



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 06:06 PM UTC

PDB ID : 4V69 / pdb_00004v69
EMDB ID : EMD-5036
Title : Ternary complex-bound E.coli 70S ribosome.
Authors : Villa, E.; Sengupta, J.; Trabuco, L.G.; LeBarron, J.; Baxter, W.T.; Shaikh, T.R.; Grassucci, R.A.; Nissen, P.; Ehrenberg, M.; Schulten, K.; Frank, J.
Deposited on : 2008-12-11
Resolution : 6.70 Å(reported)
Based on initial models : 2J00, 2I2U, 2I2V, 1OB2

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
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
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

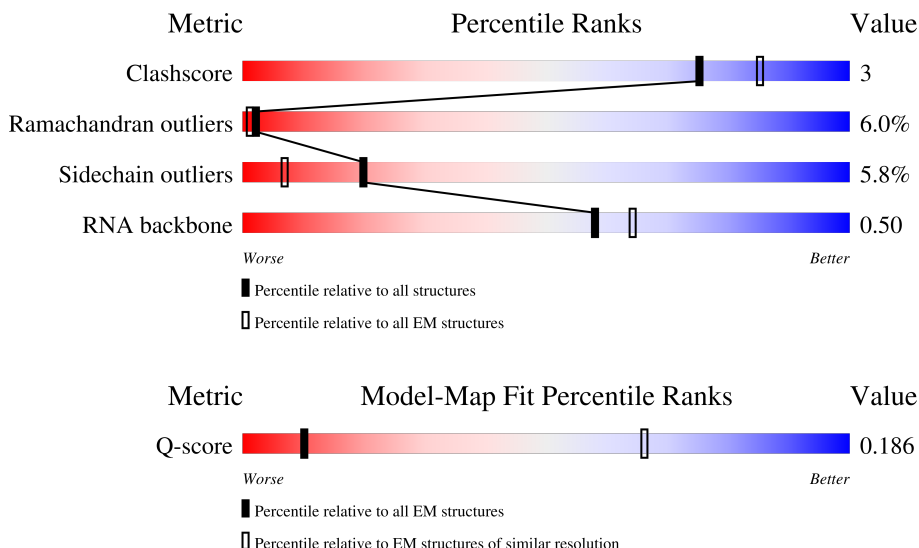
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 6.70 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	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	523 (6.20 - 7.20)

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	AJ	98	38% 39% 49% 9% .
2	AK	117	34% 42% 53% . .
3	AL	123	37% 39% 51% 9% .

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Mol	Chain	Length	Quality of chain
4	AM	113	
5	AN	96	
6	AO	88	
7	AP	80	
8	AQ	80	
9	AR	55	
10	AS	79	
11	AT	85	
12	AU	51	
13	AB	218	
14	AC	206	
15	AD	205	
16	AE	150	
17	AF	100	
18	AG	150	
19	AH	129	
20	AI	127	
21	AA	1530	
22	AY	76	
23	AW	76	
24	AX	11	
25	AZ	393	
26	AV	77	
27	B5	234	
28	BI	141	

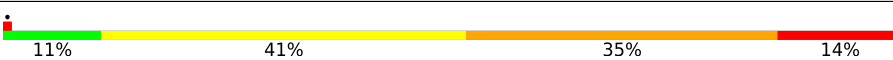
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Mol	Chain	Length	Quality of chain
29	BJ	142	
30	BK	121	
31	BL	143	
32	BM	136	
33	BN	120	
34	BO	116	
35	BP	114	
36	BQ	117	
37	BR	103	
38	BS	110	
39	BT	93	
40	BU	102	
41	BV	94	
42	BW	79	
43	BX	77	
44	BY	63	
45	BC	271	
46	BZ	58	
47	B0	56	
48	B1	50	
49	B2	46	
50	B3	64	
51	B4	38	
52	BD	209	
53	BE	201	

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Mol	Chain	Length	Quality of chain
54	BF	178	
55	BG	176	
56	BH	149	
57	BB	2903	
58	BA	117	

2 Entry composition [i](#)

There are 59 unique types of molecules in this entry. The entry contains 152250 atoms, of which 0 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 protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AJ	98	Total	C	N	O	S	0	0
			787	493	150	143	1		

- Molecule 2 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AK	117	Total	C	N	O	S	0	0
			877	540	174	160	3		

- Molecule 3 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AL	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 4 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AM	113	Total	C	N	O	S	0	0
			877	541	177	156	3		

- Molecule 5 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AN	96	Total	C	N	O	S	0	0
			774	483	160	128	3		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AN	?	-	SER	deletion	UNP P0AG59
AN	?	-	ASP	deletion	UNP P0AG59
AN	?	-	GLU	deletion	UNP P0AG59

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Chain	Residue	Modelled	Actual	Comment	Reference
AN	?	-	ASP	deletion	UNP P0AG59

- Molecule 6 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AO	88	Total	C	N	O	S	0	0
			716	440	146	129	1		

- Molecule 7 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AP	80	Total	C	N	O	S	0	0
			639	400	126	112	1		

- Molecule 8 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AQ	80	Total	C	N	O	S	0	0
			649	411	121	114	3		

- Molecule 9 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
9	AR	55	Total	C	N	O	0	0
			456	288	86	82		

- Molecule 10 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AS	79	Total	C	N	O	S	0	0
			638	408	120	108	2		

- Molecule 11 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AT	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 12 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AU	51	Total	C	N	O	S	0	0
			426	265	86	74	1		

- Molecule 13 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AB	218	Total	C	N	O	S	0	0
			1705	1081	305	312	7		

- Molecule 14 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AC	206	Total	C	N	O	S	0	0
			1625	1028	305	289	3		

- Molecule 15 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AD	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 16 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AE	150	Total	C	N	O	S	0	0
			1106	687	211	202	6		

- Molecule 17 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AF	100	Total	C	N	O	S	0	0
			818	515	148	149	6		

- Molecule 18 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AG	150	Total	C	N	O	S	0	0
			1175	730	226	215	4		

- Molecule 19 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AH	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 20 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AI	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 21 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AA	1530	Total	C	N	O	P	0	0
			32832	14642	6024	10636	1530		

- Molecule 22 is a RNA chain called A/T-site tRNA Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AY	76	Total	C	N	O	P	0	0
			1622	725	293	529	75		

- Molecule 23 is a RNA chain called P-site tRNA fMet (Unmodified bases except for Thymine 54).

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AW	76	Total	C	N	O	P	0	0
			1619	723	290	531	75		

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AX	11	Total	C	N	O	P	0	0
			232	106	44	72	10		

- Molecule 25 is a protein called Elongation factor Tu.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AZ	393	Total	C	N	O	S	0	0
			3035	1918	523	581	13		

- Molecule 26 is a RNA chain called E-site tRNA Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AV	77	Total	C	N	O	P	0	0
			1645	733	297	538	77		

- Molecule 27 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	B5	234	Total	C	N	O	S	0	0
			1733	1081	315	330	7		

- Molecule 28 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BI	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 29 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BJ	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 30 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BK	121	Total	C	N	O	S	0	0
			931	582	179	165	5		

- Molecule 31 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	BL	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 32 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BM	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 33 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BN	120	Total	C	N	O	S	0	0
			961	593	196	167	5		

- Molecule 34 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BO	116	Total	C	N	O		0	0
			892	552	178	162			

- Molecule 35 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BP	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 36 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BQ	117	Total	C	N	O		0	0
			947	604	192	151			

- Molecule 37 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BR	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 38 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	BS	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 39 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BT	93	Total	C	N	O	S	0	0
			739	466	139	132	2		

- Molecule 40 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	BU	102	Total	C	N	O		
			780	492	146	142	0	0

- Molecule 41 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BV	94	Total	C	N	O	S		
			753	479	137	134	3	0	0

- Molecule 42 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BW	79	Total	C	N	O	S		
			596	367	120	108	1	0	0

- Molecule 43 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BX	77	Total	C	N	O	S		
			625	388	129	106	2	0	0

- Molecule 44 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BY	63	Total	C	N	O	S		
			509	313	99	95	2	0	0

- Molecule 45 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BC	271	Total	C	N	O	S		
			2083	1288	423	365	7	0	0

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BZ	58	Total	C	N	O	S		
			449	281	87	79	2	0	0

- Molecule 47 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	B0	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 48 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	B1	50	Total	C	N	O	S	0	0
			410	263	75	72			

- Molecule 49 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	B2	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 50 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	B3	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 51 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	B4	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 52 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	BD	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 53 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BE	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 54 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BF	178	Total	C	N	O	S	0	0
			1420	905	251	258	6		

- Molecule 55 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	BG	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 56 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BH	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

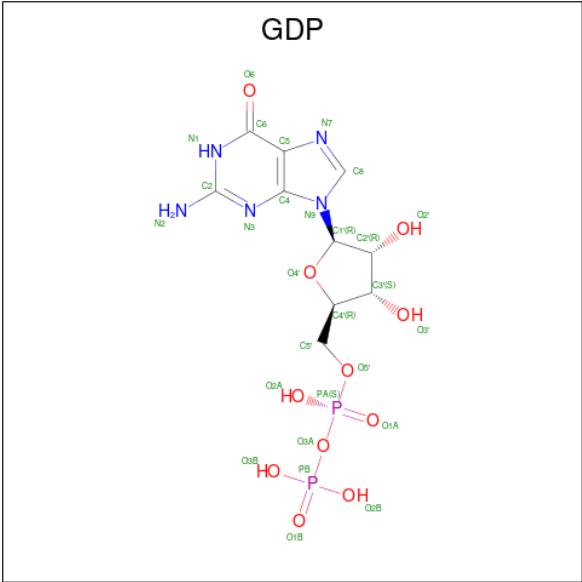
- Molecule 57 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	BB	2903	Total	C	N	O	P	0	0
			62321	27801	11467	20150	2903		

- Molecule 58 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	BA	117	Total	C	N	O	P	0	0
			2508	1116	459	816	117		

- Molecule 59 is GUANOSINE-5'-DIPHOSPHATE (CCD ID: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

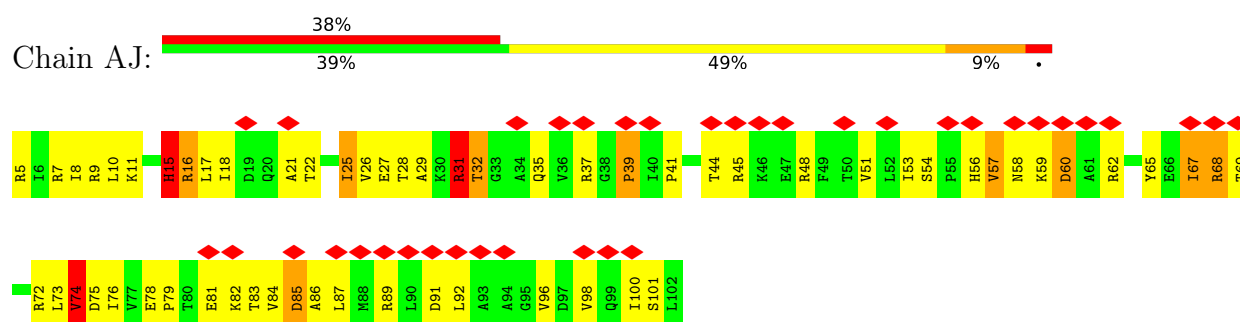


Mol	Chain	Residues	Atoms					AltConf
59	AZ	1	Total	C	N	O	P	0
			28	10	5	11	2	

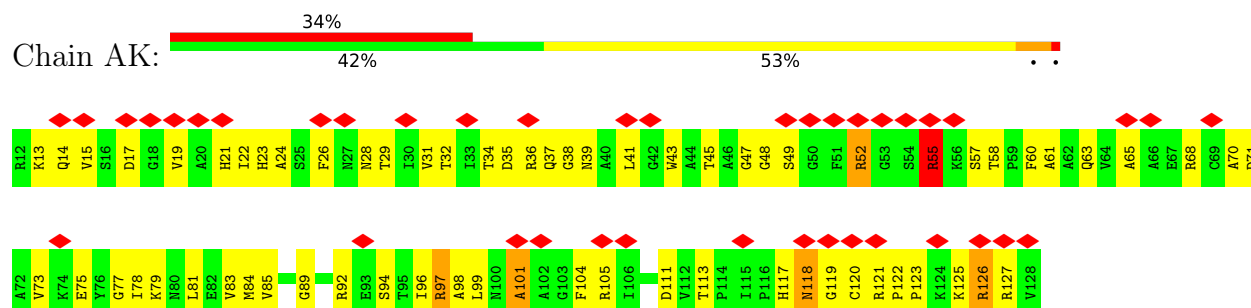
3 Residue-property plots [i](#)

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.

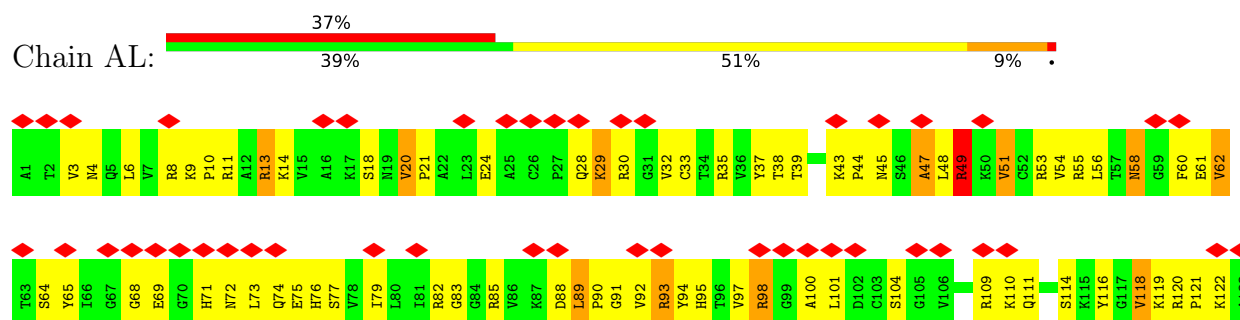
- Molecule 1: 30S ribosomal protein S10



- Molecule 2: 30S ribosomal protein S11

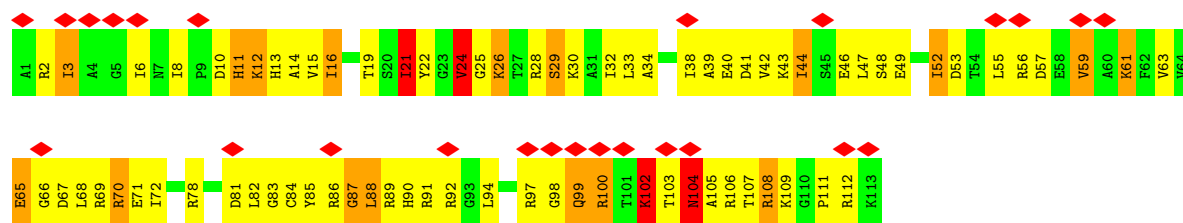


- Molecule 3: 30S ribosomal protein S12

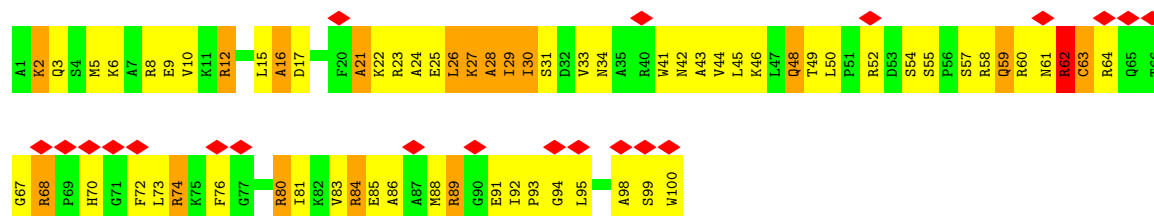


- Molecule 4: 30S ribosomal protein S13

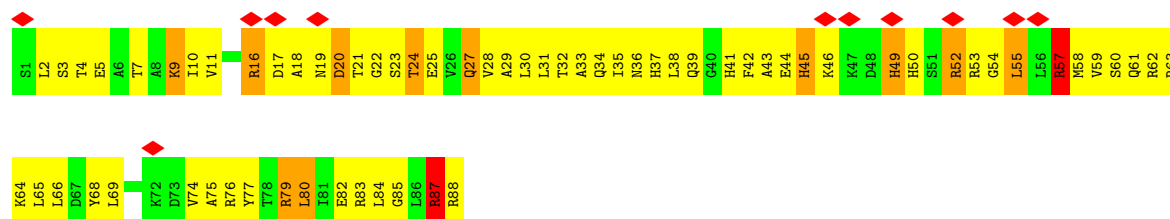




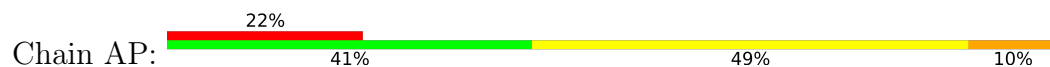
• Molecule 5: 30S ribosomal protein S14



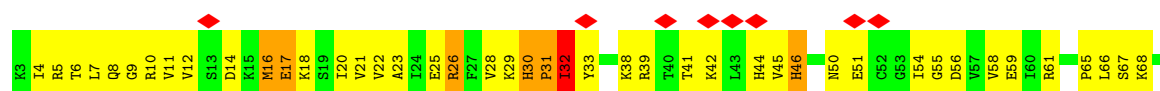
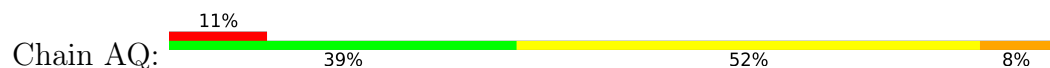
• Molecule 6: 30S ribosomal protein S15



• Molecule 7: 30S ribosomal protein S16

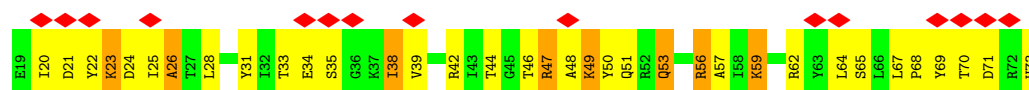


• Molecule 8: 30S ribosomal protein S17

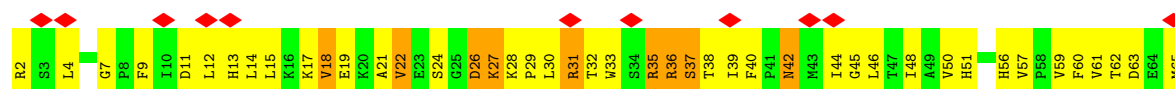




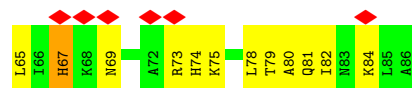
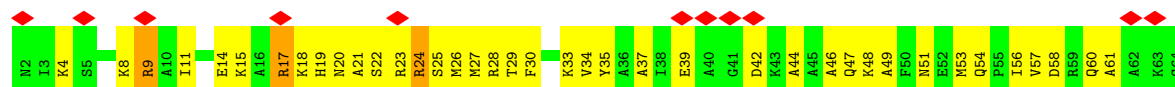
• Molecule 9: 30S ribosomal protein S18



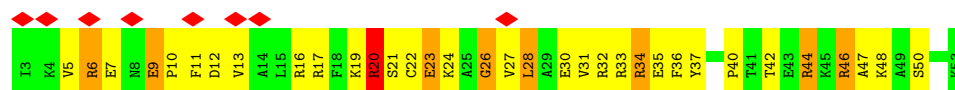
• Molecule 10: 30S ribosomal protein S19



• Molecule 11: 30S ribosomal protein S20

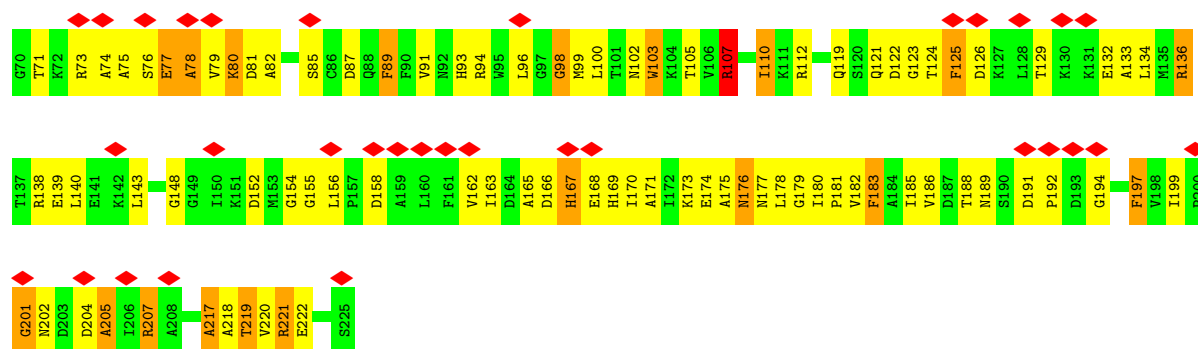


• Molecule 12: 30S ribosomal protein S21

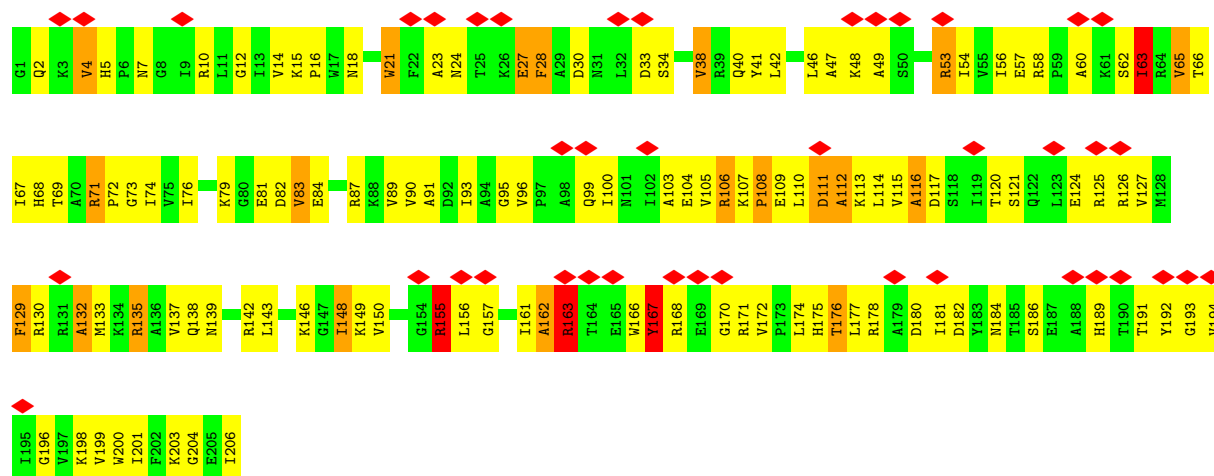


• Molecule 13: 30S ribosomal protein S2

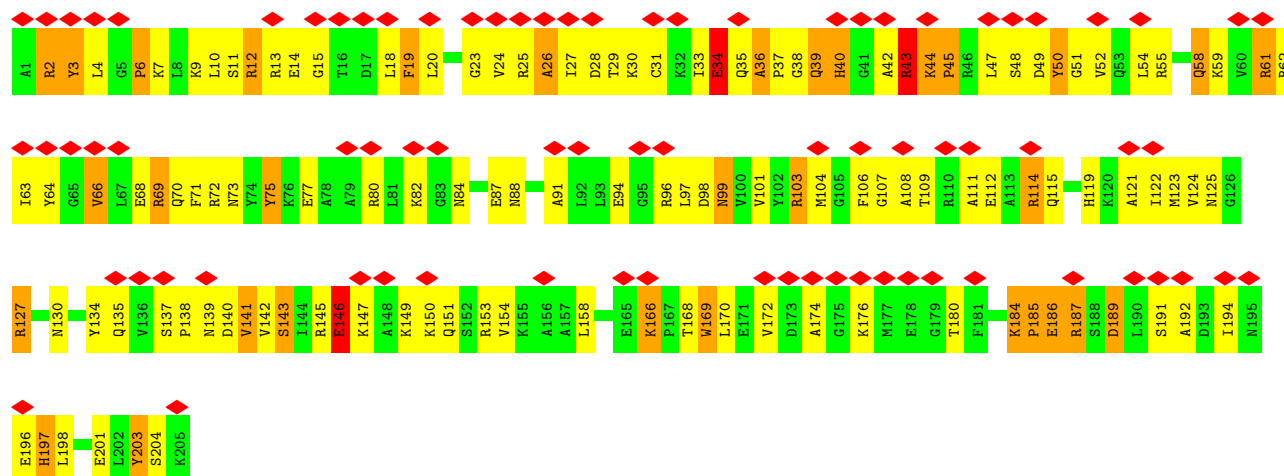




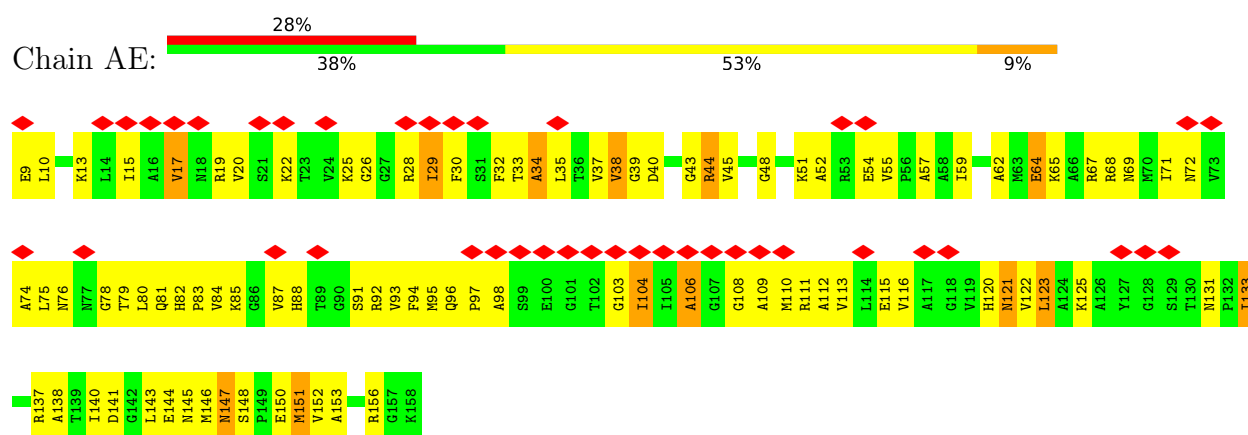
• Molecule 14: 30S ribosomal protein S3



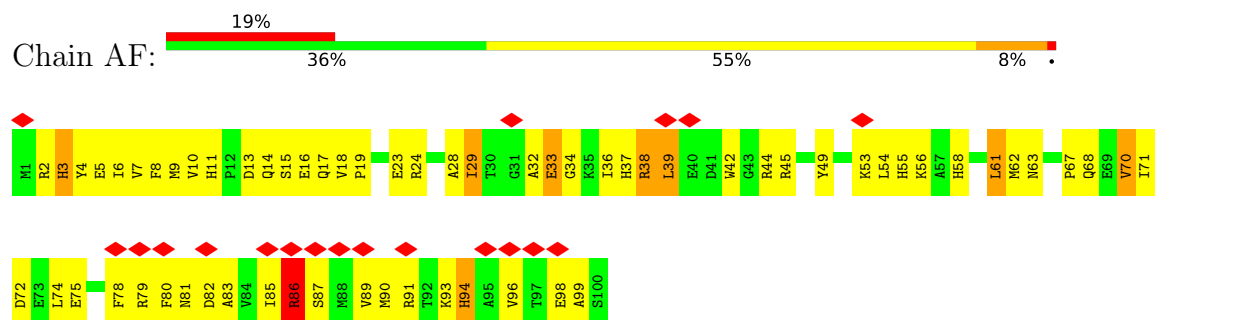
• Molecule 15: 30S ribosomal protein S4



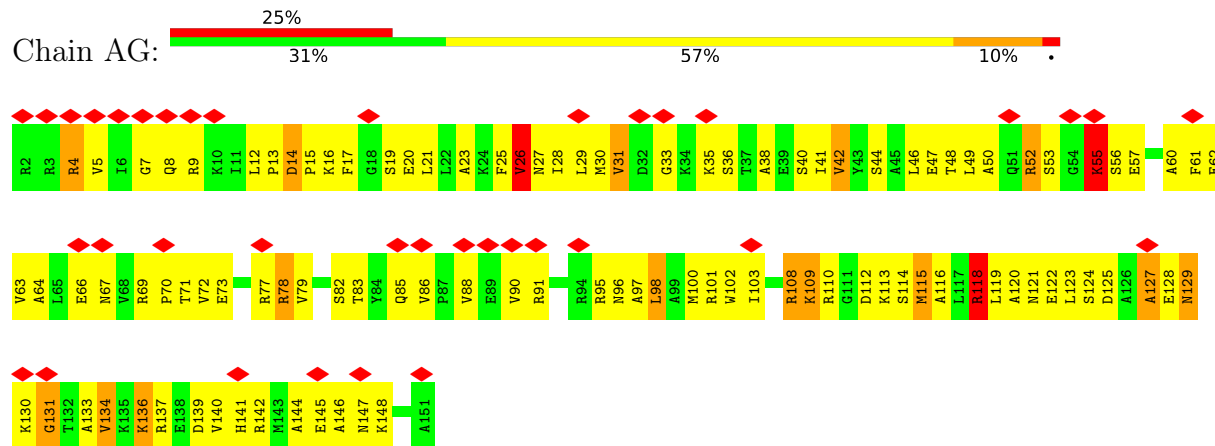
• Molecule 16: 30S ribosomal protein S5



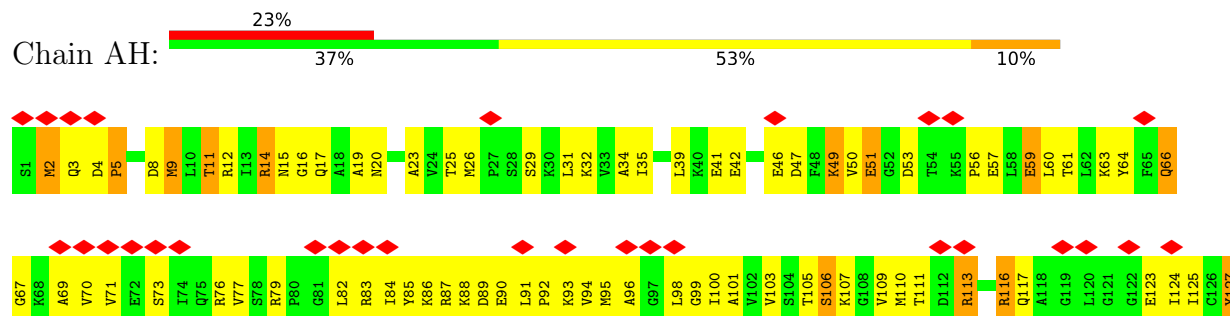
• Molecule 17: 30S ribosomal protein S6



• Molecule 18: 30S ribosomal protein S7



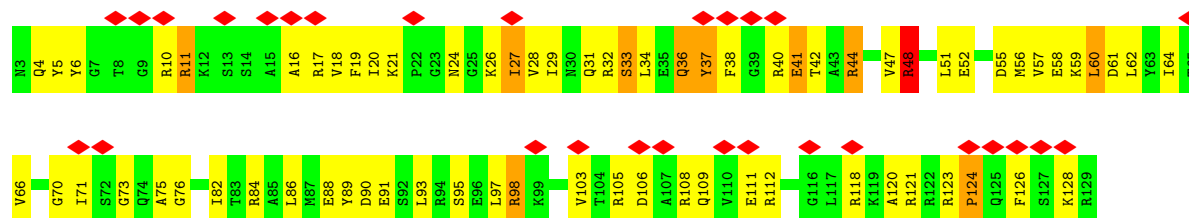
• Molecule 19: 30S ribosomal protein S8



V128
A129

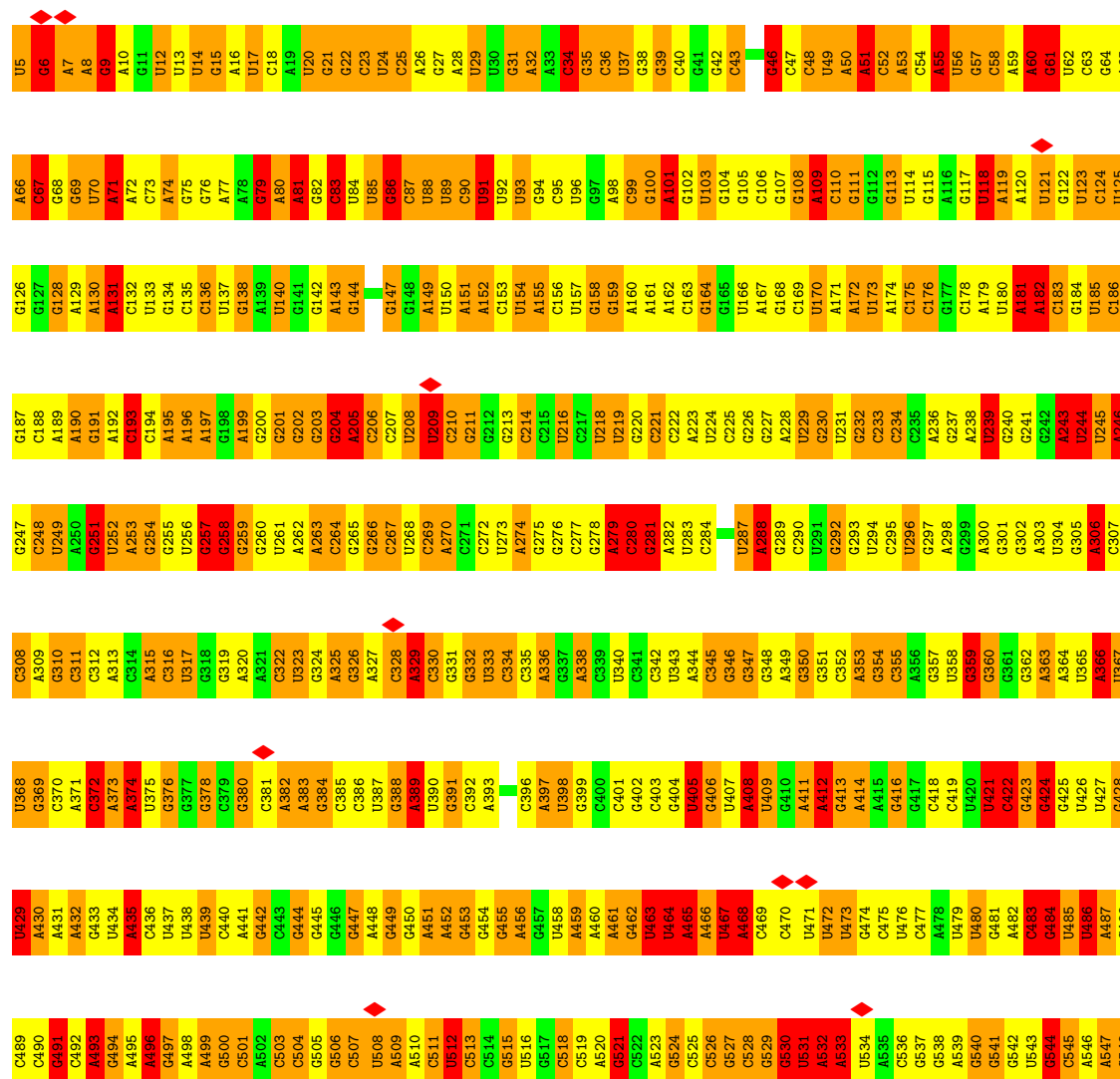
• Molecule 20: 30S ribosomal protein S9

Chain AI: 23% 44% 47% 8%

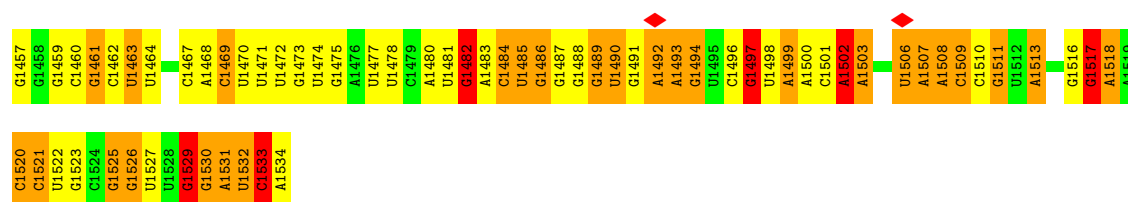


• Molecule 21: 16S rRNA

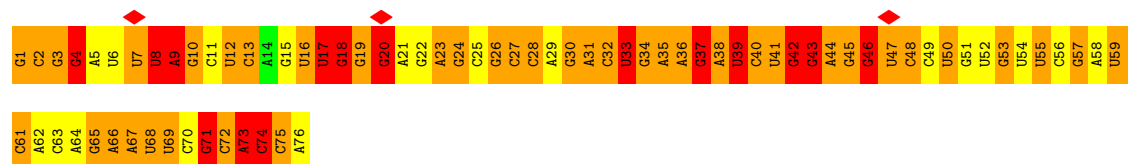
Chain AA: 11% 39% 37% 13%



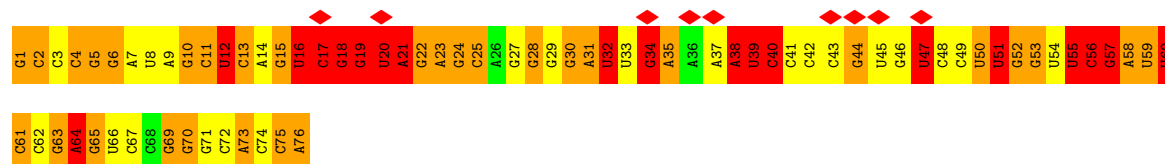
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G1337	G1338	G1339	A1340	U1341	C1342	G1343	C1344	U1345	A1346	G1347	U1348	A1349	A1350	U1351	C1352	G1353	U1354	G1355	G1356	A1357	U1358	C1359	A1360	G1361	A1362	A1363	U1364	G1365	C1366	C1367	A1368	C1369	G1370	G1371	U1372	G1373	A1374	A1375	U1376	A1377	C1378	G1379	U1380	U1381	C1382	C1383	C1384	G1385	G1386	C1387	C1388	C1389	U1390	U1391	A1392	U1393	A1394	G1395	A1396		
C1277	G1278	G1279	A1280	C1281	C1282	U1283	C1284	A1285	U1286	A1287	A1288	A1289	G1290	U1291	G1292	C1293	G1294	U1295	G1296	G1297	U1298	A1299	G1300	U1301	C1302	C1303	G1304	G1305	A1306	U1307	U1308	G1309	G1310	G1311	A1312	U1313	C1314	U1315	G1316	C1317	A1318	A1319	C1320	U1321	C1322	G1323	A1324	C1325	U1326	C1327	C1328	A1329	U1330	G1331	A1332	U1333	A1334	G1335	A1336		
C1217	C1218	A1219	G1220	G1221	G1222	C1223	U1224	A1225	A1226	A1227	A1228	A1229	C1230	G1231	U1232	C1233	C1234	U1235	A1236	C1237	A1238	A1239	U1240	G1241	G1242	C1243	G1244	C1245	A1246	U1247	A1248	U1249	A1250	A1251	A1252	G1253	A1254	G1255	A1256	U1257	G1258	C1259	G1260	U1261	C1262	C1263	U1264	C1265	G1266	C1267	G1268	A1269	U1270	A1271	G1272	C1273	A1274	G1275	C1276		
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G973	A974	U975	G976	A977	A978	C979	C980	U981	U982	A983	C984	G985	U986	G987	U991	C992	G993	A994	C995	U996	G997	C998	C999	A1000	C1001	G1002	C1003	A1004	A1005	G1006	U1007	U1008	U1009	C947	G947	G988	A889	G890	U891	A892	C893	G894	U895	U896	U897	A958	A959	U960	U961	C962	G963	A964	U965	G966	C967	U968	A969	C970	G971	C972	
C912	A913	A914	A915	U916	A919	U920	U921	G922	A923	C924	G925	G926	C927	G928	A929	C930	U931	C932	G933	A934	A935	C936	A937	A938	G939	C940	G941	G942	U943	G944	A945	G946	G947	C948	A949	U950	G951	U952	G953	G954	U955	U956	U957	A958	A959	U960	U961	C962	G963	A964	U965	G966	C967	U968	A969	C970	G971	C972			
G852	C853	U854	U855	C856	C857	G858	U859	A860	G861	C862	U863	A864	A865	C866	G867	A868	C869	U870	C871	A872	G873	A874	U875	C876	G877	A878	C879	A880	G881	C882	C883	U884	G885	A825	C826	U827	G827	A828	U829	A830	C831	U832	G833	U834	U835	A836	U837	G838	C839	C840	A841	U842	G843	A844	U845	A846	U847	C848	A849	U850	C851
A792	U793	A794	C795	C796	C797	U798	G799	U799	U799	A800	U801	C802	G803	U804	C805	A806	A807	C808	G809	U810	A811	A812	A813	A814	A815	A816	C817	A818	A819	U820	C821	C822	C823	G824	A825	C826	U827	U828	G829	A830	A831	C832	G833	U834	U835	A836	U837	G838	C839	C840	A841	U842	C843	A844	U845	A846	U847	C848	A849	U850	C851
C732	G733	C734	C735	C736	C737	C738	C739	U740	G741	C742	A743	C744	A745	A746	U747	G748	A749	C750	U751	G752	A753	C754	G755	C756	U757	C758	A759	U760	G761	U762	C763	C764	G765	A766	U767	A768	G769	C770	G771	U772	C773	G774	G775	A776	U777	G778	C779	A780	A781	C782	C783	A784	G785	G786	U787	A788	U789	A790	G791		
G671	U672	A673	C674	U675	U676	U677	U678	C679	U680	A681	C682	G683	U684	C685	U686	A687	C688	G689	U690	C691	U692	A693	C694	A695	C696	U697	C698	U699	G700	U701	A702	C703	A704	G705	U706	U707	C708	U709	G710	U711	A712	G713	U714	A715	A716	U717	U718	C719	C720	U721	U722	C723	G724	A725	C726	U727	A728	U729	A730	G731	
C611	C612	C613	C614	G615	G616	G617	C618	U619	C620	A621	C622	U623	G624	C625	U626	A627	C628	G629	A630	C631	U632	A633	C634	A635	U636	C637	U638	U639	A640	U641	A642	C643	U644	A645	C646	C647	A648	U649	G650	C651	U652	U653	U654	A655	C656	U657	U658	C659	C660	G661	U662	A663	C664	U665	U666	C667	G668	A669	U670		
C549	C550	U551	U552	A553	A554	U555	C556	C557	A558	A559	A560	U561	U562	A563	U564	C565	U566	C567	A568	C569	U570	A571	A572	A573	A574	C575	C576	C577	C580	C581	C584	C586	C587	G588	U589	U590	U591	C592	U593	U594	A595	A596	C597	U598	C599	A600	G601	A602	U603	G604	U605	G606	A607	U608	A609	U610					



• Molecule 22: A/T-site tRNA Phe



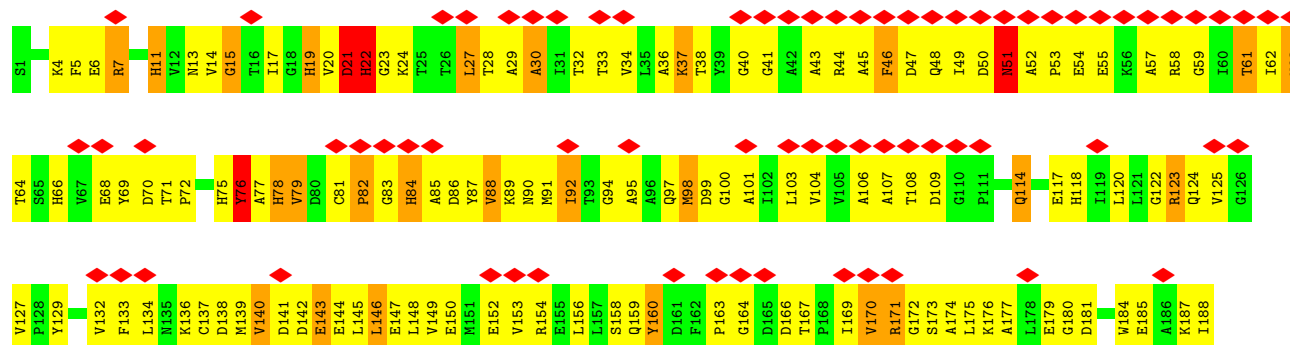
• Molecule 23: P-site tRNA fMet (Unmodified bases except for Thymine 54)

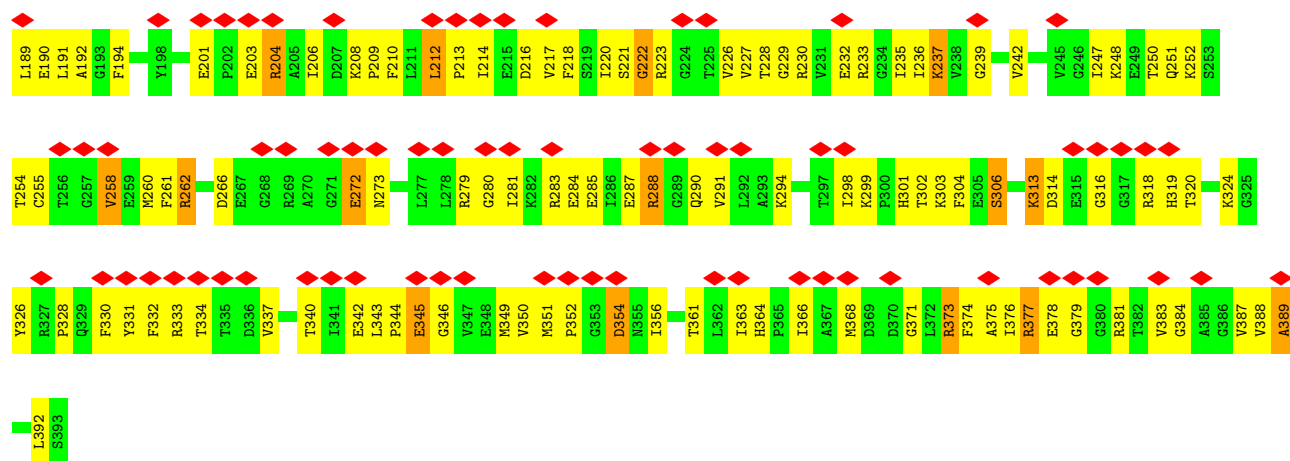


• Molecule 24: mRNA

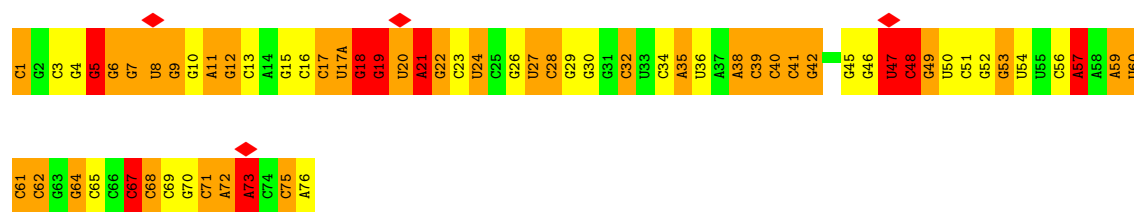


• Molecule 25: Elongation factor Tu

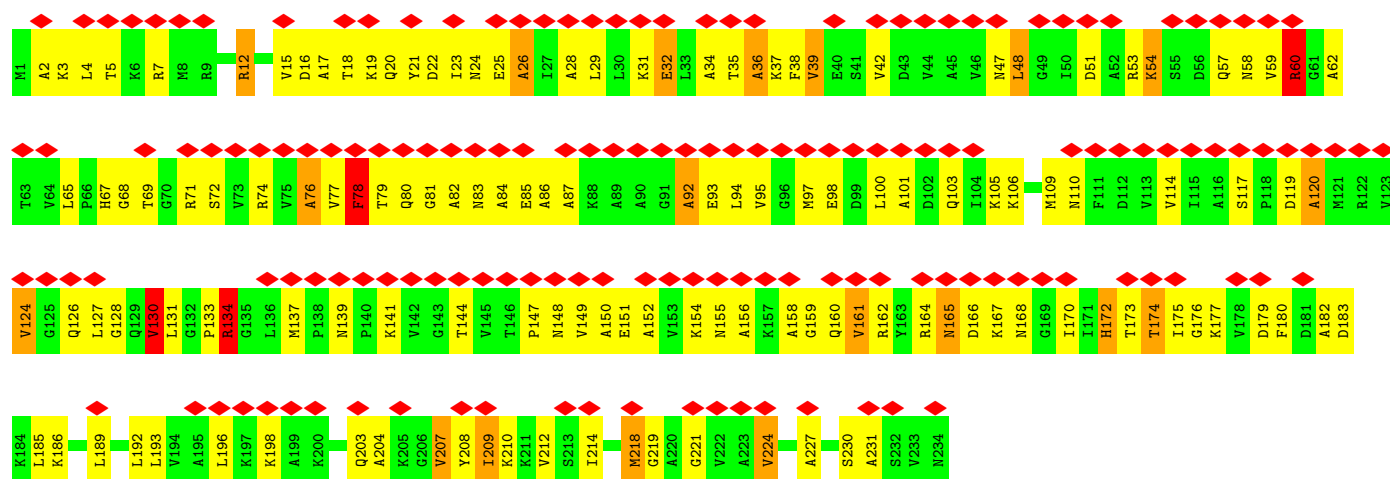




• Molecule 26: E-site tRNA Phe

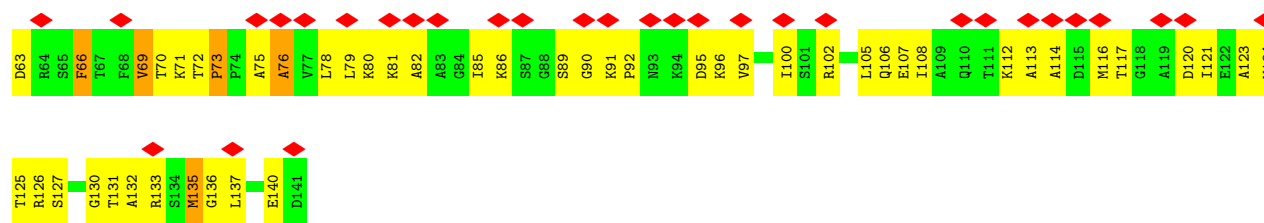


• Molecule 27: 50S ribosomal protein L1



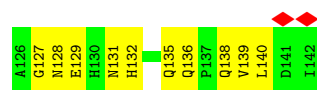
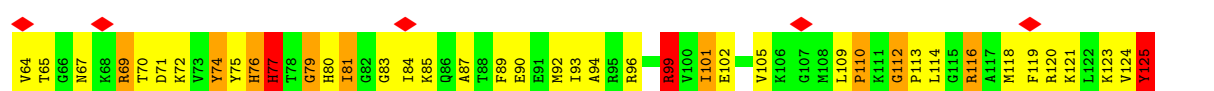
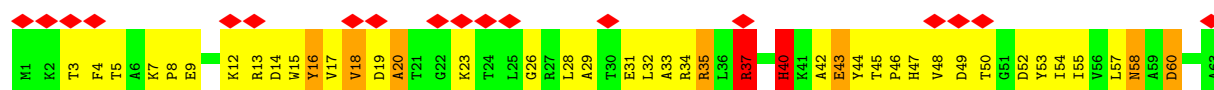
• Molecule 28: 50S ribosomal protein L11





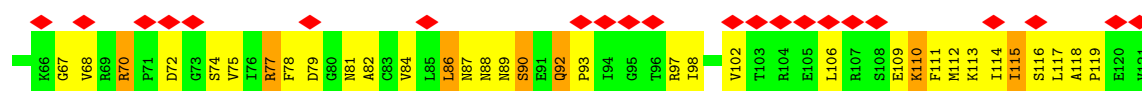
• Molecule 29: 50S ribosomal protein L13

Chain BJ: 18% 35% 51% 11% .



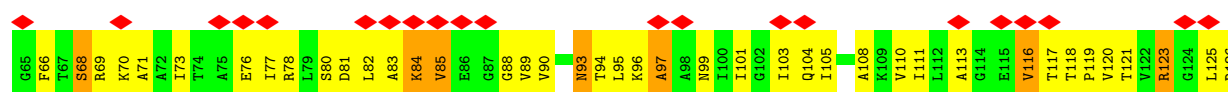
• Molecule 30: 50S ribosomal protein L14

Chain BK: 45% 45% 10%

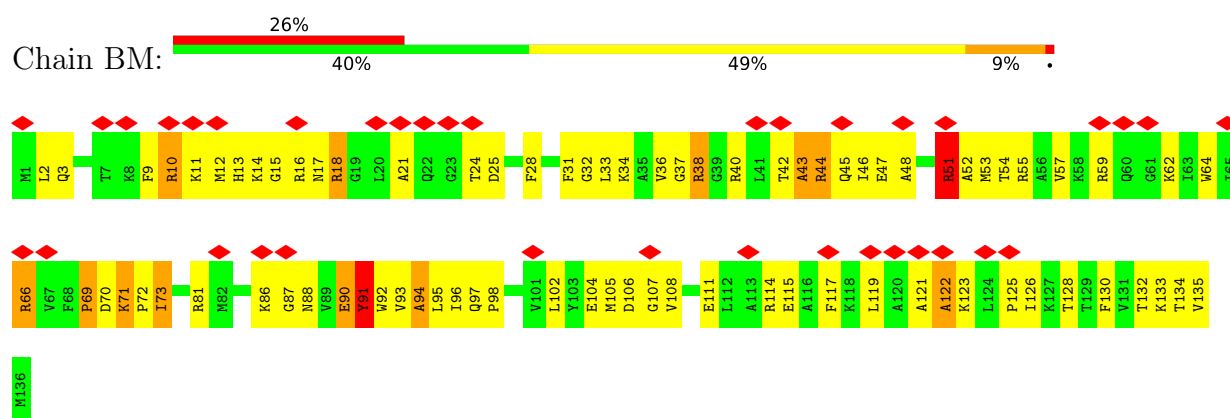


• Molecule 31: 50S ribosomal protein L15

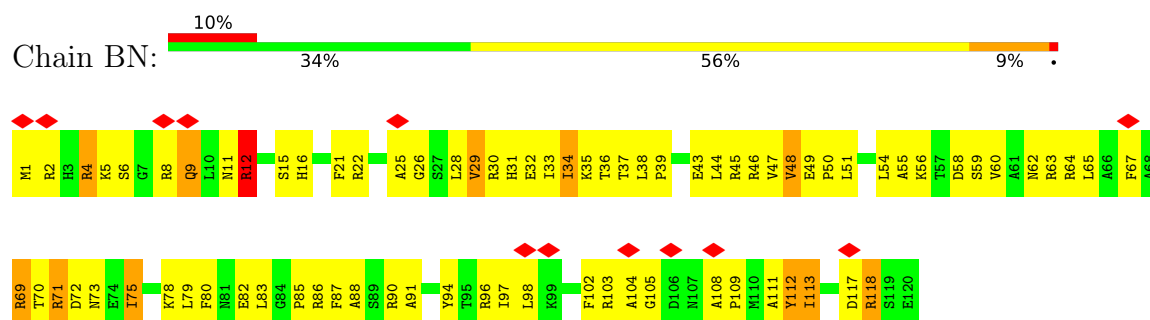
Chain BL: 33% 38% 51% 10% .



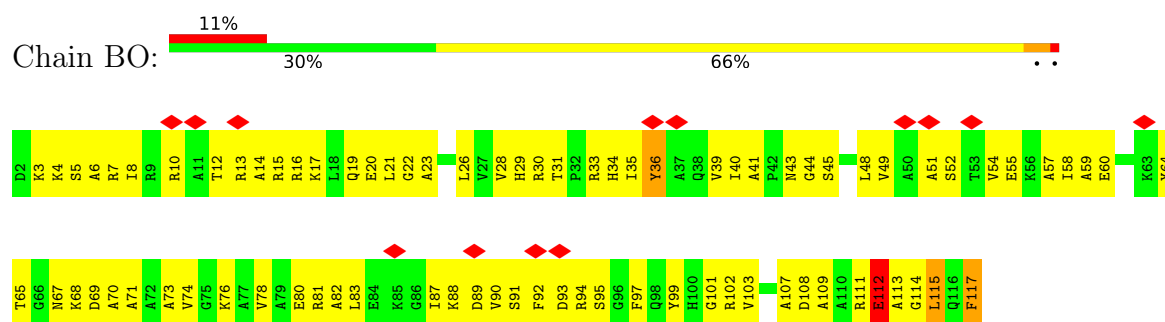
• Molecule 32: 50S ribosomal protein L16



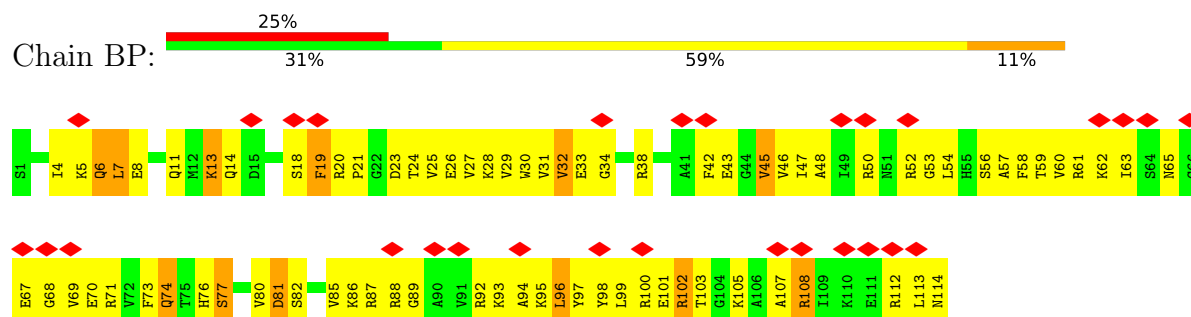
- Molecule 33: 50S ribosomal protein L17



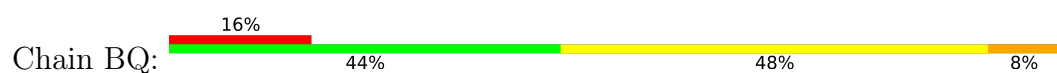
- Molecule 34: 50S ribosomal protein L18

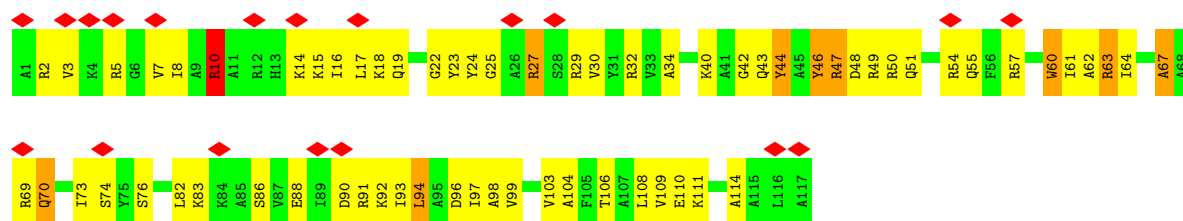


- Molecule 35: 50S ribosomal protein L19

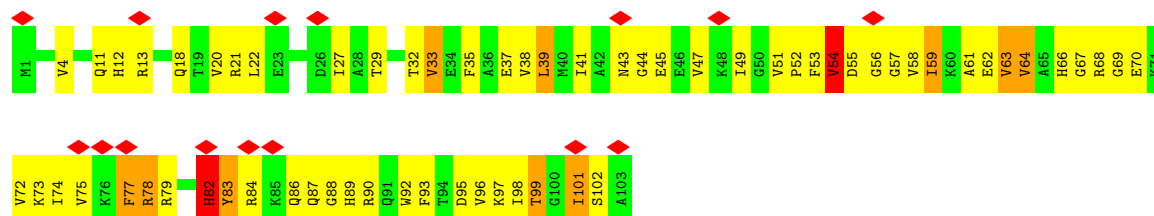


- Molecule 36: 50S ribosomal protein L20

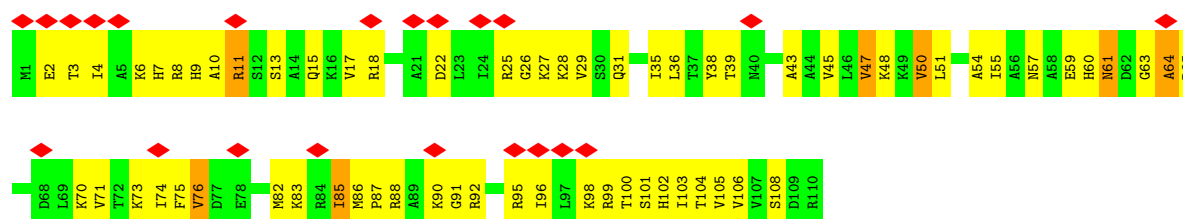




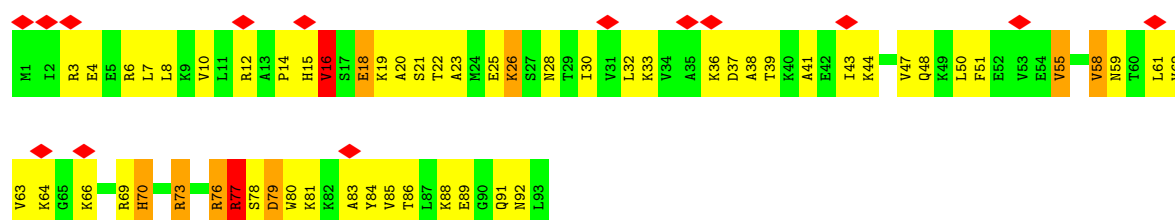
• Molecule 37: 50S ribosomal protein L21



• Molecule 38: 50S ribosomal protein L22



• Molecule 39: 50S ribosomal protein L23

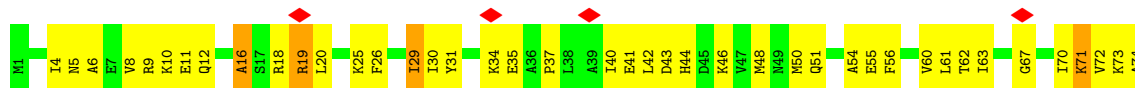
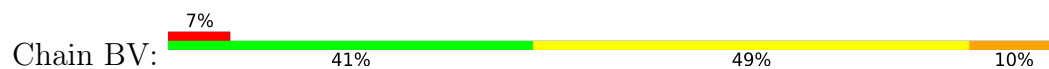


• Molecule 40: 50S ribosomal protein L24

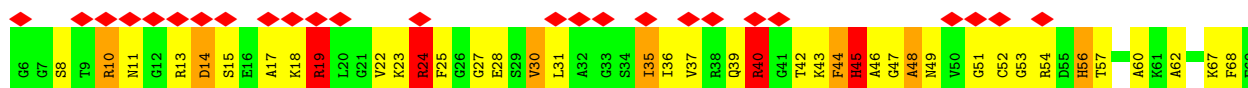




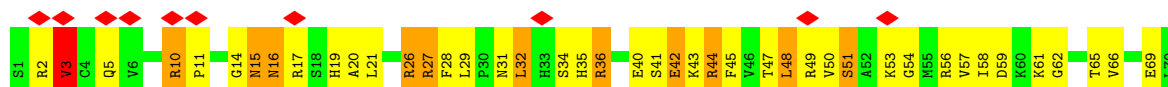
- Molecule 41: 50S ribosomal protein L25



- Molecule 42: 50S ribosomal protein L27



- Molecule 43: 50S ribosomal protein L28

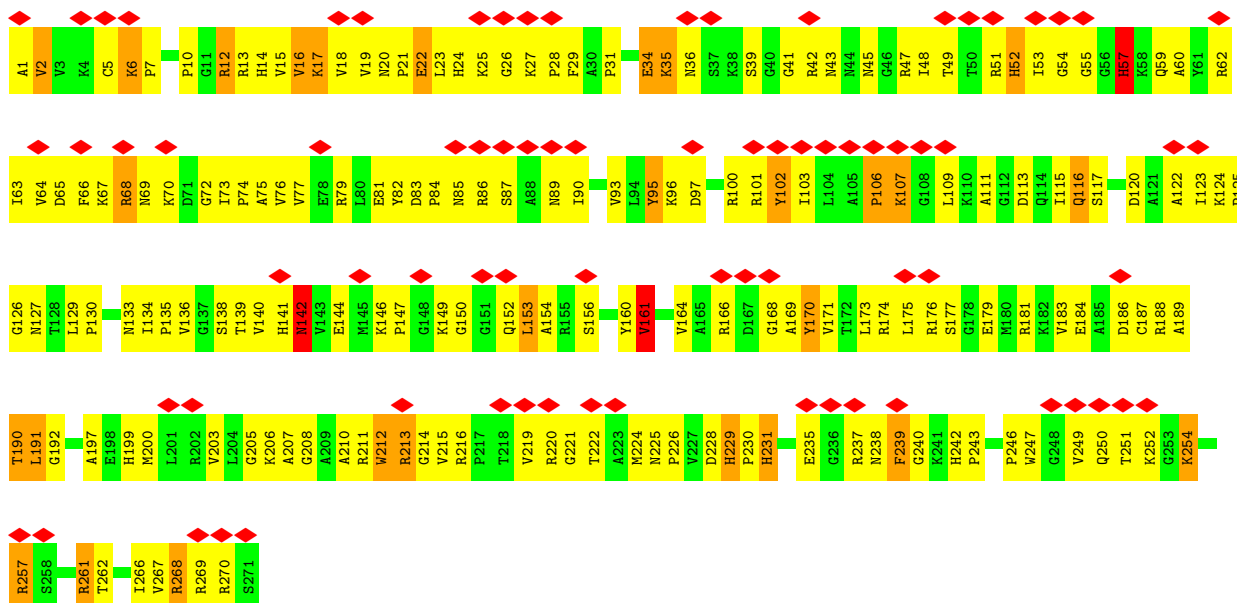


- Molecule 44: 50S ribosomal protein L29



- Molecule 45: 50S ribosomal protein L2

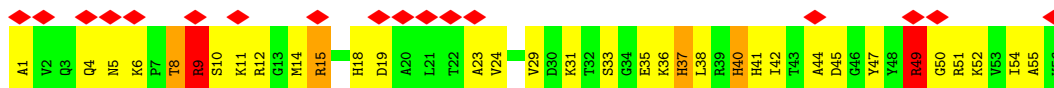
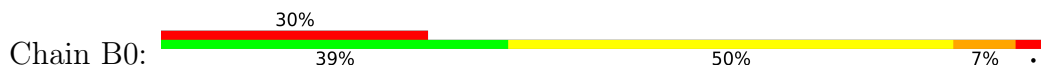




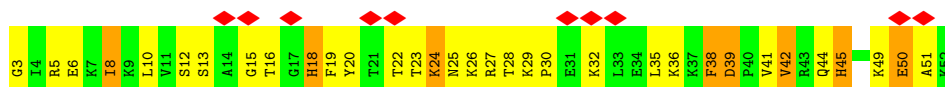
- Molecule 46: 50S ribosomal protein L30



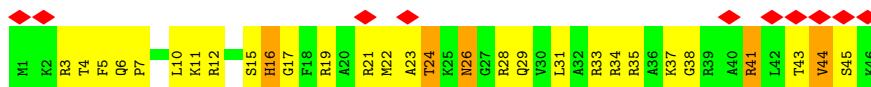
- Molecule 47: 50S ribosomal protein L32



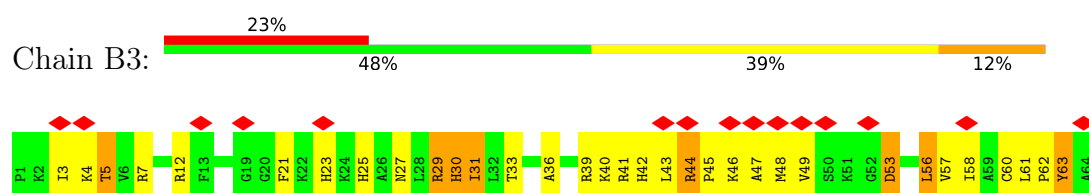
- Molecule 48: 50S ribosomal protein L33



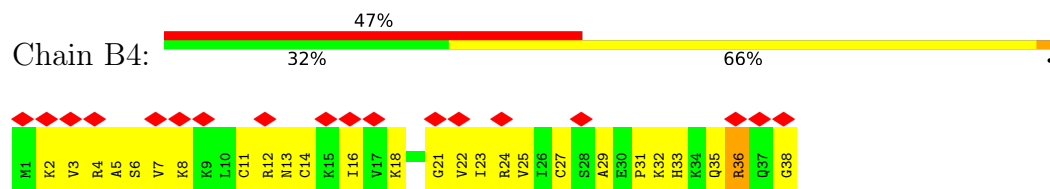
- Molecule 49: 50S ribosomal protein L34



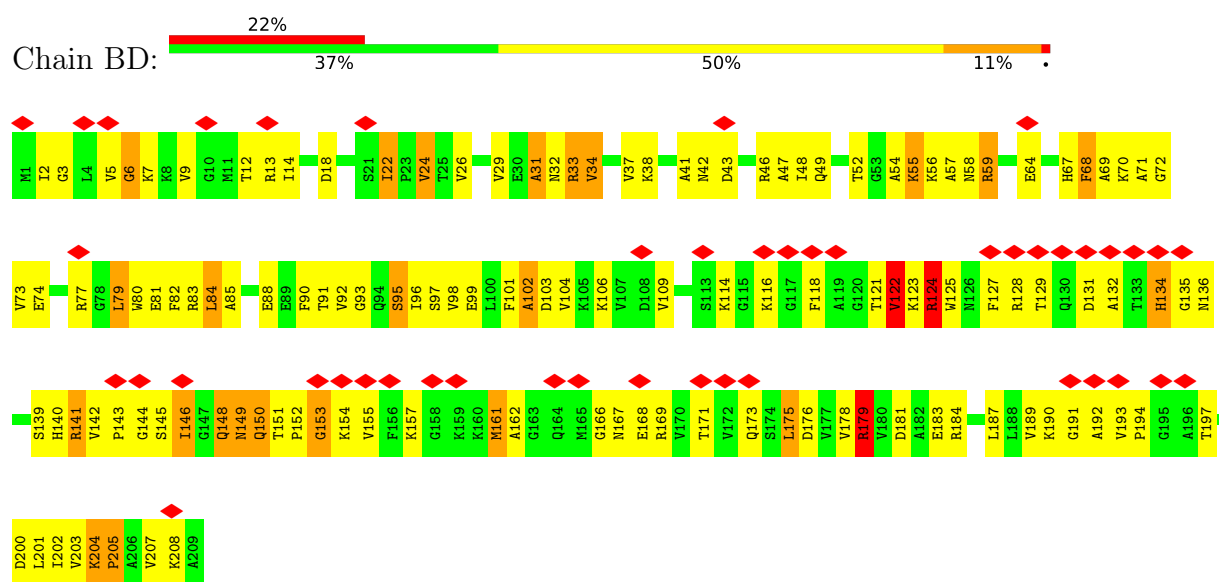
- Molecule 50: 50S ribosomal protein L35



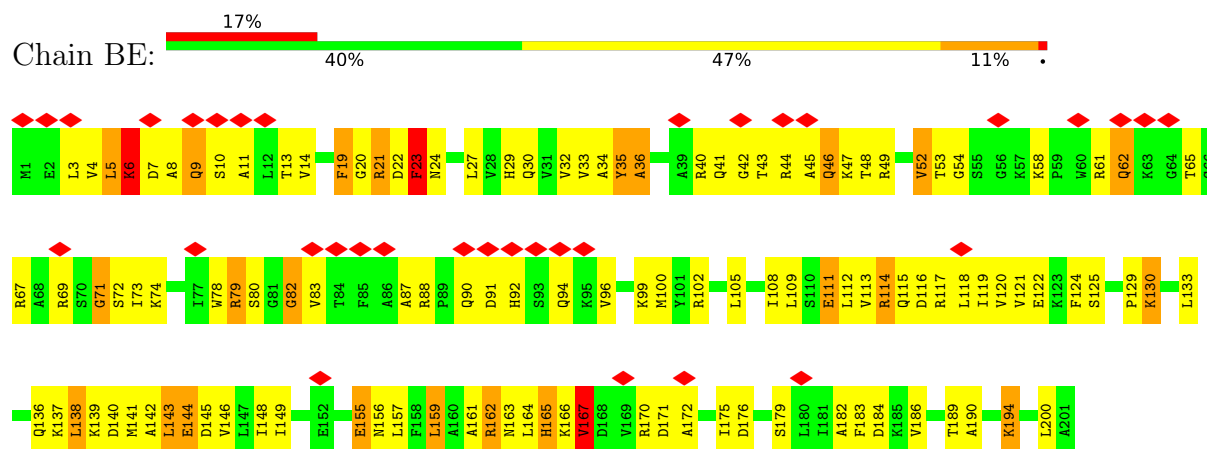
• Molecule 51: 50S ribosomal protein L36



• Molecule 52: 50S ribosomal protein L3

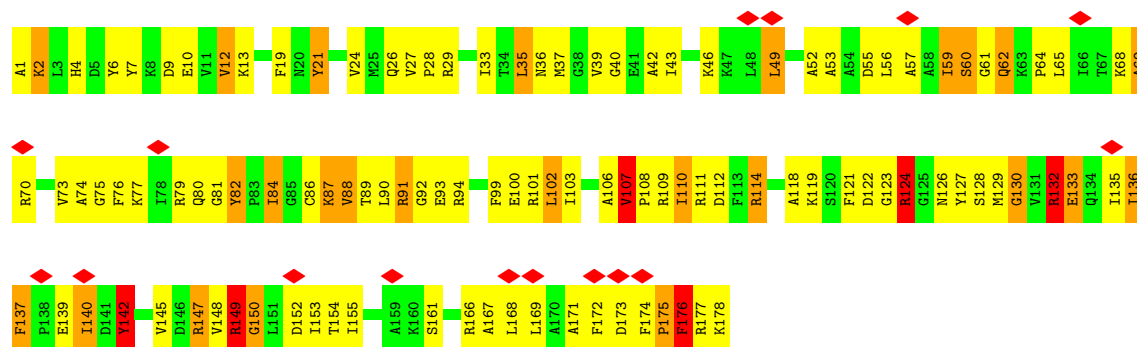


• Molecule 53: 50S ribosomal protein L4

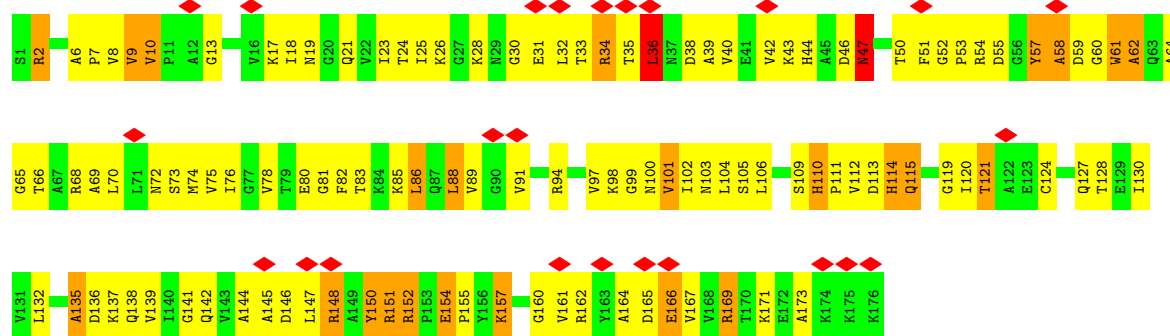


• Molecule 54: 50S ribosomal protein L5

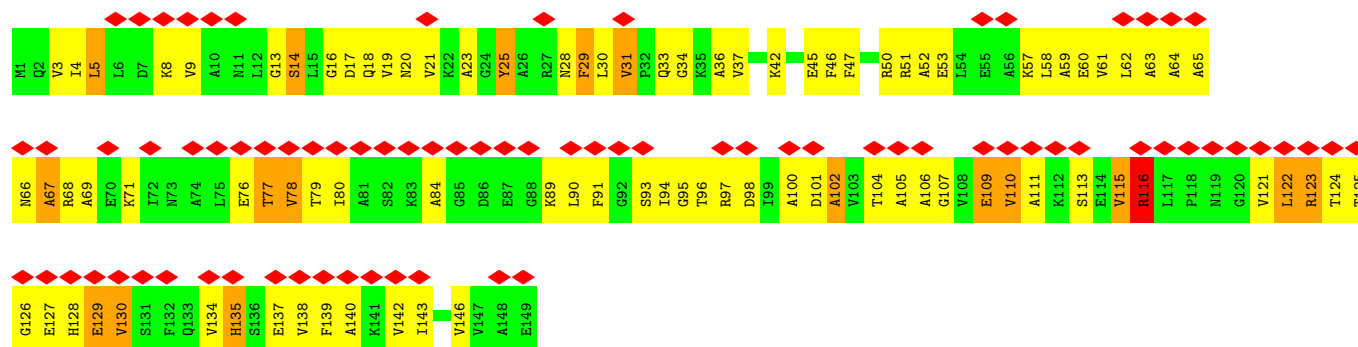




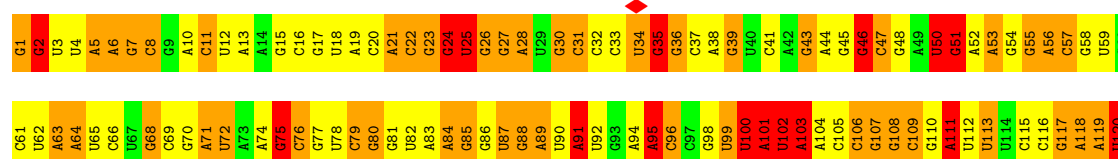
• Molecule 55: 50S ribosomal protein L6



• Molecule 56: 50S ribosomal protein L9



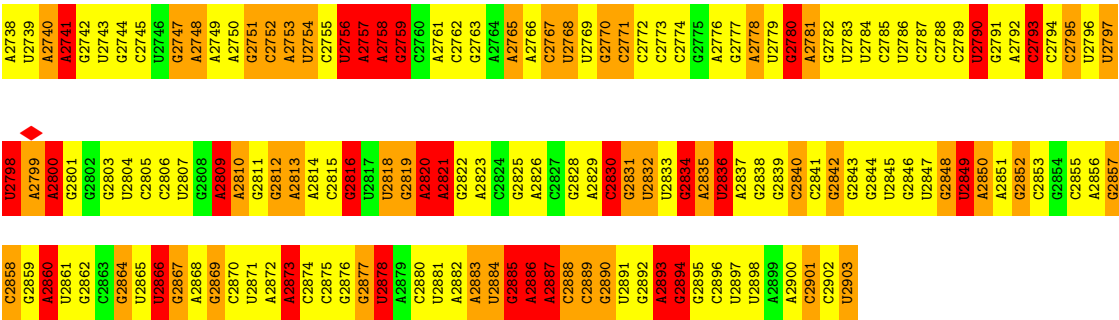
• Molecule 57: 23S ribosomal RNA



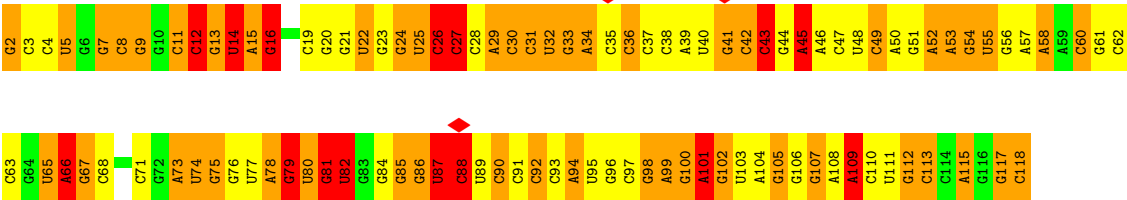
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G1034	G974	C912	C851	C791	C731	C671	A608	G547	C486	G425	A353	G303	U243	C182	G122
U1035	A975	U913	U852	A792	C732	C672	A609	G548	C364	C426	C364	U304	A244	C183	G123
G1036	G976	G914	C853	A793	G733	C673	C611	G549	C488	U427	C365	U305	G245	G185	G124
G1037	G977	C915	C854	A794	A734	C674	C612	C550	G489	A428	C366	U306	G246	C186	A125
G1038	G978	G916	G855	C795	A735	A675	G612	C551	C490	A429	C367	G307	G247	C187	A126
A1039	A979	A917	G856	C796	C736	C676	A613	U552	G491	A430	A358	G308	G248	C188	A127
A1040	A980	A918	G857	C797	C737	A677	A614	U553	A492	U431	U359	A309	C249	C189	C128
A1041	A981	A919	G858	C798	G738	C678	U615	U554	C493	A432	A370	A310	G250	A190	C129
A1042	A982	A920	G859	C799	A739	C679	A616	G555	C494	A433	A371	A311	A251	A191	C130
A1043	A983	C921	U860	A800	C740	C680	G617	U556	G495	U434	G372	G312	G252	C192	A131
C1043	A984		A861	G803	U741	G681	C618	C557	G496	C435	U373	G313	C253	U193	G132
C1044	C985	G924	G862	A802	A742	C682	C619	C558	A497	C436	A374	C314	G254	C194	U135
C1045	C986	A925	A863	U803	A743	U683	G620	C559	A498	U437	G375	C315	A255	A195	U136
G1047	C987	G926	G864	A804	U744	C684		C560	U499	U438	G376	C316	A256	A196	G136
A1048	A988	A927	C965	G805	C745	A685	C624	C561	G500	A439	G377	C317	G257	C197	G137
A1049	A989	A928	A866	C806	U746	U686	G625	U562	A501	C440	C378	C318	G258	C198	U138
C1049	U929	U929	C967	U807	U747	C687	A626	A563	A502	U441	G379	C319	G259	A199	U139
A1050	C991	G930		G808	G748	U688	A627	C564	A503	G442	G380	A320	G260	U200	C140
G1051	C992	U931	U870	G809	A749	U689	C628	C565	A504	A443	G381	U321	G261	C201	G141
C1052	G993	U932	U871	U810	A750	C690	G629	C566	A505	C444	A382	A322	A262	U202	C142
A1053	C994	A933	U872	U811	A751	C691	G630	U567	G506	C445	C383	C323	G263	A203	C143
C1054	C995	C934	C873	C812	A752	C692	A631	U568	A507	G446	A384	A324	C264	A204	A144
G1055	A996	U934	G874	U813	A753	A693	A632	U569	A508	A447	C385	G325	A265	G205	C145
C1056	C997	C935	A866	C814	U754	U694	A633	G570	C509	U448	C386	G326	G266	U206	A146
A1057	C998	A936	G875	C914	A936	C694	A633	C570	C509	U448	C386	G326	G266	U206	A146
U1058	G999	C937	A877	C815	U755	G695	C634	U571	C510	A449	U387	G327	C267	A207	C147
G1059	U999	G938	A878	C816	A756	G696	C635	U572	U511	G450	C388	U328	C268	C208	U148
U1060	A1000	G939	A879	C817	G757	G697	G636	U573	G512		C389	G329	C269	C209	A149
U1061	A1001	C940	C879	G818	C758	C698	A637	U574	A513		C390	A330	G270	C210	U150
G1062	G1002	A941	G880	A819	C759	G699	U638	A575	A514	A454	C391	A331	G271	C211	C151
C1063	G1003	G942	G881	A820	G760	G700	U639	U576	A515	A455	C392	A332	G272	C212	C152
A1064	U1004	A943	G882	A821	A761	G701	C640	U577	C516	C456	C393	G327	A273	A213	C153
	C1005	C944	G883	G822	U762	U702	U641	G578	C517	A457	U395	C334	C274	G214	U154
G1067	C1006	A945	U884	G823	C763	U703	U642	G579	G518	G458	C396	C335	C275	G215	A155
A1068	A1007	C946	C885	U824	A764	G704	A643	U580	U519	U459	U397	C336	U276	A216	A156
U1069	C1008	A947	A886	A825	C765	A705	A644	C581	G520	A460	C398	C337	G277	A217	C157
A1070	A1009	C948	U887	U826	U766	U706	C645	A582	U521	C461	U399	C338	G278	A218	U158
G1071	G949	G949	C989	U827	U767	G707	U646	U583	A522	C462	G400	U339	A279	A219	G159
C1072	U1011	C988	C989	U828	G768	G708	C647	C584	C523	G463	A401	U339	A279	A219	G159
A1073	U1012	G950	C989	A829	C769	U709	G643	C585	G524	U464	A402	C341	C281	A221	A161
G1074	C1013	C951	C930	G830	G770	U710	G649	A586	U525	G465	U403	A342	A282	A222	A162
C1075	U1014	G953	G891	G831	C771	G711	G650	C587	A526	G466	A404	C343	G283	A223	C163
G1076	A1015	C954	A892	U832	C772	G712	G651	U588	C527	G467	U405	A344	U284	U224	C164
U1077	G1016	U955	C993	A833	U773	G713	U652	U589	A528	G468	A406	A345	G285	C225	A165
G1078	G1017	U956	C994	G834	C774	U714	U653	A590	A529	G469	A407	A346	U286	C226	A166
C1079	U1018	C957	U895	C835	G775	A715	C654	A591	G530	A470	G408	A347	G287	A227	A167
A1080	A1020	G958	A896	G836	G776	C716	A655	A592	C531	A471	G409	A348	U288	C228	G168
U1081	G1021	A959	C997	C837	C777	A717	G656	A593	C532	A472	U410	U349	G289	C229	G169
C1082	A1022	A960	U898	G838	G778	A718	U657	U594	G533	G473	G411	G350	U290	G230	U170
U1083	G1023	C961	A899	U839	U779	C719	U658	C595	U534	G474	A412	C351	G291	A231	U171
A1084	U1024	G962	A900	C940	G780	U720	C659	U596	G535	C475	U292	C352	G292	A232	A172
A1085	G1025	U963	C901	G841	A781	A721	C680	U597	G536	G476	C414	C353	U293	A233	A173
A1086	C1026	C964	C903	G843	A782	C723		G597	G537	A477		A354	G294	U234	A174
G1087	A1027	G965	G904	A844	A783	G723	G683	U598	G537	A478	C417	U355	G295	U235	A175
A1088	A1028	C966	G905	A845	G784	U724	G684	G604	G538	A479	C418	G356	U296	C236	A176
A1089	A1029	U967	A906	A846	G785	G725	U685	G605		A480	U419	G357	G297	C237	A177
A1090	C1030		U906	U846	G786	G726	U686	A603	C542	A481	C420	G358	G298	C238	G178
G1091	A1031	U907	G907	U847	C787	A727	U667	G604	G543	A482	C421	U359	G299	C239	C179
C1092	G1032		C908	C948	C788	G728	U668	A668	C544	A483	C422	U360	A299	C239	C180
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C1887	G1826	U1765	G1702	G1642	A1580	U1457	U1397	A1336	A1274	G1154	U1094
G1888	U1827	G1766	G1703	G1643	G1581	U1458	C1398	G1337	G1214	G1154	
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C1895	U1834	A1773	G1710	A1650	U1588	U1588	U1405	G1344	C1221	C1161	
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U1944	U1884	A1821	C1761	A1698	C1638	U1576	G1514	A1453	C1270	U1208	
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	U1885	G1823	C1763	U1700	A1640	U1578	G1516	G1455	A1272	C1210	
	U1886		C1764	A1701	A1641	A1579	G1517	G1456	U173	G1212	

G2677	U2615	U2554	G2494	A2433	G2373	U2312	U2192	U2132	A2070	C2008	G1949
C2678	C2616	U2555	G2495	A2434	C2374	C2313	G2193	G2153	A2071	A2009	U1950
A2679	U2617	C2556	A2496	A2435	G2375	A2314	U2194	A2134	C2072	G2010	G1951
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C2683	G2621	U2560	C2501	A2439	G2379	G2318	A2198	G2138	U2076	A2014	U1955
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C2693	G2631	U2571	A2510	A2450	G2389	A2328	G2208	U2148	A2090	C2025	G1965
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A2725	G2664	A2602	A2542	A2482	G2421	G2361	U2240	U2181	U2122	G2061	A1998
G2726	A2665	U2603	G2543	U2483	G2422	C2362	A2241	U2182	G2123	A2062	C2000
C2727	C2666	U2604	G2544	G2484	U2423	G2363	U2242	U2183	G2124	C2063	C2001
U2728	G2667	U2605	G2545	G2485	C2424	G2364	U2243	A2184	G2125	G2064	A2003
A2729	U2668	C2606	U2546	C2486	A2425	G2365	U2244	U2185	A2126	C2065	G2002
G2730	G2669	G2607	A2547	G2487	A2426	A2366	U2245	G2186	G2127	C2066	A2004
U2731	C2670	U2608	U2548	U2488	C2427	G2367	G2246	U2187	G2128	G2067	A2005
G2732	G2671	U2609	U2549	G2489	G2428	C2368	A2247	U2188	U2130	U2068	C2007
A2733	C2672	C2610	G2550	U2490	G2429	A2369	G2307	U2189	G2129	G2069	U2007
U2734	G2673	C2611	U2551	U2491	U2430	A2370	U2249	G2190			
G2735	G2674	C2612	U2552	U2492	U2431	G2371	G2250	A2191			
A2736	A2675	U2613	U2553	U2493	A2432	U2372	G2251				
G2737	G2676	A2614	G2553	U2493							



● Molecule 58: 5S ribosomal RNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	131599	Depositor
Resolution determination method	Not provided	
CTF correction method	Correction of reconstruction of each defocus group	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	4520	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	58279	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	303.004	Depositor
Minimum map value	-114.578	Depositor
Average map value	6.031	Depositor
Map value standard deviation	29.145	Depositor
Recommended contour level	90	Depositor
Map size (Å)	370.80002, 370.80002, 370.80002	wwPDB
Map dimensions	309, 309, 309	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.2, 1.2, 1.2	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, GDP

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	AJ	2.35	37/797 (4.6%)	2.33	43/1077 (4.0%)
2	AK	2.42	47/893 (5.3%)	2.46	59/1205 (4.9%)
3	AL	2.28	41/969 (4.2%)	2.34	56/1300 (4.3%)
4	AM	2.49	46/885 (5.2%)	2.68	78/1181 (6.6%)
5	AN	2.40	31/786 (3.9%)	2.69	74/1046 (7.1%)
6	AO	2.40	37/724 (5.1%)	2.77	85/966 (8.8%)
7	AP	2.46	33/649 (5.1%)	2.37	39/870 (4.5%)
8	AQ	2.48	39/658 (5.9%)	2.41	32/881 (3.6%)
9	AR	2.35	21/463 (4.5%)	2.52	32/621 (5.2%)
10	AS	2.46	34/653 (5.2%)	2.37	41/877 (4.7%)
11	AT	2.31	27/671 (4.0%)	2.52	56/888 (6.3%)
12	AU	2.37	19/431 (4.4%)	2.48	29/570 (5.1%)
13	AB	2.24	60/1736 (3.5%)	2.49	120/2338 (5.1%)
14	AC	2.36	73/1652 (4.4%)	2.49	113/2225 (5.1%)
15	AD	2.34	70/1665 (4.2%)	2.50	118/2227 (5.3%)
16	AE	2.35	48/1119 (4.3%)	2.49	75/1504 (5.0%)
17	AF	2.41	38/836 (4.5%)	2.49	65/1128 (5.8%)
18	AG	2.40	59/1188 (5.0%)	2.63	104/1591 (6.5%)
19	AH	2.27	43/989 (4.3%)	2.57	75/1326 (5.7%)
20	AI	2.27	41/1034 (4.0%)	2.35	55/1375 (4.0%)
21	AA	2.00	688/36763 (1.9%)	1.85	1210/57350 (2.1%)
22	AY	2.39	69/1814 (3.8%)	2.27	147/2827 (5.2%)
23	AW	2.45	52/1809 (2.9%)	2.00	82/2819 (2.9%)
24	AX	2.06	3/260 (1.2%)	1.86	8/403 (2.0%)
25	AZ	2.42	154/3091 (5.0%)	2.53	247/4182 (5.9%)
26	AV	2.06	39/1814 (2.1%)	1.90	68/2825 (2.4%)
27	B5	2.30	75/1748 (4.3%)	2.62	139/2355 (5.9%)
28	BI	2.36	52/1046 (5.0%)	2.53	86/1410 (6.1%)
29	BJ	2.35	52/1152 (4.5%)	2.43	77/1551 (5.0%)
30	BK	2.34	37/940 (3.9%)	2.44	61/1258 (4.8%)
31	BL	2.45	49/1054 (4.6%)	2.52	86/1403 (6.1%)
32	BM	2.31	49/1093 (4.5%)	2.53	74/1460 (5.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	BN	2.39	46/974 (4.7%)	2.52	73/1301 (5.6%)
34	BO	2.42	39/902 (4.3%)	2.57	73/1209 (6.0%)
35	BP	2.39	44/929 (4.7%)	2.38	54/1242 (4.3%)
36	BQ	2.25	36/960 (3.8%)	2.48	63/1278 (4.9%)
37	BR	2.37	41/829 (4.9%)	2.46	52/1107 (4.7%)
38	BS	2.31	35/864 (4.1%)	2.54	62/1156 (5.4%)
39	BT	2.13	19/745 (2.6%)	2.57	57/994 (5.7%)
40	BU	2.30	29/788 (3.7%)	2.53	48/1051 (4.6%)
41	BV	2.30	32/766 (4.2%)	2.52	58/1025 (5.7%)
42	BW	2.42	27/603 (4.5%)	2.47	40/797 (5.0%)
43	BX	2.42	34/635 (5.4%)	2.44	40/848 (4.7%)
44	BY	2.26	21/510 (4.1%)	2.46	37/677 (5.5%)
45	BC	2.37	91/2122 (4.3%)	2.54	154/2852 (5.4%)
46	BZ	2.25	24/453 (5.3%)	2.65	32/605 (5.3%)
47	B0	2.35	18/450 (4.0%)	2.48	27/599 (4.5%)
48	B1	2.33	16/417 (3.8%)	2.38	29/554 (5.2%)
49	B2	2.41	16/380 (4.2%)	2.68	34/498 (6.8%)
50	B3	2.26	25/513 (4.9%)	2.45	32/676 (4.7%)
51	B4	2.49	15/303 (5.0%)	2.56	25/397 (6.3%)
52	BD	2.31	73/1586 (4.6%)	2.41	101/2134 (4.7%)
53	BE	2.30	65/1571 (4.1%)	2.51	108/2113 (5.1%)
54	BF	2.31	55/1444 (3.8%)	2.57	117/1937 (6.0%)
55	BG	2.42	68/1343 (5.1%)	2.52	100/1816 (5.5%)
56	BH	2.24	46/1122 (4.1%)	2.60	97/1515 (6.4%)
57	BB	1.99	1355/69800 (1.9%)	1.84	2283/108892 (2.1%)
58	BA	2.00	55/2804 (2.0%)	1.86	100/4371 (2.3%)
All	All	2.12	4488/165195 (2.7%)	2.05	7530/246683 (3.1%)

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	AJ	0	3
2	AK	0	4
3	AL	0	7
4	AM	0	5
5	AN	0	5
6	AO	0	5
7	AP	0	3
8	AQ	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
9	AR	0	4
10	AS	0	1
11	AT	0	3
12	AU	0	5
13	AB	0	4
14	AC	0	5
15	AD	0	9
16	AE	0	1
17	AF	0	2
18	AG	0	4
19	AH	0	4
20	AI	0	6
21	AA	0	713
22	AY	0	40
23	AW	3	39
24	AX	0	3
25	AZ	0	8
26	AV	0	37
27	B5	1	7
28	BI	0	3
29	BJ	0	9
30	BK	0	1
31	BL	0	8
32	BM	0	4
33	BN	0	3
34	BO	0	4
35	BP	0	2
36	BQ	0	4
37	BR	0	6
38	BS	0	1
39	BT	0	2
40	BU	0	2
41	BV	0	4
42	BW	0	3
43	BX	0	3
44	BY	0	2
45	BC	0	9
46	BZ	0	3
47	B0	0	4
48	B1	0	2
49	B2	0	1
50	B3	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
51	B4	0	1
52	BD	0	5
53	BE	0	7
54	BF	0	9
55	BG	0	5
56	BH	0	3
57	BB	0	1349
58	BA	0	56
All	All	4	2445

