



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 04:26 AM UTC

PDB ID : 3J2D / pdb_00003j2d
EMDB ID : EMD-5506
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 : 18.70 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

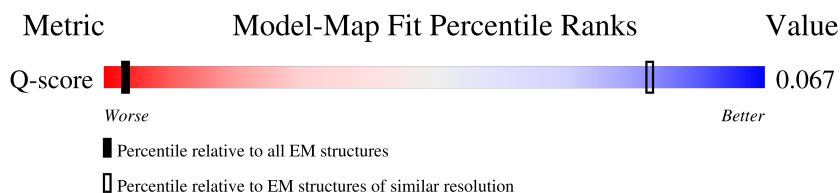
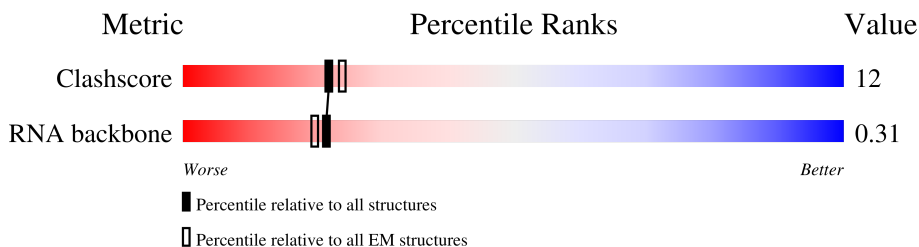
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 18.70 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	17 (18.20 - 19.20)

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.

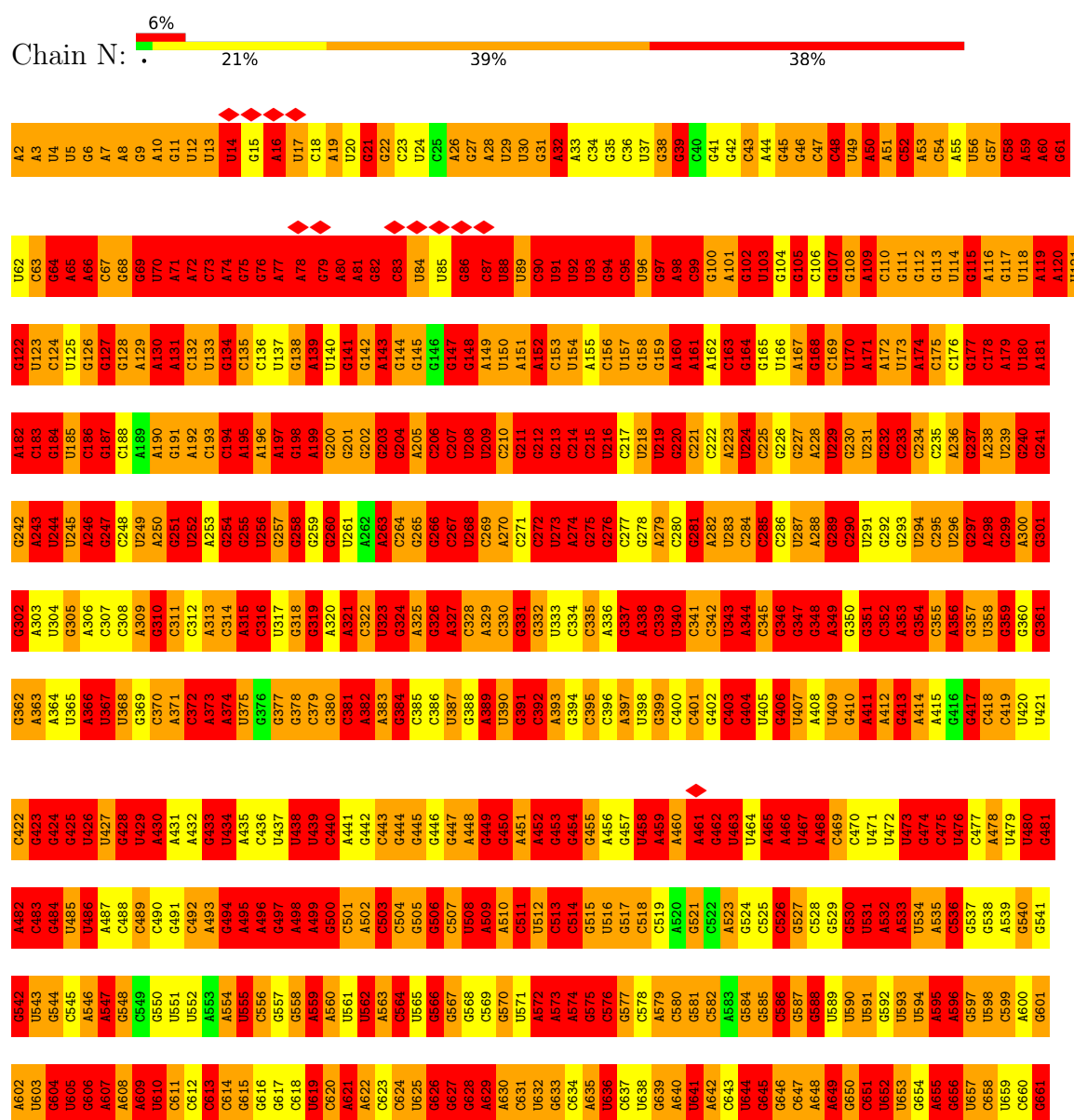
- Molecule 1 is a RNA chain called 16S rRNA.

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



C1443	C1383	G1323	C1263	C1203	G1142	A1082	A1022	C962	G902	U842	A782	G722	U662
U1444	C1384	A1324	U1264	A1204	G1143	U1083	U1023	G963	G903	U843	C783	U723	A663
U1445	G1385	C1325	C1265	U1205	G1144	U1084	G1024	A964	U905	A844	A784	G724	G664
A1446	G1386	U1326	G1266	G1206	A1145	U1085	U1025	U965	A906	G845	G785	G726	G665
A1447	G1387	C1327	C1267	G1207	A1146	U1086	G1026	G966	A907	G846	G786	G727	G666
C1448	C1388	G1328	G1268	C1208	U1147	U1087	U1027	C967	A908	G847	A787	A728	G667
C1449	C1389	A1329	A1269	C1209	U1148	U1088	G1028	A968	A909	C848	U788	A729	G668
U1450	U1390	U1330	G1270	C1210	C1149	U1089	C1027	A969	C910	C849	U789	G730	G670
U1451	U1391	G1331	A1271	U1211	A1150	U1090	C1028	G970	C911	U850	A790	G731	G671
U1452	U1392	A1332	G1272	U1212	A1151	U1091	U1029	C971	C912	G851	G791	C732	U672
C1453	U1393	C1333	C1273	U1213	A1152	A1092	U1030	G972	A913	C852	A792	G733	A673
C1394	A1394	G1334	A1274	C1214	G1153	A1093	C1031	C973	A914	U853	G793	G734	G674
C1395	C1395	U1335	A1275	G1215	G1154	G1094	G1032	G974	A915	U854	A794	C735	A675
C1396	A1396	C1336	G1276	U1216	A1155	U1095	G1033	A975	U916	U855	G795	C736	A676
C1397	C1397	G1337	C1277	C1217	G1156	G1096	G1034	G976	G917	C856	C796	C737	U677
A1398	A1398	G1338	G1278	C1218	A1157	U1097	G1035	A977	A918	G857	U797	C738	U678
G1457	C1399	A1339	G1279	G1219	U1158	G1098	A1035	A978	A919	G858	U798	C739	C679
G1458	C1400	C1340	G1280	G1220	U1159	G1099	A1036	A979	U920	A860	G799	U740	C680
G1459	U1401	U1341	G1281	G1221	G1160	G1100	C1037	C980	U921	C861	U801	G741	A681
C1460	C1402	C1342	C1282	G1222	C1161	A1101	C1038	U981	G922	C862	A802	G742	G682
C1461	C1403	G1343	U1283	C1223	A1162	U1102	G1039	U982	A923	U863	A803	C743	G683
C1462	C1404	U1344	U1284	U1224	G1163	G1103	U1040	A983	C924	A864	G803	C744	G684
U1463	G1405	A1345	A1285	A1225	U1164	G1104	G1041	C984	G925	A865	U804	G745	U684
U1464	U1406	G1346	U1286	C1226	G1165	A1105	G1042	C985	G926	C866	C805	A746	G685
A1465	C1407	G1347	A1287	G1227	A1166	G1106	G1043	U986	G927	C867	C806	A747	U686
A1466	A1408	U1348	A1288	C1228	U1168	U1108	A1044	G987	G928	C868	A807	G748	A687
C1467	C1409	A1349	A1289	C1229	A1169	C1109	U1045	G988	G929	G869	A749	C749	G688
C1468	A1410	C1350	G1290	G1230	A1170	A1110	A1046	U989	C930	U870	C810	C750	C689
C1469	C1411	C1351	U1291	U1231	A1171	G1111	G1047	C990	C931	U871	G811	G751	G690
U1470	C1412	G1352	G1292	U1232	A1172	C1112	U1048	U991	C932	A872	G812	G752	G691
U1471	U1413	C1353	G1293	G1233	U1173	C1113	U1049	U992	G933	G873	U813	C753	U692
U1472	G1414	U1354	G1294	C1234	G1174	C1114	G1050	G993	C934	U874	A814	C754	G693
U1473	G1415	G1355	U1295	G1235	G1175	U1115	C1051	A994	A935	U875	A815	G755	A694
U1474	G1416	A1356	C1296	C1236	A1176	U1116	U1052	C995	C936	G876	A816	G756	A695
U1475	G1417	C1357	G1297	C1237	G1177	C1117	G1053	A996	A937	U877	C817	C757	A696
U1476	U1418	U1358	U1298	A1238	G1178	U1118	C1054	U997	A938	A878	G818	A759	U697
U1477	G1419	A1360	A1299	U1240	A1179	C1119	A1055	C998	G939	C879	A819	G760	G698
U1478	U1420	G1361	G1300	U1241	A1180	G1120	U1056	C999	C940	C880	U820	G761	G699
C1479	G1421	A1362	U1301	G1242	G1181	U1121	G1057	A1000	G941	G881	G821	U762	U701
A1480	G1422	C1363	C1302	C1243	U1182	U1122	C1058	C1001	G942	C882	G822	G763	G702
U1481	G1423	U1364	C1303	G1244	U1183	U1123	U1060	G1002	U943	C883	C823	C764	G703
G1482	U1424	G1365	G1304	G1245	G1184	G1124	G1061	A1003	G944	U884	G824	G765	A704
A1483	U1425	C1366	G1305	U1246	G1185	U1125	U1062	A1004	G945	G885	A825	A766	G705
C1484	G1426	U1367	A1306	U1247	G1186	U1126	C1063	A1005	A946	G886	C826	A767	A706
U1485	C1427	C1368	U1307	A1248	G1187	U1127	U1064	G1006	G947	G887	U827	G768	G707
G1486	A1428	G1370	G1308	C1249	A1188	C1128	U1065	U1007	C948	G888	G828	G769	U708
G1487	A1429	U1371	A1311	A1250	C1199	C1129	C1066	U1008	A949	A889	U829	C770	G709
G1488	A1430	C1372	G1312	A1251	G1190	A1130	A1067	U1009	G951	U891	G830	G771	U709
G1489	G1431	G1373	U1313	G1253	C1191	U1131	U1068	U1010	U952	A892	A831	U772	G710
U1490	A1432	A1374	C1314	U1254	U1192	C1132	C1069	G1011	G953	G893	G832	G773	G711
A1491	A1433	U1375	U1315	G1255	C1193	G1133	U1070	A1012	G954	G894	G833	G774	A712
A1492	G1434	G1376	A1316	A1256	U1194	U1134	G1072	G1013	U955	G895	U834	G775	G713
U1493	G1435	C1377	C1317	A1257	A1197	G1135	U1073	A1014	U956	G896	G835	A776	G714
C1494	U1436	G1378	G1318	G1258	G1198	C1136	G1074	G1015	U957	C897	G836	A777	G715
U1495	A1437	U1379	A1318	C1259	U1199	G1137	U1075	A1016	A958	G898	G837	G778	A716
C1496	G1438	U1380	C1319	G1260	C1200	C1138	U1076	U1017	A959	C899	A838	C779	U717
U1497	U1440	A1382	A1261	G1261	U1201	G1139	U1077	G1018	U960	A900	A839	A780	A718
G1498	G1441	C1382	C1262	C1262	U1202	C1140	U1078	A1019	U961	A901	C840	U781	C720
U1499							A1080	G1020					G721
U1500							A1081	A1021					

A1503	G1504	G1505	U1506	A1507	A1508	C1509	C1510	G1511	U1512	A1513	C1514	G1515	G1516	G1517	A1518	A1519	C1520	C1521	U1522	G1523	C1524	G1525	G1526	U1527	U1528	C1529	G1530	A1531	U1532	C1533	A1534
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	18809	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Weiner filter	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3800	Depositor
Magnification	59000	Depositor
Image detector	FEI EAGLE (4k x 4k)	Depositor
Maximum map value	4.826	Depositor
Minimum map value	-7.449	Depositor
Average map value	-4.686	Depositor
Map value standard deviation	0.703	Depositor
Recommended contour level	-2.3	Depositor
Map size ($\text{\AA}$)	375.0, 375.0, 375.0	wwPDB
Map dimensions	125, 125, 125	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	3.0, 3.0, 3.0	Depositor

5 Model quality i

5.1 Standard geometry i

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	N	2.07	847/36831 (2.3%)	2.13	2118/57458 (3.7%)

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	971

All (847) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	737	C	C1'-N1	11.12	1.65	1.48
1	N	1501	C	C1'-N1	9.52	1.62	1.48
1	N	195	A	O3'-P	-9.39	1.47	1.61
1	N	1015	G	C5'-C4'	9.26	1.65	1.51
1	N	459	A	C1'-N9	9.18	1.61	1.48
1	N	288	A	C2'-C1'	-9.08	1.39	1.53
1	N	477	C	P-O5'	-9.07	1.46	1.59
1	N	956	U	C3'-O3'	8.98	1.55	1.42
1	N	987	G	C1'-N9	8.96	1.61	1.48
1	N	835	U	C5'-C4'	8.95	1.64	1.51
1	N	663	A	C5'-C4'	8.94	1.64	1.51
1	N	1358	U	C1'-N1	8.89	1.61	1.48
1	N	65	A	O3'-P	-8.81	1.48	1.61
1	N	152	A	C4'-C3'	8.74	1.65	1.52
1	N	222	C	P-O5'	-8.66	1.46	1.59
1	N	1393	U	O3'-P	-8.65	1.48	1.61
1	N	533	A	C3'-C2'	-8.62	1.40	1.52
1	N	245	U	C5'-C4'	8.55	1.64	1.51
1	N	273	U	O3'-P	-8.42	1.48	1.61
1	N	271	C	C1'-N1	8.40	1.61	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1525	G	C3'-O3'	8.39	1.54	1.42
1	N	920	U	O3'-P	-8.37	1.48	1.61
1	N	1109	C	O3'-P	-8.32	1.48	1.61
1	N	305	G	O3'-P	-8.31	1.48	1.61
1	N	50	A	C1'-N9	8.22	1.59	1.47
1	N	1395	C	P-O5'	8.22	1.72	1.59
1	N	1395	C	O3'-P	-8.18	1.48	1.61
1	N	661	G	C1'-N9	7.99	1.59	1.48
1	N	196	A	C5'-C4'	7.99	1.63	1.51
1	N	453	G	C5'-C4'	7.99	1.63	1.51
1	N	338	A	C5'-C4'	7.99	1.63	1.51
1	N	558	G	C1'-N9	7.94	1.59	1.48
1	N	1071	C	C1'-N1	7.93	1.60	1.48
1	N	523	A	C5'-C4'	7.91	1.63	1.51
1	N	374	A	C1'-N9	7.88	1.59	1.48
1	N	1473	G	C4'-C3'	7.82	1.64	1.52
1	N	63	C	O3'-P	-7.78	1.49	1.61
1	N	589	U	O3'-P	-7.77	1.49	1.61
1	N	903	G	C1'-N9	7.77	1.59	1.48
1	N	1373	G	C2'-C1'	-7.76	1.41	1.53
1	N	1128	C	P-O5'	-7.75	1.48	1.59
1	N	1338	G	C4'-O4'	7.74	1.57	1.45
1	N	121	U	C1'-N1	7.70	1.60	1.48
1	N	1014	A	C3'-C2'	-7.64	1.41	1.52
1	N	480	U	O3'-P	-7.63	1.49	1.61
1	N	1519	A	C4'-O4'	7.63	1.57	1.45
1	N	1486	G	C2'-C1'	-7.63	1.42	1.53
1	N	1375	A	C1'-N9	7.57	1.59	1.48
1	N	15	G	O3'-P	-7.56	1.49	1.61
1	N	245	U	C3'-O3'	7.53	1.53	1.42
1	N	1041	G	C5'-C4'	7.53	1.62	1.51
1	N	508	U	C1'-N1	7.50	1.58	1.47
1	N	1531	A	C2'-C1'	-7.50	1.42	1.53
1	N	1051	C	C4'-O4'	7.49	1.56	1.45
1	N	439	U	C1'-N1	7.48	1.59	1.48
1	N	1522	U	C5'-C4'	7.47	1.62	1.51
1	N	953	G	C1'-N9	7.47	1.59	1.48
1	N	506	G	C5'-C4'	7.46	1.62	1.51
1	N	145	G	C4'-C3'	7.46	1.63	1.52
1	N	1394	A	C4'-C3'	7.46	1.64	1.53
1	N	238	A	C2'-C1'	-7.43	1.42	1.53
1	N	1432	G	C4'-C3'	7.43	1.64	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1324	A	C4'-O4'	7.43	1.56	1.45
1	N	1308	U	C1'-N1	7.43	1.59	1.48
1	N	463	U	C1'-N1	7.42	1.59	1.48
1	N	312	C	C1'-N1	7.41	1.59	1.48
1	N	932	C	C5'-C4'	7.41	1.62	1.51
1	N	842	U	C1'-N1	7.39	1.58	1.47
1	N	509	A	C5'-C4'	7.39	1.62	1.51
1	N	5	U	C5'-C4'	7.39	1.62	1.51
1	N	464	U	O3'-P	-7.39	1.50	1.61
1	N	1177	G	C1'-N9	7.38	1.59	1.48
1	N	1205	U	C3'-C2'	7.38	1.63	1.52
1	N	926	G	C5'-C4'	7.38	1.62	1.51
1	N	450	G	P-O5'	-7.37	1.48	1.59
1	N	485	U	C3'-C2'	7.37	1.64	1.52
1	N	313	A	C5'-C4'	7.33	1.62	1.51
1	N	1479	C	C1'-N1	7.30	1.59	1.48
1	N	758	C	O4'-C1'	-7.27	1.30	1.41
1	N	768	A	C2'-C1'	-7.27	1.42	1.53
1	N	1075	U	P-O5'	-7.26	1.48	1.59
1	N	866	C	C4'-O4'	-7.25	1.34	1.45
1	N	585	G	P-O5'	-7.24	1.48	1.59
1	N	244	U	C1'-N1	7.24	1.58	1.47
1	N	349	A	C2'-C1'	-7.19	1.42	1.53
1	N	866	C	C5'-C4'	7.19	1.62	1.51
1	N	580	C	C1'-N1	7.19	1.59	1.48
1	N	323	U	C1'-N1	7.18	1.59	1.48
1	N	1462	C	O4'-C1'	-7.18	1.30	1.41
1	N	1275	A	C5'-C4'	7.14	1.61	1.51
1	N	44	A	C5'-C4'	7.12	1.61	1.51
1	N	277	C	O3'-P	-7.11	1.50	1.61
1	N	503	C	C2'-C1'	-7.10	1.42	1.53
1	N	211	G	C2'-C1'	-7.10	1.42	1.53
1	N	1532	U	C1'-N1	7.10	1.59	1.48
1	N	1119	C	C1'-N1	7.09	1.59	1.48
1	N	136	C	C1'-N1	7.08	1.59	1.48
1	N	5	U	C2'-C1'	-7.08	1.42	1.53
1	N	1064	G	C2'-C1'	-7.08	1.42	1.53
1	N	297	G	C2'-C1'	-7.08	1.42	1.53
1	N	729	A	P-O5'	-7.07	1.49	1.59
1	N	243	A	C3'-C2'	7.07	1.63	1.52
1	N	1216	A	C3'-O3'	7.05	1.52	1.42
1	N	717	U	C5'-C4'	7.05	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	947	G	C2'-C1'	-7.05	1.42	1.53
1	N	795	C	C1'-N1	7.04	1.59	1.48
1	N	1107	C	C4'-C3'	7.02	1.63	1.52
1	N	93	U	P-O5'	-7.02	1.49	1.59
1	N	123	U	O3'-P	-7.01	1.50	1.61
1	N	571	U	C1'-N1	6.99	1.58	1.48
1	N	347	G	C1'-N9	6.99	1.58	1.48
1	N	757	U	C1'-N1	6.98	1.58	1.48
1	N	1339	A	C4'-C3'	6.98	1.63	1.52
1	N	1358	U	C3'-C2'	6.97	1.63	1.52
1	N	343	U	O4'-C1'	-6.96	1.31	1.41
1	N	1202	U	C5'-C4'	6.96	1.61	1.51
1	N	775	G	C3'-C2'	6.95	1.63	1.52
1	N	1236	A	C2'-C1'	-6.95	1.43	1.53
1	N	67	C	C1'-N1	6.94	1.58	1.48
1	N	658	C	C4'-O4'	6.94	1.55	1.45
1	N	778	G	N7-C5	-6.93	1.25	1.39
1	N	93	U	C5'-C4'	6.92	1.61	1.51
1	N	210	C	C5'-C4'	6.92	1.61	1.51
1	N	91	U	C4'-C3'	6.91	1.62	1.52
1	N	207	C	C3'-C2'	6.91	1.63	1.52
1	N	1132	C	C4'-C3'	6.90	1.62	1.52
1	N	1484	C	C5'-C4'	6.90	1.61	1.51
1	N	1346	A	P-O5'	-6.88	1.49	1.59
1	N	985	C	C3'-C2'	6.86	1.63	1.52
1	N	1247	U	P-O5'	-6.86	1.49	1.59
1	N	321	A	C2'-C1'	-6.85	1.43	1.53
1	N	830	G	C1'-N9	6.85	1.58	1.48
1	N	728	A	C1'-N9	6.83	1.58	1.48
1	N	1021	A	C5'-C4'	6.82	1.61	1.51
1	N	794	A	C2'-C1'	-6.80	1.43	1.53
1	N	922	G	C4'-C3'	6.79	1.62	1.52
1	N	1222	G	O3'-P	-6.78	1.50	1.61
1	N	936	C	P-O5'	-6.76	1.49	1.59
1	N	940	C	O3'-P	-6.75	1.51	1.61
1	N	64	G	C1'-N9	6.75	1.58	1.48
1	N	807	A	O4'-C1'	6.75	1.51	1.41
1	N	448	A	C5'-C4'	6.74	1.61	1.51
1	N	198	G	C4'-C3'	6.74	1.62	1.52
1	N	635	A	C2'-C1'	-6.71	1.43	1.53
1	N	783	C	C1'-N1	6.69	1.58	1.48
1	N	1236	A	O3'-P	-6.68	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1437	A	C5'-C4'	6.67	1.61	1.51
1	N	102	G	C3'-C2'	-6.65	1.42	1.52
1	N	1336	C	C4'-O4'	6.65	1.55	1.45
1	N	675	A	C2'-C1'	-6.64	1.43	1.53
1	N	1258	G	C4'-O4'	6.63	1.55	1.45
1	N	867	G	P-O5'	-6.63	1.49	1.59
1	N	925	G	O3'-P	-6.61	1.51	1.61
1	N	34	C	C1'-N1	6.61	1.58	1.48
1	N	1196	A	O3'-P	-6.61	1.51	1.61
1	N	1408	A	C4'-O4'	-6.60	1.35	1.45
1	N	82	G	C5'-C4'	6.60	1.61	1.51
1	N	1086	U	C4'-C3'	6.59	1.62	1.52
1	N	923	A	C2'-C1'	-6.58	1.43	1.53
1	N	1220	G	C3'-C2'	6.58	1.62	1.52
1	N	484	G	O3'-P	-6.57	1.51	1.61
1	N	1303	C	O5'-C5'	-6.56	1.32	1.42
1	N	683	G	O3'-P	-6.56	1.51	1.61
1	N	431	A	C4'-O4'	-6.55	1.35	1.45
1	N	916	U	C1'-N1	6.55	1.58	1.48
1	N	302	G	C3'-O3'	6.54	1.51	1.42
1	N	151	A	C5'-C4'	6.54	1.61	1.51
1	N	739	C	C1'-N1	6.52	1.58	1.48
1	N	986	U	C1'-N1	6.52	1.58	1.48
1	N	1163	A	C4'-O4'	6.51	1.55	1.45
1	N	604	G	C2'-C1'	-6.50	1.43	1.53
1	N	428	G	P-O5'	-6.49	1.50	1.59
1	N	120	A	O3'-P	-6.48	1.51	1.61
1	N	1119	C	O3'-P	-6.47	1.51	1.61
1	N	1340	A	C5'-C4'	6.47	1.60	1.51
1	N	888	G	C4'-C3'	6.47	1.62	1.52
1	N	1389	C	C3'-O3'	6.46	1.51	1.42
1	N	1404	C	C5'-C4'	6.46	1.60	1.51
1	N	750	C	P-O5'	-6.46	1.50	1.59
1	N	858	G	C1'-N9	6.46	1.57	1.48
1	N	203	G	C3'-O3'	6.45	1.51	1.42
1	N	1382	C	C1'-N1	6.45	1.58	1.48
1	N	767	A	P-O5'	-6.43	1.50	1.59
1	N	913	A	C1'-N9	6.43	1.56	1.47
1	N	872	A	C4'-C3'	6.41	1.62	1.53
1	N	809	G	C6-N1	6.41	1.52	1.39
1	N	58	C	C5'-C4'	6.40	1.60	1.51
1	N	970	C	C1'-N1	6.40	1.58	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1468	A	C5'-C4'	6.40	1.60	1.51
1	N	1377	A	O5'-C5'	6.39	1.52	1.42
1	N	269	C	C2'-C1'	-6.39	1.43	1.53
1	N	1302	C	C3'-C2'	-6.37	1.43	1.52
1	N	741	G	C2'-C1'	-6.36	1.43	1.53
1	N	1416	G	O5'-C5'	6.36	1.51	1.42
1	N	1326	U	C2'-C1'	-6.36	1.43	1.53
1	N	1508	A	C4'-C3'	6.36	1.62	1.52
1	N	570	G	P-O5'	6.35	1.69	1.59
1	N	293	G	C2'-O2'	-6.35	1.32	1.42
1	N	424	G	C1'-N9	6.35	1.57	1.48
1	N	1102	A	C3'-O3'	6.35	1.51	1.42
1	N	489	C	C2'-C1'	-6.34	1.43	1.53
1	N	625	U	C1'-N1	6.33	1.57	1.48
1	N	1073	U	C2'-C1'	-6.33	1.43	1.53
1	N	1499	A	C3'-O3'	6.33	1.51	1.42
1	N	1097	C	C5'-C4'	6.32	1.60	1.51
1	N	1377	A	C4'-O4'	-6.31	1.36	1.45
1	N	739	C	O5'-C5'	-6.30	1.32	1.42
1	N	966	G	C5'-C4'	6.30	1.60	1.51
1	N	1360	A	C3'-O3'	6.29	1.51	1.42
1	N	1148	U	C5'-C4'	6.29	1.60	1.51
1	N	191	G	C4'-O4'	-6.28	1.36	1.45
1	N	735	C	P-O5'	-6.28	1.50	1.59
1	N	550	G	C3'-O3'	6.28	1.51	1.42
1	N	1132	C	C1'-N1	6.27	1.57	1.48
1	N	318	G	C1'-N9	6.27	1.57	1.48
1	N	474	G	P-O5'	-6.27	1.50	1.59
1	N	1200	C	C4'-C3'	6.27	1.61	1.52
1	N	144	G	C4'-C3'	6.27	1.61	1.52
1	N	278	G	C5'-C4'	6.27	1.60	1.51
1	N	245	U	C1'-N1	6.27	1.57	1.48
1	N	71	A	C1'-N9	6.26	1.57	1.48
1	N	1267	C	C1'-N1	6.26	1.57	1.48
1	N	1247	U	N3-C4	6.26	1.50	1.38
1	N	808	C	C1'-N1	6.26	1.57	1.48
1	N	570	G	O4'-C1'	6.25	1.51	1.41
1	N	439	U	C3'-O3'	6.25	1.51	1.42
1	N	365	U	C5'-C4'	6.25	1.60	1.51
1	N	1178	G	O3'-P	-6.25	1.51	1.61
1	N	1147	C	C1'-N1	6.25	1.57	1.48
1	N	1181	G	C1'-N9	6.24	1.56	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	154	U	C1'-N1	6.23	1.57	1.48
1	N	1334	G	C2'-C1'	-6.23	1.44	1.53
1	N	1247	U	C5'-C4'	6.21	1.60	1.51
1	N	965	U	C4'-O4'	6.21	1.55	1.45
1	N	205	A	O4'-C1'	6.21	1.50	1.41
1	N	285	C	O3'-P	-6.21	1.51	1.61
1	N	505	G	C3'-C2'	-6.20	1.43	1.52
1	N	263	A	O3'-P	-6.19	1.51	1.61
1	N	1386	G	C3'-O3'	6.19	1.51	1.42
1	N	737	C	C3'-O3'	6.18	1.51	1.42
1	N	488	C	C2'-C1'	-6.18	1.44	1.53
1	N	1362	A	O3'-P	-6.18	1.51	1.61
1	N	1505	G	C5'-C4'	6.18	1.60	1.51
1	N	736	C	C1'-N1	6.18	1.57	1.48
1	N	825	A	C3'-C2'	6.18	1.62	1.52
1	N	424	G	C2'-C1'	-6.17	1.44	1.53
1	N	1033	G	C4'-O4'	-6.17	1.36	1.45
1	N	1285	A	C5'-C4'	6.17	1.60	1.51
1	N	871	U	C2'-C1'	-6.17	1.44	1.53
1	N	210	C	C2'-C1'	-6.16	1.43	1.53
1	N	752	G	C1'-N9	6.16	1.56	1.47
1	N	926	G	C1'-N9	6.15	1.57	1.48
1	N	1436	U	C2'-O2'	-6.15	1.33	1.42
1	N	1162	C	C2'-O2'	-6.14	1.33	1.42
1	N	1166	G	O5'-C5'	-6.14	1.33	1.42
1	N	1191	A	O3'-P	-6.14	1.51	1.61
1	N	1091	U	C1'-N1	6.13	1.57	1.48
1	N	240	G	C2'-C1'	-6.13	1.44	1.53
1	N	383	A	C5'-C4'	6.13	1.60	1.51
1	N	1245	C	C5'-C4'	6.13	1.60	1.51
1	N	1000	A	C3'-O3'	6.13	1.51	1.42
1	N	1224	U	C3'-C2'	-6.12	1.43	1.52
1	N	99	C	O5'-C5'	6.12	1.51	1.42
1	N	180	U	O3'-P	-6.11	1.51	1.61
1	N	343	U	O3'-P	-6.11	1.51	1.61
1	N	1301	U	O4'-C1'	6.11	1.51	1.42
1	N	457	G	C3'-O3'	6.11	1.51	1.42
1	N	229	U	C3'-C2'	6.11	1.61	1.52
1	N	605	U	O3'-P	-6.10	1.51	1.61
1	N	435	A	P-O5'	-6.10	1.50	1.59
1	N	1214	C	C4'-C3'	6.10	1.62	1.53
1	N	1481	U	C5'-C4'	6.09	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1031	C	C3'-O3'	6.09	1.51	1.42
1	N	451	A	C5'-C4'	6.08	1.60	1.51
1	N	39	G	C4'-C3'	6.08	1.61	1.52
1	N	491	G	O3'-P	-6.08	1.52	1.61
1	N	295	C	C1'-N1	6.08	1.57	1.48
1	N	56	U	C5'-C4'	6.07	1.60	1.51
1	N	295	C	C3'-C2'	6.07	1.61	1.52
1	N	1529	G	C4'-O4'	-6.07	1.36	1.45
1	N	589	U	C2'-C1'	-6.07	1.44	1.53
1	N	747	A	O4'-C1'	6.07	1.50	1.41
1	N	845	A	C5'-C4'	6.07	1.60	1.51
1	N	761	G	C4'-C3'	-6.07	1.43	1.52
1	N	1282	C	C1'-N1	6.07	1.57	1.48
1	N	1322	C	C4'-C3'	6.06	1.62	1.53
1	N	370	C	P-O5'	-6.06	1.50	1.59
1	N	576	C	O5'-C5'	6.06	1.51	1.42
1	N	1018	G	O3'-P	-6.06	1.52	1.61
1	N	274	A	C4'-O4'	6.05	1.54	1.45
1	N	445	G	O3'-P	-6.05	1.52	1.61
1	N	10	A	O3'-P	-6.05	1.52	1.61
1	N	1325	C	C1'-N1	6.05	1.57	1.48
1	N	405	U	O3'-P	-6.04	1.52	1.61
1	N	514	C	C1'-N1	6.04	1.57	1.48
1	N	574	A	C5'-C4'	6.04	1.60	1.51
1	N	121	U	C2'-C1'	-6.04	1.44	1.53
1	N	505	G	O4'-C1'	6.04	1.50	1.41
1	N	562	U	O3'-P	-6.04	1.52	1.61
1	N	243	A	N7-C5	-6.03	1.27	1.39
1	N	1088	G	C4'-C3'	6.02	1.61	1.52
1	N	425	G	C1'-N9	6.02	1.56	1.48
1	N	383	A	O3'-P	-6.01	1.52	1.61
1	N	353	A	C2'-C1'	-6.01	1.44	1.53
1	N	609	A	C1'-N9	6.01	1.56	1.48
1	N	745	G	O4'-C1'	-6.01	1.32	1.41
1	N	1049	U	C1'-N1	6.00	1.56	1.47
1	N	1215	G	C2'-C1'	-6.00	1.44	1.53
1	N	53	A	O5'-C5'	6.00	1.51	1.42
1	N	326	G	C3'-C2'	-6.00	1.43	1.52
1	N	938	A	C3'-O3'	6.00	1.51	1.42
1	N	397	A	O3'-P	-6.00	1.52	1.61
1	N	34	C	C2'-C1'	-5.99	1.44	1.53
1	N	352	C	O3'-P	-5.99	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	143	A	O3'-P	-5.98	1.52	1.61
1	N	337	G	P-O5'	5.98	1.68	1.59
1	N	599	C	O4'-C1'	5.98	1.50	1.41
1	N	1022	A	P-O5'	5.98	1.68	1.59
1	N	595	A	C6-N6	5.98	1.46	1.33
1	N	825	A	O5'-C5'	-5.98	1.33	1.42
1	N	573	A	C2'-C1'	-5.97	1.44	1.53
1	N	1392	G	C1'-N9	-5.97	1.39	1.48
1	N	1510	C	C1'-N1	5.97	1.57	1.48
1	N	128	G	C5'-C4'	5.97	1.60	1.51
1	N	1240	U	C5'-C4'	5.97	1.60	1.51
1	N	599	C	O3'-P	-5.96	1.52	1.61
1	N	715	A	C2'-C1'	-5.96	1.44	1.53
1	N	595	A	O4'-C1'	-5.96	1.33	1.42
1	N	433	G	P-O5'	-5.95	1.50	1.59
1	N	298	A	C4'-C3'	5.94	1.61	1.52
1	N	131	A	C2'-C1'	-5.94	1.44	1.53
1	N	246	A	C3'-C2'	5.94	1.61	1.52
1	N	874	G	C5'-C4'	5.94	1.60	1.51
1	N	234	C	C3'-O3'	5.93	1.51	1.42
1	N	77	A	C5'-C4'	5.92	1.60	1.51
1	N	573	A	O5'-C5'	5.92	1.51	1.42
1	N	304	U	O4'-C1'	5.92	1.50	1.41
1	N	1293	C	C1'-N1	5.92	1.57	1.48
1	N	45	G	C2'-C1'	-5.92	1.44	1.53
1	N	647	C	O5'-C5'	5.91	1.51	1.42
1	N	933	G	C2'-C1'	-5.91	1.44	1.53
1	N	997	U	C1'-N1	5.90	1.57	1.48
1	N	913	A	C2'-O2'	-5.90	1.32	1.41
1	N	1461	G	C5'-C4'	5.89	1.60	1.51
1	N	467	U	C4'-O4'	-5.89	1.36	1.45
1	N	1289	A	C5'-C4'	5.88	1.60	1.51
1	N	1495	U	O3'-P	-5.88	1.52	1.61
1	N	348	G	N1-C2	5.88	1.49	1.37
1	N	592	G	C3'-C2'	5.88	1.61	1.52
1	N	985	C	P-O5'	-5.88	1.50	1.59
1	N	1285	A	C2'-C1'	-5.88	1.44	1.53
1	N	1288	A	P-O5'	-5.88	1.50	1.59
1	N	1520	C	C5'-C4'	5.87	1.60	1.51
1	N	203	G	C2'-C1'	-5.87	1.44	1.53
1	N	396	C	C1'-N1	5.87	1.57	1.48
1	N	1167	A	O4'-C1'	-5.87	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	336	A	C4'-C3'	5.86	1.61	1.52
1	N	1186	G	C4'-C3'	5.85	1.61	1.52
1	N	437	U	C2'-C1'	-5.85	1.44	1.53
1	N	213	G	C4'-O4'	-5.84	1.36	1.45
1	N	518	C	C3'-O3'	5.84	1.51	1.43
1	N	1371	G	C2'-O2'	-5.84	1.33	1.42
1	N	698	G	C5-C6	-5.83	1.30	1.42
1	N	41	G	O5'-C5'	5.83	1.51	1.42
1	N	604	G	P-O5'	-5.83	1.51	1.59
1	N	763	G	C2'-C1'	-5.83	1.44	1.53
1	N	1264	U	O3'-P	-5.83	1.52	1.61
1	N	156	C	P-O5'	-5.83	1.51	1.59
1	N	1124	G	O4'-C1'	-5.83	1.32	1.41
1	N	431	A	O4'-C1'	5.82	1.50	1.41
1	N	856	C	C1'-N1	5.82	1.57	1.48
1	N	986	U	C2'-C1'	-5.82	1.44	1.53
1	N	321	A	C5'-C4'	5.82	1.59	1.51
1	N	798	U	C3'-O3'	5.82	1.50	1.42
1	N	74	A	C2'-C1'	-5.81	1.44	1.53
1	N	902	G	C1'-N9	5.81	1.56	1.48
1	N	749	A	C5'-C4'	5.81	1.59	1.51
1	N	754	C	O3'-P	-5.81	1.52	1.61
1	N	8	A	C5'-C4'	5.81	1.60	1.51
1	N	1255	G	N9-C4	-5.81	1.26	1.38
1	N	114	U	C5'-C4'	5.80	1.59	1.51
1	N	176	C	P-O5'	-5.80	1.51	1.59
1	N	1377	A	C5'-C4'	5.80	1.59	1.51
1	N	1516	G	C5'-C4'	5.80	1.59	1.51
1	N	1071	C	C2'-C1'	-5.80	1.44	1.53
1	N	260	G	C4'-C3'	5.80	1.61	1.52
1	N	142	G	N1-C2	5.79	1.49	1.37
1	N	946	A	C1'-N9	-5.79	1.39	1.48
1	N	837	U	C3'-O3'	5.78	1.50	1.42
1	N	18	C	O5'-C5'	5.78	1.51	1.42
1	N	214	C	C2'-C1'	-5.78	1.44	1.53
1	N	93	U	C1'-N1	5.77	1.57	1.48
1	N	166	U	C5'-C4'	5.77	1.59	1.51
1	N	1016	A	C5'-C4'	5.76	1.59	1.51
1	N	497	G	C4'-O4'	-5.75	1.36	1.45
1	N	314	C	C1'-N1	5.75	1.57	1.48
1	N	1295	U	C1'-N1	5.75	1.57	1.48
1	N	1458	G	C3'-C2'	-5.75	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1448	C	O5'-C5'	5.74	1.51	1.42
1	N	742	G	C2'-C1'	-5.74	1.44	1.53
1	N	1122	U	C4'-C3'	-5.74	1.44	1.52
1	N	947	G	O3'-P	-5.73	1.52	1.61
1	N	1257	A	O4'-C1'	5.73	1.50	1.41
1	N	155	A	P-O5'	-5.72	1.51	1.59
1	N	1187	G	C5'-C4'	5.72	1.59	1.51
1	N	954	G	C5'-C4'	5.72	1.59	1.51
1	N	1070	U	O4'-C1'	5.72	1.50	1.41
1	N	1489	G	C1'-N9	-5.72	1.39	1.48
1	N	1312	G	C5-C6	-5.71	1.30	1.42
1	N	54	C	C1'-N1	5.71	1.57	1.48
1	N	1520	C	C1'-N1	5.71	1.57	1.48
1	N	452	A	C3'-O3'	5.71	1.50	1.42
1	N	647	C	C4-N4	5.71	1.45	1.33
1	N	1031	C	O3'-P	-5.71	1.52	1.61
1	N	407	U	O4'-C1'	5.70	1.50	1.41
1	N	435	A	O4'-C1'	5.70	1.50	1.41
1	N	1197	A	C3'-O3'	5.70	1.50	1.42
1	N	1487	G	P-O5'	5.70	1.68	1.59
1	N	934	C	C4'-C3'	5.69	1.61	1.53
1	N	586	C	C4'-C3'	5.69	1.61	1.52
1	N	827	U	C1'-N1	5.69	1.56	1.48
1	N	1068	G	C2'-C1'	-5.69	1.44	1.53
1	N	252	U	C1'-N1	5.69	1.56	1.48
1	N	866	C	P-O5'	-5.68	1.51	1.59
1	N	205	A	C2'-C1'	-5.68	1.44	1.53
1	N	382	A	N7-C5	-5.67	1.27	1.39
1	N	461	A	C1'-N9	5.67	1.56	1.48
1	N	1319	A	C4'-O4'	-5.67	1.37	1.45
1	N	1398	A	C5'-C4'	-5.67	1.42	1.51
1	N	1476	A	C3'-O3'	5.67	1.50	1.42
1	N	768	A	C5'-C4'	5.67	1.59	1.51
1	N	166	U	O3'-P	-5.67	1.52	1.61
1	N	1352	C	O5'-C5'	5.67	1.50	1.42
1	N	7	A	C5'-C4'	5.67	1.59	1.51
1	N	357	G	C1'-N9	5.67	1.56	1.48
1	N	616	G	C3'-O3'	5.67	1.50	1.42
1	N	731	G	C4'-O4'	5.66	1.54	1.45
1	N	246	A	O4'-C1'	5.66	1.50	1.42
1	N	276	G	C4'-C3'	5.66	1.61	1.52
1	N	969	A	C2'-C1'	-5.66	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1434	A	O3'-P	-5.66	1.52	1.61
1	N	598	U	C3'-C2'	-5.65	1.44	1.52
1	N	1286	U	O5'-C5'	5.65	1.50	1.42
1	N	411	A	C5'-C4'	5.65	1.59	1.51
1	N	624	C	C5'-C4'	5.65	1.59	1.51
1	N	1482	G	P-O5'	-5.64	1.51	1.59
1	N	704	A	C1'-N9	5.64	1.56	1.48
1	N	995	C	C3'-O3'	5.64	1.50	1.42
1	N	415	A	O4'-C1'	5.64	1.50	1.41
1	N	638	U	P-O5'	-5.64	1.51	1.59
1	N	1243	C	P-O5'	-5.64	1.51	1.59
1	N	1060	U	C5'-C4'	5.63	1.59	1.51
1	N	1111	A	C2'-O2'	-5.63	1.34	1.42
1	N	147	G	C3'-C2'	-5.63	1.44	1.52
1	N	42	G	C5-C6	-5.63	1.31	1.42
1	N	338	A	C1'-N9	5.63	1.56	1.48
1	N	654	G	C3'-O3'	5.63	1.50	1.42
1	N	88	U	C1'-N1	5.62	1.55	1.47
1	N	1322	C	C1'-N1	5.62	1.55	1.47
1	N	334	C	C1'-N1	5.61	1.56	1.48
1	N	1461	G	C3'-C2'	-5.61	1.44	1.52
1	N	302	G	O5'-C5'	5.61	1.50	1.42
1	N	671	G	C5'-C4'	5.61	1.59	1.51
1	N	1131	G	O4'-C1'	5.61	1.50	1.41
1	N	1459	G	C2'-O2'	-5.60	1.34	1.42
1	N	401	C	C3'-O3'	5.60	1.50	1.42
1	N	573	A	C2'-O2'	-5.60	1.34	1.42
1	N	500	G	C4'-C3'	5.60	1.60	1.52
1	N	1305	G	C2'-C1'	-5.60	1.45	1.53
1	N	667	G	C3'-C2'	5.60	1.61	1.52
1	N	1233	G	O3'-P	-5.60	1.52	1.61
1	N	97	G	C2'-C1'	-5.59	1.45	1.53
1	N	265	G	C2'-C1'	-5.59	1.45	1.53
1	N	500	G	C2'-C1'	-5.59	1.45	1.53
1	N	696	A	N7-C5	-5.59	1.28	1.39
1	N	1380	U	O3'-P	-5.59	1.52	1.61
1	N	1251	A	C1'-N9	-5.58	1.39	1.48
1	N	120	A	O4'-C1'	-5.58	1.33	1.41
1	N	343	U	P-O5'	-5.58	1.51	1.59
1	N	766	A	O5'-C5'	-5.58	1.34	1.42
1	N	827	U	C5'-C4'	5.57	1.59	1.51
1	N	945	G	O3'-P	-5.57	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1299	A	C4'-O4'	-5.57	1.37	1.45
1	N	1178	G	C3'-O3'	5.57	1.50	1.42
1	N	1473	G	C3'-O3'	5.57	1.50	1.42
1	N	517	G	C2-N3	5.56	1.43	1.32
1	N	191	G	O4'-C1'	5.56	1.50	1.41
1	N	1325	C	C3'-C2'	5.56	1.61	1.52
1	N	1128	C	C4'-O4'	5.56	1.53	1.45
1	N	328	C	C1'-N1	5.55	1.55	1.47
1	N	233	C	C4-N4	5.55	1.45	1.33
1	N	1106	G	C2'-C1'	5.54	1.61	1.53
1	N	1077	G	C4'-C3'	5.54	1.60	1.52
1	N	475	C	O3'-P	-5.54	1.52	1.61
1	N	557	G	C1'-N9	-5.53	1.39	1.48
1	N	555	U	C1'-N1	5.53	1.56	1.48
1	N	629	A	C1'-N9	-5.53	1.39	1.48
1	N	751	U	P-O5'	-5.53	1.51	1.59
1	N	521	G	C1'-N9	5.52	1.56	1.48
1	N	1064	G	C5'-C4'	5.51	1.59	1.51
1	N	1369	C	C1'-N1	5.51	1.56	1.48
1	N	992	U	O3'-P	-5.51	1.52	1.61
1	N	464	U	C2'-C1'	-5.51	1.45	1.53
1	N	74	A	C5'-C4'	5.51	1.59	1.51
1	N	1301	U	C4'-C3'	5.50	1.61	1.53
1	N	1230	C	P-O5'	-5.50	1.51	1.59
1	N	1100	C	C2'-O2'	-5.50	1.34	1.42
1	N	197	A	P-O5'	-5.50	1.51	1.59
1	N	617	G	O3'-P	-5.50	1.52	1.61
1	N	641	U	C1'-N1	5.50	1.56	1.48
1	N	1306	A	C3'-O3'	5.49	1.50	1.42
1	N	1503	A	P-O5'	-5.49	1.51	1.59
1	N	1399	C	P-O5'	-5.48	1.51	1.59
1	N	800	G	C1'-N9	5.48	1.56	1.48
1	N	179	A	O3'-P	5.48	1.69	1.61
1	N	1140	C	C1'-N1	5.48	1.55	1.47
1	N	602	A	C5'-C4'	5.48	1.59	1.51
1	N	541	G	C2'-O2'	-5.48	1.34	1.42
1	N	325	A	C2'-C1'	-5.47	1.45	1.53
1	N	1140	C	C4'-C3'	5.47	1.61	1.53
1	N	1031	C	C4'-O4'	5.47	1.53	1.45
1	N	340	U	C2'-C1'	-5.47	1.45	1.53
1	N	710	G	C5'-C4'	5.46	1.59	1.51
1	N	56	U	C4'-O4'	5.46	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	517	G	C3'-O3'	-5.45	1.33	1.42
1	N	650	G	C1'-N9	5.45	1.56	1.48
1	N	965	U	C5'-C4'	5.45	1.59	1.51
1	N	1325	C	C5'-C4'	5.45	1.59	1.51
1	N	748	G	O4'-C1'	5.44	1.49	1.41
1	N	1143	G	C3'-O3'	-5.44	1.33	1.42
1	N	1340	A	O3'-P	-5.44	1.52	1.61
1	N	830	G	C2'-C1'	-5.44	1.45	1.53
1	N	1087	G	C5'-C4'	5.44	1.59	1.51
1	N	1477	U	C1'-N1	5.44	1.56	1.48
1	N	1073	U	C1'-N1	5.44	1.56	1.48
1	N	1078	U	O5'-C5'	5.43	1.50	1.42
1	N	234	C	P-O5'	-5.43	1.51	1.59
1	N	331	G	C3'-O3'	5.43	1.50	1.42
1	N	1327	C	C1'-N1	5.43	1.56	1.48
1	N	103	U	C3'-O3'	5.43	1.50	1.42
1	N	309	A	C6-N6	5.43	1.44	1.33
1	N	1072	G	C4'-C3'	5.43	1.60	1.52
1	N	602	A	O4'-C1'	5.42	1.49	1.41
1	N	771	G	C2'-C1'	-5.42	1.45	1.53
1	N	17	U	C5'-C4'	5.42	1.59	1.51
1	N	465	A	C4'-C3'	5.42	1.60	1.52
1	N	1405	G	C4'-C3'	5.42	1.60	1.52
1	N	410	G	C1'-N9	5.42	1.56	1.48
1	N	981	U	C4'-C3'	5.42	1.60	1.52
1	N	299	G	C2'-C1'	-5.42	1.45	1.53
1	N	904	U	C1'-N1	5.42	1.56	1.48
1	N	689	C	P-O5'	-5.42	1.51	1.59
1	N	308	C	C2'-C1'	-5.41	1.45	1.53
1	N	924	C	C4'-C3'	5.41	1.60	1.52
1	N	1096	C	C3'-O3'	5.41	1.50	1.42
1	N	1387	G	O3'-P	-5.41	1.53	1.61
1	N	1261	A	C5'-C4'	5.41	1.59	1.51
1	N	1226	C	C5'-C4'	5.41	1.59	1.51
1	N	735	C	C5'-C4'	5.41	1.59	1.51
1	N	163	C	C1'-N1	5.40	1.56	1.48
1	N	982	U	C1'-N1	5.40	1.55	1.47
1	N	949	A	C3'-O3'	5.39	1.50	1.42
1	N	1177	G	C2'-O2'	-5.39	1.34	1.42
1	N	35	G	O3'-P	-5.39	1.53	1.61
1	N	1059	C	C5'-C4'	5.39	1.59	1.51
1	N	437	U	C3'-O3'	5.39	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	595	A	P-O5'	-5.39	1.51	1.59
1	N	598	U	C2'-O2'	-5.39	1.34	1.42
1	N	674	G	C2'-C1'	-5.39	1.45	1.53
1	N	140	U	P-O5'	-5.39	1.51	1.59
1	N	639	G	C1'-N9	5.39	1.56	1.48
1	N	1094	G	C4'-O4'	-5.39	1.37	1.45
1	N	149	A	O4'-C1'	-5.38	1.33	1.41
1	N	507	C	C3'-O3'	5.38	1.50	1.42
1	N	1506	U	C5'-C4'	5.38	1.59	1.51
1	N	1431	A	C3'-C2'	5.38	1.60	1.52
1	N	915	A	C3'-C2'	5.37	1.60	1.52
1	N	984	C	C3'-C2'	5.37	1.60	1.52
1	N	1474	U	C1'-N1	5.37	1.56	1.48
1	N	1196	A	C5'-C4'	5.37	1.59	1.51
1	N	229	U	P-O5'	-5.37	1.51	1.59
1	N	847	G	C5-C6	-5.37	1.31	1.42
1	N	1041	G	C2'-C1'	-5.37	1.45	1.53
1	N	1251	A	C2'-C1'	-5.36	1.45	1.53
1	N	1304	G	C4'-C3'	-5.36	1.44	1.52
1	N	636	U	C4'-C3'	-5.36	1.44	1.52
1	N	451	A	C1'-N9	5.36	1.54	1.47
1	N	804	U	C1'-N1	5.36	1.56	1.48
1	N	1275	A	C6-N6	5.36	1.44	1.33
1	N	933	G	C3'-C2'	-5.36	1.44	1.52
1	N	496	A	C3'-O3'	5.36	1.50	1.42
1	N	747	A	C3'-C2'	5.35	1.60	1.52
1	N	689	C	C3'-O3'	5.35	1.50	1.42
1	N	659	U	P-O5'	-5.35	1.51	1.59
1	N	777	A	O5'-C5'	5.35	1.50	1.42
1	N	870	U	P-O5'	-5.35	1.51	1.59
1	N	1412	C	P-O5'	-5.35	1.51	1.59
1	N	219	U	C3'-C2'	-5.34	1.44	1.52
1	N	517	G	C2'-C1'	-5.34	1.45	1.53
1	N	703	G	C3'-C2'	5.34	1.60	1.52
1	N	1042	A	C2'-C1'	-5.34	1.45	1.53
1	N	17	U	C4'-C3'	5.34	1.60	1.52
1	N	569	C	C5'-C4'	5.34	1.59	1.51
1	N	1492	A	C3'-O3'	5.34	1.50	1.42
1	N	1507	A	O5'-C5'	5.34	1.50	1.42
1	N	627	G	C5'-C4'	5.34	1.59	1.51
1	N	1321	U	C5'-C4'	5.33	1.59	1.51
1	N	1441	A	C3'-O3'	5.33	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1223	C	C1'-N1	5.33	1.56	1.48
1	N	749	A	C1'-N9	5.33	1.55	1.48
1	N	1433	A	O4'-C1'	5.33	1.49	1.41
1	N	432	A	C1'-N9	5.32	1.55	1.48
1	N	208	U	C2'-C1'	-5.32	1.45	1.53
1	N	754	C	O5'-C5'	5.32	1.50	1.42
1	N	239	U	C4'-C3'	5.32	1.60	1.52
1	N	241	G	O5'-C5'	5.32	1.50	1.42
1	N	717	U	C1'-N1	5.31	1.55	1.47
1	N	535	A	C4'-O4'	-5.31	1.37	1.45
1	N	730	G	C4'-C3'	5.31	1.60	1.52
1	N	1395	C	C1'-N1	5.31	1.56	1.48
1	N	79	G	C1'-N9	5.30	1.55	1.48
1	N	56	U	P-O5'	-5.30	1.51	1.59
1	N	324	G	C4'-O4'	5.30	1.53	1.45
1	N	230	G	N1-C2	5.30	1.48	1.37
1	N	1445	U	P-O5'	-5.30	1.51	1.59
1	N	559	A	O4'-C1'	5.30	1.49	1.42
1	N	788	U	C3'-O3'	5.29	1.50	1.42
1	N	1344	C	C4'-O4'	-5.29	1.37	1.45
1	N	59	A	O3'-P	-5.29	1.53	1.61
1	N	27	G	C3'-O3'	5.29	1.50	1.42
1	N	122	G	C5'-C4'	5.29	1.59	1.51
1	N	1382	C	N3-C4	5.29	1.44	1.33
1	N	326	G	C4'-O4'	-5.29	1.37	1.45
1	N	1166	G	C2'-C1'	-5.29	1.45	1.53
1	N	868	C	O3'-P	-5.28	1.53	1.61
1	N	813	U	C3'-O3'	5.28	1.50	1.42
1	N	1232	U	C1'-N1	5.28	1.56	1.48
1	N	1264	U	C2'-C1'	-5.27	1.45	1.53
1	N	1378	C	C3'-O3'	5.27	1.50	1.42
1	N	490	C	C4-N4	5.27	1.44	1.33
1	N	1362	A	O5'-C5'	-5.27	1.34	1.42
1	N	1295	U	O4'-C1'	-5.27	1.33	1.41
1	N	356	A	C4'-C3'	5.27	1.60	1.52
1	N	170	U	C1'-N1	5.27	1.56	1.48
1	N	1063	C	C3'-O3'	5.26	1.50	1.42
1	N	500	G	C3'-C2'	5.26	1.60	1.52
1	N	780	A	P-O5'	-5.26	1.51	1.59
1	N	1015	G	C2'-C1'	-5.26	1.45	1.53
1	N	704	A	C3'-C2'	-5.25	1.44	1.52
1	N	585	G	O3'-P	-5.25	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1160	G	C2'-C1'	-5.25	1.45	1.53
1	N	271	C	O4'-C1'	5.25	1.49	1.41
1	N	460	A	C2'-C1'	-5.25	1.45	1.53
1	N	836	G	O4'-C1'	-5.25	1.33	1.41
1	N	902	G	C4'-O4'	5.24	1.53	1.45
1	N	1500	A	O4'-C1'	5.24	1.49	1.41
1	N	26	A	P-O5'	-5.24	1.51	1.59
1	N	490	C	O3'-P	-5.24	1.53	1.61
1	N	1467	C	C2'-O2'	-5.24	1.34	1.42
1	N	374	A	C2'-C1'	-5.24	1.45	1.53
1	N	1285	A	O4'-C1'	5.24	1.49	1.42
1	N	434	U	N3-C4	5.23	1.49	1.38
1	N	645	G	C3'-O3'	5.23	1.50	1.42
1	N	966	G	O3'-P	-5.23	1.53	1.61
1	N	1107	C	C5'-C4'	5.23	1.59	1.51
1	N	430	A	O5'-C5'	5.22	1.50	1.42
1	N	1426	G	C2-N3	5.22	1.43	1.32
1	N	1266	G	C5'-C4'	5.22	1.59	1.51
1	N	511	C	O3'-P	-5.22	1.53	1.61
1	N	141	G	C3'-C2'	5.22	1.60	1.52
1	N	299	G	P-O5'	-5.21	1.51	1.59
1	N	1168	U	O4'-C1'	5.21	1.49	1.41
1	N	1171	A	C1'-N9	5.21	1.55	1.48
1	N	333	U	C4'-O4'	5.21	1.53	1.45
1	N	443	C	C2'-C1'	-5.21	1.45	1.53
1	N	816	A	C6-N6	5.21	1.44	1.33
1	N	830	G	C4'-O4'	-5.21	1.37	1.45
1	N	1238	A	O3'-P	-5.21	1.53	1.61
1	N	1455	G	C5'-C4'	5.21	1.59	1.51
1	N	380	G	C2'-C1'	-5.21	1.45	1.53
1	N	1172	C	C2'-C1'	-5.21	1.45	1.53
1	N	1153	G	C4'-C3'	5.20	1.60	1.52
1	N	458	U	C1'-N1	5.20	1.56	1.48
1	N	1112	C	O5'-C5'	5.20	1.50	1.42
1	N	798	U	O3'-P	-5.20	1.53	1.61
1	N	1399	C	C1'-N1	5.20	1.55	1.47
1	N	1484	C	C3'-C2'	5.20	1.60	1.52
1	N	1315	U	C1'-N1	5.19	1.56	1.48
1	N	752	G	C2'-C1'	-5.19	1.45	1.53
1	N	1228	C	O5'-C5'	5.19	1.50	1.42
1	N	1314	C	C3'-O3'	5.19	1.50	1.42
1	N	947	G	C1'-N9	-5.19	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	638	U	O5'-C5'	5.19	1.50	1.42
1	N	1124	G	C3'-O3'	-5.19	1.34	1.42
1	N	648	A	C1'-N9	-5.19	1.40	1.48
1	N	254	G	C4'-C3'	5.18	1.60	1.52
1	N	675	A	C6-N6	5.18	1.44	1.33
1	N	177	G	C3'-O3'	5.18	1.50	1.42
1	N	318	G	P-O5'	-5.18	1.51	1.59
1	N	1355	G	C2'-C1'	-5.18	1.45	1.53
1	N	115	G	C4'-C3'	5.18	1.60	1.53
1	N	1050	G	C2'-C1'	-5.18	1.45	1.53
1	N	1313	U	O5'-C5'	-5.18	1.34	1.42
1	N	591	U	C5'-C4'	5.18	1.59	1.51
1	N	1188	A	C5'-C4'	5.18	1.59	1.51
1	N	655	A	C5'-C4'	5.18	1.59	1.51
1	N	427	U	C1'-N1	5.17	1.56	1.48
1	N	699	C	C1'-N1	5.17	1.56	1.48
1	N	712	A	C1'-N9	5.17	1.55	1.48
1	N	898	G	C5'-C4'	5.17	1.59	1.51
1	N	787	A	C5'-C4'	5.17	1.59	1.51
1	N	703	G	C1'-N9	-5.17	1.39	1.47
1	N	755	G	C5'-C4'	5.17	1.58	1.51
1	N	1396	A	C5'-C4'	5.16	1.59	1.51
1	N	792	A	C5'-C4'	5.16	1.59	1.51
1	N	130	A	N9-C4	-5.16	1.27	1.37
1	N	455	G	C4'-C3'	5.16	1.60	1.52
1	N	491	G	C5'-C4'	5.16	1.58	1.51
1	N	585	G	C1'-N9	5.16	1.55	1.48
1	N	1334	G	C4'-C3'	5.16	1.60	1.52
1	N	338	A	C3'-O3'	-5.16	1.34	1.42
1	N	437	U	C1'-N1	5.16	1.56	1.48
1	N	551	U	P-O5'	-5.16	1.52	1.59
1	N	1197	A	C5'-C4'	5.16	1.58	1.51
1	N	1263	C	O3'-P	-5.16	1.53	1.61
1	N	1288	A	C3'-O3'	5.16	1.49	1.42
1	N	1313	U	C4'-O4'	-5.16	1.37	1.45
1	N	488	C	C1'-N1	5.15	1.56	1.48
1	N	1068	G	C1'-N9	5.15	1.55	1.48
1	N	1117	A	O4'-C1'	-5.15	1.33	1.41
1	N	1286	U	C2'-C1'	-5.15	1.45	1.53
1	N	956	U	C1'-N1	5.15	1.56	1.48
1	N	988	G	C3'-O3'	5.15	1.49	1.42
1	N	1169	A	C5'-C4'	5.15	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	1140	C	C2'-C1'	-5.15	1.45	1.53
1	N	1410	A	C1'-N9	5.15	1.55	1.48
1	N	1152	A	O5'-C5'	5.15	1.50	1.42
1	N	256	U	P-O5'	-5.14	1.52	1.59
1	N	940	C	P-O5'	-5.14	1.52	1.59
1	N	224	U	C5'-C4'	5.14	1.58	1.51
1	N	907	A	C4'-C3'	5.14	1.60	1.52
1	N	1120	C	C1'-N1	5.14	1.56	1.48
1	N	1315	U	C3'-C2'	5.14	1.60	1.52
1	N	1524	C	C4'-C3'	5.14	1.60	1.52
1	N	775	G	O3'-P	5.14	1.68	1.61
1	N	299	G	C3'-O3'	5.14	1.49	1.42
1	N	418	C	C1'-N1	5.13	1.56	1.48
1	N	662	U	C5'-C4'	5.13	1.58	1.51
1	N	1491	G	C4'-O4'	-5.13	1.37	1.45
1	N	1038	C	C5'-C4'	5.13	1.58	1.51
1	N	1491	G	O4'-C1'	-5.13	1.33	1.41
1	N	195	A	O5'-C5'	-5.13	1.34	1.42
1	N	353	A	C5'-C4'	5.13	1.58	1.51
1	N	747	A	O3'-P	-5.13	1.53	1.61
1	N	483	C	P-O5'	-5.12	1.52	1.59
1	N	412	A	C2'-C1'	-5.12	1.45	1.53
1	N	718	A	C4'-C3'	5.12	1.60	1.52
1	N	504	C	C5'-C4'	5.12	1.58	1.51
1	N	968	A	C4'-O4'	5.12	1.53	1.45
1	N	1341	U	O3'-P	-5.12	1.53	1.61
1	N	234	C	C1'-N1	5.12	1.56	1.48
1	N	335	C	C5'-C4'	5.12	1.58	1.51
1	N	1389	C	O5'-C5'	5.12	1.50	1.42
1	N	1458	G	N1-C2	5.12	1.48	1.37
1	N	497	G	C5'-C4'	5.11	1.58	1.51
1	N	948	C	C3'-C2'	-5.11	1.45	1.52
1	N	1046	A	C4'-C3'	5.11	1.60	1.52
1	N	256	U	C1'-N1	5.11	1.56	1.48
1	N	1343	G	C3'-O3'	5.11	1.49	1.42
1	N	1419	G	C2'-C1'	-5.11	1.45	1.53
1	N	1503	A	C4'-O4'	-5.11	1.38	1.45
1	N	1409	C	C5'-C4'	5.11	1.58	1.51
1	N	739	C	C5'-C4'	5.11	1.58	1.51
1	N	1400	C	C5'-C4'	5.11	1.58	1.51
1	N	679	C	C4'-O4'	-5.10	1.37	1.45
1	N	713	G	C4'-O4'	-5.10	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	575	G	P-O5'	-5.10	1.52	1.59
1	N	547	A	O3'-P	-5.10	1.53	1.61
1	N	856	C	C5'-C4'	5.10	1.58	1.51
1	N	1188	A	O5'-C5'	5.10	1.50	1.42
1	N	1320	C	O4'-C1'	5.10	1.49	1.41
1	N	1347	G	C4'-C3'	5.10	1.60	1.53
1	N	1457	G	O4'-C1'	-5.10	1.34	1.41
1	N	666	G	C2-N3	5.10	1.43	1.32
1	N	1443	C	C2'-C1'	-5.10	1.45	1.53
1	N	1339	A	C1'-N9	-5.09	1.40	1.48
1	N	1145	A	C1'-N9	-5.09	1.40	1.48
1	N	439	U	C2'-C1'	-5.09	1.45	1.53
1	N	578	C	C2'-C1'	-5.09	1.45	1.53
1	N	1200	C	C5'-C4'	5.09	1.58	1.51
1	N	364	A	C3'-O3'	5.09	1.49	1.42
1	N	335	C	O3'-P	-5.08	1.53	1.61
1	N	476	U	C4'-O4'	5.08	1.53	1.45
1	N	974	A	C1'-N9	5.08	1.54	1.47
1	N	54	C	C2'-O2'	-5.08	1.34	1.42
1	N	129	A	O5'-C5'	-5.08	1.35	1.42
1	N	179	A	P-O5'	-5.08	1.52	1.59
1	N	991	U	C1'-N1	5.08	1.55	1.47
1	N	947	G	C2'-O2'	-5.08	1.34	1.42
1	N	1306	A	C2'-C1'	-5.07	1.45	1.53
1	N	476	U	C4-C5	5.07	1.53	1.43
1	N	919	A	O3'-P	-5.07	1.53	1.61
1	N	334	C	O3'-P	-5.07	1.53	1.61
1	N	1382	C	P-O5'	-5.07	1.52	1.59
1	N	1410	A	C3'-O3'	5.07	1.49	1.42
1	N	985	C	C5'-C4'	5.07	1.58	1.51
1	N	89	U	C5'-C4'	5.06	1.58	1.51
1	N	486	U	C3'-O3'	5.06	1.49	1.42
1	N	544	G	N1-C2	5.06	1.47	1.37
1	N	328	C	O4'-C1'	-5.06	1.34	1.42
1	N	1342	C	C1'-N1	5.06	1.56	1.48
1	N	501	C	C1'-N1	5.06	1.56	1.48
1	N	1332	A	C4'-C3'	-5.05	1.45	1.52
1	N	1506	U	C4'-O4'	5.05	1.53	1.45
1	N	213	G	O4'-C1'	5.05	1.49	1.41
1	N	1116	U	C2'-C1'	-5.05	1.45	1.53
1	N	1128	C	C1'-N1	5.05	1.56	1.48
1	N	820	U	C4-C5	5.05	1.53	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	N	632	U	C2'-C1'	-5.05	1.45	1.53
1	N	727	G	C4'-C3'	-5.04	1.45	1.52
1	N	1024	G	C2'-C1'	-5.04	1.45	1.53
1	N	770	C	C1'-N1	5.04	1.56	1.48
1	N	829	G	C5'-C4'	5.04	1.58	1.51
1	N	1386	G	O5'-C5'	5.04	1.50	1.42
1	N	191	G	C2'-C1'	-5.03	1.45	1.53
1	N	985	C	O3'-P	-5.03	1.53	1.61
1	N	1378	C	O3'-P	-5.03	1.53	1.61
1	N	768	A	O3'-P	-5.03	1.53	1.61
1	N	197	A	C4'-C3'	5.03	1.60	1.53
1	N	545	C	P-O5'	-5.03	1.52	1.59
1	N	1025	U	C1'-N1	5.03	1.55	1.48
1	N	230	G	C2'-C1'	-5.02	1.45	1.53
1	N	241	G	C5'-C4'	5.02	1.58	1.51
1	N	1429	A	C1'-N9	5.02	1.55	1.48
1	N	613	C	O5'-C5'	5.02	1.50	1.42
1	N	378	G	C3'-C2'	-5.01	1.45	1.52
1	N	1201	A	C3'-O3'	-5.01	1.35	1.43
1	N	1396	A	O3'-P	-5.01	1.53	1.61
1	N	1020	G	C5'-C4'	5.01	1.58	1.51
1	N	1307	U	C4'-C3'	-5.01	1.45	1.52
1	N	1191	A	C2'-C1'	-5.01	1.45	1.53
1	N	1388	C	C5'-C4'	5.01	1.58	1.51
1	N	1283	U	O5'-C5'	-5.01	1.34	1.42
1	N	1421	G	C2'-C1'	-5.01	1.45	1.53
1	N	916	U	C4'-C3'	5.00	1.60	1.52
1	N	1071	C	C3'-O3'	-5.00	1.34	1.42
1	N	1184	G	O4'-C1'	-5.00	1.34	1.41

