



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 11:35 AM UTC

PDB ID : 3J2E / pdb_00003j2e
EMDB ID : EMD-5507
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 : 15.30 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

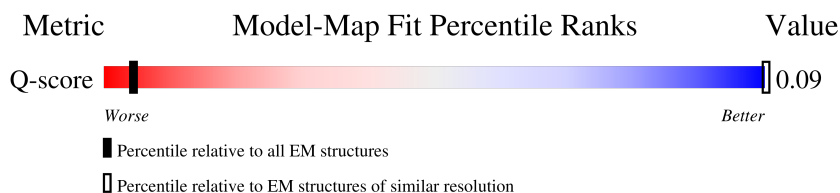
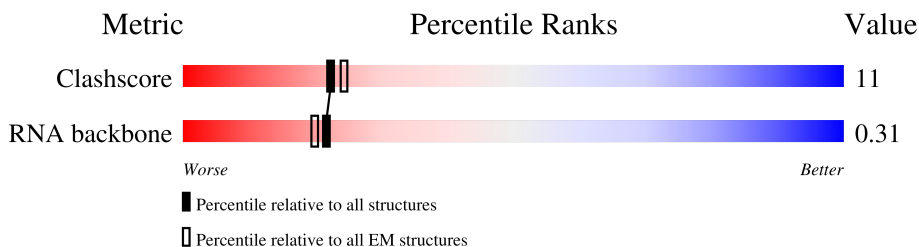
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 15.30 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	35 (14.90 - 15.60)

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

Mol	Chain	Length	Quality of chain
1	N	1533	

2 Entry composition

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

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

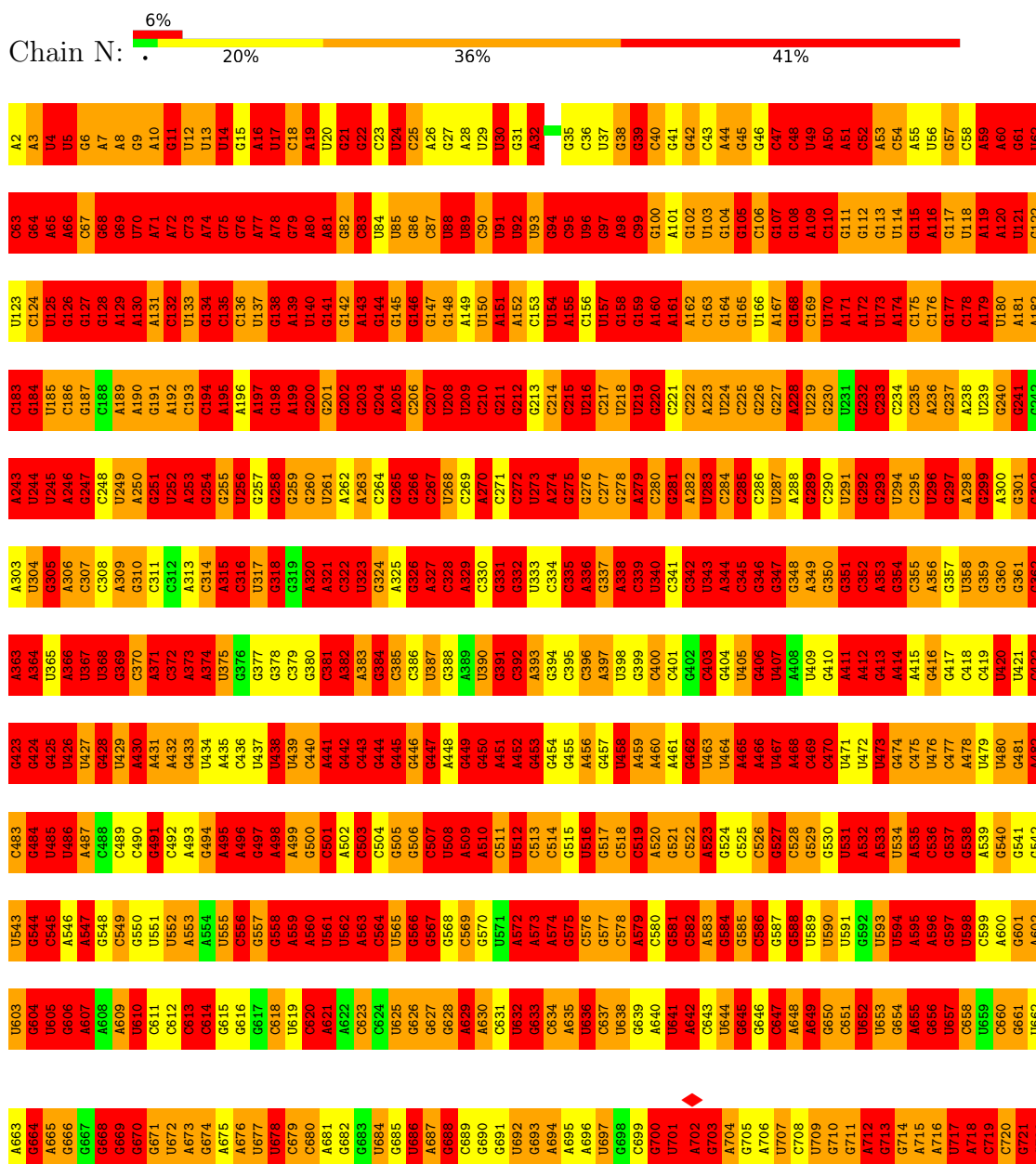
- Molecule 1 is a RNA chain called 16S rRNA.

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

3 Residue-property plots

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

• Molecule 1: 16S rRNA



A1503	G1504	G1505	G1506	A1507	A1508	C1509	C1510	G1511	G1512	A1513	G1514	G1515	G1516	G1517	A1518	A1519	C1520	C1521	G1522	C1523	C1524	G1525	G1526	G1527	G1528	G1529	G1530	A1531	C1532	C1533	A1534																																	
C1443	U1444	U1445	U1446	A1447	C1448	C1449	G1450	G1451	C1452	G1453	G1454	G1455	A1456	G1457	G1458	G1459	C1460	G1461	C1462	G1463	U1464	A1465	C1466	C1467	A1468	C1469	U1470	U1471	U1472	G1473	U1474	G1475	U1476	U1477	U1478	C1479	A1480	U1481	C1482	A1483	C1484	U1485	C1486	G1487	G1488	G1489	U1490	G1491	A1492	A1493	C1494	U1495	C1496	G1497	U1498	A1499	A1500	C1501	A1502					
C1383	C1384	G1385	G1386	G1387	C1388	C1389	U1390	U1391	G1392	U1393	A1394	C1395	A1396	C1397	A1398	C1399	G1400	G1401	C1402	C1403	C1404	G1405	U1406	C1407	A1408	C1409	U1410	C1411	C1412	A1413	U1414	G1415	G1416	C1417	A1418	G1419	U1420	G1421	G1422	G1423	U1424	U1425	G1426	A1427	A1428	A1429	G1430	A1431	G1432	A1433	A1434	G1435	U1436	A1437	G1438	G1439	U1440	A1441	G1442					
G1323	A1324	C1325	G1326	C1327	C1328	A1329	U1330	G1331	A1332	A1333	G1334	U1335	C1336	G1337	G1338	A1339	A1340	U1341	C1342	G1343	C1344	U1345	A1346	G1347	U1348	A1349	A1350	U1351	C1352	G1353	U1354	G1355	A1356	A1357	C1358	C1359	A1360	G1361	A1362	A1363	U1364	G1365	C1366	C1367	A1368	C1369	G1370	G1371	U1372	G1373	A1374	U1375	U1376	A1377	C1378	G1379	U1380	U1381	C1382					
C1263	U1264	C1265	G1266	C1267	C1268	C1269	A1269	G1270	A1271	U1272	G1273	A1274	A1275	G1276	C1277	G1278	G1279	A1280	C1281	U1282	U1283	A1284	A1285	U1286	A1287	A1288	A1289	C1290	U1291	G1292	C1293	C1294	U1295	C1296	G1297	U1298	A1299	G1300	U1301	C1302	C1303	G1304	G1305	A1306	U1307	U1308	G1309	A1310	A1311	G1312	U1313	C1314	U1315	G1316	C1317	A1318	C1319	A1320	U1321	C1322				
C1203	A1204	U1205	G1206	G1207	C1208	C1209	A1209	U1210	U1211	U1212	A1213	C1214	G1215	A1216	C1217	C1218	A1219	G1220	G1221	G1222	U1224	A1225	C1226	A1227	C1228	A1229	C1230	G1231	U1232	G1233	C1234	U1235	A1236	C1237	A1238	A1239	U1240	G1241	U1242	C1243	G1244	C1245	A1246	U1247	A1248	C1249	A1250	A1251	A1252	G1253	U1254	G1255	A1256	C1257	C1258	C1259	G1260	A1261	C1262					
G1143	G1144	U1145	A1146	C1147	U1148	C1149	A1150	A1151	A1152	G1153	G1154	A1155	G1156	A1157	C1158	U1159	G1160	C1161	C1162	A1163	U1164	U1165	G1166	A1167	U1168	A1169	A1170	A1171	C1172	U1173	C1174	G1175	U1176	G1177	G1178	A1179	A1180	G1181	U1182	U1183	G1184	G1185	G1186	G1187	A1188	U1189	A1190	A1191	C1192	G1193	U1194	C1195	U1196	A1197	G1198	U1199	C1200	A1201	U1202					
U1083	G1084	U1085	U1086	G1087	G1088	G1089	U1090	U1091	A1092	A1093	G1094	U1095	C1096	C1097	C1098	U1099	C1100	A1101	A1102	C1103	G1104	A1105	C1106	C1107	G1108	C1109	A1110	A1111	C1112	C1113	C1114	U1115	U1116	U1117	U1118	C1119	C1120	U1121	U1122	U1123	G1124	U1125	U1126	G1127	C1128	C1129	A1130	G1131	C1132	G1133	U1134	U1135	C1136	C1137	G1138	G1139	C1140	G1141	G1142					
U1023	G1024	U1025	G1026	C1027	C1028	U1029	U1030	C1031	G1032	G1033	G1034	A1035	A1036	C1037	C1038	G1039	U1040	G1041	C985	C986	C987	G988	C989	A1044	C1045	U989	A1046	G1047	G1048	U1049	G1050	C1051	U1052	G1053	C1054	A1055	U1056	G1057	C1058	C1059	U1060	G1061	A1062	C1063	G1064	U1065	C1066	A1067	U1009	U1010	C1011	A1012	G1013	U1014	G1015	A1016	U1017	G1018	A1019	G1078	G1079	A1080	A1081	A1082
G963	A964	G965	G966	C967	A968	A969	C910	U911	G912	C913	A914	U915	U916	C917	U918	A919	C979	U920	U921	G922	C923	A924	A925	G926	G927	C928	G929	C930	U931	C932	G933	C934	A935	C936	A937	A938	C939	C940	G941	U942	U943	G944	A945	A946	G947	C948	A949	U950	U951	U952	C953	G954	U955	U956	C957	A958	A959	U960	U961	C962				
U843	G844	A845	G846	G847	C848	G849	C910	U911	G912	C913	A914	U915	U916	C917	U918	A919	C979	U920	U921	G922	C923	A924	A925	G926	G927	C928	G929	C930	U931	C932	G933	C934	A935	C936	A937	A938	C939	C940	G941	U942	U943	G944	A945	A946	G947	C948	A949	U950	U951	U952	C953	G954	U955	U956	C957	A958	A959	U960	U961	C962				
C783	A784	G785	G786	A787	G788	U789	U790	U791	A792	C793	U794	C795	C796	C797	U798	A799	C799	G800	U801	G802	A803	U804	A865	C806	G807	C808	G809	C810	C811	G812	U813	A814	A815	A816	C817	A818	A819	U820	G821	U822	C823	G824	A825	C826	U827	U828	G829	G830	U831	G832	C833	U834	U835	C836	U837	G838	C839	C840	C841	U842				
U723	G724	G725	C726	G727	A728	U729	G730	G731	C732	G733	U734	C735	C736	C737	U738	A739	C739	U740	U741	G742	A743	U804	A865	C806	G807	C808	G809	C810	C811	G812	U813	A814	A815	A816	C817	A818	A819	U820	G821	U822	C823	G824	A825	C826	U827	U828	G829	G830	U831	G832	C833	U834	U835	C836	U837	G838	C839	C840	C841	U842				

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	29012	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	3.830	Depositor
Minimum map value	-6.331	Depositor
Average map value	-4.159	Depositor
Map value standard deviation	0.542	Depositor
Recommended contour level	-2.5	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, 3, 3	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	N	2.06	815/36831 (2.2%)	2.10	2078/57458 (3.6%)

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	1016

All (815) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	574	A	C4'-C3'	9.36	1.66	1.52
1	N	1269	A	C1'-N9	9.25	1.61	1.48
1	N	856	C	C2'-C1'	-9.10	1.39	1.53
1	N	804	U	C5'-C4'	9.09	1.64	1.51
1	N	166	U	P-O5'	-9.05	1.46	1.59
1	N	1473	G	O4'-C1'	8.88	1.54	1.41
1	N	641	U	O3'-P	-8.86	1.47	1.61
1	N	39	G	C4'-C3'	8.78	1.65	1.52
1	N	1191	A	O3'-P	-8.66	1.48	1.61
1	N	1404	C	O4'-C1'	8.49	1.54	1.41
1	N	438	U	O3'-P	-8.45	1.48	1.61
1	N	1472	U	O4'-C1'	8.40	1.54	1.41
1	N	274	A	P-O5'	-8.32	1.47	1.59
1	N	701	U	C1'-N1	8.32	1.60	1.48
1	N	1104	G	C5'-C4'	8.26	1.63	1.51
1	N	991	U	C1'-N1	8.26	1.59	1.47
1	N	534	U	O3'-P	-8.24	1.48	1.61
1	N	266	G	C2'-C1'	-8.23	1.40	1.53
1	N	267	C	O3'-P	-8.17	1.48	1.61
1	N	516	U	C5'-C4'	8.13	1.63	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	767	A	P-O5'	-8.08	1.47	1.59
1	N	762	U	O3'-P	-8.05	1.49	1.61
1	N	656	G	C1'-N9	8.01	1.59	1.48
1	N	1510	C	C2'-C1'	-8.01	1.41	1.53
1	N	32	A	O3'-P	-7.95	1.49	1.61
1	N	839	C	C5'-C4'	7.94	1.63	1.51
1	N	808	C	C1'-N1	7.93	1.60	1.48
1	N	1191	A	C5'-C4'	7.93	1.63	1.51
1	N	332	G	P-O5'	-7.85	1.48	1.59
1	N	1007	U	C1'-N1	7.83	1.60	1.48
1	N	1181	G	C2'-C1'	-7.83	1.41	1.53
1	N	245	U	C5'-C4'	7.82	1.62	1.51
1	N	629	A	C5'-C4'	7.79	1.62	1.51
1	N	952	U	C5'-C4'	7.78	1.62	1.51
1	N	829	G	C5'-C4'	7.77	1.62	1.51
1	N	951	G	O4'-C1'	7.73	1.53	1.41
1	N	806	C	C1'-N1	7.72	1.60	1.48
1	N	62	U	O3'-P	-7.72	1.49	1.61
1	N	1107	C	C1'-N1	7.71	1.60	1.48
1	N	595	A	C4'-C3'	7.70	1.64	1.53
1	N	738	C	P-O5'	-7.66	1.48	1.59
1	N	902	G	C2'-C1'	-7.65	1.41	1.53
1	N	715	A	C1'-N9	7.64	1.59	1.48
1	N	315	A	C5'-C4'	7.62	1.62	1.51
1	N	42	G	P-O5'	-7.61	1.48	1.59
1	N	234	C	C4'-O4'	-7.61	1.34	1.45
1	N	420	U	O5'-C5'	7.59	1.53	1.42
1	N	772	U	C1'-N1	7.59	1.59	1.48
1	N	632	U	C5'-C4'	7.58	1.62	1.51
1	N	857	C	C3'-O3'	7.56	1.53	1.42
1	N	93	U	C5'-C4'	7.55	1.62	1.51
1	N	1323	G	C2'-C1'	-7.54	1.42	1.53
1	N	172	A	P-O5'	-7.52	1.48	1.59
1	N	682	G	O4'-C1'	7.52	1.52	1.41
1	N	1279	G	C4'-C3'	7.50	1.64	1.53
1	N	1388	C	C4'-C3'	7.49	1.63	1.52
1	N	324	G	C2'-C1'	-7.49	1.42	1.53
1	N	95	C	O5'-C5'	7.49	1.53	1.42
1	N	922	G	O3'-P	-7.46	1.50	1.61
1	N	1509	C	O3'-P	-7.43	1.50	1.61
1	N	581	G	P-O5'	-7.42	1.48	1.59
1	N	184	G	O4'-C1'	7.40	1.52	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	443	C	O4'-C1'	7.39	1.52	1.41
1	N	1036	A	C5'-C4'	7.34	1.62	1.51
1	N	297	G	O3'-P	-7.33	1.50	1.61
1	N	637	C	C5'-C4'	7.33	1.62	1.51
1	N	151	A	C1'-N9	7.32	1.58	1.48
1	N	555	U	C1'-N1	7.31	1.59	1.48
1	N	1099	G	C2'-C1'	-7.30	1.42	1.53
1	N	1228	C	C1'-N1	7.27	1.59	1.48
1	N	80	A	O3'-P	7.24	1.72	1.61
1	N	462	G	C5'-C4'	7.24	1.62	1.51
1	N	889	A	O3'-P	-7.24	1.50	1.61
1	N	284	C	P-O5'	-7.24	1.48	1.59
1	N	509	A	C3'-O3'	-7.23	1.31	1.42
1	N	1502	A	C2'-C1'	-7.22	1.42	1.53
1	N	361	G	C2'-C1'	7.21	1.64	1.53
1	N	645	G	C5'-C4'	7.21	1.62	1.51
1	N	825	A	C1'-N9	-7.21	1.37	1.48
1	N	985	C	C1'-N1	7.21	1.59	1.48
1	N	1318	A	C3'-O3'	-7.17	1.31	1.42
1	N	1428	A	P-O5'	-7.12	1.49	1.59
1	N	17	U	C5'-C4'	7.11	1.61	1.51
1	N	1121	U	C4'-O4'	7.10	1.56	1.45
1	N	210	C	C1'-N1	7.10	1.58	1.47
1	N	855	U	C5'-C4'	7.09	1.61	1.51
1	N	373	A	C2'-C1'	-7.08	1.42	1.53
1	N	5	U	C1'-N1	7.08	1.58	1.47
1	N	906	A	C5'-C4'	7.07	1.61	1.51
1	N	889	A	C4'-C3'	7.07	1.63	1.52
1	N	191	G	C1'-N9	7.06	1.58	1.48
1	N	245	U	C1'-N1	7.05	1.59	1.48
1	N	199	A	C3'-C2'	7.02	1.63	1.52
1	N	753	A	C5'-C4'	7.01	1.61	1.51
1	N	426	U	C1'-N1	7.01	1.58	1.48
1	N	142	G	C2'-C1'	-7.00	1.42	1.53
1	N	686	U	C1'-N1	6.99	1.57	1.47
1	N	905	U	C2'-C1'	6.99	1.63	1.53
1	N	81	A	O4'-C1'	-6.98	1.31	1.42
1	N	772	U	C5'-C4'	6.98	1.61	1.51
1	N	324	G	O3'-P	-6.97	1.50	1.61
1	N	890	G	C2'-C1'	-6.97	1.42	1.53
1	N	324	G	C5'-C4'	6.95	1.61	1.51
1	N	448	A	O3'-P	-6.95	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	871	U	C1'-N1	6.93	1.58	1.48
1	N	1529	G	C1'-N9	6.93	1.57	1.47
1	N	1427	C	C4'-C3'	6.91	1.62	1.52
1	N	1091	U	C5'-C4'	6.91	1.61	1.51
1	N	1230	C	P-O5'	-6.90	1.49	1.59
1	N	915	A	O5'-C5'	6.88	1.52	1.42
1	N	478	A	P-O5'	-6.88	1.49	1.59
1	N	1071	C	C1'-N1	6.88	1.58	1.48
1	N	127	G	C2'-C1'	-6.86	1.43	1.53
1	N	981	U	C5'-C4'	6.86	1.61	1.51
1	N	1117	A	P-O5'	-6.86	1.49	1.59
1	N	344	A	C4'-C3'	6.86	1.63	1.53
1	N	1240	U	C1'-N1	6.86	1.58	1.48
1	N	1335	U	P-O5'	-6.79	1.49	1.59
1	N	730	G	C3'-C2'	-6.79	1.42	1.52
1	N	1247	U	O4'-C1'	6.78	1.51	1.41
1	N	354	G	C3'-O3'	6.73	1.52	1.42
1	N	837	U	O4'-C1'	6.73	1.51	1.41
1	N	333	U	C1'-N1	6.72	1.58	1.48
1	N	652	U	C2'-C1'	-6.72	1.43	1.53
1	N	856	C	C3'-C2'	6.71	1.62	1.52
1	N	161	A	C3'-O3'	6.70	1.52	1.42
1	N	254	G	P-O5'	-6.70	1.49	1.59
1	N	1199	U	C5'-C4'	6.70	1.61	1.51
1	N	1274	A	C1'-N9	6.69	1.57	1.48
1	N	538	G	C1'-N9	6.68	1.57	1.48
1	N	890	G	P-O5'	-6.67	1.49	1.59
1	N	900	A	C5'-C4'	6.67	1.61	1.51
1	N	414	A	C1'-N9	6.66	1.57	1.48
1	N	776	G	P-O5'	-6.66	1.49	1.59
1	N	966	G	P-O5'	6.66	1.69	1.59
1	N	894	G	C5'-C4'	6.65	1.61	1.51
1	N	62	U	C5'-C4'	6.65	1.61	1.51
1	N	1473	G	C3'-O3'	6.65	1.52	1.42
1	N	893	C	C1'-N1	6.64	1.58	1.48
1	N	473	U	C2'-C1'	6.63	1.63	1.53
1	N	50	A	C1'-N9	6.62	1.56	1.47
1	N	406	G	C4'-C3'	6.62	1.62	1.52
1	N	1299	A	C2'-C1'	-6.61	1.43	1.53
1	N	936	C	C1'-N1	6.61	1.58	1.48
1	N	191	G	C5'-C4'	6.60	1.61	1.51
1	N	1482	G	P-O5'	-6.58	1.49	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	336	A	N9-C8	6.58	1.50	1.37
1	N	882	C	C1'-N1	6.58	1.58	1.48
1	N	984	C	C5'-C4'	6.57	1.61	1.51
1	N	1140	C	C4'-O4'	6.57	1.55	1.45
1	N	697	U	C1'-N1	6.56	1.58	1.48
1	N	137	U	C1'-N1	6.56	1.58	1.48
1	N	958	A	C2'-C1'	-6.56	1.43	1.53
1	N	238	A	C2'-C1'	-6.55	1.43	1.53
1	N	1067	A	O3'-P	-6.54	1.51	1.61
1	N	206	C	C3'-O3'	6.54	1.51	1.42
1	N	244	U	C3'-C2'	6.54	1.62	1.52
1	N	514	C	C1'-N1	6.54	1.58	1.48
1	N	142	G	C4'-C3'	6.52	1.62	1.52
1	N	1423	G	O5'-C5'	6.52	1.52	1.42
1	N	1128	C	C1'-N1	6.51	1.58	1.48
1	N	606	G	C4'-C3'	6.51	1.62	1.52
1	N	634	C	O3'-P	-6.51	1.51	1.61
1	N	1374	A	O4'-C1'	6.50	1.51	1.41
1	N	229	U	C5'-C4'	6.50	1.60	1.51
1	N	1095	U	C2'-C1'	-6.48	1.43	1.53
1	N	1520	C	C1'-N1	6.48	1.58	1.48
1	N	104	G	C1'-N9	6.48	1.57	1.48
1	N	1469	C	O4'-C1'	-6.48	1.31	1.41
1	N	460	A	C4'-O4'	6.48	1.55	1.45
1	N	177	G	C4'-C3'	6.47	1.62	1.52
1	N	392	C	O4'-C1'	6.47	1.51	1.41
1	N	53	A	C3'-O3'	6.46	1.51	1.42
1	N	1364	U	C3'-C2'	6.46	1.62	1.52
1	N	1142	G	C3'-O3'	6.46	1.51	1.42
1	N	874	G	C2'-C1'	-6.45	1.43	1.53
1	N	955	U	C1'-N1	6.45	1.58	1.48
1	N	464	U	O3'-P	-6.44	1.51	1.61
1	N	1291	U	C2'-C1'	6.44	1.63	1.53
1	N	1412	C	C4'-C3'	6.43	1.62	1.52
1	N	120	A	O4'-C1'	-6.42	1.32	1.41
1	N	13	U	C1'-N1	6.42	1.57	1.47
1	N	561	U	C1'-N1	6.42	1.57	1.47
1	N	613	C	C1'-N1	6.42	1.58	1.48
1	N	717	U	P-O5'	-6.41	1.50	1.59
1	N	1244	G	O3'-P	-6.41	1.51	1.61
1	N	584	G	P-O5'	-6.39	1.50	1.59
1	N	1294	G	C5'-C4'	6.38	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	733	G	C2'-C1'	-6.38	1.43	1.53
1	N	91	U	C1'-N1	6.36	1.57	1.48
1	N	606	G	C2'-C1'	-6.36	1.43	1.53
1	N	807	A	O3'-P	-6.34	1.51	1.61
1	N	211	G	C1'-N9	6.34	1.57	1.48
1	N	514	C	O3'-P	6.34	1.70	1.61
1	N	725	G	C3'-C2'	6.34	1.62	1.52
1	N	1409	C	C1'-N1	6.33	1.57	1.48
1	N	562	U	O3'-P	-6.33	1.51	1.61
1	N	409	U	P-O5'	-6.32	1.50	1.59
1	N	18	C	C5'-C4'	6.31	1.60	1.51
1	N	618	C	C1'-N1	6.31	1.57	1.48
1	N	691	G	C2-N3	6.30	1.45	1.32
1	N	743	A	C1'-N9	-6.30	1.38	1.48
1	N	1336	C	C4'-C3'	6.30	1.62	1.53
1	N	744	C	O3'-P	-6.29	1.51	1.61
1	N	316	C	O3'-P	-6.29	1.51	1.61
1	N	1150	A	P-O5'	-6.29	1.50	1.59
1	N	1029	U	C5'-C4'	6.29	1.60	1.51
1	N	113	G	C2'-C1'	-6.29	1.44	1.53
1	N	118	U	C4'-C3'	6.29	1.61	1.52
1	N	1352	C	C5'-C4'	6.29	1.60	1.51
1	N	130	A	C3'-O3'	6.28	1.52	1.43
1	N	421	U	C5'-C4'	6.28	1.60	1.51
1	N	1300	G	O4'-C1'	-6.28	1.32	1.42
1	N	169	C	P-O5'	-6.27	1.50	1.59
1	N	119	A	N7-C5	-6.27	1.26	1.39
1	N	1252	A	C2'-C1'	-6.27	1.44	1.53
1	N	109	A	C4'-C3'	6.26	1.61	1.52
1	N	655	A	C4'-O4'	-6.26	1.36	1.45
1	N	1127	G	C2'-C1'	-6.26	1.44	1.53
1	N	120	A	C4'-C3'	6.25	1.61	1.52
1	N	1172	C	P-O5'	-6.25	1.50	1.59
1	N	1195	C	O4'-C1'	6.25	1.51	1.41
1	N	1452	C	C5'-C4'	6.25	1.60	1.51
1	N	1322	C	C1'-N1	6.24	1.56	1.47
1	N	1413	A	C4'-C3'	6.24	1.61	1.52
1	N	294	U	C3'-C2'	-6.24	1.43	1.52
1	N	226	G	O5'-C5'	6.23	1.51	1.42
1	N	255	G	O3'-P	-6.22	1.51	1.61
1	N	1340	A	C3'-C2'	6.22	1.62	1.52
1	N	489	C	O3'-P	-6.21	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	866	C	C5'-C4'	6.21	1.60	1.51
1	N	225	C	C3'-C2'	6.20	1.62	1.52
1	N	315	A	C2'-C1'	-6.20	1.43	1.53
1	N	177	G	C1'-N9	-6.20	1.38	1.48
1	N	741	G	C5'-C4'	6.19	1.60	1.51
1	N	576	C	C4-C5	6.19	1.55	1.43
1	N	1406	U	C5'-C4'	6.19	1.60	1.51
1	N	392	C	C5'-C4'	6.18	1.60	1.51
1	N	1505	G	C2'-C1'	-6.18	1.44	1.53
1	N	972	C	O4'-C1'	-6.17	1.32	1.41
1	N	895	G	P-O5'	-6.17	1.50	1.59
1	N	1482	G	O3'-P	-6.17	1.51	1.61
1	N	169	C	C1'-N1	6.17	1.57	1.48
1	N	926	G	C5'-C4'	6.16	1.60	1.51
1	N	215	C	C2'-C1'	-6.14	1.44	1.53
1	N	670	G	P-O5'	-6.14	1.50	1.59
1	N	557	G	C5'-C4'	6.13	1.60	1.51
1	N	1462	C	C5'-C4'	6.12	1.60	1.51
1	N	986	U	P-O5'	-6.12	1.50	1.59
1	N	647	C	C5'-C4'	6.11	1.60	1.51
1	N	66	A	C5'-C4'	6.11	1.60	1.51
1	N	1140	C	P-O5'	-6.11	1.50	1.59
1	N	1381	U	C4'-O4'	6.10	1.54	1.45
1	N	1057	G	C1'-N9	-6.10	1.38	1.48
1	N	765	G	O5'-C5'	6.10	1.51	1.42
1	N	249	U	C2'-C1'	-6.09	1.44	1.53
1	N	1151	A	C5'-C4'	6.09	1.60	1.51
1	N	473	U	C5'-C4'	6.09	1.60	1.51
1	N	599	C	C4'-C3'	6.08	1.61	1.52
1	N	1139	G	O3'-P	-6.08	1.52	1.61
1	N	1371	G	C2'-C1'	-6.08	1.44	1.53
1	N	589	U	C1'-N1	6.06	1.57	1.48
1	N	1336	C	C5'-C4'	6.06	1.60	1.51
1	N	247	G	O5'-C5'	6.06	1.51	1.42
1	N	920	U	C5'-C4'	6.06	1.60	1.51
1	N	749	A	C3'-C2'	6.05	1.61	1.52
1	N	128	G	C1'-N9	6.05	1.57	1.48
1	N	944	G	P-O5'	-6.05	1.50	1.59
1	N	1075	U	C2'-C1'	-6.04	1.44	1.53
1	N	1362	A	O3'-P	-6.04	1.52	1.61
1	N	103	U	C3'-C2'	-6.03	1.43	1.52
1	N	987	G	C1'-N9	6.03	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	750	C	C1'-N1	6.02	1.57	1.48
1	N	471	U	N3-C4	6.02	1.50	1.38
1	N	1006	G	C2'-C1'	-6.02	1.44	1.53
1	N	1148	U	O4'-C1'	6.02	1.50	1.41
1	N	366	A	C2'-C1'	-6.01	1.44	1.53
1	N	1178	G	O3'-P	-6.01	1.52	1.61
1	N	482	A	C5'-C4'	6.01	1.60	1.51
1	N	1044	A	O5'-C5'	6.00	1.51	1.42
1	N	1214	C	C5'-C4'	6.00	1.60	1.51
1	N	632	U	C1'-N1	6.00	1.57	1.48
1	N	1085	U	C4'-O4'	-6.00	1.36	1.45
1	N	1297	G	C1'-N9	6.00	1.55	1.47
1	N	593	U	P-O5'	-5.99	1.50	1.59
1	N	366	A	C3'-O3'	-5.99	1.34	1.43
1	N	941	G	P-O5'	-5.99	1.50	1.59
1	N	1135	U	O5'-C5'	5.99	1.51	1.42
1	N	1201	A	O4'-C1'	5.99	1.50	1.42
1	N	59	A	C5'-C4'	5.99	1.60	1.51
1	N	684	U	C3'-O3'	5.98	1.51	1.42
1	N	286	C	C1'-N1	5.98	1.57	1.48
1	N	254	G	C4'-O4'	5.98	1.54	1.45
1	N	905	U	O3'-P	-5.98	1.52	1.61
1	N	390	U	C5'-C4'	5.97	1.60	1.51
1	N	424	G	C2'-C1'	-5.97	1.44	1.53
1	N	435	A	O3'-P	-5.97	1.52	1.61
1	N	977	A	C4'-C3'	5.97	1.61	1.52
1	N	604	G	C5'-C4'	5.97	1.60	1.51
1	N	838	G	C4'-C3'	5.97	1.61	1.52
1	N	1513	A	C1'-N9	-5.97	1.39	1.48
1	N	393	A	C5'-C4'	5.96	1.60	1.51
1	N	627	G	C4'-O4'	-5.96	1.36	1.45
1	N	693	G	P-O5'	-5.96	1.50	1.59
1	N	1163	A	O4'-C1'	5.96	1.50	1.41
1	N	501	C	C3'-O3'	-5.96	1.33	1.42
1	N	840	C	C1'-N1	5.96	1.57	1.48
1	N	1197	A	C1'-N9	5.96	1.56	1.48
1	N	1531	A	O3'-P	-5.95	1.52	1.61
1	N	387	U	O3'-P	-5.95	1.52	1.61
1	N	483	C	O4'-C1'	5.94	1.50	1.41
1	N	1408	A	O3'-P	-5.94	1.52	1.61
1	N	347	G	C2'-C1'	-5.94	1.44	1.53
1	N	721	G	C5'-C4'	5.94	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	707	U	C2-N3	5.93	1.49	1.37
1	N	1211	U	C5'-C4'	5.93	1.60	1.51
1	N	1269	A	C5'-C4'	5.93	1.60	1.51
1	N	1333	A	P-O5'	-5.93	1.50	1.59
1	N	924	C	O3'-P	-5.92	1.52	1.61
1	N	694	A	O3'-P	-5.92	1.52	1.61
1	N	363	A	O4'-C1'	5.92	1.50	1.41
1	N	395	C	C1'-N1	5.92	1.57	1.48
1	N	233	C	C3'-O3'	-5.91	1.33	1.42
1	N	910	C	C4'-C3'	-5.91	1.43	1.52
1	N	1194	U	C4'-O4'	5.91	1.54	1.45
1	N	347	G	C4'-O4'	5.91	1.54	1.45
1	N	511	C	C5'-C4'	5.90	1.60	1.51
1	N	1181	G	N7-C5	-5.90	1.27	1.39
1	N	520	A	C2'-C1'	-5.90	1.44	1.53
1	N	916	U	C4'-C3'	5.90	1.61	1.52
1	N	158	G	C5'-C4'	5.90	1.60	1.51
1	N	920	U	C3'-O3'	5.89	1.50	1.42
1	N	946	A	C2'-C1'	-5.89	1.44	1.53
1	N	1203	C	C1'-N1	5.89	1.57	1.48
1	N	191	G	C2'-C1'	-5.89	1.44	1.53
1	N	91	U	C2'-C1'	-5.89	1.44	1.53
1	N	220	G	P-O5'	-5.88	1.50	1.59
1	N	97	G	O3'-P	-5.88	1.52	1.61
1	N	1261	A	C2'-C1'	-5.88	1.44	1.53
1	N	492	C	C1'-N1	5.88	1.57	1.48
1	N	36	C	N3-C4	5.88	1.45	1.33
1	N	1407	C	O5'-C5'	5.87	1.51	1.42
1	N	201	G	C1'-N9	5.87	1.56	1.48
1	N	709	U	C1'-N1	5.87	1.57	1.48
1	N	124	C	O3'-P	-5.87	1.52	1.61
1	N	609	A	C2'-C1'	-5.87	1.44	1.53
1	N	1085	U	C3'-C2'	5.87	1.61	1.52
1	N	51	A	O3'-P	-5.86	1.52	1.61
1	N	734	G	C1'-N9	5.85	1.56	1.48
1	N	222	C	C4'-C3'	5.85	1.61	1.52
1	N	268	U	C2-N3	5.84	1.49	1.37
1	N	1069	C	O5'-C5'	-5.84	1.33	1.42
1	N	856	C	C1'-N1	5.84	1.57	1.48
1	N	175	C	C5'-C4'	5.84	1.60	1.51
1	N	808	C	O3'-P	-5.84	1.52	1.61
1	N	1238	A	C1'-N9	5.83	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1409	C	C2'-C1'	-5.82	1.44	1.53
1	N	1162	C	C5'-C4'	5.81	1.59	1.51
1	N	261	U	C4'-C3'	5.81	1.61	1.52
1	N	221	C	P-O5'	-5.80	1.51	1.59
1	N	712	A	C4'-C3'	5.80	1.61	1.52
1	N	1532	U	C2-N3	5.80	1.49	1.37
1	N	1440	U	C4'-C3'	5.80	1.61	1.52
1	N	396	C	P-O5'	-5.79	1.51	1.59
1	N	1169	A	C4'-O4'	5.79	1.54	1.45
1	N	1429	A	O3'-P	-5.79	1.52	1.61
1	N	189	A	C5'-C4'	5.79	1.59	1.51
1	N	453	G	C4'-O4'	-5.79	1.36	1.45
1	N	1270	G	C5'-C4'	5.79	1.59	1.51
1	N	424	G	P-O5'	-5.79	1.51	1.59
1	N	644	U	C3'-O3'	5.78	1.50	1.42
1	N	206	C	C1'-N1	5.78	1.57	1.48
1	N	1521	C	C1'-N1	5.78	1.57	1.48
1	N	803	G	P-O5'	5.77	1.68	1.59
1	N	899	C	O4'-C1'	5.77	1.50	1.41
1	N	1105	A	C5'-C4'	5.77	1.59	1.51
1	N	1263	C	P-O5'	-5.77	1.51	1.59
1	N	1483	A	O3'-P	-5.77	1.52	1.61
1	N	1320	C	C3'-C2'	5.77	1.61	1.52
1	N	293	G	O3'-P	-5.76	1.52	1.61
1	N	1182	G	O3'-P	-5.76	1.52	1.61
1	N	1357	A	C2'-C1'	-5.76	1.44	1.53
1	N	1241	G	C3'-O3'	5.76	1.50	1.42
1	N	175	C	C4'-C3'	5.75	1.61	1.52
1	N	372	C	P-O5'	-5.75	1.51	1.59
1	N	198	G	C5'-C4'	5.75	1.59	1.51
1	N	14	U	O3'-P	-5.75	1.52	1.61
1	N	575	G	C5'-C4'	5.74	1.59	1.51
1	N	781	A	C3'-C2'	5.74	1.61	1.52
1	N	664	G	C5'-C4'	-5.74	1.42	1.51
1	N	65	A	O3'-P	-5.74	1.52	1.61
1	N	208	U	C3'-C2'	5.74	1.61	1.52
1	N	381	C	O3'-P	-5.74	1.52	1.61
1	N	1155	A	N7-C5	-5.74	1.27	1.39
1	N	1483	A	C4'-O4'	5.74	1.54	1.45
1	N	36	C	C4'-C3'	5.73	1.61	1.52
1	N	1480	A	C4'-C3'	5.73	1.61	1.52
1	N	1308	U	C5'-C4'	5.72	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	121	U	C3'-C2'	-5.72	1.44	1.52
1	N	280	C	P-O5'	-5.72	1.51	1.59
1	N	1288	A	P-O5'	-5.72	1.51	1.59
1	N	419	C	C1'-N1	5.71	1.57	1.48
1	N	382	A	C3'-C2'	-5.71	1.44	1.52
1	N	40	C	O3'-P	5.71	1.69	1.61
1	N	600	A	P-O5'	-5.71	1.51	1.59
1	N	1355	G	C3'-C2'	5.70	1.61	1.52
1	N	913	A	C3'-C2'	5.70	1.61	1.52
1	N	162	A	C2'-C1'	-5.70	1.44	1.53
1	N	377	G	C1'-N9	5.70	1.56	1.48
1	N	207	C	C5'-C4'	5.69	1.59	1.51
1	N	808	C	C2'-C1'	-5.68	1.44	1.53
1	N	171	A	C5'-C4'	5.68	1.59	1.51
1	N	262	A	N7-C5	-5.67	1.27	1.39
1	N	702	A	O4'-C1'	5.67	1.50	1.41
1	N	513	C	P-O5'	-5.67	1.51	1.59
1	N	343	U	C3'-C2'	-5.66	1.44	1.52
1	N	1530	G	C1'-N9	5.66	1.55	1.47
1	N	1041	G	O5'-C5'	5.66	1.50	1.42
1	N	1024	G	C4'-O4'	5.65	1.54	1.45
1	N	1043	G	O3'-P	-5.64	1.52	1.61
1	N	430	A	O4'-C1'	5.64	1.50	1.41
1	N	559	A	O3'-P	-5.64	1.52	1.61
1	N	865	A	P-O5'	5.64	1.68	1.59
1	N	306	A	C3'-O3'	5.63	1.50	1.42
1	N	971	G	P-O5'	-5.63	1.51	1.59
1	N	1332	A	C2'-C1'	-5.63	1.45	1.53
1	N	824	G	N9-C4	-5.63	1.26	1.38
1	N	10	A	C2'-O2'	-5.63	1.34	1.42
1	N	601	G	C2'-C1'	-5.63	1.45	1.53
1	N	288	A	C3'-O3'	5.62	1.50	1.42
1	N	186	C	C4'-C3'	-5.62	1.44	1.52
1	N	1122	U	C1'-N1	5.62	1.56	1.48
1	N	151	A	C3'-O3'	5.61	1.50	1.42
1	N	1276	G	C1'-N9	5.61	1.56	1.48
1	N	1518	A	P-O5'	-5.61	1.51	1.59
1	N	1049	U	C1'-N1	5.61	1.55	1.47
1	N	1314	C	C1'-N1	5.61	1.56	1.48
1	N	77	A	C4'-O4'	-5.61	1.37	1.45
1	N	594	U	C5'-C4'	5.61	1.59	1.51
1	N	1041	G	C2'-C1'	-5.61	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1448	C	O3'-P	-5.61	1.52	1.61
1	N	1496	C	O5'-C5'	-5.61	1.34	1.42
1	N	518	C	C3'-C2'	5.60	1.61	1.52
1	N	750	C	P-O5'	-5.60	1.51	1.59
1	N	401	C	C5'-C4'	5.60	1.59	1.51
1	N	411	A	C4'-O4'	5.60	1.53	1.45
1	N	1345	U	C2'-C1'	-5.60	1.44	1.53
1	N	49	U	N1-C6	5.59	1.49	1.38
1	N	234	C	C4'-C3'	5.59	1.60	1.52
1	N	322	C	C1'-N1	5.59	1.56	1.48
1	N	577	G	C5'-C4'	5.59	1.59	1.51
1	N	747	A	C5'-C4'	5.59	1.59	1.51
1	N	1420	U	C2'-C1'	5.59	1.61	1.53
1	N	1423	G	C2'-O2'	-5.59	1.34	1.42
1	N	229	U	P-O5'	-5.59	1.51	1.59
1	N	1364	U	C4'-C3'	5.58	1.61	1.53
1	N	473	U	C1'-N1	5.57	1.56	1.48
1	N	278	G	C2'-C1'	-5.57	1.45	1.53
1	N	801	U	C2'-C1'	-5.57	1.45	1.53
1	N	90	C	C2'-C1'	-5.57	1.44	1.53
1	N	464	U	O4'-C1'	5.57	1.50	1.41
1	N	1262	C	O3'-P	5.57	1.69	1.61
1	N	1279	G	C5'-C4'	5.56	1.59	1.51
1	N	1446	A	O3'-P	-5.56	1.52	1.61
1	N	1205	U	C1'-N1	5.56	1.56	1.48
1	N	1474	U	C2'-C1'	-5.56	1.45	1.53
1	N	718	A	C1'-N9	5.56	1.56	1.48
1	N	212	G	C2'-C1'	-5.56	1.45	1.53
1	N	695	A	C3'-C2'	-5.56	1.44	1.52
1	N	845	A	C5'-C4'	5.55	1.59	1.51
1	N	1148	U	C1'-N1	5.55	1.56	1.48
1	N	645	G	C1'-N9	5.55	1.56	1.48
1	N	1337	G	C2'-C1'	-5.55	1.45	1.53
1	N	1043	G	C3'-C2'	5.54	1.61	1.52
1	N	960	U	O3'-P	-5.54	1.52	1.61
1	N	1290	G	P-O5'	5.54	1.68	1.59
1	N	251	G	P-O5'	-5.54	1.51	1.59
1	N	515	G	C5'-C4'	5.54	1.59	1.51
1	N	1342	C	O5'-C5'	-5.53	1.34	1.42
1	N	896	C	C5'-C4'	5.53	1.59	1.51
1	N	663	A	N7-C5	-5.53	1.28	1.39
1	N	1033	G	C6-N1	5.53	1.50	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	103	U	C1'-N1	5.53	1.56	1.48
1	N	406	G	C2'-O2'	-5.53	1.34	1.42
1	N	860	A	C2'-C1'	-5.53	1.45	1.53
1	N	847	G	C3'-C2'	-5.51	1.44	1.52
1	N	343	U	C5'-C4'	5.51	1.59	1.51
1	N	458	U	C4'-C3'	5.51	1.60	1.52
1	N	1098	C	C3'-O3'	5.51	1.50	1.42
1	N	1229	A	C6-N6	5.51	1.45	1.33
1	N	180	U	O3'-P	-5.51	1.52	1.61
1	N	219	U	P-O5'	-5.51	1.51	1.59
1	N	1035	A	C4'-O4'	5.51	1.53	1.45
1	N	1152	A	C2'-C1'	-5.51	1.45	1.53
1	N	1338	G	C2'-C1'	5.51	1.61	1.53
1	N	76	G	C1'-N9	5.51	1.56	1.48
1	N	684	U	P-O5'	-5.51	1.51	1.59
1	N	1327	C	O4'-C1'	5.50	1.50	1.41
1	N	153	C	C2'-C1'	-5.50	1.45	1.53
1	N	433	G	C4'-O4'	-5.50	1.37	1.45
1	N	49	U	C3'-O3'	5.49	1.50	1.42
1	N	1267	C	C1'-N1	5.49	1.56	1.48
1	N	1520	C	C4'-C3'	-5.49	1.44	1.52
1	N	380	G	C3'-C2'	-5.49	1.44	1.52
1	N	946	A	P-O5'	-5.49	1.51	1.59
1	N	654	G	O3'-P	-5.48	1.52	1.61
1	N	252	U	C4'-O4'	-5.48	1.37	1.45
1	N	1427	C	C5'-C4'	5.48	1.59	1.51
1	N	24	U	C4'-O4'	5.48	1.53	1.45
1	N	423	G	C5'-C4'	5.48	1.59	1.51
1	N	380	G	P-O5'	-5.48	1.51	1.59
1	N	734	G	O4'-C1'	-5.48	1.33	1.41
1	N	1136	C	C1'-N1	5.47	1.55	1.47
1	N	292	G	C5-C6	-5.47	1.31	1.42
1	N	480	U	O3'-P	-5.47	1.52	1.61
1	N	387	U	C1'-N1	5.47	1.56	1.48
1	N	1024	G	C4'-C3'	5.47	1.60	1.52
1	N	430	A	C3'-C2'	5.46	1.60	1.52
1	N	616	G	C2'-C1'	-5.46	1.45	1.53
1	N	706	A	N7-C5	-5.46	1.28	1.39
1	N	1285	A	C3'-C2'	-5.46	1.44	1.52
1	N	1419	G	C3'-O3'	5.46	1.50	1.42
1	N	1428	A	O5'-C5'	-5.46	1.34	1.42
1	N	839	C	C4'-O4'	-5.46	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1112	C	O4'-C1'	5.46	1.49	1.41
1	N	673	A	C3'-O3'	5.45	1.50	1.42
1	N	336	A	C4'-O4'	-5.45	1.37	1.45
1	N	1288	A	C4'-O4'	5.45	1.53	1.45
1	N	1420	U	C5'-C4'	5.45	1.59	1.51
1	N	1147	C	C1'-N1	5.45	1.56	1.48
1	N	1310	G	C4'-O4'	-5.45	1.37	1.45
1	N	1040	U	O3'-P	-5.45	1.52	1.61
1	N	1369	C	P-O5'	-5.45	1.51	1.59
1	N	385	C	C1'-N1	5.44	1.56	1.48
1	N	1068	G	O5'-C5'	5.44	1.50	1.42
1	N	1153	G	C2'-C1'	-5.44	1.45	1.53
1	N	1192	C	C3'-C2'	-5.44	1.44	1.52
1	N	525	C	C1'-N1	5.44	1.56	1.48
1	N	1518	A	N7-C5	-5.44	1.28	1.39
1	N	868	C	O3'-P	-5.44	1.52	1.61
1	N	390	U	O4'-C1'	5.43	1.49	1.41
1	N	1313	U	C5'-C4'	5.43	1.59	1.51
1	N	111	G	C4'-C3'	5.43	1.60	1.52
1	N	331	G	C4'-C3'	5.43	1.60	1.52
1	N	899	C	O5'-C5'	5.43	1.50	1.42
1	N	937	A	O4'-C1'	-5.43	1.33	1.41
1	N	1114	C	C3'-O3'	5.43	1.50	1.42
1	N	285	C	C5'-C4'	5.42	1.59	1.51
1	N	481	G	C5'-C4'	5.42	1.59	1.51
1	N	835	U	P-O5'	-5.41	1.51	1.59
1	N	1429	A	C4'-O4'	-5.41	1.37	1.45
1	N	789	U	O3'-P	-5.41	1.53	1.61
1	N	406	G	P-O5'	-5.41	1.51	1.59
1	N	999	C	O3'-P	-5.40	1.53	1.61
1	N	1038	C	O4'-C1'	5.40	1.49	1.41
1	N	886	G	C3'-O3'	5.39	1.50	1.42
1	N	341	C	C4'-O4'	5.39	1.53	1.45
1	N	1018	G	C3'-C2'	-5.39	1.44	1.52
1	N	1144	G	O3'-P	-5.39	1.53	1.61
1	N	413	G	C2'-C1'	-5.38	1.45	1.53
1	N	1367	C	O3'-P	-5.38	1.53	1.61
1	N	1483	A	C1'-N9	5.38	1.56	1.48
1	N	1434	A	C2'-C1'	-5.38	1.45	1.53
1	N	57	G	O3'-P	-5.38	1.53	1.61
1	N	1025	U	C5'-C4'	5.38	1.59	1.51
1	N	620	C	C3'-C2'	-5.38	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1303	C	C3'-O3'	5.37	1.50	1.42
1	N	689	C	C5'-C4'	5.37	1.59	1.51
1	N	498	A	C3'-O3'	5.37	1.50	1.42
1	N	1164	G	O3'-P	-5.36	1.53	1.61
1	N	1181	G	C5-C6	-5.36	1.31	1.42
1	N	1384	C	O4'-C1'	5.36	1.49	1.41
1	N	159	G	C2'-C1'	-5.36	1.45	1.53
1	N	693	G	C3'-C2'	-5.36	1.44	1.52
1	N	868	C	C3'-O3'	5.36	1.50	1.42
1	N	889	A	C5'-C4'	5.36	1.59	1.51
1	N	100	G	C3'-C2'	5.36	1.60	1.52
1	N	1197	A	C6-N6	5.35	1.44	1.33
1	N	129	A	C4'-C3'	-5.35	1.45	1.53
1	N	562	U	P-O5'	5.35	1.67	1.59
1	N	777	A	O4'-C1'	5.34	1.49	1.41
1	N	1384	C	O5'-C5'	5.34	1.50	1.42
1	N	1138	G	C5'-C4'	5.34	1.59	1.51
1	N	1196	A	C2'-O2'	-5.34	1.34	1.42
1	N	629	A	C2'-C1'	-5.34	1.45	1.53
1	N	1244	G	C4'-C3'	-5.34	1.44	1.52
1	N	969	A	C3'-C2'	5.33	1.60	1.52
1	N	1477	U	O4'-C1'	5.33	1.49	1.41
1	N	65	A	O4'-C1'	-5.33	1.33	1.42
1	N	337	G	C2'-C1'	-5.33	1.45	1.53
1	N	384	G	C4'-C3'	-5.33	1.44	1.52
1	N	757	U	C1'-N1	5.33	1.56	1.48
1	N	57	G	C1'-N9	5.32	1.55	1.48
1	N	133	U	C2'-C1'	5.32	1.61	1.53
1	N	903	G	C3'-C2'	-5.32	1.44	1.52
1	N	1119	C	P-O5'	5.32	1.67	1.59
1	N	230	G	C1'-N9	5.31	1.55	1.48
1	N	1040	U	C4'-C3'	-5.31	1.44	1.52
1	N	453	G	C2'-C1'	-5.30	1.45	1.53
1	N	983	A	C1'-N9	5.30	1.54	1.47
1	N	573	A	C4'-C3'	5.30	1.60	1.52
1	N	1509	C	C3'-O3'	5.30	1.50	1.42
1	N	273	U	O3'-P	-5.30	1.53	1.61
1	N	505	G	O4'-C1'	5.30	1.49	1.41
1	N	907	A	C1'-N9	5.30	1.55	1.48
1	N	450	G	C2'-C1'	5.30	1.61	1.53
1	N	594	U	C3'-C2'	5.30	1.60	1.52
1	N	1145	A	O5'-C5'	5.30	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	485	U	C3'-O3'	5.29	1.51	1.43
1	N	648	A	P-O5'	-5.29	1.51	1.59
1	N	745	G	C5'-C4'	5.29	1.59	1.51
1	N	1348	U	C4'-C3'	5.29	1.60	1.52
1	N	590	U	O4'-C1'	5.29	1.49	1.41
1	N	1269	A	O3'-P	-5.29	1.53	1.61
1	N	828	U	P-O5'	-5.29	1.51	1.59
1	N	1441	A	N7-C5	-5.29	1.28	1.39
1	N	176	C	N1-C6	5.29	1.47	1.37
1	N	182	A	O4'-C1'	5.28	1.49	1.42
1	N	161	A	O4'-C1'	5.28	1.49	1.41
1	N	733	G	C5'-C4'	5.28	1.59	1.51
1	N	1186	G	O3'-P	-5.28	1.53	1.61
1	N	1385	G	C3'-C2'	5.28	1.60	1.52
1	N	220	G	C4'-O4'	5.28	1.53	1.45
1	N	246	A	C2'-C1'	-5.28	1.45	1.53
1	N	729	A	P-O5'	-5.28	1.51	1.59
1	N	1022	A	C3'-O3'	5.28	1.50	1.42
1	N	1057	G	C3'-O3'	5.28	1.50	1.42
1	N	1505	G	C5'-C4'	5.28	1.59	1.51
1	N	1074	G	C5'-C4'	5.27	1.59	1.51
1	N	283	U	P-O5'	-5.27	1.51	1.59
1	N	553	A	C3'-C2'	5.27	1.60	1.52
1	N	1091	U	O3'-P	-5.27	1.53	1.61
1	N	673	A	C1'-N9	-5.27	1.40	1.48
1	N	783	C	C1'-N1	5.27	1.56	1.48
1	N	1089	G	C2'-C1'	-5.26	1.45	1.53
1	N	1218	C	C2'-C1'	-5.26	1.45	1.53
1	N	503	C	C1'-N1	5.26	1.56	1.48
1	N	564	C	O3'-P	-5.26	1.53	1.61
1	N	579	A	C5'-C4'	5.26	1.59	1.51
1	N	798	U	C4'-O4'	-5.26	1.37	1.45
1	N	938	A	C2'-C1'	-5.26	1.45	1.53
1	N	351	G	C3'-C2'	5.26	1.60	1.52
1	N	899	C	C2'-C1'	-5.25	1.45	1.53
1	N	86	G	O3'-P	-5.25	1.53	1.61
1	N	132	C	N3-C4	5.25	1.44	1.33
1	N	301	G	C4'-C3'	-5.25	1.44	1.52
1	N	538	G	C5'-C4'	5.25	1.59	1.51
1	N	747	A	O5'-C5'	5.25	1.50	1.42
1	N	202	G	P-O5'	-5.25	1.51	1.59
1	N	186	C	C1'-N1	5.25	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	584	G	C2-N3	5.24	1.43	1.32
1	N	623	C	C5'-C4'	5.24	1.59	1.51
1	N	451	A	C4'-C3'	5.24	1.61	1.53
1	N	525	C	C3'-O3'	5.24	1.50	1.42
1	N	599	C	O3'-P	5.24	1.69	1.61
1	N	1143	G	C4'-O4'	5.24	1.53	1.45
1	N	425	G	C1'-N9	5.23	1.55	1.48
1	N	1237	C	C4'-C3'	-5.23	1.44	1.52
1	N	413	G	C4'-O4'	-5.23	1.38	1.45
1	N	817	C	C2'-C1'	-5.23	1.45	1.53
1	N	1398	A	P-O5'	-5.23	1.51	1.59
1	N	1083	U	O4'-C1'	-5.23	1.33	1.41
1	N	441	A	C5'-C4'	5.23	1.59	1.51
1	N	791	G	P-O5'	-5.23	1.51	1.59
1	N	1402	C	O4'-C1'	5.22	1.49	1.41
1	N	129	A	O4'-C1'	-5.21	1.34	1.42
1	N	444	G	O3'-P	-5.21	1.53	1.61
1	N	498	A	O3'-P	-5.21	1.53	1.61
1	N	1350	A	C2'-O2'	-5.21	1.34	1.42
1	N	382	A	O4'-C1'	-5.21	1.33	1.41
1	N	1287	A	C5'-C4'	5.21	1.59	1.51
1	N	1080	A	C6-N6	5.21	1.44	1.33
1	N	984	C	P-O5'	-5.21	1.51	1.59
1	N	754	C	C4'-O4'	-5.20	1.37	1.45
1	N	1103	C	C3'-O3'	-5.20	1.34	1.42
1	N	1047	G	O4'-C1'	5.20	1.49	1.41
1	N	469	C	C5'-C4'	5.20	1.59	1.51
1	N	581	G	C1'-N9	-5.20	1.40	1.48
1	N	119	A	O4'-C1'	-5.20	1.33	1.41
1	N	1047	G	C4'-O4'	-5.20	1.37	1.45
1	N	68	G	C2'-C1'	-5.19	1.45	1.53
1	N	702	A	C4'-C3'	5.19	1.60	1.52
1	N	581	G	C3'-C2'	5.19	1.60	1.52
1	N	665	A	C2'-C1'	-5.19	1.45	1.53
1	N	1522	U	N1-C6	5.18	1.48	1.38
1	N	195	A	C2'-C1'	5.18	1.61	1.53
1	N	519	C	O3'-P	-5.18	1.53	1.61
1	N	1067	A	O5'-C5'	-5.18	1.35	1.42
1	N	451	A	C4'-O4'	5.18	1.53	1.45
1	N	239	U	C5'-C4'	5.18	1.59	1.51
1	N	94	G	O5'-C5'	5.18	1.50	1.42
1	N	534	U	C1'-N1	-5.18	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1085	U	O3'-P	-5.18	1.53	1.61
1	N	993	G	N7-C5	-5.17	1.28	1.39
1	N	1238	A	C3'-C2'	5.17	1.60	1.52
1	N	529	G	O3'-P	-5.17	1.53	1.61
1	N	1410	A	O5'-C5'	5.17	1.50	1.42
1	N	366	A	N7-C5	-5.17	1.28	1.39
1	N	582	C	C1'-N1	5.17	1.56	1.48
1	N	533	A	C1'-N9	5.17	1.54	1.47
1	N	215	C	C1'-N1	5.16	1.56	1.48
1	N	1015	G	C5'-C4'	5.16	1.58	1.51
1	N	76	G	P-O5'	-5.16	1.52	1.59
1	N	120	A	O3'-P	-5.16	1.53	1.61
1	N	169	C	C5'-C4'	5.16	1.58	1.51
1	N	1466	C	C5'-C4'	5.16	1.58	1.51
1	N	739	C	C1'-N1	5.16	1.56	1.48
1	N	1463	U	C5'-C4'	5.16	1.58	1.51
1	N	590	U	P-O5'	-5.15	1.52	1.59
1	N	1422	G	C4'-C3'	5.15	1.60	1.52
1	N	879	C	O4'-C1'	5.15	1.49	1.41
1	N	934	C	C4'-C3'	5.15	1.60	1.53
1	N	1474	U	O4'-C1'	5.14	1.49	1.41
1	N	400	C	C3'-C2'	-5.14	1.45	1.52
1	N	1296	C	O3'-P	-5.14	1.53	1.61
1	N	1302	C	O3'-P	-5.14	1.53	1.61
1	N	1309	G	O5'-C5'	5.14	1.50	1.42
1	N	1476	A	O3'-P	-5.14	1.53	1.61
1	N	756	C	O4'-C1'	5.14	1.49	1.41
1	N	537	G	C1'-N9	5.14	1.55	1.48
1	N	311	C	C3'-C2'	-5.14	1.45	1.52
1	N	54	C	O4'-C1'	5.13	1.49	1.41
1	N	189	A	C4'-C3'	5.13	1.60	1.52
1	N	221	C	C1'-N1	5.13	1.56	1.48
1	N	305	G	O4'-C1'	-5.13	1.34	1.42
1	N	1465	A	O4'-C1'	5.12	1.49	1.41
1	N	596	A	P-O5'	-5.12	1.52	1.59
1	N	1089	G	C5'-C4'	5.12	1.58	1.51
1	N	1300	G	C5'-C4'	5.12	1.59	1.51
1	N	83	C	O3'-P	-5.12	1.53	1.61
1	N	559	A	C4'-C3'	5.12	1.60	1.53
1	N	1099	G	P-O5'	-5.11	1.52	1.59
1	N	964	A	C5'-C4'	5.11	1.58	1.51
1	N	1110	A	C5'-C4'	5.11	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	569	C	O4'-C1'	5.11	1.49	1.41
1	N	1037	C	O3'-P	-5.11	1.53	1.61
1	N	635	A	C4'-O4'	-5.10	1.38	1.45
1	N	1009	U	C4'-O4'	5.10	1.53	1.45
1	N	1412	C	O3'-P	-5.10	1.53	1.61
1	N	956	U	C2'-C1'	5.10	1.60	1.53
1	N	1480	A	C2'-C1'	-5.10	1.45	1.53
1	N	848	C	P-O5'	-5.10	1.52	1.59
1	N	1270	G	C3'-O3'	5.09	1.49	1.42
1	N	1365	G	C5'-C4'	5.09	1.58	1.51
1	N	1072	G	C4'-C3'	5.09	1.60	1.52
1	N	1171	A	C1'-N9	5.09	1.55	1.48
1	N	914	A	C2'-C1'	-5.09	1.45	1.53
1	N	910	C	O5'-C5'	-5.09	1.34	1.42
1	N	163	C	O5'-C5'	5.09	1.50	1.42
1	N	1295	U	C1'-N1	5.09	1.56	1.48
1	N	1469	C	C5'-C4'	-5.09	1.43	1.51
1	N	1412	C	C2'-C1'	5.08	1.60	1.53
1	N	1449	C	C3'-C2'	5.08	1.60	1.52
1	N	132	C	C3'-O3'	5.08	1.49	1.42
1	N	1458	G	C4'-O4'	-5.08	1.38	1.45
1	N	725	G	C2-N3	5.08	1.43	1.32
1	N	1097	C	C5'-C4'	5.08	1.58	1.51
1	N	1173	U	C2'-C1'	-5.08	1.45	1.53
1	N	506	G	C2'-C1'	-5.07	1.45	1.53
1	N	768	A	C4'-O4'	-5.07	1.38	1.45
1	N	1163	A	C1'-N9	5.07	1.55	1.48
1	N	1298	U	C5'-C4'	5.07	1.58	1.51
1	N	22	G	O3'-P	-5.07	1.53	1.61
1	N	93	U	C1'-N1	5.07	1.56	1.48
1	N	1347	G	O3'-P	-5.07	1.53	1.61
1	N	453	G	C1'-N9	5.07	1.55	1.48
1	N	708	C	C3'-C2'	5.07	1.60	1.52
1	N	480	U	C1'-N1	-5.06	1.40	1.48
1	N	152	A	C6-N6	5.06	1.44	1.33
1	N	707	U	C1'-N1	5.06	1.56	1.48
1	N	383	A	C1'-N9	-5.06	1.40	1.48
1	N	1235	U	P-O5'	-5.06	1.52	1.59
1	N	1433	A	C1'-N9	5.06	1.55	1.48
1	N	401	C	C4'-O4'	5.05	1.53	1.45
1	N	1116	U	P-O5'	-5.05	1.52	1.59
1	N	1208	C	C3'-C2'	5.05	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1518	A	C5'-C4'	5.05	1.58	1.51
1	N	273	U	C4'-O4'	-5.05	1.38	1.45
1	N	543	U	P-O5'	-5.05	1.52	1.59
1	N	587	G	N1-C2	5.05	1.47	1.37
1	N	282	A	C4'-O4'	-5.05	1.38	1.45
1	N	927	G	C1'-N9	5.05	1.55	1.48
1	N	71	A	C4'-C3'	5.05	1.60	1.52
1	N	91	U	C4'-C3'	5.05	1.60	1.52
1	N	1377	A	O3'-P	-5.05	1.53	1.61
1	N	215	C	C4-N4	5.04	1.44	1.33
1	N	956	U	C3'-O3'	5.04	1.49	1.42
1	N	1043	G	C1'-N9	5.04	1.55	1.48
1	N	318	G	C3'-C2'	-5.04	1.45	1.52
1	N	711	G	O4'-C1'	-5.03	1.34	1.41
1	N	981	U	C1'-N1	5.03	1.55	1.48
1	N	1327	C	C3'-O3'	5.03	1.49	1.42
1	N	227	G	N9-C8	5.03	1.48	1.37
1	N	1083	U	C3'-C2'	-5.03	1.45	1.52
1	N	254	G	O4'-C1'	5.03	1.49	1.41
1	N	959	A	C5'-C4'	5.03	1.58	1.51
1	N	1061	G	C3'-C2'	5.03	1.60	1.52
1	N	528	C	C2'-C1'	-5.02	1.45	1.53
1	N	1315	U	C4'-C3'	5.02	1.60	1.52
1	N	1360	A	C1'-N9	5.02	1.55	1.48
1	N	193	C	P-O5'	-5.02	1.52	1.59
1	N	1194	U	C2-N3	5.01	1.47	1.37
1	N	787	A	C1'-N9	5.01	1.55	1.48
1	N	904	U	O4'-C1'	5.01	1.49	1.41
1	N	1195	C	C3'-C2'	5.01	1.60	1.52
1	N	234	C	C2'-O2'	-5.01	1.34	1.42
1	N	1009	U	O5'-C5'	5.01	1.50	1.42
1	N	963	G	C2-N3	5.01	1.42	1.32
1	N	1104	G	O4'-C1'	-5.01	1.34	1.41
1	N	211	G	C4'-O4'	5.00	1.53	1.45
1	N	558	G	C6-N1	5.00	1.49	1.39
1	N	1267	C	C2'-C1'	-5.00	1.45	1.53
1	N	1284	C	C3'-C2'	5.00	1.60	1.52
1	N	14	U	O5'-C5'	5.00	1.50	1.42
1	N	487	A	O3'-P	-5.00	1.53	1.61