All (4488) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AW	63	G	N9-C8	29.59	1.97	1.37
23	AW	63	G	N9-C4	26.14	1.90	1.38
23	AW	63	G	C5-C4	24.33	1.87	1.38
23	AW	63	G	N7-C5	23.42	1.86	1.39
23	AW	63	G	C8-N7	18.36	1.67	1.30
42	BW	67	LYS	N-CA	-15.02	1.31	1.46
54	BF	87	LYS	CA-C	-13.36	1.46	1.53
31	BL	31	GLY	CA-C	-13.08	1.43	1.52
11	AT	44	ALA	N-CA	-13.06	1.34	1.46
54	BF	33	ILE	CA-C	-12.42	1.38	1.52
52	BD	79	LEU	CA-C	-11.27	1.39	1.52
22	AY	48	C	C4'-C3'	11.24	1.70	1.53
6	AO	41	HIS	ND1-CE1	11.19	1.43	1.32
57	BB	2523	G	C2'-C1'	-11.11	1.36	1.53
7	AP	37	GLY	CA-C	-10.84	1.39	1.51
15	AD	44	LYS	CA-C	-10.79	1.40	1.53
22	AY	44	A	C2'-C1'	-10.77	1.37	1.53
16	AE	74	ALA	N-CA	-10.71	1.36	1.46
54	BF	73	VAL	CA-C	-10.66	1.39	1.52
49	B2	3	ARG	CA-C	-10.63	1.45	1.52
51	B4	25	VAL	CA-C	-10.60	1.40	1.52
14	AC	198	LYS	CA-C	-10.46	1.40	1.52
45	BC	199	HIS	ND1-CE1	10.42	1.43	1.32
35	BP	47	ILE	CA-CB	-10.42	1.42	1.54
52	BD	175	LEU	CA-C	-10.11	1.39	1.52
13	AB	220	VAL	CA-C	-10.10	1.40	1.52
21	AA	1199	U	C1'-N1	10.04	1.63	1.48
57	BB	2661	G	C2'-C1'	-9.99	1.38	1.53
57	BB	1637	A	C2'-C1'	-9.94	1.38	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BE	121	VAL	CA-C	-9.93	1.44	1.52
57	BB	726	G	O4'-C1'	-9.91	1.26	1.41
57	BB	441	U	C4'-O4'	9.86	1.60	1.45
8	AQ	44	HIS	ND1-CE1	9.86	1.42	1.32
41	BV	71	LYS	CA-C	-9.67	1.39	1.52
52	BD	42	ASN	C-N	9.58	1.43	1.32
1	AJ	62	ARG	NE-CZ	9.56	1.43	1.33
34	BO	114	GLY	CA-C	-9.56	1.38	1.51
20	AI	60	LEU	CA-C	-9.53	1.40	1.52
21	AA	67	C	C1'-N1	9.51	1.62	1.48
29	BJ	116	ARG	CA-C	-9.47	1.40	1.52
55	BG	103	ASN	CA-C	-9.41	1.41	1.52
13	AB	166	ASP	CA-CB	9.39	1.67	1.54
25	AZ	313	LYS	CA-C	-9.39	1.39	1.52
21	AA	1024	G	C2'-C1'	-9.37	1.39	1.53
20	AI	41	GLU	N-CA	-9.35	1.34	1.45
31	BL	90	VAL	CA-C	-9.35	1.41	1.52
34	BO	94	ARG	CD-NE	9.35	1.59	1.46
21	AA	104	G	C2'-C1'	-9.32	1.39	1.53
55	BG	124	CYS	C-N	9.27	1.43	1.34
5	AN	50	LEU	N-CA	-9.25	1.37	1.46
42	BW	18	LYS	C-N	9.24	1.45	1.33
17	AF	49	TYR	N-CA	-9.23	1.36	1.46
14	AC	176	THR	CA-C	-9.20	1.40	1.52
33	BN	69	ARG	CA-C	-9.20	1.42	1.52
13	AB	136	ARG	CD-NE	9.19	1.59	1.46
29	BJ	58	ASN	CA-C	-9.18	1.41	1.52
32	BM	59	ARG	NE-CZ	9.18	1.43	1.33
57	BB	1713	A	C2'-C1'	-9.15	1.39	1.53
30	BK	118	ALA	CA-C	-9.14	1.44	1.52
5	AN	92	ILE	CA-C	9.14	1.59	1.52
25	AZ	129	TYR	CA-C	-9.12	1.41	1.52
57	BB	1905	C	C1'-N1	-9.09	1.34	1.48
31	BL	18	ARG	NE-CZ	9.09	1.43	1.33
57	BB	1269	A	C3'-O3'	9.07	1.55	1.42
57	BB	1688	U	O3'-P	-9.07	1.47	1.61
34	BO	14	ALA	CA-CB	9.05	1.67	1.54
18	AG	147	ASN	C-O	-9.05	1.17	1.23
4	AM	78	ARG	NE-CZ	9.04	1.43	1.33
25	AZ	254	THR	CA-C	-9.04	1.41	1.52
53	BE	162	ARG	CD-NE	9.00	1.58	1.46
57	BB	1188	U	C1'-N1	8.95	1.61	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AM	94	LEU	CA-C	-8.94	1.43	1.53
53	BE	7	ASP	C-N	8.93	1.45	1.33
2	AK	31	VAL	CA-C	-8.92	1.41	1.52
43	BX	45	PHE	CA-C	-8.89	1.42	1.52
15	AD	38	GLY	CA-C	-8.88	1.43	1.52
11	AT	73	ARG	CD-NE	8.87	1.58	1.46
21	AA	1301	U	C1'-N1	8.87	1.60	1.47
53	BE	200	LEU	CA-C	-8.84	1.41	1.52
44	BY	52	ARG	CD-NE	8.84	1.58	1.46
27	B5	57	GLN	CA-C	-8.83	1.42	1.52
21	AA	624	C	C2'-C1'	-8.80	1.40	1.53
4	AM	82	LEU	N-CA	-8.79	1.35	1.46
51	B4	4	ARG	CZ-NH2	8.76	1.44	1.33
5	AN	33	VAL	CA-CB	-8.74	1.43	1.54
57	BB	2837	A	P-O5'	-8.73	1.46	1.59
57	BB	994	C	O3'-P	-8.72	1.48	1.61
55	BG	44	HIS	ND1-CE1	8.71	1.41	1.32
6	AO	76	ARG	NE-CZ	8.70	1.42	1.33
43	BX	58	ILE	CA-CB	-8.70	1.44	1.54
10	AS	80	ARG	CD-NE	8.69	1.58	1.46
21	AA	739	C	C5'-C4'	8.68	1.64	1.51
15	AD	28	ASP	CA-C	-8.68	1.42	1.53
34	BO	115	LEU	CA-C	-8.67	1.41	1.52
25	AZ	378	GLU	CA-C	-8.66	1.42	1.52
33	BN	56	LYS	N-CA	-8.66	1.35	1.46
42	BW	45	HIS	ND1-CE1	8.65	1.41	1.32
15	AD	137	SER	N-CA	-8.65	1.38	1.46
34	BO	7	ARG	CD-NE	8.65	1.58	1.46
5	AN	93	PRO	N-CA	-8.63	1.36	1.47
55	BG	25	ILE	CA-C	-8.63	1.42	1.52
16	AE	112	ALA	C-N	8.62	1.44	1.33
57	BB	2631	G	C5'-C4'	8.61	1.64	1.51
27	B5	74	ARG	CA-C	-8.61	1.43	1.52
57	BB	2103	C	O3'-P	-8.61	1.48	1.61
11	AT	81	GLN	N-CA	-8.59	1.36	1.46
57	BB	1885	A	C4'-C3'	8.58	1.65	1.52
57	BB	2379	G	C2'-C1'	-8.57	1.40	1.53
21	AA	764	C	O3'-P	-8.56	1.48	1.61
8	AQ	23	ALA	CA-C	-8.56	1.42	1.52
21	AA	9	G	C2'-C1'	-8.51	1.40	1.53
57	BB	1118	C	C4'-C3'	-8.50	1.39	1.52
35	BP	56	SER	CA-C	-8.49	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BS	95	ARG	NE-CZ	8.49	1.42	1.33
57	BB	1904	G	P-O5'	-8.48	1.47	1.59
57	BB	208	C	C1'-N1	8.47	1.61	1.48
37	BR	88	GLY	CA-C	-8.45	1.46	1.52
7	AP	25	ARG	CD-NE	8.44	1.58	1.46
52	BD	142	VAL	CA-C	-8.43	1.44	1.52
17	AF	24	ARG	CA-C	8.43	1.64	1.52
45	BC	24	HIS	CA-C	-8.43	1.41	1.53
14	AC	203	LYS	CA-C	-8.42	1.42	1.52
18	AG	139	ASP	C-N	8.41	1.44	1.33
57	BB	1223	G	C2'-C1'	-8.41	1.40	1.53
57	BB	843	G	C5'-C4'	8.39	1.63	1.51
23	AW	19	G	C5'-C4'	8.38	1.64	1.51
21	AA	393	A	C1'-N9	8.37	1.60	1.48
14	AC	91	ALA	CA-C	-8.36	1.41	1.52
42	BW	39	GLN	N-CA	-8.36	1.36	1.46
33	BN	30	ARG	NE-CZ	8.36	1.42	1.33
31	BL	47	ARG	CD-NE	8.35	1.57	1.46
52	BD	71	ALA	CA-C	-8.35	1.41	1.53
55	BG	162	ARG	NE-CZ	8.34	1.42	1.33
57	BB	2258	C	C5'-C4'	8.34	1.63	1.51
21	AA	170	U	C4'-C3'	8.34	1.65	1.52
22	AY	55	U	C1'-N1	8.34	1.60	1.48
7	AP	9	HIS	CA-C	-8.33	1.43	1.52
32	BM	92	TRP	CA-C	8.33	1.61	1.53
21	AA	480	U	C1'-N1	8.32	1.60	1.48
57	BB	1443	U	C1'-N1	8.32	1.60	1.48
37	BR	75	VAL	CA-C	-8.31	1.42	1.52
57	BB	2456	C	C5'-C4'	8.31	1.63	1.51
8	AQ	78	VAL	CA-C	-8.30	1.42	1.52
57	BB	1411	U	C2'-C1'	-8.30	1.40	1.53
25	AZ	250	THR	CA-C	-8.26	1.42	1.52
25	AZ	59	GLY	CA-C	8.26	1.59	1.52
17	AF	24	ARG	CD-NE	8.26	1.57	1.46
25	AZ	188	ILE	CA-CB	-8.25	1.44	1.54
29	BJ	14	ASP	N-CA	-8.25	1.35	1.45
21	AA	1077	G	C1'-N9	8.25	1.60	1.48
56	BH	109	GLU	C-N	8.24	1.43	1.33
28	BI	47	SER	CA-CB	8.24	1.65	1.54
35	BP	25	VAL	CA-C	-8.24	1.43	1.52
21	AA	656	G	C2'-C1'	-8.23	1.41	1.53
23	AW	34	G	C1'-N9	8.23	1.60	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1983	G	C5'-C4'	8.23	1.63	1.51
22	AY	25	C	C2'-C1'	-8.23	1.41	1.53
28	BI	107	GLU	C-N	8.22	1.43	1.33
38	BS	38	TYR	CA-C	-8.22	1.42	1.52
32	BM	38	ARG	CD-NE	8.21	1.57	1.46
50	B3	7	ARG	CA-C	-8.20	1.42	1.52
10	AS	28	LYS	CA-C	-8.19	1.42	1.52
30	BK	44	GLU	CA-C	-8.19	1.42	1.52
57	BB	1399	C	C4'-O4'	8.19	1.57	1.45
57	BB	1375	U	C5'-C4'	8.19	1.63	1.51
38	BS	108	SER	C-N	8.18	1.44	1.33
57	BB	897	C	C5'-C4'	8.18	1.63	1.51
6	AO	50	HIS	ND1-CE1	8.17	1.40	1.32
34	BO	39	VAL	CA-C	-8.17	1.44	1.53
57	BB	1510	G	O3'-P	-8.17	1.48	1.61
22	AY	7	U	C1'-N1	8.16	1.59	1.47
55	BG	75	VAL	CA-CB	-8.16	1.44	1.54
21	AA	969	A	P-O5'	-8.16	1.47	1.59
53	BE	79	ARG	NE-CZ	8.15	1.42	1.33
45	BC	96	LYS	CA-CB	8.15	1.65	1.53
37	BR	58	VAL	N-CA	-8.14	1.36	1.46
57	BB	596	U	C3'-C2'	-8.13	1.40	1.52
57	BB	681	G	C4'-C3'	8.12	1.64	1.52
35	BP	63	ILE	CA-C	8.12	1.63	1.52
43	BX	65	THR	CA-C	-8.12	1.41	1.52
54	BF	68	LYS	N-CA	8.12	1.53	1.46
18	AG	7	GLY	N-CA	8.12	1.51	1.44
55	BG	157	LYS	CA-C	-8.11	1.41	1.52
3	AL	55	ARG	NE-CZ	8.11	1.42	1.33
10	AS	68	HIS	CA-C	-8.10	1.43	1.52
55	BG	102	ILE	CA-C	-8.10	1.43	1.52
38	BS	83	LYS	N-CA	-8.10	1.36	1.46
57	BB	453	A	O5'-C5'	8.10	1.54	1.42
25	AZ	108	THR	N-CA	-8.09	1.36	1.46
45	BC	12	ARG	C-O	-8.09	1.17	1.23
15	AD	36	ALA	C-N	8.08	1.40	1.33
22	AY	13	C	C2'-C1'	-8.08	1.41	1.53
57	BB	2370	G	O4'-C1'	-8.08	1.29	1.41
10	AS	36	ARG	CD-NE	8.07	1.57	1.46
31	BL	27	LEU	CA-C	-8.07	1.43	1.52
31	BL	59	ARG	CD-NE	8.06	1.57	1.46
21	AA	124	C	C4'-C3'	8.06	1.64	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	AD	192	ALA	N-CA	-8.05	1.37	1.46
25	AZ	318	ARG	NE-CZ	8.04	1.41	1.33
12	AU	34	ARG	NE-CZ	8.03	1.41	1.33
55	BG	114	HIS	CA-C	-8.03	1.42	1.52
14	AC	124	GLU	CA-C	-8.02	1.41	1.52
10	AS	22	VAL	CA-C	-8.02	1.42	1.52
57	BB	1586	A	C2'-C1'	-8.02	1.41	1.53
53	BE	182	ALA	CA-C	-8.01	1.42	1.53
13	AB	37	VAL	CA-C	-8.00	1.43	1.52
21	AA	844	G	C4'-O4'	-8.00	1.33	1.45
33	BN	46	ARG	C-N	7.99	1.40	1.33
10	AS	56	HIS	ND1-CE1	7.99	1.40	1.32
57	BB	1290	C	P-O5'	-7.99	1.47	1.59
21	AA	322	C	C2'-O2'	-7.99	1.30	1.42
31	BL	132	ARG	NE-CZ	7.97	1.41	1.33
53	BE	164	LEU	CA-C	-7.97	1.43	1.52
38	BS	8	ARG	CD-NE	7.95	1.57	1.46
21	AA	76	G	C2'-C1'	-7.94	1.41	1.53
57	BB	2383	G	C2'-C1'	-7.93	1.41	1.53
11	AT	49	ALA	CA-C	-7.93	1.43	1.52
57	BB	51	G	C3'-C2'	-7.93	1.41	1.52
57	BB	1686	C	C1'-N1	7.93	1.60	1.48
55	BG	94	ARG	NE-CZ	7.89	1.41	1.33
28	BI	79	LEU	CA-C	-7.89	1.42	1.52
35	BP	61	ARG	C-N	7.89	1.44	1.33
57	BB	197	A	C4'-O4'	7.89	1.57	1.45
2	AK	52	ARG	NE-CZ	7.89	1.41	1.33
23	AW	72	C	C2'-C1'	-7.89	1.41	1.53
57	BB	786	C	C2'-C1'	-7.88	1.41	1.53
25	AZ	181	ASP	CA-CB	7.88	1.62	1.52
49	B2	21	ARG	NE-CZ	7.88	1.41	1.33
57	BB	2624	G	C4'-C3'	7.87	1.64	1.52
21	AA	34	C	C3'-O3'	7.87	1.53	1.42
44	BY	21	LEU	CA-C	-7.86	1.43	1.53
37	BR	79	ARG	CD-NE	7.86	1.57	1.46
57	BB	1238	G	C5'-C4'	7.86	1.63	1.51
33	BN	118	ARG	CZ-NH2	7.85	1.43	1.33
19	AH	47	ASP	CA-CB	7.85	1.64	1.53
44	BY	49	ASP	N-CA	-7.85	1.36	1.46
57	BB	1238	G	C3'-O3'	7.85	1.53	1.42
14	AC	171	ARG	CD-NE	7.84	1.57	1.46
57	BB	2750	A	C3'-C2'	7.84	1.64	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	BX	20	ALA	CA-C	-7.84	1.41	1.52
22	AY	10	G	P-O5'	-7.83	1.48	1.59
54	BF	114	ARG	CD-NE	7.83	1.57	1.46
57	BB	820	A	O3'-P	-7.83	1.49	1.61
21	AA	454	G	O3'-P	-7.83	1.49	1.61
57	BB	1113	U	O5'-C5'	7.83	1.54	1.42
33	BN	103	ARG	CA-C	-7.82	1.42	1.52
45	BC	261	ARG	CD-NE	7.82	1.57	1.46
21	AA	245	U	C5'-C4'	7.81	1.62	1.51
57	BB	2637	U	C1'-N1	7.81	1.60	1.48
45	BC	81	GLU	CA-C	-7.80	1.42	1.52
45	BC	213	ARG	NE-CZ	7.80	1.41	1.33
13	AB	132	GLU	C-N	7.80	1.44	1.33
14	AC	114	LEU	CA-C	-7.79	1.42	1.52
25	AZ	343	LEU	CA-C	-7.78	1.44	1.52
3	AL	73	LEU	CA-C	-7.78	1.42	1.52
57	BB	1591	A	P-O5'	-7.78	1.48	1.59
27	B5	174	THR	C-N	7.77	1.44	1.33
57	BB	685	A	C5'-C4'	7.77	1.63	1.51
29	BJ	110	PRO	CA-CB	-7.76	1.42	1.53
22	AY	26	G	C2'-O2'	-7.76	1.30	1.42
57	BB	192	C	C5'-C4'	7.76	1.62	1.51
27	B5	78	PHE	CA-C	-7.76	1.43	1.52
58	BA	92	C	C2'-C1'	-7.76	1.41	1.53
57	BB	1661	G	C2'-C1'	-7.75	1.41	1.53
34	BO	78	VAL	CA-C	-7.75	1.42	1.52
21	AA	790	A	C1'-N9	-7.75	1.36	1.48
28	BI	132	ALA	C-N	7.75	1.44	1.33
42	BW	47	GLY	C-N	7.75	1.44	1.33
57	BB	878	A	C2'-C1'	-7.75	1.41	1.53
57	BB	2508	G	C4'-C3'	7.74	1.64	1.52
57	BB	578	G	C2'-C1'	-7.74	1.41	1.53
1	AJ	83	THR	C-N	7.74	1.43	1.33
31	BL	35	HIS	ND1-CE1	7.74	1.40	1.32
57	BB	2042	A	C4'-O4'	-7.74	1.33	1.45
19	AH	14	ARG	CD-NE	7.73	1.57	1.46
7	AP	8	ARG	NE-CZ	7.73	1.41	1.33
22	AY	9	A	C1'-N9	7.73	1.58	1.47
21	AA	564	C	C2'-C1'	-7.72	1.41	1.53
22	AY	26	G	C3'-C2'	-7.72	1.41	1.52
22	AY	58	A	O3'-P	-7.72	1.49	1.61
2	AK	57	SER	CA-C	-7.72	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	AS	36	ARG	CZ-NH2	7.72	1.43	1.33
21	AA	1346	A	C2'-C1'	-7.72	1.41	1.53
41	BV	82	TYR	CA-C	-7.72	1.46	1.52
20	AI	118	ARG	CD-NE	7.71	1.57	1.46
57	BB	2008	C	C4'-C3'	7.71	1.64	1.52
57	BB	2608	G	C3'-O3'	7.71	1.53	1.42
7	AP	56	ARG	NE-CZ	7.70	1.41	1.33
57	BB	498	G	C3'-C2'	7.70	1.64	1.52
47	B0	35	GLU	CA-C	-7.70	1.42	1.52
47	B0	41	HIS	CA-C	-7.70	1.43	1.52
14	AC	57	GLU	CA-C	-7.70	1.43	1.52
37	BR	77	PHE	N-CA	-7.70	1.36	1.45
22	AY	64	A	C4'-C3'	-7.69	1.41	1.52
18	AG	56	SER	N-CA	-7.69	1.36	1.46
27	B5	128	GLY	CA-C	-7.69	1.46	1.52
19	AH	59	GLU	N-CA	-7.67	1.36	1.46
57	BB	1909	C	O3'-P	-7.67	1.49	1.61
13	AB	34	ARG	NE-CZ	7.67	1.41	1.33
44	BY	48	ARG	NE-CZ	7.67	1.41	1.33
31	BL	22	GLY	CA-C	-7.67	1.42	1.52
54	BF	145	VAL	N-CA	-7.66	1.36	1.46
45	BC	14	HIS	CG-CD2	-7.66	1.27	1.35
5	AN	84	ARG	NE-CZ	7.65	1.41	1.33
21	AA	659	U	C5'-C4'	7.65	1.62	1.51
21	AA	252	U	C3'-C2'	7.64	1.64	1.52
25	AZ	84	HIS	CA-C	-7.64	1.43	1.52
53	BE	7	ASP	N-CA	-7.64	1.36	1.46
21	AA	558	G	P-O5'	-7.64	1.48	1.59
38	BS	92	ARG	CD-NE	7.64	1.56	1.46
57	BB	522	A	C2'-C1'	-7.64	1.41	1.53
57	BB	461	C	C5'-C4'	7.64	1.62	1.51
57	BB	2431	U	C3'-O3'	7.64	1.53	1.42
6	AO	45	HIS	CB-CG	7.63	1.60	1.50
12	AU	32	ARG	NE-CZ	7.63	1.41	1.33
21	AA	14	U	C5'-C4'	7.63	1.62	1.51
48	B1	39	ASP	CA-C	-7.63	1.44	1.52
25	AZ	331	TYR	CA-C	-7.63	1.43	1.52
48	B1	10	LEU	CA-C	-7.63	1.43	1.52
57	BB	934	U	C4'-C3'	7.63	1.64	1.52
21	AA	465	A	O3'-P	-7.62	1.49	1.61
25	AZ	78	HIS	CE1-NE2	7.62	1.40	1.32
33	BN	83	LEU	N-CA	-7.62	1.36	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AQ	5	ARG	CD-NE	7.62	1.56	1.46
57	BB	1559	U	O3'-P	-7.62	1.49	1.61
26	AV	1	C	P-OP2	7.61	1.64	1.49
53	BE	119	ILE	CA-C	-7.61	1.42	1.52
33	BN	90	ARG	N-CA	-7.61	1.37	1.46
38	BS	71	VAL	CA-C	-7.61	1.46	1.52
1	AJ	56	HIS	CG-CD2	7.60	1.44	1.35
19	AH	87	ARG	CD-NE	7.60	1.56	1.46
21	AA	326	G	O5'-C5'	7.60	1.53	1.42
32	BM	51	ARG	CA-C	-7.60	1.42	1.52
57	BB	892	A	C5'-C4'	7.60	1.62	1.51
57	BB	2028	U	C5'-C4'	7.60	1.62	1.51
31	BL	116	VAL	CA-C	-7.59	1.43	1.52
7	AP	36	VAL	C-N	7.59	1.43	1.33
27	B5	62	ALA	N-CA	-7.59	1.37	1.46
21	AA	1309	G	C2'-C1'	-7.58	1.42	1.53
57	BB	1390	U	C2'-C1'	-7.58	1.42	1.53
57	BB	2060	A	C4'-C3'	7.58	1.64	1.53
57	BB	1941	C	C3'-O3'	7.58	1.53	1.42
17	AF	80	PHE	N-CA	-7.58	1.39	1.46
34	BO	81	ARG	NE-CZ	7.58	1.41	1.33
50	B3	39	ARG	CA-C	-7.57	1.43	1.52
36	BQ	2	ARG	NE-CZ	7.57	1.41	1.33
56	BH	95	GLY	CA-C	-7.57	1.43	1.51
15	AD	49	ASP	CA-C	-7.57	1.43	1.52
57	BB	1582	C	C2'-C1'	-7.56	1.42	1.53
14	AC	10	ARG	NE-CZ	7.56	1.41	1.33
57	BB	629	G	C3'-O3'	7.55	1.53	1.42
57	BB	1445	G	C1'-N9	7.54	1.59	1.48
57	BB	2807	U	C2'-C1'	-7.54	1.42	1.53
57	BB	2163	A	P-O5'	-7.54	1.48	1.59
15	AD	50	TYR	CZ-OH	7.53	1.53	1.38
57	BB	1525	A	O5'-C5'	7.53	1.53	1.42
31	BL	59	ARG	CA-C	-7.52	1.44	1.53
57	BB	629	G	C4'-O4'	7.52	1.56	1.45
31	BL	43	GLY	N-CA	7.52	1.56	1.45
8	AQ	61	ARG	CA-C	-7.51	1.43	1.52
15	AD	62	ARG	CA-C	-7.51	1.42	1.52
57	BB	2687	U	C3'-C2'	-7.51	1.41	1.52
2	AK	127	ARG	NE-CZ	7.51	1.41	1.33
25	AZ	34	VAL	CA-CB	-7.51	1.46	1.54
26	AV	64	G	C3'-C2'	-7.51	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1979	U	O3'-P	-7.51	1.49	1.61
23	AW	3	C	C1'-N1	7.51	1.59	1.48
25	AZ	230	ARG	CA-C	-7.51	1.43	1.52
15	AD	12	ARG	CZ-NH1	7.50	1.43	1.32
54	BF	42	ALA	CA-C	-7.50	1.43	1.53
25	AZ	170	VAL	CA-C	-7.50	1.43	1.52
56	BH	79	THR	N-CA	-7.50	1.37	1.46
21	AA	399	G	C3'-O3'	7.50	1.53	1.42
25	AZ	100	GLY	CA-C	-7.49	1.43	1.51
6	AO	39	GLN	CA-C	-7.49	1.43	1.52
15	AD	189	ASP	CA-C	-7.49	1.44	1.52
56	BH	47	PHE	CA-C	-7.49	1.43	1.52
18	AG	53	SER	CA-C	-7.49	1.45	1.53
57	BB	1867	G	C2'-C1'	-7.48	1.42	1.53
57	BB	366	C	C3'-C2'	7.48	1.64	1.52
57	BB	1751	U	C5'-C4'	7.47	1.62	1.51
57	BB	2275	C	C1'-N1	7.47	1.58	1.47
57	BB	1238	G	O5'-C5'	7.47	1.53	1.42
57	BB	2085	U	C2'-C1'	-7.47	1.42	1.53
21	AA	493	A	C5'-C4'	7.47	1.62	1.51
27	B5	60	ARG	C-N	7.47	1.41	1.32
52	BD	132	ALA	CA-C	7.46	1.61	1.52
57	BB	2756	U	C5'-C4'	7.46	1.62	1.51
57	BB	262	A	O3'-P	-7.46	1.50	1.61
57	BB	1915	U	O3'-P	-7.46	1.50	1.61
21	AA	573	A	O4'-C1'	7.45	1.52	1.41
45	BC	144	GLU	C-N	7.45	1.43	1.33
21	AA	1057	G	C4'-O4'	-7.45	1.34	1.45
57	BB	2774	C	C5'-C4'	7.44	1.62	1.51
53	BE	24	ASN	N-CA	-7.43	1.37	1.46
31	BL	38	GLN	CA-C	-7.43	1.42	1.52
58	BA	82	U	C1'-N1	7.43	1.59	1.48
57	BB	2323	G	C4'-C3'	7.42	1.63	1.52
41	BV	9	ARG	NE-CZ	7.42	1.41	1.33
45	BC	34	GLU	CA-CB	7.42	1.60	1.53
30	BK	63	ARG	CA-C	-7.41	1.46	1.53
55	BG	69	ALA	N-CA	-7.41	1.36	1.46
23	AW	31	A	C4'-C3'	7.41	1.63	1.52
50	B3	45	PRO	N-CA	-7.41	1.37	1.47
21	AA	1238	A	O3'-P	-7.41	1.50	1.61
22	AY	3	G	C4'-O4'	7.41	1.56	1.45
53	BE	125	SER	N-CA	-7.40	1.36	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AT	81	GLN	CA-C	-7.40	1.43	1.52
21	AA	652	U	C2'-C1'	-7.40	1.42	1.53
21	AA	839	C	C4'-O4'	-7.40	1.34	1.45
25	AZ	101	ALA	CA-C	-7.40	1.43	1.52
39	BT	77	ARG	CD-NE	7.40	1.56	1.46
21	AA	1301	U	C3'-C2'	7.40	1.64	1.52
18	AG	137	ARG	CD-NE	7.39	1.56	1.46
21	AA	424	G	C5'-C4'	7.39	1.62	1.51
57	BB	2509	G	C2'-C1'	-7.39	1.42	1.53
33	BN	105	GLY	C-N	7.39	1.41	1.32
43	BX	27	ARG	CZ-NH1	7.39	1.43	1.32
57	BB	610	C	C1'-N1	7.39	1.59	1.48
3	AL	60	PHE	CA-C	-7.38	1.43	1.52
21	AA	5	U	P-OP2	7.38	1.63	1.49
25	AZ	91	MET	N-CA	-7.38	1.36	1.46
57	BB	24	G	C2'-C1'	-7.38	1.42	1.53
56	BH	110	VAL	CA-CB	7.38	1.61	1.54
25	AZ	40	GLY	CA-C	-7.37	1.45	1.52
35	BP	60	VAL	CA-C	-7.37	1.44	1.52
21	AA	562	U	C5'-C4'	7.37	1.62	1.51
57	BB	1568	G	O5'-C5'	7.37	1.53	1.42
58	BA	49	C	C2'-C1'	-7.37	1.42	1.53
38	BS	99	ARG	CZ-NH1	7.36	1.43	1.32
31	BL	101	ILE	CA-C	-7.36	1.43	1.52
4	AM	3	ILE	CA-C	-7.35	1.43	1.52
15	AD	135	GLN	CA-C	-7.35	1.43	1.52
22	AY	5	A	P-O5'	-7.35	1.48	1.59
25	AZ	98	MET	CA-C	-7.35	1.43	1.52
25	AZ	81	CYS	CA-C	-7.35	1.43	1.52
57	BB	370	G	C4'-C3'	7.35	1.64	1.53
40	BU	93	ARG	CA-CB	7.35	1.63	1.53
7	AP	66	THR	CA-C	-7.35	1.43	1.52
21	AA	817	C	C5'-C4'	7.35	1.62	1.51
41	BV	6	ALA	C-O	-7.35	1.16	1.23
57	BB	1612	C	C4'-C3'	7.35	1.63	1.52
57	BB	2432	A	C1'-N9	7.35	1.58	1.48
46	BZ	55	LYS	N-CA	-7.34	1.37	1.46
5	AN	54	SER	CA-C	-7.34	1.43	1.52
10	AS	60	PHE	CA-C	-7.34	1.43	1.52
26	AV	65	C	P-O5'	-7.34	1.48	1.59
21	AA	439	U	C1'-N1	7.34	1.59	1.48
57	BB	878	A	C3'-C2'	-7.33	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	366	C	C2'-C1'	-7.33	1.42	1.53
38	BS	60	HIS	CB-CG	7.33	1.60	1.50
20	AI	18	VAL	CA-C	-7.33	1.43	1.52
45	BC	166	ARG	CD-NE	7.33	1.56	1.46
16	AE	51	LYS	CA-C	-7.32	1.43	1.52
21	AA	1501	C	O3'-P	-7.32	1.50	1.61
21	AA	1489	G	C2'-C1'	-7.32	1.42	1.53
37	BR	84	ARG	CD-NE	7.32	1.56	1.46
4	AM	89	ARG	CA-C	-7.32	1.42	1.52
15	AD	66	VAL	N-CA	-7.32	1.37	1.46
25	AZ	41	GLY	CA-C	-7.31	1.41	1.51
57	BB	355	U	C4'-C3'	7.31	1.63	1.52
21	AA	753	A	C4'-C3'	7.31	1.64	1.53
35	BP	67	GLU	CA-C	-7.31	1.44	1.52
4	AM	89	ARG	CD-NE	7.30	1.56	1.46
21	AA	208	U	C1'-N1	7.30	1.59	1.48
57	BB	2155	U	O5'-C5'	7.30	1.53	1.42
27	B5	162	ARG	CA-CB	7.29	1.63	1.53
37	BR	18	GLN	CA-C	-7.29	1.43	1.52
21	AA	862	C	P-O5'	-7.29	1.48	1.59
14	AC	12	GLY	CA-C	-7.28	1.42	1.51
21	AA	672	U	C1'-N1	7.27	1.59	1.48
15	AD	20	LEU	CA-CB	7.27	1.62	1.53
51	B4	7	VAL	CA-CB	-7.27	1.44	1.54
21	AA	897	C	C4'-C3'	7.26	1.63	1.52
10	AS	78	THR	N-CA	-7.26	1.37	1.46
57	BB	2154	A	C4'-O4'	-7.26	1.34	1.45
57	BB	2414	G	C4'-O4'	7.26	1.56	1.45
41	BV	19	ARG	CZ-NH1	7.26	1.43	1.32
57	BB	1043	C	C4'-C3'	7.26	1.63	1.52
4	AM	70	ARG	CD-NE	7.25	1.56	1.46
57	BB	470	A	C4'-O4'	-7.25	1.34	1.45
10	AS	59	VAL	CA-C	-7.25	1.43	1.52
4	AM	11	HIS	ND1-CE1	7.25	1.39	1.32
21	AA	1084	G	C4'-C3'	-7.23	1.41	1.52
29	BJ	105	VAL	CA-C	-7.23	1.43	1.52
45	BC	123	ILE	CA-C	-7.23	1.43	1.52
7	AP	31	ARG	CZ-NH1	7.22	1.42	1.32
21	AA	230	G	C3'-C2'	-7.22	1.42	1.52
41	BV	42	LEU	CA-C	-7.22	1.43	1.53
21	AA	184	G	O3'-P	-7.22	1.50	1.61
21	AA	553	A	C2'-C1'	-7.22	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AQ	9	GLY	N-CA	-7.22	1.38	1.44
57	BB	219	A	P-O5'	-7.22	1.49	1.59
57	BB	2418	A	C5'-C4'	7.21	1.62	1.51
35	BP	46	VAL	CA-CB	7.21	1.61	1.54
57	BB	27	G	O4'-C1'	-7.21	1.30	1.41
14	AC	163	ARG	CD-NE	7.21	1.56	1.46
31	BL	64	PHE	CA-CB	7.21	1.65	1.53
38	BS	102	HIS	ND1-CE1	7.21	1.39	1.32
55	BG	151	ARG	NE-CZ	7.21	1.41	1.33
15	AD	58	GLN	N-CA	-7.21	1.36	1.46
13	AB	136	ARG	CA-CB	7.20	1.65	1.53
57	BB	1616	A	C1'-N9	7.20	1.57	1.47
57	BB	2761	A	C5'-C4'	7.20	1.62	1.51
57	BB	178	G	C1'-N9	-7.20	1.37	1.48
22	AY	66	A	C5'-C4'	7.20	1.62	1.51
29	BJ	92	MET	C-N	7.19	1.42	1.33
18	AG	121	ASN	CA-C	-7.19	1.43	1.52
57	BB	1210	G	C4'-C3'	7.19	1.64	1.53
31	BL	119	PRO	CA-CB	7.18	1.62	1.54
57	BB	2847	U	C4'-O4'	-7.18	1.34	1.45
57	BB	175	G	C2'-C1'	-7.18	1.42	1.53
22	AY	24	G	C3'-C2'	7.18	1.63	1.52
43	BX	51	SER	CA-CB	7.18	1.65	1.53
55	BG	34	ARG	CA-CB	7.18	1.64	1.53
54	BF	173	ASP	C-N	7.17	1.41	1.33
57	BB	217	A	O3'-P	-7.17	1.50	1.61
22	AY	59	U	P-O5'	-7.17	1.49	1.59
40	BU	32	LYS	CA-C	-7.17	1.44	1.52
8	AQ	61	ARG	CZ-NH2	7.16	1.42	1.33
45	BC	211	ARG	NE-CZ	7.16	1.41	1.33
32	BM	66	ARG	CD-NE	7.16	1.56	1.46
21	AA	1460	C	C5'-C4'	7.16	1.61	1.51
38	BS	75	PHE	CA-CB	7.15	1.65	1.53
42	BW	27	GLY	CA-C	-7.15	1.42	1.52
57	BB	2148	G	C4'-C3'	7.15	1.63	1.52
29	BJ	123	LYS	C-N	7.14	1.43	1.33
57	BB	215	G	O3'-P	-7.14	1.50	1.61
23	AW	46	G	C4'-C3'	7.14	1.63	1.53
54	BF	4	HIS	ND1-CE1	7.14	1.39	1.32
57	BB	1521	G	C5'-C4'	7.14	1.61	1.51
31	BL	81	ASP	CA-C	-7.13	1.44	1.52
56	BH	28	ASN	N-CA	-7.13	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	AG	101	ARG	NE-CZ	7.13	1.40	1.33
21	AA	150	U	C2'-C1'	-7.13	1.42	1.53
21	AA	69	G	O3'-P	-7.13	1.50	1.61
22	AY	34	G	P-O5'	-7.13	1.49	1.59
30	BK	60	VAL	CA-C	-7.13	1.43	1.52
54	BF	79	ARG	CZ-NH2	7.13	1.42	1.33
15	AD	166	LYS	CA-CB	7.12	1.64	1.53
21	AA	1377	A	O3'-P	-7.12	1.50	1.61
36	BQ	50	ARG	CA-C	-7.12	1.45	1.53
21	AA	786	G	P-O5'	-7.12	1.49	1.59
26	AV	19	G	O4'-C1'	-7.12	1.31	1.42
21	AA	711	G	C2'-C1'	-7.11	1.42	1.53
57	BB	220	G	C2'-C1'	-7.11	1.42	1.53
57	BB	963	U	C2'-C1'	-7.11	1.42	1.53
57	BB	2705	A	C2'-O2'	-7.11	1.31	1.42
38	BS	7	HIS	CB-CG	7.10	1.60	1.50
55	BG	73	SER	C-N	7.10	1.43	1.33
57	BB	1394	U	C3'-O3'	7.10	1.52	1.42
23	AW	47	U	C4'-C3'	7.10	1.63	1.52
57	BB	2107	G	C4'-O4'	7.10	1.56	1.45
18	AG	116	ALA	CA-C	-7.09	1.43	1.52
21	AA	131	A	O3'-P	-7.09	1.50	1.61
55	BG	54	ARG	CD-NE	7.09	1.56	1.46
57	BB	2358	A	C2'-C1'	-7.09	1.42	1.53
28	BI	12	VAL	C-N	7.09	1.43	1.33
39	BT	58	VAL	N-CA	-7.09	1.37	1.46
33	BN	69	ARG	CZ-NH1	7.09	1.42	1.32
57	BB	1695	G	P-O5'	7.08	1.70	1.59
15	AD	77	GLU	CA-C	-7.08	1.43	1.52
57	BB	1955	U	C1'-N1	7.08	1.58	1.47
2	AK	43	TRP	CA-CB	7.08	1.65	1.53
21	AA	1416	G	C2'-C1'	-7.08	1.42	1.53
22	AY	57	G	O5'-C5'	7.08	1.53	1.42
32	BM	15	GLY	N-CA	-7.08	1.37	1.45
57	BB	1640	A	C2'-C1'	-7.08	1.42	1.53
58	BA	51	G	C5'-C4'	7.07	1.61	1.51
13	AB	201	GLY	CA-C	-7.07	1.43	1.51
21	AA	1227	A	O3'-P	-7.07	1.50	1.61
27	B5	141	LYS	CA-C	-7.07	1.44	1.52
46	BZ	29	ARG	NE-CZ	7.07	1.40	1.33
6	AO	87	ARG	CD-NE	7.07	1.56	1.46
24	AX	13	A	C5'-C4'	7.07	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AN	42	ASN	CA-C	-7.06	1.42	1.52
13	AB	183	PHE	CA-C	7.06	1.61	1.52
22	AY	30	G	C3'-O3'	7.05	1.52	1.42
5	AN	59	GLN	CA-C	-7.05	1.44	1.52
45	BC	68	ARG	CZ-NH1	7.05	1.42	1.32
55	BG	26	LYS	C-N	7.05	1.43	1.33
43	BX	10	ARG	N-CA	-7.05	1.39	1.46
57	BB	676	A	O3'-P	-7.05	1.50	1.61
3	AL	69	GLU	CA-C	-7.05	1.44	1.52
28	BI	9	LYS	CA-C	-7.04	1.44	1.52
57	BB	896	A	C5'-C4'	7.04	1.61	1.51
4	AM	41	ASP	C-N	7.04	1.42	1.33
22	AY	56	C	O4'-C1'	7.04	1.52	1.41
18	AG	13	PRO	N-CA	-7.03	1.38	1.46
55	BG	65	GLY	CA-C	-7.03	1.42	1.51
57	BB	1676	A	P-O5'	-7.03	1.49	1.59
57	BB	2812	G	C1'-N9	7.03	1.58	1.48
11	AT	33	LYS	CA-C	-7.03	1.42	1.52
29	BJ	54	ILE	CA-CB	-7.03	1.48	1.55
30	BK	90	SER	CA-C	-7.03	1.43	1.52
57	BB	2450	A	C1'-N9	-7.03	1.37	1.48
25	AZ	4	LYS	N-CA	-7.03	1.37	1.46
37	BR	21	ARG	N-CA	-7.03	1.37	1.46
41	BV	93	ARG	NE-CZ	7.02	1.40	1.33
57	BB	1314	C	C1'-N1	7.02	1.58	1.48
56	BH	84	ALA	CA-C	-7.02	1.43	1.52
13	AB	105	THR	N-CA	7.02	1.54	1.46
30	BK	90	SER	C-N	7.02	1.40	1.33
57	BB	1977	A	O3'-P	-7.02	1.50	1.61
57	BB	2848	G	C1'-N9	-7.02	1.36	1.47
2	AK	81	LEU	C-N	7.02	1.42	1.33
57	BB	2182	U	O3'-P	-7.01	1.50	1.61
21	AA	414	A	C3'-O3'	7.01	1.52	1.42
21	AA	798	U	C2'-C1'	-7.01	1.42	1.53
56	BH	36	ALA	CA-C	-7.01	1.44	1.52
57	BB	1102	C	C4'-O4'	-7.01	1.35	1.45
55	BG	62	ALA	CA-CB	7.01	1.65	1.53
57	BB	2540	C	C4'-O4'	7.01	1.56	1.45
37	BR	90	ARG	CZ-NH2	7.00	1.42	1.33
52	BD	102	ALA	N-CA	-7.00	1.37	1.46
21	AA	772	U	O4'-C1'	7.00	1.52	1.41
57	BB	2344	U	C1'-N1	7.00	1.57	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BS	54	ALA	CA-C	-7.00	1.43	1.52
21	AA	1283	U	C4'-C3'	7.00	1.63	1.52
34	BO	17	LYS	CA-C	-7.00	1.43	1.52
35	BP	112	ARG	CA-C	-7.00	1.43	1.52
1	AJ	68	ARG	CA-C	-7.00	1.43	1.52
21	AA	566	G	C1'-N9	6.99	1.57	1.47
12	AU	24	LYS	C-N	6.99	1.42	1.33
21	AA	368	U	C2'-C1'	-6.99	1.42	1.53
45	BC	267	VAL	CA-CB	-6.99	1.46	1.54
22	AY	73	A	C3'-O3'	6.99	1.52	1.42
31	BL	69	ARG	NE-CZ	6.99	1.40	1.33
22	AY	25	C	C4'-O4'	-6.99	1.35	1.45
57	BB	632	A	C2'-C1'	-6.99	1.42	1.53
4	AM	85	TYR	CA-C	6.98	1.61	1.52
13	AB	107	ARG	NE-CZ	6.98	1.40	1.33
25	AZ	377	ARG	CD-NE	6.98	1.56	1.46
57	BB	1657	U	C4'-C3'	-6.98	1.42	1.52
7	AP	67	ILE	CA-CB	-6.97	1.45	1.54
57	BB	647	G	C1'-N9	6.97	1.58	1.48
57	BB	894	U	C4'-O4'	-6.97	1.35	1.45
32	BM	10	ARG	CZ-NH2	6.97	1.42	1.33
14	AC	149	LYS	CA-C	-6.96	1.44	1.52
38	BS	95	ARG	CD-NE	6.96	1.55	1.46
14	AC	132	ALA	CA-C	-6.96	1.44	1.52
21	AA	373	A	C5'-C4'	6.96	1.61	1.51
21	AA	1531	A	C5'-C4'	6.96	1.61	1.51
16	AE	121	ASN	CA-C	-6.96	1.43	1.52
11	AT	49	ALA	N-CA	-6.96	1.38	1.46
57	BB	1363	C	O4'-C1'	6.96	1.52	1.41
57	BB	1950	G	C1'-N9	-6.96	1.37	1.48
21	AA	760	G	C3'-O3'	6.96	1.52	1.42
43	BX	35	HIS	N-CA	-6.96	1.37	1.46
57	BB	1720	U	C3'-O3'	6.96	1.52	1.42
7	AP	70	ARG	NE-CZ	6.95	1.40	1.33
33	BN	12	ARG	NE-CZ	6.95	1.40	1.33
32	BM	16	ARG	CZ-NH1	6.95	1.42	1.32
17	AF	67	PRO	CA-C	6.94	1.59	1.53
16	AE	20	VAL	CA-C	-6.94	1.44	1.52
53	BE	117	ARG	NE-CZ	6.94	1.40	1.33
25	AZ	350	VAL	C-O	-6.93	1.16	1.24
1	AJ	87	LEU	CA-CB	6.93	1.64	1.53
57	BB	470	A	C2'-C1'	-6.93	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	BN	69	ARG	N-CA	-6.93	1.38	1.46
27	B5	28	ALA	C-N	6.93	1.43	1.33
57	BB	17	G	C2'-C1'	-6.93	1.43	1.53
30	BK	81	ASN	N-CA	-6.93	1.37	1.46
14	AC	68	HIS	CG-ND1	-6.92	1.30	1.38
22	AY	25	C	C1'-N1	6.92	1.58	1.48
35	BP	95	LYS	CA-C	-6.92	1.44	1.52
57	BB	2218	G	C3'-O3'	6.92	1.52	1.42
2	AK	121	ARG	CD-NE	6.92	1.55	1.46
21	AA	131	A	C1'-N9	6.92	1.58	1.48
57	BB	2632	A	O3'-P	-6.92	1.50	1.61
58	BA	42	C	C2'-C1'	-6.92	1.43	1.53
54	BF	75	GLY	C-N	6.92	1.43	1.33
29	BJ	50	THR	CA-C	-6.91	1.44	1.52
5	AN	98	ALA	CA-C	-6.91	1.43	1.52
57	BB	2694	G	C4'-C3'	6.91	1.62	1.52
54	BF	127	TYR	N-CA	-6.91	1.37	1.46
21	AA	1302	C	C3'-O3'	6.91	1.52	1.42
21	AA	938	A	O5'-C5'	6.91	1.52	1.42
22	AY	53	G	O5'-C5'	6.90	1.52	1.42
56	BH	80	ILE	C-N	6.90	1.42	1.33
17	AF	75	GLU	CA-C	-6.90	1.44	1.52
45	BC	266	ILE	C-N	6.90	1.39	1.33
10	AS	33	TRP	CA-CB	6.90	1.64	1.53
14	AC	182	ASP	CA-CB	6.90	1.64	1.53
14	AC	71	ARG	C-N	6.89	1.39	1.33
45	BC	254	LYS	N-CA	-6.89	1.37	1.46
57	BB	2102	G	C1'-N9	6.89	1.58	1.48
16	AE	83	PRO	N-CA	-6.89	1.39	1.47
57	BB	488	G	O3'-P	-6.89	1.50	1.61
57	BB	2263	C	O5'-C5'	6.89	1.52	1.42
29	BJ	114	LEU	CA-C	-6.89	1.43	1.52
21	AA	184	G	P-O5'	-6.89	1.49	1.59
30	BK	98	ILE	CA-C	-6.89	1.44	1.52
43	BX	47	THR	N-CA	-6.88	1.37	1.46
45	BC	100	ARG	NE-CZ	6.88	1.40	1.33
33	BN	35	LYS	CA-C	-6.88	1.44	1.52
57	BB	2104	C	O3'-P	-6.88	1.50	1.61
28	BI	52	LEU	CA-C	6.88	1.59	1.52
57	BB	1437	C	C4'-O4'	6.88	1.55	1.45
33	BN	33	ILE	CA-C	-6.87	1.44	1.52
21	AA	695	A	C5'-C4'	6.87	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	49	C	O3'-P	-6.87	1.50	1.61
42	BW	10	ARG	NE-CZ	6.87	1.40	1.33
57	BB	2064	C	O4'-C1'	6.87	1.51	1.41
57	BB	2838	G	O3'-P	-6.87	1.50	1.61
9	AR	56	ARG	NE-CZ	6.86	1.40	1.33
21	AA	1231	G	C2'-C1'	-6.86	1.43	1.53
57	BB	1225	G	O3'-P	-6.86	1.50	1.61
57	BB	2861	U	C2'-C1'	-6.86	1.43	1.53
21	AA	1372	U	C2'-C1'	-6.86	1.43	1.53
57	BB	319	G	C2'-C1'	-6.86	1.43	1.53
20	AI	75	ALA	C-N	6.86	1.42	1.33
41	BV	46	LYS	N-CA	-6.85	1.38	1.46
22	AY	18	G	C5'-C4'	6.85	1.61	1.51
27	B5	156	ALA	CA-C	-6.85	1.44	1.52
2	AK	68	ARG	NE-CZ	6.85	1.40	1.33
57	BB	814	C	C2'-C1'	-6.85	1.43	1.53
21	AA	436	C	C5'-C4'	6.85	1.61	1.51
45	BC	252	LYS	CA-C	6.84	1.61	1.52
49	B2	31	LEU	N-CA	-6.84	1.37	1.46
9	AR	68	PRO	CA-C	-6.84	1.45	1.52
21	AA	823	C	C2'-C1'	-6.84	1.43	1.53
57	BB	468	G	C2'-C1'	-6.84	1.43	1.53
18	AG	72	VAL	CA-C	-6.83	1.44	1.52
52	BD	83	ARG	CD-NE	6.83	1.55	1.46
57	BB	933	A	O3'-P	-6.83	1.50	1.61
57	BB	902	C	O3'-P	-6.83	1.50	1.61
1	AJ	54	SER	C-N	-6.83	1.28	1.33
57	BB	550	C	C4'-O4'	6.83	1.55	1.45
4	AM	69	ARG	NE-CZ	6.83	1.40	1.33
20	AI	38	PHE	CA-C	-6.83	1.44	1.52
25	AZ	248	LYS	C-N	6.83	1.42	1.33
31	BL	33	ARG	CD-NE	6.83	1.55	1.46
44	BY	10	SER	C-N	6.83	1.41	1.34
2	AK	45	THR	CA-C	-6.82	1.44	1.52
22	AY	40	C	P-O5'	-6.82	1.49	1.59
57	BB	2678	C	O3'-P	-6.82	1.50	1.61
45	BC	270	ARG	NE-CZ	6.82	1.40	1.33
21	AA	1149	C	O3'-P	-6.82	1.50	1.61
57	BB	2001	C	P-O5'	-6.82	1.49	1.59
8	AQ	39	ARG	CA-C	-6.81	1.43	1.53
57	BB	1530	G	C2'-C1'	-6.81	1.43	1.53
2	AK	92	ARG	NE-CZ	6.81	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	AI	52	GLU	CA-C	-6.81	1.43	1.52
57	BB	1031	G	C3'-C2'	6.81	1.62	1.52
57	BB	918	A	O3'-P	-6.80	1.50	1.61
21	AA	1200	C	C5'-C4'	6.80	1.61	1.51
57	BB	1738	G	O3'-P	-6.80	1.50	1.61
28	BI	11	GLN	C-N	6.80	1.44	1.33
57	BB	2418	A	C3'-O3'	6.80	1.52	1.42
21	AA	1339	A	C8-N7	-6.79	1.18	1.31
57	BB	1566	A	O3'-P	-6.79	1.50	1.61
22	AY	52	U	O4'-C1'	6.79	1.51	1.41
57	BB	1612	C	O3'-P	-6.79	1.50	1.61
21	AA	569	C	O3'-P	-6.79	1.50	1.61
21	AA	984	C	C2'-C1'	-6.79	1.43	1.53
21	AA	1025	U	C4'-C3'	6.79	1.63	1.53
55	BG	110	HIS	CD2-NE2	6.79	1.45	1.37
16	AE	93	VAL	CA-C	-6.79	1.44	1.52
18	AG	61	PHE	N-CA	-6.79	1.40	1.46
7	AP	51	ARG	CZ-NH1	6.79	1.42	1.32
5	AN	58	ARG	NE-CZ	6.79	1.40	1.33
36	BQ	114	ALA	CA-C	-6.79	1.43	1.52
8	AQ	45	VAL	CA-CB	-6.78	1.45	1.54
21	AA	800	G	C4'-O4'	-6.78	1.35	1.45
21	AA	835	U	O4'-C1'	6.78	1.51	1.41
57	BB	310	A	C5'-C4'	6.78	1.61	1.51
40	BU	54	PRO	CA-C	6.78	1.61	1.52
57	BB	1688	U	C2'-C1'	-6.78	1.43	1.53
57	BB	2263	C	C2'-C1'	-6.78	1.43	1.53
21	AA	984	C	C1'-N1	6.78	1.58	1.48
57	BB	2830	C	C5'-C4'	6.78	1.61	1.51
21	AA	501	C	C3'-O3'	6.78	1.52	1.42
57	BB	677	A	C2'-C1'	-6.78	1.43	1.53
25	AZ	320	THR	CA-C	-6.77	1.45	1.52
7	AP	78	VAL	CA-CB	-6.77	1.46	1.54
1	AJ	45	ARG	CZ-NH2	6.77	1.42	1.33
18	AG	69	ARG	NE-CZ	6.77	1.40	1.33
57	BB	472	A	C3'-C2'	6.77	1.62	1.52
57	BB	1889	A	C1'-N9	6.77	1.58	1.48
43	BX	36	ARG	CD-NE	6.77	1.55	1.46
27	B5	76	ALA	CA-C	-6.76	1.44	1.52
57	BB	487	C	O3'-P	-6.76	1.51	1.61
57	BB	2848	G	C2-N3	6.76	1.46	1.32
55	BG	24	THR	CA-C	-6.76	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	AZ	191	LEU	C-N	6.76	1.44	1.33
2	AK	68	ARG	CD-NE	6.76	1.55	1.46
21	AA	15	G	O3'-P	-6.76	1.51	1.61
44	BY	44	LYS	CA-C	-6.76	1.44	1.52
27	B5	47	ASN	CA-C	-6.75	1.44	1.52
35	BP	71	ARG	CA-C	-6.75	1.44	1.52
17	AF	94	HIS	CE1-NE2	6.75	1.39	1.32
52	BD	128	ARG	CZ-NH1	6.75	1.42	1.32
3	AL	98	ARG	CZ-NH2	6.75	1.42	1.33
10	AS	9	PHE	C-N	6.75	1.42	1.33
27	B5	124	VAL	C-O	-6.75	1.17	1.24
57	BB	444	C	C3'-O3'	6.75	1.52	1.42
21	AA	1214	C	P-O5'	-6.75	1.49	1.59
26	AV	10	G	C1'-N9	-6.75	1.37	1.48
25	AZ	260	MET	CA-C	-6.75	1.45	1.53
9	AR	49	LYS	CA-C	-6.74	1.44	1.52
14	AC	10	ARG	CD-NE	6.74	1.55	1.46
16	AE	67	ARG	NE-CZ	6.74	1.40	1.33
19	AH	92	PRO	CA-C	-6.74	1.44	1.52
20	AI	58	GLU	N-CA	-6.74	1.40	1.46
21	AA	159	G	O3'-P	-6.74	1.51	1.61
57	BB	2828	G	C4'-O4'	-6.74	1.35	1.45
15	AD	13	ARG	NE-CZ	6.74	1.40	1.33
16	AE	59	ILE	CA-C	-6.74	1.46	1.52
19	AH	15	ASN	N-CA	-6.74	1.38	1.46
21	AA	1241	G	C2'-C1'	-6.74	1.43	1.53
36	BQ	57	ARG	CD-NE	6.74	1.55	1.46
57	BB	2700	A	C1'-N9	-6.74	1.37	1.48
14	AC	199	VAL	CA-C	-6.73	1.44	1.52
15	AD	94	GLU	N-CA	-6.73	1.37	1.46
21	AA	488	C	C4'-O4'	6.73	1.55	1.45
57	BB	1689	A	C5'-C4'	6.73	1.61	1.51
15	AD	143	SER	N-CA	-6.73	1.37	1.46
25	AZ	188	ILE	CA-C	6.72	1.61	1.52
46	BZ	23	LEU	CA-C	-6.72	1.44	1.52
25	AZ	236	ILE	CA-C	-6.72	1.47	1.53
57	BB	2407	A	P-O5'	-6.72	1.49	1.59
57	BB	2609	U	C5'-C4'	6.72	1.61	1.51
45	BC	12	ARG	NE-CZ	6.72	1.40	1.33
57	BB	384	A	C5'-C4'	6.72	1.61	1.51
57	BB	1926	U	C2'-C1'	-6.72	1.43	1.53
57	BB	2834	G	C2'-C1'	-6.72	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2897	U	O3'-P	-6.72	1.51	1.61
53	BE	44	ARG	CD-NE	6.71	1.55	1.46
55	BG	148	ARG	NE-CZ	6.71	1.40	1.33
57	BB	2017	U	P-O5'	6.71	1.69	1.59
57	BB	2712	C	O3'-P	-6.71	1.51	1.61
21	AA	81	A	C4'-C3'	-6.71	1.42	1.52
56	BH	50	ARG	NE-CZ	6.71	1.40	1.33
27	B5	12	ARG	NE-CZ	6.71	1.40	1.33
18	AG	82	SER	C-N	6.71	1.42	1.33
21	AA	163	C	P-O5'	-6.71	1.49	1.59
21	AA	1332	A	C4'-O4'	6.71	1.55	1.45
25	AZ	78	HIS	C-O	-6.71	1.16	1.24
28	BI	127	SER	N-CA	-6.71	1.38	1.46
45	BC	39	SER	C-N	6.71	1.43	1.33
57	BB	2491	U	C4'-C3'	6.71	1.63	1.53
57	BB	974	G	C3'-O3'	-6.71	1.33	1.43
57	BB	1687	G	C4'-O4'	6.70	1.55	1.45
13	AB	38	HIS	CE1-NE2	-6.70	1.25	1.32
21	AA	329	A	C1'-N9	6.70	1.56	1.47
57	BB	807	U	O5'-C5'	6.70	1.52	1.42
57	BB	2172	U	C1'-N1	6.70	1.57	1.47
29	BJ	35	ARG	NE-CZ	6.70	1.40	1.33
45	BC	237	ARG	CA-CB	6.70	1.63	1.53
57	BB	2287	A	C5'-C4'	6.70	1.61	1.51
57	BB	669	G	O4'-C1'	-6.69	1.31	1.41
57	BB	1798	U	O4'-C1'	6.69	1.51	1.41
40	BU	97	SER	C-N	6.69	1.43	1.33
52	BD	81	GLU	N-CA	-6.69	1.38	1.46
1	AJ	27	GLU	N-CA	-6.69	1.37	1.46
57	BB	192	C	P-O5'	-6.69	1.49	1.59
57	BB	2422	C	C4'-C3'	6.69	1.62	1.52
58	BA	106	G	C3'-C2'	6.69	1.62	1.52
57	BB	2207	C	O4'-C1'	-6.69	1.31	1.41
58	BA	37	C	C4'-O4'	-6.69	1.35	1.45
3	AL	48	LEU	CA-C	-6.68	1.44	1.52
26	AV	45	G	C1'-N9	6.68	1.57	1.48
2	AK	121	ARG	CZ-NH2	6.68	1.42	1.33
22	AY	5	A	O5'-C5'	6.68	1.52	1.42
26	AV	61	C	O4'-C1'	6.68	1.51	1.41
57	BB	1106	G	C1'-N9	6.68	1.57	1.48
46	BZ	28	LEU	CA-C	-6.68	1.44	1.52
21	AA	125	U	C2'-C1'	-6.68	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BE	92	HIS	CB-CG	6.67	1.59	1.50
14	AC	204	GLY	C-N	6.67	1.41	1.33
57	BB	1651	G	O3'-P	-6.67	1.51	1.61
57	BB	1700	A	C2'-C1'	-6.67	1.43	1.53
34	BO	35	ILE	CA-C	-6.67	1.44	1.52
45	BC	174	ARG	CD-NE	6.67	1.55	1.46
4	AM	70	ARG	NE-CZ	6.67	1.40	1.33
7	AP	14	ARG	CD-NE	6.67	1.55	1.46
21	AA	130	A	P-O5'	-6.67	1.49	1.59
21	AA	957	U	C3'-O3'	6.67	1.52	1.42
43	BX	2	ARG	CA-C	-6.67	1.45	1.53
19	AH	17	GLN	C-N	6.67	1.43	1.33
45	BC	15	VAL	N-CA	-6.66	1.38	1.46
21	AA	1296	C	C3'-C2'	6.66	1.62	1.52
22	AY	52	U	C4'-C3'	6.66	1.62	1.52
57	BB	1424	G	C5'-C4'	6.66	1.61	1.51
35	BP	62	LYS	N-CA	-6.66	1.38	1.46
48	B1	6	GLU	N-CA	-6.66	1.38	1.46
19	AH	59	GLU	CA-C	-6.66	1.44	1.53
57	BB	931	U	O3'-P	-6.66	1.51	1.61
55	BG	68	ARG	CZ-NH2	6.65	1.42	1.33
57	BB	2167	U	C3'-C2'	-6.65	1.42	1.52
53	BE	176	ASP	C-N	6.65	1.42	1.34
57	BB	35	G	C1'-N9	6.65	1.57	1.48
57	BB	1877	A	O4'-C1'	6.65	1.51	1.41
14	AC	130	ARG	NE-CZ	6.65	1.40	1.33
19	AH	100	ILE	CA-C	-6.65	1.44	1.52
57	BB	430	A	P-O5'	-6.65	1.49	1.59
37	BR	13	ARG	N-CA	-6.65	1.38	1.46
57	BB	1912	A	C4'-O4'	-6.65	1.35	1.45
57	BB	2676	C	C2'-C1'	-6.65	1.43	1.53
18	AG	108	ARG	CA-C	-6.65	1.45	1.53
57	BB	674	G	C2'-C1'	-6.65	1.43	1.53
39	BT	38	ALA	CA-C	-6.64	1.44	1.52
2	AK	123	PRO	N-CD	-6.64	1.38	1.47
27	B5	82	ALA	CA-C	-6.64	1.43	1.52
15	AD	115	GLN	C-N	6.64	1.42	1.33
50	B3	46	LYS	N-CA	-6.64	1.38	1.46
7	AP	20	VAL	N-CA	-6.64	1.38	1.46
13	AB	105	THR	CA-C	-6.64	1.45	1.52
57	BB	180	G	C5'-C4'	6.64	1.61	1.51
57	BB	2709	G	O3'-P	-6.64	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BF	60	SER	CA-CB	6.63	1.64	1.53
22	AY	56	C	C2'-C1'	-6.63	1.43	1.53
57	BB	2832	U	C5'-C4'	6.63	1.61	1.51
21	AA	106	C	C4'-C3'	6.63	1.62	1.52
21	AA	29	U	C5'-C4'	6.63	1.61	1.51
41	BV	76	ASP	C-N	6.63	1.42	1.33
57	BB	1646	C	O3'-P	-6.63	1.51	1.61
21	AA	296	U	P-O5'	-6.62	1.49	1.59
23	AW	49	C	C3'-C2'	6.62	1.62	1.52
57	BB	393	C	C2'-C1'	-6.62	1.43	1.53
57	BB	1323	C	C2'-C1'	-6.62	1.43	1.53
7	AP	28	ARG	CD-NE	6.62	1.55	1.46
22	AY	64	A	C5'-C4'	6.62	1.61	1.51
26	AV	16	C	C2'-C1'	-6.62	1.43	1.53
53	BE	71	GLY	CA-C	-6.62	1.42	1.51
3	AL	29	LYS	CA-C	-6.62	1.44	1.52
25	AZ	233	ARG	NE-CZ	6.62	1.40	1.33
29	BJ	34	ARG	NE-CZ	6.62	1.40	1.33
29	BJ	138	GLN	CA-C	-6.62	1.44	1.52
40	BU	93	ARG	NE-CZ	6.62	1.40	1.33
16	AE	103	GLY	CA-C	6.61	1.59	1.51
21	AA	1493	A	C1'-N9	-6.61	1.37	1.47
52	BD	124	ARG	NE-CZ	6.61	1.40	1.33
13	AB	143	LEU	CA-C	-6.61	1.44	1.52
57	BB	2852	G	C2'-C1'	-6.61	1.43	1.53
40	BU	35	VAL	C-N	6.61	1.43	1.33
42	BW	24	ARG	CD-NE	6.61	1.55	1.46
6	AO	64	LYS	N-CA	-6.60	1.38	1.46
17	AF	75	GLU	C-O	-6.60	1.16	1.24
57	BB	1556	C	C2'-C1'	-6.60	1.43	1.53
57	BB	1991	U	C4'-O4'	-6.60	1.35	1.45
21	AA	782	A	P-O5'	-6.60	1.49	1.59
25	AZ	171	ARG	NE-CZ	6.60	1.40	1.33
31	BL	21	ARG	NE-CZ	6.60	1.40	1.33
10	AS	68	HIS	ND1-CE1	6.60	1.39	1.32
46	BZ	40	THR	C-N	-6.60	1.25	1.34
21	AA	1055	A	P-O5'	-6.59	1.49	1.59
21	AA	1389	C	C1'-N1	6.59	1.58	1.48
57	BB	1377	G	O3'-P	-6.59	1.51	1.61
57	BB	2466	C	C2'-C1'	-6.59	1.43	1.53
16	AE	106	ALA	CA-C	-6.59	1.44	1.52
18	AG	57	GLU	N-CA	6.58	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BG	31	GLU	CA-C	-6.58	1.43	1.52
57	BB	76	C	P-O5'	-6.58	1.49	1.59
57	BB	1864	U	C2'-C1'	-6.58	1.43	1.53
21	AA	776	G	C4'-O4'	-6.58	1.35	1.45
27	B5	78	PHE	C-N	6.58	1.41	1.33
12	AU	31	VAL	N-CA	-6.58	1.38	1.46
57	BB	577	G	C2'-C1'	-6.58	1.43	1.53
55	BG	142	GLN	C-N	6.58	1.40	1.33
20	AI	20	ILE	CA-C	-6.58	1.44	1.52
21	AA	1201	A	O3'-P	-6.58	1.51	1.61
39	BT	83	ALA	CA-C	-6.58	1.44	1.52
40	BU	96	LYS	CA-C	-6.58	1.44	1.52
57	BB	877	A	C2'-C1'	-6.57	1.43	1.53
57	BB	1447	C	C1'-N1	6.57	1.58	1.48
21	AA	840	C	C5'-C4'	6.57	1.61	1.51
25	AZ	94	GLY	C-O	-6.57	1.16	1.23
14	AC	167	TYR	N-CA	-6.57	1.37	1.46
21	AA	68	G	C5'-C4'	6.57	1.61	1.51
57	BB	2388	A	P-O5'	-6.57	1.49	1.59
57	BB	2816	G	C5'-C4'	6.57	1.61	1.51
14	AC	196	GLY	C-N	6.56	1.42	1.33
16	AE	44	ARG	N-CA	-6.56	1.37	1.45
54	BF	35	LEU	CA-C	-6.56	1.44	1.52
10	AS	77	ARG	N-CA	-6.56	1.38	1.46
57	BB	725	G	P-O5'	-6.56	1.50	1.59
21	AA	620	C	C1'-N1	6.56	1.58	1.48
57	BB	848	C	C2'-C1'	-6.56	1.43	1.53
32	BM	32	GLY	CA-C	-6.56	1.44	1.51
21	AA	979	C	O5'-C5'	6.55	1.52	1.42
45	BC	55	GLY	N-CA	6.55	1.49	1.44
45	BC	229	HIS	ND1-CE1	6.55	1.39	1.32
51	B4	4	ARG	NE-CZ	6.55	1.40	1.33
21	AA	641	U	C4'-O4'	-6.55	1.36	1.45
21	AA	1012	A	C4'-C3'	6.55	1.62	1.52
19	AH	100	ILE	N-CA	-6.55	1.38	1.46
57	BB	1033	U	C1'-N1	6.55	1.57	1.47
57	BB	1706	C	C4-N4	6.55	1.47	1.33
57	BB	2740	A	C1'-N9	-6.55	1.38	1.48
57	BB	2440	C	C2'-C1'	-6.54	1.43	1.53
40	BU	42	LYS	CA-C	-6.54	1.44	1.53
57	BB	760	G	C2'-C1'	-6.54	1.43	1.53
57	BB	2221	G	C5'-C4'	6.54	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BG	89	VAL	C-N	6.54	1.43	1.33
57	BB	1248	G	C3'-O3'	6.54	1.52	1.43
57	BB	1783	A	C4'-C3'	6.54	1.62	1.52
57	BB	2152	G	O3'-P	-6.54	1.51	1.61
21	AA	306	A	O3'-P	-6.53	1.51	1.61
32	BM	121	ALA	N-CA	-6.53	1.37	1.46
57	BB	50	U	C1'-N1	6.53	1.58	1.48
57	BB	2249	U	O3'-P	-6.53	1.51	1.61
21	AA	61	G	C1'-N9	-6.53	1.38	1.48
57	BB	2776	A	C2'-C1'	-6.53	1.43	1.53
11	AT	17	ARG	CZ-NH2	6.53	1.42	1.33
18	AG	77	ARG	NE-CZ	6.53	1.40	1.33
57	BB	1361	G	O3'-P	-6.53	1.51	1.61
21	AA	349	A	C2'-C1'	-6.53	1.43	1.53
21	AA	1098	C	C3'-C2'	-6.53	1.43	1.52
34	BO	40	ILE	N-CA	-6.52	1.38	1.46
16	AE	121	ASN	C-N	6.52	1.39	1.33
17	AF	70	VAL	C-N	6.52	1.41	1.34
3	AL	9	LYS	CA-CB	6.52	1.61	1.53
21	AA	541	G	P-O5'	-6.52	1.50	1.59
31	BL	40	SER	N-CA	-6.52	1.38	1.46
41	BV	30	ILE	C-O	-6.52	1.16	1.24
15	AD	51	GLY	CA-C	-6.52	1.42	1.51
21	AA	270	A	C2'-C1'	-6.52	1.43	1.53
21	AA	480	U	C3'-O3'	6.52	1.51	1.42
25	AZ	258	VAL	C-N	6.52	1.42	1.33
41	BV	29	ILE	N-CA	-6.52	1.38	1.46
21	AA	860	A	C4'-C3'	6.51	1.62	1.52
52	BD	34	VAL	CA-CB	-6.51	1.46	1.54
57	BB	1130	U	C3'-C2'	-6.51	1.43	1.52
57	BB	2229	U	C4'-O4'	6.51	1.55	1.45
57	BB	2777	G	O3'-P	-6.51	1.51	1.61
21	AA	1509	C	C5'-C4'	6.51	1.61	1.51
15	AD	184	LYS	CA-C	-6.51	1.45	1.53
21	AA	187	G	C5'-C4'	6.51	1.61	1.51
36	BQ	27	ARG	CD-NE	6.51	1.55	1.46
52	BD	114	LYS	CA-C	-6.51	1.44	1.52
12	AU	17	ARG	N-CA	-6.51	1.38	1.46
21	AA	473	U	C5'-C4'	6.51	1.61	1.51
1	AJ	29	ALA	N-CA	-6.50	1.37	1.46
57	BB	6	A	C2'-C1'	-6.50	1.43	1.53
14	AC	120	THR	C-N	6.50	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	BA	45	A	C1'-N9	6.50	1.57	1.48
18	AG	120	ALA	CA-C	-6.50	1.46	1.53
16	AE	156	ARG	CD-NE	6.49	1.55	1.46
57	BB	983	A	O4'-C1'	-6.49	1.31	1.41
23	AW	69	G	O3'-P	-6.49	1.51	1.61
57	BB	1610	A	C4'-O4'	-6.49	1.36	1.45
43	BX	10	ARG	CD-NE	6.49	1.55	1.46
53	BE	142	ALA	N-CA	-6.49	1.37	1.46
41	BV	88	HIS	N-CA	-6.49	1.37	1.46
45	BC	156	SER	C-N	6.49	1.42	1.33
57	BB	2573	C	C1'-N1	6.49	1.58	1.48
34	BO	10	ARG	CD-NE	6.49	1.55	1.46
57	BB	1198	U	O3'-P	-6.49	1.51	1.61
1	AJ	101	SER	CA-CB	6.48	1.64	1.53
21	AA	345	C	C1'-N1	6.48	1.57	1.47
25	AZ	272	GLU	CA-C	-6.48	1.44	1.52
54	BF	101	ARG	CZ-NH2	6.48	1.41	1.33
28	BI	95	ASP	N-CA	-6.48	1.37	1.45
57	BB	2198	A	C6-N6	6.48	1.47	1.33
21	AA	1285	A	O3'-P	-6.48	1.51	1.61
22	AY	75	C	C2'-C1'	6.48	1.62	1.53
25	AZ	22	HIS	CE1-NE2	6.48	1.39	1.32
45	BC	106	PRO	N-CA	6.48	1.55	1.47
52	BD	74	GLU	CA-CB	6.48	1.64	1.53
57	BB	1017	G	C2'-C1'	-6.48	1.43	1.53
18	AG	142	ARG	CD-NE	6.48	1.55	1.46
37	BR	32	THR	CA-C	-6.48	1.44	1.52
21	AA	424	G	O3'-P	-6.47	1.51	1.61
22	AY	22	G	C1'-N9	-6.47	1.38	1.48
25	AZ	177	ALA	CA-C	-6.47	1.44	1.52
57	BB	2073	C	C4'-O4'	-6.47	1.35	1.45
57	BB	522	A	O3'-P	-6.47	1.51	1.61
14	AC	130	ARG	C-N	6.47	1.42	1.34
21	AA	1343	G	C5'-C4'	6.47	1.60	1.51
57	BB	680	C	C5'-C4'	6.47	1.60	1.51
6	AO	2	LEU	N-CA	-6.46	1.38	1.46
20	AI	88	GLU	CA-C	-6.46	1.43	1.52
21	AA	126	G	C3'-C2'	-6.46	1.43	1.52
57	BB	27	G	C5'-C4'	6.46	1.60	1.51
57	BB	1977	A	P-O5'	-6.46	1.50	1.59
57	BB	2326	C	O3'-P	-6.46	1.51	1.61
18	AG	101	ARG	N-CA	-6.46	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	BO	88	LYS	C-N	6.46	1.41	1.33
57	BB	264	C	C3'-O3'	6.46	1.51	1.42
29	BJ	31	GLU	N-CA	-6.46	1.38	1.46
45	BC	221	GLY	CA-C	6.46	1.59	1.52
57	BB	1002	G	C2'-C1'	-6.46	1.43	1.53
57	BB	2467	C	O3'-P	-6.46	1.51	1.61
57	BB	2000	C	O5'-C5'	6.46	1.52	1.42
25	AZ	252	LYS	CA-C	-6.46	1.45	1.52
36	BQ	62	ALA	CA-C	-6.46	1.44	1.52
58	BA	31	C	P-O5'	-6.46	1.50	1.59
57	BB	236	C	C2'-C1'	-6.45	1.43	1.53
57	BB	1522	A	C2'-C1'	-6.45	1.43	1.53
16	AE	111	ARG	NE-CZ	6.45	1.40	1.33
57	BB	1157	G	C1'-N9	6.45	1.57	1.48
25	AZ	333	ARG	CA-C	6.45	1.58	1.52
33	BN	87	PHE	CA-C	-6.45	1.44	1.52
43	BX	26	ARG	NE-CZ	6.45	1.40	1.33
57	BB	691	C	C2'-O2'	-6.45	1.32	1.42
57	BB	2360	G	C5'-C4'	6.45	1.60	1.51
21	AA	625	U	C5'-C4'	6.45	1.60	1.51
53	BE	149	ILE	CA-C	-6.45	1.44	1.52
57	BB	2329	U	C4'-O4'	6.45	1.55	1.45
57	BB	2709	G	C5'-C4'	6.45	1.60	1.51
1	AJ	84	VAL	CA-CB	-6.45	1.46	1.54
3	AL	20	VAL	N-CA	-6.45	1.38	1.46
4	AM	46	GLU	N-CA	-6.45	1.38	1.46
21	AA	948	C	C5'-C4'	6.45	1.60	1.51
21	AA	1302	C	C4'-O4'	6.45	1.55	1.45
57	BB	1803	A	C2'-C1'	-6.44	1.43	1.53
14	AC	129	PHE	CA-CB	6.44	1.63	1.53
21	AA	497	G	C2'-C1'	-6.44	1.43	1.53
57	BB	1326	U	C5'-C4'	6.44	1.60	1.51
15	AD	114	ARG	CZ-NH2	6.44	1.41	1.33
40	BU	30	SER	CA-CB	6.44	1.64	1.53
57	BB	2506	U	C1'-N1	6.44	1.58	1.48
57	BB	198	C	C1'-N1	6.44	1.58	1.48
57	BB	1782	U	C4'-O4'	-6.44	1.35	1.45
17	AF	83	ALA	C-N	6.44	1.41	1.33
37	BR	102	SER	CA-CB	6.44	1.62	1.53
15	AD	88	ASN	C-N	-6.44	1.25	1.33
30	BK	93	PRO	N-CA	-6.44	1.39	1.47
16	AE	35	LEU	CA-C	-6.43	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1404	C	C2'-C1'	-6.43	1.43	1.53
18	AG	9	ARG	CD-NE	6.43	1.55	1.46
21	AA	635	A	C2'-C1'	-6.43	1.43	1.53
36	BQ	64	ILE	N-CA	-6.43	1.38	1.46
57	BB	1216	G	O3'-P	-6.43	1.51	1.61
34	BO	113	ALA	CA-C	-6.43	1.44	1.52
3	AL	76	HIS	CA-C	-6.43	1.44	1.52
29	BJ	135	GLN	CA-CB	6.43	1.61	1.53
21	AA	551	U	C2'-C1'	-6.42	1.43	1.53
36	BQ	108	LEU	CA-C	-6.42	1.44	1.52
14	AC	133	MET	C-N	-6.42	1.26	1.33
38	BS	28	LYS	C-N	6.42	1.42	1.33
57	BB	2897	U	O4'-C1'	6.42	1.51	1.41
2	AK	41	LEU	N-CA	6.42	1.54	1.46
25	AZ	146	LEU	CA-C	-6.42	1.44	1.52
23	AW	52	G	C4'-C3'	6.42	1.62	1.52
57	BB	753	A	C2'-C1'	-6.42	1.43	1.53
57	BB	2810	A	P-O5'	-6.42	1.50	1.59
13	AB	103	TRP	C-N	6.41	1.42	1.33
38	BS	61	ASN	CA-CB	6.41	1.64	1.53
58	BA	109	A	C2'-C1'	-6.41	1.43	1.53
21	AA	679	C	C4'-O4'	6.41	1.55	1.45
49	B2	3	ARG	CZ-NH2	6.41	1.41	1.33
9	AR	70	THR	CA-C	-6.41	1.44	1.52
45	BC	153	LEU	C-O	-6.41	1.16	1.23
53	BE	35	TYR	CA-C	-6.41	1.44	1.52
57	BB	2587	A	C1'-N9	6.41	1.57	1.48
10	AS	61	VAL	C-N	6.40	1.42	1.33
21	AA	987	G	C2'-C1'	-6.40	1.43	1.53
32	BM	107	GLY	CA-C	-6.40	1.42	1.51
47	B0	50	GLY	CA-C	-6.40	1.45	1.51
57	BB	4	U	C3'-C2'	6.40	1.62	1.52
57	BB	2065	C	C2'-C1'	-6.40	1.43	1.53
21	AA	375	U	C4'-C3'	-6.40	1.43	1.52
23	AW	64	A	C4'-O4'	6.40	1.55	1.45
34	BO	111	ARG	N-CA	-6.40	1.37	1.45
44	BY	23	ARG	C-N	6.40	1.42	1.33
45	BC	86	ARG	NE-CZ	6.40	1.40	1.33
53	BE	13	THR	CA-C	-6.40	1.44	1.52
57	BB	1393	A	C4'-O4'	6.40	1.55	1.45
21	AA	1487	G	C5'-C4'	6.40	1.60	1.51
52	BD	83	ARG	CA-C	-6.40	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2836	U	C3'-C2'	6.40	1.62	1.52
1	AJ	89	ARG	NE-CZ	6.39	1.40	1.33
25	AZ	320	THR	C-N	-6.39	1.25	1.33
55	BG	2	ARG	CD-NE	6.39	1.55	1.46
57	BB	2308	G	C4'-C3'	6.39	1.62	1.52
8	AQ	32	ILE	C-N	6.39	1.42	1.33
18	AG	114	SER	C-N	6.39	1.42	1.33
55	BG	30	GLY	CA-C	-6.39	1.44	1.52
57	BB	228	C	C4'-O4'	6.39	1.55	1.45
57	BB	970	U	C2'-C1'	-6.39	1.43	1.53
57	BB	2235	G	O3'-P	-6.39	1.51	1.61
22	AY	11	C	C1'-N1	6.39	1.58	1.48
25	AZ	68	GLU	CA-C	-6.39	1.45	1.52
34	BO	16	ARG	NE-CZ	6.38	1.40	1.33
45	BC	93	VAL	C-N	6.38	1.41	1.33
57	BB	2521	C	C1'-N1	6.38	1.58	1.48
21	AA	868	C	C5'-C4'	6.38	1.60	1.51
21	AA	268	U	C4'-C3'	6.38	1.62	1.52
21	AA	851	G	O4'-C1'	6.38	1.51	1.41
30	BK	30	ARG	NE-CZ	6.38	1.40	1.33
57	BB	1986	C	C2'-C1'	-6.38	1.43	1.53
10	AS	56	HIS	CA-C	-6.37	1.45	1.52
21	AA	923	A	C4'-C3'	6.37	1.62	1.52
35	BP	42	PHE	CA-CB	6.37	1.58	1.53
56	BH	116	ARG	NE-CZ	6.37	1.40	1.33
48	B1	27	ARG	C-O	-6.37	1.15	1.24
55	BG	58	ALA	CA-CB	6.37	1.64	1.53
14	AC	81	GLU	N-CA	-6.37	1.38	1.46
58	BA	38	C	C5'-C4'	6.37	1.60	1.51
49	B2	41	ARG	CZ-NH1	6.37	1.41	1.32
53	BE	105	LEU	N-CA	-6.37	1.38	1.46
57	BB	1598	A	O3'-P	-6.37	1.51	1.61
21	AA	162	A	C4'-O4'	6.37	1.55	1.45
52	BD	48	ILE	N-CA	-6.37	1.39	1.46
8	AQ	16	MET	CA-C	-6.37	1.44	1.52
40	BU	95	PHE	C-N	6.37	1.41	1.33
41	BV	61	LEU	CA-C	-6.37	1.44	1.52
57	BB	1086	A	C4'-O4'	-6.37	1.36	1.45
21	AA	1388	C	P-O5'	-6.36	1.50	1.59
32	BM	3	GLN	CA-C	-6.36	1.45	1.53
57	BB	1473	G	C1'-N9	-6.36	1.38	1.48
57	BB	2769	U	C4'-O4'	-6.36	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	720	U	O5'-C5'	6.36	1.51	1.42
57	BB	161	A	C5'-C4'	6.36	1.60	1.51
21	AA	1211	U	C4'-O4'	-6.36	1.36	1.45
28	BI	70	THR	N-CA	-6.36	1.38	1.46
29	BJ	132	HIS	CB-CG	-6.36	1.41	1.50
21	AA	626	G	C2'-C1'	-6.36	1.43	1.53
27	B5	72	SER	CA-C	-6.35	1.44	1.52
57	BB	2866	U	O3'-P	-6.35	1.51	1.61
2	AK	47	GLY	CA-C	-6.35	1.42	1.51
55	BG	135	ALA	CA-CB	6.35	1.64	1.53
4	AM	29	SER	C-N	6.35	1.42	1.33
29	BJ	112	GLY	C-N	-6.35	1.26	1.34
55	BG	36	LEU	C-N	6.35	1.42	1.33
57	BB	1991	U	C2'-C1'	-6.35	1.43	1.53
15	AD	191	SER	CA-CB	6.35	1.61	1.52
21	AA	751	U	C2'-C1'	-6.35	1.43	1.53
29	BJ	96	ARG	CA-C	6.35	1.60	1.52
57	BB	94	A	P-O5'	6.35	1.69	1.59
25	AZ	70	ASP	CA-C	-6.35	1.45	1.52
21	AA	100	G	C4'-C3'	-6.34	1.43	1.52
42	BW	24	ARG	NE-CZ	6.34	1.40	1.33
57	BB	2241	A	C2'-C1'	-6.34	1.43	1.53
21	AA	407	U	O3'-P	-6.34	1.51	1.61
23	AW	50	U	O3'-P	-6.34	1.51	1.61
57	BB	2621	G	C4'-O4'	-6.34	1.36	1.45
57	BB	2729	G	C1'-N9	-6.34	1.38	1.48
2	AK	55	ARG	N-CA	-6.34	1.37	1.46
38	BS	8	ARG	NE-CZ	6.34	1.40	1.33
17	AF	86	ARG	CD-NE	6.34	1.55	1.46
21	AA	506	G	C4'-O4'	-6.34	1.36	1.45
25	AZ	283	ARG	NE-CZ	6.34	1.40	1.33
29	BJ	54	ILE	CA-C	-6.34	1.44	1.52
49	B2	3	ARG	CA-CB	6.34	1.62	1.53
19	AH	111	THR	C-N	6.33	1.42	1.33
2	AK	118	ASN	N-CA	-6.33	1.38	1.46
16	AE	79	THR	CA-C	-6.33	1.44	1.52
40	BU	45	GLN	C-O	-6.33	1.16	1.23
57	BB	905	A	C2'-C1'	-6.33	1.43	1.53
57	BB	1309	G	C4'-O4'	6.33	1.55	1.45
57	BB	273	G	C2'-C1'	-6.33	1.43	1.53
21	AA	967	C	C5'-C4'	6.33	1.60	1.51
57	BB	2532	G	C2'-C1'	-6.33	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AK	118	ASN	CA-C	-6.33	1.44	1.52
10	AS	42	ASN	N-CA	-6.33	1.37	1.46
13	AB	221	ARG	CZ-NH1	6.33	1.41	1.32
21	AA	176	C	P-O5'	-6.33	1.50	1.59
21	AA	51	A	C2'-C1'	-6.32	1.43	1.53
21	AA	966	G	C4'-O4'	-6.32	1.36	1.45
34	BO	26	LEU	CA-CB	6.32	1.62	1.53
45	BC	60	ALA	C-N	6.32	1.42	1.33
57	BB	2104	C	P-O5'	-6.32	1.50	1.59
21	AA	1403	C	C5'-C4'	6.32	1.60	1.51
46	BZ	10	ARG	NE-CZ	6.32	1.40	1.33
21	AA	1059	C	C2'-C1'	-6.32	1.43	1.53
25	AZ	52	ALA	N-CA	-6.32	1.34	1.46
27	B5	168	ASN	CA-C	-6.32	1.46	1.52
37	BR	27	ILE	CA-C	-6.32	1.45	1.53
57	BB	1499	C	C2'-C1'	-6.32	1.43	1.53
14	AC	100	ILE	CA-C	6.32	1.60	1.52
46	BZ	11	SER	C-N	6.32	1.42	1.33
3	AL	97	VAL	CA-C	6.32	1.59	1.52
14	AC	110	LEU	CA-C	-6.32	1.44	1.52
15	AD	27	ILE	N-CA	6.32	1.54	1.46
55	BG	152	ARG	NE-CZ	6.32	1.40	1.33
57	BB	204	A	O3'-P	-6.32	1.51	1.61
57	BB	2751	G	P-O5'	-6.32	1.50	1.59
21	AA	13	U	C2'-O2'	6.32	1.51	1.41
57	BB	557	C	C5'-C4'	6.32	1.60	1.51
57	BB	1076	C	C2'-C1'	-6.32	1.43	1.53
33	BN	85	PRO	CA-CB	-6.31	1.45	1.53
13	AB	20	ARG	CA-C	-6.31	1.44	1.52
39	BT	18	GLU	C-N	-6.31	1.25	1.33
45	BC	124	LYS	CA-C	-6.31	1.44	1.52
55	BG	34	ARG	CZ-NH1	6.31	1.41	1.32
26	AV	34	C	C5'-C4'	6.31	1.60	1.51
57	BB	1938	A	C1'-N9	6.31	1.56	1.47
13	AB	217	ALA	CA-C	-6.31	1.43	1.52
57	BB	2328	A	C4'-C3'	6.31	1.62	1.52
30	BK	3	GLU	CA-C	-6.30	1.44	1.53
37	BR	87	GLN	C-N	6.30	1.39	1.33
57	BB	660	C	C2'-C1'	-6.30	1.43	1.53
57	BB	1523	U	C4'-O4'	6.30	1.55	1.45
8	AQ	26	ARG	CD-NE	6.30	1.55	1.46
7	AP	33	ILE	CA-C	-6.30	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	AZ	164	GLY	N-CA	-6.30	1.36	1.45
57	BB	824	U	N1-C2	6.30	1.51	1.38
3	AL	111	GLN	CA-C	6.30	1.61	1.52
21	AA	1475	G	C5'-C4'	6.30	1.60	1.51
53	BE	94	GLN	CA-C	-6.30	1.44	1.53
7	AP	56	ARG	CA-C	-6.30	1.44	1.52
14	AC	93	ILE	CA-CB	-6.30	1.47	1.54
34	BO	102	ARG	CD-NE	6.30	1.55	1.46
35	BP	93	LYS	CA-CB	6.30	1.62	1.53
43	BX	44	ARG	N-CA	-6.30	1.38	1.45
18	AG	66	GLU	CA-C	-6.29	1.44	1.52
39	BT	12	ARG	NE-CZ	6.29	1.40	1.33
21	AA	399	G	C5'-C4'	6.29	1.60	1.51
57	BB	580	U	O3'-P	-6.29	1.51	1.61
54	BF	111	ARG	CD-NE	6.29	1.55	1.46
8	AQ	11	VAL	N-CA	-6.29	1.38	1.46
57	BB	2022	U	C2'-C1'	-6.29	1.43	1.53
34	BO	92	PHE	N-CA	-6.29	1.38	1.46
17	AF	86	ARG	NE-CZ	6.28	1.40	1.33
30	BK	40	ILE	CA-C	-6.28	1.44	1.52
27	B5	93	GLU	CA-CB	6.28	1.63	1.53
17	AF	42	TRP	C-N	6.28	1.41	1.33
57	BB	2179	C	C1'-N1	6.28	1.57	1.48
57	BB	2844	G	O3'-P	-6.28	1.51	1.61
1	AJ	11	LYS	C-N	6.28	1.41	1.33
21	AA	85	U	O3'-P	-6.27	1.51	1.61
21	AA	1188	A	P-O5'	-6.27	1.50	1.59
57	BB	1061	U	C4'-O4'	-6.27	1.36	1.45
52	BD	145	SER	CA-C	-6.27	1.44	1.53
57	BB	1763	G	C4'-O4'	6.27	1.54	1.45
57	BB	849	A	O3'-P	-6.27	1.51	1.61
25	AZ	75	HIS	ND1-CE1	6.27	1.38	1.32
35	BP	33	GLU	CA-C	-6.26	1.44	1.52
49	B2	12	ARG	NE-CZ	6.26	1.40	1.33
57	BB	2326	C	O5'-C5'	6.26	1.51	1.42
21	AA	159	G	C3'-C2'	-6.26	1.43	1.52
15	AD	80	ARG	CD-NE	6.26	1.55	1.46
15	AD	141	VAL	CA-C	-6.26	1.45	1.52
30	BK	77	ARG	N-CA	-6.26	1.38	1.46
57	BB	85	G	P-O5'	-6.26	1.50	1.59
57	BB	311	A	C4'-C3'	6.26	1.62	1.53
57	BB	907	G	O3'-P	-6.26	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	147	G	C5'-C4'	6.25	1.60	1.51
57	BB	324	A	C3'-C2'	6.25	1.62	1.52
57	BB	2214	C	C5'-C4'	6.25	1.60	1.51
45	BC	161	VAL	CA-C	-6.25	1.45	1.52
48	B1	18	HIS	N-CA	-6.25	1.38	1.46
1	AJ	16	ARG	NE-CZ	6.25	1.40	1.33
4	AM	56	ARG	CD-NE	6.25	1.55	1.46
17	AF	23	GLU	N-CA	6.25	1.53	1.46
57	BB	919	U	P-O5'	-6.25	1.50	1.59
20	AI	5	TYR	CA-C	-6.25	1.45	1.52
20	AI	84	ARG	CZ-NH1	6.25	1.41	1.32
21	AA	1445	U	C2'-C1'	-6.25	1.44	1.53
37	BR	13	ARG	CA-C	-6.25	1.45	1.52
37	BR	56	GLY	N-CA	-6.25	1.37	1.45
21	AA	616	G	C3'-O3'	6.25	1.51	1.42
57	BB	1361	G	O5'-C5'	6.25	1.51	1.42
57	BB	2771	C	C2'-C1'	-6.25	1.44	1.53
44	BY	23	ARG	CA-C	-6.25	1.45	1.53
57	BB	2734	A	O3'-P	-6.25	1.51	1.61
1	AJ	72	ARG	CZ-NH2	6.24	1.41	1.33
1	AJ	81	GLU	C-N	6.24	1.42	1.33
57	BB	2320	U	C1'-N1	6.24	1.56	1.47
57	BB	2359	C	C5'-C4'	6.24	1.60	1.51
57	BB	2653	U	C2'-C1'	-6.24	1.44	1.53
52	BD	41	ALA	CA-CB	6.24	1.62	1.54
21	AA	1518	A	O3'-P	-6.24	1.51	1.61
34	BO	31	THR	N-CA	-6.24	1.38	1.46
35	BP	86	LYS	C-N	6.24	1.41	1.33
31	BL	2	ARG	CA-C	-6.24	1.39	1.52
51	B4	3	VAL	CA-CB	-6.24	1.47	1.54
54	BF	29	ARG	N-CA	-6.24	1.38	1.46
57	BB	893	C	P-O5'	6.24	1.69	1.59
57	BB	2846	G	N7-C5	-6.23	1.26	1.39
57	BB	2021	C	C5'-C4'	6.23	1.60	1.51
57	BB	2486	C	C3'-C2'	-6.23	1.43	1.52
57	BB	2806	C	C2'-C1'	-6.23	1.44	1.53
21	AA	1098	C	P-O5'	-6.23	1.50	1.59
21	AA	1155	A	C2'-C1'	-6.23	1.44	1.53
57	BB	140	C	O5'-C5'	-6.23	1.33	1.42
55	BG	68	ARG	CA-C	-6.23	1.44	1.52
57	BB	2723	C	C2'-C1'	6.23	1.62	1.53
21	AA	1239	A	O3'-P	-6.23	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1481	U	C3'-C2'	-6.23	1.43	1.52
56	BH	51	ARG	NE-CZ	6.23	1.39	1.33
32	BM	73	ILE	CA-CB	-6.22	1.46	1.54
3	AL	74	GLN	CA-C	-6.22	1.44	1.52
5	AN	8	ARG	NE-CZ	6.22	1.39	1.33
21	AA	636	U	C4'-O4'	-6.22	1.36	1.45
39	BT	78	SER	CA-C	-6.22	1.45	1.52
57	BB	1777	U	C5'-C4'	6.22	1.60	1.51
21	AA	689	C	C4'-C3'	-6.22	1.43	1.52
57	BB	2864	G	C4'-C3'	-6.21	1.43	1.52
31	BL	103	ILE	N-CA	-6.21	1.38	1.46
52	BD	187	LEU	CA-C	-6.21	1.45	1.52
53	BE	69	ARG	CZ-NH2	6.21	1.41	1.33
21	AA	1173	U	O3'-P	-6.21	1.51	1.61
27	B5	192	LEU	N-CA	-6.21	1.38	1.46
45	BC	72	GLY	C-N	6.21	1.37	1.33
57	BB	2460	U	C2'-C1'	-6.21	1.44	1.53
21	AA	168	G	C4'-C3'	-6.21	1.43	1.52
21	AA	1093	A	C4'-C3'	6.21	1.61	1.52
57	BB	611	C	C4'-O4'	6.21	1.54	1.45
57	BB	721	A	O3'-P	-6.21	1.51	1.61
12	AU	20	ARG	C-O	-6.21	1.16	1.23
34	BO	81	ARG	CD-NE	6.21	1.54	1.46
37	BR	35	PHE	C-N	6.21	1.42	1.33
20	AI	28	VAL	CA-C	-6.20	1.44	1.52
21	AA	589	U	C4'-C3'	6.20	1.61	1.52
25	AZ	15	GLY	CA-C	-6.20	1.44	1.51
28	BI	10	LEU	CA-CB	6.20	1.64	1.53
54	BF	73	VAL	C-N	6.20	1.42	1.33
57	BB	2409	G	C4'-C3'	6.20	1.61	1.52
21	AA	221	C	C2'-C1'	-6.20	1.44	1.53
13	AB	62	ARG	NE-CZ	6.20	1.39	1.33
25	AZ	171	ARG	CA-CB	6.20	1.61	1.52
26	AV	17(A)	U	C3'-O3'	6.20	1.51	1.42
26	AV	72	A	O5'-C5'	6.20	1.51	1.42
45	BC	142	ASN	CA-C	-6.20	1.44	1.52
48	B1	41	VAL	CA-CB	-6.20	1.45	1.54
6	AO	57	ARG	NE-CZ	6.20	1.39	1.33
57	BB	1890	A	C2'-O2'	-6.20	1.33	1.42
21	AA	310	G	C2'-C1'	-6.20	1.44	1.53
39	BT	70	HIS	CG-CD2	6.20	1.42	1.35
57	BB	2527	C	C1'-N1	6.20	1.57	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1275	A	C1'-N9	-6.19	1.38	1.48
55	BG	61	TRP	NE1-CE2	6.19	1.44	1.37
36	BQ	98	ALA	C-N	6.19	1.41	1.33
57	BB	2123	G	C1'-N9	6.19	1.57	1.48
21	AA	458	U	C1'-N1	6.19	1.57	1.48
21	AA	1478	U	C2'-C1'	-6.19	1.44	1.53
32	BM	44	ARG	NE-CZ	6.19	1.39	1.33
21	AA	1319	A	C4'-O4'	-6.18	1.36	1.45
57	BB	1047	G	O3'-P	-6.18	1.51	1.61
21	AA	505	G	C5'-C4'	6.18	1.60	1.51
56	BH	84	ALA	C-N	6.18	1.41	1.33
13	AB	185	ILE	CA-C	6.18	1.60	1.52
57	BB	1895	C	C5'-C4'	6.18	1.60	1.51
58	BA	2	G	P-OP2	6.18	1.61	1.49
16	AE	123	LEU	N-CA	6.18	1.53	1.45
47	B0	49	ARG	CD-NE	6.18	1.54	1.46
21	AA	461	A	C3'-O3'	6.18	1.51	1.42
21	AA	1096	C	C2'-C1'	-6.18	1.44	1.53
28	BI	114	ALA	C-N	6.18	1.42	1.33
36	BQ	73	ILE	CA-CB	-6.18	1.46	1.54
52	BD	116	LYS	N-CA	-6.18	1.40	1.46
9	AR	73	HIS	ND1-CE1	6.17	1.38	1.32
57	BB	288	U	C4'-C3'	6.17	1.61	1.52
57	BB	1497	U	C4'-C3'	6.17	1.62	1.53
28	BI	45	THR	C-N	6.17	1.41	1.33
32	BM	104	GLU	CA-C	-6.17	1.44	1.52
45	BC	188	ARG	CD-NE	6.17	1.54	1.46
48	B1	24	LYS	CA-CB	6.17	1.63	1.53
9	AR	49	LYS	C-N	6.17	1.41	1.33
21	AA	133	U	C3'-O3'	6.17	1.51	1.42
55	BG	165	ASP	N-CA	-6.17	1.39	1.46
21	AA	315	A	C5'-C4'	6.17	1.60	1.51
58	BA	54	G	C2'-O2'	-6.17	1.33	1.42
21	AA	205	A	C5'-C4'	6.16	1.60	1.51
21	AA	903	G	C4'-O4'	-6.16	1.36	1.45
33	BN	5	LYS	N-CA	-6.16	1.38	1.45
39	BT	33	LYS	CA-CB	6.16	1.62	1.53
43	BX	48	LEU	CA-C	-6.16	1.45	1.52
57	BB	1269	A	P-O5'	-6.16	1.50	1.59
21	AA	437	U	C2'-C1'	-6.16	1.44	1.53
57	BB	1643	G	C4'-O4'	-6.16	1.36	1.45
23	AW	28	G	C1'-N9	-6.16	1.38	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	AZ	150	GLU	N-CA	-6.16	1.39	1.46
45	BC	2	VAL	CA-C	-6.16	1.45	1.52
21	AA	274	A	C2'-C1'	-6.16	1.43	1.53
7	AP	31	ARG	NE-CZ	6.15	1.39	1.33
11	AT	8	LYS	C-N	6.15	1.42	1.33
21	AA	292	G	O3'-P	-6.15	1.51	1.61
57	BB	1781	U	O3'-P	-6.15	1.51	1.61
36	BQ	91	ARG	NE-CZ	6.15	1.39	1.33
57	BB	449	A	C2'-C1'	-6.15	1.44	1.53
57	BB	1060	U	C1'-N1	6.15	1.56	1.47
16	AE	9	GLU	N-CA	6.15	1.57	1.46
18	AG	4	ARG	CD-NE	6.15	1.54	1.46
57	BB	214	G	O3'-P	-6.15	1.51	1.61
57	BB	731	C	O3'-P	-6.15	1.51	1.61
21	AA	759	A	O5'-C5'	-6.14	1.33	1.42
57	BB	600	G	C2'-C1'	-6.14	1.44	1.53
13	AB	154	GLY	CA-C	-6.14	1.43	1.51
18	AG	64	ALA	CA-C	-6.14	1.44	1.52
20	AI	75	ALA	CA-C	6.14	1.61	1.52
22	AY	10	G	O3'-P	-6.14	1.51	1.61
57	BB	654	A	C1'-N9	6.14	1.57	1.48
57	BB	1436	G	O5'-C5'	6.14	1.51	1.42
57	BB	2463	C	C4'-C3'	6.14	1.61	1.52
3	AL	119	LYS	CA-C	-6.14	1.44	1.53
28	BI	76	ALA	N-CA	-6.14	1.38	1.46
57	BB	2163	A	O5'-C5'	6.14	1.51	1.42
22	AY	9	A	C2'-C1'	-6.14	1.43	1.53
57	BB	1320	C	C2'-C1'	-6.14	1.43	1.53
13	AB	222	GLU	CA-C	-6.13	1.44	1.52
21	AA	1304	G	C5'-C4'	6.13	1.60	1.51
49	B2	33	ARG	NE-CZ	6.13	1.39	1.33
54	BF	161	SER	CA-C	-6.13	1.45	1.52
57	BB	525	U	C5'-C4'	6.13	1.60	1.51
57	BB	1859	U	P-O5'	-6.13	1.50	1.59
15	AD	149	LYS	CA-CB	6.13	1.62	1.53
57	BB	1968	G	C2'-C1'	-6.13	1.44	1.53
7	AP	79	ASN	CA-C	-6.13	1.45	1.53
54	BF	166	ARG	CD-NE	6.13	1.54	1.46
26	AV	30	G	O3'-P	-6.13	1.51	1.61
57	BB	705	A	C2'-C1'	-6.13	1.44	1.53
6	AO	79	ARG	CA-C	-6.13	1.45	1.52
21	AA	249	U	P-O5'	-6.13	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	387	U	O5'-C5'	6.13	1.51	1.42
21	AA	402	G	C5'-C4'	-6.13	1.42	1.51
29	BJ	18	VAL	N-CA	-6.13	1.39	1.46
56	BH	123	ARG	CD-NE	6.13	1.54	1.46
57	BB	94	A	C3'-O3'	6.13	1.51	1.42
57	BB	395	U	C3'-C2'	-6.13	1.43	1.52
16	AE	52	ALA	CA-C	-6.13	1.45	1.52
53	BE	102	ARG	NE-CZ	6.13	1.39	1.33
56	BH	116	ARG	CA-C	-6.13	1.44	1.52
57	BB	2022	U	O5'-C5'	6.13	1.52	1.42
58	BA	43	C	C2'-C1'	6.13	1.62	1.53
21	AA	1302	C	C1'-N1	6.12	1.57	1.48
57	BB	1861	G	C5'-C4'	6.12	1.60	1.51
15	AD	176	LYS	C-N	6.12	1.41	1.33
21	AA	12	U	C4'-O4'	6.12	1.54	1.45
34	BO	102	ARG	CZ-NH2	6.12	1.41	1.33
46	BZ	50	VAL	N-CA	-6.12	1.38	1.46
54	BF	36	ASN	C-N	6.12	1.42	1.33
57	BB	2047	C	C1'-N1	6.12	1.57	1.48
57	BB	2282	G	O3'-P	-6.12	1.51	1.61
27	B5	185	LEU	C-N	6.12	1.41	1.33
39	BT	89	GLU	C-N	6.12	1.42	1.33
56	BH	62	LEU	CA-CB	6.12	1.63	1.53
57	BB	1274	A	O3'-P	-6.12	1.51	1.61
57	BB	1387	A	P-O5'	-6.12	1.50	1.59
57	BB	2327	A	C4'-C3'	6.12	1.61	1.52
1	AJ	7	ARG	NE-CZ	6.12	1.39	1.33
57	BB	2698	U	C4'-O4'	6.12	1.54	1.45
27	B5	172	HIS	CA-CB	6.12	1.62	1.53
3	AL	120	ARG	CD-NE	6.12	1.54	1.46
8	AQ	56	ASP	CA-CB	6.12	1.60	1.52
21	AA	13	U	C2'-C1'	-6.12	1.43	1.53
57	BB	6	A	C1'-N9	-6.12	1.38	1.48
57	BB	2038	G	C3'-C2'	-6.12	1.43	1.52
57	BB	2556	C	C3'-O3'	6.12	1.51	1.42
6	AO	49	HIS	CE1-NE2	-6.11	1.26	1.32
42	BW	30	VAL	N-CA	-6.11	1.38	1.46
52	BD	41	ALA	CA-C	-6.11	1.44	1.52
57	BB	120	U	C3'-O3'	6.11	1.52	1.43
57	BB	260	G	C2-N3	6.11	1.45	1.32
57	BB	1791	A	O3'-P	-6.11	1.51	1.61
21	AA	1327	C	O3'-P	-6.11	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	BI	38	CYS	N-CA	-6.11	1.39	1.46
31	BL	18	ARG	CZ-NH2	6.11	1.41	1.33
33	BN	80	PHE	CA-CB	6.11	1.62	1.53
36	BQ	83	LYS	C-N	6.11	1.41	1.33
57	BB	530	G	C2'-C1'	-6.11	1.44	1.53
57	BB	664	G	O4'-C1'	-6.11	1.32	1.41
3	AL	35	ARG	NE-CZ	6.11	1.39	1.33
21	AA	755	G	C2'-C1'	-6.11	1.44	1.53
21	AA	1484	C	O4'-C1'	-6.11	1.32	1.41
57	BB	11	C	O3'-P	-6.11	1.51	1.61
57	BB	2059	A	O3'-P	-6.11	1.51	1.61
21	AA	1182	G	C1'-N9	6.10	1.56	1.47
57	BB	1246	A	O3'-P	6.10	1.70	1.61
8	AQ	28	VAL	CA-CB	-6.10	1.47	1.54
22	AY	5	A	O3'-P	6.10	1.70	1.61
27	B5	137	MET	CA-C	6.10	1.59	1.53
25	AZ	20	VAL	N-CA	-6.10	1.38	1.46
57	BB	1567	G	O3'-P	-6.10	1.52	1.61
13	AB	76	SER	CA-C	-6.09	1.44	1.52
53	BE	114	ARG	CD-NE	6.09	1.54	1.46
53	BE	74	LYS	N-CA	-6.09	1.39	1.46
55	BG	162	ARG	N-CA	-6.09	1.39	1.46
4	AM	57	ASP	CA-CB	6.09	1.62	1.53
21	AA	529	G	O3'-P	-6.09	1.52	1.61
35	BP	57	ALA	CA-C	-6.09	1.45	1.52
55	BG	28	LYS	CA-C	-6.09	1.45	1.52
57	BB	498	G	C3'-O3'	6.09	1.51	1.42
57	BB	618	G	C6-N1	6.09	1.51	1.39
57	BB	2332	C	C4'-C3'	6.09	1.61	1.52
57	BB	1093	G	C3'-O3'	6.09	1.51	1.42
21	AA	1506	U	C2'-C1'	-6.09	1.44	1.53
45	BC	127	ASN	CA-C	-6.09	1.45	1.52
57	BB	233	A	C3'-O3'	6.09	1.51	1.42
57	BB	1759	A	C4'-O4'	6.09	1.54	1.45
57	BB	755	U	C5'-C4'	6.08	1.60	1.51
11	AT	37	ALA	C-N	6.08	1.41	1.33
12	AU	46	ARG	NE-CZ	6.08	1.39	1.33
20	AI	124	PRO	CA-CB	6.08	1.62	1.53
21	AA	476	U	C2'-C1'	-6.08	1.44	1.53
25	AZ	203	GLU	N-CA	-6.08	1.39	1.46
27	B5	94	LEU	CA-C	-6.08	1.45	1.52
57	BB	924	G	P-O5'	-6.08	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	BA	118	C	C2'-C1'	-6.08	1.44	1.53
10	AS	68	HIS	C-N	6.08	1.41	1.33
12	AU	44	ARG	CD-NE	6.08	1.54	1.46
41	BV	62	THR	CA-C	-6.08	1.45	1.53
29	BJ	55	ILE	CA-CB	-6.08	1.46	1.54
57	BB	398	C	C5'-C4'	6.08	1.60	1.51
57	BB	2107	G	C2'-C1'	-6.08	1.44	1.53
25	AZ	77	ALA	CA-C	-6.08	1.45	1.52
26	AV	22	G	O5'-C5'	6.08	1.51	1.42
37	BR	78	ARG	NE-CZ	6.08	1.39	1.33
40	BU	69	VAL	C-N	6.08	1.41	1.33
43	BX	69	GLU	CA-C	-6.08	1.45	1.52
21	AA	186	C	C3'-C2'	-6.08	1.43	1.52
52	BD	169	ARG	CA-C	-6.08	1.45	1.52
20	AI	112	ARG	CZ-NH1	6.08	1.41	1.32
25	AZ	49	ILE	CA-CB	-6.08	1.46	1.54
53	BE	184	ASP	N-CA	-6.08	1.38	1.46
57	BB	755	U	C3'-O3'	6.08	1.51	1.42
33	BN	118	ARG	CA-C	-6.07	1.44	1.52
42	BW	27	GLY	N-CA	-6.07	1.38	1.45
57	BB	900	A	C1'-N9	6.07	1.57	1.48
57	BB	1071	G	O3'-P	-6.07	1.52	1.61
57	BB	1927	A	O5'-C5'	6.07	1.51	1.42
15	AD	43	ARG	CZ-NH1	6.07	1.41	1.32
57	BB	1620	G	C2'-C1'	-6.07	1.44	1.53
36	BQ	63	ARG	NE-CZ	6.07	1.39	1.33
49	B2	4	THR	N-CA	-6.07	1.38	1.46
53	BE	47	LYS	C-N	6.07	1.42	1.33
57	BB	1769	U	P-O5'	-6.07	1.50	1.59
57	BB	2592	G	P-O5'	-6.07	1.50	1.59
57	BB	2677	G	C1'-N9	6.07	1.57	1.48
25	AZ	384	GLY	N-CA	-6.07	1.38	1.45
21	AA	66	A	C4'-C3'	6.07	1.61	1.52
25	AZ	290	GLN	C-N	6.07	1.42	1.33
45	BC	141	HIS	ND1-CE1	6.07	1.38	1.32
54	BF	101	ARG	CA-C	-6.07	1.45	1.52
57	BB	107	G	C4'-C3'	6.07	1.61	1.52
57	BB	186	G	C3'-C2'	6.07	1.61	1.52
3	AL	55	ARG	N-CA	-6.07	1.37	1.46
15	AD	127	ARG	CZ-NH1	6.07	1.41	1.32
21	AA	764	C	C2'-C1'	-6.07	1.44	1.53
28	BI	28	GLY	N-CA	-6.07	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	B2	7	PRO	CA-C	-6.07	1.44	1.52
5	AN	68	ARG	CD-NE	6.06	1.54	1.46
21	AA	1442	G	C3'-C2'	6.06	1.61	1.52
57	BB	500	G	O3'-P	-6.06	1.52	1.61
45	BC	169	ALA	CA-C	-6.06	1.44	1.52
18	AG	8	GLN	CA-C	-6.06	1.45	1.52
19	AH	49	LYS	CA-CB	6.06	1.64	1.53
5	AN	63	CYS	N-CA	-6.06	1.38	1.45
21	AA	1134	G	O3'-P	-6.06	1.52	1.61
27	B5	110	ASN	C-N	6.06	1.41	1.33
57	BB	2855	C	P-O5'	-6.06	1.50	1.59
29	BJ	49	ASP	CA-C	-6.06	1.45	1.52
57	BB	1360	G	C3'-O3'	6.06	1.51	1.42
21	AA	573	A	O3'-P	-6.05	1.52	1.61
22	AY	3	G	C5'-C4'	6.05	1.60	1.51
13	AB	112	ARG	NE-CZ	6.05	1.39	1.33
16	AE	34	ALA	N-CA	-6.05	1.39	1.46
33	BN	8	ARG	NE-CZ	6.05	1.39	1.33
46	BZ	30	ARG	CA-C	-6.05	1.44	1.52
21	AA	268	U	O4'-C1'	6.05	1.50	1.41
21	AA	892	A	C3'-O3'	6.05	1.51	1.42
25	AZ	301	HIS	CA-C	-6.05	1.45	1.52
50	B3	57	VAL	N-CA	-6.05	1.39	1.46
52	BD	194	PRO	N-CD	-6.05	1.39	1.47
57	BB	1847	A	C3'-C2'	6.05	1.61	1.52
6	AO	53	ARG	CD-NE	6.05	1.54	1.46
26	AV	65	C	C5'-C4'	6.05	1.60	1.51
57	BB	1334	G	C4'-O4'	6.05	1.54	1.45
21	AA	1042	A	C3'-O3'	6.05	1.51	1.42
6	AO	87	ARG	CZ-NH2	6.04	1.41	1.33
57	BB	51	G	C4'-C3'	-6.04	1.44	1.53
57	BB	1515	A	C3'-O3'	-6.04	1.33	1.42
57	BB	2860	A	O5'-C5'	-6.04	1.33	1.42
25	AZ	87	TYR	CA-C	-6.04	1.44	1.52
25	AZ	255	CYS	CA-C	-6.04	1.45	1.52
57	BB	1787	A	C5'-C4'	6.04	1.60	1.51
11	AT	25	SER	N-CA	-6.04	1.38	1.46
57	BB	2784	U	P-O5'	-6.04	1.50	1.59
29	BJ	13	ARG	NE-CZ	6.04	1.39	1.33
29	BJ	120	ARG	CD-NE	6.04	1.54	1.46
54	BF	112	ASP	CA-C	-6.04	1.45	1.52
57	BB	1888	G	P-O5'	-6.04	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	AG	16	LYS	N-CA	-6.04	1.39	1.46
19	AH	35	ILE	CA-C	-6.04	1.45	1.52
35	BP	71	ARG	NE-CZ	6.04	1.39	1.33
57	BB	572	A	C4'-C3'	6.04	1.61	1.52
57	BB	722	A	C5'-C4'	6.04	1.60	1.51
57	BB	794	A	C2'-C1'	-6.04	1.44	1.53
57	BB	987	C	C2'-C1'	-6.04	1.44	1.53
58	BA	43	C	C1'-N1	6.04	1.57	1.48
57	BB	231	A	C5'-C4'	6.03	1.60	1.51
8	AQ	46	HIS	ND1-CE1	6.03	1.38	1.32
57	BB	468	G	C3'-O3'	6.03	1.51	1.42
57	BB	1166	G	C2'-C1'	-6.03	1.44	1.53
57	BB	1572	A	C5'-C4'	6.03	1.60	1.51
57	BB	2752	C	C5'-C4'	6.03	1.60	1.51
2	AK	28	ASN	N-CA	-6.03	1.39	1.46
17	AF	33	GLU	CA-C	-6.03	1.44	1.52
39	BT	10	VAL	CA-CB	-6.03	1.46	1.54
57	BB	1184	U	C4'-O4'	6.03	1.54	1.45
57	BB	2648	G	P-O5'	-6.03	1.50	1.59
57	BB	2670	A	C3'-C2'	-6.03	1.43	1.52
57	BB	943	A	C4'-C3'	6.03	1.61	1.52
57	BB	1028	A	C3'-C2'	-6.03	1.43	1.52
25	AZ	210	PHE	CA-C	-6.02	1.44	1.53
57	BB	790	U	C4'-C3'	6.02	1.61	1.52
57	BB	859	G	C4'-O4'	-6.02	1.36	1.45
57	BB	1221	C	C2'-C1'	-6.02	1.44	1.53
21	AA	77	A	C2'-C1'	-6.02	1.44	1.53
57	BB	2783	U	C1'-N1	6.02	1.57	1.48
18	AG	27	ASN	N-CA	-6.02	1.39	1.46
25	AZ	223	ARG	CZ-NH2	6.02	1.41	1.33
25	AZ	328	PRO	CA-C	6.02	1.58	1.52
29	BJ	17	VAL	C-N	6.02	1.41	1.33
42	BW	76	ARG	CZ-NH1	6.02	1.41	1.32
57	BB	36	G	C1'-N9	6.02	1.56	1.48
21	AA	185	U	C3'-O3'	6.02	1.51	1.42
30	BK	28	HIS	CD2-NE2	-6.02	1.31	1.37
57	BB	1326	U	O5'-C5'	6.02	1.51	1.42
4	AM	92	ARG	CA-CB	6.02	1.62	1.53
18	AG	90	VAL	CA-C	-6.02	1.45	1.52
20	AI	44	ARG	CZ-NH2	6.02	1.41	1.33
45	BC	103	ILE	C-N	6.02	1.42	1.33
52	BD	55	LYS	N-CA	-6.02	1.37	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1308	A	P-O5'	-6.01	1.50	1.59
57	BB	2856	A	C4'-O4'	6.01	1.54	1.45
29	BJ	20	ALA	CA-C	-6.01	1.45	1.52
18	AG	33	GLY	C-N	6.01	1.42	1.33
19	AH	67	GLY	C-N	6.01	1.41	1.33
21	AA	257	G	C2'-C1'	-6.01	1.44	1.53
27	B5	170	ILE	CA-C	-6.01	1.45	1.52
57	BB	272	A	O3'-P	-6.01	1.52	1.61
28	BI	45	THR	CA-CB	6.01	1.62	1.54
10	AS	31	ARG	CZ-NH2	6.01	1.41	1.33
31	BL	143	GLU	N-CA	-6.01	1.38	1.46
36	BQ	54	ARG	CZ-NH1	6.01	1.41	1.32
43	BX	31	ASN	CA-C	-6.01	1.45	1.52
47	B0	36	LYS	CA-C	-6.01	1.45	1.53
57	BB	1911	U	C3'-C2'	6.01	1.61	1.52
57	BB	2168	G	O3'-P	-6.01	1.52	1.61
57	BB	2190	G	C2'-C1'	-6.01	1.44	1.53
16	AE	29	ILE	CA-C	-6.00	1.45	1.52
57	BB	1464	G	C2'-O2'	-6.00	1.33	1.42
26	AV	15	G	O5'-C5'	6.00	1.51	1.42
33	BN	12	ARG	N-CA	-6.00	1.38	1.45
57	BB	364	C	O3'-P	-6.00	1.52	1.61
57	BB	1483	G	C2'-C1'	-6.00	1.44	1.53
57	BB	2348	U	C2'-C1'	-6.00	1.44	1.53
15	AD	153	ARG	CD-NE	6.00	1.54	1.46
21	AA	34	C	N3-C4	6.00	1.45	1.33
21	AA	460	A	P-O5'	-6.00	1.50	1.59
25	AZ	388	VAL	CA-C	-6.00	1.46	1.53
57	BB	900	A	C4'-O4'	6.00	1.54	1.45
21	AA	196	A	C1'-N9	-6.00	1.39	1.48
21	AA	1122	U	O4'-C1'	6.00	1.50	1.41
45	BC	18	VAL	CA-C	-6.00	1.45	1.52
57	BB	84	A	C3'-O3'	-6.00	1.34	1.43
57	BB	410	G	C3'-C2'	-6.00	1.43	1.52
21	AA	1126	U	C4'-O4'	6.00	1.54	1.45
42	BW	53	GLY	N-CA	-6.00	1.36	1.45
57	BB	751	A	C4'-C3'	6.00	1.61	1.52
21	AA	95	C	C1'-N1	6.00	1.57	1.48
21	AA	765	G	O4'-C1'	6.00	1.50	1.41
2	AK	85	VAL	CA-CB	5.99	1.62	1.54
21	AA	714	G	C2'-C1'	-5.99	1.44	1.53
29	BJ	89	PHE	CA-C	-5.99	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	BM	34	LYS	C-N	5.99	1.42	1.33
56	BH	66	ASN	CA-CB	5.99	1.62	1.53
57	BB	21	A	C2'-C1'	-5.99	1.44	1.53
57	BB	691	C	C3'-C2'	5.99	1.61	1.52
57	BB	1966	A	C4'-C3'	5.99	1.62	1.53
16	AE	71	ILE	CA-C	5.99	1.60	1.52
17	AF	15	SER	C-O	-5.99	1.17	1.24
51	B4	29	ALA	CA-CB	5.99	1.62	1.52
57	BB	2104	C	O5'-C5'	5.99	1.51	1.42
5	AN	60	ARG	NE-CZ	5.99	1.39	1.33
14	AC	142	ARG	CA-C	-5.99	1.45	1.52
57	BB	170	U	C5'-C4'	5.99	1.60	1.51
57	BB	709	U	C3'-O3'	5.99	1.51	1.42
57	BB	2037	A	C4'-C3'	5.99	1.61	1.52
57	BB	2850	A	O4'-C1'	5.99	1.50	1.41
57	BB	68	G	O3'-P	-5.98	1.52	1.61
14	AC	105	VAL	N-CA	-5.98	1.39	1.46
21	AA	209	U	C1'-N1	5.98	1.57	1.48
21	AA	593	U	C4'-C3'	5.98	1.61	1.52
23	AW	66	U	N3-C4	5.98	1.50	1.38
33	BN	4	ARG	CZ-NH1	5.98	1.41	1.32
57	BB	183	C	C2'-C1'	-5.98	1.44	1.53
21	AA	1067	A	C2'-O2'	-5.98	1.32	1.41
22	AY	41	U	C3'-C2'	5.98	1.61	1.52
45	BC	270	ARG	CZ-NH1	5.98	1.41	1.32
52	BD	148	GLN	C-N	5.98	1.42	1.33
21	AA	412	A	O3'-P	-5.98	1.52	1.61
31	BL	35	HIS	CE1-NE2	5.98	1.38	1.32
46	BZ	15	ARG	CA-C	-5.98	1.44	1.53
57	BB	168	G	P-O5'	-5.98	1.50	1.59
14	AC	23	ALA	N-CA	-5.97	1.39	1.46
52	BD	90	PHE	C-O	5.97	1.31	1.23
52	BD	191	GLY	CA-C	-5.97	1.46	1.52
21	AA	659	U	C4'-C3'	5.97	1.61	1.52
57	BB	182	A	C2'-C1'	-5.97	1.44	1.53
57	BB	862	G	C4'-C3'	-5.97	1.43	1.52
21	AA	831	A	C5'-C4'	5.97	1.60	1.51
18	AG	77	ARG	C-N	5.97	1.41	1.33
21	AA	1101	A	O3'-P	-5.97	1.52	1.61
55	BG	54	ARG	CA-C	-5.97	1.46	1.53
57	BB	1575	C	C2'-C1'	-5.97	1.44	1.53
4	AM	39	ALA	C-N	5.97	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	BD	194	PRO	CA-C	-5.97	1.44	1.52
57	BB	2314	A	O5'-C5'	5.97	1.51	1.42
7	AP	25	ARG	NE-CZ	5.96	1.39	1.33
12	AU	12	ASP	N-CA	-5.96	1.38	1.46
21	AA	317	U	C2'-C1'	-5.96	1.44	1.53
25	AZ	171	ARG	C-N	5.96	1.40	1.33
57	BB	879	G	C5'-C4'	5.96	1.60	1.51
42	BW	83	ALA	C-O	-5.96	1.16	1.24
57	BB	953	G	P-O5'	-5.96	1.50	1.59
14	AC	124	GLU	N-CA	-5.96	1.38	1.46
14	AC	155	ARG	CZ-NH1	5.96	1.41	1.32
21	AA	1298	U	O3'-P	-5.96	1.52	1.61
27	B5	134	ARG	CD-NE	5.96	1.54	1.46
57	BB	253	C	C3'-C2'	-5.96	1.43	1.52
1	AJ	72	ARG	NE-CZ	5.96	1.39	1.33
21	AA	1462	C	C2'-C1'	-5.96	1.44	1.53
51	B4	38	GLY	CA-C	5.96	1.62	1.52
9	AR	38	ILE	CA-CB	-5.96	1.46	1.54
27	B5	21	TYR	C-N	5.96	1.42	1.33
55	BG	57	TYR	CA-C	-5.96	1.44	1.53
32	BM	94	ALA	CA-CB	5.96	1.63	1.53
45	BC	212	TRP	N-CA	-5.96	1.38	1.46
54	BF	147	ARG	CD-NE	5.96	1.54	1.46
2	AK	105	ARG	CA-C	-5.95	1.45	1.52
17	AF	11	HIS	ND1-CE1	5.95	1.38	1.32
21	AA	398	U	O4'-C1'	5.95	1.50	1.41
37	BR	21	ARG	NE-CZ	5.95	1.39	1.33
57	BB	2353	G	C2'-C1'	-5.95	1.44	1.53
21	AA	926	G	O5'-C5'	-5.95	1.33	1.42
21	AA	1503	A	C3'-O3'	-5.95	1.34	1.43
26	AV	64	G	C1'-N9	5.95	1.56	1.48
45	BC	160	TYR	C-N	5.95	1.41	1.33
49	B2	3	ARG	N-CA	-5.95	1.40	1.46
57	BB	983	A	C2'-C1'	-5.95	1.44	1.53
32	BM	66	ARG	NE-CZ	5.95	1.39	1.33
57	BB	75	G	O4'-C1'	5.95	1.50	1.41
57	BB	481	G	C5'-C4'	5.95	1.60	1.51
57	BB	1760	C	O5'-C5'	5.95	1.51	1.42
10	AS	17	LYS	C-N	5.95	1.41	1.33
25	AZ	273	ASN	CA-C	-5.95	1.45	1.52
57	BB	1106	G	C2'-O2'	-5.95	1.33	1.42
57	BB	2763	G	C4'-C3'	5.95	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	413	G	C1'-N9	-5.94	1.38	1.47
57	BB	501	A	C4'-C3'	5.94	1.61	1.52
57	BB	1128	G	C1'-N9	5.94	1.55	1.47
18	AG	55	LYS	C-N	5.94	1.41	1.33
21	AA	1254	A	C5'-C4'	5.94	1.60	1.51
57	BB	1400	U	C2'-C1'	-5.94	1.44	1.53
16	AE	150	GLU	CA-C	-5.94	1.44	1.52
21	AA	875	U	P-O5'	-5.94	1.50	1.59
21	AA	897	C	O3'-P	-5.94	1.52	1.61
45	BC	214	GLY	N-CA	-5.94	1.36	1.45
51	B4	16	ILE	CA-CB	-5.94	1.47	1.53
53	BE	112	LEU	C-N	5.94	1.41	1.33
57	BB	2742	G	C5'-C4'	5.94	1.60	1.51
35	BP	30	TRP	CA-CB	5.94	1.61	1.53
29	BJ	12	LYS	CA-C	-5.94	1.45	1.52
47	B0	45	ASP	N-CA	-5.94	1.38	1.46
53	BE	118	LEU	CA-CB	5.94	1.62	1.53
57	BB	1160	G	O3'-P	-5.94	1.52	1.61
14	AC	192	TYR	N-CA	-5.94	1.39	1.46
21	AA	23	C	O4'-C1'	-5.94	1.32	1.41
21	AA	14	U	C1'-N1	5.93	1.57	1.48
2	AK	36	ARG	NE-CZ	5.93	1.39	1.33
4	AM	48	SER	CA-C	-5.93	1.44	1.53
21	AA	143	A	O3'-P	-5.93	1.52	1.61
21	AA	627	G	C5'-C4'	5.93	1.60	1.51
21	AA	1176	A	C2'-C1'	-5.93	1.44	1.53
28	BI	6	ALA	N-CA	-5.93	1.38	1.46
52	BD	99	GLU	C-N	5.93	1.41	1.33
21	AA	428	G	C1'-N9	-5.93	1.38	1.47
21	AA	995	C	C3'-C2'	-5.93	1.43	1.52
43	BX	45	PHE	CA-CB	5.93	1.62	1.53
57	BB	1741	C	C1'-N1	5.93	1.57	1.48
1	AJ	98	VAL	C-N	5.92	1.42	1.33
21	AA	421	U	C2'-C1'	-5.92	1.44	1.53
21	AA	1021	A	C3'-C2'	-5.92	1.43	1.52
30	BK	12	ASN	C-N	5.92	1.42	1.33
23	AW	28	G	C4'-C3'	5.92	1.61	1.52
26	AV	20	U	O3'-P	-5.92	1.52	1.61
57	BB	1333	G	C2'-C1'	-5.92	1.44	1.53
22	AY	67	A	C2'-O2'	-5.92	1.33	1.42
43	BX	27	ARG	N-CA	5.92	1.53	1.46
52	BD	37	VAL	CA-C	-5.92	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BE	40	ARG	NE-CZ	5.92	1.39	1.33
9	AR	34	GLU	C-N	5.92	1.41	1.33
41	BV	20	LEU	C-N	5.92	1.41	1.34
54	BF	2	LYS	CA-C	-5.92	1.44	1.52
57	BB	1420	A	C4'-C3'	5.92	1.61	1.52
58	BA	99	A	C4'-O4'	-5.92	1.36	1.45
10	AS	65	MET	N-CA	-5.92	1.39	1.46
15	AD	34	GLU	CA-C	-5.92	1.44	1.52
21	AA	1033	G	O3'-P	-5.91	1.52	1.61
32	BM	14	LYS	N-CA	-5.91	1.39	1.46
57	BB	350	G	O3'-P	-5.91	1.52	1.61
57	BB	1418	G	C2'-C1'	-5.91	1.44	1.53
8	AQ	61	ARG	NE-CZ	5.91	1.39	1.33
13	AB	59	ILE	CB-CG1	5.91	1.65	1.53
21	AA	930	C	C5'-C4'	5.91	1.60	1.51
32	BM	126	ILE	C-N	5.91	1.41	1.33
37	BR	92	TRP	N-CA	-5.91	1.38	1.45
57	BB	95	A	O3'-P	-5.91	1.52	1.61
21	AA	1310	G	P-O5'	-5.91	1.50	1.59
52	BD	150	GLN	CA-C	-5.91	1.44	1.52
57	BB	2300	C	C2'-C1'	-5.91	1.44	1.53
21	AA	973	G	C2'-O2'	-5.91	1.33	1.42
57	BB	607	U	N1-C6	-5.91	1.26	1.38
57	BB	819	A	C1'-N9	5.91	1.56	1.48
57	BB	2028	U	C4'-O4'	5.91	1.54	1.45
1	AJ	84	VAL	CA-C	-5.90	1.45	1.52
6	AO	79	ARG	N-CA	-5.90	1.39	1.46
57	BB	648	G	C2-N2	5.90	1.46	1.34
57	BB	764	A	C4'-C3'	5.90	1.62	1.53
57	BB	1104	C	P-O5'	5.90	1.68	1.59
21	AA	1044	A	C5'-C4'	5.90	1.60	1.51
21	AA	1283	U	C2'-C1'	-5.90	1.44	1.53
27	B5	77	VAL	C-N	5.90	1.41	1.33
57	BB	480	A	C1'-N9	5.90	1.56	1.48
4	AM	32	ILE	N-CA	-5.90	1.39	1.46
33	BN	11	ASN	C-N	5.90	1.41	1.33
42	BW	25	PHE	C-N	5.90	1.42	1.33
21	AA	429	U	O3'-P	-5.90	1.52	1.61
29	BJ	48	VAL	CA-C	-5.90	1.45	1.52
21	AA	1363	A	C2'-C1'	-5.90	1.44	1.53
29	BJ	37	ARG	NE-CZ	5.90	1.39	1.33
57	BB	490	C	O3'-P	-5.90	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	BM	98	PRO	CA-C	-5.89	1.45	1.52
53	BE	115	GLN	CA-CB	-5.89	1.45	1.53
57	BB	105	C	C2'-C1'	-5.89	1.44	1.53
57	BB	1571	A	C1'-N9	5.89	1.56	1.48
57	BB	2556	C	C1'-N1	5.89	1.57	1.48
21	AA	406	G	P-O5'	-5.89	1.50	1.59
57	BB	591	U	O3'-P	-5.89	1.52	1.61
57	BB	1039	A	O5'-C5'	-5.89	1.33	1.42
53	BE	179	SER	C-N	5.89	1.42	1.33
57	BB	181	A	C2'-C1'	-5.89	1.44	1.53
57	BB	1210	G	O3'-P	-5.89	1.52	1.61
57	BB	2237	G	C1'-N9	5.89	1.56	1.48
3	AL	49	ARG	N-CA	-5.89	1.39	1.46
19	AH	103	VAL	N-CA	-5.89	1.39	1.46
25	AZ	221	SER	CA-C	-5.89	1.44	1.52
57	BB	46	G	C2'-C1'	-5.89	1.44	1.53
58	BA	86	G	C1'-N9	5.89	1.56	1.48
21	AA	470	C	C1'-N1	5.89	1.57	1.48
32	BM	51	ARG	N-CA	-5.89	1.38	1.46
57	BB	2433	A	C5'-C4'	5.89	1.60	1.51
1	AJ	58	ASN	CA-C	-5.89	1.44	1.52
13	AB	60	ALA	CA-C	-5.89	1.45	1.53
21	AA	822	U	P-O5'	-5.89	1.50	1.59
57	BB	1600	C	C3'-C2'	-5.89	1.44	1.52
57	BB	2524	G	C2'-O2'	-5.89	1.33	1.42
19	AH	89	ASP	CA-C	-5.88	1.44	1.52
21	AA	533	A	P-O5'	-5.88	1.50	1.59
21	AA	550	G	P-O5'	-5.88	1.50	1.59
57	BB	1	G	P-OP2	5.88	1.60	1.49
57	BB	1163	G	C1'-N9	-5.88	1.39	1.48
11	AT	9	ARG	CZ-NH2	5.88	1.41	1.33
20	AI	59	LYS	CA-C	-5.88	1.44	1.52
26	AV	11	A	O3'-P	-5.88	1.52	1.61
28	BI	132	ALA	N-CA	-5.88	1.39	1.46
47	B0	23	ALA	C-N	5.88	1.41	1.33
1	AJ	92	LEU	CA-C	-5.88	1.45	1.52
10	AS	51	HIS	CA-C	-5.88	1.45	1.52
36	BQ	97	ILE	C-N	5.88	1.41	1.33
57	BB	1285	A	C2'-C1'	-5.88	1.44	1.53
32	BM	87	GLY	C-N	5.88	1.41	1.33
57	BB	695	G	C2'-C1'	-5.88	1.44	1.53
57	BB	742	A	O4'-C1'	5.88	1.50	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2825	G	O3'-P	-5.88	1.52	1.61
2	AK	78	ILE	CA-C	-5.88	1.45	1.52
15	AD	55	ARG	NE-CZ	5.88	1.39	1.33
25	AZ	283	ARG	CA-CB	5.88	1.63	1.53
25	AZ	330	PHE	N-CA	-5.88	1.39	1.46
26	AV	42	G	P-O5'	-5.88	1.50	1.59
27	B5	119	ASP	CA-C	-5.88	1.45	1.52
32	BM	18	ARG	CA-C	-5.88	1.45	1.52
45	BC	208	GLY	N-CA	-5.88	1.37	1.45
57	BB	628	G	C6-N1	5.88	1.51	1.39
57	BB	2642	G	O3'-P	5.88	1.70	1.61
57	BB	2707	U	O4'-C1'	5.88	1.50	1.41
16	AE	91	SER	N-CA	-5.87	1.39	1.46
21	AA	982	U	C2'-C1'	-5.87	1.44	1.53
52	BD	59	ARG	CZ-NH2	5.87	1.41	1.33
53	BE	72	SER	CA-C	-5.87	1.45	1.52
21	AA	171	A	O3'-P	-5.87	1.52	1.61
21	AA	1141	C	C5'-C4'	5.87	1.60	1.51
29	BJ	120	ARG	NE-CZ	5.87	1.39	1.33
31	BL	123	ARG	N-CA	-5.87	1.39	1.46
35	BP	38	ARG	NE-CZ	5.87	1.39	1.33
55	BG	144	ALA	CA-C	-5.87	1.45	1.52
15	AD	3	TYR	CA-C	-5.87	1.45	1.52
21	AA	537	G	C2'-C1'	-5.87	1.44	1.53
21	AA	981	U	C2-N3	5.87	1.49	1.37
5	AN	73	LEU	CA-CB	5.87	1.62	1.53
29	BJ	140	LEU	CA-C	-5.87	1.45	1.52
51	B4	6	SER	N-CA	-5.87	1.38	1.46
25	AZ	304	PHE	N-CA	-5.87	1.39	1.46
57	BB	906	U	C5'-C4'	5.87	1.60	1.51
15	AD	176	LYS	N-CA	-5.87	1.38	1.46
21	AA	674	G	C2'-C1'	-5.87	1.44	1.53
54	BF	9	ASP	CA-C	-5.87	1.45	1.52
57	BB	1784	A	C5'-C4'	5.87	1.60	1.51
57	BB	908	C	C4'-C3'	5.86	1.61	1.52
57	BB	2601	C	C2'-C1'	-5.86	1.44	1.53
20	AI	48	ARG	CA-C	-5.86	1.45	1.52
57	BB	556	A	N9-C4	5.86	1.49	1.37
57	BB	2813	A	C4'-C3'	5.86	1.61	1.52
57	BB	755	U	O3'-P	-5.86	1.52	1.61
57	BB	1051	G	C5'-C4'	5.86	1.60	1.51
6	AO	80	LEU	C-N	5.86	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AW	29	G	C4'-C3'	5.86	1.61	1.52
57	BB	655	A	O3'-P	-5.86	1.52	1.61
57	BB	1499	C	P-O5'	-5.86	1.50	1.59
3	AL	94	TYR	C-N	-5.86	1.26	1.33
21	AA	1485	U	C4'-O4'	-5.86	1.36	1.45
22	AY	30	G	C1'-N9	5.86	1.56	1.48
55	BG	35	THR	C-N	5.86	1.41	1.33
21	AA	1107	C	O4'-C1'	5.85	1.50	1.41
50	B3	25	HIS	ND1-CE1	5.85	1.38	1.32
3	AL	109	ARG	CD-NE	5.85	1.54	1.46
16	AE	39	GLY	CA-C	-5.85	1.45	1.51
21	AA	506	G	C5'-C4'	5.85	1.60	1.51
22	AY	11	C	C5'-C4'	5.85	1.60	1.51
50	B3	44	ARG	CZ-NH1	5.85	1.41	1.32
57	BB	1927	A	O4'-C1'	5.85	1.50	1.41
9	AR	26	ALA	CA-C	-5.85	1.45	1.52
29	BJ	71	ASP	N-CA	-5.85	1.41	1.46
57	BB	2708	G	C2'-C1'	-5.85	1.44	1.53
14	AC	126	ARG	CZ-NH2	5.85	1.41	1.33
27	B5	4	LEU	CA-C	-5.85	1.47	1.53
40	BU	91	LYS	N-CA	-5.85	1.38	1.46
45	BC	126	GLY	C-N	5.85	1.42	1.33
52	BD	18	ASP	CA-CB	5.85	1.63	1.53
57	BB	295	G	C4'-C3'	5.85	1.61	1.52
21	AA	493	A	C1'-N9	5.85	1.56	1.48
28	BI	116	MET	CA-C	-5.85	1.45	1.53
33	BN	102	PHE	CA-CB	5.85	1.64	1.54
40	BU	15	GLY	C-N	5.85	1.41	1.33
56	BH	129	GLU	N-CA	-5.85	1.38	1.45
14	AC	67	ILE	CA-CB	-5.85	1.48	1.54
56	BH	125	THR	N-CA	-5.85	1.38	1.46
57	BB	340	A	O3'-P	-5.85	1.52	1.61
21	AA	102	G	O5'-C5'	5.84	1.51	1.42
21	AA	824	G	C2'-C1'	-5.84	1.44	1.53
41	BV	46	LYS	C-N	5.84	1.41	1.34
48	B1	6	GLU	CA-C	-5.84	1.45	1.52
57	BB	25	U	O3'-P	-5.84	1.52	1.61
13	AB	85	SER	CA-CB	5.84	1.62	1.53
21	AA	542	G	P-O5'	5.84	1.68	1.59
22	AY	9	A	P-O5'	-5.84	1.50	1.59
17	AF	2	ARG	CA-C	-5.84	1.45	1.52
34	BO	99	TYR	C-N	5.84	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	BZ	44	ARG	CZ-NH2	5.84	1.41	1.33
57	BB	120	U	O4'-C1'	5.84	1.50	1.42
57	BB	1264	A	C3'-O3'	5.84	1.50	1.42
30	BK	97	ARG	CD-NE	5.84	1.54	1.46
57	BB	1800	C	P-O5'	-5.84	1.50	1.59
21	AA	437	U	O4'-C1'	-5.84	1.32	1.41
8	AQ	41	THR	N-CA	-5.83	1.39	1.46
21	AA	249	U	C2'-C1'	-5.83	1.44	1.53
24	AX	17	U	O5'-C5'	5.83	1.51	1.42
38	BS	25	ARG	CD-NE	5.83	1.54	1.46
27	B5	175	ILE	CA-CB	-5.83	1.46	1.54
47	B0	9	ARG	CD-NE	5.83	1.54	1.46
57	BB	1541	C	C4'-O4'	5.83	1.54	1.45
21	AA	590	U	O5'-C5'	5.83	1.51	1.42
42	BW	56	HIS	ND1-CE1	5.83	1.38	1.32
57	BB	1018	U	P-O5'	-5.83	1.51	1.59
20	AI	120	ALA	CA-C	-5.83	1.44	1.52
25	AZ	299	LYS	C-O	5.83	1.28	1.24
57	BB	1822	C	C2'-O2'	-5.83	1.33	1.42
57	BB	2065	C	O3'-P	-5.83	1.52	1.61
57	BB	2100	G	C2'-C1'	-5.83	1.44	1.53
57	BB	2564	A	C2'-C1'	-5.83	1.44	1.53
15	AD	197	HIS	ND1-CE1	5.83	1.38	1.32
22	AY	10	G	O4'-C1'	5.83	1.50	1.41
57	BB	2630	G	C5'-C4'	5.83	1.59	1.51
25	AZ	303	LYS	N-CA	-5.83	1.39	1.45
30	BK	75	VAL	CA-C	-5.83	1.45	1.52
53	BE	133	LEU	CA-CB	5.83	1.61	1.53
57	BB	2589	A	C6-N6	5.83	1.45	1.33
14	AC	87	ARG	CD-NE	5.82	1.54	1.46
19	AH	70	VAL	CA-CB	-5.82	1.47	1.54
20	AI	32	ARG	CA-C	-5.82	1.46	1.53
22	AY	10	G	C2'-O2'	5.82	1.51	1.42
25	AZ	389	ALA	CA-CB	5.82	1.62	1.53
57	BB	161	A	C2'-C1'	-5.82	1.44	1.53
57	BB	783	A	C5'-C4'	5.82	1.59	1.51
15	AD	61	ARG	CD-NE	5.82	1.54	1.46
28	BI	133	ARG	CD-NE	5.82	1.54	1.46
52	BD	71	ALA	CA-CB	5.82	1.61	1.53
58	BA	62	C	C5'-C4'	5.82	1.59	1.51
33	BN	45	ARG	NE-CZ	5.82	1.39	1.33
6	AO	17	ASP	N-CA	-5.82	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	772	U	C4'-C3'	5.82	1.61	1.52
35	BP	102	ARG	CA-C	-5.82	1.45	1.52
57	BB	1718	G	C3'-C2'	-5.82	1.44	1.52
21	AA	776	G	C2'-C1'	-5.82	1.44	1.53
21	AA	837	U	C5'-C4'	5.82	1.59	1.51
23	AW	31	A	C5'-C4'	5.82	1.59	1.51
57	BB	580	U	C2'-C1'	-5.82	1.44	1.53
57	BB	779	U	C5'-C4'	5.82	1.59	1.51
57	BB	2767	C	C4'-O4'	-5.82	1.36	1.45
57	BB	2890	G	C1'-N9	5.81	1.56	1.48
25	AZ	173	SER	CA-C	-5.81	1.45	1.52
38	BS	74	ILE	C-O	-5.81	1.18	1.24
21	AA	157	U	C3'-C2'	-5.81	1.44	1.52
21	AA	1174	G	C4'-O4'	-5.81	1.36	1.45
27	B5	150	ALA	N-CA	-5.81	1.39	1.46
2	AK	19	VAL	CA-C	-5.81	1.45	1.52
2	AK	73	VAL	CA-CB	-5.81	1.46	1.54
5	AN	12	ARG	CZ-NH2	5.81	1.41	1.33
51	B4	24	ARG	NE-CZ	5.81	1.39	1.33
57	BB	16	C	O4'-C1'	-5.81	1.32	1.41
57	BB	2018	G	C3'-O3'	5.81	1.50	1.42
5	AN	55	SER	C-N	5.81	1.40	1.34
22	AY	67	A	O3'-P	-5.81	1.52	1.61
57	BB	2167	U	P-O5'	-5.81	1.51	1.59
2	AK	99	LEU	CA-C	-5.81	1.45	1.52
21	AA	592	G	C5'-C4'	5.81	1.59	1.51
57	BB	1583	A	C2'-C1'	-5.81	1.44	1.53
28	BI	6	ALA	C-N	5.80	1.41	1.33
57	BB	2177	C	C3'-C2'	5.80	1.61	1.52
25	AZ	57	ALA	CA-C	-5.80	1.45	1.52
30	BK	74	SER	CA-CB	5.80	1.62	1.53
57	BB	831	G	C5'-C4'	5.80	1.59	1.51
8	AQ	65	PRO	CA-C	5.80	1.59	1.52
21	AA	328	C	P-O5'	-5.80	1.51	1.59
57	BB	1668	A	C3'-O3'	5.80	1.51	1.43
21	AA	697	U	P-O5'	-5.80	1.51	1.59
57	BB	2404	U	C3'-C2'	-5.80	1.44	1.52
25	AZ	7	ARG	CA-CB	5.80	1.60	1.52
45	BC	164	VAL	N-CA	-5.80	1.39	1.46
2	AK	34	THR	C-N	5.80	1.41	1.33
14	AC	89	VAL	C-N	5.80	1.41	1.33
21	AA	1043	G	O3'-P	-5.80	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BE	67	ARG	CA-C	5.80	1.60	1.53
57	BB	127	A	P-O5'	-5.80	1.51	1.59
8	AQ	68	LYS	N-CA	-5.79	1.38	1.45
45	BC	89	ASN	CA-C	-5.79	1.45	1.53
57	BB	355	U	C1'-N1	5.79	1.57	1.48
57	BB	2617	U	C2'-C1'	-5.79	1.44	1.53
2	AK	126	ARG	CA-CB	5.79	1.62	1.53
16	AE	87	VAL	N-CA	5.79	1.53	1.46
21	AA	1473	G	C5'-C4'	5.79	1.59	1.51
57	BB	2781	A	P-O5'	-5.79	1.51	1.59
3	AL	35	ARG	N-CA	-5.79	1.38	1.46
10	AS	75	PRO	CA-CB	5.79	1.62	1.53
16	AE	153	ALA	CA-CB	-5.79	1.43	1.53
25	AZ	52	ALA	C-N	5.79	1.42	1.33
34	BO	13	ARG	NE-CZ	5.79	1.39	1.33
37	BR	68	ARG	CA-C	-5.79	1.45	1.52
39	BT	70	HIS	C-N	5.79	1.41	1.33
56	BH	106	ALA	CA-C	-5.79	1.44	1.52
57	BB	1515	A	C4'-O4'	5.79	1.54	1.45
6	AO	55	LEU	CA-C	-5.79	1.45	1.52
40	BU	85	ARG	CA-C	-5.79	1.45	1.52
57	BB	2258	C	C4'-C3'	-5.79	1.44	1.53
35	BP	70	GLU	N-CA	-5.79	1.38	1.46
52	BD	22	ILE	N-CA	-5.79	1.39	1.46
57	BB	1384	A	O3'-P	-5.79	1.52	1.61
21	AA	464	U	C5'-C4'	5.78	1.59	1.51
21	AA	505	G	O3'-P	-5.78	1.52	1.61
23	AW	11	C	C3'-O3'	5.78	1.50	1.42
34	BO	15	ARG	NE-CZ	5.78	1.39	1.33
57	BB	1585	C	C1'-N1	5.78	1.57	1.48
57	BB	1296	G	C2'-C1'	-5.78	1.44	1.53
4	AM	63	VAL	CA-C	-5.78	1.45	1.52
21	AA	739	C	C1'-N1	-5.78	1.39	1.48
27	B5	164	ARG	CD-NE	5.78	1.54	1.46
57	BB	653	U	C4'-C3'	5.78	1.61	1.52
57	BB	1340	U	O4'-C1'	5.78	1.50	1.42
58	BA	105	G	C2'-C1'	-5.78	1.44	1.53
57	BB	570	G	O3'-P	-5.78	1.52	1.61
57	BB	2369	A	C3'-O3'	5.78	1.50	1.42
13	AB	140	LEU	C-N	5.78	1.41	1.33
21	AA	995	C	C5'-C4'	5.78	1.59	1.51
45	BC	100	ARG	C-N	5.78	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	BC	269	ARG	CD-NE	5.78	1.54	1.46
57	BB	2231	U	C3'-O3'	5.78	1.50	1.42
27	B5	117	SER	N-CA	5.78	1.53	1.45
21	AA	1500	A	P-O5'	-5.77	1.51	1.59
39	BT	8	LEU	CA-C	-5.77	1.45	1.52
4	AM	44	ILE	CA-C	-5.77	1.45	1.52
12	AU	13	VAL	CA-C	-5.77	1.45	1.52
14	AC	146	LYS	C-N	5.77	1.39	1.32
35	BP	23	ASP	C-N	5.77	1.41	1.33
52	BD	155	VAL	CA-C	-5.77	1.45	1.52
55	BG	109	SER	CA-CB	-5.77	1.45	1.53
57	BB	1023	U	C1'-N1	-5.77	1.39	1.48
57	BB	1531	C	O3'-P	-5.77	1.52	1.61
18	AG	41	ILE	CA-CB	-5.77	1.47	1.54
25	AZ	14	VAL	CA-C	-5.77	1.46	1.52
27	B5	106	LYS	C-N	5.77	1.40	1.33
57	BB	438	G	C5'-C4'	5.77	1.59	1.51
57	BB	1204	A	C4'-O4'	-5.77	1.37	1.45
57	BB	1282	U	C2'-C1'	-5.77	1.44	1.53
57	BB	2702	G	O3'-P	-5.77	1.52	1.61
2	AK	101	ALA	N-CA	-5.77	1.38	1.46
57	BB	1367	A	O5'-C5'	5.77	1.51	1.42
21	AA	364	A	C1'-N9	5.76	1.56	1.48
35	BP	20	ARG	CZ-NH1	5.76	1.40	1.32
41	BV	79	ARG	C-N	5.76	1.42	1.33
42	BW	54	ARG	CZ-NH2	5.76	1.41	1.33
53	BE	40	ARG	N-CA	-5.76	1.39	1.46
57	BB	1098	A	O4'-C1'	-5.76	1.33	1.41
21	AA	1144	G	C3'-C2'	-5.76	1.44	1.52
28	BI	105	LEU	N-CA	5.76	1.53	1.46
47	B0	24	VAL	C-N	5.76	1.42	1.33
57	BB	342	A	C2'-C1'	-5.76	1.44	1.53
54	BF	4	HIS	CA-C	5.76	1.60	1.52
54	BF	94	ARG	C-N	5.76	1.42	1.34
8	AQ	66	LEU	C-N	5.76	1.40	1.33
21	AA	530	G	O4'-C1'	-5.76	1.33	1.42
21	AA	1097	C	C2'-C1'	-5.76	1.44	1.53
31	BL	59	ARG	N-CA	-5.76	1.39	1.46
57	BB	1481	U	C1'-N1	5.76	1.57	1.48
57	BB	2599	G	O3'-P	-5.76	1.52	1.61
41	BV	30	ILE	N-CA	-5.76	1.39	1.46
57	BB	482	A	C8-N7	-5.76	1.20	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1393	U	P-O5'	5.76	1.68	1.59
57	BB	1375	U	N3-C4	5.76	1.50	1.38
57	BB	2423	U	C3'-C2'	5.76	1.61	1.52
4	AM	13	HIS	CA-C	-5.75	1.45	1.52
20	AI	47	VAL	N-CA	5.75	1.53	1.46
57	BB	1322	A	C3'-O3'	5.75	1.50	1.42
57	BB	2326	C	C4'-O4'	-5.75	1.36	1.45
58	BA	81	G	C5'-C4'	5.75	1.59	1.51
57	BB	360	U	C4'-C3'	5.75	1.61	1.52
57	BB	1154	G	O3'-P	-5.75	1.52	1.61
57	BB	1648	U	O4'-C1'	5.75	1.50	1.41
21	AA	1194	U	C4'-O4'	-5.75	1.36	1.45
31	BL	105	ILE	N-CA	-5.75	1.39	1.46
57	BB	1407	G	C5'-C4'	5.75	1.59	1.51
18	AG	119	LEU	CA-C	-5.75	1.44	1.52
21	AA	468	A	C5'-C4'	5.75	1.59	1.51
52	BD	64	GLU	CA-CB	5.75	1.60	1.53
57	BB	1631	G	C4'-C3'	5.75	1.61	1.52
21	AA	602	A	P-O5'	-5.75	1.51	1.59
26	AV	6	G	O3'-P	-5.75	1.52	1.61
40	BU	58	VAL	N-CA	-5.75	1.39	1.46
6	AO	61	GLN	C-N	5.75	1.41	1.33
19	AH	116	ARG	NE-CZ	5.75	1.39	1.33
2	AK	70	ALA	N-CA	-5.74	1.39	1.46
22	AY	27	C	C2'-C1'	-5.74	1.44	1.53
28	BI	16	MET	CA-C	-5.74	1.45	1.52
57	BB	1823	G	C1'-N9	5.74	1.56	1.48
21	AA	62	U	C1'-N1	5.74	1.57	1.48
21	AA	1208	C	C1'-N1	5.74	1.57	1.48
57	BB	1520	U	C4'-C3'	-5.74	1.44	1.52
4	AM	100	ARG	CZ-NH2	5.74	1.41	1.33
19	AH	53	ASP	C-N	5.74	1.41	1.34
27	B5	119	ASP	CA-CB	5.74	1.62	1.53
45	BC	181	ARG	CD-NE	5.74	1.54	1.46
57	BB	474	G	O4'-C1'	5.74	1.50	1.42
21	AA	1195	C	C5'-C4'	5.74	1.59	1.51
57	BB	1560	G	C3'-O3'	5.74	1.50	1.42
13	AB	14	HIS	CG-ND1	5.74	1.44	1.38
57	BB	63	A	P-O5'	-5.74	1.51	1.59
10	AS	12	LEU	CA-C	-5.74	1.44	1.52
21	AA	191	G	C1'-N9	5.74	1.56	1.48
57	BB	61	C	O5'-C5'	5.74	1.51	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	BM	70	ASP	N-CA	-5.73	1.42	1.47
57	BB	727	A	C2'-C1'	-5.73	1.44	1.53
57	BB	1873	G	C4'-O4'	5.73	1.54	1.45
14	AC	72	PRO	N-CA	-5.73	1.43	1.47
18	AG	60	ALA	CA-C	-5.73	1.45	1.52
36	BQ	29	ARG	CD-NE	5.73	1.54	1.46
55	BG	127	GLN	CA-CB	5.73	1.61	1.53
19	AH	98	LEU	CA-C	-5.73	1.46	1.52
23	AW	65	G	P-O5'	-5.73	1.51	1.59
29	BJ	96	ARG	CZ-NH2	5.73	1.40	1.33
32	BM	91	TYR	CA-C	-5.73	1.45	1.52
57	BB	229	C	O5'-C5'	5.73	1.51	1.42
57	BB	1018	U	C4'-O4'	5.73	1.54	1.45
57	BB	1811	G	C4'-C3'	5.73	1.61	1.52
3	AL	51	VAL	C-N	5.73	1.40	1.33
55	BG	60	GLY	CA-C	-5.73	1.44	1.51
57	BB	1939	U	C2'-C1'	-5.73	1.44	1.53
57	BB	2161	C	C3'-C2'	-5.73	1.44	1.52
57	BB	2793	C	O5'-C5'	5.73	1.51	1.42
5	AN	95	LEU	C-N	5.73	1.40	1.33
45	BC	17	LYS	CA-C	-5.73	1.45	1.52
57	BB	150	U	C3'-O3'	5.73	1.50	1.42
57	BB	2312	U	O3'-P	-5.73	1.52	1.61
12	AU	26	GLY	C-N	5.73	1.38	1.33
45	BC	15	VAL	CA-CB	5.73	1.61	1.54
33	BN	12	ARG	CD-NE	5.72	1.54	1.46
55	BG	31	GLU	N-CA	-5.72	1.39	1.46
57	BB	2044	C	C3'-O3'	5.72	1.50	1.42
57	BB	734	A	O3'-P	-5.72	1.52	1.61
5	AN	24	ALA	N-CA	-5.72	1.39	1.46
15	AD	36	ALA	CA-C	-5.72	1.46	1.52
40	BU	81	ARG	CZ-NH1	5.72	1.40	1.32
57	BB	1847	A	C1'-N9	-5.72	1.39	1.48
57	BB	2467	C	C4'-C3'	-5.72	1.44	1.52
21	AA	110	C	C5'-C4'	5.72	1.59	1.51
57	BB	377	G	O4'-C1'	5.72	1.50	1.41
57	BB	979	A	O3'-P	-5.72	1.52	1.61
57	BB	1535	A	C1'-N9	5.72	1.55	1.47
57	BB	1762	A	C6-N6	5.72	1.45	1.33
57	BB	2380	C	C1'-N1	5.72	1.57	1.48
25	AZ	288	ARG	CZ-NH1	5.71	1.40	1.32
28	BI	44	LYS	C-N	5.71	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	374	A	C3'-C2'	5.71	1.61	1.52
57	BB	1319	C	C3'-C2'	-5.71	1.44	1.52
57	BB	2409	G	C2'-C1'	-5.71	1.44	1.53
15	AD	108	ALA	N-CA	-5.71	1.38	1.46
57	BB	2011	U	C4'-C3'	5.71	1.61	1.52
5	AN	25	GLU	N-CA	-5.71	1.39	1.46
8	AQ	81	ALA	N-CA	-5.71	1.38	1.46
19	AH	109	VAL	CA-C	-5.71	1.45	1.52
21	AA	164	G	P-O5'	-5.71	1.51	1.59
21	AA	612	C	C4'-O4'	-5.71	1.36	1.45
28	BI	12	VAL	CA-CB	-5.71	1.47	1.54
56	BH	116	ARG	CA-CB	5.71	1.63	1.53
57	BB	517	C	C4-N4	5.71	1.45	1.33
57	BB	924	G	C3'-O3'	5.71	1.50	1.42
57	BB	964	C	C2'-C1'	-5.71	1.44	1.53
2	AK	122	PRO	CA-C	-5.71	1.46	1.52
33	BN	46	ARG	NE-CZ	5.71	1.39	1.33
43	BX	16	ASN	N-CA	-5.71	1.39	1.45
57	BB	150	U	O3'-P	-5.71	1.52	1.61
57	BB	2479	U	P-O5'	-5.71	1.51	1.59
13	AB	32	GLY	N-CA	-5.71	1.37	1.45
21	AA	51	A	C4'-O4'	-5.71	1.37	1.45
21	AA	1142	G	C2'-C1'	-5.71	1.44	1.53
21	AA	1475	G	C4'-O4'	-5.71	1.36	1.45
25	AZ	373	ARG	CZ-NH2	5.71	1.40	1.33
33	BN	4	ARG	CD-NE	5.71	1.54	1.46
51	B4	3	VAL	C-O	-5.71	1.16	1.24
57	BB	1797	G	C1'-N9	5.71	1.56	1.48
10	AS	77	ARG	CZ-NH2	5.71	1.40	1.33
11	AT	53	MET	CA-CB	5.71	1.62	1.53
21	AA	779	C	O5'-C5'	5.71	1.51	1.42
57	BB	349	U	C1'-N1	5.71	1.57	1.48
57	BB	745	G	C4'-O4'	-5.71	1.36	1.45
53	BE	58	LYS	C-O	-5.71	1.17	1.24
57	BB	684	G	O4'-C1'	5.71	1.50	1.41
57	BB	1008	A	O3'-P	-5.71	1.52	1.61
20	AI	93	LEU	CA-C	-5.70	1.44	1.52
25	AZ	287	GLU	N-CA	-5.70	1.39	1.45
57	BB	1425	G	C2'-C1'	-5.70	1.44	1.53
8	AQ	26	ARG	CZ-NH2	5.70	1.40	1.33
41	BV	5	ASN	N-CA	-5.70	1.39	1.46
5	AN	91	GLU	CA-C	-5.70	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	384	G	C3'-O3'	5.70	1.50	1.42
53	BE	170	ARG	CD-NE	5.70	1.54	1.46
21	AA	234	C	C2'-C1'	-5.70	1.44	1.53
52	BD	122	VAL	CA-C	5.70	1.59	1.52
56	BH	105	ALA	C-N	5.70	1.41	1.33
25	AZ	7	ARG	CZ-NH2	5.70	1.40	1.33
54	BF	70	ARG	NE-CZ	5.70	1.39	1.33
57	BB	2487	G	P-O5'	-5.70	1.51	1.59
58	BA	95	U	C5'-C4'	5.70	1.59	1.51
4	AM	28	ARG	C-N	5.70	1.41	1.33
6	AO	37	HIS	N-CA	-5.70	1.39	1.46
21	AA	1107	C	C4'-C3'	-5.70	1.44	1.52
27	B5	12	ARG	CZ-NH2	5.70	1.40	1.33
35	BP	59	THR	CA-C	-5.70	1.45	1.52
55	BG	54	ARG	CA-CB	5.70	1.60	1.52
25	AZ	99	ASP	N-CA	-5.69	1.38	1.45
1	AJ	81	GLU	CA-C	-5.69	1.45	1.52
13	AB	74	ALA	N-CA	-5.69	1.39	1.46
21	AA	1102	A	C2'-C1'	-5.69	1.44	1.53
21	AA	1149	C	C1'-N1	5.69	1.56	1.48
21	AA	1165	U	C2'-C1'	-5.69	1.44	1.53
22	AY	58	A	C6-N6	5.69	1.45	1.33
45	BC	43	ASN	CA-C	-5.69	1.45	1.53
56	BH	17	ASP	CA-C	-5.69	1.46	1.52
57	BB	362	A	C4'-O4'	5.69	1.54	1.45
57	BB	1041	G	O5'-C5'	5.69	1.50	1.42
57	BB	1187	G	C5'-C4'	5.69	1.59	1.51
57	BB	1802	A	C2'-C1'	-5.69	1.44	1.53
1	AJ	22	THR	CA-C	5.69	1.60	1.52
6	AO	44	GLU	C-N	5.69	1.41	1.33
19	AH	83	ARG	NE-CZ	5.69	1.39	1.33
57	BB	658	U	C4'-C3'	5.69	1.61	1.52
57	BB	953	G	O3'-P	-5.69	1.52	1.61
57	BB	2209	G	C4'-C3'	-5.69	1.44	1.52
29	BJ	79	GLY	C-N	5.69	1.41	1.33
56	BH	130	VAL	N-CA	5.69	1.53	1.46
57	BB	2596	U	O3'-P	-5.69	1.52	1.61
13	AB	155	GLY	N-CA	-5.69	1.41	1.46
21	AA	181	A	C4'-C3'	5.69	1.61	1.53
21	AA	1074	G	C1'-N9	5.69	1.56	1.48
52	BD	129	THR	C-N	5.69	1.40	1.33
57	BB	1044	C	C4'-O4'	-5.69	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AL	90	PRO	N-CA	-5.69	1.40	1.46
57	BB	2101	A	C5'-C4'	5.68	1.59	1.51
57	BB	2317	A	C2'-C1'	-5.68	1.44	1.53
57	BB	2599	G	C3'-C2'	-5.68	1.44	1.52
13	AB	204	ASP	CA-C	-5.68	1.45	1.52
21	AA	906	A	O3'-P	-5.68	1.52	1.61
21	AA	953	G	C3'-O3'	5.68	1.50	1.42
57	BB	1062	G	C3'-O3'	-5.68	1.33	1.42
29	BJ	116	ARG	NE-CZ	5.68	1.39	1.33
21	AA	101	A	C3'-O3'	5.68	1.50	1.42
21	AA	152	A	O5'-C5'	5.68	1.50	1.42
21	AA	1087	G	O4'-C1'	5.68	1.50	1.41
21	AA	1410	A	C2'-C1'	-5.68	1.44	1.53
21	AA	1498	U	C5'-C4'	5.68	1.59	1.51
25	AZ	217	VAL	N-CA	-5.68	1.39	1.46
29	BJ	132	HIS	N-CA	-5.68	1.38	1.46
52	BD	77	ARG	NE-CZ	5.68	1.39	1.33
52	BD	141	ARG	C-N	5.68	1.39	1.33
57	BB	876	C	P-O5'	-5.68	1.51	1.59
57	BB	1900	A	C3'-O3'	5.68	1.51	1.43
57	BB	2875	C	C2'-C1'	-5.68	1.44	1.53
45	BC	213	ARG	CA-CB	-5.68	1.46	1.54
47	B0	37	HIS	CB-CG	5.68	1.58	1.50
57	BB	560	C	P-O5'	-5.68	1.51	1.59
57	BB	2310	C	O4'-C1'	5.68	1.50	1.41
35	BP	46	VAL	N-CA	-5.68	1.39	1.46
54	BF	123	GLY	C-N	5.68	1.42	1.33
34	BO	83	LEU	C-N	5.67	1.41	1.34
42	BW	40	ARG	CD-NE	5.67	1.54	1.46
57	BB	615	U	O3'-P	-5.67	1.52	1.61
6	AO	45	HIS	N-CA	-5.67	1.38	1.46
57	BB	2783	U	C3'-C2'	5.67	1.61	1.52
6	AO	84	LEU	C-N	5.67	1.41	1.33
19	AH	95	MET	C-O	-5.67	1.16	1.24
28	BI	45	THR	CA-C	-5.67	1.45	1.52
32	BM	117	PHE	N-CA	-5.67	1.38	1.46
57	BB	1733	G	C4'-C3'	-5.67	1.44	1.52
57	BB	2717	C	C2'-C1'	-5.67	1.44	1.53
4	AM	14	ALA	CA-C	-5.67	1.44	1.52
15	AD	19	PHE	C-N	5.67	1.43	1.33
16	AE	28	ARG	NE-CZ	5.67	1.39	1.33
57	BB	586	A	C2'-C1'	-5.67	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1157	G	P-O5'	-5.67	1.51	1.59
57	BB	1226	A	O4'-C1'	-5.67	1.33	1.41
57	BB	1248	G	C2'-O2'	-5.67	1.33	1.41
57	BB	2034	U	C2'-C1'	-5.67	1.44	1.53
21	AA	1086	U	C3'-O3'	5.67	1.50	1.42
57	BB	1813	G	O4'-C1'	-5.67	1.33	1.41
21	AA	986	U	P-O5'	-5.66	1.51	1.59
50	B3	39	ARG	NE-CZ	5.66	1.39	1.33
57	BB	1207	C	O5'-C5'	5.66	1.50	1.42
57	BB	2116	G	C1'-N9	5.66	1.56	1.48
9	AR	46	THR	N-CA	-5.66	1.39	1.45
38	BS	36	LEU	CA-C	-5.66	1.45	1.52
4	AM	97	ARG	NE-CZ	5.66	1.39	1.33
9	AR	51	GLN	C-O	-5.66	1.17	1.24
14	AC	180	ASP	CA-C	-5.66	1.45	1.52
21	AA	693	G	C1'-N9	-5.66	1.39	1.48
45	BC	212	TRP	NE1-CE2	-5.66	1.31	1.37
57	BB	748	G	C4'-O4'	-5.66	1.37	1.45
18	AG	122	GLU	C-N	5.66	1.41	1.33
21	AA	495	A	O3'-P	-5.66	1.52	1.61
21	AA	566	G	C2'-C1'	-5.66	1.44	1.53
57	BB	2364	C	C5'-C4'	5.66	1.59	1.51
3	AL	95	HIS	ND1-CE1	5.66	1.38	1.32
17	AF	87	SER	CA-C	-5.66	1.45	1.52
25	AZ	79	VAL	C-N	5.66	1.41	1.33
38	BS	92	ARG	NE-CZ	5.66	1.39	1.33
57	BB	28	A	C5'-C4'	5.66	1.59	1.51
15	AD	80	ARG	CZ-NH2	5.65	1.40	1.33
19	AH	46	GLU	CA-C	-5.65	1.45	1.52
10	AS	42	ASN	C-N	5.65	1.41	1.33
21	AA	780	A	C2'-C1'	-5.65	1.44	1.53
25	AZ	185	GLU	C-N	5.65	1.41	1.33
32	BM	51	ARG	CD-NE	5.65	1.54	1.46
46	BZ	19	HIS	CB-CG	5.65	1.58	1.50
57	BB	1766	G	C3'-C2'	5.65	1.61	1.52
28	BI	133	ARG	CZ-NH2	5.65	1.40	1.33
57	BB	399	U	C4'-O4'	-5.65	1.37	1.45
58	BA	7	G	P-O5'	-5.65	1.51	1.59
21	AA	158	G	O3'-P	-5.65	1.52	1.61
30	BK	86	LEU	N-CA	-5.65	1.39	1.46
35	BP	74	GLN	C-N	5.65	1.41	1.33
6	AO	33	ALA	C-N	5.65	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	AF	38	ARG	CD-NE	5.65	1.54	1.46
39	BT	50	LEU	CA-CB	5.65	1.62	1.53
44	BY	56	LEU	N-CA	-5.65	1.39	1.46
57	BB	1349	C	C4'-O4'	5.65	1.54	1.45
31	BL	126	ARG	CA-C	5.65	1.60	1.53
52	BD	104	VAL	N-CA	-5.65	1.39	1.46
57	BB	1875	G	C1'-N9	-5.65	1.39	1.48
57	BB	2588	G	C5'-C4'	5.65	1.59	1.51
21	AA	346	G	C5'-C4'	5.64	1.59	1.51
21	AA	1292	G	C2'-C1'	-5.64	1.44	1.53
57	BB	1100	C	C3'-O3'	5.64	1.50	1.42
57	BB	1977	A	N7-C5	-5.64	1.27	1.39
16	AE	55	VAL	CA-CB	5.64	1.57	1.53
57	BB	658	U	C2'-C1'	-5.64	1.44	1.53
57	BB	2560	A	O4'-C1'	5.64	1.50	1.41
25	AZ	233	ARG	CD-NE	5.64	1.54	1.46
27	B5	32	GLU	CA-CB	5.64	1.62	1.53
57	BB	1109	C	C4'-O4'	-5.64	1.37	1.45
57	BB	2264	C	C1'-N1	5.64	1.56	1.48
30	BK	117	LEU	CA-C	-5.64	1.45	1.52
57	BB	822	G	O3'-P	-5.64	1.52	1.61
57	BB	2175	C	P-O5'	-5.64	1.51	1.59
33	BN	86	ARG	NE-CZ	5.64	1.39	1.33
57	BB	2099	U	C4'-O4'	5.64	1.54	1.45
14	AC	54	ILE	CA-CB	-5.64	1.47	1.54
57	BB	1263	U	C4'-O4'	5.64	1.54	1.45
57	BB	1583	A	O3'-P	-5.64	1.52	1.61
57	BB	2787	C	C1'-N1	5.64	1.56	1.48
3	AL	89	LEU	CA-C	-5.63	1.45	1.52
57	BB	798	G	O3'-P	-5.63	1.52	1.61
57	BB	1590	A	C3'-O3'	5.63	1.50	1.42
57	BB	1635	A	C5'-C4'	-5.63	1.42	1.51
57	BB	2392	A	C5'-C4'	5.63	1.59	1.51
25	AZ	262	ARG	CA-C	-5.63	1.44	1.52
45	BC	102	TYR	C-N	5.63	1.41	1.33
57	BB	2145	C	O3'-P	-5.63	1.52	1.61
57	BB	2162	G	C5'-C4'	5.63	1.59	1.51
27	B5	162	ARG	CZ-NH2	5.63	1.40	1.33
28	BI	2	LYS	CA-C	-5.63	1.45	1.52
52	BD	48	ILE	CB-CG1	5.63	1.64	1.53
57	BB	1671	U	O3'-P	-5.63	1.52	1.61
44	BY	47	ARG	NE-CZ	5.63	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BF	175	PRO	CA-CB	5.63	1.61	1.53
57	BB	237	C	C4'-O4'	-5.63	1.37	1.45
57	BB	735	A	P-O5'	-5.63	1.51	1.59
21	AA	773	G	O5'-C5'	5.63	1.50	1.42
21	AA	1170	A	P-O5'	-5.63	1.51	1.59
21	AA	1214	C	C3'-C2'	5.63	1.61	1.52
57	BB	1943	U	C5'-C4'	5.63	1.59	1.51
57	BB	2671	G	C5'-C4'	5.63	1.59	1.51
57	BB	2700	A	C5'-C4'	5.63	1.59	1.51
57	BB	561	G	C4'-C3'	5.62	1.60	1.52
57	BB	973	A	C4'-C3'	5.62	1.61	1.53
14	AC	108	PRO	N-CA	-5.62	1.40	1.47
21	AA	70	U	C2'-O2'	5.62	1.50	1.41
31	BL	97	ALA	CA-C	-5.62	1.45	1.52
46	BZ	56	VAL	N-CA	-5.62	1.39	1.46
52	BD	207	VAL	CA-CB	5.62	1.62	1.54
57	BB	274	C	C3'-C2'	5.62	1.61	1.52
57	BB	1061	U	C3'-C2'	-5.62	1.44	1.52
19	AH	29	SER	CA-C	-5.62	1.45	1.52
28	BI	51	GLY	C-N	5.62	1.39	1.33
57	BB	2209	G	P-O5'	5.62	1.68	1.59
46	BZ	30	ARG	C-N	5.62	1.40	1.33
12	AU	17	ARG	CZ-NH1	5.62	1.40	1.32
57	BB	537	G	N7-C5	-5.62	1.28	1.39
57	BB	929	U	C2'-C1'	-5.62	1.45	1.53
57	BB	1039	A	O4'-C1'	-5.62	1.33	1.41
21	AA	1490	U	C1'-N1	5.62	1.56	1.48
25	AZ	17	ILE	CA-CB	-5.62	1.46	1.54
35	BP	88	ARG	NE-CZ	5.62	1.39	1.33
57	BB	2346	A	C1'-N9	-5.62	1.38	1.47
5	AN	8	ARG	CZ-NH1	5.61	1.40	1.32
21	AA	1172	C	O3'-P	-5.61	1.52	1.61
6	AO	69	LEU	C-N	5.61	1.41	1.33
31	BL	125	LEU	CA-C	-5.61	1.45	1.52
17	AF	79	ARG	NE-CZ	5.61	1.39	1.33
21	AA	96	U	O3'-P	-5.61	1.52	1.61
58	BA	2	G	C5'-C4'	5.61	1.59	1.51
13	AB	133	ALA	CA-CB	5.61	1.62	1.53
29	BJ	4	PHE	C-N	5.61	1.41	1.33
57	BB	373	U	C1'-N1	5.61	1.56	1.48
21	AA	447	G	C1'-N9	-5.61	1.39	1.48
21	AA	548	G	O3'-P	-5.61	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	B3	30	HIS	ND1-CE1	5.61	1.38	1.32
57	BB	206	U	C1'-N1	5.61	1.56	1.48
57	BB	1268	A	O3'-P	-5.61	1.52	1.61
57	BB	1467	U	C1'-N1	5.61	1.56	1.48
57	BB	1799	G	C6-N1	5.61	1.50	1.39
6	AO	52	ARG	NE-CZ	5.60	1.39	1.33
43	BX	43	LYS	C-N	5.60	1.41	1.33
57	BB	1213	A	O3'-P	-5.60	1.52	1.61
57	BB	2011	U	C2-N3	5.60	1.49	1.37
1	AJ	62	ARG	N-CA	-5.60	1.39	1.46
19	AH	71	VAL	C-O	-5.60	1.18	1.24
21	AA	402	G	O3'-P	5.60	1.69	1.61
50	B3	4	LYS	CA-C	5.60	1.60	1.52
54	BF	36	ASN	CA-CB	-5.60	1.47	1.54
57	BB	425	G	C5-C6	5.60	1.53	1.42
57	BB	771	G	C1'-N9	-5.60	1.39	1.48
57	BB	2581	G	C2-N2	5.60	1.45	1.34
15	AD	13	ARG	CD-NE	5.60	1.54	1.46
21	AA	790	A	C4'-O4'	-5.60	1.37	1.45
32	BM	66	ARG	C-N	5.60	1.42	1.33
54	BF	61	GLY	CA-C	-5.60	1.46	1.52
2	AK	52	ARG	CZ-NH2	5.60	1.40	1.33
17	AF	53	LYS	CA-C	-5.60	1.46	1.53
19	AH	35	ILE	CA-CB	5.60	1.61	1.54
57	BB	863	A	C4'-O4'	5.60	1.53	1.45
57	BB	2882	A	P-O5'	-5.60	1.51	1.59
13	AB	94	ARG	NE-CZ	5.60	1.39	1.33
57	BB	595	C	C4'-C3'	5.60	1.60	1.52
57	BB	1945	G	C5'-C4'	5.60	1.59	1.51
57	BB	2419	U	O3'-P	-5.60	1.52	1.61
6	AO	63	ARG	CD-NE	5.59	1.54	1.46
58	BA	57	A	C3'-C2'	-5.59	1.44	1.52
3	AL	13	ARG	CD-NE	5.59	1.54	1.46
57	BB	1857	G	C3'-C2'	-5.59	1.44	1.52
1	AJ	26	VAL	CA-C	-5.59	1.45	1.52
10	AS	45	GLY	CA-C	-5.59	1.43	1.51
21	AA	189	A	C2'-O2'	-5.59	1.34	1.42
53	BE	175	ILE	C-N	5.59	1.40	1.33
23	AW	23	A	C4'-C3'	5.59	1.60	1.52
29	BJ	99	ARG	NE-CZ	5.59	1.39	1.33
52	BD	190	LYS	C-N	5.59	1.38	1.32
57	BB	625	G	O5'-C5'	5.59	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	997	G	C3'-O3'	5.59	1.50	1.42
28	BI	108	ILE	CA-C	-5.59	1.44	1.52
33	BN	96	ARG	NE-CZ	5.59	1.39	1.33
15	AD	154	VAL	N-CA	-5.59	1.40	1.46
21	AA	147	G	C2'-C1'	-5.59	1.45	1.53
22	AY	76	A	O5'-C5'	5.59	1.51	1.42
33	BN	16	HIS	ND1-CE1	5.59	1.38	1.32
21	AA	658	C	C5'-C4'	5.58	1.59	1.51
21	AA	1488	G	C4'-C3'	5.58	1.60	1.52
46	BZ	25	GLY	CA-C	5.58	1.58	1.52
57	BB	1264	A	C1'-N9	5.58	1.56	1.48
8	AQ	31	PRO	CA-CB	5.58	1.61	1.53
21	AA	771	G	C6-N1	5.58	1.50	1.39
21	AA	1305	G	C1'-N9	-5.58	1.39	1.48
44	BY	6	LEU	CA-C	-5.58	1.45	1.52
54	BF	21	TYR	CA-C	-5.58	1.45	1.52
56	BH	59	ALA	CA-CB	5.58	1.62	1.53
57	BB	89	A	C2'-C1'	-5.58	1.45	1.53
10	AS	2	ARG	NE-CZ	5.58	1.39	1.33
13	AB	26	MET	N-CA	5.58	1.53	1.46
57	BB	794	A	O4'-C1'	5.58	1.50	1.41
57	BB	955	U	O5'-C5'	5.58	1.50	1.42
57	BB	1622	G	C2'-C1'	-5.58	1.45	1.53
2	AK	65	ALA	CA-C	5.58	1.60	1.53
10	AS	36	ARG	NE-CZ	5.58	1.39	1.33
25	AZ	179	GLU	CA-C	-5.58	1.45	1.52
38	BS	39	THR	CA-C	-5.58	1.45	1.52
52	BD	161	MET	SD-CE	5.58	1.93	1.79
57	BB	2399	G	O4'-C1'	-5.58	1.33	1.41
57	BB	2430	A	C3'-C2'	5.58	1.61	1.52
3	AL	114	SER	C-O	-5.58	1.17	1.24
21	AA	650	G	C4'-O4'	-5.58	1.37	1.45
25	AZ	86	ASP	C-O	-5.58	1.17	1.24
42	BW	72	GLY	N-CA	5.58	1.52	1.44
57	BB	66	C	C4'-O4'	-5.58	1.37	1.45
57	BB	883	G	O5'-C5'	5.58	1.50	1.42
57	BB	713	G	C3'-C2'	-5.57	1.44	1.52
57	BB	1944	U	C5'-C4'	5.57	1.59	1.51
57	BB	2063	C	C5'-C4'	5.57	1.59	1.51
31	BL	94	THR	CA-C	-5.57	1.45	1.52
57	BB	2292	U	C4'-C3'	5.57	1.60	1.52
9	AR	50	TYR	N-CA	5.57	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	29	A	C5'-C4'	5.57	1.59	1.51
57	BB	828	U	O3'-P	-5.57	1.52	1.61
57	BB	1023	U	C5'-C4'	5.57	1.59	1.51
3	AL	39	THR	C-O	-5.57	1.16	1.23
17	AF	44	ARG	CZ-NH1	5.57	1.40	1.32
57	BB	269	C	C5'-C4'	5.57	1.59	1.51
27	B5	174	THR	CA-C	-5.57	1.45	1.52
35	BP	19	PHE	N-CA	-5.57	1.38	1.45
56	BH	140	ALA	CA-C	-5.57	1.45	1.52
57	BB	1655	A	C5'-C4'	5.57	1.59	1.51
57	BB	2600	A	C1'-N9	5.57	1.56	1.48
52	BD	171	THR	CB-OG1	-5.56	1.34	1.43
57	BB	2231	U	P-O5'	-5.56	1.51	1.59
57	BB	2759	G	O3'-P	-5.56	1.52	1.61
17	AF	45	ARG	CD-NE	5.56	1.54	1.46
21	AA	500	G	C2-N3	5.56	1.43	1.32
38	BS	103	ILE	CA-C	-5.56	1.46	1.52
41	BV	79	ARG	CZ-NH1	5.56	1.40	1.32
19	AH	84	ILE	CA-C	-5.56	1.47	1.52
40	BU	27	VAL	CA-C	-5.56	1.46	1.52
45	BC	16	VAL	C-N	5.56	1.41	1.33
53	BE	82	GLY	N-CA	-5.56	1.39	1.45
57	BB	2090	A	C4'-C3'	5.56	1.60	1.52
2	AK	63	GLN	C-O	-5.56	1.17	1.24
32	BM	37	GLY	CA-C	-5.56	1.44	1.51
57	BB	85	G	C2'-C1'	-5.56	1.45	1.53
21	AA	219	U	C1'-N1	5.56	1.56	1.48
21	AA	1153	G	C3'-O3'	5.56	1.50	1.42
32	BM	64	TRP	CD2-CE3	-5.56	1.31	1.40
33	BN	8	ARG	CZ-NH1	5.56	1.40	1.32
38	BS	10	ALA	N-CA	-5.56	1.39	1.46
57	BB	1838	C	C5'-C4'	5.56	1.59	1.51
58	BA	91	C	C1'-N1	5.56	1.56	1.48
7	AP	56	ARG	CD-NE	5.56	1.54	1.46
32	BM	62	LYS	C-O	5.56	1.30	1.23
33	BN	60	VAL	C-N	5.56	1.41	1.33
57	BB	487	C	P-O5'	-5.56	1.51	1.59
8	AQ	25	GLU	N-CA	-5.55	1.39	1.46
8	AQ	67	SER	CA-C	-5.55	1.46	1.52
25	AZ	132	VAL	N-CA	-5.55	1.39	1.46
10	AS	19	GLU	C-N	5.55	1.41	1.33
21	AA	773	G	C4'-C3'	5.55	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	208	C	C2'-C1'	-5.55	1.45	1.53
57	BB	981	A	C5'-C4'	5.55	1.59	1.51
57	BB	1258	U	C5'-C4'	5.55	1.59	1.51
57	BB	2572	A	O4'-C1'	-5.55	1.33	1.42
4	AM	112	ARG	CZ-NH1	5.55	1.40	1.32
21	AA	725	G	O3'-P	-5.55	1.52	1.61
25	AZ	326	TYR	CA-C	-5.55	1.45	1.52
51	B4	7	VAL	CA-C	-5.55	1.45	1.52
57	BB	515	A	C2'-C1'	-5.55	1.45	1.53
57	BB	2722	G	C4'-C3'	5.55	1.60	1.52
19	AH	79	ARG	C-N	-5.55	1.20	1.33
31	BL	59	ARG	CA-CB	5.55	1.61	1.52
13	AB	129	THR	CA-C	-5.55	1.45	1.53
21	AA	606	G	O5'-C5'	-5.55	1.34	1.42
27	B5	77	VAL	N-CA	-5.55	1.39	1.46
43	BX	17	ARG	NE-CZ	5.55	1.39	1.33
57	BB	730	A	C2'-C1'	-5.55	1.45	1.53
57	BB	835	C	C2'-C1'	-5.55	1.45	1.53
3	AL	120	ARG	CZ-NH2	5.54	1.40	1.33
21	AA	287	U	O5'-C5'	5.54	1.50	1.42
27	B5	189	LEU	CA-C	-5.54	1.45	1.52
38	BS	86	MET	CA-C	-5.54	1.46	1.52
57	BB	291	G	O5'-C5'	5.54	1.50	1.42
21	AA	842	U	C2'-C1'	-5.54	1.45	1.53
21	AA	1313	U	C4'-C3'	5.54	1.60	1.52
57	BB	1088	A	C5'-C4'	5.54	1.59	1.51
57	BB	1367	A	O3'-P	-5.54	1.52	1.61
57	BB	2289	G	C1'-N9	-5.54	1.39	1.48
4	AM	104	ASN	CA-CB	5.54	1.61	1.53
7	AP	41	PRO	C-N	-5.54	1.27	1.34
8	AQ	81	ALA	CA-C	-5.54	1.45	1.52
11	AT	19	HIS	CD2-NE2	-5.54	1.31	1.37
12	AU	19	LYS	CA-C	-5.54	1.45	1.53
53	BE	194	LYS	C-O	-5.54	1.17	1.24
57	BB	443	A	O5'-C5'	-5.54	1.34	1.42
57	BB	1613	G	C4'-O4'	5.54	1.53	1.45
57	BB	1650	A	P-O5'	5.54	1.68	1.59
57	BB	1941	C	O4'-C1'	5.54	1.50	1.41
58	BA	91	C	C3'-O3'	5.54	1.50	1.42
18	AG	31	VAL	CA-C	-5.54	1.45	1.52
21	AA	419	C	C1'-N1	5.54	1.56	1.48
25	AZ	381	ARG	C-N	5.54	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BR	66	HIS	CB-CG	-5.54	1.42	1.50
57	BB	548	G	C3'-C2'	-5.54	1.44	1.52
57	BB	2021	C	O4'-C1'	5.54	1.50	1.41
15	AD	75	TYR	CA-C	5.54	1.60	1.52
25	AZ	381	ARG	CZ-NH1	5.54	1.40	1.32
45	BC	133	ASN	N-CA	5.54	1.52	1.46
52	BD	125	TRP	C-N	5.54	1.41	1.33
57	BB	542	C	C4'-C3'	5.54	1.60	1.52
22	AY	38	A	O3'-P	-5.54	1.52	1.61
38	BS	17	VAL	N-CA	-5.54	1.40	1.46
53	BE	194	LYS	CA-C	-5.54	1.45	1.52
57	BB	201	C	C3'-O3'	5.54	1.50	1.42
21	AA	123	U	C5'-C4'	5.54	1.59	1.51
45	BC	48	ILE	N-CA	-5.54	1.39	1.46
53	BE	122	GLU	C-N	5.54	1.41	1.33
56	BH	135	HIS	ND1-CE1	5.54	1.38	1.32
57	BB	387	U	C4'-O4'	-5.54	1.37	1.45
21	AA	912	C	O3'-P	-5.53	1.52	1.61
28	BI	137	LEU	CA-C	-5.53	1.46	1.52
53	BE	171	ASP	CA-C	-5.53	1.45	1.52
57	BB	936	A	O3'-P	-5.53	1.52	1.61
57	BB	2285	C	C5'-C4'	5.53	1.59	1.51
25	AZ	302	THR	CA-C	-5.53	1.45	1.52
55	BG	111	PRO	CA-C	-5.53	1.46	1.52
57	BB	428	A	C4'-C3'	5.53	1.60	1.52
23	AW	5	G	O4'-C1'	5.53	1.50	1.41
36	BQ	32	ARG	NE-CZ	5.53	1.39	1.33
45	BC	147	PRO	CA-C	5.53	1.60	1.52
55	BG	6	ALA	N-CA	-5.53	1.37	1.46
57	BB	271	G	C5'-C4'	5.53	1.59	1.51
57	BB	1630	A	C3'-C2'	-5.53	1.44	1.52
57	BB	1837	C	C1'-N1	5.53	1.56	1.48
42	BW	31	LEU	CA-C	-5.53	1.45	1.52
43	BX	36	ARG	CZ-NH1	5.53	1.40	1.32
56	BH	45	GLU	CA-C	-5.53	1.45	1.52
57	BB	117	G	O3'-P	-5.53	1.52	1.61
57	BB	175	G	C5'-C4'	5.53	1.59	1.51
57	BB	349	U	P-O5'	-5.53	1.51	1.59
57	BB	636	G	C2'-C1'	-5.53	1.45	1.53
57	BB	989	G	C5'-C4'	5.53	1.59	1.51
57	BB	2329	U	C3'-C2'	-5.53	1.44	1.52
6	AO	9	LYS	CA-CB	5.53	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AT	15	LYS	CA-C	-5.53	1.45	1.52
11	AT	54	GLN	CA-CB	5.53	1.60	1.53
17	AF	81	ASN	N-CA	-5.53	1.39	1.46
21	AA	357	G	C5'-C4'	5.53	1.59	1.51
25	AZ	150	GLU	CA-C	-5.53	1.45	1.52
27	B5	183	ASP	C-N	5.53	1.41	1.33
57	BB	2152	G	C5'-C4'	5.53	1.59	1.51
57	BB	2707	U	C2-N3	5.53	1.48	1.37
57	BB	2154	A	C5'-C4'	5.52	1.59	1.51
57	BB	2692	G	O4'-C1'	5.52	1.50	1.41
21	AA	391	G	C3'-C2'	5.52	1.61	1.52
39	BT	79	ASP	CA-C	-5.52	1.45	1.53
57	BB	493	G	C2'-C1'	-5.52	1.45	1.53
57	BB	1062	G	C1'-N9	5.52	1.56	1.48
57	BB	1075	C	C1'-N1	5.52	1.56	1.48
57	BB	1838	C	C2'-C1'	-5.52	1.44	1.53
27	B5	81	GLY	C-N	5.52	1.41	1.33
50	B3	23	HIS	CA-C	5.52	1.59	1.52
4	AM	104	ASN	N-CA	-5.52	1.38	1.46
9	AR	53	GLN	CA-C	-5.52	1.45	1.52
21	AA	295	C	C4'-C3'	5.52	1.60	1.52
21	AA	344	A	N9-C4	-5.52	1.26	1.37
21	AA	929	G	C4'-O4'	-5.52	1.37	1.45
21	AA	1182	G	C5'-C4'	5.52	1.59	1.51
33	BN	103	ARG	CD-NE	5.52	1.53	1.46
57	BB	2665	A	C1'-N9	-5.52	1.39	1.48
57	BB	2749	A	P-O5'	-5.52	1.51	1.59
58	BA	55	U	C5'-C4'	5.52	1.59	1.51
21	AA	1448	C	C4'-O4'	5.52	1.53	1.45
23	AW	46	G	O3'-P	-5.52	1.52	1.61
45	BC	90	ILE	C-N	5.52	1.40	1.33
57	BB	31	C	C5'-C4'	5.52	1.59	1.51
57	BB	109	C	C1'-N1	5.52	1.56	1.48
57	BB	2416	C	P-O5'	-5.52	1.51	1.59
20	AI	105	ARG	CD-NE	5.51	1.53	1.46
21	AA	50	A	O4'-C1'	5.51	1.50	1.42
21	AA	223	A	C5'-C4'	5.51	1.59	1.51
21	AA	932	C	C1'-N1	5.51	1.56	1.48
21	AA	1456	A	C1'-N9	5.51	1.56	1.48
23	AW	29	G	C3'-C2'	5.51	1.61	1.52
57	BB	351	C	O4'-C1'	5.51	1.50	1.41
57	BB	1205	A	O4'-C1'	-5.51	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1418	G	P-O5'	-5.51	1.51	1.59
57	BB	1458	U	C4'-O4'	-5.51	1.37	1.45
21	AA	1456	A	O5'-C5'	5.51	1.50	1.42
30	BK	77	ARG	CA-C	-5.51	1.46	1.52
52	BD	140	HIS	CA-C	-5.51	1.45	1.52
53	BE	42	GLY	N-CA	-5.51	1.38	1.45
15	AD	150	LYS	C-N	5.51	1.40	1.33
22	AY	64	A	C2'-C1'	-5.51	1.45	1.53
25	AZ	345	GLU	CA-C	-5.51	1.45	1.52
42	BW	15	SER	CA-CB	5.51	1.62	1.53
58	BA	2	G	P-O5'	-5.51	1.51	1.59
13	AB	218	ALA	CA-CB	5.51	1.62	1.53
18	AG	9	ARG	CZ-NH2	5.51	1.40	1.33
41	BV	25	LYS	CA-C	-5.51	1.45	1.52
57	BB	1058	U	C5'-C4'	5.51	1.59	1.51
57	BB	1353	A	C2'-C1'	-5.51	1.45	1.53
57	BB	1442	U	C2'-C1'	-5.51	1.45	1.53
57	BB	1818	U	C1'-N1	5.51	1.56	1.48
14	AC	166	TRP	CA-C	-5.51	1.49	1.52
28	BI	47	SER	CA-C	-5.51	1.45	1.52
45	BC	240	GLY	C-O	-5.51	1.17	1.24
57	BB	430	A	C4'-O4'	-5.51	1.37	1.45
17	AF	14	GLN	C-N	5.51	1.41	1.33
17	AF	90	MET	C-N	5.51	1.40	1.33
21	AA	211	G	C3'-C2'	5.51	1.61	1.52
21	AA	768	A	P-O5'	-5.51	1.51	1.59
57	BB	1446	C	O3'-P	-5.51	1.52	1.61
57	BB	1604	C	C3'-O3'	5.51	1.50	1.42
57	BB	1987	A	O5'-C5'	5.51	1.50	1.42
22	AY	12	U	C1'-N1	5.50	1.56	1.48
25	AZ	148	LEU	CA-C	5.50	1.59	1.52
57	BB	2229	U	C1'-N1	5.50	1.56	1.48
57	BB	2800	A	P-O5'	-5.50	1.51	1.59
21	AA	149	A	C2'-O2'	-5.50	1.34	1.42
22	AY	33	U	C4'-O4'	-5.50	1.37	1.45
32	BM	55	ARG	CZ-NH1	5.50	1.40	1.32
52	BD	190	LYS	CA-C	-5.50	1.45	1.52
57	BB	2867	G	C4'-O4'	-5.50	1.37	1.45
5	AN	74	ARG	N-CA	-5.50	1.39	1.46
18	AG	125	ASP	N-CA	-5.50	1.38	1.45
19	AH	11	THR	CB-OG1	-5.50	1.34	1.43
21	AA	53	A	C3'-C2'	5.50	1.61	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	928	G	C2'-C1'	-5.50	1.45	1.53
57	BB	983	A	C5'-C4'	5.50	1.59	1.51
57	BB	2012	G	N9-C8	5.50	1.48	1.37
21	AA	608	A	C3'-C2'	-5.50	1.44	1.52
31	BL	104	GLN	CA-CB	5.50	1.63	1.53
41	BV	41	GLU	CA-C	-5.50	1.46	1.52
14	AC	155	ARG	CA-CB	5.50	1.62	1.53
17	AF	87	SER	C-N	5.50	1.41	1.33
26	AV	15	G	N1-C2	5.50	1.48	1.37
56	BH	69	ALA	C-N	5.50	1.40	1.33
19	AH	89	ASP	C-N	5.50	1.40	1.33
58	BA	23	G	C5'-C4'	5.50	1.59	1.51
8	AQ	10	ARG	CZ-NH1	5.49	1.40	1.32
21	AA	119	A	O5'-C5'	5.49	1.51	1.42
57	BB	149	A	C2'-C1'	-5.49	1.45	1.53
8	AQ	51	GLU	N-CA	-5.49	1.39	1.46
21	AA	629	A	C2'-C1'	-5.49	1.45	1.53
57	BB	2234	G	C1'-N9	5.49	1.56	1.48
21	AA	800	G	O3'-P	-5.49	1.52	1.61
25	AZ	262	ARG	CD-NE	5.49	1.53	1.46
37	BR	89	HIS	CA-CB	5.49	1.63	1.53
53	BE	49	ARG	NE-CZ	5.49	1.39	1.33
57	BB	1316	U	C4'-O4'	5.49	1.53	1.45
2	AK	126	ARG	CD-NE	5.49	1.53	1.46
3	AL	95	HIS	CE1-NE2	5.49	1.38	1.32
21	AA	151	A	C5'-C4'	5.49	1.59	1.51
57	BB	171	U	P-O5'	-5.49	1.51	1.59
57	BB	564	C	C3'-O3'	5.49	1.50	1.42
14	AC	127	VAL	CA-C	-5.49	1.45	1.52
57	BB	2079	U	O4'-C1'	-5.49	1.33	1.41
4	AM	100	ARG	CD-NE	5.49	1.53	1.46
48	B1	28	THR	CB-OG1	-5.49	1.34	1.43
54	BF	169	LEU	C-N	5.49	1.41	1.33
57	BB	116	C	C1'-N1	5.49	1.56	1.48
57	BB	217	A	C1'-N9	5.49	1.56	1.48
57	BB	1223	G	O4'-C1'	-5.49	1.33	1.41
57	BB	1838	C	C3'-C2'	5.49	1.61	1.52
11	AT	75	LYS	C-O	-5.48	1.16	1.24
27	B5	175	ILE	C-N	5.48	1.39	1.33
21	AA	21	G	C3'-C2'	-5.48	1.44	1.52
21	AA	288	A	C2'-C1'	5.48	1.61	1.53
32	BM	25	ASP	N-CA	-5.48	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	33	C	O3'-P	-5.48	1.52	1.61
7	AP	14	ARG	CA-CB	5.48	1.59	1.53
21	AA	771	G	C2'-C1'	-5.48	1.45	1.53
26	AV	75	C	O3'-P	-5.48	1.52	1.61
57	BB	1299	G	C2'-C1'	-5.48	1.45	1.53
57	BB	1976	U	C1'-N1	5.48	1.56	1.48
57	BB	2700	A	O3'-P	-5.48	1.52	1.61
40	BU	47	PRO	C-N	5.48	1.38	1.33
57	BB	1332	G	C3'-O3'	5.48	1.51	1.43
57	BB	2349	G	C1'-N9	5.48	1.56	1.48
7	AP	29	ASN	CA-CB	5.48	1.62	1.54
21	AA	836	G	C3'-C2'	-5.48	1.44	1.52
21	AA	927	G	C2'-C1'	-5.48	1.45	1.53
21	AA	1157	A	C4'-C3'	5.48	1.61	1.53
25	AZ	27	LEU	C-N	5.48	1.40	1.33
36	BQ	29	ARG	C-N	5.48	1.40	1.33
57	BB	7	G	O3'-P	-5.48	1.52	1.61
57	BB	2152	G	O5'-C5'	5.48	1.50	1.42
17	AF	9	MET	CA-C	-5.48	1.46	1.52
57	BB	2437	G	C2'-O2'	-5.48	1.34	1.42
5	AN	62	ARG	CZ-NH1	5.47	1.40	1.32
18	AG	42	VAL	N-CA	5.47	1.53	1.46
19	AH	76	ARG	CZ-NH2	5.47	1.40	1.33
55	BG	75	VAL	CA-C	-5.47	1.46	1.52
57	BB	107	G	P-O5'	-5.47	1.51	1.59
57	BB	2849	U	N3-C4	5.47	1.49	1.38
16	AE	30	PHE	C-N	5.47	1.40	1.33
21	AA	175	C	O3'-P	-5.47	1.52	1.61
21	AA	383	A	N7-C5	-5.47	1.28	1.39
25	AZ	283	ARG	N-CA	-5.47	1.39	1.46
38	BS	100	THR	N-CA	5.47	1.53	1.45
57	BB	657	U	O4'-C1'	-5.47	1.33	1.41
57	BB	1444	G	C3'-O3'	5.47	1.50	1.42
57	BB	1743	G	C5'-C4'	5.47	1.59	1.51
57	BB	402	A	O4'-C1'	-5.47	1.33	1.41
57	BB	2303	G	P-O5'	-5.47	1.51	1.59
21	AA	309	A	C4'-O4'	5.47	1.53	1.45
54	BF	128	SER	CA-C	-5.47	1.46	1.52
56	BH	13	GLY	CA-C	-5.47	1.46	1.52
57	BB	1725	U	C4'-O4'	5.47	1.53	1.45
21	AA	1212	U	O3'-P	-5.47	1.52	1.61
57	BB	121	G	C5'-C4'	5.47	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AK	65	ALA	C-N	5.47	1.41	1.33
9	AR	44	THR	N-CA	-5.47	1.38	1.46
19	AH	124	ILE	CA-C	-5.47	1.46	1.52
21	AA	87	C	C5'-C4'	5.47	1.59	1.51
21	AA	747	A	O3'-P	-5.47	1.52	1.61
21	AA	1151	A	C4'-O4'	-5.47	1.37	1.45
27	B5	139	ASN	CA-C	5.47	1.60	1.53
43	BX	35	HIS	ND1-CE1	5.47	1.38	1.32
57	BB	1114	C	C5'-C4'	5.47	1.59	1.51
57	BB	1504	A	C2'-C1'	-5.47	1.45	1.53
21	AA	1262	C	C2'-C1'	-5.46	1.45	1.53
57	BB	1862	G	P-O5'	-5.46	1.51	1.59
35	BP	23	ASP	N-CA	-5.46	1.38	1.45
57	BB	149	A	C4'-O4'	-5.46	1.37	1.45
21	AA	858	G	C1'-N9	5.46	1.56	1.48
30	BK	70	ARG	CD-NE	5.46	1.53	1.46
54	BF	176	PHE	CA-C	-5.46	1.45	1.52
57	BB	2674	G	P-O5'	-5.46	1.51	1.59
21	AA	461	A	C4'-C3'	5.46	1.60	1.52
21	AA	50	A	C1'-N9	5.46	1.55	1.47
21	AA	460	A	C2'-C1'	-5.46	1.45	1.53
28	BI	58	ILE	C-N	5.46	1.40	1.33
34	BO	54	VAL	CA-CB	-5.46	1.48	1.54
57	BB	507	A	C1'-N9	-5.46	1.39	1.48
57	BB	803	U	N3-C4	5.46	1.49	1.38
4	AM	102	LYS	C-N	5.46	1.40	1.33
18	AG	133	ALA	CA-C	-5.46	1.45	1.52
21	AA	721	G	C2-N2	5.46	1.45	1.34
21	AA	991	U	P-O5'	5.46	1.68	1.59
25	AZ	228	THR	C-N	5.46	1.39	1.32
27	B5	189	LEU	N-CA	-5.46	1.39	1.46
57	BB	614	A	C3'-O3'	-5.46	1.33	1.42
57	BB	916	G	P-O5'	-5.46	1.51	1.59
57	BB	1042	G	C4'-O4'	5.46	1.53	1.45
57	BB	1311	G	C4'-C3'	-5.46	1.45	1.53
16	AE	72	ASN	CA-C	-5.45	1.45	1.53
21	AA	58	C	C5'-C4'	5.45	1.59	1.51
21	AA	432	A	O3'-P	-5.45	1.52	1.61
25	AZ	4	LYS	CA-C	-5.45	1.45	1.52
40	BU	49	PRO	CA-C	-5.45	1.46	1.52
52	BD	106	LYS	N-CA	-5.45	1.39	1.46
57	BB	1694	C	C2'-C1'	-5.45	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	AR	24	ASP	CA-C	-5.45	1.46	1.52
10	AS	39	ILE	CA-C	5.45	1.58	1.52
19	AH	86	LYS	CA-CB	5.45	1.63	1.53
21	AA	296	U	O4'-C1'	-5.45	1.33	1.41
21	AA	771	G	C4'-O4'	5.45	1.53	1.45
53	BE	22	ASP	N-CA	-5.45	1.39	1.46
57	BB	2265	U	C3'-C2'	5.45	1.60	1.52
14	AC	189	HIS	CA-C	-5.45	1.46	1.52
21	AA	72	A	C2'-C1'	-5.45	1.45	1.53
34	BO	108	ASP	CA-C	-5.45	1.45	1.53
54	BF	103	ILE	CA-CB	5.45	1.62	1.54
57	BB	998	C	C5'-C4'	-5.45	1.43	1.51
57	BB	2858	C	C2'-C1'	-5.45	1.45	1.53
57	BB	763	G	C4'-C3'	5.45	1.60	1.52
57	BB	2475	C	O4'-C1'	5.45	1.49	1.41
9	AR	20	ILE	C-O	-5.45	1.17	1.24
14	AC	60	ALA	CA-C	-5.45	1.48	1.52
21	AA	677	U	C3'-O3'	5.45	1.50	1.42
23	AW	63	G	C5-C6	-5.45	1.31	1.42
44	BY	17	GLU	CA-C	-5.45	1.45	1.52
45	BC	22	GLU	C-N	5.45	1.40	1.33
57	BB	66	C	O4'-C1'	5.45	1.49	1.41
57	BB	1481	U	C4'-C3'	5.45	1.60	1.52
20	AI	17	ARG	NE-CZ	5.44	1.39	1.33
37	BR	67	GLY	CA-C	-5.44	1.44	1.51
57	BB	2798	U	C4'-C3'	5.44	1.61	1.53
18	AG	23	ALA	CA-C	-5.44	1.45	1.52
21	AA	24	U	P-O5'	-5.44	1.51	1.59
21	AA	498	A	O3'-P	-5.44	1.52	1.61
21	AA	545	C	C1'-N1	5.44	1.56	1.48
50	B3	56	LEU	C-N	5.44	1.40	1.33
53	BE	118	LEU	N-CA	-5.44	1.39	1.46
54	BF	139	GLU	CA-C	-5.44	1.46	1.52
57	BB	1768	C	P-O5'	-5.44	1.51	1.59
21	AA	1039	G	C2'-C1'	-5.44	1.45	1.53
21	AA	1370	G	C4'-C3'	5.44	1.60	1.52
22	AY	8	U	C3'-C2'	-5.44	1.44	1.52
34	BO	81	ARG	CA-CB	-5.44	1.45	1.53
48	B1	38	PHE	CA-CB	5.44	1.61	1.53
57	BB	1645	G	C5'-C4'	5.44	1.59	1.51
57	BB	2295	C	C1'-N1	5.44	1.56	1.48
57	BB	2513	A	P-O5'	-5.44	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BE	34	ALA	CA-C	-5.44	1.45	1.52
55	BG	132	LEU	CA-C	-5.44	1.45	1.53
57	BB	933	A	C3'-C2'	-5.44	1.44	1.52
6	AO	16	ARG	NE-CZ	5.44	1.39	1.33
14	AC	168	ARG	N-CA	-5.44	1.38	1.45
21	AA	495	A	N7-C5	-5.44	1.28	1.39
34	BO	71	ALA	N-CA	-5.44	1.39	1.46
57	BB	1003	G	O5'-C5'	5.44	1.50	1.42
31	BL	84	LYS	CA-CB	5.44	1.62	1.53
33	BN	63	ARG	CD-NE	5.44	1.53	1.46
53	BE	190	ALA	CA-C	-5.44	1.45	1.52
21	AA	335	C	C4'-O4'	-5.43	1.37	1.45
21	AA	374	A	C4'-O4'	5.43	1.53	1.45
50	B3	46	LYS	CA-C	-5.43	1.46	1.52
14	AC	48	LYS	CA-C	5.43	1.61	1.52
15	AD	192	ALA	C-N	5.43	1.41	1.33
34	BO	88	LYS	N-CA	5.43	1.52	1.45
57	BB	1780	A	C3'-C2'	5.43	1.61	1.52
57	BB	1784	A	P-O5'	-5.43	1.51	1.59
57	BB	2280	G	C3'-O3'	5.43	1.50	1.42
7	AP	34	GLU	C-N	5.43	1.40	1.33
25	AZ	288	ARG	NE-CZ	5.43	1.39	1.33
57	BB	1157	G	C2'-C1'	-5.43	1.45	1.53
57	BB	1359	A	C5'-C4'	-5.43	1.43	1.51
13	AB	34	ARG	CA-C	-5.43	1.46	1.52
21	AA	1358	U	O3'-P	-5.43	1.53	1.61
55	BG	55	ASP	C-N	5.43	1.41	1.33
57	BB	476	G	O5'-C5'	5.43	1.50	1.42
57	BB	2582	G	C4'-C3'	-5.43	1.44	1.52
11	AT	58	ASP	CA-C	5.43	1.59	1.52
13	AB	148	GLY	N-CA	-5.43	1.37	1.45
21	AA	259	G	O4'-C1'	-5.43	1.33	1.41
36	BQ	109	VAL	C-N	5.43	1.40	1.33
47	B0	19	ASP	C-N	5.43	1.40	1.33
57	BB	2214	C	O3'-P	-5.43	1.53	1.61
26	AV	46	G	C2'-C1'	-5.42	1.45	1.53
57	BB	1810	A	C4'-C3'	-5.42	1.44	1.52
57	BB	2285	C	O5'-C5'	5.42	1.50	1.42
18	AG	36	SER	C-N	5.42	1.41	1.33
1	AJ	32	THR	CA-C	-5.42	1.45	1.52
12	AU	32	ARG	CA-C	-5.42	1.46	1.52
15	AD	27	ILE	CA-C	-5.42	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	AI	33	SER	CA-C	-5.42	1.45	1.53
21	AA	504	C	C3'-O3'	5.42	1.50	1.42
32	BM	2	LEU	CA-C	-5.42	1.46	1.52
38	BS	11	ARG	CZ-NH2	5.42	1.40	1.33
38	BS	59	GLU	CA-C	-5.42	1.45	1.52
57	BB	458	G	C3'-O3'	-5.42	1.35	1.43
14	AC	74	ILE	CA-CB	-5.42	1.47	1.54
21	AA	1247	U	C2'-C1'	-5.42	1.45	1.53
57	BB	2830	C	C2'-C1'	-5.42	1.45	1.53
27	B5	119	ASP	N-CA	-5.42	1.39	1.46
31	BL	33	ARG	CZ-NH2	5.42	1.40	1.33
46	BZ	27	GLY	C-N	5.42	1.40	1.33
52	BD	139	SER	CA-CB	5.42	1.63	1.53
11	AT	28	ARG	NE-CZ	5.42	1.39	1.33
11	AT	29	THR	C-N	5.42	1.41	1.33
15	AD	34	GLU	CA-CB	5.42	1.62	1.53
21	AA	967	C	O3'-P	-5.42	1.53	1.61
21	AA	1342	C	C4'-C3'	5.42	1.60	1.52
57	BB	666	A	C4'-O4'	5.42	1.53	1.45
57	BB	1953	A	C2'-C1'	-5.42	1.45	1.53
57	BB	2579	C	C4'-C3'	5.42	1.60	1.52
58	BA	34	A	C2'-C1'	-5.42	1.45	1.53
19	AH	73	SER	CA-C	-5.42	1.46	1.52
29	BJ	45	THR	CA-CB	-5.42	1.44	1.53
57	BB	1663	G	C4'-C3'	-5.42	1.44	1.52
57	BB	2299	U	P-O5'	-5.42	1.51	1.59
2	AK	127	ARG	N-CA	-5.41	1.39	1.46
3	AL	82	ARG	NE-CZ	5.41	1.39	1.33
8	AQ	29	LYS	CA-C	-5.41	1.46	1.52
21	AA	34	C	C3'-C2'	-5.41	1.44	1.52
40	BU	40	LEU	C-N	5.41	1.41	1.33
57	BB	634	C	O3'-P	-5.41	1.53	1.61
57	BB	2541	A	O3'-P	-5.41	1.53	1.61
21	AA	135	C	C4'-C3'	-5.41	1.44	1.52
45	BC	187	CYS	C-N	5.41	1.40	1.33
57	BB	66	C	P-O5'	-5.41	1.51	1.59
57	BB	765	C	C1'-N1	5.41	1.56	1.48
57	BB	1615	C	C4'-O4'	-5.41	1.37	1.45
21	AA	1113	C	C3'-C2'	-5.41	1.44	1.52
21	AA	1264	U	P-O5'	-5.41	1.51	1.59
28	BI	52	LEU	N-CA	-5.41	1.40	1.45
37	BR	86	GLN	N-CA	-5.41	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BG	161	VAL	CA-C	-5.41	1.46	1.52
57	BB	26	G	C2'-C1'	-5.41	1.45	1.53
58	BA	98	G	C1'-N9	-5.41	1.39	1.48
21	AA	1308	U	C5'-C4'	5.41	1.59	1.51
26	AV	47	U	C5'-C4'	5.41	1.59	1.51
46	BZ	29	ARG	CZ-NH1	5.41	1.40	1.32
50	B3	44	ARG	CD-NE	5.41	1.53	1.46
50	B3	62	PRO	C-N	5.41	1.42	1.33
57	BB	362	A	O3'-P	-5.41	1.53	1.61
21	AA	743	A	C3'-O3'	5.41	1.50	1.42
55	BG	166	GLU	CA-C	-5.41	1.46	1.52
57	BB	239	C	O3'-P	-5.41	1.53	1.61
57	BB	2187	U	C5'-C4'	5.41	1.59	1.51
57	BB	2590	A	C5'-C4'	5.41	1.59	1.51
13	AB	51	GLU	C-N	5.40	1.41	1.33
21	AA	229	U	C2'-C1'	-5.40	1.45	1.53
21	AA	1198	G	O3'-P	-5.40	1.53	1.61
7	AP	2	VAL	C-N	5.40	1.40	1.33
14	AC	106	ARG	CD-NE	5.40	1.53	1.46
14	AC	142	ARG	CZ-NH2	5.40	1.40	1.33
31	BL	57	LEU	CB-CG	5.40	1.64	1.53
55	BG	139	VAL	C-N	5.40	1.40	1.33
57	BB	161	A	O3'-P	-5.40	1.53	1.61
57	BB	1762	A	O3'-P	-5.40	1.53	1.61
21	AA	1335	U	C4'-C3'	5.40	1.61	1.53
57	BB	2779	U	O5'-C5'	5.40	1.50	1.42
25	AZ	356	ILE	CA-CB	5.40	1.61	1.55
57	BB	79	C	C1'-N1	5.40	1.56	1.48
21	AA	521	G	C2'-C1'	-5.40	1.45	1.53
21	AA	544	G	C5'-C4'	5.40	1.59	1.51
25	AZ	374	PHE	C-N	5.39	1.41	1.33
57	BB	1	G	C5'-C4'	5.39	1.59	1.51
57	BB	352	A	C1'-N9	5.39	1.56	1.48
57	BB	499	U	C3'-C2'	5.39	1.60	1.52
57	BB	614	A	O3'-P	-5.39	1.53	1.61
57	BB	914	G	O3'-P	5.39	1.69	1.61
57	BB	2390	U	C2'-O2'	-5.39	1.34	1.42
17	AF	96	VAL	CA-CB	-5.39	1.50	1.55
22	AY	7	U	O3'-P	5.39	1.69	1.61
25	AZ	366	ILE	CA-CB	-5.39	1.47	1.54
56	BH	127	GLU	CA-CB	5.39	1.61	1.53
57	BB	1407	G	C4'-C3'	5.39	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1638	C	O3'-P	-5.39	1.53	1.61
1	AJ	28	THR	C-N	5.39	1.41	1.33
21	AA	701	U	C1'-N1	5.39	1.55	1.47
21	AA	959	A	O3'-P	-5.39	1.53	1.61
4	AM	33	LEU	C-N	5.39	1.41	1.33
22	AY	57	G	C4'-O4'	5.39	1.53	1.45
25	AZ	58	ARG	CZ-NH1	5.39	1.40	1.32
57	BB	239	C	C4'-C3'	-5.39	1.44	1.52
57	BB	2275	C	C5'-C4'	5.39	1.59	1.51
3	AL	64	SER	CA-C	-5.39	1.46	1.52
4	AM	67	ASP	C-N	-5.39	1.27	1.33
32	BM	38	ARG	CZ-NH2	5.39	1.40	1.33
1	AJ	35	GLN	CA-C	-5.39	1.46	1.52
4	AM	21	ILE	CA-CB	5.39	1.61	1.54
15	AD	169	TRP	CA-C	-5.39	1.45	1.52
22	AY	24	G	C4'-C3'	5.39	1.60	1.52
57	BB	1289	C	C4'-O4'	-5.39	1.37	1.45
57	BB	1508	A	C4'-O4'	-5.39	1.37	1.45
57	BB	2342	C	C5'-C4'	-5.39	1.43	1.51
21	AA	244	U	N3-C4	5.38	1.49	1.38
21	AA	279	A	C3'-O3'	-5.38	1.35	1.43
21	AA	609	A	C4'-C3'	5.38	1.60	1.52
29	BJ	77	HIS	CE1-NE2	-5.38	1.27	1.32
35	BP	4	ILE	N-CA	5.38	1.52	1.46
57	BB	328	U	C3'-O3'	5.38	1.50	1.42
57	BB	1626	A	C5'-C4'	5.38	1.59	1.51
57	BB	1929	G	P-O5'	-5.38	1.51	1.59
57	BB	2837	A	C2'-C1'	-5.38	1.45	1.53
6	AO	52	ARG	CD-NE	5.38	1.53	1.46
35	BP	18	SER	CA-C	-5.38	1.46	1.52
57	BB	2100	G	O5'-C5'	5.38	1.50	1.42
21	AA	501	C	C4'-O4'	5.38	1.53	1.45
57	BB	1322	A	C2'-C1'	-5.38	1.45	1.53
57	BB	1912	A	C4'-C3'	-5.38	1.44	1.52
57	BB	2334	U	O3'-P	-5.38	1.53	1.61
57	BB	2853	C	C2'-C1'	-5.38	1.45	1.53
21	AA	1285	A	C4'-C3'	-5.38	1.45	1.53
21	AA	1435	G	C1'-N9	-5.38	1.39	1.48
28	BI	63	ASP	C-N	5.38	1.40	1.33
1	AJ	68	ARG	NE-CZ	5.38	1.39	1.33
8	AQ	67	SER	C-N	5.38	1.40	1.33
21	AA	979	C	C2'-C1'	-5.38	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	BD	155	VAL	N-CA	-5.38	1.39	1.46
55	BG	112	VAL	CA-CB	-5.38	1.47	1.54
56	BH	124	THR	CA-C	5.38	1.57	1.52
57	BB	561	G	C5-C6	-5.38	1.31	1.42
57	BB	1585	C	C5'-C4'	-5.38	1.43	1.51
14	AC	99	GLN	CA-C	-5.38	1.45	1.52
20	AI	73	GLY	C-N	5.38	1.40	1.33
22	AY	19	G	C4'-C3'	5.38	1.61	1.53
25	AZ	287	GLU	C-N	5.38	1.40	1.33
30	BK	114	ILE	CA-CB	-5.38	1.48	1.54
40	BU	79	ALA	N-CA	5.38	1.53	1.45
53	BE	32	VAL	CA-C	-5.38	1.46	1.53
57	BB	1149	G	C2'-O2'	-5.38	1.34	1.42
58	BA	88	C	O4'-C1'	5.38	1.49	1.41
11	AT	73	ARG	CZ-NH1	5.38	1.40	1.32
11	AT	74	HIS	ND1-CE1	5.38	1.38	1.32
3	AL	75	GLU	C-O	-5.37	1.16	1.24
20	AI	123	ARG	NE-CZ	5.37	1.39	1.33
21	AA	464	U	C2'-C1'	-5.37	1.45	1.53
25	AZ	324	LYS	C-N	-5.37	1.26	1.33
29	BJ	85	LYS	CA-C	5.37	1.59	1.52
41	BV	90	ASP	N-CA	5.37	1.53	1.46
57	BB	269	C	N3-C4	5.37	1.44	1.33
57	BB	1463	C	O5'-C5'	-5.37	1.34	1.42
57	BB	1761	C	P-O5'	-5.37	1.51	1.59
57	BB	2785	C	C5'-C4'	5.37	1.59	1.51
8	AQ	65	PRO	N-CA	5.37	1.53	1.47
57	BB	616	A	C4'-C3'	5.37	1.60	1.52
57	BB	2222	C	C1'-N1	5.37	1.56	1.48
57	BB	2762	C	C5'-C4'	5.37	1.59	1.51
57	BB	901	C	C3'-C2'	-5.37	1.44	1.52
57	BB	1656	C	C2'-C1'	-5.37	1.45	1.53
21	AA	22	G	C3'-C2'	-5.37	1.44	1.52
21	AA	1419	G	C2'-C1'	-5.37	1.45	1.53
21	AA	1453	G	O4'-C1'	5.37	1.49	1.41
57	BB	849	A	C3'-C2'	5.37	1.60	1.52
57	BB	1952	A	C2'-C1'	-5.37	1.45	1.53
57	BB	1974	C	P-O5'	-5.37	1.51	1.59
44	BY	61	ALA	CA-C	-5.37	1.47	1.53
57	BB	222	A	C2'-C1'	-5.37	1.45	1.53
57	BB	577	G	N1-C2	5.37	1.48	1.37
57	BB	682	G	C4'-C3'	5.37	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	BA	60	C	C2'-C1'	-5.37	1.45	1.53
2	AK	55	ARG	CZ-NH1	5.37	1.40	1.32
21	AA	949	A	O3'-P	-5.37	1.53	1.61
21	AA	1265	C	C5'-C4'	5.37	1.59	1.51
57	BB	1162	G	P-O5'	-5.37	1.51	1.59
57	BB	1733	G	O3'-P	-5.37	1.53	1.61
57	BB	1804	C	O5'-C5'	5.37	1.50	1.42
18	AG	50	ALA	N-CA	-5.36	1.39	1.46
21	AA	662	U	P-O5'	-5.36	1.51	1.59
21	AA	1231	G	C3'-O3'	5.36	1.50	1.42
21	AA	1393	U	C5'-C4'	5.36	1.59	1.51
30	BK	16	ARG	NE-CZ	5.36	1.39	1.33
47	B0	12	ARG	CA-C	-5.36	1.46	1.52
56	BH	36	ALA	C-O	-5.36	1.17	1.23
57	BB	2189	U	O4'-C1'	-5.36	1.33	1.41
4	AM	8	ILE	CA-C	5.36	1.57	1.52
31	BL	29	LYS	CA-CB	5.36	1.62	1.53
57	BB	2199	A	P-O5'	-5.36	1.51	1.59
19	AH	83	ARG	C-N	5.36	1.40	1.33
21	AA	1315	U	O5'-C5'	5.36	1.50	1.42
28	BI	19	PRO	CA-CB	-5.36	1.46	1.53
36	BQ	54	ARG	CA-C	-5.36	1.45	1.52
52	BD	103	ASP	CA-CB	5.36	1.62	1.54
52	BD	178	VAL	CA-C	-5.36	1.46	1.52
57	BB	219	A	C5'-C4'	5.36	1.59	1.51
57	BB	2058	A	C3'-O3'	5.36	1.50	1.42
14	AC	199	VAL	CA-CB	-5.36	1.47	1.54
21	AA	945	G	C1'-N9	5.36	1.55	1.48
25	AZ	44	ARG	NE-CZ	5.36	1.39	1.33
26	AV	67	C	C4'-O4'	-5.36	1.37	1.45
51	B4	24	ARG	CD-NE	5.36	1.53	1.46
57	BB	817	C	C1'-N1	5.36	1.56	1.48
57	BB	1270	C	P-O5'	-5.36	1.51	1.59
57	BB	2305	U	C1'-N1	-5.36	1.40	1.48
57	BB	2351	G	P-O5'	5.36	1.67	1.59
57	BB	2772	C	C1'-N1	5.36	1.56	1.48
3	AL	9	LYS	C-N	5.36	1.40	1.33
21	AA	820	U	C5'-C4'	5.36	1.59	1.51
25	AZ	78	HIS	ND1-CE1	-5.36	1.27	1.32
55	BG	42	VAL	N-CA	-5.36	1.39	1.46
57	BB	1155	A	C3'-C2'	5.36	1.60	1.52
57	BB	1820	U	C2'-C1'	-5.36	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2411	A	C1'-N9	-5.36	1.40	1.48
57	BB	884	U	C2'-C1'	-5.36	1.45	1.53
57	BB	2298	A	C2'-C1'	5.36	1.61	1.53
21	AA	510	A	C4'-C3'	5.35	1.60	1.52
27	B5	126	GLN	N-CA	-5.35	1.39	1.46
29	BJ	123	LYS	N-CA	-5.35	1.39	1.46
38	BS	64	ALA	CA-CB	5.35	1.62	1.53
40	BU	73	ASN	N-CA	5.35	1.53	1.46
43	BX	73	ARG	N-CA	-5.35	1.38	1.45
46	BZ	9	THR	C-N	5.35	1.41	1.33
54	BF	145	VAL	CA-C	5.35	1.59	1.52
21	AA	672	U	C2'-C1'	-5.35	1.45	1.53
7	AP	3	THR	CA-C	-5.35	1.46	1.52
8	AQ	39	ARG	CD-NE	5.35	1.53	1.46
25	AZ	232	GLU	C-N	5.35	1.40	1.33
36	BQ	49	ARG	CD-NE	5.35	1.53	1.46
45	BC	47	ARG	NE-CZ	5.35	1.39	1.33
57	BB	766	U	C4'-C3'	5.35	1.60	1.52
57	BB	1034	G	C2-N3	5.35	1.43	1.32
57	BB	1617	C	C2'-C1'	-5.35	1.45	1.53
21	AA	1205	U	C3'-O3'	5.35	1.50	1.42
32	BM	114	ARG	C-N	5.35	1.41	1.33
33	BN	97	ILE	N-CA	-5.35	1.39	1.46
57	BB	78	U	C1'-N1	5.35	1.56	1.48
57	BB	318	C	C4'-C3'	5.35	1.60	1.52
57	BB	1819	A	C2'-C1'	-5.35	1.45	1.53
57	BB	1823	G	C2'-O2'	-5.35	1.34	1.42
57	BB	2231	U	O3'-P	-5.35	1.53	1.61
57	BB	2736	A	C1'-N9	5.35	1.55	1.48
18	AG	85	GLN	CA-CB	5.35	1.59	1.52
15	AD	15	GLY	C-N	5.34	1.40	1.33
16	AE	152	VAL	CA-C	-5.34	1.45	1.52
17	AF	6	ILE	N-CA	-5.34	1.39	1.46
20	AI	5	TYR	C-O	-5.34	1.17	1.23
21	AA	188	C	O5'-C5'	5.34	1.50	1.42
21	AA	193	C	C3'-O3'	5.34	1.50	1.42
27	B5	196	LEU	CA-CB	5.34	1.62	1.53
36	BQ	2	ARG	CZ-NH2	5.34	1.40	1.33
45	BC	85	ASN	N-CA	-5.34	1.40	1.46
57	BB	2796	U	C1'-N1	5.34	1.56	1.48
12	AU	33	ARG	CZ-NH1	5.34	1.40	1.32
17	AF	61	LEU	C-N	5.34	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BQ	44	TYR	N-CA	5.34	1.53	1.46
45	BC	70	LYS	CA-C	-5.34	1.45	1.52
13	AB	167	HIS	C-N	5.34	1.42	1.34
21	AA	381	C	C2'-O2'	-5.34	1.34	1.42
21	AA	1513	A	C1'-N9	-5.34	1.40	1.48
27	B5	7	ARG	NE-CZ	5.34	1.39	1.33
57	BB	429	A	O5'-C5'	5.34	1.50	1.42
57	BB	629	G	O3'-P	-5.34	1.53	1.61
28	BI	82	ALA	C-O	-5.34	1.17	1.24
57	BB	847	U	O3'-P	-5.34	1.53	1.61
57	BB	1630	A	C4'-C3'	5.34	1.60	1.52
57	BB	2598	A	O5'-C5'	5.34	1.50	1.42
12	AU	30	GLU	CA-C	-5.34	1.46	1.52
17	AF	91	ARG	CA-C	-5.34	1.46	1.52
44	BY	2	LYS	CA-CB	5.34	1.62	1.53
57	BB	654	A	O3'-P	-5.34	1.53	1.61
57	BB	2383	G	C5'-C4'	5.34	1.59	1.51
2	AK	23	HIS	CG-CD2	5.33	1.41	1.35
21	AA	333	U	O5'-C5'	-5.33	1.34	1.42
21	AA	1307	U	C2'-C1'	-5.33	1.45	1.53
32	BM	135	VAL	N-CA	-5.33	1.40	1.46
57	BB	586	A	C3'-O3'	5.33	1.50	1.42
57	BB	2503	A	O3'-P	-5.33	1.53	1.61
3	AL	85	ARG	NE-CZ	5.33	1.39	1.33
19	AH	90	GLU	CA-C	-5.33	1.45	1.52
25	AZ	344	PRO	N-CD	5.33	1.55	1.47
30	BK	18	VAL	CA-CB	-5.33	1.47	1.54
14	AC	4	VAL	N-CA	5.33	1.52	1.46
21	AA	9	G	P-O5'	-5.33	1.51	1.59
21	AA	742	G	P-O5'	-5.33	1.51	1.59
28	BI	126	ARG	CA-CB	5.33	1.61	1.53
35	BP	13	LYS	N-CA	-5.33	1.39	1.46
37	BR	79	ARG	N-CA	-5.33	1.38	1.45
44	BY	29	ARG	CZ-NH1	5.33	1.40	1.32
57	BB	1251	C	C3'-C2'	5.33	1.60	1.52
57	BB	2724	U	O4'-C1'	-5.33	1.33	1.41
57	BB	471	A	C1'-N9	5.33	1.55	1.48
14	AC	163	ARG	C-N	5.33	1.40	1.33
21	AA	183	C	C4-N4	5.33	1.44	1.33
21	AA	399	G	C4'-C3'	5.33	1.60	1.52
21	AA	1118	U	C1'-N1	5.33	1.56	1.48
25	AZ	368	MET	CA-C	-5.33	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	BI	121	ILE	N-CA	-5.33	1.39	1.46
29	BJ	3	THR	C-N	-5.33	1.25	1.33
42	BW	37	VAL	CA-C	-5.33	1.46	1.52
52	BD	67	HIS	C-N	5.33	1.40	1.33
54	BF	99	PHE	CA-CB	5.33	1.61	1.53
57	BB	681	G	C2'-C1'	-5.33	1.45	1.53
57	BB	2084	C	C4'-O4'	5.33	1.53	1.45
57	BB	153	U	C3'-C2'	-5.33	1.44	1.52
57	BB	2204	G	P-O5'	-5.33	1.51	1.59
4	AM	47	LEU	CA-C	-5.33	1.46	1.52
21	AA	999	C	O4'-C1'	5.33	1.49	1.41
31	BL	132	ARG	CD-NE	5.33	1.53	1.46
57	BB	136	G	C2'-C1'	5.33	1.61	1.53
28	BI	53	PRO	N-CA	-5.32	1.41	1.46
28	BI	125	THR	CA-CB	5.32	1.61	1.53
48	B1	6	GLU	C-N	5.32	1.40	1.33
57	BB	124	G	O4'-C1'	-5.32	1.33	1.41
57	BB	174	U	C3'-O3'	5.32	1.50	1.42
57	BB	1664	A	P-O5'	-5.32	1.51	1.59
20	AI	29	ILE	C-N	5.32	1.41	1.33
21	AA	90	C	O5'-C5'	5.32	1.50	1.42
21	AA	323	U	C5'-C4'	5.32	1.59	1.51
3	AL	93	ARG	CZ-NH1	5.32	1.40	1.32
14	AC	90	VAL	CA-C	-5.32	1.46	1.52
21	AA	347	G	C4'-O4'	5.32	1.53	1.45
26	AV	32	C	N3-C4	5.32	1.44	1.33
35	BP	21	PRO	CA-C	-5.32	1.45	1.52
57	BB	1274	A	C4'-C3'	5.32	1.60	1.52
57	BB	1419	A	C4'-C3'	5.32	1.60	1.52
8	AQ	8	GLN	CA-C	-5.32	1.45	1.52
13	AB	33	ALA	C-N	5.32	1.40	1.33
16	AE	140	ILE	CA-CB	-5.32	1.47	1.54
21	AA	540	G	O3'-P	-5.32	1.53	1.61
21	AA	864	A	O5'-C5'	5.32	1.50	1.42
57	BB	806	C	P-O5'	-5.32	1.51	1.59
57	BB	2840	C	P-O5'	-5.32	1.51	1.59
12	AU	16	ARG	CA-CB	5.32	1.61	1.53
32	BM	52	ALA	N-CA	-5.32	1.39	1.46
57	BB	526	A	P-OP1	-5.32	1.38	1.49
57	BB	2019	A	C5'-C4'	5.32	1.59	1.51
21	AA	971	G	O4'-C1'	-5.31	1.33	1.42
40	BU	89	GLY	CA-C	-5.31	1.44	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	B3	12	ARG	NE-CZ	5.31	1.38	1.33
57	BB	1912	A	C3'-C2'	5.31	1.60	1.52
5	AN	6	LYS	C-N	5.31	1.40	1.33
18	AG	69	ARG	CA-C	-5.31	1.47	1.52
25	AZ	176	LYS	N-CA	-5.31	1.40	1.46
57	BB	1521	G	C2'-C1'	-5.31	1.45	1.53
23	AW	16	U	C2'-C1'	-5.31	1.45	1.53
25	AZ	375	ALA	CA-C	-5.31	1.46	1.52
43	BX	49	ARG	CZ-NH2	5.31	1.40	1.33
54	BF	133	GLU	CA-CB	5.31	1.62	1.53
58	BA	16	G	C4'-O4'	5.31	1.53	1.45
15	AD	169	TRP	N-CA	-5.31	1.39	1.46
19	AH	124	ILE	C-N	5.31	1.40	1.34
21	AA	490	C	P-O5'	-5.31	1.51	1.59
21	AA	958	A	C1'-N9	-5.31	1.40	1.48
31	BL	131	ALA	C-N	5.31	1.40	1.33
57	BB	729	G	C1'-N9	5.31	1.55	1.48
57	BB	948	C	C5'-C4'	5.31	1.59	1.51
57	BB	1151	A	C6-N6	5.31	1.44	1.33
21	AA	450	G	O3'-P	-5.31	1.53	1.61
25	AZ	163	PRO	CA-CB	5.31	1.60	1.53
28	BI	18	ASN	CA-C	-5.31	1.48	1.52
55	BG	18	ILE	CA-CB	-5.31	1.48	1.54
57	BB	1256	G	C5'-C4'	5.31	1.59	1.51
21	AA	730	G	P-O5'	-5.31	1.51	1.59
10	AS	32	THR	N-CA	-5.30	1.40	1.46
21	AA	194	C	C2'-C1'	-5.30	1.45	1.53
21	AA	1073	U	C2'-C1'	-5.30	1.45	1.53
21	AA	1336	C	C1'-N1	5.30	1.55	1.47
28	BI	92	PRO	N-CA	-5.30	1.41	1.47
47	B0	12	ARG	CZ-NH2	5.30	1.40	1.33
50	B3	44	ARG	NE-CZ	5.30	1.38	1.33
57	BB	1690	A	C1'-N9	5.30	1.55	1.48
1	AJ	56	HIS	CB-CG	5.30	1.57	1.50
21	AA	757	U	C2'-C1'	-5.30	1.45	1.53
21	AA	813	U	C3'-C2'	-5.30	1.44	1.52
21	AA	1125	U	C2'-C1'	-5.30	1.45	1.53
21	AA	1406	U	N1-C6	5.30	1.48	1.38
32	BM	17	ASN	CA-CB	5.30	1.61	1.53
34	BO	92	PHE	CA-C	-5.30	1.45	1.52
41	BV	91	PHE	CA-C	-5.30	1.46	1.52
57	BB	421	C	C5'-C4'	5.30	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	102	G	C3'-C2'	-5.30	1.44	1.52
27	B5	183	ASP	C-O	-5.30	1.17	1.24
57	BB	2124	G	C2'-C1'	-5.30	1.45	1.53
21	AA	1365	G	C2'-C1'	-5.30	1.45	1.53
22	AY	64	A	C4'-O4'	-5.30	1.37	1.45
27	B5	93	GLU	CA-C	-5.30	1.45	1.52
55	BG	13	GLY	CA-C	5.30	1.58	1.51
57	BB	1999	C	C4'-C3'	5.30	1.60	1.52
57	BB	2812	G	C5'-C4'	5.30	1.59	1.51
20	AI	10	ARG	CZ-NH2	5.30	1.40	1.33
35	BP	43	GLU	CA-C	5.30	1.59	1.52
57	BB	1553	A	C1'-N9	-5.30	1.40	1.48
4	AM	107	THR	CA-CB	5.29	1.60	1.53
45	BC	129	LEU	CA-C	5.29	1.59	1.52
21	AA	1148	U	C1'-N1	5.29	1.56	1.48
21	AA	1248	A	O3'-P	-5.29	1.53	1.61
21	AA	1331	G	O3'-P	-5.29	1.53	1.61
22	AY	56	C	C1'-N1	5.29	1.56	1.48
26	AV	49	G	O4'-C1'	-5.29	1.33	1.41
50	B3	7	ARG	CZ-NH2	5.29	1.40	1.33
52	BD	116	LYS	C-N	5.29	1.41	1.33
55	BG	78	VAL	C-N	5.29	1.41	1.33
13	AB	125	PHE	N-CA	-5.29	1.39	1.46
21	AA	779	C	C3'-C2'	-5.29	1.44	1.52
35	BP	87	ARG	CZ-NH2	5.29	1.40	1.33
57	BB	789	A	P-O5'	-5.29	1.51	1.59
57	BB	988	A	C4'-O4'	5.29	1.53	1.45
58	BA	58	A	P-O5'	-5.29	1.51	1.59
21	AA	978	A	C5'-C4'	5.29	1.59	1.51
25	AZ	363	ILE	CA-CB	5.29	1.60	1.54
55	BG	19	ASN	CA-CB	5.29	1.60	1.53
15	AD	69	ARG	CZ-NH1	5.29	1.40	1.32
15	AD	98	ASP	CA-CB	5.29	1.62	1.53
21	AA	481	G	O3'-P	-5.29	1.53	1.61
21	AA	741	G	C2'-C1'	-5.29	1.45	1.53
21	AA	1234	C	P-O5'	-5.29	1.51	1.59
34	BO	19	GLN	CA-CB	5.29	1.61	1.53
46	BZ	53	MET	CG-SD	5.29	1.94	1.80
17	AF	72	ASP	C-N	5.29	1.41	1.34
57	BB	648	G	C4'-C3'	5.29	1.60	1.52
57	BB	710	U	C1'-N1	5.29	1.56	1.48
21	AA	865	A	C2'-C1'	-5.29	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1408	A	C2'-C1'	-5.29	1.45	1.53
32	BM	106	ASP	N-CA	-5.29	1.39	1.46
53	BE	161	ALA	CA-C	-5.29	1.45	1.52
57	BB	1078	U	O3'-P	-5.29	1.53	1.61
58	BA	32	U	O3'-P	-5.29	1.53	1.61
3	AL	98	ARG	CD-NE	5.28	1.53	1.46
8	AQ	55	GLY	CA-C	-5.28	1.44	1.51
21	AA	27	G	C3'-C2'	-5.28	1.44	1.52
21	AA	210	C	C4-C5	5.28	1.53	1.43
25	AZ	84	HIS	CB-CG	5.28	1.57	1.50
43	BX	56	ARG	NE-CZ	5.28	1.38	1.33
57	BB	2609	U	C3'-C2'	5.28	1.60	1.52
57	BB	2836	U	O3'-P	-5.28	1.53	1.61
21	AA	888	G	C1'-N9	5.28	1.55	1.48
57	BB	1273	U	C4'-C3'	-5.28	1.44	1.52
57	BB	1273	U	C4'-O4'	-5.28	1.37	1.45
57	BB	1453	A	C4'-C3'	5.28	1.60	1.52
21	AA	1101	A	C1'-N9	5.28	1.54	1.47
30	BK	70	ARG	CZ-NH2	5.28	1.40	1.33
37	BR	102	SER	N-CA	-5.28	1.39	1.46
52	BD	72	GLY	C-N	5.28	1.40	1.33
53	BE	170	ARG	NE-CZ	5.28	1.38	1.33
57	BB	2281	A	C2'-C1'	-5.28	1.45	1.53
57	BB	2705	A	P-O5'	-5.28	1.51	1.59
7	AP	39	PHE	CG-CD2	5.28	1.50	1.38
21	AA	1243	C	O5'-C5'	5.28	1.50	1.42
29	BJ	16	TYR	N-CA	-5.28	1.38	1.45
20	AI	112	ARG	NE-CZ	5.28	1.38	1.33
21	AA	1425	U	C1'-N1	5.28	1.56	1.48
29	BJ	9	GLU	CA-C	-5.28	1.45	1.52
47	B0	1	ALA	C-N	5.28	1.40	1.33
57	BB	2831	G	O4'-C1'	-5.28	1.33	1.41
6	AO	32	THR	N-CA	-5.28	1.40	1.46
8	AQ	17	GLU	N-CA	-5.28	1.39	1.46
21	AA	1015	G	C1'-N9	5.28	1.55	1.48
23	AW	2	C	P-O5'	-5.28	1.51	1.59
27	B5	210	LYS	CA-C	5.28	1.59	1.52
29	BJ	37	ARG	CD-NE	5.28	1.53	1.46
43	BX	56	ARG	CD-NE	5.28	1.53	1.46
56	BH	16	GLY	C-N	5.27	1.40	1.33
57	BB	967	U	C4'-O4'	5.27	1.53	1.45
21	AA	312	C	P-O5'	-5.27	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	AZ	41	GLY	C-N	5.27	1.40	1.33
57	BB	166	U	C1'-N1	5.27	1.56	1.48
57	BB	928	A	C2'-C1'	-5.27	1.45	1.53
57	BB	1094	U	C1'-N1	5.27	1.56	1.48
57	BB	2206	C	C4'-C3'	-5.27	1.44	1.52
19	AH	94	VAL	CA-CB	-5.27	1.46	1.54
33	BN	38	LEU	N-CA	-5.27	1.40	1.46
57	BB	468	G	O5'-C5'	-5.27	1.34	1.42
21	AA	605	U	O4'-C1'	-5.27	1.33	1.41
31	BL	116	VAL	C-N	5.27	1.42	1.33
32	BM	128	THR	C-N	-5.27	1.26	1.33
55	BG	167	VAL	CA-C	-5.27	1.48	1.52
55	BG	171	LYS	CA-C	-5.27	1.46	1.52
57	BB	946	C	C5'-C4'	5.27	1.59	1.51
57	BB	1863	G	C4'-O4'	5.27	1.53	1.45
57	BB	2098	U	C3'-O3'	5.27	1.50	1.42
21	AA	98	A	O4'-C1'	-5.27	1.33	1.41
21	AA	251	G	N7-C5	-5.27	1.28	1.39
21	AA	807	A	P-O5'	-5.27	1.51	1.59
21	AA	905	U	O5'-C5'	5.27	1.50	1.42
21	AA	1157	A	O3'-P	-5.27	1.53	1.61
25	AZ	319	HIS	CG-ND1	-5.27	1.32	1.38
35	BP	101	GLU	C-N	5.27	1.40	1.33
44	BY	5	GLU	N-CA	-5.27	1.39	1.46
55	BG	17	LYS	CA-C	-5.27	1.46	1.53
57	BB	689	A	C5'-C4'	5.27	1.59	1.51
57	BB	1222	U	O3'-P	-5.27	1.53	1.61
21	AA	92	U	C4'-O4'	5.27	1.53	1.45
21	AA	680	C	C4'-C3'	5.27	1.60	1.52
50	B3	27	ASN	CA-CB	5.27	1.60	1.54
57	BB	262	A	C4'-C3'	-5.27	1.44	1.52
21	AA	925	G	O3'-P	-5.26	1.53	1.61
27	B5	204	ALA	CA-CB	5.26	1.61	1.53
33	BN	71	ARG	NE-CZ	5.26	1.38	1.33
49	B2	35	ARG	NE-CZ	5.26	1.38	1.33
56	BH	23	ALA	CA-C	5.26	1.59	1.52
57	BB	1210	G	O4'-C1'	-5.26	1.34	1.42
57	BB	2340	A	C2'-C1'	-5.26	1.45	1.53
18	AG	70	PRO	C-N	5.26	1.41	1.33
21	AA	248	C	C5'-C4'	5.26	1.59	1.51
21	AA	375	U	C5'-C4'	5.26	1.59	1.51
21	AA	568	G	C1'-N9	5.26	1.55	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	1100	C	C1'-N1	5.26	1.56	1.48
57	BB	2655	G	O3'-P	-5.26	1.53	1.61
12	AU	28	LEU	C-O	-5.26	1.17	1.24
21	AA	252	U	O3'-P	-5.26	1.53	1.61
33	BN	38	LEU	C-N	5.26	1.39	1.34
37	BR	63	VAL	N-CA	-5.26	1.40	1.46
56	BH	130	VAL	CA-C	-5.26	1.46	1.52
57	BB	71	A	C4'-O4'	-5.26	1.38	1.45
57	BB	2302	U	C3'-O3'	5.26	1.50	1.42
4	AM	10	ASP	CA-CB	5.26	1.64	1.53
27	B5	25	GLU	C-O	-5.26	1.17	1.24
28	BI	126	ARG	CZ-NH1	5.26	1.40	1.32
52	BD	146	ILE	C-N	5.26	1.38	1.33
57	BB	201	C	C2'-C1'	-5.26	1.45	1.53
57	BB	885	C	C4-N4	5.26	1.44	1.33
57	BB	1399	C	C1'-N1	5.26	1.56	1.48
57	BB	2334	U	O5'-C5'	5.26	1.50	1.42
27	B5	82	ALA	N-CA	-5.26	1.39	1.46
33	BN	58	ASP	C-O	-5.26	1.17	1.24
57	BB	254	G	N9-C4	-5.26	1.27	1.38
16	AE	85	LYS	C-O	-5.26	1.17	1.23
21	AA	1156	G	C1'-N9	-5.26	1.40	1.48
57	BB	1771	C	C4'-O4'	5.26	1.53	1.45
13	AB	48	MET	N-CA	5.25	1.52	1.46
20	AI	57	VAL	N-CA	-5.25	1.39	1.46
21	AA	413	G	O4'-C1'	-5.25	1.34	1.42
21	AA	442	G	C4'-O4'	5.25	1.53	1.45
27	B5	80	GLN	CA-C	-5.25	1.46	1.52
27	B5	177	LYS	CA-C	-5.25	1.45	1.53
57	BB	462	C	O5'-C5'	5.25	1.50	1.42
57	BB	1511	G	C2'-C1'	-5.25	1.45	1.53
57	BB	2149	U	C4'-O4'	-5.25	1.37	1.45
21	AA	463	U	C4'-O4'	-5.25	1.37	1.45
21	AA	471	U	C2'-C1'	-5.25	1.45	1.53
21	AA	752	G	C2'-C1'	-5.25	1.45	1.53
30	BK	70	ARG	NE-CZ	5.25	1.38	1.33
43	BX	19	HIS	ND1-CE1	5.25	1.37	1.32
57	BB	147	C	P-O5'	-5.25	1.51	1.59
57	BB	492	A	O3'-P	-5.25	1.53	1.61
57	BB	659	G	C2'-O2'	-5.25	1.34	1.42
57	BB	1541	C	C4'-C3'	5.25	1.60	1.52
57	BB	2464	G	O5'-C5'	5.25	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2836	U	C4'-O4'	5.25	1.53	1.45
13	AB	71	THR	CA-CB	-5.25	1.45	1.53
23	AW	63	G	C4'-O4'	-5.25	1.37	1.45
31	BL	121	THR	CA-CB	-5.25	1.45	1.53
52	BD	179	ARG	CA-C	-5.25	1.46	1.52
52	BD	179	ARG	CZ-NH2	5.25	1.40	1.33
54	BF	26	GLN	C-N	5.25	1.39	1.33
16	AE	138	ALA	N-CA	-5.25	1.38	1.45
26	AV	30	G	C5'-C4'	5.25	1.59	1.51
28	BI	136	GLY	C-N	5.25	1.41	1.33
9	AR	64	LEU	C-O	-5.25	1.16	1.24
29	BJ	120	ARG	CA-C	-5.25	1.45	1.52
45	BC	13	ARG	NE-CZ	5.25	1.38	1.33
57	BB	359	G	C2'-C1'	-5.25	1.45	1.53
5	AN	60	ARG	CZ-NH2	5.25	1.40	1.33
21	AA	1260	G	C4'-C3'	5.25	1.60	1.52
23	AW	5	G	C5'-C4'	5.25	1.59	1.51
25	AZ	251	GLN	C-N	5.25	1.40	1.33
33	BN	8	ARG	CD-NE	5.25	1.53	1.46
14	AC	168	ARG	CD-NE	5.25	1.53	1.46
40	BU	46	LYS	CA-CB	5.25	1.60	1.53
58	BA	81	G	C2-N2	5.25	1.45	1.34
8	AQ	10	ARG	CA-C	-5.24	1.46	1.52
21	AA	1262	C	P-O5'	-5.24	1.51	1.59
22	AY	57	G	C2-N3	5.24	1.43	1.32
55	BG	38	ASP	N-CA	-5.24	1.39	1.46
57	BB	1548	A	P-O5'	-5.24	1.51	1.59
57	BB	1909	C	C4'-O4'	5.24	1.53	1.45
23	AW	25	C	O4'-C1'	-5.24	1.33	1.41
53	BE	140	ASP	CA-CB	5.24	1.62	1.53
10	AS	13	HIS	ND1-CE1	5.24	1.37	1.32
21	AA	952	U	O4'-C1'	5.24	1.49	1.41
25	AZ	351	MET	C-O	5.24	1.29	1.24
26	AV	61	C	C2'-C1'	-5.24	1.45	1.53
30	BK	48	ARG	CD-NE	5.24	1.53	1.46
49	B2	21	ARG	N-CA	-5.24	1.40	1.46
56	BH	129	GLU	C-N	5.24	1.40	1.33
57	BB	2294	G	C2'-C1'	-5.24	1.45	1.53
57	BB	2357	G	C5'-C4'	5.24	1.59	1.51
26	AV	5	G	C2'-C1'	-5.24	1.45	1.53
30	BK	3	GLU	C-N	5.24	1.39	1.33
30	BK	32	ALA	N-CA	5.24	1.50	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	BV	41	GLU	C-O	5.24	1.30	1.24
45	BC	215	VAL	C-N	5.24	1.43	1.33
57	BB	1135	C	C4'-C3'	-5.24	1.44	1.52
57	BB	1591	A	C2'-C1'	-5.24	1.45	1.53
57	BB	1597	A	C4'-O4'	-5.24	1.37	1.45
57	BB	1666	G	P-O5'	-5.24	1.51	1.59
16	AE	32	PHE	CA-CB	-5.24	1.46	1.53
58	BA	118	C	C2'-O2'	-5.24	1.34	1.42
21	AA	124	C	O4'-C1'	5.23	1.49	1.41
21	AA	195	A	C3'-O3'	5.23	1.50	1.42
43	BX	58	ILE	CA-C	5.23	1.59	1.52
52	BD	101	PHE	N-CA	-5.23	1.39	1.45
57	BB	1550	C	C3'-O3'	5.23	1.50	1.42
57	BB	1743	G	O5'-C5'	-5.23	1.34	1.42
57	BB	2008	C	O4'-C1'	5.23	1.49	1.41
57	BB	2411	A	C4'-O4'	5.23	1.53	1.45
21	AA	20	U	C5'-C4'	5.23	1.59	1.51
21	AA	1383	C	O3'-P	-5.23	1.53	1.61
26	AV	49	G	O5'-C5'	5.23	1.50	1.42
31	BL	105	ILE	CA-C	5.23	1.58	1.52
48	B1	18	HIS	ND1-CE1	5.23	1.37	1.32
57	BB	215	G	C2'-C1'	-5.23	1.45	1.53
7	AP	31	ARG	N-CA	-5.23	1.39	1.46
21	AA	1276	G	P-O5'	-5.23	1.51	1.59
22	AY	28	C	C4'-O4'	5.23	1.53	1.45
25	AZ	118	HIS	N-CA	-5.23	1.40	1.46
26	AV	48	C	C4'-C3'	5.23	1.60	1.53
35	BP	108	ARG	CZ-NH1	5.23	1.40	1.32
37	BR	62	GLU	C-N	5.23	1.39	1.33
57	BB	1058	U	O5'-C5'	5.23	1.50	1.42
15	AD	114	ARG	N-CA	-5.23	1.39	1.46
23	AW	40	C	C4'-C3'	5.23	1.60	1.52
57	BB	1392	A	C5'-C4'	5.23	1.59	1.51
18	AG	101	ARG	CA-C	-5.23	1.46	1.52
21	AA	685	G	C4'-O4'	-5.23	1.37	1.45
21	AA	865	A	C4'-O4'	-5.23	1.37	1.45
22	AY	2	C	C1'-N1	5.23	1.56	1.48
56	BH	68	ARG	NE-CZ	5.23	1.38	1.33
57	BB	360	U	C3'-C2'	5.23	1.60	1.52
57	BB	954	G	C5'-C4'	5.23	1.59	1.51
57	BB	1263	U	C2'-C1'	5.23	1.61	1.53
57	BB	1795	C	C4'-C3'	5.23	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	710	U	C5'-C4'	5.23	1.59	1.51
57	BB	2270	A	C2'-C1'	-5.23	1.45	1.53
4	AM	105	ALA	N-CA	-5.22	1.42	1.47
13	AB	20	ARG	CZ-NH1	5.22	1.40	1.32
21	AA	541	G	O3'-P	-5.22	1.53	1.61
41	BV	81	PRO	N-CA	-5.22	1.40	1.47
45	BC	181	ARG	NE-CZ	5.22	1.38	1.33
50	B3	3	ILE	CA-C	-5.22	1.45	1.52
56	BH	143	ILE	CB-CG1	5.22	1.63	1.53
57	BB	1032	A	C6-N6	5.22	1.44	1.33
2	AK	48	GLY	CA-C	-5.22	1.44	1.51
15	AD	72	ARG	CZ-NH2	5.22	1.40	1.33
21	AA	515	G	C1'-N9	-5.22	1.40	1.48
21	AA	1041	G	C4'-C3'	5.22	1.60	1.52
52	BD	84	LEU	CA-C	-5.22	1.46	1.52
57	BB	1660	G	C5'-C4'	5.22	1.59	1.51
57	BB	2075	U	C4'-O4'	-5.22	1.37	1.45
29	BJ	131	ASN	CA-CB	5.22	1.61	1.53
44	BY	30	MET	CA-C	-5.22	1.46	1.52
45	BC	149	LYS	N-CA	-5.22	1.40	1.46
57	BB	1517	G	O3'-P	-5.22	1.53	1.61
21	AA	603	U	N1-C6	-5.22	1.27	1.38
21	AA	925	G	C2'-C1'	-5.22	1.45	1.53
21	AA	1499	A	C5'-C4'	5.22	1.59	1.51
25	AZ	109	ASP	C-N	5.22	1.41	1.33
37	BR	92	TRP	NE1-CE2	-5.22	1.31	1.37
57	BB	126	A	C4'-C3'	5.22	1.60	1.52
57	BB	1668	A	C4'-C3'	5.22	1.60	1.53
57	BB	2855	C	C4'-C3'	5.22	1.60	1.52
21	AA	1349	A	C2'-C1'	-5.22	1.45	1.53
23	AW	1	G	C1'-N9	-5.22	1.40	1.48
57	BB	2174	C	O3'-P	-5.22	1.53	1.61
57	BB	2768	U	O4'-C1'	5.22	1.49	1.41
57	BB	2816	G	C2'-O2'	-5.22	1.34	1.42
2	AK	14	GLN	C-N	5.22	1.40	1.33
21	AA	246	A	O5'-C5'	5.22	1.50	1.42
29	BJ	114	LEU	C-N	5.22	1.41	1.33
32	BM	38	ARG	CA-C	-5.22	1.45	1.53
42	BW	19	ARG	CZ-NH2	5.22	1.40	1.33
57	BB	108	G	P-O5'	-5.22	1.51	1.59
57	BB	2794	C	C1'-N1	5.22	1.56	1.48
4	AM	15	VAL	C-N	5.21	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	608	A	O3'-P	-5.21	1.53	1.61
57	BB	2507	C	P-O5'	-5.21	1.51	1.59
44	BY	3	ALA	C-N	5.21	1.40	1.33
57	BB	901	C	P-O5'	-5.21	1.51	1.59
57	BB	2107	G	P-O5'	5.21	1.67	1.59
26	AV	42	G	C2'-C1'	-5.21	1.45	1.53
44	BY	55	THR	C-N	5.21	1.42	1.33
48	B1	29	LYS	C-O	-5.21	1.20	1.24
13	AB	122	ASP	CA-C	-5.21	1.46	1.52
21	AA	100	G	O3'-P	-5.21	1.53	1.61
21	AA	1477	U	O3'-P	-5.21	1.53	1.61
25	AZ	117	GLU	C-N	5.21	1.40	1.33
51	B4	12	ARG	NE-CZ	5.21	1.38	1.33
57	BB	806	C	O3'-P	5.21	1.69	1.61
57	BB	1879	C	P-O5'	-5.21	1.51	1.59
57	BB	1928	A	C1'-N9	-5.21	1.40	1.48
21	AA	307	C	C1'-N1	5.21	1.56	1.48
32	BM	114	ARG	CZ-NH1	5.21	1.40	1.32
37	BR	39	LEU	N-CA	-5.21	1.40	1.46
45	BC	249	VAL	C-N	5.21	1.41	1.33
57	BB	746	U	P-O5'	-5.21	1.51	1.59
57	BB	1761	C	O5'-C5'	5.21	1.50	1.42
57	BB	2283	C	C4'-C3'	5.21	1.60	1.52
39	BT	85	VAL	C-N	5.21	1.40	1.33
57	BB	743	A	C2'-C1'	-5.21	1.45	1.53
1	AJ	72	ARG	CD-NE	5.20	1.53	1.46
20	AI	27	ILE	C-O	-5.20	1.18	1.24
21	AA	704	A	C3'-O3'	5.20	1.50	1.42
21	AA	836	G	P-O5'	-5.20	1.51	1.59
21	AA	1500	A	O5'-C5'	5.20	1.50	1.42
27	B5	29	LEU	N-CA	-5.20	1.40	1.46
57	BB	2001	C	O3'-P	-5.20	1.53	1.61
21	AA	650	G	C5'-C4'	5.20	1.59	1.51
52	BD	202	ILE	C-N	-5.20	1.26	1.33
57	BB	768	G	C3'-C2'	-5.20	1.45	1.52
2	AK	121	ARG	C-N	5.20	1.39	1.33
14	AC	84	GLU	CA-C	-5.20	1.46	1.52
14	AC	125	ARG	CZ-NH2	5.20	1.40	1.33
21	AA	744	C	C3'-C2'	-5.20	1.45	1.52
38	BS	51	LEU	N-CA	-5.20	1.40	1.46
57	BB	1445	G	C2-N3	5.20	1.43	1.32
57	BB	1842	G	C3'-C2'	5.20	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AK	81	LEU	CA-C	-5.20	1.46	1.52
14	AC	112	ALA	CA-CB	5.20	1.62	1.53
21	AA	693	G	O4'-C1'	5.20	1.49	1.41
32	BM	105	MET	CA-CB	-5.20	1.45	1.53
37	BR	83	TYR	C-N	5.20	1.40	1.33
28	BI	18	ASN	CA-CB	5.20	1.61	1.53
56	BH	50	ARG	CZ-NH2	5.20	1.40	1.33
57	BB	2367	G	C2'-C1'	-5.20	1.45	1.53
3	AL	77	SER	CA-C	-5.20	1.45	1.53
13	AB	21	TYR	C-N	5.20	1.38	1.32
25	AZ	283	ARG	CZ-NH2	5.20	1.40	1.33
57	BB	20	C	O5'-C5'	5.20	1.50	1.42
57	BB	162	U	O3'-P	-5.20	1.53	1.61
57	BB	870	U	O3'-P	-5.20	1.53	1.61
57	BB	942	G	C4'-O4'	-5.20	1.37	1.45
57	BB	1261	C	C2'-C1'	-5.20	1.45	1.53
57	BB	1311	G	C3'-C2'	-5.20	1.45	1.52
21	AA	149	A	C6-N1	5.19	1.46	1.35
21	AA	1502	A	O3'-P	-5.19	1.53	1.61
21	AA	1511	G	C4'-C3'	5.19	1.60	1.52
46	BZ	12	ALA	C-N	5.19	1.40	1.33
57	BB	1529	G	C4'-O4'	5.19	1.53	1.45
57	BB	2280	G	C2'-C1'	-5.19	1.45	1.53
21	AA	359	G	C4'-O4'	-5.19	1.37	1.45
21	AA	1064	G	C3'-C2'	5.19	1.60	1.52
25	AZ	203	GLU	C-N	5.19	1.41	1.33
43	BX	57	VAL	C-N	5.19	1.40	1.34
57	BB	774	G	C5'-C4'	5.19	1.59	1.51
57	BB	1794	A	C2'-C1'	-5.19	1.45	1.53
13	AB	169	HIS	C-N	5.19	1.40	1.33
21	AA	440	C	P-O5'	-5.19	1.51	1.59
21	AA	520	A	O4'-C1'	5.19	1.49	1.41
25	AZ	82	PRO	N-CA	-5.19	1.40	1.47
48	B1	45	HIS	CA-C	-5.19	1.46	1.52
57	BB	1943	U	O3'-P	-5.19	1.53	1.61
7	AP	58	ALA	C-N	5.19	1.41	1.33
21	AA	573	A	N7-C5	-5.19	1.28	1.39
21	AA	1126	U	N3-C4	5.19	1.48	1.38
57	BB	432	A	C1'-N9	5.19	1.55	1.48
11	AT	23	ARG	NE-CZ	5.19	1.38	1.33
19	AH	25	THR	CA-C	-5.19	1.46	1.52
20	AI	61	ASP	N-CA	-5.19	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	902	G	C4'-O4'	5.19	1.53	1.45
21	AA	921	U	C1'-N1	5.19	1.56	1.48
26	AV	72	A	C2'-C1'	-5.19	1.45	1.53
54	BF	118	ALA	CA-C	-5.19	1.46	1.52
57	BB	349	U	O5'-C5'	5.19	1.50	1.42
14	AC	193	GLY	CA-C	-5.19	1.46	1.52
50	B3	63	TYR	CZ-OH	5.19	1.49	1.38
17	AF	33	GLU	N-CA	-5.18	1.39	1.46
21	AA	655	A	O3'-P	-5.18	1.53	1.61
21	AA	674	G	C1'-N9	-5.18	1.40	1.48
46	BZ	49	ALA	CA-C	-5.18	1.45	1.52
54	BF	10	GLU	C-N	5.18	1.40	1.33
21	AA	462	G	C5'-C4'	5.18	1.59	1.51
57	BB	368	A	C5'-C4'	5.18	1.59	1.51
57	BB	2689	U	C4'-C3'	5.18	1.60	1.53
6	AO	68	TYR	N-CA	5.18	1.52	1.46
27	B5	165	ASN	CA-CB	5.18	1.59	1.52
50	B3	49	VAL	N-CA	-5.18	1.39	1.46
57	BB	2869	G	C3'-C2'	-5.18	1.45	1.52
20	AI	26	LYS	N-CA	-5.18	1.39	1.46
21	AA	1059	C	C1'-N1	5.18	1.56	1.48
25	AZ	194	PHE	CA-CB	-5.18	1.44	1.53
32	BM	81	ARG	CD-NE	5.18	1.53	1.46
36	BQ	48	ASP	N-CA	5.18	1.53	1.46
45	BC	230	PRO	C-N	5.18	1.40	1.33
57	BB	351	C	C3'-C2'	-5.18	1.45	1.52
57	BB	903	C	C2'-C1'	-5.18	1.45	1.53
57	BB	2068	U	O3'-P	-5.18	1.53	1.61
57	BB	2497	A	C1'-N9	-5.18	1.39	1.47
21	AA	1119	C	P-O5'	-5.18	1.51	1.59
57	BB	2401	U	O3'-P	-5.18	1.53	1.61
25	AZ	279	ARG	NE-CZ	5.18	1.38	1.33
42	BW	36	ILE	CA-C	5.18	1.59	1.52
57	BB	986	C	C4'-C3'	5.18	1.60	1.52
57	BB	2545	G	P-O5'	-5.18	1.51	1.59
18	AG	142	ARG	NE-CZ	5.17	1.38	1.33
21	AA	259	G	C2'-C1'	-5.17	1.45	1.53
57	BB	2208	C	C4'-O4'	5.17	1.53	1.45
57	BB	2366	A	C5'-C4'	5.17	1.59	1.51
18	AG	130	LYS	N-CA	-5.17	1.38	1.45
21	AA	1323	G	C4'-O4'	-5.17	1.37	1.45
25	AZ	342	GLU	CA-C	-5.17	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BR	64	VAL	CA-C	-5.17	1.47	1.53
57	BB	227	A	C2'-C1'	-5.17	1.45	1.53
57	BB	315	G	O5'-C5'	5.17	1.50	1.42
57	BB	1339	G	N1-C2	5.17	1.48	1.37
57	BB	2738	A	P-O5'	-5.17	1.51	1.59
30	BK	14	GLY	N-CA	-5.17	1.41	1.46
20	AI	108	ARG	CA-C	5.17	1.59	1.53
21	AA	363	A	C2'-C1'	-5.17	1.45	1.53
21	AA	1388	C	C3'-C2'	5.17	1.60	1.52
57	BB	722	A	P-O5'	-5.17	1.51	1.59
57	BB	1033	U	C5'-C4'	5.17	1.59	1.51
57	BB	1160	G	C2'-C1'	-5.17	1.45	1.53
57	BB	1997	C	C4'-C3'	5.17	1.60	1.52
57	BB	2902	C	C5'-C4'	5.17	1.59	1.51
39	BT	66	LYS	CA-C	-5.17	1.46	1.52
41	BV	44	HIS	CA-CB	-5.17	1.45	1.53
57	BB	1764	C	C5'-C4'	5.17	1.59	1.51
57	BB	2505	G	C5'-C4'	5.17	1.59	1.51
58	BA	21	G	C3'-C2'	-5.17	1.45	1.52
4	AM	104	ASN	CA-C	-5.17	1.47	1.53
15	AD	3	TYR	CA-CB	5.17	1.62	1.53
21	AA	998	C	C2'-O2'	-5.17	1.34	1.42
58	BA	8	C	O5'-C5'	-5.17	1.34	1.42
1	AJ	100	ILE	CA-C	-5.16	1.46	1.52
11	AT	18	LYS	CA-C	-5.16	1.45	1.52
14	AC	132	ALA	C-O	-5.16	1.18	1.24
21	AA	562	U	O3'-P	-5.16	1.53	1.61
34	BO	34	HIS	ND1-CE1	5.16	1.37	1.32
38	BS	9	HIS	N-CA	-5.16	1.39	1.46
57	BB	822	G	C5'-C4'	5.16	1.58	1.51
57	BB	2628	C	P-O5'	-5.16	1.52	1.59
7	AP	39	PHE	CA-C	-5.16	1.46	1.52
12	AU	33	ARG	N-CA	-5.16	1.39	1.45
57	BB	2172	U	O3'-P	-5.16	1.53	1.61
21	AA	552	U	C3'-O3'	5.16	1.49	1.42
25	AZ	242	VAL	N-CA	-5.16	1.40	1.46
43	BX	71	ARG	CD-NE	5.16	1.53	1.46
47	B0	24	VAL	CA-C	-5.16	1.46	1.52
57	BB	541	A	P-O5'	-5.16	1.52	1.59
57	BB	794	A	C4'-C3'	5.16	1.60	1.52
57	BB	1911	U	O3'-P	-5.16	1.53	1.61
4	AM	42	VAL	N-CA	-5.16	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AE	137	ARG	N-CA	-5.16	1.39	1.46
21	AA	870	U	C2'-C1'	-5.16	1.45	1.53
55	BG	21	GLN	CA-CB	5.16	1.60	1.53
57	BB	23	G	O5'-C5'	5.16	1.50	1.42
57	BB	144	A	C3'-O3'	5.16	1.49	1.42
57	BB	1098	A	C2'-C1'	-5.16	1.45	1.53
57	BB	1233	C	P-O5'	-5.16	1.52	1.59
17	AF	11	HIS	CG-ND1	-5.16	1.32	1.38
21	AA	1312	G	P-O5'	-5.16	1.52	1.59
5	AN	83	VAL	CA-CB	-5.16	1.47	1.54
21	AA	52	C	C2'-C1'	-5.16	1.45	1.53
21	AA	173	U	N3-C4	5.16	1.48	1.38
37	BR	86	GLN	CA-C	-5.16	1.46	1.52
57	BB	596	U	O4'-C1'	5.16	1.49	1.41
57	BB	2433	A	P-O5'	5.16	1.67	1.59
21	AA	210	C	O5'-C5'	5.15	1.50	1.42
21	AA	1116	U	O3'-P	-5.15	1.53	1.61
54	BF	89	THR	CA-C	-5.15	1.45	1.53
57	BB	2243	U	O3'-P	-5.15	1.53	1.61
21	AA	1140	C	C2-N3	5.15	1.46	1.35
36	BQ	94	LEU	CA-C	-5.15	1.45	1.52
47	B0	31	LYS	CA-CB	5.15	1.61	1.53
54	BF	147	ARG	CA-CB	5.15	1.61	1.53
57	BB	2189	U	C5'-C4'	5.15	1.58	1.51
57	BB	2894	G	O5'-C5'	-5.15	1.35	1.42
21	AA	972	C	C2'-C1'	-5.15	1.45	1.53
30	BK	77	ARG	NE-CZ	5.15	1.38	1.33
35	BP	76	HIS	CG-ND1	5.15	1.44	1.38
36	BQ	5	ARG	CZ-NH2	5.15	1.40	1.33
37	BR	79	ARG	NE-CZ	5.15	1.38	1.33
46	BZ	46	MET	CA-CB	5.15	1.61	1.53
57	BB	755	U	C1'-N1	5.15	1.56	1.48
57	BB	2603	G	C2-N3	5.15	1.43	1.32
25	AZ	280	GLY	C-N	5.15	1.40	1.33
35	BP	27	VAL	C-N	5.15	1.40	1.33
57	BB	694	U	P-O5'	-5.15	1.52	1.59
15	AD	50	TYR	CA-CB	5.15	1.61	1.53
16	AE	131	ASN	CA-CB	5.15	1.60	1.53
18	AG	113	LYS	N-CA	-5.15	1.39	1.46
25	AZ	61	THR	CA-C	-5.15	1.45	1.52
44	BY	36	GLN	CA-C	-5.15	1.46	1.53
45	BC	39	SER	CA-C	5.15	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
45	BC	211	ARG	CA-C	-5.15	1.46	1.52
57	BB	862	G	C2'-C1'	-5.15	1.45	1.53
57	BB	2200	C	C4-N4	5.15	1.44	1.33
21	AA	775	G	P-O5'	-5.15	1.52	1.59
21	AA	1532	U	C4'-O4'	5.15	1.53	1.45
36	BQ	83	LYS	N-CA	-5.15	1.38	1.45
9	AR	64	LEU	CA-C	-5.14	1.45	1.52
21	AA	1279	G	C3'-O3'	5.14	1.49	1.42
21	AA	1391	U	C4'-C3'	5.14	1.60	1.52
43	BX	75	GLU	CA-CB	5.14	1.61	1.53
45	BC	116	GLN	CA-C	5.14	1.59	1.52
52	BD	146	ILE	CA-C	-5.14	1.46	1.52
55	BG	128	THR	C-N	5.14	1.39	1.33
1	AJ	16	ARG	CD-NE	5.14	1.53	1.46
13	AB	10	LYS	N-CA	5.14	1.52	1.46
21	AA	510	A	O3'-P	-5.14	1.53	1.61
38	BS	91	GLY	CA-C	-5.14	1.44	1.51
57	BB	31	C	C4'-C3'	5.14	1.60	1.52
57	BB	223	A	C4'-C3'	-5.14	1.44	1.52
57	BB	727	A	C5'-C4'	5.14	1.58	1.51
57	BB	2888	C	C2'-C1'	-5.14	1.45	1.53
58	BA	88	C	O3'-P	-5.14	1.53	1.61
23	AW	11	C	C1'-N1	5.14	1.56	1.48
40	BU	21	ARG	C-O	-5.14	1.18	1.23
21	AA	371	A	C1'-N9	-5.14	1.40	1.48
25	AZ	306	SER	CA-CB	5.14	1.62	1.54
36	BQ	3	VAL	C-N	5.14	1.40	1.33
48	B1	26	LYS	CA-C	-5.14	1.46	1.52
52	BD	161	MET	C-N	5.14	1.40	1.33
53	BE	111	GLU	C-N	5.14	1.40	1.33
57	BB	2706	A	N7-C5	-5.14	1.28	1.39
9	AR	28	LEU	C-N	5.14	1.40	1.33
11	AT	58	ASP	N-CA	-5.14	1.40	1.46
16	AE	33	THR	CA-C	-5.14	1.46	1.52
21	AA	738	C	C1'-N1	5.14	1.56	1.48
21	AA	919	A	C2'-C1'	-5.14	1.45	1.53
21	AA	1076	U	O4'-C1'	5.14	1.49	1.41
39	BT	62	VAL	CA-C	-5.14	1.46	1.52
52	BD	184	ARG	NE-CZ	5.14	1.38	1.33
6	AO	63	ARG	C-N	5.13	1.40	1.33
14	AC	135	ARG	CA-CB	5.13	1.61	1.53
14	AC	200	TRP	CA-C	-5.13	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1454	G	C3'-C2'	-5.13	1.45	1.52
30	BK	114	ILE	CB-CG1	5.13	1.63	1.53
45	BC	257	ARG	CD-NE	5.13	1.53	1.46
57	BB	1049	C	C4'-C3'	5.13	1.60	1.52
16	AE	68	ARG	NE-CZ	5.13	1.38	1.33
57	BB	176	A	C2'-O2'	-5.13	1.34	1.42
15	AD	139	ASN	CA-C	-5.13	1.46	1.53
16	AE	113	VAL	N-CA	-5.13	1.39	1.46
21	AA	175	C	C4'-C3'	5.13	1.60	1.52
54	BF	101	ARG	NE-CZ	5.13	1.38	1.33
54	BF	107	VAL	C-N	5.13	1.40	1.34
57	BB	91	A	C4'-O4'	-5.13	1.38	1.45
57	BB	1016	G	O4'-C1'	5.13	1.49	1.41
57	BB	1350	C	C2'-C1'	-5.13	1.45	1.53
57	BB	2337	G	P-O5'	-5.13	1.52	1.59
28	BI	56	VAL	CA-CB	-5.13	1.48	1.54
49	B2	37	LYS	N-CA	-5.13	1.39	1.46
56	BH	53	GLU	N-CA	-5.13	1.41	1.46
57	BB	20	C	C4'-O4'	5.13	1.53	1.45
57	BB	2033	A	P-O5'	-5.13	1.52	1.59
21	AA	714	G	C1'-N9	5.13	1.55	1.48
31	BL	22	GLY	C-O	-5.13	1.17	1.23
36	BQ	110	GLU	C-N	5.13	1.41	1.33
37	BR	70	GLU	CA-C	-5.13	1.46	1.52
40	BU	70	ALA	CA-C	-5.13	1.46	1.52
57	BB	921	C	C3'-C2'	-5.13	1.45	1.52
57	BB	1158	C	C3'-O3'	5.13	1.49	1.42
57	BB	1517	G	C3'-O3'	5.13	1.49	1.42
57	BB	2722	G	C5'-C4'	5.13	1.58	1.51
23	AW	35	A	O4'-C1'	5.13	1.49	1.41
34	BO	65	THR	N-CA	-5.13	1.39	1.46
46	BZ	43	ILE	CA-CB	-5.13	1.47	1.54
57	BB	1744	A	O4'-C1'	5.13	1.49	1.41
57	BB	1845	G	C2'-C1'	-5.13	1.45	1.53
8	AQ	22	VAL	N-CA	-5.12	1.40	1.46
57	BB	360	U	C1'-N1	5.12	1.56	1.48
57	BB	1145	C	C1'-N1	-5.12	1.40	1.48
57	BB	1146	C	O5'-C5'	5.12	1.50	1.42
7	AP	17	TYR	N-CA	-5.12	1.39	1.45
11	AT	35	TYR	C-N	-5.12	1.27	1.33
23	AW	10	G	C4'-C3'	-5.12	1.44	1.52
26	AV	76	A	C5'-C4'	5.12	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	B5	79	THR	CA-C	-5.12	1.46	1.52
28	BI	9	LYS	N-CA	-5.12	1.39	1.46
34	BO	28	VAL	CA-C	-5.12	1.46	1.52
52	BD	31	ALA	CA-C	-5.12	1.46	1.52
54	BF	107	VAL	N-CA	-5.12	1.40	1.46
57	BB	570	G	C2'-C1'	-5.12	1.45	1.53
57	BB	2436	G	C6-N1	5.12	1.49	1.39
57	BB	2857	G	C2'-C1'	-5.12	1.45	1.53
3	AL	83	GLY	CA-C	-5.12	1.44	1.51
50	B3	39	ARG	CZ-NH2	5.12	1.40	1.33
57	BB	185	G	C2'-C1'	-5.12	1.45	1.53
57	BB	1931	U	C5'-C4'	5.12	1.58	1.51
25	AZ	36	ALA	C-O	-5.12	1.17	1.24
21	AA	1360	A	C2'-C1'	-5.12	1.45	1.53
37	BR	21	ARG	C-N	5.12	1.40	1.33
45	BC	107	LYS	CA-C	-5.12	1.45	1.52
57	BB	517	C	O5'-C5'	-5.12	1.34	1.42
57	BB	2723	C	P-O5'	-5.12	1.52	1.59
57	BB	1303	G	C3'-C2'	-5.12	1.45	1.52
21	AA	617	G	C1'-N9	5.12	1.55	1.48
22	AY	19	G	C2-N3	5.12	1.43	1.32
57	BB	1589	U	C2'-C1'	-5.12	1.45	1.53
57	BB	1818	U	O3'-P	-5.12	1.53	1.61
57	BB	1826	G	C2'-C1'	-5.12	1.45	1.53
21	AA	440	C	C1'-N1	5.11	1.56	1.48
21	AA	484	G	C2-N3	5.11	1.43	1.32
21	AA	955	U	C2'-C1'	-5.11	1.45	1.53
21	AA	1208	C	C3'-O3'	5.11	1.49	1.42
50	B3	43	LEU	N-CA	5.11	1.52	1.45
57	BB	222	A	C4'-C3'	5.11	1.60	1.53
57	BB	592	A	C1'-N9	5.11	1.55	1.48
57	BB	1038	G	C2-N3	5.11	1.43	1.32
18	AG	86	VAL	CA-C	-5.11	1.47	1.52
26	AV	27	U	C4'-O4'	5.11	1.53	1.45
32	BM	13	HIS	CB-CG	5.11	1.57	1.50
41	BV	92	VAL	C-O	-5.11	1.18	1.24
57	BB	697	G	O3'-P	-5.11	1.53	1.61
15	AD	138	PRO	C-N	5.11	1.40	1.33
18	AG	123	LEU	C-N	5.11	1.41	1.33
21	AA	1123	U	O3'-P	-5.11	1.53	1.61
21	AA	1494	G	O4'-C1'	5.11	1.49	1.41
29	BJ	131	ASN	C-N	5.11	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	BN	2	ARG	CZ-NH1	5.11	1.40	1.32
38	BS	100	THR	C-N	5.11	1.40	1.33
53	BE	22	ASP	CA-C	-5.11	1.46	1.53
57	BB	239	C	P-O5'	-5.11	1.52	1.59
57	BB	403	U	C5'-C4'	5.11	1.59	1.51
57	BB	417	C	O5'-C5'	5.11	1.50	1.42
57	BB	949	G	N7-C5	-5.11	1.29	1.39
57	BB	2337	G	C5'-C4'	5.11	1.58	1.51
57	BB	2365	G	O4'-C1'	-5.11	1.33	1.41
57	BB	2690	U	C5'-C4'	5.11	1.58	1.51
57	BB	2809	A	C6-N6	5.11	1.44	1.33
58	BA	28	C	C4'-O4'	5.11	1.53	1.45
14	AC	135	ARG	NE-CZ	5.11	1.38	1.33
53	BE	73	ILE	CA-CB	-5.11	1.47	1.54
23	AW	27	G	C2'-C1'	-5.11	1.45	1.53
34	BO	16	ARG	CZ-NH2	5.11	1.40	1.33
35	BP	114	ASN	CA-CB	5.11	1.63	1.53
57	BB	2785	C	P-O5'	-5.11	1.52	1.59
9	AR	23	LYS	CA-CB	5.11	1.65	1.54
21	AA	138	G	O5'-C5'	5.11	1.50	1.42
21	AA	230	G	C2'-C1'	-5.11	1.45	1.53
27	B5	47	ASN	CA-CB	5.11	1.59	1.53
45	BC	211	ARG	N-CA	-5.11	1.40	1.46
53	BE	157	LEU	CA-C	5.11	1.59	1.52
57	BB	1559	U	C2'-C1'	-5.11	1.45	1.53
57	BB	2332	C	P-O5'	-5.11	1.52	1.59
6	AO	11	VAL	CA-C	5.10	1.59	1.52
21	AA	773	G	C5'-C4'	5.10	1.58	1.51
21	AA	872	A	C4'-O4'	-5.10	1.38	1.45
13	AB	18	GLN	N-CA	-5.10	1.39	1.46
15	AD	153	ARG	CZ-NH1	5.10	1.39	1.32
17	AF	2	ARG	NE-CZ	5.10	1.38	1.33
21	AA	1149	C	C3'-O3'	5.10	1.49	1.42
53	BE	183	PHE	CA-C	-5.10	1.46	1.52
57	BB	111	A	O5'-C5'	5.10	1.50	1.42
57	BB	126	A	P-O5'	-5.10	1.52	1.59
57	BB	546	U	C3'-C2'	-5.10	1.45	1.52
57	BB	1883	U	C5'-C4'	5.10	1.58	1.51
57	BB	2818	U	C1'-N1	5.10	1.56	1.48
18	AG	109	LYS	CA-C	-5.10	1.46	1.52
4	AM	53	ASP	CA-C	-5.10	1.46	1.52
21	AA	482	A	N7-C5	-5.10	1.29	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	AY	29	A	O3'-P	-5.10	1.53	1.61
27	B5	114	VAL	N-CA	-5.10	1.40	1.46
28	BI	85	ILE	CA-C	-5.10	1.46	1.52
33	BN	48	VAL	N-CA	-5.10	1.40	1.46
40	BU	35	VAL	CA-C	-5.10	1.46	1.52
56	BH	102	ALA	N-CA	-5.10	1.39	1.46
14	AC	27	GLU	CA-CB	5.10	1.61	1.54
29	BJ	17	VAL	CA-CB	5.10	1.61	1.54
53	BE	117	ARG	C-N	5.10	1.40	1.33
57	BB	2330	G	C4'-C3'	5.10	1.60	1.52
57	BB	2533	U	C1'-N1	5.10	1.56	1.48
13	AB	17	HIS	ND1-CE1	5.10	1.37	1.32
13	AB	73	ARG	CD-NE	5.10	1.53	1.46
21	AA	568	G	C2'-O2'	-5.10	1.34	1.42
57	BB	1907	G	C2'-O2'	-5.10	1.34	1.42
57	BB	2682	A	C2'-C1'	-5.10	1.45	1.53
8	AQ	5	ARG	NE-CZ	5.09	1.38	1.33
13	AB	61	SER	C-N	5.09	1.40	1.33
16	AE	22	LYS	C-N	5.09	1.40	1.33
23	AW	12	U	C3'-C2'	-5.09	1.45	1.52
25	AZ	132	VAL	C-N	5.09	1.40	1.33
33	BN	30	ARG	C-N	5.09	1.40	1.33
36	BQ	14	LYS	C-N	5.09	1.40	1.33
57	BB	1074	G	P-O5'	5.09	1.67	1.59
57	BB	1945	G	C3'-C2'	-5.09	1.45	1.52
1	AJ	18	ILE	C-N	5.09	1.40	1.33
27	B5	134	ARG	N-CA	-5.09	1.39	1.46
57	BB	2636	C	C1'-N1	5.09	1.56	1.48
15	AD	187	ARG	NE-CZ	5.09	1.38	1.33
20	AI	56	MET	C-O	-5.09	1.18	1.23
53	BE	120	VAL	N-CA	-5.09	1.40	1.46
57	BB	1778	U	O3'-P	-5.09	1.53	1.61
58	BA	53	A	P-O5'	-5.09	1.52	1.59
14	AC	135	ARG	CZ-NH2	5.09	1.40	1.33
15	AD	96	ARG	NE-CZ	5.09	1.38	1.33
16	AE	81	GLN	CA-C	-5.09	1.45	1.52
20	AI	58	GLU	CA-C	-5.09	1.47	1.53
25	AZ	374	PHE	CA-C	-5.09	1.46	1.52
41	BV	70	ILE	C-N	5.09	1.40	1.33
46	BZ	10	ARG	CA-C	-5.09	1.45	1.53
50	B3	25	HIS	N-CA	-5.09	1.39	1.46
57	BB	382	A	C4'-C3'	5.09	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2790	U	O5'-C5'	5.09	1.50	1.42
24	AX	18	G	C5'-C4'	5.09	1.58	1.51
57	BB	476	G	C4'-C3'	5.09	1.60	1.52
14	AC	56	ILE	N-CA	-5.09	1.40	1.46
21	AA	963	G	O5'-C5'	5.09	1.50	1.42
21	AA	1222	G	C5'-C4'	5.09	1.58	1.51
57	BB	166	U	C4'-C3'	-5.09	1.45	1.52
43	BX	69	GLU	CA-CB	5.08	1.61	1.53
57	BB	896	A	O4'-C1'	5.08	1.49	1.41
58	BA	13	G	C3'-C2'	-5.08	1.45	1.52
13	AB	34	ARG	CZ-NH2	5.08	1.40	1.33
45	BC	65	ASP	C-N	5.08	1.41	1.33
55	BG	53	PRO	C-N	5.08	1.40	1.33
57	BB	174	U	O3'-P	-5.08	1.53	1.61
57	BB	1807	G	O5'-C5'	5.08	1.50	1.42
57	BB	2429	G	C6-N1	5.08	1.49	1.39
57	BB	2619	C	C1'-N1	5.08	1.56	1.48
58	BA	23	G	C1'-N9	5.08	1.55	1.48
58	BA	30	C	C5'-C4'	5.08	1.58	1.51
2	AK	68	ARG	N-CA	-5.08	1.40	1.46
21	AA	7	A	C5'-C4'	5.08	1.58	1.51
21	AA	153	C	O4'-C1'	5.08	1.49	1.41
21	AA	442	G	N9-C4	5.08	1.48	1.38
21	AA	912	C	C2'-C1'	-5.08	1.45	1.53
36	BQ	57	ARG	CZ-NH1	5.08	1.39	1.32
41	BV	8	VAL	CA-C	5.08	1.59	1.52
45	BC	23	LEU	CA-C	-5.08	1.46	1.52
6	AO	64	LYS	CA-C	-5.08	1.46	1.52
20	AI	95	SER	C-N	5.08	1.40	1.33
21	AA	309	A	C3'-C2'	5.08	1.60	1.52
21	AA	563	A	C2'-C1'	-5.08	1.45	1.53
21	AA	577	G	C3'-O3'	5.08	1.49	1.42
21	AA	739	C	O5'-C5'	5.08	1.50	1.42
21	AA	803	G	O5'-C5'	5.08	1.50	1.42
21	AA	934	C	C1'-N1	5.08	1.55	1.47
25	AZ	170	VAL	CA-CB	-5.08	1.48	1.54
52	BD	154	LYS	C-O	-5.08	1.17	1.23
56	BH	31	VAL	CA-CB	-5.08	1.47	1.54
57	BB	1180	U	C5'-C4'	5.08	1.58	1.51
57	BB	2861	U	O4'-C1'	5.08	1.49	1.41
21	AA	13	U	P-O5'	-5.08	1.52	1.59
23	AW	42	C	O4'-C1'	5.08	1.49	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BF	90	LEU	CA-C	-5.08	1.46	1.52
54	BF	121	PHE	N-CA	-5.08	1.39	1.46
57	BB	1154	G	N7-C5	-5.08	1.29	1.39
57	BB	1498	C	C2'-C1'	-5.08	1.45	1.53
22	AY	66	A	C4'-O4'	-5.08	1.38	1.45
33	BN	16	HIS	CB-CG	-5.08	1.43	1.50
21	AA	162	A	C5'-C4'	5.08	1.58	1.51
25	AZ	291	VAL	C-O	5.08	1.29	1.24
27	B5	67	HIS	C-N	5.08	1.41	1.33
37	BR	37	GLU	N-CA	-5.08	1.39	1.46
57	BB	633	A	C4'-C3'	-5.08	1.45	1.52
57	BB	2239	G	O3'-P	-5.08	1.53	1.61
16	AE	10	LEU	N-CA	5.07	1.52	1.45
23	AW	49	C	C4'-O4'	5.07	1.53	1.45
45	BC	25	LYS	CA-C	-5.07	1.45	1.52
49	B2	22	MET	C-O	-5.07	1.18	1.24
57	BB	252	G	O4'-C1'	-5.07	1.34	1.41
37	BR	72	VAL	C-N	5.07	1.40	1.33
15	AD	31	CYS	CA-C	-5.07	1.46	1.52
21	AA	214	C	O4'-C1'	5.07	1.49	1.41
21	AA	1428	A	O4'-C1'	5.07	1.49	1.41
33	BN	90	ARG	NE-CZ	5.07	1.38	1.33
57	BB	87	U	C3'-O3'	5.07	1.49	1.42
57	BB	428	A	N7-C5	-5.07	1.29	1.39
57	BB	838	C	C3'-C2'	5.07	1.60	1.52
57	BB	1582	C	C1'-N1	5.07	1.56	1.48
58	BA	11	C	C3'-C2'	-5.07	1.45	1.52
21	AA	871	U	O4'-C1'	5.07	1.49	1.42
31	BL	30	THR	CA-C	5.07	1.59	1.53
44	BY	9	LYS	C-O	-5.07	1.17	1.24
13	AB	102	ASN	CA-CB	5.07	1.62	1.53
21	AA	692	U	C1'-N1	5.07	1.56	1.48
25	AZ	48	GLN	C-N	5.07	1.40	1.33
25	AZ	379	GLY	N-CA	-5.07	1.37	1.45
57	BB	217	A	O4'-C1'	5.07	1.49	1.41
14	AC	126	ARG	NE-CZ	5.07	1.38	1.33
21	AA	1076	U	C3'-O3'	5.07	1.49	1.42
23	AW	16	U	C5'-C4'	5.07	1.58	1.51
37	BR	47	VAL	CA-C	-5.07	1.46	1.52
52	BD	153	GLY	C-N	5.07	1.39	1.33
54	BF	126	ASN	N-CA	5.07	1.51	1.45
57	BB	1360	G	C4'-C3'	5.07	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	2511	U	C5'-C4'	5.07	1.58	1.51
57	BB	2759	G	P-O5'	-5.07	1.52	1.59
13	AB	57	ASN	CA-C	-5.06	1.46	1.52
16	AE	64	GLU	CA-C	-5.06	1.46	1.52
52	BD	168	GLU	C-N	5.06	1.40	1.33
15	AD	40	HIS	CA-C	-5.06	1.46	1.52
23	AW	9	A	C5'-C4'	5.06	1.58	1.51
57	BB	270	A	C3'-C2'	5.06	1.60	1.52
57	BB	1868	C	C5'-C4'	5.06	1.58	1.51
6	AO	42	PHE	CA-C	-5.06	1.46	1.52
19	AH	71	VAL	CA-C	5.06	1.58	1.52
57	BB	2441	U	C2'-C1'	-5.06	1.45	1.53
57	BB	2585	U	C4'-O4'	-5.06	1.38	1.45
5	AN	8	ARG	N-CA	-5.06	1.40	1.46
18	AG	69	ARG	CA-CB	5.06	1.60	1.53
21	AA	705	G	C2'-C1'	-5.06	1.45	1.53
21	AA	1374	A	C1'-N9	5.06	1.55	1.48
27	B5	80	GLN	N-CA	-5.06	1.39	1.46
36	BQ	7	VAL	CA-C	-5.06	1.46	1.52
40	BU	80	ASP	C-N	5.06	1.38	1.33
41	BV	88	HIS	ND1-CE1	5.06	1.37	1.32
54	BF	76	PHE	CA-CB	5.06	1.61	1.53
57	BB	517	C	C4'-C3'	5.06	1.60	1.52
57	BB	2682	A	O3'-P	-5.06	1.53	1.61
15	AD	201	GLU	CA-C	-5.06	1.46	1.52
23	AW	38	A	O4'-C1'	5.06	1.49	1.41
57	BB	2228	G	C2'-C1'	-5.06	1.45	1.53
57	BB	2261	C	C3'-C2'	-5.06	1.45	1.52
58	BA	19	C	C3'-C2'	-5.06	1.45	1.52
57	BB	1400	U	O4'-C1'	5.06	1.49	1.41
21	AA	373	A	C4'-O4'	5.05	1.53	1.45
21	AA	1041	G	O3'-P	-5.05	1.53	1.61
56	BH	69	ALA	CA-C	-5.05	1.46	1.52
57	BB	409	G	C5'-C4'	5.05	1.58	1.51
57	BB	1018	U	C3'-C2'	5.05	1.60	1.52
57	BB	1352	U	C4'-O4'	-5.05	1.38	1.45
58	BA	5	U	C2'-C1'	-5.05	1.45	1.53
18	AG	108	ARG	CZ-NH2	5.05	1.40	1.33
1	AJ	48	ARG	C-O	-5.05	1.17	1.24
26	AV	50	U	P-O5'	5.05	1.67	1.59
47	B0	42	ILE	CA-C	5.05	1.59	1.52
57	BB	559	G	C4'-O4'	5.05	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	835	C	C4'-C3'	5.05	1.60	1.52
57	BB	841	G	C2'-C1'	-5.05	1.45	1.53
57	BB	2533	U	C2'-C1'	-5.05	1.45	1.53
21	AA	1154	G	C2'-C1'	-5.05	1.45	1.53
21	AA	1358	U	C3'-C2'	-5.05	1.45	1.52
21	AA	1482	G	O3'-P	-5.05	1.53	1.61
27	B5	15	VAL	C-N	5.05	1.39	1.33
27	B5	48	LEU	N-CA	-5.05	1.39	1.45
27	B5	182	ALA	CA-C	-5.05	1.46	1.52
57	BB	989	G	C2-N2	5.05	1.44	1.34
57	BB	1895	C	C2-N3	5.05	1.45	1.35
5	AN	60	ARG	C-N	5.05	1.40	1.33
19	AH	113	ARG	CZ-NH1	5.05	1.39	1.32
21	AA	1449	C	C2'-C1'	-5.05	1.45	1.53
32	BM	12	MET	C-N	5.05	1.40	1.33
36	BQ	2	ARG	CA-CB	5.05	1.61	1.53
38	BS	88	ARG	CZ-NH2	5.05	1.40	1.33
57	BB	100	U	C4'-O4'	5.05	1.53	1.45
57	BB	1198	U	C4'-C3'	5.05	1.60	1.52
21	AA	14	U	C2'-C1'	-5.05	1.45	1.53
21	AA	154	U	C2'-O2'	-5.05	1.34	1.42
21	AA	305	G	C4'-C3'	5.05	1.60	1.53
21	AA	1425	U	C2'-C1'	-5.05	1.45	1.53
21	AA	1432	G	C4'-C3'	5.05	1.60	1.52
27	B5	68	GLY	C-N	5.05	1.40	1.33
53	BE	9	GLN	CD-NE2	5.05	1.43	1.33
57	BB	1638	C	C1'-N1	5.05	1.56	1.48
57	BB	343	C	P-O5'	-5.04	1.52	1.59
36	BQ	32	ARG	CZ-NH1	5.04	1.39	1.32
57	BB	748	G	O4'-C1'	-5.04	1.34	1.41
57	BB	1829	A	O4'-C1'	-5.04	1.34	1.41
57	BB	1877	A	P-O5'	-5.04	1.52	1.59
57	BB	2528	U	C4-C5	5.04	1.53	1.43
18	AG	91	ARG	CD-NE	5.04	1.53	1.46
21	AA	606	G	C3'-O3'	5.04	1.49	1.42
27	B5	51	ASP	C-O	-5.04	1.19	1.24
57	BB	79	C	C2'-O2'	-5.04	1.34	1.42
57	BB	1651	G	C4'-C3'	5.04	1.60	1.52
21	AA	1072	G	C2'-C1'	-5.04	1.45	1.53
6	AO	17	ASP	C-O	-5.04	1.18	1.23
21	AA	281	G	P-O5'	-5.04	1.52	1.59
23	AW	46	G	O5'-C5'	5.04	1.50	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	B0	14	MET	CG-SD	5.04	1.93	1.80
56	BH	121	VAL	N-CA	-5.04	1.40	1.46
57	BB	802	A	C3'-C2'	-5.04	1.45	1.52
57	BB	813	U	C4'-C3'	5.04	1.60	1.52
57	BB	904	G	O3'-P	-5.04	1.53	1.61
57	BB	1267	U	C3'-C2'	-5.04	1.45	1.52
57	BB	1547	C	O3'-P	-5.04	1.53	1.61
57	BB	1747	U	O3'-P	-5.04	1.53	1.61
57	BB	2199	A	C4'-O4'	-5.04	1.38	1.45
13	AB	171	ALA	N-CA	5.04	1.52	1.46
21	AA	347	G	C2-N3	5.04	1.42	1.32
25	AZ	187	LYS	CA-C	-5.04	1.45	1.52
10	AS	33	TRP	CA-C	-5.04	1.46	1.52
16	AE	111	ARG	N-CA	5.04	1.52	1.46
18	AG	131	GLY	CA-C	-5.04	1.46	1.52
21	AA	338	A	C2'-C1'	-5.04	1.45	1.53
21	AA	958	A	P-O5'	-5.04	1.52	1.59
21	AA	1450	U	O3'-P	-5.04	1.53	1.61
25	AZ	89	LYS	CA-CB	5.04	1.61	1.53
57	BB	75	G	O5'-C5'	5.04	1.50	1.42
57	BB	127	A	C3'-C2'	5.04	1.60	1.52
57	BB	652	U	C1'-N1	5.04	1.56	1.48
57	BB	1850	G	C3'-O3'	5.04	1.49	1.42
57	BB	1900	A	C2'-C1'	-5.04	1.45	1.53
57	BB	2809	A	C5'-C4'	-5.04	1.43	1.51
4	AM	99	GLN	C-N	5.03	1.40	1.33
21	AA	81	A	P-O5'	-5.03	1.52	1.59
21	AA	133	U	C1'-N1	5.03	1.55	1.48
21	AA	852	G	C2'-C1'	-5.03	1.45	1.53
26	AV	32	C	O5'-C5'	5.03	1.50	1.42
35	BP	5	LYS	CA-CB	5.03	1.61	1.53
35	BP	81	ASP	CA-C	5.03	1.59	1.52
45	BC	79	ARG	NE-CZ	5.03	1.38	1.33
52	BD	6	GLY	C-N	5.03	1.39	1.33
57	BB	491	G	C1'-N9	-5.03	1.40	1.48
57	BB	1014	A	C2'-C1'	-5.03	1.45	1.53
57	BB	1188	U	C4'-C3'	5.03	1.60	1.52
57	BB	1361	G	C6-N1	5.03	1.49	1.39
58	BA	84	G	C1'-N9	5.03	1.55	1.48
21	AA	1400	C	C3'-O3'	5.03	1.50	1.43
27	B5	165	ASN	CA-C	5.03	1.59	1.52
41	BV	25	LYS	N-CA	-5.03	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	410	G	C2-N3	5.03	1.42	1.32
57	BB	546	U	C1'-N1	5.03	1.55	1.48
57	BB	2451	A	P-O5'	-5.03	1.52	1.59
6	AO	29	ALA	CA-C	-5.03	1.46	1.52
11	AT	24	ARG	NE-CZ	5.03	1.38	1.33
15	AD	137	SER	CA-CB	5.03	1.60	1.53
16	AE	109	ALA	C-N	5.03	1.40	1.33
25	AZ	319	HIS	CA-C	-5.03	1.46	1.52
53	BE	4	VAL	CA-C	5.03	1.58	1.53
57	BB	2078	C	C5'-C4'	5.03	1.58	1.51
57	BB	2856	A	C5'-C4'	5.03	1.58	1.51
18	AG	136	LYS	C-N	5.03	1.40	1.33
28	BI	20	SER	CA-C	5.03	1.59	1.52
31	BL	41	ARG	CD-NE	5.03	1.53	1.46
48	B1	5	ARG	CA-CB	5.03	1.62	1.53
57	BB	865	C	C4'-O4'	5.03	1.53	1.45
57	BB	1405	U	C4'-O4'	5.03	1.53	1.45
57	BB	2773	C	O3'-P	5.03	1.68	1.61
2	AK	21	HIS	CA-C	-5.03	1.46	1.52
5	AN	27	LYS	CA-CB	5.03	1.61	1.53
23	AW	22	G	C1'-N9	5.03	1.55	1.48
57	BB	1131	G	C5'-C4'	5.03	1.58	1.51
57	BB	2059	A	C2'-C1'	-5.03	1.45	1.53
57	BB	2810	A	C2'-C1'	-5.03	1.45	1.53
23	AW	40	C	C2'-C1'	-5.03	1.45	1.53
34	BO	80	GLU	CA-CB	5.03	1.62	1.53
37	BR	83	TYR	CG-CD2	5.03	1.50	1.39
42	BW	13	ARG	NE-CZ	5.03	1.38	1.33
45	BC	39	SER	CA-CB	5.03	1.62	1.54
57	BB	2352	A	N7-C5	-5.03	1.29	1.39
57	BB	2529	G	O3'-P	-5.03	1.53	1.61
57	BB	2695	U	C5'-C4'	5.03	1.58	1.51
2	AK	97	ARG	CZ-NH1	5.02	1.39	1.32
19	AH	50	VAL	CA-CB	-5.02	1.47	1.53
30	BK	59	ALA	CA-C	-5.02	1.46	1.52
36	BQ	49	ARG	CZ-NH1	5.02	1.39	1.32
57	BB	2396	G	C2'-C1'	-5.02	1.45	1.53
57	BB	2711	A	C5'-C4'	5.02	1.58	1.51
21	AA	1014	A	C2'-C1'	-5.02	1.45	1.53
21	AA	1057	G	C2'-C1'	-5.02	1.45	1.53
57	BB	278	A	C2'-O2'	-5.02	1.34	1.42
57	BB	407	G	C3'-O3'	5.02	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	BB	529	A	C3'-C2'	-5.02	1.45	1.52
57	BB	592	A	O5'-C5'	-5.02	1.34	1.42
57	BB	1146	C	C2'-C1'	-5.02	1.45	1.53
13	AB	17	HIS	C-N	5.02	1.40	1.33
57	BB	600	G	C2'-O2'	-5.02	1.34	1.42
57	BB	1305	C	C4'-O4'	-5.02	1.38	1.45
57	BB	1533	C	C3'-O3'	5.02	1.49	1.42
1	AJ	65	TYR	CZ-OH	5.02	1.48	1.38
4	AM	59	VAL	C-N	5.02	1.41	1.33
30	BK	45	ALA	N-CA	-5.02	1.39	1.46
53	BE	53	THR	CA-C	-5.02	1.46	1.53
57	BB	136	G	C3'-O3'	5.02	1.49	1.42
57	BB	465	G	O4'-C1'	-5.02	1.34	1.41
3	AL	58	ASN	N-CA	-5.02	1.39	1.46
21	AA	411	A	C4'-C3'	5.02	1.60	1.53
23	AW	56	C	C3'-O3'	5.02	1.49	1.42
25	AZ	28	THR	CA-C	-5.02	1.46	1.52
26	AV	24	U	P-O5'	-5.02	1.52	1.59
34	BO	114	GLY	C-O	-5.02	1.17	1.23
57	BB	2059	A	C4'-O4'	5.02	1.53	1.45
58	BA	27	C	C5'-C4'	5.02	1.58	1.51
49	B2	19	ARG	N-CA	-5.02	1.40	1.46
57	BB	2282	G	O4'-C1'	-5.02	1.34	1.42
21	AA	1286	U	O3'-P	-5.01	1.53	1.61
21	AA	1488	G	C4'-O4'	5.01	1.53	1.45
57	BB	1502	A	C4'-O4'	5.01	1.53	1.45
57	BB	2757	A	C2'-C1'	5.01	1.60	1.53
21	AA	1038	C	C3'-O3'	-5.01	1.34	1.42
21	AA	1329	A	C4'-C3'	5.01	1.60	1.52
30	BK	17	ARG	NE-CZ	5.01	1.38	1.33
57	BB	667	U	C5'-C4'	5.01	1.58	1.51
57	BB	1303	G	C2'-C1'	-5.01	1.45	1.53
57	BB	2442	C	C1'-N1	5.01	1.55	1.48
57	BB	2819	G	P-O5'	-5.01	1.52	1.59
57	BB	2868	A	C4'-O4'	5.01	1.53	1.45
58	BA	115	A	C4'-C3'	5.01	1.60	1.52
3	AL	97	VAL	C-N	5.01	1.40	1.33
20	AI	98	ARG	NE-CZ	5.01	1.38	1.33
23	AW	51	U	C5'-C4'	5.01	1.58	1.51
31	BL	26	GLY	CA-C	-5.01	1.44	1.51
42	BW	44	PHE	CA-C	5.01	1.58	1.52
42	BW	76	ARG	CZ-NH2	5.01	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BF	149	ARG	CD-NE	5.01	1.53	1.46
57	BB	967	U	C2'-C1'	-5.01	1.45	1.53
57	BB	1084	A	O3'-P	-5.01	1.53	1.61
21	AA	637	C	C4'-C3'	5.01	1.60	1.52
23	AW	50	U	C5'-C4'	5.01	1.58	1.51
25	AZ	213	PRO	N-CA	-5.01	1.41	1.46
32	BM	87	GLY	C-O	-5.01	1.18	1.23
57	BB	315	G	C2'-C1'	-5.01	1.45	1.53
57	BB	1016	G	C2'-C1'	-5.01	1.45	1.53
57	BB	1342	A	N7-C5	-5.01	1.29	1.39
2	AK	52	ARG	N-CA	-5.01	1.39	1.46
21	AA	495	A	O5'-C5'	5.01	1.50	1.42
21	AA	571	U	C2'-C1'	-5.01	1.45	1.53
21	AA	850	U	C2'-C1'	-5.01	1.45	1.53
39	BT	80	TRP	CA-CB	5.01	1.60	1.53
57	BB	2597	G	P-O5'	-5.01	1.52	1.59
21	AA	1127	G	C4'-O4'	5.01	1.53	1.45
31	BL	141	LYS	CA-C	-5.01	1.46	1.52
52	BD	73	VAL	C-N	5.01	1.40	1.33
55	BG	28	LYS	N-CA	5.01	1.52	1.46
57	BB	22	C	O3'-P	-5.01	1.53	1.61
57	BB	252	G	C2'-C1'	-5.01	1.45	1.53
57	BB	445	C	C1'-N1	5.01	1.55	1.48
57	BB	1132	U	O5'-C5'	5.01	1.50	1.42
57	BB	1140	C	O3'-P	-5.01	1.53	1.61
21	AA	969	A	C5'-C4'	-5.00	1.43	1.51
51	B4	18	LYS	CA-C	-5.00	1.46	1.52
57	BB	1002	G	C3'-C2'	5.00	1.60	1.52
57	BB	2506	U	C4'-O4'	-5.00	1.38	1.45
58	BA	41	G	C2'-O2'	5.00	1.50	1.42
7	AP	8	ARG	CA-C	-5.00	1.46	1.52
21	AA	808	C	O5'-C5'	5.00	1.50	1.42
21	AA	972	C	C1'-N1	5.00	1.55	1.48
21	AA	1168	U	O4'-C1'	5.00	1.49	1.41
25	AZ	54	GLU	C-O	-5.00	1.18	1.24
30	BK	67	GLY	CA-C	-5.00	1.45	1.51
36	BQ	50	ARG	C-N	5.00	1.40	1.34
57	BB	636	G	O3'-P	-5.00	1.53	1.61
57	BB	2281	A	O3'-P	-5.00	1.53	1.61
58	BA	101	A	C2'-C1'	-5.00	1.45	1.53
5	AN	31	SER	N-CA	-5.00	1.39	1.46
9	AR	50	TYR	CG-CD2	5.00	1.49	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	AD	29	THR	C-N	5.00	1.40	1.33
17	AF	39	LEU	C-N	5.00	1.40	1.33
35	BP	108	ARG	NE-CZ	5.00	1.38	1.33
56	BH	52	ALA	CA-C	-5.00	1.45	1.52
57	BB	1283	G	C5'-C4'	5.00	1.58	1.51
57	BB	2077	A	C4'-C3'	-5.00	1.45	1.52
57	BB	2233	U	C5'-C4'	5.00	1.58	1.51

