'	8.09	121.63	109.50
1	N	813	U	O3'-P-O5'	-8.09	91.87	104.00
1	N	158	G	O4'-C4'-C3'	-8.08	95.92	104.00
1	N	591	U	P-O5'-C5'	8.08	133.03	120.90
1	N	107	G	P-O5'-C5'	-8.06	108.82	120.90
1	N	1166	G	P-O3'-C3'	8.04	132.27	120.20
1	N	792	A	O4'-C4'-C3'	-8.04	98.06	106.10
1	N	910	C	P-O5'-C5'	8.04	132.96	120.90
1	N	1363	A	C4'-C3'-C2'	-8.03	94.57	102.60
1	N	1432	G	C2'-C3'-O3'	8.03	121.55	109.50
1	N	407	U	P-O5'-C5'	8.02	132.93	120.90
1	N	1253	G	P-O3'-C3'	-8.02	108.18	120.20
1	N	1353	G	P-O3'-C3'	-8.01	108.19	120.20
1	N	1136	C	P-O5'-C5'	-8.00	108.90	120.90
1	N	1252	A	P-O3'-C3'	-8.00	108.20	120.20
1	N	271	C	P-O5'-C5'	8.00	132.89	120.90
1	N	1278	G	P-O3'-C3'	7.99	132.19	120.20
1	N	1125	U	O4'-C1'-N1	7.98	120.47	108.50
1	N	760	G	P-O5'-C5'	7.98	132.87	120.90
1	N	309	A	P-O3'-C3'	-7.96	108.27	120.20
1	N	662	U	O4'-C1'-N1	7.96	120.43	108.50
1	N	266	G	P-O3'-C3'	7.94	132.12	120.20
1	N	694	A	O3'-P-O5'	-7.93	92.10	104.00
1	N	1520	C	P-O5'-C5'	7.93	132.79	120.90
1	N	341	C	C4'-C3'-C2'	-7.92	94.68	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1358	U	C2'-C3'-O3'	7.92	121.39	109.50
1	N	120	A	O4'-C1'-N9	7.92	120.38	108.50
1	N	1274	A	P-O5'-C5'	7.91	132.76	120.90
1	N	198	G	C3'-C2'-C1'	7.91	109.21	101.30
1	N	249	U	C4'-C3'-C2'	-7.90	94.70	102.60
1	N	294	U	O3'-P-O5'	-7.90	92.15	104.00
1	N	93	U	O3'-P-O5'	7.90	115.85	104.00
1	N	256	U	O4'-C1'-C2'	-7.90	99.70	107.60
1	N	934	C	P-O3'-C3'	7.89	132.04	120.20
1	N	726	C	P-O5'-C5'	-7.89	109.07	120.90
1	N	514	C	C4'-C3'-C2'	-7.87	94.73	102.60
1	N	1140	C	O4'-C1'-N1	7.86	120.29	108.50
1	N	664	G	O3'-P-O5'	-7.85	92.23	104.00
1	N	582	C	P-O3'-C3'	-7.84	108.44	120.20
1	N	1469	C	P-O5'-C5'	-7.83	109.16	120.90
1	N	1159	U	P-O3'-C3'	-7.82	108.47	120.20
1	N	119	A	O3'-P-O5'	7.82	115.73	104.00
1	N	754	C	C4'-C3'-C2'	7.82	110.42	102.60
1	N	1250	A	P-O5'-C5'	7.81	132.62	120.90
1	N	702	A	O4'-C1'-N9	7.81	120.21	108.50
1	N	494	G	C5'-C4'-C3'	-7.80	104.29	116.00
1	N	726	C	P-O3'-C3'	-7.80	108.49	120.20
1	N	1011	C	P-O5'-C5'	7.80	132.60	120.90
1	N	798	U	C5'-C4'-C3'	7.80	127.70	116.00
1	N	1432	G	P-O3'-C3'	7.80	131.90	120.20
1	N	81	A	C5'-C4'-C3'	7.77	126.86	115.20
1	N	373	A	C5'-C4'-O4'	-7.77	98.15	109.80
1	N	801	U	C5'-C4'-C3'	7.75	127.63	116.00
1	N	103	U	O4'-C1'-C2'	-7.75	99.85	107.60
1	N	771	G	O3'-P-O5'	-7.74	92.39	104.00
1	N	769	G	O5'-C5'-C4'	-7.74	99.89	111.50
1	N	325	A	C5'-C4'-C3'	7.73	127.59	116.00
1	N	197	A	O4'-C1'-N9	7.72	119.78	108.20
1	N	801	U	P-O5'-C5'	-7.71	109.34	120.90
1	N	839	C	P-O5'-C5'	7.71	132.46	120.90
1	N	1296	C	C4'-C3'-C2'	7.70	110.30	102.60
1	N	1102	A	P-O5'-C5'	7.70	132.45	120.90
1	N	1151	A	C3'-C2'-C1'	7.70	109.00	101.30
1	N	905	U	P-O5'-C5'	7.69	132.44	120.90
1	N	14	U	O4'-C1'-N1	7.69	120.04	108.50
1	N	181	A	P-O3'-C3'	7.69	131.73	120.20
1	N	1282	C	C5'-C4'-C3'	-7.68	104.48	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1344	C	O4'-C1'-N1	7.67	120.01	108.50
1	N	1504	G	P-O3'-C3'	7.67	131.71	120.20
1	N	1118	U	C5'-C4'-C3'	7.67	127.50	116.00
1	N	210	C	O3'-P-O5'	-7.67	92.50	104.00
1	N	1173	U	C4'-C3'-C2'	-7.66	94.94	102.60
1	N	1111	A	C4'-C3'-C2'	-7.66	94.94	102.60
1	N	1331	G	P-O3'-C3'	7.65	131.68	120.20
1	N	274	A	C2'-C3'-O3'	7.65	120.98	109.50
1	N	1280	A	C2'-C3'-O3'	7.65	120.98	109.50
1	N	315	A	C2'-C3'-O3'	7.65	120.97	109.50
1	N	213	G	P-O5'-C5'	-7.64	109.43	120.90
1	N	1252	A	C5'-C4'-C3'	7.64	127.47	116.00
1	N	985	C	P-O5'-C5'	7.64	132.36	120.90
1	N	1094	G	O3'-P-O5'	-7.64	92.55	104.00
1	N	172	A	C2'-C3'-O3'	7.63	125.15	113.70
1	N	1196	A	P-O3'-C3'	7.62	131.63	120.20
1	N	1436	U	C5'-C4'-C3'	7.62	127.43	116.00
1	N	1533	C	P-O5'-C5'	7.62	132.33	120.90
1	N	446	G	C4'-C3'-C2'	-7.62	94.98	102.60
1	N	1023	U	C5'-C4'-C3'	-7.60	104.59	116.00
1	N	63	C	P-O3'-C3'	7.58	131.58	120.20
1	N	1061	G	P-O5'-C5'	7.58	132.27	120.90
1	N	155	A	P-O5'-C5'	7.57	132.25	120.90
1	N	862	C	O4'-C1'-N1	7.57	119.85	108.50
1	N	608	A	P-O3'-C3'	-7.56	108.86	120.20
1	N	541	G	C4'-C3'-C2'	-7.56	95.04	102.60
1	N	412	A	C4'-C3'-C2'	7.55	110.16	102.60
1	N	1043	G	O4'-C1'-C2'	-7.55	100.05	107.60
1	N	522	C	O4'-C1'-N1	7.55	119.82	108.50
1	N	114	U	O4'-C1'-N1	7.54	119.81	108.50
1	N	723	U	C1'-O4'-C4'	-7.54	102.36	109.90
1	N	790	A	C4'-C3'-C2'	-7.53	95.07	102.60
1	N	1282	C	P-O5'-C5'	7.53	132.20	120.90
1	N	477	C	P-O5'-C5'	7.53	132.20	120.90
1	N	17	U	O4'-C1'-N1	7.52	119.78	108.50
1	N	212	G	P-O3'-C3'	7.51	131.47	120.20
1	N	705	G	P-O5'-C5'	7.51	132.17	120.90
1	N	246	A	C2'-C3'-O3'	7.51	120.77	109.50
1	N	508	U	P-O3'-C3'	7.51	131.47	120.20
1	N	1129	C	C2'-C3'-O3'	7.50	120.75	109.50
1	N	1342	C	C4'-C3'-C2'	-7.50	95.10	102.60
1	N	1084	G	C4'-C3'-O3'	-7.49	101.76	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	145	G	C4'-C3'-C2'	-7.49	95.11	102.60
1	N	1101	A	C4'-C3'-C2'	7.49	110.09	102.60
1	N	289	G	C5'-C4'-C3'	-7.49	104.77	116.00
1	N	736	C	C4'-C3'-C2'	-7.48	95.12	102.60
1	N	125	U	P-O5'-C5'	7.48	132.12	120.90
1	N	1042	A	O5'-C5'-C4'	-7.47	100.29	111.50
1	N	1323	G	C2'-C3'-O3'	-7.47	102.49	113.70
1	N	115	G	C1'-O4'-C4'	7.47	117.17	109.70
1	N	547	A	C1'-O4'-C4'	-7.47	102.23	109.70
1	N	1390	U	C5'-C4'-C3'	7.46	127.19	116.00
1	N	256	U	P-O5'-C5'	7.46	132.08	120.90
1	N	1092	A	O4'-C1'-N9	7.45	119.68	108.50
1	N	1403	C	C5'-C4'-C3'	7.45	127.17	116.00
1	N	216	U	C4'-C3'-C2'	-7.45	95.15	102.60
1	N	840	C	P-O5'-C5'	7.44	132.06	120.90
1	N	930	C	O4'-C1'-N1	7.44	119.66	108.50
1	N	208	U	P-O3'-C3'	7.44	131.35	120.20
1	N	447	G	O4'-C1'-C2'	-7.43	100.17	107.60
1	N	914	A	C5'-C4'-C3'	-7.43	104.86	116.00
1	N	1085	U	P-O5'-C5'	7.43	132.04	120.90
1	N	281	G	C2'-C3'-O3'	7.42	120.62	109.50
1	N	1139	G	O3'-P-O5'	-7.42	92.88	104.00
1	N	1145	A	O3'-P-O5'	-7.41	92.89	104.00
1	N	1094	G	P-O3'-C3'	7.39	131.29	120.20
1	N	973	G	C4'-C3'-C2'	-7.39	95.21	102.60
1	N	905	U	C5'-C4'-C3'	-7.38	104.93	116.00
1	N	696	A	C3'-C2'-C1'	-7.38	93.92	101.30
1	N	923	A	P-O3'-C3'	7.38	131.27	120.20
1	N	1128	C	P-O5'-C5'	7.38	131.96	120.90
1	N	1041	G	P-O3'-C3'	-7.37	109.14	120.20
1	N	318	G	P-O3'-C3'	-7.37	109.14	120.20
1	N	351	G	C2'-C3'-O3'	7.37	120.56	109.50
1	N	1116	U	P-O3'-C3'	-7.36	109.16	120.20
1	N	9	G	O4'-C1'-C2'	-7.35	100.25	107.60
1	N	1395	C	O4'-C4'-C3'	-7.35	96.65	104.00
1	N	318	G	P-O5'-C5'	-7.35	109.88	120.90
1	N	878	A	P-O5'-C5'	7.34	131.91	120.90
1	N	1021	A	P-O3'-C3'	7.34	131.21	120.20
1	N	293	G	P-O5'-C5'	7.32	131.88	120.90
1	N	429	U	C2'-C3'-O3'	7.32	120.49	109.50
1	N	652	U	O4'-C4'-C3'	7.32	111.32	104.00
1	N	1075	U	O4'-C1'-C2'	-7.32	100.28	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	152	A	C5'-C4'-C3'	7.32	126.97	116.00
1	N	374	A	O4'-C1'-N9	7.32	119.47	108.50
1	N	893	C	O4'-C1'-C2'	-7.31	100.29	107.60
1	N	963	G	C5'-C4'-C3'	-7.31	105.04	116.00
1	N	194	C	C5'-C4'-C3'	-7.31	105.04	116.00
1	N	798	U	P-O5'-C5'	-7.31	109.94	120.90
1	N	442	G	P-O5'-C5'	7.31	131.86	120.90
1	N	351	G	P-O3'-C3'	7.30	131.15	120.20
1	N	1348	U	C5'-C4'-O4'	-7.30	98.85	109.80
1	N	652	U	O4'-C1'-N1	7.30	119.44	108.50
1	N	737	C	O4'-C1'-C2'	-7.29	100.31	107.60
1	N	1036	A	P-O3'-C3'	7.29	131.14	120.20
1	N	559	A	P-O3'-C3'	7.29	131.13	120.20
1	N	119	A	P-O5'-C5'	-7.28	109.98	120.90
1	N	1010	U	P-O5'-C5'	7.28	131.83	120.90
1	N	1483	A	O4'-C1'-N9	7.28	119.42	108.50
1	N	438	U	C2'-C3'-O3'	7.27	120.41	109.50
1	N	78	A	P-O3'-C3'	7.27	131.10	120.20
1	N	80	A	P-O3'-C3'	-7.26	109.30	120.20
1	N	1364	U	O4'-C1'-N1	7.26	119.10	108.20
1	N	255	G	O4'-C4'-C3'	-7.26	96.74	104.00
1	N	483	C	O4'-C1'-C2'	7.25	114.85	107.60
1	N	721	G	P-O3'-C3'	7.25	131.08	120.20
1	N	978	A	P-O3'-C3'	7.25	131.08	120.20
1	N	90	C	C5'-C4'-C3'	7.25	126.08	115.20
1	N	252	U	O3'-P-O5'	-7.25	93.12	104.00
1	N	201	G	C3'-C2'-C1'	7.25	108.55	101.30
1	N	1366	C	P-O5'-C5'	7.25	131.77	120.90
1	N	163	C	O4'-C4'-C3'	-7.25	96.75	104.00
1	N	339	C	O5'-C5'-C4'	-7.24	100.64	111.50
1	N	146	G	P-O5'-C5'	7.22	131.74	120.90
1	N	426	U	O5'-C5'-C4'	-7.22	100.67	111.50
1	N	657	U	O4'-C1'-C2'	-7.22	100.38	107.60
1	N	1335	U	O4'-C4'-C3'	-7.22	98.88	106.10
1	N	634	C	P-O5'-C5'	7.21	131.72	120.90
1	N	771	G	O4'-C1'-C2'	-7.21	100.39	107.60
1	N	1027	C	C5'-C4'-C3'	-7.21	105.19	116.00
1	N	657	U	C5'-C4'-C3'	7.21	126.81	116.00
1	N	856	C	C5'-C4'-C3'	7.20	126.81	116.00
1	N	535	A	O4'-C4'-C3'	-7.20	98.90	106.10
1	N	956	U	C3'-C2'-C1'	7.20	108.50	101.30
1	N	1413	A	O4'-C1'-N9	7.20	119.30	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1211	U	O4'-C4'-C3'	-7.20	98.90	106.10
1	N	1517	G	P-O5'-C5'	-7.19	110.11	120.90
1	N	106	C	C4'-C3'-C2'	7.19	109.79	102.60
1	N	817	C	P-O3'-C3'	7.17	130.96	120.20
1	N	41	G	P-O3'-C3'	-7.17	109.44	120.20
1	N	256	U	C4'-C3'-C2'	-7.17	95.43	102.60
1	N	701	U	P-O5'-C5'	7.16	131.64	120.90
1	N	669	G	P-O5'-C5'	7.16	131.63	120.90
1	N	423	G	O4'-C1'-N9	7.15	119.23	108.50
1	N	655	A	P-O5'-C5'	7.15	131.63	120.90
1	N	787	A	C5'-C4'-C3'	7.15	126.73	116.00
1	N	1496	C	P-O5'-C5'	7.13	131.60	120.90
1	N	502	A	C4'-C3'-C2'	-7.12	95.47	102.60
1	N	918	A	C4'-C3'-O3'	-7.12	102.31	113.00
1	N	928	G	C5'-C4'-C3'	-7.12	105.31	116.00
1	N	1346	A	P-O3'-C3'	7.12	130.88	120.20
1	N	1038	C	P-O3'-C3'	7.12	130.88	120.20
1	N	1020	G	O4'-C1'-C2'	-7.12	100.48	107.60
1	N	1258	G	O4'-C1'-N9	7.11	119.17	108.50
1	N	193	C	O5'-C5'-C4'	-7.11	100.84	111.50
1	N	1345	U	C2'-C3'-O3'	7.11	120.16	109.50
1	N	26	A	C4'-C3'-C2'	-7.11	95.50	102.60
1	N	272	C	O4'-C1'-N1	7.10	119.16	108.50
1	N	747	A	O5'-C5'-C4'	-7.08	100.87	111.50
1	N	950	U	C3'-C2'-C1'	-7.08	94.22	101.30
1	N	1325	C	P-O3'-C3'	-7.08	109.58	120.20
1	N	867	G	O5'-C5'-C4'	-7.08	100.89	111.50
1	N	156	C	O3'-P-O5'	-7.07	93.39	104.00
1	N	1065	U	P-O5'-C5'	7.07	131.50	120.90
1	N	49	U	O5'-C5'-C4'	7.07	122.10	111.50
1	N	758	C	O4'-C1'-N1	7.07	119.10	108.50
1	N	186	C	C4'-C3'-O3'	-7.06	102.40	113.00
1	N	31	G	O4'-C1'-C2'	-7.06	98.74	105.80
1	N	161	A	O3'-P-O5'	-7.06	93.41	104.00
1	N	817	C	C4'-C3'-O3'	7.06	119.99	109.40
1	N	1124	G	C3'-C2'-C1'	7.06	108.36	101.30
1	N	433	G	O5'-C5'-C4'	-7.05	100.92	111.50
1	N	731	G	P-O3'-C3'	-7.05	109.62	120.20
1	N	921	U	O4'-C4'-C3'	-7.05	96.95	104.00
1	N	101	A	C2'-C3'-O3'	7.05	124.28	113.70
1	N	357	G	O5'-C5'-C4'	-7.05	100.93	111.50
1	N	906	A	O5'-C5'-C4'	-7.05	100.92	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	203	G	C4'-C3'-C2'	-7.05	95.55	102.60
1	N	458	U	P-O3'-C3'	7.05	130.77	120.20
1	N	343	U	C3'-C2'-C1'	-7.04	94.26	101.30
1	N	220	G	O4'-C1'-C2'	-7.03	100.57	107.60
1	N	1178	G	P-O5'-C5'	7.03	131.45	120.90
1	N	165	G	P-O5'-C5'	7.02	131.43	120.90
1	N	1491	G	C5'-C4'-C3'	7.02	126.53	116.00
1	N	858	G	O4'-C1'-C2'	-7.02	100.58	107.60
1	N	98	A	O4'-C1'-N9	7.01	119.01	108.50
1	N	1274	A	C3'-C2'-C1'	-7.00	94.30	101.30
1	N	636	U	C4'-C3'-C2'	-7.00	95.60	102.60
1	N	273	U	O3'-P-O5'	-7.00	93.50	104.00
1	N	766	A	O3'-P-O5'	-7.00	93.50	104.00
1	N	207	C	O4'-C1'-C2'	-7.00	100.60	107.60
1	N	929	G	P-O5'-C5'	7.00	131.39	120.90
1	N	1468	A	O4'-C4'-C3'	6.99	110.99	104.00
1	N	669	G	C4'-C3'-C2'	-6.98	95.62	102.60
1	N	173	U	P-O5'-C5'	-6.98	110.42	120.90
1	N	220	G	O4'-C1'-N9	6.98	118.96	108.50
1	N	1384	C	P-O5'-C5'	6.97	131.36	120.90
1	N	76	G	C5'-C4'-C3'	-6.97	105.54	116.00
1	N	129	A	C2'-C3'-O3'	6.97	119.95	109.50
1	N	1199	U	C3'-C2'-C1'	6.97	108.27	101.30
1	N	1361	G	C5'-C4'-C3'	6.96	126.45	116.00
1	N	1199	U	C4'-C3'-C2'	-6.96	95.64	102.60
1	N	198	G	O4'-C1'-N9	6.95	118.92	108.50
1	N	498	A	O4'-C1'-N9	6.94	118.91	108.50
1	N	652	U	C4'-C3'-C2'	-6.94	95.66	102.60
1	N	417	G	O3'-P-O5'	-6.93	93.60	104.00
1	N	563	A	P-O5'-C5'	-6.93	110.50	120.90
1	N	121	U	O4'-C1'-C2'	-6.93	100.67	107.60
1	N	1101	A	C2'-C3'-O3'	6.93	119.89	109.50
1	N	164	G	P-O3'-C3'	-6.93	109.81	120.20
1	N	5	U	P-O5'-C5'	-6.92	110.52	120.90
1	N	290	C	O5'-C5'-C4'	-6.92	101.12	111.50
1	N	148	G	C4'-C3'-C2'	-6.91	95.69	102.60
1	N	1181	G	C2'-C3'-O3'	6.91	119.87	109.50
1	N	53	A	P-O5'-C5'	6.91	131.26	120.90
1	N	1350	A	P-O3'-C3'	6.91	130.56	120.20
1	N	558	G	O4'-C1'-C2'	-6.90	100.70	107.60
1	N	1277	C	P-O3'-C3'	-6.90	109.85	120.20
1	N	1140	C	O4'-C1'-C2'	-6.89	100.71	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	939	G	P-O3'-C3'	-6.88	109.88	120.20
1	N	871	U	P-O3'-C3'	6.88	130.52	120.20
1	N	197	A	P-O5'-C5'	6.88	131.22	120.90
1	N	308	C	O4'-C1'-C2'	-6.88	100.72	107.60
1	N	525	C	O4'-C1'-N1	6.88	118.81	108.50
1	N	897	C	O4'-C1'-C2'	-6.87	100.73	107.60
1	N	1483	A	P-O5'-C5'	6.87	131.20	120.90
1	N	161	A	C5'-C4'-C3'	6.87	126.30	116.00
1	N	1206	G	P-O5'-C5'	6.86	131.19	120.90
1	N	1416	G	C4'-C3'-C2'	-6.86	95.74	102.60
1	N	826	C	O3'-P-O5'	-6.86	93.71	104.00
1	N	648	A	P-O5'-C5'	6.86	131.19	120.90
1	N	41	G	C4'-C3'-C2'	-6.86	95.74	102.60
1	N	372	C	O4'-C4'-C3'	-6.86	99.25	106.10
1	N	984	C	P-O5'-C5'	6.85	131.18	120.90
1	N	1167	A	O3'-P-O5'	6.85	114.27	104.00
1	N	218	U	O3'-P-O5'	-6.85	93.73	104.00
1	N	1173	U	P-O3'-C3'	6.85	130.47	120.20
1	N	1275	A	C4'-C3'-C2'	-6.85	95.75	102.60
1	N	484	G	C4'-C3'-O3'	6.84	119.67	109.40
1	N	554	A	P-O5'-C5'	-6.84	110.63	120.90
1	N	650	G	C1'-O4'-C4'	-6.84	103.06	109.90
1	N	178	C	P-O5'-C5'	6.84	131.16	120.90
1	N	195	A	C4'-C3'-O3'	-6.84	102.75	113.00
1	N	546	A	P-O5'-C5'	-6.83	110.65	120.90
1	N	1462	C	O4'-C1'-N1	6.83	118.75	108.50
1	N	4	U	P-O3'-C3'	-6.83	109.96	120.20
1	N	257	G	C2'-C3'-O3'	6.83	123.94	113.70
1	N	1000	A	O5'-C5'-C4'	-6.82	101.27	111.50
1	N	209	U	O4'-C1'-N1	6.82	118.73	108.50
1	N	1082	A	C5'-C4'-C3'	-6.82	105.77	116.00
1	N	424	G	O4'-C1'-C2'	-6.82	100.78	107.60
1	N	792	A	C1'-O4'-C4'	6.82	116.52	109.70
1	N	1007	U	P-O3'-C3'	6.81	130.42	120.20
1	N	1321	U	P-O5'-C5'	6.81	131.12	120.90
1	N	425	G	O5'-C5'-C4'	-6.81	101.28	111.50
1	N	1386	G	C5'-C4'-C3'	6.81	126.22	116.00
1	N	928	G	O4'-C1'-N9	6.81	118.71	108.50
1	N	1263	C	O4'-C1'-N1	6.81	118.71	108.50
1	N	1463	U	O4'-C1'-N1	6.81	118.71	108.50
1	N	1292	G	P-O5'-C5'	6.80	131.10	120.90
1	N	563	A	C4'-C3'-C2'	6.80	109.40	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1130	A	P-O5'-C5'	-6.80	110.70	120.90
1	N	658	C	O4'-C1'-N1	6.80	118.69	108.50
1	N	1115	U	P-O5'-C5'	6.80	131.09	120.90
1	N	1431	A	P-O5'-C5'	6.79	131.09	120.90
1	N	549	C	O3'-P-O5'	-6.79	93.81	104.00
1	N	177	G	P-O5'-C5'	6.79	131.08	120.90
1	N	1367	C	P-O5'-C5'	6.79	131.08	120.90
1	N	31	G	C4'-C3'-C2'	-6.79	95.81	102.60
1	N	322	C	O3'-P-O5'	-6.78	93.82	104.00
1	N	1053	G	C5'-C4'-C3'	-6.78	105.83	116.00
1	N	1409	C	O4'-C1'-N1	6.78	118.67	108.50
1	N	1276	G	O4'-C1'-C2'	-6.78	100.82	107.60
1	N	1191	A	P-O3'-C3'	6.77	130.35	120.20
1	N	263	A	P-O5'-C5'	-6.76	110.75	120.90
1	N	870	U	O5'-C5'-C4'	-6.76	101.56	111.70
1	N	513	C	C5'-C4'-C3'	6.76	126.14	116.00
1	N	212	G	P-O5'-C5'	6.76	131.04	120.90
1	N	1184	G	P-O5'-C5'	6.76	131.04	120.90
1	N	1100	C	P-O3'-C3'	-6.76	110.07	120.20
1	N	1274	A	C4'-C3'-C2'	6.75	109.35	102.60
1	N	207	C	O4'-C4'-C3'	-6.75	97.25	104.00
1	N	559	A	P-O5'-C5'	6.75	131.03	120.90
1	N	765	G	P-O3'-C3'	-6.75	110.08	120.20
1	N	1063	C	O4'-C1'-N1	6.75	118.32	108.20
1	N	1268	G	P-O3'-C3'	6.75	130.32	120.20
1	N	451	A	P-O3'-C3'	6.74	130.32	120.20
1	N	602	A	P-O3'-C3'	-6.74	110.08	120.20
1	N	685	G	C1'-C2'-O2'	6.74	118.52	108.40
1	N	278	G	P-O5'-C5'	-6.74	110.79	120.90
1	N	767	A	P-O5'-C5'	6.74	131.01	120.90
1	N	1070	U	C4'-C3'-C2'	-6.74	95.86	102.60
1	N	487	A	O4'-C1'-C2'	-6.74	100.86	107.60
1	N	1432	G	O5'-C5'-C4'	-6.74	101.59	111.70
1	N	794	A	C5'-C4'-C3'	-6.73	105.90	116.00
1	N	1060	U	P-O3'-C3'	-6.73	110.11	120.20
1	N	1269	A	O3'-P-O5'	-6.73	93.91	104.00
1	N	502	A	C1'-O4'-C4'	-6.72	103.18	109.90
1	N	976	G	P-O3'-C3'	-6.72	110.11	120.20
1	N	1522	U	P-O3'-C3'	-6.72	110.12	120.20
1	N	14	U	C4'-C3'-C2'	-6.71	95.89	102.60
1	N	1487	G	C5'-C4'-C3'	6.70	126.05	116.00
1	N	411	A	P-O5'-C5'	6.70	130.95	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1419	G	O4'-C1'-C2'	-6.70	100.90	107.60
1	N	1533	C	C3'-C2'-C1'	-6.70	94.80	101.50
1	N	69	G	P-O5'-C5'	-6.70	110.86	120.90
1	N	45	G	C3'-C2'-O2'	-6.70	100.66	110.70
1	N	1049	U	P-O3'-C3'	6.69	130.24	120.20
1	N	380	G	O4'-C1'-N9	6.69	118.54	108.50
1	N	1400	C	C1'-O4'-C4'	6.68	116.58	109.90
1	N	899	C	O4'-C1'-N1	6.68	118.51	108.50
1	N	10	A	P-O3'-C3'	-6.67	110.19	120.20
1	N	737	C	O4'-C1'-N1	6.67	118.50	108.50
1	N	306	A	C1'-O4'-C4'	6.67	116.57	109.90
1	N	556	C	C5'-C4'-C3'	6.67	126.00	116.00
1	N	1055	A	O3'-P-O5'	-6.67	94.00	104.00
1	N	814	A	C1'-C2'-O2'	6.67	118.40	108.40
1	N	1352	C	O4'-C1'-N1	6.67	118.50	108.50
1	N	1330	U	O4'-C1'-C2'	-6.66	100.94	107.60
1	N	285	C	O4'-C4'-C3'	-6.66	97.34	104.00
1	N	49	U	C5'-C4'-C3'	-6.66	106.02	116.00
1	N	1441	A	C5'-C4'-C3'	-6.65	106.02	116.00
1	N	968	A	C4'-C3'-C2'	-6.65	95.95	102.60
1	N	412	A	O4'-C4'-C3'	-6.64	99.45	106.10
1	N	1168	U	C2'-C3'-O3'	6.64	123.66	113.70
1	N	449	G	O3'-P-O5'	-6.64	94.04	104.00
1	N	1508	A	O4'-C1'-N9	6.64	118.45	108.50
1	N	241	G	P-O5'-C5'	6.63	130.85	120.90
1	N	1066	C	C5'-C4'-C3'	-6.63	106.06	116.00
1	N	880	C	P-O5'-C5'	6.63	130.84	120.90
1	N	724	G	P-O5'-C5'	-6.62	110.97	120.90
1	N	1261	A	O4'-C1'-N9	6.62	118.43	108.50
1	N	1337	G	P-O3'-C3'	-6.62	110.27	120.20
1	N	196	A	O3'-P-O5'	-6.61	94.08	104.00
1	N	356	A	O4'-C4'-C3'	-6.61	97.39	104.00
1	N	334	C	P-O5'-C5'	6.60	130.80	120.90
1	N	775	G	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	1100	C	C4'-C3'-O3'	-6.60	103.10	113.00
1	N	236	A	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	531	U	C5'-C4'-O4'	6.60	119.69	109.80
1	N	946	A	O4'-C1'-N9	6.60	118.39	108.50
1	N	251	G	P-O3'-C3'	6.59	130.09	120.20
1	N	300	A	C5'-C4'-C3'	6.59	125.89	116.00
1	N	1284	C	O4'-C1'-N1	6.59	118.39	108.50
1	N	486	U	P-O3'-C3'	-6.58	110.33	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	514	C	O4'-C1'-C2'	-6.58	101.02	107.60
1	N	854	U	O5'-C5'-C4'	-6.58	101.63	111.50
1	N	59	A	O4'-C1'-N9	6.58	118.36	108.50
1	N	680	C	P-O5'-C5'	6.57	130.75	120.90
1	N	177	G	P-O3'-C3'	-6.56	110.35	120.20
1	N	709	U	O5'-C5'-C4'	-6.56	101.66	111.50
1	N	859	G	C4'-C3'-C2'	-6.56	96.04	102.60
1	N	1278	G	C4'-C3'-C2'	-6.56	96.04	102.60
1	N	93	U	O4'-C4'-C3'	-6.55	97.44	104.00
1	N	681	A	O4'-C4'-C3'	-6.55	97.45	104.00
1	N	559	A	C2'-C3'-O3'	6.55	119.33	109.50
1	N	828	U	P-O5'-C5'	6.55	130.72	120.90
1	N	599	C	O4'-C1'-N1	6.54	118.31	108.50
1	N	1511	G	P-O3'-C3'	-6.54	110.39	120.20
1	N	1517	G	O3'-P-O5'	-6.54	94.19	104.00
1	N	217	C	O4'-C1'-N1	6.54	118.30	108.50
1	N	641	U	C2'-C3'-O3'	6.53	123.50	113.70
1	N	222	C	O4'-C4'-C3'	-6.53	97.47	104.00
1	N	1161	C	C5'-C4'-C3'	-6.53	106.20	116.00
1	N	1296	C	O4'-C1'-N1	6.53	118.29	108.50
1	N	129	A	P-O5'-C5'	6.53	130.69	120.90
1	N	1120	C	P-O3'-C3'	-6.53	110.41	120.20
1	N	1407	C	P-O5'-C5'	6.53	130.69	120.90
1	N	1509	C	C5'-C4'-C3'	-6.52	106.22	116.00
1	N	323	U	P-O3'-C3'	-6.52	110.42	120.20
1	N	584	G	P-O5'-C5'	6.52	130.67	120.90
1	N	1203	C	P-O5'-C5'	6.52	130.67	120.90
1	N	849	G	C5'-C4'-C3'	-6.51	106.23	116.00
1	N	1412	C	C4'-C3'-C2'	-6.51	96.09	102.60
1	N	1185	G	O4'-C4'-C3'	-6.50	97.50	104.00
1	N	1129	C	O4'-C1'-C2'	6.50	112.30	105.80
1	N	278	G	O4'-C1'-N9	6.50	118.25	108.50
1	N	543	U	P-O5'-C5'	6.50	130.65	120.90
1	N	1263	C	C1'-C2'-O2'	6.50	118.15	108.40
1	N	607	A	C5'-C4'-C3'	-6.50	106.25	116.00
1	N	939	G	O4'-C1'-N9	6.50	118.24	108.50
1	N	1112	C	P-O5'-C5'	6.50	130.64	120.90
1	N	573	A	C4'-C3'-C2'	-6.50	96.11	102.60
1	N	618	C	O4'-C1'-C2'	-6.50	101.11	107.60
1	N	210	C	C2'-C3'-O3'	6.49	119.24	109.50
1	N	699	C	O5'-C5'-C4'	-6.49	101.77	111.50
1	N	971	G	P-O5'-C5'	6.49	130.63	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	323	U	O5'-C5'-C4'	-6.49	101.77	111.50
1	N	686	U	C2'-C3'-O3'	6.49	119.23	109.50
1	N	805	C	O4'-C1'-N1	6.49	118.23	108.50
1	N	1196	A	O5'-C5'-C4'	-6.49	101.77	111.50
1	N	70	U	P-O3'-C3'	6.48	129.93	120.20
1	N	950	U	O4'-C1'-N1	6.48	118.22	108.50
1	N	450	G	C4'-C3'-C2'	-6.48	96.12	102.60
1	N	516	U	O4'-C1'-C2'	-6.48	101.12	107.60
1	N	182	A	C5'-C4'-C3'	-6.47	105.49	115.20
1	N	1426	G	O5'-C5'-C4'	-6.47	101.79	111.50
1	N	1436	U	O4'-C4'-C3'	6.47	110.47	104.00
1	N	45	G	O4'-C1'-N9	6.46	118.19	108.50
1	N	316	C	O4'-C1'-N1	6.46	118.19	108.50
1	N	509	A	O4'-C1'-C2'	-6.46	101.14	107.60
1	N	108	G	O3'-P-O5'	6.45	113.68	104.00
1	N	1343	G	P-O3'-C3'	-6.45	110.52	120.20
1	N	73	C	O4'-C1'-C2'	-6.45	101.15	107.60
1	N	300	A	N9-C1'-C2'	6.45	121.67	112.00
1	N	501	C	C4'-C3'-C2'	-6.45	96.15	102.60
1	N	1147	C	C2'-C3'-O3'	6.45	123.37	113.70
1	N	1533	C	C1'-O4'-C4'	-6.45	103.25	109.70
1	N	1379	G	O5'-C5'-C4'	-6.44	101.84	111.50
1	N	724	G	C5'-C4'-C3'	-6.44	106.34	116.00
1	N	105	G	C1'-C2'-O2'	6.43	118.05	108.40
1	N	832	G	C5'-C4'-C3'	-6.43	106.35	116.00
1	N	1160	G	O4'-C1'-N9	6.43	118.15	108.50
1	N	287	U	C4'-C3'-C2'	-6.43	96.17	102.60
1	N	868	C	O4'-C1'-C2'	-6.43	101.17	107.60
1	N	1171	A	O5'-C5'-C4'	-6.43	101.86	111.50
1	N	1252	A	O4'-C4'-C3'	-6.43	97.57	104.00
1	N	985	C	C5'-C4'-C3'	-6.42	106.36	116.00
1	N	964	A	O4'-C1'-C2'	-6.42	101.18	107.60
1	N	1427	C	O4'-C1'-N1	6.42	118.13	108.50
1	N	1025	U	P-O3'-C3'	6.42	129.83	120.20
1	N	411	A	O5'-C5'-C4'	6.42	121.13	111.50
1	N	347	G	P-O5'-C5'	6.41	130.52	120.90
1	N	602	A	O3'-P-O5'	-6.41	94.38	104.00
1	N	135	C	O4'-C1'-N1	6.41	118.11	108.50
1	N	531	U	P-O5'-C5'	6.41	130.51	120.90
1	N	847	G	C3'-C2'-C1'	-6.40	94.90	101.30
1	N	170	U	C4'-C3'-C2'	-6.39	96.20	102.60
1	N	913	A	C4'-C3'-O3'	6.39	118.99	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	181	A	O4'-C1'-N9	6.39	118.09	108.50
1	N	374	A	C5'-C4'-O4'	-6.39	100.21	109.80
1	N	912	C	P-O3'-C3'	6.39	129.79	120.20
1	N	60	A	C2'-C3'-O3'	6.39	119.08	109.50
1	N	599	C	P-O3'-C3'	-6.39	110.62	120.20
1	N	1440	U	C5'-C4'-C3'	-6.39	106.42	116.00
1	N	233	C	O4'-C4'-C3'	-6.38	97.61	104.00
1	N	11	G	C4'-C3'-C2'	-6.38	96.22	102.60
1	N	866	C	C4'-C3'-O3'	-6.38	103.43	113.00
1	N	49	U	P-O3'-C3'	-6.38	110.63	120.20
1	N	1236	A	C3'-C2'-C1'	6.38	107.68	101.30
1	N	1347	G	O4'-C1'-N9	6.38	117.77	108.20
1	N	1357	A	P-O3'-C3'	6.38	129.77	120.20
1	N	177	G	C4'-C3'-C2'	-6.38	96.22	102.60
1	N	920	U	C4'-C3'-C2'	-6.38	96.22	102.60
1	N	772	U	O4'-C4'-C3'	-6.38	97.62	104.00
1	N	334	C	O4'-C1'-N1	6.37	118.06	108.50
1	N	1521	C	O4'-C1'-N1	6.37	118.06	108.50
1	N	566	G	C2'-C3'-O3'	6.37	119.06	109.50
1	N	1440	U	P-O3'-C3'	-6.37	110.64	120.20
1	N	1106	G	P-O5'-C5'	-6.36	111.36	120.90
1	N	333	U	P-O5'-C5'	6.36	130.44	120.90
1	N	1325	C	O4'-C1'-N1	6.36	118.03	108.50
1	N	770	C	O3'-P-O5'	-6.36	94.47	104.00
1	N	1290	G	C1'-O4'-C4'	6.35	116.25	109.90
1	N	1186	G	C4'-C3'-C2'	-6.35	96.25	102.60
1	N	1319	A	C4'-C3'-C2'	-6.35	96.25	102.60
1	N	1325	C	C4'-C3'-C2'	-6.35	96.25	102.60
1	N	1530	G	O5'-C5'-C4'	6.35	121.22	111.70
1	N	596	A	O5'-C5'-C4'	-6.35	101.98	111.50
1	N	1410	A	C2'-C3'-O3'	6.35	123.22	113.70
1	N	197	A	C2'-C3'-O3'	6.34	119.02	109.50
1	N	134	G	O4'-C4'-C3'	-6.34	97.66	104.00
1	N	466	A	O3'-P-O5'	6.34	113.51	104.00
1	N	632	U	O4'-C1'-N1	6.34	118.01	108.50
1	N	220	G	C5'-C4'-O4'	6.33	119.30	109.80
1	N	538	G	C4'-C3'-O3'	-6.33	103.50	113.00
1	N	658	C	C1'-O4'-C4'	6.33	116.23	109.90
1	N	893	C	C4'-C3'-O3'	-6.33	103.50	113.00
1	N	235	C	P-O5'-C5'	6.33	130.40	120.90
1	N	1085	U	P-O3'-C3'	-6.33	110.70	120.20
1	N	956	U	O4'-C1'-C2'	-6.33	101.27	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1361	G	P-O5'-C5'	-6.33	111.41	120.90
1	N	1418	A	P-O3'-C3'	6.33	129.69	120.20
1	N	690	G	C1'-C2'-O2'	6.33	117.89	108.40
1	N	999	C	C4'-C3'-C2'	-6.32	96.28	102.60
1	N	985	C	O4'-C1'-N1	6.32	117.98	108.50
1	N	849	G	O4'-C1'-C2'	-6.32	101.28	107.60
1	N	459	A	C5'-C4'-C3'	-6.32	106.53	116.00
1	N	848	C	P-O5'-C5'	6.32	130.37	120.90
1	N	719	C	O4'-C1'-N1	6.31	117.97	108.50
1	N	366	A	C4'-C3'-C2'	6.31	108.91	102.60
1	N	443	C	O4'-C4'-C3'	-6.31	97.69	104.00
1	N	200	G	O4'-C1'-C2'	-6.31	101.29	107.60
1	N	204	G	C2'-C3'-O3'	6.31	123.16	113.70
1	N	581	G	O5'-C5'-C4'	-6.30	102.05	111.50
1	N	271	C	O5'-C5'-C4'	-6.30	102.05	111.50
1	N	730	G	P-O3'-C3'	6.30	129.66	120.20
1	N	52	C	O4'-C1'-N1	6.30	117.95	108.50
1	N	456	A	O3'-P-O5'	-6.30	94.55	104.00
1	N	498	A	P-O3'-C3'	-6.30	110.75	120.20
1	N	764	C	P-O3'-C3'	-6.29	110.76	120.20
1	N	376	G	P-O5'-C5'	-6.29	111.46	120.90
1	N	1414	U	C4'-C3'-O3'	-6.29	103.57	113.00
1	N	428	G	C5'-C4'-O4'	-6.29	99.67	109.10
1	N	20	U	C4'-C3'-C2'	-6.28	96.32	102.60
1	N	666	G	P-O3'-C3'	-6.28	110.78	120.20
1	N	1300	G	C4'-C3'-C2'	-6.28	96.32	102.60
1	N	1402	C	C5'-C4'-O4'	6.28	119.22	109.80
1	N	255	G	P-O5'-C5'	-6.28	111.48	120.90
1	N	1131	G	O4'-C4'-C3'	-6.28	97.72	104.00
1	N	426	U	P-O3'-C3'	6.28	129.62	120.20
1	N	101	A	C4'-C3'-C2'	-6.28	96.32	102.60
1	N	1207	G	O5'-C5'-C4'	-6.27	102.09	111.50
1	N	146	G	C5'-C4'-C3'	-6.27	106.59	116.00
1	N	1410	A	C4'-C3'-O3'	-6.27	103.60	113.00
1	N	373	A	P-O5'-C5'	-6.27	111.50	120.90
1	N	194	C	O4'-C1'-N1	6.26	117.90	108.50
1	N	262	A	O3'-P-O5'	-6.26	94.60	104.00
1	N	755	G	C5'-C4'-C3'	-6.26	106.61	116.00
1	N	1313	U	P-O5'-C5'	6.26	130.30	120.90
1	N	313	A	P-O5'-C5'	6.26	130.29	120.90
1	N	320	A	C5'-C4'-C3'	-6.26	106.61	116.00
1	N	692	U	P-O5'-C5'	-6.26	111.51	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1094	G	O5'-C5'-C4'	6.26	120.89	111.50
1	N	1123	U	C4'-C3'-C2'	-6.26	96.34	102.60
1	N	265	G	P-O3'-C3'	6.26	129.59	120.20
1	N	199	A	O4'-C1'-C2'	-6.26	101.34	107.60
1	N	1194	U	O4'-C4'-C3'	-6.26	97.74	104.00
1	N	1454	G	O4'-C1'-N9	6.26	117.88	108.50
1	N	362	G	C4'-C3'-O3'	-6.25	103.62	113.00
1	N	104	G	C5'-C4'-O4'	6.25	119.17	109.80
1	N	162	A	P-O3'-C3'	6.25	129.57	120.20
1	N	756	C	O4'-C4'-C3'	-6.24	97.76	104.00
1	N	717	U	C5'-C4'-C3'	-6.24	105.84	115.20
1	N	1411	C	C3'-C2'-C1'	-6.24	95.06	101.30
1	N	341	C	P-O5'-C5'	6.24	130.25	120.90
1	N	1353	G	O4'-C1'-C2'	-6.23	101.37	107.60
1	N	273	U	N1-C1'-C2'	6.23	121.35	112.00
1	N	767	A	O3'-P-O5'	6.23	113.35	104.00
1	N	1212	U	P-O3'-C3'	-6.23	110.85	120.20
1	N	1433	A	P-O5'-C5'	6.23	130.25	120.90
1	N	1166	G	C2'-C3'-O3'	-6.23	104.36	113.70
1	N	587	G	P-O3'-C3'	6.22	129.54	120.20
1	N	762	U	C4'-C3'-O3'	-6.22	103.66	113.00
1	N	1003	G	C4'-C3'-O3'	-6.22	103.67	113.00
1	N	190	A	C4'-C3'-O3'	-6.22	103.67	113.00
1	N	400	C	O4'-C1'-N1	6.22	117.83	108.50
1	N	409	U	P-O5'-C5'	6.22	130.23	120.90
1	N	866	C	N1-C1'-C2'	6.22	121.33	112.00
1	N	934	C	C3'-C2'-C1'	6.22	107.72	101.50
1	N	586	C	C4'-C3'-C2'	-6.22	96.38	102.60
1	N	741	G	O4'-C4'-C3'	6.22	110.22	104.00
1	N	767	A	O4'-C4'-C3'	-6.21	97.79	104.00