All (2078) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1362	A	P-O3'-C3'	22.48	153.91	120.20
1	N	776	G	P-O5'-C5'	20.16	151.15	120.90
1	N	181	A	P-O3'-C3'	19.22	149.02	120.20
1	N	547	A	P-O3'-C3'	18.17	147.46	120.20
1	N	94	G	P-O3'-C3'	18.01	147.21	120.20
1	N	605	U	P-O3'-C3'	17.77	146.85	120.20
1	N	172	A	P-O3'-C3'	15.53	143.49	120.20
1	N	47	C	P-O3'-C3'	15.50	143.46	120.20
1	N	484	G	P-O3'-C3'	15.29	143.14	120.20
1	N	184	G	P-O5'-C5'	14.91	143.27	120.90
1	N	1399	C	P-O3'-C3'	14.90	142.55	120.20
1	N	812	G	P-O3'-C3'	14.87	142.50	120.20
1	N	1101	A	P-O3'-C3'	14.36	141.74	120.20
1	N	210	C	P-O3'-C3'	14.17	141.45	120.20
1	N	511	C	P-O3'-C3'	13.90	141.05	120.20
1	N	559	A	P-O3'-C3'	13.90	141.04	120.20
1	N	243	A	P-O3'-C3'	13.84	140.97	120.20
1	N	1380	U	P-O3'-C3'	13.83	140.94	120.20
1	N	1530	G	P-O3'-C3'	13.79	140.89	120.20
1	N	315	A	P-O5'-C5'	13.76	141.53	120.90
1	N	1168	U	P-O3'-C3'	13.65	140.68	120.20
1	N	438	U	P-O3'-C3'	13.60	140.60	120.20
1	N	895	G	P-O5'-C5'	13.09	140.54	120.90
1	N	982	U	P-O3'-C3'	13.03	139.74	120.20
1	N	316	C	C5'-C4'-C3'	-12.91	96.64	116.00
1	N	93	U	P-O5'-C5'	12.75	140.02	120.90
1	N	1088	G	P-O5'-C5'	12.72	139.99	120.90
1	N	532	A	P-O3'-C3'	12.43	138.85	120.20
1	N	95	C	P-O5'-C5'	-12.41	102.29	120.90
1	N	560	A	P-O3'-C3'	12.36	138.74	120.20
1	N	265	G	P-O3'-C3'	12.25	138.57	120.20
1	N	817	C	P-O3'-C3'	12.07	138.30	120.20
1	N	1201	A	P-O3'-C3'	12.04	138.26	120.20
1	N	1358	U	P-O3'-C3'	12.04	138.25	120.20
1	N	1242	G	P-O5'-C5'	11.98	138.87	120.90
1	N	1432	G	P-O3'-C3'	11.92	138.08	120.20
1	N	991	U	P-O3'-C3'	11.90	138.06	120.20
1	N	414	A	P-O5'-C5'	11.88	138.71	120.90
1	N	1338	G	P-O3'-C3'	11.85	137.98	120.20
1	N	327	A	P-O3'-C3'	11.81	137.92	120.20
1	N	633	G	P-O5'-C5'	11.81	138.62	120.90
1	N	596	A	P-O5'-C5'	11.78	138.57	120.90
1	N	256	U	P-O5'-C5'	11.72	138.47	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	913	A	P-O3'-C3'	11.72	137.77	120.20
1	N	910	C	P-O5'-C5'	11.56	138.24	120.90
1	N	1173	U	P-O5'-C5'	11.52	138.17	120.90
1	N	555	U	P-O3'-C3'	11.47	137.40	120.20
1	N	266	G	P-O3'-C3'	11.45	137.38	120.20
1	N	926	G	P-O3'-C3'	11.28	137.12	120.20
1	N	1319	A	P-O3'-C3'	11.14	136.92	120.20
1	N	420	U	P-O5'-C5'	-10.93	104.50	120.90
1	N	535	A	P-O3'-C3'	10.88	136.53	120.20
1	N	1125	U	P-O3'-C3'	10.86	136.49	120.20
1	N	23	C	P-O5'-C5'	10.86	137.18	120.90
1	N	60	A	P-O3'-C3'	10.82	136.43	120.20
1	N	105	G	P-O5'-C5'	10.80	137.10	120.90
1	N	1315	U	P-O5'-C5'	10.77	137.06	120.90
1	N	769	G	P-O5'-C5'	10.71	136.97	120.90
1	N	582	C	P-O5'-C5'	10.68	136.91	120.90
1	N	1331	G	P-O3'-C3'	10.67	136.21	120.20
1	N	575	G	P-O3'-C3'	10.63	136.15	120.20
1	N	1081	A	C5'-C4'-C3'	-10.59	100.12	116.00
1	N	1285	A	P-O3'-C3'	10.57	136.05	120.20
1	N	273	U	O3'-P-O5'	-10.55	88.17	104.00
1	N	424	G	P-O5'-C5'	10.50	136.65	120.90
1	N	115	G	P-O3'-C3'	10.48	135.92	120.20
1	N	120	A	P-O3'-C3'	10.40	135.79	120.20
1	N	641	U	P-O3'-C3'	10.37	135.75	120.20
1	N	1086	U	O5'-C5'-C4'	10.37	127.06	111.50
1	N	486	U	P-O5'-C5'	-10.37	105.35	120.90
1	N	509	A	P-O3'-C3'	10.19	135.48	120.20
1	N	1166	G	P-O5'-C5'	10.18	136.18	120.90
1	N	815	A	P-O3'-C3'	10.18	135.47	120.20
1	N	940	C	P-O5'-C5'	10.18	136.16	120.90
1	N	588	G	P-O5'-C5'	10.17	136.15	120.90
1	N	934	C	P-O3'-C3'	10.14	135.41	120.20
1	N	1241	G	P-O5'-C5'	10.14	136.10	120.90
1	N	1021	A	P-O5'-C5'	10.12	136.07	120.90
1	N	274	A	P-O3'-C3'	10.11	135.37	120.20
1	N	119	A	O3'-P-O5'	10.09	119.14	104.00
1	N	1312	G	P-O5'-C5'	-10.06	105.80	120.90
1	N	566	G	P-O3'-C3'	9.97	135.16	120.20
1	N	1144	G	P-O3'-C3'	9.96	135.14	120.20
1	N	508	U	P-O3'-C3'	9.92	135.08	120.20
1	N	10	A	P-O5'-C5'	9.92	135.78	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	686	U	O4'-C1'-C2'	-9.92	95.88	105.80
1	N	109	A	P-O3'-C3'	9.90	135.05	120.20
1	N	1139	G	P-O3'-C3'	9.89	135.03	120.20
1	N	1490	U	P-O5'-C5'	9.89	135.74	120.90
1	N	1331	G	C5'-C4'-C3'	-9.88	101.17	116.00
1	N	1128	C	P-O5'-C5'	9.88	135.72	120.90
1	N	222	C	C4'-C3'-C2'	-9.82	92.78	102.60
1	N	792	A	P-O3'-C3'	9.81	134.91	120.20
1	N	366	A	C4'-C3'-C2'	9.80	112.40	102.60
1	N	1208	C	P-O5'-C5'	9.78	135.56	120.90
1	N	1316	G	P-O3'-C3'	9.77	134.85	120.20
1	N	793	U	P-O3'-C3'	9.76	134.83	120.20
1	N	686	U	C2'-C3'-O3'	9.74	124.11	109.50
1	N	93	U	P-O3'-C3'	-9.70	105.65	120.20
1	N	1082	A	C5'-C4'-C3'	-9.68	101.48	116.00
1	N	422	C	P-O3'-C3'	9.66	134.68	120.20
1	N	1472	U	O4'-C1'-C2'	-9.66	97.94	107.60
1	N	607	A	P-O5'-C5'	9.65	135.37	120.90
1	N	559	A	C4'-C3'-C2'	9.64	112.24	102.60
1	N	246	A	C2'-C3'-O3'	9.63	123.94	109.50
1	N	531	U	P-O5'-C5'	9.55	135.23	120.90
1	N	652	U	C3'-C2'-C1'	9.55	110.85	101.30
1	N	1432	G	C2'-C3'-O3'	9.54	123.81	109.50
1	N	491	G	P-O5'-C5'	-9.54	106.59	120.90
1	N	459	A	C5'-C4'-C3'	-9.45	101.83	116.00
1	N	1094	G	P-O3'-C3'	9.45	134.37	120.20
1	N	802	A	P-O3'-C3'	9.44	134.35	120.20
1	N	270	A	P-O5'-C5'	9.38	134.97	120.90
1	N	772	U	O4'-C4'-C3'	-9.38	94.62	104.00
1	N	314	C	C4'-C3'-C2'	-9.37	93.23	102.60
1	N	70	U	C2'-C3'-O3'	9.33	123.50	109.50
1	N	647	C	O5'-C5'-C4'	-9.33	97.51	111.50
1	N	1332	A	P-O5'-C5'	-9.31	106.94	120.90
1	N	798	U	C5'-C4'-C3'	9.30	129.95	116.00
1	N	1498	U	P-O3'-C3'	9.27	134.10	120.20
1	N	281	G	P-O3'-C3'	9.26	134.09	120.20
1	N	90	C	C5'-C4'-C3'	9.21	129.01	115.20
1	N	411	A	P-O5'-C5'	9.20	134.69	120.90
1	N	1086	U	C5'-C4'-C3'	-9.19	102.21	116.00
1	N	1507	A	P-O5'-C5'	9.19	134.69	120.90
1	N	445	G	O4'-C1'-C2'	-9.19	98.41	107.60
1	N	273	U	P-O5'-C5'	9.18	134.67	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	119	A	P-O3'-C3'	9.18	133.97	120.20
1	N	1388	C	C4'-C3'-O3'	-9.17	99.25	113.00
1	N	555	U	P-O5'-C5'	9.13	134.59	120.90
1	N	1053	G	P-O5'-C5'	9.12	134.57	120.90
1	N	176	C	P-O5'-C5'	9.10	134.54	120.90
1	N	785	G	O4'-C1'-C2'	-9.07	98.53	107.60
1	N	1364	U	O4'-C1'-N1	9.04	121.75	108.20
1	N	905	U	P-O5'-C5'	9.03	134.44	120.90
1	N	197	A	P-O3'-C3'	9.01	133.71	120.20
1	N	1087	G	P-O5'-C5'	8.98	134.37	120.90
1	N	1168	U	C5'-C4'-C3'	8.98	129.46	116.00
1	N	266	G	C2'-C3'-O3'	8.95	122.92	109.50
1	N	473	U	P-O5'-C5'	8.95	134.32	120.90
1	N	54	C	O4'-C1'-C2'	-8.94	98.66	107.60
1	N	1085	U	C2'-C3'-O3'	8.94	122.91	109.50
1	N	1117	A	P-O5'-C5'	8.94	134.31	120.90
1	N	1249	C	C5'-C4'-C3'	-8.94	102.59	116.00
1	N	694	A	C5'-C4'-C3'	8.94	129.41	116.00
1	N	198	G	O4'-C1'-N9	8.93	121.90	108.50
1	N	1442	G	P-O5'-C5'	8.87	134.21	120.90
1	N	1336	C	P-O3'-C3'	8.86	133.49	120.20
1	N	648	A	P-O5'-C5'	8.85	134.17	120.90
1	N	724	G	P-O5'-C5'	-8.85	107.63	120.90
1	N	411	A	O5'-C5'-C4'	8.84	124.76	111.50
1	N	739	C	P-O5'-C5'	8.81	134.11	120.90
1	N	1181	G	C2'-C3'-O3'	8.80	122.71	109.50
1	N	1046	A	P-O5'-C5'	-8.78	107.73	120.90
1	N	1502	A	C2'-C3'-O3'	8.76	122.64	109.50
1	N	428	G	P-O3'-C3'	8.75	133.32	120.20
1	N	1378	C	P-O5'-C5'	8.75	134.02	120.90
1	N	17	U	C5'-C4'-C3'	8.74	129.11	116.00
1	N	1096	C	P-O5'-C5'	8.71	133.96	120.90
1	N	317	U	C5'-C4'-C3'	-8.70	102.95	116.00
1	N	656	G	C4'-C3'-C2'	-8.70	93.90	102.60
1	N	1300	G	C4'-C3'-C2'	-8.70	93.90	102.60
1	N	1363	A	P-O5'-C5'	8.68	133.92	120.90
1	N	1433	A	O3'-P-O5'	-8.68	90.98	104.00
1	N	211	G	C4'-C3'-C2'	8.68	111.28	102.60
1	N	889	A	P-O5'-C5'	-8.66	107.91	120.90
1	N	1424	U	C4'-C3'-C2'	-8.66	93.94	102.60
1	N	591	U	P-O5'-C5'	8.65	133.87	120.90
1	N	1395	C	O4'-C4'-C3'	-8.65	95.35	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	974	A	P-O5'-C5'	8.62	133.84	120.90
1	N	651	C	P-O5'-C5'	8.61	133.81	120.90
1	N	1423	G	P-O3'-C3'	-8.59	107.32	120.20
1	N	972	C	O4'-C1'-N1	8.58	121.36	108.50
1	N	1363	A	C5'-C4'-C3'	-8.57	102.34	115.20
1	N	826	C	C4'-C3'-C2'	-8.56	94.03	102.60
1	N	1239	A	C4'-C3'-O3'	8.55	122.23	109.40
1	N	409	U	P-O5'-C5'	8.55	133.73	120.90
1	N	1490	U	O4'-C1'-N1	8.54	121.31	108.50
1	N	1216	A	C5'-C4'-C3'	8.52	128.79	116.00
1	N	1226	C	P-O3'-C3'	8.52	132.98	120.20
1	N	323	U	P-O5'-C5'	8.50	133.65	120.90
1	N	369	G	O4'-C1'-C2'	-8.49	99.11	107.60
1	N	1440	U	O4'-C4'-C3'	-8.49	95.51	104.00
1	N	412	A	P-O3'-C3'	8.47	132.91	120.20
1	N	1292	G	P-O5'-C5'	8.45	133.58	120.90
1	N	567	G	P-O5'-C5'	8.44	133.56	120.90
1	N	1282	C	C1'-O4'-C4'	8.44	118.34	109.90
1	N	1529	G	P-O3'-C3'	8.43	132.85	120.20
1	N	495	A	C4'-C3'-O3'	8.42	122.03	109.40
1	N	464	U	P-O3'-C3'	8.41	132.82	120.20
1	N	1482	G	P-O5'-C5'	8.41	133.51	120.90
1	N	324	G	P-O3'-C3'	8.40	132.81	120.20
1	N	531	U	C1'-O4'-C4'	-8.40	101.50	109.90
1	N	789	U	P-O5'-C5'	8.40	133.50	120.90
1	N	180	U	P-O5'-C5'	8.40	133.50	120.90
1	N	919	A	P-O5'-C5'	-8.39	108.31	120.90
1	N	834	U	P-O5'-C5'	8.39	133.48	120.90
1	N	992	U	C5'-C4'-C3'	8.37	127.75	115.20
1	N	1253	G	P-O5'-C5'	8.36	133.44	120.90
1	N	179	A	P-O5'-C5'	8.36	133.43	120.90
1	N	641	U	O3'-P-O5'	-8.36	91.47	104.00
1	N	486	U	C5'-C4'-C3'	-8.35	103.47	116.00
1	N	328	C	C2'-C3'-O3'	8.34	122.00	109.50
1	N	823	C	O5'-C5'-C4'	-8.32	99.02	111.50
1	N	905	U	O4'-C1'-N1	8.32	120.98	108.50
1	N	907	A	O4'-C1'-C2'	-8.30	99.30	107.60
1	N	73	C	P-O5'-C5'	-8.30	108.45	120.90
1	N	1418	A	P-O5'-C5'	8.30	133.35	120.90
1	N	814	A	C5'-C4'-C3'	-8.29	103.56	116.00
1	N	1080	A	P-O5'-C5'	-8.29	108.47	120.90
1	N	1429	A	C3'-C2'-C1'	-8.29	93.01	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	88	U	P-O3'-C3'	8.28	132.62	120.20
1	N	1024	G	P-O5'-C5'	8.28	133.32	120.90
1	N	1129	C	O4'-C1'-N1	8.28	120.91	108.50
1	N	950	U	P-O5'-C5'	8.27	133.31	120.90
1	N	1335	U	C1'-O4'-C4'	-8.27	101.63	109.90
1	N	162	A	P-O3'-C3'	8.26	132.59	120.20
1	N	723	U	O4'-C4'-C3'	-8.25	95.75	104.00
1	N	329	A	O5'-C5'-C4'	-8.24	99.33	111.70
1	N	1042	A	P-O5'-C5'	8.24	133.26	120.90
1	N	1313	U	O4'-C1'-N1	8.24	120.86	108.50
1	N	1312	G	C5'-C4'-C3'	-8.23	103.65	116.00
1	N	95	C	C5'-C4'-C3'	-8.23	103.66	116.00
1	N	1108	G	P-O3'-C3'	8.23	132.54	120.20
1	N	864	A	P-O3'-C3'	8.21	132.52	120.20
1	N	1053	G	P-O3'-C3'	8.21	132.52	120.20
1	N	762	U	C4'-C3'-C2'	-8.20	94.40	102.60
1	N	787	A	P-O5'-C5'	8.19	133.18	120.90
1	N	1278	G	P-O3'-C3'	8.19	132.48	120.20
1	N	372	C	P-O3'-C3'	8.15	132.43	120.20
1	N	157	U	P-O5'-C5'	8.14	133.12	120.90
1	N	723	U	C4'-C3'-C2'	-8.14	94.46	102.60
1	N	1049	U	P-O3'-C3'	8.14	132.41	120.20
1	N	30	U	P-O3'-C3'	8.10	132.36	120.20
1	N	168	G	O5'-C5'-C4'	-8.09	99.37	111.50
1	N	251	G	O5'-C5'-C4'	-8.08	99.57	111.70
1	N	946	A	C3'-C2'-C1'	8.08	109.38	101.30
1	N	456	A	O3'-P-O5'	-8.06	91.90	104.00
1	N	1331	G	C1'-C2'-O2'	-8.06	96.31	108.40
1	N	1518	A	C5'-C4'-C3'	8.05	128.07	116.00
1	N	1292	G	P-O3'-C3'	-8.04	108.13	120.20
1	N	1230	C	P-O5'-C5'	8.02	132.93	120.90
1	N	1065	U	P-O5'-C5'	8.01	132.92	120.90
1	N	198	G	C5'-C4'-C3'	-8.00	104.01	116.00
1	N	81	A	O4'-C1'-N9	7.97	120.16	108.20
1	N	93	U	O4'-C1'-N1	7.97	120.45	108.50
1	N	890	G	C4'-C3'-C2'	-7.96	94.64	102.60
1	N	750	C	O5'-C5'-C4'	-7.95	99.57	111.50
1	N	1202	U	O4'-C1'-N1	7.95	120.42	108.50
1	N	212	G	P-O5'-C5'	7.93	132.80	120.90
1	N	428	G	C5'-C4'-C3'	7.92	127.07	115.20
1	N	1533	C	C5'-C4'-C3'	7.91	127.07	115.20
1	N	89	U	O4'-C1'-C2'	-7.91	97.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	273	U	C5'-C4'-C3'	-7.90	104.14	116.00
1	N	84	U	P-O5'-C5'	-7.89	109.06	120.90
1	N	990	C	C4'-C3'-C2'	-7.89	94.71	102.60
1	N	521	G	O5'-C5'-C4'	-7.89	99.67	111.50
1	N	1501	C	O4'-C1'-N1	7.89	120.33	108.50
1	N	78	A	P-O3'-C3'	7.87	132.00	120.20
1	N	500	G	C2'-C3'-O3'	-7.83	101.95	113.70
1	N	73	C	O4'-C1'-C2'	-7.83	99.77	107.60
1	N	814	A	P-O3'-C3'	7.83	131.94	120.20
1	N	155	A	P-O5'-C5'	7.82	132.63	120.90
1	N	895	G	C5'-C4'-C3'	-7.82	104.27	116.00
1	N	1041	G	P-O3'-C3'	-7.81	108.48	120.20
1	N	425	G	P-O5'-C5'	7.80	132.60	120.90
1	N	1397	C	C5'-C4'-C3'	-7.79	104.32	116.00
1	N	456	A	P-O5'-C5'	-7.79	109.22	120.90
1	N	1275	A	C5'-C4'-C3'	-7.78	104.33	116.00
1	N	264	C	P-O5'-C5'	7.78	132.57	120.90
1	N	423	G	C1'-O4'-C4'	-7.78	101.92	109.70
1	N	530	G	P-O3'-C3'	7.78	131.86	120.20
1	N	1469	C	P-O5'-C5'	-7.77	109.24	120.90
1	N	1202	U	C5'-C4'-C3'	7.76	127.65	116.00
1	N	723	U	O4'-C1'-N1	7.76	120.14	108.50
1	N	7	A	C2'-C3'-O3'	7.76	121.14	109.50
1	N	679	C	P-O5'-C5'	7.75	132.53	120.90
1	N	953	G	P-O5'-C5'	7.75	132.52	120.90
1	N	1166	G	O3'-P-O5'	-7.75	92.38	104.00
1	N	1240	U	O4'-C1'-C2'	-7.75	99.85	107.60
1	N	1336	C	O4'-C1'-N1	7.74	119.81	108.20
1	N	60	A	C2'-C3'-O3'	7.73	121.10	109.50
1	N	539	A	P-O5'-C5'	7.73	132.50	120.90
1	N	582	C	O5'-C5'-C4'	-7.72	99.91	111.50
1	N	438	U	O4'-C1'-N1	7.72	119.78	108.20
1	N	985	C	P-O5'-C5'	7.72	132.48	120.90
1	N	629	A	C4'-C3'-C2'	-7.72	94.88	102.60
1	N	374	A	C1'-O4'-C4'	7.71	117.61	109.90
1	N	960	U	C2'-C3'-O3'	7.70	121.06	109.50
1	N	1224	U	P-O3'-C3'	7.69	131.74	120.20
1	N	522	C	O4'-C1'-N1	7.69	120.03	108.50
1	N	1213	A	C1'-O4'-C4'	7.68	117.58	109.90
1	N	94	G	P-O5'-C5'	-7.68	109.38	120.90
1	N	1498	U	C2'-C3'-O3'	7.67	121.01	109.50
1	N	1097	C	O4'-C1'-N1	7.67	120.01	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	489	C	O4'-C4'-C3'	-7.67	96.33	104.00
1	N	1053	G	C5'-C4'-C3'	-7.67	104.49	116.00
1	N	193	C	O5'-C5'-C4'	-7.67	100.00	111.50
1	N	709	U	P-O5'-C5'	7.66	132.38	120.90
1	N	446	G	O5'-C5'-C4'	-7.65	100.02	111.50
1	N	715	A	O4'-C1'-N9	7.65	119.98	108.50
1	N	90	C	P-O5'-C5'	7.64	132.36	120.90
1	N	513	C	P-O5'-C5'	7.64	132.36	120.90
1	N	1159	U	O4'-C1'-C2'	-7.62	98.18	105.80
1	N	1235	U	N1-C1'-C2'	-7.62	100.57	112.00
1	N	1394	A	P-O5'-C5'	7.62	132.33	120.90
1	N	185	U	O5'-C5'-C4'	-7.62	100.08	111.50
1	N	75	G	C4'-C3'-C2'	-7.61	94.99	102.60
1	N	794	A	C2'-C3'-O3'	-7.60	102.30	113.70
1	N	480	U	O4'-C4'-C3'	-7.60	96.40	104.00
1	N	722	G	C4'-C3'-C2'	7.60	110.20	102.60
1	N	563	A	C1'-O4'-C4'	7.58	117.48	109.90
1	N	1064	G	O4'-C1'-N9	7.58	119.57	108.20
1	N	161	A	P-O5'-C5'	7.57	132.26	120.90
1	N	374	A	C5'-C4'-C3'	7.57	127.35	116.00
1	N	1403	C	O4'-C1'-N1	7.56	119.84	108.50
1	N	1275	A	C4'-C3'-C2'	-7.56	95.04	102.60
1	N	982	U	C2'-C3'-O3'	7.56	120.84	109.50
1	N	1405	G	O4'-C4'-C3'	-7.56	96.44	104.00
1	N	873	A	O5'-C5'-C4'	7.55	123.03	111.70
1	N	1357	A	C4'-C3'-O3'	-7.55	101.67	113.00
1	N	890	G	O4'-C1'-C2'	-7.55	98.25	105.80
1	N	1263	C	P-O5'-C5'	7.55	132.22	120.90
1	N	1368	A	P-O3'-C3'	-7.55	108.88	120.20
1	N	849	G	C5'-C4'-C3'	-7.55	104.68	116.00
1	N	1288	A	P-O5'-C5'	7.54	132.21	120.90
1	N	759	A	O5'-C5'-C4'	-7.52	100.21	111.50
1	N	1110	A	P-O3'-C3'	7.52	131.47	120.20
1	N	496	A	P-O5'-C5'	7.51	132.17	120.90
1	N	790	A	P-O3'-C3'	7.51	131.47	120.20
1	N	334	C	O5'-C5'-C4'	-7.50	100.25	111.50
1	N	1191	A	P-O5'-C5'	7.50	132.16	120.90
1	N	140	U	P-O5'-C5'	7.50	132.15	120.90
1	N	903	G	P-O3'-C3'	7.50	131.45	120.20
1	N	370	C	O3'-P-O5'	-7.50	92.75	104.00
1	N	92	U	O4'-C1'-N1	7.49	119.74	108.50
1	N	989	U	O4'-C1'-C2'	-7.49	100.11	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	721	G	P-O3'-C3'	7.49	131.43	120.20
1	N	771	G	O3'-P-O5'	-7.49	92.77	104.00
1	N	566	G	C2'-C3'-O3'	7.49	120.73	109.50
1	N	438	U	C4'-C3'-O3'	-7.48	98.18	109.40
1	N	295	C	O4'-C1'-N1	7.47	119.71	108.50
1	N	1137	C	O4'-C4'-C3'	-7.47	98.63	106.10
1	N	1188	A	P-O5'-C5'	7.46	132.10	120.90
1	N	355	C	C4'-C3'-C2'	-7.46	95.14	102.60
1	N	669	G	O5'-C5'-C4'	-7.46	100.31	111.50
1	N	53	A	P-O5'-C5'	7.44	132.06	120.90
1	N	652	U	P-O3'-C3'	7.44	131.36	120.20
1	N	129	A	C2'-C3'-O3'	7.44	120.65	109.50
1	N	634	C	P-O5'-C5'	7.44	132.06	120.90
1	N	197	A	P-O5'-C5'	7.43	132.05	120.90
1	N	440	C	P-O5'-C5'	7.43	132.04	120.90
1	N	562	U	P-O3'-C3'	7.43	131.34	120.20
1	N	563	A	C5'-C4'-O4'	-7.43	98.66	109.80
1	N	1121	U	O4'-C1'-N1	7.42	119.63	108.50
1	N	197	A	C5'-C4'-C3'	7.42	126.33	115.20
1	N	924	C	O4'-C1'-C2'	-7.41	100.19	107.60
1	N	215	C	P-O5'-C5'	7.41	132.01	120.90
1	N	856	C	C4'-C3'-C2'	-7.41	95.19	102.60
1	N	274	A	C2'-C3'-O3'	7.41	120.61	109.50
1	N	944	G	P-O5'-C5'	7.40	131.99	120.90
1	N	199	A	O4'-C4'-C3'	-7.39	96.61	104.00
1	N	113	G	P-O5'-C5'	7.39	131.99	120.90
1	N	1273	C	C4'-C3'-C2'	-7.38	95.22	102.60
1	N	263	A	O4'-C1'-N9	7.37	119.56	108.50
1	N	387	U	P-O3'-C3'	7.37	131.26	120.20
1	N	1160	G	P-O3'-C3'	7.37	131.25	120.20
1	N	50	A	P-O5'-C5'	7.37	131.95	120.90
1	N	1159	U	O3'-P-O5'	-7.36	92.95	104.00
1	N	492	C	O4'-C1'-C2'	-7.36	100.24	107.60
1	N	982	U	O4'-C4'-C3'	-7.36	98.74	106.10
1	N	1139	G	O3'-P-O5'	-7.36	92.96	104.00
1	N	1348	U	O4'-C1'-N1	7.36	119.54	108.50
1	N	1101	A	C2'-C3'-O3'	7.36	120.54	109.50
1	N	98	A	P-O5'-C5'	7.36	131.93	120.90
1	N	1239	A	O4'-C1'-C2'	-7.36	98.44	105.80
1	N	95	C	C4'-C3'-C2'	7.35	109.95	102.60
1	N	801	U	C5'-C4'-C3'	7.35	127.03	116.00
1	N	374	A	P-O3'-C3'	-7.34	109.19	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	254	G	O5'-C5'-C4'	-7.34	100.50	111.50
1	N	945	G	C4'-C3'-C2'	-7.33	95.27	102.60
1	N	1153	G	O4'-C4'-C3'	-7.33	96.67	104.00
1	N	187	G	C3'-C2'-C1'	-7.33	93.97	101.30
1	N	16	A	O3'-P-O5'	7.32	114.98	104.00
1	N	1027	C	O4'-C1'-C2'	-7.32	100.28	107.60
1	N	1274	A	O4'-C1'-N9	7.31	119.46	108.50
1	N	11	G	P-O3'-C3'	-7.30	109.25	120.20
1	N	173	U	O3'-P-O5'	7.30	114.95	104.00
1	N	309	A	C4'-C3'-C2'	-7.29	95.31	102.60
1	N	400	C	C1'-O4'-C4'	-7.29	102.61	109.90
1	N	859	G	O4'-C4'-C3'	-7.29	96.71	104.00
1	N	285	C	O4'-C1'-N1	7.28	119.42	108.50
1	N	703	G	C2'-C3'-O3'	7.28	120.42	109.50
1	N	495	A	P-O3'-C3'	7.27	131.10	120.20
1	N	1506	U	C5'-C4'-C3'	7.27	126.10	115.20
1	N	207	C	P-O3'-C3'	7.26	131.10	120.20
1	N	1366	C	P-O5'-C5'	7.26	131.80	120.90
1	N	271	C	P-O5'-C5'	7.26	131.78	120.90
1	N	740	U	O4'-C4'-C3'	-7.25	96.75	104.00
1	N	911	U	C4'-C3'-C2'	-7.25	95.35	102.60
1	N	1307	U	P-O3'-C3'	-7.25	109.33	120.20
1	N	1336	C	C2'-C3'-O3'	7.25	120.37	109.50
1	N	573	A	P-O3'-C3'	7.24	131.06	120.20
1	N	161	A	C5'-C4'-C3'	7.24	126.86	116.00
1	N	1260	G	C5'-C4'-C3'	-7.24	105.14	116.00
1	N	615	G	C5'-C4'-C3'	-7.24	105.15	116.00
1	N	99	C	O3'-P-O5'	-7.23	93.16	104.00
1	N	120	A	O4'-C1'-N9	7.23	119.34	108.50
1	N	1182	G	C1'-C2'-O2'	-7.22	100.96	111.80
1	N	1228	C	P-O3'-C3'	7.22	131.03	120.20
1	N	156	C	O3'-P-O5'	-7.22	93.17	104.00
1	N	345	C	P-O5'-C5'	7.22	131.73	120.90
1	N	756	C	O4'-C1'-N1	7.22	119.33	108.50
1	N	891	U	O4'-C1'-N1	7.22	119.33	108.50
1	N	134	G	P-O5'-C5'	7.21	131.72	120.90
1	N	189	A	C4'-C3'-C2'	-7.21	95.39	102.60
1	N	924	C	P-O3'-C3'	7.21	131.01	120.20
1	N	704	A	O4'-C1'-N9	7.21	119.31	108.50
1	N	1150	A	O4'-C1'-N9	7.21	119.31	108.50
1	N	342	C	O4'-C1'-C2'	-7.20	100.40	107.60
1	N	451	A	C2'-C3'-O3'	7.20	120.30	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	557	G	P-O3'-C3'	7.20	131.00	120.20
1	N	1126	U	P-O5'-C5'	-7.20	110.11	120.90
1	N	1437	A	C5'-C4'-C3'	7.20	126.79	116.00
1	N	214	C	C4'-C3'-C2'	-7.19	95.41	102.60
1	N	491	G	O4'-C1'-C2'	-7.19	100.41	107.60
1	N	257	G	C4'-C3'-C2'	-7.18	95.42	102.60
1	N	902	G	O4'-C4'-C3'	-7.18	96.82	104.00
1	N	1448	C	P-O5'-C5'	-7.18	110.13	120.90
1	N	956	U	O4'-C1'-C2'	-7.17	100.43	107.60
1	N	199	A	P-O5'-C5'	7.17	131.66	120.90
1	N	1440	U	C4'-C3'-C2'	-7.17	95.43	102.60
1	N	181	A	C4'-C3'-C2'	-7.16	95.44	102.60
1	N	1252	A	C4'-C3'-C2'	-7.16	95.44	102.60
1	N	234	C	C4'-C3'-C2'	-7.15	95.45	102.60
1	N	750	C	P-O5'-C5'	7.15	131.62	120.90
1	N	21	G	P-O5'-C5'	7.15	131.62	120.90
1	N	1265	C	O4'-C1'-N1	7.14	119.20	108.50
1	N	30	U	O4'-C1'-C2'	7.13	112.93	105.80
1	N	473	U	O4'-C1'-C2'	-7.13	100.47	107.60
1	N	993	G	C4'-C3'-C2'	-7.12	95.48	102.60
1	N	426	U	O5'-C5'-C4'	-7.12	100.82	111.50
1	N	1337	G	P-O3'-C3'	-7.12	109.53	120.20
1	N	196	A	C5'-C4'-C3'	7.11	126.67	116.00
1	N	686	U	P-O3'-C3'	7.11	130.87	120.20
1	N	173	U	P-O5'-C5'	-7.11	110.23	120.90
1	N	87	C	C5'-C4'-C3'	-7.11	105.34	116.00
1	N	1221	G	C4'-C3'-O3'	-7.11	102.34	113.00
1	N	851	G	P-O5'-C5'	7.10	131.54	120.90
1	N	296	U	P-O3'-C3'	-7.09	109.56	120.20
1	N	61	G	O4'-C4'-C3'	-7.09	96.91	104.00
1	N	504	C	O4'-C1'-N1	7.08	119.11	108.50
1	N	508	U	C2'-C3'-O3'	7.07	120.11	109.50
1	N	1512	U	C3'-C2'-C1'	7.07	108.37	101.30
1	N	1191	A	C4'-C3'-C2'	7.07	109.67	102.60
1	N	1003	G	P-O3'-C3'	7.07	130.80	120.20
1	N	252	U	C1'-O4'-C4'	7.07	116.97	109.90
1	N	122	G	C5'-C4'-C3'	-7.07	105.40	116.00
1	N	1530	G	C4'-C3'-O3'	7.06	119.99	109.40
1	N	176	C	O4'-C1'-N1	7.06	119.09	108.50
1	N	1045	C	O4'-C1'-C2'	-7.06	100.54	107.60
1	N	264	C	C4'-C3'-O3'	-7.05	102.42	113.00
1	N	1043	G	O5'-C5'-C4'	-7.05	100.92	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1173	U	O5'-C5'-C4'	-7.05	100.92	111.50
1	N	1395	C	P-O3'-C3'	7.05	130.77	120.20
1	N	1526	G	P-O3'-C3'	-7.04	109.64	120.20
1	N	1212	U	O4'-C1'-C2'	-7.04	100.56	107.60
1	N	238	A	C5'-C4'-C3'	-7.04	105.44	116.00
1	N	812	G	C2'-C3'-O3'	7.03	120.04	109.50
1	N	898	G	O3'-P-O5'	-7.02	93.47	104.00
1	N	672	U	P-O3'-C3'	-7.02	109.67	120.20
1	N	794	A	O4'-C1'-N9	7.02	119.03	108.50
1	N	1419	G	O5'-C5'-C4'	7.02	122.03	111.50
1	N	153	C	P-O5'-C5'	7.01	131.41	120.90
1	N	717	U	C4'-C3'-C2'	7.00	109.60	102.60
1	N	95	C	O4'-C1'-N1	7.00	119.00	108.50
1	N	1185	G	O4'-C4'-C3'	-7.00	97.00	104.00
1	N	203	G	O4'-C1'-N9	7.00	119.00	108.50
1	N	917	G	C4'-C3'-O3'	-7.00	102.51	113.00
1	N	1002	G	P-O3'-C3'	-6.99	109.71	120.20
1	N	1302	C	C3'-C2'-C1'	6.99	108.29	101.30
1	N	446	G	C4'-C3'-C2'	-6.98	95.62	102.60
1	N	326	G	P-O5'-C5'	-6.97	110.44	120.90
1	N	201	G	P-O3'-C3'	6.97	130.66	120.20
1	N	1374	A	O4'-C1'-N9	6.97	118.96	108.50
1	N	109	A	C1'-O4'-C4'	6.97	116.87	109.90
1	N	397	A	P-O3'-C3'	6.97	130.65	120.20
1	N	73	C	O4'-C1'-N1	6.97	118.95	108.50
1	N	966	G	P-O3'-C3'	6.96	130.64	120.20
1	N	438	U	O4'-C4'-C3'	-6.95	99.15	106.10
1	N	939	G	P-O5'-C5'	-6.95	110.47	120.90
1	N	508	U	C5'-C4'-C3'	-6.95	104.78	115.20
1	N	126	G	O4'-C1'-N9	6.95	118.92	108.50
1	N	955	U	O4'-C1'-C2'	-6.95	100.66	107.60
1	N	1050	G	C5'-C4'-C3'	-6.95	105.58	116.00
1	N	1037	C	O4'-C1'-N1	6.94	118.91	108.50
1	N	1300	G	P-O3'-C3'	6.94	130.61	120.20
1	N	256	U	O5'-C5'-C4'	-6.94	101.09	111.50
1	N	896	C	O4'-C1'-N1	6.94	118.91	108.50
1	N	770	C	C5'-C4'-C3'	6.93	126.40	116.00
1	N	1241	G	C5'-C4'-C3'	-6.93	105.60	116.00
1	N	1474	U	P-O5'-C5'	6.93	131.30	120.90
1	N	700	G	P-O5'-C5'	6.93	131.29	120.90
1	N	194	C	C4'-C3'-C2'	-6.92	95.68	102.60
1	N	540	G	C4'-C3'-O3'	-6.92	102.62	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	38	G	C4'-C3'-C2'	-6.92	95.68	102.60
1	N	775	G	O4'-C1'-C2'	-6.92	100.68	107.60
1	N	1482	G	O5'-C5'-C4'	-6.92	101.12	111.50
1	N	339	C	P-O5'-C5'	6.91	131.27	120.90
1	N	490	C	C4'-C3'-C2'	-6.91	95.69	102.60
1	N	106	C	C5'-C4'-C3'	-6.91	105.64	116.00
1	N	47	C	O5'-C5'-C4'	-6.90	101.15	111.50
1	N	1172	C	O4'-C1'-N1	6.89	118.83	108.50
1	N	85	U	O4'-C1'-N1	6.89	118.53	108.20
1	N	1010	U	P-O5'-C5'	6.88	131.23	120.90
1	N	531	U	O4'-C1'-N1	6.88	118.83	108.50
1	N	251	G	C4'-C3'-O3'	6.88	119.72	109.40
1	N	1250	A	P-O5'-C5'	6.88	131.22	120.90
1	N	250	A	P-O5'-C5'	6.88	131.22	120.90
1	N	1239	A	O3'-P-O5'	6.88	114.31	104.00
1	N	199	A	C1'-O4'-C4'	6.87	116.77	109.90
1	N	1424	U	C5'-C4'-C3'	-6.87	105.69	116.00
1	N	1410	A	P-O3'-C3'	6.87	130.50	120.20
1	N	139	A	O3'-P-O5'	-6.87	93.70	104.00
1	N	877	G	C4'-C3'-C2'	-6.87	95.73	102.60
1	N	610	U	C4'-C3'-O3'	-6.86	102.71	113.00