All (7530) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	B5	36	ALA	CA-C-N	18.25	154.55	121.70
27	B5	36	ALA	C-N-CA	18.25	154.55	121.70
27	B5	36	ALA	O-C-N	-17.55	99.25	122.59
57	BB	880	G	P-O3'-C3'	15.65	143.67	120.20
21	AA	1256	A	P-O3'-C3'	15.62	143.63	120.20
21	AA	412	A	P-O3'-C3'	15.30	143.15	120.20
57	BB	62	U	P-O5'-C5'	15.00	143.40	120.90
22	AY	3	G	P-O3'-C3'	14.62	142.13	120.20
22	AY	34	G	P-O3'-C3'	14.48	141.92	120.20
22	AY	48	C	P-O5'-C5'	14.36	142.44	120.90
34	BO	74	VAL	N-CA-C	-14.01	99.32	113.47
52	BD	193	VAL	N-CA-CB	13.93	124.34	109.99
21	AA	243	A	C2'-C3'-O3'	13.49	129.74	109.50
19	AH	3	GLN	N-CA-C	-13.15	95.69	113.18
5	AN	23	ARG	N-CA-C	-13.07	95.30	112.68
45	BC	134	ILE	N-CA-C	-13.01	93.20	107.77
27	B5	149	VAL	N-CA-CB	12.76	122.11	111.64
1	AJ	25	ILE	N-CA-C	-12.74	101.04	113.53
45	BC	89	ASN	CA-CB-CG	-12.50	100.10	112.60
57	BB	2076	U	P-O3'-C3'	12.49	138.93	120.20
14	AC	24	ASN	CA-CB-CG	-12.41	100.19	112.60
57	BB	2894	G	P-O5'-C5'	12.07	139.00	120.90
56	BH	101	ASP	CA-CB-CG	-11.96	100.64	112.60
55	BG	82	PHE	CA-CB-CG	-11.90	101.90	113.80
41	BV	44	HIS	CA-CB-CG	11.90	125.70	113.80
57	BB	2425	A	P-O3'-C3'	11.82	137.93	120.20
3	AL	4	ASN	CA-CB-CG	11.74	124.34	112.60
54	BF	174	PHE	CA-CB-CG	-11.67	102.13	113.80
57	BB	2130	U	P-O3'-C3'	11.35	137.23	120.20
25	AZ	38	THR	N-CA-C	-11.24	99.39	113.55
20	AI	97	LEU	N-CA-C	-11.23	101.82	114.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2104	C	P-O3'-C3'	11.20	137.00	120.20
39	BT	51	PHE	N-CA-CB	11.06	125.16	114.10
31	BL	7	SER	O-C-N	-11.02	114.66	121.71
36	BQ	83	LYS	N-CA-C	-10.99	98.84	114.12
16	AE	55	VAL	CA-C-O	-10.93	109.56	118.85
21	AA	960	U	P-O3'-C3'	10.89	136.54	120.20
22	AY	12	U	C4'-C3'-C2'	-10.82	91.78	102.60
55	BG	38	ASP	CA-CB-CG	-10.81	101.79	112.60
57	BB	1098	A	C5'-C4'-C3'	10.79	132.18	116.00
50	B3	31	ILE	CB-CA-C	10.78	128.97	111.29
40	BU	48	VAL	CA-C-N	10.76	130.88	119.90
40	BU	48	VAL	C-N-CA	10.76	130.88	119.90
57	BB	2174	C	P-O3'-C3'	10.76	136.34	120.20
36	BQ	49	ARG	N-CA-C	-10.66	101.31	114.75
53	BE	108	ILE	CA-C-N	10.66	134.73	120.65
53	BE	108	ILE	C-N-CA	10.66	134.73	120.65
20	AI	37	TYR	N-CA-C	-10.58	100.36	113.38
22	AY	27	C	O3'-P-O5'	-10.55	88.18	104.00
27	B5	37	LYS	N-CA-CB	10.54	128.43	110.50
57	BB	279	A	P-O5'-C5'	10.53	136.69	120.90
32	BM	13	HIS	CA-C-N	10.53	134.39	120.28
32	BM	13	HIS	C-N-CA	10.53	134.39	120.28
55	BG	46	ASP	N-CA-C	-10.52	100.17	113.43
55	BG	169	ARG	N-CA-C	-10.48	102.67	114.62
57	BB	2283	C	P-O5'-C5'	10.48	136.62	120.90
57	BB	670	A	P-O3'-C3'	10.42	135.84	120.20
37	BR	68	ARG	NE-CZ-NH2	10.41	128.57	119.20
57	BB	2428	G	P-O3'-C3'	10.41	135.82	120.20
25	AZ	366	ILE	N-CA-C	-10.41	94.61	108.35
31	BL	43	GLY	N-CA-C	-10.40	100.02	115.72
5	AN	61	ASN	CA-CB-CG	10.39	122.99	112.60
19	AH	9	MET	CA-C-N	10.37	134.59	120.38
19	AH	9	MET	C-N-CA	10.37	134.59	120.38
36	BQ	32	ARG	NE-CZ-NH2	10.35	128.52	119.20
46	BZ	48	ASN	CA-C-N	10.32	135.15	120.28
46	BZ	48	ASN	C-N-CA	10.32	135.15	120.28
56	BH	134	VAL	N-CA-C	-10.31	101.78	111.48
23	AW	49	C	P-O5'-C5'	10.24	136.26	120.90
57	BB	2282	G	C2'-C3'-O3'	10.20	124.80	109.50
14	AC	138	GLN	CA-C-N	10.09	133.97	120.65
14	AC	138	GLN	C-N-CA	10.09	133.97	120.65
21	AA	388	G	C5'-C4'-O4'	10.06	124.18	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	60	A	P-O3'-C3'	10.05	135.27	120.20
25	AZ	71	THR	N-CA-C	-10.05	97.24	110.40
21	AA	1073	U	C4'-C3'-C2'	-10.04	92.56	102.60
54	BF	87	LYS	O-C-N	10.04	129.98	121.65
39	BT	37	ASP	CA-CB-CG	-10.02	102.58	112.60
44	BY	36	GLN	OE1-CD-NE2	9.99	132.59	122.60
33	BN	21	PHE	CA-CB-CG	-9.99	103.81	113.80
13	AB	18	GLN	CA-C-N	9.94	133.77	120.65
13	AB	18	GLN	C-N-CA	9.94	133.77	120.65
20	AI	42	THR	CA-C-N	9.91	133.96	120.38
20	AI	42	THR	C-N-CA	9.91	133.96	120.38
5	AN	92	ILE	CA-C-O	-9.90	113.38	119.51
31	BL	93	ASN	CA-C-N	9.89	133.30	120.44
31	BL	93	ASN	C-N-CA	9.89	133.30	120.44
32	BM	53	MET	N-CA-C	-9.88	100.88	113.72
27	B5	179	ASP	N-CA-C	-9.87	100.15	112.88
18	AG	114	SER	CA-C-N	9.87	140.72	121.18
18	AG	114	SER	C-N-CA	9.87	140.72	121.18
16	AE	59	ILE	N-CA-C	-9.84	103.85	112.12
21	AA	1332	A	C5'-C4'-C3'	9.82	130.72	116.00
53	BE	22	ASP	CA-CB-CG	-9.80	102.80	112.60
57	BB	1061	U	P-O3'-C3'	9.79	134.89	120.20
30	BK	13	SER	CA-C-N	-9.77	114.64	122.16
30	BK	13	SER	C-N-CA	-9.77	114.64	122.16
21	AA	328	C	C2'-C3'-O3'	9.75	124.13	109.50
33	BN	22	ARG	N-CA-C	-9.74	101.08	113.16
25	AZ	127	VAL	CA-C-O	-9.72	111.21	119.76
44	BY	25	GLN	N-CA-C	-9.71	102.00	114.04
29	BJ	47	HIS	CA-CB-CG	9.69	123.49	113.80
22	AY	20	G	C4'-C3'-C2'	9.65	112.25	102.60
45	BC	20	ASN	CA-CB-CG	-9.65	102.95	112.60
19	AH	26	MET	N-CA-C	-9.63	99.46	108.13
57	BB	891	G	C1'-O4'-C4'	-9.63	100.27	109.90
25	AZ	66	HIS	CA-CB-CG	-9.59	104.21	113.80
54	BF	87	LYS	CA-C-O	-9.57	112.30	118.33
21	AA	1509	C	C4'-C3'-C2'	-9.57	93.03	102.60
31	BL	132	ARG	N-CA-C	-9.57	100.92	112.59
57	BB	1535	A	O4'-C1'-C2'	-9.55	96.25	105.80
46	BZ	19	HIS	CE1-NE2-CD2	-9.55	99.45	109.00
57	BB	901	C	P-O5'-C5'	9.53	135.20	120.90
40	BU	39	ASN	CA-CB-CG	-9.51	103.09	112.60
57	BB	997	G	C4'-C3'-C2'	-9.50	93.10	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BR	27	ILE	N-CA-C	9.50	120.85	108.12
46	BZ	27	GLY	CA-C-N	9.50	134.36	120.87
46	BZ	27	GLY	C-N-CA	9.50	134.36	120.87
12	AU	50	SER	N-CA-C	-9.50	101.70	113.38
56	BH	45	GLU	CA-C-N	9.48	133.97	120.79
56	BH	45	GLU	C-N-CA	9.48	133.97	120.79
57	BB	1318	U	C5'-C4'-C3'	-9.48	101.78	116.00
3	AL	116	TYR	O-C-N	9.47	130.56	121.56
57	BB	1029	A	P-O5'-C5'	9.47	135.10	120.90
21	AA	167	A	C4'-C3'-C2'	-9.45	93.16	102.60
18	AG	41	ILE	CA-C-O	-9.44	111.23	121.05
25	AZ	51	ASN	CA-CB-CG	9.43	122.03	112.60
28	BI	71	LYS	N-CA-C	-9.41	94.99	109.95
56	BH	20	ASN	OD1-CG-ND2	9.41	132.01	122.60
53	BE	19	PHE	CA-C-O	9.40	130.68	119.59
27	B5	22	ASP	CA-C-N	9.40	133.33	120.46
27	B5	22	ASP	C-N-CA	9.40	133.33	120.46
54	BF	176	PHE	CA-C-N	9.39	134.14	120.90
54	BF	176	PHE	C-N-CA	9.39	134.14	120.90
12	AU	40	PRO	N-CA-CB	9.38	112.22	103.41
1	AJ	73	LEU	N-CA-C	-9.37	102.42	114.04
54	BF	92	GLY	CA-C-N	9.37	133.19	120.54
54	BF	92	GLY	C-N-CA	9.37	133.19	120.54
39	BT	32	LEU	CA-C-N	9.36	134.87	121.02
39	BT	32	LEU	C-N-CA	9.36	134.87	121.02
44	BY	11	VAL	O-C-N	-9.36	111.78	122.07
54	BF	75	GLY	N-CA-C	-9.32	103.11	115.32
47	B0	10	SER	N-CA-C	-9.31	102.11	112.72
16	AE	54	GLU	CA-C-N	9.31	126.10	120.24
16	AE	54	GLU	C-N-CA	9.31	126.10	120.24
57	BB	2073	C	C4'-C3'-C2'	-9.30	93.30	102.60
57	BB	1452	G	P-O3'-C3'	9.29	134.14	120.20
14	AC	58	ARG	CA-C-N	9.29	129.02	119.64
14	AC	58	ARG	C-N-CA	9.29	129.02	119.64
57	BB	1481	U	C4'-C3'-C2'	-9.28	93.32	102.60
52	BD	184	ARG	NE-CZ-NH1	-9.27	112.23	121.50
55	BG	101	VAL	N-CA-CB	9.26	120.63	110.53
57	BB	791	C	C3'-C2'-C1'	-9.26	92.24	101.50
15	AD	37	PRO	N-CA-C	-9.25	103.91	114.92
4	AM	94	LEU	CA-C-O	-9.25	110.26	120.25
30	BK	79	ASP	N-CA-C	-9.25	102.01	113.38
25	AZ	138	ASP	N-CA-C	-9.24	100.92	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2853	C	O4'-C1'-N1	9.23	122.34	108.50
27	B5	151	GLU	CA-C-N	9.22	132.42	120.44
27	B5	151	GLU	C-N-CA	9.22	132.42	120.44
40	BU	14	THR	CA-C-N	9.22	130.94	120.53
40	BU	14	THR	C-N-CA	9.22	130.94	120.53
55	BG	114	HIS	CA-CB-CG	9.22	123.02	113.80
21	AA	1278	G	P-O3'-C3'	9.21	134.01	120.20
14	AC	116	ALA	CA-C-N	9.21	133.54	120.28
14	AC	116	ALA	C-N-CA	9.21	133.54	120.28
55	BG	169	ARG	NE-CZ-NH2	9.21	127.49	119.20
57	BB	1046	A	O4'-C1'-C2'	-9.20	96.60	105.80
21	AA	309	A	C4'-C3'-C2'	-9.17	93.43	102.60
21	AA	118	U	O3'-P-O5'	-9.17	90.25	104.00
53	BE	141	MET	N-CA-C	-9.16	101.65	112.92
13	AB	14	HIS	CB-CG-CD2	-9.16	119.29	131.20
46	BZ	19	HIS	ND1-CE1-NE2	9.14	117.54	108.40
25	AZ	57	ALA	CB-CA-C	-9.14	93.97	110.70
55	BG	167	VAL	N-CA-CB	9.13	122.82	112.32
57	BB	369	U	P-O5'-C5'	9.13	134.59	120.90
21	AA	357	G	O4'-C1'-C2'	-9.12	98.48	107.60
58	BA	105	G	O4'-C1'-N9	9.12	122.18	108.50
15	AD	48	SER	CA-C-N	9.11	133.46	120.79
15	AD	48	SER	C-N-CA	9.11	133.46	120.79
23	AW	40	C	P-O5'-C5'	-9.11	107.24	120.90
4	AM	70	ARG	CA-C-N	9.09	134.46	120.82
4	AM	70	ARG	C-N-CA	9.09	134.46	120.82
57	BB	2178	C	P-O3'-C3'	9.09	133.84	120.20
21	AA	1188	A	O4'-C1'-N9	9.09	122.13	108.50
45	BC	177	SER	N-CA-C	-9.08	102.21	113.38
14	AC	186	SER	O-C-N	-9.08	114.21	123.29
30	BK	70	ARG	NE-CZ-NH2	-9.07	111.03	119.20
55	BG	110	HIS	CE1-NE2-CD2	-9.07	99.93	109.00
27	B5	28	ALA	O-C-N	9.06	131.51	122.09
32	BM	55	ARG	NE-CZ-NH1	-9.06	112.44	121.50
55	BG	148	ARG	N-CA-C	-9.06	101.76	113.17
33	BN	102	PHE	CA-CB-CG	-9.06	104.74	113.80
50	B3	53	ASP	CA-CB-CG	9.05	121.66	112.60
21	AA	613	C	P-O5'-C5'	9.04	134.45	120.90
45	BC	12	ARG	N-CA-C	-9.03	100.57	113.21
16	AE	131	ASN	CA-C-O	-9.02	112.14	119.99
21	AA	1202	U	O4'-C1'-N1	9.02	122.02	108.50
13	AB	31	PHE	CA-CB-CG	-9.01	104.79	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	BF	109	ARG	NE-CZ-NH1	-9.01	112.49	121.50
22	AY	40	C	O4'-C4'-C3'	9.00	113.00	104.00
52	BD	184	ARG	NE-CZ-NH2	9.00	127.30	119.20
22	AY	12	U	O5'-C5'-C4'	8.99	124.98	111.50
32	BM	28	PHE	CA-CB-CG	8.99	122.79	113.80
23	AW	52	G	C4'-C3'-O3'	-8.98	99.52	113.00
25	AZ	173	SER	CA-C-N	8.98	132.50	120.65
25	AZ	173	SER	C-N-CA	8.98	132.50	120.65
57	BB	1661	G	O4'-C4'-C3'	-8.98	95.02	104.00
57	BB	2081	U	C5'-C4'-C3'	8.96	129.44	116.00
57	BB	2213	U	P-O3'-C3'	8.96	133.64	120.20
21	AA	653	U	P-O5'-C5'	8.96	134.34	120.90
57	BB	900	A	P-O3'-C3'	-8.95	106.78	120.20
58	BA	30	C	O4'-C1'-C2'	-8.94	98.66	107.60
23	AW	39	U	O3'-P-O5'	8.90	117.35	104.00
10	AS	56	HIS	N-CA-C	-8.90	94.75	109.07
21	AA	471	U	O4'-C4'-C3'	-8.88	95.12	104.00
27	B5	5	THR	CA-C-N	8.87	132.52	120.54
27	B5	5	THR	C-N-CA	8.87	132.52	120.54
57	BB	2145	C	P-O3'-C3'	8.87	133.51	120.20
21	AA	689	C	P-O5'-C5'	8.87	134.20	120.90
25	AZ	90	ASN	CA-CB-CG	-8.86	103.74	112.60
57	BB	1381	G	O4'-C1'-N9	8.85	121.77	108.50
19	AH	79	ARG	CA-C-O	-8.84	113.02	120.71
23	AW	20	U	P-O5'-C5'	8.84	134.16	120.90
57	BB	2167	U	P-O5'-C5'	8.84	134.16	120.90
13	AB	178	LEU	N-CA-C	-8.83	102.66	113.97
21	AA	259	G	P-O3'-C3'	-8.83	106.95	120.20
45	BC	199	HIS	CG-CD2-NE2	8.83	116.03	107.20
55	BG	144	ALA	N-CA-C	-8.83	101.47	113.30
32	BM	108	VAL	CB-CA-C	8.82	117.97	109.33
57	BB	2328	A	C4'-C3'-C2'	-8.82	93.78	102.60
57	BB	2134	A	P-O3'-C3'	8.82	133.43	120.20
16	AE	148	SER	CA-C-N	8.81	128.46	119.82
16	AE	148	SER	C-N-CA	8.81	128.46	119.82
18	AG	112	ASP	CA-CB-CG	-8.81	103.78	112.60
37	BR	64	VAL	CB-CA-C	-8.81	101.52	112.45
57	BB	544	C	C4'-C3'-C2'	-8.81	93.79	102.60
39	BT	86	THR	CA-C-O	8.80	130.93	120.81
57	BB	986	C	O4'-C1'-N1	8.79	121.68	108.50
34	BO	31	THR	O-C-N	-8.79	115.70	121.85
11	AT	73	ARG	N-CA-C	-8.78	104.61	114.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	AF	93	LYS	CA-C-O	8.78	128.56	118.55
5	AN	5	MET	CA-C-N	8.78	132.39	120.54
5	AN	5	MET	C-N-CA	8.78	132.39	120.54
15	AD	59	LYS	CA-C-N	8.78	132.90	120.53
15	AD	59	LYS	C-N-CA	8.78	132.90	120.53
50	B3	58	ILE	N-CA-C	-8.76	103.85	112.17
56	BH	91	PHE	CA-CB-CG	-8.76	105.04	113.80
19	AH	92	PRO	CA-C-N	8.76	136.35	122.34
19	AH	92	PRO	C-N-CA	8.76	136.35	122.34
56	BH	30	LEU	N-CA-C	-8.76	95.39	108.79
57	BB	2135	A	P-O5'-C5'	8.73	134.00	120.90
57	BB	753	A	C3'-C2'-C1'	8.73	110.03	101.30
14	AC	30	ASP	CA-CB-CG	-8.72	103.88	112.60
30	BK	112	MET	N-CA-C	-8.72	101.63	112.88
45	BC	6	LYS	CA-C-N	8.72	130.74	119.84
45	BC	6	LYS	C-N-CA	8.72	130.74	119.84
57	BB	644	A	P-O3'-C3'	8.71	133.26	120.20
42	BW	42	THR	N-CA-C	-8.70	102.80	113.41
57	BB	2873	A	C2'-C3'-O3'	8.70	122.55	109.50
21	AA	960	U	C2'-C3'-O3'	8.70	122.54	109.50
31	BL	25	SER	N-CA-C	-8.69	102.81	112.72
43	BX	48	LEU	N-CA-C	-8.69	95.81	109.72
25	AZ	141	ASP	CA-CB-CG	-8.69	103.91	112.60
55	BG	82	PHE	CA-C-N	8.69	138.13	121.54
55	BG	82	PHE	C-N-CA	8.69	138.13	121.54
57	BB	1378	A	P-O5'-C5'	-8.68	107.88	120.90
57	BB	2433	A	P-O5'-C5'	-8.68	107.88	120.90
20	AI	71	ILE	N-CA-C	-8.68	103.43	111.67
8	AQ	28	VAL	CA-C-O	-8.67	111.29	120.57
15	AD	99	ASN	N-CA-C	-8.67	99.55	112.04
39	BT	25	GLU	N-CA-C	-8.66	101.69	113.30
21	AA	279	A	P-O3'-C3'	8.66	133.19	120.20
3	AL	55	ARG	N-CA-C	-8.65	97.69	109.54
52	BD	204	LYS	CB-CA-C	-8.64	99.27	109.47
57	BB	891	G	P-O5'-C5'	8.64	133.87	120.90
57	BB	1813	G	O5'-C5'-C4'	-8.64	98.54	111.50
25	AZ	266	ASP	CA-CB-CG	-8.63	103.97	112.60
45	BC	101	ARG	N-CA-C	-8.62	96.74	108.38
57	BB	890	C	P-O3'-C3'	8.62	133.13	120.20
19	AH	16	GLY	CA-C-N	8.62	132.18	120.54
19	AH	16	GLY	C-N-CA	8.62	132.18	120.54
35	BP	14	GLN	N-CA-C	-8.62	102.51	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	807	U	P-O5'-C5'	-8.61	107.98	120.90
21	AA	851	G	C5'-C4'-C3'	-8.60	103.10	116.00
16	AE	96	GLN	CA-C-O	-8.60	113.23	120.71
54	BF	109	ARG	NE-CZ-NH2	8.60	126.94	119.20
57	BB	1112	G	O4'-C4'-C3'	-8.59	95.41	104.00
56	BH	66	ASN	CA-CB-CG	8.59	121.19	112.60
57	BB	810	U	P-O5'-C5'	8.59	133.78	120.90
6	AO	46	LYS	N-CA-C	-8.59	101.45	114.16
21	AA	220	G	P-O3'-C3'	-8.59	107.32	120.20
58	BA	35	C	O3'-P-O5'	-8.59	91.12	104.00
25	AZ	212	LEU	CA-C-N	8.58	128.72	120.31
25	AZ	212	LEU	C-N-CA	8.58	128.72	120.31
25	AZ	201	GLU	CA-C-N	8.58	128.52	120.03
25	AZ	201	GLU	C-N-CA	8.58	128.52	120.03
25	AZ	59	GLY	CA-C-O	-8.57	112.40	121.57
41	BV	91	PHE	CA-CB-CG	-8.57	105.23	113.80
57	BB	2154	A	O4'-C1'-N9	8.56	121.34	108.50
41	BV	16	ALA	CA-C-N	8.56	132.10	120.54
41	BV	16	ALA	C-N-CA	8.56	132.10	120.54
8	AQ	75	VAL	CB-CA-C	-8.55	103.53	111.06
57	BB	870	U	C4'-C3'-C2'	-8.55	94.05	102.60
9	AR	57	ALA	O-C-N	8.55	130.88	122.07
21	AA	465	A	P-O3'-C3'	8.55	133.02	120.20
21	AA	1300	G	P-O5'-C5'	8.55	133.72	120.90
10	AS	70	LEU	CA-C-N	8.53	129.59	120.03
10	AS	70	LEU	C-N-CA	8.53	129.59	120.03
57	BB	1668	A	O3'-P-O5'	-8.52	91.22	104.00
22	AY	4	G	O4'-C4'-C3'	8.52	112.52	104.00
57	BB	241	A	O4'-C1'-C2'	-8.51	97.29	105.80
18	AG	61	PHE	N-CA-C	-8.50	98.67	111.34
57	BB	2582	G	C3'-C2'-C1'	-8.50	92.80	101.30
57	BB	2525	G	P-O5'-C5'	-8.50	108.15	120.90
23	AW	72	C	C5'-C4'-C3'	8.49	128.74	116.00
20	AI	42	THR	N-CA-C	-8.48	102.51	113.12
11	AT	80	ALA	CA-C-N	8.48	132.58	120.79
11	AT	80	ALA	C-N-CA	8.48	132.58	120.79
56	BH	67	ALA	CA-C-N	8.48	136.97	121.70
56	BH	67	ALA	C-N-CA	8.48	136.97	121.70
53	BE	33	VAL	N-CA-C	-8.47	104.64	112.43
57	BB	2617	U	P-O5'-C5'	-8.47	108.20	120.90
39	BT	89	GLU	N-CA-C	-8.46	102.36	114.12
44	BY	47	ARG	N-CA-C	8.46	120.19	110.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AN	83	VAL	CA-C-N	8.45	131.95	120.54
5	AN	83	VAL	C-N-CA	8.45	131.95	120.54
25	AZ	50	ASP	CA-CB-CG	-8.44	104.16	112.60
5	AN	48	GLN	N-CA-C	-8.44	100.94	113.61
38	BS	88	ARG	CA-C-N	8.44	134.72	121.56
38	BS	88	ARG	C-N-CA	8.44	134.72	121.56
27	B5	78	PHE	CA-CB-CG	8.43	122.23	113.80
21	AA	1241	G	P-O5'-C5'	8.43	133.54	120.90
21	AA	1017	U	C5'-C4'-C3'	-8.43	103.36	116.00
21	AA	620	C	O4'-C1'-N1	8.42	121.13	108.50
45	BC	146	LYS	O-C-N	-8.42	115.26	121.83
46	BZ	22	THR	N-CA-C	-8.42	103.20	113.97
57	BB	510	C	P-O5'-C5'	8.42	133.53	120.90
34	BO	87	ILE	N-CA-CB	8.41	121.05	111.21
57	BB	2333	A	P-O3'-C3'	8.41	132.81	120.20
25	AZ	376	ILE	CA-C-O	-8.40	112.08	120.31
30	BK	12	ASN	CA-CB-CG	8.40	121.00	112.60
32	BM	95	LEU	N-CA-CB	8.40	122.54	109.69
52	BD	197	THR	N-CA-CB	8.40	124.68	110.49
21	AA	31	G	P-O5'-C5'	8.39	133.49	120.90
54	BF	174	PHE	CA-C-O	-8.39	113.41	120.71
57	BB	1484	U	P-O5'-C5'	8.39	133.49	120.90
24	AX	20	U	P-O3'-C3'	-8.38	107.64	120.20
57	BB	1699	G	C1'-O4'-C4'	-8.37	101.33	109.70
57	BB	1211	C	P-O3'-C3'	8.37	132.75	120.20
36	BQ	42	GLY	CA-C-N	8.37	132.17	120.29
36	BQ	42	GLY	C-N-CA	8.37	132.17	120.29
21	AA	455	G	O3'-P-O5'	-8.37	91.45	104.00
21	AA	471	U	P-O5'-C5'	8.37	133.45	120.90
18	AG	21	LEU	N-CA-C	-8.36	102.11	111.14
34	BO	101	GLY	CA-C-N	8.36	131.48	120.28
34	BO	101	GLY	C-N-CA	8.36	131.48	120.28
22	AY	28	C	O4'-C4'-C3'	-8.36	95.64	104.00
30	BK	63	ARG	CB-CA-C	-8.36	99.98	111.51
26	AV	40	C	C4'-C3'-C2'	-8.35	94.25	102.60
55	BG	86	LEU	CB-CA-C	-8.35	101.08	111.43
57	BB	1978	A	P-O5'-C5'	8.34	133.42	120.90
56	BH	59	ALA	CA-C-O	-8.34	111.97	120.90
21	AA	1009	U	C5'-C4'-C3'	-8.33	103.50	116.00
26	AV	17	C	C4'-C3'-C2'	-8.33	94.27	102.60
49	B2	19	ARG	NE-CZ-NH2	8.32	126.69	119.20
56	BH	115	VAL	CA-C-N	8.32	137.43	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BH	115	VAL	C-N-CA	8.32	137.43	121.54
21	AA	366	A	P-O3'-C3'	8.32	132.68	120.20
57	BB	2538	C	O4'-C1'-N1	8.31	120.97	108.50
14	AC	137	VAL	CB-CA-C	8.31	118.37	111.06
57	BB	1209	U	P-O3'-C3'	8.31	132.66	120.20
32	BM	123	LYS	N-CA-C	-8.30	101.62	112.41
28	BI	53	PRO	O-C-N	8.29	132.44	123.23
13	AB	168	GLU	N-CA-C	-8.29	101.02	112.30
1	AJ	60	ASP	N-CA-C	-8.29	102.61	112.89
23	AW	23	A	C5'-C4'-C3'	-8.29	103.57	116.00
52	BD	143	PRO	CA-C-O	-8.28	111.95	121.56
57	BB	2089	C	P-O5'-C5'	8.28	133.32	120.90
17	AF	71	ILE	CA-C-O	-8.28	111.72	120.57
25	AZ	71	THR	CA-C-N	8.27	128.97	120.04
25	AZ	71	THR	C-N-CA	8.27	128.97	120.04
35	BP	24	THR	N-CA-C	-8.27	95.25	108.73
40	BU	68	ASN	CA-CB-CG	-8.26	104.34	112.60
57	BB	2569	G	C4'-C3'-C2'	-8.26	94.34	102.60
57	BB	1728	C	O4'-C1'-N1	8.26	120.88	108.50
42	BW	11	ASN	CB-CA-C	-8.25	96.18	109.80
49	B2	35	ARG	N-CA-C	-8.25	103.34	113.41
21	AA	1454	G	O5'-C5'-C4'	8.25	123.88	111.50
55	BG	169	ARG	NE-CZ-NH1	-8.24	113.26	121.50
22	AY	66	A	P-O5'-C5'	8.22	133.24	120.90
23	AW	6	G	P-O5'-C5'	8.22	133.23	120.90
18	AG	147	ASN	N-CA-C	-8.22	101.71	113.21
18	AG	141	HIS	CE1-NE2-CD2	-8.22	100.78	109.00
30	BK	62	VAL	CB-CA-C	-8.21	101.01	111.20
46	BZ	47	ILE	CB-CA-C	-8.21	101.29	112.04
57	BB	791	C	O4'-C1'-C2'	8.20	114.00	105.80
45	BC	206	LYS	CA-C-O	8.20	130.07	121.38
57	BB	2092	U	C5'-C4'-C3'	-8.20	102.90	115.20
5	AN	58	ARG	NE-CZ-NH2	-8.20	111.82	119.20
57	BB	1939	U	O4'-C4'-C3'	-8.20	97.90	106.10
57	BB	1987	A	P-O5'-C5'	-8.19	108.61	120.90
57	BB	168	G	P-O5'-C5'	8.19	133.19	120.90
57	BB	670	A	C2'-C3'-O3'	8.19	121.78	109.50
17	AF	19	PRO	CA-C-N	8.18	129.02	119.94
17	AF	19	PRO	C-N-CA	8.18	129.02	119.94
21	AA	411	A	O4'-C1'-N9	8.18	120.47	108.20
21	AA	635	A	C4'-C3'-C2'	-8.18	94.42	102.60
57	BB	1535	A	P-O5'-C5'	8.18	133.17	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	BE	113	VAL	CA-C-O	-8.18	112.50	121.17
57	BB	1930	G	O4'-C1'-N9	8.18	120.76	108.50
5	AN	29	ILE	CA-C-N	8.17	136.68	121.97
5	AN	29	ILE	C-N-CA	8.17	136.68	121.97
49	B2	12	ARG	CA-C-N	8.17	132.05	120.28
49	B2	12	ARG	C-N-CA	8.17	132.05	120.28
18	AG	38	ALA	CA-C-N	8.17	132.73	120.31
18	AG	38	ALA	C-N-CA	8.17	132.73	120.31
21	AA	925	G	C4'-C3'-C2'	8.15	110.75	102.60
7	AP	33	ILE	N-CA-C	-8.15	103.87	111.45
29	BJ	35	ARG	CB-CA-C	-8.15	97.00	110.85
9	AR	26	ALA	CA-C-N	8.14	133.03	120.82
9	AR	26	ALA	C-N-CA	8.14	133.03	120.82
58	BA	24	G	P-O3'-C3'	8.14	132.40	120.20
14	AC	91	ALA	N-CA-C	8.13	121.17	111.33
34	BO	102	ARG	CB-CA-C	-8.13	97.29	110.79
57	BB	2898	U	C5'-C4'-C3'	-8.13	103.81	116.00
30	BK	98	ILE	N-CA-C	-8.13	96.42	108.45
53	BE	148	ILE	N-CA-C	-8.12	95.62	108.86
18	AG	96	ASN	CA-C-N	8.12	133.00	120.82
18	AG	96	ASN	C-N-CA	8.12	133.00	120.82
21	AA	1250	A	P-O5'-C5'	-8.12	108.72	120.90
57	BB	810	U	O4'-C1'-N1	8.12	120.68	108.50
57	BB	1781	U	O4'-C4'-C3'	-8.12	97.98	106.10
58	BA	43	C	O4'-C1'-N1	8.12	120.68	108.50
28	BI	52	LEU	O-C-N	-8.12	115.73	121.65
23	AW	15	G	P-O3'-C3'	8.11	132.36	120.20
6	AO	66	LEU	CB-CA-C	-8.10	97.34	110.79
25	AZ	45	ALA	CA-C-N	8.10	131.35	120.65
25	AZ	45	ALA	C-N-CA	8.10	131.35	120.65
53	BE	109	LEU	N-CA-C	-8.10	102.14	110.97
29	BJ	132	HIS	N-CA-CB	-8.09	98.75	110.56
25	AZ	184	TRP	CA-C-O	-8.09	110.37	119.67
57	BB	2842	G	P-O3'-C3'	-8.09	108.07	120.20
57	BB	1738	G	P-O3'-C3'	8.08	132.32	120.20
46	BZ	44	ARG	N-CA-C	-8.08	103.44	113.38
18	AG	35	LYS	O-C-N	-8.08	111.51	122.33
9	AR	71	ASP	CA-CB-CG	-8.07	104.53	112.60
40	BU	93	ARG	NE-CZ-NH1	-8.07	113.43	121.50
21	AA	182	A	P-O3'-C3'	8.06	132.30	120.20
57	BB	414	C	C5'-C4'-C3'	8.06	128.10	116.00
53	BE	165	HIS	CB-CG-ND1	8.06	134.79	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	BY	46	VAL	N-CA-CB	8.06	124.53	111.23
57	BB	307	G	P-O5'-C5'	8.06	132.98	120.90
57	BB	389	G	P-O5'-C5'	-8.06	108.82	120.90
18	AG	49	LEU	CA-C-N	8.05	131.07	120.28
18	AG	49	LEU	C-N-CA	8.05	131.07	120.28
57	BB	1117	C	O4'-C4'-C3'	-8.05	95.95	104.00
54	BF	148	VAL	CA-C-N	8.05	136.91	121.54
54	BF	148	VAL	C-N-CA	8.05	136.91	121.54
21	AA	366	A	O4'-C1'-C2'	8.05	113.85	105.80
22	AY	40	C	C1'-O4'-C4'	-8.05	101.85	109.90
57	BB	854	C	O4'-C1'-C2'	-8.04	99.56	107.60
57	BB	1922	G	C4'-C3'-O3'	-8.05	100.93	113.00
21	AA	87	C	C5'-C4'-C3'	8.04	128.06	116.00
57	BB	2506	U	O4'-C1'-N1	8.03	120.55	108.50
34	BO	78	VAL	N-CA-C	8.03	118.83	110.72
57	BB	1509	A	O3'-P-O5'	8.03	116.04	104.00
57	BB	1079	C	O4'-C1'-N1	8.02	120.53	108.50
57	BB	2877	G	C4'-C3'-C2'	-8.02	94.58	102.60
7	AP	21	VAL	N-CA-C	-8.02	96.28	107.99
27	B5	17	ALA	CA-C-N	8.02	132.51	121.05
27	B5	17	ALA	C-N-CA	8.02	132.51	121.05
57	BB	871	U	C4'-C3'-O3'	-8.01	100.98	113.00
57	BB	854	C	O4'-C1'-N1	8.01	120.51	108.50
21	AA	920	U	P-O5'-C5'	8.01	132.91	120.90
10	AS	63	ASP	CA-CB-CG	-8.01	104.59	112.60
42	BW	11	ASN	CA-CB-CG	-8.01	104.59	112.60
57	BB	961	C	O5'-C5'-C4'	-8.01	99.69	111.70
29	BJ	83	GLY	CA-C-O	-8.00	116.53	122.37
21	AA	366	A	C2'-C3'-O3'	8.00	121.50	109.50
57	BB	693	A	C5'-C4'-C3'	8.00	128.00	116.00
57	BB	2594	C	O4'-C1'-N1	8.00	120.50	108.50
58	BA	43	C	P-O5'-C5'	-8.00	108.91	120.90
26	AV	21	A	O3'-P-O5'	-8.00	92.01	104.00
27	B5	71	ARG	CD-NE-CZ	7.99	135.59	124.40
57	BB	876	C	P-O5'-C5'	7.99	132.89	120.90
57	BB	2282	G	P-O3'-C3'	7.99	132.19	120.20
3	AL	95	HIS	O-C-N	-7.99	114.30	123.33
53	BE	34	ALA	N-CA-C	-7.99	103.01	114.12
15	AD	80	ARG	N-CA-C	-7.98	104.14	114.04
40	BU	38	ILE	N-CA-C	-7.98	104.94	111.81
57	BB	2699	C	O4'-C1'-N1	7.98	120.47	108.50
57	BB	851	C	O4'-C1'-N1	7.98	120.46	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AY	31	A	O4'-C1'-N9	7.97	120.46	108.50
57	BB	363	G	C5'-C4'-C3'	-7.97	104.04	116.00
21	AA	846	G	P-O3'-C3'	-7.96	108.25	120.20
21	AA	34	C	C4'-C3'-O3'	-7.96	101.06	113.00
57	BB	1153	C	P-O5'-C5'	7.96	132.84	120.90
32	BM	10	ARG	NE-CZ-NH1	-7.96	113.54	121.50
25	AZ	190	GLU	N-CA-C	7.95	122.08	112.38
38	BS	64	ALA	CA-C-N	7.94	136.70	121.54
38	BS	64	ALA	C-N-CA	7.94	136.70	121.54
21	AA	328	C	P-O3'-C3'	7.94	132.11	120.20
57	BB	89	A	O4'-C4'-C3'	-7.94	96.06	104.00
57	BB	2190	G	O4'-C1'-N9	7.94	120.40	108.50
57	BB	974	G	C3'-C2'-C1'	-7.93	93.57	101.50
11	AT	61	ALA	N-CA-C	-7.93	103.05	112.89
16	AE	96	GLN	CA-C-N	7.92	129.75	119.84
16	AE	96	GLN	C-N-CA	7.92	129.75	119.84
57	BB	2071	A	C5'-C4'-C3'	-7.92	104.11	116.00
57	BB	2473	U	P-O5'-C5'	7.92	132.79	120.90
15	AD	28	ASP	CA-CB-CG	-7.92	104.68	112.60
13	AB	158	ASP	N-CA-C	-7.92	103.64	113.38
46	BZ	12	ALA	CA-C-N	7.92	130.60	120.70
46	BZ	12	ALA	C-N-CA	7.92	130.60	120.70
21	AA	886	G	C1'-C2'-O2'	-7.92	96.52	108.40
30	BK	119	PRO	N-CA-C	-7.92	96.16	112.47
44	BY	32	ALA	N-CA-C	-7.92	103.20	113.17
57	BB	1807	G	P-O5'-C5'	-7.91	109.03	120.90
57	BB	501	A	C4'-C3'-C2'	-7.91	94.69	102.60
57	BB	259	G	C1'-C2'-O2'	7.91	120.26	108.40
57	BB	2275	C	P-O5'-C5'	7.91	132.76	120.90
23	AW	12	U	C4'-C3'-C2'	7.91	110.51	102.60
57	BB	1285	A	P-O3'-C3'	7.91	132.06	120.20
35	BP	47	ILE	N-CA-C	-7.91	105.61	113.20
3	AL	8	ARG	N-CA-C	-7.90	103.24	113.12
25	AZ	68	GLU	N-CA-C	-7.90	97.07	109.72
45	BC	191	LEU	CA-C-N	7.90	131.33	121.06
45	BC	191	LEU	C-N-CA	7.90	131.33	121.06
15	AD	154	VAL	CA-C-N	7.90	131.21	120.54
15	AD	154	VAL	C-N-CA	7.90	131.21	120.54
29	BJ	136	GLN	CA-C-N	7.90	129.71	119.84
29	BJ	136	GLN	C-N-CA	7.90	129.71	119.84
29	BJ	94	ALA	N-CA-C	-7.90	103.79	113.50
32	BM	70	ASP	CA-CB-CG	-7.90	104.70	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	AH	69	ALA	N-CA-C	-7.89	102.16	113.21
57	BB	920	A	C5'-C4'-C3'	7.89	127.84	116.00
57	BB	1422	G	O4'-C1'-N9	7.89	120.34	108.50
57	BB	2584	U	P-O3'-C3'	7.89	132.04	120.20
29	BJ	37	ARG	N-CA-C	-7.89	103.80	113.50
22	AY	3	G	P-O5'-C5'	-7.88	109.07	120.90
57	BB	193	U	O4'-C1'-N1	7.88	120.33	108.50
15	AD	63	ILE	N-CA-C	-7.88	103.57	111.77
21	AA	52	C	C4'-C3'-C2'	-7.88	94.72	102.60
22	AY	36	A	O4'-C1'-N9	7.88	120.31	108.50
54	BF	90	LEU	N-CA-CB	7.87	123.51	110.52
49	B2	6	GLN	CA-C-O	-7.87	111.39	119.49
57	BB	234	U	C4'-C3'-C2'	-7.87	94.73	102.60
36	BQ	32	ARG	NE-CZ-NH1	-7.86	113.64	121.50
57	BB	1802	A	O4'-C1'-C2'	-7.86	99.74	107.60
21	AA	1375	A	C4'-C3'-C2'	-7.86	94.74	102.60
54	BF	93	GLU	O-C-N	7.86	130.26	122.09
33	BN	25	ALA	N-CA-C	-7.85	103.51	113.72
21	AA	868	C	O4'-C1'-N1	7.85	120.27	108.50
25	AZ	350	VAL	O-C-N	7.84	131.34	123.18
56	BH	68	ARG	NE-CZ-NH2	7.84	126.26	119.20
6	AO	38	LEU	N-CA-C	-7.84	103.03	114.39
34	BO	93	ASP	CA-C-N	7.83	130.62	120.44
34	BO	93	ASP	C-N-CA	7.83	130.62	120.44
57	BB	2404	U	C4'-C3'-C2'	7.83	110.43	102.60
21	AA	750	C	O4'-C1'-N1	7.83	120.24	108.50
23	AW	53	G	C4'-C3'-C2'	-7.82	94.78	102.60
57	BB	2805	C	P-O3'-C3'	-7.82	108.47	120.20
57	BB	2568	U	O4'-C1'-N1	7.82	120.23	108.50
32	BM	119	LEU	N-CA-C	-7.82	101.89	113.61
57	BB	2152	G	P-O3'-C3'	7.82	131.92	120.20
21	AA	1226	C	P-O3'-C3'	7.81	131.92	120.20
57	BB	1875	G	P-O5'-C5'	7.81	132.62	120.90
3	AL	118	VAL	N-CA-CB	7.81	120.34	111.21
13	AB	35	ASN	CA-CB-CG	-7.81	104.79	112.60
8	AQ	50	ASN	OD1-CG-ND2	7.80	130.40	122.60
57	BB	1360	G	C4'-C3'-C2'	-7.80	94.80	102.60
6	AO	5	GLU	CA-C-N	7.80	130.73	120.28
6	AO	5	GLU	C-N-CA	7.80	130.73	120.28
28	BI	96	LYS	N-CA-CB	7.80	122.69	110.84
45	BC	206	LYS	N-CA-C	-7.80	97.22	108.60
17	AF	83	ALA	O-C-N	7.79	130.51	122.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2336	A	P-O3'-C3'	7.79	131.89	120.20
18	AG	61	PHE	CA-C-N	7.79	133.57	121.19
18	AG	61	PHE	C-N-CA	7.79	133.57	121.19
7	AP	78	VAL	N-CA-C	-7.79	105.42	112.90
45	BC	229	HIS	CA-C-N	7.79	127.50	119.56
45	BC	229	HIS	C-N-CA	7.79	127.50	119.56
57	BB	896	A	P-O3'-C3'	-7.79	108.52	120.20
21	AA	1049	U	C2'-C3'-O3'	7.78	121.18	109.50
57	BB	1574	C	C4'-C3'-C2'	-7.78	94.82	102.60
57	BB	959	A	C5'-C4'-C3'	-7.78	104.33	116.00
21	AA	53	A	C4'-C3'-C2'	-7.78	94.82	102.60
13	AB	197	PHE	CA-CB-CG	-7.78	106.02	113.80
21	AA	1258	G	P-O5'-C5'	7.77	132.55	120.90
28	BI	62	ALA	CA-C-N	7.77	135.33	121.66
28	BI	62	ALA	C-N-CA	7.77	135.33	121.66
21	AA	1195	C	P-O3'-C3'	7.76	131.84	120.20
52	BD	68	PHE	CA-C-O	-7.76	110.43	119.59
21	AA	792	A	P-O5'-C5'	-7.76	109.26	120.90
57	BB	1846	G	C4'-C3'-O3'	-7.76	101.36	113.00
40	BU	8	ASP	CA-CB-CG	-7.76	104.84	112.60
21	AA	254	G	C4'-C3'-C2'	-7.75	94.85	102.60
21	AA	687	A	C4'-C3'-O3'	7.75	121.03	109.40
57	BB	141	G	P-O5'-C5'	7.75	132.53	120.90
57	BB	1612	C	O4'-C1'-N1	7.75	120.13	108.50
19	AH	98	LEU	CA-C-N	7.75	131.13	121.06
19	AH	98	LEU	C-N-CA	7.75	131.13	121.06
57	BB	1608	A	C4'-C3'-C2'	7.75	110.35	102.60
40	BU	68	ASN	N-CA-C	-7.74	101.27	110.41
11	AT	46	ALA	N-CA-C	-7.74	103.63	113.23
46	BZ	22	THR	CA-C-N	7.74	131.28	120.29
46	BZ	22	THR	C-N-CA	7.74	131.28	120.29
22	AY	20	G	C3'-C2'-C1'	-7.74	93.76	101.50
21	AA	300	A	O4'-C1'-N9	7.74	120.11	108.50
57	BB	1535	A	C4'-C3'-C2'	-7.74	94.86	102.60
21	AA	374	A	P-O5'-C5'	7.73	132.50	120.90
6	AO	9	LYS	CA-C-N	7.73	131.05	120.46
6	AO	9	LYS	C-N-CA	7.73	131.05	120.46
31	BL	60	ARG	NE-CZ-NH2	7.73	126.16	119.20
45	BC	142	ASN	N-CA-CB	7.73	123.55	110.49
5	AN	64	ARG	N-CA-C	-7.73	102.91	112.88
22	AY	28	C	O4'-C1'-N1	7.73	120.09	108.50
10	AS	48	ILE	N-CA-C	7.72	119.02	107.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AE	145	ASN	CA-CB-CG	-7.72	104.88	112.60
22	AY	29	A	C5'-C4'-C3'	-7.72	104.41	116.00
54	BF	70	ARG	NE-CZ-NH1	-7.72	113.78	121.50
58	BA	12	C	P-O5'-C5'	7.72	132.48	120.90
30	BK	21	ILE	O-C-N	7.71	129.73	121.78
39	BT	70	HIS	CA-CB-CG	7.71	121.52	113.80
6	AO	46	LYS	O-C-N	7.71	129.79	121.85
51	B4	22	VAL	N-CA-C	-7.71	97.35	108.53
57	BB	1909	C	C1'-O4'-C4'	-7.71	102.19	109.90
54	BF	86	CYS	CA-C-N	7.71	131.38	123.13
54	BF	86	CYS	C-N-CA	7.71	131.38	123.13
41	BV	34	LYS	N-CA-C	-7.70	100.59	112.99
34	BO	54	VAL	N-CA-C	-7.70	103.75	113.22
54	BF	60	SER	CA-C-N	7.70	127.31	119.92
54	BF	60	SER	C-N-CA	7.70	127.31	119.92
57	BB	2598	A	P-O5'-C5'	-7.70	109.36	120.90
14	AC	81	GLU	O-C-N	7.69	130.09	122.09
21	AA	114	U	P-O3'-C3'	-7.69	108.66	120.20
25	AZ	72	PRO	N-CA-C	-7.69	103.89	114.27
15	AD	137	SER	N-CA-C	7.69	116.98	108.14
21	AA	485	U	O4'-C1'-N1	7.69	120.04	108.50
44	BY	11	VAL	CA-C-N	7.69	130.44	120.44
44	BY	11	VAL	C-N-CA	7.69	130.44	120.44
21	AA	1293	C	C5'-C4'-C3'	-7.69	104.47	116.00
23	AW	20	U	P-O3'-C3'	7.69	131.73	120.20
12	AU	10	PRO	N-CA-CB	7.68	110.82	103.52
27	B5	28	ALA	CA-C-O	-7.68	112.68	120.90
21	AA	936	C	O4'-C1'-N1	7.68	120.02	108.50
57	BB	2226	C	P-O5'-C5'	7.67	132.41	120.90
19	AH	51	GLU	CA-C-N	7.67	127.89	120.98
19	AH	51	GLU	C-N-CA	7.67	127.89	120.98
6	AO	29	ALA	CA-C-N	7.67	130.89	120.54
6	AO	29	ALA	C-N-CA	7.67	130.89	120.54
57	BB	2447	G	O5'-C5'-C4'	-7.67	100.20	111.70
21	AA	1454	G	P-O5'-C5'	7.67	132.40	120.90
12	AU	47	ALA	N-CA-C	-7.66	103.66	113.16
19	AH	34	ALA	N-CA-C	7.66	121.56	111.75
21	AA	183	C	P-O3'-C3'	7.66	131.69	120.20
22	AY	40	C	C4'-C3'-C2'	-7.66	94.94	102.60
31	BL	47	ARG	NE-CZ-NH1	-7.66	113.84	121.50
57	BB	2121	G	C4'-C3'-C2'	-7.66	94.94	102.60
49	B2	43	THR	N-CA-C	-7.66	103.29	114.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1907	G	C5'-C4'-C3'	-7.65	104.52	116.00
2	AK	111	ASP	CA-CB-CG	-7.65	104.95	112.60
57	BB	2045	C	O4'-C1'-N1	7.65	119.98	108.50
25	AZ	248	LYS	N-CA-C	-7.65	103.78	113.72
56	BH	59	ALA	N-CA-C	7.65	120.29	111.11
51	B4	33	HIS	CB-CA-C	-7.65	97.75	109.29
5	AN	9	GLU	CA-C-N	7.64	130.19	120.56
5	AN	9	GLU	C-N-CA	7.64	130.19	120.56
52	BD	34	VAL	N-CA-CB	7.64	119.51	110.95
58	BA	66	A	P-O3'-C3'	7.64	131.67	120.20
57	BB	1085	A	O4'-C1'-N9	7.64	119.96	108.50
57	BB	846	U	O4'-C1'-N1	7.64	119.66	108.20
21	AA	1446	A	P-O5'-C5'	-7.64	109.44	120.90
32	BM	71	LYS	CA-C-N	7.64	129.39	119.84
32	BM	71	LYS	C-N-CA	7.64	129.39	119.84
57	BB	1149	G	C1'-O4'-C4'	-7.64	102.26	109.90
21	AA	1246	A	C4'-C3'-C2'	-7.63	94.97	102.60
21	AA	1221	G	O4'-C4'-C3'	-7.63	96.37	104.00
21	AA	207	C	P-O5'-C5'	-7.62	109.47	120.90
25	AZ	294	LYS	CA-C-N	7.62	127.33	119.56
25	AZ	294	LYS	C-N-CA	7.62	127.33	119.56
4	AM	25	GLY	CA-C-N	7.62	130.71	120.65
4	AM	25	GLY	C-N-CA	7.62	130.71	120.65
36	BQ	16	ILE	CB-CA-C	-7.62	99.67	110.95
45	BC	220	ARG	CA-C-N	7.62	128.40	119.94
45	BC	220	ARG	C-N-CA	7.62	128.40	119.94
57	BB	1737	G	P-O3'-C3'	7.62	131.63	120.20
21	AA	1467	C	O4'-C1'-N1	7.62	119.93	108.50
32	BM	55	ARG	NE-CZ-NH2	7.62	126.05	119.20
57	BB	701	G	N9-C1'-C2'	-7.62	100.58	112.00
57	BB	1902	C	P-O3'-C3'	-7.61	108.78	120.20
6	AO	37	HIS	N-CA-C	-7.61	103.31	112.59
13	AB	110	ILE	N-CA-C	-7.61	105.35	112.96
13	AB	221	ARG	N-CA-C	-7.61	103.58	113.17
25	AZ	84	HIS	O-C-N	7.61	132.54	123.33
57	BB	1435	G	O5'-C5'-C4'	-7.61	100.09	111.50
57	BB	92	U	P-O5'-C5'	7.61	132.31	120.90
21	AA	980	C	C4'-C3'-C2'	-7.60	95.00	102.60
54	BF	1	ALA	CA-C-N	7.60	136.06	121.54
54	BF	1	ALA	C-N-CA	7.60	136.06	121.54
57	BB	2073	C	O4'-C1'-C2'	-7.60	100.00	107.60
33	BN	47	VAL	N-CA-C	-7.60	105.27	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1527	G	C4'-C3'-O3'	-7.60	101.61	113.00
35	BP	31	VAL	N-CA-C	-7.59	97.52	108.53
25	AZ	71	THR	CB-CA-C	7.59	120.55	109.09
35	BP	73	PHE	N-CA-C	-7.59	98.27	108.74
15	AD	12	ARG	NE-CZ-NH2	7.59	126.03	119.20
57	BB	2148	G	C4'-C3'-C2'	-7.59	95.01	102.60
57	BB	1896	G	C5'-C4'-C3'	-7.58	104.63	116.00
57	BB	2111	U	P-O3'-C3'	-7.58	108.83	120.20
15	AD	44	LYS	N-CA-C	7.57	120.39	109.48
25	AZ	57	ALA	CA-C-O	-7.57	111.83	120.24
52	BD	167	ASN	N-CA-CB	7.57	126.35	113.10
54	BF	153	ILE	N-CA-C	-7.57	96.70	107.75
57	BB	1331	G	C4'-C3'-O3'	-7.57	101.64	113.00
53	BE	139	LYS	N-CA-C	7.57	120.19	111.11
57	BB	2841	C	O4'-C1'-N1	7.57	119.85	108.50
1	AJ	84	VAL	N-CA-C	7.56	118.33	110.62
21	AA	134	G	C1'-O4'-C4'	-7.56	102.34	109.90
28	BI	97	VAL	N-CA-C	-7.56	103.92	113.22
57	BB	1056	G	P-O5'-C5'	7.56	132.24	120.90
25	AZ	22	HIS	CB-CG-ND1	-7.55	111.37	122.70
57	BB	2842	G	C4'-C3'-O3'	-7.55	101.67	113.00
21	AA	264	C	O4'-C1'-N1	7.55	119.83	108.50
28	BI	91	LYS	CA-C-N	7.55	128.01	119.93
28	BI	91	LYS	C-N-CA	7.55	128.01	119.93
56	BH	128	HIS	CE1-NE2-CD2	-7.55	101.45	109.00
23	AW	29	G	C4'-C3'-C2'	-7.55	95.05	102.60
57	BB	1102	C	C4'-C3'-C2'	-7.55	95.05	102.60
54	BF	60	SER	N-CA-CB	7.54	123.24	110.49
57	BB	2889	C	O4'-C1'-N1	7.54	119.82	108.50
21	AA	950	U	C5'-C4'-C3'	7.54	127.31	116.00
51	B4	14	CYS	N-CA-C	-7.54	96.12	108.41
57	BB	2622	U	O5'-C5'-C4'	-7.54	100.19	111.50
17	AF	93	LYS	N-CA-C	-7.54	104.98	114.56
57	BB	362	A	P-O5'-C5'	7.54	132.21	120.90
21	AA	491	G	P-O3'-C3'	-7.54	108.89	120.20
57	BB	2652	C	O4'-C1'-N1	7.54	119.81	108.50
25	AZ	175	LEU	N-CA-C	7.54	120.38	111.71
6	AO	39	GLN	CA-C-N	7.53	128.47	120.03
6	AO	39	GLN	C-N-CA	7.53	128.47	120.03
27	B5	208	TYR	CA-CB-CG	-7.53	100.34	113.90
43	BX	2	ARG	N-CA-C	7.53	121.45	111.28
18	AG	130	LYS	N-CA-C	-7.53	102.32	113.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	259	G	C4'-C3'-O3'	-7.53	101.71	113.00
38	BS	39	THR	N-CA-C	-7.53	103.01	111.14
10	AS	39	ILE	N-CA-C	-7.53	98.95	108.89
21	AA	378	G	C4'-C3'-O3'	-7.53	101.71	113.00
54	BF	52	ALA	CA-C-N	7.53	130.87	120.63
54	BF	52	ALA	C-N-CA	7.53	130.87	120.63
54	BF	128	SER	N-CA-C	-7.53	97.68	109.72
36	BQ	63	ARG	CA-C-N	7.52	131.10	120.42
36	BQ	63	ARG	C-N-CA	7.52	131.10	120.42
57	BB	1791	A	P-O5'-C5'	7.52	132.18	120.90
21	AA	138	G	O4'-C1'-N9	7.52	119.78	108.50
21	AA	657	U	C4'-C3'-O3'	-7.52	101.72	113.00
54	BF	43	ILE	N-CA-C	-7.52	103.46	110.53
57	BB	2516	A	P-O5'-C5'	-7.52	109.62	120.90
11	AT	14	GLU	N-CA-C	-7.51	103.18	111.36
21	AA	1148	U	C4'-C3'-C2'	-7.50	95.09	102.60
21	AA	308	C	P-O5'-C5'	7.50	132.15	120.90
15	AD	104	MET	N-CA-C	-7.50	102.66	112.41
57	BB	51	G	C4'-C3'-C2'	7.50	110.10	102.60
30	BK	8	ASN	CA-CB-CG	-7.50	105.10	112.60
57	BB	1069	A	P-O3'-C3'	7.50	131.44	120.20
21	AA	484	G	P-O3'-C3'	7.50	131.44	120.20
42	BW	47	GLY	CA-C-O	7.49	126.84	119.27
21	AA	981	U	C4'-C3'-O3'	-7.49	101.76	113.00
57	BB	1691	C	O4'-C1'-N1	7.49	119.73	108.50
21	AA	157	U	C1'-O4'-C4'	-7.49	102.41	109.90
57	BB	1488	C	O4'-C1'-N1	7.49	119.73	108.50
10	AS	37	SER	N-CA-CB	7.48	123.14	110.49
34	BO	13	ARG	NE-CZ-NH2	7.48	125.93	119.20
21	AA	156	C	O4'-C1'-N1	7.48	119.72	108.50
31	BL	134	ALA	N-CA-C	-7.48	103.74	113.17
45	BC	24	HIS	CA-CB-CG	7.48	121.28	113.80
57	BB	45	G	P-O3'-C3'	7.48	131.42	120.20
25	AZ	261	PHE	CA-CB-CG	-7.48	106.32	113.80
27	B5	83	ASN	N-CA-C	-7.48	104.18	113.38
21	AA	230	G	O4'-C4'-C3'	-7.47	96.53	104.00
21	AA	782	A	O4'-C1'-N9	7.47	119.70	108.50
57	BB	2481	G	C4'-C3'-O3'	-7.47	101.80	113.00
25	AZ	351	MET	O-C-N	-7.47	114.48	121.20
25	AZ	227	VAL	N-CA-C	-7.46	97.73	108.48
28	BI	54	ILE	CA-C-O	-7.46	114.88	119.51
16	AE	84	VAL	O-C-N	7.46	130.96	122.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	277	C	O4'-C1'-N1	7.46	119.69	108.50
21	AA	804	U	C4'-C3'-O3'	-7.46	101.81	113.00
29	BJ	119	PHE	CA-CB-CG	-7.46	106.34	113.80
57	BB	1585	C	O4'-C1'-N1	7.46	119.69	108.50
57	BB	878	A	C5'-C4'-C3'	7.45	127.17	116.00
16	AE	115	GLU	CA-C-N	7.45	132.83	120.62
16	AE	115	GLU	C-N-CA	7.45	132.83	120.62
22	AY	18	G	C3'-C2'-C1'	-7.44	94.06	101.50
25	AZ	81	CYS	CA-C-N	7.44	129.15	119.84
25	AZ	81	CYS	C-N-CA	7.44	129.15	119.84
11	AT	69	ASN	CA-CB-CG	7.44	120.04	112.60
21	AA	21	G	P-O3'-C3'	-7.44	109.04	120.20
53	BE	94	GLN	CA-C-O	-7.44	112.44	121.89
57	BB	370	G	O4'-C4'-C3'	-7.44	98.66	106.10
4	AM	88	LEU	CA-C-N	7.44	131.24	120.38
4	AM	88	LEU	C-N-CA	7.44	131.24	120.38
57	BB	826	U	P-O3'-C3'	7.44	131.36	120.20
57	BB	900	A	C3'-C2'-C1'	-7.44	93.86	101.30
34	BO	6	ALA	CA-C-N	7.44	130.85	120.29
34	BO	6	ALA	C-N-CA	7.44	130.85	120.29
41	BV	70	ILE	CB-CA-C	-7.44	104.43	111.05
57	BB	896	A	C5'-C4'-C3'	7.44	127.16	116.00
9	AR	24	ASP	CA-C-N	7.43	130.19	120.60
9	AR	24	ASP	C-N-CA	7.43	130.19	120.60
45	BC	26	GLY	O-C-N	-7.43	116.42	122.81
45	BC	199	HIS	CE1-NE2-CD2	-7.43	101.56	109.00
58	BA	89	U	P-O5'-C5'	7.43	132.05	120.90
40	BU	73	ASN	N-CA-C	-7.43	102.79	112.68
57	BB	1375	U	P-O5'-C5'	-7.43	109.75	120.90
57	BB	2898	U	O4'-C1'-N1	7.43	119.65	108.50
33	BN	49	GLU	CA-C-N	7.43	127.14	119.64
33	BN	49	GLU	C-N-CA	7.43	127.14	119.64
18	AG	52	ARG	CA-C-O	7.43	128.71	119.05
57	BB	2149	U	O4'-C1'-N1	7.43	119.64	108.50
57	BB	841	G	O4'-C1'-N9	7.42	119.64	108.50
33	BN	65	LEU	N-CA-C	-7.42	104.25	113.38
36	BQ	69	ARG	NE-CZ-NH1	-7.42	114.08	121.50
4	AM	34	ALA	CA-C-N	7.42	130.56	120.54
4	AM	34	ALA	C-N-CA	7.42	130.56	120.54
57	BB	312	G	P-O5'-C5'	7.42	132.03	120.90
21	AA	64	G	O4'-C1'-C2'	7.42	113.22	105.80
15	AD	77	GLU	N-CA-C	-7.42	104.20	113.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	AV	34	C	O4'-C1'-N1	7.42	119.63	108.50
34	BO	21	LEU	N-CA-C	-7.42	104.84	114.04
34	BO	31	THR	N-CA-C	-7.42	96.21	108.23
57	BB	1458	U	P-O5'-C5'	-7.42	109.78	120.90
21	AA	586	C	O4'-C1'-N1	7.42	119.62	108.50
1	AJ	26	VAL	O-C-N	-7.41	114.19	121.83
8	AQ	30	HIS	CE1-NE2-CD2	-7.41	101.59	109.00
15	AD	69	ARG	CA-C-N	7.41	130.55	120.54
15	AD	69	ARG	C-N-CA	7.41	130.55	120.54
22	AY	46	G	C5'-C4'-O4'	7.41	120.22	109.10
28	BI	135	MET	N-CA-C	-7.41	105.41	114.75
57	BB	399	U	O4'-C1'-C2'	-7.41	100.19	107.60
15	AD	12	ARG	CB-CA-C	-7.41	98.44	110.74
57	BB	96	C	O4'-C1'-C2'	-7.41	100.19	107.60
57	BB	1552	A	P-O3'-C3'	-7.41	109.09	120.20
57	BB	2193	G	C4'-C3'-C2'	-7.41	95.19	102.60
57	BB	2694	G	C1'-O4'-C4'	7.40	117.30	109.90
27	B5	57	GLN	OE1-CD-NE2	-7.39	115.21	122.60
57	BB	1010	A	P-O5'-C5'	7.39	131.99	120.90
22	AY	18	G	P-O3'-C3'	7.39	131.28	120.20
4	AM	103	THR	N-CA-C	-7.39	98.41	108.38
57	BB	2114	A	O4'-C4'-C3'	-7.39	96.61	104.00
57	BB	2619	C	C5'-C4'-C3'	-7.39	104.92	116.00
58	BA	16	G	P-O5'-C5'	7.39	131.98	120.90
8	AQ	54	ILE	N-CA-C	-7.38	98.15	108.27
56	BH	77	THR	CA-CB-OG1	7.38	120.67	109.60
26	AV	71	C	O4'-C1'-N1	7.38	119.57	108.50
54	BF	106	ALA	CB-CA-C	-7.38	98.15	109.29
21	AA	768	A	P-O5'-C5'	7.38	131.96	120.90
2	AK	32	THR	N-CA-CB	7.37	123.20	110.81
28	BI	89	SER	N-CA-CB	7.37	120.96	109.69
38	BS	55	ILE	N-CA-CB	7.37	119.17	110.55
57	BB	2691	C	P-O3'-C3'	-7.37	109.15	120.20
21	AA	385	C	O4'-C1'-N1	7.37	119.55	108.50
35	BP	7	LEU	N-CA-C	-7.37	102.90	113.21
37	BR	20	VAL	CA-C-N	7.36	133.38	123.00
37	BR	20	VAL	C-N-CA	7.36	133.38	123.00
56	BH	129	GLU	CA-C-N	7.36	135.22	121.97
56	BH	129	GLU	C-N-CA	7.36	135.22	121.97
57	BB	2103	C	P-O3'-C3'	7.36	131.24	120.20
21	AA	295	C	O5'-C5'-C4'	-7.36	100.46	111.50
25	AZ	36	ALA	N-CA-C	-7.36	103.26	112.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BH	25	TYR	N-CA-C	-7.36	104.91	114.04
23	AW	46	G	P-O3'-C3'	7.36	131.24	120.20
8	AQ	75	VAL	N-CA-C	-7.36	105.60	112.96
21	AA	268	U	O4'-C1'-N1	7.36	119.54	108.50
57	BB	859	G	C4'-C3'-C2'	-7.36	95.24	102.60
19	AH	71	VAL	N-CA-C	-7.35	97.53	108.85
12	AU	20	ARG	N-CA-C	-7.35	103.28	114.16
21	AA	511	C	P-O3'-C3'	7.35	131.23	120.20
36	BQ	82	LEU	N-CA-C	-7.35	102.58	113.61
21	AA	1212	U	P-O3'-C3'	7.35	131.22	120.20
29	BJ	35	ARG	N-CA-C	7.35	119.37	111.36
34	BO	57	ALA	N-CA-CB	7.35	123.22	110.65
38	BS	85	ILE	CA-C-O	-7.35	114.07	121.49
57	BB	1251	C	P-O3'-C3'	7.34	131.22	120.20
25	AZ	64	THR	CA-C-O	7.34	129.09	121.23
57	BB	2253	G	O4'-C1'-C2'	-7.34	100.26	107.60
21	AA	971	G	C3'-C2'-C1'	-7.34	94.16	101.50
45	BC	225	ASN	CA-C-N	7.34	129.01	119.84
45	BC	225	ASN	C-N-CA	7.34	129.01	119.84
57	BB	1130	U	P-O5'-C5'	-7.34	109.89	120.90
30	BK	58	LYS	N-CA-C	-7.34	98.16	109.24
57	BB	1407	G	O4'-C4'-C3'	-7.34	96.66	104.00
57	BB	660	C	P-O5'-C5'	-7.33	109.90	120.90
21	AA	1414	U	C3'-C2'-O2'	7.33	121.70	110.70
57	BB	1729	U	O4'-C1'-C2'	-7.33	100.27	107.60
21	AA	906	A	P-O5'-C5'	7.33	131.90	120.90
18	AG	97	ALA	CA-C-N	7.33	130.41	120.44
18	AG	97	ALA	C-N-CA	7.33	130.41	120.44
27	B5	149	VAL	CA-C-O	-7.33	114.28	120.80
35	BP	68	GLY	CA-C-N	7.33	133.17	123.06
35	BP	68	GLY	C-N-CA	7.33	133.17	123.06
48	B1	39	ASP	CA-C-N	7.33	127.49	119.87
48	B1	39	ASP	C-N-CA	7.33	127.49	119.87
38	BS	35	ILE	CA-C-N	7.32	130.41	120.38
38	BS	35	ILE	C-N-CA	7.32	130.41	120.38
57	BB	524	G	P-O3'-C3'	-7.32	109.22	120.20
21	AA	137	U	O4'-C1'-C2'	-7.32	100.28	107.60
57	BB	1419	A	O3'-P-O5'	-7.32	93.02	104.00
2	AK	21	HIS	CE1-NE2-CD2	-7.32	101.68	109.00
21	AA	879	C	C1'-O4'-C4'	-7.32	102.58	109.90
25	AZ	46	PHE	CA-C-N	7.31	135.51	121.54
25	AZ	46	PHE	C-N-CA	7.31	135.51	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	AV	18	G	C1'-O4'-C4'	7.31	117.01	109.70
15	AD	130	ASN	N-CA-C	-7.31	102.45	112.03
21	AA	86	G	O4'-C4'-C3'	-7.31	98.79	106.10
57	BB	2283	C	O4'-C1'-N1	7.31	119.46	108.50
18	AG	82	SER	N-CA-C	-7.30	97.49	109.40
43	BX	44	ARG	CD-NE-CZ	-7.30	114.17	124.40
57	BB	2029	G	P-O3'-C3'	7.30	131.16	120.20
32	BM	48	ALA	N-CA-C	-7.30	102.37	112.30
3	AL	121	PRO	CA-C-O	-7.30	113.07	122.12
21	AA	1178	G	C5'-C4'-C3'	-7.30	105.05	116.00
43	BX	53	LYS	CA-C-N	7.30	128.08	119.98
43	BX	53	LYS	C-N-CA	7.30	128.08	119.98
57	BB	2458	G	P-O5'-C5'	-7.30	109.95	120.90
28	BI	58	ILE	CA-CB-CG1	7.30	122.81	110.40
57	BB	2090	A	P-O3'-C3'	-7.30	109.25	120.20
21	AA	136	C	C4'-C3'-C2'	-7.29	95.31	102.60
21	AA	136	C	C4'-C3'-O3'	-7.29	102.06	113.00
55	BG	54	ARG	N-CA-C	-7.29	95.87	108.56
57	BB	1665	A	O5'-C5'-C4'	-7.29	100.56	111.50
57	BB	1743	G	O4'-C1'-N9	7.29	119.44	108.50
57	BB	562	U	P-O5'-C5'	-7.29	109.96	120.90
37	BR	70	GLU	N-CA-C	-7.29	98.33	109.85
57	BB	2263	C	O4'-C1'-N1	7.29	119.43	108.50
1	AJ	91	ASP	CA-CB-CG	-7.29	105.31	112.60
57	BB	2620	C	O4'-C1'-N1	7.29	119.43	108.50
21	AA	943	U	O4'-C1'-N1	7.28	119.43	108.50
43	BX	59	ASP	CA-CB-CG	-7.28	105.32	112.60
54	BF	56	LEU	CB-CA-C	-7.28	98.70	110.79
21	AA	935	A	P-O5'-C5'	7.28	131.82	120.90
15	AD	97	LEU	CA-C-N	7.28	131.01	120.38
15	AD	97	LEU	C-N-CA	7.28	131.01	120.38
57	BB	1200	C	O4'-C1'-N1	7.28	119.42	108.50
13	AB	105	THR	N-CA-C	-7.28	103.41	112.72
21	AA	792	A	O4'-C1'-C2'	-7.28	98.53	105.80
34	BO	45	SER	CA-C-N	7.27	134.74	121.94
34	BO	45	SER	C-N-CA	7.27	134.74	121.94
21	AA	688	G	O4'-C1'-C2'	-7.27	100.33	107.60
57	BB	347	A	P-O5'-C5'	-7.27	110.00	120.90
22	AY	6	U	C2'-C3'-O3'	7.27	124.60	113.70
57	BB	154	U	C4'-C3'-C2'	-7.27	95.33	102.60
21	AA	1125	U	P-O3'-C3'	7.26	131.10	120.20
52	BD	175	LEU	N-CA-CB	7.26	122.77	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1419	A	C4'-C3'-C2'	7.26	109.86	102.60
21	AA	797	C	O4'-C1'-N1	7.26	119.39	108.50
37	BR	41	ILE	N-CA-C	-7.26	97.64	108.46
2	AK	13	LYS	N-CA-C	-7.26	104.45	113.38
10	AS	14	LEU	N-CA-C	-7.25	103.05	113.21
21	AA	490	C	O4'-C1'-N1	7.25	119.38	108.50
57	BB	2625	G	C5'-C4'-C3'	-7.25	105.12	116.00
14	AC	16	PRO	O-C-N	7.25	132.43	122.64
21	AA	645	G	O4'-C1'-C2'	-7.25	100.35	107.60
36	BQ	104	ALA	CA-C-N	7.25	130.58	120.29
36	BQ	104	ALA	C-N-CA	7.25	130.58	120.29
57	BB	1613	G	C5'-C4'-C3'	7.25	126.87	116.00
57	BB	2770	G	P-O5'-C5'	7.25	131.77	120.90
44	BY	11	VAL	N-CA-C	-7.25	104.47	112.80
53	BE	4	VAL	CB-CA-C	-7.25	103.62	111.59
4	AM	83	GLY	CA-C-N	7.25	135.38	121.54
4	AM	83	GLY	C-N-CA	7.25	135.38	121.54
31	BL	99	ASN	N-CA-CB	7.24	122.73	110.49
35	BP	52	ARG	N-CA-C	-7.24	102.99	112.41
53	BE	36	ALA	N-CA-C	-7.24	104.25	113.23
13	AB	175	ALA	N-CA-C	-7.24	104.39	112.57
27	B5	38	PHE	CA-CB-CG	-7.24	106.56	113.80
54	BF	173	ASP	CA-C-N	7.24	132.50	122.07
54	BF	173	ASP	C-N-CA	7.24	132.50	122.07
57	BB	344	A	O4'-C1'-N9	7.24	119.36	108.50
21	AA	173	U	O5'-C5'-C4'	-7.24	100.84	111.70
57	BB	1485	U	O4'-C1'-C2'	-7.24	100.36	107.60
3	AL	11	ARG	N-CA-C	7.23	120.44	110.24
13	AB	169	HIS	CE1-NE2-CD2	-7.23	101.77	109.00
21	AA	840	C	C4'-C3'-O3'	-7.23	102.15	113.00
47	B0	18	HIS	CE1-NE2-CD2	-7.23	101.77	109.00
25	AZ	152	GLU	CA-C-N	7.23	130.68	120.42
25	AZ	152	GLU	C-N-CA	7.23	130.68	120.42
13	AB	191	ASP	CA-CB-CG	-7.23	105.37	112.60
57	BB	107	G	C4'-C3'-C2'	-7.22	95.38	102.60
57	BB	2190	G	C4'-C3'-C2'	-7.22	95.38	102.60
14	AC	68	HIS	CE1-NE2-CD2	-7.22	101.78	109.00
21	AA	1507	A	P-O5'-C5'	-7.22	110.07	120.90
27	B5	131	LEU	CA-C-O	7.22	126.52	119.08
29	BJ	43	GLU	N-CA-C	7.22	121.19	112.38
40	BU	49	PRO	CA-C-O	-7.22	113.20	121.36
15	AD	73	ASN	CA-C-N	7.22	130.54	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	AD	73	ASN	C-N-CA	7.22	130.54	120.29
22	AY	39	U	P-O5'-C5'	7.22	131.72	120.90
13	AB	17	HIS	CE1-NE2-CD2	-7.21	101.79	109.00
14	AC	62	SER	N-CA-C	-7.21	102.58	112.03
21	AA	89	U	O4'-C1'-N1	7.21	119.32	108.50
22	AY	70	C	O4'-C1'-N1	7.21	119.31	108.50
57	BB	1023	U	O4'-C1'-N1	7.21	119.31	108.50
31	BL	95	LEU	CB-CA-C	-7.21	99.28	110.37
21	AA	609	A	P-O5'-C5'	7.20	131.71	120.90
57	BB	1357	C	O4'-C1'-N1	7.20	119.30	108.50
57	BB	2507	C	O4'-C1'-N1	7.20	119.31	108.50
34	BO	87	ILE	CA-C-O	7.20	128.44	120.59
53	BE	165	HIS	N-CA-C	-7.20	102.60	112.03
22	AY	17	U	P-O5'-C5'	7.20	131.69	120.90
57	BB	2324	U	P-O5'-C5'	7.20	131.70	120.90
11	AT	34	VAL	CB-CA-C	-7.20	102.61	112.04
23	AW	4	C	O4'-C1'-C2'	-7.19	100.41	107.60
57	BB	138	U	C5'-C4'-C3'	-7.19	105.21	116.00
37	BR	33	VAL	N-CA-C	-7.19	97.77	108.12
57	BB	2105	U	C3'-C2'-C1'	7.19	108.49	101.30
57	BB	386	G	C2'-C3'-O3'	7.18	120.28	109.50
50	B3	60	CYS	N-CA-C	-7.18	102.83	113.61
10	AS	11	ASP	CA-CB-CG	-7.18	105.42	112.60
20	AI	27	ILE	CA-C-N	7.18	132.65	123.10
20	AI	27	ILE	C-N-CA	7.18	132.65	123.10
21	AA	1493	A	C2'-C3'-O3'	7.18	120.27	109.50
25	AZ	63	ASN	CA-CB-CG	7.18	119.78	112.60
57	BB	2401	U	O3'-P-O5'	-7.18	93.23	104.00
21	AA	789	U	O4'-C4'-C3'	-7.17	96.83	104.00
21	AA	925	G	P-O3'-C3'	7.17	130.96	120.20
21	AA	1049	U	P-O3'-C3'	7.17	130.96	120.20
21	AA	1445	U	C4'-C3'-O3'	-7.17	102.24	113.00
57	BB	2169	A	O4'-C1'-N9	7.17	119.26	108.50
21	AA	111	G	P-O5'-C5'	7.17	131.66	120.90
57	BB	1006	C	O4'-C1'-N1	7.17	119.26	108.50
25	AZ	149	VAL	N-CA-CB	7.17	118.94	110.55
57	BB	282	A	O4'-C4'-C3'	-7.17	96.83	104.00
57	BB	1715	G	C5'-C4'-C3'	7.17	125.95	115.20
25	AZ	149	VAL	CA-C-N	7.16	130.21	120.54
25	AZ	149	VAL	C-N-CA	7.16	130.21	120.54
57	BB	1985	C	O4'-C1'-N1	7.16	119.25	108.50
57	BB	2832	U	C1'-C2'-O2'	-7.16	101.06	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	11	HIS	CE1-NE2-CD2	-7.16	101.84	109.00
47	B0	37	HIS	CB-CG-CD2	-7.16	121.89	131.20
27	B5	16	ASP	O-C-N	-7.16	116.37	123.46
56	BH	19	VAL	CA-C-O	7.16	128.69	120.67
56	BH	28	ASN	CB-CA-C	-7.16	99.76	109.28
57	BB	1006	C	O4'-C4'-C3'	-7.16	96.84	104.00
2	AK	127	ARG	N-CA-C	-7.16	104.29	113.16
21	AA	1225	A	O4'-C4'-C3'	-7.15	98.95	106.10
26	AV	27	U	O4'-C1'-N1	7.15	119.23	108.50
23	AW	56	C	P-O3'-C3'	7.15	130.93	120.20
39	BT	4	GLU	CA-C-O	7.15	130.97	121.89
57	BB	698	C	O4'-C1'-N1	7.15	119.22	108.50
57	BB	996	A	P-O5'-C5'	7.15	131.62	120.90
40	BU	92	VAL	N-CA-C	-7.15	98.01	108.23
47	B0	18	HIS	ND1-CE1-NE2	7.15	115.55	108.40
56	BH	146	VAL	N-CA-CB	7.15	123.03	111.23
26	AV	18	G	P-O3'-C3'	7.15	130.92	120.20
57	BB	2102	G	O4'-C4'-C3'	-7.15	96.85	104.00
57	BB	2597	G	C4'-C3'-O3'	-7.15	102.28	113.00
30	BK	60	VAL	N-CA-CB	7.15	121.27	111.41
31	BL	35	HIS	CE1-NE2-CD2	-7.14	101.86	109.00
38	BS	29	VAL	CA-C-O	-7.14	111.85	120.78
3	AL	49	ARG	CB-CG-CD	7.14	127.73	111.30
23	AW	24	G	O4'-C1'-C2'	-7.14	100.46	107.60
52	BD	79	LEU	N-CA-CB	7.14	121.98	110.77
57	BB	951	C	O4'-C1'-N1	7.14	119.22	108.50
21	AA	1508	A	O4'-C1'-C2'	-7.14	100.46	107.60
25	AZ	167	THR	CA-C-N	7.14	128.26	119.98
25	AZ	167	THR	C-N-CA	7.14	128.26	119.98
57	BB	2076	U	O4'-C4'-C3'	-7.14	96.86	104.00
57	BB	1381	G	P-O3'-C3'	-7.14	109.50	120.20
57	BB	2211	A	C4'-C3'-O3'	-7.14	102.30	113.00
33	BN	75	ILE	CA-CB-CG2	-7.13	98.37	110.50
52	BD	201	LEU	O-C-N	-7.13	115.35	123.48
18	AG	29	LEU	CA-C-O	-7.13	110.80	119.43
4	AM	46	GLU	CB-CA-C	-7.13	98.37	110.64
21	AA	939	G	P-O5'-C5'	-7.13	110.20	120.90
25	AZ	55	GLU	N-CA-C	7.13	120.09	111.82
57	BB	1010	A	O4'-C4'-C3'	-7.13	96.87	104.00
2	AK	21	HIS	CA-CB-CG	-7.13	106.67	113.80
36	BQ	30	VAL	CB-CA-C	7.13	120.25	110.99
57	BB	108	G	P-O3'-C3'	-7.13	109.51	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BN	9	GLN	OE1-CD-NE2	7.12	129.72	122.60
57	BB	1111	A	P-O5'-C5'	7.12	131.59	120.90
57	BB	2035	G	C5'-C4'-C3'	7.12	125.89	115.20
57	BB	2484	G	O5'-C5'-C4'	-7.12	100.81	111.50
21	AA	1346	A	P-O5'-C5'	-7.12	110.22	120.90
27	B5	24	ASN	CA-C-N	7.12	130.40	120.29
27	B5	24	ASN	C-N-CA	7.12	130.40	120.29
36	BQ	69	ARG	NE-CZ-NH2	7.12	125.61	119.20
5	AN	74	ARG	CA-C-N	7.12	130.77	120.38
5	AN	74	ARG	C-N-CA	7.12	130.77	120.38
21	AA	1111	A	P-O3'-C3'	7.12	130.88	120.20
36	BQ	99	VAL	CA-C-O	-7.12	113.49	119.97
54	BF	149	ARG	NE-CZ-NH2	-7.12	112.79	119.20
21	AA	460	A	P-O5'-C5'	7.12	131.57	120.90
29	BJ	121	LYS	N-CA-C	-7.12	104.63	113.38
21	AA	491	G	C4'-C3'-O3'	-7.12	102.33	113.00
21	AA	847	G	C4'-C3'-C2'	-7.12	95.48	102.60
21	AA	1012	A	P-O5'-C5'	-7.12	110.23	120.90
57	BB	327	G	C4'-C3'-C2'	-7.12	95.48	102.60
57	BB	1552	A	C4'-C3'-C2'	-7.12	95.48	102.60
34	BO	69	ASP	N-CA-C	-7.11	104.23	114.12
57	BB	2332	C	O4'-C1'-N1	7.11	119.17	108.50
18	AG	127	ALA	CA-C-N	7.11	132.74	121.08
18	AG	127	ALA	C-N-CA	7.11	132.74	121.08
22	AY	49	C	C5'-C4'-C3'	-7.11	105.33	116.00
25	AZ	388	VAL	CB-CA-C	-7.11	103.60	111.35
57	BB	804	A	C3'-C2'-C1'	7.11	108.41	101.30
21	AA	451	A	C3'-C2'-O2'	-7.11	103.94	114.60
33	BN	64	ARG	NE-CZ-NH2	7.11	125.60	119.20
34	BO	93	ASP	CA-C-O	7.11	128.39	120.43
4	AM	109	LYS	CA-C-N	7.10	133.02	121.87
4	AM	109	LYS	C-N-CA	7.10	133.02	121.87
5	AN	63	CYS	CA-C-O	-7.10	113.82	121.56
16	AE	48	GLY	N-CA-C	7.10	120.14	112.33
37	BR	74	ILE	CA-C-O	-7.10	112.95	120.48
21	AA	57	G	P-O5'-C5'	7.10	131.54	120.90
21	AA	111	G	O4'-C1'-N9	7.10	119.15	108.50
23	AW	19	G	O4'-C1'-N9	7.10	118.84	108.20
57	BB	2878	U	P-O5'-C5'	7.10	131.55	120.90
14	AC	137	VAL	N-CA-C	-7.09	105.87	112.96
21	AA	1332	A	O4'-C4'-C3'	-7.09	96.91	104.00
43	BX	31	ASN	CB-CA-C	-7.09	99.75	110.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	AG	26	VAL	CA-C-N	7.09	129.78	120.28
18	AG	26	VAL	C-N-CA	7.09	129.78	120.28
33	BN	26	GLY	N-CA-C	-7.09	106.04	115.32
57	BB	156	A	C3'-C2'-O2'	7.09	121.33	110.70
18	AG	57	GLU	N-CA-C	-7.08	103.95	112.59
43	BX	15	ASN	OD1-CG-ND2	-7.08	115.52	122.60
57	BB	140	C	O4'-C1'-N1	7.08	118.83	108.20
57	BB	943	A	C4'-C3'-O3'	-7.08	102.37	113.00
21	AA	74	A	C1'-C2'-O2'	7.08	119.02	108.40
34	BO	5	SER	N-CA-C	-7.08	104.51	113.72
49	B2	21	ARG	NE-CZ-NH1	-7.08	114.42	121.50
57	BB	243	U	C4'-C3'-C2'	-7.08	95.52	102.60
57	BB	1003	G	C4'-C3'-C2'	-7.08	95.52	102.60
57	BB	1714	U	O4'-C1'-C2'	-7.08	100.52	107.60
58	BA	28	C	C4'-C3'-C2'	-7.08	95.52	102.60
13	AB	176	ASN	N-CA-C	-7.08	102.01	113.19
31	BL	85	VAL	CA-C-N	7.08	132.41	122.36
31	BL	85	VAL	C-N-CA	7.08	132.41	122.36
57	BB	2781	A	C5'-C4'-C3'	-7.08	105.38	116.00
30	BK	78	PHE	CA-CB-CG	-7.08	106.72	113.80
42	BW	45	HIS	CB-CG-CD2	-7.08	122.00	131.20
50	B3	45	PRO	N-CA-CB	7.08	109.51	103.35
57	BB	2743	U	O4'-C1'-N1	7.08	119.11	108.50
21	AA	1237	C	C5'-C4'-C3'	7.07	126.61	116.00
57	BB	2326	C	C3'-C2'-C1'	-7.07	94.23	101.30
21	AA	345	C	P-O5'-C5'	-7.07	110.30	120.90
32	BM	32	GLY	CA-C-O	-7.07	114.75	121.96
21	AA	1362	A	C5'-C4'-C3'	7.07	125.80	115.20
57	BB	624	C	C4'-C3'-C2'	-7.07	95.53	102.60
21	AA	1062	U	C4'-C3'-O3'	-7.07	102.40	113.00
23	AW	47	U	C4'-C3'-C2'	-7.07	95.53	102.60
46	BZ	24	LEU	N-CA-C	7.07	118.63	111.07
57	BB	2156	G	P-O5'-C5'	-7.06	110.30	120.90
28	BI	76	ALA	CA-C-N	7.06	129.60	120.56
28	BI	76	ALA	C-N-CA	7.06	129.60	120.56
32	BM	54	THR	N-CA-C	-7.06	104.47	113.23
57	BB	281	C	O4'-C1'-N1	7.06	119.09	108.50
57	BB	490	C	C2'-C3'-O3'	7.06	120.09	109.50
57	BB	1647	U	C5'-C4'-C3'	7.06	125.79	115.20
57	BB	2561	U	C4'-C3'-C2'	-7.06	95.54	102.60
13	AB	139	GLU	O-C-N	-7.06	113.04	122.43
57	BB	1234	U	O4'-C1'-N1	7.06	119.09	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AM	8	ILE	CA-C-N	7.05	127.05	119.78
4	AM	8	ILE	C-N-CA	7.05	127.05	119.78
15	AD	30	LYS	CB-CA-C	-7.05	100.26	111.48
21	AA	741	G	C5'-C4'-C3'	7.05	126.57	116.00
21	AA	1131	G	C4'-C3'-C2'	-7.05	95.55	102.60
37	BR	92	TRP	CE2-CD2-CE3	7.05	125.85	118.80
21	AA	388	G	O4'-C4'-C3'	-7.05	99.05	106.10
57	BB	2882	A	C4'-C3'-C2'	-7.05	95.55	102.60
22	AY	19	G	O4'-C4'-C3'	-7.05	99.05	106.10
58	BA	36	C	O4'-C1'-C2'	-7.05	100.55	107.60
34	BO	113	ALA	N-CA-C	-7.04	103.79	112.88
6	AO	23	SER	CA-C-N	7.04	131.38	120.82
6	AO	23	SER	C-N-CA	7.04	131.38	120.82
16	AE	147	ASN	N-CA-C	-7.04	101.99	110.44
57	BB	1248	G	C4'-C3'-C2'	7.04	109.64	102.60
57	BB	56	A	C4'-C3'-C2'	-7.04	95.56	102.60
57	BB	651	G	P-O3'-C3'	7.04	130.76	120.20
53	BE	29	HIS	CA-CB-CG	7.04	120.84	113.80
21	AA	461	A	P-O3'-C3'	-7.04	109.64	120.20
57	BB	2756	U	P-O3'-C3'	7.04	130.75	120.20
12	AU	48	LYS	N-CA-C	-7.03	104.51	113.23
21	AA	844	G	O4'-C4'-C3'	7.03	111.03	104.00
3	AL	61	GLU	N-CA-C	-7.03	104.01	112.59
21	AA	372	C	C2'-C3'-O3'	7.03	120.05	109.50
18	AG	69	ARG	O-C-N	-7.03	114.93	121.32
57	BB	2625	G	O4'-C4'-C3'	7.03	111.03	104.00
21	AA	1301	U	O4'-C1'-C2'	-7.03	98.78	105.80
29	BJ	33	ALA	N-CA-C	-7.03	103.67	111.82
39	BT	39	THR	N-CA-C	-7.03	103.76	114.16
57	BB	894	U	O4'-C1'-C2'	-7.03	100.57	107.60
5	AN	76	PHE	CA-CB-CG	-7.02	106.78	113.80
31	BL	73	ILE	CA-C-O	7.02	127.65	119.36
17	AF	71	ILE	O-C-N	7.02	128.96	121.87
21	AA	879	C	O4'-C1'-N1	7.02	119.03	108.50
21	AA	1132	C	O4'-C1'-N1	7.02	119.03	108.50
16	AE	88	HIS	N-CA-CB	7.02	122.36	110.49
57	BB	82	U	O4'-C1'-N1	7.02	119.03	108.50
6	AO	76	ARG	NE-CZ-NH2	-7.02	112.88	119.20
13	AB	134	LEU	N-CA-C	-7.02	104.75	113.38
57	BB	2073	C	O4'-C1'-N1	7.02	119.03	108.50
6	AO	27	GLN	CA-C-N	7.02	129.40	120.56
6	AO	27	GLN	C-N-CA	7.02	129.40	120.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	86	G	C2'-C3'-O3'	7.02	120.03	109.50
21	AA	288	A	O4'-C1'-C2'	-7.02	100.58	107.60
45	BC	250	GLN	CA-C-N	7.02	130.25	120.29
45	BC	250	GLN	C-N-CA	7.02	130.25	120.29
52	BD	128	ARG	NE-CZ-NH1	7.02	128.52	121.50
56	BH	34	GLY	N-CA-C	-7.02	104.93	115.32
11	AT	54	GLN	CA-C-O	-7.01	111.86	118.73
13	AB	73	ARG	NE-CZ-NH2	-7.01	112.89	119.20
14	AC	107	LYS	O-C-N	-7.01	116.00	121.47
21	AA	689	C	C4'-C3'-O3'	-7.01	102.48	113.00
21	AA	1078	U	P-O5'-C5'	-7.01	110.38	120.90
26	AV	22	G	C3'-C2'-C1'	-7.01	94.29	101.30
57	BB	2488	G	P-O5'-C5'	7.01	131.42	120.90
28	BI	14	ALA	N-CA-C	-7.01	104.47	113.16
57	BB	354	A	O4'-C1'-N9	7.01	119.02	108.50
2	AK	60	PHE	CA-CB-CG	-7.01	106.79	113.80
21	AA	1372	U	P-O3'-C3'	7.01	130.71	120.20
57	BB	747	U	P-O5'-C5'	7.01	131.41	120.90
17	AF	78	PHE	CA-CB-CG	7.01	120.81	113.80
21	AA	1170	A	C4'-C3'-C2'	-7.01	95.59	102.60
27	B5	204	ALA	N-CA-C	-7.00	103.10	113.61
21	AA	330	C	O4'-C1'-N1	7.00	119.01	108.50
57	BB	1550	C	O4'-C1'-N1	7.00	119.00	108.50
13	AB	136	ARG	N-CA-C	-7.00	102.72	112.45
21	AA	70	U	O3'-P-O5'	-7.00	93.50	104.00
22	AY	57	G	O4'-C1'-N9	7.00	119.00	108.50
37	BR	82	HIS	CA-CB-CG	7.00	120.80	113.80
21	AA	511	C	P-O5'-C5'	-7.00	110.41	120.90
53	BE	166	LYS	N-CA-C	-7.00	103.07	112.94
58	BA	20	G	C3'-C2'-C1'	-7.00	94.30	101.30
21	AA	615	G	P-O3'-C3'	-7.00	109.71	120.20
21	AA	763	G	C1'-C2'-O2'	7.00	118.89	108.40
21	AA	1220	G	C5'-C4'-C3'	-6.99	105.51	116.00
32	BM	97	GLN	CA-C-O	-6.99	110.58	120.16
54	BF	154	THR	CB-CA-C	6.99	122.16	109.37
55	BG	165	ASP	N-CA-CB	6.99	121.47	110.84
57	BB	294	A	O4'-C4'-C3'	6.99	110.99	104.00
57	BB	2218	G	O5'-C5'-C4'	-6.99	101.01	111.50
28	BI	46	ASP	N-CA-C	-6.99	104.75	112.72
33	BN	29	VAL	N-CA-C	-6.99	105.81	113.43
57	BB	248	G	P-O3'-C3'	6.99	130.68	120.20
57	BB	703	U	P-O3'-C3'	6.99	130.68	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	BA	90	C	P-O3'-C3'	-6.99	109.72	120.20
48	B1	22	THR	N-CA-C	-6.98	98.95	108.38
45	BC	134	ILE	N-CA-CB	6.98	119.82	111.23
57	BB	1483	G	O5'-C5'-C4'	-6.98	101.03	111.50
57	BB	1721	G	C2'-C3'-O3'	6.98	119.97	109.50
28	BI	18	ASN	CA-CB-CG	-6.98	105.62	112.60
21	AA	40	C	C5'-C4'-C3'	-6.98	105.53	116.00
57	BB	1541	C	O4'-C1'-N1	6.98	118.97	108.50
22	AY	49	C	O4'-C1'-C2'	-6.98	100.62	107.60
57	BB	1856	U	C4'-C3'-C2'	-6.98	95.62	102.60
49	B2	34	ARG	N-CA-C	-6.97	104.77	113.28
21	AA	412	A	C2'-C3'-O3'	6.97	119.96	109.50
33	BN	45	ARG	NE-CZ-NH1	-6.97	114.53	121.50
53	BE	172	ALA	O-C-N	6.97	132.71	122.39
10	AS	68	HIS	CG-CD2-NE2	6.97	114.17	107.20
21	AA	1320	C	O4'-C1'-N1	6.97	118.95	108.50
35	BP	29	VAL	N-CA-C	-6.97	98.12	108.85
57	BB	2680	U	C4'-C3'-O3'	-6.96	102.55	113.00
54	BF	19	PHE	CA-CB-CG	-6.96	106.84	113.80
57	BB	2145	C	C4'-C3'-C2'	6.96	109.56	102.60
21	AA	710	G	O4'-C1'-N9	6.96	118.94	108.50
57	BB	1905	C	O4'-C1'-N1	6.96	118.94	108.50
57	BB	894	U	C4'-C3'-C2'	-6.96	95.64	102.60
21	AA	545	C	O5'-C5'-C4'	-6.96	101.07	111.50
57	BB	2285	C	O4'-C1'-N1	6.96	118.93	108.50
5	AN	26	LEU	CA-C-N	6.95	132.32	120.71
5	AN	26	LEU	C-N-CA	6.95	132.32	120.71
34	BO	83	LEU	N-CA-C	-6.95	105.33	113.88
53	BE	159	LEU	N-CA-C	-6.95	104.31	114.39
19	AH	15	ASN	N-CA-CB	6.95	120.33	110.12
16	AE	65	LYS	N-CA-C	6.95	120.85	112.38
58	BA	30	C	O4'-C1'-N1	6.95	118.92	108.50
21	AA	322	C	C4'-C3'-O3'	-6.94	102.58	113.00
19	AH	26	MET	CA-C-N	6.94	127.33	119.83
19	AH	26	MET	C-N-CA	6.94	127.33	119.83
57	BB	397	U	P-O5'-C5'	6.94	131.31	120.90
21	AA	662	U	C3'-C2'-C1'	-6.94	94.36	101.30
34	BO	10	ARG	NE-CZ-NH2	6.94	125.45	119.20
57	BB	2737	G	C5'-C4'-C3'	-6.94	105.59	116.00
13	AB	176	ASN	CA-CB-CG	-6.94	105.66	112.60
48	B1	45	HIS	CA-CB-CG	-6.94	106.86	113.80
14	AC	33	ASP	CA-C-N	6.93	129.90	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	AC	33	ASP	C-N-CA	6.93	129.90	120.54
21	AA	48	C	C5'-C4'-C3'	-6.93	104.80	115.20
28	BI	53	PRO	CA-C-N	-6.93	117.30	123.33
28	BI	53	PRO	C-N-CA	-6.93	117.30	123.33
27	B5	93	GLU	N-CA-C	6.93	119.43	111.11
57	BB	262	A	C5'-C4'-C3'	-6.93	105.60	116.00
57	BB	1330	C	P-O5'-C5'	-6.93	110.50	120.90
21	AA	555	U	O4'-C1'-N1	6.93	118.90	108.50
39	BT	73	ARG	NE-CZ-NH2	6.93	125.44	119.20
18	AG	77	ARG	NE-CZ-NH2	6.93	125.44	119.20
21	AA	195	A	C4'-C3'-O3'	-6.93	102.61	113.00
21	AA	568	G	P-O5'-C5'	-6.93	110.50	120.90
21	AA	945	G	C1'-C2'-O2'	6.93	118.80	108.40
10	AS	68	HIS	CE1-NE2-CD2	-6.93	102.07	109.00
11	AT	4	LYS	CA-C-N	6.93	129.87	120.38
11	AT	4	LYS	C-N-CA	6.93	129.87	120.38
14	AC	103	ALA	N-CA-C	-6.93	98.78	109.52
57	BB	2890	G	P-O5'-C5'	6.93	131.29	120.90
40	BU	6	ARG	NE-CZ-NH1	-6.92	114.58	121.50
57	BB	2443	C	O4'-C1'-N1	6.92	118.88	108.50
58	BA	82	U	O4'-C4'-C3'	-6.92	97.08	104.00
21	AA	1141	C	O4'-C1'-N1	6.92	118.88	108.50
25	AZ	58	ARG	CA-C-N	6.92	127.63	121.82
25	AZ	58	ARG	C-N-CA	6.92	127.63	121.82
57	BB	565	C	O4'-C1'-N1	6.92	118.88	108.50
15	AD	11	SER	CA-C-N	6.92	131.20	120.82
15	AD	11	SER	C-N-CA	6.92	131.20	120.82
21	AA	489	C	O4'-C1'-N1	6.92	118.88	108.50
23	AW	38	A	P-O3'-C3'	6.92	130.58	120.20
26	AV	17	C	O4'-C1'-N1	6.92	118.88	108.50
57	BB	973	A	O5'-C5'-C4'	6.92	122.08	111.70
21	AA	866	C	O4'-C1'-N1	6.92	118.88	108.50
28	BI	121	ILE	CA-C-O	6.92	127.97	120.57
57	BB	2	G	C5'-C4'-C3'	-6.92	105.62	116.00
57	BB	151	C	O4'-C1'-N1	6.92	118.87	108.50
25	AZ	344	PRO	N-CA-CB	6.92	109.33	103.17
21	AA	23	C	C4'-C3'-O3'	-6.91	102.63	113.00
21	AA	1244	G	C4'-C3'-C2'	-6.91	95.69	102.60
35	BP	58	PHE	N-CA-C	-6.91	96.07	110.80
40	BU	33	VAL	N-CA-C	-6.91	98.63	108.65
48	B1	23	THR	CA-CB-OG1	6.91	119.97	109.60
57	BB	788	A	C5'-C4'-O4'	6.91	119.47	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1532	U	C5'-C4'-C3'	-6.91	105.63	116.00
57	BB	566	U	C1'-O4'-C4'	6.91	116.81	109.90
57	BB	727	A	C4'-C3'-O3'	-6.91	102.63	113.00
11	AT	74	HIS	N-CA-CB	6.91	120.65	110.56
13	AB	180	ILE	CA-C-O	-6.91	114.16	119.20
51	B4	36	ARG	N-CA-C	-6.91	105.38	113.88
27	B5	144	THR	CA-CB-CG2	6.91	122.24	110.50
57	BB	2145	C	O4'-C1'-N1	6.91	118.86	108.50
57	BB	2803	G	O4'-C1'-N9	6.91	118.86	108.50
21	AA	732	C	C4'-C3'-O3'	-6.90	102.65	113.00
57	BB	2271	G	C4'-C3'-O3'	-6.90	102.65	113.00
39	BT	44	LYS	N-CA-C	-6.90	105.41	114.31
57	BB	1092	C	C4'-C3'-C2'	-6.90	95.70	102.60
4	AM	52	ILE	O-C-N	-6.90	114.90	121.87
28	BI	102	ARG	NE-CZ-NH2	6.90	125.41	119.20
1	AJ	21	ALA	CA-C-O	-6.90	113.59	122.14
6	AO	35	ILE	N-CA-CB	6.90	118.17	110.51
52	BD	92	VAL	CA-C-O	-6.90	113.21	121.28
57	BB	2311	A	O5'-C5'-C4'	-6.90	101.35	111.70
52	BD	91	THR	CA-C-N	6.90	130.01	120.49
52	BD	91	THR	C-N-CA	6.90	130.01	120.49
57	BB	1695	G	P-O5'-C5'	-6.90	110.56	120.90
23	AW	39	U	P-O3'-C3'	6.89	130.54	120.20
8	AQ	32	ILE	CB-CA-C	6.89	121.37	111.65
18	AG	67	ASN	N-CA-C	-6.89	103.21	111.69
57	BB	2551	C	O4'-C1'-N1	6.89	118.84	108.50
21	AA	1469	C	O4'-C1'-N1	6.89	118.84	108.50
3	AL	73	LEU	N-CA-C	6.89	120.22	110.50
21	AA	1395	C	C5'-C4'-C3'	-6.89	105.67	116.00
40	BU	98	ASN	CA-C-N	6.89	132.60	122.82
40	BU	98	ASN	C-N-CA	6.89	132.60	122.82
57	BB	1409	U	O4'-C1'-C2'	-6.89	100.71	107.60
55	BG	88	LEU	CB-CA-C	6.89	120.81	109.72
57	BB	19	A	C4'-C3'-C2'	-6.89	95.71	102.60
57	BB	1064	C	P-O3'-C3'	6.88	130.53	120.20
57	BB	2402	U	C1'-O4'-C4'	-6.88	103.02	109.90
55	BG	81	GLY	O-C-N	6.88	129.54	122.86
57	BB	1113	U	C4'-C3'-O3'	-6.88	102.68	113.00
25	AZ	332	PHE	CB-CA-C	-6.88	99.66	110.74
57	BB	1854	A	O4'-C1'-N9	6.88	118.82	108.50
27	B5	3	LYS	CA-C-N	6.88	133.24	122.78
27	B5	3	LYS	C-N-CA	6.88	133.24	122.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	AC	73	GLY	CA-C-N	6.88	129.88	120.46
14	AC	73	GLY	C-N-CA	6.88	129.88	120.46
56	BH	106	ALA	N-CA-C	-6.88	104.50	113.17
57	BB	2224	G	P-O5'-C5'	6.88	131.22	120.90
21	AA	1119	C	P-O5'-C5'	6.87	131.21	120.90
25	AZ	77	ALA	N-CA-C	-6.87	97.31	108.52
25	AZ	100	GLY	N-CA-C	-6.87	98.77	111.14
54	BF	37	MET	N-CA-CB	6.87	123.25	112.25
6	AO	55	LEU	CA-C-N	6.87	130.05	120.29
6	AO	55	LEU	C-N-CA	6.87	130.05	120.29
21	AA	365	U	P-O3'-C3'	-6.87	109.89	120.20
21	AA	1322	C	O4'-C4'-C3'	-6.87	99.23	106.10
27	B5	103	GLN	CA-C-N	6.87	129.22	120.56
27	B5	103	GLN	C-N-CA	6.87	129.22	120.56
32	BM	134	THR	N-CA-CB	6.87	122.10	110.49
57	BB	1543	G	C4'-C3'-O3'	-6.87	102.70	113.00
21	AA	462	G	C5'-C4'-O4'	6.87	119.40	109.10
21	AA	380	G	C4'-C3'-O3'	-6.87	102.70	113.00
57	BB	1011	G	O5'-C5'-C4'	-6.87	101.40	111.70
57	BB	2814	A	O4'-C1'-C2'	-6.87	100.73	107.60
29	BJ	75	TYR	CA-C-O	-6.86	113.25	121.56
57	BB	2138	G	C5'-C4'-C3'	-6.86	105.71	116.00
21	AA	1364	U	C5'-C4'-C3'	-6.86	104.91	115.20
21	AA	1460	C	C4'-C3'-C2'	-6.86	95.74	102.60
58	BA	80	U	C4'-C3'-O3'	-6.86	102.71	113.00
21	AA	729	A	C4'-C3'-C2'	-6.86	95.74	102.60
45	BC	48	ILE	N-CA-CB	6.86	119.65	110.26
57	BB	842	U	P-O5'-C5'	6.86	131.19	120.90
57	BB	2182	U	P-O3'-C3'	6.86	130.49	120.20
21	AA	121	U	P-O5'-C5'	-6.86	110.62	120.90
57	BB	179	C	O4'-C4'-C3'	-6.86	97.14	104.00
57	BB	758	C	O4'-C1'-N1	6.86	118.78	108.50
38	BS	13	SER	N-CA-CB	6.85	120.24	110.44
57	BB	372	G	P-O3'-C3'	6.85	130.48	120.20
21	AA	745	G	C1'-C2'-O2'	6.85	118.68	108.40
37	BR	12	HIS	ND1-CE1-NE2	6.85	115.25	108.40
5	AN	57	SER	N-CA-C	-6.85	104.92	113.28
17	AF	49	TYR	N-CA-C	-6.85	102.06	108.22
44	BY	30	MET	CG-SD-CE	-6.85	85.83	100.90
57	BB	1504	A	C5'-C4'-C3'	-6.85	105.72	116.00
57	BB	2427	C	C1'-O4'-C4'	6.85	116.75	109.90
27	B5	166	ASP	CA-CB-CG	6.85	119.45	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BK	87	ASN	CA-CB-CG	-6.85	105.75	112.60
31	BL	73	ILE	CA-C-N	6.85	131.53	122.42
31	BL	73	ILE	C-N-CA	6.85	131.53	122.42
39	BT	84	TYR	CA-C-O	-6.85	112.98	120.24
9	AR	59	LYS	N-CA-C	6.85	118.74	111.28
20	AI	26	LYS	CA-C-N	6.85	132.30	123.13
20	AI	26	LYS	C-N-CA	6.85	132.30	123.13
57	BB	1280	G	C5'-C4'-C3'	-6.84	105.73	116.00
34	BO	23	ALA	CA-C-N	6.84	132.36	122.85
34	BO	23	ALA	C-N-CA	6.84	132.36	122.85
17	AF	83	ALA	CA-C-O	-6.84	113.66	120.70
21	AA	1203	C	O4'-C1'-C2'	-6.84	100.76	107.60
25	AZ	137	CYS	O-C-N	6.84	131.11	122.22
57	BB	2037	A	C4'-C3'-C2'	-6.84	95.76	102.60
57	BB	2658	C	C1'-C2'-O2'	6.84	118.66	108.40
38	BS	7	HIS	CB-CG-CD2	-6.84	122.31	131.20
25	AZ	285	GLU	CB-CG-CD	-6.83	100.98	112.60
57	BB	387	U	P-O3'-C3'	6.83	130.45	120.20
18	AG	41	ILE	N-CA-CB	6.83	119.01	110.47
19	AH	67	GLY	N-CA-C	-6.83	104.81	116.01
23	AW	31	A	O4'-C1'-N9	6.83	118.75	108.50
57	BB	1103	A	P-O3'-C3'	6.83	130.44	120.20
23	AW	35	A	C3'-C2'-C1'	-6.83	94.47	101.30
17	AF	82	ASP	CA-C-N	6.83	129.72	120.44
17	AF	82	ASP	C-N-CA	6.83	129.72	120.44
57	BB	1306	C	O4'-C1'-N1	6.83	118.74	108.50
57	BB	2196	C	P-O5'-C5'	-6.83	110.66	120.90
27	B5	92	ALA	CA-C-N	6.82	129.75	120.54
27	B5	92	ALA	C-N-CA	6.82	129.75	120.54
42	BW	39	GLN	CA-C-O	6.82	128.31	119.98
56	BH	95	GLY	N-CA-C	-6.82	103.93	115.80
11	AT	22	SER	CB-CA-C	-6.82	99.08	110.68
32	BM	24	THR	N-CA-C	-6.82	104.27	114.64
13	AB	17	HIS	CG-CD2-NE2	6.82	114.02	107.20
13	AB	181	PRO	CA-C-O	-6.82	114.11	121.27
57	BB	2285	C	P-O5'-C5'	-6.82	110.67	120.90
57	BB	2740	A	C4'-C3'-C2'	-6.82	95.78	102.60
57	BB	1515	A	O4'-C1'-N9	6.82	118.72	108.50
57	BB	1674	G	C3'-C2'-C1'	6.82	108.32	101.50
21	AA	1434	A	O4'-C1'-N9	6.81	118.72	108.50
57	BB	710	U	O4'-C1'-C2'	-6.81	100.79	107.60
8	AQ	46	HIS	CA-C-O	6.81	127.65	120.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	AS	2	ARG	NE-CZ-NH2	-6.81	113.07	119.20
11	AT	48	LYS	N-CA-C	-6.81	104.28	112.59
22	AY	33	U	P-O5'-C5'	6.81	131.12	120.90
32	BM	3	GLN	OE1-CD-NE2	-6.81	115.79	122.60
57	BB	66	C	O4'-C1'-N1	6.81	118.72	108.50
57	BB	1266	G	C1'-O4'-C4'	-6.81	102.89	109.70
32	BM	132	THR	N-CA-C	-6.81	98.96	109.52
4	AM	16	ILE	CA-C-N	6.81	130.32	120.38
4	AM	16	ILE	C-N-CA	6.81	130.32	120.38
25	AZ	344	PRO	CA-C-N	6.81	134.55	121.54
25	AZ	344	PRO	C-N-CA	6.81	134.55	121.54
26	AV	39	C	O5'-C5'-C4'	-6.81	101.28	111.50
57	BB	53	A	O4'-C1'-N9	6.81	118.72	108.50
21	AA	1403	C	P-O5'-C5'	6.81	131.11	120.90
41	BV	48	MET	N-CA-C	-6.81	103.78	111.07
57	BB	244	A	C4'-C3'-O3'	-6.81	102.79	113.00
58	BA	104	A	P-O5'-C5'	-6.81	110.69	120.90
33	BN	104	ALA	CA-C-O	-6.81	113.67	120.82
6	AO	37	HIS	CE1-NE2-CD2	-6.80	102.19	109.00
33	BN	43	GLU	CA-C-O	6.80	127.10	119.41
34	BO	31	THR	CA-CB-OG1	6.80	119.81	109.60
45	BC	257	ARG	CB-CG-CD	6.80	126.95	111.30
57	BB	272	A	C4'-C3'-C2'	-6.80	95.80	102.60
57	BB	1237	A	O5'-C5'-C4'	-6.80	101.29	111.50
57	BB	2726	A	O4'-C1'-N9	6.80	118.41	108.20
23	AW	10	G	O4'-C4'-C3'	6.80	110.80	104.00
33	BN	62	ASN	N-CA-C	-6.80	105.26	113.97
4	AM	72	ILE	N-CA-CB	6.80	118.06	110.51
15	AD	10	LEU	CA-C-N	6.80	129.72	120.54
15	AD	10	LEU	C-N-CA	6.80	129.72	120.54
14	AC	161	ILE	N-CA-CB	6.80	122.45	111.23
57	BB	2065	C	P-O5'-C5'	6.80	131.10	120.90
25	AZ	187	LYS	N-CA-C	6.80	119.53	111.71
13	AB	69	VAL	CA-C-O	6.80	126.67	120.96
36	BQ	61	ILE	N-CA-C	6.80	117.50	110.36
57	BB	1133	A	C4'-C3'-C2'	6.80	109.40	102.60
57	BB	2566	A	C4'-C3'-C2'	6.80	109.40	102.60
13	AB	138	ARG	CA-C-O	-6.79	113.69	120.82
21	AA	1048	G	O4'-C1'-N9	6.79	118.69	108.50
22	AY	73	A	C1'-O4'-C4'	-6.79	103.11	109.90
47	B0	8	THR	N-CA-C	-6.79	100.40	110.46
21	AA	90	C	P-O5'-C5'	-6.79	110.71	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BL	121	THR	CA-CB-OG1	6.79	119.79	109.60
1	AJ	89	ARG	N-CA-C	-6.79	103.11	111.40
6	AO	43	ALA	N-CA-C	-6.79	103.96	111.36
21	AA	389	A	P-O3'-C3'	6.79	130.39	120.20
41	BV	89	ILE	N-CA-C	-6.79	99.39	108.35
42	BW	8	SER	N-CA-C	-6.79	104.11	114.16
57	BB	808	G	O4'-C4'-C3'	6.79	110.79	104.00
57	BB	2113	U	O5'-C5'-C4'	-6.79	101.31	111.50
11	AT	30	PHE	CA-CB-CG	-6.79	107.01	113.80
22	AY	34	G	C4'-C3'-C2'	-6.79	95.81	102.60
21	AA	1030	U	C2'-C3'-O3'	6.79	123.88	113.70
21	AA	1193	G	O5'-C5'-C4'	-6.79	101.32	111.50
27	B5	65	LEU	CA-C-O	-6.79	113.84	120.97
57	BB	13	A	O4'-C4'-C3'	-6.79	99.31	106.10
57	BB	98	G	O4'-C1'-C2'	-6.79	100.81	107.60
31	BL	126	ARG	NE-CZ-NH1	-6.79	114.71	121.50
21	AA	8	A	O4'-C1'-C2'	-6.79	99.02	105.80
21	AA	770	C	P-O5'-C5'	6.79	131.08	120.90
25	AZ	30	ALA	N-CA-CB	6.79	121.96	110.49
39	BT	73	ARG	N-CA-C	-6.78	96.35	110.80
41	BV	50	MET	N-CA-C	6.78	118.47	111.14
21	AA	1112	C	C4'-C3'-O3'	-6.78	102.83	113.00
57	BB	1506	U	O4'-C1'-N1	6.78	118.67	108.50
57	BB	1645	G	P-O3'-C3'	6.78	130.37	120.20
57	BB	1781	U	C1'-O4'-C4'	6.78	116.48	109.70
45	BC	187	CYS	CA-C-N	6.78	132.65	121.39
45	BC	187	CYS	C-N-CA	6.78	132.65	121.39
57	BB	894	U	C5'-C4'-C3'	-6.78	105.83	116.00
57	BB	241	A	C3'-C2'-C1'	-6.78	94.72	101.50
21	AA	209	U	P-O5'-C5'	6.78	131.06	120.90
57	BB	1641	A	C4'-C3'-C2'	-6.78	95.83	102.60
57	BB	2606	C	O4'-C4'-C3'	-6.78	97.22	104.00
57	BB	2798	U	O3'-P-O5'	-6.78	93.84	104.00
15	AD	101	VAL	N-CA-CB	6.77	118.94	110.47
21	AA	38	G	O4'-C1'-N9	6.77	118.66	108.50
40	BU	100	GLU	N-CA-C	-6.77	104.59	112.92
57	BB	459	U	P-O5'-C5'	6.77	131.06	120.90
57	BB	2090	A	O4'-C1'-N9	6.77	118.66	108.50
3	AL	21	PRO	N-CA-C	-6.77	106.86	114.92
9	AR	39	VAL	N-CA-C	-6.77	101.45	108.15
57	BB	959	A	P-O3'-C3'	-6.77	110.05	120.20
57	BB	1208	C	O4'-C1'-N1	6.77	118.65	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	18	C	O4'-C1'-N1	6.77	118.65	108.50
53	BE	79	ARG	N-CA-CB	6.77	120.83	110.61
57	BB	2821	A	C4'-C3'-O3'	-6.77	102.85	113.00
57	BB	2659	G	C4'-C3'-C2'	-6.76	95.83	102.60
58	BA	73	A	O4'-C1'-C2'	-6.76	100.83	107.60
21	AA	1444	U	P-O5'-C5'	6.76	131.04	120.90
57	BB	867	C	O4'-C1'-N1	6.76	118.64	108.50
57	BB	1434	A	O4'-C1'-N9	6.76	118.64	108.50
57	BB	2479	U	P-O5'-C5'	6.76	131.04	120.90
26	AV	56	C	O4'-C1'-N1	6.76	118.64	108.50
7	AP	60	TRP	N-CA-CB	6.76	121.07	110.46
21	AA	284	C	P-O5'-C5'	6.76	131.03	120.90
27	B5	51	ASP	CA-CB-CG	6.76	119.36	112.60
52	BD	134	HIS	ND1-CE1-NE2	6.76	115.16	108.40
57	BB	426	C	O4'-C1'-N1	6.76	118.63	108.50
57	BB	737	C	C4'-C3'-C2'	-6.75	95.85	102.60
2	AK	21	HIS	CG-CD2-NE2	6.75	113.95	107.20
21	AA	473	U	P-O5'-C5'	-6.75	110.77	120.90
57	BB	22	C	O4'-C1'-N1	6.75	118.63	108.50
57	BB	1306	C	P-O5'-C5'	-6.75	110.77	120.90
21	AA	1430	A	C3'-C2'-C1'	-6.75	94.55	101.30
11	AT	15	LYS	N-CA-C	6.75	118.72	111.36
21	AA	435	A	O4'-C1'-C2'	-6.75	100.85	107.60
31	BL	128	THR	CA-CB-OG1	6.75	119.72	109.60
39	BT	39	THR	CA-CB-OG1	6.75	119.72	109.60
57	BB	2759	G	O3'-P-O5'	-6.75	93.88	104.00
49	B2	10	LEU	CA-C-N	6.75	129.32	120.28
49	B2	10	LEU	C-N-CA	6.75	129.32	120.28
57	BB	2694	G	O4'-C4'-C3'	-6.75	97.25	104.00
57	BB	1750	G	C4'-C3'-C2'	-6.75	95.86	102.60
6	AO	28	VAL	CA-C-N	6.74	129.64	120.54
6	AO	28	VAL	C-N-CA	6.74	129.64	120.54
21	AA	1100	C	C1'-O4'-C4'	-6.74	103.16	109.90
21	AA	1452	C	C5'-C4'-O4'	6.74	119.21	109.10
19	AH	2	MET	CA-C-O	-6.74	113.44	120.99
57	BB	692	C	O4'-C1'-N1	6.74	118.61	108.50
18	AG	63	VAL	CA-C-N	6.74	129.61	120.38
18	AG	63	VAL	C-N-CA	6.74	129.61	120.38
52	BD	99	GLU	CA-C-N	6.74	129.64	120.54
52	BD	99	GLU	C-N-CA	6.74	129.64	120.54
5	AN	49	THR	N-CA-C	-6.74	104.88	113.23
57	BB	1646	C	P-O5'-C5'	6.73	131.00	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AM	81	ASP	CA-C-N	6.73	129.19	120.44
4	AM	81	ASP	C-N-CA	6.73	129.19	120.44
13	AB	197	PHE	N-CA-C	-6.73	98.42	108.99
21	AA	1371	G	C4'-C3'-C2'	-6.73	95.87	102.60
57	BB	485	C	C4'-C3'-C2'	-6.73	95.87	102.60
24	AX	16	A	P-O3'-C3'	6.73	130.30	120.20
57	BB	1120	G	C4'-C3'-C2'	-6.73	95.87	102.60
57	BB	1199	U	O4'-C1'-N1	6.73	118.60	108.50
57	BB	1243	C	P-O3'-C3'	-6.73	110.10	120.20
43	BX	32	LEU	N-CA-C	6.73	120.82	111.74
15	AD	35	GLN	N-CA-CB	6.73	121.86	110.49
18	AG	57	GLU	CA-C-N	6.73	133.56	121.92
18	AG	57	GLU	C-N-CA	6.73	133.56	121.92
56	BH	64	ALA	CA-C-N	6.73	129.62	120.54
56	BH	64	ALA	C-N-CA	6.73	129.62	120.54
3	AL	60	PHE	CA-CB-CG	6.72	120.52	113.80
4	AM	85	TYR	CA-C-N	6.72	129.29	120.28
4	AM	85	TYR	C-N-CA	6.72	129.29	120.28
5	AN	3	GLN	CA-C-N	6.72	129.18	120.44
5	AN	3	GLN	C-N-CA	6.72	129.18	120.44
15	AD	174	ALA	N-CA-C	-6.72	104.77	114.12
57	BB	2730	C	C4'-C3'-O3'	-6.72	102.91	113.00
15	AD	141	VAL	N-CA-C	-6.72	97.76	107.78
47	B0	35	GLU	CA-CB-CG	-6.72	100.66	114.10
54	BF	103	ILE	CA-C-N	6.72	133.88	122.26
54	BF	103	ILE	C-N-CA	6.72	133.88	122.26
57	BB	2902	C	O4'-C1'-N1	6.72	118.58	108.50
31	BL	55	MET	O-C-N	-6.72	113.59	121.32
57	BB	2110	G	P-O3'-C3'	6.72	130.28	120.20
21	AA	92	U	O5'-C5'-C4'	-6.72	101.42	111.50
56	BH	101	ASP	CB-CA-C	-6.72	98.17	109.65
57	BB	2880	C	O4'-C1'-N1	6.72	118.57	108.50
57	BB	978	G	C5'-C4'-C3'	6.71	126.07	116.00
33	BN	34	ILE	O-C-N	6.71	130.96	122.57
18	AG	141	HIS	ND1-CE1-NE2	6.71	115.11	108.40
27	B5	60	ARG	NE-CZ-NH2	-6.71	113.16	119.20
36	BQ	43	GLN	CA-C-N	6.71	132.88	121.14
36	BQ	43	GLN	C-N-CA	6.71	132.88	121.14
21	AA	1293	C	C4'-C3'-C2'	-6.71	95.89	102.60
40	BU	18	LYS	O-C-N	6.71	130.52	122.27
14	AC	87	ARG	NE-CZ-NH2	-6.71	113.17	119.20
21	AA	303	A	C4'-C3'-C2'	-6.71	95.89	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1802	A	C1'-O4'-C4'	6.71	116.61	109.90
14	AC	135	ARG	NE-CZ-NH2	-6.70	113.17	119.20
21	AA	1203	C	O4'-C1'-N1	6.70	118.56	108.50
25	AZ	204	ARG	N-CA-C	-6.70	99.00	109.72
57	BB	1044	C	C4'-C3'-O3'	-6.70	102.94	113.00
57	BB	1567	G	C4'-C3'-C2'	-6.70	95.90	102.60
26	AV	69	C	O5'-C5'-C4'	-6.70	101.45	111.50
57	BB	854	C	C4'-C3'-C2'	-6.70	95.90	102.60
57	BB	2058	A	C4'-C3'-O3'	-6.70	102.95	113.00
5	AN	22	LYS	N-CA-C	-6.70	103.71	114.09
45	BC	216	ARG	NE-CZ-NH2	-6.70	113.17	119.20
27	B5	79	THR	O-C-N	-6.70	115.76	123.33
57	BB	902	C	C4'-C3'-O3'	-6.70	102.95	113.00
21	AA	368	U	C4'-C3'-O3'	-6.70	102.96	113.00
25	AZ	118	HIS	ND1-CG-CD2	6.70	112.80	106.10
26	AV	17	C	O4'-C4'-C3'	-6.70	97.31	104.00
57	BB	2810	A	P-O5'-C5'	6.70	130.94	120.90
22	AY	65	G	P-O5'-C5'	-6.69	110.86	120.90
25	AZ	140	VAL	O-C-N	6.69	130.21	123.18
57	BB	2852	G	P-O3'-C3'	-6.69	110.16	120.20
21	AA	518	C	C3'-C2'-C1'	-6.69	94.81	101.50
21	AA	841	C	P-O3'-C3'	6.69	130.23	120.20
57	BB	201	C	C4'-C3'-C2'	-6.69	95.91	102.60
57	BB	302	C	O4'-C1'-N1	6.69	118.54	108.50
57	BB	2373	G	O4'-C1'-N9	6.69	118.54	108.50
58	BA	27	C	O4'-C1'-N1	6.69	118.54	108.50
57	BB	1533	C	P-O3'-C3'	-6.68	110.17	120.20
57	BB	2187	U	C3'-C2'-C1'	-6.68	94.62	101.30
31	BL	14	LYS	CA-C-N	6.68	130.20	120.71
31	BL	14	LYS	C-N-CA	6.68	130.20	120.71
57	BB	237	C	C1'-O4'-C4'	6.68	116.58	109.90
57	BB	2325	G	O4'-C4'-C3'	-6.68	97.32	104.00
21	AA	604	G	O5'-C5'-C4'	-6.68	101.48	111.50
57	BB	2025	C	O4'-C1'-N1	6.68	118.52	108.50
21	AA	1199	U	C4'-C3'-O3'	-6.68	102.98	113.00
8	AQ	30	HIS	ND1-CE1-NE2	6.68	115.08	108.40
19	AH	19	ALA	CA-C-N	6.67	132.30	122.82
19	AH	19	ALA	C-N-CA	6.67	132.30	122.82
21	AA	1299	A	C4'-C3'-C2'	6.67	109.27	102.60
28	BI	33	ASN	CA-CB-CG	-6.67	105.93	112.60
55	BG	110	HIS	ND1-CE1-NE2	6.67	115.07	108.40
57	BB	2120	G	O4'-C1'-C2'	-6.67	100.93	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AK	65	ALA	N-CA-C	-6.67	102.44	112.04
57	BB	1166	G	O4'-C4'-C3'	-6.67	97.33	104.00
14	AC	133	MET	CA-C-N	6.67	130.06	120.79
14	AC	133	MET	C-N-CA	6.67	130.06	120.79
34	BO	3	LYS	N-CA-C	-6.67	105.02	113.02
57	BB	991	C	O4'-C1'-N1	6.67	118.50	108.50
57	BB	1799	G	O4'-C1'-N9	6.67	118.20	108.20
57	BB	2559	C	O4'-C1'-N1	6.67	118.50	108.50
57	BB	2874	C	O4'-C1'-N1	6.67	118.50	108.50
57	BB	984	A	C2'-C3'-O3'	6.67	119.50	109.50
57	BB	1769	U	P-O5'-C5'	6.67	130.90	120.90
54	BF	69	ALA	O-C-N	6.66	131.45	122.59
49	B2	37	LYS	CA-C-O	-6.66	112.31	119.97
52	BD	96	ILE	CB-CA-C	6.66	118.92	111.59
17	AF	55	HIS	CE1-NE2-CD2	-6.66	102.34	109.00
23	AW	31	A	P-O3'-C3'	-6.66	110.21	120.20
57	BB	2438	U	O4'-C1'-N1	6.66	118.49	108.50
57	BB	636	G	P-O3'-C3'	6.65	130.18	120.20
1	AJ	82	LYS	N-CA-C	-6.65	104.39	113.30
21	AA	233	C	O4'-C1'-N1	6.65	118.48	108.50
21	AA	447	G	O4'-C1'-N9	6.65	118.48	108.50
22	AY	37	G	C5'-C4'-C3'	-6.65	106.02	116.00
21	AA	633	G	P-O5'-C5'	6.65	130.87	120.90
21	AA	1480	A	C4'-C3'-C2'	-6.65	95.95	102.60
21	AA	637	C	O4'-C1'-N1	6.65	118.47	108.50
34	BO	89	ASP	CA-CB-CG	6.65	119.25	112.60
46	BZ	29	ARG	NE-CZ-NH2	6.65	125.18	119.20
55	BG	44	HIS	CE1-NE2-CD2	-6.65	102.35	109.00
57	BB	96	C	O5'-C5'-C4'	-6.65	101.53	111.50
17	AF	68	GLN	CA-C-N	6.64	130.08	120.38
17	AF	68	GLN	C-N-CA	6.64	130.08	120.38
14	AC	120	THR	N-CA-C	-6.64	103.97	111.14
21	AA	788	U	O4'-C1'-N1	6.64	118.46	108.50
32	BM	16	ARG	N-CA-C	-6.64	96.31	107.80
45	BC	67	LYS	N-CA-C	-6.64	103.52	111.69
52	BD	70	LYS	N-CA-C	-6.64	103.39	113.89
57	BB	2187	U	O5'-C5'-C4'	6.64	121.47	111.50
21	AA	382	A	P-O5'-C5'	6.64	130.86	120.90
21	AA	1360	A	C3'-C2'-C1'	6.64	107.94	101.30
52	BD	88	GLU	N-CA-C	-6.64	103.80	114.09
57	BB	536	G	O4'-C1'-N9	6.64	118.46	108.50
21	AA	1214	C	C2'-C3'-O3'	6.64	119.46	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1217	C	O4'-C1'-N1	6.64	118.46	108.50
57	BB	960	A	P-O3'-C3'	6.64	130.16	120.20
22	AY	59	U	P-O5'-C5'	6.64	130.85	120.90
45	BC	74	PRO	N-CD-CG	6.63	113.15	103.20
23	AW	17	C	O4'-C1'-N1	6.63	118.15	108.20
57	BB	645	C	C2'-C3'-O3'	6.63	119.45	109.50
21	AA	735	C	C1'-C2'-O2'	6.63	118.35	108.40
21	AA	780	A	O4'-C1'-N9	6.63	118.45	108.50
31	BL	53	GLY	CA-C-N	6.63	130.17	120.82
31	BL	53	GLY	C-N-CA	6.63	130.17	120.82
57	BB	2333	A	P-O5'-C5'	6.63	130.85	120.90
38	BS	92	ARG	NE-CZ-NH2	6.63	125.17	119.20
57	BB	2494	G	O5'-C5'-C4'	-6.63	101.56	111.50
13	AB	81	ASP	CA-CB-CG	-6.63	105.97	112.60
16	AE	116	VAL	N-CA-CB	6.63	120.95	110.54
42	BW	52	CYS	O-C-N	6.63	131.41	122.59
57	BB	1395	A	P-O3'-C3'	6.63	130.14	120.20
57	BB	2405	G	C5'-C4'-C3'	-6.63	106.06	116.00
2	AK	118	ASN	CA-CB-CG	-6.63	105.97	112.60
6	AO	84	LEU	CB-CA-C	-6.63	98.56	110.35
21	AA	1148	U	O4'-C1'-N1	6.63	118.44	108.50
34	BO	59	ALA	CA-C-O	6.63	125.81	118.52
53	BE	121	VAL	CA-C-O	-6.63	116.44	121.68
57	BB	668	A	C4'-C3'-C2'	-6.63	95.97	102.60
57	BB	1505	A	O4'-C1'-N9	6.63	118.44	108.50
57	BB	2706	A	C5'-C4'-C3'	6.63	125.94	116.00
13	AB	125	PHE	N-CA-C	-6.62	103.60	112.94
25	AZ	53	PRO	N-CA-C	6.62	123.62	113.75
57	BB	417	C	O4'-C1'-N1	6.62	118.44	108.50
38	BS	31	GLN	OE1-CD-NE2	-6.62	115.98	122.60
57	BB	284	U	C5'-C4'-C3'	-6.62	106.06	116.00
57	BB	1557	C	C4'-C3'-O3'	-6.62	103.06	113.00
57	BB	2505	G	C3'-C2'-C1'	6.62	107.92	101.30
57	BB	2881	U	O4'-C1'-N1	6.62	118.44	108.50
8	AQ	58	VAL	CA-C-O	-6.62	115.15	121.64
21	AA	976	G	O4'-C4'-C3'	-6.62	97.38	104.00
36	BQ	18	LYS	N-CA-C	-6.62	104.43	113.30
57	BB	1701	A	C5'-C4'-C3'	-6.62	106.07	116.00
57	BB	1892	C	C4'-C3'-C2'	-6.62	95.98	102.60
4	AM	78	ARG	N-CA-CB	6.62	121.68	110.49
4	AM	97	ARG	CA-C-N	6.62	126.27	119.92
4	AM	97	ARG	C-N-CA	6.62	126.27	119.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	AB	107	ARG	NE-CZ-NH2	-6.62	113.24	119.20
40	BU	64	ILE	CA-C-O	-6.62	115.37	121.72
57	BB	399	U	O4'-C1'-N1	6.62	118.43	108.50
57	BB	2472	G	C5'-C4'-C3'	6.62	125.93	116.00
32	BM	88	ASN	CA-C-O	-6.62	113.68	121.16
21	AA	643	C	O4'-C1'-N1	6.62	118.42	108.50
21	AA	1183	U	O5'-C5'-C4'	6.62	121.42	111.50
4	AM	92	ARG	N-CA-C	-6.61	104.35	112.88
33	BN	79	LEU	N-CA-CB	6.61	119.76	110.04
55	BG	38	ASP	N-CA-C	-6.61	104.35	112.88
21	AA	1318	A	P-O3'-C3'	6.61	130.11	120.20
35	BP	112	ARG	CA-C-N	6.61	134.16	121.54
35	BP	112	ARG	C-N-CA	6.61	134.16	121.54
57	BB	555	G	P-O3'-C3'	-6.61	110.29	120.20
29	BJ	76	HIS	CA-C-N	6.61	130.87	121.42
29	BJ	76	HIS	C-N-CA	6.61	130.87	121.42
21	AA	694	A	C4'-C3'-O3'	-6.60	103.10	113.00
50	B3	44	ARG	CA-C-O	-6.60	111.11	120.16
52	BD	68	PHE	N-CA-C	-6.60	104.36	112.88
32	BM	115	GLU	N-CA-C	-6.60	104.71	112.89
57	BB	470	A	C4'-C3'-C2'	-6.60	96.00	102.60
57	BB	1769	U	C1'-C2'-O2'	-6.60	98.50	108.40
21	AA	432	A	C1'-O4'-C4'	-6.60	103.30	109.90
45	BC	120	ASP	CA-C-O	6.60	125.71	118.65
57	BB	907	G	C4'-C3'-O3'	-6.60	103.10	113.00
57	BB	1392	A	P-O3'-C3'	-6.60	110.30	120.20
36	BQ	54	ARG	N-CA-C	-6.60	103.28	112.45
57	BB	1332	G	O4'-C4'-C3'	-6.60	99.50	106.10
21	AA	512	U	C5'-C4'-C3'	-6.59	106.11	116.00
26	AV	45	G	P-O5'-C5'	-6.59	111.01	120.90
57	BB	2664	G	P-O5'-C5'	6.59	130.79	120.90
21	AA	707	U	C4'-C3'-O3'	-6.59	103.12	113.00
45	BC	238	ASN	CA-CB-CG	6.59	119.19	112.60
13	AB	191	ASP	CB-CA-C	-6.59	102.86	110.17
15	AD	69	ARG	NE-CZ-NH2	6.59	125.13	119.20
21	AA	808	C	P-O3'-C3'	-6.59	110.32	120.20
21	AA	1321	U	O5'-C5'-C4'	-6.59	101.62	111.50
35	BP	82	SER	N-CA-C	6.59	120.26	109.06
57	BB	1968	G	P-O5'-C5'	-6.59	111.02	120.90
21	AA	778	G	P-O5'-C5'	6.58	130.78	120.90
21	AA	1224	U	P-O3'-C3'	6.58	130.08	120.20
23	AW	66	U	C1'-C2'-O2'	6.58	118.28	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1685	C	O4'-C1'-N1	6.58	118.38	108.50
57	BB	2078	C	O4'-C1'-N1	6.58	118.38	108.50
33	BN	117	ASP	N-CA-CB	6.58	121.74	110.68
4	AM	90	HIS	CE1-NE2-CD2	-6.58	102.42	109.00
22	AY	57	G	C4'-C3'-C2'	6.58	109.18	102.60
57	BB	171	U	P-O3'-C3'	-6.58	110.33	120.20
57	BB	1181	U	O4'-C1'-N1	6.58	118.37	108.50
57	BB	2244	U	C3'-C2'-C1'	6.58	107.88	101.30
57	BB	2752	C	O4'-C1'-N1	6.58	118.37	108.50
21	AA	384	G	P-O5'-C5'	6.58	130.77	120.90
28	BI	12	VAL	N-CA-C	-6.58	98.89	108.89
57	BB	1551	A	O4'-C1'-N9	6.58	118.37	108.50
57	BB	404	A	P-O5'-C5'	6.58	130.76	120.90
40	BU	100	GLU	CA-C-N	6.58	132.35	122.68
40	BU	100	GLU	C-N-CA	6.58	132.35	122.68
54	BF	135	ILE	CB-CA-C	6.58	122.07	111.29
52	BD	181	ASP	N-CA-C	-6.57	99.67	108.74
58	BA	27	C	O4'-C4'-C3'	-6.57	97.43	104.00
25	AZ	64	THR	CA-CB-OG1	6.57	119.46	109.60
32	BM	135	VAL	N-CA-C	-6.57	104.08	110.72
38	BS	38	TYR	CA-C-N	6.57	129.38	120.44
38	BS	38	TYR	C-N-CA	6.57	129.38	120.44
48	B1	13	SER	N-CA-C	-6.57	104.20	111.36
21	AA	435	A	C3'-C2'-C1'	6.57	107.87	101.30
29	BJ	40	HIS	CA-CB-CG	6.57	120.37	113.80
34	BO	70	ALA	N-CA-C	-6.57	104.84	112.92
48	B1	12	SER	N-CA-CB	6.57	119.63	109.97
54	BF	103	ILE	N-CA-C	-6.57	105.25	112.80
18	AG	77	ARG	N-CA-C	-6.57	99.09	109.07
20	AI	10	ARG	CA-C-O	-6.57	112.29	120.57
21	AA	503	C	O4'-C1'-N1	6.57	118.35	108.50
21	AA	632	U	P-O5'-C5'	6.57	130.75	120.90
22	AY	28	C	O4'-C1'-C2'	-6.57	101.03	107.60
57	BB	1033	U	O3'-P-O5'	-6.57	94.15	104.00
25	AZ	45	ALA	O-C-N	6.57	130.29	122.94
25	AZ	320	THR	N-CA-CB	6.57	122.61	110.27
57	BB	1432	G	C5'-C4'-C3'	-6.57	106.15	116.00
21	AA	841	C	C4'-C3'-C2'	-6.56	96.04	102.60
38	BS	43	ALA	CA-C-N	6.56	129.31	120.65
38	BS	43	ALA	C-N-CA	6.56	129.31	120.65
22	AY	45	G	C4'-C3'-O3'	-6.56	103.16	113.00
6	AO	7	THR	CA-C-N	6.56	129.73	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	AO	7	THR	C-N-CA	6.56	129.73	120.28
52	BD	190	LYS	CA-C-O	-6.56	113.59	120.55
45	BC	181	ARG	NE-CZ-NH2	6.56	125.10	119.20
21	AA	604	G	C4'-C3'-C2'	-6.56	96.04	102.60
35	BP	61	ARG	N-CA-C	-6.56	98.55	109.24
53	BE	124	PHE	N-CA-CB	6.56	122.77	111.69
53	BE	137	LYS	O-C-N	6.56	128.88	121.93
57	BB	484	C	O4'-C1'-C2'	-6.56	101.04	107.60
57	BB	2683	C	O4'-C1'-N1	6.56	118.33	108.50
6	AO	24	THR	CA-C-N	6.56	128.96	120.44
6	AO	24	THR	C-N-CA	6.56	128.96	120.44
3	AL	14	LYS	O-C-N	-6.55	115.32	122.79
25	AZ	118	HIS	CA-CB-CG	-6.55	107.25	113.80
52	BD	47	ALA	CA-C-O	-6.55	112.88	121.73
57	BB	2105	U	C4'-C3'-C2'	-6.55	96.05	102.60
21	AA	135	C	C3'-C2'-O2'	6.55	120.53	110.70
55	BG	160	GLY	CA-C-N	6.55	131.01	121.18
55	BG	160	GLY	C-N-CA	6.55	131.01	121.18
57	BB	2650	U	C4'-C3'-O3'	-6.55	103.17	113.00
21	AA	870	U	O4'-C4'-C3'	-6.55	99.55	106.10
38	BS	95	ARG	NH1-CZ-NH2	6.55	127.82	119.30
39	BT	77	ARG	CD-NE-CZ	-6.55	115.23	124.40
57	BB	213	A	O4'-C1'-N9	6.55	118.33	108.50
57	BB	1840	G	P-O5'-C5'	6.55	130.73	120.90
6	AO	49	HIS	CA-C-N	6.55	128.96	120.44
6	AO	49	HIS	C-N-CA	6.55	128.96	120.44
22	AY	52	U	O4'-C1'-C2'	-6.55	101.05	107.60
55	BG	42	VAL	CB-CA-C	6.55	120.64	111.34
21	AA	48	C	O5'-C5'-C4'	-6.55	101.88	111.70
43	BX	3	VAL	CA-C-N	6.55	131.77	120.58
43	BX	3	VAL	C-N-CA	6.55	131.77	120.58
21	AA	387	U	P-O5'-C5'	-6.54	111.08	120.90
21	AA	832	G	C4'-C3'-C2'	-6.54	96.06	102.60
6	AO	76	ARG	CA-C-N	6.54	129.53	120.63
6	AO	76	ARG	C-N-CA	6.54	129.53	120.63
57	BB	2106	U	O4'-C1'-N1	6.54	118.31	108.50
57	BB	2274	A	P-O5'-C5'	6.54	130.71	120.90
21	AA	317	U	O3'-P-O5'	-6.54	94.19	104.00
57	BB	316	C	O4'-C4'-C3'	-6.54	97.46	104.00
57	BB	1092	C	O4'-C1'-N1	6.54	118.31	108.50
21	AA	901	A	C4'-C3'-C2'	6.54	109.14	102.60
10	AS	21	ALA	N-CA-C	6.54	120.25	112.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1057	G	O4'-C4'-C3'	6.54	110.54	104.00
21	AA	1159	U	C2'-C3'-O3'	6.54	119.31	109.50
41	BV	55	GLU	CA-C-N	6.54	129.37	120.54
41	BV	55	GLU	C-N-CA	6.54	129.37	120.54
51	B4	29	ALA	O-C-N	6.54	127.08	121.65
57	BB	1660	G	P-O5'-C5'	-6.54	111.09	120.90
57	BB	458	G	P-O3'-C3'	6.54	130.01	120.20
57	BB	667	U	P-O3'-C3'	6.54	130.01	120.20
21	AA	986	U	C1'-C2'-O2'	6.54	118.20	108.40
21	AA	992	U	O4'-C1'-N1	6.54	118.00	108.20
22	AY	37	G	C4'-C3'-O3'	-6.54	103.20	113.00
34	BO	93	ASP	CA-CB-CG	-6.54	106.06	112.60
42	BW	62	ALA	CA-C-N	6.53	130.62	120.75
42	BW	62	ALA	C-N-CA	6.53	130.62	120.75
54	BF	81	GLY	CA-C-O	-6.53	114.23	122.01
56	BH	60	GLU	CA-C-O	6.53	126.60	119.15
57	BB	2730	C	O4'-C1'-N1	6.53	118.30	108.50
32	BM	91	TYR	CB-CG-CD1	6.53	130.59	120.80
20	AI	98	ARG	N-CA-C	-6.53	103.38	112.45
21	AA	562	U	C5'-C4'-O4'	6.53	118.89	109.10
21	AA	1393	U	O3'-P-O5'	-6.53	94.21	104.00
57	BB	865	C	O3'-P-O5'	-6.53	94.21	104.00
13	AB	80	LYS	N-CA-C	6.53	119.23	111.33
21	AA	979	C	O4'-C1'-N1	6.53	118.29	108.50
21	AA	1145	A	O3'-P-O5'	-6.53	94.21	104.00
36	BQ	43	GLN	N-CA-C	-6.53	104.25	111.36
57	BB	902	C	C5'-C4'-C3'	6.53	125.79	116.00
39	BT	55	VAL	CA-C-O	-6.52	112.62	120.78
4	AM	100	ARG	O-C-N	-6.52	115.16	122.86
7	AP	59	HIS	CB-CG-CD2	-6.52	122.72	131.20
57	BB	541	A	C4'-C3'-O3'	-6.52	103.22	113.00
57	BB	1094	U	P-O3'-C3'	6.52	129.99	120.20
21	AA	651	C	O4'-C1'-N1	6.52	118.28	108.50
49	B2	41	ARG	NE-CZ-NH2	6.52	125.07	119.20
57	BB	936	A	C4'-C3'-O3'	-6.52	103.22	113.00
57	BB	2142	A	P-O5'-C5'	-6.52	111.12	120.90
19	AH	4	ASP	CA-CB-CG	6.52	119.12	112.60
41	BV	54	ALA	CA-C-N	6.52	133.99	121.54
41	BV	54	ALA	C-N-CA	6.52	133.99	121.54
57	BB	1906	G	C4'-C3'-C2'	-6.52	96.08	102.60
33	BN	29	VAL	CG1-CB-CG2	6.52	125.14	110.80
57	BB	1244	A	C4'-C3'-C2'	-6.52	96.08	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1773	A	C5'-C4'-C3'	6.52	125.78	116.00
57	BB	2356	U	C4'-C3'-O3'	-6.52	103.22	113.00
57	BB	1860	G	P-O3'-C3'	-6.52	110.43	120.20
7	AP	75	ILE	CB-CA-C	-6.51	103.34	112.14
18	AG	103	ILE	N-CA-C	6.51	119.19	111.05
22	AY	15	G	C2'-C3'-O3'	6.51	123.47	113.70
34	BO	99	TYR	O-C-N	-6.51	114.30	122.83
43	BX	56	ARG	N-CA-C	6.51	120.09	111.75
45	BC	73	ILE	N-CA-C	-6.51	99.86	107.61
19	AH	84	ILE	CA-CB-CG1	6.51	121.47	110.40
57	BB	418	C	C4'-C3'-C2'	-6.51	96.09	102.60
37	BR	33	VAL	CB-CA-C	6.51	119.84	110.33
39	BT	23	ALA	N-CA-C	-6.51	104.52	114.16
45	BC	6	LYS	N-CA-CB	6.51	121.39	109.73
56	BH	59	ALA	N-CA-CB	6.51	119.64	109.94
21	AA	890	G	O4'-C1'-C2'	-6.51	99.29	105.80
57	BB	265	A	O4'-C1'-N9	6.51	118.27	108.50
57	BB	490	C	P-O3'-C3'	6.51	129.96	120.20
57	BB	1048	A	P-O3'-C3'	-6.51	110.44	120.20
57	BB	2359	C	O4'-C1'-N1	6.51	118.26	108.50
6	AO	21	THR	CA-CB-OG1	6.51	119.36	109.60
53	BE	46	GLN	N-CA-CB	6.51	121.49	110.49
57	BB	2018	G	C3'-C2'-C1'	-6.51	94.79	101.30
57	BB	2115	G	O4'-C1'-N9	6.51	118.26	108.50
57	BB	464	U	O4'-C1'-C2'	-6.50	101.09	107.60
6	AO	74	VAL	N-CA-C	6.50	116.99	110.23
21	AA	890	G	C4'-C3'-C2'	-6.50	96.10	102.60
21	AA	1279	G	C5'-C4'-C3'	-6.50	106.24	116.00
45	BC	221	GLY	CA-C-N	6.50	133.09	120.99
45	BC	221	GLY	C-N-CA	6.50	133.09	120.99
9	AR	47	ARG	CA-C-N	6.50	129.32	120.54
9	AR	47	ARG	C-N-CA	6.50	129.32	120.54
10	AS	74	ALA	CA-C-N	6.50	126.88	119.92
10	AS	74	ALA	C-N-CA	6.50	126.88	119.92
21	AA	1277	C	O4'-C1'-N1	6.50	118.25	108.50
57	BB	2222	C	C4'-C3'-O3'	-6.50	103.25	113.00
19	AH	109	VAL	N-CA-C	-6.50	98.76	108.12
33	BN	4	ARG	CA-C-N	6.50	133.35	121.85
33	BN	4	ARG	C-N-CA	6.50	133.35	121.85
57	BB	1136	G	P-O5'-C5'	-6.50	111.15	120.90
57	BB	2803	G	C3'-C2'-C1'	-6.50	94.80	101.30
57	BB	2826	A	C4'-C3'-C2'	-6.50	96.10	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	AC	148	ILE	O-C-N	-6.50	116.05	123.00
21	AA	1162	C	O4'-C1'-N1	6.50	118.25	108.50
57	BB	1030	C	O4'-C1'-N1	6.50	118.25	108.50
22	AY	63	C	C3'-C2'-O2'	6.50	120.44	110.70
57	BB	846	U	O4'-C1'-C2'	-6.50	99.31	105.80
57	BB	1093	G	P-O5'-C5'	6.50	130.64	120.90
57	BB	2032	G	C3'-C2'-O2'	-6.50	104.86	114.60
22	AY	17	U	C5'-C4'-O4'	6.49	118.84	109.10
21	AA	1065	U	P-O3'-C3'	6.49	129.94	120.20
38	BS	63	GLY	CA-C-N	6.49	133.94	121.54
38	BS	63	GLY	C-N-CA	6.49	133.94	121.54
57	BB	2231	U	C4'-C3'-C2'	-6.49	96.11	102.60
6	AO	10	ILE	CA-C-N	6.49	129.35	120.46
6	AO	10	ILE	C-N-CA	6.49	129.35	120.46
14	AC	60	ALA	N-CA-C	-6.49	104.12	113.21
21	AA	783	C	P-O3'-C3'	-6.49	110.46	120.20
21	AA	1405	G	O5'-C5'-C4'	-6.49	101.76	111.50
33	BN	90	ARG	NE-CZ-NH2	-6.49	113.36	119.20
57	BB	1382	G	P-O5'-C5'	-6.49	111.17	120.90
57	BB	1509	A	P-O3'-C3'	6.49	129.94	120.20
16	AE	88	HIS	N-CA-C	-6.49	96.98	110.80
54	BF	1	ALA	CB-CA-C	6.49	120.23	110.50
57	BB	977	G	C4'-C3'-C2'	-6.49	96.11	102.60
17	AF	68	GLN	OE1-CD-NE2	6.49	129.09	122.60
31	BL	7	SER	CB-CA-C	6.49	120.41	109.32
5	AN	85	GLU	N-CA-CB	6.49	120.74	109.72
25	AZ	88	VAL	CA-C-N	6.49	128.97	120.28
25	AZ	88	VAL	C-N-CA	6.49	128.97	120.28
27	B5	120	ALA	O-C-N	6.49	128.75	122.07
52	BD	149	ASN	CA-CB-CG	-6.49	106.11	112.60
57	BB	1991	U	C4'-C3'-C2'	-6.49	96.11	102.60
57	BB	2632	A	P-O5'-C5'	-6.48	111.17	120.90
54	BF	107	VAL	O-C-N	-6.48	113.71	121.10
57	BB	456	C	C5'-C4'-C3'	-6.48	105.48	115.20
17	AF	62	MET	CA-C-N	6.48	132.63	122.78
17	AF	62	MET	C-N-CA	6.48	132.63	122.78
25	AZ	204	ARG	NE-CZ-NH1	6.48	127.98	121.50
27	B5	87	ALA	N-CA-C	-6.48	105.12	113.16
38	BS	60	HIS	N-CA-C	-6.48	97.00	110.80
39	BT	39	THR	O-C-N	-6.48	115.18	121.85
43	BX	72	ALA	N-CA-C	-6.48	105.38	113.28
31	BL	56	PRO	CB-CA-C	-6.48	103.10	111.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BO	6	ALA	N-CA-C	-6.48	105.20	113.23
57	BB	1266	G	C3'-C2'-C1'	-6.48	95.02	101.50
6	AO	4	THR	CA-CB-CG2	6.47	121.50	110.50
21	AA	500	G	C4'-C3'-O3'	-6.47	103.29	113.00
36	BQ	90	ASP	CA-CB-CG	6.47	119.08	112.60
43	BX	3	VAL	N-CA-CB	6.47	121.22	110.86
57	BB	1124	G	P-O5'-C5'	-6.47	111.19	120.90
57	BB	1991	U	O4'-C1'-N1	6.47	118.21	108.50
42	BW	78	PHE	N-CA-C	-6.47	99.47	109.24
45	BC	115	ILE	O-C-N	-6.47	116.19	123.18
57	BB	362	A	O4'-C1'-N9	6.47	118.21	108.50
28	BI	123	ALA	CB-CA-C	-6.47	100.05	110.79
52	BD	103	ASP	CA-C-N	6.47	129.17	120.50
52	BD	103	ASP	C-N-CA	6.47	129.17	120.50
56	BH	47	PHE	CA-C-O	-6.47	113.98	120.90
57	BB	1078	U	O4'-C1'-C2'	-6.47	101.13	107.60
57	BB	1218	G	O4'-C1'-N9	6.47	118.21	108.50
4	AM	65	GLU	CA-C-N	6.47	134.09	121.41
4	AM	65	GLU	C-N-CA	6.47	134.09	121.41
13	AB	57	ASN	CA-CB-CG	-6.47	106.13	112.60
55	BG	66	THR	N-CA-C	-6.47	103.46	112.45
57	BB	117	G	C4'-C3'-O3'	-6.47	103.30	113.00
57	BB	2047	C	P-O5'-C5'	-6.47	111.20	120.90
7	AP	5	ARG	NE-CZ-NH2	-6.47	113.38	119.20
29	BJ	52	ASP	N-CA-CB	6.47	122.46	111.66
57	BB	365	U	O4'-C1'-N1	6.46	118.20	108.50
58	BA	103	U	C4'-C3'-C2'	-6.46	96.14	102.60
50	B3	33	THR	N-CA-C	-6.46	105.53	113.41
14	AC	48	LYS	N-CA-C	-6.46	105.27	113.02
22	AY	76	A	P-O5'-C5'	-6.46	111.21	120.90
57	BB	2518	A	C4'-C3'-C2'	-6.46	96.14	102.60
21	AA	872	A	P-O5'-C5'	6.46	130.59	120.90
21	AA	1257	A	O4'-C1'-N9	6.46	118.19	108.50
50	B3	23	HIS	CE1-NE2-CD2	-6.46	102.54	109.00
57	BB	668	A	O4'-C4'-C3'	6.46	110.46	104.00
21	AA	360	G	C4'-C3'-C2'	-6.46	96.14	102.60
21	AA	679	C	O4'-C4'-C3'	-6.46	97.54	104.00
45	BC	226	PRO	CA-C-N	6.46	129.31	120.46
45	BC	226	PRO	C-N-CA	6.46	129.31	120.46
19	AH	42	GLU	CB-CA-C	-6.46	96.70	110.32
21	AA	98	A	C4'-C3'-C2'	-6.46	96.14	102.60
21	AA	536	C	O4'-C1'-N1	6.46	118.19	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	260	MET	CA-C-N	6.46	131.85	122.36
25	AZ	260	MET	C-N-CA	6.46	131.85	122.36
57	BB	1006	C	P-O3'-C3'	-6.46	110.52	120.20
21	AA	1409	C	C4'-C3'-C2'	-6.46	96.14	102.60
57	BB	986	C	C4'-C3'-C2'	-6.46	96.14	102.60
57	BB	2404	U	O4'-C1'-N1	6.46	118.18	108.50
21	AA	455	G	C4'-C3'-C2'	-6.45	96.15	102.60
25	AZ	145	LEU	N-CA-C	-6.45	103.53	111.40
50	B3	23	HIS	CA-CB-CG	6.45	120.25	113.80
53	BE	62	GLN	CA-CB-CG	6.45	127.01	114.10
57	BB	1443	U	O4'-C1'-C2'	-6.45	101.15	107.60
23	AW	47	U	O4'-C1'-N1	6.45	118.18	108.50
41	BV	37	PRO	N-CA-CB	6.45	110.02	103.25
57	BB	1012	U	P-O3'-C3'	6.45	129.88	120.20
57	BB	2278	A	C3'-C2'-O2'	6.45	120.38	110.70
57	BB	2717	C	O4'-C1'-N1	6.45	118.18	108.50
3	AL	44	PRO	N-CA-C	-6.45	107.24	114.92
5	AN	89	ARG	CD-NE-CZ	-6.45	115.37	124.40
52	BD	90	PHE	CA-C-N	6.45	128.92	120.28
52	BD	90	PHE	C-N-CA	6.45	128.92	120.28
57	BB	1568	G	P-O5'-C5'	-6.45	111.23	120.90
57	BB	2396	G	C5'-C4'-C3'	-6.45	106.33	116.00
15	AD	40	HIS	CA-CB-CG	-6.45	107.35	113.80
22	AY	26	G	O3'-P-O5'	-6.45	94.33	104.00
14	AC	121	SER	CA-C-N	6.45	128.82	120.44
14	AC	121	SER	C-N-CA	6.45	128.82	120.44
21	AA	46	G	C4'-C3'-C2'	-6.45	96.15	102.60
40	BU	85	ARG	NE-CZ-NH2	6.45	125.00	119.20
57	BB	1631	G	P-O3'-C3'	-6.45	110.53	120.20
58	BA	80	U	O5'-C5'-C4'	-6.45	101.83	111.50
45	BC	100	ARG	CA-C-O	-6.44	113.92	121.46
51	B4	21	GLY	CA-C-N	-6.44	114.79	123.10
51	B4	21	GLY	C-N-CA	-6.44	114.79	123.10
57	BB	383	C	N1-C1'-C2'	-6.44	102.33	112.00
57	BB	903	C	C4'-C3'-C2'	-6.44	96.16	102.60
45	BC	207	ALA	CA-C-N	6.44	128.19	120.14
45	BC	207	ALA	C-N-CA	6.44	128.19	120.14
57	BB	1389	G	O5'-C5'-C4'	-6.44	101.84	111.50
57	BB	2100	G	P-O5'-C5'	-6.44	111.24	120.90
57	BB	2155	U	P-O5'-C5'	-6.44	111.24	120.90
57	BB	1442	U	C4'-C3'-C2'	-6.44	96.16	102.60
57	BB	2571	U	C4'-C3'-O3'	-6.44	103.34	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	AB	54	ALA	N-CA-C	-6.44	105.25	113.23
21	AA	349	A	C4'-C3'-C2'	-6.44	96.16	102.60
57	BB	2705	A	C4'-C3'-C2'	6.44	109.04	102.60
25	AZ	288	ARG	NE-CZ-NH2	6.44	124.99	119.20
32	BM	93	VAL	CA-C-O	-6.44	114.72	121.93
41	BV	48	MET	CA-C-N	6.44	128.91	120.28
41	BV	48	MET	C-N-CA	6.44	128.91	120.28
57	BB	2282	G	O5'-C5'-C4'	-6.44	102.05	111.70
18	AG	139	ASP	CA-CB-CG	6.43	119.03	112.60
21	AA	345	C	O4'-C4'-C3'	-6.43	99.67	106.10
32	BM	36	VAL	O-C-N	-6.43	116.25	123.20
57	BB	2287	A	C2'-C3'-O3'	6.43	119.15	109.50
2	AK	21	HIS	CB-CG-ND1	6.43	132.35	122.70
21	AA	751	U	C4'-C3'-C2'	-6.43	96.17	102.60
21	AA	1231	G	C4'-C3'-O3'	-6.43	103.35	113.00
57	BB	870	U	O4'-C1'-C2'	-6.43	101.17	107.60
17	AF	14	GLN	CA-C-N	6.43	129.42	120.29
17	AF	14	GLN	C-N-CA	6.43	129.42	120.29
42	BW	43	LYS	CA-C-O	-6.43	113.42	120.30
57	BB	2190	G	P-O3'-C3'	-6.43	110.56	120.20
14	AC	65	VAL	N-CA-CB	6.43	121.84	111.23
57	BB	2497	A	C2'-C3'-O3'	6.43	119.14	109.50
57	BB	522	A	O4'-C4'-C3'	-6.43	97.57	104.00
19	AH	128	VAL	CB-CA-C	6.42	120.15	110.90
21	AA	137	U	O4'-C1'-N1	6.42	118.14	108.50
31	BL	41	ARG	CA-C-N	6.42	129.83	120.71
31	BL	41	ARG	C-N-CA	6.42	129.83	120.71
36	BQ	17	LEU	N-CA-CB	6.42	119.78	110.47
57	BB	491	G	C5'-C4'-C3'	6.42	125.64	116.00
22	AY	29	A	C3'-C2'-O2'	6.42	120.33	110.70
23	AW	35	A	O4'-C1'-N9	6.42	118.13	108.50
57	BB	2862	G	O4'-C1'-N9	6.42	118.13	108.50
19	AH	5	PRO	CA-C-N	6.42	129.58	120.53
19	AH	5	PRO	C-N-CA	6.42	129.58	120.53
27	B5	34	ALA	CA-C-O	-6.42	114.13	121.19
54	BF	154	THR	N-CA-C	-6.42	99.74	109.95
57	BB	218	A	O3'-P-O5'	-6.42	94.37	104.00
57	BB	2494	G	C4'-C3'-O3'	-6.42	103.37	113.00
57	BB	663	G	C3'-C2'-C1'	-6.42	94.88	101.30
21	AA	762	U	C4'-C3'-C2'	-6.42	96.18	102.60
25	AZ	332	PHE	N-CA-CB	6.42	120.79	110.65
53	BE	130	LYS	CA-C-N	6.42	128.88	120.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	BE	130	LYS	C-N-CA	6.42	128.88	120.28
57	BB	101	A	C5'-C4'-C3'	-6.42	106.37	116.00
21	AA	1379	G	O4'-C1'-N9	6.42	118.13	108.50
55	BG	44	HIS	CG-CD2-NE2	6.42	113.62	107.20
57	BB	246	C	P-O5'-C5'	6.42	130.52	120.90
57	BB	322	A	P-O5'-C5'	-6.42	111.28	120.90
57	BB	1458	U	C4'-C3'-O3'	6.42	119.03	109.40
13	AB	91	VAL	N-CA-C	-6.42	98.22	107.78
37	BR	66	HIS	CA-CB-CG	-6.42	107.39	113.80
57	BB	677	A	P-O5'-C5'	-6.42	111.28	120.90
57	BB	2751	G	C5'-C4'-C3'	-6.42	105.58	115.20
57	BB	2889	C	P-O3'-C3'	6.42	129.82	120.20
21	AA	453	G	C5'-C4'-O4'	6.41	119.42	109.80
21	AA	919	A	C4'-C3'-C2'	-6.41	96.19	102.60
21	AA	1136	C	O5'-C5'-C4'	6.41	121.12	111.50
28	BI	80	LYS	CA-C-N	6.41	128.87	120.28
28	BI	80	LYS	C-N-CA	6.41	128.87	120.28
45	BC	1	ALA	CA-C-N	6.41	131.38	123.10
45	BC	1	ALA	C-N-CA	6.41	131.38	123.10
57	BB	130	C	O5'-C5'-C4'	-6.41	101.88	111.50
57	BB	2670	A	O4'-C1'-N9	6.41	118.12	108.50
2	AK	37	GLN	N-CA-C	-6.41	105.09	113.17
21	AA	103	U	C4'-C3'-C2'	-6.41	96.19	102.60
21	AA	784	A	P-O5'-C5'	-6.41	111.28	120.90
45	BC	220	ARG	CA-C-O	-6.41	113.84	121.66
57	BB	2833	U	O4'-C1'-N1	6.41	118.12	108.50
4	AM	40	GLU	CB-CA-C	-6.41	99.95	110.85
21	AA	440	C	O4'-C1'-N1	6.41	118.11	108.50
25	AZ	340	THR	CA-C-N	6.41	129.70	120.98
25	AZ	340	THR	C-N-CA	6.41	129.70	120.98
31	BL	14	LYS	CA-C-O	6.41	128.69	121.51
55	BG	113	ASP	N-CA-CB	6.41	121.32	110.49
57	BB	2566	A	O4'-C4'-C3'	-6.41	99.69	106.10
33	BN	72	ASP	CA-C-N	6.41	128.87	120.28
33	BN	72	ASP	C-N-CA	6.41	128.87	120.28
13	AB	75	ALA	O-C-N	-6.41	115.08	122.89
21	AA	777	A	O4'-C1'-N9	6.41	118.11	108.50
35	BP	94	ALA	N-CA-C	6.41	119.25	111.82
57	BB	408	G	O4'-C1'-N9	6.41	118.11	108.50
57	BB	538	A	C1'-O4'-C4'	-6.41	103.50	109.90
13	AB	192	PRO	CB-CA-C	6.40	119.69	111.56
21	AA	1511	G	P-O3'-C3'	-6.40	110.60	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	258	VAL	N-CA-C	-6.40	96.02	109.34
30	BK	4	GLN	CB-CG-CD	-6.40	101.72	112.60
31	BL	68	SER	CA-C-N	6.40	131.70	122.35
31	BL	68	SER	C-N-CA	6.40	131.70	122.35
34	BO	111	ARG	N-CA-C	-6.40	104.00	113.61
57	BB	1930	G	C4'-C3'-O3'	-6.40	103.40	113.00
21	AA	1308	U	C1'-C2'-O2'	6.40	118.00	108.40
57	BB	2471	A	O4'-C1'-N9	6.40	117.80	108.20
27	B5	148	ASN	CA-CB-CG	-6.40	106.20	112.60
57	BB	737	C	O4'-C1'-N1	6.40	118.09	108.50
14	AC	104	GLU	O-C-N	-6.39	115.37	123.24
25	AZ	302	THR	N-CA-C	-6.39	104.67	113.18
53	BE	165	HIS	CB-CG-CD2	-6.39	122.89	131.20
57	BB	1268	A	C5'-C4'-C3'	-6.39	106.41	116.00
57	BB	1577	C	O4'-C1'-N1	6.39	118.09	108.50
57	BB	2196	C	O4'-C1'-N1	6.39	118.09	108.50
21	AA	1317	C	O4'-C1'-N1	6.39	118.09	108.50
28	BI	90	GLY	CA-C-N	6.39	129.29	122.26
28	BI	90	GLY	C-N-CA	6.39	129.29	122.26
45	BC	220	ARG	NE-CZ-NH1	-6.39	115.11	121.50
57	BB	2405	G	C4'-C3'-O3'	-6.39	103.41	113.00
9	AR	48	ALA	CA-C-N	6.39	129.17	120.54
9	AR	48	ALA	C-N-CA	6.39	129.17	120.54
15	AD	6	PRO	O-C-N	6.39	131.27	122.64
15	AD	55	ARG	CA-C-N	6.39	129.13	120.38
15	AD	55	ARG	C-N-CA	6.39	129.13	120.38
18	AG	118	ARG	CA-C-N	6.39	130.82	120.60
18	AG	118	ARG	C-N-CA	6.39	130.82	120.60
57	BB	1525	A	C4'-C3'-C2'	-6.39	96.21	102.60
57	BB	456	C	C5'-C4'-O4'	6.39	118.68	109.10
57	BB	1261	C	O4'-C1'-N1	6.39	118.08	108.50
57	BB	1551	A	C3'-C2'-C1'	-6.39	94.91	101.30
16	AE	69	ASN	N-CA-CB	6.39	121.28	110.49
33	BN	46	ARG	CA-C-N	6.39	129.89	122.35
33	BN	46	ARG	C-N-CA	6.39	129.89	122.35
42	BW	46	ALA	N-CA-C	-6.39	99.76	108.38
3	AL	49	ARG	CA-C-N	6.39	131.51	121.99
3	AL	49	ARG	C-N-CA	6.39	131.51	121.99
21	AA	1493	A	P-O3'-C3'	6.39	129.78	120.20
57	BB	250	G	O5'-C5'-C4'	-6.39	101.92	111.50
57	BB	589	U	C5'-C4'-C3'	6.39	125.58	116.00
57	BB	1278	C	O3'-P-O5'	-6.39	94.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1443	U	C1'-O4'-C4'	6.39	116.29	109.90
9	AR	67	LEU	O-C-N	6.38	127.76	121.57
25	AZ	70	ASP	O-C-N	6.38	131.32	123.21
25	AZ	337	VAL	CA-C-O	6.38	126.32	120.96
38	BS	87	PRO	N-CA-CB	-6.38	96.55	103.25
57	BB	2175	C	O4'-C1'-N1	6.38	118.08	108.50
57	BB	2732	G	C5'-C4'-C3'	-6.38	106.42	116.00
57	BB	460	A	O5'-C5'-C4'	-6.38	101.93	111.50
16	AE	67	ARG	NE-CZ-NH1	6.38	127.88	121.50
57	BB	2212	A	O4'-C1'-N9	6.38	117.77	108.20
7	AP	9	HIS	CB-CG-CD2	-6.38	122.91	131.20
21	AA	1468	A	C3'-C2'-C1'	-6.38	94.92	101.30
25	AZ	97	GLN	N-CA-CB	6.38	120.08	110.19
25	AZ	188	ILE	CB-CA-C	6.38	120.75	112.14
21	AA	1041	G	C5'-C4'-C3'	-6.38	106.44	116.00
57	BB	885	C	O4'-C1'-N1	6.38	118.06	108.50
14	AC	175	HIS	CA-CB-CG	6.38	120.17	113.80
21	AA	144	G	O4'-C1'-N9	6.38	118.06	108.50
5	AN	2	LYS	N-CA-CB	6.37	121.26	110.49
6	AO	37	HIS	ND1-CE1-NE2	6.37	114.77	108.40
21	AA	734	G	C4'-C3'-O3'	-6.37	103.44	113.00
21	AA	1310	G	O4'-C1'-N9	6.37	118.06	108.50
53	BE	176	ASP	CA-CB-CG	6.37	118.97	112.60
54	BF	93	GLU	CA-C-N	6.37	131.37	120.72
54	BF	93	GLU	C-N-CA	6.37	131.37	120.72
57	BB	1394	U	P-O3'-C3'	-6.37	110.64	120.20
57	BB	1864	U	C4'-C3'-O3'	-6.37	103.44	113.00
7	AP	56	ARG	N-CA-C	-6.37	105.81	113.97
21	AA	1383	C	O4'-C1'-N1	6.37	118.06	108.50
22	AY	52	U	P-O3'-C3'	6.37	129.76	120.20
50	B3	36	ALA	N-CA-C	-6.37	102.31	110.53
57	BB	2086	U	O4'-C1'-N1	6.37	118.06	108.50
12	AU	5	VAL	CA-C-N	6.37	129.75	120.71
12	AU	5	VAL	C-N-CA	6.37	129.75	120.71
14	AC	116	ALA	O-C-N	-6.37	114.12	122.59
21	AA	428	G	P-O3'-C3'	6.37	129.75	120.20
38	BS	73	LYS	CA-C-N	-6.37	113.52	122.75
38	BS	73	LYS	C-N-CA	-6.37	113.52	122.75
44	BY	35	GLY	N-CA-C	-6.37	98.09	113.18
57	BB	1854	A	P-O5'-C5'	6.37	130.45	120.90
57	BB	2208	C	O4'-C1'-N1	6.37	118.05	108.50
25	AZ	192	ALA	N-CA-C	-6.37	105.00	112.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BR	45	GLU	N-CA-C	-6.37	98.61	109.24
57	BB	421	C	O3'-P-O5'	-6.37	94.45	104.00
3	AL	10	PRO	N-CA-C	6.37	121.23	111.11
21	AA	978	A	O4'-C4'-C3'	-6.37	97.63	104.00
30	BK	18	VAL	N-CA-C	-6.37	98.30	107.78
35	BP	13	LYS	CA-C-N	6.37	132.38	122.26
35	BP	13	LYS	C-N-CA	6.37	132.38	122.26
38	BS	57	ASN	OD1-CG-ND2	6.37	128.97	122.60
21	AA	541	G	O4'-C1'-N9	6.36	118.05	108.50
44	BY	20	ASN	N-CA-C	-6.36	105.15	113.17
57	BB	944	C	O4'-C1'-C2'	-6.36	101.24	107.60
57	BB	2115	G	O5'-C5'-C4'	6.36	121.05	111.50
43	BX	19	HIS	N-CA-C	-6.36	105.45	113.72
25	AZ	62	ILE	N-CA-CB	6.36	120.49	110.31
45	BC	48	ILE	CB-CA-C	-6.36	102.31	111.34
54	BF	55	ASP	CA-CB-CG	6.36	118.96	112.60
55	BG	9	VAL	N-CA-CB	6.36	121.72	111.23
55	BG	23	ILE	CA-CB-CG1	6.36	121.21	110.40
57	BB	457	A	P-O3'-C3'	6.36	129.74	120.20
57	BB	1515	A	C4'-C3'-C2'	-6.36	96.24	102.60
57	BB	1989	G	O4'-C4'-C3'	-6.36	97.64	104.00
57	BB	1788	C	O4'-C1'-N1	6.36	118.04	108.50
57	BB	2425	A	C2'-C3'-O3'	6.36	119.04	109.50
17	AF	70	VAL	CA-C-N	6.36	130.51	120.47
17	AF	70	VAL	C-N-CA	6.36	130.51	120.47
21	AA	187	G	N9-C1'-C2'	-6.36	102.47	112.00
21	AA	384	G	C5'-C4'-C3'	-6.36	106.47	116.00
53	BE	88	ARG	NE-CZ-NH2	6.36	124.92	119.20
43	BX	16	ASN	OD1-CG-ND2	-6.35	116.25	122.60
53	BE	112	LEU	CA-C-N	6.35	128.57	120.56
53	BE	112	LEU	C-N-CA	6.35	128.57	120.56
57	BB	2362	C	C4'-C3'-C2'	-6.35	96.25	102.60
21	AA	270	A	P-O5'-C5'	-6.35	111.37	120.90
21	AA	472	U	C3'-C2'-C1'	-6.35	94.95	101.30
21	AA	1165	U	C4'-C3'-O3'	-6.35	103.47	113.00
57	BB	1668	A	P-O5'-C5'	-6.35	111.37	120.90
3	AL	122	LYS	N-CA-C	-6.35	102.82	110.44
13	AB	183	PHE	N-CA-C	-6.35	100.30	110.14
17	AF	34	GLY	N-CA-C	-6.35	98.13	113.18
21	AA	1364	U	O4'-C1'-N1	6.35	117.72	108.20
22	AY	53	G	C4'-C3'-O3'	-6.35	103.48	113.00
57	BB	453	A	C4'-C3'-C2'	-6.35	96.25	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	838	C	P-O5'-C5'	6.35	130.42	120.90
18	AG	35	LYS	N-CA-C	-6.35	104.23	112.23
21	AA	424	G	P-O5'-C5'	6.35	130.42	120.90
21	AA	1368	A	P-O5'-C5'	-6.35	111.38	120.90
57	BB	1107	G	P-O5'-C5'	6.35	130.42	120.90
48	B1	12	SER	CA-C-N	6.35	129.30	120.29
48	B1	12	SER	C-N-CA	6.35	129.30	120.29
4	AM	103	THR	CA-C-N	6.34	131.77	122.63
4	AM	103	THR	C-N-CA	6.34	131.77	122.63
21	AA	442	G	P-O3'-C3'	-6.34	110.68	120.20
21	AA	1392	G	C4'-C3'-O3'	-6.34	103.48	113.00
27	B5	162	ARG	NE-CZ-NH2	-6.34	113.49	119.20
45	BC	51	ARG	N-CA-C	-6.34	99.48	109.50
57	BB	2264	C	O4'-C4'-C3'	-6.34	97.66	104.00
21	AA	1447	A	P-O3'-C3'	6.34	129.71	120.20
21	AA	487	A	C5'-C4'-C3'	-6.34	106.49	116.00
21	AA	546	A	C3'-C2'-O2'	6.34	120.21	110.70
23	AW	22	G	O5'-C5'-C4'	-6.34	101.99	111.50
57	BB	1048	A	O4'-C1'-N9	6.34	118.01	108.50
56	BH	125	THR	O-C-N	6.34	131.02	122.59
57	BB	166	U	O4'-C1'-C2'	-6.34	101.26	107.60
21	AA	255	G	C1'-O4'-C4'	-6.34	103.56	109.90
21	AA	571	U	O5'-C5'-C4'	-6.34	102.00	111.50
21	AA	792	A	C4'-C3'-C2'	-6.34	96.26	102.60
21	AA	906	A	C4'-C3'-C2'	-6.34	96.26	102.60
57	BB	209	C	C1'-O4'-C4'	-6.34	103.56	109.90
21	AA	239	U	N1-C1'-C2'	-6.33	104.50	114.00
57	BB	900	A	O4'-C4'-C3'	-6.33	97.67	104.00
19	AH	59	GLU	N-CA-CB	6.33	121.04	110.53
21	AA	1214	C	O5'-C5'-C4'	-6.33	102.20	111.70
24	AX	19	U	C5'-C4'-C3'	-6.33	106.50	116.00
57	BB	817	C	O4'-C1'-N1	6.33	118.00	108.50
57	BB	1391	U	P-O5'-C5'	-6.33	111.40	120.90
57	BB	2713	U	O4'-C1'-N1	6.33	118.00	108.50
21	AA	627	G	O4'-C1'-N9	6.33	118.00	108.50
21	AA	855	U	C4'-C3'-C2'	6.33	108.93	102.60
57	BB	13	A	C1'-O4'-C4'	6.33	116.03	109.70
57	BB	1614	A	C4'-C3'-O3'	-6.33	103.51	113.00
1	AJ	67	ILE	N-CA-CB	6.33	121.67	111.23
9	AR	33	THR	CA-C-O	6.33	129.29	121.89
41	BV	4	ILE	N-CA-C	-6.33	98.41	107.77
52	BD	58	ASN	CA-CB-CG	-6.33	106.27	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AR	35	SER	N-CA-C	-6.33	105.14	112.92
36	BQ	14	LYS	N-CA-C	-6.33	105.20	113.17
45	BC	203	VAL	N-CA-C	-6.33	105.17	111.88
57	BB	380	G	C4'-C3'-C2'	-6.33	96.28	102.60
21	AA	956	U	O4'-C1'-N1	6.32	117.99	108.50
4	AM	39	ALA	CA-C-N	6.32	129.26	120.29
4	AM	39	ALA	C-N-CA	6.32	129.26	120.29
25	AZ	5	PHE	CA-CB-CG	6.32	120.12	113.80
57	BB	2781	A	C3'-C2'-C1'	-6.32	94.98	101.30
57	BB	2218	G	P-O3'-C3'	-6.32	110.72	120.20
21	AA	93	U	C5'-C4'-C3'	-6.32	106.52	116.00
21	AA	613	C	O4'-C1'-N1	6.32	117.98	108.50
57	BB	1042	G	O5'-C5'-C4'	-6.32	102.02	111.50
57	BB	2823	A	C4'-C3'-C2'	-6.32	96.28	102.60
57	BB	2150	C	O4'-C1'-N1	6.32	117.97	108.50
15	AD	109	THR	CA-C-N	6.31	129.06	120.54
15	AD	109	THR	C-N-CA	6.31	129.06	120.54
21	AA	91	U	O4'-C1'-N1	6.31	117.97	108.50
35	BP	20	ARG	N-CA-C	-6.31	102.11	110.07
57	BB	2039	U	O4'-C1'-N1	6.31	117.97	108.50
13	AB	167	HIS	CE1-NE2-CD2	-6.31	102.69	109.00
21	AA	1394	A	O4'-C1'-C2'	-6.31	99.49	105.80
57	BB	2795	C	O5'-C5'-C4'	-6.31	102.03	111.50
23	AW	52	G	C2'-C3'-O3'	6.31	123.17	113.70
57	BB	2368	C	C4'-C3'-C2'	-6.31	96.29	102.60
21	AA	936	C	O4'-C1'-C2'	-6.31	101.29	107.60
26	AV	12	G	C4'-C3'-C2'	-6.31	96.29	102.60
35	BP	32	VAL	CA-CB-CG2	-6.31	99.67	110.40
39	BT	32	LEU	N-CA-CB	6.31	121.24	110.77
57	BB	2755	C	P-O3'-C3'	6.31	129.67	120.20
57	BB	2813	A	C4'-C3'-C2'	-6.31	96.29	102.60
58	BA	110	C	O4'-C1'-N1	6.31	117.96	108.50
45	BC	247	TRP	N-CA-C	-6.31	105.53	112.72
52	BD	97	SER	CA-C-O	-6.31	114.56	121.31
57	BB	1566	A	O4'-C1'-C2'	6.31	112.11	105.80
57	BB	1638	C	C4'-C3'-O3'	-6.31	103.54	113.00
57	BB	1893	C	O4'-C1'-N1	6.31	117.96	108.50
34	BO	29	HIS	N-CA-C	-6.31	98.13	108.41
14	AC	96	VAL	CA-C-N	6.30	126.32	119.89
14	AC	96	VAL	C-N-CA	6.30	126.32	119.89
53	BE	143	LEU	N-CA-CB	6.30	120.42	110.84
57	BB	1124	G	C3'-C2'-C1'	-6.30	95.00	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AL	49	ARG	CA-C-O	6.30	127.17	120.36
6	AO	60	SER	CA-C-N	6.30	128.73	120.28
6	AO	60	SER	C-N-CA	6.30	128.73	120.28
21	AA	1367	C	O4'-C1'-N1	6.30	117.95	108.50
21	AA	754	C	P-O3'-C3'	-6.30	110.75	120.20
57	BB	1858	A	O4'-C4'-C3'	6.30	110.30	104.00
57	BB	2665	A	C4'-C3'-C2'	-6.30	96.30	102.60
14	AC	95	GLY	N-CA-C	-6.30	105.83	115.66
33	BN	37	THR	CA-C-N	6.30	127.56	120.06
33	BN	37	THR	C-N-CA	6.30	127.56	120.06
42	BW	11	ASN	N-CA-CB	6.30	120.39	110.56
57	BB	172	A	O4'-C1'-N9	6.30	117.95	108.50
57	BB	1509	A	C5'-C4'-C3'	-6.30	105.75	115.20
13	AB	191	ASP	N-CA-C	-6.30	97.07	109.10
27	B5	84	ALA	N-CA-C	-6.30	105.42	113.23
21	AA	49	U	C4'-C3'-C2'	-6.29	96.31	102.60
57	BB	157	C	P-O5'-C5'	6.29	130.34	120.90
21	AA	386	C	O4'-C1'-N1	6.29	117.94	108.50
26	AV	38	A	P-O3'-C3'	-6.29	110.76	120.20
5	AN	93	PRO	N-CA-CB	6.29	108.93	103.27
12	AU	7	GLU	N-CA-CB	6.29	122.17	111.66
14	AC	15	LYS	CA-C-N	6.29	127.70	119.84
14	AC	15	LYS	C-N-CA	6.29	127.70	119.84
17	AF	17	GLN	CA-C-N	6.29	133.77	122.13
17	AF	17	GLN	C-N-CA	6.29	133.77	122.13
37	BR	52	PRO	N-CA-C	6.29	125.43	112.47
38	BS	47	VAL	CA-C-N	6.29	129.22	120.29
38	BS	47	VAL	C-N-CA	6.29	129.22	120.29
57	BB	417	C	P-O3'-C3'	-6.29	110.76	120.20
57	BB	754	U	C4'-C3'-C2'	-6.29	96.31	102.60
57	BB	2369	A	C4'-C3'-C2'	-6.29	96.31	102.60
25	AZ	184	TRP	N-CA-C	-6.29	105.62	113.55
58	BA	87	U	C4'-C3'-O3'	6.29	118.83	109.40
57	BB	784	G	O4'-C1'-N9	6.29	117.93	108.50
22	AY	16	U	N1-C1'-C2'	6.29	121.43	112.00
2	AK	45	THR	CA-CB-OG1	6.29	119.03	109.60
13	AB	25	LYS	N-CA-C	-6.29	105.65	113.38
18	AG	85	GLN	CA-CB-CG	6.29	126.67	114.10
57	BB	196	A	O4'-C1'-N9	6.29	117.63	108.20
14	AC	15	LYS	CA-C-O	-6.28	114.51	119.66
53	BE	49	ARG	NE-CZ-NH1	-6.28	115.22	121.50
57	BB	420	C	C4'-C3'-C2'	-6.28	96.32	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1074	G	C3'-C2'-O2'	6.28	120.13	110.70
57	BB	2463	C	O4'-C1'-N1	6.28	117.93	108.50
57	BB	2483	C	O3'-P-O5'	-6.28	94.58	104.00
43	BX	62	GLY	CA-C-O	6.28	127.17	121.77
45	BC	242	HIS	ND1-CE1-NE2	6.28	114.68	108.40
51	B4	33	HIS	CE1-NE2-CD2	-6.28	102.72	109.00
54	BF	167	ALA	N-CA-C	-6.28	105.20	112.92
57	BB	2871	U	O4'-C4'-C3'	-6.28	97.72	104.00
14	AC	34	SER	CA-C-O	-6.28	114.18	120.90
57	BB	1791	A	C4'-C3'-C2'	-6.28	96.32	102.60
23	AW	4	C	P-O5'-C5'	-6.28	111.48	120.90
25	AZ	349	MET	CA-C-N	6.28	131.89	122.98
25	AZ	349	MET	C-N-CA	6.28	131.89	122.98
57	BB	1335	C	C4'-C3'-O3'	-6.28	103.58	113.00
57	BB	1362	C	O4'-C1'-N1	6.28	117.92	108.50
57	BB	2543	G	C5'-C4'-C3'	-6.28	106.58	116.00
57	BB	2701	U	O4'-C1'-N1	6.28	117.92	108.50
57	BB	2762	C	O4'-C1'-N1	6.28	117.92	108.50
22	AY	35	A	P-O3'-C3'	-6.28	110.79	120.20
40	BU	72	PHE	N-CA-C	-6.28	98.15	108.76
9	AR	34	GLU	N-CA-C	-6.27	105.27	113.17
21	AA	1360	A	C4'-C3'-C2'	-6.27	96.33	102.60
56	BH	63	ALA	CA-C-N	6.27	131.17	121.19
56	BH	63	ALA	C-N-CA	6.27	131.17	121.19
57	BB	1427	A	P-O5'-C5'	-6.27	111.49	120.90
46	BZ	17	PRO	N-CA-C	-6.27	105.89	114.80
31	BL	89	VAL	N-CA-C	-6.27	96.30	109.34
53	BE	80	SER	N-CA-CB	6.27	119.95	110.11
57	BB	1233	C	C4'-C3'-C2'	-6.27	96.33	102.60
25	AZ	148	LEU	CA-C-N	6.27	128.46	120.56
25	AZ	148	LEU	C-N-CA	6.27	128.46	120.56
26	AV	59	A	C1'-C2'-O2'	-6.27	99.00	108.40
29	BJ	70	THR	CA-CB-OG1	6.27	119.00	109.60
57	BB	517	C	O4'-C1'-N1	6.27	117.90	108.50
57	BB	2642	G	C4'-C3'-C2'	-6.27	96.33	102.60
13	AB	126	ASP	CA-CB-CG	-6.27	106.33	112.60
26	AV	7	G	O4'-C1'-C2'	6.27	112.07	105.80
58	BA	97	C	P-O3'-C3'	-6.27	110.80	120.20
14	AC	21	TRP	CA-CB-CG	6.26	125.50	113.60
17	AF	58	HIS	CE1-NE2-CD2	-6.26	102.73	109.00
41	BV	41	GLU	N-CA-CB	6.26	120.67	110.90
51	B4	13	ASN	CA-C-O	6.26	126.77	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1103	A	O4'-C1'-C2'	-6.26	101.33	107.60
58	BA	79	G	C3'-C2'-O2'	6.26	120.10	110.70
45	BC	66	PHE	CA-C-N	6.26	131.29	120.58
45	BC	66	PHE	C-N-CA	6.26	131.29	120.58
21	AA	505	G	P-O3'-C3'	6.26	129.59	120.20
57	BB	614	A	C1'-C2'-O2'	-6.26	99.01	108.40
57	BB	1039	A	O5'-C5'-C4'	-6.26	102.11	111.50
18	AG	88	VAL	CA-C-N	6.26	131.45	120.87
18	AG	88	VAL	C-N-CA	6.26	131.45	120.87
34	BO	31	THR	CB-CA-C	6.26	119.38	109.55
43	BX	45	PHE	N-CA-CB	6.26	120.40	110.57
55	BG	162	ARG	NE-CZ-NH2	6.26	124.83	119.20
57	BB	422	A	C4'-C3'-C2'	-6.26	96.34	102.60
57	BB	1429	G	C4'-C3'-O3'	-6.26	103.61	113.00
21	AA	43	C	O4'-C1'-N1	6.26	117.89	108.50
17	AF	49	TYR	O-C-N	-6.26	116.02	121.71
21	AA	193	C	O4'-C1'-N1	6.26	117.89	108.50
21	AA	631	C	O4'-C1'-N1	6.26	117.89	108.50
57	BB	2263	C	O4'-C4'-C3'	-6.25	97.75	104.00
12	AU	42	THR	CA-C-N	6.25	128.57	120.44
12	AU	42	THR	C-N-CA	6.25	128.57	120.44
17	AF	37	HIS	CA-CB-CG	-6.25	107.55	113.80
21	AA	1284	C	P-O3'-C3'	6.25	129.58	120.20
32	BM	47	GLU	N-CA-C	-6.25	105.59	112.72
57	BB	1855	U	O4'-C1'-N1	6.25	117.88	108.50
19	AH	39	LEU	N-CA-C	-6.25	104.47	111.28
21	AA	257	G	O4'-C4'-C3'	-6.25	97.75	104.00
2	AK	55	ARG	N-CA-C	-6.25	105.52	113.02
52	BD	67	HIS	CE1-NE2-CD2	-6.25	102.75	109.00
57	BB	436	C	O4'-C1'-N1	6.25	117.87	108.50
13	AB	98	GLY	O-C-N	6.25	130.82	122.70
21	AA	1110	A	O4'-C1'-N9	6.25	117.87	108.50
21	AA	1222	G	O4'-C1'-N9	6.25	117.87	108.50
26	AV	46	G	C5'-C4'-C3'	6.25	125.37	116.00
36	BQ	99	VAL	O-C-N	6.25	128.90	122.09
57	BB	1221	C	O4'-C1'-N1	6.25	117.87	108.50
11	AT	49	ALA	N-CA-C	-6.24	104.92	114.16
21	AA	821	G	O4'-C4'-C3'	-6.24	97.76	104.00
37	BR	90	ARG	N-CA-CB	6.24	119.58	110.47
57	BB	637	A	C4'-C3'-C2'	6.24	108.84	102.60
57	BB	2011	U	C4'-C3'-C2'	-6.24	96.36	102.60
30	BK	60	VAL	N-CA-C	-6.24	99.37	108.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2493	U	O4'-C1'-N1	6.24	117.86	108.50
22	AY	28	C	O3'-P-O5'	-6.24	94.64	104.00
21	AA	533	A	P-O5'-C5'	6.24	130.26	120.90
26	AV	49	G	C3'-C2'-C1'	6.24	107.54	101.30
57	BB	616	A	C5'-C4'-C3'	-6.24	106.64	116.00
21	AA	152	A	O4'-C1'-N9	6.24	117.86	108.50
21	AA	907	A	O4'-C1'-C2'	-6.24	101.36	107.60
37	BR	55	ASP	N-CA-C	-6.24	104.26	113.61
57	BB	2452	C	O4'-C1'-N1	6.24	117.85	108.50
57	BB	2821	A	O4'-C1'-N9	6.24	117.85	108.50
19	AH	83	ARG	CA-C-O	-6.23	113.58	120.69
13	AB	15	PHE	CA-C-N	6.23	128.44	122.27
13	AB	15	PHE	C-N-CA	6.23	128.44	122.27
53	BE	30	GLN	OE1-CD-NE2	6.23	128.83	122.60
21	AA	197	A	C5'-C4'-C3'	6.23	124.55	115.20
29	BJ	60	ASP	CA-CB-CG	-6.23	106.37	112.60
31	BL	41	ARG	NE-CZ-NH1	-6.23	115.27	121.50
33	BN	88	ALA	N-CA-C	-6.23	105.54	113.02
43	BX	61	LYS	N-CA-CB	6.23	119.43	110.40
57	BB	2312	U	O5'-C5'-C4'	-6.23	102.16	111.50
13	AB	61	SER	N-CA-C	-6.23	105.26	112.92
57	BB	2529	G	C4'-C3'-C2'	6.23	108.83	102.60
10	AS	51	HIS	CE1-NE2-CD2	-6.23	102.77	109.00
21	AA	12	U	C1'-O4'-C4'	-6.23	103.67	109.90
45	BC	166	ARG	N-CA-CB	6.23	120.80	110.47
13	AB	49	PHE	N-CA-C	-6.22	104.12	111.03
45	BC	18	VAL	CA-C-O	-6.22	113.98	120.27
57	BB	1663	G	C4'-C3'-O3'	-6.22	103.66	113.00
18	AG	52	ARG	O-C-N	-6.22	113.87	122.46
57	BB	1397	U	P-O3'-C3'	-6.22	110.87	120.20
57	BB	627	A	O4'-C1'-C2'	-6.22	99.58	105.80
21	AA	551	U	C4'-C3'-O3'	-6.22	103.67	113.00
21	AA	1424	U	C4'-C3'-O3'	-6.22	103.67	113.00
22	AY	3	G	O4'-C1'-N9	6.22	117.83	108.50
25	AZ	350	VAL	CA-C-O	-6.22	113.99	120.27
55	BG	39	ALA	N-CA-C	-6.22	105.54	112.57
57	BB	1278	C	O4'-C4'-C3'	6.22	110.22	104.00
21	AA	160	A	C4'-C3'-C2'	-6.22	96.38	102.60
21	AA	855	U	O4'-C4'-C3'	-6.22	97.78	104.00
21	AA	1046	A	P-O5'-C5'	-6.22	111.57	120.90
21	AA	1223	C	C4'-C3'-O3'	-6.22	103.67	113.00
57	BB	2167	U	C5'-C4'-C3'	6.22	125.32	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	AP	63	GLN	N-CA-C	-6.21	104.97	113.30
25	AZ	212	LEU	CA-C-O	-6.21	111.65	120.16
57	BB	257	C	P-O3'-C3'	-6.21	110.88	120.20
57	BB	281	C	C4'-C3'-C2'	6.21	108.81	102.60
57	BB	2020	A	P-O3'-C3'	6.21	129.52	120.20
57	BB	2467	C	C1'-O4'-C4'	-6.21	103.69	109.90
54	BF	139	GLU	CA-C-N	6.21	128.99	120.35
54	BF	139	GLU	C-N-CA	6.21	128.99	120.35
57	BB	1210	G	C4'-C3'-C2'	-6.21	96.39	102.60
14	AC	111	ASP	N-CA-CB	6.21	120.99	110.49
21	AA	179	A	P-O5'-C5'	6.21	130.22	120.90
21	AA	325	A	P-O5'-C5'	-6.21	111.58	120.90
21	AA	597	G	O5'-C5'-C4'	-6.21	102.18	111.50
57	BB	667	U	C5'-C4'-C3'	-6.21	106.68	116.00
57	BB	1776	G	C4'-C3'-C2'	-6.21	96.39	102.60
57	BB	1732	C	C4'-C3'-C2'	6.21	108.81	102.60
21	AA	113	G	O4'-C1'-N9	6.21	117.81	108.50
27	B5	58	ASN	N-CA-CB	6.21	120.33	110.65
31	BL	130	GLY	N-CA-C	-6.21	105.97	115.66
39	BT	15	HIS	CA-C-N	6.21	133.15	121.97
39	BT	15	HIS	C-N-CA	6.21	133.15	121.97
57	BB	1098	A	P-O3'-C3'	6.21	129.51	120.20
5	AN	10	VAL	N-CA-CB	6.21	117.81	110.55
21	AA	475	C	C4'-C3'-O3'	-6.21	103.69	113.00
57	BB	2025	C	O4'-C1'-C2'	-6.21	101.39	107.60
21	AA	590	U	O4'-C1'-N1	6.21	117.81	108.50
33	BN	31	HIS	CA-C-N	6.21	133.39	121.54
33	BN	31	HIS	C-N-CA	6.21	133.39	121.54
4	AM	89	ARG	N-CA-CB	-6.20	100.34	110.14
14	AC	175	HIS	CE1-NE2-CD2	-6.20	102.80	109.00
17	AF	13	ASP	N-CA-C	-6.20	105.35	113.17
21	AA	317	U	C4'-C3'-O3'	-6.20	103.69	113.00
25	AZ	132	VAL	CA-CB-CG1	6.20	120.94	110.40
21	AA	603	U	P-O5'-C5'	6.20	130.20	120.90
32	BM	88	ASN	O-C-N	6.20	130.97	123.16
57	BB	2752	C	C5'-C4'-C3'	-6.20	106.70	116.00
21	AA	255	G	C4'-C3'-C2'	-6.20	96.40	102.60
21	AA	711	G	C4'-C3'-C2'	-6.20	96.40	102.60
21	AA	1060	U	C1'-C2'-O2'	6.20	117.70	108.40
57	BB	339	U	O4'-C1'-N1	6.20	117.80	108.50
57	BB	398	C	O4'-C1'-N1	6.20	117.80	108.50
57	BB	580	U	C4'-C3'-C2'	-6.20	96.40	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2885	G	C4'-C3'-O3'	-6.20	103.70	113.00
14	AC	171	ARG	N-CA-C	-6.20	98.51	108.55
20	AI	109	GLN	OE1-CD-NE2	-6.20	116.40	122.60
21	AA	483	C	C4'-C3'-C2'	6.20	108.80	102.60
57	BB	31	C	P-O3'-C3'	-6.20	110.90	120.20
4	AM	43	LYS	CA-C-O	-6.20	114.93	121.99
34	BO	12	THR	N-CA-C	-6.20	104.89	112.88
47	B0	37	HIS	ND1-CE1-NE2	6.20	114.59	108.40
57	BB	1949	G	C4'-C3'-C2'	-6.20	96.41	102.60
57	BB	2223	G	C5'-C4'-C3'	6.20	125.29	116.00
58	BA	7	G	C3'-C2'-C1'	-6.20	95.11	101.30
45	BC	87	SER	N-CA-C	-6.19	106.41	112.97
26	AV	3	C	O5'-C5'-C4'	-6.19	102.21	111.50
57	BB	38	A	C1'-O4'-C4'	6.19	116.09	109.90
57	BB	1031	G	P-O5'-C5'	-6.19	111.61	120.90
57	BB	444	C	P-O3'-C3'	-6.19	110.92	120.20
57	BB	1491	G	C4'-C3'-C2'	-6.19	96.41	102.60
56	BH	94	ILE	N-CA-C	-6.19	106.47	112.29
57	BB	1674	G	O3'-P-O5'	-6.19	94.72	104.00
4	AM	14	ALA	N-CA-C	6.19	120.09	112.54
19	AH	46	GLU	CB-CG-CD	-6.19	102.08	112.60
29	BJ	57	LEU	CA-C-O	6.19	127.20	119.59
37	BR	99	THR	CA-C-O	6.19	126.96	119.78
57	BB	372	G	C2'-C3'-O3'	6.19	118.78	109.50
9	AR	50	TYR	CA-C-O	-6.18	114.27	121.07
57	BB	344	A	C5'-C4'-C3'	-6.18	106.72	116.00
1	AJ	69	THR	CA-C-N	6.18	129.91	120.82
1	AJ	69	THR	C-N-CA	6.18	129.91	120.82
13	AB	189	ASN	N-CA-CB	6.18	120.94	110.49
57	BB	253	C	C1'-O4'-C4'	-6.18	103.72	109.90
57	BB	634	C	O4'-C1'-N1	6.18	117.77	108.50
57	BB	1379	U	C4'-C3'-O3'	-6.18	103.73	113.00
21	AA	461	A	C5'-C4'-C3'	6.18	125.27	116.00
53	BE	113	VAL	O-C-N	6.18	127.97	121.91
34	BO	107	ALA	CA-C-N	6.18	132.58	121.15
34	BO	107	ALA	C-N-CA	6.18	132.58	121.15
57	BB	1148	U	P-O3'-C3'	-6.18	110.93	120.20
15	AD	39	GLN	CA-C-O	6.18	127.31	120.82
57	BB	2719	G	C5'-C4'-O4'	6.18	119.07	109.80
11	AT	57	VAL	N-CA-C	6.18	117.66	110.62
14	AC	100	ILE	CA-C-O	6.18	127.56	120.76
19	AH	73	SER	O-C-N	-6.18	115.84	123.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	137	U	C3'-C2'-C1'	6.18	107.48	101.30
57	BB	900	A	C4'-C3'-O3'	6.18	122.27	113.00
57	BB	991	C	P-O5'-C5'	-6.18	111.64	120.90
2	AK	45	THR	CA-C-N	6.17	129.17	120.28
2	AK	45	THR	C-N-CA	6.17	129.17	120.28
21	AA	1231	G	P-O3'-C3'	-6.17	110.94	120.20
29	BJ	7	LYS	N-CA-C	-6.17	102.36	110.39
57	BB	1231	U	O4'-C1'-N1	6.17	117.76	108.50
21	AA	1109	C	P-O5'-C5'	-6.17	111.64	120.90
55	BG	70	LEU	N-CA-C	-6.17	106.39	114.04
18	AG	48	THR	O-C-N	6.17	128.51	122.09
25	AZ	371	GLY	N-CA-C	-6.17	106.90	114.92
57	BB	2498	C	C4'-C3'-C2'	-6.17	96.43	102.60
21	AA	597	G	O4'-C1'-N9	6.17	117.75	108.50
21	AA	974	A	C5'-C4'-C3'	-6.17	105.94	115.20
55	BG	138	GLN	N-CA-C	-6.17	105.88	113.41
57	BB	1917	U	C4'-C3'-C2'	-6.17	96.43	102.60
21	AA	99	C	O4'-C1'-N1	6.17	117.75	108.50
21	AA	1336	C	C4'-C3'-C2'	6.17	108.77	102.60
25	AZ	392	LEU	N-CA-C	-6.17	99.95	109.14
50	B3	44	ARG	CA-C-N	6.17	126.13	119.78
50	B3	44	ARG	C-N-CA	6.17	126.13	119.78
57	BB	565	C	P-O5'-C5'	-6.17	111.65	120.90
57	BB	1920	C	O4'-C1'-N1	6.17	117.75	108.50
57	BB	2475	C	C5'-C4'-C3'	-6.17	106.75	116.00
11	AT	53	MET	N-CA-C	-6.17	104.36	113.61
14	AC	117	ASP	CA-C-O	-6.17	113.13	120.10
21	AA	585	G	C5'-C4'-O4'	6.17	119.05	109.80
32	BM	31	PHE	N-CA-C	-6.17	99.95	109.14
37	BR	97	LYS	CA-C-N	6.17	133.07	121.97
37	BR	97	LYS	C-N-CA	6.17	133.07	121.97
57	BB	549	G	O4'-C1'-C2'	-6.17	101.43	107.60
57	BB	1703	G	O4'-C1'-N9	6.17	117.75	108.50
57	BB	2157	G	C2'-C3'-O3'	6.17	118.75	109.50
21	AA	1493	A	O3'-P-O5'	-6.17	94.75	104.00
56	BH	58	LEU	CA-C-N	6.17	128.86	120.54
56	BH	58	LEU	C-N-CA	6.17	128.86	120.54
57	BB	1870	C	O4'-C1'-N1	6.17	117.75	108.50
16	AE	104	ILE	N-CA-CB	6.16	119.44	111.67
21	AA	1029	U	C4'-C3'-C2'	-6.16	96.44	102.60
31	BL	110	VAL	CA-C-N	6.16	133.06	121.97
31	BL	110	VAL	C-N-CA	6.16	133.06	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	BD	129	THR	CA-CB-CG2	-6.16	100.02	110.50
54	BF	172	PHE	CA-C-N	6.16	131.29	120.87
54	BF	172	PHE	C-N-CA	6.16	131.29	120.87
57	BB	290	U	P-O5'-C5'	6.16	130.15	120.90
57	BB	921	C	P-O5'-C5'	6.16	130.15	120.90
57	BB	1632	A	O4'-C4'-C3'	-6.16	97.84	104.00
57	BB	2850	A	P-O3'-C3'	6.16	129.44	120.20
58	BA	54	G	C4'-C3'-O3'	-6.16	103.75	113.00
21	AA	1279	G	O3'-P-O5'	-6.16	94.76	104.00
27	B5	165	ASN	CA-CB-CG	-6.16	106.44	112.60
33	BN	31	HIS	ND1-CE1-NE2	6.16	114.56	108.40
41	BV	63	ILE	O-C-N	-6.16	116.55	123.20
57	BB	831	G	O5'-C5'-C4'	-6.16	102.26	111.50
57	BB	1979	U	O4'-C4'-C3'	-6.16	97.84	104.00
57	BB	2067	G	O4'-C4'-C3'	-6.16	99.94	106.10
7	AP	61	VAL	N-CA-C	-6.16	105.72	112.80
11	AT	26	MET	CG-SD-CE	-6.16	87.35	100.90
15	AD	119	HIS	CA-CB-CG	-6.16	107.64	113.80
21	AA	1361	G	O4'-C1'-N9	6.16	117.74	108.50
25	AZ	354	ASP	N-CA-C	6.16	118.50	110.43
35	BP	43	GLU	CA-C-N	-6.16	115.46	122.42
35	BP	43	GLU	C-N-CA	-6.16	115.46	122.42
57	BB	558	U	O4'-C1'-N1	6.16	117.74	108.50
57	BB	816	C	O4'-C1'-N1	6.16	117.74	108.50
57	BB	2166	U	C4'-C3'-C2'	-6.16	96.44	102.60
21	AA	136	C	O4'-C1'-C2'	-6.16	101.44	107.60
21	AA	1101	A	C4'-C3'-C2'	-6.16	96.44	102.60
14	AC	18	ASN	CA-CB-CG	-6.16	106.44	112.60
57	BB	956	G	P-O5'-C5'	-6.16	111.67	120.90
57	BB	1305	C	O4'-C1'-N1	6.16	117.73	108.50
57	BB	2400	G	C5'-C4'-C3'	-6.16	106.77	116.00
57	BB	501	A	P-O5'-C5'	6.15	130.13	120.90
57	BB	1160	G	C4'-C3'-C2'	-6.15	96.45	102.60
57	BB	1591	A	C5'-C4'-C3'	-6.15	106.77	116.00
57	BB	1656	C	O4'-C1'-N1	6.15	117.73	108.50
15	AD	114	ARG	NE-CZ-NH2	-6.15	113.66	119.20
21	AA	442	G	C4'-C3'-O3'	-6.15	103.77	113.00
21	AA	1119	C	O4'-C4'-C3'	-6.15	97.85	104.00
50	B3	25	HIS	O-C-N	6.15	130.44	122.87
57	BB	514	A	C5'-C4'-C3'	6.15	125.23	116.00
57	BB	2439	A	O5'-C5'-C4'	6.15	120.93	111.70
4	AM	98	GLY	CA-C-N	6.15	133.29	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AM	98	GLY	C-N-CA	6.15	133.29	121.54
21	AA	1361	G	C4'-C3'-C2'	-6.15	96.45	102.60
54	BF	155	ILE	CA-CB-CG2	-6.15	100.05	110.50
22	AY	44	A	C1'-O4'-C4'	-6.15	103.75	109.90
48	B1	8	ILE	O-C-N	-6.15	116.24	123.00
57	BB	2711	A	C4'-C3'-O3'	-6.15	103.78	113.00
57	BB	2820	A	O4'-C1'-C2'	-6.15	99.65	105.80
21	AA	300	A	O4'-C1'-C2'	-6.15	101.45	107.60
51	B4	4	ARG	CA-C-N	6.15	128.51	120.28
51	B4	4	ARG	C-N-CA	6.15	128.51	120.28
57	BB	822	G	P-O5'-C5'	-6.15	111.68	120.90
57	BB	912	C	P-O3'-C3'	-6.15	110.98	120.20
27	B5	19	LYS	CB-CA-C	-6.14	99.19	110.62
27	B5	39	VAL	CA-C-N	6.14	131.44	122.41
27	B5	39	VAL	C-N-CA	6.14	131.44	122.41
27	B5	174	THR	N-CA-CB	6.14	119.68	109.60
32	BM	36	VAL	N-CA-C	-6.14	99.27	108.12
57	BB	2123	G	P-O5'-C5'	6.14	130.12	120.90
16	AE	20	VAL	N-CA-CB	6.14	121.52	111.44
25	AZ	132	VAL	CB-CA-C	-6.14	102.62	111.34
56	BH	96	THR	CA-C-N	6.14	130.98	120.72
56	BH	96	THR	C-N-CA	6.14	130.98	120.72
36	BQ	51	GLN	OE1-CD-NE2	6.14	128.74	122.60
36	BQ	111	LYS	N-CA-C	-6.14	105.95	113.50
57	BB	1691	C	C4'-C3'-C2'	-6.14	96.46	102.60
57	BB	1208	C	P-O5'-C5'	-6.14	111.69	120.90
57	BB	2090	A	C5'-C4'-C3'	-6.14	106.79	116.00
21	AA	1354	U	O4'-C1'-N1	6.14	117.71	108.50
57	BB	2749	A	P-O5'-C5'	6.14	130.11	120.90
17	AF	32	ALA	CA-C-N	6.14	133.26	121.54
17	AF	32	ALA	C-N-CA	6.14	133.26	121.54
21	AA	436	C	O4'-C1'-N1	6.14	117.70	108.50
21	AA	25	C	O4'-C1'-N1	6.13	117.70	108.50
21	AA	468	A	C4'-C3'-O3'	-6.13	103.80	113.00
22	AY	8	U	O4'-C1'-N1	6.13	117.70	108.50
54	BF	161	SER	CA-C-O	-6.13	114.86	121.36
57	BB	1009	A	O3'-P-O5'	-6.13	94.80	104.00
57	BB	2272	U	P-O5'-C5'	6.13	130.10	120.90
7	AP	59	HIS	CB-CG-ND1	6.13	131.90	122.70
7	AP	59	HIS	CE1-NE2-CD2	-6.13	102.87	109.00
21	AA	511	C	C2'-C3'-O3'	6.13	118.70	109.50
26	AV	26	G	O4'-C1'-N9	6.13	117.70	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	B0	18	HIS	CG-CD2-NE2	6.13	113.33	107.20
53	BE	13	THR	CA-C-O	6.13	127.97	120.92
57	BB	2730	C	P-O3'-C3'	-6.13	111.00	120.20
21	AA	169	C	O4'-C1'-N1	6.13	117.69	108.50
57	BB	746	U	P-O5'-C5'	6.13	130.09	120.90
57	BB	2185	U	P-O3'-C3'	-6.13	111.00	120.20
8	AQ	10	ARG	CB-CA-C	-6.13	100.33	110.14
21	AA	1055	A	C5'-C4'-O4'	6.13	118.99	109.80
21	AA	1373	G	C4'-C3'-C2'	-6.13	96.47	102.60
23	AW	75	C	P-O3'-C3'	-6.13	111.01	120.20
57	BB	1131	G	O4'-C1'-C2'	6.13	111.93	105.80
57	BB	2347	C	O4'-C1'-N1	6.13	117.69	108.50
22	AY	28	C	C3'-C2'-C1'	6.13	107.43	101.30
25	AZ	22	HIS	N-CA-CB	6.13	120.84	110.49
38	BS	70	LYS	N-CA-C	-6.13	99.92	109.72
54	BF	173	ASP	N-CA-C	6.13	118.45	110.43
57	BB	2152	G	C2'-C3'-O3'	6.13	122.89	113.70
57	BB	2178	C	O4'-C1'-N1	6.12	117.69	108.50
21	AA	1228	C	C5'-C4'-C3'	-6.12	106.82	116.00
25	AZ	175	LEU	CA-C-N	6.12	128.73	120.65
25	AZ	175	LEU	C-N-CA	6.12	128.73	120.65
30	BK	115	ILE	N-CA-C	-6.12	105.69	113.22
53	BE	138	LEU	N-CA-CB	6.12	120.84	110.49
57	BB	2658	C	P-O3'-C3'	-6.12	111.01	120.20
21	AA	1493	A	O4'-C4'-C3'	-6.12	99.98	106.10
29	BJ	8	PRO	N-CA-CB	6.12	109.68	103.25
36	BQ	74	SER	CB-CA-C	6.12	122.23	109.68
49	B2	11	LYS	CA-C-N	6.12	129.30	120.79
49	B2	11	LYS	C-N-CA	6.12	129.30	120.79
57	BB	153	U	C4'-C3'-O3'	-6.12	103.82	113.00
57	BB	483	A	C4'-C3'-O3'	-6.12	103.82	113.00
57	BB	770	G	P-O5'-C5'	-6.12	111.72	120.90
25	AZ	27	LEU	N-CA-CB	6.12	119.12	110.12
57	BB	674	G	C4'-C3'-O3'	-6.12	103.82	113.00
2	AK	29	THR	CA-C-O	6.12	127.67	120.20
21	AA	1414	U	C5'-C4'-C3'	6.12	125.18	116.00
45	BC	206	LYS	CB-CA-C	6.12	123.16	111.17
57	BB	170	U	O4'-C1'-N1	6.12	117.67	108.50
19	AH	23	ALA	N-CA-CB	6.12	120.83	110.49
21	AA	1416	G	O5'-C5'-C4'	-6.12	102.33	111.50
31	BL	61	LEU	O-C-N	-6.12	116.15	121.35
35	BP	8	GLU	O-C-N	6.12	129.61	122.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2586	U	C4'-C3'-C2'	-6.12	96.48	102.60
58	BA	47	C	O4'-C1'-N1	6.12	117.67	108.50
11	AT	51	ASN	OD1-CG-ND2	6.11	128.71	122.60
21	AA	280	C	C5'-C4'-C3'	6.11	124.37	115.20
22	AY	58	A	O5'-C5'-C4'	-6.11	102.53	111.70
57	BB	612	G	C4'-C3'-O3'	-6.11	103.83	113.00
9	AR	73	HIS	CE1-NE2-CD2	-6.11	102.89	109.00
22	AY	44	A	P-O5'-C5'	-6.11	111.74	120.90
57	BB	383	C	P-O3'-C3'	-6.11	111.03	120.20
57	BB	1778	U	C4'-C3'-O3'	-6.11	103.84	113.00
17	AF	11	HIS	CE1-NE2-CD2	-6.11	102.89	109.00
27	B5	186	LYS	O-C-N	-6.11	115.09	122.11
57	BB	2674	G	O5'-C5'-C4'	-6.11	102.34	111.50
22	AY	39	U	C4'-C3'-C2'	-6.11	96.50	102.60
33	BN	63	ARG	N-CA-C	-6.11	104.54	112.23
53	BE	5	LEU	O-C-N	-6.11	115.54	122.68
53	BE	19	PHE	O-C-N	-6.11	114.98	122.25
57	BB	213	A	O4'-C1'-C2'	-6.11	101.49	107.60
57	BB	282	A	C4'-C3'-O3'	-6.11	103.84	113.00
57	BB	1142	A	C2'-C3'-O3'	6.10	118.66	109.50
19	AH	47	ASP	CA-CB-CG	6.10	118.70	112.60
19	AH	99	GLY	CA-C-O	-6.10	114.95	122.82
21	AA	1317	C	O5'-C5'-C4'	6.10	120.66	111.50
21	AA	1382	C	C4'-C3'-O3'	-6.10	103.85	113.00
39	BT	80	TRP	N-CA-C	6.10	116.30	108.24
57	BB	192	C	O4'-C1'-N1	6.10	117.66	108.50
57	BB	2898	U	C4'-C3'-C2'	-6.10	96.50	102.60
45	BC	135	PRO	CA-C-N	6.10	129.60	120.69
45	BC	135	PRO	C-N-CA	6.10	129.60	120.69
57	BB	506	G	C2'-C3'-O3'	6.10	118.65	109.50
57	BB	838	C	C4'-C3'-C2'	-6.10	96.50	102.60
2	AK	65	ALA	CA-C-N	6.10	130.45	120.63
2	AK	65	ALA	C-N-CA	6.10	130.45	120.63
40	BU	7	ASP	CA-CB-CG	-6.10	106.50	112.60
57	BB	454	A	O4'-C4'-C3'	-6.10	100.00	106.10
57	BB	1429	G	O4'-C1'-N9	6.10	117.65	108.50
57	BB	1593	A	O4'-C1'-N9	6.10	117.65	108.50
57	BB	2324	U	C1'-C2'-O2'	-6.10	102.65	111.80
21	AA	479	U	O4'-C1'-N1	6.10	117.65	108.50
39	BT	39	THR	CA-C-O	6.10	125.23	118.52
55	BG	10	VAL	CA-C-N	6.10	127.46	119.84
55	BG	10	VAL	C-N-CA	6.10	127.46	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	378	C	P-O3'-C3'	-6.10	111.05	120.20
57	BB	479	A	C2'-C3'-O3'	6.10	118.65	109.50
57	BB	1209	U	O4'-C1'-N1	6.10	117.64	108.50
57	BB	1974	C	P-O5'-C5'	6.10	130.05	120.90
2	AK	117	HIS	N-CA-C	-6.10	106.00	113.50
7	AP	49	GLY	CA-C-N	-6.10	113.37	122.39
7	AP	49	GLY	C-N-CA	-6.10	113.37	122.39
15	AD	168	THR	N-CA-C	-6.10	105.02	112.88
21	AA	1045	C	O4'-C1'-N1	6.10	117.64	108.50
57	BB	1223	G	C1'-C2'-O2'	6.10	117.55	108.40
21	AA	861	G	O4'-C1'-C2'	-6.09	101.50	107.60
21	AA	1113	C	O4'-C1'-N1	6.09	117.64	108.50
52	BD	191	GLY	CA-C-O	-6.09	117.92	122.37
11	AT	27	MET	N-CA-C	-6.09	104.56	112.23
15	AD	15	GLY	CA-C-N	6.09	132.08	122.21
15	AD	15	GLY	C-N-CA	6.09	132.08	122.21
21	AA	1493	A	C4'-C3'-C2'	6.09	108.69	102.60
27	B5	221	GLY	CA-C-N	6.09	131.31	123.03
27	B5	221	GLY	C-N-CA	6.09	131.31	123.03
51	B4	31	PRO	N-CA-CB	6.09	106.52	102.25
57	BB	36	G	O5'-C5'-C4'	-6.09	102.36	111.50
57	BB	776	G	O4'-C1'-N9	6.09	117.34	108.20
57	BB	1440	U	P-O5'-C5'	6.09	130.04	120.90
57	BB	2047	C	O4'-C1'-N1	6.09	117.64	108.50
13	AB	194	GLY	N-CA-C	-6.09	107.00	114.92
20	AI	41	GLU	CA-C-O	6.09	128.12	121.06
21	AA	135	C	O4'-C1'-C2'	-6.09	101.51	107.60
21	AA	1521	C	P-O5'-C5'	6.09	130.03	120.90
54	BF	91	ARG	CA-C-O	6.09	127.75	121.23
57	BB	1638	C	C4'-C3'-C2'	-6.09	96.51	102.60
2	AK	22	ILE	CA-CB-CG2	6.09	120.85	110.50
28	BI	120	ASP	CA-CB-CG	-6.09	106.51	112.60
30	BK	28	HIS	ND1-CE1-NE2	6.09	114.49	108.40
57	BB	361	G	P-O5'-C5'	6.09	130.03	120.90
57	BB	450	G	C4'-C3'-C2'	-6.09	96.51	102.60
7	AP	36	VAL	N-CA-CB	6.08	121.27	111.23
21	AA	13	U	O3'-P-O5'	-6.08	94.87	104.00
25	AZ	216	ASP	N-CA-CB	6.08	120.92	111.24
57	BB	892	A	C5'-C4'-C3'	-6.08	106.87	116.00
57	BB	1909	C	O4'-C1'-N1	6.08	117.63	108.50
21	AA	355	C	O4'-C4'-C3'	-6.08	97.92	104.00
44	BY	53	VAL	N-CA-C	-6.08	106.80	113.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	856	G	P-O3'-C3'	6.08	129.33	120.20
57	BB	1857	G	C2'-C3'-O3'	6.08	118.63	109.50
57	BB	2203	U	N1-C1'-C2'	6.08	121.12	112.00
3	AL	91	GLY	CA-C-N	6.08	129.37	120.91
3	AL	91	GLY	C-N-CA	6.08	129.37	120.91
4	AM	61	LYS	N-CA-C	-6.08	105.79	112.72
6	AO	58	MET	CG-SD-CE	-6.08	87.52	100.90
57	BB	1295	C	P-O5'-C5'	6.08	130.02	120.90
58	BA	49	C	O4'-C1'-N1	6.08	117.62	108.50
4	AM	41	ASP	CA-C-N	6.08	131.02	123.12
4	AM	41	ASP	C-N-CA	6.08	131.02	123.12
18	AG	8	GLN	OE1-CD-NE2	6.08	128.68	122.60
57	BB	337	C	C3'-C2'-C1'	-6.08	95.22	101.30
57	BB	1481	U	C3'-C2'-C1'	6.08	107.38	101.30
53	BE	6	LYS	CA-C-N	6.08	131.73	122.37
53	BE	6	LYS	C-N-CA	6.08	131.73	122.37
57	BB	544	C	O4'-C1'-N1	6.08	117.62	108.50
21	AA	534	U	O4'-C1'-N1	6.08	117.61	108.50
57	BB	2333	A	N9-C1'-C2'	-6.08	104.89	114.00
22	AY	22	G	C5'-C4'-C3'	-6.08	106.89	116.00
22	AY	23	A	C4'-C3'-O3'	-6.08	103.89	113.00
25	AZ	59	GLY	O-C-N	6.08	128.89	123.60
57	BB	891	G	O4'-C1'-N9	6.08	117.61	108.50
57	BB	1864	U	O4'-C1'-N1	6.08	117.61	108.50
57	BB	1870	C	C5'-C4'-C3'	-6.08	106.89	116.00
57	BB	2850	A	O3'-P-O5'	-6.08	94.89	104.00
58	BA	51	G	C5'-C4'-C3'	6.08	125.11	116.00
18	AG	14	ASP	O-C-N	-6.07	115.89	121.30
25	AZ	118	HIS	CG-CD2-NE2	-6.07	101.13	107.20
26	AV	30	G	O4'-C1'-C2'	-6.07	101.53	107.60
36	BQ	76	SER	CA-C-O	-6.07	114.11	120.55
49	B2	33	ARG	NE-CZ-NH1	-6.07	115.43	121.50
57	BB	1886	U	O4'-C1'-N1	6.07	117.61	108.50
57	BB	2174	C	C4'-C3'-C2'	-6.07	96.53	102.60
21	AA	434	U	O4'-C1'-C2'	-6.07	101.53	107.60
41	BV	12	GLN	N-CA-CB	6.07	121.39	110.83
57	BB	1944	U	O4'-C1'-C2'	-6.07	99.73	105.80
57	BB	2689	U	O5'-C5'-C4'	-6.07	102.59	111.70
16	AE	76	ASN	OD1-CG-ND2	6.07	128.67	122.60
29	BJ	89	PHE	CA-C-N	6.07	128.70	120.38
29	BJ	89	PHE	C-N-CA	6.07	128.70	120.38
33	BN	51	LEU	N-CA-C	-6.07	104.74	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	BR	54	VAL	N-CA-CB	6.07	121.25	111.23
57	BB	1476	U	O3'-P-O5'	-6.07	94.89	104.00
41	BV	50	MET	N-CA-CB	6.07	118.87	110.07
57	BB	1386	C	O4'-C1'-N1	6.07	117.60	108.50
57	BB	1773	A	N9-C1'-C2'	-6.07	102.90	112.00
13	AB	166	ASP	N-CA-C	-6.07	105.69	114.12
15	AD	140	ASP	N-CA-C	-6.07	101.01	110.17
33	BN	11	ASN	N-CA-C	-6.07	104.25	112.26
45	BC	134	ILE	CA-C-N	6.07	126.01	119.76
45	BC	134	ILE	C-N-CA	6.07	126.01	119.76
57	BB	1394	U	P-O5'-C5'	6.07	130.00	120.90
21	AA	170	U	O4'-C4'-C3'	-6.07	97.94	104.00
27	B5	114	VAL	CB-CA-C	6.07	118.95	111.25
32	BM	46	ILE	N-CA-C	-6.07	104.59	110.72
57	BB	340	A	O3'-P-O5'	6.07	113.10	104.00
21	AA	1354	U	C4'-C3'-C2'	-6.06	96.54	102.60
33	BN	82	GLU	N-CA-C	-6.06	104.39	112.94
57	BB	2476	A	O3'-P-O5'	-6.06	94.90	104.00
57	BB	2793	C	C2'-C3'-O3'	6.06	122.80	113.70
17	AF	29	ILE	N-CA-C	6.06	116.18	110.30
21	AA	537	G	C3'-C2'-C1'	-6.06	95.24	101.30
21	AA	607	A	O4'-C1'-N9	6.06	117.59	108.50
21	AA	1399	C	O4'-C1'-C2'	6.06	111.86	105.80
27	B5	231	ALA	CA-C-N	6.06	133.12	121.54
27	B5	231	ALA	C-N-CA	6.06	133.12	121.54
37	BR	54	VAL	N-CA-C	-6.06	96.73	109.34
57	BB	351	C	P-O5'-C5'	6.06	129.99	120.90
57	BB	681	G	O4'-C1'-N9	6.06	117.59	108.50
5	AN	70	HIS	CG-CD2-NE2	6.06	113.26	107.20
12	AU	23	GLU	CA-C-O	-6.06	114.97	121.45
14	AC	170	GLY	N-CA-C	-6.06	98.81	113.18
21	AA	452	A	N9-C1'-C2'	-6.06	102.91	112.00
21	AA	668	G	C3'-C2'-C1'	-6.06	95.24	101.30
18	AG	25	PHE	CA-CB-CG	-6.06	107.74	113.80
21	AA	1038	C	O4'-C1'-N1	6.06	117.59	108.50
57	BB	1220	G	C5'-C4'-C3'	-6.06	106.91	116.00
57	BB	1275	A	O4'-C1'-N9	6.06	117.59	108.50
57	BB	2524	G	C4'-C3'-O3'	-6.06	103.91	113.00
58	BA	30	C	C4'-C3'-C2'	-6.06	96.54	102.60
10	AS	44	ILE	CA-C-N	6.06	130.72	120.91
10	AS	44	ILE	C-N-CA	6.06	130.72	120.91
13	AB	22	TRP	CB-CG-CD1	6.06	135.99	126.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	AH	66	GLN	OE1-CD-NE2	-6.06	116.54	122.60
21	AA	720	C	O4'-C1'-N1	6.06	117.59	108.50
21	AA	1046	A	C4'-C3'-C2'	-6.06	96.54	102.60
21	AA	1126	U	O4'-C4'-C3'	-6.06	100.04	106.10
27	B5	230	SER	CA-C-N	6.06	129.90	120.75
27	B5	230	SER	C-N-CA	6.06	129.90	120.75
45	BC	86	ARG	CA-C-N	6.06	132.53	122.66
45	BC	86	ARG	C-N-CA	6.06	132.53	122.66
57	BB	304	U	O4'-C1'-N1	6.06	117.59	108.50
57	BB	1008	A	O4'-C1'-C2'	6.06	111.86	105.80
57	BB	2261	C	C3'-C2'-C1'	-6.06	95.24	101.30
57	BB	225	C	O4'-C1'-N1	6.06	117.58	108.50
57	BB	1153	C	C4'-C3'-C2'	-6.06	96.54	102.60
20	AI	103	VAL	CA-C-O	6.05	125.90	119.91
21	AA	937	A	O3'-P-O5'	-6.05	94.92	104.00
22	AY	36	A	C4'-C3'-C2'	-6.05	96.55	102.60
44	BY	12	GLU	N-CA-C	-6.05	104.59	111.07
45	BC	10	PRO	CA-C-N	6.05	130.18	122.00
45	BC	10	PRO	C-N-CA	6.05	130.18	122.00
45	BC	45	ASN	CA-C-O	6.05	126.61	119.28
55	BG	169	ARG	CA-C-N	6.05	130.76	122.34
55	BG	169	ARG	C-N-CA	6.05	130.76	122.34
57	BB	1984	G	P-O3'-C3'	-6.05	111.12	120.20
17	AF	32	ALA	N-CA-C	-6.05	104.54	112.41
45	BC	79	ARG	CD-NE-CZ	-6.05	115.93	124.40
57	BB	497	A	O3'-P-O5'	-6.05	94.92	104.00
57	BB	1051	G	C4'-C3'-O3'	-6.05	103.92	113.00
50	B3	25	HIS	N-CA-C	6.05	119.01	110.23
57	BB	514	A	C1'-C2'-O2'	6.05	117.48	108.40
57	BB	1813	G	O4'-C1'-N9	6.05	117.58	108.50
55	BG	162	ARG	NE-CZ-NH1	-6.05	115.45	121.50
57	BB	1158	C	O4'-C1'-N1	6.05	117.57	108.50
57	BB	1854	A	O4'-C1'-C2'	-6.05	101.55	107.60
57	BB	2793	C	P-O5'-C5'	-6.05	111.83	120.90
6	AO	20	ASP	CA-CB-CG	-6.05	106.55	112.60
57	BB	37	C	P-O5'-C5'	6.05	129.97	120.90
57	BB	432	A	O4'-C1'-N9	6.05	117.57	108.50
57	BB	2570	G	O4'-C4'-C3'	-6.05	97.95	104.00
58	BA	101	A	C5'-C4'-O4'	6.05	118.87	109.80
21	AA	920	U	O4'-C1'-N1	6.05	117.57	108.50
21	AA	1127	G	C4'-C3'-O3'	-6.05	103.93	113.00
49	B2	38	GLY	N-CA-C	-6.05	106.09	116.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	306	U	C4'-C3'-O3'	-6.05	103.93	113.00
5	AN	41	TRP	N-CA-CB	6.04	120.71	110.49
21	AA	550	G	O4'-C1'-N9	6.04	117.57	108.50
21	AA	1517	G	O5'-C5'-C4'	-6.04	102.43	111.50
34	BO	87	ILE	CB-CA-C	-6.04	102.70	110.98
21	AA	1140	C	O4'-C1'-N1	6.04	117.56	108.50
25	AZ	320	THR	CA-C-O	-6.04	113.75	119.55
27	B5	92	ALA	N-CA-CB	6.04	120.70	110.49
57	BB	443	A	P-O5'-C5'	6.04	129.97	120.90
1	AJ	45	ARG	N-CA-C	-6.04	98.68	108.41
3	AL	47	ALA	O-C-N	6.04	129.99	122.86
21	AA	969	A	P-O5'-C5'	6.04	129.96	120.90
41	BV	84	PRO	N-CA-C	-6.04	100.03	112.47
45	BC	168	GLY	CA-C-O	6.04	125.72	119.01
55	BG	40	VAL	N-CA-C	-6.04	99.17	107.75
57	BB	262	A	O4'-C1'-N9	6.04	117.56	108.50
57	BB	2244	U	O4'-C1'-C2'	-6.04	101.56	107.60
8	AQ	39	ARG	CA-C-N	6.04	130.42	120.94
8	AQ	39	ARG	C-N-CA	6.04	130.42	120.94
6	AO	80	LEU	CA-C-N	6.04	128.25	120.70
6	AO	80	LEU	C-N-CA	6.04	128.25	120.70
12	AU	22	CYS	CA-C-N	6.04	131.77	121.87
12	AU	22	CYS	C-N-CA	6.04	131.77	121.87
21	AA	616	G	O4'-C1'-C2'	-6.04	101.56	107.60
21	AA	1162	C	C5'-C4'-C3'	-6.04	106.94	116.00
56	BH	65	ALA	N-CA-C	6.04	118.36	111.11
57	BB	1143	A	O4'-C1'-C2'	6.04	111.84	105.80
57	BB	1784	A	C3'-C2'-C1'	6.04	107.54	101.50
5	AN	31	SER	O-C-N	-6.04	114.56	122.59
17	AF	82	ASP	N-CA-C	-6.04	105.21	113.30
21	AA	519	C	O4'-C1'-N1	6.04	117.56	108.50
57	BB	1701	A	O4'-C1'-N9	6.04	117.56	108.50
57	BB	2589	A	O4'-C1'-N9	6.04	117.56	108.50
21	AA	1276	G	O4'-C4'-C3'	-6.04	97.96	104.00
22	AY	10	G	O4'-C1'-C2'	-6.04	101.56	107.60
22	AY	41	U	O4'-C1'-N1	6.04	117.55	108.50
36	BQ	15	LYS	N-CA-CB	6.04	118.99	110.12
38	BS	8	ARG	N-CA-CB	6.04	120.31	110.17
54	BF	140	ILE	CA-CB-CG1	6.04	120.66	110.40
57	BB	1484	U	O4'-C1'-N1	6.04	117.55	108.50
57	BB	1703	G	O5'-C5'-C4'	-6.04	102.45	111.50
18	AG	128	GLU	CA-C-N	6.03	133.06	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	AG	128	GLU	C-N-CA	6.03	133.06	121.54
23	AW	67	C	O4'-C1'-N1	6.03	117.55	108.50
29	BJ	102	GLU	N-CA-C	-6.03	104.27	111.69
29	BJ	113	PRO	CA-C-O	-6.03	110.99	119.74
30	BK	102	VAL	CB-CA-C	-6.03	103.50	111.70
35	BP	8	GLU	CA-C-N	6.03	129.19	120.38
35	BP	8	GLU	C-N-CA	6.03	129.19	120.38
45	BC	41	GLY	N-CA-C	-6.03	106.76	115.27
53	BE	19	PHE	CA-CB-CG	-6.03	107.77	113.80
57	BB	190	A	O4'-C1'-N9	6.03	117.55	108.50
57	BB	964	C	O5'-C5'-C4'	-6.03	102.45	111.50
25	AZ	142	ASP	CA-CB-CG	-6.03	106.57	112.60
45	BC	69	ASN	CA-C-O	-6.03	114.70	121.40
57	BB	240	C	O4'-C1'-N1	6.03	117.55	108.50
4	AM	46	GLU	N-CA-CB	6.03	120.93	110.98
16	AE	69	ASN	CA-CB-CG	-6.03	106.57	112.60
57	BB	78	U	C1'-O4'-C4'	-6.03	103.87	109.90
57	BB	247	G	P-O5'-C5'	-6.03	111.85	120.90
57	BB	1894	C	O3'-P-O5'	-6.03	94.96	104.00
57	BB	2786	U	O4'-C1'-C2'	-6.03	101.57	107.60
21	AA	833	G	O5'-C5'-C4'	-6.03	102.46	111.50
53	BE	156	ASN	CA-C-O	6.03	126.83	119.11
57	BB	645	C	O4'-C1'-N1	6.03	117.24	108.20
21	AA	1250	A	C4'-C3'-C2'	-6.03	96.57	102.60
58	BA	38	C	C4'-C3'-O3'	-6.03	103.96	113.00
58	BA	78	A	C5'-C4'-O4'	6.03	118.84	109.80
27	B5	103	GLN	N-CA-C	6.03	118.62	111.33
33	BN	35	LYS	N-CA-C	-6.03	98.46	108.34
45	BC	14	HIS	CE1-NE2-CD2	-6.03	102.97	109.00
46	BZ	54	VAL	O-C-N	6.03	129.71	123.20
57	BB	75	G	C5'-C4'-C3'	-6.03	106.96	116.00
26	AV	62	C	O4'-C1'-N1	6.02	117.54	108.50
39	BT	91	GLN	CB-CG-CD	-6.02	102.36	112.60
45	BC	144	GLU	CA-C-O	6.02	128.05	121.06
52	BD	43	ASP	CA-CB-CG	-6.02	106.58	112.60
21	AA	1067	A	P-O5'-C5'	6.02	129.93	120.90
23	AW	31	A	O5'-C5'-C4'	-6.02	102.47	111.50
36	BQ	10	ARG	N-CA-C	-6.02	105.58	113.17
43	BX	47	THR	CA-C-O	6.02	127.63	120.70
57	BB	895	U	O3'-P-O5'	-6.02	94.97	104.00
57	BB	2161	C	O4'-C1'-N1	6.02	117.53	108.50
58	BA	42	C	P-O3'-C3'	6.02	129.23	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	63	C	O4'-C4'-C3'	6.02	110.02	104.00
26	AV	5	G	P-O5'-C5'	-6.02	111.87	120.90
21	AA	1100	C	C5'-C4'-O4'	-6.02	100.77	109.80
23	AW	34	G	P-O3'-C3'	-6.02	111.17	120.20
45	BC	113	ASP	CB-CA-C	-6.02	98.47	109.54
57	BB	531	C	O4'-C1'-N1	6.02	117.23	108.20
57	BB	1545	A	O4'-C1'-C2'	-6.02	101.58	107.60
5	AN	68	ARG	NE-CZ-NH1	-6.02	115.48	121.50
22	AY	4	G	C1'-O4'-C4'	-6.02	103.88	109.90
36	BQ	8	ILE	CB-CA-C	6.02	121.16	111.29
57	BB	1142	A	O4'-C4'-C3'	-6.02	100.08	106.10
42	BW	76	ARG	O-C-N	-6.02	115.99	122.85
16	AE	28	ARG	N-CA-C	-6.01	106.48	113.88
28	BI	47	SER	N-CA-C	-6.01	105.76	114.12
41	BV	10	LYS	N-CA-C	-6.01	104.06	113.02
57	BB	571	U	O3'-P-O5'	-6.01	94.98	104.00
57	BB	1562	U	P-O5'-C5'	6.01	129.92	120.90
57	BB	2262	U	O4'-C4'-C3'	-6.01	97.99	104.00
21	AA	540	G	C5'-C4'-C3'	6.01	125.02	116.00
21	AA	580	C	O4'-C4'-C3'	-6.01	97.99	104.00
22	AY	39	U	C5'-C4'-C3'	-6.01	106.98	116.00
28	BI	66	PHE	N-CA-CB	6.01	120.88	111.56
53	BE	3	LEU	N-CA-C	-6.01	98.05	108.69
57	BB	130	C	O4'-C1'-N1	6.01	117.52	108.50
57	BB	407	G	O4'-C1'-N9	6.01	117.52	108.50
57	BB	1032	A	P-O5'-C5'	-6.01	111.88	120.90
57	BB	2547	A	P-O5'-C5'	-6.01	111.88	120.90
14	AC	79	LYS	N-CA-C	6.01	118.60	111.33
21	AA	203	G	P-O3'-C3'	-6.01	111.19	120.20
57	BB	532	A	P-O5'-C5'	6.01	129.91	120.90
57	BB	2661	G	P-O5'-C5'	-6.01	111.89	120.90
28	BI	41	PHE	CA-C-N	6.01	130.21	120.60
28	BI	41	PHE	C-N-CA	6.01	130.21	120.60
53	BE	29	HIS	ND1-CE1-NE2	6.01	114.41	108.40
57	BB	2459	A	O4'-C1'-C2'	-6.01	101.59	107.60
21	AA	1093	A	C5'-C4'-C3'	6.01	125.01	116.00
22	AY	60	C	P-O5'-C5'	6.01	129.91	120.90
26	AV	75	C	C3'-C2'-C1'	6.01	107.31	101.30
57	BB	961	C	O4'-C4'-C3'	-6.01	100.09	106.10
21	AA	1234	C	O4'-C1'-N1	6.00	117.51	108.50
45	BC	24	HIS	CG-CD2-NE2	6.00	113.20	107.20
57	BB	908	C	O4'-C1'-N1	6.00	117.51	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AM	89	ARG	N-CA-C	6.00	119.43	111.75
21	AA	637	C	P-O5'-C5'	6.00	129.91	120.90
21	AA	1329	A	O4'-C1'-N9	6.00	117.50	108.50
21	AA	1394	A	N9-C1'-C2'	-6.00	105.00	114.00
45	BC	115	ILE	CA-C-O	6.00	127.69	120.67
57	BB	1042	G	C1'-O4'-C4'	-6.00	103.90	109.90
57	BB	2198	A	O4'-C1'-C2'	-6.00	99.80	105.80
57	BB	2789	C	O4'-C1'-N1	6.00	117.50	108.50
9	AR	48	ALA	O-C-N	6.00	128.33	122.09
16	AE	37	VAL	CB-CA-C	-6.00	101.69	110.81
21	AA	806	C	O4'-C1'-N1	6.00	117.50	108.50
57	BB	1651	G	P-O3'-C3'	6.00	129.20	120.20
57	BB	2343	U	C4'-C3'-O3'	-6.00	104.00	113.00
3	AL	95	HIS	CG-CD2-NE2	6.00	113.20	107.20
56	BH	128	HIS	CA-C-O	-6.00	115.03	121.45
57	BB	2174	C	P-O5'-C5'	-6.00	111.90	120.90
13	AB	17	HIS	N-CA-CB	6.00	121.89	111.39
15	AD	51	GLY	CA-C-N	6.00	128.62	120.77
15	AD	51	GLY	C-N-CA	6.00	128.62	120.77
21	AA	353	A	C5'-C4'-C3'	6.00	124.99	116.00
27	B5	16	ASP	N-CA-CB	6.00	120.67	111.56
42	BW	51	GLY	CA-C-N	6.00	132.99	121.54
42	BW	51	GLY	C-N-CA	6.00	132.99	121.54
57	BB	955	U	P-O3'-C3'	-6.00	111.20	120.20
21	AA	684	U	O4'-C1'-N1	6.00	117.49	108.50
21	AA	908	A	O4'-C1'-C2'	-6.00	101.61	107.60
55	BG	102	ILE	N-CA-CB	6.00	120.86	111.99
57	BB	1509	A	P-O5'-C5'	-6.00	111.91	120.90
57	BB	1895	C	O4'-C1'-N1	6.00	117.49	108.50
21	AA	532	A	C4'-C3'-C2'	5.99	108.59	102.60
57	BB	333	G	O4'-C4'-C3'	-5.99	98.01	104.00
57	BB	2268	A	C5'-C4'-C3'	-5.99	107.01	116.00
57	BB	148	U	O4'-C1'-N1	5.99	117.49	108.50
21	AA	849	G	C4'-C3'-O3'	-5.99	104.02	113.00
57	BB	1850	G	P-O5'-C5'	5.99	129.89	120.90
57	BB	2429	G	C4'-C3'-C2'	5.99	108.59	102.60
16	AE	106	ALA	N-CA-CB	5.99	120.61	110.49
21	AA	941	G	O4'-C4'-C3'	-5.99	98.01	104.00
21	AA	1036	A	C4'-C3'-C2'	-5.99	96.61	102.60
23	AW	27	G	P-O5'-C5'	-5.99	111.92	120.90
27	B5	144	THR	CA-C-N	5.99	132.07	123.27
27	B5	144	THR	C-N-CA	5.99	132.07	123.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BT	30	ILE	N-CA-C	-5.99	99.54	108.46
47	B0	12	ARG	NE-CZ-NH2	-5.99	113.81	119.20
57	BB	1229	C	O4'-C1'-N1	5.99	117.48	108.50
57	BB	1567	G	O4'-C1'-C2'	-5.99	99.81	105.80
57	BB	2693	G	O5'-C5'-C4'	-5.99	102.52	111.50
57	BB	1425	G	O4'-C1'-N9	5.99	117.48	108.50
58	BA	118	C	O4'-C4'-C3'	-5.99	98.01	104.00
16	AE	144	GLU	O-C-N	-5.99	114.47	122.49
21	AA	456	A	C5'-C4'-C3'	-5.99	107.02	116.00
39	BT	26	LYS	N-CA-C	-5.99	104.88	111.82
57	BB	2492	U	P-O3'-C3'	-5.98	111.22	120.20
21	AA	1308	U	O4'-C1'-N1	5.98	117.47	108.50
22	AY	31	A	C4'-C3'-C2'	-5.98	96.62	102.60
57	BB	2574	G	O4'-C4'-C3'	5.98	109.98	104.00
21	AA	1018	G	P-O5'-C5'	5.98	129.87	120.90
26	AV	7	G	P-O3'-C3'	5.98	129.17	120.20
53	BE	91	ASP	N-CA-C	-5.98	97.97	108.20
57	BB	1419	A	C1'-O4'-C4'	5.98	115.88	109.90
18	AG	83	THR	N-CA-C	-5.98	102.48	110.55
21	AA	418	C	C4'-C3'-O3'	-5.98	104.03	113.00
56	BH	128	HIS	CG-CD2-NE2	5.98	113.18	107.20
57	BB	1076	C	C4'-C3'-C2'	-5.98	96.62	102.60
57	BB	2023	C	O5'-C5'-C4'	-5.98	102.53	111.50
21	AA	392	C	P-O5'-C5'	5.98	129.87	120.90
49	B2	19	ARG	NH1-CZ-NH2	-5.98	111.53	119.30
54	BF	124	ARG	N-CA-C	-5.98	103.44	111.87
55	BG	61	TRP	CB-CA-C	-5.98	103.85	111.86
57	BB	111	A	O5'-C5'-C4'	-5.98	102.53	111.50
2	AK	126	ARG	N-CA-CB	5.98	118.75	109.97
21	AA	114	U	C4'-C3'-O3'	-5.98	104.04	113.00
35	BP	89	GLY	N-CA-C	-5.98	99.02	113.18
36	BQ	96	ASP	CA-C-O	5.98	127.51	120.70
14	AC	155	ARG	CA-C-N	5.97	129.19	120.71
14	AC	155	ARG	C-N-CA	5.97	129.19	120.71
20	AI	28	VAL	N-CA-C	-5.97	99.03	107.75
21	AA	731	G	C1'-O4'-C4'	5.97	115.87	109.90
25	AZ	66	HIS	CB-CG-CD2	5.97	138.97	131.20
45	BC	268	ARG	CA-C-N	5.97	129.19	120.71
45	BC	268	ARG	C-N-CA	5.97	129.19	120.71
57	BB	936	A	C4'-C3'-C2'	-5.97	96.63	102.60
57	BB	1753	G	O4'-C1'-N9	5.97	117.46	108.50
57	BB	2636	C	C3'-C2'-C1'	5.97	107.28	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AN	86	ALA	CA-C-N	5.97	128.56	120.38
5	AN	86	ALA	C-N-CA	5.97	128.56	120.38
16	AE	43	GLY	N-CA-C	-5.97	104.18	112.18
21	AA	501	C	O5'-C5'-C4'	-5.97	102.54	111.50
32	BM	16	ARG	CA-C-O	-5.97	112.72	120.25
36	BQ	19	GLN	CB-CA-C	-5.97	100.08	110.17
57	BB	760	G	C4'-C3'-C2'	-5.97	96.63	102.60
57	BB	257	C	C4'-C3'-C2'	-5.97	96.63	102.60
20	AI	19	PHE	N-CA-C	-5.97	98.68	108.41
21	AA	1048	G	P-O3'-C3'	-5.97	111.25	120.20
21	AA	1256	A	O4'-C1'-C2'	-5.97	101.63	107.60
21	AA	1374	A	C4'-C3'-C2'	-5.97	96.63	102.60
29	BJ	64	VAL	O-C-N	-5.97	115.11	122.57
57	BB	411	G	P-O5'-C5'	5.97	129.85	120.90
57	BB	2063	C	P-O3'-C3'	-5.97	111.24	120.20
57	BB	2110	G	C4'-C3'-O3'	5.97	118.35	109.40
25	AZ	279	ARG	NE-CZ-NH2	5.97	124.57	119.20
12	AU	36	PHE	CA-C-O	5.97	127.66	121.10
15	AD	158	LEU	CA-C-N	5.97	129.08	120.79
15	AD	158	LEU	C-N-CA	5.97	129.08	120.79
21	AA	1037	C	P-O5'-C5'	-5.97	111.95	120.90
41	BV	40	ILE	CB-CA-C	-5.97	103.02	111.19
52	BD	123	LYS	CA-C-O	-5.97	113.31	119.51
57	BB	1024	G	C4'-C3'-O3'	-5.97	104.05	113.00
57	BB	2422	C	P-O5'-C5'	-5.97	111.95	120.90
21	AA	328	C	O3'-P-O5'	5.96	112.95	104.00
21	AA	978	A	C1'-O4'-C4'	5.96	115.86	109.90
21	AA	1339	A	C4'-C3'-C2'	-5.96	96.64	102.60
21	AA	1391	U	O4'-C1'-N1	5.96	117.45	108.50
22	AY	6	U	C4'-C3'-C2'	-5.96	96.64	102.60
22	AY	74	C	P-O5'-C5'	5.96	129.85	120.90
32	BM	97	GLN	CA-C-N	5.96	126.30	119.92
32	BM	97	GLN	C-N-CA	5.96	126.30	119.92
57	BB	2070	A	O4'-C4'-C3'	-5.96	98.03	104.00
1	AJ	26	VAL	N-CA-C	-5.96	104.70	110.72
21	AA	1417	G	P-O5'-C5'	5.96	129.84	120.90
5	AN	92	ILE	CB-CA-C	-5.96	104.35	110.13
21	AA	87	C	O4'-C4'-C3'	-5.96	98.04	104.00
45	BC	96	LYS	N-CA-C	-5.96	103.14	110.65
33	BN	118	ARG	N-CA-C	-5.96	98.11	110.80
44	BY	57	LEU	N-CA-C	-5.96	106.62	114.31
57	BB	390	U	O4'-C1'-C2'	5.96	111.76	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AK	77	GLY	O-C-N	5.96	130.44	122.70
29	BJ	80	HIS	ND1-CE1-NE2	5.96	114.36	108.40
43	BX	66	VAL	CA-C-N	5.96	130.67	120.72
43	BX	66	VAL	C-N-CA	5.96	130.67	120.72
57	BB	997	G	O4'-C1'-N9	5.96	117.44	108.50
57	BB	2041	U	O4'-C1'-N1	5.96	117.44	108.50
14	AC	114	LEU	CA-C-O	-5.96	114.24	120.55
18	AG	108	ARG	NE-CZ-NH1	-5.96	115.54	121.50
21	AA	1297	G	O4'-C4'-C3'	-5.96	100.14	106.10
48	B1	19	PHE	CA-CB-CG	-5.96	107.84	113.80
48	B1	25	ASN	N-CA-CB	-5.96	101.59	110.17
57	BB	2107	G	O3'-P-O5'	-5.96	95.06	104.00
18	AG	20	GLU	CA-C-N	5.96	128.54	120.44
18	AG	20	GLU	C-N-CA	5.96	128.54	120.44
21	AA	1474	U	O4'-C1'-N1	5.96	117.43	108.50
37	BR	22	LEU	CA-C-N	5.96	129.56	121.05
37	BR	22	LEU	C-N-CA	5.96	129.56	121.05
42	BW	40	ARG	NE-CZ-NH1	-5.96	115.55	121.50
7	AP	41	PRO	N-CA-C	-5.95	104.63	114.75
21	AA	980	C	C2'-C3'-O3'	5.95	122.63	113.70
21	AA	1080	A	C4'-C3'-O3'	-5.95	104.07	113.00
21	AA	1206	G	C1'-C2'-O2'	5.95	117.33	108.40
49	B2	3	ARG	O-C-N	5.95	128.61	121.76
57	BB	1210	G	C2'-C3'-O3'	5.95	118.43	109.50
21	AA	800	G	C1'-O4'-C4'	5.95	115.85	109.90
27	B5	161	VAL	CA-C-O	-5.95	114.20	120.39
42	BW	75	ASN	N-CA-CB	5.95	120.55	110.49
50	B3	47	ALA	CA-C-N	5.95	130.28	120.94
50	B3	47	ALA	C-N-CA	5.95	130.28	120.94
10	AS	42	ASN	CA-CB-CG	5.95	118.55	112.60
15	AD	54	LEU	N-CA-C	-5.95	104.77	112.68
26	AV	65	C	O4'-C1'-N1	5.95	117.43	108.50
54	BF	142	TYR	CA-C-O	5.95	126.73	119.11
57	BB	1847	A	C1'-O4'-C4'	-5.95	103.95	109.90
57	BB	2894	G	C3'-C2'-C1'	5.95	107.45	101.50
11	AT	84	LYS	CA-C-N	5.95	130.79	120.68
11	AT	84	LYS	C-N-CA	5.95	130.79	120.68
25	AZ	54	GLU	CB-CA-C	-5.95	100.92	110.79
56	BH	146	VAL	CA-CB-CG1	-5.95	100.29	110.40
57	BB	2235	G	C4'-C3'-C2'	-5.95	96.65	102.60
25	AZ	148	LEU	N-CA-CB	5.95	118.63	110.01
52	BD	49	GLN	CA-C-N	-5.95	111.27	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	BD	49	GLN	C-N-CA	-5.95	111.27	121.97
58	BA	56	G	C1'-C2'-O2'	5.95	120.72	111.80
10	AS	4	LEU	N-CA-C	5.95	120.27	113.19
23	AW	61	C	P-O3'-C3'	5.95	129.12	120.20
46	BZ	28	LEU	N-CA-C	-5.95	101.48	110.28
57	BB	1661	G	P-O5'-C5'	5.95	129.82	120.90
21	AA	1126	U	C2'-C3'-O3'	5.94	118.42	109.50
27	B5	131	LEU	N-CA-C	-5.94	103.80	113.19
31	BL	7	SER	CA-C-N	5.94	126.28	119.92
31	BL	7	SER	C-N-CA	5.94	126.28	119.92
15	AD	107	GLY	CA-C-N	5.94	132.12	121.66
15	AD	107	GLY	C-N-CA	5.94	132.12	121.66
21	AA	398	U	O4'-C1'-N1	5.94	117.41	108.50
57	BB	584	C	P-O5'-C5'	-5.94	111.98	120.90
57	BB	1118	C	P-O3'-C3'	-5.94	111.29	120.20
57	BB	1188	U	O4'-C1'-N1	5.94	117.42	108.50
57	BB	2796	U	O4'-C4'-C3'	-5.94	98.06	104.00
22	AY	60	C	P-O3'-C3'	-5.94	111.29	120.20
52	BD	42	ASN	CA-C-N	5.94	134.77	121.76
52	BD	42	ASN	C-N-CA	5.94	134.77	121.76
57	BB	900	A	C4'-C3'-C2'	-5.94	96.66	102.60
21	AA	486	U	O4'-C4'-C3'	-5.94	98.06	104.00
21	AA	807	A	C1'-O4'-C4'	-5.94	103.96	109.90
28	BI	72	THR	CA-C-N	5.94	126.50	120.38
28	BI	72	THR	C-N-CA	5.94	126.50	120.38
37	BR	95	ASP	CA-CB-CG	5.94	118.54	112.60
45	BC	142	ASN	N-CA-C	-5.94	98.15	110.80
54	BF	73	VAL	N-CA-C	-5.94	99.93	108.42
57	BB	878	A	O4'-C4'-C3'	-5.94	98.06	104.00
21	AA	1413	A	C4'-C3'-C2'	-5.94	96.66	102.60
27	B5	80	GLN	O-C-N	-5.94	115.97	122.92
57	BB	20	C	C4'-C3'-C2'	-5.94	96.66	102.60
21	AA	190	A	C5'-C4'-C3'	-5.93	107.10	116.00
21	AA	531	U	C5'-C4'-C3'	5.93	124.10	115.20
45	BC	14	HIS	CB-CG-CD2	-5.93	123.48	131.20
52	BD	55	LYS	CA-C-N	5.93	128.72	120.29
52	BD	55	LYS	C-N-CA	5.93	128.72	120.29
57	BB	57	C	O4'-C1'-N1	5.93	117.40	108.50
57	BB	248	G	O4'-C4'-C3'	-5.93	98.06	104.00
57	BB	913	U	O4'-C4'-C3'	-5.93	100.17	106.10
19	AH	76	ARG	CA-C-O	5.93	126.81	120.46
21	AA	574	A	O5'-C5'-C4'	-5.93	102.60	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	821	G	C4'-C3'-O3'	-5.93	104.10	113.00
33	BN	90	ARG	N-CA-C	-5.93	100.37	108.38
31	BL	69	ARG	CA-C-N	5.93	132.87	121.54
31	BL	69	ARG	C-N-CA	5.93	132.87	121.54
33	BN	111	ALA	CB-CA-C	-5.93	98.56	110.30
6	AO	79	ARG	NE-CZ-NH2	5.93	124.54	119.20
16	AE	38	VAL	O-C-N	-5.93	116.75	123.10
21	AA	1276	G	C4'-C3'-O3'	-5.93	104.11	113.00
38	BS	8	ARG	CB-CA-C	-5.93	100.32	110.22
38	BS	26	GLY	N-CA-C	-5.93	107.63	114.69
49	B2	24	THR	CA-C-N	5.93	129.04	120.38
49	B2	24	THR	C-N-CA	5.93	129.04	120.38
15	AD	10	LEU	CB-CA-C	-5.93	100.95	110.79
50	B3	25	HIS	CG-CD2-NE2	5.93	113.13	107.20
57	BB	1475	G	C4'-C3'-O3'	5.93	118.29	109.40
15	AD	88	ASN	CA-CB-CG	-5.93	106.67	112.60
21	AA	650	G	C4'-C3'-O3'	-5.93	104.11	113.00
45	BC	262	THR	CA-C-N	5.93	130.08	120.60
45	BC	262	THR	C-N-CA	5.93	130.08	120.60
57	BB	1225	G	P-O5'-C5'	-5.93	112.01	120.90
57	BB	2673	G	O5'-C5'-C4'	-5.93	102.61	111.50
58	BA	112	G	C4'-C3'-C2'	-5.93	96.67	102.60
21	AA	585	G	C1'-O4'-C4'	5.92	115.83	109.90
21	AA	721	G	P-O5'-C5'	5.92	129.79	120.90
21	AA	731	G	O4'-C4'-C3'	-5.92	98.08	104.00
55	BG	59	ASP	O-C-N	5.92	129.30	122.25
57	BB	61	C	C4'-C3'-O3'	-5.92	104.11	113.00
57	BB	2141	G	C1'-O4'-C4'	-5.92	103.97	109.90
21	AA	709	U	O4'-C1'-N1	5.92	117.39	108.50
21	AA	1363	A	O4'-C4'-C3'	-5.92	100.18	106.10
42	BW	40	ARG	NE-CZ-NH2	5.92	124.53	119.20
57	BB	1450	G	P-O3'-C3'	5.92	129.08	120.20
57	BB	2145	C	O4'-C4'-C3'	-5.92	98.08	104.00
15	AD	11	SER	N-CA-CB	5.92	118.76	109.94
15	AD	52	VAL	N-CA-CB	5.92	116.84	110.62
30	BK	109	GLU	CA-C-N	5.92	128.14	120.44
30	BK	109	GLU	C-N-CA	5.92	128.14	120.44
32	BM	21	ALA	CA-C-N	5.92	129.12	120.71
32	BM	21	ALA	C-N-CA	5.92	129.12	120.71
47	B0	55	ALA	CA-C-O	5.92	127.51	120.70
57	BB	2055	C	O4'-C1'-N1	5.92	117.38	108.50
7	AP	66	THR	O-C-N	-5.92	116.43	123.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	58	C	C3'-C2'-O2'	5.92	119.58	110.70
21	AA	1448	C	C3'-C2'-O2'	5.92	119.58	110.70
21	AA	1473	G	C4'-C3'-O3'	-5.92	104.12	113.00
30	BK	112	MET	CG-SD-CE	-5.92	87.88	100.90
33	BN	28	LEU	N-CA-CB	5.92	119.91	110.73
42	BW	42	THR	CA-C-N	5.92	131.35	123.00
42	BW	42	THR	C-N-CA	5.92	131.35	123.00
57	BB	811	U	O4'-C1'-C2'	-5.92	99.88	105.80
57	BB	1943	U	C4'-C3'-O3'	5.92	118.28	109.40
57	BB	2193	G	C5'-C4'-C3'	-5.92	107.12	116.00
57	BB	607	U	O4'-C1'-N1	5.92	117.38	108.50
57	BB	992	C	O4'-C1'-N1	5.92	117.38	108.50
57	BB	1564	C	O4'-C1'-N1	5.92	117.38	108.50
57	BB	2167	U	P-O3'-C3'	5.92	129.08	120.20
57	BB	2704	C	C4'-C3'-C2'	-5.92	96.68	102.60
25	AZ	266	ASP	N-CA-C	-5.92	104.72	112.41
41	BV	92	VAL	N-CA-CB	5.92	118.92	111.46
57	BB	430	A	O5'-C5'-C4'	-5.92	102.62	111.50
3	AL	101	LEU	CA-C-N	5.92	128.13	120.44
3	AL	101	LEU	C-N-CA	5.92	128.13	120.44
30	BK	110	LYS	CA-C-O	-5.92	114.61	120.82
57	BB	126	A	C4'-C3'-C2'	-5.92	96.69	102.60
57	BB	673	C	O5'-C5'-C4'	-5.92	102.63	111.50
57	BB	2857	G	O5'-C5'-C4'	-5.92	102.63	111.50
14	AC	72	PRO	N-CA-C	-5.91	107.11	114.68
57	BB	2259	U	P-O3'-C3'	-5.91	111.33	120.20
6	AO	27	GLN	N-CA-C	5.91	118.23	111.02
18	AG	53	SER	CB-CA-C	-5.91	103.67	111.42
21	AA	197	A	P-O5'-C5'	-5.91	112.03	120.90
57	BB	351	C	O4'-C1'-N1	5.91	117.37	108.50
4	AM	78	ARG	NH1-CZ-NH2	5.91	126.98	119.30
20	AI	16	ALA	CA-C-O	5.91	126.51	120.24
25	AZ	90	ASN	OD1-CG-ND2	-5.91	116.69	122.60
27	B5	155	ASN	O-C-N	5.91	128.16	122.07
45	BC	102	TYR	CA-C-N	5.91	131.33	122.58
45	BC	102	TYR	C-N-CA	5.91	131.33	122.58
56	BH	100	ALA	N-CA-C	-5.91	103.47	112.99
57	BB	364	C	C5'-C4'-C3'	-5.91	107.13	116.00
57	BB	1815	A	C1'-O4'-C4'	5.91	115.61	109.70
15	AD	25	ARG	CD-NE-CZ	-5.91	116.13	124.40
21	AA	619	U	O4'-C4'-C3'	-5.91	98.09	104.00
57	BB	314	C	C4'-C3'-C2'	-5.91	96.69	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	813	U	O4'-C1'-N1	5.91	117.36	108.50
57	BB	1308	A	P-O5'-C5'	5.91	129.76	120.90
57	BB	2197	U	C2'-C3'-O3'	5.91	118.36	109.50
57	BB	2883	A	O3'-P-O5'	-5.91	95.14	104.00
16	AE	122	VAL	N-CA-C	-5.91	99.73	107.88
21	AA	1395	C	C4'-C3'-C2'	-5.91	96.69	102.60
57	BB	930	G	C4'-C3'-O3'	-5.91	104.14	113.00
57	BB	2272	U	C4'-C3'-O3'	-5.91	104.14	113.00
34	BO	60	GLU	N-CA-C	-5.91	105.84	113.16
57	BB	1130	U	O4'-C4'-C3'	-5.91	100.19	106.10
21	AA	913	A	C5'-C4'-O4'	5.90	117.95	109.10
22	AY	28	C	P-O5'-C5'	5.90	129.76	120.90
25	AZ	387	VAL	N-CA-C	-5.90	99.10	108.90
26	AV	9	G	O5'-C5'-C4'	-5.90	102.84	111.70
28	BI	124	MET	CG-SD-CE	-5.90	87.91	100.90
57	BB	1337	G	O4'-C1'-C2'	-5.90	101.70	107.60
57	BB	2402	U	O4'-C1'-N1	5.90	117.36	108.50
21	AA	1438	G	C4'-C3'-O3'	-5.90	104.15	113.00
57	BB	2169	A	P-O5'-C5'	5.90	129.75	120.90
15	AD	135	GLN	CB-CG-CD	-5.90	102.57	112.60
22	AY	4	G	C1'-C2'-O2'	-5.90	99.55	108.40
28	BI	17	ALA	CB-CA-C	-5.90	101.00	110.79
57	BB	1528	A	P-O3'-C3'	-5.90	111.35	120.20
57	BB	2384	U	C5'-C4'-C3'	-5.90	106.35	115.20
15	AD	140	ASP	CA-CB-CG	-5.90	106.70	112.60
21	AA	477	C	O4'-C1'-N1	5.90	117.35	108.50
21	AA	1222	G	C1'-O4'-C4'	-5.90	104.00	109.90
22	AY	71	G	O5'-C5'-C4'	-5.90	102.65	111.50
21	AA	484	G	C2'-C3'-O3'	5.90	118.34	109.50
33	BN	8	ARG	NE-CZ-NH1	-5.90	115.60	121.50
21	AA	1026	G	P-O3'-C3'	-5.89	111.36	120.20
57	BB	982	C	P-O3'-C3'	5.89	129.04	120.20
57	BB	2311	A	C2'-C3'-O3'	5.89	118.34	109.50
5	AN	44	VAL	CA-CB-CG1	-5.89	100.38	110.40
21	AA	28	A	C4'-C3'-C2'	-5.89	96.71	102.60
21	AA	897	C	C1'-O4'-C4'	-5.89	104.01	109.90
56	BH	62	LEU	CA-C-N	5.89	128.76	120.28
56	BH	62	LEU	C-N-CA	5.89	128.76	120.28
57	BB	1366	A	O4'-C1'-N9	5.89	117.34	108.50
20	AI	28	VAL	CA-CB-CG1	-5.89	100.39	110.40
22	AY	68	U	P-O5'-C5'	-5.89	112.06	120.90
54	BF	152	ASP	CA-CB-CG	-5.89	106.71	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BH	124	THR	N-CA-C	-5.89	104.96	113.21
21	AA	856	C	O4'-C1'-N1	5.89	117.34	108.50
21	AA	1106	G	O5'-C5'-C4'	-5.89	102.67	111.50
5	AN	28	ALA	CA-C-N	5.89	128.48	120.77
5	AN	28	ALA	C-N-CA	5.89	128.48	120.77
6	AO	50	HIS	CG-CD2-NE2	5.89	113.09	107.20
30	BK	89	ASN	N-CA-C	-5.89	106.44	113.97
51	B4	33	HIS	CA-CB-CG	-5.89	107.91	113.80
57	BB	964	C	C4'-C3'-C2'	-5.89	96.71	102.60
57	BB	1560	G	C4'-C3'-O3'	-5.89	104.17	113.00
58	BA	61	G	C4'-C3'-C2'	-5.89	96.71	102.60
21	AA	880	C	P-O5'-C5'	-5.88	112.07	120.90
21	AA	1147	C	C4'-C3'-C2'	-5.88	96.72	102.60
21	AA	1250	A	O4'-C4'-C3'	5.88	109.88	104.00
22	AY	5	A	O5'-C5'-C4'	-5.88	102.67	111.50
57	BB	974	G	O5'-C5'-C4'	-5.88	102.87	111.70
57	BB	1568	G	O4'-C1'-N9	5.88	117.33	108.50
14	AC	181	ILE	CA-C-N	5.88	132.13	122.07
14	AC	181	ILE	C-N-CA	5.88	132.13	122.07
45	BC	251	THR	N-CA-C	-5.88	104.95	111.36
57	BB	1259	G	P-O3'-C3'	-5.88	111.38	120.20
21	AA	152	A	C1'-O4'-C4'	5.88	115.78	109.90
22	AY	7	U	C2'-C3'-O3'	5.88	118.32	109.50
22	AY	32	C	C4'-C3'-O3'	-5.88	104.18	113.00
29	BJ	84	ILE	CA-CB-CG2	5.88	120.49	110.50
30	BK	92	GLN	CA-C-N	5.88	126.22	119.93
30	BK	92	GLN	C-N-CA	5.88	126.22	119.93
45	BC	160	TYR	CB-CA-C	-5.88	99.36	109.65
53	BE	47	LYS	CA-C-N	5.88	132.77	121.54
53	BE	47	LYS	C-N-CA	5.88	132.77	121.54
57	BB	2254	C	C4'-C3'-O3'	-5.88	104.18	113.00
57	BB	2581	G	P-O5'-C5'	-5.88	112.08	120.90
57	BB	2801	G	O4'-C4'-C3'	-5.88	98.12	104.00
57	BB	2850	A	O4'-C1'-N9	5.88	117.32	108.50
16	AE	82	HIS	CE1-NE2-CD2	-5.88	103.12	109.00
21	AA	456	A	O4'-C1'-N9	5.88	117.31	108.50
21	AA	968	A	C4'-C3'-O3'	5.88	118.22	109.40
21	AA	1279	G	C4'-C3'-C2'	5.88	108.48	102.60
21	AA	1288	A	O4'-C1'-N9	5.88	117.32	108.50
31	BL	113	ALA	N-CA-C	-5.88	105.46	114.16
55	BG	119	GLY	N-CA-C	-5.88	107.55	115.36
57	BB	614	A	C1'-O4'-C4'	5.88	115.78	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	AO	59	VAL	N-CA-CB	5.88	117.02	110.62
13	AB	51	GLU	N-CA-CB	5.87	118.85	110.16
14	AC	46	LEU	N-CA-C	-5.87	102.90	111.30
25	AZ	118	HIS	CA-C-N	5.87	127.96	120.56
25	AZ	118	HIS	C-N-CA	5.87	127.96	120.56
52	BD	54	ALA	CA-C-N	5.87	131.99	122.53
52	BD	54	ALA	C-N-CA	5.87	131.99	122.53
57	BB	213	A	C4'-C3'-C2'	-5.87	96.73	102.60
57	BB	1627	G	P-O3'-C3'	-5.87	111.39	120.20
13	AB	93	HIS	CE1-NE2-CD2	-5.87	103.13	109.00
26	AV	69	C	O4'-C1'-N1	5.87	117.31	108.50
30	BK	92	GLN	N-CA-CB	5.87	120.82	110.37
53	BE	80	SER	N-CA-C	-5.87	100.77	109.11
57	BB	1338	G	O4'-C1'-N9	5.87	117.31	108.50
30	BK	88	ASN	N-CA-C	-5.87	106.09	113.72
40	BU	48	VAL	N-CA-C	-5.87	102.38	109.01
57	BB	1855	U	C5'-C4'-C3'	-5.87	107.19	116.00
4	AM	98	GLY	CA-C-O	-5.87	116.25	121.41
13	AB	39	ILE	N-CA-C	-5.87	99.04	107.78
25	AZ	361	THR	N-CA-C	-5.87	96.11	107.44
46	BZ	32	GLY	N-CA-C	-5.87	99.27	113.18
49	B2	33	ARG	CG-CD-NE	-5.87	99.09	112.00
50	B3	56	LEU	CB-CA-C	-5.87	100.25	110.17
57	BB	82	U	C3'-C2'-C1'	-5.87	95.43	101.30
57	BB	938	G	O4'-C1'-C2'	-5.87	101.73	107.60
57	BB	1437	C	O4'-C1'-N1	5.87	117.30	108.50
57	BB	2552	U	C4'-C3'-O3'	-5.87	104.20	113.00
57	BB	2830	C	P-O3'-C3'	-5.87	111.40	120.20
10	AS	74	ALA	CA-C-O	-5.87	113.83	120.46
14	AC	139	ASN	CB-CG-ND2	-5.87	107.60	116.40
21	AA	119	A	C3'-C2'-O2'	-5.87	105.80	114.60
23	AW	73	A	O4'-C4'-C3'	-5.87	98.13	104.00
25	AZ	123	ARG	NE-CZ-NH2	5.87	124.48	119.20
25	AZ	331	TYR	CA-CB-CG	-5.87	103.34	113.90
27	B5	54	LYS	CB-CA-C	5.87	119.07	111.50
29	BJ	113	PRO	O-C-N	5.87	129.56	122.23
21	AA	211	G	C1'-C2'-O2'	5.87	117.20	108.40
21	AA	955	U	P-O5'-C5'	5.87	129.70	120.90
21	AA	1246	A	O4'-C1'-N9	5.87	117.30	108.50
29	BJ	131	ASN	O-C-N	-5.87	115.27	122.25
39	BT	22	THR	N-CA-CB	5.87	120.40	110.49
46	BZ	6	ILE	CB-CA-C	-5.87	102.45	110.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1844	C	P-O3'-C3'	-5.87	111.40	120.20
57	BB	2166	U	C5'-C4'-C3'	-5.87	107.20	116.00
57	BB	2626	C	O4'-C1'-N1	5.87	117.30	108.50
21	AA	761	G	O5'-C5'-C4'	-5.86	102.70	111.50
21	AA	770	C	O4'-C1'-N1	5.86	117.30	108.50
33	BN	75	ILE	CA-CB-CG1	5.86	120.37	110.40
57	BB	905	A	C4'-C3'-C2'	-5.86	96.74	102.60
20	AI	70	GLY	O-C-N	5.86	128.25	122.92
11	AT	54	GLN	N-CA-CB	5.86	119.03	110.30
15	AD	13	ARG	NE-CZ-NH2	-5.86	113.92	119.20
21	AA	50	A	O4'-C4'-C3'	-5.86	100.24	106.10
21	AA	681	A	O4'-C4'-C3'	-5.86	98.14	104.00
25	AZ	118	HIS	N-CA-CB	5.86	118.51	110.01
33	BN	67	PHE	N-CA-C	-5.86	105.45	113.30
49	B2	17	GLY	O-C-N	-5.86	112.04	122.82
52	BD	67	HIS	CG-CD2-NE2	5.86	113.06	107.20
55	BG	110	HIS	CA-C-O	5.86	125.71	119.50
57	BB	1823	G	O4'-C4'-C3'	-5.86	98.14	104.00
58	BA	9	G	C5'-C4'-O4'	5.86	118.59	109.80
25	AZ	47	ASP	CB-CA-C	-5.86	98.76	110.42
57	BB	2183	A	C4'-C3'-C2'	-5.86	96.74	102.60
10	AS	26	ASP	CA-CB-CG	5.86	118.46	112.60
21	AA	65	A	O4'-C1'-C2'	5.86	111.66	105.80
21	AA	317	U	C4'-C3'-C2'	-5.86	96.74	102.60
21	AA	1064	G	O4'-C1'-C2'	5.86	111.66	105.80
53	BE	5	LEU	CA-C-O	5.86	128.74	121.89
57	BB	992	C	C4'-C3'-C2'	-5.86	96.74	102.60
57	BB	1852	U	P-O3'-C3'	-5.86	111.41	120.20
57	BB	2187	U	C4'-C3'-O3'	-5.86	104.22	113.00
57	BB	2378	A	C5'-C4'-C3'	-5.86	107.21	116.00
13	AB	94	ARG	CA-C-N	5.86	130.13	120.94
13	AB	94	ARG	C-N-CA	5.86	130.13	120.94
21	AA	1172	C	O4'-C1'-N1	5.86	117.28	108.50
25	AZ	76	TYR	N-CA-CB	5.86	120.52	110.68
27	B5	26	ALA	CA-C-N	5.86	127.94	120.56
27	B5	26	ALA	C-N-CA	5.86	127.94	120.56
55	BG	99	GLY	O-C-N	5.86	126.89	123.08
21	AA	919	A	C5'-C4'-C3'	5.85	124.78	116.00
26	AV	67	C	O4'-C1'-N1	5.85	117.28	108.50
57	BB	1802	A	C4'-C3'-O3'	-5.85	104.22	113.00
57	BB	2772	C	O4'-C1'-N1	5.85	117.28	108.50
57	BB	2814	A	C3'-C2'-C1'	5.85	107.15	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BO	7	ARG	O-C-N	5.85	128.82	122.15
46	BZ	26	LEU	N-CA-C	-5.85	105.97	113.23
57	BB	2106	U	C4'-C3'-C2'	-5.85	96.75	102.60
21	AA	23	C	C3'-C2'-C1'	-5.85	95.45	101.30
22	AY	26	G	O4'-C4'-C3'	-5.85	98.15	104.00
47	B0	15	ARG	NE-CZ-NH2	5.85	124.47	119.20
13	AB	89	PHE	CA-CB-CG	-5.85	107.95	113.80
25	AZ	143	GLU	O-C-N	-5.85	114.81	122.59
32	BM	108	VAL	CA-C-N	5.85	126.15	119.83
32	BM	108	VAL	C-N-CA	5.85	126.15	119.83
45	BC	239	PHE	N-CA-C	-5.85	98.34	110.80
57	BB	1798	U	C4'-C3'-O3'	-5.85	104.22	113.00
57	BB	2426	A	O4'-C1'-C2'	5.85	111.65	105.80
16	AE	108	GLY	O-C-N	-5.85	117.22	122.77
21	AA	380	G	P-O3'-C3'	-5.85	111.43	120.20
31	BL	71	ALA	N-CA-C	-5.85	103.95	113.19
57	BB	1220	G	O4'-C1'-N9	5.85	117.27	108.50
57	BB	1993	U	C3'-C2'-C1'	5.85	107.15	101.30
57	BB	2053	G	P-O3'-C3'	-5.85	111.43	120.20
57	BB	2801	G	O3'-P-O5'	-5.85	95.23	104.00
14	AC	49	ALA	N-CA-C	-5.84	99.81	108.99
21	AA	592	G	O5'-C5'-C4'	-5.84	102.73	111.50
21	AA	673	A	O5'-C5'-C4'	-5.84	102.73	111.50
25	AZ	103	LEU	CA-C-N	-5.84	113.59	121.66
25	AZ	103	LEU	C-N-CA	-5.84	113.59	121.66
34	BO	52	SER	CA-C-O	-5.84	115.20	121.45
57	BB	1178	C	O4'-C1'-C2'	-5.84	101.75	107.60
57	BB	1908	C	C4'-C3'-C2'	-5.84	96.75	102.60
57	BB	2406	A	C5'-C4'-O4'	5.84	117.87	109.10
57	BB	2560	A	O4'-C1'-N9	5.84	117.27	108.50
25	AZ	50	ASP	CB-CA-C	-5.84	103.64	111.88
21	AA	533	A	C3'-C2'-C1'	-5.84	95.66	101.50
21	AA	1387	G	C4'-C3'-O3'	-5.84	104.24	113.00
27	B5	180	PHE	CA-CB-CG	5.84	119.64	113.80
30	BK	78	PHE	N-CA-CB	5.84	119.93	110.41
55	BG	98	LYS	CA-C-N	5.84	126.83	121.86
55	BG	98	LYS	C-N-CA	5.84	126.83	121.86
57	BB	944	C	P-O5'-C5'	-5.84	112.14	120.90
58	BA	15	A	P-O3'-C3'	5.84	128.96	120.20
21	AA	96	U	C4'-C3'-O3'	-5.84	104.24	113.00
41	BV	35	GLU	N-CA-C	-5.84	101.09	110.14
57	BB	644	A	O4'-C1'-C2'	-5.84	101.76	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	671	C	C5'-C4'-C3'	-5.84	107.24	116.00
57	BB	943	A	C4'-C3'-C2'	-5.84	96.76	102.60
57	BB	2774	C	C4'-C3'-O3'	-5.84	104.24	113.00
5	AN	73	LEU	CA-C-N	5.84	129.58	120.82
5	AN	73	LEU	C-N-CA	5.84	129.58	120.82
27	B5	83	ASN	CA-C-O	-5.84	112.50	119.15
33	BN	69	ARG	N-CA-C	-5.84	97.33	107.49
57	BB	955	U	O4'-C1'-N1	5.84	117.25	108.50
57	BB	2571	U	C2'-C3'-O3'	5.84	122.45	113.70
25	AZ	381	ARG	NE-CZ-NH2	5.83	124.45	119.20
37	BR	29	THR	N-CA-CB	-5.83	100.63	110.49
57	BB	1110	G	O4'-C1'-C2'	5.83	111.64	105.80
12	AU	11	PHE	CA-CB-CG	5.83	119.63	113.80
25	AZ	21	ASP	N-CA-CB	5.83	120.35	110.49
29	BJ	58	ASN	OD1-CG-ND2	5.83	128.43	122.60
31	BL	77	ILE	CA-CB-CG1	5.83	120.32	110.40
56	BH	53	GLU	CA-C-N	5.83	128.90	120.79
56	BH	53	GLU	C-N-CA	5.83	128.90	120.79
57	BB	96	C	C4'-C3'-O3'	-5.83	104.25	113.00
57	BB	496	G	C5'-C4'-C3'	-5.83	107.25	116.00
6	AO	32	THR	N-CA-C	5.83	118.11	111.11
21	AA	688	G	O5'-C5'-C4'	-5.83	102.75	111.50
23	AW	54	U	C1'-C2'-O2'	5.83	117.15	108.40
26	AV	18	G	O4'-C1'-N9	5.83	116.95	108.20
8	AQ	38	LYS	N-CA-C	-5.83	99.23	108.73
10	AS	40	PHE	CA-C-O	-5.83	115.35	120.60
14	AC	2	GLN	OE1-CD-NE2	5.83	128.43	122.60
21	AA	297	G	O4'-C1'-C2'	-5.83	101.77	107.60
31	BL	117	THR	N-CA-C	-5.83	105.94	114.39
57	BB	1227	G	O5'-C5'-C4'	-5.83	102.75	111.50
21	AA	551	U	P-O3'-C3'	-5.83	111.46	120.20
21	AA	1375	A	C1'-C2'-O2'	5.83	117.14	108.40
31	BL	9	ALA	O-C-N	-5.83	115.98	122.86
57	BB	2207	C	O4'-C1'-N1	5.83	117.24	108.50
57	BB	2603	G	P-O5'-C5'	-5.83	112.16	120.90
58	BA	71	C	C4'-C3'-O3'	-5.83	104.26	113.00
27	B5	117	SER	CA-C-O	-5.83	115.89	121.08
21	AA	191	G	C4'-C3'-O3'	-5.83	104.26	113.00
32	BM	42	THR	CA-C-N	5.83	132.66	121.54
32	BM	42	THR	C-N-CA	5.83	132.66	121.54
51	B4	24	ARG	CA-C-O	5.83	128.77	121.66
57	BB	86	G	O3'-P-O5'	-5.83	95.26	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	453	A	O4'-C1'-N9	5.83	117.24	108.50
57	BB	1215	G	C4'-C3'-O3'	-5.83	104.26	113.00
57	BB	2860	A	C1'-C2'-O2'	5.83	117.14	108.40
58	BA	115	A	C4'-C3'-C2'	-5.83	96.78	102.60
21	AA	272	C	C4'-C3'-O3'	-5.82	104.27	113.00
21	AA	540	G	O5'-C5'-C4'	-5.82	102.77	111.50
40	BU	20	LYS	N-CA-C	-5.82	100.80	110.17
57	BB	439	A	P-O3'-C3'	-5.82	111.47	120.20
58	BA	107	G	C4'-C3'-C2'	-5.82	96.78	102.60
6	AO	41	HIS	CG-CD2-NE2	5.82	113.02	107.20
19	AH	20	ASN	CA-CB-CG	-5.82	106.78	112.60
21	AA	1064	G	O3'-P-O5'	-5.82	95.27	104.00
57	BB	220	G	O3'-P-O5'	-5.82	95.27	104.00
20	AI	36	GLN	N-CA-C	-5.82	107.17	114.56
21	AA	149	A	C4'-C3'-C2'	-5.82	96.78	102.60
21	AA	877	G	O4'-C1'-N9	5.82	117.23	108.50
21	AA	893	C	C4'-C3'-O3'	-5.82	104.27	113.00
31	BL	138	ALA	N-CA-C	-5.82	105.50	113.30
43	BX	19	HIS	CA-CB-CG	-5.82	107.98	113.80
57	BB	612	G	C4'-C3'-C2'	5.82	108.42	102.60
21	AA	171	A	P-O5'-C5'	-5.82	112.17	120.90
21	AA	1004	A	N9-C1'-C2'	5.82	120.73	112.00
45	BC	6	LYS	CA-C-O	-5.82	114.28	119.75
21	AA	1326	U	O4'-C1'-N1	5.82	117.22	108.50
57	BB	2256	G	C4'-C3'-C2'	-5.82	96.78	102.60
52	BD	7	LYS	N-CA-C	-5.81	99.58	108.76
57	BB	27	G	C4'-C3'-C2'	-5.81	96.79	102.60
57	BB	1391	U	O4'-C1'-C2'	-5.81	101.79	107.60
57	BB	2463	C	P-O3'-C3'	-5.81	111.48	120.20
25	AZ	206	ILE	N-CA-C	-5.81	107.32	112.90
27	B5	203	GLN	N-CA-C	-5.81	103.64	112.99
50	B3	45	PRO	CA-C-O	-5.81	114.82	121.56
51	B4	23	ILE	CB-CA-C	5.81	119.44	111.31
57	BB	714	U	P-O3'-C3'	5.81	128.91	120.20
57	BB	1128	G	O4'-C1'-N9	5.81	116.91	108.20
57	BB	2757	A	P-O5'-C5'	-5.81	112.19	120.90
9	AR	24	ASP	N-CA-C	-5.81	97.71	107.99
16	AE	51	LYS	N-CA-CB	5.81	118.60	109.83
32	BM	44	ARG	N-CA-CB	5.81	119.24	110.30
56	BH	69	ALA	CA-C-N	5.81	129.53	120.82
56	BH	69	ALA	C-N-CA	5.81	129.53	120.82
57	BB	63	A	C1'-O4'-C4'	-5.81	104.09	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	787	C	O4'-C1'-N1	5.81	117.21	108.50
21	AA	915	A	C3'-C2'-C1'	-5.81	95.49	101.30
35	BP	112	ARG	NE-CZ-NH2	-5.81	113.97	119.20
54	BF	37	MET	CB-CA-C	-5.81	104.39	111.82
57	BB	1343	G	O4'-C1'-N9	5.81	117.21	108.50
6	AO	65	LEU	CA-C-O	5.80	126.92	120.82
27	B5	37	LYS	CB-CA-C	5.80	121.13	110.10
21	AA	971	G	C2'-C3'-O3'	5.80	118.20	109.50
21	AA	979	C	C4'-C3'-C2'	-5.80	96.80	102.60
23	AW	54	U	O4'-C1'-N1	5.80	117.20	108.50
26	AV	67	C	O4'-C1'-C2'	-5.80	101.80	107.60
57	BB	867	C	C4'-C3'-C2'	-5.80	96.80	102.60
3	AL	4	ASN	OD1-CG-ND2	5.80	128.40	122.60
7	AP	26	ASN	N-CA-C	-5.80	98.44	110.80
18	AG	19	SER	CA-C-N	5.80	128.05	120.28
18	AG	19	SER	C-N-CA	5.80	128.05	120.28
23	AW	57	G	C4'-C3'-C2'	-5.80	96.80	102.60
40	BU	34	ILE	N-CA-CB	5.80	119.18	111.64
57	BB	2499	C	C4'-C3'-C2'	5.80	108.40	102.60
57	BB	2747	G	O4'-C1'-N9	5.80	117.20	108.50
57	BB	2892	G	O3'-P-O5'	-5.80	95.30	104.00
57	BB	2892	G	C5'-C4'-C3'	5.80	124.70	116.00
7	AP	57	ILE	CA-CB-CG1	5.80	120.26	110.40
15	AD	9	LYS	CA-C-N	5.80	128.05	120.28
15	AD	9	LYS	C-N-CA	5.80	128.05	120.28
21	AA	475	C	C5'-C4'-C3'	5.80	124.70	116.00
21	AA	871	U	C2'-C3'-O3'	5.80	118.20	109.50
21	AA	1340	A	C5'-C4'-C3'	-5.80	107.30	116.00
57	BB	1120	G	O4'-C1'-N9	5.80	117.20	108.50
21	AA	1370	G	C4'-C3'-C2'	-5.80	96.80	102.60
41	BV	74	ALA	CB-CA-C	-5.80	101.86	110.67
57	BB	1036	G	C3'-C2'-O2'	5.80	119.40	110.70
58	BA	42	C	C4'-C3'-C2'	-5.80	96.80	102.60
21	AA	923	A	P-O3'-C3'	-5.80	111.50	120.20
53	BE	125	SER	N-CA-CB	5.80	120.55	111.56
57	BB	83	A	P-O5'-C5'	5.80	129.59	120.90
57	BB	563	A	O5'-C5'-C4'	-5.80	102.81	111.50
58	BA	20	G	O4'-C4'-C3'	-5.80	98.20	104.00
56	BH	111	ALA	CA-C-O	5.79	127.69	121.55
57	BB	243	U	O4'-C1'-N1	5.79	117.19	108.50
4	AM	71	GLU	O-C-N	5.79	128.77	122.11
14	AC	156	LEU	N-CA-CB	5.79	118.58	109.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1110	A	O4'-C4'-C3'	-5.79	98.21	104.00
57	BB	205	G	C2'-C3'-O3'	5.79	118.19	109.50
57	BB	2231	U	O4'-C1'-N1	5.79	117.19	108.50
57	BB	2758	A	C4'-C3'-O3'	-5.79	104.31	113.00
25	AZ	194	PHE	CA-CB-CG	-5.79	108.01	113.80
52	BD	102	ALA	CB-CA-C	-5.79	98.90	110.42
57	BB	43	G	C3'-C2'-C1'	-5.79	95.51	101.30