All (2118) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	94	G	P-O3'-C3'	21.59	152.59	120.20
1	N	1362	A	P-O3'-C3'	21.56	152.54	120.20
1	N	1242	G	P-O5'-C5'	19.93	150.79	120.90
1	N	451	A	P-O3'-C3'	19.40	149.31	120.20
1	N	484	G	P-O3'-C3'	19.09	148.83	120.20
1	N	140	U	P-O5'-C5'	17.57	147.26	120.90
1	N	210	C	P-O3'-C3'	17.42	146.32	120.20
1	N	181	A	P-O3'-C3'	17.40	146.29	120.20
1	N	605	U	P-O3'-C3'	17.29	146.13	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1315	U	P-O5'-C5'	16.35	145.42	120.90
1	N	1399	C	P-O3'-C3'	16.28	144.62	120.20
1	N	438	U	P-O3'-C3'	16.02	144.22	120.20
1	N	1201	A	P-O3'-C3'	15.56	143.54	120.20
1	N	1319	A	P-O3'-C3'	15.53	143.50	120.20
1	N	1283	U	P-O5'-C5'	15.10	143.55	120.90
1	N	1285	A	P-O3'-C3'	14.99	142.69	120.20
1	N	1031	C	P-O5'-C5'	14.99	143.38	120.90
1	N	172	A	P-O3'-C3'	14.89	142.54	120.20
1	N	913	A	P-O3'-C3'	14.38	141.76	120.20
1	N	641	U	P-O3'-C3'	14.28	141.62	120.20
1	N	1529	G	P-O3'-C3'	14.19	141.48	120.20
1	N	1101	A	P-O3'-C3'	14.17	141.46	120.20
1	N	93	U	P-O5'-C5'	13.90	141.76	120.90
1	N	1196	A	P-O3'-C3'	13.89	141.04	120.20
1	N	950	U	P-O5'-C5'	13.72	141.48	120.90
1	N	197	A	P-O5'-C5'	13.70	141.45	120.90
1	N	547	A	P-O3'-C3'	13.64	140.67	120.20
1	N	1088	G	P-O5'-C5'	13.64	141.36	120.90
1	N	511	C	P-O3'-C3'	13.47	140.41	120.20
1	N	1331	G	P-O5'-C5'	13.46	141.09	120.90
1	N	513	C	P-O5'-C5'	13.45	141.07	120.90
1	N	686	U	P-O3'-C3'	13.32	140.18	120.20
1	N	982	U	P-O3'-C3'	13.31	140.17	120.20
1	N	119	A	P-O3'-C3'	13.27	140.10	120.20
1	N	1102	A	P-O5'-C5'	13.21	140.71	120.90
1	N	47	C	P-O3'-C3'	13.00	139.70	120.20
1	N	1530	G	P-O3'-C3'	13.00	139.70	120.20
1	N	776	G	P-O5'-C5'	12.73	140.00	120.90
1	N	316	C	C5'-C4'-C3'	-12.61	97.08	116.00
1	N	895	G	P-O5'-C5'	12.57	139.76	120.90
1	N	1086	U	C5'-C4'-C3'	-12.56	97.16	116.00
1	N	60	A	P-O3'-C3'	12.43	138.85	120.20
1	N	1094	G	P-O3'-C3'	12.40	138.79	120.20
1	N	1127	G	P-O5'-C5'	12.37	139.46	120.90
1	N	926	G	C5'-C4'-C3'	12.29	134.43	116.00
1	N	1197	A	P-O5'-C5'	12.23	139.25	120.90
1	N	1243	C	P-O5'-C5'	12.12	139.08	120.90
1	N	199	A	P-O5'-C5'	12.06	138.99	120.90
1	N	515	G	P-O5'-C5'	12.03	138.95	120.90
1	N	985	C	P-O5'-C5'	11.98	138.88	120.90
1	N	535	A	P-O3'-C3'	11.94	138.11	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	373	A	P-O5'-C5'	-11.91	103.04	120.90
1	N	344	A	P-O3'-C3'	11.85	137.97	120.20
1	N	575	G	P-O3'-C3'	11.81	137.92	120.20
1	N	1274	A	P-O5'-C5'	11.81	138.61	120.90
1	N	1086	U	O5'-C5'-C4'	11.66	128.99	111.50
1	N	1336	C	P-O3'-C3'	11.66	137.69	120.20
1	N	1432	G	P-O3'-C3'	11.50	137.45	120.20
1	N	129	A	P-O5'-C5'	11.49	138.13	120.90
1	N	591	U	P-O5'-C5'	11.46	138.08	120.90
1	N	274	A	C2'-C3'-O3'	11.41	126.61	109.50
1	N	176	C	P-O5'-C5'	11.35	137.92	120.90
1	N	909	A	P-O5'-C5'	11.32	137.89	120.90
1	N	305	G	P-O3'-C3'	11.25	137.08	120.20
1	N	559	A	P-O3'-C3'	11.22	137.04	120.20
1	N	477	C	P-O5'-C5'	11.18	137.68	120.90
1	N	849	G	C5'-C4'-C3'	-11.18	99.24	116.00
1	N	690	G	P-O5'-C5'	11.13	137.60	120.90
1	N	135	C	P-O5'-C5'	11.06	137.49	120.90
1	N	633	G	P-O5'-C5'	11.05	137.47	120.90
1	N	21	G	P-O5'-C5'	11.02	137.43	120.90
1	N	1433	A	O3'-P-O5'	-10.96	87.55	104.00
1	N	607	A	P-O5'-C5'	10.96	137.34	120.90
1	N	358	U	P-O5'-C5'	10.94	137.31	120.90
1	N	1341	U	P-O5'-C5'	10.92	137.28	120.90
1	N	760	G	P-O5'-C5'	10.91	137.26	120.90
1	N	95	C	P-O5'-C5'	-10.90	104.55	120.90
1	N	1050	G	C5'-C4'-C3'	-10.86	99.71	116.00
1	N	51	A	P-O3'-C3'	10.83	136.45	120.20
1	N	90	C	C5'-C4'-C3'	10.82	131.43	115.20
1	N	351	G	P-O3'-C3'	10.79	136.39	120.20
1	N	750	C	P-O5'-C5'	10.69	136.94	120.90
1	N	1380	U	P-O3'-C3'	10.68	136.22	120.20
1	N	723	U	C4'-C3'-C2'	-10.59	92.01	102.60
1	N	866	C	P-O5'-C5'	10.59	136.78	120.90
1	N	10	A	P-O5'-C5'	10.57	136.76	120.90
1	N	651	C	P-O5'-C5'	10.54	136.72	120.90
1	N	180	U	P-O5'-C5'	10.52	136.68	120.90
1	N	73	C	P-O5'-C5'	-10.51	105.14	120.90
1	N	1058	G	P-O5'-C5'	10.49	136.63	120.90
1	N	1202	U	O4'-C4'-C3'	-10.48	93.52	104.00
1	N	691	G	P-O5'-C5'	10.46	136.59	120.90
1	N	559	A	C4'-C3'-C2'	10.46	113.06	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	372	C	P-O3'-C3'	10.43	135.85	120.20
1	N	430	A	P-O5'-C5'	10.41	136.52	120.90
1	N	266	G	P-O3'-C3'	10.41	135.81	120.20
1	N	1096	C	P-O5'-C5'	10.38	136.46	120.90
1	N	817	C	P-O3'-C3'	10.37	135.75	120.20
1	N	5	U	O4'-C4'-C3'	-10.36	95.74	106.10
1	N	1173	U	P-O5'-C5'	10.34	136.41	120.90
1	N	414	A	P-O5'-C5'	10.33	136.40	120.90
1	N	412	A	P-O3'-C3'	10.31	135.66	120.20
1	N	193	C	P-O5'-C5'	10.29	136.34	120.90
1	N	1241	G	P-O5'-C5'	10.28	136.31	120.90
1	N	449	G	P-O3'-C3'	-10.25	104.82	120.20
1	N	1263	C	P-O5'-C5'	10.19	136.19	120.90
1	N	1062	U	P-O3'-C3'	10.18	135.48	120.20
1	N	340	U	P-O5'-C5'	10.17	136.15	120.90
1	N	120	A	O4'-C1'-C2'	-10.16	97.44	107.60
1	N	991	U	P-O3'-C3'	10.08	135.31	120.20
1	N	486	U	P-O5'-C5'	-10.06	105.81	120.90
1	N	814	A	P-O3'-C3'	10.01	135.21	120.20
1	N	542	G	C4'-C3'-C2'	-10.00	92.60	102.60
1	N	43	C	P-O5'-C5'	9.96	135.83	120.90
1	N	532	A	P-O3'-C3'	9.95	135.12	120.20
1	N	753	A	P-O5'-C5'	-9.92	106.02	120.90
1	N	280	C	P-O3'-C3'	9.85	134.97	120.20
1	N	656	G	C3'-C2'-C1'	9.85	111.15	101.30
1	N	792	A	P-O3'-C3'	9.83	134.94	120.20
1	N	495	A	P-O3'-C3'	9.81	134.92	120.20
1	N	148	G	P-O5'-C5'	9.79	135.59	120.90
1	N	1331	G	P-O3'-C3'	9.78	134.87	120.20
1	N	666	G	C5'-C4'-C3'	9.78	130.67	116.00
1	N	934	C	P-O3'-C3'	9.76	134.84	120.20
1	N	1032	G	C4'-C3'-C2'	-9.74	92.86	102.60
1	N	752	G	P-O3'-C3'	9.71	134.77	120.20
1	N	1395	C	P-O3'-C3'	9.71	134.76	120.20
1	N	555	U	P-O3'-C3'	9.71	134.76	120.20
1	N	581	G	P-O5'-C5'	9.69	135.44	120.90
1	N	587	G	P-O3'-C3'	9.66	134.69	120.20
1	N	1220	G	C4'-C3'-C2'	-9.58	93.02	102.60
1	N	1446	A	P-O5'-C5'	-9.55	106.58	120.90
1	N	842	U	P-O5'-C5'	9.54	135.21	120.90
1	N	992	U	C5'-C4'-C3'	9.53	129.50	115.20
1	N	752	G	C2'-C3'-O3'	9.53	123.79	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1092	A	C5'-C4'-C3'	9.52	130.28	116.00
1	N	197	A	C5'-C4'-C3'	9.52	129.48	115.20
1	N	184	G	P-O5'-C5'	9.50	135.15	120.90
1	N	198	G	C3'-C2'-C1'	9.49	110.79	101.30
1	N	154	U	P-O3'-C3'	-9.47	105.99	120.20
1	N	590	U	P-O5'-C5'	9.45	135.08	120.90
1	N	274	A	P-O3'-C3'	9.41	134.32	120.20
1	N	701	U	P-O5'-C5'	9.40	135.00	120.90
1	N	1531	A	P-O5'-C5'	9.35	134.93	120.90
1	N	533	A	P-O3'-C3'	9.35	134.22	120.20
1	N	123	U	P-O5'-C5'	-9.25	107.03	120.90
1	N	129	A	C2'-C3'-O3'	9.24	123.36	109.50
1	N	596	A	P-O5'-C5'	9.21	134.72	120.90
1	N	90	C	P-O5'-C5'	9.20	134.70	120.90
1	N	422	C	O3'-P-O5'	-9.19	90.21	104.00
1	N	1064	G	P-O5'-C5'	-9.18	107.13	120.90
1	N	806	C	C4'-C3'-C2'	-9.16	93.44	102.60
1	N	930	C	P-O3'-C3'	9.11	133.86	120.20
1	N	1049	U	P-O3'-C3'	9.11	133.86	120.20
1	N	1404	C	P-O5'-C5'	9.10	134.55	120.90
1	N	1186	G	C5'-C4'-C3'	9.09	129.64	116.00
1	N	595	A	P-O5'-C5'	9.09	134.53	120.90
1	N	200	G	O4'-C4'-C3'	-9.08	94.92	104.00
1	N	1226	C	P-O3'-C3'	9.06	133.80	120.20
1	N	1259	C	P-O5'-C5'	9.06	134.50	120.90
1	N	873	A	O5'-C5'-C4'	9.06	125.29	111.70
1	N	871	U	C5'-C4'-C3'	9.06	129.59	116.00
1	N	115	G	P-O3'-C3'	9.06	133.79	120.20
1	N	729	A	P-O5'-C5'	9.04	134.46	120.90
1	N	995	C	P-O3'-C3'	-9.04	106.64	120.20
1	N	98	A	P-O5'-C5'	9.03	134.45	120.90
1	N	261	U	P-O5'-C5'	8.97	134.36	120.90
1	N	1199	U	P-O5'-C5'	8.97	134.36	120.90
1	N	119	A	O3'-P-O5'	8.96	117.43	104.00
1	N	109	A	P-O3'-C3'	8.95	133.62	120.20
1	N	580	C	P-O5'-C5'	8.94	134.31	120.90
1	N	81	A	P-O5'-C5'	8.92	134.28	120.90
1	N	277	C	P-O3'-C3'	8.91	133.57	120.20
1	N	327	A	P-O3'-C3'	8.91	133.56	120.20
1	N	223	A	P-O3'-C3'	-8.89	106.87	120.20
1	N	270	A	P-O5'-C5'	8.84	134.17	120.90
1	N	597	G	C4'-C3'-C2'	-8.84	93.76	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1241	G	C5'-C4'-C3'	-8.84	102.75	116.00
1	N	51	A	O4'-C1'-C2'	-8.83	96.97	105.80
1	N	878	A	P-O5'-C5'	8.83	134.14	120.90
1	N	530	G	P-O3'-C3'	8.82	133.43	120.20
1	N	788	U	P-O5'-C5'	8.82	134.13	120.90
1	N	914	A	C5'-C4'-C3'	-8.82	102.78	116.00
1	N	1502	A	P-O3'-C3'	8.82	133.42	120.20
1	N	1070	U	C4'-C3'-C2'	-8.81	93.79	102.60
1	N	1336	C	C2'-C3'-O3'	8.81	122.72	109.50
1	N	211	G	C4'-C3'-C2'	8.76	111.36	102.60
1	N	812	G	P-O3'-C3'	8.76	133.34	120.20
1	N	241	G	O4'-C4'-C3'	-8.75	95.25	104.00
1	N	93	U	P-O3'-C3'	-8.69	107.17	120.20
1	N	1436	U	C5'-C4'-C3'	8.69	129.03	116.00
1	N	629	A	C4'-C3'-C2'	-8.68	93.92	102.60
1	N	848	C	P-O3'-C3'	8.68	133.22	120.20
1	N	335	C	P-O5'-C5'	8.67	133.91	120.90
1	N	319	G	C5'-C4'-C3'	-8.66	103.00	116.00
1	N	859	G	O5'-C5'-C4'	-8.66	98.51	111.50
1	N	1101	A	C4'-C3'-C2'	8.65	111.25	102.60
1	N	264	C	P-O3'-C3'	8.62	133.12	120.20
1	N	1128	C	P-O5'-C5'	8.61	133.81	120.90
1	N	585	G	O4'-C1'-N9	8.61	121.41	108.50
1	N	413	G	O4'-C1'-C2'	-8.60	97.20	105.80
1	N	486	U	O4'-C1'-C2'	-8.60	99.00	107.60
1	N	69	G	N9-C1'-C2'	8.59	124.89	112.00
1	N	315	A	C2'-C3'-O3'	8.59	122.38	109.50
1	N	62	U	C4'-C3'-C2'	-8.56	94.04	102.60
1	N	559	A	C2'-C3'-O3'	8.53	122.30	109.50
1	N	1341	U	P-O3'-C3'	8.52	132.99	120.20
1	N	886	G	O4'-C4'-C3'	-8.52	95.48	104.00
1	N	179	A	P-O5'-C5'	8.51	133.67	120.90
1	N	717	U	O5'-C5'-C4'	-8.51	98.93	111.70
1	N	440	C	P-O5'-C5'	8.50	133.66	120.90
1	N	722	G	C5'-C4'-C3'	-8.49	103.26	116.00
1	N	1496	C	P-O5'-C5'	8.49	133.64	120.90
1	N	426	U	O5'-C5'-C4'	-8.49	98.76	111.50
1	N	949	A	P-O5'-C5'	8.49	133.63	120.90
1	N	193	C	O4'-C1'-N1	8.48	121.22	108.50
1	N	180	U	C2'-C3'-O3'	8.46	126.40	113.70
1	N	1230	C	P-O5'-C5'	8.47	133.60	120.90
1	N	866	C	P-O3'-C3'	8.46	132.90	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1078	U	C4'-C3'-C2'	-8.46	94.14	102.60
1	N	1236	A	C4'-C3'-O3'	-8.46	100.31	113.00
1	N	1202	U	O4'-C1'-N1	8.46	121.18	108.50
1	N	1412	C	C1'-O4'-C4'	-8.44	101.46	109.90
1	N	403	C	C4'-C3'-C2'	-8.43	94.17	102.60
1	N	343	U	P-O3'-C3'	8.40	132.79	120.20
1	N	1138	G	P-O3'-C3'	8.39	132.79	120.20
1	N	538	G	P-O5'-C5'	8.38	133.47	120.90
1	N	105	G	C4'-C3'-C2'	-8.35	94.25	102.60
1	N	542	G	P-O5'-C5'	8.34	133.41	120.90
1	N	1296	C	O4'-C1'-N1	8.34	121.01	108.50
1	N	660	C	P-O5'-C5'	8.34	133.41	120.90
1	N	383	A	C5'-C4'-C3'	8.34	128.50	116.00
1	N	1011	C	C4'-C3'-O3'	-8.34	100.50	113.00
1	N	1021	A	P-O5'-C5'	8.32	133.39	120.90
1	N	800	G	P-O5'-C5'	8.32	133.38	120.90
1	N	220	G	O3'-P-O5'	-8.32	91.52	104.00
1	N	531	U	O4'-C1'-N1	8.32	120.98	108.50
1	N	871	U	O4'-C4'-C3'	-8.31	95.69	104.00
1	N	794	A	O4'-C1'-N9	8.30	120.95	108.50
1	N	1200	C	C5'-C4'-C3'	8.30	128.45	116.00
1	N	107	G	P-O5'-C5'	-8.30	108.45	120.90
1	N	1239	A	C4'-C3'-O3'	8.29	121.84	109.40
1	N	1136	C	P-O5'-C5'	-8.29	108.47	120.90
1	N	256	U	O5'-C5'-C4'	-8.29	99.07	111.50
1	N	428	G	P-O5'-C5'	8.27	133.30	120.90
1	N	224	U	C4'-C3'-C2'	-8.26	94.34	102.60
1	N	846	G	O4'-C1'-C2'	-8.24	99.36	107.60
1	N	1064	G	C5'-C4'-C3'	8.23	127.54	115.20
1	N	686	U	C2'-C3'-O3'	8.22	121.83	109.50
1	N	694	A	O3'-P-O5'	-8.21	91.68	104.00
1	N	632	U	O3'-P-O5'	-8.20	91.70	104.00
1	N	508	U	C4'-C3'-C2'	8.20	110.80	102.60
1	N	339	C	P-O5'-C5'	8.19	133.19	120.90
1	N	736	C	C4'-C3'-C2'	-8.19	94.41	102.60
1	N	843	U	O4'-C1'-N1	8.19	120.79	108.50
1	N	1323	G	O4'-C1'-N9	8.17	120.75	108.50
1	N	1469	C	P-O5'-C5'	-8.17	108.65	120.90
1	N	1000	A	O4'-C4'-C3'	-8.16	95.84	104.00
1	N	359	G	P-O3'-C3'	-8.16	107.96	120.20
1	N	1230	C	P-O3'-C3'	8.16	132.44	120.20
1	N	1200	C	C5'-C4'-O4'	-8.16	97.56	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	699	C	P-O5'-C5'	8.15	133.12	120.90
1	N	858	G	O4'-C1'-C2'	-8.13	99.47	107.60
1	N	1204	A	O3'-P-O5'	-8.11	91.84	104.00
1	N	559	A	P-O5'-C5'	8.09	133.04	120.90
1	N	1326	U	C5'-C4'-C3'	-8.08	103.88	116.00
1	N	851	G	P-O5'-C5'	8.07	133.01	120.90
1	N	481	G	O4'-C4'-C3'	-8.07	98.03	106.10
1	N	905	U	O5'-C5'-C4'	-8.07	99.40	111.50
1	N	816	A	C4'-C3'-C2'	8.07	110.67	102.60
1	N	968	A	O3'-P-O5'	-8.06	91.91	104.00
1	N	251	G	C4'-C3'-C2'	-8.05	94.55	102.60
1	N	808	C	O4'-C1'-C2'	-8.05	99.55	107.60
1	N	1526	G	C4'-C3'-C2'	-8.05	94.55	102.60
1	N	141	G	C4'-C3'-C2'	-8.05	94.55	102.60
1	N	99	C	O3'-P-O5'	-8.04	91.94	104.00
1	N	582	C	P-O5'-C5'	8.03	132.94	120.90
1	N	140	U	C2'-C3'-O3'	7.99	125.68	113.70
1	N	1321	U	P-O5'-C5'	7.99	132.88	120.90
1	N	322	C	P-O5'-C5'	7.98	132.88	120.90
1	N	723	U	O4'-C1'-N1	7.98	120.47	108.50
1	N	925	G	P-O5'-C5'	7.98	132.87	120.90
1	N	990	C	C4'-C3'-C2'	-7.97	94.63	102.60
1	N	49	U	P-O5'-C5'	7.96	132.84	120.90
1	N	266	G	P-O5'-C5'	7.94	132.82	120.90
1	N	208	U	P-O3'-C3'	7.94	132.11	120.20
1	N	197	A	P-O3'-C3'	7.94	132.11	120.20
1	N	986	U	O5'-C5'-C4'	-7.91	99.63	111.50
1	N	1416	G	O3'-P-O5'	-7.90	92.15	104.00
1	N	1517	G	C4'-C3'-C2'	7.89	110.49	102.60
1	N	660	C	O4'-C1'-N1	7.89	120.34	108.50
1	N	616	G	P-O3'-C3'	-7.89	108.36	120.20
1	N	1332	A	P-O5'-C5'	-7.89	109.07	120.90
1	N	39	G	P-O5'-C5'	-7.88	109.07	120.90
1	N	940	C	P-O5'-C5'	7.88	132.73	120.90
1	N	229	U	C4'-C3'-C2'	-7.88	94.72	102.60
1	N	382	A	P-O5'-C5'	7.88	132.72	120.90
1	N	1320	C	O4'-C1'-N1	7.86	120.29	108.50
1	N	1374	A	O4'-C1'-N9	7.86	120.29	108.50
1	N	630	A	P-O3'-C3'	7.86	131.99	120.20
1	N	1120	C	P-O5'-C5'	7.85	132.68	120.90
1	N	1393	U	O4'-C1'-N1	7.84	120.27	108.50
1	N	582	C	O4'-C1'-N1	7.84	120.26	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	314	C	C4'-C3'-C2'	-7.83	94.77	102.60
1	N	695	A	P-O5'-C5'	7.82	132.64	120.90
1	N	1255	G	P-O5'-C5'	7.82	132.63	120.90
1	N	699	C	P-O3'-C3'	-7.82	108.47	120.20
1	N	242	G	O3'-P-O5'	-7.80	92.30	104.00
1	N	1498	U	C3'-C2'-C1'	7.80	109.30	101.50
1	N	198	G	P-O5'-C5'	7.80	132.60	120.90
1	N	586	C	C2'-C3'-O3'	7.79	125.39	113.70
1	N	982	U	P-O5'-C5'	7.79	132.59	120.90
1	N	204	G	C4'-C3'-O3'	7.79	124.68	113.00
1	N	361	G	P-O5'-C5'	7.79	132.58	120.90
1	N	1041	G	O3'-P-O5'	-7.78	92.33	104.00
1	N	632	U	P-O3'-C3'	7.77	131.86	120.20
1	N	120	A	C4'-C3'-C2'	-7.77	94.83	102.60
1	N	23	C	P-O5'-C5'	7.77	132.55	120.90
1	N	1201	A	C2'-C3'-O3'	7.77	121.15	109.50
1	N	313	A	C4'-C3'-C2'	-7.76	94.84	102.60
1	N	576	C	C1'-O4'-C4'	-7.76	102.14	109.90
1	N	120	A	P-O3'-C3'	7.76	131.84	120.20
1	N	1223	C	P-O3'-C3'	7.76	131.84	120.20
1	N	713	G	C4'-C3'-O3'	-7.75	101.37	113.00
1	N	1240	U	P-O3'-C3'	7.75	131.82	120.20
1	N	1390	U	C5'-C4'-C3'	7.74	127.61	116.00
1	N	112	G	C1'-C2'-O2'	7.74	120.01	108.40
1	N	672	U	C5'-C4'-C3'	-7.73	104.40	116.00
1	N	1083	U	P-O3'-C3'	7.72	131.78	120.20
1	N	1327	C	O4'-C1'-N1	7.71	120.07	108.50
1	N	531	U	P-O5'-C5'	7.70	132.45	120.90
1	N	1276	G	C4'-C3'-C2'	-7.68	94.92	102.60
1	N	808	C	O4'-C1'-N1	7.67	120.00	108.50
1	N	294	U	P-O5'-C5'	7.66	132.39	120.90
1	N	963	G	C4'-C3'-C2'	-7.65	94.95	102.60
1	N	724	G	P-O5'-C5'	-7.65	109.43	120.90
1	N	222	C	C4'-C3'-C2'	-7.64	94.96	102.60
1	N	1049	U	C5'-C4'-C3'	7.64	126.66	115.20
1	N	428	G	P-O3'-C3'	7.62	131.64	120.20
1	N	258	G	P-O5'-C5'	7.62	132.33	120.90
1	N	274	A	C3'-C2'-C1'	7.62	109.12	101.50
1	N	644	U	O4'-C1'-N1	7.62	119.93	108.50
1	N	601	G	P-O3'-C3'	-7.61	108.78	120.20
1	N	366	A	C2'-C3'-O3'	7.61	120.91	109.50
1	N	1302	C	P-O5'-C5'	7.61	132.31	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	135	C	C4'-C3'-C2'	-7.60	95.00	102.60
1	N	1334	G	P-O3'-C3'	7.59	131.59	120.20
1	N	200	G	C1'-O4'-C4'	7.59	117.49	109.90
1	N	200	G	O4'-C1'-C2'	-7.58	100.02	107.60
1	N	1530	G	O4'-C1'-N9	7.58	119.57	108.20
1	N	1424	U	C4'-C3'-C2'	-7.57	95.03	102.60
1	N	907	A	P-O3'-C3'	7.56	131.54	120.20
1	N	93	U	C4'-C3'-O3'	7.53	124.29	113.00
1	N	827	U	P-O3'-C3'	7.53	131.49	120.20
1	N	264	C	O5'-C5'-C4'	-7.52	100.21	111.50
1	N	864	A	P-O3'-C3'	7.52	131.48	120.20
1	N	151	A	O4'-C1'-C2'	-7.52	100.08	107.60
1	N	181	A	C1'-C2'-O2'	-7.51	97.14	108.40
1	N	1240	U	O4'-C1'-C2'	-7.49	100.11	107.60
1	N	827	U	C5'-C4'-C3'	7.49	127.23	116.00
1	N	1129	C	C2'-C3'-O3'	7.48	120.72	109.50
1	N	1432	G	C2'-C3'-O3'	7.48	120.72	109.50
1	N	755	G	C5'-C4'-C3'	-7.45	104.83	116.00
1	N	51	A	C3'-C2'-C1'	7.45	108.94	101.50
1	N	196	A	O3'-P-O5'	-7.45	92.83	104.00
1	N	1172	C	C2'-C3'-O3'	7.45	124.87	113.70
1	N	1147	C	C4'-C3'-O3'	-7.44	101.84	113.00
1	N	1364	U	C1'-O4'-C4'	-7.44	102.26	109.70
1	N	377	G	O5'-C5'-C4'	-7.43	100.35	111.50
1	N	341	C	P-O5'-C5'	7.43	132.05	120.90
1	N	1060	U	C4'-C3'-C2'	-7.43	95.17	102.60
1	N	1092	A	O4'-C4'-C3'	-7.42	96.58	104.00
1	N	491	G	O5'-C5'-C4'	-7.42	100.37	111.50
1	N	1485	U	P-O5'-C5'	7.42	132.03	120.90
1	N	1098	C	O5'-C5'-C4'	-7.41	100.38	111.50
1	N	407	U	P-O5'-C5'	7.41	132.01	120.90
1	N	817	C	O4'-C1'-N1	7.40	119.30	108.20
1	N	1145	A	O3'-P-O5'	-7.40	92.90	104.00
1	N	106	C	O4'-C1'-N1	7.39	119.59	108.50
1	N	1043	G	C4'-C3'-O3'	-7.39	101.91	113.00
1	N	1007	U	P-O5'-C5'	7.38	131.96	120.90
1	N	415	A	C5'-C4'-C3'	-7.38	104.94	116.00
1	N	723	U	O4'-C4'-C3'	-7.37	96.63	104.00
1	N	424	G	P-O5'-C5'	7.37	131.95	120.90
1	N	1281	C	P-O5'-C5'	7.37	131.95	120.90
1	N	272	C	C4'-C3'-C2'	-7.36	95.24	102.60
1	N	1399	C	O3'-P-O5'	7.36	115.04	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1518	A	P-O3'-C3'	7.35	131.22	120.20
1	N	1402	C	O4'-C1'-N1	7.34	119.51	108.50
1	N	496	A	P-O5'-C5'	7.33	131.90	120.90
1	N	76	G	C5'-C4'-C3'	-7.33	105.00	116.00
1	N	561	U	C1'-C2'-O2'	-7.33	100.80	111.80
1	N	982	U	C2'-C3'-O3'	7.33	120.49	109.50
1	N	1264	U	O5'-C5'-C4'	-7.33	100.51	111.50
1	N	435	A	P-O5'-C5'	7.32	131.88	120.90
1	N	63	C	P-O3'-C3'	7.32	131.18	120.20
1	N	185	U	P-O5'-C5'	7.32	131.88	120.90
1	N	458	U	O4'-C1'-C2'	-7.32	100.28	107.60
1	N	581	G	O5'-C5'-C4'	-7.32	100.52	111.50
1	N	249	U	O4'-C1'-N1	7.32	119.47	108.50
1	N	250	A	O4'-C1'-N9	7.31	119.17	108.20
1	N	54	C	O4'-C1'-C2'	-7.30	100.30	107.60
1	N	1176	A	C5'-C4'-C3'	7.30	126.96	116.00
1	N	337	G	C5'-C4'-C3'	7.30	126.95	116.00
1	N	21	G	C3'-C2'-C1'	7.29	108.59	101.30
1	N	752	G	O4'-C1'-N9	7.29	119.13	108.20
1	N	1354	U	P-O3'-C3'	-7.28	109.28	120.20
1	N	770	C	C5'-C4'-C3'	7.27	126.91	116.00
1	N	339	C	O5'-C5'-C4'	-7.26	100.61	111.50
1	N	680	C	C5'-C4'-C3'	7.26	126.89	116.00
1	N	1492	A	P-O5'-C5'	7.26	131.79	120.90
1	N	178	C	O5'-C5'-C4'	-7.26	100.61	111.50
1	N	284	C	P-O5'-C5'	7.26	131.79	120.90
1	N	89	U	C2'-C3'-O3'	7.25	120.38	109.50
1	N	1063	C	P-O5'-C5'	7.25	131.78	120.90
1	N	775	G	C4'-C3'-C2'	-7.25	95.35	102.60
1	N	511	C	C2'-C3'-O3'	7.24	120.36	109.50
1	N	815	A	O4'-C4'-C3'	-7.24	96.76	104.00
1	N	1448	C	P-O5'-C5'	-7.24	110.04	120.90
1	N	121	U	O4'-C1'-C2'	-7.23	100.37	107.60
1	N	1125	U	C5'-C4'-C3'	-7.23	105.16	116.00
1	N	1153	G	P-O3'-C3'	-7.23	109.36	120.20
1	N	770	C	O3'-P-O5'	-7.23	93.16	104.00
1	N	69	G	C3'-C2'-C1'	7.23	108.53	101.30
1	N	718	A	C5'-C4'-C3'	-7.22	105.16	116.00
1	N	1193	G	P-O5'-C5'	-7.22	110.06	120.90
1	N	346	G	C4'-C3'-C2'	7.22	109.82	102.60
1	N	131	A	O4'-C1'-N9	7.22	119.33	108.50
1	N	1251	A	P-O3'-C3'	7.20	131.00	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1395	C	P-O5'-C5'	-7.20	110.10	120.90
1	N	112	G	C4'-C3'-C2'	-7.20	95.40	102.60
1	N	1164	G	O5'-C5'-C4'	-7.20	100.70	111.50
1	N	422	C	C5'-C4'-O4'	7.20	119.90	109.10
1	N	846	G	O4'-C4'-C3'	7.20	111.20	104.00
1	N	1069	C	C3'-C2'-C1'	-7.19	94.11	101.30
1	N	249	U	O4'-C1'-C2'	-7.18	100.42	107.60
1	N	813	U	P-O3'-C3'	-7.18	109.42	120.20
1	N	1265	C	O4'-C1'-N1	7.18	119.28	108.50
1	N	542	G	P-O3'-C3'	-7.18	109.43	120.20
1	N	902	G	C3'-C2'-O2'	7.18	121.47	110.70
1	N	1460	C	O4'-C1'-N1	7.18	119.28	108.50
1	N	972	C	O4'-C1'-N1	7.18	119.27	108.50
1	N	882	C	C4'-C3'-C2'	-7.17	95.43	102.60
1	N	53	A	P-O5'-C5'	7.17	131.65	120.90
1	N	658	C	O4'-C1'-N1	7.17	119.25	108.50
1	N	1345	U	O3'-P-O5'	-7.16	93.25	104.00
1	N	314	C	P-O5'-C5'	7.16	131.64	120.90
1	N	819	A	C4'-C3'-O3'	7.16	120.13	109.40
1	N	74	A	O4'-C4'-C3'	-7.15	96.85	104.00
1	N	1359	C	P-O5'-C5'	-7.15	110.17	120.90
1	N	1042	A	P-O5'-C5'	7.15	131.62	120.90
1	N	1326	U	C4'-C3'-C2'	-7.15	95.45	102.60
1	N	115	G	C2'-C3'-O3'	7.15	120.22	109.50
1	N	1473	G	C1'-O4'-C4'	7.15	117.05	109.90
1	N	1209	C	P-O5'-C5'	7.14	131.62	120.90
1	N	935	A	P-O5'-C5'	-7.14	110.19	120.90
1	N	1374	A	O3'-P-O5'	-7.14	93.29	104.00
1	N	762	U	P-O5'-C5'	7.13	131.60	120.90
1	N	606	G	P-O5'-C5'	-7.13	110.21	120.90
1	N	938	A	P-O5'-C5'	7.13	131.59	120.90
1	N	939	G	P-O5'-C5'	-7.13	110.21	120.90
1	N	36	C	O4'-C1'-N1	7.12	119.18	108.50
1	N	30	U	C1'-O4'-C4'	7.12	116.82	109.70
1	N	91	U	C5'-C4'-O4'	-7.12	99.12	109.80
1	N	705	G	C4'-C3'-C2'	-7.12	95.48	102.60
1	N	1484	C	C3'-C2'-C1'	7.11	108.41	101.30
1	N	131	A	C5'-C4'-C3'	-7.11	105.34	116.00
1	N	295	C	O4'-C1'-N1	7.11	119.16	108.50
1	N	1117	A	P-O3'-C3'	7.10	130.85	120.20
1	N	1071	C	C4'-C3'-C2'	-7.10	95.50	102.60
1	N	20	U	P-O5'-C5'	7.09	131.54	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	905	U	O4'-C1'-N1	7.09	119.13	108.50
1	N	198	G	O4'-C1'-N9	7.08	119.13	108.50
1	N	1456	A	C5'-C4'-C3'	7.08	126.63	116.00
1	N	582	C	O5'-C5'-C4'	-7.08	100.88	111.50
1	N	175	C	P-O5'-C5'	7.07	131.51	120.90
1	N	246	A	C2'-C3'-O3'	7.07	120.10	109.50
1	N	1267	C	P-O5'-C5'	-7.07	110.30	120.90
1	N	963	G	P-O3'-C3'	-7.07	109.60	120.20
1	N	354	G	O4'-C1'-C2'	-7.06	100.54	107.60
1	N	1042	A	C2'-C3'-O3'	7.06	124.29	113.70
1	N	508	U	P-O3'-C3'	7.06	130.79	120.20
1	N	1489	G	O4'-C4'-C3'	-7.05	96.94	104.00
1	N	758	C	C4'-C3'-C2'	-7.05	95.55	102.60
1	N	960	U	C2'-C3'-O3'	7.05	120.07	109.50
1	N	143	A	P-O5'-C5'	7.05	131.47	120.90
1	N	1069	C	O5'-C5'-C4'	-7.04	100.94	111.50
1	N	1333	A	C4'-C3'-C2'	-7.04	95.56	102.60
1	N	689	C	P-O3'-C3'	-7.03	109.66	120.20
1	N	475	C	C4'-C3'-O3'	-7.02	102.47	113.00
1	N	656	G	C4'-C3'-C2'	-7.02	95.58	102.60
1	N	932	C	P-O5'-C5'	7.02	131.43	120.90
1	N	731	G	C4'-C3'-C2'	-7.02	95.58	102.60
1	N	770	C	C4'-C3'-C2'	-7.01	95.59	102.60
1	N	1027	C	O5'-C5'-C4'	-7.01	100.99	111.50
1	N	173	U	O3'-P-O5'	7.00	114.51	104.00
1	N	201	G	P-O3'-C3'	7.00	130.71	120.20
1	N	868	C	O4'-C1'-N1	7.00	119.00	108.50
1	N	49	U	O3'-P-O5'	-7.00	93.50	104.00
1	N	686	U	C5'-C4'-O4'	7.00	119.59	109.10
1	N	1431	A	C4'-C3'-C2'	-6.99	95.61	102.60
1	N	1228	C	C4'-C3'-C2'	6.99	109.59	102.60
1	N	573	A	C4'-C3'-C2'	-6.97	95.63	102.60
1	N	455	G	P-O5'-C5'	6.97	131.35	120.90
1	N	1007	U	C3'-C2'-C1'	6.97	108.27	101.30
1	N	1365	G	P-O5'-C5'	-6.97	110.45	120.90
1	N	1159	U	O3'-P-O5'	-6.96	93.56	104.00
1	N	1267	C	O4'-C1'-C2'	-6.96	100.64	107.60
1	N	884	U	O3'-P-O5'	-6.96	93.56	104.00
1	N	1282	C	P-O5'-C5'	6.96	131.34	120.90
1	N	1459	G	O4'-C1'-C2'	-6.96	100.64	107.60
1	N	473	U	P-O5'-C5'	6.95	131.33	120.90
1	N	273	U	C1'-O4'-C4'	6.95	116.85	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	429	U	C4'-C3'-O3'	6.95	119.82	109.40
1	N	1333	A	P-O5'-C5'	6.95	131.32	120.90
1	N	73	C	O4'-C1'-N1	6.95	118.92	108.50
1	N	140	U	C4'-C3'-O3'	-6.95	102.58	113.00
1	N	895	G	O4'-C1'-N9	6.95	118.92	108.50
1	N	127	G	O4'-C1'-C2'	-6.93	100.67	107.60
1	N	67	C	P-O3'-C3'	6.92	130.59	120.20
1	N	752	G	C3'-C2'-C1'	6.92	108.42	101.50
1	N	406	G	O4'-C1'-N9	6.92	118.88	108.50
1	N	1120	C	P-O3'-C3'	-6.92	109.82	120.20
1	N	352	C	P-O3'-C3'	6.92	130.57	120.20
1	N	307	C	C1'-O4'-C4'	-6.91	102.99	109.90
1	N	797	C	P-O3'-C3'	6.91	130.57	120.20
1	N	1404	C	P-O3'-C3'	6.91	130.57	120.20
1	N	212	G	O5'-C5'-C4'	-6.90	101.14	111.50
1	N	984	C	O4'-C1'-N1	6.90	118.85	108.50
1	N	1110	A	P-O3'-C3'	6.90	130.55	120.20
1	N	246	A	P-O3'-C3'	6.90	130.55	120.20
1	N	1389	C	C4'-C3'-C2'	-6.90	95.70	102.60
1	N	1514	G	C5'-C4'-C3'	6.90	126.35	116.00
1	N	1035	A	C5'-C4'-C3'	-6.90	105.65	116.00
1	N	98	A	C5'-C4'-C3'	-6.89	105.66	116.00
1	N	51	A	C1'-O4'-C4'	6.89	116.59	109.70
1	N	468	A	P-O3'-C3'	6.89	130.53	120.20
1	N	554	A	C5'-C4'-C3'	6.89	126.33	116.00
1	N	581	G	C4'-C3'-C2'	-6.88	95.72	102.60
1	N	569	C	P-O3'-C3'	6.87	130.50	120.20
1	N	1405	G	C5'-C4'-C3'	6.87	126.30	116.00
1	N	293	G	P-O5'-C5'	6.86	131.19	120.90
1	N	1041	G	O4'-C1'-N9	6.86	118.79	108.50
1	N	942	G	C2'-C3'-O3'	6.85	119.77	109.50
1	N	1196	A	O4'-C1'-N9	6.85	118.77	108.50
1	N	1352	C	O4'-C1'-N1	6.85	118.77	108.50
1	N	960	U	C5'-C4'-C3'	6.84	125.47	115.20
1	N	1036	A	P-O3'-C3'	6.84	130.47	120.20
1	N	1105	A	C1'-C2'-O2'	6.84	118.66	108.40
1	N	1071	C	O4'-C1'-C2'	-6.84	100.76	107.60
1	N	409	U	P-O5'-C5'	6.84	131.16	120.90
1	N	41	G	C4'-C3'-C2'	-6.84	95.76	102.60
1	N	1533	C	O4'-C1'-C2'	-6.84	98.96	105.80
1	N	1101	A	C5'-C4'-O4'	6.83	119.35	109.10
1	N	1160	G	C5'-C4'-O4'	-6.83	99.56	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	217	C	O4'-C1'-N1	6.82	118.73	108.50
1	N	566	G	C2'-C3'-O3'	6.82	119.73	109.50
1	N	85	U	P-O5'-C5'	6.82	131.12	120.90
1	N	934	C	C4'-C3'-O3'	6.81	119.61	109.40
1	N	156	C	O4'-C1'-C2'	-6.81	100.79	107.60
1	N	1285	A	C4'-C3'-O3'	6.80	119.60	109.40
1	N	690	G	O5'-C5'-C4'	-6.80	101.30	111.50
1	N	216	U	C5'-C4'-C3'	6.80	126.19	116.00
1	N	837	U	P-O3'-C3'	-6.80	110.00	120.20
1	N	543	U	O4'-C1'-N1	6.79	118.69	108.50
1	N	664	G	P-O5'-C5'	-6.79	110.71	120.90
1	N	178	C	P-O5'-C5'	6.78	131.07	120.90
1	N	400	C	O4'-C1'-N1	6.78	118.67	108.50
1	N	178	C	P-O3'-C3'	-6.78	110.03	120.20
1	N	325	A	O4'-C1'-N9	6.77	118.66	108.50
1	N	205	A	P-O5'-C5'	-6.77	110.75	120.90
1	N	1131	G	O4'-C1'-N9	6.77	118.65	108.50
1	N	721	G	C2'-C3'-O3'	6.77	119.65	109.50
1	N	1332	A	C5'-C4'-C3'	-6.77	105.85	116.00
1	N	1346	A	P-O3'-C3'	6.77	130.35	120.20
1	N	1140	C	C4'-C3'-C2'	-6.77	95.83	102.60
1	N	882	C	O4'-C1'-C2'	-6.76	100.83	107.60
1	N	802	A	P-O3'-C3'	6.76	130.33	120.20
1	N	1194	U	C1'-O4'-C4'	-6.75	103.15	109.90
1	N	1291	U	P-O5'-C5'	6.75	131.03	120.90
1	N	381	C	C5'-C4'-C3'	6.75	126.12	116.00
1	N	1160	G	C4'-C3'-C2'	6.75	109.35	102.60
1	N	182	A	C2'-C3'-O3'	6.75	119.62	109.50
1	N	453	G	O5'-C5'-C4'	-6.75	101.38	111.50
1	N	773	G	C4'-C3'-O3'	-6.75	102.88	113.00
1	N	1121	U	O4'-C1'-N1	6.75	118.62	108.50
1	N	1511	G	O4'-C1'-C2'	-6.74	100.86	107.60
1	N	403	C	P-O3'-C3'	-6.74	110.09	120.20
1	N	524	G	O4'-C1'-N9	6.74	118.61	108.50
1	N	279	A	C3'-C2'-C1'	6.74	108.04	101.30
1	N	953	G	P-O5'-C5'	6.74	131.01	120.90
1	N	538	G	C4'-C3'-C2'	-6.74	95.86	102.60
1	N	633	G	O4'-C1'-N9	6.74	118.61	108.50
1	N	966	G	C1'-O4'-C4'	-6.74	103.17	109.90
1	N	1116	U	C5'-C4'-C3'	-6.74	105.90	116.00
1	N	893	C	C5'-C4'-C3'	6.73	126.10	116.00
1	N	873	A	C4'-C3'-O3'	6.73	119.49	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1525	G	P-O3'-C3'	-6.73	110.11	120.20
1	N	3	A	P-O3'-C3'	-6.73	110.11	120.20
1	N	1239	A	O3'-P-O5'	6.72	114.08	104.00
1	N	664	G	O4'-C4'-C3'	6.72	110.72	104.00
1	N	1092	A	O4'-C1'-N9	6.72	118.58	108.50
1	N	843	U	P-O3'-C3'	-6.71	110.13	120.20
1	N	1047	G	P-O5'-C5'	6.71	130.97	120.90
1	N	1392	G	P-O5'-C5'	6.71	130.97	120.90
1	N	170	U	P-O5'-C5'	6.71	130.96	120.90
1	N	795	C	O4'-C1'-C2'	-6.69	100.91	107.60
1	N	299	G	O4'-C1'-N9	6.68	118.53	108.50
1	N	494	G	C3'-C2'-C1'	6.68	107.98	101.30
1	N	401	C	P-O3'-C3'	-6.68	110.19	120.20
1	N	86	G	O4'-C4'-C3'	-6.67	99.43	106.10
1	N	335	C	O5'-C5'-C4'	-6.67	101.49	111.50
1	N	501	C	C1'-C2'-O2'	6.67	118.41	108.40
1	N	49	U	C5'-C4'-C3'	-6.67	106.00	116.00
1	N	832	G	P-O3'-C3'	-6.67	110.20	120.20
1	N	566	G	P-O3'-C3'	6.67	130.20	120.20
1	N	615	G	O4'-C1'-C2'	-6.67	100.93	107.60
1	N	17	U	C3'-C2'-C1'	6.66	107.96	101.30
1	N	1222	G	O4'-C1'-N9	6.66	118.49	108.50
1	N	88	U	C2'-C3'-O3'	6.66	119.49	109.50
1	N	1094	G	C5'-C4'-C3'	-6.66	106.02	116.00
1	N	801	U	P-O5'-C5'	-6.65	110.92	120.90
1	N	1070	U	O4'-C1'-C2'	-6.65	100.95	107.60
1	N	1073	U	C2'-C3'-O3'	6.65	123.67	113.70
1	N	234	C	O5'-C5'-C4'	-6.65	101.53	111.50
1	N	431	A	O4'-C4'-C3'	-6.65	97.35	104.00
1	N	1139	G	P-O3'-C3'	6.64	130.16	120.20
1	N	122	G	P-O5'-C5'	6.64	130.86	120.90
1	N	544	G	O3'-P-O5'	-6.64	94.04	104.00
1	N	401	C	O4'-C4'-C3'	-6.64	97.36	104.00
1	N	833	G	C5'-C4'-C3'	6.63	125.95	116.00
1	N	1466	C	C4'-C3'-C2'	-6.63	95.97	102.60
1	N	531	U	C1'-O4'-C4'	-6.63	103.27	109.90
1	N	447	G	P-O5'-C5'	6.63	130.84	120.90
1	N	281	G	C2'-C3'-O3'	6.63	119.44	109.50
1	N	30	U	P-O3'-C3'	6.62	130.14	120.20
1	N	118	U	P-O5'-C5'	6.62	130.83	120.90
1	N	891	U	O4'-C4'-C3'	-6.62	97.38	104.00
1	N	846	G	C5'-C4'-C3'	-6.62	106.07	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1227	A	O4'-C4'-C3'	-6.61	97.39	104.00
1	N	475	C	C5'-C4'-C3'	6.61	125.92	116.00
1	N	1465	A	P-O3'-C3'	6.61	130.11	120.20
1	N	276	G	C4'-C3'-C2'	-6.61	95.99	102.60
1	N	1245	C	O4'-C1'-N1	6.61	118.41	108.50
1	N	1528	U	O4'-C1'-C2'	-6.61	99.19	105.80
1	N	741	G	C5'-C4'-C3'	6.60	125.90	116.00
1	N	896	C	P-O5'-C5'	6.60	130.80	120.90
1	N	75	G	C4'-C3'-C2'	-6.60	96.00	102.60
1	N	669	G	P-O5'-C5'	6.59	130.79	120.90
1	N	713	G	C3'-C2'-C1'	-6.59	94.71	101.30
1	N	1143	G	P-O3'-C3'	6.59	130.09	120.20
1	N	578	C	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	931	C	C4'-C3'-C2'	-6.59	96.01	102.60
1	N	1335	U	C2'-C3'-O3'	6.59	119.39	109.50
1	N	551	U	P-O5'-C5'	6.58	130.78	120.90
1	N	342	C	O3'-P-O5'	-6.58	94.13	104.00
1	N	894	G	C2'-C3'-O3'	6.57	123.56	113.70
1	N	1281	C	C5'-C4'-C3'	6.57	125.86	116.00
1	N	1456	A	P-O3'-C3'	6.57	130.06	120.20
1	N	544	G	C4'-C3'-C2'	-6.57	96.03	102.60
1	N	1155	A	C4'-C3'-C2'	-6.57	96.03	102.60
1	N	868	C	O4'-C1'-C2'	-6.57	101.03	107.60
1	N	531	U	C5'-C4'-C3'	6.57	125.85	116.00
1	N	1448	C	P-O3'-C3'	6.56	130.04	120.20
1	N	1323	G	C5'-C4'-O4'	-6.56	99.96	109.80
1	N	1328	C	O4'-C4'-C3'	-6.56	97.44	104.00
1	N	718	A	O4'-C4'-C3'	-6.56	97.44	104.00
1	N	1072	G	C4'-C3'-O3'	-6.56	103.17	113.00
1	N	631	C	O4'-C1'-N1	6.55	118.33	108.50
1	N	77	A	P-O5'-C5'	-6.55	111.08	120.90
1	N	1154	G	P-O5'-C5'	-6.55	111.08	120.90
1	N	212	G	P-O5'-C5'	6.54	130.72	120.90
1	N	426	U	C4'-C3'-O3'	-6.54	103.19	113.00
1	N	499	A	C2'-C3'-O3'	6.54	119.31	109.50
1	N	1403	C	P-O5'-C5'	6.54	130.71	120.90
1	N	1461	G	P-O3'-C3'	-6.54	110.39	120.20
1	N	17	U	O4'-C1'-N1	6.54	118.31	108.50
1	N	309	A	C5'-C4'-C3'	-6.54	106.19	116.00
1	N	982	U	C3'-C2'-C1'	6.54	108.04	101.50
1	N	310	G	C4'-C3'-C2'	-6.53	96.07	102.60
1	N	648	A	P-O5'-C5'	6.53	130.70	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	930	C	O4'-C1'-N1	6.53	118.30	108.50
1	N	1419	G	C5'-C4'-C3'	-6.53	106.21	116.00
1	N	1042	A	O3'-P-O5'	-6.53	94.21	104.00
1	N	1129	C	O4'-C1'-C2'	6.53	112.33	105.80
1	N	1406	U	C5'-C4'-C3'	-6.51	106.23	116.00
1	N	73	C	O4'-C1'-C2'	-6.51	101.09	107.60
1	N	1253	G	O3'-P-O5'	6.51	113.77	104.00
1	N	1312	G	O4'-C1'-C2'	-6.51	101.09	107.60
1	N	182	A	P-O5'-C5'	-6.51	111.14	120.90
1	N	578	C	C5'-C4'-C3'	6.51	125.76	116.00
1	N	1456	A	P-O5'-C5'	-6.50	111.14	120.90
1	N	46	G	C4'-C3'-O3'	-6.50	103.24	113.00
1	N	273	U	O3'-P-O5'	-6.50	94.24	104.00
1	N	329	A	O4'-C4'-C3'	-6.50	99.60	106.10
1	N	1052	U	C1'-O4'-C4'	6.50	116.40	109.90
1	N	993	G	P-O3'-C3'	6.50	129.95	120.20
1	N	1075	U	O5'-C5'-C4'	-6.50	101.75	111.50
1	N	136	C	O4'-C1'-C2'	-6.50	101.10	107.60
1	N	850	U	O5'-C5'-C4'	-6.50	101.75	111.50
1	N	857	C	O4'-C1'-C2'	-6.50	101.11	107.60
1	N	889	A	P-O5'-C5'	-6.49	111.16	120.90
1	N	1105	A	O4'-C4'-C3'	6.49	110.49	104.00
1	N	247	G	C5'-C4'-O4'	-6.49	100.06	109.80
1	N	971	G	C5'-C4'-C3'	-6.49	106.26	116.00
1	N	269	C	P-O5'-C5'	6.49	130.63	120.90
1	N	718	A	P-O3'-C3'	6.49	129.93	120.20
1	N	1454	G	O4'-C1'-N9	6.49	118.23	108.50
1	N	427	U	C4'-C3'-O3'	-6.48	103.28	113.00
1	N	1168	U	C2'-C3'-O3'	6.48	123.42	113.70
1	N	444	G	C4'-C3'-C2'	-6.48	96.12	102.60
1	N	1328	C	C1'-O4'-C4'	6.48	116.38	109.90
1	N	69	G	P-O5'-C5'	-6.47	111.19	120.90
1	N	738	C	O4'-C1'-N1	6.47	118.21	108.50
1	N	1238	A	O3'-P-O5'	-6.47	94.30	104.00
1	N	496	A	N9-C1'-C2'	6.47	121.70	112.00
1	N	1144	G	P-O3'-C3'	6.47	129.90	120.20
1	N	39	G	P-O3'-C3'	-6.46	110.51	120.20
1	N	1009	U	C4'-C3'-C2'	-6.46	96.14	102.60
1	N	323	U	O5'-C5'-C4'	-6.46	101.81	111.50
1	N	272	C	O3'-P-O5'	-6.45	94.32	104.00
1	N	915	A	P-O3'-C3'	-6.45	110.52	120.20
1	N	60	A	C2'-C3'-O3'	6.45	119.17	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	9	G	P-O5'-C5'	6.45	130.57	120.90
1	N	1378	C	O5'-C5'-C4'	-6.44	101.83	111.50
1	N	812	G	C2'-C3'-O3'	6.44	119.16	109.50
1	N	692	U	C5'-C4'-C3'	-6.44	106.34	116.00
1	N	1117	A	O5'-C5'-C4'	-6.44	101.84	111.50
1	N	54	C	C5'-C4'-C3'	-6.44	106.34	116.00
1	N	404	G	P-O3'-C3'	-6.44	110.54	120.20
1	N	1035	A	O4'-C4'-C3'	-6.43	97.56	104.00
1	N	575	G	C1'-O4'-C4'	6.43	116.13	109.70
1	N	144	G	O4'-C4'-C3'	-6.43	97.57	104.00
1	N	563	A	C4'-C3'-C2'	6.43	109.03	102.60
1	N	454	G	P-O3'-C3'	-6.43	110.56	120.20
1	N	897	C	O4'-C1'-C2'	-6.42	101.18	107.60
1	N	951	G	P-O5'-C5'	-6.42	111.26	120.90
1	N	1152	A	P-O5'-C5'	-6.42	111.26	120.90
1	N	255	G	O5'-C5'-C4'	-6.42	101.86	111.50
1	N	425	G	O5'-C5'-C4'	-6.42	101.87	111.50
1	N	841	C	O4'-C4'-C3'	-6.42	97.58	104.00
1	N	922	G	C4'-C3'-C2'	-6.42	96.18	102.60
1	N	930	C	C5'-C4'-C3'	6.42	125.63	116.00
1	N	1095	U	O4'-C4'-C3'	-6.42	97.58	104.00
1	N	424	G	O4'-C1'-N9	6.41	118.12	108.50
1	N	756	C	O4'-C1'-N1	6.41	118.11	108.50
1	N	913	A	C2'-C3'-O3'	6.41	119.11	109.50
1	N	766	A	O3'-P-O5'	-6.41	94.39	104.00
1	N	1239	A	C5'-C4'-O4'	6.40	118.70	109.10
1	N	1483	A	O4'-C1'-N9	6.40	118.10	108.50
1	N	664	G	C1'-O4'-C4'	-6.40	103.50	109.90
1	N	1530	G	O5'-C5'-C4'	6.40	121.30	111.70
1	N	274	A	C4'-C3'-O3'	6.40	119.00	109.40
1	N	446	G	C4'-C3'-C2'	-6.40	96.20	102.60
1	N	303	A	C5'-C4'-C3'	-6.39	106.41	116.00
1	N	748	G	P-O5'-C5'	6.39	130.49	120.90
1	N	924	C	O4'-C1'-N1	6.39	118.09	108.50
1	N	1094	G	O4'-C4'-C3'	6.38	110.38	104.00
1	N	1336	C	C1'-O4'-C4'	-6.38	103.33	109.70
1	N	1314	C	O4'-C1'-C2'	-6.37	101.23	107.60
1	N	266	G	C2'-C3'-O3'	6.37	119.06	109.50
1	N	61	G	O4'-C1'-N9	6.37	118.05	108.50
1	N	256	U	C2'-C3'-O3'	6.37	123.25	113.70
1	N	389	A	C5'-C4'-C3'	-6.37	106.45	116.00
1	N	957	U	O4'-C1'-C2'	-6.37	101.23	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	84	U	P-O5'-C5'	-6.37	111.35	120.90
1	N	181	A	C4'-C3'-O3'	6.37	122.55	113.00
1	N	811	C	C4'-C3'-C2'	-6.37	96.23	102.60
1	N	1283	U	C5'-C4'-C3'	-6.37	106.45	116.00
1	N	70	U	O3'-P-O5'	-6.36	94.45	104.00
1	N	1145	A	P-O5'-C5'	6.36	130.44	120.90
1	N	485	U	O4'-C1'-N1	6.36	117.74	108.20
1	N	773	G	P-O5'-C5'	6.36	130.44	120.90
1	N	1266	G	O4'-C1'-N9	6.36	118.04	108.50
1	N	238	A	P-O3'-C3'	-6.36	110.66	120.20
1	N	563	A	P-O5'-C5'	-6.36	111.36	120.90
1	N	991	U	O4'-C1'-N1	6.36	117.74	108.20
1	N	1411	C	C4'-C3'-O3'	-6.36	103.47	113.00
1	N	501	C	O4'-C1'-N1	6.36	118.03	108.50
1	N	1275	A	O4'-C1'-N9	6.35	118.03	108.50
1	N	39	G	O4'-C1'-N9	6.35	118.03	108.50
1	N	1025	U	P-O5'-C5'	6.35	130.43	120.90
1	N	211	G	P-O3'-C3'	6.35	129.72	120.20
1	N	383	A	P-O3'-C3'	6.35	129.72	120.20
1	N	1431	A	P-O5'-C5'	6.35	130.42	120.90
1	N	478	A	O4'-C1'-C2'	-6.35	101.25	107.60
1	N	1191	A	P-O5'-C5'	6.35	130.42	120.90
1	N	372	C	O4'-C1'-C2'	-6.34	99.46	105.80
1	N	1355	G	N9-C1'-C2'	-6.34	102.49	112.00
1	N	177	G	P-O3'-C3'	-6.34	110.69	120.20
1	N	210	C	O3'-P-O5'	-6.34	94.49	104.00
1	N	44	A	P-O3'-C3'	-6.34	110.69	120.20
1	N	1435	G	O4'-C1'-N9	6.34	118.01	108.50
1	N	805	C	P-O5'-C5'	6.33	130.40	120.90
1	N	388	G	C1'-O4'-C4'	6.33	116.03	109.70
1	N	459	A	C5'-C4'-C3'	-6.33	106.50	116.00
1	N	215	C	P-O3'-C3'	-6.33	110.70	120.20
1	N	80	A	P-O3'-C3'	-6.33	110.71	120.20
1	N	1317	C	O4'-C1'-N1	6.33	117.99	108.50
1	N	468	A	C4'-C3'-O3'	-6.32	103.52	113.00
1	N	972	C	C1'-O4'-C4'	6.32	116.22	109.90
1	N	562	U	P-O3'-C3'	6.32	129.68	120.20
1	N	373	A	C1'-O4'-C4'	6.32	116.22	109.90
1	N	1348	U	C5'-C4'-O4'	-6.32	100.32	109.80
1	N	1211	U	O4'-C4'-C3'	-6.32	99.78	106.10
1	N	663	A	C4'-C3'-O3'	-6.32	103.53	113.00
1	N	1255	G	C1'-O4'-C4'	6.31	116.21	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	754	C	C4'-C3'-C2'	6.31	108.91	102.60
1	N	1183	U	O5'-C5'-C4'	6.31	120.97	111.50
1	N	1363	A	C5'-C4'-C3'	-6.31	105.74	115.20
1	N	965	U	C2'-C3'-O3'	6.31	118.96	109.50
1	N	1113	C	O4'-C1'-N1	6.30	117.95	108.50
1	N	256	U	O4'-C1'-N1	6.30	117.95	108.50
1	N	1091	U	P-O3'-C3'	6.30	129.65	120.20
1	N	1448	C	C1'-O4'-C4'	6.30	116.20	109.90
1	N	110	C	O4'-C1'-N1	6.30	117.95	108.50
1	N	261	U	N1-C1'-C2'	-6.30	102.55	112.00
1	N	1415	G	C4'-C3'-O3'	-6.30	103.55	113.00
1	N	413	G	O3'-P-O5'	-6.30	94.56	104.00
1	N	566	G	C4'-C3'-O3'	6.30	118.84	109.40
1	N	1386	G	O4'-C1'-C2'	-6.29	101.31	107.60
1	N	872	A	C5'-C4'-C3'	6.29	124.64	115.20
1	N	692	U	P-O5'-C5'	-6.29	111.47	120.90
1	N	58	C	C1'-O4'-C4'	6.29	116.19	109.90
1	N	129	A	C1'-C2'-O2'	-6.29	102.37	111.80
1	N	1053	G	O5'-C5'-C4'	-6.29	102.07	111.50
1	N	1417	G	P-O3'-C3'	6.29	129.63	120.20
1	N	1388	C	P-O5'-C5'	-6.29	111.47	120.90
1	N	1498	U	C4'-C3'-O3'	6.28	118.82	109.40
1	N	242	G	C4'-C3'-O3'	-6.28	103.58	113.00
1	N	889	A	O4'-C4'-C3'	-6.28	99.82	106.10
1	N	153	C	O4'-C1'-N1	6.28	117.91	108.50
1	N	736	C	O4'-C1'-N1	6.27	117.91	108.50
1	N	675	A	O4'-C1'-C2'	-6.27	101.33	107.60
1	N	1131	G	O3'-P-O5'	-6.27	94.59	104.00
1	N	1434	A	C1'-O4'-C4'	6.27	116.17	109.90
1	N	45	G	O4'-C1'-N9	6.27	117.91	108.50
1	N	362	G	O4'-C1'-N9	6.27	117.91	108.50
1	N	767	A	C4'-C3'-C2'	-6.27	96.33	102.60
1	N	1235	U	O3'-P-O5'	-6.27	94.60	104.00
1	N	193	C	O5'-C5'-C4'	-6.27	102.10	111.50
1	N	175	C	O4'-C1'-N1	6.26	117.90	108.50
1	N	1386	G	C5'-C4'-C3'	6.26	125.40	116.00
1	N	391	G	C4'-C3'-C2'	6.26	108.86	102.60
1	N	613	C	O4'-C1'-N1	6.26	117.89	108.50
1	N	798	U	C5'-C4'-C3'	6.26	125.39	116.00
1	N	1269	A	O3'-P-O5'	-6.26	94.61	104.00
1	N	760	G	O4'-C1'-N9	6.26	117.89	108.50
1	N	308	C	C5'-C4'-O4'	-6.25	100.42	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	602	A	P-O5'-C5'	6.25	130.28	120.90
1	N	967	C	O4'-C1'-N1	6.25	117.88	108.50
1	N	210	C	C2'-C3'-O3'	6.25	118.87	109.50
1	N	509	A	P-O3'-C3'	6.25	129.57	120.20
1	N	484	G	C2'-C3'-O3'	6.25	118.87	109.50
1	N	88	U	C1'-O4'-C4'	6.24	115.94	109.70
1	N	190	A	P-O5'-C5'	6.24	130.27	120.90
1	N	907	A	N9-C1'-C2'	6.24	121.37	112.00
1	N	974	A	C3'-C2'-O2'	-6.24	105.24	114.60
1	N	75	G	C1'-C2'-O2'	6.24	117.76	108.40
1	N	408	A	O4'-C1'-C2'	-6.24	101.36	107.60
1	N	616	G	C4'-C3'-C2'	-6.24	96.36	102.60
1	N	1032	G	P-O5'-C5'	6.24	130.26	120.90
1	N	545	C	O3'-P-O5'	-6.24	94.64	104.00
1	N	1517	G	O4'-C4'-C3'	-6.23	99.87	106.10
1	N	1255	G	O4'-C1'-C2'	-6.23	101.37	107.60
1	N	500	G	P-O5'-C5'	6.23	130.25	120.90
1	N	606	G	O4'-C1'-N9	6.23	117.85	108.50
1	N	385	C	O5'-C5'-C4'	-6.23	102.16	111.50
1	N	1363	A	P-O5'-C5'	6.23	130.24	120.90
1	N	120	A	O4'-C1'-N9	6.22	117.83	108.50
1	N	70	U	C2'-C3'-O3'	6.22	118.83	109.50
1	N	95	C	C5'-C4'-C3'	-6.22	106.67	116.00
1	N	373	A	C5'-C4'-O4'	-6.22	100.47	109.80
1	N	1362	A	O5'-C5'-C4'	6.22	120.82	111.50
1	N	1274	A	O3'-P-O5'	-6.21	94.68	104.00
1	N	873	A	P-O5'-C5'	6.21	130.22	120.90
1	N	1160	G	N9-C1'-C2'	-6.21	102.68	112.00
1	N	99	C	O4'-C1'-N1	6.21	117.82	108.50
1	N	371	A	O3'-P-O5'	-6.21	94.69	104.00
1	N	576	C	O4'-C4'-C3'	6.21	110.21	104.00
1	N	1327	C	C4'-C3'-O3'	-6.21	103.69	113.00
1	N	512	U	C1'-O4'-C4'	-6.21	103.69	109.90
1	N	186	C	C3'-C2'-C1'	-6.20	95.10	101.30
1	N	414	A	O4'-C1'-N9	6.20	117.80	108.50
1	N	70	U	O4'-C4'-C3'	-6.20	99.91	106.10
1	N	1135	U	O4'-C4'-C3'	-6.20	97.80	104.00
1	N	1196	A	C5'-C4'-C3'	-6.20	106.71	116.00
1	N	1276	G	O4'-C1'-C2'	-6.20	101.40	107.60
1	N	1309	G	O4'-C4'-C3'	-6.20	97.80	104.00
1	N	694	A	C4'-C3'-C2'	-6.19	96.41	102.60
1	N	194	C	O4'-C1'-N1	6.19	117.79	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	243	A	P-O5'-C5'	6.19	130.19	120.90
1	N	1010	U	P-O5'-C5'	6.19	130.19	120.90
1	N	941	G	C2'-C3'-O3'	6.19	122.98	113.70
1	N	412	A	C4'-C3'-C2'	6.19	108.79	102.60
1	N	18	C	C5'-C4'-C3'	6.18	125.27	116.00
1	N	195	A	C5'-C4'-C3'	-6.18	106.73	116.00
1	N	88	U	O4'-C4'-C3'	-6.18	99.92	106.10
1	N	268	U	O4'-C1'-N1	6.18	117.77	108.50
1	N	1462	C	O4'-C1'-N1	6.18	117.77	108.50
1	N	500	G	O4'-C1'-N9	6.17	117.76	108.50
1	N	721	G	P-O5'-C5'	-6.17	111.65	120.90
1	N	1065	U	P-O5'-C5'	6.17	130.15	120.90
1	N	1018	G	P-O3'-C3'	6.16	129.45	120.20
1	N	1395	C	O4'-C4'-C3'	-6.16	97.84	104.00
1	N	499	A	C4'-C3'-O3'	6.16	118.64	109.40
1	N	1244	G	O4'-C4'-C3'	-6.16	97.84	104.00
1	N	401	C	O4'-C1'-N1	6.16	117.73	108.50
1	N	736	C	O4'-C1'-C2'	-6.16	101.44	107.60
1	N	1440	U	C4'-C3'-C2'	-6.16	96.44	102.60
1	N	532	A	C5'-C4'-C3'	6.15	125.23	116.00
1	N	1181	G	C5'-C4'-C3'	-6.15	105.97	115.20
1	N	1137	C	O4'-C4'-C3'	-6.15	99.95	106.10
1	N	1425	U	C4'-C3'-C2'	-6.15	96.45	102.60
1	N	505	G	O4'-C1'-N9	6.15	117.72	108.50
1	N	800	G	C5'-C4'-C3'	-6.15	106.78	116.00
1	N	1248	A	P-O5'-C5'	6.15	130.12	120.90
1	N	352	C	C5'-C4'-C3'	-6.15	106.78	116.00
1	N	130	A	C5'-C4'-C3'	-6.14	105.98	115.20
1	N	239	U	C5'-C4'-C3'	-6.14	106.79	116.00
1	N	1520	C	O5'-C5'-C4'	-6.14	102.29	111.50
1	N	1281	C	O5'-C5'-C4'	6.14	120.71	111.50
1	N	480	U	O4'-C1'-N1	6.14	117.71	108.50
1	N	834	U	O4'-C1'-C2'	-6.14	101.46	107.60
1	N	1250	A	O3'-P-O5'	6.14	113.21	104.00
1	N	422	C	O4'-C1'-N1	6.14	117.41	108.20
1	N	463	U	C3'-C2'-C1'	-6.14	95.16	101.30
1	N	1223	C	O5'-C5'-C4'	6.14	120.70	111.50
1	N	516	U	C4'-C3'-C2'	-6.13	96.47	102.60
1	N	1117	A	P-O5'-C5'	6.13	130.10	120.90
1	N	810	C	P-O3'-C3'	-6.13	111.00	120.20
1	N	272	C	P-O3'-C3'	6.13	129.39	120.20
1	N	751	U	O4'-C4'-C3'	6.13	110.13	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	931	C	O4'-C1'-C2'	-6.13	101.47	107.60
1	N	1140	C	O5'-C5'-C4'	-6.13	102.51	111.70
1	N	1389	C	C3'-C2'-C1'	6.13	107.43	101.30
1	N	1363	A	O3'-P-O5'	-6.12	94.81	104.00
1	N	850	U	P-O3'-C3'	-6.12	111.01	120.20
1	N	1075	U	P-O3'-C3'	-6.12	111.01	120.20
1	N	1323	G	C2'-C3'-O3'	-6.12	104.51	113.70
1	N	251	G	O5'-C5'-C4'	-6.12	102.52	111.70
1	N	1306	A	C4'-C3'-O3'	-6.12	103.82	113.00
1	N	393	A	O4'-C1'-C2'	-6.12	101.48	107.60
1	N	621	A	C1'-O4'-C4'	6.12	116.02	109.90
1	N	1260	G	O5'-C5'-C4'	-6.12	102.32	111.50
1	N	1412	C	C4'-C3'-C2'	-6.11	96.49	102.60
1	N	599	C	O4'-C4'-C3'	6.11	110.11	104.00
1	N	447	G	P-O3'-C3'	6.11	129.37	120.20
1	N	676	A	O4'-C1'-C2'	-6.11	101.49	107.60
1	N	557	G	C2'-C3'-O3'	-6.11	104.54	113.70
1	N	1338	G	C4'-C3'-O3'	-6.11	103.84	113.00
1	N	668	G	O4'-C1'-N9	6.11	117.66	108.50
1	N	792	A	C1'-O4'-C4'	6.10	115.80	109.70
1	N	229	U	P-O5'-C5'	6.10	130.04	120.90
1	N	255	G	C4'-C3'-O3'	-6.09	103.86	113.00
1	N	202	G	C5'-C4'-C3'	6.09	125.14	116.00
1	N	432	A	P-O5'-C5'	6.09	130.04	120.90
1	N	760	G	O4'-C1'-C2'	-6.09	101.51	107.60
1	N	771	G	O4'-C4'-C3'	-6.09	97.91	104.00
1	N	162	A	C4'-C3'-C2'	-6.09	96.51	102.60
1	N	1533	C	O4'-C4'-C3'	-6.09	100.01	106.10
1	N	186	C	O5'-C5'-C4'	-6.09	102.37	111.50
1	N	1227	A	C5'-C4'-C3'	-6.09	106.87	116.00
1	N	1170	A	O4'-C1'-C2'	-6.08	101.52	107.60
1	N	134	G	C5'-C4'-O4'	6.08	118.92	109.80
1	N	151	A	O4'-C4'-C3'	-6.08	97.92	104.00
1	N	37	U	P-O5'-C5'	6.07	130.01	120.90
1	N	926	G	P-O3'-C3'	6.07	129.31	120.20
1	N	1185	G	O4'-C4'-C3'	-6.07	97.93	104.00
1	N	339	C	C5'-C4'-O4'	6.07	118.90	109.80
1	N	709	U	P-O5'-C5'	6.07	130.00	120.90
1	N	724	G	C4'-C3'-O3'	-6.07	103.90	113.00
1	N	138	G	C5'-C4'-C3'	6.06	125.09	116.00
1	N	1180	A	P-O3'-C3'	6.06	129.29	120.20
1	N	396	C	C4'-C3'-C2'	-6.06	96.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	192	A	O4'-C1'-C2'	-6.06	101.54	107.60
1	N	500	G	C1'-O4'-C4'	6.06	115.96	109.90
1	N	1532	U	C4'-C3'-C2'	6.06	108.66	102.60
1	N	911	U	P-O5'-C5'	6.06	129.98	120.90
1	N	502	A	O5'-C5'-C4'	-6.05	102.42	111.50
1	N	1089	G	C5'-C4'-C3'	-6.05	106.93	116.00
1	N	500	G	C5'-C4'-C3'	-6.05	106.93	116.00
1	N	93	U	O4'-C1'-N1	6.04	117.57	108.50
1	N	1389	C	P-O5'-C5'	-6.04	111.83	120.90
1	N	1433	A	O4'-C1'-N9	6.04	117.57	108.50
1	N	1146	A	C4'-C3'-C2'	-6.04	96.56	102.60
1	N	290	C	O5'-C5'-C4'	-6.04	102.44	111.50
1	N	834	U	C3'-C2'-C1'	6.04	107.34	101.30
1	N	1253	G	P-O3'-C3'	-6.04	111.14	120.20
1	N	753	A	C4'-C3'-O3'	6.04	118.45	109.40
1	N	160	A	O4'-C1'-N9	6.04	117.55	108.50
1	N	336	A	P-O3'-C3'	-6.04	111.14	120.20
1	N	1037	C	O4'-C1'-N1	6.04	117.55	108.50
1	N	458	U	P-O3'-C3'	6.03	129.25	120.20
1	N	535	A	C2'-C3'-O3'	6.03	118.54	109.50
1	N	874	G	P-O5'-C5'	6.03	129.94	120.90
1	N	87	C	O4'-C1'-N1	6.03	117.54	108.50
1	N	275	G	O4'-C1'-C2'	-6.03	101.58	107.60
1	N	621	A	O4'-C1'-C2'	-6.02	101.58	107.60
1	N	1063	C	P-O3'-C3'	-6.02	111.17	120.20
1	N	1172	C	C4'-C3'-O3'	-6.02	103.97	113.00
1	N	444	G	O5'-C5'-C4'	-6.02	102.47	111.50
1	N	223	A	C5'-C4'-C3'	-6.02	106.97	116.00
1	N	1284	C	O4'-C1'-N1	6.02	117.53	108.50
1	N	221	C	P-O5'-C5'	6.02	129.93	120.90
1	N	264	C	C1'-O4'-C4'	-6.02	103.88	109.90
1	N	1064	G	O4'-C4'-C3'	-6.02	100.08	106.10
1	N	169	C	O4'-C1'-N1	6.01	117.52	108.50
1	N	1392	G	C5'-C4'-C3'	6.01	125.01	116.00
1	N	1394	A	C5'-C4'-C3'	-6.01	106.18	115.20
1	N	703	G	P-O5'-C5'	6.01	129.91	120.90
1	N	1361	G	O3'-P-O5'	-6.01	94.99	104.00
1	N	136	C	O4'-C1'-N1	6.00	117.50	108.50
1	N	1000	A	P-O5'-C5'	6.00	129.90	120.90
1	N	1328	C	C4'-C3'-C2'	6.00	108.60	102.60
1	N	467	U	C3'-C2'-C1'	-6.00	95.30	101.30
1	N	1359	C	P-O3'-C3'	6.00	129.20	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1101	A	O4'-C1'-N9	6.00	117.20	108.20
1	N	279	A	O4'-C1'-N9	6.00	117.50	108.50
1	N	650	G	C5'-C4'-C3'	-6.00	107.00	116.00
1	N	1007	U	O4'-C1'-N1	5.99	117.49	108.50
1	N	850	U	C4'-C3'-C2'	-5.99	96.61	102.60
1	N	1522	U	O4'-C1'-C2'	-5.99	101.61	107.60
1	N	1336	C	C5'-C4'-O4'	5.99	118.08	109.10
1	N	134	G	C2'-C3'-O3'	5.99	122.68	113.70
1	N	1062	U	P-O5'-C5'	5.98	129.88	120.90
1	N	1336	C	C1'-C2'-O2'	5.98	120.78	111.80
1	N	413	G	C4'-C3'-C2'	-5.98	96.62	102.60
1	N	1168	U	P-O3'-C3'	5.98	129.17	120.20
1	N	382	A	C5'-C4'-C3'	5.98	124.97	116.00
1	N	1394	A	O5'-C5'-C4'	5.98	120.67	111.70
1	N	30	U	O3'-P-O5'	5.98	112.97	104.00
1	N	62	U	O3'-P-O5'	-5.98	95.03	104.00
1	N	1200	C	C4'-C3'-C2'	-5.97	96.63	102.60
1	N	1483	A	P-O3'-C3'	5.97	129.16	120.20
1	N	166	U	P-O5'-C5'	5.97	129.86	120.90
1	N	692	U	P-O3'-C3'	5.97	129.16	120.20
1	N	532	A	O4'-C1'-N9	5.97	117.46	108.50
1	N	788	U	C2'-C3'-O3'	-5.97	104.75	113.70
1	N	1048	G	C4'-C3'-O3'	-5.97	104.05	113.00
1	N	99	C	C4'-C3'-O3'	-5.96	104.06	113.00
1	N	120	A	C3'-C2'-C1'	-5.96	95.34	101.30
1	N	445	G	C5'-C4'-C3'	-5.96	107.06	116.00
1	N	1014	A	P-O3'-C3'	5.96	129.14	120.20
1	N	650	G	C5'-C4'-O4'	5.96	118.74	109.80
1	N	661	G	O5'-C5'-C4'	5.96	120.43	111.50
1	N	238	A	C5'-C4'-C3'	-5.96	107.07	116.00
1	N	715	A	C5'-C4'-C3'	5.95	124.93	116.00
1	N	67	C	C4'-C3'-C2'	-5.95	96.65	102.60
1	N	212	G	C4'-C3'-O3'	-5.95	104.07	113.00
1	N	255	G	O3'-P-O5'	-5.95	95.08	104.00
1	N	1118	U	C5'-C4'-O4'	-5.95	100.87	109.80
1	N	198	G	C3'-C2'-O2'	5.95	119.62	110.70
1	N	483	C	P-O5'-C5'	5.95	129.82	120.90
1	N	1068	G	O4'-C4'-C3'	-5.95	98.05	104.00
1	N	1445	U	P-O5'-C5'	5.95	129.82	120.90
1	N	464	U	P-O3'-C3'	5.95	129.12	120.20
1	N	846	G	C3'-C2'-C1'	5.95	107.25	101.30
1	N	1139	G	O3'-P-O5'	-5.94	95.08	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	498	A	C4'-C3'-O3'	-5.94	104.09	113.00
1	N	656	G	O4'-C1'-N9	5.94	117.42	108.50
1	N	1457	G	O4'-C1'-C2'	5.94	113.54	107.60
1	N	169	C	O3'-P-O5'	-5.94	95.10	104.00
1	N	211	G	O4'-C4'-C3'	-5.94	98.06	104.00
1	N	916	U	P-O3'-C3'	-5.93	111.30	120.20
1	N	1518	A	C5'-C4'-C3'	5.93	124.90	116.00
1	N	18	C	O4'-C1'-N1	5.93	117.40	108.50