1	N	1201	A	C2'-C3'-O3'	6.86	119.78	109.50
1	N	810	C	C4'-C3'-C2'	-6.85	95.75	102.60
1	N	772	U	P-O5'-C5'	6.85	131.18	120.90
1	N	1156	G	C2'-C3'-O3'	6.85	119.78	109.50
1	N	49	U	P-O3'-C3'	-6.84	109.93	120.20
1	N	587	G	C4'-C3'-C2'	-6.84	95.76	102.60
1	N	729	A	P-O5'-C5'	6.84	131.16	120.90
1	N	801	U	P-O3'-C3'	6.84	130.46	120.20
1	N	1346	A	C1'-C2'-O2'	6.84	122.06	111.80
1	N	267	C	C5'-C4'-O4'	-6.84	99.54	109.80
1	N	347	G	P-O5'-C5'	6.83	131.15	120.90
1	N	593	U	P-O5'-C5'	6.83	131.15	120.90
1	N	344	A	C2'-C3'-O3'	6.83	119.75	109.50
1	N	669	G	O4'-C1'-C2'	-6.83	100.77	107.60
1	N	1196	A	O3'-P-O5'	-6.82	93.77	104.00
1	N	822	U	P-O5'-C5'	6.82	131.13	120.90
1	N	1364	U	P-O5'-C5'	-6.81	110.68	120.90
1	N	166	U	O4'-C1'-C2'	-6.81	100.79	107.60
1	N	283	U	P-O3'-C3'	-6.81	109.98	120.20
1	N	467	U	C5'-C4'-C3'	6.81	126.21	116.00
1	N	495	A	C4'-C3'-C2'	6.80	109.40	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1123	U	O4'-C1'-N1	6.80	118.70	108.50
1	N	1241	G	O4'-C4'-C3'	6.80	110.80	104.00
1	N	1127	G	O4'-C4'-C3'	-6.80	97.20	104.00
1	N	981	U	P-O5'-C5'	-6.80	110.71	120.90
1	N	63	C	C5'-C4'-C3'	-6.79	105.81	116.00
1	N	616	G	P-O3'-C3'	-6.79	110.01	120.20
1	N	909	A	O5'-C5'-C4'	-6.79	101.31	111.50
1	N	731	G	O4'-C1'-C2'	-6.79	100.81	107.60
1	N	368	U	O4'-C1'-N1	6.78	118.67	108.50
1	N	530	G	O4'-C1'-C2'	-6.78	100.82	107.60
1	N	630	A	O5'-C5'-C4'	-6.78	101.33	111.50
1	N	174	A	O4'-C4'-C3'	-6.78	97.22	104.00
1	N	1347	G	C2'-C3'-O3'	6.78	119.67	109.50
1	N	369	G	C3'-C2'-C1'	6.78	108.08	101.30
1	N	438	U	C2'-C3'-O3'	6.77	119.66	109.50
1	N	629	A	C5'-C4'-C3'	-6.76	105.85	116.00
1	N	1339	A	C4'-C3'-C2'	6.76	109.36	102.60
1	N	374	A	O4'-C1'-N9	6.76	118.64	108.50
1	N	1042	A	O3'-P-O5'	-6.76	93.86	104.00
1	N	672	U	P-O5'-C5'	6.75	131.03	120.90
1	N	610	U	P-O5'-C5'	-6.75	110.77	120.90
1	N	1363	A	O4'-C4'-C3'	-6.75	99.35	106.10
1	N	669	G	P-O5'-C5'	6.75	131.02	120.90
1	N	925	G	O3'-P-O5'	-6.75	93.88	104.00
1	N	637	C	O5'-C5'-C4'	-6.74	101.39	111.50
1	N	766	A	O3'-P-O5'	-6.74	93.89	104.00
1	N	1264	U	O5'-C5'-C4'	-6.74	101.39	111.50
1	N	533	A	C5'-C4'-O4'	6.73	119.19	109.10
1	N	1315	U	C5'-C4'-C3'	-6.73	105.90	116.00
1	N	1067	A	O3'-P-O5'	-6.73	93.91	104.00
1	N	1236	A	C4'-C3'-O3'	-6.73	102.91	113.00
1	N	1417	G	P-O5'-C5'	6.72	130.98	120.90
1	N	916	U	P-O3'-C3'	-6.71	110.13	120.20
1	N	47	C	O4'-C1'-N1	6.71	118.56	108.50
1	N	214	C	O4'-C4'-C3'	-6.71	97.29	104.00
1	N	247	G	C4'-C3'-C2'	-6.71	95.89	102.60
1	N	233	C	O4'-C1'-N1	6.70	118.56	108.50
1	N	399	G	C4'-C3'-C2'	-6.70	95.90	102.60
1	N	143	A	O4'-C1'-N9	6.70	118.55	108.50
1	N	9	G	P-O5'-C5'	6.70	130.95	120.90
1	N	1039	G	C4'-C3'-C2'	-6.70	95.90	102.60
1	N	1408	A	P-O5'-C5'	6.69	130.94	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	66	A	P-O3'-C3'	6.69	130.24	120.20
1	N	343	U	P-O5'-C5'	6.69	130.94	120.90
1	N	467	U	O4'-C1'-N1	6.69	118.54	108.50
1	N	661	G	O4'-C1'-N9	6.69	118.54	108.50
1	N	1524	C	C1'-O4'-C4'	-6.68	103.22	109.90
1	N	359	G	C4'-C3'-C2'	-6.68	95.92	102.60
1	N	929	G	P-O5'-C5'	6.68	130.91	120.90
1	N	1333	A	C4'-C3'-C2'	-6.68	95.92	102.60
1	N	1120	C	O4'-C1'-N1	6.67	118.51	108.50
1	N	1036	A	O3'-P-O5'	-6.67	93.99	104.00
1	N	1249	C	P-O3'-C3'	6.67	130.20	120.20
1	N	813	U	O3'-P-O5'	-6.66	94.02	104.00
1	N	273	U	N1-C1'-C2'	6.66	121.98	112.00
1	N	345	C	P-O3'-C3'	6.66	130.18	120.20
1	N	677	U	P-O5'-C5'	6.66	130.88	120.90
1	N	716	A	C5'-C4'-O4'	6.65	119.78	109.80
1	N	331	G	P-O5'-C5'	6.65	130.88	120.90
1	N	988	G	P-O5'-C5'	6.65	130.88	120.90
1	N	1354	U	C4'-C3'-C2'	-6.65	95.95	102.60
1	N	331	G	O4'-C4'-C3'	-6.65	97.35	104.00
1	N	274	A	C4'-C3'-O3'	6.64	119.37	109.40
1	N	569	C	C4'-C3'-C2'	6.64	109.24	102.60
1	N	261	U	O4'-C1'-N1	6.64	118.46	108.50
1	N	45	G	O4'-C1'-N9	6.64	118.46	108.50
1	N	1142	G	O4'-C1'-C2'	-6.64	100.96	107.60
1	N	1282	C	P-O5'-C5'	6.64	130.86	120.90
1	N	81	A	O4'-C4'-C3'	-6.64	99.46	106.10
1	N	281	G	O3'-P-O5'	-6.63	94.05	104.00
1	N	20	U	O4'-C1'-C2'	-6.63	100.97	107.60
1	N	812	G	C5'-C4'-O4'	6.63	119.05	109.10
1	N	984	C	O4'-C1'-N1	6.62	118.43	108.50
1	N	1498	U	C5'-C4'-C3'	-6.62	105.27	115.20
1	N	1469	C	C5'-C4'-C3'	-6.62	106.07	116.00
1	N	178	C	O5'-C5'-C4'	-6.62	101.57	111.50
1	N	1361	G	C5'-C4'-C3'	6.62	125.93	116.00
1	N	314	C	C1'-O4'-C4'	-6.62	103.28	109.90
1	N	470	C	C4'-C3'-C2'	-6.62	95.98	102.60
1	N	60	A	C3'-C2'-C1'	6.61	108.11	101.50
1	N	1522	U	O4'-C1'-N1	6.61	118.41	108.50
1	N	241	G	O5'-C5'-C4'	-6.60	101.59	111.50
1	N	285	C	P-O5'-C5'	6.60	130.80	120.90
1	N	1432	G	C5'-C4'-C3'	6.60	125.10	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1177	G	C1'-C2'-O2'	6.59	118.29	108.40
1	N	369	G	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	84	U	O4'-C1'-N1	6.59	118.38	108.50
1	N	631	C	P-O3'-C3'	6.59	130.08	120.20
1	N	511	C	C2'-C3'-O3'	6.58	119.38	109.50
1	N	1062	U	C4'-C3'-O3'	-6.58	103.13	113.00
1	N	66	A	C4'-C3'-C2'	-6.58	96.02	102.60
1	N	818	G	C3'-C2'-C1'	-6.58	94.72	101.30
1	N	769	G	O5'-C5'-C4'	-6.58	101.64	111.50
1	N	888	G	O5'-C5'-C4'	-6.57	101.65	111.50
1	N	963	G	C4'-C3'-C2'	-6.57	96.03	102.60
1	N	1313	U	C2'-C3'-O3'	6.57	123.55	113.70
1	N	63	C	P-O3'-C3'	6.56	130.04	120.20
1	N	546	A	O4'-C1'-N9	6.56	118.34	108.50
1	N	481	G	C4'-C3'-C2'	-6.56	96.04	102.60
1	N	206	C	O4'-C1'-N1	6.56	118.34	108.50
1	N	1067	A	C4'-C3'-O3'	6.56	119.23	109.40
1	N	1375	A	O5'-C5'-C4'	-6.55	101.67	111.50
1	N	1530	G	O5'-C5'-C4'	6.55	121.53	111.70
1	N	334	C	O4'-C1'-N1	6.55	118.33	108.50
1	N	89	U	P-O3'-C3'	6.55	130.03	120.20
1	N	860	A	C4'-C3'-C2'	-6.55	96.05	102.60
1	N	1058	G	P-O5'-C5'	6.55	130.72	120.90
1	N	680	C	P-O5'-C5'	6.55	130.72	120.90
1	N	1401	G	O4'-C1'-C2'	-6.55	101.05	107.60
1	N	653	U	C5'-C4'-C3'	6.54	125.82	116.00
1	N	1342	C	P-O3'-C3'	-6.54	110.39	120.20
1	N	264	C	C4'-C3'-C2'	-6.54	96.06	102.60
1	N	30	U	C2'-C3'-O3'	6.54	119.31	109.50
1	N	931	C	O4'-C1'-N1	6.53	118.30	108.50
1	N	1277	C	O4'-C1'-C2'	-6.53	101.07	107.60
1	N	272	C	O4'-C1'-C2'	-6.53	101.08	107.60
1	N	1232	U	O4'-C1'-N1	6.53	118.29	108.50
1	N	752	G	P-O3'-C3'	6.52	129.98	120.20
1	N	774	G	O4'-C4'-C3'	-6.52	97.48	104.00
1	N	491	G	C1'-C2'-O2'	6.52	118.18	108.40
1	N	80	A	P-O3'-C3'	-6.51	110.43	120.20
1	N	182	A	C2'-C3'-O3'	6.51	119.26	109.50
1	N	1329	A	C4'-C3'-C2'	-6.51	96.09	102.60
1	N	1501	C	O4'-C4'-C3'	-6.51	97.49	104.00
1	N	668	G	P-O5'-C5'	6.50	130.66	120.90
1	N	1247	U	P-O3'-C3'	-6.50	110.44	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	752	G	O4'-C1'-N9	6.50	118.26	108.50
1	N	1072	G	C4'-C3'-O3'	-6.49	103.26	113.00
1	N	822	U	C4'-C3'-C2'	-6.49	96.11	102.60
1	N	1514	G	C5'-C4'-C3'	6.49	125.74	116.00
1	N	204	G	P-O5'-C5'	6.49	130.63	120.90
1	N	230	G	P-O3'-C3'	-6.49	110.47	120.20
1	N	318	G	P-O5'-C5'	-6.49	111.17	120.90
1	N	1461	G	C4'-C3'-C2'	-6.49	96.11	102.60
1	N	1393	U	O4'-C1'-N1	6.48	118.23	108.50
1	N	972	C	C2'-C3'-O3'	-6.48	103.98	113.70
1	N	1213	A	C4'-C3'-O3'	-6.48	103.29	113.00
1	N	338	A	O4'-C4'-C3'	-6.47	97.53	104.00
1	N	807	A	O4'-C4'-C3'	-6.47	97.53	104.00
1	N	1175	G	O4'-C4'-C3'	-6.47	97.53	104.00
1	N	1216	A	O4'-C1'-N9	6.47	118.21	108.50
1	N	1206	G	O5'-C5'-C4'	-6.46	101.80	111.50
1	N	1323	G	C4'-C3'-C2'	-6.46	96.14	102.60
1	N	1380	U	O3'-P-O5'	-6.46	94.31	104.00
1	N	1029	U	C3'-C2'-O2'	6.46	120.38	110.70
1	N	1024	G	C3'-C2'-C1'	6.46	107.75	101.30
1	N	196	A	C4'-C3'-O3'	-6.45	103.32	113.00
1	N	335	C	O3'-P-O5'	-6.45	94.32	104.00
1	N	1321	U	P-O5'-C5'	6.45	130.58	120.90
1	N	212	G	C4'-C3'-O3'	-6.45	103.32	113.00
1	N	1470	U	O4'-C1'-N1	6.45	118.17	108.50
1	N	1495	U	O4'-C1'-N1	6.45	118.18	108.50
1	N	719	C	O4'-C4'-C3'	-6.45	97.55	104.00
1	N	576	C	C1'-O4'-C4'	-6.45	103.45	109.90
1	N	1061	G	C4'-C3'-C2'	-6.45	96.16	102.60
1	N	648	A	C4'-C3'-C2'	-6.44	96.16	102.60
1	N	343	U	C4'-C3'-C2'	-6.44	96.16	102.60
1	N	587	G	P-O3'-C3'	6.44	129.86	120.20
1	N	721	G	C2'-C3'-O3'	6.44	119.16	109.50
1	N	1524	C	O4'-C1'-N1	6.44	118.15	108.50
1	N	1244	G	O4'-C1'-N9	6.43	118.14	108.50
1	N	1343	G	P-O3'-C3'	-6.43	110.56	120.20
1	N	932	C	C5'-C4'-C3'	-6.42	106.36	116.00
1	N	93	U	O4'-C4'-C3'	-6.42	97.58	104.00
1	N	221	C	C4'-C3'-C2'	-6.42	96.18	102.60
1	N	1402	C	O4'-C1'-N1	6.42	118.13	108.50
1	N	386	C	C5'-C4'-C3'	-6.42	106.38	116.00
1	N	586	C	C2'-C3'-O3'	6.42	123.33	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	252	U	O4'-C1'-C2'	-6.41	101.19	107.60
1	N	1098	C	O4'-C1'-N1	6.41	118.12	108.50
1	N	367	U	C5'-C4'-C3'	-6.41	105.59	115.20
1	N	255	G	O5'-C5'-C4'	-6.41	101.89	111.50
1	N	495	A	O4'-C1'-N9	6.41	117.81	108.20
1	N	880	C	O4'-C1'-N1	6.40	118.11	108.50
1	N	1147	C	O5'-C5'-C4'	-6.40	101.90	111.50
1	N	423	G	O4'-C1'-N9	6.39	117.79	108.20
1	N	760	G	O4'-C1'-C2'	-6.39	101.21	107.60
1	N	1367	C	P-O5'-C5'	6.39	130.49	120.90
1	N	5	U	O4'-C4'-C3'	-6.39	99.71	106.10
1	N	723	U	P-O3'-C3'	-6.39	110.61	120.20
1	N	1043	G	P-O3'-C3'	6.39	129.78	120.20
1	N	1132	C	C4'-C3'-C2'	-6.39	96.21	102.60
1	N	1073	U	O4'-C1'-C2'	-6.39	101.21	107.60
1	N	210	C	C2'-C3'-O3'	6.38	119.08	109.50
1	N	1340	A	C5'-C4'-C3'	-6.38	106.43	116.00
1	N	346	G	C5'-C4'-C3'	-6.37	106.44	116.00
1	N	587	G	O4'-C1'-C2'	-6.37	101.23	107.60
1	N	1335	U	C4'-C3'-O3'	-6.37	103.45	113.00
1	N	334	C	C4'-C3'-O3'	-6.37	103.45	113.00
1	N	1446	A	C1'-C2'-O2'	6.36	117.94	108.40
1	N	1144	G	P-O5'-C5'	6.36	130.44	120.90
1	N	902	G	P-O5'-C5'	6.36	130.44	120.90
1	N	775	G	O4'-C1'-N9	6.36	118.03	108.50
1	N	805	C	P-O5'-C5'	6.36	130.43	120.90
1	N	152	A	O3'-P-O5'	-6.35	94.47	104.00
1	N	322	C	N1-C1'-C2'	6.35	121.53	112.00
1	N	130	A	O5'-C5'-C4'	6.35	121.22	111.70
1	N	918	A	P-O5'-C5'	6.35	130.43	120.90
1	N	724	G	O4'-C1'-C2'	-6.34	101.26	107.60
1	N	835	U	O4'-C1'-N1	6.34	118.01	108.50
1	N	235	C	O4'-C1'-N1	6.34	118.01	108.50
1	N	340	U	P-O5'-C5'	6.34	130.41	120.90
1	N	1109	C	P-O3'-C3'	6.33	129.70	120.20
1	N	598	U	P-O5'-C5'	6.33	130.40	120.90
1	N	1336	C	C1'-O4'-C4'	-6.33	103.37	109.70
1	N	1347	G	P-O3'-C3'	6.33	129.69	120.20
1	N	450	G	C2'-C3'-O3'	6.33	123.19	113.70
1	N	1261	A	C5'-C4'-C3'	6.33	125.49	116.00
1	N	120	A	C4'-C3'-C2'	-6.33	96.28	102.60
1	N	1139	G	O5'-C5'-C4'	-6.33	102.21	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1171	A	C5'-C4'-O4'	6.32	119.28	109.80
1	N	808	C	O4'-C4'-C3'	-6.32	97.68	104.00
1	N	910	C	O4'-C1'-C2'	-6.32	101.28	107.60
1	N	565	U	P-O5'-C5'	-6.32	111.43	120.90
1	N	1029	U	P-O3'-C3'	-6.32	110.73	120.20
1	N	1170	A	C5'-C4'-C3'	6.32	125.47	116.00
1	N	989	U	C4'-C3'-C2'	-6.31	96.29	102.60
1	N	533	A	P-O3'-C3'	6.31	129.67	120.20
1	N	1269	A	C5'-C4'-C3'	6.31	125.46	116.00
1	N	915	A	C4'-C3'-C2'	-6.30	96.30	102.60
1	N	940	C	O4'-C1'-N1	6.30	117.96	108.50
1	N	1494	G	P-O5'-C5'	6.30	130.36	120.90
1	N	358	U	P-O5'-C5'	6.30	130.35	120.90
1	N	177	G	C4'-C3'-C2'	-6.30	96.30	102.60
1	N	1515	G	C5'-C4'-C3'	6.30	125.45	116.00
1	N	1344	C	O4'-C1'-N1	6.30	117.95	108.50
1	N	1496	C	O4'-C1'-N1	6.30	117.95	108.50
1	N	1395	C	C4'-C3'-O3'	-6.29	103.56	113.00
1	N	1146	A	C5'-C4'-C3'	6.29	125.44	116.00
1	N	142	G	O4'-C4'-C3'	-6.29	97.71	104.00
1	N	828	U	C5'-C4'-C3'	6.29	125.44	116.00
1	N	1407	C	P-O5'-C5'	6.29	130.34	120.90
1	N	1423	G	C4'-C3'-C2'	-6.29	96.31	102.60
1	N	1446	A	C4'-C3'-O3'	-6.29	103.57	113.00
1	N	526	C	O4'-C1'-N1	6.29	117.93	108.50
1	N	982	U	P-O5'-C5'	6.29	130.33	120.90
1	N	1088	G	C2'-C3'-O3'	-6.28	104.28	113.70
1	N	894	G	O5'-C5'-C4'	-6.28	102.08	111.50
1	N	225	C	P-O5'-C5'	6.28	130.31	120.90
1	N	595	A	O4'-C1'-C2'	-6.28	99.53	105.80
1	N	462	G	O4'-C1'-C2'	-6.27	101.33	107.60
1	N	552	U	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	797	C	O4'-C4'-C3'	6.27	110.27	104.00
1	N	690	G	P-O5'-C5'	6.27	130.30	120.90
1	N	1054	C	C1'-O4'-C4'	6.27	115.97	109.70
1	N	1531	A	P-O5'-C5'	6.27	130.30	120.90
1	N	879	C	O4'-C1'-N1	6.26	117.90	108.50
1	N	1475	G	P-O5'-C5'	-6.26	111.50	120.90
1	N	536	C	O4'-C1'-N1	6.26	117.89	108.50
1	N	746	A	O4'-C1'-N9	6.26	117.89	108.50
1	N	1236	A	P-O3'-C3'	6.26	129.59	120.20
1	N	1491	G	P-O5'-C5'	6.26	130.29	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	595	A	O4'-C4'-C3'	-6.25	99.84	106.10
1	N	464	U	O3'-P-O5'	-6.25	94.62	104.00
1	N	610	U	O3'-P-O5'	-6.25	94.62	104.00
1	N	484	G	C2'-C3'-O3'	6.25	118.87	109.50
1	N	710	G	P-O3'-C3'	6.25	129.57	120.20
1	N	182	A	O5'-C5'-C4'	6.25	121.07	111.70
1	N	1216	A	P-O3'-C3'	6.25	129.57	120.20
1	N	1152	A	O4'-C1'-N9	6.24	117.87	108.50
1	N	210	C	O3'-P-O5'	-6.24	94.64	104.00
1	N	535	A	P-O5'-C5'	6.24	130.26	120.90
1	N	1434	A	C2'-C3'-O3'	6.24	123.06	113.70
1	N	817	C	C5'-C4'-C3'	6.24	124.56	115.20
1	N	1049	U	C2'-C3'-O3'	6.24	118.86	109.50
1	N	498	A	O4'-C1'-N9	6.24	117.86	108.50
1	N	857	C	C2'-C3'-O3'	6.24	123.05	113.70
1	N	1418	A	C5'-C4'-C3'	6.24	125.35	116.00
1	N	697	U	P-O3'-C3'	-6.23	110.85	120.20
1	N	1485	U	P-O5'-C5'	6.23	130.25	120.90
1	N	311	C	C4'-C3'-C2'	-6.23	96.37	102.60
1	N	1433	A	P-O5'-C5'	6.23	130.24	120.90
1	N	1328	C	C4'-C3'-O3'	-6.23	103.66	113.00
1	N	174	A	C2'-C3'-O3'	-6.22	104.37	113.70
1	N	699	C	O4'-C1'-N1	6.22	117.83	108.50
1	N	1533	C	O5'-C5'-C4'	6.22	121.03	111.70
1	N	246	A	P-O3'-C3'	6.22	129.52	120.20
1	N	1311	A	P-O3'-C3'	-6.22	110.87	120.20
1	N	204	G	C5'-C4'-C3'	6.21	125.32	116.00
1	N	1025	U	P-O5'-C5'	6.21	130.22	120.90
1	N	523	A	P-O5'-C5'	6.21	130.22	120.90
1	N	1516	G	C4'-C3'-C2'	-6.21	96.39	102.60
1	N	342	C	O3'-P-O5'	-6.21	94.69	104.00
1	N	1264	U	O4'-C1'-N1	6.21	117.81	108.50
1	N	644	U	P-O5'-C5'	6.20	130.20	120.90
1	N	867	G	C4'-C3'-C2'	-6.20	96.40	102.60
1	N	351	G	C2'-C3'-O3'	6.20	118.80	109.50
1	N	741	G	C4'-C3'-C2'	-6.20	96.40	102.60
1	N	759	A	C4'-C3'-C2'	-6.20	96.40	102.60
1	N	185	U	C4'-C3'-O3'	-6.20	103.71	113.00
1	N	307	C	C5'-C4'-C3'	6.20	125.29	116.00
1	N	409	U	O4'-C1'-C2'	-6.20	101.41	107.60
1	N	957	U	O3'-P-O5'	-6.20	94.71	104.00
1	N	1038	C	P-O3'-C3'	6.19	129.49	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1087	G	O4'-C1'-N9	6.19	117.78	108.50
1	N	877	G	P-O3'-C3'	-6.19	110.92	120.20
1	N	1101	A	C4'-C3'-C2'	6.19	108.79	102.60
1	N	777	A	O4'-C4'-C3'	-6.19	97.81	104.00
1	N	220	G	O4'-C1'-C2'	-6.18	101.42	107.60
1	N	912	C	C4'-C3'-O3'	-6.18	103.72	113.00
1	N	164	G	C4'-C3'-C2'	-6.18	96.42	102.60
1	N	447	G	C4'-C3'-C2'	-6.18	96.42	102.60
1	N	1260	G	O5'-C5'-C4'	-6.18	102.23	111.50
1	N	1106	G	P-O5'-C5'	-6.18	111.63	120.90
1	N	278	G	O4'-C1'-N9	6.18	117.77	108.50
1	N	1365	G	O4'-C1'-N9	6.18	117.77	108.50
1	N	78	A	P-O5'-C5'	6.17	130.16	120.90
1	N	93	U	O3'-P-O5'	6.17	113.26	104.00
1	N	924	C	P-O5'-C5'	6.17	130.16	120.90
1	N	36	C	P-O5'-C5'	6.17	130.16	120.90
1	N	250	A	C5'-C4'-C3'	6.17	124.46	115.20
1	N	843	U	O4'-C1'-N1	6.17	117.76	108.50
1	N	260	G	P-O3'-C3'	6.17	129.46	120.20
1	N	874	G	C4'-C3'-O3'	-6.17	103.75	113.00
1	N	1242	G	O5'-C5'-C4'	-6.17	102.25	111.50
1	N	1399	C	C2'-C3'-O3'	6.17	118.75	109.50
1	N	382	A	P-O3'-C3'	6.17	129.45	120.20
1	N	105	G	O4'-C1'-C2'	-6.17	101.44	107.60
1	N	960	U	C1'-O4'-C4'	-6.16	103.54	109.70
1	N	1493	A	P-O3'-C3'	6.16	129.45	120.20
1	N	1125	U	C4'-C3'-O3'	-6.16	103.76	113.00
1	N	1515	G	P-O3'-C3'	-6.16	110.96	120.20
1	N	58	C	C5'-C4'-C3'	-6.16	106.76	116.00
1	N	136	C	O4'-C1'-C2'	-6.16	101.44	107.60
1	N	385	C	O4'-C1'-N1	6.16	117.74	108.50
1	N	1239	A	N9-C1'-C2'	-6.15	104.77	114.00
1	N	298	A	O3'-P-O5'	-6.15	94.77	104.00
1	N	860	A	C2'-C3'-O3'	6.15	122.93	113.70
1	N	692	U	C4'-C3'-O3'	-6.15	103.78	113.00
1	N	897	C	O3'-P-O5'	-6.14	94.78	104.00
1	N	1308	U	O4'-C1'-C2'	-6.14	101.46	107.60
1	N	154	U	C4'-C3'-C2'	-6.14	96.46	102.60
1	N	370	C	C2'-C3'-O3'	6.14	122.90	113.70
1	N	17	U	O4'-C1'-N1	6.13	117.70	108.50
1	N	754	C	P-O3'-C3'	6.13	129.40	120.20
1	N	817	C	P-O5'-C5'	6.13	130.10	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	738	C	O4'-C1'-N1	6.13	117.69	108.50
1	N	609	A	C3'-C2'-O2'	6.12	119.89	110.70
1	N	705	G	P-O5'-C5'	6.12	130.08	120.90
1	N	868	C	O4'-C1'-C2'	-6.12	101.48	107.60
1	N	521	G	C4'-C3'-C2'	-6.11	96.49	102.60
1	N	1488	G	O4'-C1'-N9	6.11	117.67	108.50
1	N	476	U	O4'-C1'-N1	6.11	117.67	108.50
1	N	480	U	C3'-C2'-O2'	6.11	119.87	110.70
1	N	1412	C	C4'-C3'-C2'	-6.11	96.49	102.60
1	N	1452	C	O4'-C1'-N1	6.11	117.37	108.20
1	N	945	G	O4'-C4'-C3'	-6.11	97.89	104.00
1	N	1484	C	C1'-O4'-C4'	6.11	116.01	109.90
1	N	543	U	P-O5'-C5'	6.11	130.06	120.90
1	N	929	G	O5'-C5'-C4'	-6.11	102.34	111.50
1	N	1108	G	P-O5'-C5'	-6.11	111.74	120.90
1	N	629	A	C3'-C2'-C1'	6.11	107.41	101.30
1	N	1277	C	P-O3'-C3'	-6.11	111.04	120.20
1	N	127	G	O4'-C4'-C3'	-6.10	97.90	104.00
1	N	613	C	P-O5'-C5'	6.10	130.06	120.90
1	N	89	U	O5'-C5'-C4'	-6.10	102.55	111.70
1	N	302	G	O4'-C1'-N9	6.10	117.65	108.50
1	N	465	A	C4'-C3'-C2'	-6.10	96.50	102.60
1	N	1346	A	O4'-C4'-C3'	-6.10	100.00	106.10
1	N	1385	G	P-O5'-C5'	6.10	130.05	120.90
1	N	1424	U	P-O5'-C5'	6.10	130.04	120.90
1	N	1428	A	O4'-C1'-N9	6.10	117.64	108.50
1	N	771	G	C5'-C4'-C3'	6.09	125.14	116.00
1	N	858	G	O4'-C1'-C2'	-6.09	101.51	107.60
1	N	945	G	C3'-C2'-C1'	6.09	107.39	101.30
1	N	1511	G	P-O3'-C3'	-6.09	111.07	120.20
1	N	1160	G	C2'-C3'-O3'	6.08	118.63	109.50
1	N	299	G	O4'-C1'-N9	6.08	117.62	108.50
1	N	913	A	C2'-C3'-O3'	6.08	118.62	109.50
1	N	1030	U	O4'-C1'-N1	6.08	117.62	108.50
1	N	905	U	C5'-C4'-C3'	-6.08	106.88	116.00
1	N	616	G	C4'-C3'-C2'	-6.08	96.52	102.60
1	N	694	A	O4'-C4'-C3'	-6.08	97.92	104.00
1	N	1387	G	P-O5'-C5'	6.08	130.02	120.90
1	N	416	G	O5'-C5'-C4'	-6.08	102.39	111.50
1	N	1145	A	C2'-C3'-O3'	6.08	122.81	113.70
1	N	535	A	C2'-C3'-O3'	6.07	122.81	113.70
1	N	827	U	O4'-C1'-N1	6.07	117.61	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	948	C	C4'-C3'-O3'	-6.07	103.89	113.00
1	N	386	C	O4'-C1'-N1	6.07	117.61	108.50
1	N	403	C	O4'-C1'-N1	6.07	117.60	108.50
1	N	443	C	O4'-C1'-N1	6.07	117.60	108.50
1	N	827	U	C4'-C3'-C2'	-6.07	96.53	102.60
1	N	508	U	C1'-C2'-O2'	6.07	120.90	111.80
1	N	1079	G	P-O5'-C5'	6.07	130.00	120.90
1	N	1285	A	O4'-C4'-C3'	-6.07	100.03	106.10
1	N	806	C	P-O3'-C3'	-6.06	111.11	120.20
1	N	584	G	P-O5'-C5'	6.06	129.99	120.90
1	N	520	A	C5'-C4'-C3'	6.06	125.09	116.00
1	N	1091	U	O4'-C1'-N1	6.06	117.59	108.50
1	N	1504	G	C5'-C4'-C3'	6.06	124.29	115.20
1	N	739	C	O4'-C1'-C2'	-6.06	101.54	107.60
1	N	1265	C	P-O5'-C5'	6.06	129.98	120.90
1	N	1280	A	C3'-C2'-C1'	6.05	107.56	101.50
1	N	75	G	P-O5'-C5'	-6.05	111.82	120.90
1	N	405	U	O4'-C1'-N1	6.05	117.58	108.50
1	N	749	A	O4'-C1'-N9	6.05	117.58	108.50
1	N	121	U	O3'-P-O5'	-6.05	94.92	104.00
1	N	264	C	O5'-C5'-C4'	-6.05	102.43	111.50
1	N	1273	C	O5'-C5'-C4'	-6.05	102.43	111.50
1	N	1153	G	P-O3'-C3'	-6.04	111.13	120.20
1	N	187	G	P-O5'-C5'	-6.04	111.83	120.90
1	N	849	G	P-O5'-C5'	-6.04	111.83	120.90
1	N	119	A	O4'-C4'-C3'	6.04	110.04	104.00
1	N	894	G	C1'-C2'-O2'	6.04	117.46	108.40
1	N	1452	C	C5'-C4'-O4'	6.04	118.16	109.10
1	N	500	G	O4'-C1'-C2'	-6.04	101.56	107.60
1	N	293	G	P-O5'-C5'	6.04	129.96	120.90
1	N	1374	A	O3'-P-O5'	-6.04	94.94	104.00
1	N	1393	U	P-O5'-C5'	-6.04	111.84	120.90
1	N	72	A	C1'-O4'-C4'	6.04	115.94	109.90
1	N	371	A	C3'-C2'-O2'	-6.04	101.64	110.70
1	N	114	U	P-O5'-C5'	6.03	129.95	120.90
1	N	210	C	O4'-C1'-N1	6.03	117.25	108.20
1	N	751	U	C4'-C3'-C2'	-6.03	96.57	102.60
1	N	1031	C	P-O5'-C5'	6.03	129.95	120.90
1	N	1368	A	C4'-C3'-C2'	-6.03	96.57	102.60
1	N	93	U	C3'-C2'-C1'	-6.03	95.27	101.30
1	N	906	A	O4'-C1'-N9	6.03	117.54	108.50
1	N	1028	C	O4'-C1'-N1	6.03	117.54	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	391	G	O4'-C1'-N9	6.03	117.54	108.50
1	N	638	U	C4'-C3'-O3'	-6.03	103.96	113.00
1	N	1283	U	P-O5'-C5'	6.03	129.94	120.90
1	N	566	G	C4'-C3'-C2'	6.02	108.62	102.60
1	N	1310	G	C3'-C2'-C1'	-6.02	95.28	101.30
1	N	224	U	C4'-C3'-C2'	-6.02	96.58	102.60
1	N	499	A	P-O3'-C3'	6.02	129.23	120.20
1	N	1066	C	O3'-P-O5'	-6.02	94.97	104.00
1	N	1513	A	P-O5'-C5'	-6.02	111.87	120.90
1	N	813	U	C4'-C3'-C2'	6.02	108.62	102.60
1	N	1225	A	C1'-O4'-C4'	6.02	115.72	109.70
1	N	603	U	C4'-C3'-C2'	-6.02	96.58	102.60
1	N	860	A	C3'-C2'-C1'	6.02	107.32	101.30
1	N	20	U	P-O5'-C5'	6.01	129.92	120.90
1	N	641	U	C2'-C3'-O3'	6.01	122.72	113.70
1	N	1519	A	O4'-C4'-C3'	-6.01	97.99	104.00
1	N	711	G	C4'-C3'-C2'	-6.01	96.59	102.60
1	N	871	U	P-O3'-C3'	6.01	129.22	120.20
1	N	945	G	O4'-C1'-C2'	-6.01	101.59	107.60
1	N	982	U	C1'-O4'-C4'	6.01	115.71	109.70
1	N	1062	U	P-O3'-C3'	6.01	129.21	120.20
1	N	1444	U	C3'-C2'-C1'	6.01	107.31	101.30
1	N	886	G	P-O5'-C5'	6.00	129.91	120.90
1	N	1118	U	C5'-C4'-O4'	-6.00	100.79	109.80
1	N	407	U	P-O5'-C5'	6.00	129.90	120.90
1	N	911	U	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	427	U	O5'-C5'-C4'	-6.00	102.50	111.50
1	N	614	C	O4'-C1'-C2'	-6.00	101.60	107.60
1	N	1514	G	O4'-C1'-N9	6.00	117.50	108.50
1	N	339	C	O4'-C1'-N1	6.00	117.49	108.50
1	N	889	A	P-O3'-C3'	6.00	129.19	120.20
1	N	1094	G	P-O5'-C5'	6.00	129.90	120.90
1	N	425	G	O4'-C1'-N9	6.00	117.49	108.50
1	N	1234	C	P-O5'-C5'	6.00	129.89	120.90
1	N	101	A	O5'-C5'-C4'	-5.99	102.51	111.50
1	N	416	G	O3'-P-O5'	-5.99	95.01	104.00
1	N	639	G	C5'-C4'-C3'	-5.99	107.01	116.00
1	N	631	C	O3'-P-O5'	-5.99	95.02	104.00
1	N	1339	A	O5'-C5'-C4'	5.98	120.47	111.50
1	N	169	C	C3'-C2'-C1'	-5.98	95.32	101.30
1	N	636	U	C4'-C3'-C2'	-5.98	96.62	102.60
1	N	699	C	O4'-C1'-C2'	-5.98	101.62	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	619	U	P-O5'-C5'	5.98	129.87	120.90
1	N	274	A	P-O5'-C5'	5.98	129.87	120.90
1	N	652	U	C5'-C4'-C3'	-5.97	107.04	116.00
1	N	1187	G	O4'-C1'-C2'	-5.97	101.63	107.60
1	N	903	G	C4'-C3'-C2'	5.97	108.57	102.60
1	N	1514	G	P-O5'-C5'	-5.97	111.94	120.90
1	N	329	A	C5'-C4'-C3'	-5.97	106.25	115.20
1	N	770	C	P-O5'-C5'	-5.97	111.94	120.90
1	N	229	U	P-O5'-C5'	5.97	129.85	120.90
1	N	1351	U	O4'-C4'-C3'	-5.96	98.04	104.00
1	N	144	G	C4'-C3'-C2'	-5.96	96.64	102.60
1	N	935	A	O4'-C1'-N9	5.96	117.44	108.50
1	N	899	C	O4'-C1'-N1	5.96	117.43	108.50
1	N	980	C	O4'-C1'-N1	5.96	117.43	108.50
1	N	801	U	C4'-C3'-C2'	-5.95	96.65	102.60
1	N	1428	A	P-O5'-C5'	5.95	129.83	120.90
1	N	183	C	O3'-P-O5'	-5.95	95.07	104.00
1	N	1029	U	P-O5'-C5'	5.95	129.82	120.90
1	N	705	G	O4'-C1'-N9	5.94	117.42	108.50
1	N	1062	U	O3'-P-O5'	-5.94	95.08	104.00
1	N	1514	G	N9-C1'-C2'	-5.94	103.09	112.00
1	N	172	A	P-O5'-C5'	5.94	129.80	120.90
1	N	69	G	C3'-C2'-O2'	5.93	119.60	110.70
1	N	508	U	C1'-O4'-C4'	5.93	115.64	109.70
1	N	636	U	C1'-O4'-C4'	-5.93	103.97	109.90
1	N	723	U	O5'-C5'-C4'	5.93	120.40	111.50
1	N	793	U	P-O5'-C5'	-5.93	112.00	120.90
1	N	1438	G	C4'-C3'-C2'	-5.93	96.67	102.60
1	N	192	A	O3'-P-O5'	-5.93	95.10	104.00
1	N	207	C	C5'-C4'-C3'	5.93	124.90	116.00
1	N	800	G	P-O5'-C5'	5.93	129.80	120.90
1	N	823	C	O4'-C1'-N1	5.93	117.40	108.50
1	N	948	C	P-O3'-C3'	-5.93	111.30	120.20
1	N	644	U	O5'-C5'-C4'	-5.93	102.61	111.50
1	N	647	C	O4'-C1'-N1	5.93	117.39	108.50
1	N	1384	C	C1'-C2'-O2'	5.93	117.30	108.40
1	N	359	G	P-O3'-C3'	-5.93	111.31	120.20
1	N	650	G	O5'-C5'-C4'	-5.93	102.61	111.50
1	N	788	U	C3'-C2'-C1'	5.93	107.23	101.30
1	N	520	A	P-O5'-C5'	5.92	129.79	120.90
1	N	707	U	P-O5'-C5'	5.92	129.79	120.90
