Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 01:05 AM UTC

PDB ID	:	4V5H / pdb_00004v5h
EMDB ID	:	EMD-1657
Title	:	E.Coli 70s Ribosome Stalled During Translation Of Tnac Leader Peptide.
Authors	:	Seidelt, B.; Innis, C.A.; Wilson, D.N.; Gartmann, M.; Armache, J.; Villa, E.; Trabuco, L.G.; Becker, T.; Mielke, T.; Schulten, K.; Steitz, T.A.; Beckmann, R.
Deposited on	:	2009-10-26
Resolution	:	5.80 Å(reported)
Based on initial models	:	3FIK, 3FIH

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:

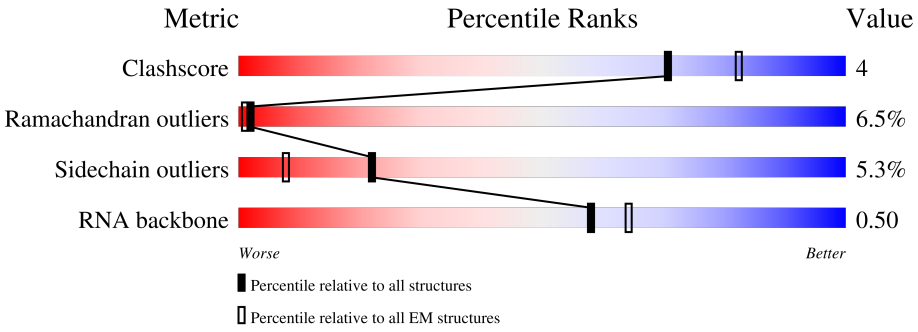
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

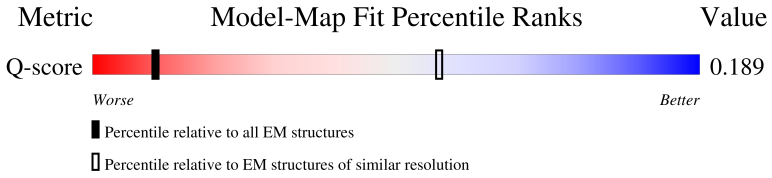
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 5.80 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	511 (5.30 - 6.30)

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 <=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	AA	1530	9% 38% 38% 14%
2	AB	218	54% 37% 56% 6%
3	AC	206	37% 40% 46% 12%

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Mol	Chain	Length	Quality of chain
4	AD	205	43% 33% 54% 12%
5	AE	150	29% 40% 51% 8%
6	AF	100	21% 37% 42% 21%
7	AG	150	39% 43% 50% 6%
8	AH	129	29% 36% 58% 5%
9	AI	127	38% 31% 58% 10%
10	AJ	98	65% 27% 59% 14%
11	AK	117	30% 38% 52% 9%
12	AL	123	37% 44% 45% 11%
13	AM	113	28% 33% 50% 15%
14	AN	96	27% 34% 51% 14%
15	AO	88	28% 45% 45% 8%
16	AP	80	39% 40% 46% 11%
17	AQ	80	25% 36% 58% 6%
18	AR	55	20% 31% 56% 13%
19	AS	79	25% 29% 58% 11%
20	AT	85	31% 31% 59% 9%
21	AU	51	57% 47% 43% 10%
22	AV	77	26% 51% 21% 19% 9%
23	AX	11	64% 18% 27% 27% 27%
24	AZ	20	55% 70% 30%
25	B0	77	26% 35% 57% 8%
26	B1	63	25% 38% 51% 11%
27	B2	58	22% 48% 45% 7%
28	B3	56	32% 36% 50% 12%

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Mol	Chain	Length	Quality of chain
29	B4	50	26% 44% 48% 6%
30	B5	234	99% 49% 47%
31	B6	46	37% 39% 43% 15%
32	B7	64	23% 36% 52% 12%
33	B8	38	21% 50% 50%
34	BA	117	13% 41% 35% 9%
35	BB	2903	11% 39% 37% 13%
36	BC	271	27% 35% 56% 8%
37	BD	209	20% 34% 50% 14%
38	BE	201	39% 45% 44% 9%
39	BF	178	22% 36% 50% 12%
40	BG	176	14% 38% 51% 10%
41	BH	149	71% 42% 51% 7%
42	BI	141	75% 35% 61%
43	BJ	142	18% 42% 43% 13%
44	BK	121	33% 29% 59% 11%
45	BL	143	30% 47% 44% 9%
46	BM	136	24% 35% 54% 10%
47	BN	120	26% 35% 58% 7%
48	BO	116	20% 39% 58%
49	BP	114	27% 42% 46% 10%
50	BQ	117	22% 35% 47% 15%
51	BR	103	17% 37% 44% 17%
52	BS	110	25% 31% 55% 13%
53	BT	93	37% 33% 51% 15%

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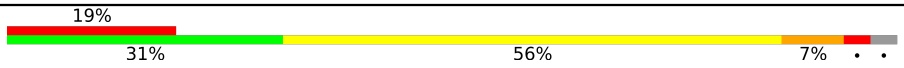
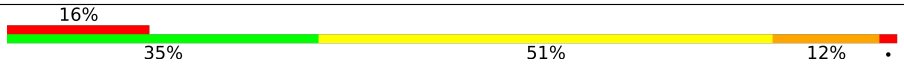
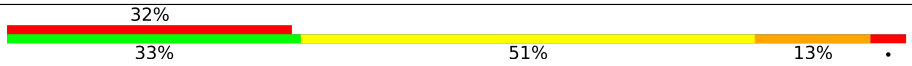
Mol	Chain	Length	Quality of chain
54	BU	102	
55	BW	94	
56	BY	79	

2 Entry composition (i)

There are 56 unique types of molecules in this entry. The entry contains 145960 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 RNA chain called 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	AA	1530	32831	14642	6024	10635	1530	0	0

- Molecule 2 is a protein called 30S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	AB	218	1704	1081	305	311	7	0	0

- Molecule 3 is a protein called 30S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	AC	206	1624	1028	305	288	3	0	0

- Molecule 4 is a protein called 30S RIBOSOMAL PROTEIN S4.

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

- Molecule 5 is a protein called 30S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AE	150	1105	687	211	201	6	0	0

- Molecule 6 is a protein called 30S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	AF	100	817	515	148	148	6	0	0

- Molecule 7 is a protein called 30S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AG	150	Total	C	N	O	S	0	0
			1174	730	226	214	4		

- Molecule 8 is a protein called 30S RIBOSOMAL PROTEIN S8.

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

- Molecule 9 is a protein called 30S RIBOSOMAL PROTEIN S9.

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

- Molecule 10 is a protein called 30S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AJ	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 11 is a protein called 30S RIBOSOMAL PROTEIN S11.

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

- Molecule 12 is a protein called 30S RIBOSOMAL PROTEIN S12.

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

- Molecule 13 is a protein called 30S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AM	113	Total	C	N	O	S	0	0
			876	541	177	155	3		

- Molecule 14 is a protein called 30S RIBOSOMAL PROTEIN S14.

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

- Molecule 15 is a protein called 30S RIBOSOMAL PROTEIN S15.

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

- Molecule 16 is a protein called 30S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AP	80	Total	C	N	O	S	0	0
			638	400	126	111	1		

- Molecule 17 is a protein called 30S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AQ	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 18 is a protein called 30S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	AR	55	Total	C	N	O	0	0
			455	288	86	81		

- Molecule 19 is a protein called 30S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 20 is a protein called 30S RIBOSOMAL PROTEIN S20.

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

- Molecule 21 is a protein called 30S RIBOSOMAL PROTEIN S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0
			425	265	86	73	1		

- Molecule 22 is a RNA chain called P-SITE TRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AV	77	Total	C	N	O	P	0	0
			1649	733	297	542	77		

- Molecule 23 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AX	11	Total	C	N	O	P	0	0
			236	106	46	73	11		

- Molecule 24 is a protein called POLY-ALA NASCENT CHAIN.

Mol	Chain	Residues	Atoms				AltConf	Trace
24	AZ	20	Total	C	N	O	0	0
			100	60	20	20		

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	B0	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	B1	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	B2	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	B3	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	B4	50	Total	C	N	O	0	0
			409	263	75	71		

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L1.

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

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	B6	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 32 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	B7	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 33 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	B8	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 34 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BA	115	Total	C	N	O	P	0	0
			2464	1097	451	801	115		

- Molecule 35 is a RNA chain called 23S RIBOSOMAL RNA.

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

- Molecule 36 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BC	271	Total	C	N	O	S	0	0
			2082	1288	423	364	7		

- Molecule 37 is a protein called 50S RIBOSOMAL PROTEIN L3.

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

- Molecule 38 is a protein called 50S RIBOSOMAL PROTEIN L4.

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

- Molecule 39 is a protein called 50S RIBOSOMAL PROTEIN L5.

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

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BG	175	Total	C	N	O	S	0	0
			1316	827	242	245	2		

- Molecule 41 is a protein called 50S RIBOSOMAL PROTEIN L9.

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

- Molecule 42 is a protein called 50S RIBOSOMAL PROTEIN L11.

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

- Molecule 43 is a protein called 50S RIBOSOMAL PROTEIN L13.

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

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BK	121	Total	C	N	O	S	0	0
			930	582	179	163	6		

- Molecule 45 is a protein called 50S RIBOSOMAL PROTEIN L15.

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

- Molecule 46 is a protein called 50S RIBOSOMAL PROTEIN L16.

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

- Molecule 47 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BN	120	Total	C	N	O	S	0	0
			960	593	196	166	5		

- Molecule 48 is a protein called 50S RIBOSOMAL PROTEIN L18.

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

- Molecule 49 is a protein called 50S RIBOSOMAL PROTEIN L19.

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

- Molecule 50 is a protein called 50S RIBOSOMAL PROTEIN L20.

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

- Molecule 51 is a protein called 50S RIBOSOMAL PROTEIN L21.

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

- Molecule 52 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 53 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BT	93	Total	C	N	O	S	0	0
			738	466	139	131	2		

- Molecule 54 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
54	BU	99	Total	C	N	O	0	0
			755	479	140	136		

- Molecule 55 is a protein called 50S RIBOSOMAL PROTEIN L25.

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

- Molecule 56 is a protein called 50S RIBOSOMAL PROTEIN L27.

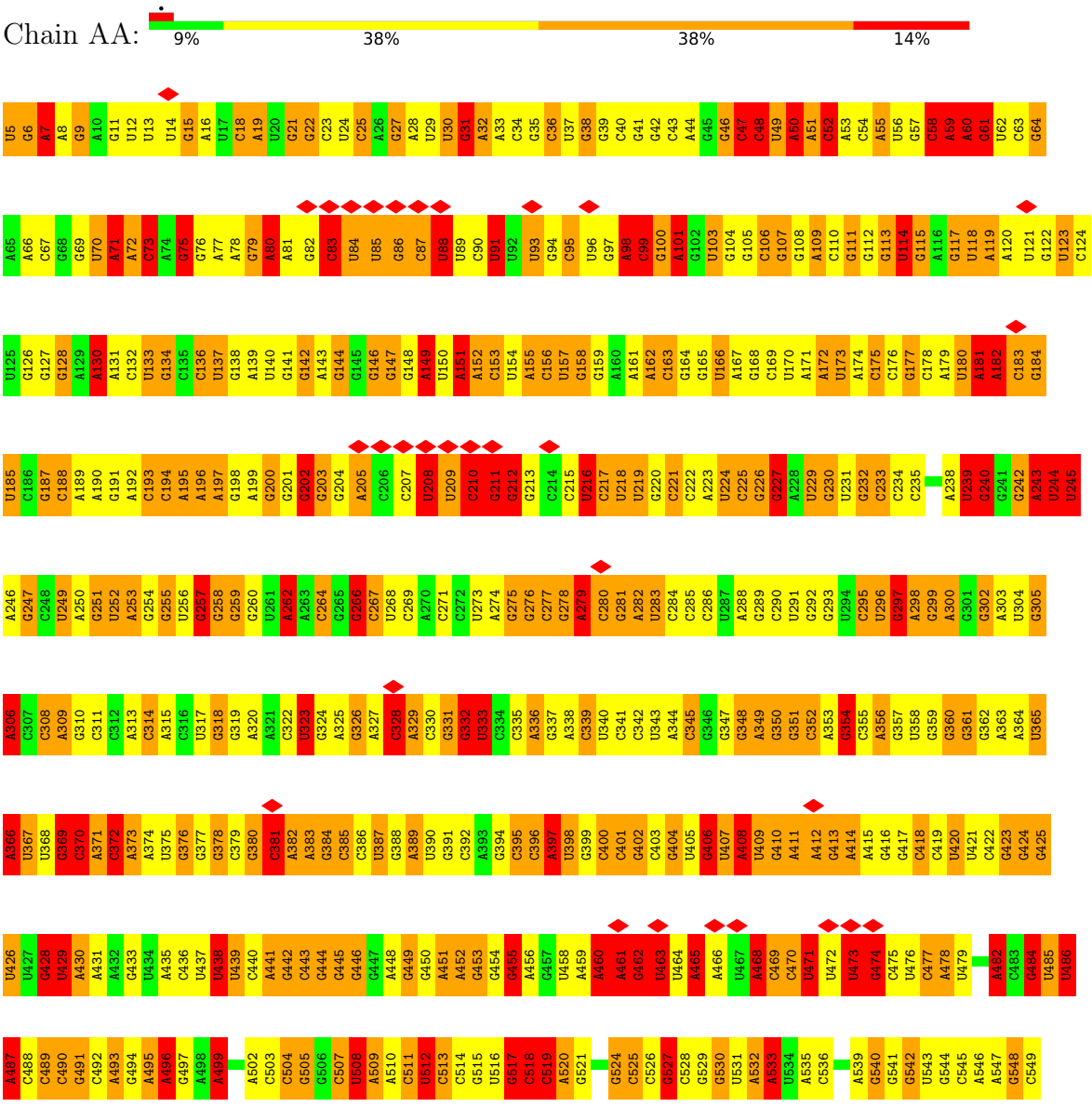
Mol	Chain	Residues	Atoms					AltConf	Trace
56	BY	79	Total	C	N	O	S	0	0
			596	367	120	108	1		

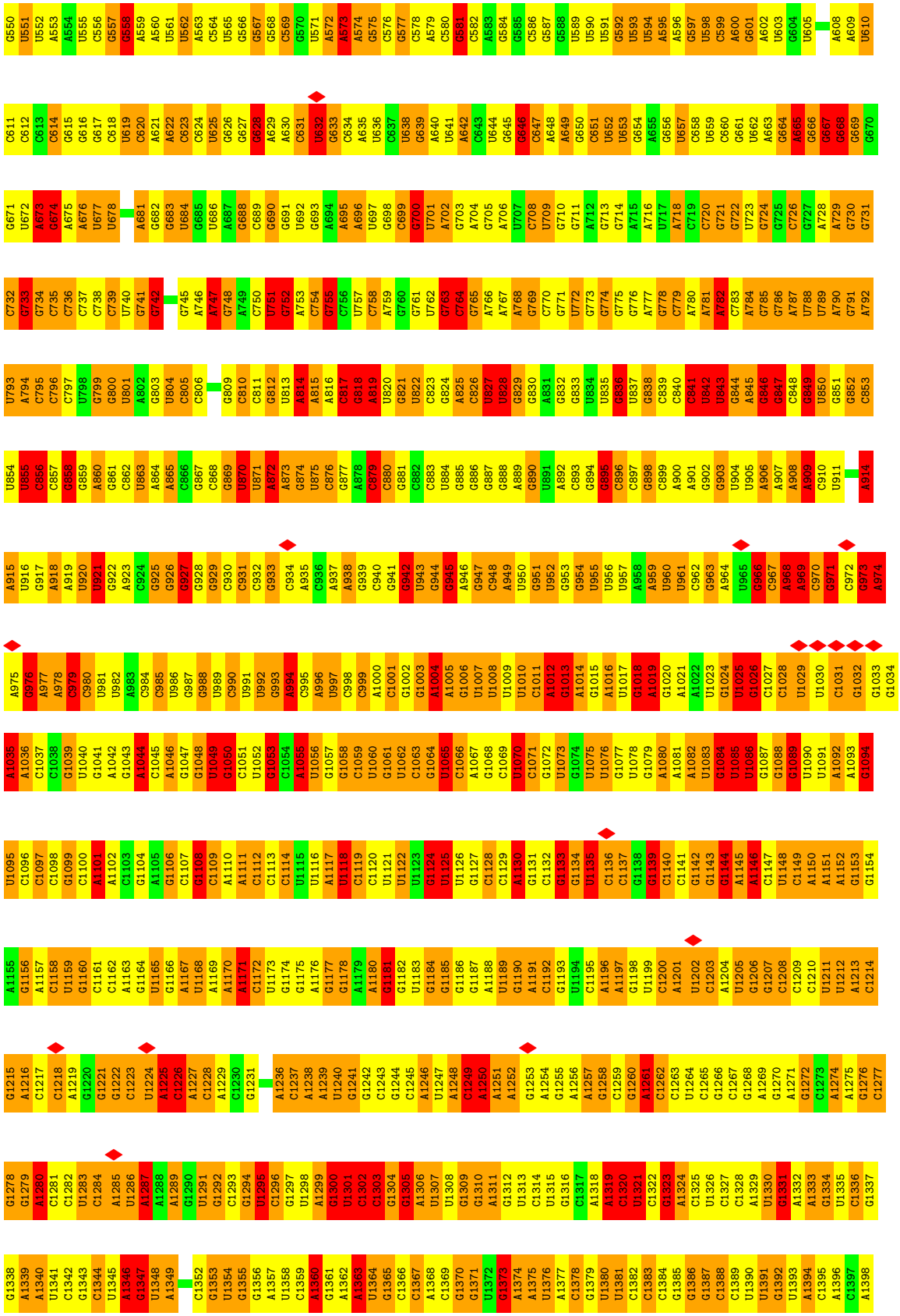
3 Residue-property plots (i)

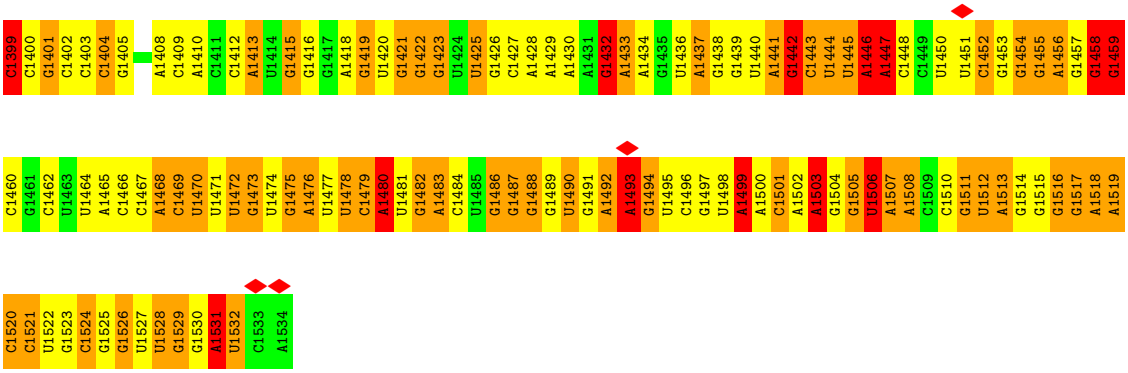
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 16S RIBOSOMAL RNA

Chain AA: 9% 38% 38% 14%

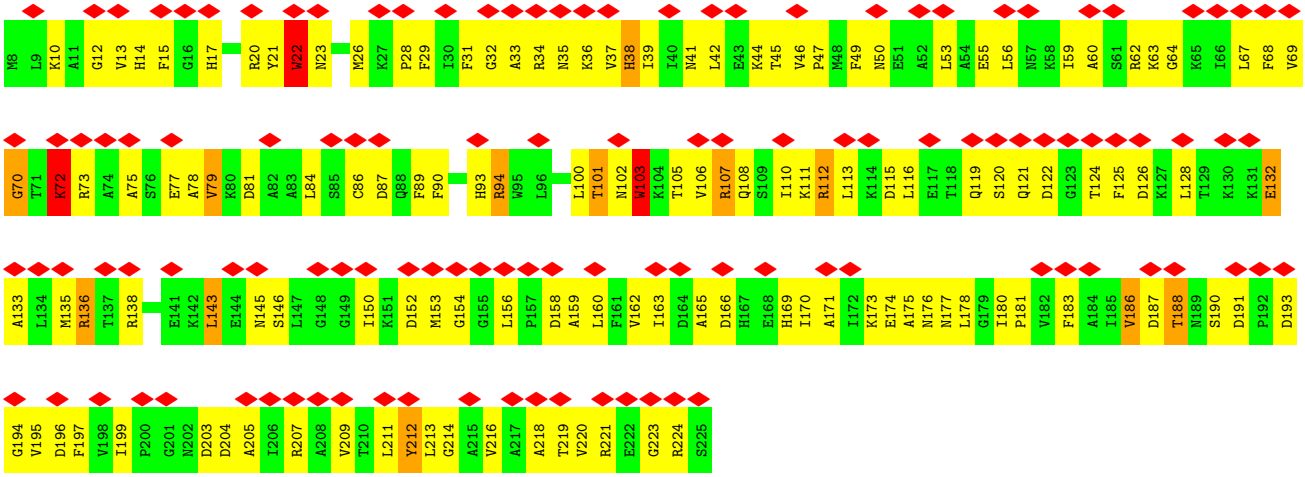






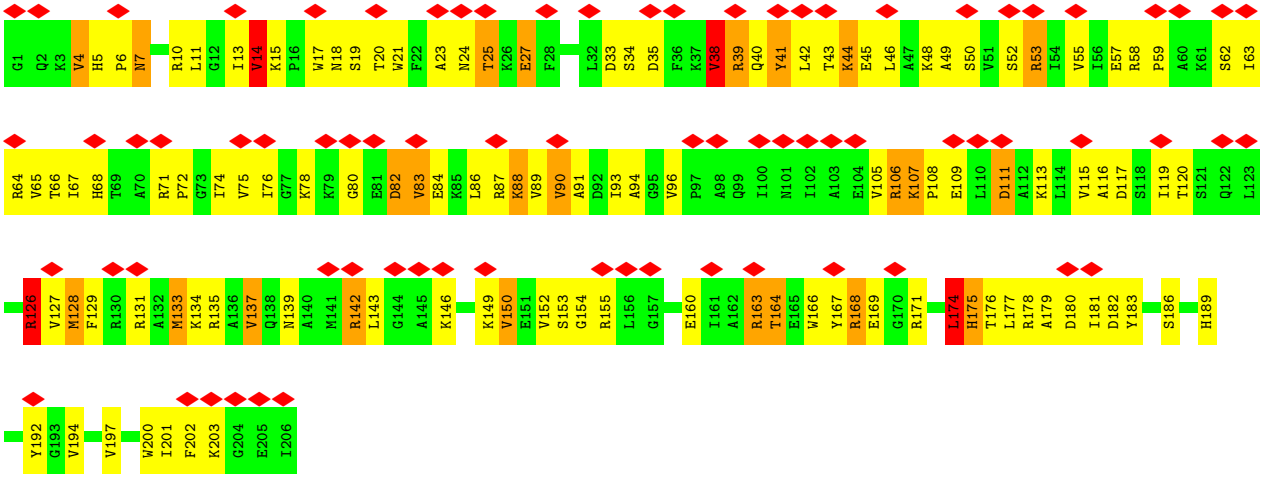
• Molecule 2: 30S RIBOSOMAL PROTEIN S2

Chain AB:



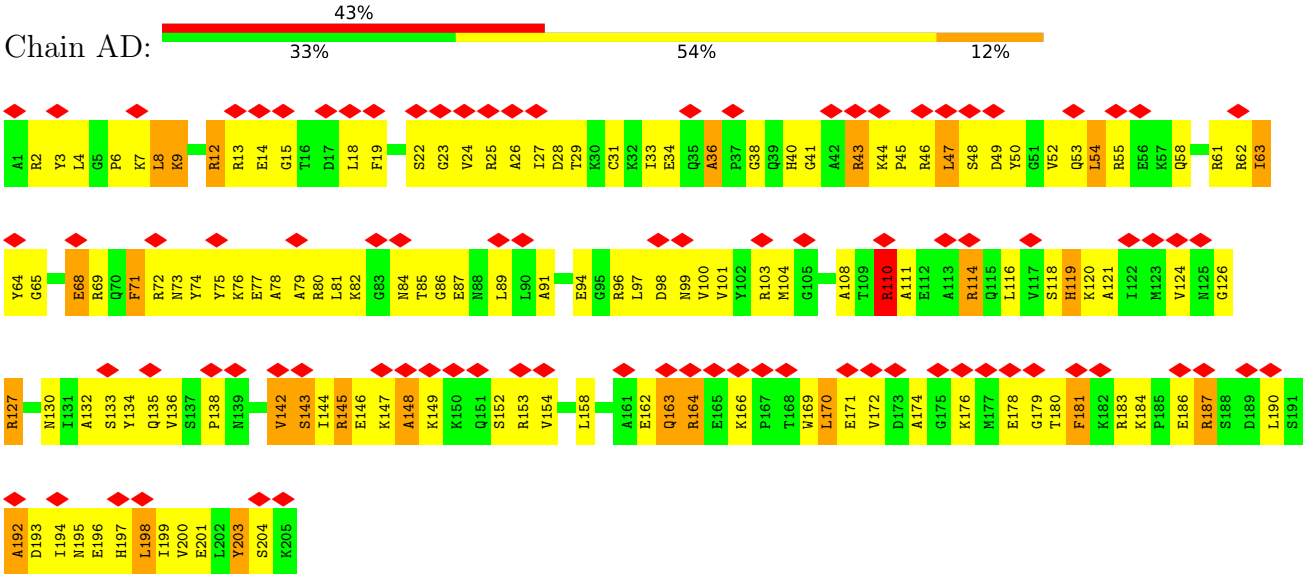
• Molecule 3: 30S RIBOSOMAL PROTEIN S3

Chain AC:



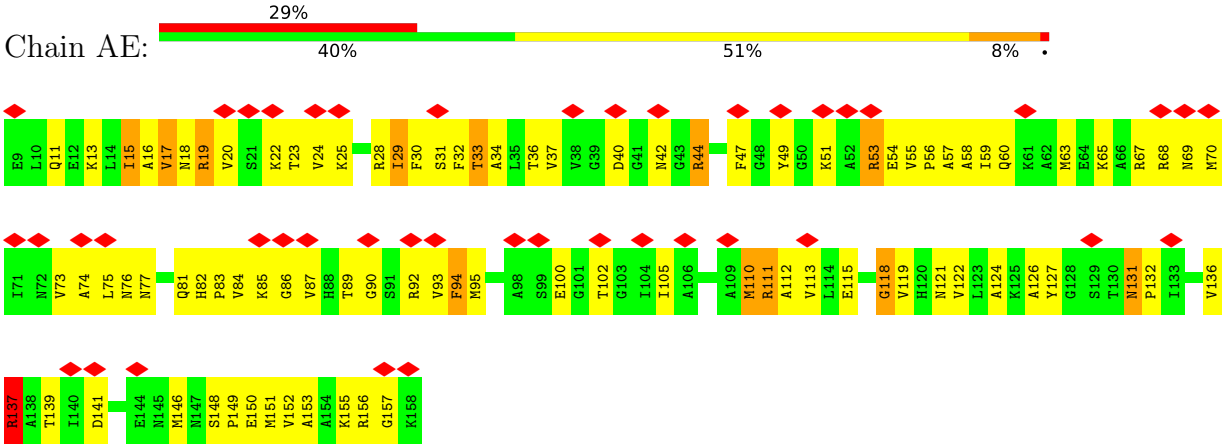
• Molecule 4: 30S RIBOSOMAL PROTEIN S4

Chain AD:



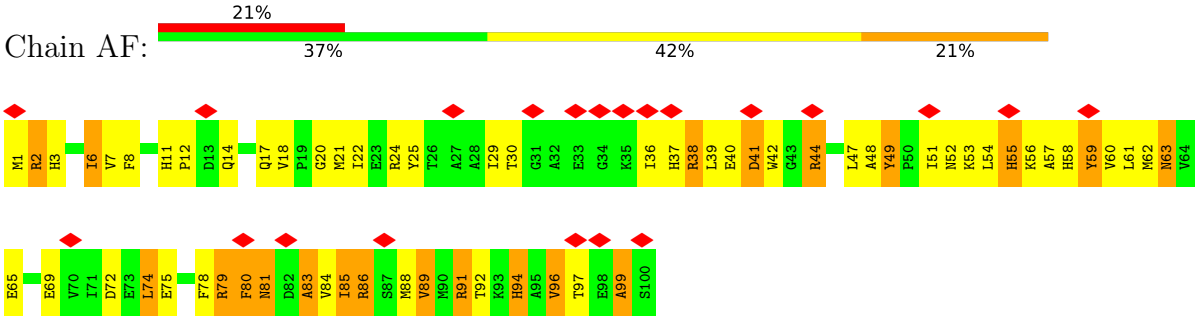
• Molecule 5: 30S RIBOSOMAL PROTEIN S5

Chain AE:



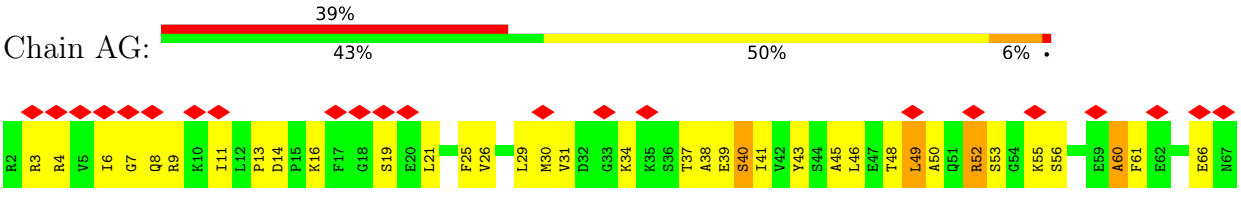
• Molecule 6: 30S RIBOSOMAL PROTEIN S6

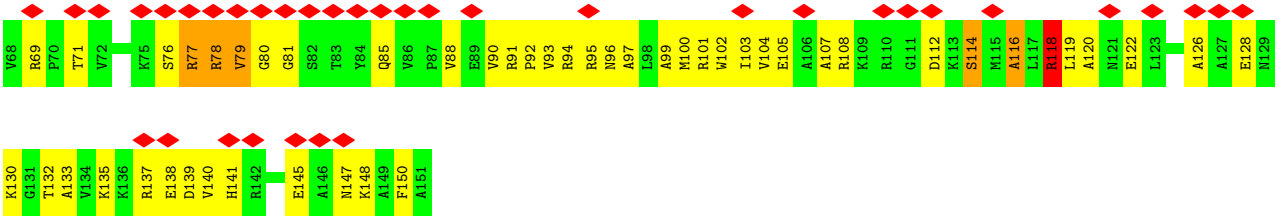
Chain AF:



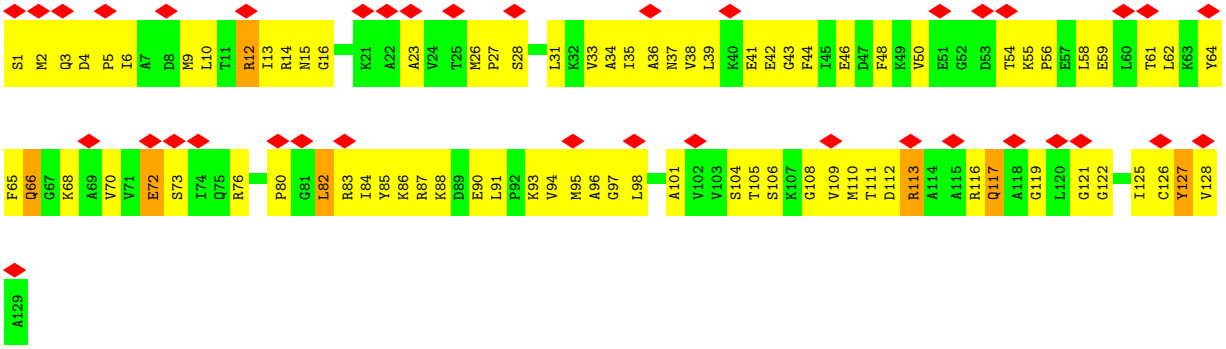
• Molecule 7: 30S RIBOSOMAL PROTEIN S7

Chain AG:

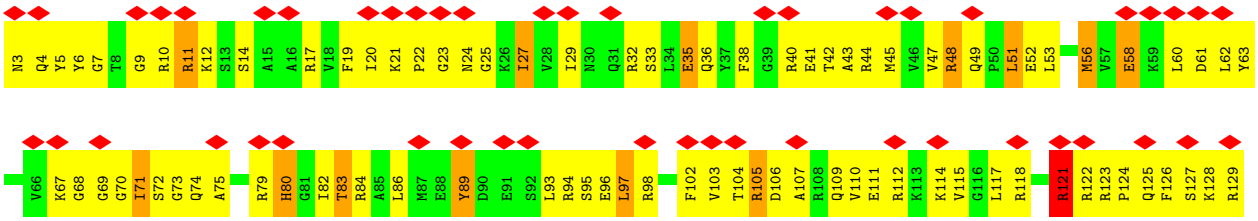




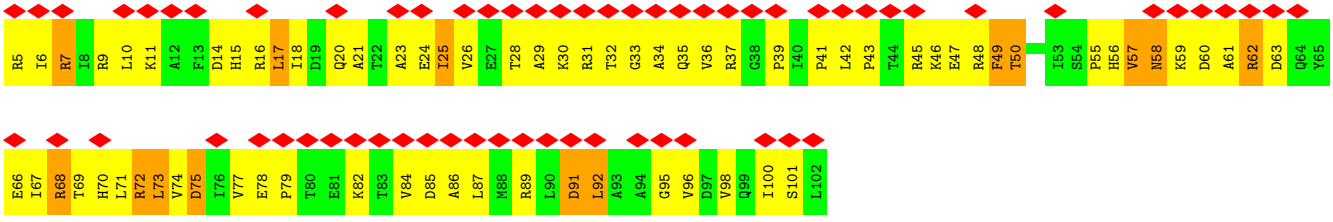
• Molecule 8: 30S RIBOSOMAL PROTEIN S8



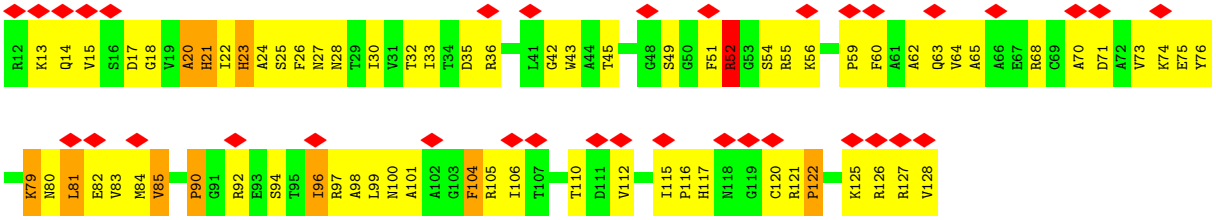
• Molecule 9: 30S RIBOSOMAL PROTEIN S9



• Molecule 10: 30S RIBOSOMAL PROTEIN S10

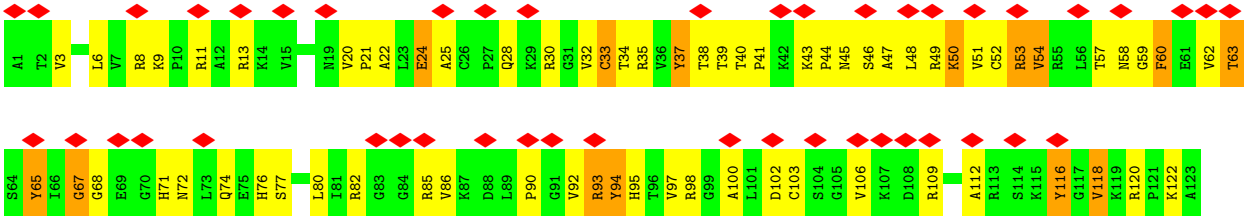


• Molecule 11: 30S RIBOSOMAL PROTEIN S11



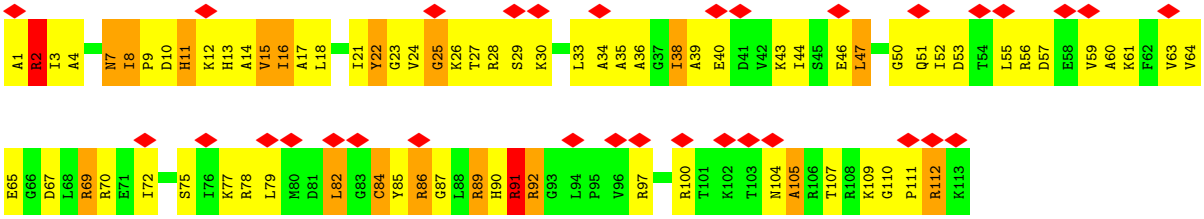
• Molecule 12: 30S RIBOSOMAL PROTEIN S12

Chain AL:



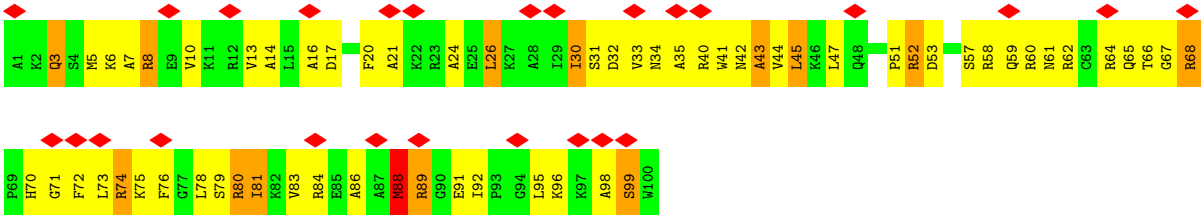
• Molecule 13: 30S RIBOSOMAL PROTEIN S13

Chain AM:



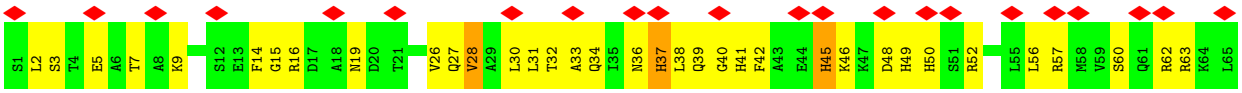
• Molecule 14: 30S RIBOSOMAL PROTEIN S14

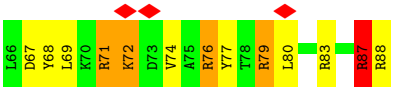
Chain AN:



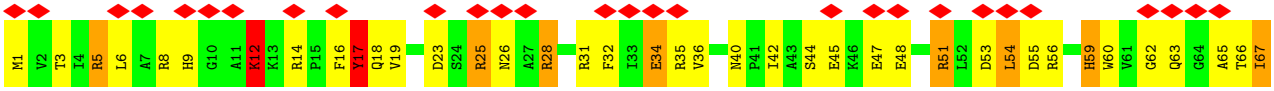
• Molecule 15: 30S RIBOSOMAL PROTEIN S15

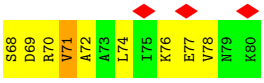
Chain AO:



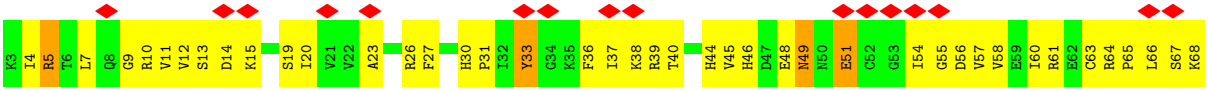


• Molecule 16: 30S RIBOSOMAL PROTEIN S16

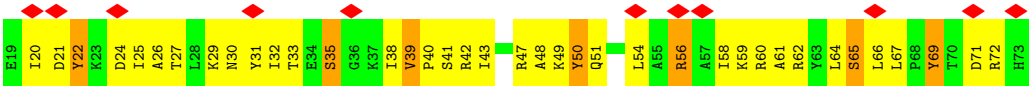




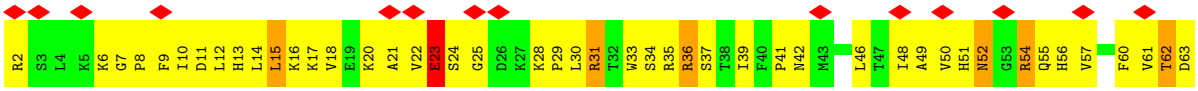
• Molecule 17: 30S RIBOSOMAL PROTEIN S17

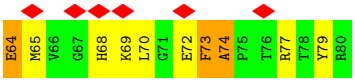


• Molecule 18: 30S RIBOSOMAL PROTEIN S18

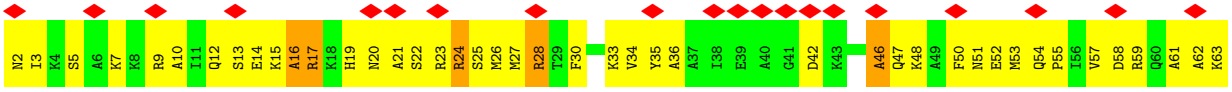


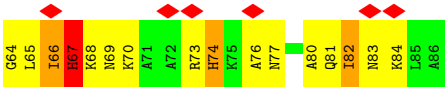
• Molecule 19: 30S RIBOSOMAL PROTEIN S19



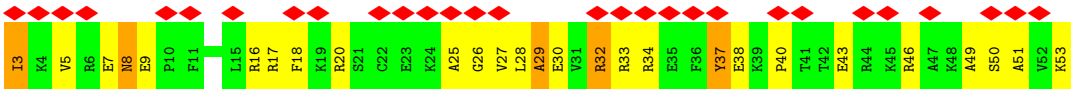


• Molecule 20: 30S RIBOSOMAL PROTEIN S20

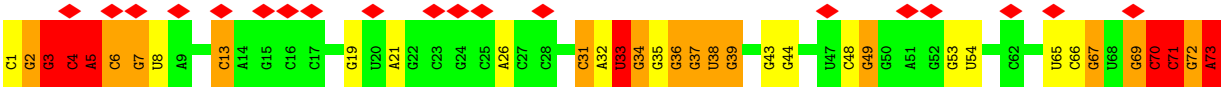




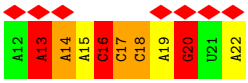
• Molecule 21: 30S RIBOSOMAL PROTEIN S21



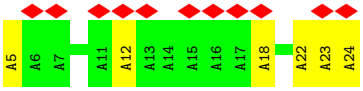
• Molecule 22: P-SITE TRNA



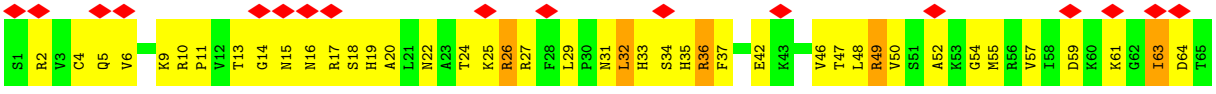
• Molecule 23: MRNA

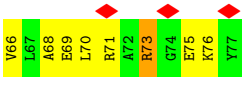


• Molecule 24: POLY-ALA NASCENT CHAIN

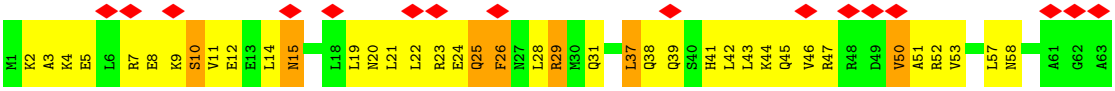


• Molecule 25: 50S RIBOSOMAL PROTEIN L28



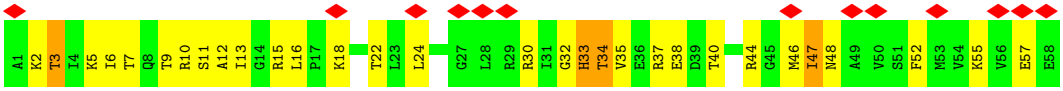


• Molecule 26: 50S RIBOSOMAL PROTEIN L29



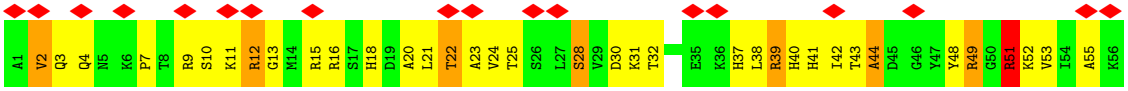
• Molecule 27: 50S RIBOSOMAL PROTEIN L30

Chain B2:



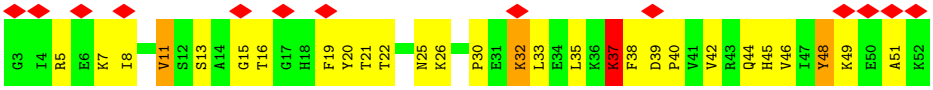
• Molecule 28: 50S RIBOSOMAL PROTEIN L32

Chain B3:



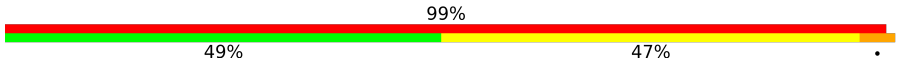
• Molecule 29: 50S RIBOSOMAL PROTEIN L33

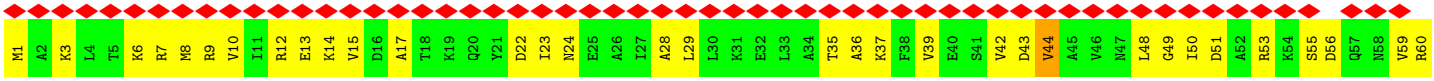
Chain B4:

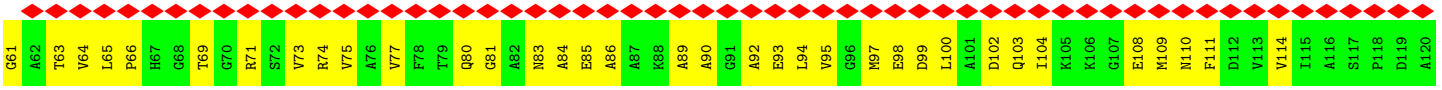


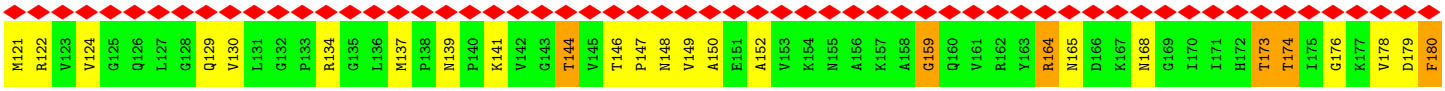
• Molecule 30: 50S RIBOSOMAL PROTEIN L1

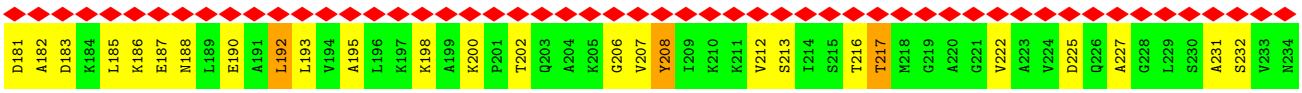
Chain B5:





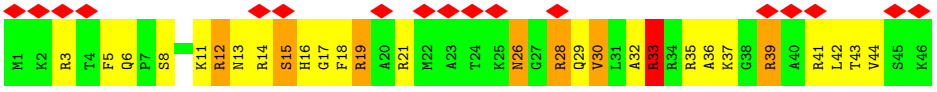






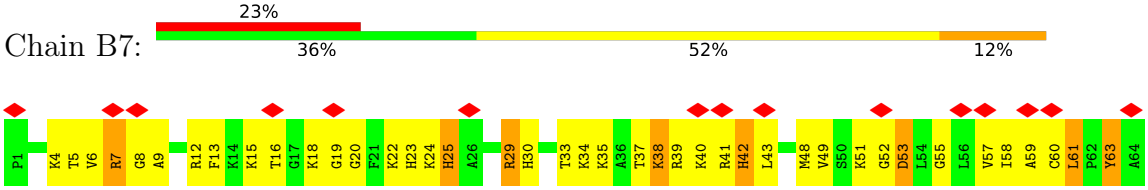
• Molecule 31: 50S RIBOSOMAL PROTEIN L34

Chain B6:



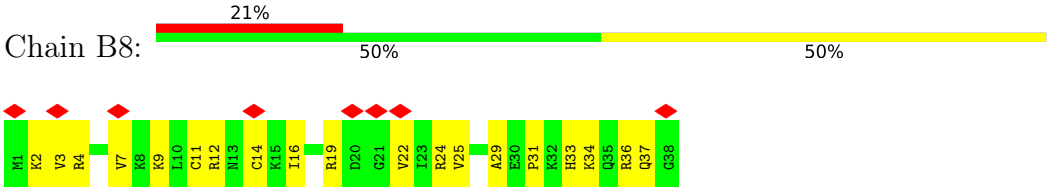
• Molecule 32: 50S RIBOSOMAL PROTEIN L35

Chain B7:



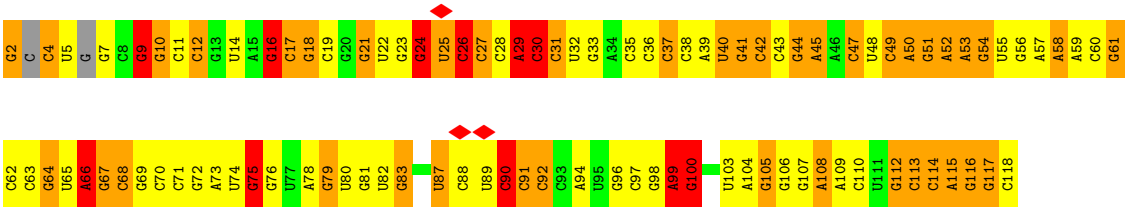
• Molecule 33: 50S RIBOSOMAL PROTEIN L36

Chain B8:



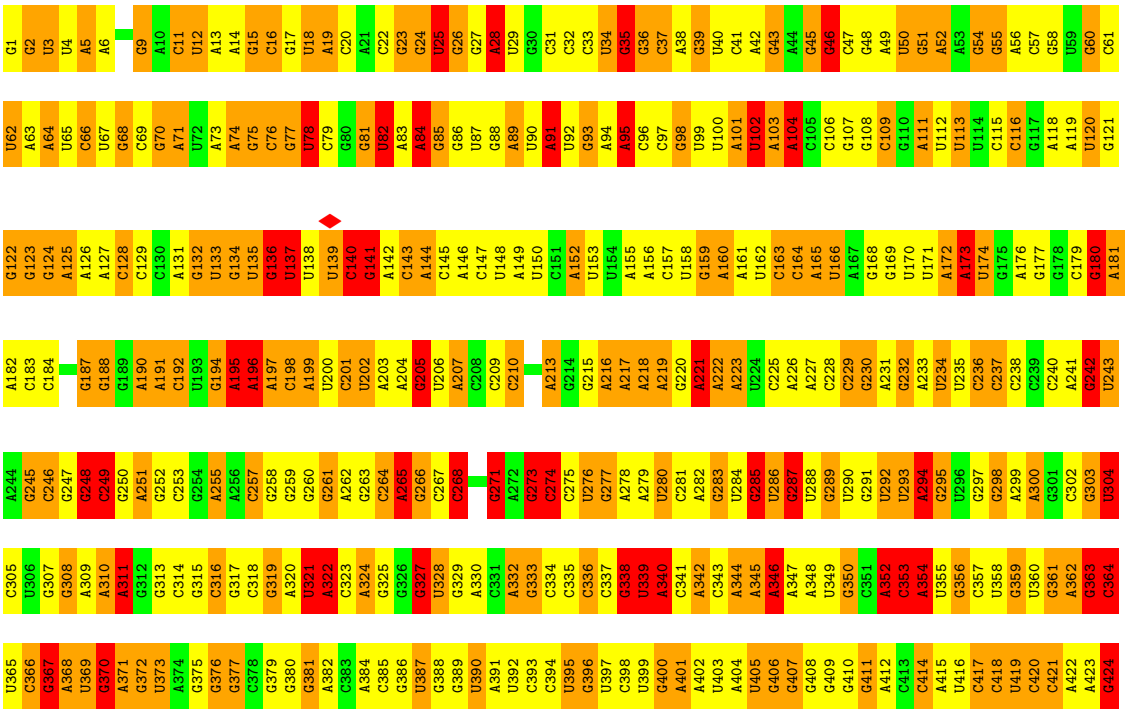
• Molecule 34: 5S RIBOSOMAL RNA

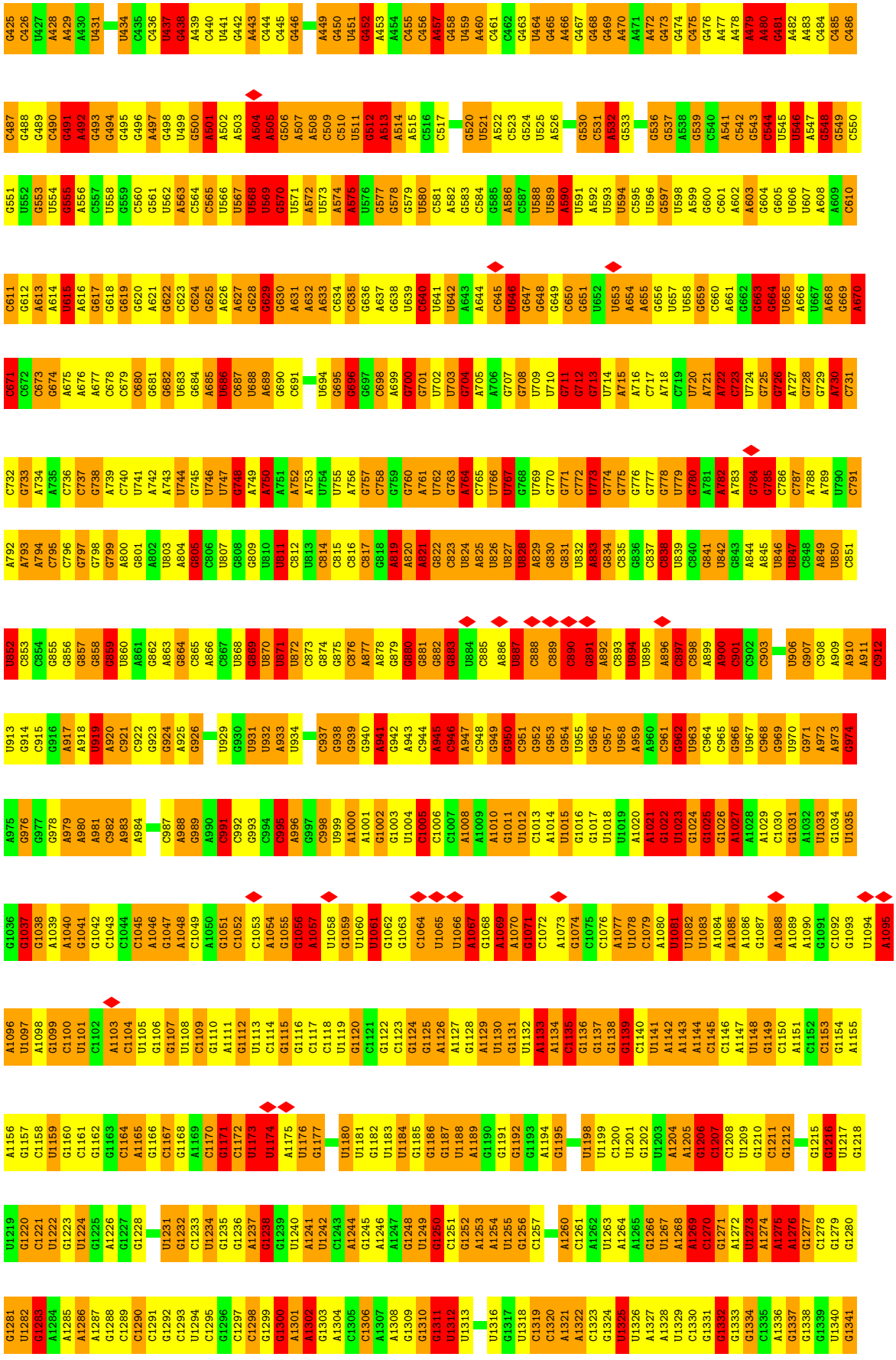
Chain BA:

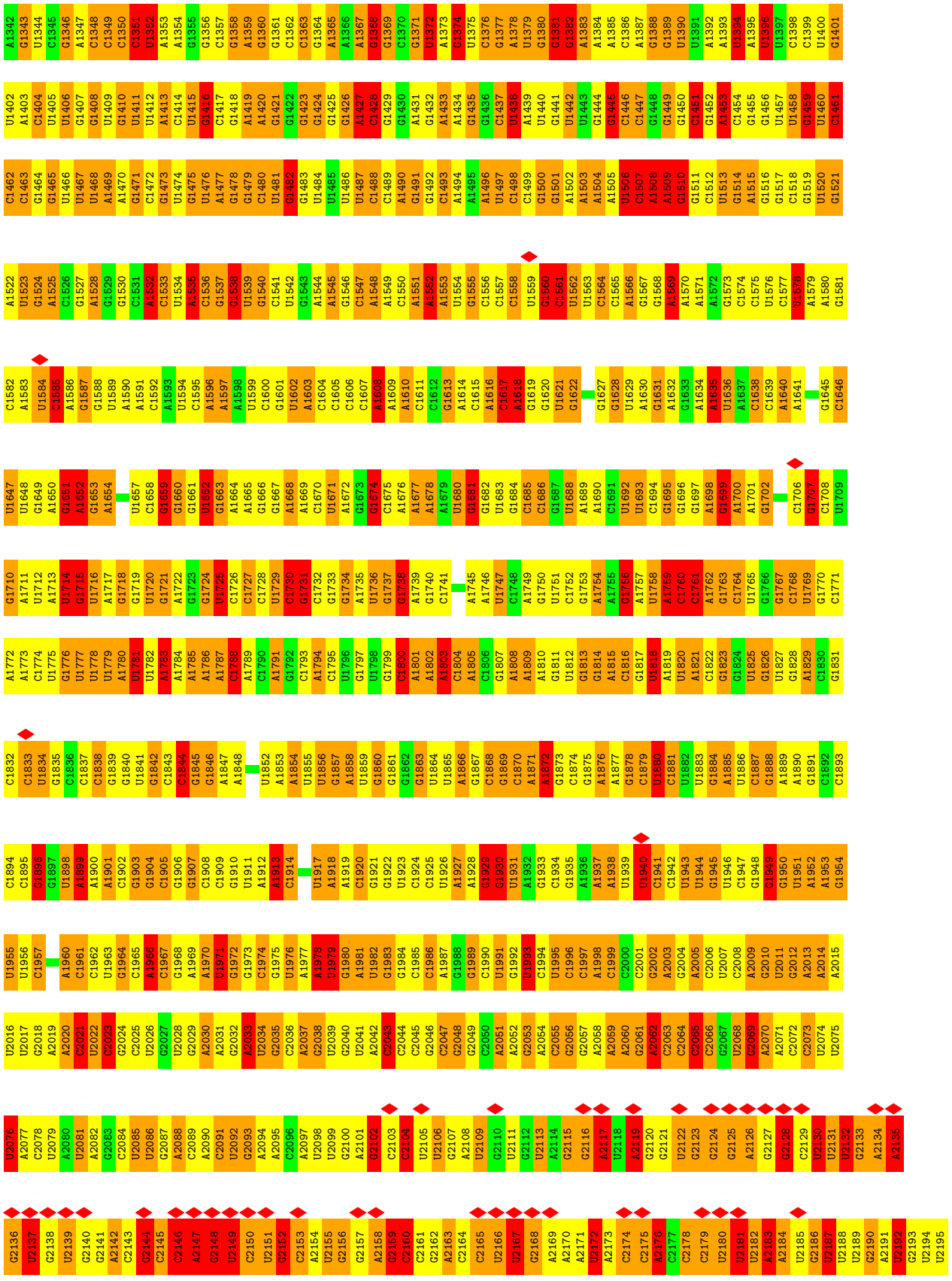


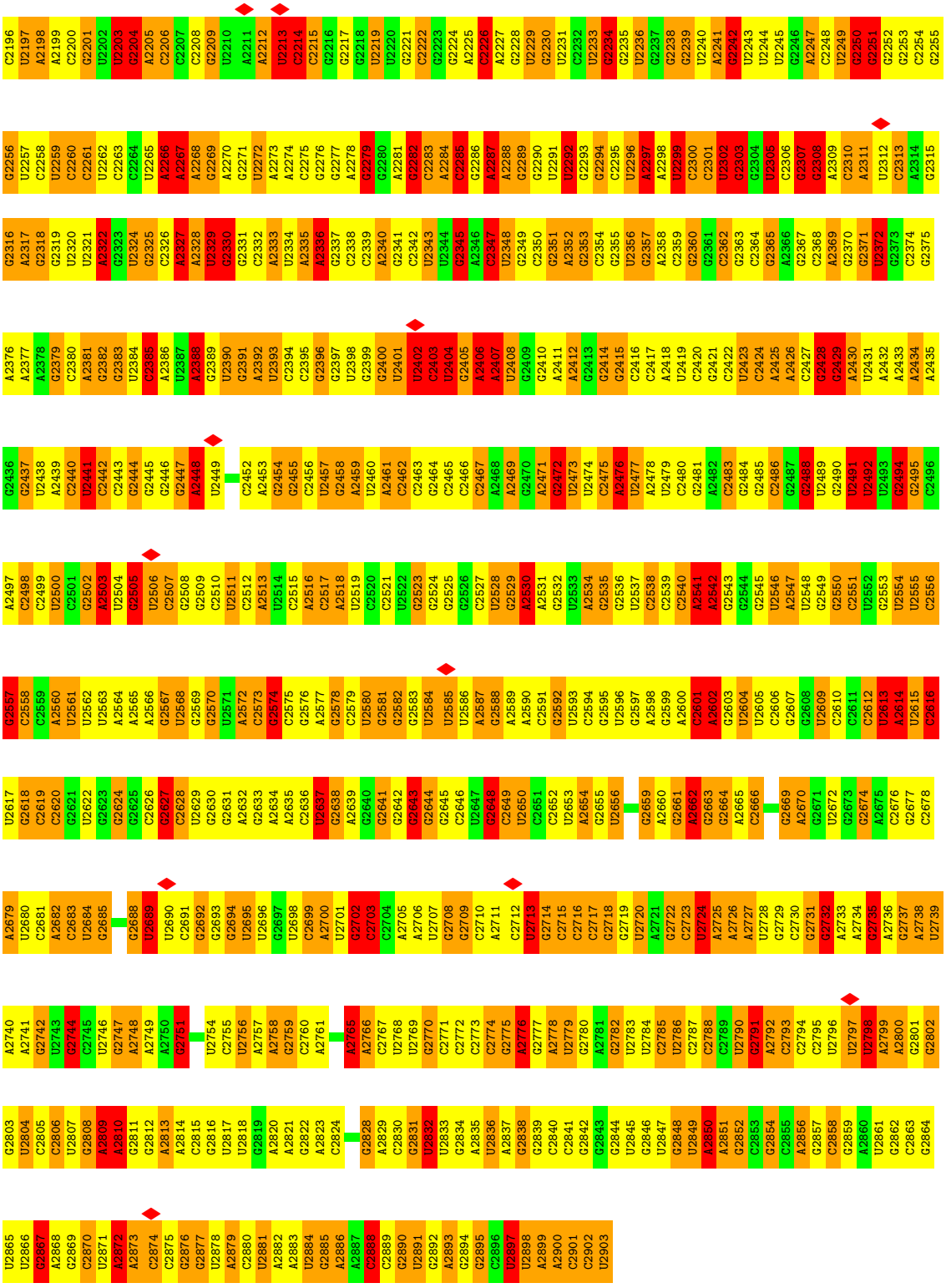
• Molecule 35: 23S RIBOSOMAL RNA

Chain BB:

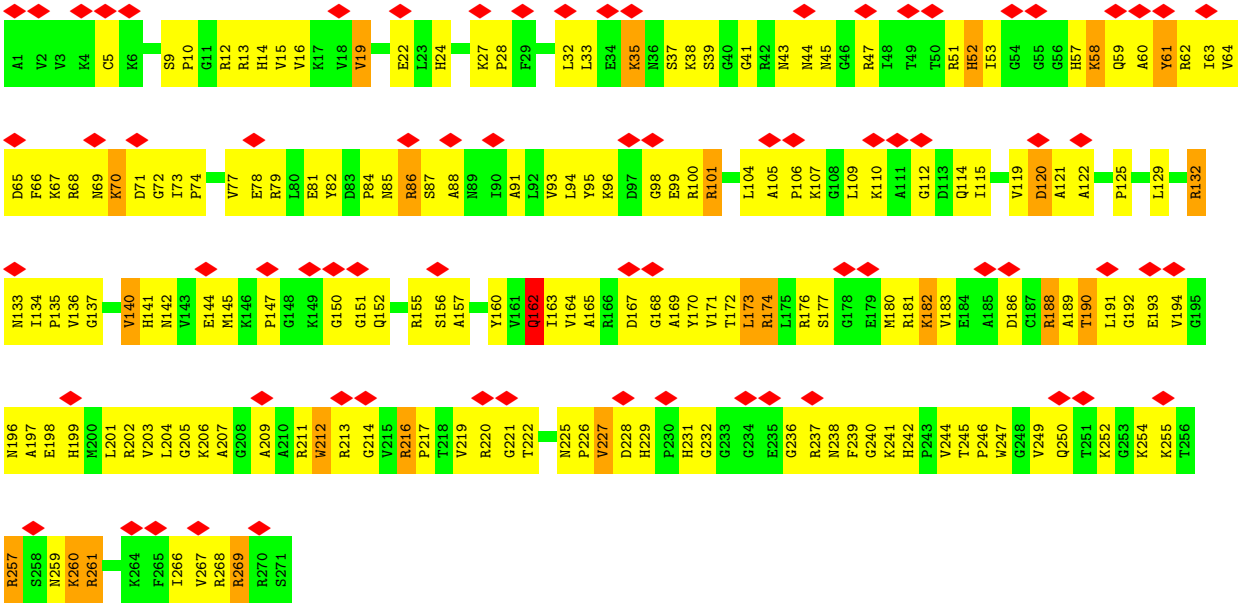






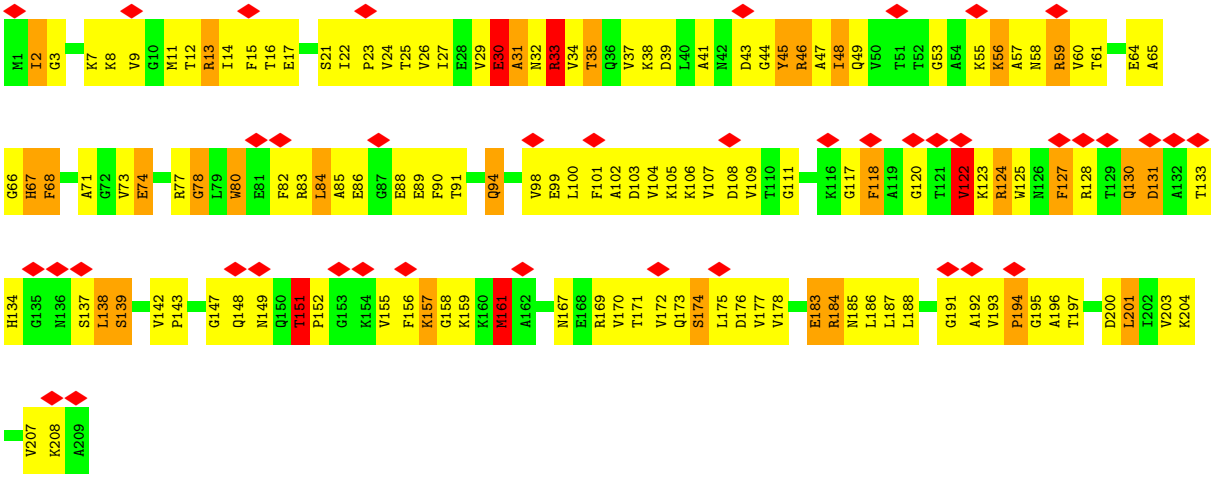


• Molecule 36: 50S RIBOSOMAL PROTEIN L2



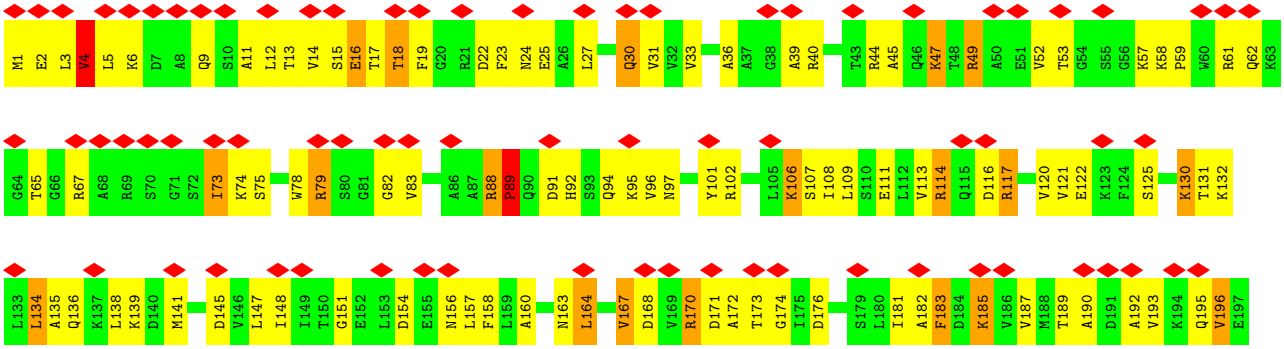
• Molecule 37: 50S RIBOSOMAL PROTEIN L3

Chain BD:



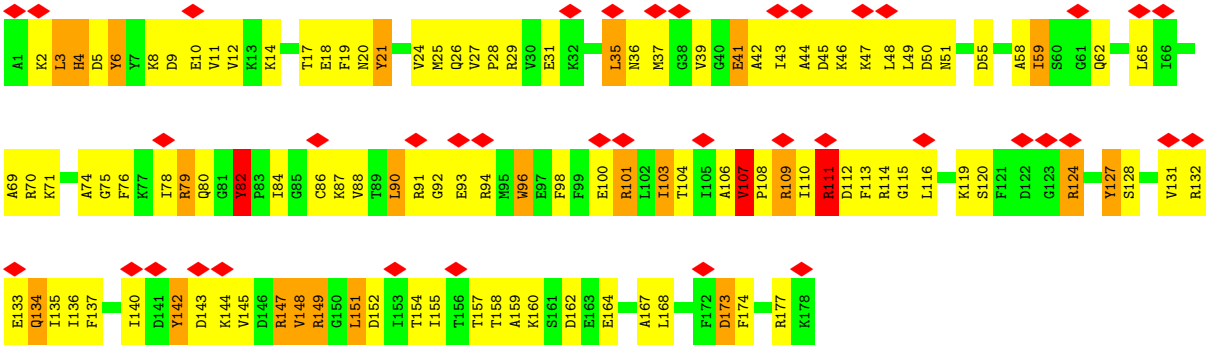
• Molecule 38: 50S RIBOSOMAL PROTEIN L4

Chain BE:



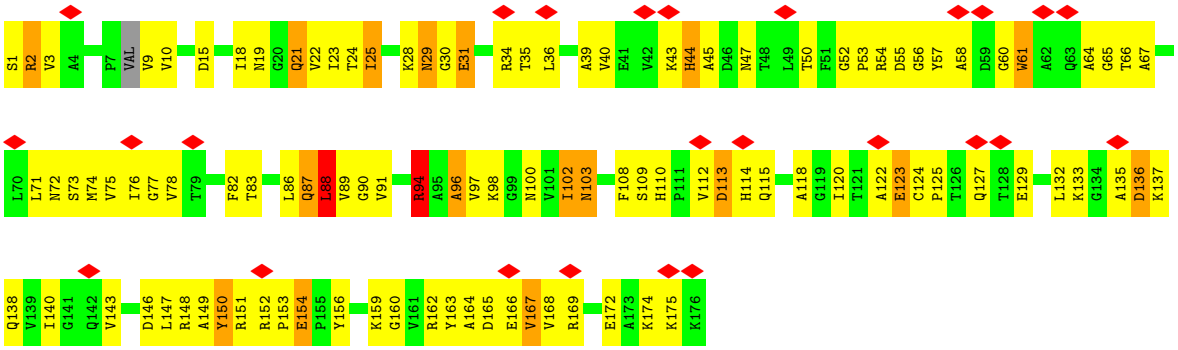
• Molecule 39: 50S RIBOSOMAL PROTEIN L5

Chain BF:



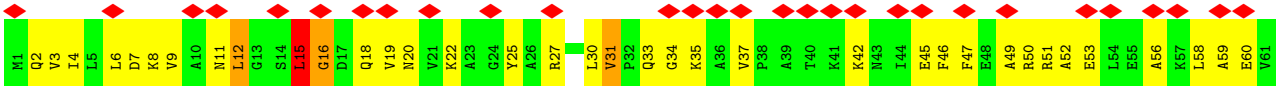
• Molecule 40: 50S RIBOSOMAL PROTEIN L6

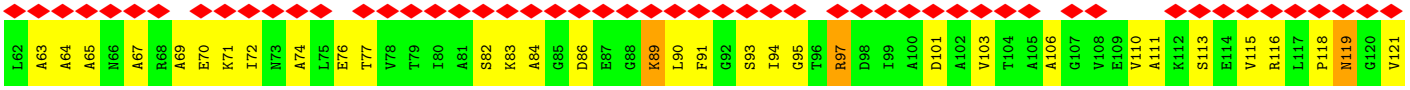
Chain BG:

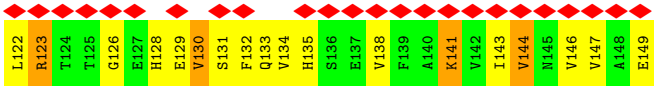


• Molecule 41: 50S RIBOSOMAL PROTEIN L9

Chain BH:

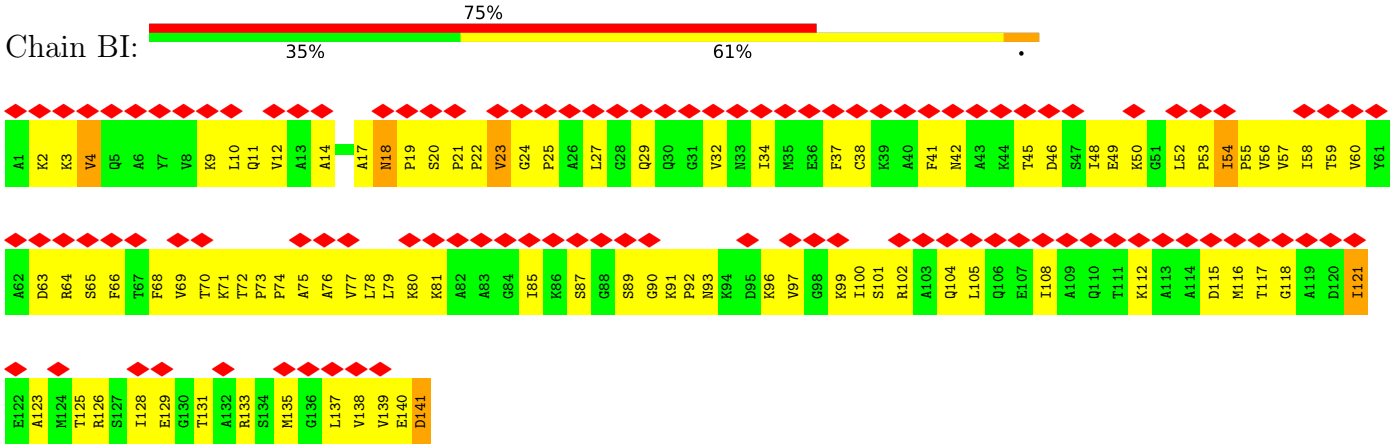






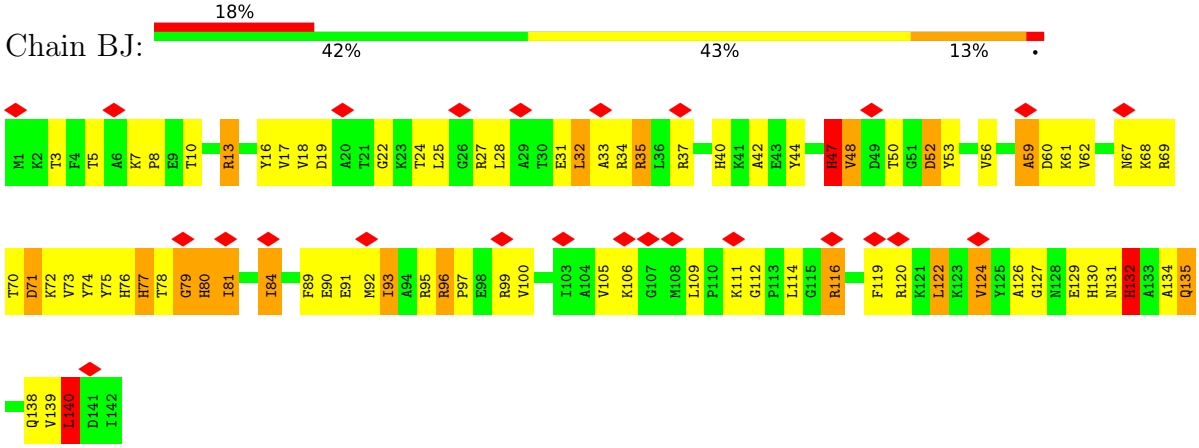
• Molecule 42: 50S RIBOSOMAL PROTEIN L11

Chain BI:



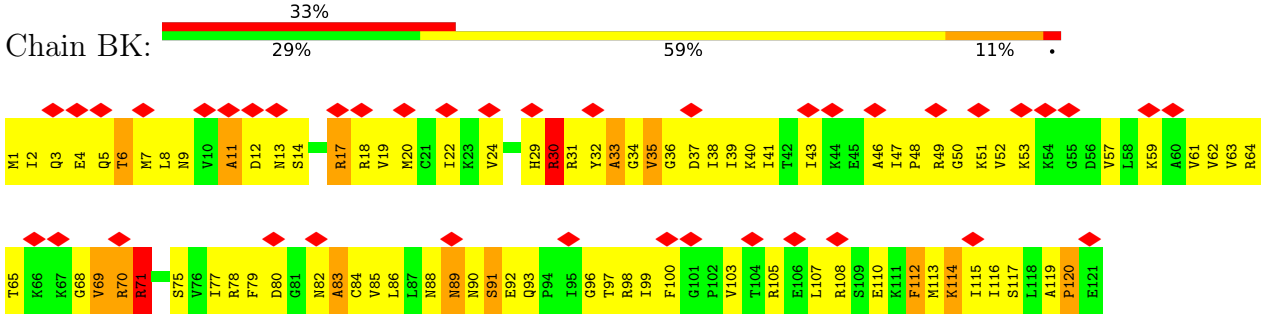
• Molecule 43: 50S RIBOSOMAL PROTEIN L13

Chain BJ:



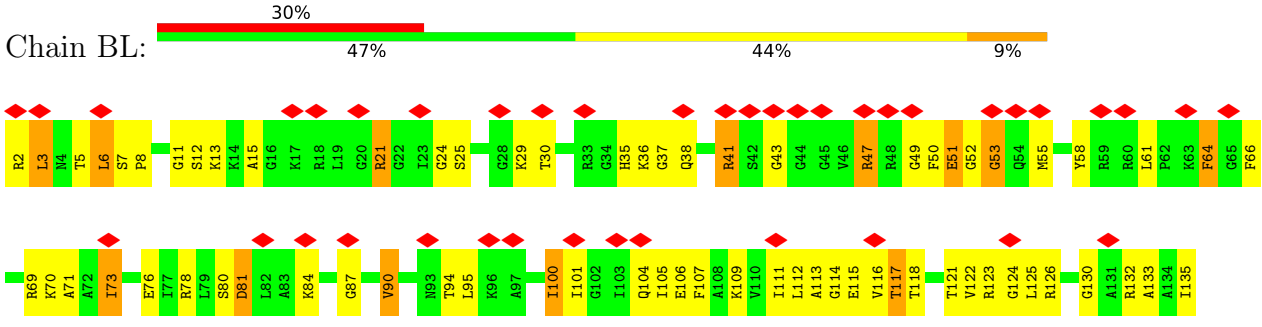
• Molecule 44: 50S RIBOSOMAL PROTEIN L14

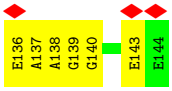
Chain BK:



• Molecule 45: 50S RIBOSOMAL PROTEIN L15

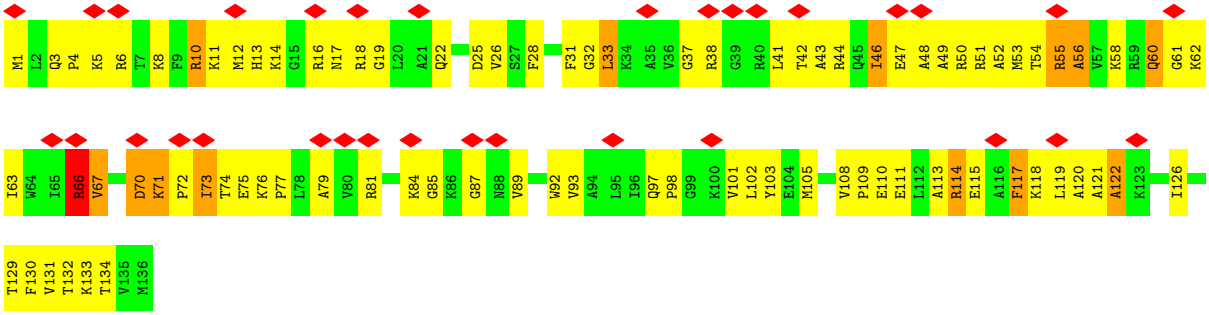
Chain BL:





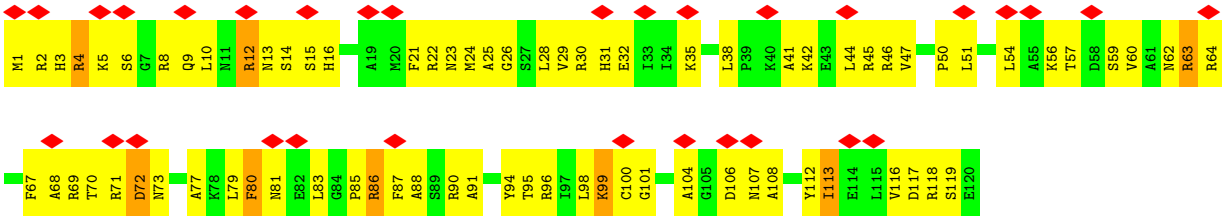
• Molecule 46: 50S RIBOSOMAL PROTEIN L16

Chain BM:



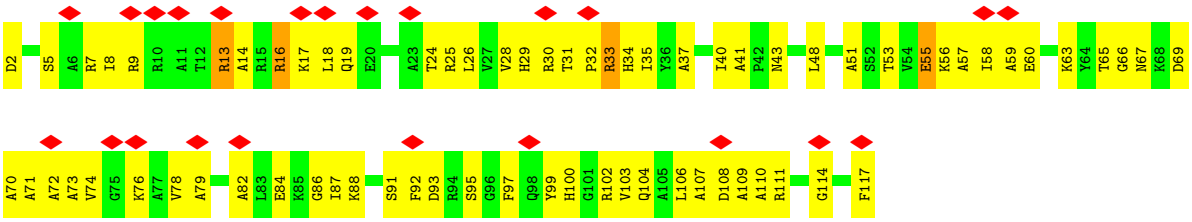
• Molecule 47: 50S RIBOSOMAL PROTEIN L17

Chain BN:



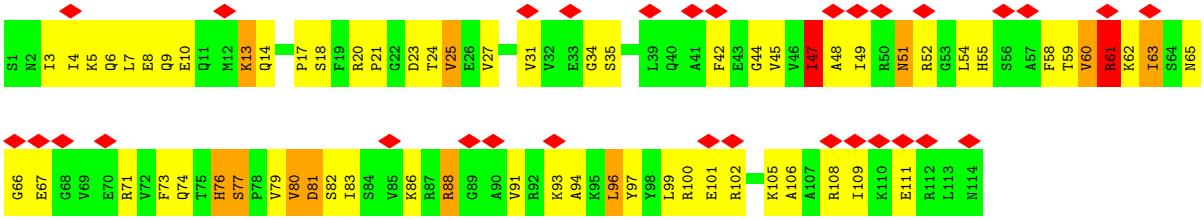
• Molecule 48: 50S RIBOSOMAL PROTEIN L18

Chain BO:



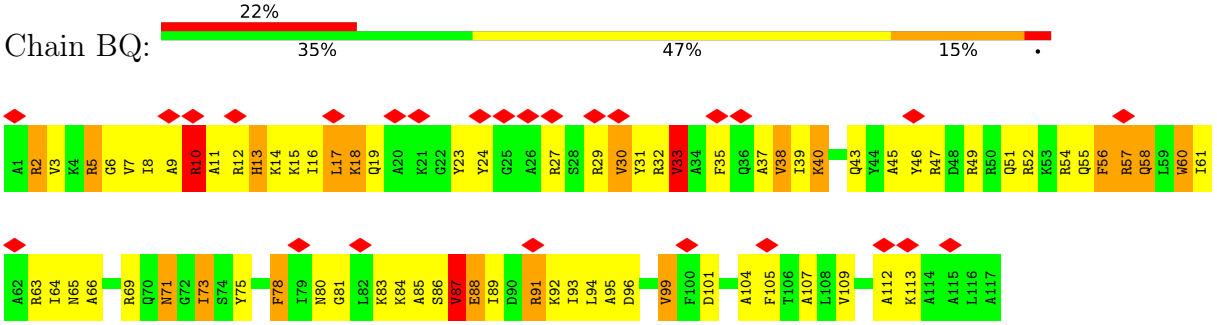
• Molecule 49: 50S RIBOSOMAL PROTEIN L19

Chain BP:



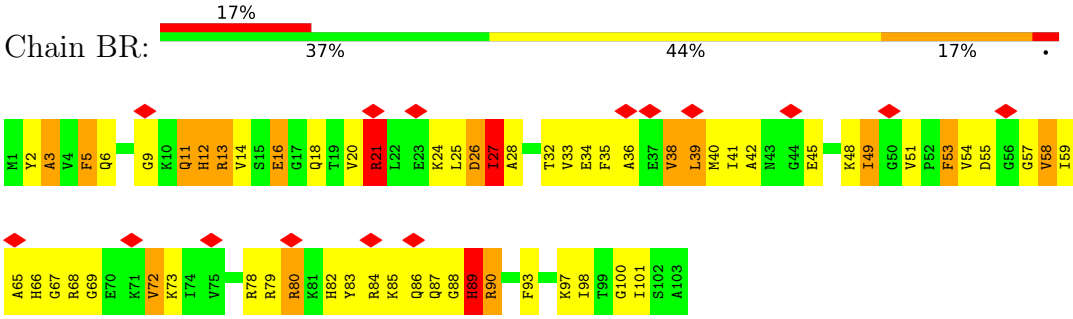
• Molecule 50: 50S RIBOSOMAL PROTEIN L20

Chain BQ:



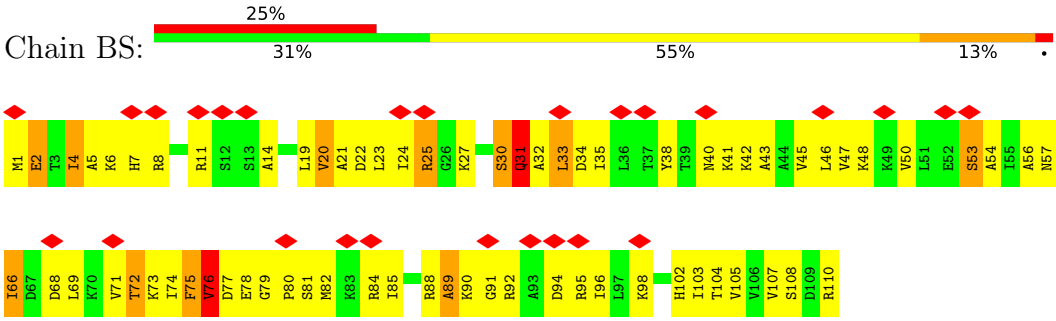
• Molecule 51: 50S RIBOSOMAL PROTEIN L21

Chain BR:



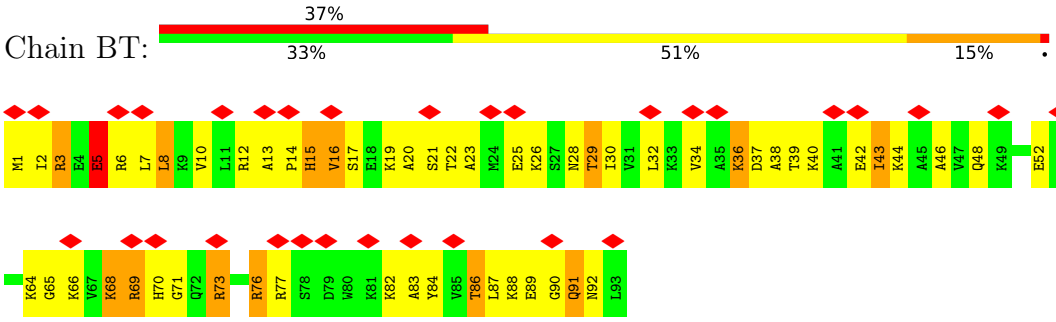
• Molecule 52: 50S RIBOSOMAL PROTEIN L22

Chain BS:



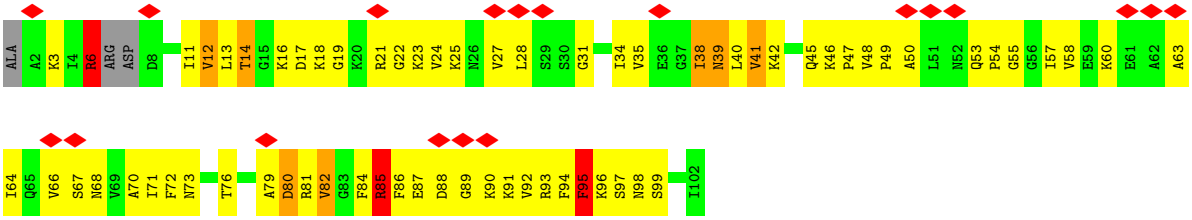
• Molecule 53: 50S RIBOSOMAL PROTEIN L23

Chain BT:

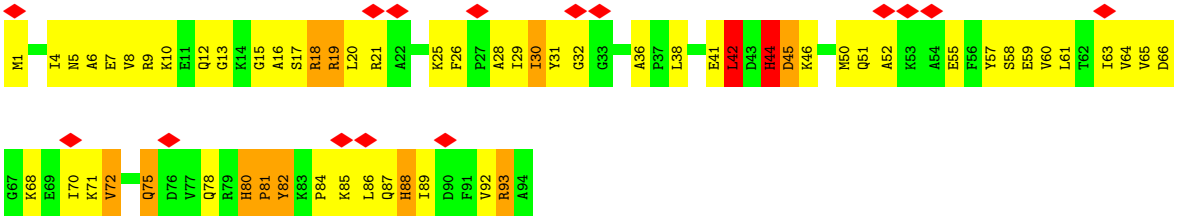


• Molecule 54: 50S RIBOSOMAL PROTEIN L24

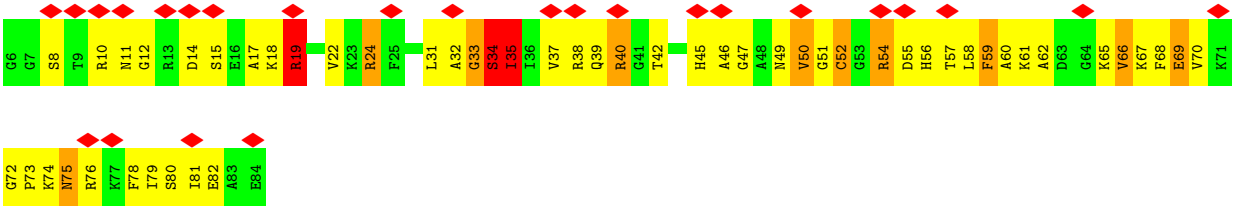
Chain BU:



• Molecule 55: 50S RIBOSOMAL PROTEIN L25



• Molecule 56: 50S RIBOSOMAL PROTEIN L27



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	263000	Depositor
Resolution determination method	Not provided	
CTF correction method	DEFOCUS GROUP VOLUMES	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	38900	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	0.760	Depositor
Minimum map value	-0.510	Depositor
Average map value	0.005	Depositor
Map value standard deviation	0.047	Depositor
Recommended contour level	0.12	Depositor
Map size (Å)	361.62, 363.82498, 361.62	wwPDB
Map dimensions	294, 294, 294	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.23, 1.2375, 1.23	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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	AA	1.98	658/36762 (1.8%)	1.85	1280/57350 (2.2%)
2	AB	2.29	75/1735 (4.3%)	2.55	130/2338 (5.6%)
3	AC	2.28	61/1651 (3.7%)	2.48	105/2225 (4.7%)
4	AD	2.30	68/1665 (4.1%)	2.52	145/2227 (6.5%)
5	AE	2.26	44/1118 (3.9%)	2.45	72/1504 (4.8%)
6	AF	2.36	36/835 (4.3%)	2.43	56/1128 (5.0%)
7	AG	2.36	49/1187 (4.1%)	2.50	78/1591 (4.9%)
8	AH	2.36	47/989 (4.8%)	2.54	73/1326 (5.5%)
9	AI	2.45	57/1034 (5.5%)	2.50	69/1375 (5.0%)
10	AJ	2.43	36/796 (4.5%)	2.44	57/1077 (5.3%)
11	AK	2.39	45/893 (5.0%)	2.65	71/1205 (5.9%)
12	AL	2.45	46/969 (4.7%)	2.43	62/1300 (4.8%)
13	AM	2.29	34/884 (3.8%)	2.48	70/1181 (5.9%)
14	AN	2.33	31/785 (3.9%)	2.47	50/1043 (4.8%)
15	AO	2.36	27/724 (3.7%)	2.54	50/966 (5.2%)
16	AP	2.41	40/648 (6.2%)	2.49	45/870 (5.2%)
17	AQ	2.30	22/657 (3.3%)	2.34	33/881 (3.7%)
18	AR	2.28	18/462 (3.9%)	2.53	39/621 (6.3%)
19	AS	2.41	40/652 (6.1%)	2.57	48/877 (5.5%)
20	AT	2.27	31/671 (4.6%)	2.74	67/888 (7.5%)
21	AU	2.31	17/430 (4.0%)	2.32	25/570 (4.4%)
22	AV	1.39	12/1820 (0.7%)	1.46	31/2836 (1.1%)
23	AX	1.34	1/264 (0.4%)	1.34	1/407 (0.2%)
24	AZ	2.55	4/99 (4.0%)	2.40	7/137 (5.1%)
25	B0	2.34	24/635 (3.8%)	2.62	54/848 (6.4%)
26	B1	2.30	26/510 (5.1%)	2.55	40/677 (5.9%)
27	B2	2.35	17/453 (3.8%)	2.32	23/605 (3.8%)
28	B3	2.40	25/450 (5.6%)	2.59	30/599 (5.0%)
29	B4	2.16	8/416 (1.9%)	2.43	28/554 (5.1%)
30	B5	2.17	61/1748 (3.5%)	2.41	111/2355 (4.7%)
31	B6	2.46	17/380 (4.5%)	2.59	28/498 (5.6%)
32	B7	2.28	19/513 (3.7%)	2.47	33/676 (4.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	B8	2.52	15/303 (5.0%)	2.35	10/397 (2.5%)
34	BA	1.94	38/2753 (1.4%)	1.84	87/4288 (2.0%)
35	BB	1.99	1362/69800 (2.0%)	1.85	2359/108892 (2.2%)
36	BC	2.43	97/2121 (4.6%)	2.47	149/2852 (5.2%)
37	BD	2.36	78/1586 (4.9%)	2.44	102/2134 (4.8%)
38	BE	2.29	57/1571 (3.6%)	2.47	99/2113 (4.7%)
39	BF	2.29	60/1444 (4.2%)	2.53	103/1937 (5.3%)
40	BG	2.39	59/1335 (4.4%)	2.47	89/1803 (4.9%)
41	BH	2.35	53/1122 (4.7%)	2.57	80/1515 (5.3%)
42	BI	0.69	2/1046 (0.2%)	0.92	0/1410
43	BJ	2.40	50/1152 (4.3%)	2.52	83/1551 (5.4%)
44	BK	2.39	46/939 (4.9%)	2.43	65/1257 (5.2%)
45	BL	2.29	32/1054 (3.0%)	2.35	61/1403 (4.3%)
46	BM	2.43	52/1093 (4.8%)	2.43	64/1460 (4.4%)
47	BN	2.40	49/973 (5.0%)	2.51	77/1301 (5.9%)
48	BO	2.37	37/902 (4.1%)	2.50	63/1209 (5.2%)
49	BP	2.23	29/929 (3.1%)	2.59	67/1242 (5.4%)
50	BQ	2.37	37/960 (3.9%)	2.59	82/1278 (6.4%)
51	BR	2.39	42/829 (5.1%)	2.43	54/1107 (4.9%)
52	BS	2.41	42/864 (4.9%)	2.58	72/1156 (6.2%)
53	BT	2.24	25/744 (3.4%)	2.52	52/994 (5.2%)
54	BU	2.39	39/761 (5.1%)	2.47	48/1013 (4.7%)
55	BW	2.35	32/766 (4.2%)	2.58	55/1025 (5.4%)
56	BY	2.31	25/603 (4.1%)	2.51	39/797 (4.9%)
All	All	2.09	4054/158485 (2.6%)	2.03	6971/236869 (2.9%)

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	AA	0	740
2	AB	0	5
3	AC	0	7
4	AD	0	11
5	AE	0	5
6	AF	0	3
7	AG	0	3
8	AH	0	3
9	AI	0	7
10	AJ	0	6

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	AK	0	3
12	AL	0	5
13	AM	0	9
14	AN	0	3
15	AO	0	6
16	AP	0	4
17	AQ	0	1
18	AR	0	5
19	AS	0	4
20	AT	0	3
22	AV	0	13
23	AX	0	4
25	B0	0	4
26	B1	0	1
28	B3	0	2
29	B4	0	3
30	B5	0	6
31	B6	0	3
32	B7	0	1
34	BA	0	50
35	BB	0	1343
36	BC	0	8
37	BD	0	6
38	BE	0	5
39	BF	0	10
40	BG	0	3
41	BH	0	1
43	BJ	0	4
44	BK	0	5
45	BL	0	1
46	BM	0	3
47	BN	0	5
48	BO	0	2
49	BP	0	5
50	BQ	0	5
51	BR	0	3
52	BS	0	1
53	BT	0	1
54	BU	0	2
55	BW	0	4
56	BY	0	5
All	All	0	2342