1	N	861	G	O4'-C1'-N9	6.21	117.82	108.50
1	N	956	U	O5'-C5'-C4'	-6.21	102.18	111.50
1	N	985	C	O3'-P-O5'	-6.21	94.68	104.00
1	N	757	U	C1'-O4'-C4'	6.21	116.11	109.90
1	N	1506	U	O3'-P-O5'	6.21	113.31	104.00
1	N	61	G	O4'-C1'-N9	6.21	117.81	108.50
1	N	553	A	C4'-C3'-C2'	6.21	108.81	102.60
1	N	215	C	O4'-C1'-N1	6.20	117.80	108.50
1	N	256	U	O5'-C5'-C4'	-6.20	102.20	111.50
1	N	1466	C	C4'-C3'-C2'	-6.20	96.40	102.60
1	N	208	U	O4'-C4'-C3'	-6.20	97.81	104.00
1	N	607	A	O4'-C4'-C3'	-6.20	97.81	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1479	C	O5'-C5'-C4'	-6.20	102.21	111.50
1	N	1332	A	O4'-C1'-N9	6.19	117.79	108.50
1	N	57	G	C4'-C3'-C2'	-6.19	96.41	102.60
1	N	948	C	O4'-C1'-N1	6.19	117.78	108.50
1	N	335	C	O4'-C1'-C2'	-6.19	101.41	107.60
1	N	1223	C	N1-C1'-C2'	6.19	121.28	112.00
1	N	1032	G	O4'-C1'-N9	6.18	117.78	108.50
1	N	403	C	C1'-C2'-O2'	6.18	117.67	108.40
1	N	555	U	C4'-C3'-O3'	-6.18	103.73	113.00
1	N	145	G	P-O3'-C3'	-6.18	110.93	120.20
1	N	750	C	P-O5'-C5'	6.18	130.17	120.90
1	N	1313	U	O4'-C1'-C2'	-6.18	101.42	107.60
1	N	1442	G	O5'-C5'-C4'	-6.18	102.23	111.50
1	N	1089	G	C5'-C4'-C3'	-6.18	106.73	116.00
1	N	1532	U	C4'-C3'-C2'	6.17	108.78	102.60
1	N	216	U	O4'-C1'-C2'	-6.17	101.43	107.60
1	N	1224	U	C1'-O4'-C4'	-6.17	103.73	109.90
1	N	856	C	O4'-C4'-C3'	-6.16	97.84	104.00
1	N	1198	G	C4'-C3'-C2'	-6.16	96.44	102.60
1	N	818	G	P-O3'-C3'	6.16	129.44	120.20
1	N	1034	G	C5'-C4'-O4'	-6.16	100.56	109.80
1	N	1095	U	O5'-C5'-C4'	6.16	120.74	111.50
1	N	1042	A	C2'-C3'-O3'	6.16	122.94	113.70
1	N	1074	G	C4'-C3'-C2'	-6.16	96.44	102.60
1	N	1058	G	O5'-C5'-C4'	-6.15	102.27	111.50
1	N	1402	C	O5'-C5'-C4'	-6.15	102.27	111.50
1	N	235	C	O4'-C1'-N1	6.15	117.72	108.50
1	N	499	A	C2'-C3'-O3'	6.15	118.72	109.50
1	N	254	G	O5'-C5'-C4'	-6.15	102.28	111.50
1	N	401	C	P-O3'-C3'	-6.14	110.98	120.20
1	N	202	G	C5'-C4'-C3'	6.14	125.21	116.00
1	N	677	U	C4'-C3'-C2'	-6.14	96.46	102.60
1	N	1282	C	O4'-C1'-N1	6.14	117.70	108.50
1	N	1405	G	C4'-C3'-C2'	-6.14	96.46	102.60
1	N	255	G	O5'-C5'-C4'	-6.13	102.30	111.50
1	N	1370	G	O4'-C1'-N9	6.13	117.70	108.50
1	N	160	A	C1'-O4'-C4'	-6.13	103.77	109.90
1	N	862	C	O3'-P-O5'	-6.13	94.81	104.00
1	N	882	C	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	942	G	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	83	C	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	305	G	C2'-C3'-O3'	6.12	118.69	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1377	A	O3'-P-O5'	-6.12	94.82	104.00
1	N	247	G	C4'-C3'-C2'	-6.12	96.48	102.60
1	N	723	U	C4'-C3'-C2'	-6.12	96.48	102.60
1	N	1203	C	C5'-C4'-C3'	6.11	125.17	116.00
1	N	531	U	C1'-O4'-C4'	-6.11	103.79	109.90
1	N	497	G	C3'-C2'-C1'	6.11	107.41	101.30
1	N	583	A	P-O5'-C5'	-6.11	111.74	120.90
1	N	722	G	O3'-P-O5'	-6.11	94.84	104.00
1	N	1133	G	O4'-C1'-N9	6.11	117.66	108.50
1	N	95	C	P-O5'-C5'	-6.10	111.74	120.90
1	N	1134	G	C1'-O4'-C4'	-6.10	103.80	109.90
1	N	1458	G	O4'-C1'-C2'	-6.10	101.50	107.60
1	N	1202	U	P-O5'-C5'	-6.10	111.75	120.90
1	N	1291	U	O5'-C5'-C4'	-6.10	102.35	111.50
1	N	689	C	C5'-C4'-C3'	-6.09	106.86	116.00
1	N	1460	C	P-O5'-C5'	6.09	130.04	120.90
1	N	519	C	O4'-C4'-C3'	6.09	110.09	104.00
1	N	1495	U	O4'-C1'-C2'	-6.09	101.51	107.60
1	N	125	U	O4'-C1'-N1	6.08	117.63	108.50
1	N	220	G	O4'-C4'-C3'	-6.08	97.92	104.00
1	N	717	U	O5'-C5'-C4'	-6.07	102.59	111.70
1	N	1226	C	C1'-O4'-C4'	6.07	115.77	109.70
1	N	450	G	O5'-C5'-C4'	-6.07	102.39	111.50
1	N	865	A	O4'-C1'-N9	6.07	117.61	108.50
1	N	691	G	P-O3'-C3'	6.07	129.30	120.20
1	N	485	U	O4'-C1'-N1	6.07	117.30	108.20
1	N	996	A	O4'-C1'-N9	6.07	117.60	108.50
1	N	1116	U	C5'-C4'-C3'	-6.07	106.90	116.00
1	N	343	U	O5'-C5'-C4'	-6.06	102.41	111.50
1	N	781	A	O4'-C1'-C2'	-6.06	101.54	107.60
1	N	62	U	O4'-C1'-C2'	-6.06	101.54	107.60
1	N	294	U	O5'-C5'-C4'	-6.06	102.41	111.50
1	N	355	C	C1'-C2'-O2'	6.06	117.49	108.40
1	N	1330	U	O3'-P-O5'	-6.06	94.91	104.00
1	N	1515	G	O4'-C4'-C3'	-6.06	97.94	104.00
1	N	331	G	P-O5'-C5'	6.06	129.99	120.90
1	N	328	C	O4'-C4'-C3'	-6.06	100.04	106.10
1	N	531	U	O4'-C1'-N1	6.06	117.58	108.50
1	N	1309	G	C5'-C4'-C3'	6.06	125.08	116.00
1	N	110	C	C4'-C3'-O3'	-6.05	103.92	113.00
1	N	1041	G	O3'-P-O5'	-6.05	94.92	104.00
1	N	1330	U	O4'-C1'-N1	6.05	117.57	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1359	C	C4'-C3'-O3'	-6.05	103.93	113.00
1	N	784	A	N9-C1'-C2'	-6.05	102.93	112.00
1	N	367	U	C5'-C4'-C3'	-6.05	106.13	115.20
1	N	555	U	P-O3'-C3'	6.05	129.27	120.20
1	N	819	A	P-O5'-C5'	-6.05	111.83	120.90
1	N	240	G	P-O5'-C5'	6.04	129.97	120.90
1	N	959	A	C1'-O4'-C4'	6.04	115.94	109.90
1	N	1278	G	O3'-P-O5'	-6.04	94.94	104.00
1	N	1455	G	C5'-C4'-C3'	-6.04	106.94	116.00
1	N	905	U	O4'-C1'-N1	6.04	117.56	108.50
1	N	377	G	O4'-C4'-C3'	-6.04	97.96	104.00
1	N	755	G	P-O5'-C5'	6.04	129.95	120.90
1	N	1239	A	O4'-C1'-N9	6.04	117.25	108.20
1	N	392	C	O4'-C1'-N1	6.03	117.55	108.50
1	N	1252	A	C4'-C3'-C2'	-6.03	96.57	102.60
1	N	182	A	P-O5'-C5'	-6.03	111.85	120.90
1	N	90	C	C4'-C3'-C2'	-6.03	96.57	102.60
1	N	382	A	P-O3'-C3'	6.03	129.24	120.20
1	N	1139	G	O5'-C5'-C4'	-6.03	102.66	111.70
1	N	549	C	P-O5'-C5'	6.03	129.94	120.90
1	N	141	G	C5'-C4'-C3'	-6.02	106.96	116.00
1	N	339	C	O4'-C1'-N1	6.02	117.54	108.50
1	N	739	C	P-O3'-C3'	-6.02	111.16	120.20
1	N	447	G	C4'-C3'-C2'	-6.02	96.58	102.60
1	N	468	A	P-O5'-C5'	6.02	129.94	120.90
1	N	911	U	C4'-C3'-C2'	6.02	108.62	102.60
1	N	841	C	C5'-C4'-C3'	6.02	125.03	116.00
1	N	230	G	P-O3'-C3'	-6.02	111.17	120.20
1	N	260	G	C4'-C3'-C2'	-6.02	96.58	102.60
1	N	464	U	O3'-P-O5'	-6.02	94.97	104.00
1	N	1247	U	C4'-C3'-C2'	-6.02	96.58	102.60
1	N	397	A	C5'-C4'-C3'	6.01	125.02	116.00
1	N	479	U	O4'-C1'-N1	6.01	117.52	108.50
1	N	777	A	O4'-C4'-C3'	-6.01	97.99	104.00
1	N	1482	G	O5'-C5'-C4'	-6.01	102.48	111.50
1	N	1026	G	C4'-C3'-O3'	-6.01	103.99	113.00
1	N	1363	A	C5'-C4'-C3'	-6.01	106.19	115.20
1	N	577	G	C5'-C4'-O4'	-6.00	100.79	109.80
1	N	481	G	C4'-C3'-C2'	-6.00	96.60	102.60
1	N	803	G	C1'-C2'-O2'	6.00	117.40	108.40
1	N	1170	A	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	254	G	P-O5'-C5'	5.99	129.89	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1069	C	C4'-C3'-C2'	-5.99	96.61	102.60
1	N	1483	A	O4'-C4'-C3'	-5.99	98.01	104.00
1	N	7	A	P-O5'-C5'	-5.99	111.92	120.90
1	N	582	C	O5'-C5'-C4'	-5.99	102.52	111.50
1	N	492	C	C4'-C3'-O3'	-5.99	104.02	113.00
1	N	384	G	O3'-P-O5'	-5.99	95.02	104.00
1	N	686	U	P-O3'-C3'	5.99	129.18	120.20
1	N	189	A	P-O3'-C3'	-5.98	111.23	120.20
1	N	1205	U	P-O5'-C5'	5.98	129.87	120.90
1	N	1223	C	C5'-C4'-C3'	-5.98	107.03	116.00
1	N	1107	C	P-O3'-C3'	-5.98	111.24	120.20
1	N	1260	G	P-O3'-C3'	5.98	129.16	120.20
1	N	327	A	C2'-C3'-O3'	5.97	118.46	109.50
1	N	1223	C	C1'-O4'-C4'	-5.97	103.93	109.90
1	N	1304	G	O5'-C5'-C4'	-5.97	102.54	111.50
1	N	1079	G	C5'-C4'-O4'	5.97	118.76	109.80
1	N	580	C	P-O5'-C5'	5.97	129.85	120.90
1	N	847	G	O4'-C4'-C3'	-5.97	98.03	104.00
1	N	47	C	C5'-C4'-O4'	-5.97	100.15	109.10
1	N	50	A	C3'-C2'-C1'	-5.97	95.53	101.50
1	N	274	A	O3'-P-O5'	5.97	112.95	104.00
1	N	10	A	O4'-C4'-C3'	-5.96	98.03	104.00
1	N	588	G	P-O5'-C5'	5.96	129.84	120.90
1	N	135	C	O5'-C5'-C4'	-5.96	102.56	111.50
1	N	169	C	O4'-C1'-N1	5.96	117.44	108.50
1	N	346	G	O4'-C4'-C3'	5.96	109.96	104.00
1	N	586	C	O4'-C1'-N1	5.96	117.44	108.50
1	N	1146	A	N9-C1'-C2'	5.96	120.94	112.00
1	N	237	G	C4'-C3'-C2'	-5.96	96.64	102.60
1	N	776	G	C1'-O4'-C4'	-5.96	103.94	109.90
1	N	1234	C	C5'-C4'-C3'	-5.96	107.06	116.00
1	N	511	C	O4'-C1'-N1	5.96	117.13	108.20
1	N	726	C	C4'-C3'-O3'	-5.96	104.07	113.00
1	N	701	U	C1'-O4'-C4'	5.95	115.85	109.90
1	N	327	A	O4'-C4'-C3'	-5.95	100.15	106.10
1	N	772	U	C2'-C3'-O3'	5.95	122.63	113.70
1	N	1316	G	O3'-P-O5'	-5.95	95.07	104.00
1	N	69	G	N9-C1'-C2'	5.95	120.93	112.00
1	N	859	G	O3'-P-O5'	-5.95	95.07	104.00
1	N	957	U	C5'-C4'-C3'	5.95	124.92	116.00
1	N	1394	A	O5'-C5'-C4'	5.95	120.63	111.70
1	N	338	A	O5'-C5'-C4'	-5.95	102.58	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1088	G	O4'-C1'-N9	5.95	117.42	108.50
1	N	271	C	C5'-C4'-O4'	5.95	118.72	109.80
1	N	285	C	C3'-C2'-C1'	-5.95	95.35	101.30
1	N	659	U	O5'-C5'-C4'	-5.95	102.58	111.50
1	N	239	U	O4'-C1'-N1	5.94	117.41	108.50
1	N	421	U	C2'-C3'-O3'	5.94	118.41	109.50
1	N	703	G	C1'-C2'-O2'	-5.94	102.89	111.80
1	N	1490	U	O4'-C4'-C3'	-5.94	98.06	104.00
1	N	1269	A	C5'-C4'-C3'	5.93	124.90	116.00
1	N	605	U	C3'-C2'-C1'	5.93	107.23	101.30
1	N	576	C	P-O3'-C3'	5.93	129.09	120.20
1	N	770	C	O4'-C1'-N1	5.93	117.39	108.50
1	N	140	U	C4'-C3'-O3'	-5.92	104.11	113.00
1	N	1177	G	C5'-C4'-C3'	5.92	124.89	116.00
1	N	154	U	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	278	G	C4'-C3'-O3'	-5.92	104.11	113.00
1	N	1095	U	P-O3'-C3'	-5.92	111.31	120.20
1	N	1526	G	P-O5'-C5'	5.92	129.78	120.90
1	N	79	G	C5-C6-O6	-5.92	110.85	128.60
1	N	263	A	C4'-C3'-O3'	-5.91	104.13	113.00
1	N	371	A	C2'-C3'-O3'	5.91	122.57	113.70
1	N	1191	A	O4'-C1'-C2'	-5.91	101.69	107.60
1	N	1257	A	O4'-C1'-N9	5.91	117.37	108.50
1	N	1389	C	C4'-C3'-C2'	-5.91	96.69	102.60
1	N	672	U	O4'-C1'-N1	5.91	117.37	108.50
1	N	817	C	C3'-C2'-C1'	5.91	107.41	101.50
1	N	857	C	O5'-C5'-C4'	-5.91	102.64	111.50
1	N	935	A	C4'-C3'-O3'	-5.91	104.14	113.00
1	N	1327	C	P-O5'-C5'	5.91	129.76	120.90
1	N	1412	C	O4'-C1'-N1	5.91	117.37	108.50
1	N	590	U	C3'-C2'-C1'	-5.91	95.39	101.30
1	N	1171	A	C4'-C3'-O3'	-5.91	104.14	113.00
1	N	91	U	O4'-C1'-N1	5.91	117.36	108.50
1	N	924	C	C1'-O4'-C4'	5.90	115.80	109.90
1	N	741	G	C4'-C3'-C2'	-5.90	96.70	102.60
1	N	971	G	O4'-C1'-N9	5.90	117.34	108.50
1	N	1326	U	C3'-C2'-C1'	5.90	107.20	101.30
1	N	837	U	C5'-C4'-C3'	5.89	124.84	116.00
1	N	1373	G	P-O3'-C3'	5.89	129.03	120.20
1	N	216	U	C3'-C2'-C1'	5.88	107.19	101.30
1	N	530	G	C4'-C3'-O3'	-5.88	104.17	113.00
1	N	1198	G	O4'-C1'-N9	5.88	117.33	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1406	U	O4'-C1'-N1	5.88	117.33	108.50
1	N	5	U	O4'-C4'-C3'	-5.88	100.22	106.10
1	N	347	G	P-O3'-C3'	-5.88	111.38	120.20
1	N	823	C	P-O3'-C3'	5.88	129.02	120.20
1	N	987	G	P-O3'-C3'	-5.88	111.38	120.20
1	N	469	C	P-O3'-C3'	5.88	129.01	120.20
1	N	1378	C	P-O3'-C3'	-5.88	111.39	120.20
1	N	182	A	O4'-C4'-C3'	-5.87	100.23	106.10
1	N	183	C	P-O3'-C3'	5.87	129.00	120.20
1	N	61	G	O4'-C4'-C3'	-5.87	98.13	104.00
1	N	399	G	O3'-P-O5'	5.87	112.80	104.00
1	N	789	U	O3'-P-O5'	-5.87	95.20	104.00
1	N	1097	C	O4'-C1'-N1	5.87	117.30	108.50
1	N	744	C	O4'-C1'-N1	5.86	117.30	108.50
1	N	1083	U	O4'-C1'-N1	5.86	117.30	108.50
1	N	1043	G	O4'-C4'-C3'	5.86	109.86	104.00
1	N	1082	A	O4'-C1'-C2'	5.86	113.45	107.60
1	N	808	C	O4'-C1'-N1	5.85	117.28	108.50
1	N	1443	C	O4'-C4'-C3'	5.85	109.85	104.00
1	N	746	A	O4'-C4'-C3'	-5.85	98.15	104.00
1	N	1410	A	O4'-C1'-N9	5.85	117.28	108.50
1	N	679	C	O4'-C4'-C3'	-5.85	98.15	104.00
1	N	855	U	O4'-C1'-N1	5.85	117.28	108.50
1	N	1332	A	O4'-C1'-C2'	-5.85	101.75	107.60
1	N	892	A	C5'-C4'-C3'	5.84	124.77	116.00
1	N	1218	C	C4'-C3'-C2'	-5.84	96.75	102.60
1	N	1399	C	C4'-C3'-O3'	5.84	118.17	109.40
1	N	1532	U	O4'-C1'-N1	5.84	116.97	108.20
1	N	726	C	O4'-C1'-N1	5.84	117.26	108.50
1	N	1303	C	O4'-C1'-N1	5.84	117.26	108.50
1	N	1440	U	C5'-C4'-O4'	5.84	118.56	109.80
1	N	11	G	O4'-C4'-C3'	5.84	109.84	104.00
1	N	1043	G	N9-C1'-C2'	5.84	120.76	112.00
1	N	1379	G	P-O3'-C3'	-5.84	111.44	120.20
1	N	50	A	O4'-C1'-N9	5.84	116.96	108.20
1	N	360	G	P-O5'-C5'	-5.84	112.14	120.90
1	N	843	U	O4'-C4'-C3'	-5.84	98.16	104.00
1	N	229	U	O4'-C1'-C2'	-5.84	101.76	107.60
1	N	1359	C	P-O5'-C5'	-5.84	112.14	120.90
1	N	1362	A	C2'-C3'-O3'	5.84	122.45	113.70
1	N	484	G	C2'-C3'-O3'	5.83	118.25	109.50
1	N	1253	G	C4'-C3'-C2'	-5.83	96.77	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	420	U	C5'-C4'-C3'	-5.82	107.27	116.00
1	N	788	U	C5'-C4'-C3'	-5.82	107.27	116.00
1	N	826	C	O4'-C1'-N1	5.82	117.23	108.50
1	N	924	C	O4'-C4'-C3'	-5.82	98.18	104.00
1	N	1367	C	C2'-C3'-O3'	5.82	122.44	113.70
1	N	319	G	C4'-C3'-O3'	-5.82	104.27	113.00
1	N	997	U	C4'-C3'-C2'	-5.82	96.78	102.60
1	N	193	C	O4'-C1'-N1	5.82	117.23	108.50
1	N	650	G	O4'-C4'-C3'	5.82	109.82	104.00
1	N	180	U	C2'-C3'-O3'	5.82	122.43	113.70
1	N	278	G	O3'-P-O5'	-5.82	95.27	104.00
1	N	559	A	N9-C1'-C2'	-5.82	105.27	114.00
1	N	635	A	C1'-O4'-C4'	-5.82	104.08	109.90
1	N	155	A	C2'-C3'-O3'	5.82	122.42	113.70
1	N	226	G	O4'-C4'-C3'	5.82	109.81	104.00
1	N	86	G	C1'-C2'-O2'	-5.81	103.08	111.80
1	N	499	A	O4'-C1'-C2'	5.81	111.61	105.80
1	N	806	C	O4'-C1'-N1	5.81	117.22	108.50
1	N	83	C	O4'-C1'-N1	5.81	117.22	108.50
1	N	173	U	P-O3'-C3'	5.81	128.92	120.20
1	N	1292	G	C5'-C4'-C3'	5.81	124.72	116.00
1	N	398	U	O4'-C1'-N1	5.81	117.22	108.50
1	N	1306	A	P-O5'-C5'	5.81	129.62	120.90
1	N	1313	U	C2'-C3'-O3'	5.81	122.41	113.70
1	N	90	C	O4'-C4'-C3'	5.81	111.91	106.10
1	N	134	G	O5'-C5'-C4'	-5.81	102.79	111.50
1	N	849	G	O5'-C5'-C4'	5.80	120.20	111.50
1	N	573	A	P-O5'-C5'	-5.80	112.21	120.90
1	N	1345	U	O5'-C5'-C4'	-5.79	103.01	111.70
1	N	1202	U	C3'-C2'-C1'	5.79	107.09	101.30
1	N	202	G	O4'-C4'-C3'	-5.79	98.21	104.00
1	N	212	G	O3'-P-O5'	-5.79	95.31	104.00
1	N	278	G	P-O3'-C3'	5.79	128.89	120.20
1	N	12	U	O5'-C5'-C4'	-5.79	102.82	111.50
1	N	488	C	O4'-C1'-N1	5.79	117.18	108.50
1	N	1175	G	C3'-C2'-C1'	-5.79	95.51	101.30
1	N	24	U	C4'-C3'-C2'	-5.79	96.81	102.60
1	N	1275	A	C5'-C4'-C3'	-5.79	107.32	116.00
1	N	93	U	C4'-C3'-O3'	5.78	121.67	113.00
1	N	486	U	O4'-C1'-N1	5.78	117.18	108.50
1	N	775	G	P-O5'-C5'	5.78	129.57	120.90
1	N	874	G	P-O5'-C5'	5.78	129.57	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1500	A	O4'-C1'-N9	5.78	117.17	108.50
1	N	110	C	P-O3'-C3'	5.78	128.87	120.20
1	N	1270	G	P-O5'-C5'	5.78	129.57	120.90
1	N	1152	A	C5'-C4'-C3'	-5.78	107.33	116.00
1	N	178	C	C1'-O4'-C4'	-5.78	104.12	109.90
1	N	795	C	P-O5'-C5'	5.78	129.57	120.90
1	N	1309	G	O3'-P-O5'	-5.78	95.33	104.00
1	N	1396	A	P-O3'-C3'	5.77	128.86	120.20
1	N	1096	C	O4'-C1'-N1	5.77	117.16	108.50
1	N	1330	U	C2'-C3'-O3'	5.77	122.36	113.70
1	N	246	A	C3'-C2'-C1'	5.77	107.27	101.50
1	N	316	C	O4'-C4'-C3'	-5.77	98.23	104.00
1	N	335	C	O4'-C4'-C3'	-5.77	98.23	104.00
1	N	1528	U	C4'-C3'-O3'	5.77	118.05	109.40
1	N	772	U	O3'-P-O5'	-5.77	95.35	104.00
1	N	777	A	C5'-C4'-O4'	5.77	118.45	109.80
1	N	875	U	O4'-C4'-C3'	-5.77	98.23	104.00
1	N	327	A	C3'-C2'-O2'	-5.77	105.95	114.60
1	N	1499	A	O5'-C5'-C4'	5.77	120.15	111.50
1	N	63	C	C4'-C3'-O3'	-5.76	104.35	113.00
1	N	865	A	C4'-C3'-C2'	-5.76	96.83	102.60
1	N	1300	G	P-O5'-C5'	5.76	129.55	120.90
1	N	295	C	C5'-C4'-C3'	-5.76	107.36	116.00
1	N	1174	G	P-O5'-C5'	5.76	129.54	120.90
1	N	463	U	O4'-C4'-C3'	-5.76	98.24	104.00
1	N	668	G	O5'-C5'-C4'	-5.76	102.86	111.50
1	N	544	G	C4'-C3'-C2'	-5.76	96.84	102.60
1	N	1392	G	C3'-C2'-C1'	5.76	107.06	101.30
1	N	26	A	O3'-P-O5'	-5.75	95.37	104.00
1	N	659	U	C1'-C2'-O2'	5.75	117.03	108.40
1	N	175	C	O4'-C1'-N1	5.75	117.13	108.50
1	N	423	G	P-O3'-C3'	5.75	128.83	120.20
1	N	429	U	C4'-C3'-C2'	-5.75	96.85	102.60
1	N	506	G	C4'-C3'-C2'	5.75	108.35	102.60
1	N	99	C	P-O3'-C3'	5.75	128.82	120.20
1	N	332	G	C1'-C2'-O2'	5.75	117.02	108.40
1	N	737	C	O5'-C5'-C4'	-5.75	102.88	111.50
1	N	307	C	O4'-C1'-N1	5.75	117.12	108.50
1	N	1119	C	O4'-C1'-N1	5.75	117.12	108.50
1	N	318	G	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	503	C	C4'-C3'-O3'	-5.74	104.39	113.00
1	N	853	C	O4'-C1'-N1	5.74	117.12	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	318	G	C4'-C3'-O3'	-5.74	104.39	113.00
1	N	60	A	O4'-C1'-N9	5.74	116.81	108.20
1	N	1294	G	P-O3'-C3'	-5.74	111.59	120.20
1	N	13	U	O4'-C1'-C2'	-5.74	100.06	105.80
1	N	216	U	O4'-C1'-N1	5.74	117.10	108.50
1	N	355	C	O4'-C1'-N1	5.74	117.10	108.50
1	N	1043	G	C3'-C2'-C1'	5.73	107.03	101.30
1	N	1133	G	O4'-C1'-C2'	-5.73	101.87	107.60
1	N	1191	A	P-O5'-C5'	5.73	129.50	120.90
1	N	1277	C	O4'-C1'-N1	5.73	117.09	108.50
1	N	48	C	O4'-C1'-N1	5.73	117.09	108.50
1	N	348	G	C4'-C3'-O3'	-5.73	104.41	113.00
1	N	357	G	O4'-C1'-N9	5.73	117.09	108.50
1	N	66	A	C4'-C3'-O3'	-5.72	104.41	113.00
1	N	165	G	O3'-P-O5'	-5.72	95.41	104.00
1	N	729	A	O5'-C5'-C4'	-5.72	102.92	111.50
1	N	122	G	O3'-P-O5'	-5.71	95.43	104.00
1	N	1502	A	P-O3'-C3'	5.71	128.77	120.20
1	N	583	A	O4'-C1'-C2'	-5.71	101.89	107.60
1	N	913	A	C4'-C3'-C2'	-5.71	96.89	102.60
1	N	1345	U	O3'-P-O5'	-5.71	95.43	104.00
1	N	475	C	P-O3'-C3'	5.71	128.76	120.20
1	N	1458	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	1089	G	C4'-C3'-O3'	-5.70	104.45	113.00
1	N	548	G	C3'-C2'-C1'	5.70	107.00	101.30
1	N	1211	U	O4'-C1'-N1	5.70	116.75	108.20
1	N	64	G	C5'-C4'-C3'	-5.70	107.45	116.00
1	N	1071	C	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	1252	A	O5'-C5'-C4'	5.70	120.05	111.50
1	N	270	A	P-O3'-C3'	5.70	128.74	120.20
1	N	272	C	C4'-C3'-C2'	-5.70	96.91	102.60
1	N	279	A	O4'-C1'-C2'	5.70	111.50	105.80
1	N	1357	A	O4'-C4'-C3'	-5.70	98.31	104.00
1	N	351	G	C4'-C3'-O3'	5.69	117.94	109.40
1	N	470	C	C3'-C2'-C1'	-5.69	95.61	101.30
1	N	1329	A	O4'-C1'-C2'	-5.69	101.91	107.60
1	N	231	U	C5'-C4'-C3'	5.68	124.53	116.00
1	N	1493	A	P-O3'-C3'	5.68	128.73	120.20
1	N	324	G	C3'-C2'-O2'	-5.68	102.17	110.70
1	N	737	C	P-O5'-C5'	5.68	129.43	120.90
1	N	898	G	O4'-C1'-N9	5.68	117.03	108.50
1	N	1208	C	O4'-C1'-N1	5.68	117.02	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	359	G	P-O3'-C3'	-5.68	111.68	120.20
1	N	484	G	O4'-C4'-C3'	-5.68	100.42	106.10
1	N	775	G	C3'-C2'-C1'	5.68	106.98	101.30
1	N	913	A	O3'-P-O5'	5.68	112.52	104.00
1	N	1147	C	O5'-C5'-C4'	-5.68	102.99	111.50
1	N	1259	C	P-O5'-C5'	5.68	129.42	120.90
1	N	1040	U	P-O3'-C3'	5.67	128.71	120.20
1	N	736	C	P-O5'-C5'	-5.67	112.39	120.90
1	N	56	U	O4'-C1'-C2'	-5.67	101.93	107.60
1	N	34	C	O4'-C1'-N1	5.67	117.00	108.50
1	N	924	C	O4'-C1'-C2'	-5.67	101.93	107.60
1	N	1484	C	N1-C1'-C2'	5.67	120.50	112.00
1	N	145	G	N9-C1'-C2'	-5.67	103.50	112.00
1	N	267	C	C1'-O4'-C4'	5.67	115.56	109.90
1	N	401	C	C4'-C3'-C2'	-5.66	96.94	102.60
1	N	931	C	C4'-C3'-O3'	-5.66	104.50	113.00
1	N	1137	C	P-O5'-C5'	5.66	129.40	120.90
1	N	1143	G	C5'-C4'-C3'	-5.66	107.51	116.00
1	N	1393	U	C4'-C3'-O3'	-5.66	104.51	113.00
1	N	324	G	O3'-P-O5'	-5.66	95.51	104.00
1	N	566	G	C5'-C4'-C3'	-5.66	106.71	115.20
1	N	1435	G	C4'-C3'-O3'	-5.66	104.51	113.00
1	N	425	G	P-O3'-C3'	-5.66	111.71	120.20
1	N	575	G	C2'-C3'-O3'	5.66	117.99	109.50
1	N	1432	G	O4'-C4'-C3'	-5.66	100.44	106.10
1	N	762	U	C4'-C3'-C2'	-5.66	96.94	102.60
1	N	1209	C	C3'-C2'-O2'	5.66	119.18	110.70
1	N	1295	U	C5'-C4'-C3'	-5.66	107.52	116.00
1	N	336	A	C4'-C3'-O3'	-5.65	104.52	113.00
1	N	1045	C	O4'-C1'-C2'	-5.65	101.95	107.60
1	N	107	G	C4'-C3'-C2'	-5.65	96.95	102.60
1	N	266	G	C4'-C3'-C2'	5.65	108.25	102.60
1	N	647	C	P-O5'-C5'	5.65	129.38	120.90
1	N	737	C	O4'-C4'-C3'	-5.65	98.35	104.00
1	N	4	U	C2'-C3'-O3'	5.65	117.97	109.50
1	N	759	A	P-O3'-C3'	-5.65	111.73	120.20
1	N	1389	C	P-O5'-C5'	-5.65	112.43	120.90
1	N	1482	G	P-O5'-C5'	5.65	129.37	120.90
1	N	890	G	C1'-O4'-C4'	-5.65	104.05	109.70
1	N	656	G	C5'-C4'-C3'	-5.64	107.53	116.00
1	N	802	A	P-O3'-C3'	5.64	128.67	120.20
1	N	1329	A	P-O5'-C5'	-5.64	112.43	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	74	A	O3'-P-O5'	5.64	112.46	104.00
1	N	251	G	O5'-C5'-C4'	-5.64	103.23	111.70
1	N	131	A	C5'-C4'-C3'	-5.64	107.54	116.00
1	N	645	G	O4'-C1'-C2'	-5.64	101.96	107.60
1	N	572	A	P-O3'-C3'	5.64	128.66	120.20
1	N	1138	G	O4'-C1'-N9	5.64	116.96	108.50
1	N	1447	A	O4'-C1'-N9	5.64	116.96	108.50
1	N	450	G	C2'-C3'-O3'	5.64	122.16	113.70
1	N	181	A	C4'-C3'-O3'	5.64	121.45	113.00
1	N	503	C	O4'-C1'-N1	5.64	116.96	108.50
1	N	1141	C	O4'-C1'-N1	5.64	116.95	108.50
1	N	1242	G	P-O3'-C3'	-5.64	111.74	120.20
1	N	115	G	C2'-C3'-O3'	5.63	117.95	109.50
1	N	224	U	O4'-C1'-N1	5.63	116.95	108.50
1	N	785	G	C4'-C3'-C2'	-5.63	96.97	102.60
1	N	1121	U	O4'-C1'-N1	5.63	116.95	108.50
1	N	1190	G	P-O3'-C3'	-5.63	111.75	120.20
1	N	1351	U	C5'-C4'-C3'	5.63	124.45	116.00
1	N	273	U	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	91	U	C5'-C4'-C3'	5.63	124.44	116.00
1	N	255	G	C4'-C3'-O3'	-5.63	104.56	113.00
1	N	421	U	C3'-C2'-C1'	-5.63	95.87	101.50
1	N	930	C	C4'-C3'-O3'	-5.63	104.56	113.00
1	N	478	A	O4'-C1'-N9	5.62	116.93	108.50
1	N	573	A	O3'-P-O5'	-5.62	95.57	104.00
1	N	982	U	C4'-C3'-C2'	5.62	108.22	102.60
1	N	1043	G	P-O5'-C5'	5.62	129.33	120.90
1	N	67	C	C1'-C2'-O2'	5.62	116.83	108.40
1	N	1334	G	P-O3'-C3'	5.62	128.63	120.20
1	N	476	U	C5'-C4'-C3'	5.62	124.43	116.00
1	N	1249	C	C4'-C3'-C2'	-5.62	96.98	102.60
1	N	1447	A	O3'-P-O5'	-5.62	95.57	104.00
1	N	1237	C	O5'-C5'-C4'	-5.62	103.07	111.50
1	N	1123	U	O4'-C1'-N1	5.61	116.92	108.50
1	N	480	U	O4'-C1'-N1	5.61	116.62	108.20
1	N	709	U	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	843	U	O4'-C1'-N1	5.61	116.92	108.50
1	N	1006	G	C4'-C3'-C2'	-5.61	96.99	102.60
1	N	1129	C	P-O3'-C3'	5.61	128.62	120.20
1	N	302	G	O4'-C1'-C2'	-5.61	101.99	107.60
1	N	1316	G	P-O5'-C5'	-5.61	112.49	120.90
1	N	99	C	C5'-C4'-C3'	5.61	124.41	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	559	A	O4'-C1'-N9	5.61	116.61	108.20
1	N	610	U	C4'-C3'-O3'	-5.61	104.59	113.00
1	N	636	U	C2'-C3'-O3'	5.60	122.11	113.70
1	N	793	U	O4'-C1'-N1	5.60	116.60	108.20
1	N	1192	C	C3'-C2'-C1'	5.60	106.90	101.30
1	N	94	G	C4'-C3'-O3'	5.60	117.80	109.40
1	N	142	G	O4'-C1'-N9	5.60	116.89	108.50
1	N	671	G	C3'-C2'-C1'	-5.59	95.71	101.30
1	N	1154	G	O4'-C1'-C2'	-5.59	102.00	107.60
1	N	1367	C	C1'-O4'-C4'	5.59	115.49	109.90
1	N	82	G	C5'-C4'-C3'	5.59	124.39	116.00
1	N	1160	G	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	1314	C	O4'-C1'-N1	5.59	116.89	108.50
1	N	63	C	O4'-C1'-C2'	5.59	113.19	107.60
1	N	156	C	C1'-O4'-C4'	5.59	115.49	109.90
1	N	679	C	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	1077	G	C4'-C3'-O3'	-5.58	104.62	113.00
1	N	1518	A	C3'-C2'-C1'	-5.58	95.72	101.30
1	N	575	G	N9-C1'-C2'	-5.58	105.63	114.00
1	N	366	A	C4'-C3'-O3'	5.58	117.77	109.40
1	N	523	A	O4'-C1'-N9	5.58	116.87	108.50
1	N	586	C	C2'-C3'-O3'	5.58	122.07	113.70
1	N	54	C	P-O3'-C3'	-5.58	111.84	120.20
1	N	599	C	O5'-C5'-C4'	-5.58	103.14	111.50
1	N	859	G	O4'-C1'-C2'	-5.58	102.02	107.60
1	N	1513	A	C5'-C4'-C3'	5.58	124.36	116.00
1	N	223	A	C5'-C4'-C3'	-5.57	107.64	116.00
1	N	1169	A	C2'-C3'-O3'	5.57	122.06	113.70
1	N	824	G	P-O5'-C5'	5.57	129.26	120.90
1	N	222	C	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	543	U	C4'-C3'-O3'	-5.57	104.65	113.00
1	N	1374	A	C5'-C4'-C3'	-5.57	107.65	116.00
1	N	335	C	O4'-C1'-N1	5.56	116.84	108.50
1	N	928	G	C4'-C3'-C2'	-5.56	97.04	102.60
1	N	1223	C	C5'-C4'-O4'	5.56	118.14	109.80
1	N	1325	C	C3'-C2'-C1'	5.56	106.86	101.30
1	N	1506	U	C5'-C4'-C3'	5.56	123.54	115.20
1	N	409	U	P-O3'-C3'	5.56	128.54	120.20
1	N	591	U	C1'-O4'-C4'	5.56	115.46	109.90
1	N	785	G	O4'-C4'-C3'	5.55	109.55	104.00
1	N	1506	U	C2'-C3'-O3'	5.55	117.83	109.50
1	N	81	A	N9-C1'-C2'	5.55	122.33	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1032	G	C1'-O4'-C4'	-5.55	104.35	109.90
1	N	1145	A	C3'-C2'-C1'	5.55	106.85	101.30
1	N	1191	A	N9-C1'-C2'	5.55	120.32	112.00
1	N	420	U	O4'-C1'-N1	5.54	116.82	108.50
1	N	621	A	C5'-C4'-C3'	5.54	124.31	116.00
1	N	785	G	O4'-C1'-C2'	-5.54	102.06	107.60
1	N	1112	C	O4'-C4'-C3'	-5.54	100.56	106.10
1	N	1377	A	P-O5'-C5'	-5.54	112.59	120.90
1	N	1363	A	C3'-C2'-O2'	-5.54	106.29	114.60
1	N	1407	C	C4'-C3'-C2'	-5.54	97.06	102.60
1	N	715	A	C3'-C2'-C1'	-5.54	95.76	101.30
1	N	1039	G	P-O3'-C3'	-5.54	111.89	120.20
1	N	1512	U	C3'-C2'-C1'	5.54	106.84	101.30
1	N	134	G	O4'-C1'-C2'	-5.54	102.06	107.60
1	N	1414	U	O4'-C1'-N1	5.54	116.80	108.50
1	N	532	A	P-O3'-C3'	5.53	128.50	120.20
1	N	1417	G	O3'-P-O5'	-5.53	95.70	104.00
1	N	50	A	N9-C1'-C2'	5.53	122.30	114.00
1	N	93	U	P-O3'-C3'	-5.53	111.91	120.20
1	N	432	A	P-O5'-C5'	5.53	129.20	120.90
1	N	752	G	O4'-C1'-N9	5.53	116.79	108.50
1	N	878	A	C1'-O4'-C4'	-5.53	104.37	109.90
1	N	37	U	O4'-C1'-C2'	-5.53	102.07	107.60
1	N	627	G	C4'-C3'-C2'	-5.53	97.07	102.60
1	N	863	U	C4'-C3'-O3'	-5.53	104.71	113.00
1	N	863	U	O3'-P-O5'	-5.53	95.71	104.00
1	N	955	U	N1-C1'-C2'	5.53	120.29	112.00
1	N	17	U	C5'-C4'-C3'	5.52	124.28	116.00
1	N	101	A	C1'-C2'-O2'	5.52	116.68	108.40
1	N	587	G	C2'-C3'-O3'	5.52	121.98	113.70
1	N	1120	C	C1'-O4'-C4'	-5.52	104.38	109.90
1	N	290	C	C4'-C3'-C2'	-5.52	97.08	102.60
1	N	822	U	O4'-C1'-C2'	-5.52	102.08	107.60
1	N	1034	G	P-O3'-C3'	5.52	128.48	120.20
1	N	287	U	O5'-C5'-C4'	-5.52	103.22	111.50
1	N	418	C	O5'-C5'-C4'	-5.52	103.22	111.50
1	N	1333	A	P-O3'-C3'	-5.52	111.92	120.20
1	N	134	G	C4'-C3'-C2'	-5.52	97.08	102.60
1	N	1251	A	O4'-C1'-N9	5.52	116.48	108.20
1	N	527	G	O4'-C1'-N9	5.51	116.77	108.50
1	N	308	C	O4'-C1'-N1	5.51	116.77	108.50
1	N	851	G	O5'-C5'-C4'	-5.51	103.23	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	870	U	C2'-C3'-O3'	5.51	117.77	109.50
1	N	62	U	P-O3'-C3'	-5.51	111.94	120.20
1	N	1107	C	C1'-O4'-C4'	-5.51	104.39	109.90
1	N	1258	G	P-O5'-C5'	5.51	129.16	120.90
1	N	198	G	C3'-C2'-O2'	5.50	118.96	110.70
1	N	508	U	C5'-C4'-C3'	-5.50	106.94	115.20
1	N	500	G	N9-C1'-C2'	-5.50	103.75	112.00
1	N	327	A	C4'-C3'-C2'	-5.50	97.10	102.60
1	N	806	C	P-O3'-C3'	-5.50	111.95	120.20
1	N	37	U	C3'-C2'-C1'	5.50	106.80	101.30
1	N	1318	A	P-O5'-C5'	5.50	129.15	120.90
1	N	393	A	C3'-C2'-C1'	-5.50	95.80	101.30
1	N	1025	U	O3'-P-O5'	-5.50	95.76	104.00
1	N	1058	G	O4'-C4'-C3'	-5.50	98.50	104.00
1	N	269	C	P-O3'-C3'	-5.49	111.96	120.20
1	N	1259	C	O4'-C1'-N1	5.49	116.74	108.50
1	N	346	G	P-O5'-C5'	-5.49	112.66	120.90
1	N	860	A	O5'-C5'-C4'	-5.49	103.26	111.50
1	N	360	G	C5'-C4'-C3'	-5.49	107.76	116.00
1	N	1530	G	C2'-C3'-O3'	5.49	117.73	109.50
1	N	1393	U	O3'-P-O5'	-5.49	95.77	104.00
1	N	565	U	C4'-C3'-C2'	5.49	108.09	102.60
1	N	1024	G	P-O5'-C5'	5.49	129.13	120.90
1	N	1129	C	C4'-C3'-C2'	5.49	108.08	102.60
1	N	1230	C	C4'-C3'-O3'	-5.49	104.77	113.00
1	N	1527	U	O3'-P-O5'	5.49	112.23	104.00
1	N	207	C	C1'-O4'-C4'	5.48	115.38	109.90
1	N	511	C	C2'-C3'-O3'	5.48	117.73	109.50
1	N	1244	G	C5'-C4'-C3'	5.48	124.23	116.00
1	N	447	G	P-O3'-C3'	5.48	128.42	120.20
1	N	834	U	P-O5'-C5'	5.48	129.12	120.90
1	N	1058	G	C4'-C3'-O3'	-5.48	104.78	113.00
1	N	1196	A	C2'-C3'-O3'	5.48	121.92	113.70
1	N	268	U	C1'-O4'-C4'	-5.48	104.42	109.90