1	N	895	G	C4'-C3'-C2'	-5.92	96.67	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	456	A	C1'-O4'-C4'	5.92	115.82	109.90
1	N	136	C	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	785	G	O4'-C1'-N9	5.92	117.38	108.50
1	N	851	G	P-O3'-C3'	-5.92	111.32	120.20
1	N	1219	A	C4'-C3'-C2'	-5.92	96.68	102.60
1	N	165	G	P-O5'-C5'	5.92	129.78	120.90
1	N	1518	A	C1'-O4'-C4'	5.92	115.82	109.90
1	N	120	A	O4'-C1'-C2'	-5.91	101.69	107.60
1	N	639	G	O4'-C1'-C2'	-5.91	101.69	107.60
1	N	212	G	P-O3'-C3'	5.91	129.06	120.20
1	N	297	G	P-O3'-C3'	5.91	129.06	120.20
1	N	965	U	O4'-C1'-N1	5.91	117.06	108.20
1	N	1239	A	C2'-C3'-O3'	5.91	118.36	109.50
1	N	1274	A	C1'-C2'-O2'	5.91	117.26	108.40
1	N	597	G	O4'-C1'-N9	5.91	117.36	108.50
1	N	844	G	C4'-C3'-O3'	-5.90	104.14	113.00
1	N	1410	A	O4'-C1'-C2'	-5.90	101.70	107.60
1	N	872	A	O4'-C1'-N9	5.90	117.06	108.20
1	N	1484	C	P-O5'-C5'	5.90	129.75	120.90
1	N	1422	G	O4'-C1'-C2'	-5.90	101.70	107.60
1	N	220	G	O4'-C1'-N9	5.89	117.34	108.50
1	N	465	A	O3'-P-O5'	-5.89	95.16	104.00
1	N	921	U	P-O5'-C5'	5.89	129.74	120.90
1	N	1323	G	C2'-C3'-O3'	-5.89	104.86	113.70
1	N	1496	C	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	1018	G	O4'-C1'-C2'	-5.89	101.71	107.60
1	N	1533	C	O4'-C1'-C2'	-5.89	99.91	105.80
1	N	614	C	O4'-C1'-N1	5.89	117.33	108.50
1	N	216	U	C5'-C4'-C3'	5.88	124.83	116.00
1	N	208	U	P-O3'-C3'	5.88	129.02	120.20
1	N	780	A	P-O5'-C5'	5.88	129.72	120.90
1	N	1351	U	O3'-P-O5'	-5.88	95.18	104.00
1	N	994	A	O4'-C1'-C2'	-5.88	101.72	107.60
1	N	123	U	O3'-P-O5'	-5.88	95.19	104.00
1	N	696	A	C3'-C2'-C1'	-5.88	95.42	101.30
1	N	837	U	O4'-C1'-N1	5.88	117.31	108.50
1	N	1338	G	O4'-C4'-C3'	-5.88	100.22	106.10
1	N	1433	A	P-O3'-C3'	5.88	129.01	120.20
1	N	1448	C	O4'-C1'-N1	5.88	117.31	108.50
1	N	851	G	C5'-C4'-C3'	-5.87	107.19	116.00
1	N	191	G	C4'-C3'-C2'	-5.87	96.73	102.60
1	N	1013	G	C4'-C3'-O3'	-5.87	104.19	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1312	G	O4'-C1'-C2'	-5.87	101.73	107.60
1	N	922	G	O5'-C5'-C4'	5.87	120.31	111.50
1	N	1007	U	C5'-C4'-C3'	-5.87	107.19	116.00
1	N	753	A	P-O5'-C5'	-5.87	112.10	120.90
1	N	1114	C	P-O3'-C3'	-5.87	111.40	120.20
1	N	802	A	O4'-C1'-N9	5.87	117.30	108.50
1	N	89	U	C2'-C3'-O3'	5.86	118.30	109.50
1	N	591	U	P-O3'-C3'	-5.86	111.40	120.20
1	N	600	A	P-O5'-C5'	5.86	129.69	120.90
1	N	750	C	O4'-C1'-C2'	-5.86	101.74	107.60
1	N	1202	U	C4'-C3'-C2'	-5.86	96.74	102.60
1	N	505	G	O4'-C4'-C3'	-5.86	98.14	104.00
1	N	334	C	P-O5'-C5'	5.86	129.69	120.90
1	N	855	U	P-O5'-C5'	-5.86	112.11	120.90
1	N	1301	U	C5'-C4'-O4'	5.86	117.88	109.10
1	N	1339	A	P-O5'-C5'	5.86	129.68	120.90
1	N	1042	A	O4'-C4'-C3'	-5.85	98.15	104.00
1	N	117	G	C5'-C4'-O4'	5.85	118.58	109.80
1	N	620	C	P-O5'-C5'	-5.85	112.13	120.90
1	N	739	C	N1-C1'-C2'	5.85	120.77	112.00
1	N	756	C	O4'-C4'-C3'	-5.85	98.15	104.00
1	N	1066	C	O4'-C1'-N1	5.85	117.27	108.50
1	N	373	A	C4'-C3'-O3'	-5.84	104.23	113.00
1	N	656	G	C3'-C2'-C1'	5.84	107.14	101.30
1	N	1046	A	C4'-C3'-C2'	-5.84	96.76	102.60
1	N	1216	A	O3'-P-O5'	-5.84	95.23	104.00
1	N	1495	U	P-O5'-C5'	5.84	129.66	120.90
1	N	579	A	P-O5'-C5'	5.84	129.66	120.90
1	N	1176	A	N9-C1'-C2'	5.84	120.76	112.00
1	N	199	A	P-O3'-C3'	-5.84	111.44	120.20
1	N	570	G	O4'-C1'-C2'	-5.84	101.76	107.60
1	N	1006	G	O4'-C4'-C3'	-5.84	98.16	104.00
1	N	1348	U	C2'-C3'-O3'	-5.84	104.94	113.70
1	N	428	G	C4'-C3'-C2'	5.84	108.44	102.60
1	N	914	A	C5'-C4'-C3'	-5.84	107.25	116.00
1	N	1063	C	P-O3'-C3'	-5.84	111.44	120.20
1	N	1200	C	C5'-C4'-O4'	-5.84	101.05	109.80
1	N	1489	G	O4'-C4'-C3'	-5.84	98.16	104.00
1	N	1278	G	P-O5'-C5'	-5.83	112.15	120.90
1	N	1003	G	O3'-P-O5'	5.83	112.75	104.00
1	N	1068	G	C4'-C3'-O3'	-5.83	104.25	113.00
1	N	1239	A	O4'-C1'-N9	5.83	116.95	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1236	A	P-O5'-C5'	5.83	129.65	120.90
1	N	176	C	O4'-C4'-C3'	5.83	109.83	104.00
1	N	513	C	O4'-C1'-N1	5.83	117.24	108.50
1	N	1388	C	P-O5'-C5'	-5.83	112.16	120.90
1	N	1526	G	C4'-C3'-C2'	-5.83	96.77	102.60
1	N	206	C	P-O5'-C5'	5.83	129.64	120.90
1	N	406	G	C3'-C2'-C1'	5.83	107.12	101.30
1	N	1308	U	C5'-C4'-C3'	-5.83	107.26	116.00
1	N	609	A	N9-C1'-C2'	5.82	120.73	112.00
1	N	601	G	C4'-C3'-C2'	-5.82	96.78	102.60
1	N	1000	A	O4'-C1'-C2'	-5.81	101.79	107.60
1	N	1277	C	C4'-C3'-C2'	-5.81	96.79	102.60
1	N	179	A	O3'-P-O5'	-5.81	95.29	104.00
1	N	380	G	O4'-C1'-N9	5.81	117.21	108.50
1	N	1163	A	C4'-C3'-C2'	-5.81	96.79	102.60
1	N	1182	G	C4'-C3'-C2'	-5.81	96.79	102.60
1	N	419	C	O4'-C1'-N1	5.81	117.21	108.50
1	N	988	G	C3'-C2'-C1'	5.81	107.11	101.30
1	N	222	C	P-O3'-C3'	-5.80	111.49	120.20
1	N	695	A	O5'-C5'-C4'	-5.80	102.79	111.50
1	N	1348	U	O3'-P-O5'	5.80	112.71	104.00
1	N	930	C	C3'-C2'-C1'	-5.80	95.50	101.30
1	N	1311	A	C4'-C3'-C2'	-5.80	96.80	102.60
1	N	779	C	O4'-C1'-N1	5.80	117.20	108.50
1	N	1363	A	C3'-C2'-O2'	-5.80	105.90	114.60
1	N	1517	G	C5'-C4'-C3'	5.80	124.70	116.00
1	N	67	C	O4'-C1'-N1	5.80	117.20	108.50
1	N	1414	U	C5'-C4'-C3'	5.80	124.70	116.00
1	N	991	U	C2'-C3'-O3'	5.80	118.20	109.50
1	N	194	C	C5'-C4'-C3'	-5.79	107.31	116.00
1	N	13	U	P-O3'-C3'	5.79	128.89	120.20
1	N	505	G	P-O3'-C3'	5.79	128.89	120.20
1	N	1353	G	C5'-C4'-C3'	-5.79	107.31	116.00
1	N	1458	G	C1'-C2'-O2'	5.79	117.09	108.40
1	N	890	G	C1'-O4'-C4'	-5.79	103.91	109.70
1	N	1529	G	C2'-C3'-O3'	5.79	118.18	109.50
1	N	585	G	O4'-C1'-N9	5.79	117.18	108.50
1	N	1281	C	O4'-C1'-N1	5.79	117.18	108.50
1	N	1390	U	P-O3'-C3'	5.79	128.88	120.20
1	N	1159	U	O4'-C4'-C3'	-5.78	100.32	106.10
1	N	198	G	P-O5'-C5'	5.78	129.57	120.90
1	N	322	C	C5'-C4'-C3'	-5.78	107.33	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	674	G	O4'-C1'-N9	5.78	117.17	108.50
1	N	89	U	O4'-C4'-C3'	-5.78	100.32	106.10
1	N	185	U	O4'-C1'-C2'	-5.78	101.82	107.60
1	N	689	C	P-O5'-C5'	5.78	129.57	120.90
1	N	205	A	O4'-C1'-C2'	-5.78	101.82	107.60
1	N	808	C	O4'-C1'-N1	5.78	117.16	108.50
1	N	1227	A	C4'-C3'-C2'	5.77	108.37	102.60
1	N	7	A	P-O5'-C5'	-5.77	112.24	120.90
1	N	580	C	P-O5'-C5'	5.77	129.56	120.90
1	N	713	G	C4'-C3'-O3'	-5.77	104.34	113.00
1	N	933	G	O4'-C1'-C2'	-5.77	101.83	107.60
1	N	1422	G	C5'-C4'-C3'	-5.77	107.34	116.00
1	N	1489	G	C5'-C4'-C3'	5.77	124.66	116.00
1	N	321	A	C3'-C2'-C1'	5.77	107.07	101.30
1	N	500	G	O3'-P-O5'	-5.77	95.34	104.00
1	N	1446	A	C2'-C3'-O3'	5.77	122.36	113.70
1	N	374	A	O4'-C1'-C2'	-5.77	101.83	107.60
1	N	384	G	O4'-C1'-C2'	-5.77	101.83	107.60
1	N	467	U	C1'-C2'-O2'	5.77	117.05	108.40
1	N	644	U	P-O3'-C3'	-5.77	111.55	120.20
1	N	1433	A	O4'-C1'-C2'	-5.77	101.83	107.60
1	N	286	C	C4'-C3'-C2'	-5.77	96.83	102.60
1	N	804	U	O4'-C1'-N1	5.77	117.15	108.50
1	N	51	A	C4'-C3'-C2'	5.76	108.36	102.60
1	N	125	U	O4'-C1'-N1	5.76	117.15	108.50
1	N	896	C	O5'-C5'-C4'	-5.76	102.85	111.50
1	N	1312	G	C4'-C3'-C2'	-5.76	96.83	102.60
1	N	1041	G	O4'-C4'-C3'	-5.76	98.24	104.00
1	N	1393	U	O4'-C1'-C2'	-5.76	101.84	107.60
1	N	61	G	O3'-P-O5'	-5.76	95.36	104.00
1	N	304	U	O4'-C1'-N1	5.76	117.14	108.50
1	N	694	A	O3'-P-O5'	-5.76	95.36	104.00
1	N	713	G	C5'-C4'-C3'	-5.76	107.36	116.00
1	N	1274	A	P-O5'-C5'	5.76	129.53	120.90
1	N	173	U	P-O3'-C3'	5.75	128.83	120.20
1	N	252	U	P-O3'-C3'	-5.75	111.57	120.20
1	N	301	G	O3'-P-O5'	-5.75	95.37	104.00
1	N	464	U	C4'-C3'-C2'	5.75	108.35	102.60
1	N	577	G	P-O3'-C3'	-5.75	111.57	120.20
1	N	1198	G	O4'-C1'-C2'	-5.75	101.85	107.60
1	N	49	U	O5'-C5'-C4'	5.75	120.12	111.50
1	N	344	A	P-O3'-C3'	5.75	128.82	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1185	G	C5'-C4'-C3'	5.75	124.62	116.00
1	N	1305	G	C1'-C2'-O2'	-5.75	99.78	108.40
1	N	1294	G	O4'-C1'-C2'	-5.75	101.85	107.60
1	N	298	A	P-O3'-C3'	5.74	128.82	120.20
1	N	961	U	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	656	G	O4'-C4'-C3'	5.74	109.74	104.00
1	N	679	C	O3'-P-O5'	-5.74	95.39	104.00
1	N	1010	U	C5'-C4'-C3'	5.74	124.61	116.00
1	N	1357	A	O3'-P-O5'	-5.74	95.39	104.00
1	N	134	G	C4'-C3'-O3'	5.74	121.60	113.00
1	N	874	G	P-O5'-C5'	5.74	129.50	120.90
1	N	482	A	P-O5'-C5'	-5.73	112.30	120.90
1	N	485	U	O4'-C1'-N1	5.73	116.80	108.20
1	N	1347	G	C4'-C3'-C2'	-5.73	96.87	102.60
1	N	867	G	C4'-C3'-O3'	-5.73	104.40	113.00
1	N	1293	C	O4'-C4'-C3'	-5.73	98.27	104.00
1	N	152	A	C5'-C4'-C3'	5.73	124.60	116.00
1	N	563	A	O3'-P-O5'	-5.73	95.40	104.00
1	N	1063	C	C1'-O4'-C4'	5.73	115.63	109.90
1	N	459	A	C5'-C4'-O4'	5.73	118.39	109.80
1	N	882	C	C4'-C3'-C2'	-5.73	96.87	102.60
1	N	1481	U	O3'-P-O5'	-5.73	95.41	104.00
1	N	1358	U	C2'-C3'-O3'	5.73	122.29	113.70
1	N	118	U	P-O3'-C3'	-5.72	111.61	120.20
1	N	620	C	O4'-C4'-C3'	-5.72	98.28	104.00
1	N	1243	C	O5'-C5'-C4'	-5.72	102.91	111.50
1	N	1363	A	O3'-P-O5'	-5.72	95.41	104.00
1	N	653	U	O4'-C1'-N1	5.72	117.08	108.50
1	N	1380	U	O4'-C1'-N1	5.72	117.08	108.50
1	N	78	A	C5'-C4'-C3'	5.72	124.58	116.00
1	N	96	U	O5'-C5'-C4'	-5.72	103.12	111.70
1	N	1167	A	O4'-C1'-N9	5.72	116.78	108.20
1	N	403	C	O4'-C4'-C3'	-5.72	98.28	104.00
1	N	364	A	C4'-C3'-C2'	-5.72	96.88	102.60
1	N	1079	G	O5'-C5'-C4'	5.71	120.07	111.50
1	N	83	C	C5'-C4'-C3'	-5.71	107.43	116.00
1	N	281	G	C2'-C3'-O3'	5.71	118.07	109.50
1	N	904	U	C5'-C4'-C3'	5.71	124.57	116.00
1	N	416	G	C5'-C4'-C3'	5.71	124.56	116.00
1	N	657	U	C4'-C3'-C2'	-5.71	96.89	102.60
1	N	379	C	C4'-C3'-C2'	-5.71	96.89	102.60
1	N	64	G	P-O5'-C5'	5.71	129.46	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	794	A	C5'-C4'-C3'	-5.71	107.44	116.00
1	N	1118	U	C5'-C4'-C3'	5.71	124.56	116.00
1	N	1436	U	C4'-C3'-O3'	-5.71	104.44	113.00
1	N	901	A	C1'-O4'-C4'	-5.71	104.19	109.90
1	N	903	G	C3'-C2'-C1'	-5.71	95.59	101.30
1	N	1183	U	O5'-C5'-C4'	5.70	120.06	111.50
1	N	11	G	C4'-C3'-C2'	5.70	108.30	102.60
1	N	258	G	C5'-C4'-C3'	-5.70	107.45	116.00
1	N	551	U	O4'-C1'-C2'	-5.70	101.90	107.60
1	N	32	A	O5'-C5'-C4'	-5.70	102.95	111.50
1	N	272	C	C1'-O4'-C4'	5.70	115.60	109.90
1	N	490	C	P-O3'-C3'	-5.70	111.65	120.20
1	N	691	G	O4'-C1'-N9	5.70	117.05	108.50
1	N	1022	A	P-O3'-C3'	-5.70	111.65	120.20
1	N	1253	G	O4'-C1'-N9	5.70	117.05	108.50
1	N	947	G	C5'-C4'-C3'	5.70	124.55	116.00
1	N	1040	U	P-O3'-C3'	5.70	128.74	120.20
1	N	998	C	P-O3'-C3'	-5.69	111.66	120.20
1	N	444	G	P-O5'-C5'	5.69	129.44	120.90
1	N	702	A	P-O3'-C3'	5.69	128.74	120.20
1	N	716	A	O3'-P-O5'	-5.69	95.47	104.00
1	N	650	G	C5'-C4'-O4'	5.69	118.33	109.80
1	N	1098	C	O4'-C1'-C2'	-5.69	101.91	107.60
1	N	1218	C	O4'-C1'-N1	5.69	117.03	108.50
1	N	4	U	C5'-C4'-O4'	5.69	117.63	109.10
1	N	198	G	C3'-C2'-C1'	5.69	106.99	101.30
1	N	1041	G	C4'-C3'-C2'	-5.69	96.91	102.60
1	N	114	U	O4'-C1'-C2'	-5.69	101.91	107.60
1	N	1091	U	C4'-C3'-O3'	-5.69	104.47	113.00
1	N	827	U	P-O3'-C3'	5.68	128.73	120.20
1	N	1094	G	C5'-C4'-C3'	-5.68	107.47	116.00
1	N	517	G	C5'-C4'-C3'	-5.68	107.47	116.00
1	N	255	G	O4'-C4'-C3'	-5.68	98.32	104.00
1	N	140	U	C2'-C3'-O3'	5.67	122.21	113.70
1	N	1051	C	O4'-C1'-N1	5.67	117.01	108.50
1	N	1184	G	P-O5'-C5'	5.67	129.41	120.90
1	N	287	U	C2'-C3'-O3'	5.67	122.20	113.70
1	N	368	U	C4'-C3'-C2'	-5.67	96.93	102.60
1	N	648	A	O5'-C5'-C4'	-5.67	103.00	111.50
1	N	884	U	C5'-C4'-C3'	5.67	123.70	115.20
1	N	1329	A	O5'-C5'-C4'	-5.67	103.00	111.50
1	N	69	G	O3'-P-O5'	-5.66	95.51	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	822	U	C2'-C3'-O3'	5.66	122.19	113.70
1	N	196	A	P-O5'-C5'	-5.66	112.41	120.90
1	N	333	U	O5'-C5'-C4'	-5.66	103.01	111.50
1	N	678	U	P-O3'-C3'	-5.66	111.71	120.20
1	N	281	G	C3'-C2'-C1'	5.66	107.16	101.50
1	N	810	C	P-O3'-C3'	-5.66	111.71	120.20
1	N	967	C	O4'-C1'-N1	5.66	116.98	108.50
1	N	992	U	C4'-C3'-C2'	-5.66	96.94	102.60
1	N	618	C	O5'-C5'-C4'	-5.66	103.02	111.50
1	N	858	G	C1'-C2'-O2'	5.65	116.88	108.40
1	N	1450	U	O3'-P-O5'	-5.65	95.52	104.00
1	N	342	C	C1'-O4'-C4'	5.65	115.55	109.90
1	N	754	C	O4'-C4'-C3'	5.65	109.65	104.00
1	N	986	U	O4'-C1'-N1	5.65	116.98	108.50
1	N	432	A	P-O5'-C5'	5.65	129.37	120.90
1	N	694	A	C3'-C2'-C1'	-5.65	95.65	101.30
1	N	157	U	O4'-C1'-N1	5.64	116.97	108.50
1	N	436	C	O4'-C1'-N1	5.64	116.96	108.50
1	N	435	A	O3'-P-O5'	-5.64	95.54	104.00
1	N	1001	C	P-O5'-C5'	-5.64	112.44	120.90
1	N	1083	U	C4'-C3'-O3'	-5.64	104.55	113.00
1	N	1186	G	O5'-C5'-C4'	5.63	119.95	111.50
1	N	1346	A	P-O5'-C5'	5.63	129.35	120.90
1	N	1393	U	C4'-C3'-O3'	-5.63	104.55	113.00
1	N	671	G	O4'-C1'-C2'	-5.63	101.97	107.60
1	N	869	G	C5'-C4'-C3'	-5.63	107.55	116.00
1	N	137	U	C3'-C2'-C1'	-5.63	95.67	101.30
1	N	194	C	O4'-C1'-N1	5.63	116.95	108.50
1	N	1463	U	C3'-C2'-C1'	-5.63	95.67	101.30
1	N	544	G	C5'-C4'-C3'	-5.63	107.56	116.00
1	N	651	C	C1'-O4'-C4'	5.63	115.53	109.90
1	N	1303	C	C2'-C3'-O3'	-5.63	105.26	113.70
1	N	197	A	O4'-C1'-N9	5.63	116.64	108.20
1	N	228	A	P-O5'-C5'	5.63	129.34	120.90
1	N	805	C	C1'-C2'-O2'	-5.63	99.96	108.40
1	N	1259	C	P-O5'-C5'	5.63	129.34	120.90
1	N	153	C	O4'-C4'-C3'	-5.62	98.38	104.00
1	N	1312	G	C4'-C3'-O3'	-5.62	104.56	113.00
1	N	203	G	C4'-C3'-C2'	-5.62	96.98	102.60
1	N	1104	G	C5'-C4'-C3'	5.62	124.43	116.00
1	N	328	C	O4'-C1'-N1	5.62	116.63	108.20
1	N	670	G	O4'-C1'-N9	5.62	116.93	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1155	A	P-O5'-C5'	5.62	129.33	120.90
1	N	496	A	C4'-C3'-C2'	5.62	108.22	102.60
1	N	913	A	O3'-P-O5'	5.62	112.42	104.00
1	N	996	A	P-O5'-C5'	5.62	129.32	120.90
1	N	1266	G	C3'-C2'-O2'	5.62	119.12	110.70
1	N	578	C	C1'-C2'-O2'	5.61	116.82	108.40
1	N	1163	A	C1'-O4'-C4'	-5.61	104.29	109.90
1	N	427	U	C1'-O4'-C4'	5.61	115.51	109.90
1	N	1185	G	P-O3'-C3'	-5.61	111.78	120.20
1	N	974	A	C4'-C3'-C2'	5.61	108.21	102.60
1	N	1498	U	C4'-C3'-C2'	5.61	108.21	102.60
1	N	352	C	C3'-C2'-C1'	5.61	106.91	101.30
1	N	476	U	O4'-C1'-C2'	-5.61	102.00	107.60
1	N	129	A	P-O5'-C5'	5.60	129.31	120.90
1	N	810	C	N1-C1'-C2'	-5.60	103.59	112.00
1	N	1160	G	C1'-C2'-O2'	-5.60	103.40	111.80
1	N	320	A	P-O5'-C5'	-5.60	112.50	120.90
1	N	975	A	O5'-C5'-C4'	-5.60	103.30	111.70
1	N	44	A	C4'-C3'-C2'	-5.59	97.00	102.60
1	N	1156	G	O4'-C4'-C3'	-5.59	100.51	106.10
1	N	127	G	C2'-C3'-O3'	-5.59	105.31	113.70
1	N	1211	U	O4'-C4'-C3'	-5.59	100.51	106.10
1	N	283	U	C5'-C4'-C3'	-5.59	107.62	116.00
1	N	621	A	C5'-C4'-C3'	5.59	124.39	116.00
1	N	939	G	C5'-C4'-C3'	-5.59	107.62	116.00
1	N	1226	C	C5'-C4'-C3'	-5.59	106.82	115.20
1	N	164	G	O5'-C5'-C4'	-5.59	103.12	111.50
1	N	171	A	C5'-C4'-C3'	-5.59	107.62	116.00
1	N	768	A	C1'-O4'-C4'	5.59	115.49	109.90
1	N	476	U	P-O5'-C5'	5.58	129.28	120.90
1	N	919	A	C4'-C3'-C2'	-5.58	97.02	102.60
1	N	1199	U	P-O5'-C5'	5.58	129.28	120.90
1	N	1235	U	C4'-C3'-C2'	-5.58	97.02	102.60
1	N	141	G	O4'-C1'-N9	5.58	116.87	108.50
1	N	294	U	O3'-P-O5'	-5.58	95.63	104.00
1	N	731	G	P-O3'-C3'	-5.58	111.83	120.20
1	N	1208	C	P-O3'-C3'	-5.58	111.83	120.20
1	N	660	C	O4'-C1'-N1	5.58	116.87	108.50
1	N	1288	A	O3'-P-O5'	-5.58	95.63	104.00
1	N	1495	U	C5'-C4'-C3'	-5.58	107.63	116.00
1	N	959	A	C4'-C3'-C2'	5.58	108.18	102.60
1	N	920	U	O5'-C5'-C4'	-5.58	103.14	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	466	A	O3'-P-O5'	5.57	112.36	104.00
1	N	856	C	O4'-C1'-N1	5.57	116.86	108.50
1	N	559	A	O4'-C1'-C2'	5.57	111.37	105.80
1	N	668	G	O5'-C5'-C4'	-5.57	103.14	111.50
1	N	215	C	O4'-C1'-N1	5.57	116.86	108.50
1	N	521	G	O4'-C1'-C2'	-5.57	102.03	107.60
1	N	917	G	O4'-C1'-N9	5.57	116.85	108.50
1	N	1031	C	O5'-C5'-C4'	5.57	119.85	111.50
1	N	1309	G	N1-C6-O6	5.57	136.60	119.90
1	N	161	A	O4'-C1'-C2'	-5.57	102.03	107.60
1	N	94	G	C5'-C4'-C3'	-5.56	106.86	115.20
1	N	1129	C	O4'-C1'-C2'	5.56	113.16	107.60
1	N	344	A	C3'-C2'-C1'	5.56	107.06	101.50
1	N	433	G	C4'-C3'-C2'	-5.56	97.04	102.60
1	N	286	C	C5'-C4'-C3'	-5.56	107.67	116.00
1	N	563	A	C4'-C3'-O3'	-5.56	104.67	113.00
1	N	735	C	O4'-C1'-N1	5.56	116.83	108.50
1	N	230	G	C5'-C4'-C3'	-5.55	107.67	116.00
1	N	361	G	P-O3'-C3'	5.55	128.53	120.20
1	N	1433	A	C1'-O4'-C4'	5.55	115.45	109.90
1	N	325	A	O4'-C1'-N9	5.55	116.83	108.50
1	N	851	G	O4'-C1'-C2'	-5.55	102.05	107.60
1	N	926	G	O4'-C4'-C3'	-5.55	98.45	104.00
1	N	1127	G	O5'-C5'-C4'	-5.55	103.17	111.50
1	N	74	A	C3'-C2'-O2'	5.55	119.03	110.70
1	N	341	C	C4'-C3'-C2'	-5.55	97.05	102.60
1	N	717	U	C2'-C3'-O3'	5.55	117.83	109.50
1	N	926	G	C5'-C4'-C3'	5.55	124.32	116.00
1	N	1169	A	O4'-C4'-C3'	-5.55	98.45	104.00
1	N	331	G	C5'-C4'-C3'	5.55	124.32	116.00
1	N	366	A	O4'-C4'-C3'	-5.55	100.55	106.10
1	N	1109	C	O4'-C1'-N1	5.55	116.82	108.50
1	N	322	C	C5'-C4'-O4'	5.55	118.12	109.80
1	N	1160	G	C3'-C2'-C1'	5.55	107.05	101.50
1	N	763	G	O4'-C4'-C3'	5.54	109.54	104.00
1	N	1411	C	C4'-C3'-O3'	-5.54	104.69	113.00
1	N	1346	A	C5'-C4'-C3'	5.54	123.51	115.20
1	N	1349	A	O4'-C1'-N9	5.54	116.81	108.50
1	N	39	G	O4'-C1'-N9	5.54	116.81	108.50
1	N	211	G	P-O3'-C3'	5.54	128.51	120.20
1	N	471	U	O4'-C1'-N1	5.54	116.81	108.50
1	N	483	C	O4'-C4'-C3'	5.54	109.54	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1517	G	C5'-C4'-O4'	-5.54	101.50	109.80
1	N	196	A	P-O3'-C3'	-5.54	111.90	120.20
1	N	207	C	O4'-C1'-C2'	-5.54	102.06	107.60
1	N	853	C	O4'-C1'-N1	5.54	116.80	108.50
1	N	1164	G	O4'-C4'-C3'	-5.54	98.46	104.00
1	N	1506	U	C2'-C3'-O3'	5.54	117.80	109.50
1	N	994	A	O3'-P-O5'	-5.53	95.70	104.00
1	N	380	G	C8-N9-C1'	5.53	143.59	127.00
1	N	1251	A	N9-C1'-C2'	-5.53	105.70	114.00
1	N	233	C	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	178	C	O4'-C1'-N1	5.53	116.79	108.50
1	N	1150	A	C4'-C3'-C2'	5.53	108.13	102.60
1	N	914	A	O4'-C1'-N9	5.53	116.79	108.50
1	N	1402	C	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	204	G	O4'-C4'-C3'	-5.53	98.47	104.00
1	N	432	A	C4'-C3'-C2'	-5.53	97.07	102.60
1	N	447	G	N9-C1'-C2'	-5.52	103.71	112.00
1	N	549	C	O4'-C1'-N1	5.52	116.79	108.50
1	N	324	G	O3'-P-O5'	-5.52	95.72	104.00
1	N	331	G	C4'-C3'-C2'	5.52	108.12	102.60
1	N	631	C	C2'-C3'-O3'	5.52	117.77	109.50
1	N	934	C	C4'-C3'-O3'	5.52	117.67	109.40
1	N	587	G	C1'-O4'-C4'	5.51	115.41	109.90
1	N	1069	C	O4'-C1'-N1	5.51	116.77	108.50
1	N	1377	A	O3'-P-O5'	-5.51	95.73	104.00
1	N	1436	U	C1'-C2'-O2'	5.51	116.67	108.40
1	N	305	G	P-O3'-C3'	5.51	128.46	120.20
1	N	81	A	C5'-C4'-C3'	5.51	123.46	115.20
1	N	329	A	C2'-C3'-O3'	5.51	117.76	109.50
1	N	878	A	P-O5'-C5'	5.51	129.16	120.90
1	N	1205	U	O4'-C1'-C2'	-5.51	102.09	107.60
1	N	86	G	P-O3'-C3'	5.51	128.46	120.20
1	N	220	G	C5'-C4'-O4'	5.51	118.06	109.80
1	N	1190	G	C4'-C3'-C2'	5.51	108.11	102.60
1	N	500	G	O4'-C1'-N9	5.50	116.76	108.50
1	N	651	C	O3'-P-O5'	-5.50	95.75	104.00
1	N	916	U	O4'-C4'-C3'	-5.50	98.50	104.00
1	N	86	G	C4'-C3'-O3'	-5.50	104.75	113.00
1	N	306	A	C4'-C3'-O3'	-5.50	104.75	113.00
1	N	909	A	O4'-C1'-N9	5.50	116.75	108.50
1	N	1102	A	P-O5'-C5'	5.50	129.15	120.90
1	N	516	U	O4'-C4'-C3'	-5.50	98.50	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	651	C	O4'-C1'-N1	5.50	116.75	108.50
1	N	1263	C	O5'-C5'-C4'	-5.50	103.25	111.50
1	N	861	G	O4'-C1'-N9	5.50	116.74	108.50
1	N	1213	A	O4'-C1'-C2'	-5.50	102.11	107.60
1	N	120	A	C3'-C2'-C1'	-5.49	95.81	101.30
1	N	661	G	O4'-C1'-C2'	-5.49	102.11	107.60
1	N	1068	G	O4'-C1'-C2'	-5.49	102.11	107.60
1	N	1305	G	O4'-C1'-N9	5.49	116.74	108.50
1	N	347	G	O4'-C1'-N9	5.49	116.74	108.50
1	N	1223	C	O4'-C1'-N1	5.49	116.73	108.50
1	N	957	U	O5'-C5'-C4'	-5.49	103.27	111.50
1	N	202	G	P-O3'-C3'	5.48	128.43	120.20
1	N	780	A	N1-C6-N6	5.48	135.04	118.60
1	N	298	A	O4'-C1'-N9	5.48	116.72	108.50
1	N	613	C	P-O3'-C3'	-5.48	111.98	120.20
1	N	1532	U	P-O5'-C5'	-5.48	112.68	120.90
1	N	83	C	O4'-C1'-N1	5.48	116.72	108.50
1	N	244	U	C3'-C2'-O2'	-5.48	106.39	114.60
1	N	887	G	C5'-C4'-C3'	-5.48	107.79	116.00
1	N	1354	U	P-O5'-C5'	5.47	129.11	120.90
1	N	1278	G	C2'-C3'-O3'	5.47	117.71	109.50
1	N	811	C	O4'-C1'-C2'	-5.47	102.13	107.60
1	N	1151	A	C5'-C4'-C3'	-5.47	107.80	116.00
1	N	694	A	C1'-C2'-O2'	5.47	116.60	108.40
1	N	48	C	P-O3'-C3'	5.47	128.40	120.20
1	N	326	G	O5'-C5'-C4'	5.47	119.70	111.50
1	N	759	A	P-O5'-C5'	5.47	129.10	120.90
1	N	1458	G	O5'-C5'-C4'	-5.47	103.30	111.50
1	N	183	C	P-O3'-C3'	5.46	128.39	120.20
1	N	311	C	O4'-C1'-N1	5.46	116.69	108.50
1	N	613	C	O4'-C1'-N1	5.46	116.69	108.50
1	N	291	U	C5'-C4'-O4'	5.46	117.99	109.80
1	N	391	G	P-O3'-C3'	5.46	128.39	120.20
1	N	350	G	P-O3'-C3'	-5.46	112.01	120.20
1	N	300	A	O4'-C1'-N9	5.46	116.68	108.50
1	N	496	A	C5'-C4'-C3'	-5.46	107.82	116.00
1	N	205	A	C4'-C3'-O3'	-5.45	104.82	113.00
1	N	809	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	1237	C	P-O3'-C3'	5.45	128.38	120.20
1	N	1253	G	C5'-C4'-O4'	5.45	117.98	109.80
1	N	427	U	P-O5'-C5'	-5.45	112.72	120.90
1	N	87	C	C3'-C2'-C1'	5.45	106.75	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	76	G	C5'-C4'-C3'	-5.45	107.83	116.00
1	N	102	G	O3'-P-O5'	-5.45	95.83	104.00
1	N	401	C	O3'-P-O5'	-5.45	95.83	104.00
1	N	865	A	O4'-C4'-C3'	-5.45	98.55	104.00
1	N	1193	G	C2'-C3'-O3'	5.45	117.67	109.50
1	N	230	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	177	G	O4'-C1'-N9	5.45	116.67	108.50
1	N	489	C	C1'-O4'-C4'	5.45	115.35	109.90
1	N	501	C	O4'-C1'-C2'	-5.45	102.16	107.60
1	N	167	A	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	211	G	O4'-C1'-N9	5.44	116.66	108.50
1	N	476	U	C1'-O4'-C4'	5.44	115.34	109.90
1	N	75	G	C5'-C4'-C3'	-5.44	107.84	116.00
1	N	79	G	P-O3'-C3'	5.44	128.36	120.20
1	N	140	U	O5'-C5'-C4'	-5.44	103.34	111.50
1	N	1434	A	C1'-O4'-C4'	5.44	115.34	109.90
1	N	996	A	C4'-C3'-C2'	-5.44	97.16	102.60
1	N	1350	A	P-O5'-C5'	5.44	129.06	120.90
1	N	510	A	C4'-C3'-C2'	5.44	108.04	102.60
1	N	1244	G	C1'-C2'-O2'	5.44	116.55	108.40
1	N	1428	A	C1'-C2'-O2'	5.44	116.55	108.40
1	N	824	G	P-O5'-C5'	5.43	129.05	120.90
1	N	559	A	O4'-C4'-C3'	-5.43	100.67	106.10
1	N	1361	G	C3'-C2'-C1'	-5.43	95.87	101.30
1	N	341	C	P-O5'-C5'	5.43	129.05	120.90
1	N	900	A	O4'-C1'-N9	5.43	116.64	108.50
1	N	951	G	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	438	U	C4'-C3'-C2'	5.42	108.02	102.60
1	N	915	A	O4'-C1'-N9	5.42	116.63	108.50
1	N	1348	U	O4'-C4'-C3'	-5.42	98.58	104.00
1	N	1362	A	O4'-C1'-N9	5.42	116.63	108.50
1	N	1033	G	C4'-C3'-C2'	-5.42	97.18	102.60
1	N	279	A	C2'-C3'-O3'	5.42	117.62	109.50
1	N	857	C	O4'-C1'-N1	5.42	116.62	108.50
1	N	1029	U	O5'-C5'-C4'	-5.41	103.38	111.50
1	N	352	C	P-O3'-C3'	5.41	128.32	120.20
1	N	451	A	C4'-C3'-O3'	5.41	117.52	109.40
1	N	9	G	C5'-C4'-O4'	5.41	117.92	109.80
1	N	118	U	P-O5'-C5'	5.41	129.02	120.90
1	N	23	C	O4'-C1'-N1	5.41	116.61	108.50
1	N	99	C	C4'-C3'-C2'	-5.41	97.19	102.60
1	N	909	A	O4'-C1'-C2'	-5.41	102.19	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1226	C	C4'-C3'-O3'	5.41	117.51	109.40
1	N	1532	U	O4'-C1'-N1	5.41	116.61	108.50
1	N	589	U	P-O5'-C5'	5.41	129.01	120.90
1	N	726	C	P-O3'-C3'	-5.41	112.09	120.20
1	N	360	G	O4'-C4'-C3'	5.40	109.40	104.00
1	N	36	C	O4'-C1'-N1	5.40	116.60	108.50
1	N	665	A	C5'-C4'-O4'	-5.40	101.69	109.80
1	N	140	U	P-O3'-C3'	5.40	128.30	120.20
1	N	1373	G	O4'-C1'-N9	5.40	116.60	108.50
1	N	251	G	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	542	G	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	1322	C	P-O3'-C3'	5.40	128.30	120.20