All (4054) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	B6	6	GLN	CA-C	-12.83	1.42	1.52
45	BL	138	ALA	C-N	12.29	1.46	1.33
11	AK	122	PRO	CA-C	-11.74	1.44	1.52
24	AZ	24	ALA	C-O	-11.58	1.00	1.23
42	BI	141	ASP	C-O	-11.57	1.00	1.23
42	BI	141	ASP	C-OXT	-11.54	1.00	1.23
36	BC	81	GLU	N-CA	-11.26	1.32	1.45
39	BF	147	ARG	CA-CB	11.09	1.66	1.53
7	AG	49	LEU	N-CA	-10.65	1.33	1.46
39	BF	113	PHE	CA-C	-10.54	1.41	1.52
49	BP	71	ARG	CA-C	-10.52	1.40	1.52
47	BN	5	LYS	CA-C	-10.52	1.39	1.52
55	BW	7	GLU	CA-C	-10.48	1.39	1.52
51	BR	88	GLY	CA-C	-10.38	1.45	1.52
41	BH	101	ASP	CA-C	-10.33	1.40	1.52
50	BQ	27	ARG	CD-NE	10.32	1.60	1.46
44	BK	9	ASN	CA-C	-10.21	1.39	1.52
46	BM	16	ARG	CA-C	-10.12	1.40	1.52
52	BS	5	ALA	CA-C	-10.12	1.39	1.52
29	B4	39	ASP	C-N	10.11	1.44	1.34
46	BM	105	MET	CA-C	-10.02	1.40	1.52
51	BR	79	ARG	NE-CZ	9.93	1.44	1.33
39	BF	107	VAL	CA-C	-9.88	1.42	1.52
12	AL	100	ALA	CA-C	-9.77	1.40	1.52
36	BC	257	ARG	NE-CZ	9.77	1.43	1.33
36	BC	199	HIS	CE1-NE2	9.71	1.42	1.32
41	BH	31	VAL	CA-CB	-9.63	1.47	1.54
36	BC	211	ARG	CA-C	-9.60	1.41	1.52
53	BT	6	ARG	CA-C	-9.57	1.39	1.52
37	BD	26	VAL	CA-C	-9.55	1.43	1.53
35	BB	156	A	C4'-O4'	9.53	1.59	1.45
35	BB	34	U	C4'-C3'	9.50	1.66	1.52
1	AA	245	U	C5'-C4'	9.49	1.65	1.51
35	BB	1764	C	O3'-P	-9.45	1.47	1.61
11	AK	115	ILE	N-CA	-9.40	1.38	1.45
18	AR	35	SER	C-N	9.35	1.45	1.33
35	BB	1133	A	O5'-C5'	9.34	1.56	1.42
8	AH	55	LYS	CA-C	-9.33	1.45	1.52
47	BN	91	ALA	CA-C	-9.33	1.41	1.52
32	B7	39	ARG	NE-CZ	9.31	1.43	1.33
40	BG	15	ASP	CA-C	-9.29	1.41	1.52
43	BJ	131	ASN	N-CA	-9.28	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AC	87	ARG	NE-CZ	9.27	1.43	1.33
7	AG	77	ARG	CA-C	-9.26	1.41	1.52
35	BB	853	C	C2'-C1'	-9.25	1.39	1.53
43	BJ	124	VAL	CA-C	-9.18	1.41	1.52
1	AA	275	G	P-O5'	-9.17	1.46	1.59
35	BB	480	A	C1'-N9	9.13	1.61	1.48
39	BF	159	ALA	CA-C	-9.10	1.40	1.53
11	AK	127	ARG	CD-NE	9.09	1.58	1.46
45	BL	118	THR	CA-C	-9.06	1.43	1.53
19	AS	54	ARG	NE-CZ	9.05	1.43	1.33
3	AC	87	ARG	CD-NE	9.03	1.58	1.46
35	BB	1325	U	C1'-N1	9.02	1.60	1.47
11	AK	22	ILE	CA-C	-9.01	1.41	1.52
40	BG	114	HIS	ND1-CE1	9.00	1.41	1.32
17	AQ	39	ARG	CA-C	-8.93	1.41	1.53
56	BY	34	SER	N-CA	-8.90	1.35	1.46
35	BB	1350	C	C4'-C3'	8.89	1.65	1.52
3	AC	24	ASN	CA-C	-8.89	1.41	1.53
7	AG	85	GLN	C-N	8.88	1.41	1.32
44	BK	115	ILE	CA-C	-8.87	1.41	1.52
9	AI	29	ILE	CA-C	8.84	1.64	1.52
27	B2	55	LYS	N-CA	-8.84	1.35	1.46
1	AA	982	U	O3'-P	-8.84	1.47	1.61
25	B0	14	GLY	CA-C	-8.84	1.42	1.51
9	AI	94	ARG	CA-C	-8.83	1.41	1.52
46	BM	115	GLU	CA-C	-8.83	1.41	1.52
35	BB	1659	G	P-O5'	-8.82	1.46	1.59
9	AI	110	VAL	CA-C	-8.80	1.41	1.52
49	BP	71	ARG	C-N	8.77	1.44	1.33
15	AO	83	ARG	NE-CZ	8.76	1.42	1.33
43	BJ	75	TYR	N-CA	-8.76	1.35	1.45
38	BE	134	LEU	CA-C	8.74	1.65	1.52
10	AJ	9	ARG	CD-NE	8.73	1.58	1.46
1	AA	944	G	O3'-P	-8.72	1.48	1.61
48	BO	71	ALA	CA-C	-8.71	1.41	1.52
31	B6	12	ARG	CD-NE	8.70	1.58	1.46
14	AN	41	TRP	CA-CB	8.70	1.62	1.54
35	BB	1663	G	O3'-P	-8.68	1.48	1.61
8	AH	2	MET	CA-C	-8.67	1.41	1.52
7	AG	148	LYS	CA-C	-8.66	1.41	1.52
44	BK	70	ARG	CD-NE	8.65	1.58	1.46
55	BW	71	LYS	CA-C	-8.64	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1786	A	O3'-P	-8.62	1.48	1.61
35	BB	2119	A	C5'-C4'	8.61	1.64	1.51
4	AD	181	PHE	CA-C	-8.61	1.43	1.53
35	BB	1989	G	O3'-P	-8.60	1.48	1.61
54	BU	17	ASP	N-CA	-8.58	1.38	1.46
10	AJ	41	PRO	CA-CB	8.57	1.66	1.53
13	AM	64	VAL	CA-C	-8.57	1.41	1.52
43	BJ	77	HIS	N-CA	-8.56	1.35	1.46
11	AK	55	ARG	NE-CZ	8.56	1.42	1.33
36	BC	62	ARG	CD-NE	8.54	1.58	1.46
10	AJ	100	ILE	CA-C	-8.54	1.42	1.53
35	BB	1769	U	C5'-C4'	8.52	1.64	1.51
1	AA	574	A	O3'-P	-8.51	1.48	1.61
43	BJ	80	HIS	CA-C	-8.50	1.42	1.52
31	B6	28	ARG	CD-NE	8.49	1.58	1.46
55	BW	8	VAL	CA-CB	-8.47	1.45	1.54
35	BB	2632	A	C1'-N9	-8.45	1.35	1.48
40	BG	31	GLU	CA-C	-8.45	1.41	1.52
35	BB	912	C	O3'-P	-8.40	1.48	1.61
39	BF	59	ILE	CA-CB	-8.40	1.43	1.54
35	BB	1551	A	O3'-P	-8.40	1.48	1.61
8	AH	58	LEU	N-CA	-8.40	1.35	1.46
34	BA	12	C	O3'-P	-8.39	1.48	1.61
4	AD	27	ILE	CA-C	-8.39	1.42	1.52
17	AQ	38	LYS	CA-C	-8.37	1.42	1.52
43	BJ	81	ILE	C-N	8.37	1.44	1.34
21	AU	28	LEU	CA-C	-8.37	1.42	1.52
48	BO	53	THR	C-N	8.37	1.44	1.33
1	AA	232	G	C1'-N9	8.36	1.60	1.48
35	BB	1215	G	C5'-C4'	8.36	1.63	1.51
35	BB	772	C	P-O5'	-8.36	1.47	1.59
35	BB	1565	C	P-O5'	-8.36	1.47	1.59
1	AA	1441	A	O4'-C1'	8.35	1.54	1.41
35	BB	962	G	C2'-C1'	-8.34	1.40	1.53
40	BG	10	VAL	CA-C	-8.34	1.46	1.52
7	AG	76	SER	C-N	8.33	1.43	1.33
1	AA	335	C	O3'-P	-8.31	1.48	1.61
35	BB	1868	C	O3'-P	-8.31	1.48	1.61
50	BQ	107	ALA	CA-C	-8.31	1.42	1.52
38	BE	170	ARG	CA-C	-8.30	1.42	1.52
15	AO	16	ARG	NE-CZ	8.29	1.42	1.33
40	BG	88	LEU	CA-C	-8.28	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BY	24	ARG	C-N	8.28	1.42	1.33
37	BD	108	ASP	CA-C	-8.27	1.41	1.52
5	AE	156	ARG	CD-NE	8.26	1.57	1.46
13	AM	100	ARG	CD-NE	8.26	1.57	1.46
35	BB	2845	U	C1'-N1	8.26	1.60	1.48
43	BJ	44	TYR	N-CA	-8.26	1.35	1.46
25	B0	71	ARG	NE-CZ	8.25	1.42	1.33
35	BB	205	G	C4'-C3'	8.24	1.65	1.53
36	BC	156	SER	N-CA	-8.24	1.36	1.46
47	BN	45	ARG	CD-NE	8.23	1.57	1.46
27	B2	33	HIS	ND1-CE1	8.22	1.40	1.32
48	BO	16	ARG	CD-NE	8.22	1.57	1.46
1	AA	490	C	C4'-O4'	8.22	1.57	1.45
13	AM	100	ARG	CA-CB	8.22	1.63	1.52
15	AO	37	HIS	CA-C	-8.22	1.41	1.52
14	AN	96	LYS	CA-C	-8.21	1.42	1.52
1	AA	885	G	C2'-C1'	-8.21	1.41	1.53
10	AJ	15	HIS	N-CA	-8.21	1.35	1.46
1	AA	96	U	O3'-P	-8.20	1.48	1.61
35	BB	198	C	O3'-P	-8.20	1.48	1.61
36	BC	220	ARG	CD-NE	8.19	1.57	1.46
4	AD	171	GLU	CA-C	-8.18	1.43	1.52
54	BU	41	VAL	CA-C	-8.18	1.42	1.52
37	BD	208	LYS	C-N	8.18	1.44	1.33
35	BB	2208	C	C2'-C1'	-8.16	1.41	1.53
26	B1	21	LEU	CA-CB	8.13	1.66	1.53
30	B5	159	GLY	CA-C	-8.13	1.40	1.51
43	BJ	92	MET	N-CA	-8.12	1.36	1.46
41	BH	27	ARG	NE-CZ	8.12	1.42	1.33
14	AN	68	ARG	NE-CZ	8.11	1.42	1.33
36	BC	213	ARG	NE-CZ	8.11	1.42	1.33
9	AI	40	ARG	CZ-NH2	8.10	1.44	1.33
19	AS	64	GLU	C-N	8.10	1.44	1.33
1	AA	825	A	O5'-C5'	8.10	1.54	1.42
35	BB	2326	C	P-O5'	-8.09	1.47	1.59
37	BD	61	THR	CA-C	-8.09	1.41	1.53
1	AA	705	G	C4'-C3'	8.09	1.64	1.52
27	B2	12	ALA	C-N	8.07	1.43	1.33
35	BB	403	U	C5'-C4'	8.05	1.63	1.51
1	AA	216	U	O4'-C1'	8.05	1.53	1.41
35	BB	578	G	P-O5'	-8.04	1.47	1.59
1	AA	315	A	O3'-P	-8.04	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	BQ	32	ARG	NE-CZ	8.04	1.41	1.33
1	AA	79	G	O4'-C1'	8.03	1.53	1.41
45	BL	78	ARG	CD-NE	8.03	1.57	1.46
1	AA	817	C	C2'-C1'	-8.00	1.41	1.53
1	AA	1200	C	C2'-C1'	-7.99	1.41	1.53
46	BM	10	ARG	CZ-NH2	7.99	1.43	1.33
36	BC	269	ARG	NE-CZ	7.99	1.41	1.33
13	AM	89	ARG	NE-CZ	7.99	1.41	1.33
8	AH	12	ARG	CZ-NH1	7.98	1.44	1.32
1	AA	1065	U	O3'-P	-7.97	1.49	1.61
46	BM	92	TRP	CA-C	-7.97	1.43	1.52
30	B5	100	LEU	C-N	7.97	1.43	1.33
50	BQ	65	ASN	CA-CB	7.96	1.66	1.53
35	BB	517	C	O3'-P	-7.96	1.49	1.61
48	BO	103	VAL	CA-C	-7.96	1.42	1.52
18	AR	29	LYS	CA-C	-7.95	1.42	1.52
29	B4	19	PHE	CA-C	-7.95	1.42	1.52
1	AA	371	A	O3'-P	-7.94	1.49	1.61
44	BK	62	VAL	CA-CB	7.94	1.63	1.54
4	AD	61	ARG	NE-CZ	7.93	1.41	1.33
21	AU	8	ASN	CA-C	-7.93	1.42	1.52
35	BB	1864	U	O3'-P	-7.92	1.49	1.61
51	BR	87	GLN	C-N	7.92	1.38	1.33
1	AA	1183	U	C1'-N1	7.91	1.60	1.48
12	AL	3	VAL	N-CA	-7.90	1.37	1.46
17	AQ	10	ARG	CA-C	-7.90	1.43	1.52
41	BH	84	ALA	CA-C	-7.90	1.43	1.52
36	BC	261	ARG	CZ-NH1	7.90	1.43	1.32
35	BB	1326	U	O3'-P	-7.90	1.49	1.61
7	AG	78	ARG	NE-CZ	7.89	1.41	1.33
35	BB	1310	G	O3'-P	-7.89	1.49	1.61
36	BC	229	HIS	CA-C	-7.89	1.42	1.52
51	BR	66	HIS	ND1-CE1	-7.89	1.24	1.32
33	B8	24	ARG	CD-NE	7.88	1.57	1.46
40	BG	154	GLU	CA-C	-7.88	1.44	1.52
35	BB	2191	A	C4'-O4'	-7.87	1.33	1.45
34	BA	19	C	P-O5'	-7.87	1.48	1.59
1	AA	264	C	C1'-N1	7.86	1.60	1.48
37	BD	83	ARG	NE-CZ	7.86	1.41	1.33
35	BB	2614	A	O3'-P	-7.86	1.49	1.61
19	AS	49	ALA	CA-CB	7.85	1.63	1.52
36	BC	176	ARG	CA-C	-7.83	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	966	G	C3'-O3'	-7.83	1.30	1.42
1	AA	1005	A	C2'-C1'	-7.82	1.41	1.53
28	B3	49	ARG	NE-CZ	7.82	1.41	1.33
35	BB	288	U	C5'-C4'	7.82	1.62	1.51
54	BU	17	ASP	CA-C	-7.81	1.44	1.52
49	BP	76	HIS	CE1-NE2	7.81	1.40	1.32
20	AT	25	SER	N-CA	-7.80	1.36	1.46
35	BB	1867	G	C2'-C1'	-7.80	1.41	1.53
35	BB	2585	U	O3'-P	-7.79	1.49	1.61
35	BB	2733	A	C2'-C1'	-7.79	1.41	1.53
45	BL	47	ARG	CD-NE	7.78	1.57	1.46
36	BC	202	ARG	CD-NE	7.77	1.57	1.46
1	AA	833	G	C2'-C1'	-7.77	1.41	1.53
3	AC	46	LEU	N-CA	-7.76	1.37	1.46
4	AD	166	LYS	C-N	7.76	1.42	1.33
14	AN	95	LEU	C-N	7.76	1.43	1.33
35	BB	2151	U	P-O5'	-7.75	1.48	1.59
51	BR	13	ARG	NE-CZ	7.75	1.41	1.33
54	BU	3	LYS	N-CA	-7.75	1.38	1.46
43	BJ	74	TYR	CA-C	-7.75	1.43	1.52
17	AQ	40	THR	N-CA	-7.75	1.36	1.46
9	AI	79	ARG	NE-CZ	7.74	1.41	1.33
1	AA	832	G	C5'-C4'	7.74	1.62	1.51
35	BB	2076	U	O3'-P	-7.74	1.49	1.61
1	AA	997	U	C5'-C4'	7.74	1.62	1.51
2	AB	56	LEU	CA-C	-7.73	1.42	1.52
12	AL	49	ARG	CA-C	-7.73	1.43	1.52
12	AL	68	GLY	CA-C	-7.73	1.42	1.52
36	BC	169	ALA	CA-C	-7.72	1.42	1.52
2	AB	203	ASP	CA-C	-7.72	1.42	1.52
6	AF	86	ARG	CD-NE	7.72	1.57	1.46
3	AC	167	TYR	CA-CB	7.71	1.66	1.53
35	BB	393	C	C5'-C4'	7.71	1.62	1.51
44	BK	2	ILE	CA-CB	-7.71	1.45	1.54
3	AC	163	ARG	NE-CZ	7.71	1.41	1.33
40	BG	44	HIS	ND1-CE1	7.71	1.40	1.32
43	BJ	47	HIS	CE1-NE2	7.70	1.40	1.32
2	AB	178	LEU	CA-CB	7.70	1.65	1.54
36	BC	27	LYS	CA-C	7.70	1.62	1.53
35	BB	2035	G	C1'-N9	-7.70	1.35	1.47
51	BR	67	GLY	CA-C	-7.70	1.42	1.51
44	BK	14	SER	N-CA	-7.69	1.36	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BW	18	ARG	N-CA	-7.69	1.37	1.46
14	AN	91	GLU	C-N	7.69	1.39	1.32
41	BH	134	VAL	CA-C	-7.69	1.41	1.53
35	BB	1398	C	C3'-O3'	7.68	1.53	1.42
54	BU	34	ILE	CA-C	-7.68	1.42	1.52
35	BB	2045	C	P-O5'	-7.68	1.48	1.59
10	AJ	62	ARG	CD-NE	7.67	1.56	1.46
39	BF	55	ASP	N-CA	-7.67	1.36	1.46
40	BG	24	THR	CA-CB	-7.67	1.42	1.53
36	BC	197	ALA	C-O	-7.67	1.18	1.23
35	BB	2434	A	C5'-C4'	7.67	1.62	1.51
40	BG	94	ARG	NE-CZ	7.67	1.41	1.33
14	AN	32	ASP	N-CA	-7.66	1.36	1.46
1	AA	159	G	O5'-C5'	7.66	1.53	1.42
4	AD	46	ARG	NE-CZ	7.65	1.41	1.33
35	BB	1312	U	C1'-N1	7.65	1.58	1.47
35	BB	2028	U	C3'-C2'	-7.64	1.41	1.52
38	BE	187	VAL	CA-CB	-7.64	1.45	1.54
30	B5	74	ARG	NE-CZ	7.63	1.41	1.33
41	BH	103	VAL	CA-CB	7.63	1.64	1.54
1	AA	1300	G	C5'-C4'	7.62	1.62	1.51
3	AC	94	ALA	CA-C	-7.62	1.43	1.52
35	BB	1686	C	O3'-P	-7.62	1.49	1.61
19	AS	57	VAL	CA-C	7.62	1.60	1.52
1	AA	569	C	C2'-C1'	-7.61	1.42	1.53
37	BD	39	ASP	CA-C	-7.61	1.43	1.52
30	B5	42	VAL	CA-C	7.60	1.61	1.52
49	BP	8	GLU	C-N	7.60	1.43	1.33
51	BR	57	GLY	CA-C	-7.60	1.45	1.52
19	AS	31	ARG	CZ-NH2	7.60	1.43	1.33
3	AC	49	ALA	N-CA	-7.59	1.36	1.45
10	AJ	17	LEU	CA-C	-7.59	1.42	1.52
48	BO	30	ARG	NE-CZ	7.59	1.41	1.33
38	BE	141	MET	C-N	7.56	1.43	1.33
1	AA	911	U	C4'-C3'	7.55	1.63	1.52
1	AA	1213	A	C5'-C4'	7.55	1.62	1.51
1	AA	689	C	P-O5'	-7.55	1.48	1.59
34	BA	58	A	C2'-C1'	-7.55	1.42	1.53
35	BB	1689	A	P-O5'	-7.55	1.48	1.59
41	BH	129	GLU	CA-C	-7.54	1.43	1.52
35	BB	1948	G	O3'-P	-7.54	1.49	1.61
35	BB	2091	C	O3'-P	-7.53	1.49	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BC	68	ARG	CD-NE	7.52	1.56	1.46
44	BK	107	LEU	CA-C	-7.52	1.42	1.52
39	BF	42	ALA	CA-C	-7.52	1.46	1.52
4	AD	13	ARG	CD-NE	7.52	1.56	1.46
7	AG	78	ARG	CD-NE	7.51	1.56	1.46
34	BA	74	U	O3'-P	-7.51	1.49	1.61
35	BB	1298	C	C5'-C4'	7.50	1.62	1.51
48	BO	7	ARG	NE-CZ	7.50	1.41	1.33
35	BB	2442	C	C1'-N1	7.50	1.59	1.48
30	B5	188	ASN	CA-C	7.49	1.62	1.52
40	BG	133	LYS	CA-C	-7.49	1.43	1.52
5	AE	146	MET	CA-C	-7.49	1.43	1.52
46	BM	14	LYS	CA-C	-7.48	1.43	1.52
49	BP	51	ASN	C-N	7.48	1.44	1.33
2	AB	112	ARG	CA-C	-7.47	1.43	1.52
11	AK	24	ALA	CA-C	-7.47	1.43	1.53
1	AA	1391	U	C4'-O4'	7.47	1.56	1.45
52	BS	92	ARG	CD-NE	7.47	1.56	1.46
35	BB	1866	A	C2'-C1'	-7.46	1.42	1.53
34	BA	88	C	C4'-O4'	7.46	1.56	1.45
2	AB	170	ILE	C-O	-7.46	1.15	1.24
1	AA	1386	G	C2'-C1'	-7.45	1.42	1.53
1	AA	382	A	O3'-P	-7.44	1.50	1.61
1	AA	444	G	C4'-C3'	7.44	1.63	1.52
36	BC	214	GLY	CA-C	-7.44	1.41	1.51
35	BB	2310	C	C5'-C4'	7.44	1.62	1.51
1	AA	829	G	C4'-O4'	7.44	1.56	1.45
37	BD	117	GLY	CA-C	-7.44	1.41	1.51
30	B5	14	LYS	CA-CB	7.43	1.63	1.53
2	AB	211	LEU	CA-CB	7.43	1.65	1.53
35	BB	2134	A	C2'-C1'	-7.42	1.42	1.53
35	BB	966	G	O4'-C1'	7.42	1.52	1.41
52	BS	59	GLU	CA-C	-7.42	1.42	1.52
48	BO	111	ARG	NE-CZ	7.42	1.41	1.33
35	BB	1122	G	O3'-P	-7.42	1.50	1.61
1	AA	91	U	N3-C4	7.42	1.53	1.38
2	AB	107	ARG	CD-NE	7.41	1.56	1.46
43	BJ	69	ARG	NE-CZ	7.41	1.41	1.33
8	AH	39	LEU	CA-C	-7.41	1.42	1.52
5	AE	92	ARG	CD-NE	7.41	1.56	1.46
1	AA	351	G	P-O5'	-7.41	1.48	1.59
1	AA	692	U	P-O5'	-7.40	1.48	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	AT	24	ARG	NE-CZ	7.40	1.41	1.33
35	BB	2564	A	O3'-P	-7.40	1.50	1.61
28	B3	16	ARG	NE-CZ	7.40	1.41	1.33
52	BS	11	ARG	CA-CB	7.39	1.63	1.53
53	BT	3	ARG	NE-CZ	7.39	1.41	1.33
11	AK	17	ASP	CA-C	-7.38	1.43	1.52
28	B3	11	LYS	C-N	7.38	1.43	1.33
37	BD	134	HIS	CA-C	-7.38	1.44	1.53
35	BB	934	U	C2'-C1'	-7.38	1.42	1.53
35	BB	1760	C	C5'-C4'	7.37	1.62	1.51
48	BO	73	ALA	C-N	7.37	1.42	1.33
1	AA	423	G	C2'-O2'	-7.37	1.31	1.42
44	BK	30	ARG	CA-C	-7.37	1.43	1.52
25	B0	10	ARG	NE-CZ	7.36	1.41	1.33
35	BB	1168	G	C3'-C2'	-7.36	1.41	1.52
1	AA	1216	A	C4'-C3'	-7.36	1.41	1.52
35	BB	1523	U	C1'-N1	7.36	1.59	1.48
9	AI	40	ARG	CD-NE	7.36	1.56	1.46
8	AH	76	ARG	CZ-NH1	7.36	1.43	1.32
8	AH	104	SER	C-N	7.35	1.41	1.33
45	BL	138	ALA	CA-C	-7.35	1.43	1.52
8	AH	109	VAL	N-CA	-7.35	1.37	1.46
35	BB	2311	A	O3'-P	-7.35	1.50	1.61
35	BB	963	U	C5'-C4'	7.35	1.62	1.51
1	AA	1491	G	C4'-O4'	-7.34	1.34	1.45
1	AA	1236	A	C4'-C3'	7.34	1.63	1.52
1	AA	832	G	C3'-O3'	7.33	1.53	1.42
7	AG	61	PHE	CA-C	-7.33	1.46	1.52
2	AB	207	ARG	CD-NE	7.33	1.56	1.46
9	AI	68	GLY	CA-C	-7.33	1.41	1.51
11	AK	55	ARG	CA-C	-7.33	1.42	1.52
35	BB	1794	A	C2'-C1'	-7.33	1.42	1.53
35	BB	423	A	C2'-C1'	-7.33	1.42	1.53
9	AI	83	THR	CA-C	-7.32	1.42	1.52
35	BB	841	G	C5'-C4'	7.32	1.62	1.51
35	BB	1873	G	C3'-O3'	7.32	1.53	1.42
35	BB	445	C	O3'-P	-7.31	1.50	1.61
22	AV	1	C	OP3-P	7.31	1.63	1.48
52	BS	19	LEU	CA-C	-7.31	1.42	1.52
1	AA	328	C	O3'-P	-7.30	1.50	1.61
10	AJ	87	LEU	N-CA	-7.30	1.37	1.46
35	BB	2306	C	O5'-C5'	7.30	1.53	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	93	HIS	CG-CD2	7.29	1.43	1.35
6	AF	24	ARG	N-CA	-7.29	1.37	1.46
43	BJ	35	ARG	NE-CZ	7.29	1.41	1.33
35	BB	1466	U	P-O5'	-7.29	1.48	1.59
56	BY	45	HIS	C-N	7.29	1.42	1.33
55	BW	61	LEU	CA-C	-7.28	1.43	1.52
19	AS	14	LEU	CA-CB	7.28	1.64	1.53
34	BA	61	G	O3'-P	-7.27	1.50	1.61
54	BU	49	PRO	CA-C	-7.27	1.44	1.52
35	BB	926	G	C2'-C1'	-7.27	1.42	1.53
37	BD	47	ALA	C-N	7.27	1.42	1.33
7	AG	101	ARG	NE-CZ	7.26	1.41	1.33
35	BB	611	C	C2'-C1'	-7.26	1.42	1.53
35	BB	1372	U	C2'-C1'	-7.26	1.42	1.53
1	AA	1274	A	C5'-C4'	7.26	1.62	1.51
12	AL	30	ARG	NE-CZ	7.26	1.41	1.33
35	BB	1856	U	C4'-C3'	7.26	1.63	1.52
32	B7	4	LYS	CA-C	-7.25	1.43	1.52
13	AM	2	ARG	CD-NE	7.25	1.56	1.46
28	B3	15	ARG	CD-NE	7.25	1.56	1.46
52	BS	73	LYS	CA-C	-7.25	1.44	1.52
35	BB	2808	G	C2'-C1'	-7.24	1.42	1.53
35	BB	1181	U	C2'-C1'	-7.24	1.42	1.53
2	AB	211	LEU	CA-C	-7.24	1.42	1.52
36	BC	43	ASN	N-CA	-7.24	1.36	1.45
35	BB	2265	U	O3'-P	-7.24	1.50	1.61
35	BB	2838	G	O3'-P	-7.24	1.50	1.61
35	BB	1182	G	O3'-P	-7.24	1.50	1.61
1	AA	1322	C	O3'-P	-7.23	1.50	1.61
3	AC	78	LYS	C-N	7.23	1.43	1.33
3	AC	107	LYS	C-N	-7.23	1.26	1.34
35	BB	951	C	O4'-C1'	7.23	1.52	1.41
36	BC	87	SER	C-N	7.23	1.42	1.33
35	BB	1771	C	C1'-N1	7.23	1.59	1.48
1	AA	871	U	C3'-O3'	7.23	1.53	1.43
12	AL	85	ARG	NE-CZ	7.22	1.41	1.33
35	BB	2329	U	C3'-C2'	-7.22	1.42	1.52
33	B8	22	VAL	CA-CB	-7.21	1.46	1.54
35	BB	1129	A	P-O5'	-7.21	1.49	1.59
1	AA	1079	G	P-O5'	-7.21	1.49	1.59
35	BB	23	G	P-O5'	-7.21	1.49	1.59
50	BQ	27	ARG	NE-CZ	7.21	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	733	G	O4'-C1'	-7.21	1.31	1.42
35	BB	396	G	C2'-C1'	-7.20	1.42	1.53
45	BL	130	GLY	CA-C	-7.20	1.41	1.51
4	AD	171	GLU	C-N	7.20	1.42	1.33
7	AG	26	VAL	CA-C	-7.20	1.42	1.52
36	BC	77	VAL	CA-C	-7.20	1.43	1.52
36	BC	101	ARG	NE-CZ	7.19	1.41	1.33
45	BL	35	HIS	N-CA	-7.19	1.37	1.46
34	BA	27	C	P-O5'	-7.19	1.49	1.59
32	B7	42	HIS	ND1-CE1	7.18	1.39	1.32
35	BB	1799	G	P-O5'	-7.18	1.49	1.59
39	BF	37	MET	CA-C	-7.18	1.44	1.52
2	AB	55	GLU	CA-C	-7.18	1.43	1.52
31	B6	12	ARG	NE-CZ	7.18	1.41	1.33
35	BB	2404	U	C3'-C2'	-7.18	1.42	1.52
50	BQ	91	ARG	CZ-NH1	7.18	1.42	1.32
4	AD	101	VAL	CA-C	-7.17	1.43	1.52
33	B8	3	VAL	CA-C	-7.17	1.43	1.52
35	BB	2788	C	C5'-C4'	7.17	1.62	1.51
37	BD	124	ARG	NE-CZ	7.17	1.41	1.33
35	BB	1542	U	O4'-C1'	-7.17	1.30	1.41
54	BU	58	VAL	CA-C	-7.16	1.44	1.53
35	BB	32	C	C3'-C2'	7.16	1.63	1.52
35	BB	479	A	C5'-C4'	7.15	1.62	1.51
1	AA	49	U	C5'-C4'	7.15	1.62	1.51
20	AT	54	GLN	CA-C	-7.14	1.43	1.52
35	BB	1653	G	P-O5'	-7.14	1.49	1.59
47	BN	73	ASN	CA-C	-7.14	1.43	1.52
35	BB	603	A	C1'-N9	7.14	1.57	1.47
1	AA	1026	G	C4'-C3'	-7.13	1.41	1.52
43	BJ	62	VAL	CA-CB	-7.13	1.45	1.54
35	BB	302	C	C3'-C2'	-7.13	1.42	1.52
1	AA	908	A	C3'-C2'	7.13	1.63	1.52
35	BB	1293	C	C2'-C1'	-7.12	1.42	1.53
38	BE	19	PHE	CA-C	7.12	1.60	1.52
41	BH	83	LYS	CA-CB	7.12	1.62	1.53
35	BB	1183	U	C4'-O4'	-7.11	1.34	1.45
35	BB	1445	G	C2'-C1'	-7.11	1.42	1.53
1	AA	789	U	O3'-P	-7.11	1.50	1.61
1	AA	1467	C	C3'-O3'	7.11	1.52	1.42
38	BE	195	GLN	CA-CB	7.11	1.64	1.53
35	BB	2369	A	C5'-C4'	7.11	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	2670	A	C4'-O4'	7.11	1.56	1.45
35	BB	414	C	C2'-C1'	-7.10	1.42	1.53
35	BB	1758	U	C3'-O3'	7.10	1.53	1.43
14	AN	8	ARG	NE-CZ	7.10	1.40	1.33
45	BL	11	GLY	CA-C	-7.10	1.42	1.51
18	AR	62	ARG	CD-NE	7.10	1.56	1.46
35	BB	170	U	C5'-C4'	7.10	1.61	1.51
35	BB	2172	U	C5'-C4'	7.10	1.61	1.51
39	BF	29	ARG	CA-C	-7.10	1.44	1.52
40	BG	151	ARG	NE-CZ	7.10	1.40	1.33
51	BR	51	VAL	CA-C	-7.09	1.45	1.52
40	BG	43	LYS	N-CA	-7.09	1.36	1.45
35	BB	996	A	C4'-C3'	7.09	1.63	1.52
35	BB	2873	A	P-O5'	-7.09	1.49	1.59
13	AM	12	LYS	CA-C	-7.08	1.44	1.52
13	AM	89	ARG	CD-NE	7.08	1.56	1.46
46	BM	44	ARG	NE-CZ	7.08	1.40	1.33
46	BM	97	GLN	C-N	7.08	1.43	1.33
1	AA	1140	C	O4'-C1'	7.07	1.52	1.41
40	BG	61	TRP	C-N	7.07	1.43	1.33
1	AA	1306	A	O3'-P	-7.07	1.50	1.61
12	AL	35	ARG	NE-CZ	7.07	1.40	1.33
35	BB	2169	A	C5'-C4'	7.07	1.61	1.51
45	BL	41	ARG	CD-NE	7.06	1.56	1.46
1	AA	1445	U	O3'-P	-7.06	1.50	1.61
3	AC	179	ALA	CA-C	-7.06	1.43	1.52
40	BG	152	ARG	CD-NE	7.06	1.56	1.46
1	AA	472	U	O3'-P	-7.05	1.50	1.61
35	BB	63	A	O3'-P	-7.05	1.50	1.61
47	BN	113	ILE	N-CA	-7.05	1.38	1.46
43	BJ	135	GLN	CA-CB	7.05	1.62	1.53
1	AA	548	G	O3'-P	-7.05	1.50	1.61
20	AT	81	GLN	N-CA	-7.05	1.38	1.46
35	BB	1876	A	P-O5'	-7.05	1.49	1.59
44	BK	64	ARG	NE-CZ	7.05	1.40	1.33
1	AA	953	G	P-O5'	-7.05	1.49	1.59
2	AB	90	PHE	CA-C	-7.05	1.43	1.52
35	BB	259	G	C3'-C2'	7.05	1.63	1.52
35	BB	883	G	O3'-P	-7.05	1.50	1.61
52	BS	2	GLU	CA-CB	7.05	1.65	1.53
9	AI	43	ALA	N-CA	-7.04	1.38	1.46
1	AA	1142	G	C5'-C4'	7.04	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BF	45	ASP	CA-C	-7.04	1.44	1.53
12	AL	53	ARG	CZ-NH2	7.04	1.42	1.33
1	AA	115	G	C5'-C4'	7.04	1.61	1.51
16	AP	51	ARG	CD-NE	7.04	1.56	1.46
37	BD	187	LEU	CA-C	-7.04	1.44	1.52
2	AB	20	ARG	CD-NE	7.03	1.56	1.46
36	BC	160	TYR	CA-C	-7.03	1.43	1.52
35	BB	1761	C	C4'-C3'	7.03	1.63	1.52
3	AC	50	SER	C-N	7.03	1.40	1.33
5	AE	54	GLU	C-N	7.03	1.41	1.33
21	AU	46	ARG	NE-CZ	7.03	1.40	1.33
26	B1	47	ARG	CZ-NH2	7.03	1.42	1.33
35	BB	1535	A	P-O5'	-7.03	1.49	1.59
35	BB	690	G	C2'-C1'	-7.03	1.42	1.53
46	BM	117	PHE	C-N	7.03	1.43	1.34
38	BE	11	ALA	N-CA	-7.02	1.37	1.45
8	AH	101	ALA	N-CA	-7.02	1.37	1.46
1	AA	276	G	P-O5'	-7.02	1.49	1.59
35	BB	1671	U	C1'-N1	7.02	1.58	1.48
12	AL	85	ARG	CD-NE	7.02	1.56	1.46
52	BS	43	ALA	CA-C	-7.02	1.43	1.52
1	AA	800	G	C2'-C1'	-7.01	1.42	1.53
20	AT	73	ARG	CA-C	-7.01	1.43	1.52
4	AD	12	ARG	CD-NE	7.01	1.56	1.46
1	AA	751	U	C3'-C2'	-7.01	1.42	1.52
1	AA	317	U	C2'-C1'	-7.01	1.42	1.53
35	BB	2798	U	O4'-C1'	-7.01	1.31	1.42
37	BD	98	VAL	C-N	7.01	1.43	1.34
14	AN	95	LEU	CA-C	-7.01	1.43	1.52
35	BB	2692	G	O5'-C5'	7.00	1.52	1.42
35	BB	74	A	C5'-C4'	7.00	1.61	1.51
51	BR	21	ARG	NE-CZ	7.00	1.40	1.33
35	BB	1216	G	C2'-C1'	-7.00	1.42	1.53
1	AA	1391	U	C3'-C2'	6.99	1.63	1.52
3	AC	174	LEU	CA-CB	6.99	1.63	1.53
30	B5	134	ARG	CD-NE	6.99	1.56	1.46
35	BB	659	G	C1'-N9	6.99	1.58	1.48
36	BC	93	VAL	N-CA	-6.99	1.38	1.46
9	AI	24	ASN	N-CA	-6.99	1.37	1.46
10	AJ	21	ALA	N-CA	-6.99	1.38	1.46
35	BB	908	C	P-O5'	-6.98	1.49	1.59
35	BB	2125	G	C4'-O4'	-6.98	1.35	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	274	C	C5'-C4'	6.98	1.61	1.51
2	AB	39	ILE	C-N	6.97	1.39	1.33
43	BJ	10	THR	CA-C	6.97	1.61	1.52
1	AA	1313	U	C2'-C1'	-6.97	1.42	1.53
35	BB	366	C	O4'-C1'	-6.97	1.31	1.41
47	BN	28	LEU	CA-CB	6.97	1.64	1.53
1	AA	338	A	C2'-C1'	-6.97	1.43	1.53
40	BG	166	GLU	CA-CB	6.97	1.62	1.53
1	AA	865	A	C3'-O3'	6.96	1.52	1.42
6	AF	84	VAL	CA-C	6.96	1.60	1.52
10	AJ	47	GLU	N-CA	-6.96	1.35	1.46
41	BH	146	VAL	CA-C	-6.96	1.44	1.52
43	BJ	32	LEU	N-CA	-6.96	1.38	1.46
9	AI	84	ARG	CD-NE	6.96	1.55	1.46
1	AA	852	G	C4'-O4'	-6.95	1.35	1.45
35	BB	1639	C	C5'-C4'	6.95	1.61	1.51
7	AG	140	VAL	CA-C	-6.95	1.43	1.52
34	BA	47	C	O3'-P	-6.95	1.50	1.61
7	AG	3	ARG	CD-NE	6.94	1.55	1.46
10	AJ	98	VAL	CA-C	-6.94	1.44	1.52
31	B6	14	ARG	NE-CZ	6.94	1.40	1.33
38	BE	79	ARG	NE-CZ	6.94	1.40	1.33
45	BL	64	PHE	CA-C	-6.94	1.43	1.52
1	AA	471	U	O4'-C1'	6.94	1.52	1.41
35	BB	2042	A	C1'-N9	6.94	1.58	1.48
6	AF	94	HIS	CA-C	-6.93	1.43	1.52
9	AI	58	GLU	N-CA	6.93	1.55	1.46
46	BM	81	ARG	CD-NE	6.93	1.55	1.46
7	AG	30	MET	CA-C	-6.93	1.44	1.52
12	AL	116	TYR	C-N	6.93	1.43	1.33
40	BG	124	CYS	CA-C	-6.93	1.44	1.52
9	AI	109	GLN	CA-C	-6.93	1.43	1.52
1	AA	1263	C	C5'-C4'	6.93	1.61	1.51
38	BE	88	ARG	NE-CZ	6.92	1.40	1.33
35	BB	970	U	C5'-C4'	6.92	1.61	1.51
52	BS	60	HIS	ND1-CE1	6.92	1.39	1.32
5	AE	81	GLN	CA-CB	6.92	1.65	1.53
33	B8	36	ARG	NE-CZ	6.92	1.40	1.33
36	BC	57	HIS	ND1-CE1	6.91	1.39	1.32
36	BC	269	ARG	C-N	6.91	1.43	1.33
1	AA	1291	U	C1'-N1	6.91	1.58	1.48
30	B5	29	LEU	C-N	6.91	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AC	183	TYR	CA-C	-6.91	1.43	1.52
6	AF	47	LEU	CA-CB	6.91	1.64	1.53
35	BB	1693	U	C4'-C3'	6.90	1.63	1.53
1	AA	1310	G	C2'-C1'	-6.89	1.43	1.53
21	AU	34	ARG	CD-NE	6.89	1.55	1.46
36	BC	65	ASP	N-CA	-6.89	1.38	1.46
44	BK	64	ARG	N-CA	-6.89	1.38	1.47
35	BB	1024	G	P-O5'	6.89	1.70	1.59
35	BB	2891	U	O3'-P	-6.89	1.50	1.61
3	AC	57	GLU	CA-CB	-6.89	1.42	1.53
2	AB	191	ASP	C-N	-6.89	1.24	1.33
35	BB	2561	U	C5'-C4'	6.89	1.61	1.51
35	BB	2797	U	C5'-C4'	6.89	1.61	1.51
36	BC	181	ARG	NE-CZ	6.89	1.40	1.33
1	AA	349	A	C5'-C4'	6.88	1.61	1.51
41	BH	128	HIS	ND1-CE1	6.88	1.39	1.32
35	BB	1622	G	C2-N3	6.88	1.46	1.32
7	AG	69	ARG	CA-C	-6.88	1.43	1.52
35	BB	111	A	O4'-C1'	-6.88	1.31	1.41
35	BB	589	U	C2'-O2'	-6.88	1.32	1.42
43	BJ	96	ARG	CZ-NH1	6.88	1.42	1.32
45	BL	37	GLY	CA-C	-6.88	1.41	1.51
35	BB	1408	G	C5'-C4'	6.87	1.61	1.51
44	BK	97	THR	CA-CB	-6.87	1.44	1.54
34	BA	73	A	C4'-O4'	-6.87	1.35	1.45
39	BF	35	LEU	N-CA	-6.87	1.38	1.46
35	BB	36	G	C2'-C1'	-6.87	1.43	1.53
35	BB	271	G	C2'-C1'	-6.87	1.42	1.53
1	AA	855	U	P-O5'	-6.86	1.49	1.59
1	AA	859	G	C1'-N9	6.86	1.58	1.48
7	AG	91	ARG	NE-CZ	6.86	1.40	1.33
35	BB	1362	C	P-O5'	-6.86	1.49	1.59
7	AG	29	LEU	CA-CB	6.86	1.63	1.53
35	BB	1669	A	C1'-N9	6.85	1.58	1.48
35	BB	1898	U	C5'-C4'	6.85	1.61	1.51
35	BB	2124	G	C4'-O4'	-6.85	1.35	1.45
18	AR	39	VAL	N-CA	-6.84	1.40	1.46
35	BB	1954	G	C5'-C4'	6.84	1.61	1.51
10	AJ	96	VAL	CA-C	-6.83	1.44	1.52
4	AD	38	GLY	C-N	6.83	1.42	1.33
43	BJ	17	VAL	N-CA	-6.83	1.38	1.46
37	BD	142	VAL	C-N	-6.82	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1084	G	O5'-C5'	6.82	1.52	1.42
35	BB	1617	C	C1'-N1	6.82	1.57	1.47
55	BW	16	ALA	C-O	-6.82	1.16	1.24
1	AA	987	G	C1'-N9	-6.82	1.37	1.48
19	AS	49	ALA	CA-C	-6.82	1.44	1.53
13	AM	86	ARG	CZ-NH2	6.82	1.42	1.33
54	BU	50	ALA	C-N	6.82	1.43	1.33
4	AD	187	ARG	CZ-NH1	6.81	1.42	1.32
40	BG	78	VAL	C-O	-6.81	1.16	1.24
8	AH	46	GLU	C-O	-6.81	1.15	1.24
4	AD	198	LEU	N-CA	-6.81	1.37	1.46
35	BB	425	G	C2'-C1'	-6.80	1.43	1.53
48	BO	7	ARG	N-CA	-6.80	1.38	1.46
26	B1	8	GLU	CA-C	-6.80	1.44	1.52
1	AA	24	U	C4'-C3'	6.80	1.62	1.52
35	BB	1716	U	O3'-P	-6.80	1.50	1.61
1	AA	153	C	O4'-C1'	-6.80	1.31	1.41
1	AA	1375	A	P-O5'	-6.80	1.49	1.59
47	BN	16	HIS	CA-C	-6.80	1.44	1.52
2	AB	13	VAL	C-N	6.79	1.42	1.33
9	AI	98	ARG	CZ-NH1	6.79	1.42	1.32
16	AP	8	ARG	CD-NE	6.79	1.55	1.46
35	BB	805	G	C2'-C1'	-6.79	1.42	1.53
38	BE	154	ASP	N-CA	-6.79	1.38	1.46
14	AN	32	ASP	C-N	6.79	1.42	1.33
35	BB	2613	U	C4'-C3'	6.79	1.63	1.53
16	AP	18	GLN	CA-C	-6.78	1.45	1.52
35	BB	1557	C	O3'-P	-6.78	1.50	1.61
35	BB	2143	C	O3'-P	-6.78	1.50	1.61
51	BR	13	ARG	CD-NE	6.78	1.55	1.46
12	AL	34	THR	CA-C	-6.78	1.44	1.52
38	BE	102	ARG	CD-NE	6.78	1.55	1.46
7	AG	4	ARG	CD-NE	6.78	1.55	1.46
9	AI	62	LEU	CA-CB	6.78	1.62	1.53
15	AO	52	ARG	C-O	-6.78	1.16	1.24
30	B5	165	ASN	CA-C	6.78	1.61	1.52
35	BB	1066	U	O3'-P	-6.78	1.50	1.61
35	BB	2713	U	P-O5'	6.77	1.70	1.59
35	BB	1224	U	C2'-C1'	-6.77	1.43	1.53
45	BL	87	GLY	C-N	6.77	1.42	1.34
10	AJ	95	GLY	C-O	-6.77	1.16	1.24
12	AL	24	GLU	C-N	6.77	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	348	A	C5'-C4'	6.77	1.61	1.51
34	BA	117	G	O3'-P	-6.76	1.51	1.61
37	BD	98	VAL	CA-C	-6.76	1.44	1.52
51	BR	82	HIS	CE1-NE2	6.76	1.39	1.32
35	BB	1749	A	C2'-C1'	-6.76	1.43	1.53
15	AO	88	ARG	NE-CZ	6.76	1.40	1.33
35	BB	1389	G	C2'-C1'	-6.76	1.43	1.53
35	BB	2047	C	C2'-C1'	-6.76	1.43	1.53
4	AD	54	LEU	CA-C	-6.76	1.44	1.53
35	BB	349	U	C4'-O4'	-6.76	1.35	1.45
35	BB	2160	C	C4'-C3'	6.76	1.62	1.52
1	AA	1226	C	C3'-C2'	-6.75	1.42	1.52
15	AO	79	ARG	CA-C	-6.75	1.44	1.52
35	BB	460	A	C2'-C1'	-6.75	1.43	1.53
35	BB	1008	A	O3'-P	-6.75	1.51	1.61
55	BW	38	LEU	CA-C	-6.75	1.44	1.52
35	BB	2311	A	C4'-O4'	-6.74	1.35	1.45
39	BF	111	ARG	CZ-NH1	6.74	1.42	1.32
35	BB	95	A	C3'-C2'	6.74	1.62	1.52
41	BH	45	GLU	N-CA	-6.74	1.37	1.46
18	AR	54	LEU	CA-C	-6.74	1.44	1.52
1	AA	985	C	O4'-C1'	6.74	1.51	1.41
35	BB	1635	A	C2'-C1'	-6.74	1.43	1.53
35	BB	1731	G	O3'-P	-6.74	1.51	1.61
1	AA	384	G	C4'-O4'	-6.73	1.35	1.45
48	BO	33	ARG	CD-NE	6.73	1.55	1.46
48	BO	100	HIS	C-N	6.73	1.43	1.33
35	BB	258	G	O4'-C1'	6.73	1.51	1.41
1	AA	829	G	O3'-P	-6.73	1.51	1.61
1	AA	1160	G	O4'-C1'	6.72	1.51	1.41
53	BT	55	VAL	CA-C	-6.72	1.45	1.52
36	BC	222	THR	C-N	6.72	1.43	1.33
1	AA	234	C	C1'-N1	6.72	1.58	1.48
35	BB	668	A	O4'-C1'	-6.72	1.31	1.41
45	BL	70	LYS	CA-C	-6.71	1.43	1.52
9	AI	75	ALA	N-CA	-6.71	1.37	1.46
43	BJ	71	ASP	CA-C	-6.71	1.43	1.52
35	BB	1233	C	C2'-C1'	-6.71	1.43	1.53
6	AF	91	ARG	N-CA	-6.71	1.37	1.45
8	AH	80	PRO	CA-CB	6.71	1.63	1.53
30	B5	49	GLY	N-CA	6.71	1.55	1.45
36	BC	74	PRO	C-N	6.71	1.43	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	B0	11	PRO	N-CA	-6.71	1.39	1.47
35	BB	50	U	O3'-P	-6.70	1.51	1.61
35	BB	2109	U	O3'-P	-6.70	1.51	1.61
3	AC	39	ARG	NE-CZ	6.70	1.40	1.33
37	BD	24	VAL	C-N	6.70	1.42	1.33
35	BB	561	G	O3'-P	-6.70	1.51	1.61
35	BB	1260	A	O3'-P	-6.70	1.51	1.61
30	B5	29	LEU	CA-C	6.70	1.61	1.52
35	BB	681	G	O3'-P	-6.70	1.51	1.61
10	AJ	89	ARG	CZ-NH1	6.69	1.42	1.32
25	B0	57	VAL	CA-C	-6.69	1.44	1.52
35	BB	1033	U	C5'-C4'	6.69	1.61	1.51
35	BB	1133	A	O3'-P	-6.69	1.51	1.61
30	B5	198	LYS	CA-C	6.69	1.61	1.52
35	BB	594	U	O5'-C5'	6.69	1.52	1.42
35	BB	799	G	C5'-C4'	6.69	1.61	1.51
35	BB	2153	C	C3'-O3'	6.69	1.53	1.43
9	AI	14	SER	N-CA	-6.68	1.38	1.46
29	B4	37	LYS	N-CA	-6.68	1.37	1.46
35	BB	937	C	C2'-C1'	-6.68	1.43	1.53
43	BJ	37	ARG	NE-CZ	6.68	1.40	1.33
50	BQ	10	ARG	NE-CZ	6.68	1.40	1.33
35	BB	694	U	C2'-C1'	-6.68	1.43	1.53
35	BB	1754	A	O3'-P	-6.68	1.51	1.61
34	BA	105	G	O3'-P	-6.68	1.51	1.61
35	BB	2120	G	O5'-C5'	6.68	1.52	1.42
55	BW	81	PRO	C-N	6.68	1.43	1.33
9	AI	4	GLN	C-N	6.67	1.43	1.33
41	BH	4	ILE	CA-CB	-6.67	1.46	1.54
4	AD	15	GLY	C-N	6.67	1.42	1.33
35	BB	321	U	C4'-O4'	-6.67	1.35	1.45
35	BB	2028	U	C2'-C1'	-6.67	1.43	1.53
35	BB	1553	A	O5'-C5'	6.66	1.52	1.42
35	BB	1710	G	C2'-C1'	-6.66	1.43	1.53
41	BH	133	GLN	N-CA	-6.66	1.38	1.45
35	BB	474	G	C2'-C1'	-6.66	1.43	1.53
36	BC	86	ARG	CA-C	-6.66	1.44	1.52
35	BB	2627	G	C5'-C4'	6.66	1.61	1.51
47	BN	14	SER	CA-C	-6.66	1.43	1.52
46	BM	73	ILE	CA-C	-6.66	1.44	1.52
13	AM	72	ILE	CA-C	-6.65	1.45	1.52
39	BF	29	ARG	CD-NE	6.65	1.55	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	BW	30	ILE	CA-C	-6.65	1.44	1.52
35	BB	847	U	C1'-N1	6.65	1.58	1.48
35	BB	1464	G	C4'-C3'	6.64	1.62	1.52
35	BB	1082	U	C1'-N1	6.64	1.58	1.48
35	BB	2154	A	O3'-P	-6.64	1.51	1.61
36	BC	107	LYS	N-CA	-6.64	1.38	1.46
49	BP	67	GLU	N-CA	-6.64	1.37	1.46
51	BR	85	LYS	CA-C	-6.64	1.44	1.52
1	AA	721	G	C5'-C4'	6.64	1.61	1.51
35	BB	2705	A	P-O5'	-6.64	1.49	1.59
4	AD	153	ARG	NE-CZ	6.64	1.40	1.33
1	AA	758	C	C2'-C1'	-6.64	1.43	1.53
8	AH	16	GLY	C-N	6.63	1.42	1.33
8	AH	37	ASN	CA-C	-6.63	1.44	1.52
38	BE	95	LYS	C-N	6.63	1.42	1.33
8	AH	48	PHE	CA-C	-6.63	1.44	1.52
35	BB	1847	A	C2'-C1'	-6.63	1.43	1.53
38	BE	40	ARG	NE-CZ	6.63	1.40	1.33
6	AF	79	ARG	CZ-NH1	6.63	1.42	1.32
39	BF	173	ASP	CA-C	-6.63	1.43	1.52
1	AA	835	U	C4'-C3'	6.62	1.62	1.52
35	BB	179	C	O5'-C5'	6.62	1.52	1.42
35	BB	860	U	C2'-C1'	-6.62	1.43	1.53
1	AA	837	U	O5'-C5'	6.62	1.52	1.42
1	AA	1361	G	O4'-C1'	6.62	1.51	1.41
21	AU	37	TYR	C-N	6.62	1.42	1.33
35	BB	570	G	C5'-C4'	6.62	1.61	1.51
35	BB	1056	G	C2'-C1'	-6.62	1.43	1.53
35	BB	461	C	O3'-P	-6.62	1.51	1.61
35	BB	1618	A	C2'-C1'	-6.62	1.43	1.53
36	BC	183	VAL	CA-C	-6.62	1.47	1.52
17	AQ	57	VAL	CA-CB	-6.62	1.47	1.54
1	AA	1347	G	P-O5'	-6.62	1.49	1.59
21	AU	17	ARG	NE-CZ	6.62	1.40	1.33
35	BB	223	A	O3'-P	-6.61	1.51	1.61
35	BB	2443	C	C2'-C1'	-6.61	1.43	1.53
1	AA	920	U	C5'-C4'	6.61	1.61	1.51
1	AA	1088	G	P-O5'	-6.61	1.49	1.59
37	BD	29	VAL	CA-C	6.61	1.61	1.52
52	BS	61	ASN	N-CA	-6.61	1.37	1.46
1	AA	1464	U	C4'-C3'	6.61	1.62	1.52
25	B0	37	PHE	N-CA	6.60	1.53	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BD	188	LEU	N-CA	-6.60	1.38	1.46
34	BA	2	G	C2'-C1'	-6.60	1.43	1.53
35	BB	1781	U	C2'-C1'	-6.60	1.43	1.53
38	BE	73	ILE	CA-C	-6.60	1.44	1.52
36	BC	180	MET	CA-CB	6.60	1.62	1.53
35	BB	1297	C	O3'-P	-6.60	1.51	1.61
35	BB	2666	C	C1'-N1	6.59	1.58	1.48
35	BB	2510	C	P-O5'	-6.59	1.49	1.59
36	BC	134	ILE	N-CA	-6.59	1.38	1.46
1	AA	745	G	P-O5'	-6.59	1.49	1.59
10	AJ	45	ARG	CD-NE	6.59	1.55	1.46
35	BB	2097	A	C4'-O4'	6.58	1.55	1.45
35	BB	405	U	O5'-C5'	6.58	1.52	1.42
35	BB	1084	A	C4'-C3'	6.58	1.62	1.52
53	BT	52	GLU	N-CA	-6.58	1.41	1.47
35	BB	2555	U	C4'-O4'	6.58	1.55	1.45
1	AA	1124	G	C4'-C3'	-6.58	1.43	1.53
6	AF	8	PHE	N-CA	-6.58	1.37	1.45
8	AH	16	GLY	CA-C	-6.58	1.42	1.51
35	BB	617	G	C5'-C4'	6.58	1.61	1.51
30	B5	146	THR	CA-C	6.58	1.59	1.52
1	AA	753	A	C4'-C3'	6.58	1.63	1.53
14	AN	17	ASP	CA-C	-6.58	1.43	1.52
19	AS	51	HIS	CB-CG	6.58	1.59	1.50
44	BK	17	ARG	NE-CZ	6.58	1.40	1.33
11	AK	43	TRP	CA-CB	6.57	1.65	1.53
35	BB	2775	G	C5'-C4'	6.57	1.61	1.51
36	BC	86	ARG	CD-NE	6.57	1.55	1.46
4	AD	23	GLY	N-CA	-6.57	1.37	1.45
10	AJ	68	ARG	CZ-NH1	6.57	1.42	1.32
35	BB	1489	C	C5'-C4'	6.57	1.61	1.51
15	AO	88	ARG	CZ-NH1	6.57	1.42	1.32
35	BB	1376	C	P-O5'	-6.57	1.50	1.59
35	BB	1815	A	O4'-C1'	-6.57	1.32	1.42
50	BQ	56	PHE	N-CA	-6.57	1.37	1.46
8	AH	23	ALA	N-CA	-6.56	1.37	1.46
1	AA	1496	C	C1'-N1	6.56	1.58	1.48
35	BB	2136	G	C3'-O3'	6.56	1.51	1.42
1	AA	1097	C	C2'-C1'	-6.56	1.43	1.53
13	AM	70	ARG	CD-NE	6.56	1.55	1.46
35	BB	2727	A	C2'-O2'	-6.56	1.32	1.42
47	BN	59	SER	C-N	6.56	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	AT	3	ILE	CA-C	-6.56	1.44	1.52
30	B5	185	LEU	CA-C	-6.56	1.44	1.52
35	BB	1023	U	C2'-C1'	-6.56	1.43	1.53
44	BK	80	ASP	C-N	6.56	1.41	1.33
1	AA	968	A	C5'-C4'	6.56	1.61	1.51
35	BB	2406	A	C2'-C1'	-6.56	1.43	1.53
47	BN	1	MET	C-N	6.56	1.41	1.33
47	BN	90	ARG	NE-CZ	6.56	1.40	1.33
3	AC	180	ASP	C-N	6.56	1.40	1.33
54	BU	95	PHE	CA-C	-6.55	1.44	1.52
35	BB	1452	G	P-O5'	-6.55	1.50	1.59
35	BB	469	G	C5'-C4'	6.55	1.61	1.51
51	BR	66	HIS	N-CA	-6.55	1.37	1.45
8	AH	127	TYR	CA-C	-6.55	1.44	1.52
19	AS	55	GLN	CA-C	-6.55	1.44	1.52
35	BB	1638	C	C2'-O2'	-6.55	1.32	1.42
11	AK	81	LEU	CA-C	-6.55	1.44	1.52
1	AA	955	U	C3'-O3'	6.54	1.51	1.42
27	B2	10	ARG	NE-CZ	6.54	1.40	1.33
35	BB	622	G	O3'-P	-6.54	1.51	1.61
12	AL	82	ARG	CD-NE	6.54	1.55	1.46
44	BK	18	ARG	CD-NE	6.54	1.55	1.46
25	B0	34	SER	C-N	6.54	1.42	1.33
36	BC	66	PHE	CA-C	-6.54	1.44	1.52
43	BJ	130	HIS	N-CA	-6.54	1.38	1.45
9	AI	112	ARG	CZ-NH1	6.53	1.41	1.32
52	BS	20	VAL	CA-CB	-6.53	1.46	1.54
10	AJ	5	ARG	CZ-NH1	6.53	1.41	1.32
35	BB	1139	G	O5'-C5'	6.53	1.52	1.42
53	BT	61	LEU	N-CA	-6.53	1.37	1.46
35	BB	2738	A	C3'-C2'	-6.53	1.43	1.52
4	AD	143	SER	N-CA	-6.53	1.38	1.45
34	BA	42	C	O4'-C1'	6.53	1.51	1.41
35	BB	2043	C	P-O5'	-6.53	1.50	1.59
35	BB	166	U	C5'-C4'	6.52	1.61	1.51
35	BB	2557	G	C5'-C4'	6.52	1.61	1.51
1	AA	400	C	O3'-P	-6.52	1.51	1.61
13	AM	70	ARG	CZ-NH1	6.52	1.41	1.32
32	B7	12	ARG	CZ-NH1	6.52	1.41	1.32
35	BB	622	G	C5'-C4'	6.52	1.61	1.51
35	BB	691	C	P-O5'	-6.52	1.50	1.59
46	BM	56	ALA	C-N	6.52	1.40	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	BO	60	GLU	C-N	6.52	1.42	1.33
49	BP	71	ARG	CA-CB	6.52	1.63	1.53
47	BN	25	ALA	CA-C	-6.52	1.44	1.52
35	BB	2141	G	O5'-C5'	6.51	1.52	1.42
1	AA	710	G	O5'-C5'	6.51	1.52	1.42
32	B7	9	ALA	N-CA	-6.51	1.38	1.46
37	BD	139	SER	CA-C	-6.51	1.44	1.52
2	AB	64	GLY	CA-C	-6.50	1.43	1.51
35	BB	477	A	C1'-N9	-6.50	1.38	1.48
35	BB	1281	G	C5'-C4'	6.50	1.61	1.51
35	BB	2617	U	C1'-N1	6.50	1.58	1.48
1	AA	784	A	C4'-O4'	-6.50	1.35	1.45
30	B5	129	GLN	N-CA	-6.50	1.38	1.46
9	AI	89	TYR	N-CA	-6.50	1.39	1.46
19	AS	48	ILE	CA-C	-6.50	1.45	1.53
35	BB	482	A	O3'-P	-6.49	1.51	1.61
44	BK	1	MET	CA-CB	6.49	1.66	1.53
54	BU	92	VAL	N-CA	-6.49	1.38	1.46
4	AD	43	ARG	NE-CZ	6.49	1.40	1.33
35	BB	1879	C	C2'-C1'	-6.49	1.43	1.53
49	BP	109	ILE	CA-C	-6.49	1.46	1.52
13	AM	69	ARG	CZ-NH1	6.49	1.41	1.32
35	BB	1503	A	C5'-C4'	6.49	1.60	1.51
35	BB	2388	A	C4'-C3'	-6.49	1.42	1.52
37	BD	200	ASP	CA-CB	6.49	1.64	1.53
50	BQ	80	ASN	CA-C	-6.49	1.46	1.53
1	AA	1177	G	C2'-C1'	-6.48	1.43	1.53
2	AB	169	HIS	ND1-CE1	6.48	1.39	1.32
35	BB	1511	G	O3'-P	-6.48	1.51	1.61
38	BE	30	GLN	N-CA	-6.48	1.37	1.46
9	AI	44	ARG	N-CA	-6.48	1.38	1.46
35	BB	1298	C	P-O5'	-6.48	1.50	1.59
5	AE	93	VAL	CA-C	-6.48	1.45	1.52
1	AA	823	C	C4'-O4'	6.48	1.55	1.45
35	BB	1584	U	C1'-N1	6.48	1.58	1.48
35	BB	2234	G	C2'-C1'	-6.48	1.43	1.53
53	BT	82	LYS	CA-C	-6.48	1.45	1.52
35	BB	541	A	O3'-P	-6.48	1.51	1.61
3	AC	64	ARG	CA-C	-6.47	1.45	1.52
40	BG	2	ARG	CD-NE	6.47	1.55	1.46
49	BP	83	ILE	C-N	6.47	1.42	1.33
35	BB	1545	A	C2'-C1'	-6.47	1.43	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	AR	61	ALA	N-CA	-6.47	1.38	1.46
1	AA	1274	A	C2'-C1'	-6.47	1.43	1.53
35	BB	2429	G	O3'-P	-6.47	1.51	1.61
35	BB	2842	G	C4'-C3'	6.47	1.62	1.52
1	AA	880	C	O3'-P	-6.46	1.51	1.61
1	AA	1365	G	C4'-O4'	-6.46	1.35	1.45
2	AB	50	ASN	CA-CB	6.46	1.64	1.53
1	AA	88	U	C1'-N1	6.46	1.58	1.48
35	BB	166	U	O3'-P	-6.46	1.51	1.61
11	AK	45	THR	N-CA	-6.46	1.38	1.46
26	B1	22	LEU	CA-CB	6.46	1.61	1.53
31	B6	16	HIS	N-CA	-6.46	1.41	1.47
35	BB	1210	G	P-O5'	6.45	1.69	1.59
35	BB	1550	C	P-O5'	-6.45	1.50	1.59
50	BQ	91	ARG	NE-CZ	6.45	1.40	1.33
8	AH	76	ARG	CA-CB	6.45	1.62	1.53
35	BB	2171	A	C3'-C2'	6.45	1.62	1.52
36	BC	37	SER	CA-C	-6.45	1.44	1.52
46	BM	18	ARG	NE-CZ	6.45	1.40	1.33
1	AA	941	G	C3'-C2'	-6.45	1.43	1.52
2	AB	113	LEU	CA-C	-6.45	1.44	1.52
1	AA	361	G	C3'-C2'	-6.44	1.43	1.52
10	AJ	82	LYS	CA-C	-6.44	1.44	1.52
19	AS	20	LYS	N-CA	-6.44	1.38	1.46
28	B3	40	HIS	CE1-NE2	6.44	1.39	1.32
28	B3	2	VAL	CA-C	-6.44	1.44	1.52
35	BB	734	A	C5'-C4'	6.44	1.60	1.51
2	AB	143	LEU	CA-C	-6.44	1.44	1.52
3	AC	64	ARG	CZ-NH1	6.44	1.41	1.32
4	AD	127	ARG	CD-NE	6.44	1.55	1.46
1	AA	667	G	O3'-P	-6.42	1.51	1.61
13	AM	47	LEU	CA-C	-6.42	1.44	1.52
35	BB	747	U	C1'-N1	6.42	1.58	1.48
35	BB	845	A	C3'-O3'	6.42	1.51	1.42
30	B5	65	LEU	C-N	-6.42	1.27	1.34
1	AA	994	A	O4'-C1'	6.42	1.51	1.41
1	AA	1462	C	C4'-C3'	6.42	1.62	1.52
8	AH	54	THR	C-N	6.42	1.42	1.33
4	AD	45	PRO	CA-CB	6.42	1.61	1.54
35	BB	1793	C	O3'-P	-6.41	1.51	1.61
47	BN	80	PHE	CA-CB	6.41	1.64	1.53
5	AE	83	PRO	N-CA	-6.41	1.39	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AP	70	ARG	N-CA	-6.41	1.38	1.46
35	BB	91	A	C2'-C1'	-6.41	1.43	1.53
35	BB	1408	G	C1'-N9	-6.41	1.38	1.48
35	BB	2245	U	O4'-C1'	-6.41	1.32	1.41
35	BB	741	U	C2'-C1'	-6.41	1.43	1.53
1	AA	1092	A	O3'-P	-6.41	1.51	1.61
35	BB	1403	A	N9-C4	6.40	1.50	1.37
54	BU	66	VAL	CA-C	-6.40	1.44	1.53
9	AI	105	ARG	C-N	6.40	1.42	1.33
35	BB	2371	G	C4'-C3'	-6.40	1.43	1.52
38	BE	182	ALA	N-CA	-6.40	1.38	1.46
4	AD	99	ASN	CA-C	-6.40	1.45	1.53
1	AA	213	G	C2'-C1'	-6.40	1.43	1.53
26	B1	22	LEU	CA-C	-6.40	1.45	1.52
35	BB	2477	U	C4-C5	6.40	1.56	1.43
20	AT	69	ASN	CA-C	-6.39	1.43	1.52
1	AA	392	C	C4'-C3'	6.39	1.62	1.52
2	AB	181	PRO	N-CD	-6.39	1.38	1.47
15	AO	48	ASP	CA-C	-6.39	1.46	1.53
1	AA	209	U	C4'-O4'	-6.39	1.35	1.45
3	AC	5	HIS	CE1-NE2	6.39	1.39	1.32
17	AQ	26	ARG	NE-CZ	6.39	1.40	1.33
30	B5	43	ASP	CA-C	-6.39	1.45	1.52
1	AA	1503	A	C5'-C4'	6.39	1.60	1.51
22	AV	73	A	C5'-C4'	6.38	1.60	1.51
35	BB	852	U	P-O5'	-6.38	1.50	1.59
35	BB	138	U	P-O5'	6.38	1.69	1.59
35	BB	1949	G	C1'-N9	6.38	1.57	1.48
9	AI	70	GLY	C-N	6.38	1.40	1.33
2	AB	13	VAL	N-CA	-6.37	1.38	1.46
8	AH	111	THR	C-O	-6.37	1.16	1.23
35	BB	95	A	C2'-C1'	-6.37	1.43	1.53
50	BQ	49	ARG	CD-NE	6.37	1.55	1.46
1	AA	770	C	C4'-O4'	6.37	1.55	1.45
35	BB	567	U	C4'-O4'	-6.37	1.35	1.45
1	AA	1496	C	O4'-C1'	-6.37	1.32	1.41
20	AT	73	ARG	NE-CZ	6.37	1.40	1.33
35	BB	2810	A	P-O5'	-6.37	1.50	1.59
47	BN	71	ARG	NE-CZ	6.37	1.40	1.33
35	BB	807	U	O5'-C5'	6.37	1.52	1.42
38	BE	171	ASP	CA-C	-6.37	1.44	1.52
5	AE	59	ILE	CA-CB	-6.37	1.45	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AP	23	ASP	N-CA	-6.37	1.37	1.45
35	BB	824	U	P-O5'	-6.37	1.50	1.59
10	AJ	62	ARG	CA-C	-6.36	1.45	1.52
48	BO	16	ARG	NE-CZ	6.36	1.40	1.33
1	AA	25	C	C3'-C2'	6.36	1.62	1.52
11	AK	23	HIS	CA-C	-6.36	1.44	1.53
35	BB	572	A	C2'-C1'	-6.36	1.43	1.53
35	BB	1869	G	C5'-C4'	6.36	1.60	1.51
53	BT	77	ARG	NE-CZ	6.36	1.40	1.33
1	AA	835	U	P-O5'	-6.36	1.50	1.59
35	BB	2041	U	C1'-N1	6.36	1.57	1.48
4	AD	190	LEU	N-CA	-6.35	1.37	1.45
35	BB	1273	U	P-O5'	6.35	1.69	1.59
35	BB	2393	U	O3'-P	-6.35	1.51	1.61
40	BG	54	ARG	CD-NE	6.35	1.55	1.46
35	BB	1994	C	O4'-C1'	-6.35	1.32	1.41
36	BC	242	HIS	CE1-NE2	6.35	1.39	1.32
30	B5	99	ASP	CA-CB	6.35	1.63	1.53
35	BB	226	A	O5'-C5'	6.35	1.51	1.42
37	BD	167	ASN	C-N	-6.35	1.25	1.33
43	BJ	13	ARG	NE-CZ	6.35	1.40	1.33
40	BG	88	LEU	N-CA	-6.34	1.38	1.46
56	BY	38	ARG	CD-NE	6.34	1.55	1.46
1	AA	311	C	C2'-C1'	-6.34	1.43	1.53
35	BB	574	A	C2'-C1'	-6.34	1.43	1.53
35	BB	2435	A	C1'-N9	-6.34	1.38	1.48
36	BC	52	HIS	CD2-NE2	-6.34	1.30	1.37
1	AA	1505	G	C2'-C1'	-6.34	1.43	1.53
12	AL	120	ARG	C-N	6.34	1.41	1.33
35	BB	464	U	C2'-C1'	-6.34	1.43	1.53
35	BB	1457	U	C1'-N1	6.34	1.57	1.48
35	BB	2455	G	P-O5'	-6.34	1.50	1.59
1	AA	658	C	P-O5'	-6.34	1.50	1.59
35	BB	1871	A	C4'-C3'	6.34	1.62	1.52
36	BC	246	PRO	C-N	6.34	1.42	1.33
40	BG	149	ALA	C-N	6.34	1.41	1.33
35	BB	2597	G	C5'-C4'	6.33	1.60	1.51
43	BJ	116	ARG	CD-NE	6.33	1.55	1.46
51	BR	48	LYS	C-N	6.33	1.42	1.33
3	AC	80	GLY	C-N	6.33	1.42	1.33
11	AK	21	HIS	CE1-NE2	6.33	1.38	1.32
15	AO	42	PHE	CA-CB	6.33	1.64	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	669	G	O5'-C5'	6.33	1.52	1.42
35	BB	1651	G	C3'-O3'	6.33	1.51	1.42
40	BG	115	GLN	CA-CB	6.33	1.60	1.52
44	BK	29	HIS	CD2-NE2	-6.33	1.30	1.37
47	BN	101	GLY	C-N	6.33	1.41	1.33
35	BB	621	A	P-O5'	-6.33	1.50	1.59
36	BC	147	PRO	N-CD	-6.33	1.38	1.47
46	BM	84	LYS	CA-CB	6.33	1.64	1.53
35	BB	1442	U	C2'-C1'	-6.32	1.43	1.53
1	AA	149	A	C2'-C1'	-6.32	1.43	1.53
30	B5	65	LEU	CB-CG	6.32	1.66	1.53
35	BB	339	U	C3'-O3'	6.32	1.51	1.42
39	BF	136	ILE	CA-C	-6.32	1.43	1.53
10	AJ	101	SER	N-CA	-6.32	1.37	1.46
2	AB	159	ALA	CA-C	6.32	1.60	1.52
25	B0	15	ASN	CA-C	-6.32	1.45	1.52
1	AA	1171	A	C5'-C4'	6.32	1.60	1.51
4	AD	162	GLU	CA-CB	6.32	1.63	1.53
4	AD	197	HIS	N-CA	-6.32	1.38	1.46
35	BB	2893	A	O5'-C5'	6.32	1.52	1.42
55	BW	21	ARG	CD-NE	6.32	1.55	1.46
47	BN	90	ARG	CZ-NH2	6.31	1.41	1.33
49	BP	6	GLN	N-CA	-6.31	1.38	1.46
35	BB	394	C	P-O5'	-6.31	1.50	1.59
1	AA	382	A	C2'-C1'	-6.31	1.43	1.53
18	AR	58	ILE	CA-CB	-6.31	1.45	1.54
35	BB	591	U	C3'-O3'	6.31	1.51	1.42
35	BB	2733	A	P-O5'	-6.31	1.50	1.59
34	BA	62	C	C2'-C1'	-6.30	1.43	1.53
3	AC	163	ARG	CD-NE	6.30	1.55	1.46
4	AD	158	LEU	CA-C	-6.30	1.43	1.52
16	AP	55	ASP	CA-C	-6.30	1.44	1.52
35	BB	1466	U	C1'-N1	-6.30	1.39	1.48
35	BB	1471	G	C1'-N9	-6.30	1.38	1.48
1	AA	1276	G	C2'-C1'	-6.29	1.44	1.53
35	BB	729	G	C1'-N9	6.29	1.57	1.48
35	BB	1738	G	C3'-C2'	6.29	1.62	1.52
1	AA	429	U	O3'-P	-6.29	1.51	1.61
1	AA	847	G	C4'-O4'	6.29	1.54	1.45
1	AA	1331	G	P-O5'	-6.29	1.50	1.59
2	AB	209	VAL	CA-CB	6.29	1.61	1.54
54	BU	25	LYS	N-CA	-6.29	1.38	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1473	G	C2'-C1'	-6.29	1.44	1.53
52	BS	8	ARG	C-N	6.29	1.42	1.33
27	B2	6	ILE	N-CA	-6.29	1.38	1.46
35	BB	1165	A	C5'-C4'	6.29	1.60	1.51
41	BH	34	GLY	CA-C	-6.29	1.43	1.51
22	AV	32	A	C4'-O4'	-6.29	1.36	1.45
45	BL	107	PHE	C-N	6.29	1.41	1.33
1	AA	793	U	P-O5'	-6.28	1.50	1.59
35	BB	232	G	O3'-P	-6.28	1.51	1.61
35	BB	2474	U	C3'-O3'	6.28	1.51	1.42
27	B2	30	ARG	CZ-NH1	6.28	1.41	1.32
39	BF	103	ILE	N-CA	-6.28	1.38	1.46
46	BM	51	ARG	NE-CZ	6.28	1.40	1.33
1	AA	487	A	C4'-C3'	6.28	1.61	1.52
25	B0	26	ARG	NE-CZ	6.28	1.40	1.33
40	BG	21	GLN	CA-CB	6.28	1.64	1.53
1	AA	48	C	C3'-C2'	-6.27	1.43	1.52
35	BB	285	G	C1'-N9	-6.27	1.38	1.48
1	AA	284	C	C4'-O4'	6.27	1.54	1.45
35	BB	2051	A	C4'-C3'	-6.27	1.43	1.53
35	BB	2188	U	C1'-N1	6.27	1.57	1.48
40	BG	21	GLN	N-CA	-6.27	1.38	1.46
49	BP	5	LYS	C-N	6.27	1.41	1.33
1	AA	933	G	C4'-C3'	6.27	1.61	1.52
35	BB	1527	G	O3'-P	-6.27	1.51	1.61
52	BS	88	ARG	CZ-NH2	6.27	1.41	1.33
35	BB	194	G	C2'-O2'	-6.27	1.33	1.42
35	BB	280	U	C2'-C1'	-6.27	1.44	1.53
1	AA	1011	C	C4'-C3'	-6.26	1.43	1.52
5	AE	18	ASN	C-N	6.26	1.41	1.33
19	AS	48	ILE	C-N	6.26	1.42	1.33
2	AB	124	THR	CA-CB	-6.26	1.44	1.54
35	BB	2048	G	C2-N3	6.26	1.45	1.32
35	BB	2663	G	C2'-C1'	-6.26	1.44	1.53
48	BO	91	SER	C-N	6.26	1.42	1.33
35	BB	931	U	C5'-C4'	6.26	1.60	1.51
35	BB	2300	C	C1'-N1	-6.26	1.39	1.48
1	AA	1254	A	C1'-N9	6.26	1.57	1.48
32	B7	59	ALA	N-CA	-6.26	1.37	1.46
21	AU	38	GLU	N-CA	-6.25	1.38	1.46
30	B5	84	ALA	CA-C	6.25	1.60	1.52
35	BB	119	A	C4'-C3'	6.25	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1481	U	C4'-C3'	-6.25	1.43	1.52
50	BQ	109	VAL	CA-C	-6.25	1.45	1.52
1	AA	581	G	C5'-C4'	6.25	1.60	1.51
26	B1	45	GLN	CA-C	-6.25	1.45	1.53
37	BD	185	ASN	CA-C	-6.25	1.45	1.53
39	BF	131	VAL	C-N	6.25	1.42	1.33
31	B6	43	THR	C-N	6.25	1.42	1.33
55	BW	32	GLY	CA-C	-6.25	1.45	1.52
29	B4	15	GLY	CA-C	-6.25	1.43	1.51
36	BC	163	ILE	CA-CB	-6.25	1.46	1.54
53	BT	65	GLY	C-N	6.25	1.41	1.33
35	BB	2055	C	O4'-C1'	6.24	1.51	1.41
35	BB	2186	G	C1'-N9	6.24	1.57	1.48
1	AA	400	C	C3'-O3'	6.24	1.51	1.42
35	BB	1170	C	C1'-N1	6.24	1.57	1.48
35	BB	1832	C	C4'-O4'	6.24	1.54	1.45
1	AA	1388	C	O3'-P	-6.23	1.51	1.61
36	BC	173	LEU	N-CA	-6.23	1.38	1.45
1	AA	605	U	C4'-O4'	-6.23	1.36	1.45
35	BB	288	U	C2'-C1'	-6.23	1.44	1.53
1	AA	479	U	P-O5'	-6.23	1.50	1.59
1	AA	1025	U	O3'-P	-6.23	1.51	1.61
1	AA	1482	G	C2'-C1'	-6.23	1.44	1.53
44	BK	22	ILE	CA-CB	-6.23	1.46	1.54
55	BW	12	GLN	C-N	6.23	1.42	1.33
47	BN	86	ARG	N-CA	-6.23	1.38	1.46
17	AQ	44	HIS	CD2-NE2	-6.23	1.31	1.37
22	AV	3	G	O3'-P	-6.22	1.51	1.61
35	BB	2132	U	O3'-P	-6.22	1.51	1.61
41	BH	11	ASN	CA-C	-6.22	1.44	1.52
1	AA	97	G	C5'-C4'	6.22	1.60	1.51
35	BB	723	C	C2'-C1'	-6.22	1.44	1.53
8	AH	113	ARG	N-CA	-6.22	1.39	1.46
1	AA	79	G	C3'-C2'	6.22	1.62	1.52
35	BB	1117	C	C5'-C4'	6.22	1.60	1.51
35	BB	1475	G	C2'-C1'	-6.22	1.43	1.53
35	BB	2401	U	P-O5'	-6.22	1.50	1.59
30	B5	174	THR	CA-C	-6.22	1.44	1.52
2	AB	213	LEU	C-N	6.21	1.41	1.33
13	AM	55	LEU	CA-C	-6.21	1.44	1.52
35	BB	2411	A	C2'-C1'	-6.21	1.44	1.53
1	AA	1052	U	O3'-P	-6.21	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AU	25	ALA	N-CA	-6.21	1.37	1.46
22	AV	39	G	N9-C4	6.21	1.50	1.38
35	BB	1997	C	C1'-N1	-6.21	1.39	1.48
39	BF	94	ARG	NE-CZ	6.21	1.39	1.33
1	AA	389	A	C1'-N9	6.21	1.57	1.48
1	AA	361	G	C1'-N9	6.21	1.57	1.48
35	BB	979	A	P-O5'	-6.21	1.50	1.59
35	BB	1980	G	C2'-O2'	-6.21	1.32	1.41
35	BB	2123	G	O3'-P	-6.21	1.51	1.61
41	BH	67	ALA	C-N	6.21	1.42	1.33
50	BQ	51	GLN	C-N	6.21	1.41	1.33
1	AA	718	A	C2'-C1'	-6.21	1.44	1.53
1	AA	1363	A	O3'-P	-6.21	1.51	1.61
41	BH	123	ARG	CA-CB	6.21	1.64	1.53
1	AA	1446	A	C4'-C3'	6.20	1.61	1.52
35	BB	1379	U	C5'-C4'	6.20	1.60	1.51
35	BB	1055	G	C2-N3	6.20	1.45	1.32
14	AN	40	ARG	CZ-NH1	6.20	1.41	1.32
54	BU	11	ILE	N-CA	-6.20	1.39	1.46
1	AA	1459	G	O5'-C5'	6.20	1.51	1.42
1	AA	1516	G	C5'-C4'	6.20	1.60	1.51
14	AN	45	LEU	C-N	6.20	1.42	1.33
19	AS	56	HIS	CB-CG	6.20	1.58	1.50
35	BB	125	A	C4'-O4'	6.20	1.55	1.45
35	BB	144	A	P-O5'	-6.20	1.50	1.59
35	BB	474	G	O3'-P	-6.20	1.51	1.61
35	BB	1677	A	C3'-O3'	6.20	1.51	1.42
35	BB	476	G	P-O5'	-6.20	1.50	1.59
35	BB	2445	G	O3'-P	6.20	1.70	1.61
1	AA	1493	A	C1'-N9	6.20	1.57	1.48
27	B2	13	ILE	CA-CB	-6.20	1.47	1.54
53	BT	5	GLU	C-N	6.20	1.42	1.34
17	AQ	13	SER	CA-CB	6.19	1.64	1.53
53	BT	22	THR	CB-OG1	-6.19	1.33	1.43
54	BU	96	LYS	N-CA	-6.19	1.38	1.46
12	AL	76	HIS	CG-ND1	-6.19	1.31	1.38
17	AQ	26	ARG	CD-NE	6.19	1.54	1.46
37	BD	186	LEU	CA-C	-6.19	1.45	1.52
32	B7	39	ARG	CZ-NH1	6.19	1.41	1.32
35	BB	1087	G	C4'-C3'	6.19	1.61	1.52
40	BG	30	GLY	CA-C	-6.19	1.45	1.52
46	BM	76	LYS	CA-C	-6.19	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1228	C	O3'-P	-6.19	1.51	1.61
4	AD	27	ILE	N-CA	-6.18	1.38	1.46
20	AT	52	GLU	CA-C	-6.18	1.44	1.52
30	B5	164	ARG	CD-NE	6.18	1.54	1.46
35	BB	1889	A	C4'-C3'	-6.18	1.43	1.52
35	BB	1965	C	C3'-O3'	6.18	1.51	1.42
38	BE	138	LEU	C-N	6.18	1.41	1.33
47	BN	4	ARG	CZ-NH1	6.18	1.41	1.32
1	AA	1287	A	P-O5'	6.18	1.69	1.59
35	BB	2171	A	C4'-C3'	6.18	1.62	1.53
2	AB	38	HIS	ND1-CE1	-6.18	1.26	1.32
35	BB	764	A	C5'-C4'	6.18	1.60	1.51
1	AA	509	A	P-O5'	-6.18	1.50	1.59
1	AA	797	C	C3'-C2'	6.18	1.62	1.52
35	BB	1665	A	C1'-N9	-6.18	1.38	1.48
1	AA	690	G	O5'-C5'	6.17	1.51	1.42
1	AA	816	A	P-O5'	-6.17	1.50	1.59
35	BB	122	G	P-O5'	-6.17	1.50	1.59
36	BC	244	VAL	CA-C	-6.17	1.46	1.52
41	BH	123	ARG	NE-CZ	6.17	1.39	1.33
52	BS	103	ILE	CA-CB	-6.17	1.46	1.54
5	AE	49	TYR	CA-C	-6.17	1.45	1.52
35	BB	1584	U	C4'-C3'	6.17	1.61	1.52
55	BW	88	HIS	C-N	6.17	1.41	1.33
5	AE	126	ALA	CA-CB	6.17	1.64	1.53
16	AP	34	GLU	C-N	-6.17	1.25	1.33
19	AS	29	PRO	CA-C	-6.17	1.43	1.52
35	BB	1542	U	C4'-C3'	-6.17	1.43	1.52
35	BB	2476	A	O4'-C1'	6.17	1.50	1.41
40	BG	87	GLN	C-O	-6.17	1.17	1.23
4	AD	170	LEU	N-CA	-6.17	1.39	1.46
13	AM	63	VAL	CA-C	-6.17	1.45	1.52
19	AS	56	HIS	ND1-CE1	6.17	1.38	1.32
35	BB	1817	G	C1'-N9	6.17	1.57	1.48
35	BB	900	A	C3'-O3'	6.17	1.51	1.42
1	AA	505	G	O5'-C5'	6.16	1.51	1.42
1	AA	1430	A	O3'-P	-6.16	1.51	1.61
13	AM	10	ASP	C-N	6.16	1.42	1.33
26	B1	23	ARG	N-CA	-6.16	1.37	1.46
40	BG	135	ALA	CA-C	-6.16	1.45	1.52
2	AB	21	TYR	CA-C	-6.16	1.45	1.52
3	AC	91	ALA	C-N	6.16	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	AN	7	ALA	CA-C	-6.16	1.44	1.52
35	BB	2146	C	C1'-N1	6.16	1.57	1.48
43	BJ	8	PRO	C-N	6.16	1.42	1.33
5	AE	20	VAL	CA-CB	-6.16	1.45	1.54
20	AT	23	ARG	CZ-NH1	6.16	1.41	1.32
44	BK	75	SER	CA-C	-6.16	1.45	1.52
1	AA	568	G	O4'-C1'	6.15	1.50	1.41
49	BP	31	VAL	CA-C	-6.15	1.45	1.52
28	B3	2	VAL	N-CA	-6.15	1.38	1.46
30	B5	13	GLU	C-N	6.15	1.41	1.33
35	BB	1320	C	O3'-P	-6.15	1.51	1.61
20	AT	12	GLN	CA-C	-6.15	1.45	1.52
35	BB	183	C	P-O5'	6.15	1.69	1.59
35	BB	1431	A	C2'-C1'	-6.15	1.44	1.53
35	BB	1636	U	C2'-C1'	-6.15	1.44	1.53
35	BB	2678	C	O3'-P	-6.15	1.51	1.61
55	BW	21	ARG	NE-CZ	6.15	1.39	1.33
46	BM	93	VAL	CA-CB	-6.15	1.44	1.55
51	BR	68	ARG	NE-CZ	6.15	1.39	1.33
38	BE	44	ARG	CA-CB	6.15	1.63	1.53
1	AA	162	A	C5'-C4'	6.15	1.60	1.51
14	AN	16	ALA	CA-C	-6.15	1.44	1.52
35	BB	1653	G	O3'-P	-6.15	1.51	1.61
1	AA	1329	A	C2'-C1'	-6.14	1.44	1.53
35	BB	1664	A	P-O5'	-6.14	1.50	1.59
36	BC	213	ARG	CD-NE	6.14	1.54	1.46
33	B8	11	CYS	CA-C	-6.14	1.45	1.53
1	AA	1126	U	C4'-O4'	-6.14	1.36	1.45
6	AF	11	HIS	CE1-NE2	-6.14	1.26	1.32
35	BB	293	U	O3'-P	-6.14	1.51	1.61
53	BT	54	GLU	CA-CB	6.14	1.62	1.53
2	AB	10	LYS	CA-C	-6.14	1.44	1.52
40	BG	50	THR	N-CA	6.14	1.53	1.45
1	AA	907	A	C1'-N9	6.14	1.57	1.48
8	AH	76	ARG	CA-C	-6.14	1.45	1.52
24	AZ	12	ALA	C-N	6.14	1.42	1.33
30	B5	150	ALA	CA-CB	6.14	1.62	1.53
35	BB	1109	C	C4'-C3'	6.14	1.61	1.52
35	BB	747	U	C5'-C4'	6.13	1.60	1.51
50	BQ	29	ARG	CZ-NH1	6.13	1.41	1.32
12	AL	8	ARG	NE-CZ	6.13	1.39	1.33
48	BO	82	ALA	C-O	-6.13	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	BO	114	GLY	C-N	6.13	1.41	1.33
35	BB	648	G	C5'-C4'	6.13	1.60	1.51
35	BB	1271	G	C3'-O3'	6.13	1.51	1.42
47	BN	68	ALA	N-CA	-6.13	1.38	1.46
21	AU	5	VAL	CA-CB	-6.12	1.48	1.54
35	BB	1081	U	C5'-C4'	6.12	1.60	1.51
1	AA	1360	A	C5'-C4'	6.12	1.60	1.51
11	AK	121	ARG	CZ-NH1	6.12	1.41	1.32
51	BR	90	ARG	NE-CZ	6.12	1.39	1.33
2	AB	93	HIS	C-N	6.12	1.41	1.33
35	BB	1678	A	O3'-P	-6.12	1.51	1.61
15	AO	71	ARG	NE-CZ	6.12	1.39	1.33
35	BB	350	G	O3'-P	-6.12	1.51	1.61
41	BH	53	GLU	C-N	6.12	1.41	1.33
4	AD	204	SER	CA-C	-6.11	1.44	1.52
28	B3	22	THR	C-N	6.11	1.42	1.33
35	BB	1301	A	N7-C5	-6.11	1.27	1.39
1	AA	822	U	C2'-C1'	-6.11	1.44	1.53
35	BB	426	C	C2'-O2'	-6.11	1.33	1.42
35	BB	1063	G	C1'-N9	6.11	1.57	1.48
1	AA	1481	U	C5'-C4'	6.11	1.60	1.51
35	BB	1695	G	O4'-C1'	-6.11	1.32	1.41
1	AA	628	G	O3'-P	-6.10	1.51	1.61
16	AP	26	ASN	CA-CB	6.10	1.64	1.53
35	BB	718	A	C2'-C1'	-6.10	1.44	1.53
35	BB	1508	A	P-O5'	-6.10	1.50	1.59
1	AA	1141	C	C5'-C4'	6.10	1.60	1.51
56	BY	35	ILE	CA-CB	-6.10	1.46	1.54
1	AA	1062	U	P-O5'	-6.10	1.50	1.59
1	AA	1071	C	C5'-C4'	6.10	1.60	1.51
8	AH	73	SER	N-CA	-6.10	1.39	1.46
30	B5	97	MET	CA-C	-6.10	1.45	1.52
35	BB	2626	C	O3'-P	-6.10	1.51	1.61
41	BH	64	ALA	C-N	6.10	1.41	1.33
6	AF	92	THR	CA-C	-6.10	1.44	1.52
35	BB	359	G	P-O5'	-6.10	1.50	1.59
35	BB	1093	G	C2'-O2'	-6.10	1.33	1.42
56	BY	49	ASN	CA-C	-6.10	1.44	1.52
8	AH	61	THR	CA-C	-6.09	1.45	1.52
12	AL	21	PRO	CA-CB	6.09	1.62	1.53
17	AQ	15	LYS	N-CA	-6.09	1.38	1.46
35	BB	1566	A	C4'-C3'	6.09	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	872	U	C1'-N1	6.09	1.57	1.48
53	BT	84	TYR	CA-CB	6.09	1.60	1.53
1	AA	91	U	C4'-C3'	-6.09	1.43	1.52
1	AA	394	G	C2'-O2'	-6.09	1.33	1.42
1	AA	1204	A	C2'-C1'	-6.09	1.44	1.53
7	AG	81	GLY	CA-C	-6.09	1.43	1.51
11	AK	70	ALA	C-N	6.09	1.42	1.33
45	BL	76	GLU	CA-CB	6.09	1.61	1.52
46	BM	119	LEU	CA-C	-6.09	1.44	1.52
54	BU	53	GLN	CA-CB	6.09	1.63	1.53
1	AA	183	C	O3'-P	-6.09	1.52	1.61
28	B3	44	ALA	CA-C	-6.09	1.44	1.52
35	BB	2369	A	P-O5'	-6.09	1.50	1.59
35	BB	2528	U	C5'-C4'	6.09	1.60	1.51
37	BD	49	GLN	N-CA	-6.09	1.38	1.45
1	AA	302	G	C2-N3	6.09	1.45	1.32
1	AA	1425	U	C2'-C1'	-6.09	1.44	1.53
3	AC	189	HIS	CA-CB	-6.09	1.48	1.53
16	AP	66	THR	CA-C	-6.09	1.45	1.52
22	AV	13	C	C4'-O4'	6.09	1.54	1.45
35	BB	847	U	C2'-C1'	-6.09	1.44	1.53
35	BB	1278	C	O3'-P	-6.09	1.52	1.61
35	BB	1308	A	O3'-P	-6.09	1.52	1.61
35	BB	2092	U	P-O5'	-6.09	1.50	1.59
51	BR	12	HIS	CA-C	-6.09	1.45	1.52
41	BH	52	ALA	C-N	6.08	1.41	1.33
47	BN	47	VAL	C-N	6.08	1.39	1.33
54	BU	71	ILE	N-CA	-6.08	1.39	1.46
1	AA	505	G	C1'-N9	-6.08	1.38	1.48
16	AP	23	ASP	CA-C	-6.08	1.45	1.52
35	BB	773	U	P-O5'	-6.08	1.50	1.59
35	BB	1727	C	C5'-C4'	6.08	1.60	1.51
35	BB	2006	C	P-O5'	-6.08	1.50	1.59
36	BC	193	GLU	N-CA	-6.08	1.38	1.46
35	BB	2144	G	C2-N2	6.08	1.46	1.34
33	B8	4	ARG	CA-C	-6.08	1.45	1.52
35	BB	1381	G	O4'-C1'	-6.08	1.32	1.41
35	BB	2859	G	O3'-P	-6.08	1.52	1.61
35	BB	2768	U	C1'-N1	6.08	1.57	1.48
1	AA	170	U	C4'-O4'	-6.08	1.36	1.45
1	AA	629	A	P-O5'	6.08	1.68	1.59
3	AC	203	LYS	CA-C	-6.08	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1957	C	P-O5'	-6.08	1.50	1.59
35	BB	2233	U	C1'-N1	6.08	1.57	1.48
40	BG	98	LYS	CA-C	-6.08	1.49	1.52
44	BK	70	ARG	CA-C	-6.08	1.44	1.52
20	AT	82	ILE	CA-CB	6.07	1.63	1.54
35	BB	99	U	O3'-P	-6.07	1.52	1.61
35	BB	2416	C	C5'-C4'	6.07	1.60	1.51
41	BH	116	ARG	NE-CZ	6.07	1.39	1.33
54	BU	85	ARG	NE-CZ	6.07	1.39	1.33
19	AS	30	LEU	CA-CB	6.07	1.63	1.53
49	BP	102	ARG	NE-CZ	6.07	1.39	1.33
1	AA	731	G	C5'-C4'	6.07	1.60	1.51
1	AA	1444	U	C2-N3	6.07	1.49	1.37
50	BQ	85	ALA	C-N	6.07	1.42	1.33
1	AA	1185	G	C4'-O4'	6.07	1.54	1.45
35	BB	1059	G	P-O5'	-6.07	1.50	1.59
35	BB	2879	A	C2'-C1'	-6.07	1.44	1.53
35	BB	2511	U	C5'-C4'	6.06	1.60	1.51
49	BP	65	ASN	CA-CB	6.06	1.61	1.53
1	AA	298	A	C5'-C4'	6.06	1.60	1.51
24	AZ	22	ALA	N-CA	-6.06	1.38	1.46
34	BA	66	A	O5'-C5'	6.06	1.51	1.42
35	BB	2672	U	C4'-C3'	6.06	1.61	1.52
31	B6	19	ARG	N-CA	-6.06	1.38	1.46
35	BB	511	U	O3'-P	-6.06	1.52	1.61
35	BB	769	U	O3'-P	-6.06	1.52	1.61
35	BB	1515	A	C3'-C2'	-6.06	1.43	1.52
35	BB	1971	U	C5'-C4'	6.06	1.60	1.51
1	AA	629	A	C2'-C1'	-6.06	1.44	1.53
25	B0	6	VAL	CA-CB	-6.06	1.47	1.54
35	BB	1055	G	C5'-C4'	6.06	1.60	1.51
35	BB	1465	G	C2'-O2'	-6.06	1.33	1.42
9	AI	98	ARG	C-N	6.06	1.42	1.33
35	BB	2270	A	C2'-C1'	-6.06	1.44	1.53
38	BE	49	ARG	NE-CZ	6.06	1.39	1.33
1	AA	187	G	C2'-C1'	-6.05	1.44	1.53
3	AC	178	ARG	NE-CZ	6.05	1.39	1.33
37	BD	68	PHE	N-CA	-6.05	1.39	1.46
14	AN	84	ARG	C-N	6.05	1.42	1.33
37	BD	108	ASP	C-N	6.05	1.41	1.33
4	AD	110	ARG	NE-CZ	6.05	1.39	1.33
35	BB	219	A	C5'-C4'	6.05	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1763	G	C4'-C3'	6.05	1.61	1.52
1	AA	1052	U	C3'-O3'	6.05	1.51	1.42
35	BB	1034	G	C5'-C4'	6.05	1.60	1.51
35	BB	2693	G	P-O5'	-6.05	1.50	1.59
8	AH	84	ILE	CA-C	-6.05	1.45	1.52
35	BB	1444	G	C5'-C4'	6.05	1.60	1.51
35	BB	1782	U	C1'-N1	6.05	1.57	1.48
35	BB	2466	C	C4'-O4'	6.05	1.54	1.45
35	BB	2580	U	O3'-P	-6.05	1.52	1.61
1	AA	1033	G	C4'-C3'	6.04	1.61	1.52
8	AH	59	GLU	CA-C	-6.04	1.45	1.53
35	BB	195	A	C4'-C3'	6.04	1.61	1.52
45	BL	21	ARG	CD-NE	6.04	1.54	1.46
35	BB	342	A	O3'-P	-6.04	1.52	1.61
35	BB	2613	U	C1'-N1	6.04	1.56	1.47
35	BB	1589	U	C4'-C3'	6.04	1.61	1.52
1	AA	365	U	C1'-N1	6.04	1.57	1.48
34	BA	88	C	C4'-C3'	-6.04	1.43	1.52
35	BB	889	C	C5'-C4'	6.04	1.60	1.51
1	AA	271	C	O4'-C1'	6.03	1.50	1.41
2	AB	211	LEU	CB-CG	6.03	1.65	1.53
39	BF	86	CYS	C-N	6.03	1.41	1.33
7	AG	104	VAL	C-O	-6.03	1.16	1.23
35	BB	853	C	C5'-C4'	6.03	1.60	1.51
35	BB	2440	C	C2'-C1'	-6.03	1.44	1.53
9	AI	104	THR	CA-CB	-6.03	1.43	1.53
1	AA	373	A	C3'-O3'	6.03	1.51	1.42
17	AQ	9	GLY	CA-C	-6.03	1.46	1.52
1	AA	1094	G	O4'-C1'	-6.03	1.32	1.42
54	BU	47	PRO	C-N	6.03	1.38	1.33
35	BB	1415	U	C1'-N1	6.02	1.57	1.48
1	AA	142	G	C5'-C4'	6.02	1.60	1.51
14	AN	89	ARG	CZ-NH2	6.02	1.41	1.33
17	AQ	30	HIS	ND1-CE1	6.02	1.38	1.32
35	BB	457	A	C2'-C1'	-6.02	1.44	1.53
35	BB	1780	A	C5'-C4'	6.02	1.60	1.51
1	AA	1445	U	C2'-C1'	-6.02	1.44	1.53
35	BB	1217	U	C5'-C4'	6.02	1.60	1.51
1	AA	568	G	C2'-C1'	-6.02	1.44	1.53
35	BB	66	C	O5'-C5'	6.02	1.51	1.42
35	BB	1127	A	O3'-P	-6.02	1.52	1.61
35	BB	1354	A	P-O5'	-6.02	1.50	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	2758	A	C8-N7	-6.02	1.19	1.31
52	BS	8	ARG	CD-NE	6.02	1.54	1.46
7	AG	120	ALA	CA-C	-6.01	1.46	1.53
8	AH	85	TYR	N-CA	-6.01	1.38	1.46
35	BB	644	A	O4'-C1'	6.01	1.50	1.41
1	AA	136	C	C3'-C2'	-6.01	1.43	1.52
1	AA	889	A	P-O5'	-6.01	1.50	1.59
1	AA	1471	U	O4'-C1'	-6.01	1.32	1.41
7	AG	88	VAL	CA-C	-6.01	1.45	1.52
35	BB	468	G	O3'-P	-6.01	1.52	1.61
1	AA	1396	A	C5'-C4'	6.00	1.60	1.51
35	BB	173	A	C5'-C4'	6.00	1.60	1.51
35	BB	998	C	C2'-C1'	-6.00	1.44	1.53
35	BB	1035	U	C1'-N1	6.00	1.57	1.48
1	AA	611	C	C3'-O3'	6.00	1.51	1.42
1	AA	1300	G	C2'-C1'	-6.00	1.44	1.53
35	BB	761	A	C4'-O4'	6.00	1.54	1.45
35	BB	2527	C	P-O5'	-6.00	1.50	1.59
44	BK	77	ILE	CA-C	-6.00	1.45	1.52
35	BB	380	G	C4'-O4'	-6.00	1.36	1.45
35	BB	1114	C	C2'-C1'	-6.00	1.44	1.53
35	BB	1808	A	C4'-C3'	6.00	1.62	1.53
52	BS	98	LYS	CA-C	-6.00	1.45	1.53
55	BW	9	ARG	NE-CZ	6.00	1.39	1.33
35	BB	804	A	C5'-C4'	6.00	1.60	1.51
35	BB	1818	U	C4'-O4'	-6.00	1.36	1.45
35	BB	2093	G	C4'-O4'	-6.00	1.36	1.45
35	BB	2213	U	C5'-C4'	6.00	1.60	1.51
19	AS	17	LYS	CA-C	-6.00	1.45	1.52
56	BY	19	ARG	CA-C	-6.00	1.45	1.52
1	AA	1320	C	C1'-N1	5.99	1.57	1.48
1	AA	1342	C	C1'-N1	5.99	1.57	1.48
10	AJ	61	ALA	CA-C	-5.99	1.45	1.52
18	AR	60	ARG	CD-NE	5.99	1.54	1.46
45	BL	47	ARG	NE-CZ	5.99	1.39	1.33
1	AA	465	A	C5'-C4'	5.99	1.60	1.51
6	AF	69	GLU	C-N	5.99	1.41	1.33
3	AC	168	ARG	CA-C	-5.99	1.45	1.52
35	BB	2713	U	O3'-P	-5.99	1.52	1.61
1	AA	1205	U	C4'-C3'	5.99	1.61	1.52
5	AE	16	ALA	CA-C	-5.99	1.45	1.53
30	B5	178	VAL	CA-CB	-5.99	1.45	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	B7	33	THR	CA-C	-5.99	1.44	1.52
36	BC	110	LYS	C-N	5.99	1.40	1.33
51	BR	5	PHE	C-N	5.99	1.42	1.33
37	BD	91	THR	CA-C	-5.99	1.44	1.52
1	AA	508	U	P-O5'	5.99	1.68	1.59
8	AH	3	GLN	CA-C	-5.99	1.45	1.52
38	BE	125	SER	CA-C	-5.99	1.45	1.52
1	AA	71	A	C3'-O3'	5.98	1.51	1.42
1	AA	451	A	C1'-N9	5.98	1.55	1.47
7	AG	45	ALA	C-N	5.98	1.41	1.33
6	AF	24	ARG	NE-CZ	5.98	1.39	1.33
9	AI	25	GLY	CA-C	-5.98	1.41	1.51
15	AO	62	ARG	NE-CZ	5.98	1.39	1.33
36	BC	100	ARG	NE-CZ	5.98	1.39	1.33
46	BM	114	ARG	NE-CZ	5.98	1.39	1.33
48	BO	104	GLN	C-N	5.98	1.41	1.33
16	AP	67	ILE	N-CA	-5.98	1.39	1.46
35	BB	1252	G	P-O5'	-5.98	1.50	1.59
51	BR	88	GLY	N-CA	-5.98	1.37	1.45
1	AA	1181	G	C2'-C1'	-5.98	1.44	1.53
5	AE	67	ARG	NE-CZ	5.98	1.39	1.33
19	AS	2	ARG	NE-CZ	5.98	1.39	1.33
35	BB	84	A	C4'-C3'	5.98	1.62	1.53
53	BT	86	THR	C-N	5.98	1.41	1.33
36	BC	120	ASP	CA-C	-5.98	1.45	1.52
46	BM	58	LYS	CA-C	-5.98	1.44	1.52
15	AO	72	LYS	N-CA	-5.97	1.38	1.46
48	BO	9	ARG	CZ-NH1	5.97	1.41	1.32
1	AA	990	C	C2'-O2'	-5.97	1.33	1.42
11	AK	27	ASN	N-CA	-5.97	1.37	1.46
45	BL	140	GLY	CA-C	-5.97	1.45	1.51
35	BB	377	G	O5'-C5'	5.97	1.51	1.42
4	AD	148	ALA	CA-C	-5.97	1.44	1.52
14	AN	34	ASN	CA-C	-5.97	1.44	1.52
41	BH	72	ILE	N-CA	-5.97	1.40	1.46
1	AA	1017	U	C2'-C1'	-5.97	1.44	1.53
35	BB	526	A	C6-N6	5.97	1.45	1.33
48	BO	34	HIS	ND1-CE1	-5.97	1.26	1.32
35	BB	730	A	C5'-C4'	-5.96	1.42	1.51
35	BB	1290	C	C2'-C1'	-5.96	1.44	1.53
35	BB	2395	C	O3'-P	-5.96	1.52	1.61
22	AV	38	U	C2'-C1'	-5.96	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	22	TRP	CA-C	5.96	1.60	1.52
32	B7	23	HIS	ND1-CE1	5.96	1.38	1.32
35	BB	924	G	P-O5'	-5.96	1.50	1.59
35	BB	1002	G	C5'-C4'	5.96	1.60	1.51
49	BP	71	ARG	NE-CZ	5.96	1.39	1.33
35	BB	2294	G	C5'-C4'	5.96	1.60	1.51
11	AK	68	ARG	CA-C	-5.96	1.45	1.52
35	BB	1764	C	C1'-N1	5.96	1.57	1.48
52	BS	25	ARG	CA-CB	-5.96	1.45	1.52
54	BU	80	ASP	CA-CB	5.96	1.62	1.53
35	BB	2143	C	C4'-O4'	-5.96	1.36	1.45
39	BF	20	ASN	C-N	5.96	1.40	1.33
3	AC	21	TRP	N-CA	-5.95	1.39	1.46
37	BD	171	THR	C-N	-5.95	1.27	1.33
4	AD	84	ASN	N-CA	-5.95	1.38	1.46
14	AN	59	GLN	CA-CB	5.95	1.62	1.53
30	B5	147	PRO	N-CA	-5.95	1.39	1.47
1	AA	1474	U	C1'-N1	5.95	1.57	1.48
1	AA	887	G	C5'-C4'	5.95	1.60	1.51
4	AD	22	SER	CA-CB	5.95	1.63	1.53
28	B3	53	VAL	CA-CB	5.95	1.62	1.54
35	BB	1351	C	C3'-C2'	-5.95	1.43	1.52
35	BB	1652	A	C4'-O4'	5.95	1.54	1.45
35	BB	532	A	O3'-P	-5.94	1.52	1.61
35	BB	1124	G	P-O5'	-5.94	1.50	1.59
35	BB	2858	C	C5'-C4'	5.94	1.60	1.51
1	AA	944	G	C5'-C4'	5.94	1.60	1.51
12	AL	63	THR	N-CA	-5.94	1.38	1.46
35	BB	574	A	C5'-C4'	5.94	1.60	1.51
35	BB	779	U	C5'-C4'	5.94	1.60	1.51
35	BB	1938	A	O3'-P	-5.94	1.52	1.61
38	BE	52	VAL	CA-CB	5.94	1.60	1.54
40	BG	25	ILE	CA-C	-5.94	1.45	1.52
1	AA	930	C	N1-C6	5.94	1.49	1.37
35	BB	1293	C	C4'-C3'	-5.94	1.43	1.52
12	AL	13	ARG	CD-NE	5.94	1.54	1.46
35	BB	87	U	P-O5'	-5.94	1.50	1.59
35	BB	2358	A	C5'-C4'	5.94	1.60	1.51
55	BW	64	VAL	CA-CB	5.94	1.60	1.53
1	AA	825	A	P-O5'	-5.94	1.50	1.59
13	AM	92	ARG	NE-CZ	5.94	1.39	1.33
1	AA	288	A	C2'-C1'	-5.93	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1086	U	C1'-N1	5.93	1.57	1.48
1	AA	1429	A	C3'-C2'	-5.93	1.43	1.52
35	BB	1860	G	C6-N1	5.93	1.51	1.39
37	BD	7	LYS	N-CA	-5.93	1.38	1.46
35	BB	159	G	C4'-O4'	-5.93	1.36	1.45
35	BB	919	U	C3'-C2'	5.93	1.61	1.52
35	BB	1099	G	C2'-C1'	-5.93	1.44	1.53
1	AA	215	C	C4'-C3'	5.93	1.61	1.52
13	AM	59	VAL	CA-CB	-5.93	1.46	1.54
35	BB	401	A	C2'-C1'	-5.93	1.44	1.53
48	BO	58	ILE	N-CA	-5.93	1.39	1.46
1	AA	485	U	P-O5'	-5.93	1.50	1.59
1	AA	803	G	C4'-C3'	5.93	1.61	1.52
1	AA	1044	A	O3'-P	-5.93	1.52	1.61
35	BB	1613	G	C5'-C4'	5.93	1.60	1.51
35	BB	2052	A	C2'-C1'	-5.93	1.44	1.53
35	BB	2190	G	C2'-C1'	-5.93	1.44	1.53
44	BK	19	VAL	CA-CB	-5.93	1.46	1.54
1	AA	1280	A	C5'-C4'	5.93	1.60	1.51
35	BB	482	A	C2'-C1'	-5.93	1.44	1.53
35	BB	1551	A	C2'-C1'	-5.93	1.44	1.53
12	AL	52	CYS	N-CA	-5.93	1.39	1.46
1	AA	297	G	C3'-O3'	5.92	1.51	1.42
35	BB	2494	G	C1'-N9	5.92	1.56	1.48
56	BY	60	ALA	N-CA	-5.92	1.38	1.46
3	AC	23	ALA	CA-C	-5.92	1.45	1.52
12	AL	82	ARG	CZ-NH1	5.92	1.41	1.32
16	AP	71	VAL	CA-CB	-5.92	1.47	1.54
35	BB	601	C	C1'-N1	5.92	1.57	1.48
35	BB	2339	C	C2'-C1'	-5.92	1.44	1.53
35	BB	2643	G	O3'-P	-5.92	1.52	1.61
47	BN	22	ARG	NE-CZ	5.92	1.39	1.33
48	BO	28	VAL	CA-CB	-5.92	1.47	1.54
4	AD	145	ARG	NE-CZ	5.92	1.39	1.33
37	BD	106	LYS	CA-C	-5.92	1.44	1.52
32	B7	22	LYS	CA-C	-5.92	1.45	1.52
35	BB	548	G	C4'-O4'	5.92	1.54	1.45
35	BB	920	A	C4'-C3'	5.92	1.61	1.52
35	BB	2048	G	C1'-N9	-5.92	1.39	1.48
1	AA	332	G	C2'-C1'	-5.92	1.44	1.53
10	AJ	70	HIS	CE1-NE2	5.92	1.38	1.32
25	B0	35	HIS	CA-C	-5.92	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1198	U	C4'-C3'	5.92	1.61	1.52
14	AN	10	VAL	CA-C	-5.91	1.45	1.52
26	B1	3	ALA	N-CA	-5.91	1.38	1.46
35	BB	1078	U	C1'-N1	5.91	1.57	1.48
35	BB	2146	C	C5'-C4'	5.91	1.60	1.51
35	BB	2716	C	C3'-O3'	5.91	1.51	1.42
36	BC	91	ALA	CA-C	-5.91	1.45	1.52
47	BN	26	GLY	N-CA	-5.91	1.38	1.45
30	B5	186	LYS	N-CA	5.91	1.53	1.46
1	AA	83	C	C4-N4	5.91	1.45	1.33
1	AA	1070	U	O4'-C1'	5.91	1.50	1.41
7	AG	52	ARG	CZ-NH2	5.91	1.41	1.33
35	BB	2840	C	C4'-C3'	5.91	1.61	1.52
2	AB	62	ARG	CD-NE	5.91	1.54	1.46
28	B3	25	THR	CA-C	-5.91	1.47	1.53
35	BB	539	G	C1'-N9	5.91	1.56	1.48
20	AT	66	ILE	CA-C	-5.91	1.46	1.53
30	B5	208	TYR	CA-C	5.90	1.58	1.53
35	BB	406	G	O5'-C5'	5.90	1.51	1.42
35	BB	625	G	C5'-C4'	5.90	1.60	1.51
35	BB	1300	G	O4'-C1'	-5.90	1.33	1.42
39	BF	4	HIS	CE1-NE2	5.90	1.38	1.32
1	AA	1141	C	C3'-C2'	5.90	1.61	1.52
21	AU	18	PHE	CA-C	-5.90	1.45	1.52
35	BB	1952	A	C5'-C4'	5.90	1.60	1.51
48	BO	13	ARG	CD-NE	5.90	1.54	1.46
1	AA	1301	U	C1'-N1	5.90	1.56	1.47
55	BW	18	ARG	NE-CZ	5.90	1.39	1.33
1	AA	623	C	C2'-C1'	-5.90	1.44	1.53
3	AC	181	ILE	C-N	5.90	1.41	1.33
25	B0	55	MET	CA-CB	5.90	1.62	1.53
35	BB	1564	C	C5'-C4'	5.90	1.60	1.51
40	BG	138	GLN	CA-C	-5.90	1.45	1.52
43	BJ	53	TYR	CA-CB	5.90	1.63	1.53
2	AB	107	ARG	CA-C	-5.90	1.45	1.52
28	B3	18	HIS	CG-ND1	5.90	1.44	1.38
35	BB	852	U	C3'-C2'	-5.89	1.44	1.52
35	BB	2481	G	C3'-O3'	-5.89	1.33	1.42
37	BD	117	GLY	N-CA	-5.89	1.36	1.45
1	AA	674	G	P-O5'	-5.89	1.50	1.59
30	B5	122	ARG	CD-NE	5.89	1.54	1.46
39	BF	119	LYS	C-N	5.89	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	BE	113	VAL	N-CA	-5.89	1.39	1.46
49	BP	88	ARG	CZ-NH1	5.89	1.41	1.32
1	AA	1049	U	C1'-N1	5.89	1.56	1.47
12	AL	41	PRO	CA-C	-5.89	1.46	1.52
35	BB	2538	C	C4'-C3'	5.89	1.61	1.52
45	BL	69	ARG	CZ-NH1	5.89	1.41	1.32
35	BB	562	U	O3'-P	-5.89	1.52	1.61
35	BB	580	U	C4'-C3'	5.89	1.61	1.52
35	BB	346	A	C3'-O3'	5.88	1.50	1.42
35	BB	1930	G	C4'-C3'	5.88	1.61	1.52
36	BC	53	ILE	CA-CB	-5.88	1.47	1.54
1	AA	461	A	C4'-C3'	5.88	1.61	1.52
1	AA	847	G	O4'-C1'	-5.88	1.32	1.41
1	AA	1096	C	C2'-C1'	-5.88	1.44	1.53
12	AL	48	LEU	CA-C	-5.88	1.45	1.52
35	BB	172	A	C1'-N9	-5.88	1.39	1.48
35	BB	2519	U	C5'-C4'	5.88	1.60	1.51
35	BB	1898	U	P-O5'	-5.88	1.50	1.59
51	BR	6	GLN	CA-CB	5.88	1.62	1.53
56	BY	19	ARG	NE-CZ	5.88	1.39	1.33
35	BB	1513	U	C1'-N1	5.88	1.57	1.48
35	BB	1960	A	C3'-O3'	5.88	1.50	1.42
48	BO	57	ALA	C-N	5.88	1.41	1.33
5	AE	30	PHE	C-N	5.88	1.41	1.33
20	AT	67	HIS	CB-CG	-5.88	1.42	1.50
40	BG	67	ALA	N-CA	-5.88	1.39	1.46
1	AA	1058	G	C3'-C2'	-5.87	1.44	1.52
28	B3	23	ALA	CA-C	-5.87	1.45	1.52
35	BB	2700	A	C4'-O4'	5.87	1.54	1.45
39	BF	88	VAL	CA-CB	-5.87	1.46	1.54
48	BO	84	GLU	CA-C	-5.87	1.45	1.52
35	BB	1978	A	C2'-O2'	-5.87	1.33	1.42
35	BB	2274	A	C2'-C1'	-5.87	1.44	1.53
35	BB	2393	U	O5'-C5'	5.87	1.51	1.42
6	AF	49	TYR	CA-CB	5.87	1.62	1.54
35	BB	265	A	O5'-C5'	5.87	1.51	1.42
35	BB	1406	U	P-O5'	-5.87	1.50	1.59
48	BO	110	ALA	CA-C	-5.87	1.44	1.52
25	B0	16	ASN	CA-C	-5.87	1.45	1.52
7	AG	101	ARG	CD-NE	5.87	1.54	1.46
35	BB	1863	G	C1'-N9	-5.87	1.39	1.48
41	BH	50	ARG	NE-CZ	5.87	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
13	AM	69	ARG	C-N	5.86	1.41	1.33
1	AA	455	G	O3'-P	-5.86	1.52	1.61
35	BB	1294	U	P-O5'	-5.86	1.50	1.59
1	AA	804	U	P-O5'	-5.86	1.50	1.59
1	AA	1111	A	C4'-C3'	5.86	1.61	1.52
9	AI	33	SER	CA-C	-5.86	1.45	1.53
35	BB	2791	G	C4'-O4'	5.86	1.54	1.45
7	AG	21	LEU	CA-CB	5.86	1.62	1.53
1	AA	379	C	C2'-C1'	-5.86	1.44	1.53
1	AA	496	A	C3'-O3'	5.86	1.50	1.42
8	AH	121	GLY	C-O	5.86	1.29	1.23
35	BB	1210	G	C1'-N9	5.86	1.55	1.47
35	BB	1358	G	C3'-C2'	5.86	1.61	1.52
36	BC	181	ARG	CA-C	-5.86	1.45	1.52
44	BK	110	GLU	CA-CB	5.86	1.63	1.53
1	AA	1204	A	C5'-C4'	5.86	1.60	1.51
1	AA	1400	C	C2'-C1'	-5.86	1.44	1.53
1	AA	1455	G	N1-C2	5.86	1.49	1.37
41	BH	122	LEU	CA-CB	5.86	1.62	1.53
1	AA	240	G	P-O5'	5.85	1.68	1.59
9	AI	98	ARG	CD-NE	5.85	1.54	1.46
35	BB	2502	G	P-O5'	-5.85	1.50	1.59
36	BC	115	ILE	N-CA	-5.85	1.39	1.46
4	AD	130	ASN	C-N	5.85	1.40	1.33
40	BG	91	VAL	CA-C	-5.85	1.45	1.52
1	AA	1326	U	P-O5'	-5.85	1.50	1.59
35	BB	89	A	P-O5'	-5.85	1.50	1.59
35	BB	1791	A	C4'-O4'	-5.85	1.36	1.45
37	BD	123	LYS	N-CA	-5.85	1.38	1.46
40	BG	148	ARG	NE-CZ	5.85	1.39	1.33
35	BB	1856	U	O5'-C5'	5.85	1.51	1.42
35	BB	2546	U	O3'-P	-5.85	1.52	1.61
39	BF	114	ARG	N-CA	-5.85	1.39	1.46
35	BB	2318	G	C4'-C3'	5.85	1.61	1.52
12	AL	92	VAL	N-CA	-5.84	1.39	1.46
35	BB	1507	C	C1'-N1	5.84	1.57	1.48
35	BB	1900	A	C6-N6	5.84	1.45	1.33
35	BB	2703	C	C1'-N1	5.84	1.57	1.48
9	AI	125	GLN	N-CA	-5.84	1.38	1.46
11	AK	73	VAL	C-N	5.84	1.41	1.33
35	BB	946	C	O3'-P	-5.84	1.52	1.61
41	BH	138	VAL	N-CA	-5.84	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AK	49	SER	CA-C	-5.84	1.44	1.52
35	BB	1678	A	C4'-O4'	5.84	1.54	1.45
35	BB	1753	G	C3'-O3'	5.84	1.50	1.42
35	BB	1249	U	C4'-O4'	-5.84	1.36	1.45
35	BB	2446	G	O3'-P	-5.84	1.52	1.61
1	AA	686	U	O3'-P	-5.83	1.52	1.61
2	AB	183	PHE	CA-C	-5.83	1.45	1.52
38	BE	160	ALA	CA-C	-5.83	1.44	1.52
1	AA	1208	C	C3'-O3'	5.83	1.50	1.42
35	BB	1737	G	C4'-O4'	-5.83	1.36	1.45
35	BB	2001	C	C2'-C1'	-5.83	1.44	1.53
35	BB	1890	A	O5'-C5'	5.83	1.51	1.42
35	BB	2353	G	C2'-C1'	-5.83	1.44	1.53
31	B6	39	ARG	CD-NE	5.83	1.54	1.46
35	BB	1640	A	O3'-P	-5.83	1.52	1.61
35	BB	2582	G	O4'-C1'	5.83	1.50	1.41
1	AA	323	U	C1'-N1	5.83	1.57	1.48
18	AR	65	SER	CA-C	-5.83	1.45	1.53
35	BB	1918	A	C1'-N9	5.83	1.55	1.47
40	BG	122	ALA	N-CA	-5.83	1.39	1.45
41	BH	33	GLN	N-CA	5.83	1.53	1.46
11	AK	127	ARG	CZ-NH2	5.83	1.41	1.33
12	AL	35	ARG	C-N	5.83	1.39	1.33
20	AT	70	LYS	N-CA	5.83	1.53	1.46
35	BB	1282	U	C5'-C4'	5.83	1.59	1.51
35	BB	1776	G	C5'-C4'	5.83	1.59	1.51
37	BD	124	ARG	CZ-NH2	5.83	1.41	1.33
9	AI	118	ARG	CD-NE	5.82	1.54	1.46
35	BB	683	U	C2'-C1'	-5.82	1.44	1.53
35	BB	1026	G	C4'-O4'	-5.82	1.36	1.45
38	BE	109	LEU	CA-C	-5.82	1.45	1.52
37	BD	124	ARG	N-CA	-5.82	1.38	1.46
34	BA	100	G	C5'-C4'	5.82	1.59	1.51
35	BB	869	G	C6-N1	5.82	1.51	1.39
36	BC	197	ALA	N-CA	-5.82	1.42	1.47
5	AE	28	ARG	CZ-NH2	5.82	1.41	1.33
35	BB	2003	A	C2'-C1'	-5.82	1.44	1.53
1	AA	982	U	C2'-C1'	-5.82	1.44	1.53
11	AK	42	GLY	CA-C	-5.82	1.45	1.51
35	BB	746	U	O3'-P	-5.82	1.52	1.61
35	BB	1532	A	P-O5'	-5.82	1.51	1.59
37	BD	131	ASP	CA-C	-5.82	1.46	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	100	VAL	CA-CB	-5.82	1.48	1.54
11	AK	26	PHE	N-CA	-5.82	1.38	1.46
25	B0	71	ARG	CD-NE	5.82	1.54	1.46
37	BD	13	ARG	NE-CZ	5.82	1.39	1.33
40	BG	172	GLU	CA-C	-5.82	1.45	1.52
51	BR	59	ILE	N-CA	-5.82	1.38	1.46
35	BB	2739	U	N3-C4	5.81	1.50	1.38
35	BB	188	G	O3'-P	-5.81	1.52	1.61
35	BB	1521	G	C1'-N9	5.81	1.56	1.48
35	BB	2226	C	C4'-C3'	5.81	1.61	1.52
52	BS	35	ILE	CA-C	-5.81	1.45	1.52
35	BB	2136	G	C3'-C2'	5.81	1.61	1.52
28	B3	41	HIS	CA-CB	5.81	1.61	1.54
47	BN	2	ARG	CA-C	-5.81	1.47	1.53
53	BT	37	ASP	N-CA	-5.81	1.38	1.46
6	AF	2	ARG	C-N	5.81	1.41	1.33
52	BS	80	PRO	CA-C	-5.81	1.45	1.52
22	AV	33	U	C4'-C3'	5.80	1.61	1.52
35	BB	2404	U	O3'-P	-5.80	1.52	1.61
36	BC	155	ARG	CD-NE	5.80	1.54	1.46
35	BB	226	A	O4'-C1'	-5.80	1.32	1.41
1	AA	1061	G	P-O5'	-5.80	1.51	1.59
16	AP	35	ARG	CD-NE	5.80	1.54	1.46
37	BD	22	ILE	N-CA	-5.80	1.39	1.46
1	AA	1184	G	C2'-C1'	-5.80	1.44	1.53
3	AC	59	PRO	C-N	5.80	1.41	1.33
21	AU	46	ARG	N-CA	-5.80	1.38	1.45
35	BB	1435	G	C3'-O3'	5.80	1.50	1.42
43	BJ	31	GLU	C-N	5.80	1.41	1.33
35	BB	586	A	C3'-O3'	5.80	1.50	1.42
35	BB	656	G	C1'-N9	-5.80	1.39	1.48
40	BG	169	ARG	CA-C	5.80	1.60	1.52
43	BJ	3	THR	C-N	5.80	1.41	1.33
35	BB	2575	C	O3'-P	-5.79	1.52	1.61
1	AA	1389	C	C4'-C3'	5.79	1.61	1.52
35	BB	350	G	C1'-N9	5.79	1.56	1.48
35	BB	626	A	C5'-C4'	5.79	1.59	1.51
35	BB	1267	U	C4'-C3'	5.79	1.61	1.52
1	AA	16	A	C5'-C4'	5.79	1.59	1.51
1	AA	1000	A	C2'-C1'	-5.79	1.44	1.53
1	AA	1067	A	C1'-N9	-5.79	1.38	1.47
1	AA	1362	A	C2'-C1'	-5.79	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	60	G	O5'-C5'	5.79	1.51	1.42
35	BB	2557	G	C2'-C1'	-5.79	1.44	1.53
35	BB	2713	U	O5'-C5'	5.79	1.51	1.42
36	BC	73	ILE	CA-C	-5.79	1.46	1.52
43	BJ	27	ARG	CZ-NH2	5.79	1.41	1.33
54	BU	90	LYS	CA-C	5.79	1.59	1.52
1	AA	816	A	N7-C5	-5.79	1.27	1.39
35	BB	941	A	P-O5'	-5.79	1.51	1.59
35	BB	1870	C	C4'-O4'	-5.79	1.37	1.45
54	BU	55	GLY	CA-C	-5.79	1.43	1.51
35	BB	2574	G	C4'-O4'	5.79	1.54	1.45
35	BB	2736	A	C5'-C4'	5.79	1.59	1.51
1	AA	404	G	C3'-C2'	5.78	1.61	1.52
15	AO	69	LEU	CA-C	-5.78	1.45	1.52
17	AQ	45	VAL	N-CA	-5.78	1.39	1.46
36	BC	225	ASN	CG-ND2	5.78	1.45	1.33
35	BB	780	G	C2'-C1'	5.78	1.62	1.53
35	BB	1142	A	O3'-P	-5.78	1.52	1.61
50	BQ	57	ARG	CA-C	-5.78	1.45	1.52
35	BB	1403	A	C2'-C1'	-5.78	1.44	1.53
35	BB	2372	U	O3'-P	-5.78	1.52	1.61
48	BO	86	GLY	CA-C	-5.78	1.43	1.51
6	AF	30	THR	C-O	-5.78	1.17	1.24
25	B0	9	LYS	CA-C	-5.78	1.45	1.52
1	AA	438	U	C3'-C2'	5.78	1.61	1.52
1	AA	194	C	C4'-C3'	5.78	1.61	1.52
7	AG	60	ALA	CA-C	-5.78	1.44	1.52
11	AK	23	HIS	CG-CD2	5.78	1.42	1.35
44	BK	38	ILE	CA-C	-5.78	1.45	1.52
51	BR	9	GLY	CA-C	-5.77	1.42	1.51
35	BB	1183	U	C5'-C4'	5.77	1.59	1.51
35	BB	1392	A	C2'-C1'	-5.77	1.44	1.53
36	BC	171	VAL	CA-C	-5.77	1.45	1.52
50	BQ	32	ARG	CA-CB	5.77	1.63	1.53
54	BU	92	VAL	CA-C	-5.77	1.45	1.52
52	BS	84	ARG	CZ-NH2	5.77	1.41	1.33
35	BB	855	G	C4'-C3'	5.77	1.61	1.52
47	BN	87	PHE	CA-C	-5.77	1.45	1.52
1	AA	1204	A	C4'-C3'	-5.77	1.44	1.52
35	BB	924	G	C2'-C1'	-5.77	1.44	1.53
1	AA	921	U	P-O5'	-5.77	1.51	1.59
13	AM	26	LYS	C-N	5.77	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	B5	59	VAL	CA-CB	-5.77	1.47	1.54
35	BB	2061	G	C3'-C2'	5.77	1.61	1.52
2	AB	163	ILE	CA-C	-5.76	1.45	1.52
35	BB	1385	A	P-O5'	-5.76	1.51	1.59
35	BB	1473	G	O4'-C1'	5.76	1.50	1.41
35	BB	2291	U	C1'-N1	-5.76	1.39	1.48
39	BF	50	ASP	CA-C	-5.76	1.44	1.52
41	BH	119	ASN	N-CA	-5.76	1.38	1.46
1	AA	309	A	C1'-N9	-5.76	1.39	1.48
7	AG	139	ASP	N-CA	-5.76	1.39	1.46
35	BB	1842	G	C1'-N9	-5.76	1.39	1.48
35	BB	2767	C	C1'-N1	5.76	1.57	1.48
6	AF	1	MET	C-N	5.76	1.40	1.33
37	BD	122	VAL	C-N	5.76	1.42	1.33
47	BN	31	HIS	ND1-CE1	5.76	1.38	1.32
35	BB	344	A	C2'-C1'	-5.76	1.44	1.53
35	BB	1556	C	O3'-P	-5.76	1.52	1.61
35	BB	1666	G	O4'-C1'	-5.76	1.33	1.41
46	BM	108	VAL	C-O	-5.76	1.17	1.24
2	AB	116	LEU	CA-C	-5.76	1.44	1.52
46	BM	79	ALA	CA-CB	5.76	1.61	1.53
51	BR	80	ARG	NE-CZ	5.76	1.39	1.33
1	AA	704	A	P-O5'	-5.75	1.51	1.59
1	AA	1371	G	C2'-C1'	-5.75	1.44	1.53
2	AB	37	VAL	C-N	5.75	1.41	1.33
35	BB	1821	A	N9-C4	5.75	1.49	1.37
46	BM	75	GLU	CA-C	-5.75	1.45	1.52
35	BB	811	U	C5'-C4'	-5.75	1.42	1.51
35	BB	1770	G	C3'-C2'	-5.75	1.44	1.52
35	BB	2653	U	O3'-P	-5.75	1.52	1.61
35	BB	2832	U	C2'-C1'	-5.75	1.44	1.53
38	BE	74	LYS	C-N	5.75	1.42	1.33
1	AA	1277	C	C3'-C2'	-5.75	1.44	1.52
22	AV	71	C	C4'-O4'	5.75	1.54	1.45
31	B6	8	SER	CA-C	-5.75	1.45	1.52
35	BB	1015	U	O3'-P	-5.75	1.52	1.61
1	AA	449	G	C5'-C4'	5.75	1.59	1.51
1	AA	954	G	C4'-C3'	5.75	1.61	1.52
9	AI	47	VAL	N-CA	-5.75	1.40	1.46
34	BA	76	G	C3'-C2'	5.75	1.61	1.52
35	BB	991	C	C4'-O4'	5.75	1.54	1.45
35	BB	2116	G	C5'-C4'	5.75	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BD	187	LEU	N-CA	-5.75	1.39	1.46
1	AA	141	G	O3'-P	-5.75	1.52	1.61
1	AA	1157	A	O4'-C1'	5.75	1.50	1.42
35	BB	391	A	O5'-C5'	5.75	1.51	1.42
35	BB	455	C	C2'-C1'	-5.75	1.44	1.53
35	BB	1332	G	C2'-C1'	-5.75	1.44	1.53
37	BD	73	VAL	CA-C	5.75	1.59	1.52
9	AI	4	GLN	CA-CB	5.75	1.61	1.53
35	BB	236	C	O3'-P	-5.75	1.52	1.61
1	AA	1505	G	O3'-P	-5.74	1.52	1.61
5	AE	76	ASN	N-CA	-5.74	1.38	1.46
35	BB	2495	G	C2'-C1'	-5.74	1.44	1.53
35	BB	2655	G	C3'-C2'	5.74	1.61	1.52
6	AF	39	LEU	CA-CB	5.74	1.63	1.53
19	AS	65	MET	N-CA	-5.74	1.39	1.46
35	BB	469	G	C2'-C1'	-5.74	1.44	1.53
2	AB	69	VAL	CA-CB	-5.74	1.49	1.55
9	AI	71	ILE	CA-CB	-5.74	1.49	1.55
35	BB	555	G	C4'-O4'	-5.74	1.36	1.45
35	BB	811	U	P-O5'	-5.74	1.51	1.59
43	BJ	127	GLY	N-CA	5.74	1.52	1.45
1	AA	1098	C	C4'-C3'	5.74	1.61	1.52
3	AC	33	ASP	CA-C	-5.74	1.45	1.52
9	AI	36	GLN	N-CA	-5.74	1.38	1.45
43	BJ	126	ALA	C-N	5.74	1.40	1.32
49	BP	21	PRO	CA-CB	-5.74	1.46	1.53
49	BP	31	VAL	C-N	5.74	1.41	1.33
1	AA	1167	A	C3'-O3'	5.74	1.50	1.42
5	AE	37	VAL	CA-CB	5.74	1.62	1.54
12	AL	82	ARG	NE-CZ	5.74	1.39	1.33
2	AB	116	LEU	N-CA	-5.73	1.38	1.46
35	BB	844	A	C5'-C4'	5.73	1.59	1.51
35	BB	2491	U	C5'-C4'	5.73	1.59	1.51
52	BS	24	ILE	CA-C	-5.73	1.45	1.52
1	AA	910	C	C1'-N1	5.73	1.57	1.48
38	BE	89	PRO	CA-C	-5.73	1.44	1.52
1	AA	947	G	C2'-C1'	-5.73	1.44	1.53
7	AG	137	ARG	NE-CZ	5.73	1.39	1.33
54	BU	22	GLY	N-CA	5.73	1.51	1.45
30	B5	216	THR	CA-C	5.72	1.59	1.52
35	BB	956	G	C4'-C3'	5.72	1.61	1.52
35	BB	2881	U	P-O5'	-5.72	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	215	C	O4'-C1'	-5.72	1.33	1.41
9	AI	11	ARG	CZ-NH1	5.72	1.40	1.32
32	B7	40	LYS	CA-C	-5.72	1.45	1.52
35	BB	294	A	C2'-C1'	-5.72	1.44	1.53
35	BB	486	C	C3'-O3'	5.72	1.50	1.42
35	BB	2418	A	C2'-C1'	-5.72	1.44	1.53
38	BE	94	GLN	CA-C	-5.72	1.45	1.52
47	BN	4	ARG	CD-NE	5.72	1.54	1.46
5	AE	53	ARG	CZ-NH1	5.72	1.40	1.32
47	BN	118	ARG	CD-NE	5.72	1.54	1.46
35	BB	1506	U	O3'-P	-5.72	1.52	1.61
37	BD	103	ASP	N-CA	-5.72	1.41	1.46
49	BP	14	GLN	C-N	5.72	1.41	1.33
22	AV	72	G	C2'-C1'	-5.72	1.44	1.53
27	B2	11	SER	N-CA	-5.72	1.39	1.46
37	BD	128	ARG	NE-CZ	5.72	1.39	1.33
35	BB	319	G	C3'-O3'	5.72	1.50	1.42
35	BB	69	C	C3'-O3'	5.71	1.50	1.42
35	BB	121	G	C1'-N9	5.71	1.56	1.48
6	AF	88	MET	C-N	5.71	1.39	1.33
1	AA	1225	A	P-O5'	-5.71	1.51	1.59
35	BB	782	A	C5'-C4'	5.71	1.59	1.51
37	BD	74	GLU	CA-C	-5.71	1.45	1.52
1	AA	229	U	C5'-C4'	5.71	1.59	1.51
1	AA	1488	G	C4'-O4'	-5.71	1.36	1.45
4	AD	162	GLU	CA-C	-5.71	1.45	1.52
35	BB	38	A	C2'-C1'	-5.71	1.44	1.53
35	BB	615	U	C1'-N1	5.71	1.56	1.47
1	AA	813	U	C2'-C1'	-5.71	1.44	1.53
35	BB	406	G	C2'-C1'	-5.71	1.44	1.53
47	BN	106	ASP	N-CA	-5.71	1.38	1.45
2	AB	115	ASP	N-CA	-5.71	1.39	1.46
35	BB	1745	A	C4'-O4'	5.71	1.54	1.45
1	AA	1127	G	C5'-C4'	5.70	1.59	1.51
11	AK	90	PRO	CA-C	-5.70	1.45	1.52
35	BB	1940	U	C1'-N1	5.70	1.56	1.47
56	BY	11	ASN	N-CA	-5.70	1.38	1.46
26	B1	10	SER	CA-C	-5.70	1.45	1.52
5	AE	18	ASN	CA-C	-5.70	1.45	1.52
35	BB	380	G	C2'-C1'	-5.70	1.44	1.53
35	BB	2038	G	C2'-C1'	-5.70	1.44	1.53
35	BB	2394	C	C2'-C1'	-5.70	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	AK	110	THR	CA-CB	-5.70	1.43	1.53
26	B1	53	VAL	C-O	-5.70	1.17	1.24
35	BB	82	U	O3'-P	-5.70	1.52	1.61
35	BB	247	G	O4'-C1'	-5.70	1.33	1.41
1	AA	219	U	O3'-P	-5.70	1.52	1.61
35	BB	640	C	O3'-P	-5.70	1.52	1.61
35	BB	1042	G	C5'-C4'	5.70	1.59	1.51
41	BH	59	ALA	CA-CB	5.70	1.62	1.53
50	BQ	54	ARG	CA-C	-5.69	1.45	1.52
15	AO	34	GLN	CA-C	-5.69	1.45	1.52
35	BB	2459	A	C5'-C4'	5.69	1.59	1.51