1	N	986	U	O5'-C5'-C4'	-5.48	103.28	111.50
1	N	166	U	O4'-C1'-C2'	-5.48	102.12	107.60
1	N	641	U	C4'-C3'-O3'	-5.48	104.78	113.00
1	N	714	G	C5'-C4'-C3'	-5.48	107.78	116.00
1	N	1086	U	P-O5'-C5'	-5.48	112.69	120.90
1	N	1319	A	C5'-C4'-C3'	-5.48	107.78	116.00
1	N	1429	A	C4'-C3'-C2'	-5.48	97.12	102.60
1	N	277	C	N1-C1'-C2'	-5.47	103.79	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	926	G	C5'-C4'-C3'	5.47	124.21	116.00
1	N	41	G	C4'-C3'-O3'	-5.47	104.80	113.00
1	N	1292	G	O5'-C5'-C4'	-5.47	103.30	111.50
1	N	717	U	C2'-C3'-O3'	5.47	117.70	109.50
1	N	1283	U	O4'-C1'-N1	5.47	116.70	108.50
1	N	1469	C	C4'-C3'-O3'	-5.47	104.80	113.00
1	N	1498	U	P-O3'-C3'	5.47	128.40	120.20
1	N	1241	G	P-O3'-C3'	-5.46	112.00	120.20
1	N	1235	U	C2'-C3'-O3'	5.46	121.89	113.70
1	N	207	C	C5'-C4'-C3'	5.46	124.19	116.00
1	N	124	C	O3'-P-O5'	-5.46	95.82	104.00
1	N	468	A	C4'-C3'-O3'	-5.46	104.81	113.00
1	N	1111	A	C1'-O4'-C4'	-5.46	104.44	109.90
1	N	907	A	C4'-C3'-O3'	-5.46	104.82	113.00
1	N	7	A	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	262	A	P-O5'-C5'	-5.45	112.72	120.90
1	N	558	G	C5'-C4'-C3'	5.45	124.18	116.00
1	N	131	A	O4'-C1'-N9	5.45	116.67	108.50
1	N	424	G	C3'-C2'-C1'	5.45	106.75	101.30
1	N	1094	G	C3'-C2'-O2'	5.45	118.87	110.70
1	N	1125	U	C4'-C3'-O3'	-5.45	104.83	113.00
1	N	1264	U	P-O5'-C5'	5.45	129.07	120.90
1	N	1375	A	O3'-P-O5'	-5.45	95.83	104.00
1	N	578	C	O4'-C1'-N1	5.45	116.67	108.50
1	N	683	G	O5'-C5'-C4'	-5.45	103.33	111.50
1	N	865	A	C3'-C2'-O2'	5.45	118.87	110.70
1	N	773	G	O5'-C5'-C4'	-5.45	103.33	111.50
1	N	785	G	C3'-C2'-C1'	5.45	106.75	101.30
1	N	941	G	P-O3'-C3'	5.45	128.37	120.20
1	N	968	A	C3'-C2'-O2'	-5.45	106.43	114.60
1	N	1233	G	O4'-C1'-C2'	-5.45	102.16	107.60
1	N	55	A	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	680	C	C4'-C3'-C2'	-5.44	97.16	102.60
1	N	1235	U	C4'-C3'-C2'	-5.44	97.16	102.60
1	N	1211	U	O4'-C1'-C2'	-5.44	100.36	105.80
1	N	87	C	O5'-C5'-C4'	-5.44	103.35	111.50
1	N	960	U	O4'-C1'-N1	5.43	116.65	108.50
1	N	1245	C	O4'-C1'-N1	5.43	116.65	108.50
1	N	828	U	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	99	C	O4'-C1'-N1	5.43	116.64	108.50
1	N	181	A	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	322	C	C5'-C4'-C3'	-5.43	107.86	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1353	G	C1'-O4'-C4'	5.43	115.33	109.90
1	N	172	A	O5'-C5'-C4'	-5.43	103.36	111.50
1	N	679	C	O4'-C1'-N1	5.43	116.64	108.50
1	N	788	U	C1'-O4'-C4'	-5.43	104.47	109.90
1	N	1126	U	O4'-C4'-C3'	-5.43	100.67	106.10
1	N	1143	G	O4'-C1'-N9	5.43	116.64	108.50
1	N	1209	C	O4'-C1'-N1	5.43	116.64	108.50
1	N	532	A	P-O5'-C5'	-5.42	112.77	120.90
1	N	684	U	O4'-C1'-C2'	-5.42	102.18	107.60
1	N	1112	C	C3'-C2'-C1'	-5.42	96.08	101.50
1	N	1347	G	C5'-C4'-C3'	-5.42	107.07	115.20
1	N	20	U	P-O5'-C5'	5.42	129.03	120.90
1	N	884	U	P-O5'-C5'	5.42	129.03	120.90
1	N	880	C	O4'-C1'-N1	5.42	116.63	108.50
1	N	211	G	C4'-C3'-C2'	5.42	108.02	102.60
1	N	708	C	C3'-C2'-O2'	5.42	118.83	110.70
1	N	339	C	C4'-C3'-C2'	-5.42	97.18	102.60
1	N	727	G	O4'-C4'-C3'	-5.42	98.58	104.00
1	N	160	A	C4'-C3'-C2'	-5.41	97.19	102.60
1	N	1440	U	C3'-C2'-C1'	-5.41	95.89	101.30
1	N	121	U	C1'-C2'-O2'	5.41	116.52	108.40
1	N	1323	G	O4'-C1'-N9	5.41	116.62	108.50
1	N	265	G	O5'-C5'-C4'	-5.41	103.39	111.50
1	N	774	G	O4'-C1'-N9	5.41	116.61	108.50
1	N	795	C	O5'-C5'-C4'	-5.41	103.39	111.50
1	N	1257	A	P-O5'-C5'	5.41	129.01	120.90
1	N	255	G	C3'-C2'-C1'	-5.41	95.89	101.30
1	N	509	A	P-O3'-C3'	5.41	128.31	120.20
1	N	1400	C	O4'-C1'-N1	5.41	116.61	108.50
1	N	812	G	C2'-C3'-O3'	5.40	117.61	109.50
1	N	1066	C	O4'-C1'-N1	5.40	116.61	108.50
1	N	1470	U	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	365	U	O5'-C5'-C4'	-5.40	103.40	111.50
1	N	539	A	O4'-C1'-N9	5.40	116.60	108.50
1	N	1093	A	O4'-C1'-C2'	-5.40	102.20	107.60
1	N	1432	G	P-O5'-C5'	5.40	129.00	120.90
1	N	124	C	C5'-C4'-C3'	5.40	124.10	116.00
1	N	596	A	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	1034	G	O4'-C4'-C3'	5.40	109.40	104.00
1	N	1390	U	C3'-C2'-C1'	5.40	106.70	101.30
1	N	714	G	C4'-C3'-O3'	-5.40	104.90	113.00
1	N	569	C	O4'-C1'-N1	5.39	116.59	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	767	A	P-O3'-C3'	5.39	128.29	120.20
1	N	1485	U	O4'-C1'-N1	5.39	116.59	108.50
1	N	652	U	C5'-C4'-C3'	-5.39	107.92	116.00
1	N	1138	G	C5'-C4'-O4'	5.39	117.88	109.80
1	N	1367	C	O4'-C4'-C3'	-5.39	98.61	104.00
1	N	721	G	P-O5'-C5'	-5.38	112.83	120.90
1	N	225	C	O4'-C1'-N1	5.38	116.57	108.50
1	N	1471	U	O3'-P-O5'	-5.38	95.93	104.00
1	N	381	C	C5'-C4'-C3'	5.38	124.06	116.00
1	N	537	G	C4'-C3'-C2'	-5.38	97.22	102.60
1	N	1027	C	C5'-C4'-O4'	5.38	117.86	109.80
1	N	1228	C	O4'-C4'-C3'	5.38	109.38	104.00
1	N	545	C	O5'-C5'-C4'	-5.37	103.44	111.50
1	N	913	A	C2'-C3'-O3'	5.37	117.56	109.50
1	N	737	C	C1'-O4'-C4'	5.37	115.27	109.90
1	N	1114	C	C5'-C4'-O4'	5.37	117.86	109.80
1	N	1108	G	P-O3'-C3'	5.37	128.25	120.20
1	N	56	U	O5'-C5'-C4'	-5.37	103.45	111.50
1	N	57	G	C1'-C2'-O2'	5.37	116.45	108.40
1	N	556	C	P-O3'-C3'	-5.37	112.15	120.20
1	N	873	A	O5'-C5'-C4'	5.37	119.75	111.70
1	N	315	A	O4'-C1'-C2'	5.36	111.16	105.80
1	N	433	G	C4'-C3'-C2'	-5.36	97.24	102.60
1	N	458	U	P-O5'-C5'	-5.36	112.86	120.90
1	N	1278	G	O5'-C5'-C4'	-5.36	103.65	111.70
1	N	765	G	O4'-C1'-N9	5.36	116.54	108.50
1	N	1380	U	O4'-C1'-N1	5.36	116.54	108.50
1	N	88	U	C5'-C4'-O4'	5.36	117.14	109.10
1	N	517	G	C4'-C3'-C2'	-5.36	97.24	102.60
1	N	1195	C	P-O3'-C3'	5.36	128.24	120.20
1	N	1117	A	C3'-C2'-C1'	5.36	106.66	101.30
1	N	1369	C	O5'-C5'-C4'	-5.36	103.46	111.50
1	N	69	G	O3'-P-O5'	-5.36	95.96	104.00
1	N	518	C	C5'-C4'-O4'	5.36	117.14	109.10
1	N	788	U	P-O5'-C5'	5.36	128.94	120.90
1	N	1342	C	P-O3'-C3'	-5.36	112.16	120.20
1	N	440	C	C4'-C3'-O3'	-5.35	104.97	113.00
1	N	274	A	C1'-O4'-C4'	5.35	115.05	109.70
1	N	707	U	C4'-C3'-O3'	-5.35	104.97	113.00
1	N	1212	U	N1-C1'-C2'	5.35	120.03	112.00
1	N	1297	G	P-O5'-C5'	5.35	128.93	120.90
1	N	16	A	C1'-O4'-C4'	5.35	115.25	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	87	C	C2'-C3'-O3'	-5.35	105.68	113.70
1	N	708	C	P-O3'-C3'	-5.35	112.17	120.20
1	N	317	U	O4'-C1'-C2'	-5.35	102.25	107.60
1	N	353	A	O3'-P-O5'	-5.35	95.98	104.00
1	N	432	A	C5'-C4'-O4'	5.35	117.82	109.80
1	N	1120	C	O4'-C4'-C3'	5.35	109.35	104.00
1	N	1264	U	O4'-C1'-N1	5.34	116.52	108.50
1	N	1282	C	O4'-C1'-C2'	-5.34	102.26	107.60
1	N	950	U	C4'-C3'-C2'	5.34	107.94	102.60
1	N	277	C	O4'-C1'-N1	5.34	116.51	108.50
1	N	614	C	O4'-C1'-N1	5.34	116.51	108.50
1	N	1296	C	P-O3'-C3'	5.34	128.21	120.20
1	N	807	A	P-O3'-C3'	5.34	128.21	120.20
1	N	1204	A	O4'-C4'-C3'	-5.34	98.66	104.00
1	N	523	A	O3'-P-O5'	-5.34	95.99	104.00
1	N	696	A	O4'-C1'-N9	5.34	116.50	108.50
1	N	1120	C	O5'-C5'-C4'	-5.33	103.50	111.50
1	N	908	A	C2'-C3'-O3'	5.33	121.70	113.70
1	N	591	U	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	1302	C	C5'-C4'-C3'	-5.33	108.00	116.00
1	N	1072	G	C5'-C4'-C3'	5.33	123.99	116.00
1	N	1333	A	C5'-C4'-C3'	-5.33	108.00	116.00
1	N	427	U	C4'-C3'-O3'	-5.33	105.01	113.00
1	N	1086	U	O4'-C1'-N1	5.33	116.49	108.50
1	N	1178	G	C4'-C3'-C2'	-5.33	97.27	102.60
1	N	503	C	P-O5'-C5'	5.33	128.89	120.90
1	N	718	A	C1'-O4'-C4'	5.33	115.23	109.90
1	N	252	U	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	763	G	C5'-C4'-C3'	-5.33	108.01	116.00
1	N	1341	U	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	1347	G	P-O3'-C3'	5.33	128.19	120.20
1	N	1465	A	C4'-C3'-C2'	-5.33	97.27	102.60
1	N	183	C	O3'-P-O5'	-5.32	96.02	104.00
1	N	295	C	O3'-P-O5'	-5.32	96.02	104.00
1	N	756	C	P-O5'-C5'	-5.32	112.92	120.90
1	N	827	U	O4'-C1'-N1	5.32	116.48	108.50
1	N	323	U	O4'-C4'-C3'	-5.32	98.68	104.00
1	N	1468	A	O4'-C1'-N9	5.32	116.48	108.50
1	N	887	G	C5'-C4'-C3'	-5.32	108.02	116.00
1	N	154	U	C1'-C2'-O2'	5.32	116.37	108.40
1	N	443	C	C1'-O4'-C4'	5.32	115.22	109.90
1	N	878	A	O4'-C4'-C3'	5.32	109.32	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	770	C	C5'-C4'-C3'	5.31	123.97	116.00
1	N	1003	G	O5'-C5'-C4'	5.31	119.47	111.50
1	N	1058	G	C5'-C4'-C3'	5.31	123.97	116.00
1	N	1525	G	C3'-C2'-O2'	5.31	118.67	110.70
1	N	113	G	C4'-C3'-C2'	5.31	107.91	102.60
1	N	120	A	C3'-C2'-O2'	5.31	118.67	110.70
1	N	405	U	C4'-C3'-O3'	-5.31	105.04	113.00
1	N	533	A	C5'-C4'-O4'	5.31	117.06	109.10
1	N	309	A	C4'-C3'-C2'	-5.31	97.29	102.60
1	N	1101	A	O4'-C4'-C3'	-5.31	100.79	106.10
1	N	1367	C	C1'-C2'-O2'	5.31	116.36	108.40
1	N	1497	G	P-O5'-C5'	5.31	128.86	120.90
1	N	353	A	O4'-C4'-C3'	-5.30	98.70	104.00
1	N	693	G	O5'-C5'-C4'	-5.30	103.54	111.50
1	N	1361	G	C4'-C3'-C2'	5.30	107.90	102.60
1	N	1077	G	C5'-C4'-C3'	-5.30	108.05	116.00
1	N	1373	G	C2'-C3'-O3'	-5.30	105.75	113.70
1	N	806	C	C1'-O4'-C4'	5.30	115.20	109.90
1	N	162	A	O4'-C1'-N9	5.30	116.45	108.50
1	N	966	G	O4'-C4'-C3'	-5.30	98.70	104.00
1	N	1401	G	C4'-C3'-O3'	-5.30	105.05	113.00
1	N	406	G	C4'-C3'-C2'	-5.30	97.30	102.60
1	N	657	U	C1'-O4'-C4'	5.30	115.20	109.90
1	N	1350	A	O4'-C1'-N9	5.30	116.44	108.50
1	N	1450	U	C4'-C3'-O3'	-5.30	105.06	113.00
1	N	976	G	O3'-P-O5'	5.29	111.94	104.00
1	N	1240	U	C3'-C2'-C1'	-5.29	96.01	101.30
1	N	1283	U	P-O3'-C3'	-5.29	112.26	120.20
1	N	1346	A	C3'-C2'-O2'	-5.29	106.66	114.60
1	N	8	A	O4'-C1'-N9	5.29	116.14	108.20
1	N	722	G	C5'-C4'-C3'	-5.29	108.06	116.00
1	N	1504	G	C5'-C4'-C3'	5.29	123.14	115.20
1	N	1029	U	C5'-C4'-C3'	5.29	123.94	116.00
1	N	133	U	P-O3'-C3'	-5.29	112.27	120.20
1	N	500	G	O4'-C1'-N9	5.29	116.43	108.50
1	N	524	G	C4'-C3'-C2'	5.29	107.89	102.60
1	N	524	G	O4'-C4'-C3'	-5.29	98.71	104.00
1	N	1031	C	O3'-P-O5'	5.29	111.93	104.00
1	N	1125	U	O4'-C1'-C2'	-5.29	102.31	107.60
1	N	1067	A	O3'-P-O5'	-5.28	96.08	104.00
1	N	865	A	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	1220	G	O4'-C1'-N9	5.28	116.42	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1470	U	C3'-C2'-C1'	5.28	106.58	101.30
1	N	275	G	P-O3'-C3'	-5.28	112.28	120.20
1	N	698	G	P-O5'-C5'	5.28	128.82	120.90
1	N	371	A	P-O3'-C3'	-5.28	112.28	120.20
1	N	960	U	P-O3'-C3'	5.28	128.12	120.20
1	N	323	U	C1'-O4'-C4'	5.28	115.17	109.90
1	N	263	A	C1'-C2'-O2'	5.27	116.31	108.40
1	N	867	G	C1'-O4'-C4'	5.27	115.17	109.90
1	N	225	C	C2'-C3'-O3'	5.27	121.61	113.70
1	N	721	G	C2'-C3'-O3'	5.27	117.41	109.50
1	N	821	G	P-O3'-C3'	-5.27	112.29	120.20
1	N	1420	U	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	99	C	C4'-C3'-O3'	-5.27	105.09	113.00
1	N	1426	G	O4'-C1'-N9	5.27	116.41	108.50
1	N	818	G	O4'-C1'-N9	5.27	116.40	108.50
1	N	1255	G	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	1347	G	O4'-C4'-C3'	-5.27	100.83	106.10
1	N	77	A	P-O3'-C3'	5.27	128.10	120.20
1	N	1162	C	C5'-C4'-C3'	5.27	123.90	116.00
1	N	837	U	O5'-C5'-C4'	-5.27	103.60	111.50
1	N	430	A	C1'-O4'-C4'	5.26	115.16	109.90
1	N	382	A	O4'-C1'-N9	5.26	116.39	108.50
1	N	731	G	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	761	G	P-O5'-C5'	-5.26	113.01	120.90
1	N	266	G	O3'-P-O5'	5.26	111.89	104.00
1	N	545	C	O4'-C1'-N1	5.26	116.38	108.50
1	N	229	U	P-O5'-C5'	5.25	128.78	120.90
1	N	439	U	O5'-C5'-C4'	-5.25	103.62	111.50
1	N	1503	A	P-O5'-C5'	5.25	128.78	120.90
1	N	204	G	C5'-C4'-C3'	5.25	123.88	116.00
1	N	770	C	O4'-C4'-C3'	-5.25	98.75	104.00
1	N	262	A	O5'-C5'-C4'	-5.25	103.62	111.50
1	N	294	U	O4'-C4'-C3'	-5.25	98.75	104.00
1	N	832	G	P-O3'-C3'	-5.25	112.33	120.20
1	N	1060	U	C4'-C3'-C2'	-5.25	97.35	102.60
1	N	568	G	C5'-C4'-C3'	-5.25	108.13	116.00
1	N	711	G	O4'-C4'-C3'	-5.25	98.75	104.00
1	N	1180	A	P-O3'-C3'	5.25	128.07	120.20
1	N	606	G	C5'-C4'-C3'	-5.24	108.13	116.00
1	N	977	A	C5'-C4'-C3'	5.24	123.86	116.00
1	N	786	G	O4'-C1'-N9	5.24	116.36	108.50
1	N	890	G	C2'-C3'-O3'	5.24	117.36	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1504	G	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	217	C	O4'-C4'-C3'	-5.24	98.76	104.00
1	N	1453	G	P-O5'-C5'	5.24	128.76	120.90
1	N	1079	G	P-O3'-C3'	5.24	128.06	120.20
1	N	67	C	O4'-C1'-C2'	-5.24	102.36	107.60
1	N	777	A	N9-C1'-C2'	-5.24	104.15	112.00
1	N	789	U	O5'-C5'-C4'	-5.24	103.65	111.50
1	N	1124	G	C5'-C4'-C3'	-5.24	108.15	116.00
1	N	187	G	P-O3'-C3'	-5.23	112.36	120.20
1	N	686	U	N1-C1'-C2'	5.23	121.85	114.00
1	N	1336	C	C3'-C2'-C1'	-5.23	96.27	101.50
1	N	1448	C	P-O3'-C3'	5.23	128.05	120.20
1	N	112	G	C4'-C3'-C2'	-5.23	97.37	102.60
1	N	1518	A	P-O5'-C5'	5.23	128.74	120.90
1	N	75	G	C5'-C4'-O4'	5.23	117.64	109.80
1	N	278	G	C4'-C3'-C2'	-5.23	97.37	102.60
1	N	926	G	C4'-C3'-O3'	5.23	120.84	113.00
1	N	143	A	O4'-C1'-N9	5.22	116.34	108.50
1	N	447	G	O4'-C1'-N9	5.22	116.34	108.50
1	N	1095	U	O4'-C1'-N1	5.22	116.34	108.50
1	N	927	G	P-O5'-C5'	-5.22	113.07	120.90
1	N	1223	C	O3'-P-O5'	5.22	111.83	104.00
1	N	1332	A	C5'-C4'-C3'	-5.22	108.17	116.00
1	N	1043	G	P-O3'-C3'	5.21	128.02	120.20
1	N	1049	U	O4'-C4'-C3'	-5.21	100.89	106.10
1	N	1498	U	C5'-C4'-C3'	-5.21	107.38	115.20
1	N	1318	A	C5'-C4'-O4'	5.21	117.62	109.80
1	N	469	C	N1-C1'-C2'	5.21	119.82	112.00
1	N	567	G	O4'-C1'-N9	5.21	116.32	108.50
1	N	1185	G	O4'-C1'-N9	5.21	116.32	108.50
1	N	60	A	C4'-C3'-C2'	5.21	107.81	102.60
1	N	1061	G	O5'-C5'-C4'	-5.21	103.69	111.50
1	N	1232	U	O4'-C1'-N1	5.21	116.31	108.50
1	N	1013	G	P-O5'-C5'	5.21	128.71	120.90
1	N	25	C	P-O3'-C3'	-5.21	112.39	120.20
1	N	257	G	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	337	G	P-O3'-C3'	-5.21	112.39	120.20
1	N	849	G	C1'-C2'-O2'	5.20	116.20	108.40
1	N	1375	A	O5'-C5'-C4'	-5.20	103.70	111.50
1	N	1171	A	C2'-C3'-O3'	5.20	121.50	113.70
1	N	416	G	O3'-P-O5'	-5.20	96.20	104.00
1	N	432	A	O4'-C4'-C3'	-5.20	98.80	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	485	U	C2'-C3'-O3'	5.20	117.30	109.50
1	N	692	U	O4'-C1'-N1	5.20	116.30	108.50
1	N	735	C	N1-C1'-C2'	-5.20	104.20	112.00
1	N	856	C	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	1244	G	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	330	C	C4'-C3'-O3'	-5.20	105.21	113.00
1	N	462	G	N1-C6-O6	5.19	135.48	119.90
1	N	1481	U	O4'-C1'-C2'	-5.19	102.41	107.60
1	N	427	U	C5'-C4'-C3'	5.19	123.78	116.00
1	N	652	U	C3'-C2'-O2'	5.19	118.49	110.70
1	N	822	U	O5'-C5'-C4'	-5.19	103.72	111.50
1	N	283	U	P-O3'-C3'	-5.19	112.42	120.20
1	N	166	U	O4'-C1'-N1	5.19	116.28	108.50
1	N	982	U	O5'-C5'-C4'	-5.19	103.92	111.70
1	N	1245	C	P-O3'-C3'	5.19	127.98	120.20
1	N	1266	G	C1'-O4'-C4'	-5.18	104.72	109.90
1	N	1276	G	C4'-C3'-C2'	-5.18	97.42	102.60
1	N	243	A	C2'-C3'-O3'	-5.18	105.92	113.70
1	N	192	A	P-O3'-C3'	5.18	127.97	120.20
1	N	1049	U	C1'-C2'-O2'	-5.18	104.03	111.80
1	N	558	G	C3'-C2'-C1'	5.18	106.48	101.30
1	N	814	A	P-O3'-C3'	5.18	127.97	120.20
1	N	935	A	O4'-C1'-C2'	-5.18	102.42	107.60
1	N	273	U	C5'-C4'-C3'	-5.18	108.23	116.00
1	N	702	A	O4'-C4'-C3'	-5.18	98.82	104.00
1	N	4	U	C3'-C2'-C1'	5.17	106.67	101.50
1	N	77	A	O5'-C5'-C4'	5.17	119.26	111.50
1	N	306	A	C5'-C4'-C3'	5.17	123.76	116.00
1	N	1090	U	C4'-C3'-C2'	-5.17	97.43	102.60
1	N	1366	C	O4'-C1'-N1	5.17	116.26	108.50
1	N	404	G	P-O5'-C5'	-5.17	113.14	120.90
1	N	516	U	O4'-C1'-N1	5.17	116.26	108.50
1	N	1192	C	C4'-C3'-C2'	-5.17	97.43	102.60
1	N	498	A	C4'-C3'-C2'	5.17	107.77	102.60
1	N	89	U	C2'-C3'-O3'	5.17	117.25	109.50
1	N	336	A	O4'-C4'-C3'	-5.17	98.83	104.00
1	N	633	G	C5'-C4'-C3'	5.16	123.75	116.00
1	N	996	A	P-O5'-C5'	5.16	128.65	120.90
1	N	1415	G	O5'-C5'-C4'	5.16	119.24	111.50
1	N	802	A	P-O5'-C5'	-5.16	113.16	120.90
1	N	1381	U	C4'-C3'-C2'	-5.16	97.44	102.60
1	N	459	A	N1-C6-N6	5.16	134.07	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	771	G	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	858	G	C4'-C3'-O3'	5.16	120.74	113.00
1	N	1449	C	C2'-C3'-O3'	5.16	121.44	113.70
1	N	69	G	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	236	A	P-O3'-C3'	-5.16	112.47	120.20
1	N	507	C	O4'-C1'-N1	5.16	116.23	108.50
1	N	1440	U	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	1449	C	O4'-C1'-N1	5.16	116.23	108.50
1	N	381	C	O4'-C1'-N1	5.15	116.23	108.50
1	N	932	C	C4'-C3'-O3'	-5.15	105.27	113.00
1	N	974	A	O4'-C4'-C3'	-5.15	100.95	106.10
1	N	92	U	O4'-C1'-N1	5.15	116.23	108.50
1	N	1162	C	O4'-C1'-N1	5.15	116.23	108.50
1	N	733	G	C4'-C3'-C2'	5.15	107.75	102.60
1	N	747	A	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	1354	U	O4'-C1'-N1	5.15	116.22	108.50
1	N	269	C	O5'-C5'-C4'	-5.15	103.78	111.50
1	N	1147	C	P-O3'-C3'	5.15	127.92	120.20
1	N	158	G	O4'-C1'-C2'	-5.15	102.45	107.60
1	N	886	G	C1'-O4'-C4'	-5.15	104.75	109.90
1	N	1093	A	C3'-C2'-O2'	5.15	118.42	110.70
1	N	1513	A	O4'-C4'-C3'	-5.15	98.85	104.00
1	N	525	C	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	733	G	C2'-C3'-O3'	5.15	117.22	109.50
1	N	894	G	P-O5'-C5'	5.15	128.62	120.90
1	N	1011	C	O4'-C1'-N1	5.15	116.22	108.50
1	N	958	A	O3'-P-O5'	-5.14	96.28	104.00
1	N	1283	U	O4'-C4'-C3'	5.14	109.14	104.00
1	N	1492	A	O3'-P-O5'	-5.14	96.28	104.00
1	N	323	U	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	983	A	O4'-C1'-N9	5.14	115.91	108.20
1	N	984	C	O4'-C1'-N1	5.14	116.21	108.50
1	N	1161	C	P-O3'-C3'	5.14	127.91	120.20
1	N	1353	G	C5'-C4'-C3'	-5.14	108.29	116.00
1	N	1462	C	P-O5'-C5'	5.14	128.61	120.90
1	N	51	A	C4'-C3'-C2'	5.14	107.74	102.60
1	N	502	A	O5'-C5'-C4'	-5.14	103.79	111.50
1	N	843	U	C5'-C4'-O4'	5.14	117.51	109.80
1	N	1488	G	P-O5'-C5'	-5.14	113.19	120.90
1	N	31	G	C5'-C4'-C3'	5.14	122.90	115.20
1	N	300	A	C4'-C3'-O3'	-5.14	105.30	113.00
1	N	782	A	O3'-P-O5'	-5.14	96.30	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1112	C	O3'-P-O5'	-5.14	96.30	104.00
1	N	1507	A	O4'-C1'-N9	5.14	116.20	108.50
1	N	779	C	P-O3'-C3'	5.13	127.90	120.20
1	N	1041	G	P-O5'-C5'	5.13	128.60	120.90
1	N	1047	G	O3'-P-O5'	-5.13	96.30	104.00
1	N	1168	U	C1'-O4'-C4'	-5.13	104.77	109.90
1	N	91	U	C5'-C4'-O4'	-5.13	102.10	109.80
1	N	289	G	O4'-C1'-C2'	-5.13	102.47	107.60
1	N	1147	C	C4'-C3'-O3'	-5.13	105.31	113.00
1	N	1403	C	O4'-C4'-C3'	-5.13	98.87	104.00
1	N	495	A	O4'-C1'-C2'	5.12	110.92	105.80
1	N	610	U	P-O5'-C5'	-5.12	113.22	120.90
1	N	634	C	O4'-C1'-N1	5.12	116.19	108.50
1	N	775	G	O4'-C1'-C2'	-5.12	102.48	107.60
1	N	1316	G	P-O3'-C3'	5.12	127.88	120.20
1	N	1020	G	C5'-C4'-C3'	-5.12	108.32	116.00
1	N	1110	A	C5'-C4'-C3'	-5.12	108.32	116.00
1	N	26	A	O4'-C1'-N9	5.12	116.18	108.50
1	N	920	U	O4'-C1'-N1	5.12	116.18	108.50
1	N	643	C	P-O5'-C5'	5.12	128.58	120.90
1	N	745	G	O4'-C1'-N9	5.12	116.18	108.50
1	N	766	A	P-O3'-C3'	-5.12	112.52	120.20
1	N	867	G	O4'-C1'-C2'	-5.12	102.48	107.60
1	N	1288	A	C5'-C4'-C3'	5.12	123.68	116.00
1	N	490	C	O4'-C1'-N1	5.12	116.18	108.50
1	N	485	U	C4'-C3'-O3'	5.12	117.07	109.40
1	N	1115	U	C5'-C4'-C3'	5.12	123.67	116.00
1	N	1202	U	C1'-O4'-C4'	-5.12	104.78	109.90
1	N	1378	C	P-O5'-C5'	5.12	128.57	120.90
1	N	1121	U	O5'-C5'-C4'	-5.11	103.83	111.50
1	N	811	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	1191	A	C5'-C4'-O4'	-5.11	102.14	109.80
1	N	1320	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	133	U	O3'-P-O5'	-5.11	96.34	104.00
1	N	187	G	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	646	G	C5'-C4'-C3'	5.11	123.66	116.00
1	N	1019	A	P-O5'-C5'	5.11	128.56	120.90
1	N	1367	C	C3'-C2'-O2'	-5.11	103.04	110.70
1	N	1499	A	C1'-C2'-O2'	-5.11	100.74	108.40
1	N	481	G	P-O5'-C5'	-5.11	113.24	120.90
1	N	510	A	P-O3'-C3'	5.11	127.86	120.20
1	N	513	C	P-O5'-C5'	5.11	128.56	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	536	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	658	C	C3'-C2'-C1'	-5.10	96.20	101.30
1	N	766	A	N1-C6-N6	5.10	133.91	118.60
1	N	669	G	O4'-C1'-N9	5.10	116.15	108.50
1	N	1088	G	P-O3'-C3'	-5.10	112.55	120.20
1	N	647	C	C2'-C3'-O3'	5.10	121.34	113.70
1	N	1019	A	P-O3'-C3'	-5.10	112.55	120.20
1	N	1379	G	O4'-C1'-N9	5.10	116.14	108.50
1	N	682	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	1010	U	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	1170	A	N9-C1'-C2'	5.09	119.64	112.00
1	N	1474	U	P-O5'-C5'	5.09	128.54	120.90
1	N	1475	G	P-O5'-C5'	-5.09	113.26	120.90
1	N	187	G	P-O5'-C5'	-5.09	113.26	120.90
1	N	496	A	P-O5'-C5'	5.09	128.54	120.90
1	N	554	A	C3'-C2'-O2'	5.09	118.34	110.70
1	N	873	A	C4'-C3'-O3'	5.09	117.04	109.40
1	N	1085	U	C4'-C3'-O3'	-5.09	105.36	113.00
1	N	126	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	986	U	O4'-C1'-N1	5.09	116.13	108.50
1	N	626	G	C5'-C4'-C3'	5.09	123.63	116.00
1	N	1490	U	O4'-C1'-N1	5.09	116.13	108.50
1	N	92	U	C1'-O4'-C4'	5.09	114.99	109.90
1	N	1206	G	C5'-C4'-O4'	5.09	117.43	109.80
1	N	36	C	O4'-C1'-N1	5.08	116.13	108.50
1	N	182	A	C5'-C4'-O4'	5.08	116.72	109.10
1	N	535	A	C4'-C3'-C2'	-5.08	97.52	102.60
1	N	606	G	P-O5'-C5'	-5.08	113.27	120.90
1	N	925	G	C1'-O4'-C4'	5.08	114.98	109.90
1	N	1046	A	C1'-O4'-C4'	-5.08	104.82	109.90
1	N	1514	G	C5'-C4'-O4'	5.08	117.42	109.80
1	N	167	A	C1'-O4'-C4'	-5.08	104.82	109.90
1	N	349	A	P-O5'-C5'	-5.08	113.28	120.90
1	N	548	G	O5'-C5'-C4'	-5.08	103.88	111.50
1	N	604	G	P-O5'-C5'	5.08	128.52	120.90
1	N	682	G	O4'-C1'-C2'	-5.08	102.52	107.60
1	N	1151	A	C5'-C4'-C3'	-5.08	108.38	116.00
1	N	1032	G	P-O5'-C5'	5.08	128.51	120.90
1	N	1262	C	C4'-C3'-C2'	-5.08	97.52	102.60
1	N	672	U	O5'-C5'-C4'	-5.08	103.89	111.50
1	N	693	G	C1'-O4'-C4'	-5.08	104.83	109.90
1	N	1093	A	C5'-C4'-C3'	-5.08	108.39	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	84	U	O4'-C1'-N1	5.07	116.11	108.50
1	N	210	C	O4'-C1'-N1	5.07	115.81	108.20
1	N	249	U	O4'-C1'-N1	5.07	116.11	108.50
1	N	788	U	C2'-C3'-O3'	-5.07	106.10	113.70
1	N	1055	A	C5'-C4'-C3'	5.07	123.60	116.00
1	N	42	G	O4'-C1'-N9	5.07	116.10	108.50
1	N	299	G	C5'-C4'-C3'	5.07	123.60	116.00
1	N	421	U	O4'-C4'-C3'	-5.07	101.03	106.10
1	N	543	U	C3'-C2'-C1'	5.07	106.37	101.30
1	N	1522	U	O4'-C1'-N1	5.07	116.10	108.50
1	N	81	A	O4'-C4'-C3'	-5.07	101.03	106.10
1	N	244	U	C5'-C4'-C3'	-5.07	107.60	115.20
1	N	727	G	O4'-C1'-N9	5.07	116.10	108.50
1	N	784	A	C4'-C3'-C2'	-5.07	97.53	102.60
1	N	940	C	P-O5'-C5'	5.07	128.50	120.90
1	N	1384	C	C3'-C2'-O2'	5.07	118.30	110.70
1	N	1524	C	O5'-C5'-C4'	-5.07	103.90	111.50
1	N	1061	G	N9-C1'-C2'	-5.06	104.41	112.00
1	N	1372	U	O3'-P-O5'	-5.06	96.41	104.00
1	N	201	G	C3'-C2'-O2'	5.06	118.29	110.70
1	N	864	A	P-O3'-C3'	5.06	127.79	120.20
1	N	999	C	O4'-C1'-N1	5.06	116.09	108.50
1	N	1197	A	P-O5'-C5'	5.06	128.49	120.90
1	N	1364	U	O4'-C4'-C3'	-5.06	101.04	106.10
1	N	392	C	C1'-C2'-O2'	5.06	115.98	108.40
1	N	581	G	P-O5'-C5'	5.06	128.49	120.90
1	N	1351	U	O4'-C1'-C2'	5.06	112.66	107.60
1	N	659	U	C2'-C3'-O3'	5.05	121.28	113.70
1	N	991	U	C4'-C3'-O3'	5.05	116.98	109.40
1	N	1145	A	P-O3'-C3'	5.05	127.78	120.20
1	N	628	G	C1'-O4'-C4'	5.05	114.95	109.90
1	N	378	G	P-O5'-C5'	-5.05	113.32	120.90
1	N	1035	A	P-O3'-C3'	-5.05	112.62	120.20
1	N	747	A	O4'-C1'-N9	5.05	116.08	108.50
1	N	1076	U	O3'-P-O5'	-5.05	96.43	104.00
1	N	1090	U	C5'-C4'-C3'	-5.05	108.43	116.00
1	N	1410	A	C5'-C4'-O4'	-5.05	102.22	109.80
1	N	720	C	O4'-C1'-C2'	-5.05	102.55	107.60
1	N	207	C	P-O3'-C3'	5.05	127.77	120.20
1	N	386	C	C3'-C2'-C1'	5.05	106.35	101.30
1	N	1054	C	O4'-C1'-N1	5.05	115.77	108.20
1	N	660	C	O4'-C1'-N1	5.04	116.07	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1092	A	O3'-P-O5'	-5.04	96.43	104.00
1	N	918	A	O4'-C1'-N9	5.04	116.06	108.50
1	N	1059	C	C1'-O4'-C4'	5.04	114.94	109.90
1	N	1236	A	O5'-C5'-C4'	-5.04	103.94	111.50
1	N	788	U	O4'-C1'-C2'	5.04	112.64	107.60
1	N	1074	G	P-O5'-C5'	-5.04	113.34	120.90
1	N	672	U	C4'-C3'-C2'	-5.04	97.56	102.60
1	N	766	A	C5'-C4'-C3'	-5.04	108.44	116.00
1	N	868	C	C4'-C3'-O3'	-5.04	105.44	113.00
1	N	943	U	C4'-C3'-C2'	5.04	107.64	102.60
1	N	980	C	O4'-C1'-C2'	-5.04	102.56	107.60
1	N	1126	U	P-O5'-C5'	-5.04	113.34	120.90
1	N	1192	C	P-O3'-C3'	5.04	127.76	120.20
1	N	1399	C	O4'-C1'-N1	5.04	115.76	108.20
1	N	286	C	O4'-C1'-C2'	-5.04	102.56	107.60
1	N	1367	C	O4'-C1'-N1	5.04	116.05	108.50
1	N	1502	A	O4'-C1'-N9	5.04	115.75	108.20
1	N	122	G	P-O5'-C5'	5.03	128.45	120.90
1	N	142	G	O5'-C5'-C4'	-5.03	103.95	111.50
1	N	417	G	O5'-C5'-C4'	-5.03	103.95	111.50
1	N	961	U	O4'-C1'-N1	5.03	116.05	108.50
1	N	1082	A	P-O5'-C5'	5.03	128.45	120.90
1	N	242	G	C1'-C2'-O2'	5.03	115.95	108.40
1	N	1137	C	N1-C1'-C2'	5.03	121.55	114.00
1	N	1185	G	P-O3'-C3'	-5.03	112.65	120.20
1	N	54	C	O4'-C1'-C2'	-5.03	102.57	107.60
1	N	837	U	O4'-C1'-N1	5.03	116.05	108.50
1	N	855	U	C5'-C4'-C3'	-5.03	108.45	116.00
1	N	888	G	O4'-C1'-C2'	5.03	112.63	107.60
1	N	549	C	C4'-C3'-O3'	-5.03	105.46	113.00
1	N	792	A	C5'-C4'-O4'	5.03	116.64	109.10
1	N	429	U	C3'-C2'-O2'	-5.03	107.06	114.60
1	N	465	A	N1-C6-N6	5.03	133.68	118.60
1	N	979	C	C1'-O4'-C4'	-5.03	104.87	109.90
1	N	178	C	O5'-C5'-C4'	-5.03	103.96	111.50
1	N	262	A	C4'-C3'-O3'	-5.03	105.46	113.00
1	N	513	C	O4'-C1'-C2'	-5.03	102.58	107.60
1	N	1068	G	O4'-C1'-C2'	-5.03	102.58	107.60
1	N	122	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	273	U	P-O3'-C3'	-5.02	112.67	120.20
1	N	596	A	O4'-C1'-N9	5.02	116.03	108.50
1	N	84	U	P-O3'-C3'	-5.02	112.67	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	583	A	O5'-C5'-C4'	-5.02	103.97	111.50
1	N	1253	G	O3'-P-O5'	5.02	111.53	104.00
1	N	562	U	C4'-C3'-C2'	5.02	107.62	102.60
1	N	1448	C	C4'-C3'-C2'	5.02	107.62	102.60
1	N	358	U	O4'-C1'-N1	5.01	116.02	108.50
1	N	1371	G	P-O3'-C3'	5.01	127.72	120.20
1	N	1462	C	P-O3'-C3'	5.01	127.72	120.20
1	N	915	A	O4'-C1'-N9	5.01	116.02	108.50
1	N	548	G	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	236	A	N1-C6-N6	5.01	133.63	118.60
1	N	263	A	O4'-C1'-N9	5.01	116.01	108.50
1	N	93	U	C3'-C2'-C1'	-5.01	96.29	101.30
1	N	196	A	P-O5'-C5'	-5.01	113.39	120.90
1	N	388	G	P-O5'-C5'	5.01	128.41	120.90
1	N	583	A	O4'-C1'-N9	5.01	116.01	108.50
1	N	1188	A	C1'-O4'-C4'	-5.01	104.89	109.90
1	N	1201	A	P-O5'-C5'	-5.01	113.39	120.90
1	N	1363	A	C1'-O4'-C4'	-5.01	104.69	109.70
1	N	1006	G	O4'-C1'-C2'	-5.00	102.59	107.60
1	N	217	C	O5'-C5'-C4'	5.00	119.00	111.50
1	N	565	U	C3'-C2'-C1'	-5.00	96.30	101.30
1	N	720	C	C4'-C3'-C2'	-5.00	97.60	102.60
1	N	798	U	O4'-C4'-C3'	-5.00	99.00	104.00
1	N	872	A	P-O3'-C3'	5.00	127.71	120.20
1	N	876	C	O3'-P-O5'	-5.00	96.49	104.00
1	N	974	A	P-O5'-C5'	5.00	128.40	120.90
1	N	1362	A	O3'-P-O5'	-5.00	96.49	104.00
1	N	49	U	C3'-C2'-O2'	5.00	118.20	110.70
1	N	788	U	P-O3'-C3'	-5.00	112.70	120.20