1	N	1380	U	P-O5'-C5'	-5.40	112.81	120.90
1	N	339	C	C5'-C4'-O4'	5.39	117.89	109.80
1	N	929	G	O4'-C1'-N9	5.39	116.59	108.50
1	N	470	C	O4'-C1'-N1	5.39	116.59	108.50
1	N	67	C	P-O3'-C3'	5.39	128.28	120.20
1	N	406	G	C4'-C3'-C2'	-5.39	97.21	102.60
1	N	549	C	P-O5'-C5'	5.39	128.98	120.90
1	N	808	C	O4'-C1'-C2'	-5.39	102.21	107.60
1	N	965	U	C5'-C4'-C3'	-5.39	107.12	115.20
1	N	1090	U	C4'-C3'-C2'	-5.39	97.21	102.60
1	N	1266	G	C5'-C4'-C3'	5.39	124.08	116.00
1	N	725	G	C1'-O4'-C4'	5.39	115.29	109.90
1	N	843	U	O3'-P-O5'	-5.39	95.92	104.00
1	N	561	U	C5'-C4'-C3'	5.38	123.28	115.20
1	N	749	A	O3'-P-O5'	-5.38	95.92	104.00
1	N	906	A	N9-C1'-C2'	-5.38	103.92	112.00
1	N	1304	G	O5'-C5'-C4'	-5.38	103.42	111.50
1	N	163	C	O4'-C1'-N1	5.38	116.57	108.50
1	N	395	C	O4'-C1'-N1	5.38	116.57	108.50
1	N	1133	G	O4'-C1'-C2'	-5.38	102.22	107.60
1	N	1298	U	C5'-C4'-C3'	-5.38	107.13	115.20
1	N	1312	G	P-O3'-C3'	-5.38	112.13	120.20
1	N	625	U	O5'-C5'-C4'	5.38	119.57	111.50
1	N	134	G	O4'-C4'-C3'	-5.37	98.63	104.00
1	N	151	A	C4'-C3'-C2'	-5.37	97.23	102.60
1	N	440	C	C2'-C3'-O3'	5.37	121.76	113.70
1	N	1422	G	C4'-C3'-O3'	5.37	121.06	113.00
1	N	1491	G	O4'-C4'-C3'	-5.37	98.63	104.00
1	N	50	A	C3'-C2'-C1'	-5.37	96.13	101.50
1	N	338	A	P-O5'-C5'	5.37	128.96	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	362	G	O4'-C1'-N9	5.37	116.56	108.50
1	N	353	A	C4'-C3'-C2'	-5.37	97.23	102.60
1	N	505	G	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	750	C	C1'-O4'-C4'	5.37	115.27	109.90
1	N	956	U	O5'-C5'-C4'	-5.37	103.45	111.50
1	N	335	C	C4'-C3'-O3'	-5.37	104.95	113.00
1	N	471	U	P-O5'-C5'	5.37	128.95	120.90
1	N	419	C	O5'-C5'-C4'	5.36	119.54	111.50
1	N	506	G	C1'-O4'-C4'	-5.36	104.54	109.90
1	N	864	A	O4'-C1'-C2'	-5.36	102.24	107.60
1	N	891	U	O5'-C5'-C4'	-5.36	103.45	111.50
1	N	920	U	O4'-C1'-N1	5.36	116.54	108.50
1	N	572	A	O3'-P-O5'	-5.36	95.96	104.00
1	N	993	G	C4'-C3'-O3'	5.36	117.44	109.40
1	N	1392	G	O4'-C1'-N9	5.36	116.54	108.50
1	N	1074	G	O3'-P-O5'	-5.36	95.96	104.00
1	N	789	U	O4'-C1'-N1	5.36	116.53	108.50
1	N	1067	A	O4'-C4'-C3'	-5.36	100.75	106.10
1	N	724	G	C4'-C3'-O3'	-5.35	104.97	113.00
1	N	68	G	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	462	G	O3'-P-O5'	-5.35	95.97	104.00
1	N	489	C	O5'-C5'-C4'	-5.35	103.47	111.50
1	N	492	C	C4'-C3'-O3'	-5.35	104.97	113.00
1	N	527	G	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	1160	G	O5'-C5'-C4'	5.35	119.73	111.70
1	N	387	U	C1'-O4'-C4'	5.35	115.25	109.90
1	N	169	C	O4'-C4'-C3'	-5.35	98.65	104.00
1	N	381	C	O4'-C1'-N1	5.35	116.53	108.50
1	N	1413	A	C3'-C2'-O2'	5.35	118.72	110.70
1	N	140	U	C4'-C3'-O3'	-5.35	104.98	113.00
1	N	1444	U	O4'-C1'-N1	5.35	116.52	108.50
1	N	578	C	O5'-C5'-C4'	-5.34	103.48	111.50
1	N	1127	G	P-O5'-C5'	5.34	128.92	120.90
1	N	1196	A	O4'-C4'-C3'	-5.34	98.66	104.00
1	N	70	U	P-O3'-C3'	5.34	128.21	120.20
1	N	138	G	C5'-C4'-C3'	5.34	124.01	116.00
1	N	261	U	P-O5'-C5'	5.34	128.91	120.90
1	N	1506	U	C4'-C3'-O3'	5.34	117.41	109.40
1	N	97	G	P-O5'-C5'	5.34	128.91	120.90
1	N	732	C	O4'-C1'-N1	5.34	116.51	108.50
1	N	836	G	P-O3'-C3'	5.34	128.20	120.20
1	N	895	G	O4'-C1'-N9	5.34	116.50	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	971	G	C3'-C2'-C1'	5.34	106.64	101.30
1	N	28	A	C3'-C2'-C1'	-5.33	95.97	101.30
1	N	114	U	O4'-C1'-N1	5.33	116.50	108.50
1	N	327	A	P-O5'-C5'	-5.33	112.90	120.90
1	N	1151	A	O4'-C1'-N9	5.33	116.50	108.50
1	N	1374	A	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	131	A	C5'-C4'-C3'	-5.33	108.00	116.00
1	N	217	C	O4'-C1'-N1	5.33	116.50	108.50
1	N	268	U	P-O5'-C5'	5.33	128.90	120.90
1	N	353	A	P-O3'-C3'	5.33	128.20	120.20
1	N	582	C	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	212	G	O5'-C5'-C4'	-5.33	103.51	111.50
1	N	1050	G	O4'-C1'-N9	5.33	116.49	108.50
1	N	1054	C	P-O5'-C5'	5.33	128.89	120.90
1	N	1132	C	P-O3'-C3'	5.33	128.19	120.20
1	N	1192	C	P-O5'-C5'	-5.33	112.91	120.90
1	N	556	C	O4'-C1'-C2'	-5.32	102.28	107.60
1	N	798	U	C4'-C3'-O3'	-5.32	105.02	113.00
1	N	1444	U	P-O5'-C5'	5.32	128.88	120.90
1	N	1176	A	P-O3'-C3'	5.32	128.18	120.20
1	N	301	G	O4'-C1'-N9	5.32	116.48	108.50
1	N	720	C	C1'-O4'-C4'	-5.32	104.58	109.90
1	N	1163	A	P-O5'-C5'	5.32	128.88	120.90
1	N	110	C	O4'-C4'-C3'	-5.32	98.68	104.00
1	N	893	C	C4'-C3'-O3'	-5.32	105.03	113.00
1	N	575	G	C4'-C3'-O3'	5.32	117.37	109.40
1	N	1143	G	C5'-C4'-C3'	-5.32	108.03	116.00
1	N	108	G	C4'-C3'-O3'	-5.31	105.03	113.00
1	N	848	C	C3'-C2'-C1'	5.31	106.61	101.30
1	N	66	A	O4'-C1'-C2'	-5.31	102.29	107.60
1	N	513	C	C5'-C4'-C3'	5.31	123.97	116.00
1	N	1348	U	C1'-O4'-C4'	5.31	115.21	109.90
1	N	1443	C	C2'-C3'-O3'	5.31	121.67	113.70
1	N	256	U	O4'-C1'-N1	5.31	116.47	108.50
1	N	869	G	C5'-C4'-O4'	5.31	117.77	109.80
1	N	1040	U	P-O5'-C5'	5.31	128.87	120.90
1	N	1140	C	O4'-C1'-C2'	-5.31	100.49	105.80
1	N	13	U	P-O5'-C5'	5.31	128.86	120.90
1	N	253	A	C2'-C3'-O3'	5.31	121.66	113.70
1	N	273	U	C4'-C3'-O3'	-5.31	105.04	113.00
1	N	411	A	C3'-C2'-C1'	5.31	106.61	101.30
1	N	790	A	N1-C6-N6	5.31	134.52	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1288	A	C5'-C4'-C3'	5.31	123.96	116.00
1	N	1307	U	C1'-O4'-C4'	5.31	115.21	109.90
1	N	717	U	O4'-C1'-C2'	5.31	111.11	105.80
1	N	90	C	O3'-P-O5'	-5.30	96.05	104.00
1	N	649	A	C4'-C3'-C2'	-5.30	97.30	102.60
1	N	216	U	P-O5'-C5'	-5.30	112.94	120.90
1	N	315	A	O4'-C1'-N9	5.30	116.16	108.20
1	N	175	C	O4'-C1'-N1	5.30	116.45	108.50
1	N	1296	C	C5'-C4'-C3'	-5.30	108.05	116.00
1	N	1034	G	C1'-O4'-C4'	-5.30	104.60	109.90
1	N	474	G	O4'-C1'-C2'	-5.30	102.30	107.60
1	N	1248	A	O5'-C5'-C4'	-5.30	103.56	111.50
1	N	1213	A	C5'-C4'-C3'	-5.29	108.06	116.00
1	N	1483	A	O4'-C1'-N9	5.29	116.44	108.50
1	N	346	G	O4'-C4'-C3'	5.29	109.29	104.00
1	N	1349	A	P-O3'-C3'	-5.29	112.26	120.20
1	N	203	G	O3'-P-O5'	-5.29	96.06	104.00
1	N	257	G	P-O3'-C3'	-5.29	112.26	120.20
1	N	427	U	C4'-C3'-O3'	-5.29	105.06	113.00
1	N	815	A	O4'-C4'-C3'	-5.29	98.71	104.00
1	N	1462	C	O4'-C1'-N1	5.29	116.44	108.50
1	N	757	U	O4'-C1'-N1	5.29	116.44	108.50
1	N	1212	U	N1-C1'-C2'	5.29	119.94	112.00
1	N	990	C	O4'-C1'-N1	5.29	116.43	108.50
1	N	656	G	O4'-C1'-N9	5.28	116.42	108.50
1	N	665	A	P-O3'-C3'	-5.28	112.27	120.20
1	N	1525	G	C5'-C4'-C3'	5.28	123.93	116.00
1	N	705	G	C4'-C3'-C2'	-5.28	97.32	102.60
1	N	806	C	C4'-C3'-O3'	-5.28	105.08	113.00
1	N	19	A	C5'-C4'-O4'	5.28	117.72	109.80
1	N	233	C	O4'-C1'-C2'	-5.28	102.32	107.60
1	N	468	A	P-O3'-C3'	5.28	128.12	120.20
1	N	1208	C	C4'-C3'-C2'	-5.28	97.32	102.60
1	N	1153	G	O3'-P-O5'	-5.28	96.08	104.00
1	N	557	G	O5'-C5'-C4'	-5.28	103.58	111.50
1	N	642	A	C5'-C4'-C3'	-5.28	108.08	116.00
1	N	829	G	C5'-C4'-C3'	-5.27	108.09	116.00
1	N	219	U	P-O5'-C5'	5.27	128.81	120.90
1	N	1495	U	P-O3'-C3'	-5.27	112.29	120.20
1	N	477	C	P-O5'-C5'	5.27	128.80	120.90
1	N	786	G	P-O5'-C5'	-5.27	113.00	120.90
1	N	1060	U	O4'-C4'-C3'	-5.27	98.73	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1508	A	C4'-C3'-C2'	-5.27	97.33	102.60
1	N	696	A	O4'-C4'-C3'	-5.27	98.73	104.00
1	N	125	U	C4'-C3'-C2'	-5.27	97.33	102.60
1	N	42	G	C3'-C2'-C1'	-5.26	96.04	101.30
1	N	204	G	C2'-C3'-O3'	5.26	121.60	113.70
1	N	1087	G	C4'-C3'-C2'	-5.26	97.33	102.60
1	N	1209	C	O4'-C1'-N1	5.26	116.40	108.50
1	N	528	C	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	266	G	O3'-P-O5'	5.26	111.89	104.00
1	N	552	U	P-O3'-C3'	-5.26	112.31	120.20
1	N	770	C	O3'-P-O5'	-5.26	96.11	104.00
1	N	552	U	C2'-C3'-O3'	5.26	121.59	113.70
1	N	751	U	C5'-C4'-C3'	-5.26	108.11	116.00
1	N	859	G	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	1077	G	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	1155	A	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	277	C	C3'-C2'-C1'	5.25	106.56	101.30
1	N	653	U	O5'-C5'-C4'	-5.25	103.62	111.50
1	N	465	A	P-O3'-C3'	5.25	128.08	120.20
1	N	1253	G	C5'-C4'-C3'	-5.25	108.12	116.00
1	N	146	G	C5'-C4'-C3'	-5.25	108.12	116.00
1	N	959	A	P-O3'-C3'	5.25	128.08	120.20
1	N	1341	U	O4'-C1'-N1	5.25	116.37	108.50
1	N	351	G	P-O3'-C3'	5.25	128.07	120.20
1	N	396	C	O4'-C1'-N1	5.25	116.37	108.50
1	N	418	C	C4'-C3'-C2'	-5.25	97.35	102.60
1	N	575	G	C3'-C2'-C1'	5.25	106.75	101.50
1	N	726	C	C5'-C4'-C3'	-5.25	108.13	116.00
1	N	1472	U	P-O3'-C3'	5.25	128.07	120.20
1	N	284	C	O5'-C5'-C4'	-5.25	103.63	111.50
1	N	424	G	O4'-C1'-N9	5.25	116.37	108.50
1	N	631	C	O4'-C4'-C3'	5.25	111.35	106.10
1	N	77	A	C3'-C2'-C1'	5.24	106.54	101.30
1	N	116	A	O3'-P-O5'	-5.24	96.14	104.00
1	N	1091	U	P-O3'-C3'	5.24	128.06	120.20
1	N	1404	C	C4'-C3'-C2'	5.24	107.84	102.60
1	N	442	G	P-O5'-C5'	5.24	128.76	120.90
1	N	1245	C	O4'-C1'-N1	5.24	116.36	108.50
1	N	634	C	C4'-C3'-C2'	5.24	107.84	102.60
1	N	595	A	C5'-C4'-O4'	5.24	116.95	109.10
1	N	956	U	C1'-O4'-C4'	5.24	115.14	109.90
1	N	1347	G	O4'-C1'-N9	5.24	116.05	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1380	U	O4'-C1'-C2'	-5.24	102.36	107.60
1	N	1407	C	O5'-C5'-C4'	-5.23	103.65	111.50
1	N	1504	G	O4'-C1'-C2'	-5.23	100.57	105.80
1	N	367	U	C4'-C3'-O3'	5.23	117.25	109.40
1	N	501	C	C4'-C3'-O3'	-5.23	105.15	113.00
1	N	860	A	C1'-C2'-O2'	5.23	116.25	108.40
1	N	1285	A	C1'-O4'-C4'	5.23	114.93	109.70
1	N	428	G	O5'-C5'-C4'	-5.23	103.86	111.70
1	N	1148	U	C4'-C3'-C2'	-5.23	97.37	102.60
1	N	1532	U	C4'-C3'-C2'	-5.23	97.37	102.60
1	N	115	G	C2'-C3'-O3'	5.22	117.34	109.50
1	N	234	C	O5'-C5'-C4'	-5.22	103.66	111.50
1	N	537	G	N9-C1'-C2'	-5.22	104.16	112.00
1	N	718	A	C5'-C4'-C3'	-5.22	108.16	116.00
1	N	1528	U	O4'-C4'-C3'	-5.22	100.88	106.10
1	N	462	G	O4'-C4'-C3'	-5.22	98.78	104.00
1	N	1303	C	P-O5'-C5'	5.22	128.73	120.90
1	N	195	A	C4'-C3'-O3'	-5.22	105.17	113.00
1	N	933	G	C4'-C3'-C2'	-5.22	97.38	102.60
1	N	220	G	C4'-C3'-C2'	-5.22	97.38	102.60
1	N	496	A	O4'-C1'-N9	5.22	116.33	108.50
1	N	839	C	O4'-C1'-N1	5.22	116.33	108.50
1	N	930	C	P-O5'-C5'	-5.22	113.07	120.90
1	N	1125	U	O4'-C1'-N1	5.22	116.33	108.50
1	N	1417	G	O3'-P-O5'	-5.22	96.17	104.00
1	N	25	C	C3'-C2'-O2'	5.22	118.53	110.70
1	N	200	G	P-O3'-C3'	5.22	128.03	120.20
1	N	1382	C	O4'-C1'-N1	5.22	116.32	108.50
1	N	1429	A	P-O5'-C5'	5.22	128.72	120.90
1	N	947	G	O5'-C5'-C4'	-5.21	103.68	111.50
1	N	1202	U	O4'-C4'-C3'	-5.21	98.78	104.00
1	N	894	G	C2'-C3'-O3'	5.21	121.52	113.70
1	N	533	A	C5'-C4'-C3'	-5.21	107.39	115.20
1	N	1355	G	P-O5'-C5'	-5.21	113.08	120.90
1	N	280	C	C4'-C3'-O3'	5.21	117.21	109.40
1	N	1473	G	O4'-C1'-C2'	-5.21	102.39	107.60
1	N	227	G	C5'-C4'-C3'	5.21	123.81	116.00
1	N	235	C	C5'-C4'-C3'	-5.21	108.19	116.00
1	N	318	G	O4'-C1'-N9	5.21	116.31	108.50
1	N	564	C	N1-C1'-C2'	5.21	119.81	112.00
1	N	1198	G	O4'-C1'-N9	5.21	116.31	108.50
1	N	1509	C	P-O5'-C5'	-5.21	113.09	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	5	U	O4'-C1'-C2'	5.21	111.00	105.80
1	N	1114	C	O4'-C1'-C2'	-5.21	102.39	107.60
1	N	199	A	O3'-P-O5'	-5.20	96.19	104.00
1	N	746	A	O4'-C4'-C3'	-5.20	98.80	104.00
1	N	934	C	C5'-C4'-C3'	-5.20	107.39	115.20
1	N	676	A	O4'-C1'-C2'	-5.20	102.40	107.60
1	N	428	G	O4'-C4'-C3'	-5.20	100.90	106.10
1	N	937	A	O5'-C5'-C4'	-5.20	103.70	111.50
1	N	1103	C	O4'-C1'-N1	5.20	116.30	108.50
1	N	138	G	O4'-C4'-C3'	-5.20	98.80	104.00
1	N	451	A	P-O3'-C3'	5.20	127.99	120.20
1	N	515	G	O4'-C1'-N9	5.20	116.29	108.50
1	N	606	G	O4'-C4'-C3'	-5.20	98.80	104.00
1	N	718	A	P-O3'-C3'	5.20	127.99	120.20
1	N	811	C	O4'-C1'-N1	5.20	116.29	108.50
1	N	839	C	C2'-C3'-O3'	5.20	121.49	113.70
1	N	1004	A	C5'-C4'-C3'	-5.19	108.21	116.00
1	N	1185	G	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1248	A	P-O5'-C5'	5.19	128.69	120.90
1	N	219	U	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1026	G	C4'-C3'-O3'	-5.19	105.21	113.00
1	N	203	G	C4'-C3'-O3'	-5.19	105.22	113.00
1	N	836	G	O5'-C5'-C4'	-5.19	103.72	111.50
1	N	1298	U	C4'-C3'-C2'	-5.19	97.41	102.60
1	N	1366	C	C4'-C3'-O3'	-5.19	105.21	113.00
1	N	58	C	O4'-C1'-N1	5.19	116.28	108.50
1	N	888	G	O4'-C1'-N9	5.19	116.28	108.50
1	N	1342	C	O4'-C1'-N1	5.19	116.28	108.50
1	N	158	G	O4'-C1'-C2'	-5.19	102.41	107.60
1	N	1132	C	P-O5'-C5'	5.19	128.68	120.90
1	N	1439	G	P-O5'-C5'	5.19	128.68	120.90
1	N	1469	C	O5'-C5'-C4'	5.19	119.28	111.50
1	N	460	A	P-O5'-C5'	5.19	128.68	120.90
1	N	826	C	P-O5'-C5'	-5.19	113.12	120.90
1	N	933	G	O4'-C1'-N9	5.19	116.28	108.50
1	N	1010	U	O5'-C5'-C4'	-5.19	103.72	111.50
1	N	1477	U	C3'-C2'-C1'	-5.18	96.11	101.30
1	N	449	G	P-O3'-C3'	-5.18	112.43	120.20
1	N	307	C	O4'-C1'-N1	5.18	116.27	108.50
1	N	481	G	O4'-C4'-C3'	-5.18	100.92	106.10
1	N	508	U	O4'-C4'-C3'	-5.18	100.92	106.10
1	N	779	C	C4'-C3'-O3'	-5.18	105.23	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	939	G	O5'-C5'-C4'	-5.18	103.74	111.50
1	N	842	U	P-O5'-C5'	5.17	128.66	120.90
1	N	884	U	O4'-C4'-C3'	-5.17	100.93	106.10
1	N	656	G	C2'-C3'-O3'	5.17	121.46	113.70
1	N	726	C	C1'-O4'-C4'	-5.17	104.73	109.90
1	N	1435	G	C4'-C3'-O3'	-5.17	105.24	113.00
1	N	756	C	O4'-C1'-C2'	-5.17	102.43	107.60
1	N	808	C	C1'-O4'-C4'	5.17	115.07	109.90
1	N	618	C	O4'-C1'-C2'	-5.17	102.43	107.60
1	N	1487	G	C2'-C3'-O3'	5.17	121.45	113.70
1	N	492	C	O5'-C5'-C4'	-5.17	103.75	111.50
1	N	807	A	O4'-C1'-N9	5.16	116.24	108.50
1	N	1214	C	P-O3'-C3'	-5.16	112.45	120.20
1	N	67	C	C5'-C4'-C3'	5.16	123.74	116.00
1	N	94	G	C3'-C2'-C1'	5.16	106.66	101.50
1	N	400	C	O4'-C1'-N1	5.16	116.24	108.50
1	N	401	C	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	485	U	C2'-C3'-O3'	5.16	117.24	109.50
1	N	1045	C	C1'-O4'-C4'	5.16	115.06	109.90
1	N	1072	G	O4'-C1'-N9	5.16	116.24	108.50
1	N	1323	G	O4'-C1'-N9	5.16	116.24	108.50
1	N	1096	C	O4'-C4'-C3'	-5.16	98.84	104.00
1	N	1338	G	C2'-C3'-O3'	5.16	117.24	109.50
1	N	1361	G	O3'-P-O5'	-5.16	96.26	104.00
1	N	729	A	O5'-C5'-C4'	-5.16	103.76	111.50
1	N	567	G	P-O3'-C3'	5.16	127.93	120.20
1	N	1140	C	C3'-C2'-C1'	5.16	106.66	101.50
1	N	1388	C	C3'-C2'-C1'	5.16	106.46	101.30
1	N	1472	U	O4'-C1'-N1	5.16	116.23	108.50
1	N	70	U	C4'-C3'-O3'	-5.15	101.67	109.40
1	N	536	C	C4'-C3'-O3'	-5.15	105.27	113.00
1	N	676	A	O4'-C1'-N9	5.15	116.23	108.50
1	N	801	U	P-O5'-C5'	-5.15	113.17	120.90
1	N	938	A	C4'-C3'-O3'	-5.15	105.27	113.00
1	N	1157	A	O4'-C4'-C3'	5.15	111.25	106.10
1	N	676	A	O3'-P-O5'	5.15	111.73	104.00
1	N	1049	U	C1'-O4'-C4'	-5.15	104.55	109.70
1	N	37	U	O4'-C1'-C2'	-5.15	102.45	107.60
1	N	772	U	C1'-C2'-O2'	5.15	116.13	108.40
1	N	848	C	P-O3'-C3'	5.15	127.93	120.20
1	N	1203	C	O5'-C5'-C4'	-5.15	103.77	111.50
1	N	1495	U	C4'-C3'-C2'	-5.15	97.45	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	656	G	P-O5'-C5'	5.15	128.62	120.90
1	N	887	G	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	1137	C	C5'-C4'-C3'	-5.15	107.48	115.20
1	N	49	U	C5'-C4'-C3'	-5.15	108.28	116.00
1	N	384	G	O4'-C1'-N9	5.15	116.22	108.50
1	N	804	U	P-O3'-C3'	-5.15	112.48	120.20
1	N	351	G	C4'-C3'-O3'	5.14	117.12	109.40
1	N	841	C	O4'-C1'-N1	5.14	116.22	108.50
1	N	1344	C	O4'-C1'-C2'	-5.14	102.45	107.60
1	N	11	G	P-O5'-C5'	5.14	128.61	120.90
1	N	59	A	O4'-C1'-C2'	-5.14	102.46	107.60
1	N	232	G	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	935	A	P-O5'-C5'	-5.14	113.19	120.90
1	N	938	A	P-O3'-C3'	-5.14	112.49	120.20
1	N	1078	U	P-O3'-C3'	5.14	127.91	120.20
1	N	1111	A	C2'-C3'-O3'	5.14	121.41	113.70
1	N	1416	G	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	273	U	C2'-C3'-O3'	5.14	121.41	113.70
1	N	375	U	C3'-C2'-C1'	-5.14	96.16	101.30
1	N	764	C	O4'-C1'-N1	5.14	116.20	108.50
1	N	897	C	O4'-C1'-N1	5.14	116.20	108.50
1	N	1456	A	O4'-C1'-N9	5.14	116.21	108.50
1	N	137	U	C1'-C2'-O2'	5.13	116.10	108.40
1	N	249	U	O4'-C1'-N1	5.13	116.20	108.50
1	N	920	U	P-O5'-C5'	5.13	128.60	120.90
1	N	154	U	P-O3'-C3'	-5.13	112.50	120.20
1	N	1212	U	C1'-O4'-C4'	5.13	115.03	109.90
1	N	1264	U	P-O5'-C5'	5.13	128.60	120.90
1	N	428	G	C1'-O4'-C4'	5.13	114.83	109.70
1	N	1207	G	P-O5'-C5'	5.13	128.59	120.90
1	N	583	A	P-O5'-C5'	5.13	128.59	120.90
1	N	968	A	O3'-P-O5'	-5.13	96.31	104.00
1	N	1372	U	C4'-C3'-O3'	-5.13	105.31	113.00
1	N	291	U	O4'-C1'-C2'	-5.13	102.47	107.60
1	N	1087	G	C5'-C4'-C3'	-5.13	108.31	116.00
1	N	36	C	O4'-C1'-C2'	-5.12	102.47	107.60
1	N	559	A	P-O5'-C5'	5.12	128.59	120.90
1	N	795	C	O4'-C4'-C3'	-5.12	98.88	104.00
1	N	853	C	C5'-C4'-C3'	-5.12	108.32	116.00
1	N	127	G	P-O5'-C5'	5.12	128.58	120.90
1	N	504	C	C3'-C2'-C1'	-5.12	96.18	101.30
1	N	628	G	O4'-C1'-N9	5.12	116.18	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	644	U	O4'-C4'-C3'	-5.12	98.88	104.00
1	N	671	G	P-O3'-C3'	-5.12	112.52	120.20
1	N	795	C	C1'-O4'-C4'	5.12	115.02	109.90
1	N	37	U	O3'-P-O5'	-5.12	96.32	104.00
1	N	170	U	O4'-C1'-N1	5.12	116.18	108.50
1	N	710	G	O3'-P-O5'	-5.12	96.32	104.00
1	N	1145	A	O4'-C1'-C2'	5.12	112.72	107.60
1	N	738	C	P-O5'-C5'	5.12	128.57	120.90
1	N	607	A	O5'-C5'-C4'	-5.11	103.83	111.50
1	N	856	C	C1'-C2'-O2'	5.11	116.07	108.40
1	N	1183	U	P-O3'-C3'	-5.11	112.53	120.20
1	N	180	U	C2'-C3'-O3'	5.11	121.36	113.70
1	N	512	U	O4'-C1'-N1	5.11	116.16	108.50
1	N	1417	G	O4'-C1'-N9	5.11	116.16	108.50
1	N	891	U	P-O3'-C3'	-5.11	112.54	120.20
1	N	1484	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	22	G	P-O3'-C3'	5.11	127.86	120.20
1	N	772	U	C2'-C3'-O3'	5.11	121.36	113.70
1	N	785	G	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	1320	C	C1'-O4'-C4'	5.10	115.00	109.90
1	N	716	A	P-O5'-C5'	-5.10	113.25	120.90
1	N	774	G	O4'-C1'-C2'	-5.10	102.50	107.60
1	N	829	G	P-O3'-C3'	-5.10	112.55	120.20
1	N	875	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	545	C	O3'-P-O5'	-5.10	96.35	104.00
1	N	232	G	P-O5'-C5'	5.10	128.55	120.90
1	N	587	G	C2'-C3'-O3'	5.10	121.35	113.70
1	N	710	G	O4'-C1'-N9	5.10	116.15	108.50
1	N	570	G	C3'-C2'-C1'	5.10	106.40	101.30
1	N	260	G	P-O5'-C5'	-5.09	113.26	120.90
1	N	468	A	P-O5'-C5'	5.09	128.54	120.90
1	N	1326	U	P-O3'-C3'	-5.09	112.56	120.20
1	N	286	C	O4'-C1'-C2'	-5.09	102.51	107.60
1	N	663	A	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	884	U	P-O3'-C3'	5.09	127.84	120.20
1	N	1105	A	C1'-C2'-O2'	5.09	116.04	108.40
1	N	70	U	C5'-C4'-C3'	-5.09	107.56	115.20
1	N	505	G	C5'-C4'-O4'	5.09	117.43	109.80
1	N	1044	A	P-O5'-C5'	-5.09	113.27	120.90
1	N	208	U	C1'-O4'-C4'	5.08	114.98	109.90
1	N	1231	G	O4'-C1'-N9	5.08	116.12	108.50
1	N	270	A	C1'-C2'-O2'	5.08	116.02	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	299	G	C5'-C4'-C3'	5.08	123.62	116.00
1	N	924	C	C5'-C4'-C3'	5.08	123.62	116.00
1	N	542	G	P-O3'-C3'	-5.08	112.58	120.20
1	N	302	G	C3'-C2'-O2'	5.08	118.31	110.70
1	N	575	G	C1'-O4'-C4'	5.08	114.78	109.70
1	N	839	C	P-O5'-C5'	5.08	128.51	120.90
1	N	61	G	C4'-C3'-O3'	-5.08	105.39	113.00
1	N	1515	G	O4'-C4'-C3'	-5.08	98.92	104.00
1	N	99	C	P-O3'-C3'	5.07	127.81	120.20
1	N	1359	C	C5'-C4'-C3'	5.07	123.61	116.00
1	N	1416	G	C1'-O4'-C4'	-5.07	104.83	109.90
1	N	468	A	C3'-C2'-O2'	5.07	118.31	110.70
1	N	1296	C	O4'-C1'-C2'	5.07	112.67	107.60
1	N	199	A	O5'-C5'-C4'	-5.07	103.89	111.50
1	N	328	C	O5'-C5'-C4'	5.07	119.31	111.70
1	N	135	C	P-O3'-C3'	-5.07	112.60	120.20
1	N	500	G	C1'-O4'-C4'	5.07	114.97	109.90
1	N	578	C	C4'-C3'-C2'	-5.07	97.53	102.60
1	N	116	A	O4'-C1'-N9	5.07	116.10	108.50
1	N	360	G	C3'-C2'-C1'	5.07	106.37	101.30
1	N	854	U	O4'-C1'-N1	5.07	116.10	108.50
1	N	1066	C	O4'-C4'-C3'	5.07	109.07	104.00
1	N	109	A	C5'-C4'-C3'	-5.06	108.40	116.00
1	N	127	G	N9-C1'-C2'	-5.06	104.41	112.00
1	N	195	A	C2'-C3'-O3'	5.06	121.29	113.70
1	N	1377	A	C4'-C3'-C2'	-5.06	97.54	102.60
1	N	87	C	O4'-C1'-N1	5.06	116.09	108.50
1	N	1252	A	P-O3'-C3'	-5.06	112.61	120.20
1	N	1011	C	P-O3'-C3'	-5.06	112.62	120.20
1	N	338	A	C1'-O4'-C4'	5.05	114.95	109.90
1	N	1489	G	C4'-C3'-C2'	-5.05	97.55	102.60
1	N	1469	C	C3'-C2'-O2'	5.05	118.28	110.70
1	N	1092	A	C5'-C4'-C3'	5.05	123.57	116.00
1	N	1372	U	O4'-C4'-C3'	-5.05	98.95	104.00
1	N	106	C	O4'-C1'-N1	5.05	116.07	108.50
1	N	314	C	P-O5'-C5'	5.05	128.47	120.90
1	N	921	U	O4'-C1'-N1	5.05	116.07	108.50
1	N	426	U	C2'-C3'-O3'	5.04	121.27	113.70
1	N	803	G	C3'-C2'-O2'	5.04	118.27	110.70
1	N	497	G	C1'-C2'-O2'	-5.04	100.83	108.40
1	N	858	G	O3'-P-O5'	-5.04	96.43	104.00
1	N	309	A	N1-C6-N6	5.04	133.72	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	581	G	O5'-C5'-C4'	-5.04	103.94	111.50
1	N	988	G	O4'-C1'-N9	5.04	116.06	108.50
1	N	120	A	C1'-O4'-C4'	-5.04	104.86	109.90
1	N	639	G	O4'-C1'-N9	5.04	116.06	108.50
1	N	777	A	N9-C1'-C2'	-5.04	104.44	112.00
1	N	338	A	O4'-C1'-N9	5.04	116.05	108.50
1	N	629	A	O4'-C1'-C2'	-5.04	102.56	107.60
1	N	451	A	C5'-C4'-O4'	5.03	116.65	109.10
1	N	943	U	C5'-C4'-C3'	-5.03	108.45	116.00
1	N	1087	G	O4'-C1'-C2'	-5.03	102.57	107.60
1	N	1230	C	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	1492	A	C1'-O4'-C4'	-5.03	104.87	109.90
1	N	239	U	P-O5'-C5'	5.03	128.44	120.90
1	N	252	U	C4'-C3'-O3'	-5.03	105.45	113.00
1	N	673	A	C4'-C3'-C2'	-5.03	97.57	102.60
1	N	787	A	O3'-P-O5'	5.03	111.55	104.00
1	N	826	C	O3'-P-O5'	-5.03	96.45	104.00
1	N	1099	G	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	49	U	O3'-P-O5'	-5.03	96.46	104.00
1	N	476	U	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	540	G	O4'-C1'-N9	5.03	116.04	108.50
1	N	637	C	O4'-C4'-C3'	-5.03	98.97	104.00
1	N	1054	C	P-O3'-C3'	-5.03	112.66	120.20
1	N	255	G	O3'-P-O5'	-5.03	96.46	104.00
1	N	45	G	C4'-C3'-C2'	-5.02	97.58	102.60
1	N	168	G	N9-C1'-C2'	-5.02	104.46	112.00
1	N	1126	U	C5'-C4'-O4'	5.02	116.64	109.10
1	N	544	G	P-O5'-C5'	-5.02	113.37	120.90
1	N	625	U	C4'-C3'-O3'	-5.02	105.47	113.00
1	N	1217	C	C3'-C2'-O2'	5.02	118.23	110.70
1	N	489	C	P-O3'-C3'	5.02	127.73	120.20
1	N	1239	A	C5'-C4'-O4'	5.02	116.63	109.10
1	N	1474	U	C3'-C2'-C1'	5.02	106.32	101.30
1	N	482	A	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	1192	C	C4'-C3'-O3'	-5.02	105.47	113.00
1	N	1364	U	C6-N1-C1'	-5.02	106.15	121.20
1	N	102	G	C4'-C3'-O3'	-5.02	105.48	113.00
1	N	618	C	O4'-C1'-N1	5.02	116.02	108.50
1	N	484	G	O3'-P-O5'	5.01	111.52	104.00
1	N	544	G	C4'-C3'-C2'	-5.01	97.59	102.60
1	N	1409	C	O5'-C5'-C4'	5.01	119.02	111.50
1	N	87	C	C2'-C3'-O3'	-5.01	106.18	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	371	A	C5'-C4'-C3'	-5.01	108.48	116.00
1	N	545	C	C4'-C3'-O3'	-5.01	105.48	113.00
1	N	772	U	C1'-O4'-C4'	5.01	114.91	109.90
1	N	870	U	O5'-C5'-C4'	-5.01	104.18	111.70
1	N	358	U	C3'-C2'-C1'	-5.01	96.29	101.30
1	N	64	G	C3'-C2'-C1'	5.01	106.31	101.30
1	N	169	C	O4'-C1'-N1	5.01	116.01	108.50
1	N	688	G	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	74	A	C2'-C3'-O3'	-5.00	106.19	113.70
1	N	215	C	C4'-C3'-O3'	-5.00	105.49	113.00
1	N	390	U	O5'-C5'-C4'	-5.00	103.99	111.50
1	N	658	C	O4'-C1'-N1	5.00	116.00	108.50
1	N	989	U	O4'-C1'-N1	5.00	116.01	108.50
1	N	1148	U	O4'-C1'-C2'	-5.00	102.60	107.60
1	N	1317	C	O3'-P-O5'	5.00	111.51	104.00
1	N	1320	C	O4'-C1'-N1	5.00	116.00	108.50
1	N	507	C	O4'-C4'-C3'	-5.00	99.00	104.00
1	N	567	G	O4'-C1'-N9	5.00	116.00	108.50
1	N	786	G	C4'-C3'-C2'	-5.00	97.60	102.60