35	BB	2739	U	C2'-C1'	-5.69	1.44	1.53
37	BD	94	GLN	CA-C	-5.69	1.45	1.52
39	BF	92	GLY	C-N	-5.69	1.26	1.33
1	AA	78	A	C3'-O3'	5.69	1.50	1.42
4	AD	8	LEU	CA-C	-5.69	1.44	1.52
12	AL	65	TYR	C-N	5.69	1.40	1.33
35	BB	2740	A	C5'-C4'	5.69	1.59	1.51
52	BS	23	LEU	CA-C	-5.69	1.45	1.52
8	AH	88	LYS	C-N	5.69	1.41	1.33
34	BA	108	A	C4'-C3'	-5.69	1.44	1.53
35	BB	423	A	P-O5'	-5.69	1.51	1.59
2	AB	136	ARG	CA-C	-5.68	1.45	1.52
8	AH	128	VAL	CA-C	-5.68	1.45	1.52
35	BB	2893	A	O3'-P	-5.68	1.52	1.61
38	BE	170	ARG	CD-NE	5.68	1.54	1.46
1	AA	182	A	C2'-C1'	-5.68	1.44	1.53
35	BB	2607	G	C1'-N9	5.68	1.56	1.48
35	BB	2513	A	C5'-C4'	-5.68	1.42	1.51
39	BF	143	ASP	CA-CB	5.68	1.62	1.53
35	BB	1222	U	O3'-P	-5.68	1.52	1.61
1	AA	1404	C	C2'-O2'	-5.68	1.33	1.42
15	AO	52	ARG	NE-CZ	5.68	1.39	1.33
35	BB	1586	A	O3'-P	-5.67	1.52	1.61
51	BR	25	LEU	CA-C	-5.67	1.45	1.52
51	BR	60	LYS	CA-C	-5.67	1.45	1.52
1	AA	1329	A	O4'-C1'	5.67	1.50	1.41
1	AA	1382	C	P-O5'	-5.67	1.51	1.59
35	BB	99	U	O5'-C5'	5.67	1.50	1.42
35	BB	821	A	O3'-P	-5.67	1.52	1.61
44	BK	51	LYS	CA-CB	5.67	1.65	1.53
38	BE	67	ARG	C-N	5.67	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	789	U	C3'-O3'	5.67	1.50	1.42
54	BU	18	LYS	C-N	5.67	1.39	1.33
1	AA	635	A	C1'-N9	-5.67	1.39	1.48
1	AA	1064	G	C2'-C1'	-5.67	1.44	1.53
7	AG	91	ARG	CZ-NH1	5.67	1.40	1.32
35	BB	360	U	C2'-C1'	-5.67	1.44	1.53
37	BD	172	VAL	N-CA	-5.67	1.41	1.46
2	AB	36	LYS	CA-CB	5.67	1.61	1.53
8	AH	26	MET	N-CA	-5.67	1.38	1.46
35	BB	2135	A	O3'-P	-5.67	1.52	1.61
35	BB	2474	U	C2'-C1'	-5.67	1.44	1.53
4	AD	80	ARG	CZ-NH1	5.66	1.40	1.32
35	BB	604	G	C2'-C1'	-5.66	1.44	1.53
40	BG	75	VAL	CA-C	-5.66	1.46	1.52
35	BB	844	A	P-O5'	-5.66	1.51	1.59
35	BB	2523	G	C2'-C1'	-5.66	1.44	1.53
44	BK	116	ILE	CA-C	-5.66	1.45	1.52
1	AA	1002	G	C2'-C1'	-5.66	1.44	1.53
6	AF	51	ILE	C-O	-5.66	1.18	1.24
30	B5	14	LYS	N-CA	-5.66	1.40	1.46
35	BB	1571	A	C2'-C1'	-5.66	1.44	1.53
35	BB	1577	C	O3'-P	-5.66	1.52	1.61
35	BB	2549	G	O5'-C5'	-5.66	1.33	1.42
35	BB	2577	A	O4'-C1'	-5.66	1.33	1.41
35	BB	2776	A	C2'-C1'	-5.66	1.44	1.53
35	BB	2800	A	C4'-O4'	5.66	1.54	1.45
1	AA	963	G	O4'-C1'	5.66	1.50	1.41
1	AA	972	C	O3'-P	-5.66	1.52	1.61
1	AA	1453	G	C5'-C4'	5.66	1.59	1.51
14	AN	71	GLY	CA-C	-5.66	1.43	1.51
35	BB	1549	A	C5'-C4'	5.66	1.59	1.51
45	BL	112	LEU	C-N	5.66	1.41	1.33
47	BN	104	ALA	N-CA	-5.66	1.38	1.46
55	BW	75	GLN	N-CA	-5.66	1.38	1.46
35	BB	2244	U	O3'-P	-5.66	1.52	1.61
1	AA	159	G	P-O5'	-5.66	1.51	1.59
1	AA	620	C	P-O5'	-5.66	1.51	1.59
2	AB	45	THR	C-N	5.66	1.39	1.33
9	AI	17	ARG	N-CA	5.66	1.52	1.46
19	AS	50	VAL	C-N	5.66	1.41	1.33
35	BB	1439	A	C5'-C4'	5.66	1.59	1.51
35	BB	2747	G	P-O5'	-5.66	1.51	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
36	BC	67	LYS	CA-C	-5.66	1.45	1.52
47	BN	6	SER	N-CA	-5.66	1.38	1.45
41	BH	141	LYS	CA-CB	5.65	1.62	1.53
1	AA	1309	G	C4'-O4'	5.65	1.54	1.45
2	AB	17	HIS	ND1-CE1	-5.65	1.26	1.32
35	BB	506	G	O3'-P	-5.65	1.52	1.61
35	BB	649	G	P-O5'	-5.65	1.51	1.59
35	BB	1943	U	C1'-N1	5.65	1.55	1.47
1	AA	1164	G	C2'-C1'	-5.65	1.44	1.53
35	BB	1034	G	O4'-C1'	5.65	1.50	1.41
35	BB	2045	C	C2'-C1'	-5.65	1.44	1.53
35	BB	2841	C	C3'-C2'	-5.65	1.44	1.52
38	BE	121	VAL	N-CA	-5.65	1.39	1.46
52	BS	6	LYS	C-N	5.65	1.41	1.33
6	AF	3	HIS	CA-C	-5.65	1.45	1.53
35	BB	2259	U	C3'-O3'	5.65	1.50	1.42
1	AA	1242	G	C2'-C1'	-5.65	1.44	1.53
35	BB	753	A	C4'-C3'	-5.65	1.44	1.52
35	BB	1073	A	C3'-C2'	5.65	1.61	1.52
35	BB	1747	U	P-O5'	-5.65	1.51	1.59
35	BB	1918	A	O3'-P	-5.65	1.52	1.61
35	BB	2001	C	P-O5'	-5.65	1.51	1.59
1	AA	491	G	C2'-C1'	-5.65	1.44	1.53
10	AJ	86	ALA	C-N	5.65	1.41	1.33
35	BB	1002	G	C4'-C3'	5.65	1.61	1.52
1	AA	969	A	C4'-O4'	5.64	1.54	1.45
7	AG	114	SER	CA-CB	5.64	1.63	1.53
35	BB	2123	G	C5'-C4'	5.64	1.59	1.51
7	AG	139	ASP	C-N	5.64	1.41	1.33
35	BB	539	G	C2'-C1'	-5.64	1.44	1.53
35	BB	1246	A	C2'-C1'	-5.64	1.44	1.53
45	BL	87	GLY	CA-C	-5.64	1.46	1.52
52	BS	85	ILE	CA-C	-5.64	1.46	1.52
20	AT	68	LYS	CA-C	-5.64	1.45	1.52
35	BB	1234	U	C3'-C2'	-5.64	1.44	1.52
35	BB	1575	C	O3'-P	-5.64	1.52	1.61
35	BB	2292	U	O3'-P	-5.64	1.52	1.61
5	AE	29	ILE	CA-C	-5.64	1.48	1.52
35	BB	470	A	C8-N7	-5.64	1.20	1.31
35	BB	949	G	C1'-N9	-5.64	1.39	1.48
35	BB	1453	A	O5'-C5'	5.64	1.51	1.42
36	BC	47	ARG	C-N	5.64	1.41	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BD	64	GLU	N-CA	-5.64	1.39	1.46
47	BN	64	ARG	CZ-NH2	5.64	1.40	1.33
35	BB	1953	A	O5'-C5'	5.63	1.50	1.42
1	AA	593	U	C1'-N1	5.63	1.56	1.48
1	AA	732	C	C1'-N1	5.63	1.56	1.48
9	AI	80	HIS	CA-CB	5.63	1.62	1.53
35	BB	722	A	C3'-O3'	5.63	1.50	1.42
35	BB	758	C	O3'-P	-5.63	1.52	1.61
35	BB	1341	G	C4'-C3'	5.63	1.61	1.53
1	AA	577	G	C3'-C2'	-5.63	1.44	1.52
1	AA	780	A	C5'-C4'	5.63	1.59	1.51
11	AK	115	ILE	C-N	5.63	1.40	1.33
35	BB	2148	G	C5'-C4'	5.63	1.59	1.51
35	BB	2655	G	C2-N3	5.63	1.44	1.32
39	BF	174	PHE	CA-C	-5.63	1.45	1.52
36	BC	41	GLY	CA-C	-5.63	1.43	1.51
35	BB	371	A	O3'-P	-5.63	1.52	1.61
35	BB	1046	A	C5'-C4'	5.63	1.59	1.51
38	BE	111	GLU	CA-C	-5.63	1.45	1.52
53	BT	48	GLN	CA-C	-5.63	1.45	1.52
35	BB	1668	A	O4'-C1'	-5.62	1.33	1.42
36	BC	201	LEU	CA-C	-5.62	1.45	1.52
38	BE	145	ASP	CA-C	-5.62	1.45	1.52
1	AA	957	U	C4'-C3'	5.62	1.60	1.52
12	AL	50	LYS	N-CA	-5.62	1.39	1.46
34	BA	53	A	C5'-C4'	5.62	1.59	1.51
35	BB	268	C	C1'-N1	5.62	1.56	1.48
35	BB	472	A	C6-N6	5.62	1.45	1.33
46	BM	42	THR	C-N	5.62	1.41	1.33
1	AA	475	C	O3'-P	-5.62	1.52	1.61
26	B1	12	GLU	CA-C	-5.62	1.45	1.52
35	BB	405	U	O4'-C1'	5.62	1.50	1.41
35	BB	1977	A	C1'-N9	-5.62	1.39	1.48
14	AN	60	ARG	NE-CZ	5.62	1.39	1.33
30	B5	195	ALA	CA-C	5.62	1.60	1.52
34	BA	4	C	C4'-C3'	5.62	1.60	1.52
35	BB	1613	G	C4'-C3'	5.62	1.60	1.52
35	BB	1812	U	P-O5'	-5.62	1.51	1.59
36	BC	221	GLY	C-N	5.62	1.41	1.33
1	AA	568	G	C5'-C4'	5.62	1.59	1.51
1	AA	1205	U	C1'-N1	5.62	1.56	1.48
2	AB	221	ARG	CZ-NH1	5.62	1.40	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	AF	65	GLU	C-O	-5.62	1.17	1.23
35	BB	373	U	C4'-O4'	-5.62	1.37	1.45
46	BM	133	LYS	CA-C	-5.62	1.46	1.52
4	AD	86	GLY	CA-C	-5.62	1.44	1.51
35	BB	885	C	C3'-C2'	-5.62	1.44	1.52
35	BB	2537	U	C2'-C1'	-5.62	1.45	1.53
1	AA	254	G	C3'-O3'	5.62	1.50	1.42
3	AC	71	ARG	NE-CZ	5.62	1.39	1.33
35	BB	1615	C	C4'-O4'	5.62	1.54	1.45
35	BB	1853	A	C5'-C4'	5.62	1.59	1.51
35	BB	2134	A	C5'-C4'	5.62	1.59	1.51
39	BF	91	ARG	CD-NE	5.62	1.54	1.46
39	BF	93	GLU	CA-C	-5.62	1.45	1.52
35	BB	655	A	C4'-C3'	5.61	1.61	1.53
1	AA	634	C	C3'-C2'	-5.61	1.44	1.52
2	AB	187	ASP	CA-C	-5.61	1.45	1.52
3	AC	129	PHE	CA-CB	5.61	1.62	1.53
13	AM	15	VAL	CA-CB	5.61	1.60	1.54
28	B3	10	SER	CA-C	-5.61	1.45	1.52
36	BC	255	LYS	CA-CB	5.61	1.62	1.53
38	BE	92	HIS	ND1-CE1	5.61	1.38	1.32
35	BB	946	C	C2'-C1'	-5.61	1.45	1.53
35	BB	2214	C	C5'-C4'	5.61	1.59	1.51
35	BB	2620	C	O5'-C5'	-5.61	1.34	1.42
1	AA	1336	C	C2'-C1'	-5.61	1.44	1.53
1	AA	1466	C	C4'-O4'	5.61	1.53	1.45
4	AD	55	ARG	NE-CZ	5.61	1.39	1.33
17	AQ	68	LYS	N-CA	5.61	1.52	1.46
35	BB	624	C	C4'-C3'	5.61	1.60	1.52
45	BL	6	LEU	CA-C	-5.61	1.45	1.52
35	BB	2168	G	C2'-C1'	-5.60	1.45	1.53
36	BC	204	LEU	CA-CB	5.60	1.66	1.51
2	AB	135	MET	CA-C	-5.60	1.45	1.52
7	AG	46	LEU	CA-C	-5.60	1.45	1.52
35	BB	2035	G	O3'-P	-5.60	1.52	1.61
35	BB	2358	A	C2'-C1'	-5.60	1.45	1.53
8	AH	101	ALA	C-N	5.60	1.40	1.33
11	AK	14	GLN	C-N	5.60	1.41	1.33
35	BB	1414	C	C4-N4	5.60	1.45	1.33
35	BB	2241	A	C2'-C1'	-5.60	1.45	1.53
52	BS	82	MET	CA-C	-5.60	1.45	1.52
3	AC	168	ARG	CZ-NH2	5.60	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AE	31	SER	C-N	-5.60	1.25	1.33
31	B6	8	SER	N-CA	-5.60	1.39	1.46
35	BB	1202	G	N1-C2	5.60	1.49	1.37
35	BB	1628	G	C2'-C1'	-5.60	1.45	1.53
35	BB	1803	A	O3'-P	-5.60	1.52	1.61
39	BF	29	ARG	NE-CZ	5.60	1.39	1.33
1	AA	300	A	C5'-C4'	5.60	1.59	1.51
1	AA	1402	C	C3'-C2'	-5.60	1.44	1.52
38	BE	185	LYS	C-N	5.60	1.40	1.33
43	BJ	62	VAL	C-N	5.60	1.40	1.33
1	AA	665	A	O5'-C5'	5.59	1.50	1.42
1	AA	953	G	C2-N3	5.59	1.44	1.32
15	AO	60	SER	CA-C	-5.59	1.45	1.52
31	B6	14	ARG	CA-C	-5.59	1.45	1.52
32	B7	63	TYR	CA-CB	5.59	1.60	1.53
35	BB	51	G	C1'-N9	-5.59	1.38	1.47
35	BB	2217	G	C4'-C3'	5.59	1.60	1.52
35	BB	2467	C	C4'-O4'	-5.59	1.37	1.45
35	BB	2473	U	C4'-O4'	5.59	1.53	1.45
37	BD	53	GLY	CA-C	-5.59	1.44	1.52
35	BB	1095	A	O4'-C1'	5.59	1.50	1.41
35	BB	1346	G	C1'-N9	-5.59	1.39	1.48
35	BB	1896	G	C4'-O4'	-5.59	1.37	1.45
36	BC	64	VAL	CA-CB	-5.59	1.46	1.54
1	AA	1178	G	C1'-N9	5.59	1.56	1.48
2	AB	38	HIS	CA-CB	5.59	1.62	1.53
4	AD	43	ARG	CZ-NH1	5.59	1.40	1.32
5	AE	23	THR	C-N	5.59	1.41	1.33
11	AK	60	PHE	CA-CB	5.59	1.62	1.53
35	BB	1238	G	C3'-C2'	5.59	1.61	1.52
51	BR	83	TYR	CA-C	-5.59	1.46	1.52
3	AC	83	VAL	C-N	5.59	1.40	1.33
35	BB	1434	A	C4'-O4'	-5.59	1.37	1.45
46	BM	114	ARG	CA-C	-5.59	1.45	1.52
1	AA	589	U	O3'-P	-5.59	1.52	1.61
1	AA	838	G	P-O5'	-5.59	1.51	1.59
2	AB	145	ASN	CA-CB	5.59	1.62	1.53
3	AC	176	THR	C-N	5.59	1.42	1.34
35	BB	1764	C	P-O5'	5.59	1.68	1.59
35	BB	2002	G	O3'-P	-5.59	1.52	1.61
35	BB	335	C	C4'-O4'	5.58	1.53	1.45
35	BB	1412	U	C5'-C4'	5.58	1.59	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	2606	C	O5'-C5'	5.58	1.50	1.42
46	BM	25	ASP	CA-C	5.58	1.59	1.52
1	AA	444	G	C1'-N9	-5.58	1.39	1.48
35	BB	2174	C	C4'-O4'	-5.58	1.37	1.45
35	BB	2324	U	O3'-P	-5.58	1.52	1.61
50	BQ	46	TYR	CA-CB	5.58	1.62	1.53
1	AA	686	U	C5'-C4'	5.58	1.59	1.51
16	AP	14	ARG	CZ-NH1	5.58	1.40	1.32
28	B3	39	ARG	CZ-NH1	5.58	1.40	1.32
1	AA	1048	G	C1'-N9	-5.58	1.39	1.48
35	BB	745	G	O3'-P	-5.58	1.52	1.61
35	BB	761	A	C6-N6	5.58	1.45	1.33
35	BB	1354	A	C2'-O2'	-5.58	1.34	1.42
35	BB	1989	G	C3'-O3'	5.58	1.50	1.42
54	BU	72	PHE	CA-C	-5.58	1.45	1.52
55	BW	6	ALA	C-N	5.58	1.40	1.33
1	AA	441	A	C2'-C1'	-5.58	1.45	1.53
4	AD	184	LYS	CA-C	-5.58	1.45	1.52
5	AE	87	VAL	N-CA	-5.58	1.39	1.46
26	B1	23	ARG	NE-CZ	5.58	1.39	1.33
35	BB	2639	A	C3'-C2'	-5.58	1.44	1.52
36	BC	228	ASP	CA-C	-5.58	1.45	1.52
1	AA	180	U	C3'-O3'	5.58	1.50	1.42
35	BB	366	C	C2'-C1'	-5.58	1.45	1.53
47	BN	35	LYS	CA-C	-5.58	1.46	1.52
1	AA	1186	G	C3'-C2'	-5.58	1.44	1.52
35	BB	229	C	P-O5'	-5.58	1.51	1.59
35	BB	1181	U	C1'-N1	5.58	1.56	1.48
35	BB	2637	U	C4'-C3'	-5.58	1.44	1.52
36	BC	79	ARG	CA-C	-5.58	1.45	1.52
39	BF	115	GLY	CA-C	-5.58	1.45	1.52
1	AA	720	C	O3'-P	-5.57	1.52	1.61
21	AU	32	ARG	CD-NE	5.57	1.54	1.46
35	BB	1302	A	C5'-C4'	5.57	1.59	1.51
1	AA	1176	A	C3'-O3'	5.57	1.50	1.42
35	BB	493	G	O4'-C1'	-5.57	1.33	1.41
35	BB	2091	C	C4'-O4'	-5.57	1.37	1.45
48	BO	14	ALA	C-N	5.57	1.41	1.33
1	AA	582	C	P-O5'	-5.57	1.51	1.59
1	AA	614	C	C3'-C2'	5.57	1.61	1.52
1	AA	1507	A	C6-N6	5.57	1.45	1.33
30	B5	193	LEU	CA-C	5.57	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	BT	1	MET	C-N	5.57	1.40	1.33
54	BU	73	ASN	CA-C	-5.57	1.45	1.52
1	AA	518	C	C2'-C1'	-5.57	1.44	1.53
25	B0	36	ARG	NE-CZ	5.57	1.39	1.33
35	BB	381	G	C5'-C4'	5.57	1.59	1.51
1	AA	127	G	C3'-O3'	5.57	1.50	1.42
9	AI	128	LYS	CA-CB	5.57	1.62	1.53
35	BB	1119	U	C3'-O3'	5.57	1.50	1.42
1	AA	163	C	C1'-N1	5.57	1.56	1.48
4	AD	89	LEU	N-CA	-5.57	1.39	1.46
35	BB	39	G	C1'-N9	-5.57	1.39	1.48
35	BB	164	C	C1'-N1	5.57	1.56	1.48
35	BB	2483	C	C3'-O3'	-5.57	1.33	1.42
35	BB	2507	C	P-O5'	-5.57	1.51	1.59
1	AA	1012	A	C3'-O3'	5.56	1.50	1.42
9	AI	115	VAL	N-CA	-5.56	1.39	1.46
35	BB	2384	U	O3'-P	-5.56	1.52	1.61
11	AK	85	VAL	N-CA	-5.56	1.39	1.46
14	AN	58	ARG	C-N	5.56	1.41	1.33
34	BA	89	U	C1'-N1	-5.56	1.40	1.48
35	BB	590	A	C3'-C2'	5.56	1.61	1.52
35	BB	1883	U	O4'-C1'	5.56	1.50	1.41
35	BB	1939	U	C1'-N1	5.56	1.55	1.47
35	BB	2275	C	C5'-C4'	5.56	1.59	1.51
35	BB	2377	A	P-O5'	-5.56	1.51	1.59
44	BK	99	ILE	C-N	5.56	1.41	1.33
47	BN	118	ARG	CZ-NH1	5.56	1.40	1.32
5	AE	137	ARG	CA-C	5.56	1.60	1.52
19	AS	60	PHE	C-N	5.56	1.41	1.33
35	BB	298	G	C3'-O3'	5.56	1.50	1.42
54	BU	81	ARG	NE-CZ	5.56	1.39	1.33
5	AE	157	GLY	CA-C	5.56	1.58	1.52
30	B5	104	ILE	N-CA	5.56	1.53	1.46
35	BB	1160	G	C2'-C1'	-5.56	1.45	1.53
35	BB	1287	A	O3'-P	-5.56	1.52	1.61
39	BF	133	GLU	C-N	5.56	1.41	1.33
35	BB	1374	G	O3'-P	-5.56	1.52	1.61
35	BB	1977	A	C2'-C1'	-5.56	1.45	1.53
35	BB	2770	G	O4'-C1'	5.56	1.50	1.41
47	BN	118	ARG	NE-CZ	5.56	1.39	1.33
35	BB	1165	A	C2'-C1'	-5.56	1.45	1.53
37	BD	17	GLU	CA-CB	5.56	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	BD	142	VAL	CA-CB	-5.56	1.47	1.54
13	AM	28	ARG	CD-NE	5.55	1.54	1.46
29	B4	30	PRO	CA-CB	5.55	1.61	1.53
30	B5	192	LEU	CA-C	-5.55	1.45	1.52
35	BB	1581	G	C4'-O4'	-5.55	1.37	1.45
7	AG	126	ALA	C-N	5.55	1.42	1.33
36	BC	163	ILE	N-CA	-5.55	1.39	1.46
35	BB	2	G	C2'-C1'	-5.55	1.45	1.53
35	BB	1175	A	P-O5'	5.55	1.68	1.59
35	BB	1206	G	O3'-P	-5.55	1.52	1.61
35	BB	1250	G	O3'-P	-5.55	1.52	1.61
35	BB	2195	U	O3'-P	-5.55	1.52	1.61
36	BC	22	GLU	N-CA	-5.55	1.38	1.46
35	BB	62	U	C4'-C3'	5.55	1.60	1.52
35	BB	2327	A	C3'-C2'	5.55	1.61	1.52
38	BE	79	ARG	CZ-NH1	5.55	1.40	1.32
41	BH	143	ILE	C-N	5.55	1.41	1.33
51	BR	73	LYS	CA-C	-5.55	1.46	1.52
1	AA	1462	C	C2'-C1'	-5.55	1.45	1.53
35	BB	895	U	C5'-C4'	5.55	1.59	1.51
35	BB	1027	A	C5'-C4'	5.55	1.59	1.51
35	BB	1900	A	O3'-P	-5.55	1.52	1.61
35	BB	2519	U	O4'-C1'	-5.55	1.33	1.42
35	BB	2857	G	C5'-C4'	5.55	1.59	1.51
36	BC	136	VAL	CA-C	-5.55	1.46	1.52
37	BD	78	GLY	C-N	5.55	1.40	1.33
15	AO	52	ARG	CZ-NH2	5.54	1.40	1.33
34	BA	90	C	C1'-N1	5.54	1.56	1.48
35	BB	136	G	C4'-O4'	5.54	1.53	1.45
37	BD	45	TYR	CA-C	-5.54	1.45	1.52
35	BB	1528	A	C6-N6	5.54	1.45	1.33
1	AA	1280	A	C2'-C1'	-5.54	1.44	1.53
1	AA	1355	G	P-O5'	-5.54	1.51	1.59
7	AG	94	ARG	CZ-NH1	5.54	1.40	1.32
15	AO	62	ARG	CZ-NH2	5.54	1.40	1.33
16	AP	59	HIS	CE1-NE2	5.54	1.38	1.32
32	B7	39	ARG	N-CA	-5.54	1.39	1.46
34	BA	24	G	O3'-P	-5.54	1.52	1.61
35	BB	569	U	C3'-O3'	5.54	1.50	1.42
35	BB	1838	C	P-O5'	-5.54	1.51	1.59
35	BB	2213	U	C2'-C1'	-5.54	1.45	1.53
37	BD	57	ALA	CA-CB	5.54	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
39	BF	132	ARG	CZ-NH2	5.54	1.40	1.33
30	B5	104	ILE	C-N	5.54	1.42	1.33
35	BB	1990	C	O4'-C1'	-5.54	1.33	1.41
1	AA	1039	G	O5'-C5'	5.54	1.50	1.42
2	AB	178	LEU	CA-C	-5.54	1.45	1.52
9	AI	67	LYS	CA-C	-5.54	1.45	1.52
46	BM	121	ALA	CA-C	-5.54	1.45	1.52
1	AA	667	G	C2'-C1'	-5.54	1.45	1.53
34	BA	75	G	C1'-N9	-5.54	1.39	1.48
35	BB	1966	A	P-O5'	-5.54	1.51	1.59
35	BB	2870	C	C5'-C4'	5.54	1.59	1.51
39	BF	154	THR	C-O	-5.54	1.17	1.23
43	BJ	99	ARG	CD-NE	5.54	1.53	1.46
51	BR	26	ASP	C-N	5.54	1.41	1.33
55	BW	18	ARG	C-N	5.54	1.41	1.33
1	AA	910	C	C2'-C1'	-5.53	1.45	1.53
6	AF	12	PRO	N-CD	-5.53	1.40	1.47
35	BB	501	A	O5'-C5'	-5.53	1.34	1.42
35	BB	1359	A	C2'-C1'	-5.53	1.45	1.53
35	BB	1611	C	O5'-C5'	5.53	1.50	1.42
35	BB	1934	C	C1'-N1	5.53	1.56	1.48
37	BD	178	VAL	N-CA	-5.53	1.41	1.46
43	BJ	95	ARG	NE-CZ	5.53	1.39	1.33
54	BU	34	ILE	CA-CB	5.53	1.61	1.54
35	BB	932	U	P-O5'	-5.53	1.51	1.59
35	BB	1156	A	C3'-C2'	-5.53	1.44	1.52
35	BB	2341	G	C5'-C4'	5.53	1.59	1.51
1	AA	702	A	P-O5'	-5.53	1.51	1.59
11	AK	18	GLY	N-CA	5.53	1.53	1.45
35	BB	42	A	C4'-O4'	-5.53	1.37	1.45
35	BB	1077	A	C1'-N9	5.53	1.56	1.48
40	BG	160	GLY	CA-C	-5.53	1.44	1.51
43	BJ	99	ARG	C-N	5.53	1.41	1.33
19	AS	28	LYS	CA-CB	5.53	1.62	1.53
35	BB	1057	A	C3'-O3'	5.53	1.50	1.42
1	AA	713	G	C6-N1	5.53	1.50	1.39
1	AA	1031	C	C1'-N1	5.53	1.55	1.47
1	AA	1092	A	C5'-C4'	5.53	1.59	1.51
6	AF	25	TYR	CA-C	5.53	1.59	1.52
35	BB	773	U	C1'-N1	5.53	1.56	1.48
35	BB	2505	G	C2'-C1'	-5.53	1.45	1.53
36	BC	231	HIS	CE1-NE2	5.53	1.38	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1050	G	C3'-O3'	5.53	1.50	1.42
1	AA	1421	G	C4'-C3'	5.53	1.60	1.52
16	AP	56	ARG	NE-CZ	5.53	1.39	1.33
18	AR	32	ILE	CA-CB	5.53	1.61	1.54
1	AA	926	G	O4'-C1'	5.52	1.50	1.41
8	AH	12	ARG	NE-CZ	5.52	1.39	1.33
19	AS	68	HIS	N-CA	-5.52	1.39	1.46
35	BB	1670	C	O4'-C1'	-5.52	1.33	1.41
46	BM	31	PHE	CA-C	-5.52	1.45	1.52
26	B1	26	PHE	CA-CB	5.52	1.61	1.53
12	AL	9	LYS	CA-C	-5.52	1.46	1.52
35	BB	2613	U	C3'-C2'	-5.52	1.44	1.52
1	AA	62	U	C2'-C1'	-5.52	1.45	1.53
8	AH	90	GLU	CA-C	-5.52	1.46	1.52
33	B8	9	LYS	CA-C	5.52	1.60	1.53
35	BB	2777	G	C3'-O3'	5.52	1.50	1.42
9	AI	102	PHE	CA-CB	5.52	1.60	1.53
9	AI	121	ARG	CD-NE	5.52	1.53	1.46
1	AA	795	C	C5'-C4'	5.51	1.59	1.51
27	B2	57	GLU	CA-C	-5.51	1.46	1.53
31	B6	28	ARG	NE-CZ	5.51	1.39	1.33
43	BJ	52	ASP	N-CA	-5.51	1.39	1.46
26	B1	29	ARG	NE-CZ	5.51	1.39	1.33
1	AA	356	A	C2'-O2'	5.51	1.50	1.42
46	BM	55	ARG	NE-CZ	5.51	1.39	1.33
51	BR	78	ARG	NE-CZ	5.51	1.39	1.33
35	BB	745	G	C1'-N9	-5.51	1.39	1.48
35	BB	831	G	P-O5'	-5.51	1.51	1.59
35	BB	2078	C	O3'-P	-5.51	1.52	1.61
35	BB	2121	G	C6-N1	5.51	1.50	1.39
50	BQ	2	ARG	CZ-NH2	5.51	1.40	1.33
19	AS	12	LEU	N-CA	-5.51	1.38	1.46
20	AT	59	ARG	NE-CZ	5.51	1.39	1.33
26	B1	5	GLU	CA-CB	5.51	1.62	1.53
28	B3	53	VAL	CA-C	-5.51	1.44	1.52
30	B5	10	VAL	N-CA	5.51	1.53	1.46
35	BB	690	G	P-O5'	-5.51	1.51	1.59
35	BB	829	A	C1'-N9	-5.51	1.38	1.47
11	AK	60	PHE	CA-C	-5.51	1.45	1.52
25	B0	34	SER	N-CA	-5.51	1.39	1.46
35	BB	2542	A	P-O5'	-5.51	1.51	1.59
35	BB	2814	A	C6-N6	5.51	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	B2	3	THR	CA-C	-5.50	1.46	1.52
1	AA	1149	C	C5'-C4'	5.50	1.59	1.51
7	AG	103	ILE	CA-C	-5.50	1.45	1.52
35	BB	1823	G	C3'-O3'	5.50	1.50	1.42
35	BB	2900	A	C5'-C4'	5.50	1.59	1.51
51	BR	27	ILE	CA-C	5.50	1.59	1.52
51	BR	51	VAL	CA-CB	5.50	1.61	1.54
1	AA	55	A	C5'-C4'	5.50	1.59	1.51
1	AA	515	G	O4'-C1'	-5.50	1.33	1.41
1	AA	848	C	O3'-P	-5.50	1.52	1.61
5	AE	73	VAL	N-CA	-5.50	1.39	1.46
35	BB	819	A	C2'-C1'	-5.50	1.45	1.53
35	BB	870	U	C1'-N1	5.50	1.56	1.48
35	BB	1052	C	O4'-C1'	5.50	1.50	1.41
35	BB	2638	G	O3'-P	-5.50	1.52	1.61
35	BB	2815	C	C3'-C2'	5.50	1.61	1.52
1	AA	709	U	C2'-C1'	-5.50	1.45	1.53
2	AB	153	MET	C-N	5.50	1.40	1.33
16	AP	25	ARG	NE-CZ	5.50	1.39	1.33
19	AS	36	ARG	CD-NE	5.50	1.53	1.46
35	BB	184	C	C5'-C4'	5.50	1.59	1.51
35	BB	2783	U	C5'-C4'	5.50	1.59	1.51
35	BB	1071	G	C4'-O4'	-5.50	1.37	1.45
35	BB	1189	A	O3'-P	-5.50	1.52	1.61
1	AA	774	G	P-O5'	-5.50	1.51	1.59
45	BL	2	ARG	CD-NE	5.50	1.53	1.46
1	AA	765	G	C2'-C1'	-5.49	1.45	1.53
1	AA	1296	C	P-O5'	-5.49	1.51	1.59
13	AM	25	GLY	C-N	5.49	1.40	1.33
40	BG	162	ARG	NE-CZ	5.49	1.39	1.33
54	BU	95	PHE	C-N	5.49	1.41	1.33
35	BB	203	A	C2'-C1'	-5.49	1.45	1.53
35	BB	1134	A	C3'-C2'	5.49	1.61	1.52
37	BD	77	ARG	CZ-NH2	5.49	1.40	1.33
35	BB	2221	G	O5'-C5'	5.49	1.50	1.42
43	BJ	47	HIS	CD2-NE2	-5.49	1.31	1.37
1	AA	1043	G	C4'-O4'	5.49	1.53	1.45
5	AE	44	ARG	CZ-NH1	5.49	1.40	1.32
14	AN	80	ARG	NE-CZ	5.49	1.39	1.33
40	BG	150	TYR	CA-C	-5.49	1.46	1.52
38	BE	61	ARG	CD-NE	5.49	1.53	1.46
1	AA	646	G	C2'-C1'	-5.49	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	663	A	C4'-O4'	5.49	1.53	1.45
16	AP	6	LEU	CA-CB	5.49	1.62	1.53
27	B2	2	LYS	N-CA	-5.49	1.39	1.46
35	BB	549	G	P-O5'	-5.49	1.51	1.59
30	B5	24	ASN	CA-CB	5.48	1.61	1.53
1	AA	1037	C	C3'-O3'	5.48	1.50	1.42
1	AA	1444	U	C2'-C1'	-5.48	1.45	1.53
35	BB	73	A	C4'-O4'	-5.48	1.37	1.45
35	BB	831	G	C3'-O3'	5.48	1.50	1.42
35	BB	1269	A	C2'-C1'	-5.48	1.45	1.53
37	BD	13	ARG	CA-C	-5.48	1.45	1.52
38	BE	114	ARG	CZ-NH2	5.48	1.40	1.33
50	BQ	16	ILE	CA-C	-5.48	1.46	1.52
1	AA	1144	G	O4'-C1'	5.48	1.49	1.41
24	AZ	5	ALA	C-N	5.48	1.41	1.33
35	BB	2469	A	O4'-C1'	-5.48	1.33	1.41
36	BC	181	ARG	CD-NE	5.48	1.53	1.46
50	BQ	113	LYS	CA-CB	5.48	1.62	1.53
8	AH	9	MET	N-CA	-5.48	1.39	1.46
35	BB	1596	A	C4'-O4'	-5.48	1.37	1.45
46	BM	74	THR	CA-C	5.48	1.60	1.53
1	AA	309	A	C3'-C2'	-5.47	1.44	1.52
1	AA	1458	G	C4'-C3'	5.47	1.60	1.52
2	AB	44	LYS	CA-C	-5.47	1.46	1.52
3	AC	71	ARG	CZ-NH2	5.47	1.40	1.33
35	BB	601	C	O3'-P	-5.47	1.52	1.61
35	BB	2545	G	C5'-C4'	-5.47	1.43	1.51
36	BC	78	GLU	CA-CB	5.47	1.62	1.53
39	BF	151	LEU	CA-C	-5.47	1.46	1.52
45	BL	126	ARG	NE-CZ	5.47	1.39	1.33
50	BQ	113	LYS	C-N	5.47	1.42	1.33
18	AR	33	THR	CA-C	5.47	1.60	1.52
35	BB	2648	G	N7-C5	-5.47	1.28	1.39
7	AG	92	PRO	CA-C	-5.47	1.43	1.52
35	BB	261	G	P-O5'	-5.47	1.51	1.59
35	BB	1031	G	C2'-C1'	-5.47	1.45	1.53
35	BB	2497	A	P-O5'	-5.47	1.51	1.59
1	AA	98	A	O3'-P	-5.47	1.52	1.61
1	AA	1430	A	C2'-C1'	-5.47	1.45	1.53
4	AD	72	ARG	NE-CZ	5.47	1.39	1.33
35	BB	1383	A	C1'-N9	-5.47	1.39	1.48
1	AA	165	G	C1'-N9	5.46	1.56	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AE	58	ALA	C-N	5.46	1.41	1.33
28	B3	51	ARG	CD-NE	5.46	1.53	1.46
35	BB	107	G	C5'-C4'	5.46	1.59	1.51
35	BB	2732	G	O4'-C1'	-5.46	1.33	1.41
37	BD	15	PHE	CA-CB	5.46	1.62	1.53
41	BH	128	HIS	CG-CD2	5.46	1.41	1.35
54	BU	21	ARG	NE-CZ	5.46	1.39	1.33
5	AE	28	ARG	NE-CZ	5.46	1.39	1.33
34	BA	66	A	O3'-P	-5.46	1.52	1.61
1	AA	341	C	O4'-C1'	5.46	1.49	1.41
1	AA	1416	G	C5'-C4'	-5.46	1.43	1.51
3	AC	87	ARG	C-N	5.46	1.41	1.33
30	B5	114	VAL	CA-C	5.46	1.59	1.52
35	BB	847	U	C2'-O2'	-5.46	1.34	1.42
35	BB	1076	C	C4'-O4'	5.46	1.53	1.45
35	BB	2627	G	C3'-C2'	-5.46	1.44	1.52
1	AA	1064	G	O5'-C5'	5.46	1.51	1.42
1	AA	1174	G	C3'-O3'	5.46	1.50	1.42
6	AF	85	ILE	CA-CB	-5.46	1.47	1.54
35	BB	65	U	O5'-C5'	5.46	1.50	1.42
35	BB	1205	A	C2'-C1'	-5.46	1.44	1.53
35	BB	1821	A	C2'-O2'	-5.46	1.34	1.42
35	BB	2806	C	O3'-P	-5.46	1.52	1.61
44	BK	98	ARG	CA-C	-5.46	1.45	1.52
47	BN	32	GLU	CA-CB	5.46	1.62	1.53
1	AA	1254	A	O4'-C1'	-5.46	1.33	1.41
35	BB	2354	C	C4'-C3'	-5.46	1.44	1.52
8	AH	73	SER	CA-C	-5.46	1.46	1.52
15	AO	87	ARG	NE-CZ	5.46	1.39	1.33
35	BB	423	A	O5'-C5'	5.46	1.50	1.42
1	AA	907	A	C4'-C3'	-5.45	1.44	1.52
1	AA	1383	C	O5'-C5'	5.45	1.50	1.42
21	AU	5	VAL	C-O	-5.45	1.18	1.24
19	AS	6	LYS	N-CA	-5.45	1.40	1.46
35	BB	712	G	C4'-O4'	5.45	1.53	1.45
52	BS	68	ASP	CA-C	-5.45	1.45	1.53
1	AA	331	G	O4'-C1'	5.45	1.49	1.41
1	AA	1378	C	P-O5'	-5.45	1.51	1.59
35	BB	589	U	C5'-C4'	5.45	1.59	1.51
50	BQ	5	ARG	CD-NE	5.45	1.53	1.46
56	BY	19	ARG	CD-NE	5.45	1.53	1.46
6	AF	55	HIS	CE1-NE2	5.45	1.38	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	221	A	O5'-C5'	5.45	1.51	1.42
51	BR	80	ARG	CA-C	-5.45	1.46	1.52
1	AA	6	G	O3'-P	-5.45	1.52	1.61
1	AA	300	A	C2'-C1'	-5.45	1.45	1.53
35	BB	556	A	P-O5'	-5.45	1.51	1.59
35	BB	731	C	C5'-C4'	5.45	1.59	1.51
35	BB	2152	G	O5'-C5'	5.45	1.50	1.42
52	BS	110	ARG	CD-NE	5.45	1.53	1.46
6	AF	80	PHE	CA-C	-5.44	1.45	1.52
29	B4	22	THR	C-N	5.44	1.41	1.33
35	BB	122	G	C3'-O3'	5.44	1.50	1.42
1	AA	202	G	C4'-O4'	-5.44	1.37	1.45
11	AK	92	ARG	CD-NE	5.44	1.53	1.46
20	AT	5	SER	N-CA	-5.44	1.40	1.46
35	BB	1241	A	C4'-O4'	-5.44	1.37	1.45
35	BB	2135	A	C3'-C2'	-5.44	1.44	1.52
39	BF	116	LEU	CA-C	-5.44	1.45	1.52
2	AB	94	ARG	NE-CZ	5.44	1.39	1.33
2	AB	171	ALA	N-CA	-5.44	1.40	1.46
11	AK	68	ARG	NE-CZ	5.44	1.39	1.33
17	AQ	26	ARG	CZ-NH1	5.44	1.40	1.32
35	BB	2581	G	O5'-C5'	5.44	1.51	1.42
35	BB	2676	C	C3'-O3'	5.44	1.50	1.42
35	BB	2725	A	P-O5'	-5.44	1.51	1.59
41	BH	67	ALA	CA-C	-5.44	1.46	1.53
43	BJ	48	VAL	CA-C	-5.44	1.45	1.52
52	BS	91	GLY	C-N	5.44	1.41	1.33
37	BD	127	PHE	N-CA	-5.44	1.39	1.45
1	AA	998	C	P-O5'	-5.44	1.51	1.59
1	AA	1242	G	C4'-C3'	5.44	1.60	1.52
10	AJ	89	ARG	CD-NE	5.44	1.53	1.46
35	BB	354	A	C4'-O4'	5.44	1.53	1.45
35	BB	581	C	C3'-C2'	5.44	1.60	1.52
35	BB	1344	U	C1'-N1	5.44	1.55	1.47
35	BB	1706	C	C3'-C2'	-5.44	1.44	1.52
40	BG	34	ARG	CZ-NH2	5.44	1.40	1.33
35	BB	316	C	C1'-N1	5.44	1.56	1.48
38	BE	131	THR	C-O	-5.44	1.16	1.24
46	BM	101	VAL	N-CA	-5.44	1.39	1.46
50	BQ	91	ARG	N-CA	-5.44	1.39	1.46
56	BY	22	VAL	CA-C	-5.44	1.46	1.52
1	AA	1080	A	O3'-P	-5.43	1.52	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AB	73	ARG	CZ-NH2	5.43	1.40	1.33
7	AG	145	GLU	CA-C	-5.43	1.45	1.52
8	AH	1	SER	N-CA	5.43	1.56	1.46
16	AP	78	VAL	C-O	-5.43	1.17	1.24
35	BB	490	C	C3'-O3'	5.43	1.51	1.43
35	BB	766	U	C1'-N1	5.43	1.56	1.48
35	BB	1017	G	C4'-C3'	5.43	1.60	1.52
35	BB	2324	U	C5'-C4'	5.43	1.59	1.51
1	AA	192	A	O3'-P	-5.43	1.53	1.61
1	AA	845	A	C6-N6	5.43	1.44	1.33
32	B7	57	VAL	C-N	5.43	1.40	1.33
35	BB	394	C	O3'-P	-5.43	1.53	1.61
35	BB	1826	G	C3'-O3'	5.43	1.50	1.42
35	BB	2445	G	C2'-C1'	-5.43	1.45	1.53
36	BC	229	HIS	C-N	5.43	1.40	1.33
55	BW	19	ARG	CD-NE	5.43	1.53	1.46
1	AA	425	G	C2'-C1'	-5.43	1.45	1.53
1	AA	1286	U	C1'-N1	5.43	1.56	1.48
35	BB	1257	C	C2'-O2'	-5.43	1.34	1.42
4	AD	72	ARG	CD-NE	5.43	1.53	1.46
10	AJ	7	ARG	NE-CZ	5.43	1.39	1.33
35	BB	192	C	C2'-C1'	-5.43	1.45	1.53
35	BB	2415	G	P-O5'	-5.43	1.51	1.59
45	BL	133	ALA	N-CA	-5.43	1.39	1.46
1	AA	1342	C	O3'-P	-5.43	1.53	1.61
7	AG	41	ILE	C-O	-5.43	1.17	1.24
20	AT	22	SER	C-N	5.43	1.41	1.33
35	BB	1074	G	O3'-P	-5.43	1.53	1.61
38	BE	132	LYS	C-N	5.43	1.41	1.33
41	BH	144	VAL	C-N	5.43	1.41	1.33
35	BB	308	G	C3'-C2'	-5.43	1.44	1.52
35	BB	862	G	C3'-C2'	5.43	1.60	1.52
43	BJ	75	TYR	C-N	5.43	1.40	1.33
48	BO	25	ARG	CZ-NH1	5.43	1.40	1.32
11	AK	65	ALA	C-N	5.42	1.41	1.33
35	BB	2082	A	C2'-C1'	-5.42	1.45	1.53
35	BB	2894	G	P-O5'	-5.42	1.51	1.59
35	BB	2902	C	C2'-C1'	-5.42	1.45	1.53
35	BB	2495	G	P-O5'	-5.42	1.51	1.59
1	AA	323	U	C5'-C4'	5.42	1.59	1.51
2	AB	79	VAL	N-CA	5.42	1.53	1.46
2	AB	181	PRO	CA-C	-5.42	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AP	55	ASP	C-N	-5.42	1.27	1.33
34	BA	53	A	C3'-O3'	5.42	1.50	1.42
35	BB	362	A	P-O5'	5.42	1.67	1.59
35	BB	494	G	C3'-O3'	5.42	1.50	1.42
35	BB	1945	G	O3'-P	-5.42	1.53	1.61
35	BB	1985	C	O5'-C5'	5.42	1.50	1.42
35	BB	2219	U	C4'-C3'	5.42	1.60	1.52
1	AA	860	A	C1'-N9	5.42	1.56	1.48
19	AS	31	ARG	NE-CZ	5.42	1.39	1.33
1	AA	621	A	C2'-C1'	-5.42	1.45	1.53
21	AU	20	ARG	CA-CB	5.42	1.61	1.53
35	BB	380	G	C1'-N9	-5.42	1.39	1.48
1	AA	592	G	C5'-C4'	5.42	1.59	1.51
30	B5	190	GLU	CA-C	5.42	1.59	1.52
35	BB	3	U	C1'-N1	5.42	1.56	1.48
35	BB	763	G	C1'-N9	-5.42	1.39	1.48
35	BB	917	A	C3'-O3'	5.42	1.50	1.42
35	BB	570	G	C4'-O4'	5.42	1.53	1.45
35	BB	1131	G	P-O5'	-5.42	1.51	1.59
35	BB	1881	C	C4'-O4'	-5.42	1.37	1.45
37	BD	56	LYS	CA-C	-5.41	1.46	1.52
1	AA	1099	G	C2'-C1'	-5.41	1.45	1.53
1	AA	1370	G	C3'-O3'	5.41	1.50	1.42
5	AE	105	ILE	CA-C	5.41	1.59	1.52
35	BB	2863	C	C2'-C1'	-5.41	1.45	1.53
37	BD	3	GLY	CA-C	-5.41	1.45	1.52
1	AA	438	U	O4'-C1'	-5.41	1.33	1.42
7	AG	34	LYS	CA-CB	5.41	1.59	1.52
13	AM	34	ALA	CA-CB	5.41	1.61	1.53
35	BB	466	A	C5'-C4'	5.41	1.59	1.51
35	BB	1928	A	C2'-C1'	-5.41	1.45	1.53
35	BB	1973	G	O3'-P	-5.41	1.53	1.61
35	BB	2445	G	C4'-C3'	-5.41	1.44	1.52
38	BE	61	ARG	N-CA	-5.41	1.40	1.46
46	BM	6	ARG	CZ-NH1	5.41	1.40	1.32
1	AA	592	G	C2'-C1'	-5.41	1.45	1.53
35	BB	704	G	C3'-O3'	5.41	1.50	1.42
36	BC	260	LYS	C-N	5.41	1.40	1.33
1	AA	49	U	C4'-C3'	5.41	1.61	1.53
1	AA	1086	U	C2'-C1'	-5.41	1.45	1.53
15	AO	16	ARG	CA-C	-5.41	1.46	1.52
30	B5	75	VAL	N-CA	-5.41	1.40	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	B5	94	LEU	CA-C	-5.41	1.46	1.52
35	BB	592	A	C3'-O3'	5.41	1.50	1.42
43	BJ	56	VAL	C-N	5.41	1.41	1.33
44	BK	65	THR	C-N	5.41	1.41	1.34
35	BB	78	U	C4'-C3'	-5.40	1.44	1.52
35	BB	2142	A	O3'-P	-5.40	1.53	1.61
1	AA	1357	A	C4'-O4'	-5.40	1.37	1.45
6	AF	91	ARG	NE-CZ	5.40	1.39	1.33
7	AG	50	ALA	C-N	5.40	1.40	1.33
40	BG	137	LYS	N-CA	-5.40	1.39	1.46
53	BT	25	GLU	CA-C	-5.40	1.45	1.52
1	AA	154	U	P-O5'	-5.40	1.51	1.59
35	BB	2804	U	O3'-P	-5.40	1.53	1.61
36	BC	35	LYS	CA-C	-5.40	1.45	1.52
39	BF	114	ARG	NE-CZ	5.40	1.39	1.33
43	BJ	76	HIS	N-CA	-5.40	1.39	1.46
52	BS	108	SER	CA-CB	5.40	1.61	1.54
35	BB	2850	A	C2'-C1'	-5.40	1.45	1.53
35	BB	1823	G	C2-N2	5.40	1.45	1.34
35	BB	1982	U	O4'-C1'	5.40	1.49	1.41
39	BF	158	THR	N-CA	-5.40	1.39	1.46
1	AA	617	G	C2-N3	5.40	1.43	1.32
30	B5	216	THR	C-N	5.40	1.41	1.33
35	BB	1982	U	P-O5'	-5.40	1.51	1.59
52	BS	22	ASP	CA-C	-5.40	1.45	1.52
1	AA	227	G	C5'-C4'	5.39	1.59	1.51
1	AA	267	C	O3'-P	-5.39	1.53	1.61
1	AA	319	G	O3'-P	-5.39	1.53	1.61
4	AD	80	ARG	NE-CZ	5.39	1.39	1.33
9	AI	23	GLY	CA-C	-5.39	1.45	1.52
18	AR	59	LYS	N-CA	-5.39	1.39	1.46
33	B8	33	HIS	CE1-NE2	5.39	1.38	1.32
35	BB	365	U	C4'-C3'	5.39	1.60	1.52
35	BB	1035	U	C2'-C1'	-5.39	1.45	1.53
38	BE	181	ILE	CA-C	-5.39	1.46	1.52
48	BO	28	VAL	CA-C	-5.39	1.46	1.52
7	AG	3	ARG	C-N	5.39	1.39	1.33
25	B0	24	THR	C-N	5.39	1.40	1.33
35	BB	1144	A	C1'-N9	-5.39	1.39	1.48
35	BB	1811	G	O3'-P	-5.39	1.53	1.61
35	BB	2569	G	C3'-O3'	5.39	1.50	1.42
16	AP	59	HIS	CA-CB	5.39	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	B4	44	GLN	CA-C	-5.39	1.46	1.52
35	BB	2579	C	C5'-C4'	5.39	1.59	1.51
1	AA	255	G	C2'-C1'	-5.39	1.45	1.53
35	BB	704	G	O3'-P	-5.39	1.53	1.61
35	BB	1442	U	C5'-C4'	5.39	1.59	1.51
56	BY	52	CYS	CA-C	-5.39	1.45	1.52
3	AC	171	ARG	N-CA	-5.39	1.40	1.46
35	BB	2836	U	O5'-C5'	5.39	1.50	1.42
38	BE	157	LEU	CA-CB	-5.39	1.44	1.53
3	AC	50	SER	CA-CB	5.39	1.59	1.53
4	AD	14	GLU	CA-C	-5.39	1.45	1.52
35	BB	666	A	C6-N6	5.39	1.44	1.33
35	BB	1416	G	N9-C4	5.39	1.48	1.38
35	BB	2241	A	C1'-N9	-5.39	1.39	1.48
41	BH	3	VAL	N-CA	-5.39	1.40	1.46
4	AD	69	ARG	CD-NE	5.38	1.53	1.46
35	BB	849	A	C4'-O4'	-5.38	1.37	1.45
35	BB	934	U	O5'-C5'	5.38	1.50	1.42
35	BB	2291	U	C5'-C4'	5.38	1.59	1.51
52	BS	32	ALA	CA-C	-5.38	1.44	1.52
1	AA	747	A	C4'-C3'	-5.38	1.44	1.52
1	AA	1143	G	O4'-C1'	5.38	1.49	1.41
52	BS	25	ARG	CD-NE	5.38	1.53	1.46
9	AI	41	GLU	CA-C	-5.38	1.46	1.53
35	BB	1000	A	P-O5'	-5.38	1.51	1.59
40	BG	169	ARG	NE-CZ	5.38	1.39	1.33
55	BW	64	VAL	C-N	5.38	1.40	1.33
1	AA	681	A	C5'-C4'	5.38	1.59	1.51
1	AA	1450	U	C5'-C4'	5.38	1.59	1.51
11	AK	20	ALA	C-N	5.38	1.41	1.33
31	B6	26	ASN	N-CA	-5.38	1.40	1.46
35	BB	1533	C	C5'-C4'	5.38	1.59	1.51
35	BB	1645	G	O3'-P	-5.38	1.53	1.61
35	BB	57	C	O4'-C1'	5.38	1.49	1.41
35	BB	507	A	C2'-C1'	-5.38	1.45	1.53
35	BB	2471	A	C4'-C3'	5.38	1.61	1.53
1	AA	610	U	C4'-C3'	5.38	1.60	1.52
1	AA	1506	U	C4'-C3'	5.38	1.61	1.53
16	AP	47	GLU	C-N	5.38	1.41	1.33
35	BB	399	U	C4'-O4'	-5.38	1.37	1.45
35	BB	2364	C	C2'-C1'	-5.38	1.45	1.53
35	BB	2385	C	C4-N4	5.38	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	BK	108	ARG	CA-C	-5.38	1.46	1.52
47	BN	108	ALA	N-CA	-5.38	1.38	1.46
47	BN	8	ARG	NE-CZ	5.38	1.39	1.33
2	AB	32	GLY	CA-C	-5.37	1.44	1.51
35	BB	1667	G	P-O5'	-5.37	1.51	1.59
37	BD	37	VAL	N-CA	-5.37	1.40	1.46
1	AA	499	A	C3'-O3'	5.37	1.51	1.43
14	AN	79	SER	C-N	5.37	1.41	1.33
16	AP	26	ASN	C-N	5.37	1.40	1.33
35	BB	668	A	C2'-O2'	-5.37	1.34	1.42
35	BB	1020	A	C2'-C1'	-5.37	1.45	1.53
35	BB	1156	A	O3'-P	-5.37	1.53	1.61
35	BB	1675	C	C3'-C2'	5.37	1.60	1.52
35	BB	1941	C	C1'-N1	5.37	1.56	1.48
35	BB	1947	C	C4'-O4'	5.37	1.53	1.45
35	BB	2212	A	C1'-N9	5.37	1.55	1.47
1	AA	134	G	O3'-P	-5.37	1.53	1.61
15	AO	45	HIS	CB-CG	5.37	1.57	1.50
20	AT	9	ARG	NE-CZ	5.37	1.39	1.33
35	BB	1666	G	C5'-C4'	5.37	1.59	1.51
38	BE	67	ARG	CD-NE	5.37	1.53	1.46
40	BG	123	GLU	CA-CB	5.37	1.62	1.53
44	BK	75	SER	N-CA	5.37	1.53	1.46
3	AC	90	VAL	CA-C	-5.37	1.46	1.52
12	AL	43	LYS	C-N	-5.37	1.29	1.33
19	AS	68	HIS	CA-C	-5.37	1.46	1.52
22	AV	70	C	P-O5'	-5.37	1.51	1.59
32	B7	42	HIS	CA-C	-5.37	1.44	1.52
35	BB	1775	U	C5'-C4'	5.37	1.59	1.51
52	BS	7	HIS	CE1-NE2	5.37	1.38	1.32
1	AA	1014	A	C5'-C4'	5.37	1.59	1.51
35	BB	972	A	O4'-C1'	-5.37	1.33	1.41
35	BB	1295	C	O3'-P	-5.37	1.53	1.61
36	BC	140	VAL	CA-C	-5.37	1.45	1.52
1	AA	535	A	C1'-N9	-5.36	1.39	1.47
1	AA	631	C	C1'-N1	5.36	1.56	1.48
13	AM	23	GLY	CA-C	-5.36	1.44	1.51
35	BB	691	C	C5'-C4'	5.36	1.59	1.51
35	BB	1453	A	C1'-N9	5.36	1.54	1.47
36	BC	176	ARG	NE-CZ	5.36	1.39	1.33
39	BF	14	LYS	N-CA	-5.36	1.40	1.46
1	AA	383	A	C2'-C1'	-5.36	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	652	U	O5'-C5'	5.36	1.50	1.42
1	AA	1019	A	C2'-C1'	-5.36	1.45	1.53
3	AC	194	VAL	C-O	-5.36	1.18	1.24
18	AR	25	ILE	C-O	-5.36	1.18	1.24
35	BB	2340	A	C3'-O3'	5.36	1.50	1.42
36	BC	268	ARG	CZ-NH1	5.36	1.40	1.32
1	AA	1412	C	C3'-C2'	-5.36	1.44	1.52
12	AL	67	GLY	C-N	5.36	1.40	1.33
35	BB	1962	C	C3'-C2'	-5.36	1.45	1.52
1	AA	1341	U	C5'-C4'	5.36	1.59	1.51
35	BB	1540	G	C5'-C4'	5.36	1.59	1.51
1	AA	1048	G	O3'-P	-5.36	1.53	1.61
1	AA	1060	U	C3'-O3'	-5.36	1.34	1.42
5	AE	28	ARG	C-N	5.36	1.38	1.33
36	BC	219	VAL	N-CA	-5.36	1.39	1.46
40	BG	86	LEU	C-N	5.36	1.41	1.33
49	BP	23	ASP	N-CA	-5.36	1.38	1.46
1	AA	1221	G	C3'-O3'	5.35	1.50	1.42
14	AN	89	ARG	NE-CZ	5.35	1.39	1.33
17	AQ	19	SER	N-CA	-5.35	1.39	1.46
27	B2	38	GLU	CA-C	-5.35	1.46	1.52
35	BB	2795	C	C1'-N1	5.35	1.56	1.48
36	BC	35	LYS	C-N	5.35	1.39	1.33
15	AO	88	ARG	CD-NE	5.35	1.53	1.46
35	BB	470	A	C5'-C4'	5.35	1.59	1.51
35	BB	688	U	C5'-C4'	5.35	1.59	1.51
35	BB	2744	G	O4'-C1'	-5.35	1.33	1.41
36	BC	33	LEU	N-CA	-5.35	1.39	1.46
39	BF	160	LYS	N-CA	-5.35	1.39	1.46
1	AA	222	C	C2'-C1'	-5.35	1.45	1.53
3	AC	58	ARG	CD-NE	5.35	1.53	1.46
35	BB	725	G	O3'-P	-5.35	1.53	1.61
35	BB	1604	C	C5'-C4'	5.35	1.59	1.51
43	BJ	120	ARG	NE-CZ	5.35	1.39	1.33
46	BM	33	LEU	CA-C	-5.35	1.46	1.52
1	AA	492	C	C4'-C3'	5.35	1.60	1.52
3	AC	174	LEU	C-O	-5.35	1.18	1.24
30	B5	168	ASN	CA-CB	5.35	1.61	1.53
39	BF	111	ARG	CZ-NH2	5.35	1.40	1.33
41	BH	12	LEU	CA-CB	5.35	1.62	1.53
44	BK	103	VAL	N-CA	-5.35	1.39	1.46
4	AD	96	ARG	CA-C	-5.35	1.45	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	AH	13	ILE	N-CA	-5.35	1.40	1.46
11	AK	36	ARG	CD-NE	5.35	1.53	1.46
19	AS	74	ALA	C-O	-5.35	1.20	1.25
35	BB	162	U	C4'-C3'	5.35	1.61	1.53
35	BB	607	U	O5'-C5'	5.35	1.50	1.42
35	BB	776	G	C1'-N9	5.35	1.54	1.47
35	BB	2144	G	C3'-O3'	5.35	1.51	1.43
37	BD	21	SER	CA-C	-5.35	1.46	1.53
1	AA	977	A	C3'-O3'	5.35	1.50	1.42
3	AC	66	THR	N-CA	-5.35	1.37	1.46
35	BB	632	A	C4'-C3'	5.35	1.60	1.52
41	BH	93	SER	CA-C	-5.35	1.45	1.52
1	AA	1336	C	C5'-C4'	5.34	1.59	1.51
1	AA	1369	C	C4'-C3'	5.34	1.60	1.52
35	BB	566	U	C2'-O2'	-5.34	1.34	1.42
35	BB	1367	A	O3'-P	-5.34	1.53	1.61
1	AA	124	C	C1'-N1	5.34	1.56	1.48
1	AA	1126	U	P-O5'	-5.34	1.51	1.59
1	AA	1340	A	C1'-N9	5.34	1.55	1.48
35	BB	1788	C	P-O5'	-5.34	1.51	1.59
35	BB	2151	U	O3'-P	-5.34	1.53	1.61
35	BB	2441	U	C1'-N1	5.34	1.56	1.48
10	AJ	71	LEU	N-CA	-5.34	1.39	1.47
35	BB	54	G	C2-N3	5.34	1.43	1.32
35	BB	180	G	C2'-O2'	-5.34	1.34	1.42
35	BB	323	C	O3'-P	-5.34	1.53	1.61
35	BB	2812	G	C2-N3	5.34	1.43	1.32
4	AD	44	LYS	CA-C	5.34	1.59	1.52
35	BB	1254	A	C4'-C3'	5.34	1.60	1.52
35	BB	2802	G	C5'-C4'	5.34	1.59	1.51
44	BK	17	ARG	CZ-NH2	5.34	1.40	1.33
53	BT	15	HIS	CA-C	5.34	1.59	1.52
53	BT	26	LYS	CA-CB	5.34	1.61	1.53
1	AA	540	G	C1'-N9	-5.34	1.40	1.48
16	AP	55	ASP	CA-CB	5.34	1.61	1.53
35	BB	2696	U	C2'-C1'	-5.34	1.45	1.53
1	AA	1008	U	O5'-C5'	5.34	1.50	1.42
13	AM	1	ALA	N-CA	5.34	1.56	1.46
35	BB	292	U	C1'-N1	5.34	1.56	1.48
35	BB	2808	G	C4'-O4'	-5.34	1.37	1.45
26	B1	28	LEU	C-N	5.33	1.41	1.33
35	BB	227	A	C6-N6	5.33	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	384	A	C5'-C4'	-5.33	1.43	1.51
35	BB	2125	G	C5'-C4'	5.33	1.59	1.51
44	BK	39	ILE	CA-C	-5.33	1.46	1.52
54	BU	6	ARG	NE-CZ	5.33	1.39	1.33
1	AA	50	A	P-O5'	-5.33	1.51	1.59
1	AA	310	G	C4'-C3'	5.33	1.60	1.52
1	AA	837	U	P-O5'	-5.33	1.51	1.59
10	AJ	15	HIS	ND1-CE1	-5.33	1.27	1.32
35	BB	711	G	C1'-N9	5.33	1.55	1.48
35	BB	855	G	C3'-C2'	-5.33	1.44	1.52
35	BB	1080	A	O5'-C5'	5.33	1.50	1.42
35	BB	2601	C	C4'-C3'	5.33	1.61	1.53
55	BW	41	GLU	N-CA	-5.33	1.40	1.46
19	AS	11	ASP	N-CA	-5.33	1.39	1.46
35	BB	361	G	C1'-N9	5.33	1.55	1.48
49	BP	47	ILE	CA-CB	5.33	1.61	1.54
49	BP	58	PHE	CA-C	-5.33	1.45	1.52
35	BB	384	A	C4'-O4'	5.33	1.53	1.45
38	BE	101	TYR	C-N	5.33	1.40	1.33
1	AA	993	G	C3'-C2'	5.33	1.60	1.52
11	AK	76	TYR	N-CA	-5.33	1.39	1.46
35	BB	705	A	C2'-C1'	-5.33	1.45	1.53
35	BB	2452	C	O5'-C5'	5.33	1.50	1.42
1	AA	732	C	C2'-C1'	-5.33	1.45	1.53
46	BM	32	GLY	N-CA	-5.33	1.39	1.45
1	AA	482	A	O5'-C5'	5.33	1.50	1.42
1	AA	750	C	P-O5'	-5.33	1.51	1.59
1	AA	1196	A	C5'-C4'	5.33	1.59	1.51
35	BB	1498	C	C2'-O2'	-5.33	1.34	1.42
35	BB	1536	C	O4'-C1'	5.33	1.50	1.42
35	BB	2005	A	C5'-C4'	5.33	1.59	1.51
35	BB	2379	G	C3'-O3'	5.33	1.50	1.42
35	BB	2578	G	C1'-N9	-5.33	1.40	1.48
1	AA	170	U	C2'-C1'	-5.32	1.45	1.53
4	AD	183	ARG	C-N	5.32	1.43	1.33
7	AG	48	THR	CA-CB	5.32	1.61	1.53
35	BB	382	A	O3'-P	-5.32	1.53	1.61
35	BB	1233	C	C3'-O3'	5.32	1.50	1.42
35	BB	1578	U	C2'-C1'	-5.32	1.45	1.53
1	AA	421	U	C2-N3	5.32	1.48	1.37
10	AJ	10	LEU	CA-CB	5.32	1.60	1.53
27	B2	34	THR	CA-C	-5.32	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	AQ	19	SER	CA-C	-5.32	1.46	1.52
35	BB	2804	U	O4'-C1'	5.32	1.49	1.41
37	BD	56	LYS	CA-CB	5.32	1.63	1.54
1	AA	156	C	O3'-P	-5.32	1.53	1.61
1	AA	383	A	O3'-P	-5.32	1.53	1.61
1	AA	445	G	P-O5'	5.32	1.67	1.59
20	AT	51	ASN	CA-C	5.32	1.59	1.52
38	BE	27	LEU	N-CA	-5.32	1.40	1.46
39	BF	152	ASP	CA-C	-5.32	1.46	1.52
56	BY	54	ARG	N-CA	5.32	1.52	1.46
1	AA	93	U	C3'-C2'	5.32	1.60	1.52
1	AA	370	C	O3'-P	-5.32	1.53	1.61
1	AA	788	U	C3'-C2'	5.32	1.60	1.52
35	BB	1293	C	C5'-C4'	5.32	1.59	1.51
35	BB	1608	A	C3'-C2'	5.32	1.60	1.52
35	BB	2708	G	C2'-C1'	-5.32	1.45	1.53
5	AE	153	ALA	N-CA	-5.31	1.39	1.46
15	AO	31	LEU	CB-CG	5.31	1.64	1.53
35	BB	739	A	C2'-C1'	-5.31	1.45	1.53
36	BC	85	ASN	CA-C	-5.31	1.45	1.52
1	AA	1368	A	C5'-C4'	5.31	1.59	1.51
5	AE	17	VAL	CA-C	-5.31	1.46	1.52
35	BB	1079	C	C1'-N1	5.31	1.56	1.48
35	BB	1739	A	P-O5'	-5.31	1.51	1.59
1	AA	30	U	O4'-C1'	5.31	1.50	1.42
1	AA	1440	U	O3'-P	-5.31	1.53	1.61
16	AP	63	GLN	CA-CB	5.31	1.62	1.53
35	BB	428	A	O4'-C1'	5.31	1.49	1.41
44	BK	78	ARG	CD-NE	5.31	1.53	1.46
1	AA	138	G	C3'-O3'	5.31	1.50	1.42
3	AC	86	LEU	N-CA	-5.31	1.40	1.46
28	B3	52	LYS	N-CA	-5.31	1.39	1.46
35	BB	1569	A	C4'-O4'	-5.31	1.37	1.45
35	BB	1887	C	C2'-C1'	-5.31	1.45	1.53
45	BL	115	GLU	C-N	5.31	1.40	1.33
1	AA	863	U	O5'-C5'	5.31	1.50	1.42
1	AA	1333	A	C4'-O4'	-5.31	1.37	1.45
5	AE	49	TYR	CZ-OH	5.31	1.49	1.38
9	AI	22	PRO	C-N	5.31	1.38	1.33
13	AM	35	ALA	CA-C	-5.31	1.45	1.52
35	BB	153	U	C5'-C4'	5.31	1.59	1.51
35	BB	491	G	O4'-C1'	-5.31	1.33	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	748	G	O3'-P	-5.31	1.53	1.61
35	BB	1115	G	O3'-P	-5.31	1.53	1.61
35	BB	1982	U	O3'-P	5.31	1.69	1.61
35	BB	2423	U	C5'-C4'	5.31	1.59	1.51
49	BP	62	LYS	C-N	5.31	1.40	1.33
51	BR	79	ARG	C-N	5.31	1.41	1.33
52	BS	8	ARG	CZ-NH2	5.31	1.40	1.33
53	BT	40	LYS	CA-C	-5.31	1.45	1.52
5	AE	75	LEU	N-CA	-5.31	1.39	1.46
1	AA	322	C	C4'-C3'	5.30	1.60	1.52
34	BA	106	G	C4'-O4'	5.30	1.53	1.45
35	BB	1896	G	C5'-C4'	5.30	1.59	1.51
35	BB	2633	G	C1'-N9	-5.30	1.40	1.48
26	B1	43	LEU	CA-CB	-5.30	1.44	1.53
40	BG	9	VAL	N-CA	-5.30	1.36	1.46
10	AJ	20	GLN	N-CA	-5.30	1.39	1.46
35	BB	565	C	C4'-C3'	5.30	1.60	1.52
35	BB	2844	G	O4'-C1'	5.30	1.49	1.41
37	BD	169	ARG	CZ-NH2	5.30	1.40	1.33
35	BB	555	G	O5'-C5'	5.30	1.50	1.42
35	BB	2249	U	O3'-P	-5.30	1.53	1.61
35	BB	2326	C	O3'-P	-5.30	1.53	1.61
35	BB	2749	A	O3'-P	-5.30	1.53	1.61
54	BU	23	LYS	N-CA	-5.30	1.39	1.45
1	AA	1211	U	C4'-O4'	-5.30	1.38	1.45
35	BB	22	C	P-O5'	-5.30	1.51	1.59
35	BB	2024	G	C2-N3	5.30	1.43	1.32
35	BB	2868	A	C3'-O3'	5.30	1.50	1.42
1	AA	137	U	C2'-C1'	-5.30	1.45	1.53
8	AH	87	ARG	NE-CZ	5.30	1.38	1.33
20	AT	59	ARG	CD-NE	5.30	1.53	1.46
35	BB	2251	G	C3'-C2'	-5.30	1.44	1.52
35	BB	2613	U	O3'-P	-5.30	1.53	1.61
35	BB	2823	A	O3'-P	-5.30	1.53	1.61
37	BD	191	GLY	C-N	5.30	1.40	1.33
48	BO	95	SER	CA-CB	5.30	1.62	1.53
35	BB	1015	U	P-O5'	-5.29	1.51	1.59
35	BB	1159	U	O4'-C1'	5.29	1.49	1.41
1	AA	88	U	O5'-C5'	5.29	1.50	1.42
1	AA	805	C	C4'-O4'	5.29	1.53	1.45
1	AA	991	U	C1'-N1	5.29	1.55	1.47
1	AA	1011	C	C4'-O4'	-5.29	1.37	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	AG	53	SER	N-CA	-5.29	1.39	1.45
7	AG	55	LYS	CA-C	5.29	1.59	1.52
11	AK	84	MET	C-N	5.29	1.40	1.33
35	BB	513	A	O4'-C1'	-5.29	1.33	1.41
35	BB	1722	A	P-O5'	-5.29	1.51	1.59
35	BB	2184	A	C1'-N9	-5.29	1.40	1.48
52	BS	1	MET	C-N	5.29	1.41	1.33
1	AA	337	G	C4'-C3'	5.29	1.60	1.52
1	AA	1505	G	P-O5'	-5.29	1.51	1.59
44	BK	78	ARG	CA-C	-5.29	1.46	1.52
3	AC	84	GLU	CA-CB	5.29	1.62	1.53
1	AA	244	U	O5'-C5'	5.29	1.50	1.42
1	AA	783	C	N1-C6	5.29	1.47	1.37
8	AH	37	ASN	C-N	5.29	1.40	1.33
30	B5	222	VAL	CA-C	5.29	1.58	1.52
46	BM	50	ARG	CD-NE	5.29	1.53	1.46
35	BB	2738	A	C2'-C1'	-5.29	1.45	1.53
56	BY	50	VAL	CA-C	-5.29	1.46	1.52
1	AA	401	C	C3'-C2'	-5.29	1.44	1.52
1	AA	1075	U	O4'-C1'	5.29	1.49	1.41
1	AA	1168	U	C5'-C4'	5.29	1.59	1.51
1	AA	1172	C	O4'-C1'	-5.29	1.33	1.41
5	AE	136	VAL	CA-CB	-5.29	1.46	1.54
11	AK	64	VAL	CA-CB	-5.29	1.47	1.54
11	AK	115	ILE	CA-CB	-5.29	1.50	1.54
35	BB	141	G	C1'-N9	-5.29	1.40	1.48
35	BB	452	G	C5'-C4'	5.29	1.59	1.51
35	BB	945	A	C5'-C4'	5.29	1.59	1.51
35	BB	1680	U	C2'-C1'	-5.29	1.45	1.53
35	BB	2874	C	C4'-C3'	-5.29	1.44	1.52
37	BD	170	VAL	N-CA	-5.29	1.40	1.46
1	AA	234	C	C4'-O4'	5.28	1.53	1.45
1	AA	1473	G	O3'-P	-5.28	1.53	1.61
16	AP	3	THR	CA-C	-5.28	1.46	1.52
20	AT	17	ARG	NE-CZ	5.28	1.38	1.33
35	BB	619	G	C1'-N9	-5.28	1.40	1.48
35	BB	789	A	C4'-O4'	5.28	1.53	1.45
35	BB	970	U	C2'-C1'	-5.28	1.45	1.53
39	BF	79	ARG	CZ-NH1	5.28	1.40	1.32
46	BM	102	LEU	CA-C	-5.28	1.45	1.52
35	BB	2092	U	O4'-C1'	5.28	1.49	1.42
41	BH	132	PHE	CA-C	-5.28	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	337	G	O3'-P	-5.28	1.53	1.61
1	AA	1402	C	C2'-C1'	-5.28	1.45	1.53
35	BB	1455	G	P-O5'	-5.28	1.51	1.59
56	BY	55	ASP	C-N	5.28	1.41	1.33
1	AA	793	U	O5'-C5'	5.28	1.50	1.42
2	AB	86	CYS	CA-CB	5.28	1.61	1.53
35	BB	1330	C	O5'-C5'	5.28	1.50	1.42
1	AA	88	U	P-O5'	-5.28	1.51	1.59
1	AA	445	G	O3'-P	-5.28	1.53	1.61
34	BA	104	A	C1'-N9	5.28	1.55	1.48
35	BB	696	G	C5'-C4'	5.28	1.59	1.51
35	BB	1291	C	C1'-N1	5.28	1.56	1.48
35	BB	1777	U	C3'-O3'	5.28	1.50	1.42
35	BB	2040	G	C2-N3	5.28	1.43	1.32
36	BC	137	GLY	CA-C	-5.28	1.44	1.51
1	AA	1405	G	C1'-N9	5.28	1.55	1.48
16	AP	51	ARG	CZ-NH1	5.28	1.40	1.32
46	BM	26	VAL	CA-CB	-5.28	1.47	1.54
51	BR	62	GLU	CA-CB	5.28	1.62	1.53
1	AA	918	A	C4'-O4'	-5.27	1.37	1.45
35	BB	1873	G	C2'-C1'	-5.27	1.45	1.53
35	BB	2308	G	O5'-C5'	5.27	1.50	1.42
1	AA	517	G	C5'-C4'	5.27	1.59	1.51
1	AA	945	G	O3'-P	-5.27	1.53	1.61
1	AA	1053	G	C2'-C1'	-5.27	1.45	1.53
5	AE	137	ARG	CD-NE	5.27	1.53	1.46
16	AP	70	ARG	CZ-NH2	5.27	1.40	1.33
21	AU	20	ARG	CZ-NH1	5.27	1.40	1.32
31	B6	5	PHE	N-CA	-5.27	1.39	1.46
35	BB	1497	U	O5'-C5'	5.27	1.50	1.42
38	BE	36	ALA	CA-C	-5.27	1.46	1.52
39	BF	5	ASP	C-N	5.27	1.40	1.33
40	BG	57	TYR	CA-C	-5.27	1.46	1.52
1	AA	176	C	P-O5'	-5.27	1.51	1.59
1	AA	1401	G	C2'-C1'	-5.27	1.45	1.53
3	AC	135	ARG	NE-CZ	5.27	1.38	1.33
8	AH	56	PRO	N-CD	-5.27	1.40	1.47
35	BB	141	G	C2-N2	5.27	1.45	1.34
35	BB	523	C	C3'-C2'	5.27	1.60	1.52
54	BU	19	GLY	CA-C	-5.27	1.46	1.51
9	AI	58	GLU	C-N	5.27	1.41	1.33
30	B5	24	ASN	N-CA	5.27	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
40	BG	78	VAL	CA-C	-5.27	1.46	1.52
1	AA	631	C	C2'-C1'	5.27	1.61	1.53
8	AH	83	ARG	NE-CZ	5.27	1.38	1.33
49	BP	18	SER	C-O	-5.27	1.17	1.24
1	AA	1102	A	C4'-O4'	-5.26	1.37	1.45
9	AI	29	ILE	C-N	5.26	1.41	1.33
35	BB	267	C	O3'-P	-5.26	1.53	1.61
35	BB	2142	A	C2'-C1'	-5.26	1.45	1.53
40	BG	167	VAL	CA-C	-5.26	1.46	1.52
35	BB	765	C	C2'-C1'	-5.26	1.45	1.53
35	BB	1189	A	C5'-C4'	5.26	1.59	1.51
35	BB	1192	G	C2'-C1'	-5.26	1.45	1.53
41	BH	71	LYS	N-CA	-5.26	1.39	1.46
32	B7	7	ARG	CZ-NH2	5.26	1.40	1.33
35	BB	240	C	O3'-P	-5.26	1.53	1.61
35	BB	878	A	C4'-O4'	5.26	1.53	1.45
35	BB	1538	G	C2'-C1'	-5.26	1.45	1.53
35	BB	1979	U	C4'-C3'	5.26	1.60	1.52
35	BB	2435	A	C2'-C1'	-5.26	1.45	1.53
37	BD	44	GLY	N-CA	-5.26	1.36	1.44
50	BQ	101	ASP	CA-C	-5.26	1.45	1.52
1	AA	1051	C	O4'-C1'	5.26	1.49	1.41
19	AS	46	LEU	CA-C	-5.26	1.46	1.52
35	BB	1146	C	C2'-C1'	-5.26	1.45	1.53
35	BB	1257	C	P-O5'	-5.26	1.51	1.59
46	BM	62	LYS	CA-C	-5.26	1.46	1.52
48	BO	51	ALA	C-N	5.26	1.39	1.33
56	BY	70	VAL	C-N	5.26	1.40	1.33
2	AB	17	HIS	CB-CG	5.26	1.57	1.50
18	AR	72	ARG	CD-NE	5.26	1.53	1.46
40	BG	28	LYS	CA-C	-5.26	1.46	1.52
35	BB	1057	A	C4'-C3'	-5.26	1.44	1.52
35	BB	1171	G	P-O5'	5.26	1.67	1.59
35	BB	2033	A	C4'-C3'	5.26	1.61	1.53
35	BB	2751	G	C5'-C4'	5.26	1.59	1.51
36	BC	165	ALA	CA-C	-5.26	1.46	1.52
40	BG	97	VAL	C-O	5.26	1.30	1.24
44	BK	64	ARG	CZ-NH1	5.26	1.40	1.32
44	BK	86	LEU	CA-C	-5.26	1.46	1.52
1	AA	139	A	O3'-P	-5.25	1.53	1.61
12	AL	67	GLY	N-CA	-5.25	1.37	1.45
17	AQ	78	VAL	N-CA	5.25	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	BS	56	ALA	N-CA	-5.25	1.39	1.46
1	AA	1245	C	C2'-C1'	-5.25	1.45	1.53
16	AP	8	ARG	NE-CZ	5.25	1.38	1.33
19	AS	8	PRO	CA-C	5.25	1.59	1.52
32	B7	25	HIS	ND1-CE1	5.25	1.37	1.32
1	AA	283	U	O4'-C1'	-5.25	1.33	1.41
1	AA	1213	A	C6-N6	5.25	1.44	1.33
12	AL	58	ASN	CA-C	-5.25	1.45	1.52
35	BB	956	G	C5'-C4'	5.25	1.59	1.51
35	BB	1628	G	P-O5'	-5.25	1.51	1.59
35	BB	2724	U	C4'-C3'	-5.25	1.44	1.52
35	BB	2872	A	C3'-C2'	5.25	1.60	1.52
46	BM	17	ASN	N-CA	-5.25	1.39	1.45
55	BW	64	VAL	CA-C	-5.25	1.47	1.53
35	BB	733	G	C4'-O4'	5.25	1.53	1.45
46	BM	66	ARG	N-CA	5.25	1.52	1.46
48	BO	100	HIS	CG-ND1	5.25	1.44	1.38
5	AE	152	VAL	C-N	5.25	1.41	1.34
12	AL	45	ASN	N-CA	-5.25	1.42	1.47
16	AP	8	ARG	CA-CB	5.25	1.60	1.53
18	AR	21	ASP	C-N	5.25	1.41	1.33
21	AU	46	ARG	CD-NE	5.25	1.53	1.46
26	B1	46	VAL	C-N	5.25	1.40	1.33
35	BB	142	A	C3'-C2'	5.25	1.60	1.52
36	BC	37	SER	N-CA	5.25	1.52	1.45
1	AA	1321	U	C4'-O4'	-5.25	1.37	1.45
35	BB	249	C	C2'-C1'	5.25	1.60	1.53
35	BB	1534	U	C3'-O3'	5.25	1.50	1.42
35	BB	1873	G	C5'-C4'	5.25	1.59	1.51
35	BB	2107	G	C2'-C1'	-5.25	1.45	1.53
35	BB	2301	C	C2'-C1'	-5.25	1.45	1.53
50	BQ	91	ARG	CD-NE	5.25	1.53	1.46
1	AA	249	U	O5'-C5'	5.25	1.50	1.42
1	AA	601	G	C2'-C1'	-5.25	1.45	1.53
6	AF	11	HIS	CD2-NE2	5.25	1.43	1.37
35	BB	2087	G	C4'-O4'	5.25	1.53	1.45
18	AR	49	LYS	CA-CB	5.24	1.61	1.53
55	BW	60	VAL	CA-CB	5.24	1.59	1.54
1	AA	325	A	C2'-C1'	-5.24	1.45	1.53
35	BB	2013	A	P-O5'	-5.24	1.51	1.59
1	AA	378	G	C4'-C3'	5.24	1.60	1.52
35	BB	226	A	O3'-P	-5.24	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1133	A	C4'-O4'	-5.24	1.37	1.45
10	AJ	24	GLU	N-CA	5.24	1.53	1.46
16	AP	72	ALA	CA-C	-5.24	1.46	1.52
26	B1	11	VAL	N-CA	5.24	1.52	1.46
27	B2	18	LYS	CA-CB	5.24	1.59	1.53
35	BB	163	C	O4'-C1'	5.24	1.49	1.41
35	BB	1922	G	C2'-C1'	-5.24	1.45	1.53
35	BB	230	G	O5'-C5'	5.24	1.50	1.42
35	BB	449	A	P-O5'	-5.24	1.51	1.59
1	AA	31	G	C4'-C3'	-5.23	1.45	1.53
1	AA	41	G	O3'-P	-5.23	1.53	1.61
1	AA	1367	C	C2'-C1'	-5.23	1.45	1.53
3	AC	52	SER	CA-CB	5.23	1.61	1.53
8	AH	10	LEU	CA-C	5.23	1.59	1.52
26	B1	44	LYS	C-O	-5.23	1.18	1.24
33	B8	14	CYS	N-CA	-5.23	1.40	1.46
35	BB	745	G	P-O5'	-5.23	1.51	1.59
35	BB	1356	G	C3'-O3'	5.23	1.50	1.42
1	AA	1113	C	C4'-O4'	5.23	1.53	1.45
25	B0	36	ARG	CD-NE	5.23	1.53	1.46
52	BS	31	GLN	CA-C	-5.23	1.45	1.52
1	AA	1352	C	O5'-C5'	5.23	1.50	1.42
35	BB	291	G	C3'-O3'	5.23	1.50	1.42
35	BB	969	G	O3'-P	-5.23	1.53	1.61
46	BM	89	VAL	N-CA	-5.23	1.39	1.46
8	AH	14	ARG	CZ-NH2	5.23	1.40	1.33
35	BB	1535	A	C2'-C1'	-5.23	1.45	1.53
10	AJ	32	THR	N-CA	-5.23	1.39	1.46
19	AS	16	LYS	N-CA	-5.23	1.39	1.46
35	BB	2007	U	O4'-C1'	5.23	1.49	1.41
37	BD	128	ARG	CD-NE	5.23	1.53	1.46
41	BH	18	GLN	CA-CB	5.23	1.59	1.53
43	BJ	91	GLU	C-N	5.23	1.40	1.33
1	AA	42	G	P-O5'	-5.23	1.51	1.59
1	AA	1491	G	C1'-N9	5.23	1.55	1.48
4	AD	22	SER	N-CA	-5.23	1.39	1.45
35	BB	444	C	C2'-O2'	5.23	1.50	1.42
46	BM	84	LYS	CA-C	-5.23	1.45	1.52
1	AA	367	U	C3'-C2'	-5.22	1.45	1.52
1	AA	541	G	C2'-C1'	-5.22	1.45	1.53
2	AB	29	PHE	CA-CB	5.22	1.60	1.53
16	AP	62	GLY	CA-C	5.22	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	19	A	P-O5'	-5.22	1.51	1.59
35	BB	580	U	C3'-C2'	-5.22	1.45	1.52
35	BB	2179	C	C5'-C4'	5.22	1.59	1.51
35	BB	2489	U	P-O5'	-5.22	1.51	1.59
37	BD	33	ARG	CA-C	-5.22	1.46	1.52
39	BF	154	THR	CA-C	-5.22	1.46	1.52
51	BR	27	ILE	C-N	5.22	1.40	1.33
1	AA	690	G	P-O5'	-5.22	1.51	1.59
3	AC	7	ASN	CA-CB	5.22	1.62	1.53
3	AC	128	MET	C-N	5.22	1.41	1.33
16	AP	68	SER	CA-CB	5.22	1.61	1.53
17	AQ	56	ASP	CA-C	-5.22	1.46	1.52
30	B5	65	LEU	CA-CB	5.22	1.60	1.53
35	BB	473	G	C5'-C4'	5.22	1.59	1.51
35	BB	531	C	C2'-C1'	-5.22	1.45	1.53
35	BB	1901	A	O3'-P	-5.22	1.53	1.61
35	BB	2326	C	C1'-N1	-5.22	1.40	1.48
35	BB	2555	U	C1'-N1	5.22	1.56	1.48
46	BM	92	TRP	N-CA	-5.22	1.40	1.46
48	BO	88	LYS	N-CA	-5.22	1.41	1.46
3	AC	142	ARG	CD-NE	5.22	1.53	1.46
17	AQ	51	GLU	CA-C	-5.22	1.47	1.52
20	AT	76	ALA	N-CA	-5.22	1.40	1.46
34	BA	89	U	C5'-C4'	5.22	1.59	1.51
2	AB	17	HIS	CA-C	-5.22	1.46	1.52
3	AC	34	SER	CA-C	-5.22	1.46	1.52
4	AD	9	LYS	C-O	-5.22	1.17	1.24
12	AL	3	VAL	CA-CB	5.22	1.60	1.54
35	BB	530	G	C4'-C3'	-5.22	1.44	1.52
35	BB	677	A	C5'-C4'	5.22	1.59	1.51
40	BG	153	PRO	CA-C	5.22	1.58	1.52
39	BF	90	LEU	CA-C	-5.22	1.46	1.52
46	BM	103	TYR	CZ-OH	5.22	1.49	1.38
1	AA	686	U	C2-N3	5.22	1.48	1.37
9	AI	94	ARG	CD-NE	5.22	1.53	1.46
14	AN	72	PHE	CA-C	-5.22	1.45	1.52
35	BB	2086	U	C1'-N1	5.22	1.56	1.48
37	BD	120	GLY	N-CA	-5.22	1.40	1.45
39	BF	157	THR	CB-OG1	-5.22	1.35	1.43
46	BM	85	GLY	CA-C	-5.22	1.44	1.51
25	B0	9	LYS	CA-CB	5.21	1.60	1.53
30	B5	53	ARG	CZ-NH1	5.21	1.40	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1476	U	C5'-C4'	5.21	1.59	1.51
37	BD	128	ARG	CZ-NH2	5.21	1.40	1.33
41	BH	131	SER	CA-CB	5.21	1.63	1.53
35	BB	2274	A	O5'-C5'	5.21	1.50	1.42
40	BG	109	SER	CA-CB	5.21	1.61	1.53
44	BK	96	GLY	C-N	5.21	1.41	1.33
49	BP	82	SER	CA-C	-5.21	1.46	1.52
33	B8	24	ARG	CA-C	-5.21	1.46	1.53
35	BB	1161	C	C5'-C4'	5.21	1.59	1.51
35	BB	1857	G	C3'-O3'	-5.21	1.35	1.43
35	BB	2614	A	C4'-O4'	5.21	1.53	1.45
47	BN	80	PHE	C-N	5.21	1.40	1.33
51	BR	48	LYS	CA-C	-5.21	1.46	1.52
1	AA	143	A	O3'-P	-5.21	1.53	1.61
1	AA	716	A	C2'-C1'	-5.21	1.45	1.53
1	AA	984	C	O4'-C1'	5.21	1.49	1.41
35	BB	367	G	C1'-N9	-5.21	1.40	1.48
10	AJ	92	LEU	N-CA	5.21	1.52	1.46
19	AS	52	ASN	CA-CB	5.21	1.60	1.53
35	BB	191	A	C5'-C4'	5.21	1.59	1.51
35	BB	2351	G	O3'-P	-5.21	1.53	1.61
41	BH	45	GLU	CA-C	-5.21	1.46	1.52
45	BL	132	ARG	NE-CZ	5.21	1.38	1.33
45	BL	139	GLY	CA-C	-5.21	1.46	1.52
55	BW	19	ARG	CZ-NH1	5.21	1.40	1.32
5	AE	156	ARG	NE-CZ	5.21	1.38	1.33
6	AF	84	VAL	N-CA	-5.21	1.39	1.46
35	BB	264	C	O3'-P	-5.21	1.53	1.61
35	BB	1833	C	P-O5'	-5.21	1.51	1.59
35	BB	2494	G	O3'-P	-5.21	1.53	1.61
39	BF	177	ARG	CA-CB	5.21	1.61	1.53
44	BK	78	ARG	N-CA	-5.21	1.39	1.46
50	BQ	31	TYR	CA-CB	5.21	1.61	1.53
1	AA	114	U	C2'-C1'	-5.21	1.45	1.53
1	AA	544	G	O3'-P	-5.21	1.53	1.61
1	AA	1189	U	O3'-P	-5.21	1.53	1.61
1	AA	1214	C	C1'-N1	5.21	1.56	1.48
19	AS	41	PRO	CA-CB	-5.21	1.46	1.53
35	BB	721	A	O4'-C1'	-5.20	1.33	1.41
35	BB	1392	A	P-O5'	5.20	1.67	1.59
56	BY	79	ILE	C-O	-5.20	1.18	1.24
17	AQ	74	LEU	CA-CB	5.20	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1226	A	C3'-O3'	5.20	1.50	1.42
1	AA	1276	G	P-O5'	-5.20	1.51	1.59
11	AK	110	THR	N-CA	-5.20	1.39	1.45
12	AL	71	HIS	CG-CD2	-5.20	1.30	1.35
14	AN	20	PHE	N-CA	-5.20	1.39	1.46
33	B8	25	VAL	CA-C	-5.20	1.46	1.52
35	BB	41	C	C1'-N1	5.20	1.56	1.48
35	BB	107	G	C4'-C3'	-5.20	1.44	1.52
35	BB	1999	C	C3'-C2'	-5.20	1.45	1.52
43	BJ	80	HIS	C-O	-5.20	1.17	1.24
1	AA	1410	A	C2'-C1'	-5.20	1.45	1.53
2	AB	207	ARG	CZ-NH1	5.20	1.40	1.32
7	AG	122	GLU	CA-C	-5.20	1.46	1.52
14	AN	43	ALA	C-O	-5.20	1.17	1.24
19	AS	23	GLU	CA-C	-5.20	1.45	1.52
35	BB	1465	G	O3'-P	-5.20	1.53	1.61
35	BB	1566	A	C5'-C4'	5.20	1.59	1.51
35	BB	1974	C	P-O5'	-5.20	1.51	1.59
28	B3	40	HIS	C-N	5.20	1.38	1.33
35	BB	1291	C	C2'-C1'	-5.20	1.45	1.53
35	BB	1794	A	C5'-C4'	5.20	1.59	1.51
1	AA	591	U	C2'-C1'	-5.20	1.45	1.53
9	AI	63	TYR	C-N	5.20	1.40	1.33
35	BB	825	A	C2'-C1'	-5.20	1.45	1.53
35	BB	1896	G	C4'-C3'	5.20	1.60	1.52
35	BB	2144	G	C2'-C1'	5.20	1.60	1.53
39	BF	29	ARG	C-N	5.20	1.40	1.33
1	AA	1415	G	P-O5'	-5.19	1.51	1.59
35	BB	2858	C	C3'-O3'	5.19	1.50	1.42
1	AA	635	A	C2'-C1'	-5.19	1.45	1.53
1	AA	1065	U	P-O5'	5.19	1.67	1.59
9	AI	48	ARG	CZ-NH1	5.19	1.40	1.32
30	B5	93	GLU	C-N	5.19	1.40	1.33
35	BB	580	U	C2'-O2'	-5.19	1.34	1.42
35	BB	1398	C	C2'-O2'	-5.19	1.34	1.42
35	BB	2878	U	C5'-C4'	5.19	1.59	1.51
36	BC	250	GLN	CA-C	-5.19	1.46	1.53
52	BS	96	ILE	N-CA	-5.19	1.40	1.46
30	B5	149	VAL	CA-CB	-5.19	1.47	1.55
35	BB	165	A	O3'-P	-5.19	1.53	1.61
35	BB	429	A	O3'-P	-5.19	1.53	1.61
47	BN	117	ASP	C-N	5.19	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	BR	72	VAL	N-CA	-5.19	1.40	1.46
1	AA	310	G	P-O5'	-5.19	1.51	1.59
16	AP	9	HIS	ND1-CE1	5.19	1.37	1.32
31	B6	17	GLY	C-N	5.19	1.41	1.33
33	B8	34	LYS	C-O	-5.19	1.17	1.24
40	BG	174	LYS	C-O	-5.19	1.17	1.23
49	BP	94	ALA	CA-C	-5.19	1.45	1.52
4	AD	179	GLY	CA-C	-5.19	1.46	1.51
8	AH	108	GLY	CA-C	-5.19	1.45	1.52
35	BB	996	A	C3'-O3'	5.19	1.50	1.42
35	BB	2558	C	C5'-C4'	5.19	1.59	1.51
35	BB	2831	G	N7-C5	-5.19	1.28	1.39
1	AA	33	A	C4'-C3'	5.18	1.60	1.52
1	AA	329	A	O3'-P	-5.18	1.53	1.61
1	AA	908	A	O5'-C5'	5.18	1.50	1.42
1	AA	1482	G	C1'-N9	5.18	1.55	1.48
35	BB	1651	G	C4'-C3'	5.18	1.60	1.52
35	BB	1721	G	C1'-N9	5.18	1.54	1.47
35	BB	2141	G	C5'-C4'	5.18	1.59	1.51
35	BB	2786	U	C2'-C1'	-5.18	1.45	1.53
37	BD	134	HIS	ND1-CE1	5.18	1.37	1.32
38	BE	190	ALA	C-N	5.18	1.40	1.33
41	BH	16	GLY	N-CA	-5.18	1.37	1.45
1	AA	795	C	C1'-N1	5.18	1.56	1.48
12	AL	93	ARG	CA-C	-5.18	1.46	1.52
35	BB	51	G	C5-C6	-5.18	1.31	1.42
35	BB	307	G	C4'-C3'	5.18	1.60	1.52
35	BB	780	G	O3'-P	-5.18	1.53	1.61
35	BB	1202	G	C1'-N9	5.18	1.55	1.48
35	BB	1638	C	O4'-C1'	5.18	1.49	1.41
54	BU	87	GLU	CA-CB	-5.18	1.45	1.53
1	AA	1212	U	C4'-C3'	5.18	1.60	1.52
2	AB	128	LEU	CB-CG	5.18	1.63	1.53
12	AL	98	ARG	NE-CZ	5.18	1.38	1.33
20	AT	3	ILE	CA-CB	-5.18	1.48	1.54
35	BB	757	G	P-O5'	-5.18	1.51	1.59
35	BB	1234	U	C1'-N1	5.18	1.56	1.48
35	BB	2061	G	C4'-C3'	5.18	1.60	1.53
35	BB	2201	G	C2'-O2'	-5.18	1.34	1.42
35	BB	2780	G	P-O5'	-5.18	1.51	1.59
1	AA	689	C	C1'-N1	5.18	1.56	1.48
19	AS	31	ARG	C-N	5.18	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	B0	19	HIS	CE1-NE2	5.18	1.37	1.32
35	BB	137	U	P-O5'	-5.18	1.51	1.59
35	BB	317	G	C3'-C2'	-5.18	1.45	1.52
35	BB	750	A	C5'-C4'	5.18	1.59	1.51
35	BB	2742	G	C2'-C1'	-5.18	1.45	1.53
44	BK	43	ILE	N-CA	5.18	1.52	1.46
50	BQ	47	ARG	CD-NE	5.18	1.53	1.46
35	BB	2256	G	O4'-C1'	5.18	1.49	1.41
1	AA	1189	U	C4'-O4'	-5.18	1.37	1.45
1	AA	1392	G	C5'-C4'	5.18	1.59	1.51
33	B8	2	LYS	C-N	5.18	1.40	1.33
35	BB	2465	C	C5'-C4'	5.18	1.59	1.51
43	BJ	50	THR	C-O	5.18	1.29	1.24
4	AD	36	ALA	N-CA	-5.17	1.38	1.46
10	AJ	9	ARG	NE-CZ	5.17	1.38	1.33
12	AL	11	ARG	NE-CZ	5.17	1.38	1.33
19	AS	15	LEU	N-CA	-5.17	1.40	1.46
35	BB	1385	A	O3'-P	-5.17	1.53	1.61
35	BB	2273	A	C3'-O3'	5.17	1.50	1.42
37	BD	41	ALA	CA-C	-5.17	1.45	1.52
41	BH	82	SER	CA-C	-5.17	1.45	1.52
37	BD	138	LEU	C-O	-5.17	1.17	1.24
40	BG	77	GLY	C-N	5.17	1.40	1.33
35	BB	795	C	O3'-P	5.17	1.69	1.61
37	BD	80	TRP	N-CA	-5.17	1.40	1.46
1	AA	532	A	P-O5'	-5.17	1.51	1.59
1	AA	996	A	O3'-P	-5.17	1.53	1.61
4	AD	96	ARG	C-N	5.17	1.40	1.33
16	AP	68	SER	C-O	-5.17	1.17	1.23
27	B2	37	ARG	CZ-NH1	5.17	1.40	1.32
35	BB	2863	C	P-O5'	-5.17	1.51	1.59
38	BE	23	PHE	CA-CB	5.17	1.61	1.53
56	BY	76	ARG	CZ-NH2	5.17	1.40	1.33
35	BB	880	G	O5'-C5'	5.17	1.50	1.42
35	BB	1767	G	C4'-O4'	5.17	1.53	1.45
35	BB	1776	G	C1'-N9	5.17	1.55	1.48
35	BB	1887	C	O5'-C5'	5.17	1.50	1.42
35	BB	2416	C	O4'-C1'	-5.17	1.33	1.41
11	AK	105	ARG	CZ-NH2	5.17	1.40	1.33
27	B2	15	ARG	NE-CZ	5.17	1.38	1.33
35	BB	889	C	C2'-C1'	-5.17	1.45	1.53
2	AB	223	GLY	CA-C	-5.16	1.44	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	AF	52	ASN	N-CA	-5.16	1.39	1.46
32	B7	25	HIS	CA-C	-5.16	1.46	1.52
35	BB	353	C	C5'-C4'	5.16	1.58	1.51
35	BB	1011	G	C5'-C4'	5.16	1.59	1.51
40	BG	60	GLY	CA-C	-5.16	1.42	1.51
41	BH	133	GLN	C-O	-5.16	1.17	1.23
48	BO	40	ILE	CA-C	-5.16	1.46	1.52
50	BQ	57	ARG	NE-CZ	5.16	1.38	1.33
56	BY	33	GLY	CA-C	-5.16	1.44	1.51
8	AH	34	ALA	C-N	5.16	1.40	1.33
26	B1	41	HIS	ND1-CE1	5.16	1.37	1.32
30	B5	73	VAL	CA-CB	-5.16	1.47	1.54
35	BB	2739	U	P-O5'	5.16	1.67	1.59
35	BB	2009	A	P-O5'	-5.16	1.52	1.59
41	BH	106	ALA	CA-C	-5.16	1.46	1.52
1	AA	592	G	C2-N3	5.16	1.43	1.32
1	AA	872	A	O3'-P	-5.16	1.53	1.61
7	AG	61	PHE	CA-CB	5.16	1.59	1.53
44	BK	29	HIS	CA-C	-5.16	1.48	1.53
50	BQ	60	TRP	CA-C	-5.16	1.46	1.52
35	BB	1435	G	N7-C5	-5.16	1.28	1.39
1	AA	1037	C	C4-N4	5.16	1.44	1.33
35	BB	601	C	C2'-C1'	-5.16	1.45	1.53
35	BB	700	G	C6-N1	5.16	1.49	1.39
35	BB	946	C	C1'-N1	5.16	1.56	1.48
35	BB	2081	U	C2'-C1'	-5.16	1.45	1.53
35	BB	2328	A	C3'-C2'	-5.16	1.45	1.52
35	BB	2428	G	C4'-C3'	5.16	1.60	1.52
36	BC	191	LEU	CA-C	-5.16	1.46	1.52
41	BH	121	VAL	CA-C	-5.16	1.46	1.52
1	AA	429	U	C5'-C4'	5.15	1.59	1.51
6	AF	79	ARG	CD-NE	5.15	1.53	1.46
11	AK	116	PRO	N-CA	-5.15	1.41	1.47
35	BB	1767	G	O5'-C5'	5.15	1.50	1.42
1	AA	180	U	C2'-C1'	-5.15	1.45	1.53
1	AA	904	U	C2-N3	5.15	1.48	1.37
1	AA	1409	C	C4'-C3'	5.15	1.60	1.52
13	AM	38	ILE	N-CA	-5.15	1.40	1.46
35	BB	1141	U	C5'-C4'	5.15	1.59	1.51
35	BB	2105	U	C3'-C2'	5.15	1.60	1.52
37	BD	148	GLN	CA-CB	5.15	1.62	1.53
41	BH	133	GLN	CA-C	5.15	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
47	BN	46	ARG	CZ-NH1	5.15	1.40	1.32
1	AA	428	G	C2'-C1'	-5.15	1.45	1.53
35	BB	1635	A	C2'-O2'	-5.15	1.34	1.42
35	BB	1820	U	C1'-N1	5.15	1.55	1.47
35	BB	1884	G	C4'-C3'	5.15	1.60	1.52
35	BB	2547	A	C2'-C1'	-5.15	1.45	1.53
35	BB	2846	G	C5'-C4'	5.15	1.58	1.51
54	BU	13	LEU	C-N	5.15	1.40	1.33
35	BB	36	G	N7-C5	-5.15	1.28	1.39
35	BB	2322	A	O3'-P	-5.15	1.53	1.61
49	BP	55	HIS	C-O	-5.15	1.18	1.24
1	AA	23	C	P-O5'	-5.15	1.52	1.59
1	AA	517	G	C1'-N9	5.15	1.54	1.47
1	AA	901	A	C2'-C1'	-5.15	1.45	1.53
2	AB	112	ARG	NE-CZ	5.15	1.38	1.33
26	B1	51	ALA	CA-CB	5.15	1.61	1.53
35	BB	673	C	P-O5'	-5.15	1.52	1.59
35	BB	862	G	C5'-C4'	5.15	1.58	1.51
35	BB	1080	A	C4'-O4'	5.15	1.53	1.45
44	BK	98	ARG	N-CA	-5.15	1.39	1.46
1	AA	595	A	C6-N6	5.15	1.44	1.33
30	B5	61	GLY	C-N	5.15	1.40	1.33
35	BB	1817	G	C5'-C4'	5.15	1.58	1.51
35	BB	2033	A	C5'-C4'	5.15	1.59	1.51
35	BB	2562	U	C4'-O4'	-5.15	1.37	1.45
1	AA	785	G	O5'-C5'	5.14	1.50	1.42
1	AA	1178	G	P-O5'	-5.14	1.52	1.59
6	AF	44	ARG	NE-CZ	5.14	1.38	1.33
12	AL	9	LYS	C-N	5.14	1.40	1.33
14	AN	43	ALA	C-N	5.14	1.40	1.33
28	B3	52	LYS	CA-C	-5.14	1.46	1.52
35	BB	1228	G	P-O5'	5.14	1.67	1.59
35	BB	2317	A	P-O5'	-5.14	1.52	1.59
38	BE	167	VAL	N-CA	-5.14	1.40	1.46
38	BE	170	ARG	CZ-NH2	5.14	1.40	1.33
1	AA	1156	G	O3'-P	-5.14	1.53	1.61
11	AK	45	THR	C-N	5.14	1.40	1.34
25	B0	49	ARG	CA-C	-5.14	1.46	1.52
33	B8	12	ARG	C-N	5.14	1.41	1.33
35	BB	1003	G	C1'-N9	-5.14	1.40	1.48
35	BB	1536	C	O5'-C5'	5.14	1.50	1.42
35	BB	2047	C	P-O5'	-5.14	1.52	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1515	A	O5'-C5'	5.14	1.50	1.42
41	BH	90	LEU	CA-C	-5.14	1.45	1.53
51	BR	80	ARG	CZ-NH1	5.14	1.40	1.32
52	BS	4	ILE	CA-C	-5.14	1.46	1.52
54	BU	49	PRO	C-N	5.14	1.40	1.33
1	AA	1121	U	C4'-C3'	5.14	1.60	1.52
20	AT	80	ALA	N-CA	-5.14	1.40	1.46
35	BB	2444	G	C2-N3	5.14	1.43	1.32
9	AI	97	LEU	N-CA	-5.14	1.39	1.46
22	AV	32	A	O3'-P	-5.14	1.53	1.61
33	B8	31	PRO	C-O	5.14	1.30	1.24
35	BB	1023	U	O3'-P	-5.14	1.53	1.61
35	BB	2103	C	C1'-N1	5.14	1.56	1.48
35	BB	2143	C	C3'-O3'	5.14	1.49	1.42
35	BB	2367	G	C1'-N9	5.14	1.55	1.48
35	BB	2529	G	O5'-C5'	5.14	1.50	1.42
1	AA	511	C	O3'-P	-5.13	1.53	1.61
1	AA	682	G	O4'-C1'	-5.13	1.33	1.41
1	AA	1265	C	C2'-C1'	-5.13	1.45	1.53
13	AM	86	ARG	NE-CZ	5.13	1.38	1.33
28	B3	16	ARG	CZ-NH2	5.13	1.40	1.33
35	BB	1015	U	C4'-O4'	5.13	1.53	1.45
35	BB	1420	A	O3'-P	-5.13	1.53	1.61
43	BJ	131	ASN	CA-C	-5.13	1.48	1.52
1	AA	99	C	C1'-N1	5.13	1.56	1.48
35	BB	124	G	C1'-N9	-5.13	1.40	1.48
5	AE	118	GLY	CA-C	-5.13	1.44	1.51
6	AF	20	GLY	CA-C	5.13	1.58	1.52
35	BB	302	C	C2'-C1'	-5.13	1.45	1.53
35	BB	835	C	C5'-C4'	5.13	1.58	1.51
35	BB	1039	A	C3'-O3'	5.13	1.49	1.42
39	BF	36	ASN	C-N	-5.13	1.26	1.33
46	BM	47	GLU	N-CA	-5.13	1.40	1.46
1	AA	622	A	C4'-C3'	5.13	1.60	1.52
3	AC	90	VAL	C-N	5.13	1.40	1.33
12	AL	120	ARG	CD-NE	5.13	1.53	1.46
35	BB	1813	G	C5'-C4'	5.13	1.58	1.51
35	BB	2259	U	O3'-P	-5.13	1.53	1.61
1	AA	803	G	O5'-C5'	5.13	1.50	1.42
2	AB	188	THR	CA-C	-5.13	1.46	1.52
35	BB	249	C	C3'-O3'	-5.13	1.35	1.43
35	BB	524	G	C1'-N9	-5.13	1.40	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	2255	G	P-O5'	-5.13	1.52	1.59
35	BB	2267	A	O4'-C1'	5.13	1.49	1.41
35	BB	2321	U	C5'-C4'	5.13	1.58	1.51
1	AA	1109	C	C4'-O4'	-5.13	1.37	1.45
4	AD	75	TYR	CA-CB	5.13	1.61	1.53
35	BB	242	G	C2'-C1'	-5.13	1.45	1.53
35	BB	1540	G	N1-C2	5.13	1.48	1.37
35	BB	1751	U	C4'-C3'	5.13	1.60	1.52
39	BF	134	GLN	CA-C	-5.13	1.46	1.52
53	BT	10	VAL	CA-CB	-5.13	1.48	1.54
1	AA	221	C	C3'-C2'	-5.12	1.45	1.52
1	AA	1163	A	O3'-P	-5.12	1.53	1.61
4	AD	138	PRO	C-N	5.12	1.40	1.33
13	AM	39	ALA	CA-CB	5.12	1.60	1.53
35	BB	1080	A	O3'-P	-5.12	1.53	1.61
35	BB	1120	G	C3'-C2'	5.12	1.60	1.52
35	BB	1889	A	C3'-C2'	5.12	1.60	1.52
35	BB	2453	A	P-O5'	-5.12	1.52	1.59
1	AA	813	U	C4'-C3'	-5.12	1.44	1.52
9	AI	44	ARG	C-N	5.12	1.40	1.33
13	AM	43	LYS	CA-CB	5.12	1.61	1.53
13	AM	43	LYS	N-CA	-5.12	1.38	1.45
15	AO	79	ARG	CZ-NH2	5.12	1.40	1.33
34	BA	26	C	C1'-N1	5.12	1.56	1.48
36	BC	51	ARG	NE-CZ	5.12	1.38	1.33
50	BQ	99	VAL	CA-CB	-5.12	1.48	1.54
1	AA	95	C	C5'-C4'	5.12	1.58	1.51
1	AA	1071	C	O3'-P	-5.12	1.53	1.61
16	AP	28	ARG	CD-NE	5.12	1.53	1.46
35	BB	1611	C	C1'-N1	5.12	1.56	1.48
48	BO	99	TYR	N-CA	-5.12	1.40	1.46
53	BT	26	LYS	N-CA	-5.12	1.40	1.46
1	AA	545	C	N3-C4	5.12	1.44	1.33
1	AA	656	G	C5'-C4'	5.12	1.58	1.51
17	AQ	67	SER	C-N	5.12	1.40	1.33
35	BB	1410	G	O3'-P	5.12	1.68	1.61
1	AA	264	C	O4'-C1'	5.12	1.49	1.41
35	BB	873	C	O4'-C1'	-5.12	1.33	1.41
35	BB	1164	C	C4'-O4'	5.12	1.53	1.45
35	BB	2195	U	C5'-C4'	5.12	1.58	1.51
35	BB	2595	G	C5'-C4'	5.12	1.58	1.51
6	AF	36	ILE	CA-CB	-5.12	1.47	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	AP	40	ASN	CA-C	5.12	1.56	1.52
35	BB	1130	U	C4'-C3'	5.12	1.60	1.53
46	BM	98	PRO	N-CA	-5.12	1.41	1.47
46	BM	131	VAL	CA-C	-5.12	1.46	1.52
1	AA	298	A	O3'-P	-5.12	1.53	1.61
1	AA	420	U	O3'-P	-5.12	1.53	1.61
1	AA	811	C	O5'-C5'	5.12	1.50	1.42
35	BB	1480	C	O4'-C1'	5.12	1.49	1.41
1	AA	514	C	C3'-C2'	-5.11	1.45	1.52
1	AA	841	C	P-O5'	5.11	1.67	1.59
1	AA	1349	A	O3'-P	-5.11	1.53	1.61
23	AX	16	C	C5'-C4'	5.11	1.58	1.51
30	B5	81	GLY	C-N	-5.11	1.26	1.33
35	BB	1592	C	C2-N3	5.11	1.46	1.35
35	BB	2681	C	C3'-O3'	5.11	1.50	1.43
35	BB	2867	G	C2-N2	5.11	1.44	1.34
38	BE	117	ARG	N-CA	-5.11	1.39	1.46
50	BQ	12	ARG	CZ-NH2	5.11	1.40	1.33
1	AA	980	C	C4'-C3'	-5.11	1.44	1.52
35	BB	1103	A	O4'-C1'	-5.11	1.33	1.41
36	BC	95	TYR	CA-C	-5.11	1.46	1.53
3	AC	33	ASP	N-CA	-5.11	1.40	1.46
10	AJ	31	ARG	CZ-NH1	5.11	1.40	1.32
12	AL	118	VAL	CA-CB	5.11	1.61	1.54
35	BB	104	A	C4'-O4'	5.11	1.53	1.45
35	BB	738	G	O3'-P	-5.11	1.53	1.61
35	BB	757	G	C5'-C4'	5.11	1.58	1.51
35	BB	1677	A	C4'-O4'	-5.11	1.37	1.45
47	BN	15	SER	CA-C	-5.11	1.45	1.52
1	AA	1369	C	C3'-C2'	-5.11	1.45	1.52
35	BB	1131	G	O3'-P	-5.11	1.53	1.61
35	BB	1270	C	C3'-O3'	5.11	1.49	1.42
35	BB	1566	A	C4'-O4'	-5.11	1.38	1.45
52	BS	72	THR	CA-C	-5.11	1.46	1.52
55	BW	58	SER	CA-C	-5.11	1.46	1.52
2	AB	120	SER	CA-C	-5.11	1.46	1.52
38	BE	12	LEU	CA-C	-5.11	1.46	1.52
1	AA	66	A	O5'-C5'	5.10	1.50	1.42
35	BB	1377	G	C4'-C3'	5.10	1.60	1.52
35	BB	1530	G	P-O5'	-5.10	1.52	1.59
1	AA	178	C	C2'-C1'	-5.10	1.45	1.53
2	AB	125	PHE	CG-CD1	5.10	1.49	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AC	166	TRP	NE1-CE2	5.10	1.43	1.37
4	AD	40	HIS	CG-ND1	5.10	1.43	1.38
9	AI	40	ARG	NE-CZ	5.10	1.38	1.33
9	AI	122	ARG	NE-CZ	5.10	1.38	1.33
35	BB	33	C	O5'-C5'	5.10	1.50	1.42
35	BB	752	A	O3'-P	-5.10	1.53	1.61
35	BB	1283	G	C1'-N9	5.10	1.55	1.48
35	BB	1408	G	O5'-C5'	-5.10	1.34	1.42
1	AA	6	G	C1'-N9	-5.10	1.40	1.48
35	BB	1631	G	P-O5'	-5.10	1.52	1.59
1	AA	651	C	C3'-C2'	-5.10	1.45	1.52
4	AD	40	HIS	CE1-NE2	5.10	1.37	1.32
28	B3	38	LEU	CA-CB	5.10	1.60	1.53
35	BB	58	G	C4'-O4'	-5.10	1.38	1.45
35	BB	87	U	C2'-C1'	-5.10	1.45	1.53
35	BB	1775	U	C2-N3	5.10	1.48	1.37
35	BB	1993	U	O5'-C5'	5.10	1.50	1.42
47	BN	13	ASN	C-N	5.10	1.41	1.33
1	AA	503	C	C5'-C4'	5.10	1.58	1.51
1	AA	688	G	P-O5'	-5.10	1.52	1.59
30	B5	202	THR	CA-C	-5.10	1.46	1.52
34	BA	64	G	C3'-O3'	5.10	1.49	1.42
35	BB	1617	C	C2'-C1'	-5.10	1.45	1.53
38	BE	40	ARG	CA-C	-5.10	1.46	1.52
52	BS	27	LYS	CA-CB	-5.10	1.46	1.53
52	BS	105	VAL	C-N	5.10	1.40	1.33
3	AC	168	ARG	CD-NE	5.10	1.53	1.46
28	B3	21	LEU	C-N	5.10	1.40	1.33
35	BB	2612	C	C3'-C2'	5.10	1.60	1.52
1	AA	318	G	O4'-C1'	5.09	1.49	1.41
1	AA	845	A	C2'-C1'	-5.09	1.45	1.53
4	AD	49	ASP	C-N	5.09	1.40	1.33
26	B1	42	LEU	CB-CG	5.09	1.63	1.53
30	B5	3	LYS	C-N	5.09	1.40	1.33
35	BB	425	G	C5-C4	-5.09	1.28	1.38
35	BB	2140	G	C5'-C4'	5.09	1.58	1.51
36	BC	85	ASN	C-N	5.09	1.40	1.33
1	AA	890	G	C4'-O4'	-5.09	1.38	1.45
35	BB	1993	U	C2-N3	5.09	1.48	1.37
4	AD	91	ALA	CA-C	-5.09	1.46	1.52
9	AI	56	MET	C-N	5.09	1.40	1.33
20	AT	3	ILE	C-N	5.09	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1128	G	C4'-C3'	5.09	1.60	1.53
35	BB	2270	A	O3'-P	-5.09	1.53	1.61
35	BB	2309	A	C1'-N9	5.09	1.55	1.48
37	BD	88	GLU	N-CA	-5.09	1.39	1.46
39	BF	144	LYS	N-CA	-5.09	1.39	1.46
50	BQ	69	ARG	CD-NE	5.09	1.53	1.46
53	BT	19	LYS	C-O	-5.09	1.17	1.23
1	AA	143	A	C2'-C1'	5.09	1.60	1.53
12	AL	3	VAL	CA-C	-5.09	1.46	1.52
35	BB	457	A	N7-C5	-5.09	1.29	1.39
35	BB	505	A	N7-C5	-5.09	1.29	1.39
35	BB	1982	U	C4'-O4'	-5.09	1.38	1.45
49	BP	100	ARG	NE-CZ	5.09	1.38	1.33
56	BY	78	PHE	CA-C	-5.09	1.46	1.52
21	AU	29	ALA	CA-C	-5.09	1.46	1.52
1	AA	557	G	C4'-C3'	-5.09	1.45	1.52
1	AA	801	U	C3'-C2'	5.09	1.60	1.52
3	AC	143	LEU	CA-C	-5.09	1.46	1.52
30	B5	15	VAL	CA-CB	5.09	1.61	1.54
34	BA	36	C	C3'-C2'	-5.09	1.45	1.52
35	BB	870	U	C3'-O3'	5.09	1.49	1.42
35	BB	1069	A	C2'-C1'	-5.09	1.45	1.53
35	BB	1473	G	C1'-N9	-5.09	1.40	1.48
44	BK	38	ILE	N-CA	-5.09	1.40	1.46
45	BL	78	ARG	CZ-NH1	5.09	1.39	1.32
54	BU	84	PHE	N-CA	-5.09	1.40	1.46
55	BW	70	ILE	CB-CG1	5.09	1.63	1.53
26	B1	22	LEU	N-CA	-5.08	1.40	1.46
35	BB	665	U	C5'-C4'	5.08	1.58	1.51
35	BB	797	G	C3'-O3'	5.08	1.49	1.42
35	BB	1434	A	C2'-C1'	-5.08	1.45	1.53
38	BE	117	ARG	NE-CZ	5.08	1.38	1.33
41	BH	118	PRO	CA-C	5.08	1.60	1.52
1	AA	433	G	C4'-O4'	-5.08	1.38	1.45
1	AA	1200	C	C1'-N1	5.08	1.55	1.47
35	BB	1861	G	C1'-N9	5.08	1.55	1.48
36	BC	192	GLY	C-O	5.08	1.28	1.23
36	BC	252	LYS	C-N	5.08	1.40	1.33
38	BE	36	ALA	C-N	5.08	1.41	1.34
45	BL	115	GLU	CA-C	-5.08	1.46	1.52
47	BN	3	HIS	CD2-NE2	5.08	1.43	1.37
55	BW	81	PRO	N-CD	-5.08	1.40	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	1594	U	N1-C6	5.08	1.48	1.38
1	AA	893	C	C3'-O3'	5.08	1.49	1.42
1	AA	1248	A	C2'-C1'	-5.08	1.45	1.53
30	B5	227	ALA	CA-C	-5.08	1.46	1.52
35	BB	2870	C	C1'-N1	5.08	1.56	1.48
43	BJ	32	LEU	C-O	-5.08	1.18	1.24
35	BB	414	C	C3'-C2'	-5.08	1.45	1.52
1	AA	892	A	C5'-C4'	-5.08	1.43	1.51
2	AB	195	VAL	CA-CB	5.08	1.59	1.54
12	AL	47	ALA	CA-CB	5.08	1.61	1.53
15	AO	36	ASN	CA-CB	5.08	1.61	1.53
20	AT	73	ARG	C-N	5.08	1.40	1.34
34	BA	16	G	C2'-C1'	-5.08	1.45	1.53
35	BB	5	A	C1'-N9	-5.08	1.40	1.48
35	BB	1228	G	C3'-O3'	5.08	1.49	1.42
35	BB	2362	C	C4'-C3'	5.08	1.60	1.52
54	BU	42	LYS	CA-C	-5.08	1.47	1.53
1	AA	221	C	C5'-C4'	5.07	1.58	1.51
6	AF	88	MET	CA-C	-5.07	1.46	1.52
18	AR	47	ARG	CZ-NH1	5.07	1.39	1.32
19	AS	39	ILE	CA-CB	-5.07	1.48	1.54
34	BA	83	G	C5-C6	-5.07	1.32	1.42
35	BB	1278	C	C4'-O4'	-5.07	1.38	1.45
35	BB	2414	G	P-O5'	-5.07	1.52	1.59
19	AS	39	ILE	CA-C	-5.07	1.46	1.52
36	BC	32	LEU	C-N	5.07	1.40	1.33
39	BF	109	ARG	CA-C	-5.07	1.46	1.52
1	AA	1245	C	P-O5'	-5.07	1.52	1.59
10	AJ	11	LYS	CA-CB	5.07	1.61	1.53
29	B4	7	LYS	C-N	5.07	1.39	1.33
35	BB	1119	U	P-O5'	-5.07	1.52	1.59
35	BB	1535	A	C5'-C4'	5.07	1.58	1.51
35	BB	2145	C	C5'-C4'	5.07	1.58	1.51
35	BB	2381	A	P-O5'	-5.07	1.52	1.59
35	BB	2472	G	C1'-N9	-5.07	1.40	1.48
1	AA	593	U	C5'-C4'	5.07	1.58	1.51
1	AA	619	U	O3'-P	-5.07	1.53	1.61
1	AA	219	U	C4'-O4'	-5.07	1.38	1.45
35	BB	1888	G	O4'-C1'	5.07	1.49	1.41
45	BL	73	ILE	C-N	5.07	1.40	1.33
1	AA	140	U	P-O5'	-5.07	1.52	1.59
1	AA	368	U	O4'-C1'	-5.07	1.34	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	AD	114	ARG	N-CA	-5.07	1.39	1.46
15	AO	30	LEU	CB-CG	5.07	1.63	1.53
35	BB	328	U	C4'-C3'	5.07	1.60	1.52
35	BB	1690	A	C4'-C3'	5.07	1.60	1.52
35	BB	1899	A	C5'-C4'	5.07	1.58	1.51
35	BB	2465	C	O3'-P	-5.07	1.53	1.61
43	BJ	122	LEU	C-N	5.07	1.40	1.33
2	AB	23	ASN	C-N	-5.06	1.29	1.34
34	BA	40	U	C5'-C4'	5.06	1.58	1.51
47	BN	107	ASN	CA-CB	5.06	1.59	1.53
1	AA	814	A	O3'-P	-5.06	1.53	1.61
5	AE	111	ARG	CZ-NH1	5.06	1.39	1.32
30	B5	17	ALA	C-N	5.06	1.40	1.33
35	BB	2295	C	C4'-C3'	5.06	1.60	1.52
35	BB	2797	U	C1'-N1	5.06	1.56	1.48
47	BN	59	SER	CA-C	-5.06	1.46	1.52
1	AA	1226	C	C4-N4	5.06	1.44	1.33
35	BB	1533	C	O5'-C5'	-5.06	1.34	1.42
47	BN	94	TYR	C-N	-5.06	1.27	1.33
1	AA	368	U	C1'-N1	-5.06	1.40	1.48
1	AA	455	G	P-O5'	-5.06	1.52	1.59
1	AA	567	G	C1'-N9	-5.06	1.40	1.48
1	AA	672	U	C5'-C4'	-5.06	1.43	1.51
7	AG	95	ARG	CD-NE	5.06	1.53	1.46
10	AJ	14	ASP	CA-C	-5.06	1.46	1.52
35	BB	350	G	P-O5'	-5.06	1.52	1.59
36	BC	188	ARG	CZ-NH1	5.06	1.39	1.32
37	BD	195	GLY	C-N	5.06	1.40	1.33
38	BE	13	THR	CA-C	-5.06	1.46	1.53
1	AA	586	C	C3'-C2'	-5.06	1.45	1.52
13	AM	90	HIS	CE1-NE2	5.06	1.37	1.32
35	BB	640	C	C1'-N1	5.06	1.56	1.48
35	BB	681	G	C2'-C1'	-5.06	1.45	1.53
35	BB	2006	C	O5'-C5'	5.06	1.50	1.42
35	BB	2430	A	C2'-O2'	-5.06	1.34	1.42
4	AD	73	ASN	N-CA	5.06	1.52	1.46
5	AE	68	ARG	CZ-NH2	5.06	1.40	1.33
35	BB	967	U	C3'-O3'	5.06	1.49	1.42
35	BB	1100	C	P-O5'	5.06	1.67	1.59
39	BF	58	ALA	C-O	-5.06	1.18	1.24
44	BK	62	VAL	CA-C	-5.06	1.46	1.52
50	BQ	63	ARG	CZ-NH2	5.06	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	89	U	C2'-C1'	-5.05	1.45	1.53
1	AA	1142	G	C2'-C1'	-5.05	1.45	1.53
6	AF	55	HIS	CG-CD2	5.05	1.41	1.35
34	BA	51	G	O3'-P	-5.05	1.53	1.61
35	BB	989	G	C2-N2	5.05	1.44	1.34
35	BB	2008	C	C1'-N1	5.05	1.56	1.48
35	BB	2398	U	P-O5'	-5.05	1.52	1.59
43	BJ	5	THR	N-CA	-5.05	1.39	1.45
46	BM	120	ALA	CA-C	-5.05	1.46	1.52
3	AC	35	ASP	C-N	5.05	1.40	1.33
32	B7	37	THR	N-CA	-5.05	1.39	1.46
35	BB	1752	C	P-O5'	-5.05	1.52	1.59
1	AA	264	C	C2'-C1'	-5.05	1.45	1.53
3	AC	149	LYS	N-CA	-5.05	1.40	1.46
35	BB	830	G	C4'-O4'	-5.05	1.38	1.45
35	BB	1377	G	O3'-P	-5.05	1.53	1.61
35	BB	1539	U	O5'-C5'	5.05	1.50	1.42
35	BB	2465	C	C2'-C1'	-5.05	1.45	1.53
37	BD	147	GLY	N-CA	5.05	1.50	1.44
48	BO	26	LEU	CA-C	-5.05	1.46	1.53
10	AJ	70	HIS	CA-CB	5.05	1.61	1.53
12	AL	57	THR	C-N	5.05	1.40	1.33
28	B3	42	ILE	CA-C	5.05	1.58	1.52
35	BB	2358	A	C4'-C3'	5.05	1.60	1.52
39	BF	104	THR	C-N	5.05	1.40	1.33
15	AO	40	GLY	C-N	5.05	1.40	1.33
35	BB	1707	G	C2-N3	5.05	1.42	1.32
35	BB	2109	U	O5'-C5'	5.05	1.50	1.42
4	AD	164	ARG	CA-CB	5.05	1.61	1.53
4	AD	176	LYS	N-CA	-5.05	1.40	1.46
14	AN	44	VAL	C-N	5.05	1.40	1.33
35	BB	103	A	C2'-C1'	-5.05	1.45	1.53
35	BB	135	U	C4'-C3'	5.05	1.60	1.52
35	BB	1109	C	C5'-C4'	5.05	1.58	1.51
35	BB	1564	C	C3'-O3'	5.05	1.49	1.42
35	BB	2795	C	C4'-O4'	5.05	1.53	1.45
1	AA	495	A	C4'-O4'	5.04	1.53	1.45
35	BB	1973	G	P-O5'	-5.04	1.52	1.59
39	BF	88	VAL	CA-C	-5.04	1.46	1.52
1	AA	367	U	O3'-P	-5.04	1.53	1.61
1	AA	476	U	P-O5'	-5.04	1.52	1.59
1	AA	1090	U	C2'-C1'	-5.04	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1491	G	C5'-C4'	5.04	1.58	1.51
35	BB	1147	A	C3'-O3'	5.04	1.49	1.42
35	BB	1972	G	C3'-O3'	5.04	1.49	1.42
40	BG	86	LEU	CA-C	-5.04	1.49	1.53
46	BM	60	GLN	N-CA	-5.04	1.40	1.45
47	BN	26	GLY	C-O	-5.04	1.17	1.23
50	BQ	57	ARG	CD-NE	5.04	1.53	1.46
51	BR	38	VAL	C-N	5.04	1.41	1.33
53	BT	36	LYS	N-CA	-5.04	1.39	1.46
35	BB	369	U	C4'-O4'	-5.04	1.38	1.45
35	BB	1772	A	C3'-O3'	5.04	1.49	1.42
55	BW	93	ARG	NE-CZ	5.04	1.38	1.33
13	AM	25	GLY	N-CA	-5.04	1.41	1.45
39	BF	43	ILE	CA-CB	-5.04	1.48	1.54
1	AA	81	A	P-O5'	-5.04	1.52	1.59
1	AA	487	A	C5'-C4'	5.04	1.58	1.51
1	AA	939	G	O3'-P	-5.04	1.53	1.61
35	BB	964	C	C3'-C2'	-5.04	1.45	1.52
35	BB	1616	A	C2'-C1'	-5.04	1.45	1.53
35	BB	2070	A	C6-N1	5.04	1.45	1.35
35	BB	2869	G	C5'-C4'	5.04	1.58	1.51
26	B1	52	ARG	NE-CZ	5.04	1.38	1.33
35	BB	1084	A	C2'-C1'	-5.04	1.45	1.53
35	BB	1856	U	C5'-C4'	5.04	1.58	1.51
35	BB	2739	U	C5'-C4'	5.04	1.58	1.51
1	AA	55	A	C3'-O3'	5.04	1.49	1.42
1	AA	183	C	C4'-C3'	5.04	1.60	1.52
35	BB	97	C	C1'-N1	5.04	1.56	1.48
43	BJ	138	GLN	CA-C	-5.04	1.46	1.52
47	BN	67	PHE	C-N	5.04	1.41	1.33
1	AA	856	C	C5'-C4'	5.03	1.58	1.51
7	AG	139	ASP	CA-C	-5.03	1.46	1.52
35	BB	2102	G	P-O5'	-5.03	1.52	1.59
35	BB	2296	U	C5'-C4'	5.03	1.58	1.51
41	BH	89	LYS	CA-C	-5.03	1.46	1.52
56	BY	80	SER	C-N	5.03	1.39	1.33
35	BB	443	A	C4'-O4'	-5.03	1.38	1.45
35	BB	1904	G	C4'-C3'	5.03	1.60	1.52
37	BD	155	VAL	N-CA	-5.03	1.40	1.46
47	BN	21	PHE	N-CA	-5.03	1.39	1.46
1	AA	1483	A	C3'-C2'	5.03	1.60	1.52
20	AT	58	ASP	N-CA	5.03	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	B2	16	LEU	N-CA	-5.03	1.37	1.45
35	BB	275	C	C4'-C3'	-5.03	1.45	1.52
35	BB	1146	C	C3'-O3'	5.03	1.49	1.42
35	BB	2790	U	P-O5'	-5.03	1.52	1.59
39	BF	50	ASP	CA-CB	5.03	1.61	1.53
48	BO	87	ILE	CA-CB	-5.03	1.49	1.54
44	BK	84	CYS	CA-CB	5.03	1.61	1.53
2	AB	59	ILE	N-CA	-5.03	1.39	1.46
31	B6	12	ARG	N-CA	5.03	1.52	1.46
35	BB	217	A	P-O5'	-5.03	1.52	1.59
1	AA	564	C	C4'-O4'	5.03	1.53	1.45
1	AA	1334	G	C4'-C3'	5.03	1.60	1.52
1	AA	1389	C	C4-N4	5.03	1.44	1.33
25	B0	32	LEU	N-CA	-5.03	1.39	1.46
35	BB	625	G	O3'-P	-5.03	1.53	1.61
35	BB	1195	G	O3'-P	-5.03	1.53	1.61
35	BB	2331	G	O3'-P	-5.03	1.53	1.61
35	BB	2885	G	N1-C2	5.03	1.47	1.37
1	AA	872	A	C4'-C3'	5.02	1.60	1.53
1	AA	1202	U	O4'-C1'	5.02	1.49	1.41
30	B5	39	VAL	CA-CB	-5.02	1.48	1.54
43	BJ	72	LYS	CA-C	-5.02	1.46	1.52
1	AA	482	A	C2'-C1'	-5.02	1.45	1.53
7	AG	56	SER	C-N	5.02	1.41	1.33
9	AI	14	SER	CA-CB	5.02	1.60	1.53
9	AI	47	VAL	C-N	5.02	1.40	1.33
12	AL	47	ALA	CA-C	-5.02	1.46	1.52
20	AT	33	LYS	N-CA	-5.02	1.39	1.46
35	BB	1375	U	C5'-C4'	5.02	1.58	1.51
35	BB	1621	U	O3'-P	-5.02	1.53	1.61
35	BB	2886	A	C4'-C3'	5.02	1.60	1.52
55	BW	9	ARG	CD-NE	5.02	1.53	1.46
56	BY	37	VAL	N-CA	-5.02	1.40	1.46
1	AA	395	C	C4'-C3'	5.02	1.60	1.52
49	BP	9	GLN	N-CA	5.02	1.52	1.46
1	AA	36	C	C3'-O3'	5.02	1.49	1.42
1	AA	36	C	C4'-C3'	5.02	1.60	1.52
1	AA	971	G	C2-N3	5.02	1.42	1.32
35	BB	13	A	C4'-C3'	5.02	1.60	1.53
50	BQ	99	VAL	N-CA	-5.02	1.40	1.46
1	AA	1154	G	O4'-C1'	-5.02	1.34	1.41
2	AB	212	TYR	N-CA	-5.02	1.39	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	BA	81	G	C3'-C2'	-5.02	1.45	1.52
35	BB	227	A	C5'-C4'	5.02	1.58	1.51
35	BB	1472	C	O3'-P	-5.02	1.53	1.61
35	BB	2422	C	C3'-C2'	-5.02	1.45	1.52
35	BB	2777	G	O3'-P	-5.02	1.53	1.61
40	BG	122	ALA	CA-CB	5.02	1.62	1.53
46	BM	3	GLN	CD-NE2	5.02	1.43	1.33
51	BR	21	ARG	N-CA	-5.02	1.40	1.46
16	AP	48	GLU	N-CA	-5.02	1.39	1.46
51	BR	97	LYS	CA-C	-5.02	1.45	1.52
1	AA	551	U	P-O5'	-5.01	1.52	1.59
1	AA	602	A	O4'-C1'	5.01	1.49	1.41
1	AA	862	C	C4'-C3'	5.01	1.60	1.52
1	AA	979	C	P-O5'	-5.01	1.52	1.59
1	AA	1036	A	C6-N6	5.01	1.44	1.33
18	AR	43	ILE	CA-C	-5.01	1.46	1.52
26	B1	50	VAL	CA-C	5.01	1.60	1.52
35	BB	225	C	O3'-P	-5.01	1.53	1.61
35	BB	1176	U	C5'-C4'	5.01	1.58	1.51
35	BB	1537	G	O3'-P	-5.01	1.53	1.61
35	BB	2069	G	O3'-P	-5.01	1.53	1.61
54	BU	28	LEU	C-N	5.01	1.40	1.34
16	AP	78	VAL	CA-C	-5.01	1.46	1.52
35	BB	308	G	O5'-C5'	5.01	1.50	1.42
35	BB	1814	G	O5'-C5'	5.01	1.50	1.42
35	BB	2364	C	O3'-P	-5.01	1.53	1.61
39	BF	42	ALA	C-O	-5.01	1.20	1.23
44	BK	99	ILE	N-CA	-5.01	1.40	1.46
56	BY	22	VAL	N-CA	-5.01	1.40	1.46
1	AA	550	G	O4'-C1'	5.01	1.49	1.41
5	AE	95	MET	CA-C	-5.01	1.46	1.52
16	AP	47	GLU	CA-CB	5.01	1.62	1.53
35	BB	27	G	O4'-C1'	-5.01	1.34	1.41
35	BB	145	C	O3'-P	5.01	1.68	1.61
35	BB	1592	C	C5'-C4'	5.01	1.58	1.51
35	BB	2022	U	C2'-C1'	-5.01	1.45	1.53
35	BB	2150	C	O3'-P	-5.01	1.53	1.61
35	BB	2500	U	C2'-C1'	-5.01	1.45	1.53
20	AT	35	TYR	C-O	-5.01	1.17	1.24
25	B0	54	GLY	CA-C	-5.01	1.46	1.52
45	BL	51	GLU	N-CA	-5.01	1.41	1.46
35	BB	953	G	P-O5'	-5.01	1.52	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	BB	2702	G	C4'-C3'	-5.01	1.45	1.52
1	AA	106	C	O3'-P	-5.01	1.53	1.61
4	AD	126	GLY	CA-C	5.01	1.60	1.51
14	AN	64	ARG	NE-CZ	5.01	1.38	1.33
35	BB	23	G	C5'-C4'	5.01	1.58	1.51
53	BT	20	ALA	CA-C	-5.00	1.46	1.52
55	BW	5	ASN	N-CA	-5.00	1.40	1.46
1	AA	1007	U	C1'-N1	5.00	1.55	1.48
1	AA	1472	U	C5'-C4'	5.00	1.58	1.51
11	AK	13	LYS	CA-C	-5.00	1.46	1.52
35	BB	438	G	O5'-C5'	5.00	1.50	1.42
35	BB	1405	U	C2'-C1'	-5.00	1.45	1.53
35	BB	1898	U	O3'-P	-5.00	1.53	1.61
35	BB	2236	U	P-O5'	5.00	1.67	1.59
56	BY	33	GLY	C-N	5.00	1.40	1.33
1	AA	790	A	C2'-C1'	-5.00	1.45	1.53
1	AA	998	C	C5'-C4'	5.00	1.58	1.51
35	BB	1666	G	C4'-O4'	5.00	1.53	1.45
35	BB	1750	G	P-O5'	-5.00	1.52	1.59
41	BH	51	ARG	NE-CZ	5.00	1.38	1.33
41	BH	86	ASP	CG-OD1	-5.00	1.15	1.25
51	BR	28	ALA	CA-CB	5.00	1.60	1.53