1	N	180	U	C4'-C3'-O3'	-5.93	104.10	113.00
1	N	1160	G	O4'-C1'-N9	5.93	117.40	108.50
1	N	924	C	C5'-C4'-C3'	5.93	124.89	116.00
1	N	1203	C	O4'-C1'-N1	5.92	117.39	108.50
1	N	1501	C	C1'-O4'-C4'	5.92	115.82	109.90
1	N	1181	G	C2'-C3'-O3'	5.92	118.38	109.50
1	N	600	A	C5'-C4'-C3'	-5.92	107.13	116.00
1	N	1321	U	C5'-C4'-C3'	-5.92	107.12	116.00
1	N	656	G	O4'-C1'-C2'	-5.92	101.69	107.60
1	N	121	U	O4'-C1'-N1	5.91	117.37	108.50
1	N	1242	G	P-O3'-C3'	-5.91	111.33	120.20
1	N	1416	G	C4'-C3'-C2'	-5.91	96.69	102.60
1	N	44	A	P-O5'-C5'	-5.91	112.03	120.90
1	N	179	A	O3'-P-O5'	-5.91	95.13	104.00
1	N	332	G	O4'-C4'-C3'	5.91	109.91	104.00
1	N	1263	C	C2'-C3'-O3'	5.91	122.56	113.70
1	N	1441	A	C4'-C3'-C2'	5.91	108.51	102.60
1	N	373	A	C4'-C3'-O3'	-5.91	104.14	113.00
1	N	1344	C	O4'-C1'-N1	5.91	117.36	108.50
1	N	251	G	C4'-C3'-O3'	5.90	118.25	109.40
1	N	874	G	C5'-C4'-O4'	-5.90	100.95	109.80
1	N	1362	A	C2'-C3'-O3'	5.90	122.55	113.70
1	N	200	G	P-O5'-C5'	-5.89	112.06	120.90
1	N	567	G	N9-C1'-C2'	-5.89	103.16	112.00
1	N	375	U	O5'-C5'-C4'	-5.89	102.67	111.50
1	N	850	U	P-O5'-C5'	5.89	129.73	120.90
1	N	540	G	C4'-C3'-C2'	-5.89	96.71	102.60
1	N	593	U	O3'-P-O5'	5.88	112.83	104.00
1	N	83	C	O4'-C1'-N1	5.88	117.32	108.50
1	N	1066	C	C3'-C2'-C1'	5.88	107.18	101.30
1	N	1300	G	O3'-P-O5'	-5.88	95.18	104.00
1	N	91	U	C1'-O4'-C4'	-5.88	104.02	109.90
1	N	744	C	C4'-C3'-C2'	5.88	108.48	102.60
1	N	1478	U	O4'-C1'-N1	5.88	117.32	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	433	G	O4'-C4'-C3'	-5.88	98.12	104.00
1	N	615	G	O3'-P-O5'	-5.88	95.18	104.00
1	N	771	G	O3'-P-O5'	-5.88	95.19	104.00
1	N	995	C	O4'-C1'-C2'	-5.88	101.72	107.60
1	N	1283	U	P-O3'-C3'	-5.88	111.39	120.20
1	N	776	G	O5'-C5'-C4'	-5.87	102.69	111.50
1	N	1446	A	O5'-C5'-C4'	-5.87	102.69	111.50
1	N	104	G	O4'-C1'-C2'	-5.87	101.73	107.60
1	N	1040	U	C5'-C4'-C3'	5.87	124.81	116.00
1	N	679	C	O3'-P-O5'	-5.87	95.20	104.00
1	N	1065	U	C4'-C3'-C2'	5.87	108.47	102.60
1	N	222	C	O5'-C5'-C4'	-5.86	102.70	111.50
1	N	411	A	C4'-C3'-C2'	5.86	108.46	102.60
1	N	492	C	C4'-C3'-O3'	-5.86	104.21	113.00
1	N	1035	A	C5'-C4'-O4'	5.86	118.59	109.80
1	N	1324	A	O4'-C1'-C2'	-5.86	101.74	107.60
1	N	1362	A	C1'-O4'-C4'	-5.86	104.04	109.90
1	N	1428	A	C4'-C3'-C2'	5.86	108.46	102.60
1	N	828	U	P-O5'-C5'	5.86	129.69	120.90
1	N	889	A	C2'-C3'-O3'	5.86	118.29	109.50
1	N	922	G	P-O3'-C3'	5.86	128.99	120.20
1	N	1193	G	C5'-C4'-C3'	-5.86	106.41	115.20
1	N	1252	A	C4'-C3'-C2'	-5.85	96.75	102.60
1	N	980	C	C1'-O4'-C4'	-5.85	104.05	109.90
1	N	1098	C	O4'-C1'-N1	5.85	117.28	108.50
1	N	956	U	O4'-C1'-N1	5.85	117.28	108.50
1	N	509	A	P-O5'-C5'	-5.85	112.12	120.90
1	N	1080	A	C5'-C4'-C3'	-5.85	107.22	116.00
1	N	1239	A	C2'-C3'-O3'	5.85	118.27	109.50
1	N	1065	U	O5'-C5'-C4'	-5.84	102.93	111.70
1	N	1035	A	C3'-C2'-C1'	-5.84	95.46	101.30
1	N	1092	A	C2'-C3'-O3'	-5.84	104.94	113.70
1	N	1115	U	O4'-C4'-C3'	-5.84	98.16	104.00
1	N	244	U	C4'-C3'-O3'	5.84	118.16	109.40
1	N	581	G	P-O3'-C3'	-5.84	111.44	120.20
1	N	951	G	P-O3'-C3'	-5.84	111.44	120.20
1	N	122	G	O4'-C1'-C2'	-5.84	101.76	107.60
1	N	859	G	C4'-C3'-C2'	-5.83	96.77	102.60
1	N	130	A	O3'-P-O5'	-5.83	95.25	104.00
1	N	157	U	C4'-C3'-C2'	-5.83	96.77	102.60
1	N	244	U	O4'-C4'-C3'	-5.83	100.27	106.10
1	N	717	U	P-O3'-C3'	5.83	128.94	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1519	A	O4'-C4'-C3'	-5.83	98.17	104.00
1	N	35	G	O4'-C1'-N9	5.82	117.23	108.50
1	N	1199	U	O3'-P-O5'	5.82	112.73	104.00
1	N	1449	C	C4'-C3'-O3'	-5.82	104.27	113.00
1	N	173	U	C2'-C3'-O3'	5.82	118.23	109.50
1	N	300	A	C5'-C4'-C3'	5.82	124.73	116.00
1	N	172	A	C4'-C3'-O3'	-5.82	104.28	113.00
1	N	1400	C	O4'-C1'-N1	5.82	117.22	108.50
1	N	156	C	O4'-C1'-N1	5.81	117.22	108.50
1	N	388	G	O4'-C1'-N9	5.81	116.92	108.20
1	N	58	C	O4'-C1'-N1	5.81	117.22	108.50
1	N	495	A	C4'-C3'-C2'	5.81	108.41	102.60
1	N	572	A	P-O5'-C5'	5.81	129.61	120.90
1	N	91	U	C5'-C4'-C3'	5.81	124.71	116.00
1	N	488	C	O4'-C4'-C3'	-5.81	98.19	104.00
1	N	133	U	O4'-C1'-C2'	-5.81	101.79	107.60
1	N	969	A	C2'-C3'-O3'	5.80	118.20	109.50
1	N	979	C	O4'-C1'-N1	5.80	117.21	108.50
1	N	775	G	O3'-P-O5'	5.80	112.70	104.00
1	N	1502	A	C2'-C3'-O3'	5.80	118.20	109.50
1	N	281	G	P-O5'-C5'	5.80	129.60	120.90
1	N	345	C	P-O3'-C3'	5.79	128.89	120.20
1	N	604	G	P-O3'-C3'	5.79	128.89	120.20
1	N	932	C	C4'-C3'-O3'	-5.79	104.31	113.00
1	N	1140	C	O4'-C1'-N1	5.79	116.89	108.20
1	N	148	G	C1'-O4'-C4'	-5.79	104.11	109.90
1	N	485	U	C2'-C3'-O3'	5.79	118.18	109.50
1	N	1130	A	C3'-C2'-C1'	-5.79	95.51	101.30
1	N	1044	A	P-O5'-C5'	-5.79	112.22	120.90
1	N	1125	U	P-O3'-C3'	5.79	128.88	120.20
1	N	243	A	O4'-C4'-C3'	5.79	109.78	104.00
1	N	614	C	C4'-C3'-C2'	-5.79	96.81	102.60
1	N	755	G	O4'-C1'-C2'	-5.79	101.81	107.60
1	N	1122	U	C5'-C4'-C3'	-5.79	107.32	116.00
1	N	1404	C	O5'-C5'-C4'	-5.79	102.82	111.50
1	N	308	C	P-O5'-C5'	5.78	129.57	120.90
1	N	956	U	O5'-C5'-C4'	-5.78	102.83	111.50
1	N	1501	C	P-O3'-C3'	5.78	128.88	120.20
1	N	1397	C	P-O3'-C3'	5.78	128.87	120.20
1	N	788	U	O5'-C5'-C4'	5.78	120.17	111.50
1	N	1366	C	P-O5'-C5'	5.78	129.57	120.90
1	N	171	A	C5'-C4'-C3'	-5.78	107.33	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	393	A	C4'-C3'-C2'	-5.78	96.82	102.60
1	N	895	G	O5'-C5'-C4'	-5.78	102.84	111.50
1	N	237	G	C3'-C2'-O2'	5.77	119.36	110.70
1	N	1318	A	C1'-O4'-C4'	-5.77	104.13	109.90
1	N	30	U	O4'-C4'-C3'	-5.77	100.33	106.10
1	N	863	U	O3'-P-O5'	-5.77	95.34	104.00
1	N	1050	G	O4'-C1'-N9	5.77	117.16	108.50
1	N	267	C	C3'-C2'-C1'	5.77	107.07	101.30
1	N	754	C	P-O5'-C5'	-5.77	112.25	120.90
1	N	1512	U	O4'-C1'-N1	5.77	117.15	108.50
1	N	1042	A	O5'-C5'-C4'	-5.77	102.85	111.50
1	N	853	C	O3'-P-O5'	5.76	112.65	104.00
1	N	29	U	O5'-C5'-C4'	-5.76	102.86	111.50
1	N	395	C	P-O5'-C5'	5.76	129.54	120.90
1	N	1072	G	O5'-C5'-C4'	-5.76	102.86	111.50
1	N	72	A	P-O5'-C5'	-5.76	112.26	120.90
1	N	96	U	O5'-C5'-C4'	-5.76	103.06	111.70
1	N	508	U	O4'-C1'-N1	5.76	116.84	108.20
1	N	1343	G	P-O3'-C3'	-5.76	111.56	120.20
1	N	130	A	O5'-C5'-C4'	5.76	120.33	111.70
1	N	696	A	C5'-C4'-C3'	5.75	124.63	116.00
1	N	239	U	O4'-C1'-N1	5.75	117.13	108.50
1	N	849	G	O5'-C5'-C4'	5.75	120.13	111.50
1	N	1005	A	C5'-C4'-O4'	5.75	118.43	109.80
1	N	1031	C	C1'-O4'-C4'	-5.75	104.15	109.90
1	N	672	U	O4'-C1'-N1	5.75	117.12	108.50
1	N	641	U	O3'-P-O5'	-5.75	95.38	104.00
1	N	1168	U	C3'-C2'-O2'	-5.75	102.08	110.70
1	N	1267	C	C4'-C3'-C2'	-5.75	96.85	102.60
1	N	979	C	C5'-C4'-C3'	-5.75	107.38	116.00
1	N	854	U	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	1165	U	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	1483	A	P-O5'-C5'	5.74	129.51	120.90
1	N	329	A	O5'-C5'-C4'	-5.74	103.09	111.70
1	N	957	U	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	1323	G	C4'-C3'-C2'	-5.74	96.86	102.60
1	N	164	G	P-O3'-C3'	-5.74	111.60	120.20
1	N	182	A	C4'-C3'-C2'	5.74	108.34	102.60
1	N	225	C	O5'-C5'-C4'	-5.74	102.90	111.50
1	N	1235	U	C2'-C3'-O3'	5.74	122.30	113.70
1	N	1095	U	C3'-C2'-O2'	5.73	119.30	110.70
1	N	1485	U	C4'-C3'-O3'	-5.73	104.41	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	508	U	C1'-O4'-C4'	5.72	115.42	109.70
1	N	554	A	O4'-C4'-C3'	-5.72	98.28	104.00
1	N	724	G	O4'-C1'-N9	5.72	117.09	108.50
1	N	955	U	O4'-C1'-N1	5.72	117.08	108.50
1	N	1442	G	O5'-C5'-C4'	-5.72	102.91	111.50
1	N	212	G	P-O3'-C3'	5.72	128.78	120.20
1	N	957	U	P-O3'-C3'	5.72	128.78	120.20
1	N	905	U	C5'-C4'-O4'	5.72	118.38	109.80
1	N	1325	C	O4'-C1'-N1	5.72	117.08	108.50
1	N	428	G	C5'-C4'-O4'	-5.72	100.52	109.10
1	N	1418	A	C5'-C4'-C3'	5.72	124.58	116.00
1	N	256	U	P-O5'-C5'	5.72	129.47	120.90
1	N	483	C	C4'-C3'-C2'	5.72	108.32	102.60
1	N	702	A	O4'-C1'-N9	5.72	117.08	108.50
1	N	1307	U	O4'-C1'-N1	5.72	117.08	108.50
1	N	429	U	O4'-C1'-N1	5.71	116.77	108.20
1	N	573	A	C5'-C4'-C3'	-5.71	107.43	116.00
1	N	71	A	C1'-O4'-C4'	5.71	115.61	109.90
1	N	573	A	N9-C1'-C2'	5.71	120.57	112.00
1	N	653	U	O4'-C1'-N1	5.71	117.07	108.50
1	N	224	U	P-O3'-C3'	-5.71	111.64	120.20
1	N	227	G	P-O3'-C3'	-5.71	111.64	120.20
1	N	618	C	O4'-C1'-C2'	-5.71	101.89	107.60
1	N	1090	U	C5'-C4'-C3'	-5.71	107.44	116.00
1	N	329	A	C1'-O4'-C4'	5.71	115.41	109.70
1	N	273	U	N1-C1'-C2'	5.70	120.56	112.00
1	N	1071	C	O4'-C1'-N1	5.70	117.06	108.50
1	N	1112	C	C2'-C3'-O3'	5.70	118.06	109.50
1	N	1487	G	O5'-C5'-C4'	5.70	120.06	111.50
1	N	324	G	O4'-C1'-N9	5.70	117.05	108.50
1	N	674	G	C4'-C3'-C2'	-5.70	96.90	102.60
1	N	686	U	O4'-C1'-C2'	-5.70	100.10	105.80
1	N	834	U	C1'-O4'-C4'	5.70	115.60	109.90
1	N	917	G	P-O3'-C3'	-5.70	111.65	120.20
1	N	1165	U	O5'-C5'-C4'	-5.70	102.95	111.50
1	N	26	A	O4'-C1'-N9	5.69	117.04	108.50
1	N	557	G	O3'-P-O5'	-5.69	95.47	104.00
1	N	780	A	P-O5'-C5'	5.69	129.44	120.90
1	N	275	G	C5'-C4'-C3'	-5.69	107.47	116.00
1	N	1481	U	O5'-C5'-C4'	-5.69	102.97	111.50
1	N	574	A	O5'-C5'-C4'	5.68	120.03	111.50
1	N	794	A	O4'-C4'-C3'	-5.68	98.31	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1245	C	C4'-C3'-O3'	-5.68	104.47	113.00
1	N	700	G	P-O5'-C5'	5.68	129.42	120.90
1	N	962	C	P-O5'-C5'	5.68	129.42	120.90
1	N	1506	U	C4'-C3'-C2'	5.68	108.28	102.60
1	N	999	C	O4'-C4'-C3'	-5.68	98.32	104.00
1	N	1003	G	C1'-O4'-C4'	5.68	115.58	109.90
1	N	1174	G	O5'-C5'-C4'	-5.68	102.98	111.50
1	N	224	U	O4'-C1'-C2'	-5.68	101.92	107.60
1	N	593	U	C4'-C3'-C2'	-5.68	96.92	102.60
1	N	28	A	N1-C6-N6	5.67	135.62	118.60
1	N	168	G	O5'-C5'-C4'	-5.67	102.99	111.50
1	N	322	C	C5'-C4'-C3'	-5.67	107.49	116.00
1	N	439	U	O4'-C4'-C3'	-5.67	98.33	104.00
1	N	569	C	C4'-C3'-C2'	5.67	108.28	102.60
1	N	496	A	O3'-P-O5'	-5.67	95.49	104.00
1	N	554	A	O4'-C1'-C2'	-5.67	101.93	107.60
1	N	961	U	O4'-C1'-N1	5.67	117.00	108.50
1	N	988	G	O4'-C1'-N9	5.67	117.00	108.50
1	N	554	A	O4'-C1'-N9	5.66	117.00	108.50
1	N	635	A	C4'-C3'-O3'	-5.66	104.50	113.00
1	N	465	A	P-O3'-C3'	5.66	128.69	120.20
1	N	673	A	P-O5'-C5'	5.66	129.39	120.90
1	N	132	C	O3'-P-O5'	-5.66	95.51	104.00
1	N	659	U	C3'-C2'-C1'	-5.66	95.64	101.30
1	N	637	C	P-O5'-C5'	5.66	129.38	120.90
1	N	301	G	P-O3'-C3'	-5.65	111.72	120.20
1	N	1147	C	C2'-C3'-O3'	5.65	122.18	113.70
1	N	1049	U	C2'-C3'-O3'	5.65	117.98	109.50
1	N	412	A	O4'-C4'-C3'	-5.65	100.45	106.10
1	N	119	A	C1'-C2'-O2'	-5.65	103.33	111.80
1	N	630	A	C4'-C3'-O3'	-5.65	104.53	113.00
1	N	135	C	C3'-C2'-C1'	5.65	106.95	101.30
1	N	852	G	C4'-C3'-C2'	-5.65	96.95	102.60
1	N	222	C	O4'-C1'-C2'	-5.64	101.96	107.60
1	N	1053	G	P-O3'-C3'	5.64	128.67	120.20
1	N	1409	C	O4'-C1'-N1	5.64	116.97	108.50
1	N	93	U	O3'-P-O5'	5.64	112.46	104.00
1	N	244	U	O4'-C1'-C2'	-5.64	100.16	105.80
1	N	1235	U	O4'-C1'-N1	5.64	116.97	108.50
1	N	1342	C	P-O3'-C3'	-5.64	111.74	120.20
1	N	864	A	O5'-C5'-C4'	-5.64	103.04	111.50
1	N	890	G	C4'-C3'-C2'	-5.64	96.96	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1121	U	C5'-C4'-C3'	5.64	124.46	116.00
1	N	49	U	O4'-C4'-C3'	5.64	109.64	104.00
1	N	130	A	C3'-C2'-C1'	-5.64	95.86	101.50
1	N	862	C	O4'-C1'-N1	5.64	116.96	108.50
1	N	1042	A	C4'-C3'-O3'	-5.64	104.54	113.00
1	N	143	A	C4'-C3'-C2'	5.64	108.24	102.60
1	N	997	U	O5'-C5'-C4'	-5.63	103.05	111.50
1	N	1513	A	P-O5'-C5'	-5.63	112.45	120.90
1	N	1266	G	C1'-C2'-O2'	5.63	116.84	108.40
1	N	34	C	O4'-C4'-C3'	-5.63	98.37	104.00
1	N	49	U	P-O3'-C3'	-5.63	111.76	120.20
1	N	1001	C	C1'-C2'-O2'	5.63	116.84	108.40
1	N	1098	C	C5'-C4'-C3'	5.63	124.44	116.00
1	N	294	U	O4'-C1'-C2'	-5.62	101.97	107.60
1	N	682	G	O4'-C1'-C2'	-5.62	101.97	107.60
1	N	1248	A	O5'-C5'-C4'	-5.62	103.06	111.50
1	N	364	A	P-O5'-C5'	-5.62	112.47	120.90
1	N	854	U	P-O3'-C3'	-5.62	111.77	120.20
1	N	1261	A	C4'-C3'-O3'	-5.62	104.57	113.00
1	N	1442	G	C5'-C4'-C3'	5.62	124.43	116.00
1	N	208	U	C3'-C2'-C1'	5.62	106.92	101.30
1	N	221	C	C4'-C3'-O3'	-5.62	104.58	113.00
1	N	1022	A	P-O5'-C5'	-5.61	112.48	120.90
1	N	1049	U	O4'-C4'-C3'	-5.61	100.49	106.10
1	N	1469	C	O4'-C1'-N1	5.61	116.92	108.50
1	N	1250	A	O5'-C5'-C4'	-5.61	103.08	111.50
1	N	103	U	O4'-C1'-N1	5.61	116.91	108.50
1	N	1015	G	O5'-C5'-C4'	5.61	119.92	111.50
1	N	139	A	O3'-P-O5'	-5.61	95.59	104.00
1	N	1347	G	C2'-C3'-O3'	5.61	117.91	109.50
1	N	699	C	O5'-C5'-C4'	-5.61	103.09	111.50
1	N	536	C	C5'-C4'-C3'	5.61	124.41	116.00
1	N	1423	G	P-O3'-C3'	-5.61	111.79	120.20
1	N	670	G	O4'-C1'-C2'	-5.60	102.00	107.60
1	N	1252	A	O4'-C1'-N9	5.60	116.91	108.50
1	N	304	U	C5'-C4'-C3'	-5.60	107.60	116.00
1	N	597	G	O4'-C1'-N9	5.60	116.90	108.50
1	N	1065	U	C2'-C3'-O3'	5.60	117.90	109.50
1	N	1065	U	O4'-C1'-N1	5.60	116.60	108.20
1	N	1158	C	C3'-C2'-C1'	5.60	106.90	101.30
1	N	1162	C	C5'-C4'-O4'	-5.60	101.40	109.80
1	N	823	C	P-O3'-C3'	5.60	128.60	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	934	C	O3'-P-O5'	-5.60	95.60	104.00
1	N	1522	U	P-O3'-C3'	-5.60	111.80	120.20
1	N	634	C	O4'-C1'-N1	5.60	116.90	108.50
1	N	1484	C	C5'-C4'-C3'	-5.60	107.60	116.00
1	N	126	G	P-O3'-C3'	5.59	128.59	120.20
1	N	610	U	O5'-C5'-C4'	5.59	119.89	111.50
1	N	887	G	C4'-C3'-O3'	-5.59	104.61	113.00
1	N	347	G	P-O3'-C3'	-5.59	111.81	120.20
1	N	1434	A	C5'-C4'-C3'	5.59	124.39	116.00
1	N	888	G	C5'-C4'-C3'	-5.59	107.62	116.00
1	N	474	G	O4'-C1'-C2'	-5.59	102.01	107.60
1	N	1188	A	P-O5'-C5'	-5.59	112.52	120.90
1	N	974	A	P-O3'-C3'	5.58	128.57	120.20
1	N	1099	G	O5'-C5'-C4'	-5.58	103.12	111.50
1	N	788	U	C3'-C2'-C1'	5.58	106.88	101.30
1	N	1508	A	O4'-C1'-N9	5.58	116.86	108.50
1	N	52	C	O4'-C1'-N1	5.58	116.86	108.50
1	N	1507	A	P-O3'-C3'	-5.58	111.84	120.20
1	N	105	G	P-O5'-C5'	5.57	129.26	120.90
1	N	251	G	O4'-C4'-C3'	-5.57	100.53	106.10
1	N	554	A	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	652	U	P-O3'-C3'	5.57	128.56	120.20
1	N	309	A	N9-C1'-C2'	-5.57	103.64	112.00
1	N	1191	A	P-O3'-C3'	5.57	128.56	120.20
1	N	1244	G	C3'-C2'-C1'	-5.57	95.73	101.30
1	N	1458	G	O3'-P-O5'	5.57	112.36	104.00
1	N	640	A	C4'-C3'-O3'	-5.57	104.65	113.00
1	N	1214	C	P-O3'-C3'	-5.57	111.85	120.20
1	N	507	C	O4'-C1'-N1	5.57	116.85	108.50
1	N	646	G	C4'-C3'-C2'	-5.57	97.03	102.60
1	N	1132	C	C4'-C3'-O3'	-5.56	104.66	113.00
1	N	1349	A	O4'-C1'-N9	5.56	116.84	108.50
1	N	545	C	P-O3'-C3'	5.56	128.54	120.20
1	N	289	G	P-O5'-C5'	-5.56	112.56	120.90
1	N	1446	A	C1'-C2'-O2'	5.56	116.73	108.40
1	N	124	C	C4'-C3'-C2'	-5.55	97.05	102.60
1	N	161	A	C4'-C3'-O3'	-5.55	104.67	113.00
1	N	1051	C	O4'-C1'-N1	5.55	116.83	108.50
1	N	871	U	C1'-O4'-C4'	5.55	115.45	109.90
1	N	958	A	O5'-C5'-C4'	-5.55	103.17	111.50
1	N	874	G	O4'-C4'-C3'	-5.55	98.45	104.00
1	N	263	A	C1'-C2'-O2'	5.55	116.72	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1192	C	P-O5'-C5'	-5.55	112.58	120.90
1	N	232	G	O4'-C1'-N9	5.55	116.82	108.50
1	N	806	C	O4'-C1'-N1	5.55	116.82	108.50
1	N	1106	G	P-O5'-C5'	-5.55	112.58	120.90
1	N	608	A	P-O5'-C5'	5.55	129.22	120.90
1	N	347	G	C5'-C4'-C3'	-5.54	107.68	116.00
1	N	1082	A	C5'-C4'-C3'	-5.54	107.68	116.00
1	N	399	G	O5'-C5'-C4'	-5.54	103.19	111.50
1	N	52	C	O4'-C4'-C3'	-5.54	98.46	104.00
1	N	641	U	C4'-C3'-O3'	-5.54	104.69	113.00
1	N	796	C	C4'-C3'-C2'	-5.54	97.06	102.60
1	N	1511	G	C1'-O4'-C4'	5.54	115.44	109.90
1	N	516	U	O4'-C1'-N1	5.54	116.80	108.50
1	N	926	G	C4'-C3'-O3'	5.54	121.30	113.00
1	N	1066	C	C5'-C4'-C3'	-5.54	107.70	116.00
1	N	206	C	O3'-P-O5'	5.53	112.30	104.00
1	N	514	C	O4'-C1'-C2'	-5.53	102.07	107.60
1	N	744	C	O5'-C5'-C4'	-5.53	103.20	111.50
1	N	1342	C	O4'-C1'-N1	5.53	116.80	108.50
1	N	89	U	O4'-C1'-N1	5.53	116.49	108.20
1	N	542	G	O4'-C1'-C2'	-5.53	102.07	107.60
1	N	994	A	C1'-C2'-O2'	5.53	116.69	108.40
1	N	1140	C	C2'-C3'-O3'	5.53	117.79	109.50
1	N	1249	C	C1'-O4'-C4'	5.53	115.43	109.90
1	N	808	C	C1'-O4'-C4'	5.53	115.43	109.90
1	N	1475	G	P-O3'-C3'	-5.53	111.91	120.20
1	N	418	C	C1'-C2'-O2'	5.52	116.69	108.40
1	N	1528	U	N1-C1'-C2'	-5.52	105.71	114.00
1	N	384	G	P-O5'-C5'	5.52	129.19	120.90
1	N	1300	G	N9-C1'-C2'	5.52	122.28	114.00
1	N	1345	U	O5'-C5'-C4'	-5.52	103.42	111.70
1	N	1274	A	C4'-C3'-O3'	5.52	121.28	113.00
1	N	90	C	O3'-P-O5'	-5.52	95.72	104.00
1	N	818	G	P-O3'-C3'	5.52	128.47	120.20
1	N	72	A	O3'-P-O5'	-5.51	95.73	104.00
1	N	1109	C	P-O3'-C3'	5.51	128.47	120.20
1	N	1413	A	O4'-C1'-N9	5.51	116.77	108.50
1	N	29	U	O4'-C1'-N1	5.51	116.77	108.50
1	N	408	A	C4'-C3'-C2'	-5.51	97.09	102.60
1	N	99	C	C4'-C3'-C2'	-5.51	97.09	102.60
1	N	264	C	C4'-C3'-C2'	-5.51	97.09	102.60
1	N	476	U	O4'-C4'-C3'	-5.51	98.49	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	772	U	O4'-C1'-N1	5.51	116.77	108.50
1	N	87	C	C3'-C2'-C1'	5.51	106.81	101.30
1	N	372	C	O4'-C4'-C3'	-5.50	100.59	106.10
1	N	655	A	C5'-C4'-O4'	5.50	118.06	109.80
1	N	295	C	C4'-C3'-C2'	-5.50	97.10	102.60
1	N	1276	G	P-O3'-C3'	-5.50	111.94	120.20
1	N	110	C	C5'-C4'-C3'	5.50	124.25	116.00
1	N	158	G	O4'-C1'-N9	5.50	116.75	108.50
1	N	566	G	C3'-C2'-O2'	-5.50	106.35	114.60
1	N	901	A	O4'-C4'-C3'	-5.50	98.50	104.00
1	N	374	A	C1'-O4'-C4'	5.50	115.40	109.90
1	N	499	A	P-O3'-C3'	5.50	128.45	120.20
1	N	1256	A	O4'-C4'-C3'	-5.50	100.60	106.10
1	N	1530	G	C2'-C3'-O3'	5.50	117.75	109.50
1	N	832	G	C4'-C3'-C2'	-5.50	97.10	102.60
1	N	1047	G	C4'-C3'-O3'	-5.50	104.75	113.00
1	N	212	G	C5'-C4'-O4'	-5.49	101.56	109.80
1	N	452	A	O4'-C1'-C2'	-5.49	102.11	107.60
1	N	789	U	C4'-C3'-O3'	-5.49	104.76	113.00
1	N	1049	U	C4'-C3'-C2'	5.49	108.09	102.60
1	N	1394	A	O4'-C1'-N9	5.49	116.44	108.20
1	N	443	C	O4'-C4'-C3'	-5.49	98.51	104.00
1	N	561	U	C1'-O4'-C4'	5.49	115.19	109.70
1	N	928	G	C5'-C4'-C3'	-5.49	107.77	116.00
1	N	1362	A	O4'-C1'-C2'	-5.49	102.11	107.60
1	N	526	C	C4'-C3'-C2'	-5.49	97.11	102.60
1	N	924	C	O4'-C1'-C2'	-5.48	102.12	107.60
1	N	285	C	O4'-C1'-N1	5.48	116.72	108.50
1	N	47	C	O5'-C5'-C4'	-5.48	103.48	111.70
1	N	924	C	C4'-C3'-C2'	-5.48	97.12	102.60
1	N	1331	G	O3'-P-O5'	5.48	112.22	104.00
1	N	827	U	O3'-P-O5'	-5.48	95.78	104.00
1	N	190	A	C4'-C3'-O3'	-5.47	104.79	113.00
1	N	335	C	O4'-C1'-N1	5.47	116.71	108.50
1	N	746	A	P-O3'-C3'	-5.47	111.99	120.20
1	N	753	A	O5'-C5'-C4'	5.47	119.91	111.70
1	N	12	U	C5'-C4'-C3'	5.47	124.21	116.00
1	N	708	C	C4'-C3'-C2'	-5.47	97.13	102.60
1	N	794	A	C5'-C4'-C3'	-5.47	107.79	116.00
1	N	1405	G	C4'-C3'-C2'	-5.47	97.13	102.60
1	N	429	U	O5'-C5'-C4'	-5.47	103.50	111.70
1	N	561	U	C5'-C4'-O4'	5.47	117.31	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	577	G	O4'-C1'-C2'	-5.47	102.13	107.60
1	N	1094	G	C3'-C2'-O2'	5.47	118.91	110.70
1	N	651	C	C5'-C4'-C3'	-5.46	107.80	116.00
1	N	1476	A	O4'-C1'-C2'	-5.46	102.14	107.60
1	N	1485	U	O4'-C1'-N1	5.46	116.70	108.50
1	N	366	A	C4'-C3'-O3'	5.46	117.59	109.40
1	N	1383	C	O4'-C4'-C3'	-5.46	98.54	104.00
1	N	1462	C	P-O5'-C5'	5.46	129.09	120.90
1	N	195	A	O4'-C4'-C3'	-5.46	98.54	104.00
1	N	328	C	C4'-C3'-C2'	-5.46	97.14	102.60
1	N	484	G	O4'-C1'-N9	5.46	116.39	108.20
1	N	745	G	C4'-C3'-C2'	-5.46	97.14	102.60
1	N	1273	C	O5'-C5'-C4'	-5.46	103.31	111.50
1	N	67	C	C4'-C3'-O3'	-5.46	104.81	113.00
1	N	1382	C	C4'-C3'-O3'	-5.46	104.82	113.00
1	N	379	C	O4'-C1'-N1	5.46	116.68	108.50
1	N	235	C	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	381	C	O4'-C1'-N1	5.45	116.68	108.50
1	N	472	U	P-O5'-C5'	5.45	129.08	120.90
1	N	910	C	O5'-C5'-C4'	-5.45	103.32	111.50
1	N	1335	U	C1'-O4'-C4'	-5.45	104.25	109.70
1	N	1401	G	O3'-P-O5'	-5.45	95.82	104.00
1	N	1030	U	O4'-C1'-N1	5.45	116.67	108.50
1	N	1097	C	O4'-C1'-N1	5.45	116.67	108.50
1	N	1165	U	C3'-C2'-C1'	5.45	106.75	101.30
1	N	326	G	P-O5'-C5'	-5.45	112.73	120.90
1	N	626	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	527	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	N	602	A	C3'-C2'-C1'	-5.45	95.85	101.30
1	N	1326	U	C3'-C2'-C1'	5.45	106.75	101.30
1	N	1454	G	C3'-C2'-C1'	-5.44	95.86	101.30
1	N	173	U	C5'-C4'-C3'	5.44	123.36	115.20
1	N	1168	U	C1'-O4'-C4'	-5.44	104.46	109.90
1	N	1026	G	C4'-C3'-O3'	-5.44	104.84	113.00
1	N	1050	G	C4'-C3'-C2'	-5.44	97.16	102.60
1	N	429	U	O4'-C4'-C3'	-5.44	100.66	106.10
1	N	831	A	C4'-C3'-C2'	-5.44	97.16	102.60
1	N	934	C	C3'-C2'-C1'	5.44	106.94	101.50
1	N	937	A	C2'-C3'-O3'	5.44	121.86	113.70
1	N	963	G	O4'-C1'-N9	5.44	116.66	108.50
1	N	174	A	O3'-P-O5'	5.43	112.15	104.00
1	N	1095	U	O4'-C1'-N1	5.43	116.65	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	7	A	P-O3'-C3'	5.43	128.35	120.20
1	N	305	G	C2'-C3'-O3'	5.43	117.65	109.50
1	N	1031	C	C3'-C2'-C1'	5.43	106.73	101.30
1	N	152	A	O3'-P-O5'	-5.43	95.85	104.00
1	N	1343	G	C5'-C4'-C3'	-5.43	107.85	116.00
1	N	218	U	C5'-C4'-O4'	5.43	117.94	109.80
1	N	935	A	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	1458	G	C5'-C4'-O4'	5.43	117.94	109.80
1	N	1365	G	C4'-C3'-O3'	-5.43	104.86	113.00
1	N	220	G	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	754	C	P-O3'-C3'	5.43	128.34	120.20
1	N	835	U	C4'-C3'-C2'	-5.43	97.17	102.60
1	N	1043	G	C2'-C3'-O3'	5.43	121.84	113.70
1	N	382	A	O3'-P-O5'	5.42	112.14	104.00
1	N	733	G	P-O5'-C5'	-5.42	112.76	120.90
1	N	1405	G	P-O3'-C3'	-5.42	112.06	120.20
1	N	1427	C	O4'-C1'-N1	5.42	116.64	108.50
1	N	1098	C	C3'-C2'-C1'	5.42	106.72	101.30
1	N	500	G	O4'-C4'-C3'	-5.42	98.58	104.00
1	N	852	G	P-O5'-C5'	-5.42	112.77	120.90
1	N	1007	U	O4'-C4'-C3'	5.42	109.42	104.00
1	N	1143	G	C5'-C4'-C3'	-5.42	107.87	116.00
1	N	1387	G	P-O3'-C3'	5.42	128.33	120.20
1	N	1485	U	O5'-C5'-C4'	-5.42	103.37	111.50
1	N	513	C	P-O3'-C3'	5.42	128.33	120.20
1	N	854	U	C2'-C3'-O3'	-5.42	105.57	113.70
1	N	860	A	C4'-C3'-C2'	-5.42	97.18	102.60
1	N	526	C	P-O5'-C5'	-5.42	112.77	120.90
1	N	887	G	C2'-C3'-O3'	5.42	121.83	113.70
1	N	366	A	O4'-C4'-C3'	-5.42	100.69	106.10
1	N	38	G	O4'-C1'-N9	5.41	116.62	108.50
1	N	319	G	O5'-C5'-C4'	5.41	119.62	111.50
1	N	391	G	O4'-C1'-N9	5.41	116.62	108.50
1	N	931	C	O4'-C1'-N1	5.41	116.62	108.50
1	N	1271	A	C5'-C4'-C3'	-5.41	107.88	116.00
1	N	1480	A	O5'-C5'-C4'	5.41	119.62	111.50
1	N	595	A	C4'-C3'-C2'	-5.41	97.19	102.60
1	N	114	U	O4'-C1'-N1	5.41	116.61	108.50
1	N	1069	C	O3'-P-O5'	-5.41	95.89	104.00
1	N	209	U	C5'-C4'-C3'	-5.41	107.89	116.00
1	N	1309	G	C5'-C4'-C3'	5.40	124.11	116.00
1	N	78	A	P-O3'-C3'	5.40	128.31	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	480	U	P-O3'-C3'	5.40	128.31	120.20
1	N	590	U	C5'-C4'-C3'	5.40	124.10	116.00
1	N	702	A	C5'-C4'-O4'	5.40	117.91	109.80
1	N	738	C	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	975	A	C2'-C3'-O3'	5.40	117.60	109.50
1	N	1244	G	C3'-C2'-O2'	5.40	118.80	110.70
1	N	1354	U	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	890	G	O4'-C1'-C2'	-5.40	100.40	105.80
1	N	1245	C	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	1472	U	O4'-C4'-C3'	-5.40	98.60	104.00
1	N	707	U	P-O5'-C5'	5.40	129.00	120.90
1	N	1376	U	C4'-C3'-C2'	-5.40	97.20	102.60
1	N	496	A	C3'-C2'-C1'	5.40	106.70	101.30
1	N	1011	C	P-O3'-C3'	-5.40	112.11	120.20
1	N	680	C	P-O3'-C3'	5.39	128.29	120.20
1	N	1243	C	O5'-C5'-C4'	-5.39	103.41	111.50
1	N	1490	U	O4'-C1'-N1	5.39	116.59	108.50
1	N	215	C	N1-C1'-C2'	5.39	120.08	112.00
1	N	1308	U	P-O5'-C5'	5.39	128.99	120.90
1	N	1370	G	O4'-C4'-C3'	5.39	109.39	104.00
1	N	1434	A	O3'-P-O5'	-5.39	95.92	104.00
1	N	41	G	O4'-C1'-C2'	-5.39	102.21	107.60
1	N	187	G	O5'-C5'-C4'	-5.39	103.42	111.50
1	N	1230	C	O4'-C1'-N1	5.39	116.58	108.50
1	N	215	C	C4'-C3'-C2'	-5.39	97.21	102.60
1	N	972	C	C4'-C3'-O3'	-5.39	104.92	113.00
1	N	198	G	O4'-C4'-C3'	5.38	109.38	104.00
1	N	1348	U	O3'-P-O5'	5.38	112.08	104.00
1	N	1467	C	C3'-C2'-C1'	5.38	106.68	101.30
1	N	1364	U	O4'-C1'-N1	5.38	116.27	108.20
1	N	733	G	C1'-O4'-C4'	-5.38	104.32	109.70
1	N	1457	G	C4'-C3'-O3'	-5.38	104.93	113.00
1	N	127	G	C4'-C3'-C2'	-5.38	97.22	102.60
1	N	490	C	C3'-C2'-C1'	-5.38	95.92	101.30
1	N	930	C	C1'-O4'-C4'	5.38	115.28	109.90
1	N	1154	G	N9-C1'-C2'	-5.38	103.93	112.00
1	N	345	C	O4'-C1'-N1	5.38	116.27	108.20
1	N	582	C	C1'-O4'-C4'	5.38	115.28	109.90
1	N	845	A	O4'-C1'-N9	5.38	116.57	108.50
1	N	915	A	O5'-C5'-C4'	-5.38	103.44	111.50
1	N	256	U	C4'-C3'-C2'	-5.38	97.22	102.60
1	N	813	U	O3'-P-O5'	-5.38	95.94	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	845	A	P-O5'-C5'	-5.38	112.84	120.90
1	N	966	G	C4'-C3'-C2'	-5.38	97.22	102.60
1	N	115	G	C3'-C2'-C1'	5.37	106.87	101.50
1	N	1105	A	O4'-C1'-N9	5.37	116.56	108.50
1	N	842	U	C3'-C2'-O2'	-5.37	106.54	114.60
1	N	1237	C	C4'-C3'-O3'	-5.37	104.94	113.00
1	N	466	A	O5'-C5'-C4'	-5.37	103.45	111.50
1	N	33	A	C5'-C4'-C3'	5.37	124.05	116.00
1	N	212	G	C2'-C3'-O3'	5.37	121.75	113.70
1	N	637	C	O3'-P-O5'	-5.37	95.95	104.00
1	N	1087	G	O4'-C4'-C3'	5.37	109.37	104.00
1	N	1251	A	C3'-C2'-C1'	5.37	106.67	101.30
1	N	1327	C	O4'-C1'-C2'	-5.37	102.23	107.60
1	N	838	G	O5'-C5'-C4'	-5.37	103.45	111.50
1	N	545	C	C3'-C2'-C1'	5.37	106.67	101.30
1	N	632	U	C3'-C2'-C1'	5.37	106.67	101.30
1	N	1063	C	O4'-C4'-C3'	-5.37	98.63	104.00
1	N	1336	C	O4'-C1'-N1	5.37	116.25	108.20
1	N	366	A	C4'-C3'-C2'	5.36	107.96	102.60
1	N	406	G	C3'-C2'-C1'	5.36	106.66	101.30
1	N	546	A	P-O5'-C5'	-5.36	112.85	120.90
1	N	743	A	C4'-C3'-O3'	-5.36	104.95	113.00
1	N	785	G	P-O5'-C5'	5.36	128.94	120.90
1	N	974	A	P-O5'-C5'	5.36	128.94	120.90
1	N	1357	A	C1'-O4'-C4'	5.36	115.26	109.90
1	N	37	U	C4'-C3'-C2'	5.36	107.96	102.60
1	N	50	A	C3'-C2'-C1'	-5.36	96.14	101.50
1	N	765	G	P-O3'-C3'	-5.36	112.16	120.20
1	N	1468	A	O4'-C4'-C3'	5.36	109.36	104.00
1	N	1496	C	C4'-C3'-C2'	-5.36	97.24	102.60
1	N	559	A	N1-C6-N6	5.36	134.68	118.60
1	N	902	G	O4'-C1'-N9	5.36	116.54	108.50
1	N	489	C	C4'-C3'-O3'	-5.36	104.96	113.00
1	N	1376	U	O4'-C1'-N1	5.35	116.53	108.50
1	N	352	C	C1'-O4'-C4'	-5.35	104.55	109.90
1	N	103	U	C4'-C3'-C2'	-5.35	97.25	102.60
1	N	368	U	C3'-C2'-C1'	5.35	106.65	101.30
1	N	1389	C	O4'-C1'-N1	5.35	116.52	108.50
1	N	1418	A	P-O5'-C5'	5.35	128.92	120.90
1	N	600	A	P-O5'-C5'	5.35	128.92	120.90
1	N	373	A	O4'-C1'-C2'	-5.34	102.26	107.60
1	N	272	C	C4'-C3'-O3'	-5.34	104.99	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	574	A	C1'-C2'-O2'	5.34	116.40	108.40
1	N	972	C	P-O3'-C3'	-5.34	112.20	120.20
1	N	1442	G	P-O5'-C5'	5.34	128.91	120.90
1	N	243	A	P-O3'-C3'	5.33	128.20	120.20
1	N	447	G	O4'-C4'-C3'	-5.33	98.67	104.00
1	N	904	U	P-O3'-C3'	-5.33	112.20	120.20
1	N	468	A	C5'-C4'-O4'	-5.33	101.80	109.80
1	N	628	G	O3'-P-O5'	-5.33	96.00	104.00
1	N	21	G	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	572	A	P-O3'-C3'	5.33	128.19	120.20
1	N	810	C	O5'-C5'-C4'	-5.33	103.51	111.50
1	N	1380	U	P-O5'-C5'	-5.33	112.91	120.90
1	N	81	A	C5'-C4'-C3'	5.33	123.19	115.20
1	N	869	G	O3'-P-O5'	-5.33	96.01	104.00
1	N	871	U	C4'-C3'-O3'	-5.33	105.01	113.00
1	N	891	U	P-O5'-C5'	5.33	128.89	120.90
1	N	1045	C	O4'-C1'-N1	5.33	116.49	108.50
1	N	1052	U	O4'-C1'-C2'	-5.33	102.27	107.60
1	N	133	U	C4'-C3'-O3'	-5.32	105.01	113.00
1	N	210	C	C3'-C2'-C1'	5.32	106.82	101.50
1	N	719	C	O3'-P-O5'	5.32	111.98	104.00
1	N	479	U	C5'-C4'-C3'	-5.32	108.02	116.00
1	N	1028	C	O3'-P-O5'	-5.32	96.02	104.00
1	N	1228	C	P-O5'-C5'	-5.32	112.92	120.90
1	N	1311	A	P-O3'-C3'	-5.32	112.22	120.20
1	N	208	U	C5'-C4'-C3'	5.32	123.98	116.00
1	N	1035	A	O3'-P-O5'	-5.32	96.02	104.00
1	N	181	A	C4'-C3'-C2'	-5.32	97.28	102.60
1	N	358	U	O4'-C1'-N1	5.32	116.47	108.50
1	N	784	A	O4'-C4'-C3'	-5.32	98.68	104.00
1	N	751	U	P-O3'-C3'	5.31	128.17	120.20
1	N	134	G	O5'-C5'-C4'	-5.31	103.53	111.50
1	N	246	A	C4'-C3'-C2'	5.31	107.91	102.60
1	N	1269	A	C5'-C4'-C3'	5.31	123.97	116.00
1	N	134	G	O4'-C1'-C2'	-5.31	102.29	107.60
1	N	273	U	P-O5'-C5'	5.31	128.86	120.90
1	N	1373	G	O4'-C1'-C2'	5.31	112.91	107.60
1	N	37	U	P-O3'-C3'	5.31	128.16	120.20
1	N	245	U	O4'-C1'-N1	5.31	116.46	108.50
1	N	1059	C	C5'-C4'-C3'	5.30	123.96	116.00
1	N	1348	U	C2'-C3'-O3'	-5.30	105.74	113.70
1	N	1487	G	P-O5'-C5'	-5.30	112.94	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	119	A	O4'-C1'-N9	5.30	116.15	108.20
1	N	511	C	P-O5'-C5'	-5.30	112.95	120.90
1	N	198	G	O5'-C5'-C4'	5.30	119.45	111.50
1	N	827	U	C3'-C2'-O2'	5.30	118.64	110.70
1	N	611	C	O4'-C1'-N1	5.29	116.44	108.50
1	N	905	U	P-O5'-C5'	5.29	128.84	120.90
1	N	156	C	C1'-C2'-O2'	5.29	116.34	108.40
1	N	247	G	C4'-C3'-C2'	-5.29	97.31	102.60
1	N	349	A	C4'-C3'-O3'	-5.29	105.06	113.00
1	N	418	C	C1'-O4'-C4'	5.29	115.19	109.90
1	N	781	A	O4'-C4'-C3'	-5.29	98.71	104.00
1	N	792	A	O4'-C4'-C3'	-5.29	100.81	106.10
1	N	784	A	C4'-C3'-C2'	-5.29	97.31	102.60
1	N	857	C	N1-C1'-C2'	5.29	119.94	112.00
1	N	1338	G	O4'-C1'-C2'	5.29	112.89	107.60
1	N	1466	C	O4'-C1'-N1	5.29	116.44	108.50
1	N	1333	A	P-O3'-C3'	-5.29	112.27	120.20
1	N	693	G	C5'-C4'-C3'	5.29	123.93	116.00
1	N	1041	G	C1'-O4'-C4'	-5.29	104.61	109.90
1	N	1493	A	P-O3'-C3'	5.29	128.13	120.20
1	N	1510	C	P-O5'-C5'	5.29	128.83	120.90
1	N	185	U	O4'-C1'-N1	5.29	116.43	108.50
1	N	770	C	O4'-C1'-N1	5.29	116.43	108.50
1	N	41	G	C2'-C3'-O3'	5.28	121.62	113.70
1	N	450	G	P-O3'-C3'	5.28	128.13	120.20
1	N	998	C	C3'-C2'-C1'	5.28	106.58	101.30
1	N	1398	A	O4'-C1'-N9	5.28	116.42	108.50
1	N	493	A	C4'-C3'-C2'	-5.28	97.32	102.60
1	N	1006	G	O4'-C1'-N9	5.28	116.42	108.50
1	N	133	U	C1'-O4'-C4'	5.28	115.18	109.90
1	N	357	G	C4'-C3'-C2'	-5.28	97.32	102.60
1	N	536	C	O4'-C1'-N1	5.28	116.42	108.50
1	N	902	G	P-O5'-C5'	5.28	128.82	120.90
1	N	503	C	C5'-C4'-C3'	-5.28	108.08	116.00
1	N	886	G	O5'-C5'-C4'	-5.28	103.59	111.50
1	N	92	U	O4'-C1'-N1	5.27	116.41	108.50
1	N	2	A	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	124	C	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	631	C	O3'-P-O5'	-5.27	96.09	104.00
1	N	1028	C	O4'-C1'-N1	5.27	116.41	108.50
1	N	1229	A	P-O5'-C5'	5.27	128.81	120.90
1	N	1375	A	O4'-C1'-C2'	-5.27	102.33	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	103	U	P-O3'-C3'	-5.27	112.29	120.20
1	N	267	C	P-O3'-C3'	5.27	128.10	120.20
1	N	435	A	O4'-C1'-C2'	-5.27	102.33	107.60
1	N	99	C	P-O3'-C3'	5.27	128.10	120.20
1	N	160	A	C4'-C3'-O3'	-5.27	105.10	113.00
1	N	559	A	C4'-C3'-O3'	5.27	117.30	109.40
1	N	1191	A	C4'-C3'-O3'	-5.27	105.10	113.00
1	N	883	C	C5'-C4'-C3'	-5.26	108.10	116.00
1	N	83	C	C5'-C4'-C3'	-5.26	108.11	116.00
1	N	219	U	O4'-C4'-C3'	-5.26	98.74	104.00
1	N	273	U	O4'-C1'-C2'	-5.26	102.34	107.60
1	N	862	C	C4'-C3'-O3'	-5.26	105.11	113.00
1	N	196	A	O5'-C5'-C4'	5.26	119.39	111.50
1	N	540	G	O4'-C1'-N9	5.26	116.39	108.50
1	N	1092	A	O4'-C1'-C2'	-5.26	102.34	107.60
1	N	1101	A	O4'-C4'-C3'	-5.26	100.84	106.10
1	N	423	G	O3'-P-O5'	-5.26	96.11	104.00
1	N	467	U	C5'-C4'-C3'	5.26	123.89	116.00
1	N	1040	U	P-O3'-C3'	5.26	128.09	120.20
1	N	1184	G	O5'-C5'-C4'	-5.26	103.61	111.50
1	N	1500	A	O4'-C1'-C2'	-5.26	102.34	107.60
1	N	895	G	P-O3'-C3'	-5.26	112.31	120.20
1	N	282	A	O4'-C1'-C2'	-5.26	102.34	107.60
1	N	1347	G	C4'-C3'-C2'	-5.26	97.34	102.60
1	N	1404	C	C4'-C3'-O3'	-5.26	105.12	113.00
1	N	1224	U	O4'-C1'-N1	5.25	116.38	108.50
1	N	1312	G	C3'-C2'-C1'	5.25	106.55	101.30
1	N	1434	A	O4'-C1'-C2'	-5.25	102.35	107.60
1	N	756	C	C4'-C3'-C2'	-5.25	97.35	102.60
1	N	891	U	O4'-C1'-C2'	-5.25	102.35	107.60
1	N	178	C	O4'-C4'-C3'	-5.25	98.75	104.00
1	N	989	U	O4'-C1'-C2'	-5.25	102.35	107.60
1	N	1326	U	O4'-C1'-N1	5.25	116.37	108.50
1	N	285	C	P-O3'-C3'	5.25	128.07	120.20
1	N	669	G	O4'-C1'-N9	5.25	116.37	108.50
1	N	1125	U	O3'-P-O5'	5.25	111.87	104.00
1	N	1212	U	P-O3'-C3'	-5.25	112.33	120.20
1	N	210	C	O4'-C1'-N1	5.24	116.07	108.20
1	N	554	A	P-O3'-C3'	-5.24	112.34	120.20
1	N	812	G	O3'-P-O5'	-5.24	96.14	104.00
1	N	879	C	O4'-C1'-N1	5.24	116.36	108.50
1	N	1286	U	O3'-P-O5'	-5.24	96.14	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1479	C	P-O5'-C5'	5.24	128.76	120.90
1	N	76	G	O4'-C1'-C2'	-5.24	102.36	107.60
1	N	709	U	O3'-P-O5'	-5.24	96.14	104.00
1	N	1274	A	P-O3'-C3'	-5.24	112.34	120.20
1	N	152	A	C4'-C3'-C2'	-5.24	97.36	102.60
1	N	661	G	O4'-C4'-C3'	-5.23	98.77	104.00
1	N	1472	U	O4'-C1'-N1	5.23	116.35	108.50
1	N	781	A	O4'-C1'-C2'	-5.23	102.37	107.60
1	N	867	G	O5'-C5'-C4'	-5.23	103.65	111.50
1	N	582	C	O4'-C4'-C3'	-5.23	98.77	104.00
1	N	1297	G	C4'-C3'-O3'	5.23	117.24	109.40
1	N	79	G	P-O3'-C3'	5.23	128.04	120.20
1	N	88	U	P-O3'-C3'	5.23	128.04	120.20
1	N	479	U	O4'-C1'-N1	5.23	116.34	108.50
1	N	456	A	P-O5'-C5'	-5.22	113.06	120.90
1	N	527	G	O4'-C4'-C3'	5.22	109.22	104.00
1	N	943	U	N1-C1'-C2'	5.22	119.83	112.00
1	N	1005	A	P-O3'-C3'	5.22	128.03	120.20
1	N	1208	C	P-O5'-C5'	5.21	128.72	120.90
1	N	161	A	C1'-O4'-C4'	5.21	115.11	109.90
1	N	1122	U	C4'-C3'-C2'	-5.21	97.39	102.60
1	N	740	U	P-O5'-C5'	-5.21	113.08	120.90
1	N	1039	G	O4'-C1'-N9	5.21	116.32	108.50
1	N	1408	A	C3'-C2'-O2'	-5.21	102.88	110.70
1	N	434	U	O4'-C4'-C3'	-5.21	98.79	104.00
1	N	795	C	P-O5'-C5'	5.21	128.71	120.90
1	N	1470	U	C1'-O4'-C4'	-5.21	104.69	109.90
1	N	883	C	O4'-C1'-N1	5.21	116.31	108.50
1	N	1227	A	C3'-C2'-C1'	-5.21	96.09	101.30
1	N	198	G	P-O3'-C3'	-5.20	112.39	120.20
1	N	874	G	C4'-C3'-O3'	-5.20	105.19	113.00
1	N	934	C	C1'-C2'-O2'	-5.20	104.00	111.80
1	N	1133	G	O4'-C1'-C2'	-5.20	102.40	107.60
1	N	1309	G	P-O5'-C5'	-5.20	113.10	120.90
1	N	402	G	C4'-C3'-O3'	-5.20	105.20	113.00
1	N	873	A	O4'-C4'-C3'	-5.20	100.90	106.10
1	N	114	U	P-O5'-C5'	5.20	128.70	120.90
1	N	394	G	O5'-C5'-C4'	-5.20	103.70	111.50
1	N	199	A	C4'-C3'-C2'	-5.20	97.40	102.60
1	N	254	G	P-O5'-C5'	5.20	128.70	120.90
1	N	736	C	O3'-P-O5'	-5.20	96.20	104.00
1	N	1219	A	C5'-C4'-C3'	5.20	123.80	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	686	U	O4'-C1'-N1	5.20	116.00	108.20
1	N	960	U	O4'-C1'-N1	5.20	115.99	108.20
1	N	1068	G	C5'-C4'-C3'	-5.20	108.21	116.00
1	N	1522	U	C3'-C2'-C1'	5.20	106.50	101.30
1	N	614	C	C1'-C2'-O2'	-5.19	100.61	108.40
1	N	637	C	O4'-C1'-N1	5.19	116.29	108.50
1	N	725	G	O4'-C1'-N9	5.19	116.29	108.50
1	N	1087	G	C5'-C4'-O4'	-5.19	102.01	109.80
1	N	1382	C	P-O3'-C3'	5.19	127.99	120.20
1	N	410	G	O5'-C5'-C4'	-5.19	103.71	111.50
1	N	661	G	C4'-C3'-O3'	-5.19	105.21	113.00
1	N	392	C	O4'-C1'-N1	5.19	116.29	108.50
1	N	1169	A	C2'-C3'-O3'	5.19	121.49	113.70
1	N	704	A	O4'-C4'-C3'	-5.19	98.81	104.00
1	N	771	G	O4'-C1'-N9	5.19	116.28	108.50
1	N	1335	U	N1-C1'-C2'	5.19	121.78	114.00
1	N	197	A	O5'-C5'-C4'	-5.19	103.92	111.70
1	N	253	A	C2'-C3'-O3'	5.19	121.48	113.70
1	N	710	G	O5'-C5'-C4'	-5.19	103.72	111.50
1	N	1316	G	C5'-C4'-O4'	5.19	117.58	109.80
1	N	1327	C	P-O3'-C3'	-5.19	112.42	120.20
1	N	468	A	N1-C6-N6	5.19	134.16	118.60
1	N	842	U	C2'-C3'-O3'	5.19	117.28	109.50
1	N	1197	A	O4'-C4'-C3'	5.19	109.19	104.00
1	N	1524	C	C1'-O4'-C4'	-5.19	104.71	109.90
1	N	1419	G	P-O3'-C3'	-5.18	112.42	120.20
1	N	422	C	P-O3'-C3'	5.18	127.97	120.20
1	N	1350	A	C4'-C3'-O3'	-5.18	105.23	113.00
1	N	1386	G	C3'-C2'-C1'	5.18	106.48	101.30
1	N	319	G	O4'-C4'-C3'	5.18	109.18	104.00
1	N	871	U	C3'-C2'-C1'	5.18	106.48	101.30
1	N	1002	G	C3'-C2'-O2'	5.18	118.47	110.70
1	N	75	G	C5'-C4'-O4'	5.18	117.57	109.80
1	N	903	G	P-O5'-C5'	5.18	128.67	120.90
1	N	325	A	O4'-C4'-C3'	-5.18	98.82	104.00
1	N	595	A	O4'-C1'-C2'	-5.18	100.62	105.80
1	N	1236	A	C3'-C2'-C1'	5.18	106.48	101.30
1	N	312	C	P-O5'-C5'	5.17	128.66	120.90
1	N	985	C	C5'-C4'-C3'	-5.17	108.24	116.00
1	N	1158	C	C1'-O4'-C4'	5.17	115.07	109.90
1	N	1039	G	C5'-C4'-C3'	5.17	123.76	116.00
1	N	31	G	P-O5'-C5'	5.17	128.66	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1495	U	P-O5'-C5'	5.17	128.66	120.90
1	N	69	G	C3'-C2'-O2'	5.17	118.45	110.70
1	N	212	G	O4'-C1'-N9	5.17	116.25	108.50
1	N	337	G	O4'-C4'-C3'	-5.17	98.83	104.00
1	N	500	G	N9-C1'-C2'	-5.17	104.25	112.00
1	N	572	A	C3'-C2'-C1'	5.17	106.47	101.30
1	N	769	G	P-O5'-C5'	-5.17	113.15	120.90
1	N	781	A	C1'-O4'-C4'	5.17	115.07	109.90
1	N	521	G	C5'-C4'-C3'	5.17	123.75	116.00
1	N	1238	A	C4'-C3'-C2'	5.17	107.77	102.60
1	N	54	C	O5'-C5'-C4'	-5.17	103.75	111.50
1	N	750	C	P-O3'-C3'	-5.17	112.45	120.20
1	N	1310	G	C5'-C4'-C3'	5.17	123.75	116.00
1	N	17	U	C2'-C3'-O3'	5.16	121.45	113.70
1	N	244	U	O5'-C5'-C4'	5.16	119.44	111.70
1	N	1263	C	O4'-C1'-N1	5.16	116.24	108.50
1	N	658	C	C5'-C4'-C3'	5.16	123.74	116.00
1	N	1347	G	P-O3'-C3'	5.16	127.94	120.20
1	N	932	C	O4'-C1'-N1	5.16	116.24	108.50
1	N	213	G	P-O5'-C5'	-5.16	113.16	120.90
1	N	1027	C	P-O3'-C3'	-5.16	112.46	120.20
1	N	1265	C	C5'-C4'-O4'	5.16	117.54	109.80
1	N	297	G	O4'-C1'-N9	5.16	116.24	108.50
1	N	317	U	C1'-C2'-O2'	5.16	116.13	108.40
1	N	605	U	O3'-P-O5'	5.16	111.73	104.00
1	N	685	G	O5'-C5'-C4'	-5.16	103.77	111.50
1	N	1051	C	C1'-O4'-C4'	-5.16	104.75	109.90
1	N	1335	U	O5'-C5'-C4'	-5.16	103.97	111.70
1	N	606	G	C5'-C4'-C3'	-5.15	108.27	116.00
1	N	1019	A	C2'-C3'-O3'	5.15	121.43	113.70
1	N	1201	A	O4'-C4'-C3'	-5.15	100.95	106.10
1	N	103	U	P-O5'-C5'	-5.15	113.17	120.90
1	N	207	C	C5'-C4'-C3'	5.15	123.73	116.00
1	N	833	G	O5'-C5'-C4'	-5.15	103.77	111.50
1	N	877	G	O5'-C5'-C4'	-5.15	103.77	111.50
1	N	503	C	N1-C1'-C2'	5.15	119.72	112.00
1	N	796	C	O5'-C5'-C4'	-5.15	103.78	111.50
1	N	1203	C	O4'-C1'-C2'	-5.15	102.45	107.60
1	N	1316	G	O4'-C1'-N9	5.15	116.23	108.50
1	N	1457	G	C2'-C3'-O3'	5.15	121.43	113.70
1	N	1510	C	O4'-C1'-N1	5.15	116.22	108.50
1	N	106	C	C4'-C3'-O3'	-5.15	105.28	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	723	U	C5'-C4'-O4'	5.15	117.52	109.80
1	N	1101	A	P-O5'-C5'	5.15	128.62	120.90
1	N	311	C	C4'-C3'-C2'	-5.15	97.45	102.60
1	N	850	U	C5'-C4'-C3'	-5.15	108.28	116.00
1	N	1488	G	O4'-C1'-N9	5.15	116.22	108.50
1	N	1450	U	P-O3'-C3'	5.15	127.92	120.20
1	N	33	A	O5'-C5'-C4'	5.14	119.22	111.50
1	N	156	C	O3'-P-O5'	-5.14	96.28	104.00
1	N	216	U	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	484	G	O4'-C4'-C3'	-5.14	100.96	106.10
1	N	954	G	P-O5'-C5'	5.14	128.62	120.90
1	N	132	C	C4'-C3'-C2'	-5.14	97.46	102.60
1	N	1059	C	C4'-C3'-O3'	-5.14	105.29	113.00
1	N	1176	A	O4'-C1'-N9	5.14	116.21	108.50
1	N	1317	C	C4'-C3'-O3'	-5.14	105.29	113.00
1	N	201	G	C5'-C4'-O4'	-5.14	102.09	109.80
1	N	418	C	O4'-C1'-N1	5.14	116.21	108.50
1	N	1093	A	O3'-P-O5'	5.13	111.70	104.00
1	N	1035	A	P-O5'-C5'	5.13	128.60	120.90
1	N	269	C	P-O3'-C3'	-5.13	112.50	120.20
1	N	1086	U	O3'-P-O5'	5.13	111.70	104.00
1	N	1278	G	C2'-C3'-O3'	5.13	117.20	109.50
1	N	359	G	C5'-C4'-C3'	-5.13	108.31	116.00
1	N	755	G	O3'-P-O5'	-5.13	96.31	104.00
1	N	842	U	P-O3'-C3'	5.13	127.89	120.20
1	N	1026	G	O4'-C4'-C3'	-5.13	98.87	104.00
1	N	1304	G	O4'-C1'-C2'	-5.13	102.47	107.60
1	N	266	G	O4'-C4'-C3'	-5.13	100.97	106.10
1	N	372	C	C5'-C4'-O4'	5.13	116.79	109.10
1	N	1301	U	O4'-C1'-N1	5.13	115.89	108.20
1	N	1340	A	O4'-C1'-N9	5.13	116.19	108.50
1	N	82	G	C1'-C2'-O2'	5.12	116.08	108.40
1	N	315	A	P-O5'-C5'	5.12	128.59	120.90
1	N	585	G	C4'-C3'-O3'	-5.12	105.32	113.00
1	N	905	U	C4'-C3'-C2'	5.12	107.72	102.60
1	N	985	C	O4'-C1'-N1	5.12	116.19	108.50
1	N	1228	C	C2'-C3'-O3'	5.12	121.38	113.70
1	N	1357	A	C5'-C4'-C3'	5.12	123.68	116.00
1	N	62	U	O4'-C4'-C3'	5.12	109.12	104.00
1	N	468	A	O4'-C1'-N9	5.12	116.18	108.50
1	N	1068	G	O4'-C1'-C2'	-5.12	102.48	107.60
1	N	1090	U	C4'-C3'-C2'	-5.12	97.48	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1328	C	C4'-C3'-O3'	-5.12	105.32	113.00
1	N	514	C	C4'-C3'-C2'	-5.12	97.48	102.60
1	N	557	G	C5'-C4'-C3'	5.12	123.68	116.00
1	N	1134	G	C5'-C4'-C3'	5.12	123.68	116.00
1	N	1449	C	O4'-C1'-N1	5.12	116.18	108.50
1	N	433	G	P-O5'-C5'	5.12	128.57	120.90
1	N	1027	C	C5'-C4'-C3'	-5.12	108.33	116.00
1	N	437	U	O4'-C1'-N1	5.11	116.17	108.50
1	N	894	G	O5'-C5'-C4'	-5.11	103.83	111.50
1	N	1031	C	P-O3'-C3'	-5.11	112.53	120.20
1	N	70	U	C3'-C2'-O2'	5.11	122.27	114.60
1	N	474	G	O4'-C1'-N9	5.11	116.17	108.50
1	N	1515	G	P-O3'-C3'	-5.11	112.53	120.20
1	N	718	A	P-O5'-C5'	-5.11	113.23	120.90
1	N	788	U	C3'-C2'-O2'	5.11	118.37	110.70
1	N	1048	G	C4'-C3'-C2'	-5.11	97.49	102.60
1	N	1341	U	O4'-C1'-N1	5.11	116.17	108.50
1	N	287	U	C3'-C2'-C1'	-5.11	96.19	101.30
1	N	1359	C	O5'-C5'-C4'	-5.11	103.84	111.50
1	N	179	A	C5'-C4'-O4'	5.11	117.46	109.80
1	N	378	G	O3'-P-O5'	-5.11	96.34	104.00
1	N	624	C	P-O5'-C5'	5.11	128.56	120.90
1	N	948	C	C4'-C3'-O3'	-5.11	105.34	113.00
1	N	981	U	O4'-C4'-C3'	-5.11	98.89	104.00
1	N	1407	C	O4'-C1'-N1	5.11	116.16	108.50
1	N	1493	A	O5'-C5'-C4'	-5.11	103.84	111.50
1	N	240	G	O4'-C1'-N9	5.11	116.16	108.50
1	N	1424	U	P-O5'-C5'	5.11	128.56	120.90
1	N	419	C	O4'-C1'-N1	5.10	116.16	108.50
1	N	1114	C	C1'-O4'-C4'	5.10	115.00	109.90
1	N	641	U	C3'-C2'-O2'	5.10	118.35	110.70
1	N	1335	U	C1'-C2'-O2'	-5.10	104.15	111.80
1	N	209	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	636	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	1391	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	670	G	C4'-C3'-C2'	-5.10	97.50	102.60
1	N	1122	U	O4'-C1'-N1	5.10	116.15	108.50
1	N	1187	G	O3'-P-O5'	-5.10	96.35	104.00
1	N	1369	C	C1'-C2'-O2'	5.10	116.05	108.40
1	N	123	U	P-O3'-C3'	5.10	127.84	120.20
1	N	944	G	C5'-C4'-C3'	5.10	123.64	116.00
1	N	300	A	O5'-C5'-C4'	-5.09	103.86	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	1367	C	P-O5'-C5'	5.09	128.54	120.90
1	N	997	U	C2'-C3'-O3'	5.09	121.34	113.70
1	N	865	A	C2'-C3'-O3'	5.09	121.34	113.70
1	N	869	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	1087	G	P-O5'-C5'	5.09	128.54	120.90
1	N	151	A	P-O3'-C3'	-5.09	112.57	120.20
1	N	288	A	P-O5'-C5'	5.09	128.53	120.90
1	N	1452	C	O4'-C4'-C3'	-5.09	101.01	106.10
1	N	941	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	N	1522	U	O5'-C5'-C4'	-5.09	103.87	111.50
1	N	324	G	P-O5'-C5'	-5.09	113.27	120.90
1	N	599	C	C5'-C4'-C3'	-5.09	108.37	116.00
1	N	1403	C	O4'-C1'-N1	5.09	116.13	108.50
1	N	508	U	O4'-C4'-C3'	-5.08	101.02	106.10
1	N	1425	U	P-O3'-C3'	-5.08	112.57	120.20
1	N	1448	C	O5'-C5'-C4'	5.08	119.13	111.50
1	N	77	A	P-O3'-C3'	5.08	127.83	120.20
1	N	113	G	P-O3'-C3'	-5.08	112.57	120.20
1	N	698	G	C5'-C4'-C3'	-5.08	108.37	116.00
1	N	1523	G	C5'-C4'-C3'	5.08	123.62	116.00
1	N	13	U	P-O5'-C5'	5.08	128.52	120.90
1	N	64	G	N9-C1'-C2'	5.08	119.62	112.00
1	N	851	G	C1'-O4'-C4'	5.08	114.98	109.90
1	N	1289	A	O4'-C1'-N9	5.08	116.12	108.50
1	N	708	C	O4'-C1'-C2'	-5.08	102.52	107.60
1	N	891	U	O4'-C1'-N1	5.08	116.12	108.50
1	N	1477	U	C2'-C3'-O3'	5.08	121.32	113.70
1	N	862	C	C2'-C3'-O3'	5.07	121.31	113.70
1	N	198	G	C1'-C2'-O2'	-5.07	100.80	108.40
1	N	962	C	P-O3'-C3'	-5.07	112.59	120.20
1	N	404	G	C1'-C2'-O2'	5.07	116.00	108.40
1	N	256	U	C4'-C3'-O3'	-5.07	105.40	113.00
1	N	528	C	C1'-C2'-O2'	5.07	116.00	108.40
1	N	808	C	O4'-C4'-C3'	-5.07	98.94	104.00
1	N	1287	A	O5'-C5'-C4'	-5.07	103.90	111.50
1	N	374	A	C4'-C3'-O3'	-5.06	105.40	113.00
1	N	488	C	C5'-C4'-C3'	5.06	123.60	116.00
1	N	794	A	C2'-C3'-O3'	-5.06	106.10	113.70
1	N	1000	A	C2'-C3'-O3'	5.06	121.30	113.70
1	N	194	C	C1'-O4'-C4'	-5.06	104.84	109.90
1	N	497	G	C3'-C2'-O2'	5.06	118.29	110.70
1	N	183	C	P-O3'-C3'	5.06	127.79	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	260	G	P-O5'-C5'	5.06	128.49	120.90
1	N	468	A	P-O5'-C5'	5.06	128.49	120.90
1	N	475	C	P-O3'-C3'	5.06	127.79	120.20
1	N	645	G	C4'-C3'-O3'	5.06	120.59	113.00
1	N	702	A	O3'-P-O5'	5.06	111.59	104.00
1	N	1069	C	C1'-C2'-O2'	5.06	115.99	108.40
1	N	67	C	O5'-C5'-C4'	-5.06	103.91	111.50
1	N	272	C	O4'-C1'-C2'	-5.06	102.54	107.60
1	N	228	A	P-O3'-C3'	-5.05	112.62	120.20
1	N	460	A	P-O5'-C5'	5.05	128.48	120.90
1	N	563	A	O4'-C1'-N9	5.05	116.08	108.50
1	N	636	U	P-O3'-C3'	-5.05	112.62	120.20
1	N	1192	C	C5'-C4'-C3'	-5.05	108.42	116.00
1	N	1115	U	P-O3'-C3'	-5.05	112.62	120.20
1	N	463	U	O4'-C4'-C3'	-5.05	98.95	104.00
1	N	622	A	O5'-C5'-C4'	-5.05	103.92	111.50
1	N	693	G	P-O3'-C3'	5.05	127.77	120.20
1	N	745	G	C4'-C3'-O3'	-5.05	105.43	113.00
1	N	247	G	O4'-C1'-C2'	-5.05	102.55	107.60
1	N	1227	A	C4'-C3'-C2'	5.05	107.65	102.60
1	N	1405	G	O4'-C4'-C3'	-5.05	98.95	104.00
1	N	348	G	C4'-C3'-O3'	-5.04	105.43	113.00
1	N	471	U	O4'-C1'-N1	5.04	116.06	108.50
1	N	1088	G	C4'-C3'-C2'	-5.04	97.56	102.60
1	N	1328	C	O4'-C1'-N1	5.04	116.07	108.50
1	N	1345	U	C1'-O4'-C4'	-5.04	104.66	109.70
1	N	1380	U	C3'-C2'-C1'	5.04	106.34	101.30
1	N	585	G	O3'-P-O5'	-5.04	96.44	104.00
1	N	645	G	C4'-C3'-C2'	-5.04	97.56	102.60
1	N	1248	A	O3'-P-O5'	5.04	111.56	104.00
1	N	157	U	C1'-C2'-O2'	5.04	115.96	108.40
1	N	46	G	P-O3'-C3'	5.04	127.76	120.20
1	N	944	G	P-O5'-C5'	-5.04	113.34	120.90
1	N	16	A	O4'-C4'-C3'	5.04	109.04	104.00
1	N	573	A	N1-C6-N6	5.04	133.70	118.60
1	N	867	G	P-O5'-C5'	5.04	128.45	120.90
1	N	1085	U	O3'-P-O5'	5.04	111.55	104.00
1	N	1145	A	C2'-C3'-O3'	5.04	121.25	113.70
1	N	1455	G	P-O5'-C5'	5.04	128.45	120.90
1	N	485	U	P-O3'-C3'	5.03	127.75	120.20
1	N	882	C	O4'-C1'-N1	5.03	116.05	108.50
1	N	1114	C	P-O5'-C5'	5.03	128.45	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	450	G	C2'-C3'-O3'	5.03	121.25	113.70
1	N	619	U	C1'-O4'-C4'	-5.03	104.87	109.90
1	N	708	C	O5'-C5'-C4'	-5.03	103.95	111.50
1	N	1174	G	C5'-C4'-O4'	5.03	117.34	109.80
1	N	588	G	C3'-C2'-O2'	5.03	118.24	110.70
1	N	120	A	C5'-C4'-C3'	5.03	123.54	116.00
1	N	396	C	C5'-C4'-C3'	-5.03	108.46	116.00
1	N	599	C	O5'-C5'-C4'	-5.03	103.96	111.50
1	N	749	A	C3'-C2'-C1'	-5.03	96.27	101.30
1	N	832	G	O3'-P-O5'	5.03	111.54	104.00
1	N	1204	A	O4'-C1'-C2'	-5.03	102.57	107.60
1	N	14	U	C4'-C3'-C2'	-5.03	97.58	102.60
1	N	613	C	C3'-C2'-C1'	5.03	106.33	101.30
1	N	1306	A	C1'-O4'-C4'	5.03	114.92	109.90
1	N	1451	U	C3'-C2'-C1'	-5.03	96.27	101.30
1	N	270	A	N1-C6-N6	5.02	133.66	118.60
1	N	426	U	C2'-C3'-O3'	5.02	121.23	113.70
1	N	599	C	O3'-P-O5'	-5.02	96.47	104.00
1	N	11	G	C1'-O4'-C4'	-5.02	104.88	109.90
1	N	43	C	C5'-C4'-C3'	-5.02	108.47	116.00
1	N	614	C	C3'-C2'-O2'	5.02	118.23	110.70
1	N	1217	C	C1'-C2'-O2'	5.02	115.93	108.40
1	N	417	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	N	672	U	P-O3'-C3'	-5.02	112.67	120.20
1	N	801	U	O5'-C5'-C4'	5.02	119.03	111.50
1	N	999	C	C5'-C4'-C3'	5.02	123.53	116.00
1	N	1361	G	N9-C1'-C2'	-5.02	104.47	112.00
1	N	367	U	O4'-C1'-C2'	-5.01	100.79	105.80
1	N	1210	C	O4'-C1'-C2'	-5.01	102.58	107.60
1	N	1396	A	P-O3'-C3'	5.01	127.72	120.20
1	N	1456	A	O4'-C4'-C3'	-5.01	98.99	104.00
1	N	681	A	O4'-C4'-C3'	-5.01	98.99	104.00
1	N	1040	U	O4'-C1'-N1	5.01	116.02	108.50
1	N	459	A	C4'-C3'-O3'	-5.01	105.48	113.00
1	N	510	A	O5'-C5'-C4'	-5.01	103.98	111.50
1	N	1041	G	O4'-C4'-C3'	-5.01	98.99	104.00
1	N	1083	U	C5'-C4'-C3'	-5.01	108.48	116.00
1	N	1174	G	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	1235	U	C4'-C3'-O3'	-5.01	105.48	113.00
1	N	452	A	C5'-C4'-C3'	-5.01	108.49	116.00
1	N	1229	A	P-O3'-C3'	-5.01	112.68	120.20
1	N	1119	C	O4'-C4'-C3'	-5.01	98.99	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	544	G	C2'-C3'-O3'	5.01	121.21	113.70
1	N	671	G	O4'-C1'-C2'	-5.01	102.59	107.60
1	N	181	A	P-O5'-C5'	5.00	128.41	120.90
1	N	572	A	O3'-P-O5'	-5.00	96.50	104.00
1	N	857	C	O4'-C1'-N1	5.00	116.00	108.50
1	N	1210	C	C4'-C3'-C2'	-5.00	97.60	102.60
1	N	397	A	N9-C1'-C2'	5.00	119.50	112.00
1	N	547	A	C2'-C3'-O3'	5.00	117.00	109.50
1	N	1422	G	C5'-C4'-C3'	-5.00	108.50	116.00