There are no chirality outliers.

All (1016) 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	1005	A	Sidechain
1	N	1006	G	Sidechain
1	N	1007	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	1017	U	Sidechain
1	N	1018	G	Sidechain
1	N	1019	A	Sidechain
1	N	102	G	Sidechain
1	N	1020	G	Sidechain
1	N	1023	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1024	G	Sidechain
1	N	1025	U	Sidechain
1	N	1026	G	Sidechain
1	N	1028	C	Sidechain
1	N	103	U	Sidechain
1	N	1030	U	Sidechain
1	N	1031	C	Sidechain
1	N	1033	G	Sidechain
1	N	1034	G	Sidechain
1	N	1035	A	Sidechain
1	N	1039	G	Sidechain
1	N	104	G	Sidechain
1	N	1041	G	Sidechain
1	N	1042	A	Sidechain
1	N	1043	G	Sidechain
1	N	1044	A	Sidechain
1	N	1045	C	Sidechain
1	N	1047	G	Sidechain
1	N	1048	G	Sidechain
1	N	1049	U	Sidechain
1	N	105	G	Sidechain
1	N	1051	C	Sidechain
1	N	1052	U	Sidechain
1	N	1053	G	Sidechain
1	N	1055	A	Sidechain
1	N	1056	U	Sidechain
1	N	1057	G	Sidechain
1	N	1058	G	Sidechain
1	N	1060	U	Sidechain
1	N	1064	G	Sidechain
1	N	1065	U	Sidechain
1	N	1068	G	Sidechain
1	N	1069	C	Sidechain
1	N	107	G	Sidechain
1	N	1070	U	Sidechain
1	N	1072	G	Sidechain
1	N	1073	U	Sidechain
1	N	1075	U	Sidechain
1	N	1076	U	Sidechain
1	N	1077	G	Sidechain
1	N	1079	G	Sidechain
1	N	108	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1081	A	Sidechain
1	N	1083	U	Sidechain
1	N	1084	G	Sidechain
1	N	1085	U	Sidechain
1	N	1087	G	Sidechain
1	N	1088	G	Sidechain
1	N	1089	G	Sidechain
1	N	109	A	Sidechain
1	N	1091	U	Sidechain
1	N	1094	G	Sidechain
1	N	1095	U	Sidechain
1	N	1096	C	Sidechain
1	N	1098	C	Sidechain
1	N	11	G	Sidechain
1	N	110	C	Sidechain
1	N	1101	A	Sidechain
1	N	1102	A	Sidechain
1	N	1104	G	Sidechain
1	N	1105	A	Sidechain
1	N	1106	G	Sidechain
1	N	1109	C	Sidechain
1	N	111	G	Sidechain
1	N	1110	A	Sidechain
1	N	1112	C	Sidechain
1	N	1113	C	Sidechain
1	N	1115	U	Sidechain
1	N	1116	U	Sidechain
1	N	1117	A	Sidechain
1	N	112	G	Sidechain
1	N	1121	U	Sidechain
1	N	1122	U	Sidechain
1	N	1124	G	Sidechain
1	N	1125	U	Sidechain
1	N	1127	G	Sidechain
1	N	1128	C	Sidechain
1	N	1129	C	Sidechain
1	N	1130	A	Sidechain
1	N	1131	G	Sidechain
1	N	1132	C	Sidechain
1	N	1133	G	Sidechain
1	N	1135	U	Sidechain
1	N	1136	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1138	G	Sidechain
1	N	1139	G	Sidechain
1	N	114	U	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	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	1164	G	Sidechain
1	N	1166	G	Sidechain
1	N	1167	A	Sidechain
1	N	1168	U	Sidechain
1	N	1169	A	Sidechain
1	N	1170	A	Sidechain
1	N	1172	C	Sidechain
1	N	1173	U	Sidechain
1	N	1174	G	Sidechain
1	N	1175	G	Sidechain
1	N	1176	A	Sidechain
1	N	1177	G	Sidechain
1	N	1178	G	Sidechain
1	N	1180	A	Sidechain
1	N	1181	G	Sidechain
1	N	1182	G	Sidechain
1	N	1183	U	Sidechain
1	N	1185	G	Sidechain
1	N	1186	G	Sidechain
1	N	1187	G	Sidechain
1	N	1188	A	Sidechain
1	N	119	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1190	G	Sidechain
1	N	1192	C	Sidechain
1	N	1194	U	Sidechain
1	N	1196	A	Sidechain
1	N	1197	A	Sidechain
1	N	12	U	Sidechain
1	N	1200	C	Sidechain
1	N	1201	A	Sidechain
1	N	1202	U	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	Sidechain
1	N	1206	G	Sidechain
1	N	1207	G	Sidechain
1	N	121	U	Sidechain
1	N	1210	C	Sidechain
1	N	1211	U	Sidechain
1	N	1214	C	Sidechain
1	N	1215	G	Sidechain
1	N	1217	C	Sidechain
1	N	1219	A	Sidechain
1	N	1222	G	Sidechain
1	N	1223	C	Sidechain
1	N	1224	U	Sidechain
1	N	1225	A	Sidechain
1	N	1226	C	Sidechain
1	N	1227	A	Sidechain
1	N	1228	C	Sidechain
1	N	1229	A	Sidechain
1	N	1230	C	Sidechain
1	N	1232	U	Sidechain
1	N	1234	C	Sidechain
1	N	1236	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	1243	C	Sidechain
1	N	1244	G	Sidechain
1	N	1245	C	Sidechain
1	N	1247	U	Sidechain
1	N	1249	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	125	U	Sidechain
1	N	1250	A	Sidechain
1	N	1253	G	Sidechain
1	N	1254	A	Sidechain
1	N	1255	G	Sidechain
1	N	1256	A	Sidechain
1	N	1257	A	Sidechain
1	N	1258	G	Sidechain
1	N	1259	C	Sidechain
1	N	126	G	Sidechain
1	N	1260	G	Sidechain
1	N	1261	A	Sidechain
1	N	1265	C	Sidechain
1	N	1267	C	Sidechain
1	N	1268	G	Sidechain
1	N	1269	A	Sidechain
1	N	127	G	Sidechain
1	N	1270	G	Sidechain
1	N	1271	A	Sidechain
1	N	1272	G	Sidechain
1	N	1274	A	Sidechain
1	N	1275	A	Sidechain
1	N	1276	G	Sidechain
1	N	1278	G	Sidechain
1	N	1279	G	Sidechain
1	N	128	G	Sidechain
1	N	1280	A	Sidechain
1	N	1281	C	Sidechain
1	N	1283	U	Sidechain
1	N	1284	C	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	1298	U	Sidechain
1	N	130	A	Sidechain
1	N	1300	G	Sidechain
1	N	1301	U	Sidechain
1	N	1302	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1304	G	Sidechain
1	N	1305	G	Sidechain
1	N	1309	G	Sidechain
1	N	1312	G	Sidechain
1	N	1315	U	Sidechain
1	N	1316	G	Sidechain
1	N	1318	A	Sidechain
1	N	132	C	Sidechain
1	N	1321	U	Sidechain
1	N	1323	G	Sidechain
1	N	1324	A	Sidechain
1	N	1326	U	Sidechain
1	N	1327	C	Sidechain
1	N	1328	C	Sidechain
1	N	133	U	Sidechain
1	N	1330	U	Sidechain
1	N	1331	G	Sidechain
1	N	1333	A	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	1343	G	Sidechain
1	N	1345	U	Sidechain
1	N	1346	A	Sidechain
1	N	1348	U	Sidechain
1	N	1349	A	Sidechain
1	N	1350	A	Sidechain
1	N	1351	U	Sidechain
1	N	1356	G	Sidechain
1	N	1357	A	Sidechain
1	N	1360	A	Sidechain
1	N	1361	G	Sidechain
1	N	1362	A	Sidechain
1	N	1364	U	Sidechain
1	N	1365	G	Sidechain
1	N	1366	C	Sidechain
1	N	137	U	Sidechain
1	N	1371	G	Sidechain
1	N	1372	U	Sidechain
1	N	1373	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1374	A	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1378	C	Sidechain
1	N	138	G	Sidechain
1	N	1381	U	Sidechain
1	N	1382	C	Sidechain
1	N	1383	C	Sidechain
1	N	1385	G	Sidechain
1	N	1386	G	Sidechain
1	N	1389	C	Sidechain
1	N	139	A	Sidechain
1	N	1392	G	Sidechain
1	N	1394	A	Sidechain
1	N	1395	C	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	1402	C	Sidechain
1	N	1405	G	Sidechain
1	N	1406	U	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain
1	N	1413	A	Sidechain
1	N	1414	U	Sidechain
1	N	1416	G	Sidechain
1	N	1417	G	Sidechain
1	N	1419	G	Sidechain
1	N	1420	U	Sidechain
1	N	1421	G	Sidechain
1	N	1422	G	Sidechain
1	N	1423	G	Sidechain
1	N	1424	U	Sidechain
1	N	1427	C	Sidechain
1	N	1428	A	Sidechain
1	N	1431	A	Sidechain
1	N	1432	G	Sidechain
1	N	1433	A	Sidechain
1	N	1434	A	Sidechain
1	N	1435	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1439	G	Sidechain
1	N	144	G	Sidechain
1	N	1440	U	Sidechain
1	N	1447	A	Sidechain
1	N	1448	C	Sidechain
1	N	145	G	Sidechain
1	N	1450	U	Sidechain
1	N	1451	U	Sidechain
1	N	1453	G	Sidechain
1	N	1454	G	Sidechain
1	N	1457	G	Sidechain
1	N	1458	G	Sidechain
1	N	1459	G	Sidechain
1	N	146	G	Sidechain
1	N	1460	C	Sidechain
1	N	1461	G	Sidechain
1	N	1464	U	Sidechain
1	N	1466	C	Sidechain
1	N	1468	A	Sidechain
1	N	1469	C	Sidechain
1	N	147	G	Sidechain
1	N	1471	U	Sidechain
1	N	1472	U	Sidechain
1	N	1478	U	Sidechain
1	N	1479	C	Sidechain
1	N	148	G	Sidechain
1	N	1480	A	Sidechain
1	N	1481	U	Sidechain
1	N	1483	A	Sidechain
1	N	1485	U	Sidechain
1	N	1486	G	Sidechain
1	N	1487	G	Sidechain
1	N	1488	G	Sidechain
1	N	1489	G	Sidechain
1	N	149	A	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
1	N	1498	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	15	G	Sidechain
1	N	150	U	Sidechain
1	N	1500	A	Sidechain
1	N	1502	A	Sidechain
1	N	1503	A	Sidechain
1	N	1504	G	Sidechain
1	N	1505	G	Sidechain
1	N	1508	A	Sidechain
1	N	151	A	Sidechain
1	N	1512	U	Sidechain
1	N	1513	A	Sidechain
1	N	1515	G	Sidechain
1	N	1516	G	Sidechain
1	N	152	A	Sidechain
1	N	1522	U	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1527	U	Sidechain
1	N	1528	U	Sidechain
1	N	1529	G	Sidechain
1	N	1531	A	Sidechain
1	N	1532	U	Sidechain
1	N	1533	C	Sidechain
1	N	154	U	Sidechain
1	N	155	A	Sidechain
1	N	157	U	Sidechain
1	N	158	G	Sidechain
1	N	159	G	Sidechain
1	N	16	A	Sidechain
1	N	160	A	Sidechain
1	N	161	A	Sidechain
1	N	162	A	Sidechain
1	N	17	U	Sidechain
1	N	170	U	Sidechain
1	N	171	A	Sidechain
1	N	172	A	Sidechain
1	N	173	U	Sidechain
1	N	175	C	Sidechain
1	N	176	C	Sidechain
1	N	177	G	Sidechain
1	N	178	C	Sidechain
1	N	179	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	183	C	Sidechain
1	N	184	G	Sidechain
1	N	185	U	Sidechain
1	N	19	A	Sidechain
1	N	190	A	Sidechain
1	N	191	G	Sidechain
1	N	192	A	Sidechain
1	N	193	C	Sidechain
1	N	194	C	Sidechain
1	N	195	A	Sidechain
1	N	197	A	Sidechain
1	N	199	A	Sidechain
1	N	2	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	205	A	Sidechain
1	N	206	C	Sidechain
1	N	207	C	Sidechain
1	N	208	U	Sidechain
1	N	209	U	Sidechain
1	N	21	G	Sidechain
1	N	210	C	Sidechain
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	213	G	Sidechain
1	N	215	C	Sidechain
1	N	216	U	Sidechain
1	N	217	C	Sidechain
1	N	218	U	Sidechain
1	N	220	G	Sidechain
1	N	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	232	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	233	C	Sidechain
1	N	235	C	Sidechain
1	N	236	A	Sidechain
1	N	237	G	Sidechain
1	N	24	U	Sidechain
1	N	241	G	Sidechain
1	N	244	U	Sidechain
1	N	245	U	Sidechain
1	N	246	A	Sidechain
1	N	247	G	Sidechain
1	N	248	C	Sidechain
1	N	249	U	Sidechain
1	N	250	A	Sidechain
1	N	251	G	Sidechain
1	N	252	U	Sidechain
1	N	253	A	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	256	U	Sidechain
1	N	258	G	Sidechain
1	N	259	G	Sidechain
1	N	26	A	Sidechain
1	N	263	A	Sidechain
1	N	265	G	Sidechain
1	N	266	G	Sidechain
1	N	267	C	Sidechain
1	N	268	U	Sidechain
1	N	269	C	Sidechain
1	N	27	G	Sidechain
1	N	270	A	Sidechain
1	N	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	281	G	Sidechain
1	N	283	U	Sidechain
1	N	285	C	Sidechain
1	N	287	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	289	G	Sidechain
1	N	29	U	Sidechain
1	N	292	G	Sidechain
1	N	293	G	Sidechain
1	N	294	U	Sidechain
1	N	296	U	Sidechain
1	N	297	G	Sidechain
1	N	298	A	Sidechain
1	N	299	G	Sidechain
1	N	3	A	Sidechain
1	N	30	U	Sidechain
1	N	302	G	Sidechain
1	N	303	A	Sidechain
1	N	304	U	Sidechain
1	N	305	G	Sidechain
1	N	307	C	Sidechain
1	N	310	G	Sidechain
1	N	314	C	Sidechain
1	N	315	A	Sidechain
1	N	316	C	Sidechain
1	N	317	U	Sidechain
1	N	318	G	Sidechain
1	N	32	A	Sidechain
1	N	320	A	Sidechain
1	N	321	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	324	G	Sidechain
1	N	326	G	Sidechain
1	N	328	C	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	342	C	Sidechain
1	N	343	U	Sidechain
1	N	344	A	Sidechain
1	N	345	C	Sidechain
1	N	347	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	348	G	Sidechain
1	N	349	A	Sidechain
1	N	35	G	Sidechain
1	N	352	C	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain
1	N	356	A	Sidechain
1	N	357	G	Sidechain
1	N	358	U	Sidechain
1	N	359	G	Sidechain
1	N	360	G	Sidechain
1	N	361	G	Sidechain
1	N	362	G	Sidechain
1	N	363	A	Sidechain
1	N	364	A	Sidechain
1	N	366	A	Sidechain
1	N	367	U	Sidechain
1	N	368	U	Sidechain
1	N	369	G	Sidechain
1	N	370	C	Sidechain
1	N	371	A	Sidechain
1	N	372	C	Sidechain
1	N	374	A	Sidechain
1	N	375	U	Sidechain
1	N	378	G	Sidechain
1	N	38	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain
1	N	384	G	Sidechain
1	N	385	C	Sidechain
1	N	387	U	Sidechain
1	N	388	G	Sidechain
1	N	39	G	Sidechain
1	N	391	G	Sidechain
1	N	392	C	Sidechain
1	N	394	G	Sidechain
1	N	396	C	Sidechain
1	N	397	A	Sidechain
1	N	398	U	Sidechain
1	N	4	U	Sidechain
1	N	40	C	Sidechain
1	N	400	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	403	C	Sidechain
1	N	404	G	Sidechain
1	N	406	G	Sidechain
1	N	407	U	Sidechain
1	N	41	G	Sidechain
1	N	410	G	Sidechain
1	N	411	A	Sidechain
1	N	412	A	Sidechain
1	N	413	G	Sidechain
1	N	414	A	Sidechain
1	N	415	A	Sidechain
1	N	416	G	Sidechain
1	N	417	G	Sidechain
1	N	42	G	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
1	N	43	C	Sidechain
1	N	430	A	Sidechain
1	N	431	A	Sidechain
1	N	432	A	Sidechain
1	N	433	G	Sidechain
1	N	434	U	Sidechain
1	N	437	U	Sidechain
1	N	44	A	Sidechain
1	N	441	A	Sidechain
1	N	442	G	Sidechain
1	N	443	C	Sidechain
1	N	444	G	Sidechain
1	N	445	G	Sidechain
1	N	446	G	Sidechain
1	N	447	G	Sidechain
1	N	449	G	Sidechain
1	N	45	G	Sidechain
1	N	450	G	Sidechain
1	N	451	A	Sidechain
1	N	452	A	Sidechain
1	N	453	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	454	G	Sidechain
1	N	455	G	Sidechain
1	N	456	A	Sidechain
1	N	457	G	Sidechain
1	N	458	U	Sidechain
1	N	46	G	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	464	U	Sidechain
1	N	465	A	Sidechain
1	N	468	A	Sidechain
1	N	469	C	Sidechain
1	N	47	C	Sidechain
1	N	470	C	Sidechain
1	N	472	U	Sidechain
1	N	473	U	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	482	A	Sidechain
1	N	484	G	Sidechain
1	N	485	U	Sidechain
1	N	486	U	Sidechain
1	N	487	A	Sidechain
1	N	49	U	Sidechain
1	N	491	G	Sidechain
1	N	494	G	Sidechain
1	N	495	A	Sidechain
1	N	496	A	Sidechain
1	N	497	G	Sidechain
1	N	498	A	Sidechain
1	N	50	A	Sidechain
1	N	501	C	Sidechain
1	N	503	C	Sidechain
1	N	505	G	Sidechain
1	N	507	C	Sidechain
1	N	508	U	Sidechain
1	N	509	A	Sidechain
1	N	51	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	510	A	Sidechain
1	N	512	U	Sidechain
1	N	514	C	Sidechain
1	N	516	U	Sidechain
1	N	517	G	Sidechain
1	N	519	C	Sidechain
1	N	52	C	Sidechain
1	N	521	G	Sidechain
1	N	522	C	Sidechain
1	N	523	A	Sidechain
1	N	524	G	Sidechain
1	N	526	C	Sidechain
1	N	527	G	Sidechain
1	N	528	C	Sidechain
1	N	529	G	Sidechain
1	N	53	A	Sidechain
1	N	531	U	Sidechain
1	N	532	A	Sidechain
1	N	536	C	Sidechain
1	N	538	G	Sidechain
1	N	54	C	Sidechain
1	N	540	G	Sidechain
1	N	541	G	Sidechain
1	N	543	U	Sidechain
1	N	544	G	Sidechain
1	N	545	C	Sidechain
1	N	547	A	Sidechain
1	N	55	A	Sidechain
1	N	550	G	Sidechain
1	N	552	U	Sidechain
1	N	553	A	Sidechain
1	N	555	U	Sidechain
1	N	556	C	Sidechain
1	N	558	G	Sidechain
1	N	559	A	Sidechain
1	N	56	U	Sidechain
1	N	560	A	Sidechain
1	N	562	U	Sidechain
1	N	563	A	Sidechain
1	N	564	C	Sidechain
1	N	565	U	Sidechain
1	N	566	G	Sidechain