All (6971) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	85	U	P-O3'-C3'	18.67	148.21	120.20
35	BB	2132	U	P-O3'-C3'	17.26	146.10	120.20
35	BB	2585	U	P-O3'-C3'	15.81	143.91	120.20
30	B5	168	ASN	CA-CB-CG	-14.26	98.34	112.60
11	AK	122	PRO	N-CA-CB	-14.24	95.81	103.22
1	AA	1226	C	P-O3'-C3'	14.05	141.27	120.20
35	BB	2402	U	P-O3'-C3'	13.98	141.17	120.20
1	AA	328	C	P-O3'-C3'	13.54	140.50	120.20
35	BB	1081	U	C5'-C4'-C3'	13.47	136.20	116.00
35	BB	890	C	P-O3'-C3'	13.38	140.27	120.20
35	BB	2336	A	P-O3'-C3'	13.29	140.14	120.20
48	BO	74	VAL	N-CA-C	-13.10	100.32	112.90
35	BB	1551	A	P-O3'-C3'	12.93	139.60	120.20
35	BB	886	A	P-O3'-C3'	12.90	139.54	120.20
11	AK	122	PRO	CA-C-O	-12.78	110.64	120.73
35	BB	1088	A	O4'-C1'-C2'	-12.77	94.83	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	AT	67	HIS	CA-C-N	12.72	137.72	120.54
20	AT	67	HIS	C-N-CA	12.72	137.72	120.54
1	AA	1284	C	P-O3'-C3'	12.67	139.20	120.20
49	BP	3	ILE	N-CA-C	-12.66	98.61	113.42
1	AA	1065	U	P-O3'-C3'	12.63	139.14	120.20
39	BF	104	THR	N-CA-C	-12.60	98.41	114.04
52	BS	33	LEU	N-CA-C	-12.55	96.49	113.18
25	B0	61	LYS	N-CA-C	-12.34	98.00	113.55
35	BB	2624	G	P-O5'-C5'	12.34	139.40	120.90
1	AA	243	A	C2'-C3'-O3'	12.29	127.93	109.50
43	BJ	130	HIS	CA-CB-CG	-12.12	101.68	113.80
18	AR	69	TYR	N-CA-C	-12.10	98.19	113.43
2	AB	186	VAL	N-CA-C	-11.99	92.53	108.35
2	AB	180	ILE	N-CA-C	-11.84	98.45	108.63
34	BA	117	G	P-O3'-C3'	11.65	137.67	120.20
14	AN	42	ASN	CA-CB-CG	-11.60	101.00	112.60
38	BE	171	ASP	CA-CB-CG	11.37	123.97	112.60
43	BJ	7	LYS	N-CA-C	-11.34	98.01	108.22
50	BQ	112	ALA	N-CA-C	-11.12	99.53	113.55
35	BB	900	A	P-O3'-C3'	-11.10	103.55	120.20
30	B5	51	ASP	CA-CB-CG	-11.04	101.56	112.60
35	BB	2601	C	P-O3'-C3'	10.97	136.66	120.20
3	AC	146	LYS	N-CA-C	-10.97	96.90	110.61
10	AJ	63	ASP	CA-CB-CG	10.86	123.46	112.60
34	BA	27	C	P-O5'-C5'	10.79	137.09	120.90
35	BB	187	G	P-O5'-C5'	10.77	137.05	120.90
1	AA	814	A	P-O3'-C3'	10.76	136.34	120.20
39	BF	164	GLU	N-CA-C	-10.66	102.46	114.62
9	AI	71	ILE	N-CA-C	-10.59	101.61	111.67
22	AV	34	G	P-O5'-C5'	10.48	136.62	120.90
1	AA	239	U	P-O5'-C5'	10.47	136.61	120.90
4	AD	152	SER	N-CA-C	-10.47	100.25	113.23
49	BP	20	ARG	CA-C-N	10.45	130.54	119.89
49	BP	20	ARG	C-N-CA	10.45	130.54	119.89
36	BC	261	ARG	N-CA-C	-10.43	99.06	112.93
11	AK	115	ILE	CA-C-O	-10.42	114.52	119.94
14	AN	76	PHE	CA-CB-CG	-10.42	103.38	113.80
25	B0	6	VAL	N-CA-C	-10.42	102.54	112.96
41	BH	35	LYS	N-CA-C	-10.41	97.99	113.61
28	B3	40	HIS	ND1-CG-CD2	10.40	116.50	106.10
30	B5	134	ARG	CA-C-O	10.39	129.89	119.91
55	BW	36	ALA	CA-C-N	10.39	130.49	119.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BW	36	ALA	C-N-CA	10.39	130.49	119.89
39	BF	76	PHE	CA-CB-CG	-10.38	103.42	113.80
1	AA	849	G	P-O5'-C5'	10.35	136.42	120.90
8	AH	14	ARG	CA-C-N	10.33	134.54	120.38
8	AH	14	ARG	C-N-CA	10.33	134.54	120.38
41	BH	31	VAL	CA-C-O	-10.27	114.60	119.94
41	BH	134	VAL	N-CA-C	-10.19	101.90	111.48
35	BB	901	C	P-O5'-C5'	10.18	136.16	120.90
17	AQ	30	HIS	CA-CB-CG	-10.16	103.64	113.80
11	AK	74	LYS	N-CA-C	10.13	123.59	111.33
28	B3	51	ARG	NE-CZ-NH2	10.07	128.26	119.20
38	BE	18	THR	N-CA-C	-10.02	99.86	114.39
35	BB	645	C	C2'-C3'-O3'	10.02	124.52	109.50
29	B4	42	VAL	CA-C-N	10.00	136.56	122.46
29	B4	42	VAL	C-N-CA	10.00	136.56	122.46
35	BB	2282	G	C2'-C3'-O3'	9.99	124.49	109.50
19	AS	13	HIS	CA-CB-CG	-9.99	103.81	113.80
1	AA	314	C	O4'-C1'-N1	9.94	123.42	108.50
4	AD	63	ILE	N-CA-C	-9.93	103.07	111.91
35	BB	933	A	P-O3'-C3'	9.92	135.08	120.20
55	BW	59	GLU	CA-C-N	9.90	133.77	120.50
55	BW	59	GLU	C-N-CA	9.90	133.77	120.50
35	BB	922	C	O4'-C4'-C3'	-9.90	94.10	104.00
30	B5	144	THR	N-CA-CB	9.87	123.71	110.59
56	BY	67	LYS	N-CA-C	-9.85	102.05	114.56
43	BJ	28	LEU	N-CA-C	-9.84	100.82	113.12
35	BB	2152	G	P-O3'-C3'	9.81	134.92	120.20
32	B7	58	ILE	N-CA-C	-9.79	102.75	113.43
48	BO	69	ASP	N-CA-C	-9.76	100.91	112.92
2	AB	169	HIS	CB-CG-CD2	-9.75	118.52	131.20
20	AT	69	ASN	CA-CB-CG	-9.74	102.86	112.60
2	AB	219	THR	N-CA-C	-9.73	100.24	113.18
50	BQ	58	GLN	N-CA-C	-9.70	100.30	112.72
36	BC	186	ASP	CA-CB-CG	-9.67	102.93	112.60
3	AC	14	VAL	N-CA-C	-9.66	95.60	108.35
8	AH	12	ARG	CA-C-N	9.65	132.92	120.56
8	AH	12	ARG	C-N-CA	9.65	132.92	120.56
25	B0	31	ASN	OD1-CG-ND2	9.60	132.20	122.60
29	B4	5	ARG	N-CA-CB	9.60	125.78	110.23
35	BB	2628	C	O4'-C1'-N1	9.59	122.88	108.50
36	BC	84	PRO	N-CA-C	-9.57	102.43	114.68
35	BB	2076	U	O4'-C4'-C3'	-9.57	94.43	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	13	A	P-O3'-C3'	9.56	134.54	120.20
12	AL	74	GLN	N-CA-C	-9.56	95.55	108.74
43	BJ	8	PRO	N-CA-C	-9.55	101.03	114.98
39	BF	4	HIS	CA-CB-CG	9.55	123.35	113.80
7	AG	116	ALA	CA-C-N	9.54	134.31	120.38
7	AG	116	ALA	C-N-CA	9.54	134.31	120.38
2	AB	105	THR	N-CA-C	-9.53	100.52	112.72
43	BJ	114	LEU	N-CA-C	-9.49	100.47	112.90
19	AS	7	GLY	CA-C-N	9.48	129.24	119.76
19	AS	7	GLY	C-N-CA	9.48	129.24	119.76
55	BW	80	HIS	CA-C-N	9.48	129.23	119.56
55	BW	80	HIS	C-N-CA	9.48	129.23	119.56
45	BL	94	THR	N-CA-C	-9.47	101.86	113.41
2	AB	154	GLY	N-CA-C	-9.45	101.84	115.64
35	BB	807	U	C4'-C3'-C2'	-9.44	93.16	102.60
35	BB	2691	C	O4'-C1'-N1	9.44	122.66	108.50
40	BG	113	ASP	CA-CB-CG	-9.44	103.16	112.60
1	AA	42	G	P-O5'-C5'	9.40	135.01	120.90
35	BB	1378	A	P-O5'-C5'	-9.40	106.79	120.90
36	BC	62	ARG	N-CA-C	-9.40	94.64	109.50
35	BB	2159	G	O4'-C1'-C2'	-9.39	98.21	107.60
35	BB	368	A	C4'-C3'-C2'	-9.34	93.26	102.60
5	AE	47	PHE	O-C-N	-9.34	113.43	123.42
49	BP	65	ASN	N-CA-C	-9.33	99.40	110.41
46	BM	71	LYS	CA-C-O	-9.32	112.42	119.32
35	BB	153	U	O4'-C1'-C2'	-9.30	98.30	107.60
35	BB	376	G	P-O5'-C5'	9.30	134.86	120.90
35	BB	814	C	C4'-C3'-C2'	-9.29	93.31	102.60
2	AB	213	LEU	CA-C-N	9.27	130.46	119.99
2	AB	213	LEU	C-N-CA	9.27	130.46	119.99
35	BB	228	C	O4'-C4'-C3'	-9.27	96.83	106.10
16	AP	53	ASP	CA-CB-CG	-9.26	103.34	112.60
2	AB	112	ARG	CA-C-N	9.25	132.67	120.28
2	AB	112	ARG	C-N-CA	9.25	132.67	120.28
25	B0	49	ARG	NE-CZ-NH2	9.24	127.52	119.20
11	AK	117	HIS	CB-CG-CD2	-9.23	119.20	131.20
1	AA	15	G	O4'-C1'-N9	9.21	122.32	108.50
55	BW	63	ILE	N-CA-CB	9.21	122.64	111.31
56	BY	75	ASN	N-CA-CB	9.20	126.04	110.49
35	BB	271	G	C2'-C3'-O3'	9.19	123.29	109.50
1	AA	1368	A	C4'-C3'-C2'	-9.17	93.43	102.60
37	BD	184	ARG	N-CA-C	-9.17	103.20	114.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	AV	73	A	C5'-C4'-C3'	9.16	129.75	116.00
54	BU	92	VAL	N-CA-C	-9.16	94.81	108.46
35	BB	705	A	P-O5'-C5'	9.16	134.63	120.90
1	AA	484	G	P-O3'-C3'	9.15	133.93	120.20
37	BD	127	PHE	CA-CB-CG	9.13	122.94	113.80
35	BB	1452	G	P-O3'-C3'	9.12	133.89	120.20
35	BB	498	G	O4'-C4'-C3'	-9.12	94.88	104.00
35	BB	2076	U	P-O3'-C3'	9.12	133.88	120.20
35	BB	1275	A	P-O3'-C3'	9.11	133.87	120.20
35	BB	908	C	P-O5'-C5'	9.10	134.54	120.90
35	BB	1070	A	C4'-C3'-C2'	-9.08	93.52	102.60
35	BB	322	A	P-O3'-C3'	9.08	133.82	120.20
35	BB	1730	C	C2'-C3'-O3'	9.08	123.11	109.50
35	BB	68	G	O4'-C1'-C2'	-9.07	98.53	107.60
1	AA	1239	A	P-O3'-C3'	9.07	133.81	120.20
35	BB	2560	A	C4'-C3'-O3'	-9.07	99.39	113.00
41	BH	51	ARG	N-CA-C	-9.07	102.35	113.50
44	BK	79	PHE	CA-CB-CG	-9.05	104.75	113.80
1	AA	527	G	O4'-C1'-N9	9.05	122.07	108.50
1	AA	132	C	O4'-C1'-N1	9.04	122.06	108.50
1	AA	1241	G	P-O5'-C5'	9.03	134.45	120.90
3	AC	5	HIS	CA-CB-CG	9.03	122.83	113.80
35	BB	1079	C	C5'-C4'-C3'	-9.03	102.46	116.00
40	BG	89	VAL	CA-C-N	9.01	133.03	121.85
40	BG	89	VAL	C-N-CA	9.01	133.03	121.85
5	AE	40	ASP	N-CA-C	-8.99	103.43	114.75
35	BB	880	G	P-O3'-C3'	8.98	133.66	120.20
39	BF	11	VAL	N-CA-C	-8.97	102.10	110.53
19	AS	36	ARG	N-CA-C	-8.95	101.91	112.92
41	BH	72	ILE	CB-CA-C	-8.95	101.88	110.65
11	AK	117	HIS	N-CA-C	-8.93	100.22	113.61
35	BB	1424	G	C4'-C3'-C2'	-8.92	93.68	102.60
35	BB	2132	U	C4'-C3'-O3'	8.91	126.36	113.00
11	AK	23	HIS	ND1-CE1-NE2	8.90	117.30	108.40
28	B3	48	TYR	N-CA-C	-8.89	104.49	114.62
47	BN	73	ASN	CA-C-N	8.88	133.35	120.38
47	BN	73	ASN	C-N-CA	8.88	133.35	120.38
5	AE	82	HIS	CB-CG-CD2	-8.87	119.67	131.20
22	AV	32	A	P-O3'-C3'	8.86	133.50	120.20
22	AV	72	G	P-O3'-C3'	8.86	133.50	120.20
11	AK	28	ASN	O-C-N	-8.86	114.43	123.29
21	AU	26	GLY	N-CA-C	-8.86	102.78	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	24	VAL	CA-C-O	8.85	130.51	120.42
17	AQ	33	TYR	N-CA-C	-8.85	101.82	114.12
43	BJ	89	PHE	CA-CB-CG	-8.85	104.95	113.80
7	AG	118	ARG	CA-C-N	8.84	134.86	120.63
7	AG	118	ARG	C-N-CA	8.84	134.86	120.63
35	BB	1690	A	O4'-C1'-N9	8.84	121.75	108.50
3	AC	105	VAL	O-C-N	8.83	131.95	122.76
10	AJ	70	HIS	CA-CB-CG	-8.83	104.97	113.80
49	BP	42	PHE	CA-CB-CG	-8.82	104.98	113.80
52	BS	61	ASN	N-CA-CB	8.82	125.39	110.49
2	AB	110	ILE	N-CA-C	-8.81	104.15	112.96
43	BJ	7	LYS	O-C-N	-8.81	113.69	121.71
1	AA	1025	U	P-O5'-C5'	8.81	134.11	120.90
35	BB	2283	C	P-O5'-C5'	8.80	134.10	120.90
35	BB	1352	U	O4'-C1'-N1	8.79	121.69	108.50
36	BC	133	ASN	N-CA-C	-8.79	101.64	114.39
30	B5	90	ALA	N-CA-C	8.79	120.94	111.36
35	BB	1057	A	O4'-C4'-C3'	8.79	112.79	104.00
39	BF	137	PHE	CB-CA-C	-8.79	100.04	110.76
34	BA	31	C	C3'-C2'-O2'	8.77	123.86	110.70
1	AA	1240	U	P-O5'-C5'	-8.74	107.78	120.90
35	BB	1088	A	C2'-C3'-O3'	-8.74	100.59	113.70
2	AB	166	ASP	N-CA-C	-8.73	102.64	113.38
56	BY	75	ASN	OD1-CG-ND2	8.73	131.33	122.60
35	BB	627	A	C5'-C4'-O4'	8.73	122.19	109.10
2	AB	124	THR	N-CA-C	-8.72	102.38	113.72
35	BB	2531	A	C4'-C3'-C2'	-8.72	93.88	102.60
13	AM	57	ASP	N-CA-C	8.70	120.38	111.07
50	BQ	78	PHE	CA-C-N	8.70	132.80	120.53
50	BQ	78	PHE	C-N-CA	8.70	132.80	120.53
28	B3	32	THR	N-CA-C	-8.70	103.51	114.56
30	B5	69	THR	CA-C-N	8.70	129.59	119.94
30	B5	69	THR	C-N-CA	8.70	129.59	119.94
36	BC	182	LYS	CA-C-O	8.69	130.16	120.43
35	BB	2615	U	C4'-C3'-C2'	-8.69	93.91	102.60
9	AI	84	ARG	CA-C-O	8.68	130.07	119.31
35	BB	900	A	O4'-C1'-N9	8.68	121.52	108.50
1	AA	1331	G	P-O5'-C5'	8.68	133.91	120.90
35	BB	1107	G	C5'-C4'-C3'	8.68	129.01	116.00
40	BG	64	ALA	CA-C-N	8.68	129.75	120.03
40	BG	64	ALA	C-N-CA	8.68	129.75	120.03
53	BT	44	LYS	N-CA-C	-8.67	100.82	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AI	45	MET	CA-C-N	8.67	132.33	120.46
9	AI	45	MET	C-N-CA	8.67	132.33	120.46
44	BK	82	ASN	N-CA-C	-8.67	100.68	112.03
28	B3	51	ARG	N-CA-CB	8.66	125.12	110.49
1	AA	979	C	P-O3'-C3'	8.66	133.19	120.20
4	AD	31	CYS	N-CA-C	-8.64	96.26	109.14
4	AD	203	TYR	N-CA-C	8.64	122.81	111.75
51	BR	88	GLY	CA-C-O	-8.64	113.39	120.91
1	AA	736	C	P-O5'-C5'	-8.64	107.95	120.90
35	BB	2090	A	P-O5'-C5'	-8.63	107.95	120.90
43	BJ	48	VAL	CA-C-N	8.63	132.99	120.82
43	BJ	48	VAL	C-N-CA	8.63	132.99	120.82
35	BB	1659	G	C4'-C3'-C2'	-8.62	93.98	102.60
36	BC	245	THR	CA-C-N	8.62	128.35	119.56
36	BC	245	THR	C-N-CA	8.62	128.35	119.56
1	AA	304	U	O4'-C1'-N1	8.60	121.40	108.50
35	BB	1542	U	O4'-C1'-N1	8.60	121.40	108.50
36	BC	242	HIS	CA-CB-CG	-8.60	105.20	113.80
31	B6	19	ARG	NE-CZ-NH2	8.59	126.93	119.20
44	BK	117	SER	N-CA-C	-8.59	103.32	113.88
43	BJ	47	HIS	ND1-CE1-NE2	8.58	116.98	108.40
31	B6	21	ARG	NE-CZ-NH1	-8.57	112.93	121.50
10	AJ	98	VAL	N-CA-CB	8.57	120.06	110.72
35	BB	1569	A	C5'-C4'-C3'	-8.57	103.14	116.00
45	BL	52	GLY	N-CA-C	-8.56	101.57	111.85
35	BB	1925	C	P-O5'-C5'	8.56	133.74	120.90
12	AL	45	ASN	N-CA-C	-8.55	101.23	113.21
10	AJ	86	ALA	O-C-N	-8.55	111.06	122.43
9	AI	52	GLU	N-CA-C	-8.54	102.77	113.02
1	AA	215	C	C4'-C3'-C2'	-8.54	94.06	102.60
16	AP	68	SER	O-C-N	-8.53	112.95	122.84
4	AD	77	GLU	N-CA-C	-8.53	103.39	113.88
35	BB	2193	G	O4'-C4'-C3'	-8.53	95.47	104.00
43	BJ	109	LEU	CA-C-N	8.52	129.18	120.14
43	BJ	109	LEU	C-N-CA	8.52	129.18	120.14
11	AK	122	PRO	O-C-N	8.52	125.16	121.15
1	AA	72	A	P-O5'-C5'	8.52	133.68	120.90
8	AH	48	PHE	CA-CB-CG	8.52	122.32	113.80
4	AD	169	TRP	N-CA-C	-8.52	99.45	113.50
9	AI	43	ALA	N-CA-C	8.51	121.32	111.11
4	AD	24	VAL	N-CA-C	-8.51	102.86	111.88
35	BB	2452	C	P-O5'-C5'	-8.51	108.14	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BQ	40	LYS	CA-C-N	8.50	131.87	120.65
50	BQ	40	LYS	C-N-CA	8.50	131.87	120.65
35	BB	1128	G	C3'-C2'-C1'	8.49	110.00	101.50
9	AI	105	ARG	N-CA-C	-8.49	97.92	110.48
16	AP	78	VAL	N-CA-C	-8.48	104.90	113.47
35	BB	2603	G	C5'-C4'-C3'	-8.48	103.28	116.00
7	AG	14	ASP	CA-CB-CG	8.47	121.07	112.60
35	BB	686	U	O5'-C5'-C4'	-8.47	98.99	111.70
41	BH	65	ALA	CA-C-N	8.46	133.17	120.31
41	BH	65	ALA	C-N-CA	8.46	133.17	120.31
45	BL	136	GLU	N-CA-CB	8.46	123.41	110.80
12	AL	3	VAL	N-CA-C	8.46	118.54	110.42
35	BB	1462	C	O4'-C1'-N1	8.45	121.18	108.50
35	BB	1994	C	O4'-C1'-N1	8.45	121.18	108.50
9	AI	75	ALA	CA-C-N	8.45	129.36	119.98
9	AI	75	ALA	C-N-CA	8.45	129.36	119.98
35	BB	1818	U	O4'-C4'-C3'	8.45	112.45	104.00
21	AU	46	ARG	N-CA-C	-8.45	103.16	113.97
40	BG	2	ARG	NE-CZ-NH2	8.43	126.79	119.20
35	BB	483	A	O4'-C1'-N9	8.43	121.14	108.50
35	BB	2425	A	C2'-C3'-O3'	8.43	122.14	109.50
9	AI	53	LEU	N-CA-C	-8.42	101.12	111.40
35	BB	1115	G	O5'-C5'-C4'	-8.42	98.87	111.50
1	AA	51	A	C2'-C3'-O3'	8.41	122.12	109.50
7	AG	45	ALA	N-CA-C	-8.41	102.61	113.12
47	BN	21	PHE	N-CA-C	-8.41	101.50	112.68
9	AI	3	ASN	CA-CB-CG	8.40	121.00	112.60
40	BG	143	VAL	CA-C-N	8.40	131.36	120.44
40	BG	143	VAL	C-N-CA	8.40	131.36	120.44
1	AA	51	A	O4'-C1'-C2'	8.39	114.19	105.80
29	B4	8	ILE	N-CA-C	-8.38	96.43	108.42
35	BB	888	C	O4'-C4'-C3'	-8.38	95.62	104.00
35	BB	948	C	O4'-C1'-N1	8.38	121.07	108.50
25	B0	68	ALA	O-C-N	8.38	130.70	122.07
41	BH	64	ALA	CA-C-N	8.38	131.85	120.54
41	BH	64	ALA	C-N-CA	8.38	131.85	120.54
8	AH	31	LEU	CA-C-O	8.38	129.62	120.82
32	B7	40	LYS	CA-C-O	-8.38	111.67	120.55
7	AG	139	ASP	N-CA-C	-8.37	105.08	114.62
3	AC	174	LEU	N-CA-C	-8.37	100.15	110.61
17	AQ	33	TYR	N-CA-CB	8.36	122.42	110.88
7	AG	7	GLY	N-CA-C	-8.36	99.37	112.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	BT	66	LYS	N-CA-C	-8.34	96.53	108.96
1	AA	785	G	O5'-C5'-C4'	-8.34	98.99	111.50
7	AG	46	LEU	N-CA-C	8.34	121.42	111.33
11	AK	96	ILE	CA-C-N	8.33	131.80	120.38
11	AK	96	ILE	C-N-CA	8.33	131.80	120.38
1	AA	183	C	O4'-C4'-C3'	-8.33	95.67	104.00
38	BE	172	ALA	N-CA-CB	8.33	122.61	110.20
47	BN	117	ASP	CA-CB-CG	-8.33	104.27	112.60
35	BB	1089	A	P-O5'-C5'	8.32	133.39	120.90
35	BB	670	A	P-O3'-C3'	8.32	132.68	120.20
4	AD	110	ARG	CA-C-N	8.31	131.24	120.44
4	AD	110	ARG	C-N-CA	8.31	131.24	120.44
3	AC	33	ASP	CA-C-N	8.30	131.75	120.54
3	AC	33	ASP	C-N-CA	8.30	131.75	120.54
39	BF	140	ILE	N-CA-C	-8.30	103.08	111.88
1	AA	863	U	O3'-P-O5'	-8.29	91.56	104.00
8	AH	91	LEU	N-CA-C	-8.29	99.36	109.72
5	AE	157	GLY	O-C-N	8.29	130.15	122.19
52	BS	53	SER	N-CA-C	-8.27	93.19	110.80
1	AA	23	C	P-O5'-C5'	8.26	133.29	120.90
14	AN	57	SER	CA-C-O	-8.26	112.15	120.82
35	BB	2476	A	C5'-C4'-C3'	-8.25	103.62	116.00
43	BJ	127	GLY	N-CA-C	-8.25	101.13	112.18
9	AI	49	GLN	N-CA-C	8.25	123.97	112.75
35	BB	2175	C	O4'-C1'-N1	8.25	120.87	108.50
1	AA	575	G	C5'-C4'-O4'	8.24	121.46	109.10
29	B4	51	ALA	N-CA-C	-8.24	104.10	114.56
1	AA	1453	G	O4'-C1'-N9	8.23	120.85	108.50
2	AB	138	ARG	O-C-N	8.23	130.59	122.03
35	BB	2765	A	C5'-C4'-C3'	-8.23	103.66	116.00
35	BB	1350	C	O4'-C1'-N1	8.22	120.83	108.50
3	AC	127	VAL	CA-C-N	8.22	137.24	121.54
3	AC	127	VAL	C-N-CA	8.22	137.24	121.54
35	BB	227	A	P-O3'-C3'	8.22	132.53	120.20
36	BC	217	PRO	N-CA-C	8.22	124.18	111.11
35	BB	1993	U	P-O5'-C5'	-8.21	108.58	120.90
35	BB	29	U	P-O3'-C3'	-8.21	107.88	120.20
22	AV	32	A	C4'-C3'-O3'	-8.20	100.70	113.00
35	BB	2334	U	C2'-C3'-O3'	8.20	121.81	109.50
53	BT	59	ASN	OD1-CG-ND2	8.20	130.80	122.60
15	AO	38	LEU	N-CA-C	-8.19	104.43	114.75
35	BB	2060	A	P-O5'-C5'	-8.19	108.61	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1868	C	O4'-C1'-N1	8.19	120.78	108.50
7	AG	128	GLU	N-CA-C	-8.18	103.31	113.38
35	BB	1330	C	P-O5'-C5'	-8.18	108.63	120.90
35	BB	1575	C	O4'-C1'-N1	8.18	120.77	108.50
1	AA	306	A	P-O5'-C5'	8.18	133.16	120.90
35	BB	334	C	C4'-C3'-C2'	-8.18	94.42	102.60
35	BB	555	G	C3'-C2'-C1'	8.18	109.47	101.30
35	BB	1393	A	C4'-C3'-C2'	-8.17	94.43	102.60
40	BG	74	MET	CA-C-N	8.16	130.84	120.56
40	BG	74	MET	C-N-CA	8.16	130.84	120.56
20	AT	30	PHE	CA-C-N	8.15	132.00	120.42
20	AT	30	PHE	C-N-CA	8.15	132.00	120.42
35	BB	210	C	O4'-C1'-N1	8.15	120.73	108.50
35	BB	1520	U	O4'-C1'-N1	8.14	120.71	108.50
35	BB	613	A	C5'-C4'-O4'	8.13	122.00	109.80
1	AA	121	U	O4'-C1'-N1	8.12	120.68	108.50
41	BH	53	GLU	N-CA-C	-8.12	101.00	112.13
35	BB	669	G	P-O5'-C5'	-8.12	108.72	120.90
50	BQ	69	ARG	CA-C-N	8.12	131.50	120.38
50	BQ	69	ARG	C-N-CA	8.12	131.50	120.38
35	BB	2136	G	C4'-C3'-C2'	-8.12	94.48	102.60
52	BS	34	ASP	CB-CA-C	-8.12	98.14	110.88
10	AJ	84	VAL	N-CA-CB	8.10	121.56	110.54
15	AO	15	GLY	CA-C-O	-8.10	114.21	122.56
2	AB	78	ALA	N-CA-C	-8.10	101.91	112.68
35	BB	1688	U	O3'-P-O5'	-8.10	91.86	104.00
1	AA	759	A	O3'-P-O5'	8.09	116.14	104.00
31	B6	18	PHE	N-CA-C	-8.09	101.73	111.69
35	BB	680	C	O5'-C5'-C4'	-8.09	99.37	111.50
1	AA	366	A	C2'-C3'-O3'	8.09	121.63	109.50
30	B5	227	ALA	N-CA-C	8.09	119.78	110.97
51	BR	84	ARG	NE-CZ-NH2	8.09	126.48	119.20
35	BB	218	A	C4'-C3'-C2'	-8.08	94.52	102.60
1	AA	1413	A	O4'-C1'-N9	8.08	120.62	108.50
35	BB	1237	A	C3'-C2'-C1'	8.08	109.38	101.30
49	BP	99	LEU	N-CA-C	-8.08	103.44	113.38
3	AC	113	LYS	N-CA-C	8.07	120.99	111.71
9	AI	89	TYR	N-CA-C	-8.07	105.42	114.62
53	BT	8	LEU	N-CA-C	-8.06	100.37	112.54
3	AC	152	VAL	N-CA-C	-8.06	97.71	108.35
8	AH	35	ILE	N-CA-C	-8.06	103.00	110.82
35	BB	816	C	C4'-C3'-O3'	-8.06	100.91	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	574	A	P-O5'-C5'	8.05	132.98	120.90
38	BE	130	LYS	N-CA-C	-8.05	93.65	110.80
35	BB	1488	C	C5'-C4'-C3'	8.05	128.08	116.00
1	AA	415	A	C5'-C4'-C3'	-8.05	103.93	116.00
1	AA	410	G	O4'-C1'-N9	8.05	120.57	108.50
39	BF	174	PHE	N-CA-C	-8.05	95.71	109.15
1	AA	1170	A	C4'-C3'-C2'	-8.04	94.56	102.60
56	BY	56	HIS	ND1-CG-CD2	8.04	114.14	106.10
1	AA	108	G	C4'-C3'-O3'	-8.04	100.94	113.00
35	BB	2247	A	O4'-C1'-N9	8.04	120.56	108.50
52	BS	7	HIS	CA-C-O	8.04	128.84	120.40
26	B1	4	LYS	CA-C-N	8.04	131.39	120.38
26	B1	4	LYS	C-N-CA	8.04	131.39	120.38
33	B8	37	GLN	N-CA-C	-8.03	95.41	109.06
35	BB	1498	C	O4'-C4'-C3'	-8.03	95.97	104.00
44	BK	90	ASN	CA-CB-CG	-8.03	104.57	112.60
1	AA	279	A	P-O3'-C3'	8.02	132.23	120.20
37	BD	86	GLU	N-CA-C	-8.02	97.00	108.96
35	BB	99	U	P-O3'-C3'	8.02	132.23	120.20
46	BM	75	GLU	N-CA-C	-8.02	94.50	108.69
1	AA	1225	A	C3'-C2'-C1'	8.01	109.51	101.50
35	BB	1083	U	P-O5'-C5'	-8.01	108.88	120.90
40	BG	114	HIS	CA-CB-CG	-8.01	105.79	113.80
8	AH	42	GLU	CA-C-N	8.01	137.11	121.41
8	AH	42	GLU	C-N-CA	8.01	137.11	121.41
37	BD	83	ARG	NE-CZ-NH1	-8.01	113.49	121.50
43	BJ	27	ARG	N-CA-C	-8.01	101.60	113.61
35	BB	1393	A	O4'-C4'-C3'	8.01	112.01	104.00
35	BB	2683	C	C4'-C3'-C2'	-8.00	94.60	102.60
50	BQ	43	GLN	CA-C-N	8.00	130.84	120.44
50	BQ	43	GLN	C-N-CA	8.00	130.84	120.44
52	BS	34	ASP	CA-CB-CG	-8.00	104.60	112.60
35	BB	1822	C	P-O3'-C3'	-8.00	108.21	120.20
52	BS	46	LEU	N-CA-C	-8.00	103.47	113.55
7	AG	69	ARG	CB-CA-C	7.99	119.79	108.68
35	BB	1972	G	O5'-C5'-C4'	-7.99	99.51	111.50
1	AA	945	G	P-O5'-C5'	7.99	132.89	120.90
35	BB	205	G	C4'-C3'-C2'	-7.98	94.62	102.60
35	BB	2161	C	O4'-C4'-C3'	-7.97	96.03	104.00
55	BW	15	GLY	CA-C-N	7.97	131.30	120.38
55	BW	15	GLY	C-N-CA	7.97	131.30	120.38
35	BB	696	G	C4'-C3'-C2'	-7.97	94.63	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BQ	13	HIS	CA-C-N	7.96	131.60	120.29
50	BQ	13	HIS	C-N-CA	7.96	131.60	120.29
28	B3	9	ARG	CA-C-N	7.96	131.86	120.79
28	B3	9	ARG	C-N-CA	7.96	131.86	120.79
53	BT	84	TYR	CA-C-N	7.96	131.37	120.46
53	BT	84	TYR	C-N-CA	7.96	131.37	120.46
35	BB	2174	C	O5'-C5'-C4'	-7.96	99.56	111.50
53	BT	30	ILE	CB-CA-C	7.96	122.60	110.82
35	BB	1969	A	O3'-P-O5'	-7.95	92.08	104.00
1	AA	1185	G	O4'-C1'-C2'	-7.94	99.66	107.60
13	AM	21	ILE	CA-C-N	7.94	136.71	121.54
13	AM	21	ILE	C-N-CA	7.94	136.71	121.54
35	BB	1376	C	O4'-C1'-N1	7.94	120.41	108.50
35	BB	1910	G	O4'-C1'-N9	7.94	120.42	108.50
37	BD	94	GLN	N-CA-C	-7.94	105.56	114.62
7	AG	132	THR	N-CA-C	7.94	122.39	112.87
1	AA	372	C	C2'-C3'-O3'	7.93	121.40	109.50
36	BC	229	HIS	CA-C-N	7.93	128.00	119.28
36	BC	229	HIS	C-N-CA	7.93	128.00	119.28
25	B0	64	ASP	O-C-N	7.93	133.13	122.59
36	BC	16	VAL	N-CA-C	-7.92	97.02	108.11
35	BB	862	G	C4'-C3'-C2'	-7.92	94.68	102.60
41	BH	144	VAL	CA-C-O	-7.92	112.41	121.44
30	B5	232	SER	CA-C-N	7.91	133.28	120.30
30	B5	232	SER	C-N-CA	7.91	133.28	120.30
25	B0	63	ILE	N-CA-C	7.91	118.46	110.23
35	BB	1388	G	O5'-C5'-C4'	-7.91	99.64	111.50
1	AA	995	C	C1'-C2'-O2'	7.90	120.25	108.40
17	AQ	4	ILE	N-CA-C	-7.90	103.50	111.88
35	BB	57	C	C3'-C2'-C1'	7.90	109.20	101.30
35	BB	1506	U	P-O5'-C5'	7.90	132.75	120.90
5	AE	82	HIS	CB-CG-ND1	7.90	134.54	122.70
1	AA	552	U	C1'-C2'-O2'	7.89	120.23	108.40
35	BB	406	G	P-O5'-C5'	-7.89	109.06	120.90
9	AI	42	THR	N-CA-C	-7.89	101.49	112.45
1	AA	1416	G	P-O5'-C5'	7.88	132.72	120.90
1	AA	29	U	C3'-C2'-C1'	7.88	109.18	101.30
44	BK	119	ALA	O-C-N	-7.88	116.28	121.88
16	AP	35	ARG	CA-C-O	-7.88	113.74	122.01
25	B0	66	VAL	N-CA-C	-7.88	102.41	111.00
2	AB	111	LYS	CA-C-N	7.88	130.68	120.44
2	AB	111	LYS	C-N-CA	7.88	130.68	120.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1533	C	P-O5'-C5'	7.88	132.71	120.90
35	BB	1046	A	C5'-C4'-O4'	7.87	120.91	109.10
1	AA	328	C	C2'-C3'-O3'	7.87	121.30	109.50
35	BB	567	U	C4'-C3'-C2'	-7.87	94.73	102.60
1	AA	1225	A	C1'-O4'-C4'	7.87	117.57	109.70
15	AO	74	VAL	CA-C-O	-7.86	113.23	121.41
32	B7	59	ALA	N-CA-C	-7.86	103.27	113.17
35	BB	1535	A	C5'-C4'-O4'	7.86	120.89	109.10
35	BB	1205	A	P-O3'-C3'	7.86	131.99	120.20
28	B3	55	ALA	N-CA-C	-7.86	100.54	113.50
35	BB	772	C	C4'-C3'-O3'	-7.85	101.22	113.00
41	BH	3	VAL	N-CA-C	-7.85	97.20	108.42
1	AA	815	A	C2'-C3'-O3'	7.84	121.26	109.50
35	BB	1571	A	C4'-C3'-C2'	-7.84	94.76	102.60
39	BF	51	ASN	CA-CB-CG	-7.84	104.76	112.60
31	B6	3	ARG	CA-C-N	7.83	131.10	120.44
31	B6	3	ARG	C-N-CA	7.83	131.10	120.44
35	BB	520	G	P-O5'-C5'	-7.83	109.15	120.90
35	BB	1344	U	P-O5'-C5'	7.83	132.65	120.90
1	AA	60	A	C4'-C3'-C2'	-7.83	94.77	102.60
51	BR	97	LYS	N-CA-C	-7.83	104.33	114.04
1	AA	1358	U	C5'-C4'-C3'	-7.83	104.26	116.00
35	BB	1551	A	C4'-C3'-C2'	-7.83	94.77	102.60
46	BM	101	VAL	N-CA-CB	7.82	120.98	110.26
52	BS	47	VAL	N-CA-C	-7.82	101.51	113.16
1	AA	835	U	C5'-C4'-C3'	-7.82	104.27	116.00
35	BB	2767	C	C4'-C3'-C2'	-7.82	94.78	102.60
30	B5	23	ILE	N-CA-C	7.82	118.59	110.62
55	BW	30	ILE	N-CA-C	-7.81	97.20	108.53
35	BB	13	A	C1'-O4'-C4'	7.81	117.51	109.70
27	B2	46	MET	O-C-N	7.81	130.12	122.07
35	BB	2893	A	C4'-C3'-C2'	-7.80	94.80	102.60
25	B0	70	LEU	CA-C-N	7.80	133.73	120.71
25	B0	70	LEU	C-N-CA	7.80	133.73	120.71
35	BB	1289	C	O4'-C1'-N1	7.79	120.19	108.50
35	BB	1800	C	C3'-C2'-O2'	-7.79	102.91	114.60
35	BB	1282	U	O4'-C1'-N1	7.79	120.19	108.50
35	BB	2367	G	P-O5'-C5'	7.79	132.59	120.90
47	BN	69	ARG	N-CA-C	-7.79	104.38	114.04
54	BU	39	ASN	CB-CA-C	-7.79	97.00	110.17
51	BR	45	GLU	N-CA-C	-7.79	103.80	113.38
35	BB	2012	G	C4'-C3'-C2'	-7.79	94.81	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	732	C	C4'-C3'-O3'	-7.78	101.33	113.00
35	BB	2107	G	O3'-P-O5'	-7.78	92.33	104.00
35	BB	2165	C	P-O3'-C3'	7.78	131.87	120.20
35	BB	1919	A	O4'-C4'-C3'	-7.77	96.23	104.00
47	BN	56	LYS	N-CA-C	-7.77	103.38	113.17
1	AA	1469	C	O4'-C1'-N1	7.77	120.15	108.50
20	AT	42	ASP	CA-C-N	7.77	131.03	120.54
20	AT	42	ASP	C-N-CA	7.77	131.03	120.54
21	AU	27	VAL	N-CA-C	-7.77	105.13	111.81
35	BB	9	G	O4'-C1'-N9	7.76	120.14	108.50
39	BF	48	LEU	CA-C-N	7.76	130.99	120.44
39	BF	48	LEU	C-N-CA	7.76	130.99	120.44
35	BB	2447	G	P-O3'-C3'	7.76	131.84	120.20
35	BB	558	U	C4'-C3'-C2'	-7.75	94.84	102.60
35	BB	2085	U	O4'-C1'-N1	7.75	120.12	108.50
1	AA	699	C	C4'-C3'-C2'	-7.75	94.85	102.60
35	BB	2713	U	P-O5'-C5'	-7.75	109.28	120.90
7	AG	147	ASN	N-CA-C	-7.74	100.93	110.61
35	BB	965	C	C5'-C4'-C3'	-7.74	104.39	116.00
35	BB	1058	U	O4'-C1'-N1	7.74	120.11	108.50
35	BB	2461	A	O4'-C1'-C2'	-7.73	99.87	107.60
35	BB	2799	A	O4'-C4'-C3'	-7.73	98.37	106.10
45	BL	7	SER	CA-C-N	7.73	128.20	119.93
45	BL	7	SER	C-N-CA	7.73	128.20	119.93
50	BQ	94	LEU	N-CA-C	-7.73	102.91	112.88
1	AA	797	C	O4'-C1'-N1	7.73	120.09	108.50
35	BB	2192	U	C5'-C4'-C3'	-7.73	104.41	116.00
36	BC	202	ARG	CA-C-O	-7.73	113.36	121.55
1	AA	310	G	O4'-C4'-C3'	-7.73	96.27	104.00
35	BB	83	A	P-O5'-C5'	7.72	132.48	120.90
1	AA	1321	U	P-O5'-C5'	7.72	132.48	120.90
48	BO	88	LYS	N-CA-C	-7.72	100.77	113.50
39	BF	167	ALA	CA-C-N	7.71	130.95	120.54
39	BF	167	ALA	C-N-CA	7.71	130.95	120.54
1	AA	330	C	C4'-C3'-C2'	-7.71	94.89	102.60
30	B5	176	GLY	O-C-N	-7.71	115.52	124.15
1	AA	1437	A	O4'-C1'-C2'	-7.71	99.89	107.60
22	AV	4	C	C2'-C3'-O3'	7.71	121.06	109.50
35	BB	371	A	P-O3'-C3'	7.71	131.76	120.20
41	BH	144	VAL	O-C-N	7.71	131.01	122.92
47	BN	67	PHE	N-CA-C	-7.70	102.98	113.30
35	BB	1088	A	O4'-C1'-N9	7.70	120.05	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	669	G	C2'-C3'-O3'	7.70	121.05	109.50
35	BB	568	U	P-O5'-C5'	7.70	132.45	120.90
35	BB	2462	C	C4'-C3'-C2'	-7.69	94.91	102.60
28	B3	4	GLN	N-CA-C	-7.69	97.60	109.52
2	AB	100	LEU	N-CA-C	-7.68	102.08	113.61
48	BO	7	ARG	CA-C-N	7.68	130.83	120.77
48	BO	7	ARG	C-N-CA	7.68	130.83	120.77
9	AI	51	LEU	N-CA-C	-7.68	104.06	113.50
20	AT	74	HIS	ND1-CE1-NE2	7.68	116.08	108.40
7	AG	11	ILE	N-CA-C	-7.68	96.38	108.81
34	BA	98	G	P-O3'-C3'	7.68	131.71	120.20
11	AK	27	ASN	CA-CB-CG	-7.67	104.93	112.60
37	BD	94	GLN	CA-C-N	7.67	133.00	122.34
37	BD	94	GLN	C-N-CA	7.67	133.00	122.34
1	AA	318	G	O4'-C4'-C3'	-7.67	96.33	104.00
1	AA	586	C	P-O3'-C3'	-7.67	108.70	120.20
35	BB	1715	G	C4'-C3'-C2'	-7.67	94.93	102.60
6	AF	83	ALA	CA-C-N	7.67	131.41	120.98
6	AF	83	ALA	C-N-CA	7.67	131.41	120.98
13	AM	112	ARG	CA-C-O	7.66	129.31	120.96
26	B1	53	VAL	CA-C-N	7.66	131.96	120.31
26	B1	53	VAL	C-N-CA	7.66	131.96	120.31
35	BB	436	C	P-O3'-C3'	-7.66	108.71	120.20
35	BB	1681	G	O4'-C4'-C3'	-7.66	98.44	106.10
35	BB	893	C	O4'-C1'-N1	7.65	119.98	108.50
15	AO	36	ASN	CA-CB-CG	-7.65	104.95	112.60
39	BF	9	ASP	CA-CB-CG	-7.65	104.95	112.60
1	AA	1348	U	O4'-C1'-C2'	-7.65	99.95	107.60
35	BB	1005	C	O4'-C1'-N1	7.65	119.97	108.50
48	BO	24	THR	N-CA-C	-7.65	96.80	108.96
49	BP	59	THR	CA-C-N	7.64	133.61	123.06
49	BP	59	THR	C-N-CA	7.64	133.61	123.06
56	BY	42	THR	N-CA-C	-7.64	102.60	112.23
35	BB	1240	U	O4'-C1'-C2'	-7.64	99.96	107.60
54	BU	46	LYS	N-CA-C	-7.64	99.77	110.31
35	BB	1719	G	O4'-C1'-N9	7.64	119.95	108.50
35	BB	1983	G	P-O3'-C3'	-7.64	108.75	120.20
49	BP	74	GLN	CA-C-N	7.64	133.21	122.36
49	BP	74	GLN	C-N-CA	7.64	133.21	122.36
15	AO	63	ARG	CA-C-N	7.63	130.84	120.54
15	AO	63	ARG	C-N-CA	7.63	130.84	120.54
35	BB	2655	G	C4'-C3'-C2'	-7.63	94.97	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BC	142	ASN	CA-CB-CG	-7.63	104.97	112.60
1	AA	647	C	P-O5'-C5'	-7.63	109.46	120.90
10	AJ	34	ALA	N-CA-C	-7.63	102.53	113.21
39	BF	70	ARG	NE-CZ-NH2	7.63	126.06	119.20
50	BQ	55	GLN	CA-C-O	7.63	128.19	119.27
1	AA	1253	G	O4'-C1'-C2'	-7.62	99.97	107.60
34	BA	43	C	P-O5'-C5'	-7.62	109.46	120.90
11	AK	80	ASN	CA-CB-CG	-7.62	104.98	112.60
35	BB	181	A	O4'-C1'-N9	7.62	119.93	108.50
53	BT	66	LYS	O-C-N	-7.62	114.34	123.10
1	AA	275	G	P-O5'-C5'	7.61	132.32	120.90
35	BB	1094	U	O4'-C1'-N1	7.61	119.92	108.50
22	AV	33	U	P-O3'-C3'	7.61	131.62	120.20
1	AA	245	U	P-O5'-C5'	-7.61	109.48	120.90
35	BB	243	U	P-O5'-C5'	7.61	132.32	120.90
51	BR	69	GLY	O-C-N	7.61	130.61	122.77
35	BB	122	G	P-O3'-C3'	-7.61	108.79	120.20
35	BB	510	C	O4'-C1'-N1	7.61	119.91	108.50
35	BB	1133	A	P-O3'-C3'	7.61	131.61	120.20
44	BK	9	ASN	O-C-N	-7.61	114.44	123.03
1	AA	177	G	P-O5'-C5'	7.60	132.30	120.90
35	BB	2863	C	O4'-C1'-N1	7.60	119.90	108.50
1	AA	156	C	O5'-C5'-C4'	-7.60	100.11	111.50
35	BB	1076	C	O4'-C1'-N1	7.60	119.89	108.50
36	BC	150	GLY	CA-C-O	-7.59	115.64	122.24
30	B5	42	VAL	N-CA-CB	7.59	120.10	110.99
47	BN	83	LEU	N-CA-C	-7.59	103.13	113.30
1	AA	960	U	P-O3'-C3'	7.59	131.58	120.20
54	BU	41	VAL	N-CA-CB	7.58	125.96	111.93
52	BS	75	PHE	CA-CB-CG	7.58	121.38	113.80
1	AA	1521	C	O4'-C1'-N1	7.58	119.87	108.50
5	AE	139	THR	N-CA-C	-7.58	104.56	113.88
1	AA	269	C	O4'-C1'-N1	7.58	119.87	108.50
1	AA	286	C	O4'-C1'-N1	7.58	119.87	108.50
25	B0	73	ARG	NE-CZ-NH2	7.58	126.02	119.20
30	B5	146	THR	O-C-N	-7.58	115.93	121.84
51	BR	5	PHE	CA-CB-CG	-7.58	106.22	113.80
35	BB	887	U	P-O3'-C3'	7.57	131.56	120.20
48	BO	74	VAL	CB-CA-C	7.57	120.59	111.20
35	BB	1058	U	C5'-C4'-C3'	-7.57	104.65	116.00
39	BF	137	PHE	N-CA-C	-7.57	101.33	108.07
35	BB	1206	G	O4'-C4'-C3'	-7.56	96.44	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BN	106	ASP	CA-C-O	-7.56	113.04	121.51
4	AD	135	GLN	CA-C-N	7.56	130.85	120.35
4	AD	135	GLN	C-N-CA	7.56	130.85	120.35
35	BB	1818	U	O4'-C1'-N1	7.56	119.83	108.50
21	AU	49	ALA	N-CA-C	-7.56	102.40	111.69
1	AA	848	C	O4'-C1'-N1	7.55	119.82	108.50
3	AC	160	GLU	N-CA-C	7.55	119.51	111.28
35	BB	1864	U	P-O5'-C5'	-7.55	109.58	120.90
35	BB	2772	C	O4'-C1'-N1	7.55	119.82	108.50
47	BN	9	GLN	N-CA-CB	7.55	121.22	110.12
31	B6	32	ALA	N-CA-CB	7.55	120.95	110.01
35	BB	364	C	P-O5'-C5'	-7.55	109.58	120.90
51	BR	80	ARG	NE-CZ-NH1	-7.55	113.95	121.50
35	BB	2245	U	O3'-P-O5'	-7.54	92.68	104.00
12	AL	28	GLN	O-C-N	7.54	132.02	123.27
35	BB	1731	G	P-O3'-C3'	7.54	131.51	120.20
22	AV	36	G	O5'-C5'-C4'	7.54	122.81	111.50
52	BS	89	ALA	N-CA-CB	7.54	123.23	110.49
36	BC	120	ASP	N-CA-C	-7.53	106.03	114.62
35	BB	2106	U	O4'-C1'-N1	7.53	119.79	108.50
32	B7	38	LYS	N-CA-C	-7.53	103.04	112.90
40	BG	73	SER	N-CA-C	-7.52	103.05	112.90
35	BB	1302	A	O5'-C5'-C4'	7.51	122.97	111.70
15	AO	67	ASP	CA-CB-CG	7.51	120.11	112.60
2	AB	70	GLY	N-CA-C	-7.51	95.39	113.18
1	AA	1073	U	P-O3'-C3'	-7.50	108.94	120.20
11	AK	18	GLY	CA-C-N	7.50	130.61	120.63
11	AK	18	GLY	C-N-CA	7.50	130.61	120.63
35	BB	1578	U	C4'-C3'-C2'	-7.50	95.10	102.60
1	AA	1096	C	O4'-C1'-N1	7.50	119.75	108.50
8	AH	96	ALA	N-CA-CB	7.49	123.15	110.49
43	BJ	31	GLU	N-CA-C	-7.49	104.27	113.41
7	AG	19	SER	N-CA-CB	7.49	123.15	110.49
35	BB	1730	C	O3'-P-O5'	-7.49	92.76	104.00
47	BN	24	MET	CA-C-N	7.49	130.54	120.65
47	BN	24	MET	C-N-CA	7.49	130.54	120.65
35	BB	1414	C	O4'-C1'-N1	7.49	119.74	108.50
1	AA	646	G	C4'-C3'-C2'	-7.48	95.12	102.60
38	BE	78	TRP	CA-C-N	7.48	130.31	120.28
38	BE	78	TRP	C-N-CA	7.48	130.31	120.28
35	BB	1874	C	P-O5'-C5'	7.48	132.12	120.90
36	BC	98	GLY	N-CA-C	-7.48	104.72	115.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2678	C	C4'-C3'-C2'	-7.48	95.12	102.60
1	AA	562	U	C5'-C4'-C3'	7.48	127.21	116.00
38	BE	33	VAL	CA-C-O	-7.48	112.40	120.47
41	BH	111	ALA	N-CA-C	-7.48	104.00	113.72
32	B7	6	VAL	N-CA-C	-7.47	95.52	106.88
35	BB	2362	C	O4'-C4'-C3'	-7.47	96.53	104.00
38	BE	67	ARG	N-CA-C	7.47	119.43	111.28
39	BF	137	PHE	CA-C-O	-7.47	113.76	120.56
35	BB	1135	C	C4'-C3'-O3'	-7.47	101.79	113.00
37	BD	103	ASP	N-CA-C	-7.47	101.17	113.50
52	BS	60	HIS	ND1-CE1-NE2	7.47	115.87	108.40
22	AV	7	G	P-O3'-C3'	7.47	131.40	120.20
28	B3	12	ARG	NE-CZ-NH2	-7.47	112.48	119.20
1	AA	1344	C	C4'-C3'-C2'	-7.46	95.14	102.60
35	BB	2137	U	O4'-C1'-N1	7.46	119.69	108.50
41	BH	103	VAL	N-CA-CB	7.46	120.81	112.45
34	BA	50	A	O4'-C4'-C3'	-7.46	96.54	104.00
1	AA	98	A	C4'-C3'-O3'	-7.46	101.82	113.00
35	BB	1261	C	C4'-C3'-C2'	-7.46	95.14	102.60
35	BB	2136	G	P-O5'-C5'	7.46	132.09	120.90
44	BK	69	VAL	N-CA-C	-7.46	97.84	108.65
17	AQ	49	ASN	N-CA-CB	7.46	123.09	110.49
35	BB	2499	C	C4'-C3'-O3'	-7.45	101.82	113.00
35	BB	620	G	P-O5'-C5'	-7.45	109.73	120.90
49	BP	65	ASN	CA-C-O	-7.45	114.32	121.02
1	AA	1508	A	O4'-C1'-N9	7.45	119.67	108.50
46	BM	129	THR	CA-CB-OG1	7.45	120.77	109.60
1	AA	1281	C	C2'-C3'-O3'	7.44	120.67	109.50
7	AG	61	PHE	N-CA-C	-7.44	100.25	111.34
16	AP	31	ARG	NE-CZ-NH2	7.44	125.90	119.20
37	BD	35	THR	CA-C-O	7.44	124.09	119.55
39	BF	20	ASN	CA-CB-CG	-7.44	105.16	112.60
35	BB	2592	G	P-O5'-C5'	7.44	132.06	120.90
1	AA	1046	A	C4'-C3'-C2'	-7.44	95.16	102.60
35	BB	68	G	C4'-C3'-C2'	-7.43	95.17	102.60
15	AO	45	HIS	CB-CG-ND1	7.43	133.85	122.70
34	BA	110	C	O4'-C1'-N1	7.42	119.63	108.50
35	BB	1746	A	O4'-C1'-N9	7.42	119.63	108.50
35	BB	784	G	O3'-P-O5'	-7.42	92.87	104.00
1	AA	347	G	C4'-C3'-C2'	-7.42	95.18	102.60
35	BB	1479	G	P-O5'-C5'	7.42	132.03	120.90
40	BG	77	GLY	O-C-N	-7.42	115.00	122.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	238	C	O4'-C1'-N1	7.42	119.62	108.50
35	BB	2884	U	O4'-C1'-N1	7.41	119.62	108.50
1	AA	408	A	C5'-C4'-C3'	-7.41	104.88	116.00
17	AQ	80	LYS	N-CA-CB	7.41	121.24	110.20
30	B5	110	ASN	CA-CB-CG	-7.41	105.19	112.60
1	AA	73	C	C4'-C3'-O3'	-7.41	101.89	113.00
1	AA	101	A	C3'-C2'-O2'	7.41	121.82	110.70
1	AA	305	G	C1'-O4'-C4'	7.41	117.11	109.70
35	BB	1099	G	C5'-C4'-C3'	-7.41	104.89	116.00
1	AA	1420	U	C4'-C3'-C2'	-7.41	95.19	102.60
30	B5	124	VAL	N-CA-C	7.41	117.48	110.74
31	B6	36	ALA	N-CA-C	-7.40	104.22	113.18
1	AA	1323	G	O3'-P-O5'	-7.40	92.90	104.00
35	BB	76	C	O4'-C1'-N1	7.40	119.60	108.50
35	BB	1776	G	O4'-C1'-C2'	-7.40	100.20	107.60
47	BN	86	ARG	NE-CZ-NH2	-7.40	112.54	119.20
55	BW	17	SER	N-CA-CB	7.40	120.97	109.94
45	BL	66	PHE	CA-CB-CG	-7.40	106.40	113.80
55	BW	89	ILE	N-CA-C	-7.40	98.13	108.27
1	AA	76	G	C4'-C3'-C2'	-7.40	95.20	102.60
38	BE	19	PHE	N-CA-C	-7.40	103.21	114.16
25	B0	15	ASN	CA-CB-CG	-7.40	105.20	112.60
39	BF	31	GLU	N-CA-CB	7.40	121.93	110.46
35	BB	1420	A	P-O5'-C5'	-7.40	109.81	120.90
17	AQ	27	PHE	CA-CB-CG	-7.39	106.41	113.80
56	BY	31	LEU	N-CA-C	-7.39	95.06	110.80
1	AA	1493	A	C4'-C3'-C2'	-7.39	95.21	102.60
32	B7	24	LYS	N-CA-C	-7.39	99.53	110.46
45	BL	12	SER	N-CA-CB	7.39	121.06	110.13
52	BS	35	ILE	N-CA-C	7.39	118.12	110.36
41	BH	25	TYR	N-CA-C	-7.38	104.08	113.23
1	AA	1150	A	O3'-P-O5'	-7.38	92.93	104.00
30	B5	80	GLN	N-CA-C	-7.38	104.40	113.41
35	BB	2273	A	C5'-C4'-C3'	-7.38	104.93	116.00
1	AA	490	C	O4'-C1'-N1	7.38	119.57	108.50
15	AO	19	ASN	CA-C-N	7.38	131.89	120.82
15	AO	19	ASN	C-N-CA	7.38	131.89	120.82
35	BB	709	U	P-O5'-C5'	7.38	131.97	120.90
35	BB	1946	U	O4'-C1'-N1	7.38	119.56	108.50
45	BL	116	VAL	CB-CA-C	7.38	121.39	111.87
51	BR	83	TYR	N-CA-CB	7.38	122.35	110.77
35	BB	807	U	P-O3'-C3'	-7.37	109.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1544	A	C4'-C3'-C2'	-7.37	95.23	102.60
35	BB	1328	A	C2'-C3'-O3'	7.37	124.76	113.70
47	BN	88	ALA	N-CA-C	-7.37	103.88	113.17
35	BB	2279	G	O4'-C1'-C2'	-7.37	100.23	107.60
35	BB	717	C	O4'-C1'-N1	7.36	119.55	108.50
3	AC	68	HIS	CA-CB-CG	-7.36	106.44	113.80
1	AA	1067	A	C5'-C4'-C3'	-7.36	104.16	115.20
1	AA	1328	C	O4'-C1'-N1	7.36	119.54	108.50
4	AD	104	MET	N-CA-C	-7.36	102.68	114.09
49	BP	96	LEU	N-CA-C	-7.36	99.53	110.06
1	AA	486	U	O4'-C1'-N1	7.36	119.54	108.50
1	AA	368	U	O4'-C1'-N1	7.36	119.54	108.50
37	BD	66	GLY	CA-C-N	7.36	130.46	120.38
37	BD	66	GLY	C-N-CA	7.36	130.46	120.38
1	AA	484	G	C2'-C3'-O3'	7.36	120.53	109.50
35	BB	2180	U	P-O5'-C5'	7.36	131.93	120.90
40	BG	154	GLU	CA-C-O	-7.35	113.74	120.50
7	AG	19	SER	N-CA-C	-7.35	95.15	110.80
35	BB	68	G	C3'-C2'-C1'	7.35	108.65	101.30
35	BB	2642	G	C4'-C3'-C2'	-7.35	95.25	102.60
36	BC	27	LYS	CA-C-N	7.35	127.31	120.03
36	BC	27	LYS	C-N-CA	7.35	127.31	120.03
34	BA	53	A	C5'-C4'-C3'	7.34	127.02	116.00
35	BB	741	U	O4'-C4'-C3'	-7.34	96.66	104.00
30	B5	195	ALA	O-C-N	-7.34	114.46	122.09
1	AA	510	A	C4'-C3'-C2'	-7.33	95.27	102.60
35	BB	669	G	C5'-C4'-O4'	7.33	120.10	109.10
1	AA	198	G	O4'-C4'-C3'	-7.33	96.67	104.00
1	AA	34	C	O4'-C1'-N1	7.33	119.49	108.50
1	AA	1391	U	O5'-C5'-C4'	-7.33	100.51	111.50
48	BO	59	ALA	N-CA-C	7.33	121.13	111.75
35	BB	1467	U	O4'-C1'-N1	7.33	119.49	108.50
35	BB	2132	U	O4'-C4'-C3'	-7.33	96.67	104.00
52	BS	66	ILE	N-CA-C	-7.33	105.21	112.17
36	BC	249	VAL	N-CA-CB	7.32	120.67	110.56
35	BB	1451	C	C3'-C2'-C1'	7.32	108.82	101.50
35	BB	459	U	C4'-C3'-C2'	-7.32	95.28	102.60
1	AA	315	A	P-O3'-C3'	7.31	131.17	120.20
51	BR	27	ILE	N-CA-CB	7.31	123.30	111.23
1	AA	726	C	O4'-C1'-N1	7.31	119.47	108.50
35	BB	2374	C	P-O3'-C3'	-7.31	109.23	120.20
41	BH	76	GLU	CA-C-N	7.31	134.23	122.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BH	76	GLU	C-N-CA	7.31	134.23	122.10
4	AD	163	GLN	N-CA-CB	7.31	122.84	110.49
1	AA	815	A	C1'-O4'-C4'	-7.30	102.40	109.70
2	AB	21	TYR	N-CA-CB	7.30	120.81	110.07
4	AD	184	LYS	CA-C-N	7.30	127.22	119.85
4	AD	184	LYS	C-N-CA	7.30	127.22	119.85
36	BC	105	ALA	O-C-N	-7.30	112.92	121.32
35	BB	1000	A	O4'-C4'-C3'	-7.30	96.70	104.00
35	BB	1926	U	P-O5'-C5'	7.30	131.85	120.90
40	BG	30	GLY	N-CA-C	-7.30	104.60	112.04
56	BY	59	PHE	CA-CB-CG	7.30	121.10	113.80
4	AD	162	GLU	O-C-N	-7.29	114.07	122.97
13	AM	34	ALA	N-CA-CB	7.29	120.58	110.01
1	AA	1162	C	C4'-C3'-C2'	-7.29	95.31	102.60
35	BB	1708	C	O4'-C1'-N1	7.29	119.43	108.50
47	BN	29	VAL	N-CA-CB	-7.29	102.68	110.62
35	BB	2402	U	O4'-C1'-N1	7.29	119.13	108.20
36	BC	183	VAL	CA-C-O	-7.29	115.92	121.68
8	AH	93	LYS	N-CA-C	-7.28	97.72	109.96
31	B6	16	HIS	CA-C-N	7.28	128.38	120.44
31	B6	16	HIS	C-N-CA	7.28	128.38	120.44
53	BT	20	ALA	N-CA-CB	7.28	122.80	110.49
3	AC	88	LYS	N-CA-C	-7.28	103.28	111.14
35	BB	1249	U	O4'-C1'-N1	7.28	119.42	108.50
10	AJ	18	ILE	CA-C-O	7.28	128.83	120.03
24	AZ	23	ALA	O-C-N	-7.28	113.85	122.58
8	AH	105	THR	CA-C-O	7.27	128.63	121.14
11	AK	71	ASP	CA-CB-CG	-7.27	105.33	112.60
35	BB	572	A	O4'-C1'-N9	7.27	119.41	108.50
1	AA	156	C	C4'-C3'-O3'	-7.27	102.10	113.00
1	AA	755	G	P-O5'-C5'	-7.27	110.00	120.90
16	AP	60	TRP	N-CA-CB	7.27	120.96	110.06
1	AA	1295	U	O4'-C1'-C2'	-7.27	100.33	107.60
35	BB	963	U	O4'-C4'-C3'	-7.27	96.73	104.00
43	BJ	31	GLU	N-CA-CB	7.27	121.08	110.47
1	AA	470	C	O4'-C1'-N1	7.26	119.40	108.50
37	BD	2	ILE	CA-CB-CG1	7.26	122.75	110.40
52	BS	60	HIS	CA-C-N	7.26	135.41	121.54
52	BS	60	HIS	C-N-CA	7.26	135.41	121.54
43	BJ	33	ALA	CA-C-N	7.26	130.32	120.44
43	BJ	33	ALA	C-N-CA	7.26	130.32	120.44
1	AA	1137	C	C2'-C3'-O3'	7.26	120.39	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	45	PRO	CA-C-O	-7.26	113.04	122.19
50	BQ	7	VAL	N-CA-C	-7.26	105.45	111.91
1	AA	1498	U	O3'-P-O5'	-7.26	93.11	104.00
35	BB	1287	A	P-O5'-C5'	7.26	131.78	120.90
35	BB	1920	C	P-O5'-C5'	7.26	131.78	120.90
38	BE	91	ASP	N-CA-C	-7.26	99.17	110.42
37	BD	161	MET	N-CA-CB	7.25	122.75	110.49
47	BN	30	ARG	N-CA-C	7.25	121.04	111.75
1	AA	1241	G	C4'-C3'-C2'	-7.25	95.35	102.60
44	BK	97	THR	N-CA-C	-7.25	104.69	113.97
20	AT	19	HIS	CA-C-N	7.25	130.31	120.38
20	AT	19	HIS	C-N-CA	7.25	130.31	120.38
7	AG	141	HIS	N-CA-C	-7.25	104.24	113.23
35	BB	2475	C	P-O3'-C3'	7.25	131.07	120.20
35	BB	41	C	C4'-C3'-C2'	-7.25	95.35	102.60
46	BM	117	PHE	N-CA-C	-7.25	102.78	111.69
35	BB	1884	G	C3'-C2'-C1'	7.24	108.54	101.30
1	AA	477	C	O4'-C1'-N1	7.24	119.36	108.50
26	B1	14	LEU	CA-C-O	-7.24	113.11	121.07
35	BB	1459	G	P-O3'-C3'	7.24	131.06	120.20
35	BB	745	G	C4'-C3'-C2'	7.24	109.83	102.60
35	BB	2899	A	C3'-C2'-C1'	7.23	108.53	101.30
1	AA	1344	C	O4'-C1'-N1	7.23	119.34	108.50
9	AI	36	GLN	N-CA-C	-7.23	104.98	114.31
40	BG	2	ARG	CA-C-N	7.23	130.37	120.46
40	BG	2	ARG	C-N-CA	7.23	130.37	120.46
19	AS	10	ILE	O-C-N	7.23	129.28	121.83
19	AS	51	HIS	ND1-CG-CD2	7.23	113.33	106.10
56	BY	56	HIS	CA-CB-CG	-7.23	106.57	113.80
43	BJ	105	VAL	N-CA-C	7.23	121.14	111.17
39	BF	98	PHE	CA-CB-CG	-7.22	106.58	113.80
1	AA	1359	C	O4'-C1'-N1	7.22	119.33	108.50
35	BB	1188	U	P-O3'-C3'	-7.22	109.37	120.20
1	AA	938	A	C4'-C3'-C2'	-7.22	95.38	102.60
1	AA	1158	C	O4'-C1'-N1	7.22	119.33	108.50
35	BB	933	A	O3'-P-O5'	-7.22	93.17	104.00
39	BF	29	ARG	NE-CZ-NH2	7.22	125.70	119.20
35	BB	2833	U	C1'-O4'-C4'	-7.22	102.48	109.70
1	AA	1343	G	O4'-C1'-C2'	-7.22	100.38	107.60
56	BY	10	ARG	N-CA-C	-7.22	96.79	109.06
1	AA	1181	G	N9-C1'-C2'	-7.21	103.18	114.00
30	B5	92	ALA	CA-C-N	7.21	130.17	120.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	B5	92	ALA	C-N-CA	7.21	130.17	120.65
45	BL	101	ILE	N-CA-CB	7.21	121.02	111.64
1	AA	750	C	O4'-C4'-C3'	-7.21	96.79	104.00
5	AE	18	ASN	CA-CB-CG	7.21	119.81	112.60
8	AH	3	GLN	N-CA-C	-7.21	104.34	113.43
30	B5	110	ASN	CA-C-N	7.21	130.95	120.71
30	B5	110	ASN	C-N-CA	7.21	130.95	120.71
35	BB	726	G	O4'-C1'-N9	7.21	119.31	108.50
1	AA	390	U	O4'-C1'-N1	7.21	119.31	108.50
22	AV	65	U	P-O3'-C3'	7.21	131.01	120.20
29	B4	38	PHE	CA-CB-CG	-7.21	106.59	113.80
35	BB	777	G	O5'-C5'-C4'	-7.21	100.69	111.50
39	BF	5	ASP	CA-CB-CG	7.21	119.81	112.60
35	BB	236	C	O4'-C1'-N1	7.21	119.31	108.50
40	BG	154	GLU	O-C-N	-7.20	117.10	121.71
35	BB	1409	U	O4'-C1'-N1	7.20	119.30	108.50
1	AA	1398	A	C4'-C3'-O3'	-7.20	102.20	113.00
7	AG	38	ALA	CA-C-N	7.20	130.65	120.28
7	AG	38	ALA	C-N-CA	7.20	130.65	120.28
35	BB	257	C	O4'-C1'-N1	7.20	119.30	108.50
35	BB	890	C	O4'-C1'-N1	7.20	119.30	108.50
35	BB	2679	A	P-O5'-C5'	-7.20	110.10	120.90
46	BM	44	ARG	NE-CZ-NH1	-7.20	114.30	121.50
1	AA	257	G	C3'-C2'-C1'	7.20	108.50	101.30
35	BB	27	G	O4'-C4'-C3'	7.20	111.20	104.00
35	BB	1983	G	C4'-C3'-C2'	-7.20	95.40	102.60
35	BB	2766	A	O4'-C1'-C2'	-7.20	100.40	107.60
39	BF	29	ARG	NE-CZ-NH1	-7.20	114.30	121.50
40	BG	56	GLY	N-CA-C	-7.20	105.13	115.64
35	BB	1055	G	O4'-C1'-N9	7.20	119.30	108.50
35	BB	517	C	P-O5'-C5'	7.20	131.69	120.90
35	BB	2484	G	C4'-C3'-C2'	-7.19	95.41	102.60
35	BB	1553	A	P-O5'-C5'	-7.19	110.11	120.90
1	AA	329	A	P-O3'-C3'	7.19	130.98	120.20
2	AB	171	ALA	CA-C-N	7.19	132.62	121.19
2	AB	171	ALA	C-N-CA	7.19	132.62	121.19
35	BB	1568	G	P-O5'-C5'	7.19	131.68	120.90
1	AA	418	C	O4'-C1'-N1	7.19	119.28	108.50
37	BD	58	ASN	N-CA-C	-7.19	103.97	114.39
1	AA	194	C	O4'-C1'-N1	7.18	119.28	108.50
35	BB	2123	G	P-O3'-C3'	7.18	130.98	120.20
35	BB	2340	A	P-O3'-C3'	-7.18	109.42	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2882	A	C4'-C3'-C2'	-7.18	95.42	102.60
5	AE	20	VAL	CA-C-O	-7.18	114.60	121.64
28	B3	3	GLN	N-CA-CB	7.18	120.05	110.29
32	B7	55	GLY	N-CA-C	7.18	124.21	115.31
35	BB	2747	G	P-O5'-C5'	7.17	131.66	120.90
1	AA	75	G	C5'-C4'-C3'	-7.17	105.24	116.00
51	BR	13	ARG	O-C-N	7.17	131.02	122.85
35	BB	1140	C	C4'-C3'-O3'	-7.17	102.25	113.00
1	AA	701	U	C4'-C3'-C2'	-7.17	95.43	102.60
6	AF	59	TYR	O-C-N	7.17	131.84	123.17
35	BB	2403	C	P-O5'-C5'	-7.17	110.15	120.90
50	BQ	45	ALA	CA-C-N	7.17	130.60	120.28
50	BQ	45	ALA	C-N-CA	7.17	130.60	120.28
1	AA	167	A	C4'-C3'-O3'	-7.17	102.25	113.00
35	BB	2115	G	C4'-C3'-C2'	-7.16	95.44	102.60
5	AE	63	MET	N-CA-C	-7.16	104.35	113.23
1	AA	902	G	P-O3'-C3'	-7.16	109.46	120.20
12	AL	11	ARG	CB-CA-C	-7.16	97.41	109.65
14	AN	20	PHE	CA-CB-CG	7.16	120.96	113.80
35	BB	61	C	O4'-C1'-N1	7.16	119.24	108.50
1	AA	285	C	O4'-C1'-N1	7.16	119.23	108.50
2	AB	38	HIS	ND1-CE1-NE2	7.16	115.56	108.40
35	BB	686	U	O4'-C1'-C2'	-7.16	98.64	105.80
35	BB	2801	G	O4'-C4'-C3'	-7.16	96.84	104.00
55	BW	80	HIS	CG-CD2-NE2	7.16	114.36	107.20
15	AO	52	ARG	N-CA-C	7.15	118.72	111.07
2	AB	150	ILE	N-CA-C	-7.15	105.75	112.83
14	AN	17	ASP	CA-CB-CG	-7.15	105.45	112.60
35	BB	129	C	O3'-P-O5'	-7.15	93.28	104.00
35	BB	718	A	C5'-C4'-C3'	7.15	126.72	116.00
48	BO	41	ALA	CA-C-N	7.15	128.77	119.84
48	BO	41	ALA	C-N-CA	7.15	128.77	119.84
54	BU	84	PHE	CA-CB-CG	7.15	120.95	113.80
1	AA	1200	C	O4'-C1'-C2'	7.14	112.94	105.80
18	AR	21	ASP	CA-C-O	-7.14	113.81	121.38
35	BB	924	G	O4'-C1'-N9	7.14	119.21	108.50
35	BB	5	A	C5'-C4'-C3'	-7.14	105.29	116.00
49	BP	101	GLU	O-C-N	-7.14	113.77	122.19
20	AT	12	GLN	CA-C-N	7.13	130.16	120.38
20	AT	12	GLN	C-N-CA	7.13	130.16	120.38
35	BB	558	U	O4'-C1'-N1	7.13	119.20	108.50
35	BB	2353	G	O4'-C4'-C3'	-7.13	96.87	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BL	80	SER	N-CA-C	-7.13	104.15	112.92
35	BB	1561	C	O4'-C4'-C3'	-7.13	96.87	104.00
1	AA	682	G	C4'-C3'-C2'	-7.13	95.47	102.60
12	AL	71	HIS	CE1-NE2-CD2	-7.12	101.88	109.00
7	AG	90	VAL	CA-CB-CG2	7.12	122.51	110.40
1	AA	635	A	O4'-C1'-N9	7.12	119.18	108.50
19	AS	70	LEU	CA-C-N	7.12	128.01	120.03
19	AS	70	LEU	C-N-CA	7.12	128.01	120.03
35	BB	275	C	O4'-C1'-N1	7.12	119.18	108.50
35	BB	1238	G	O4'-C4'-C3'	-7.12	96.88	104.00
52	BS	5	ALA	N-CA-CB	7.12	122.53	110.49
3	AC	181	ILE	O-C-N	7.12	130.44	122.68
30	B5	152	ALA	N-CA-C	7.12	118.69	111.07
35	BB	1751	U	O4'-C1'-N1	7.12	119.17	108.50
44	BK	83	ALA	N-CA-C	7.12	121.05	110.52
35	BB	1563	U	O4'-C1'-N1	7.12	119.17	108.50
1	AA	218	U	O4'-C1'-N1	7.11	119.17	108.50
35	BB	1115	G	P-O5'-C5'	-7.11	110.23	120.90
35	BB	2798	U	P-O5'-C5'	7.11	131.57	120.90
11	AK	110	THR	N-CA-CB	7.11	122.72	111.20
22	AV	36	G	P-O5'-C5'	-7.11	110.23	120.90
25	B0	15	ASN	OD1-CG-ND2	-7.11	115.49	122.60
1	AA	810	C	O4'-C1'-N1	7.11	119.16	108.50
38	BE	183	PHE	N-CA-CB	7.11	122.50	110.49
1	AA	560	A	O4'-C1'-C2'	7.11	112.91	105.80
1	AA	1308	U	O4'-C4'-C3'	-7.11	96.89	104.00
51	BR	60	LYS	N-CA-C	-7.11	98.73	110.17
35	BB	1732	C	O4'-C4'-C3'	-7.10	99.00	106.10
36	BC	246	PRO	N-CA-CB	7.10	110.58	103.48
41	BH	82	SER	CA-C-N	7.10	134.24	122.66
41	BH	82	SER	C-N-CA	7.10	134.24	122.66
11	AK	63	GLN	N-CA-C	-7.10	103.23	110.97
35	BB	2092	U	O3'-P-O5'	-7.10	93.35	104.00
39	BF	127	TYR	CA-C-O	7.10	127.89	120.30
53	BT	92	ASN	N-CA-C	-7.10	101.98	113.19
35	BB	903	C	C4'-C3'-C2'	-7.09	95.51	102.60
1	AA	1370	G	O4'-C4'-C3'	-7.09	96.91	104.00
35	BB	1561	C	C1'-O4'-C4'	7.09	116.99	109.90
54	BU	12	VAL	CA-C-N	7.09	130.36	120.29
54	BU	12	VAL	C-N-CA	7.09	130.36	120.29
1	AA	208	U	C5'-C4'-C3'	7.09	126.64	116.00
4	AD	133	SER	N-CA-C	-7.09	104.51	113.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	68	ARG	N-CA-C	-7.09	104.51	113.02
6	AF	14	GLN	CB-CG-CD	-7.09	100.55	112.60
35	BB	2049	G	C4'-C3'-O3'	-7.09	102.37	113.00
1	AA	123	U	P-O5'-C5'	-7.09	110.27	120.90
1	AA	997	U	O4'-C1'-C2'	-7.09	100.51	107.60
7	AG	25	PHE	N-CA-C	-7.09	104.63	113.28
35	BB	346	A	C4'-C3'-C2'	-7.08	95.52	102.60
52	BS	102	HIS	ND1-CG-CD2	7.08	113.18	106.10
1	AA	1292	G	O4'-C1'-N9	7.08	119.12	108.50
22	AV	74	C	C4'-C3'-O3'	-7.08	102.38	113.00
35	BB	2088	A	C4'-C3'-C2'	-7.08	95.52	102.60
35	BB	2464	G	O4'-C1'-N9	7.08	119.12	108.50
35	BB	1883	U	O3'-P-O5'	-7.08	93.39	104.00
46	BM	67	VAL	CA-C-O	7.08	129.63	120.78
35	BB	1720	U	O4'-C1'-N1	7.08	119.11	108.50
48	BO	35	ILE	N-CA-C	-7.08	97.84	108.17
3	AC	43	THR	N-CA-C	7.07	121.54	112.34
3	AC	82	ASP	CA-CB-CG	7.07	119.67	112.60
55	BW	50	MET	CG-SD-CE	-7.07	85.34	100.90
17	AQ	55	GLY	N-CA-C	-7.07	105.46	115.43
35	BB	1371	G	O4'-C1'-N9	7.07	119.11	108.50
35	BB	2132	U	O3'-P-O5'	7.07	114.60	104.00
46	BM	110	GLU	CA-C-O	7.07	127.91	120.42
35	BB	2283	C	O4'-C1'-C2'	-7.07	100.53	107.60
1	AA	1043	G	O4'-C4'-C3'	-7.06	96.94	104.00
35	BB	1567	G	C4'-C3'-C2'	7.06	109.66	102.60
44	BK	50	GLY	CA-C-O	-7.06	117.36	122.23
51	BR	93	PHE	CA-CB-CG	7.06	120.86	113.80
1	AA	283	U	C1'-O4'-C4'	7.06	116.96	109.90
8	AH	58	LEU	N-CA-C	-7.06	96.12	108.20
35	BB	946	C	O4'-C1'-N1	7.06	119.09	108.50
39	BF	9	ASP	N-CA-CB	7.06	122.42	110.49
35	BB	1845	G	P-O5'-C5'	7.06	131.49	120.90
40	BG	132	LEU	CA-C-O	7.06	128.16	120.32
35	BB	2205	A	P-O5'-C5'	-7.06	110.31	120.90
1	AA	1067	A	P-O5'-C5'	7.06	131.49	120.90
37	BD	44	GLY	CA-C-O	7.06	126.82	119.27
13	AM	7	ASN	CA-C-N	-7.05	117.19	123.33
13	AM	7	ASN	C-N-CA	-7.05	117.19	123.33
1	AA	1454	G	P-O5'-C5'	7.05	131.48	120.90
35	BB	558	U	O4'-C1'-C2'	-7.05	100.55	107.60
35	BB	1745	A	P-O3'-C3'	-7.05	109.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BL	81	ASP	N-CA-C	-7.05	103.78	112.88
49	BP	65	ASN	O-C-N	7.05	129.16	122.18
2	AB	194	GLY	CA-C-O	-7.05	112.80	121.68
4	AD	2	ARG	N-CA-C	-7.05	103.00	112.94
5	AE	44	ARG	N-CA-CB	7.05	122.41	110.49
35	BB	2222	C	O4'-C1'-N1	7.05	119.08	108.50
35	BB	1057	A	C5'-C4'-O4'	7.05	120.37	109.80
1	AA	1443	C	O4'-C1'-N1	7.04	119.06	108.50
3	AC	120	THR	N-CA-C	-7.04	103.53	111.14
35	BB	70	G	O5'-C5'-C4'	-7.04	101.14	111.70
35	BB	1938	A	C4'-C3'-C2'	7.04	109.64	102.60
1	AA	494	G	C3'-C2'-C1'	7.04	108.34	101.30
9	AI	103	VAL	N-CA-C	-7.04	105.19	113.42
35	BB	69	C	C4'-C3'-C2'	-7.04	95.56	102.60
46	BM	111	GLU	CA-C-O	-7.04	112.96	120.42
56	BY	49	ASN	CA-CB-CG	7.04	119.64	112.60
1	AA	904	U	P-O5'-C5'	7.04	131.46	120.90
1	AA	1360	A	O5'-C5'-C4'	-7.03	100.95	111.50
38	BE	5	LEU	CA-C-N	7.03	129.71	120.28
38	BE	5	LEU	C-N-CA	7.03	129.71	120.28
12	AL	118	VAL	N-CA-CB	7.03	122.83	111.23
30	B5	12	ARG	N-CA-CB	7.03	121.05	110.22
35	BB	2547	A	C4'-C3'-C2'	-7.03	95.57	102.60
38	BE	138	LEU	CA-C-N	7.03	130.03	120.54
38	BE	138	LEU	C-N-CA	7.03	130.03	120.54
35	BB	1364	G	P-O5'-C5'	7.03	131.44	120.90
1	AA	1037	C	P-O3'-C3'	-7.03	109.66	120.20
35	BB	1310	G	C4'-C3'-O3'	-7.03	102.46	113.00
46	BM	110	GLU	N-CA-C	-7.03	103.70	111.36
25	B0	71	ARG	N-CA-CB	7.02	120.52	110.13
1	AA	1095	U	P-O5'-C5'	-7.02	110.37	120.90
35	BB	1578	U	O4'-C1'-C2'	-7.02	100.58	107.60
30	B5	216	THR	CA-C-N	7.02	134.95	121.54
30	B5	216	THR	C-N-CA	7.02	134.95	121.54
35	BB	1096	A	C3'-C2'-C1'	7.02	108.32	101.30
4	AD	101	VAL	CA-C-O	-7.02	113.75	121.05
5	AE	42	ASN	N-CA-C	-7.01	103.78	114.16
35	BB	11	C	C5'-C4'-C3'	7.01	126.52	116.00
35	BB	2403	C	P-O3'-C3'	-7.01	109.68	120.20
4	AD	108	ALA	O-C-N	7.01	129.29	122.07
4	AD	25	ARG	NE-CZ-NH1	7.01	128.51	121.50
51	BR	13	ARG	N-CA-CB	7.01	121.10	110.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	191	ASP	CA-C-O	-7.01	113.70	120.64
13	AM	67	ASP	N-CA-CB	7.01	120.17	110.01
35	BB	2269	G	P-O5'-C5'	-7.01	110.39	120.90
32	B7	8	GLY	CA-C-N	7.00	129.98	120.38
32	B7	8	GLY	C-N-CA	7.00	129.98	120.38
2	AB	183	PHE	CA-CB-CG	-7.00	106.80	113.80
5	AE	76	ASN	OD1-CG-ND2	7.00	129.60	122.60
16	AP	54	LEU	CA-C-N	7.00	130.52	120.79
16	AP	54	LEU	C-N-CA	7.00	130.52	120.79
35	BB	2182	U	O3'-P-O5'	-7.00	93.50	104.00
15	AO	32	THR	CA-C-N	7.00	129.66	120.28
15	AO	32	THR	C-N-CA	7.00	129.66	120.28
35	BB	1334	G	O4'-C1'-N9	7.00	119.00	108.50
48	BO	53	THR	N-CA-C	-7.00	104.74	113.28
35	BB	368	A	O4'-C1'-N9	7.00	119.00	108.50
1	AA	1487	G	C3'-C2'-O2'	7.00	121.20	110.70
35	BB	318	C	O4'-C1'-N1	7.00	119.00	108.50
35	BB	1112	G	O4'-C4'-C3'	-7.00	97.00	104.00
1	AA	951	G	P-O5'-C5'	-6.99	110.41	120.90
35	BB	1808	A	C2'-C3'-O3'	6.99	119.99	109.50
1	AA	55	A	O4'-C1'-C2'	-6.99	100.61	107.60
14	AN	47	LEU	CA-C-N	6.99	129.95	120.38
14	AN	47	LEU	C-N-CA	6.99	129.95	120.38
52	BS	95	ARG	NE-CZ-NH1	-6.99	114.51	121.50
35	BB	1047	G	C2'-C3'-O3'	6.99	119.98	109.50
35	BB	2198	A	P-O3'-C3'	6.99	130.68	120.20
39	BF	91	ARG	NE-CZ-NH2	-6.98	112.92	119.20
3	AC	131	ARG	NE-CZ-NH1	-6.98	114.52	121.50
36	BC	19	VAL	CA-CB-CG2	6.98	122.27	110.40
35	BB	937	C	P-O5'-C5'	6.98	131.37	120.90
35	BB	2159	G	C1'-O4'-C4'	6.98	116.88	109.90
53	BT	54	GLU	N-CA-C	-6.98	98.23	109.96
54	BU	64	ILE	O-C-N	-6.98	116.20	122.69
35	BB	1128	G	C4'-C3'-C2'	-6.98	95.62	102.60
35	BB	2342	C	C4'-C3'-C2'	-6.98	95.62	102.60
37	BD	90	PHE	CA-CB-CG	-6.98	106.82	113.80
39	BF	92	GLY	CA-C-N	6.98	129.96	120.54
39	BF	92	GLY	C-N-CA	6.98	129.96	120.54
1	AA	240	G	C4'-C3'-C2'	-6.97	95.63	102.60
35	BB	1611	C	P-O5'-C5'	-6.97	110.45	120.90
35	BB	2053	G	P-O3'-C3'	-6.97	109.75	120.20
1	AA	469	C	O4'-C1'-N1	6.97	118.95	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	146	G	O4'-C1'-C2'	-6.97	100.63	107.60
12	AL	25	ALA	N-CA-C	6.97	121.00	111.39
52	BS	60	HIS	CE1-NE2-CD2	-6.97	102.03	109.00
1	AA	1466	C	O4'-C1'-N1	6.96	118.95	108.50
9	AI	123	ARG	CA-C-N	6.96	127.38	119.93
9	AI	123	ARG	C-N-CA	6.96	127.38	119.93
40	BG	66	THR	CA-C-N	6.96	129.92	120.38
40	BG	66	THR	C-N-CA	6.96	129.92	120.38
35	BB	2178	C	O4'-C1'-N1	6.96	118.94	108.50
22	AV	33	U	O3'-P-O5'	6.96	114.43	104.00
35	BB	1750	G	O4'-C1'-N9	6.96	118.93	108.50
47	BN	12	ARG	CA-C-O	6.96	128.10	120.80
44	BK	17	ARG	CA-C-N	6.95	130.58	120.71
44	BK	17	ARG	C-N-CA	6.95	130.58	120.71
49	BP	48	ALA	CA-C-N	6.95	131.25	121.66
49	BP	48	ALA	C-N-CA	6.95	131.25	121.66
1	AA	548	G	O4'-C4'-C3'	-6.95	97.05	104.00
34	BA	28	C	C4'-C3'-C2'	-6.95	95.65	102.60
49	BP	52	ARG	N-CA-CB	6.95	122.23	110.49
24	AZ	24	ALA	CA-C-O	-6.95	108.99	120.80
36	BC	134	ILE	CA-CB-CG1	6.95	122.21	110.40
47	BN	62	ASN	CA-CB-CG	-6.95	105.65	112.60
18	AR	60	ARG	CA-C-N	6.95	129.90	120.38
18	AR	60	ARG	C-N-CA	6.95	129.90	120.38
35	BB	510	C	C4'-C3'-O3'	-6.95	102.58	113.00
35	BB	2797	U	O4'-C1'-N1	6.95	118.92	108.50
11	AK	33	ILE	CB-CA-C	6.94	121.10	110.96
35	BB	1476	U	C2'-C3'-O3'	6.94	119.92	109.50
35	BB	1416	G	O4'-C1'-C2'	-6.94	98.86	105.80
1	AA	47	C	C4'-C3'-C2'	-6.94	95.66	102.60
35	BB	882	G	P-O5'-C5'	-6.94	110.49	120.90
35	BB	1604	C	O5'-C5'-C4'	-6.94	101.09	111.50
35	BB	1630	A	O5'-C5'-C4'	-6.94	101.10	111.50
26	B1	31	GLN	CA-C-N	6.93	129.57	120.28
26	B1	31	GLN	C-N-CA	6.93	129.57	120.28
55	BW	86	LEU	N-CA-C	-6.93	99.95	110.14
34	BA	104	A	C4'-C3'-C2'	-6.93	95.67	102.60
35	BB	673	C	O3'-P-O5'	-6.93	93.60	104.00
3	AC	44	LYS	CA-C-O	6.93	127.93	120.24
1	AA	775	G	O4'-C1'-N9	6.93	118.89	108.50
1	AA	54	C	O5'-C5'-C4'	-6.93	101.11	111.50
35	BB	1865	U	O3'-P-O5'	-6.93	93.61	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	674	G	O5'-C5'-C4'	-6.93	101.11	111.50
35	BB	1061	U	C5'-C4'-O4'	6.93	119.49	109.10
35	BB	2200	C	O4'-C1'-N1	6.93	118.89	108.50
1	AA	83	C	C5'-C4'-C3'	6.92	126.39	116.00
1	AA	437	U	P-O5'-C5'	-6.92	110.51	120.90
7	AG	37	THR	CA-C-N	6.92	129.86	120.44
7	AG	37	THR	C-N-CA	6.92	129.86	120.44
30	B5	148	ASN	CA-CB-CG	-6.92	105.68	112.60
36	BC	70	LYS	N-CA-C	-6.92	99.32	110.32
1	AA	823	C	O4'-C1'-N1	6.92	118.87	108.50
35	BB	60	G	C1'-C2'-O2'	-6.92	101.43	111.80
35	BB	441	U	O4'-C1'-N1	6.92	118.87	108.50
35	BB	2393	U	O4'-C4'-C3'	-6.92	97.08	104.00
54	BU	79	ALA	N-CA-CB	6.92	121.35	110.56
7	AG	102	TRP	N-CA-C	6.91	118.82	111.28
34	BA	103	U	P-O5'-C5'	6.91	131.27	120.90
35	BB	1768	C	O5'-C5'-C4'	-6.91	101.13	111.50
1	AA	959	A	P-O3'-C3'	6.91	130.57	120.20
39	BF	134	GLN	O-C-N	6.91	130.77	122.96
44	BK	29	HIS	CA-CB-CG	6.91	120.71	113.80
1	AA	519	C	O4'-C1'-N1	6.91	118.86	108.50
14	AN	98	ALA	N-CA-CB	6.91	120.12	110.17
54	BU	24	VAL	CA-C-N	6.91	129.87	120.54
54	BU	24	VAL	C-N-CA	6.91	129.87	120.54
35	BB	1525	A	C4'-C3'-O3'	-6.91	102.64	113.00
2	AB	138	ARG	CA-C-O	-6.91	113.75	121.00
35	BB	1207	C	O4'-C1'-N1	6.90	118.85	108.50
35	BB	1257	C	O4'-C1'-N1	6.90	118.85	108.50
36	BC	236	GLY	N-CA-C	-6.90	105.22	114.95
1	AA	628	G	O4'-C1'-N9	6.90	118.85	108.50
1	AA	774	G	P-O3'-C3'	-6.90	109.85	120.20
18	AR	40	PRO	CA-C-N	6.90	133.80	121.66
18	AR	40	PRO	C-N-CA	6.90	133.80	121.66
35	BB	1012	U	C3'-C2'-C1'	-6.90	94.60	101.50
1	AA	542	G	O4'-C1'-N9	6.90	118.84	108.50
2	AB	180	ILE	O-C-N	-6.89	113.64	121.57
7	AG	119	LEU	CA-C-O	6.89	127.74	119.61
16	AP	42	ILE	N-CA-C	-6.89	105.36	113.42
35	BB	961	C	O4'-C1'-N1	6.89	118.54	108.20
35	BB	1927	A	P-O3'-C3'	6.89	130.54	120.20
45	BL	55	MET	N-CA-C	-6.89	101.43	110.39
1	AA	1482	G	P-O3'-C3'	6.89	130.53	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BE	9	GLN	OE1-CD-NE2	6.89	129.49	122.60
43	BJ	24	THR	CA-C-N	6.89	130.90	121.05
43	BJ	24	THR	C-N-CA	6.89	130.90	121.05
54	BU	40	LEU	N-CA-C	6.89	120.83	110.64
28	B3	28	SER	N-CA-CB	6.89	122.23	111.56
35	BB	2255	G	C1'-O4'-C4'	-6.89	103.01	109.90
40	BG	65	GLY	CA-C-O	6.88	127.55	120.80
45	BL	117	THR	N-CA-CB	6.88	122.12	110.49
9	AI	107	ALA	N-CA-C	-6.88	104.63	113.16
35	BB	418	C	C4'-C3'-O3'	-6.88	102.68	113.00
35	BB	452	G	C5'-C4'-C3'	-6.88	105.68	116.00
35	BB	1008	A	O3'-P-O5'	-6.88	93.68	104.00
35	BB	2084	C	O4'-C1'-N1	6.88	118.82	108.50
1	AA	471	U	P-O5'-C5'	6.88	131.22	120.90
20	AT	27	MET	CA-C-N	6.88	130.42	120.38
20	AT	27	MET	C-N-CA	6.88	130.42	120.38
35	BB	1396	U	O4'-C4'-C3'	-6.88	99.22	106.10
1	AA	1257	A	C2'-C3'-O3'	6.88	119.81	109.50
6	AF	72	ASP	CA-CB-CG	-6.88	105.72	112.60
43	BJ	48	VAL	N-CA-C	-6.88	95.04	109.34
3	AC	197	VAL	N-CA-C	-6.87	98.22	108.46
28	B3	30	ASP	N-CA-CB	6.87	120.94	110.70
35	BB	2563	U	C4'-C3'-O3'	-6.87	102.69	113.00
41	BH	101	ASP	CA-CB-CG	-6.87	105.73	112.60
1	AA	106	C	O4'-C1'-N1	6.87	118.81	108.50
2	AB	35	ASN	N-CA-C	-6.87	104.93	113.38
35	BB	2523	G	P-O5'-C5'	6.87	131.21	120.90
35	BB	87	U	O5'-C5'-C4'	-6.87	101.20	111.50
39	BF	36	ASN	OD1-CG-ND2	6.87	129.47	122.60
52	BS	25	ARG	CD-NE-CZ	-6.87	114.78	124.40
35	BB	1444	G	O4'-C1'-C2'	-6.87	100.73	107.60
22	AV	3	G	P-O5'-C5'	-6.87	110.60	120.90
52	BS	96	ILE	N-CA-C	-6.87	98.23	108.12
16	AP	74	LEU	N-CA-C	-6.86	105.04	113.41
1	AA	1064	G	O4'-C1'-C2'	6.86	112.66	105.80
5	AE	29	ILE	N-CA-CB	6.86	119.89	112.07
8	AH	44	PHE	CA-CB-CG	-6.86	106.94	113.80
35	BB	1857	G	C4'-C3'-C2'	6.86	109.46	102.60
26	B1	58	ASN	CA-C-N	6.86	131.57	120.60
26	B1	58	ASN	C-N-CA	6.86	131.57	120.60
35	BB	1721	G	O5'-C5'-C4'	-6.86	101.42	111.70
35	BB	3	U	O4'-C1'-C2'	-6.85	100.75	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	138	U	C4'-C3'-C2'	-6.85	95.75	102.60
35	BB	2036	C	C5'-C4'-C3'	-6.85	105.72	116.00
35	BB	2531	A	O4'-C1'-C2'	-6.85	100.75	107.60
35	BB	2712	C	P-O3'-C3'	6.85	130.48	120.20
46	BM	54	THR	N-CA-CB	6.85	120.23	109.82
1	AA	200	G	C5'-C4'-C3'	-6.85	105.72	116.00
5	AE	157	GLY	CA-C-N	6.85	134.03	121.70
5	AE	157	GLY	C-N-CA	6.85	134.03	121.70
35	BB	651	G	O4'-C1'-N9	6.85	118.77	108.50
1	AA	27	G	O4'-C1'-N9	6.85	118.77	108.50
1	AA	347	G	C3'-C2'-C1'	6.85	108.15	101.30
1	AA	373	A	C5'-C4'-C3'	6.85	126.27	116.00
15	AO	3	SER	CA-C-N	6.85	131.65	120.63
15	AO	3	SER	C-N-CA	6.85	131.65	120.63
35	BB	436	C	C4'-C3'-O3'	-6.85	102.73	113.00
35	BB	398	C	O4'-C1'-N1	6.84	118.77	108.50
35	BB	2011	U	O4'-C1'-N1	6.84	118.77	108.50
48	BO	71	ALA	N-CA-C	-6.84	104.82	113.72
1	AA	404	G	O4'-C1'-N9	6.84	118.77	108.50
44	BK	47	ILE	CA-C-O	-6.84	113.25	119.82
35	BB	1083	U	C5'-C4'-C3'	-6.84	105.74	116.00
35	BB	1956	U	O4'-C1'-N1	6.84	118.76	108.50
35	BB	2549	G	O4'-C1'-N9	6.84	118.76	108.50
35	BB	1156	A	C2'-C3'-O3'	6.84	119.75	109.50
35	BB	2388	A	P-O5'-C5'	6.84	131.15	120.90
18	AR	51	GLN	CA-C-O	-6.83	113.64	120.82
35	BB	2030	A	O5'-C5'-C4'	-6.83	101.45	111.70
43	BJ	134	ALA	N-CA-C	6.83	120.72	112.38
35	BB	757	G	P-O5'-C5'	6.83	131.15	120.90
35	BB	1055	G	C1'-O4'-C4'	-6.83	103.07	109.90
2	AB	93	HIS	ND1-CE1-NE2	6.83	115.23	108.40
35	BB	2834	G	P-O5'-C5'	-6.83	110.66	120.90
43	BJ	42	ALA	N-CA-CB	6.83	120.22	109.71
49	BP	34	GLY	CA-C-N	6.83	134.58	121.54
49	BP	34	GLY	C-N-CA	6.83	134.58	121.54
43	BJ	73	VAL	CA-C-O	-6.83	114.75	121.58
1	AA	1163	A	O4'-C1'-N9	6.83	118.74	108.50
35	BB	2215	C	O4'-C1'-N1	6.83	118.74	108.50
53	BT	69	ARG	N-CA-C	6.83	119.63	110.35
1	AA	1239	A	C2'-C3'-O3'	6.82	119.74	109.50
3	AC	186	SER	N-CA-C	-6.82	98.97	109.14
1	AA	1181	G	C1'-C2'-O2'	-6.82	101.57	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	706	A	P-O5'-C5'	6.82	131.13	120.90
35	BB	1567	G	O4'-C4'-C3'	-6.82	99.28	106.10
35	BB	1699	G	O4'-C1'-C2'	-6.82	98.98	105.80
35	BB	2584	U	C3'-C2'-C1'	6.82	108.12	101.30
1	AA	386	C	P-O3'-C3'	-6.82	109.97	120.20
1	AA	408	A	C4'-C3'-C2'	-6.82	95.78	102.60
1	AA	1314	C	O4'-C4'-C3'	6.82	110.82	104.00
35	BB	954	G	C4'-C3'-O3'	-6.82	102.78	113.00
35	BB	1547	C	C5'-C4'-C3'	-6.82	105.78	116.00
49	BP	77	SER	CA-C-N	6.82	127.09	119.32
49	BP	77	SER	C-N-CA	6.82	127.09	119.32
54	BU	70	ALA	N-CA-C	-6.82	98.95	109.52
34	BA	68	C	O4'-C1'-N1	6.81	118.72	108.50
11	AK	55	ARG	CA-C-N	6.81	129.41	120.28
11	AK	55	ARG	C-N-CA	6.81	129.41	120.28
1	AA	210	C	C3'-C2'-O2'	-6.81	104.39	114.60
1	AA	777	A	P-O5'-C5'	-6.81	110.69	120.90
35	BB	1952	A	C4'-C3'-O3'	-6.81	102.79	113.00
36	BC	239	PHE	N-CA-C	-6.81	99.19	108.38
55	BW	46	LYS	CA-C-N	6.81	131.23	120.47
55	BW	46	LYS	C-N-CA	6.81	131.23	120.47
1	AA	1444	U	O4'-C1'-N1	6.81	118.71	108.50
36	BC	27	LYS	CA-C-O	-6.81	113.28	120.70
1	AA	121	U	C4'-C3'-C2'	-6.80	95.80	102.60
1	AA	699	C	O4'-C1'-C2'	-6.80	100.80	107.60
16	AP	55	ASP	N-CA-C	6.80	119.32	111.02
35	BB	2168	G	C5'-C4'-C3'	6.80	126.20	116.00
50	BQ	105	PHE	CA-C-N	6.80	131.48	120.60
50	BQ	105	PHE	C-N-CA	6.80	131.48	120.60
14	AN	78	LEU	N-CA-C	-6.80	99.01	109.14
35	BB	2145	C	C4'-C3'-C2'	6.80	109.40	102.60
1	AA	705	G	C4'-C3'-C2'	-6.80	95.80	102.60
35	BB	786	C	P-O3'-C3'	-6.80	110.00	120.20
37	BD	159	LYS	CA-C-N	6.80	130.36	120.71
37	BD	159	LYS	C-N-CA	6.80	130.36	120.71
1	AA	364	A	O4'-C4'-C3'	-6.80	97.20	104.00
1	AA	1499	A	P-O5'-C5'	6.80	131.09	120.90
19	AS	69	LYS	N-CA-C	-6.80	101.53	110.43
35	BB	1079	C	P-O5'-C5'	-6.80	110.71	120.90
38	BE	24	ASN	OD1-CG-ND2	-6.79	115.81	122.60
10	AJ	58	ASN	CA-CB-CG	-6.79	105.81	112.60
22	AV	70	C	O4'-C1'-N1	6.79	118.69	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	B2	24	LEU	CA-C-N	6.79	128.69	120.13
27	B2	24	LEU	C-N-CA	6.79	128.69	120.13
35	BB	242	G	C2'-C3'-O3'	6.79	119.69	109.50
4	AD	76	LYS	CA-CB-CG	6.79	127.68	114.10
15	AO	19	ASN	N-CA-C	-6.79	103.42	113.40
1	AA	143	A	O4'-C1'-N9	6.79	118.69	108.50
1	AA	117	G	C4'-C3'-O3'	-6.79	102.82	113.00
35	BB	2022	U	O3'-P-O5'	-6.79	93.82	104.00
52	BS	94	ASP	CA-C-O	-6.79	112.45	120.60
1	AA	1494	G	C4'-C3'-C2'	-6.79	95.81	102.60
35	BB	1084	A	P-O5'-C5'	6.79	131.08	120.90
6	AF	22	ILE	N-CA-CB	6.79	118.04	110.51
35	BB	64	A	O4'-C4'-C3'	-6.79	97.21	104.00
35	BB	2790	U	P-O5'-C5'	6.79	131.08	120.90
45	BL	100	ILE	CA-C-N	6.78	132.12	123.10
45	BL	100	ILE	C-N-CA	6.78	132.12	123.10
1	AA	21	G	C4'-C3'-C2'	-6.78	95.82	102.60
1	AA	742	G	C4'-C3'-C2'	-6.78	95.82	102.60
35	BB	593	U	O4'-C1'-C2'	-6.78	100.82	107.60
1	AA	653	U	O4'-C1'-N1	6.78	118.37	108.20
8	AH	112	ASP	CA-C-N	6.78	129.85	120.63
8	AH	112	ASP	C-N-CA	6.78	129.85	120.63
35	BB	1831	G	O4'-C1'-N9	6.78	118.67	108.50
35	BB	2709	G	O4'-C4'-C3'	-6.78	97.22	104.00
35	BB	172	A	O4'-C1'-N9	6.78	118.66	108.50
38	BE	136	GLN	OE1-CD-NE2	6.77	129.37	122.60
39	BF	114	ARG	NE-CZ-NH1	-6.77	114.73	121.50
8	AH	126	CYS	O-C-N	6.77	130.08	123.04
35	BB	791	C	C4'-C3'-C2'	-6.77	95.83	102.60
35	BB	2315	G	O4'-C1'-N9	6.77	118.66	108.50
46	BM	132	THR	O-C-N	-6.77	115.38	123.03
1	AA	25	C	O4'-C1'-N1	6.77	118.66	108.50
2	AB	220	VAL	N-CA-C	-6.77	103.44	113.39
1	AA	29	U	O4'-C1'-C2'	-6.77	100.83	107.60
35	BB	1552	A	P-O3'-C3'	-6.77	110.05	120.20
1	AA	1482	G	P-O5'-C5'	-6.77	110.75	120.90
35	BB	1580	A	C4'-C3'-C2'	-6.77	95.83	102.60
18	AR	30	ASN	OD1-CG-ND2	6.76	129.37	122.60
35	BB	1956	U	C4'-C3'-C2'	-6.76	95.83	102.60
50	BQ	12	ARG	N-CA-C	-6.76	105.03	113.28
1	AA	857	C	O4'-C1'-N1	6.76	118.64	108.50
35	BB	1056	G	C2'-C3'-O3'	-6.76	103.56	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1361	G	C1'-O4'-C4'	-6.76	103.14	109.90
32	B7	34	LYS	N-CA-C	-6.76	104.93	113.72
1	AA	986	U	O4'-C1'-N1	6.76	118.64	108.50
2	AB	197	PHE	N-CA-C	-6.76	97.89	108.90
35	BB	1541	C	O4'-C1'-N1	6.76	118.63	108.50
35	BB	2340	A	O4'-C4'-C3'	-6.76	97.24	104.00
35	BB	2266	A	C2'-C3'-O3'	6.75	119.63	109.50
35	BB	702	U	O4'-C1'-N1	6.75	118.63	108.50
19	AS	11	ASP	N-CA-CB	6.75	121.90	110.49
34	BA	80	U	O3'-P-O5'	-6.75	93.87	104.00
35	BB	897	C	O4'-C1'-N1	6.75	118.63	108.50
35	BB	1785	A	C4'-C3'-O3'	-6.75	102.87	113.00
35	BB	2061	G	O3'-P-O5'	-6.75	93.87	104.00
35	BB	2338	C	O5'-C5'-C4'	-6.75	101.37	111.50
53	BT	68	LYS	CA-C-N	6.75	130.94	120.75
53	BT	68	LYS	C-N-CA	6.75	130.94	120.75
35	BB	1156	A	O4'-C1'-C2'	6.75	112.55	105.80
43	BJ	7	LYS	CA-C-O	6.75	126.67	120.26
44	BK	71	ARG	CD-NE-CZ	-6.75	114.95	124.40
1	AA	503	C	O4'-C1'-N1	6.75	118.62	108.50
1	AA	1025	U	C4'-C3'-C2'	-6.75	95.85	102.60
3	AC	19	SER	CA-C-N	6.75	132.50	123.05
3	AC	19	SER	C-N-CA	6.75	132.50	123.05
15	AO	62	ARG	CA-C-N	6.75	129.62	120.44
15	AO	62	ARG	C-N-CA	6.75	129.62	120.44
55	BW	80	HIS	CE1-NE2-CD2	-6.75	102.25	109.00
35	BB	2094	A	P-O5'-C5'	6.75	131.02	120.90
1	AA	267	C	C4'-C3'-O3'	-6.74	102.88	113.00
2	AB	211	LEU	CA-C-N	6.74	130.56	120.31
2	AB	211	LEU	C-N-CA	6.74	130.56	120.31
50	BQ	89	ILE	O-C-N	6.74	128.91	121.90
22	AV	5	A	C5'-C4'-C3'	6.74	126.11	116.00
35	BB	696	G	O4'-C1'-C2'	-6.74	100.86	107.60
11	AK	105	ARG	N-CA-C	-6.74	98.78	109.23
35	BB	1173	U	O5'-C5'-C4'	-6.74	101.39	111.50
1	AA	631	C	O3'-P-O5'	-6.74	93.89	104.00
1	AA	1532	U	P-O5'-C5'	6.74	131.01	120.90
20	AT	16	ALA	CA-C-N	6.74	129.20	120.44