There are no chirality outliers.

All (971) 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	1003	G	Sidechain
1	N	1004	A	Sidechain
1	N	1005	A	Sidechain
1	N	1006	G	Sidechain
1	N	1007	U	Sidechain
1	N	1008	U	Sidechain
1	N	1009	U	Sidechain
1	N	101	A	Sidechain
1	N	1011	C	Sidechain
1	N	1013	G	Sidechain
1	N	1015	G	Sidechain
1	N	102	G	Sidechain
1	N	1024	G	Sidechain
1	N	1025	U	Sidechain
1	N	1026	G	Sidechain
1	N	103	U	Sidechain
1	N	1031	C	Sidechain
1	N	1032	G	Sidechain
1	N	1033	G	Sidechain
1	N	1034	G	Sidechain
1	N	1036	A	Sidechain
1	N	1038	C	Sidechain
1	N	1039	G	Sidechain
1	N	1041	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1042	A	Sidechain
1	N	1043	G	Sidechain
1	N	1045	C	Sidechain
1	N	1047	G	Sidechain
1	N	1048	G	Sidechain
1	N	1049	U	Sidechain
1	N	105	G	Sidechain
1	N	1051	C	Sidechain
1	N	1052	U	Sidechain
1	N	1055	A	Sidechain
1	N	1056	U	Sidechain
1	N	1058	G	Sidechain
1	N	1059	C	Sidechain
1	N	1061	G	Sidechain
1	N	1062	U	Sidechain
1	N	1066	C	Sidechain
1	N	1067	A	Sidechain
1	N	1068	G	Sidechain
1	N	107	G	Sidechain
1	N	1070	U	Sidechain
1	N	1072	G	Sidechain
1	N	1073	U	Sidechain
1	N	1074	G	Sidechain
1	N	1075	U	Sidechain
1	N	1076	U	Sidechain
1	N	1078	U	Sidechain
1	N	108	G	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	1090	U	Sidechain
1	N	1091	U	Sidechain
1	N	1093	A	Sidechain
1	N	1095	U	Sidechain
1	N	1096	C	Sidechain
1	N	1097	C	Sidechain
1	N	1098	C	Sidechain
1	N	11	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1100	C	Sidechain
1	N	1102	A	Sidechain
1	N	1103	C	Sidechain
1	N	1104	G	Sidechain
1	N	1108	G	Sidechain
1	N	1109	C	Sidechain
1	N	111	G	Sidechain
1	N	1111	A	Sidechain
1	N	1114	C	Sidechain
1	N	1115	U	Sidechain
1	N	1116	U	Sidechain
1	N	1117	A	Sidechain
1	N	1124	G	Sidechain
1	N	1125	U	Sidechain
1	N	1126	U	Sidechain
1	N	1127	G	Sidechain
1	N	1129	C	Sidechain
1	N	113	G	Sidechain
1	N	1130	A	Sidechain
1	N	1131	G	Sidechain
1	N	1132	C	Sidechain
1	N	1133	G	Sidechain
1	N	1135	U	Sidechain
1	N	1137	C	Sidechain
1	N	1139	G	Sidechain
1	N	114	U	Sidechain
1	N	1141	C	Sidechain
1	N	1143	G	Sidechain
1	N	1144	G	Sidechain
1	N	1145	A	Sidechain
1	N	1148	U	Sidechain
1	N	1149	C	Sidechain
1	N	1150	A	Sidechain
1	N	1152	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	1160	G	Sidechain
1	N	1163	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1164	G	Sidechain
1	N	1168	U	Sidechain
1	N	1169	A	Sidechain
1	N	117	G	Sidechain
1	N	1170	A	Sidechain
1	N	1172	C	Sidechain
1	N	1174	G	Sidechain
1	N	1176	A	Sidechain
1	N	1177	G	Sidechain
1	N	1178	G	Sidechain
1	N	118	U	Sidechain
1	N	1181	G	Sidechain
1	N	1182	G	Sidechain
1	N	1184	G	Sidechain
1	N	1185	G	Sidechain
1	N	1186	G	Sidechain
1	N	1187	G	Sidechain
1	N	1188	A	Sidechain
1	N	119	A	Sidechain
1	N	1193	G	Sidechain
1	N	1194	U	Sidechain
1	N	1195	C	Sidechain
1	N	1198	G	Sidechain
1	N	1199	U	Sidechain
1	N	12	U	Sidechain
1	N	1200	C	Sidechain
1	N	1201	A	Sidechain
1	N	1204	A	Sidechain
1	N	1205	U	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	1218	C	Sidechain
1	N	1219	A	Sidechain
1	N	122	G	Sidechain
1	N	1221	G	Sidechain
1	N	1222	G	Sidechain
1	N	1224	U	Sidechain
1	N	1227	A	Sidechain
1	N	1228	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1229	A	Sidechain
1	N	123	U	Sidechain
1	N	1231	G	Sidechain
1	N	1235	U	Sidechain
1	N	1236	A	Sidechain
1	N	1238	A	Sidechain
1	N	1239	A	Sidechain
1	N	1240	U	Sidechain
1	N	1241	G	Sidechain
1	N	1242	G	Sidechain
1	N	1244	G	Sidechain
1	N	1245	C	Sidechain
1	N	1246	A	Sidechain
1	N	1248	A	Sidechain
1	N	125	U	Sidechain
1	N	1251	A	Sidechain
1	N	1252	A	Sidechain
1	N	1254	A	Sidechain
1	N	1255	G	Sidechain
1	N	1256	A	Sidechain
1	N	1257	A	Sidechain
1	N	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	1266	G	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	1272	G	Sidechain
1	N	1274	A	Sidechain
1	N	1276	G	Sidechain
1	N	1277	C	Sidechain
1	N	1279	G	Sidechain
1	N	128	G	Sidechain
1	N	1280	A	Sidechain
1	N	1282	C	Sidechain
1	N	1283	U	Sidechain
1	N	1285	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1289	A	Sidechain
1	N	1291	U	Sidechain
1	N	1292	G	Sidechain
1	N	1295	U	Sidechain
1	N	1296	C	Sidechain
1	N	1297	G	Sidechain
1	N	1298	U	Sidechain
1	N	130	A	Sidechain
1	N	1301	U	Sidechain
1	N	1302	C	Sidechain
1	N	1304	G	Sidechain
1	N	1305	G	Sidechain
1	N	1306	A	Sidechain
1	N	1308	U	Sidechain
1	N	1309	G	Sidechain
1	N	131	A	Sidechain
1	N	1310	G	Sidechain
1	N	1311	A	Sidechain
1	N	1313	U	Sidechain
1	N	1314	C	Sidechain
1	N	1315	U	Sidechain
1	N	1316	G	Sidechain
1	N	1318	A	Sidechain
1	N	1319	A	Sidechain
1	N	1322	C	Sidechain
1	N	1324	A	Sidechain
1	N	1327	C	Sidechain
1	N	133	U	Sidechain
1	N	1331	G	Sidechain
1	N	1332	A	Sidechain
1	N	1334	G	Sidechain
1	N	1335	U	Sidechain
1	N	1336	C	Sidechain
1	N	1339	A	Sidechain
1	N	134	G	Sidechain
1	N	1341	U	Sidechain
1	N	1343	G	Sidechain
1	N	1344	C	Sidechain
1	N	1345	U	Sidechain
1	N	1346	A	Sidechain
1	N	1347	G	Sidechain
1	N	1348	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1350	A	Sidechain
1	N	1353	G	Sidechain
1	N	1355	G	Sidechain
1	N	1356	G	Sidechain
1	N	1357	A	Sidechain
1	N	1359	C	Sidechain
1	N	1361	G	Sidechain
1	N	1362	A	Sidechain
1	N	1364	U	Sidechain
1	N	1365	G	Sidechain
1	N	1367	C	Sidechain
1	N	1368	A	Sidechain
1	N	137	U	Sidechain
1	N	1370	G	Sidechain
1	N	1371	G	Sidechain
1	N	1373	G	Sidechain
1	N	1375	A	Sidechain
1	N	1376	U	Sidechain
1	N	1379	G	Sidechain
1	N	1381	U	Sidechain
1	N	1383	C	Sidechain
1	N	1384	C	Sidechain
1	N	1385	G	Sidechain
1	N	1386	G	Sidechain
1	N	1387	G	Sidechain
1	N	1388	C	Sidechain
1	N	1389	C	Sidechain
1	N	139	A	Sidechain
1	N	1391	U	Sidechain
1	N	1392	G	Sidechain
1	N	1394	A	Sidechain
1	N	1396	A	Sidechain
1	N	1397	C	Sidechain
1	N	1398	A	Sidechain
1	N	14	U	Sidechain
1	N	1401	G	Sidechain
1	N	1405	G	Sidechain
1	N	1407	C	Sidechain
1	N	1408	A	Sidechain
1	N	1409	C	Sidechain
1	N	141	G	Sidechain
1	N	1410	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1411	C	Sidechain
1	N	1413	A	Sidechain
1	N	1414	U	Sidechain
1	N	1417	G	Sidechain
1	N	1418	A	Sidechain
1	N	1419	G	Sidechain
1	N	142	G	Sidechain
1	N	1422	G	Sidechain
1	N	1423	G	Sidechain
1	N	1424	U	Sidechain
1	N	1425	U	Sidechain
1	N	143	A	Sidechain
1	N	1430	A	Sidechain
1	N	1431	A	Sidechain
1	N	1432	G	Sidechain
1	N	1434	A	Sidechain
1	N	1435	G	Sidechain
1	N	1437	A	Sidechain
1	N	1438	G	Sidechain
1	N	1439	G	Sidechain
1	N	144	G	Sidechain
1	N	1440	U	Sidechain
1	N	1441	A	Sidechain
1	N	1442	G	Sidechain
1	N	1443	C	Sidechain
1	N	1444	U	Sidechain
1	N	1445	U	Sidechain
1	N	1446	A	Sidechain
1	N	1447	A	Sidechain
1	N	1448	C	Sidechain
1	N	1449	C	Sidechain
1	N	1450	U	Sidechain
1	N	1453	G	Sidechain
1	N	1456	A	Sidechain
1	N	1457	G	Sidechain
1	N	1458	G	Sidechain
1	N	1461	G	Sidechain
1	N	1464	U	Sidechain
1	N	1467	C	Sidechain
1	N	1468	A	Sidechain
1	N	1469	C	Sidechain
1	N	147	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	1470	U	Sidechain
1	N	1472	U	Sidechain
1	N	1473	G	Sidechain
1	N	1475	G	Sidechain
1	N	1477	U	Sidechain
1	N	1478	U	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	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	1493	A	Sidechain
1	N	1495	U	Sidechain
1	N	1496	C	Sidechain
1	N	1497	G	Sidechain
1	N	1498	U	Sidechain
1	N	1499	A	Sidechain
1	N	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	1506	U	Sidechain
1	N	1509	C	Sidechain
1	N	1512	U	Sidechain
1	N	1515	G	Sidechain
1	N	1516	G	Sidechain
1	N	1517	G	Sidechain
1	N	152	A	Sidechain
1	N	1521	C	Sidechain
1	N	1523	G	Sidechain
1	N	1524	C	Sidechain
1	N	1528	U	Sidechain
1	N	1530	G	Sidechain
1	N	1532	U	Sidechain
1	N	1533	C	Sidechain
1	N	1534	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	156	C	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	163	C	Sidechain
1	N	164	G	Sidechain
1	N	165	G	Sidechain
1	N	167	A	Sidechain
1	N	168	G	Sidechain
1	N	17	U	Sidechain
1	N	170	U	Sidechain
1	N	171	A	Sidechain
1	N	175	C	Sidechain
1	N	177	G	Sidechain
1	N	179	A	Sidechain
1	N	180	U	Sidechain
1	N	181	A	Sidechain
1	N	184	G	Sidechain
1	N	186	C	Sidechain
1	N	187	G	Sidechain
1	N	188	C	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	196	A	Sidechain
1	N	197	A	Sidechain
1	N	198	G	Sidechain
1	N	199	A	Sidechain
1	N	2	A	Sidechain
1	N	200	G	Sidechain
1	N	201	G	Sidechain
1	N	203	G	Sidechain
1	N	204	G	Sidechain
1	N	206	C	Sidechain
1	N	208	U	Sidechain
1	N	21	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	211	G	Sidechain
1	N	212	G	Sidechain
1	N	213	G	Sidechain
1	N	214	C	Sidechain
1	N	215	C	Sidechain
1	N	216	U	Sidechain
1	N	218	U	Sidechain
1	N	22	G	Sidechain
1	N	220	G	Sidechain
1	N	221	C	Sidechain
1	N	224	U	Sidechain
1	N	225	C	Sidechain
1	N	226	G	Sidechain
1	N	227	G	Sidechain
1	N	229	U	Sidechain
1	N	230	G	Sidechain
1	N	231	U	Sidechain
1	N	232	G	Sidechain
1	N	233	C	Sidechain
1	N	234	C	Sidechain
1	N	236	A	Sidechain
1	N	237	G	Sidechain
1	N	239	U	Sidechain
1	N	24	U	Sidechain
1	N	240	G	Sidechain
1	N	241	G	Sidechain
1	N	242	G	Sidechain
1	N	244	U	Sidechain
1	N	246	A	Sidechain
1	N	247	G	Sidechain
1	N	248	C	Sidechain
1	N	249	U	Sidechain
1	N	250	A	Sidechain
1	N	251	G	Sidechain
1	N	252	U	Sidechain
1	N	254	G	Sidechain
1	N	255	G	Sidechain
1	N	256	U	Sidechain
1	N	257	G	Sidechain
1	N	258	G	Sidechain
1	N	26	A	Sidechain
1	N	260	G	Sidechain