There are no chirality outliers.

All (956) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	N	10	A	Sidechain
1	N	100	G	Sidechain
1	N	1000	A	Sidechain
1	N	1002	G	Sidechain
1	N	1004	A	Sidechain
1	N	1005	A	Sidechain
1	N	1006	G	Sidechain
1	N	1007	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1009	U	Sidechain
1	N	1010	U	Sidechain
1	N	1011	C	Sidechain
1	N	1012	A	Sidechain
1	N	1013	G	Sidechain
1	N	1014	A	Sidechain
1	N	1015	G	Sidechain
1	N	1018	G	Sidechain
1	N	1019	A	Sidechain
1	N	1020	G	Sidechain
1	N	1024	G	Sidechain
1	N	1026	G	Sidechain
1	N	1029	U	Sidechain
1	N	1032	G	Sidechain
1	N	1033	G	Sidechain
1	N	1034	G	Sidechain
1	N	1035	A	Sidechain
1	N	1036	A	Sidechain
1	N	1039	G	Sidechain
1	N	104	G	Sidechain
1	N	1040	U	Sidechain
1	N	1041	G	Sidechain
1	N	1042	A	Sidechain
1	N	1044	A	Sidechain
1	N	1047	G	Sidechain
1	N	105	G	Sidechain
1	N	1050	G	Sidechain
1	N	1052	U	Sidechain
1	N	1053	G	Sidechain
1	N	1055	A	Sidechain
1	N	1056	U	Sidechain
1	N	1058	G	Sidechain
1	N	1059	C	Sidechain
1	N	106	C	Sidechain
1	N	1061	G	Sidechain
1	N	1064	G	Sidechain
1	N	1066	C	Sidechain
1	N	1067	A	Sidechain
1	N	1068	G	Sidechain
1	N	1069	C	Sidechain
1	N	107	G	Sidechain
1	N	1070	U	Sidechain