57	BB	1335	C	O4'-C4'-C3'	-5.79	98.21	104.00
57	BB	1462	C	O4'-C1'-N1	5.79	117.19	108.50
8	AQ	78	VAL	O-C-N	5.79	127.58	121.91
15	AD	82	LYS	CA-C-O	5.79	126.12	119.35
21	AA	638	U	P-O5'-C5'	-5.79	112.22	120.90
34	BO	15	ARG	NE-CZ-NH1	-5.79	115.71	121.50
45	BC	166	ARG	NE-CZ-NH1	-5.79	115.71	121.50
55	BG	100	ASN	CA-CB-CG	-5.79	106.81	112.60
57	BB	711	G	C4'-C3'-C2'	-5.79	96.81	102.60
57	BB	973	A	P-O5'-C5'	5.79	129.58	120.90
57	BB	2785	C	O5'-C5'-C4'	-5.79	102.82	111.50
5	AN	46	LYS	N-CA-C	5.79	119.81	112.87
13	AB	163	ILE	CB-CA-C	5.79	117.19	110.88
21	AA	252	U	C4'-C3'-C2'	-5.79	96.81	102.60
27	B5	176	GLY	CA-C-O	-5.79	115.84	121.05
37	BR	57	GLY	N-CA-C	-5.79	102.56	111.64
21	AA	167	A	C1'-O4'-C4'	-5.78	104.12	109.90
27	B5	224	VAL	CA-C-N	5.78	130.47	120.58
27	B5	224	VAL	C-N-CA	5.78	130.47	120.58
57	BB	1118	C	O4'-C4'-C3'	5.78	109.78	104.00
58	BA	94	A	P-O3'-C3'	-5.78	111.52	120.20
30	BK	2	GLN	N-CA-CB	5.78	120.26	110.49
57	BB	967	U	C4'-C3'-C2'	-5.78	96.82	102.60
57	BB	1627	G	C4'-C3'-O3'	-5.78	104.33	113.00
57	BB	2471	A	C2'-C3'-O3'	5.78	118.17	109.50
35	BP	14	GLN	OE1-CD-NE2	5.78	128.38	122.60
41	BV	62	THR	CB-CA-C	5.78	120.07	111.17
53	BE	163	ASN	N-CA-C	-5.78	105.55	113.30
57	BB	316	C	C4'-C3'-C2'	-5.78	96.82	102.60
57	BB	615	U	O4'-C1'-N1	5.78	116.87	108.20
57	BB	2780	G	C5'-C4'-O4'	-5.78	101.13	109.80
4	AM	38	ILE	CA-C-N	5.78	129.08	120.87
4	AM	38	ILE	C-N-CA	5.78	129.08	120.87
57	BB	2096	C	C4'-C3'-C2'	-5.78	96.82	102.60
6	AO	82	GLU	N-CA-C	5.78	118.32	111.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AE	88	HIS	CE1-NE2-CD2	-5.78	103.22	109.00
17	AF	93	LYS	CA-C-N	5.78	132.57	121.54
17	AF	93	LYS	C-N-CA	5.78	132.57	121.54
28	BI	86	LYS	N-CA-C	-5.78	106.09	114.12
57	BB	493	G	C1'-C2'-O2'	5.78	117.07	108.40
57	BB	1706	C	C5'-C4'-C3'	-5.78	106.53	115.20
6	AO	53	ARG	CA-C-N	5.78	126.52	119.99
6	AO	53	ARG	C-N-CA	5.78	126.52	119.99
54	BF	53	ALA	N-CA-C	-5.78	104.62	111.03
57	BB	1847	A	P-O3'-C3'	5.78	128.86	120.20
57	BB	280	U	C4'-C3'-C2'	-5.77	96.83	102.60
31	BL	19	LEU	N-CA-CB	5.77	119.19	110.42
21	AA	37	U	O4'-C1'-N1	5.77	117.16	108.50
21	AA	998	C	P-O5'-C5'	-5.77	112.24	120.90
21	AA	1391	U	C1'-O4'-C4'	5.77	115.67	109.90
3	AL	95	HIS	CE1-NE2-CD2	-5.77	103.23	109.00
19	AH	110	MET	N-CA-C	-5.77	98.51	110.80
21	AA	380	G	C4'-C3'-C2'	-5.77	96.83	102.60
21	AA	945	G	N9-C1'-C2'	5.77	120.65	112.00
25	AZ	98	MET	CA-C-N	5.77	131.30	122.24
25	AZ	98	MET	C-N-CA	5.77	131.30	122.24
53	BE	41	GLN	N-CA-CB	5.77	119.65	110.65
56	BH	96	THR	CA-CB-OG1	5.77	118.25	109.60
57	BB	545	U	P-O5'-C5'	-5.77	112.25	120.90
57	BB	1458	U	C1'-C2'-O2'	-5.77	103.14	111.80
57	BB	1505	A	C3'-C2'-C1'	-5.77	95.53	101.30
1	AJ	26	VAL	CA-C-O	5.77	126.96	120.85
21	AA	1248	A	O5'-C5'-C4'	-5.77	102.85	111.50
31	BL	35	HIS	CG-CD2-NE2	5.77	112.97	107.20
16	AE	92	ARG	CD-NE-CZ	-5.76	116.33	124.40
21	AA	924	C	O4'-C1'-N1	5.76	117.15	108.50
57	BB	23	G	O4'-C1'-N9	5.76	117.15	108.50
57	BB	2152	G	C4'-C3'-O3'	-5.76	104.35	113.00
13	AB	121	GLN	O-C-N	5.76	128.72	122.15
21	AA	411	A	O4'-C4'-C3'	-5.76	100.34	106.10
21	AA	750	C	C5'-C4'-C3'	5.76	124.64	116.00
51	B4	22	VAL	N-CA-CB	5.76	121.87	111.21
54	BF	172	PHE	CA-CB-CG	-5.76	108.04	113.80
57	BB	567	U	C4'-C3'-O3'	-5.76	104.36	113.00
57	BB	935	C	O4'-C4'-C3'	-5.76	98.24	104.00
26	AV	18	G	O5'-C5'-C4'	-5.76	103.06	111.70
28	BI	52	LEU	N-CA-C	-5.76	101.57	108.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BL	108	ALA	CB-CA-C	-5.76	100.72	109.99
57	BB	577	G	O4'-C4'-C3'	-5.76	98.24	104.00
57	BB	873	C	O5'-C5'-C4'	-5.76	102.86	111.50
57	BB	1026	G	O4'-C1'-N9	5.76	117.14	108.50
57	BB	1623	G	O4'-C1'-N9	5.76	117.14	108.50
57	BB	2236	U	O4'-C1'-N1	5.76	117.14	108.50
4	AM	13	HIS	CE1-NE2-CD2	-5.76	103.24	109.00
26	AV	19	G	C2'-C3'-O3'	5.76	118.14	109.50
32	BM	14	LYS	CA-C-N	5.76	128.99	121.85
32	BM	14	LYS	C-N-CA	5.76	128.99	121.85
57	BB	898	C	C4'-C3'-O3'	-5.76	104.36	113.00
57	BB	1634	A	P-O5'-C5'	-5.76	112.26	120.90
14	AC	68	HIS	CG-CD2-NE2	5.76	112.96	107.20
57	BB	1705	A	C1'-C2'-O2'	5.76	117.03	108.40
20	AI	66	VAL	O-C-N	5.75	129.80	122.61
21	AA	119	A	P-O5'-C5'	-5.75	112.27	120.90
57	BB	1404	C	O4'-C1'-N1	5.75	117.13	108.50
16	AE	120	HIS	CB-CG-CD2	-5.75	123.72	131.20
16	AE	137	ARG	N-CA-C	-5.75	105.59	113.30
21	AA	119	A	C4'-C3'-C2'	-5.75	96.85	102.60
21	AA	539	A	O4'-C1'-N9	5.75	117.13	108.50
33	BN	56	LYS	CA-C-O	-5.75	114.32	120.42
57	BB	901	C	O4'-C4'-C3'	5.75	109.75	104.00
57	BB	1680	U	O4'-C1'-N1	5.75	117.13	108.50
57	BB	1821	A	P-O3'-C3'	-5.75	111.57	120.20
21	AA	1069	C	O4'-C1'-N1	5.75	117.13	108.50
28	BI	26	ALA	N-CA-CB	5.75	119.50	109.72
29	BJ	93	ILE	N-CA-C	-5.75	107.14	112.43
41	BV	74	ALA	N-CA-CB	5.75	119.03	109.60
52	BD	173	GLN	OE1-CD-NE2	5.75	128.35	122.60
57	BB	797	G	O4'-C1'-N9	5.75	117.13	108.50
57	BB	1109	C	O4'-C1'-N1	5.75	117.13	108.50
57	BB	1579	A	C1'-O4'-C4'	-5.75	104.15	109.90
13	AB	107	ARG	CA-C-N	5.75	128.56	120.28
13	AB	107	ARG	C-N-CA	5.75	128.56	120.28
13	AB	138	ARG	O-C-N	5.75	127.99	122.07
19	AH	60	LEU	N-CA-CB	5.75	119.80	110.43
21	AA	418	C	P-O5'-C5'	-5.75	112.28	120.90
21	AA	1363	A	C5'-C4'-O4'	5.75	117.73	109.10
23	AW	54	U	C4'-C3'-C2'	-5.75	96.85	102.60
38	BS	22	ASP	N-CA-C	5.75	118.32	111.71
39	BT	8	LEU	CA-C-O	5.75	125.61	119.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	BS	75	PHE	CA-C-O	-5.75	112.29	120.51
54	BF	169	LEU	N-CA-C	-5.75	105.93	113.17
55	BG	43	LYS	N-CA-CB	5.75	119.67	111.05
57	BB	351	C	C4'-C3'-O3'	-5.75	104.38	113.00
57	BB	1374	G	P-O5'-C5'	5.75	129.52	120.90
11	AT	69	ASN	N-CA-C	-5.75	105.93	113.17
21	AA	1529	G	C5'-C4'-C3'	5.75	123.82	115.20
22	AY	12	U	O4'-C1'-N1	5.75	117.12	108.50
22	AY	36	A	P-O5'-C5'	-5.75	112.28	120.90
23	AW	13	C	O4'-C1'-N1	5.75	117.12	108.50
34	BO	43	ASN	N-CA-C	-5.75	102.77	111.56
52	BD	125	TRP	N-CA-CB	5.75	119.23	110.95
57	BB	304	U	C5'-C4'-C3'	-5.75	107.38	116.00
57	BB	1063	G	P-O5'-C5'	-5.75	112.28	120.90
57	BB	1532	A	P-O5'-C5'	5.75	129.52	120.90
57	BB	1796	U	P-O3'-C3'	-5.75	111.58	120.20
57	BB	2617	U	O5'-C5'-C4'	-5.75	102.88	111.50
57	BB	2903	U	C4'-C3'-C2'	-5.75	96.85	102.60
21	AA	1098	C	O4'-C1'-N1	5.75	117.12	108.50
57	BB	2143	C	O4'-C1'-N1	5.75	117.12	108.50
57	BB	2343	U	O4'-C1'-N1	5.75	117.12	108.50
21	AA	526	C	O5'-C5'-C4'	-5.74	102.89	111.50
21	AA	959	A	O5'-C5'-C4'	-5.74	102.88	111.50
41	BV	56	PHE	CA-C-O	5.74	127.05	120.90
57	BB	175	G	O4'-C1'-N9	5.74	117.12	108.50
57	BB	643	A	O4'-C1'-N9	5.74	117.11	108.50
21	AA	773	G	O5'-C5'-C4'	-5.74	102.89	111.50
53	BE	133	LEU	CA-C-N	5.74	132.95	122.50
53	BE	133	LEU	C-N-CA	5.74	132.95	122.50
53	BE	155	GLU	CA-C-O	5.74	125.95	119.18
57	BB	2713	U	P-O3'-C3'	5.74	128.81	120.20
57	BB	2833	U	P-O3'-C3'	5.74	128.81	120.20
29	BJ	87	ALA	CA-C-O	-5.74	114.56	120.99
45	BC	83	ASP	N-CA-C	-5.74	101.48	110.14
57	BB	669	G	P-O3'-C3'	5.74	128.81	120.20
57	BB	2787	C	O4'-C1'-N1	5.74	117.11	108.50
55	BG	110	HIS	CB-CA-C	5.74	117.77	109.45
57	BB	1192	G	C4'-C3'-O3'	-5.74	104.39	113.00
57	BB	1714	U	P-O5'-C5'	5.74	129.50	120.90
57	BB	1728	C	O4'-C1'-C2'	-5.74	101.86	107.60
58	BA	13	G	O4'-C4'-C3'	-5.74	98.26	104.00
13	AB	169	HIS	ND1-CE1-NE2	5.74	114.14	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	484	G	O4'-C4'-C3'	-5.74	100.36	106.10
23	AW	60	U	O4'-C1'-N1	5.74	116.80	108.20
45	BC	235	GLU	CB-CA-C	-5.74	99.21	109.71
57	BB	39	G	C3'-C2'-O2'	5.74	119.30	110.70
57	BB	1219	U	P-O3'-C3'	-5.74	111.60	120.20
57	BB	2044	C	O4'-C1'-N1	5.74	117.10	108.50
57	BB	2073	C	C1'-O4'-C4'	5.74	115.64	109.90
23	AW	31	A	N9-C1'-C2'	-5.73	103.40	112.00
3	AL	83	GLY	N-CA-C	-5.73	106.84	115.32
21	AA	103	U	P-O3'-C3'	-5.73	111.60	120.20
21	AA	595	A	C4'-C3'-C2'	5.73	108.33	102.60
22	AY	35	A	O3'-P-O5'	-5.73	95.40	104.00
25	AZ	254	THR	CB-CA-C	5.73	120.32	109.37
28	BI	105	LEU	O-C-N	5.73	128.20	122.12
47	B0	54	ILE	N-CA-CB	5.73	120.69	111.23
52	BD	205	PRO	N-CA-CB	-5.73	97.23	103.25
57	BB	2469	A	P-O3'-C3'	-5.73	111.60	120.20
57	BB	2503	A	O5'-C5'-C4'	-5.73	103.10	111.70
29	BJ	89	PHE	O-C-N	5.73	128.05	122.09
57	BB	1472	C	C4'-C3'-O3'	-5.73	104.40	113.00
57	BB	1689	A	C4'-C3'-C2'	-5.73	96.87	102.60
57	BB	2725	A	P-O5'-C5'	-5.73	112.30	120.90
19	AH	20	ASN	CB-CA-C	-5.73	103.06	112.06
19	AH	61	THR	CA-CB-CG2	-5.73	100.76	110.50
21	AA	353	A	P-O3'-C3'	5.73	128.79	120.20
37	BR	92	TRP	CB-CG-CD2	-5.73	118.78	126.80
1	AJ	51	VAL	O-C-N	-5.73	117.07	123.26
2	AK	24	ALA	CA-C-N	5.73	131.87	122.07
2	AK	24	ALA	C-N-CA	5.73	131.87	122.07
26	AV	36	U	C5'-C4'-C3'	-5.73	107.41	116.00
57	BB	205	G	C1'-O4'-C4'	-5.73	103.97	109.70
57	BB	1694	C	O5'-C5'-C4'	-5.73	103.11	111.70
4	AM	12	LYS	CA-C-N	5.73	129.24	120.82
4	AM	12	LYS	C-N-CA	5.73	129.24	120.82
21	AA	813	U	C3'-C2'-O2'	5.73	119.29	110.70
57	BB	705	A	O4'-C1'-N9	5.73	117.09	108.50
57	BB	1868	C	O3'-P-O5'	-5.73	95.41	104.00
21	AA	121	U	O4'-C1'-N1	5.72	117.09	108.50
21	AA	188	C	O4'-C1'-N1	5.72	117.09	108.50
21	AA	623	C	O4'-C1'-N1	5.72	117.09	108.50
27	B5	2	ALA	CA-C-O	5.72	128.52	121.94
52	BD	83	ARG	NE-CZ-NH2	5.72	124.35	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	36	G	C4'-C3'-O3'	-5.72	104.41	113.00
32	BM	57	VAL	O-C-N	5.72	128.93	122.18
41	BV	51	GLN	CA-C-N	5.72	128.52	120.28
41	BV	51	GLN	C-N-CA	5.72	128.52	120.28
52	BD	52	THR	CA-CB-OG1	-5.72	101.02	109.60
54	BF	110	ILE	N-CA-CB	5.72	120.67	111.23
57	BB	196	A	C5'-C4'-C3'	-5.72	106.62	115.20
57	BB	972	A	O4'-C1'-N9	5.72	117.08	108.50
13	AB	103	TRP	O-C-N	-5.72	114.98	122.59
14	AC	194	VAL	O-C-N	5.72	128.69	122.63
37	BR	4	VAL	N-CA-C	-5.72	99.82	108.17
57	BB	103	A	C5'-C4'-C3'	-5.72	107.42	116.00
57	BB	1882	U	O4'-C1'-N1	5.72	117.08	108.50
57	BB	2771	C	O4'-C4'-C3'	-5.72	98.28	104.00
3	AL	88	ASP	N-CA-C	-5.72	106.34	113.38
21	AA	151	A	O5'-C5'-C4'	5.72	120.08	111.50
21	AA	1518	A	C4'-C3'-C2'	-5.72	96.88	102.60
53	BE	184	ASP	CA-CB-CG	-5.72	106.88	112.60
57	BB	1098	A	C4'-C3'-O3'	-5.72	104.42	113.00
21	AA	163	C	O4'-C1'-N1	5.72	117.08	108.50
57	BB	998	C	O4'-C1'-N1	5.72	117.08	108.50
57	BB	1134	A	O4'-C4'-C3'	-5.72	100.38	106.10
57	BB	2615	U	O4'-C1'-N1	5.72	117.08	108.50
58	BA	2	G	OP1-P-OP2	-5.72	102.44	119.60
3	AL	90	PRO	N-CA-CB	5.72	108.69	103.15
15	AD	189	ASP	CA-CB-CG	5.72	118.32	112.60
22	AY	7	U	P-O5'-C5'	-5.72	112.33	120.90
23	AW	48	C	C2'-C3'-O3'	5.72	118.07	109.50
30	BK	106	LEU	N-CA-C	-5.72	106.10	114.39
52	BD	5	VAL	CA-C-O	-5.72	114.36	120.59
53	BE	14	VAL	CA-C-N	5.72	128.83	120.71
53	BE	14	VAL	C-N-CA	5.72	128.83	120.71
57	BB	735	A	O4'-C1'-C2'	-5.72	101.88	107.60
21	AA	91	U	O4'-C1'-C2'	-5.71	101.89	107.60
21	AA	253	A	C4'-C3'-C2'	-5.71	96.89	102.60
21	AA	968	A	C3'-C2'-C1'	5.71	107.22	101.50
57	BB	527	C	O4'-C4'-C3'	-5.71	100.39	106.10
57	BB	1091	G	O4'-C1'-N9	5.71	117.07	108.50
21	AA	814	A	C4'-C3'-O3'	-5.71	104.43	113.00
32	BM	71	LYS	CA-C-O	-5.71	112.92	119.32
57	BB	770	G	C4'-C3'-C2'	-5.71	96.89	102.60
57	BB	877	A	O4'-C1'-N9	5.71	117.07	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1382	C	P-O3'-C3'	-5.71	111.63	120.20
27	B5	23	ILE	CA-C-N	5.71	127.93	120.28
27	B5	23	ILE	C-N-CA	5.71	127.93	120.28
57	BB	512	G	P-O3'-C3'	5.71	128.77	120.20
57	BB	2103	C	O4'-C4'-C3'	-5.71	98.29	104.00
57	BB	2461	A	C5'-C4'-C3'	-5.71	107.43	116.00
16	AE	79	THR	N-CA-C	-5.71	100.62	109.24
21	AA	1259	C	C4'-C3'-C2'	-5.71	96.89	102.60
57	BB	2093	G	C4'-C3'-C2'	-5.71	96.89	102.60
21	AA	52	C	C3'-C2'-C1'	5.71	107.01	101.30
21	AA	654	G	C1'-C2'-O2'	5.71	116.96	108.40
21	AA	1054	C	N1-C1'-C2'	5.71	120.56	112.00
57	BB	56	A	P-O5'-C5'	5.71	129.46	120.90
57	BB	1366	A	P-O5'-C5'	-5.71	112.34	120.90
57	BB	1652	A	C1'-O4'-C4'	-5.71	104.19	109.90
57	BB	2155	U	C4'-C3'-O3'	-5.71	104.44	113.00
1	AJ	79	PRO	N-CA-C	-5.71	106.57	114.27
6	AO	74	VAL	CB-CA-C	-5.71	104.40	111.70
21	AA	357	G	C4'-C3'-O3'	-5.71	104.44	113.00
21	AA	398	U	C3'-C2'-C1'	5.71	107.01	101.30
21	AA	468	A	O5'-C5'-C4'	-5.71	102.94	111.50
57	BB	1325	U	C5'-C4'-C3'	-5.71	106.64	115.20
57	BB	2409	G	P-O5'-C5'	-5.71	112.34	120.90
57	BB	2459	A	C4'-C3'-O3'	-5.71	104.44	113.00
13	AB	139	GLU	CA-C-O	5.71	126.29	119.10
57	BB	1999	C	C4'-C3'-C2'	-5.71	96.89	102.60
57	BB	2365	G	O4'-C1'-N9	5.71	117.06	108.50
57	BB	2838	G	C5'-C4'-O4'	5.71	118.36	109.80
13	AB	174	GLU	CB-CG-CD	-5.70	102.91	112.60
56	BH	9	VAL	CA-C-N	5.70	129.36	120.75
56	BH	9	VAL	C-N-CA	5.70	129.36	120.75
57	BB	690	G	O4'-C1'-N9	5.70	117.05	108.50
57	BB	1624	U	O4'-C1'-N1	5.70	117.06	108.50
57	BB	1752	C	C4'-C3'-O3'	-5.70	104.44	113.00
58	BA	4	C	O4'-C1'-N1	5.70	117.06	108.50
57	BB	1728	C	P-O5'-C5'	5.70	129.45	120.90
57	BB	2055	C	C3'-C2'-O2'	5.70	119.25	110.70
21	AA	382	A	P-O3'-C3'	5.70	128.75	120.20
21	AA	452	A	C4'-C3'-O3'	-5.70	104.45	113.00
21	AA	1343	G	C5'-C4'-C3'	5.70	124.55	116.00
22	AY	12	U	C5'-C4'-C3'	-5.70	107.45	116.00
57	BB	357	C	C4'-C3'-C2'	-5.70	96.90	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	937	C	P-O5'-C5'	5.70	129.45	120.90
58	BA	29	A	O4'-C1'-N9	5.70	117.05	108.50
21	AA	336	A	O5'-C5'-C4'	-5.70	102.95	111.50
21	AA	761	G	O4'-C4'-C3'	-5.70	98.30	104.00
21	AA	765	G	C3'-C2'-C1'	-5.70	95.60	101.30
57	BB	259	G	P-O5'-C5'	-5.70	112.35	120.90
57	BB	470	A	C1'-C2'-O2'	5.70	116.95	108.40
57	BB	630	G	C5'-C4'-C3'	5.70	124.55	116.00
57	BB	1887	C	O4'-C1'-N1	5.70	117.05	108.50
21	AA	1429	A	O5'-C5'-C4'	-5.70	102.95	111.50
25	AZ	226	VAL	CA-CB-CG1	5.70	120.08	110.40
27	B5	182	ALA	O-C-N	5.70	127.94	122.07
57	BB	1801	A	C3'-C2'-O2'	-5.70	106.05	114.60
57	BB	2499	C	C5'-C4'-C3'	-5.70	107.45	116.00
13	AB	124	THR	CA-C-N	5.70	131.14	122.37
13	AB	124	THR	C-N-CA	5.70	131.14	122.37
21	AA	224	U	C4'-C3'-O3'	-5.70	104.46	113.00
21	AA	776	G	O4'-C1'-N9	5.70	117.04	108.50
56	BH	102	ALA	N-CA-CB	5.70	120.12	110.49
57	BB	1263	U	C4'-C3'-O3'	-5.70	104.46	113.00
14	AC	104	GLU	CA-C-N	5.69	130.52	123.12
14	AC	104	GLU	C-N-CA	5.69	130.52	123.12
16	AE	92	ARG	CB-CA-C	-5.69	99.29	109.71
21	AA	1064	G	C4'-C3'-O3'	5.69	117.94	109.40
31	BL	84	LYS	N-CA-CB	5.69	120.05	110.77
57	BB	38	A	O4'-C4'-C3'	-5.69	98.31	104.00
57	BB	321	U	P-O3'-C3'	5.69	128.74	120.20
57	BB	908	C	P-O3'-C3'	5.69	128.74	120.20
57	BB	2709	G	O4'-C1'-C2'	-5.69	101.91	107.60
14	AC	177	LEU	N-CA-C	-5.69	105.92	112.92
21	AA	458	U	P-O3'-C3'	5.69	128.74	120.20
57	BB	1431	A	O4'-C1'-N9	5.69	117.04	108.50
13	AB	173	LYS	CA-C-N	5.69	128.18	120.38
13	AB	173	LYS	C-N-CA	5.69	128.18	120.38
17	AF	10	VAL	CA-C-N	5.69	129.31	120.60
17	AF	10	VAL	C-N-CA	5.69	129.31	120.60
21	AA	772	U	O4'-C1'-N1	5.69	117.04	108.50
45	BC	268	ARG	CB-CA-C	-5.69	102.31	110.62
47	B0	14	MET	N-CA-C	5.69	117.56	111.36
57	BB	1025	G	C2'-C3'-O3'	5.69	118.04	109.50
18	AG	141	HIS	CG-CD2-NE2	5.69	112.89	107.20
21	AA	842	U	P-O3'-C3'	5.69	128.73	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	B5	109	MET	CA-C-O	-5.69	115.14	121.51
39	BT	88	LYS	N-CA-C	-5.69	108.14	114.62
40	BU	23	LYS	N-CA-CB	5.69	119.68	110.41
54	BF	101	ARG	N-CA-C	-5.69	105.00	111.14
57	BB	98	G	C4'-C3'-C2'	-5.69	96.91	102.60
57	BB	1300	G	P-O3'-C3'	5.69	128.73	120.20
21	AA	17	U	O4'-C4'-C3'	-5.69	98.31	104.00
21	AA	372	C	O4'-C1'-N1	5.69	116.73	108.20
27	B5	93	GLU	CA-CB-CG	5.69	125.47	114.10
38	BS	82	MET	CA-C-N	5.69	128.78	120.71
38	BS	82	MET	C-N-CA	5.69	128.78	120.71
57	BB	197	A	C3'-C2'-C1'	5.69	106.99	101.30
57	BB	947	A	P-O5'-C5'	5.69	129.43	120.90
57	BB	1786	A	C1'-O4'-C4'	-5.69	104.01	109.70
57	BB	1802	A	P-O3'-C3'	-5.69	111.67	120.20
57	BB	1932	A	C4'-C3'-C2'	-5.69	96.91	102.60
57	BB	2459	A	P-O5'-C5'	5.69	129.43	120.90
21	AA	613	C	P-O3'-C3'	-5.69	111.67	120.20
21	AA	1203	C	O4'-C4'-C3'	-5.69	98.31	104.00
53	BE	29	HIS	CE1-NE2-CD2	-5.69	103.31	109.00
57	BB	1310	G	C4'-C3'-O3'	-5.69	104.47	113.00
57	BB	2001	C	O5'-C5'-C4'	-5.69	102.97	111.50
2	AK	94	SER	CA-C-O	5.68	126.57	120.20
15	AD	87	GLU	O-C-N	5.68	128.16	122.08
21	AA	175	C	C5'-C4'-C3'	-5.68	107.47	116.00
21	AA	422	C	O4'-C4'-C3'	-5.68	100.42	106.10
28	BI	75	ALA	N-CA-C	-5.68	96.54	107.57
31	BL	133	ALA	N-CA-C	-5.68	107.59	114.75
57	BB	1151	A	P-O5'-C5'	-5.68	112.37	120.90
57	BB	2390	U	O4'-C1'-N1	5.68	117.03	108.50
58	BA	77	U	O4'-C4'-C3'	-5.68	98.31	104.00
6	AO	30	LEU	N-CA-C	5.68	117.93	111.11
12	AU	27	VAL	O-C-N	-5.68	116.76	122.67
21	AA	9	G	C5'-C4'-C3'	5.68	124.52	116.00
21	AA	1018	G	C4'-C3'-O3'	-5.68	104.48	113.00
21	AA	1497	G	C5'-C4'-C3'	-5.68	107.48	116.00
57	BB	774	G	P-O5'-C5'	5.68	129.42	120.90
57	BB	1145	C	P-O3'-C3'	-5.68	111.68	120.20
57	BB	2206	C	P-O3'-C3'	-5.68	111.68	120.20
57	BB	2849	U	C3'-C2'-C1'	5.68	107.18	101.50
21	AA	1262	C	C4'-C3'-O3'	-5.68	104.48	113.00
28	BI	124	MET	CA-C-N	5.68	128.17	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	BI	124	MET	C-N-CA	5.68	128.17	120.44
42	BW	53	GLY	O-C-N	5.68	130.09	122.70
2	AK	71	ASP	CA-C-N	5.68	130.19	120.71
2	AK	71	ASP	C-N-CA	5.68	130.19	120.71
21	AA	51	A	C4'-C3'-C2'	5.68	108.28	102.60
41	BV	44	HIS	O-C-N	5.68	128.14	122.12
57	BB	1042	G	O4'-C1'-N9	5.68	117.02	108.50
57	BB	2268	A	P-O3'-C3'	-5.68	111.68	120.20
2	AK	83	VAL	N-CA-CB	5.68	117.02	110.49
8	AQ	7	LEU	CA-C-O	5.68	126.62	120.32
27	B5	152	ALA	N-CA-CB	5.68	118.24	110.01
57	BB	344	A	P-O3'-C3'	-5.68	111.68	120.20
21	AA	96	U	C5'-C4'-C3'	-5.68	107.48	116.00
21	AA	501	C	P-O3'-C3'	-5.68	111.69	120.20
31	BL	132	ARG	NE-CZ-NH1	-5.68	115.82	121.50
52	BD	41	ALA	N-CA-C	-5.68	106.70	113.97
57	BB	204	A	P-O3'-C3'	5.68	128.72	120.20
57	BB	897	C	O4'-C1'-N1	5.68	117.02	108.50
57	BB	2874	C	P-O5'-C5'	-5.68	112.39	120.90
14	AC	76	ILE	N-CA-C	-5.67	99.89	108.17
15	AD	196	GLU	CA-C-N	5.67	128.45	120.28
15	AD	196	GLU	C-N-CA	5.67	128.45	120.28
47	B0	4	GLN	N-CA-C	-5.67	106.71	113.97
55	BG	115	GLN	OE1-CD-NE2	-5.67	116.92	122.60
57	BB	2303	G	O4'-C1'-C2'	-5.67	101.93	107.60
57	BB	2637	U	C4'-C3'-O3'	-5.67	104.49	113.00
45	BC	224	MET	CA-C-N	5.67	129.94	120.86
45	BC	224	MET	C-N-CA	5.67	129.94	120.86
55	BG	154	GLU	CA-C-N	5.67	126.17	120.04
55	BG	154	GLU	C-N-CA	5.67	126.17	120.04
57	BB	2507	C	C4'-C3'-C2'	-5.67	96.93	102.60
5	AN	15	LEU	CA-C-N	5.67	128.66	120.38
5	AN	15	LEU	C-N-CA	5.67	128.66	120.38
19	AH	86	LYS	N-CA-C	-5.67	100.45	109.07
20	AI	103	VAL	N-CA-CB	5.67	119.82	112.28
35	BP	47	ILE	CA-C-N	5.67	132.37	121.54
35	BP	47	ILE	C-N-CA	5.67	132.37	121.54
35	BP	96	LEU	O-C-N	5.67	130.05	123.30
38	BS	7	HIS	CE1-NE2-CD2	-5.67	103.33	109.00
55	BG	164	ALA	CB-CA-C	-5.67	109.04	115.79
57	BB	315	G	P-O5'-C5'	-5.67	112.39	120.90
21	AA	1265	C	O4'-C1'-N1	5.67	117.00	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	BY	40	SER	CA-C-N	5.67	128.44	120.28
44	BY	40	SER	C-N-CA	5.67	128.44	120.28
57	BB	236	C	O4'-C4'-C3'	-5.67	98.33	104.00
6	AO	77	TYR	CA-C-N	5.67	128.15	120.38
6	AO	77	TYR	C-N-CA	5.67	128.15	120.38
23	AW	11	C	O5'-C5'-C4'	-5.67	103.00	111.50
57	BB	634	C	C4'-C3'-C2'	-5.67	96.93	102.60
57	BB	1729	U	O4'-C4'-C3'	-5.67	98.33	104.00
57	BB	1813	G	C4'-C3'-O3'	-5.67	104.50	113.00
57	BB	2158	A	P-O3'-C3'	5.67	128.70	120.20
15	AD	111	ALA	N-CA-CB	5.67	118.22	110.01
21	AA	437	U	C4'-C3'-O3'	-5.67	104.50	113.00
21	AA	1322	C	C4'-C3'-O3'	5.67	117.90	109.40
48	B1	28	THR	CA-C-O	-5.67	115.06	120.90
51	B4	2	LYS	CA-C-N	5.67	131.13	122.69
51	B4	2	LYS	C-N-CA	5.67	131.13	122.69
57	BB	519	U	P-O3'-C3'	-5.67	111.70	120.20
57	BB	640	C	O4'-C1'-N1	5.67	117.00	108.50
57	BB	1127	A	C1'-C2'-O2'	-5.67	99.90	108.40
7	AP	13	LYS	CB-CA-C	-5.67	103.69	111.73
18	AG	46	LEU	CA-C-N	5.67	128.33	120.29
18	AG	46	LEU	C-N-CA	5.67	128.33	120.29
23	AW	60	U	O4'-C1'-C2'	-5.67	100.14	105.80
31	BL	120	VAL	CA-C-N	5.67	130.99	123.00
31	BL	120	VAL	C-N-CA	5.67	130.99	123.00
57	BB	1564	C	P-O5'-C5'	5.67	129.40	120.90
57	BB	2579	C	C5'-C4'-C3'	-5.67	107.50	116.00
58	BA	80	U	C4'-C3'-C2'	5.67	108.27	102.60
27	B5	85	GLU	N-CA-CB	5.66	118.68	110.47
54	BF	137	PHE	CA-CB-CG	5.66	119.46	113.80
57	BB	877	A	P-O5'-C5'	5.66	129.40	120.90
57	BB	1199	U	C4'-C3'-O3'	-5.66	104.51	113.00
57	BB	1885	A	C4'-C3'-O3'	-5.66	104.50	113.00
57	BB	2090	A	C1'-C2'-O2'	5.66	116.89	108.40
16	AE	145	ASN	CB-CG-ND2	5.66	124.89	116.40
21	AA	1509	C	O4'-C1'-C2'	-5.66	101.94	107.60
54	BF	62	GLN	N-CA-CB	5.66	120.18	111.46
54	BF	114	ARG	N-CA-C	-5.66	106.14	113.16
56	BH	80	ILE	CA-CB-CG2	-5.66	100.88	110.50
57	BB	1496	A	C4'-C3'-C2'	-5.66	96.94	102.60
21	AA	963	G	O4'-C4'-C3'	-5.66	98.34	104.00
21	AA	1121	U	C4'-C3'-O3'	-5.66	104.51	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1488	G	O4'-C4'-C3'	-5.66	98.34	104.00
51	B4	32	LYS	N-CA-C	-5.66	104.61	112.30
57	BB	605	G	C4'-C3'-C2'	-5.66	96.94	102.60
57	BB	1173	U	P-O5'-C5'	5.66	129.39	120.90
57	BB	2370	G	P-O5'-C5'	-5.66	112.41	120.90
11	AT	69	ASN	CA-C-O	5.66	125.97	119.35
13	AB	82	ALA	CA-C-N	5.66	132.34	121.54
13	AB	82	ALA	C-N-CA	5.66	132.34	121.54
21	AA	429	U	O5'-C5'-C4'	-5.66	103.22	111.70
29	BJ	80	HIS	CE1-NE2-CD2	-5.66	103.34	109.00
57	BB	235	U	O4'-C1'-N1	5.66	116.99	108.50
7	AP	6	LEU	N-CA-C	-5.66	101.83	110.14
21	AA	1093	A	O4'-C1'-N9	5.66	116.98	108.50
28	BI	38	CYS	N-CA-C	-5.66	106.97	112.97
57	BB	548	G	C5'-C4'-C3'	5.66	124.48	116.00
57	BB	1042	G	C3'-C2'-C1'	-5.66	95.64	101.30
57	BB	1870	C	C3'-C2'-C1'	5.66	106.96	101.30
58	BA	49	C	O5'-C5'-C4'	-5.66	103.02	111.50
2	AK	45	THR	N-CA-C	-5.65	100.48	109.07
17	AF	24	ARG	CD-NE-CZ	-5.65	116.48	124.40
21	AA	573	A	C4'-C3'-O3'	-5.65	104.52	113.00
21	AA	1403	C	C4'-C3'-C2'	5.65	108.25	102.60
57	BB	355	U	O4'-C4'-C3'	-5.65	98.35	104.00
6	AO	3	SER	CA-C-N	5.65	129.73	120.63
6	AO	3	SER	C-N-CA	5.65	129.73	120.63
22	AY	54	U	P-O5'-C5'	-5.65	112.42	120.90
25	AZ	146	LEU	O-C-N	5.65	127.89	122.07
54	BF	110	ILE	CA-C-N	5.65	130.25	120.58
54	BF	110	ILE	C-N-CA	5.65	130.25	120.58
57	BB	211	C	O4'-C1'-N1	5.65	116.98	108.50
57	BB	1436	G	C4'-C3'-O3'	-5.65	104.52	113.00
57	BB	1568	G	P-O3'-C3'	-5.65	111.72	120.20
57	BB	2313	C	C4'-C3'-C2'	-5.65	96.95	102.60
21	AA	1110	A	C3'-C2'-O2'	5.65	119.18	110.70
23	AW	57	G	C4'-C3'-O3'	5.65	121.47	113.00
28	BI	7	TYR	CB-CG-CD2	-5.65	112.32	120.80
28	BI	34	ILE	N-CA-CB	-5.65	102.10	110.58
45	BC	231	HIS	CA-CB-CG	-5.65	108.15	113.80
16	AE	93	VAL	CB-CA-C	5.65	120.59	110.65
21	AA	471	U	O4'-C1'-N1	5.65	116.97	108.50
27	B5	154	LYS	CA-C-N	5.65	127.78	120.44
27	B5	154	LYS	C-N-CA	5.65	127.78	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BH	104	THR	CB-CA-C	-5.65	98.08	109.55
6	AO	50	HIS	CE1-NE2-CD2	-5.65	103.35	109.00
25	AZ	29	ALA	CA-C-N	5.65	132.33	121.54
25	AZ	29	ALA	C-N-CA	5.65	132.33	121.54
26	AV	28	C	O4'-C1'-C2'	-5.65	101.95	107.60
36	BQ	60	TRP	N-CA-CB	5.65	118.49	110.13
45	BC	42	ARG	CG-CD-NE	-5.65	99.58	112.00
55	BG	59	ASP	N-CA-CB	-5.65	101.98	110.73
57	BB	379	G	O4'-C1'-N9	5.65	116.97	108.50
57	BB	962	G	C3'-C2'-C1'	5.65	106.95	101.30
57	BB	1019	U	O4'-C1'-C2'	-5.65	101.95	107.60
57	BB	1981	A	O3'-P-O5'	5.65	112.47	104.00
57	BB	2257	U	C5'-C4'-C3'	5.65	124.47	116.00
57	BB	2800	A	O4'-C4'-C3'	-5.65	98.35	104.00
3	AL	8	ARG	CA-C-N	-5.65	115.47	122.42
3	AL	8	ARG	C-N-CA	-5.65	115.47	122.42
21	AA	1410	A	C3'-C2'-C1'	5.65	106.95	101.30
43	BX	15	ASN	CB-CG-OD1	5.65	132.09	120.80
57	BB	2343	U	C5'-C4'-C3'	-5.65	107.53	116.00
14	AC	157	GLY	CA-C-O	-5.64	112.68	119.00
30	BK	48	ARG	CA-C-N	5.64	129.08	122.19
30	BK	48	ARG	C-N-CA	5.64	129.08	122.19
30	BK	63	ARG	NE-CZ-NH2	5.64	124.28	119.20
57	BB	1545	A	C3'-C2'-O2'	5.64	119.17	110.70
57	BB	2025	C	C1'-O4'-C4'	5.64	115.54	109.90
57	BB	2066	C	C4'-C3'-O3'	-5.64	104.53	113.00
14	AC	191	THR	CA-C-N	5.64	130.43	121.18
14	AC	191	THR	C-N-CA	5.64	130.43	121.18
21	AA	769	G	C4'-C3'-O3'	-5.64	104.54	113.00
21	AA	929	G	O4'-C4'-C3'	-5.64	98.36	104.00
21	AA	977	A	P-O5'-C5'	5.64	129.36	120.90
21	AA	1030	U	N1-C1'-C2'	5.64	120.46	112.00
21	AA	1051	C	O4'-C1'-N1	5.64	116.96	108.50
40	BU	41	VAL	N-CA-C	-5.64	99.53	108.90
57	BB	1663	G	O4'-C1'-C2'	-5.64	101.96	107.60
57	BB	2090	A	C4'-C3'-C2'	-5.64	96.96	102.60
58	BA	13	G	O4'-C1'-N9	5.64	116.96	108.50
16	AE	98	ALA	N-CA-CB	5.64	119.97	110.77
45	BC	220	ARG	N-CA-C	-5.64	101.68	110.42
57	BB	1906	G	O5'-C5'-C4'	-5.64	103.04	111.50
57	BB	2477	U	O4'-C1'-N1	5.64	116.96	108.50
57	BB	2620	C	C4'-C3'-O3'	-5.64	104.54	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	AS	56	HIS	ND1-CE1-NE2	5.64	114.04	108.40
21	AA	159	G	C3'-C2'-O2'	5.64	119.16	110.70
25	AZ	98	MET	N-CA-C	5.64	122.81	110.80
36	BQ	47	ARG	CB-CA-C	-5.64	101.43	110.79
45	BC	83	ASP	CA-CB-CG	-5.64	106.96	112.60
57	BB	113	U	C4'-C3'-C2'	5.64	108.24	102.60
57	BB	1031	G	C1'-C2'-O2'	-5.64	99.94	108.40
57	BB	1114	C	C5'-C4'-C3'	-5.64	107.54	116.00
57	BB	1176	U	C3'-C2'-C1'	5.64	106.94	101.30
57	BB	2153	C	O4'-C1'-N1	5.64	116.66	108.20
57	BB	1025	G	C5'-C4'-C3'	-5.64	106.74	115.20
57	BB	1553	A	P-O5'-C5'	-5.64	112.44	120.90
26	AV	6	G	O4'-C4'-C3'	-5.64	98.36	104.00
34	BO	30	ARG	NE-CZ-NH1	5.64	127.14	121.50
43	BX	10	ARG	O-C-N	5.64	126.33	121.54
50	B3	3	ILE	CB-CA-C	5.64	118.77	110.77
54	BF	82	TYR	N-CA-CB	5.64	120.40	110.37
57	BB	1309	G	O4'-C1'-N9	5.64	116.96	108.50
57	BB	1463	C	O4'-C1'-N1	5.64	116.95	108.50
57	BB	2188	U	O4'-C1'-N1	5.64	116.96	108.50
58	BA	78	A	C3'-C2'-C1'	-5.64	95.66	101.30
2	AK	126	ARG	NH1-CZ-NH2	5.63	126.62	119.30
21	AA	1011	C	O4'-C1'-N1	5.63	116.95	108.50
22	AY	6	U	C4'-C3'-O3'	-5.63	104.55	113.00
30	BK	93	PRO	CB-CA-C	5.63	118.80	111.64
47	B0	38	LEU	N-CA-C	-5.63	99.83	109.24
56	BH	123	ARG	CA-C-N	5.63	128.82	119.35
56	BH	123	ARG	C-N-CA	5.63	128.82	119.35
57	BB	2636	C	C5'-C4'-O4'	-5.63	101.35	109.80
21	AA	9	G	O4'-C4'-C3'	-5.63	98.37	104.00
21	AA	909	A	C1'-O4'-C4'	-5.63	104.27	109.90
27	B5	38	PHE	N-CA-CB	5.63	120.12	111.56
56	BH	98	ASP	CA-CB-CG	-5.63	106.97	112.60
57	BB	1370	C	C4'-C3'-C2'	-5.63	96.97	102.60
57	BB	2849	U	O4'-C1'-C2'	-5.63	100.17	105.80
21	AA	834	U	O4'-C1'-N1	5.63	116.94	108.50
25	AZ	346	GLY	N-CA-C	-5.63	107.33	115.27
13	AB	119	GLN	OE1-CD-NE2	5.63	128.23	122.60
21	AA	239	U	C2'-C3'-O3'	5.63	117.94	109.50
21	AA	344	A	C5'-C4'-O4'	5.63	117.54	109.10
21	AA	495	A	P-O5'-C5'	-5.63	112.46	120.90
21	AA	1017	U	O5'-C5'-C4'	-5.63	103.06	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1235	U	C4'-C3'-O3'	-5.63	104.56	113.00
21	AA	1392	G	O4'-C4'-C3'	-5.63	98.37	104.00
21	AA	1422	G	O4'-C4'-C3'	-5.63	98.37	104.00
22	AY	61	C	O3'-P-O5'	-5.63	95.56	104.00
37	BR	68	ARG	NH1-CZ-NH2	-5.63	111.98	119.30
39	BT	92	ASN	N-CA-C	-5.63	104.77	111.69
57	BB	1384	A	C5'-C4'-C3'	-5.63	107.56	116.00
13	AB	169	HIS	CG-CD2-NE2	5.63	112.83	107.20
14	AC	58	ARG	CA-C-O	-5.63	115.09	119.99
21	AA	902	G	O4'-C1'-C2'	-5.63	101.97	107.60
21	AA	1278	G	C2'-C3'-O3'	5.63	117.94	109.50
21	AA	1432	G	P-O5'-C5'	5.63	129.34	120.90
39	BT	36	LYS	CA-C-N	5.63	131.32	122.21
39	BT	36	LYS	C-N-CA	5.63	131.32	122.21
57	BB	1440	U	O4'-C1'-N1	5.63	116.94	108.50
57	BB	2663	G	C4'-C3'-C2'	-5.63	96.97	102.60
58	BA	45	A	P-O5'-C5'	-5.63	112.46	120.90
44	BY	60	LYS	N-CA-C	-5.62	106.09	114.64
57	BB	32	C	O4'-C1'-N1	5.62	116.94	108.50
8	AQ	42	LYS	O-C-N	5.62	129.31	122.96
13	AB	23	ASN	O-C-N	-5.62	117.89	121.88
21	AA	440	C	N1-C1'-C2'	-5.62	103.57	112.00
21	AA	667	G	O4'-C1'-N9	5.62	116.94	108.50
21	AA	1077	G	C4'-C3'-C2'	-5.62	96.98	102.60
21	AA	1297	G	C5'-C4'-O4'	5.62	117.53	109.10
54	BF	171	ALA	O-C-N	5.62	128.94	122.25
57	BB	625	G	P-O5'-C5'	-5.62	112.46	120.90
57	BB	2861	U	O4'-C1'-C2'	-5.62	101.98	107.60
57	BB	2887	A	P-O3'-C3'	-5.62	111.77	120.20
2	AK	71	ASP	N-CA-C	5.62	118.18	111.71
21	AA	1196	A	P-O5'-C5'	5.62	129.33	120.90
57	BB	55	G	C4'-C3'-C2'	-5.62	96.98	102.60
57	BB	332	A	O3'-P-O5'	-5.62	95.57	104.00
57	BB	727	A	P-O5'-C5'	5.62	129.33	120.90
57	BB	813	U	P-O3'-C3'	-5.62	111.77	120.20
22	AY	27	C	P-O5'-C5'	5.62	129.33	120.90
29	BJ	28	LEU	N-CA-C	-5.62	107.42	114.56
38	BS	3	THR	N-CA-C	-5.62	100.17	108.99
42	BW	30	VAL	N-CA-C	-5.62	97.65	109.34
45	BC	139	THR	CA-C-N	-5.62	115.18	122.99
45	BC	139	THR	C-N-CA	-5.62	115.18	122.99
57	BB	1535	A	C5'-C4'-O4'	5.62	117.53	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	243	A	C4'-C3'-C2'	5.62	108.22	102.60
28	BI	4	VAL	CA-CB-CG1	5.62	119.95	110.40
42	BW	56	HIS	N-CA-CB	5.62	119.98	110.49
57	BB	2380	C	O4'-C1'-N1	5.62	116.93	108.50
9	AR	73	HIS	ND1-CE1-NE2	5.62	114.02	108.40
27	B5	25	GLU	N-CA-C	5.62	117.48	111.36
48	B1	35	LEU	N-CA-C	-5.62	100.81	109.52
54	BF	4	HIS	CA-CB-CG	-5.62	108.19	113.80
57	BB	349	U	O4'-C1'-C2'	-5.62	101.98	107.60
57	BB	734	A	O4'-C4'-C3'	5.62	109.61	104.00
57	BB	1024	G	C3'-C2'-C1'	-5.62	95.69	101.30
57	BB	1929	G	O4'-C4'-C3'	-5.62	100.48	106.10
57	BB	1931	U	O4'-C4'-C3'	-5.62	98.39	104.00
57	BB	2675	A	C4'-C3'-O3'	-5.62	104.58	113.00
21	AA	89	U	O4'-C1'-C2'	-5.61	101.99	107.60
57	BB	1337	G	C4'-C3'-O3'	-5.61	104.58	113.00
57	BB	2512	C	C4'-C3'-C2'	-5.61	96.99	102.60
57	BB	2641	G	C4'-C3'-O3'	-5.61	104.58	113.00
5	AN	59	GLN	CA-C-O	5.61	126.42	120.36
26	AV	76	A	C4'-C3'-C2'	-5.61	96.99	102.60
57	BB	439	A	O5'-C5'-C4'	-5.61	103.08	111.50
57	BB	1043	C	C4'-C3'-C2'	-5.61	96.99	102.60
57	BB	1732	C	C3'-C2'-C1'	-5.61	95.89	101.50
8	AQ	44	HIS	CB-CG-CD2	-5.61	123.91	131.20
10	AS	18	VAL	CA-C-O	-5.61	115.11	120.95
21	AA	467	U	C4'-C3'-O3'	5.61	121.42	113.00
21	AA	1385	G	O4'-C4'-C3'	-5.61	98.39	104.00
21	AA	1507	A	C5'-C4'-C3'	-5.61	107.58	116.00
21	AA	1510	C	O4'-C1'-N1	5.61	116.92	108.50
24	AX	16	A	O4'-C1'-C2'	5.61	113.21	107.60
57	BB	393	C	O4'-C1'-N1	5.61	116.92	108.50
57	BB	1743	G	C4'-C3'-O3'	-5.61	104.58	113.00
57	BB	1937	A	O3'-P-O5'	-5.61	95.58	104.00
57	BB	2259	U	C4'-C3'-O3'	-5.61	104.58	113.00
57	BB	2649	C	O4'-C1'-N1	5.61	116.92	108.50
58	BA	20	G	P-O3'-C3'	-5.61	111.79	120.20
21	AA	1107	C	O4'-C1'-C2'	-5.61	101.99	107.60
34	BO	97	PHE	N-CA-CB	5.61	119.34	110.87
41	BV	5	ASN	N-CA-C	-5.61	100.04	108.96
53	BE	186	VAL	CA-C-O	5.61	125.80	120.25
7	AP	20	VAL	N-CA-C	-5.61	99.70	108.95
21	AA	501	C	C4'-C3'-C2'	-5.61	96.99	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1015	G	C4'-C3'-O3'	-5.61	104.59	113.00
55	BG	75	VAL	CA-C-N	5.61	128.14	120.46
55	BG	75	VAL	C-N-CA	5.61	128.14	120.46
57	BB	1233	C	O4'-C1'-C2'	-5.61	101.99	107.60
21	AA	1158	C	O4'-C4'-C3'	-5.61	98.39	104.00
25	AZ	62	ILE	CA-C-O	-5.61	113.99	120.83
31	BL	33	ARG	N-CA-C	-5.61	105.79	113.30
31	BL	101	ILE	CB-CA-C	5.61	116.14	110.65
35	BP	38	ARG	O-C-N	-5.61	116.99	122.99
45	BC	150	GLY	CA-C-O	5.61	125.97	119.13
55	BG	105	SER	N-CA-C	-5.61	98.39	108.48
57	BB	92	U	O4'-C1'-N1	5.61	116.91	108.50
57	BB	644	A	C4'-C3'-C2'	-5.61	96.99	102.60
57	BB	1278	C	C4'-C3'-C2'	-5.61	96.99	102.60
57	BB	2049	G	O4'-C1'-N9	5.61	116.91	108.50
25	AZ	49	ILE	CA-C-O	5.60	127.63	120.96
45	BC	69	ASN	CA-C-N	5.60	132.24	121.54
45	BC	69	ASN	C-N-CA	5.60	132.24	121.54
57	BB	332	A	O4'-C4'-C3'	-5.60	100.50	106.10
1	AJ	15	HIS	CA-CB-CG	5.60	119.40	113.80
20	AI	44	ARG	N-CA-C	5.60	117.39	111.28
21	AA	1322	C	P-O5'-C5'	-5.60	112.50	120.90
44	BY	39	GLN	N-CA-C	-5.60	103.29	111.30
52	BD	85	ALA	N-CA-C	-5.60	99.88	109.24
57	BB	614	A	P-O3'-C3'	5.60	128.60	120.20
57	BB	745	G	C4'-C3'-C2'	-5.60	97.00	102.60
57	BB	1198	U	O4'-C4'-C3'	-5.60	98.40	104.00
57	BB	1460	U	P-O5'-C5'	5.60	129.30	120.90
57	BB	2754	U	O4'-C1'-N1	5.60	116.90	108.50
21	AA	527	G	P-O5'-C5'	5.60	129.30	120.90
22	AY	58	A	C3'-C2'-O2'	-5.60	106.20	114.60
26	AV	65	C	C5'-C4'-C3'	-5.60	107.60	116.00
31	BL	41	ARG	NE-CZ-NH2	5.60	124.24	119.20
54	BF	56	LEU	CA-C-N	5.60	128.34	120.28
54	BF	56	LEU	C-N-CA	5.60	128.34	120.28
57	BB	1145	C	C4'-C3'-C2'	-5.60	97.00	102.60
57	BB	1401	G	C4'-C3'-C2'	-5.60	97.00	102.60
57	BB	2381	A	C1'-O4'-C4'	-5.60	104.30	109.90
21	AA	230	G	O4'-C1'-N9	5.60	116.90	108.50
21	AA	618	C	O5'-C5'-C4'	-5.60	103.10	111.50
29	BJ	119	PHE	N-CA-C	-5.60	105.17	112.23
53	BE	19	PHE	N-CA-C	-5.60	105.66	112.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2248	C	C4'-C3'-O3'	-5.60	104.60	113.00
57	BB	2809	A	O4'-C4'-C3'	-5.60	98.40	104.00
21	AA	554	A	C4'-C3'-C2'	-5.60	97.00	102.60
26	AV	13	C	O4'-C1'-N1	5.60	116.90	108.50
29	BJ	139	VAL	N-CA-C	5.60	117.52	109.51
32	BM	11	LYS	N-CA-CB	5.60	120.48	110.80
57	BB	6	A	O4'-C1'-N9	5.60	116.90	108.50
57	BB	432	A	C4'-C3'-O3'	-5.60	104.60	113.00
57	BB	699	A	C4'-C3'-O3'	-5.60	104.60	113.00
57	BB	1679	A	P-O5'-C5'	-5.60	112.50	120.90
21	AA	1105	A	O4'-C1'-N9	5.60	116.89	108.50
56	BH	42	LYS	CA-C-N	5.60	128.55	120.38
56	BH	42	LYS	C-N-CA	5.60	128.55	120.38
57	BB	1235	G	C5'-C4'-C3'	-5.60	107.61	116.00
57	BB	2489	U	O4'-C1'-N1	5.60	116.89	108.50
13	AB	60	ALA	N-CA-C	-5.59	103.98	111.87
21	AA	1076	U	C4'-C3'-O3'	-5.59	104.61	113.00
25	AZ	301	HIS	CB-CG-CD2	-5.59	123.93	131.20
33	BN	91	ALA	N-CA-CB	5.59	119.34	110.84
39	BT	4	GLU	CB-CG-CD	-5.59	103.09	112.60
57	BB	684	G	P-O3'-C3'	-5.59	111.81	120.20
57	BB	1071	G	C4'-C3'-O3'	-5.59	104.61	113.00
57	BB	1129	A	C5'-C4'-O4'	5.59	118.19	109.80
57	BB	2603	G	O3'-P-O5'	5.59	112.39	104.00
53	BE	121	VAL	O-C-N	5.59	127.32	122.12
21	AA	1143	G	C3'-C2'-C1'	-5.59	95.71	101.30
23	AW	55	U	C1'-C2'-O2'	5.59	116.79	108.40
25	AZ	364	HIS	CB-CG-CD2	-5.59	123.93	131.20
56	BH	62	LEU	N-CA-C	-5.59	106.30	113.23
57	BB	841	G	C1'-O4'-C4'	-5.59	104.31	109.90
57	BB	2741	A	C5'-C4'-C3'	-5.59	107.61	116.00
5	AN	21	ALA	N-CA-CB	5.59	119.94	110.49
21	AA	1230	C	C3'-C2'-C1'	-5.59	95.71	101.30
29	BJ	127	GLY	CA-C-N	5.59	130.07	122.19
29	BJ	127	GLY	C-N-CA	5.59	130.07	122.19
41	BV	48	MET	CA-C-O	-5.59	114.95	120.82
45	BC	242	HIS	CE1-NE2-CD2	-5.59	103.41	109.00
57	BB	102	U	C3'-C2'-O2'	-5.59	106.22	114.60
57	BB	136	G	P-O3'-C3'	-5.59	111.82	120.20
57	BB	770	G	O4'-C1'-C2'	-5.59	102.01	107.60
57	BB	1161	C	C4'-C3'-C2'	-5.59	97.01	102.60
14	AC	71	ARG	N-CA-C	-5.59	102.58	110.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1146	C	O4'-C1'-N1	5.59	116.88	108.50
57	BB	2609	U	C5'-C4'-C3'	5.59	123.58	115.20
21	AA	216	U	C1'-O4'-C4'	-5.59	104.31	109.90
25	AZ	303	LYS	N-CA-C	-5.59	101.07	109.95
40	BU	57	ILE	N-CA-CB	5.59	120.45	111.23
57	BB	2254	C	O4'-C4'-C3'	5.59	109.59	104.00
11	AT	19	HIS	CA-C-N	5.58	128.08	120.54
11	AT	19	HIS	C-N-CA	5.58	128.08	120.54
23	AW	35	A	N9-C1'-C2'	5.58	120.38	112.00
3	AL	54	VAL	O-C-N	-5.58	116.95	122.76
13	AB	23	ASN	CA-C-O	-5.58	114.53	120.28
21	AA	319	G	O4'-C1'-N9	5.58	116.88	108.50
21	AA	564	C	C5'-C4'-C3'	-5.58	107.62	116.00
21	AA	678	U	O4'-C1'-N1	5.58	116.88	108.50
21	AA	707	U	O4'-C4'-C3'	-5.58	98.42	104.00
21	AA	1482	G	P-O3'-C3'	5.58	128.57	120.20
54	BF	118	ALA	O-C-N	-5.58	116.55	123.36
56	BH	107	GLY	N-CA-C	-5.58	107.40	115.27
57	BB	492	A	O4'-C4'-C3'	-5.58	98.42	104.00
57	BB	1801	A	O4'-C1'-N9	5.58	116.58	108.20
57	BB	2392	A	O4'-C4'-C3'	5.58	109.58	104.00
13	AB	25	LYS	CA-C-O	5.58	125.51	119.15
56	BH	76	GLU	N-CA-C	5.58	122.69	110.80
21	AA	408	A	C5'-C4'-C3'	-5.58	107.63	116.00
53	BE	179	SER	N-CA-C	-5.58	105.28	111.36
57	BB	2540	C	O4'-C1'-N1	5.58	116.87	108.50
17	AF	5	GLU	N-CA-CB	5.58	119.35	110.65
18	AG	28	ILE	N-CA-C	-5.58	105.09	110.72
21	AA	467	U	C1'-O4'-C4'	-5.58	104.32	109.90
21	AA	1138	G	O5'-C5'-C4'	-5.58	103.13	111.50
57	BB	1125	G	O4'-C4'-C3'	5.58	109.58	104.00
57	BB	2084	C	O4'-C4'-C3'	-5.58	98.42	104.00
57	BB	2700	A	O4'-C1'-N9	5.58	116.87	108.50
57	BB	2882	A	O4'-C1'-N9	5.58	116.87	108.50
29	BJ	128	ASN	N-CA-CB	5.58	120.55	112.13
53	BE	20	GLY	N-CA-C	-5.58	106.96	115.66
57	BB	724	U	O4'-C1'-N1	5.58	116.86	108.50
57	BB	965	C	C1'-C2'-O2'	5.58	116.76	108.40
57	BB	2164	C	O4'-C4'-C3'	-5.58	98.42	104.00
15	AD	184	LYS	CA-C-N	5.57	126.81	119.84
15	AD	184	LYS	C-N-CA	5.57	126.81	119.84
18	AG	115	MET	CA-C-N	5.57	132.18	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	AG	115	MET	C-N-CA	5.57	132.18	121.54
21	AA	1225	A	P-O5'-C5'	5.57	129.26	120.90
57	BB	69	C	O4'-C1'-N1	5.57	116.86	108.50
57	BB	352	A	O4'-C1'-C2'	-5.57	102.03	107.60
57	BB	867	C	C3'-C2'-C1'	5.57	106.87	101.30
57	BB	1869	G	C5'-C4'-C3'	-5.57	107.64	116.00
27	B5	207	VAL	CB-CA-C	-5.57	103.58	111.21
49	B2	26	ASN	N-CA-C	-5.57	106.53	113.38
1	AJ	76	ILE	N-CA-CB	5.57	119.49	110.13
8	AQ	31	PRO	CA-C-N	5.57	129.46	120.82
8	AQ	31	PRO	C-N-CA	5.57	129.46	120.82
21	AA	751	U	O4'-C1'-N1	5.57	116.86	108.50
21	AA	758	C	C3'-C2'-O2'	5.57	119.06	110.70
29	BJ	55	ILE	CA-C-O	5.57	125.77	120.25
57	BB	769	U	C4'-C3'-O3'	-5.57	104.65	113.00
57	BB	1197	G	C4'-C3'-C2'	-5.57	97.03	102.60
57	BB	1492	G	P-O5'-C5'	-5.57	112.55	120.90
57	BB	2324	U	C4'-C3'-C2'	5.57	108.17	102.60
57	BB	2463	C	C3'-C2'-C1'	5.57	106.87	101.30
1	AJ	8	ILE	N-CA-CB	5.57	119.23	112.10
20	AI	10	ARG	N-CA-CB	5.57	119.88	110.69
21	AA	1040	U	O4'-C1'-N1	5.57	116.85	108.50
36	BQ	103	VAL	CG1-CB-CG2	5.57	123.05	110.80
37	BR	21	ARG	O-C-N	5.57	129.73	123.27
57	BB	611	C	C4'-C3'-O3'	-5.57	104.65	113.00
57	BB	795	C	C4'-C3'-C2'	-5.57	97.03	102.60
57	BB	1497	U	O4'-C1'-C2'	-5.57	100.23	105.80
2	AK	98	ALA	CA-C-N	5.57	128.00	120.65
2	AK	98	ALA	C-N-CA	5.57	128.00	120.65
21	AA	49	U	C1'-C2'-O2'	-5.57	103.45	111.80
21	AA	734	G	C4'-C3'-C2'	-5.57	97.03	102.60
21	AA	782	A	C4'-C3'-C2'	-5.57	97.03	102.60
21	AA	1051	C	C4'-C3'-O3'	-5.57	104.65	113.00
25	AZ	19	HIS	N-CA-C	-5.57	101.30	109.81
26	AV	60	U	C5'-C4'-C3'	-5.57	106.85	115.20
57	BB	757	G	C1'-O4'-C4'	-5.57	104.33	109.90
57	BB	1199	U	C5'-C4'-C3'	-5.57	107.65	116.00
10	AS	35	ARG	N-CA-CB	5.56	120.34	111.66
15	AD	19	PHE	CA-CB-CG	-5.56	108.24	113.80
22	AY	29	A	C4'-C3'-O3'	-5.56	104.65	113.00
25	AZ	153	VAL	N-CA-C	-5.56	105.10	110.72
31	BL	28	GLY	CA-C-O	5.56	130.25	120.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	BQ	34	ALA	CA-C-N	5.56	127.67	120.44
36	BQ	34	ALA	C-N-CA	5.56	127.67	120.44
1	AJ	37	ARG	N-CA-C	-5.56	100.63	109.59
31	BL	42	SER	CA-C-O	-5.56	115.07	121.19
33	BN	108	ALA	N-CA-C	-5.56	97.52	109.81
53	BE	6	LYS	N-CA-CB	5.56	119.89	110.49
21	AA	1147	C	P-O5'-C5'	5.56	129.24	120.90
54	BF	109	ARG	CA-C-O	5.56	125.17	119.05
58	BA	15	A	O3'-P-O5'	-5.56	95.66	104.00
22	AY	47	U	O4'-C1'-N1	5.56	116.84	108.50
57	BB	1662	U	O4'-C1'-N1	5.56	116.84	108.50
57	BB	2326	C	C5'-C4'-O4'	-5.56	101.46	109.80
57	BB	2813	A	P-O3'-C3'	5.56	128.54	120.20
17	AF	75	GLU	CA-C-N	5.56	127.66	120.44
17	AF	75	GLU	C-N-CA	5.56	127.66	120.44
21	AA	12	U	O4'-C1'-N1	5.56	116.84	108.50
21	AA	1508	A	C1'-O4'-C4'	5.56	115.46	109.90
22	AY	7	U	C3'-C2'-C1'	-5.56	95.94	101.50
27	B5	57	GLN	CG-CD-NE2	5.56	124.74	116.40
34	BO	71	ALA	N-CA-C	-5.56	105.10	112.94
35	BP	11	GLN	N-CA-C	-5.56	106.40	114.12
39	BT	25	GLU	CA-C-N	5.56	128.76	120.31
39	BT	25	GLU	C-N-CA	5.56	128.76	120.31
45	BC	84	PRO	CB-CA-C	-5.56	102.39	111.56
57	BB	444	C	C4'-C3'-C2'	-5.56	97.04	102.60
57	BB	501	A	C3'-C2'-C1'	5.56	106.86	101.30
57	BB	599	A	C1'-O4'-C4'	-5.56	104.34	109.90
57	BB	925	A	P-O5'-C5'	5.56	129.24	120.90
57	BB	1217	U	O3'-P-O5'	-5.56	95.66	104.00
57	BB	1237	A	C3'-C2'-C1'	5.56	106.86	101.30
57	BB	2022	U	O4'-C1'-N1	5.56	116.53	108.20
4	AM	105	ALA	CA-C-O	5.56	125.94	118.38
11	AT	81	GLN	OE1-CD-NE2	5.56	128.16	122.60
15	AD	14	GLU	CB-CG-CD	-5.56	103.16	112.60
34	BO	36	TYR	CA-C-O	5.56	127.61	121.11
57	BB	250	G	P-O5'-C5'	-5.56	112.57	120.90
57	BB	2580	U	C5'-C4'-C3'	-5.56	107.67	116.00
28	BI	73	PRO	N-CA-CB	-5.55	97.69	103.08
35	BP	77	SER	CA-C-O	-5.55	114.82	119.76
41	BV	43	ASP	CA-C-O	-5.55	114.64	120.58
45	BC	120	ASP	N-CA-C	-5.55	104.34	113.50
47	B0	29	VAL	CA-CB-CG1	5.55	119.84	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	128	C	O4'-C1'-N1	5.55	116.83	108.50
57	BB	511	U	C1'-O4'-C4'	5.55	115.45	109.90
15	AD	125	ASN	OD1-CG-ND2	-5.55	117.05	122.60
48	B1	30	PRO	CA-C-N	5.55	129.66	120.94
48	B1	30	PRO	C-N-CA	5.55	129.66	120.94
57	BB	1336	A	C4'-C3'-C2'	-5.55	97.05	102.60
57	BB	1891	G	P-O5'-C5'	5.55	129.23	120.90
14	AC	28	PHE	CA-CB-CG	5.55	119.35	113.80
21	AA	166	U	O4'-C1'-C2'	-5.55	102.05	107.60
42	BW	24	ARG	CB-CA-C	5.55	121.47	110.42
56	BH	78	VAL	N-CA-CB	5.55	117.99	111.66
57	BB	433	C	O4'-C1'-N1	5.55	116.83	108.50
57	BB	535	G	C4'-C3'-C2'	-5.55	97.05	102.60
57	BB	800	A	P-O3'-C3'	5.55	128.53	120.20
57	BB	858	G	C1'-C2'-O2'	5.55	120.13	111.80
57	BB	1051	G	C5'-C4'-C3'	-5.55	107.67	116.00
57	BB	2076	U	C5'-C4'-C3'	5.55	124.33	116.00
57	BB	2364	C	O4'-C1'-N1	5.55	116.83	108.50
21	AA	702	A	C4'-C3'-C2'	5.55	108.15	102.60
22	AY	59	U	O5'-C5'-C4'	-5.55	103.18	111.50
40	BU	6	ARG	O-C-N	5.55	129.10	122.27
57	BB	171	U	C1'-O4'-C4'	-5.55	104.35	109.90
57	BB	398	C	P-O5'-C5'	-5.55	112.57	120.90
57	BB	2308	G	O4'-C1'-N9	5.55	116.83	108.50
28	BI	55	PRO	N-CA-CB	5.55	107.74	103.30
50	B3	25	HIS	CA-CB-CG	5.55	119.35	113.80
56	BH	29	PHE	CA-C-N	5.55	131.77	121.62
56	BH	29	PHE	C-N-CA	5.55	131.77	121.62
57	BB	1598	A	C4'-C3'-O3'	-5.55	104.68	113.00
57	BB	2152	G	O4'-C1'-C2'	-5.55	102.05	107.60
57	BB	2188	U	P-O5'-C5'	5.55	129.22	120.90
21	AA	25	C	N1-C1'-C2'	-5.55	103.68	112.00
21	AA	1509	C	O4'-C1'-N1	5.55	116.82	108.50
50	B3	5	THR	CA-C-N	-5.55	115.80	122.90
50	B3	5	THR	C-N-CA	-5.55	115.80	122.90
21	AA	421	U	C4'-C3'-C2'	-5.54	97.06	102.60
51	B4	11	CYS	N-CA-CB	5.54	120.00	111.24
57	BB	464	U	C3'-C2'-C1'	5.54	106.84	101.30
57	BB	1403	A	O4'-C1'-N9	5.54	116.82	108.50
57	BB	2346	A	C5'-C4'-C3'	-5.54	106.88	115.20
7	AP	50	THR	N-CA-CB	5.54	119.81	110.77
15	AD	139	ASN	CA-CB-CG	-5.54	107.06	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	115	G	C4'-C3'-C2'	5.54	108.14	102.60
27	B5	139	ASN	CA-C-N	5.54	125.20	119.05
27	B5	139	ASN	C-N-CA	5.54	125.20	119.05
48	B1	18	HIS	ND1-CE1-NE2	5.54	113.94	108.40
57	BB	1544	A	O4'-C4'-C3'	-5.54	98.46	104.00
21	AA	149	A	O4'-C4'-C3'	5.54	109.54	104.00
21	AA	1167	A	P-O3'-C3'	5.54	128.51	120.20
21	AA	1338	G	C4'-C3'-O3'	-5.54	104.69	113.00
28	BI	44	LYS	CB-CA-C	-5.54	99.58	110.11
55	BG	76	ILE	N-CA-CB	5.54	118.08	110.54
57	BB	1547	C	O4'-C1'-N1	5.54	116.81	108.50
57	BB	2699	C	P-O5'-C5'	5.54	129.21	120.90
21	AA	1207	G	C4'-C3'-C2'	-5.54	97.06	102.60
21	AA	1425	U	P-O5'-C5'	5.54	129.21	120.90
16	AE	143	LEU	N-CA-CB	5.54	118.69	110.49
21	AA	1259	C	C4'-C3'-O3'	-5.54	104.69	113.00
23	AW	34	G	C3'-C2'-C1'	5.54	106.84	101.30
37	BR	77	PHE	N-CA-C	-5.54	100.75	109.50
53	BE	80	SER	CA-C-N	5.54	128.72	121.85
53	BE	80	SER	C-N-CA	5.54	128.72	121.85
57	BB	769	U	O4'-C1'-C2'	-5.54	102.06	107.60
57	BB	879	G	C5'-C4'-O4'	5.54	118.11	109.80
57	BB	2005	A	C4'-C3'-O3'	-5.54	104.69	113.00
57	BB	2566	A	P-O3'-C3'	5.54	128.51	120.20
57	BB	2675	A	P-O3'-C3'	-5.54	111.89	120.20
28	BI	24	GLY	CA-C-O	-5.54	113.60	121.52
57	BB	125	A	C3'-C2'-O2'	5.54	119.01	110.70
57	BB	1336	A	C5'-C4'-C3'	-5.54	107.69	116.00
57	BB	2306	C	P-O5'-C5'	-5.54	112.59	120.90
7	AP	35	ARG	NE-CZ-NH2	5.54	124.18	119.20
21	AA	1031	C	C2'-C3'-O3'	5.54	117.80	109.50
21	AA	1468	A	O4'-C4'-C3'	-5.54	98.46	104.00
48	B1	3	GLY	CA-C-N	5.54	131.93	121.97
48	B1	3	GLY	C-N-CA	5.54	131.93	121.97
57	BB	242	G	C3'-C2'-C1'	-5.54	95.96	101.50
57	BB	2448	A	O3'-P-O5'	-5.54	95.70	104.00
10	AS	31	ARG	CB-CG-CD	5.53	124.03	111.30
21	AA	297	G	C4'-C3'-O3'	-5.53	104.70	113.00
26	AV	60	U	P-O5'-C5'	-5.53	112.60	120.90
37	BR	79	ARG	NE-CZ-NH1	-5.53	115.97	121.50
53	BE	143	LEU	N-CA-C	-5.53	98.17	108.02
57	BB	1300	G	C1'-O4'-C4'	-5.53	104.17	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1410	G	C4'-C3'-C2'	-5.53	97.07	102.60
57	BB	2466	C	O4'-C1'-N1	5.53	116.80	108.50
25	AZ	91	MET	CG-SD-CE	-5.53	88.73	100.90
28	BI	113	ALA	N-CA-C	5.53	120.50	111.37
57	BB	543	G	P-O3'-C3'	5.53	128.50	120.20
57	BB	731	C	O3'-P-O5'	-5.53	95.70	104.00
21	AA	199	A	C3'-C2'-O2'	5.53	118.99	110.70
21	AA	234	C	O4'-C1'-N1	5.53	116.80	108.50
23	AW	69	G	O4'-C1'-N9	5.53	116.80	108.50
45	BC	35	LYS	CB-CG-CD	5.53	124.02	111.30
57	BB	740	C	O4'-C1'-N1	5.53	116.80	108.50
57	BB	1004	U	O4'-C1'-N1	5.53	116.80	108.50
57	BB	1072	C	C1'-O4'-C4'	-5.53	104.37	109.90
57	BB	1591	A	O4'-C1'-N9	5.53	116.80	108.50
57	BB	2140	G	C4'-C3'-O3'	-5.53	104.70	113.00
58	BA	27	C	C5'-C4'-C3'	-5.53	107.70	116.00
58	BA	107	G	O3'-P-O5'	-5.53	95.70	104.00
2	AK	99	LEU	N-CA-C	5.53	117.00	110.97
10	AS	28	LYS	CA-C-N	-5.53	112.93	119.84
10	AS	28	LYS	C-N-CA	-5.53	112.93	119.84
17	AF	74	LEU	CA-C-N	5.53	127.63	120.44
17	AF	74	LEU	C-N-CA	5.53	127.63	120.44
43	BX	28	PHE	N-CA-C	-5.53	100.67	109.07
57	BB	1454	C	C5'-C4'-C3'	5.53	124.29	116.00
1	AJ	10	LEU	N-CA-C	-5.53	99.72	108.73
5	AN	85	GLU	CB-CA-C	-5.53	101.66	110.84
16	AE	88	HIS	ND1-CE1-NE2	5.53	113.93	108.40
21	AA	1471	U	P-O3'-C3'	-5.53	111.91	120.20
23	AW	30	G	O3'-P-O5'	5.53	112.29	104.00
57	BB	513	A	C3'-C2'-C1'	5.53	106.83	101.30
7	AP	5	ARG	O-C-N	-5.53	117.46	123.26
20	AI	123	ARG	N-CA-C	-5.53	99.48	108.82
21	AA	556	C	P-O3'-C3'	-5.53	111.91	120.20
22	AY	23	A	O4'-C4'-C3'	-5.53	98.47	104.00
25	AZ	170	VAL	N-CA-CB	5.53	118.76	111.25
25	AZ	214	ILE	CA-C-N	5.53	132.09	121.54
25	AZ	214	ILE	C-N-CA	5.53	132.09	121.54
52	BD	46	ARG	NE-CZ-NH2	-5.53	114.23	119.20
53	BE	162	ARG	N-CA-C	-5.52	106.24	114.64
55	BG	88	LEU	N-CA-C	-5.52	100.12	108.46
57	BB	846	U	O3'-P-O5'	-5.52	95.71	104.00
57	BB	1250	G	C2'-C3'-O3'	5.52	117.78	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2508	G	O4'-C1'-N9	5.52	116.79	108.50
21	AA	672	U	O4'-C1'-N1	5.52	116.78	108.50
21	AA	1460	C	O4'-C1'-N1	5.52	116.78	108.50
25	AZ	351	MET	CA-C-N	5.52	126.74	119.84
25	AZ	351	MET	C-N-CA	5.52	126.74	119.84
57	BB	834	G	C1'-C2'-O2'	5.52	116.69	108.40
57	BB	1417	C	P-O3'-C3'	-5.52	111.92	120.20
57	BB	2311	A	C5'-C4'-O4'	5.52	117.38	109.10
57	BB	2461	A	O4'-C1'-C2'	-5.52	102.08	107.60
57	BB	2625	G	C3'-C2'-C1'	5.52	106.82	101.30
38	BS	51	LEU	N-CA-C	-5.52	104.08	111.87
57	BB	185	G	P-O3'-C3'	-5.52	111.92	120.20
57	BB	2519	U	O4'-C1'-N1	5.52	116.48	108.20
10	AS	7	GLY	O-C-N	-5.52	116.25	121.77
13	AB	170	ILE	CA-C-N	5.52	127.61	120.44
13	AB	170	ILE	C-N-CA	5.52	127.61	120.44
14	AC	63	ILE	CB-CA-C	5.52	120.34	111.29
15	AD	130	ASN	OD1-CG-ND2	5.52	128.12	122.60
54	BF	27	VAL	CA-C-O	-5.52	112.56	119.95
57	BB	608	A	O4'-C4'-C3'	-5.52	98.48	104.00
5	AN	17	ASP	CA-CB-CG	-5.52	107.08	112.60
14	AC	38	VAL	N-CA-CB	5.52	120.09	110.65
32	BM	51	ARG	NE-CZ-NH2	-5.52	114.23	119.20
43	BX	61	LYS	N-CA-C	-5.52	106.60	113.55
57	BB	802	A	C4'-C3'-O3'	-5.52	104.72	113.00
57	BB	2666	C	O4'-C1'-N1	5.52	116.78	108.50
57	BB	2855	C	C4'-C3'-O3'	-5.52	104.72	113.00
21	AA	885	G	O4'-C4'-C3'	-5.52	98.48	104.00
21	AA	1490	U	C5'-C4'-C3'	-5.52	107.73	116.00
22	AY	2	C	O4'-C1'-N1	5.52	116.77	108.50
57	BB	1578	U	P-O3'-C3'	-5.52	111.93	120.20
57	BB	2474	U	O4'-C1'-N1	5.52	116.77	108.50
12	AU	13	VAL	CA-C-O	-5.51	116.04	121.67
16	AE	133	ILE	N-CA-C	5.51	117.94	111.05
21	AA	574	A	C4'-C3'-C2'	5.51	108.11	102.60
21	AA	929	G	C1'-O4'-C4'	5.51	115.41	109.90
26	AV	57	A	O4'-C1'-N9	5.51	116.77	108.50
28	BI	51	GLY	O-C-N	5.51	128.90	122.45
39	BT	20	ALA	N-CA-CB	5.51	119.81	110.49
49	B2	23	ALA	N-CA-C	-5.51	105.49	113.21
57	BB	2305	U	C4'-C3'-C2'	-5.51	97.08	102.60
2	AK	63	GLN	OE1-CD-NE2	5.51	128.11	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AR	62	ARG	CB-CA-C	-5.51	102.22	110.88
51	B4	35	GLN	N-CA-C	-5.51	101.18	109.95
58	BA	33	G	P-O5'-C5'	-5.51	112.63	120.90
58	BA	77	U	C4'-C3'-O3'	-5.51	104.73	113.00
2	AK	24	ALA	N-CA-CB	5.51	119.68	110.53
18	AG	121	ASN	CA-CB-CG	-5.51	107.09	112.60
37	BR	73	LYS	N-CA-CB	5.51	119.43	110.17
57	BB	151	C	P-O5'-C5'	5.51	129.17	120.90
57	BB	680	C	O4'-C1'-N1	5.51	116.77	108.50
57	BB	682	G	C3'-C2'-C1'	-5.51	95.79	101.30
57	BB	2323	G	P-O5'-C5'	-5.51	112.63	120.90
2	AK	126	ARG	NE-CZ-NH2	-5.51	114.24	119.20
10	AS	73	PHE	CA-CB-CG	-5.51	108.29	113.80
43	BX	50	VAL	CB-CA-C	-5.51	104.14	111.80
53	BE	129	PRO	N-CA-C	-5.51	101.12	112.47
57	BB	466	A	P-O5'-C5'	-5.51	112.63	120.90
57	BB	2159	G	O4'-C1'-N9	5.51	116.47	108.20
57	BB	2232	C	C1'-C2'-O2'	5.51	116.66	108.40
58	BA	65	U	O5'-C5'-C4'	-5.51	103.24	111.50
6	AO	23	SER	O-C-N	5.51	129.65	122.87
14	AC	7	ASN	N-CA-C	-5.51	106.61	113.38
21	AA	71	A	O4'-C1'-N9	5.51	116.76	108.50
31	BL	108	ALA	O-C-N	-5.51	117.72	123.56
52	BD	82	PHE	CB-CA-C	-5.51	102.69	111.17
21	AA	1241	G	O4'-C1'-N9	5.51	116.76	108.50
31	BL	76	GLU	CB-CG-CD	-5.51	103.24	112.60
33	BN	16	HIS	CA-CB-CG	5.51	119.31	113.80
57	BB	842	U	C4'-C3'-O3'	-5.51	104.74	113.00
57	BB	2005	A	O3'-P-O5'	-5.51	95.74	104.00
57	BB	2765	A	O4'-C4'-C3'	-5.51	98.49	104.00
42	BW	57	THR	CA-C-N	5.50	129.06	120.75
42	BW	57	THR	C-N-CA	5.50	129.06	120.75
53	BE	116	ASP	CA-C-O	5.50	128.38	120.51
57	BB	1984	G	C4'-C3'-C2'	-5.50	97.09	102.60
19	AH	56	PRO	CA-C-O	-5.50	115.07	121.34
21	AA	103	U	C4'-C3'-O3'	-5.50	104.75	113.00
21	AA	736	C	O4'-C1'-N1	5.50	116.76	108.50
25	AZ	217	VAL	N-CA-C	-5.50	100.20	108.12
27	B5	110	ASN	N-CA-CB	5.50	119.79	110.49
28	BI	92	PRO	N-CD-CG	5.50	111.46	103.20
38	BS	86	MET	O-C-N	-5.50	117.55	121.84
57	BB	99	U	O4'-C1'-N1	5.50	116.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	205	G	C4'-C3'-C2'	-5.50	97.10	102.60
57	BB	1557	C	O4'-C1'-N1	5.50	116.76	108.50
13	AB	102	ASN	CA-C-N	5.50	132.05	121.54
13	AB	102	ASN	C-N-CA	5.50	132.05	121.54
20	AI	4	GLN	N-CA-CB	5.50	119.79	110.49
21	AA	507	C	O4'-C1'-N1	5.50	116.75	108.50
21	AA	1342	C	O4'-C1'-N1	5.50	116.75	108.50
41	BV	88	HIS	CG-CD2-NE2	5.50	112.70	107.20
57	BB	143	C	O4'-C1'-N1	5.50	116.75	108.50
25	AZ	75	HIS	CA-C-N	5.50	130.75	122.99
25	AZ	75	HIS	C-N-CA	5.50	130.75	122.99
40	BU	71	ILE	CA-CB-CG1	5.50	119.75	110.40
57	BB	1451	C	O4'-C1'-N1	5.50	116.75	108.50
18	AG	62	GLU	CA-C-O	-5.50	114.59	121.02
21	AA	712	A	P-O5'-C5'	5.50	129.15	120.90
22	AY	29	A	P-O5'-C5'	-5.50	112.65	120.90
52	BD	43	ASP	CB-CA-C	5.50	122.33	115.79
54	BF	126	ASN	OD1-CG-ND2	5.50	128.10	122.60
57	BB	473	G	O4'-C4'-C3'	-5.50	98.50	104.00
57	BB	1479	G	C3'-C2'-C1'	-5.50	95.80	101.30
57	BB	2237	G	O3'-P-O5'	-5.50	95.75	104.00
38	BS	27	LYS	N-CA-C	-5.50	105.89	112.59
45	BC	52	HIS	CE1-NE2-CD2	-5.50	103.50	109.00
57	BB	1659	G	C4'-C3'-O3'	-5.50	104.75	113.00
15	AD	43	ARG	CB-CA-C	5.50	122.27	110.45
21	AA	1270	G	P-O5'-C5'	5.50	129.14	120.90
56	BH	18	GLN	OE1-CD-NE2	5.50	128.09	122.60
11	AT	21	ALA	CA-C-N	5.49	127.91	120.38
11	AT	21	ALA	C-N-CA	5.49	127.91	120.38
21	AA	9	G	P-O5'-C5'	5.49	129.14	120.90
21	AA	169	C	P-O5'-C5'	-5.49	112.66	120.90
21	AA	1061	G	O4'-C4'-C3'	-5.49	98.51	104.00
25	AZ	123	ARG	NE-CZ-NH1	-5.49	116.01	121.50
28	BI	18	ASN	CB-CA-C	-5.49	101.99	110.62
57	BB	132	G	O4'-C1'-N9	5.49	116.74	108.50
57	BB	794	A	C1'-O4'-C4'	5.49	115.39	109.90
57	BB	1456	G	C4'-C3'-C2'	-5.49	97.11	102.60
57	BB	1902	C	O5'-C5'-C4'	-5.49	103.26	111.50
6	AO	35	ILE	CA-C-N	5.49	128.40	120.38
6	AO	35	ILE	C-N-CA	5.49	128.40	120.38
21	AA	513	C	O4'-C1'-N1	5.49	116.74	108.50
21	AA	1201	A	P-O3'-C3'	5.49	128.44	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BZ	6	ILE	CA-C-O	-5.49	115.27	121.75
57	BB	1841	U	C4'-C3'-O3'	-5.49	104.76	113.00
21	AA	280	C	O4'-C1'-C2'	5.49	111.29	105.80
21	AA	403	C	O4'-C1'-N1	5.49	116.74	108.50
21	AA	1335	U	C3'-C2'-O2'	-5.49	106.36	114.60
21	AA	1351	U	C4'-C3'-O3'	-5.49	104.76	113.00
28	BI	4	VAL	N-CA-CB	5.49	120.53	112.35
30	BK	98	ILE	N-CA-CB	5.49	120.45	111.45
43	BX	20	ALA	N-CA-C	-5.49	106.25	113.17
57	BB	2585	U	C4'-C3'-C2'	-5.49	97.11	102.60
57	BB	2753	A	O5'-C5'-C4'	-5.49	103.26	111.50
57	BB	2848	G	C3'-C2'-C1'	-5.49	96.01	101.50
15	AD	39	GLN	OE1-CD-NE2	5.49	128.09	122.60
21	AA	801	U	O4'-C4'-C3'	-5.49	98.51	104.00
25	AZ	46	PHE	N-CA-CB	-5.49	101.90	109.91
27	B5	20	GLN	N-CA-CB	5.49	119.22	110.16
52	BD	67	HIS	CB-CG-CD2	-5.49	124.07	131.20
57	BB	1407	G	C4'-C3'-C2'	-5.49	97.11	102.60
57	BB	1670	C	O4'-C1'-N1	5.49	116.73	108.50
57	BB	2028	U	O4'-C1'-N1	5.49	116.73	108.50
57	BB	2407	A	P-O5'-C5'	5.49	129.13	120.90
57	BB	671	C	O5'-C5'-C4'	-5.49	103.27	111.50
57	BB	1813	G	P-O3'-C3'	-5.49	111.97	120.20
20	AI	111	GLU	N-CA-C	-5.49	101.23	109.95
21	AA	204	G	C4'-C3'-O3'	-5.49	104.77	113.00
21	AA	392	C	C5'-C4'-C3'	-5.49	107.77	116.00
21	AA	1406	U	P-O5'-C5'	-5.49	112.67	120.90
22	AY	58	A	C3'-C2'-C1'	5.49	106.98	101.50
26	AV	11	A	C4'-C3'-C2'	-5.49	97.11	102.60
42	BW	14	ASP	N-CA-CB	5.49	119.76	110.49
55	BG	128	THR	CA-C-O	-5.49	113.31	119.95
57	BB	221	A	P-O3'-C3'	5.49	128.43	120.20
57	BB	1350	C	P-O3'-C3'	-5.49	111.97	120.20
57	BB	2615	U	C3'-C2'-C1'	5.49	106.78	101.30
14	AC	46	LEU	CA-C-N	5.48	130.99	122.49
14	AC	46	LEU	C-N-CA	5.48	130.99	122.49
17	AF	18	VAL	CA-C-O	-5.48	112.60	119.95
52	BD	151	THR	N-CA-C	-5.48	101.08	109.64
2	AK	104	PHE	CA-CB-CG	5.48	119.28	113.80
25	AZ	147	GLU	CA-CB-CG	5.48	125.06	114.10
26	AV	35	A	C5'-C4'-C3'	-5.48	107.78	116.00
29	BJ	75	TYR	O-C-N	5.48	130.17	123.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	BY	47	ARG	NH1-CZ-NH2	5.48	126.43	119.30
57	BB	2200	C	O4'-C1'-N1	5.48	116.72	108.50
21	AA	702	A	C3'-C2'-O2'	-5.48	106.38	114.60
25	AZ	383	VAL	CA-C-N	5.48	131.19	121.05
25	AZ	383	VAL	C-N-CA	5.48	131.19	121.05
57	BB	485	C	O4'-C1'-C2'	-5.48	102.12	107.60
57	BB	2508	G	O4'-C4'-C3'	-5.48	98.52	104.00
21	AA	426	U	C4'-C3'-C2'	-5.48	97.12	102.60
21	AA	1324	A	C4'-C3'-O3'	-5.48	104.78	113.00
21	AA	1451	U	P-O5'-C5'	-5.48	112.68	120.90
57	BB	701	G	C4'-C3'-C2'	-5.48	97.12	102.60
57	BB	739	A	O4'-C1'-N9	5.48	116.42	108.20
57	BB	2339	C	O4'-C1'-N1	5.48	116.72	108.50
35	BP	65	ASN	O-C-N	5.48	129.00	122.21
57	BB	1151	A	O5'-C5'-C4'	-5.48	103.28	111.50
57	BB	1907	G	C4'-C3'-O3'	-5.48	104.78	113.00
3	AL	21	PRO	CA-C-O	-5.48	112.44	118.68
4	AM	86	ARG	NE-CZ-NH2	-5.48	114.27	119.20
21	AA	992	U	C2'-C3'-O3'	5.48	117.71	109.50
57	BB	1944	U	O4'-C4'-C3'	-5.48	100.62	106.10
2	AK	28	ASN	OD1-CG-ND2	5.47	128.07	122.60
14	AC	63	ILE	O-C-N	-5.47	115.73	122.57
18	AG	144	ALA	CA-C-N	5.47	129.91	122.19
18	AG	144	ALA	C-N-CA	5.47	129.91	122.19
21	AA	1299	A	C1'-O4'-C4'	5.47	115.38	109.90
57	BB	1670	C	O4'-C4'-C3'	5.47	109.47	104.00
21	AA	1294	G	C4'-C3'-C2'	-5.47	97.13	102.60
33	BN	109	PRO	N-CA-CB	5.47	108.46	103.15
56	BH	65	ALA	CA-C-N	5.47	129.96	121.26
56	BH	65	ALA	C-N-CA	5.47	129.96	121.26
57	BB	44	A	C5'-C4'-O4'	5.47	118.01	109.80
57	BB	455	C	P-O3'-C3'	-5.47	111.99	120.20
57	BB	461	C	O4'-C1'-C2'	-5.47	102.13	107.60
57	BB	1572	A	P-O5'-C5'	5.47	129.11	120.90
57	BB	1815	A	O4'-C1'-N9	5.47	116.41	108.20
21	AA	765	G	C1'-C2'-O2'	5.47	116.61	108.40
22	AY	39	U	C4'-C3'-O3'	-5.47	104.79	113.00
24	AX	18	G	C5'-C4'-C3'	-5.47	106.99	115.20
42	BW	77	LYS	O-C-N	5.47	129.09	122.85
55	BG	47	ASN	CA-C-N	-5.47	114.47	122.19
55	BG	47	ASN	C-N-CA	-5.47	114.47	122.19
6	AO	77	TYR	CB-CA-C	5.47	119.43	110.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AT	25	SER	CA-C-O	5.47	125.67	119.27
21	AA	34	C	P-O3'-C3'	-5.47	112.00	120.20
28	BI	5	GLN	O-C-N	5.47	129.64	122.97
57	BB	398	C	P-O3'-C3'	5.47	128.41	120.20
57	BB	1931	U	P-O5'-C5'	-5.47	112.69	120.90
57	BB	2476	A	O5'-C5'-C4'	-5.47	103.30	111.50
31	BL	7	SER	CA-C-O	-5.47	115.47	120.50
41	BV	50	MET	CA-C-N	5.47	129.85	120.72
41	BV	50	MET	C-N-CA	5.47	129.85	120.72
45	BC	266	ILE	CA-C-N	5.47	128.80	122.35
45	BC	266	ILE	C-N-CA	5.47	128.80	122.35
48	B1	18	HIS	N-CA-C	5.47	118.16	109.96
57	BB	2318	G	C3'-C2'-C1'	5.47	106.77	101.30
57	BB	2580	U	O4'-C4'-C3'	5.47	109.47	104.00
57	BB	2847	U	C4'-C3'-O3'	-5.47	104.80	113.00
4	AM	42	VAL	CB-CA-C	5.47	118.94	110.96
26	AV	28	C	C4'-C3'-O3'	-5.47	104.80	113.00
27	B5	130	VAL	N-CA-CB	5.47	116.68	110.72
28	BI	86	LYS	N-CA-CB	5.47	118.42	110.88
42	BW	28	GLU	N-CA-C	-5.47	106.07	114.16
53	BE	88	ARG	CA-C-O	-5.47	115.07	120.26
54	BF	109	ARG	N-CA-C	-5.47	106.61	113.72
55	BG	81	GLY	CA-C-O	-5.47	114.94	121.83
57	BB	248	G	C5'-C4'-C3'	5.47	124.20	116.00
57	BB	1397	U	O4'-C1'-N1	5.47	116.40	108.20
57	BB	2016	U	O4'-C1'-N1	5.47	116.70	108.50
57	BB	2148	G	C5'-C4'-O4'	5.47	118.00	109.80
14	AC	168	ARG	N-CA-C	-5.46	101.10	109.41
17	AF	36	ILE	CA-C-N	5.46	127.60	120.28
17	AF	36	ILE	C-N-CA	5.46	127.60	120.28
21	AA	1027	C	C4'-C3'-O3'	-5.46	104.80	113.00
27	B5	28	ALA	N-CA-C	5.46	117.67	111.11
36	BQ	61	ILE	O-C-N	5.46	127.40	121.94
50	B3	48	MET	CG-SD-CE	-5.46	88.88	100.90
57	BB	1292	G	C4'-C3'-C2'	-5.46	97.14	102.60
57	BB	1571	A	O4'-C1'-N9	5.46	116.70	108.50
57	BB	2074	U	O4'-C1'-C2'	-5.46	102.14	107.60
16	AE	57	ALA	N-CA-C	5.46	119.69	113.19
18	AG	71	THR	CA-C-N	-5.46	116.05	123.10
18	AG	71	THR	C-N-CA	-5.46	116.05	123.10
57	BB	2250	G	O4'-C1'-N9	5.46	116.39	108.20
57	BB	2761	A	O4'-C1'-N9	5.46	116.69	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	AG	98	LEU	CA-C-N	5.46	127.54	120.44
18	AG	98	LEU	C-N-CA	5.46	127.54	120.44
21	AA	357	G	P-O5'-C5'	-5.46	112.71	120.90
21	AA	1071	C	C4'-C3'-O3'	-5.46	104.81	113.00
33	BN	94	TYR	N-CA-C	-5.46	106.47	113.02
38	BS	7	HIS	CB-CG-ND1	5.46	130.89	122.70
45	BC	146	LYS	N-CA-C	-5.46	101.07	108.11
46	BZ	53	MET	CA-C-O	5.46	126.03	119.59
58	BA	40	U	P-O3'-C3'	5.46	128.39	120.20
21	AA	1040	U	C1'-O4'-C4'	5.46	115.36	109.90
26	AV	3	C	P-O5'-C5'	-5.46	112.71	120.90
46	BZ	7	THR	CA-C-N	5.46	128.61	120.31
46	BZ	7	THR	C-N-CA	5.46	128.61	120.31
57	BB	638	G	P-O5'-C5'	5.46	129.09	120.90
57	BB	1385	A	P-O5'-C5'	-5.46	112.71	120.90
4	AM	90	HIS	CG-CD2-NE2	5.46	112.66	107.20
4	AM	103	THR	N-CA-CB	5.46	119.86	111.24
21	AA	567	G	O4'-C1'-N9	5.46	116.69	108.50
41	BV	63	ILE	N-CA-C	5.46	115.98	108.12
52	BD	148	GLN	CG-CD-NE2	5.46	124.59	116.40
57	BB	1628	G	C5'-C4'-C3'	-5.46	107.81	116.00
57	BB	1692	U	P-O5'-C5'	-5.46	112.71	120.90
4	AM	3	ILE	N-CA-CB	5.46	120.23	111.23
17	AF	98	GLU	N-CA-C	-5.46	100.42	108.99
21	AA	83	C	C4'-C3'-C2'	5.46	108.06	102.60
32	BM	70	ASP	O-C-N	5.46	126.92	121.85
36	BQ	55	GLN	OE1-CD-NE2	5.46	128.06	122.60
57	BB	238	C	O4'-C1'-N1	5.46	116.68	108.50
57	BB	1502	A	C4'-C3'-C2'	-5.46	97.14	102.60
57	BB	1880	U	C2'-C3'-O3'	5.46	121.89	113.70
21	AA	295	C	P-O5'-C5'	-5.46	112.72	120.90
21	AA	972	C	C1'-O4'-C4'	-5.46	104.44	109.90
32	BM	18	ARG	NE-CZ-NH1	-5.46	116.05	121.50
35	BP	45	VAL	CA-C-O	5.46	127.60	120.78
57	BB	2539	C	O4'-C1'-N1	5.46	116.68	108.50
21	AA	846	G	C4'-C3'-O3'	-5.45	104.82	113.00
21	AA	1416	G	P-O3'-C3'	-5.45	112.02	120.20
30	BK	79	ASP	CB-CA-C	-5.45	100.16	109.65
32	BM	102	LEU	CA-C-O	-5.45	112.71	120.51
57	BB	2572	A	C2'-C3'-O3'	5.45	117.68	109.50
21	AA	835	U	O4'-C1'-N1	5.45	116.68	108.50
25	AZ	50	ASP	O-C-N	-5.45	115.16	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	BJ	81	ILE	CA-C-N	5.45	128.75	121.01
29	BJ	81	ILE	C-N-CA	5.45	128.75	121.01
42	BW	45	HIS	ND1-CE1-NE2	5.45	113.85	108.40
55	BG	51	PHE	CB-CG-CD2	-5.45	111.43	120.70
21	AA	269	C	N1-C1'-C2'	5.45	120.18	112.00
21	AA	701	U	O4'-C4'-C3'	5.45	111.55	106.10
21	AA	931	C	O4'-C1'-N1	5.45	116.68	108.50
21	AA	1333	A	C4'-C3'-O3'	-5.45	104.83	113.00
57	BB	179	C	P-O3'-C3'	-5.45	112.02	120.20
57	BB	1733	G	O4'-C1'-N9	5.45	116.68	108.50
57	BB	2113	U	O4'-C1'-C2'	-5.45	102.15	107.60
57	BB	2407	A	C4'-C3'-O3'	-5.45	104.83	113.00
21	AA	722	G	C5'-C4'-C3'	-5.45	107.83	116.00
21	AA	1200	C	C2'-C3'-O3'	5.45	117.67	109.50
21	AA	1249	C	O4'-C1'-N1	5.45	116.67	108.50
25	AZ	154	ARG	CA-C-N	5.45	131.95	121.54
25	AZ	154	ARG	C-N-CA	5.45	131.95	121.54
25	AZ	290	GLN	OE1-CD-NE2	5.45	128.05	122.60
34	BO	8	ILE	CA-C-N	5.45	127.58	120.28
34	BO	8	ILE	C-N-CA	5.45	127.58	120.28
57	BB	385	C	O4'-C1'-N1	5.45	116.67	108.50
57	BB	735	A	C3'-C2'-C1'	5.45	106.75	101.30
57	BB	792	A	C5'-C4'-O4'	5.45	117.27	109.10
13	AB	103	TRP	CA-C-N	5.45	127.84	120.38
13	AB	103	TRP	C-N-CA	5.45	127.84	120.38
21	AA	441	A	C4'-C3'-C2'	-5.45	97.15	102.60
21	AA	795	C	O4'-C1'-N1	5.45	116.67	108.50
54	BF	57	ALA	CA-C-N	5.45	127.89	120.54
54	BF	57	ALA	C-N-CA	5.45	127.89	120.54
14	AC	38	VAL	CB-CA-C	-5.45	103.72	112.16
15	AD	127	ARG	O-C-N	-5.45	116.67	123.04
21	AA	266	G	O4'-C1'-N9	5.45	116.67	108.50
21	AA	486	U	C1'-O4'-C4'	5.45	115.35	109.90
25	AZ	34	VAL	CA-C-N	5.45	129.40	120.63
25	AZ	34	VAL	C-N-CA	5.45	129.40	120.63
33	BN	15	SER	N-CA-CB	5.45	118.22	110.16
57	BB	2302	U	O4'-C1'-N1	5.45	116.67	108.50
21	AA	1143	G	O4'-C1'-N9	5.44	116.67	108.50
29	BJ	14	ASP	CA-C-N	5.44	130.23	122.72
29	BJ	14	ASP	C-N-CA	5.44	130.23	122.72
56	BH	51	ARG	N-CA-C	-5.44	106.48	113.23
57	BB	896	A	O4'-C4'-C3'	-5.44	98.56	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	AF	54	LEU	CA-C-O	5.44	126.88	120.89
21	AA	967	C	C4'-C3'-O3'	-5.44	104.83	113.00
21	AA	1393	U	O4'-C1'-N1	5.44	116.66	108.50
21	AA	1474	U	C4'-C3'-O3'	-5.44	104.84	113.00
52	BD	67	HIS	CB-CA-C	-5.44	101.00	110.09
56	BH	4	ILE	N-CA-CB	5.44	117.52	110.99
57	BB	72	U	P-O5'-C5'	5.44	129.06	120.90
57	BB	2723	C	O4'-C1'-C2'	-5.44	102.16	107.60
6	AO	36	ASN	OD1-CG-ND2	5.44	128.04	122.60
21	AA	334	C	O4'-C1'-N1	5.44	116.66	108.50
22	AY	62	A	O4'-C1'-N9	5.44	116.66	108.50
23	AW	32	U	C2'-C3'-O3'	5.44	117.66	109.50
52	BD	58	ASN	N-CA-C	-5.44	104.32	112.54
57	BB	127	A	P-O5'-C5'	5.44	129.06	120.90
57	BB	2491	U	C4'-C3'-C2'	5.44	108.04	102.60
57	BB	2715	C	P-O3'-C3'	-5.44	112.04	120.20
11	AT	29	THR	N-CA-CB	5.44	118.31	110.20
21	AA	840	C	C3'-C2'-C1'	5.44	106.74	101.30
21	AA	935	A	P-O3'-C3'	-5.44	112.04	120.20
37	BR	44	GLY	CA-C-O	5.44	125.05	119.01
58	BA	63	C	C3'-C2'-O2'	5.44	118.86	110.70
20	AI	11	ARG	CA-C-N	5.44	130.35	122.36
20	AI	11	ARG	C-N-CA	5.44	130.35	122.36
20	AI	55	ASP	CA-CB-CG	-5.44	107.16	112.60
21	AA	51	A	O4'-C1'-C2'	5.44	111.24	105.80
21	AA	1363	A	N9-C1'-C2'	5.44	122.16	114.00
23	AW	13	C	P-O3'-C3'	5.44	128.36	120.20
26	AV	41	C	O4'-C1'-N1	5.44	116.66	108.50
37	BR	11	GLN	N-CA-C	-5.44	101.14	109.41
53	BE	43	THR	N-CA-CB	5.44	118.03	110.04
57	BB	790	U	O4'-C4'-C3'	-5.44	98.56	104.00
57	BB	1338	G	C4'-C3'-O3'	-5.44	104.84	113.00
57	BB	1706	C	O4'-C1'-N1	5.44	116.36	108.20
57	BB	2172	U	P-O5'-C5'	5.44	129.06	120.90
31	BL	32	GLY	CA-C-O	-5.44	113.17	119.10
57	BB	1853	A	C1'-O4'-C4'	-5.44	104.46	109.90
57	BB	2589	A	O4'-C1'-C2'	-5.44	102.16	107.60
14	AC	54	ILE	O-C-N	5.43	129.39	123.09
21	AA	1208	C	C4'-C3'-O3'	-5.43	104.85	113.00
21	AA	1391	U	O4'-C4'-C3'	-5.43	98.56	104.00
25	AZ	13	ASN	CA-CB-CG	-5.43	107.17	112.60
49	B2	29	GLN	CG-CD-NE2	-5.43	108.25	116.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	510	C	C4'-C3'-O3'	-5.43	104.85	113.00
57	BB	1657	U	C4'-C3'-O3'	-5.43	104.85	113.00
57	BB	2641	G	C5'-C4'-C3'	5.43	124.15	116.00
16	AE	144	GLU	N-CA-CB	5.43	118.52	110.53
21	AA	185	U	O4'-C1'-N1	5.43	116.65	108.50
21	AA	313	A	C4'-C3'-O3'	-5.43	104.85	113.00
21	AA	812	G	O4'-C1'-C2'	-5.43	102.17	107.60
37	BR	92	TRP	CD2-CE2-CZ2	-5.43	116.97	122.40
45	BC	111	ALA	N-CA-C	-5.43	101.27	109.85
57	BB	1982	U	O3'-P-O5'	-5.43	95.85	104.00
58	BA	96	G	O4'-C4'-C3'	-5.43	98.57	104.00
55	BG	32	LEU	CB-CA-C	-5.43	101.45	110.14
11	AT	42	ASP	CA-C-N	5.43	132.38	122.50
11	AT	42	ASP	C-N-CA	5.43	132.38	122.50
13	AB	123	GLY	CA-C-O	-5.43	111.95	119.01
14	AC	81	GLU	CA-C-O	-5.43	115.09	120.90
14	AC	117	ASP	CA-CB-CG	5.43	118.03	112.60
54	BF	46	LYS	O-C-N	-5.43	116.71	123.33
57	BB	629	G	C1'-O4'-C4'	-5.43	104.47	109.90
57	BB	2058	A	O4'-C1'-C2'	5.43	113.03	107.60
58	BA	39	A	C2'-C3'-O3'	5.43	121.84	113.70
20	AI	52	GLU	N-CA-C	-5.43	106.70	113.38
22	AY	44	A	O4'-C1'-C2'	5.43	113.03	107.60
37	BR	89	HIS	CE1-NE2-CD2	-5.43	103.57	109.00
57	BB	402	A	C4'-C3'-C2'	-5.43	97.17	102.60
57	BB	1196	C	O4'-C4'-C3'	-5.43	98.57	104.00
57	BB	1359	A	C4'-C3'-C2'	-5.43	97.17	102.60
21	AA	476	U	C2'-C3'-O3'	5.43	121.84	113.70
21	AA	1040	U	O4'-C4'-C3'	-5.43	98.57	104.00
57	BB	572	A	P-O3'-C3'	5.43	128.34	120.20
57	BB	1179	G	C4'-C3'-C2'	-5.43	97.17	102.60
57	BB	1905	C	O4'-C1'-C2'	-5.43	102.17	107.60
57	BB	2408	U	O4'-C1'-C2'	-5.43	102.17	107.60
3	AL	71	HIS	ND1-CE1-NE2	5.42	113.82	108.40
5	AN	76	PHE	CA-C-O	5.42	124.87	118.90
21	AA	707	U	C3'-C2'-C1'	5.42	106.72	101.30
32	BM	51	ARG	CD-NE-CZ	-5.42	116.81	124.40
48	B1	18	HIS	CE1-NE2-CD2	-5.42	103.58	109.00
54	BF	76	PHE	N-CA-CB	5.42	119.08	110.84
57	BB	929	U	P-O5'-C5'	-5.42	112.76	120.90
57	BB	2809	A	C4'-C3'-O3'	-5.42	104.86	113.00
57	BB	793	A	N9-C1'-C2'	5.42	120.13	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1426	G	C5'-C4'-C3'	-5.42	107.86	116.00
57	BB	1436	G	C4'-C3'-C2'	-5.42	97.18	102.60
57	BB	2785	C	O4'-C1'-N1	5.42	116.64	108.50
21	AA	414	A	P-O3'-C3'	5.42	128.33	120.20
22	AY	65	G	O4'-C1'-N9	5.42	116.63	108.50
29	BJ	29	ALA	CA-C-O	5.42	126.17	120.42
38	BS	2	GLU	CB-CA-C	-5.42	101.95	110.79
57	BB	403	U	P-O3'-C3'	5.42	128.33	120.20
57	BB	1204	A	P-O5'-C5'	5.42	129.03	120.90
57	BB	2031	A	C1'-C2'-O2'	-5.42	103.67	111.80
14	AC	66	THR	CA-C-N	5.42	127.76	120.50
14	AC	66	THR	C-N-CA	5.42	127.76	120.50
19	AH	32	LYS	CA-C-O	5.42	126.30	120.55
19	AH	77	VAL	N-CA-C	-5.42	98.07	109.34
21	AA	126	G	P-O5'-C5'	5.42	129.03	120.90
21	AA	1499	A	P-O5'-C5'	5.42	129.03	120.90
29	BJ	19	ASP	N-CA-C	-5.42	101.12	109.52
57	BB	34	U	O4'-C4'-C3'	-5.42	98.58	104.00
57	BB	2454	G	P-O5'-C5'	-5.42	112.77	120.90
15	AD	66	VAL	CA-CB-CG1	5.42	119.61	110.40
39	BT	47	VAL	N-CA-C	-5.42	107.70	112.90
55	BG	9	VAL	CB-CA-C	-5.42	102.40	111.29
57	BB	701	G	P-O3'-C3'	-5.42	112.07	120.20
57	BB	798	G	C4'-C3'-C2'	-5.42	97.18	102.60
57	BB	1373	A	P-O5'-C5'	5.42	129.03	120.90
57	BB	2625	G	P-O5'-C5'	-5.42	112.77	120.90
5	AN	84	ARG	CA-C-O	-5.42	115.11	120.90
11	AT	35	TYR	CA-C-N	5.42	128.32	120.79
11	AT	35	TYR	C-N-CA	5.42	128.32	120.79
14	AC	111	ASP	CA-CB-CG	-5.42	107.18	112.60
21	AA	365	U	C4'-C3'-C2'	5.42	108.02	102.60
21	AA	523	A	N1-C6-N6	5.42	134.85	118.60
21	AA	1410	A	C4'-C3'-C2'	-5.42	97.18	102.60
38	BS	7	HIS	O-C-N	5.42	131.19	122.96
42	BW	71	LYS	CG-CD-CE	5.42	123.76	111.30
55	BG	137	LYS	CA-C-O	5.42	125.62	119.18
57	BB	185	G	C5'-C4'-C3'	-5.42	107.87	116.00
57	BB	1748	C	C5'-C4'-O4'	5.42	117.92	109.80
57	BB	2202	U	C4'-C3'-O3'	-5.42	104.88	113.00
57	BB	2653	U	C1'-C2'-O2'	5.42	116.53	108.40
58	BA	102	G	C4'-C3'-O3'	-5.42	104.88	113.00
21	AA	1098	C	O4'-C4'-C3'	-5.42	98.58	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	AW	20	U	C5'-C4'-O4'	5.42	117.92	109.80
31	BL	12	SER	N-CA-CB	5.42	118.61	109.78
34	BO	22	GLY	CA-C-N	5.42	128.93	120.75
34	BO	22	GLY	C-N-CA	5.42	128.93	120.75
57	BB	249	C	N1-C1'-C2'	-5.42	105.88	114.00
57	BB	1626	A	C2'-C3'-O3'	5.42	117.62	109.50
5	AN	100	TRP	CD2-CE2-CZ2	-5.41	116.99	122.40
14	AC	180	ASP	CA-CB-CG	-5.41	107.19	112.60
15	AD	33	ILE	CA-C-O	-5.41	114.61	120.67
15	AD	203	TYR	CA-C-N	5.41	129.44	120.94
15	AD	203	TYR	C-N-CA	5.41	129.44	120.94
16	AE	20	VAL	O-C-N	5.41	128.89	123.10
21	AA	210	C	C5'-C4'-C3'	5.41	123.32	115.20
29	BJ	49	ASP	N-CA-C	-5.41	102.03	110.42
31	BL	137	ALA	N-CA-C	-5.41	106.35	113.17
57	BB	467	G	O3'-P-O5'	5.41	112.12	104.00
57	BB	2151	U	O4'-C1'-N1	5.41	116.62	108.50
57	BB	2205	A	P-O5'-C5'	-5.41	112.78	120.90
6	AO	52	ARG	CA-C-N	5.41	127.85	120.54
6	AO	52	ARG	C-N-CA	5.41	127.85	120.54
21	AA	272	C	C3'-C2'-C1'	-5.41	95.89	101.30
21	AA	1206	G	P-O5'-C5'	5.41	129.02	120.90
25	AZ	142	ASP	N-CA-CB	5.41	119.07	110.84
57	BB	2367	G	P-O5'-C5'	5.41	129.02	120.90
21	AA	1116	U	O4'-C1'-N1	5.41	116.61	108.50
22	AY	23	A	C3'-C2'-C1'	-5.41	95.89	101.30
27	B5	97	MET	CG-SD-CE	-5.41	89.00	100.90
44	BY	58	ASN	OD1-CG-ND2	5.41	128.01	122.60
57	BB	1621	U	P-O3'-C3'	5.41	128.32	120.20
57	BB	2028	U	C1'-C2'-O2'	5.41	116.52	108.40
57	BB	2725	A	C2'-C3'-O3'	5.41	117.61	109.50
21	AA	369	G	C4'-C3'-O3'	-5.41	104.89	113.00
21	AA	467	U	P-O3'-C3'	-5.41	112.09	120.20
22	AY	54	U	C4'-C3'-O3'	-5.41	104.89	113.00
33	BN	38	LEU	N-CA-C	5.41	121.03	113.57
33	BN	73	ASN	O-C-N	5.41	127.85	122.12
36	BQ	92	LYS	N-CA-C	-5.41	99.28	110.80
44	BY	26	PHE	CA-C-N	5.41	127.84	120.54
44	BY	26	PHE	C-N-CA	5.41	127.84	120.54
44	BY	43	LEU	CA-C-N	5.41	127.47	120.44
44	BY	43	LEU	C-N-CA	5.41	127.47	120.44
57	BB	1063	G	O4'-C1'-N9	5.41	116.61	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AL	101	LEU	CB-CA-C	-5.41	108.75	115.89
14	AC	174	LEU	CA-C-N	5.41	127.47	120.44
14	AC	174	LEU	C-N-CA	5.41	127.47	120.44
19	AH	14	ARG	CA-C-N	5.41	127.53	120.28
19	AH	14	ARG	C-N-CA	5.41	127.53	120.28
25	AZ	216	ASP	CA-CB-CG	-5.41	107.19	112.60
57	BB	1884	G	C4'-C3'-C2'	-5.41	97.19	102.60
57	BB	2736	A	C5'-C4'-C3'	-5.41	107.89	116.00
6	AO	31	LEU	N-CA-C	-5.41	105.08	110.97
11	AT	33	LYS	N-CA-C	5.41	118.97	112.38
15	AD	176	LYS	CA-C-O	5.41	124.90	118.79
21	AA	275	G	C5'-C4'-C3'	-5.41	107.89	116.00
23	AW	10	G	C4'-C3'-C2'	-5.41	97.19	102.60
34	BO	91	SER	CA-C-O	5.41	126.20	120.36
39	BT	15	HIS	N-CA-CB	5.41	117.91	110.07
57	BB	281	C	P-O3'-C3'	5.41	128.31	120.20
57	BB	703	U	C4'-C3'-C2'	-5.41	97.19	102.60
57	BB	1392	A	O3'-P-O5'	5.41	112.11	104.00
57	BB	1498	C	C5'-C4'-C3'	5.41	124.11	116.00
57	BB	1904	G	P-O5'-C5'	5.41	129.01	120.90
4	AM	55	LEU	CA-C-N	5.40	127.52	120.28
4	AM	55	LEU	C-N-CA	5.40	127.52	120.28
13	AB	165	ALA	N-CA-C	-5.40	104.58	113.50
21	AA	571	U	O4'-C1'-N1	5.40	116.61	108.50
21	AA	928	G	O4'-C4'-C3'	-5.40	98.60	104.00
37	BR	99	THR	N-CA-C	-5.40	104.95	112.30
53	BE	144	GLU	N-CA-C	-5.40	99.87	109.06
57	BB	2474	U	P-O5'-C5'	-5.40	112.79	120.90
57	BB	2761	A	O5'-C5'-C4'	-5.40	103.39	111.50
57	BB	2761	A	P-O5'-C5'	5.40	129.01	120.90
6	AO	85	GLY	CA-C-O	5.40	125.72	119.13
21	AA	497	G	C3'-C2'-O2'	5.40	118.80	110.70
41	BV	67	GLY	CA-C-O	5.40	125.02	119.02
45	BC	235	GLU	CA-C-N	5.40	130.37	122.10
45	BC	235	GLU	C-N-CA	5.40	130.37	122.10
57	BB	125	A	N9-C1'-C2'	5.40	120.10	112.00
57	BB	730	A	P-O3'-C3'	-5.40	112.09	120.20
57	BB	1498	C	C4'-C3'-C2'	-5.40	97.20	102.60
57	BB	1976	U	O4'-C1'-N1	5.40	116.60	108.50
18	AG	53	SER	CA-C-N	5.40	127.08	120.22
18	AG	53	SER	C-N-CA	5.40	127.08	120.22
20	AI	40	ARG	NE-CZ-NH2	-5.40	114.34	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	60	A	O3'-P-O5'	-5.40	95.90	104.00
21	AA	290	C	C4'-C3'-C2'	-5.40	97.20	102.60
21	AA	1233	G	O5'-C5'-C4'	-5.40	103.40	111.50
30	BK	102	VAL	CA-CB-CG1	-5.40	101.22	110.40
34	BO	68	LYS	CA-C-O	5.40	127.05	120.57
53	BE	42	GLY	CA-C-N	5.40	128.90	120.75
53	BE	42	GLY	C-N-CA	5.40	128.90	120.75
57	BB	248	G	C4'-C3'-O3'	-5.40	104.90	113.00
57	BB	259	G	O4'-C1'-N9	5.40	116.60	108.50
57	BB	1728	C	P-O3'-C3'	-5.40	112.10	120.20
21	AA	51	A	C2'-C3'-O3'	5.40	117.60	109.50
45	BC	210	ALA	CA-C-N	5.40	127.78	120.65
45	BC	210	ALA	C-N-CA	5.40	127.78	120.65
57	BB	201	C	O4'-C1'-C2'	-5.40	102.20	107.60
57	BB	458	G	C4'-C3'-C2'	-5.40	97.20	102.60
36	BQ	86	SER	N-CA-CB	5.40	119.61	110.49
43	BX	62	GLY	N-CA-C	-5.40	104.65	111.72
45	BC	53	ILE	O-C-N	5.40	128.79	123.18
55	BG	6	ALA	CA-C-N	5.40	126.33	120.83
55	BG	6	ALA	C-N-CA	5.40	126.33	120.83
57	BB	243	U	O4'-C1'-C2'	-5.40	102.20	107.60
57	BB	852	U	C4'-C3'-O3'	-5.40	104.90	113.00
57	BB	1169	A	O4'-C4'-C3'	-5.40	98.60	104.00
57	BB	1617	C	C5'-C4'-C3'	5.40	123.30	115.20
57	BB	1772	A	P-O5'-C5'	-5.40	112.80	120.90
57	BB	2804	U	O4'-C1'-C2'	-5.40	102.20	107.60
22	AY	6	U	O4'-C1'-N1	5.40	116.59	108.50
54	BF	122	ASP	N-CA-C	-5.40	100.92	108.96
57	BB	1255	U	C4'-C3'-O3'	-5.40	104.91	113.00
1	AJ	5	ARG	CD-NE-CZ	5.39	131.95	124.40
11	AT	44	ALA	N-CA-C	-5.39	104.30	112.99
18	AG	78	ARG	N-CA-C	5.39	118.26	110.28
21	AA	401	C	O4'-C1'-N1	5.39	116.59	108.50
51	B4	27	CYS	CA-C-N	5.39	130.58	121.14
51	B4	27	CYS	C-N-CA	5.39	130.58	121.14
55	BG	30	GLY	CA-C-N	5.39	129.93	121.08
55	BG	30	GLY	C-N-CA	5.39	129.93	121.08
57	BB	175	G	C4'-C3'-C2'	-5.39	97.20	102.60
57	BB	791	C	P-O5'-C5'	-5.39	112.81	120.90
57	BB	1248	G	O4'-C4'-C3'	-5.39	100.71	106.10
57	BB	1277	G	C4'-C3'-C2'	-5.39	97.20	102.60
57	BB	1370	C	C3'-C2'-O2'	5.39	118.79	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	BE	141	MET	CA-C-N	5.39	130.40	122.63
53	BE	141	MET	C-N-CA	5.39	130.40	122.63
57	BB	61	C	O4'-C1'-N1	5.39	116.59	108.50
57	BB	717	C	O4'-C1'-C2'	-5.39	102.21	107.60
57	BB	1263	U	O5'-C5'-C4'	-5.39	103.41	111.50
57	BB	1533	C	O5'-C5'-C4'	-5.39	103.41	111.50
57	BB	1869	G	C4'-C3'-C2'	-5.39	97.21	102.60
57	BB	2046	G	C3'-C2'-C1'	5.39	106.69	101.30
57	BB	2855	C	C5'-C4'-C3'	-5.39	107.91	116.00
8	AQ	46	HIS	CB-CG-CD2	-5.39	124.19	131.20
25	AZ	124	GLN	CA-C-O	-5.39	114.71	120.42
57	BB	1585	C	C4'-C3'-O3'	-5.39	104.91	113.00
3	AL	93	ARG	CB-CG-CD	5.39	123.70	111.30
19	AH	79	ARG	NE-CZ-NH2	-5.39	114.35	119.20
21	AA	436	C	P-O3'-C3'	-5.39	112.12	120.20
21	AA	624	C	O4'-C1'-N1	5.39	116.58	108.50
28	BI	78	LEU	CA-C-N	5.39	127.94	120.29
28	BI	78	LEU	C-N-CA	5.39	127.94	120.29
51	B4	5	ALA	N-CA-CB	5.39	118.04	110.12
57	BB	41	C	O4'-C1'-N1	5.39	116.58	108.50
57	BB	115	C	O5'-C5'-C4'	-5.39	103.42	111.50
57	BB	1061	U	O4'-C1'-N1	5.39	116.28	108.20
57	BB	2414	G	C1'-C2'-O2'	5.39	116.48	108.40
21	AA	708	C	P-O5'-C5'	-5.39	112.82	120.90
25	AZ	33	THR	CA-CB-OG1	5.39	117.68	109.60
25	AZ	122	GLY	CA-C-N	5.39	128.90	120.82
25	AZ	122	GLY	C-N-CA	5.39	128.90	120.82
29	BJ	40	HIS	CE1-NE2-CD2	-5.39	103.61	109.00
34	BO	76	LYS	O-C-N	5.39	128.29	122.15
55	BG	68	ARG	NE-CZ-NH2	-5.39	114.35	119.20
57	BB	668	A	C5'-C4'-C3'	-5.39	107.92	116.00
57	BB	2486	C	O4'-C1'-N1	5.39	116.58	108.50
4	AM	108	ARG	NE-CZ-NH2	5.39	124.05	119.20
21	AA	840	C	O4'-C1'-C2'	-5.39	102.21	107.60
21	AA	982	U	O4'-C1'-C2'	5.39	111.19	105.80
22	AY	53	G	O4'-C4'-C3'	-5.39	98.61	104.00
35	BP	76	HIS	ND1-CE1-NE2	5.39	113.79	108.40
40	BU	66	VAL	N-CA-C	-5.39	106.61	112.80
41	BV	70	ILE	CA-C-N	5.39	131.83	121.54
41	BV	70	ILE	C-N-CA	5.39	131.83	121.54
57	BB	944	C	N1-C1'-C2'	5.39	120.08	112.00
57	BB	1307	A	C4'-C3'-O3'	-5.39	104.92	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2057	G	O4'-C1'-N9	5.39	116.58	108.50
5	AN	81	ILE	CA-C-O	-5.38	114.05	120.78
21	AA	113	G	N9-C1'-C2'	5.38	120.08	112.00
21	AA	453	G	O5'-C5'-C4'	-5.38	103.42	111.50
21	AA	1482	G	O4'-C1'-N9	5.38	116.58	108.50
25	AZ	92	ILE	N-CA-CB	5.38	120.11	111.23
34	BO	39	VAL	N-CA-CB	5.38	117.49	111.89
52	BD	98	VAL	N-CA-C	5.38	120.54	109.34
52	BD	134	HIS	CE1-NE2-CD2	-5.38	103.62	109.00
57	BB	951	C	C4'-C3'-C2'	-5.38	97.22	102.60
57	BB	2326	C	P-O5'-C5'	-5.38	112.82	120.90
2	AK	84	MET	CG-SD-CE	-5.38	89.06	100.90
8	AQ	21	VAL	CA-C-N	5.38	130.04	123.10
8	AQ	21	VAL	C-N-CA	5.38	130.04	123.10
11	AT	82	ILE	CA-C-O	5.38	126.28	120.47
21	AA	606	G	O4'-C1'-N9	5.38	116.57	108.50
21	AA	904	U	C1'-O4'-C4'	-5.38	104.52	109.90
24	AX	16	A	C3'-C2'-C1'	-5.38	95.92	101.30
57	BB	517	C	C4'-C3'-C2'	-5.38	97.22	102.60
57	BB	2044	C	P-O5'-C5'	-5.38	112.83	120.90
4	AM	53	ASP	CA-CB-CG	-5.38	107.22	112.60
6	AO	34	GLN	CA-C-N	5.38	127.54	120.60
6	AO	34	GLN	C-N-CA	5.38	127.54	120.60
14	AC	40	GLN	CB-CA-C	-5.38	102.40	110.90
20	AI	11	ARG	NE-CZ-NH2	5.38	124.04	119.20
21	AA	397	A	N9-C1'-C2'	5.38	120.07	112.00
21	AA	831	A	P-O3'-C3'	-5.38	112.13	120.20
21	AA	880	C	C4'-C3'-C2'	-5.38	97.22	102.60
21	AA	1484	C	O4'-C1'-N1	5.38	116.57	108.50
56	BH	46	PHE	N-CA-C	-5.38	104.45	111.02
57	BB	810	U	C3'-C2'-C1'	-5.38	95.92	101.30
5	AN	70	HIS	CE1-NE2-CD2	-5.38	103.62	109.00
21	AA	707	U	C1'-O4'-C4'	5.38	115.28	109.90
21	AA	840	C	O4'-C1'-N1	5.38	116.57	108.50
21	AA	893	C	P-O3'-C3'	-5.38	112.13	120.20
31	BL	110	VAL	CA-CB-CG1	-5.38	101.25	110.40
52	BD	88	GLU	CA-C-O	5.38	124.87	118.79
57	BB	353	C	C5'-C4'-O4'	5.38	117.87	109.80
1	AJ	74	VAL	N-CA-CB	5.38	120.11	111.23
21	AA	28	A	C5'-C4'-C3'	-5.38	107.93	116.00
21	AA	66	A	O4'-C4'-C3'	-5.38	98.62	104.00
21	AA	845	A	C4'-C3'-C2'	-5.38	97.22	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1464	U	C3'-C2'-C1'	-5.38	95.92	101.30
23	AW	21	A	P-O3'-C3'	5.38	128.27	120.20
36	BQ	67	ALA	N-CA-C	-5.38	107.09	113.97
57	BB	227	A	C4'-C3'-C2'	-5.38	97.22	102.60
57	BB	1177	G	P-O5'-C5'	5.38	128.97	120.90
57	BB	1444	G	C3'-C2'-C1'	-5.38	95.92	101.30
57	BB	2030	A	O4'-C1'-N9	5.38	116.27	108.20
57	BB	2617	U	C3'-C2'-O2'	5.38	118.77	110.70
1	AJ	5	ARG	CA-C-N	5.38	127.91	120.49
1	AJ	5	ARG	C-N-CA	5.38	127.91	120.49
21	AA	637	C	O4'-C4'-C3'	-5.38	98.62	104.00
21	AA	1108	G	O4'-C1'-N9	5.38	116.57	108.50
27	B5	209	ILE	CA-C-N	5.38	131.81	121.54
27	B5	209	ILE	C-N-CA	5.38	131.81	121.54
29	BJ	74	TYR	CB-CG-CD1	-5.38	112.73	120.80
33	BN	22	ARG	CA-C-O	-5.38	112.77	119.28
57	BB	1028	A	C4'-C3'-O3'	-5.38	104.94	113.00
57	BB	1539	U	O3'-P-O5'	-5.38	95.94	104.00
57	BB	2219	U	C4'-C3'-C2'	-5.38	97.22	102.60
57	BB	2745	C	C5'-C4'-C3'	-5.38	107.94	116.00
2	AK	17	ASP	N-CA-C	-5.38	99.52	108.34
5	AN	17	ASP	CB-CA-C	-5.38	102.11	111.35
21	AA	273	U	O4'-C1'-N1	5.38	116.56	108.50
21	AA	1218	C	C1'-O4'-C4'	-5.38	104.53	109.90
22	AY	64	A	C4'-C3'-O3'	-5.38	104.94	113.00
47	B0	12	ARG	N-CA-CB	5.38	117.97	110.07
52	BD	58	ASN	CB-CA-C	-5.38	98.75	110.41
57	BB	1796	U	O4'-C1'-C2'	-5.38	102.22	107.60
58	BA	74	U	O4'-C1'-N1	5.38	116.56	108.50
7	AP	74	LEU	N-CA-C	-5.37	106.85	113.41
15	AD	87	GLU	CA-C-N	5.37	131.80	121.54
15	AD	87	GLU	C-N-CA	5.37	131.80	121.54
18	AG	44	SER	N-CA-C	5.37	117.89	111.71
22	AY	63	C	C4'-C3'-O3'	-5.37	104.94	113.00
45	BC	5	CYS	CA-C-N	5.37	127.96	120.65
45	BC	5	CYS	C-N-CA	5.37	127.96	120.65
57	BB	92	U	O4'-C4'-C3'	-5.37	98.63	104.00
57	BB	390	U	O4'-C1'-N1	5.37	116.26	108.20
57	BB	2010	G	C3'-C2'-C1'	-5.37	95.93	101.30
11	AT	67	HIS	CE1-NE2-CD2	-5.37	103.63	109.00
57	BB	789	A	C2'-C3'-O3'	5.37	117.56	109.50
20	AI	106	ASP	CA-C-O	-5.37	114.64	120.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	BU	52	ASN	N-CA-CB	5.37	119.57	110.49
57	BB	1352	U	C4'-C3'-C2'	-5.37	97.23	102.60
57	BB	1491	G	C4'-C3'-O3'	-5.37	104.94	113.00
49	B2	28	ARG	NE-CZ-NH2	5.37	124.03	119.20
52	BD	92	VAL	CA-C-N	5.37	131.93	121.41
52	BD	92	VAL	C-N-CA	5.37	131.93	121.41
53	BE	121	VAL	CA-CB-CG2	5.37	119.53	110.40
57	BB	146	A	O4'-C1'-N9	5.37	116.55	108.50
57	BB	307	G	C1'-C2'-O2'	5.37	116.45	108.40
57	BB	361	G	C4'-C3'-O3'	-5.37	104.95	113.00
57	BB	1465	G	C4'-C3'-O3'	-5.37	104.95	113.00
21	AA	980	C	O4'-C1'-N1	5.37	116.55	108.50
28	BI	21	PRO	CA-C-O	-5.37	112.78	120.56
3	AL	88	ASP	CA-CB-CG	5.37	117.97	112.60
10	AS	56	HIS	CA-CB-CG	-5.37	108.44	113.80
21	AA	1300	G	O3'-P-O5'	-5.37	95.95	104.00
37	BR	82	HIS	CB-CG-CD2	-5.37	124.22	131.20
1	AJ	29	ALA	N-CA-C	5.36	119.31	112.87
10	AS	15	LEU	CA-C-N	5.36	131.79	121.54
10	AS	15	LEU	C-N-CA	5.36	131.79	121.54
10	AS	62	THR	CB-CA-C	5.36	119.36	109.71
21	AA	1155	A	O4'-C1'-N9	5.36	116.55	108.50
31	BL	35	HIS	CB-CG-CD2	-5.36	124.23	131.20
57	BB	2495	G	C4'-C3'-C2'	-5.36	97.24	102.60
13	AB	58	LYS	N-CA-C	-5.36	106.24	112.89
21	AA	232	G	C5'-C4'-C3'	-5.36	107.96	116.00
21	AA	1447	A	C4'-C3'-C2'	-5.36	97.24	102.60
31	BL	50	PHE	CA-CB-CG	-5.36	108.44	113.80
18	AG	61	PHE	O-C-N	5.36	127.04	121.79
19	AH	8	ASP	CA-CB-CG	-5.36	107.24	112.60
21	AA	423	G	C4'-C3'-O3'	-5.36	104.96	113.00
21	AA	728	A	O4'-C1'-N9	5.36	116.54	108.50
21	AA	1033	G	P-O5'-C5'	5.36	128.94	120.90
21	AA	1154	G	O4'-C4'-C3'	-5.36	98.64	104.00
21	AA	1404	C	C4'-C3'-O3'	-5.36	104.96	113.00
31	BL	56	PRO	N-CA-C	5.36	119.64	111.11
34	BO	4	LYS	CB-CG-CD	5.36	123.63	111.30
45	BC	63	ILE	CA-C-O	5.36	126.77	120.71
55	BG	72	ASN	CA-CB-CG	5.36	117.96	112.60
57	BB	143	C	P-O5'-C5'	5.36	128.94	120.90
57	BB	1317	G	C5'-C4'-C3'	5.36	124.04	116.00
57	BB	1899	A	C4'-C3'-O3'	-5.36	104.96	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	AB	44	LYS	N-CA-C	-5.36	105.57	113.61
21	AA	266	G	C4'-C3'-O3'	-5.36	104.96	113.00
25	AZ	118	HIS	CB-CA-C	-5.36	102.47	110.88
57	BB	720	U	C4'-C3'-C2'	-5.36	97.24	102.60
3	AL	47	ALA	CA-C-O	-5.36	115.72	121.56
14	AC	162	ALA	N-CA-CB	5.36	119.55	110.49
21	AA	656	G	O5'-C5'-C4'	-5.36	103.46	111.50
25	AZ	174	ALA	O-C-N	5.36	127.60	122.03
41	BV	83	LYS	O-C-N	-5.36	117.37	121.55
52	BD	142	VAL	CA-CB-CG1	5.36	119.51	110.40
1	AJ	57	VAL	N-CA-C	5.36	120.48	109.34
8	AQ	6	THR	O-C-N	-5.36	116.74	123.27
13	AB	78	ALA	CA-C-N	5.36	131.61	121.97
13	AB	78	ALA	C-N-CA	5.36	131.61	121.97
28	BI	63	ASP	N-CA-C	-5.36	106.59	113.23
31	BL	50	PHE	CB-CG-CD1	-5.36	111.60	120.70
52	BD	101	PHE	N-CA-C	-5.36	102.12	110.42
57	BB	555	G	O4'-C4'-C3'	-5.36	98.64	104.00
57	BB	1160	G	O4'-C1'-N9	5.36	116.53	108.50
2	AK	61	ALA	CA-C-N	5.35	127.89	120.29
2	AK	61	ALA	C-N-CA	5.35	127.89	120.29
21	AA	1442	G	O4'-C1'-N9	5.35	116.53	108.50
21	AA	1030	U	C4'-C3'-C2'	-5.35	97.25	102.60
21	AA	1520	C	O4'-C1'-N1	5.35	116.53	108.50
22	AY	49	C	C1'-O4'-C4'	5.35	115.25	109.90
33	BN	28	LEU	N-CA-C	-5.35	105.98	112.88
44	BY	53	VAL	CB-CA-C	-5.35	104.15	110.84
52	BD	59	ARG	N-CA-C	-5.35	104.37	112.99
57	BB	179	C	P-O5'-C5'	-5.35	112.87	120.90
57	BB	1637	A	P-O5'-C5'	-5.35	112.87	120.90
3	AL	3	VAL	CA-C-N	5.35	127.98	120.28
3	AL	3	VAL	C-N-CA	5.35	127.98	120.28
26	AV	38	A	P-O5'-C5'	5.35	128.93	120.90
35	BP	100	ARG	N-CA-C	-5.35	106.13	113.30
57	BB	631	A	O4'-C1'-N9	5.35	116.53	108.50
1	AJ	78	GLU	CA-C-N	5.35	125.82	120.04
1	AJ	78	GLU	C-N-CA	5.35	125.82	120.04
3	AL	68	GLY	CA-C-N	-5.35	115.89	122.84
3	AL	68	GLY	C-N-CA	-5.35	115.89	122.84
6	AO	75	ALA	CA-C-N	5.35	127.45	120.28
6	AO	75	ALA	C-N-CA	5.35	127.45	120.28
21	AA	1095	U	O4'-C1'-N1	5.35	116.53	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1273	C	P-O5'-C5'	5.35	128.93	120.90
42	BW	48	ALA	N-CA-CB	5.35	119.53	110.49
57	BB	16	C	C3'-C2'-O2'	5.35	118.72	110.70
57	BB	2176	A	C4'-C3'-C2'	5.35	107.95	102.60
3	AL	18	SER	CA-C-N	5.35	127.71	120.44
3	AL	18	SER	C-N-CA	5.35	127.71	120.44
21	AA	423	G	C4'-C3'-C2'	-5.35	97.25	102.60
28	BI	7	TYR	CB-CG-CD1	5.35	128.82	120.80
33	BN	6	SER	CA-C-N	5.35	125.18	120.10
33	BN	6	SER	C-N-CA	5.35	125.18	120.10
45	BC	49	THR	N-CA-C	-5.35	105.40	112.94
57	BB	511	U	O5'-C5'-C4'	-5.35	103.48	111.50
57	BB	1935	G	P-O3'-C3'	-5.35	112.18	120.20
13	AB	18	GLN	CG-CD-OE1	-5.35	110.11	120.80
21	AA	178	C	O4'-C1'-N1	5.35	116.52	108.50
44	BY	61	ALA	N-CA-CB	5.35	120.19	111.74
16	AE	59	ILE	CB-CA-C	-5.34	105.67	110.91
21	AA	333	U	O4'-C1'-C2'	-5.34	102.25	107.60
21	AA	856	C	N1-C1'-C2'	-5.34	103.98	112.00
21	AA	1221	G	C1'-O4'-C4'	5.34	115.24	109.90
41	BV	80	HIS	ND1-CE1-NE2	5.34	113.75	108.40
56	BH	21	VAL	CA-C-N	5.34	131.80	122.82
56	BH	21	VAL	C-N-CA	5.34	131.80	122.82
57	BB	76	C	C4'-C3'-C2'	-5.34	97.25	102.60
57	BB	240	C	O3'-P-O5'	-5.34	95.98	104.00
57	BB	478	A	C4'-C3'-C2'	5.34	107.94	102.60
57	BB	1318	U	C3'-C2'-C1'	-5.34	95.96	101.30
21	AA	949	A	C3'-C2'-O2'	5.34	118.72	110.70
21	AA	1443	C	O4'-C1'-N1	5.34	116.51	108.50
57	BB	657	U	O4'-C1'-N1	5.34	116.51	108.50
57	BB	2596	U	O4'-C1'-N1	5.34	116.52	108.50
1	AJ	16	ARG	CA-C-O	-5.34	112.87	120.51
19	AH	93	LYS	CA-C-O	5.34	127.56	121.58
21	AA	115	G	O4'-C4'-C3'	-5.34	100.76	106.10
26	AV	18	G	O4'-C4'-C3'	-5.34	100.76	106.10
52	BD	67	HIS	ND1-CE1-NE2	5.34	113.74	108.40
57	BB	125	A	C4'-C3'-C2'	-5.34	97.26	102.60
57	BB	2241	A	C4'-C3'-O3'	-5.34	104.99	113.00
57	BB	2672	U	O4'-C1'-N1	5.34	116.51	108.50
6	AO	87	ARG	CA-C-N	5.34	131.31	121.70
6	AO	87	ARG	C-N-CA	5.34	131.31	121.70
7	AP	16	PHE	CA-CB-CG	-5.34	108.46	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	AT	39	GLU	N-CA-C	-5.34	106.54	113.16
21	AA	1250	A	O4'-C1'-N9	5.34	116.51	108.50
25	AZ	32	THR	N-CA-C	5.34	117.18	111.36
35	BP	61	ARG	N-CA-CB	5.34	119.13	110.43
54	BF	4	HIS	CE1-NE2-CD2	-5.34	103.66	109.00
57	BB	1013	C	O4'-C1'-N1	5.34	116.51	108.50
57	BB	1324	G	C4'-C3'-O3'	5.34	117.41	109.40
57	BB	1609	A	O4'-C4'-C3'	-5.34	100.76	106.10
57	BB	2750	A	C5'-C4'-C3'	-5.34	107.19	115.20
1	AJ	81	GLU	N-CA-C	-5.34	105.47	112.41
2	AK	121	ARG	NE-CZ-NH2	-5.34	114.40	119.20
43	BX	59	ASP	N-CA-C	5.34	117.18	111.36
57	BB	1307	A	C3'-C2'-O2'	5.34	118.71	110.70
57	BB	1602	U	C4'-C3'-C2'	5.34	107.94	102.60
57	BB	2825	G	P-O3'-C3'	-5.34	112.19	120.20
10	AS	38	THR	N-CA-CB	5.34	117.93	109.71
21	AA	371	A	C4'-C3'-C2'	-5.34	97.26	102.60
21	AA	450	G	O5'-C5'-C4'	-5.34	103.49	111.50
40	BU	48	VAL	CA-C-O	-5.34	114.57	121.13
53	BE	99	LYS	N-CA-C	-5.34	105.46	113.89
54	BF	136	ILE	N-CA-CB	5.34	120.04	111.23
57	BB	1900	A	O4'-C1'-C2'	-5.34	100.46	105.80
57	BB	2425	A	P-O5'-C5'	-5.34	112.90	120.90
58	BA	107	G	C4'-C3'-O3'	-5.34	105.00	113.00
18	AG	36	SER	CA-C-N	5.33	129.22	120.63
18	AG	36	SER	C-N-CA	5.33	129.22	120.63
21	AA	172	A	P-O5'-C5'	5.33	128.90	120.90
21	AA	1084	G	C4'-C3'-O3'	-5.33	105.00	113.00
22	AY	29	A	C3'-C2'-C1'	-5.33	95.97	101.30
22	AY	56	C	O4'-C4'-C3'	-5.33	98.67	104.00
56	BH	66	ASN	N-CA-CB	5.33	118.03	109.28
57	BB	2296	U	O4'-C4'-C3'	-5.33	100.77	106.10
4	AM	91	ARG	CA-C-O	5.33	126.10	119.97
18	AG	128	GLU	O-C-N	5.33	127.79	122.30
21	AA	826	C	C4'-C3'-O3'	-5.33	105.00	113.00
21	AA	1219	A	C4'-C3'-O3'	-5.33	105.00	113.00
25	AZ	61	THR	N-CA-CB	5.33	119.50	110.49
42	BW	39	GLN	N-CA-CB	5.33	119.12	110.32
47	B0	31	LYS	CA-C-N	5.33	129.92	121.44
47	B0	31	LYS	C-N-CA	5.33	129.92	121.44
52	BD	31	ALA	N-CA-C	-5.33	99.44	110.80
57	BB	47	C	P-O3'-C3'	-5.33	112.20	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	835	C	O4'-C4'-C3'	-5.33	98.67	104.00
1	AJ	48	ARG	CD-NE-CZ	-5.33	116.94	124.40
18	AG	69	ARG	CA-C-N	5.33	125.27	119.78
18	AG	69	ARG	C-N-CA	5.33	125.27	119.78
22	AY	65	G	C4'-C3'-C2'	-5.33	97.27	102.60
29	BJ	74	TYR	CB-CG-CD2	5.33	128.80	120.80
32	BM	93	VAL	N-CA-CB	-5.33	101.90	112.24
57	BB	108	G	O4'-C1'-C2'	-5.33	102.27	107.60
57	BB	938	G	C3'-C2'-O2'	5.33	118.70	110.70
57	BB	1807	G	P-O3'-C3'	-5.33	112.20	120.20
5	AN	22	LYS	N-CA-CB	5.33	119.33	111.01
13	AB	152	ASP	N-CA-C	-5.33	105.92	112.90
34	BO	82	ALA	CA-C-O	5.33	125.80	119.56
20	AI	17	ARG	NE-CZ-NH2	5.33	124.00	119.20
23	AW	69	G	C1'-C2'-O2'	5.33	116.39	108.40
25	AZ	136	LYS	N-CA-CB	5.33	119.50	110.49
27	B5	158	ALA	CA-C-O	-5.33	115.21	120.70
57	BB	589	U	O4'-C1'-C2'	-5.33	102.27	107.60
57	BB	1439	A	P-O5'-C5'	-5.33	112.91	120.90
57	BB	2006	C	O4'-C1'-N1	5.33	116.49	108.50
57	BB	2442	C	C4'-C3'-C2'	-5.33	97.27	102.60
44	BY	3	ALA	N-CA-CB	5.33	119.49	110.49
53	BE	165	HIS	CE1-NE2-CD2	-5.33	103.67	109.00
57	BB	343	C	P-O3'-C3'	-5.33	112.21	120.20
4	AM	49	GLU	N-CA-C	-5.33	105.49	112.41
57	BB	441	U	O4'-C1'-N1	5.33	116.49	108.50
57	BB	466	A	O4'-C1'-C2'	-5.33	102.27	107.60
21	AA	968	A	C5-C6-N6	-5.32	107.73	123.70
30	BK	17	ARG	N-CA-CB	5.32	118.01	109.28
54	BF	166	ARG	N-CA-C	-5.32	105.62	113.61
57	BB	404	A	C5'-C4'-C3'	-5.32	107.21	115.20
57	BB	827	U	O4'-C1'-N1	5.32	116.19	108.20
57	BB	1104	C	C4'-C3'-C2'	-5.32	97.28	102.60
57	BB	1133	A	O4'-C4'-C3'	-5.32	100.78	106.10
57	BB	1187	G	O4'-C1'-N9	5.32	116.48	108.50
57	BB	1963	U	C4'-C3'-O3'	-5.32	105.02	113.00
57	BB	2324	U	C2'-C3'-O3'	5.32	117.49	109.50
57	BB	2370	G	C2'-C3'-O3'	5.32	121.69	113.70
57	BB	2492	U	O4'-C1'-N1	5.32	116.48	108.50
57	BB	2846	G	C5'-C4'-C3'	5.32	123.98	116.00
9	AR	70	THR	N-CA-C	-5.32	100.36	108.76
21	AA	1434	A	O3'-P-O5'	5.32	111.98	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	AZ	66	HIS	CB-CA-C	-5.32	102.16	110.94
31	BL	96	LYS	N-CA-C	-5.32	104.91	111.40
44	BY	62	GLY	N-CA-C	-5.32	104.72	112.17
53	BE	7	ASP	N-CA-C	-5.32	105.44	112.94
57	BB	1313	U	P-O5'-C5'	-5.32	112.92	120.90
57	BB	2309	A	C4'-C3'-C2'	-5.32	97.28	102.60
57	BB	2460	U	O4'-C1'-N1	5.32	116.48	108.50
15	AD	151	GLN	N-CA-CB	5.32	117.83	110.17
21	AA	1093	A	C3'-C2'-O2'	5.32	118.68	110.70
25	AZ	334	THR	CA-C-O	-5.32	114.09	120.10
43	BX	21	LEU	N-CA-CB	5.32	119.48	110.49
57	BB	48	G	C5'-C4'-C3'	-5.32	108.02	116.00
57	BB	1008	A	N9-C1'-C2'	-5.32	106.02	114.00
57	BB	2134	A	C5'-C4'-C3'	5.32	123.98	116.00
57	BB	2180	U	P-O5'-C5'	5.32	128.88	120.90
2	AK	63	GLN	CA-C-N	5.32	129.34	120.62
2	AK	63	GLN	C-N-CA	5.32	129.34	120.62
10	AS	71	GLY	CA-C-N	5.32	129.11	120.60
10	AS	71	GLY	C-N-CA	5.32	129.11	120.60
21	AA	1250	A	C1'-O4'-C4'	-5.32	104.58	109.90
55	BG	136	ASP	CA-CB-CG	-5.32	107.28	112.60
56	BH	71	LYS	N-CA-C	5.32	119.39	113.01
57	BB	1903	G	P-O3'-C3'	-5.32	112.22	120.20
5	AN	8	ARG	CA-C-N	5.32	127.84	120.29
5	AN	8	ARG	C-N-CA	5.32	127.84	120.29
21	AA	36	C	O4'-C4'-C3'	-5.32	98.68	104.00
21	AA	298	A	O4'-C1'-C2'	5.32	112.92	107.60
21	AA	707	U	O4'-C1'-C2'	-5.32	102.28	107.60
33	BN	78	LYS	CA-C-N	5.32	128.78	120.75
33	BN	78	LYS	C-N-CA	5.32	128.78	120.75
57	BB	1641	A	C3'-C2'-O2'	5.32	118.67	110.70
57	BB	1732	C	O4'-C4'-C3'	-5.32	100.78	106.10
58	BA	111	U	O4'-C1'-N1	5.32	116.47	108.50
21	AA	32	A	O4'-C1'-N9	5.31	116.47	108.50
21	AA	615	G	C4'-C3'-C2'	-5.31	97.29	102.60
22	AY	29	A	C1'-O4'-C4'	-5.31	104.59	109.90
30	BK	23	VAL	CB-CA-C	-5.31	105.49	111.23
31	BL	61	LEU	CB-CA-C	-5.31	100.95	109.08
37	BR	62	GLU	CA-C-N	-5.31	115.73	122.43
37	BR	62	GLU	C-N-CA	-5.31	115.73	122.43
57	BB	528	A	C4'-C3'-C2'	-5.31	97.29	102.60
57	BB	712	G	O4'-C1'-C2'	-5.31	102.29	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	AC	82	ASP	CA-C-N	5.31	129.33	120.62
14	AC	82	ASP	C-N-CA	5.31	129.33	120.62
20	AI	89	TYR	N-CA-C	-5.31	105.16	111.69
45	BC	170	TYR	CA-C-N	5.31	131.53	121.97
45	BC	170	TYR	C-N-CA	5.31	131.53	121.97
55	BG	72	ASN	N-CA-C	-5.31	106.85	113.38
57	BB	1410	G	O4'-C1'-N9	5.31	116.47	108.50
57	BB	1482	G	C4'-C3'-O3'	-5.31	105.03	113.00
16	AE	143	LEU	N-CA-C	-5.31	106.48	113.17
21	AA	328	C	O4'-C1'-N1	5.31	116.16	108.20
21	AA	640	A	P-O5'-C5'	5.31	128.86	120.90
21	AA	1278	G	C4'-C3'-C2'	-5.31	97.29	102.60
22	AY	42	G	C3'-C2'-O2'	5.31	118.66	110.70
57	BB	1566	A	C3'-C2'-C1'	-5.31	96.19	101.50
57	BB	1635	A	O4'-C1'-N9	5.31	116.47	108.50
57	BB	2097	A	N1-C6-N6	5.31	134.53	118.60
57	BB	2424	C	O4'-C1'-N1	5.31	116.46	108.50
11	AT	17	ARG	NE-CZ-NH2	-5.31	114.42	119.20
21	AA	926	G	O3'-P-O5'	-5.31	96.04	104.00
41	BV	73	LYS	O-C-N	5.31	129.77	123.24
45	BC	60	ALA	O-C-N	-5.31	116.88	123.36
45	BC	93	VAL	O-C-N	5.31	128.60	123.03
50	B3	61	LEU	N-CA-CB	5.31	119.82	110.37
52	BD	176	ASP	N-CA-CB	5.31	117.95	110.36
56	BH	18	GLN	CA-C-O	-5.31	114.60	120.60
57	BB	551	G	O4'-C1'-N9	5.31	116.46	108.50
57	BB	2237	G	C5'-C4'-O4'	5.31	117.76	109.80
57	BB	2832	U	C2'-C3'-O3'	5.31	117.46	109.50
13	AB	20	ARG	N-CA-CB	5.31	119.46	110.49
19	AH	127	TYR	CA-C-N	5.31	131.32	122.57
19	AH	127	TYR	C-N-CA	5.31	131.32	122.57
57	BB	875	G	C4'-C3'-O3'	-5.31	105.04	113.00
16	AE	92	ARG	N-CA-C	-5.30	100.25	108.90
16	AE	131	ASN	O-C-N	5.30	126.45	120.83
21	AA	29	U	O4'-C1'-N1	5.30	116.46	108.50
21	AA	227	G	C4'-C3'-C2'	-5.30	97.30	102.60
25	AZ	213	PRO	N-CD-CG	5.30	111.16	103.20
32	BM	130	PHE	CA-CB-CG	-5.30	108.50	113.80
34	BO	20	GLU	CA-C-O	5.30	124.73	118.90
38	BS	105	VAL	N-CA-C	-5.30	100.84	108.53
54	BF	59	ILE	CA-C-N	5.30	131.67	121.54
54	BF	59	ILE	C-N-CA	5.30	131.67	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BH	57	LYS	CA-C-N	5.30	128.37	120.31
56	BH	57	LYS	C-N-CA	5.30	128.37	120.31
57	BB	2542	A	C5'-C4'-C3'	5.30	123.16	115.20
19	AH	87	ARG	CA-C-N	5.30	130.42	121.14
19	AH	87	ARG	C-N-CA	5.30	130.42	121.14
21	AA	393	A	C4'-C3'-C2'	-5.30	97.30	102.60
35	BP	53	GLY	N-CA-C	-5.30	108.32	115.21
53	BE	100	MET	N-CA-C	-5.30	106.86	113.38
57	BB	77	G	O4'-C1'-N9	5.30	116.45	108.50
57	BB	1307	A	C3'-C2'-C1'	5.30	106.60	101.30
12	AU	31	VAL	N-CA-CB	5.30	119.98	111.23
21	AA	128	G	O4'-C1'-N9	5.30	116.45	108.50
21	AA	479	U	C4'-C3'-C2'	-5.30	97.30	102.60
21	AA	1223	C	P-O3'-C3'	5.30	128.15	120.20
25	AZ	333	ARG	CA-C-O	5.30	126.76	118.65
30	BK	6	MET	CG-SD-CE	-5.30	89.24	100.90
57	BB	387	U	C4'-C3'-O3'	5.30	117.35	109.40
57	BB	600	G	C1'-O4'-C4'	-5.30	104.60	109.90
57	BB	1652	A	P-O3'-C3'	5.30	128.15	120.20
57	BB	2085	U	O4'-C4'-C3'	-5.30	98.70	104.00
6	AO	25	GLU	O-C-N	5.30	127.53	122.07
21	AA	52	C	C5'-C4'-C3'	-5.30	108.05	116.00
21	AA	140	U	O4'-C1'-N1	5.30	116.45	108.50
21	AA	436	C	C3'-C2'-O2'	5.30	118.65	110.70
32	BM	134	THR	CA-C-N	5.30	127.95	120.42
32	BM	134	THR	C-N-CA	5.30	127.95	120.42
38	BS	95	ARG	NE-CZ-NH1	-5.30	116.20	121.50
57	BB	1043	C	P-O3'-C3'	-5.30	112.25	120.20
57	BB	1300	G	C5'-C4'-O4'	5.30	117.05	109.10
57	BB	2283	C	P-O3'-C3'	-5.30	112.25	120.20
57	BB	2306	C	C4'-C3'-O3'	-5.30	105.05	113.00
57	BB	2724	U	C1'-O4'-C4'	5.30	115.20	109.90
21	AA	405	U	C5'-C4'-C3'	5.30	123.95	116.00
25	AZ	218	PHE	N-CA-C	-5.30	101.31	109.52
45	BC	138	SER	CA-C-N	5.30	129.93	122.09
45	BC	138	SER	C-N-CA	5.30	129.93	122.09
20	AI	91	GLU	N-CA-C	-5.30	106.20	113.30
22	AY	39	U	O4'-C4'-C3'	-5.30	98.70	104.00
22	AY	61	C	C5'-C4'-O4'	-5.30	101.86	109.80
25	AZ	37	LYS	CG-CD-CE	5.30	123.48	111.30
35	BP	45	VAL	CA-C-N	5.30	127.60	120.50
35	BP	45	VAL	C-N-CA	5.30	127.60	120.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	BC	2	VAL	CA-CB-CG1	5.30	119.41	110.40
57	BB	866	A	P-O5'-C5'	-5.30	112.95	120.90
57	BB	1745	A	C5'-C4'-C3'	5.30	123.94	116.00
57	BB	1828	G	O4'-C1'-N9	5.30	116.14	108.20
8	AQ	4	ILE	CA-CB-CG2	-5.29	101.50	110.50
18	AG	17	PHE	CA-CB-CG	-5.29	108.50	113.80
44	BY	41	HIS	CB-CG-ND1	5.29	130.64	122.70
55	BG	130	ILE	N-CA-C	-5.29	100.44	108.17
57	BB	700	G	O4'-C1'-C2'	-5.29	102.31	107.60
21	AA	246	A	C5'-C4'-O4'	5.29	117.04	109.10
21	AA	810	C	O4'-C1'-N1	5.29	116.44	108.50
28	BI	32	VAL	CA-C-N	5.29	128.23	120.71
28	BI	32	VAL	C-N-CA	5.29	128.23	120.71
30	BK	81	ASN	CB-CA-C	-5.29	102.92	111.18
45	BC	228	ASP	N-CA-C	-5.29	98.60	108.02
57	BB	353	C	C1'-O4'-C4'	5.29	115.19	109.90
57	BB	1100	C	C4'-C3'-C2'	-5.29	97.31	102.60
6	AO	16	ARG	N-CA-C	-5.29	106.08	112.54
11	AT	11	ILE	CA-C-O	5.29	126.18	120.47
21	AA	1277	C	C4'-C3'-C2'	-5.29	97.31	102.60
22	AY	39	U	C1'-C2'-O2'	5.29	116.34	108.40
29	BJ	42	ALA	CA-C-N	5.29	129.07	120.60
29	BJ	42	ALA	C-N-CA	5.29	129.07	120.60
32	BM	122	ALA	CA-C-N	5.29	130.80	122.49
32	BM	122	ALA	C-N-CA	5.29	130.80	122.49
41	BV	76	ASP	CA-CB-CG	-5.29	107.31	112.60
45	BC	19	VAL	CA-C-O	-5.29	115.51	120.22
57	BB	725	G	N1-C6-O6	5.29	135.78	119.90
57	BB	1763	G	O5'-C5'-C4'	-5.29	103.56	111.50
23	AW	23	A	O3'-P-O5'	-5.29	96.06	104.00
25	AZ	184	TRP	N-CA-CB	5.29	118.07	110.40
38	BS	7	HIS	ND1-CE1-NE2	5.29	113.69	108.40
57	BB	4	U	O4'-C1'-N1	5.29	116.44	108.50
57	BB	1902	C	P-O5'-C5'	-5.29	112.97	120.90
29	BJ	4	PHE	CA-C-O	5.29	125.10	119.34
36	BQ	104	ALA	N-CA-C	-5.29	106.33	112.89
53	BE	90	GLN	N-CA-CB	5.29	118.66	110.46
54	BF	29	ARG	CA-C-N	5.29	127.66	120.63
54	BF	29	ARG	C-N-CA	5.29	127.66	120.63
57	BB	189	G	O4'-C1'-C2'	-5.29	102.31	107.60
57	BB	751	A	P-O3'-C3'	-5.29	112.27	120.20
57	BB	793	A	P-O3'-C3'	5.29	128.13	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	946	C	C5'-C4'-O4'	-5.29	101.87	109.80
57	BB	1789	A	C4'-C3'-O3'	-5.29	105.07	113.00
57	BB	1927	A	O5'-C5'-C4'	-5.29	103.57	111.50
57	BB	2629	U	C3'-C2'-C1'	-5.29	96.21	101.50
16	AE	151	MET	N-CA-CB	5.29	118.08	110.20
21	AA	258	G	C5'-C4'-O4'	-5.29	101.87	109.80
21	AA	931	C	O4'-C4'-C3'	-5.29	98.71	104.00
55	BG	52	GLY	O-C-N	-5.29	116.48	121.77
17	AF	3	HIS	CE1-NE2-CD2	-5.29	103.72	109.00
21	AA	1331	G	C4'-C3'-C2'	-5.29	97.31	102.60
26	AV	16	C	O4'-C4'-C3'	-5.29	100.81	106.10
39	BT	81	LYS	CA-C-O	-5.29	114.92	121.11
41	BV	46	LYS	N-CA-CB	5.29	117.98	110.16
53	BE	30	GLN	N-CA-C	-5.29	105.60	111.36
54	BF	88	VAL	N-CA-CB	5.29	119.95	111.23
57	BB	50	U	P-O3'-C3'	5.29	128.13	120.20
57	BB	456	C	O5'-C5'-C4'	-5.29	103.77	111.70
57	BB	2176	A	P-O3'-C3'	-5.29	112.27	120.20
57	BB	2215	C	O4'-C1'-N1	5.29	116.43	108.50
13	AB	207	ARG	N-CA-C	-5.28	106.51	113.17
21	AA	7	A	O4'-C1'-N9	5.28	116.43	108.50
21	AA	525	C	O4'-C1'-N1	5.28	116.42	108.50
21	AA	1178	G	P-O3'-C3'	5.28	128.12	120.20
21	AA	1501	C	C4'-C3'-O3'	-5.28	105.07	113.00
57	BB	115	C	P-O3'-C3'	-5.28	112.28	120.20
57	BB	660	C	O4'-C1'-N1	5.28	116.42	108.50
57	BB	1525	A	O4'-C4'-C3'	5.28	109.28	104.00
57	BB	1615	C	C5'-C4'-C3'	5.28	123.12	115.20
57	BB	1849	G	C4'-C3'-O3'	-5.28	105.08	113.00
57	BB	2150	C	N1-C1'-C2'	-5.28	104.08	112.00
57	BB	2202	U	O4'-C1'-N1	5.28	116.42	108.50
57	BB	2433	A	C4'-C3'-C2'	5.28	107.88	102.60
57	BB	2679	A	O4'-C1'-N9	5.28	116.42	108.50
3	AL	62	VAL	O-C-N	-5.28	115.97	122.57
21	AA	206	C	O4'-C1'-N1	5.28	116.42	108.50
29	BJ	109	LEU	N-CA-C	-5.28	103.12	109.72
57	BB	925	A	O4'-C1'-N9	5.28	116.42	108.50
57	BB	2820	A	C4'-C3'-C2'	-5.28	97.32	102.60
14	AC	172	VAL	N-CA-CB	5.28	118.60	111.21
57	BB	57	C	O4'-C4'-C3'	-5.28	98.72	104.00
57	BB	340	A	P-O3'-C3'	-5.28	112.28	120.20
57	BB	818	G	C4'-C3'-O3'	-5.28	105.08	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	835	C	P-O5'-C5'	5.28	128.82	120.90
57	BB	907	G	P-O3'-C3'	-5.28	112.28	120.20
57	BB	1239	G	C5'-C4'-C3'	5.28	123.92	116.00
57	BB	1247	A	P-O3'-C3'	5.28	128.12	120.20
57	BB	1316	U	P-O3'-C3'	-5.28	112.28	120.20
57	BB	1910	G	C4'-C3'-C2'	-5.28	97.32	102.60
57	BB	2232	C	O4'-C1'-N1	5.28	116.42	108.50
57	BB	2608	G	P-O3'-C3'	-5.28	112.28	120.20
13	AB	53	LEU	CB-CA-C	-5.28	101.27	110.09
22	AY	32	C	C4'-C3'-C2'	5.28	107.88	102.60
25	AZ	237	LYS	CA-C-N	5.28	131.47	121.97
25	AZ	237	LYS	C-N-CA	5.28	131.47	121.97
57	BB	574	A	P-O5'-C5'	-5.28	112.98	120.90
9	AR	56	ARG	CA-C-N	5.28	127.30	120.44
9	AR	56	ARG	C-N-CA	5.28	127.30	120.44
21	AA	694	A	C4'-C3'-C2'	-5.28	97.32	102.60
21	AA	1121	U	O4'-C1'-N1	5.28	116.42	108.50
21	AA	1192	C	O4'-C1'-N1	5.28	116.42	108.50
42	BW	68	PHE	N-CA-CB	5.28	119.41	110.49
55	BG	33	THR	N-CA-C	-5.28	100.43	109.24
57	BB	564	C	O4'-C1'-N1	5.28	116.42	108.50
57	BB	1162	G	P-O5'-C5'	-5.28	112.98	120.90
57	BB	1745	A	P-O5'-C5'	5.28	128.82	120.90
57	BB	2475	C	P-O5'-C5'	5.28	128.82	120.90
58	BA	11	C	O4'-C1'-N1	5.28	116.42	108.50
58	BA	113	C	O4'-C1'-N1	5.28	116.42	108.50
14	AC	53	ARG	N-CA-C	-5.28	100.30	108.42
26	AV	68	C	O5'-C5'-C4'	-5.28	103.59	111.50
44	BY	9	LYS	N-CA-C	5.28	122.04	110.80
45	BC	206	LYS	CA-C-N	5.28	127.78	120.29
45	BC	206	LYS	C-N-CA	5.28	127.78	120.29
19	AH	101	ALA	CA-C-N	5.27	127.64	120.63
19	AH	101	ALA	C-N-CA	5.27	127.64	120.63
21	AA	734	G	O4'-C1'-C2'	-5.27	102.33	107.60
38	BS	105	VAL	O-C-N	-5.27	117.76	123.14
5	AN	33	VAL	CA-C-N	5.27	127.61	120.44
5	AN	33	VAL	C-N-CA	5.27	127.61	120.44
21	AA	1228	C	O5'-C5'-C4'	-5.27	103.59	111.50
27	B5	47	ASN	N-CA-CB	5.27	119.07	110.37
34	BO	67	ASN	CA-C-N	5.27	130.33	122.74
34	BO	67	ASN	C-N-CA	5.27	130.33	122.74
57	BB	95	A	C4'-C3'-C2'	-5.27	97.33	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	541	A	C4'-C3'-C2'	-5.27	97.33	102.60
57	BB	1323	C	C4'-C3'-O3'	-5.27	105.09	113.00
57	BB	1564	C	C3'-C2'-C1'	5.27	106.57	101.30
57	BB	1664	A	C4'-C3'-O3'	-5.27	105.09	113.00
57	BB	2699	C	P-O3'-C3'	-5.27	112.29	120.20
57	BB	2841	C	O5'-C5'-C4'	-5.27	103.59	111.50
57	BB	2895	G	O4'-C1'-N9	5.27	116.41	108.50
21	AA	754	C	C2'-C3'-O3'	5.27	121.61	113.70
21	AA	1468	A	P-O3'-C3'	-5.27	112.29	120.20
25	AZ	90	ASN	CA-C-N	5.27	129.59	120.58
25	AZ	90	ASN	C-N-CA	5.27	129.59	120.58
25	AZ	190	GLU	CB-CA-C	-5.27	99.20	110.32
57	BB	640	C	O4'-C1'-C2'	-5.27	102.33	107.60
57	BB	864	G	C4'-C3'-O3'	-5.27	105.09	113.00
57	BB	2495	G	O4'-C1'-N9	5.27	116.41	108.50
8	AQ	59	GLU	CB-CG-CD	-5.27	103.64	112.60
21	AA	263	A	C5'-C4'-C3'	-5.27	108.10	116.00
21	AA	1335	U	C2'-C3'-O3'	5.27	117.41	109.50
31	BL	88	GLY	N-CA-C	-5.27	108.05	115.32
43	BX	29	LEU	CA-C-N	5.27	125.25	120.03
43	BX	29	LEU	C-N-CA	5.27	125.25	120.03
53	BE	117	ARG	N-CA-C	-5.27	105.56	113.89
56	BH	37	VAL	CA-CB-CG2	-5.27	101.44	110.40
57	BB	672	C	C1'-O4'-C4'	-5.27	104.63	109.90
57	BB	1130	U	P-O3'-C3'	5.27	128.10	120.20
57	BB	1250	G	C1'-O4'-C4'	5.27	114.97	109.70
57	BB	1256	G	O5'-C5'-C4'	-5.27	103.60	111.50
57	BB	1399	C	O5'-C5'-C4'	-5.27	103.59	111.50
57	BB	2170	A	P-O3'-C3'	-5.27	112.30	120.20
57	BB	2723	C	P-O3'-C3'	-5.27	112.30	120.20
16	AE	80	LEU	N-CA-CB	5.27	118.30	110.29
18	AG	120	ALA	CA-C-N	5.27	127.34	120.28
18	AG	120	ALA	C-N-CA	5.27	127.34	120.28
22	AY	43	G	O4'-C1'-N9	5.27	116.40	108.50
26	AV	15	G	C4'-C3'-C2'	5.27	107.87	102.60
45	BC	62	ARG	NE-CZ-NH1	-5.27	116.23	121.50
57	BB	35	G	C3'-C2'-O2'	5.27	118.60	110.70
57	BB	758	C	P-O3'-C3'	-5.27	112.30	120.20
57	BB	1371	G	O4'-C1'-N9	5.27	116.40	108.50
57	BB	2192	U	C4'-C3'-O3'	-5.27	105.10	113.00
15	AD	124	VAL	N-CA-C	-5.27	100.54	108.12
17	AF	18	VAL	CA-C-N	5.27	126.42	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	AF	18	VAL	C-N-CA	5.27	126.42	119.84
57	BB	532	A	P-O3'-C3'	5.27	128.10	120.20
57	BB	1649	G	O4'-C1'-N9	5.27	116.40	108.50
21	AA	110	C	C5'-C4'-C3'	-5.26	108.10	116.00
21	AA	317	U	C5'-C4'-C3'	-5.26	108.10	116.00
34	BO	93	ASP	O-C-N	-5.26	117.08	123.13
52	BD	95	SER	CA-C-O	5.26	127.65	121.54
56	BH	69	ALA	CA-C-O	-5.26	115.47	121.00
57	BB	472	A	C4'-C3'-C2'	-5.26	97.33	102.60
57	BB	1104	C	C4'-C3'-O3'	-5.26	105.10	113.00
21	AA	1097	C	P-O3'-C3'	-5.26	112.31	120.20
22	AY	27	C	C4'-C3'-O3'	-5.26	105.11	113.00
57	BB	1305	C	C1'-C2'-O2'	5.26	116.29	108.40
3	AL	45	ASN	N-CA-C	-5.26	106.81	114.12
6	AO	49	HIS	CB-CA-C	-5.26	102.06	110.79
14	AC	47	ALA	N-CA-C	-5.26	106.25	113.30
20	AI	123	ARG	CB-CA-C	5.26	117.59	108.91
22	AY	33	U	O5'-C5'-C4'	5.26	119.39	111.50
37	BR	53	PHE	CA-C-N	5.26	131.44	121.97
37	BR	53	PHE	C-N-CA	5.26	131.44	121.97
52	BD	118	PHE	CA-CB-CG	5.26	119.06	113.80
5	AN	34	ASN	N-CA-C	-5.26	105.46	111.14
18	AG	16	LYS	N-CA-C	-5.26	105.15	112.30
21	AA	997	U	C4'-C3'-O3'	-5.26	105.11	113.00
23	AW	14	A	O3'-P-O5'	-5.26	96.11	104.00
34	BO	44	GLY	N-CA-C	-5.26	107.79	115.63
57	BB	246	C	O4'-C1'-N1	5.26	116.39	108.50
57	BB	252	G	O4'-C1'-N9	5.26	116.39	108.50
57	BB	2609	U	O3'-P-O5'	5.26	111.89	104.00
58	BA	65	U	O4'-C1'-N1	5.26	116.39	108.50
2	AK	79	LYS	CB-CA-C	-5.26	99.96	110.42
20	AI	112	ARG	O-C-N	5.26	128.84	122.85
21	AA	153	C	C1'-O4'-C4'	-5.26	104.64	109.90
21	AA	942	G	C1'-C2'-O2'	-5.26	100.51	108.40
57	BB	304	U	O4'-C4'-C3'	5.26	109.26	104.00
57	BB	2244	U	O4'-C1'-N1	5.26	116.39	108.50
18	AG	19	SER	CA-C-O	5.26	128.03	120.51
21	AA	560	A	C2'-C3'-O3'	5.26	117.39	109.50
21	AA	661	G	C5'-C4'-C3'	-5.26	108.11	116.00
21	AA	1051	C	P-O3'-C3'	-5.26	112.32	120.20
25	AZ	14	VAL	CA-C-O	-5.26	116.18	121.49
25	AZ	100	GLY	O-C-N	-5.26	118.67	123.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	BK	30	ARG	CA-C-O	5.26	125.79	119.43
45	BC	225	ASN	O-C-N	-5.26	115.67	121.66
49	B2	44	VAL	N-CA-CB	5.26	119.90	111.23
57	BB	335	C	C4'-C3'-O3'	-5.26	105.11	113.00
57	BB	593	U	O4'-C1'-N1	5.26	116.38	108.50
57	BB	1508	A	C1'-O4'-C4'	-5.26	104.64	109.90
57	BB	1844	C	O4'-C1'-N1	5.26	116.39	108.50
57	BB	2109	U	C5'-C4'-C3'	-5.26	108.11	116.00
57	BB	2646	C	P-O5'-C5'	5.26	128.78	120.90
16	AE	44	ARG	O-C-N	-5.25	116.81	123.17
21	AA	413	G	C2'-C3'-O3'	5.25	117.38	109.50
27	B5	144	THR	CA-C-O	5.25	125.81	120.24
42	BW	82	GLU	N-CA-C	-5.25	101.31	109.14
55	BG	26	LYS	CA-C-O	5.25	126.11	120.38
57	BB	332	A	P-O3'-C3'	5.25	128.08	120.20
57	BB	1223	G	O4'-C1'-N9	5.25	116.38	108.50
57	BB	2003	A	C1'-C2'-O2'	5.25	116.28	108.40
1	AJ	59	LYS	CB-CG-CD	5.25	123.38	111.30
19	AH	91	LEU	CA-C-N	5.25	125.66	119.99
19	AH	91	LEU	C-N-CA	5.25	125.66	119.99
21	AA	412	A	C1'-O4'-C4'	-5.25	104.45	109.70
21	AA	430	A	C1'-C2'-O2'	5.25	116.28	108.40
22	AY	20	G	O4'-C1'-C2'	5.25	111.05	105.80
24	AX	14	A	P-O3'-C3'	5.25	128.08	120.20
26	AV	45	G	C1'-O4'-C4'	5.25	115.15	109.90
56	BH	109	GLU	CA-C-N	5.25	127.65	120.35
56	BH	109	GLU	C-N-CA	5.25	127.65	120.35
57	BB	1961	C	O5'-C5'-C4'	-5.25	103.62	111.50
12	AU	30	GLU	CB-CG-CD	5.25	121.53	112.60
18	AG	72	VAL	CB-CA-C	-5.25	102.83	110.81
21	AA	86	G	C5'-C4'-O4'	5.25	116.98	109.10
30	BK	9	VAL	CB-CA-C	-5.25	104.94	111.08
51	B4	24	ARG	N-CA-C	-5.25	102.28	110.42
57	BB	2423	U	O4'-C1'-C2'	-5.25	100.55	105.80
57	BB	2447	G	P-O5'-C5'	-5.25	113.02	120.90
57	BB	2609	U	O5'-C5'-C4'	-5.25	103.82	111.70
27	B5	193	LEU	CB-CA-C	-5.25	101.92	110.85
57	BB	10	A	O4'-C1'-N9	5.25	116.38	108.50
57	BB	545	U	C5'-C4'-C3'	5.25	123.87	116.00
57	BB	780	G	C4'-C3'-O3'	-5.25	105.12	113.00
2	AK	49	SER	N-CA-C	-5.25	105.73	111.82
14	AC	107	LYS	CA-C-O	-5.25	115.02	119.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	109	A	O4'-C1'-N9	5.25	116.07	108.20
21	AA	134	G	O3'-P-O5'	5.25	111.87	104.00
21	AA	358	U	O4'-C1'-N1	5.25	116.37	108.50
21	AA	1165	U	C1'-O4'-C4'	5.25	115.15	109.90
29	BJ	70	THR	N-CA-C	-5.25	106.02	112.90
33	BN	112	TYR	CA-C-N	5.25	131.42	121.97
33	BN	112	TYR	C-N-CA	5.25	131.42	121.97
36	BQ	70	GLN	N-CA-C	-5.25	106.88	113.28
37	BR	69	GLY	CA-C-O	-5.25	116.41	121.92
55	BG	74	MET	CA-C-N	5.25	127.17	120.56
55	BG	74	MET	C-N-CA	5.25	127.17	120.56
57	BB	242	G	O3'-P-O5'	-5.25	96.13	104.00
57	BB	762	U	C5'-C4'-C3'	5.25	123.07	115.20
57	BB	1377	G	C4'-C3'-C2'	5.25	107.85	102.60
57	BB	2090	A	O3'-P-O5'	-5.25	96.13	104.00
57	BB	2356	U	O4'-C1'-C2'	-5.25	102.35	107.60
38	BS	98	LYS	CA-C-N	5.25	128.67	120.75
38	BS	98	LYS	C-N-CA	5.25	128.67	120.75
52	BD	141	ARG	NE-CZ-NH1	-5.25	116.25	121.50
57	BB	162	U	O4'-C1'-N1	5.25	116.07	108.20
57	BB	366	C	O4'-C1'-N1	5.25	116.37	108.50
57	BB	2452	C	P-O5'-C5'	5.25	128.77	120.90
57	BB	2472	G	O4'-C4'-C3'	-5.25	98.75	104.00
21	AA	155	A	C4'-C3'-O3'	-5.25	105.13	113.00
21	AA	287	U	C3'-C2'-C1'	-5.25	96.06	101.30
29	BJ	23	LYS	CA-C-N	5.25	127.74	120.29
29	BJ	23	LYS	C-N-CA	5.25	127.74	120.29
57	BB	2294	G	C4'-C3'-C2'	-5.25	97.36	102.60
21	AA	179	A	O4'-C4'-C3'	-5.24	98.76	104.00
21	AA	459	A	C4'-C3'-C2'	-5.24	97.36	102.60
21	AA	739	C	C1'-O4'-C4'	-5.24	104.66	109.90
37	BR	11	GLN	OE1-CD-NE2	5.24	127.84	122.60
38	BS	3	THR	CB-CA-C	5.24	121.11	109.94
54	BF	126	ASN	CB-CG-OD1	-5.24	110.31	120.80
57	BB	407	G	O5'-C5'-C4'	-5.24	103.64	111.50
57	BB	1712	U	C4'-C3'-O3'	-5.24	105.13	113.00
57	BB	1822	C	O4'-C1'-N1	5.24	116.36	108.50
57	BB	2274	A	N1-C6-N6	5.24	134.33	118.60
22	AY	53	G	C5'-C4'-C3'	-5.24	108.14	116.00
28	BI	57	VAL	O-C-N	-5.24	117.64	123.20
57	BB	159	G	O4'-C1'-N9	5.24	116.36	108.50
57	BB	727	A	N9-C1'-C2'	5.24	119.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	AD	47	LEU	N-CA-CB	5.24	119.34	110.49
34	BO	112	GLU	CA-C-O	-5.24	113.02	120.51
57	BB	752	A	P-O3'-C3'	5.24	128.06	120.20
57	BB	2265	U	O4'-C1'-N1	5.24	116.36	108.50
57	BB	2422	C	O3'-P-O5'	-5.24	96.14	104.00
57	BB	2432	A	O5'-C5'-C4'	5.24	119.36	111.50
21	AA	10	A	C1'-C2'-O2'	5.24	116.26	108.40
21	AA	766	A	O5'-C5'-C4'	-5.24	103.64	111.50
21	AA	1306	A	C4'-C3'-C2'	-5.24	97.36	102.60
39	BT	28	ASN	CA-C-N	5.24	131.55	121.54
39	BT	28	ASN	C-N-CA	5.24	131.55	121.54
57	BB	824	U	O5'-C5'-C4'	-5.24	103.64	111.50
57	BB	1171	G	O4'-C1'-C2'	-5.24	102.36	107.60
57	BB	167	A	O4'-C1'-C2'	-5.24	102.36	107.60
57	BB	298	G	O4'-C4'-C3'	-5.24	98.76	104.00
1	AJ	15	HIS	CE1-NE2-CD2	-5.24	103.77	109.00
21	AA	904	U	O4'-C1'-N1	5.24	116.35	108.50
21	AA	1012	A	C4'-C3'-C2'	-5.24	97.36	102.60
21	AA	1018	G	C5'-C4'-C3'	5.24	123.85	116.00
21	AA	1461	G	P-O3'-C3'	5.24	128.05	120.20
22	AY	5	A	C4'-C3'-O3'	-5.24	105.15	113.00
27	B5	85	GLU	CA-C-O	5.24	125.77	119.43
28	BI	45	THR	N-CA-C	-5.24	107.27	113.97
32	BM	59	ARG	NE-CZ-NH1	-5.24	116.26	121.50
46	BZ	22	THR	CA-C-O	5.24	124.57	118.97
57	BB	1150	C	P-O3'-C3'	-5.24	112.35	120.20
57	BB	1241	A	O4'-C1'-N9	5.24	116.35	108.50
36	BQ	83	LYS	N-CA-CB	5.23	118.10	110.88
57	BB	742	A	C1'-O4'-C4'	-5.23	104.67	109.90
57	BB	1415	U	C1'-O4'-C4'	5.23	115.13	109.90
57	BB	2548	U	C2'-C3'-O3'	5.23	121.55	113.70
57	BB	2627	G	C5'-C4'-C3'	-5.23	108.15	116.00
16	AE	140	ILE	N-CA-C	-5.23	106.78	112.80
52	BD	200	ASP	CA-C-O	-5.23	115.30	121.16
57	BB	86	G	O4'-C1'-N9	5.23	116.35	108.50
57	BB	454	A	C5'-C4'-C3'	5.23	123.05	115.20
57	BB	458	G	C3'-C2'-C1'	-5.23	96.27	101.50
57	BB	875	G	C5'-C4'-C3'	-5.23	108.15	116.00
57	BB	1377	G	P-O5'-C5'	5.23	128.75	120.90
57	BB	1561	C	O4'-C1'-N1	5.23	116.35	108.50
57	BB	1910	G	O4'-C1'-C2'	-5.23	102.37	107.60
21	AA	1328	C	O4'-C1'-N1	5.23	116.34	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1399	C	C5'-C4'-C3'	-5.23	107.36	115.20
23	AW	12	U	O4'-C1'-N1	5.23	116.34	108.50
37	BR	96	VAL	CB-CA-C	5.23	118.50	110.55
57	BB	2109	U	O4'-C1'-N1	5.23	116.34	108.50
25	AZ	156	LEU	CA-C-N	5.23	131.53	121.54
25	AZ	156	LEU	C-N-CA	5.23	131.53	121.54
54	BF	64	PRO	CB-CA-C	-5.23	102.93	111.56
57	BB	403	U	O4'-C4'-C3'	-5.23	100.87	106.10
57	BB	1444	G	P-O5'-C5'	-5.23	113.06	120.90
15	AD	142	VAL	CA-C-O	-5.23	114.80	120.71
18	AG	78	ARG	O-C-N	-5.23	116.51	122.89
19	AH	31	LEU	N-CA-CB	5.23	117.81	110.12
21	AA	144	G	C3'-C2'-C1'	-5.23	96.07	101.30
21	AA	1282	C	P-O5'-C5'	-5.23	113.06	120.90
23	AW	9	A	C4'-C3'-O3'	5.23	117.24	109.40
25	AZ	314	ASP	N-CA-C	5.23	117.06	111.36
38	BS	99	ARG	O-C-N	5.23	129.24	122.81
56	BH	96	THR	N-CA-C	-5.23	106.86	113.18
57	BB	554	U	C4'-C3'-C2'	-5.23	97.37	102.60
57	BB	2624	G	C4'-C3'-O3'	-5.23	105.16	113.00
57	BB	2710	C	C5'-C4'-O4'	5.23	117.64	109.80
21	AA	1491	G	O4'-C1'-C2'	-5.23	102.37	107.60
23	AW	25	C	C3'-C2'-O2'	5.23	118.54	110.70
57	BB	839	U	O4'-C1'-N1	5.23	116.34	108.50
57	BB	1201	U	O5'-C5'-C4'	-5.23	103.66	111.50
13	AB	179	GLY	N-CA-C	-5.22	105.00	114.46
14	AC	21	TRP	N-CA-C	-5.22	99.67	110.80
17	AF	87	SER	O-C-N	-5.22	117.78	123.26
21	AA	331	G	P-O5'-C5'	5.22	128.74	120.90
21	AA	664	G	C5'-C4'-C3'	5.22	123.84	116.00
22	AY	46	G	C5'-C4'-C3'	-5.22	107.36	115.20
23	AW	41	C	O3'-P-O5'	-5.22	96.16	104.00
27	B5	69	THR	CA-CB-CG2	5.22	119.38	110.50
28	BI	58	ILE	N-CA-CB	5.22	117.32	111.21
30	BK	89	ASN	CA-CB-CG	-5.22	107.38	112.60
31	BL	95	LEU	N-CA-C	-5.22	106.43	114.16
47	B0	40	HIS	CE1-NE2-CD2	-5.22	103.78	109.00
52	BD	136	ASN	N-CA-C	-5.22	101.42	109.52
57	BB	1064	C	C4'-C3'-O3'	-5.22	105.16	113.00
57	BB	1767	G	C4'-C3'-O3'	-5.22	105.16	113.00
57	BB	2828	G	O4'-C1'-C2'	-5.22	102.38	107.60
58	BA	50	A	P-O3'-C3'	-5.22	112.36	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AM	111	PRO	CB-CA-C	-5.22	102.94	111.56
21	AA	274	A	C5'-C4'-C3'	-5.22	107.36	115.20
21	AA	1470	U	C4'-C3'-O3'	-5.22	105.17	113.00
26	AV	11	A	C4'-C3'-O3'	-5.22	105.17	113.00
45	BC	17	LYS	N-CA-C	-5.22	101.47	109.41
55	BG	121	THR	N-CA-CB	5.22	120.08	111.62
57	BB	1407	G	C3'-C2'-C1'	-5.22	96.08	101.30
57	BB	2137	U	C4'-C3'-O3'	-5.22	105.17	113.00
57	BB	2420	C	P-O5'-C5'	5.22	128.74	120.90
57	BB	2444	G	P-O3'-C3'	-5.22	112.37	120.20
7	AP	16	PHE	N-CA-C	-5.22	100.22	108.73
17	AF	6	ILE	CA-C-N	5.22	130.39	122.98
17	AF	6	ILE	C-N-CA	5.22	130.39	122.98
21	AA	825	A	O4'-C1'-N9	5.22	116.33	108.50
31	BL	22	GLY	CA-C-O	-5.22	118.83	122.22
41	BV	61	LEU	N-CA-C	-5.22	102.33	110.42
46	BZ	26	LEU	N-CA-CB	5.22	118.58	110.44
57	BB	1601	G	O5'-C5'-C4'	-5.22	103.67	111.50
15	AD	204	SER	N-CA-CB	5.22	117.69	110.17
23	AW	31	A	C4'-C3'-C2'	-5.22	97.38	102.60
27	B5	210	LYS	CA-C-N	5.22	129.29	121.72
27	B5	210	LYS	C-N-CA	5.22	129.29	121.72
30	BK	111	PHE	CA-CB-CG	-5.22	108.58	113.80
38	BS	22	ASP	CA-C-O	5.22	126.00	120.10
57	BB	1732	C	C5'-C4'-C3'	-5.22	107.37	115.20
57	BB	2007	U	O4'-C1'-N1	5.22	116.33	108.50
57	BB	2167	U	O4'-C4'-C3'	-5.22	98.78	104.00
57	BB	2452	C	O4'-C1'-C2'	5.22	112.82	107.60
4	AM	24	VAL	N-CA-C	-5.22	98.49	109.34
13	AB	22	TRP	CB-CG-CD2	-5.22	119.50	126.80
21	AA	58	C	C4'-C3'-O3'	-5.22	105.18	113.00
21	AA	943	U	C4'-C3'-O3'	-5.22	105.17	113.00
21	AA	1201	A	C5'-C4'-C3'	-5.22	107.37	115.20
32	BM	133	LYS	CA-C-O	5.22	126.07	120.70
57	BB	95	A	O3'-P-O5'	-5.22	96.17	104.00
57	BB	341	C	O4'-C1'-N1	5.22	116.33	108.50
57	BB	1046	A	O4'-C1'-N9	5.22	116.03	108.20
57	BB	1848	A	C4'-C3'-C2'	-5.22	97.38	102.60
57	BB	2195	U	O4'-C1'-N1	5.22	116.33	108.50
5	AN	50	LEU	O-C-N	-5.21	115.60	120.55
21	AA	190	A	C1'-C2'-O2'	5.21	116.22	108.40
21	AA	1075	U	C4'-C3'-O3'	-5.21	105.18	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	AW	44	G	P-O3'-C3'	5.21	128.02	120.20
27	B5	42	VAL	CB-CA-C	-5.21	103.75	110.84
57	BB	1482	G	O4'-C1'-C2'	-5.21	102.39	107.60
57	BB	2266	A	C5'-C4'-O4'	5.21	116.92	109.10
58	BA	60	C	O4'-C1'-N1	5.21	116.32	108.50
20	AI	95	SER	CB-CA-C	-5.21	102.14	110.79
21	AA	6	G	C2'-C3'-O3'	5.21	121.52	113.70
22	AY	58	A	O4'-C1'-C2'	-5.21	100.59	105.80
25	AZ	84	HIS	CA-CB-CG	5.21	119.01	113.80
42	BW	25	PHE	CA-CB-CG	-5.21	108.59	113.80
57	BB	1644	C	C5'-C4'-C3'	-5.21	108.18	116.00
15	AD	194	ILE	CA-C-O	5.21	125.53	120.27
25	AZ	304	PHE	N-CA-C	-5.21	100.59	108.46
27	B5	150	ALA	CA-C-N	5.21	128.23	120.31
27	B5	150	ALA	C-N-CA	5.21	128.23	120.31
28	BI	3	LYS	N-CA-CB	5.21	119.30	110.49
33	BN	16	HIS	CE1-NE2-CD2	-5.21	103.79	109.00
57	BB	106	C	O4'-C1'-N1	5.21	116.32	108.50
57	BB	626	A	O4'-C1'-N9	5.21	116.32	108.50
57	BB	1865	U	P-O3'-C3'	5.21	128.02	120.20
57	BB	2315	G	C4'-C3'-O3'	-5.21	105.18	113.00
5	AN	80	ARG	CA-C-N	5.21	131.35	121.97
5	AN	80	ARG	C-N-CA	5.21	131.35	121.97
21	AA	607	A	P-O3'-C3'	-5.21	112.39	120.20
15	AD	12	ARG	N-CA-CB	5.21	118.27	109.78
15	AD	138	PRO	CA-C-N	5.21	130.34	122.68
15	AD	138	PRO	C-N-CA	5.21	130.34	122.68
22	AY	31	A	O5'-C5'-C4'	-5.21	103.69	111.50
34	BO	7	ARG	CA-C-O	-5.21	114.90	120.42
36	BQ	73	ILE	CA-C-N	5.21	130.45	120.97
36	BQ	73	ILE	C-N-CA	5.21	130.45	120.97
57	BB	429	A	O4'-C1'-C2'	-5.21	102.39	107.60
57	BB	1075	C	P-O3'-C3'	-5.21	112.39	120.20
57	BB	1103	A	C5'-C4'-C3'	-5.21	108.19	116.00
57	BB	2705	A	O4'-C4'-C3'	-5.21	98.79	104.00
4	AM	11	HIS	N-CA-CB	5.21	120.58	112.25
6	AO	87	ARG	N-CA-CB	5.21	119.29	110.49
13	AB	18	GLN	N-CA-CB	5.21	119.29	110.49
15	AD	38	GLY	CA-C-O	5.21	125.80	121.11
21	AA	549	C	O4'-C1'-N1	5.21	116.31	108.50
21	AA	1493	A	C4'-C3'-O3'	5.21	117.21	109.40
26	AV	39	C	C4'-C3'-O3'	-5.21	105.19	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	AV	64	G	P-O3'-C3'	-5.21	112.39	120.20
28	BI	131	THR	CA-C-N	5.21	127.21	120.44
28	BI	131	THR	C-N-CA	5.21	127.21	120.44
55	BG	146	ASP	CA-CB-CG	-5.21	107.39	112.60
57	BB	554	U	P-O5'-C5'	5.21	128.71	120.90
57	BB	1149	G	O4'-C1'-C2'	5.21	112.81	107.60
57	BB	1244	A	O4'-C4'-C3'	-5.21	98.79	104.00
57	BB	2194	U	O4'-C1'-N1	5.21	116.31	108.50
57	BB	2257	U	O4'-C1'-N1	5.21	116.31	108.50
57	BB	2665	A	O3'-P-O5'	5.21	111.81	104.00
58	BA	28	C	O4'-C1'-C2'	-5.21	102.39	107.60
21	AA	77	A	O4'-C1'-N9	5.21	116.31	108.50
21	AA	1277	C	C1'-O4'-C4'	-5.21	104.69	109.90
14	AC	193	GLY	CA-C-N	5.20	127.47	120.50
14	AC	193	GLY	C-N-CA	5.20	127.47	120.50
20	AI	16	ALA	CB-CA-C	-5.20	101.81	110.14
21	AA	1227	A	C4'-C3'-O3'	-5.20	105.19	113.00
28	BI	63	ASP	CA-C-O	5.20	125.36	119.27
45	BC	206	LYS	O-C-N	-5.20	117.80	123.26
57	BB	439	A	C4'-C3'-O3'	-5.20	105.20	113.00
57	BB	1613	G	C4'-C3'-C2'	-5.20	97.40	102.60
57	BB	1710	G	O4'-C1'-N9	5.20	116.31	108.50
57	BB	2705	A	O3'-P-O5'	-5.20	96.20	104.00
1	AJ	25	ILE	N-CA-CB	5.20	119.14	112.12
7	AP	37	GLY	CA-C-O	5.20	127.13	121.56
11	AT	75	LYS	N-CA-C	-5.20	106.33	113.30
11	AT	79	THR	N-CA-C	-5.20	105.61	111.28
13	AB	162	VAL	CB-CA-C	-5.20	103.75	111.19
21	AA	368	U	C5'-C4'-C3'	-5.20	108.20	116.00
27	B5	37	LYS	CA-CB-CG	5.20	124.50	114.10
53	BE	145	ASP	CA-C-N	5.20	131.33	121.97
53	BE	145	ASP	C-N-CA	5.20	131.33	121.97
57	BB	1033	U	C2'-C3'-O3'	5.20	117.30	109.50
57	BB	2097	A	O4'-C4'-C3'	-5.20	98.80	104.00
14	AC	127	VAL	CA-C-N	5.20	131.47	121.54
14	AC	127	VAL	C-N-CA	5.20	131.47	121.54
21	AA	534	U	C5'-C4'-O4'	5.20	117.60	109.80
21	AA	1144	G	C5'-C4'-C3'	5.20	123.80	116.00
21	AA	1463	U	O4'-C4'-C3'	5.20	109.20	104.00
21	AA	1464	U	O4'-C1'-N1	5.20	116.30	108.50
21	AA	1533	C	C5'-C4'-O4'	5.20	117.60	109.80
25	AZ	167	THR	CA-C-O	-5.20	114.41	120.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	B5	219	GLY	N-CA-C	-5.20	100.86	113.18
30	BK	11	ASP	CA-CB-CG	5.20	117.80	112.60
32	BM	44	ARG	NE-CZ-NH2	5.20	123.88	119.20
33	BN	55	ALA	O-C-N	-5.20	115.68	122.39
34	BO	107	ALA	N-CA-C	-5.20	105.65	112.41
44	BY	52	ARG	N-CA-C	5.20	116.95	111.28
46	BZ	19	HIS	CB-CA-C	-5.20	100.60	109.65
52	BD	32	ASN	CA-CB-CG	5.20	117.80	112.60
52	BD	67	HIS	CB-CG-ND1	5.20	130.50	122.70
55	BG	106	LEU	N-CA-C	-5.20	103.80	111.81
57	BB	1194	A	C4'-C3'-C2'	5.20	107.80	102.60
57	BB	1575	C	O4'-C1'-C2'	5.20	112.80	107.60
15	AD	106	PHE	N-CA-C	-5.20	99.31	108.20
17	AF	91	ARG	O-C-N	-5.20	115.50	122.94
19	AH	57	GLU	N-CA-CB	5.20	120.43	111.13
21	AA	186	C	O4'-C1'-N1	5.20	116.30	108.50
21	AA	827	U	O4'-C1'-N1	5.20	116.30	108.50
21	AA	913	A	O4'-C4'-C3'	-5.20	100.90	106.10
22	AY	69	U	O4'-C1'-C2'	-5.20	102.40	107.60
28	BI	69	VAL	CA-C-O	5.20	127.28	120.78
48	B1	42	VAL	CA-C-O	5.20	124.71	119.20
57	BB	315	G	O4'-C1'-N9	5.20	116.30	108.50
57	BB	1013	C	O4'-C4'-C3'	-5.20	98.80	104.00
57	BB	2338	C	N1-C1'-C2'	5.20	119.80	112.00
57	BB	2417	C	O4'-C1'-N1	5.20	116.30	108.50
57	BB	2472	G	P-O5'-C5'	5.20	128.70	120.90
21	AA	764	C	C4'-C3'-O3'	-5.20	105.20	113.00
21	AA	885	G	C3'-C2'-C1'	-5.20	96.10	101.30
29	BJ	90	GLU	CA-C-N	5.20	129.47	120.58
29	BJ	90	GLU	C-N-CA	5.20	129.47	120.58
53	BE	189	THR	N-CA-CB	5.20	119.69	111.43
57	BB	528	A	O4'-C1'-N9	5.20	116.30	108.50
57	BB	1068	G	C1'-O4'-C4'	-5.20	104.70	109.90
57	BB	1831	G	C1'-C2'-O2'	5.20	116.20	108.40
57	BB	1857	G	O4'-C4'-C3'	-5.20	100.90	106.10
19	AH	92	PRO	N-CA-CB	-5.20	98.25	103.19
21	AA	39	G	P-O5'-C5'	5.20	128.69	120.90
21	AA	375	U	C4'-C3'-O3'	-5.20	105.21	113.00
21	AA	1019	A	C1'-C2'-O2'	5.20	116.19	108.40
21	AA	1317	C	C1'-C2'-O2'	5.20	116.19	108.40
27	B5	25	GLU	CA-C-N	5.20	127.56	120.54
27	B5	25	GLU	C-N-CA	5.20	127.56	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BM	91	TYR	CB-CG-CD2	-5.20	113.01	120.80
40	BU	94	PHE	CA-CB-CG	5.20	119.00	113.80
57	BB	223	A	C5'-C4'-C3'	-5.20	108.21	116.00
57	BB	613	A	O4'-C1'-N9	5.20	116.29	108.50
57	BB	659	G	C4'-C3'-O3'	-5.20	105.21	113.00
57	BB	1105	U	C3'-C2'-O2'	5.20	118.49	110.70
57	BB	1951	U	O4'-C1'-N1	5.20	116.29	108.50
27	B5	149	VAL	CA-CB-CG1	-5.19	101.57	110.40
37	BR	83	TYR	N-CA-C	-5.19	99.82	108.34
41	BV	62	THR	N-CA-C	-5.19	96.84	107.70
57	BB	1647	U	O5'-C5'-C4'	-5.19	103.91	111.70
57	BB	1916	A	C4'-C3'-C2'	-5.19	97.41	102.60
57	BB	1966	A	O4'-C4'-C3'	-5.19	100.91	106.10
57	BB	2403	C	O4'-C1'-N1	5.19	116.29	108.50
12	AU	6	ARG	N-CA-CB	-5.19	101.99	109.83
14	AC	105	VAL	CA-CB-CG2	-5.19	101.57	110.40
21	AA	274	A	P-O5'-C5'	-5.19	113.11	120.90
29	BJ	4	PHE	CB-CA-C	-5.19	101.72	110.44
33	BN	36	THR	N-CA-C	-5.19	101.02	108.60
38	BS	73	LYS	CB-CA-C	-5.19	100.74	109.72
57	BB	1580	A	O4'-C1'-C2'	-5.19	102.41	107.60
57	BB	1766	G	C1'-O4'-C4'	5.19	115.09	109.90
57	BB	2798	U	O4'-C4'-C3'	-5.19	100.91	106.10
58	BA	22	U	P-O5'-C5'	5.19	128.69	120.90
58	BA	85	G	P-O3'-C3'	-5.19	112.41	120.20
2	AK	15	VAL	N-CA-C	5.19	115.63	110.23
14	AC	113	LYS	CB-CA-C	-5.19	101.03	110.63
16	AE	97	PRO	N-CA-CB	5.19	108.70	103.25
24	AX	13	A	P-O3'-C3'	-5.19	112.41	120.20
28	BI	106	GLN	CB-CA-C	-5.19	102.17	110.79
29	BJ	8	PRO	CA-C-N	5.19	130.51	122.26
29	BJ	8	PRO	C-N-CA	5.19	130.51	122.26
39	BT	48	GLN	CA-C-N	5.19	130.91	121.41
39	BT	48	GLN	C-N-CA	5.19	130.91	121.41
57	BB	198	C	O4'-C1'-N1	5.19	116.28	108.50
57	BB	1244	A	C4'-C3'-O3'	-5.19	105.22	113.00
57	BB	1774	C	C1'-O4'-C4'	5.19	115.09	109.90
57	BB	1814	G	O4'-C4'-C3'	-5.19	98.81	104.00
57	BB	2084	C	P-O3'-C3'	-5.19	112.42	120.20
57	BB	2857	G	O4'-C4'-C3'	-5.19	98.81	104.00
21	AA	220	G	C4'-C3'-C2'	-5.19	97.41	102.60
37	BR	66	HIS	N-CA-C	-5.19	101.65	109.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	215	G	C5'-C4'-C3'	5.19	122.98	115.20
57	BB	2008	C	C4'-C3'-C2'	-5.19	97.41	102.60
1	AJ	31	ARG	CA-C-N	5.19	127.66	120.29
1	AJ	31	ARG	C-N-CA	5.19	127.66	120.29
2	AK	15	VAL	CA-C-N	5.19	131.45	121.54
2	AK	15	VAL	C-N-CA	5.19	131.45	121.54
19	AH	12	ARG	CG-CD-NE	-5.19	100.59	112.00
23	AW	24	G	O4'-C1'-N9	5.19	116.28	108.50
28	BI	59	THR	CA-C-O	-5.19	114.74	120.24
21	AA	543	U	O4'-C1'-N1	5.19	116.28	108.50
21	AA	1417	G	C1'-C2'-O2'	5.19	116.18	108.40
23	AW	57	G	O4'-C1'-N9	5.19	116.28	108.50
25	AZ	379	GLY	N-CA-C	-5.19	108.09	115.30
28	BI	18	ASN	CB-CG-OD1	-5.19	110.43	120.80
38	BS	99	ARG	NE-CZ-NH1	5.19	126.69	121.50
10	AS	32	THR	CA-C-N	5.18	127.65	120.29
10	AS	32	THR	C-N-CA	5.18	127.65	120.29
13	AB	191	ASP	CA-C-N	5.18	125.19	119.90
13	AB	191	ASP	C-N-CA	5.18	125.19	119.90
20	AI	19	PHE	CA-CB-CG	-5.18	108.62	113.80
21	AA	188	C	C1'-C2'-O2'	5.18	116.18	108.40
22	AY	25	C	C1'-C2'-O2'	5.18	116.18	108.40
22	AY	49	C	O4'-C1'-N1	5.18	116.28	108.50
55	BG	169	ARG	CA-C-O	5.18	125.07	118.54
57	BB	80	G	O4'-C1'-C2'	-5.18	102.42	107.60
57	BB	232	G	C3'-C2'-O2'	-5.18	106.82	114.60
57	BB	549	G	C4'-C3'-C2'	-5.18	97.42	102.60
57	BB	1394	U	O4'-C4'-C3'	-5.18	98.81	104.00
57	BB	2269	G	C4'-C3'-C2'	-5.18	97.42	102.60
57	BB	2441	U	O4'-C1'-N1	5.18	116.28	108.50
15	AD	36	ALA	CB-CA-C	5.18	116.90	108.87
21	AA	485	U	C2'-C3'-O3'	5.18	121.47	113.70
21	AA	668	G	P-O5'-C5'	-5.18	113.13	120.90
21	AA	756	C	C4'-C3'-O3'	-5.18	105.23	113.00
25	AZ	75	HIS	CA-CB-CG	5.18	118.98	113.80
27	B5	160	GLN	CA-C-O	-5.18	115.05	120.80
40	BU	76	THR	CA-C-O	5.18	125.93	120.33
57	BB	328	U	C4'-C3'-C2'	-5.18	97.42	102.60
57	BB	1752	C	O4'-C1'-N1	5.18	116.28	108.50
36	BQ	83	LYS	CA-CB-CG	5.18	124.46	114.10
2	AK	121	ARG	NE-CZ-NH1	5.18	126.68	121.50
21	AA	416	G	O5'-C5'-C4'	-5.18	103.73	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	BT	19	LYS	CA-C-N	5.18	131.44	121.54
39	BT	19	LYS	C-N-CA	5.18	131.44	121.54
48	B1	45	HIS	CB-CG-ND1	5.18	130.47	122.70
57	BB	2487	G	O5'-C5'-C4'	-5.18	103.73	111.50
21	AA	376	G	O4'-C4'-C3'	-5.18	98.82	104.00
35	BP	33	GLU	N-CA-C	-5.18	107.01	113.38
46	BZ	52	PHE	N-CA-C	5.18	119.22	113.01
50	B3	23	HIS	ND1-CE1-NE2	5.18	113.58	108.40
55	BG	141	GLY	CA-C-N	5.18	127.17	120.44
55	BG	141	GLY	C-N-CA	5.18	127.17	120.44
57	BB	663	G	O5'-C5'-C4'	-5.18	103.73	111.50
57	BB	1310	G	C5'-C4'-C3'	-5.18	108.23	116.00
15	AD	12	ARG	NE-CZ-NH1	-5.18	116.32	121.50
21	AA	492	C	O4'-C1'-N1	5.18	116.27	108.50
21	AA	1016	A	C1'-O4'-C4'	5.18	115.08	109.90
25	AZ	166	ASP	N-CA-C	-5.18	99.77	110.80
40	BU	39	ASN	CA-C-N	5.18	130.92	121.97
40	BU	39	ASN	C-N-CA	5.18	130.92	121.97
45	BC	213	ARG	NE-CZ-NH2	-5.18	114.54	119.20
52	BD	82	PHE	CA-C-N	5.18	128.20	120.90
52	BD	82	PHE	C-N-CA	5.18	128.20	120.90
52	BD	131	ASP	O-C-N	-5.18	116.95	122.85
55	BG	21	GLN	N-CA-C	-5.18	104.42	111.56
57	BB	854	C	P-O3'-C3'	-5.18	112.44	120.20
57	BB	1074	G	P-O5'-C5'	-5.18	113.14	120.90
57	BB	1796	U	P-O5'-C5'	5.18	128.66	120.90
57	BB	2452	C	P-O3'-C3'	-5.18	112.43	120.20
15	AD	68	GLU	CA-C-N	5.17	127.98	120.79
15	AD	68	GLU	C-N-CA	5.17	127.98	120.79
15	AD	154	VAL	N-CA-C	5.17	115.39	110.42
25	AZ	120	LEU	N-CA-C	5.17	116.92	111.28
25	AZ	189	LEU	N-CA-CB	5.17	117.73	110.12
30	BK	28	HIS	CG-CD2-NE2	5.17	112.38	107.20
33	BN	73	ASN	CA-C-N	5.17	127.94	120.38
33	BN	73	ASN	C-N-CA	5.17	127.94	120.38
54	BF	130	GLY	N-CA-C	-5.17	100.92	113.18
57	BB	571	U	C2'-C3'-O3'	5.17	117.26	109.50
57	BB	1072	C	C4'-C3'-C2'	-5.17	97.43	102.60
57	BB	1154	G	C4'-C3'-O3'	-5.17	105.24	113.00
57	BB	1605	C	O4'-C1'-N1	5.17	116.26	108.50
57	BB	1898	U	O3'-P-O5'	5.17	111.76	104.00
57	BB	2406	A	O4'-C4'-C3'	-5.17	100.92	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2610	C	P-O3'-C3'	5.17	127.96	120.20
57	BB	2840	C	P-O5'-C5'	5.17	128.66	120.90
58	BA	9	G	N1-C6-O6	5.17	135.43	119.90
15	AD	84	ASN	OD1-CG-ND2	5.17	127.77	122.60
57	BB	5	A	C1'-O4'-C4'	-5.17	104.73	109.90
8	AQ	61	ARG	CA-C-N	5.17	128.81	121.42
8	AQ	61	ARG	C-N-CA	5.17	128.81	121.42
11	AT	15	LYS	O-C-N	5.17	128.04	122.15
18	AG	62	GLU	CA-C-N	5.17	127.27	120.60
18	AG	62	GLU	C-N-CA	5.17	127.27	120.60
21	AA	195	A	O3'-P-O5'	-5.17	96.24	104.00
57	BB	423	A	C4'-C3'-C2'	-5.17	97.43	102.60
21	AA	1470	U	C4'-C3'-C2'	5.17	107.77	102.60
29	BJ	32	LEU	CA-C-N	5.17	128.17	120.31
29	BJ	32	LEU	C-N-CA	5.17	128.17	120.31
57	BB	373	U	O4'-C4'-C3'	-5.17	98.83	104.00
57	BB	976	G	C4'-C3'-O3'	-5.17	105.24	113.00
57	BB	1874	C	C5'-C4'-C3'	5.17	123.75	116.00
57	BB	2815	C	C4'-C3'-C2'	-5.17	97.43	102.60
13	AB	87	ASP	CA-CB-CG	5.17	117.77	112.60
21	AA	649	A	O4'-C4'-C3'	-5.17	98.83	104.00
21	AA	741	G	O4'-C4'-C3'	-5.17	98.83	104.00
22	AY	25	C	P-O3'-C3'	-5.17	112.45	120.20
23	AW	30	G	P-O3'-C3'	-5.17	112.45	120.20
23	AW	73	A	C1'-C2'-O2'	5.17	116.15	108.40
27	B5	152	ALA	CA-C-N	5.17	127.07	120.56
27	B5	152	ALA	C-N-CA	5.17	127.07	120.56
29	BJ	72	LYS	CA-C-N	5.17	129.52	122.34
29	BJ	72	LYS	C-N-CA	5.17	129.52	122.34
49	B2	22	MET	N-CA-CB	5.17	118.69	110.84
57	BB	300	A	P-O5'-C5'	5.17	128.65	120.90
57	BB	335	C	O4'-C1'-N1	5.17	116.25	108.50
57	BB	891	G	C5'-C4'-O4'	5.17	117.55	109.80
57	BB	1376	C	O5'-C5'-C4'	-5.17	103.75	111.50
27	B5	101	ALA	O-C-N	5.17	127.40	122.03
36	BQ	51	GLN	CA-C-N	5.17	127.47	120.65
36	BQ	51	GLN	C-N-CA	5.17	127.47	120.65
57	BB	1027	A	C5'-C4'-C3'	-5.17	108.25	116.00
57	BB	2040	G	O4'-C4'-C3'	-5.17	98.83	104.00
57	BB	2715	C	O4'-C1'-N1	5.17	116.25	108.50
57	BB	2877	G	O4'-C1'-N9	5.17	116.25	108.50
21	AA	239	U	O5'-C5'-C4'	5.17	119.45	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	BI	112	LYS	CG-CD-CE	5.17	123.18	111.30
37	BR	38	VAL	N-CA-C	-5.17	102.52	108.82
52	BD	69	ALA	N-CA-C	-5.17	106.57	112.92
4	AM	66	GLY	CA-C-N	5.16	127.15	120.44
4	AM	66	GLY	C-N-CA	5.16	127.15	120.44
13	AB	73	ARG	CA-C-O	5.16	125.33	119.18
16	AE	44	ARG	NE-CZ-NH2	-5.16	114.55	119.20
21	AA	32	A	O4'-C1'-C2'	-5.16	102.44	107.60
21	AA	233	C	O5'-C5'-C4'	-5.16	103.76	111.50
21	AA	932	C	O4'-C1'-N1	5.16	116.25	108.50
27	B5	86	ALA	CA-C-N	5.16	131.73	122.38
27	B5	86	ALA	C-N-CA	5.16	131.73	122.38
52	BD	52	THR	CA-C-N	5.16	128.93	121.44
52	BD	52	THR	C-N-CA	5.16	128.93	121.44
57	BB	1862	G	C1'-O4'-C4'	-5.16	104.74	109.90
58	BA	109	A	C3'-C2'-C1'	5.16	106.46	101.30
5	AN	16	ALA	N-CA-C	5.16	118.36	111.75
22	AY	22	G	P-O3'-C3'	-5.16	112.46	120.20
22	AY	23	A	O4'-C1'-N9	5.16	116.24	108.50
53	BE	165	HIS	CA-CB-CG	-5.16	108.64	113.80
7	AP	66	THR	CA-C-N	5.16	131.26	121.97
7	AP	66	THR	C-N-CA	5.16	131.26	121.97
21	AA	275	G	O4'-C1'-C2'	-5.16	102.44	107.60
27	B5	31	LYS	CA-C-O	-5.16	115.40	120.82
27	B5	60	ARG	NH1-CZ-NH2	5.16	126.01	119.30
36	BQ	60	TRP	CB-CA-C	-5.16	102.12	110.79
43	BX	49	ARG	N-CA-CB	5.16	117.66	109.71
57	BB	432	A	C2'-C3'-O3'	5.16	121.44	113.70
57	BB	771	G	P-O5'-C5'	5.16	128.64	120.90
57	BB	873	C	C2'-C3'-O3'	5.16	121.44	113.70
57	BB	1176	U	C4'-C3'-C2'	-5.16	97.44	102.60
57	BB	2284	A	C4'-C3'-C2'	-5.16	97.44	102.60
58	BA	117	G	P-O3'-C3'	-5.16	112.46	120.20
13	AB	221	ARG	CA-C-N	5.16	130.65	122.60
13	AB	221	ARG	C-N-CA	5.16	130.65	122.60
19	AH	4	ASP	N-CA-C	-5.16	98.12	109.11
21	AA	73	C	C4'-C3'-O3'	-5.16	105.26	113.00
21	AA	930	C	C5'-C4'-C3'	-5.16	108.26	116.00
25	AZ	316	GLY	CA-C-N	-5.16	114.23	121.56
25	AZ	316	GLY	C-N-CA	-5.16	114.23	121.56
57	BB	1605	C	C3'-C2'-O2'	5.16	118.44	110.70
57	BB	1943	U	O4'-C4'-C3'	-5.16	100.94	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	AN	44	VAL	CA-C-N	5.16	131.39	121.54
5	AN	44	VAL	C-N-CA	5.16	131.39	121.54
9	AR	62	ARG	N-CA-CB	5.16	117.49	110.01
16	AE	137	ARG	NE-CZ-NH2	5.16	123.84	119.20
21	AA	88	U	O4'-C1'-N1	5.16	116.23	108.50
22	AY	28	C	C1'-O4'-C4'	5.16	115.06	109.90
39	BT	7	LEU	N-CA-C	-5.16	105.45	112.26
47	B0	37	HIS	CA-C-N	5.16	131.08	122.73
47	B0	37	HIS	C-N-CA	5.16	131.08	122.73
57	BB	1965	C	O4'-C1'-N1	5.16	116.23	108.50
17	AF	53	LYS	CB-CA-C	5.16	118.77	111.86
19	AH	107	LYS	CA-C-N	-5.16	115.69	121.83
19	AH	107	LYS	C-N-CA	-5.16	115.69	121.83
21	AA	274	A	O3'-P-O5'	-5.16	96.27	104.00
21	AA	568	G	C4'-C3'-O3'	-5.16	105.27	113.00
25	AZ	144	GLU	CB-CG-CD	-5.16	103.83	112.60
26	AV	40	C	C4'-C3'-O3'	-5.16	105.27	113.00
56	BH	90	LEU	N-CA-C	5.16	117.19	110.43
57	BB	222	A	N9-C1'-C2'	-5.16	106.27	114.00
57	BB	2513	A	O3'-P-O5'	-5.16	96.27	104.00
57	BB	2853	C	C1'-C2'-O2'	5.16	116.13	108.40
21	AA	1492	A	P-O3'-C3'	-5.15	112.47	120.20
22	AY	8	U	O4'-C1'-C2'	-5.15	102.45	107.60
57	BB	2078	C	O5'-C5'-C4'	-5.15	103.77	111.50
21	AA	1192	C	C3'-C2'-O2'	-5.15	102.97	110.70
22	AY	76	A	O4'-C1'-N9	5.15	115.93	108.20
57	BB	795	C	O4'-C1'-N1	5.15	116.23	108.50
57	BB	1275	A	P-O3'-C3'	5.15	127.93	120.20
57	BB	2516	A	C4'-C3'-O3'	-5.15	105.27	113.00
57	BB	2707	U	C4'-C3'-C2'	5.15	107.75	102.60
57	BB	2751	G	C2'-C3'-O3'	5.15	117.23	109.50
11	AT	20	ASN	CA-CB-CG	5.15	117.75	112.60
21	AA	426	U	O4'-C1'-N1	5.15	116.23	108.50
21	AA	869	G	O3'-P-O5'	-5.15	96.28	104.00
21	AA	889	A	C3'-C2'-C1'	-5.15	96.35	101.50
32	BM	13	HIS	CE1-NE2-CD2	-5.15	103.85	109.00
35	BP	50	ARG	N-CA-CB	5.15	118.28	110.45
54	BF	168	LEU	O-C-N	-5.15	116.01	122.24
57	BB	16	C	C5'-C4'-C3'	5.15	123.73	116.00
57	BB	32	C	C4'-C3'-C2'	5.15	107.75	102.60
57	BB	1040	A	C1'-C2'-O2'	5.15	116.13	108.40
57	BB	1734	G	C4'-C3'-C2'	-5.15	97.45	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1763	G	O4'-C4'-C3'	-5.15	98.85	104.00
11	AT	78	LEU	CA-C-N	5.15	127.18	120.28
11	AT	78	LEU	C-N-CA	5.15	127.18	120.28
17	AF	11	HIS	CA-C-O	-5.15	114.87	120.69
27	B5	218	MET	N-CA-CB	5.15	119.19	110.49
57	BB	2161	C	C5'-C4'-C3'	5.15	123.72	116.00
57	BB	2523	G	C4'-C3'-C2'	-5.15	97.45	102.60
11	AT	47	GLN	N-CA-C	-5.15	106.31	112.59
20	AI	24	ASN	CA-CB-CG	-5.15	107.45	112.60
22	AY	32	C	O4'-C1'-N1	5.15	116.22	108.50
52	BD	143	PRO	CA-C-N	5.15	131.50	121.41
52	BD	143	PRO	C-N-CA	5.15	131.50	121.41
57	BB	171	U	C4'-C3'-C2'	-5.15	97.45	102.60
57	BB	2292	U	C4'-C3'-O3'	-5.15	105.28	113.00
58	BA	26	C	P-O3'-C3'	5.15	127.92	120.20
25	AZ	23	GLY	CA-C-N	5.15	131.37	121.54
25	AZ	23	GLY	C-N-CA	5.15	131.37	121.54
27	B5	119	ASP	CB-CA-C	-5.15	102.14	110.79
48	B1	15	GLY	N-CA-C	-5.15	106.64	115.08
57	BB	778	G	P-O3'-C3'	-5.15	112.48	120.20
19	AH	128	VAL	N-CA-C	-5.14	100.97	108.99
21	AA	317	U	O4'-C1'-N1	5.14	116.22	108.50
21	AA	370	C	P-O5'-C5'	5.14	128.62	120.90
25	AZ	84	HIS	ND1-CE1-NE2	5.14	113.54	108.40
34	BO	103	VAL	CA-C-O	5.14	126.30	120.85
39	BT	91	GLN	CA-C-N	5.14	129.38	120.58
39	BT	91	GLN	C-N-CA	5.14	129.38	120.58
47	B0	52	LYS	N-CA-C	-5.14	104.71	112.99
57	BB	537	G	O4'-C1'-N9	5.14	116.22	108.50
57	BB	731	C	C1'-C2'-O2'	-5.14	100.68	108.40
57	BB	2373	G	O4'-C1'-C2'	-5.14	102.46	107.60
21	AA	458	U	O4'-C1'-N1	5.14	116.21	108.50
21	AA	629	A	C3'-C2'-C1'	-5.14	96.16	101.30
21	AA	693	G	C4'-C3'-C2'	5.14	107.74	102.60
21	AA	1076	U	O5'-C5'-C4'	-5.14	103.78	111.50
31	BL	83	ALA	CA-C-N	5.14	130.00	122.39
31	BL	83	ALA	C-N-CA	5.14	130.00	122.39
31	BL	131	ALA	CB-CA-C	-5.14	102.03	110.72
53	BE	155	GLU	O-C-N	-5.14	116.13	122.20
57	BB	848	C	O5'-C5'-C4'	-5.14	103.79	111.50
57	BB	1399	C	C3'-C2'-C1'	5.14	106.44	101.30
57	BB	1529	G	C5'-C4'-C3'	-5.14	108.29	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1742	U	O5'-C5'-C4'	-5.14	103.79	111.50
57	BB	1801	A	C5'-C4'-C3'	-5.14	107.49	115.20
57	BB	2334	U	P-O3'-C3'	5.14	127.92	120.20
57	BB	2384	U	O4'-C4'-C3'	-5.14	100.96	106.10
57	BB	2710	C	O4'-C1'-N1	5.14	116.22	108.50
30	BK	12	ASN	O-C-N	-5.14	115.79	122.37
35	BP	71	ARG	CA-C-N	5.14	129.84	121.62
35	BP	71	ARG	C-N-CA	5.14	129.84	121.62
57	BB	2755	C	O3'-P-O5'	-5.14	96.29	104.00
4	AM	44	ILE	N-CA-C	-5.14	106.08	113.07
12	AU	27	VAL	N-CA-C	-5.14	100.45	107.75
21	AA	121	U	O3'-P-O5'	-5.14	96.29	104.00
21	AA	1431	A	O3'-P-O5'	-5.14	96.29	104.00
21	AA	1482	G	O3'-P-O5'	-5.14	96.29	104.00
44	BY	15	ASN	CA-C-O	5.14	125.69	119.11
47	B0	9	ARG	CB-CG-CD	5.14	123.12	111.30
57	BB	456	C	O4'-C1'-N1	5.14	115.91	108.20
57	BB	1528	A	C4'-C3'-C2'	-5.14	97.46	102.60
57	BB	1979	U	O4'-C1'-N1	5.14	116.21	108.50
57	BB	2269	G	O5'-C5'-C4'	-5.14	103.79	111.50
57	BB	2291	U	O4'-C1'-N1	5.14	116.21	108.50
10	AS	57	VAL	CA-C-O	-5.14	114.69	119.62
23	AW	70	G	O4'-C1'-N9	5.14	116.21	108.50
57	BB	168	G	O3'-P-O5'	-5.14	96.29	104.00
12	AU	33	ARG	NE-CZ-NH1	-5.14	116.36	121.50
18	AG	142	ARG	O-C-N	5.14	127.64	122.09
21	AA	372	C	C4'-C3'-C2'	5.14	107.74	102.60
21	AA	405	U	O5'-C5'-C4'	-5.14	103.80	111.50
21	AA	825	A	P-O3'-C3'	-5.14	112.50	120.20
21	AA	1375	A	N1-C6-N6	5.14	134.01	118.60
21	AA	1453	G	O4'-C1'-N9	5.14	116.20	108.50
25	AZ	51	ASN	O-C-N	-5.14	117.36	123.22
57	BB	490	C	C3'-C2'-C1'	5.14	106.64	101.50
57	BB	629	G	P-O5'-C5'	-5.14	113.20	120.90
57	BB	794	A	O4'-C4'-C3'	-5.14	98.86	104.00
57	BB	1280	G	O4'-C1'-N9	5.14	116.20	108.50
57	BB	1461	C	P-O5'-C5'	-5.14	113.20	120.90
57	BB	1549	A	O4'-C4'-C3'	-5.14	98.86	104.00
57	BB	1556	C	O4'-C4'-C3'	-5.14	98.86	104.00
57	BB	1641	A	P-O5'-C5'	5.14	128.60	120.90
3	AL	114	SER	N-CA-C	-5.13	105.86	111.82
6	AO	38	LEU	N-CA-CB	-5.13	104.20	110.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	AE	28	ARG	CA-C-N	5.13	131.21	121.97
16	AE	28	ARG	C-N-CA	5.13	131.21	121.97
19	AH	99	GLY	O-C-N	5.13	128.40	122.60
21	AA	243	A	O4'-C1'-C2'	5.13	110.94	105.80
21	AA	518	C	O5'-C5'-C4'	-5.13	104.00	111.70
22	AY	50	U	P-O5'-C5'	5.13	128.60	120.90
55	BG	155	PRO	N-CA-C	-5.13	107.34	114.27
57	BB	1422	G	O5'-C5'-C4'	-5.13	103.80	111.50
57	BB	1779	U	C3'-C2'-C1'	5.13	106.43	101.30
57	BB	1851	U	C4'-C3'-C2'	-5.13	97.47	102.60
57	BB	2021	C	O4'-C1'-C2'	-5.13	102.47	107.60
57	BB	2341	G	P-O5'-C5'	5.13	128.60	120.90
13	AB	222	GLU	CA-C-N	5.13	126.81	120.34
13	AB	222	GLU	C-N-CA	5.13	126.81	120.34
20	AI	51	LEU	O-C-N	5.13	129.49	122.46
21	AA	1242	G	O4'-C1'-N9	5.13	116.20	108.50
45	BC	134	ILE	O-C-N	-5.13	117.46	121.46
50	B3	58	ILE	CA-CB-CG1	5.13	119.13	110.40
57	BB	236	C	O4'-C1'-N1	5.13	116.20	108.50
7	AP	42	ILE	CA-C-N	5.13	130.58	122.78
7	AP	42	ILE	C-N-CA	5.13	130.58	122.78
19	AH	23	ALA	N-CA-C	-5.13	99.87	110.80
20	AI	29	ILE	N-CA-C	-5.13	98.67	109.34
21	AA	732	C	O4'-C1'-N1	5.13	116.20	108.50
21	AA	945	G	O4'-C1'-C2'	-5.13	102.47	107.60
28	BI	43	ALA	O-C-N	5.13	127.57	122.03
35	BP	85	VAL	N-CA-CB	5.13	119.13	110.56
57	BB	523	C	O4'-C1'-N1	5.13	116.20	108.50
57	BB	673	C	O4'-C1'-N1	5.13	116.20	108.50
57	BB	1200	C	P-O5'-C5'	-5.13	113.20	120.90
57	BB	2289	G	O4'-C1'-N9	5.13	116.20	108.50
34	BO	15	ARG	CA-CB-CG	-5.13	103.84	114.10
57	BB	1655	A	O4'-C1'-N9	5.13	116.19	108.50
9	AR	28	LEU	CB-CA-C	-5.13	102.13	110.85
14	AC	83	VAL	N-CA-C	5.13	118.25	111.17
16	AE	79	THR	O-C-N	-5.13	116.97	123.17
21	AA	17	U	O4'-C1'-N1	5.13	116.19	108.50
21	AA	50	A	C3'-C2'-O2'	-5.13	106.91	114.60
33	BN	39	PRO	N-CA-C	-5.13	106.03	114.75
38	BS	50	VAL	CA-C-N	5.13	131.15	122.79
38	BS	50	VAL	C-N-CA	5.13	131.15	122.79
57	BB	257	C	C4'-C3'-O3'	-5.13	105.31	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2491	U	C1'-O4'-C4'	5.13	114.83	109.70
17	AF	10	VAL	O-C-N	-5.13	116.16	122.57
20	AI	90	ASP	O-C-N	5.13	129.62	123.36
21	AA	449	G	O4'-C1'-N9	5.13	116.19	108.50
21	AA	915	A	O4'-C4'-C3'	-5.13	98.87	104.00
50	B3	48	MET	O-C-N	-5.13	116.81	122.86
53	BE	32	VAL	N-CA-CB	-5.13	104.61	112.15
57	BB	55	G	O4'-C1'-C2'	-5.13	102.47	107.60
57	BB	841	G	O4'-C1'-C2'	5.13	112.73	107.60
57	BB	1090	A	N1-C6-N6	5.13	133.98	118.60
57	BB	1372	U	O4'-C1'-N1	5.13	116.19	108.50
57	BB	1435	G	C5'-C4'-C3'	-5.13	108.31	116.00
57	BB	1818	U	O4'-C1'-N1	5.13	116.19	108.50
57	BB	2272	U	N1-C1'-C2'	5.13	119.69	112.00
13	AB	177	ASN	CA-C-O	5.12	124.69	119.05
21	AA	129	A	P-O3'-C3'	5.12	127.89	120.20
21	AA	625	U	O3'-P-O5'	-5.12	96.31	104.00
21	AA	1115	U	P-O5'-C5'	-5.12	113.21	120.90
57	BB	530	G	O3'-P-O5'	-5.12	96.31	104.00
1	AJ	31	ARG	N-CA-C	5.12	117.27	111.02
21	AA	389	A	O4'-C1'-C2'	-5.12	102.48	107.60
32	BM	43	ALA	CA-C-N	5.12	129.39	120.68
32	BM	43	ALA	C-N-CA	5.12	129.39	120.68
40	BU	90	LYS	N-CA-CB	5.12	117.57	109.83
45	BC	215	VAL	O-C-N	5.12	128.77	122.72
52	BD	77	ARG	NE-CZ-NH2	5.12	123.81	119.20
56	BH	109	GLU	N-CA-CB	5.12	119.15	110.49
57	BB	24	G	C4'-C3'-O3'	-5.12	105.31	113.00
57	BB	386	G	C3'-C2'-C1'	-5.12	96.38	101.50
57	BB	1531	C	C4'-C3'-C2'	5.12	107.72	102.60
57	BB	2602	A	O4'-C1'-N9	5.12	116.19	108.50
16	AE	84	VAL	CA-C-O	-5.12	116.33	121.45
21	AA	770	C	P-O3'-C3'	-5.12	112.52	120.20
25	AZ	172	GLY	CA-C-O	-5.12	116.23	121.61
39	BT	51	PHE	CA-CB-CG	-5.12	108.68	113.80
53	BE	79	ARG	N-CA-C	-5.12	106.44	113.30
57	BB	710	U	C3'-C2'-C1'	5.12	106.42	101.30
57	BB	1175	A	C1'-C2'-O2'	5.12	116.08	108.40
13	AB	221	ARG	NE-CZ-NH1	5.12	126.62	121.50
18	AG	52	ARG	N-CA-CB	5.12	119.35	110.39
50	B3	63	TYR	N-CA-C	-5.12	106.88	113.23
52	BD	157	LYS	CB-CG-CD	5.12	123.08	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1164	C	O4'-C4'-C3'	-5.12	98.88	104.00
57	BB	1483	G	C4'-C3'-O3'	-5.12	105.32	113.00
57	BB	2767	C	C4'-C3'-O3'	-5.12	105.32	113.00
12	AU	9	GLU	CA-C-N	5.12	124.83	119.82
12	AU	9	GLU	C-N-CA	5.12	124.83	119.82
13	AB	205	ALA	N-CA-CB	5.12	119.14	110.49
21	AA	970	C	O4'-C1'-N1	5.12	116.18	108.50
21	AA	1241	G	P-O3'-C3'	-5.12	112.52	120.20
50	B3	21	PHE	N-CA-C	-5.12	101.29	109.07
53	BE	87	ALA	CB-CA-C	-5.12	101.66	110.16
57	BB	768	G	O4'-C1'-N9	5.12	116.18	108.50
57	BB	1311	G	O4'-C1'-N9	5.12	115.88	108.20
57	BB	1915	U	O4'-C1'-N1	5.12	116.18	108.50
57	BB	2275	C	C2'-C3'-O3'	5.12	117.18	109.50
57	BB	2482	A	C4'-C3'-C2'	-5.12	97.48	102.60
57	BB	2588	G	O4'-C1'-N9	5.12	116.18	108.50
57	BB	2806	C	C1'-C2'-O2'	5.12	116.08	108.40
21	AA	1190	G	N9-C1'-C2'	-5.12	106.33	114.00
25	AZ	313	LYS	CG-CD-CE	5.12	123.07	111.30
31	BL	24	GLY	N-CA-C	-5.12	101.05	113.18
40	BU	52	ASN	CA-C-N	5.12	126.12	119.78
40	BU	52	ASN	C-N-CA	5.12	126.12	119.78
57	BB	1701	A	O4'-C1'-C2'	-5.12	102.48	107.60
8	AQ	14	ASP	CA-C-N	5.12	131.31	121.54
8	AQ	14	ASP	C-N-CA	5.12	131.31	121.54
21	AA	350	G	C4'-C3'-O3'	-5.12	105.33	113.00
21	AA	907	A	P-O3'-C3'	-5.12	112.53	120.20
25	AZ	142	ASP	N-CA-C	-5.12	98.91	108.02
26	AV	68	C	P-O5'-C5'	-5.12	113.23	120.90
28	BI	117	THR	N-CA-C	-5.12	106.44	113.30
35	BP	28	LYS	N-CA-CB	5.12	118.63	110.65
36	BQ	22	GLY	N-CA-C	-5.12	108.26	115.32
54	BF	55	ASP	O-C-N	5.12	127.98	122.15
57	BB	894	U	O4'-C1'-N1	5.12	116.17	108.50
58	BA	96	G	P-O5'-C5'	-5.12	113.22	120.90
1	AJ	65	TYR	CG-CD2-CE2	-5.11	113.53	121.20
5	AN	61	ASN	OD1-CG-ND2	-5.11	117.49	122.60
21	AA	157	U	C4'-C3'-C2'	-5.11	97.49	102.60
21	AA	784	A	C1'-O4'-C4'	-5.11	104.79	109.90
45	BC	59	GLN	N-CA-CB	5.11	119.13	110.49
57	BB	861	A	P-O3'-C3'	-5.11	112.53	120.20
57	BB	1407	G	C5'-C4'-C3'	-5.11	108.33	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1919	A	O4'-C1'-N9	5.11	116.17	108.50
57	BB	2388	A	O4'-C4'-C3'	5.11	109.11	104.00
57	BB	2825	G	C4'-C3'-C2'	-5.11	97.49	102.60
58	BA	79	G	O4'-C1'-C2'	-5.11	102.49	107.60
31	BL	94	THR	CA-C-O	-5.11	115.45	120.82
9	AR	68	PRO	N-CA-CB	5.11	107.60	103.36
23	AW	8	U	O5'-C5'-C4'	5.11	119.17	111.50
38	BS	106	VAL	N-CA-C	-5.11	98.71	109.34
40	BU	52	ASN	CA-CB-CG	-5.11	107.49	112.60
41	BV	46	LYS	N-CA-C	-5.11	105.79	111.36
45	BC	31	PRO	N-CA-C	5.11	123.00	112.47
48	B1	44	GLN	CA-C-O	-5.11	115.13	121.06
53	BE	65	THR	OG1-CB-CG2	5.11	119.52	109.30
57	BB	248	G	P-O5'-C5'	5.11	128.56	120.90
57	BB	704	G	O4'-C1'-C2'	-5.11	102.49	107.60
57	BB	1173	U	O5'-C5'-C4'	-5.11	103.83	111.50
57	BB	1873	G	O4'-C4'-C3'	-5.11	98.89	104.00
5	AN	48	GLN	CB-CG-CD	-5.11	103.92	112.60
8	AQ	20	ILE	CA-C-N	5.11	128.76	122.37
8	AQ	20	ILE	C-N-CA	5.11	128.76	122.37
21	AA	26	A	C4'-C3'-O3'	-5.11	105.34	113.00
21	AA	149	A	C3'-C2'-C1'	5.11	106.41	101.30
21	AA	671	G	O3'-P-O5'	5.11	111.66	104.00
27	B5	28	ALA	CA-C-N	5.11	127.13	120.28
27	B5	28	ALA	C-N-CA	5.11	127.13	120.28
57	BB	609	A	C4'-C3'-O3'	-5.11	105.34	113.00
57	BB	763	G	C4'-C3'-O3'	-5.11	105.34	113.00
21	AA	402	G	P-O5'-C5'	5.11	128.56	120.90
21	AA	591	U	C2'-C3'-O3'	5.11	121.36	113.70
21	AA	856	C	C4'-C3'-C2'	-5.11	97.49	102.60
49	B2	15	SER	O-C-N	5.11	129.38	122.59
57	BB	441	U	P-O5'-C5'	5.11	128.56	120.90
57	BB	464	U	O4'-C1'-N1	5.11	116.16	108.50
57	BB	993	G	C5'-C4'-C3'	5.11	123.66	116.00
57	BB	2081	U	O4'-C1'-N1	5.11	116.16	108.50
57	BB	2109	U	P-O3'-C3'	-5.11	112.54	120.20
3	AL	79	ILE	N-CA-C	5.11	116.95	108.99
4	AM	21	ILE	CA-C-O	5.11	127.16	120.78
16	AE	120	HIS	CE1-NE2-CD2	-5.11	103.89	109.00
21	AA	436	C	C4'-C3'-C2'	-5.11	97.50	102.60
21	AA	861	G	C4'-C3'-C2'	-5.11	97.49	102.60
21	AA	1372	U	O4'-C1'-N1	5.11	116.16	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	458	G	C2'-C3'-O3'	5.11	117.16	109.50
57	BB	696	G	O4'-C1'-N9	5.11	116.16	108.50
57	BB	1806	C	O4'-C1'-N1	5.11	116.16	108.50
57	BB	2757	A	O4'-C4'-C3'	5.11	109.11	104.00
57	BB	2895	G	C5'-C4'-C3'	-5.11	108.34	116.00
21	AA	1348	U	P-O5'-C5'	5.10	128.56	120.90
21	AA	1447	A	C3'-C2'-C1'	5.10	106.60	101.50
32	BM	9	PHE	CA-CB-CG	-5.10	108.70	113.80
41	BV	26	PHE	N-CA-CB	5.10	120.19	110.49
44	BY	38	GLN	CG-CD-NE2	-5.10	108.75	116.40
57	BB	1263	U	C1'-O4'-C4'	-5.10	104.80	109.90
21	AA	425	G	C5'-C4'-C3'	5.10	123.66	116.00
21	AA	945	G	P-O5'-C5'	5.10	128.56	120.90
21	AA	1523	G	N9-C1'-C2'	-5.10	104.35	112.00
22	AY	17	U	O4'-C1'-N1	5.10	115.86	108.20
25	AZ	99	ASP	CA-C-O	5.10	124.44	118.77
25	AZ	352	PRO	N-CA-CB	5.10	108.61	103.25
28	BI	130	GLY	O-C-N	-5.10	116.72	122.28
57	BB	357	C	O3'-P-O5'	-5.10	96.34	104.00
57	BB	1442	U	C1'-C2'-O2'	5.10	116.05	108.40
57	BB	1703	G	C4'-C3'-O3'	-5.10	105.35	113.00
57	BB	1935	G	C4'-C3'-O3'	-5.10	105.35	113.00
57	BB	1986	C	O4'-C1'-N1	5.10	116.15	108.50
57	BB	2428	G	P-O5'-C5'	-5.10	113.25	120.90
7	AP	9	HIS	CA-CB-CG	5.10	118.90	113.80
45	BC	76	VAL	CB-CA-C	-5.10	102.92	111.29
47	B0	5	ASN	CA-CB-CG	-5.10	107.50	112.60
57	BB	2028	U	O5'-C5'-C4'	-5.10	103.85	111.50
17	AF	99	ALA	N-CA-C	-5.10	100.39	109.06
21	AA	866	C	C1'-O4'-C4'	5.10	115.00	109.90
21	AA	1485	U	O4'-C1'-N1	5.10	116.15	108.50
30	BK	92	GLN	OE1-CD-NE2	5.10	127.70	122.60
31	BL	143	GLU	CB-CG-CD	-5.10	103.93	112.60
34	BO	109	ALA	N-CA-C	-5.10	105.42	113.02
57	BB	736	C	O3'-P-O5'	-5.10	96.35	104.00
57	BB	792	A	P-O5'-C5'	5.10	128.55	120.90
57	BB	1396	U	C1'-C2'-O2'	5.10	119.45	111.80
12	AU	16	ARG	CA-C-N	5.10	127.07	120.44
12	AU	16	ARG	C-N-CA	5.10	127.07	120.44
13	AB	77	GLU	CG-CD-OE1	-5.10	106.67	118.40
16	AE	62	ALA	CA-C-O	5.10	125.65	119.38
21	AA	388	G	C1'-O4'-C4'	5.10	114.80	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	BU	30	SER	N-CA-C	-5.10	106.75	113.17
57	BB	240	C	C4'-C3'-O3'	-5.10	105.35	113.00
57	BB	440	C	O4'-C1'-N1	5.10	116.15	108.50
57	BB	947	A	C1'-O4'-C4'	-5.10	104.80	109.90
57	BB	998	C	O4'-C4'-C3'	5.10	109.10	104.00
57	BB	1051	G	C4'-C3'-C2'	-5.10	97.50	102.60
57	BB	1826	G	O3'-P-O5'	5.10	111.65	104.00
7	AP	18	GLN	CA-C-O	5.10	126.55	120.28
13	AB	93	HIS	CG-CD2-NE2	5.10	112.30	107.20
27	B5	95	VAL	N-CA-CB	5.10	118.32	111.90
57	BB	656	G	C3'-C2'-O2'	5.10	118.34	110.70
57	BB	1801	A	C2'-C3'-O3'	5.10	117.14	109.50
21	AA	839	C	O4'-C1'-C2'	-5.09	102.51	107.60
25	AZ	229	GLY	CA-C-O	5.09	127.16	121.96
39	BT	63	VAL	CA-C-O	5.09	125.69	120.39
39	BT	73	ARG	NE-CZ-NH1	-5.09	116.41	121.50
40	BU	30	SER	N-CA-CB	5.09	118.03	110.49
45	BC	246	PRO	N-CA-CB	5.09	108.40	103.51
57	BB	1414	C	O4'-C1'-N1	5.09	116.14	108.50
57	BB	2649	C	O5'-C5'-C4'	-5.09	103.86	111.50
15	AD	91	ALA	CA-C-N	5.09	127.61	120.28
15	AD	91	ALA	C-N-CA	5.09	127.61	120.28
21	AA	609	A	O5'-C5'-C4'	-5.09	103.86	111.50
56	BH	5	LEU	N-CA-CB	5.09	117.53	110.04
57	BB	1305	C	C3'-C2'-C1'	-5.09	96.21	101.30
14	AC	135	ARG	N-CA-C	5.09	116.83	111.28
21	AA	1344	C	O4'-C1'-N1	5.09	116.14	108.50
21	AA	1438	G	C4'-C3'-C2'	-5.09	97.51	102.60
25	AZ	117	GLU	CB-CA-C	-5.09	102.29	110.74
27	B5	72	SER	N-CA-C	-5.09	100.58	108.42
57	BB	155	A	O4'-C1'-N9	5.09	116.14	108.50
57	BB	459	U	C4'-C3'-O3'	-5.09	105.36	113.00
57	BB	900	A	C3'-C2'-O2'	5.09	118.34	110.70
57	BB	980	A	P-O5'-C5'	5.09	128.54	120.90
57	BB	2301	C	O3'-P-O5'	-5.09	96.36	104.00
57	BB	2532	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	AJ	35	GLN	CA-C-O	5.09	126.67	121.23
2	AK	119	GLY	CA-C-N	5.09	131.26	121.54
2	AK	119	GLY	C-N-CA	5.09	131.26	121.54
20	AI	27	ILE	CA-CB-CG1	5.09	119.05	110.40
21	AA	1035	A	O5'-C5'-C4'	-5.09	103.86	111.50
21	AA	1120	C	O4'-C1'-N1	5.09	116.13	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AY	25	C	C4'-C3'-C2'	-5.09	97.51	102.60
38	BS	7	HIS	CA-CB-CG	-5.09	108.71	113.80
38	BS	85	ILE	CA-CB-CG1	5.09	119.05	110.40
43	BX	14	GLY	N-CA-C	-5.09	101.12	113.18
57	BB	156	A	P-O5'-C5'	5.09	128.53	120.90
57	BB	908	C	C3'-C2'-O2'	5.09	118.33	110.70
57	BB	919	U	O4'-C1'-C2'	-5.09	102.51	107.60
57	BB	1250	G	O4'-C4'-C3'	-5.09	101.01	106.10
57	BB	1340	U	C5'-C4'-O4'	5.09	116.73	109.10
57	BB	1474	U	P-O3'-C3'	-5.09	112.57	120.20
57	BB	2491	U	O4'-C4'-C3'	-5.09	101.01	106.10
57	BB	2677	G	O4'-C1'-N9	5.09	116.13	108.50
57	BB	2712	C	O4'-C1'-N1	5.09	116.13	108.50
58	BA	101	A	C3'-C2'-C1'	5.09	106.39	101.30
18	AG	122	GLU	N-CA-C	5.09	116.52	110.97
22	AY	27	C	C2'-C3'-O3'	5.09	121.33	113.70
29	BJ	50	THR	N-CA-CB	5.09	118.59	110.65
36	BQ	109	VAL	O-C-N	-5.09	116.05	121.80
39	BT	76	ARG	N-CA-C	-5.09	99.32	108.48
39	BT	84	TYR	O-C-N	5.09	129.22	123.27
5	AN	76	PHE	N-CA-C	-5.09	107.05	114.12
13	AB	14	HIS	CB-CG-ND1	5.09	130.33	122.70
14	AC	189	HIS	CE1-NE2-CD2	-5.09	103.91	109.00
21	AA	953	G	O4'-C1'-N9	5.09	116.13	108.50
21	AA	973	G	O4'-C1'-N9	5.09	116.13	108.50
23	AW	35	A	C3'-C2'-O2'	-5.09	103.07	110.70
25	AZ	104	VAL	N-CA-CB	5.09	116.08	110.53
36	BQ	25	GLY	N-CA-C	-5.09	107.73	115.66
43	BX	5	GLN	N-CA-CB	5.09	119.09	110.49
49	B2	16	HIS	CE1-NE2-CD2	-5.09	103.91	109.00
57	BB	450	G	C2'-C3'-O3'	5.09	121.33	113.70
57	BB	1868	C	O4'-C1'-N1	5.09	116.13	108.50
21	AA	412	A	O4'-C1'-N9	5.08	115.83	108.20
21	AA	1468	A	O4'-C1'-N9	5.08	116.13	108.50
27	B5	21	TYR	N-CA-C	-5.08	101.64	109.52
29	BJ	15	TRP	N-CA-C	-5.08	100.95	109.24
57	BB	244	A	P-O5'-C5'	-5.08	113.27	120.90
57	BB	854	C	O4'-C4'-C3'	-5.08	98.92	104.00
12	AU	36	PHE	O-C-N	-5.08	118.43	123.46
21	AA	421	U	O4'-C4'-C3'	-5.08	98.92	104.00
21	AA	536	C	C5'-C4'-C3'	-5.08	108.38	116.00
21	AA	963	G	C5'-C4'-O4'	-5.08	102.17	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1428	A	P-O5'-C5'	-5.08	113.27	120.90
22	AY	64	A	C3'-C2'-C1'	-5.08	96.22	101.30
32	BM	3	GLN	CG-CD-OE1	5.08	130.97	120.80
35	BP	4	ILE	CA-C-N	5.08	131.25	121.54
35	BP	4	ILE	C-N-CA	5.08	131.25	121.54
41	BV	44	HIS	CE1-NE2-CD2	-5.08	103.92	109.00
45	BC	173	LEU	CD1-CG-CD2	5.08	121.98	110.80
49	B2	45	SER	CA-C-O	5.08	127.78	120.51
54	BF	147	ARG	N-CA-C	-5.08	102.24	110.32
57	BB	1350	C	C1'-C2'-O2'	5.08	116.02	108.40
57	BB	1624	U	C1'-C2'-O2'	5.08	116.03	108.40
58	BA	46	A	P-O5'-C5'	5.08	128.53	120.90
11	AT	9	ARG	CA-C-N	5.08	127.09	120.28
11	AT	9	ARG	C-N-CA	5.08	127.09	120.28
14	AC	41	TYR	CB-CA-C	-5.08	102.90	110.88
18	AG	30	MET	N-CA-C	5.08	117.53	109.96
21	AA	879	C	C4'-C3'-C2'	-5.08	97.52	102.60
21	AA	1031	C	C4'-C3'-C2'	-5.08	97.52	102.60
25	AZ	43	ALA	N-CA-C	5.08	118.09	109.76
25	AZ	158	SER	N-CA-C	5.08	121.62	110.80
55	BG	111	PRO	CA-C-O	-5.08	115.60	121.95
57	BB	61	C	P-O3'-C3'	5.08	127.82	120.20
57	BB	421	C	C1'-C2'-O2'	5.08	119.42	111.80
57	BB	1053	C	C3'-C2'-C1'	-5.08	96.22	101.30
57	BB	1243	C	O4'-C1'-N1	5.08	116.12	108.50
57	BB	1418	G	C5'-C4'-C3'	5.08	123.62	116.00
57	BB	2757	A	C2'-C3'-O3'	5.08	121.32	113.70
57	BB	2893	A	C4'-C3'-C2'	-5.08	97.52	102.60
12	AU	10	PRO	CA-CB-CG	-5.08	94.85	104.50
19	AH	124	ILE	CA-C-O	-5.08	115.13	120.57
27	B5	166	ASP	N-CA-C	5.08	116.51	111.07
30	BK	84	VAL	CA-C-N	5.08	129.82	121.39
30	BK	84	VAL	C-N-CA	5.08	129.82	121.39
36	BQ	23	TYR	CA-CB-CG	5.08	123.04	113.90
57	BB	182	A	P-O5'-C5'	5.08	128.52	120.90
57	BB	719	C	O4'-C4'-C3'	-5.08	98.92	104.00
57	BB	2513	A	C3'-C2'-C1'	5.08	106.38	101.30
21	AA	408	A	O4'-C1'-N9	5.08	116.12	108.50
25	AZ	169	ILE	CA-C-N	5.08	129.49	123.19
25	AZ	169	ILE	C-N-CA	5.08	129.49	123.19
26	AV	38	A	O4'-C1'-C2'	-5.08	102.52	107.60
39	BT	4	GLU	CA-CB-CG	-5.08	103.94	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	BZ	20	LYS	CB-CA-C	-5.08	100.81	109.65
57	BB	576	U	O4'-C1'-N1	5.08	116.12	108.50
57	BB	611	C	O5'-C5'-C4'	-5.08	103.88	111.50
57	BB	849	A	C3'-C2'-C1'	-5.08	96.22	101.30
58	BA	14	U	P-O5'-C5'	-5.08	113.28	120.90
15	AD	18	LEU	N-CA-C	5.08	118.20	111.30
21	AA	656	G	C3'-C2'-O2'	-5.08	103.08	110.70
21	AA	1061	G	P-O5'-C5'	5.08	128.51	120.90
22	AY	76	A	C2'-C3'-O3'	5.08	117.11	109.50
25	AZ	366	ILE	N-CA-CB	5.08	119.69	111.36
28	BI	125	THR	CA-CB-OG1	-5.08	101.98	109.60
57	BB	343	C	C3'-C2'-C1'	-5.08	96.22	101.30
57	BB	2494	G	C3'-C2'-O2'	5.08	118.31	110.70
5	AN	72	PHE	O-C-N	5.08	128.85	122.86
18	AG	101	ARG	CD-NE-CZ	-5.08	117.30	124.40
21	AA	542	G	P-O3'-C3'	-5.08	112.58	120.20
21	AA	659	U	O4'-C1'-N1	5.08	116.11	108.50
21	AA	968	A	C2'-C3'-O3'	5.08	117.11	109.50
21	AA	968	A	N1-C6-N6	5.08	133.83	118.60
21	AA	1195	C	O4'-C1'-N1	5.08	116.11	108.50
23	AW	22	G	C3'-C2'-C1'	-5.08	96.22	101.30
35	BP	108	ARG	NE-CZ-NH2	5.08	123.77	119.20
57	BB	147	C	O4'-C1'-N1	5.08	116.11	108.50
57	BB	279	A	C5'-C4'-C3'	5.08	123.61	116.00
57	BB	1205	A	P-O5'-C5'	5.08	128.51	120.90
57	BB	2440	C	C4'-C3'-C2'	-5.08	97.52	102.60
57	BB	2630	G	O4'-C1'-N9	5.08	116.11	108.50
57	BB	2680	U	C4'-C3'-C2'	-5.08	97.52	102.60
20	AI	4	GLN	OE1-CD-NE2	-5.07	117.53	122.60
21	AA	108	G	C3'-C2'-C1'	-5.07	96.23	101.30
21	AA	905	U	O4'-C1'-N1	5.07	116.11	108.50
21	AA	1025	U	C4'-C3'-C2'	-5.07	97.53	102.60
21	AA	1231	G	P-O5'-C5'	-5.07	113.29	120.90
21	AA	1293	C	C1'-O4'-C4'	-5.07	104.83	109.90
21	AA	1454	G	C3'-C2'-O2'	5.07	118.31	110.70
23	AW	38	A	O4'-C1'-N9	5.07	116.11	108.50
30	BK	113	LYS	N-CA-C	-5.07	107.75	114.04
37	BR	59	ILE	CA-C-O	-5.07	115.34	120.31
53	BE	67	ARG	NE-CZ-NH2	-5.07	114.63	119.20
57	BB	102	U	O4'-C4'-C3'	-5.07	101.03	106.10
57	BB	959	A	P-O5'-C5'	5.07	128.51	120.90
57	BB	1959	G	O5'-C5'-C4'	-5.07	103.89	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2531	A	O3'-P-O5'	5.07	111.61	104.00
57	BB	2620	C	C5'-C4'-C3'	-5.07	108.39	116.00
18	AG	13	PRO	CA-C-O	-5.07	115.67	121.86
19	AH	123	GLU	CA-C-O	-5.07	115.27	121.05
21	AA	599	C	O4'-C1'-N1	5.07	116.11	108.50
21	AA	1142	G	O5'-C5'-C4'	5.07	119.11	111.50
22	AY	56	C	C4'-C3'-O3'	-5.07	105.39	113.00
25	AZ	92	ILE	CB-CA-C	-5.07	102.97	111.29
57	BB	1453	A	O4'-C1'-N9	5.07	116.11	108.50
57	BB	1802	A	O4'-C4'-C3'	-5.07	98.93	104.00
57	BB	1873	G	N9-C1'-C2'	-5.07	104.39	112.00
3	AL	89	LEU	CA-C-N	5.07	125.52	120.14
3	AL	89	LEU	C-N-CA	5.07	125.52	120.14
16	AE	44	ARG	N-CA-C	-5.07	101.58	109.24
21	AA	190	A	C4'-C3'-C2'	-5.07	97.53	102.60
21	AA	844	G	P-O3'-C3'	-5.07	112.59	120.20
32	BM	90	GLU	N-CA-C	-5.07	105.14	113.50
53	BE	167	VAL	CA-CB-CG1	5.07	119.02	110.40
57	BB	304	U	P-O5'-C5'	5.07	128.51	120.90
57	BB	932	U	C4'-C3'-O3'	-5.07	105.39	113.00
57	BB	2579	C	O4'-C1'-N1	5.07	116.11	108.50
1	AJ	35	GLN	O-C-N	-5.07	118.00	123.42
15	AD	72	ARG	N-CA-CB	5.07	117.57	110.12
26	AV	8	U	O5'-C5'-C4'	-5.07	103.90	111.50
57	BB	463	G	P-O3'-C3'	-5.07	112.60	120.20
57	BB	470	A	C4'-C3'-O3'	-5.07	105.40	113.00
21	AA	1165	U	O4'-C4'-C3'	-5.07	98.93	104.00
21	AA	1278	G	C4'-C3'-O3'	5.07	117.00	109.40
21	AA	1422	G	O4'-C1'-N9	5.07	116.10	108.50
27	B5	147	PRO	CB-CA-C	-5.07	104.34	109.92
30	BK	110	LYS	O-C-N	5.07	127.29	122.07
56	BH	61	VAL	CB-CA-C	-5.07	104.30	112.16
57	BB	614	A	C4'-C3'-C2'	5.07	107.67	102.60
57	BB	815	C	O4'-C1'-N1	5.07	116.10	108.50
57	BB	1816	C	O4'-C1'-N1	5.07	116.10	108.50
57	BB	1844	C	O4'-C4'-C3'	-5.07	98.93	104.00
57	BB	2021	C	N1-C1'-C2'	5.07	119.60	112.00
57	BB	2181	U	C1'-C2'-O2'	5.07	116.00	108.40
57	BB	2281	A	C4'-C3'-C2'	-5.07	97.53	102.60
58	BA	36	C	C1'-O4'-C4'	5.07	114.97	109.90
16	AE	80	LEU	CA-C-N	5.07	131.46	121.58
16	AE	80	LEU	C-N-CA	5.07	131.46	121.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	370	C	O4'-C1'-N1	5.07	116.10	108.50
21	AA	1226	C	C5'-C4'-C3'	-5.07	108.40	116.00
53	BE	27	LEU	N-CA-C	5.07	116.80	111.28
57	BB	570	G	P-O5'-C5'	-5.07	113.30	120.90
57	BB	739	A	C3'-C2'-O2'	-5.07	107.00	114.60
58	BA	106	G	C3'-C2'-C1'	-5.07	96.23	101.30
3	AL	75	GLU	CB-CA-C	-5.06	100.89	110.01
54	BF	81	GLY	CA-C-N	5.06	134.16	121.80
54	BF	81	GLY	C-N-CA	5.06	134.16	121.80
57	BB	683	U	O4'-C1'-N1	5.06	116.10	108.50
57	BB	2137	U	O4'-C1'-N1	5.06	116.10	108.50
15	AD	108	ALA	N-CA-C	-5.06	106.95	113.23
15	AD	194	ILE	CA-CB-CG1	5.06	119.01	110.40
33	BN	50	PRO	N-CA-CB	5.06	108.17	103.46
53	BE	129	PRO	N-CA-CB	5.06	108.57	103.25
55	BG	114	HIS	N-CA-CB	5.06	119.56	110.80
57	BB	2603	G	P-O3'-C3'	-5.06	112.61	120.20
58	BA	52	A	P-O3'-C3'	5.06	127.79	120.20
58	BA	89	U	C4'-C3'-C2'	-5.06	97.54	102.60
21	AA	1213	A	C5'-C4'-O4'	5.06	117.39	109.80
31	BL	57	LEU	N-CA-C	-5.06	106.95	113.23
54	BF	40	GLY	O-C-N	-5.06	117.38	122.59
57	BB	1409	U	P-O3'-C3'	-5.06	112.61	120.20
57	BB	2616	C	C4'-C3'-O3'	-5.06	105.41	113.00
21	AA	399	G	O4'-C4'-C3'	-5.06	98.94	104.00
21	AA	934	C	O3'-P-O5'	-5.06	96.41	104.00
21	AA	1403	C	C4'-C3'-O3'	-5.06	105.41	113.00
31	BL	80	SER	N-CA-CB	5.06	119.01	110.92
31	BL	89	VAL	CA-C-O	5.06	127.11	120.78
41	BV	88	HIS	CA-CB-CG	-5.06	108.74	113.80
55	BG	39	ALA	O-C-N	5.06	128.72	122.19
57	BB	306	U	C1'-C2'-O2'	5.06	115.99	108.40
57	BB	813	U	C3'-C2'-C1'	5.06	106.36	101.30
57	BB	1058	U	P-O5'-C5'	-5.06	113.31	120.90
57	BB	1382	G	O4'-C1'-N9	5.06	116.09	108.50
6	AO	9	LYS	N-CA-C	5.06	116.79	111.28
7	AP	42	ILE	CA-CB-CG2	-5.06	101.90	110.50
21	AA	263	A	P-O3'-C3'	-5.06	112.61	120.20
21	AA	1059	C	P-O3'-C3'	-5.06	112.61	120.20
23	AW	67	C	C3'-C2'-C1'	-5.06	96.24	101.30
25	AZ	86	ASP	CA-C-O	5.06	125.61	119.49
25	AZ	381	ARG	NH1-CZ-NH2	-5.06	112.72	119.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	BM	98	PRO	N-CA-C	5.06	119.18	111.34
57	BB	317	G	P-O3'-C3'	-5.06	112.61	120.20
57	BB	1839	G	O3'-P-O5'	-5.06	96.41	104.00
20	AI	21	LYS	N-CA-C	-5.06	102.81	110.50
21	AA	789	U	O4'-C1'-N1	5.06	116.08	108.50
23	AW	57	G	O3'-P-O5'	5.06	111.58	104.00
39	BT	55	VAL	O-C-N	5.06	128.89	122.57
41	BV	89	ILE	CA-CB-CG1	5.06	119.00	110.40
54	BF	161	SER	CA-C-N	5.06	132.05	121.94
54	BF	161	SER	C-N-CA	5.06	132.05	121.94
57	BB	893	C	P-O5'-C5'	-5.06	113.32	120.90
2	AK	113	THR	N-CA-C	-5.05	102.51	110.14
21	AA	467	U	O4'-C1'-N1	5.05	116.08	108.50
21	AA	567	G	C3'-C2'-O2'	5.05	118.28	110.70
30	BK	57	LEU	N-CA-CB	5.05	122.10	110.88
41	BV	84	PRO	N-CA-CB	5.05	108.56	103.25
48	B1	39	ASP	CA-C-O	-5.05	115.58	119.32
54	BF	150	GLY	CA-C-N	5.05	128.88	120.94
54	BF	150	GLY	C-N-CA	5.05	128.88	120.94
57	BB	674	G	P-O5'-C5'	5.05	128.48	120.90
57	BB	998	C	C4'-C3'-C2'	-5.05	97.55	102.60
57	BB	2174	C	O5'-C5'-C4'	-5.05	103.92	111.50
57	BB	2187	U	O4'-C1'-N1	5.05	116.08	108.50
57	BB	2576	G	C4'-C3'-O3'	-5.05	105.42	113.00
21	AA	72	A	O4'-C1'-N9	5.05	116.08	108.50
21	AA	129	A	O4'-C1'-N9	5.05	115.78	108.20
21	AA	180	U	O4'-C1'-N1	5.05	116.08	108.50
21	AA	1353	G	O3'-P-O5'	-5.05	96.42	104.00
25	AZ	388	VAL	N-CA-CB	5.05	116.87	111.46
26	AV	67	C	C4'-C3'-C2'	-5.05	97.55	102.60
27	B5	133	PRO	O-C-N	5.05	130.70	121.10
42	BW	48	ALA	O-C-N	-5.05	115.87	122.59
52	BD	98	VAL	CA-CB-CG2	5.05	118.99	110.40
57	BB	301	G	O3'-P-O5'	-5.05	96.42	104.00
57	BB	409	G	O4'-C1'-C2'	-5.05	102.55	107.60
13	AB	125	PHE	CA-CB-CG	-5.05	108.75	113.80
21	AA	144	G	C4'-C3'-O3'	-5.05	105.42	113.00
21	AA	1204	A	N9-C1'-C2'	-5.05	104.42	112.00
29	BJ	40	HIS	ND1-CE1-NE2	5.05	113.45	108.40
50	B3	42	HIS	CE1-NE2-CD2	-5.05	103.95	109.00
53	BE	137	LYS	CA-C-O	-5.05	112.12	118.43
54	BF	53	ALA	CA-C-N	5.05	127.76	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	BF	53	ALA	C-N-CA	5.05	127.76	120.38
57	BB	296	U	O4'-C1'-N1	5.05	116.08	108.50
57	BB	1543	G	O5'-C5'-C4'	-5.05	103.92	111.50
4	AM	63	VAL	CA-C-O	5.05	126.60	120.74
21	AA	1000	A	O4'-C1'-N9	5.05	116.07	108.50
26	AV	65	C	P-O3'-C3'	-5.05	112.63	120.20
40	BU	24	VAL	N-CA-CB	5.05	118.04	111.83
54	BF	28	PRO	N-CA-C	-5.05	103.34	111.77
57	BB	8	C	C1'-C2'-O2'	5.05	115.97	108.40
57	BB	88	G	C4'-C3'-O3'	-5.05	105.43	113.00
57	BB	361	G	O4'-C1'-N9	5.05	116.07	108.50
57	BB	819	A	C5'-C4'-C3'	-5.05	108.43	116.00
57	BB	2126	A	O4'-C1'-C2'	-5.05	100.75	105.80
57	BB	2488	G	O4'-C1'-N9	5.05	116.07	108.50
57	BB	2720	U	C4'-C3'-C2'	-5.05	97.55	102.60
57	BB	2852	G	O5'-C5'-C4'	-5.05	103.93	111.50
21	AA	585	G	O4'-C1'-C2'	-5.05	102.55	107.60
30	BK	116	SER	N-CA-CB	5.05	117.93	110.56
57	BB	378	C	C4'-C3'-O3'	-5.05	105.43	113.00
57	BB	1583	A	C4'-C3'-O3'	-5.05	105.43	113.00
9	AR	73	HIS	CG-CD2-NE2	5.05	112.25	107.20
15	AD	186	GLU	N-CA-C	-5.05	101.17	109.40
21	AA	48	C	C2'-C3'-O3'	5.05	117.07	109.50
26	AV	38	A	O4'-C1'-N9	5.05	116.07	108.50
38	BS	35	ILE	CA-CB-CG1	5.05	118.98	110.40
56	BH	3	VAL	N-CA-CB	5.05	118.00	110.13
57	BB	11	C	C2'-C3'-O3'	5.05	121.27	113.70
57	BB	16	C	O4'-C1'-N1	5.05	116.07	108.50
57	BB	1985	C	O4'-C1'-C2'	-5.05	102.55	107.60
57	BB	2864	G	O4'-C1'-N9	5.05	116.07	108.50
20	AI	76	GLY	O-C-N	5.04	127.03	122.19
25	AZ	160	TYR	N-CA-C	-5.04	107.62	112.97
45	BC	136	VAL	N-CA-C	5.04	115.91	109.30
52	BD	183	GLU	CB-CA-C	-5.04	102.93	110.90
53	BE	54	GLY	N-CA-C	-5.04	104.91	111.52
56	BH	135	HIS	CG-CD2-NE2	5.04	112.25	107.20
57	BB	1398	C	C4'-C3'-O3'	-5.04	105.43	113.00
57	BB	2193	G	O4'-C4'-C3'	5.04	109.05	104.00
15	AD	68	GLU	O-C-N	5.04	129.30	122.59
15	AD	84	ASN	N-CA-CB	5.04	118.09	109.87
21	AA	328	C	O4'-C1'-C2'	-5.04	100.76	105.80
21	AA	925	G	C5'-C4'-C3'	5.04	123.56	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1018	G	C4'-C3'-C2'	-5.04	97.56	102.60
32	BM	40	ARG	CD-NE-CZ	-5.04	117.34	124.40
52	BD	80	TRP	N-CA-CB	5.04	119.28	110.81
55	BG	136	ASP	N-CA-C	-5.04	101.07	108.79
57	BB	1564	C	C4'-C3'-O3'	-5.04	105.43	113.00
57	BB	2841	C	C1'-C2'-O2'	5.04	115.97	108.40
58	BA	53	A	O4'-C1'-N9	5.04	116.06	108.50
1	AJ	72	ARG	N-CA-C	-5.04	100.95	109.07
7	AP	60	TRP	CB-CG-CD1	5.04	134.46	126.90
13	AB	96	LEU	CA-C-N	5.04	131.29	121.41
13	AB	96	LEU	C-N-CA	5.04	131.29	121.41
21	AA	510	A	C4'-C3'-O3'	-5.04	105.44	113.00
21	AA	927	G	P-O5'-C5'	5.04	128.46	120.90
21	AA	1496	C	C1'-O4'-C4'	-5.04	104.86	109.90
25	AZ	279	ARG	CB-CA-C	-5.04	100.89	109.51
26	AV	6	G	C4'-C3'-O3'	-5.04	105.44	113.00
27	B5	149	VAL	CB-CA-C	-5.04	106.56	111.05
43	BX	49	ARG	CA-C-N	5.04	128.72	121.96
43	BX	49	ARG	C-N-CA	5.04	128.72	121.96
45	BC	190	THR	CA-CB-CG2	5.04	119.07	110.50
56	BH	137	GLU	N-CA-C	-5.04	105.22	113.19
57	BB	291	G	O4'-C4'-C3'	-5.04	98.96	104.00
57	BB	716	A	C4'-C3'-C2'	-5.04	97.56	102.60
57	BB	834	G	O4'-C1'-N9	5.04	116.06	108.50
57	BB	1182	G	P-O5'-C5'	-5.04	113.34	120.90
57	BB	1443	U	O4'-C4'-C3'	-5.04	98.96	104.00
57	BB	1790	C	O3'-P-O5'	-5.04	96.44	104.00
57	BB	1967	C	C4'-C3'-C2'	-5.04	97.56	102.60
58	BA	75	G	P-O3'-C3'	-5.04	112.64	120.20
16	AE	141	ASP	N-CA-C	-5.04	107.10	113.20
23	AW	34	G	P-O5'-C5'	-5.04	113.34	120.90
29	BJ	5	THR	CA-C-O	5.04	126.73	121.19
43	BX	16	ASN	O-C-N	-5.04	117.30	122.94
57	BB	1279	G	O4'-C1'-N9	5.04	116.06	108.50
58	BA	95	U	O5'-C5'-C4'	-5.04	103.94	111.50
3	AL	88	ASP	N-CA-CB	5.04	118.04	110.53
21	AA	1417	G	C4'-C3'-O3'	-5.04	105.44	113.00
28	BI	18	ASN	OD1-CG-ND2	5.04	127.64	122.60
35	BP	6	GLN	OE1-CD-NE2	5.04	127.64	122.60
36	BQ	109	VAL	CA-C-O	5.04	125.91	120.47
42	BW	45	HIS	CE1-NE2-CD2	-5.04	103.96	109.00
57	BB	650	C	P-O5'-C5'	5.04	128.46	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1081	U	P-O5'-C5'	5.04	128.46	120.90
57	BB	1905	C	C4'-C3'-O3'	-5.04	105.44	113.00
3	AL	38	THR	N-CA-C	-5.04	98.84	107.61
20	AI	109	GLN	CA-C-N	5.04	127.25	120.50
20	AI	109	GLN	C-N-CA	5.04	127.25	120.50
21	AA	1254	A	C4'-C3'-O3'	-5.04	105.44	113.00
11	AT	74	HIS	CB-CG-CD2	-5.04	124.65	131.20
15	AD	112	GLU	N-CA-C	5.04	116.77	111.28
18	AG	47	GLU	N-CA-CB	5.04	117.61	110.16
21	AA	528	C	O5'-C5'-C4'	-5.04	103.95	111.50
21	AA	1180	A	O3'-P-O5'	-5.04	96.45	104.00
21	AA	1190	G	C3'-C2'-C1'	-5.04	96.46	101.50
25	AZ	53	PRO	CA-C-N	5.04	127.03	120.28
25	AZ	53	PRO	C-N-CA	5.04	127.03	120.28
25	AZ	106	ALA	N-CA-CB	5.04	117.75	109.95
44	BY	2	LYS	CA-C-N	5.04	131.16	121.54
44	BY	2	LYS	C-N-CA	5.04	131.16	121.54
57	BB	424	G	N9-C1'-C2'	-5.04	104.45	112.00
57	BB	695	G	O5'-C5'-C4'	-5.04	103.95	111.50
57	BB	2501	C	C5'-C4'-O4'	-5.04	102.25	109.80
17	AF	79	ARG	CA-C-N	5.03	128.64	120.23
17	AF	79	ARG	C-N-CA	5.03	128.64	120.23
21	AA	681	A	C5'-C4'-O4'	5.03	117.35	109.80
21	AA	866	C	O4'-C4'-C3'	-5.03	98.97	104.00
23	AW	53	G	C5'-C4'-C3'	5.03	123.55	116.00
47	B0	6	LYS	CA-C-N	5.03	124.94	119.85
47	B0	6	LYS	C-N-CA	5.03	124.94	119.85
57	BB	831	G	C4'-C3'-O3'	-5.03	105.45	113.00
57	BB	894	U	C5'-C4'-O4'	5.03	117.35	109.80
57	BB	1189	A	C4'-C3'-C2'	-5.03	97.57	102.60
57	BB	1483	G	C3'-C2'-O2'	5.03	118.25	110.70
21	AA	1313	U	O4'-C4'-C3'	-5.03	98.97	104.00
21	AA	1362	A	O4'-C1'-C2'	-5.03	100.77	105.80
57	BB	1767	G	O4'-C4'-C3'	-5.03	98.97	104.00
57	BB	1918	A	O4'-C1'-N9	5.03	115.75	108.20
57	BB	2401	U	C2'-C3'-O3'	5.03	117.05	109.50
57	BB	2638	G	C2'-C3'-O3'	5.03	117.05	109.50
57	BB	2871	U	O5'-C5'-C4'	-5.03	103.95	111.50
58	BA	87	U	O4'-C4'-C3'	-5.03	101.07	106.10
18	AG	102	TRP	CD2-CE2-CZ2	-5.03	117.37	122.40
21	AA	1088	G	P-O5'-C5'	5.03	128.44	120.90
25	AZ	20	VAL	O-C-N	5.03	127.96	122.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	BP	76	HIS	N-CA-CB	5.03	118.50	111.15
41	BV	18	ARG	CA-C-N	5.03	127.02	120.28
41	BV	18	ARG	C-N-CA	5.03	127.02	120.28
45	BC	52	HIS	CG-CD2-NE2	5.03	112.23	107.20
54	BF	132	ARG	CA-C-N	5.03	131.15	121.54
54	BF	132	ARG	C-N-CA	5.03	131.15	121.54
57	BB	292	U	O4'-C1'-C2'	-5.03	102.57	107.60
16	AE	19	ARG	CA-C-N	5.03	129.93	122.94
16	AE	19	ARG	C-N-CA	5.03	129.93	122.94
17	AF	28	ALA	CA-C-N	5.03	126.99	120.70
17	AF	28	ALA	C-N-CA	5.03	126.99	120.70
21	AA	1003	G	C1'-C2'-O2'	5.03	115.94	108.40
32	BM	86	LYS	O-C-N	-5.03	116.93	122.86
45	BC	72	GLY	CA-C-N	5.03	127.71	123.33
45	BC	72	GLY	C-N-CA	5.03	127.71	123.33
57	BB	2389	G	O3'-P-O5'	-5.03	96.46	104.00
57	BB	2868	A	O4'-C1'-N9	5.03	116.04	108.50
9	AR	21	ASP	N-CA-C	-5.03	101.80	108.74
15	AD	96	ARG	CA-C-N	5.03	127.02	120.28
15	AD	96	ARG	C-N-CA	5.03	127.02	120.28
46	BZ	55	LYS	N-CA-C	-5.03	101.51	109.76
52	BD	167	ASN	CA-CB-CG	-5.03	107.57	112.60
53	BE	116	ASP	N-CA-CB	5.03	118.99	110.49
54	BF	80	GLN	N-CA-C	-5.03	100.09	110.80
57	BB	837	C	O4'-C1'-N1	5.03	116.04	108.50
57	BB	1141	U	O5'-C5'-C4'	-5.03	104.16	111.70
57	BB	1314	C	O4'-C1'-N1	5.03	116.04	108.50
57	BB	2395	C	P-O5'-C5'	-5.03	113.36	120.90
57	BB	2901	C	O4'-C1'-N1	5.03	116.04	108.50
21	AA	509	A	O5'-C5'-C4'	-5.03	103.96	111.50
21	AA	1304	G	O5'-C5'-C4'	-5.03	103.96	111.50
36	BQ	106	THR	CA-C-O	5.03	125.72	119.79
48	B1	44	GLN	O-C-N	5.03	129.10	123.27
57	BB	228	C	O4'-C4'-C3'	-5.03	101.08	106.10
57	BB	324	A	O4'-C1'-N9	5.03	116.04	108.50
57	BB	711	G	O4'-C1'-N9	5.03	116.04	108.50
57	BB	1341	G	P-O5'-C5'	-5.03	113.36	120.90
21	AA	484	G	O4'-C1'-C2'	5.02	110.82	105.80
57	BB	613	A	O3'-P-O5'	-5.02	96.46	104.00
57	BB	1135	C	O4'-C1'-C2'	-5.02	102.58	107.60
57	BB	2346	A	P-O5'-C5'	-5.02	113.36	120.90
13	AB	27	LYS	O-C-N	-5.02	115.73	120.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	311	C	P-O5'-C5'	-5.02	113.36	120.90
21	AA	652	U	O4'-C1'-N1	5.02	115.73	108.20
21	AA	784	A	C4'-C3'-C2'	-5.02	97.58	102.60
21	AA	1056	U	P-O3'-C3'	-5.02	112.67	120.20
21	AA	1102	A	C4'-C3'-O3'	-5.02	105.47	113.00
22	AY	24	G	C4'-C3'-C2'	-5.02	97.58	102.60
22	AY	25	C	C4'-C3'-O3'	-5.02	105.47	113.00
25	AZ	174	ALA	N-CA-C	5.02	116.44	110.97
52	BD	98	VAL	CB-CA-C	-5.02	103.05	111.29
57	BB	628	G	N1-C6-O6	5.02	134.97	119.90
57	BB	658	U	O4'-C4'-C3'	-5.02	98.98	104.00
57	BB	1058	U	O4'-C1'-N1	5.02	116.03	108.50
57	BB	1769	U	P-O3'-C3'	-5.02	112.67	120.20
57	BB	2303	G	O4'-C1'-N9	5.02	116.03	108.50
57	BB	2516	A	C4'-C3'-C2'	-5.02	97.58	102.60
57	BB	2640	G	C5'-C4'-C3'	5.02	123.53	116.00
57	BB	2666	C	C1'-C2'-O2'	5.02	115.93	108.40
21	AA	620	C	P-O5'-C5'	-5.02	113.37	120.90
21	AA	1191	A	C1'-C2'-O2'	5.02	115.93	108.40
50	B3	23	HIS	CB-CG-CD2	-5.02	124.67	131.20
55	BG	33	THR	CA-C-N	5.02	129.99	122.86
55	BG	33	THR	C-N-CA	5.02	129.99	122.86
57	BB	318	C	C4'-C3'-O3'	-5.02	105.47	113.00
58	BA	63	C	O4'-C1'-N1	5.02	116.03	108.50
7	AP	31	ARG	O-C-N	-5.02	116.64	122.96
21	AA	1036	A	C4'-C3'-O3'	-5.02	105.47	113.00
30	BK	42	ILE	CA-C-O	-5.02	115.31	121.13
57	BB	65	U	C4'-C3'-C2'	-5.02	97.58	102.60
57	BB	346	A	C3'-C2'-C1'	-5.02	96.28	101.30
57	BB	780	G	O4'-C1'-N9	5.02	116.03	108.50
57	BB	919	U	P-O3'-C3'	-5.02	112.67	120.20
57	BB	954	G	O4'-C1'-N9	5.02	116.03	108.50
5	AN	91	GLU	CA-C-N	-5.02	118.97	123.33
5	AN	91	GLU	C-N-CA	-5.02	118.97	123.33
6	AO	37	HIS	CA-C-O	5.02	125.87	119.95
15	AD	36	ALA	N-CA-C	-5.02	101.40	109.58
19	AH	127	TYR	N-CA-C	-5.02	100.83	108.76
21	AA	1054	C	O4'-C1'-N1	5.02	116.03	108.50
25	AZ	76	TYR	CA-CB-CG	-5.02	104.87	113.90
36	BQ	3	VAL	CA-CB-CG1	-5.02	101.87	110.40
53	BE	52	VAL	CA-C-O	5.02	126.60	121.23
57	BB	218	A	O4'-C1'-C2'	-5.02	102.58	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	2304	G	O3'-P-O5'	-5.02	96.47	104.00
30	BK	63	ARG	NE-CZ-NH1	-5.02	116.48	121.50
55	BG	10	VAL	O-C-N	-5.02	115.38	121.10
57	BB	286	U	C5'-C4'-C3'	-5.02	108.47	116.00
57	BB	2750	A	O4'-C1'-C2'	5.02	110.82	105.80
4	AM	56	ARG	CA-C-N	5.01	127.00	120.28
4	AM	56	ARG	C-N-CA	5.01	127.00	120.28
21	AA	476	U	O4'-C1'-N1	5.01	116.02	108.50
33	BN	29	VAL	CB-CA-C	-5.01	104.57	110.84
49	B2	29	GLN	N-CA-C	-5.01	106.67	112.89
57	BB	1767	G	O4'-C1'-N9	5.01	116.02	108.50
21	AA	496	A	O4'-C1'-N9	5.01	115.72	108.20
21	AA	962	C	O4'-C1'-N1	5.01	116.02	108.50
21	AA	1174	G	O5'-C5'-C4'	-5.01	103.98	111.50
21	AA	1240	U	O4'-C1'-C2'	-5.01	100.79	105.80
21	AA	223	A	O5'-C5'-C4'	-5.01	103.98	111.50
21	AA	440	C	O4'-C1'-C2'	-5.01	102.59	107.60
28	BI	81	LYS	CB-CG-CD	5.01	122.83	111.30
38	BS	54	ALA	O-C-N	5.01	127.86	122.15
48	B1	50	GLU	CA-C-N	5.01	130.33	122.21
48	B1	50	GLU	C-N-CA	5.01	130.33	122.21
53	BE	23	PHE	N-CA-CB	5.01	118.96	110.49
55	BG	97	VAL	CA-C-N	5.01	129.25	121.83
55	BG	97	VAL	C-N-CA	5.01	129.25	121.83
56	BH	123	ARG	CB-CG-CD	5.01	122.83	111.30
57	BB	737	C	P-O5'-C5'	5.01	128.42	120.90
57	BB	1025	G	O4'-C4'-C3'	-5.01	101.09	106.10
57	BB	1154	G	O4'-C1'-N9	5.01	116.02	108.50
2	AK	29	THR	N-CA-C	-5.01	99.94	108.26
11	AT	29	THR	N-CA-C	-5.01	105.53	111.69
14	AC	69	THR	N-CA-C	-5.01	101.79	109.41
18	AG	77	ARG	CA-C-N	5.01	127.98	120.87
18	AG	77	ARG	C-N-CA	5.01	127.98	120.87
21	AA	401	C	O4'-C4'-C3'	-5.01	98.99	104.00
21	AA	868	C	O4'-C1'-C2'	-5.01	102.59	107.60
29	BJ	125	TYR	CB-CA-C	5.01	120.39	110.42
46	BZ	2	LYS	O-C-N	5.01	128.61	122.75
49	B2	26	ASN	CA-C-O	5.01	124.86	119.15
49	B2	37	LYS	O-C-N	5.01	128.43	122.27
57	BB	1126	A	C2'-C3'-O3'	5.01	117.01	109.50
57	BB	1617	C	O4'-C4'-C3'	-5.01	101.09	106.10
20	AI	38	PHE	CA-C-O	5.01	126.81	121.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	452	A	C5'-C4'-C3'	-5.01	108.49	116.00
21	AA	759	A	P-O5'-C5'	5.01	128.41	120.90
2	AK	58	THR	CA-CB-OG1	5.01	117.11	109.60
5	AN	94	GLY	CA-C-O	-5.01	113.73	119.04
15	AD	26	ALA	N-CA-C	-5.01	100.14	110.80
21	AA	256	U	O3'-P-O5'	-5.01	96.49	104.00
21	AA	592	G	O4'-C1'-N9	5.01	116.01	108.50
21	AA	1230	C	O4'-C4'-C3'	-5.01	98.99	104.00
22	AY	28	C	C5'-C4'-C3'	-5.01	108.49	116.00
22	AY	47	U	C3'-C2'-O2'	5.01	118.21	110.70
25	AZ	166	ASP	N-CA-CB	5.01	118.95	110.49
33	BN	60	VAL	CB-CA-C	-5.01	103.08	111.29
39	BT	59	ASN	CA-CB-CG	-5.01	107.59	112.60
44	BY	23	ARG	CA-C-O	5.01	127.24	121.28
56	BH	50	ARG	N-CA-C	5.01	116.74	111.28
57	BB	31	C	P-O5'-C5'	5.01	128.41	120.90
57	BB	235	U	C4'-C3'-O3'	-5.01	105.49	113.00
57	BB	358	U	O4'-C1'-N1	5.01	116.01	108.50
57	BB	1151	A	C4'-C3'-C2'	-5.01	97.59	102.60
57	BB	2372	U	C5'-C4'-C3'	-5.01	108.49	116.00
57	BB	2686	G	O5'-C5'-C4'	-5.01	103.99	111.50
21	AA	170	U	O5'-C5'-C4'	-5.00	103.99	111.50
21	AA	194	C	O4'-C1'-N1	5.00	116.01	108.50
34	BO	117	PHE	CA-CB-CG	5.00	118.81	113.80
57	BB	221	A	C5'-C4'-C3'	-5.00	107.69	115.20
57	BB	1614	A	O5'-C5'-C4'	-5.00	103.99	111.50
57	BB	2300	C	P-O3'-C3'	-5.00	112.69	120.20
57	BB	2641	G	C3'-C2'-O2'	5.00	118.21	110.70
57	BB	2702	G	O4'-C1'-N9	5.00	116.01	108.50
3	AL	28	GLN	CG-CD-NE2	5.00	123.91	116.40
9	AR	65	SER	CA-C-N	5.00	130.10	122.24
9	AR	65	SER	C-N-CA	5.00	130.10	122.24
20	AI	48	ARG	N-CA-C	-5.00	107.22	113.72
21	AA	494	G	C4'-C3'-C2'	-5.00	97.60	102.60
21	AA	719	C	O4'-C1'-N1	5.00	116.01	108.50
21	AA	1181	G	C5'-C4'-C3'	-5.00	107.69	115.20
26	AV	21	A	N9-C1'-C2'	5.00	119.51	112.00
35	BP	82	SER	N-CA-CB	-5.00	102.17	111.13
36	BQ	46	TYR	CA-C-N	5.00	126.98	120.28
36	BQ	46	TYR	C-N-CA	5.00	126.98	120.28
40	BU	14	THR	O-C-N	5.00	129.08	122.93
57	BB	379	G	C3'-C2'-O2'	5.00	118.20	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	BB	1238	G	C3'-C2'-O2'	-5.00	103.20	110.70
57	BB	1535	A	C5'-C4'-C3'	-5.00	107.69	115.20
57	BB	2274	A	O4'-C1'-N9	5.00	116.01	108.50
2	AK	38	GLY	O-C-N	-5.00	115.70	122.35
13	AB	29	PHE	CB-CG-CD1	-5.00	112.20	120.70
16	AE	13	LYS	N-CA-C	-5.00	101.74	108.19
18	AG	134	VAL	CB-CA-C	-5.00	104.01	112.16
21	AA	413	G	O3'-P-O5'	5.00	111.50	104.00
21	AA	705	G	O4'-C4'-C3'	-5.00	99.00	104.00
21	AA	1358	U	O4'-C1'-C2'	5.00	112.60	107.60
21	AA	1377	A	C4'-C3'-O3'	-5.00	105.50	113.00
21	AA	1402	C	C3'-C2'-C1'	5.00	106.30	101.30
21	AA	1463	U	C1'-O4'-C4'	-5.00	104.90	109.90
28	BI	106	GLN	N-CA-CB	5.00	117.47	110.12
29	BJ	118	MET	CA-CB-CG	-5.00	104.10	114.10
32	BM	51	ARG	CB-CG-CD	5.00	122.81	111.30
52	BD	131	ASP	CA-CB-CG	-5.00	107.60	112.60
52	BD	208	LYS	O-C-N	5.00	128.98	123.33
54	BF	84	ILE	CA-C-N	5.00	131.21	121.41
54	BF	84	ILE	C-N-CA	5.00	131.21	121.41
57	BB	1804	C	C4'-C3'-O3'	-5.00	105.50	113.00
57	BB	2396	G	C5'-C4'-O4'	5.00	117.30	109.80
57	BB	2626	C	C5'-C4'-C3'	-5.00	108.50	116.00