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Mol	Chain	Res	Type	Group
1	N	263	A	Sidechain
1	N	266	G	Sidechain
1	N	268	U	Sidechain
1	N	269	C	Sidechain
1	N	272	C	Sidechain
1	N	273	U	Sidechain
1	N	274	A	Sidechain
1	N	275	G	Sidechain
1	N	276	G	Sidechain
1	N	28	A	Sidechain
1	N	281	G	Sidechain
1	N	283	U	Sidechain
1	N	284	C	Sidechain
1	N	285	C	Sidechain
1	N	286	C	Sidechain
1	N	287	U	Sidechain
1	N	288	A	Sidechain
1	N	29	U	Sidechain
1	N	290	C	Sidechain
1	N	291	U	Sidechain
1	N	292	G	Sidechain
1	N	294	U	Sidechain
1	N	295	C	Sidechain
1	N	296	U	Sidechain
1	N	297	G	Sidechain
1	N	298	A	Sidechain
1	N	299	G	Sidechain
1	N	301	G	Sidechain
1	N	302	G	Sidechain
1	N	309	A	Sidechain
1	N	310	G	Sidechain
1	N	315	A	Sidechain
1	N	316	C	Sidechain
1	N	318	G	Sidechain
1	N	319	G	Sidechain
1	N	32	A	Sidechain
1	N	320	A	Sidechain
1	N	321	A	Sidechain
1	N	322	C	Sidechain
1	N	323	U	Sidechain
1	N	324	G	Sidechain
1	N	325	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	326	G	Sidechain
1	N	327	A	Sidechain
1	N	331	G	Sidechain
1	N	335	C	Sidechain
1	N	337	G	Sidechain
1	N	338	A	Sidechain
1	N	339	C	Sidechain
1	N	340	U	Sidechain
1	N	341	C	Sidechain
1	N	343	U	Sidechain
1	N	344	A	Sidechain
1	N	346	G	Sidechain
1	N	347	G	Sidechain
1	N	348	G	Sidechain
1	N	349	A	Sidechain
1	N	350	G	Sidechain
1	N	351	G	Sidechain
1	N	352	C	Sidechain
1	N	353	A	Sidechain
1	N	354	G	Sidechain
1	N	355	C	Sidechain
1	N	356	A	Sidechain
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	366	A	Sidechain
1	N	367	U	Sidechain
1	N	369	G	Sidechain
1	N	370	C	Sidechain
1	N	371	A	Sidechain
1	N	372	C	Sidechain
1	N	377	G	Sidechain
1	N	378	G	Sidechain
1	N	38	G	Sidechain
1	N	381	C	Sidechain
1	N	382	A	Sidechain
1	N	383	A	Sidechain
1	N	384	G	Sidechain
1	N	386	C	Sidechain
1	N	387	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	389	A	Sidechain
1	N	39	G	Sidechain
1	N	390	U	Sidechain
1	N	391	G	Sidechain
1	N	392	C	Sidechain
1	N	393	A	Sidechain
1	N	395	C	Sidechain
1	N	397	A	Sidechain
1	N	398	U	Sidechain
1	N	399	G	Sidechain
1	N	4	U	Sidechain
1	N	401	C	Sidechain
1	N	403	C	Sidechain
1	N	404	G	Sidechain
1	N	406	G	Sidechain
1	N	409	U	Sidechain
1	N	411	A	Sidechain
1	N	413	G	Sidechain
1	N	417	G	Sidechain
1	N	419	C	Sidechain
1	N	420	U	Sidechain
1	N	423	G	Sidechain
1	N	424	G	Sidechain
1	N	425	G	Sidechain
1	N	426	U	Sidechain
1	N	427	U	Sidechain
1	N	428	G	Sidechain
1	N	43	C	Sidechain
1	N	430	A	Sidechain
1	N	433	G	Sidechain
1	N	434	U	Sidechain
1	N	436	C	Sidechain
1	N	440	C	Sidechain
1	N	442	G	Sidechain
1	N	443	C	Sidechain
1	N	444	G	Sidechain
1	N	445	G	Sidechain
1	N	447	G	Sidechain
1	N	449	G	Sidechain
1	N	45	G	Sidechain
1	N	450	G	Sidechain
1	N	452	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	453	G	Sidechain
1	N	454	G	Sidechain
1	N	455	G	Sidechain
1	N	458	U	Sidechain
1	N	459	A	Sidechain
1	N	46	G	Sidechain
1	N	460	A	Sidechain
1	N	462	G	Sidechain
1	N	463	U	Sidechain
1	N	465	A	Sidechain
1	N	467	U	Sidechain
1	N	468	A	Sidechain
1	N	469	C	Sidechain
1	N	470	C	Sidechain
1	N	473	U	Sidechain
1	N	474	G	Sidechain
1	N	475	C	Sidechain
1	N	476	U	Sidechain
1	N	478	A	Sidechain
1	N	48	C	Sidechain
1	N	480	U	Sidechain
1	N	481	G	Sidechain
1	N	482	A	Sidechain
1	N	483	C	Sidechain
1	N	484	G	Sidechain
1	N	486	U	Sidechain
1	N	489	C	Sidechain
1	N	494	G	Sidechain
1	N	497	G	Sidechain
1	N	498	A	Sidechain
1	N	499	A	Sidechain
1	N	50	A	Sidechain
1	N	500	G	Sidechain
1	N	502	A	Sidechain
1	N	503	C	Sidechain
1	N	504	C	Sidechain
1	N	505	G	Sidechain
1	N	506	G	Sidechain
1	N	508	U	Sidechain
1	N	509	A	Sidechain
1	N	511	C	Sidechain
1	N	513	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	514	C	Sidechain
1	N	515	G	Sidechain
1	N	516	U	Sidechain
1	N	517	G	Sidechain
1	N	519	C	Sidechain
1	N	52	C	Sidechain
1	N	521	G	Sidechain
1	N	525	C	Sidechain
1	N	526	C	Sidechain
1	N	529	G	Sidechain
1	N	530	G	Sidechain
1	N	531	U	Sidechain
1	N	532	A	Sidechain
1	N	533	A	Sidechain
1	N	534	U	Sidechain
1	N	536	C	Sidechain
1	N	537	G	Sidechain
1	N	539	A	Sidechain
1	N	54	C	Sidechain
1	N	540	G	Sidechain
1	N	542	G	Sidechain
1	N	543	U	Sidechain
1	N	544	G	Sidechain
1	N	546	A	Sidechain
1	N	547	A	Sidechain
1	N	548	G	Sidechain
1	N	55	A	Sidechain
1	N	552	U	Sidechain
1	N	554	A	Sidechain
1	N	555	U	Sidechain
1	N	559	A	Sidechain
1	N	56	U	Sidechain
1	N	560	A	Sidechain
1	N	562	U	Sidechain
1	N	564	C	Sidechain
1	N	565	U	Sidechain
1	N	566	G	Sidechain
1	N	568	G	Sidechain
1	N	57	G	Sidechain
1	N	570	G	Sidechain
1	N	572	A	Sidechain
1	N	573	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	574	A	Sidechain
1	N	575	G	Sidechain
1	N	576	C	Sidechain
1	N	579	A	Sidechain
1	N	58	C	Sidechain
1	N	580	C	Sidechain
1	N	581	G	Sidechain
1	N	582	C	Sidechain
1	N	584	G	Sidechain
1	N	586	C	Sidechain
1	N	587	G	Sidechain
1	N	588	G	Sidechain
1	N	59	A	Sidechain
1	N	590	U	Sidechain
1	N	591	U	Sidechain
1	N	593	U	Sidechain
1	N	594	U	Sidechain
1	N	596	A	Sidechain
1	N	597	G	Sidechain
1	N	598	U	Sidechain
1	N	599	C	Sidechain
1	N	6	G	Sidechain
1	N	60	A	Sidechain
1	N	601	G	Sidechain
1	N	602	A	Sidechain
1	N	603	U	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	613	C	Sidechain
1	N	614	C	Sidechain
1	N	619	U	Sidechain
1	N	620	C	Sidechain
1	N	621	A	Sidechain
1	N	622	A	Sidechain
1	N	623	C	Sidechain
1	N	624	C	Sidechain
1	N	625	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	626	G	Sidechain
1	N	627	G	Sidechain
1	N	628	G	Sidechain
1	N	629	A	Sidechain
1	N	63	C	Sidechain
1	N	630	A	Sidechain
1	N	632	U	Sidechain
1	N	636	U	Sidechain
1	N	639	G	Sidechain
1	N	64	G	Sidechain
1	N	641	U	Sidechain
1	N	643	C	Sidechain
1	N	644	U	Sidechain
1	N	645	G	Sidechain
1	N	646	G	Sidechain
1	N	647	C	Sidechain
1	N	649	A	Sidechain
1	N	650	G	Sidechain
1	N	651	C	Sidechain
1	N	652	U	Sidechain
1	N	653	U	Sidechain
1	N	655	A	Sidechain
1	N	656	G	Sidechain
1	N	657	U	Sidechain
1	N	66	A	Sidechain
1	N	661	G	Sidechain
1	N	662	U	Sidechain
1	N	663	A	Sidechain
1	N	665	A	Sidechain
1	N	667	G	Sidechain
1	N	668	G	Sidechain
1	N	669	G	Sidechain
1	N	670	G	Sidechain
1	N	672	U	Sidechain
1	N	674	G	Sidechain
1	N	675	A	Sidechain
1	N	676	A	Sidechain
1	N	678	U	Sidechain
1	N	679	C	Sidechain
1	N	68	G	Sidechain
1	N	680	C	Sidechain
1	N	681	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	682	G	Sidechain
1	N	683	G	Sidechain
1	N	684	U	Sidechain
1	N	686	U	Sidechain
1	N	687	A	Sidechain
1	N	688	G	Sidechain
1	N	689	C	Sidechain
1	N	69	G	Sidechain
1	N	690	G	Sidechain
1	N	692	U	Sidechain
1	N	694	A	Sidechain
1	N	695	A	Sidechain
1	N	70	U	Sidechain
1	N	701	U	Sidechain
1	N	703	G	Sidechain
1	N	704	A	Sidechain
1	N	705	G	Sidechain
1	N	707	U	Sidechain
1	N	709	U	Sidechain
1	N	71	A	Sidechain
1	N	714	G	Sidechain
1	N	717	U	Sidechain
1	N	718	A	Sidechain
1	N	72	A	Sidechain
1	N	720	C	Sidechain
1	N	723	U	Sidechain
1	N	724	G	Sidechain
1	N	725	G	Sidechain
1	N	727	G	Sidechain
1	N	729	A	Sidechain
1	N	73	C	Sidechain
1	N	730	G	Sidechain
1	N	732	C	Sidechain
1	N	733	G	Sidechain
1	N	734	G	Sidechain
1	N	739	C	Sidechain
1	N	740	U	Sidechain
1	N	741	G	Sidechain
1	N	742	G	Sidechain
1	N	744	C	Sidechain
1	N	745	G	Sidechain
1	N	747	A	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	750	C	Sidechain
1	N	751	U	Sidechain
1	N	752	G	Sidechain
1	N	754	C	Sidechain
1	N	756	C	Sidechain
1	N	757	U	Sidechain
1	N	759	A	Sidechain
1	N	76	G	Sidechain
1	N	760	G	Sidechain
1	N	761	G	Sidechain
1	N	762	U	Sidechain
1	N	763	G	Sidechain
1	N	765	G	Sidechain
1	N	766	A	Sidechain
1	N	767	A	Sidechain
1	N	769	G	Sidechain
1	N	77	A	Sidechain
1	N	771	G	Sidechain
1	N	772	U	Sidechain
1	N	773	G	Sidechain
1	N	775	G	Sidechain
1	N	776	G	Sidechain
1	N	777	A	Sidechain
1	N	779	C	Sidechain
1	N	78	A	Sidechain
1	N	780	A	Sidechain
1	N	782	A	Sidechain
1	N	783	C	Sidechain
1	N	784	A	Sidechain
1	N	785	G	Sidechain
1	N	786	G	Sidechain
1	N	788	U	Sidechain
1	N	79	G	Sidechain
1	N	790	A	Sidechain
1	N	792	A	Sidechain
1	N	793	U	Sidechain
1	N	794	A	Sidechain
1	N	795	C	Sidechain
1	N	796	C	Sidechain