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Mol	Chain	Res	Type	Group
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	1079	G	Sidechain
1	N	1080	A	Sidechain
1	N	1081	A	Sidechain
1	N	1082	A	Sidechain
1	N	1083	U	Sidechain
1	N	1084	G	Sidechain
1	N	1085	U	Sidechain
1	N	1088	G	Sidechain
1	N	1089	G	Sidechain
1	N	109	A	Sidechain
1	N	1091	U	Sidechain
1	N	1092	A	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	11	G	Sidechain
1	N	1100	C	Sidechain
1	N	1102	A	Sidechain
1	N	1103	C	Sidechain
1	N	1104	G	Sidechain
1	N	1105	A	Sidechain
1	N	1106	G	Sidechain
1	N	1108	G	Sidechain
1	N	1109	C	Sidechain
1	N	111	G	Sidechain
1	N	1111	A	Sidechain
1	N	1113	C	Sidechain
1	N	1116	U	Sidechain
1	N	1117	A	Sidechain
1	N	1118	U	Sidechain
1	N	1119	C	Sidechain
1	N	1121	U	Sidechain
1	N	1130	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1131	G	Sidechain
1	N	1132	C	Sidechain
1	N	1134	G	Sidechain
1	N	1137	C	Sidechain
1	N	1138	G	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	1145	A	Sidechain
1	N	1146	A	Sidechain
1	N	1148	U	Sidechain
1	N	1149	C	Sidechain
1	N	115	G	Sidechain
1	N	1150	A	Sidechain
1	N	1153	G	Sidechain
1	N	1154	G	Sidechain
1	N	1155	A	Sidechain
1	N	1156	G	Sidechain
1	N	1157	A	Sidechain
1	N	1159	U	Sidechain
1	N	116	A	Sidechain
1	N	1160	G	Sidechain
1	N	1161	C	Sidechain
1	N	1165	U	Sidechain
1	N	1166	G	Sidechain
1	N	1168	U	Sidechain
1	N	1169	A	Sidechain
1	N	1170	A	Sidechain
1	N	1171	A	Sidechain
1	N	1173	U	Sidechain
1	N	1174	G	Sidechain
1	N	1176	A	Sidechain
1	N	1177	G	Sidechain
1	N	1178	G	Sidechain
1	N	1180	A	Sidechain
1	N	1181	G	Sidechain
1	N	1182	G	Sidechain
1	N	1185	G	Sidechain
1	N	1187	G	Sidechain
1	N	1188	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1189	U	Sidechain
1	N	119	A	Sidechain
1	N	1191	A	Sidechain
1	N	1192	C	Sidechain
1	N	1194	U	Sidechain
1	N	1195	C	Sidechain
1	N	1197	A	Sidechain
1	N	1198	G	Sidechain
1	N	1199	U	Sidechain
1	N	120	A	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	Sidechain
1	N	1207	G	Sidechain
1	N	121	U	Sidechain
1	N	1211	U	Sidechain
1	N	1212	U	Sidechain
1	N	1214	C	Sidechain
1	N	1215	G	Sidechain
1	N	1216	A	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	1224	U	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	1231	G	Sidechain
1	N	1233	G	Sidechain
1	N	1235	U	Sidechain
1	N	1238	A	Sidechain
1	N	1239	A	Sidechain
1	N	124	C	Sidechain
1	N	1240	U	Sidechain
1	N	1241	G	Sidechain
1	N	1242	G	Sidechain
1	N	1244	G	Sidechain
1	N	1245	C	Sidechain
1	N	1248	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	125	U	Sidechain
1	N	1252	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	1261	A	Sidechain
1	N	1262	C	Sidechain
1	N	1265	C	Sidechain
1	N	1266	G	Sidechain
1	N	1267	C	Sidechain
1	N	1269	A	Sidechain
1	N	127	G	Sidechain
1	N	1270	G	Sidechain
1	N	1272	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
1	N	1281	C	Sidechain
1	N	1282	C	Sidechain
1	N	1283	U	Sidechain
1	N	1284	C	Sidechain
1	N	1286	U	Sidechain
1	N	1287	A	Sidechain
1	N	1289	A	Sidechain
1	N	129	A	Sidechain
1	N	1290	G	Sidechain
1	N	1291	U	Sidechain
1	N	1292	G	Sidechain
1	N	1293	C	Sidechain
1	N	1295	U	Sidechain
1	N	1297	G	Sidechain
1	N	1298	U	Sidechain
1	N	13	U	Sidechain
1	N	130	A	Sidechain
1	N	1300	G	Sidechain
1	N	1301	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1302	C	Sidechain
1	N	1303	C	Sidechain
1	N	1305	G	Sidechain
1	N	1306	A	Sidechain
1	N	1307	U	Sidechain
1	N	1309	G	Sidechain
1	N	131	A	Sidechain
1	N	1312	G	Sidechain
1	N	1313	U	Sidechain
1	N	1316	G	Sidechain
1	N	1318	A	Sidechain
1	N	1319	A	Sidechain
1	N	132	C	Sidechain
1	N	1320	C	Sidechain
1	N	1321	U	Sidechain
1	N	1322	C	Sidechain
1	N	1324	A	Sidechain
1	N	1326	U	Sidechain
1	N	1327	C	Sidechain
1	N	1328	C	Sidechain
1	N	1331	G	Sidechain
1	N	1334	G	Sidechain
1	N	1336	C	Sidechain
1	N	1337	G	Sidechain
1	N	134	G	Sidechain
1	N	1340	A	Sidechain
1	N	1341	U	Sidechain
1	N	1342	C	Sidechain
1	N	1344	C	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	1356	G	Sidechain
1	N	1357	A	Sidechain
1	N	1363	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1364	U	Sidechain
1	N	1365	G	Sidechain
1	N	1368	A	Sidechain
1	N	1369	C	Sidechain
1	N	137	U	Sidechain
1	N	1373	G	Sidechain
1	N	1374	A	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1378	C	Sidechain
1	N	1380	U	Sidechain
1	N	1381	U	Sidechain
1	N	1383	C	Sidechain
1	N	1384	C	Sidechain
1	N	1385	G	Sidechain
1	N	1386	G	Sidechain
1	N	1391	U	Sidechain
1	N	1392	G	Sidechain
1	N	1394	A	Sidechain
1	N	1395	C	Sidechain
1	N	1396	A	Sidechain
1	N	1398	A	Sidechain
1	N	14	U	Sidechain
1	N	140	U	Sidechain
1	N	1400	C	Sidechain
1	N	1401	G	Sidechain
1	N	1406	U	Sidechain
1	N	1409	C	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain
1	N	1416	G	Sidechain
1	N	1417	G	Sidechain
1	N	1419	G	Sidechain
1	N	142	G	Sidechain
1	N	1422	G	Sidechain
1	N	1423	G	Sidechain
1	N	1424	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