20	AT	16	ALA	C-N-CA	6.74	129.20	120.44
1	AA	782	A	O4'-C4'-C3'	-6.74	97.27	104.00
1	AA	895	G	C4'-C3'-C2'	-6.74	95.86	102.60
1	AA	974	A	C5'-C4'-C3'	-6.74	105.10	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1396	U	O4'-C1'-C2'	6.74	112.53	105.80
35	BB	1240	U	C1'-O4'-C4'	6.73	116.63	109.90
47	BN	113	ILE	N-CA-C	-6.73	99.05	108.27
1	AA	1495	U	O4'-C1'-C2'	-6.73	100.87	107.60
3	AC	67	ILE	O-C-N	6.73	130.66	122.72
34	BA	51	G	P-O5'-C5'	-6.73	110.80	120.90
1	AA	890	G	P-O3'-C3'	6.73	130.29	120.20
2	AB	75	ALA	N-CA-C	-6.73	104.20	114.16
35	BB	971	G	O4'-C1'-N9	6.73	118.59	108.50
15	AO	39	GLN	CB-CA-C	-6.73	99.62	110.79
35	BB	1600	C	C5'-C4'-C3'	-6.73	105.91	116.00
19	AS	24	SER	O-C-N	-6.72	115.54	123.41
35	BB	90	U	P-O3'-C3'	6.72	130.29	120.20
35	BB	2276	G	C4'-C3'-C2'	-6.72	95.88	102.60
1	AA	1002	G	C4'-C3'-C2'	-6.72	95.88	102.60
35	BB	47	C	P-O3'-C3'	6.72	130.28	120.20
35	BB	577	G	P-O5'-C5'	-6.72	110.82	120.90
35	BB	1987	A	O4'-C1'-N9	6.72	118.58	108.50
49	BP	10	GLU	N-CA-C	6.72	120.58	112.38
52	BS	76	VAL	N-CA-C	-6.72	95.36	109.34
53	BT	10	VAL	CA-CB-CG2	6.72	121.83	110.40
1	AA	140	U	P-O3'-C3'	-6.72	110.12	120.20
35	BB	2162	G	O3'-P-O5'	-6.72	93.92	104.00
35	BB	2605	U	C4'-C3'-C2'	-6.72	95.88	102.60
36	BC	269	ARG	N-CA-CB	6.72	119.92	110.04
1	AA	1246	A	C4'-C3'-C2'	-6.72	95.88	102.60
7	AG	150	PHE	CA-CB-CG	-6.72	107.08	113.80
29	B4	26	LYS	N-CA-C	-6.72	105.06	112.72
35	BB	897	C	C4'-C3'-C2'	-6.72	95.88	102.60
35	BB	1662	U	O4'-C1'-N1	6.72	118.58	108.50
1	AA	611	C	C4'-C3'-O3'	-6.72	102.92	113.00
35	BB	271	G	O4'-C4'-C3'	-6.72	99.38	106.10
35	BB	1646	C	O4'-C1'-N1	6.72	118.58	108.50
9	AI	80	HIS	CA-CB-CG	6.71	120.51	113.80
12	AL	93	ARG	NE-CZ-NH1	-6.71	114.79	121.50
35	BB	1407	G	C4'-C3'-C2'	-6.71	95.89	102.60
41	BH	132	PHE	O-C-N	-6.71	115.17	123.36
20	AT	74	HIS	N-CA-C	6.71	120.34	111.75
1	AA	815	A	O4'-C1'-N9	6.71	118.27	108.20
39	BF	4	HIS	O-C-N	6.71	129.07	122.09
31	B6	5	PHE	CA-CB-CG	6.71	120.51	113.80
35	BB	1895	C	C4'-C3'-O3'	-6.71	102.94	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	AP	76	LYS	CA-C-O	-6.71	113.31	120.42
22	AV	39	G	C2'-C3'-O3'	6.71	123.76	113.70
6	AF	56	LYS	N-CA-C	-6.71	99.12	109.24
35	BB	2348	U	O4'-C1'-N1	6.71	118.56	108.50
1	AA	7	A	P-O5'-C5'	-6.70	110.84	120.90
1	AA	438	U	O4'-C1'-N1	6.70	118.25	108.20
1	AA	927	G	O4'-C1'-N9	6.70	118.55	108.50
1	AA	311	C	O4'-C1'-N1	6.70	118.55	108.50
17	AQ	56	ASP	CA-CB-CG	-6.70	105.90	112.60
35	BB	564	C	C4'-C3'-C2'	-6.70	95.91	102.60
35	BB	1592	C	O4'-C1'-N1	6.70	118.54	108.50
3	AC	7	ASN	O-C-N	-6.69	113.69	122.59
20	AT	58	ASP	N-CA-CB	6.69	119.77	110.07
49	BP	73	PHE	N-CA-C	-6.69	99.01	109.72
53	BT	39	THR	N-CA-C	-6.69	98.44	107.88
18	AR	39	VAL	O-C-N	-6.69	115.61	121.57
30	B5	180	PHE	CB-CG-CD1	6.69	132.07	120.70
36	BC	38	LYS	N-CA-CB	6.69	123.11	111.13
55	BW	80	HIS	N-CA-C	6.69	117.29	109.60
34	BA	36	C	O4'-C1'-C2'	-6.69	100.91	107.60
35	BB	2490	G	O4'-C1'-C2'	6.69	112.49	105.80
50	BQ	83	LYS	N-CA-C	-6.69	102.61	111.24
1	AA	357	G	C5'-C4'-C3'	-6.69	105.97	116.00
38	BE	106	LYS	CB-CA-C	-6.69	97.11	110.42
35	BB	510	C	C3'-C2'-C1'	6.69	107.99	101.30
35	BB	961	C	O4'-C4'-C3'	-6.68	99.42	106.10
22	AV	6	C	C4'-C3'-C2'	-6.68	95.92	102.60
35	BB	115	C	O4'-C1'-N1	6.68	118.53	108.50
35	BB	830	G	O3'-P-O5'	-6.68	93.98	104.00
22	AV	70	C	P-O5'-C5'	6.68	130.92	120.90
35	BB	1390	U	O4'-C1'-N1	6.68	118.52	108.50
35	BB	1757	A	O4'-C1'-N9	6.68	118.52	108.50
35	BB	737	C	O4'-C1'-N1	6.68	118.52	108.50
35	BB	2171	A	P-O3'-C3'	6.68	130.22	120.20
40	BG	22	VAL	CA-C-N	6.68	131.23	122.95
40	BG	22	VAL	C-N-CA	6.68	131.23	122.95
25	B0	35	HIS	CA-C-N	6.68	134.07	122.32
25	B0	35	HIS	C-N-CA	6.68	134.07	122.32
35	BB	1454	C	O3'-P-O5'	-6.68	93.99	104.00
46	BM	18	ARG	N-CA-C	-6.68	103.34	113.89
35	BB	131	A	O4'-C1'-N9	6.67	118.51	108.50
35	BB	560	C	C3'-C2'-O2'	6.67	120.71	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1938	A	C2'-C3'-O3'	6.67	119.51	109.50
35	BB	1412	U	O4'-C4'-C3'	-6.67	97.33	104.00
1	AA	708	C	O3'-P-O5'	-6.67	93.99	104.00
29	B4	5	ARG	N-CA-C	-6.67	98.75	109.96
1	AA	242	G	P-O3'-C3'	6.67	130.20	120.20
35	BB	106	C	O4'-C1'-N1	6.67	118.50	108.50
35	BB	2020	A	P-O5'-C5'	6.67	130.90	120.90
56	BY	12	GLY	CA-C-N	6.67	131.60	122.07
56	BY	12	GLY	C-N-CA	6.67	131.60	122.07
35	BB	1057	A	P-O3'-C3'	-6.67	110.20	120.20
1	AA	210	C	C2'-C3'-O3'	6.67	119.50	109.50
3	AC	137	VAL	N-CA-C	-6.67	106.30	112.96
1	AA	15	G	O4'-C1'-C2'	-6.66	100.94	107.60
35	BB	1112	G	C4'-C3'-O3'	-6.66	103.01	113.00
35	BB	1363	C	C5'-C4'-C3'	-6.66	106.01	116.00
35	BB	1909	C	O4'-C1'-N1	6.66	118.50	108.50
35	BB	1465	G	P-O5'-C5'	6.66	130.89	120.90
36	BC	242	HIS	ND1-CG-CD2	6.66	112.76	106.10
31	B6	17	GLY	N-CA-C	6.66	119.66	112.33
38	BE	120	VAL	N-CA-CB	6.66	120.29	111.90
1	AA	652	U	P-O3'-C3'	-6.66	110.21	120.20
1	AA	1472	U	C4'-C3'-C2'	-6.66	95.94	102.60
10	AJ	6	ILE	N-CA-C	-6.66	99.56	108.35
35	BB	1813	G	C4'-C3'-C2'	-6.66	95.94	102.60
35	BB	2103	C	O4'-C1'-N1	6.66	118.49	108.50
1	AA	1117	A	C4'-C3'-O3'	-6.66	103.02	113.00
37	BD	178	VAL	N-CA-C	-6.66	106.36	111.62
51	BR	45	GLU	CA-C-O	6.66	126.74	119.15
53	BT	2	ILE	N-CA-C	-6.66	105.63	113.42
5	AE	111	ARG	N-CA-C	-6.65	102.46	112.04
35	BB	2861	U	P-O5'-C5'	6.65	130.88	120.90
47	BN	26	GLY	CA-C-O	-6.65	113.90	120.75
35	BB	1810	A	O4'-C1'-N9	6.65	118.48	108.50
1	AA	602	A	C1'-O4'-C4'	-6.65	103.25	109.90
10	AJ	37	ARG	N-CA-CB	6.65	121.97	111.20
35	BB	1270	C	O4'-C1'-N1	6.65	118.47	108.50
39	BF	100	GLU	N-CA-C	-6.65	96.64	110.80
3	AC	111	ASP	N-CA-CB	6.65	121.72	110.49
7	AG	112	ASP	N-CA-C	-6.64	103.57	112.94
1	AA	837	U	O4'-C1'-C2'	-6.64	100.96	107.60
26	B1	46	VAL	CA-C-N	6.64	129.42	120.65
26	B1	46	VAL	C-N-CA	6.64	129.42	120.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2162	G	O4'-C4'-C3'	-6.64	97.36	104.00
3	AC	88	LYS	CB-CG-CD	6.64	126.57	111.30
9	AI	86	LEU	N-CA-C	-6.64	96.69	109.24
30	B5	188	ASN	OD1-CG-ND2	-6.64	115.96	122.60
35	BB	1281	G	P-O5'-C5'	-6.64	110.94	120.90
35	BB	1344	U	O4'-C1'-N1	6.64	118.16	108.20
1	AA	128	G	C4'-C3'-C2'	-6.64	95.96	102.60
35	BB	1460	U	O4'-C1'-N1	6.64	118.16	108.20
1	AA	46	G	O4'-C1'-N9	6.64	118.45	108.50
1	AA	207	C	O4'-C1'-N1	6.64	118.45	108.50
13	AM	13	HIS	N-CA-C	6.64	118.87	110.24
35	BB	99	U	O4'-C1'-N1	6.64	118.46	108.50
1	AA	597	G	P-O3'-C3'	-6.63	110.25	120.20
27	B2	52	PHE	CA-CB-CG	-6.63	107.17	113.80
35	BB	230	G	O5'-C5'-C4'	-6.63	101.55	111.50
35	BB	466	A	C4'-C3'-C2'	-6.63	95.97	102.60
1	AA	158	G	C4'-C3'-O3'	-6.63	103.05	113.00
1	AA	916	U	O4'-C4'-C3'	-6.63	97.37	104.00
18	AR	71	ASP	CB-CA-C	-6.63	98.54	110.35
35	BB	832	U	O4'-C1'-N1	6.63	118.45	108.50
39	BF	128	SER	N-CA-C	-6.63	99.37	109.85
35	BB	887	U	C3'-C2'-C1'	-6.63	94.67	101.30
35	BB	1847	A	C4'-C3'-O3'	-6.63	103.06	113.00
40	BG	29	ASN	N-CA-CB	6.63	121.69	110.49
34	BA	113	C	O4'-C1'-N1	6.63	118.44	108.50
36	BC	14	HIS	N-CA-C	-6.63	104.35	114.16
35	BB	1244	A	P-O5'-C5'	-6.62	110.96	120.90
44	BK	71	ARG	CA-C-N	6.62	126.57	119.28
44	BK	71	ARG	C-N-CA	6.62	126.57	119.28
1	AA	812	G	O4'-C1'-C2'	-6.62	100.98	107.60
1	AA	1083	U	O4'-C4'-C3'	-6.62	97.38	104.00
1	AA	489	C	O4'-C1'-N1	6.62	118.43	108.50
35	BB	56	A	C4'-C3'-C2'	-6.62	95.98	102.60
4	AD	130	ASN	CA-CB-CG	-6.62	105.98	112.60
9	AI	4	GLN	OE1-CD-NE2	6.62	129.22	122.60
36	BC	59	GLN	N-CA-CB	6.62	121.67	110.49
11	AK	97	ARG	CA-C-O	-6.62	113.48	120.63
32	B7	61	LEU	O-C-N	-6.62	115.98	121.27
35	BB	846	U	O4'-C1'-N1	6.62	118.42	108.50
1	AA	671	G	C5'-C4'-C3'	-6.61	106.08	116.00
36	BC	136	VAL	O-C-N	6.61	129.65	122.57
37	BD	46	ARG	N-CA-C	-6.61	96.71	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	AM	84	CYS	CA-C-N	6.61	129.98	120.79
13	AM	84	CYS	C-N-CA	6.61	129.98	120.79
35	BB	1561	C	O4'-C1'-C2'	-6.61	100.99	107.60
35	BB	2364	C	O4'-C1'-N1	6.61	118.42	108.50
35	BB	2865	U	C4'-C3'-C2'	-6.61	95.99	102.60
37	BD	142	VAL	O-C-N	-6.61	113.56	121.10
54	BU	88	ASP	N-CA-C	-6.61	102.56	112.54
6	AF	41	ASP	CA-CB-CG	-6.61	105.99	112.60
35	BB	1006	C	O4'-C1'-N1	6.61	118.41	108.50
39	BF	65	LEU	CA-C-N	6.61	133.86	121.97
39	BF	65	LEU	C-N-CA	6.61	133.86	121.97
35	BB	1566	A	C1'-O4'-C4'	6.61	116.31	109.70
35	BB	2049	G	O5'-C5'-C4'	-6.61	101.59	111.50
44	BK	85	VAL	N-CA-C	-6.61	98.86	108.11
35	BB	62	U	C4'-C3'-C2'	-6.60	96.00	102.60
35	BB	1337	G	C5'-C4'-C3'	-6.60	106.09	116.00
43	BJ	129	GLU	CA-C-O	6.60	129.95	120.51
1	AA	512	U	P-O5'-C5'	6.60	130.81	120.90
19	AS	68	HIS	CE1-NE2-CD2	-6.60	102.40	109.00
21	AU	8	ASN	CA-CB-CG	6.60	119.20	112.60
34	BA	118	C	O4'-C1'-N1	6.60	118.40	108.50
35	BB	671	C	O4'-C1'-N1	6.60	118.41	108.50
35	BB	1757	A	P-O5'-C5'	-6.60	111.00	120.90
35	BB	536	G	O4'-C1'-C2'	-6.60	101.00	107.60
41	BH	49	ALA	CA-C-N	6.60	130.02	120.38
41	BH	49	ALA	C-N-CA	6.60	130.02	120.38
1	AA	220	G	O4'-C4'-C3'	-6.60	97.40	104.00
38	BE	185	LYS	N-CA-C	-6.59	100.72	110.48
35	BB	1686	C	O4'-C1'-N1	6.59	118.39	108.50
3	AC	27	GLU	CB-CA-C	6.59	120.14	109.07
35	BB	1271	G	C4'-C3'-O3'	-6.59	103.11	113.00
41	BH	18	GLN	OE1-CD-NE2	6.59	129.19	122.60
48	BO	60	GLU	CB-CG-CD	-6.59	101.39	112.60
32	B7	35	LYS	CA-C-O	-6.59	113.49	120.80
39	BF	151	LEU	N-CA-C	-6.59	99.65	108.74
41	BH	135	HIS	CE1-NE2-CD2	-6.59	102.41	109.00
35	BB	1234	U	C1'-C2'-O2'	6.59	118.28	108.40
37	BD	104	VAL	CA-C-O	-6.59	114.75	121.67
35	BB	1056	G	O4'-C1'-N9	6.58	118.38	108.50
1	AA	180	U	O4'-C1'-N1	6.58	118.37	108.50
5	AE	94	PHE	N-CA-C	-6.58	99.06	109.07
1	AA	60	A	P-O3'-C3'	6.58	130.07	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	AS	62	THR	N-CA-C	-6.58	99.83	109.18
35	BB	2151	U	P-O5'-C5'	6.58	130.77	120.90
35	BB	2718	G	P-O5'-C5'	-6.58	111.03	120.90
35	BB	2768	U	C4'-C3'-C2'	-6.58	96.02	102.60
48	BO	78	VAL	N-CA-CB	6.58	119.49	110.54
35	BB	368	A	O4'-C1'-C2'	-6.58	101.02	107.60
35	BB	856	G	C4'-C3'-O3'	-6.58	103.13	113.00
1	AA	41	G	C4'-C3'-C2'	-6.58	96.02	102.60
1	AA	1456	A	O4'-C1'-N9	6.58	118.37	108.50
35	BB	1061	U	C3'-C2'-O2'	-6.58	104.73	114.60
35	BB	2466	C	C4'-C3'-O3'	-6.58	103.14	113.00
47	BN	38	LEU	CA-C-N	6.58	126.35	119.05
47	BN	38	LEU	C-N-CA	6.58	126.35	119.05
5	AE	94	PHE	CA-C-N	6.58	134.10	121.54
5	AE	94	PHE	C-N-CA	6.58	134.10	121.54
35	BB	839	U	C4'-C3'-O3'	-6.58	103.14	113.00
35	BB	2486	C	O4'-C1'-N1	6.58	118.36	108.50
49	BP	4	ILE	O-C-N	-6.58	116.17	122.09
35	BB	560	C	O4'-C1'-C2'	-6.57	101.03	107.60
35	BB	2359	C	O4'-C1'-N1	6.57	118.36	108.50
36	BC	201	LEU	N-CA-C	-6.57	103.31	112.45
51	BR	2	TYR	CA-CB-CG	-6.57	102.07	113.90
35	BB	1135	C	O4'-C1'-N1	6.57	118.35	108.50
35	BB	2445	G	C2'-C3'-O3'	6.57	123.56	113.70
1	AA	1295	U	C1'-O4'-C4'	6.57	116.47	109.90
35	BB	1768	C	O4'-C1'-N1	6.57	118.35	108.50
35	BB	2421	G	C3'-C2'-O2'	6.57	120.55	110.70
35	BB	2613	U	O4'-C4'-C3'	-6.57	99.53	106.10
35	BB	1595	C	O4'-C4'-C3'	-6.57	97.44	104.00
1	AA	880	C	O4'-C1'-N1	6.56	118.35	108.50
1	AA	918	A	O4'-C1'-N9	6.56	118.34	108.50
1	AA	1377	A	C4'-C3'-O3'	-6.56	103.15	113.00
15	AO	38	LEU	N-CA-CB	6.56	120.73	111.15
1	AA	1384	C	O4'-C1'-N1	6.56	118.34	108.50
35	BB	2287	A	C2'-C3'-O3'	6.56	119.34	109.50
35	BB	2503	A	O5'-C5'-C4'	-6.56	101.86	111.70
38	BE	106	LYS	N-CA-C	-6.56	96.82	110.80
2	AB	128	LEU	N-CA-C	-6.56	104.85	112.92
35	BB	106	C	O4'-C4'-C3'	-6.56	97.44	104.00
35	BB	1546	G	C5'-C4'-C3'	-6.56	106.16	116.00
1	AA	908	A	C4'-C3'-C2'	-6.56	96.04	102.60
35	BB	366	C	C4'-C3'-C2'	-6.56	96.04	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	951	C	O4'-C1'-N1	6.56	118.34	108.50
1	AA	733	G	C4'-C3'-C2'	-6.56	96.04	102.60
31	B6	21	ARG	CD-NE-CZ	-6.56	115.22	124.40
35	BB	950	G	O4'-C4'-C3'	-6.56	97.44	104.00
35	BB	1146	C	O4'-C1'-N1	6.56	118.33	108.50
35	BB	1449	G	C4'-C3'-C2'	-6.56	96.04	102.60
41	BH	149	GLU	N-CA-CB	6.56	121.65	110.50
49	BP	63	ILE	CA-C-N	6.56	129.07	120.28
49	BP	63	ILE	C-N-CA	6.56	129.07	120.28
4	AD	119	HIS	CA-CB-CG	-6.56	107.24	113.80
1	AA	1001	C	O4'-C1'-N1	6.55	118.33	108.50
17	AQ	49	ASN	N-CA-C	-6.55	96.84	110.80
35	BB	364	C	O4'-C1'-N1	6.55	118.33	108.50
35	BB	2815	C	O4'-C1'-N1	6.55	118.33	108.50
40	BG	163	TYR	CA-C-N	6.55	128.96	120.44
40	BG	163	TYR	C-N-CA	6.55	128.96	120.44
35	BB	302	C	C4'-C3'-O3'	-6.55	103.17	113.00
16	AP	14	ARG	N-CA-CB	6.55	122.03	110.37
35	BB	607	U	C3'-C2'-C1'	6.55	107.85	101.30
35	BB	2056	G	O4'-C1'-C2'	-6.55	101.05	107.60
35	BB	1576	U	C4'-C3'-C2'	-6.55	96.05	102.60
35	BB	2267	A	O4'-C1'-C2'	-6.55	101.05	107.60
40	BG	40	VAL	CA-C-N	6.55	134.04	121.54
40	BG	40	VAL	C-N-CA	6.55	134.04	121.54
41	BH	132	PHE	CA-C-O	6.55	128.33	120.28
52	BS	62	ASP	N-CA-CB	6.55	121.55	110.49
35	BB	2600	A	P-O3'-C3'	-6.54	110.38	120.20
1	AA	1209	C	O4'-C1'-N1	6.54	118.31	108.50
35	BB	496	G	C5'-C4'-C3'	-6.54	106.19	116.00
35	BB	1825	U	C4'-C3'-O3'	-6.54	103.19	113.00
1	AA	1453	G	O5'-C5'-C4'	-6.54	101.69	111.50
39	BF	12	VAL	N-CA-CB	6.54	118.20	110.55
2	AB	199	ILE	N-CA-C	-6.54	94.76	108.88
8	AH	86	LYS	CA-C-N	6.54	134.03	121.54
8	AH	86	LYS	C-N-CA	6.54	134.03	121.54
35	BB	912	C	P-O5'-C5'	6.54	130.71	120.90
35	BB	2809	A	O4'-C1'-N9	6.54	118.31	108.50
35	BB	2423	U	C3'-C2'-C1'	-6.54	94.96	101.50
36	BC	231	HIS	CE1-NE2-CD2	-6.54	102.46	109.00
37	BD	33	ARG	CA-C-N	6.54	130.95	121.80
37	BD	33	ARG	C-N-CA	6.54	130.95	121.80
35	BB	583	G	C4'-C3'-O3'	-6.54	103.20	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	38	HIS	CE1-NE2-CD2	-6.53	102.47	109.00
3	AC	182	ASP	N-CA-C	-6.53	100.85	110.52
35	BB	1046	A	C5'-C4'-C3'	-6.53	105.40	115.20
35	BB	2488	G	O4'-C1'-N9	6.53	118.30	108.50
45	BL	24	GLY	CA-C-N	6.53	129.57	120.29
45	BL	24	GLY	C-N-CA	6.53	129.57	120.29
35	BB	509	C	C3'-C2'-C1'	6.53	107.83	101.30
43	BJ	52	ASP	N-CA-CB	6.53	121.53	110.49
15	AO	5	GLU	N-CA-CB	6.53	119.54	110.07
35	BB	1160	G	C5'-C4'-C3'	6.53	125.79	116.00
1	AA	1128	C	C4'-C3'-C2'	-6.53	96.07	102.60
7	AG	79	VAL	N-CA-C	-6.53	95.76	109.34
17	AQ	76	ARG	N-CA-CB	6.53	121.52	110.49
35	BB	937	C	P-O3'-C3'	-6.53	110.41	120.20
35	BB	973	A	C5'-C4'-O4'	6.53	118.89	109.10
38	BE	78	TRP	CB-CG-CD2	-6.53	117.66	126.80
41	BH	31	VAL	N-CA-C	-6.53	94.08	107.92
1	AA	649	A	O5'-C5'-C4'	-6.53	101.71	111.50
1	AA	1201	A	P-O3'-C3'	6.52	129.99	120.20
5	AE	30	PHE	N-CA-C	-6.52	104.08	113.21
34	BA	66	A	P-O3'-C3'	6.52	129.99	120.20
55	BW	8	VAL	CA-C-N	6.52	133.78	122.82
55	BW	8	VAL	C-N-CA	6.52	133.78	122.82
35	BB	2348	U	C1'-O4'-C4'	-6.52	103.38	109.90
35	BB	359	G	O4'-C1'-N9	6.52	118.28	108.50
37	BD	12	THR	N-CA-C	-6.52	100.24	108.45
1	AA	184	G	O4'-C1'-N9	6.52	118.27	108.50
32	B7	39	ARG	CA-C-N	6.51	129.01	120.28
32	B7	39	ARG	C-N-CA	6.51	129.01	120.28
34	BA	30	C	O4'-C1'-C2'	-6.51	101.09	107.60
48	BO	97	PHE	O-C-N	6.51	130.81	123.19
52	BS	98	LYS	N-CA-CB	6.51	121.34	110.53
1	AA	1432	G	C4'-C3'-C2'	6.51	109.11	102.60
35	BB	1202	G	C4'-C3'-O3'	-6.51	103.23	113.00
3	AC	40	GLN	CA-C-N	6.51	128.90	120.44
3	AC	40	GLN	C-N-CA	6.51	128.90	120.44
30	B5	178	VAL	CA-C-N	6.51	134.07	121.18
30	B5	178	VAL	C-N-CA	6.51	134.07	121.18
35	BB	627	A	C4'-C3'-C2'	-6.51	96.09	102.60
3	AC	75	VAL	CA-C-N	6.51	128.76	120.56
3	AC	75	VAL	C-N-CA	6.51	128.76	120.56
36	BC	226	PRO	CA-C-N	6.51	130.75	120.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BC	226	PRO	C-N-CA	6.51	130.75	120.47
1	AA	446	G	P-O3'-C3'	-6.51	110.44	120.20
35	BB	1664	A	C5'-C4'-C3'	-6.51	106.24	116.00
35	BB	2480	C	O4'-C1'-N1	6.51	118.26	108.50
38	BE	47	LYS	CA-C-O	-6.51	113.73	120.89
48	BO	59	ALA	CA-C-N	6.51	129.32	120.54
48	BO	59	ALA	C-N-CA	6.51	129.32	120.54
35	BB	2859	G	C4'-C3'-C2'	6.50	109.11	102.60
35	BB	2684	U	C3'-C2'-C1'	6.50	107.80	101.30
35	BB	2901	C	O4'-C1'-N1	6.50	118.26	108.50
1	AA	52	C	O4'-C1'-N1	6.50	118.25	108.50
1	AA	369	G	C4'-C3'-C2'	-6.50	96.10	102.60
37	BD	43	ASP	CA-CB-CG	-6.50	106.10	112.60
7	AG	49	LEU	CA-C-N	6.50	128.99	120.28
7	AG	49	LEU	C-N-CA	6.50	128.99	120.28
39	BF	86	CYS	CB-CA-C	-6.50	98.75	109.80
37	BD	80	TRP	CA-C-N	6.50	129.93	120.71
37	BD	80	TRP	C-N-CA	6.50	129.93	120.71
1	AA	609	A	C1'-O4'-C4'	6.50	116.39	109.90
8	AH	106	SER	CA-C-N	-6.50	114.40	122.84
8	AH	106	SER	C-N-CA	-6.50	114.40	122.84
13	AM	112	ARG	O-C-N	-6.50	115.27	123.06
51	BR	54	VAL	N-CA-C	-6.50	98.27	107.75
1	AA	1434	A	O4'-C1'-N9	6.49	118.24	108.50
5	AE	56	PRO	CB-CA-C	-6.49	102.74	113.06
30	B5	66	PRO	N-CA-C	6.49	121.99	114.20
35	BB	343	C	O3'-P-O5'	-6.49	94.26	104.00
35	BB	2467	C	C4'-C3'-C2'	-6.49	96.11	102.60
50	BQ	47	ARG	NE-CZ-NH1	-6.49	115.01	121.50
16	AP	53	ASP	CA-C-N	6.49	133.94	121.54
16	AP	53	ASP	C-N-CA	6.49	133.94	121.54
35	BB	876	C	C5'-C4'-C3'	-6.49	106.26	116.00
35	BB	2446	G	C4'-C3'-O3'	-6.49	103.26	113.00
1	AA	1358	U	C4'-C3'-C2'	-6.49	96.11	102.60
30	B5	6	LYS	CA-C-O	6.49	127.63	120.82
35	BB	1565	C	C2'-C3'-O3'	6.49	119.23	109.50
43	BJ	96	ARG	NE-CZ-NH2	6.49	125.04	119.20
36	BC	28	PRO	CA-C-O	-6.49	113.78	122.08
36	BC	199	HIS	ND1-CG-CD2	6.49	112.59	106.10
1	AA	203	G	O4'-C1'-N9	6.49	118.23	108.50
30	B5	183	ASP	O-C-N	-6.49	114.76	122.15
35	BB	1454	C	P-O5'-C5'	-6.49	111.17	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2303	G	O5'-C5'-C4'	-6.49	101.77	111.50
40	BG	19	ASN	N-CA-C	-6.49	99.30	108.96
1	AA	675	A	C4'-C3'-O3'	-6.48	103.28	113.00
1	AA	693	G	P-O5'-C5'	6.48	130.62	120.90
1	AA	726	C	P-O5'-C5'	6.48	130.62	120.90
1	AA	853	C	N1-C1'-C2'	-6.48	102.28	112.00
1	AA	1315	U	O4'-C1'-N1	6.48	118.22	108.50
35	BB	699	A	O4'-C4'-C3'	-6.48	97.52	104.00
43	BJ	116	ARG	N-CA-C	-6.48	105.50	113.41
47	BN	28	LEU	CA-C-N	6.48	128.80	120.70
47	BN	28	LEU	C-N-CA	6.48	128.80	120.70
1	AA	779	C	O4'-C1'-N1	6.48	118.22	108.50
11	AK	17	ASP	CA-C-O	6.48	128.69	121.11
1	AA	1386	G	C4'-C3'-C2'	-6.48	96.12	102.60
35	BB	295	G	C3'-C2'-C1'	6.48	107.78	101.30
35	BB	907	G	P-O5'-C5'	6.48	130.62	120.90
35	BB	1306	C	O4'-C1'-N1	6.48	118.22	108.50
39	BF	28	PRO	CB-CA-C	-6.48	100.87	111.56
35	BB	183	C	C1'-O4'-C4'	-6.47	103.42	109.90
35	BB	2476	A	O4'-C1'-N9	6.47	118.21	108.50
1	AA	931	C	O4'-C1'-N1	6.47	118.21	108.50
1	AA	783	C	P-O3'-C3'	-6.47	110.49	120.20
1	AA	103	U	C4'-C3'-O3'	-6.47	103.30	113.00
35	BB	635	C	O4'-C1'-N1	6.47	118.20	108.50
35	BB	1118	C	C1'-O4'-C4'	6.47	116.37	109.90
35	BB	2364	C	C4'-C3'-C2'	-6.47	96.13	102.60
37	BD	31	ALA	N-CA-CB	6.47	121.42	110.49
38	BE	141	MET	CA-C-N	6.47	131.95	122.63
38	BE	141	MET	C-N-CA	6.47	131.95	122.63
43	BJ	8	PRO	N-CA-CB	6.47	108.41	101.88
1	AA	488	C	O4'-C4'-C3'	-6.47	97.53	104.00
14	AN	5	MET	CA-C-N	6.47	129.78	120.79
14	AN	5	MET	C-N-CA	6.47	129.78	120.79
8	AH	56	PRO	N-CA-C	6.46	121.80	111.26
14	AN	41	TRP	CB-CG-CD1	6.46	136.60	126.90
35	BB	673	C	P-O3'-C3'	-6.46	110.50	120.20
40	BG	35	THR	N-CA-C	-6.46	99.16	109.76
1	AA	1470	U	O4'-C1'-N1	6.46	118.19	108.50
8	AH	90	GLU	N-CA-C	-6.46	103.51	112.30
36	BC	202	ARG	NE-CZ-NH1	6.46	127.96	121.50
44	BK	11	ALA	N-CA-C	-6.46	105.27	113.02
3	AC	137	VAL	CA-C-O	6.46	124.72	119.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	110	ARG	NE-CZ-NH1	-6.46	115.04	121.50
34	BA	90	C	O4'-C1'-N1	6.46	118.19	108.50
41	BH	47	PHE	N-CA-C	6.46	118.01	110.97
6	AF	97	THR	N-CA-C	-6.46	102.74	112.04
30	B5	121	MET	CG-SD-CE	-6.46	86.69	100.90
35	BB	1097	U	C4'-C3'-C2'	-6.46	96.14	102.60
43	BJ	60	ASP	N-CA-C	-6.46	105.53	113.41
50	BQ	73	ILE	N-CA-C	6.46	122.77	109.34
1	AA	751	U	P-O5'-C5'	6.46	130.58	120.90
5	AE	51	LYS	O-C-N	6.46	130.77	122.89
35	BB	1165	A	O4'-C1'-N9	6.46	118.19	108.50
35	BB	1616	A	O4'-C4'-C3'	-6.46	99.64	106.10
44	BK	120	PRO	N-CA-CB	-6.46	96.47	103.25
1	AA	985	C	O4'-C1'-N1	6.46	118.18	108.50
1	AA	1510	C	O5'-C5'-C4'	-6.46	101.82	111.50
11	AK	21	HIS	CB-CG-ND1	-6.46	113.02	122.70
1	AA	400	C	C4'-C3'-C2'	-6.45	96.15	102.60
2	AB	111	LYS	N-CA-C	-6.45	105.37	113.18
9	AI	19	PHE	CA-C-N	6.45	130.44	122.37
9	AI	19	PHE	C-N-CA	6.45	130.44	122.37
9	AI	82	ILE	CA-C-N	6.45	130.12	120.31
9	AI	82	ILE	C-N-CA	6.45	130.12	120.31
35	BB	2109	U	C4'-C3'-O3'	-6.45	103.32	113.00
35	BB	2190	G	O4'-C1'-N9	6.45	118.18	108.50
41	BH	15	LEU	N-CA-CB	6.45	121.40	110.49
47	BN	64	ARG	NE-CZ-NH1	6.45	127.95	121.50
1	AA	955	U	C4'-C3'-O3'	-6.45	103.32	113.00
35	BB	952	G	C4'-C3'-C2'	-6.45	96.15	102.60
35	BB	1346	G	O4'-C1'-N9	6.45	118.18	108.50
35	BB	2172	U	C1'-O4'-C4'	-6.45	103.25	109.70
52	BS	57	ASN	N-CA-CB	6.45	119.64	110.67
1	AA	1094	G	O3'-P-O5'	-6.45	94.33	104.00
35	BB	1056	G	O5'-C5'-C4'	6.45	121.17	111.50
35	BB	1291	C	O4'-C4'-C3'	-6.45	97.55	104.00
1	AA	1029	U	C5'-C4'-C3'	6.45	125.67	116.00
1	AA	1298	U	C5'-C4'-O4'	6.45	118.77	109.10
35	BB	1282	U	C1'-C2'-O2'	6.45	118.07	108.40
47	BN	16	HIS	ND1-CE1-NE2	6.45	114.84	108.40
11	AK	100	ASN	CA-CB-CG	-6.44	106.16	112.60
35	BB	1658	C	O5'-C5'-C4'	-6.44	101.83	111.50
35	BB	1701	A	P-O5'-C5'	-6.44	111.23	120.90
35	BB	2867	G	P-O3'-C3'	-6.44	110.53	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	BR	66	HIS	ND1-CE1-NE2	6.44	114.84	108.40
2	AB	209	VAL	CA-CB-CG2	-6.44	99.45	110.40
28	B3	40	HIS	CG-CD2-NE2	-6.44	100.76	107.20
35	BB	1047	G	P-O3'-C3'	6.44	129.86	120.20
35	BB	1795	C	C4'-C3'-O3'	-6.44	103.34	113.00
44	BK	47	ILE	N-CA-CB	6.44	117.32	110.17
4	AD	201	GLU	N-CA-C	-6.44	103.54	111.40
35	BB	2369	A	O5'-C5'-C4'	-6.44	101.84	111.50
1	AA	1237	C	P-O3'-C3'	6.44	129.86	120.20
29	B4	25	ASN	OD1-CG-ND2	6.44	129.04	122.60
35	BB	956	G	C4'-C3'-C2'	-6.44	96.16	102.60
1	AA	119	A	O4'-C1'-C2'	6.44	112.24	105.80
1	AA	905	U	O4'-C1'-N1	6.44	118.16	108.50
1	AA	967	C	O4'-C1'-N1	6.44	118.16	108.50
1	AA	1076	U	O5'-C5'-C4'	-6.44	101.84	111.50
2	AB	145	ASN	CA-CB-CG	6.44	119.04	112.60
35	BB	1938	A	P-O3'-C3'	6.44	129.85	120.20
48	BO	43	ASN	N-CA-C	-6.44	106.01	114.31
1	AA	305	G	C5'-C4'-O4'	6.43	118.75	109.10
1	AA	846	G	O4'-C4'-C3'	-6.43	97.56	104.00
12	AL	71	HIS	CG-CD2-NE2	6.43	113.63	107.20
35	BB	633	A	C4'-C3'-C2'	-6.43	96.17	102.60
35	BB	2572	A	P-O3'-C3'	6.43	129.85	120.20
46	BM	17	ASN	CA-CB-CG	-6.43	106.17	112.60
17	AQ	46	HIS	N-CA-CB	6.43	120.91	110.43
21	AU	28	LEU	CA-C-N	6.43	133.82	121.54
21	AU	28	LEU	C-N-CA	6.43	133.82	121.54
31	B6	11	LYS	N-CA-C	6.43	118.83	111.11
2	AB	49	PHE	CA-C-O	-6.43	114.28	120.90
1	AA	1283	U	C5'-C4'-C3'	-6.43	106.36	116.00
7	AG	105	GLU	CA-C-N	6.43	130.89	120.60
7	AG	105	GLU	C-N-CA	6.43	130.89	120.60
16	AP	19	VAL	N-CA-CB	6.43	117.96	110.82
20	AT	77	ASN	CB-CA-C	-6.43	100.07	110.74
36	BC	119	VAL	O-C-N	6.43	128.38	122.14
35	BB	2900	A	C4'-C3'-O3'	-6.43	103.36	113.00
41	BH	6	LEU	N-CA-C	-6.43	105.19	114.12
3	AC	133	MET	CA-C-N	6.43	128.79	120.44
3	AC	133	MET	C-N-CA	6.43	128.79	120.44
35	BB	762	U	O4'-C1'-N1	6.43	118.14	108.50
30	B5	89	ALA	CA-C-O	6.42	127.37	120.24
35	BB	892	A	P-O3'-C3'	-6.42	110.57	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	124	VAL	N-CA-CB	6.42	120.90	111.52
5	AE	122	VAL	N-CA-C	-6.42	99.05	108.23
35	BB	2497	A	P-O3'-C3'	6.42	129.83	120.20
39	BF	11	VAL	N-CA-CB	6.42	118.79	110.57
14	AN	6	LYS	CA-C-N	6.42	129.21	120.54
14	AN	6	LYS	C-N-CA	6.42	129.21	120.54
19	AS	39	ILE	CA-C-N	6.42	129.60	120.49
19	AS	39	ILE	C-N-CA	6.42	129.60	120.49
35	BB	2134	A	C4'-C3'-C2'	-6.42	96.18	102.60
7	AG	133	ALA	CA-C-O	-6.42	113.70	120.63
35	BB	478	A	O4'-C1'-N9	6.42	118.12	108.50
35	BB	1059	G	C4'-C3'-C2'	-6.42	96.18	102.60
35	BB	1274	A	C4'-C3'-C2'	-6.42	96.18	102.60
35	BB	2609	U	C5'-C4'-O4'	6.42	118.72	109.10
3	AC	108	PRO	CA-C-N	6.42	129.52	120.28
3	AC	108	PRO	C-N-CA	6.42	129.52	120.28
6	AF	6	ILE	CB-CA-C	6.42	118.16	111.23
14	AN	7	ALA	CA-C-N	6.42	131.39	121.19
14	AN	7	ALA	C-N-CA	6.42	131.39	121.19
2	AB	12	GLY	N-CA-C	-6.41	105.66	115.66
35	BB	292	U	O4'-C1'-N1	6.41	118.12	108.50
35	BB	2664	G	C4'-C3'-C2'	-6.41	96.19	102.60
51	BR	33	VAL	N-CA-C	-6.41	98.96	108.45
4	AD	48	SER	N-CA-CB	6.41	119.53	110.36
35	BB	625	G	O4'-C1'-N9	6.41	118.12	108.50
1	AA	383	A	P-O5'-C5'	-6.41	111.28	120.90
1	AA	1037	C	C4'-C3'-C2'	-6.41	96.19	102.60
1	AA	1252	A	P-O5'-C5'	6.41	130.52	120.90
34	BA	63	C	C4'-C3'-C2'	-6.41	96.19	102.60
35	BB	1048	A	C4'-C3'-O3'	-6.41	103.39	113.00
52	BS	42	LYS	N-CA-C	-6.41	105.09	113.17
2	AB	122	ASP	N-CA-CB	6.41	121.32	110.49
35	BB	143	C	O4'-C4'-C3'	-6.41	97.59	104.00
35	BB	434	U	C1'-C2'-O2'	-6.41	102.19	111.80
35	BB	2136	G	C5'-C4'-C3'	-6.41	106.39	116.00
51	BR	66	HIS	CG-CD2-NE2	-6.41	100.79	107.20
27	B2	48	ASN	CA-CB-CG	-6.41	106.19	112.60
35	BB	450	G	O4'-C1'-N9	6.41	118.11	108.50
35	BB	947	A	C3'-C2'-C1'	-6.41	94.89	101.30
35	BB	1920	C	O4'-C1'-N1	6.41	118.11	108.50
12	AL	76	HIS	CB-CG-CD2	-6.41	122.87	131.20
35	BB	2740	A	P-O5'-C5'	-6.41	111.29	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BM	60	GLN	O-C-N	6.41	130.47	123.10
5	AE	59	ILE	CA-CB-CG1	6.40	121.29	110.40
35	BB	164	C	O4'-C1'-N1	6.40	118.11	108.50
35	BB	2498	C	P-O3'-C3'	-6.40	110.59	120.20
6	AF	52	ASN	N-CA-C	-6.40	102.56	111.52
35	BB	1685	C	O4'-C4'-C3'	-6.40	97.60	104.00
52	BS	33	LEU	CA-C-N	6.40	128.76	120.44
52	BS	33	LEU	C-N-CA	6.40	128.76	120.44
1	AA	932	C	C5'-C4'-C3'	-6.40	106.40	116.00
10	AJ	61	ALA	O-C-N	-6.40	115.78	123.27
1	AA	1362	A	O4'-C1'-N9	6.40	117.80	108.20
35	BB	291	G	C4'-C3'-C2'	-6.40	96.20	102.60
35	BB	2689	U	O4'-C1'-N1	6.40	117.80	108.20
37	BD	85	ALA	N-CA-C	-6.40	106.43	114.56
2	AB	194	GLY	O-C-N	6.40	129.84	122.61
6	AF	89	VAL	CA-C-O	6.40	126.97	120.96
13	AM	17	ALA	CA-C-N	6.40	130.03	120.31
13	AM	17	ALA	C-N-CA	6.40	130.03	120.31
35	BB	2502	G	O4'-C1'-C2'	6.40	112.20	105.80
53	BT	19	LYS	N-CA-C	6.40	119.31	110.35
1	AA	1139	G	C4'-C3'-C2'	-6.39	96.21	102.60
34	BA	37	C	O4'-C1'-C2'	-6.39	101.21	107.60
34	BA	82	U	C3'-C2'-O2'	-6.39	101.11	110.70
35	BB	1981	A	C5'-C4'-C3'	-6.39	106.41	116.00
35	BB	2184	A	O4'-C1'-N9	6.39	118.09	108.50
37	BD	14	ILE	CA-C-N	6.39	130.41	120.75
37	BD	14	ILE	C-N-CA	6.39	130.41	120.75
39	BF	19	PHE	CB-CA-C	-6.39	100.75	111.24
1	AA	117	G	O4'-C4'-C3'	-6.39	97.61	104.00
19	AS	56	HIS	CE1-NE2-CD2	-6.39	102.61	109.00
30	B5	152	ALA	CA-C-O	6.39	127.53	120.82
35	BB	853	C	C4'-C3'-C2'	-6.39	96.21	102.60
35	BB	838	C	O4'-C1'-N1	6.39	118.08	108.50
35	BB	1343	G	P-O5'-C5'	-6.39	111.31	120.90
1	AA	1218	C	C5'-C4'-C3'	6.39	125.58	116.00
1	AA	826	C	C4'-C3'-O3'	-6.39	103.42	113.00
18	AR	47	ARG	N-CA-C	-6.39	100.17	110.32
43	BJ	135	GLN	CB-CA-C	6.39	122.09	111.23
1	AA	1096	C	P-O5'-C5'	6.38	130.48	120.90
2	AB	77	GLU	N-CA-CB	6.38	119.73	110.47
10	AJ	25	ILE	N-CA-CB	6.38	120.74	112.12
35	BB	521	U	O4'-C1'-N1	6.38	118.08	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1080	A	P-O5'-C5'	-6.38	111.32	120.90
35	BB	2070	A	O4'-C1'-N9	6.38	118.08	108.50
1	AA	1454	G	O5'-C5'-C4'	6.38	121.07	111.50
8	AH	83	ARG	NH1-CZ-NH2	6.38	127.60	119.30
1	AA	126	G	C4'-C3'-O3'	-6.38	103.43	113.00
1	AA	675	A	C5'-C4'-C3'	6.38	125.57	116.00
1	AA	1326	U	O4'-C1'-N1	6.38	118.07	108.50
54	BU	48	VAL	CA-C-N	6.38	126.56	120.31
54	BU	48	VAL	C-N-CA	6.38	126.56	120.31
1	AA	759	A	P-O3'-C3'	-6.38	110.63	120.20
35	BB	1396	U	C4'-C3'-C2'	6.38	108.98	102.60
37	BD	157	LYS	CA-C-N	6.38	130.32	121.26
37	BD	157	LYS	C-N-CA	6.38	130.32	121.26
53	BT	71	GLY	N-CA-C	-6.38	104.51	115.61
56	BY	34	SER	N-CA-C	-6.38	96.76	107.80
1	AA	364	A	C1'-O4'-C4'	6.38	116.28	109.90
12	AL	59	GLY	CA-C-O	-6.38	117.48	122.52
30	B5	188	ASN	CA-C-N	6.38	128.73	120.44
30	B5	188	ASN	C-N-CA	6.38	128.73	120.44
35	BB	2380	C	O4'-C1'-N1	6.38	118.06	108.50
47	BN	80	PHE	N-CA-CB	6.38	121.27	110.49
10	AJ	62	ARG	N-CA-C	-6.38	99.43	109.50
4	AD	162	GLU	CA-C-O	6.37	128.16	121.15
35	BB	2722	G	O5'-C5'-C4'	-6.37	101.94	111.50
37	BD	8	LYS	N-CA-C	-6.37	100.19	110.32
1	AA	1142	G	C5'-C4'-C3'	6.37	125.56	116.00
4	AD	47	LEU	CA-C-N	6.37	132.57	120.97
4	AD	47	LEU	C-N-CA	6.37	132.57	120.97
14	AN	67	GLY	CA-C-N	6.37	137.35	121.80
14	AN	67	GLY	C-N-CA	6.37	137.35	121.80
25	B0	14	GLY	N-CA-C	-6.37	101.45	110.88
1	AA	552	U	O4'-C1'-N1	6.37	118.06	108.50
20	AT	66	ILE	N-CA-C	-6.37	106.59	112.96
35	BB	2390	U	O4'-C1'-N1	6.37	118.06	108.50
52	BS	79	GLY	CA-C-N	6.37	126.75	119.93
52	BS	79	GLY	C-N-CA	6.37	126.75	119.93
1	AA	1472	U	C5'-C4'-C3'	-6.37	106.45	116.00
35	BB	216	A	C3'-C2'-O2'	6.37	120.25	110.70
46	BM	49	ALA	CA-C-N	6.37	128.72	120.44
46	BM	49	ALA	C-N-CA	6.37	128.72	120.44
31	B6	33	ARG	NE-CZ-NH2	6.37	124.93	119.20
44	BK	29	HIS	N-CA-CB	6.37	122.10	111.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1238	A	C4'-C3'-O3'	-6.37	103.45	113.00
34	BA	97	C	C3'-C2'-C1'	-6.37	94.93	101.30
1	AA	557	G	O4'-C1'-N9	6.36	118.05	108.50
5	AE	137	ARG	N-CA-CB	6.36	121.24	110.49
13	AM	110	GLY	O-C-N	6.36	128.13	121.77
45	BL	111	ILE	CA-C-N	6.36	129.75	120.71
45	BL	111	ILE	C-N-CA	6.36	129.75	120.71
46	BM	126	ILE	CA-C-N	6.36	129.90	120.87
46	BM	126	ILE	C-N-CA	6.36	129.90	120.87
4	AD	183	ARG	N-CA-C	-6.36	99.31	108.60
5	AE	36	THR	CA-C-N	-6.36	112.26	122.25
5	AE	36	THR	C-N-CA	-6.36	112.26	122.25
26	B1	12	GLU	CA-C-N	6.36	129.44	120.28
26	B1	12	GLU	C-N-CA	6.36	129.44	120.28
27	B2	30	ARG	NE-CZ-NH2	6.36	124.92	119.20
35	BB	2874	C	O4'-C1'-N1	6.36	118.04	108.50
36	BC	86	ARG	CA-C-N	6.36	129.32	120.29
36	BC	86	ARG	C-N-CA	6.36	129.32	120.29
39	BF	149	ARG	N-CA-C	-6.36	98.83	109.07
1	AA	877	G	O3'-P-O5'	-6.36	94.46	104.00
10	AJ	70	HIS	ND1-CG-CD2	6.36	112.46	106.10
1	AA	640	A	C2'-C3'-O3'	6.36	123.24	113.70
12	AL	3	VAL	CA-CB-CG2	6.36	121.21	110.40
12	AL	102	ASP	CA-C-N	6.36	130.16	120.82
12	AL	102	ASP	C-N-CA	6.36	130.16	120.82
4	AD	48	SER	CA-C-O	-6.36	114.50	121.87
35	BB	1017	G	C4'-C3'-C2'	-6.36	96.24	102.60
35	BB	2649	C	O4'-C1'-C2'	-6.35	101.25	107.60
45	BL	51	GLU	N-CA-C	-6.35	102.76	112.99
35	BB	2604	U	P-O3'-C3'	-6.35	110.67	120.20
1	AA	494	G	C1'-O4'-C4'	6.35	116.25	109.90
1	AA	784	A	C4'-C3'-O3'	-6.35	103.47	113.00
35	BB	1365	A	P-O3'-C3'	6.35	129.73	120.20
35	BB	1887	C	P-O3'-C3'	-6.35	110.68	120.20
35	BB	2156	G	O4'-C1'-N9	6.35	118.03	108.50
1	AA	673	A	O4'-C1'-N9	6.35	118.02	108.50
1	AA	1068	G	P-O5'-C5'	-6.35	111.38	120.90
25	B0	33	HIS	ND1-CG-CD2	6.35	112.45	106.10
38	BE	97	ASN	N-CA-CB	6.35	119.31	110.17
49	BP	8	GLU	CA-C-O	-6.35	114.16	120.70
17	AQ	31	PRO	N-CA-C	-6.35	105.79	114.80
1	AA	428	G	P-O3'-C3'	6.34	129.72	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1220	G	O4'-C1'-C2'	-6.34	101.25	107.60
1	AA	778	G	P-O5'-C5'	6.34	130.41	120.90
35	BB	322	A	C3'-C2'-O2'	-6.34	105.08	114.60
35	BB	1021	A	P-O5'-C5'	-6.34	111.39	120.90
47	BN	77	ALA	N-CA-C	-6.34	105.19	113.12
1	AA	623	C	C3'-C2'-C1'	6.34	107.64	101.30
35	BB	26	G	C1'-O4'-C4'	6.34	116.24	109.90
35	BB	143	C	O3'-P-O5'	-6.34	94.49	104.00
35	BB	143	C	O4'-C1'-N1	6.34	118.01	108.50
35	BB	1004	U	C4'-C3'-C2'	-6.34	96.26	102.60
35	BB	2182	U	C5'-C4'-O4'	6.34	119.31	109.80
35	BB	2727	A	P-O5'-C5'	-6.34	111.39	120.90
15	AO	45	HIS	CB-CG-CD2	-6.34	122.96	131.20
29	B4	39	ASP	O-C-N	-6.34	114.32	121.36
35	BB	2283	C	P-O3'-C3'	-6.34	110.69	120.20
56	BY	81	ILE	CA-C-O	6.34	127.20	120.48
35	BB	1159	U	N1-C1'-C2'	6.34	121.51	112.00
1	AA	992	U	O4'-C1'-N1	6.34	117.70	108.20
2	AB	126	ASP	CA-CB-CG	-6.34	106.26	112.60
35	BB	2330	G	C3'-C2'-C1'	-6.34	94.96	101.30
3	AC	45	GLU	N-CA-C	-6.33	105.52	113.18
1	AA	675	A	O5'-C5'-C4'	-6.33	102.00	111.50
6	AF	14	GLN	N-CA-C	-6.33	102.87	111.55
12	AL	82	ARG	CA-C-O	-6.33	114.17	120.82
35	BB	2895	G	C5'-C4'-C3'	-6.33	106.50	116.00
51	BR	78	ARG	CA-C-O	6.33	127.17	120.33
1	AA	1302	C	N1-C1'-C2'	6.33	121.50	112.00
11	AK	30	ILE	O-C-N	6.33	129.56	122.98
21	AU	18	PHE	CA-C-N	6.33	132.76	120.99
21	AU	18	PHE	C-N-CA	6.33	132.76	120.99
35	BB	869	G	P-O5'-C5'	6.33	130.40	120.90
35	BB	926	G	P-O3'-C3'	-6.33	110.70	120.20
35	BB	1935	G	O4'-C1'-N9	6.33	118.00	108.50
35	BB	2530	A	O4'-C4'-C3'	-6.33	97.67	104.00
39	BF	93	GLU	CA-C-N	6.33	129.40	120.28
39	BF	93	GLU	C-N-CA	6.33	129.40	120.28
1	AA	1182	G	C5'-C4'-O4'	6.33	118.59	109.10
5	AE	149	PRO	N-CA-C	-6.33	104.92	113.40
50	BQ	112	ALA	N-CA-CB	6.33	119.58	110.40
35	BB	1464	G	O4'-C4'-C3'	-6.33	97.67	104.00
35	BB	1854	A	C1'-C2'-O2'	6.33	117.89	108.40
36	BC	65	ASP	CA-C-O	6.33	127.16	120.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2163	A	C3'-C2'-O2'	6.33	120.19	110.70
36	BC	9	SER	CA-C-O	-6.33	114.38	120.64
1	AA	1422	G	C4'-C3'-C2'	-6.33	96.28	102.60
2	AB	28	PRO	CA-C-O	-6.33	111.26	118.98
34	BA	36	C	O4'-C1'-N1	6.33	117.99	108.50
35	BB	911	A	O4'-C1'-N9	6.33	117.99	108.50
1	AA	1419	G	O5'-C5'-C4'	-6.32	102.01	111.50
35	BB	825	A	C4'-C3'-C2'	-6.32	96.28	102.60
50	BQ	37	ALA	CA-C-N	6.32	129.12	120.46
50	BQ	37	ALA	C-N-CA	6.32	129.12	120.46
1	AA	402	G	C1'-C2'-O2'	6.32	117.88	108.40
1	AA	846	G	C4'-C3'-O3'	-6.32	103.52	113.00
1	AA	1284	C	O4'-C1'-N1	6.32	117.98	108.50
1	AA	1340	A	O4'-C4'-C3'	-6.32	97.68	104.00
7	AG	90	VAL	CA-C-N	6.32	129.18	120.39
7	AG	90	VAL	C-N-CA	6.32	129.18	120.39
22	AV	5	A	O4'-C1'-N9	6.32	117.98	108.50
35	BB	610	C	C4'-C3'-O3'	-6.32	103.52	113.00
35	BB	2900	A	P-O3'-C3'	-6.32	110.72	120.20
16	AP	12	LYS	CA-C-N	6.32	131.33	122.36
16	AP	12	LYS	C-N-CA	6.32	131.33	122.36
38	BE	97	ASN	CA-CB-CG	-6.32	106.28	112.60
1	AA	502	A	O4'-C4'-C3'	-6.32	97.68	104.00
1	AA	591	U	C4'-C3'-C2'	-6.32	96.28	102.60
1	AA	952	U	C5'-C4'-C3'	6.32	125.47	116.00
35	BB	395	U	P-O5'-C5'	6.32	130.38	120.90
51	BR	18	GLN	CA-C-N	6.32	130.29	120.75
51	BR	18	GLN	C-N-CA	6.32	130.29	120.75
35	BB	1804	C	O4'-C1'-C2'	-6.32	101.28	107.60
35	BB	2549	G	C5'-C4'-C3'	-6.32	106.53	116.00
46	BM	76	LYS	CA-C-O	-6.31	114.89	120.19
1	AA	1085	U	O4'-C4'-C3'	-6.31	99.79	106.10
4	AD	69	ARG	CA-C-N	6.31	129.06	120.54
4	AD	69	ARG	C-N-CA	6.31	129.06	120.54
35	BB	1527	G	C4'-C3'-O3'	-6.31	103.53	113.00
35	BB	360	U	C4'-C3'-C2'	-6.31	96.29	102.60
7	AG	120	ALA	N-CA-CB	6.31	119.06	110.10
39	BF	115	GLY	N-CA-C	-6.31	103.88	112.52
18	AR	51	GLN	O-C-N	6.31	128.57	122.07
35	BB	19	A	O4'-C1'-C2'	-6.31	101.29	107.60
35	BB	803	U	O4'-C1'-N1	6.31	117.96	108.50
35	BB	1312	U	P-O3'-C3'	6.31	129.66	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1340	U	C4'-C3'-C2'	-6.31	96.29	102.60
35	BB	1760	C	P-O5'-C5'	-6.31	111.44	120.90
55	BW	92	VAL	N-CA-C	-6.31	98.54	107.75
14	AN	99	SER	N-CA-C	-6.30	97.37	110.80
35	BB	671	C	C4'-C3'-C2'	6.30	108.91	102.60
48	BO	8	ILE	N-CA-CB	6.30	117.24	110.62
35	BB	2489	U	C4'-C3'-C2'	6.30	108.90	102.60
1	AA	1471	U	C1'-O4'-C4'	6.30	116.20	109.90
5	AE	115	GLU	N-CA-C	-6.30	97.38	110.80
17	AQ	64	ARG	CA-C-N	6.30	126.27	120.03
17	AQ	64	ARG	C-N-CA	6.30	126.27	120.03
20	AT	20	ASN	N-CA-CB	6.30	119.51	110.06
35	BB	245	G	C4'-C3'-C2'	-6.30	96.30	102.60
35	BB	1034	G	O4'-C1'-N9	6.30	117.95	108.50
35	BB	1092	C	C4'-C3'-C2'	-6.30	96.30	102.60
35	BB	2518	A	P-O5'-C5'	-6.30	111.45	120.90
4	AD	142	VAL	N-CA-CB	6.30	119.16	111.60
1	AA	426	U	P-O5'-C5'	6.30	130.34	120.90
35	BB	796	C	C1'-O4'-C4'	6.30	116.20	109.90
1	AA	837	U	C4'-C3'-C2'	-6.29	96.31	102.60
1	AA	1253	G	C1'-O4'-C4'	6.29	116.19	109.90
45	BL	78	ARG	CA-C-N	6.29	128.71	120.28
45	BL	78	ARG	C-N-CA	6.29	128.71	120.28
1	AA	134	G	P-O3'-C3'	6.29	129.64	120.20
1	AA	1408	A	C3'-C2'-C1'	6.29	107.59	101.30
2	AB	68	PHE	CA-CB-CG	6.29	120.09	113.80
11	AK	23	HIS	CB-CG-ND1	-6.29	113.26	122.70
34	BA	83	G	C4'-C3'-C2'	-6.29	96.31	102.60
35	BB	304	U	C3'-C2'-C1'	6.29	107.59	101.30
35	BB	746	U	C1'-O4'-C4'	-6.29	103.61	109.90
35	BB	1194	A	C5'-C4'-C3'	-6.29	106.56	116.00
35	BB	2537	U	O4'-C4'-C3'	-6.29	97.71	104.00
35	BB	2714	G	C4'-C3'-O3'	-6.29	103.56	113.00
55	BW	9	ARG	N-CA-C	-6.29	99.85	109.41
35	BB	1771	C	O4'-C1'-C2'	6.29	113.89	107.60
1	AA	1116	U	O4'-C1'-N1	6.29	117.93	108.50
2	AB	106	VAL	CA-C-O	-6.29	112.92	120.78
35	BB	1667	G	P-O5'-C5'	6.29	130.33	120.90
35	BB	1183	U	O4'-C1'-N1	6.29	117.93	108.50
50	BQ	86	SER	CA-C-N	6.29	133.29	121.97
50	BQ	86	SER	C-N-CA	6.29	133.29	121.97
1	AA	394	G	O4'-C1'-C2'	-6.29	101.31	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	AS	31	ARG	NE-CZ-NH1	6.29	127.78	121.50
35	BB	555	G	O4'-C1'-C2'	-6.29	101.31	107.60
35	BB	2878	U	P-O5'-C5'	6.29	130.33	120.90
55	BW	26	PHE	CA-CB-CG	6.29	120.08	113.80
35	BB	838	C	O4'-C4'-C3'	-6.28	97.72	104.00
35	BB	1589	U	O4'-C4'-C3'	-6.28	97.72	104.00
35	BB	2043	C	C4'-C3'-O3'	-6.28	103.57	113.00
35	BB	2899	A	C4'-C3'-C2'	-6.28	96.32	102.60
35	BB	497	A	O4'-C1'-N9	6.28	117.92	108.50
35	BB	2898	U	C5'-C4'-C3'	-6.28	106.58	116.00
1	AA	622	A	P-O5'-C5'	-6.28	111.48	120.90
7	AG	93	VAL	O-C-N	-6.28	115.36	121.83
35	BB	1088	A	C1'-C2'-O2'	6.28	117.82	108.40
18	AR	69	TYR	CA-C-N	6.28	130.23	120.75
18	AR	69	TYR	C-N-CA	6.28	130.23	120.75
35	BB	1027	A	P-O3'-C3'	6.28	129.62	120.20
1	AA	328	C	O4'-C1'-C2'	-6.28	99.52	105.80
35	BB	2588	G	P-O3'-C3'	-6.28	110.78	120.20
40	BG	118	ALA	N-CA-CB	6.28	120.64	110.41
7	AG	141	HIS	CE1-NE2-CD2	-6.28	102.72	109.00
35	BB	1922	G	C1'-O4'-C4'	-6.28	103.62	109.90
39	BF	26	GLN	CA-C-N	6.28	133.74	122.13
39	BF	26	GLN	C-N-CA	6.28	133.74	122.13
39	BF	149	ARG	CA-C-N	6.28	133.71	121.41
39	BF	149	ARG	C-N-CA	6.28	133.71	121.41
40	BG	114	HIS	CG-CD2-NE2	6.28	113.48	107.20
19	AS	68	HIS	ND1-CE1-NE2	6.27	114.67	108.40
4	AD	197	HIS	ND1-CG-CD2	6.27	112.37	106.10
16	AP	69	ASP	CB-CA-C	-6.27	100.77	110.81
19	AS	68	HIS	CG-CD2-NE2	6.27	113.47	107.20
35	BB	1010	A	C1'-C2'-O2'	6.27	117.81	108.40
35	BB	1930	G	C3'-C2'-C1'	6.27	107.57	101.30
7	AG	97	ALA	CA-C-N	6.27	128.93	120.65
7	AG	97	ALA	C-N-CA	6.27	128.93	120.65
35	BB	249	C	P-O5'-C5'	-6.27	111.49	120.90
1	AA	415	A	P-O3'-C3'	6.27	129.60	120.20
1	AA	1083	U	C4'-C3'-C2'	6.27	108.87	102.60
18	AR	31	TYR	N-CA-C	-6.27	106.32	112.97
35	BB	950	G	O4'-C1'-N9	6.27	117.90	108.50
56	BY	39	GLN	N-CA-C	-6.27	99.92	108.38
1	AA	791	G	N9-C1'-C2'	6.27	121.40	112.00
9	AI	93	LEU	CA-C-N	6.27	129.00	120.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AI	93	LEU	C-N-CA	6.27	129.00	120.54
36	BC	225	ASN	CA-CB-CG	-6.27	106.33	112.60
1	AA	765	G	O4'-C1'-N9	6.26	117.90	108.50
3	AC	38	VAL	N-CA-CB	6.26	118.30	110.47
18	AR	64	LEU	N-CA-C	-6.26	104.21	113.61
30	B5	109	MET	O-C-N	-6.26	115.62	123.01
35	BB	101	A	O4'-C1'-C2'	-6.26	101.34	107.60
35	BB	1395	A	O3'-P-O5'	-6.26	94.60	104.00
35	BB	1527	G	O4'-C1'-C2'	-6.26	101.34	107.60
35	BB	1615	C	O4'-C1'-N1	6.26	117.60	108.20
43	BJ	74	TYR	N-CA-C	-6.26	97.20	108.48
44	BK	14	SER	CA-C-O	-6.26	113.84	121.36
55	BW	81	PRO	N-CA-CB	6.26	109.75	103.48
2	AB	60	ALA	N-CA-C	-6.26	103.69	113.02
40	BG	3	VAL	O-C-N	6.26	127.94	121.87
35	BB	1140	C	O4'-C4'-C3'	-6.26	97.74	104.00
35	BB	195	A	C4'-C3'-C2'	-6.26	96.34	102.60
40	BG	76	ILE	CA-C-N	6.26	126.89	120.00
40	BG	76	ILE	C-N-CA	6.26	126.89	120.00
35	BB	846	U	C4'-C3'-C2'	-6.26	96.34	102.60
35	BB	1944	U	C4'-C3'-C2'	6.26	108.86	102.60
35	BB	2761	A	O5'-C5'-C4'	-6.26	102.11	111.50
35	BB	395	U	O4'-C1'-N1	6.25	117.58	108.20
49	BP	14	GLN	N-CA-CB	6.25	120.82	110.63
53	BT	91	GLN	OE1-CD-NE2	-6.25	116.35	122.60
1	AA	896	C	O4'-C1'-N1	6.25	117.88	108.50
35	BB	2873	A	O4'-C1'-N9	6.25	117.58	108.20
35	BB	67	U	C3'-C2'-O2'	6.25	120.08	110.70
35	BB	2385	C	O5'-C5'-C4'	-6.25	102.12	111.50
1	AA	1347	G	P-O5'-C5'	6.25	130.27	120.90
6	AF	2	ARG	CA-C-O	-6.25	114.02	120.89
35	BB	1381	G	O5'-C5'-C4'	-6.25	102.13	111.50
35	BB	1386	C	C4'-C3'-O3'	-6.25	103.63	113.00
35	BB	2134	A	O4'-C4'-C3'	-6.25	97.75	104.00
1	AA	763	G	C4'-C3'-C2'	-6.25	96.36	102.60
35	BB	370	G	P-O5'-C5'	6.25	130.27	120.90
35	BB	2815	C	C4'-C3'-O3'	-6.25	103.63	113.00
12	AL	76	HIS	ND1-CG-CD2	6.24	112.34	106.10
35	BB	2321	U	P-O3'-C3'	-6.24	110.83	120.20
1	AA	477	C	C1'-C2'-O2'	6.24	117.76	108.40
32	B7	5	THR	CA-C-O	-6.24	114.01	121.56
35	BB	2875	C	O4'-C1'-N1	6.24	117.86	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BW	55	GLU	CA-C-N	6.24	128.55	120.44
55	BW	55	GLU	C-N-CA	6.24	128.55	120.44
5	AE	24	VAL	N-CA-C	6.24	117.02	110.72
16	AP	44	SER	N-CA-C	-6.24	103.21	113.50
1	AA	1476	A	C4'-C3'-O3'	-6.24	103.65	113.00
36	BC	190	THR	O-C-N	-6.24	115.93	123.16
52	BS	35	ILE	CA-C-N	6.24	128.92	120.38
52	BS	35	ILE	C-N-CA	6.24	128.92	120.38
26	B1	7	ARG	CA-C-O	6.23	126.82	119.28
27	B2	18	LYS	CB-CA-C	-6.23	103.49	111.22
35	BB	1018	U	O4'-C1'-N1	6.23	117.85	108.50
1	AA	919	A	C4'-C3'-C2'	-6.23	96.37	102.60
1	AA	1028	C	C4'-C3'-C2'	-6.23	96.37	102.60
5	AE	90	GLY	N-CA-C	-6.23	105.94	115.66
35	BB	237	C	C1'-O4'-C4'	6.23	116.13	109.90
35	BB	593	U	C4'-C3'-O3'	-6.23	103.65	113.00
46	BM	66	ARG	N-CA-C	6.23	118.82	110.35
1	AA	1057	G	C4'-C3'-O3'	-6.23	103.66	113.00
35	BB	25	U	C4'-C3'-O3'	-6.23	103.66	113.00
35	BB	174	U	O4'-C1'-N1	6.23	117.84	108.50
35	BB	2142	A	O4'-C4'-C3'	-6.23	97.77	104.00
1	AA	811	C	C4'-C3'-C2'	6.23	108.83	102.60
1	AA	1398	A	C2'-C3'-O3'	6.23	123.04	113.70
2	AB	78	ALA	CA-C-O	-6.23	111.41	120.13
35	BB	895	U	P-O5'-C5'	6.23	130.24	120.90
35	BB	2412	A	O4'-C1'-N9	6.23	117.84	108.50
1	AA	308	C	O4'-C1'-N1	6.22	117.84	108.50
35	BB	721	A	O4'-C4'-C3'	-6.22	97.78	104.00
35	BB	1022	G	O5'-C5'-C4'	-6.22	102.36	111.70
51	BR	32	THR	CA-CB-OG1	6.22	118.94	109.60
1	AA	675	A	O4'-C4'-C3'	-6.22	97.78	104.00
1	AA	1352	C	O4'-C1'-N1	6.22	117.83	108.50
12	AL	41	PRO	CA-C-N	6.22	129.71	120.87
12	AL	41	PRO	C-N-CA	6.22	129.71	120.87
35	BB	640	C	C4'-C3'-O3'	-6.22	103.67	113.00
35	BB	2079	U	O4'-C1'-N1	6.22	117.83	108.50
35	BB	2423	U	O4'-C1'-N1	6.22	117.53	108.20
35	BB	2483	C	O4'-C1'-N1	6.22	117.83	108.50
43	BJ	10	THR	N-CA-C	-6.22	104.28	113.61
49	BP	66	GLY	N-CA-C	-6.22	106.73	115.32
4	AD	199	ILE	CA-C-O	-6.22	113.91	120.57
8	AH	36	ALA	CA-C-N	6.22	129.12	120.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	36	ALA	C-N-CA	6.22	129.12	120.29
31	B6	37	LYS	N-CA-C	-6.22	105.85	113.50
35	BB	267	C	O4'-C1'-N1	6.22	117.83	108.50
48	BO	7	ARG	NE-CZ-NH2	-6.22	113.60	119.20
11	AK	25	SER	N-CA-C	-6.22	100.43	110.32
35	BB	1410	G	C1'-C2'-O2'	-6.22	99.07	108.40
36	BC	87	SER	CA-C-N	6.22	132.02	120.95
36	BC	87	SER	C-N-CA	6.22	132.02	120.95
41	BH	19	VAL	N-CA-C	-6.22	99.64	108.65
48	BO	9	ARG	CB-CG-CD	6.22	125.60	111.30
1	AA	147	G	C1'-O4'-C4'	-6.21	103.69	109.90
1	AA	1398	A	C4'-C3'-C2'	-6.21	96.39	102.60
8	AH	64	TYR	N-CA-CB	6.21	120.37	111.05
25	B0	11	PRO	N-CA-CB	6.21	108.70	103.17
34	BA	23	G	P-O5'-C5'	6.21	130.22	120.90
35	BB	1404	C	O4'-C1'-N1	6.21	117.82	108.50
35	BB	1976	U	O4'-C1'-N1	6.21	117.82	108.50
35	BB	2147	A	P-O3'-C3'	6.21	129.52	120.20
37	BD	38	LYS	N-CA-C	-6.21	97.69	108.69
1	AA	179	A	C4'-C3'-C2'	-6.21	96.39	102.60
1	AA	310	G	C1'-O4'-C4'	6.21	116.11	109.90
1	AA	635	A	C4'-C3'-C2'	-6.21	96.39	102.60
1	AA	842	U	O4'-C1'-N1	6.21	117.52	108.20
35	BB	655	A	O4'-C1'-N9	6.21	117.52	108.20
35	BB	871	U	C5'-C4'-C3'	-6.21	106.68	116.00
35	BB	2895	G	C4'-C3'-C2'	-6.21	96.39	102.60
1	AA	887	G	C4'-C3'-C2'	-6.21	96.39	102.60
35	BB	724	U	O4'-C1'-N1	6.21	117.82	108.50
35	BB	1267	U	O4'-C4'-C3'	-6.21	97.79	104.00
35	BB	2575	C	P-O5'-C5'	-6.21	111.58	120.90
50	BQ	16	ILE	O-C-N	6.21	128.00	121.91
27	B2	40	THR	CA-C-O	-6.21	113.58	119.91
1	AA	988	G	C4'-C3'-O3'	-6.21	103.69	113.00
7	AG	40	SER	CA-C-N	6.21	133.15	121.97
7	AG	40	SER	C-N-CA	6.21	133.15	121.97
26	B1	22	LEU	CA-C-N	6.21	131.41	122.35
26	B1	22	LEU	C-N-CA	6.21	131.41	122.35
1	AA	545	C	C5'-C4'-C3'	-6.21	106.69	116.00
35	BB	1005	C	C4'-C3'-C2'	6.21	108.81	102.60
35	BB	1114	C	O4'-C1'-N1	6.21	117.81	108.50
35	BB	1211	C	P-O5'-C5'	-6.21	111.59	120.90
35	BB	1804	C	O4'-C1'-N1	6.21	117.81	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2006	C	O4'-C1'-C2'	-6.21	101.39	107.60
39	BF	107	VAL	N-CA-CB	6.21	119.90	111.21
35	BB	1114	C	O5'-C5'-C4'	-6.21	102.19	111.50
40	BG	169	ARG	N-CA-C	-6.21	100.18	110.17
16	AP	32	PHE	CB-CA-C	-6.20	97.07	109.79
35	BB	1297	C	O4'-C1'-C2'	-6.20	101.40	107.60
35	BB	1449	G	O4'-C1'-C2'	-6.20	101.40	107.60
35	BB	1589	U	P-O5'-C5'	6.20	130.20	120.90
1	AA	1338	G	O4'-C1'-N9	6.20	117.80	108.50
22	AV	34	G	O3'-P-O5'	6.20	113.30	104.00
35	BB	1835	G	P-O3'-C3'	-6.20	110.90	120.20
38	BE	199	MET	N-CA-CB	-6.20	100.67	110.22
1	AA	226	G	C4'-C3'-O3'	-6.20	103.70	113.00
1	AA	454	G	C5'-C4'-C3'	-6.20	106.70	116.00
1	AA	539	A	O4'-C1'-N9	6.20	117.80	108.50
1	AA	1067	A	C3'-C2'-O2'	-6.20	105.30	114.60
4	AD	145	ARG	NE-CZ-NH2	6.20	124.78	119.20
8	AH	121	GLY	N-CA-C	-6.20	98.95	110.73
30	B5	231	ALA	CA-C-O	6.20	127.10	119.97
40	BG	82	PHE	CA-CB-CG	6.20	120.00	113.80
47	BN	81	ASN	N-CA-C	-6.20	105.37	113.12
1	AA	106	C	P-O5'-C5'	6.20	130.20	120.90
3	AC	150	VAL	CA-C-N	6.20	133.03	122.37
3	AC	150	VAL	C-N-CA	6.20	133.03	122.37
7	AG	147	ASN	CA-CB-CG	-6.20	106.40	112.60
19	AS	13	HIS	N-CA-C	-6.20	105.47	113.16
35	BB	180	G	C4'-C3'-O3'	-6.20	103.70	113.00
35	BB	1318	U	C5'-C4'-C3'	-6.20	106.70	116.00
43	BJ	132	HIS	CA-C-N	6.20	129.43	120.38
43	BJ	132	HIS	C-N-CA	6.20	129.43	120.38
55	BW	17	SER	N-CA-C	6.20	118.55	111.11
35	BB	1737	G	P-O3'-C3'	6.20	129.50	120.20
44	BK	63	VAL	CA-C-O	6.20	124.77	119.38
5	AE	82	HIS	N-CA-C	-6.20	99.49	109.40
8	AH	26	MET	N-CA-CB	6.20	121.40	110.37
26	B1	5	GLU	CA-C-N	6.20	129.20	120.28
26	B1	5	GLU	C-N-CA	6.20	129.20	120.28
34	BA	62	C	C4'-C3'-C2'	-6.20	96.41	102.60
35	BB	769	U	P-O5'-C5'	6.20	130.19	120.90
35	BB	1147	A	O4'-C1'-C2'	-6.20	101.41	107.60
35	BB	1960	A	C5'-C4'-C3'	-6.20	106.71	116.00
35	BB	2662	A	C5'-C4'-C3'	6.20	125.29	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BF	75	GLY	N-CA-C	-6.20	106.00	115.66
49	BP	79	VAL	CB-CA-C	-6.20	103.78	112.14
1	AA	406	G	C4'-C3'-O3'	-6.19	103.71	113.00
5	AE	85	LYS	N-CA-C	-6.19	105.23	114.64
35	BB	361	G	O4'-C1'-C2'	-6.19	101.41	107.60
35	BB	1306	C	O4'-C4'-C3'	-6.19	97.81	104.00
15	AO	28	VAL	CA-C-N	6.19	131.03	121.19
15	AO	28	VAL	C-N-CA	6.19	131.03	121.19
35	BB	1611	C	O5'-C5'-C4'	-6.19	102.22	111.50
35	BB	1707	G	C5'-C4'-C3'	-6.19	106.71	116.00
35	BB	2692	G	P-O3'-C3'	-6.19	110.92	120.20
1	AA	153	C	O4'-C1'-N1	6.19	117.78	108.50
1	AA	731	G	O5'-C5'-C4'	-6.19	102.22	111.50
2	AB	15	PHE	CA-CB-CG	-6.19	107.61	113.80
6	AF	63	ASN	N-CA-CB	6.19	120.95	110.49
35	BB	475	C	C1'-C2'-O2'	6.19	117.68	108.40
35	BB	2617	U	P-O5'-C5'	-6.19	111.62	120.90
1	AA	979	C	C4'-C3'-O3'	-6.19	103.72	113.00
1	AA	1349	A	C4'-C3'-O3'	-6.19	103.72	113.00
35	BB	946	C	C4'-C3'-C2'	-6.19	96.41	102.60
50	BQ	95	ALA	N-CA-C	-6.19	104.62	111.36
35	BB	170	U	O4'-C1'-C2'	-6.19	101.41	107.60
35	BB	514	A	O4'-C1'-N9	6.19	117.78	108.50
1	AA	789	U	C5'-C4'-C3'	-6.18	106.72	116.00
5	AE	94	PHE	CA-CB-CG	-6.18	107.61	113.80
8	AH	34	ALA	N-CA-C	6.18	120.38	112.34
8	AH	38	VAL	N-CA-C	-6.18	104.26	111.00
54	BU	16	LYS	N-CA-C	-6.18	104.11	113.51
1	AA	38	G	O4'-C1'-N9	6.18	117.77	108.50
11	AK	98	ALA	CA-C-N	6.18	128.81	120.65
11	AK	98	ALA	C-N-CA	6.18	128.81	120.65
35	BB	929	U	P-O5'-C5'	-6.18	111.63	120.90
39	BF	134	GLN	N-CA-CB	6.18	119.69	110.29
1	AA	215	C	C1'-C2'-O2'	6.18	117.67	108.40
1	AA	789	U	O5'-C5'-C4'	6.18	120.77	111.50
12	AL	40	THR	N-CA-C	-6.18	101.56	110.40
22	AV	76	A	C2'-C3'-O3'	6.18	118.77	109.50
30	B5	8	MET	CA-C-N	6.18	128.81	120.65
30	B5	8	MET	C-N-CA	6.18	128.81	120.65
35	BB	1611	C	C4'-C3'-O3'	-6.18	103.73	113.00
39	BF	154	THR	N-CA-C	-6.18	100.22	110.17
1	AA	684	U	O4'-C1'-N1	6.18	117.77	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	980	C	P-O3'-C3'	6.18	129.47	120.20
52	BS	89	ALA	CA-C-N	6.18	130.90	122.19
52	BS	89	ALA	C-N-CA	6.18	130.90	122.19
35	BB	1403	A	C1'-O4'-C4'	6.18	116.08	109.90
51	BR	11	GLN	N-CA-C	-6.18	100.02	109.41
35	BB	37	C	C4'-C3'-C2'	-6.17	96.43	102.60
35	BB	218	A	O4'-C4'-C3'	6.17	110.17	104.00
35	BB	891	G	C5'-C4'-O4'	6.17	119.06	109.80
35	BB	922	C	O4'-C1'-N1	6.17	117.76	108.50
35	BB	1148	U	O4'-C1'-C2'	-6.17	101.42	107.60
4	AD	100	VAL	CA-C-O	-6.17	114.85	121.27
35	BB	2770	G	O4'-C1'-N9	6.17	117.76	108.50
45	BL	47	ARG	CD-NE-CZ	-6.17	115.76	124.40
35	BB	1184	U	C4'-C3'-O3'	-6.17	103.75	113.00
1	AA	1134	G	C1'-C2'-O2'	6.17	117.65	108.40
2	AB	124	THR	OG1-CB-CG2	-6.17	96.96	109.30
35	BB	94	A	P-O3'-C3'	6.17	129.45	120.20
11	AK	45	THR	CA-C-N	6.17	129.16	120.28
11	AK	45	THR	C-N-CA	6.17	129.16	120.28
14	AN	65	GLN	OE1-CD-NE2	-6.17	116.43	122.60
35	BB	182	A	P-O3'-C3'	-6.17	110.95	120.20
35	BB	243	U	C3'-C2'-O2'	6.17	119.95	110.70
35	BB	1401	G	C4'-C3'-O3'	-6.17	103.75	113.00
1	AA	499	A	O4'-C4'-C3'	-6.16	99.94	106.10
27	B2	10	ARG	N-CA-C	-6.16	97.67	110.80
56	BY	56	HIS	ND1-CE1-NE2	6.16	114.56	108.40
1	AA	950	U	O4'-C1'-N1	6.16	117.74	108.50
35	BB	1158	C	O4'-C1'-N1	6.16	117.74	108.50
1	AA	251	G	O4'-C4'-C3'	-6.16	99.94	106.10
21	AU	20	ARG	N-CA-C	-6.16	106.03	112.93
35	BB	2386	A	O4'-C1'-N9	6.16	117.74	108.50
1	AA	755	G	C5'-C4'-C3'	-6.16	106.76	116.00
1	AA	898	G	O5'-C5'-C4'	-6.16	102.26	111.50
35	BB	845	A	P-O3'-C3'	-6.16	110.96	120.20
35	BB	2156	G	C3'-C2'-O2'	6.16	119.94	110.70
1	AA	1229	A	C4'-C3'-C2'	-6.16	96.44	102.60
49	BP	24	THR	O-C-N	6.16	131.19	122.20
3	AC	178	ARG	N-CA-C	-6.16	93.38	107.48
35	BB	2193	G	C3'-C2'-O2'	6.16	119.93	110.70
1	AA	1493	A	P-O5'-C5'	6.15	130.13	120.90
35	BB	1277	G	P-O3'-C3'	-6.15	110.97	120.20
35	BB	1983	G	P-O5'-C5'	-6.15	111.67	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BQ	35	PHE	N-CA-C	-6.15	104.84	112.72
1	AA	1482	G	O3'-P-O5'	-6.15	94.78	104.00
6	AF	55	HIS	CA-CB-CG	-6.15	107.65	113.80
13	AM	36	ALA	CA-C-N	6.15	132.28	120.66
13	AM	36	ALA	C-N-CA	6.15	132.28	120.66
35	BB	2310	C	O4'-C1'-N1	6.15	117.73	108.50
35	BB	2452	C	O4'-C1'-N1	6.15	117.73	108.50
36	BC	190	THR	N-CA-C	-6.15	99.63	109.96
1	AA	666	G	C4'-C3'-O3'	-6.15	103.78	113.00
35	BB	608	A	O4'-C1'-C2'	-6.15	101.45	107.60
40	BG	74	MET	CG-SD-CE	-6.15	87.38	100.90
1	AA	143	A	O4'-C4'-C3'	6.14	110.14	104.00
1	AA	881	G	C4'-C3'-C2'	-6.14	96.45	102.60
1	AA	1374	A	C5'-C4'-C3'	-6.14	106.78	116.00
35	BB	1212	G	C4'-C3'-C2'	-6.14	96.46	102.60
35	BB	1294	U	O4'-C1'-C2'	-6.14	101.46	107.60
46	BM	85	GLY	N-CA-C	-6.14	98.62	113.18
1	AA	1071	C	O4'-C1'-N1	6.14	117.71	108.50
29	B4	40	PRO	N-CA-C	-6.14	104.31	114.75
35	BB	5	A	C4'-C3'-C2'	-6.14	96.46	102.60
45	BL	118	THR	N-CA-C	-6.14	102.03	109.83
1	AA	426	U	C5'-C4'-C3'	-6.14	106.79	116.00
2	AB	135	MET	CA-C-N	6.14	131.08	120.58
2	AB	135	MET	C-N-CA	6.14	131.08	120.58
35	BB	1204	A	O5'-C5'-C4'	-6.14	102.49	111.70
35	BB	1487	U	C4'-C3'-C2'	-6.14	96.46	102.60
44	BK	49	ARG	NE-CZ-NH2	-6.14	113.67	119.20
52	BS	95	ARG	NE-CZ-NH2	6.14	124.73	119.20
1	AA	29	U	O4'-C1'-N1	6.14	117.71	108.50
35	BB	324	A	O5'-C5'-C4'	-6.14	102.29	111.50
35	BB	1359	A	O4'-C1'-N9	6.14	117.71	108.50
39	BF	51	ASN	N-CA-C	-6.14	103.91	111.40
1	AA	150	U	O5'-C5'-C4'	-6.14	102.29	111.50
8	AH	85	TYR	N-CA-CB	6.14	122.24	111.13
28	B3	18	HIS	ND1-CE1-NE2	6.14	114.54	108.40
35	BB	52	A	C4'-C3'-C2'	-6.14	96.46	102.60
13	AM	86	ARG	CA-C-O	6.13	127.05	120.55
30	B5	104	ILE	N-CA-CB	6.13	117.73	110.55
35	BB	2265	U	C4'-C3'-O3'	-6.13	103.80	113.00
36	BC	72	GLY	CA-C-N	6.13	132.05	119.72
36	BC	72	GLY	C-N-CA	6.13	132.05	119.72
1	AA	360	G	C4'-C3'-O3'	-6.13	103.80	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	94	TYR	CA-CB-CG	-6.13	102.86	113.90
35	BB	1030	C	P-O3'-C3'	-6.13	111.00	120.20
37	BD	158	GLY	O-C-N	-6.13	115.00	122.30
52	BS	34	ASP	N-CA-CB	6.13	118.90	110.01
54	BU	27	VAL	N-CA-C	-6.13	99.64	108.53
1	AA	735	C	O5'-C5'-C4'	-6.13	102.31	111.50
1	AA	195	A	C1'-O4'-C4'	6.13	116.03	109.90
36	BC	44	ASN	CA-CB-CG	6.13	118.73	112.60
6	AF	97	THR	N-CA-CB	6.13	119.69	110.19
35	BB	1394	U	C4'-C3'-C2'	-6.13	96.47	102.60
38	BE	164	LEU	N-CA-CB	6.13	120.84	110.49
53	BT	84	TYR	N-CA-CB	6.13	119.74	109.94
1	AA	280	C	C4'-C3'-C2'	6.12	108.72	102.60
35	BB	14	A	C4'-C3'-O3'	-6.12	103.81	113.00
3	AC	62	SER	O-C-N	-6.12	117.17	123.29
5	AE	31	SER	N-CA-C	6.12	119.36	110.42
35	BB	472	A	C4'-C3'-O3'	-6.12	103.81	113.00
35	BB	1165	A	C5'-C4'-C3'	-6.12	106.81	116.00
35	BB	1266	G	O4'-C1'-C2'	-6.12	99.68	105.80
1	AA	858	G	P-O5'-C5'	6.12	130.08	120.90
3	AC	11	LEU	N-CA-C	-6.12	105.10	113.30
35	BB	408	G	O4'-C1'-N9	6.12	117.68	108.50
35	BB	1970	A	C3'-C2'-O2'	-6.12	105.42	114.60
48	BO	108	ASP	N-CA-C	-6.12	105.64	113.23
1	AA	545	C	O4'-C1'-N1	6.12	117.68	108.50
1	AA	1006	G	C4'-C3'-O3'	-6.12	103.82	113.00
1	AA	1070	U	O4'-C1'-N1	6.12	117.68	108.50
49	BP	5	LYS	N-CA-C	-6.12	105.47	113.12
54	BU	80	ASP	CA-C-O	-6.12	114.83	121.20
9	AI	22	PRO	CB-CA-C	6.12	118.86	111.46
29	B4	35	LEU	N-CA-C	-6.12	99.77	109.07
34	BA	73	A	C1'-O4'-C4'	6.12	116.02	109.90
49	BP	111	GLU	CA-C-N	6.12	128.98	120.29
49	BP	111	GLU	C-N-CA	6.12	128.98	120.29
30	B5	190	GLU	CA-C-N	6.12	128.48	120.28
30	B5	190	GLU	C-N-CA	6.12	128.48	120.28
1	AA	1043	G	C4'-C3'-C2'	6.12	108.72	102.60
1	AA	1073	U	C4'-C3'-O3'	-6.12	103.83	113.00
9	AI	114	LYS	CA-CB-CG	6.12	126.33	114.10
32	B7	19	GLY	O-C-N	-6.12	113.15	122.26
35	BB	623	C	C4'-C3'-C2'	-6.12	96.48	102.60
39	BF	17	THR	CA-CB-CG2	-6.12	100.10	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BQ	52	ARG	CB-CA-C	-6.12	101.54	110.96
1	AA	765	G	P-O3'-C3'	-6.11	111.03	120.20
4	AD	119	HIS	ND1-CE1-NE2	6.11	114.51	108.40
35	BB	628	G	O4'-C1'-N9	6.11	117.67	108.50
38	BE	190	ALA	CA-C-N	6.11	128.39	120.44
38	BE	190	ALA	C-N-CA	6.11	128.39	120.44
39	BF	10	GLU	N-CA-C	-6.11	104.44	113.61
49	BP	73	PHE	CA-C-O	6.11	128.02	121.11
53	BT	30	ILE	CA-C-N	6.11	131.03	122.23
53	BT	30	ILE	C-N-CA	6.11	131.03	122.23
1	AA	1524	C	O5'-C5'-C4'	-6.11	102.34	111.50
19	AS	42	ASN	OD1-CG-ND2	6.11	128.71	122.60
35	BB	49	A	O4'-C1'-N9	6.11	117.37	108.20
35	BB	1735	A	O3'-P-O5'	6.11	113.17	104.00
35	BB	2580	U	C4'-C3'-O3'	-6.11	103.84	113.00
35	BB	2876	G	P-O5'-C5'	-6.11	111.73	120.90
43	BJ	47	HIS	ND1-CG-CD2	6.11	112.21	106.10
44	BK	89	ASN	N-CA-C	-6.11	106.15	113.97
1	AA	835	U	P-O3'-C3'	-6.11	111.04	120.20
35	BB	109	C	O4'-C1'-N1	6.11	117.66	108.50
1	AA	782	A	C4'-C3'-O3'	-6.11	103.84	113.00
1	AA	1185	G	O4'-C4'-C3'	-6.11	97.89	104.00
8	AH	10	LEU	CA-C-N	6.11	128.46	120.28
8	AH	10	LEU	C-N-CA	6.11	128.46	120.28
9	AI	5	TYR	N-CA-C	-6.11	98.68	109.06
38	BE	151	GLY	CA-C-N	6.11	131.19	120.87
38	BE	151	GLY	C-N-CA	6.11	131.19	120.87
41	BH	110	VAL	CA-C-O	6.10	127.10	120.57
1	AA	753	A	N1-C6-N6	6.10	136.91	118.60
35	BB	407	G	P-O3'-C3'	-6.10	111.05	120.20
35	BB	295	G	O5'-C5'-C4'	-6.10	102.35	111.50
1	AA	879	C	O4'-C1'-N1	6.10	117.65	108.50
3	AC	192	TYR	N-CA-C	-6.10	105.13	114.16
35	BB	1478	G	O3'-P-O5'	-6.10	94.85	104.00
40	BG	140	ILE	N-CA-C	6.10	116.76	110.36
50	BQ	107	ALA	CA-C-O	6.10	126.89	120.42
1	AA	1243	C	O4'-C1'-N1	6.10	117.64	108.50
15	AO	80	LEU	N-CA-CB	6.10	119.08	110.12
35	BB	494	G	O4'-C1'-N9	6.10	117.65	108.50
35	BB	1632	A	O3'-P-O5'	-6.10	94.85	104.00
49	BP	80	VAL	CB-CA-C	-6.10	103.91	112.14
1	AA	632	U	P-O3'-C3'	6.10	129.34	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2208	C	P-O3'-C3'	-6.10	111.06	120.20
1	AA	239	U	N1-C1'-C2'	-6.09	104.86	114.00
30	B5	134	ARG	O-C-N	-6.09	116.61	123.13
35	BB	1955	U	O5'-C5'-C4'	-6.09	102.56	111.70
35	BB	2095	A	C1'-O4'-C4'	6.09	116.00	109.90
35	BB	2509	G	C4'-C3'-O3'	-6.09	103.86	113.00
39	BF	144	LYS	CA-C-N	6.09	132.94	121.97
39	BF	144	LYS	C-N-CA	6.09	132.94	121.97
13	AM	109	LYS	CB-CA-C	-6.09	99.05	109.65
46	BM	46	ILE	O-C-N	-6.09	115.72	121.87
1	AA	170	U	C4'-C3'-O3'	-6.09	103.86	113.00
35	BB	2076	U	O4'-C1'-N1	6.09	117.64	108.50
44	BK	112	PHE	CA-C-N	6.09	133.18	121.54
44	BK	112	PHE	C-N-CA	6.09	133.18	121.54
1	AA	1433	A	O4'-C1'-N9	6.09	117.63	108.50
3	AC	41	TYR	O-C-N	6.09	128.34	122.07
35	BB	252	G	O4'-C1'-C2'	-6.09	101.51	107.60
35	BB	311	A	O4'-C1'-N9	6.09	117.33	108.20
35	BB	1029	A	C4'-C3'-O3'	-6.09	103.86	113.00
35	BB	2125	G	C4'-C3'-C2'	-6.09	96.51	102.60
35	BB	2480	C	C4'-C3'-C2'	-6.09	96.51	102.60
36	BC	174	ARG	CA-C-N	6.09	129.35	120.71
36	BC	174	ARG	C-N-CA	6.09	129.35	120.71
35	BB	656	G	O4'-C1'-C2'	-6.08	101.52	107.60
2	AB	170	ILE	O-C-N	6.08	127.77	121.87
22	AV	7	G	P-O5'-C5'	6.08	130.02	120.90
30	B5	69	THR	O-C-N	-6.08	115.51	122.20
35	BB	525	U	O4'-C1'-N1	6.08	117.63	108.50
49	BP	5	LYS	CA-C-N	6.08	128.35	120.44
49	BP	5	LYS	C-N-CA	6.08	128.35	120.44
15	AO	34	GLN	CA-C-N	6.08	128.44	120.60
15	AO	34	GLN	C-N-CA	6.08	128.44	120.60
35	BB	1201	U	O4'-C4'-C3'	-6.08	97.92	104.00
37	BD	101	PHE	CA-CB-CG	-6.08	107.72	113.80
48	BO	65	THR	N-CA-CB	6.08	119.00	109.69
53	BT	10	VAL	N-CA-C	-6.08	104.81	110.53
1	AA	1212	U	C1'-O4'-C4'	-6.08	103.82	109.90
36	BC	267	VAL	CA-C-O	-6.08	114.31	120.69
1	AA	658	C	O4'-C1'-N1	6.08	117.62	108.50
35	BB	2098	U	O4'-C1'-N1	6.08	117.62	108.50
35	BB	2832	U	P-O3'-C3'	6.08	129.32	120.20
35	BB	2880	C	P-O5'-C5'	6.08	130.02	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1334	G	C3'-C2'-C1'	6.08	107.38	101.30
35	BB	650	C	O5'-C5'-C4'	-6.08	102.39	111.50
35	BB	2187	U	O3'-P-O5'	-6.08	94.89	104.00
35	BB	2466	C	O4'-C1'-N1	6.08	117.61	108.50
1	AA	1174	G	P-O5'-C5'	-6.08	111.79	120.90
2	AB	55	GLU	N-CA-C	-6.08	106.19	113.97
20	AT	7	LYS	N-CA-C	-6.08	105.13	112.54
35	BB	440	C	O4'-C1'-N1	6.08	117.61	108.50
36	BC	229	HIS	CA-CB-CG	-6.08	107.72	113.80
49	BP	76	HIS	ND1-CG-CD2	6.08	112.17	106.10
32	B7	12	ARG	N-CA-C	-6.07	106.03	113.50
35	BB	1210	G	C5'-C4'-C3'	-6.07	106.09	115.20
35	BB	1392	A	O4'-C4'-C3'	-6.07	97.93	104.00
35	BB	2437	G	C4'-C3'-O3'	-6.07	103.89	113.00
1	AA	429	U	O4'-C1'-N1	6.07	117.31	108.20
35	BB	1140	C	C3'-C2'-C1'	-6.07	95.23	101.30
35	BB	2774	C	O4'-C1'-C2'	-6.07	101.53	107.60
1	AA	1146	A	O5'-C5'-C4'	6.07	120.60	111.50
35	BB	2595	G	O5'-C5'-C4'	-6.07	102.40	111.50
1	AA	1371	G	O3'-P-O5'	6.07	113.10	104.00
4	AD	135	GLN	N-CA-C	-6.07	98.64	108.41
10	AJ	46	LYS	N-CA-C	-6.07	100.01	109.72
35	BB	1895	C	C5'-C4'-C3'	-6.07	106.90	116.00
35	BB	2307	G	O4'-C1'-N9	6.07	117.30	108.20
35	BB	2619	C	C5'-C4'-C3'	-6.07	106.90	116.00
52	BS	4	ILE	CA-CB-CG1	6.07	120.71	110.40
55	BW	13	GLY	CA-C-N	6.07	129.92	120.82
55	BW	13	GLY	C-N-CA	6.07	129.92	120.82
1	AA	966	G	C1'-O4'-C4'	6.07	115.97	109.90
35	BB	954	G	O4'-C4'-C3'	-6.06	97.94	104.00
35	BB	1909	C	C4'-C3'-O3'	-6.06	103.91	113.00
14	AN	57	SER	O-C-N	6.06	128.31	122.07
34	BA	87	U	P-O3'-C3'	6.06	129.29	120.20
1	AA	1336	C	C3'-C2'-C1'	-6.06	95.44	101.50
1	AA	1488	G	C4'-C3'-O3'	-6.06	103.91	113.00
2	AB	207	ARG	O-C-N	-6.06	115.61	121.85
35	BB	655	A	O4'-C4'-C3'	-6.06	100.04	106.10
35	BB	959	A	C4'-C3'-O3'	-6.06	103.91	113.00
52	BS	19	LEU	N-CA-CB	6.06	119.67	110.28
1	AA	173	U	O5'-C5'-C4'	-6.06	102.61	111.70
1	AA	348	G	P-O5'-C5'	6.06	129.99	120.90
1	AA	729	A	C4'-C3'-C2'	-6.06	96.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	715	A	O3'-P-O5'	-6.06	94.91	104.00
35	BB	2313	C	O4'-C1'-N1	6.06	117.59	108.50
35	BB	2739	U	O5'-C5'-C4'	-6.06	102.41	111.50
36	BC	180	MET	CB-CA-C	-6.06	99.76	109.75
19	AS	56	HIS	ND1-CE1-NE2	6.06	114.46	108.40
35	BB	95	A	C5'-C4'-O4'	6.06	118.88	109.80
1	AA	846	G	O4'-C1'-N9	6.05	117.58	108.50
1	AA	1101	A	O4'-C1'-C2'	-6.05	99.75	105.80
4	AD	87	GLU	N-CA-CB	6.05	119.02	109.82
35	BB	569	U	P-O3'-C3'	-6.05	111.12	120.20
35	BB	995	C	C1'-O4'-C4'	-6.05	103.84	109.90
35	BB	1570	A	O4'-C1'-N9	6.05	117.58	108.50
1	AA	485	U	P-O5'-C5'	6.05	129.98	120.90
1	AA	955	U	P-O3'-C3'	-6.05	111.12	120.20
35	BB	1446	C	C3'-C2'-C1'	6.05	107.35	101.30
35	BB	1550	C	C4'-C3'-C2'	-6.05	96.55	102.60
1	AA	486	U	P-O3'-C3'	-6.05	111.13	120.20
32	B7	52	GLY	N-CA-C	-6.05	106.37	115.32
50	BQ	27	ARG	NE-CZ-NH2	-6.05	113.76	119.20
50	BQ	66	ALA	CA-C-O	-6.05	114.10	120.63
1	AA	130	A	P-O3'-C3'	6.05	129.27	120.20
26	B1	24	GLU	N-CA-CB	6.05	120.71	110.49
35	BB	102	U	O4'-C1'-N1	6.05	117.57	108.50
40	BG	108	PHE	CB-CG-CD2	6.05	130.98	120.70
10	AJ	89	ARG	NE-CZ-NH2	6.04	124.64	119.20
35	BB	565	C	C4'-C3'-C2'	-6.04	96.56	102.60
52	BS	54	ALA	N-CA-CB	6.04	119.01	110.12
1	AA	1447	A	O4'-C1'-C2'	6.04	111.84	105.80
35	BB	2483	C	O3'-P-O5'	-6.04	94.93	104.00
35	BB	614	A	C5'-C4'-C3'	-6.04	106.14	115.20
35	BB	1706	C	O4'-C1'-N1	6.04	117.26	108.20
2	AB	205	ALA	N-CA-C	-6.04	100.84	108.45
3	AC	115	VAL	CA-C-N	6.04	133.08	121.54
3	AC	115	VAL	C-N-CA	6.04	133.08	121.54
15	AO	41	HIS	ND1-CG-CD2	6.04	112.14	106.10
25	B0	29	LEU	N-CA-C	-6.04	101.97	110.31
28	B3	10	SER	N-CA-CB	6.04	119.00	109.82
35	BB	2113	U	O4'-C1'-N1	6.04	117.56	108.50
35	BB	2127	G	O4'-C1'-N9	6.04	117.56	108.50
35	BB	2599	G	C4'-C3'-C2'	-6.04	96.56	102.60
54	BU	14	THR	CA-C-O	6.04	128.14	121.56
4	AD	121	ALA	CA-C-O	-6.04	114.44	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	AJ	55	PRO	N-CA-C	-6.04	104.49	114.75
7	AG	56	SER	N-CA-C	-6.04	101.00	110.36
19	AS	25	GLY	N-CA-C	-6.03	98.88	113.18
35	BB	340	A	C4'-C3'-C2'	-6.03	96.57	102.60
1	AA	1329	A	O4'-C1'-N9	6.03	117.55	108.50
35	BB	274	C	C1'-O4'-C4'	-6.03	103.87	109.90
47	BN	116	VAL	O-C-N	6.03	128.14	122.23
1	AA	1238	A	C5'-C4'-C3'	6.03	125.05	116.00
35	BB	1291	C	P-O3'-C3'	-6.03	111.15	120.20
37	BD	188	LEU	N-CA-C	-6.03	98.90	108.73
44	BK	19	VAL	N-CA-C	-6.03	98.79	107.78
51	BR	82	HIS	N-CA-C	-6.03	104.13	112.03
1	AA	458	U	O4'-C1'-N1	6.03	117.54	108.50
1	AA	641	U	P-O3'-C3'	6.03	129.24	120.20
1	AA	977	A	C5'-C4'-C3'	-6.03	106.96	116.00
1	AA	1189	U	P-O5'-C5'	6.03	129.94	120.90
3	AC	10	ARG	N-CA-C	-6.02	105.58	113.17
14	AN	73	LEU	CB-CA-C	-6.02	102.54	111.70
5	AE	55	VAL	O-C-N	-6.02	114.23	121.10
8	AH	97	GLY	N-CA-C	-6.02	105.28	115.34
35	BB	1117	C	O4'-C1'-N1	6.02	117.53	108.50
35	BB	1924	C	O4'-C1'-N1	6.02	117.53	108.50
38	BE	12	LEU	CA-C-N	6.02	130.91	122.36
38	BE	12	LEU	C-N-CA	6.02	130.91	122.36
1	AA	113	G	C1'-O4'-C4'	6.02	115.92	109.90
2	AB	108	GLN	O-C-N	6.02	129.26	122.22
2	AB	158	ASP	O-C-N	-6.02	114.58	122.59
35	BB	2755	C	P-O5'-C5'	-6.02	111.87	120.90
37	BD	55	LYS	N-CA-C	6.02	117.92	111.36
1	AA	904	U	O4'-C4'-C3'	-6.02	97.98	104.00
32	B7	29	ARG	CA-C-N	6.02	133.04	121.54
32	B7	29	ARG	C-N-CA	6.02	133.04	121.54
35	BB	762	U	C4'-C3'-C2'	-6.02	96.58	102.60
35	BB	2660	A	C4'-C3'-O3'	-6.02	103.97	113.00
49	BP	24	THR	CA-C-O	-6.02	112.50	119.78
1	AA	268	U	O4'-C1'-N1	6.02	117.53	108.50
1	AA	683	G	P-O5'-C5'	-6.02	111.87	120.90
1	AA	765	G	O4'-C4'-C3'	-6.02	97.98	104.00
1	AA	1016	A	C1'-O4'-C4'	6.02	115.92	109.90
6	AF	78	PHE	N-CA-C	6.02	117.84	111.28
13	AM	4	ALA	N-CA-C	6.02	119.33	110.30
25	B0	76	LYS	CA-C-O	-6.02	114.40	120.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BC	229	HIS	CE1-NE2-CD2	-6.02	102.98	109.00
4	AD	49	ASP	CA-C-N	6.02	128.34	120.28
4	AD	49	ASP	C-N-CA	6.02	128.34	120.28
39	BF	6	TYR	CB-CG-CD1	6.02	129.82	120.80
49	BP	6	GLN	CA-C-N	6.02	128.34	120.28
49	BP	6	GLN	C-N-CA	6.02	128.34	120.28
1	AA	647	C	O4'-C1'-N1	6.01	117.52	108.50
1	AA	1162	C	P-O3'-C3'	-6.01	111.18	120.20
35	BB	1382	G	C1'-O4'-C4'	-6.01	103.89	109.90
1	AA	574	A	P-O3'-C3'	6.01	129.22	120.20
4	AD	195	ASN	CA-C-N	6.01	130.22	120.60
4	AD	195	ASN	C-N-CA	6.01	130.22	120.60
35	BB	821	A	P-O3'-C3'	6.01	129.22	120.20
35	BB	1575	C	O5'-C5'-C4'	-6.01	102.48	111.50
35	BB	2249	U	O4'-C1'-N1	6.01	117.22	108.20
1	AA	850	U	O4'-C1'-N1	6.01	117.52	108.50
2	AB	26	MET	N-CA-C	-6.01	103.47	112.54
9	AI	127	SER	N-CA-C	-6.01	98.02	107.93
11	AK	112	VAL	N-CA-C	-6.01	98.98	107.75
13	AM	111	PRO	CA-C-N	6.01	129.64	121.05
13	AM	111	PRO	C-N-CA	6.01	129.64	121.05
35	BB	423	A	O4'-C1'-N9	6.01	117.51	108.50
35	BB	1218	G	O4'-C1'-C2'	-6.01	101.59	107.60
39	BF	155	ILE	CA-C-O	-6.01	113.27	120.78
41	BH	130	VAL	O-C-N	6.01	129.80	122.95
51	BR	41	ILE	N-CA-CB	6.01	121.29	111.44
7	AG	13	PRO	O-C-N	-6.01	115.38	122.89
35	BB	104	A	C1'-O4'-C4'	-6.01	103.89	109.90
35	BB	678	C	O4'-C4'-C3'	-6.00	98.00	104.00
46	BM	18	ARG	NE-CZ-NH1	-6.00	115.50	121.50
1	AA	80	A	O4'-C4'-C3'	6.00	110.00	104.00
1	AA	200	G	O5'-C5'-C4'	-6.00	102.49	111.50
1	AA	1471	U	O4'-C1'-N1	6.00	117.51	108.50
35	BB	1688	U	O4'-C1'-N1	6.00	117.51	108.50
35	BB	1811	G	O4'-C4'-C3'	-6.00	98.00	104.00
1	AA	678	U	C4'-C3'-O3'	-6.00	104.00	113.00
1	AA	854	U	O4'-C1'-C2'	-6.00	101.60	107.60
8	AH	44	PHE	N-CA-CB	6.00	120.63	110.49
35	BB	271	G	C3'-C2'-C1'	-6.00	95.50	101.50
35	BB	582	A	C5'-C4'-C3'	-6.00	107.00	116.00
35	BB	1085	A	O4'-C1'-N9	6.00	117.50	108.50
37	BD	32	ASN	CB-CA-C	-6.00	102.65	111.77