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Mol	Chain	Res	Type	Group
1	N	797	C	Sidechain
1	N	798	U	Sidechain
1	N	80	A	Sidechain
1	N	800	G	Sidechain
1	N	801	U	Sidechain
1	N	803	G	Sidechain
1	N	805	C	Sidechain
1	N	808	C	Sidechain
1	N	809	G	Sidechain
1	N	81	A	Sidechain
1	N	810	C	Sidechain
1	N	811	C	Sidechain
1	N	812	G	Sidechain
1	N	814	A	Sidechain
1	N	815	A	Sidechain
1	N	818	G	Sidechain
1	N	819	A	Sidechain
1	N	82	G	Sidechain
1	N	824	G	Sidechain
1	N	828	U	Sidechain
1	N	829	G	Sidechain
1	N	83	C	Sidechain
1	N	830	G	Sidechain
1	N	832	G	Sidechain
1	N	833	G	Sidechain
1	N	835	U	Sidechain
1	N	837	U	Sidechain
1	N	838	G	Sidechain
1	N	839	C	Sidechain
1	N	84	U	Sidechain
1	N	842	U	Sidechain
1	N	843	U	Sidechain
1	N	844	G	Sidechain
1	N	845	A	Sidechain
1	N	847	G	Sidechain
1	N	848	C	Sidechain
1	N	849	G	Sidechain
1	N	850	U	Sidechain
1	N	851	G	Sidechain
1	N	852	G	Sidechain
1	N	853	C	Sidechain
1	N	854	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	855	U	Sidechain
1	N	857	C	Sidechain
1	N	858	G	Sidechain
1	N	859	G	Sidechain
1	N	860	A	Sidechain
1	N	861	G	Sidechain
1	N	862	C	Sidechain
1	N	864	A	Sidechain
1	N	865	A	Sidechain
1	N	867	G	Sidechain
1	N	868	C	Sidechain
1	N	869	G	Sidechain
1	N	870	U	Sidechain
1	N	871	U	Sidechain
1	N	872	A	Sidechain
1	N	873	A	Sidechain
1	N	874	G	Sidechain
1	N	875	U	Sidechain
1	N	876	C	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	883	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	890	G	Sidechain
1	N	891	U	Sidechain
1	N	892	A	Sidechain
1	N	894	G	Sidechain
1	N	895	G	Sidechain
1	N	896	C	Sidechain
1	N	898	G	Sidechain
1	N	899	C	Sidechain
1	N	900	A	Sidechain
1	N	901	A	Sidechain
1	N	902	G	Sidechain
1	N	904	U	Sidechain

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Mol	Chain	Res	Type	Group
1	N	905	U	Sidechain
1	N	906	A	Sidechain
1	N	907	A	Sidechain
1	N	909	A	Sidechain
1	N	91	U	Sidechain
1	N	911	U	Sidechain
1	N	915	A	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	926	G	Sidechain
1	N	927	G	Sidechain
1	N	928	G	Sidechain
1	N	929	G	Sidechain
1	N	93	U	Sidechain
1	N	933	G	Sidechain
1	N	934	C	Sidechain
1	N	937	A	Sidechain
1	N	938	A	Sidechain
1	N	939	G	Sidechain
1	N	94	G	Sidechain
1	N	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	950	U	Sidechain
1	N	951	G	Sidechain
1	N	953	G	Sidechain
1	N	954	G	Sidechain
1	N	958	A	Sidechain
1	N	959	A	Sidechain
1	N	961	U	Sidechain
1	N	964	A	Sidechain
1	N	965	U	Sidechain
1	N	966	G	Sidechain
1	N	969	A	Sidechain

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Mol	Chain	Res	Type	Group
1	N	97	G	Sidechain
1	N	972	C	Sidechain
1	N	973	G	Sidechain
1	N	974	A	Sidechain
1	N	976	G	Sidechain
1	N	978	A	Sidechain
1	N	98	A	Sidechain
1	N	982	U	Sidechain
1	N	985	C	Sidechain
1	N	986	U	Sidechain
1	N	987	G	Sidechain
1	N	988	G	Sidechain
1	N	99	C	Sidechain
1	N	991	U	Sidechain
1	N	993	G	Sidechain
1	N	994	A	Sidechain
1	N	995	C	Sidechain
1	N	996	A	Sidechain
1	N	998	C	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	N	32892	16554	16519	566	0
All	All	32892	16554	16519	566	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 12.