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Mol	Chain	Res	Type	Group
1	N	1435	G	Sidechain
1	N	1436	U	Sidechain
1	N	1438	G	Sidechain
1	N	1439	G	Sidechain
1	N	144	G	Sidechain
1	N	1440	U	Sidechain
1	N	1444	U	Sidechain
1	N	1446	A	Sidechain
1	N	1447	A	Sidechain
1	N	1449	C	Sidechain
1	N	1450	U	Sidechain
1	N	1451	U	Sidechain
1	N	1453	G	Sidechain
1	N	1454	G	Sidechain
1	N	1455	G	Sidechain
1	N	1457	G	Sidechain
1	N	1458	G	Sidechain
1	N	1459	G	Sidechain
1	N	146	G	Sidechain
1	N	1461	G	Sidechain
1	N	1464	U	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	1471	U	Sidechain
1	N	1476	A	Sidechain
1	N	1477	U	Sidechain
1	N	1478	U	Sidechain
1	N	148	G	Sidechain
1	N	1481	U	Sidechain
1	N	1483	A	Sidechain
1	N	1486	G	Sidechain
1	N	1487	G	Sidechain
1	N	1489	G	Sidechain
1	N	1490	U	Sidechain
1	N	1492	A	Sidechain
1	N	1494	G	Sidechain
1	N	1495	U	Sidechain
1	N	1496	C	Sidechain
1	N	1497	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1498	U	Sidechain
1	N	1499	A	Sidechain
1	N	150	U	Sidechain
1	N	1500	A	Sidechain
1	N	1502	A	Sidechain
1	N	1504	G	Sidechain
1	N	1506	U	Sidechain
1	N	1507	A	Sidechain
1	N	1509	C	Sidechain
1	N	151	A	Sidechain
1	N	1511	G	Sidechain
1	N	1512	U	Sidechain
1	N	1515	G	Sidechain
1	N	1516	G	Sidechain
1	N	1517	G	Sidechain
1	N	152	A	Sidechain
1	N	1522	U	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1525	G	Sidechain
1	N	1527	U	Sidechain
1	N	1529	G	Sidechain
1	N	153	C	Sidechain
1	N	1532	U	Sidechain
1	N	1533	C	Sidechain
1	N	157	U	Sidechain
1	N	159	G	Sidechain
1	N	160	A	Sidechain
1	N	161	A	Sidechain
1	N	165	G	Sidechain
1	N	167	A	Sidechain
1	N	169	C	Sidechain
1	N	17	U	Sidechain
1	N	170	U	Sidechain
1	N	172	A	Sidechain
1	N	173	U	Sidechain
1	N	177	G	Sidechain
1	N	178	C	Sidechain
1	N	179	A	Sidechain
1	N	181	A	Sidechain
1	N	184	G	Sidechain
1	N	185	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	186	C	Sidechain
1	N	188	C	Sidechain
1	N	190	A	Sidechain
1	N	192	A	Sidechain
1	N	193	C	Sidechain
1	N	194	C	Sidechain
1	N	195	A	Sidechain
1	N	196	A	Sidechain
1	N	197	A	Sidechain
1	N	199	A	Sidechain
1	N	200	G	Sidechain
1	N	201	G	Sidechain
1	N	202	G	Sidechain
1	N	203	G	Sidechain
1	N	204	G	Sidechain
1	N	208	U	Sidechain
1	N	21	G	Sidechain
1	N	210	C	Sidechain
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	213	G	Sidechain
1	N	216	U	Sidechain
1	N	218	U	Sidechain
1	N	219	U	Sidechain
1	N	22	G	Sidechain
1	N	220	G	Sidechain
1	N	221	C	Sidechain
1	N	223	A	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	229	U	Sidechain
1	N	230	G	Sidechain
1	N	231	U	Sidechain
1	N	233	C	Sidechain
1	N	234	C	Sidechain
1	N	236	A	Sidechain
1	N	237	G	Sidechain
1	N	240	G	Sidechain
1	N	241	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	242	G	Sidechain
1	N	246	A	Sidechain
1	N	247	G	Sidechain
1	N	248	C	Sidechain
1	N	249	U	Sidechain
1	N	25	C	Sidechain
1	N	251	G	Sidechain
1	N	252	U	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	256	U	Sidechain
1	N	258	G	Sidechain
1	N	259	G	Sidechain
1	N	26	A	Sidechain
1	N	260	G	Sidechain
1	N	261	U	Sidechain
1	N	265	G	Sidechain
1	N	266	G	Sidechain
1	N	267	C	Sidechain
1	N	269	C	Sidechain
1	N	27	G	Sidechain
1	N	271	C	Sidechain
1	N	272	C	Sidechain
1	N	273	U	Sidechain
1	N	274	A	Sidechain
1	N	275	G	Sidechain
1	N	276	G	Sidechain
1	N	277	C	Sidechain
1	N	278	G	Sidechain
1	N	279	A	Sidechain
1	N	28	A	Sidechain
1	N	282	A	Sidechain
1	N	284	C	Sidechain
1	N	287	U	Sidechain
1	N	289	G	Sidechain
1	N	290	C	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	298	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	299	G	Sidechain
1	N	30	U	Sidechain
1	N	301	G	Sidechain
1	N	302	G	Sidechain
1	N	307	C	Sidechain
1	N	308	C	Sidechain
1	N	309	A	Sidechain
1	N	315	A	Sidechain
1	N	316	C	Sidechain
1	N	319	G	Sidechain
1	N	32	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	326	G	Sidechain
1	N	33	A	Sidechain
1	N	332	G	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	340	U	Sidechain
1	N	341	C	Sidechain
1	N	342	C	Sidechain
1	N	343	U	Sidechain
1	N	346	G	Sidechain
1	N	347	G	Sidechain
1	N	348	G	Sidechain
1	N	351	G	Sidechain
1	N	352	C	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain
1	N	356	A	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	367	U	Sidechain
1	N	370	C	Sidechain
1	N	371	A	Sidechain
1	N	374	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	375	U	Sidechain
1	N	376	G	Sidechain
1	N	377	G	Sidechain
1	N	378	G	Sidechain
1	N	38	G	Sidechain
1	N	380	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain
1	N	383	A	Sidechain
1	N	384	G	Sidechain
1	N	385	C	Sidechain
1	N	387	U	Sidechain
1	N	388	G	Sidechain
1	N	389	A	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	396	C	Sidechain
1	N	399	G	Sidechain
1	N	4	U	Sidechain
1	N	40	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	410	G	Sidechain
1	N	412	A	Sidechain
1	N	413	G	Sidechain
1	N	414	A	Sidechain
1	N	416	G	Sidechain
1	N	417	G	Sidechain
1	N	419	C	Sidechain
1	N	420	U	Sidechain
1	N	423	G	Sidechain
1	N	424	G	Sidechain
1	N	425	G	Sidechain
1	N	426	U	Sidechain
1	N	427	U	Sidechain
1	N	428	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	43	C	Sidechain
1	N	430	A	Sidechain
1	N	432	A	Sidechain
1	N	434	U	Sidechain
1	N	437	U	Sidechain
1	N	44	A	Sidechain
1	N	440	C	Sidechain
1	N	442	G	Sidechain
1	N	443	C	Sidechain
1	N	444	G	Sidechain
1	N	446	G	Sidechain
1	N	447	G	Sidechain
1	N	448	A	Sidechain
1	N	449	G	Sidechain
1	N	45	G	Sidechain
1	N	450	G	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	459	A	Sidechain
1	N	460	A	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	464	U	Sidechain
1	N	465	A	Sidechain
1	N	466	A	Sidechain
1	N	467	U	Sidechain
1	N	468	A	Sidechain
1	N	470	C	Sidechain
1	N	471	U	Sidechain
1	N	472	U	Sidechain
1	N	473	U	Sidechain
1	N	474	G	Sidechain
1	N	475	C	Sidechain
1	N	477	C	Sidechain
1	N	478	A	Sidechain
1	N	479	U	Sidechain
1	N	48	C	Sidechain
1	N	480	U	Sidechain
1	N	481	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	483	C	Sidechain
1	N	485	U	Sidechain
1	N	486	U	Sidechain
1	N	49	U	Sidechain
1	N	491	G	Sidechain
1	N	493	A	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	500	G	Sidechain
1	N	501	C	Sidechain
1	N	507	C	Sidechain
1	N	508	U	Sidechain
1	N	509	A	Sidechain
1	N	510	A	Sidechain
1	N	515	G	Sidechain
1	N	516	U	Sidechain
1	N	518	C	Sidechain
1	N	519	C	Sidechain
1	N	52	C	Sidechain
1	N	521	G	Sidechain
1	N	522	C	Sidechain
1	N	524	G	Sidechain
1	N	526	C	Sidechain
1	N	527	G	Sidechain
1	N	528	C	Sidechain
1	N	531	U	Sidechain
1	N	534	U	Sidechain
1	N	536	C	Sidechain
1	N	540	G	Sidechain
1	N	542	G	Sidechain
1	N	544	G	Sidechain
1	N	546	A	Sidechain
1	N	547	A	Sidechain
1	N	548	G	Sidechain
1	N	553	A	Sidechain
1	N	554	A	Sidechain
1	N	555	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	558	G	Sidechain
1	N	559	A	Sidechain
1	N	56	U	Sidechain
1	N	562	U	Sidechain
1	N	563	A	Sidechain
1	N	565	U	Sidechain
1	N	566	G	Sidechain
1	N	567	G	Sidechain
1	N	568	G	Sidechain
1	N	569	C	Sidechain
1	N	572	A	Sidechain
1	N	573	A	Sidechain
1	N	575	G	Sidechain
1	N	576	C	Sidechain
1	N	580	C	Sidechain
1	N	581	G	Sidechain
1	N	582	C	Sidechain
1	N	583	A	Sidechain
1	N	584	G	Sidechain
1	N	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	592	G	Sidechain
1	N	594	U	Sidechain
1	N	595	A	Sidechain
1	N	597	G	Sidechain
1	N	598	U	Sidechain
1	N	599	C	Sidechain
1	N	601	G	Sidechain
1	N	604	G	Sidechain
1	N	605	U	Sidechain
1	N	606	G	Sidechain
1	N	609	A	Sidechain
1	N	610	U	Sidechain
1	N	611	C	Sidechain
1	N	613	C	Sidechain
1	N	614	C	Sidechain
1	N	616	G	Sidechain
1	N	617	G	Sidechain
1	N	618	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	619	U	Sidechain
1	N	620	C	Sidechain
1	N	621	A	Sidechain
1	N	626	G	Sidechain
1	N	627	G	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	632	U	Sidechain
1	N	633	G	Sidechain
1	N	634	C	Sidechain
1	N	635	A	Sidechain
1	N	637	C	Sidechain
1	N	638	U	Sidechain
1	N	64	G	Sidechain
1	N	640	A	Sidechain
1	N	641	U	Sidechain
1	N	647	C	Sidechain
1	N	648	A	Sidechain
1	N	649	A	Sidechain
1	N	652	U	Sidechain
1	N	653	U	Sidechain
1	N	655	A	Sidechain
1	N	656	G	Sidechain
1	N	657	U	Sidechain
1	N	658	C	Sidechain
1	N	659	U	Sidechain
1	N	660	C	Sidechain
1	N	661	G	Sidechain
1	N	664	G	Sidechain
1	N	665	A	Sidechain
1	N	667	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	670	G	Sidechain
1	N	671	G	Sidechain
1	N	673	A	Sidechain
1	N	675	A	Sidechain
1	N	677	U	Sidechain
1	N	678	U	Sidechain
1	N	679	C	Sidechain
1	N	68	G	Sidechain
1	N	680	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	682	G	Sidechain
1	N	684	U	Sidechain
1	N	685	G	Sidechain
1	N	687	A	Sidechain
1	N	688	G	Sidechain
1	N	69	G	Sidechain
1	N	690	G	Sidechain
1	N	692	U	Sidechain
1	N	693	G	Sidechain
1	N	694	A	Sidechain
1	N	696	A	Sidechain
1	N	697	U	Sidechain
1	N	698	G	Sidechain
1	N	7	A	Sidechain
1	N	70	U	Sidechain
1	N	700	G	Sidechain
1	N	701	U	Sidechain
1	N	702	A	Sidechain
1	N	703	G	Sidechain
1	N	704	A	Sidechain
1	N	705	G	Sidechain
1	N	707	U	Sidechain
1	N	708	C	Sidechain
1	N	709	U	Sidechain
1	N	71	A	Sidechain
1	N	710	G	Sidechain
1	N	712	A	Sidechain
1	N	713	G	Sidechain
1	N	714	G	Sidechain
1	N	715	A	Sidechain
1	N	716	A	Sidechain
1	N	717	U	Sidechain
1	N	718	A	Sidechain
1	N	719	C	Sidechain
1	N	72	A	Sidechain
1	N	721	G	Sidechain
1	N	723	U	Sidechain
1	N	726	C	Sidechain
1	N	727	G	Sidechain
1	N	728	A	Sidechain
1	N	729	A	Sidechain
1	N	73	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	730	G	Sidechain
1	N	732	C	Sidechain
1	N	733	G	Sidechain
1	N	734	G	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	746	A	Sidechain
1	N	748	G	Sidechain
1	N	749	A	Sidechain
1	N	75	G	Sidechain
1	N	750	C	Sidechain
1	N	751	U	Sidechain
1	N	752	G	Sidechain
1	N	753	A	Sidechain
1	N	755	G	Sidechain
1	N	756	C	Sidechain
1	N	757	U	Sidechain
1	N	759	A	Sidechain
1	N	761	G	Sidechain
1	N	762	U	Sidechain
1	N	763	G	Sidechain
1	N	765	G	Sidechain
1	N	768	A	Sidechain
1	N	769	G	Sidechain
1	N	77	A	Sidechain
1	N	770	C	Sidechain
1	N	771	G	Sidechain
1	N	772	U	Sidechain
1	N	773	G	Sidechain
1	N	775	G	Sidechain
1	N	776	G	Sidechain
1	N	777	A	Sidechain
1	N	778	G	Sidechain
1	N	78	A	Sidechain
1	N	780	A	Sidechain
1	N	781	A	Sidechain
1	N	782	A	Sidechain
1	N	783	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	784	A	Sidechain
1	N	785	G	Sidechain
1	N	786	G	Sidechain
1	N	787	A	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	799	G	Sidechain
1	N	80	A	Sidechain
1	N	800	G	Sidechain
1	N	801	U	Sidechain
1	N	802	A	Sidechain
1	N	803	G	Sidechain
1	N	804	U	Sidechain
1	N	805	C	Sidechain
1	N	807	A	Sidechain
1	N	808	C	Sidechain
1	N	809	G	Sidechain
1	N	81	A	Sidechain
1	N	810	C	Sidechain
1	N	811	C	Sidechain
1	N	812	G	Sidechain
1	N	815	A	Sidechain
1	N	818	G	Sidechain
1	N	819	A	Sidechain
1	N	82	G	Sidechain
1	N	825	A	Sidechain
1	N	827	U	Sidechain
1	N	83	C	Sidechain
1	N	830	G	Sidechain
1	N	832	G	Sidechain
1	N	833	G	Sidechain
1	N	834	U	Sidechain
1	N	835	U	Sidechain
1	N	837	U	Sidechain
1	N	838	G	Sidechain
1	N	839	C	Sidechain
1	N	840	C	Sidechain
1	N	841	C	Sidechain
1	N	843	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	844	G	Sidechain
1	N	847	G	Sidechain
1	N	848	C	Sidechain
1	N	85	U	Sidechain
1	N	852	G	Sidechain
1	N	855	U	Sidechain
1	N	857	C	Sidechain
1	N	858	G	Sidechain
1	N	859	G	Sidechain
1	N	86	G	Sidechain
1	N	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	87	C	Sidechain
1	N	870	U	Sidechain
1	N	871	U	Sidechain
1	N	872	A	Sidechain
1	N	874	G	Sidechain
1	N	875	U	Sidechain
1	N	876	C	Sidechain
1	N	877	G	Sidechain
1	N	883	C	Sidechain
1	N	884	U	Sidechain
1	N	885	G	Sidechain
1	N	887	G	Sidechain
1	N	888	G	Sidechain
1	N	889	A	Sidechain
1	N	890	G	Sidechain
1	N	891	U	Sidechain
1	N	893	C	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	901	A	Sidechain
1	N	902	G	Sidechain
1	N	904	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	905	U	Sidechain
1	N	906	A	Sidechain
1	N	908	A	Sidechain
1	N	909	A	Sidechain
1	N	91	U	Sidechain
1	N	910	C	Sidechain
1	N	912	C	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	924	C	Sidechain
1	N	925	G	Sidechain
1	N	928	G	Sidechain
1	N	929	G	Sidechain
1	N	93	U	Sidechain
1	N	931	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	943	U	Sidechain
1	N	944	G	Sidechain
1	N	945	G	Sidechain
1	N	946	A	Sidechain
1	N	947	G	Sidechain
1	N	948	C	Sidechain
1	N	951	G	Sidechain
1	N	954	G	Sidechain
1	N	955	U	Sidechain
1	N	957	U	Sidechain
1	N	959	A	Sidechain
1	N	962	C	Sidechain
1	N	963	G	Sidechain
1	N	964	A	Sidechain
1	N	965	U	Sidechain
1	N	966	G	Sidechain
1	N	967	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	968	A	Sidechain
1	N	969	A	Sidechain
1	N	97	G	Sidechain
1	N	971	G	Sidechain
1	N	972	C	Sidechain
1	N	973	G	Sidechain
1	N	974	A	Sidechain
1	N	977	A	Sidechain
1	N	978	A	Sidechain
1	N	98	A	Sidechain
1	N	981	U	Sidechain
1	N	982	U	Sidechain
1	N	984	C	Sidechain
1	N	985	C	Sidechain
1	N	986	U	Sidechain
1	N	987	G	Sidechain
1	N	989	U	Sidechain
1	N	991	U	Sidechain
1	N	992	U	Sidechain
1	N	993	G	Sidechain
1	N	995	C	Sidechain
1	N	996	A	Sidechain
1	N	997	U	Sidechain
1	N	999	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	16536	530	0
All	All	32892	16554	16536	530	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 (530) 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:858:G:H1	1:N:869:G:H2'	1.53	0.74
1:N:1240:U:C6	1:N:1241:G:H5'	2.26	0.70
1:N:67:C:H2'	1:N:68:G:C8	2.27	0.70
1:N:594:U:C4	1:N:595:A:C6	2.80	0.69
1:N:909:A:H2	1:N:1487:G:H21	1.40	0.68
1:N:575:G:C5	1:N:821:G:C8	2.82	0.68
1:N:1315:U:C4	1:N:1316:G:C6	2.82	0.68
1:N:947:G:H1'	1:N:1332:A:H62	1.58	0.67
1:N:811:C:H2'	1:N:812:G:H5'	1.75	0.66
1:N:1240:U:H6	1:N:1241:G:H5'	1.59	0.66
1:N:459:A:H61	1:N:472:U:H3	1.43	0.66
1:N:1282:C:H2'	1:N:1283:U:C6	2.31	0.65
1:N:79:G:H2'	1:N:80:A:C8	2.31	0.65
1:N:1255:G:H3'	1:N:1279:G:H22	1.62	0.65
1:N:859:G:C6	1:N:860:A:C6	2.85	0.64
1:N:116:A:H61	1:N:313:A:H1'	1.61	0.64
1:N:596:A:H61	1:N:644:U:H3	1.46	0.64
1:N:688:G:C8	1:N:688:G:H5''	2.33	0.64
1:N:668:G:C6	1:N:669:G:C6	2.86	0.63
1:N:815:A:C2	1:N:1529:G:C4	2.87	0.62
1:N:1357:A:C6	1:N:1363:A:C2	2.88	0.61
1:N:240:G:C6	1:N:241:G:C5	2.89	0.61
1:N:500:G:C6	1:N:501:C:C4	2.88	0.61
1:N:573:A:C2	1:N:915:A:C2	2.89	0.61
1:N:410:G:H2'	1:N:429:U:C5	2.36	0.60
1:N:946:A:C2	1:N:1236:A:C2	2.89	0.60
1:N:1301:U:H2'	1:N:1303:C:C5	2.37	0.60
1:N:272:C:C4	1:N:273:U:C4	2.89	0.59
1:N:80:A:C5	1:N:81:A:H1'	2.37	0.59
1:N:1090:U:H2'	1:N:1091:U:C6	2.37	0.59
1:N:1149:C:H2'	1:N:1150:A:C8	2.38	0.59
1:N:78:A:C5	1:N:79:G:C6	2.91	0.59
1:N:372:C:H4'	1:N:373:A:OP1	2.02	0.58
1:N:172:A:C8	1:N:174:A:C8	2.92	0.58
1:N:512:U:H2'	1:N:513:C:C6	2.38	0.58
1:N:169:C:C4	1:N:170:U:C4	2.91	0.58
1:N:459:A:N6	1:N:472:U:H3	2.01	0.58
1:N:17:U:H2'	1:N:18:C:C6	2.39	0.58
1:N:584:G:C6	1:N:585:G:C6	2.91	0.58
1:N:976:G:H22	1:N:1362:A:H3'	1.68	0.58
1:N:68:G:C8	1:N:69:G:C8	2.92	0.57
1:N:1219:A:C6	1:N:1220:G:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1268:G:H21	1:N:1326:U:H1'	1.70	0.57
1:N:603:U:H2'	1:N:604:G:C8	2.39	0.57
1:N:1240:U:C2	1:N:1240:U:OP1	2.57	0.57
1:N:1216:A:H2'	1:N:1217:C:C6	2.40	0.56
1:N:998:C:H42	1:N:1042:A:H61	1.52	0.56
1:N:145:G:C2	1:N:178:C:C2	2.93	0.56
1:N:1066:C:C6	1:N:1066:C:H5''	2.41	0.56
1:N:80:A:C4	1:N:81:A:H1'	2.41	0.56
1:N:655:A:C4	1:N:656:G:C8	2.94	0.56
1:N:425:G:C6	1:N:426:U:N3	2.74	0.56
1:N:32:A:H4'	1:N:48:C:H42	1.70	0.56
1:N:713:G:C2	1:N:714:G:C2	2.93	0.56
1:N:1072:G:C2	1:N:1104:G:C2	2.94	0.55
1:N:168:G:C6	1:N:169:C:C5	2.94	0.55
1:N:171:A:H2'	1:N:172:A:C8	2.41	0.55
1:N:860:A:N6	1:N:861:G:C2	2.75	0.55
1:N:1272:G:C6	1:N:1273:C:C5	2.94	0.55
1:N:942:G:H22	1:N:1341:U:H3	1.53	0.55
1:N:701:U:H5''	1:N:703:G:H5'	1.89	0.55
1:N:354:G:C6	1:N:355:C:C4	2.95	0.55
1:N:197:A:C2	1:N:198:G:C4	2.96	0.54
1:N:1102:A:C2	1:N:1103:C:C2	2.95	0.54
1:N:1244:G:C6	1:N:1245:C:C4	2.95	0.54
1:N:986:U:H3	1:N:1219:A:H61	1.54	0.54
1:N:585:G:C2	1:N:586:C:C2	2.96	0.54
1:N:207:C:H2'	1:N:208:U:C2	2.43	0.54
1:N:64:G:H2'	1:N:99:C:H41	1.73	0.54
1:N:673:A:H61	1:N:717:U:H3	1.54	0.54
1:N:50:A:H1'	1:N:52:C:C6	2.42	0.54
1:N:141:G:N1	1:N:223:A:C5	2.76	0.54
1:N:512:U:H5''	1:N:512:U:H6	1.72	0.54
1:N:936:C:H1'	1:N:1382:C:H42	1.72	0.54
1:N:722:G:H1	1:N:733:G:H1	1.55	0.53
1:N:381:C:C5	1:N:382:A:C5	2.96	0.53
1:N:107:G:H5''	1:N:134:G:H21	1.73	0.53
1:N:257:G:C2	1:N:258:G:C4	2.97	0.53
1:N:1021:A:H2'	1:N:1022:A:H5''	1.91	0.53
1:N:1198:G:C5	1:N:1199:U:C4	2.96	0.53
1:N:1315:U:H2'	1:N:1316:G:C8	2.43	0.53
1:N:19:A:C2	1:N:917:G:C5	2.96	0.53
1:N:1365:G:C6	1:N:1366:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:499:A:C2	1:N:547:A:C2	2.97	0.53
1:N:424:G:C6	1:N:425:G:C6	2.97	0.53
1:N:664:G:N2	1:N:741:G:H22	2.07	0.53
1:N:160:A:C2	1:N:346:G:N1	2.76	0.53
1:N:664:G:H22	1:N:741:G:H22	1.57	0.53
1:N:449:G:C6	1:N:450:G:C6	2.96	0.53
1:N:410:G:H2'	1:N:429:U:C4	2.44	0.53
1:N:64:G:C2	1:N:69:G:C6	2.97	0.52
1:N:803:G:C5	1:N:804:U:C5	2.97	0.52
1:N:627:G:C6	1:N:628:G:C6	2.97	0.52
1:N:632:U:H3'	1:N:633:G:C8	2.44	0.52
1:N:1164:G:C6	1:N:1165:U:C4	2.97	0.52
1:N:664:G:H22	1:N:741:G:H1	1.55	0.52
1:N:595:A:H2	1:N:643:C:H42	1.55	0.52
1:N:780:A:C2	1:N:801:U:C5	2.98	0.52
1:N:1071:C:H2'	1:N:1072:G:C8	2.43	0.52
1:N:1433:A:C1'	1:N:1468:A:C2	2.93	0.52
1:N:141:G:C6	1:N:223:A:C6	2.98	0.52
1:N:214:C:C5	1:N:215:C:C5	2.98	0.52
1:N:558:G:H2'	1:N:559:A:C2	2.45	0.52
1:N:1058:G:C6	1:N:1059:C:C4	2.98	0.52
1:N:91:U:C5	1:N:92:U:C2	2.98	0.51
1:N:651:C:C4	1:N:652:U:C4	2.98	0.51
1:N:1083:U:C5	1:N:1084:G:C6	2.98	0.51
1:N:1218:C:H2'	1:N:1219:A:C8	2.45	0.51
1:N:1296:C:H2'	1:N:1297:G:O4'	2.09	0.51
1:N:1434:A:C5	1:N:1435:G:C5	2.99	0.51
1:N:260:G:H2'	1:N:261:U:C6	2.45	0.51
1:N:295:C:C4	1:N:296:U:C4	2.98	0.51
1:N:621:A:C6	1:N:622:A:C6	2.99	0.51
1:N:751:U:C5	1:N:752:G:C4	2.98	0.51
1:N:970:C:H3'	1:N:971:G:H5''	1.92	0.51
1:N:376:G:C6	1:N:377:G:C6	2.99	0.51
1:N:807:A:H2'	1:N:808:C:O4'	2.11	0.51
1:N:1148:U:N3	1:N:1149:C:C2	2.79	0.51
1:N:339:C:C4	1:N:340:U:C4	2.99	0.51
1:N:50:A:C2	1:N:52:C:N3	2.78	0.51
1:N:69:G:C4	1:N:70:U:C5	2.99	0.51
1:N:669:G:C6	1:N:670:G:C6	2.99	0.51
1:N:1383:C:C4	1:N:1384:C:C4	2.99	0.51
1:N:979:C:H41	1:N:1360:A:N6	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:273:U:C4	1:N:274:A:C6	2.99	0.51
1:N:761:G:C5	1:N:762:U:C4	2.99	0.51
1:N:1254:A:C2	1:N:1255:G:C4	2.99	0.51
1:N:73:C:C6	1:N:73:C:H5''	2.46	0.51
1:N:771:G:H2'	1:N:772:U:O4'	2.11	0.51
1:N:1164:G:C2	1:N:1165:U:C2	2.98	0.51
1:N:934:C:C2	1:N:1344:C:C4	2.99	0.50
1:N:1016:A:C8	1:N:1017:U:H1'	2.46	0.50
1:N:1316:G:C2	1:N:1319:A:C8	2.98	0.50
1:N:70:U:C5	1:N:94:G:H2'	2.46	0.50
1:N:209:U:C4	1:N:211:G:N1	2.79	0.50
1:N:687:A:C2	1:N:704:A:C6	3.00	0.50
1:N:17:U:H2'	1:N:18:C:C5	2.46	0.50
1:N:453:G:O6	1:N:480:U:C5	2.64	0.50
1:N:1350:A:C6	1:N:1373:G:C2	2.99	0.50
1:N:949:A:H61	1:N:1232:U:H3	1.58	0.50
1:N:1447:A:H3'	1:N:1448:C:H5'	1.92	0.50
1:N:966:G:C6	1:N:1385:G:H4'	2.47	0.50
1:N:1296:C:C5	1:N:1297:G:C5	3.00	0.50
1:N:1391:U:H2'	1:N:1392:G:C8	2.47	0.50
1:N:335:C:C2	1:N:336:A:C8	3.00	0.50
1:N:596:A:N6	1:N:644:U:H3	2.08	0.50
1:N:482:A:C6	1:N:483:C:C2	3.00	0.50
1:N:738:C:C4	1:N:739:C:C4	3.00	0.50
1:N:1072:G:C2	1:N:1073:U:C2	3.00	0.50
1:N:213:G:C8	1:N:214:C:C6	2.99	0.50
1:N:301:G:C6	1:N:302:G:C5	2.99	0.50
1:N:665:A:C8	1:N:733:G:C2	3.00	0.50
1:N:804:U:C5	1:N:805:C:C4	3.00	0.50
1:N:908:A:C2	1:N:909:A:C4	3.00	0.50
1:N:934:C:H2'	1:N:1344:C:C5	2.46	0.50
1:N:946:A:H2'	1:N:947:G:C8	2.47	0.50
1:N:525:C:C4	1:N:526:C:C4	3.00	0.49
1:N:1419:G:C5	1:N:1420:U:C5	3.00	0.49
1:N:489:C:N3	1:N:490:C:C5	2.79	0.49
1:N:256:U:H3	1:N:270:A:H61	1.61	0.49
1:N:354:G:N1	1:N:355:C:C2	2.80	0.49
1:N:771:G:C6	1:N:772:U:N3	2.80	0.49
1:N:894:G:C6	1:N:895:G:C6	3.00	0.49
1:N:937:A:C2	1:N:1379:G:O6	2.65	0.49
1:N:751:U:C5	1:N:752:G:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1011:C:C2	1:N:1019:A:C2	3.00	0.49
1:N:1433:A:H1'	1:N:1468:A:C2	2.48	0.49
1:N:859:G:C6	1:N:860:A:C5	3.01	0.49
1:N:1056:U:H5''	1:N:1056:U:H6	1.78	0.49
1:N:668:G:C2	1:N:669:G:C4	3.00	0.49
1:N:1095:U:C4	1:N:1096:C:C4	3.01	0.49
1:N:772:U:H2'	1:N:773:G:C8	2.47	0.49
1:N:223:A:C2	1:N:224:U:C2	3.01	0.49
1:N:259:G:C4	1:N:260:G:C8	3.01	0.49
1:N:446:G:C2	1:N:489:C:C2	3.01	0.49
1:N:1021:A:C2	1:N:1022:A:C8	3.01	0.49
1:N:64:G:N2	1:N:69:G:C5	2.80	0.49
1:N:1023:U:H2'	1:N:1024:G:C8	2.48	0.49
1:N:1198:G:C6	1:N:1199:U:N3	2.81	0.49
1:N:1244:G:C6	1:N:1294:G:C6	3.01	0.49
1:N:197:A:H2	1:N:198:G:C4	2.30	0.49
1:N:933:G:C2	1:N:1385:G:C2	3.00	0.49
1:N:1169:A:H2'	1:N:1170:A:C8	2.48	0.49
1:N:507:C:H3'	1:N:508:U:H5''	1.95	0.48
1:N:509:A:C4	1:N:510:A:C2	3.00	0.48
1:N:57:G:C6	1:N:58:C:C4	3.01	0.48
1:N:112:G:C2	1:N:330:C:C5	3.01	0.48
1:N:832:G:C5	1:N:855:U:N3	2.82	0.48
1:N:909:A:H2	1:N:1487:G:N2	2.09	0.48
1:N:942:G:C6	1:N:943:U:C4	3.01	0.48
1:N:1084:G:H5''	1:N:1099:G:H22	1.77	0.48
1:N:1255:G:C6	1:N:1279:G:C5	3.01	0.48
1:N:413:G:H4'	1:N:428:G:N2	2.28	0.48
1:N:465:A:C6	1:N:466:A:C6	3.01	0.48
1:N:751:U:H5	1:N:752:G:C5	2.30	0.48
1:N:1228:C:H2'	1:N:1229:A:C8	2.49	0.48
1:N:579:A:C6	1:N:763:G:C6	3.01	0.48
1:N:1255:G:H2'	1:N:1279:G:H1	1.77	0.48
1:N:1259:C:C4	1:N:1260:G:C5	3.01	0.48
1:N:68:G:C2	1:N:102:G:C2	3.02	0.48
1:N:174:A:C5	1:N:175:C:C5	3.01	0.48
1:N:1365:G:C6	1:N:1366:C:N3	2.82	0.48
1:N:226:G:C6	1:N:227:G:C6	3.02	0.48
1:N:475:C:H2'	1:N:476:U:C6	2.49	0.48
1:N:917:G:C6	1:N:918:A:C6	3.02	0.48
1:N:1148:U:C5	1:N:1149:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:105:G:H21	1:N:380:G:H5'	1.78	0.48
1:N:668:G:C6	1:N:669:G:C5	3.02	0.48
1:N:581:G:C5	1:N:758:C:C5	3.02	0.48
1:N:635:A:C2	1:N:636:U:C2	3.02	0.48
1:N:949:A:N6	1:N:1232:U:H3	2.11	0.48
1:N:654:G:H21	1:N:755:G:C4'	2.27	0.47
1:N:1144:G:C6	1:N:1145:A:C5	3.02	0.47
1:N:761:G:C5	1:N:762:U:C5	3.02	0.47
1:N:1523:G:C6	1:N:1524:C:C4	3.02	0.47
1:N:109:A:C5	1:N:326:G:C5	3.03	0.47
1:N:425:G:C5	1:N:426:U:C4	3.02	0.47
1:N:486:U:C6	1:N:486:U:H5''	2.48	0.47
1:N:766:A:C8	1:N:814:A:C6	3.02	0.47
1:N:985:C:H2'	1:N:986:U:O4'	2.14	0.47
1:N:1176:A:C6	1:N:1177:G:C6	3.03	0.47
1:N:208:U:C2	1:N:209:U:C4	3.02	0.47
1:N:124:C:C2	1:N:238:A:C2	3.02	0.47
1:N:198:G:H2'	1:N:199:A:C8	2.50	0.47
1:N:438:U:C5	1:N:494:G:C8	3.03	0.47
1:N:1127:G:H22	1:N:1145:A:H2	1.62	0.47
1:N:1287:A:C6	1:N:1288:A:C6	3.01	0.47
1:N:1358:U:H2'	1:N:1359:C:C5	2.49	0.47
1:N:64:G:C4	1:N:99:C:C4	3.03	0.47
1:N:93:U:H5	1:N:94:G:C8	2.33	0.47
1:N:198:G:C6	1:N:220:G:C4	3.03	0.47
1:N:208:U:C2	1:N:209:U:C5	3.03	0.47
1:N:815:A:C2	1:N:1529:G:C5	3.02	0.47
1:N:954:G:C6	1:N:955:U:C4	3.03	0.47
1:N:64:G:H2'	1:N:99:C:N4	2.29	0.47
1:N:79:G:C6	1:N:80:A:C6	3.03	0.47
1:N:142:G:H2'	1:N:196:A:H2	1.80	0.47
1:N:297:G:C2	1:N:301:G:C6	3.03	0.47
1:N:323:U:N3	1:N:324:G:C4	2.83	0.47
1:N:807:A:C6	1:N:808:C:C4	3.03	0.47
1:N:141:G:H22	1:N:195:A:H2	1.63	0.47
1:N:509:A:C5	1:N:510:A:N1	2.83	0.47
1:N:540:G:C6	1:N:541:G:C5	3.03	0.47
1:N:737:C:H2'	1:N:738:C:C6	2.50	0.47
1:N:1138:G:C6	1:N:1140:C:C2	3.03	0.47
1:N:1296:C:C5	1:N:1297:G:C6	3.03	0.46
1:N:1438:G:C6	1:N:1464:U:N3	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:68:G:C4	1:N:69:G:H1'	2.50	0.46
1:N:424:G:C6	1:N:425:G:C5	3.03	0.46
1:N:437:U:C4	1:N:438:U:C5	3.03	0.46
1:N:838:G:C6	1:N:849:G:C5	3.04	0.46
1:N:139:A:C2	1:N:140:U:C2	3.03	0.46
1:N:585:G:C6	1:N:586:C:C4	3.03	0.46
1:N:68:G:C5	1:N:69:G:H1'	2.50	0.46
1:N:471:U:H2'	1:N:472:U:C6	2.50	0.46
1:N:707:U:H2'	1:N:708:C:C6	2.51	0.46
1:N:1024:G:C6	1:N:1025:U:C5	3.04	0.46
1:N:1075:U:C4	1:N:1076:U:C4	3.04	0.46
1:N:1394:A:H3'	1:N:1395:C:H5'	1.97	0.46
1:N:107:G:C5'	1:N:134:G:H21	2.28	0.46
1:N:179:A:C5	1:N:180:U:C4	3.04	0.46
1:N:1012:A:C6	1:N:1013:G:C5	3.03	0.46
1:N:1314:C:C2	1:N:1315:U:C5	3.03	0.46
1:N:81:A:OP2	1:N:83:C:C5	2.69	0.46
1:N:1483:A:C8	1:N:1484:C:C6	3.03	0.46
1:N:152:A:N6	1:N:170:U:C2	2.84	0.46
1:N:899:C:C4	1:N:900:A:C5	3.03	0.46
1:N:981:U:C2	1:N:982:U:C5	3.04	0.46
1:N:1357:A:C5	1:N:1358:U:N3	2.84	0.46
1:N:1309:G:C6	1:N:1310:G:C6	3.03	0.46
1:N:1500:A:C6	1:N:1501:C:C5	3.04	0.46
1:N:227:G:C4	1:N:228:A:C8	3.04	0.46
1:N:69:G:C6	1:N:70:U:C4	3.04	0.45
1:N:512:U:H5''	1:N:512:U:C6	2.51	0.45
1:N:548:G:H5''	1:N:548:G:H8	1.81	0.45
1:N:941:G:C6	1:N:1343:G:C6	3.04	0.45
1:N:1138:G:C5	1:N:1140:C:C2	3.03	0.45
1:N:1223:C:H5''	1:N:1224:U:H3'	1.97	0.45
1:N:584:G:C4	1:N:585:G:C8	3.04	0.45
1:N:604:G:C2	1:N:605:U:C2	3.05	0.45
1:N:655:A:C2	1:N:656:G:C4	3.05	0.45
1:N:830:G:N1	1:N:857:C:C2	2.84	0.45
1:N:1479:C:H2'	1:N:1480:A:C8	2.50	0.45
1:N:120:A:C2	1:N:122:G:C6	3.05	0.45
1:N:424:G:C5	1:N:425:G:C5	3.04	0.45
1:N:635:A:C6	1:N:636:U:C4	3.05	0.45
1:N:216:U:H4'	1:N:464:U:H4'	1.98	0.45
1:N:1104:G:C6	1:N:1105:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1276:G:C5	1:N:1277:C:C4	3.05	0.45
1:N:197:A:C2	1:N:198:G:N9	2.85	0.45
1:N:524:G:C5	1:N:525:C:C4	3.05	0.45
1:N:802:A:H3'	1:N:803:G:C8	2.52	0.45
1:N:1157:A:C4	1:N:1181:G:C6	3.04	0.45
1:N:1239:A:C5	1:N:1241:G:C2	3.04	0.45
1:N:1244:G:C2	1:N:1245:C:C2	3.04	0.45
1:N:585:G:C6	1:N:586:C:N3	2.84	0.45
1:N:19:A:C2	1:N:917:G:C6	3.04	0.45
1:N:115:G:C6	1:N:289:G:C6	3.05	0.45
1:N:931:C:H2'	1:N:932:C:C6	2.52	0.45
1:N:1416:G:C6	1:N:1417:G:C4	3.04	0.45
1:N:98:A:C8	1:N:99:C:C5	3.05	0.45
1:N:1058:G:C4	1:N:1059:C:C6	3.05	0.45
1:N:1385:G:C6	1:N:1386:G:C6	3.05	0.45
1:N:1511:G:C6	1:N:1525:G:C6	3.04	0.45
1:N:39:G:C4	1:N:498:A:C2	3.05	0.45
1:N:584:G:H2'	1:N:585:G:O4'	2.17	0.45
1:N:908:A:H2'	1:N:909:A:C8	2.52	0.45
1:N:1256:A:C2	1:N:1258:G:C6	3.05	0.45
1:N:1433:A:C6	1:N:1434:A:C6	3.05	0.45
1:N:669:G:C6	1:N:670:G:C5	3.04	0.45
1:N:1123:U:H3	1:N:1150:A:H61	1.65	0.45
1:N:1239:A:C2	1:N:1241:G:C6	3.05	0.45
1:N:464:U:H2'	1:N:466:A:N7	2.32	0.44
1:N:872:A:C5	1:N:874:G:C8	3.05	0.44
1:N:1158:C:C2	1:N:1160:G:C8	3.05	0.44
1:N:1295:U:C4	1:N:1296:C:C4	3.05	0.44
1:N:19:A:C6	1:N:917:G:O6	2.70	0.44
1:N:519:C:H2'	1:N:520:A:C8	2.53	0.44
1:N:761:G:C6	1:N:762:U:C4	3.05	0.44
1:N:7:A:C8	1:N:298:A:H1'	2.53	0.44
1:N:139:A:C6	1:N:140:U:C4	3.05	0.44
1:N:143:A:H2'	1:N:143:A:N3	2.32	0.44
1:N:1006:G:C6	1:N:1024:G:C2	3.06	0.44
1:N:232:G:C6	1:N:233:C:C4	3.05	0.44
1:N:411:A:C4	1:N:429:U:C5	3.05	0.44
1:N:544:G:C6	1:N:545:C:C4	3.06	0.44
1:N:588:G:C6	1:N:753:A:C8	3.06	0.44
1:N:644:U:N3	1:N:645:G:C5	2.86	0.44
1:N:667:G:N1	1:N:668:G:C5	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1187:G:N3	1:N:1187:G:H2'	2.31	0.44
1:N:1296:C:C6	1:N:1297:G:C5	3.06	0.44
1:N:60:A:H5'	1:N:387:U:H4'	2.00	0.44
1:N:61:G:H21	1:N:379:C:H4'	1.83	0.44
1:N:78:A:C6	1:N:79:G:C6	3.05	0.44
1:N:92:U:H2'	1:N:93:U:C6	2.53	0.44
1:N:653:U:H2'	1:N:654:G:H5'	1.99	0.44
1:N:1072:G:C6	1:N:1073:U:N3	2.86	0.44
1:N:207:C:H2'	1:N:208:U:C5	2.52	0.44
1:N:855:U:C4	1:N:856:C:C4	3.05	0.44
1:N:908:A:C2	1:N:909:A:C5	3.05	0.44
1:N:1400:C:H3'	1:N:1401:G:H5'	2.00	0.44
1:N:59:A:H1'	1:N:354:G:C2	2.53	0.44
1:N:373:A:H2'	1:N:374:A:C8	2.53	0.44
1:N:444:G:C4	1:N:445:G:C8	3.05	0.44
1:N:1215:G:H2'	1:N:1216:A:H5'	2.00	0.44
1:N:1304:G:C6	1:N:1305:G:N1	2.85	0.44
1:N:534:U:H2'	1:N:535:A:H5'	2.00	0.43
1:N:604:G:C5	1:N:605:U:C4	3.06	0.43
1:N:678:U:H3	1:N:712:A:H61	1.66	0.43
1:N:1083:U:C4	1:N:1084:G:C2	3.06	0.43
1:N:102:G:N2	1:N:171:A:C2	2.86	0.43
1:N:130:A:N1	1:N:233:C:O2	2.52	0.43
1:N:186:C:H2'	1:N:187:G:O4'	2.18	0.43
1:N:299:G:C5	1:N:300:A:C5	3.06	0.43
1:N:440:C:H42	1:N:496:A:N6	2.15	0.43
1:N:449:G:C6	1:N:450:G:O6	2.71	0.43
1:N:1166:G:N2	1:N:1169:A:C8	2.86	0.43
1:N:1306:A:N6	1:N:1331:G:H1'	2.32	0.43
1:N:1484:C:C4	1:N:1485:U:N3	2.86	0.43
1:N:301:G:N1	1:N:302:G:C4	2.86	0.43
1:N:489:C:C2	1:N:490:C:C5	3.07	0.43
1:N:775:G:C6	1:N:776:G:C5	3.07	0.43
1:N:1068:G:C6	1:N:1069:C:C5	3.06	0.43
1:N:1182:G:H4'	1:N:1184:G:H5''	1.99	0.43
1:N:1500:A:C5	1:N:1501:C:C5	3.07	0.43
1:N:673:A:N6	1:N:717:U:H3	2.15	0.43
1:N:872:A:N3	1:N:872:A:H2'	2.33	0.43
1:N:64:G:C2	1:N:67:C:C4	3.07	0.43
1:N:1058:G:C5	1:N:1059:C:C4	3.06	0.43
1:N:1468:A:C2	1:N:1469:C:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:146:G:C2	1:N:177:G:C8	3.07	0.43
1:N:761:G:C6	1:N:762:U:N3	2.86	0.43
1:N:1056:U:H5''	1:N:1056:U:C6	2.54	0.43
1:N:1305:G:H22	1:N:1331:G:H2'	1.84	0.43
1:N:213:G:C8	1:N:214:C:C5	3.07	0.43
1:N:403:C:H41	1:N:547:A:H5''	1.83	0.43
1:N:1138:G:C6	1:N:1140:C:N3	2.87	0.43
1:N:976:G:N2	1:N:1363:A:C2	2.86	0.43
1:N:981:U:C2	1:N:982:U:C6	3.06	0.43
1:N:1043:G:H2'	1:N:1044:A:C8	2.54	0.43
1:N:356:A:H5''	1:N:366:A:H2'	2.01	0.43
1:N:411:A:H61	1:N:428:G:H1'	1.83	0.43
1:N:587:G:C2	1:N:755:G:C8	3.07	0.43
1:N:644:U:H2'	1:N:645:G:C8	2.53	0.43
1:N:673:A:C6	1:N:674:G:C6	3.06	0.43
1:N:1055:A:C6	1:N:1206:G:C5	3.07	0.43
1:N:1129:C:C2	1:N:1144:G:C2	3.07	0.43
1:N:98:A:H2'	1:N:99:C:O4'	2.19	0.43
1:N:109:A:C6	1:N:326:G:C6	3.07	0.43
1:N:413:G:C5	1:N:426:U:OP2	2.72	0.43
1:N:627:G:C6	1:N:628:G:C5	3.06	0.43
1:N:756:C:C4	1:N:757:U:C4	3.07	0.43
1:N:282:A:C2	1:N:283:U:H1'	2.54	0.42
1:N:532:A:H5'	1:N:533:A:H5'	2.01	0.42
1:N:93:U:C6	1:N:93:U:H3'	2.55	0.42
1:N:126:G:N1	1:N:127:G:C5	2.87	0.42
1:N:240:G:C5	1:N:241:G:C8	3.07	0.42
1:N:405:U:H5''	1:N:495:A:C2	2.54	0.42
1:N:450:G:OP2	1:N:451:A:H3'	2.20	0.42
1:N:474:G:C5	1:N:475:C:C4	3.07	0.42
1:N:620:C:C5	1:N:621:A:C5	3.06	0.42
1:N:862:C:H1'	1:N:874:G:H5''	2.01	0.42
1:N:1324:A:H4'	1:N:1362:A:H4'	2.01	0.42
1:N:39:G:C2	1:N:498:A:C2	3.07	0.42
1:N:39:G:N3	1:N:498:A:C2	2.88	0.42
1:N:236:A:C2	1:N:237:G:C4	3.08	0.42
1:N:474:G:C6	1:N:475:C:N3	2.87	0.42
1:N:503:C:O2	1:N:510:A:C2	2.72	0.42
1:N:626:G:H2'	1:N:627:G:C8	2.55	0.42
1:N:804:U:H5	1:N:805:C:C4	2.36	0.42
1:N:1249:C:H3'	1:N:1250:A:H5''	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:293:G:C5	1:N:294:U:C5	3.08	0.42
1:N:804:U:C6	1:N:805:C:C5	3.08	0.42
1:N:1136:C:C2	1:N:1138:G:O6	2.73	0.42
1:N:98:A:C5	1:N:99:C:C4	3.07	0.42
1:N:349:A:N1	1:N:350:G:C6	2.87	0.42
1:N:1129:C:N3	1:N:1144:G:C6	2.87	0.42
1:N:57:G:N1	1:N:356:A:C2	2.88	0.42
1:N:257:G:N1	1:N:258:G:C5	2.88	0.42
1:N:978:A:C5	1:N:1319:A:C2	3.08	0.42
1:N:25:C:H41	1:N:559:A:H61	1.68	0.42
1:N:932:C:H2'	1:N:933:G:C8	2.54	0.42
1:N:1049:U:H4'	1:N:1050:G:H5'	2.01	0.42
1:N:1219:A:C6	1:N:1220:G:C5	3.07	0.42
1:N:1311:A:C2	1:N:1327:C:N3	2.88	0.42
1:N:697:U:C4	1:N:698:G:C8	3.07	0.42
1:N:1241:G:C2	1:N:1242:G:C5	3.08	0.42
1:N:92:U:C4	1:N:93:U:C4	3.08	0.42
1:N:859:G:O6	1:N:860:A:C6	2.73	0.42
1:N:1184:G:C6	1:N:1185:G:C8	3.08	0.42
1:N:1446:A:C2	1:N:1447:A:C4	3.08	0.42
1:N:203:G:H1	1:N:206:C:N4	2.18	0.42
1:N:350:G:C4	1:N:351:G:N1	2.88	0.42
1:N:460:A:C2	1:N:462:G:C8	3.07	0.42
1:N:466:A:H2'	1:N:467:U:C2	2.54	0.42
1:N:1349:A:C8	1:N:1350:A:C8	3.07	0.42
1:N:1495:U:N3	1:N:1496:C:C4	2.88	0.42
1:N:594:U:N3	1:N:595:A:C6	2.88	0.41
1:N:679:C:H2'	1:N:680:C:O4'	2.20	0.41
1:N:870:U:OP1	1:N:871:U:C5	2.72	0.41
1:N:998:C:H42	1:N:1042:A:N6	2.18	0.41
1:N:1170:A:H2'	1:N:1171:A:O4'	2.20	0.41
1:N:1502:A:H5'	1:N:1504:G:N7	2.35	0.41
1:N:217:C:H4'	1:N:463:U:H3	1.85	0.41
1:N:595:A:C2	1:N:596:A:N6	2.88	0.41
1:N:1058:G:C5	1:N:1059:C:C5	3.08	0.41
1:N:1254:A:N1	1:N:1255:G:C5	2.88	0.41
1:N:44:A:H2'	1:N:45:G:C8	2.55	0.41
1:N:65:A:C6	1:N:200:G:H1'	2.55	0.41
1:N:471:U:H2'	1:N:472:U:H6	1.86	0.41
1:N:1177:G:C5	1:N:1178:G:C5	3.07	0.41
1:N:1074:G:C4	1:N:1102:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1074:G:C5	1:N:1075:U:C4	3.09	0.41
1:N:1484:C:H2'	1:N:1485:U:O4'	2.21	0.41
1:N:282:A:C4	1:N:283:U:C6	3.08	0.41
1:N:294:U:H3	1:N:303:A:H2	1.67	0.41
1:N:558:G:C8	1:N:559:A:H2'	2.56	0.41
1:N:581:G:H1'	1:N:761:G:H22	1.86	0.41
1:N:712:A:C6	1:N:713:G:C6	3.08	0.41
1:N:761:G:C4	1:N:762:U:C6	3.08	0.41
1:N:840:C:C1'	1:N:843:U:H3	2.33	0.41
1:N:840:C:H1'	1:N:843:U:H3	1.84	0.41
1:N:872:A:N7	1:N:874:G:C8	2.89	0.41
1:N:1295:U:H2'	1:N:1296:C:O4'	2.21	0.41
1:N:39:G:H1'	1:N:497:G:H21	1.84	0.41
1:N:52:C:C6	1:N:52:C:H3'	2.56	0.41
1:N:160:A:C2	1:N:346:G:C6	3.08	0.41
1:N:462:G:O6	1:N:468:A:H5''	2.20	0.41
1:N:833:G:C5	1:N:834:U:C5	3.09	0.41
1:N:1158:C:C4	1:N:1160:G:C8	3.08	0.41
1:N:1239:A:H4'	1:N:1240:U:OP1	2.20	0.41
1:N:171:A:C5	1:N:172:A:C6	3.09	0.41
1:N:349:A:C6	1:N:350:G:C6	3.09	0.41
1:N:384:G:C6	1:N:385:C:C4	3.08	0.41
1:N:481:G:OP1	1:N:482:A:C8	2.74	0.41
1:N:958:A:C5	1:N:959:A:C6	3.09	0.41
1:N:1125:U:C5	1:N:1127:G:C5	3.09	0.41
1:N:1198:G:C6	1:N:1199:U:C4	3.09	0.41
1:N:409:U:C4	1:N:410:G:C6	3.09	0.41
1:N:613:C:H2'	1:N:614:C:O4'	2.21	0.41
1:N:676:A:H2'	1:N:677:U:C6	2.55	0.41
1:N:757:U:H2'	1:N:758:C:C6	2.55	0.41
1:N:978:A:C4	1:N:1319:A:C2	3.09	0.41
1:N:1441:A:H62	1:N:1461:G:N2	2.19	0.41
1:N:11:G:C6	1:N:12:U:N3	2.89	0.41
1:N:132:C:H3'	1:N:132:C:H6	1.85	0.41
1:N:141:G:N1	1:N:223:A:C6	2.88	0.41
1:N:240:G:O6	1:N:241:G:C6	2.74	0.41
1:N:256:U:H3	1:N:270:A:N6	2.19	0.41
1:N:447:G:H3'	1:N:447:G:C8	2.56	0.41
1:N:582:C:N3	1:N:760:G:C6	2.89	0.41
1:N:584:G:C6	1:N:585:G:C5	3.09	0.41
1:N:585:G:N1	1:N:757:U:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:621:A:H2'	1:N:622:A:C8	2.56	0.41
1:N:655:A:C6	1:N:656:G:C5	3.09	0.41
1:N:730:G:H4'	1:N:816:A:O2'	2.21	0.41
1:N:811:C:H2'	1:N:812:G:C5'	2.45	0.41
1:N:953:G:C6	1:N:1229:A:C6	3.09	0.41
1:N:1020:G:C4	1:N:1021:A:C8	3.09	0.41
1:N:1038:C:H2'	1:N:1039:G:C8	2.56	0.41
1:N:325:A:N7	1:N:326:G:C5	2.89	0.41
1:N:938:A:C6	1:N:939:G:C5	3.09	0.41
1:N:941:G:C6	1:N:942:G:C5	3.08	0.41
1:N:1041:G:C6	1:N:1042:A:C6	3.09	0.41
1:N:1433:A:C8	1:N:1468:A:C6	3.09	0.41
1:N:11:G:C6	1:N:12:U:C4	3.09	0.40
1:N:87:C:C5	1:N:88:U:C5	3.09	0.40
1:N:301:G:C6	1:N:302:G:C6	3.09	0.40
1:N:1100:C:H4'	1:N:1102:A:H4'	2.03	0.40
1:N:1365:G:C5	1:N:1366:C:C4	3.10	0.40
1:N:112:G:H22	1:N:315:A:H2	1.69	0.40
1:N:120:A:C2	1:N:122:G:N1	2.88	0.40
1:N:150:U:C5	1:N:170:U:C5	3.09	0.40
1:N:320:A:H2'	1:N:321:A:C8	2.57	0.40
1:N:525:C:H2'	1:N:526:C:C6	2.56	0.40
1:N:794:A:H2'	1:N:795:C:H5'	2.02	0.40
1:N:1042:A:C2	1:N:1043:G:N1	2.89	0.40
1:N:21:G:H1'	1:N:914:A:H61	1.86	0.40
1:N:487:A:C2	1:N:488:C:H1'	2.56	0.40
1:N:589:U:H2'	1:N:590:U:C6	2.56	0.40
1:N:595:A:H4'	1:N:596:A:H5'	2.03	0.40
1:N:966:G:H2'	1:N:967:C:H5'	2.02	0.40
1:N:1366:C:C4	1:N:1367:C:C4	3.10	0.40
1:N:1385:G:C6	1:N:1386:G:C5	3.10	0.40
1:N:64:G:N2	1:N:69:G:C6	2.90	0.40
1:N:347:G:C6	1:N:348:G:C4	3.09	0.40
1:N:465:A:H2'	1:N:466:A:C8	2.56	0.40
1:N:243:A:C2	1:N:282:A:N6	2.90	0.40
1:N:953:G:C6	1:N:954:G:C4	3.10	0.40
1:N:1259:C:N3	1:N:1260:G:C4	2.90	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%)	458 (29%)	150 (9%)