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
23	AW	17	C	C1'
23	AW	47	U	C1'
23	AW	70	G	C3'
27	B5	37	LYS	CA

All (2445) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
21	AA	100	G	Sidechain
21	AA	1002	G	Sidechain
21	AA	1004	A	Sidechain
21	AA	1005	A	Sidechain
21	AA	1007	U	Sidechain
21	AA	101	A	Sidechain
21	AA	1010	U	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1013	G	Sidechain
21	AA	1014	A	Sidechain
21	AA	1017	U	Sidechain
21	AA	1022	A	Sidechain
21	AA	1024	G	Sidechain
21	AA	1026	G	Sidechain
21	AA	1027	C	Sidechain
21	AA	1028	C	Sidechain
21	AA	103	U	Sidechain
21	AA	1031	C	Sidechain
21	AA	1032	G	Sidechain
21	AA	1033	G	Sidechain
21	AA	1034	G	Sidechain
21	AA	1035	A	Sidechain
21	AA	1040	U	Sidechain
21	AA	1043	G	Sidechain
21	AA	1046	A	Sidechain
21	AA	1047	G	Sidechain
21	AA	1048	G	Sidechain
21	AA	105	G	Sidechain
21	AA	1050	G	Sidechain
21	AA	1051	C	Sidechain
21	AA	1054	C	Sidechain
21	AA	1056	U	Sidechain
21	AA	1057	G	Sidechain
21	AA	1058	G	Sidechain
21	AA	1059	C	Sidechain
21	AA	1060	U	Sidechain
21	AA	1064	G	Sidechain
21	AA	1068	G	Sidechain
21	AA	107	G	Sidechain
21	AA	1071	C	Sidechain
21	AA	1072	G	Sidechain
21	AA	1074	G	Sidechain
21	AA	1076	U	Sidechain
21	AA	1077	G	Sidechain
21	AA	1078	U	Sidechain
21	AA	1079	G	Sidechain
21	AA	108	G	Sidechain
21	AA	1081	A	Sidechain
21	AA	1082	A	Sidechain
21	AA	1083	U	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1086	U	Sidechain
21	AA	1088	G	Sidechain
21	AA	1089	G	Sidechain
21	AA	109	A	Sidechain
21	AA	1090	U	Sidechain
21	AA	1091	U	Sidechain
21	AA	1093	A	Sidechain
21	AA	1094	G	Sidechain
21	AA	1097	C	Sidechain
21	AA	1098	C	Sidechain
21	AA	1099	G	Sidechain
21	AA	110	C	Sidechain
21	AA	1101	A	Sidechain
21	AA	1103	C	Sidechain
21	AA	1104	G	Sidechain
21	AA	1105	A	Sidechain
21	AA	1106	G	Sidechain
21	AA	111	G	Sidechain
21	AA	1110	A	Sidechain
21	AA	1116	U	Sidechain
21	AA	1118	U	Sidechain
21	AA	1123	U	Sidechain
21	AA	1126	U	Sidechain
21	AA	1127	G	Sidechain
21	AA	113	G	Sidechain
21	AA	1133	G	Sidechain
21	AA	1134	G	Sidechain
21	AA	1139	G	Sidechain
21	AA	1140	C	Sidechain
21	AA	1142	G	Sidechain
21	AA	1143	G	Sidechain
21	AA	1144	G	Sidechain
21	AA	1146	A	Sidechain
21	AA	1148	U	Sidechain
21	AA	1150	A	Sidechain
21	AA	1151	A	Sidechain
21	AA	1154	G	Sidechain
21	AA	1155	A	Sidechain
21	AA	1156	G	Sidechain
21	AA	1162	C	Sidechain
21	AA	1166	G	Sidechain
21	AA	1168	U	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1169	A	Sidechain
21	AA	117	G	Sidechain
21	AA	1170	A	Sidechain
21	AA	1173	U	Sidechain
21	AA	1174	G	Sidechain
21	AA	1178	G	Sidechain
21	AA	1179	A	Sidechain
21	AA	118	U	Sidechain
21	AA	1184	G	Sidechain
21	AA	1185	G	Sidechain
21	AA	1186	G	Sidechain
21	AA	1189	U	Sidechain
21	AA	1190	G	Sidechain
21	AA	1192	C	Sidechain
21	AA	1195	C	Sidechain
21	AA	1199	U	Sidechain
21	AA	12	U	Sidechain
21	AA	120	A	Sidechain
21	AA	1201	A	Sidechain
21	AA	1204	A	Sidechain
21	AA	1205	U	Sidechain
21	AA	1206	G	Sidechain
21	AA	1207	G	Sidechain
21	AA	121	U	Sidechain
21	AA	1210	C	Sidechain
21	AA	1211	U	Sidechain
21	AA	1213	A	Sidechain
21	AA	1214	C	Sidechain
21	AA	1215	G	Sidechain
21	AA	1217	C	Sidechain
21	AA	122	G	Sidechain
21	AA	1220	G	Sidechain
21	AA	1221	G	Sidechain
21	AA	1223	C	Sidechain
21	AA	1224	U	Sidechain
21	AA	1225	A	Sidechain
21	AA	1226	C	Sidechain
21	AA	1227	A	Sidechain
21	AA	1228	C	Sidechain
21	AA	123	U	Sidechain
21	AA	124	C	Sidechain
21	AA	1241	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1242	G	Sidechain
21	AA	1246	A	Sidechain
21	AA	1247	U	Sidechain
21	AA	125	U	Sidechain
21	AA	1250	A	Sidechain
21	AA	1251	A	Sidechain
21	AA	1253	G	Sidechain
21	AA	1254	A	Sidechain
21	AA	1259	C	Sidechain
21	AA	1260	G	Sidechain
21	AA	1262	C	Sidechain
21	AA	1263	C	Sidechain
21	AA	1264	U	Sidechain
21	AA	1266	G	Sidechain
21	AA	1268	G	Sidechain
21	AA	1272	G	Sidechain
21	AA	1279	G	Sidechain
21	AA	128	G	Sidechain
21	AA	1280	A	Sidechain
21	AA	1282	C	Sidechain
21	AA	1284	C	Sidechain
21	AA	1285	A	Sidechain
21	AA	1286	U	Sidechain
21	AA	1287	A	Sidechain
21	AA	1288	A	Sidechain
21	AA	1290	G	Sidechain
21	AA	1291	U	Sidechain
21	AA	1292	G	Sidechain
21	AA	1297	G	Sidechain
21	AA	1298	U	Sidechain
21	AA	1299	A	Sidechain
21	AA	130	A	Sidechain
21	AA	1302	C	Sidechain
21	AA	1304	G	Sidechain
21	AA	1305	G	Sidechain
21	AA	1306	A	Sidechain
21	AA	1308	U	Sidechain
21	AA	1309	G	Sidechain
21	AA	131	A	Sidechain
21	AA	1311	A	Sidechain
21	AA	1313	U	Sidechain
21	AA	1316	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1317	C	Sidechain
21	AA	1318	A	Sidechain
21	AA	132	C	Sidechain
21	AA	1323	G	Sidechain
21	AA	1326	U	Sidechain
21	AA	1329	A	Sidechain
21	AA	1331	G	Sidechain
21	AA	1332	A	Sidechain
21	AA	1338	G	Sidechain
21	AA	1339	A	Sidechain
21	AA	1340	A	Sidechain
21	AA	1341	U	Sidechain
21	AA	1342	C	Sidechain
21	AA	1343	G	Sidechain
21	AA	1345	U	Sidechain
21	AA	1346	A	Sidechain
21	AA	1347	G	Sidechain
21	AA	1349	A	Sidechain
21	AA	1351	U	Sidechain
21	AA	1354	U	Sidechain
21	AA	1355	G	Sidechain
21	AA	1356	G	Sidechain
21	AA	1357	A	Sidechain
21	AA	1359	C	Sidechain
21	AA	136	C	Sidechain
21	AA	1361	G	Sidechain
21	AA	1363	A	Sidechain
21	AA	1364	U	Sidechain
21	AA	1365	G	Sidechain
21	AA	1366	C	Sidechain
21	AA	1368	A	Sidechain
21	AA	1371	G	Sidechain
21	AA	1374	A	Sidechain
21	AA	1376	U	Sidechain
21	AA	1377	A	Sidechain
21	AA	138	G	Sidechain
21	AA	1380	U	Sidechain
21	AA	1381	U	Sidechain
21	AA	1382	C	Sidechain
21	AA	1383	C	Sidechain
21	AA	1384	C	Sidechain
21	AA	1385	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1388	C	Sidechain
21	AA	1391	U	Sidechain
21	AA	1392	G	Sidechain
21	AA	1393	U	Sidechain
21	AA	1395	C	Sidechain
21	AA	1397	C	Sidechain
21	AA	1399	C	Sidechain
21	AA	140	U	Sidechain
21	AA	1400	C	Sidechain
21	AA	1401	G	Sidechain
21	AA	1402	C	Sidechain
21	AA	1403	C	Sidechain
21	AA	1404	C	Sidechain
21	AA	1405	G	Sidechain
21	AA	1407	C	Sidechain
21	AA	1409	C	Sidechain
21	AA	1410	A	Sidechain
21	AA	1411	C	Sidechain
21	AA	1412	C	Sidechain
21	AA	1413	A	Sidechain
21	AA	1414	U	Sidechain
21	AA	1415	G	Sidechain
21	AA	1416	G	Sidechain
21	AA	1417	G	Sidechain
21	AA	1418	A	Sidechain
21	AA	142	G	Sidechain
21	AA	1421	G	Sidechain
21	AA	1422	G	Sidechain
21	AA	1426	G	Sidechain
21	AA	1427	C	Sidechain
21	AA	1428	A	Sidechain
21	AA	1429	A	Sidechain
21	AA	1431	A	Sidechain
21	AA	1433	A	Sidechain
21	AA	1434	A	Sidechain
21	AA	1435	G	Sidechain
21	AA	1437	A	Sidechain
21	AA	1438	G	Sidechain
21	AA	1440	U	Sidechain
21	AA	1442	G	Sidechain
21	AA	1446	A	Sidechain
21	AA	1447	A	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	1449	C	Sidechain
21	AA	1453	G	Sidechain
21	AA	1456	A	Sidechain
21	AA	1457	G	Sidechain
21	AA	1459	G	Sidechain
21	AA	1461	G	Sidechain
21	AA	1463	U	Sidechain
21	AA	1469	C	Sidechain
21	AA	147	G	Sidechain
21	AA	1472	U	Sidechain
21	AA	1482	G	Sidechain
21	AA	1483	A	Sidechain
21	AA	1486	G	Sidechain
21	AA	1489	G	Sidechain
21	AA	1490	U	Sidechain
21	AA	1492	A	Sidechain
21	AA	1497	G	Sidechain
21	AA	1502	A	Sidechain
21	AA	1507	A	Sidechain
21	AA	1508	A	Sidechain
21	AA	1509	C	Sidechain
21	AA	151	A	Sidechain
21	AA	1511	G	Sidechain
21	AA	1516	G	Sidechain
21	AA	1517	G	Sidechain
21	AA	1518	A	Sidechain
21	AA	152	A	Sidechain
21	AA	1521	C	Sidechain
21	AA	1522	U	Sidechain
21	AA	1525	G	Sidechain
21	AA	1526	G	Sidechain
21	AA	1527	U	Sidechain
21	AA	1529	G	Sidechain
21	AA	1530	G	Sidechain
21	AA	1532	U	Sidechain
21	AA	1533	C	Sidechain
21	AA	154	U	Sidechain
21	AA	158	G	Sidechain
21	AA	159	G	Sidechain
21	AA	16	A	Sidechain
21	AA	161	A	Sidechain
21	AA	164	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	17	U	Sidechain
21	AA	170	U	Sidechain
21	AA	172	A	Sidechain
21	AA	173	U	Sidechain
21	AA	176	C	Sidechain
21	AA	181	A	Sidechain
21	AA	183	C	Sidechain
21	AA	190	A	Sidechain
21	AA	191	G	Sidechain
21	AA	193	C	Sidechain
21	AA	195	A	Sidechain
21	AA	20	U	Sidechain
21	AA	200	G	Sidechain
21	AA	201	G	Sidechain
21	AA	202	G	Sidechain
21	AA	203	G	Sidechain
21	AA	204	G	Sidechain
21	AA	205	A	Sidechain
21	AA	206	C	Sidechain
21	AA	208	U	Sidechain
21	AA	209	U	Sidechain
21	AA	21	G	Sidechain
21	AA	213	G	Sidechain
21	AA	214	C	Sidechain
21	AA	218	U	Sidechain
21	AA	219	U	Sidechain
21	AA	22	G	Sidechain
21	AA	221	C	Sidechain
21	AA	222	C	Sidechain
21	AA	225	C	Sidechain
21	AA	226	G	Sidechain
21	AA	23	C	Sidechain
21	AA	230	G	Sidechain
21	AA	231	U	Sidechain
21	AA	232	G	Sidechain
21	AA	233	C	Sidechain
21	AA	234	C	Sidechain
21	AA	236	A	Sidechain
21	AA	237	G	Sidechain
21	AA	239	U	Sidechain
21	AA	24	U	Sidechain
21	AA	241	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	244	U	Sidechain
21	AA	246	A	Sidechain
21	AA	248	C	Sidechain
21	AA	249	U	Sidechain
21	AA	25	C	Sidechain
21	AA	251	G	Sidechain
21	AA	253	A	Sidechain
21	AA	254	G	Sidechain
21	AA	257	G	Sidechain
21	AA	258	G	Sidechain
21	AA	259	G	Sidechain
21	AA	260	G	Sidechain
21	AA	261	U	Sidechain
21	AA	262	A	Sidechain
21	AA	263	A	Sidechain
21	AA	264	C	Sidechain
21	AA	265	G	Sidechain
21	AA	267	C	Sidechain
21	AA	269	C	Sidechain
21	AA	270	A	Sidechain
21	AA	274	A	Sidechain
21	AA	276	G	Sidechain
21	AA	280	C	Sidechain
21	AA	281	G	Sidechain
21	AA	282	A	Sidechain
21	AA	283	U	Sidechain
21	AA	287	U	Sidechain
21	AA	288	A	Sidechain
21	AA	29	U	Sidechain
21	AA	292	G	Sidechain
21	AA	293	G	Sidechain
21	AA	294	U	Sidechain
21	AA	296	U	Sidechain
21	AA	301	G	Sidechain
21	AA	302	G	Sidechain
21	AA	304	U	Sidechain
21	AA	306	A	Sidechain
21	AA	315	A	Sidechain
21	AA	316	C	Sidechain
21	AA	317	U	Sidechain
21	AA	320	A	Sidechain
21	AA	322	C	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	323	U	Sidechain
21	AA	324	G	Sidechain
21	AA	325	A	Sidechain
21	AA	327	A	Sidechain
21	AA	329	A	Sidechain
21	AA	334	C	Sidechain
21	AA	336	A	Sidechain
21	AA	338	A	Sidechain
21	AA	34	C	Sidechain
21	AA	340	U	Sidechain
21	AA	342	C	Sidechain
21	AA	343	U	Sidechain
21	AA	345	C	Sidechain
21	AA	346	G	Sidechain
21	AA	347	G	Sidechain
21	AA	348	G	Sidechain
21	AA	35	G	Sidechain
21	AA	350	G	Sidechain
21	AA	351	G	Sidechain
21	AA	353	A	Sidechain
21	AA	354	G	Sidechain
21	AA	355	C	Sidechain
21	AA	359	G	Sidechain
21	AA	362	G	Sidechain
21	AA	363	A	Sidechain
21	AA	366	A	Sidechain
21	AA	367	U	Sidechain
21	AA	368	U	Sidechain
21	AA	369	G	Sidechain
21	AA	372	C	Sidechain
21	AA	374	A	Sidechain
21	AA	376	G	Sidechain
21	AA	378	G	Sidechain
21	AA	380	G	Sidechain
21	AA	383	A	Sidechain
21	AA	384	G	Sidechain
21	AA	389	A	Sidechain
21	AA	390	U	Sidechain
21	AA	391	G	Sidechain
21	AA	396	C	Sidechain
21	AA	404	G	Sidechain
21	AA	405	U	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	412	A	Sidechain
21	AA	42	G	Sidechain
21	AA	421	U	Sidechain
21	AA	422	C	Sidechain
21	AA	423	G	Sidechain
21	AA	424	G	Sidechain
21	AA	427	U	Sidechain
21	AA	429	U	Sidechain
21	AA	43	C	Sidechain
21	AA	431	A	Sidechain
21	AA	432	A	Sidechain
21	AA	433	G	Sidechain
21	AA	435	A	Sidechain
21	AA	438	U	Sidechain
21	AA	439	U	Sidechain
21	AA	442	G	Sidechain
21	AA	444	G	Sidechain
21	AA	445	G	Sidechain
21	AA	447	G	Sidechain
21	AA	448	A	Sidechain
21	AA	449	G	Sidechain
21	AA	452	A	Sidechain
21	AA	453	G	Sidechain
21	AA	455	G	Sidechain
21	AA	46	G	Sidechain
21	AA	463	U	Sidechain
21	AA	464	U	Sidechain
21	AA	466	A	Sidechain
21	AA	467	U	Sidechain
21	AA	468	A	Sidechain
21	AA	472	U	Sidechain
21	AA	473	U	Sidechain
21	AA	474	G	Sidechain
21	AA	480	U	Sidechain
21	AA	483	C	Sidechain
21	AA	484	G	Sidechain
21	AA	486	U	Sidechain
21	AA	487	A	Sidechain
21	AA	49	U	Sidechain
21	AA	491	G	Sidechain
21	AA	493	A	Sidechain
21	AA	494	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	496	A	Sidechain
21	AA	5	U	Sidechain
21	AA	500	G	Sidechain
21	AA	501	C	Sidechain
21	AA	503	C	Sidechain
21	AA	504	C	Sidechain
21	AA	506	G	Sidechain
21	AA	509	A	Sidechain
21	AA	51	A	Sidechain
21	AA	512	U	Sidechain
21	AA	513	C	Sidechain
21	AA	521	G	Sidechain
21	AA	524	G	Sidechain
21	AA	526	C	Sidechain
21	AA	528	C	Sidechain
21	AA	530	G	Sidechain
21	AA	531	U	Sidechain
21	AA	532	A	Sidechain
21	AA	533	A	Sidechain
21	AA	538	G	Sidechain
21	AA	544	G	Sidechain
21	AA	548	G	Sidechain
21	AA	55	A	Sidechain
21	AA	550	G	Sidechain
21	AA	553	A	Sidechain
21	AA	554	A	Sidechain
21	AA	555	U	Sidechain
21	AA	556	C	Sidechain
21	AA	557	G	Sidechain
21	AA	56	U	Sidechain
21	AA	560	A	Sidechain
21	AA	561	U	Sidechain
21	AA	563	A	Sidechain
21	AA	565	U	Sidechain
21	AA	566	G	Sidechain
21	AA	567	G	Sidechain
21	AA	57	G	Sidechain
21	AA	572	A	Sidechain
21	AA	573	A	Sidechain
21	AA	574	A	Sidechain
21	AA	575	G	Sidechain
21	AA	577	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	58	C	Sidechain
21	AA	580	C	Sidechain
21	AA	581	G	Sidechain
21	AA	584	G	Sidechain
21	AA	585	G	Sidechain
21	AA	588	G	Sidechain
21	AA	589	U	Sidechain
21	AA	598	U	Sidechain
21	AA	6	G	Sidechain
21	AA	60	A	Sidechain
21	AA	600	A	Sidechain
21	AA	602	A	Sidechain
21	AA	603	U	Sidechain
21	AA	605	U	Sidechain
21	AA	608	A	Sidechain
21	AA	61	G	Sidechain
21	AA	611	C	Sidechain
21	AA	612	C	Sidechain
21	AA	613	C	Sidechain
21	AA	622	A	Sidechain
21	AA	624	C	Sidechain
21	AA	626	G	Sidechain
21	AA	627	G	Sidechain
21	AA	631	C	Sidechain
21	AA	632	U	Sidechain
21	AA	633	G	Sidechain
21	AA	637	C	Sidechain
21	AA	638	U	Sidechain
21	AA	640	A	Sidechain
21	AA	646	G	Sidechain
21	AA	648	A	Sidechain
21	AA	652	U	Sidechain
21	AA	655	A	Sidechain
21	AA	656	G	Sidechain
21	AA	657	U	Sidechain
21	AA	662	U	Sidechain
21	AA	663	A	Sidechain
21	AA	664	G	Sidechain
21	AA	666	G	Sidechain
21	AA	667	G	Sidechain
21	AA	668	G	Sidechain
21	AA	669	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	67	C	Sidechain
21	AA	671	G	Sidechain
21	AA	673	A	Sidechain
21	AA	674	G	Sidechain
21	AA	677	U	Sidechain
21	AA	682	G	Sidechain
21	AA	683	G	Sidechain
21	AA	685	G	Sidechain
21	AA	688	G	Sidechain
21	AA	69	G	Sidechain
21	AA	690	G	Sidechain
21	AA	691	G	Sidechain
21	AA	695	A	Sidechain
21	AA	700	G	Sidechain
21	AA	701	U	Sidechain
21	AA	703	G	Sidechain
21	AA	704	A	Sidechain
21	AA	705	G	Sidechain
21	AA	707	U	Sidechain
21	AA	709	U	Sidechain
21	AA	716	A	Sidechain
21	AA	717	U	Sidechain
21	AA	719	C	Sidechain
21	AA	722	G	Sidechain
21	AA	723	U	Sidechain
21	AA	726	C	Sidechain
21	AA	727	G	Sidechain
21	AA	728	A	Sidechain
21	AA	729	A	Sidechain
21	AA	730	G	Sidechain
21	AA	731	G	Sidechain
21	AA	738	C	Sidechain
21	AA	739	C	Sidechain
21	AA	74	A	Sidechain
21	AA	740	U	Sidechain
21	AA	742	G	Sidechain
21	AA	751	U	Sidechain
21	AA	752	G	Sidechain
21	AA	754	C	Sidechain
21	AA	761	G	Sidechain
21	AA	763	G	Sidechain
21	AA	765	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	768	A	Sidechain
21	AA	773	G	Sidechain
21	AA	776	G	Sidechain
21	AA	779	C	Sidechain
21	AA	780	A	Sidechain
21	AA	781	A	Sidechain
21	AA	782	A	Sidechain
21	AA	785	G	Sidechain
21	AA	786	G	Sidechain
21	AA	789	U	Sidechain
21	AA	79	G	Sidechain
21	AA	791	G	Sidechain
21	AA	792	A	Sidechain
21	AA	793	U	Sidechain
21	AA	795	C	Sidechain
21	AA	796	C	Sidechain
21	AA	799	G	Sidechain
21	AA	802	A	Sidechain
21	AA	805	C	Sidechain
21	AA	81	A	Sidechain
21	AA	810	C	Sidechain
21	AA	811	C	Sidechain
21	AA	814	A	Sidechain
21	AA	815	A	Sidechain
21	AA	817	C	Sidechain
21	AA	818	G	Sidechain
21	AA	821	G	Sidechain
21	AA	828	U	Sidechain
21	AA	83	C	Sidechain
21	AA	831	A	Sidechain
21	AA	833	G	Sidechain
21	AA	834	U	Sidechain
21	AA	838	G	Sidechain
21	AA	842	U	Sidechain
21	AA	843	U	Sidechain
21	AA	844	G	Sidechain
21	AA	846	G	Sidechain
21	AA	847	G	Sidechain
21	AA	851	G	Sidechain
21	AA	854	U	Sidechain
21	AA	859	G	Sidechain
21	AA	86	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	864	A	Sidechain
21	AA	865	A	Sidechain
21	AA	869	G	Sidechain
21	AA	87	C	Sidechain
21	AA	870	U	Sidechain
21	AA	871	U	Sidechain
21	AA	873	A	Sidechain
21	AA	874	G	Sidechain
21	AA	877	G	Sidechain
21	AA	878	A	Sidechain
21	AA	879	C	Sidechain
21	AA	881	G	Sidechain
21	AA	883	C	Sidechain
21	AA	886	G	Sidechain
21	AA	887	G	Sidechain
21	AA	889	A	Sidechain
21	AA	890	G	Sidechain
21	AA	895	G	Sidechain
21	AA	898	G	Sidechain
21	AA	899	C	Sidechain
21	AA	9	G	Sidechain
21	AA	90	C	Sidechain
21	AA	900	A	Sidechain
21	AA	901	A	Sidechain
21	AA	902	G	Sidechain
21	AA	903	G	Sidechain
21	AA	909	A	Sidechain
21	AA	91	U	Sidechain
21	AA	911	U	Sidechain
21	AA	914	A	Sidechain
21	AA	916	U	Sidechain
21	AA	919	A	Sidechain
21	AA	920	U	Sidechain
21	AA	921	U	Sidechain
21	AA	922	G	Sidechain
21	AA	923	A	Sidechain
21	AA	924	C	Sidechain
21	AA	925	G	Sidechain
21	AA	926	G	Sidechain
21	AA	927	G	Sidechain
21	AA	932	C	Sidechain
21	AA	933	G	Sidechain