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BG	71	LEU	CA-C-O	6.00	126.97	120.55
1	AA	817	C	C5'-C4'-C3'	-6.00	106.20	115.20
35	BB	2287	A	O5'-C5'-C4'	-6.00	102.70	111.70
41	BH	115	VAL	CA-C-N	6.00	130.25	120.23
41	BH	115	VAL	C-N-CA	6.00	130.25	120.23
34	BA	9	G	C5'-C4'-C3'	-6.00	107.00	116.00
35	BB	828	U	N1-C1'-C2'	6.00	121.00	112.00
35	BB	2635	A	C3'-C2'-O2'	6.00	119.70	110.70
3	AC	179	ALA	CA-C-N	6.00	130.70	121.53
3	AC	179	ALA	C-N-CA	6.00	130.70	121.53
20	AT	66	ILE	CA-C-O	6.00	124.33	119.29
35	BB	444	C	O4'-C1'-N1	6.00	117.50	108.50
35	BB	1969	A	C4'-C3'-O3'	-6.00	104.00	113.00
35	BB	2277	G	C5'-C4'-C3'	-6.00	107.00	116.00
54	BU	11	ILE	N-CA-CB	-6.00	105.61	112.21
1	AA	835	U	C4'-C3'-C2'	-6.00	96.61	102.60
3	AC	18	ASN	N-CA-C	-5.99	105.89	112.72
3	AC	96	VAL	CA-C-N	5.99	126.82	120.11
3	AC	96	VAL	C-N-CA	5.99	126.82	120.11
8	AH	76	ARG	NH1-CZ-NH2	-5.99	111.51	119.30
11	AK	99	LEU	CA-C-N	5.99	128.63	120.54
11	AK	99	LEU	C-N-CA	5.99	128.63	120.54
33	B8	25	VAL	N-CA-CB	5.99	120.86	111.99
35	BB	1846	G	C5'-C4'-C3'	-5.99	107.01	116.00
35	BB	2113	U	O5'-C5'-C4'	-5.99	102.51	111.50
35	BB	2824	C	O4'-C1'-N1	5.99	117.49	108.50
49	BP	86	LYS	CB-CA-C	-5.99	107.98	115.89
1	AA	31	G	C5'-C4'-C3'	-5.99	106.21	115.20
1	AA	401	C	P-O5'-C5'	-5.99	111.91	120.90
9	AI	106	ASP	CA-CB-CG	-5.99	106.61	112.60
27	B2	44	ARG	NE-CZ-NH1	-5.99	115.51	121.50
30	B5	7	ARG	N-CA-C	5.99	119.42	111.75
31	B6	26	ASN	CA-C-N	5.99	133.15	121.41
31	B6	26	ASN	C-N-CA	5.99	133.15	121.41
35	BB	485	C	C4'-C3'-C2'	-5.99	96.61	102.60
35	BB	1082	U	C5'-C4'-C3'	-5.99	107.01	116.00
30	B5	216	THR	O-C-N	-5.99	115.08	123.11
35	BB	1386	C	C4'-C3'-C2'	-5.99	96.61	102.60
37	BD	118	PHE	N-CA-C	5.99	123.56	110.80
41	BH	70	GLU	N-CA-C	5.99	123.55	110.80
48	BO	67	ASN	CB-CG-ND2	-5.99	107.42	116.40
1	AA	507	C	P-O3'-C3'	5.99	129.18	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	913	U	C5'-C4'-C3'	5.99	124.18	115.20
36	BC	242	HIS	CA-C-O	-5.99	114.43	119.76
37	BD	204	LYS	N-CA-C	5.99	118.69	110.01
43	BJ	76	HIS	N-CA-C	-5.99	99.42	108.52
56	BY	15	SER	N-CA-C	-5.99	103.73	113.19
19	AS	68	HIS	CB-CG-ND1	5.98	131.68	122.70
35	BB	972	A	C4'-C3'-O3'	-5.98	104.02	113.00
35	BB	1383	A	P-O3'-C3'	5.98	129.18	120.20
1	AA	70	U	O3'-P-O5'	-5.98	95.03	104.00
1	AA	609	A	O4'-C4'-C3'	-5.98	98.02	104.00
1	AA	1313	U	C4'-C3'-O3'	-5.98	104.03	113.00
34	BA	11	C	P-O3'-C3'	5.98	129.18	120.20
35	BB	2134	A	O4'-C1'-N9	5.98	117.47	108.50
35	BB	2681	C	O3'-P-O5'	-5.98	95.03	104.00
34	BA	94	A	O4'-C4'-C3'	-5.98	98.02	104.00
35	BB	937	C	C4'-C3'-C2'	-5.98	96.62	102.60
35	BB	1658	C	O4'-C1'-N1	5.98	117.47	108.50
54	BU	86	PHE	CA-C-O	5.98	126.95	120.43
1	AA	1473	G	O4'-C1'-N9	5.98	117.47	108.50
35	BB	1040	A	C1'-O4'-C4'	5.98	115.88	109.90
1	AA	1086	U	O4'-C1'-N1	5.98	117.47	108.50
37	BD	16	THR	N-CA-C	-5.98	100.22	109.24
1	AA	816	A	C1'-O4'-C4'	-5.98	103.92	109.90
35	BB	2182	U	O5'-C5'-C4'	-5.98	102.54	111.50
35	BB	2720	U	O4'-C4'-C3'	-5.98	98.02	104.00
1	AA	721	G	C2'-C3'-O3'	5.97	118.46	109.50
1	AA	997	U	C4'-C3'-O3'	-5.97	104.04	113.00
1	AA	1481	U	C4'-C3'-O3'	-5.97	104.04	113.00
1	AA	1487	G	O4'-C1'-C2'	-5.97	101.62	107.60
14	AN	35	ALA	CB-CA-C	-5.97	101.54	110.50
15	AO	49	HIS	CB-CG-CD2	-5.97	123.43	131.20
19	AS	6	LYS	CA-C-O	5.97	125.23	119.08
34	BA	63	C	O4'-C1'-N1	5.97	117.46	108.50
35	BB	202	U	P-O3'-C3'	5.97	129.16	120.20
36	BC	119	VAL	N-CA-C	-5.97	106.92	112.83
43	BJ	40	HIS	N-CA-C	-5.97	105.57	112.92
49	BP	61	ARG	O-C-N	-5.97	116.20	123.19
40	BG	169	ARG	NE-CZ-NH1	-5.97	115.53	121.50
49	BP	49	ILE	N-CA-C	5.97	116.77	108.89
51	BR	12	HIS	CA-C-N	5.97	133.86	121.32
51	BR	12	HIS	C-N-CA	5.97	133.86	121.32
1	AA	280	C	C1'-O4'-C4'	5.97	115.67	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	18	LEU	N-CA-CB	5.97	122.62	111.52
8	AH	6	ILE	CA-C-O	-5.97	114.84	121.05
35	BB	336	C	O4'-C1'-N1	5.97	117.45	108.50
35	BB	744	U	O4'-C1'-N1	5.97	117.45	108.50
35	BB	965	C	O4'-C1'-C2'	-5.97	101.63	107.60
35	BB	2334	U	P-O3'-C3'	5.97	129.15	120.20
11	AK	59	PRO	CA-C-N	5.97	129.09	120.79
11	AK	59	PRO	C-N-CA	5.97	129.09	120.79
18	AR	25	ILE	CB-CA-C	5.97	119.52	111.88
35	BB	143	C	C3'-C2'-O2'	5.97	119.65	110.70
35	BB	996	A	O4'-C1'-N9	5.97	117.45	108.50
1	AA	551	U	P-O5'-C5'	5.97	129.85	120.90
1	AA	1479	C	O4'-C1'-N1	5.97	117.45	108.50
34	BA	39	A	C4'-C3'-O3'	-5.97	104.05	113.00
35	BB	1126	A	P-O5'-C5'	-5.97	111.95	120.90
35	BB	1180	U	O4'-C1'-N1	5.97	117.45	108.50
35	BB	1369	G	O4'-C4'-C3'	-5.97	98.03	104.00
35	BB	1509	A	P-O3'-C3'	5.96	129.15	120.20
41	BH	135	HIS	CA-CB-CG	-5.96	107.84	113.80
1	AA	868	C	C4'-C3'-C2'	-5.96	96.64	102.60
13	AM	11	HIS	N-CA-C	-5.96	98.10	110.80
1	AA	1111	A	P-O3'-C3'	5.96	129.14	120.20
26	B1	41	HIS	CE1-NE2-CD2	-5.96	103.04	109.00
35	BB	1150	C	O4'-C1'-N1	5.96	117.44	108.50
35	BB	1917	U	O4'-C4'-C3'	-5.96	98.04	104.00
7	AG	80	GLY	N-CA-C	-5.96	107.39	114.48
35	BB	517	C	O4'-C1'-N1	5.96	117.44	108.50
38	BE	101	TYR	CA-CB-CG	-5.96	103.17	113.90
1	AA	9	G	C4'-C3'-C2'	-5.96	96.64	102.60
1	AA	1205	U	P-O3'-C3'	5.96	129.14	120.20
14	AN	86	ALA	CA-C-N	5.96	129.08	120.38
14	AN	86	ALA	C-N-CA	5.96	129.08	120.38
35	BB	2251	G	C3'-C2'-O2'	5.96	119.64	110.70
55	BW	84	PRO	N-CA-C	5.96	121.36	114.03
1	AA	58	C	O4'-C1'-N1	5.96	117.43	108.50
1	AA	1036	A	P-O5'-C5'	5.96	129.84	120.90
1	AA	1377	A	O3'-P-O5'	-5.96	95.06	104.00
1	AA	1477	U	C5'-C4'-C3'	-5.96	107.07	116.00
11	AK	60	PHE	CA-C-N	5.96	129.08	120.38
11	AK	60	PHE	C-N-CA	5.96	129.08	120.38
35	BB	209	C	O4'-C1'-N1	5.96	117.44	108.50
1	AA	195	A	C4'-C3'-O3'	-5.96	104.07	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	AF	53	LYS	N-CA-CB	5.96	120.55	110.49
35	BB	2779	U	C3'-C2'-C1'	-5.96	95.55	101.50
44	BK	9	ASN	CA-C-O	5.96	128.93	121.66
48	BO	72	ALA	N-CA-CB	5.95	119.81	110.46
10	AJ	43	PRO	CA-C-N	-5.95	114.72	123.05
10	AJ	43	PRO	C-N-CA	-5.95	114.72	123.05
1	AA	840	C	C4'-C3'-O3'	-5.95	104.08	113.00
5	AE	76	ASN	CA-CB-CG	5.95	118.55	112.60
1	AA	1089	G	C4'-C3'-O3'	-5.95	104.08	113.00
8	AH	83	ARG	NE-CZ-NH2	-5.95	113.84	119.20
35	BB	2369	A	C1'-O4'-C4'	5.95	115.85	109.90
35	BB	2541	A	O3'-P-O5'	5.95	112.92	104.00
35	BB	2852	G	O4'-C1'-N9	5.95	117.42	108.50
35	BB	1756	G	P-O3'-C3'	5.95	129.12	120.20
36	BC	14	HIS	ND1-CG-CD2	5.95	112.05	106.10
1	AA	773	G	C4'-C3'-O3'	-5.95	104.08	113.00
35	BB	578	G	C4'-C3'-O3'	-5.95	104.08	113.00
35	BB	1714	U	O4'-C1'-N1	5.95	117.42	108.50
1	AA	385	C	P-O5'-C5'	5.94	129.81	120.90
1	AA	688	G	O4'-C1'-N9	5.94	117.41	108.50
5	AE	82	HIS	CA-C-N	5.94	126.28	119.92
5	AE	82	HIS	C-N-CA	5.94	126.28	119.92
29	B4	40	PRO	CA-C-N	5.94	128.60	120.46
29	B4	40	PRO	C-N-CA	5.94	128.60	120.46
1	AA	382	A	C3'-C2'-O2'	5.94	119.61	110.70
1	AA	568	G	O4'-C1'-C2'	-5.94	101.66	107.60
13	AM	92	ARG	O-C-N	5.94	129.67	122.48
35	BB	1055	G	O4'-C4'-C3'	5.94	109.94	104.00
35	BB	1107	G	C1'-O4'-C4'	5.94	115.84	109.90
35	BB	1145	C	O4'-C1'-N1	5.94	117.41	108.50
43	BJ	129	GLU	O-C-N	-5.94	114.69	122.59
1	AA	1294	G	C4'-C3'-C2'	-5.94	96.66	102.60
35	BB	2862	G	P-O5'-C5'	-5.94	111.99	120.90
47	BN	23	ASN	N-CA-C	-5.94	104.44	111.03
8	AH	5	PRO	CA-C-N	5.94	128.90	120.53
8	AH	5	PRO	C-N-CA	5.94	128.90	120.53
35	BB	2139	U	P-O5'-C5'	-5.94	111.99	120.90
54	BU	16	LYS	N-CA-CB	5.94	120.04	114.10
54	BU	96	LYS	N-CA-CB	5.94	119.42	109.92
1	AA	1226	C	N1-C1'-C2'	5.94	120.90	112.00
2	AB	152	ASP	N-CA-CB	5.94	119.93	110.73
11	AK	23	HIS	ND1-CG-CD2	5.94	112.04	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1400	U	O5'-C5'-C4'	-5.94	102.60	111.50
35	BB	570	G	O4'-C1'-N9	5.93	117.40	108.50
35	BB	741	U	P-O3'-C3'	-5.93	111.30	120.20
35	BB	1699	G	C5'-C4'-O4'	5.93	118.00	109.10
35	BB	2066	C	O4'-C1'-N1	5.93	117.40	108.50
47	BN	101	GLY	O-C-N	-5.93	117.27	122.91
38	BE	23	PHE	CA-C-O	5.93	126.84	120.38
39	BF	93	GLU	N-CA-CB	5.93	118.78	109.94
47	BN	12	ARG	CA-C-N	5.93	132.87	121.54
47	BN	12	ARG	C-N-CA	5.93	132.87	121.54
20	AT	3	ILE	CA-C-N	5.93	129.71	120.75
20	AT	3	ILE	C-N-CA	5.93	129.71	120.75
32	B7	12	ARG	CA-C-O	5.93	125.66	119.14
52	BS	96	ILE	O-C-N	5.93	129.61	123.20
35	BB	363	G	O4'-C1'-N9	5.93	117.39	108.50
35	BB	2086	U	P-O5'-C5'	-5.93	112.00	120.90
38	BE	62	GLN	CB-CG-CD	-5.93	102.52	112.60
51	BR	48	LYS	O-C-N	-5.93	115.58	122.87
1	AA	62	U	O4'-C1'-N1	5.93	117.39	108.50
35	BB	742	A	O4'-C1'-C2'	-5.93	101.67	107.60
3	AC	139	ASN	CA-C-N	5.93	129.03	120.38
3	AC	139	ASN	C-N-CA	5.93	129.03	120.38
35	BB	539	G	O4'-C4'-C3'	-5.93	98.07	104.00
35	BB	1381	G	C4'-C3'-C2'	-5.93	96.67	102.60
35	BB	1650	A	P-O5'-C5'	5.93	129.79	120.90
39	BF	65	LEU	N-CA-C	-5.93	98.62	108.34
43	BJ	92	MET	N-CA-C	5.93	118.50	111.33
49	BP	55	HIS	CA-CB-CG	-5.93	107.87	113.80
53	BT	52	GLU	N-CA-C	-5.93	104.91	113.21
1	AA	518	C	O4'-C4'-C3'	-5.92	100.18	106.10
8	AH	88	LYS	N-CA-C	5.92	118.50	111.33
29	B4	8	ILE	CB-CA-C	5.92	121.84	111.18
35	BB	1819	A	P-O5'-C5'	5.92	129.79	120.90
43	BJ	22	GLY	N-CA-C	-5.92	106.42	115.66
14	AN	53	ASP	O-C-N	-5.92	115.08	122.24
28	B3	37	HIS	CA-CB-CG	5.92	119.72	113.80
35	BB	938	G	O4'-C1'-N9	5.92	117.38	108.50
35	BB	2568	U	O4'-C1'-N1	5.92	117.38	108.50
48	BO	29	HIS	CB-CG-CD2	-5.92	123.50	131.20
37	BD	125	TRP	CA-C-O	5.92	126.36	119.32
1	AA	164	G	C4'-C3'-O3'	-5.92	104.12	113.00
1	AA	1175	G	C4'-C3'-C2'	-5.92	96.68	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	987	C	O4'-C1'-N1	5.92	117.38	108.50
35	BB	1280	G	C4'-C3'-O3'	-5.92	104.12	113.00
35	BB	1952	A	O4'-C1'-N9	5.92	117.38	108.50
1	AA	157	U	P-O5'-C5'	5.92	129.77	120.90
1	AA	956	U	P-O3'-C3'	-5.92	111.33	120.20
19	AS	21	ALA	CA-C-O	5.92	125.29	119.08
35	BB	1751	U	P-O3'-C3'	-5.92	111.33	120.20
46	BM	118	LYS	CA-C-O	5.92	126.79	120.10
3	AC	167	TYR	O-C-N	-5.91	116.17	123.44
4	AD	52	VAL	CA-C-N	5.91	129.01	120.38
4	AD	52	VAL	C-N-CA	5.91	129.01	120.38
17	AQ	4	ILE	CA-C-N	5.91	132.83	121.54
17	AQ	4	ILE	C-N-CA	5.91	132.83	121.54
26	B1	41	HIS	ND1-CE1-NE2	5.91	114.31	108.40
35	BB	708	G	C5'-C4'-C3'	-5.91	107.13	116.00
35	BB	2282	G	C4'-C3'-C2'	5.91	108.51	102.60
10	AJ	25	ILE	N-CA-C	-5.91	107.74	113.53
29	B4	11	VAL	CA-C-N	5.91	129.26	120.87
29	B4	11	VAL	C-N-CA	5.91	129.26	120.87
7	AG	39	GLU	CB-CG-CD	-5.91	102.55	112.60
30	B5	50	ILE	CA-C-N	5.91	130.80	121.99
30	B5	50	ILE	C-N-CA	5.91	130.80	121.99
35	BB	728	G	O5'-C5'-C4'	5.91	120.56	111.70
35	BB	849	A	C4'-C3'-O3'	-5.91	104.14	113.00
35	BB	1089	A	N9-C1'-C2'	-5.91	105.13	114.00
35	BB	2612	C	C1'-O4'-C4'	5.91	115.81	109.90
35	BB	2830	C	O5'-C5'-C4'	-5.91	102.64	111.50
36	BC	24	HIS	ND1-CG-CD2	5.91	112.01	106.10
1	AA	152	A	C4'-C3'-C2'	-5.91	96.69	102.60
35	BB	2830	C	P-O5'-C5'	-5.91	112.04	120.90
44	BK	68	GLY	CA-C-N	5.91	131.06	123.03
44	BK	68	GLY	C-N-CA	5.91	131.06	123.03
47	BN	8	ARG	NE-CZ-NH2	-5.91	113.88	119.20
1	AA	190	A	O5'-C5'-C4'	5.91	120.36	111.50
1	AA	1040	U	O4'-C1'-N1	5.91	117.36	108.50
1	AA	1120	C	O4'-C1'-N1	5.91	117.36	108.50
13	AM	40	GLU	N-CA-C	-5.91	105.83	114.39
35	BB	1402	U	C4'-C3'-O3'	-5.91	104.14	113.00
48	BO	114	GLY	N-CA-C	-5.91	105.98	115.08
1	AA	169	C	C4'-C3'-C2'	-5.90	96.70	102.60
35	BB	293	U	O3'-P-O5'	5.90	112.86	104.00
35	BB	380	G	O5'-C5'-C4'	-5.90	102.64	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BO	55	GLU	N-CA-CB	5.90	119.08	109.69
1	AA	782	A	O4'-C1'-C2'	-5.90	101.70	107.60
35	BB	2391	G	O4'-C1'-N9	5.90	117.06	108.20
35	BB	2594	C	P-O3'-C3'	-5.90	111.35	120.20
35	BB	2835	A	O4'-C1'-C2'	-5.90	99.90	105.80
44	BK	50	GLY	N-CA-C	-5.90	105.68	112.29
11	AK	56	LYS	N-CA-CB	5.90	118.79	110.12
34	BA	4	C	C1'-O4'-C4'	5.90	115.80	109.90
35	BB	503	A	P-O5'-C5'	-5.90	112.05	120.90
35	BB	57	C	O5'-C5'-C4'	-5.90	102.65	111.50
35	BB	1513	U	P-O3'-C3'	-5.90	111.35	120.20
35	BB	1777	U	O4'-C1'-N1	5.90	117.35	108.50
35	BB	1976	U	P-O3'-C3'	5.90	129.05	120.20
1	AA	948	C	O4'-C1'-N1	5.90	117.35	108.50
1	AA	987	G	C4'-C3'-C2'	-5.90	96.70	102.60
30	B5	77	VAL	N-CA-C	5.90	116.35	107.80
35	BB	1037	G	P-O3'-C3'	-5.90	111.36	120.20
47	BN	68	ALA	CA-C-O	5.90	126.42	119.28
1	AA	823	C	P-O5'-C5'	-5.90	112.06	120.90
2	AB	101	THR	N-CA-CB	5.90	119.34	110.14
35	BB	1438	U	O4'-C1'-N1	5.90	117.34	108.50
35	BB	1826	G	P-O3'-C3'	-5.90	111.36	120.20
1	AA	164	G	O4'-C1'-N9	5.89	117.34	108.50
1	AA	811	C	C1'-O4'-C4'	5.89	115.80	109.90
5	AE	44	ARG	NE-CZ-NH2	5.89	124.50	119.20
30	B5	187	GLU	N-CA-C	5.89	118.18	111.11
35	BB	1173	U	C3'-C2'-C1'	5.89	107.19	101.30
35	BB	1821	A	P-O5'-C5'	5.89	129.74	120.90
6	AF	22	ILE	CA-C-N	5.89	128.10	120.44
6	AF	22	ILE	C-N-CA	5.89	128.10	120.44
35	BB	1962	C	C2'-C3'-O3'	5.89	118.34	109.50
35	BB	2769	U	O4'-C1'-N1	5.89	117.34	108.50
35	BB	2795	C	O4'-C1'-N1	5.89	117.34	108.50
19	AS	33	TRP	CA-C-N	5.89	129.74	121.02
19	AS	33	TRP	C-N-CA	5.89	129.74	121.02
35	BB	866	A	C1'-C2'-O2'	5.89	117.24	108.40
35	BB	1181	U	P-O3'-C3'	-5.89	111.36	120.20
35	BB	2302	U	O4'-C1'-N1	5.89	117.34	108.50
35	BB	2715	C	P-O5'-C5'	5.89	129.74	120.90
1	AA	95	C	O4'-C1'-N1	5.89	117.33	108.50
35	BB	691	C	O3'-P-O5'	-5.89	95.17	104.00
35	BB	1354	A	C4'-C3'-C2'	-5.89	96.71	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2573	C	O4'-C4'-C3'	-5.89	98.11	104.00
35	BB	2699	C	O4'-C1'-N1	5.89	117.33	108.50
53	BT	92	ASN	N-CA-CB	5.89	122.50	111.43
1	AA	1289	A	O4'-C4'-C3'	5.89	109.89	104.00
1	AA	734	G	C4'-C3'-O3'	-5.89	104.17	113.00
35	BB	989	G	O3'-P-O5'	-5.89	95.17	104.00
1	AA	1122	U	P-O5'-C5'	5.88	129.73	120.90
18	AR	56	ARG	CD-NE-CZ	-5.88	116.16	124.40
35	BB	1207	C	P-O5'-C5'	-5.88	112.07	120.90
36	BC	151	GLY	CA-C-N	5.88	132.78	121.54
36	BC	151	GLY	C-N-CA	5.88	132.78	121.54
45	BL	21	ARG	NE-CZ-NH2	5.88	124.50	119.20
47	BN	54	LEU	N-CA-CB	5.88	119.99	110.40
1	AA	956	U	O4'-C1'-N1	5.88	117.32	108.50
27	B2	44	ARG	N-CA-C	-5.88	106.14	113.38
34	BA	62	C	P-O5'-C5'	5.88	129.72	120.90
35	BB	401	A	O4'-C1'-N9	5.88	117.33	108.50
35	BB	1929	G	C3'-C2'-O2'	-5.88	105.78	114.60
35	BB	2594	C	P-O5'-C5'	5.88	129.72	120.90
35	BB	627	A	C3'-C2'-C1'	-5.88	95.62	101.50
35	BB	1606	C	C1'-O4'-C4'	-5.88	104.02	109.90
38	BE	31	VAL	N-CA-C	-5.88	104.78	110.72
38	BE	36	ALA	CA-C-N	5.88	129.25	120.31
38	BE	36	ALA	C-N-CA	5.88	129.25	120.31
1	AA	52	C	C5'-C4'-C3'	-5.88	107.18	116.00
1	AA	53	A	P-O3'-C3'	5.88	129.02	120.20
1	AA	1264	U	O4'-C1'-C2'	-5.88	101.72	107.60
30	B5	98	GLU	CA-C-N	5.88	129.25	120.31
30	B5	98	GLU	C-N-CA	5.88	129.25	120.31
35	BB	450	G	P-O3'-C3'	-5.88	111.38	120.20
1	AA	465	A	O3'-P-O5'	-5.88	95.18	104.00
1	AA	639	G	P-O3'-C3'	-5.88	111.38	120.20
7	AG	48	THR	N-CA-CB	5.88	118.70	109.94
12	AL	97	VAL	N-CA-C	-5.88	99.24	108.23
19	AS	9	PHE	O-C-N	-5.88	115.79	123.02
35	BB	205	G	C5'-C4'-O4'	5.88	117.92	109.10
35	BB	1183	U	C1'-O4'-C4'	5.88	115.78	109.90
35	BB	2356	U	C5'-C4'-C3'	-5.88	107.18	116.00
45	BL	111	ILE	N-CA-C	-5.88	99.95	108.89
12	AL	6	LEU	N-CA-C	-5.88	104.28	112.45
50	BQ	69	ARG	O-C-N	5.88	128.12	122.07
51	BR	40	MET	N-CA-CB	5.88	120.42	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	463	U	O4'-C1'-N1	5.88	117.31	108.50
35	BB	1304	A	O4'-C1'-N9	5.88	117.31	108.50
1	AA	857	C	C5'-C4'-C3'	5.87	124.81	116.00
43	BJ	68	LYS	N-CA-C	-5.87	104.99	114.09
50	BQ	85	ALA	N-CA-CB	5.87	119.01	110.26
1	AA	549	C	C4'-C3'-C2'	-5.87	96.73	102.60
1	AA	1242	G	O4'-C4'-C3'	-5.87	98.13	104.00
2	AB	152	ASP	N-CA-C	-5.87	105.31	112.88
2	AB	196	ASP	CA-CB-CG	5.87	118.47	112.60
20	AT	36	ALA	CA-C-O	-5.87	114.61	121.07
35	BB	520	G	C4'-C3'-O3'	-5.87	104.19	113.00
4	AD	78	ALA	CA-C-O	-5.87	114.84	121.00
50	BQ	2	ARG	NE-CZ-NH1	-5.87	115.63	121.50
1	AA	686	U	C3'-C2'-C1'	-5.87	95.63	101.50
1	AA	1376	U	P-O5'-C5'	-5.87	112.10	120.90
34	BA	4	C	O4'-C4'-C3'	-5.87	98.13	104.00
35	BB	2760	C	P-O3'-C3'	-5.87	111.40	120.20
1	AA	536	C	C4'-C3'-O3'	-5.87	104.20	113.00
35	BB	1502	A	C4'-C3'-O3'	-5.87	104.20	113.00
35	BB	1779	U	O4'-C4'-C3'	-5.87	98.13	104.00
35	BB	2399	G	O4'-C1'-N9	5.87	117.30	108.50
38	BE	91	ASP	CA-CB-CG	5.87	118.47	112.60
1	AA	148	G	C4'-C3'-C2'	-5.86	96.74	102.60
1	AA	212	G	O4'-C1'-N9	5.86	117.29	108.50
1	AA	1117	A	C5'-C4'-C3'	-5.86	107.21	116.00
2	AB	10	LYS	CA-C-O	5.86	126.64	120.42
4	AD	100	VAL	N-CA-CB	5.86	117.02	110.51
17	AQ	20	ILE	CA-C-O	5.86	126.91	120.64
20	AT	14	GLU	CA-C-N	5.86	128.41	120.38
20	AT	14	GLU	C-N-CA	5.86	128.41	120.38
35	BB	205	G	C2'-C3'-O3'	5.86	118.30	109.50
35	BB	1377	G	P-O5'-C5'	5.86	129.69	120.90
35	BB	1895	C	P-O5'-C5'	5.86	129.70	120.90
1	AA	1460	C	C4'-C3'-C2'	-5.86	96.74	102.60
4	AD	196	GLU	N-CA-C	-5.86	105.23	112.38
25	B0	26	ARG	NE-CZ-NH2	-5.86	113.92	119.20
1	AA	331	G	C1'-O4'-C4'	-5.86	104.04	109.90
1	AA	634	C	O4'-C1'-N1	5.86	117.29	108.50
1	AA	1159	U	O4'-C1'-N1	5.86	116.99	108.20
12	AL	58	ASN	CA-C-O	5.86	126.51	119.59
25	B0	69	GLU	N-CA-CB	5.86	118.89	110.45
35	BB	663	G	O4'-C4'-C3'	-5.86	98.14	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1311	G	O4'-C1'-C2'	5.86	111.66	105.80
40	BG	165	ASP	CA-C-N	-5.86	114.98	122.77
40	BG	165	ASP	C-N-CA	-5.86	114.98	122.77
43	BJ	79	GLY	CA-C-O	5.86	126.28	119.13
28	B3	18	HIS	CA-CB-CG	-5.86	107.94	113.80
35	BB	711	G	C1'-C2'-O2'	5.86	117.19	108.40
45	BL	90	VAL	N-CA-CB	5.86	119.79	111.82
5	AE	124	ALA	N-CA-C	5.86	117.87	109.14
24	AZ	22	ALA	CA-C-N	5.86	130.48	122.34
24	AZ	22	ALA	C-N-CA	5.86	130.48	122.34
30	B5	130	VAL	CA-CB-CG2	5.86	120.36	110.40
35	BB	1182	G	C4'-C3'-O3'	-5.86	104.21	113.00
35	BB	1403	A	C5'-C4'-C3'	5.86	124.79	116.00
35	BB	1985	C	O4'-C1'-N1	5.86	117.29	108.50
1	AA	54	C	O4'-C4'-C3'	5.86	109.86	104.00
4	AD	126	GLY	CA-C-N	5.86	129.87	121.50
4	AD	126	GLY	C-N-CA	5.86	129.87	121.50
27	B2	57	GLU	N-CA-CB	5.86	120.35	110.69
35	BB	1072	C	P-O3'-C3'	-5.86	111.42	120.20
37	BD	130	GLN	CA-C-N	5.86	130.48	122.34
37	BD	130	GLN	C-N-CA	5.86	130.48	122.34
43	BJ	3	THR	CA-C-O	5.86	128.29	121.44
35	BB	1831	G	P-O5'-C5'	-5.85	112.12	120.90
1	AA	9	G	P-O3'-C3'	-5.85	111.42	120.20
1	AA	1035	A	O4'-C1'-N9	5.85	117.28	108.50
19	AS	35	ARG	CB-CA-C	-5.85	99.24	109.07
35	BB	469	G	C4'-C3'-C2'	-5.85	96.75	102.60
35	BB	1641	A	P-O5'-C5'	-5.85	112.12	120.90
35	BB	2172	U	O4'-C1'-N1	5.85	116.98	108.20
35	BB	2564	A	P-O3'-C3'	5.85	128.98	120.20
36	BC	257	ARG	NE-CZ-NH1	5.85	127.35	121.50
41	BH	25	TYR	CB-CG-CD2	-5.85	112.02	120.80
52	BS	32	ALA	N-CA-C	-5.85	106.00	113.02
13	AM	82	LEU	N-CA-C	-5.85	104.64	113.89
35	BB	1964	G	C2'-C3'-O3'	5.85	118.28	109.50
48	BO	63	LYS	N-CA-C	-5.85	104.26	111.40
2	AB	36	LYS	N-CA-C	-5.85	104.80	113.40
8	AH	70	VAL	CA-CB-CG1	-5.85	100.46	110.40
25	B0	33	HIS	ND1-CE1-NE2	5.85	114.25	108.40
35	BB	3	U	C1'-O4'-C4'	5.85	115.75	109.90
35	BB	610	C	O4'-C1'-N1	5.85	117.27	108.50
35	BB	1908	C	O4'-C1'-N1	5.85	117.28	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2316	G	P-O5'-C5'	5.85	129.67	120.90
37	BD	185	ASN	CB-CA-C	5.85	119.59	111.63
1	AA	688	G	O5'-C5'-C4'	-5.85	102.73	111.50
8	AH	37	ASN	N-CA-CB	5.85	118.81	110.16
48	BO	57	ALA	CA-C-N	5.85	128.01	120.70
48	BO	57	ALA	C-N-CA	5.85	128.01	120.70
6	AF	62	MET	N-CA-CB	5.85	120.37	110.49
35	BB	613	A	O4'-C1'-N9	5.85	117.27	108.50
35	BB	1109	C	O4'-C1'-N1	5.85	117.27	108.50
35	BB	2181	U	O5'-C5'-C4'	-5.85	102.73	111.50
35	BB	2319	G	P-O5'-C5'	5.85	129.67	120.90
34	BA	53	A	O4'-C1'-C2'	-5.84	101.75	107.60
35	BB	961	C	O4'-C1'-C2'	-5.84	99.96	105.80
35	BB	991	C	O4'-C1'-N1	5.84	117.27	108.50
35	BB	1951	U	O4'-C1'-N1	5.84	117.27	108.50
46	BM	77	PRO	O-C-N	-5.84	115.58	122.89
20	AT	21	ALA	CA-C-N	5.84	128.39	120.38
20	AT	21	ALA	C-N-CA	5.84	128.39	120.38
35	BB	371	A	O4'-C4'-C3'	-5.84	100.26	106.10
36	BC	202	ARG	CA-CB-CG	5.84	125.78	114.10
8	AH	110	MET	N-CA-CB	-5.84	100.62	110.49
10	AJ	66	GLU	N-CA-C	-5.84	100.44	109.14
30	B5	130	VAL	CB-CA-C	5.84	118.39	111.32
35	BB	1793	C	C4'-C3'-C2'	-5.84	96.76	102.60
41	BH	70	GLU	CA-C-N	5.84	132.75	121.18
41	BH	70	GLU	C-N-CA	5.84	132.75	121.18
1	AA	842	U	C3'-C2'-O2'	-5.84	105.84	114.60
2	AB	53	LEU	N-CA-C	-5.84	106.78	114.31
35	BB	305	C	O4'-C1'-N1	5.84	117.26	108.50
35	BB	671	C	C3'-C2'-C1'	-5.84	95.46	101.30
35	BB	767	U	O4'-C1'-N1	5.84	117.26	108.50
35	BB	2203	U	C5'-C4'-C3'	-5.84	107.24	116.00
41	BH	69	ALA	CB-CA-C	-5.84	101.97	110.96
27	B2	35	VAL	N-CA-C	-5.84	99.21	108.90
35	BB	493	G	P-O3'-C3'	-5.84	111.44	120.20
35	BB	2126	A	O4'-C1'-C2'	-5.84	99.96	105.80
35	BB	2260	C	C4'-C3'-O3'	-5.84	104.24	113.00
1	AA	1309	G	C1'-O4'-C4'	-5.84	104.06	109.90
35	BB	2717	C	O4'-C1'-N1	5.84	117.25	108.50
39	BF	152	ASP	CA-CB-CG	-5.84	106.76	112.60
24	AZ	24	ALA	CB-CA-C	-5.83	101.75	110.50
1	AA	1222	G	O4'-C1'-N9	5.83	117.25	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1367	C	C1'-O4'-C4'	-5.83	104.07	109.90
6	AF	52	ASN	OD1-CG-ND2	-5.83	116.77	122.60
13	AM	97	ARG	N-CA-C	5.83	120.09	112.92
14	AN	70	HIS	CB-CG-CD2	-5.83	123.61	131.20
35	BB	2502	G	P-O5'-C5'	5.83	129.65	120.90
34	BA	51	G	O5'-C5'-C4'	-5.83	102.75	111.50
35	BB	2837	A	O5'-C5'-C4'	-5.83	102.75	111.50
38	BE	195	GLN	CA-C-N	5.83	128.45	120.46
38	BE	195	GLN	C-N-CA	5.83	128.45	120.46
1	AA	49	U	O4'-C1'-C2'	5.83	111.63	105.80
1	AA	1359	C	O3'-P-O5'	-5.83	95.25	104.00
35	BB	2407	A	O4'-C1'-N9	5.83	117.25	108.50
39	BF	120	SER	CA-C-O	-5.83	114.48	120.89
1	AA	811	C	P-O3'-C3'	5.83	128.94	120.20
1	AA	1114	C	O4'-C1'-N1	5.83	117.24	108.50
2	AB	159	ALA	N-CA-C	-5.83	100.21	109.07
10	AJ	78	GLU	CA-C-N	5.83	127.13	119.84
10	AJ	78	GLU	C-N-CA	5.83	127.13	119.84
11	AK	92	ARG	CB-CA-C	-5.83	98.35	109.95
44	BK	93	GLN	CA-C-N	5.83	126.17	119.93
44	BK	93	GLN	C-N-CA	5.83	126.17	119.93
53	BT	88	LYS	N-CA-C	-5.83	104.93	112.68
1	AA	1423	G	P-O3'-C3'	-5.83	111.46	120.20
15	AO	57	ARG	CA-C-N	5.83	128.56	120.29
15	AO	57	ARG	C-N-CA	5.83	128.56	120.29
35	BB	673	C	O4'-C1'-N1	5.83	117.24	108.50
35	BB	2609	U	C2'-C3'-O3'	5.83	118.24	109.50
38	BE	59	PRO	O-C-N	5.83	131.83	122.74
1	AA	133	U	C4'-C3'-C2'	-5.83	96.77	102.60
20	AT	35	TYR	CA-C-N	5.83	128.89	120.79
20	AT	35	TYR	C-N-CA	5.83	128.89	120.79
25	B0	42	GLU	CA-C-N	5.83	131.02	122.63
25	B0	42	GLU	C-N-CA	5.83	131.02	122.63
35	BB	1064	C	C5'-C4'-C3'	-5.83	107.26	116.00
35	BB	1828	G	C5'-C4'-O4'	5.83	117.84	109.10
35	BB	2359	C	P-O5'-C5'	-5.83	112.16	120.90
48	BO	58	ILE	N-CA-CB	5.83	116.97	110.62
1	AA	832	G	P-O5'-C5'	-5.82	112.17	120.90
10	AJ	50	THR	N-CA-CB	5.82	120.20	110.59
35	BB	664	G	C4'-C3'-C2'	-5.82	96.78	102.60
35	BB	2766	A	O3'-P-O5'	-5.82	95.27	104.00
3	AC	149	LYS	N-CA-C	-5.82	97.73	107.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	583	G	O4'-C1'-N9	5.82	117.23	108.50
35	BB	1498	C	C4'-C3'-C2'	5.82	108.42	102.60
39	BF	58	ALA	N-CA-C	5.82	118.10	111.11
40	BG	153	PRO	N-CA-CB	5.82	108.42	103.35
1	AA	845	A	C2'-C3'-O3'	5.82	118.23	109.50
36	BC	5	CYS	N-CA-C	-5.82	100.18	109.96
38	BE	120	VAL	CB-CA-C	-5.82	103.42	110.99
45	BL	58	TYR	N-CA-C	-5.82	106.18	113.28
1	AA	598	U	O4'-C1'-N1	5.82	117.23	108.50
9	AI	74	GLN	N-CA-CB	5.82	118.67	109.82
35	BB	1514	G	C2'-C3'-O3'	-5.82	104.97	113.70
43	BJ	140	LEU	CA-C-N	5.82	128.66	120.28
43	BJ	140	LEU	C-N-CA	5.82	128.66	120.28
1	AA	1380	U	C3'-C2'-C1'	5.82	107.32	101.50
6	AF	8	PHE	N-CA-CB	5.82	120.75	111.56
35	BB	999	U	O4'-C1'-C2'	-5.82	101.78	107.60
35	BB	1938	A	C1'-O4'-C4'	-5.82	103.88	109.70
45	BL	71	ALA	CA-C-O	-5.82	112.93	119.79
47	BN	38	LEU	O-C-N	-5.82	115.10	120.51
50	BQ	93	ILE	O-C-N	5.82	127.51	121.87
29	B4	42	VAL	N-CA-CB	-5.81	104.80	112.36
35	BB	1545	A	C4'-C3'-O3'	-5.81	104.28	113.00
7	AG	93	VAL	N-CA-CB	5.81	119.30	110.58
16	AP	56	ARG	CA-C-N	5.81	128.73	120.53
16	AP	56	ARG	C-N-CA	5.81	128.73	120.53
22	AV	69	G	O4'-C1'-N9	5.81	117.22	108.50
30	B5	22	ASP	CA-C-O	-5.81	114.80	121.19
35	BB	176	A	P-O5'-C5'	5.81	129.62	120.90
35	BB	648	G	O4'-C1'-C2'	-5.81	101.79	107.60
35	BB	2506	U	O4'-C1'-N1	5.81	117.22	108.50
35	BB	2735	G	C4'-C3'-O3'	-5.81	104.28	113.00
36	BC	231	HIS	N-CA-CB	5.81	119.17	110.22
43	BJ	47	HIS	CG-ND1-CE1	-5.81	99.42	109.30
45	BL	5	THR	CA-C-O	5.81	125.44	119.05
8	AH	91	LEU	CA-C-N	5.81	126.30	120.14
8	AH	91	LEU	C-N-CA	5.81	126.30	120.14
35	BB	33	C	O4'-C1'-C2'	5.81	111.61	105.80
35	BB	1117	C	C1'-C2'-O2'	5.81	117.12	108.40
35	BB	137	U	P-O5'-C5'	5.81	129.61	120.90
35	BB	356	G	P-O5'-C5'	-5.81	112.19	120.90
54	BU	89	GLY	N-CA-C	-5.81	107.08	115.27
55	BW	28	ALA	N-CA-C	-5.81	98.83	108.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	284	C	O4'-C1'-N1	5.81	117.21	108.50
1	AA	1475	G	O4'-C1'-N9	5.81	117.21	108.50
1	AA	1499	A	O5'-C5'-C4'	5.81	120.21	111.50
9	AI	124	PRO	O-C-N	5.81	129.94	122.85
10	AJ	66	GLU	CA-C-O	5.81	128.01	121.51
20	AT	2	ASN	CA-CB-CG	-5.81	106.79	112.60
30	B5	12	ARG	N-CA-C	-5.81	105.03	111.71
35	BB	293	U	C1'-C2'-O2'	5.81	117.11	108.40
35	BB	2063	C	O4'-C1'-N1	5.81	117.21	108.50
47	BN	23	ASN	CA-C-N	5.81	128.86	120.38
47	BN	23	ASN	C-N-CA	5.81	128.86	120.38
1	AA	1454	G	O4'-C4'-C3'	-5.81	98.19	104.00
9	AI	73	GLY	CA-C-O	5.80	126.73	120.75
16	AP	25	ARG	N-CA-CB	5.80	120.30	110.49
35	BB	437	U	C3'-C2'-C1'	-5.80	95.50	101.30
35	BB	1537	G	O5'-C5'-C4'	-5.80	102.79	111.50
45	BL	104	GLN	N-CA-C	-5.80	106.20	113.28
1	AA	1071	C	P-O3'-C3'	-5.80	111.50	120.20
2	AB	176	ASN	N-CA-C	-5.80	106.83	114.31
3	AC	202	PHE	CA-C-N	5.80	128.06	120.28
3	AC	202	PHE	C-N-CA	5.80	128.06	120.28
35	BB	2509	G	P-O3'-C3'	-5.80	111.50	120.20
35	BB	2664	G	C5'-C4'-C3'	-5.80	107.30	116.00
36	BC	39	SER	CB-CA-C	-5.80	101.67	109.16
55	BW	20	LEU	CA-C-N	5.80	129.88	120.60
55	BW	20	LEU	C-N-CA	5.80	129.88	120.60
1	AA	1153	G	O4'-C1'-C2'	5.80	113.40	107.60
25	B0	64	ASP	CA-CB-CG	-5.80	106.80	112.60
35	BB	731	C	P-O3'-C3'	-5.80	111.50	120.20
35	BB	1621	U	O4'-C1'-N1	5.80	117.20	108.50
1	AA	605	U	C4'-C3'-C2'	-5.80	96.80	102.60
1	AA	710	G	P-O3'-C3'	-5.80	111.50	120.20
2	AB	204	ASP	CB-CA-C	-5.80	98.88	110.42
6	AF	21	MET	CA-C-N	5.80	128.08	120.60
6	AF	21	MET	C-N-CA	5.80	128.08	120.60
35	BB	2012	G	O4'-C1'-N9	5.80	117.20	108.50
35	BB	2877	G	O4'-C1'-C2'	-5.80	101.80	107.60
35	BB	1654	A	P-O3'-C3'	-5.80	111.50	120.20
40	BG	136	ASP	O-C-N	5.80	130.30	122.59
1	AA	1330	U	O4'-C4'-C3'	5.80	109.80	104.00
8	AH	72	GLU	CB-CG-CD	-5.80	102.75	112.60
35	BB	532	A	O5'-C5'-C4'	-5.80	103.01	111.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1440	U	O4'-C1'-N1	5.80	117.19	108.50
40	BG	40	VAL	N-CA-CB	5.80	120.86	111.36
16	AP	65	ALA	N-CA-CB	5.79	120.28	110.49
1	AA	111	G	C1'-C2'-O2'	5.79	117.09	108.40
4	AD	24	VAL	O-C-N	-5.79	114.61	122.14
10	AJ	82	LYS	CA-C-N	5.79	128.62	120.28
10	AJ	82	LYS	C-N-CA	5.79	128.62	120.28
35	BB	1065	U	P-O5'-C5'	5.79	129.59	120.90
35	BB	1706	C	O5'-C5'-C4'	-5.79	103.01	111.70
54	BU	82	VAL	CA-C-N	5.79	128.64	122.38
54	BU	82	VAL	C-N-CA	5.79	128.64	122.38
3	AC	201	ILE	N-CA-CB	5.79	119.13	111.25
16	AP	59	HIS	N-CA-CB	5.79	118.47	110.07
35	BB	1872	A	C5'-C4'-C3'	5.79	124.69	116.00
36	BC	78	GLU	N-CA-C	-5.79	106.25	113.55
43	BJ	62	VAL	N-CA-C	-5.79	101.24	108.89
50	BQ	75	TYR	O-C-N	5.79	128.05	122.03
35	BB	1153	C	C3'-C2'-O2'	5.79	119.38	110.70
35	BB	1409	U	C4'-C3'-C2'	-5.79	96.81	102.60
35	BB	2011	U	C4'-C3'-C2'	-5.79	96.81	102.60
44	BK	46	ALA	N-CA-C	-5.79	100.50	109.24
13	AM	27	THR	CA-C-N	5.79	128.62	120.28
13	AM	27	THR	C-N-CA	5.79	128.62	120.28
35	BB	1584	U	C1'-O4'-C4'	5.79	115.69	109.90
35	BB	1834	U	O4'-C1'-N1	5.79	117.18	108.50
41	BH	11	ASN	CB-CA-C	5.79	120.50	110.72
21	AU	50	SER	CA-C-O	-5.79	114.74	120.82
35	BB	1745	A	C4'-C3'-C2'	-5.79	96.81	102.60
41	BH	60	GLU	N-CA-C	-5.79	106.38	113.50
1	AA	1010	U	C4'-C3'-O3'	-5.79	104.32	113.00
4	AD	149	LYS	N-CA-C	-5.79	106.22	113.28
35	BB	1423	G	C4'-C3'-C2'	5.79	108.39	102.60
35	BB	1461	C	O4'-C1'-N1	5.79	117.18	108.50
35	BB	1789	A	O4'-C1'-N9	5.79	117.18	108.50
41	BH	74	ALA	N-CA-C	-5.79	104.57	111.69
17	AQ	37	ILE	CA-CB-CG1	5.78	120.23	110.40
1	AA	709	U	C4'-C3'-C2'	-5.78	96.82	102.60
1	AA	319	G	O4'-C1'-N9	5.78	117.17	108.50
35	BB	138	U	O4'-C1'-N1	5.78	117.17	108.50
35	BB	202	U	C5'-C4'-C3'	-5.78	107.33	116.00
35	BB	679	C	O4'-C1'-N1	5.78	117.17	108.50
35	BB	1414	C	C5'-C4'-C3'	-5.78	107.33	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2828	G	C1'-C2'-O2'	5.78	117.07	108.40
36	BC	167	ASP	N-CA-C	5.78	118.39	110.24
1	AA	1249	C	P-O5'-C5'	5.78	129.57	120.90
29	B4	48	TYR	CB-CA-C	-5.78	101.24	110.14
35	BB	2492	U	C4'-C3'-C2'	-5.78	96.82	102.60
1	AA	104	G	C5'-C4'-C3'	-5.78	107.33	116.00
1	AA	931	C	P-O3'-C3'	-5.78	111.53	120.20
4	AD	108	ALA	N-CA-C	-5.78	104.89	111.07
16	AP	1	MET	CG-SD-CE	-5.78	88.19	100.90
35	BB	2007	U	O4'-C1'-N1	5.78	117.17	108.50
35	BB	2376	A	C2'-C3'-O3'	5.78	122.37	113.70
1	AA	533	A	C3'-C2'-C1'	-5.78	95.72	101.50
10	AJ	62	ARG	NE-CZ-NH2	5.78	124.40	119.20
16	AP	67	ILE	N-CA-C	-5.78	100.16	108.48
35	BB	1447	C	P-O3'-C3'	-5.78	111.54	120.20
35	BB	1732	C	C4'-C3'-C2'	5.78	108.38	102.60
54	BU	34	ILE	CB-CA-C	-5.78	102.57	110.77
5	AE	65	LYS	CA-C-O	-5.77	112.50	119.49
30	B5	150	ALA	CA-C-N	5.77	128.49	120.29
30	B5	150	ALA	C-N-CA	5.77	128.49	120.29
35	BB	939	G	C4'-C3'-O3'	-5.77	104.34	113.00
36	BC	13	ARG	N-CA-C	-5.77	104.80	112.94
50	BQ	96	ASP	CA-C-N	5.77	132.36	121.97
50	BQ	96	ASP	C-N-CA	5.77	132.36	121.97
1	AA	81	A	C4'-C3'-C2'	5.77	108.37	102.60
1	AA	598	U	P-O5'-C5'	-5.77	112.24	120.90
1	AA	1473	G	C4'-C3'-O3'	-5.77	104.34	113.00
11	AK	35	ASP	CA-CB-CG	5.77	118.37	112.60
12	AL	65	TYR	CA-C-O	-5.77	114.83	121.47
30	B5	200	LYS	CB-CA-C	5.77	117.01	108.87
50	BQ	87	VAL	O-C-N	5.77	129.78	122.57
1	AA	1365	G	C3'-C2'-O2'	5.77	119.36	110.70
35	BB	1248	G	C5'-C4'-O4'	5.77	117.76	109.10
35	BB	1938	A	C5'-C4'-C3'	5.77	123.86	115.20
46	BM	5	LYS	O-C-N	5.77	128.73	122.15
6	AF	20	GLY	CA-C-O	5.77	126.45	120.80
20	AT	70	LYS	N-CA-C	-5.77	104.36	111.40
30	B5	28	ALA	N-CA-C	5.77	117.24	111.07
1	AA	1125	U	C5'-C4'-O4'	5.77	117.75	109.10
1	AA	1241	G	O4'-C1'-N9	5.77	117.15	108.50
4	AD	203	TYR	O-C-N	5.77	128.77	122.20
35	BB	614	A	C1'-O4'-C4'	-5.77	103.93	109.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1297	C	O4'-C1'-N1	5.77	117.15	108.50
1	AA	353	A	P-O3'-C3'	5.77	128.85	120.20
35	BB	874	G	C4'-C3'-C2'	-5.77	96.83	102.60
35	BB	2832	U	O4'-C4'-C3'	-5.77	100.33	106.10
1	AA	242	G	O5'-C5'-C4'	-5.76	102.85	111.50
1	AA	986	U	O4'-C1'-C2'	-5.76	101.83	107.60
13	AM	8	ILE	N-CA-C	-5.76	100.75	107.61
35	BB	163	C	O4'-C1'-N1	5.76	117.14	108.50
35	BB	965	C	C4'-C3'-O3'	-5.76	104.35	113.00
35	BB	1324	G	C5'-C4'-C3'	-5.76	106.55	115.20
35	BB	1599	U	C4'-C3'-O3'	-5.76	104.35	113.00
35	BB	2401	U	O4'-C1'-C2'	5.76	111.56	105.80
35	BB	2569	G	O5'-C5'-C4'	-5.76	102.85	111.50
1	AA	739	C	C4'-C3'-C2'	-5.76	96.84	102.60
35	BB	308	G	C3'-C2'-C1'	5.76	107.06	101.30
35	BB	1167	C	O4'-C1'-N1	5.76	117.14	108.50
35	BB	1734	G	C4'-C3'-C2'	-5.76	96.84	102.60
51	BR	59	ILE	CB-CA-C	5.76	117.59	110.73
2	AB	90	PHE	CA-C-N	5.76	131.51	122.70
2	AB	90	PHE	C-N-CA	5.76	131.51	122.70
13	AM	90	HIS	ND1-CE1-NE2	5.76	114.16	108.40
35	BB	2070	A	C4'-C3'-C2'	-5.76	96.84	102.60
35	BB	2516	A	O4'-C1'-N9	5.76	117.14	108.50
41	BH	37	VAL	N-CA-C	-5.76	96.43	108.88
1	AA	988	G	C3'-C2'-C1'	-5.76	95.54	101.30
7	AG	119	LEU	CA-C-N	5.76	129.53	120.89
7	AG	119	LEU	C-N-CA	5.76	129.53	120.89
19	AS	33	TRP	CD2-CE3-CZ3	-5.76	111.11	118.60
39	BF	6	TYR	CB-CG-CD2	-5.76	112.16	120.80
3	AC	119	ILE	N-CA-C	-5.76	103.98	112.04
48	BO	2	ASP	N-CA-CB	5.76	120.29	110.50
4	AD	103	ARG	CA-C-N	5.76	130.59	121.44
4	AD	103	ARG	C-N-CA	5.76	130.59	121.44
35	BB	429	A	C5'-C4'-O4'	5.76	118.44	109.80
35	BB	474	G	N9-C1'-C2'	-5.76	105.36	114.00
35	BB	2371	G	C5'-C4'-C3'	-5.76	107.37	116.00
56	BY	46	ALA	N-CA-C	-5.76	99.98	108.79
1	AA	1146	A	P-O3'-C3'	-5.75	111.57	120.20
35	BB	699	A	C1'-O4'-C4'	5.75	115.66	109.90
1	AA	621	A	C5'-C4'-O4'	-5.75	101.17	109.80
14	AN	74	ARG	CB-CA-C	-5.75	101.60	110.81
35	BB	569	U	C4'-C3'-O3'	-5.75	104.37	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1761	C	C2'-C3'-O3'	5.75	122.33	113.70
1	AA	111	G	O4'-C1'-N9	5.75	117.13	108.50
1	AA	543	U	P-O5'-C5'	5.75	129.53	120.90
1	AA	599	C	C4'-C3'-O3'	-5.75	104.37	113.00
1	AA	814	A	P-O5'-C5'	-5.75	112.27	120.90
19	AS	60	PHE	CA-CB-CG	-5.75	108.05	113.80
25	B0	5	GLN	OE1-CD-NE2	-5.75	116.85	122.60
35	BB	1630	A	P-O3'-C3'	-5.75	111.57	120.20
35	BB	1982	U	O4'-C1'-C2'	-5.75	101.85	107.60
35	BB	2287	A	O4'-C4'-C3'	-5.75	100.35	106.10
7	AG	147	ASN	CA-C-O	-5.75	115.22	121.20
35	BB	1248	G	P-O5'-C5'	5.75	129.53	120.90
35	BB	2260	C	C4'-C3'-C2'	-5.75	96.85	102.60
15	AO	9	LYS	CA-C-N	5.75	127.80	120.56
15	AO	9	LYS	C-N-CA	5.75	127.80	120.56
35	BB	449	A	P-O5'-C5'	5.75	129.52	120.90
37	BD	167	ASN	N-CA-CB	5.75	120.21	110.49
1	AA	1093	A	P-O3'-C3'	5.75	128.82	120.20
8	AH	98	LEU	N-CA-C	-5.75	105.47	112.88
11	AK	94	SER	O-C-N	5.75	128.75	122.20
15	AO	33	ALA	CA-C-N	5.75	128.24	120.65
15	AO	33	ALA	C-N-CA	5.75	128.24	120.65
17	AQ	70	LYS	N-CA-C	-5.75	100.53	109.72
19	AS	56	HIS	CG-CD2-NE2	5.75	112.94	107.20
21	AU	33	ARG	N-CA-C	-5.75	100.42	109.50
35	BB	1500	G	P-O3'-C3'	-5.75	111.58	120.20
1	AA	211	G	O4'-C1'-N9	5.74	117.11	108.50
2	AB	197	PHE	CA-CB-CG	-5.74	108.06	113.80
3	AC	68	HIS	ND1-CE1-NE2	5.74	114.14	108.40
25	B0	68	ALA	CA-C-N	5.74	131.34	121.86
25	B0	68	ALA	C-N-CA	5.74	131.34	121.86
49	BP	81	ASP	CA-CB-CG	5.74	118.34	112.60
51	BR	89	HIS	CB-CG-CD2	-5.74	123.73	131.20
1	AA	183	C	C4'-C3'-C2'	5.74	108.34	102.60
46	BM	53	MET	CA-C-N	5.74	128.77	120.79
46	BM	53	MET	C-N-CA	5.74	128.77	120.79
14	AN	52	ARG	N-CA-CB	5.74	120.19	110.49
35	BB	1536	C	O4'-C1'-N1	5.74	116.81	108.20
35	BB	1962	C	O4'-C4'-C3'	-5.74	100.36	106.10
35	BB	2123	G	P-O5'-C5'	5.74	129.51	120.90
50	BQ	11	ALA	CA-C-O	5.74	126.24	119.06
1	AA	144	G	O4'-C1'-N9	5.74	117.11	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	B0	2	ARG	CB-CA-C	5.74	118.80	111.40
30	B5	39	VAL	O-C-N	-5.74	116.42	122.67
35	BB	31	C	P-O3'-C3'	-5.74	111.59	120.20
35	BB	140	C	C3'-C2'-C1'	-5.74	95.76	101.50
35	BB	817	C	O4'-C1'-C2'	-5.74	101.86	107.60
35	BB	1189	A	C4'-C3'-O3'	-5.74	104.39	113.00
47	BN	106	ASP	N-CA-C	-5.74	100.59	109.14
52	BS	75	PHE	N-CA-C	-5.74	98.58	110.80
10	AJ	72	ARG	N-CA-C	-5.74	102.81	110.55
35	BB	2219	U	P-O5'-C5'	5.74	129.51	120.90
35	BB	2401	U	C1'-C2'-O2'	-5.74	103.19	111.80
35	BB	2602	A	O4'-C1'-N9	5.74	116.81	108.20
36	BC	199	HIS	ND1-CE1-NE2	5.74	114.14	108.40
43	BJ	138	GLN	CA-C-N	5.74	128.41	120.49
43	BJ	138	GLN	C-N-CA	5.74	128.41	120.49
54	BU	97	SER	N-CA-CB	5.74	120.19	110.49
34	BA	21	G	O4'-C1'-N9	5.74	117.10	108.50
35	BB	338	G	C3'-C2'-C1'	5.74	107.03	101.30
35	BB	1783	A	C1'-C2'-O2'	-5.74	99.80	108.40
36	BC	53	ILE	N-CA-C	-5.74	100.22	108.48
47	BN	116	VAL	N-CA-CB	-5.74	102.06	111.98
1	AA	87	C	C4'-C3'-C2'	5.73	108.33	102.60
1	AA	1381	U	C1'-O4'-C4'	-5.73	104.17	109.90
30	B5	217	THR	O-C-N	-5.73	114.96	122.59
56	BY	37	VAL	N-CA-C	-5.73	100.22	108.42
1	AA	225	C	C4'-C3'-C2'	-5.73	96.87	102.60
1	AA	285	C	O5'-C5'-C4'	-5.73	102.90	111.50
35	BB	502	A	P-O5'-C5'	-5.73	112.30	120.90
35	BB	1388	G	C5'-C4'-C3'	-5.73	107.40	116.00
36	BC	261	ARG	NH1-CZ-NH2	-5.73	111.85	119.30
1	AA	56	U	O4'-C1'-N1	5.73	117.09	108.50
8	AH	33	VAL	O-C-N	5.73	129.73	122.57
32	B7	12	ARG	NE-CZ-NH1	-5.73	115.77	121.50
35	BB	1240	U	P-O5'-C5'	-5.73	112.31	120.90
35	BB	1260	A	P-O5'-C5'	-5.73	112.31	120.90
35	BB	1497	U	O4'-C1'-N1	5.73	116.80	108.20
35	BB	2023	C	C5'-C4'-C3'	-5.73	107.41	116.00
1	AA	370	C	C4'-C3'-C2'	-5.73	96.87	102.60
35	BB	1217	U	C5'-C4'-C3'	-5.73	107.41	116.00
50	BQ	43	GLN	OE1-CD-NE2	-5.73	116.87	122.60
1	AA	166	U	C5'-C4'-O4'	5.73	118.39	109.80
1	AA	232	G	C4'-C3'-O3'	-5.73	104.41	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	799	G	O4'-C1'-N9	5.73	117.09	108.50
1	AA	961	U	O4'-C1'-N1	5.73	117.09	108.50
6	AF	99	ALA	N-CA-CB	5.73	120.17	110.49
18	AR	30	ASN	CA-C-N	5.73	132.00	122.66
18	AR	30	ASN	C-N-CA	5.73	132.00	122.66
35	BB	593	U	O4'-C1'-N1	5.73	117.09	108.50
35	BB	2283	C	O4'-C4'-C3'	-5.73	98.27	104.00
35	BB	2617	U	C4'-C3'-O3'	-5.73	104.41	113.00
53	BT	12	ARG	O-C-N	-5.73	115.63	122.27
1	AA	1100	C	O4'-C1'-N1	5.73	117.09	108.50
5	AE	102	THR	CA-CB-CG2	-5.73	100.77	110.50
35	BB	234	U	C4'-C3'-C2'	-5.73	96.87	102.60
35	BB	1133	A	C5'-C4'-C3'	5.73	124.59	116.00
38	BE	168	ASP	N-CA-C	-5.73	100.84	108.74
1	AA	1395	C	C1'-O4'-C4'	5.72	115.62	109.90
29	B4	46	VAL	CA-C-O	-5.72	116.83	120.66
30	B5	179	ASP	O-C-N	-5.72	114.56	122.46
35	BB	923	G	O4'-C1'-C2'	-5.72	101.88	107.60
46	BM	13	HIS	CA-C-N	5.72	128.27	120.54
46	BM	13	HIS	C-N-CA	5.72	128.27	120.54
54	BU	16	LYS	CB-CA-C	-5.72	104.16	109.83
13	AM	75	SER	N-CA-C	-5.72	106.64	113.97
19	AS	55	GLN	N-CA-C	-5.72	100.61	109.14
30	B5	83	ASN	CA-C-N	5.72	128.41	120.29
30	B5	83	ASN	C-N-CA	5.72	128.41	120.29
35	BB	2805	C	O4'-C1'-N1	5.72	117.08	108.50
53	BT	22	THR	N-CA-C	-5.72	105.32	112.93
1	AA	562	U	O4'-C1'-N1	5.72	117.08	108.50
1	AA	1106	G	C1'-O4'-C4'	-5.72	104.18	109.90
34	BA	41	G	O4'-C1'-N9	5.72	117.08	108.50
35	BB	1413	A	O4'-C1'-N9	5.72	117.08	108.50
37	BD	84	LEU	CA-C-O	-5.72	115.11	121.23
41	BH	46	PHE	N-CA-CB	5.72	118.26	109.91
1	AA	828	U	O4'-C1'-N1	5.72	117.08	108.50
22	AV	73	A	C2'-C3'-O3'	5.72	122.28	113.70
35	BB	1089	A	O3'-P-O5'	-5.72	95.42	104.00
35	BB	1688	U	O4'-C1'-C2'	-5.72	101.88	107.60
35	BB	1974	C	C4'-C3'-O3'	-5.72	104.42	113.00
35	BB	2616	C	O4'-C1'-N1	5.72	117.08	108.50
44	BK	48	PRO	N-CA-CB	5.72	108.78	103.46
45	BL	49	GLY	N-CA-C	-5.72	108.16	115.42
1	AA	167	A	C4'-C3'-C2'	-5.72	96.88	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	247	G	O4'-C1'-N9	5.72	117.08	108.50
29	B4	21	THR	CA-C-O	-5.72	113.74	120.60
35	BB	500	G	O5'-C5'-C4'	-5.72	102.92	111.50
35	BB	815	C	O4'-C1'-N1	5.72	117.07	108.50
35	BB	2256	G	C4'-C3'-O3'	-5.72	104.42	113.00
35	BB	2872	A	C2'-C3'-O3'	5.72	118.08	109.50
1	AA	1182	G	O4'-C1'-C2'	5.71	111.51	105.80
4	AD	172	VAL	N-CA-C	-5.71	100.11	108.11
10	AJ	66	GLU	N-CA-CB	5.71	120.88	111.62
35	BB	1069	A	O3'-P-O5'	-5.71	95.43	104.00
35	BB	2521	C	O5'-C5'-C4'	-5.71	102.93	111.50
39	BF	101	ARG	NE-CZ-NH2	5.71	124.34	119.20
52	BS	90	LYS	CA-C-O	-5.71	114.48	121.28
1	AA	1311	A	C4'-C3'-O3'	-5.71	104.43	113.00
19	AS	35	ARG	CA-C-N	-5.71	113.51	122.65
19	AS	35	ARG	C-N-CA	-5.71	113.51	122.65
52	BS	7	HIS	N-CA-C	-5.71	98.02	108.02
1	AA	259	G	O4'-C1'-N9	5.71	117.07	108.50
1	AA	365	U	C4'-C3'-C2'	5.71	108.31	102.60
1	AA	777	A	O3'-P-O5'	-5.71	95.43	104.00
2	AB	171	ALA	N-CA-C	5.71	117.18	111.07
4	AD	153	ARG	N-CA-C	5.71	117.51	111.28
35	BB	323	C	O4'-C1'-N1	5.71	116.77	108.20
35	BB	2406	A	C1'-O4'-C4'	-5.71	103.99	109.70
35	BB	2714	G	O4'-C1'-N9	5.71	117.07	108.50
36	BC	109	LEU	N-CA-C	-5.71	100.02	108.99
44	BK	12	ASP	CA-C-O	-5.71	114.43	121.06
45	BL	126	ARG	CB-CG-CD	5.71	124.44	111.30
51	BR	55	ASP	N-CA-CB	5.71	119.74	110.43
1	AA	513	C	P-O5'-C5'	5.71	129.46	120.90
1	AA	1329	A	O4'-C4'-C3'	-5.71	98.29	104.00
11	AK	120	CYS	N-CA-C	-5.71	100.73	109.41
12	AL	44	PRO	CB-CA-C	-5.71	106.21	111.40
35	BB	752	A	C1'-O4'-C4'	-5.71	103.99	109.70
35	BB	962	G	C4'-C3'-C2'	-5.71	96.89	102.60
35	BB	1812	U	O4'-C4'-C3'	-5.71	98.29	104.00
51	BR	64	VAL	CA-C-N	5.71	132.44	121.54
51	BR	64	VAL	C-N-CA	5.71	132.44	121.54
1	AA	100	G	C4'-C3'-O3'	-5.71	104.44	113.00
1	AA	115	G	P-O3'-C3'	5.71	128.76	120.20
1	AA	558	G	O4'-C1'-C2'	-5.71	101.89	107.60
35	BB	202	U	O4'-C1'-N1	5.71	117.06	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	496	G	O4'-C1'-C2'	-5.71	101.89	107.60
35	BB	696	G	O4'-C1'-N9	5.71	117.06	108.50
35	BB	752	A	O4'-C1'-C2'	5.71	111.51	105.80
35	BB	1759	A	C1'-O4'-C4'	-5.71	104.19	109.90
35	BB	2556	C	O3'-P-O5'	5.71	112.56	104.00
1	AA	828	U	O3'-P-O5'	-5.71	95.44	104.00
35	BB	431	U	C4'-C3'-C2'	-5.71	96.89	102.60
35	BB	799	G	O5'-C5'-C4'	-5.71	102.94	111.50
35	BB	2779	U	C1'-O4'-C4'	-5.71	104.00	109.70
55	BW	31	TYR	N-CA-C	-5.71	100.40	109.07
1	AA	362	G	P-O5'-C5'	5.70	129.46	120.90
1	AA	1041	G	C4'-C3'-O3'	-5.70	104.45	113.00
30	B5	13	GLU	N-CA-CB	-5.70	101.11	110.40
35	BB	515	A	C4'-C3'-O3'	-5.70	104.44	113.00
35	BB	959	A	O4'-C4'-C3'	5.70	109.70	104.00
52	BS	57	ASN	N-CA-C	-5.70	106.67	113.97
1	AA	153	C	C4'-C3'-O3'	-5.70	104.45	113.00
4	AD	200	VAL	CA-C-N	5.70	130.23	120.71
4	AD	200	VAL	C-N-CA	5.70	130.23	120.71
36	BC	173	LEU	N-CA-C	-5.70	100.60	109.72
36	BC	252	LYS	N-CA-CB	5.70	118.35	109.97
46	BM	60	GLN	OE1-CD-NE2	5.70	128.30	122.60
3	AC	89	VAL	CA-C-N	5.70	127.83	120.70
3	AC	89	VAL	C-N-CA	5.70	127.83	120.70
35	BB	2624	G	C4'-C3'-C2'	-5.70	96.90	102.60
35	BB	2788	C	O4'-C1'-N1	5.70	117.05	108.50
10	AJ	91	ASP	CA-CB-CG	5.70	118.30	112.60
13	AM	34	ALA	N-CA-C	-5.70	104.97	111.07
21	AU	9	GLU	O-C-N	-5.70	117.86	121.85
35	BB	401	A	O4'-C4'-C3'	-5.70	98.30	104.00
35	BB	1392	A	C4'-C3'-O3'	-5.70	104.45	113.00
48	BO	70	ALA	N-CA-C	-5.70	106.37	113.38
54	BU	31	GLY	N-CA-C	-5.70	105.74	115.08
1	AA	99	C	P-O5'-C5'	-5.70	112.36	120.90
1	AA	152	A	C5'-C4'-C3'	5.70	124.55	116.00
1	AA	549	C	C2'-C3'-O3'	5.70	122.25	113.70
2	AB	153	MET	CA-C-O	-5.70	114.84	120.82
35	BB	1359	A	C4'-C3'-C2'	-5.70	96.90	102.60
38	BE	59	PRO	CB-CA-C	5.70	116.90	109.89
41	BH	2	GLN	N-CA-C	-5.70	100.41	109.07
4	AD	68	GLU	CA-C-N	5.70	130.25	121.19
4	AD	68	GLU	C-N-CA	5.70	130.25	121.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	60	PHE	N-CA-CB	5.70	120.11	110.49
35	BB	880	G	O4'-C1'-C2'	-5.70	101.91	107.60
35	BB	1180	U	C3'-C2'-C1'	5.70	107.00	101.30
35	BB	1285	A	C4'-C3'-O3'	-5.70	104.46	113.00
35	BB	1861	G	O4'-C1'-N9	5.70	117.04	108.50
36	BC	212	TRP	CA-CB-CG	5.70	124.42	113.60
46	BM	8	LYS	CB-CA-C	-5.70	101.33	110.79
51	BR	82	HIS	O-C-N	-5.70	116.43	122.30
19	AS	8	PRO	CA-C-O	-5.69	114.48	121.31
35	BB	2839	G	O4'-C1'-N9	5.69	117.04	108.50
1	AA	1125	U	C2'-C3'-O3'	5.69	118.04	109.50
35	BB	1017	G	P-O5'-C5'	-5.69	112.36	120.90
35	BB	2654	A	O4'-C4'-C3'	-5.69	100.41	106.10
35	BB	2656	U	O4'-C1'-C2'	-5.69	101.91	107.60
38	BE	17	THR	N-CA-C	-5.69	105.73	114.16
50	BQ	95	ALA	O-C-N	5.69	128.64	122.15
1	AA	27	G	P-O3'-C3'	-5.69	111.66	120.20
1	AA	946	A	C1'-C2'-O2'	5.69	116.94	108.40
28	B3	13	GLY	CA-C-N	5.69	128.47	120.28
28	B3	13	GLY	C-N-CA	5.69	128.47	120.28
30	B5	80	GLN	OE1-CD-NE2	-5.69	116.91	122.60
35	BB	978	G	P-O3'-C3'	-5.69	111.66	120.20
35	BB	989	G	O4'-C1'-C2'	-5.69	100.11	105.80
35	BB	1157	G	C5'-C4'-C3'	-5.69	107.47	116.00
36	BC	207	ALA	CA-C-O	-5.69	113.43	119.97
1	AA	594	U	O4'-C1'-N1	5.69	117.03	108.50
1	AA	1032	G	C4'-C3'-C2'	-5.69	96.91	102.60
35	BB	125	A	P-O5'-C5'	-5.69	112.37	120.90
35	BB	885	C	O4'-C1'-N1	5.69	117.03	108.50
35	BB	2149	U	O4'-C4'-C3'	-5.69	98.31	104.00
1	AA	759	A	O4'-C1'-N9	5.69	117.03	108.50
35	BB	2637	U	O4'-C1'-N1	5.69	117.03	108.50
43	BJ	59	ALA	N-CA-C	-5.69	98.69	110.80
51	BR	13	ARG	N-CA-C	-5.69	102.87	110.55
56	BY	17	ALA	CA-C-N	5.69	130.65	122.23
56	BY	17	ALA	C-N-CA	5.69	130.65	122.23
35	BB	558	U	P-O3'-C3'	-5.68	111.67	120.20
35	BB	873	C	C4'-C3'-O3'	-5.68	104.47	113.00
35	BB	937	C	C5'-C4'-C3'	-5.68	107.47	116.00
35	BB	1109	C	P-O3'-C3'	5.68	128.73	120.20
35	BB	1211	C	O4'-C1'-N1	5.68	116.73	108.20
35	BB	1326	U	O4'-C1'-N1	5.68	117.03	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2272	U	C3'-C2'-O2'	5.68	119.23	110.70
35	BB	2864	G	O4'-C1'-N9	5.68	117.03	108.50
36	BC	229	HIS	ND1-CE1-NE2	5.68	114.08	108.40
41	BH	141	LYS	CA-C-O	-5.68	115.36	121.56
51	BR	3	ALA	N-CA-C	-5.68	98.69	110.80
1	AA	180	U	C4'-C3'-O3'	-5.68	104.48	113.00
1	AA	360	G	O4'-C1'-N9	5.68	117.02	108.50
1	AA	1225	A	O4'-C1'-C2'	-5.68	100.12	105.80
3	AC	55	VAL	N-CA-C	-5.68	99.63	108.44
3	AC	64	ARG	CA-C-N	5.68	130.00	122.95
3	AC	64	ARG	C-N-CA	5.68	130.00	122.95
35	BB	1749	A	P-O3'-C3'	-5.68	111.68	120.20
35	BB	2689	U	O4'-C4'-C3'	-5.68	100.42	106.10
35	BB	2708	G	C4'-C3'-C2'	-5.68	96.92	102.60
47	BN	10	LEU	CA-C-N	5.68	127.83	120.44
47	BN	10	LEU	C-N-CA	5.68	127.83	120.44
1	AA	1059	C	C5'-C4'-C3'	-5.68	107.48	116.00
1	AA	1060	U	C4'-C3'-C2'	-5.68	96.92	102.60
5	AE	29	ILE	CA-C-O	-5.68	117.19	121.68
35	BB	2811	G	O4'-C1'-N9	5.68	117.02	108.50
53	BT	43	ILE	CA-C-N	5.68	130.19	120.71
53	BT	43	ILE	C-N-CA	5.68	130.19	120.71
18	AR	32	ILE	N-CA-CB	5.68	120.78	111.58
35	BB	1328	A	C1'-O4'-C4'	5.68	115.58	109.90
35	BB	1587	G	N9-C1'-C2'	5.68	120.52	112.00
1	AA	838	G	O4'-C1'-N9	5.68	117.01	108.50
1	AA	1478	U	C4'-C3'-O3'	-5.68	104.48	113.00
30	B5	192	LEU	O-C-N	-5.68	114.72	122.33
35	BB	1287	A	O4'-C1'-N9	5.68	117.02	108.50
35	BB	1537	G	P-O3'-C3'	5.68	128.72	120.20
35	BB	1728	C	C4'-C3'-O3'	-5.68	104.48	113.00
35	BB	2003	A	C4'-C3'-O3'	-5.68	104.49	113.00
35	BB	2137	U	C5'-C4'-O4'	5.68	118.31	109.80
35	BB	2446	G	C5'-C4'-C3'	-5.68	107.48	116.00
1	AA	609	A	C4'-C3'-O3'	-5.67	104.49	113.00
1	AA	1191	A	P-O5'-C5'	5.67	129.41	120.90
4	AD	58	GLN	N-CA-C	-5.67	105.47	112.90
26	B1	52	ARG	NE-CZ-NH2	5.67	124.31	119.20
35	BB	143	C	C5'-C4'-C3'	5.67	124.51	116.00
35	BB	787	C	O4'-C1'-N1	5.67	117.01	108.50
36	BC	237	ARG	N-CA-CB	5.67	121.33	112.25
52	BS	74	ILE	N-CA-C	-5.67	100.05	108.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	222	C	P-O3'-C3'	-5.67	111.69	120.20
1	AA	925	G	O5'-C5'-C4'	-5.67	102.99	111.50
1	AA	950	U	P-O5'-C5'	5.67	129.41	120.90
1	AA	1171	A	O4'-C1'-N9	5.67	117.01	108.50
1	AA	1346	A	C2'-C3'-O3'	5.67	118.01	109.50
3	AC	27	GLU	N-CA-C	-5.67	106.71	113.97
41	BH	12	LEU	N-CA-C	-5.67	106.02	113.17
47	BN	87	PHE	CA-CB-CG	-5.67	108.13	113.80
1	AA	193	C	O4'-C1'-N1	5.67	117.00	108.50
1	AA	317	U	C5'-C4'-C3'	-5.67	107.50	116.00
1	AA	379	C	P-O3'-C3'	-5.67	111.70	120.20
1	AA	832	G	P-O3'-C3'	-5.67	111.70	120.20
1	AA	1326	U	P-O3'-C3'	-5.67	111.70	120.20
35	BB	71	A	C4'-C3'-C2'	5.67	108.27	102.60
35	BB	1180	U	C4'-C3'-O3'	-5.67	104.50	113.00
27	B2	9	THR	N-CA-CB	5.67	120.52	111.91
35	BB	444	C	C4'-C3'-C2'	-5.67	96.93	102.60
35	BB	1905	C	C4'-C3'-O3'	-5.67	104.50	113.00
36	BC	99	GLU	CA-C-O	-5.67	114.95	121.47
44	BK	110	GLU	CA-C-N	5.67	130.50	121.66
44	BK	110	GLU	C-N-CA	5.67	130.50	121.66
47	BN	4	ARG	CA-C-N	5.67	131.44	122.94
47	BN	4	ARG	C-N-CA	5.67	131.44	122.94
35	BB	375	G	C5'-C4'-C3'	-5.67	107.50	116.00
6	AF	57	ALA	O-C-N	-5.66	115.79	123.15
34	BA	63	C	O4'-C1'-C2'	-5.66	101.94	107.60
35	BB	2254	C	O4'-C1'-N1	5.66	117.00	108.50
35	BB	2868	A	O4'-C1'-N9	5.66	117.00	108.50
38	BE	148	ILE	N-CA-CB	5.66	120.58	111.23
41	BH	115	VAL	CB-CA-C	5.66	119.77	111.33
47	BN	16	HIS	CE1-NE2-CD2	-5.66	103.34	109.00
1	AA	1080	A	C4'-C3'-O3'	-5.66	104.51	113.00
4	AD	6	PRO	CA-C-N	5.66	132.35	121.54
4	AD	6	PRO	C-N-CA	5.66	132.35	121.54
13	AM	25	GLY	CA-C-N	5.66	128.12	120.65
13	AM	25	GLY	C-N-CA	5.66	128.12	120.65
32	B7	42	HIS	ND1-CG-CD2	5.66	111.76	106.10
35	BB	2605	U	O3'-P-O5'	-5.66	95.51	104.00
1	AA	32	A	C4'-C3'-O3'	-5.66	104.51	113.00
1	AA	767	A	O3'-P-O5'	-5.66	95.51	104.00
1	AA	1172	C	C5'-C4'-C3'	-5.66	107.51	116.00
1	AA	1247	U	N1-C1'-C2'	-5.66	103.51	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	69	VAL	O-C-N	-5.66	118.05	122.97
5	AE	56	PRO	N-CA-CB	5.66	109.29	103.23
34	BA	22	U	P-O3'-C3'	-5.66	111.71	120.20
35	BB	45	G	P-O3'-C3'	5.66	128.69	120.20
35	BB	944	C	P-O5'-C5'	-5.66	112.41	120.90
35	BB	2104	C	C1'-O4'-C4'	-5.66	104.24	109.90
37	BD	77	ARG	O-C-N	5.66	129.31	122.35
37	BD	104	VAL	N-CA-C	-5.66	99.61	108.95
37	BD	143	PRO	CB-CA-C	-5.66	102.90	110.88
4	AD	181	PHE	N-CA-CB	-5.66	103.84	110.35
35	BB	153	U	O4'-C1'-N1	5.66	116.99	108.50
35	BB	1014	A	P-O3'-C3'	-5.66	111.71	120.20
35	BB	2578	G	C5'-C4'-C3'	-5.66	107.51	116.00
51	BR	84	ARG	NE-CZ-NH1	-5.66	115.84	121.50
34	BA	52	A	C4'-C3'-C2'	-5.66	96.94	102.60
35	BB	1918	A	O4'-C1'-N9	5.66	116.69	108.20
36	BC	88	ALA	O-C-N	5.66	129.35	122.68
1	AA	693	G	O4'-C1'-N9	5.66	116.98	108.50
35	BB	1461	C	P-O5'-C5'	-5.66	112.42	120.90
12	AL	38	THR	O-C-N	-5.65	117.01	123.40
35	BB	441	U	P-O5'-C5'	5.65	129.38	120.90
1	AA	442	G	O4'-C1'-N9	5.65	116.98	108.50
1	AA	515	G	C4'-C3'-C2'	-5.65	96.95	102.60
1	AA	1310	G	O4'-C1'-N9	5.65	116.98	108.50
10	AJ	49	PHE	N-CA-C	5.65	118.47	109.65
26	B1	51	ALA	N-CA-CB	5.65	118.18	109.98
35	BB	2297	A	P-O3'-C3'	-5.65	111.72	120.20
1	AA	52	C	O5'-C5'-C4'	-5.65	103.02	111.50
13	AM	105	ALA	N-CA-C	-5.65	98.77	110.80
35	BB	938	G	O4'-C1'-C2'	-5.65	101.95	107.60
51	BR	34	GLU	CA-C-O	5.65	127.16	120.66
53	BT	60	THR	CA-CB-OG1	5.65	118.08	109.60
1	AA	429	U	C4'-C3'-O3'	5.65	117.87	109.40
35	BB	1082	U	C4'-C3'-O3'	-5.65	104.53	113.00
35	BB	1103	A	P-O5'-C5'	5.65	129.37	120.90
35	BB	1158	C	P-O5'-C5'	5.65	129.37	120.90
35	BB	2109	U	C4'-C3'-C2'	-5.65	96.95	102.60
39	BF	21	TYR	CB-CG-CD1	-5.65	112.33	120.80
40	BG	55	ASP	CA-CB-CG	-5.65	106.95	112.60
1	AA	1055	A	P-O5'-C5'	-5.65	112.43	120.90
1	AA	1363	A	O4'-C1'-C2'	5.65	111.45	105.80
28	B3	9	ARG	CA-C-O	5.65	126.54	120.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	699	A	O4'-C1'-C2'	-5.65	101.95	107.60
35	BB	856	G	O5'-C5'-C4'	-5.65	103.03	111.50
35	BB	1434	A	C4'-C3'-O3'	-5.65	104.53	113.00
8	AH	122	GLY	CA-C-O	-5.65	115.42	121.35
36	BC	196	ASN	CA-CB-CG	-5.65	106.95	112.60
52	BS	103	ILE	N-CA-C	-5.65	102.24	109.30
1	AA	601	G	C3'-C2'-C1'	-5.64	95.66	101.30
1	AA	710	G	P-O5'-C5'	-5.64	112.43	120.90
1	AA	1354	U	O5'-C5'-C4'	-5.64	103.03	111.50
1	AA	1359	C	C1'-O4'-C4'	-5.64	104.25	109.90
2	AB	132	GLU	N-CA-C	-5.64	98.78	110.80
35	BB	2835	A	C4'-C3'-C2'	-5.64	96.95	102.60
37	BD	34	VAL	N-CA-CB	5.64	117.27	110.95
41	BH	20	ASN	CA-CB-CG	-5.64	106.96	112.60
1	AA	243	A	O4'-C1'-C2'	5.64	111.44	105.80
1	AA	1452	C	O4'-C1'-N1	5.64	116.66	108.20
35	BB	196	A	C2'-C3'-O3'	5.64	117.96	109.50
35	BB	891	G	P-O5'-C5'	5.64	129.36	120.90
35	BB	1279	G	O4'-C1'-N9	5.64	116.96	108.50
35	BB	1512	C	O4'-C1'-N1	5.64	116.96	108.50
47	BN	57	THR	CA-C-N	5.64	129.90	121.72
47	BN	57	THR	C-N-CA	5.64	129.90	121.72
1	AA	1505	G	O4'-C1'-C2'	5.64	113.24	107.60
21	AU	40	PRO	N-CA-C	-5.64	106.81	113.86
35	BB	779	U	O4'-C1'-N1	5.64	116.96	108.50
35	BB	1337	G	O4'-C1'-C2'	-5.64	101.96	107.60
35	BB	1562	U	P-O5'-C5'	5.64	129.36	120.90
35	BB	2674	G	C4'-C3'-O3'	-5.64	104.54	113.00
1	AA	147	G	C4'-C3'-C2'	-5.64	96.96	102.60
1	AA	942	G	P-O5'-C5'	5.64	129.36	120.90
1	AA	1009	U	P-O3'-C3'	5.64	128.66	120.20
1	AA	1176	A	C4'-C3'-O3'	-5.64	104.54	113.00
1	AA	1268	G	O3'-P-O5'	-5.64	95.54	104.00
1	AA	1303	C	O5'-C5'-C4'	-5.64	103.04	111.50
18	AR	24	ASP	CA-C-N	5.64	127.88	120.60
18	AR	24	ASP	C-N-CA	5.64	127.88	120.60
30	B5	17	ALA	N-CA-C	5.64	117.35	110.41
35	BB	770	G	C3'-C2'-O2'	5.64	119.16	110.70
35	BB	1380	G	C4'-C3'-C2'	-5.64	96.96	102.60
56	BY	66	VAL	CA-C-O	-5.64	114.30	120.84
20	AT	69	ASN	CB-CA-C	-5.64	98.10	109.55
35	BB	487	C	O4'-C1'-C2'	-5.64	101.96	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2291	U	O4'-C1'-N1	5.64	116.96	108.50
10	AJ	60	ASP	N-CA-C	-5.64	106.40	113.28
35	BB	50	U	O4'-C1'-N1	5.64	116.66	108.20
35	BB	249	C	P-O3'-C3'	5.64	128.65	120.20
35	BB	294	A	C4'-C3'-O3'	-5.64	104.55	113.00
35	BB	1167	C	C5'-C4'-C3'	5.64	124.45	116.00
36	BC	104	LEU	O-C-N	5.64	128.09	122.12
1	AA	504	C	P-O3'-C3'	-5.63	111.75	120.20
9	AI	7	GLY	N-CA-C	-5.63	100.50	111.03
35	BB	207	A	C5'-C4'-C3'	-5.63	107.55	116.00
35	BB	1394	U	C3'-C2'-C1'	5.63	106.93	101.30
1	AA	1033	G	C5'-C4'-C3'	5.63	124.45	116.00
1	AA	1106	G	C4'-C3'-O3'	-5.63	104.55	113.00
40	BG	18	ILE	N-CA-C	-5.63	102.31	109.58
1	AA	1501	C	C4'-C3'-O3'	-5.63	104.55	113.00
4	AD	28	ASP	CA-CB-CG	-5.63	106.97	112.60
20	AT	57	VAL	CA-C-N	5.63	128.10	120.44
20	AT	57	VAL	C-N-CA	5.63	128.10	120.44
30	B5	137	MET	CG-SD-CE	-5.63	88.51	100.90
35	BB	146	A	C4'-C3'-O3'	-5.63	104.55	113.00
35	BB	1002	G	O4'-C1'-N9	5.63	116.95	108.50
35	BB	2016	U	O4'-C1'-C2'	-5.63	101.97	107.60
50	BQ	18	LYS	N-CA-CB	5.63	119.74	110.39
1	AA	1364	U	O4'-C1'-N1	5.63	116.65	108.20
11	AK	106	ILE	CB-CA-C	5.63	119.81	111.31
13	AM	14	ALA	CA-C-N	5.63	127.74	120.70
13	AM	14	ALA	C-N-CA	5.63	127.74	120.70
13	AM	56	ARG	CA-C-O	-5.63	114.58	120.55
35	BB	1043	C	O4'-C1'-N1	5.63	116.94	108.50
35	BB	2854	G	O4'-C1'-N9	5.63	116.94	108.50
1	AA	1217	C	C1'-O4'-C4'	-5.63	104.27	109.90
4	AD	174	ALA	CA-C-O	-5.63	113.17	119.08
20	AT	59	ARG	CD-NE-CZ	5.63	132.28	124.40
35	BB	549	G	C4'-C3'-O3'	-5.63	104.56	113.00
35	BB	703	U	C4'-C3'-C2'	-5.63	96.97	102.60
35	BB	2036	C	C5'-C4'-O4'	5.63	118.24	109.80
1	AA	274	A	C4'-C3'-O3'	5.63	117.84	109.40
1	AA	281	G	P-O5'-C5'	5.63	129.34	120.90
35	BB	2194	U	C5'-C4'-C3'	5.63	124.44	116.00
35	BB	2284	A	C5'-C4'-C3'	5.63	124.44	116.00
35	BB	2426	A	P-O3'-C3'	5.63	128.64	120.20
43	BJ	105	VAL	N-CA-CB	5.63	119.37	110.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	BQ	92	LYS	N-CA-C	-5.63	106.46	113.55
1	AA	870	U	C5'-C4'-C3'	-5.62	106.76	115.20
1	AA	896	C	C4'-C3'-C2'	-5.62	96.97	102.60
35	BB	825	A	C4'-C3'-O3'	-5.62	104.56	113.00
35	BB	1043	C	O4'-C4'-C3'	-5.62	98.38	104.00
35	BB	1271	G	P-O3'-C3'	-5.62	111.76	120.20
1	AA	1394	A	O4'-C1'-N9	5.62	116.64	108.20
2	AB	108	GLN	N-CA-CB	5.62	118.88	110.22
5	AE	87	VAL	CA-C-O	5.62	125.82	120.25
27	B2	5	LYS	CB-CA-C	-5.62	100.97	110.19
35	BB	752	A	P-O3'-C3'	5.62	128.63	120.20
39	BF	12	VAL	CA-C-N	5.62	128.13	120.54
39	BF	12	VAL	C-N-CA	5.62	128.13	120.54
53	BT	73	ARG	CG-CD-NE	-5.62	99.63	112.00
56	BY	75	ASN	CA-CB-CG	5.62	118.22	112.60
1	AA	398	U	O4'-C1'-C2'	-5.62	101.98	107.60
13	AM	85	TYR	CA-C-N	5.62	127.81	120.28
13	AM	85	TYR	C-N-CA	5.62	127.81	120.28
35	BB	1428	C	C2'-C3'-O3'	5.62	117.93	109.50
45	BL	37	GLY	O-C-N	-5.62	115.77	122.68
55	BW	5	ASN	CA-C-O	5.62	126.73	120.43
2	AB	121	GLN	CA-C-O	5.62	125.47	119.34
16	AP	77	GLU	N-CA-C	5.62	119.61	112.87
46	BM	44	ARG	NE-CZ-NH2	5.62	124.26	119.20
1	AA	826	C	C1'-O4'-C4'	5.62	115.52	109.90
1	AA	1060	U	C3'-C2'-O2'	5.62	119.13	110.70
1	AA	1375	A	C4'-C3'-O3'	-5.62	104.57	113.00
5	AE	19	ARG	CA-C-O	5.62	127.75	121.40
35	BB	1168	G	P-O3'-C3'	-5.62	111.77	120.20
35	BB	2804	U	O4'-C1'-C2'	-5.62	101.98	107.60
35	BB	2864	G	C4'-C3'-C2'	-5.62	96.98	102.60
36	BC	106	PRO	CA-C-N	5.62	131.27	123.07
36	BC	106	PRO	C-N-CA	5.62	131.27	123.07
38	BE	196	VAL	CA-C-N	5.62	127.74	120.44
38	BE	196	VAL	C-N-CA	5.62	127.74	120.44
35	BB	785	G	P-O5'-C5'	-5.62	112.47	120.90
35	BB	2090	A	O5'-C5'-C4'	-5.62	103.08	111.50
1	AA	1374	A	O4'-C1'-C2'	-5.62	101.98	107.60
35	BB	1177	G	P-O5'-C5'	5.62	129.32	120.90
40	BG	164	ALA	O-C-N	5.62	127.85	122.07
40	BG	168	VAL	CB-CA-C	-5.62	105.16	111.45
48	BO	5	SER	CA-C-N	5.62	128.07	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	BO	5	SER	C-N-CA	5.62	128.07	120.38
52	BS	45	VAL	N-CA-C	5.62	121.02	109.34
33	B8	29	ALA	CA-C-N	5.61	128.28	120.65
33	B8	29	ALA	C-N-CA	5.61	128.28	120.65
35	BB	213	A	C3'-C2'-O2'	5.61	119.12	110.70
35	BB	464	U	P-O5'-C5'	-5.61	112.48	120.90
35	BB	1508	A	O4'-C1'-N9	5.61	116.62	108.20
35	BB	2886	A	O4'-C1'-N9	5.61	116.92	108.50
35	BB	2902	C	C3'-C2'-O2'	5.61	119.12	110.70
41	BH	110	VAL	O-C-N	-5.61	116.80	123.03
1	AA	224	U	O4'-C1'-N1	5.61	116.92	108.50
1	AA	668	G	O4'-C1'-C2'	-5.61	101.99	107.60
12	AL	6	LEU	N-CA-CB	5.61	118.62	110.26
35	BB	1561	C	O4'-C1'-N1	5.61	116.92	108.50
36	BC	145	MET	N-CA-C	-5.61	105.86	114.16
36	BC	188	ARG	N-CA-C	5.61	117.15	110.19
35	BB	4	U	O4'-C1'-N1	5.61	116.91	108.50
49	BP	80	VAL	N-CA-CB	5.61	118.17	110.54
26	B1	53	VAL	N-CA-CB	5.61	117.11	110.55
35	BB	671	C	C4'-C3'-O3'	-5.61	104.59	113.00
35	BB	1986	C	O4'-C4'-C3'	5.61	109.61	104.00
35	BB	2004	G	C1'-C2'-O2'	5.61	116.81	108.40
1	AA	619	U	C3'-C2'-C1'	5.61	106.91	101.30
35	BB	2626	C	O5'-C5'-C4'	5.61	119.91	111.50
1	AA	1248	A	O4'-C1'-N9	5.60	116.91	108.50
35	BB	500	G	O4'-C4'-C3'	-5.60	98.40	104.00
35	BB	2460	U	P-O3'-C3'	-5.60	111.79	120.20
44	BK	48	PRO	N-CA-C	-5.60	106.39	114.18
1	AA	1135	U	C3'-C2'-O2'	5.60	119.10	110.70
35	BB	156	A	O4'-C4'-C3'	-5.60	98.40	104.00
35	BB	2831	G	O4'-C1'-N9	5.60	116.90	108.50
43	BJ	25	LEU	CB-CA-C	5.60	118.24	109.84
35	BB	2206	C	C4'-C3'-C2'	-5.60	97.00	102.60
35	BB	2467	C	O3'-P-O5'	-5.60	95.60	104.00
35	BB	2682	A	P-O3'-C3'	-5.60	111.80	120.20
1	AA	603	U	O3'-P-O5'	-5.60	95.60	104.00
37	BD	102	ALA	O-C-N	5.60	129.24	122.35
46	BM	52	ALA	CB-CA-C	-5.60	101.49	110.79
54	BU	68	ASN	OD1-CG-ND2	5.60	128.20	122.60
56	BY	8	SER	O-C-N	5.60	128.33	122.23
19	AS	34	SER	CA-C-O	5.60	127.14	120.70
35	BB	695	G	C4'-C3'-O3'	-5.60	104.61	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2193	G	P-O3'-C3'	-5.60	111.80	120.20
1	AA	1308	U	C4'-C3'-C2'	5.60	108.20	102.60
8	AH	31	LEU	O-C-N	-5.60	116.31	122.07
35	BB	1530	G	O3'-P-O5'	-5.60	95.61	104.00
35	BB	1940	U	O4'-C1'-N1	5.60	116.59	108.20
35	BB	2728	U	O4'-C1'-N1	5.60	116.89	108.50
1	AA	285	C	P-O3'-C3'	-5.59	111.81	120.20
12	AL	112	ALA	O-C-N	5.59	129.29	122.58
34	BA	89	U	O4'-C1'-N1	5.59	116.89	108.50
35	BB	1539	U	O3'-P-O5'	-5.59	95.61	104.00
36	BC	170	TYR	N-CA-CB	5.59	119.94	110.49
1	AA	152	A	O4'-C1'-N9	5.59	116.89	108.50
35	BB	601	C	C4'-C3'-C2'	-5.59	97.01	102.60
35	BB	1725	U	C4'-C3'-C2'	-5.59	97.01	102.60
35	BB	2888	C	O4'-C1'-N1	5.59	116.89	108.50
1	AA	1222	G	C4'-C3'-C2'	-5.59	97.01	102.60
1	AA	1511	G	C4'-C3'-O3'	-5.59	104.61	113.00
2	AB	107	ARG	CA-C-N	5.59	128.33	120.28
2	AB	107	ARG	C-N-CA	5.59	128.33	120.28
11	AK	84	MET	CA-C-N	5.59	128.58	120.98
11	AK	84	MET	C-N-CA	5.59	128.58	120.98
12	AL	34	THR	N-CA-C	-5.59	105.74	113.18
32	B7	41	ARG	N-CA-C	5.59	117.37	111.28
35	BB	868	U	C4'-C3'-C2'	-5.59	97.01	102.60
35	BB	1332	G	C5'-C4'-C3'	5.59	123.59	115.20
35	BB	1606	C	O4'-C1'-C2'	5.59	113.19	107.60
15	AO	27	GLN	CG-CD-NE2	5.59	124.78	116.40
18	AR	50	TYR	CB-CG-CD1	-5.59	112.42	120.80
35	BB	1442	U	O4'-C1'-N1	5.59	116.89	108.50
35	BB	2513	A	C5'-C4'-C3'	5.59	124.38	116.00
35	BB	2609	U	P-O5'-C5'	-5.59	112.52	120.90
45	BL	106	GLU	N-CA-C	-5.59	105.75	113.18
52	BS	14	ALA	N-CA-C	5.59	119.82	112.89
1	AA	984	C	O4'-C1'-C2'	-5.59	102.01	107.60
12	AL	103	CYS	CA-C-O	5.59	127.48	121.44
35	BB	670	A	C2'-C3'-O3'	5.59	117.88	109.50
1	AA	750	C	O4'-C1'-N1	5.59	116.88	108.50
1	AA	1095	U	C4'-C3'-O3'	-5.59	104.62	113.00
2	AB	108	GLN	CA-C-O	-5.59	113.79	120.10
8	AH	15	ASN	N-CA-C	-5.59	104.57	111.33
35	BB	48	G	C5'-C4'-O4'	5.59	118.18	109.80
35	BB	494	G	C4'-C3'-C2'	-5.59	97.01	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1222	U	O4'-C4'-C3'	5.59	109.59	104.00
35	BB	1729	U	C4'-C3'-C2'	-5.59	97.01	102.60
35	BB	1844	C	O4'-C1'-N1	5.59	116.88	108.50
35	BB	2187	U	O5'-C5'-C4'	5.59	119.88	111.50
55	BW	88	HIS	CA-C-O	-5.59	114.49	120.75
35	BB	349	U	O4'-C1'-C2'	-5.58	102.02	107.60
35	BB	477	A	P-O5'-C5'	-5.58	112.52	120.90
35	BB	2633	G	C4'-C3'-O3'	-5.58	104.62	113.00
1	AA	336	A	C5'-C4'-O4'	-5.58	101.42	109.80
35	BB	878	A	C5'-C4'-C3'	5.58	124.38	116.00
35	BB	879	G	C4'-C3'-C2'	-5.58	97.02	102.60
35	BB	1592	C	O4'-C1'-C2'	-5.58	102.02	107.60
35	BB	2426	A	O4'-C1'-C2'	5.58	111.38	105.80
44	BK	69	VAL	N-CA-CB	5.58	120.67	112.35
55	BW	42	LEU	CA-C-N	5.58	129.84	122.30
55	BW	42	LEU	C-N-CA	5.58	129.84	122.30
2	AB	67	LEU	CA-C-O	-5.58	114.33	120.36
3	AC	109	GLU	CA-C-O	5.58	126.41	120.10
25	B0	10	ARG	N-CA-CB	5.58	116.78	110.03
34	BA	94	A	C1'-O4'-C4'	5.58	115.48	109.90
35	BB	450	G	C2'-C3'-O3'	-5.58	105.33	113.70
35	BB	1594	U	O4'-C1'-N1	5.58	116.87	108.50
49	BP	17	PRO	CB-CA-C	-5.58	102.35	111.56
50	BQ	19	GLN	OE1-CD-NE2	-5.58	117.02	122.60
56	BY	62	ALA	CA-C-N	5.58	131.58	121.92
56	BY	62	ALA	C-N-CA	5.58	131.58	121.92
1	AA	159	G	P-O5'-C5'	-5.58	112.53	120.90
1	AA	1206	G	O4'-C1'-N9	5.58	116.87	108.50
1	AA	117	G	C3'-C2'-C1'	-5.58	95.72	101.30
1	AA	1476	A	P-O5'-C5'	5.58	129.27	120.90
6	AF	75	GLU	CA-C-N	5.58	127.69	120.44
6	AF	75	GLU	C-N-CA	5.58	127.69	120.44
31	B6	16	HIS	N-CA-C	-5.58	105.40	113.21
35	BB	13	A	O4'-C4'-C3'	-5.58	100.52	106.10
35	BB	434	U	C2'-C3'-O3'	5.58	117.87	109.50
39	BF	96	TRP	CA-C-O	5.58	125.72	119.41
34	BA	17	C	O3'-P-O5'	-5.58	95.63	104.00
37	BD	178	VAL	N-CA-CB	-5.58	107.07	111.64
1	AA	1277	C	O4'-C1'-N1	5.58	116.86	108.50
3	AC	153	SER	N-CA-CB	-5.58	101.07	110.49
9	AI	98	ARG	NE-CZ-NH2	-5.58	114.18	119.20
16	AP	40	ASN	OD1-CG-ND2	-5.58	117.02	122.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	B0	75	GLU	CA-C-N	5.58	129.02	121.05
25	B0	75	GLU	C-N-CA	5.58	129.02	121.05
35	BB	794	A	P-O5'-C5'	-5.58	112.54	120.90
35	BB	1984	G	O4'-C1'-N9	5.58	116.86	108.50
40	BG	110	HIS	CE1-NE2-CD2	-5.58	103.42	109.00
1	AA	81	A	C5'-C4'-O4'	5.57	118.16	109.80
1	AA	1192	C	O4'-C1'-N1	5.57	116.86	108.50
2	AB	132	GLU	CA-C-N	5.57	128.21	120.29
2	AB	132	GLU	C-N-CA	5.57	128.21	120.29
13	AM	8	ILE	N-CA-CB	5.57	118.28	112.37
35	BB	725	G	C5'-C4'-C3'	5.57	124.36	116.00
35	BB	995	C	O4'-C4'-C3'	-5.57	98.43	104.00
35	BB	1468	U	O4'-C4'-C3'	-5.57	98.43	104.00
35	BB	2903	U	O4'-C4'-C3'	-5.57	98.43	104.00
52	BS	88	ARG	NE-CZ-NH2	5.57	124.22	119.20
36	BC	47	ARG	N-CA-CB	5.57	118.47	110.06
40	BG	140	ILE	N-CA-CB	5.57	116.69	110.51
35	BB	1079	C	O4'-C1'-N1	5.57	116.86	108.50
35	BB	2062	A	C3'-C2'-C1'	5.57	107.07	101.50
40	BG	102	ILE	N-CA-C	-5.57	99.48	107.78
1	AA	1167	A	O3'-P-O5'	-5.57	95.65	104.00
35	BB	607	U	C3'-C2'-O2'	5.57	119.05	110.70
35	BB	1745	A	C4'-C3'-O3'	-5.57	104.65	113.00
1	AA	769	G	O4'-C1'-N9	5.57	116.85	108.50
35	BB	47	C	P-O5'-C5'	5.57	129.25	120.90
35	BB	1736	U	P-O5'-C5'	5.57	129.25	120.90
2	AB	31	PHE	N-CA-C	-5.57	101.44	108.45
2	AB	50	ASN	N-CA-C	5.57	118.88	111.75
25	B0	22	ASN	CA-C-N	5.57	128.61	120.71
25	B0	22	ASN	C-N-CA	5.57	128.61	120.71
35	BB	1998	A	P-O5'-C5'	5.57	129.25	120.90
35	BB	2894	G	C2'-C3'-O3'	5.57	117.85	109.50
40	BG	135	ALA	CA-C-O	-5.57	114.14	120.32
1	AA	359	G	C4'-C3'-C2'	-5.56	97.04	102.60
4	AD	186	GLU	CA-C-N	5.56	128.29	120.28
4	AD	186	GLU	C-N-CA	5.56	128.29	120.28
30	B5	103	GLN	OE1-CD-NE2	-5.56	117.04	122.60
35	BB	1118	C	O3'-P-O5'	-5.56	95.65	104.00
35	BB	2078	C	C4'-C3'-C2'	-5.56	97.04	102.60
1	AA	282	A	C1'-C2'-O2'	5.56	116.74	108.40
35	BB	276	U	O4'-C1'-C2'	-5.56	102.04	107.60
35	BB	332	A	P-O3'-C3'	5.56	128.54	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	756	A	O4'-C1'-C2'	-5.56	102.04	107.60
35	BB	893	C	P-O3'-C3'	-5.56	111.86	120.20
35	BB	1156	A	P-O5'-C5'	-5.56	112.56	120.90
35	BB	1828	G	C4'-C3'-C2'	-5.56	97.04	102.60
35	BB	1953	A	P-O5'-C5'	-5.56	112.56	120.90
36	BC	9	SER	CA-C-N	5.56	126.79	119.84
36	BC	9	SER	C-N-CA	5.56	126.79	119.84
51	BR	39	LEU	O-C-N	5.56	127.69	122.18
53	BT	3	ARG	N-CA-CB	5.56	121.12	111.39
1	AA	8	A	O4'-C1'-N9	5.56	116.54	108.20
13	AM	60	ALA	N-CA-C	5.56	119.68	113.01
35	BB	684	G	C4'-C3'-O3'	-5.56	104.66	113.00
35	BB	1567	G	P-O5'-C5'	-5.56	112.56	120.90
6	AF	2	ARG	N-CA-C	-5.56	99.98	108.76
12	AL	100	ALA	CA-C-N	5.56	132.15	121.54
12	AL	100	ALA	C-N-CA	5.56	132.15	121.54
35	BB	572	A	C1'-O4'-C4'	5.56	115.46	109.90
35	BB	2065	C	P-O5'-C5'	5.56	129.24	120.90
28	B3	18	HIS	N-CA-C	-5.56	106.27	113.16
35	BB	319	G	P-O3'-C3'	-5.56	111.87	120.20
35	BB	2817	U	C1'-C2'-O2'	5.56	116.73	108.40
48	BO	91	SER	N-CA-C	-5.56	99.37	108.76
1	AA	993	G	O5'-C5'-C4'	-5.55	103.37	111.70
2	AB	14	HIS	CA-C-N	5.55	130.63	122.63
2	AB	14	HIS	C-N-CA	5.55	130.63	122.63
30	B5	94	LEU	CD1-CG-CD2	-5.55	98.58	110.80
32	B7	53	ASP	CA-CB-CG	-5.55	107.05	112.60
35	BB	1467	U	P-O3'-C3'	-5.55	111.87	120.20
13	AM	90	HIS	CE1-NE2-CD2	-5.55	103.45	109.00
40	BG	50	THR	O-C-N	-5.55	116.72	122.94
46	BM	60	GLN	N-CA-C	-5.55	101.23	110.17
1	AA	746	A	P-O3'-C3'	-5.55	111.87	120.20
2	AB	14	HIS	N-CA-C	-5.55	103.07	111.34
10	AJ	70	HIS	CB-CG-CD2	-5.55	123.98	131.20
35	BB	948	C	C4'-C3'-O3'	-5.55	104.67	113.00
35	BB	1817	G	C4'-C3'-O3'	-5.55	104.67	113.00
35	BB	1922	G	C4'-C3'-C2'	-5.55	97.05	102.60
35	BB	1931	U	O4'-C1'-N1	5.55	116.83	108.50
5	AE	77	ASN	N-CA-C	-5.55	106.46	113.23
35	BB	52	A	O4'-C1'-N9	5.55	116.82	108.50
35	BB	393	C	O4'-C1'-N1	5.55	116.83	108.50
35	BB	876	C	O4'-C4'-C3'	-5.55	98.45	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2845	U	C4'-C3'-O3'	-5.55	104.68	113.00
50	BQ	71	ASN	CA-CB-CG	-5.55	107.05	112.60
1	AA	419	C	O4'-C1'-N1	5.55	116.82	108.50
34	BA	110	C	P-O5'-C5'	5.55	129.22	120.90
35	BB	1025	G	C5'-C4'-C3'	-5.55	106.88	115.20
35	BB	2010	G	O5'-C5'-C4'	-5.55	103.18	111.50
41	BH	63	ALA	N-CA-C	5.55	118.85	111.75
1	AA	652	U	O3'-P-O5'	-5.55	95.68	104.00
1	AA	1253	G	P-O3'-C3'	-5.55	111.88	120.20
1	AA	1261	A	C4'-C3'-C2'	-5.55	97.05	102.60
30	B5	139	ASN	N-CA-C	5.55	117.47	109.04
35	BB	1603	A	C4'-C3'-C2'	-5.55	97.05	102.60
35	BB	2064	C	C1'-C2'-O2'	5.55	116.72	108.40
35	BB	2179	C	O5'-C5'-C4'	5.55	119.82	111.50
43	BJ	93	ILE	N-CA-CB	5.55	118.90	110.58
4	AD	118	SER	N-CA-CB	5.54	119.86	110.49
11	AK	115	ILE	N-CA-C	-5.54	96.17	107.92
13	AM	47	LEU	N-CA-CB	5.54	119.86	110.49
47	BN	113	ILE	CA-C-O	5.54	126.57	120.64
50	BQ	10	ARG	CA-C-N	5.54	132.23	122.42
50	BQ	10	ARG	C-N-CA	5.54	132.23	122.42
26	B1	20	ASN	OD1-CG-ND2	-5.54	117.06	122.60
35	BB	140	C	O5'-C5'-C4'	-5.54	103.38	111.70
35	BB	992	C	C4'-C3'-C2'	-5.54	97.06	102.60
35	BB	1904	G	O4'-C4'-C3'	-5.54	98.46	104.00
1	AA	215	C	O4'-C1'-N1	5.54	116.81	108.50
1	AA	1329	A	C5'-C4'-C3'	5.54	124.31	116.00
35	BB	588	U	C3'-C2'-C1'	5.54	106.84	101.30
35	BB	1081	U	C5'-C4'-O4'	-5.54	101.49	109.80
35	BB	2109	U	P-O3'-C3'	5.54	128.51	120.20
36	BC	71	ASP	N-CA-C	-5.54	104.36	113.50
12	AL	106	VAL	N-CA-C	-5.54	100.45	108.87
44	BK	40	LYS	N-CA-CB	5.54	118.17	109.69
1	AA	397	A	C4'-C3'-O3'	-5.54	104.69	113.00
1	AA	787	A	C4'-C3'-O3'	-5.54	104.69	113.00
1	AA	1326	U	C4'-C3'-O3'	-5.54	104.69	113.00
1	AA	1393	U	C4'-C3'-C2'	-5.54	97.06	102.60
6	AF	20	GLY	O-C-N	-5.54	116.80	122.17
27	B2	32	GLY	CA-C-N	5.54	128.57	120.71
27	B2	32	GLY	C-N-CA	5.54	128.57	120.71
35	BB	60	G	P-O3'-C3'	5.54	128.51	120.20
35	BB	357	C	N1-C1'-C2'	5.54	120.31	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1353	A	C4'-C3'-O3'	-5.54	104.69	113.00
35	BB	1472	C	O4'-C4'-C3'	-5.54	98.46	104.00
36	BC	241	LYS	N-CA-C	-5.54	100.94	109.52
35	BB	401	A	C4'-C3'-C2'	-5.54	97.06	102.60
35	BB	1718	G	O4'-C4'-C3'	-5.54	98.46	104.00
35	BB	1920	C	P-O3'-C3'	-5.54	111.89	120.20
1	AA	1255	G	O4'-C1'-N9	5.54	116.80	108.50
35	BB	1664	A	O4'-C1'-N9	5.54	116.80	108.50
55	BW	44	HIS	CB-CG-CD2	-5.54	124.00	131.20
1	AA	325	A	C5'-C4'-C3'	5.53	124.30	116.00
21	AU	17	ARG	NE-CZ-NH2	-5.53	114.22	119.20
35	BB	760	G	O5'-C5'-C4'	-5.53	103.20	111.50
35	BB	803	U	C4'-C3'-O3'	-5.53	104.70	113.00
35	BB	1681	G	P-O5'-C5'	5.53	129.20	120.90
35	BB	1707	G	C4'-C3'-O3'	-5.53	104.70	113.00
37	BD	99	GLU	CB-CG-CD	-5.53	103.19	112.60
39	BF	41	GLU	CB-CG-CD	5.53	122.01	112.60
35	BB	12	U	P-O3'-C3'	5.53	128.50	120.20
1	AA	1249	C	C4'-C3'-C2'	-5.53	97.07	102.60
4	AD	65	GLY	O-C-N	-5.53	116.36	122.50
5	AE	155	LYS	N-CA-C	-5.53	105.17	111.14
6	AF	61	LEU	CA-C-N	5.53	132.10	121.54
6	AF	61	LEU	C-N-CA	5.53	132.10	121.54
7	AG	99	ALA	CA-C-N	5.53	128.01	120.54
7	AG	99	ALA	C-N-CA	5.53	128.01	120.54
35	BB	451	U	O4'-C1'-N1	5.53	116.80	108.50
35	BB	1027	A	O3'-P-O5'	-5.53	95.70	104.00
35	BB	2263	C	C4'-C3'-C2'	-5.53	97.07	102.60
1	AA	296	U	O4'-C1'-N1	5.53	116.79	108.50
4	AD	53	GLN	N-CA-C	5.53	118.83	111.75
13	AM	91	ARG	CA-CB-CG	5.53	125.16	114.10
35	BB	579	G	P-O5'-C5'	-5.53	112.61	120.90
35	BB	1309	G	O5'-C5'-C4'	-5.53	103.21	111.50
35	BB	1775	U	O4'-C1'-N1	5.53	116.79	108.50
52	BS	78	GLU	N-CA-CB	5.53	118.35	109.28
1	AA	115	G	P-O5'-C5'	-5.53	112.61	120.90
1	AA	768	A	C4'-C3'-C2'	-5.53	97.07	102.60
1	AA	901	A	P-O3'-C3'	5.53	128.49	120.20
1	AA	1307	U	C1'-C2'-O2'	5.53	116.69	108.40
1	AA	1318	A	C4'-C3'-C2'	-5.53	97.07	102.60
14	AN	83	VAL	N-CA-C	-5.53	97.84	109.34
17	AQ	48	GLU	N-CA-CB	-5.53	101.98	110.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	424	G	P-O5'-C5'	5.53	129.19	120.90
35	BB	773	U	C5'-C4'-C3'	-5.53	107.71	116.00
35	BB	1447	C	O4'-C1'-C2'	-5.53	102.07	107.60
35	BB	2242	G	C3'-C2'-C1'	5.53	106.83	101.30
46	BM	54	THR	CA-C-O	-5.53	114.99	121.07
54	BU	76	THR	N-CA-C	-5.53	100.31	108.99
1	AA	108	G	C3'-C2'-O2'	5.53	118.99	110.70
1	AA	276	G	P-O3'-C3'	-5.53	111.91	120.20
1	AA	982	U	P-O3'-C3'	5.53	128.49	120.20
25	B0	2	ARG	N-CA-C	-5.53	103.98	111.55
26	B1	23	ARG	N-CA-CB	5.53	121.14	112.46
30	B5	141	LYS	CA-C-N	5.53	127.63	120.56
30	B5	141	LYS	C-N-CA	5.53	127.63	120.56
31	B6	6	GLN	CA-C-N	5.53	125.72	120.31
31	B6	6	GLN	C-N-CA	5.53	125.72	120.31
35	BB	324	A	C3'-C2'-O2'	5.53	118.99	110.70
35	BB	703	U	O4'-C1'-N1	5.53	116.79	108.50
35	BB	1541	C	C4'-C3'-C2'	-5.53	97.08	102.60
35	BB	1843	C	O4'-C1'-N1	5.53	116.79	108.50
35	BB	2395	C	O4'-C1'-N1	5.53	116.79	108.50
35	BB	2698	U	O4'-C1'-N1	5.53	116.79	108.50
13	AM	107	THR	N-CA-C	-5.52	105.32	113.61
35	BB	1183	U	O4'-C1'-C2'	-5.52	102.08	107.60
45	BL	101	ILE	N-CA-C	-5.52	99.68	107.75
1	AA	829	G	O4'-C1'-N9	5.52	116.78	108.50
1	AA	889	A	C3'-C2'-O2'	-5.52	106.32	114.60
1	AA	1144	G	O4'-C1'-N9	5.52	116.78	108.50
9	AI	14	SER	CB-CA-C	-5.52	101.13	110.19
16	AP	9	HIS	CB-CG-CD2	-5.52	124.02	131.20
25	B0	63	ILE	CA-C-N	5.52	132.09	121.54
25	B0	63	ILE	C-N-CA	5.52	132.09	121.54
31	B6	29	GLN	CA-C-N	5.52	127.52	120.56
31	B6	29	GLN	C-N-CA	5.52	127.52	120.56
32	B7	15	LYS	N-CA-C	5.52	117.97	110.35
35	BB	1344	U	O4'-C4'-C3'	-5.52	100.58	106.10
38	BE	16	GLU	CA-C-N	5.52	129.70	120.70
38	BE	16	GLU	C-N-CA	5.52	129.70	120.70
2	AB	173	LYS	O-C-N	5.52	129.93	122.59
53	BT	83	ALA	CA-C-O	5.52	126.45	120.32
14	AN	88	MET	CA-C-N	5.52	132.11	121.18
14	AN	88	MET	C-N-CA	5.52	132.11	121.18
18	AR	67	LEU	N-CA-C	-5.52	100.58	109.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	93	G	C4'-C3'-O3'	-5.52	104.72	113.00
35	BB	1105	U	O4'-C1'-N1	5.52	116.78	108.50
35	BB	1890	A	C4'-C3'-C2'	-5.52	97.08	102.60
35	BB	2033	A	C4'-C3'-C2'	-5.52	97.08	102.60
1	AA	1078	U	C4'-C3'-C2'	-5.52	97.08	102.60
2	AB	191	ASP	CA-C-N	5.52	125.95	119.99
2	AB	191	ASP	C-N-CA	5.52	125.95	119.99
10	AJ	75	ASP	CA-CB-CG	-5.52	107.08	112.60
35	BB	944	C	C5'-C4'-C3'	-5.52	107.72	116.00
35	BB	1276	A	O3'-P-O5'	-5.52	95.72	104.00
35	BB	1533	C	O4'-C1'-N1	5.52	116.78	108.50
35	BB	1706	C	C5'-C4'-C3'	-5.52	106.92	115.20
45	BL	137	ALA	N-CA-C	-5.52	104.78	112.45
1	AA	543	U	O4'-C1'-C2'	-5.52	102.08	107.60
3	AC	179	ALA	CA-C-O	-5.52	115.17	121.40
13	AM	7	ASN	CA-CB-CG	5.52	118.12	112.60
35	BB	853	C	O5'-C5'-C4'	-5.52	103.23	111.50
35	BB	1810	A	O4'-C4'-C3'	5.52	109.52	104.00
35	BB	2665	A	O5'-C5'-C4'	-5.52	103.23	111.50
1	AA	1197	A	P-O5'-C5'	5.51	129.17	120.90
2	AB	177	ASN	N-CA-C	-5.51	106.32	113.16
16	AP	40	ASN	CA-C-N	5.51	127.23	120.94
16	AP	40	ASN	C-N-CA	5.51	127.23	120.94
35	BB	6	A	C4'-C3'-C2'	-5.51	97.08	102.60
35	BB	969	G	O4'-C4'-C3'	-5.51	98.49	104.00
43	BJ	70	THR	O-C-N	-5.51	116.39	122.07
1	AA	239	U	O4'-C1'-C2'	5.51	111.31	105.80
1	AA	758	C	O4'-C4'-C3'	5.51	109.51	104.00
35	BB	1332	G	C2'-C3'-O3'	5.51	117.77	109.50
1	AA	1356	G	O4'-C1'-C2'	-5.51	102.09	107.60
21	AU	34	ARG	NE-CZ-NH2	-5.51	114.24	119.20
34	BA	55	U	C4'-C3'-C2'	-5.51	97.09	102.60
35	BB	784	G	O5'-C5'-C4'	-5.51	103.23	111.50
35	BB	2065	C	O4'-C1'-C2'	5.51	113.11	107.60
37	BD	27	ILE	O-C-N	-5.51	116.44	122.83
1	AA	1023	U	C5'-C4'-C3'	5.51	124.26	116.00
35	BB	116	C	O4'-C1'-N1	5.51	116.76	108.50
36	BC	193	GLU	N-CA-C	-5.51	99.92	108.90
40	BG	103	ASN	N-CA-CB	5.51	119.39	110.41
45	BL	12	SER	CB-CA-C	-5.51	101.53	110.79
1	AA	131	A	P-O5'-C5'	-5.51	112.64	120.90
35	BB	170	U	O5'-C5'-C4'	-5.51	103.24	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	925	A	C3'-C2'-C1'	-5.51	95.79	101.30
35	BB	2712	C	O4'-C1'-N1	5.51	116.76	108.50
1	AA	200	G	C4'-C3'-C2'	-5.51	97.09	102.60
2	AB	188	THR	N-CA-CB	-5.51	102.03	110.12
9	AI	103	VAL	CA-C-N	5.51	128.66	120.95
9	AI	103	VAL	C-N-CA	5.51	128.66	120.95
34	BA	17	C	O4'-C1'-N1	5.51	116.76	108.50
34	BA	32	U	O4'-C1'-N1	5.51	116.76	108.50
34	BA	112	G	O4'-C1'-N9	5.51	116.76	108.50
35	BB	336	C	P-O5'-C5'	-5.51	112.64	120.90
35	BB	1577	C	O4'-C1'-N1	5.51	116.76	108.50
53	BT	23	ALA	N-CA-CB	5.51	118.15	109.94
35	BB	514	A	O5'-C5'-C4'	-5.50	103.24	111.50
36	BC	60	ALA	CA-C-N	5.50	128.91	120.82
36	BC	60	ALA	C-N-CA	5.50	128.91	120.82
1	AA	338	A	C4'-C3'-C2'	-5.50	97.10	102.60
7	AG	61	PHE	CA-CB-CG	-5.50	108.30	113.80
35	BB	546	U	P-O3'-C3'	5.50	128.46	120.20
35	BB	1381	G	P-O3'-C3'	-5.50	111.95	120.20
38	BE	147	LEU	CB-CA-C	-5.50	100.41	109.65
50	BQ	87	VAL	CA-CB-CG1	-5.50	101.05	110.40
1	AA	1003	G	C5'-C4'-C3'	-5.50	107.75	116.00
35	BB	608	A	C4'-C3'-C2'	-5.50	97.10	102.60
35	BB	999	U	C1'-O4'-C4'	5.50	115.40	109.90
39	BF	4	HIS	CB-CG-CD2	-5.50	124.05	131.20
40	BG	123	GLU	N-CA-C	-5.50	100.16	108.52
44	BK	5	GLN	CB-CA-C	-5.50	110.25	116.63
44	BK	7	MET	N-CA-C	-5.50	99.32	108.34
54	BU	73	ASN	CA-C-N	5.50	127.92	120.44
54	BU	73	ASN	C-N-CA	5.50	127.92	120.44
1	AA	436	C	O4'-C1'-N1	5.50	116.75	108.50
7	AG	97	ALA	N-CA-CB	5.50	119.78	110.49
1	AA	203	G	C3'-C2'-C1'	-5.50	95.80	101.30
1	AA	1043	G	P-O3'-C3'	5.50	128.45	120.20
13	AM	89	ARG	NE-CZ-NH2	-5.50	114.25	119.20
29	B4	32	LYS	N-CA-C	5.50	119.25	112.54
35	BB	2644	G	C4'-C3'-O3'	-5.50	104.75	113.00
43	BJ	78	THR	N-CA-CB	-5.50	102.35	110.49
55	BW	89	ILE	CA-C-O	-5.50	114.76	120.64
1	AA	366	A	O4'-C4'-C3'	-5.50	100.60	106.10
1	AA	379	C	O4'-C1'-N1	5.50	116.74	108.50
7	AG	130	LYS	N-CA-C	-5.50	100.58	108.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1912	A	C3'-C2'-O2'	5.50	118.95	110.70
35	BB	2543	G	C5'-C4'-C3'	-5.50	107.76	116.00
53	BT	16	VAL	CB-CA-C	-5.50	102.28	111.29
55	BW	52	ALA	CA-C-O	-5.50	114.72	120.55
1	AA	1333	A	C4'-C3'-C2'	-5.50	97.11	102.60
4	AD	82	LYS	CA-C-N	5.50	129.27	120.97
4	AD	82	LYS	C-N-CA	5.50	129.27	120.97
9	AI	126	PHE	N-CA-C	-5.50	101.11	108.86
1	AA	562	U	O4'-C4'-C3'	-5.49	98.51	104.00
1	AA	1055	A	O3'-P-O5'	-5.49	95.76	104.00
1	AA	1178	G	O4'-C1'-N9	5.49	116.74	108.50
9	AI	72	SER	N-CA-CB	5.49	118.80	110.28
21	AU	20	ARG	CA-C-N	5.49	127.91	120.44
21	AU	20	ARG	C-N-CA	5.49	127.91	120.44
35	BB	119	A	C4'-C3'-C2'	-5.49	97.11	102.60
36	BC	24	HIS	N-CA-C	-5.49	100.36	108.99
4	AD	193	ASP	N-CA-C	-5.49	105.27	112.41
53	BT	64	LYS	N-CA-C	-5.49	105.80	112.88
55	BW	25	LYS	CG-CD-CE	5.49	123.93	111.30
55	BW	87	GLN	N-CA-C	-5.49	107.59	114.56
13	AM	50	GLY	N-CA-C	-5.49	100.17	113.18
35	BB	1689	A	P-O5'-C5'	5.49	129.14	120.90
44	BK	31	ARG	NE-CZ-NH2	5.49	124.14	119.20
45	BL	126	ARG	NH1-CZ-NH2	-5.49	112.16	119.30
51	BR	53	PHE	CA-CB-CG	-5.49	108.31	113.80
1	AA	414	A	O4'-C1'-N9	5.49	116.73	108.50
5	AE	112	ALA	O-C-N	5.49	130.21	122.20
20	AT	26	MET	CA-C-O	5.49	127.44	121.02
25	B0	48	LEU	O-C-N	-5.49	116.06	123.19
36	BC	194	VAL	CB-CA-C	5.49	118.85	111.28
38	BE	107	SER	O-C-N	5.49	129.02	122.27
1	AA	1196	A	C4'-C3'-O3'	-5.49	104.77	113.00
35	BB	473	G	O4'-C1'-N9	5.49	116.73	108.50
37	BD	77	ARG	N-CA-C	-5.49	106.59	113.72
1	AA	1021	A	P-O5'-C5'	5.49	129.13	120.90
1	AA	1313	U	O4'-C1'-N1	5.49	116.73	108.50
35	BB	229	C	C4'-C3'-O3'	-5.49	104.77	113.00
35	BB	409	G	P-O3'-C3'	-5.49	111.97	120.20
35	BB	1125	G	C4'-C3'-O3'	-5.49	104.77	113.00
35	BB	1280	G	P-O3'-C3'	-5.49	111.97	120.20
35	BB	1629	U	O5'-C5'-C4'	-5.49	103.27	111.50
35	BB	2365	G	C1'-C2'-O2'	5.49	116.63	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BG	136	ASP	N-CA-CB	5.49	119.76	110.49
43	BJ	70	THR	N-CA-C	-5.49	105.20	111.07
46	BM	12	MET	N-CA-C	-5.49	100.97	108.38
1	AA	730	G	C4'-C3'-O3'	-5.48	104.77	113.00
1	AA	903	G	C1'-O4'-C4'	-5.48	104.42	109.90
1	AA	1346	A	C1'-O4'-C4'	5.48	115.18	109.70
32	B7	19	GLY	N-CA-C	-5.48	107.01	115.73
35	BB	894	U	C4'-C3'-O3'	-5.48	104.77	113.00
35	BB	2589	A	O4'-C1'-N9	5.48	116.73	108.50
35	BB	2737	G	P-O5'-C5'	5.48	129.12	120.90
47	BN	57	THR	N-CA-C	-5.48	100.46	109.40
1	AA	117	G	P-O5'-C5'	5.48	129.12	120.90
1	AA	1151	A	O4'-C4'-C3'	-5.48	100.62	106.10
14	AN	57	SER	N-CA-C	-5.48	105.20	111.07
35	BB	66	C	O4'-C1'-N1	5.48	116.72	108.50
35	BB	833	A	O3'-P-O5'	-5.48	95.78	104.00
44	BK	13	ASN	OD1-CG-ND2	-5.48	117.12	122.60
1	AA	1165	U	C4'-C3'-O3'	-5.48	104.78	113.00
34	BA	105	G	O4'-C1'-N9	5.48	116.72	108.50
35	BB	283	G	C5'-C4'-C3'	5.48	124.22	116.00
38	BE	53	THR	N-CA-C	-5.48	106.36	113.16
52	BS	107	VAL	O-C-N	5.48	129.46	122.61
55	BW	72	VAL	O-C-N	5.48	128.68	122.92
1	AA	1364	U	C3'-C2'-O2'	-5.48	106.38	114.60
12	AL	112	ALA	CA-C-N	5.48	129.95	120.58
12	AL	112	ALA	C-N-CA	5.48	129.95	120.58
35	BB	880	G	C4'-C3'-C2'	-5.48	97.12	102.60
44	BK	116	ILE	CB-CG1-CD1	5.48	125.31	113.80
1	AA	71	A	P-O3'-C3'	-5.48	111.98	120.20
28	B3	16	ARG	CA-C-N	5.48	127.93	120.54
28	B3	16	ARG	C-N-CA	5.48	127.93	120.54
48	BO	18	LEU	N-CA-C	5.48	117.33	111.36
30	B5	212	VAL	O-C-N	-5.48	115.74	122.97
35	BB	668	A	C4'-C3'-C2'	-5.48	97.12	102.60
35	BB	1051	G	C5'-C4'-C3'	5.48	124.21	116.00
55	BW	88	HIS	O-C-N	5.48	129.36	123.56
1	AA	668	G	C4'-C3'-C2'	-5.47	97.12	102.60
1	AA	816	A	O4'-C1'-C2'	5.47	113.07	107.60
1	AA	925	G	O3'-P-O5'	-5.47	95.79	104.00
1	AA	1256	A	O5'-C5'-C4'	-5.47	103.29	111.50
1	AA	1490	U	C5'-C4'-C3'	-5.47	107.79	116.00
1	AA	1515	G	C4'-C3'-O3'	-5.47	104.79	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	649	G	C4'-C3'-O3'	-5.47	104.79	113.00
35	BB	1587	G	P-O3'-C3'	-5.47	111.99	120.20
41	BH	132	PHE	CA-CB-CG	5.47	119.27	113.80
2	AB	169	HIS	CB-CG-ND1	5.47	130.91	122.70
21	AU	51	ALA	N-CA-C	-5.47	105.33	112.23
35	BB	438	G	O4'-C1'-N9	5.47	116.71	108.50
35	BB	1022	G	C2'-C3'-O3'	5.47	117.71	109.50
35	BB	2420	C	C4'-C3'-O3'	-5.47	104.79	113.00
35	BB	2692	G	P-O5'-C5'	-5.47	112.69	120.90
46	BM	18	ARG	NE-CZ-NH2	5.47	124.13	119.20
47	BN	63	ARG	CA-C-N	5.47	129.94	120.58
47	BN	63	ARG	C-N-CA	5.47	129.94	120.58
35	BB	147	C	O4'-C1'-N1	5.47	116.71	108.50
35	BB	2101	A	O4'-C1'-N9	5.47	116.71	108.50
47	BN	94	TYR	CB-CG-CD2	-5.47	112.59	120.80
1	AA	473	U	O4'-C1'-N1	5.47	116.70	108.50
1	AA	1049	U	O4'-C1'-C2'	5.47	111.27	105.80
1	AA	1202	U	P-O3'-C3'	-5.47	112.00	120.20
35	BB	924	G	O4'-C4'-C3'	-5.47	98.53	104.00
35	BB	1832	C	C4'-C3'-O3'	-5.47	104.80	113.00
35	BB	2089	C	O4'-C1'-N1	5.47	116.70	108.50
35	BB	2229	U	P-O3'-C3'	-5.47	112.00	120.20
39	BF	147	ARG	CA-C-N	5.47	131.81	121.97
39	BF	147	ARG	C-N-CA	5.47	131.81	121.97
52	BS	102	HIS	CB-CG-ND1	-5.47	114.50	122.70
1	AA	158	G	C1'-C2'-O2'	5.47	116.60	108.40
26	B1	25	GLN	OE1-CD-NE2	-5.47	117.13	122.60
35	BB	2699	C	P-O3'-C3'	-5.47	112.00	120.20
35	BB	28	A	O4'-C1'-N9	5.47	116.70	108.50
35	BB	290	U	P-O5'-C5'	5.47	129.10	120.90
35	BB	753	A	C3'-C2'-O2'	5.47	118.90	110.70
44	BK	59	LYS	CA-C-O	-5.47	115.43	121.33
1	AA	120	A	C4'-C3'-C2'	-5.46	97.14	102.60
1	AA	403	C	O4'-C1'-N1	5.46	116.70	108.50
1	AA	421	U	C1'-C2'-O2'	-5.46	103.60	111.80
2	AB	160	LEU	O-C-N	5.46	128.53	123.50
10	AJ	31	ARG	N-CA-CB	5.46	118.15	110.12
25	B0	10	ARG	NE-CZ-NH2	5.46	124.12	119.20
35	BB	362	A	C1'-O4'-C4'	5.46	115.36	109.90
35	BB	2510	C	C1'-C2'-O2'	5.46	116.60	108.40
39	BF	133	GLU	N-CA-C	-5.46	99.53	108.76
43	BJ	84	ILE	CA-C-O	5.46	127.61	120.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1426	G	C4'-C3'-C2'	-5.46	97.14	102.60
11	AK	43	TRP	CA-C-N	5.46	133.00	121.91
11	AK	43	TRP	C-N-CA	5.46	133.00	121.91
35	BB	1940	U	O4'-C4'-C3'	-5.46	100.64	106.10
35	BB	2196	C	C4'-C3'-O3'	-5.46	104.81	113.00
1	AA	494	G	O4'-C1'-C2'	-5.46	102.14	107.60
1	AA	836	G	O4'-C1'-N9	5.46	116.69	108.50
1	AA	1202	U	C4'-C3'-C2'	-5.46	97.14	102.60
1	AA	1263	C	C4'-C3'-O3'	-5.46	104.81	113.00
3	AC	4	VAL	CA-C-N	5.46	135.12	121.80
3	AC	4	VAL	C-N-CA	5.46	135.12	121.80
16	AP	16	PHE	CA-CB-CG	-5.46	108.34	113.80
17	AQ	77	VAL	CB-CA-C	-5.46	103.66	111.31
34	BA	81	G	C4'-C3'-O3'	-5.46	104.81	113.00
35	BB	38	A	P-O5'-C5'	-5.46	112.71	120.90
35	BB	485	C	C1'-O4'-C4'	-5.46	104.44	109.90
35	BB	1420	A	P-O3'-C3'	5.46	128.39	120.20
35	BB	1552	A	C5'-C4'-O4'	-5.46	101.61	109.80
35	BB	2076	U	C5'-C4'-C3'	5.46	124.19	116.00
35	BB	2108	A	C4'-C3'-C2'	-5.46	97.14	102.60
1	AA	267	C	O4'-C1'-N1	5.46	116.69	108.50
1	AA	747	A	P-O3'-C3'	5.46	128.39	120.20
35	BB	456	C	C5'-C4'-C3'	-5.46	107.01	115.20
1	AA	242	G	O4'-C1'-N9	5.46	116.69	108.50
1	AA	667	G	P-O5'-C5'	-5.46	112.71	120.90
11	AK	116	PRO	N-CA-CB	5.46	108.10	103.19
35	BB	1606	C	O4'-C1'-N1	5.46	116.69	108.50
35	BB	2836	U	O4'-C4'-C3'	-5.46	98.54	104.00
1	AA	51	A	P-O3'-C3'	5.46	128.38	120.20
1	AA	164	G	O4'-C4'-C3'	-5.46	98.54	104.00
1	AA	256	U	C5'-C4'-C3'	-5.46	107.81	116.00
1	AA	842	U	C2'-C3'-O3'	5.46	117.69	109.50
4	AD	25	ARG	NE-CZ-NH2	-5.46	114.29	119.20
35	BB	339	U	C1'-O4'-C4'	-5.46	104.44	109.90
35	BB	530	G	O4'-C4'-C3'	5.46	109.46	104.00
35	BB	1294	U	O5'-C5'-C4'	-5.46	103.32	111.50
44	BK	37	ASP	CA-CB-CG	-5.46	107.14	112.60
44	BK	77	ILE	N-CA-C	-5.46	99.30	107.37
1	AA	239	U	C2'-C3'-O3'	5.46	117.68	109.50
1	AA	1025	U	O3'-P-O5'	-5.46	95.82	104.00
2	AB	102	ASN	CA-C-N	5.46	131.96	121.54
2	AB	102	ASN	C-N-CA	5.46	131.96	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	133	ALA	CB-CA-C	-5.46	101.58	110.85
35	BB	2213	U	P-O3'-C3'	5.46	128.38	120.20
35	BB	2728	U	C4'-C3'-C2'	-5.46	97.14	102.60
1	AA	429	U	O4'-C1'-C2'	-5.45	100.35	105.80
1	AA	1399	C	O4'-C1'-C2'	-5.45	100.35	105.80
8	AH	62	LEU	CA-C-N	5.45	129.88	122.19
8	AH	62	LEU	C-N-CA	5.45	129.88	122.19
35	BB	2017	U	C1'-O4'-C4'	-5.45	104.45	109.90
35	BB	2105	U	O3'-P-O5'	5.45	112.18	104.00
35	BB	2273	A	O4'-C1'-C2'	5.45	113.05	107.60
43	BJ	100	VAL	O-C-N	-5.45	115.75	122.57
44	BK	91	SER	N-CA-C	-5.45	99.18	110.80
46	BM	50	ARG	CA-C-O	-5.45	115.09	120.82
52	BS	40	ASN	O-C-N	5.45	129.05	122.94
1	AA	48	C	C1'-C2'-O2'	5.45	119.98	111.80
28	B3	40	HIS	CB-CG-ND1	-5.45	114.52	122.70
35	BB	1346	G	P-O5'-C5'	-5.45	112.72	120.90
1	AA	196	A	C4'-C3'-C2'	-5.45	97.15	102.60
1	AA	1145	A	N9-C1'-C2'	-5.45	105.82	114.00
11	AK	63	GLN	CA-C-O	-5.45	115.28	121.00
12	AL	71	HIS	O-C-N	-5.45	117.54	123.26
15	AO	48	ASP	CA-C-N	5.45	127.58	120.28
15	AO	48	ASP	C-N-CA	5.45	127.58	120.28
16	AP	9	HIS	CB-CG-ND1	5.45	130.88	122.70
35	BB	879	G	P-O5'-C5'	-5.45	112.73	120.90
35	BB	1337	G	O5'-C5'-C4'	5.45	119.68	111.50
35	BB	2735	G	O4'-C1'-N9	5.45	116.67	108.50
44	BK	71	ARG	O-C-N	-5.45	115.05	121.32
2	AB	15	PHE	CA-C-O	5.45	128.84	122.03
2	AB	163	ILE	CA-C-O	5.45	127.59	120.78
9	AI	38	PHE	CA-CB-CG	-5.45	108.35	113.80
32	B7	16	THR	N-CA-CB	5.45	120.31	111.21
35	BB	549	G	O4'-C1'-N9	5.45	116.67	108.50
41	BH	30	LEU	N-CA-CB	5.45	119.44	110.39
45	BL	109	LYS	N-CA-C	-5.45	100.82	109.59
1	AA	487	A	P-O5'-C5'	-5.45	112.73	120.90
35	BB	327	G	P-O3'-C3'	-5.45	112.03	120.20
35	BB	1114	C	C4'-C3'-O3'	-5.45	104.83	113.00
1	AA	669	G	C3'-C2'-O2'	5.45	118.87	110.70
1	AA	753	A	C3'-C2'-O2'	-5.45	106.43	114.60
5	AE	84	VAL	O-C-N	-5.45	117.58	123.14
35	BB	983	A	C3'-C2'-C1'	5.45	106.75	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1208	C	O4'-C1'-N1	5.45	116.67	108.50
35	BB	2295	C	C4'-C3'-C2'	-5.45	97.16	102.60
35	BB	2809	A	C5'-C4'-C3'	5.45	124.17	116.00
38	BE	65	THR	N-CA-C	-5.45	100.46	108.79
35	BB	143	C	P-O5'-C5'	5.44	129.07	120.90
35	BB	352	A	O3'-P-O5'	-5.44	95.83	104.00
35	BB	1602	U	C5'-C4'-O4'	5.44	117.27	109.10
35	BB	1938	A	O4'-C1'-N9	5.44	116.37	108.20
43	BJ	13	ARG	CA-C-N	5.44	131.11	122.62
43	BJ	13	ARG	C-N-CA	5.44	131.11	122.62
1	AA	1041	G	O3'-P-O5'	-5.44	95.84	104.00
1	AA	1180	A	P-O3'-C3'	5.44	128.36	120.20
1	AA	1311	A	P-O3'-C3'	-5.44	112.04	120.20
6	AF	29	ILE	CA-C-N	5.44	127.89	120.54
6	AF	29	ILE	C-N-CA	5.44	127.89	120.54
20	AT	66	ILE	CB-CG1-CD1	5.44	125.23	113.80
31	B6	29	GLN	OE1-CD-NE2	5.44	128.04	122.60
34	BA	38	C	O4'-C1'-N1	5.44	116.67	108.50
35	BB	1021	A	P-O3'-C3'	5.44	128.36	120.20
35	BB	1331	G	O4'-C1'-N9	5.44	116.67	108.50
38	BE	151	GLY	CA-C-O	5.44	125.92	119.50
1	AA	677	U	C5'-C4'-C3'	-5.44	107.84	116.00
25	B0	37	PHE	CA-CB-CG	-5.44	108.36	113.80
26	B1	15	ASN	CA-C-O	-5.44	111.98	119.05
35	BB	1528	A	O5'-C5'-C4'	-5.44	103.34	111.50
35	BB	1774	C	O4'-C4'-C3'	5.44	109.44	104.00
35	BB	2265	U	O4'-C4'-C3'	-5.44	98.56	104.00
35	BB	2674	G	P-O3'-C3'	-5.44	112.04	120.20
36	BC	19	VAL	N-CA-C	-5.44	98.02	109.34
38	BE	158	PHE	CB-CA-C	-5.44	101.60	110.85
40	BG	132	LEU	N-CA-C	-5.44	99.57	108.76
2	AB	190	SER	CA-C-O	5.44	126.57	120.70
35	BB	1267	U	O5'-C5'-C4'	-5.44	103.34	111.50
35	BB	1277	G	O4'-C1'-N9	5.44	116.66	108.50
35	BB	2823	A	O4'-C1'-C2'	-5.44	102.16	107.60
36	BC	135	PRO	CB-CA-C	5.44	118.41	110.63
44	BK	33	ALA	N-CA-CB	5.44	119.68	110.49
50	BQ	89	ILE	CA-C-O	-5.44	115.01	121.05
1	AA	210	C	C3'-C2'-C1'	-5.44	96.06	101.50
1	AA	673	A	O3'-P-O5'	-5.44	95.84	104.00
1	AA	1005	A	C5'-C4'-C3'	-5.44	107.84	116.00
1	AA	1398	A	O3'-P-O5'	-5.44	95.84	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AO	41	HIS	CG-CD2-NE2	-5.44	101.76	107.20
35	BB	700	G	O3'-P-O5'	-5.44	95.84	104.00
35	BB	837	C	O4'-C1'-N1	5.44	116.66	108.50
35	BB	2551	C	O4'-C4'-C3'	5.44	109.44	104.00
35	BB	2554	U	P-O5'-C5'	5.44	129.06	120.90
35	BB	97	C	C5'-C4'-O4'	-5.44	101.65	109.80
35	BB	1357	C	O4'-C1'-N1	5.44	116.65	108.50
45	BL	61	LEU	N-CA-C	-5.44	101.78	110.10
1	AA	146	G	O4'-C1'-N9	5.43	116.65	108.50
35	BB	237	C	O4'-C1'-N1	5.43	116.65	108.50
35	BB	1968	G	O5'-C5'-C4'	-5.43	103.35	111.50
37	BD	171	THR	CA-C-N	5.43	128.17	122.14
37	BD	171	THR	C-N-CA	5.43	128.17	122.14
1	AA	156	C	C1'-O4'-C4'	5.43	115.33	109.90
1	AA	868	C	P-O5'-C5'	-5.43	112.75	120.90
4	AD	144	ILE	CA-CB-CG2	5.43	119.73	110.50
35	BB	726	G	P-O5'-C5'	5.43	129.05	120.90
35	BB	1615	C	O4'-C1'-C2'	5.43	111.23	105.80
37	BD	184	ARG	NE-CZ-NH1	-5.43	116.07	121.50
46	BM	48	ALA	CA-C-O	5.43	126.24	120.10
46	BM	87	GLY	O-C-N	5.43	129.76	122.70
1	AA	5	U	C5'-C4'-C3'	5.43	123.35	115.20
1	AA	1141	C	C4'-C3'-C2'	-5.43	97.17	102.60
35	BB	486	C	O4'-C1'-N1	5.43	116.65	108.50
35	BB	1212	G	C3'-C2'-C1'	5.43	106.93	101.50
35	BB	1601	G	N9-C1'-C2'	5.43	120.15	112.00
6	AF	40	GLU	CA-C-N	5.43	130.74	122.11
6	AF	40	GLU	C-N-CA	5.43	130.74	122.11
18	AR	67	LEU	CA-C-N	5.43	125.33	119.85
18	AR	67	LEU	C-N-CA	5.43	125.33	119.85
20	AT	16	ALA	CB-CA-C	-5.43	102.60	110.96
22	AV	31	C	C4'-C3'-O3'	-5.43	104.85	113.00
35	BB	608	A	N9-C1'-C2'	5.43	120.14	112.00
35	BB	627	A	O4'-C4'-C3'	-5.43	100.67	106.10
35	BB	914	G	O4'-C1'-C2'	5.43	113.03	107.60
35	BB	2184	A	O4'-C1'-C2'	-5.43	102.17	107.60
35	BB	2523	G	C4'-C3'-O3'	-5.43	104.86	113.00
35	BB	2653	U	O4'-C1'-N1	5.43	116.64	108.50
35	BB	2903	U	O4'-C1'-N1	5.43	116.64	108.50
1	AA	354	G	C4'-C3'-O3'	-5.43	104.86	113.00
1	AA	1207	G	C4'-C3'-C2'	-5.43	97.17	102.60
35	BB	742	A	O4'-C4'-C3'	-5.43	98.57	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1107	G	O3'-P-O5'	5.43	112.14	104.00
35	BB	544	C	C4'-C3'-O3'	-5.43	104.86	113.00
35	BB	1344	U	P-O3'-C3'	-5.43	112.06	120.20
35	BB	2146	C	O4'-C4'-C3'	5.43	109.43	104.00
36	BC	63	ILE	N-CA-C	-5.43	99.74	107.77
25	B0	69	GLU	N-CA-C	-5.42	101.33	109.79
35	BB	149	A	C4'-C3'-O3'	-5.42	104.86	113.00
35	BB	1201	U	C3'-C2'-C1'	-5.42	95.88	101.30
35	BB	1358	G	O4'-C1'-N9	5.42	116.64	108.50
35	BB	1997	C	O4'-C1'-N1	5.42	116.64	108.50
43	BJ	67	ASN	OD1-CG-ND2	5.42	128.02	122.60
1	AA	1210	C	O4'-C1'-N1	5.42	116.63	108.50
8	AH	27	PRO	O-C-N	-5.42	116.77	123.01
26	B1	38	GLN	N-CA-C	-5.42	102.06	109.71
1	AA	909	A	O5'-C5'-C4'	-5.42	103.37	111.50
4	AD	111	ALA	CA-C-N	5.42	128.09	120.28
4	AD	111	ALA	C-N-CA	5.42	128.09	120.28
11	AK	17	ASP	CB-CA-C	5.42	120.71	109.38
27	B2	22	THR	CA-C-N	5.42	127.86	120.54
27	B2	22	THR	C-N-CA	5.42	127.86	120.54
35	BB	47	C	O5'-C5'-C4'	-5.42	103.37	111.50
35	BB	1301	A	O4'-C4'-C3'	-5.42	100.68	106.10
35	BB	2715	C	C4'-C3'-O3'	-5.42	104.87	113.00
37	BD	90	PHE	N-CA-C	-5.42	101.05	109.24
1	AA	147	G	C4'-C3'-O3'	-5.42	104.87	113.00
1	AA	630	A	P-O3'-C3'	5.42	128.33	120.20
1	AA	1239	A	O5'-C5'-C4'	-5.42	103.57	111.70
35	BB	198	C	O4'-C1'-N1	5.42	116.63	108.50
35	BB	2844	G	C5'-C4'-C3'	-5.42	107.87	116.00
1	AA	686	U	P-O3'-C3'	5.42	128.33	120.20
1	AA	1404	C	C4'-C3'-O3'	-5.42	104.87	113.00
12	AL	122	LYS	N-CA-C	-5.42	105.45	111.36
35	BB	1664	A	C5'-C4'-O4'	5.42	117.93	109.80
35	BB	1670	C	O4'-C1'-N1	5.42	116.63	108.50
35	BB	2003	A	O4'-C1'-N9	5.42	116.63	108.50
35	BB	2037	A	O4'-C1'-C2'	-5.42	102.18	107.60
35	BB	2135	A	P-O3'-C3'	5.42	128.33	120.20
35	BB	2396	G	C5'-C4'-C3'	-5.42	107.87	116.00
35	BB	2419	U	P-O3'-C3'	-5.42	112.07	120.20
38	BE	158	PHE	CA-C-O	5.42	126.16	120.42
46	BM	3	GLN	OE1-CD-NE2	-5.42	117.18	122.60
1	AA	1221	G	C4'-C3'-C2'	-5.42	97.18	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AB	193	ASP	O-C-N	5.42	130.27	123.23
24	AZ	5	ALA	O-C-N	-5.42	114.33	123.00
34	BA	79	G	C5'-C4'-C3'	-5.42	107.88	116.00
35	BB	1067	A	O4'-C1'-N9	5.42	116.62	108.50
35	BB	1337	G	C1'-O4'-C4'	5.42	115.32	109.90
38	BE	92	HIS	N-CA-C	-5.42	104.27	112.99
41	BH	95	GLY	CA-C-N	5.42	131.88	121.54
41	BH	95	GLY	C-N-CA	5.42	131.88	121.54
50	BQ	71	ASN	CB-CG-ND2	-5.42	108.28	116.40
1	AA	1374	A	O4'-C1'-N9	5.42	116.62	108.50
35	BB	679	C	P-O5'-C5'	-5.42	112.78	120.90
35	BB	2807	U	O3'-P-O5'	-5.42	95.88	104.00
36	BC	216	ARG	N-CA-C	-5.42	102.27	110.50
47	BN	30	ARG	CA-C-O	-5.42	114.14	120.20
1	AA	492	C	O4'-C1'-N1	5.41	116.62	108.50
20	AT	83	ASN	CB-CA-C	-5.41	101.65	110.85
35	BB	1664	A	C1'-O4'-C4'	-5.41	104.49	109.90
35	BB	2099	U	P-O3'-C3'	-5.41	112.08	120.20
38	BE	174	GLY	CA-C-N	5.41	127.75	120.50
38	BE	174	GLY	C-N-CA	5.41	127.75	120.50
1	AA	724	G	O4'-C1'-C2'	-5.41	102.19	107.60
1	AA	1383	C	P-O3'-C3'	-5.41	112.08	120.20
1	AA	1430	A	P-O3'-C3'	-5.41	112.08	120.20
30	B5	181	ASP	CA-CB-CG	5.41	118.01	112.60
35	BB	1268	A	C4'-C3'-O3'	-5.41	104.88	113.00
1	AA	452	A	O3'-P-O5'	5.41	112.11	104.00
1	AA	520	A	C4'-C3'-O3'	-5.41	104.88	113.00
29	B4	20	TYR	CB-CG-CD1	-5.41	112.69	120.80
35	BB	1045	C	P-O3'-C3'	5.41	128.31	120.20
35	BB	1188	U	O4'-C4'-C3'	-5.41	98.59	104.00
35	BB	1527	G	C1'-O4'-C4'	5.41	115.31	109.90
35	BB	2869	G	C4'-C3'-C2'	-5.41	97.19	102.60
54	BU	84	PHE	CB-CG-CD2	-5.41	111.50	120.70
1	AA	28	A	O4'-C1'-N9	5.41	116.61	108.50
1	AA	141	G	P-O5'-C5'	-5.41	112.79	120.90
1	AA	1514	G	C4'-C3'-C2'	-5.41	97.19	102.60
11	AK	82	GLU	CA-C-N	5.41	127.82	120.63
11	AK	82	GLU	C-N-CA	5.41	127.82	120.63
12	AL	58	ASN	N-CA-C	-5.41	105.90	112.88
19	AS	17	LYS	N-CA-C	-5.41	104.80	111.40
35	BB	1683	U	P-O5'-C5'	5.41	129.01	120.90
35	BB	2132	U	C3'-C2'-C1'	-5.41	95.89	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BH	45	GLU	CA-C-N	5.41	127.79	120.65
41	BH	45	GLU	C-N-CA	5.41	127.79	120.65
37	BD	48	ILE	CA-CB-CG2	-5.41	101.31	110.50
35	BB	71	A	C3'-C2'-C1'	-5.41	96.09	101.50
35	BB	359	G	O4'-C4'-C3'	-5.41	98.59	104.00
35	BB	908	C	O4'-C1'-N1	5.41	116.61	108.50
35	BB	1343	G	C4'-C3'-C2'	5.41	108.01	102.60
35	BB	1471	G	O3'-P-O5'	-5.41	95.89	104.00
35	BB	1555	G	C4'-C3'-O3'	-5.41	104.89	113.00
35	BB	2263	C	O4'-C1'-N1	5.41	116.61	108.50
36	BC	104	LEU	N-CA-CB	5.41	118.07	110.12
1	AA	672	U	O4'-C1'-N1	5.40	116.61	108.50
2	AB	175	ALA	CB-CA-C	-5.40	103.63	111.14
35	BB	420	C	P-O5'-C5'	-5.40	112.79	120.90
1	AA	167	A	P-O3'-C3'	-5.40	112.09	120.20
1	AA	911	U	O4'-C1'-N1	5.40	116.60	108.50
1	AA	996	A	C4'-C3'-C2'	-5.40	97.20	102.60
2	AB	93	HIS	CB-CG-ND1	-5.40	114.60	122.70
8	AH	82	LEU	N-CA-C	-5.40	99.29	110.80
18	AR	21	ASP	O-C-N	5.40	128.93	123.26
35	BB	685	A	C2'-C3'-O3'	5.40	117.60	109.50
27	B2	47	ILE	CA-C-O	-5.40	115.43	121.05
35	BB	92	U	O4'-C1'-N1	5.40	116.60	108.50
35	BB	283	G	O4'-C1'-N9	5.40	116.60	108.50
35	BB	520	G	O5'-C5'-C4'	-5.40	103.40	111.50
35	BB	1056	G	C5'-C4'-C3'	5.40	124.10	116.00
35	BB	2338	C	C5'-C4'-C3'	5.40	124.10	116.00
35	BB	2524	G	O4'-C1'-C2'	-5.40	102.20	107.60
35	BB	2600	A	C4'-C3'-O3'	-5.40	104.90	113.00
37	BD	157	LYS	N-CA-CB	5.40	118.32	109.95
54	BU	84	PHE	CA-C-O	5.40	126.79	120.20
1	AA	278	G	C4'-C3'-C2'	-5.40	97.20	102.60
35	BB	844	A	C1'-O4'-C4'	-5.40	104.50	109.90
35	BB	1042	G	O5'-C5'-C4'	-5.40	103.40	111.50
1	AA	278	G	O4'-C1'-C2'	-5.40	102.20	107.60
1	AA	1432	G	O4'-C1'-N9	5.40	116.60	108.50
35	BB	1263	U	C4'-C3'-O3'	-5.40	104.90	113.00