All (458) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	3	A
1	N	4	U
1	N	5	U
1	N	6	G
1	N	8	A
1	N	9	G
1	N	13	U
1	N	14	U
1	N	22	G
1	N	27	G
1	N	31	G
1	N	32	A
1	N	39	G
1	N	47	C
1	N	48	C
1	N	49	U
1	N	50	A
1	N	51	A
1	N	52	C
1	N	60	A
1	N	61	G
1	N	64	G
1	N	65	A
1	N	66	A
1	N	70	U

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Mol	Chain	Res	Type
1	N	71	A
1	N	72	A
1	N	73	C
1	N	74	A
1	N	75	G
1	N	76	G
1	N	77	A
1	N	79	G
1	N	81	A
1	N	82	G
1	N	83	C
1	N	85	U
1	N	86	G
1	N	87	C
1	N	88	U
1	N	89	U
1	N	90	C
1	N	91	U
1	N	92	U
1	N	94	G
1	N	95	C
1	N	96	U
1	N	97	G
1	N	107	G
1	N	108	G
1	N	109	A
1	N	110	C
1	N	115	G
1	N	116	A
1	N	119	A
1	N	120	A
1	N	127	G
1	N	129	A
1	N	130	A
1	N	131	A
1	N	132	C
1	N	134	G
1	N	135	C
1	N	138	G
1	N	141	G
1	N	143	A
1	N	159	G

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Mol	Chain	Res	Type
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	199	A
1	N	202	G
1	N	205	A
1	N	207	C
1	N	208	U
1	N	209	U
1	N	210	C
1	N	211	G
1	N	212	G
1	N	214	C
1	N	219	U
1	N	232	G
1	N	240	G
1	N	243	A
1	N	244	U
1	N	245	U
1	N	247	G
1	N	251	G
1	N	252	U
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	280	C
1	N	285	C

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Mol	Chain	Res	Type
1	N	289	G
1	N	305	G
1	N	306	A
1	N	308	C
1	N	316	C
1	N	321	A
1	N	328	C
1	N	329	A
1	N	330	C
1	N	331	G
1	N	332	G
1	N	344	A
1	N	345	C
1	N	346	G
1	N	347	G
1	N	351	G
1	N	352	C
1	N	353	A
1	N	354	G
1	N	363	A
1	N	366	A
1	N	367	U
1	N	368	U
1	N	373	A
1	N	374	A
1	N	376	G
1	N	384	G
1	N	389	A
1	N	390	U
1	N	392	C
1	N	406	G
1	N	411	A
1	N	412	A
1	N	413	G
1	N	414	A
1	N	422	C
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	431	A
1	N	439	U

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Mol	Chain	Res	Type
1	N	441	A
1	N	448	A
1	N	451	A
1	N	452	A
1	N	458	U
1	N	459	A
1	N	461	A
1	N	462	G
1	N	463	U
1	N	466	A
1	N	467	U
1	N	468	A
1	N	469	C
1	N	481	G
1	N	482	A
1	N	484	G
1	N	485	U
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	548	G
1	N	556	C
1	N	559	A
1	N	560	A
1	N	562	U

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Mol	Chain	Res	Type
1	N	563	A
1	N	564	C
1	N	566	G
1	N	567	G
1	N	572	A
1	N	573	A
1	N	574	A
1	N	575	G
1	N	576	C
1	N	577	G
1	N	579	A
1	N	588	G
1	N	595	A
1	N	596	A
1	N	604	G
1	N	606	G
1	N	607	A
1	N	610	U
1	N	629	A
1	N	632	U
1	N	633	G
1	N	642	A
1	N	649	A
1	N	665	A
1	N	666	G
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	776	G
1	N	777	A

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Mol	Chain	Res	Type
1	N	787	A
1	N	788	U
1	N	792	A
1	N	793	U
1	N	794	A
1	N	802	A
1	N	812	G
1	N	813	U
1	N	815	A
1	N	816	A
1	N	817	C
1	N	818	G
1	N	819	A
1	N	820	U
1	N	828	U
1	N	829	G
1	N	832	G
1	N	843	U
1	N	844	G
1	N	846	G
1	N	849	G
1	N	855	U
1	N	861	G
1	N	870	U
1	N	871	U
1	N	874	G
1	N	884	U
1	N	885	G
1	N	889	A
1	N	890	G
1	N	914	A
1	N	926	G
1	N	927	G
1	N	932	C
1	N	934	C
1	N	935	A
1	N	944	G
1	N	960	U
1	N	961	U
1	N	967	C
1	N	968	A
1	N	969	A

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Mol	Chain	Res	Type
1	N	970	C
1	N	971	G
1	N	972	C
1	N	974	A
1	N	975	A
1	N	976	G
1	N	982	U
1	N	983	A
1	N	989	U
1	N	992	U
1	N	993	G
1	N	1003	G
1	N	1004	A
1	N	1008	U
1	N	1017	U
1	N	1018	G
1	N	1022	A
1	N	1028	C
1	N	1029	U
1	N	1030	U
1	N	1031	C
1	N	1032	G
1	N	1034	G
1	N	1036	A
1	N	1037	C
1	N	1050	G
1	N	1053	G
1	N	1054	C
1	N	1063	C
1	N	1064	G
1	N	1065	U
1	N	1066	C
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

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Mol	Chain	Res	Type
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
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	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	1189	U
1	N	1190	G
1	N	1191	A
1	N	1192	C
1	N	1193	G
1	N	1196	A
1	N	1197	A
1	N	1198	G
1	N	1200	C

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Mol	Chain	Res	Type
1	N	1201	A
1	N	1202	U
1	N	1211	U
1	N	1213	A
1	N	1223	C
1	N	1224	U
1	N	1225	A
1	N	1226	C
1	N	1227	A
1	N	1228	C
1	N	1229	A
1	N	1238	A
1	N	1239	A
1	N	1240	U
1	N	1241	G
1	N	1250	A
1	N	1252	A
1	N	1253	G
1	N	1256	A
1	N	1257	A
1	N	1258	G
1	N	1275	A
1	N	1278	G
1	N	1279	G
1	N	1280	A
1	N	1281	C
1	N	1282	C
1	N	1283	U
1	N	1285	A
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	1304	G
1	N	1305	G
1	N	1308	U
1	N	1315	U
1	N	1316	G
1	N	1320	C

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Mol	Chain	Res	Type
1	N	1322	C
1	N	1323	G
1	N	1332	A
1	N	1336	C
1	N	1337	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	1360	A
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1365	G
1	N	1371	G
1	N	1380	U
1	N	1381	U
1	N	1394	A
1	N	1396	A
1	N	1397	C
1	N	1398	A
1	N	1399	C
1	N	1400	C
1	N	1433	A
1	N	1441	A
1	N	1446	A
1	N	1448	C
1	N	1452	C
1	N	1453	G
1	N	1454	G
1	N	1456	A
1	N	1457	G
1	N	1469	C
1	N	1470	U
1	N	1491	G
1	N	1492	A
1	N	1493	A
1	N	1494	G
1	N	1497	G

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Mol	Chain	Res	Type
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 (150) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	N	5	U
1	N	13	U
1	N	30	U
1	N	47	C
1	N	49	U
1	N	51	A
1	N	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	94	G
1	N	95	C
1	N	109	A
1	N	115	G
1	N	119	A
1	N	120	A
1	N	129	A
1	N	130	A
1	N	131	A
1	N	140	U
1	N	159	G

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Mol	Chain	Res	Type
1	N	167	A
1	N	168	G
1	N	181	A
1	N	197	A
1	N	198	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	305	G
1	N	327	A
1	N	328	C
1	N	331	G
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	412	A
1	N	428	G
1	N	429	U
1	N	430	A
1	N	438	U
1	N	451	A
1	N	467	U
1	N	480	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

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Mol	Chain	Res	Type
1	N	535	A
1	N	547	A
1	N	559	A
1	N	560	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	637	C
1	N	641	U
1	N	686	U
1	N	717	U
1	N	721	G
1	N	723	U
1	N	733	G
1	N	754	C
1	N	793	U
1	N	817	C
1	N	843	U
1	N	865	A
1	N	870	U
1	N	884	U
1	N	913	A
1	N	934	C
1	N	941	G
1	N	974	A
1	N	982	U
1	N	991	U
1	N	1020	G
1	N	1036	A
1	N	1041	G
1	N	1042	A
1	N	1046	A
1	N	1049	U
1	N	1053	G
1	N	1063	C
1	N	1064	G
1	N	1066	C
1	N	1093	A
1	N	1094	G
1	N	1101	A
1	N	1129	C
1	N	1136	C

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Mol	Chain	Res	Type
1	N	1151	A
1	N	1160	G
1	N	1168	U
1	N	1185	G
1	N	1191	A
1	N	1196	A
1	N	1197	A
1	N	1201	A
1	N	1214	C
1	N	1224	U
1	N	1228	C
1	N	1239	A
1	N	1263	C
1	N	1282	C
1	N	1285	A
1	N	1299	A
1	N	1303	C
1	N	1319	A
1	N	1331	G
1	N	1335	U
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	1429	A
1	N	1432	G
1	N	1451	U
1	N	1498	U
1	N	1502	A
1	N	1506	U
1	N	1513	A
1	N	1530	G
1	N	1532	U
1	N	1533	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

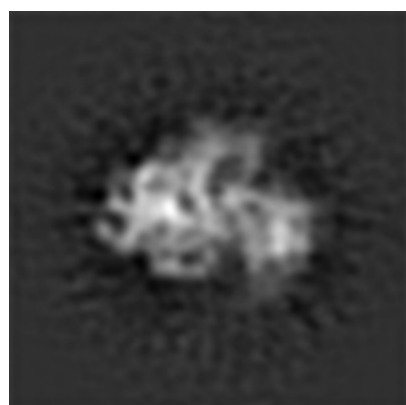
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5509. These allow visual inspection of the internal detail of the map and identification of artifacts.