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Mol	Chain	Res	Type	Group
21	AA	936	C	Sidechain
21	AA	937	A	Sidechain
21	AA	938	A	Sidechain
21	AA	939	G	Sidechain
21	AA	942	G	Sidechain
21	AA	944	G	Sidechain
21	AA	946	A	Sidechain
21	AA	948	C	Sidechain
21	AA	951	G	Sidechain
21	AA	953	G	Sidechain
21	AA	954	G	Sidechain
21	AA	957	U	Sidechain
21	AA	958	A	Sidechain
21	AA	959	A	Sidechain
21	AA	961	U	Sidechain
21	AA	962	C	Sidechain
21	AA	964	A	Sidechain
21	AA	966	G	Sidechain
21	AA	968	A	Sidechain
21	AA	971	G	Sidechain
21	AA	972	C	Sidechain
21	AA	973	G	Sidechain
21	AA	974	A	Sidechain
21	AA	975	A	Sidechain
21	AA	977	A	Sidechain
21	AA	978	A	Sidechain
21	AA	979	C	Sidechain
21	AA	981	U	Sidechain
21	AA	991	U	Sidechain
21	AA	992	U	Sidechain
21	AA	994	A	Sidechain
21	AA	995	C	Sidechain
21	AA	996	A	Sidechain
21	AA	999	C	Sidechain
13	AB	107	ARG	Sidechain
13	AB	29	PHE	Sidechain
13	AB	68	PHE	Peptide
13	AB	89	PHE	Sidechain
14	AC	155	ARG	Sidechain
14	AC	163	ARG	Sidechain
14	AC	167	TYR	Peptide
14	AC	53	ARG	Sidechain