38	BE	182	ALA	CA-C-N	5.40	131.85	121.54
38	BE	182	ALA	C-N-CA	5.40	131.85	121.54
46	BM	101	VAL	N-CA-C	-5.40	101.87	109.21
1	AA	696	A	O4'-C1'-N9	5.40	116.59	108.50
4	AD	2	ARG	NE-CZ-NH2	-5.40	114.34	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BL	126	ARG	NE-CZ-NH1	5.40	126.90	121.50
1	AA	1260	G	O5'-C5'-C4'	-5.39	103.41	111.50
7	AG	25	PHE	CA-CB-CG	-5.39	108.41	113.80
30	B5	95	VAL	N-CA-CB	-5.39	105.10	111.90
30	B5	111	PHE	CA-CB-CG	-5.39	108.41	113.80
35	BB	504	A	C1'-O4'-C4'	5.39	115.09	109.70
35	BB	604	G	O4'-C1'-N9	5.39	116.59	108.50
35	BB	1561	C	C4'-C3'-O3'	-5.39	104.91	113.00
35	BB	2454	G	C4'-C3'-O3'	-5.39	104.91	113.00
35	BB	2467	C	O4'-C1'-N1	5.39	116.59	108.50
49	BP	73	PHE	CA-CB-CG	-5.39	108.41	113.80
50	BQ	3	VAL	N-CA-C	-5.39	100.56	108.11
51	BR	58	VAL	CA-CB-CG1	-5.39	101.23	110.40
1	AA	107	G	O4'-C1'-C2'	-5.39	102.21	107.60
1	AA	337	G	O4'-C1'-N9	5.39	116.59	108.50
1	AA	1067	A	C5'-C4'-O4'	5.39	117.19	109.10
2	AB	214	GLY	N-CA-C	5.39	119.17	112.64
3	AC	163	ARG	NE-CZ-NH2	-5.39	114.35	119.20
7	AG	16	LYS	CG-CD-CE	5.39	123.70	111.30
13	AM	11	HIS	N-CA-CB	5.39	119.60	110.49
35	BB	1383	A	C2'-C3'-O3'	5.39	121.79	113.70
35	BB	2492	U	P-O3'-C3'	-5.39	112.11	120.20
44	BK	13	ASN	CA-C-O	-5.39	114.01	120.10
46	BM	70	ASP	O-C-N	-5.39	116.39	122.10
35	BB	2513	A	O3'-P-O5'	-5.39	95.91	104.00
1	AA	569	C	P-O3'-C3'	-5.39	112.12	120.20
9	AI	111	GLU	CA-C-N	5.39	128.36	120.71
9	AI	111	GLU	C-N-CA	5.39	128.36	120.71
34	BA	53	A	O4'-C1'-N9	5.39	116.58	108.50
35	BB	1304	A	C1'-O4'-C4'	5.39	115.29	109.90
35	BB	1535	A	O4'-C1'-N9	5.39	116.29	108.20
35	BB	2519	U	O3'-P-O5'	-5.39	95.92	104.00
39	BF	62	GLN	CB-CA-C	-5.39	100.59	110.62
49	BP	106	ALA	N-CA-C	-5.39	106.38	113.17
1	AA	1428	A	C4'-C3'-C2'	-5.39	97.21	102.60
35	BB	514	A	C3'-C2'-C1'	5.39	106.69	101.30
35	BB	910	A	O5'-C5'-C4'	-5.39	103.42	111.50
35	BB	1244	A	P-O3'-C3'	-5.39	112.12	120.20
35	BB	2172	U	P-O3'-C3'	-5.39	112.12	120.20
15	AO	80	LEU	N-CA-C	5.38	117.15	111.28
34	BA	69	G	O4'-C1'-N9	5.38	116.58	108.50
35	BB	718	A	O4'-C4'-C3'	-5.38	98.62	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1182	G	O4'-C4'-C3'	-5.38	98.62	104.00
45	BL	71	ALA	CA-C-N	5.38	128.03	120.28
45	BL	71	ALA	C-N-CA	5.38	128.03	120.28
19	AS	70	LEU	N-CA-C	-5.38	106.88	113.50
35	BB	283	G	P-O5'-C5'	5.38	128.97	120.90
35	BB	1023	U	O4'-C4'-C3'	-5.38	98.62	104.00
35	BB	1843	C	C4'-C3'-C2'	-5.38	97.22	102.60
1	AA	420	U	P-O3'-C3'	5.38	128.27	120.20
1	AA	660	C	P-O5'-C5'	5.38	128.97	120.90
1	AA	773	G	P-O5'-C5'	-5.38	112.83	120.90
35	BB	1458	U	C2'-C3'-O3'	5.38	117.57	109.50
35	BB	1649	G	O4'-C1'-N9	5.38	116.57	108.50
35	BB	2524	G	O4'-C1'-N9	5.38	116.57	108.50
38	BE	117	ARG	CD-NE-CZ	-5.38	116.87	124.40
8	AH	4	ASP	CA-C-N	5.38	126.56	119.84
8	AH	4	ASP	C-N-CA	5.38	126.56	119.84
35	BB	543	G	O4'-C4'-C3'	5.38	109.38	104.00
1	AA	100	G	P-O5'-C5'	-5.38	112.83	120.90
1	AA	260	G	O4'-C1'-N9	5.38	116.57	108.50
1	AA	1183	U	O4'-C4'-C3'	-5.38	98.62	104.00
35	BB	787	C	C5'-C4'-C3'	-5.38	107.93	116.00
35	BB	1205	A	O4'-C1'-C2'	5.38	111.18	105.80
35	BB	1946	U	C1'-C2'-O2'	5.38	116.47	108.40
37	BD	48	ILE	N-CA-C	-5.38	100.73	108.42
38	BE	125	SER	N-CA-CB	5.38	117.91	110.17
56	BY	69	GLU	CA-C-N	5.38	127.91	120.49
56	BY	69	GLU	C-N-CA	5.38	127.91	120.49
1	AA	659	U	C4'-C3'-O3'	-5.38	104.93	113.00
1	AA	1495	U	O3'-P-O5'	-5.38	95.94	104.00
3	AC	166	TRP	CD2-CE2-CZ2	-5.38	117.02	122.40
7	AG	99	ALA	CB-CA-C	-5.38	102.44	110.88
10	AJ	73	LEU	CB-CA-C	-5.38	103.31	110.79
35	BB	188	G	P-O5'-C5'	-5.38	112.84	120.90
35	BB	687	C	C5'-C4'-C3'	-5.38	107.94	116.00
35	BB	913	U	O4'-C4'-C3'	-5.38	100.72	106.10
35	BB	1515	A	O4'-C4'-C3'	-5.38	98.62	104.00
35	BB	1795	C	P-O5'-C5'	5.38	128.96	120.90
35	BB	2097	A	O5'-C5'-C4'	-5.38	103.44	111.50
54	BU	73	ASN	N-CA-C	-5.38	101.24	109.41
1	AA	1266	G	P-O5'-C5'	-5.38	112.84	120.90
35	BB	315	G	O4'-C4'-C3'	-5.38	98.62	104.00
35	BB	1424	G	C3'-C2'-C1'	5.38	106.67	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	BJ	106	LYS	O-C-N	-5.38	116.44	122.03
1	AA	166	U	O4'-C1'-N1	5.37	116.56	108.50
1	AA	708	C	O4'-C1'-N1	5.37	116.56	108.50
13	AM	24	VAL	CA-C-O	-5.37	114.59	120.72
34	BA	29	A	O4'-C1'-N9	5.37	116.56	108.50
35	BB	92	U	C4'-C3'-C2'	-5.37	97.23	102.60
35	BB	149	A	O3'-P-O5'	-5.37	95.94	104.00
35	BB	633	A	C4'-C3'-O3'	-5.37	104.94	113.00
35	BB	1198	U	C4'-C3'-C2'	-5.37	97.23	102.60
35	BB	1416	G	O4'-C1'-N9	5.37	116.26	108.20
35	BB	2604	U	O4'-C1'-N1	5.37	116.56	108.50
35	BB	2822	G	C4'-C3'-O3'	-5.37	104.94	113.00
40	BG	159	LYS	O-C-N	-5.37	116.20	122.81
40	BG	166	GLU	N-CA-C	-5.37	99.97	108.73
45	BL	135	ILE	CA-C-O	5.37	125.23	119.91
52	BS	58	ALA	N-CA-C	-5.37	106.68	113.18
6	AF	37	HIS	CE1-NE2-CD2	-5.37	103.63	109.00
12	AL	85	ARG	CA-C-N	5.37	130.32	122.69
12	AL	85	ARG	C-N-CA	5.37	130.32	122.69
35	BB	532	A	P-O3'-C3'	5.37	128.26	120.20
35	BB	1880	U	O4'-C1'-C2'	-5.37	102.23	107.60
1	AA	376	G	C4'-C3'-C2'	-5.37	97.23	102.60
1	AA	1078	U	O4'-C1'-N1	5.37	116.56	108.50
5	AE	13	LYS	N-CA-CB	5.37	120.63	111.66
8	AH	34	ALA	CA-C-N	5.37	128.42	120.74
8	AH	34	ALA	C-N-CA	5.37	128.42	120.74
34	BA	47	C	C4'-C3'-O3'	-5.37	104.94	113.00
1	AA	182	A	O4'-C1'-N9	5.37	116.25	108.20
1	AA	914	A	P-O3'-C3'	-5.37	112.15	120.20
4	AD	26	ALA	CA-C-O	5.37	126.23	120.32
35	BB	1509	A	P-O5'-C5'	-5.37	112.85	120.90
36	BC	242	HIS	CG-ND1-CE1	-5.37	100.17	109.30
50	BQ	38	VAL	N-CA-C	5.37	116.10	110.62
14	AN	83	VAL	N-CA-CB	5.37	120.09	111.23
35	BB	1275	A	O4'-C4'-C3'	-5.37	98.63	104.00
50	BQ	104	ALA	O-C-N	5.37	127.60	122.07
1	AA	207	C	O4'-C4'-C3'	-5.37	98.63	104.00
1	AA	387	U	P-O5'-C5'	-5.37	112.85	120.90
1	AA	751	U	O4'-C1'-N1	5.37	116.55	108.50
13	AM	105	ALA	N-CA-CB	5.37	119.56	110.49
35	BB	113	U	O5'-C5'-C4'	-5.37	103.45	111.50
35	BB	152	A	P-O3'-C3'	-5.37	112.15	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1382	G	O4'-C4'-C3'	-5.37	98.63	104.00
35	BB	2127	G	C5'-C4'-O4'	-5.37	101.75	109.80
35	BB	2324	U	P-O3'-C3'	5.37	128.25	120.20
35	BB	2530	A	O4'-C1'-C2'	-5.37	102.23	107.60
37	BD	98	VAL	CA-C-N	5.37	128.01	120.28
37	BD	98	VAL	C-N-CA	5.37	128.01	120.28
1	AA	792	A	C3'-C2'-C1'	-5.36	96.14	101.50
1	AA	1450	U	C1'-C2'-O2'	5.36	116.45	108.40
35	BB	469	G	C5'-C4'-O4'	5.36	117.84	109.80
35	BB	1216	G	C4'-C3'-O3'	-5.36	104.95	113.00
39	BF	143	ASP	CB-CA-C	-5.36	101.73	110.85
39	BF	162	ASP	CA-CB-CG	5.36	117.96	112.60
48	BO	109	ALA	N-CA-C	-5.36	106.41	113.17
26	B1	19	LEU	N-CA-C	5.36	116.93	111.14
35	BB	1286	A	P-O5'-C5'	-5.36	112.86	120.90
35	BB	2137	U	P-O5'-C5'	5.36	128.94	120.90
54	BU	91	LYS	N-CA-CB	5.36	117.89	109.69
56	BY	42	THR	N-CA-CB	5.36	118.56	110.30
35	BB	1144	A	C4'-C3'-O3'	-5.36	104.96	113.00
35	BB	1319	C	O4'-C1'-N1	5.36	116.54	108.50
35	BB	2902	C	O3'-P-O5'	-5.36	95.96	104.00
46	BM	11	LYS	N-CA-C	-5.36	101.61	109.81
49	BP	74	GLN	CA-C-O	5.36	125.30	119.24
1	AA	88	U	O4'-C1'-N1	5.36	116.54	108.50
34	BA	106	G	C3'-C2'-O2'	5.36	118.74	110.70
35	BB	565	C	O4'-C1'-N1	5.36	116.54	108.50
35	BB	880	G	P-O5'-C5'	-5.36	112.86	120.90
1	AA	1031	C	P-O3'-C3'	5.36	128.24	120.20
6	AF	54	LEU	CA-C-N	5.36	130.65	122.24
6	AF	54	LEU	C-N-CA	5.36	130.65	122.24
15	AO	56	LEU	CA-C-N	5.36	127.72	120.38
15	AO	56	LEU	C-N-CA	5.36	127.72	120.38
25	B0	24	THR	N-CA-CB	5.36	119.55	110.49
35	BB	63	A	O3'-P-O5'	-5.36	95.96	104.00
35	BB	1874	C	C4'-C3'-C2'	-5.36	97.24	102.60
37	BD	174	SER	CA-C-N	5.36	131.77	121.54
37	BD	174	SER	C-N-CA	5.36	131.77	121.54
38	BE	108	ILE	CA-C-N	5.36	127.72	120.65
38	BE	108	ILE	C-N-CA	5.36	127.72	120.65
52	BS	21	ALA	N-CA-C	-5.36	105.34	111.07
1	AA	15	G	C1'-O4'-C4'	5.36	115.26	109.90
1	AA	198	G	C3'-C2'-O2'	5.36	118.73	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1203	C	O4'-C1'-N1	5.36	116.53	108.50
4	AD	145	ARG	CA-C-N	5.36	131.77	121.54
4	AD	145	ARG	C-N-CA	5.36	131.77	121.54
18	AR	56	ARG	NE-CZ-NH1	5.36	126.86	121.50
30	B5	173	THR	CA-C-N	5.36	130.02	121.66
30	B5	173	THR	C-N-CA	5.36	130.02	121.66
35	BB	665	U	C4'-C3'-O3'	-5.36	104.97	113.00
35	BB	682	G	P-O3'-C3'	-5.36	112.17	120.20
35	BB	1800	C	O5'-C5'-C4'	-5.36	103.67	111.70
35	BB	1825	U	O4'-C1'-N1	5.36	116.53	108.50
35	BB	2185	U	C3'-C2'-C1'	-5.36	95.94	101.30
35	BB	2646	C	C3'-C2'-O2'	5.36	118.73	110.70
36	BC	229	HIS	CA-C-O	-5.36	112.82	120.16
37	BD	193	VAL	CA-C-N	5.36	126.53	119.84
37	BD	193	VAL	C-N-CA	5.36	126.53	119.84
1	AA	80	A	P-O3'-C3'	5.35	128.23	120.20
35	BB	2336	A	C2'-C3'-O3'	5.35	117.53	109.50
4	AD	33	ILE	N-CA-CB	5.35	119.33	111.52
20	AT	73	ARG	CD-NE-CZ	5.35	131.89	124.40
33	B8	9	LYS	N-CA-C	-5.35	103.33	110.55
35	BB	1641	A	O5'-C5'-C4'	-5.35	103.47	111.50
35	BB	1781	U	O4'-C1'-N1	5.35	116.23	108.20
36	BC	115	ILE	CB-CA-C	-5.35	102.65	110.62
45	BL	69	ARG	CA-C-N	5.35	131.67	122.09
45	BL	69	ARG	C-N-CA	5.35	131.67	122.09
35	BB	686	U	C4'-C3'-C2'	-5.35	97.25	102.60
35	BB	1372	U	C4'-C3'-C2'	-5.35	97.25	102.60
39	BF	21	TYR	CB-CG-CD2	5.35	128.83	120.80
45	BL	50	PHE	CB-CA-C	5.35	118.47	109.48
1	AA	1223	C	C5'-C4'-O4'	5.35	117.82	109.80
3	AC	93	ILE	CA-CB-CG1	5.35	119.49	110.40
10	AJ	30	LYS	CA-C-N	5.35	127.45	120.28
10	AJ	30	LYS	C-N-CA	5.35	127.45	120.28
35	BB	926	G	P-O5'-C5'	5.35	128.92	120.90
35	BB	1867	G	C4'-C3'-C2'	-5.35	97.25	102.60
35	BB	1960	A	O5'-C5'-C4'	-5.35	103.47	111.50
36	BC	259	ASN	CA-CB-CG	-5.35	107.25	112.60
1	AA	1262	C	O4'-C1'-N1	5.35	116.52	108.50
1	AA	1510	C	O4'-C1'-N1	5.35	116.52	108.50
35	BB	1254	A	C2'-C3'-O3'	5.35	121.72	113.70
35	BB	1864	U	C4'-C3'-O3'	-5.35	104.98	113.00
35	BB	2078	C	O4'-C1'-N1	5.35	116.52	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	BC	52	HIS	CB-CG-ND1	-5.35	114.68	122.70
39	BF	4	HIS	CA-C-O	-5.35	115.18	120.90
49	BP	99	LEU	CA-C-O	-5.35	113.05	119.15
56	BY	54	ARG	CA-C-O	5.35	126.22	120.55
35	BB	1254	A	C3'-C2'-C1'	5.35	106.65	101.30
52	BS	94	ASP	CA-CB-CG	5.35	117.95	112.60
1	AA	341	C	P-O3'-C3'	-5.34	112.18	120.20
25	B0	73	ARG	NE-CZ-NH1	-5.34	116.16	121.50
35	BB	1437	C	O4'-C1'-N1	5.34	116.52	108.50
35	BB	2295	C	O5'-C5'-C4'	-5.34	103.48	111.50
12	AL	95	HIS	CA-C-N	5.34	130.09	122.72
12	AL	95	HIS	C-N-CA	5.34	130.09	122.72
35	BB	543	G	P-O5'-C5'	-5.34	112.89	120.90
44	BK	4	GLU	CB-CG-CD	-5.34	103.52	112.60
48	BO	2	ASP	CA-C-N	5.34	127.70	120.38
48	BO	2	ASP	C-N-CA	5.34	127.70	120.38
1	AA	320	A	O3'-P-O5'	5.34	112.01	104.00
1	AA	1250	A	C4'-C3'-O3'	-5.34	104.99	113.00
12	AL	118	VAL	N-CA-C	-5.34	98.23	109.34
29	B4	30	PRO	CA-C-N	5.34	128.29	120.71
29	B4	30	PRO	C-N-CA	5.34	128.29	120.71
35	BB	1486	U	P-O5'-C5'	5.34	128.91	120.90
35	BB	2300	C	O4'-C1'-N1	5.34	116.51	108.50
1	AA	695	A	C4'-C3'-C2'	-5.34	97.26	102.60
1	AA	745	G	C5'-C4'-C3'	-5.34	107.99	116.00
18	AR	41	SER	N-CA-C	-5.34	106.61	113.23
35	BB	1257	C	O4'-C1'-C2'	-5.34	102.26	107.60
35	BB	1752	C	P-O5'-C5'	5.34	128.91	120.90
35	BB	1950	G	O3'-P-O5'	-5.34	95.99	104.00
52	BS	50	VAL	CA-C-N	5.34	131.74	121.54
52	BS	50	VAL	C-N-CA	5.34	131.74	121.54
34	BA	118	C	C4'-C3'-C2'	-5.34	97.26	102.60
35	BB	1030	C	C1'-C2'-O2'	-5.34	100.39	108.40
35	BB	2823	A	O5'-C5'-C4'	-5.34	103.49	111.50
1	AA	1075	U	C3'-C2'-O2'	5.34	118.71	110.70
2	AB	72	LYS	N-CA-CB	5.34	119.51	110.49
2	AB	146	SER	CB-CA-C	-5.34	100.06	109.02
4	AD	98	ASP	N-CA-C	5.34	119.28	112.34
17	AQ	23	ALA	CA-C-O	-5.34	114.60	120.36
20	AT	62	ALA	O-C-N	5.34	127.57	122.07
35	BB	122	G	P-O5'-C5'	5.34	128.91	120.90
35	BB	1188	U	C4'-C3'-O3'	-5.34	105.00	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2370	G	O4'-C1'-N9	5.34	116.51	108.50
35	BB	2618	G	C4'-C3'-O3'	-5.34	105.00	113.00
37	BD	185	ASN	CA-CB-CG	-5.34	107.26	112.60
47	BN	72	ASP	CA-CB-CG	-5.34	107.26	112.60
1	AA	1004	A	C5'-C4'-C3'	5.33	124.00	116.00
2	AB	110	ILE	CA-C-O	5.33	123.77	119.29
3	AC	21	TRP	CZ3-CH2-CZ2	5.33	128.44	121.50
4	AD	154	VAL	CA-C-O	-5.33	115.19	120.85
32	B7	53	ASP	N-CA-CB	5.33	119.51	110.49
35	BB	865	C	O3'-P-O5'	-5.33	96.00	104.00
35	BB	1629	U	C1'-C2'-O2'	5.33	116.40	108.40
35	BB	2382	G	C1'-C2'-O2'	-5.33	103.80	111.80
1	AA	443	C	P-O3'-C3'	-5.33	112.20	120.20
1	AA	817	C	C2'-C3'-O3'	5.33	117.50	109.50
4	AD	164	ARG	N-CA-CB	5.33	118.65	110.70
18	AR	60	ARG	O-C-N	5.33	127.79	122.08
35	BB	857	G	O4'-C1'-N9	5.33	116.50	108.50
35	BB	999	U	O4'-C1'-N1	5.33	116.50	108.50
35	BB	1434	A	C5'-C4'-O4'	-5.33	101.80	109.80
35	BB	1998	A	C4'-C3'-O3'	-5.33	105.00	113.00
35	BB	2124	G	C5'-C4'-C3'	5.33	124.00	116.00
35	BB	2457	U	C4'-C3'-O3'	-5.33	105.00	113.00
38	BE	157	LEU	CA-C-N	5.33	127.86	120.29
38	BE	157	LEU	C-N-CA	5.33	127.86	120.29
1	AA	407	U	C5'-C4'-C3'	-5.33	108.00	116.00
4	AD	84	ASN	OD1-CG-ND2	-5.33	117.27	122.60
4	AD	192	ALA	N-CA-CB	5.33	119.50	110.49
14	AN	64	ARG	NE-CZ-NH2	5.33	124.00	119.20
26	B1	44	LYS	CA-C-O	5.33	126.42	120.82
35	BB	1149	G	C3'-C2'-C1'	5.33	106.63	101.30
37	BD	183	GLU	CA-C-O	5.33	124.38	118.52
44	BK	90	ASN	N-CA-CB	5.33	118.38	110.49
1	AA	993	G	O4'-C1'-N9	5.33	116.19	108.20
19	AS	73	PHE	CA-CB-CG	-5.33	108.47	113.80
35	BB	183	C	O4'-C4'-C3'	5.33	109.33	104.00
35	BB	2650	U	O4'-C1'-N1	5.33	116.50	108.50
36	BC	238	ASN	OD1-CG-ND2	5.33	127.93	122.60
1	AA	333	U	P-O5'-C5'	5.33	128.89	120.90
1	AA	1107	C	O4'-C1'-N1	5.33	116.49	108.50
1	AA	1137	C	C5'-C4'-C3'	5.33	123.19	115.20
3	AC	126	ARG	N-CA-CB	5.33	119.50	110.49
35	BB	221	A	C5'-C4'-C3'	-5.33	107.21	115.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1184	U	O4'-C1'-N1	5.33	116.49	108.50
35	BB	1187	G	C1'-O4'-C4'	5.33	115.23	109.90
35	BB	1903	G	C4'-C3'-C2'	-5.33	97.27	102.60
35	BB	2415	G	C4'-C3'-O3'	-5.33	105.01	113.00
35	BB	2439	A	O4'-C1'-C2'	5.33	111.13	105.80
35	BB	2484	G	P-O3'-C3'	-5.33	112.21	120.20
38	BE	30	GLN	CA-C-N	5.33	127.99	120.42
38	BE	30	GLN	C-N-CA	5.33	127.99	120.42
52	BS	38	TYR	N-CA-C	-5.33	104.71	113.50
20	AT	64	GLY	CA-C-N	5.33	127.42	120.28
20	AT	64	GLY	C-N-CA	5.33	127.42	120.28
29	B4	16	THR	CA-CB-OG1	5.33	117.59	109.60
35	BB	1350	C	O4'-C4'-C3'	-5.33	98.67	104.00
35	BB	1475	G	C4'-C3'-O3'	5.33	117.39	109.40
35	BB	2381	A	P-O5'-C5'	5.33	128.89	120.90
40	BG	87	GLN	OE1-CD-NE2	5.33	127.93	122.60
1	AA	308	C	C5'-C4'-C3'	-5.33	108.01	116.00
1	AA	502	A	C1'-O4'-C4'	5.33	115.23	109.90
7	AG	43	TYR	N-CA-C	-5.33	105.14	111.69
12	AL	102	ASP	CA-C-O	5.33	126.19	120.55
18	AR	64	LEU	CA-C-N	5.33	129.69	122.07
18	AR	64	LEU	C-N-CA	5.33	129.69	122.07
20	AT	50	PHE	CA-C-O	-5.33	115.23	120.82
22	AV	13	C	O4'-C1'-C2'	-5.33	102.28	107.60
35	BB	459	U	O4'-C1'-C2'	-5.33	102.28	107.60
35	BB	570	G	C1'-O4'-C4'	-5.33	104.58	109.90
35	BB	1815	A	O3'-P-O5'	-5.33	96.01	104.00
45	BL	15	ALA	N-CA-C	5.33	118.01	110.50
1	AA	1150	A	O4'-C4'-C3'	-5.32	98.68	104.00
6	AF	17	GLN	O-C-N	5.32	128.22	122.15
13	AM	53	ASP	N-CA-C	-5.32	105.12	111.03
35	BB	1078	U	P-O3'-C3'	-5.32	112.22	120.20
46	BM	131	VAL	CA-C-O	5.32	126.90	120.67
47	BN	29	VAL	CA-C-N	5.32	128.15	120.38
47	BN	29	VAL	C-N-CA	5.32	128.15	120.38
1	AA	605	U	O4'-C1'-N1	5.32	116.48	108.50
5	AE	85	LYS	O-C-N	5.32	127.57	121.93
35	BB	846	U	O5'-C5'-C4'	-5.32	103.52	111.50
7	AG	96	ASN	CA-CB-CG	-5.32	107.28	112.60
9	AI	94	ARG	CA-C-N	5.32	127.41	120.28
9	AI	94	ARG	C-N-CA	5.32	127.41	120.28
34	BA	67	G	C4'-C3'-C2'	-5.32	97.28	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2036	C	C4'-C3'-O3'	-5.32	105.02	113.00
35	BB	2550	G	O5'-C5'-C4'	-5.32	103.52	111.50
35	BB	2768	U	C5'-C4'-C3'	-5.32	108.02	116.00
37	BD	130	GLN	N-CA-C	-5.32	101.03	108.96
37	BD	194	PRO	N-CD-CG	5.32	111.18	103.20
38	BE	39	ALA	CB-CA-C	-5.32	101.49	110.64
38	BE	164	LEU	CA-C-N	5.32	131.48	122.65
38	BE	164	LEU	C-N-CA	5.32	131.48	122.65
39	BF	124	ARG	N-CA-C	-5.32	105.84	114.09
52	BS	96	ILE	N-CA-CB	5.32	119.29	111.52
1	AA	1089	G	C4'-C3'-C2'	-5.32	97.28	102.60
35	BB	796	C	O4'-C4'-C3'	-5.32	98.68	104.00
20	AT	61	ALA	O-C-N	5.32	127.83	122.09
25	B0	24	THR	N-CA-C	-5.32	99.47	110.80
35	BB	2326	C	P-O5'-C5'	5.32	128.88	120.90
35	BB	2899	A	P-O5'-C5'	-5.32	112.92	120.90
36	BC	96	LYS	N-CA-C	-5.32	105.49	112.72
1	AA	928	G	O4'-C1'-N9	5.32	116.47	108.50
6	AF	30	THR	CA-C-N	5.32	132.38	121.17
6	AF	30	THR	C-N-CA	5.32	132.38	121.17
16	AP	66	THR	N-CA-C	-5.32	100.99	109.23
35	BB	1236	G	N9-C1'-C2'	-5.32	106.03	114.00
35	BB	2016	U	P-O5'-C5'	5.32	128.87	120.90
35	BB	2078	C	C3'-C2'-O2'	5.32	118.67	110.70
35	BB	2455	G	O4'-C1'-N9	5.32	116.47	108.50
35	BB	2615	U	O4'-C1'-C2'	-5.32	102.28	107.60
47	BN	28	LEU	N-CA-CB	5.32	117.78	110.07
51	BR	24	LYS	CA-C-O	-5.32	115.33	121.07
30	B5	36	ALA	N-CA-C	5.31	117.18	110.33
35	BB	2209	G	C5'-C4'-C3'	-5.31	108.03	116.00
35	BB	2374	C	C3'-C2'-O2'	5.31	118.67	110.70
39	BF	142	TYR	CA-C-N	5.31	127.83	120.29
39	BF	142	TYR	C-N-CA	5.31	127.83	120.29
1	AA	509	A	C4'-C3'-O3'	-5.31	105.03	113.00
35	BB	1568	G	C4'-C3'-C2'	5.31	107.91	102.60
35	BB	1738	G	C2'-C3'-O3'	5.31	117.47	109.50
1	AA	429	U	C2'-C3'-O3'	5.31	117.46	109.50
1	AA	1296	C	P-O3'-C3'	5.31	128.16	120.20
4	AD	41	GLY	CA-C-N	5.31	127.83	120.29
4	AD	41	GLY	C-N-CA	5.31	127.83	120.29
4	AD	65	GLY	CA-C-O	5.31	124.69	118.96
6	AF	81	ASN	N-CA-C	-5.31	99.00	108.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	276	U	C1'-O4'-C4'	5.31	115.21	109.90
35	BB	2006	C	C4'-C3'-C2'	-5.31	97.29	102.60
35	BB	2129	C	C5'-C4'-C3'	-5.31	107.23	115.20
1	AA	559	A	P-O3'-C3'	5.31	128.16	120.20
1	AA	1506	U	O4'-C1'-N1	5.31	116.16	108.20
7	AG	6	ILE	O-C-N	-5.31	116.89	122.57
35	BB	716	A	O4'-C1'-N9	5.31	116.46	108.50
35	BB	1142	A	O4'-C4'-C3'	-5.31	100.79	106.10
35	BB	2414	G	O4'-C4'-C3'	-5.31	98.69	104.00
41	BH	56	ALA	N-CA-C	-5.31	99.50	110.80
41	BH	76	GLU	N-CA-C	-5.31	106.74	113.43
51	BR	55	ASP	N-CA-C	-5.31	100.59	109.24
56	BY	56	HIS	CG-ND1-CE1	-5.31	100.28	109.30
12	AL	22	ALA	N-CA-C	-5.31	107.46	114.04
35	BB	1164	C	O5'-C5'-C4'	-5.31	103.54	111.50
35	BB	1174	U	C4'-C3'-C2'	-5.31	97.29	102.60
35	BB	2037	A	C4'-C3'-O3'	-5.31	105.04	113.00
35	BB	2659	G	P-O3'-C3'	-5.31	112.24	120.20
46	BM	41	LEU	CA-C-O	-5.31	114.68	120.36
1	AA	166	U	C5'-C4'-C3'	-5.30	108.04	116.00
26	B1	8	GLU	N-CA-C	5.30	118.58	110.20
35	BB	176	A	O4'-C1'-N9	5.30	116.46	108.50
35	BB	1571	A	C5'-C4'-C3'	-5.30	108.04	116.00
45	BL	7	SER	CB-CA-C	-5.30	99.72	110.17
1	AA	255	G	C4'-C3'-C2'	-5.30	97.30	102.60
2	AB	22	TRP	N-CA-CB	5.30	119.45	110.49
12	AL	80	LEU	N-CA-CB	5.30	119.07	110.43
35	BB	1142	A	C2'-C3'-O3'	5.30	117.45	109.50
35	BB	1458	U	O4'-C1'-C2'	-5.30	100.50	105.80
35	BB	1492	G	O4'-C4'-C3'	-5.30	98.70	104.00
1	AA	476	U	P-O5'-C5'	5.30	128.85	120.90
1	AA	1511	G	C3'-C2'-C1'	-5.30	96.00	101.30
14	AN	52	ARG	CD-NE-CZ	-5.30	116.98	124.40
14	AN	75	LYS	N-CA-CB	5.30	118.52	110.14
34	BA	99	A	C5'-C4'-O4'	-5.30	101.85	109.80
35	BB	1057	A	C3'-C2'-C1'	5.30	106.60	101.30
35	BB	1699	G	C1'-O4'-C4'	-5.30	104.40	109.70
35	BB	1877	A	P-O5'-C5'	-5.30	112.95	120.90
35	BB	2249	U	C5'-C4'-O4'	5.30	117.05	109.10
1	AA	210	C	O4'-C4'-C3'	-5.30	100.80	106.10
17	AQ	20	ILE	N-CA-C	-5.30	101.01	108.27
30	B5	150	ALA	O-C-N	-5.30	116.61	122.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	400	G	C5'-C4'-C3'	-5.30	108.05	116.00
35	BB	1064	C	P-O5'-C5'	-5.30	112.95	120.90
51	BR	53	PHE	N-CA-C	5.30	122.09	110.80
1	AA	48	C	O4'-C1'-N1	5.30	116.15	108.20
1	AA	662	U	C3'-C2'-C1'	-5.30	96.00	101.30
35	BB	2163	A	C4'-C3'-O3'	-5.30	105.05	113.00
35	BB	2349	G	O4'-C1'-N9	5.30	116.45	108.50
35	BB	2585	U	O4'-C1'-N1	5.30	116.15	108.20
35	BB	2632	A	O3'-P-O5'	-5.30	96.05	104.00
37	BD	196	ALA	CA-C-N	5.30	129.82	121.56
37	BD	196	ALA	C-N-CA	5.30	129.82	121.56
40	BG	129	GLU	N-CA-CB	5.30	119.66	111.24
1	AA	1062	U	C4'-C3'-O3'	-5.30	105.06	113.00
3	AC	87	ARG	NE-CZ-NH1	-5.30	116.20	121.50
5	AE	32	PHE	CA-CB-CG	-5.30	108.50	113.80
19	AS	33	TRP	CE2-CD2-CE3	5.30	124.10	118.80
35	BB	50	U	P-O3'-C3'	5.30	128.15	120.20
35	BB	1067	A	C4'-C3'-C2'	5.30	107.90	102.60
35	BB	2774	C	P-O5'-C5'	5.30	128.84	120.90
46	BM	63	ILE	N-CA-C	-5.30	100.69	108.85
1	AA	235	C	O4'-C1'-N1	5.29	116.44	108.50
5	AE	22	LYS	N-CA-C	-5.29	101.31	109.52
35	BB	2684	U	O4'-C1'-C2'	-5.29	102.31	107.60
4	AD	27	ILE	N-CA-CB	-5.29	102.50	111.23
4	AD	197	HIS	ND1-CE1-NE2	5.29	113.69	108.40
35	BB	496	G	O5'-C5'-C4'	-5.29	103.56	111.50
35	BB	1022	G	C3'-C2'-C1'	-5.29	96.21	101.50
36	BC	85	ASN	CA-C-N	5.29	130.53	122.11
36	BC	85	ASN	C-N-CA	5.29	130.53	122.11
46	BM	4	PRO	CA-C-O	-5.29	115.71	121.27
46	BM	117	PHE	CA-CB-CG	-5.29	108.51	113.80
50	BQ	88	GLU	N-CA-C	-5.29	99.53	110.80
1	AA	154	U	C4'-C3'-C2'	-5.29	97.31	102.60
1	AA	474	G	O4'-C1'-N9	5.29	116.44	108.50
1	AA	558	G	C1'-O4'-C4'	5.29	115.19	109.90
35	BB	1845	G	O4'-C1'-N9	5.29	116.44	108.50
35	BB	1977	A	C4'-C3'-C2'	-5.29	97.31	102.60
35	BB	2417	C	O4'-C1'-N1	5.29	116.44	108.50
36	BC	231	HIS	CG-CD2-NE2	5.29	112.49	107.20
51	BR	35	PHE	CA-C-N	5.29	131.66	122.56
51	BR	35	PHE	C-N-CA	5.29	131.66	122.56
54	BU	24	VAL	CB-CA-C	-5.29	104.56	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	BY	57	THR	N-CA-C	-5.29	101.53	109.15
35	BB	793	A	C5'-C4'-C3'	-5.29	107.27	115.20
35	BB	1111	A	P-O5'-C5'	5.29	128.84	120.90
35	BB	1554	U	P-O5'-C5'	-5.29	112.97	120.90
1	AA	180	U	P-O3'-C3'	-5.29	112.27	120.20
1	AA	188	C	C4'-C3'-O3'	-5.29	105.07	113.00
1	AA	1247	U	O4'-C1'-N1	5.29	116.43	108.50
35	BB	134	G	O4'-C1'-N9	5.29	116.43	108.50
35	BB	2316	G	O4'-C1'-N9	5.29	116.43	108.50
35	BB	2665	A	C4'-C3'-C2'	-5.29	97.31	102.60
55	BW	65	VAL	CA-C-N	5.29	131.64	121.54
55	BW	65	VAL	C-N-CA	5.29	131.64	121.54
1	AA	156	C	O4'-C1'-C2'	-5.29	102.31	107.60
35	BB	203	A	O4'-C1'-C2'	5.29	112.89	107.60
35	BB	2556	C	O4'-C4'-C3'	-5.29	98.71	104.00
37	BD	173	GLN	OE1-CD-NE2	5.29	127.89	122.60
47	BN	14	SER	N-CA-CB	5.29	119.17	110.39
1	AA	262	A	C1'-O4'-C4'	-5.29	104.61	109.90
1	AA	638	U	O4'-C4'-C3'	5.29	109.29	104.00
1	AA	1436	U	P-O3'-C3'	-5.29	112.27	120.20
19	AS	7	GLY	O-C-N	-5.29	116.48	121.77
35	BB	199	A	O4'-C1'-N9	5.29	116.13	108.20
35	BB	512	G	C4'-C3'-O3'	-5.29	105.07	113.00
35	BB	1995	U	C4'-C3'-O3'	-5.29	105.07	113.00
35	BB	2485	G	C4'-C3'-C2'	-5.29	97.31	102.60
37	BD	23	PRO	N-CA-C	5.29	119.51	111.11
40	BG	25	ILE	CA-CB-CG1	5.29	119.39	110.40
1	AA	326	G	C4'-C3'-C2'	5.28	107.88	102.60
1	AA	829	G	C1'-O4'-C4'	-5.28	104.62	109.90
1	AA	1498	U	O4'-C1'-N1	5.28	116.12	108.20
3	AC	109	GLU	O-C-N	-5.28	116.04	122.22
9	AI	21	LYS	CA-C-N	5.28	125.45	119.90
9	AI	21	LYS	C-N-CA	5.28	125.45	119.90
30	B5	182	ALA	CA-C-O	5.28	126.37	120.82
35	BB	120	U	O4'-C1'-N1	5.28	116.12	108.20
35	BB	181	A	C3'-C2'-O2'	5.28	118.63	110.70
35	BB	1232	G	P-O3'-C3'	-5.28	112.28	120.20
35	BB	1377	G	C4'-C3'-O3'	-5.28	105.08	113.00
35	BB	2654	A	C1'-O4'-C4'	5.28	114.98	109.70
39	BF	19	PHE	O-C-N	5.28	127.41	122.18
1	AA	1040	U	P-O5'-C5'	5.28	128.82	120.90
9	AI	19	PHE	CA-CB-CG	-5.28	108.52	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AK	52	ARG	CA-C-O	5.28	127.26	121.40
35	BB	1155	A	P-O5'-C5'	-5.28	112.98	120.90
35	BB	2463	C	O4'-C1'-N1	5.28	116.42	108.50
1	AA	799	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	AA	1531	A	O4'-C1'-N9	5.28	116.42	108.50
7	AG	77	ARG	CA-C-O	5.28	126.91	121.10
35	BB	55	G	P-O5'-C5'	5.28	128.82	120.90
35	BB	1115	G	C5'-C4'-C3'	-5.28	108.08	116.00
35	BB	1834	U	P-O5'-C5'	-5.28	112.98	120.90
35	BB	2214	C	O5'-C5'-C4'	-5.28	103.58	111.50
49	BP	58	PHE	CA-C-N	5.28	131.63	121.54
49	BP	58	PHE	C-N-CA	5.28	131.63	121.54
30	B5	86	ALA	CA-C-N	5.28	129.66	120.68
30	B5	86	ALA	C-N-CA	5.28	129.66	120.68
35	BB	2279	G	C4'-C3'-C2'	-5.28	97.32	102.60
1	AA	489	C	O5'-C5'-C4'	-5.28	103.58	111.50
1	AA	645	G	P-O5'-C5'	5.28	128.82	120.90
1	AA	646	G	C1'-O4'-C4'	-5.28	104.62	109.90
1	AA	930	C	C4'-C3'-C2'	-5.28	97.32	102.60
13	AM	21	ILE	N-CA-CB	5.28	119.94	111.23
35	BB	524	G	P-O5'-C5'	-5.28	112.98	120.90
35	BB	1063	G	P-O5'-C5'	-5.28	112.98	120.90
35	BB	1992	G	O4'-C4'-C3'	-5.28	100.82	106.10
35	BB	2089	C	P-O3'-C3'	-5.28	112.28	120.20
35	BB	2167	U	P-O5'-C5'	5.28	128.82	120.90
35	BB	2438	U	O4'-C1'-N1	5.28	116.42	108.50
41	BH	22	LYS	N-CA-C	-5.28	102.65	110.46
1	AA	233	C	O4'-C1'-N1	5.28	116.41	108.50
1	AA	1357	A	O4'-C1'-N9	5.28	116.41	108.50
4	AD	71	PHE	CB-CA-C	-5.28	101.88	110.85
5	AE	157	GLY	CA-C-O	-5.28	115.31	120.75
25	B0	64	ASP	CA-C-O	-5.28	112.97	120.51
32	B7	48	MET	CA-CB-CG	5.28	124.65	114.10
33	B8	19	ARG	CA-C-N	5.28	131.62	121.54
33	B8	19	ARG	C-N-CA	5.28	131.62	121.54
35	BB	391	A	P-O5'-C5'	-5.28	112.99	120.90
35	BB	446	G	C2'-C3'-O3'	5.28	117.41	109.50
35	BB	996	A	P-O5'-C5'	-5.28	112.99	120.90
44	BK	20	MET	CB-CA-C	-5.28	101.15	109.80
52	BS	82	MET	CA-CB-CG	5.28	124.65	114.10
11	AK	117	HIS	CA-C-N	5.27	130.11	122.36
11	AK	117	HIS	C-N-CA	5.27	130.11	122.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2004	G	C3'-C2'-C1'	5.27	106.57	101.30
35	BB	2615	U	P-O3'-C3'	-5.27	112.29	120.20
52	BS	7	HIS	ND1-CE1-NE2	5.27	113.67	108.40
11	AK	27	ASN	N-CA-C	-5.27	106.63	114.64
13	AM	107	THR	N-CA-CB	5.27	118.66	110.80
35	BB	2122	U	C4'-C3'-C2'	-5.27	97.33	102.60
35	BB	2582	G	O4'-C1'-N9	5.27	116.41	108.50
36	BC	169	ALA	CB-CA-C	5.27	118.66	109.65
55	BW	78	GLN	N-CA-CB	5.27	119.28	110.53
1	AA	423	G	C4'-C3'-C2'	-5.27	97.33	102.60
1	AA	495	A	O5'-C5'-C4'	-5.27	103.79	111.70
3	AC	38	VAL	CA-CB-CG1	5.27	119.36	110.40
31	B6	41	ARG	N-CA-C	-5.27	107.22	113.97
35	BB	190	A	O4'-C1'-C2'	-5.27	102.33	107.60
35	BB	713	G	C4'-C3'-C2'	-5.27	97.33	102.60
1	AA	573	A	C4'-C3'-O3'	-5.27	105.10	113.00
1	AA	1304	G	P-O5'-C5'	5.27	128.81	120.90
11	AK	13	LYS	N-CA-C	-5.27	101.94	110.32
26	B1	37	LEU	CA-C-O	5.27	128.05	120.51
30	B5	102	ASP	N-CA-C	5.27	120.01	111.37
35	BB	938	G	C1'-O4'-C4'	5.27	115.17	109.90
35	BB	2590	A	O4'-C1'-C2'	-5.27	102.33	107.60
53	BT	89	GLU	N-CA-C	-5.27	105.83	113.21
14	AN	80	ARG	NE-CZ-NH1	-5.27	116.23	121.50
30	B5	198	LYS	O-C-N	-5.27	115.58	122.59
35	BB	61	C	O4'-C4'-C3'	5.27	109.27	104.00
35	BB	2688	G	P-O3'-C3'	-5.27	112.30	120.20
35	BB	2813	A	C3'-C2'-C1'	5.27	106.57	101.30
53	BT	66	LYS	CA-C-N	5.27	128.48	120.95
53	BT	66	LYS	C-N-CA	5.27	128.48	120.95
1	AA	486	U	C4'-C3'-O3'	-5.27	105.10	113.00
1	AA	837	U	C1'-O4'-C4'	5.27	115.17	109.90
35	BB	201	C	C1'-O4'-C4'	5.27	115.17	109.90
35	BB	1504	A	P-O5'-C5'	-5.27	113.00	120.90
35	BB	1711	A	C4'-C3'-O3'	-5.27	105.10	113.00
36	BC	66	PHE	CA-CB-CG	-5.27	108.53	113.80
1	AA	131	A	C4'-C3'-O3'	-5.26	105.10	113.00
1	AA	921	U	C4'-C3'-C2'	-5.26	97.34	102.60
1	AA	1099	G	C3'-C2'-C1'	5.26	106.56	101.30
9	AI	38	PHE	O-C-N	5.26	129.07	122.86
12	AL	33	CYS	N-CA-C	-5.26	99.58	110.80
35	BB	133	U	O4'-C1'-N1	5.26	116.40	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	284	U	O4'-C1'-N1	5.26	116.40	108.50
35	BB	2864	G	C4'-C3'-O3'	-5.26	105.10	113.00
41	BH	11	ASN	OD1-CG-ND2	-5.26	117.33	122.60
41	BH	135	HIS	ND1-CE1-NE2	5.26	113.67	108.40
1	AA	623	C	O4'-C1'-N1	5.26	116.39	108.50
30	B5	212	VAL	CA-C-O	5.26	126.33	120.59
35	BB	2343	U	C4'-C3'-C2'	5.26	107.86	102.60
1	AA	115	G	O4'-C4'-C3'	-5.26	100.84	106.10
1	AA	153	C	C1'-O4'-C4'	5.26	115.16	109.90
4	AD	183	ARG	N-CA-CB	5.26	119.56	111.46
9	AI	122	ARG	NE-CZ-NH1	-5.26	116.24	121.50
11	AK	54	SER	N-CA-C	-5.26	106.54	113.17
14	AN	14	ALA	CA-C-N	5.26	128.31	120.31
14	AN	14	ALA	C-N-CA	5.26	128.31	120.31
21	AU	9	GLU	N-CA-C	-5.26	99.71	108.23
35	BB	1558	C	O4'-C1'-N1	5.26	116.09	108.20
1	AA	764	C	O5'-C5'-C4'	-5.26	103.61	111.50
1	AA	796	C	O4'-C1'-N1	5.26	116.39	108.50
1	AA	1427	C	P-O3'-C3'	-5.26	112.31	120.20
1	AA	1523	G	O3'-P-O5'	-5.26	96.11	104.00
35	BB	310	A	C1'-O4'-C4'	-5.26	104.44	109.70
35	BB	465	G	C3'-C2'-O2'	5.26	118.59	110.70
35	BB	553	G	P-O5'-C5'	5.26	128.79	120.90
35	BB	640	C	C3'-C2'-C1'	-5.26	96.04	101.30
35	BB	770	G	C4'-C3'-C2'	-5.26	97.34	102.60
35	BB	906	U	C3'-C2'-C1'	5.26	106.56	101.30
35	BB	1143	A	C5'-C4'-O4'	5.26	116.99	109.10
35	BB	1255	U	P-O3'-C3'	-5.26	112.31	120.20
35	BB	2142	A	C3'-C2'-O2'	5.26	118.59	110.70
37	BD	34	VAL	CA-C-O	5.26	126.95	120.74
47	BN	25	ALA	N-CA-CB	5.26	117.59	109.91
49	BP	71	ARG	N-CA-CB	5.26	119.10	110.90
1	AA	170	U	C3'-C2'-O2'	5.26	118.59	110.70
4	AD	201	GLU	N-CA-CB	5.26	117.91	110.13
10	AJ	62	ARG	CA-C-N	5.26	129.02	121.50
10	AJ	62	ARG	C-N-CA	5.26	129.02	121.50
34	BA	65	U	O4'-C1'-N1	5.26	116.39	108.50
34	BA	92	C	O4'-C4'-C3'	-5.26	98.74	104.00
35	BB	2815	C	O5'-C5'-C4'	-5.26	103.61	111.50
1	AA	1051	C	O4'-C1'-N1	5.26	116.39	108.50
3	AC	20	THR	N-CA-C	-5.26	99.95	108.52
34	BA	35	C	P-O5'-C5'	-5.26	113.01	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	BA	39	A	C5'-C4'-C3'	-5.26	108.11	116.00
35	BB	492	A	C5'-C4'-O4'	-5.26	101.91	109.80
35	BB	1903	G	P-O5'-C5'	-5.26	113.01	120.90
43	BJ	50	THR	CA-C-O	5.26	124.91	119.97
45	BL	30	THR	N-CA-CB	5.26	119.90	111.91
47	BN	51	LEU	N-CA-C	-5.26	105.22	111.69
48	BO	79	ALA	CA-C-O	-5.26	114.98	120.55
1	AA	453	G	P-O5'-C5'	5.25	128.78	120.90
1	AA	1063	C	C4'-C3'-O3'	-5.25	105.12	113.00
35	BB	149	A	C1'-O4'-C4'	5.25	115.16	109.90
35	BB	496	G	O4'-C1'-N9	5.25	116.38	108.50
35	BB	787	C	O4'-C1'-C2'	-5.25	102.34	107.60
35	BB	2369	A	O4'-C1'-C2'	-5.25	102.34	107.60
35	BB	2903	U	C5'-C4'-O4'	5.25	117.68	109.80
39	BF	82	TYR	CA-C-O	-5.25	112.96	120.16
1	AA	136	C	C1'-O4'-C4'	-5.25	104.65	109.90
14	AN	26	LEU	N-CA-CB	5.25	117.69	110.07
35	BB	37	C	O4'-C1'-N1	5.25	116.38	108.50
35	BB	887	U	O4'-C4'-C3'	-5.25	98.75	104.00
35	BB	2339	C	O4'-C1'-N1	5.25	116.38	108.50
35	BB	2442	C	C4'-C3'-O3'	-5.25	105.12	113.00
35	BB	2737	G	C5'-C4'-C3'	-5.25	108.12	116.00
50	BQ	80	ASN	OD1-CG-ND2	5.25	127.85	122.60
1	AA	1460	C	O4'-C1'-N1	5.25	116.38	108.50
17	AQ	11	VAL	CA-CB-CG1	5.25	119.33	110.40
35	BB	855	G	O4'-C1'-N9	5.25	116.38	108.50
35	BB	1425	G	P-O3'-C3'	-5.25	112.32	120.20
38	BE	65	THR	CA-CB-OG1	5.25	117.48	109.60
38	BE	107	SER	CA-C-O	-5.25	113.93	119.97
40	BG	34	ARG	NE-CZ-NH2	-5.25	114.47	119.20
45	BL	3	LEU	O-C-N	5.25	128.64	122.34
35	BB	1348	C	O4'-C1'-N1	5.25	116.38	108.50
35	BB	1595	C	C5'-C4'-C3'	5.25	123.88	116.00
49	BP	7	LEU	O-C-N	5.25	127.69	122.12
1	AA	508	U	C5'-C4'-C3'	-5.25	107.33	115.20
1	AA	1093	A	C3'-C2'-O2'	5.25	118.57	110.70
13	AM	82	LEU	CB-CG-CD2	5.25	126.45	110.70
18	AR	71	ASP	N-CA-C	-5.25	104.90	113.19
35	BB	1042	G	P-O3'-C3'	-5.25	112.33	120.20
37	BD	133	THR	N-CA-CB	5.25	119.36	110.49
3	AC	134	LYS	N-CA-C	5.25	116.68	111.07
35	BB	1566	A	O4'-C4'-C3'	-5.25	100.85	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1847	A	C3'-C2'-C1'	5.25	106.55	101.30
36	BC	266	ILE	N-CA-CB	5.25	116.44	110.72
40	BG	146	ASP	CA-CB-CG	-5.25	107.35	112.60
1	AA	202	G	O4'-C1'-N9	5.25	116.37	108.50
2	AB	143	LEU	CA-C-N	5.25	128.99	120.60
2	AB	143	LEU	C-N-CA	5.25	128.99	120.60
10	AJ	32	THR	CA-C-N	5.25	131.69	121.41
10	AJ	32	THR	C-N-CA	5.25	131.69	121.41
47	BN	83	LEU	CB-CA-C	-5.25	101.31	110.17
8	AH	65	PHE	CA-CB-CG	5.24	119.04	113.80
20	AT	80	ALA	CA-C-N	5.24	128.08	120.79
20	AT	80	ALA	C-N-CA	5.24	128.08	120.79
35	BB	1479	G	O4'-C1'-C2'	-5.24	102.36	107.60
35	BB	1960	A	C1'-O4'-C4'	5.24	115.14	109.90
49	BP	25	VAL	N-CA-CB	5.24	119.88	111.23
35	BB	1468	U	O4'-C1'-N1	5.24	116.36	108.50
35	BB	1647	U	O4'-C1'-N1	5.24	116.06	108.20
36	BC	163	ILE	N-CA-C	-5.24	101.03	108.58
1	AA	124	C	C4'-C3'-O3'	-5.24	105.14	113.00
1	AA	400	C	P-O3'-C3'	-5.24	112.34	120.20
1	AA	632	U	C2'-C3'-O3'	5.24	117.36	109.50
1	AA	1318	A	C4'-C3'-O3'	-5.24	105.14	113.00
6	AF	48	ALA	CA-C-O	-5.24	114.86	120.42
7	AG	66	GLU	CB-CG-CD	-5.24	103.69	112.60
9	AI	27	ILE	CB-CA-C	5.24	119.88	111.29
35	BB	197	A	O3'-P-O5'	-5.24	96.14	104.00
35	BB	355	U	P-O3'-C3'	-5.24	112.34	120.20
35	BB	645	C	C4'-C3'-C2'	-5.24	97.36	102.60
35	BB	1964	G	P-O3'-C3'	5.24	128.06	120.20
35	BB	2179	C	C5'-C4'-O4'	5.24	117.66	109.80
40	BG	58	ALA	N-CA-C	-5.24	106.28	113.30
1	AA	290	C	O5'-C5'-C4'	-5.24	103.64	111.50
1	AA	392	C	O5'-C5'-C4'	-5.24	103.64	111.50
1	AA	1013	G	C4'-C3'-O3'	-5.24	105.14	113.00
1	AA	1148	U	C3'-C2'-C1'	5.24	106.54	101.30
8	AH	59	GLU	CA-C-O	-5.24	115.52	121.39
17	AQ	78	VAL	N-CA-C	-5.24	105.61	110.53
29	B4	49	LYS	CA-CB-CG	-5.24	103.62	114.10
35	BB	743	A	P-O3'-C3'	-5.24	112.34	120.20
35	BB	993	G	O4'-C1'-N9	5.24	116.36	108.50
35	BB	1987	A	C4'-C3'-C2'	-5.24	97.36	102.60
35	BB	2823	A	P-O5'-C5'	-5.24	113.04	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BN	73	ASN	CA-CB-CG	5.24	117.84	112.60
4	AD	114	ARG	N-CA-C	-5.24	106.04	112.90
9	AI	61	ASP	N-CA-C	-5.24	101.17	109.76
17	AQ	36	PHE	N-CA-CB	5.24	117.74	110.04
20	AT	58	ASP	O-C-N	-5.24	116.43	122.09
35	BB	248	G	O5'-C5'-C4'	-5.24	103.64	111.50
35	BB	597	G	C3'-C2'-C1'	5.24	106.54	101.30
35	BB	648	G	O4'-C1'-N9	5.24	116.36	108.50
35	BB	1944	U	C5'-C4'-C3'	5.24	123.06	115.20
35	BB	2404	U	C4'-C3'-C2'	5.24	107.84	102.60
48	BO	117	PHE	CA-CB-CG	-5.24	108.56	113.80
1	AA	221	C	C3'-C2'-O2'	5.24	118.55	110.70
1	AA	837	U	C3'-C2'-C1'	5.24	106.53	101.30
1	AA	1010	U	C3'-C2'-C1'	-5.24	96.06	101.30
1	AA	1170	A	O4'-C1'-C2'	-5.24	102.36	107.60
1	AA	1300	G	C2'-C3'-O3'	5.24	121.55	113.70
4	AD	116	LEU	N-CA-CB	5.24	117.66	110.07
7	AG	107	ALA	N-CA-C	-5.24	106.28	113.30
35	BB	18	U	O4'-C1'-N1	5.24	116.35	108.50
35	BB	2399	G	P-O3'-C3'	-5.24	112.35	120.20
35	BB	2691	C	O4'-C1'-C2'	-5.24	102.36	107.60
35	BB	2830	C	C5'-C4'-C3'	5.24	123.85	116.00
50	BQ	92	LYS	CA-C-O	5.24	125.69	119.67
1	AA	382	A	O4'-C1'-N9	5.23	116.35	108.50
1	AA	723	U	C3'-C2'-C1'	5.23	106.53	101.30
1	AA	1480	A	C4'-C3'-C2'	-5.23	97.37	102.60
35	BB	2213	U	O4'-C1'-N1	5.23	116.35	108.50
1	AA	72	A	C1'-O4'-C4'	-5.23	104.67	109.90
1	AA	203	G	O4'-C4'-C3'	-5.23	98.77	104.00
1	AA	221	C	O4'-C1'-C2'	-5.23	102.37	107.60
4	AD	40	HIS	CA-C-N	5.23	131.66	121.41
4	AD	40	HIS	C-N-CA	5.23	131.66	121.41
7	AG	104	VAL	CA-CB-CG1	5.23	119.30	110.40
35	BB	1426	G	P-O5'-C5'	-5.23	113.05	120.90
35	BB	2037	A	C4'-C3'-C2'	-5.23	97.37	102.60
35	BB	2313	C	P-O5'-C5'	5.23	128.75	120.90
39	BF	51	ASN	N-CA-CB	5.23	117.87	110.13
47	BN	106	ASP	O-C-N	5.23	129.55	122.96
49	BP	20	ARG	CA-C-O	-5.23	114.78	119.59
54	BU	95	PHE	CA-C-N	5.23	128.51	120.82
54	BU	95	PHE	C-N-CA	5.23	128.51	120.82
1	AA	355	C	P-O5'-C5'	5.23	128.75	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	736	C	C3'-C2'-C1'	-5.23	96.07	101.30
35	BB	698	C	O3'-P-O5'	-5.23	96.15	104.00
35	BB	1427	A	P-O5'-C5'	-5.23	113.05	120.90
35	BB	2303	G	P-O5'-C5'	-5.23	113.05	120.90
38	BE	6	LYS	N-CA-CB	5.23	117.81	110.12
39	BF	114	ARG	N-CA-C	-5.23	106.21	112.59
40	BG	76	ILE	O-C-N	-5.23	116.59	121.87
50	BQ	15	LYS	CA-C-N	5.23	127.15	120.56
50	BQ	15	LYS	C-N-CA	5.23	127.15	120.56
1	AA	105	G	C4'-C3'-O3'	-5.23	105.16	113.00
1	AA	194	C	C5'-C4'-C3'	-5.23	108.16	116.00
1	AA	264	C	P-O5'-C5'	5.23	128.74	120.90
1	AA	684	U	C1'-C2'-O2'	5.23	116.24	108.40
5	AE	113	VAL	CA-CB-CG2	5.23	119.29	110.40
35	BB	850	U	C4'-C3'-O3'	-5.23	105.16	113.00
48	BO	56	LYS	CA-C-N	5.23	127.55	120.44
48	BO	56	LYS	C-N-CA	5.23	127.55	120.44
1	AA	1362	A	O3'-P-O5'	-5.23	96.16	104.00
4	AD	87	GLU	CA-C-O	-5.23	115.32	121.07
4	AD	164	ARG	CB-CA-C	5.23	119.66	110.36
24	AZ	22	ALA	O-C-N	-5.23	117.36	123.27
30	B5	35	THR	CA-CB-OG1	5.23	117.44	109.60
35	BB	2250	G	O4'-C1'-C2'	5.23	111.03	105.80
35	BB	2285	C	O4'-C1'-N1	5.23	116.34	108.50
35	BB	2499	C	O4'-C1'-N1	5.23	116.34	108.50
1	AA	657	U	O4'-C1'-N1	5.23	116.34	108.50
4	AD	110	ARG	N-CA-CB	5.23	117.76	109.82
6	AF	21	MET	N-CA-C	5.23	116.66	111.07
35	BB	81	G	C4'-C3'-O3'	-5.23	105.16	113.00
35	BB	366	C	P-O3'-C3'	-5.23	112.36	120.20
35	BB	405	U	O3'-P-O5'	-5.23	96.16	104.00
35	BB	834	G	C4'-C3'-O3'	-5.23	105.16	113.00
35	BB	2634	A	O4'-C4'-C3'	-5.23	98.77	104.00
35	BB	2878	U	O4'-C1'-N1	5.23	116.34	108.50
1	AA	158	G	O5'-C5'-C4'	-5.22	103.66	111.50
3	AC	84	GLU	CA-C-N	5.22	127.54	120.38
3	AC	84	GLU	C-N-CA	5.22	127.54	120.38
30	B5	92	ALA	N-CA-CB	5.22	118.95	110.17
35	BB	1515	A	O4'-C1'-N9	5.22	116.34	108.50
35	BB	2155	U	O5'-C5'-C4'	5.22	119.34	111.50
35	BB	2696	U	C4'-C3'-C2'	-5.22	97.38	102.60
1	AA	203	G	P-O3'-C3'	-5.22	112.36	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	779	C	O5'-C5'-C4'	-5.22	103.67	111.50
1	AA	999	C	C4'-C3'-O3'	-5.22	105.17	113.00
14	AN	6	LYS	N-CA-C	-5.22	104.65	111.02
35	BB	192	C	O4'-C1'-C2'	-5.22	102.38	107.60
35	BB	1488	C	O4'-C1'-N1	5.22	116.33	108.50
35	BB	1587	G	P-O5'-C5'	-5.22	113.07	120.90
35	BB	2159	G	O4'-C1'-N9	5.22	116.33	108.50
35	BB	2257	U	C5'-C4'-C3'	-5.22	108.17	116.00
35	BB	2856	A	C1'-O4'-C4'	-5.22	104.68	109.90
37	BD	32	ASN	CA-CB-CG	-5.22	107.38	112.60
41	BH	143	ILE	N-CA-C	-5.22	100.12	107.75
48	BO	55	GLU	O-C-N	5.22	129.34	122.97
30	B5	217	THR	N-CA-CB	5.22	119.31	110.49
41	BH	58	LEU	O-C-N	5.22	128.10	122.15
43	BJ	131	ASN	CA-CB-CG	5.22	117.82	112.60
48	BO	93	ASP	CA-C-N	5.22	127.28	120.28
48	BO	93	ASP	C-N-CA	5.22	127.28	120.28
1	AA	381	C	O4'-C4'-C3'	5.22	109.22	104.00
1	AA	813	U	C4'-C3'-O3'	-5.22	105.17	113.00
1	AA	1023	U	C1'-O4'-C4'	5.22	115.12	109.90
1	AA	1488	G	P-O5'-C5'	-5.22	113.07	120.90
6	AF	2	ARG	CD-NE-CZ	-5.22	117.09	124.40
11	AK	14	GLN	N-CA-C	-5.22	99.68	110.80
34	BA	9	G	C5'-C4'-O4'	5.22	117.63	109.80
35	BB	74	A	C5'-C4'-C3'	-5.22	107.37	115.20
35	BB	666	A	N1-C6-N6	5.22	134.26	118.60
35	BB	933	A	C1'-C2'-O2'	-5.22	100.57	108.40
35	BB	1783	A	C4'-C3'-O3'	-5.22	105.17	113.00
35	BB	2392	A	C5'-C4'-C3'	-5.22	108.17	116.00
35	BB	2431	U	P-O5'-C5'	-5.22	113.07	120.90
35	BB	2620	C	O4'-C1'-N1	5.22	116.33	108.50
48	BO	32	PRO	N-CA-C	-5.22	106.73	113.57
56	BY	72	GLY	O-C-N	-5.22	116.55	121.77
6	AF	59	TYR	N-CA-C	-5.22	101.36	109.24
29	B4	39	ASP	N-CA-C	-5.22	101.11	109.04
35	BB	1161	C	C4'-C3'-O3'	-5.22	105.17	113.00
1	AA	1065	U	C2'-C3'-O3'	5.22	117.32	109.50
1	AA	1198	G	O4'-C1'-N9	5.22	116.32	108.50
9	AI	21	LYS	CA-C-O	5.22	123.94	119.66
35	BB	995	C	C4'-C3'-O3'	-5.22	105.17	113.00
35	BB	1099	G	C2'-C3'-O3'	5.22	121.53	113.70
35	BB	1857	G	C5'-C4'-O4'	5.22	116.92	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2556	C	P-O5'-C5'	-5.22	113.08	120.90
45	BL	95	LEU	N-CA-C	-5.22	106.69	113.16
48	BO	76	LYS	N-CA-C	-5.22	105.49	111.07
1	AA	940	C	O4'-C1'-N1	5.21	116.32	108.50
15	AO	14	PHE	CA-CB-CG	5.21	119.02	113.80
35	BB	715	A	C4'-C3'-C2'	-5.21	97.39	102.60
35	BB	947	A	O4'-C1'-N9	5.21	116.32	108.50
35	BB	1087	G	C3'-C2'-O2'	-5.21	102.88	110.70
35	BB	1129	A	C4'-C3'-O3'	-5.21	105.18	113.00
35	BB	1140	C	O4'-C1'-N1	5.21	116.32	108.50
35	BB	1534	U	O4'-C1'-N1	5.21	116.32	108.50
35	BB	1822	C	O4'-C1'-N1	5.21	116.32	108.50
38	BE	58	LYS	N-CA-C	-5.21	101.06	109.40
39	BF	143	ASP	CA-CB-CG	-5.21	107.39	112.60
48	BO	57	ALA	N-CA-C	-5.21	105.51	111.14
50	BQ	55	GLN	OE1-CD-NE2	5.21	127.81	122.60
1	AA	379	C	C4'-C3'-O3'	-5.21	105.18	113.00
12	AL	28	GLN	CA-C-O	-5.21	115.01	121.06
35	BB	657	U	O4'-C1'-N1	5.21	116.32	108.50
35	BB	2010	G	C4'-C3'-C2'	-5.21	97.39	102.60
36	BC	120	ASP	CA-CB-CG	5.21	117.81	112.60
14	AN	3	GLN	CB-CA-C	5.21	119.39	110.74
22	AV	4	C	O4'-C1'-N1	5.21	116.02	108.20
35	BB	453	A	O4'-C1'-N9	5.21	116.32	108.50
35	BB	1558	C	C1'-O4'-C4'	5.21	114.91	109.70
35	BB	1805	A	C4'-C3'-O3'	-5.21	105.18	113.00
36	BC	173	LEU	N-CA-CB	5.21	119.99	111.08
39	BF	39	VAL	N-CA-C	5.21	116.56	110.62
19	AS	11	ASP	CA-C-N	5.21	130.83	121.66
19	AS	11	ASP	C-N-CA	5.21	130.83	121.66
35	BB	50	U	O5'-C5'-C4'	5.21	119.52	111.70
35	BB	1496	A	P-O5'-C5'	-5.21	113.09	120.90
1	AA	933	G	C4'-C3'-O3'	-5.21	105.19	113.00
12	AL	86	VAL	CA-C-N	5.21	130.45	120.97
12	AL	86	VAL	C-N-CA	5.21	130.45	120.97
35	BB	128	C	C4'-C3'-C2'	-5.21	97.39	102.60
35	BB	1585	C	O4'-C1'-N1	5.21	116.31	108.50
35	BB	2197	U	N1-C1'-C2'	-5.21	106.19	114.00
35	BB	2340	A	C5'-C4'-C3'	-5.21	108.19	116.00
35	BB	2347	C	O5'-C5'-C4'	5.21	119.31	111.50
47	BN	99	LYS	N-CA-CB	5.21	120.01	111.31
20	AT	77	ASN	N-CA-CB	5.21	118.27	109.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
34	BA	97	C	P-O3'-C3'	-5.21	112.39	120.20
35	BB	395	U	N1-C1'-C2'	-5.21	106.19	114.00
35	BB	981	A	P-O5'-C5'	-5.21	113.09	120.90
35	BB	2897	U	O4'-C1'-C2'	-5.21	102.39	107.60
44	BK	75	SER	N-CA-C	-5.21	100.82	109.46
35	BB	656	G	C3'-C2'-C1'	5.21	106.50	101.30
35	BB	1275	A	N9-C1'-C2'	5.21	119.81	112.00
7	AG	112	ASP	CA-C-N	5.20	131.48	121.54
7	AG	112	ASP	C-N-CA	5.20	131.48	121.54
12	AL	51	VAL	N-CA-CB	5.20	119.31	112.60
13	AM	61	LYS	N-CA-C	-5.20	107.10	113.50
16	AP	48	GLU	CB-CA-C	5.20	118.33	109.80
35	BB	69	C	C5'-C4'-O4'	-5.20	102.00	109.80
35	BB	1398	C	O4'-C1'-N1	5.20	116.31	108.50
35	BB	2028	U	O4'-C1'-N1	5.20	116.31	108.50
35	BB	2248	C	C5'-C4'-C3'	-5.20	108.19	116.00
35	BB	2531	A	P-O5'-C5'	-5.20	113.09	120.90
35	BB	2898	U	N1-C1'-C2'	-5.20	104.19	112.00
36	BC	198	GLU	CA-C-O	5.20	125.44	119.35
37	BD	82	PHE	CD1-CG-CD2	-5.20	110.80	118.60
39	BF	98	PHE	N-CA-C	-5.20	105.67	112.23
1	AA	19	A	C4'-C3'-O3'	-5.20	105.20	113.00
1	AA	973	G	C4'-C3'-O3'	-5.20	105.20	113.00
10	AJ	15	HIS	ND1-CG-CD2	5.20	111.30	106.10
14	AN	24	ALA	N-CA-C	-5.20	103.60	111.56
30	B5	102	ASP	O-C-N	-5.20	115.91	122.20
35	BB	416	U	O4'-C1'-N1	5.20	116.30	108.50
35	BB	2649	C	O4'-C1'-N1	5.20	116.30	108.50
37	BD	178	VAL	CB-CA-C	-5.20	106.42	111.05
55	BW	38	LEU	N-CA-CB	5.20	118.87	110.65
1	AA	136	C	C3'-C2'-C1'	5.20	106.50	101.30
1	AA	406	G	O3'-P-O5'	-5.20	96.20	104.00
34	BA	25	U	O4'-C1'-N1	5.20	116.30	108.50
35	BB	581	C	O4'-C1'-C2'	-5.20	102.40	107.60
35	BB	859	G	C1'-C2'-O2'	5.20	119.60	111.80
35	BB	1546	G	P-O5'-C5'	5.20	128.70	120.90
35	BB	1847	A	C5'-C4'-C3'	-5.20	108.20	116.00
35	BB	2021	C	O4'-C1'-C2'	5.20	111.00	105.80
49	BP	93	LYS	CA-C-O	5.20	127.60	121.36
1	AA	1081	A	P-O5'-C5'	-5.20	113.11	120.90
17	AQ	36	PHE	CA-C-N	5.20	130.29	123.17
17	AQ	36	PHE	C-N-CA	5.20	130.29	123.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1912	A	C5'-C4'-O4'	-5.20	102.00	109.80
35	BB	2570	G	C4'-C3'-C2'	-5.20	97.40	102.60
1	AA	754	C	O4'-C4'-C3'	5.20	109.19	104.00
1	AA	977	A	C5'-C4'-O4'	5.20	117.59	109.80
1	AA	1048	G	O4'-C1'-N9	5.20	116.30	108.50
1	AA	1128	C	C3'-C2'-O2'	-5.20	102.91	110.70
13	AM	26	LYS	CB-CA-C	-5.20	102.96	110.96
35	BB	417	C	P-O5'-C5'	5.20	128.69	120.90
35	BB	701	G	P-O3'-C3'	-5.20	112.41	120.20
35	BB	839	U	C3'-C2'-C1'	-5.20	96.10	101.30
35	BB	1200	C	C4'-C3'-O3'	-5.20	105.21	113.00
35	BB	1493	C	P-O5'-C5'	5.20	128.69	120.90
35	BB	1852	U	O4'-C1'-N1	5.20	116.29	108.50
35	BB	2268	A	C4'-C3'-O3'	-5.20	105.21	113.00
35	BB	1466	U	C1'-C2'-O2'	5.19	116.19	108.40
1	AA	118	U	P-O5'-C5'	5.19	128.69	120.90
1	AA	172	A	P-O3'-C3'	-5.19	112.41	120.20
1	AA	925	G	C5'-C4'-C3'	5.19	123.79	116.00
1	AA	1354	U	C4'-C3'-O3'	-5.19	105.21	113.00
1	AA	1422	G	P-O3'-C3'	-5.19	112.41	120.20
1	AA	1438	G	C5'-C4'-C3'	-5.19	108.21	116.00
12	AL	77	SER	CA-C-O	-5.19	115.90	121.56
35	BB	109	C	C3'-C2'-O2'	5.19	118.49	110.70
35	BB	554	U	C3'-C2'-C1'	5.19	106.49	101.30
35	BB	682	G	P-O5'-C5'	5.19	128.69	120.90
35	BB	1113	U	O4'-C1'-N1	5.19	116.29	108.50
35	BB	1597	A	C4'-C3'-C2'	-5.19	97.41	102.60
35	BB	2563	U	O4'-C1'-C2'	-5.19	102.41	107.60
35	BB	2788	C	C4'-C3'-C2'	-5.19	97.41	102.60
37	BD	37	VAL	CA-C-O	-5.19	116.22	121.67
37	BD	74	GLU	O-C-N	-5.19	115.68	122.59
51	BR	21	ARG	NE-CZ-NH1	-5.19	116.31	121.50
1	AA	689	C	O4'-C1'-N1	5.19	116.29	108.50
21	AU	43	GLU	CA-C-N	5.19	127.96	120.38
21	AU	43	GLU	C-N-CA	5.19	127.96	120.38
35	BB	726	G	C3'-C2'-O2'	5.19	118.49	110.70
35	BB	1038	G	C4'-C3'-O3'	-5.19	105.22	113.00
35	BB	1255	U	C1'-O4'-C4'	5.19	115.09	109.90
35	BB	1368	G	C3'-C2'-C1'	5.19	106.49	101.30
35	BB	1450	G	O4'-C1'-N9	5.19	116.29	108.50
35	BB	1491	G	P-O5'-C5'	-5.19	113.11	120.90
35	BB	2294	G	O4'-C1'-N9	5.19	116.29	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BF	8	LYS	CA-CB-CG	5.19	124.48	114.10
1	AA	521	G	C4'-C3'-C2'	-5.19	97.41	102.60
1	AA	733	G	C3'-C2'-O2'	-5.19	106.82	114.60
1	AA	1445	U	O4'-C1'-N1	5.19	116.28	108.50
5	AE	74	ALA	N-CA-CB	5.19	118.89	110.43
35	BB	1360	G	C4'-C3'-C2'	-5.19	97.41	102.60
35	BB	2324	U	O4'-C1'-N1	5.19	115.98	108.20
1	AA	617	G	P-O3'-C3'	-5.19	112.42	120.20
1	AA	1159	U	O4'-C1'-C2'	-5.19	100.61	105.80
1	AA	1430	A	P-O5'-C5'	5.19	128.68	120.90
10	AJ	7	ARG	CB-CG-CD	5.19	123.23	111.30
20	AT	53	MET	CA-C-N	5.19	127.21	120.26
20	AT	53	MET	C-N-CA	5.19	127.21	120.26
25	B0	59	ASP	CA-CB-CG	-5.19	107.41	112.60
35	BB	217	A	C3'-C2'-O2'	5.19	118.48	110.70
35	BB	222	A	P-O3'-C3'	-5.19	112.42	120.20
35	BB	776	G	C3'-C2'-C1'	-5.19	96.31	101.50
35	BB	1147	A	C1'-C2'-O2'	5.19	116.18	108.40
35	BB	1444	G	O4'-C1'-N9	5.19	116.28	108.50
35	BB	2078	C	C5'-C4'-C3'	-5.19	108.22	116.00
35	BB	2669	G	C4'-C3'-C2'	-5.19	97.41	102.60
38	BE	17	THR	CA-C-N	5.19	129.92	121.98
38	BE	17	THR	C-N-CA	5.19	129.92	121.98
1	AA	751	U	C4'-C3'-O3'	-5.19	105.22	113.00
4	AD	114	ARG	NE-CZ-NH1	-5.19	116.31	121.50
34	BA	61	G	C4'-C3'-O3'	-5.19	105.22	113.00
35	BB	197	A	O4'-C1'-N9	5.19	116.28	108.50
35	BB	2705	A	C4'-C3'-O3'	-5.19	105.22	113.00
1	AA	696	A	P-O5'-C5'	5.18	128.68	120.90
1	AA	763	G	C1'-C2'-O2'	5.18	116.18	108.40
10	AJ	77	VAL	CA-CB-CG1	5.18	119.21	110.40
13	AM	24	VAL	O-C-N	5.18	128.43	123.14
15	AO	16	ARG	CG-CD-NE	-5.18	100.59	112.00
40	BG	47	ASN	N-CA-C	-5.18	105.30	113.02
43	BJ	69	ARG	N-CA-C	-5.18	105.70	112.23
46	BM	55	ARG	NE-CZ-NH2	5.18	123.86	119.20
46	BM	122	ALA	O-C-N	5.18	129.49	122.59
50	BQ	75	TYR	N-CA-CB	5.18	117.48	109.91
50	BQ	109	VAL	N-CA-C	5.18	115.33	110.30
1	AA	136	C	O4'-C1'-N1	5.18	116.27	108.50
1	AA	660	C	O4'-C1'-N1	5.18	116.27	108.50
1	AA	1489	G	P-O5'-C5'	5.18	128.67	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	AD	127	ARG	CD-NE-CZ	-5.18	117.14	124.40
4	AD	193	ASP	CA-CB-CG	-5.18	107.42	112.60
4	AD	194	ILE	N-CA-CB	5.18	119.78	111.23
13	AM	33	LEU	CA-C-N	5.18	127.18	120.44
13	AM	33	LEU	C-N-CA	5.18	127.18	120.44
35	BB	1251	C	C2'-C3'-O3'	5.18	117.27	109.50
35	BB	1802	A	P-O5'-C5'	5.18	128.67	120.90
35	BB	1837	C	O4'-C1'-N1	5.18	116.28	108.50
35	BB	2865	U	O4'-C4'-C3'	5.18	109.18	104.00
48	BO	67	ASN	CB-CG-OD1	5.18	131.16	120.80
1	AA	1133	G	C1'-C2'-O2'	5.18	116.17	108.40
5	AE	15	ILE	N-CA-C	-5.18	98.56	109.34
35	BB	1400	U	O4'-C1'-N1	5.18	116.27	108.50
35	BB	1761	C	C4'-C3'-C2'	-5.18	97.42	102.60
1	AA	649	A	C3'-C2'-C1'	-5.18	96.12	101.30
1	AA	790	A	C1'-C2'-O2'	5.18	116.17	108.40
1	AA	1049	U	C4'-C3'-O3'	5.18	117.17	109.40
3	AC	75	VAL	CA-C-O	-5.18	115.36	120.85
8	AH	101	ALA	N-CA-CB	5.18	119.76	110.80
35	BB	533	G	N1-C6-O6	5.18	135.44	119.90
35	BB	921	C	O4'-C1'-N1	5.18	116.27	108.50
35	BB	1202	G	C4'-C3'-C2'	-5.18	97.42	102.60
35	BB	1341	G	O4'-C1'-N9	5.18	115.97	108.20
35	BB	1464	G	O4'-C1'-N9	5.18	116.27	108.50
35	BB	2707	U	O4'-C1'-C2'	-5.18	102.42	107.60
38	BE	108	ILE	N-CA-C	-5.18	105.05	112.35
1	AA	114	U	O4'-C1'-N1	5.18	116.27	108.50
1	AA	220	G	C1'-O4'-C4'	5.18	115.08	109.90
1	AA	568	G	O5'-C5'-C4'	-5.18	103.73	111.50
1	AA	973	G	O4'-C1'-N9	5.18	116.27	108.50
7	AG	95	ARG	N-CA-CB	5.18	117.69	109.82
15	AO	26	VAL	CA-C-N	5.18	127.99	120.79
15	AO	26	VAL	C-N-CA	5.18	127.99	120.79
30	B5	8	MET	CG-SD-CE	-5.18	89.51	100.90
35	BB	2034	U	C4'-C3'-O3'	-5.18	105.23	113.00
35	BB	2579	C	P-O5'-C5'	5.18	128.67	120.90
35	BB	2616	C	C4'-C3'-C2'	-5.18	97.42	102.60
39	BF	168	LEU	N-CA-CB	5.18	117.66	109.94
1	AA	120	A	C3'-C2'-C1'	5.18	106.48	101.30
1	AA	1101	A	C2'-C3'-O3'	5.18	117.26	109.50
2	AB	34	ARG	N-CA-C	-5.18	107.01	113.38
5	AE	112	ALA	CA-C-O	-5.18	113.52	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	48	THR	CA-CB-CG2	5.18	119.30	110.50
25	B0	46	VAL	N-CA-CB	5.18	119.77	111.23
35	BB	456	C	C1'-C2'-O2'	5.18	119.56	111.80
35	BB	871	U	C4'-C3'-O3'	-5.18	105.23	113.00
39	BF	120	SER	O-C-N	5.18	129.28	123.48
48	BO	19	GLN	CA-C-N	5.18	127.53	120.54
48	BO	19	GLN	C-N-CA	5.18	127.53	120.54
1	AA	181	A	O4'-C1'-N9	5.17	115.96	108.20
1	AA	1314	C	C4'-C3'-C2'	-5.17	97.43	102.60
25	B0	13	THR	N-CA-CB	5.17	119.40	111.22
35	BB	839	U	O4'-C1'-N1	5.17	116.26	108.50
51	BR	49	ILE	N-CA-C	-5.17	100.31	108.90
1	AA	93	U	P-O3'-C3'	-5.17	112.44	120.20
1	AA	645	G	C4'-C3'-C2'	-5.17	97.43	102.60
16	AP	5	ARG	N-CA-CB	5.17	119.43	111.46
18	AR	27	THR	CA-CB-CG2	-5.17	101.70	110.50
21	AU	3	ILE	N-CA-CB	5.17	120.29	111.50
35	BB	421	C	O4'-C1'-C2'	5.17	110.97	105.80
45	BL	101	ILE	CB-CA-C	-5.17	103.42	110.77
53	BT	88	LYS	CA-C-N	5.17	128.04	119.35
53	BT	88	LYS	C-N-CA	5.17	128.04	119.35
1	AA	949	A	C4'-C3'-C2'	-5.17	97.43	102.60
16	AP	70	ARG	CD-NE-CZ	5.17	131.64	124.40
35	BB	246	C	O4'-C1'-N1	5.17	116.26	108.50
35	BB	289	G	C3'-C2'-O2'	5.17	118.46	110.70
35	BB	1119	U	P-O3'-C3'	-5.17	112.44	120.20
35	BB	2636	C	O4'-C1'-N1	5.17	116.26	108.50
37	BD	30	GLU	CA-C-N	5.17	131.42	121.54
37	BD	30	GLU	C-N-CA	5.17	131.42	121.54
46	BM	63	ILE	CA-C-N	5.17	130.71	122.59
46	BM	63	ILE	C-N-CA	5.17	130.71	122.59
49	BP	99	LEU	N-CA-CB	5.17	118.24	110.53
1	AA	62	U	C5'-C4'-C3'	-5.17	108.25	116.00
1	AA	222	C	C1'-O4'-C4'	-5.17	104.73	109.90
1	AA	295	C	O4'-C1'-C2'	5.17	112.77	107.60
1	AA	380	G	C4'-C3'-C2'	-5.17	97.43	102.60
1	AA	827	U	O3'-P-O5'	5.17	111.75	104.00
1	AA	1007	U	C4'-C3'-O3'	-5.17	105.25	113.00
11	AK	21	HIS	CE1-NE2-CD2	-5.17	103.83	109.00
30	B5	180	PHE	CB-CG-CD2	-5.17	111.91	120.70
35	BB	287	G	C4'-C3'-O3'	-5.17	105.25	113.00
35	BB	1405	U	O4'-C1'-N1	5.17	116.25	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1435	G	C1'-O4'-C4'	5.17	115.07	109.90
48	BO	66	GLY	O-C-N	-5.17	115.91	122.32
51	BR	20	VAL	N-CA-C	-5.17	100.80	108.45
1	AA	525	C	P-O5'-C5'	5.17	128.65	120.90
1	AA	594	U	C4'-C3'-O3'	-5.17	105.25	113.00
1	AA	1011	C	C4'-C3'-C2'	5.17	107.77	102.60
5	AE	22	LYS	CA-C-O	-5.17	115.39	121.44
6	AF	74	LEU	CD1-CG-CD2	-5.17	99.43	110.80
30	B5	130	VAL	CA-C-N	5.17	131.41	121.54
30	B5	130	VAL	C-N-CA	5.17	131.41	121.54
35	BB	1729	U	O4'-C4'-C3'	5.17	109.17	104.00
35	BB	2324	U	C5'-C4'-C3'	-5.17	107.45	115.20
35	BB	2803	G	C3'-C2'-O2'	5.17	118.45	110.70
36	BC	194	VAL	CA-C-N	5.17	125.01	120.10
36	BC	194	VAL	C-N-CA	5.17	125.01	120.10
36	BC	199	HIS	CE1-NE2-CD2	-5.17	103.83	109.00
1	AA	169	C	O4'-C4'-C3'	-5.17	98.83	104.00
8	AH	94	VAL	O-C-N	5.17	129.03	122.57
9	AI	69	GLY	CA-C-N	5.17	129.09	121.96
9	AI	69	GLY	C-N-CA	5.17	129.09	121.96
10	AJ	60	ASP	CA-CB-CG	-5.17	107.44	112.60
35	BB	982	C	O3'-P-O5'	-5.17	96.25	104.00
1	AA	1088	G	C3'-C2'-O2'	5.16	118.45	110.70
1	AA	1276	G	O5'-C5'-C4'	-5.16	103.75	111.50
34	BA	57	A	O4'-C1'-N9	5.16	116.25	108.50
35	BB	354	A	P-O5'-C5'	-5.16	113.16	120.90
35	BB	2319	G	P-O3'-C3'	5.16	127.94	120.20
35	BB	2797	U	O4'-C4'-C3'	-5.16	98.84	104.00
35	BB	2813	A	C5'-C4'-C3'	-5.16	108.25	116.00
1	AA	986	U	P-O3'-C3'	-5.16	112.46	120.20
21	AU	18	PHE	CB-CG-CD2	5.16	129.48	120.70
35	BB	73	A	C4'-C3'-O3'	-5.16	105.26	113.00
35	BB	1026	G	C4'-C3'-C2'	-5.16	97.44	102.60
36	BC	145	MET	CA-C-O	5.16	124.20	118.52
41	BH	8	LYS	N-CA-CB	5.16	117.95	109.95
1	AA	61	G	P-O3'-C3'	-5.16	112.46	120.20
25	B0	49	ARG	NE-CZ-NH1	-5.16	116.34	121.50
30	B5	188	ASN	CA-CB-CG	-5.16	107.44	112.60
35	BB	595	C	O4'-C1'-N1	5.16	116.24	108.50
35	BB	686	U	O4'-C1'-N1	5.16	115.94	108.20
35	BB	1509	A	O4'-C1'-N9	5.16	115.94	108.20
35	BB	1846	G	O4'-C4'-C3'	5.16	109.16	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2551	C	O4'-C1'-N1	5.16	116.24	108.50
40	BG	52	GLY	CA-C-N	5.16	125.56	119.99
40	BG	52	GLY	C-N-CA	5.16	125.56	119.99
50	BQ	61	ILE	O-C-N	5.16	127.10	121.94
1	AA	904	U	C3'-C2'-C1'	-5.16	96.14	101.30
4	AD	97	LEU	O-C-N	5.16	127.45	122.09
7	AG	71	THR	CA-C-O	-5.16	113.39	119.48
10	AJ	59	LYS	CA-CB-CG	5.16	124.42	114.10
25	B0	25	LYS	CA-C-O	-5.16	115.47	121.15
35	BB	1903	G	C1'-O4'-C4'	-5.16	104.74	109.90
35	BB	2848	G	C4'-C3'-O3'	-5.16	101.66	109.40
37	BD	58	ASN	OD1-CG-ND2	5.16	127.76	122.60
52	BS	8	ARG	NE-CZ-NH2	-5.16	114.56	119.20
1	AA	734	G	P-O3'-C3'	-5.16	112.46	120.20
2	AB	111	LYS	CG-CD-CE	5.16	123.16	111.30
35	BB	629	G	C5'-C4'-C3'	-5.16	108.26	116.00
35	BB	1853	A	O4'-C1'-N9	5.16	116.23	108.50
35	BB	2428	G	P-O3'-C3'	5.16	127.94	120.20
1	AA	240	G	P-O5'-C5'	-5.16	113.17	120.90
35	BB	364	C	C4'-C3'-O3'	-5.16	105.27	113.00
35	BB	822	G	O3'-P-O5'	-5.16	96.27	104.00
35	BB	1273	U	P-O5'-C5'	-5.16	113.17	120.90
35	BB	2130	U	O4'-C4'-C3'	-5.16	98.84	104.00
35	BB	2683	C	P-O5'-C5'	-5.16	113.17	120.90
37	BD	177	VAL	CA-C-N	-5.16	117.70	123.16
37	BD	177	VAL	C-N-CA	-5.16	117.70	123.16
47	BN	35	LYS	N-CA-C	-5.16	100.50	108.90
50	BQ	86	SER	N-CA-CB	5.16	119.20	110.49
1	AA	1420	U	O4'-C1'-N1	5.15	116.23	108.50
35	BB	515	A	O4'-C1'-N9	5.15	116.23	108.50
35	BB	945	A	N9-C1'-C2'	-5.15	106.27	114.00
36	BC	144	GLU	CA-C-O	-5.15	115.68	121.40
1	AA	511	C	C4'-C3'-O3'	5.15	117.13	109.40
9	AI	125	GLN	OE1-CD-NE2	5.15	127.75	122.60
35	BB	314	C	O4'-C1'-N1	5.15	116.23	108.50
35	BB	707	G	O4'-C1'-C2'	-5.15	102.45	107.60
35	BB	864	G	N9-C1'-C2'	5.15	119.73	112.00
35	BB	1456	G	O4'-C1'-N9	5.15	116.23	108.50
35	BB	1510	G	O4'-C4'-C3'	-5.15	98.85	104.00
35	BB	2183	A	O4'-C4'-C3'	-5.15	98.85	104.00
39	BF	25	MET	O-C-N	5.15	128.38	122.25
51	BR	12	HIS	CE1-NE2-CD2	-5.15	103.85	109.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BU	67	SER	N-CA-C	-5.15	105.88	113.61
1	AA	220	G	O4'-C1'-C2'	-5.15	102.45	107.60
1	AA	277	C	P-O3'-C3'	-5.15	112.47	120.20
1	AA	305	G	O4'-C1'-C2'	-5.15	100.65	105.80
1	AA	452	A	P-O5'-C5'	5.15	128.62	120.90
1	AA	801	U	O4'-C4'-C3'	-5.15	98.85	104.00
1	AA	1301	U	C5'-C4'-C3'	5.15	122.93	115.20
16	AP	17	TYR	CA-CB-CG	-5.15	104.63	113.90
26	B1	41	HIS	CA-C-O	5.15	125.72	119.49
35	BB	1137	G	P-O3'-C3'	-5.15	112.47	120.20
35	BB	1518	C	C4'-C3'-O3'	-5.15	105.27	113.00
35	BB	1750	G	O4'-C4'-C3'	-5.15	98.85	104.00
35	BB	1752	C	O4'-C1'-N1	5.15	116.23	108.50
40	BG	1	SER	CA-C-N	5.15	131.38	121.54
40	BG	1	SER	C-N-CA	5.15	131.38	121.54
39	BF	5	ASP	CA-C-O	5.15	126.23	120.82
39	BF	86	CYS	N-CA-C	-5.15	99.21	108.48
44	BK	8	LEU	N-CA-C	-5.15	102.16	110.14
1	AA	1324	A	O4'-C1'-N9	5.15	116.22	108.50
3	AC	38	VAL	CA-C-N	5.15	127.69	120.28
3	AC	38	VAL	C-N-CA	5.15	127.69	120.28
4	AD	120	LYS	CA-C-N	5.15	127.49	120.54
4	AD	120	LYS	C-N-CA	5.15	127.49	120.54
5	AE	122	VAL	N-CA-CB	5.15	120.30	112.06
32	B7	13	PHE	CB-CG-CD1	-5.15	111.95	120.70
35	BB	971	G	O4'-C1'-C2'	-5.15	102.45	107.60
35	BB	2035	G	C2'-C3'-O3'	5.15	117.22	109.50
35	BB	2723	C	C1'-O4'-C4'	5.15	115.05	109.90
36	BC	246	PRO	N-CD-CG	5.15	110.92	103.20
1	AA	1060	U	P-O5'-C5'	-5.15	113.18	120.90
1	AA	1383	C	C2'-C3'-O3'	5.15	121.42	113.70
35	BB	776	G	O4'-C1'-C2'	5.15	110.95	105.80
35	BB	2053	G	O4'-C1'-N9	5.15	116.22	108.50
55	BW	31	TYR	CA-C-O	-5.15	115.77	121.33
1	AA	994	A	P-O5'-C5'	-5.14	113.18	120.90
1	AA	1462	C	O4'-C4'-C3'	-5.14	98.86	104.00
10	AJ	29	ALA	CA-C-N	5.14	127.13	120.44
10	AJ	29	ALA	C-N-CA	5.14	127.13	120.44
20	AT	63	LYS	CG-CD-CE	5.14	123.13	111.30
21	AU	17	ARG	N-CA-CB	-5.14	102.84	110.61
35	BB	2299	U	C5'-C4'-C3'	-5.14	108.28	116.00
37	BD	67	HIS	O-C-N	5.14	127.57	122.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BE	106	LYS	CA-C-N	5.14	128.13	120.31
38	BE	106	LYS	C-N-CA	5.14	128.13	120.31
47	BN	2	ARG	CB-CA-C	-5.14	103.59	112.44
50	BQ	52	ARG	CA-C-N	5.14	131.37	121.54
50	BQ	52	ARG	C-N-CA	5.14	131.37	121.54
1	AA	793	U	P-O5'-C5'	5.14	128.61	120.90
1	AA	1072	G	C1'-O4'-C4'	5.14	115.04	109.90
5	AE	86	GLY	CA-C-O	-5.14	116.95	121.58
8	AH	65	PHE	CB-CG-CD1	-5.14	111.96	120.70
14	AN	79	SER	CA-C-O	-5.14	115.93	121.38
18	AR	20	ILE	CB-CA-C	5.14	117.11	110.12
20	AT	82	ILE	CA-C-N	5.14	127.59	120.29
20	AT	82	ILE	C-N-CA	5.14	127.59	120.29
35	BB	12	U	O4'-C1'-C2'	-5.14	102.46	107.60
35	BB	242	G	P-O3'-C3'	5.14	127.92	120.20
35	BB	1199	U	O5'-C5'-C4'	-5.14	103.78	111.50
36	BC	57	HIS	N-CA-C	-5.14	105.13	111.40
36	BC	174	ARG	CA-C-O	5.14	126.39	120.84
56	BY	82	GLU	CA-C-N	5.14	128.01	120.71
56	BY	82	GLU	C-N-CA	5.14	128.01	120.71
1	AA	1373	G	C4'-C3'-O3'	-5.14	105.29	113.00
20	AT	15	LYS	CA-C-N	5.14	127.44	120.65
20	AT	15	LYS	C-N-CA	5.14	127.44	120.65
35	BB	898	C	O4'-C1'-N1	5.14	116.21	108.50
35	BB	2332	C	C5'-C4'-C3'	5.14	123.71	116.00
1	AA	195	A	O4'-C4'-C3'	-5.14	98.86	104.00
8	AH	80	PRO	N-CA-CB	-5.14	98.07	103.52
12	AL	82	ARG	O-C-N	5.14	127.36	122.07
35	BB	274	C	C5'-C4'-C3'	-5.14	108.29	116.00
35	BB	900	A	O4'-C1'-C2'	-5.14	102.46	107.60
35	BB	1324	G	O5'-C5'-C4'	-5.14	103.99	111.70
35	BB	2881	U	O4'-C1'-N1	5.14	116.21	108.50
4	AD	196	GLU	CB-CG-CD	-5.14	103.86	112.60
35	BB	349	U	C5'-C4'-C3'	-5.14	108.29	116.00
35	BB	2261	C	C5'-C4'-C3'	-5.14	108.29	116.00
1	AA	488	C	O4'-C1'-N1	5.14	116.20	108.50
1	AA	634	C	O5'-C5'-C4'	-5.14	103.80	111.50
1	AA	1246	A	O4'-C1'-N9	5.14	116.20	108.50
1	AA	1393	U	C4'-C3'-O3'	-5.14	105.29	113.00
35	BB	157	C	O4'-C1'-N1	5.14	116.20	108.50
35	BB	1698	A	P-O3'-C3'	-5.14	112.50	120.20
43	BJ	105	VAL	CB-CA-C	-5.14	104.55	112.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	BT	90	GLY	N-CA-C	-5.14	107.65	115.66
1	AA	546	A	C2'-C3'-O3'	5.13	121.40	113.70
1	AA	783	C	C5'-C4'-C3'	-5.13	108.30	116.00
1	AA	806	C	O4'-C1'-N1	5.13	116.20	108.50
3	AC	76	ILE	N-CA-CB	5.13	116.56	110.55
4	AD	50	TYR	CA-C-N	5.13	131.47	121.41
4	AD	50	TYR	C-N-CA	5.13	131.47	121.41
4	AD	132	ALA	N-CA-CB	5.13	118.18	110.53
5	AE	29	ILE	N-CA-C	-5.13	102.37	109.46
11	AK	32	THR	O-C-N	5.13	129.62	123.36
35	BB	980	A	P-O3'-C3'	5.13	127.90	120.20
35	BB	1081	U	O4'-C1'-C2'	-5.13	102.47	107.60
35	BB	1476	U	C4'-C3'-C2'	-5.13	97.47	102.60
1	AA	273	U	P-O5'-C5'	5.13	128.60	120.90
1	AA	699	C	O4'-C1'-N1	5.13	116.20	108.50
47	BN	79	LEU	N-CA-C	-5.13	103.26	110.50
1	AA	1066	C	P-O5'-C5'	5.13	128.60	120.90
2	AB	41	ASN	O-C-N	-5.13	117.16	122.96
4	AD	74	TYR	CB-CA-C	5.13	118.94	110.88
6	AF	96	VAL	O-C-N	-5.13	117.76	123.20
7	AG	85	GLN	CB-CG-CD	-5.13	103.88	112.60
18	AR	72	ARG	CB-CA-C	-5.13	100.93	109.55
30	B5	48	LEU	O-C-N	-5.13	117.20	123.10
35	BB	1396	U	O4'-C1'-N1	5.13	115.90	108.20
35	BB	1579	A	O4'-C1'-N9	5.13	116.20	108.50
35	BB	1907	G	C4'-C3'-O3'	-5.13	105.30	113.00
46	BM	1	MET	CG-SD-CE	-5.13	89.61	100.90
4	AD	126	GLY	N-CA-C	-5.13	108.60	115.32
1	AA	929	G	O5'-C5'-C4'	-5.13	103.81	111.50
25	B0	61	LYS	CA-C-O	-5.13	113.77	119.67
34	BA	51	G	C4'-C3'-O3'	-5.13	105.31	113.00
39	BF	19	PHE	CB-CG-CD2	5.13	129.42	120.70
50	BQ	19	GLN	N-CA-C	-5.13	106.71	113.17
53	BT	76	ARG	CA-C-N	5.13	127.99	120.71
53	BT	76	ARG	C-N-CA	5.13	127.99	120.71
1	AA	1410	A	O4'-C1'-C2'	5.13	112.73	107.60
30	B5	44	VAL	CA-C-O	-5.13	115.05	120.48
35	BB	344	A	O5'-C5'-C4'	-5.13	103.81	111.50
35	BB	1380	G	P-O5'-C5'	5.13	128.59	120.90
35	BB	1717	A	O5'-C5'-C4'	-5.13	103.81	111.50
38	BE	78	TRP	CB-CG-CD1	5.13	134.59	126.90
40	BG	96	ALA	N-CA-CB	5.13	119.15	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	BN	96	ARG	NE-CZ-NH2	-5.13	114.58	119.20
49	BP	9	GLN	OE1-CD-NE2	5.13	127.73	122.60
50	BQ	92	LYS	N-CA-CB	5.13	117.83	110.40
13	AM	75	SER	CB-CA-C	-5.12	100.46	109.07
26	B1	41	HIS	CG-CD2-NE2	5.12	112.33	107.20
31	B6	30	VAL	CA-C-N	5.12	127.15	120.28
31	B6	30	VAL	C-N-CA	5.12	127.15	120.28
35	BB	748	G	P-O3'-C3'	-5.12	112.51	120.20
36	BC	157	ALA	N-CA-C	-5.12	102.06	109.59
41	BH	141	LYS	CB-CG-CD	5.12	123.09	111.30
1	AA	259	G	C3'-C2'-C1'	5.12	106.42	101.30
1	AA	1275	A	P-O3'-C3'	-5.12	112.52	120.20
5	AE	102	THR	N-CA-C	-5.12	101.52	109.72
16	AP	40	ASN	N-CA-C	-5.12	97.41	107.91
17	AQ	65	PRO	CA-C-O	-5.12	115.52	122.08
35	BB	618	G	P-O5'-C5'	5.12	128.59	120.90
35	BB	1425	G	C1'-O4'-C4'	5.12	115.02	109.90
35	BB	1548	A	P-O5'-C5'	-5.12	113.22	120.90
35	BB	1567	G	O3'-P-O5'	-5.12	96.31	104.00
35	BB	2014	A	C4'-C3'-O3'	-5.12	105.31	113.00
35	BB	2196	C	C1'-O4'-C4'	-5.12	104.78	109.90
36	BC	162	GLN	CA-C-O	5.12	127.51	121.36
49	BP	7	LEU	CD1-CG-CD2	-5.12	99.53	110.80
1	AA	400	C	O4'-C1'-N1	5.12	116.18	108.50
1	AA	849	G	O4'-C1'-C2'	-5.12	102.48	107.60
1	AA	976	G	C4'-C3'-C2'	5.12	107.72	102.60
1	AA	1318	A	O4'-C1'-C2'	-5.12	102.48	107.60
1	AA	1326	U	C5'-C4'-C3'	5.12	123.68	116.00
4	AD	86	GLY	N-CA-C	-5.12	101.04	113.18
4	AD	180	THR	N-CA-C	-5.12	99.99	108.75
35	BB	689	A	C4'-C3'-O3'	-5.12	105.32	113.00
35	BB	1627	G	C3'-C2'-O2'	5.12	118.38	110.70
1	AA	242	G	C5-C6-O6	-5.12	113.24	128.60
1	AA	682	G	P-O3'-C3'	-5.12	112.52	120.20
1	AA	1339	A	O4'-C1'-N9	5.12	116.18	108.50
4	AD	73	ASN	CA-C-N	5.12	127.10	120.44
4	AD	73	ASN	C-N-CA	5.12	127.10	120.44
35	BB	2175	C	C5'-C4'-O4'	5.12	117.48	109.80
35	BB	2665	A	O4'-C1'-C2'	-5.12	102.48	107.60
1	AA	530	G	C4'-C3'-C2'	-5.12	97.48	102.60
4	AD	166	LYS	N-CA-CB	5.12	119.48	110.37
15	AO	77	TYR	CA-C-N	5.12	127.39	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AO	77	TYR	C-N-CA	5.12	127.39	120.38
35	BB	1275	A	C3'-C2'-C1'	5.12	106.42	101.30
35	BB	2878	U	O4'-C1'-C2'	-5.12	102.48	107.60
36	BC	232	GLY	CA-C-N	5.12	131.44	121.41
36	BC	232	GLY	C-N-CA	5.12	131.44	121.41
47	BN	87	PHE	N-CA-C	-5.12	105.39	113.02
50	BQ	51	GLN	O-C-N	-5.12	115.68	122.33
50	BQ	91	ARG	N-CA-CB	5.12	119.14	110.49
56	BY	75	ASN	CB-CG-OD1	-5.12	110.56	120.80
35	BB	541	A	P-O5'-C5'	-5.12	113.22	120.90
35	BB	736	C	P-O5'-C5'	-5.12	113.22	120.90
1	AA	532	A	O3'-P-O5'	-5.12	96.33	104.00
1	AA	642	A	C5'-C4'-O4'	5.12	117.47	109.80
1	AA	899	C	P-O5'-C5'	-5.12	113.23	120.90
1	AA	1152	A	C4'-C3'-O3'	-5.12	105.33	113.00
2	AB	121	GLN	CB-CA-C	-5.12	101.85	110.44
5	AE	87	VAL	CA-CB-CG1	5.12	119.09	110.40
18	AR	48	ALA	CA-C-O	-5.12	115.44	121.07
30	B5	28	ALA	CA-C-N	5.12	127.09	120.44
30	B5	28	ALA	C-N-CA	5.12	127.09	120.44
35	BB	170	U	P-O5'-C5'	-5.12	113.23	120.90
35	BB	487	C	C1'-O4'-C4'	5.12	115.02	109.90
35	BB	1778	U	O4'-C1'-N1	5.12	116.17	108.50
35	BB	1991	U	O3'-P-O5'	5.12	111.67	104.00
35	BB	2033	A	P-O5'-C5'	-5.12	113.23	120.90
35	BB	2162	G	P-O3'-C3'	-5.12	112.53	120.20
35	BB	2650	U	C4'-C3'-O3'	-5.12	105.33	113.00
50	BQ	75	TYR	CA-C-O	-5.12	115.63	121.00
1	AA	618	C	C5'-C4'-C3'	-5.11	108.33	116.00
1	AA	645	G	C1'-C2'-O2'	5.11	116.07	108.40
3	AC	25	THR	O-C-N	-5.11	116.70	122.12
33	B8	36	ARG	CA-C-N	-5.11	113.58	122.37
33	B8	36	ARG	C-N-CA	-5.11	113.58	122.37
35	BB	1014	A	N1-C6-N6	5.11	133.94	118.60
35	BB	1055	G	C5'-C4'-O4'	5.11	117.47	109.80
46	BM	113	ALA	CA-C-N	5.11	127.64	120.28
46	BM	113	ALA	C-N-CA	5.11	127.64	120.28
1	AA	168	G	P-O5'-C5'	5.11	128.57	120.90
9	AI	75	ALA	N-CA-C	5.11	118.29	111.75
50	BQ	64	ILE	N-CA-C	-5.11	105.41	110.62
1	AA	276	G	O4'-C1'-N9	5.11	116.17	108.50
1	AA	790	A	O3'-P-O5'	-5.11	96.33	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1352	C	P-O3'-C3'	5.11	127.87	120.20
2	AB	107	ARG	NE-CZ-NH2	5.11	123.80	119.20
34	BA	91	C	C1'-O4'-C4'	5.11	115.01	109.90
35	BB	34	U	C4'-C3'-C2'	-5.11	97.49	102.60
38	BE	49	ARG	NE-CZ-NH2	5.11	123.80	119.20
41	BH	77	THR	N-CA-C	-5.11	101.48	108.38
43	BJ	131	ASN	N-CA-C	-5.11	106.06	113.21
22	AV	65	U	O3'-P-O5'	-5.11	96.34	104.00
1	AA	698	G	C4'-C3'-O3'	-5.11	105.34	113.00
1	AA	722	G	O4'-C4'-C3'	5.11	109.11	104.00
1	AA	977	A	N1-C6-N6	5.11	133.92	118.60
3	AC	62	SER	N-CA-CB	5.11	120.15	111.57
6	AF	7	VAL	N-CA-C	-5.11	101.13	108.53
9	AI	96	GLU	CA-C-N	5.11	131.29	121.54
9	AI	96	GLU	C-N-CA	5.11	131.29	121.54
20	AT	59	ARG	NE-CZ-NH2	-5.11	114.60	119.20
35	BB	18	U	C5'-C4'-C3'	-5.11	108.34	116.00
35	BB	173	A	O4'-C4'-C3'	-5.11	98.89	104.00
35	BB	792	A	N9-C1'-C2'	-5.11	106.34	114.00
43	BJ	40	HIS	ND1-CG-CD2	5.11	111.21	106.10
52	BS	64	ALA	N-CA-CB	5.11	119.12	110.49
1	AA	341	C	P-O5'-C5'	-5.11	113.24	120.90
1	AA	1097	C	O4'-C1'-N1	5.11	116.16	108.50
1	AA	1359	C	C4'-C3'-O3'	-5.11	105.34	113.00
4	AD	43	ARG	N-CA-C	-5.11	101.39	109.76
10	AJ	18	ILE	O-C-N	-5.11	116.24	122.06
19	AS	72	GLU	N-CA-CB	-5.11	100.99	110.18
35	BB	1411	U	O5'-C5'-C4'	-5.11	103.84	111.50
35	BB	2146	C	C4'-C3'-C2'	-5.11	97.50	102.60
35	BB	2783	U	C5'-C4'-C3'	-5.11	108.34	116.00
38	BE	27	LEU	CA-C-O	-5.11	115.46	120.82
56	BY	19	ARG	N-CA-CB	5.11	117.77	110.06
35	BB	155	A	P-O5'-C5'	-5.10	113.24	120.90
35	BB	2677	G	O4'-C1'-N9	5.10	116.16	108.50
39	BF	48	LEU	N-CA-C	5.10	118.97	112.34
1	AA	446	G	C4'-C3'-C2'	-5.10	97.50	102.60
1	AA	651	C	O4'-C1'-N1	5.10	116.15	108.50
1	AA	837	U	O5'-C5'-C4'	5.10	119.15	111.50
35	BB	2318	G	C4'-C3'-O3'	-5.10	105.35	113.00
35	BB	2726	A	O4'-C4'-C3'	-5.10	101.00	106.10
45	BL	105	ILE	CA-C-O	-5.10	115.22	121.04
1	AA	1272	G	P-O5'-C5'	-5.10	113.25	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AH	50	VAL	N-CA-C	5.10	114.92	107.37
16	AP	62	GLY	O-C-N	5.10	127.84	122.28
47	BN	41	ALA	CA-C-O	5.10	126.18	120.82
5	AE	69	ASN	OD1-CG-ND2	-5.10	117.50	122.60
16	AP	59	HIS	CA-C-N	5.10	127.37	120.38
16	AP	59	HIS	C-N-CA	5.10	127.37	120.38
26	B1	51	ALA	N-CA-C	-5.10	105.37	111.03
35	BB	41	C	C4'-C3'-O3'	-5.10	105.35	113.00
35	BB	1260	A	C3'-C2'-O2'	5.10	118.35	110.70
35	BB	1482	G	O5'-C5'-C4'	-5.10	103.85	111.50
35	BB	1857	G	O4'-C4'-C3'	-5.10	101.00	106.10
35	BB	2641	G	C3'-C2'-C1'	-5.10	96.20	101.30
45	BL	2	ARG	CD-NE-CZ	-5.10	117.26	124.40
1	AA	906	A	O4'-C4'-C3'	-5.10	98.90	104.00
1	AA	1216	A	P-O5'-C5'	5.10	128.55	120.90
1	AA	1294	G	P-O3'-C3'	-5.10	112.55	120.20
20	AT	10	ALA	CB-CA-C	-5.10	102.33	110.79
35	BB	27	G	C4'-C3'-C2'	-5.10	97.50	102.60
35	BB	46	G	C4'-C3'-O3'	-5.10	105.35	113.00
35	BB	327	G	C4'-C3'-C2'	-5.10	97.50	102.60
35	BB	1563	U	C4'-C3'-O3'	-5.10	105.35	113.00
35	BB	1731	G	C2'-C3'-O3'	5.10	117.15	109.50
35	BB	2109	U	O4'-C1'-C2'	-5.10	102.50	107.60
40	BG	90	GLY	O-C-N	5.10	127.95	122.60
48	BO	74	VAL	CA-C-O	-5.10	114.00	119.35
35	BB	727	A	C3'-C2'-C1'	5.10	106.40	101.30
35	BB	2585	U	C2'-C3'-O3'	5.10	117.14	109.50
1	AA	154	U	C3'-C2'-O2'	5.09	118.34	110.70
7	AG	100	MET	CA-C-O	5.09	126.35	120.90
12	AL	85	ARG	N-CA-C	5.09	117.03	109.69
13	AM	77	LYS	CA-C-N	5.09	131.27	121.54
13	AM	77	LYS	C-N-CA	5.09	131.27	121.54
35	BB	1666	G	P-O5'-C5'	-5.09	113.26	120.90
35	BB	2511	U	C5'-C4'-O4'	-5.09	102.16	109.80
1	AA	452	A	O4'-C1'-N9	5.09	116.14	108.50
1	AA	810	C	C4'-C3'-O3'	-5.09	105.36	113.00
4	AD	176	LYS	CA-C-N	5.09	129.35	122.07
4	AD	176	LYS	C-N-CA	5.09	129.35	122.07
17	AQ	33	TYR	CA-CB-CG	-5.09	104.73	113.90
35	BB	252	G	P-O5'-C5'	-5.09	113.26	120.90
35	BB	295	G	O4'-C1'-C2'	-5.09	102.51	107.60
35	BB	1498	C	C5'-C4'-C3'	5.09	123.64	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BW	44	HIS	CA-C-N	5.09	131.27	121.54
55	BW	44	HIS	C-N-CA	5.09	131.27	121.54
1	AA	1214	C	P-O3'-C3'	5.09	127.84	120.20
3	AC	89	VAL	N-CA-C	5.09	119.93	109.34
20	AT	48	LYS	N-CA-C	5.09	119.77	111.37
35	BB	504	A	O3'-P-O5'	-5.09	96.36	104.00
35	BB	1890	A	O4'-C1'-C2'	-5.09	102.51	107.60
35	BB	2732	G	O4'-C1'-N9	5.09	116.14	108.50
36	BC	114	GLN	OE1-CD-NE2	5.09	127.69	122.60
43	BJ	19	ASP	CA-CB-CG	5.09	117.69	112.60
1	AA	91	U	C1'-C2'-O2'	5.09	116.03	108.40
1	AA	726	C	C4'-C3'-C2'	-5.09	97.51	102.60
1	AA	747	A	C3'-C2'-C1'	-5.09	96.21	101.30
1	AA	1037	C	C5'-C4'-C3'	-5.09	108.37	116.00
1	AA	1247	U	C3'-C2'-O2'	5.09	118.33	110.70
1	AA	1251	A	O4'-C1'-N9	5.09	116.14	108.50
1	AA	1454	G	C5'-C4'-C3'	5.09	123.63	116.00
12	AL	62	VAL	N-CA-C	-5.09	101.27	108.65
35	BB	1148	U	C1'-O4'-C4'	5.09	114.99	109.90
35	BB	1957	C	C4'-C3'-C2'	-5.09	97.51	102.60
35	BB	2748	A	C3'-C2'-C1'	-5.09	96.21	101.30
36	BC	69	ASN	OD1-CG-ND2	5.09	127.69	122.60
37	BD	59	ARG	N-CA-C	-5.09	106.76	113.17
1	AA	391	G	C4'-C3'-C2'	-5.09	97.51	102.60
1	AA	1482	G	C1'-O4'-C4'	-5.09	104.81	109.90
17	AQ	67	SER	N-CA-C	-5.09	101.17	108.60
40	BG	18	ILE	O-C-N	-5.09	117.06	122.61
1	AA	843	U	C1'-O4'-C4'	-5.09	104.61	109.70
1	AA	995	C	O4'-C1'-N1	5.09	116.13	108.50
1	AA	1373	G	O4'-C4'-C3'	-5.09	98.91	104.00
3	AC	149	LYS	CA-C-O	-5.09	113.84	120.25
4	AD	94	GLU	CB-CG-CD	-5.09	103.95	112.60
27	B2	7	THR	CA-C-O	-5.09	115.16	121.06
35	BB	359	G	C1'-O4'-C4'	5.09	114.99	109.90
35	BB	1416	G	P-O3'-C3'	5.09	127.83	120.20
35	BB	2167	U	O4'-C1'-N1	5.09	116.13	108.50
35	BB	2395	C	O4'-C1'-C2'	-5.09	102.51	107.60
49	BP	20	ARG	N-CA-CB	5.09	118.70	110.05
1	AA	1145	A	C5'-C4'-C3'	-5.08	107.57	115.20
3	AC	72	PRO	O-C-N	5.08	129.64	122.37
35	BB	1113	U	C4'-C3'-O3'	-5.08	105.37	113.00
35	BB	2739	U	O4'-C1'-N1	5.08	116.13	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2890	G	P-O5'-C5'	5.08	128.53	120.90
37	BD	148	GLN	N-CA-C	-5.08	99.97	110.80
1	AA	625	U	P-O3'-C3'	5.08	127.83	120.20
1	AA	741	G	O4'-C1'-N9	5.08	116.12	108.50
1	AA	1016	A	P-O3'-C3'	-5.08	112.57	120.20
1	AA	1128	C	O4'-C1'-N1	5.08	116.12	108.50
17	AQ	60	ILE	CA-CB-CG1	5.08	119.04	110.40
35	BB	265	A	C4'-C3'-C2'	-5.08	97.52	102.60
35	BB	1041	G	O4'-C1'-N9	5.08	116.12	108.50
35	BB	2068	U	C4'-C3'-C2'	-5.08	97.52	102.60
51	BR	12	HIS	ND1-CE1-NE2	5.08	113.48	108.40
1	AA	1199	U	O4'-C1'-N1	5.08	116.12	108.50
1	AA	1443	C	C4'-C3'-O3'	-5.08	105.38	113.00
8	AH	111	THR	CA-C-O	-5.08	115.79	121.23
14	AN	92	ILE	CA-CB-CG2	5.08	119.14	110.50
18	AR	32	ILE	CA-CB-CG1	5.08	119.04	110.40
34	BA	117	G	C4'-C3'-O3'	-5.08	105.38	113.00
35	BB	90	U	C4'-C3'-O3'	-5.08	105.38	113.00
35	BB	370	G	O4'-C4'-C3'	-5.08	101.02	106.10
35	BB	1238	G	C1'-O4'-C4'	5.08	114.98	109.90
35	BB	1838	C	C5'-C4'-C3'	5.08	122.82	115.20
35	BB	1957	C	O3'-P-O5'	-5.08	96.38	104.00
35	BB	2737	G	C1'-C2'-O2'	5.08	116.02	108.40
36	BC	122	ALA	CA-C-N	5.08	131.12	121.97
36	BC	122	ALA	C-N-CA	5.08	131.12	121.97
44	BK	9	ASN	N-CA-C	-5.08	102.54	110.42
44	BK	52	VAL	CA-C-N	5.08	131.24	121.54
44	BK	52	VAL	C-N-CA	5.08	131.24	121.54
46	BM	33	LEU	CA-C-O	5.08	125.96	120.32
55	BW	45	ASP	N-CA-C	5.08	121.62	110.80
2	AB	138	ARG	NE-CZ-NH1	-5.08	116.42	121.50
9	AI	43	ALA	CA-C-N	5.08	127.34	120.38
9	AI	43	ALA	C-N-CA	5.08	127.34	120.38
12	AL	39	THR	O-C-N	5.08	128.50	122.20
35	BB	864	G	O4'-C1'-C2'	-5.08	102.52	107.60
35	BB	1237	A	C4'-C3'-C2'	-5.08	97.52	102.60
35	BB	1881	C	O4'-C1'-N1	5.08	116.12	108.50
55	BW	51	GLN	CG-CD-NE2	-5.08	108.78	116.40
1	AA	489	C	C5'-C4'-C3'	5.08	123.62	116.00
12	AL	59	GLY	N-CA-C	-5.08	106.19	112.33
13	AM	13	HIS	ND1-CG-CD2	5.08	111.18	106.10
34	BA	114	C	O4'-C1'-N1	5.08	116.12	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	35	G	O4'-C4'-C3'	-5.08	98.92	104.00
35	BB	1466	U	P-O5'-C5'	5.08	128.52	120.90
35	BB	2051	A	P-O5'-C5'	5.08	128.52	120.90
35	BB	2151	U	P-O3'-C3'	-5.08	112.58	120.20
35	BB	2637	U	C5'-C4'-C3'	-5.08	108.38	116.00
35	BB	2701	U	P-O5'-C5'	5.08	128.52	120.90
37	BD	35	THR	CA-CB-CG2	-5.08	101.86	110.50
41	BH	113	SER	N-CA-CB	5.08	119.58	111.56
46	BM	102	LEU	N-CA-C	-5.08	99.98	110.80
47	BN	60	VAL	N-CA-C	-5.08	106.20	111.58
1	AA	417	G	O4'-C1'-C2'	-5.08	102.52	107.60
1	AA	437	U	O5'-C5'-C4'	-5.08	103.89	111.50
35	BB	1967	C	P-O5'-C5'	5.08	128.52	120.90
43	BJ	35	ARG	CA-C-N	5.08	127.34	120.38
43	BJ	35	ARG	C-N-CA	5.08	127.34	120.38
1	AA	502	A	N9-C1'-C2'	-5.08	104.39	112.00
1	AA	1018	G	C4'-C3'-O3'	-5.08	105.39	113.00
2	AB	138	ARG	NH1-CZ-NH2	5.08	125.90	119.30
10	AJ	14	ASP	N-CA-C	-5.08	101.88	109.95
35	BB	46	G	O3'-P-O5'	-5.08	96.39	104.00
35	BB	932	U	P-O5'-C5'	5.08	128.51	120.90
35	BB	1414	C	C4'-C3'-O3'	-5.08	105.39	113.00
35	BB	1966	A	O4'-C4'-C3'	-5.08	101.02	106.10
35	BB	2672	U	O4'-C1'-N1	5.08	116.11	108.50
53	BT	86	THR	N-CA-CB	5.08	119.07	110.49
1	AA	1285	A	C5'-C4'-C3'	-5.07	107.59	115.20
4	AD	19	PHE	N-CA-CB	5.07	118.69	110.17
5	AE	141	ASP	N-CA-CB	5.07	117.37	110.42
13	AM	28	ARG	CA-C-N	5.07	131.23	121.54
13	AM	28	ARG	C-N-CA	5.07	131.23	121.54
16	AP	56	ARG	CA-C-O	-5.07	115.49	121.07
34	BA	54	G	C4'-C3'-O3'	-5.07	105.39	113.00
35	BB	580	U	O4'-C1'-N1	5.07	116.11	108.50
35	BB	995	C	O4'-C1'-N1	5.07	116.11	108.50
35	BB	2087	G	C3'-C2'-C1'	5.07	106.37	101.30
35	BB	2130	U	O4'-C1'-N1	5.07	116.11	108.50
35	BB	2881	U	O4'-C1'-C2'	-5.07	102.53	107.60
38	BE	4	VAL	CA-C-N	-5.07	114.04	122.11
38	BE	4	VAL	C-N-CA	-5.07	114.04	122.11
38	BE	88	ARG	N-CA-C	-5.07	98.60	109.81
43	BJ	61	LYS	N-CA-CB	5.07	119.57	111.20
51	BR	68	ARG	O-C-N	5.07	128.89	122.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	151	A	C5'-C4'-C3'	-5.07	108.39	116.00
1	AA	1215	G	P-O3'-C3'	-5.07	112.59	120.20
4	AD	91	ALA	N-CA-C	-5.07	105.21	111.40
35	BB	980	A	C4'-C3'-O3'	-5.07	105.39	113.00
35	BB	1159	U	O4'-C1'-C2'	-5.07	102.53	107.60
35	BB	1221	C	O4'-C1'-N1	5.07	116.11	108.50
1	AA	162	A	C4'-C3'-O3'	-5.07	105.40	113.00
1	AA	560	A	C5'-C4'-C3'	-5.07	107.59	115.20
1	AA	1512	U	C5'-C4'-C3'	5.07	123.61	116.00
4	AD	201	GLU	CA-C-O	-5.07	115.12	120.55
5	AE	55	VAL	N-CA-CB	5.07	118.31	111.21
35	BB	1142	A	C5'-C4'-O4'	5.07	116.70	109.10
35	BB	1681	G	C5'-C4'-C3'	-5.07	107.59	115.20
50	BQ	84	LYS	N-CA-C	-5.07	106.92	113.01
1	AA	772	U	O5'-C5'-C4'	-5.07	103.90	111.50
1	AA	1023	U	C4'-C3'-O3'	-5.07	105.40	113.00
35	BB	51	G	N9-C1'-C2'	-5.07	106.40	114.00
35	BB	1101	U	O4'-C1'-N1	5.07	116.10	108.50
35	BB	2433	A	O4'-C1'-N9	5.07	116.10	108.50
35	BB	2471	A	C4'-C3'-C2'	-5.07	97.53	102.60
52	BS	21	ALA	CA-C-N	5.07	127.78	120.38
52	BS	21	ALA	C-N-CA	5.07	127.78	120.38
1	AA	155	A	C4'-C3'-O3'	-5.07	105.40	113.00
1	AA	211	G	P-O5'-C5'	5.07	128.50	120.90
1	AA	396	C	P-O3'-C3'	-5.07	112.60	120.20
13	AM	13	HIS	CA-CB-CG	5.07	118.87	113.80
28	B3	31	LYS	CA-C-O	5.07	125.49	119.56
35	BB	57	C	O4'-C1'-C2'	-5.07	102.53	107.60
35	BB	487	C	P-O5'-C5'	5.07	128.50	120.90
35	BB	1560	G	C3'-C2'-O2'	5.07	118.30	110.70
35	BB	1827	U	O4'-C1'-N1	5.07	116.10	108.50
35	BB	1961	C	O4'-C1'-N1	5.07	116.10	108.50
35	BB	2107	G	O5'-C5'-C4'	-5.07	103.90	111.50
35	BB	2244	U	C4'-C3'-O3'	-5.07	105.40	113.00
39	BF	71	LYS	O-C-N	5.07	129.20	123.27
54	BU	95	PHE	CA-CB-CG	-5.07	108.73	113.80
1	AA	1271	A	P-O5'-C5'	-5.07	113.30	120.90
2	AB	42	LEU	N-CA-CB	-5.07	102.96	110.61
4	AD	12	ARG	N-CA-C	5.07	119.73	111.37
4	AD	203	TYR	CA-CB-CG	-5.07	104.78	113.90
35	BB	1257	C	C5'-C4'-C3'	-5.07	108.40	116.00
35	BB	1902	C	O3'-P-O5'	5.07	111.60	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	BH	9	VAL	N-CA-C	-5.07	100.89	107.88
43	BJ	48	VAL	CA-CB-CG1	-5.07	101.79	110.40
13	AM	34	ALA	O-C-N	5.06	127.29	122.07
34	BA	52	A	O5'-C5'-C4'	-5.06	103.90	111.50
35	BB	2474	U	C3'-C2'-O2'	5.06	118.30	110.70
35	BB	2720	U	O4'-C1'-N1	5.06	116.10	108.50
36	BC	45	ASN	N-CA-C	-5.06	106.79	113.17
39	BF	114	ARG	NH1-CZ-NH2	5.06	125.88	119.30
1	AA	970	C	C4'-C3'-O3'	-5.06	105.41	113.00
1	AA	1208	C	C4'-C3'-O3'	-5.06	105.41	113.00
5	AE	139	THR	N-CA-CB	5.06	117.32	110.59
35	BB	481	G	C3'-C2'-C1'	-5.06	96.44	101.50
35	BB	1847	A	C2'-C3'-O3'	5.06	121.30	113.70
35	BB	2408	U	O5'-C5'-C4'	-5.06	103.91	111.50
35	BB	2421	G	O4'-C1'-N9	5.06	116.09	108.50
35	BB	2550	G	C4'-C3'-O3'	-5.06	105.41	113.00
37	BD	100	LEU	N-CA-C	5.06	119.72	111.37
48	BO	19	GLN	N-CA-CB	5.06	117.56	110.12
49	BP	6	GLN	N-CA-CB	5.06	117.35	110.01
35	BB	771	G	O4'-C1'-N9	5.06	116.09	108.50
35	BB	1848	A	C3'-C2'-O2'	5.06	118.29	110.70
35	BB	2791	G	P-O5'-C5'	-5.06	113.31	120.90
1	AA	262	A	C4'-C3'-C2'	-5.06	97.54	102.60
1	AA	676	A	O3'-P-O5'	-5.06	96.41	104.00
1	AA	1004	A	O4'-C1'-N9	5.06	116.09	108.50
1	AA	1507	A	C5'-C4'-C3'	-5.06	108.41	116.00
2	AB	119	GLN	OE1-CD-NE2	-5.06	117.54	122.60
34	BA	83	G	O4'-C1'-N9	5.06	116.09	108.50
35	BB	295	G	C4'-C3'-C2'	-5.06	97.54	102.60
35	BB	480	A	O3'-P-O5'	5.06	111.59	104.00
35	BB	496	G	C1'-C2'-O2'	5.06	115.99	108.40
35	BB	953	G	O5'-C5'-C4'	-5.06	103.91	111.50
35	BB	964	C	C3'-C2'-C1'	5.06	106.36	101.30
35	BB	1124	G	O5'-C5'-C4'	-5.06	103.91	111.50
35	BB	2171	A	O4'-C1'-C2'	-5.06	100.74	105.80
35	BB	2464	G	P-O3'-C3'	-5.06	112.61	120.20
41	BH	97	ARG	O-C-N	-5.06	116.43	122.20
41	BH	144	VAL	N-CA-C	-5.06	102.65	108.82
45	BL	61	LEU	O-C-N	-5.06	116.66	121.57
1	AA	950	U	O5'-C5'-C4'	-5.06	103.91	111.50
1	AA	1387	G	O4'-C1'-N9	5.06	116.09	108.50
7	AG	137	ARG	CA-C-N	5.06	131.20	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	AG	137	ARG	C-N-CA	5.06	131.20	121.54
9	AI	94	ARG	NE-CZ-NH2	-5.06	114.65	119.20
35	BB	464	U	O4'-C1'-N1	5.06	116.08	108.50
35	BB	1440	U	C1'-C2'-O2'	5.06	115.99	108.40
35	BB	2727	A	C4'-C3'-O3'	-5.06	105.42	113.00
40	BG	163	TYR	O-C-N	-5.06	116.64	122.20
47	BN	70	THR	CB-CA-C	-5.06	100.73	110.24
1	AA	174	A	C4'-C3'-O3'	-5.06	105.42	113.00
1	AA	202	G	C4'-C3'-C2'	-5.06	97.54	102.60
35	BB	261	G	O5'-C5'-C4'	-5.06	103.92	111.50
35	BB	1380	G	O4'-C1'-N9	5.06	116.08	108.50
35	BB	1407	G	O4'-C1'-N9	5.06	116.08	108.50
35	BB	1659	G	P-O3'-C3'	-5.06	112.62	120.20
35	BB	2185	U	O4'-C1'-N1	5.06	116.08	108.50
38	BE	109	LEU	N-CA-CB	5.06	117.29	109.91
1	AA	766	A	C4'-C3'-C2'	-5.05	97.55	102.60
1	AA	1421	G	C4'-C3'-C2'	-5.05	97.55	102.60
4	AD	4	LEU	N-CA-C	-5.05	106.41	112.58
4	AD	29	THR	CA-CB-OG1	5.05	117.18	109.60
9	AI	95	SER	N-CA-C	5.05	116.79	111.28
10	AJ	28	THR	N-CA-C	5.05	117.52	111.71
22	AV	2	G	O5'-C5'-C4'	-5.05	103.92	111.50
31	B6	39	ARG	NE-CZ-NH1	5.05	126.56	121.50
35	BB	731	C	C4'-C3'-O3'	-5.05	105.42	113.00
35	BB	968	C	P-O3'-C3'	-5.05	112.62	120.20
35	BB	1977	A	O4'-C1'-N9	5.05	116.08	108.50
38	BE	67	ARG	CA-C-O	-5.05	115.19	120.55
38	BE	148	ILE	CA-CB-CG2	-5.05	101.91	110.50
44	BK	108	ARG	CB-CA-C	-5.05	102.92	110.90
47	BN	29	VAL	CB-CA-C	5.05	118.13	111.81
1	AA	368	U	O3'-P-O5'	-5.05	96.42	104.00
1	AA	842	U	O5'-C5'-C4'	-5.05	104.12	111.70
1	AA	1466	C	O4'-C4'-C3'	-5.05	98.95	104.00
31	B6	42	LEU	CB-CA-C	5.05	120.48	110.42
35	BB	1136	G	P-O3'-C3'	-5.05	112.62	120.20
35	BB	1840	G	O4'-C1'-N9	5.05	116.08	108.50
35	BB	2010	G	O4'-C1'-N9	5.05	116.08	108.50
35	BB	2101	A	C1'-O4'-C4'	5.05	114.95	109.90
35	BB	2492	U	C5'-C4'-C3'	-5.05	108.42	116.00
35	BB	2902	C	C4'-C3'-C2'	-5.05	97.55	102.60
41	BH	90	LEU	CD1-CG-CD2	-5.05	99.68	110.80
1	AA	657	U	O5'-C5'-C4'	-5.05	103.92	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	862	C	O5'-C5'-C4'	-5.05	103.92	111.50
30	B5	53	ARG	CG-CD-NE	-5.05	100.89	112.00
35	BB	1465	G	C5'-C4'-C3'	5.05	123.58	116.00
35	BB	1887	C	C4'-C3'-C2'	-5.05	97.55	102.60
35	BB	2076	U	C3'-C2'-C1'	-5.05	96.25	101.30
35	BB	2424	C	P-O3'-C3'	-5.05	112.62	120.20
41	BH	42	LYS	CA-C-N	5.05	127.76	120.38
41	BH	42	LYS	C-N-CA	5.05	127.76	120.38
41	BH	94	ILE	CA-CB-CG2	-5.05	101.91	110.50
50	BQ	31	TYR	CA-CB-CG	-5.05	104.81	113.90
53	BT	14	PRO	N-CA-CB	5.05	108.55	103.25
1	AA	1108	G	O4'-C1'-N9	5.05	116.07	108.50
1	AA	1212	U	O4'-C1'-C2'	5.05	112.65	107.60
1	AA	1355	G	C4'-C3'-C2'	-5.05	97.55	102.60
3	AC	19	SER	N-CA-CB	5.05	119.03	110.49
35	BB	257	C	C4'-C3'-C2'	-5.05	97.55	102.60
35	BB	807	U	O4'-C1'-N1	5.05	116.08	108.50
38	BE	75	SER	O-C-N	-5.05	116.25	121.60
1	AA	945	G	O4'-C4'-C3'	5.05	109.05	104.00
1	AA	1310	G	C4'-C3'-C2'	-5.05	97.55	102.60
8	AH	125	ILE	O-C-N	5.05	127.03	121.83
10	AJ	69	THR	CA-C-N	5.05	128.24	120.82
10	AJ	69	THR	C-N-CA	5.05	128.24	120.82
33	B8	24	ARG	NE-CZ-NH2	5.05	123.74	119.20
35	BB	1021	A	C5'-C4'-C3'	-5.05	108.43	116.00
35	BB	1057	A	O4'-C1'-N9	5.05	116.07	108.50
1	AA	105	G	C5'-C4'-C3'	5.05	123.57	116.00
1	AA	635	A	C3'-C2'-O2'	-5.05	103.13	110.70
22	AV	4	C	C4'-C3'-C2'	-5.05	97.55	102.60
32	B7	34	LYS	CA-C-O	5.05	124.60	119.05
34	BA	26	C	O4'-C1'-C2'	5.05	112.65	107.60
35	BB	663	G	C5'-C4'-C3'	5.05	123.57	116.00
35	BB	938	G	P-O5'-C5'	-5.05	113.33	120.90
35	BB	1566	A	N1-C6-N6	5.05	133.74	118.60
35	BB	2049	G	P-O3'-C3'	-5.05	112.63	120.20
35	BB	2082	A	C4'-C3'-O3'	-5.05	105.43	113.00
35	BB	2539	C	C4'-C3'-O3'	-5.05	105.43	113.00
40	BG	2	ARG	NH1-CZ-NH2	-5.05	112.74	119.30
46	BM	109	PRO	N-CA-CB	5.05	108.13	103.39
52	BS	77	ASP	N-CA-CB	5.05	119.71	111.08
1	AA	344	A	C3'-C2'-O2'	-5.04	107.03	114.60
1	AA	460	A	O4'-C1'-N9	5.04	116.07	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1483	A	C1'-C2'-O2'	5.04	115.97	108.40
30	B5	85	GLU	O-C-N	-5.04	116.06	122.27
43	BJ	35	ARG	N-CA-CB	5.04	117.72	110.20
1	AA	275	G	C5'-C4'-C3'	-5.04	108.44	116.00
1	AA	818	G	C5'-C4'-O4'	5.04	116.67	109.10
1	AA	1468	A	C5'-C4'-O4'	-5.04	102.23	109.80
1	AA	1506	U	C4'-C3'-C2'	-5.04	97.56	102.60
5	AE	111	ARG	CA-C-O	5.04	126.61	120.31
28	B3	43	THR	O-C-N	5.04	129.57	122.41
35	BB	523	C	O4'-C1'-N1	5.04	116.07	108.50
35	BB	817	C	O5'-C5'-C4'	-5.04	103.94	111.50
35	BB	1141	U	C2'-C3'-O3'	5.04	117.06	109.50
35	BB	1372	U	P-O5'-C5'	-5.04	113.33	120.90
35	BB	1463	C	P-O3'-C3'	-5.04	112.63	120.20
36	BC	68	ARG	CB-CA-C	-5.04	103.44	112.27
46	BM	28	PHE	CA-CB-CG	-5.04	108.76	113.80
50	BQ	37	ALA	CA-C-O	-5.04	114.01	120.31
52	BS	71	VAL	N-CA-CB	-5.04	102.91	111.23
53	BT	12	ARG	CA-C-O	5.04	124.45	118.90
2	AB	209	VAL	N-CA-C	5.04	115.19	110.30
34	BA	23	G	C4'-C3'-O3'	-5.04	105.44	113.00
35	BB	644	A	O4'-C1'-C2'	-5.04	102.56	107.60
35	BB	1135	C	O4'-C4'-C3'	-5.04	98.96	104.00
35	BB	1800	C	P-O5'-C5'	-5.04	113.34	120.90
35	BB	2491	U	O4'-C1'-C2'	-5.04	100.76	105.80
43	BJ	34	ARG	NE-CZ-NH2	5.04	123.74	119.20
3	AC	117	ASP	CA-CB-CG	5.04	117.64	112.60
15	AO	16	ARG	N-CA-C	-5.04	104.74	111.24
35	BB	859	G	O5'-C5'-C4'	5.04	119.26	111.70
1	AA	128	G	O4'-C1'-N9	5.04	116.06	108.50
1	AA	518	C	O4'-C1'-N1	5.04	115.76	108.20
1	AA	982	U	O4'-C4'-C3'	-5.04	101.06	106.10
1	AA	1243	C	P-O3'-C3'	-5.04	112.64	120.20
2	AB	37	VAL	N-CA-C	-5.04	100.81	108.17
20	AT	34	VAL	CA-C-N	5.04	127.54	120.28
20	AT	34	VAL	C-N-CA	5.04	127.54	120.28
20	AT	46	ALA	O-C-N	5.04	127.47	122.08
35	BB	549	G	P-O5'-C5'	5.04	128.46	120.90
35	BB	934	U	O4'-C1'-N1	5.04	116.06	108.50
35	BB	1630	A	P-O5'-C5'	-5.04	113.34	120.90
35	BB	1924	C	C4'-C3'-C2'	-5.04	97.56	102.60
35	BB	2007	U	C4'-C3'-O3'	-5.04	105.44	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	2397	G	O4'-C4'-C3'	-5.04	98.96	104.00
36	BC	197	ALA	O-C-N	5.04	126.54	121.85
40	BG	30	GLY	CA-C-O	5.04	126.08	122.45
45	BL	53	GLY	CA-C-N	5.04	129.92	120.95
45	BL	53	GLY	C-N-CA	5.04	129.92	120.95
52	BS	81	SER	N-CA-CB	5.04	118.39	110.23
1	AA	873	A	P-O3'-C3'	-5.04	112.64	120.20
1	AA	1355	G	C3'-C2'-O2'	5.04	118.25	110.70
9	AI	112	ARG	N-CA-CB	5.04	117.44	109.83
20	AT	57	VAL	N-CA-C	5.04	116.36	110.62
36	BC	261	ARG	NE-CZ-NH2	5.04	123.73	119.20
44	BK	100	PHE	N-CA-C	-5.04	100.50	109.06
49	BP	14	GLN	CA-CB-CG	5.04	124.17	114.10
1	AA	922	G	C5'-C4'-C3'	-5.04	108.45	116.00
25	B0	68	ALA	N-CA-CB	5.04	117.31	110.01
26	B1	39	GLN	CA-C-N	5.04	129.24	120.68
26	B1	39	GLN	C-N-CA	5.04	129.24	120.68
35	BB	266	G	C4'-C3'-C2'	-5.04	97.56	102.60
35	BB	1016	G	C4'-C3'-C2'	-5.04	97.56	102.60
35	BB	2491	U	C3'-C2'-C1'	5.04	106.54	101.50
35	BB	2555	U	C4'-C3'-C2'	-5.04	97.56	102.60
35	BB	2561	U	C4'-C3'-O3'	-5.04	105.45	113.00
35	BB	2749	A	C1'-O4'-C4'	5.04	114.94	109.90
38	BE	25	GLU	CB-CG-CD	-5.04	104.04	112.60
40	BG	147	LEU	CA-C-N	5.04	127.73	120.38
40	BG	147	LEU	C-N-CA	5.04	127.73	120.38
41	BH	7	ASP	CA-CB-CG	5.04	117.64	112.60
50	BQ	99	VAL	CA-CB-CG1	-5.04	101.84	110.40
52	BS	108	SER	CA-C-O	5.04	128.17	121.47
1	AA	34	C	P-O5'-C5'	-5.03	113.35	120.90
1	AA	175	C	O4'-C1'-N1	5.03	116.05	108.50
35	BB	319	G	P-O5'-C5'	-5.03	113.35	120.90
35	BB	1382	G	C4'-C3'-C2'	-5.03	97.57	102.60
35	BB	1920	C	C4'-C3'-O3'	-5.03	105.45	113.00
35	BB	2294	G	O4'-C1'-C2'	-5.03	102.57	107.60
35	BB	2421	G	O4'-C4'-C3'	5.03	109.03	104.00
35	BB	2422	C	O4'-C1'-N1	5.03	116.05	108.50
36	BC	183	VAL	CB-CA-C	5.03	119.83	112.03
48	BO	37	ALA	N-CA-CB	5.03	118.62	110.32
49	BP	10	GLU	CA-C-O	5.03	125.58	119.49
1	AA	198	G	C5'-C4'-C3'	5.03	123.55	116.00
1	AA	700	G	C3'-C2'-C1'	5.03	106.33	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	B2	9	THR	CA-CB-OG1	5.03	117.15	109.60
30	B5	108	GLU	CB-CG-CD	5.03	121.16	112.60
35	BB	2302	U	C4'-C3'-O3'	-5.03	105.45	113.00
3	AC	105	VAL	CA-C-O	-5.03	116.03	121.92
27	B2	34	THR	N-CA-C	-5.03	101.20	109.40
34	BA	12	C	C3'-C2'-O2'	-5.03	107.05	114.60
35	BB	85	G	O4'-C1'-C2'	-5.03	102.57	107.60
35	BB	1659	G	C4'-C3'-O3'	-5.03	105.45	113.00
35	BB	2052	A	C4'-C3'-C2'	-5.03	97.57	102.60
35	BB	2567	G	C5'-C4'-C3'	-5.03	108.45	116.00
35	BB	2885	G	C1'-O4'-C4'	-5.03	104.87	109.90
37	BD	130	GLN	CG-CD-NE2	-5.03	108.85	116.40
43	BJ	90	GLU	N-CA-C	5.03	117.42	111.33
45	BL	25	SER	CA-C-O	5.03	125.75	120.42
1	AA	18	C	O4'-C4'-C3'	-5.03	98.97	104.00
1	AA	123	U	O3'-P-O5'	-5.03	96.46	104.00
30	B5	94	LEU	O-C-N	-5.03	117.43	123.31
47	BN	90	ARG	NE-CZ-NH1	5.03	126.53	121.50
1	AA	254	G	N9-C1'-C2'	-5.03	104.46	112.00
1	AA	535	A	O3'-P-O5'	-5.03	96.46	104.00
1	AA	1149	C	C5'-C4'-C3'	-5.03	108.46	116.00
8	AH	55	LYS	CA-C-O	-5.03	115.03	119.86
14	AN	32	ASP	N-CA-C	-5.03	101.59	108.38
14	AN	68	ARG	CD-NE-CZ	-5.03	117.36	124.40
34	BA	18	G	O4'-C1'-N9	5.03	116.04	108.50
35	BB	133	U	C3'-C2'-O2'	5.03	118.24	110.70
35	BB	1162	G	O4'-C1'-N9	5.03	116.04	108.50
35	BB	1299	G	P-O5'-C5'	5.03	128.44	120.90
35	BB	1604	C	C3'-C2'-O2'	-5.03	103.16	110.70
37	BD	88	GLU	O-C-N	5.03	129.06	122.87
37	BD	200	ASP	CA-CB-CG	-5.03	107.57	112.60
1	AA	433	G	C4'-C3'-O3'	-5.03	105.46	113.00
4	AD	143	SER	N-CA-C	-5.03	102.35	110.14
4	AD	153	ARG	N-CA-CB	-5.03	102.73	110.12
6	AF	86	ARG	NE-CZ-NH2	-5.03	114.68	119.20
7	AG	69	ARG	N-CA-C	-5.03	103.38	110.31
10	AJ	36	VAL	CA-C-O	-5.03	115.62	121.80
19	AS	72	GLU	CB-CG-CD	-5.03	104.06	112.60
35	BB	134	G	C4'-C3'-O3'	-5.03	105.46	113.00
35	BB	1970	A	C2'-C3'-O3'	5.03	117.04	109.50
35	BB	2427	C	P-O3'-C3'	5.03	127.74	120.20
40	BG	123	GLU	CB-CG-CD	-5.03	104.06	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	BM	52	ALA	CA-C-O	-5.03	115.22	120.55
53	BT	42	GLU	N-CA-C	-5.03	107.10	113.18
12	AL	76	HIS	CG-CD2-NE2	-5.02	102.18	107.20
23	AX	20	G	P-O3'-C3'	-5.02	112.66	120.20
35	BB	517	C	O4'-C4'-C3'	-5.02	98.98	104.00
35	BB	1290	C	O4'-C1'-N1	5.02	116.04	108.50
35	BB	1330	C	O4'-C1'-N1	5.02	116.03	108.50
1	AA	349	A	C4'-C3'-O3'	-5.02	105.47	113.00
1	AA	418	C	C1'-C2'-O2'	5.02	115.93	108.40
1	AA	885	G	O3'-P-O5'	-5.02	96.47	104.00
35	BB	141	G	C4'-C3'-C2'	-5.02	97.58	102.60
35	BB	458	G	O4'-C1'-N9	5.02	115.73	108.20
35	BB	1026	G	O4'-C1'-N9	5.02	116.03	108.50
35	BB	1104	C	P-O3'-C3'	5.02	127.73	120.20
35	BB	1115	G	P-O3'-C3'	5.02	127.73	120.20
35	BB	1702	G	P-O5'-C5'	5.02	128.44	120.90
35	BB	1880	U	O4'-C1'-N1	5.02	116.03	108.50
35	BB	2001	C	O4'-C1'-N1	5.02	116.03	108.50
35	BB	2345	G	O4'-C1'-N9	5.02	115.73	108.20
54	BU	12	VAL	O-C-N	-5.02	116.29	122.57
1	AA	475	C	C4'-C3'-O3'	-5.02	105.47	113.00
1	AA	1444	U	O5'-C5'-C4'	-5.02	103.97	111.50
35	BB	1383	A	O4'-C1'-N9	5.02	116.03	108.50
1	AA	59	A	C5'-C4'-C3'	5.02	123.53	116.00
1	AA	328	C	C4'-C3'-O3'	5.02	116.93	109.40
1	AA	339	C	O4'-C1'-N1	5.02	116.03	108.50
1	AA	877	G	O4'-C1'-N9	5.02	116.03	108.50
26	B1	19	LEU	CA-C-N	5.02	127.77	120.79
26	B1	19	LEU	C-N-CA	5.02	127.77	120.79
35	BB	739	A	O4'-C1'-N9	5.02	115.73	108.20
35	BB	762	U	O3'-P-O5'	-5.02	96.47	104.00
35	BB	1611	C	C3'-C2'-O2'	5.02	118.23	110.70
35	BB	2455	G	C5'-C4'-C3'	5.02	123.53	116.00
39	BF	47	LYS	N-CA-C	-5.02	100.11	110.80
43	BJ	135	GLN	N-CA-C	-5.02	104.08	111.81
54	BU	58	VAL	CA-C-O	-5.02	116.56	122.13
1	AA	64	G	O4'-C4'-C3'	-5.02	101.08	106.10
1	AA	444	G	O4'-C1'-N9	5.02	116.03	108.50
1	AA	1191	A	C1'-O4'-C4'	5.02	114.92	109.90
11	AK	21	HIS	N-CA-CB	5.02	118.59	110.41
32	B7	25	HIS	CA-CB-CG	-5.02	108.78	113.80
35	BB	607	U	C4'-C3'-C2'	-5.02	97.58	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BB	1232	G	O3'-P-O5'	-5.02	96.47	104.00
35	BB	2339	C	C5'-C4'-C3'	5.02	123.53	116.00
35	BB	2400	G	C5'-C4'-C3'	5.02	123.53	116.00
35	BB	2785	C	O4'-C1'-C2'	-5.02	102.58	107.60
1	AA	1071	C	O5'-C5'-C4'	-5.02	103.98	111.50
9	AI	19	PHE	N-CA-CB	5.02	118.47	110.65
35	BB	595	C	C5'-C4'-C3'	-5.02	108.48	116.00
35	BB	807	U	C4'-C3'-O3'	-5.02	105.48	113.00
35	BB	1318	U	O4'-C4'-C3'	5.02	109.02	104.00
35	BB	2357	G	O4'-C1'-C2'	-5.02	102.58	107.60
40	BG	71	LEU	CA-C-N	5.02	128.62	120.60
40	BG	71	LEU	C-N-CA	5.02	128.62	120.60
1	AA	358	U	C1'-C2'-O2'	5.01	115.92	108.40
1	AA	461	A	O4'-C1'-C2'	-5.01	102.58	107.60
1	AA	1410	A	C1'-O4'-C4'	-5.01	104.89	109.90
4	AD	194	ILE	N-CA-C	-5.01	98.91	109.34
35	BB	2325	G	C3'-C2'-O2'	5.01	118.22	110.70
36	BC	61	TYR	CB-CG-CD2	-5.01	113.28	120.80
37	BD	25	THR	N-CA-CB	5.01	119.23	110.81
38	BE	156	ASN	N-CA-C	-5.01	106.67	112.89
48	BO	92	PHE	N-CA-C	-5.01	101.79	109.76
1	AA	786	G	O4'-C1'-N9	5.01	116.02	108.50
1	AA	1442	G	O4'-C1'-N9	5.01	116.02	108.50
11	AK	33	ILE	CA-C-N	5.01	130.94	122.87
11	AK	33	ILE	C-N-CA	5.01	130.94	122.87
35	BB	394	C	O4'-C1'-N1	5.01	116.02	108.50
35	BB	2638	G	P-O5'-C5'	5.01	128.42	120.90
50	BQ	17	LEU	N-CA-C	5.01	116.74	111.28
1	AA	1065	U	O4'-C1'-N1	5.01	115.72	108.20
1	AA	1092	A	O3'-P-O5'	-5.01	96.48	104.00
2	AB	94	ARG	N-CA-C	5.01	117.31	110.24
3	AC	65	VAL	CA-C-O	5.01	126.94	120.97
3	AC	169	GLU	N-CA-C	-5.01	100.12	110.80
6	AF	12	PRO	O-C-N	-5.01	116.77	122.18
28	B3	21	LEU	CB-CA-C	-5.01	101.03	109.50
35	BB	381	G	P-O3'-C3'	-5.01	112.68	120.20
35	BB	646	U	C5'-C4'-C3'	-5.01	108.48	116.00
35	BB	805	G	C2'-C3'-O3'	5.01	117.02	109.50
35	BB	1035	U	C4'-C3'-C2'	-5.01	97.59	102.60
35	BB	1059	G	C4'-C3'-O3'	-5.01	105.48	113.00
35	BB	1992	G	C2'-C3'-O3'	5.01	117.02	109.50
35	BB	2723	C	O4'-C1'-N1	5.01	116.02	108.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BD	33	ARG	NE-CZ-NH1	-5.01	116.49	121.50
43	BJ	69	ARG	CA-C-N	5.01	126.95	120.44
43	BJ	69	ARG	C-N-CA	5.01	126.95	120.44
54	BU	85	ARG	NE-CZ-NH1	-5.01	116.49	121.50
1	AA	207	C	C4'-C3'-C2'	-5.01	97.59	102.60
1	AA	769	G	O4'-C1'-C2'	-5.01	102.59	107.60
14	AN	83	VAL	CA-C-N	5.01	127.75	120.79
14	AN	83	VAL	C-N-CA	5.01	127.75	120.79
20	AT	7	LYS	O-C-N	-5.01	115.72	122.43
35	BB	144	A	C4'-C3'-O3'	-5.01	105.48	113.00
35	BB	841	G	C4'-C3'-C2'	-5.01	97.59	102.60
35	BB	2204	G	O4'-C1'-N9	5.01	116.02	108.50
40	BG	120	ILE	N-CA-C	-5.01	98.92	109.34
2	AB	17	HIS	CA-CB-CG	5.01	118.81	113.80
3	AC	62	SER	CA-C-N	5.01	129.80	122.69
3	AC	62	SER	C-N-CA	5.01	129.80	122.69
6	AF	51	ILE	N-CA-C	-5.01	99.32	107.28
10	AJ	68	ARG	CB-CA-C	-5.01	99.41	109.68
15	AO	60	SER	CA-C-O	-5.01	115.54	120.90
34	BA	60	C	O4'-C1'-N1	5.01	116.01	108.50
35	BB	756	A	C1'-O4'-C4'	5.01	114.91	109.90
40	BG	143	VAL	CA-C-O	5.01	125.93	120.57
43	BJ	18	VAL	O-C-N	5.01	128.36	123.00
56	BY	32	ALA	CA-C-N	5.01	131.23	121.41
56	BY	32	ALA	C-N-CA	5.01	131.23	121.41
1	AA	179	A	P-O5'-C5'	5.01	128.41	120.90
1	AA	217	C	O4'-C1'-N1	5.01	116.01	108.50
19	AS	37	SER	N-CA-C	5.01	116.79	110.33
28	B3	7	PRO	CA-C-N	5.01	132.13	122.07
28	B3	7	PRO	C-N-CA	5.01	132.13	122.07
30	B5	39	VAL	N-CA-CB	5.01	116.47	110.31
35	BB	123	G	C4'-C3'-O3'	-5.01	105.49	113.00
35	BB	455	C	C3'-C2'-C1'	5.01	106.51	101.50
35	BB	568	U	O4'-C1'-C2'	-5.01	102.59	107.60
35	BB	570	G	C5'-C4'-C3'	5.01	123.51	116.00
35	BB	581	C	O4'-C1'-N1	5.01	116.01	108.50
35	BB	678	C	P-O3'-C3'	-5.01	112.69	120.20
35	BB	1256	G	O5'-C5'-C4'	-5.01	103.99	111.50
35	BB	2056	G	P-O3'-C3'	-5.01	112.69	120.20
35	BB	2508	G	O4'-C1'-N9	5.01	116.01	108.50
35	BB	2592	G	C1'-O4'-C4'	5.01	114.91	109.90
45	BL	38	GLN	CB-CG-CD	-5.01	104.09	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	BT	13	ALA	CA-C-N	5.01	126.10	119.84
53	BT	13	ALA	C-N-CA	5.01	126.10	119.84
1	AA	142	G	C4'-C3'-O3'	-5.00	105.49	113.00
35	BB	740	C	C3'-C2'-O2'	5.00	118.21	110.70
35	BB	2212	A	O4'-C1'-N9	5.00	115.71	108.20
1	AA	266	G	C3'-C2'-C1'	5.00	106.30	101.30
35	BB	213	A	O4'-C4'-C3'	-5.00	99.00	104.00
35	BB	292	U	C4'-C3'-O3'	-5.00	105.49	113.00
35	BB	654	A	O4'-C1'-N9	5.00	116.00	108.50
35	BB	1678	A	C3'-C2'-C1'	5.00	106.30	101.30
35	BB	2489	U	C4'-C3'-O3'	-5.00	105.50	113.00
35	BB	2689	U	C1'-O4'-C4'	5.00	114.70	109.70
35	BB	2888	C	O3'-P-O5'	-5.00	96.50	104.00
46	BM	84	LYS	CB-CA-C	-5.00	100.46	110.42
54	BU	46	LYS	CA-C-O	-5.00	115.54	120.19
11	AK	62	ALA	CA-C-N	5.00	127.25	120.65
11	AK	62	ALA	C-N-CA	5.00	127.25	120.65
12	AL	37	TYR	CA-C-N	5.00	129.42	121.72
12	AL	37	TYR	C-N-CA	5.00	129.42	121.72
34	BA	44	G	P-O3'-C3'	-5.00	112.70	120.20
35	BB	814	C	O4'-C1'-N1	5.00	116.00	108.50
35	BB	2656	U	C1'-O4'-C4'	5.00	114.90	109.90
48	BO	13	ARG	CA-C-N	5.00	127.29	120.54
48	BO	13	ARG	C-N-CA	5.00	127.29	120.54
48	BO	17	LYS	N-CA-C	5.00	116.81	111.36