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Mol	Chain	Res	Type	Group
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	574	A	Sidechain
1	N	575	G	Sidechain
1	N	577	G	Sidechain
1	N	578	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	588	G	Sidechain
1	N	59	A	Sidechain
1	N	590	U	Sidechain
1	N	593	U	Sidechain
1	N	594	U	Sidechain
1	N	595	A	Sidechain
1	N	596	A	Sidechain
1	N	597	G	Sidechain
1	N	598	U	Sidechain
1	N	6	G	Sidechain
1	N	60	A	Sidechain
1	N	601	G	Sidechain
1	N	602	A	Sidechain
1	N	604	G	Sidechain
1	N	605	U	Sidechain
1	N	606	G	Sidechain
1	N	607	A	Sidechain
1	N	609	A	Sidechain
1	N	61	G	Sidechain
1	N	610	U	Sidechain
1	N	611	C	Sidechain
1	N	612	C	Sidechain
1	N	613	C	Sidechain
1	N	614	C	Sidechain
1	N	618	C	Sidechain
1	N	62	U	Sidechain
1	N	620	C	Sidechain
1	N	621	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	623	C	Sidechain
1	N	626	G	Sidechain
1	N	629	A	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	632	U	Sidechain
1	N	633	G	Sidechain
1	N	634	C	Sidechain
1	N	636	U	Sidechain
1	N	638	U	Sidechain
1	N	64	G	Sidechain
1	N	641	U	Sidechain
1	N	643	C	Sidechain
1	N	645	G	Sidechain
1	N	647	C	Sidechain
1	N	648	A	Sidechain
1	N	649	A	Sidechain
1	N	65	A	Sidechain
1	N	650	G	Sidechain
1	N	652	U	Sidechain
1	N	654	G	Sidechain
1	N	655	A	Sidechain
1	N	656	G	Sidechain
1	N	657	U	Sidechain
1	N	660	C	Sidechain
1	N	662	U	Sidechain
1	N	664	G	Sidechain
1	N	666	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	670	G	Sidechain
1	N	671	G	Sidechain
1	N	672	U	Sidechain
1	N	674	G	Sidechain
1	N	675	A	Sidechain
1	N	678	U	Sidechain
1	N	679	C	Sidechain
1	N	68	G	Sidechain
1	N	680	C	Sidechain
1	N	681	A	Sidechain
1	N	684	U	Sidechain
1	N	685	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	686	U	Sidechain
1	N	687	A	Sidechain
1	N	688	G	Sidechain
1	N	69	G	Sidechain
1	N	692	U	Sidechain
1	N	693	G	Sidechain
1	N	697	U	Sidechain
1	N	700	G	Sidechain
1	N	701	U	Sidechain
1	N	702	A	Sidechain
1	N	707	U	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	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	722	G	Sidechain
1	N	723	U	Sidechain
1	N	727	G	Sidechain
1	N	728	A	Sidechain
1	N	73	C	Sidechain
1	N	731	G	Sidechain
1	N	733	G	Sidechain
1	N	734	G	Sidechain
1	N	735	C	Sidechain
1	N	736	C	Sidechain
1	N	737	C	Sidechain
1	N	738	C	Sidechain
1	N	739	C	Sidechain
1	N	74	A	Sidechain
1	N	740	U	Sidechain
1	N	741	G	Sidechain
1	N	743	A	Sidechain
1	N	744	C	Sidechain
1	N	745	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	748	G	Sidechain
1	N	749	A	Sidechain
1	N	75	G	Sidechain
1	N	752	G	Sidechain
1	N	753	A	Sidechain
1	N	754	C	Sidechain
1	N	757	U	Sidechain
1	N	759	A	Sidechain
1	N	76	G	Sidechain
1	N	761	G	Sidechain
1	N	762	U	Sidechain
1	N	763	G	Sidechain
1	N	767	A	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	774	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	785	G	Sidechain
1	N	786	G	Sidechain
1	N	787	A	Sidechain
1	N	79	G	Sidechain
1	N	791	G	Sidechain
1	N	792	A	Sidechain
1	N	794	A	Sidechain
1	N	795	C	Sidechain
1	N	796	C	Sidechain
1	N	797	C	Sidechain
1	N	798	U	Sidechain
1	N	8	A	Sidechain
1	N	80	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	800	G	Sidechain
1	N	801	U	Sidechain
1	N	803	G	Sidechain
1	N	804	U	Sidechain
1	N	805	C	Sidechain
1	N	806	C	Sidechain
1	N	807	A	Sidechain
1	N	808	C	Sidechain
1	N	81	A	Sidechain
1	N	811	C	Sidechain
1	N	812	G	Sidechain
1	N	814	A	Sidechain
1	N	815	A	Sidechain
1	N	817	C	Sidechain
1	N	818	G	Sidechain
1	N	82	G	Sidechain
1	N	820	U	Sidechain
1	N	822	U	Sidechain
1	N	823	C	Sidechain
1	N	824	G	Sidechain
1	N	825	A	Sidechain
1	N	826	C	Sidechain
1	N	828	U	Sidechain
1	N	829	G	Sidechain
1	N	83	C	Sidechain
1	N	830	G	Sidechain
1	N	831	A	Sidechain
1	N	832	G	Sidechain
1	N	833	G	Sidechain
1	N	835	U	Sidechain
1	N	837	U	Sidechain
1	N	838	G	Sidechain
1	N	842	U	Sidechain
1	N	844	G	Sidechain
1	N	845	A	Sidechain
1	N	846	G	Sidechain
1	N	847	G	Sidechain
1	N	848	C	Sidechain
1	N	850	U	Sidechain
1	N	851	G	Sidechain
1	N	855	U	Sidechain
1	N	857	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	858	G	Sidechain
1	N	859	G	Sidechain
1	N	86	G	Sidechain
1	N	860	A	Sidechain
1	N	861	G	Sidechain
1	N	862	C	Sidechain
1	N	864	A	Sidechain
1	N	866	C	Sidechain
1	N	867	G	Sidechain
1	N	868	C	Sidechain
1	N	869	G	Sidechain
1	N	870	U	Sidechain
1	N	873	A	Sidechain
1	N	874	G	Sidechain
1	N	877	G	Sidechain
1	N	88	U	Sidechain
1	N	880	C	Sidechain
1	N	881	G	Sidechain
1	N	882	C	Sidechain
1	N	884	U	Sidechain
1	N	885	G	Sidechain
1	N	886	G	Sidechain
1	N	888	G	Sidechain
1	N	889	A	Sidechain
1	N	89	U	Sidechain
1	N	890	G	Sidechain
1	N	891	U	Sidechain
1	N	892	A	Sidechain
1	N	893	C	Sidechain
1	N	894	G	Sidechain
1	N	895	G	Sidechain
1	N	896	C	Sidechain
1	N	897	C	Sidechain
1	N	898	G	Sidechain
1	N	899	C	Sidechain
1	N	900	A	Sidechain
1	N	902	G	Sidechain
1	N	903	G	Sidechain
1	N	904	U	Sidechain
1	N	905	U	Sidechain
1	N	906	A	Sidechain
1	N	907	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	908	A	Sidechain
1	N	909	A	Sidechain
1	N	91	U	Sidechain
1	N	911	U	Sidechain
1	N	912	C	Sidechain
1	N	913	A	Sidechain
1	N	914	A	Sidechain
1	N	915	A	Sidechain
1	N	916	U	Sidechain
1	N	917	G	Sidechain
1	N	918	A	Sidechain
1	N	919	A	Sidechain
1	N	92	U	Sidechain
1	N	920	U	Sidechain
1	N	921	U	Sidechain
1	N	923	A	Sidechain
1	N	924	C	Sidechain
1	N	925	G	Sidechain
1	N	926	G	Sidechain
1	N	927	G	Sidechain
1	N	928	G	Sidechain
1	N	929	G	Sidechain
1	N	931	C	Sidechain
1	N	937	A	Sidechain
1	N	938	A	Sidechain
1	N	939	G	Sidechain
1	N	94	G	Sidechain
1	N	940	C	Sidechain
1	N	941	G	Sidechain
1	N	943	U	Sidechain
1	N	944	G	Sidechain
1	N	945	G	Sidechain
1	N	946	A	Sidechain
1	N	947	G	Sidechain
1	N	948	C	Sidechain
1	N	949	A	Sidechain
1	N	951	G	Sidechain
1	N	952	U	Sidechain
1	N	953	G	Sidechain
1	N	954	G	Sidechain
1	N	957	U	Sidechain
1	N	958	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	959	A	Sidechain
1	N	96	U	Sidechain
1	N	961	U	Sidechain
1	N	962	C	Sidechain
1	N	968	A	Sidechain
1	N	969	A	Sidechain
1	N	97	G	Sidechain
1	N	970	C	Sidechain
1	N	971	G	Sidechain
1	N	973	G	Sidechain
1	N	975	A	Sidechain
1	N	977	A	Sidechain
1	N	978	A	Sidechain
1	N	98	A	Sidechain
1	N	980	C	Sidechain
1	N	981	U	Sidechain
1	N	982	U	Sidechain
1	N	983	A	Sidechain
1	N	984	C	Sidechain
1	N	985	C	Sidechain
1	N	986	U	Sidechain
1	N	987	G	Sidechain
1	N	989	U	Sidechain
1	N	99	C	Sidechain
1	N	990	C	Sidechain
1	N	991	U	Sidechain
1	N	992	U	Sidechain
1	N	994	A	Sidechain
1	N	995	C	Sidechain
1	N	996	A	Sidechain
1	N	997	U	Sidechain
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	16522	561	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	32892	16554	16522	561	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 (561) 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:594:U:C4	1:N:595:A:C6	2.75	0.74
1:N:120:A:C2	1:N:122:G:C6	2.78	0.72
1:N:67:C:H2'	1:N:68:G:C8	2.25	0.71
1:N:1343:G:C5	1:N:1344:C:C4	2.79	0.70
1:N:411:A:H61	1:N:428:G:H1'	1.56	0.70
1:N:25:C:H41	1:N:559:A:H61	1.41	0.69
1:N:668:G:C6	1:N:669:G:C6	2.81	0.68
1:N:39:G:H1'	1:N:497:G:H21	1.58	0.67
1:N:116:A:H61	1:N:313:A:H1'	1.59	0.67
1:N:1315:U:C4	1:N:1316:G:C6	2.84	0.66
1:N:275:G:C8	1:N:275:G:H5''	2.31	0.66
1:N:197:A:H2	1:N:198:G:C4	2.15	0.65
1:N:664:G:H22	1:N:741:G:H1	1.44	0.65
1:N:1255:G:H2'	1:N:1279:G:H1	1.61	0.65
1:N:998:C:H42	1:N:1042:A:H61	1.45	0.65
1:N:794:A:H2'	1:N:795:C:H5'	1.77	0.64
1:N:575:G:C5	1:N:821:G:C8	2.85	0.64
1:N:172:A:C8	1:N:174:A:C8	2.85	0.64
1:N:1250:A:C8	1:N:1287:A:C8	2.86	0.63
1:N:113:G:H21	1:N:353:A:H2'	1.63	0.62
1:N:1249:C:H3'	1:N:1250:A:H5''	1.81	0.62
1:N:338:A:H61	1:N:351:G:H1	1.47	0.62
1:N:949:A:H61	1:N:1232:U:H3	1.47	0.62
1:N:1102:A:C2	1:N:1103:C:C2	2.88	0.62
1:N:1366:C:C4	1:N:1367:C:C4	2.87	0.62
1:N:1394:A:H3'	1:N:1395:C:H5'	1.80	0.62
1:N:17:U:H2'	1:N:18:C:C6	2.35	0.62
1:N:1500:A:C6	1:N:1501:C:C5	2.88	0.61
1:N:1083:U:C5	1:N:1084:G:C6	2.88	0.61
1:N:1383:C:C4	1:N:1384:C:C4	2.89	0.61
1:N:80:A:C5	1:N:81:A:H1'	2.37	0.59
1:N:604:G:C2	1:N:605:U:C2	2.90	0.59
1:N:465:A:C2	1:N:466:A:C4	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:320:A:H2'	1:N:321:A:C8	2.37	0.59
1:N:403:C:H41	1:N:547:A:H5''	1.66	0.59
1:N:425:G:C5	1:N:426:U:C4	2.91	0.59
1:N:840:C:H1'	1:N:843:U:H3	1.68	0.58
1:N:78:A:C5	1:N:79:G:C6	2.91	0.58
1:N:859:G:C6	1:N:860:A:C6	2.91	0.58
1:N:1321:U:H2'	1:N:1322:C:H2'	1.85	0.58
1:N:1072:G:C2	1:N:1073:U:C2	2.91	0.58
1:N:596:A:H61	1:N:644:U:H3	1.50	0.58
1:N:585:G:C6	1:N:586:C:N3	2.72	0.58
1:N:117:G:H5''	1:N:1425:U:H5''	1.84	0.57
1:N:1090:U:H2'	1:N:1091:U:C6	2.39	0.57
1:N:1439:G:C5	1:N:1440:U:C6	2.93	0.57
1:N:98:A:C5	1:N:99:C:C4	2.92	0.57
1:N:1082:A:C5	1:N:1083:U:C4	2.92	0.57
1:N:1240:U:C6	1:N:1241:G:H5'	2.39	0.57
1:N:688:G:C8	1:N:688:G:H5''	2.40	0.57
1:N:985:C:C4	1:N:986:U:C4	2.93	0.57
1:N:1282:C:H2'	1:N:1283:U:C6	2.40	0.57
1:N:372:C:H4'	1:N:373:A:OP1	2.03	0.57
1:N:373:A:C2	1:N:374:A:C4	2.93	0.57
1:N:986:U:H3	1:N:1219:A:H61	1.52	0.57
1:N:1316:G:C2	1:N:1319:A:C8	2.92	0.57
1:N:1413:A:H2	1:N:1487:G:H22	1.51	0.56
1:N:512:U:H2'	1:N:513:C:C6	2.40	0.56
1:N:1207:G:C6	1:N:1208:C:C4	2.93	0.56
1:N:91:U:C5	1:N:92:U:C2	2.93	0.56
1:N:208:U:C2	1:N:209:U:C5	2.93	0.56
1:N:64:G:C2	1:N:69:G:C6	2.94	0.56
1:N:904:U:C4	1:N:905:U:C4	2.94	0.56
1:N:465:A:C6	1:N:466:A:C6	2.93	0.56
1:N:50:A:H1'	1:N:52:C:C6	2.41	0.56
1:N:780:A:C2	1:N:801:U:C5	2.93	0.56
1:N:64:G:N2	1:N:69:G:C5	2.74	0.56
1:N:64:G:C5	1:N:99:C:C2	2.94	0.56
1:N:338:A:C8	1:N:339:C:C5	2.94	0.56
1:N:501:C:H2'	1:N:502:A:C8	2.41	0.56
1:N:80:A:C4	1:N:81:A:H1'	2.41	0.55
1:N:946:A:C2	1:N:1236:A:C2	2.94	0.55
1:N:1240:U:C2	1:N:1240:U:OP1	2.59	0.55
1:N:349:A:C6	1:N:350:G:C6	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:383:A:C5	1:N:384:G:H1'	2.41	0.55
1:N:1056:U:H3	1:N:1204:A:H61	1.54	0.55
1:N:145:G:C2	1:N:178:C:C2	2.94	0.55
1:N:613:C:C4	1:N:614:C:C4	2.95	0.55
1:N:1343:G:C6	1:N:1344:C:C4	2.95	0.55
1:N:1483:A:C8	1:N:1484:C:C6	2.94	0.55
1:N:858:G:H1	1:N:869:G:H2'	1.72	0.55
1:N:1011:C:C2	1:N:1019:A:C2	2.93	0.55
1:N:169:C:C4	1:N:170:U:C4	2.95	0.55
1:N:414:A:C5	1:N:431:A:C2	2.95	0.55
1:N:1268:G:H21	1:N:1326:U:H1'	1.72	0.55
1:N:11:G:C6	1:N:12:U:C4	2.95	0.55
1:N:620:C:H3'	1:N:621:A:C8	2.42	0.55
1:N:829:G:C6	1:N:830:G:C5	2.95	0.55
1:N:1071:C:H2'	1:N:1072:G:C8	2.42	0.55
1:N:442:G:C6	1:N:443:C:C4	2.95	0.55
1:N:78:A:C6	1:N:79:G:C6	2.95	0.54
1:N:438:U:C4	1:N:494:G:C8	2.95	0.54
1:N:1301:U:H2'	1:N:1303:C:C5	2.43	0.54
1:N:655:A:C2	1:N:656:G:C4	2.96	0.54
1:N:297:G:C2	1:N:301:G:C6	2.96	0.54
1:N:669:G:C5	1:N:670:G:C5	2.96	0.54
1:N:391:G:C6	1:N:392:C:C4	2.96	0.54
1:N:1256:A:C2	1:N:1258:G:C6	2.96	0.54
1:N:405:U:H5'	1:N:495:A:C2	2.43	0.53
1:N:130:A:H2	1:N:232:G:H22	1.55	0.53
1:N:804:U:C6	1:N:805:C:C5	2.96	0.53
1:N:1523:G:C6	1:N:1524:C:C4	2.97	0.53
1:N:19:A:C2	1:N:917:G:C6	2.97	0.53
1:N:107:G:H5''	1:N:134:G:H21	1.74	0.53
1:N:468:A:H3'	1:N:470:C:H41	1.74	0.53
1:N:1053:G:H5''	1:N:1200:C:C5	2.44	0.53
1:N:1102:A:C5	1:N:1103:C:C4	2.97	0.53
1:N:1041:G:C6	1:N:1042:A:C6	2.97	0.53
1:N:867:G:H2'	1:N:868:C:H6	1.74	0.53
1:N:19:A:C2	1:N:917:G:C5	2.98	0.52
1:N:168:G:C6	1:N:169:C:C5	2.97	0.52
1:N:179:A:C5	1:N:180:U:C4	2.98	0.52
1:N:1009:U:C2	1:N:1021:A:C2	2.97	0.52
1:N:1434:A:C5	1:N:1435:G:C5	2.97	0.52
1:N:69:G:C4	1:N:70:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:651:C:C4	1:N:652:U:C4	2.96	0.52
1:N:232:G:C6	1:N:233:C:C4	2.97	0.52
1:N:441:A:H61	1:N:493:A:N6	2.08	0.52
1:N:509:A:C4	1:N:510:A:C2	2.97	0.52
1:N:941:G:N1	1:N:1343:G:C6	2.77	0.52
1:N:1035:A:H62	1:N:1036:A:H2	1.57	0.52
1:N:1036:A:OP2	1:N:1036:A:C8	2.63	0.52
1:N:117:G:C5'	1:N:1425:U:H5''	2.38	0.52
1:N:198:G:H2'	1:N:199:A:C8	2.45	0.52
1:N:595:A:C2	1:N:596:A:N6	2.77	0.52
1:N:872:A:C5	1:N:874:G:C8	2.98	0.52
1:N:76:G:C6	1:N:77:A:C5	2.98	0.52
1:N:209:U:C4	1:N:211:G:N1	2.77	0.52
1:N:760:G:C6	1:N:761:G:C4	2.98	0.52
1:N:207:C:H2'	1:N:208:U:C2	2.45	0.52
1:N:444:G:C6	1:N:491:G:C6	2.98	0.52
1:N:482:A:C6	1:N:483:C:C2	2.98	0.52
1:N:626:G:H2'	1:N:627:G:C8	2.45	0.52
1:N:1157:A:C8	1:N:1180:A:C2	2.98	0.52
1:N:197:A:C2	1:N:198:G:C4	2.98	0.51
1:N:833:G:C5	1:N:834:U:C5	2.98	0.51
1:N:64:G:N2	1:N:69:G:C6	2.79	0.51
1:N:50:A:C2	1:N:52:C:N3	2.78	0.51
1:N:64:G:C8	1:N:99:C:C5	2.99	0.51
1:N:118:U:H2'	1:N:121:U:C5	2.46	0.51
1:N:112:G:H22	1:N:315:A:H2	1.57	0.51
1:N:208:U:C2	1:N:209:U:C4	2.99	0.51
1:N:444:G:C6	1:N:445:G:C5	2.99	0.51
1:N:701:U:H5''	1:N:703:G:H5'	1.92	0.51
1:N:1365:G:N1	1:N:1366:C:C2	2.79	0.51
1:N:893:C:C2	1:N:894:G:C8	2.98	0.51
1:N:1484:C:C4	1:N:1485:U:N3	2.78	0.51
1:N:79:G:H2'	1:N:80:A:C8	2.46	0.51
1:N:439:U:C5	1:N:440:C:C5	2.99	0.51
1:N:79:G:C6	1:N:80:A:C6	2.99	0.50
1:N:147:G:C2	1:N:148:G:C5	2.99	0.50
1:N:342:C:C4	1:N:343:U:C4	2.99	0.50
1:N:769:G:H4'	1:N:1513:A:H4'	1.92	0.50
1:N:21:G:H1'	1:N:914:A:H61	1.77	0.50
1:N:17:U:H2'	1:N:18:C:C5	2.46	0.50
1:N:892:A:H1'	1:N:1486:G:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:904:U:C6	1:N:905:U:C5	2.99	0.50
1:N:64:G:N1	1:N:69:G:C2	2.80	0.50
1:N:867:G:H2'	1:N:868:C:C6	2.47	0.50
1:N:141:G:C6	1:N:223:A:C6	3.00	0.50
1:N:411:A:C8	1:N:429:U:C5	2.99	0.50
1:N:1500:A:C5	1:N:1501:C:C5	3.00	0.50
1:N:273:U:C4	1:N:274:A:C6	3.00	0.50
1:N:316:C:O2	1:N:338:A:C2	2.65	0.50
1:N:1146:A:C6	1:N:1147:C:C2	2.99	0.50
1:N:373:A:H2'	1:N:374:A:C8	2.47	0.50
1:N:381:C:C5	1:N:382:A:C5	3.00	0.49
1:N:424:G:C6	1:N:425:G:C6	3.00	0.49
1:N:934:C:C5	1:N:1344:C:H2'	2.47	0.49
1:N:160:A:C2	1:N:346:G:N1	2.80	0.49
1:N:516:U:O4	1:N:533:A:C8	2.65	0.49
1:N:1066:C:H3'	1:N:1067:A:C8	2.48	0.49
1:N:64:G:C4	1:N:99:C:C4	3.00	0.49
1:N:1357:A:C4	1:N:1358:U:C2	3.01	0.49
1:N:109:A:C4	1:N:327:A:C2	3.01	0.49
1:N:256:U:H3	1:N:270:A:H61	1.60	0.49
1:N:507:C:H3'	1:N:508:U:H5''	1.94	0.49
1:N:1501:C:C5	1:N:1504:G:C4	2.99	0.49
1:N:1241:G:C8	1:N:1241:G:O5'	2.66	0.49
1:N:1343:G:C5	1:N:1344:C:C5	3.00	0.49
1:N:203:G:H1'	1:N:465:A:H61	1.78	0.49
1:N:585:G:C6	1:N:586:C:C4	3.00	0.49
1:N:768:A:H3'	1:N:769:G:C8	2.47	0.49
1:N:68:G:C4	1:N:69:G:H1'	2.48	0.49
1:N:980:C:C6	1:N:981:U:C5	3.00	0.49
1:N:49:U:C2	1:N:362:G:H1'	2.48	0.49
1:N:283:U:C5	1:N:284:C:C5	3.01	0.49
1:N:1127:G:H22	1:N:1145:A:H2	1.60	0.49
1:N:64:G:H2'	1:N:99:C:H41	1.78	0.49
1:N:713:G:C6	1:N:714:G:C6	3.01	0.49
1:N:1220:G:C6	1:N:1221:G:C5	3.01	0.49
1:N:1423:G:C6	1:N:1424:U:C4	3.01	0.49
1:N:168:G:C8	1:N:168:G:H3'	2.47	0.49
1:N:886:G:C6	1:N:887:G:C5	3.01	0.48
1:N:901:A:C5	1:N:902:G:H1'	2.48	0.48
1:N:949:A:N6	1:N:1232:U:H3	2.10	0.48
1:N:1223:C:H5''	1:N:1224:U:H3'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:136:C:C2	1:N:228:A:C2	3.01	0.48
1:N:494:G:C4	1:N:496:A:C8	3.01	0.48
1:N:773:G:C4	1:N:774:G:H1'	2.48	0.48
1:N:1100:C:H4'	1:N:1102:A:H4'	1.95	0.48
1:N:62:U:N3	1:N:63:C:C4	2.81	0.48
1:N:1051:C:H2'	1:N:1052:U:C6	2.49	0.48
1:N:687:A:C2	1:N:704:A:C6	3.01	0.48
1:N:25:C:H41	1:N:559:A:N6	2.10	0.48
1:N:69:G:H2'	1:N:70:U:C6	2.48	0.48
1:N:503:C:O2	1:N:510:A:C2	2.66	0.48
1:N:585:G:C2	1:N:586:C:C2	3.01	0.48
1:N:788:U:H2'	1:N:789:U:C6	2.48	0.48
1:N:908:A:H2	1:N:1486:G:H21	1.60	0.48
1:N:770:C:C5	1:N:803:G:H5''	2.48	0.48
1:N:1258:G:H2'	1:N:1259:C:C6	2.49	0.48
1:N:57:G:C6	1:N:356:A:N1	2.81	0.48
1:N:602:A:C2	1:N:603:U:C2	3.01	0.48
1:N:953:G:C6	1:N:954:G:C4	3.02	0.48
1:N:301:G:C6	1:N:302:G:C5	3.02	0.48
1:N:364:A:C2	1:N:365:U:N3	2.82	0.48
1:N:506:G:C5	1:N:507:C:C4	3.02	0.48
1:N:807:A:C2	1:N:808:C:C2	3.02	0.48
1:N:320:A:H4'	1:N:1435:G:H21	1.78	0.48
1:N:770:C:H2'	1:N:771:G:C8	2.48	0.48
1:N:1068:G:C6	1:N:1108:G:C6	3.02	0.48
1:N:47:C:C2	1:N:365:U:H5	2.32	0.47
1:N:556:C:C6	1:N:556:C:H3'	2.49	0.47
1:N:834:U:C4	1:N:835:U:C4	3.02	0.47
1:N:1500:A:C6	1:N:1501:C:C4	3.02	0.47
1:N:413:G:C5	1:N:426:U:OP2	2.67	0.47
1:N:1170:A:H2'	1:N:1171:A:O4'	2.15	0.47
1:N:39:G:C4	1:N:498:A:C2	3.03	0.47
1:N:556:C:H3'	1:N:556:C:H6	1.79	0.47
1:N:139:A:C6	1:N:140:U:C4	3.02	0.47
1:N:646:G:C5	1:N:647:C:C5	3.02	0.47
1:N:1371:G:C6	1:N:1372:U:C4	3.02	0.47
1:N:107:G:C5'	1:N:134:G:H21	2.28	0.47
1:N:644:U:H2'	1:N:645:G:C8	2.50	0.47
1:N:1060:U:H3	1:N:1197:A:H61	1.62	0.47
1:N:1049:U:H4'	1:N:1050:G:H5'	1.95	0.47
1:N:1357:A:C6	1:N:1363:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:265:G:H3'	1:N:267:C:C5	2.50	0.47
1:N:342:C:C2	1:N:343:U:C6	3.02	0.47
1:N:1239:A:C5	1:N:1241:G:C2	3.02	0.47
1:N:70:U:C5	1:N:94:G:H2'	2.50	0.47
1:N:584:G:C6	1:N:585:G:C6	3.03	0.47
1:N:955:U:H3	1:N:1225:A:H2	1.59	0.47
1:N:1004:A:C5'	1:N:1024:G:H22	2.28	0.47
1:N:1438:G:C2	1:N:1464:U:C2	3.03	0.47
1:N:669:G:C6	1:N:670:G:C6	3.03	0.47
1:N:772:U:H2'	1:N:773:G:C8	2.50	0.47
1:N:781:A:C2	1:N:802:A:C2	3.03	0.47
1:N:1102:A:C6	1:N:1103:C:C4	3.03	0.47
1:N:1210:C:C5	1:N:1211:U:C5	3.03	0.47
1:N:1366:C:C5	1:N:1367:C:C4	3.03	0.47
1:N:69:G:C6	1:N:70:U:C4	3.03	0.47
1:N:260:G:H2'	1:N:261:U:C6	2.50	0.47
1:N:596:A:N6	1:N:644:U:H3	2.13	0.46
1:N:1368:A:C6	1:N:1369:C:C5	3.03	0.46
1:N:65:A:H4'	1:N:66:A:H5'	1.97	0.46
1:N:68:G:C8	1:N:69:G:C8	3.03	0.46
1:N:199:A:C2	1:N:219:U:O2	2.68	0.46
1:N:449:G:C6	1:N:450:G:C6	3.03	0.46
1:N:673:A:H61	1:N:717:U:H3	1.62	0.46
1:N:934:C:C4	1:N:1344:C:C2	3.04	0.46
1:N:944:G:C5	1:N:945:G:C8	3.04	0.46
1:N:474:G:C5	1:N:475:C:C4	3.03	0.46
1:N:219:U:H2'	1:N:220:G:C8	2.51	0.46
1:N:1123:U:H3	1:N:1150:A:H61	1.62	0.46
1:N:105:G:H2'	1:N:106:C:C6	2.51	0.46
1:N:295:C:C4	1:N:296:U:C4	3.03	0.46
1:N:474:G:C6	1:N:475:C:N3	2.84	0.46
1:N:1511:G:C6	1:N:1525:G:C6	3.03	0.46
1:N:301:G:C6	1:N:302:G:C6	3.03	0.46
1:N:840:C:C1'	1:N:843:U:H3	2.27	0.46
1:N:1530:G:C4	1:N:1531:A:C2	3.04	0.46
1:N:71:A:H61	1:N:99:C:H1'	1.79	0.46
1:N:143:A:H2	1:N:220:G:H1	1.63	0.46
1:N:475:C:H2'	1:N:476:U:H6	1.80	0.46
1:N:891:U:C5	1:N:906:A:C6	3.03	0.46
1:N:135:C:H42	1:N:228:A:H61	1.64	0.46
1:N:143:A:N3	1:N:143:A:H2'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:218:U:H2'	1:N:219:U:O4'	2.16	0.46
1:N:253:A:H2'	1:N:254:G:C8	2.51	0.46
1:N:475:C:H2'	1:N:476:U:C6	2.51	0.46
1:N:676:A:H2'	1:N:677:U:C6	2.51	0.46
1:N:830:G:C6	1:N:831:A:C5	3.04	0.46
1:N:1181:G:O2'	1:N:1182:G:C5	2.67	0.46
1:N:1415:G:C2	1:N:1416:G:C5	3.04	0.46
1:N:1083:U:C4	1:N:1084:G:C2	3.04	0.46
1:N:199:A:C4	1:N:200:G:C8	3.04	0.45
1:N:236:A:C6	1:N:237:G:C6	3.04	0.45
1:N:558:G:H2'	1:N:559:A:C2	2.51	0.45
1:N:768:A:H3'	1:N:769:G:H8	1.81	0.45
1:N:1276:G:C5	1:N:1277:C:C4	3.04	0.45
1:N:1523:G:C5	1:N:1524:C:C5	3.03	0.45
1:N:158:G:H2'	1:N:159:G:H5''	1.98	0.45
1:N:738:C:C4	1:N:739:C:C4	3.04	0.45
1:N:804:U:C5	1:N:805:C:C4	3.04	0.45
1:N:1369:C:H2'	1:N:1370:G:C8	2.50	0.45
1:N:202:G:H1'	1:N:468:A:H8	1.81	0.45
1:N:272:C:C4	1:N:273:U:C4	3.04	0.45
1:N:486:U:C6	1:N:486:U:H5''	2.51	0.45
1:N:1095:U:C4	1:N:1096:C:C4	3.05	0.45
1:N:1225:A:H2'	1:N:1226:C:C6	2.52	0.45
1:N:1434:A:C6	1:N:1435:G:C6	3.05	0.45
1:N:142:G:C2	1:N:222:C:C6	3.04	0.45
1:N:438:U:C5	1:N:494:G:C8	3.04	0.45
1:N:998:C:H42	1:N:1042:A:N6	2.14	0.45
1:N:1436:U:H2'	1:N:1437:A:C8	2.51	0.45
1:N:243:A:C2	1:N:282:A:N6	2.85	0.45
1:N:322:C:H3'	1:N:323:U:C6	2.51	0.45
1:N:406:G:C6	1:N:407:U:C4	3.05	0.45
1:N:1025:U:N3	1:N:1031:C:C2	2.85	0.45
1:N:1154:G:C2	1:N:1155:A:C8	3.05	0.45
1:N:897:C:H1'	1:N:903:G:N2	2.32	0.45
1:N:934:C:C2	1:N:1344:C:C4	3.04	0.45
1:N:1244:G:C6	1:N:1294:G:C6	3.05	0.45
1:N:1299:A:C2	1:N:1301:U:C2	3.05	0.45
1:N:186:C:H2'	1:N:187:G:O4'	2.17	0.45
1:N:780:A:C2	1:N:803:G:N1	2.84	0.45
1:N:109:A:C5	1:N:326:G:C5	3.05	0.45
1:N:362:G:N2	1:N:364:A:H3'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:943:U:C5	1:N:944:G:C6	3.05	0.45
1:N:1084:G:H5''	1:N:1099:G:H22	1.80	0.45
1:N:1357:A:H2'	1:N:1358:U:C2	2.52	0.45
1:N:177:G:H2'	1:N:178:C:H5'	1.98	0.45
1:N:484:G:C6	1:N:486:U:C6	3.05	0.45
1:N:544:G:C2	1:N:545:C:C2	3.05	0.45
1:N:773:G:C5	1:N:774:G:H1'	2.52	0.45
1:N:1177:G:C5	1:N:1178:G:C5	3.05	0.45
1:N:11:G:C5	1:N:12:U:C4	3.05	0.44
1:N:756:C:C4	1:N:757:U:C4	3.05	0.44
1:N:904:U:C5	1:N:905:U:C4	3.05	0.44
1:N:64:G:H2'	1:N:99:C:N4	2.32	0.44
1:N:171:A:C5	1:N:172:A:C6	3.05	0.44
1:N:243:A:H4'	1:N:244:U:H5''	1.99	0.44
1:N:344:A:H4'	1:N:345:C:OP2	2.18	0.44
1:N:933:G:C2	1:N:1385:G:C2	3.05	0.44
1:N:1072:G:C6	1:N:1073:U:N3	2.85	0.44
1:N:61:G:H22	1:N:105:G:N2	2.14	0.44
1:N:198:G:C6	1:N:220:G:C4	3.05	0.44
1:N:447:G:H3'	1:N:447:G:C8	2.52	0.44
1:N:18:C:C6	1:N:18:C:H3'	2.52	0.44
1:N:295:C:N3	1:N:296:U:C4	2.85	0.44
1:N:737:C:H2'	1:N:738:C:C6	2.52	0.44
1:N:1006:G:N2	1:N:1024:G:H1'	2.31	0.44
1:N:32:A:H4'	1:N:48:C:H42	1.81	0.44
1:N:184:G:C6	1:N:194:C:C4	3.05	0.44
1:N:362:G:N3	1:N:364:A:C8	2.86	0.44
1:N:979:C:C5	1:N:980:C:C6	3.06	0.44
1:N:405:U:C5'	1:N:495:A:C2	3.01	0.44
1:N:625:U:H2'	1:N:626:G:C8	2.52	0.44
1:N:952:U:O2	1:N:969:A:C2	2.71	0.44
1:N:22:G:H5''	1:N:561:U:C2	2.53	0.44
1:N:980:C:H3'	1:N:981:U:H6	1.83	0.44
1:N:1104:G:C6	1:N:1105:A:C6	3.06	0.44
1:N:1371:G:C5	1:N:1372:U:C5	3.06	0.44
1:N:24:U:C2	1:N:25:C:C5	3.06	0.44
1:N:301:G:C2	1:N:302:G:C4	3.05	0.44
1:N:506:G:C6	1:N:507:C:N3	2.86	0.44
1:N:661:G:H1'	1:N:745:G:H22	1.83	0.44
1:N:1068:G:N7	1:N:1094:G:C8	2.86	0.44
1:N:145:G:N2	1:N:178:C:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:588:G:C6	1:N:753:A:C8	3.06	0.43
1:N:832:G:C5	1:N:855:U:N3	2.86	0.43
1:N:1345:U:C4	1:N:1377:A:C2	3.06	0.43
1:N:1355:G:C4	1:N:1368:A:C2	3.05	0.43
1:N:240:G:C6	1:N:241:G:C5	3.05	0.43
1:N:441:A:C4	1:N:497:G:C6	3.06	0.43
1:N:606:G:H3'	1:N:607:A:C5'	2.48	0.43
1:N:749:A:H2'	1:N:750:C:C6	2.53	0.43
1:N:803:G:C5	1:N:804:U:C5	3.06	0.43
1:N:1241:G:C2	1:N:1242:G:C5	3.06	0.43
1:N:1269:A:C2	1:N:1313:U:O4'	2.71	0.43
1:N:1287:A:C6	1:N:1288:A:C6	3.07	0.43
1:N:1481:U:C4	1:N:1482:G:C5	3.06	0.43
1:N:14:U:O2	1:N:16:A:C5	2.71	0.43
1:N:335:C:H2'	1:N:336:A:C8	2.53	0.43
1:N:1056:U:H3	1:N:1204:A:N6	2.17	0.43
1:N:292:G:C5	1:N:293:G:H1'	2.53	0.43
1:N:327:A:C4	1:N:329:A:C8	3.05	0.43
1:N:519:C:C4	1:N:520:A:C6	3.06	0.43
1:N:575:G:C6	1:N:821:G:C5	3.06	0.43
1:N:584:G:C6	1:N:585:G:C5	3.07	0.43
1:N:1287:A:H2'	1:N:1288:A:C8	2.53	0.43
1:N:52:C:C6	1:N:52:C:H3'	2.53	0.43
1:N:716:A:C2	1:N:717:U:C2	3.06	0.43
1:N:761:G:C5	1:N:762:U:C4	3.06	0.43
1:N:73:C:C6	1:N:73:C:H5''	2.54	0.43
1:N:73:C:H5'	1:N:91:U:OP1	2.19	0.43
1:N:411:A:C4	1:N:429:U:C4	3.07	0.43
1:N:533:A:C2	1:N:535:A:H8	2.37	0.43
1:N:125:U:H2'	1:N:126:G:O4'	2.19	0.43
1:N:243:A:H61	1:N:281:G:H1'	1.83	0.43
1:N:620:C:C5	1:N:621:A:C5	3.06	0.43
1:N:668:G:C5	1:N:669:G:C5	3.06	0.43
1:N:1074:G:C5	1:N:1075:U:C4	3.07	0.43
1:N:1257:A:H3'	1:N:1258:G:H5'	1.99	0.43
1:N:1296:C:H3'	1:N:1297:G:C8	2.52	0.43
1:N:127:G:C5	1:N:128:G:C8	3.07	0.43
1:N:259:G:C4	1:N:260:G:C8	3.07	0.43
1:N:318:G:O2'	1:N:1468:A:C5'	2.66	0.43
1:N:482:A:C5	1:N:483:C:C2	3.06	0.43
1:N:687:A:N3	1:N:688:G:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1131:G:C6	1:N:1132:C:C5	3.06	0.43
1:N:1266:G:N2	1:N:1269:A:C8	2.79	0.43
1:N:1495:U:N3	1:N:1496:C:C4	2.87	0.43
1:N:94:G:H4'	1:N:95:C:H5''	2.01	0.43
1:N:141:G:N1	1:N:223:A:C5	2.87	0.43
1:N:321:A:H2'	1:N:322:C:C6	2.54	0.43
1:N:556:C:C6	1:N:556:C:C3'	3.02	0.43
1:N:585:G:N1	1:N:586:C:C2	2.86	0.43
1:N:657:U:H2'	1:N:658:C:O4'	2.19	0.43
1:N:711:G:H2'	1:N:712:A:C8	2.54	0.43
1:N:150:U:C5	1:N:170:U:C5	3.07	0.43
1:N:701:U:C5'	1:N:703:G:H5'	2.49	0.43
1:N:980:C:C6	1:N:981:U:C6	3.07	0.43
1:N:985:C:H2'	1:N:986:U:O4'	2.18	0.43
1:N:179:A:N6	1:N:195:A:H8	2.16	0.42
1:N:452:A:C5	1:N:453:G:C4	3.07	0.42
1:N:1084:G:H1'	1:N:1103:C:H41	1.84	0.42
1:N:414:A:H8	1:N:428:G:H22	1.65	0.42
1:N:627:G:H2'	1:N:628:G:C8	2.54	0.42
1:N:646:G:C6	1:N:647:C:C4	3.06	0.42
1:N:1025:U:H2'	1:N:1031:C:C5	2.53	0.42
1:N:1089:G:H2'	1:N:1090:U:O4'	2.19	0.42
1:N:135:C:N4	1:N:228:A:H61	2.18	0.42
1:N:154:U:H2'	1:N:155:A:C8	2.55	0.42
1:N:301:G:H2'	1:N:302:G:O4'	2.20	0.42
1:N:557:G:C6	1:N:558:G:N1	2.87	0.42
1:N:862:C:H1'	1:N:874:G:H5''	2.01	0.42
1:N:1299:A:C2	1:N:1301:U:N3	2.87	0.42
1:N:1266:G:N2	1:N:1268:G:H3'	2.35	0.42
1:N:240:G:C6	1:N:241:G:C6	3.08	0.42
1:N:737:C:H2'	1:N:738:C:O4'	2.19	0.42
1:N:1305:G:H22	1:N:1331:G:H2'	1.83	0.42
1:N:1360:A:H3'	1:N:1361:G:C8	2.55	0.42
1:N:1484:C:H2'	1:N:1485:U:C6	2.54	0.42
1:N:290:C:H2'	1:N:291:U:H6	1.85	0.42
1:N:309:A:C6	1:N:310:G:C5	3.08	0.42
1:N:339:C:C4	1:N:340:U:C4	3.07	0.42
1:N:1127:G:C6	1:N:1128:C:C4	3.08	0.42
1:N:1253:G:N2	1:N:1285:A:H62	2.17	0.42
1:N:381:C:H3'	1:N:382:A:C8	2.54	0.42
1:N:425:G:C6	1:N:426:U:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:466:A:H2'	1:N:467:U:C2	2.54	0.42
1:N:92:U:C2	1:N:93:U:C6	3.07	0.42
1:N:115:G:C6	1:N:289:G:C6	3.08	0.42
1:N:369:G:C2	1:N:393:A:C2	3.08	0.42
1:N:780:A:C2	1:N:803:G:C6	3.07	0.42
1:N:914:A:H8	1:N:914:A:H5''	1.84	0.42
1:N:1332:A:C6	1:N:1333:A:C6	3.07	0.42
1:N:57:G:N1	1:N:356:A:C2	2.88	0.42
1:N:251:G:C6	1:N:266:G:C6	3.08	0.42
1:N:537:G:C6	1:N:538:G:C6	3.08	0.42
1:N:582:C:C2	1:N:760:G:N1	2.88	0.42
1:N:1302:C:H3'	1:N:1303:C:C5'	2.50	0.42
1:N:98:A:H2'	1:N:99:C:O4'	2.20	0.42
1:N:108:G:C4	1:N:109:A:N1	2.88	0.42
1:N:139:A:C5	1:N:140:U:C5	3.08	0.42
1:N:301:G:N1	1:N:302:G:C4	2.88	0.42
1:N:362:G:C2	1:N:364:A:H3'	2.55	0.42
1:N:594:U:C4	1:N:595:A:N6	2.87	0.42
1:N:1005:A:C8	1:N:1006:G:C8	3.08	0.42
1:N:121:U:C6	1:N:122:G:C8	3.08	0.41
1:N:215:C:C4	1:N:216:U:C2	3.08	0.41
1:N:1049:U:C5	1:N:1202:U:H5''	2.55	0.41
1:N:297:G:H22	1:N:299:G:H3'	1.85	0.41
1:N:189:A:H2'	1:N:190:A:H5'	2.02	0.41
1:N:579:A:C6	1:N:763:G:C6	3.08	0.41
1:N:751:U:O4	1:N:752:G:C2	2.73	0.41
1:N:830:G:C6	1:N:831:A:C6	3.08	0.41
1:N:954:G:C6	1:N:955:U:C4	3.08	0.41
1:N:1060:U:H3	1:N:1197:A:N6	2.18	0.41
1:N:1433:A:C1'	1:N:1468:A:C2	3.04	0.41
1:N:460:A:C2	1:N:462:G:C8	3.08	0.41
1:N:941:G:C6	1:N:1343:G:C6	3.08	0.41
1:N:1177:G:C6	1:N:1178:G:C2	3.08	0.41
1:N:1213:A:H2'	1:N:1215:G:C8	2.55	0.41
1:N:1317:C:C5	1:N:1318:A:C6	3.08	0.41
1:N:1360:A:H3'	1:N:1361:G:H8	1.84	0.41
1:N:143:A:H5'	1:N:144:G:H5'	2.03	0.41
1:N:157:U:O2	1:N:165:G:C2	2.73	0.41
1:N:347:G:N3	1:N:348:G:H1'	2.36	0.41
1:N:628:G:C4	1:N:629:A:C8	3.08	0.41
1:N:640:A:C2	1:N:642:A:N6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1083:U:C6	1:N:1084:G:C5	3.08	0.41
1:N:1157:A:C2	1:N:1181:G:C4	3.08	0.41
1:N:724:G:H5''	1:N:724:G:H8	1.86	0.41
1:N:923:A:C2	1:N:924:C:C2	3.08	0.41
1:N:354:G:C6	1:N:355:C:C4	3.08	0.41
1:N:420:U:C5	1:N:422:C:H1'	2.55	0.41
1:N:516:U:O2	1:N:520:A:C2	2.72	0.41
1:N:678:U:H3	1:N:712:A:H61	1.69	0.41
1:N:1220:G:C2	1:N:1221:G:C4	3.09	0.41
1:N:1254:A:C2	1:N:1255:G:C4	3.09	0.41
1:N:59:A:H1'	1:N:354:G:C2	2.55	0.41
1:N:200:G:C2	1:N:218:U:C2	3.09	0.41
1:N:232:G:C5	1:N:233:C:C5	3.09	0.41
1:N:338:A:C8	1:N:339:C:C6	3.09	0.41
1:N:462:G:O6	1:N:468:A:H5''	2.21	0.41
1:N:700:G:H2'	1:N:701:U:O4'	2.20	0.41
1:N:998:C:N4	1:N:1042:A:H61	2.15	0.41
1:N:1148:U:C6	1:N:1149:C:C4	3.09	0.41
1:N:109:A:C6	1:N:326:G:C6	3.09	0.41
1:N:335:C:H2'	1:N:336:A:O4'	2.20	0.41
1:N:594:U:N3	1:N:595:A:C6	2.88	0.41
1:N:632:U:C5	1:N:633:G:C4	3.09	0.41
1:N:635:A:C6	1:N:636:U:N3	2.89	0.41
1:N:687:A:N1	1:N:704:A:C5	2.89	0.41
1:N:768:A:H4'	1:N:1524:C:H1'	2.03	0.41
1:N:917:G:C6	1:N:918:A:C6	3.08	0.41
1:N:920:U:H2'	1:N:921:U:C6	2.56	0.41
1:N:1074:G:C6	1:N:1075:U:N3	2.89	0.41
1:N:1365:G:C6	1:N:1366:C:C4	3.09	0.41
1:N:1400:C:H3'	1:N:1401:G:H5'	2.01	0.41
1:N:1484:C:N3	1:N:1485:U:C2	2.88	0.41
1:N:64:G:C2	1:N:69:G:N1	2.89	0.41
1:N:141:G:N1	1:N:223:A:C6	2.89	0.41
1:N:146:G:C2	1:N:147:G:C8	3.09	0.41
1:N:215:C:C5	1:N:216:U:C4	3.09	0.41
1:N:272:C:H2'	1:N:273:U:C6	2.56	0.41
1:N:381:C:C5	1:N:382:A:C6	3.08	0.41
1:N:768:A:H2'	1:N:769:G:O4'	2.21	0.41
1:N:828:U:H5'	1:N:870:U:C4	2.56	0.41
1:N:1205:U:H2'	1:N:1206:G:C8	2.56	0.41
1:N:109:A:C6	1:N:327:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:150:U:C2	1:N:151:A:C8	3.09	0.40
1:N:265:G:C2'	1:N:266:G:H5'	2.51	0.40
1:N:597:G:C8	1:N:598:U:C5	3.09	0.40
1:N:895:G:C6	1:N:896:C:N3	2.89	0.40
1:N:1047:G:C2	1:N:1213:A:H2	2.39	0.40
1:N:59:A:C2	1:N:331:G:C5	3.10	0.40
1:N:169:C:C5	1:N:170:U:C5	3.09	0.40
1:N:215:C:C4	1:N:216:U:N3	2.90	0.40
1:N:829:G:N1	1:N:858:G:H1'	2.37	0.40
1:N:984:C:H2'	1:N:985:C:C6	2.57	0.40
1:N:5:U:H3	1:N:613:C:H5'	1.86	0.40
1:N:198:G:C6	1:N:199:A:C6	3.09	0.40
1:N:208:U:C6	1:N:210:C:C6	3.09	0.40
1:N:668:G:C5	1:N:669:G:C6	3.10	0.40
1:N:811:C:H2'	1:N:812:G:H5'	2.03	0.40
1:N:1075:U:H2'	1:N:1076:U:O4'	2.21	0.40
1:N:1095:U:C2	1:N:1096:C:C2	3.10	0.40
1:N:1139:G:N2	1:N:1141:C:C4	2.89	0.40
1:N:1176:A:N6	1:N:1182:G:H1	2.19	0.40
1:N:1219:A:C2	1:N:1220:G:C4	3.09	0.40
1:N:1332:A:H3'	1:N:1333:A:H8	1.86	0.40
1:N:1343:G:C6	1:N:1344:C:N3	2.89	0.40
1:N:202:G:H1'	1:N:468:A:C8	2.57	0.40
1:N:581:G:C5	1:N:758:C:C5	3.09	0.40
1:N:627:G:H2'	1:N:628:G:H8	1.87	0.40
1:N:781:A:C8	1:N:782:A:C8	3.09	0.40
1:N:1133:G:N1	1:N:1134:G:C5	2.90	0.40
1:N:1170:A:C5	1:N:1171:A:C4	3.10	0.40
1:N:1447:A:H3'	1:N:1448:C:H5'	2.04	0.40
1:N:473:U:H2'	1:N:474:G:O4'	2.21	0.40
1:N:898:G:C2	1:N:902:G:C5	3.10	0.40
1:N:946:A:H2'	1:N:947:G:C8	2.56	0.40
1:N:1047:G:C2	1:N:1213:A:C2	3.09	0.40
1:N:1052:U:C2	1:N:1207:G:N1	2.89	0.40
1:N:1213:A:C5	1:N:1215:G:C4	3.10	0.40
1:N:1519:A:N3	1:N:1519:A:H2'	2.37	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	N	1532/1533 (99%)	472 (30%)	155 (10%)