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Mol	Chain	Res	Type	Group
14	AC	71	ARG	Sidechain
15	AD	103	ARG	Sidechain
15	AD	127	ARG	Sidechain
15	AD	134	TYR	Sidechain
15	AD	145	ARG	Sidechain
15	AD	19	PHE	Sidechain
15	AD	203	TYR	Sidechain
15	AD	50	TYR	Sidechain
15	AD	64	TYR	Sidechain
15	AD	75	TYR	Sidechain
16	AE	94	PHE	Sidechain
17	AF	8	PHE	Sidechain
17	AF	86	ARG	Sidechain
18	AG	110	ARG	Sidechain
18	AG	14	ASP	Peptide
18	AG	78	ARG	Sidechain
18	AG	95	ARG	Sidechain
19	AH	113	ARG	Sidechain
19	AH	125	ILE	Peptide
19	AH	64	TYR	Sidechain
19	AH	85	TYR	Sidechain
20	AI	11	ARG	Sidechain
20	AI	121	ARG	Sidechain
20	AI	126	PHE	Sidechain
20	AI	37	TYR	Sidechain
20	AI	48	ARG	Sidechain
20	AI	6	TYR	Sidechain
1	AJ	16	ARG	Sidechain
1	AJ	68	ARG	Sidechain
1	AJ	9	ARG	Sidechain
2	AK	26	PHE	Sidechain
2	AK	55	ARG	Sidechain
2	AK	89	GLY	Peptide
2	AK	97	ARG	Sidechain
3	AL	13	ARG	Sidechain
3	AL	20	VAL	Peptide
3	AL	30	ARG	Sidechain
3	AL	49	ARG	Sidechain
3	AL	53	ARG	Sidechain
3	AL	65	TYR	Sidechain
3	AL	93	ARG	Sidechain
4	AM	100	ARG	Sidechain

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Mol	Chain	Res	Type	Group
4	AM	104	ASN	Peptide
4	AM	108	ARG	Mainchain
4	AM	2	ARG	Sidechain
4	AM	22	TYR	Sidechain
5	AN	12	ARG	Sidechain
5	AN	52	ARG	Sidechain
5	AN	62	ARG	Sidechain
5	AN	68	ARG	Sidechain
5	AN	84	ARG	Sidechain
6	AO	16	ARG	Sidechain
6	AO	20	ASP	Peptide
6	AO	57	ARG	Sidechain
6	AO	62	ARG	Sidechain
6	AO	79	ARG	Sidechain
7	AP	17	TYR	Sidechain
7	AP	25	ARG	Sidechain
7	AP	9	HIS	Sidechain
8	AQ	30	HIS	Sidechain
9	AR	22	TYR	Sidechain
9	AR	31	TYR	Sidechain
9	AR	47	ARG	Sidechain
9	AR	69	TYR	Sidechain
10	AS	79	TYR	Sidechain
11	AT	17	ARG	Sidechain
11	AT	24	ARG	Sidechain
11	AT	9	ARG	Sidechain
12	AU	20	ARG	Sidechain
12	AU	37	TYR	Sidechain
12	AU	44	ARG	Sidechain
12	AU	46	ARG	Sidechain
12	AU	6	ARG	Sidechain
26	AV	1	C	Sidechain
26	AV	11	A	Sidechain
26	AV	17	C	Sidechain
26	AV	18	G	Sidechain
26	AV	19	G	Sidechain
26	AV	20	U	Sidechain
26	AV	21	A	Sidechain
26	AV	22	G	Sidechain
26	AV	23	C	Sidechain
26	AV	24	U	Sidechain
26	AV	27	U	Sidechain

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Mol	Chain	Res	Type	Group
26	AV	28	C	Sidechain
26	AV	29	G	Sidechain
26	AV	32	C	Sidechain
26	AV	35	A	Sidechain
26	AV	38	A	Sidechain
26	AV	39	C	Sidechain
26	AV	4	G	Sidechain
26	AV	40	C	Sidechain
26	AV	41	C	Sidechain
26	AV	42	G	Sidechain
26	AV	47	U	Sidechain
26	AV	48	C	Sidechain
26	AV	5	G	Sidechain
26	AV	51	C	Sidechain
26	AV	52	G	Sidechain
26	AV	53	G	Sidechain
26	AV	57	A	Sidechain
26	AV	59	A	Sidechain
26	AV	60	U	Sidechain
26	AV	61	C	Sidechain
26	AV	62	C	Sidechain
26	AV	64	G	Sidechain
26	AV	7	G	Sidechain
26	AV	70	G	Sidechain
26	AV	73	A	Sidechain
26	AV	9	G	Sidechain
23	AW	10	G	Sidechain
23	AW	11	C	Sidechain
23	AW	12	U	Sidechain
23	AW	13	C	Sidechain
23	AW	16	U	Sidechain
23	AW	17	C	Sidechain
23	AW	18	G	Sidechain
23	AW	19	G	Sidechain
23	AW	21	A	Sidechain
23	AW	22	G	Sidechain
23	AW	24	G	Sidechain
23	AW	25	C	Sidechain
23	AW	28	G	Sidechain
23	AW	30	G	Sidechain
23	AW	31	A	Sidechain
23	AW	32	U	Sidechain

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Mol	Chain	Res	Type	Group
23	AW	34	G	Sidechain
23	AW	35	A	Sidechain
23	AW	38	A	Sidechain
23	AW	4	C	Sidechain
23	AW	40	C	Sidechain
23	AW	44	G	Sidechain
23	AW	45	U	Sidechain
23	AW	47	U	Sidechain
23	AW	5	G	Sidechain
23	AW	50	U	Sidechain
23	AW	51	U	Sidechain
23	AW	53	G	Sidechain
23	AW	57	G	Sidechain
23	AW	58	A	Sidechain
23	AW	59	U	Sidechain
23	AW	6	G	Sidechain
23	AW	60	U	Sidechain
23	AW	64	A	Sidechain
23	AW	65	G	Sidechain
23	AW	69	G	Sidechain
23	AW	7	A	Sidechain
23	AW	73	A	Sidechain
23	AW	74	C	Sidechain
24	AX	13	A	Sidechain
24	AX	14	A	Sidechain
24	AX	18	G	Sidechain
22	AY	1	G	Sidechain
22	AY	10	G	Sidechain
22	AY	13	C	Sidechain
22	AY	18	G	Sidechain
22	AY	2	C	Sidechain
22	AY	20	G	Sidechain
22	AY	23	A	Sidechain
22	AY	24	G	Sidechain
22	AY	26	G	Sidechain
22	AY	27	C	Sidechain
22	AY	28	C	Sidechain
22	AY	30	G	Sidechain
22	AY	32	C	Sidechain
22	AY	33	U	Sidechain
22	AY	36	A	Sidechain
22	AY	37	G	Sidechain

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Mol	Chain	Res	Type	Group
22	AY	39	U	Sidechain
22	AY	4	G	Sidechain
22	AY	40	C	Sidechain
22	AY	42	G	Sidechain
22	AY	43	G	Sidechain
22	AY	44	A	Sidechain
22	AY	45	G	Sidechain
22	AY	46	G	Sidechain
22	AY	47	U	Sidechain
22	AY	50	U	Sidechain
22	AY	51	G	Sidechain
22	AY	53	G	Sidechain
22	AY	55	U	Sidechain
22	AY	59	U	Sidechain
22	AY	60	C	Sidechain
22	AY	61	C	Sidechain
22	AY	65	G	Sidechain
22	AY	66	A	Sidechain
22	AY	7	U	Sidechain
22	AY	71	G	Sidechain
22	AY	73	A	Sidechain
22	AY	74	C	Sidechain
22	AY	8	U	Sidechain
22	AY	9	A	Sidechain
25	AZ	123	ARG	Sidechain
25	AZ	133	PHE	Sidechain
25	AZ	160	TYR	Peptide
25	AZ	208	LYS	Peptide
25	AZ	354	ASP	Peptide
25	AZ	46	PHE	Sidechain
25	AZ	51	ASN	Peptide
25	AZ	76	TYR	Sidechain
47	B0	15	ARG	Sidechain
47	B0	37	HIS	Sidechain
47	B0	49	ARG	Sidechain
47	B0	9	ARG	Sidechain
48	B1	20	TYR	Sidechain
48	B1	38	PHE	Sidechain
49	B2	5	PHE	Sidechain
50	B3	41	ARG	Sidechain
50	B3	44	ARG	Sidechain
51	B4	36	ARG	Sidechain

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Mol	Chain	Res	Type	Group
27	B5	12	ARG	Sidechain
27	B5	124	VAL	Peptide
27	B5	18	THR	Peptide
27	B5	35	THR	Peptide
27	B5	53	ARG	Sidechain
27	B5	60	ARG	Sidechain
27	B5	78	PHE	Sidechain
58	BA	100	G	Sidechain
58	BA	101	A	Sidechain
58	BA	102	G	Sidechain
58	BA	105	G	Sidechain
58	BA	107	G	Sidechain
58	BA	108	A	Sidechain
58	BA	109	A	Sidechain
58	BA	112	G	Sidechain
58	BA	113	C	Sidechain
58	BA	115	A	Sidechain
58	BA	117	G	Sidechain
58	BA	118	C	Sidechain
58	BA	12	C	Sidechain
58	BA	13	G	Sidechain
58	BA	14	U	Sidechain
58	BA	16	G	Sidechain
58	BA	2	G	Sidechain
58	BA	22	U	Sidechain
58	BA	24	G	Sidechain
58	BA	25	U	Sidechain
58	BA	26	C	Sidechain
58	BA	27	C	Sidechain
58	BA	3	C	Sidechain
58	BA	31	C	Sidechain
58	BA	32	U	Sidechain
58	BA	33	G	Sidechain
58	BA	34	A	Sidechain
58	BA	36	C	Sidechain
58	BA	43	C	Sidechain
58	BA	44	G	Sidechain
58	BA	45	A	Sidechain
58	BA	48	U	Sidechain
58	BA	49	C	Sidechain
58	BA	5	U	Sidechain
58	BA	54	G	Sidechain

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Mol	Chain	Res	Type	Group
58	BA	55	U	Sidechain
58	BA	58	A	Sidechain
58	BA	60	C	Sidechain
58	BA	65	U	Sidechain
58	BA	66	A	Sidechain
58	BA	67	G	Sidechain
58	BA	68	C	Sidechain
58	BA	7	G	Sidechain
58	BA	73	A	Sidechain
58	BA	74	U	Sidechain
58	BA	78	A	Sidechain
58	BA	79	G	Sidechain
58	BA	8	C	Sidechain
58	BA	81	G	Sidechain
58	BA	82	U	Sidechain
58	BA	86	G	Sidechain
58	BA	87	U	Sidechain
58	BA	88	C	Sidechain
58	BA	93	C	Sidechain
58	BA	94	A	Sidechain
58	BA	98	G	Sidechain
57	BB	1	G	Sidechain
57	BB	100	U	Sidechain
57	BB	1000	A	Sidechain
57	BB	1002	G	Sidechain
57	BB	1003	G	Sidechain
57	BB	1005	C	Sidechain
57	BB	1007	C	Sidechain
57	BB	1008	A	Sidechain
57	BB	1009	A	Sidechain
57	BB	101	A	Sidechain
57	BB	1010	A	Sidechain
57	BB	1015	U	Sidechain
57	BB	1016	G	Sidechain
57	BB	1017	G	Sidechain
57	BB	1019	U	Sidechain
57	BB	102	U	Sidechain
57	BB	1024	G	Sidechain
57	BB	1025	G	Sidechain
57	BB	1027	A	Sidechain
57	BB	1028	A	Sidechain
57	BB	103	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1030	C	Sidechain
57	BB	1031	G	Sidechain
57	BB	1033	U	Sidechain
57	BB	1035	U	Sidechain
57	BB	1036	G	Sidechain
57	BB	1037	G	Sidechain
57	BB	104	A	Sidechain
57	BB	1050	A	Sidechain
57	BB	1054	A	Sidechain
57	BB	1055	G	Sidechain
57	BB	106	C	Sidechain
57	BB	1062	G	Sidechain
57	BB	1063	G	Sidechain
57	BB	1068	G	Sidechain
57	BB	107	G	Sidechain
57	BB	1070	A	Sidechain
57	BB	1074	G	Sidechain
57	BB	1078	U	Sidechain
57	BB	1079	C	Sidechain
57	BB	108	G	Sidechain
57	BB	1081	U	Sidechain
57	BB	1083	U	Sidechain
57	BB	1084	A	Sidechain
57	BB	1088	A	Sidechain
57	BB	1089	A	Sidechain
57	BB	109	C	Sidechain
57	BB	1091	G	Sidechain
57	BB	1092	C	Sidechain
57	BB	1094	U	Sidechain
57	BB	1095	A	Sidechain
57	BB	1098	A	Sidechain
57	BB	1099	G	Sidechain
57	BB	11	C	Sidechain
57	BB	110	G	Sidechain
57	BB	1102	C	Sidechain
57	BB	1103	A	Sidechain
57	BB	1104	C	Sidechain
57	BB	1106	G	Sidechain
57	BB	1108	U	Sidechain
57	BB	111	A	Sidechain
57	BB	1110	G	Sidechain
57	BB	1111	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1113	U	Sidechain
57	BB	1115	G	Sidechain
57	BB	1117	C	Sidechain
57	BB	1121	C	Sidechain
57	BB	1122	G	Sidechain
57	BB	1125	G	Sidechain
57	BB	1129	A	Sidechain
57	BB	1131	G	Sidechain
57	BB	1133	A	Sidechain
57	BB	1134	A	Sidechain
57	BB	1138	G	Sidechain
57	BB	1141	U	Sidechain
57	BB	1142	A	Sidechain
57	BB	1143	A	Sidechain
57	BB	1145	C	Sidechain
57	BB	1147	A	Sidechain
57	BB	1149	G	Sidechain
57	BB	1150	C	Sidechain
57	BB	1153	C	Sidechain
57	BB	1154	G	Sidechain
57	BB	1155	A	Sidechain
57	BB	1156	A	Sidechain
57	BB	1160	G	Sidechain
57	BB	1162	G	Sidechain
57	BB	1168	G	Sidechain
57	BB	1169	A	Sidechain
57	BB	117	G	Sidechain
57	BB	1174	U	Sidechain
57	BB	1175	A	Sidechain
57	BB	1176	U	Sidechain
57	BB	1178	C	Sidechain
57	BB	1179	G	Sidechain
57	BB	118	A	Sidechain
57	BB	1181	U	Sidechain
57	BB	1182	G	Sidechain
57	BB	1184	U	Sidechain
57	BB	1185	G	Sidechain
57	BB	1187	G	Sidechain
57	BB	1188	U	Sidechain
57	BB	1189	A	Sidechain
57	BB	119	A	Sidechain
57	BB	1190	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1192	G	Sidechain
57	BB	1195	G	Sidechain
57	BB	1199	U	Sidechain
57	BB	12	U	Sidechain
57	BB	120	U	Sidechain
57	BB	1200	C	Sidechain
57	BB	1202	G	Sidechain
57	BB	1203	U	Sidechain
57	BB	1204	A	Sidechain
57	BB	1206	G	Sidechain
57	BB	1208	C	Sidechain
57	BB	1209	U	Sidechain
57	BB	121	G	Sidechain
57	BB	1210	G	Sidechain
57	BB	1216	G	Sidechain
57	BB	1217	U	Sidechain
57	BB	1218	G	Sidechain
57	BB	122	G	Sidechain
57	BB	1223	G	Sidechain
57	BB	1224	U	Sidechain
57	BB	1226	A	Sidechain
57	BB	1228	G	Sidechain
57	BB	1231	U	Sidechain
57	BB	1234	U	Sidechain
57	BB	1238	G	Sidechain
57	BB	1241	A	Sidechain
57	BB	1248	G	Sidechain
57	BB	1250	G	Sidechain
57	BB	1252	G	Sidechain
57	BB	1253	A	Sidechain
57	BB	1255	U	Sidechain
57	BB	1258	U	Sidechain
57	BB	1266	G	Sidechain
57	BB	1267	U	Sidechain
57	BB	1268	A	Sidechain
57	BB	1269	A	Sidechain
57	BB	127	A	Sidechain
57	BB	1271	G	Sidechain
57	BB	1272	A	Sidechain
57	BB	1273	U	Sidechain
57	BB	1275	A	Sidechain
57	BB	1277	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	128	C	Sidechain
57	BB	1280	G	Sidechain
57	BB	1281	G	Sidechain
57	BB	1282	U	Sidechain
57	BB	1283	G	Sidechain
57	BB	1288	G	Sidechain
57	BB	1294	U	Sidechain
57	BB	1299	G	Sidechain
57	BB	1300	G	Sidechain
57	BB	1311	G	Sidechain
57	BB	1313	U	Sidechain
57	BB	1315	C	Sidechain
57	BB	1317	G	Sidechain
57	BB	1322	A	Sidechain
57	BB	1323	C	Sidechain
57	BB	1326	U	Sidechain
57	BB	1327	A	Sidechain
57	BB	1331	G	Sidechain
57	BB	1332	G	Sidechain
57	BB	1333	G	Sidechain
57	BB	1334	G	Sidechain
57	BB	1335	C	Sidechain
57	BB	1336	A	Sidechain
57	BB	1337	G	Sidechain
57	BB	1338	G	Sidechain
57	BB	1339	G	Sidechain
57	BB	1340	U	Sidechain
57	BB	1342	A	Sidechain
57	BB	1343	G	Sidechain
57	BB	1346	G	Sidechain
57	BB	1348	C	Sidechain
57	BB	1349	C	Sidechain
57	BB	135	U	Sidechain
57	BB	1351	C	Sidechain
57	BB	1356	G	Sidechain
57	BB	1359	A	Sidechain
57	BB	136	G	Sidechain
57	BB	1362	C	Sidechain
57	BB	1364	G	Sidechain
57	BB	1366	A	Sidechain
57	BB	1367	A	Sidechain
57	BB	1369	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1370	C	Sidechain
57	BB	1375	U	Sidechain
57	BB	1376	C	Sidechain
57	BB	1378	A	Sidechain
57	BB	1379	U	Sidechain
57	BB	1381	G	Sidechain
57	BB	1382	G	Sidechain
57	BB	1383	A	Sidechain
57	BB	1386	C	Sidechain
57	BB	1389	G	Sidechain
57	BB	1393	A	Sidechain
57	BB	1394	U	Sidechain
57	BB	1397	U	Sidechain
57	BB	140	C	Sidechain
57	BB	1401	G	Sidechain
57	BB	1403	A	Sidechain
57	BB	1406	U	Sidechain
57	BB	141	G	Sidechain
57	BB	1410	G	Sidechain
57	BB	1412	U	Sidechain
57	BB	1417	C	Sidechain
57	BB	1420	A	Sidechain
57	BB	1421	G	Sidechain
57	BB	1424	G	Sidechain
57	BB	1426	G	Sidechain
57	BB	1427	A	Sidechain
57	BB	1429	G	Sidechain
57	BB	1431	A	Sidechain
57	BB	1432	G	Sidechain
57	BB	1434	A	Sidechain
57	BB	1435	G	Sidechain
57	BB	1436	G	Sidechain
57	BB	1437	C	Sidechain
57	BB	1439	A	Sidechain
57	BB	1441	G	Sidechain
57	BB	1442	U	Sidechain
57	BB	1444	G	Sidechain
57	BB	1446	C	Sidechain
57	BB	145	C	Sidechain
57	BB	1451	C	Sidechain
57	BB	1452	G	Sidechain
57	BB	1453	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1454	C	Sidechain
57	BB	1455	G	Sidechain
57	BB	1456	G	Sidechain
57	BB	1458	U	Sidechain
57	BB	146	A	Sidechain
57	BB	1460	U	Sidechain
57	BB	1461	C	Sidechain
57	BB	1465	G	Sidechain
57	BB	1469	A	Sidechain
57	BB	1470	A	Sidechain
57	BB	1471	G	Sidechain
57	BB	1473	G	Sidechain
57	BB	1474	U	Sidechain
57	BB	1475	G	Sidechain
57	BB	148	U	Sidechain
57	BB	1481	U	Sidechain
57	BB	1482	G	Sidechain
57	BB	1485	U	Sidechain
57	BB	1487	U	Sidechain
57	BB	1490	A	Sidechain
57	BB	1493	C	Sidechain
57	BB	1494	A	Sidechain
57	BB	1495	A	Sidechain
57	BB	1496	A	Sidechain
57	BB	15	G	Sidechain
57	BB	150	U	Sidechain
57	BB	1505	A	Sidechain
57	BB	1506	U	Sidechain
57	BB	1508	A	Sidechain
57	BB	151	C	Sidechain
57	BB	1510	G	Sidechain
57	BB	1512	C	Sidechain
57	BB	1514	G	Sidechain
57	BB	1517	G	Sidechain
57	BB	1520	U	Sidechain
57	BB	1521	G	Sidechain
57	BB	1522	A	Sidechain
57	BB	1524	G	Sidechain
57	BB	1527	G	Sidechain
57	BB	1535	A	Sidechain
57	BB	1536	C	Sidechain
57	BB	1539	U	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	154	U	Sidechain
57	BB	1542	U	Sidechain
57	BB	1545	A	Sidechain
57	BB	1546	G	Sidechain
57	BB	1549	A	Sidechain
57	BB	1551	A	Sidechain
57	BB	1552	A	Sidechain
57	BB	1557	C	Sidechain
57	BB	1560	G	Sidechain
57	BB	1563	U	Sidechain
57	BB	1567	G	Sidechain
57	BB	1568	G	Sidechain
57	BB	157	C	Sidechain
57	BB	1571	A	Sidechain
57	BB	1573	G	Sidechain
57	BB	1574	C	Sidechain
57	BB	1576	U	Sidechain
57	BB	1578	U	Sidechain
57	BB	1582	C	Sidechain
57	BB	1583	A	Sidechain
57	BB	1584	U	Sidechain
57	BB	1586	A	Sidechain
57	BB	1587	G	Sidechain
57	BB	1588	G	Sidechain
57	BB	1589	U	Sidechain
57	BB	159	G	Sidechain
57	BB	1593	A	Sidechain
57	BB	1598	A	Sidechain
57	BB	1599	U	Sidechain
57	BB	160	A	Sidechain
57	BB	1601	G	Sidechain
57	BB	1606	C	Sidechain
57	BB	1609	A	Sidechain
57	BB	161	A	Sidechain
57	BB	1611	C	Sidechain
57	BB	1613	G	Sidechain
57	BB	1619	G	Sidechain
57	BB	162	U	Sidechain
57	BB	1622	G	Sidechain
57	BB	1623	G	Sidechain
57	BB	1625	C	Sidechain
57	BB	1627	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1628	G	Sidechain
57	BB	1629	U	Sidechain
57	BB	163	C	Sidechain
57	BB	1630	A	Sidechain
57	BB	1631	G	Sidechain
57	BB	1632	A	Sidechain
57	BB	1637	A	Sidechain
57	BB	1641	A	Sidechain
57	BB	1642	G	Sidechain
57	BB	1643	G	Sidechain
57	BB	1645	G	Sidechain
57	BB	165	A	Sidechain
57	BB	1652	A	Sidechain
57	BB	1653	G	Sidechain
57	BB	1654	A	Sidechain
57	BB	1656	C	Sidechain
57	BB	1657	U	Sidechain
57	BB	1658	C	Sidechain
57	BB	1660	G	Sidechain
57	BB	1665	A	Sidechain
57	BB	1666	G	Sidechain
57	BB	1668	A	Sidechain
57	BB	1670	C	Sidechain
57	BB	1672	A	Sidechain
57	BB	1678	A	Sidechain
57	BB	1679	A	Sidechain
57	BB	1680	U	Sidechain
57	BB	1681	G	Sidechain
57	BB	1683	U	Sidechain
57	BB	1684	G	Sidechain
57	BB	1689	A	Sidechain
57	BB	169	G	Sidechain
57	BB	1692	U	Sidechain
57	BB	1693	U	Sidechain
57	BB	1694	C	Sidechain
57	BB	1697	G	Sidechain
57	BB	1698	A	Sidechain
57	BB	170	U	Sidechain
57	BB	1700	A	Sidechain
57	BB	1705	A	Sidechain
57	BB	1706	C	Sidechain
57	BB	1707	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1709	U	Sidechain
57	BB	1710	G	Sidechain
57	BB	1713	A	Sidechain
57	BB	1714	U	Sidechain
57	BB	1717	A	Sidechain
57	BB	172	A	Sidechain
57	BB	1720	U	Sidechain
57	BB	1721	G	Sidechain
57	BB	1722	A	Sidechain
57	BB	1733	G	Sidechain
57	BB	1737	G	Sidechain
57	BB	1738	G	Sidechain
57	BB	1739	A	Sidechain
57	BB	1740	G	Sidechain
57	BB	1743	G	Sidechain
57	BB	1744	A	Sidechain
57	BB	1747	U	Sidechain
57	BB	1750	G	Sidechain
57	BB	1754	A	Sidechain
57	BB	1756	G	Sidechain
57	BB	1759	A	Sidechain
57	BB	176	A	Sidechain
57	BB	1762	A	Sidechain
57	BB	1763	G	Sidechain
57	BB	1769	U	Sidechain
57	BB	177	G	Sidechain
57	BB	1772	A	Sidechain
57	BB	1773	A	Sidechain
57	BB	1775	U	Sidechain
57	BB	1776	G	Sidechain
57	BB	1777	U	Sidechain
57	BB	1778	U	Sidechain
57	BB	1779	U	Sidechain
57	BB	178	G	Sidechain
57	BB	1784	A	Sidechain
57	BB	1785	A	Sidechain
57	BB	1786	A	Sidechain
57	BB	179	C	Sidechain
57	BB	1791	A	Sidechain
57	BB	1792	G	Sidechain
57	BB	1793	C	Sidechain
57	BB	1795	C	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1797	G	Sidechain
57	BB	1799	G	Sidechain
57	BB	18	U	Sidechain
57	BB	1800	C	Sidechain
57	BB	1803	A	Sidechain
57	BB	1804	C	Sidechain
57	BB	1805	A	Sidechain
57	BB	1807	G	Sidechain
57	BB	1809	A	Sidechain
57	BB	1810	A	Sidechain
57	BB	1811	G	Sidechain
57	BB	1814	G	Sidechain
57	BB	1817	G	Sidechain
57	BB	1818	U	Sidechain
57	BB	1820	U	Sidechain
57	BB	1822	C	Sidechain
57	BB	1823	G	Sidechain
57	BB	1831	G	Sidechain
57	BB	1832	C	Sidechain
57	BB	1834	U	Sidechain
57	BB	1836	C	Sidechain
57	BB	1839	G	Sidechain
57	BB	1840	G	Sidechain
57	BB	1841	U	Sidechain
57	BB	1844	C	Sidechain
57	BB	1846	G	Sidechain
57	BB	1848	A	Sidechain
57	BB	1849	G	Sidechain
57	BB	185	G	Sidechain
57	BB	1850	G	Sidechain
57	BB	1852	U	Sidechain
57	BB	1853	A	Sidechain
57	BB	1854	A	Sidechain
57	BB	1857	G	Sidechain
57	BB	1858	A	Sidechain
57	BB	1859	U	Sidechain
57	BB	1861	G	Sidechain
57	BB	1863	G	Sidechain
57	BB	1866	A	Sidechain
57	BB	1873	G	Sidechain
57	BB	1877	A	Sidechain
57	BB	1878	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1879	C	Sidechain
57	BB	188	G	Sidechain
57	BB	1880	U	Sidechain
57	BB	1883	U	Sidechain
57	BB	1884	G	Sidechain
57	BB	1885	A	Sidechain
57	BB	1888	G	Sidechain
57	BB	189	G	Sidechain
57	BB	1890	A	Sidechain
57	BB	1891	G	Sidechain
57	BB	1894	C	Sidechain
57	BB	1898	U	Sidechain
57	BB	190	A	Sidechain
57	BB	1904	G	Sidechain
57	BB	1907	G	Sidechain
57	BB	1908	C	Sidechain
57	BB	191	A	Sidechain
57	BB	1910	G	Sidechain
57	BB	1911	U	Sidechain
57	BB	1912	A	Sidechain
57	BB	1914	C	Sidechain
57	BB	1918	A	Sidechain
57	BB	1919	A	Sidechain
57	BB	192	C	Sidechain
57	BB	1920	C	Sidechain
57	BB	1922	G	Sidechain
57	BB	1923	U	Sidechain
57	BB	1925	C	Sidechain
57	BB	1926	U	Sidechain
57	BB	1927	A	Sidechain
57	BB	1929	G	Sidechain
57	BB	193	U	Sidechain
57	BB	1930	G	Sidechain
57	BB	1933	G	Sidechain
57	BB	1938	A	Sidechain
57	BB	194	G	Sidechain
57	BB	1943	U	Sidechain
57	BB	1944	U	Sidechain
57	BB	1945	G	Sidechain
57	BB	1946	U	Sidechain
57	BB	1949	G	Sidechain
57	BB	195	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	1950	G	Sidechain
57	BB	1952	A	Sidechain
57	BB	1953	A	Sidechain
57	BB	1954	G	Sidechain
57	BB	1955	U	Sidechain
57	BB	1956	U	Sidechain
57	BB	1957	C	Sidechain
57	BB	196	A	Sidechain
57	BB	1960	A	Sidechain
57	BB	1966	A	Sidechain
57	BB	1969	A	Sidechain
57	BB	1970	A	Sidechain
57	BB	1971	U	Sidechain
57	BB	1972	G	Sidechain
57	BB	1974	C	Sidechain
57	BB	1976	U	Sidechain
57	BB	1978	A	Sidechain
57	BB	198	C	Sidechain
57	BB	1980	G	Sidechain
57	BB	1983	G	Sidechain
57	BB	1984	G	Sidechain
57	BB	1987	A	Sidechain
57	BB	1988	G	Sidechain
57	BB	1989	G	Sidechain
57	BB	1991	U	Sidechain
57	BB	1992	G	Sidechain
57	BB	1993	U	Sidechain
57	BB	1995	U	Sidechain
57	BB	1998	A	Sidechain
57	BB	2	G	Sidechain
57	BB	200	U	Sidechain
57	BB	2000	C	Sidechain
57	BB	2002	G	Sidechain
57	BB	2004	G	Sidechain
57	BB	2006	C	Sidechain
57	BB	2007	U	Sidechain
57	BB	2010	G	Sidechain
57	BB	2013	A	Sidechain
57	BB	2018	G	Sidechain
57	BB	202	U	Sidechain
57	BB	2020	A	Sidechain
57	BB	2024	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2026	U	Sidechain
57	BB	2028	U	Sidechain
57	BB	2029	G	Sidechain
57	BB	203	A	Sidechain
57	BB	2030	A	Sidechain
57	BB	2032	G	Sidechain
57	BB	2033	A	Sidechain
57	BB	2034	U	Sidechain
57	BB	2035	G	Sidechain
57	BB	2038	G	Sidechain
57	BB	2039	U	Sidechain
57	BB	2042	A	Sidechain
57	BB	2043	C	Sidechain
57	BB	2048	G	Sidechain
57	BB	205	G	Sidechain
57	BB	2053	G	Sidechain
57	BB	2057	G	Sidechain
57	BB	2058	A	Sidechain
57	BB	206	U	Sidechain
57	BB	2061	G	Sidechain
57	BB	2068	U	Sidechain
57	BB	2069	G	Sidechain
57	BB	207	A	Sidechain
57	BB	2070	A	Sidechain
57	BB	2072	C	Sidechain
57	BB	2073	C	Sidechain
57	BB	2074	U	Sidechain
57	BB	2075	U	Sidechain
57	BB	2076	U	Sidechain
57	BB	2077	A	Sidechain
57	BB	2079	U	Sidechain
57	BB	208	C	Sidechain
57	BB	2080	A	Sidechain
57	BB	2090	A	Sidechain
57	BB	2092	U	Sidechain
57	BB	2094	A	Sidechain
57	BB	2097	A	Sidechain
57	BB	21	A	Sidechain
57	BB	2101	A	Sidechain
57	BB	2102	G	Sidechain
57	BB	2103	C	Sidechain
57	BB	2105	U	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2106	U	Sidechain
57	BB	2107	G	Sidechain
57	BB	211	C	Sidechain
57	BB	2112	G	Sidechain
57	BB	2113	U	Sidechain
57	BB	2115	G	Sidechain
57	BB	2116	G	Sidechain
57	BB	2119	A	Sidechain
57	BB	2127	G	Sidechain
57	BB	2130	U	Sidechain
57	BB	2132	U	Sidechain
57	BB	2134	A	Sidechain
57	BB	2138	G	Sidechain
57	BB	214	G	Sidechain
57	BB	2141	G	Sidechain
57	BB	2145	C	Sidechain
57	BB	2146	C	Sidechain
57	BB	2148	G	Sidechain
57	BB	2149	U	Sidechain
57	BB	215	G	Sidechain
57	BB	2152	G	Sidechain
57	BB	2154	A	Sidechain
57	BB	2158	A	Sidechain
57	BB	2159	G	Sidechain
57	BB	2161	C	Sidechain
57	BB	2162	G	Sidechain
57	BB	2163	A	Sidechain
57	BB	2164	C	Sidechain
57	BB	2166	U	Sidechain
57	BB	2167	U	Sidechain
57	BB	2168	G	Sidechain
57	BB	2170	A	Sidechain
57	BB	2171	A	Sidechain
57	BB	2173	A	Sidechain
57	BB	2177	C	Sidechain
57	BB	2178	C	Sidechain
57	BB	2179	C	Sidechain
57	BB	2180	U	Sidechain
57	BB	2184	A	Sidechain
57	BB	2186	G	Sidechain
57	BB	2187	U	Sidechain
57	BB	2188	U	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2189	U	Sidechain
57	BB	219	A	Sidechain
57	BB	2190	G	Sidechain
57	BB	2191	A	Sidechain
57	BB	2195	U	Sidechain
57	BB	2196	C	Sidechain
57	BB	2197	U	Sidechain
57	BB	2198	A	Sidechain
57	BB	2199	A	Sidechain
57	BB	22	C	Sidechain
57	BB	2200	C	Sidechain
57	BB	2202	U	Sidechain
57	BB	2207	C	Sidechain
57	BB	2209	G	Sidechain
57	BB	2210	U	Sidechain
57	BB	2211	A	Sidechain
57	BB	2212	A	Sidechain
57	BB	2213	U	Sidechain
57	BB	2215	C	Sidechain
57	BB	2216	G	Sidechain
57	BB	2217	G	Sidechain
57	BB	2220	U	Sidechain
57	BB	2221	G	Sidechain
57	BB	2222	C	Sidechain
57	BB	2224	G	Sidechain
57	BB	2225	A	Sidechain
57	BB	2226	C	Sidechain
57	BB	2228	G	Sidechain
57	BB	2229	U	Sidechain
57	BB	2230	G	Sidechain
57	BB	2231	U	Sidechain
57	BB	2233	U	Sidechain
57	BB	2234	G	Sidechain
57	BB	2238	G	Sidechain
57	BB	224	U	Sidechain
57	BB	2240	U	Sidechain
57	BB	2242	G	Sidechain
57	BB	2244	U	Sidechain
57	BB	2245	U	Sidechain
57	BB	2246	G	Sidechain
57	BB	2248	C	Sidechain
57	BB	225	C	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2250	G	Sidechain
57	BB	2251	G	Sidechain
57	BB	2252	G	Sidechain
57	BB	2253	G	Sidechain
57	BB	2254	C	Sidechain
57	BB	2256	G	Sidechain
57	BB	2257	U	Sidechain
57	BB	2258	C	Sidechain
57	BB	2261	C	Sidechain
57	BB	2266	A	Sidechain
57	BB	2267	A	Sidechain
57	BB	2269	G	Sidechain
57	BB	227	A	Sidechain
57	BB	2270	A	Sidechain
57	BB	2272	U	Sidechain
57	BB	2274	A	Sidechain
57	BB	2275	C	Sidechain
57	BB	2277	G	Sidechain
57	BB	2278	A	Sidechain
57	BB	228	C	Sidechain
57	BB	2280	G	Sidechain
57	BB	2283	C	Sidechain
57	BB	2285	C	Sidechain
57	BB	2286	G	Sidechain
57	BB	2287	A	Sidechain
57	BB	2289	G	Sidechain
57	BB	2291	U	Sidechain
57	BB	2292	U	Sidechain
57	BB	2295	C	Sidechain
57	BB	2296	U	Sidechain
57	BB	2297	A	Sidechain
57	BB	2298	A	Sidechain
57	BB	2299	U	Sidechain
57	BB	23	G	Sidechain
57	BB	2300	C	Sidechain
57	BB	2303	G	Sidechain
57	BB	2304	G	Sidechain
57	BB	2308	G	Sidechain
57	BB	231	A	Sidechain
57	BB	2310	C	Sidechain
57	BB	2311	A	Sidechain
57	BB	2312	U	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2315	G	Sidechain
57	BB	2317	A	Sidechain
57	BB	2319	G	Sidechain
57	BB	2320	U	Sidechain
57	BB	2321	U	Sidechain
57	BB	2324	U	Sidechain
57	BB	2327	A	Sidechain
57	BB	233	A	Sidechain
57	BB	2333	A	Sidechain
57	BB	2337	G	Sidechain
57	BB	2339	C	Sidechain
57	BB	234	U	Sidechain
57	BB	2345	G	Sidechain
57	BB	2348	U	Sidechain
57	BB	235	U	Sidechain
57	BB	2352	A	Sidechain
57	BB	2353	G	Sidechain
57	BB	2356	U	Sidechain
57	BB	2357	G	Sidechain
57	BB	2359	C	Sidechain
57	BB	2361	G	Sidechain
57	BB	2365	G	Sidechain
57	BB	2366	A	Sidechain
57	BB	2367	G	Sidechain
57	BB	2372	U	Sidechain
57	BB	2375	G	Sidechain
57	BB	2380	C	Sidechain
57	BB	2381	A	Sidechain
57	BB	2382	G	Sidechain
57	BB	2383	G	Sidechain
57	BB	2387	U	Sidechain
57	BB	2394	C	Sidechain
57	BB	2395	C	Sidechain
57	BB	24	G	Sidechain
57	BB	2400	G	Sidechain
57	BB	2401	U	Sidechain
57	BB	2406	A	Sidechain
57	BB	2407	A	Sidechain
57	BB	2409	G	Sidechain
57	BB	2410	G	Sidechain
57	BB	2411	A	Sidechain
57	BB	2412	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2413	G	Sidechain
57	BB	2414	G	Sidechain
57	BB	2417	C	Sidechain
57	BB	242	G	Sidechain
57	BB	2422	C	Sidechain
57	BB	2423	U	Sidechain
57	BB	2428	G	Sidechain
57	BB	2429	G	Sidechain
57	BB	2431	U	Sidechain
57	BB	2434	A	Sidechain
57	BB	2435	A	Sidechain
57	BB	2437	G	Sidechain
57	BB	2440	C	Sidechain
57	BB	2442	C	Sidechain
57	BB	2444	G	Sidechain
57	BB	245	G	Sidechain
57	BB	2451	A	Sidechain
57	BB	2452	C	Sidechain
57	BB	2454	G	Sidechain
57	BB	2458	G	Sidechain
57	BB	246	C	Sidechain
57	BB	2461	A	Sidechain
57	BB	2464	G	Sidechain
57	BB	2466	C	Sidechain
57	BB	2467	C	Sidechain
57	BB	2468	A	Sidechain
57	BB	247	G	Sidechain
57	BB	2470	G	Sidechain
57	BB	2471	A	Sidechain
57	BB	2472	G	Sidechain
57	BB	2473	U	Sidechain
57	BB	2478	A	Sidechain
57	BB	248	G	Sidechain
57	BB	2481	G	Sidechain
57	BB	2482	A	Sidechain
57	BB	2483	C	Sidechain
57	BB	2484	G	Sidechain
57	BB	2486	C	Sidechain
57	BB	2487	G	Sidechain
57	BB	2488	G	Sidechain
57	BB	2489	U	Sidechain
57	BB	249	C	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2490	G	Sidechain
57	BB	2491	U	Sidechain
57	BB	2498	C	Sidechain
57	BB	25	U	Sidechain
57	BB	250	G	Sidechain
57	BB	2500	U	Sidechain
57	BB	2501	C	Sidechain
57	BB	2502	G	Sidechain
57	BB	2504	U	Sidechain
57	BB	2505	G	Sidechain
57	BB	2506	U	Sidechain
57	BB	251	A	Sidechain
57	BB	2513	A	Sidechain
57	BB	2514	U	Sidechain
57	BB	2516	A	Sidechain
57	BB	2519	U	Sidechain
57	BB	2520	C	Sidechain
57	BB	2521	C	Sidechain
57	BB	2522	U	Sidechain
57	BB	2523	G	Sidechain
57	BB	2524	G	Sidechain
57	BB	2526	G	Sidechain
57	BB	2527	C	Sidechain
57	BB	2528	U	Sidechain
57	BB	2529	G	Sidechain
57	BB	2530	A	Sidechain
57	BB	2531	A	Sidechain
57	BB	2532	G	Sidechain
57	BB	2534	A	Sidechain
57	BB	2535	G	Sidechain
57	BB	2540	C	Sidechain
57	BB	2541	A	Sidechain
57	BB	2543	G	Sidechain
57	BB	2549	G	Sidechain
57	BB	2550	G	Sidechain
57	BB	2555	U	Sidechain
57	BB	2556	C	Sidechain
57	BB	2557	G	Sidechain
57	BB	2558	C	Sidechain
57	BB	2559	C	Sidechain
57	BB	2560	A	Sidechain
57	BB	2564	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2565	A	Sidechain
57	BB	2567	G	Sidechain
57	BB	2569	G	Sidechain
57	BB	2575	C	Sidechain
57	BB	2576	G	Sidechain
57	BB	2577	A	Sidechain
57	BB	2583	G	Sidechain
57	BB	2584	U	Sidechain
57	BB	2585	U	Sidechain
57	BB	2587	A	Sidechain
57	BB	2593	U	Sidechain
57	BB	2596	U	Sidechain
57	BB	2597	G	Sidechain
57	BB	2598	A	Sidechain
57	BB	2599	G	Sidechain
57	BB	26	G	Sidechain
57	BB	2602	A	Sidechain
57	BB	2605	U	Sidechain
57	BB	2610	C	Sidechain
57	BB	2611	C	Sidechain
57	BB	2612	C	Sidechain
57	BB	2618	G	Sidechain
57	BB	262	A	Sidechain
57	BB	2621	G	Sidechain
57	BB	2623	G	Sidechain
57	BB	2626	C	Sidechain
57	BB	2627	G	Sidechain
57	BB	2629	U	Sidechain
57	BB	2632	A	Sidechain
57	BB	2635	A	Sidechain
57	BB	2637	U	Sidechain
57	BB	2638	G	Sidechain
57	BB	264	C	Sidechain
57	BB	2640	G	Sidechain
57	BB	2641	G	Sidechain
57	BB	2644	G	Sidechain
57	BB	265	A	Sidechain
57	BB	2650	U	Sidechain
57	BB	2651	C	Sidechain
57	BB	2652	C	Sidechain
57	BB	2653	U	Sidechain
57	BB	2655	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2660	A	Sidechain
57	BB	2661	G	Sidechain
57	BB	2667	C	Sidechain
57	BB	2669	G	Sidechain
57	BB	2671	G	Sidechain
57	BB	2672	U	Sidechain
57	BB	2673	G	Sidechain
57	BB	2674	G	Sidechain
57	BB	268	C	Sidechain
57	BB	2684	U	Sidechain
57	BB	2685	G	Sidechain
57	BB	2687	U	Sidechain
57	BB	2688	G	Sidechain
57	BB	2689	U	Sidechain
57	BB	269	C	Sidechain
57	BB	2690	U	Sidechain
57	BB	2692	G	Sidechain
57	BB	2695	U	Sidechain
57	BB	27	G	Sidechain
57	BB	270	A	Sidechain
57	BB	2701	U	Sidechain
57	BB	2702	G	Sidechain
57	BB	2704	C	Sidechain
57	BB	2707	U	Sidechain
57	BB	2709	G	Sidechain
57	BB	2713	U	Sidechain
57	BB	2714	G	Sidechain
57	BB	2715	C	Sidechain
57	BB	2717	C	Sidechain
57	BB	2718	G	Sidechain
57	BB	2719	G	Sidechain
57	BB	272	A	Sidechain
57	BB	2721	A	Sidechain
57	BB	2726	A	Sidechain
57	BB	2729	G	Sidechain
57	BB	2730	C	Sidechain
57	BB	2732	G	Sidechain
57	BB	2734	A	Sidechain
57	BB	2735	G	Sidechain
57	BB	2736	A	Sidechain
57	BB	2739	U	Sidechain
57	BB	2741	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2747	G	Sidechain
57	BB	2748	A	Sidechain
57	BB	275	C	Sidechain
57	BB	2752	C	Sidechain
57	BB	2753	A	Sidechain
57	BB	2754	U	Sidechain
57	BB	2756	U	Sidechain
57	BB	2757	A	Sidechain
57	BB	2758	A	Sidechain
57	BB	2759	G	Sidechain
57	BB	2766	A	Sidechain
57	BB	2767	C	Sidechain
57	BB	2768	U	Sidechain
57	BB	2770	G	Sidechain
57	BB	2771	C	Sidechain
57	BB	2778	A	Sidechain
57	BB	2780	G	Sidechain
57	BB	2781	A	Sidechain
57	BB	2782	G	Sidechain
57	BB	2788	C	Sidechain
57	BB	279	A	Sidechain
57	BB	2790	U	Sidechain
57	BB	2795	C	Sidechain
57	BB	2797	U	Sidechain
57	BB	2798	U	Sidechain
57	BB	28	A	Sidechain
57	BB	2800	A	Sidechain
57	BB	2811	G	Sidechain
57	BB	2812	G	Sidechain
57	BB	2813	A	Sidechain
57	BB	2816	G	Sidechain
57	BB	2818	U	Sidechain
57	BB	2819	G	Sidechain
57	BB	2820	A	Sidechain
57	BB	2821	A	Sidechain
57	BB	2829	A	Sidechain
57	BB	283	G	Sidechain
57	BB	2830	C	Sidechain
57	BB	2831	G	Sidechain
57	BB	2834	G	Sidechain
57	BB	2835	A	Sidechain
57	BB	2836	U	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	2839	G	Sidechain
57	BB	2840	C	Sidechain
57	BB	2842	G	Sidechain
57	BB	2843	G	Sidechain
57	BB	2845	U	Sidechain
57	BB	2848	G	Sidechain
57	BB	2849	U	Sidechain
57	BB	2851	A	Sidechain
57	BB	2852	G	Sidechain
57	BB	2857	G	Sidechain
57	BB	2858	C	Sidechain
57	BB	2859	G	Sidechain
57	BB	2860	A	Sidechain
57	BB	2864	G	Sidechain
57	BB	2866	U	Sidechain
57	BB	287	G	Sidechain
57	BB	2873	A	Sidechain
57	BB	2876	G	Sidechain
57	BB	2877	G	Sidechain
57	BB	2878	U	Sidechain
57	BB	288	U	Sidechain
57	BB	2884	U	Sidechain
57	BB	2885	G	Sidechain
57	BB	2886	A	Sidechain
57	BB	2888	C	Sidechain
57	BB	2889	C	Sidechain
57	BB	289	G	Sidechain
57	BB	2890	G	Sidechain
57	BB	2891	U	Sidechain
57	BB	2893	A	Sidechain
57	BB	2894	G	Sidechain
57	BB	2900	A	Sidechain
57	BB	2901	C	Sidechain
57	BB	2903	U	Sidechain
57	BB	291	G	Sidechain
57	BB	292	U	Sidechain
57	BB	298	G	Sidechain
57	BB	30	G	Sidechain
57	BB	307	G	Sidechain
57	BB	308	G	Sidechain
57	BB	316	C	Sidechain
57	BB	320	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	321	U	Sidechain
57	BB	322	A	Sidechain
57	BB	324	A	Sidechain
57	BB	325	G	Sidechain
57	BB	328	U	Sidechain
57	BB	329	G	Sidechain
57	BB	330	A	Sidechain
57	BB	331	C	Sidechain
57	BB	333	G	Sidechain
57	BB	334	C	Sidechain
57	BB	335	C	Sidechain
57	BB	336	C	Sidechain
57	BB	337	C	Sidechain
57	BB	339	U	Sidechain
57	BB	342	A	Sidechain
57	BB	343	C	Sidechain
57	BB	345	A	Sidechain
57	BB	347	A	Sidechain
57	BB	350	G	Sidechain
57	BB	352	A	Sidechain
57	BB	353	C	Sidechain
57	BB	356	G	Sidechain
57	BB	359	G	Sidechain
57	BB	360	U	Sidechain
57	BB	361	G	Sidechain
57	BB	362	A	Sidechain
57	BB	363	G	Sidechain
57	BB	365	U	Sidechain
57	BB	366	C	Sidechain
57	BB	367	G	Sidechain
57	BB	369	U	Sidechain
57	BB	370	G	Sidechain
57	BB	372	G	Sidechain
57	BB	375	G	Sidechain
57	BB	376	G	Sidechain
57	BB	377	G	Sidechain
57	BB	380	G	Sidechain
57	BB	381	G	Sidechain
57	BB	384	A	Sidechain
57	BB	385	C	Sidechain
57	BB	386	G	Sidechain
57	BB	388	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	39	G	Sidechain
57	BB	390	U	Sidechain
57	BB	394	C	Sidechain
57	BB	395	U	Sidechain
57	BB	397	U	Sidechain
57	BB	400	G	Sidechain
57	BB	402	A	Sidechain
57	BB	405	U	Sidechain
57	BB	406	G	Sidechain
57	BB	407	G	Sidechain
57	BB	419	U	Sidechain
57	BB	421	C	Sidechain
57	BB	422	A	Sidechain
57	BB	423	A	Sidechain
57	BB	424	G	Sidechain
57	BB	428	A	Sidechain
57	BB	429	A	Sidechain
57	BB	43	G	Sidechain
57	BB	431	U	Sidechain
57	BB	435	C	Sidechain
57	BB	436	C	Sidechain
57	BB	437	U	Sidechain
57	BB	438	G	Sidechain
57	BB	443	A	Sidechain
57	BB	446	G	Sidechain
57	BB	449	A	Sidechain
57	BB	453	A	Sidechain
57	BB	454	A	Sidechain
57	BB	457	A	Sidechain
57	BB	458	G	Sidechain
57	BB	460	A	Sidechain
57	BB	464	U	Sidechain
57	BB	465	G	Sidechain
57	BB	466	A	Sidechain
57	BB	467	G	Sidechain
57	BB	469	G	Sidechain
57	BB	47	C	Sidechain
57	BB	470	A	Sidechain
57	BB	472	A	Sidechain
57	BB	475	C	Sidechain
57	BB	476	G	Sidechain
57	BB	477	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	478	A	Sidechain
57	BB	479	A	Sidechain
57	BB	480	A	Sidechain
57	BB	481	G	Sidechain
57	BB	489	G	Sidechain
57	BB	490	C	Sidechain
57	BB	491	G	Sidechain
57	BB	492	A	Sidechain
57	BB	493	G	Sidechain
57	BB	494	G	Sidechain
57	BB	496	G	Sidechain
57	BB	498	G	Sidechain
57	BB	499	U	Sidechain
57	BB	50	U	Sidechain
57	BB	503	A	Sidechain
57	BB	504	A	Sidechain
57	BB	506	G	Sidechain
57	BB	51	G	Sidechain
57	BB	512	G	Sidechain
57	BB	514	A	Sidechain
57	BB	52	A	Sidechain
57	BB	526	A	Sidechain
57	BB	527	C	Sidechain
57	BB	529	A	Sidechain
57	BB	53	A	Sidechain
57	BB	530	G	Sidechain
57	BB	532	A	Sidechain
57	BB	537	G	Sidechain
57	BB	538	A	Sidechain
57	BB	54	G	Sidechain
57	BB	542	C	Sidechain
57	BB	543	G	Sidechain
57	BB	545	U	Sidechain
57	BB	547	A	Sidechain
57	BB	548	G	Sidechain
57	BB	549	G	Sidechain
57	BB	55	G	Sidechain
57	BB	552	U	Sidechain
57	BB	555	G	Sidechain
57	BB	556	A	Sidechain
57	BB	56	A	Sidechain
57	BB	561	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	563	A	Sidechain
57	BB	566	U	Sidechain
57	BB	570	G	Sidechain
57	BB	571	U	Sidechain
57	BB	574	A	Sidechain
57	BB	575	A	Sidechain
57	BB	577	G	Sidechain
57	BB	578	G	Sidechain
57	BB	579	G	Sidechain
57	BB	581	C	Sidechain
57	BB	585	G	Sidechain
57	BB	588	U	Sidechain
57	BB	59	U	Sidechain
57	BB	593	U	Sidechain
57	BB	595	C	Sidechain
57	BB	597	G	Sidechain
57	BB	598	U	Sidechain
57	BB	604	G	Sidechain
57	BB	606	U	Sidechain
57	BB	608	A	Sidechain
57	BB	612	G	Sidechain
57	BB	613	A	Sidechain
57	BB	615	U	Sidechain
57	BB	617	G	Sidechain
57	BB	618	G	Sidechain
57	BB	619	G	Sidechain
57	BB	628	G	Sidechain
57	BB	629	G	Sidechain
57	BB	630	G	Sidechain
57	BB	631	A	Sidechain
57	BB	632	A	Sidechain
57	BB	633	A	Sidechain
57	BB	636	G	Sidechain
57	BB	637	A	Sidechain
57	BB	638	G	Sidechain
57	BB	64	A	Sidechain
57	BB	641	U	Sidechain
57	BB	644	A	Sidechain
57	BB	645	C	Sidechain
57	BB	647	G	Sidechain
57	BB	648	G	Sidechain
57	BB	656	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	659	G	Sidechain
57	BB	660	C	Sidechain
57	BB	663	G	Sidechain
57	BB	666	A	Sidechain
57	BB	667	U	Sidechain
57	BB	669	G	Sidechain
57	BB	671	C	Sidechain
57	BB	673	C	Sidechain
57	BB	674	G	Sidechain
57	BB	675	A	Sidechain
57	BB	676	A	Sidechain
57	BB	677	A	Sidechain
57	BB	679	C	Sidechain
57	BB	68	G	Sidechain
57	BB	680	C	Sidechain
57	BB	681	G	Sidechain
57	BB	682	G	Sidechain
57	BB	683	U	Sidechain
57	BB	684	G	Sidechain
57	BB	685	A	Sidechain
57	BB	686	U	Sidechain
57	BB	687	C	Sidechain
57	BB	688	U	Sidechain
57	BB	690	G	Sidechain
57	BB	693	A	Sidechain
57	BB	695	G	Sidechain
57	BB	696	G	Sidechain
57	BB	697	G	Sidechain
57	BB	7	G	Sidechain
57	BB	70	G	Sidechain
57	BB	700	G	Sidechain
57	BB	703	U	Sidechain
57	BB	704	G	Sidechain
57	BB	705	A	Sidechain
57	BB	706	A	Sidechain
57	BB	708	G	Sidechain
57	BB	711	G	Sidechain
57	BB	712	G	Sidechain
57	BB	715	A	Sidechain
57	BB	716	A	Sidechain
57	BB	72	U	Sidechain
57	BB	723	C	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	725	G	Sidechain
57	BB	726	G	Sidechain
57	BB	727	A	Sidechain
57	BB	728	G	Sidechain
57	BB	730	A	Sidechain
57	BB	731	C	Sidechain
57	BB	733	G	Sidechain
57	BB	734	A	Sidechain
57	BB	735	A	Sidechain
57	BB	737	C	Sidechain
57	BB	738	G	Sidechain
57	BB	739	A	Sidechain
57	BB	740	C	Sidechain
57	BB	741	U	Sidechain
57	BB	742	A	Sidechain
57	BB	744	U	Sidechain
57	BB	746	U	Sidechain
57	BB	75	G	Sidechain
57	BB	750	A	Sidechain
57	BB	752	A	Sidechain
57	BB	754	U	Sidechain
57	BB	756	A	Sidechain
57	BB	759	G	Sidechain
57	BB	76	C	Sidechain
57	BB	760	G	Sidechain
57	BB	761	A	Sidechain
57	BB	762	U	Sidechain
57	BB	763	G	Sidechain
57	BB	764	A	Sidechain
57	BB	766	U	Sidechain
57	BB	767	U	Sidechain
57	BB	768	G	Sidechain
57	BB	773	U	Sidechain
57	BB	776	G	Sidechain
57	BB	777	G	Sidechain
57	BB	778	G	Sidechain
57	BB	780	G	Sidechain
57	BB	782	A	Sidechain
57	BB	784	G	Sidechain
57	BB	79	C	Sidechain
57	BB	792	A	Sidechain
57	BB	793	A	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	794	A	Sidechain
57	BB	799	G	Sidechain
57	BB	8	C	Sidechain
57	BB	80	G	Sidechain
57	BB	802	A	Sidechain
57	BB	803	U	Sidechain
57	BB	804	A	Sidechain
57	BB	807	U	Sidechain
57	BB	809	G	Sidechain
57	BB	81	G	Sidechain
57	BB	810	U	Sidechain
57	BB	813	U	Sidechain
57	BB	814	C	Sidechain
57	BB	817	C	Sidechain
57	BB	821	A	Sidechain
57	BB	822	G	Sidechain
57	BB	826	U	Sidechain
57	BB	827	U	Sidechain
57	BB	829	A	Sidechain
57	BB	830	G	Sidechain
57	BB	833	A	Sidechain
57	BB	835	C	Sidechain
57	BB	836	G	Sidechain
57	BB	838	C	Sidechain
57	BB	841	G	Sidechain
57	BB	842	U	Sidechain
57	BB	844	A	Sidechain
57	BB	845	A	Sidechain
57	BB	847	U	Sidechain
57	BB	849	A	Sidechain
57	BB	85	G	Sidechain
57	BB	853	C	Sidechain
57	BB	854	C	Sidechain
57	BB	857	G	Sidechain
57	BB	858	G	Sidechain
57	BB	859	G	Sidechain
57	BB	860	U	Sidechain
57	BB	866	A	Sidechain
57	BB	87	U	Sidechain
57	BB	870	U	Sidechain
57	BB	877	A	Sidechain
57	BB	88	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	880	G	Sidechain
57	BB	881	G	Sidechain
57	BB	882	G	Sidechain
57	BB	883	G	Sidechain
57	BB	884	U	Sidechain
57	BB	885	C	Sidechain
57	BB	886	A	Sidechain
57	BB	89	A	Sidechain
57	BB	891	G	Sidechain
57	BB	892	A	Sidechain
57	BB	895	U	Sidechain
57	BB	896	A	Sidechain
57	BB	898	C	Sidechain
57	BB	90	U	Sidechain
57	BB	900	A	Sidechain
57	BB	91	A	Sidechain
57	BB	910	A	Sidechain
57	BB	911	A	Sidechain
57	BB	912	C	Sidechain
57	BB	913	U	Sidechain
57	BB	916	G	Sidechain
57	BB	917	A	Sidechain
57	BB	919	U	Sidechain
57	BB	924	G	Sidechain
57	BB	925	A	Sidechain
57	BB	926	G	Sidechain
57	BB	928	A	Sidechain
57	BB	929	U	Sidechain
57	BB	932	U	Sidechain
57	BB	933	A	Sidechain
57	BB	934	U	Sidechain
57	BB	935	C	Sidechain
57	BB	936	A	Sidechain
57	BB	938	G	Sidechain
57	BB	939	G	Sidechain
57	BB	940	G	Sidechain
57	BB	942	G	Sidechain
57	BB	944	C	Sidechain
57	BB	945	A	Sidechain
57	BB	946	C	Sidechain
57	BB	948	C	Sidechain
57	BB	949	G	Sidechain

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Mol	Chain	Res	Type	Group
57	BB	95	A	Sidechain
57	BB	953	G	Sidechain
57	BB	954	G	Sidechain
57	BB	955	U	Sidechain
57	BB	956	G	Sidechain
57	BB	958	U	Sidechain
57	BB	959	A	Sidechain
57	BB	96	C	Sidechain
57	BB	961	C	Sidechain
57	BB	962	G	Sidechain
57	BB	963	U	Sidechain
57	BB	965	C	Sidechain
57	BB	967	U	Sidechain
57	BB	972	A	Sidechain
57	BB	974	G	Sidechain
57	BB	977	G	Sidechain
57	BB	981	A	Sidechain
57	BB	984	A	Sidechain
57	BB	986	C	Sidechain
57	BB	988	A	Sidechain
57	BB	989	G	Sidechain
57	BB	995	C	Sidechain
57	BB	996	A	Sidechain
57	BB	997	G	Sidechain
57	BB	998	C	Sidechain
57	BB	999	U	Sidechain
45	BC	102	TYR	Sidechain
45	BC	12	ARG	Sidechain
45	BC	176	ARG	Sidechain
45	BC	213	ARG	Sidechain
45	BC	231	HIS	Sidechain
45	BC	27	LYS	Peptide
45	BC	57	HIS	Sidechain
45	BC	82	TYR	Sidechain
45	BC	95	TYR	Sidechain
52	BD	141	ARG	Sidechain
52	BD	153	GLY	Peptide
52	BD	179	ARG	Sidechain
52	BD	33	ARG	Sidechain
52	BD	68	PHE	Sidechain
53	BE	114	ARG	Sidechain
53	BE	136	GLN	Peptide

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Mol	Chain	Res	Type	Group
53	BE	162	ARG	Sidechain
53	BE	19	PHE	Sidechain
53	BE	21	ARG	Sidechain
53	BE	35	TYR	Sidechain
53	BE	5	LEU	Peptide
54	BF	130	GLY	Peptide
54	BF	132	ARG	Sidechain
54	BF	142	TYR	Sidechain
54	BF	147	ARG	Sidechain
54	BF	176	PHE	Sidechain
54	BF	21	TYR	Sidechain
54	BF	6	TYR	Sidechain
54	BF	7	TYR	Sidechain
54	BF	91	ARG	Sidechain
55	BG	110	HIS	Peptide
55	BG	114	HIS	Sidechain
55	BG	151	ARG	Peptide
55	BG	34	ARG	Sidechain
55	BG	57	TYR	Sidechain
56	BH	139	PHE	Sidechain
56	BH	25	TYR	Sidechain
56	BH	97	ARG	Sidechain
28	BI	10	LEU	Peptide
28	BI	3	LYS	Peptide
28	BI	7	TYR	Sidechain
29	BJ	116	ARG	Sidechain
29	BJ	125	TYR	Sidechain
29	BJ	16	TYR	Sidechain
29	BJ	37	ARG	Sidechain
29	BJ	44	TYR	Sidechain
29	BJ	53	TYR	Sidechain
29	BJ	74	TYR	Sidechain
29	BJ	77	HIS	Sidechain
29	BJ	99	ARG	Sidechain
30	BK	77	ARG	Sidechain
31	BL	123	ARG	Sidechain
31	BL	33	ARG	Sidechain
31	BL	41	ARG	Sidechain
31	BL	59	ARG	Sidechain
31	BL	60	ARG	Sidechain
31	BL	64	PHE	Sidechain
31	BL	66	PHE	Sidechain

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Mol	Chain	Res	Type	Group
31	BL	7	SER	Peptide
32	BM	38	ARG	Sidechain
32	BM	44	ARG	Sidechain
32	BM	66	ARG	Sidechain
32	BM	91	TYR	Sidechain
33	BN	4	ARG	Sidechain
33	BN	69	ARG	Sidechain
33	BN	71	ARG	Sidechain
34	BO	33	ARG	Sidechain
34	BO	36	TYR	Sidechain
34	BO	55	GLU	Peptide
34	BO	64	TYR	Sidechain
35	BP	108	ARG	Sidechain
35	BP	19	PHE	Peptide
36	BQ	10	ARG	Sidechain
36	BQ	27	ARG	Sidechain
36	BQ	46	TYR	Sidechain
36	BQ	47	ARG	Sidechain
37	BR	54	VAL	Peptide
37	BR	77	PHE	Sidechain
37	BR	78	ARG	Sidechain
37	BR	82	HIS	Sidechain
37	BR	83	TYR	Sidechain
37	BR	93	PHE	Sidechain
38	BS	6	LYS	Peptide
39	BT	3	ARG	Peptide
39	BT	77	ARG	Sidechain
40	BU	21	ARG	Sidechain
40	BU	81	ARG	Sidechain
41	BV	19	ARG	Sidechain
41	BV	31	TYR	Sidechain
41	BV	72	VAL	Peptide
41	BV	82	TYR	Sidechain
42	BW	10	ARG	Sidechain
42	BW	19	ARG	Sidechain
42	BW	44	PHE	Sidechain
43	BX	36	ARG	Sidechain
43	BX	44	ARG	Sidechain
43	BX	77	TYR	Sidechain
44	BY	47	ARG	Sidechain
44	BY	7	ARG	Sidechain
46	BZ	10	ARG	Sidechain

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Mol	Chain	Res	Type	Group
46	BZ	44	ARG	Sidechain
46	BZ	52	PHE	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AJ	787	0	828	4	0
2	AK	877	0	887	1	0
3	AL	955	0	1019	9	0
4	AM	877	0	937	8	0
5	AN	774	0	828	9	0
6	AO	716	0	742	8	0
7	AP	639	0	656	2	0
8	AQ	649	0	691	3	0
9	AR	456	0	478	4	0
10	AS	638	0	665	7	0
11	AT	665	0	714	1	0
12	AU	426	0	449	0	0
13	AB	1705	0	1732	10	0
14	AC	1625	0	1699	7	0
15	AD	1643	0	1710	18	0
16	AE	1106	0	1148	7	0
17	AF	818	0	808	6	0
18	AG	1175	0	1230	11	0
19	AH	979	0	1034	4	0
20	AI	1022	0	1070	5	0
21	AA	32832	0	16503	180	0
22	AY	1622	0	812	11	0
23	AW	1619	0	822	22	0
24	AX	232	0	120	2	0
25	AZ	3035	0	3049	17	0
26	AV	1645	0	834	6	0
27	B5	1733	0	1824	10	0
28	BI	1032	0	1088	5	0
29	BJ	1129	0	1162	8	0
30	BK	931	0	1003	5	0
31	BL	1045	0	1117	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BM	1074	0	1157	1	0
33	BN	961	0	1000	7	0
34	BO	892	0	923	2	0
35	BP	917	0	965	5	0
36	BQ	947	0	1022	4	0
37	BR	816	0	839	3	0
38	BS	857	0	922	3	0
39	BT	739	0	807	4	0
40	BU	780	0	834	5	0
41	BV	753	0	780	3	0
42	BW	596	0	610	5	0
43	BX	625	0	655	3	0
44	BY	509	0	543	2	0
45	BC	2083	0	2157	16	0
46	BZ	449	0	491	0	0
47	B0	444	0	461	6	0
48	B1	410	0	440	4	0
49	B2	377	0	418	3	0
50	B3	504	0	574	3	0
51	B4	302	0	343	0	0
52	BD	1565	0	1616	16	0
53	BE	1552	0	1619	8	0
54	BF	1420	0	1460	10	0
55	BG	1323	0	1374	7	0
56	BH	1111	0	1148	4	0
57	BB	62321	0	31298	326	0
58	BA	2508	0	1268	8	0
59	AZ	28	0	12	0	0
All	All	152250	0	103395	782	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 3.