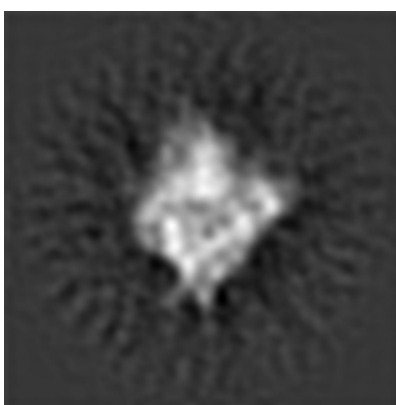
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

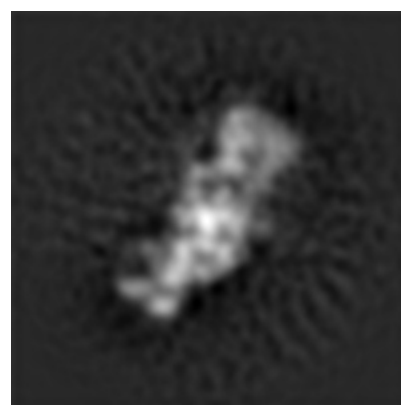
6.1.1 Primary map



X



Y

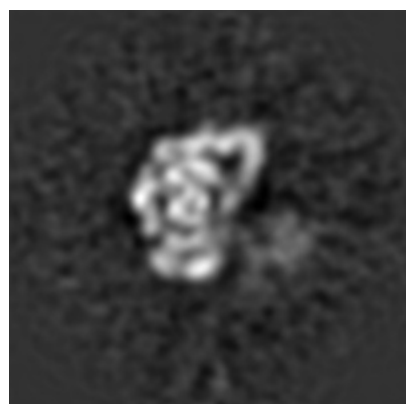


Z

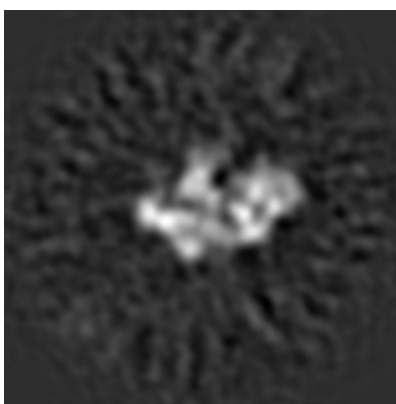
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

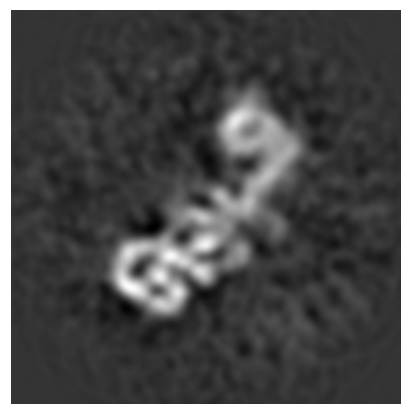
6.2.1 Primary map



X Index: 62



Y Index: 62

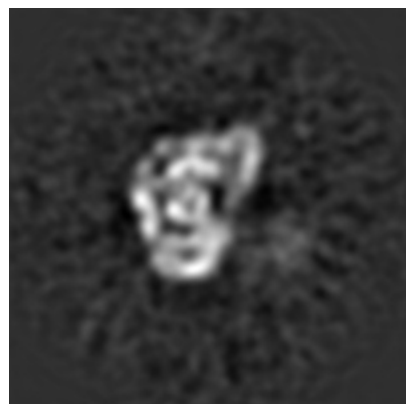


Z Index: 62

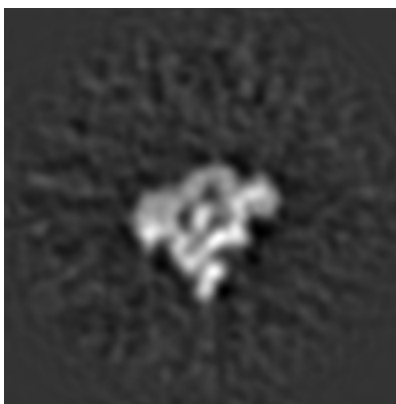
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

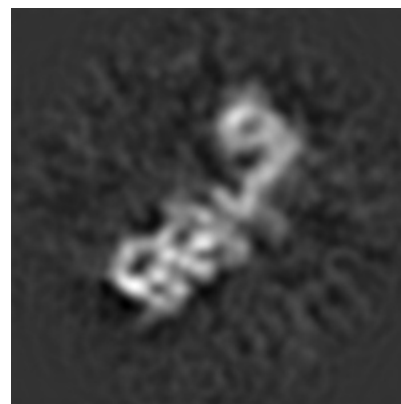
6.3.1 Primary map



X Index: 60



Y Index: 50

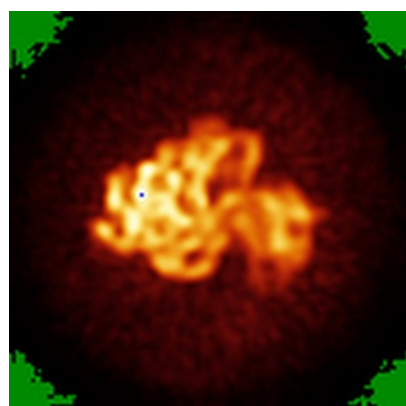


Z Index: 61

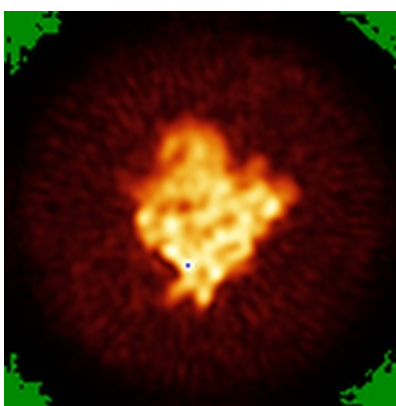
The images above show the largest variance slices of the map in three orthogonal directions.

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

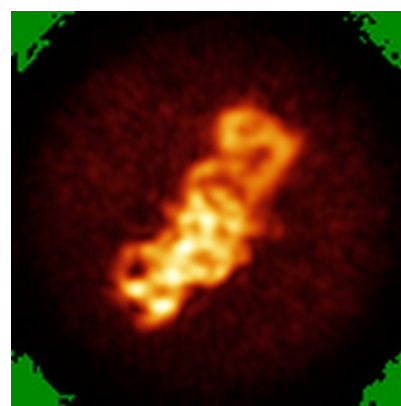
6.4.1 Primary map



X



Y

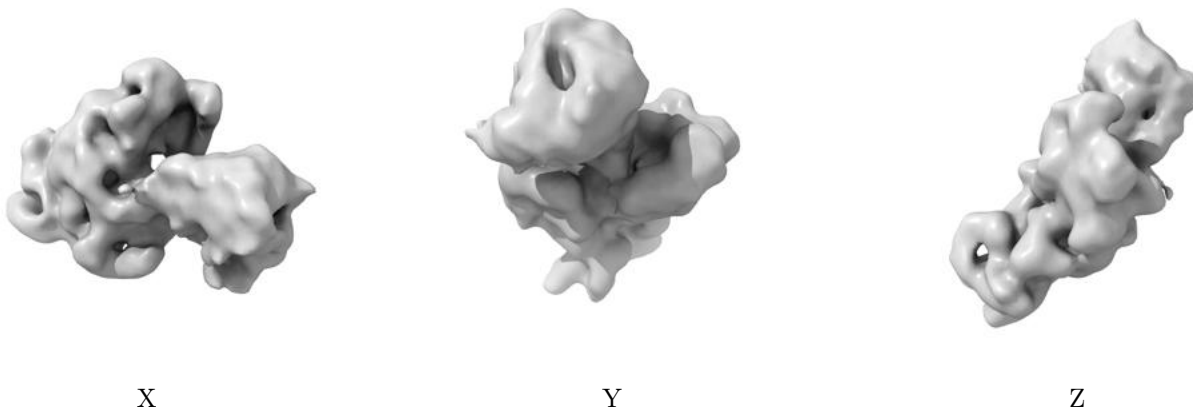


Z

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 - 2.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

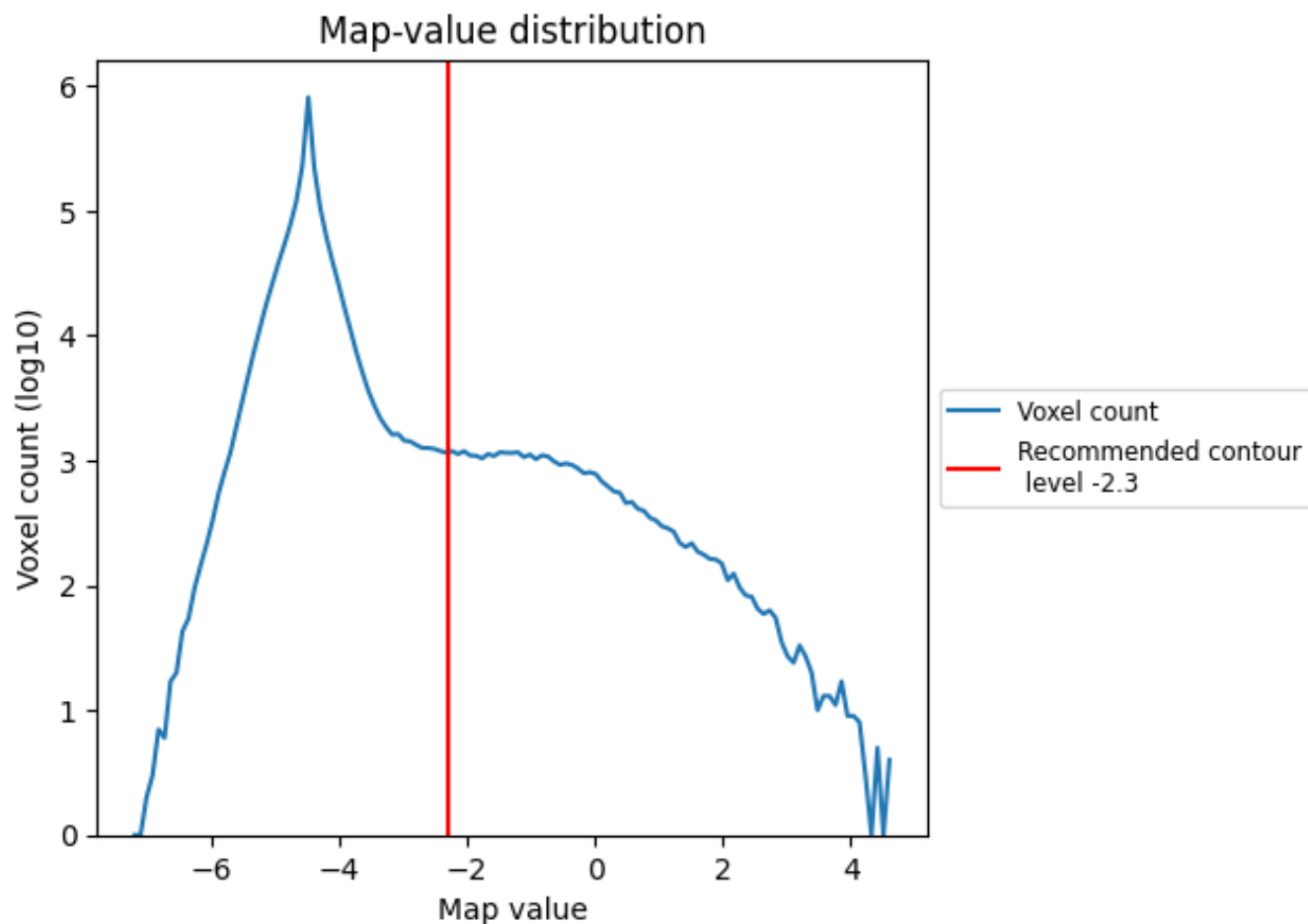
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

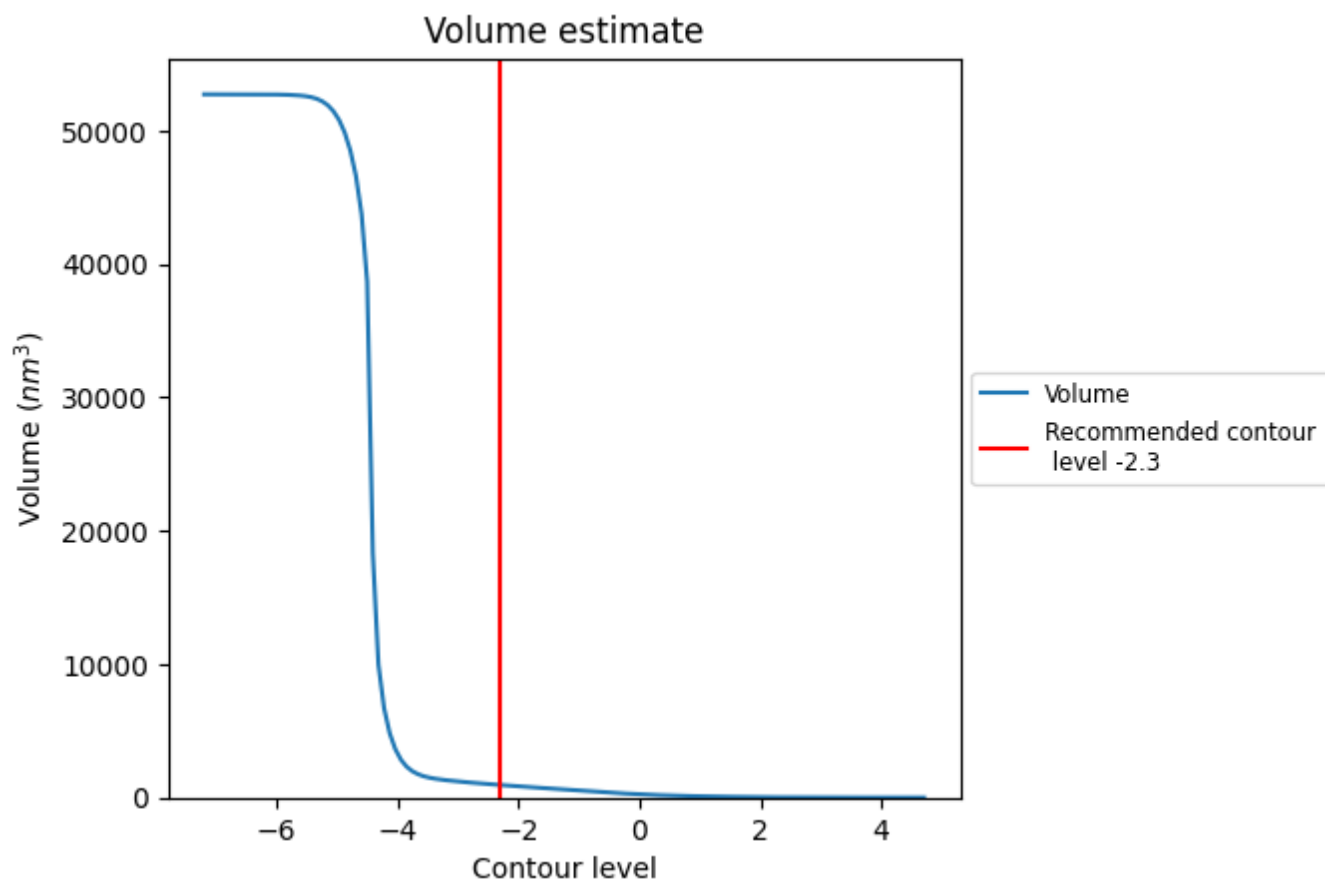
This section contains the results of statistical analysis of the map.

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.

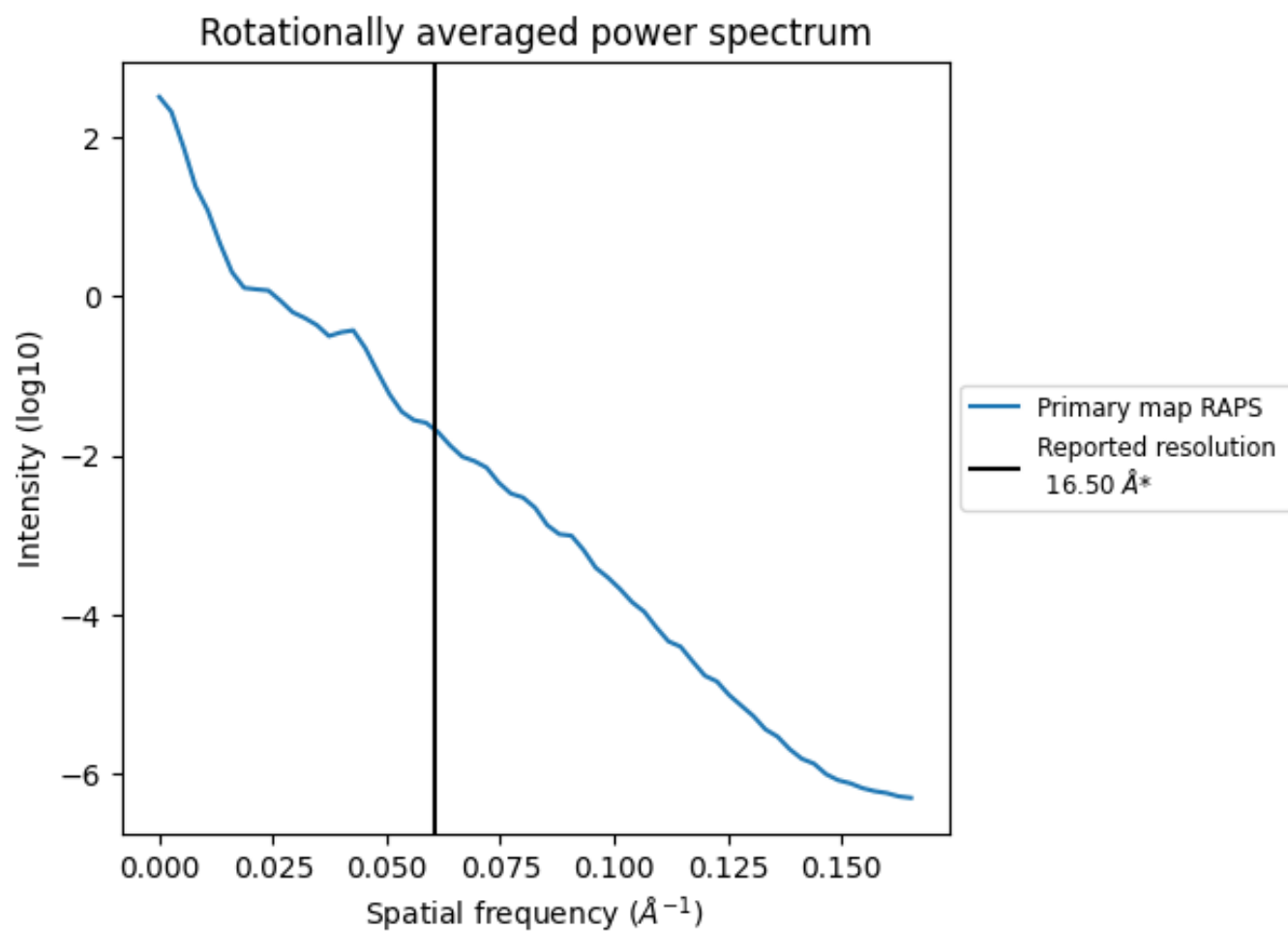
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 943 nm³; this corresponds to an approximate mass of 851 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 0.061 Å⁻¹

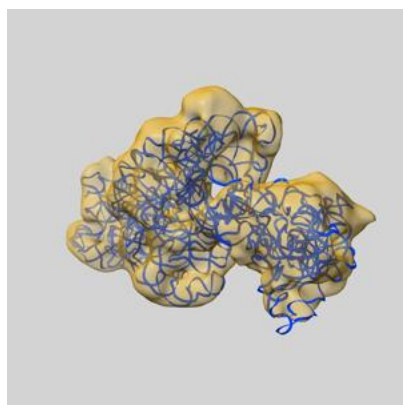
8 Fourier-Shell correlation

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

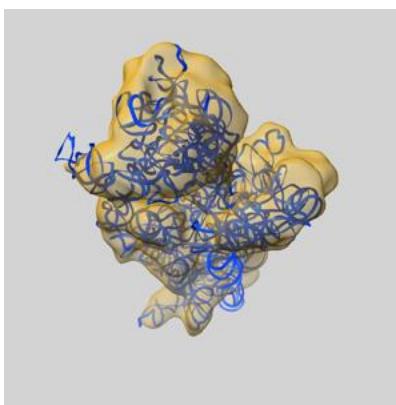
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5509 and PDB model 3J2G. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

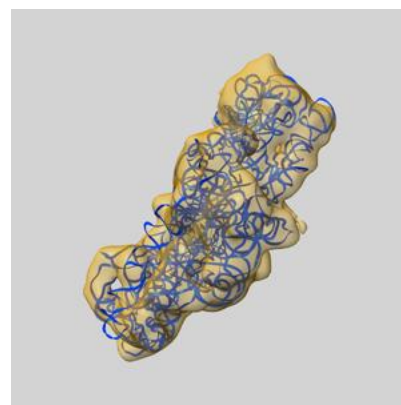
9.1 Map-model overlay [i](#)



X



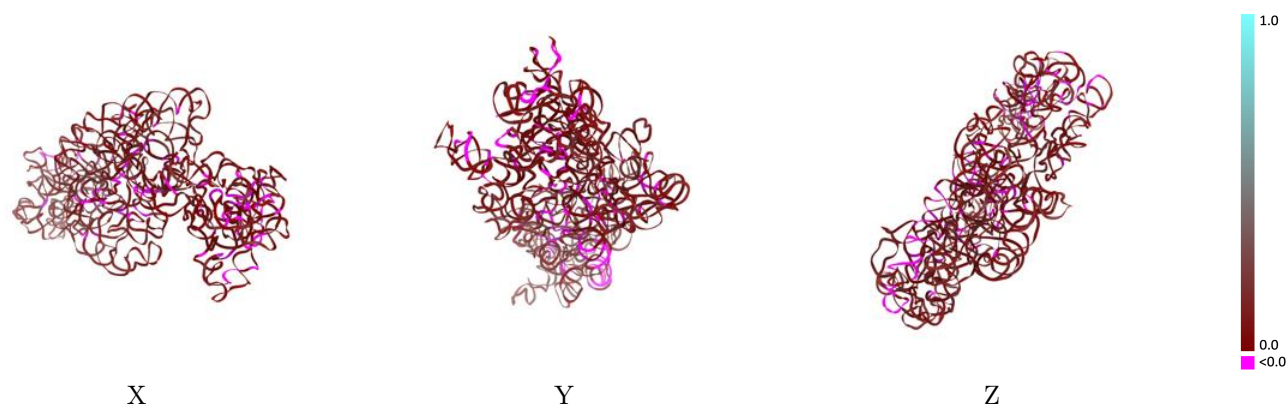
Y



Z

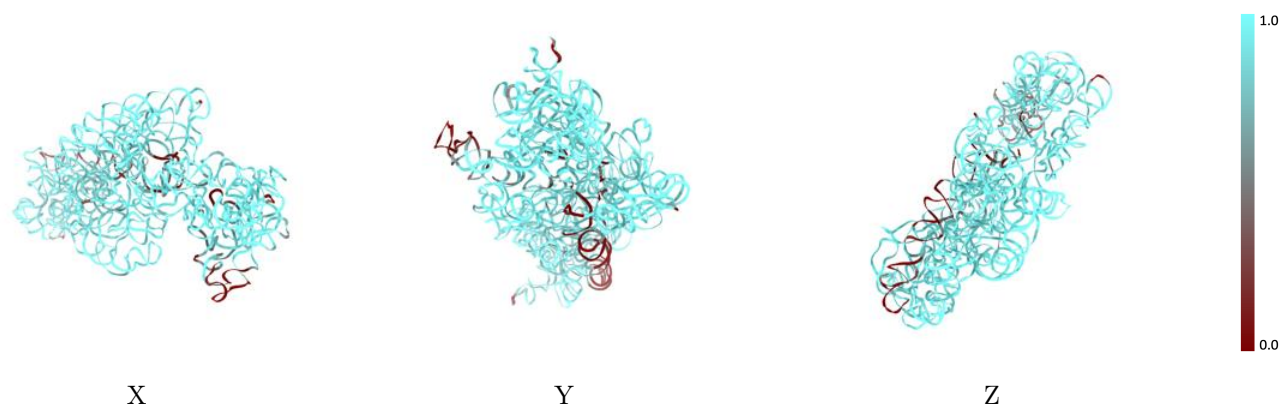
The images above show the 3D surface view of the map at the recommended contour level -2.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



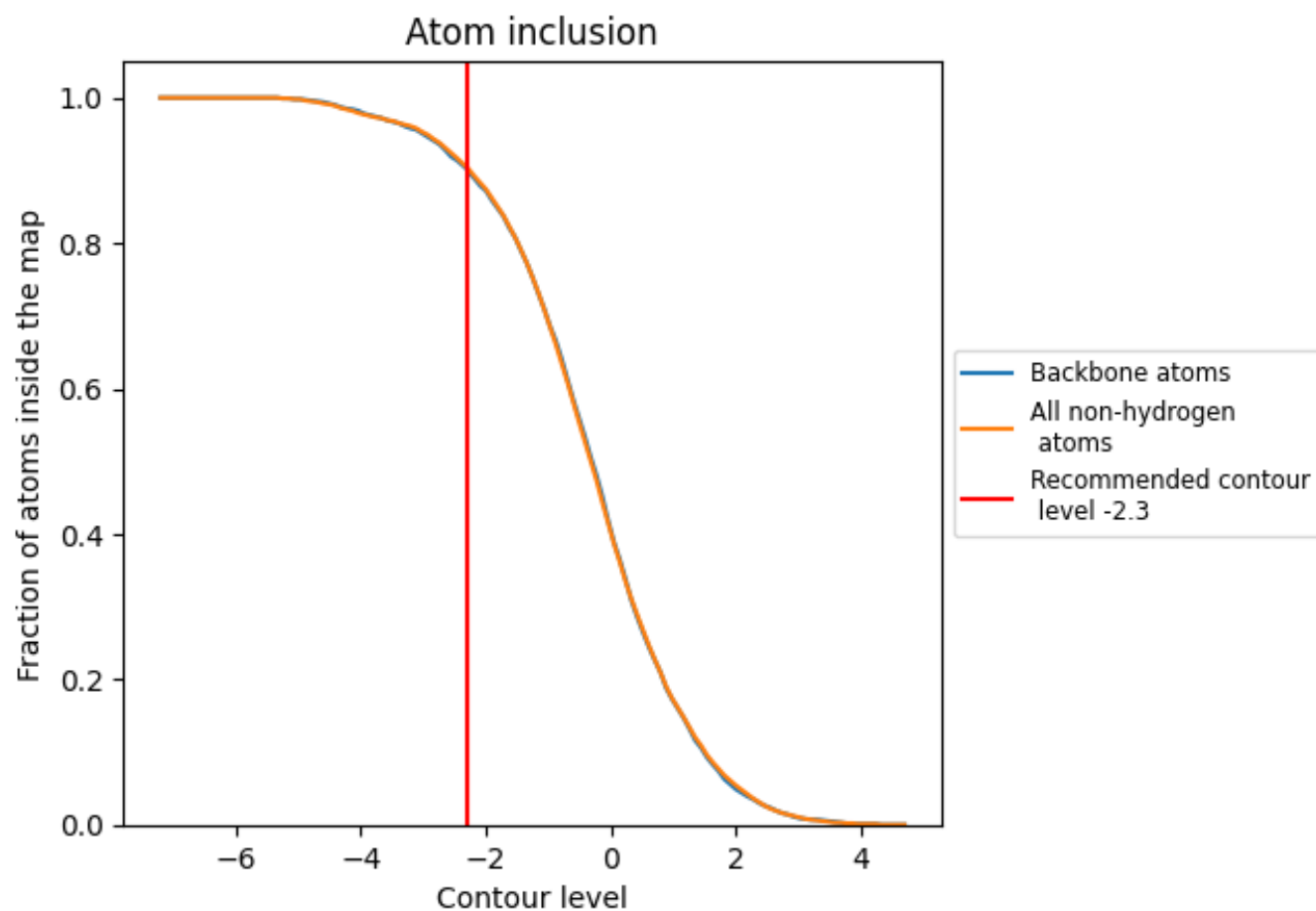
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (-2.3).

9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (-2.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9040	0.0840
N	0.9050	0.0840