All (566) 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:1084:G:H5''	1:N:1099:G:H22	1.46	0.80
1:N:858:G:H1	1:N:869:G:H2'	1.51	0.75
1:N:1004:A:H5'	1:N:1024:G:H22	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:67:C:H2'	1:N:68:G:C8	2.25	0.71
1:N:1316:G:C2	1:N:1319:A:C8	2.80	0.70
1:N:780:A:C2	1:N:801:U:C5	2.80	0.69
1:N:116:A:H61	1:N:313:A:H1'	1.58	0.68
1:N:1305:G:H22	1:N:1331:G:H2'	1.58	0.67
1:N:904:U:C6	1:N:905:U:C5	2.83	0.66
1:N:105:G:H21	1:N:380:G:H5'	1.60	0.65
1:N:1255:G:H2'	1:N:1279:G:H1	1.61	0.65
1:N:840:C:H1'	1:N:843:U:H3	1.60	0.65
1:N:657:U:H2'	1:N:658:C:C6	2.32	0.65
1:N:1240:U:C6	1:N:1241:G:H5'	2.32	0.64
1:N:804:U:C5	1:N:805:C:C5	2.86	0.64
1:N:668:G:C6	1:N:669:G:C6	2.86	0.63
1:N:117:G:H4'	1:N:1425:U:H4'	1.80	0.63
1:N:1176:A:C6	1:N:1177:G:C6	2.86	0.63
1:N:1240:U:H6	1:N:1241:G:H5'	1.64	0.63
1:N:1483:A:C8	1:N:1484:C:C6	2.87	0.63
1:N:102:G:C6	1:N:103:U:C4	2.88	0.62
1:N:122:G:H21	1:N:290:C:H4'	1.64	0.62
1:N:1434:A:C5	1:N:1435:G:C5	2.88	0.62
1:N:410:G:H2'	1:N:429:U:C5	2.36	0.61
1:N:503:C:O2	1:N:510:A:C2	2.53	0.61
1:N:381:C:C5	1:N:382:A:C5	2.88	0.61
1:N:109:A:C5	1:N:326:G:C5	2.88	0.61
1:N:120:A:C2	1:N:122:G:C6	2.89	0.61
1:N:1434:A:C6	1:N:1435:G:C6	2.89	0.61
1:N:60:A:H5'	1:N:387:U:H4'	1.82	0.61
1:N:596:A:H61	1:N:644:U:H3	1.48	0.61
1:N:934:C:C5	1:N:1345:U:C6	2.89	0.60
1:N:273:U:C4	1:N:274:A:C6	2.90	0.60
1:N:482:A:C6	1:N:483:C:C2	2.90	0.60
1:N:904:U:C4	1:N:905:U:C4	2.90	0.59
1:N:453:G:H2'	1:N:454:G:C8	2.38	0.59
1:N:39:G:C4	1:N:498:A:C2	2.90	0.59
1:N:310:G:C5	1:N:311:C:C5	2.91	0.59
1:N:803:G:C5	1:N:804:U:C5	2.91	0.59
1:N:1240:U:C2	1:N:1240:U:OP1	2.56	0.59
1:N:1266:G:H21	1:N:1269:A:H8	1.51	0.59
1:N:172:A:C8	1:N:174:A:C8	2.91	0.58
1:N:1071:C:H2'	1:N:1072:G:C8	2.38	0.58
1:N:449:G:C6	1:N:450:G:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:903:G:C5	1:N:904:U:C4	2.91	0.58
1:N:738:C:C4	1:N:739:C:C4	2.92	0.58
1:N:795:C:C5	1:N:796:C:C4	2.92	0.58
1:N:1100:C:H4'	1:N:1102:A:H4'	1.86	0.58
1:N:1241:G:C8	1:N:1241:G:O5'	2.56	0.58
1:N:1343:G:C8	1:N:1344:C:C5	2.92	0.58
1:N:1423:G:C6	1:N:1424:U:C4	2.91	0.58
1:N:945:G:C6	1:N:1337:G:C5	2.92	0.58
1:N:272:C:H2'	1:N:273:U:O4'	2.04	0.57
1:N:39:G:C2	1:N:498:A:H2	2.22	0.57
1:N:507:C:H3'	1:N:508:U:H5''	1.86	0.57
1:N:1090:U:H2'	1:N:1091:U:C6	2.40	0.57
1:N:39:G:H1'	1:N:497:G:H21	1.70	0.57
1:N:50:A:H1'	1:N:52:C:C6	2.39	0.57
1:N:91:U:C5	1:N:92:U:C2	2.92	0.57
1:N:410:G:H2'	1:N:429:U:C4	2.40	0.57
1:N:1130:A:H61	1:N:1144:G:H1'	1.70	0.57
1:N:998:C:H42	1:N:1042:A:H61	1.52	0.57
1:N:1157:A:C4	1:N:1181:G:C6	2.93	0.57
1:N:1218:C:H2'	1:N:1219:A:C8	2.40	0.57
1:N:486:U:C6	1:N:486:U:H5''	2.40	0.56
1:N:375:U:H3	1:N:389:A:H61	1.52	0.56
1:N:59:A:H1'	1:N:354:G:C2	2.41	0.56
1:N:78:A:C6	1:N:79:G:C6	2.93	0.56
1:N:150:U:C5	1:N:170:U:C5	2.93	0.56
1:N:514:C:H42	1:N:536:C:H42	1.53	0.56
1:N:594:U:C4	1:N:595:A:C6	2.92	0.56
1:N:894:G:C4	1:N:895:G:C8	2.93	0.56
1:N:439:U:C5	1:N:440:C:C5	2.93	0.56
1:N:32:A:H4'	1:N:48:C:H42	1.71	0.56
1:N:713:G:C6	1:N:714:G:C6	2.94	0.56
1:N:19:A:C2	1:N:917:G:C5	2.94	0.56
1:N:145:G:C2	1:N:178:C:C2	2.93	0.56
1:N:213:G:C8	1:N:214:C:C5	2.93	0.56
1:N:803:G:C2	1:N:804:U:C2	2.93	0.55
1:N:296:U:H2'	1:N:297:G:C8	2.41	0.55
1:N:298:A:H3'	1:N:299:G:C8	2.41	0.55
1:N:240:G:C6	1:N:241:G:C5	2.94	0.55
1:N:243:A:H4'	1:N:244:U:H5''	1.89	0.55
1:N:379:C:H2'	1:N:380:G:C8	2.41	0.55
1:N:53:A:C2	1:N:359:G:C5	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:856:C:H2'	1:N:857:C:C6	2.42	0.55
1:N:859:G:C6	1:N:860:A:C6	2.94	0.55
1:N:1123:U:H3	1:N:1150:A:H61	1.55	0.55
1:N:1500:A:C6	1:N:1501:C:C4	2.95	0.55
1:N:1011:C:C2	1:N:1019:A:C2	2.94	0.54
1:N:338:A:H61	1:N:351:G:H1	1.54	0.54
1:N:1500:A:C5	1:N:1501:C:C5	2.96	0.54
1:N:92:U:C4	1:N:93:U:C4	2.96	0.54
1:N:1262:C:H2'	1:N:1263:C:H5'	1.90	0.54
1:N:947:G:H1'	1:N:1332:A:H62	1.72	0.54
1:N:973:G:H3'	1:N:974:A:H5''	1.90	0.54
1:N:1436:U:H2'	1:N:1437:A:C8	2.42	0.54
1:N:112:G:C2	1:N:330:C:C5	2.95	0.54
1:N:1172:C:H2'	1:N:1173:U:C6	2.43	0.54
1:N:50:A:C2	1:N:52:C:N3	2.76	0.54
1:N:160:A:H2	1:N:347:G:C2	2.26	0.54
1:N:503:C:O2	1:N:510:A:H2	1.90	0.54
1:N:1244:G:C6	1:N:1294:G:C6	2.96	0.54
1:N:391:G:C6	1:N:392:C:C4	2.96	0.54
1:N:102:G:C5	1:N:103:U:C5	2.96	0.53
1:N:1219:A:C6	1:N:1220:G:C6	2.95	0.53
1:N:1261:A:C6	1:N:1275:A:C8	2.97	0.53
1:N:171:A:H2'	1:N:172:A:C8	2.43	0.53
1:N:1315:U:C4	1:N:1316:G:C6	2.97	0.53
1:N:98:A:C5	1:N:99:C:C4	2.96	0.53
1:N:994:A:H61	1:N:1047:G:H1'	1.73	0.53
1:N:124:C:C2	1:N:238:A:C2	2.96	0.53
1:N:780:A:C2	1:N:803:G:N1	2.77	0.53
1:N:1316:G:N2	1:N:1319:A:C8	2.77	0.53
1:N:1433:A:H1'	1:N:1468:A:C2	2.44	0.53
1:N:79:G:H2'	1:N:80:A:C8	2.44	0.53
1:N:1058:G:C5	1:N:1059:C:C4	2.97	0.52
1:N:105:G:N2	1:N:380:G:H5'	2.24	0.52
1:N:197:A:C2	1:N:198:G:C4	2.98	0.52
1:N:1084:G:C5'	1:N:1099:G:H22	2.20	0.52
1:N:1434:A:H2'	1:N:1435:G:O4'	2.10	0.52
1:N:120:A:C2	1:N:122:G:N1	2.77	0.52
1:N:904:U:C5	1:N:905:U:C4	2.97	0.52
1:N:811:C:H2'	1:N:812:G:H5'	1.92	0.52
1:N:829:G:C6	1:N:830:G:C5	2.98	0.52
1:N:896:C:H2'	1:N:897:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1072:G:C2	1:N:1073:U:C2	2.98	0.52
1:N:417:G:C5	1:N:418:C:C4	2.98	0.52
1:N:258:G:C6	1:N:259:G:C5	2.98	0.52
1:N:1511:G:C6	1:N:1512:U:C4	2.98	0.52
1:N:449:G:C5	1:N:450:G:C5	2.98	0.52
1:N:514:C:H41	1:N:533:A:H2'	1.75	0.52
1:N:301:G:H2'	1:N:302:G:O4'	2.10	0.51
1:N:684:U:H3	1:N:706:A:H61	1.56	0.51
1:N:1244:G:C2	1:N:1245:C:C2	2.97	0.51
1:N:1383:C:C4	1:N:1384:C:C4	2.97	0.51
1:N:198:G:C6	1:N:220:G:C4	2.98	0.51
1:N:949:A:H61	1:N:1232:U:H3	1.57	0.51
1:N:664:G:H22	1:N:741:G:H22	1.59	0.51
1:N:901:A:C5	1:N:902:G:H1'	2.45	0.51
1:N:978:A:C4	1:N:1319:A:C2	2.99	0.51
1:N:68:G:C5	1:N:69:G:H1'	2.45	0.51
1:N:79:G:C6	1:N:80:A:C6	2.98	0.51
1:N:160:A:C2	1:N:346:G:N1	2.78	0.51
1:N:214:C:C5	1:N:215:C:C5	2.99	0.51
1:N:1255:G:H3'	1:N:1279:G:H22	1.74	0.51
1:N:620:C:C5	1:N:621:A:C5	2.98	0.51
1:N:1353:G:C2	1:N:1370:G:C2	2.99	0.51
1:N:64:G:C4	1:N:99:C:C4	2.99	0.51
1:N:424:G:C6	1:N:425:G:C6	2.99	0.51
1:N:761:G:C5	1:N:762:U:C4	2.99	0.51
1:N:917:G:H2'	1:N:918:A:C8	2.46	0.51
1:N:1058:G:C6	1:N:1059:C:C4	2.99	0.51
1:N:61:G:H21	1:N:379:C:H4'	1.76	0.51
1:N:1075:U:C5	1:N:1076:U:C5	2.99	0.51
1:N:1511:G:C6	1:N:1525:G:C6	2.99	0.51
1:N:1004:A:C5'	1:N:1024:G:H22	2.21	0.51
1:N:474:G:C6	1:N:475:C:N3	2.80	0.50
1:N:177:G:H4'	1:N:1448:C:H4'	1.94	0.50
1:N:474:G:C5	1:N:475:C:C4	3.00	0.50
1:N:141:G:H21	1:N:182:A:H61	1.59	0.50
1:N:911:U:H2'	1:N:912:C:C6	2.47	0.50
1:N:1065:U:H1'	1:N:1067:A:H61	1.77	0.50
1:N:984:C:H2'	1:N:985:C:C6	2.46	0.50
1:N:701:U:H5''	1:N:703:G:H5'	1.92	0.50
1:N:575:G:C5	1:N:821:G:C8	2.99	0.50
1:N:903:G:C4	1:N:904:U:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1159:U:H5	1:N:1162:C:H42	1.59	0.50
1:N:1164:G:C6	1:N:1165:U:C4	3.00	0.50
1:N:827:U:H2'	1:N:870:U:H3	1.76	0.50
1:N:1129:C:N3	1:N:1144:G:C6	2.80	0.50
1:N:1416:G:C6	1:N:1417:G:C4	3.00	0.50
1:N:1482:G:C8	1:N:1482:G:H3'	2.46	0.50
1:N:1140:C:C2	1:N:1141:C:C5	3.00	0.49
1:N:1406:U:H2'	1:N:1407:C:H5'	1.93	0.49
1:N:357:G:C5	1:N:358:U:C5	3.00	0.49
1:N:688:G:C8	1:N:688:G:H5''	2.47	0.49
1:N:903:G:C6	1:N:904:U:C4	3.00	0.49
1:N:228:A:N7	1:N:229:U:C4	2.80	0.49
1:N:80:A:C4	1:N:81:A:H1'	2.47	0.49
1:N:340:U:H3	1:N:349:A:H61	1.59	0.49
1:N:855:U:C5	1:N:856:C:C5	3.01	0.49
1:N:1350:A:N1	1:N:1373:G:C2	2.80	0.49
1:N:197:A:H2	1:N:198:G:C4	2.30	0.49
1:N:198:G:C6	1:N:199:A:C6	3.01	0.49
1:N:856:C:C4	1:N:857:C:C4	3.00	0.49
1:N:1074:G:C5	1:N:1102:A:C2	3.01	0.49
1:N:1239:A:C2	1:N:1241:G:C6	3.01	0.49
1:N:1394:A:H3'	1:N:1395:C:H5'	1.94	0.49
1:N:626:G:H2'	1:N:627:G:C8	2.48	0.49
1:N:979:C:C5	1:N:980:C:C6	3.01	0.49
1:N:117:G:C5'	1:N:1425:U:H4'	2.43	0.49
1:N:213:G:C8	1:N:214:C:C6	3.01	0.49
1:N:635:A:C2	1:N:636:U:C2	3.00	0.49
1:N:1109:C:H3'	1:N:1110:A:C8	2.48	0.49
1:N:1127:G:H22	1:N:1145:A:H2	1.61	0.49
1:N:1023:U:H2'	1:N:1024:G:C8	2.48	0.49
1:N:209:U:C4	1:N:211:G:N1	2.81	0.48
1:N:461:A:H3'	1:N:462:G:C5'	2.43	0.48
1:N:914:A:H8	1:N:914:A:H5''	1.77	0.48
1:N:1176:A:H61	1:N:1182:G:H1	1.61	0.48
1:N:69:G:H2'	1:N:70:U:C6	2.48	0.48
1:N:1110:A:C8	1:N:1111:A:C2	3.01	0.48
1:N:1501:C:H3'	1:N:1504:G:C8	2.48	0.48
1:N:1144:G:C6	1:N:1145:A:C5	3.02	0.48
1:N:495:A:H1'	1:N:496:A:C5	2.47	0.48
1:N:628:G:H3'	1:N:629:A:C8	2.49	0.48
1:N:772:U:H2'	1:N:773:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1198:G:C5	1:N:1199:U:C4	3.01	0.48
1:N:1268:G:H2'	1:N:1269:A:O4'	2.13	0.48
1:N:1363:A:C8	1:N:1365:G:C6	3.01	0.48
1:N:94:G:N3	1:N:96:U:C4	2.81	0.48
1:N:693:G:H1	1:N:788:U:H4'	1.79	0.48
1:N:1042:A:C6	1:N:1043:G:C6	3.01	0.48
1:N:1129:C:C5	1:N:1139:G:C8	3.01	0.48
1:N:558:G:C8	1:N:559:A:H2'	2.49	0.48
1:N:596:A:N6	1:N:644:U:H3	2.11	0.48
1:N:1254:A:N1	1:N:1255:G:C5	2.81	0.48
1:N:1260:G:C2	1:N:1276:G:O6	2.67	0.48
1:N:59:A:C2	1:N:354:G:N7	2.82	0.48
1:N:98:A:C5	1:N:99:C:C5	3.02	0.48
1:N:240:G:N1	1:N:241:G:C4	2.82	0.48
1:N:771:G:H2'	1:N:772:U:O4'	2.13	0.48
1:N:169:C:C4	1:N:170:U:C4	3.02	0.48
1:N:1006:G:N2	1:N:1024:G:H1'	2.29	0.48
1:N:761:G:C6	1:N:762:U:C4	3.02	0.48
1:N:925:G:H1	1:N:1391:U:H1'	1.79	0.48
1:N:1216:A:H2'	1:N:1217:C:C6	2.48	0.48
1:N:199:A:C2	1:N:219:U:O2	2.67	0.48
1:N:208:U:C2	1:N:209:U:C4	3.02	0.48
1:N:985:C:C4	1:N:986:U:C4	3.01	0.48
1:N:1102:A:C2	1:N:1103:C:C2	3.02	0.48
1:N:141:G:C6	1:N:223:A:C6	3.02	0.47
1:N:152:A:N6	1:N:170:U:C2	2.82	0.47
1:N:934:C:C2	1:N:1344:C:C4	3.02	0.47
1:N:934:C:C5	1:N:1344:C:H2'	2.48	0.47
1:N:316:C:C5	1:N:351:G:H2'	2.49	0.47
1:N:830:G:C6	1:N:831:A:C6	3.02	0.47
1:N:272:C:C4	1:N:273:U:C4	3.02	0.47
1:N:439:U:C5	1:N:440:C:C4	3.02	0.47
1:N:503:C:H42	1:N:542:G:H1	1.63	0.47
1:N:355:C:H2'	1:N:356:A:C8	2.49	0.47
1:N:851:G:H2'	1:N:852:G:C8	2.50	0.47
1:N:1169:A:H2'	1:N:1170:A:O4'	2.15	0.47
1:N:1254:A:C2	1:N:1255:G:C4	3.03	0.47
1:N:153:C:C5	1:N:154:U:C5	3.03	0.47
1:N:723:U:H3	1:N:832:G:N2	2.13	0.47
1:N:64:G:N2	1:N:69:G:C5	2.83	0.47
1:N:72:A:C4	1:N:73:C:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:74:A:H5'	1:N:90:C:H5'	1.97	0.47
1:N:78:A:C5	1:N:79:G:C6	3.03	0.47
1:N:147:G:C2	1:N:148:G:C5	3.03	0.47
1:N:203:G:H1	1:N:206:C:H41	1.63	0.47
1:N:207:C:H2'	1:N:208:U:C2	2.50	0.47
1:N:694:A:C6	1:N:695:A:C4	3.03	0.47
1:N:895:G:C6	1:N:896:C:N3	2.83	0.47
1:N:974:A:C2	1:N:977:A:C2	3.03	0.47
1:N:1088:G:C6	1:N:1089:G:C5	3.02	0.47
1:N:595:A:C2	1:N:596:A:N6	2.83	0.47
1:N:1049:U:H4'	1:N:1050:G:H5'	1.96	0.47
1:N:70:U:C5	1:N:94:G:C8	3.03	0.47
1:N:233:C:O2'	1:N:264:C:C2	2.68	0.47
1:N:265:G:C8	1:N:267:C:C4	3.02	0.47
1:N:297:G:H22	1:N:299:G:H3'	1.80	0.47
1:N:974:A:H1'	1:N:976:G:H4'	1.96	0.47
1:N:1144:G:O6	1:N:1145:A:C6	2.68	0.47
1:N:1198:G:C6	1:N:1199:U:N3	2.83	0.47
1:N:111:G:H22	1:N:330:C:N4	2.12	0.47
1:N:208:U:C2	1:N:209:U:C5	3.03	0.47
1:N:1353:G:C5	1:N:1354:U:C5	3.03	0.46
1:N:246:A:C5	1:N:282:A:N6	2.83	0.46
1:N:584:G:C6	1:N:585:G:C6	3.04	0.46
1:N:1500:A:C6	1:N:1501:C:C5	3.03	0.46
1:N:830:G:N1	1:N:857:C:C2	2.83	0.46
1:N:1256:A:H61	1:N:1277:C:H2'	1.80	0.46
1:N:267:C:H2'	1:N:268:U:C5	2.50	0.46
1:N:982:U:H4'	1:N:983:A:O5'	2.16	0.46
1:N:611:C:C5	1:N:612:C:C5	3.03	0.46
1:N:938:A:N6	1:N:939:G:C6	2.84	0.46
1:N:181:A:C8	1:N:194:C:C5	3.04	0.46
1:N:184:G:C6	1:N:185:U:C4	3.03	0.46
1:N:860:A:N6	1:N:861:G:C2	2.84	0.46
1:N:98:A:H2'	1:N:99:C:O4'	2.15	0.46
1:N:259:G:C6	1:N:260:G:C5	3.04	0.46
1:N:263:A:C2	1:N:264:C:C5	3.04	0.46
1:N:665:A:C8	1:N:733:G:C2	3.03	0.46
1:N:832:G:C5	1:N:855:U:N3	2.84	0.46
1:N:937:A:C2	1:N:1379:G:O6	2.69	0.46
1:N:1219:A:C6	1:N:1220:G:C5	3.03	0.46
1:N:1239:A:C5	1:N:1241:G:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:425:G:C5	1:N:426:U:C4	3.04	0.46
1:N:855:U:C4	1:N:856:C:C4	3.03	0.46
1:N:908:A:C2	1:N:909:A:C4	3.03	0.46
1:N:1097:C:C4	1:N:1098:C:C4	3.04	0.46
1:N:1126:U:C5	1:N:1281:C:H1'	2.51	0.46
1:N:1149:C:H2'	1:N:1150:A:C8	2.51	0.46
1:N:265:G:H3'	1:N:267:C:C5	2.51	0.46
1:N:275:G:C8	1:N:275:G:H5''	2.51	0.46
1:N:1009:U:C2	1:N:1021:A:C2	3.04	0.46
1:N:57:G:C6	1:N:58:C:C4	3.04	0.46
1:N:171:A:C2	1:N:172:A:C2	3.04	0.46
1:N:203:G:H1'	1:N:465:A:H61	1.80	0.46
1:N:482:A:C5	1:N:483:C:C2	3.04	0.46
1:N:1058:G:C5	1:N:1059:C:C5	3.04	0.46
1:N:1261:A:H61	1:N:1274:A:H2'	1.81	0.46
1:N:19:A:C2	1:N:917:G:C6	3.04	0.45
1:N:403:C:N4	1:N:547:A:H5''	2.31	0.45
1:N:76:G:C6	1:N:77:A:C6	3.05	0.45
1:N:406:G:C6	1:N:407:U:C4	3.05	0.45
1:N:496:A:N1	1:N:497:G:C6	2.84	0.45
1:N:216:U:C6	1:N:216:U:H3'	2.51	0.45
1:N:373:A:C2	1:N:374:A:C4	3.04	0.45
1:N:708:C:C4	1:N:709:U:C4	3.05	0.45
1:N:1052:U:C2	1:N:1207:G:N1	2.84	0.45
1:N:69:G:C6	1:N:70:U:C4	3.04	0.45
1:N:347:G:C5	1:N:348:G:C8	3.04	0.45
1:N:584:G:N2	1:N:879:C:H4'	2.32	0.45
1:N:1501:C:H2'	1:N:1504:G:N7	2.32	0.45
1:N:73:C:C6	1:N:73:C:H5''	2.52	0.45
1:N:183:C:N4	1:N:223:A:H2	2.15	0.45
1:N:254:G:OP2	1:N:266:G:H3'	2.16	0.45
1:N:373:A:H2'	1:N:374:A:C8	2.51	0.45
1:N:1068:G:C6	1:N:1108:G:C6	3.04	0.45
1:N:1311:A:C2	1:N:1327:C:N3	2.85	0.45
1:N:1418:A:C8	1:N:1419:G:C8	3.04	0.45
1:N:69:G:C4	1:N:70:U:C5	3.05	0.45
1:N:198:G:C2	1:N:220:G:H1'	2.52	0.45
1:N:496:A:C2	1:N:497:G:C5	3.04	0.45
1:N:387:U:H2'	1:N:389:A:C8	2.52	0.45
1:N:687:A:C2	1:N:704:A:C6	3.05	0.45
1:N:1104:G:C6	1:N:1105:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:52:C:H6	1:N:52:C:H3'	1.81	0.45
1:N:779:C:H2'	1:N:780:A:C8	2.50	0.45
1:N:1349:A:H1'	1:N:1374:A:C6	2.52	0.45
1:N:244:U:H4'	1:N:895:G:H1'	1.97	0.45
1:N:323:U:H2'	1:N:324:G:O4'	2.17	0.45
1:N:482:A:N7	1:N:483:C:C4	2.85	0.45
1:N:1257:A:H3'	1:N:1258:G:H5'	1.98	0.45
1:N:65:A:H2'	1:N:381:C:C4	2.52	0.44
1:N:71:A:N6	1:N:98:A:C2	2.85	0.44
1:N:677:U:H3	1:N:713:G:H1	1.65	0.44
1:N:57:G:C6	1:N:356:A:N1	2.85	0.44
1:N:139:A:H61	1:N:224:U:H3	1.63	0.44
1:N:148:G:H1'	1:N:1447:A:H1'	1.99	0.44
1:N:484:G:N1	1:N:486:U:C6	2.85	0.44
1:N:904:U:C5	1:N:905:U:C5	3.05	0.44
1:N:669:G:C6	1:N:670:G:C6	3.06	0.44
1:N:1056:U:H3	1:N:1204:A:N6	2.15	0.44
1:N:1130:A:C5	1:N:1131:G:C4	3.05	0.44
1:N:1163:A:C6	1:N:1164:G:C5	3.05	0.44
1:N:1170:A:C5	1:N:1171:A:C4	3.05	0.44
1:N:1286:U:H2'	1:N:1287:A:H4'	1.99	0.44
1:N:319:G:H1'	1:N:1433:A:H61	1.83	0.44
1:N:804:U:C5	1:N:805:C:C4	3.06	0.44
1:N:807:A:C2	1:N:808:C:C2	3.06	0.44
1:N:752:G:H1'	1:N:754:C:N4	2.32	0.44
1:N:858:G:H1	1:N:869:G:C2'	2.25	0.44
1:N:1056:U:H5''	1:N:1056:U:C6	2.53	0.44
1:N:1304:G:C6	1:N:1305:G:N1	2.85	0.44
1:N:141:G:N1	1:N:223:A:C6	2.85	0.44
1:N:690:G:C6	1:N:691:G:C5	3.06	0.44
1:N:949:A:N3	1:N:971:G:C6	2.85	0.44
1:N:1423:G:C5	1:N:1424:U:C4	3.06	0.44
1:N:131:A:H2	1:N:231:U:H3	1.66	0.44
1:N:715:A:H2'	1:N:716:A:C8	2.52	0.44
1:N:1227:A:C6	1:N:1228:C:C2	3.05	0.44
1:N:21:G:H1'	1:N:914:A:H61	1.83	0.43
1:N:99:C:HO2'	1:N:100:G:H8	1.63	0.43
1:N:255:G:C5	1:N:256:U:C4	3.06	0.43
1:N:438:U:C5	1:N:494:G:C8	3.06	0.43
1:N:496:A:C2	1:N:497:G:C6	3.06	0.43
1:N:701:U:C5'	1:N:703:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:1176:A:H3'	1:N:1177:G:H8	1.83	0.43
1:N:52:C:C6	1:N:52:C:H3'	2.53	0.43
1:N:604:G:C6	1:N:605:U:N3	2.87	0.43
1:N:795:C:C4	1:N:796:C:C4	3.07	0.43
1:N:1239:A:C4	1:N:1241:G:C5	3.06	0.43
1:N:64:G:N1	1:N:69:G:C2	2.87	0.43
1:N:256:U:H3	1:N:270:A:H61	1.66	0.43
1:N:937:A:H2'	1:N:938:A:C8	2.52	0.43
1:N:1345:U:C4	1:N:1377:A:C2	3.06	0.43
1:N:257:G:C6	1:N:258:G:C5	3.05	0.43
1:N:282:A:C5	1:N:283:U:C4	3.07	0.43
1:N:433:G:C5	1:N:434:U:C6	3.06	0.43
1:N:1075:U:C4	1:N:1076:U:C4	3.05	0.43
1:N:1268:G:H21	1:N:1326:U:H1'	1.84	0.43
1:N:1299:A:C2	1:N:1301:U:C2	3.06	0.43
1:N:76:G:C6	1:N:77:A:C5	3.07	0.43
1:N:109:A:C6	1:N:326:G:C6	3.06	0.43
1:N:177:G:C4'	1:N:1448:C:H4'	2.48	0.43
1:N:179:A:C6	1:N:180:U:N3	2.87	0.43
1:N:216:U:C6	1:N:216:U:C3'	3.02	0.43
1:N:473:U:H3'	1:N:473:U:H6	1.84	0.43
1:N:475:C:H2'	1:N:476:U:H6	1.83	0.43
1:N:739:C:N4	1:N:740:U:C4	2.86	0.43
1:N:958:A:C2	1:N:959:A:C2	3.06	0.43
1:N:115:G:C6	1:N:289:G:C6	3.06	0.43
1:N:644:U:H2'	1:N:645:G:C8	2.53	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:1483:A:H3'	1:N:1484:C:H6	1.83	0.43
1:N:98:A:C6	1:N:99:C:C4	3.07	0.43
1:N:98:A:N7	1:N:99:C:C5	2.86	0.43
1:N:340:U:H3	1:N:349:A:N6	2.15	0.43
1:N:494:G:C4	1:N:496:A:C8	3.07	0.43
1:N:640:A:C2	1:N:642:A:N6	2.87	0.43
1:N:1385:G:C6	1:N:1386:G:C6	3.06	0.43
1:N:109:A:C8	1:N:327:A:O4'	2.72	0.43
1:N:1306:A:H1'	1:N:1332:A:C5	2.54	0.43
1:N:1434:A:C4	1:N:1435:G:C8	3.06	0.43
1:N:64:G:H2'	1:N:99:C:H41	1.83	0.43
1:N:107:G:H5''	1:N:134:G:H21	1.83	0.43
1:N:664:G:H21	1:N:726:C:H4'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:795:C:C6	1:N:796:C:C5	3.06	0.43
1:N:813:U:H4'	1:N:904:U:H5''	2.01	0.43
1:N:181:A:OP2	1:N:181:A:H3'	2.19	0.43
1:N:339:C:C4	1:N:340:U:C4	3.06	0.43
1:N:780:A:C2	1:N:803:G:C6	3.07	0.43
1:N:1144:G:C6	1:N:1145:A:C6	3.06	0.43
1:N:186:C:N3	1:N:187:G:C4	2.87	0.42
1:N:448:A:C4	1:N:487:A:C2	3.07	0.42
1:N:474:G:H2'	1:N:475:C:O4'	2.19	0.42
1:N:613:C:C2	1:N:628:G:C2	3.07	0.42
1:N:679:C:C4	1:N:680:C:C4	3.07	0.42
1:N:903:G:C5	1:N:904:U:C5	3.06	0.42
1:N:1443:C:C2	1:N:1444:U:C5	3.07	0.42
1:N:150:U:C2	1:N:151:A:C8	3.06	0.42
1:N:198:G:H2'	1:N:199:A:C8	2.54	0.42
1:N:648:A:H2'	1:N:649:A:C8	2.54	0.42
1:N:708:C:H2'	1:N:709:U:C6	2.54	0.42
1:N:949:A:N6	1:N:1232:U:H3	2.16	0.42
1:N:130:A:H2	1:N:232:G:H22	1.68	0.42
1:N:141:G:H22	1:N:195:A:H2	1.66	0.42
1:N:314:C:H2'	1:N:315:A:O5'	2.18	0.42
1:N:938:A:C6	1:N:939:G:C5	3.07	0.42
1:N:255:G:C4	1:N:256:U:C6	3.08	0.42
1:N:664:G:H22	1:N:741:G:H1	1.68	0.42
1:N:951:G:C6	1:N:1231:G:C6	3.07	0.42
1:N:1164:G:N2	1:N:1173:U:C2	2.88	0.42
1:N:1255:G:C6	1:N:1279:G:C5	3.07	0.42
1:N:1433:A:H2'	1:N:1434:A:C8	2.54	0.42
1:N:1480:A:C5	1:N:1481:U:C5	3.07	0.42
1:N:1523:G:C6	1:N:1524:C:C4	3.07	0.42
1:N:68:G:C4	1:N:69:G:H1'	2.54	0.42
1:N:375:U:H3	1:N:389:A:N6	2.16	0.42
1:N:584:G:C2	1:N:585:G:C4	3.08	0.42
1:N:651:C:C4	1:N:652:U:C4	3.07	0.42
1:N:688:G:H2'	1:N:689:C:H6	1.84	0.42
1:N:130:A:H2	1:N:232:G:N2	2.17	0.42
1:N:236:A:C2	1:N:237:G:C4	3.08	0.42
1:N:687:A:N3	1:N:688:G:H1'	2.35	0.42
1:N:1135:U:H3	1:N:1138:G:H22	1.68	0.42
1:N:1159:U:C6	1:N:1162:C:N4	2.88	0.42
1:N:1213:A:C5	1:N:1215:G:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:66:A:C4	1:N:67:C:C5	3.07	0.42
1:N:507:C:C3'	1:N:508:U:H5''	2.50	0.42
1:N:652:U:C5	1:N:752:G:C2	3.07	0.42
1:N:939:G:H2'	1:N:940:C:C6	2.55	0.42
1:N:1434:A:C6	1:N:1435:G:C5	3.08	0.42
1:N:183:C:H42	1:N:223:A:H2	1.66	0.42
1:N:203:G:H22	1:N:206:C:H41	1.67	0.42
1:N:337:G:C6	1:N:338:A:N6	2.88	0.42
1:N:585:G:C6	1:N:586:C:N3	2.87	0.42
1:N:608:A:H2'	1:N:609:A:H5'	2.01	0.42
1:N:990:C:H4'	1:N:1040:U:OP1	2.19	0.42
1:N:1164:G:C2	1:N:1165:U:C2	3.07	0.42
1:N:50:A:C2	1:N:361:G:N3	2.88	0.42
1:N:851:G:C6	1:N:852:G:O6	2.73	0.42
1:N:68:G:C8	1:N:69:G:C8	3.08	0.41
1:N:79:G:C5	1:N:80:A:C6	3.07	0.41
1:N:94:G:H4'	1:N:95:C:H5''	2.01	0.41
1:N:100:G:C6	1:N:101:A:C6	3.07	0.41
1:N:301:G:H4'	1:N:564:C:N3	2.35	0.41
1:N:533:A:C5	1:N:536:C:C4	3.08	0.41
1:N:763:G:C5	1:N:764:C:C5	3.08	0.41
1:N:1126:U:C5	1:N:1281:C:C1'	3.03	0.41
1:N:1169:A:H2'	1:N:1170:A:C8	2.55	0.41
1:N:215:C:C4	1:N:216:U:C2	3.08	0.41
1:N:465:A:C2	1:N:466:A:C4	3.08	0.41
1:N:473:U:H2'	1:N:474:G:O4'	2.20	0.41
1:N:492:C:H2'	1:N:493:A:C8	2.55	0.41
1:N:585:G:C6	1:N:586:C:C4	3.08	0.41
1:N:669:G:H2'	1:N:670:G:O4'	2.20	0.41
1:N:829:G:C5	1:N:830:G:C8	3.08	0.41
1:N:299:G:C6	1:N:300:A:C6	3.08	0.41
1:N:684:U:C4	1:N:685:G:C5	3.08	0.41
1:N:773:G:C5	1:N:774:G:H1'	2.55	0.41
1:N:943:U:C2	1:N:944:G:C8	3.07	0.41
1:N:1176:A:H2'	1:N:1177:G:C8	2.55	0.41
1:N:404:G:H1	1:N:499:A:H62	1.68	0.41
1:N:462:G:O6	1:N:468:A:H5''	2.20	0.41
1:N:803:G:C4	1:N:804:U:C6	3.09	0.41
1:N:1021:A:C2	1:N:1022:A:C8	3.09	0.41
1:N:1120:C:C4	1:N:1121:U:C5	3.09	0.41
1:N:1329:A:C5	1:N:1330:U:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:92:U:C5	1:N:93:U:C4	3.09	0.41
1:N:255:G:C5	1:N:256:U:C5	3.09	0.41
1:N:655:A:C2	1:N:656:G:C4	3.08	0.41
1:N:830:G:C2	1:N:857:C:O2	2.73	0.41
1:N:872:A:C5	1:N:874:G:C8	3.09	0.41
1:N:606:G:H5''	1:N:607:A:H5'	2.02	0.41
1:N:720:C:OP2	1:N:720:C:C5	2.73	0.41
1:N:933:G:C2	1:N:1385:G:C2	3.08	0.41
1:N:64:G:C2	1:N:69:G:C6	3.08	0.41
1:N:425:G:H2'	1:N:426:U:O4'	2.21	0.41
1:N:584:G:C6	1:N:585:G:C5	3.08	0.41
1:N:934:C:C4	1:N:1345:U:C5	3.09	0.41
1:N:59:A:C4	1:N:354:G:C6	3.09	0.41
1:N:117:G:H4'	1:N:1425:U:C4'	2.50	0.41
1:N:381:C:C5	1:N:382:A:C6	3.08	0.41
1:N:513:C:H2'	1:N:514:C:C6	2.56	0.41
1:N:603:U:H2'	1:N:604:G:C8	2.55	0.41
1:N:1530:G:C6	1:N:1531:A:C6	3.09	0.41
1:N:39:G:C2	1:N:498:A:C2	3.08	0.41
1:N:160:A:C2	1:N:347:G:C2	3.07	0.41
1:N:273:U:C4	1:N:274:A:C5	3.09	0.41
1:N:555:U:H2'	1:N:556:C:C6	2.56	0.41
1:N:684:U:C4	1:N:685:G:C6	3.09	0.41
1:N:684:U:N3	1:N:685:G:C4	2.89	0.41
1:N:734:G:H2'	1:N:735:C:C6	2.55	0.41
1:N:795:C:C4	1:N:796:C:N3	2.88	0.41
1:N:838:G:C6	1:N:839:C:C4	3.09	0.41
1:N:946:A:H2'	1:N:947:G:C8	2.56	0.41
1:N:1033:G:H2'	1:N:1034:G:H5'	2.03	0.41
1:N:1126:U:C6	1:N:1281:C:O4'	2.73	0.41
1:N:1365:G:N1	1:N:1366:C:C2	2.89	0.41
1:N:244:U:C6	1:N:894:G:N2	2.89	0.41
1:N:572:A:H2	1:N:917:G:C4	2.39	0.41
1:N:584:G:H2'	1:N:585:G:O4'	2.21	0.41
1:N:1046:A:C5	1:N:1047:G:C8	3.09	0.41
1:N:1056:U:H3	1:N:1204:A:H61	1.69	0.41
1:N:1254:A:C2	1:N:1284:C:C2	3.08	0.41
1:N:1363:A:C8	1:N:1365:G:C5	3.09	0.41
1:N:1501:C:C2	1:N:1504:G:C6	3.08	0.41
1:N:14:U:H3	1:N:16:A:H3'	1.87	0.40
1:N:131:A:C2	1:N:132:C:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:506:G:C2	1:N:507:C:C2	3.09	0.40
1:N:771:G:C2	1:N:772:U:C2	3.08	0.40
1:N:1179:A:C2	1:N:1180:A:C4	3.09	0.40
1:N:1255:G:H22	1:N:1276:G:N2	2.19	0.40
1:N:1287:A:H2'	1:N:1288:A:C8	2.56	0.40
1:N:105:G:H21	1:N:380:G:C5'	2.29	0.40
1:N:179:A:C5	1:N:180:U:C4	3.09	0.40
1:N:462:G:N3	1:N:462:G:H2'	2.37	0.40
1:N:749:A:C5	1:N:750:C:C4	3.09	0.40
1:N:775:G:C6	1:N:776:G:C6	3.08	0.40
1:N:1285:A:OP1	1:N:1355:G:H5'	2.20	0.40
1:N:1502:A:C8	1:N:1505:G:N2	2.89	0.40
1:N:1530:G:C4	1:N:1531:A:C2	3.10	0.40
1:N:70:U:N3	1:N:94:G:C6	2.89	0.40
1:N:86:G:H21	1:N:87:C:H41	1.69	0.40
1:N:98:A:C6	1:N:99:C:N3	2.90	0.40
1:N:506:G:C2	1:N:526:C:O2	2.75	0.40
1:N:1072:G:C2	1:N:1104:G:C2	3.10	0.40
1:N:68:G:C2	1:N:102:G:C2	3.10	0.40
1:N:258:G:C6	1:N:259:G:N7	2.89	0.40
1:N:411:A:C4	1:N:429:U:C4	3.09	0.40
1:N:453:G:O6	1:N:480:U:C4	2.74	0.40
1:N:572:A:N6	1:N:864:A:C5	2.90	0.40
1:N:795:C:C5	1:N:796:C:C5	3.09	0.40
1:N:804:U:C6	1:N:805:C:C5	3.09	0.40
1:N:830:G:C6	1:N:831:A:C5	3.09	0.40
1:N:342:C:C4	1:N:343:U:C4	3.09	0.40
1:N:1072:G:C6	1:N:1073:U:N3	2.90	0.40
1:N:1075:U:C4	1:N:1076:U:C5	3.09	0.40
1:N:1523:G:C6	1:N:1524:C:N3	2.90	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	N	1532/1533 (99%)	471 (30%)	154 (10%)