All (782) 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)
23:AW:63:G:C5	23:AW:63:G:C4	1.87	1.59
23:AW:63:G:C8	23:AW:63:G:N7	1.67	1.56
23:AW:63:G:C5	23:AW:63:G:N7	1.86	1.43
23:AW:63:G:C4	23:AW:63:G:N9	1.90	1.40
23:AW:63:G:C8	23:AW:63:G:N9	1.97	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:842:U:H3'	21:AA:843:U:H4'	1.63	0.80
57:BB:877:A:C2	57:BB:901:C:C2	2.70	0.79
21:AA:664:G:H22	21:AA:741:G:H1	1.31	0.77
21:AA:199:A:H61	21:AA:218:U:H3	1.34	0.75
45:BC:261:ARG:HH22	57:BB:2223:G:H21	1.36	0.74
21:AA:1131:G:H1	21:AA:1143:G:H21	1.38	0.71
16:AE:38:VAL:HG22	16:AE:44:ARG:HB2	1.73	0.71
21:AA:55:A:C4	25:AZ:222:GLY:HA3	2.26	0.70
41:BV:79:ARG:HE	41:BV:84:PRO:HA	1.56	0.69
23:AW:62:C:H2'	23:AW:63:G:C8	2.29	0.68
57:BB:2792:A:H3'	57:BB:2793:C:H5''	1.76	0.67
21:AA:781:A:H2'	21:AA:782:A:H5'	1.76	0.67
35:BP:7:LEU:HD11	52:BD:179:ARG:HH12	1.58	0.67
21:AA:1239:A:H62	21:AA:1299:A:H62	1.43	0.66
15:AD:99:ASN:HD22	15:AD:103:ARG:HH21	1.43	0.65
45:BC:190:THR:HG22	45:BC:191:LEU:H	1.61	0.65
21:AA:1305:G:H22	21:AA:1331:G:H2'	1.61	0.65
26:AV:6:G:H1	26:AV:67:C:H42	1.44	0.64
5:AN:29:ILE:HG13	5:AN:30:ILE:H	1.62	0.63
15:AD:12:ARG:HA	15:AD:34:GLU:H	1.63	0.63
57:BB:1283:G:H22	57:BB:1286:A:H5'	1.64	0.62
6:AO:24:THR:HA	6:AO:27:GLN:HE21	1.65	0.62
13:AB:103:TRP:CD1	13:AB:107:ARG:HH21	2.17	0.62
29:BJ:77:HIS:CD2	29:BJ:79:GLY:H	2.18	0.62
23:AW:63:G:C5	23:AW:63:G:C8	2.87	0.62
47:B0:49:ARG:H	47:B0:49:ARG:HD3	1.64	0.62
1:AJ:32:THR:HG21	1:AJ:86:ALA:HB3	1.82	0.61
57:BB:962:G:H21	57:BB:2250:G:H1	1.49	0.61
29:BJ:20:ALA:H	29:BJ:58:ASN:HD21	1.47	0.61
48:B1:16:THR:HG23	48:B1:18:HIS:H	1.65	0.61
48:B1:8:ILE:HD12	48:B1:51:ALA:HB1	1.83	0.60
7:AP:52:LEU:HD11	7:AP:78:VAL:HG21	1.84	0.60
21:AA:1305:G:H21	21:AA:1332:A:H8	1.50	0.60
45:BC:179:GLU:HA	45:BC:268:ARG:HE	1.67	0.60
15:AD:146:GLU:CD	15:AD:146:GLU:H	2.09	0.59
1:AJ:31:ARG:H	1:AJ:31:ARG:HE	1.50	0.59
21:AA:1409:C:H4'	57:BB:1914:C:H42	1.68	0.59
21:AA:1005:A:C5	21:AA:1006:G:H1'	2.38	0.58
40:BU:86:PHE:HB2	40:BU:92:VAL:HG12	1.83	0.58
15:AD:66:VAL:HG22	15:AD:70:GLN:HB2	1.85	0.58
57:BB:548:G:H4'	57:BB:549:G:C4	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:2547:A:H2'	57:BB:2548:U:C6	2.38	0.58
52:BD:55:LYS:HG2	52:BD:56:LYS:H	1.68	0.58
21:AA:496:A:H2'	21:AA:497:G:C8	2.39	0.57
13:AB:217:ALA:HA	13:AB:221:ARG:HH22	1.69	0.57
57:BB:1079:C:C4	57:BB:1088:A:C2	2.92	0.57
57:BB:2233:U:H2'	57:BB:2234:G:C8	2.38	0.57
21:AA:243:A:H4'	21:AA:244:U:H5'	1.87	0.57
21:AA:507:C:H3'	21:AA:508:U:H5''	1.87	0.56
21:AA:858:G:H1	21:AA:869:G:H3'	1.70	0.56
6:AO:52:ARG:HA	6:AO:55:LEU:HD12	1.88	0.56
21:AA:1127:G:H22	21:AA:1145:A:H2	1.53	0.56
39:BT:69:ARG:HH22	57:BB:91:A:H61	1.54	0.56
57:BB:632:A:C6	57:BB:633:A:C2	2.94	0.56
13:AB:125:PHE:CE2	13:AB:136:ARG:HB3	2.41	0.55
53:BE:146:VAL:HG23	53:BE:167:VAL:HG23	1.87	0.55
4:AM:26:LYS:H	4:AM:26:LYS:HD3	1.71	0.55
54:BF:142:TYR:HA	54:BF:149:ARG:HH12	1.71	0.55
19:AH:11:THR:HA	19:AH:14:ARG:HH21	1.71	0.55
57:BB:1533:C:C4	57:BB:1534:U:C4	2.95	0.55
18:AG:52:ARG:HH11	18:AG:124:SER:HB3	1.70	0.55
42:BW:49:ASN:HD22	42:BW:60:ALA:HA	1.71	0.55
57:BB:2091:C:H3'	57:BB:2092:U:H5''	1.87	0.55
21:AA:1395:C:H5'	21:AA:1401:G:H21	1.72	0.55
57:BB:1024:G:H3'	57:BB:1025:G:H5''	1.88	0.55
57:BB:1533:C:C5	57:BB:1534:U:C5	2.95	0.54
21:AA:1300:G:C5	21:AA:1334:G:C6	2.95	0.54
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.43	0.54
21:AA:697:U:C5	21:AA:698:G:C8	2.95	0.54
30:BK:50:LYS:H	30:BK:50:LYS:HD3	1.72	0.54
55:BG:101:VAL:HG22	55:BG:115:GLN:HE22	1.72	0.54
57:BB:1791:A:C8	57:BB:1792:G:C8	2.96	0.54
21:AA:1333:A:H3'	21:AA:1334:G:H8	1.72	0.54
45:BC:152:GLN:HG3	45:BC:153:LEU:HD12	1.90	0.54
55:BG:86:LEU:CD2	55:BG:147:LEU:HD13	2.38	0.54
9:AR:38:ILE:HD11	21:AA:720:C:H4'	1.89	0.54
57:BB:63:A:H2'	57:BB:64:A:C8	2.43	0.54
52:BD:13:ARG:HE	57:BB:2683:C:H4'	1.73	0.53
54:BF:107:VAL:H	54:BF:108:PRO:CD	2.21	0.53
21:AA:687:A:C2	21:AA:704:A:C5	2.96	0.53
21:AA:499:A:H61	21:AA:547:A:H5''	1.72	0.53
21:AA:842:U:C3'	21:AA:843:U:H4'	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:480:A:H3'	57:BB:481:G:H5''	1.90	0.53
23:AW:39:U:H2'	23:AW:40:C:H5''	1.89	0.53
7:AP:60:TRP:HA	7:AP:60:TRP:CE3	2.44	0.53
52:BD:6:GLY:HA2	52:BD:29:VAL:HG22	1.91	0.53
57:BB:172:A:C2	57:BB:173:A:C4	2.96	0.53
3:AL:89:LEU:HB2	3:AL:92:VAL:HG21	1.90	0.53
20:AI:44:ARG:HB2	20:AI:48:ARG:HH21	1.74	0.53
21:AA:181:A:H1'	21:AA:182:A:C2	2.44	0.53
21:AA:973:G:H3'	21:AA:974:A:H5''	1.90	0.53
29:BJ:20:ALA:H	29:BJ:58:ASN:ND2	2.07	0.53
57:BB:308:G:C2	57:BB:309:A:C2	2.97	0.53
10:AS:70:LEU:HD12	10:AS:70:LEU:H	1.73	0.53
27:B5:198:LYS:HA	27:B5:198:LYS:HE2	1.91	0.53
19:AH:2:MET:HG3	21:AA:588:G:H4'	1.89	0.53
23:AW:18:G:H1	23:AW:55:U:H1'	1.74	0.53
57:BB:2357:G:H22	57:BB:2359:C:H3'	1.74	0.53
21:AA:860:A:H3'	21:AA:861:G:H8	1.73	0.53
19:AH:106:SER:HA	21:AA:642:A:C4	2.43	0.52
38:BS:15:GLN:HA	38:BS:18:ARG:HE	1.74	0.52
45:BC:154:ALA:HB2	45:BC:161:VAL:HG23	1.89	0.52
53:BE:52:VAL:HG21	53:BE:82:GLY:H	1.74	0.52
21:AA:979:C:C5	21:AA:980:C:C4	2.97	0.52
57:BB:1684:G:C5	57:BB:1685:C:C5	2.97	0.52
57:BB:2453:A:H61	57:BB:2499:C:H42	1.55	0.52
55:BG:145:ALA:HA	55:BG:148:ARG:HE	1.74	0.52
21:AA:408:A:C2	21:AA:435:A:C2	2.98	0.52
21:AA:464:U:H2'	21:AA:465:A:H3'	1.92	0.52
57:BB:1082:U:C4	57:BB:1086:A:C2	2.98	0.52
3:AL:32:VAL:HG12	3:AL:33:CYS:H	1.74	0.52
3:AL:49:ARG:HH22	21:AA:521:G:H5''	1.75	0.52
21:AA:1305:G:N2	21:AA:1332:A:H8	2.08	0.52
32:BM:69:PRO:HB3	32:BM:94:ALA:HB2	1.91	0.52
57:BB:1120:G:C5	57:BB:1121:C:C5	2.98	0.52
57:BB:1949:G:C6	57:BB:1950:G:C6	2.97	0.52
9:AR:42:ARG:HH21	21:AA:720:C:H5''	1.75	0.52
21:AA:71:A:H61	21:AA:99:C:H1'	1.75	0.52
35:BP:96:LEU:HA	35:BP:99:LEU:HD12	1.91	0.52
57:BB:962:G:N2	57:BB:2250:G:H1	2.07	0.52
57:BB:1450:G:C5	57:BB:1451:C:C5	2.97	0.52
22:AY:16:U:C5	22:AY:17:U:C4	2.98	0.51
57:BB:419:U:H2'	57:BB:420:C:C6	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:2555:U:H5	57:BB:2556:C:C2	2.27	0.51
21:AA:699:C:H2'	21:AA:700:G:H5''	1.92	0.51
22:AY:18:G:H1'	22:AY:57:G:H22	1.76	0.51
57:BB:945:A:C4	57:BB:2448:A:C2	2.98	0.51
21:AA:1236:A:H2'	21:AA:1237:C:C6	2.46	0.51
43:BX:3:VAL:HG22	43:BX:10:ARG:HE	1.75	0.51
55:BG:86:LEU:HD22	55:BG:147:LEU:HD13	1.93	0.51
57:BB:447:A:C2	57:BB:454:A:C8	2.99	0.51
57:BB:2064:C:H1'	57:BB:2450:A:C6	2.45	0.51
16:AE:75:LEU:HD13	16:AE:78:GLY:H	1.75	0.51
26:AV:67:C:C5	26:AV:68:C:C5	2.99	0.51
52:BD:124:ARG:HH11	52:BD:124:ARG:HB2	1.76	0.51
25:AZ:19:HIS:HD2	25:AZ:114:GLN:H	1.57	0.51
57:BB:619:G:H3'	57:BB:620:G:H21	1.76	0.51
45:BC:140:VAL:HG12	45:BC:142:ASN:H	1.76	0.51
57:BB:711:G:C6	57:BB:712:G:C5	2.99	0.51
6:AO:54:GLY:HA2	6:AO:57:ARG:HH21	1.76	0.51
21:AA:1484:C:C4	21:AA:1485:U:C4	2.99	0.51
33:BN:34:ILE:HG23	33:BN:113:ILE:HG23	1.92	0.51
54:BF:177:ARG:HE	54:BF:178:LYS:H	1.56	0.51
57:BB:1933:G:C5	57:BB:1934:C:C5	2.99	0.51
4:AM:11:HIS:H	4:AM:44:ILE:HB	1.76	0.51
52:BD:121:THR:HG22	52:BD:122:VAL:HG23	1.93	0.51
57:BB:1176:U:C5	57:BB:1177:G:C4	3.00	0.51
5:AN:16:ALA:HB2	5:AN:59:GLN:HE22	1.75	0.50
21:AA:483:C:H2'	21:AA:484:G:C8	2.46	0.50
21:AA:1417:G:C6	21:AA:1482:G:C6	2.99	0.50
36:BQ:60:TRP:CZ2	36:BQ:93:ILE:HD12	2.46	0.50
5:AN:74:ARG:HH21	21:AA:1359:C:H3'	1.76	0.50
21:AA:801:U:H2'	21:AA:802:A:C8	2.46	0.50
21:AA:1239:A:H62	21:AA:1299:A:N6	2.06	0.50
25:AZ:69:TYR:CE1	25:AZ:76:TYR:HB2	2.46	0.50
29:BJ:35:ARG:HA	29:BJ:40:HIS:CE1	2.46	0.50
15:AD:169:TRP:CD2	15:AD:185:PRO:HA	2.46	0.50
25:AZ:284:GLU:CD	25:AZ:284:GLU:H	2.20	0.50
48:B1:45:HIS:CE1	57:BB:2371:G:H21	2.29	0.50
53:BE:138:LEU:HD13	53:BE:167:VAL:HG21	1.92	0.50
57:BB:900:A:H2'	57:BB:901:C:H5'	1.93	0.50
57:BB:1093:G:H21	57:BB:1098:A:H62	1.59	0.50
21:AA:780:A:C8	21:AA:800:G:C6	3.00	0.50
57:BB:890:C:H3'	57:BB:891:G:H4'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AB:176:ASN:HD21	13:AB:182:VAL:HG21	1.77	0.50
21:AA:1044:A:C5	21:AA:1045:C:H1'	2.46	0.50
57:BB:1803:A:C8	57:BB:1804:C:C6	3.00	0.50
57:BB:2314:A:H2'	57:BB:2315:G:C8	2.47	0.50
8:AQ:18:LYS:HB3	8:AQ:46:HIS:CE1	2.46	0.50
21:AA:55:A:C2	21:AA:56:U:H1'	2.46	0.50
21:AA:332:G:C5	21:AA:333:U:C5	2.99	0.50
57:BB:609:A:C8	57:BB:610:C:C5	3.00	0.50
25:AZ:134:LEU:HD22	25:AZ:171:ARG:HE	1.77	0.49
29:BJ:20:ALA:N	29:BJ:58:ASN:HD21	2.10	0.49
10:AS:67:GLY:H	10:AS:68:HIS:CD2	2.30	0.49
13:AB:52:ALA:HB2	13:AB:197:PHE:CE1	2.47	0.49
21:AA:201:G:H21	21:AA:469:C:H1'	1.76	0.49
21:AA:692:U:H5'	21:AA:797:C:H4'	1.94	0.49
57:BB:263:G:C6	57:BB:264:C:C5	3.01	0.49
57:BB:877:A:N1	57:BB:901:C:C2	2.80	0.49
57:BB:1181:U:H2'	57:BB:1182:G:H8	1.77	0.49
57:BB:1862:G:C2	57:BB:1881:C:C2	2.99	0.49
58:BA:42:C:C5	58:BA:43:C:C5	3.00	0.49
21:AA:1333:A:H3'	21:AA:1334:G:C8	2.47	0.49
57:BB:581:C:H2'	57:BB:582:A:C8	2.47	0.49
57:BB:1837:C:H2'	57:BB:1838:C:H5'	1.94	0.49
15:AD:2:ARG:HD2	15:AD:114:ARG:HH22	1.78	0.49
52:BD:122:VAL:HG12	52:BD:122:VAL:O	2.13	0.49
57:BB:510:C:H2'	57:BB:511:U:C6	2.47	0.49
57:BB:2425:A:H4'	57:BB:2426:A:H5''	1.94	0.49
15:AD:66:VAL:CG2	15:AD:70:GLN:HB2	2.41	0.49
17:AF:86:ARG:HH22	21:AA:673:A:H4'	1.77	0.49
54:BF:65:LEU:HD23	54:BF:87:LYS:HB2	1.93	0.49
57:BB:374:A:C2	57:BB:401:A:C4	3.01	0.49
57:BB:1061:U:H3	57:BB:1097:U:H4'	1.77	0.49
21:AA:1144:G:N2	21:AA:1146:A:H62	2.11	0.49
57:BB:35:G:H2'	57:BB:36:G:O4'	2.13	0.49
21:AA:1068:G:C6	21:AA:1069:C:C5	3.01	0.49
23:AW:1:G:C5	23:AW:2:C:C5	3.01	0.49
26:AV:67:C:C4	26:AV:68:C:C5	3.01	0.49
35:BP:32:VAL:HG12	35:BP:34:GLY:H	1.77	0.49
57:BB:977:G:C2	57:BB:987:C:C2	3.00	0.49
26:AV:12:G:H21	57:BB:1924:C:H5'	1.78	0.49
42:BW:45:HIS:CE1	42:BW:49:ASN:ND2	2.81	0.49
57:BB:422:A:C2	57:BB:423:A:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AG:108:ARG:H	18:AG:118:ARG:HD3	1.77	0.48
21:AA:901:A:C5	21:AA:902:G:H1'	2.48	0.48
23:AW:62:C:H2'	23:AW:63:G:H8	1.78	0.48
57:BB:645:C:H5'	57:BB:645:C:H6	1.78	0.48
57:BB:2471:A:O2'	57:BB:2472:G:C8	2.64	0.48
16:AE:38:VAL:HG22	16:AE:44:ARG:CB	2.42	0.48
57:BB:871:U:H3	57:BB:906:U:H3	1.59	0.48
28:BI:135:MET:HE3	57:BB:1063:G:H4'	1.95	0.48
25:AZ:21:ASP:CG	25:AZ:22:HIS:H	2.22	0.48
57:BB:1821:A:C6	57:BB:1822:C:C4	3.01	0.48
25:AZ:11:HIS:CE1	25:AZ:272:GLU:OE1	2.67	0.48
33:BN:44:LEU:O	33:BN:48:VAL:HG23	2.13	0.48
3:AL:110:LYS:H	3:AL:110:LYS:HD3	1.78	0.48
21:AA:1071:C:H2'	21:AA:1072:G:C8	2.49	0.48
47:B0:40:HIS:CG	57:BB:2816:G:H4'	2.47	0.48
49:B2:16:HIS:CE1	57:BB:686:U:H3	2.31	0.48
21:AA:1347:G:C4	21:AA:1373:G:C6	3.01	0.48
57:BB:627:A:C4	57:BB:637:A:C2	3.01	0.48
15:AD:187:ARG:C	15:AD:189:ASP:H	2.21	0.48
21:AA:860:A:H3'	21:AA:861:G:C8	2.49	0.48
52:BD:33:ARG:HA	52:BD:95:SER:H	1.78	0.48
55:BG:10:VAL:HG22	55:BG:47:ASN:O	2.14	0.48
57:BB:880:G:H2'	57:BB:881:G:C8	2.49	0.48
57:BB:1358:G:C2	57:BB:1372:U:C5	3.01	0.48
57:BB:2686:G:H2'	57:BB:2687:U:C6	2.48	0.48
5:AN:29:ILE:HG13	5:AN:30:ILE:N	2.26	0.48
21:AA:1167:A:H2'	21:AA:1169:A:C8	2.49	0.48
57:BB:221:A:C2	57:BB:266:G:OP2	2.67	0.48
57:BB:1203:U:H3'	57:BB:1204:A:H5''	1.95	0.48
17:AF:29:ILE:HG23	17:AF:70:VAL:HG11	1.96	0.48
20:AI:41:GLU:HB2	20:AI:44:ARG:HG2	1.95	0.48
57:BB:1225:G:C2	57:BB:1226:A:C2	3.02	0.48
57:BB:1853:A:C6	57:BB:1854:A:C2	3.02	0.48
21:AA:1142:G:C2	21:AA:1143:G:H1'	2.48	0.47
23:AW:20:U:H2'	23:AW:21:A:H4'	1.95	0.47
16:AE:147:ASN:HD22	19:AH:96:ALA:HB2	1.79	0.47
26:AV:72:A:H3'	26:AV:73:A:H5''	1.95	0.47
57:BB:1829:A:C8	57:BB:1830:C:C5	3.02	0.47
57:BB:2243:U:H2'	57:BB:2244:U:C6	2.50	0.47
20:AI:62:LEU:HD12	20:AI:64:ILE:HD11	1.96	0.47
25:AZ:15:GLY:HA2	25:AZ:78:HIS:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BL:116:VAL:HG22	31:BL:118:THR:H	1.80	0.47
48:B1:39:ASP:HB3	48:B1:42:VAL:HG22	1.96	0.47
57:BB:1770:G:C6	57:BB:1771:C:C4	3.02	0.47
57:BB:1770:G:C5	57:BB:1771:C:C5	3.02	0.47
57:BB:2071:A:H2'	57:BB:2072:C:C6	2.49	0.47
57:BB:2140:G:C5	57:BB:2152:G:C6	3.02	0.47
17:AF:3:HIS:CD2	17:AF:4:TYR:H	2.32	0.47
18:AG:136:LYS:O	18:AG:140:VAL:HG23	2.14	0.47
57:BB:5:A:H2'	57:BB:6:A:C8	2.49	0.47
21:AA:995:C:H2'	21:AA:996:A:H5''	1.95	0.47
57:BB:562:U:C4	57:BB:572:A:C8	3.02	0.47
27:B5:134:ARG:HG2	57:BB:2125:G:H1	1.80	0.47
57:BB:956:G:H2'	57:BB:957:C:H2'	1.97	0.47
13:AB:10:LYS:HA	13:AB:207:ARG:HH21	1.79	0.47
21:AA:408:A:H3'	21:AA:409:U:H6	1.79	0.47
26:AV:18:G:C5	26:AV:57:A:C6	3.03	0.47
36:BQ:10:ARG:HH21	57:BB:1216:G:H5''	1.79	0.47
52:BD:14:ILE:HG22	52:BD:22:ILE:O	2.15	0.47
57:BB:184:C:H2'	57:BB:185:G:C8	2.50	0.47
57:BB:1165:A:N3	57:BB:1185:G:C2	2.82	0.47
57:BB:1448:G:C6	57:BB:1449:G:C5	3.03	0.47
57:BB:2485:G:C2	57:BB:2486:C:C6	3.03	0.47
21:AA:1118:U:H3'	21:AA:1119:C:C6	2.49	0.47
23:AW:12:U:H3	23:AW:23:A:H61	1.63	0.47
57:BB:1432:G:H2'	57:BB:1433:A:C8	2.50	0.47
21:AA:66:A:H3'	21:AA:67:C:H5''	1.97	0.47
21:AA:79:G:C2	21:AA:80:A:H1'	2.50	0.47
31:BL:78:ARG:HH22	57:BB:627:A:H2'	1.78	0.47
42:BW:19:ARG:HA	42:BW:35:ILE:HG22	1.97	0.47
43:BX:48:LEU:HD23	43:BX:76:LYS:HD3	1.97	0.47
21:AA:109:A:C6	21:AA:326:G:C6	3.03	0.47
21:AA:1057:G:C5	21:AA:1204:A:C2	3.02	0.47
56:BH:135:HIS:CD2	57:BB:2221:G:OP2	2.68	0.47
57:BB:150:U:H2'	57:BB:151:C:C6	2.50	0.47
57:BB:609:A:C8	57:BB:610:C:C6	3.03	0.47
57:BB:1450:G:C6	57:BB:1451:C:C4	3.03	0.47
57:BB:2352:A:H2'	57:BB:2353:G:H5'	1.97	0.47
3:AL:47:ALA:HB2	21:AA:529:G:H22	1.80	0.46
6:AO:87:ARG:HH22	57:BB:715:A:H5''	1.79	0.46
21:AA:444:G:C2	21:AA:491:G:C2	3.03	0.46
21:AA:825:A:C2	21:AA:876:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:645:C:H5'	57:BB:645:C:C6	2.49	0.46
57:BB:776:G:H1'	57:BB:793:A:C2	2.50	0.46
57:BB:880:G:H1	57:BB:897:C:H42	1.64	0.46
57:BB:2345:G:C6	57:BB:2381:A:C6	3.03	0.46
15:AD:44:LYS:HA	15:AD:45:PRO:HD3	1.81	0.46
30:BK:28:HIS:CE1	57:BB:2547:A:H4'	2.50	0.46
49:B2:44:VAL:HG12	49:B2:44:VAL:O	2.14	0.46
57:BB:1573:G:H2'	57:BB:1574:C:H5'	1.97	0.46
58:BA:11:C:H3'	58:BA:12:C:C6	2.51	0.46
21:AA:761:G:C6	21:AA:762:U:C4	3.03	0.46
21:AA:992:U:H1'	21:AA:993:G:C2	2.50	0.46
31:BL:93:ASN:HD22	31:BL:97:ALA:HB2	1.79	0.46
57:BB:1024:G:C6	57:BB:1025:G:C6	3.03	0.46
57:BB:2714:G:C5	57:BB:2715:C:C5	3.04	0.46
15:AD:58:GLN:HA	15:AD:61:ARG:HB3	1.97	0.46
21:AA:81:A:C2	21:AA:89:U:C2	3.02	0.46
21:AA:581:G:C6	21:AA:758:C:C5	3.04	0.46
47:B0:9:ARG:HH22	57:BB:1263:U:H5''	1.81	0.46
52:BD:56:LYS:O	52:BD:57:ALA:HB3	2.15	0.46
14:AC:132:ALA:HA	14:AC:135:ARG:HH21	1.81	0.46
30:BK:5:THR:HG22	30:BK:6:MET:N	2.29	0.46
57:BB:46:G:C5	57:BB:180:G:C6	3.04	0.46
57:BB:943:A:C6	57:BB:944:C:C5	3.03	0.46
57:BB:1082:U:N3	57:BB:1086:A:C2	2.84	0.46
6:AO:80:LEU:HD12	6:AO:83:ARG:HH12	1.81	0.46
29:BJ:37:ARG:HH21	57:BB:1007:C:H5''	1.81	0.46
31:BL:56:PRO:HB2	31:BL:59:ARG:H	1.81	0.46
57:BB:1615:C:H2'	57:BB:1617:C:C6	2.50	0.46
6:AO:80:LEU:HG	6:AO:83:ARG:HH22	1.80	0.46
21:AA:143:A:H4'	21:AA:196:A:C6	2.50	0.46
21:AA:1121:U:C2	21:AA:1153:G:C2	3.04	0.46
23:AW:63:G:C4	23:AW:63:G:C8	3.04	0.46
25:AZ:95:ALA:HA	25:AZ:98:MET:HE2	1.97	0.46
36:BQ:67:ALA:HA	36:BQ:70:GLN:HE21	1.81	0.46
56:BH:116:ARG:HE	56:BH:122:LEU:HD22	1.81	0.46
57:BB:1128:G:N7	57:BB:2490:G:H5'	2.31	0.46
50:B3:30:HIS:CE1	57:BB:2421:G:OP2	2.69	0.46
57:BB:1576:U:C2	57:BB:1577:C:C5	3.04	0.46
45:BC:106:PRO:HG2	45:BC:109:LEU:H	1.81	0.46
45:BC:219:VAL:HG11	57:BB:782:A:H2'	1.97	0.46
15:AD:197:HIS:HB3	16:AE:104:ILE:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:82:G:H3'	21:AA:83:C:H4'	1.98	0.46
21:AA:1273:C:H2'	21:AA:1274:A:O4'	2.15	0.46
57:BB:1751:U:H5'	57:BB:2860:A:H2	1.81	0.46
29:BJ:101:ILE:H	29:BJ:101:ILE:HD13	1.81	0.45
45:BC:190:THR:HG22	45:BC:192:GLY:H	1.81	0.45
57:BB:475:C:C4	57:BB:476:G:C5	3.04	0.45
18:AG:4:ARG:HE	18:AG:5:VAL:H	1.62	0.45
21:AA:697:U:H3	21:AA:798:U:C1'	2.29	0.45
23:AW:39:U:C2'	23:AW:40:C:H5''	2.46	0.45
23:AW:56:C:H42	27:B5:130:VAL:HG23	1.80	0.45
57:BB:1223:G:C6	57:BB:1227:G:C6	3.04	0.45
57:BB:1486:U:C2	57:BB:1504:A:C2	3.04	0.45
14:AC:176:THR:HG22	14:AC:178:ARG:H	1.81	0.45
21:AA:1226:C:H4'	21:AA:1227:A:OP1	2.17	0.45
57:BB:30:G:C5	57:BB:31:C:C4	3.04	0.45
57:BB:874:G:C6	57:BB:875:G:C5	3.04	0.45
57:BB:1003:G:C2	57:BB:1153:C:C2	3.05	0.45
57:BB:2154:A:C5	57:BB:2155:U:C4	3.05	0.45
18:AG:145:GLU:H	18:AG:148:LYS:HB3	1.82	0.45
21:AA:202:G:N2	21:AA:216:U:C2	2.85	0.45
27:B5:76:ALA:HB3	27:B5:100:LEU:HD11	1.99	0.45
41:BV:11:GLU:HB3	41:BV:16:ALA:HB1	1.98	0.45
57:BB:2:G:C6	57:BB:3:U:C4	3.05	0.45
57:BB:641:U:C4	57:BB:642:U:C4	3.05	0.45
57:BB:2167:U:H2'	57:BB:2168:G:O4'	2.16	0.45
21:AA:956:U:H1'	21:AA:1227:A:H61	1.81	0.45
21:AA:1525:G:C6	21:AA:1526:G:C5	3.05	0.45
54:BF:49:LEU:HD12	54:BF:49:LEU:H	1.81	0.45
55:BG:61:TRP:H	55:BG:64:ALA:HB3	1.81	0.45
57:BB:1642:G:C6	57:BB:1643:G:C5	3.04	0.45
57:BB:945:A:C5	57:BB:2448:A:C2	3.04	0.45
57:BB:2030:A:H4'	57:BB:2031:A:C8	2.52	0.45
15:AD:36:ALA:HB3	15:AD:43:ARG:HH21	1.82	0.45
18:AG:129:ASN:HB3	18:AG:131:GLY:H	1.81	0.45
18:AG:55:LYS:H	18:AG:55:LYS:HD3	1.81	0.45
21:AA:1071:C:H2'	21:AA:1072:G:H8	1.82	0.45
45:BC:107:LYS:HE2	45:BC:125:PRO:HG3	1.98	0.45
56:BH:5:LEU:HD13	56:BH:14:SER:H	1.82	0.45
39:BT:6:ARG:HH12	57:BB:144:A:H4'	1.81	0.45
57:BB:1099:G:C5	57:BB:1100:C:C4	3.04	0.45
57:BB:2267:A:C8	57:BB:2267:A:H3'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:2345:G:C5	57:BB:2347:C:C5	3.04	0.45
4:AM:104:ASN:H	4:AM:106:ARG:HH12	1.65	0.45
5:AN:88:MET:HB3	14:AC:5:HIS:CD2	2.51	0.45
23:AW:38:A:H3'	23:AW:39:U:H5''	1.98	0.45
54:BF:102:LEU:HD22	54:BF:137:PHE:HA	1.99	0.45
57:BB:1021:A:C2	57:BB:1023:U:C2	3.05	0.45
57:BB:1166:G:C5	57:BB:1167:C:C5	3.04	0.45
57:BB:1783:A:C2	57:BB:2587:A:C5	3.05	0.45
57:BB:2330:G:C6	57:BB:2331:G:C5	3.05	0.45
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.52	0.44
53:BE:36:ALA:HB1	57:BB:443:A:H61	1.82	0.44
54:BF:24:VAL:HG22	54:BF:24:VAL:O	2.18	0.44
54:BF:132:ARG:H	54:BF:150:GLY:HA3	1.82	0.44
57:BB:1210:G:H3'	57:BB:1211:C:C5	2.52	0.44
57:BB:1839:G:H2'	57:BB:1840:G:C8	2.52	0.44
10:AS:26:ASP:HB3	10:AS:46:LEU:HD22	1.97	0.44
16:AE:95:MET:HE2	16:AE:95:MET:HB2	1.85	0.44
25:AZ:92:ILE:HD11	25:AZ:377:ARG:CZ	2.47	0.44
27:B5:172:HIS:HB3	57:BB:2123:G:H1'	1.99	0.44
36:BQ:40:LYS:O	36:BQ:44:TYR:CG	2.70	0.44
38:BS:76:VAL:CG2	38:BS:101:SER:HB3	2.47	0.44
57:BB:1224:U:C4	57:BB:1225:G:C6	3.05	0.44
57:BB:2070:A:C2	57:BB:2071:A:C4	3.05	0.44
57:BB:2447:G:C5	57:BB:2501:C:C2	3.05	0.44
35:BP:99:LEU:HD23	35:BP:102:ARG:HH21	1.82	0.44
40:BU:45:GLN:O	57:BB:483:A:H4'	2.16	0.44
57:BB:863:A:H61	57:BB:912:C:H42	1.64	0.44
21:AA:109:A:C8	21:AA:326:G:H2'	2.53	0.44
21:AA:1234:C:H1'	21:AA:1364:U:H6	1.81	0.44
25:AZ:19:HIS:CD2	25:AZ:114:GLN:H	2.33	0.44
40:BU:4:ILE:HD13	40:BU:4:ILE:H	1.81	0.44
47:B0:11:LYS:HE3	57:BB:2021:C:OP2	2.17	0.44
57:BB:2397:G:C6	57:BB:2398:U:C4	3.05	0.44
21:AA:238:A:H3'	21:AA:239:U:H5''	1.98	0.44
21:AA:310:G:C6	21:AA:311:C:C4	3.06	0.44
21:AA:769:G:H4'	21:AA:1513:A:H4'	1.99	0.44
21:AA:830:G:H2'	21:AA:831:A:C8	2.52	0.44
21:AA:1130:A:H3'	21:AA:1131:G:C8	2.53	0.44
21:AA:1130:A:H1'	21:AA:1146:A:C2	2.53	0.44
57:BB:1722:A:C4	57:BB:1739:A:C4	3.05	0.44
57:BB:2243:U:O2	57:BB:2434:A:C2	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:2245:U:O2	57:BB:2435:A:C8	2.70	0.44
13:AB:14:HIS:HE1	13:AB:202:ASN:H	1.65	0.44
33:BN:1:MET:HE2	57:BB:2822:G:C5	2.53	0.44
57:BB:308:G:C5	57:BB:309:A:C6	3.06	0.44
57:BB:2216:G:H2'	57:BB:2217:G:C8	2.53	0.44
5:AN:27:LYS:HA	5:AN:48:GLN:HE22	1.82	0.44
21:AA:594:U:C4	21:AA:595:A:C6	3.05	0.44
21:AA:1003:G:N2	21:AA:1005:A:H5'	2.33	0.44
47:B0:47:TYR:CD2	47:B0:51:ARG:O	2.71	0.44
52:BD:148:GLN:HE21	52:BD:152:PRO:HD3	1.83	0.44
57:BB:682:G:C6	57:BB:683:U:C4	3.05	0.44
57:BB:1717:A:C2	57:BB:1744:A:C4	3.06	0.44
21:AA:468:A:H3'	21:AA:469:C:C6	2.53	0.44
52:BD:134:HIS:CD2	57:BB:1675:C:C6	3.06	0.44
18:AG:129:ASN:HB2	18:AG:134:VAL:HG13	2.00	0.44
21:AA:257:G:H2'	21:AA:258:G:H5''	1.99	0.44
45:BC:219:VAL:HG13	57:BB:781:A:H4'	2.00	0.44
53:BE:23:PHE:CD1	53:BE:111:GLU:HG3	2.53	0.44
57:BB:188:G:C6	57:BB:189:G:C4	3.06	0.44
57:BB:563:A:C6	57:BB:564:C:C4	3.06	0.44
57:BB:2123:G:H22	57:BB:2176:A:H1'	1.82	0.44
25:AZ:306:SER:HA	25:AZ:389:ALA:H	1.82	0.43
44:BY:38:GLN:HA	57:BB:95:A:H4'	2.00	0.43
52:BD:24:VAL:HG23	52:BD:189:VAL:H	1.83	0.43
57:BB:1285:A:H2'	57:BB:1286:A:H5''	1.99	0.43
57:BB:1528:A:C4	57:BB:1544:A:C5	3.06	0.43
57:BB:1916:A:C2	57:BB:1917:U:C2	3.06	0.43
57:BB:2886:A:H3'	57:BB:2887:A:H5'	1.99	0.43
1:AJ:15:HIS:HB3	21:AA:1152:A:H5'	2.00	0.43
21:AA:185:U:H2'	21:AA:186:C:C6	2.53	0.43
21:AA:278:G:N2	21:AA:279:A:H62	2.17	0.43
21:AA:540:G:C6	21:AA:541:G:C5	3.06	0.43
21:AA:635:A:C6	21:AA:636:U:C4	3.06	0.43
21:AA:685:G:C2	21:AA:686:U:C4	3.06	0.43
28:BI:30:GLN:HE22	28:BI:58:ILE:HG22	1.83	0.43
29:BJ:77:HIS:CE1	57:BB:1131:G:C4	3.05	0.43
39:BT:77:ARG:HH21	39:BT:79:ASP:HA	1.82	0.43
57:BB:2297:A:H2'	57:BB:2298:A:H5'	2.00	0.43
57:BB:2799:A:C5	57:BB:2896:C:H5''	2.53	0.43
57:BB:2809:A:H2'	57:BB:2810:A:C8	2.53	0.43
9:AR:25:ILE:HG23	9:AR:26:ALA:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AW:63:G:C8	23:AW:63:G:C1'	2.92	0.43
57:BB:1074:G:C5	57:BB:1075:C:C5	3.06	0.43
57:BB:1360:G:C6	57:BB:1372:U:C2	3.06	0.43
57:BB:2553:G:H3'	57:BB:2554:U:H5''	1.99	0.43
3:AL:56:LEU:HG	3:AL:58:ASN:H	1.83	0.43
21:AA:359:G:C6	21:AA:360:G:C5	3.07	0.43
21:AA:764:C:C2'	21:AA:765:G:H5'	2.48	0.43
21:AA:764:C:H2'	21:AA:765:G:H5'	2.00	0.43
53:BE:159:LEU:HD23	53:BE:159:LEU:HA	1.82	0.43
57:BB:532:A:H4'	57:BB:533:G:C8	2.53	0.43
57:BB:877:A:C6	57:BB:901:C:C4	3.07	0.43
57:BB:1070:A:H3'	57:BB:1071:G:H5''	2.00	0.43
57:BB:1912:A:C8	57:BB:1918:A:C2	3.07	0.43
57:BB:2104:C:H2'	57:BB:2105:U:C6	2.54	0.43
58:BA:100:G:C6	58:BA:101:A:C5	3.06	0.43
10:AS:36:ARG:HH12	21:AA:1319:A:H4'	1.83	0.43
21:AA:192:A:C6	21:AA:193:C:C4	3.07	0.43
21:AA:515:G:C5	21:AA:516:U:C5	3.07	0.43
21:AA:773:G:N3	21:AA:807:A:C2	2.87	0.43
21:AA:979:C:H3'	21:AA:980:C:H6	1.83	0.43
21:AA:1300:G:C6	21:AA:1334:G:C5	3.07	0.43
47:B0:9:ARG:HH22	57:BB:1263:U:C5'	2.30	0.43
52:BD:150:GLN:HE21	57:BB:2572:A:N6	2.17	0.43
57:BB:1838:C:C5	57:BB:1899:A:C5	3.07	0.43
57:BB:2688:G:C2	57:BB:2720:U:C5	3.07	0.43
58:BA:75:G:H2'	58:BA:76:G:C8	2.53	0.43
3:AL:37:TYR:HB2	3:AL:51:VAL:HG23	1.99	0.43
6:AO:49:HIS:CE1	21:AA:764:C:O2'	2.71	0.43
18:AG:26:VAL:HG12	18:AG:42:VAL:HG21	2.01	0.43
21:AA:1434:A:C6	21:AA:1435:G:C6	3.06	0.43
22:AY:38:A:N6	22:AY:39:U:C5	2.87	0.43
25:AZ:140:VAL:HG11	25:AZ:146:LEU:HG	1.99	0.43
57:BB:150:U:H6	57:BB:150:U:O5'	2.01	0.43
57:BB:1063:G:C6	57:BB:1064:C:C4	3.06	0.43
57:BB:1092:C:H2'	57:BB:1093:G:H5'	1.99	0.43
57:BB:2097:A:H2'	57:BB:2098:U:C6	2.54	0.43
57:BB:2392:A:C6	57:BB:2393:U:C4	3.07	0.43
21:AA:697:U:H3	21:AA:798:U:H1'	1.84	0.43
21:AA:858:G:N1	21:AA:869:G:H2'	2.33	0.43
33:BN:12:ARG:HE	33:BN:12:ARG:HA	1.84	0.43
38:BS:47:VAL:HA	38:BS:50:VAL:HG22	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:1203:U:H3'	57:BB:1204:A:C5'	2.48	0.43
57:BB:2046:G:C4	57:BB:2623:G:C2	3.07	0.43
8:AQ:32:ILE:HD12	8:AQ:32:ILE:HA	1.96	0.43
11:AT:60:GLN:HG2	11:AT:65:LEU:HB3	2.01	0.43
21:AA:53:A:C2	21:AA:54:C:H1'	2.53	0.43
21:AA:1244:G:C6	21:AA:1294:G:C6	3.06	0.43
27:B5:60:ARG:HG3	27:B5:165:ASN:HD22	1.84	0.43
30:BK:5:THR:HG22	30:BK:6:MET:H	1.84	0.43
57:BB:1936:A:H2	57:BB:1943:U:C5	2.36	0.43
57:BB:2181:U:H3'	57:BB:2181:U:C6	2.53	0.43
57:BB:2352:A:C2'	57:BB:2353:G:H5'	2.49	0.43
15:AD:122:ILE:HG13	15:AD:123:MET:N	2.32	0.43
17:AF:3:HIS:CG	17:AF:4:TYR:H	2.37	0.43
21:AA:688:G:C6	21:AA:700:G:C6	3.06	0.43
22:AY:37:G:N2	24:AX:19:U:C6	2.87	0.43
28:BI:7:TYR:CD1	28:BI:59:THR:HA	2.54	0.43
37:BR:61:ALA:HA	37:BR:99:THR:H	1.84	0.43
52:BD:59:ARG:NH1	57:BB:2830:C:C5	2.87	0.43
3:AL:6:LEU:HB3	8:AQ:33:TYR:CZ	2.54	0.43
3:AL:98:ARG:HH21	3:AL:104:SER:H	1.65	0.43
21:AA:544:G:C5	21:AA:545:C:C5	3.07	0.43
21:AA:833:G:C6	21:AA:834:U:C4	3.07	0.43
21:AA:966:G:H2'	21:AA:967:C:C6	2.54	0.43
37:BR:49:ILE:HG22	37:BR:51:VAL:HG22	2.01	0.43
57:BB:2150:C:C5	57:BB:2151:U:C5	3.06	0.43
4:AM:84:CYS:HB2	4:AM:87:GLY:H	1.84	0.42
14:AC:112:ALA:H	14:AC:201:ILE:HD13	1.84	0.42
21:AA:1485:U:H2'	21:AA:1486:G:H8	1.84	0.42
57:BB:877:A:C6	57:BB:878:A:C4	3.07	0.42
57:BB:1444:G:C4	57:BB:1445:G:C8	3.07	0.42
57:BB:1487:U:H2'	57:BB:1488:C:H6	1.84	0.42
57:BB:2493:U:C4	57:BB:2494:G:C8	3.07	0.42
57:BB:2637:U:C5	57:BB:2638:G:C6	3.06	0.42
4:AM:21:ILE:HG13	4:AM:24:VAL:HG13	2.00	0.42
4:AM:102:LYS:HA	21:AA:1226:C:C5	2.53	0.42
13:AB:183:PHE:HB3	13:AB:197:PHE:HB3	2.01	0.42
14:AC:109:GLU:OE1	14:AC:143:LEU:HD23	2.19	0.42
15:AD:123:MET:HG3	15:AD:143:SER:O	2.19	0.42
21:AA:967:C:H2'	21:AA:968:A:C2	2.54	0.42
34:BO:90:VAL:HG22	34:BO:115:LEU:HD11	2.00	0.42
50:B3:30:HIS:CG	50:B3:31:ILE:N	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BE:6:LYS:HG3	53:BE:8:ALA:H	1.85	0.42
55:BG:169:ARG:HH22	55:BG:173:ALA:HA	1.84	0.42
57:BB:291:G:C6	57:BB:350:G:C6	3.06	0.42
57:BB:410:G:C2	57:BB:2407:A:C5	3.07	0.42
57:BB:581:C:H2'	57:BB:582:A:H8	1.83	0.42
57:BB:919:U:H2'	57:BB:920:A:C8	2.54	0.42
57:BB:932:U:H4'	57:BB:933:A:C4	2.53	0.42
57:BB:1667:G:H1	57:BB:1991:U:H3'	1.84	0.42
5:AN:63:CYS:HB3	5:AN:67:GLY:H	1.85	0.42
13:AB:186:VAL:HG22	13:AB:201:GLY:H	1.84	0.42
21:AA:66:A:H4'	21:AA:199:A:H4'	2.01	0.42
21:AA:688:G:H21	21:AA:704:A:H2	1.67	0.42
21:AA:860:A:H2'	21:AA:861:G:O4'	2.19	0.42
22:AY:67:A:H2'	22:AY:68:U:C6	2.54	0.42
22:AY:71:G:C6	22:AY:72:C:C5	3.08	0.42
57:BB:873:C:C2	57:BB:905:A:C2	3.07	0.42
57:BB:1634:A:H3'	57:BB:1635:A:C5'	2.49	0.42
57:BB:1848:A:H2'	57:BB:1849:G:O4'	2.19	0.42
57:BB:2357:G:N2	57:BB:2359:C:H3'	2.35	0.42
57:BB:2869:G:H2'	57:BB:2870:C:O4'	2.19	0.42
21:AA:246:A:C5	21:AA:279:A:C5	3.07	0.42
21:AA:728:A:H2'	21:AA:729:A:C8	2.55	0.42
21:AA:941:G:C5	21:AA:942:G:C8	3.07	0.42
21:AA:1108:G:C6	21:AA:1109:C:C4	3.07	0.42
22:AY:1:G:C5	22:AY:73:A:C2	3.07	0.42
23:AW:18:G:C2	23:AW:58:A:N7	2.86	0.42
28:BI:3:LYS:O	28:BI:4:VAL:HG23	2.19	0.42
41:BV:89:ILE:HG21	41:BV:91:PHE:CZ	2.55	0.42
57:BB:826:U:C2	57:BB:828:U:H1'	2.55	0.42
57:BB:1365:A:C2	57:BB:1366:A:H1'	2.55	0.42
57:BB:1426:G:C2'	57:BB:1572:A:H61	2.32	0.42
57:BB:1916:A:H2'	57:BB:1917:U:C6	2.54	0.42
57:BB:2075:U:C4	57:BB:2238:G:C6	3.08	0.42
57:BB:2630:G:C4	57:BB:2894:G:C2	3.08	0.42
57:BB:2835:A:H61	57:BB:2878:U:H2'	1.82	0.42
1:AJ:39:PRO:HA	1:AJ:74:VAL:HA	2.00	0.42
9:AR:53:GLN:N	9:AR:56:ARG:HH21	2.17	0.42
21:AA:1315:U:H2'	21:AA:1316:G:O4'	2.19	0.42
21:AA:1380:U:H1'	21:AA:1381:U:C5	2.55	0.42
22:AY:16:U:H5	22:AY:17:U:C4	2.38	0.42
25:AZ:92:ILE:H	25:AZ:92:ILE:HG13	1.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BI:29:GLN:NE2	57:BB:1097:U:H3	2.18	0.42
45:BC:175:LEU:HD12	45:BC:179:GLU:HB2	2.00	0.42
57:BB:564:C:C2	57:BB:565:C:C6	3.07	0.42
57:BB:1402:U:H2'	57:BB:1403:A:O5'	2.20	0.42
17:AF:38:ARG:HB3	17:AF:63:ASN:HD22	1.85	0.42
21:AA:858:G:N1	21:AA:869:G:H3'	2.35	0.42
21:AA:1012:A:C2	21:AA:1018:G:C2	3.08	0.42
33:BN:54:LEU:HD13	33:BN:54:LEU:O	2.18	0.42
45:BC:130:PRO:HB3	45:BC:186:ASP:HA	2.01	0.42
57:BB:268:C:O2	57:BB:268:C:H2'	2.20	0.42
57:BB:766:U:H2'	57:BB:767:U:C6	2.54	0.42
57:BB:921:C:H4'	57:BB:2269:G:C5	2.54	0.42
57:BB:2373:G:H2'	57:BB:2374:C:C6	2.55	0.42
2:AK:39:ASN:HD22	21:AA:683:G:H21	1.68	0.42
16:AE:17:VAL:HA	16:AE:34:ALA:HB2	2.02	0.42
21:AA:174:A:C5	21:AA:175:C:C5	3.08	0.42
21:AA:1043:G:H2'	21:AA:1044:A:C8	2.55	0.42
27:B5:212:VAL:HG11	27:B5:227:ALA:HB3	2.02	0.42
42:BW:24:ARG:HH11	57:BB:924:G:H1'	1.84	0.42
57:BB:861:A:H2'	57:BB:862:G:O4'	2.20	0.42
57:BB:2758:A:C2	57:BB:2759:G:H1'	2.55	0.42
14:AC:155:ARG:HD3	21:AA:1056:U:H4'	2.01	0.42
21:AA:981:U:H2'	21:AA:982:U:C6	2.55	0.42
57:BB:5:A:H2'	57:BB:6:A:H8	1.83	0.42
57:BB:727:A:H2'	57:BB:728:G:C8	2.55	0.42
57:BB:1722:A:H1'	57:BB:1739:A:C2	2.54	0.42
57:BB:2102:G:H2'	57:BB:2103:C:O4'	2.20	0.42
57:BB:2865:U:C4	57:BB:2866:U:C4	3.07	0.42
10:AS:18:VAL:O	10:AS:22:VAL:HG22	2.20	0.42
21:AA:1206:G:C6	21:AA:1207:G:C5	3.08	0.42
21:AA:1436:U:H2'	21:AA:1437:A:C8	2.55	0.42
57:BB:547:A:C8	57:BB:548:G:N2	2.88	0.42
4:AM:88:LEU:H	4:AM:88:LEU:HG	1.64	0.42
13:AB:50:ASN:HA	13:AB:53:LEU:HD12	2.01	0.42
18:AG:115:MET:HE2	21:AA:1240:U:C4	2.54	0.42
21:AA:859:G:H2'	21:AA:860:A:C8	2.55	0.42
21:AA:1118:U:H3'	21:AA:1119:C:H6	1.85	0.42
21:AA:1133:G:C6	21:AA:1134:G:N7	2.88	0.42
57:BB:30:G:H2'	57:BB:31:C:C6	2.55	0.42
57:BB:1783:A:C2	57:BB:2587:A:C4	3.08	0.42
57:BB:2252:G:H3'	57:BB:2253:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:2583:G:C6	57:BB:2584:U:C2	3.08	0.42
6:AO:80:LEU:HA	6:AO:83:ARG:NH1	2.35	0.41
21:AA:1117:A:C2	21:AA:1180:A:H1'	2.54	0.41
44:BY:55:THR:C	44:BY:57:LEU:H	2.28	0.41
57:BB:515:A:C8	57:BB:516:C:C6	3.08	0.41
57:BB:1024:G:C5	57:BB:1025:G:C5	3.08	0.41
57:BB:2727:A:H2'	57:BB:2728:U:C6	2.55	0.41
21:AA:81:A:C2	21:AA:89:U:O2	2.73	0.41
21:AA:958:A:C6	21:AA:959:A:N1	2.89	0.41
21:AA:1121:U:C2	21:AA:1153:G:N2	2.88	0.41
23:AW:56:C:H41	57:BB:2169:A:H61	1.67	0.41
31:BL:54:GLN:HE22	57:BB:834:G:H1'	1.85	0.41
39:BT:14:PRO:HB2	39:BT:16:VAL:HG22	2.01	0.41
42:BW:22:VAL:HG11	57:BB:856:G:N3	2.35	0.41
53:BE:21:ARG:HH22	53:BE:23:PHE:C	2.28	0.41
57:BB:299:A:C8	57:BB:322:A:C2	3.09	0.41
57:BB:520:G:C6	57:BB:521:U:C4	3.08	0.41
57:BB:775:G:C4	57:BB:794:A:C8	3.08	0.41
57:BB:870:U:H2'	57:BB:871:U:H5''	2.01	0.41
57:BB:1360:G:C8	57:BB:1361:G:C8	3.07	0.41
57:BB:1699:G:O6	57:BB:1763:G:C8	2.73	0.41
57:BB:1770:G:C5	57:BB:1983:G:C6	3.08	0.41
57:BB:2071:A:H2'	57:BB:2072:C:H6	1.84	0.41
21:AA:93:U:H2'	21:AA:94:G:H5'	2.01	0.41
21:AA:844:G:C8	21:AA:846:G:H1'	2.55	0.41
21:AA:1130:A:H3'	21:AA:1131:G:H8	1.85	0.41
21:AA:1361:G:C2'	21:AA:1362:A:H5''	2.50	0.41
21:AA:1379:G:H2'	21:AA:1380:U:C6	2.56	0.41
25:AZ:85:ALA:HA	25:AZ:88:VAL:HG13	2.02	0.41
50:B3:63:TYR:CZ	57:BB:242:G:H5''	2.55	0.41
57:BB:24:G:C2	57:BB:25:U:C2	3.08	0.41
57:BB:111:A:H2'	57:BB:112:U:O4'	2.20	0.41
57:BB:489:G:C5	57:BB:491:G:C5	3.08	0.41
57:BB:649:G:H2'	57:BB:650:C:O4'	2.20	0.41
57:BB:1817:G:C5	57:BB:1818:U:C5	3.08	0.41
57:BB:2126:A:C2	57:BB:2162:G:N1	2.88	0.41
57:BB:2188:U:C4	57:BB:2189:U:C4	3.08	0.41
58:BA:11:C:H3'	58:BA:12:C:H6	1.84	0.41
21:AA:228:A:H2'	21:AA:229:U:O4'	2.20	0.41
21:AA:707:U:H2'	21:AA:708:C:C6	2.55	0.41
22:AY:67:A:H2'	22:AY:68:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BK:10:ALA:HB2	30:BK:82:ALA:HB1	2.03	0.41
57:BB:152:A:C4	57:BB:175:G:N2	2.89	0.41
57:BB:607:U:C4	57:BB:608:A:N7	2.88	0.41
57:BB:963:U:H2'	57:BB:964:C:C6	2.55	0.41
21:AA:34:C:H2'	21:AA:35:G:C8	2.55	0.41
21:AA:1207:G:C6	21:AA:1208:C:C4	3.08	0.41
21:AA:1225:A:H2'	21:AA:1226:C:C6	2.56	0.41
21:AA:1396:A:H4'	21:AA:1397:C:H5''	2.02	0.41
23:AW:51:U:C2	23:AW:64:A:C2	3.09	0.41
27:B5:26:ALA:HB1	27:B5:214:ILE:HG21	2.02	0.41
57:BB:2112:G:C8	57:BB:2112:G:H3'	2.55	0.41
57:BB:2710:C:H2'	57:BB:2711:A:C8	2.56	0.41
21:AA:1206:G:C6	21:AA:1207:G:C6	3.08	0.41
22:AY:41:U:C2	22:AY:42:G:C8	3.09	0.41
49:B2:24:THR:HG23	49:B2:26:ASN:H	1.85	0.41
57:BB:1428:C:C5	57:BB:1569:A:H5''	2.56	0.41
57:BB:2343:U:H4'	57:BB:2374:C:H5'	2.03	0.41
57:BB:2734:A:H2'	57:BB:2735:G:H5'	2.03	0.41
21:AA:36:C:C4	21:AA:37:U:C4	3.09	0.41
21:AA:46:G:C6	21:AA:366:A:C2	3.09	0.41
21:AA:1300:G:C5	21:AA:1334:G:C5	3.09	0.41
35:BP:77:SER:O	35:BP:80:VAL:HG12	2.21	0.41
57:BB:402:A:N7	57:BB:403:U:C4	2.89	0.41
57:BB:2645:G:H3'	57:BB:2646:C:H5'	2.02	0.41
57:BB:2740:A:C6	57:BB:2741:A:C6	3.09	0.41
15:AD:4:LEU:HD11	21:AA:405:U:C5	2.55	0.41
27:B5:167:LYS:HB2	57:BB:2120:G:H21	1.84	0.41
34:BO:117:PHE:CE1	57:BB:2377:A:N3	2.89	0.41
57:BB:545:U:H3'	57:BB:547:A:OP2	2.20	0.41
57:BB:1135:C:C6	57:BB:1137:G:OP2	2.74	0.41
57:BB:2091:C:H3'	57:BB:2092:U:C5'	2.50	0.41
57:BB:2379:G:H2'	57:BB:2380:C:C6	2.55	0.41
57:BB:2537:U:H2'	57:BB:2538:C:C6	2.56	0.41
57:BB:2596:U:C4	57:BB:2597:G:C6	3.09	0.41
58:BA:85:G:C2	58:BA:92:C:C2	3.09	0.41
5:AN:2:LYS:HD2	21:AA:1049:U:H3'	2.03	0.41
21:AA:59:A:H3'	21:AA:60:A:C5'	2.50	0.41
21:AA:836:G:C5	21:AA:851:G:C6	3.08	0.41
21:AA:1231:G:C6	21:AA:1232:U:C4	3.09	0.41
40:BU:5:ARG:HH11	40:BU:92:VAL:HG22	1.85	0.41
40:BU:44:HIS:HB2	57:BB:482:A:H4'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:245:G:C6	57:BB:246:C:C4	3.09	0.41
57:BB:250:G:C5	57:BB:251:A:C5	3.09	0.41
57:BB:346:A:C2	57:BB:347:A:C5	3.09	0.41
57:BB:663:G:C6	57:BB:664:G:C5	3.09	0.41
57:BB:1202:G:C6	57:BB:1244:A:N1	2.89	0.41
57:BB:1669:A:H2'	57:BB:1670:C:H5'	2.03	0.41
57:BB:1878:G:C6	57:BB:1879:C:C4	3.09	0.41
57:BB:1961:C:C2'	57:BB:1962:C:H5'	2.50	0.41
57:BB:2027:G:N3	57:BB:2037:A:C2	2.88	0.41
57:BB:2119:A:C2	57:BB:2170:A:C2	3.09	0.41
57:BB:2468:A:C2	57:BB:2481:G:N3	2.89	0.41
57:BB:2645:G:H3'	57:BB:2646:C:C5'	2.51	0.41
57:BB:2790:U:O4'	57:BB:2893:A:C8	2.74	0.41
58:BA:79:G:C6	58:BA:80:U:C4	3.08	0.41
4:AM:70:ARG:NE	54:BF:114:ARG:HE	2.19	0.41
10:AS:26:ASP:OD2	10:AS:30:LEU:HD21	2.21	0.41
10:AS:35:ARG:HH22	10:AS:76:THR:HG22	1.86	0.41
20:AI:34:LEU:C	20:AI:36:GLN:H	2.29	0.41
21:AA:925:G:H1'	21:AA:1502:A:C4	2.56	0.41
25:AZ:107:ALA:HB2	25:AZ:134:LEU:HB3	2.02	0.41
56:BH:77:THR:HB	56:BH:78:VAL:H	1.77	0.41
57:BB:670:A:H4'	57:BB:671:C:H5'	2.02	0.41
57:BB:735:A:H3'	57:BB:736:C:H6	1.86	0.41
57:BB:796:C:H2'	57:BB:797:G:C8	2.56	0.41
21:AA:678:U:H2'	21:AA:679:C:C6	2.57	0.40
33:BN:32:GLU:HB2	33:BN:118:ARG:HH21	1.86	0.40
57:BB:373:U:O2	57:BB:373:U:H2'	2.21	0.40
57:BB:648:G:H5''	57:BB:2352:A:C5'	2.51	0.40
57:BB:738:G:C6	57:BB:759:G:C6	3.09	0.40
57:BB:2014:A:C2	57:BB:2015:A:N1	2.89	0.40
58:BA:81:G:C5	58:BA:82:U:C5	3.09	0.40
5:AN:89:ARG:HA	14:AC:5:HIS:CE1	2.56	0.40
17:AF:39:LEU:HD12	17:AF:61:LEU:O	2.20	0.40
18:AG:98:LEU:HD23	18:AG:98:LEU:HA	1.94	0.40
21:AA:748:G:C6	21:AA:749:A:C5	3.09	0.40
21:AA:1084:G:H2'	21:AA:1085:U:C6	2.56	0.40
23:AW:76:A:C2	57:BB:2421:G:C6	3.09	0.40
25:AZ:27:LEU:HD23	25:AZ:27:LEU:HA	2.02	0.40
52:BD:3:GLY:HA2	52:BD:204:LYS:HA	2.03	0.40
57:BB:548:G:H5'	57:BB:549:G:N3	2.37	0.40
57:BB:754:U:H2'	57:BB:755:U:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BB:776:G:C4	57:BB:793:A:C5	3.10	0.40
57:BB:1296:G:C2	57:BB:1645:G:C4	3.08	0.40
57:BB:1344:U:H4'	57:BB:1384:A:C5	2.56	0.40
57:BB:1423:G:C6	57:BB:1424:G:C5	3.10	0.40
57:BB:1751:U:H5'	57:BB:2860:A:C2	2.56	0.40
57:BB:2126:A:C2	57:BB:2173:A:C4	3.08	0.40
21:AA:881:G:C5	21:AA:882:C:C5	3.10	0.40
33:BN:1:MET:HE2	57:BB:2822:G:C4	2.57	0.40
45:BC:57:HIS:HE1	57:BB:1568:G:H1'	1.86	0.40
54:BF:124:ARG:NE	54:BF:124:ARG:HA	2.36	0.40
57:BB:57:C:H2'	57:BB:58:G:O4'	2.21	0.40
57:BB:2043:C:C2	57:BB:2044:C:C5	3.09	0.40
57:BB:2298:A:C8	57:BB:2299:U:C5	3.08	0.40
57:BB:2662:A:H2'	57:BB:2663:G:O4'	2.21	0.40
57:BB:2686:G:C5	57:BB:2687:U:C4	3.10	0.40
15:AD:146:GLU:HB2	15:AD:147:LYS:H	1.68	0.40
27:B5:78:PHE:CD2	27:B5:120:ALA:HB1	2.57	0.40
31:BL:116:VAL:HG13	31:BL:138:ALA:HB2	2.02	0.40
37:BR:59:ILE:HA	37:BR:101:ILE:H	1.87	0.40
45:BC:2:VAL:HG13	45:BC:16:VAL:HG13	2.04	0.40
57:BB:46:G:C6	57:BB:180:G:C5	3.10	0.40
57:BB:644:A:H4'	57:BB:645:C:C5	2.56	0.40
57:BB:895:U:H4'	57:BB:896:A:C4	2.57	0.40
57:BB:1831:G:C5	57:BB:1832:C:C5	3.10	0.40
57:BB:1839:G:H2'	57:BB:1840:G:H8	1.87	0.40
15:AD:141:VAL:HG22	15:AD:180:THR:HG22	2.03	0.40
15:AD:187:ARG:C	15:AD:189:ASP:N	2.80	0.40
20:AI:33:SER:H	20:AI:36:GLN:HB2	1.87	0.40
21:AA:1008:U:C5	21:AA:1009:U:C5	3.09	0.40
21:AA:1343:G:H2'	21:AA:1344:C:C6	2.57	0.40
21:AA:1395:C:C4'	21:AA:1401:G:H21	2.34	0.40
22:AY:37:G:N2	24:AX:19:U:C5	2.90	0.40
43:BX:51:SER:HB2	43:BX:54:GLY:H	1.87	0.40
45:BC:75:ALA:HA	45:BC:95:TYR:HA	2.03	0.40
57:BB:112:U:C5	57:BB:113:U:C4	3.10	0.40
57:BB:648:G:H5''	57:BB:2352:A:H5''	2.03	0.40
57:BB:1091:G:C6	57:BB:1092:C:N4	2.90	0.40
57:BB:1831:G:C6	57:BB:1975:G:C6	3.10	0.40
57:BB:2714:G:C6	57:BB:2715:C:C4	3.10	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	AJ	96/98 (98%)	77 (80%)	11 (12%)	8 (8%)	0	9
2	AK	115/117 (98%)	90 (78%)	18 (16%)	7 (6%)	1	13
3	AL	121/123 (98%)	107 (88%)	11 (9%)	3 (2%)	4	26
4	AM	111/113 (98%)	81 (73%)	20 (18%)	10 (9%)	0	8
5	AN	94/96 (98%)	67 (71%)	18 (19%)	9 (10%)	0	7
6	AO	86/88 (98%)	73 (85%)	8 (9%)	5 (6%)	1	13
7	AP	78/80 (98%)	61 (78%)	14 (18%)	3 (4%)	2	19
8	AQ	78/80 (98%)	62 (80%)	13 (17%)	3 (4%)	2	19
9	AR	53/55 (96%)	43 (81%)	10 (19%)	0	100	100
10	AS	77/79 (98%)	55 (71%)	17 (22%)	5 (6%)	1	12
11	AT	83/85 (98%)	73 (88%)	8 (10%)	2 (2%)	4	27
12	AU	49/51 (96%)	35 (71%)	10 (20%)	4 (8%)	0	9
13	AB	216/218 (99%)	166 (77%)	37 (17%)	13 (6%)	1	13
14	AC	204/206 (99%)	168 (82%)	26 (13%)	10 (5%)	1	16
15	AD	203/205 (99%)	161 (79%)	28 (14%)	14 (7%)	1	11
16	AE	148/150 (99%)	118 (80%)	21 (14%)	9 (6%)	1	13
17	AF	98/100 (98%)	79 (81%)	15 (15%)	4 (4%)	2	18
18	AG	148/150 (99%)	122 (82%)	18 (12%)	8 (5%)	1	14
19	AH	127/129 (98%)	96 (76%)	26 (20%)	5 (4%)	2	18
20	AI	125/127 (98%)	102 (82%)	21 (17%)	2 (2%)	7	38
25	AZ	391/393 (100%)	319 (82%)	52 (13%)	20 (5%)	1	15
27	B5	232/234 (99%)	195 (84%)	31 (13%)	6 (3%)	4	25
28	BI	139/141 (99%)	121 (87%)	11 (8%)	7 (5%)	1	16
29	BJ	140/142 (99%)	116 (83%)	11 (8%)	13 (9%)	0	8
30	BK	119/121 (98%)	96 (81%)	18 (15%)	5 (4%)	2	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
31	BL	141/143 (99%)	118 (84%)	16 (11%)	7 (5%)	1	16
32	BM	134/136 (98%)	101 (75%)	26 (19%)	7 (5%)	1	15
33	BN	118/120 (98%)	97 (82%)	17 (14%)	4 (3%)	3	21
34	BO	114/116 (98%)	100 (88%)	8 (7%)	6 (5%)	1	14
35	BP	112/114 (98%)	87 (78%)	15 (13%)	10 (9%)	0	8
36	BQ	115/117 (98%)	99 (86%)	14 (12%)	2 (2%)	7	36
37	BR	101/103 (98%)	83 (82%)	13 (13%)	5 (5%)	1	16
38	BS	108/110 (98%)	85 (79%)	15 (14%)	8 (7%)	1	10
39	BT	91/93 (98%)	64 (70%)	19 (21%)	8 (9%)	0	8
40	BU	100/102 (98%)	79 (79%)	13 (13%)	8 (8%)	1	9
41	BV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	5	29
42	BW	77/79 (98%)	56 (73%)	10 (13%)	11 (14%)	0	3
43	BX	75/77 (97%)	60 (80%)	10 (13%)	5 (7%)	1	12
44	BY	61/63 (97%)	47 (77%)	11 (18%)	3 (5%)	1	16
45	BC	269/271 (99%)	201 (75%)	43 (16%)	25 (9%)	0	8
46	BZ	56/58 (97%)	49 (88%)	7 (12%)	0	100	100
47	B0	54/56 (96%)	43 (80%)	9 (17%)	2 (4%)	2	19
48	B1	48/50 (96%)	44 (92%)	2 (4%)	2 (4%)	2	17
49	B2	44/46 (96%)	32 (73%)	11 (25%)	1 (2%)	5	28
50	B3	62/64 (97%)	54 (87%)	5 (8%)	3 (5%)	2	16
51	B4	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	4	24
52	BD	207/209 (99%)	152 (73%)	39 (19%)	16 (8%)	1	10
53	BE	199/201 (99%)	157 (79%)	29 (15%)	13 (6%)	1	12
54	BF	176/178 (99%)	129 (73%)	28 (16%)	19 (11%)	0	6
55	BG	174/176 (99%)	137 (79%)	23 (13%)	14 (8%)	1	9
56	BH	147/149 (99%)	107 (73%)	23 (16%)	17 (12%)	0	4
All	All	6242/6344 (98%)	4971 (80%)	897 (14%)	374 (6%)	2	13

All (374) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AJ	67	ILE
3	AL	24	GLU

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Mol	Chain	Res	Type
4	AM	3	ILE
4	AM	29	SER
4	AM	99	GLN
5	AN	26	LEU
5	AN	80	ARG
7	AP	65	ALA
8	AQ	71	SER
10	AS	27	LYS
10	AS	37	SER
13	AB	20	ARG
13	AB	205	ALA
14	AC	21	TRP
14	AC	63	ILE
15	AD	3	TYR
15	AD	45	PRO
16	AE	17	VAL
16	AE	106	ALA
17	AF	85	ILE
18	AG	127	ALA
19	AH	66	GLN
25	AZ	22	HIS
25	AZ	24	LYS
27	B5	36	ALA
27	B5	92	ALA
27	B5	134	ARG
28	BI	3	LYS
29	BJ	40	HIS
30	BK	72	ASP
31	BL	111	ILE
32	BM	43	ALA
37	BR	82	HIS
38	BS	76	VAL
38	BS	96	ILE
39	BT	21	SER
40	BU	75	ALA
42	BW	23	LYS
42	BW	35	ILE
42	BW	48	ALA
43	BX	41	SER
45	BC	35	LYS
45	BC	117	SER
45	BC	142	ASN

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Mol	Chain	Res	Type
45	BC	170	TYR
47	B0	44	ALA
50	B3	29	ARG
52	BD	31	ALA
53	BE	46	GLN
54	BF	13	LYS
54	BF	60	SER
54	BF	82	TYR
54	BF	84	ILE
55	BG	2	ARG
55	BG	62	ALA
56	BH	93	SER
56	BH	102	ALA
56	BH	116	ARG
56	BH	122	LEU
56	BH	130	VAL
1	AJ	17	LEU
1	AJ	57	VAL
1	AJ	74	VAL
1	AJ	75	ASP
2	AK	35	ASP
2	AK	101	ALA
2	AK	118	ASN
3	AL	62	VAL
4	AM	87	GLY
5	AN	21	ALA
5	AN	30	ILE
5	AN	43	ALA
8	AQ	12	VAL
10	AS	31	ARG
12	AU	9	GLU
14	AC	162	ALA
15	AD	7	LYS
15	AD	34	GLU
15	AD	42	ALA
15	AD	146	GLU
16	AE	121	ASN
17	AF	94	HIS
18	AG	109	LYS
18	AG	118	ARG
25	AZ	21	ASP
25	AZ	61	THR

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Mol	Chain	Res	Type
25	AZ	82	PRO
25	AZ	125	VAL
25	AZ	143	GLU
25	AZ	220	ILE
25	AZ	239	GLY
27	B5	159	GLY
28	BI	6	ALA
29	BJ	81	ILE
29	BJ	99	ARG
29	BJ	110	PRO
29	BJ	112	GLY
29	BJ	125	TYR
30	BK	34	VAL
31	BL	60	ARG
31	BL	85	VAL
32	BM	72	PRO
32	BM	73	ILE
33	BN	113	ILE
34	BO	95	SER
35	BP	48	ALA
35	BP	54	LEU
35	BP	103	THR
38	BS	11	ARG
38	BS	61	ASN
39	BT	16	VAL
40	BU	97	SER
41	BV	60	VAL
42	BW	30	VAL
42	BW	71	LYS
43	BX	40	GLU
43	BX	42	GLU
44	BY	10	SER
45	BC	22	GLU
45	BC	57	HIS
45	BC	116	GLN
50	B3	5	THR
51	B4	8	LYS
52	BD	102	ALA
52	BD	109	VAL
52	BD	122	VAL
52	BD	127	PHE
52	BD	175	LEU

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Mol	Chain	Res	Type
53	BE	9	GLN
53	BE	48	THR
54	BF	39	VAL
54	BF	88	VAL
54	BF	133	GLU
55	BG	83	THR
55	BG	150	TYR
56	BH	115	VAL
56	BH	142	VAL
1	AJ	85	ASP
2	AK	120	CYS
6	AO	22	GLY
6	AO	45	HIS
12	AU	26	GLY
13	AB	12	GLY
13	AB	77	GLU
13	AB	98	GLY
13	AB	99	MET
14	AC	116	ALA
17	AF	33	GLU
19	AH	106	SER
19	AH	116	ARG
25	AZ	180	GLY
25	AZ	281	ILE
25	AZ	345	GLU
27	B5	218	MET
28	BI	20	SER
29	BJ	26	GLY
29	BJ	60	ASP
29	BJ	67	ASN
30	BK	90	SER
31	BL	70	LYS
31	BL	82	LEU
35	BP	97	TYR
35	BP	98	TYR
36	BQ	88	GLU
37	BR	54	VAL
38	BS	64	ALA
38	BS	65	ASP
39	BT	73	ARG
40	BU	12	VAL
42	BW	17	ALA

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Mol	Chain	Res	Type
43	BX	27	ARG
45	BC	7	PRO
45	BC	29	PHE
45	BC	54	GLY
45	BC	184	GLU
45	BC	189	ALA
45	BC	197	ALA
48	B1	24	LYS
48	B1	50	GLU
52	BD	162	ALA
52	BD	192	ALA
53	BE	23	PHE
53	BE	71	GLY
53	BE	96	VAL
54	BF	2	LYS
54	BF	74	ALA
54	BF	107	VAL
54	BF	119	LYS
55	BG	36	LEU
55	BG	47	ASN
55	BG	154	GLU
56	BH	8	LYS
56	BH	14	SER
56	BH	33	GLN
56	BH	67	ALA
56	BH	113	SER
56	BH	126	GLY
2	AK	52	ARG
4	AM	6	ILE
4	AM	16	ILE
4	AM	65	GLU
5	AN	28	ALA
5	AN	62	ARG
6	AO	19	ASN
7	AP	36	VAL
10	AS	24	SER
12	AU	28	LEU
13	AB	78	ALA
13	AB	167	HIS
14	AC	167	TYR
15	AD	6	PRO
15	AD	26	ALA

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Mol	Chain	Res	Type
16	AE	25	LYS
16	AE	40	ASP
16	AE	110	MET
25	AZ	63	ASN
25	AZ	209	PRO
25	AZ	222	GLY
28	BI	76	ALA
30	BK	5	THR
31	BL	68	SER
32	BM	51	ARG
32	BM	122	ALA
33	BN	70	THR
34	BO	58	ILE
35	BP	81	ASP
35	BP	105	LYS
35	BP	107	ALA
36	BQ	24	TYR
39	BT	18	GLU
39	BT	41	ALA
40	BU	47	PRO
40	BU	62	ALA
40	BU	63	ALA
40	BU	74	ALA
40	BU	98	ASN
42	BW	14	ASP
42	BW	56	HIS
43	BX	34	SER
44	BY	9	LYS
45	BC	28	PRO
45	BC	68	ARG
45	BC	122	ALA
45	BC	229	HIS
45	BC	239	PHE
47	B0	33	SER
50	B3	53	ASP
52	BD	135	GLY
52	BD	144	GLY
53	BE	6	LYS
53	BE	10	SER
53	BE	11	ALA
53	BE	45	ALA
53	BE	61	ARG

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Mol	Chain	Res	Type
54	BF	35	LEU
54	BF	69	ALA
54	BF	132	ARG
54	BF	149	ARG
55	BG	58	ALA
55	BG	135	ALA
56	BH	29	PHE
56	BH	109	GLU
56	BH	123	ARG
3	AL	100	ALA
4	AM	21	ILE
5	AN	45	LEU
5	AN	99	SER
6	AO	18	ALA
6	AO	87	ARG
7	AP	53	ASP
11	AT	67	HIS
12	AU	21	SER
13	AB	18	GLN
13	AB	219	THR
14	AC	42	LEU
14	AC	65	VAL
14	AC	163	ARG
15	AD	40	HIS
15	AD	121	ALA
16	AE	26	GLY
17	AF	56	LYS
18	AG	40	SER
18	AG	129	ASN
20	AI	128	LYS
25	AZ	30	ALA
25	AZ	247	ILE
28	BI	37	PHE
28	BI	69	VAL
29	BJ	65	THR
29	BJ	69	ARG
30	BK	92	GLN
32	BM	69	PRO
33	BN	59	SER
34	BO	51	ALA
34	BO	112	GLU
37	BR	43	ASN

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Mol	Chain	Res	Type
37	BR	98	ILE
38	BS	90	LYS
39	BT	43	ILE
39	BT	55	VAL
39	BT	64	LYS
41	BV	71	LYS
42	BW	24	ARG
42	BW	75	ASN
45	BC	21	PRO
45	BC	52	HIS
45	BC	77	VAL
45	BC	97	ASP
45	BC	205	GLY
45	BC	254	LYS
49	B2	41	ARG
52	BD	149	ASN
53	BE	83	VAL
54	BF	136	ILE
54	BF	176	PHE
55	BG	9	VAL
55	BG	80	GLU
55	BG	157	LYS
2	AK	125	LYS
4	AM	19	THR
13	AB	40	ILE
15	AD	23	GLY
16	AE	29	ILE
18	AG	146	ALA
19	AH	82	LEU
25	AZ	258	VAL
33	BN	98	LEU
34	BO	73	ALA
35	BP	113	LEU
42	BW	40	ARG
45	BC	171	VAL
55	BG	152	ARG
56	BH	31	VAL
1	AJ	41	PRO
4	AM	24	VAL
14	AC	14	VAL
14	AC	108	PRO
15	AD	185	PRO

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Mol	Chain	Res	Type
25	AZ	298	ILE
28	BI	22	PRO
29	BJ	124	VAL
53	BE	167	VAL
54	BF	12	VAL
54	BF	110	ILE
8	AQ	31	PRO
15	AD	24	VAL
16	AE	15	ILE
18	AG	15	PRO
18	AG	79	VAL
27	B5	209	ILE
32	BM	125	PRO
44	BY	46	VAL
52	BD	166	GLY
52	BD	203	VAL
2	AK	96	ILE
37	BR	101	ILE
38	BS	45	VAL
52	BD	24	VAL
52	BD	93	GLY
52	BD	146	ILE
11	AT	56	ILE
13	AB	47	PRO
15	AD	166	LYS
19	AH	5	PRO
25	AZ	83	GLY
35	BP	45	VAL
55	BG	8	VAL
1	AJ	39	PRO
10	AS	29	PRO
13	AB	79	VAL
20	AI	124	PRO
29	BJ	46	PRO
31	BL	24	GLY
34	BO	41	ALA

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AJ	86/86 (100%)	78 (91%)	8 (9%)	8	26
2	AK	90/90 (100%)	87 (97%)	3 (3%)	33	55
3	AL	103/103 (100%)	99 (96%)	4 (4%)	28	49
4	AM	91/91 (100%)	82 (90%)	9 (10%)	7	24
5	AN	79/79 (100%)	79 (100%)	0	100	100
6	AO	76/76 (100%)	74 (97%)	2 (3%)	40	62
7	AP	65/65 (100%)	62 (95%)	3 (5%)	24	45
8	AQ	74/74 (100%)	69 (93%)	5 (7%)	14	36
9	AR	48/48 (100%)	45 (94%)	3 (6%)	16	37
10	AS	70/70 (100%)	67 (96%)	3 (4%)	26	47
11	AT	65/65 (100%)	65 (100%)	0	100	100
12	AU	44/44 (100%)	40 (91%)	4 (9%)	9	27
13	AB	180/180 (100%)	170 (94%)	10 (6%)	19	40
14	AC	170/170 (100%)	156 (92%)	14 (8%)	10	31
15	AD	172/172 (100%)	161 (94%)	11 (6%)	16	37
16	AE	113/113 (100%)	106 (94%)	7 (6%)	16	38
17	AF	87/87 (100%)	84 (97%)	3 (3%)	32	54
18	AG	123/123 (100%)	117 (95%)	6 (5%)	22	43
19	AH	104/104 (100%)	94 (90%)	10 (10%)	8	25
20	AI	105/105 (100%)	99 (94%)	6 (6%)	18	40
25	AZ	325/326 (100%)	307 (94%)	18 (6%)	19	41
27	B5	181/181 (100%)	167 (92%)	14 (8%)	12	32
28	BI	109/109 (100%)	101 (93%)	8 (7%)	13	34
29	BJ	116/116 (100%)	110 (95%)	6 (5%)	21	42
30	BK	102/102 (100%)	95 (93%)	7 (7%)	14	36
31	BL	102/102 (100%)	99 (97%)	3 (3%)	37	58
32	BM	109/109 (100%)	99 (91%)	10 (9%)	8	27
33	BN	100/100 (100%)	95 (95%)	5 (5%)	22	43
34	BO	86/86 (100%)	83 (96%)	3 (4%)	32	53
35	BP	99/99 (100%)	93 (94%)	6 (6%)	17	38

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	BQ	89/89 (100%)	87 (98%)	2 (2%)	45	64
37	BR	84/84 (100%)	79 (94%)	5 (6%)	17	39
38	BS	93/93 (100%)	89 (96%)	4 (4%)	26	47
39	BT	80/80 (100%)	74 (92%)	6 (8%)	12	33
40	BU	83/83 (100%)	73 (88%)	10 (12%)	5	17
41	BV	78/78 (100%)	77 (99%)	1 (1%)	61	74
42	BW	59/59 (100%)	54 (92%)	5 (8%)	10	29
43	BX	67/67 (100%)	60 (90%)	7 (10%)	7	22
44	BY	55/55 (100%)	54 (98%)	1 (2%)	51	68
45	BC	216/216 (100%)	204 (94%)	12 (6%)	19	40
46	BZ	48/48 (100%)	45 (94%)	3 (6%)	16	37
47	B0	47/47 (100%)	44 (94%)	3 (6%)	16	37
48	B1	45/45 (100%)	42 (93%)	3 (7%)	15	36
49	B2	38/38 (100%)	38 (100%)	0	100	100
50	B3	51/51 (100%)	48 (94%)	3 (6%)	18	39
51	B4	34/34 (100%)	34 (100%)	0	100	100
52	BD	164/164 (100%)	153 (93%)	11 (7%)	15	36
53	BE	165/165 (100%)	156 (94%)	9 (6%)	19	41
54	BF	149/149 (100%)	138 (93%)	11 (7%)	13	33
55	BG	137/137 (100%)	126 (92%)	11 (8%)	11	31
56	BH	114/114 (100%)	110 (96%)	4 (4%)	32	53
All	All	5170/5171 (100%)	4868 (94%)	302 (6%)	20	40

All (302) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AJ	15	HIS
1	AJ	25	ILE
1	AJ	31	ARG
1	AJ	44	THR
1	AJ	53	ILE
1	AJ	60	ASP
1	AJ	85	ASP
1	AJ	96	VAL
2	AK	55	ARG

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Mol	Chain	Res	Type
2	AK	75	GLU
2	AK	126	ARG
3	AL	29	LYS
3	AL	43	LYS
3	AL	72	ASN
3	AL	118	VAL
4	AM	12	LYS
4	AM	21	ILE
4	AM	26	LYS
4	AM	30	LYS
4	AM	52	ILE
4	AM	59	VAL
4	AM	61	LYS
4	AM	68	LEU
4	AM	102	LYS
6	AO	9	LYS
6	AO	88	ARG
7	AP	3	THR
7	AP	4	ILE
7	AP	52	LEU
8	AQ	16	MET
8	AQ	17	GLU
8	AQ	26	ARG
8	AQ	32	ILE
8	AQ	79	GLU
9	AR	23	LYS
9	AR	49	LYS
9	AR	59	LYS
10	AS	27	LYS
10	AS	42	ASN
10	AS	50	VAL
12	AU	20	ARG
12	AU	23	GLU
12	AU	34	ARG
12	AU	35	GLU
13	AB	44	LYS
13	AB	55	GLU
13	AB	62	ARG
13	AB	80	LYS
13	AB	100	LEU
13	AB	110	ILE
13	AB	156	LEU

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Mol	Chain	Res	Type
13	AB	188	THR
13	AB	199	ILE
13	AB	219	THR
14	AC	4	VAL
14	AC	27	GLU
14	AC	28	PHE
14	AC	38	VAL
14	AC	63	ILE
14	AC	83	VAL
14	AC	106	ARG
14	AC	111	ASP
14	AC	115	VAL
14	AC	129	PHE
14	AC	148	ILE
14	AC	150	VAL
14	AC	184	ASN
14	AC	206	ILE
15	AD	2	ARG
15	AD	39	GLN
15	AD	43	ARG
15	AD	69	ARG
15	AD	71	PHE
15	AD	146	GLU
15	AD	170	LEU
15	AD	172	VAL
15	AD	184	LYS
15	AD	186	GLU
15	AD	198	LEU
16	AE	45	VAL
16	AE	64	GLU
16	AE	123	LEU
16	AE	125	LYS
16	AE	133	ILE
16	AE	146	MET
16	AE	151	MET
17	AF	7	VAL
17	AF	16	GLU
17	AF	89	VAL
18	AG	12	LEU
18	AG	26	VAL
18	AG	31	VAL
18	AG	55	LYS

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Mol	Chain	Res	Type
18	AG	73	GLU
18	AG	100	MET
19	AH	9	MET
19	AH	41	GLU
19	AH	49	LYS
19	AH	51	GLU
19	AH	59	GLU
19	AH	63	LYS
19	AH	88	LYS
19	AH	105	THR
19	AH	117	GLN
19	AH	127	TYR
20	AI	27	ILE
20	AI	31	GLN
20	AI	60	LEU
20	AI	82	ILE
20	AI	86	LEU
20	AI	98	ARG
25	AZ	6	GLU
25	AZ	7	ARG
25	AZ	37	LYS
25	AZ	51	ASN
25	AZ	79	VAL
25	AZ	84	HIS
25	AZ	114	GLN
25	AZ	139	MET
25	AZ	159	GLN
25	AZ	170	VAL
25	AZ	204	ARG
25	AZ	212	LEU
25	AZ	235	ILE
25	AZ	237	LYS
25	AZ	262	ARG
25	AZ	288	ARG
25	AZ	313	LYS
25	AZ	373	ARG
27	B5	32	GLU
27	B5	39	VAL
27	B5	48	LEU
27	B5	54	LYS
27	B5	59	VAL
27	B5	98	GLU

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Mol	Chain	Res	Type
27	B5	105	LYS
27	B5	127	LEU
27	B5	130	VAL
27	B5	161	VAL
27	B5	173	THR
27	B5	174	THR
27	B5	207	VAL
27	B5	224	VAL
28	BI	12	VAL
28	BI	22	PRO
28	BI	39	LYS
28	BI	49	GLU
28	BI	66	PHE
28	BI	73	PRO
28	BI	100	ILE
28	BI	140	GLU
29	BJ	18	VAL
29	BJ	43	GLU
29	BJ	69	ARG
29	BJ	76	HIS
29	BJ	101	ILE
29	BJ	129	GLU
30	BK	2	GLN
30	BK	50	LYS
30	BK	68	VAL
30	BK	70	ARG
30	BK	86	LEU
30	BK	110	LYS
30	BK	115	ILE
31	BL	46	VAL
31	BL	51	GLU
31	BL	84	LYS
32	BM	10	ARG
32	BM	18	ARG
32	BM	33	LEU
32	BM	45	GLN
32	BM	51	ARG
32	BM	71	LYS
32	BM	90	GLU
32	BM	91	TYR
32	BM	96	ILE
32	BM	111	GLU

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Mol	Chain	Res	Type
33	BN	9	GLN
33	BN	12	ARG
33	BN	29	VAL
33	BN	75	ILE
33	BN	112	TYR
34	BO	48	LEU
34	BO	49	VAL
34	BO	112	GLU
35	BP	6	GLN
35	BP	13	LYS
35	BP	26	GLU
35	BP	69	VAL
35	BP	74	GLN
35	BP	92	ARG
36	BQ	63	ARG
36	BQ	94	LEU
37	BR	33	VAL
37	BR	39	LEU
37	BR	63	VAL
37	BR	64	VAL
37	BR	82	HIS
38	BS	4	ILE
38	BS	48	LYS
38	BS	85	ILE
38	BS	104	THR
39	BT	16	VAL
39	BT	26	LYS
39	BT	58	VAL
39	BT	61	LEU
39	BT	70	HIS
39	BT	76	ARG
40	BU	4	ILE
40	BU	18	LYS
40	BU	27	VAL
40	BU	33	VAL
40	BU	35	VAL
40	BU	41	VAL
40	BU	71	ILE
40	BU	87	GLU
40	BU	92	VAL
40	BU	94	PHE
41	BV	29	ILE

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Mol	Chain	Res	Type
42	BW	40	ARG
42	BW	45	HIS
42	BW	74	LYS
42	BW	79	ILE
42	BW	82	GLU
43	BX	3	VAL
43	BX	11	PRO
43	BX	15	ASN
43	BX	16	ASN
43	BX	26	ARG
43	BX	32	LEU
43	BX	42	GLU
44	BY	53	VAL
45	BC	6	LYS
45	BC	17	LYS
45	BC	34	GLU
45	BC	36	ASN
45	BC	64	VAL
45	BC	161	VAL
45	BC	183	VAL
45	BC	200	MET
45	BC	212	TRP
45	BC	222	THR
45	BC	243	PRO
45	BC	257	ARG
46	BZ	5	LYS
46	BZ	6	ILE
46	BZ	50	VAL
47	B0	8	THR
47	B0	9	ARG
47	B0	49	ARG
48	B1	32	LYS
48	B1	36	LYS
48	B1	49	LYS
50	B3	29	ARG
50	B3	40	LYS
50	B3	56	LEU
52	BD	2	ILE
52	BD	9	VAL
52	BD	12	THR
52	BD	26	VAL
52	BD	34	VAL

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Mol	Chain	Res	Type
52	BD	38	LYS
52	BD	79	LEU
52	BD	84	LEU
52	BD	124	ARG
52	BD	161	MET
52	BD	205	PRO
53	BE	62	GLN
53	BE	78	TRP
53	BE	79	ARG
53	BE	130	LYS
53	BE	143	LEU
53	BE	144	GLU
53	BE	155	GLU
53	BE	165	HIS
53	BE	194	LYS
54	BF	12	VAL
54	BF	49	LEU
54	BF	59	ILE
54	BF	62	GLN
54	BF	77	LYS
54	BF	100	GLU
54	BF	102	LEU
54	BF	124	ARG
54	BF	129	MET
54	BF	140	ILE
54	BF	175	PRO
55	BG	7	PRO
55	BG	36	LEU
55	BG	50	THR
55	BG	85	LYS
55	BG	88	LEU
55	BG	91	VAL
55	BG	104	LEU
55	BG	120	ILE
55	BG	121	THR
55	BG	150	TYR
55	BG	166	GLU
56	BH	89	LYS
56	BH	110	VAL
56	BH	129	GLU
56	BH	138	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (165)

such sidechains are listed below:

Mol	Chain	Res	Type
1	AJ	15	HIS
1	AJ	20	GLN
1	AJ	56	HIS
2	AK	23	HIS
2	AK	27	ASN
2	AK	39	ASN
2	AK	63	GLN
2	AK	108	ASN
2	AK	117	HIS
3	AL	72	ASN
3	AL	95	HIS
4	AM	13	HIS
5	AN	3	GLN
5	AN	48	GLN
5	AN	59	GLN
5	AN	70	HIS
6	AO	19	ASN
6	AO	27	GLN
6	AO	39	GLN
6	AO	49	HIS
7	AP	29	ASN
7	AP	63	GLN
8	AQ	8	GLN
8	AQ	44	HIS
8	AQ	46	HIS
9	AR	30	ASN
10	AS	13	HIS
10	AS	42	ASN
10	AS	51	HIS
10	AS	68	HIS
11	AT	2	ASN
11	AT	12	GLN
11	AT	20	ASN
11	AT	60	GLN
11	AT	67	HIS
13	AB	14	HIS
13	AB	17	HIS
13	AB	119	GLN
13	AB	145	ASN
13	AB	167	HIS
13	AB	177	ASN
14	AC	5	HIS

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Mol	Chain	Res	Type
14	AC	68	HIS
14	AC	101	ASN
14	AC	122	GLN
14	AC	138	GLN
14	AC	175	HIS
14	AC	184	ASN
14	AC	189	HIS
15	AD	58	GLN
15	AD	99	ASN
15	AD	119	HIS
15	AD	130	ASN
15	AD	197	HIS
16	AE	120	HIS
16	AE	147	ASN
17	AF	14	GLN
17	AF	52	ASN
17	AF	58	HIS
17	AF	63	ASN
17	AF	81	ASN
18	AG	27	ASN
18	AG	96	ASN
19	AH	37	ASN
19	AH	75	GLN
20	AI	3	ASN
20	AI	24	ASN
20	AI	30	ASN
20	AI	31	GLN
20	AI	125	GLN
25	AZ	11	HIS
25	AZ	13	ASN
25	AZ	19	HIS
25	AZ	22	HIS
25	AZ	63	ASN
25	AZ	75	HIS
25	AZ	78	HIS
25	AZ	114	GLN
25	AZ	118	HIS
25	AZ	159	GLN
25	AZ	329	GLN
25	AZ	364	HIS
27	B5	57	GLN
27	B5	203	GLN

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Mol	Chain	Res	Type
27	B5	234	ASN
28	BI	18	ASN
28	BI	29	GLN
29	BJ	47	HIS
29	BJ	58	ASN
29	BJ	77	HIS
29	BJ	86	GLN
29	BJ	130	HIS
29	BJ	132	HIS
30	BK	2	GLN
30	BK	28	HIS
31	BL	38	GLN
31	BL	93	ASN
33	BN	11	ASN
33	BN	13	ASN
33	BN	16	HIS
34	BO	98	GLN
34	BO	100	HIS
35	BP	14	GLN
36	BQ	36	GLN
36	BQ	58	GLN
36	BQ	65	ASN
36	BQ	70	GLN
37	BR	43	ASN
37	BR	82	HIS
37	BR	89	HIS
37	BR	91	GLN
38	BS	9	HIS
38	BS	40	ASN
38	BS	61	ASN
39	BT	28	ASN
39	BT	70	HIS
39	BT	91	GLN
40	BU	98	ASN
41	BV	44	HIS
41	BV	75	GLN
42	BW	45	HIS
42	BW	49	ASN
43	BX	33	HIS
43	BX	35	HIS
44	BY	20	ASN
44	BY	25	GLN

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Mol	Chain	Res	Type
44	BY	27	ASN
44	BY	36	GLN
45	BC	24	HIS
45	BC	36	ASN
45	BC	43	ASN
45	BC	44	ASN
45	BC	57	HIS
45	BC	89	ASN
45	BC	114	GLN
45	BC	141	HIS
45	BC	196	ASN
45	BC	199	HIS
45	BC	229	HIS
47	B0	40	HIS
48	B1	18	HIS
48	B1	45	HIS
49	B2	6	GLN
49	B2	13	ASN
49	B2	16	HIS
49	B2	26	ASN
49	B2	29	GLN
50	B3	25	HIS
50	B3	27	ASN
52	BD	126	ASN
52	BD	130	GLN
52	BD	134	HIS
52	BD	148	GLN
53	BE	30	GLN
53	BE	90	GLN
53	BE	115	GLN
54	BF	22	ASN
54	BF	51	ASN
55	BG	37	ASN
55	BG	44	HIS
55	BG	115	GLN
55	BG	138	GLN
56	BH	2	GLN
56	BH	33	GLN
56	BH	135	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1529/1530 (99%)	281 (18%)	42 (2%)
22	AY	75/76 (98%)	20 (26%)	5 (6%)
23	AW	75/76 (98%)	24 (32%)	6 (8%)
24	AX	10/11 (90%)	3 (30%)	0
26	AV	76/77 (98%)	14 (18%)	0
57	BB	2902/2903 (99%)	496 (17%)	63 (2%)
58	BA	116/117 (99%)	20 (17%)	4 (3%)
All	All	4783/4790 (99%)	858 (17%)	120 (2%)

All (858) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	6	G
21	AA	7	A
21	AA	8	A
21	AA	9	G
21	AA	14	U
21	AA	15	G
21	AA	31	G
21	AA	32	A
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	50	A
21	AA	51	A
21	AA	52	C
21	AA	55	A
21	AA	61	G
21	AA	67	C
21	AA	70	U
21	AA	71	A
21	AA	75	G
21	AA	79	G
21	AA	80	A
21	AA	81	A
21	AA	83	C
21	AA	84	U
21	AA	85	U
21	AA	86	G
21	AA	88	U
21	AA	91	U
21	AA	101	A
21	AA	118	U

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Mol	Chain	Res	Type
21	AA	119	A
21	AA	131	A
21	AA	144	G
21	AA	149	A
21	AA	155	A
21	AA	182	A
21	AA	197	A
21	AA	204	G
21	AA	205	A
21	AA	209	U
21	AA	210	C
21	AA	211	G
21	AA	239	U
21	AA	240	G
21	AA	243	A
21	AA	244	U
21	AA	245	U
21	AA	247	G
21	AA	251	G
21	AA	252	U
21	AA	257	G
21	AA	258	G
21	AA	266	G
21	AA	267	C
21	AA	280	C
21	AA	281	G
21	AA	288	A
21	AA	289	G
21	AA	306	A
21	AA	308	C
21	AA	316	C
21	AA	328	C
21	AA	329	A
21	AA	330	C
21	AA	332	G
21	AA	352	C
21	AA	354	G
21	AA	367	U
21	AA	373	A
21	AA	374	A
21	AA	382	A
21	AA	388	G

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Mol	Chain	Res	Type
21	AA	397	A
21	AA	398	U
21	AA	406	G
21	AA	408	A
21	AA	409	U
21	AA	411	A
21	AA	412	A
21	AA	413	G
21	AA	414	A
21	AA	416	G
21	AA	421	U
21	AA	422	C
21	AA	424	G
21	AA	429	U
21	AA	430	A
21	AA	435	A
21	AA	451	A
21	AA	456	A
21	AA	459	A
21	AA	461	A
21	AA	462	G
21	AA	463	U
21	AA	465	A
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	484	G
21	AA	485	U
21	AA	486	U
21	AA	493	A
21	AA	499	A
21	AA	508	U
21	AA	511	C
21	AA	512	U
21	AA	518	C
21	AA	524	G
21	AA	527	G
21	AA	530	G
21	AA	531	U
21	AA	532	A
21	AA	533	A
21	AA	547	A

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Mol	Chain	Res	Type
21	AA	560	A
21	AA	562	U
21	AA	563	A
21	AA	572	A
21	AA	573	A
21	AA	576	C
21	AA	577	G
21	AA	596	A
21	AA	631	C
21	AA	633	G
21	AA	653	U
21	AA	665	A
21	AA	666	G
21	AA	700	G
21	AA	720	C
21	AA	724	G
21	AA	731	G
21	AA	747	A
21	AA	748	G
21	AA	752	G
21	AA	755	G
21	AA	781	A
21	AA	782	A
21	AA	793	U
21	AA	794	A
21	AA	812	G
21	AA	815	A
21	AA	817	C
21	AA	818	G
21	AA	819	A
21	AA	821	G
21	AA	828	U
21	AA	841	C
21	AA	842	U
21	AA	843	U
21	AA	844	G
21	AA	846	G
21	AA	847	G
21	AA	849	G
21	AA	873	A
21	AA	914	A
21	AA	926	G

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Mol	Chain	Res	Type
21	AA	927	G
21	AA	934	C
21	AA	935	A
21	AA	945	G
21	AA	960	U
21	AA	961	U
21	AA	966	G
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	981	U
21	AA	993	G
21	AA	994	A
21	AA	996	A
21	AA	1004	A
21	AA	1018	G
21	AA	1020	G
21	AA	1028	C
21	AA	1030	U
21	AA	1031	C
21	AA	1032	G
21	AA	1034	G
21	AA	1036	A
21	AA	1043	G
21	AA	1050	G
21	AA	1053	G
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1070	U
21	AA	1085	U
21	AA	1086	U
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1110	A
21	AA	1112	C

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Mol	Chain	Res	Type
21	AA	1118	U
21	AA	1119	C
21	AA	1124	G
21	AA	1125	U
21	AA	1130	A
21	AA	1133	G
21	AA	1134	G
21	AA	1135	U
21	AA	1136	C
21	AA	1139	G
21	AA	1140	C
21	AA	1145	A
21	AA	1146	A
21	AA	1154	G
21	AA	1159	U
21	AA	1160	G
21	AA	1168	U
21	AA	1181	G
21	AA	1183	U
21	AA	1184	G
21	AA	1196	A
21	AA	1197	A
21	AA	1202	U
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1215	G
21	AA	1225	A
21	AA	1226	C
21	AA	1227	A
21	AA	1238	A
21	AA	1249	C
21	AA	1250	A
21	AA	1256	A
21	AA	1257	A
21	AA	1258	G
21	AA	1261	A
21	AA	1270	G
21	AA	1278	G
21	AA	1279	G
21	AA	1280	A
21	AA	1285	A

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Mol	Chain	Res	Type
21	AA	1286	U
21	AA	1287	A
21	AA	1297	G
21	AA	1300	G
21	AA	1301	U
21	AA	1303	C
21	AA	1305	G
21	AA	1316	G
21	AA	1317	C
21	AA	1319	A
21	AA	1320	C
21	AA	1322	C
21	AA	1323	G
21	AA	1331	G
21	AA	1336	C
21	AA	1346	A
21	AA	1353	G
21	AA	1363	A
21	AA	1364	U
21	AA	1380	U
21	AA	1399	C
21	AA	1419	G
21	AA	1432	G
21	AA	1446	A
21	AA	1448	C
21	AA	1452	C
21	AA	1454	G
21	AA	1493	A
21	AA	1494	G
21	AA	1497	G
21	AA	1499	A
21	AA	1503	A
21	AA	1506	U
21	AA	1517	G
21	AA	1520	C
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
21	AA	1533	C
21	AA	1534	A
22	AY	4	G
22	AY	8	U

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Mol	Chain	Res	Type
22	AY	9	A
22	AY	12	U
22	AY	17	U
22	AY	18	G
22	AY	19	G
22	AY	20	G
22	AY	21	A
22	AY	31	A
22	AY	33	U
22	AY	35	A
22	AY	37	G
22	AY	43	G
22	AY	46	G
22	AY	48	C
22	AY	69	U
22	AY	72	C
22	AY	74	C
22	AY	75	C
23	AW	15	G
23	AW	16	U
23	AW	17	C
23	AW	18	G
23	AW	19	G
23	AW	20	U
23	AW	21	A
23	AW	33	U
23	AW	34	G
23	AW	37	A
23	AW	39	U
23	AW	40	C
23	AW	43	C
23	AW	47	U
23	AW	52	G
23	AW	56	C
23	AW	57	G
23	AW	59	U
23	AW	60	U
23	AW	61	C
23	AW	70	G
23	AW	71	G
23	AW	75	C
23	AW	76	A

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Mol	Chain	Res	Type
24	AX	13	A
24	AX	17	U
24	AX	18	G
26	AV	5	G
26	AV	8	U
26	AV	17(A)	U
26	AV	18	G
26	AV	19	G
26	AV	21	A
26	AV	47	U
26	AV	48	C
26	AV	49	G
26	AV	53	G
26	AV	67	C
26	AV	71	C
26	AV	73	A
26	AV	75	C
57	BB	34	U
57	BB	35	G
57	BB	46	G
57	BB	50	U
57	BB	51	G
57	BB	71	A
57	BB	74	A
57	BB	75	G
57	BB	84	A
57	BB	91	A
57	BB	95	A
57	BB	99	U
57	BB	100	U
57	BB	101	A
57	BB	102	U
57	BB	103	A
57	BB	118	A
57	BB	119	A
57	BB	120	U
57	BB	125	A
57	BB	136	G
57	BB	137	U
57	BB	139	U
57	BB	140	C
57	BB	141	G

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Mol	Chain	Res	Type
57	BB	143	C
57	BB	144	A
57	BB	160	A
57	BB	180	G
57	BB	181	A
57	BB	196	A
57	BB	199	A
57	BB	216	A
57	BB	221	A
57	BB	222	A
57	BB	233	A
57	BB	241	A
57	BB	248	G
57	BB	249	C
57	BB	255	A
57	BB	265	A
57	BB	266	G
57	BB	268	C
57	BB	271	G
57	BB	273	G
57	BB	276	U
57	BB	277	G
57	BB	281	C
57	BB	283	G
57	BB	286	U
57	BB	294	A
57	BB	299	A
57	BB	311	A
57	BB	312	G
57	BB	321	U
57	BB	323	C
57	BB	329	G
57	BB	330	A
57	BB	333	G
57	BB	346	A
57	BB	352	A
57	BB	353	C
57	BB	362	A
57	BB	363	G
57	BB	364	C
57	BB	369	U
57	BB	371	A

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Mol	Chain	Res	Type
57	BB	372	G
57	BB	386	G
57	BB	387	U
57	BB	404	A
57	BB	405	U
57	BB	406	G
57	BB	411	G
57	BB	412	A
57	BB	424	G
57	BB	457	A
57	BB	479	A
57	BB	481	G
57	BB	490	C
57	BB	491	G
57	BB	504	A
57	BB	505	A
57	BB	508	A
57	BB	509	C
57	BB	512	G
57	BB	527	C
57	BB	528	A
57	BB	531	C
57	BB	532	A
57	BB	533	G
57	BB	544	C
57	BB	546	U
57	BB	547	A
57	BB	548	G
57	BB	549	G
57	BB	550	C
57	BB	555	G
57	BB	563	A
57	BB	568	U
57	BB	573	U
57	BB	575	A
57	BB	586	A
57	BB	588	U
57	BB	603	A
57	BB	613	A
57	BB	614	A
57	BB	615	U
57	BB	627	A

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Mol	Chain	Res	Type
57	BB	637	A
57	BB	638	G
57	BB	646	U
57	BB	647	G
57	BB	652	U
57	BB	656	G
57	BB	668	A
57	BB	670	A
57	BB	671	C
57	BB	686	U
57	BB	730	A
57	BB	747	U
57	BB	757	G
57	BB	764	A
57	BB	775	G
57	BB	776	G
57	BB	782	A
57	BB	784	G
57	BB	785	G
57	BB	788	A
57	BB	789	A
57	BB	793	A
57	BB	805	G
57	BB	812	C
57	BB	819	A
57	BB	827	U
57	BB	846	U
57	BB	847	U
57	BB	858	G
57	BB	859	G
57	BB	871	U
57	BB	875	G
57	BB	881	G
57	BB	886	A
57	BB	889	C
57	BB	891	G
57	BB	892	A
57	BB	896	A
57	BB	897	C
57	BB	900	A
57	BB	901	C
57	BB	910	A

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Mol	Chain	Res	Type
57	BB	912	C
57	BB	919	U
57	BB	931	U
57	BB	932	U
57	BB	933	A
57	BB	941	A
57	BB	945	A
57	BB	946	C
57	BB	961	C
57	BB	973	A
57	BB	974	G
57	BB	980	A
57	BB	983	A
57	BB	985	C
57	BB	991	C
57	BB	996	A
57	BB	1005	C
57	BB	1012	U
57	BB	1013	C
57	BB	1022	G
57	BB	1023	U
57	BB	1025	G
57	BB	1033	U
57	BB	1046	A
57	BB	1047	G
57	BB	1054	A
57	BB	1056	G
57	BB	1057	A
57	BB	1067	A
57	BB	1068	G
57	BB	1069	A
57	BB	1070	A
57	BB	1071	G
57	BB	1073	A
57	BB	1085	A
57	BB	1088	A
57	BB	1090	A
57	BB	1095	A
57	BB	1096	A
57	BB	1104	C
57	BB	1112	G
57	BB	1116	G

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Mol	Chain	Res	Type
57	BB	1130	U
57	BB	1132	U
57	BB	1133	A
57	BB	1134	A
57	BB	1135	C
57	BB	1136	G
57	BB	1139	G
57	BB	1142	A
57	BB	1156	A
57	BB	1174	U
57	BB	1176	U
57	BB	1195	G
57	BB	1205	A
57	BB	1211	C
57	BB	1212	G
57	BB	1238	G
57	BB	1241	A
57	BB	1242	U
57	BB	1248	G
57	BB	1250	G
57	BB	1253	A
57	BB	1256	G
57	BB	1266	G
57	BB	1271	G
57	BB	1272	A
57	BB	1273	U
57	BB	1275	A
57	BB	1276	A
57	BB	1300	G
57	BB	1301	A
57	BB	1321	A
57	BB	1325	U
57	BB	1326	U
57	BB	1332	G
57	BB	1337	G
57	BB	1340	U
57	BB	1341	G
57	BB	1352	U
57	BB	1365	A
57	BB	1368	G
57	BB	1374	G
57	BB	1379	U

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Mol	Chain	Res	Type
57	BB	1394	U
57	BB	1396	U
57	BB	1416	G
57	BB	1417	C
57	BB	1419	A
57	BB	1420	A
57	BB	1421	G
57	BB	1427	A
57	BB	1428	C
57	BB	1451	C
57	BB	1453	A
57	BB	1454	C
57	BB	1458	U
57	BB	1459	G
57	BB	1461	C
57	BB	1469	A
57	BB	1475	G
57	BB	1476	U
57	BB	1477	A
57	BB	1478	G
57	BB	1482	G
57	BB	1490	A
57	BB	1493	C
57	BB	1497	U
57	BB	1498	C
57	BB	1504	A
57	BB	1505	A
57	BB	1507	C
57	BB	1508	A
57	BB	1509	A
57	BB	1510	G
57	BB	1523	U
57	BB	1524	G
57	BB	1532	A
57	BB	1535	A
57	BB	1538	G
57	BB	1552	A
57	BB	1566	A
57	BB	1569	A
57	BB	1578	U
57	BB	1585	C
57	BB	1608	A

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Mol	Chain	Res	Type
57	BB	1609	A
57	BB	1610	A
57	BB	1634	A
57	BB	1635	A
57	BB	1640	A
57	BB	1647	U
57	BB	1648	U
57	BB	1653	G
57	BB	1654	A
57	BB	1674	G
57	BB	1699	G
57	BB	1700	A
57	BB	1714	U
57	BB	1715	G
57	BB	1729	U
57	BB	1731	G
57	BB	1733	G
57	BB	1738	G
57	BB	1756	G
57	BB	1758	U
57	BB	1759	A
57	BB	1761	C
57	BB	1764	C
57	BB	1773	A
57	BB	1776	G
57	BB	1781	U
57	BB	1784	A
57	BB	1800	C
57	BB	1801	A
57	BB	1808	A
57	BB	1816	C
57	BB	1829	A
57	BB	1839	G
57	BB	1870	C
57	BB	1884	G
57	BB	1896	G
57	BB	1906	G
57	BB	1913	A
57	BB	1915	U
57	BB	1929	G
57	BB	1930	G
57	BB	1937	A

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Mol	Chain	Res	Type
57	BB	1938	A
57	BB	1940	U
57	BB	1944	U
57	BB	1945	G
57	BB	1952	A
57	BB	1954	G
57	BB	1955	U
57	BB	1965	C
57	BB	1967	C
57	BB	1970	A
57	BB	1971	U
57	BB	1972	G
57	BB	1991	U
57	BB	1993	U
57	BB	1997	C
57	BB	2020	A
57	BB	2022	U
57	BB	2023	C
57	BB	2031	A
57	BB	2032	G
57	BB	2033	A
57	BB	2043	C
57	BB	2055	C
57	BB	2056	G
57	BB	2060	A
57	BB	2061	G
57	BB	2062	A
57	BB	2065	C
57	BB	2069	G
57	BB	2076	U
57	BB	2077	A
57	BB	2096	C
57	BB	2102	G
57	BB	2104	C
57	BB	2111	U
57	BB	2112	G
57	BB	2113	U
57	BB	2117	A
57	BB	2119	A
57	BB	2127	G
57	BB	2129	C
57	BB	2130	U

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Mol	Chain	Res	Type
57	BB	2131	U
57	BB	2133	G
57	BB	2134	A
57	BB	2135	A
57	BB	2136	G
57	BB	2137	U
57	BB	2140	G
57	BB	2144	G
57	BB	2145	C
57	BB	2146	C
57	BB	2147	A
57	BB	2148	G
57	BB	2149	U
57	BB	2152	G
57	BB	2153	C
57	BB	2155	U
57	BB	2157	G
57	BB	2158	A
57	BB	2159	G
57	BB	2160	C
57	BB	2164	C
57	BB	2166	U
57	BB	2167	U
57	BB	2176	A
57	BB	2179	C
57	BB	2181	U
57	BB	2183	A
57	BB	2187	U
57	BB	2192	U
57	BB	2198	A
57	BB	2199	A
57	BB	2203	U
57	BB	2204	G
57	BB	2212	A
57	BB	2213	U
57	BB	2214	C
57	BB	2225	A
57	BB	2238	G
57	BB	2239	G
57	BB	2251	G
57	BB	2252	G
57	BB	2253	G

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Mol	Chain	Res	Type
57	BB	2254	C
57	BB	2266	A
57	BB	2279	G
57	BB	2283	C
57	BB	2286	G
57	BB	2287	A
57	BB	2297	A
57	BB	2305	U
57	BB	2307	G
57	BB	2308	G
57	BB	2309	A
57	BB	2310	C
57	BB	2321	U
57	BB	2322	A
57	BB	2324	U
57	BB	2325	G
57	BB	2333	A
57	BB	2334	U
57	BB	2335	A
57	BB	2336	A
57	BB	2337	G
57	BB	2347	C
57	BB	2383	G
57	BB	2385	C
57	BB	2396	G
57	BB	2402	U
57	BB	2406	A
57	BB	2423	U
57	BB	2425	A
57	BB	2426	A
57	BB	2429	G
57	BB	2430	A
57	BB	2434	A
57	BB	2441	U
57	BB	2448	A
57	BB	2467	C
57	BB	2472	G
57	BB	2476	A
57	BB	2478	A
57	BB	2491	U
57	BB	2498	C
57	BB	2502	G

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Mol	Chain	Res	Type
57	BB	2503	A
57	BB	2505	G
57	BB	2506	U
57	BB	2518	A
57	BB	2529	G
57	BB	2533	U
57	BB	2535	G
57	BB	2554	U
57	BB	2566	A
57	BB	2567	G
57	BB	2572	A
57	BB	2573	C
57	BB	2586	U
57	BB	2609	U
57	BB	2613	U
57	BB	2629	U
57	BB	2646	C
57	BB	2682	A
57	BB	2689	U
57	BB	2690	U
57	BB	2691	C
57	BB	2714	G
57	BB	2744	G
57	BB	2748	A
57	BB	2751	G
57	BB	2757	A
57	BB	2765	A
57	BB	2778	A
57	BB	2780	G
57	BB	2791	G
57	BB	2793	C
57	BB	2797	U
57	BB	2798	U
57	BB	2799	A
57	BB	2800	A
57	BB	2809	A
57	BB	2820	A
57	BB	2821	A
57	BB	2832	U
57	BB	2834	G
57	BB	2836	U
57	BB	2849	U

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Mol	Chain	Res	Type
57	BB	2850	A
57	BB	2867	G
57	BB	2872	A
57	BB	2873	A
57	BB	2883	A
57	BB	2884	U
57	BB	2885	G
57	BB	2886	A
57	BB	2887	A
58	BA	9	G
58	BA	15	A
58	BA	16	G
58	BA	25	U
58	BA	26	C
58	BA	27	C
58	BA	29	A
58	BA	30	C
58	BA	41	G
58	BA	43	C
58	BA	45	A
58	BA	52	A
58	BA	53	A
58	BA	66	A
58	BA	67	G
58	BA	87	U
58	BA	88	C
58	BA	90	C
58	BA	99	A
58	BA	109	A

All (120) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	7	A
21	AA	50	A
21	AA	51	A
21	AA	60	A
21	AA	243	A
21	AA	279	A
21	AA	280	C
21	AA	328	C
21	AA	366	A

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Mol	Chain	Res	Type
21	AA	372	C
21	AA	389	A
21	AA	412	A
21	AA	413	G
21	AA	422	C
21	AA	428	G
21	AA	429	U
21	AA	461	A
21	AA	467	U
21	AA	484	G
21	AA	485	U
21	AA	496	A
21	AA	530	G
21	AA	562	U
21	AA	960	U
21	AA	968	A
21	AA	976	G
21	AA	980	C
21	AA	1030	U
21	AA	1049	U
21	AA	1065	U
21	AA	1111	A
21	AA	1159	U
21	AA	1201	A
21	AA	1214	C
21	AA	1226	C
21	AA	1256	A
21	AA	1278	G
21	AA	1279	G
21	AA	1300	G
21	AA	1302	C
21	AA	1319	A
21	AA	1493	A
22	AY	3	G
22	AY	17	U
22	AY	18	G
22	AY	20	G
22	AY	34	G
23	AW	15	G
23	AW	17	C
23	AW	32	U
23	AW	55	U

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Mol	Chain	Res	Type
23	AW	60	U
23	AW	70	G
57	BB	139	U
57	BB	241	A
57	BB	329	G
57	BB	490	C
57	BB	548	G
57	BB	637	A
57	BB	670	A
57	BB	789	A
57	BB	846	U
57	BB	858	G
57	BB	880	G
57	BB	890	C
57	BB	891	G
57	BB	945	A
57	BB	973	A
57	BB	984	A
57	BB	1033	U
57	BB	1046	A
57	BB	1068	G
57	BB	1069	A
57	BB	1070	A
57	BB	1094	U
57	BB	1133	A
57	BB	1210	G
57	BB	1211	C
57	BB	1300	G
57	BB	1332	G
57	BB	1451	C
57	BB	1458	U
57	BB	1459	G
57	BB	1497	U
57	BB	1608	A
57	BB	1609	A
57	BB	1618	A
57	BB	1699	G
57	BB	1870	C
57	BB	1938	A
57	BB	1944	U
57	BB	1954	G
57	BB	1966	A

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Mol	Chain	Res	Type
57	BB	2031	A
57	BB	2076	U
57	BB	2110	G
57	BB	2116	G
57	BB	2125	G
57	BB	2130	U
57	BB	2134	A
57	BB	2147	A
57	BB	2152	G
57	BB	2157	G
57	BB	2158	A
57	BB	2159	G
57	BB	2172	U
57	BB	2282	G
57	BB	2308	G
57	BB	2333	A
57	BB	2336	A
57	BB	2402	U
57	BB	2425	A
57	BB	2430	A
57	BB	2474	U
57	BB	2491	U
57	BB	2756	U
58	BA	14	U
58	BA	15	A
58	BA	66	A
58	BA	87	U

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

1 non-standard protein/DNA/RNA residue is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
26	5MU	AV	54	26	19,22,23	1.33	4 (21%)	27,32,35	1.22	3 (11%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
26	5MU	AV	54	26	-	0/7/25/26	0/2/2/2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	AV	54	5MU	C6-N1	2.46	1.42	1.38
26	AV	54	5MU	O4'-C1'	2.35	1.47	1.42
26	AV	54	5MU	O2'-C2'	-2.33	1.37	1.43
26	AV	54	5MU	C2-N1	2.26	1.42	1.38

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	AV	54	5MU	C6-N1-C2	-3.02	118.30	121.30
26	AV	54	5MU	O4'-C1'-N1	2.80	114.70	108.36
26	AV	54	5MU	C1'-N1-C6	2.41	125.13	121.15

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
59	GDP	AZ	401	-	29,30,30	1.86	4 (13%)	45,47,47	1.33	6 (13%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	GDP	AZ	401	-	-	2/16/32/32	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	AZ	401	GDP	PA-O3A	7.75	1.67	1.59
59	AZ	401	GDP	O4'-C1'	3.01	1.48	1.42
59	AZ	401	GDP	C4-N3	2.23	1.39	1.34
59	AZ	401	GDP	O3'-C3'	-2.03	1.37	1.43

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	AZ	401	GDP	C5-C4-N3	-3.11	123.43	128.39
59	AZ	401	GDP	C6-C5-N7	-2.44	125.85	130.29
59	AZ	401	GDP	O3'-C3'-C2'	2.28	119.11	111.82
59	AZ	401	GDP	C2-N3-C4	2.20	116.08	112.30
59	AZ	401	GDP	C6-C5-C4	2.13	122.03	118.83
59	AZ	401	GDP	N9-C4-N3	2.09	130.14	125.95

There are no chirality outliers.

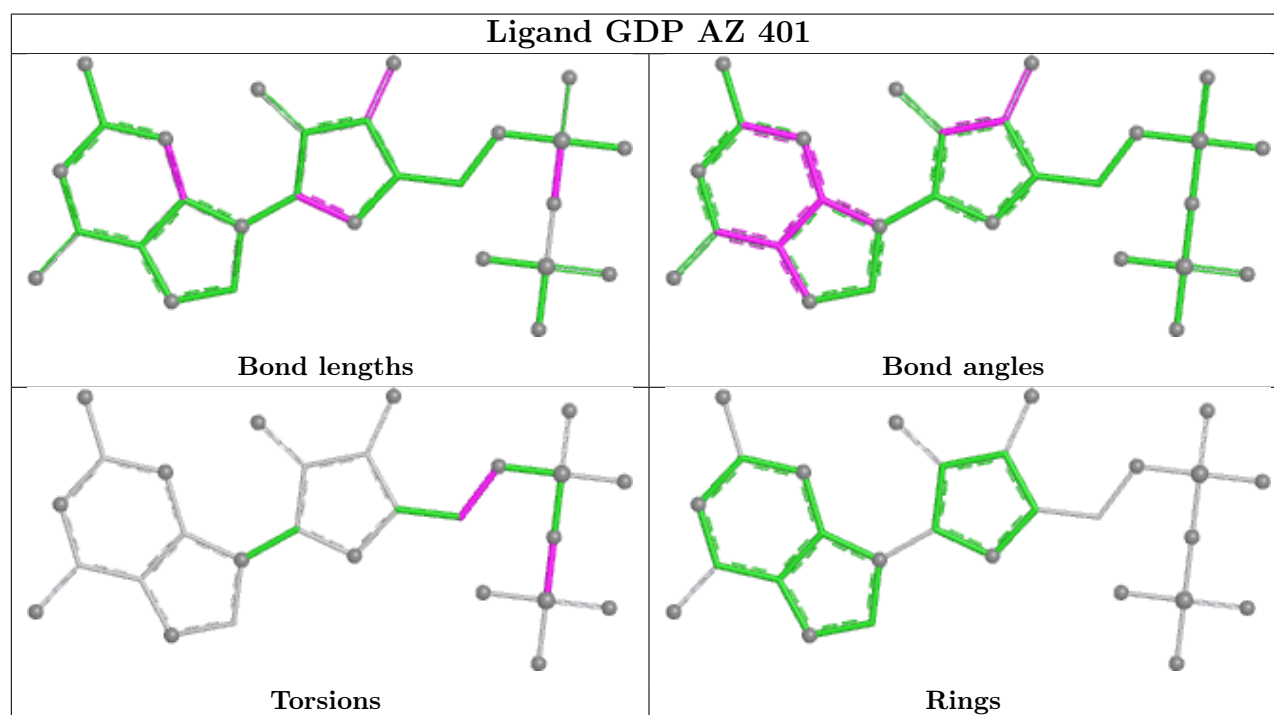
All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	AZ	401	GDP	PA-O3A-PB-O3B
59	AZ	401	GDP	C4'-C5'-O5'-PA

There are no ring outliers.

No monomer is involved in short contacts.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



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.

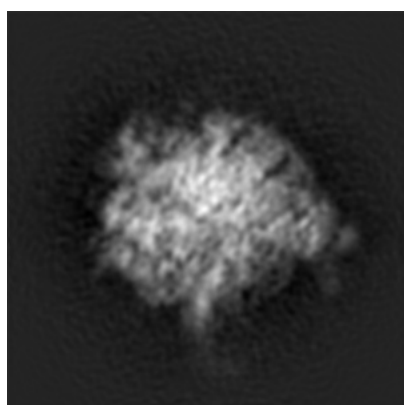
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5036. These allow visual inspection of the internal detail of the map and identification of artifacts.

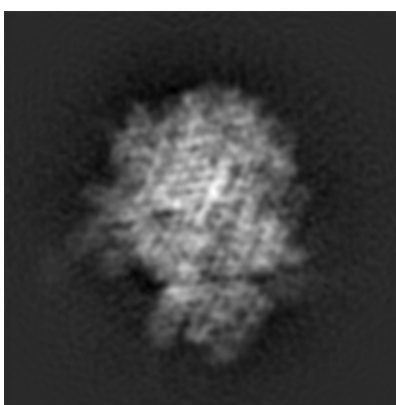
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

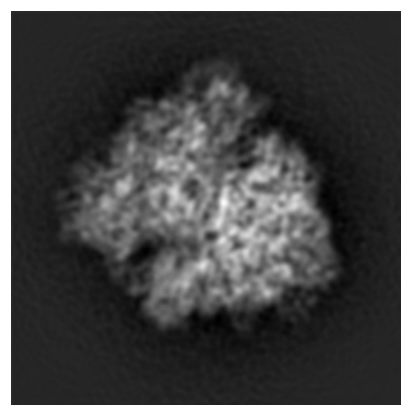
6.1.1 Primary map



X



Y

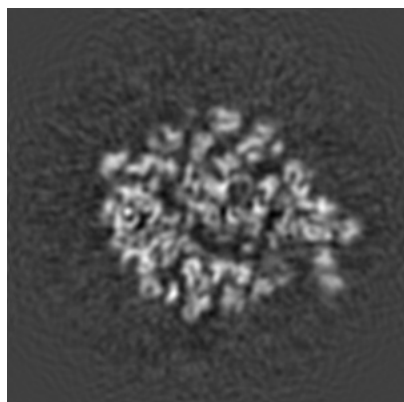


Z

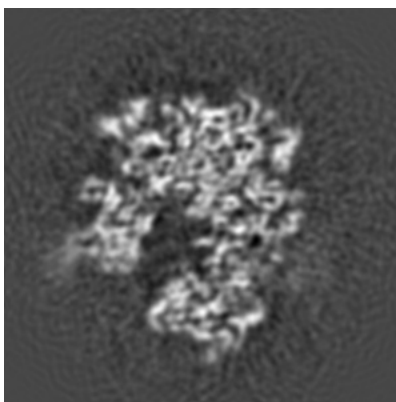
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

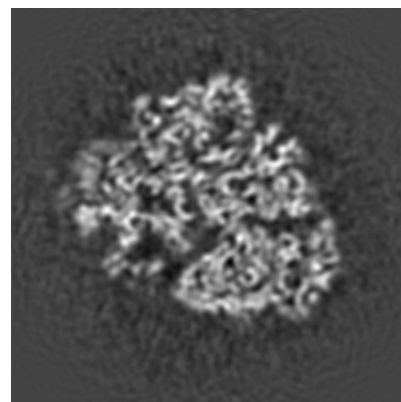
6.2.1 Primary map



X Index: 154



Y Index: 154

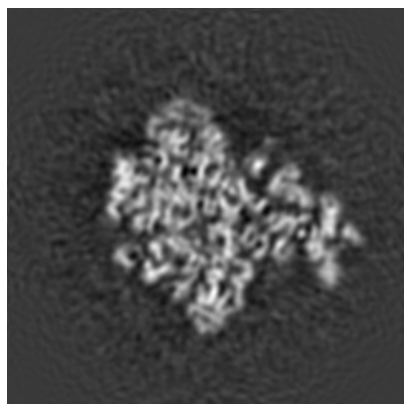


Z Index: 154

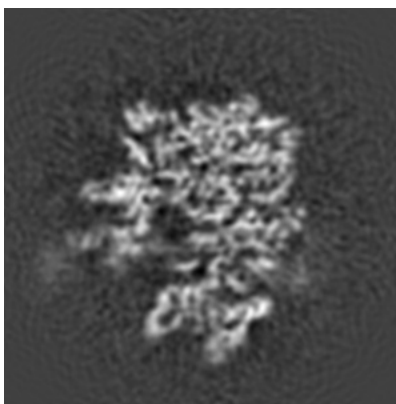
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

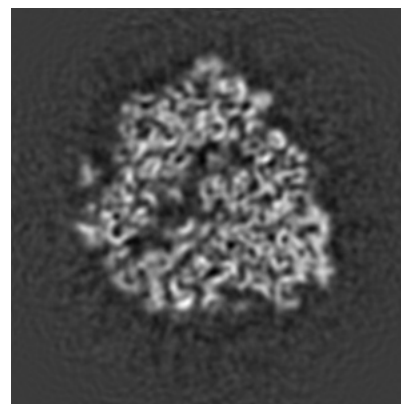
6.3.1 Primary map



X Index: 164



Y Index: 160

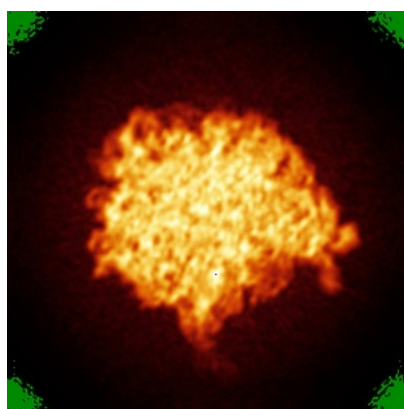


Z Index: 142

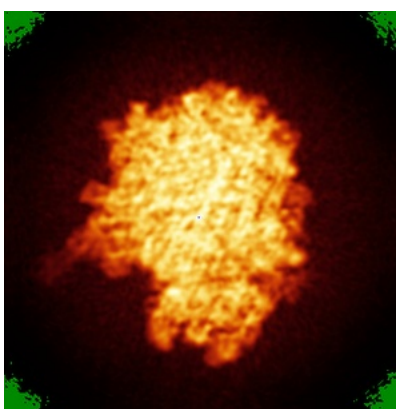
The images above show the largest variance slices of the map in three orthogonal directions.

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

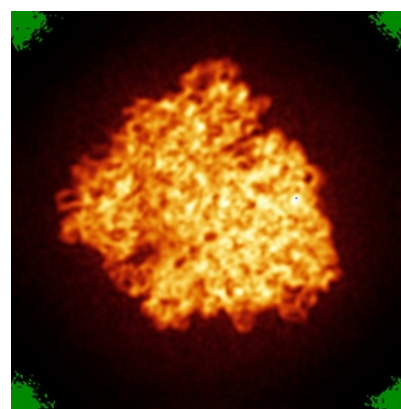
6.4.1 Primary map



X



Y

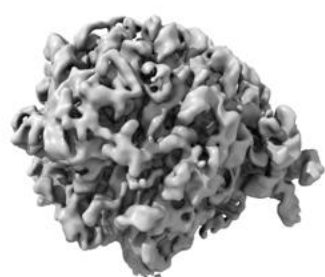


Z

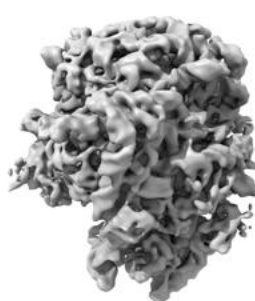
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

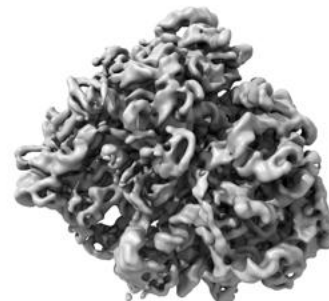
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 90.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

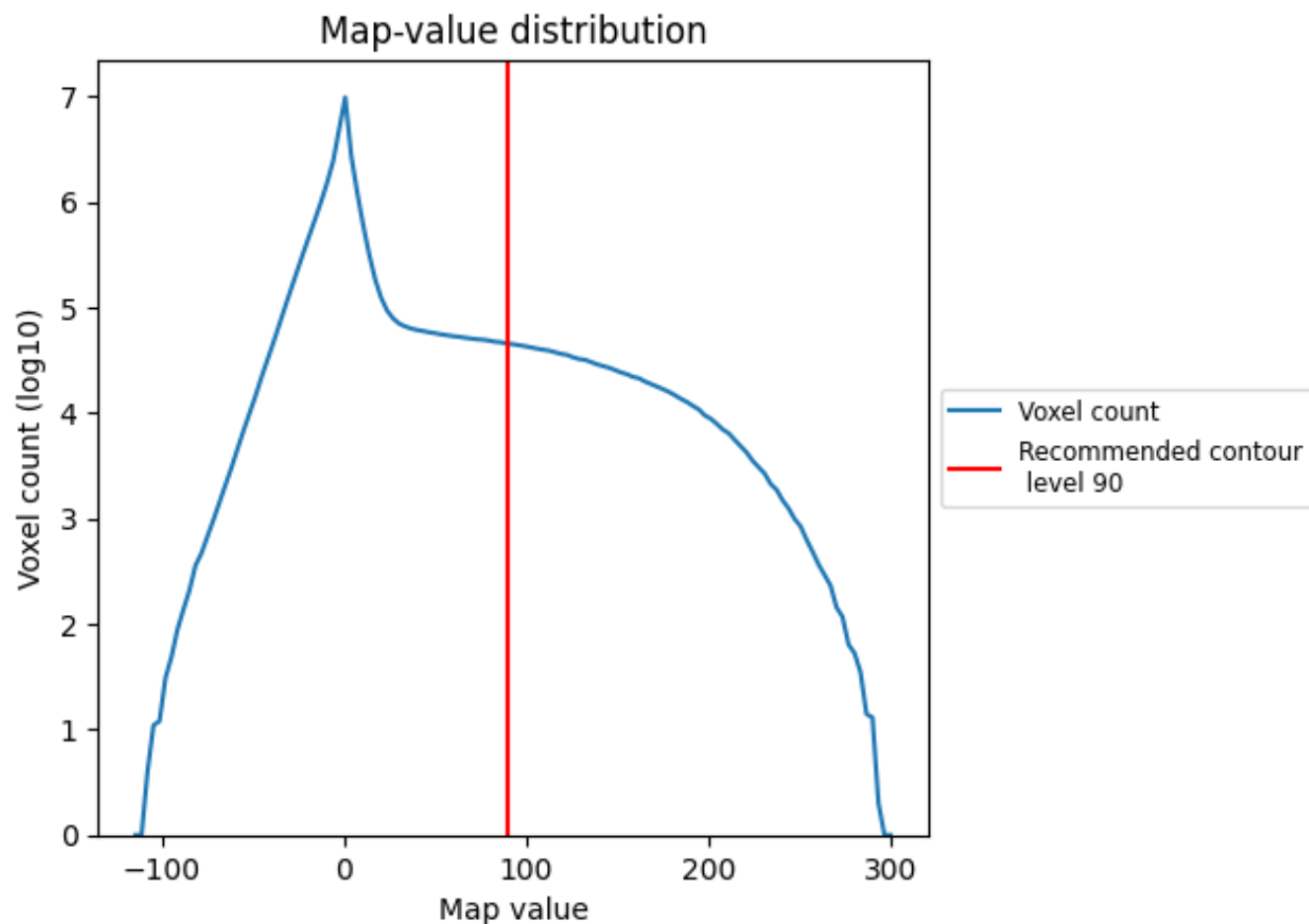
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

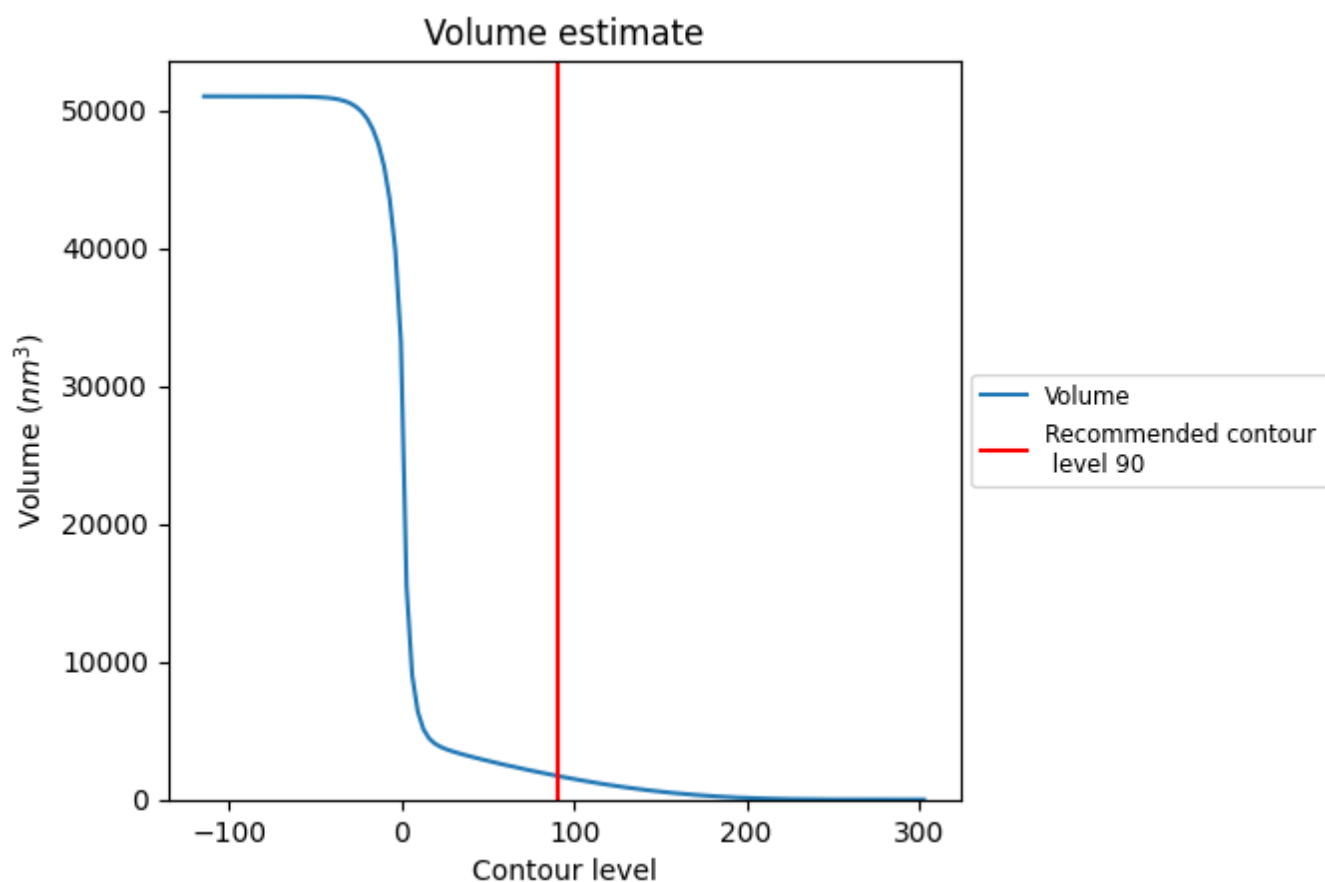
This section contains the results of statistical analysis of the map.

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.

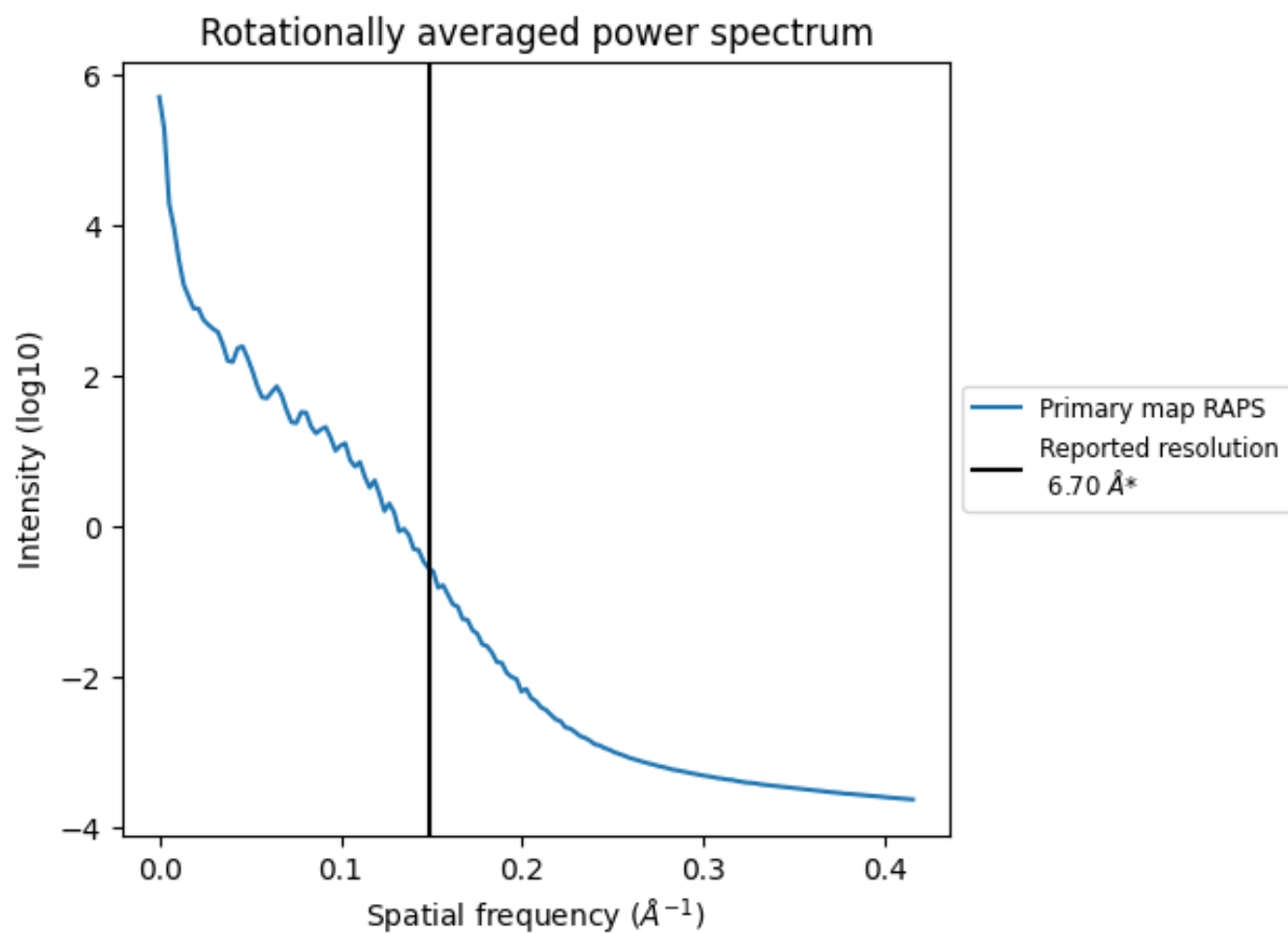
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1724 nm³; this corresponds to an approximate mass of 1557 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 0.149 Å⁻¹

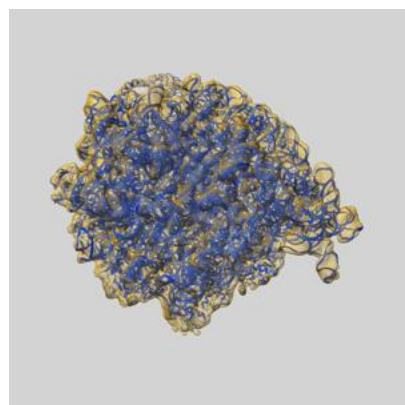
8 Fourier-Shell correlation

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

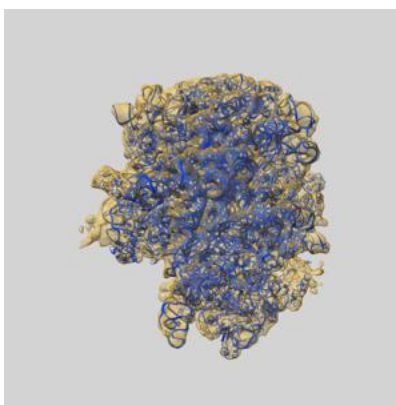
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5036 and PDB model 4V69. Per-residue inclusion information can be found in [section 3](#) on [page 16](#).

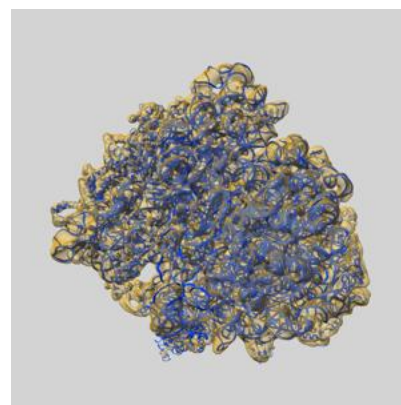
9.1 Map-model overlay [i](#)



X



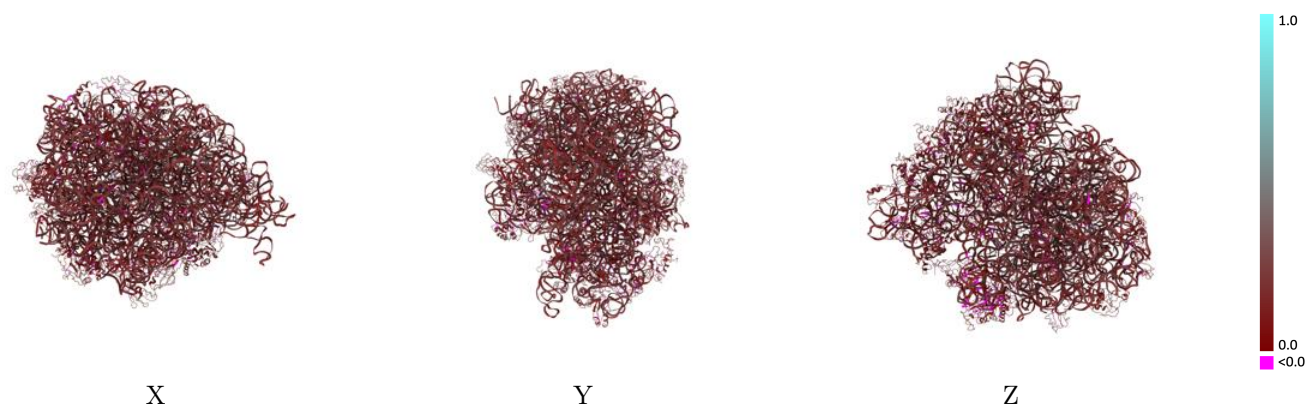
Y



Z

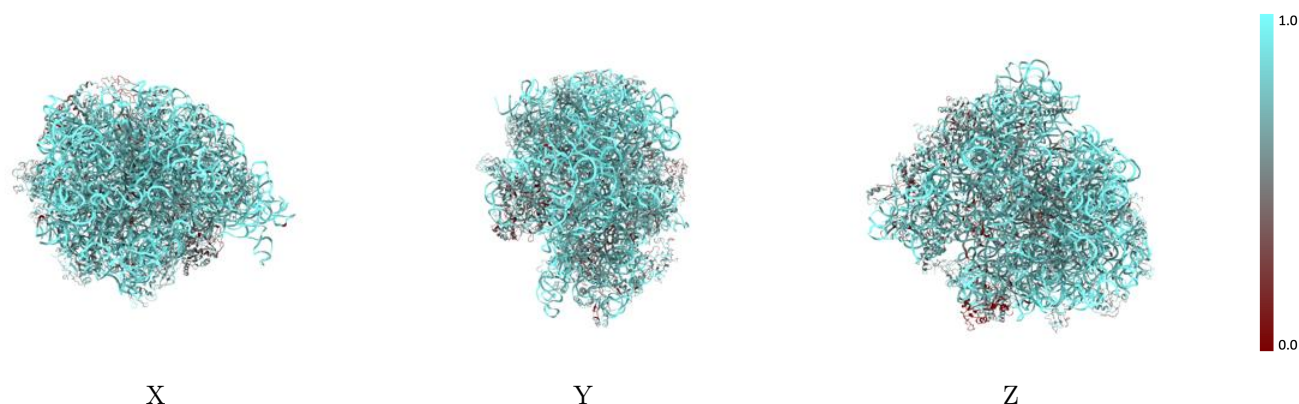
The images above show the 3D surface view of the map at the recommended contour level 90.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



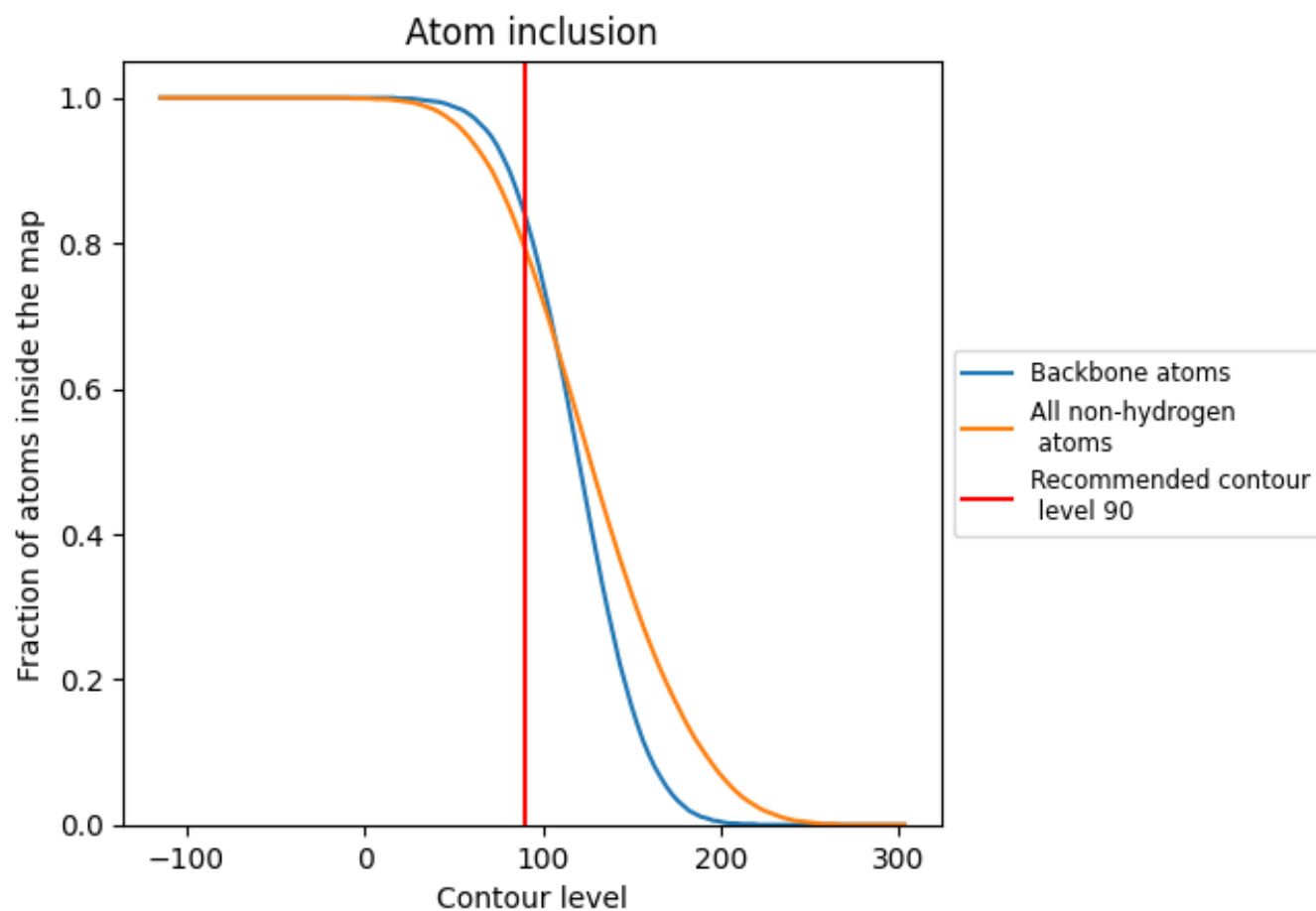
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 79% 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 (90) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7930	 0.1860
AA	 0.8950	 0.2030
AB	 0.5980	 0.1550
AC	 0.6000	 0.1680
AD	 0.4980	 0.1540
AE	 0.5930	 0.1600
AF	 0.6510	 0.1650
AG	 0.6070	 0.1460
AH	 0.5600	 0.1590
AI	 0.6100	 0.1320
AJ	 0.4580	 0.1330
AK	 0.5100	 0.1580
AL	 0.4790	 0.1550
AM	 0.6190	 0.1590
AN	 0.6060	 0.1390
AO	 0.6230	 0.1520
AP	 0.6140	 0.1330
AQ	 0.6820	 0.1460
AR	 0.5490	 0.1480
AS	 0.6740	 0.1430
AT	 0.6030	 0.1520
AU	 0.7470	 0.2000
AV	 0.7940	 0.1990
AW	 0.7090	 0.1720
AX	 0.7540	 0.2270
AY	 0.7890	 0.1930
AZ	 0.4790	 0.1640
B0	 0.6400	 0.1350
B1	 0.6170	 0.1530
B2	 0.5970	 0.1010
B3	 0.5890	 0.1460
B4	 0.4970	 0.1260
B5	 0.3000	 0.0990
BA	 0.9240	 0.2090
BB	 0.9050	 0.2040



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Chain	Atom inclusion	Q-score
BC	 0.5800	 0.1420
BD	 0.5850	 0.1460
BE	 0.6170	 0.1630
BF	 0.7330	 0.1620
BG	 0.6840	 0.1710
BH	 0.4090	 0.1420
BI	 0.4640	 0.1380
BJ	 0.6030	 0.1590
BK	 0.4080	 0.1560
BL	 0.5300	 0.1450
BM	 0.5420	 0.1470
BN	 0.6650	 0.1340
BO	 0.7220	 0.1530
BP	 0.5630	 0.1700
BQ	 0.6130	 0.1150
BR	 0.6270	 0.1580
BS	 0.5920	 0.1460
BT	 0.6280	 0.1380
BU	 0.6730	 0.1560
BV	 0.7250	 0.1700
BW	 0.5380	 0.0990
BX	 0.5810	 0.1520
BY	 0.7060	 0.1360
BZ	 0.6590	 0.1660