All (472) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	3	A
1	N	4	U
1	N	5	U
1	N	6	G
1	N	8	A
1	N	9	G
1	N	13	U
1	N	14	U
1	N	22	G
1	N	31	G
1	N	32	A
1	N	39	G
1	N	47	C
1	N	48	C
1	N	49	U
1	N	50	A
1	N	51	A
1	N	52	C
1	N	59	A
1	N	60	A
1	N	61	G
1	N	65	A
1	N	66	A
1	N	70	U
1	N	71	A

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Mol	Chain	Res	Type
1	N	72	A
1	N	73	C
1	N	74	A
1	N	75	G
1	N	76	G
1	N	77	A
1	N	79	G
1	N	80	A
1	N	81	A
1	N	82	G
1	N	83	C
1	N	85	U
1	N	87	C
1	N	88	U
1	N	89	U
1	N	90	C
1	N	91	U
1	N	92	U
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	121	U
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	273	U
1	N	274	A
1	N	275	G
1	N	276	G
1	N	279	A
1	N	281	G
1	N	285	C

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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	371	A
1	N	372	C
1	N	373	A
1	N	374	A
1	N	384	G
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	423	G
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	439	U

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Mol	Chain	Res	Type
1	N	441	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	537	G
1	N	548	G
1	N	549	C
1	N	556	C
1	N	559	A
1	N	560	A

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Mol	Chain	Res	Type
1	N	561	U
1	N	562	U
1	N	563	A
1	N	564	C
1	N	566	G
1	N	567	G
1	N	572	A
1	N	573	A
1	N	574	A
1	N	575	G
1	N	576	C
1	N	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	633	G
1	N	642	A
1	N	649	A
1	N	653	U
1	N	665	A
1	N	666	G
1	N	694	A
1	N	702	A
1	N	703	G
1	N	717	U
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	748	G
1	N	754	C
1	N	755	G
1	N	767	A

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Mol	Chain	Res	Type
1	N	774	G
1	N	776	G
1	N	777	A
1	N	787	A
1	N	788	U
1	N	792	A
1	N	793	U
1	N	794	A
1	N	812	G
1	N	813	U
1	N	815	A
1	N	816	A
1	N	817	C
1	N	818	G
1	N	820	U
1	N	821	G
1	N	828	U
1	N	829	G
1	N	832	G
1	N	843	U
1	N	844	G
1	N	846	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	936	C
1	N	942	G
1	N	944	G
1	N	960	U
1	N	961	U

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Mol	Chain	Res	Type
1	N	966	G
1	N	967	C
1	N	968	A
1	N	969	A
1	N	970	C
1	N	971	G
1	N	972	C
1	N	974	A
1	N	975	A
1	N	976	G
1	N	977	A
1	N	982	U
1	N	983	A
1	N	989	U
1	N	992	U
1	N	993	G
1	N	1003	G
1	N	1004	A
1	N	1008	U
1	N	1014	A
1	N	1017	U
1	N	1018	G
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	1052	U
1	N	1053	G
1	N	1054	C
1	N	1055	A
1	N	1064	G
1	N	1065	U
1	N	1066	C
1	N	1079	G
1	N	1085	U
1	N	1086	U

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Mol	Chain	Res	Type
1	N	1087	G
1	N	1088	G
1	N	1091	U
1	N	1092	A
1	N	1094	G
1	N	1095	U
1	N	1100	C
1	N	1101	A
1	N	1102	A
1	N	1104	G
1	N	1111	A
1	N	1113	C
1	N	1124	G
1	N	1125	U
1	N	1126	U
1	N	1127	G
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	1143	G
1	N	1144	G
1	N	1145	A
1	N	1151	A
1	N	1152	A
1	N	1158	C
1	N	1159	U
1	N	1160	G
1	N	1161	C
1	N	1167	A
1	N	1168	U
1	N	1169	A
1	N	1181	G
1	N	1182	G
1	N	1185	G
1	N	1186	G

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Mol	Chain	Res	Type
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	1194	U
1	N	1196	A
1	N	1197	A
1	N	1198	G
1	N	1200	C
1	N	1201	A
1	N	1202	U
1	N	1211	U
1	N	1213	A
1	N	1223	C
1	N	1224	U
1	N	1225	A
1	N	1226	C
1	N	1227	A
1	N	1228	C
1	N	1229	A
1	N	1238	A
1	N	1239	A
1	N	1240	U
1	N	1241	G
1	N	1250	A
1	N	1252	A
1	N	1256	A
1	N	1257	A
1	N	1258	G
1	N	1275	A
1	N	1278	G
1	N	1279	G
1	N	1280	A
1	N	1281	C
1	N	1282	C
1	N	1283	U
1	N	1286	U
1	N	1287	A
1	N	1293	C
1	N	1297	G

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Mol	Chain	Res	Type
1	N	1298	U
1	N	1299	A
1	N	1300	G
1	N	1303	C
1	N	1304	G
1	N	1305	G
1	N	1308	U
1	N	1315	U
1	N	1316	G
1	N	1320	C
1	N	1322	C
1	N	1323	G
1	N	1332	A
1	N	1336	C
1	N	1337	G
1	N	1338	G
1	N	1339	A
1	N	1341	U
1	N	1346	A
1	N	1348	U
1	N	1349	A
1	N	1353	G
1	N	1358	U
1	N	1359	C
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1365	G
1	N	1371	G
1	N	1380	U
1	N	1381	U
1	N	1394	A
1	N	1396	A
1	N	1397	C
1	N	1398	A
1	N	1399	C
1	N	1400	C
1	N	1406	U
1	N	1432	G
1	N	1433	A
1	N	1440	U
1	N	1441	A

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Mol	Chain	Res	Type
1	N	1446	A
1	N	1448	C
1	N	1452	C
1	N	1453	G
1	N	1456	A
1	N	1457	G
1	N	1469	C
1	N	1470	U
1	N	1476	A
1	N	1492	A
1	N	1493	A
1	N	1494	G
1	N	1497	G
1	N	1498	U
1	N	1499	A
1	N	1502	A
1	N	1503	A
1	N	1505	G
1	N	1506	U
1	N	1507	A
1	N	1517	G
1	N	1520	C
1	N	1529	G
1	N	1530	G
1	N	1531	A
1	N	1533	C
1	N	1534	A

All (155) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	N	5	U
1	N	7	A
1	N	13	U
1	N	30	U
1	N	47	C
1	N	51	A
1	N	60	A
1	N	65	A
1	N	70	U
1	N	71	A
1	N	73	C

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Mol	Chain	Res	Type
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	134	G
1	N	159	G
1	N	167	A
1	N	168	G
1	N	178	C
1	N	181	A
1	N	197	A
1	N	198	G
1	N	204	G
1	N	210	C
1	N	243	A
1	N	246	A
1	N	251	G
1	N	266	G
1	N	267	C
1	N	274	A
1	N	275	G
1	N	279	A
1	N	280	C
1	N	305	G
1	N	327	A
1	N	328	C
1	N	331	G
1	N	344	A
1	N	346	G
1	N	351	G
1	N	366	A
1	N	372	C
1	N	412	A
1	N	423	G

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Mol	Chain	Res	Type
1	N	428	G
1	N	429	U
1	N	438	U
1	N	451	A
1	N	463	U
1	N	467	U
1	N	481	G
1	N	484	G
1	N	485	U
1	N	486	U
1	N	495	A
1	N	496	A
1	N	499	A
1	N	500	G
1	N	508	U
1	N	511	C
1	N	531	U
1	N	532	A
1	N	535	A
1	N	547	A
1	N	548	G
1	N	559	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	637	C
1	N	641	U
1	N	686	U
1	N	717	U
1	N	720	C
1	N	721	G
1	N	723	U
1	N	754	C
1	N	792	A
1	N	817	C
1	N	820	U
1	N	843	U
1	N	870	U
1	N	884	U
1	N	913	A
1	N	934	C
1	N	960	U

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Mol	Chain	Res	Type
1	N	966	G
1	N	974	A
1	N	982	U
1	N	991	U
1	N	993	G
1	N	1041	G
1	N	1049	U
1	N	1053	G
1	N	1064	G
1	N	1066	C
1	N	1078	U
1	N	1085	U
1	N	1087	G
1	N	1094	G
1	N	1101	A
1	N	1129	C
1	N	1136	C
1	N	1151	A
1	N	1152	A
1	N	1156	G
1	N	1167	A
1	N	1168	U
1	N	1185	G
1	N	1190	G
1	N	1191	A
1	N	1193	G
1	N	1197	A
1	N	1201	A
1	N	1224	U
1	N	1228	C
1	N	1239	A
1	N	1263	C
1	N	1282	C
1	N	1283	U
1	N	1285	A
1	N	1299	A
1	N	1303	C
1	N	1316	G
1	N	1319	A
1	N	1331	G
1	N	1336	C
1	N	1337	G

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Mol	Chain	Res	Type
1	N	1338	G
1	N	1345	U
1	N	1348	U
1	N	1358	U
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1380	U
1	N	1396	A
1	N	1399	C
1	N	1432	G
1	N	1477	U
1	N	1492	A
1	N	1498	U
1	N	1502	A
1	N	1506	U
1	N	1530	G
1	N	1533	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

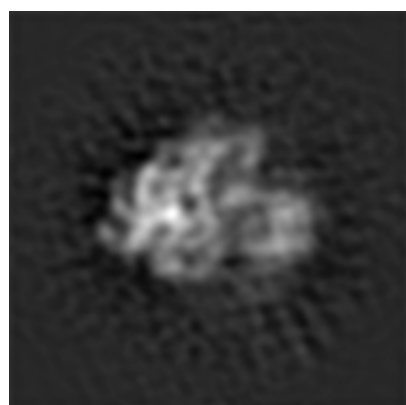
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5507. These allow visual inspection of the internal detail of the map and identification of artifacts.

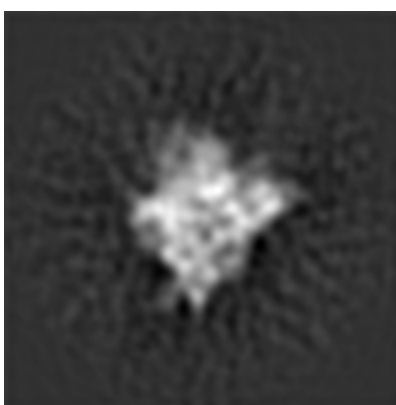
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

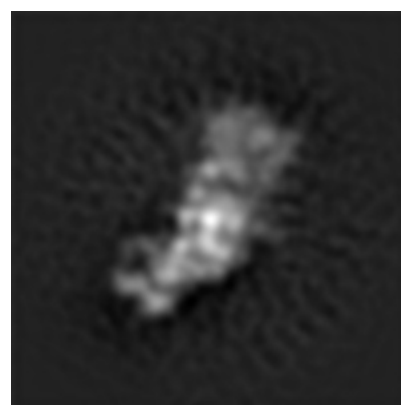
6.1.1 Primary map



X



Y

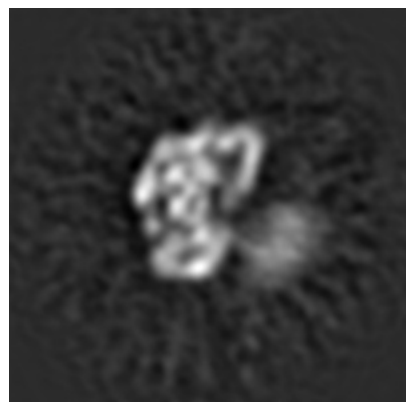


Z

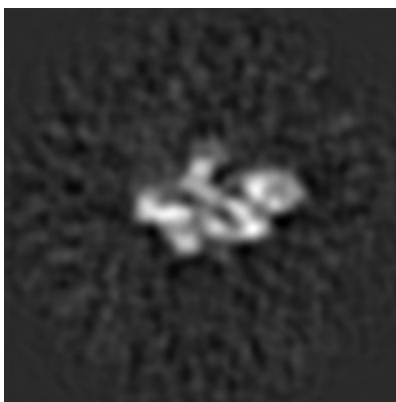
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

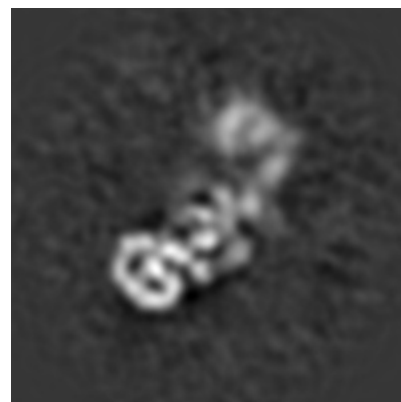
6.2.1 Primary map



X Index: 62



Y Index: 62

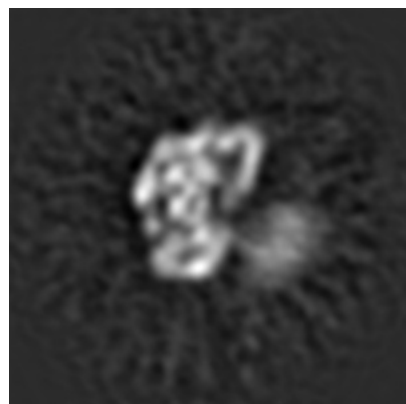


Z Index: 62

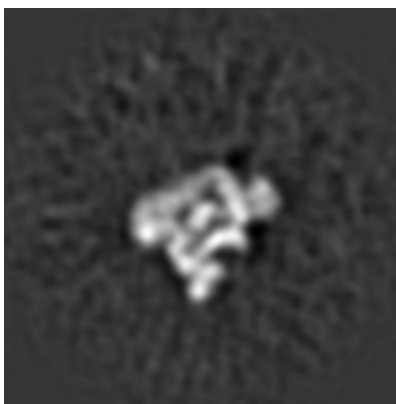
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

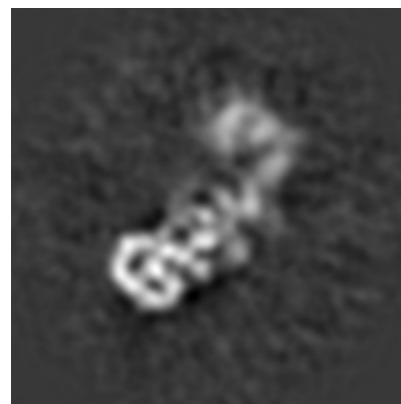
6.3.1 Primary map



X Index: 62



Y Index: 51

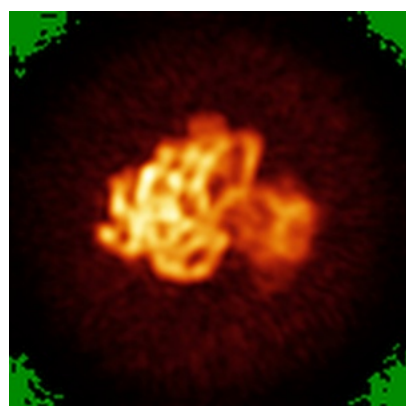


Z Index: 61

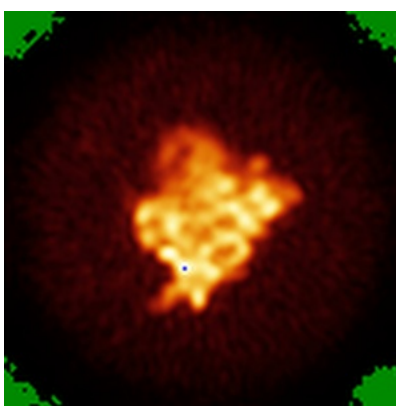
The images above show the largest variance slices of the map in three orthogonal directions.

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

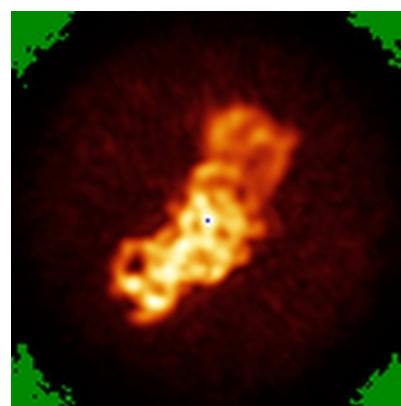
6.4.1 Primary map



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

This section was not generated.

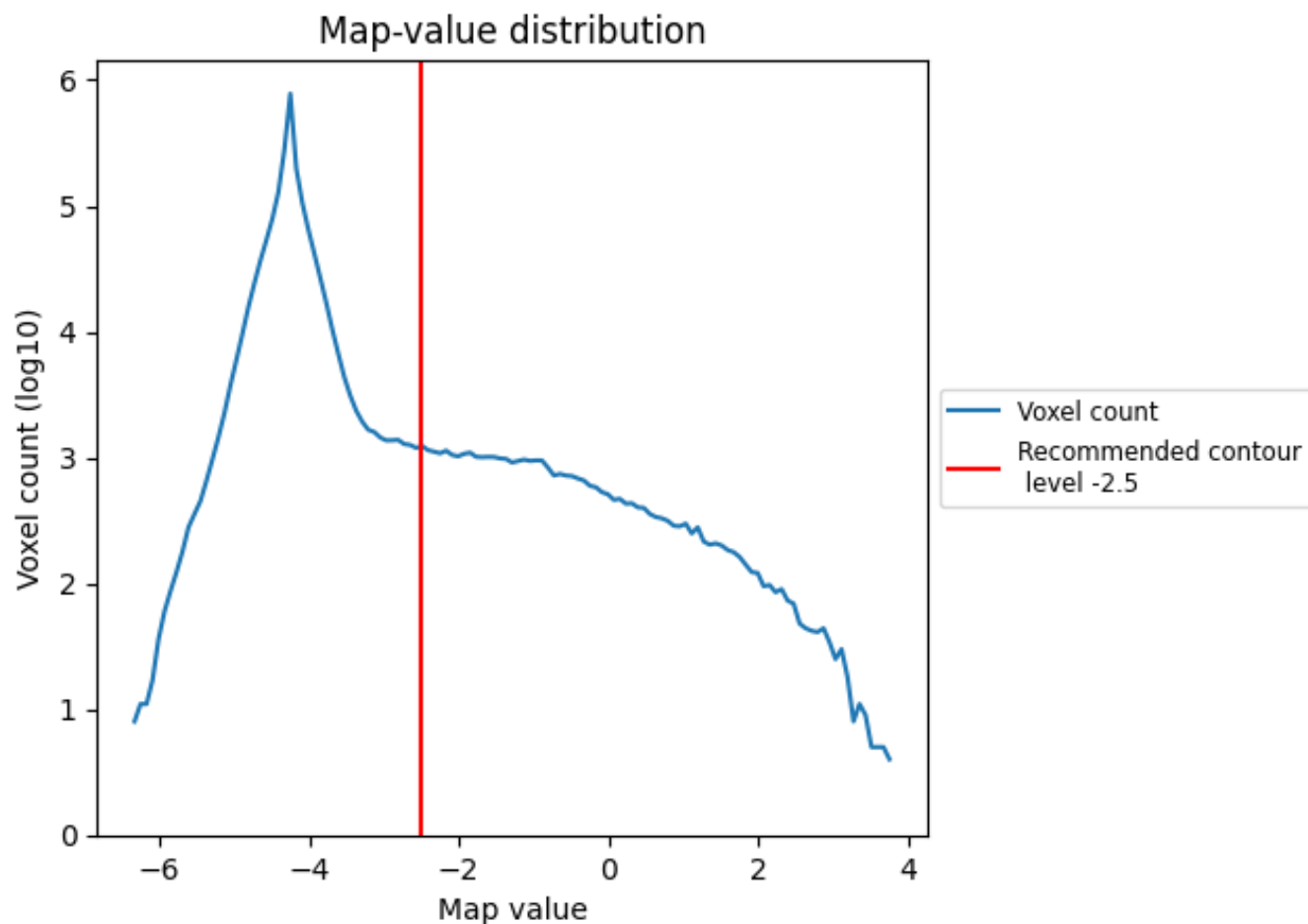
6.6 Mask visualisation

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

7 Map analysis [i](#)

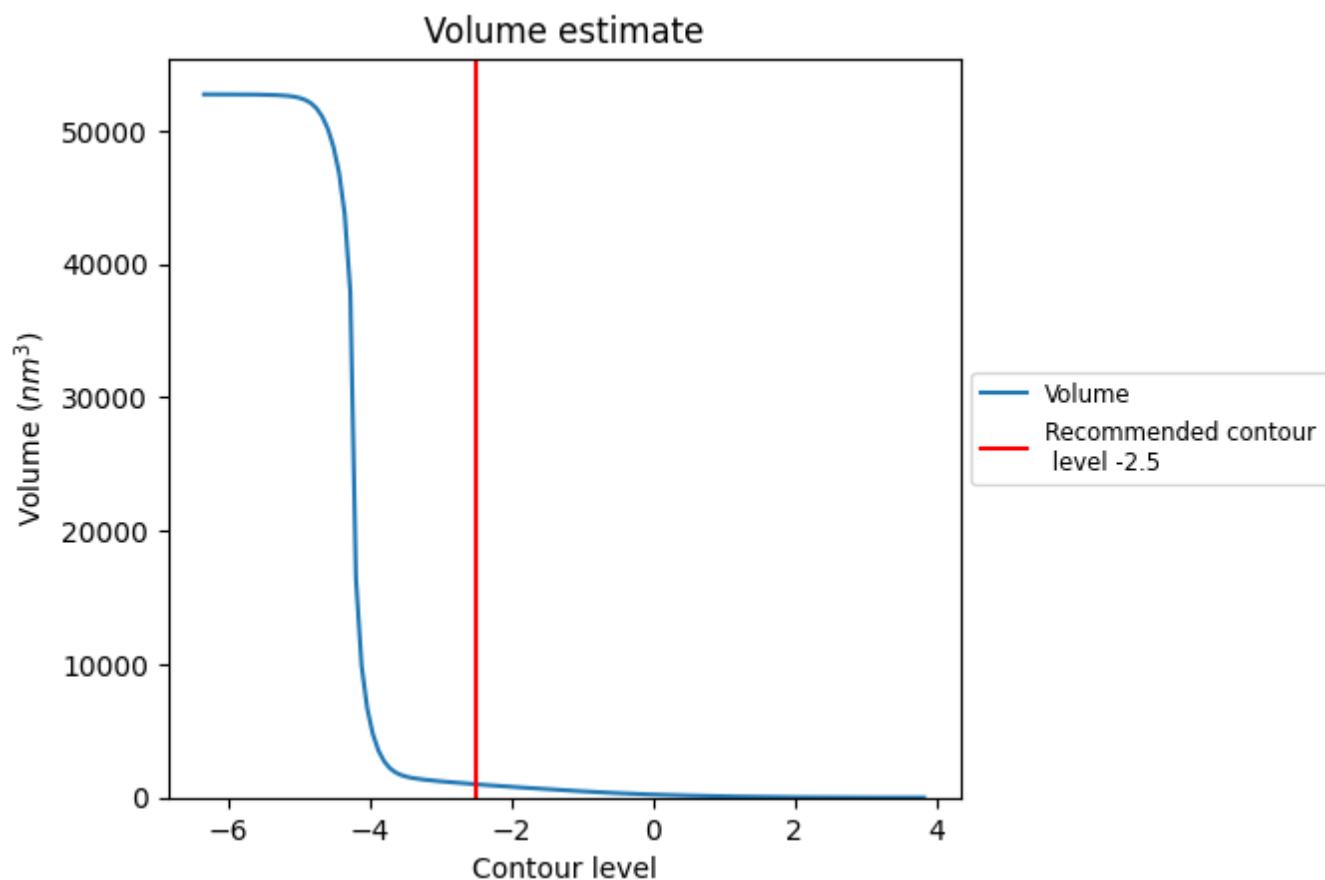
This section contains the results of statistical analysis of the map.

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.

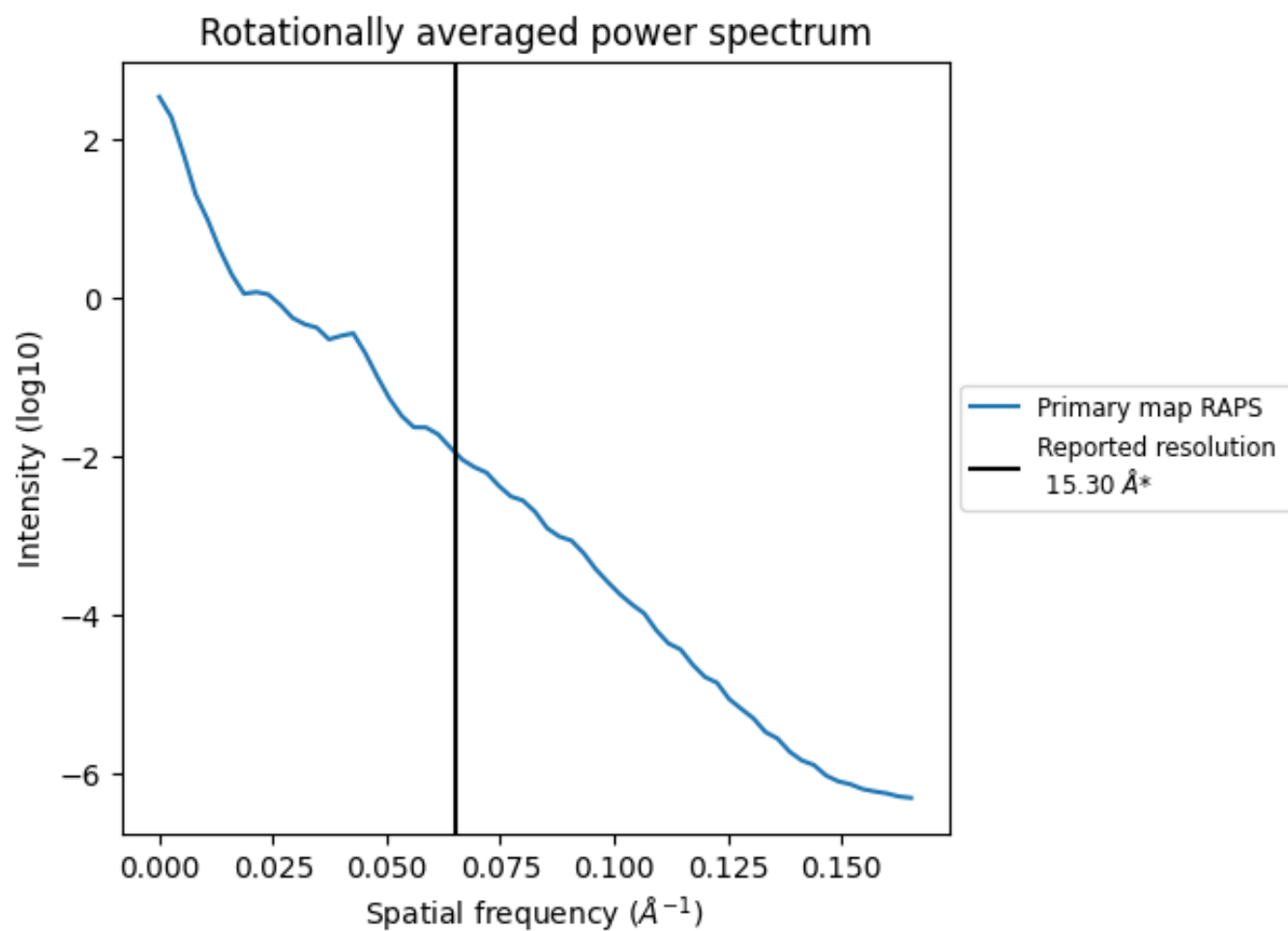
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 998 nm^3 ; this corresponds to an approximate mass of 901 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 0.065 Å⁻¹

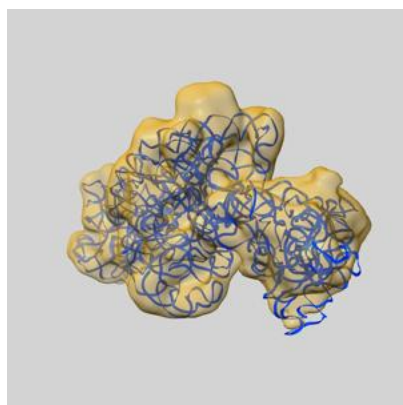
8 Fourier-Shell correlation ⓘ

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

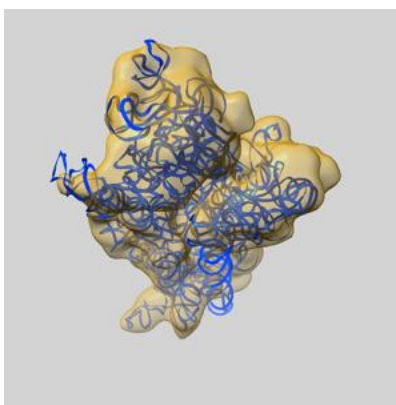
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5507 and PDB model 3J2E. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

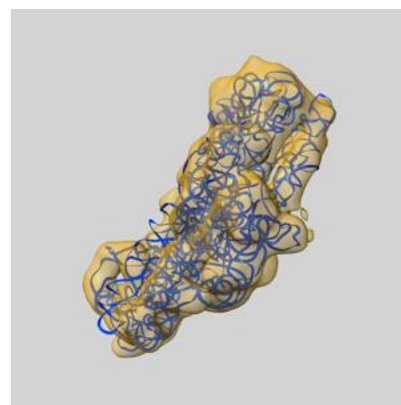
9.1 Map-model overlay [i](#)



X



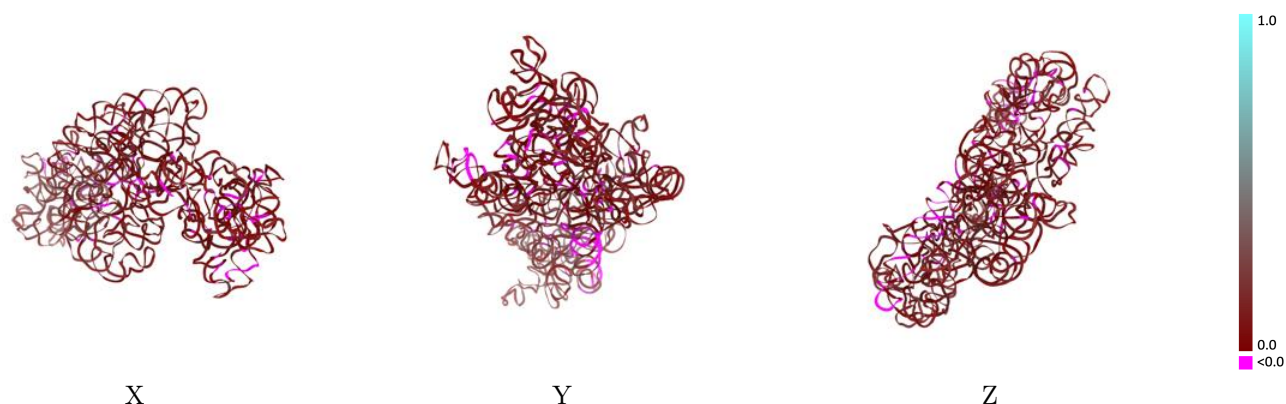
Y



Z

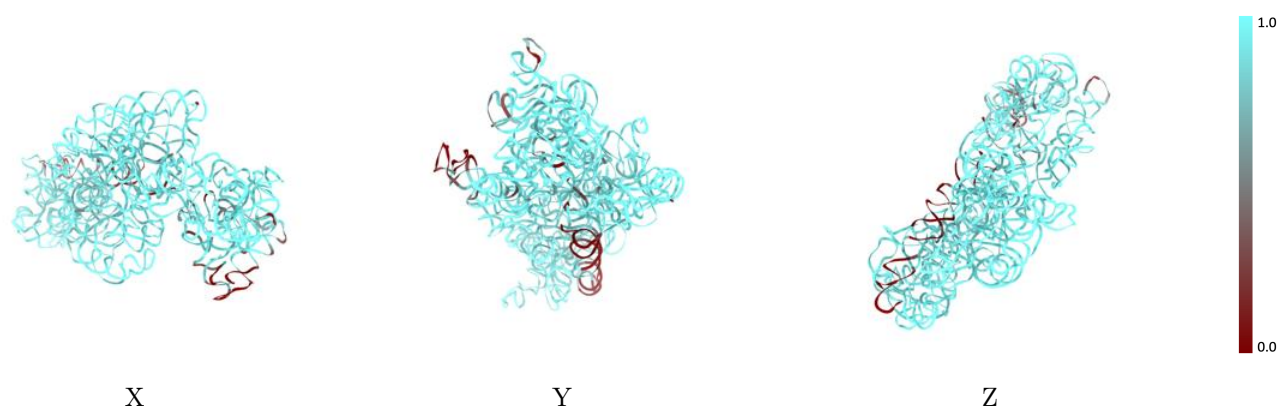
The images above show the 3D surface view of the map at the recommended contour level -2.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



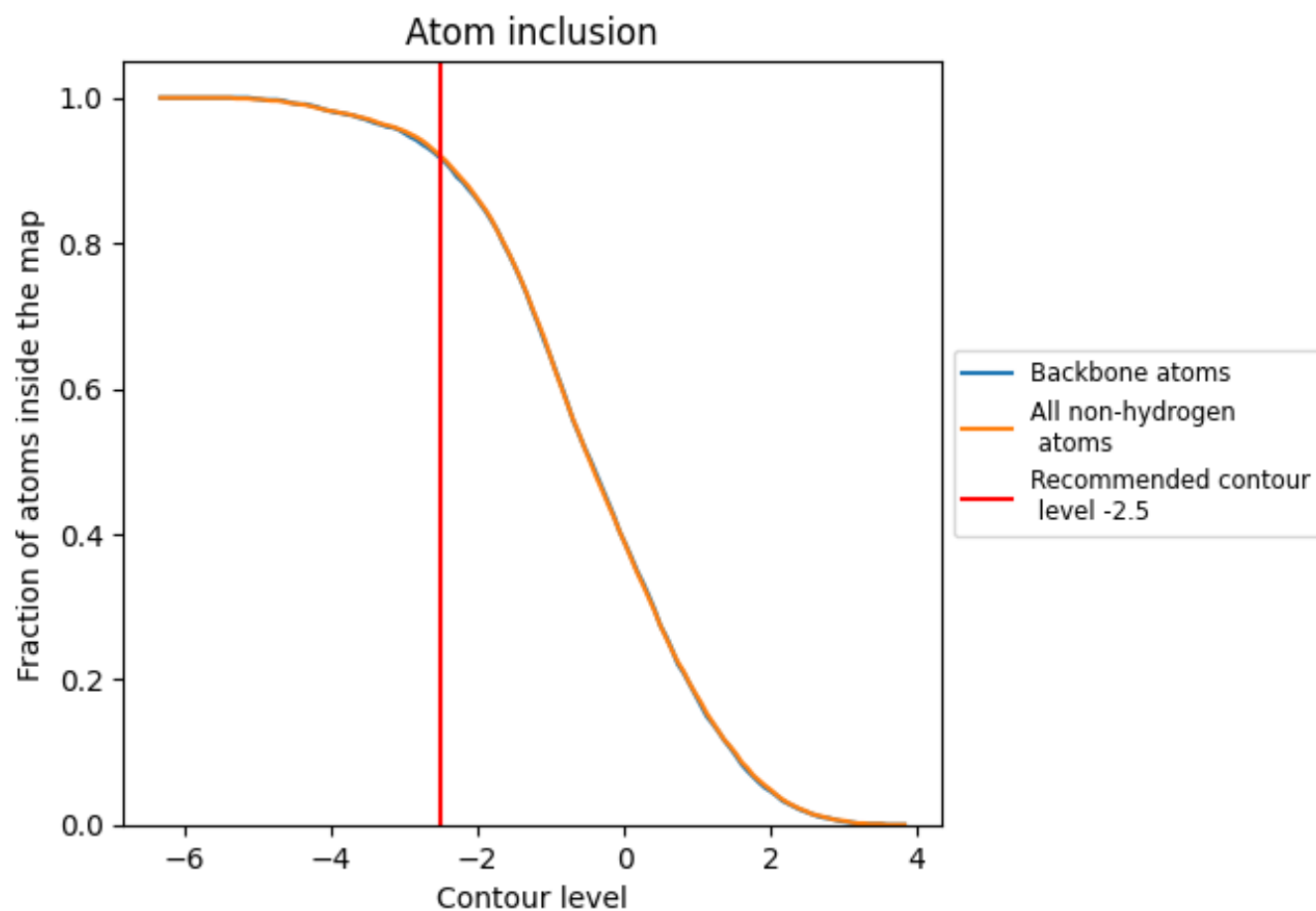
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (-2.5).

9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (-2.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9190	0.0900
N	0.9190	0.0900