All (471) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	N	3	A
1	N	4	U
1	N	5	U
1	N	6	G
1	N	7	A
1	N	8	A
1	N	9	G
1	N	13	U
1	N	14	U
1	N	22	G
1	N	27	G
1	N	31	G
1	N	32	A
1	N	39	G
1	N	47	C
1	N	48	C
1	N	49	U
1	N	50	A
1	N	51	A
1	N	52	C
1	N	60	A
1	N	61	G
1	N	64	G
1	N	65	A
1	N	66	A
1	N	70	U
1	N	71	A
1	N	72	A
1	N	73	C
1	N	74	A
1	N	75	G

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Mol	Chain	Res	Type
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	86	G
1	N	87	C
1	N	88	U
1	N	89	U
1	N	90	C
1	N	91	U
1	N	92	U
1	N	94	G
1	N	95	C
1	N	97	G
1	N	107	G
1	N	108	G
1	N	109	A
1	N	110	C
1	N	115	G
1	N	116	A
1	N	119	A
1	N	120	A
1	N	127	G
1	N	129	A
1	N	130	A
1	N	131	A
1	N	134	G
1	N	135	C
1	N	138	G
1	N	141	G
1	N	143	A
1	N	159	G
1	N	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

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Mol	Chain	Res	Type
1	N	182	A
1	N	183	C
1	N	195	A
1	N	197	A
1	N	198	G
1	N	199	A
1	N	202	G
1	N	205	A
1	N	207	C
1	N	208	U
1	N	209	U
1	N	210	C
1	N	211	G
1	N	212	G
1	N	214	C
1	N	219	U
1	N	232	G
1	N	240	G
1	N	243	A
1	N	244	U
1	N	245	U
1	N	247	G
1	N	251	G
1	N	252	U
1	N	258	G
1	N	266	G
1	N	267	C
1	N	268	U
1	N	273	U
1	N	274	A
1	N	275	G
1	N	276	G
1	N	279	A
1	N	281	G
1	N	285	C
1	N	289	G
1	N	305	G
1	N	306	A
1	N	316	C
1	N	321	A
1	N	328	C
1	N	329	A

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Mol	Chain	Res	Type
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	372	C
1	N	373	A
1	N	374	A
1	N	384	G
1	N	389	A
1	N	390	U
1	N	392	C
1	N	406	G
1	N	411	A
1	N	412	A
1	N	413	G
1	N	414	A
1	N	421	U
1	N	422	C
1	N	423	G
1	N	424	G
1	N	428	G
1	N	429	U
1	N	430	A
1	N	439	U
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

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Mol	Chain	Res	Type
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	530	G
1	N	531	U
1	N	532	A
1	N	533	A
1	N	534	U
1	N	536	C
1	N	548	G
1	N	556	C
1	N	559	A
1	N	560	A
1	N	562	U
1	N	563	A
1	N	564	C
1	N	566	G
1	N	567	G
1	N	572	A
1	N	573	A
1	N	574	A
1	N	575	G

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Mol	Chain	Res	Type
1	N	576	C
1	N	577	G
1	N	579	A
1	N	588	G
1	N	595	A
1	N	596	A
1	N	604	G
1	N	606	G
1	N	607	A
1	N	610	U
1	N	619	U
1	N	629	A
1	N	631	C
1	N	633	G
1	N	642	A
1	N	649	A
1	N	661	G
1	N	665	A
1	N	702	A
1	N	703	G
1	N	718	A
1	N	719	C
1	N	720	C
1	N	721	G
1	N	722	G
1	N	723	U
1	N	724	G
1	N	731	G
1	N	733	G
1	N	748	G
1	N	754	C
1	N	755	G
1	N	767	A
1	N	768	A
1	N	776	G
1	N	777	A
1	N	787	A
1	N	788	U
1	N	792	A
1	N	793	U
1	N	794	A
1	N	811	C

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Mol	Chain	Res	Type
1	N	812	G
1	N	813	U
1	N	815	A
1	N	816	A
1	N	817	C
1	N	818	G
1	N	819	A
1	N	820	U
1	N	828	U
1	N	829	G
1	N	832	G
1	N	843	U
1	N	844	G
1	N	845	A
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	922	G
1	N	926	G
1	N	927	G
1	N	932	C
1	N	934	C
1	N	935	A
1	N	942	G
1	N	944	G
1	N	960	U
1	N	961	U
1	N	966	G
1	N	967	C
1	N	968	A
1	N	969	A
1	N	970	C
1	N	971	G
1	N	972	C

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Mol	Chain	Res	Type
1	N	974	A
1	N	975	A
1	N	976	G
1	N	977	A
1	N	982	U
1	N	983	A
1	N	992	U
1	N	993	G
1	N	1003	G
1	N	1004	A
1	N	1008	U
1	N	1017	U
1	N	1018	G
1	N	1022	A
1	N	1028	C
1	N	1029	U
1	N	1030	U
1	N	1031	C
1	N	1032	G
1	N	1034	G
1	N	1036	A
1	N	1050	G
1	N	1052	U
1	N	1053	G
1	N	1054	C
1	N	1055	A
1	N	1063	C
1	N	1064	G
1	N	1065	U
1	N	1066	C
1	N	1067	A
1	N	1079	G
1	N	1080	A
1	N	1085	U
1	N	1086	U
1	N	1087	G
1	N	1088	G
1	N	1091	U
1	N	1092	A
1	N	1093	A
1	N	1094	G
1	N	1100	C

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Mol	Chain	Res	Type
1	N	1101	A
1	N	1102	A
1	N	1104	G
1	N	1111	A
1	N	1112	C
1	N	1113	C
1	N	1124	G
1	N	1125	U
1	N	1126	U
1	N	1127	G
1	N	1129	C
1	N	1130	A
1	N	1133	G
1	N	1135	U
1	N	1136	C
1	N	1137	C
1	N	1138	G
1	N	1139	G
1	N	1140	C
1	N	1141	C
1	N	1144	G
1	N	1145	A
1	N	1151	A
1	N	1152	A
1	N	1158	C
1	N	1159	U
1	N	1160	G
1	N	1161	C
1	N	1167	A
1	N	1168	U
1	N	1169	A
1	N	1181	G
1	N	1182	G
1	N	1188	A
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

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Mol	Chain	Res	Type
1	N	1201	A
1	N	1202	U
1	N	1211	U
1	N	1213	A
1	N	1223	C
1	N	1224	U
1	N	1225	A
1	N	1226	C
1	N	1227	A
1	N	1228	C
1	N	1229	A
1	N	1238	A
1	N	1239	A
1	N	1240	U
1	N	1241	G
1	N	1252	A
1	N	1256	A
1	N	1258	G
1	N	1263	C
1	N	1264	U
1	N	1275	A
1	N	1278	G
1	N	1279	G
1	N	1280	A
1	N	1281	C
1	N	1282	C
1	N	1283	U
1	N	1286	U
1	N	1287	A
1	N	1293	C
1	N	1297	G
1	N	1298	U
1	N	1299	A
1	N	1300	G
1	N	1301	U
1	N	1303	C
1	N	1304	G
1	N	1305	G
1	N	1308	U
1	N	1315	U
1	N	1316	G
1	N	1320	C

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Mol	Chain	Res	Type
1	N	1322	C
1	N	1323	G
1	N	1332	A
1	N	1336	C
1	N	1337	G
1	N	1338	G
1	N	1341	U
1	N	1342	C
1	N	1345	U
1	N	1346	A
1	N	1348	U
1	N	1349	A
1	N	1353	G
1	N	1358	U
1	N	1359	C
1	N	1362	A
1	N	1363	A
1	N	1364	U
1	N	1365	G
1	N	1380	U
1	N	1381	U
1	N	1391	U
1	N	1392	G
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
1	N	1446	A
1	N	1448	C
1	N	1452	C
1	N	1453	G
1	N	1454	G
1	N	1469	C
1	N	1470	U
1	N	1476	A

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Mol	Chain	Res	Type
1	N	1490	U
1	N	1492	A
1	N	1493	A
1	N	1494	G
1	N	1497	G
1	N	1498	U
1	N	1499	A
1	N	1502	A
1	N	1503	A
1	N	1505	G
1	N	1506	U
1	N	1507	A
1	N	1517	G
1	N	1518	A
1	N	1529	G
1	N	1530	G
1	N	1531	A
1	N	1532	U
1	N	1533	C
1	N	1534	A

All (154) 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
1	N	75	G
1	N	81	A
1	N	87	C
1	N	90	C
1	N	94	G
1	N	109	A
1	N	115	G

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Mol	Chain	Res	Type
1	N	119	A
1	N	120	A
1	N	129	A
1	N	130	A
1	N	134	G
1	N	167	A
1	N	168	G
1	N	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	244	U
1	N	246	A
1	N	251	G
1	N	256	U
1	N	266	G
1	N	267	C
1	N	274	A
1	N	275	G
1	N	279	A
1	N	305	G
1	N	327	A
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	373	A
1	N	412	A
1	N	421	U
1	N	428	G
1	N	429	U
1	N	438	U
1	N	451	A
1	N	467	U
1	N	481	G
1	N	484	G
1	N	485	U

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Mol	Chain	Res	Type
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	559	A
1	N	563	A
1	N	566	G
1	N	575	G
1	N	615	G
1	N	641	U
1	N	686	U
1	N	721	G
1	N	723	U
1	N	733	G
1	N	752	G
1	N	754	C
1	N	792	A
1	N	793	U
1	N	817	C
1	N	818	G
1	N	819	A
1	N	865	A
1	N	870	U
1	N	884	U
1	N	913	A
1	N	914	A
1	N	934	C
1	N	941	G
1	N	957	U
1	N	960	U
1	N	966	G
1	N	974	A
1	N	982	U
1	N	991	U
1	N	1041	G
1	N	1049	U

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Mol	Chain	Res	Type
1	N	1053	G
1	N	1064	G
1	N	1066	C
1	N	1087	G
1	N	1101	A
1	N	1112	C
1	N	1129	C
1	N	1136	C
1	N	1151	A
1	N	1160	G
1	N	1167	A
1	N	1168	U
1	N	1185	G
1	N	1191	A
1	N	1196	A
1	N	1197	A
1	N	1201	A
1	N	1224	U
1	N	1228	C
1	N	1239	A
1	N	1251	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	1319	A
1	N	1331	G
1	N	1335	U
1	N	1336	C
1	N	1337	G
1	N	1341	U
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	1391	U
1	N	1396	A

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Mol	Chain	Res	Type
1	N	1399	C
1	N	1432	G
1	N	1440	U
1	N	1494	G
1	N	1498	U
1	N	1502	A
1	N	1506	U
1	N	1517	G
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.

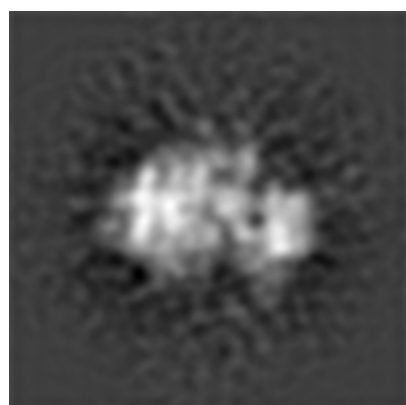
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5506. These allow visual inspection of the internal detail of the map and identification of artifacts.

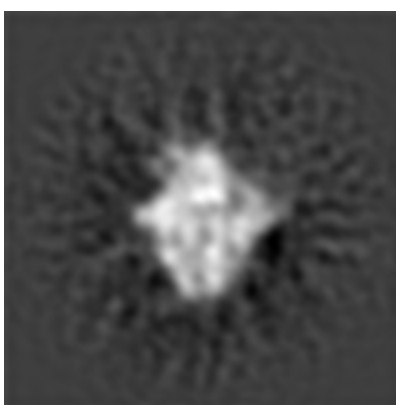
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

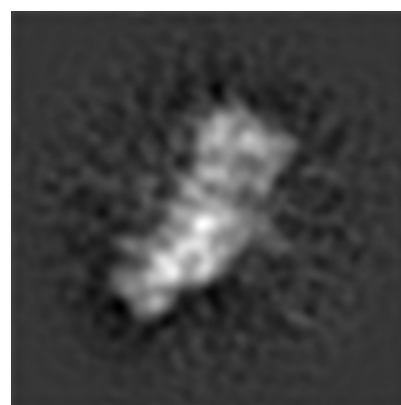
6.1.1 Primary map



X



Y

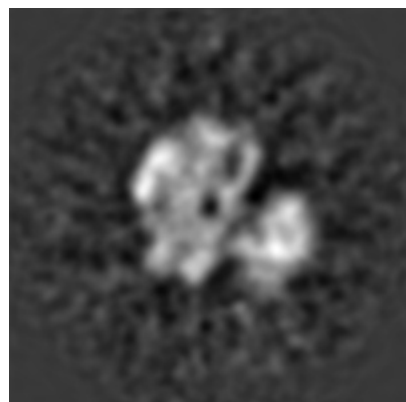


Z

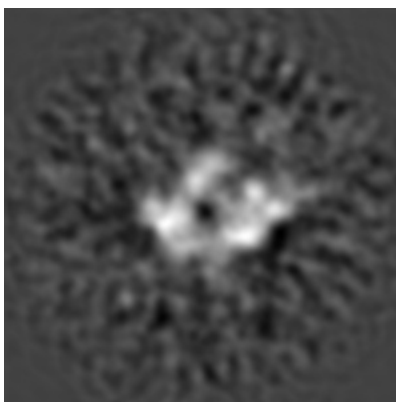
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

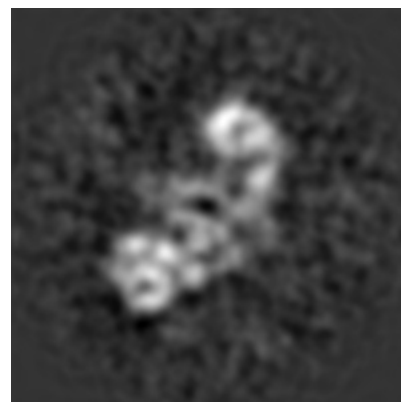
6.2.1 Primary map



X Index: 62



Y Index: 62

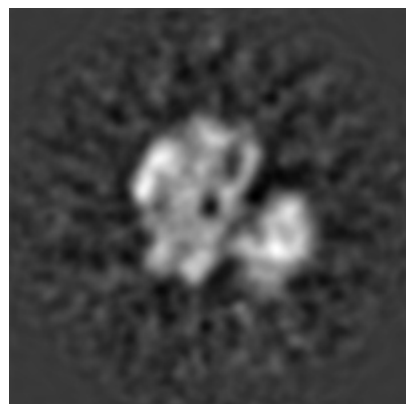


Z Index: 62

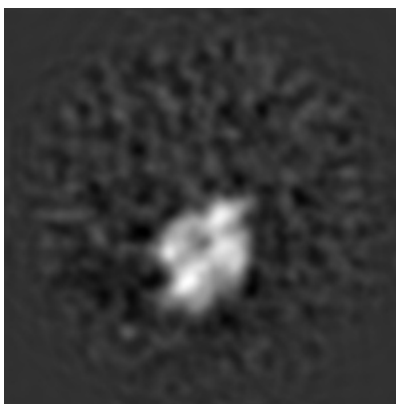
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

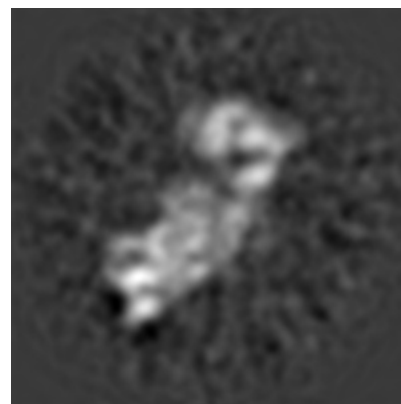
6.3.1 Primary map



X Index: 62



Y Index: 41

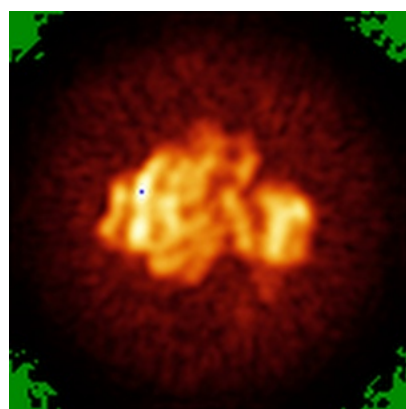


Z Index: 58

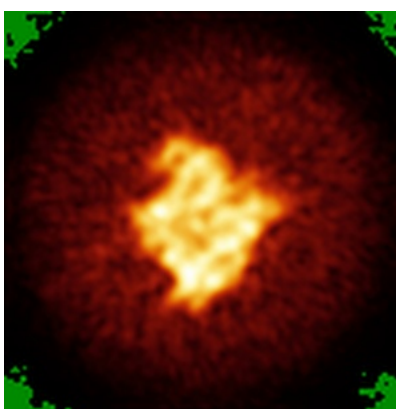
The images above show the largest variance slices of the map in three orthogonal directions.

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

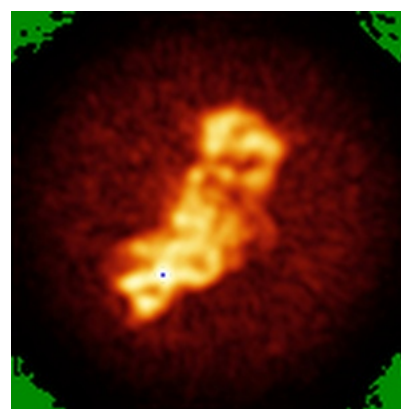
6.4.1 Primary map



X



Y

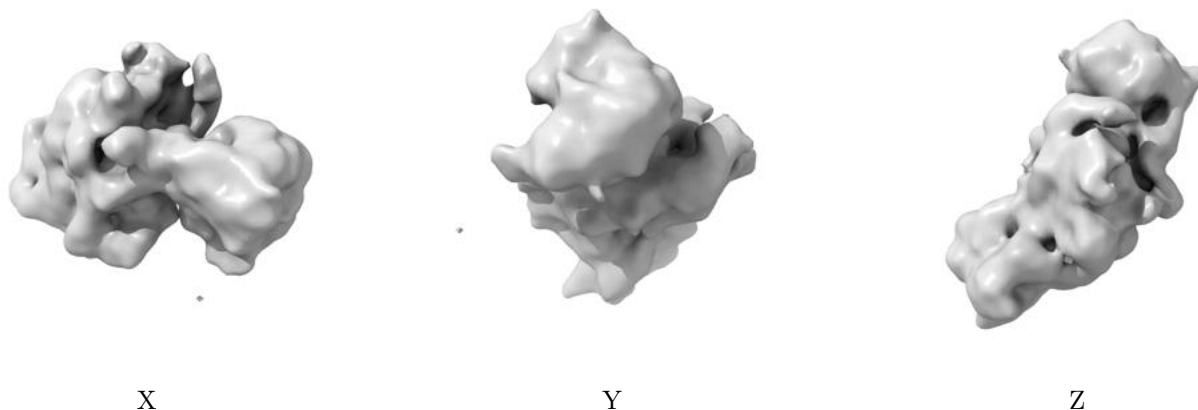


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level - 2.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

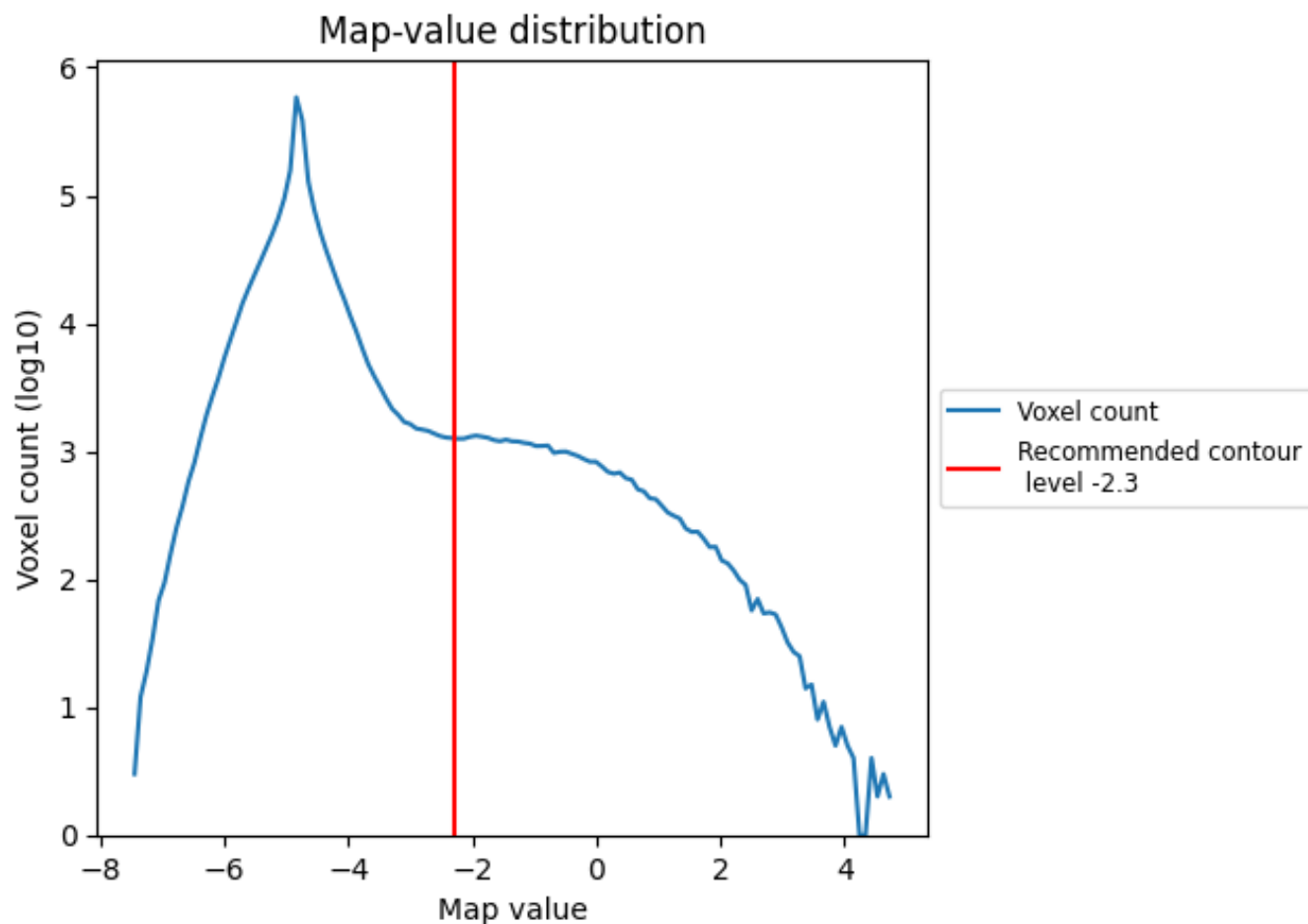
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

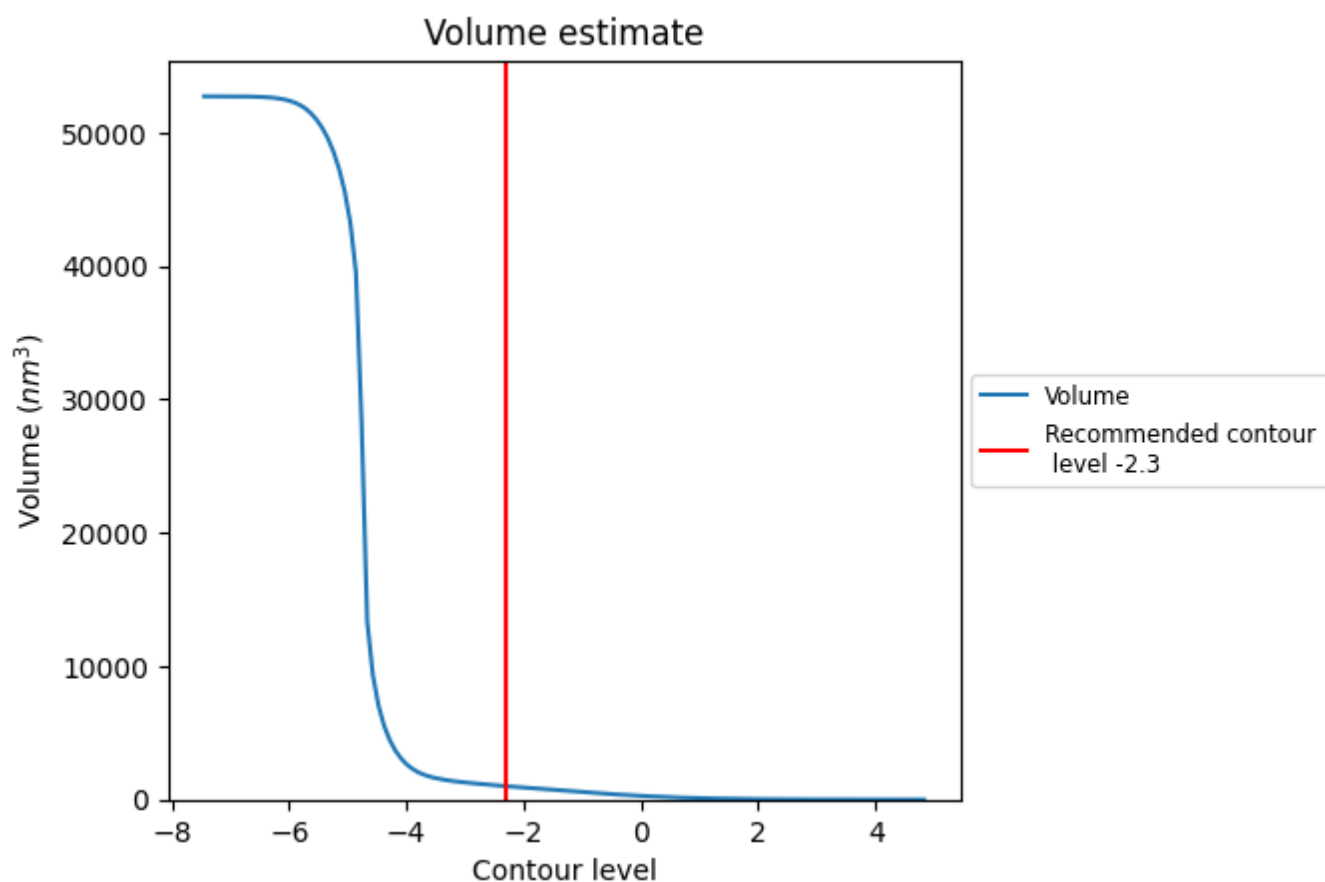
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

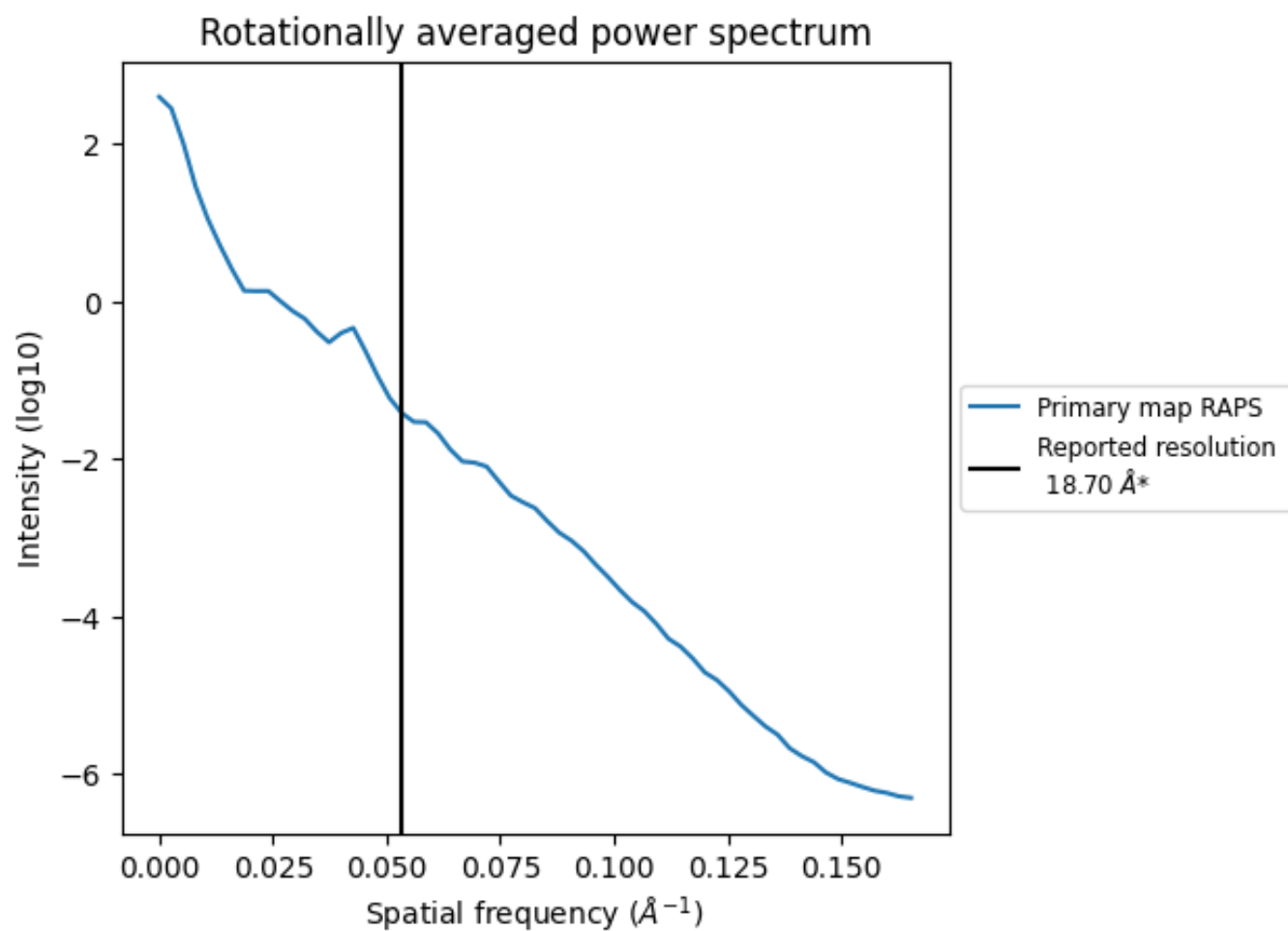
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1003 nm³; this corresponds to an approximate mass of 906 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 0.053 Å⁻¹

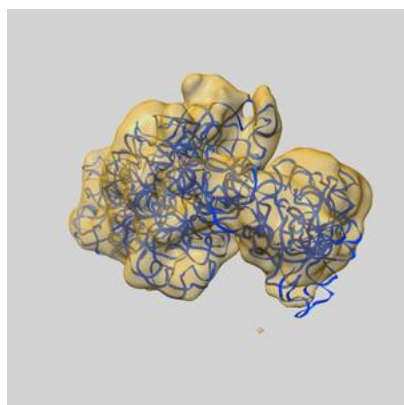
8 Fourier-Shell correlation

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

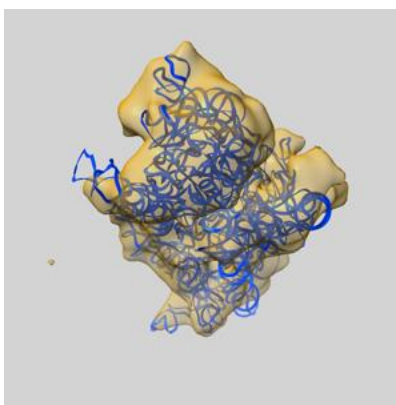
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5506 and PDB model 3J2D. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

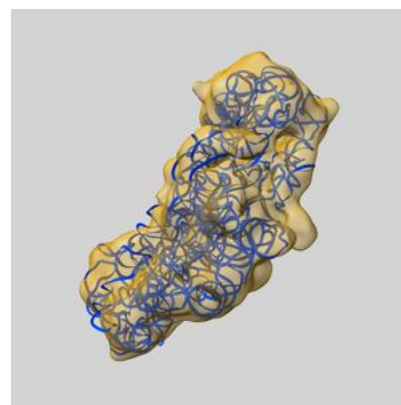
9.1 Map-model overlay [i](#)



X



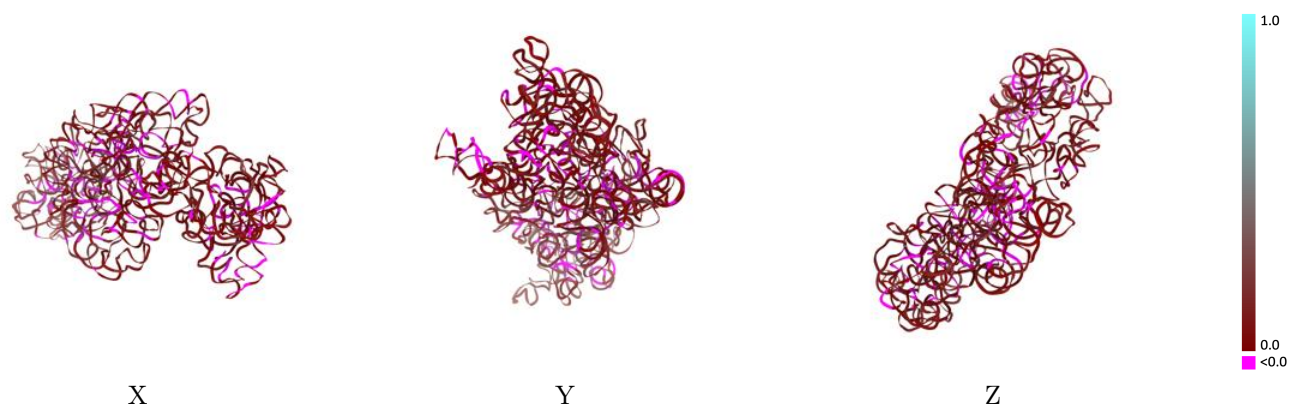
Y



Z

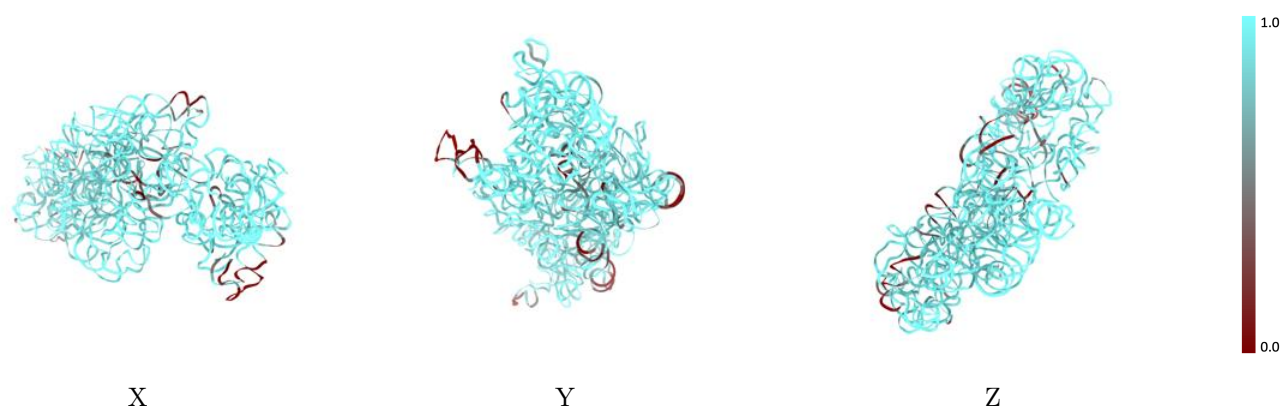
The images above show the 3D surface view of the map at the recommended contour level -2.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



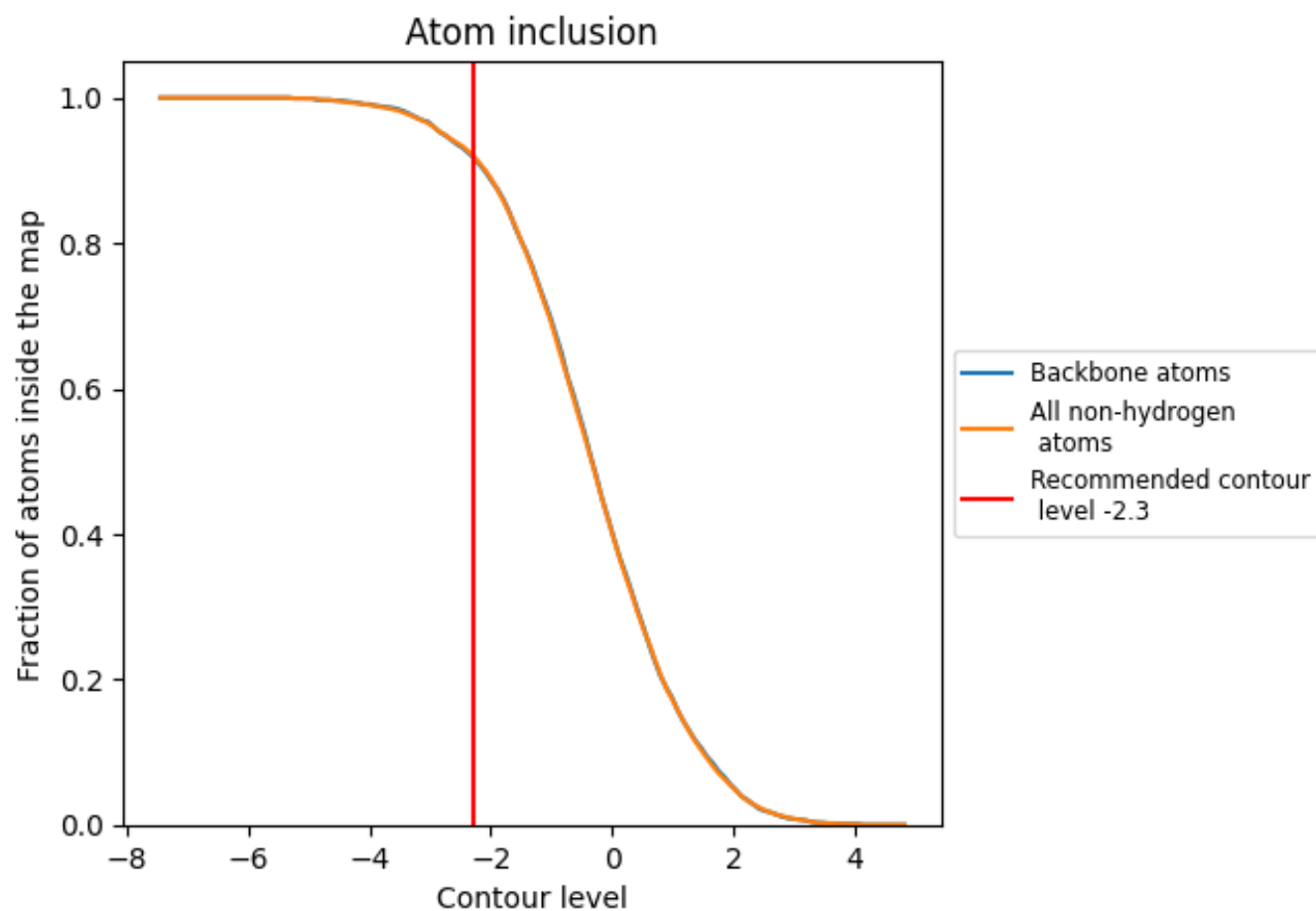
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (-2.3).

9.4 Atom inclusion [i](#)



At the recommended contour level, 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 (-2.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9210	0.0670
N	0.9210	0.0670