There are no chirality outliers.

All (2342) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	100	G	Sidechain
1	AA	1001	C	Sidechain
1	AA	1003	G	Sidechain
1	AA	1005	A	Sidechain
1	AA	1006	G	Sidechain
1	AA	1007	U	Sidechain
1	AA	1008	U	Sidechain
1	AA	101	A	Sidechain
1	AA	1010	U	Sidechain
1	AA	1011	C	Sidechain
1	AA	1012	A	Sidechain
1	AA	1013	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1014	A	Sidechain
1	AA	1015	G	Sidechain
1	AA	1016	A	Sidechain
1	AA	1018	G	Sidechain
1	AA	1019	A	Sidechain
1	AA	1024	G	Sidechain
1	AA	1025	U	Sidechain
1	AA	1026	G	Sidechain
1	AA	1029	U	Sidechain
1	AA	103	U	Sidechain
1	AA	1031	C	Sidechain
1	AA	1035	A	Sidechain
1	AA	1039	G	Sidechain
1	AA	1042	A	Sidechain
1	AA	1044	A	Sidechain
1	AA	1046	A	Sidechain
1	AA	1047	G	Sidechain
1	AA	1048	G	Sidechain
1	AA	1049	U	Sidechain
1	AA	1050	G	Sidechain
1	AA	1053	G	Sidechain
1	AA	1055	A	Sidechain
1	AA	1056	U	Sidechain
1	AA	1058	G	Sidechain
1	AA	1059	C	Sidechain
1	AA	106	C	Sidechain
1	AA	1060	U	Sidechain
1	AA	1061	G	Sidechain
1	AA	1062	U	Sidechain
1	AA	1065	U	Sidechain
1	AA	1069	C	Sidechain
1	AA	107	G	Sidechain
1	AA	1070	U	Sidechain
1	AA	1071	C	Sidechain
1	AA	1073	U	Sidechain
1	AA	1075	U	Sidechain
1	AA	1076	U	Sidechain
1	AA	1077	G	Sidechain
1	AA	1080	A	Sidechain
1	AA	1082	A	Sidechain
1	AA	1084	G	Sidechain
1	AA	1085	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1086	U	Sidechain
1	AA	1087	G	Sidechain
1	AA	1089	G	Sidechain
1	AA	109	A	Sidechain
1	AA	1091	U	Sidechain
1	AA	1092	A	Sidechain
1	AA	1094	G	Sidechain
1	AA	1097	C	Sidechain
1	AA	1099	G	Sidechain
1	AA	11	G	Sidechain
1	AA	1101	A	Sidechain
1	AA	1104	G	Sidechain
1	AA	1106	G	Sidechain
1	AA	1108	G	Sidechain
1	AA	111	G	Sidechain
1	AA	1114	C	Sidechain
1	AA	1117	A	Sidechain
1	AA	1118	U	Sidechain
1	AA	1119	C	Sidechain
1	AA	112	G	Sidechain
1	AA	1122	U	Sidechain
1	AA	1124	G	Sidechain
1	AA	1125	U	Sidechain
1	AA	1128	C	Sidechain
1	AA	1129	C	Sidechain
1	AA	1130	A	Sidechain
1	AA	1131	G	Sidechain
1	AA	1132	C	Sidechain
1	AA	1135	U	Sidechain
1	AA	1136	C	Sidechain
1	AA	1139	G	Sidechain
1	AA	114	U	Sidechain
1	AA	1143	G	Sidechain
1	AA	1144	G	Sidechain
1	AA	1147	C	Sidechain
1	AA	115	G	Sidechain
1	AA	1150	A	Sidechain
1	AA	1151	A	Sidechain
1	AA	1152	A	Sidechain
1	AA	1153	G	Sidechain
1	AA	1156	G	Sidechain
1	AA	1158	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1161	C	Sidechain
1	AA	1165	U	Sidechain
1	AA	1166	G	Sidechain
1	AA	117	G	Sidechain
1	AA	1171	A	Sidechain
1	AA	1172	C	Sidechain
1	AA	1173	U	Sidechain
1	AA	1177	G	Sidechain
1	AA	1178	G	Sidechain
1	AA	118	U	Sidechain
1	AA	1180	A	Sidechain
1	AA	1181	G	Sidechain
1	AA	1185	G	Sidechain
1	AA	1187	G	Sidechain
1	AA	119	A	Sidechain
1	AA	1190	G	Sidechain
1	AA	1192	C	Sidechain
1	AA	1193	G	Sidechain
1	AA	1195	C	Sidechain
1	AA	12	U	Sidechain
1	AA	1200	C	Sidechain
1	AA	1203	C	Sidechain
1	AA	1205	U	Sidechain
1	AA	1206	G	Sidechain
1	AA	1207	G	Sidechain
1	AA	1208	C	Sidechain
1	AA	1211	U	Sidechain
1	AA	1216	A	Sidechain
1	AA	1218	C	Sidechain
1	AA	1219	A	Sidechain
1	AA	122	G	Sidechain
1	AA	1221	G	Sidechain
1	AA	1222	G	Sidechain
1	AA	1224	U	Sidechain
1	AA	1225	A	Sidechain
1	AA	1226	C	Sidechain
1	AA	1227	A	Sidechain
1	AA	123	U	Sidechain
1	AA	1231	G	Sidechain
1	AA	1236	A	Sidechain
1	AA	1237	C	Sidechain
1	AA	1240	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1244	G	Sidechain
1	AA	1246	A	Sidechain
1	AA	1248	A	Sidechain
1	AA	1250	A	Sidechain
1	AA	1252	A	Sidechain
1	AA	1258	G	Sidechain
1	AA	1259	C	Sidechain
1	AA	1260	G	Sidechain
1	AA	1261	A	Sidechain
1	AA	1267	C	Sidechain
1	AA	1269	A	Sidechain
1	AA	1272	G	Sidechain
1	AA	1274	A	Sidechain
1	AA	1276	G	Sidechain
1	AA	1277	C	Sidechain
1	AA	1278	G	Sidechain
1	AA	1279	G	Sidechain
1	AA	128	G	Sidechain
1	AA	1280	A	Sidechain
1	AA	1282	C	Sidechain
1	AA	1283	U	Sidechain
1	AA	1284	C	Sidechain
1	AA	1287	A	Sidechain
1	AA	1289	A	Sidechain
1	AA	1291	U	Sidechain
1	AA	1292	G	Sidechain
1	AA	1293	C	Sidechain
1	AA	1294	G	Sidechain
1	AA	1295	U	Sidechain
1	AA	1299	A	Sidechain
1	AA	13	U	Sidechain
1	AA	130	A	Sidechain
1	AA	1300	G	Sidechain
1	AA	1302	C	Sidechain
1	AA	1304	G	Sidechain
1	AA	1305	G	Sidechain
1	AA	1307	U	Sidechain
1	AA	1311	A	Sidechain
1	AA	1312	G	Sidechain
1	AA	1319	A	Sidechain
1	AA	1320	C	Sidechain
1	AA	1323	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1325	C	Sidechain
1	AA	1327	C	Sidechain
1	AA	133	U	Sidechain
1	AA	1330	U	Sidechain
1	AA	1331	G	Sidechain
1	AA	1334	G	Sidechain
1	AA	1335	U	Sidechain
1	AA	1337	G	Sidechain
1	AA	1339	A	Sidechain
1	AA	134	G	Sidechain
1	AA	1340	A	Sidechain
1	AA	1344	C	Sidechain
1	AA	1345	U	Sidechain
1	AA	1346	A	Sidechain
1	AA	1347	G	Sidechain
1	AA	1348	U	Sidechain
1	AA	1349	A	Sidechain
1	AA	1353	G	Sidechain
1	AA	1354	U	Sidechain
1	AA	1355	G	Sidechain
1	AA	136	C	Sidechain
1	AA	1360	A	Sidechain
1	AA	1363	A	Sidechain
1	AA	1365	G	Sidechain
1	AA	137	U	Sidechain
1	AA	1370	G	Sidechain
1	AA	1371	G	Sidechain
1	AA	1373	G	Sidechain
1	AA	1374	A	Sidechain
1	AA	1375	A	Sidechain
1	AA	1376	U	Sidechain
1	AA	1378	C	Sidechain
1	AA	1379	G	Sidechain
1	AA	1383	C	Sidechain
1	AA	1385	G	Sidechain
1	AA	1386	G	Sidechain
1	AA	1387	G	Sidechain
1	AA	1388	C	Sidechain
1	AA	1394	A	Sidechain
1	AA	1399	C	Sidechain
1	AA	14	U	Sidechain
1	AA	1401	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1403	C	Sidechain
1	AA	1404	C	Sidechain
1	AA	1413	A	Sidechain
1	AA	1415	G	Sidechain
1	AA	1418	A	Sidechain
1	AA	142	G	Sidechain
1	AA	1422	G	Sidechain
1	AA	1423	G	Sidechain
1	AA	1425	U	Sidechain
1	AA	1432	G	Sidechain
1	AA	1433	A	Sidechain
1	AA	1437	A	Sidechain
1	AA	1439	G	Sidechain
1	AA	1441	A	Sidechain
1	AA	1442	G	Sidechain
1	AA	1444	U	Sidechain
1	AA	1445	U	Sidechain
1	AA	1446	A	Sidechain
1	AA	1447	A	Sidechain
1	AA	1455	G	Sidechain
1	AA	1456	A	Sidechain
1	AA	1457	G	Sidechain
1	AA	1458	G	Sidechain
1	AA	1459	G	Sidechain
1	AA	146	G	Sidechain
1	AA	1465	A	Sidechain
1	AA	1468	A	Sidechain
1	AA	1469	C	Sidechain
1	AA	147	G	Sidechain
1	AA	1470	U	Sidechain
1	AA	1472	U	Sidechain
1	AA	1473	G	Sidechain
1	AA	1475	G	Sidechain
1	AA	1476	A	Sidechain
1	AA	1478	U	Sidechain
1	AA	1479	C	Sidechain
1	AA	1480	A	Sidechain
1	AA	1482	G	Sidechain
1	AA	1483	A	Sidechain
1	AA	1484	C	Sidechain
1	AA	1486	G	Sidechain
1	AA	1488	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1490	U	Sidechain
1	AA	1492	A	Sidechain
1	AA	1493	A	Sidechain
1	AA	1499	A	Sidechain
1	AA	1500	A	Sidechain
1	AA	1501	C	Sidechain
1	AA	1502	A	Sidechain
1	AA	1503	A	Sidechain
1	AA	1504	G	Sidechain
1	AA	1505	G	Sidechain
1	AA	1507	A	Sidechain
1	AA	1508	A	Sidechain
1	AA	151	A	Sidechain
1	AA	1512	U	Sidechain
1	AA	1513	A	Sidechain
1	AA	1516	G	Sidechain
1	AA	1517	G	Sidechain
1	AA	1518	A	Sidechain
1	AA	1519	A	Sidechain
1	AA	1520	C	Sidechain
1	AA	1521	C	Sidechain
1	AA	1522	U	Sidechain
1	AA	1524	C	Sidechain
1	AA	1525	G	Sidechain
1	AA	1526	G	Sidechain
1	AA	1528	U	Sidechain
1	AA	1529	G	Sidechain
1	AA	153	C	Sidechain
1	AA	1531	A	Sidechain
1	AA	156	C	Sidechain
1	AA	157	U	Sidechain
1	AA	158	G	Sidechain
1	AA	161	A	Sidechain
1	AA	162	A	Sidechain
1	AA	163	C	Sidechain
1	AA	166	U	Sidechain
1	AA	173	U	Sidechain
1	AA	177	G	Sidechain
1	AA	18	C	Sidechain
1	AA	180	U	Sidechain
1	AA	181	A	Sidechain
1	AA	183	C	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	185	U	Sidechain
1	AA	187	G	Sidechain
1	AA	188	C	Sidechain
1	AA	189	A	Sidechain
1	AA	19	A	Sidechain
1	AA	191	G	Sidechain
1	AA	193	C	Sidechain
1	AA	194	C	Sidechain
1	AA	195	A	Sidechain
1	AA	196	A	Sidechain
1	AA	197	A	Sidechain
1	AA	200	G	Sidechain
1	AA	201	G	Sidechain
1	AA	202	G	Sidechain
1	AA	203	G	Sidechain
1	AA	205	A	Sidechain
1	AA	208	U	Sidechain
1	AA	210	C	Sidechain
1	AA	211	G	Sidechain
1	AA	212	G	Sidechain
1	AA	216	U	Sidechain
1	AA	217	C	Sidechain
1	AA	219	U	Sidechain
1	AA	22	G	Sidechain
1	AA	221	C	Sidechain
1	AA	223	A	Sidechain
1	AA	227	G	Sidechain
1	AA	229	U	Sidechain
1	AA	230	G	Sidechain
1	AA	233	C	Sidechain
1	AA	238	A	Sidechain
1	AA	239	U	Sidechain
1	AA	240	G	Sidechain
1	AA	242	G	Sidechain
1	AA	244	U	Sidechain
1	AA	245	U	Sidechain
1	AA	249	U	Sidechain
1	AA	25	C	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	252	U	Sidechain
1	AA	253	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	255	G	Sidechain
1	AA	259	G	Sidechain
1	AA	262	A	Sidechain
1	AA	264	C	Sidechain
1	AA	266	G	Sidechain
1	AA	27	G	Sidechain
1	AA	275	G	Sidechain
1	AA	276	G	Sidechain
1	AA	277	C	Sidechain
1	AA	278	G	Sidechain
1	AA	281	G	Sidechain
1	AA	282	A	Sidechain
1	AA	283	U	Sidechain
1	AA	291	U	Sidechain
1	AA	292	G	Sidechain
1	AA	293	G	Sidechain
1	AA	295	C	Sidechain
1	AA	297	G	Sidechain
1	AA	298	A	Sidechain
1	AA	299	G	Sidechain
1	AA	30	U	Sidechain
1	AA	302	G	Sidechain
1	AA	303	A	Sidechain
1	AA	305	G	Sidechain
1	AA	306	A	Sidechain
1	AA	309	A	Sidechain
1	AA	31	G	Sidechain
1	AA	318	G	Sidechain
1	AA	323	U	Sidechain
1	AA	326	G	Sidechain
1	AA	327	A	Sidechain
1	AA	328	C	Sidechain
1	AA	331	G	Sidechain
1	AA	332	G	Sidechain
1	AA	333	U	Sidechain
1	AA	336	A	Sidechain
1	AA	339	C	Sidechain
1	AA	340	U	Sidechain
1	AA	342	C	Sidechain
1	AA	343	U	Sidechain
1	AA	345	C	Sidechain
1	AA	348	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	349	A	Sidechain
1	AA	35	G	Sidechain
1	AA	350	G	Sidechain
1	AA	352	C	Sidechain
1	AA	354	G	Sidechain
1	AA	356	A	Sidechain
1	AA	36	C	Sidechain
1	AA	360	G	Sidechain
1	AA	361	G	Sidechain
1	AA	363	A	Sidechain
1	AA	365	U	Sidechain
1	AA	366	A	Sidechain
1	AA	369	G	Sidechain
1	AA	37	U	Sidechain
1	AA	370	C	Sidechain
1	AA	372	C	Sidechain
1	AA	375	U	Sidechain
1	AA	377	G	Sidechain
1	AA	378	G	Sidechain
1	AA	380	G	Sidechain
1	AA	381	C	Sidechain
1	AA	383	A	Sidechain
1	AA	387	U	Sidechain
1	AA	388	G	Sidechain
1	AA	395	C	Sidechain
1	AA	396	C	Sidechain
1	AA	397	A	Sidechain
1	AA	399	G	Sidechain
1	AA	40	C	Sidechain
1	AA	400	C	Sidechain
1	AA	401	C	Sidechain
1	AA	402	G	Sidechain
1	AA	405	U	Sidechain
1	AA	406	G	Sidechain
1	AA	407	U	Sidechain
1	AA	408	A	Sidechain
1	AA	409	U	Sidechain
1	AA	410	G	Sidechain
1	AA	411	A	Sidechain
1	AA	412	A	Sidechain
1	AA	418	C	Sidechain
1	AA	420	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	422	C	Sidechain
1	AA	423	G	Sidechain
1	AA	424	G	Sidechain
1	AA	425	G	Sidechain
1	AA	426	U	Sidechain
1	AA	428	G	Sidechain
1	AA	429	U	Sidechain
1	AA	43	C	Sidechain
1	AA	430	A	Sidechain
1	AA	431	A	Sidechain
1	AA	438	U	Sidechain
1	AA	439	U	Sidechain
1	AA	44	A	Sidechain
1	AA	441	A	Sidechain
1	AA	442	G	Sidechain
1	AA	443	C	Sidechain
1	AA	444	G	Sidechain
1	AA	445	G	Sidechain
1	AA	446	G	Sidechain
1	AA	449	G	Sidechain
1	AA	450	G	Sidechain
1	AA	452	A	Sidechain
1	AA	455	G	Sidechain
1	AA	46	G	Sidechain
1	AA	460	A	Sidechain
1	AA	461	A	Sidechain
1	AA	462	G	Sidechain
1	AA	464	U	Sidechain
1	AA	468	A	Sidechain
1	AA	47	C	Sidechain
1	AA	471	U	Sidechain
1	AA	473	U	Sidechain
1	AA	474	G	Sidechain
1	AA	477	C	Sidechain
1	AA	478	A	Sidechain
1	AA	48	C	Sidechain
1	AA	482	A	Sidechain
1	AA	484	G	Sidechain
1	AA	486	U	Sidechain
1	AA	487	A	Sidechain
1	AA	489	C	Sidechain
1	AA	49	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	490	C	Sidechain
1	AA	491	G	Sidechain
1	AA	493	A	Sidechain
1	AA	495	A	Sidechain
1	AA	496	A	Sidechain
1	AA	499	A	Sidechain
1	AA	5	U	Sidechain
1	AA	50	A	Sidechain
1	AA	504	C	Sidechain
1	AA	505	G	Sidechain
1	AA	509	A	Sidechain
1	AA	512	U	Sidechain
1	AA	513	C	Sidechain
1	AA	517	G	Sidechain
1	AA	518	C	Sidechain
1	AA	519	C	Sidechain
1	AA	52	C	Sidechain
1	AA	524	G	Sidechain
1	AA	525	C	Sidechain
1	AA	526	C	Sidechain
1	AA	527	G	Sidechain
1	AA	532	A	Sidechain
1	AA	540	G	Sidechain
1	AA	542	G	Sidechain
1	AA	548	G	Sidechain
1	AA	551	U	Sidechain
1	AA	553	A	Sidechain
1	AA	558	G	Sidechain
1	AA	561	U	Sidechain
1	AA	565	U	Sidechain
1	AA	566	G	Sidechain
1	AA	567	G	Sidechain
1	AA	569	C	Sidechain
1	AA	571	U	Sidechain
1	AA	572	A	Sidechain
1	AA	573	A	Sidechain
1	AA	574	A	Sidechain
1	AA	578	C	Sidechain
1	AA	58	C	Sidechain
1	AA	581	G	Sidechain
1	AA	584	G	Sidechain
1	AA	587	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	59	A	Sidechain
1	AA	590	U	Sidechain
1	AA	594	U	Sidechain
1	AA	595	A	Sidechain
1	AA	597	G	Sidechain
1	AA	598	U	Sidechain
1	AA	599	C	Sidechain
1	AA	6	G	Sidechain
1	AA	600	A	Sidechain
1	AA	608	A	Sidechain
1	AA	61	G	Sidechain
1	AA	610	U	Sidechain
1	AA	612	C	Sidechain
1	AA	614	C	Sidechain
1	AA	615	G	Sidechain
1	AA	616	G	Sidechain
1	AA	619	U	Sidechain
1	AA	620	C	Sidechain
1	AA	622	A	Sidechain
1	AA	623	C	Sidechain
1	AA	624	C	Sidechain
1	AA	625	U	Sidechain
1	AA	626	G	Sidechain
1	AA	628	G	Sidechain
1	AA	63	C	Sidechain
1	AA	632	U	Sidechain
1	AA	633	G	Sidechain
1	AA	636	U	Sidechain
1	AA	638	U	Sidechain
1	AA	639	G	Sidechain
1	AA	64	G	Sidechain
1	AA	642	A	Sidechain
1	AA	644	U	Sidechain
1	AA	646	G	Sidechain
1	AA	648	A	Sidechain
1	AA	649	A	Sidechain
1	AA	650	G	Sidechain
1	AA	651	C	Sidechain
1	AA	652	U	Sidechain
1	AA	654	G	Sidechain
1	AA	657	U	Sidechain
1	AA	661	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	664	G	Sidechain
1	AA	665	A	Sidechain
1	AA	667	G	Sidechain
1	AA	668	G	Sidechain
1	AA	669	G	Sidechain
1	AA	673	A	Sidechain
1	AA	674	G	Sidechain
1	AA	676	A	Sidechain
1	AA	681	A	Sidechain
1	AA	683	G	Sidechain
1	AA	684	U	Sidechain
1	AA	69	G	Sidechain
1	AA	690	G	Sidechain
1	AA	696	A	Sidechain
1	AA	697	U	Sidechain
1	AA	7	A	Sidechain
1	AA	700	G	Sidechain
1	AA	701	U	Sidechain
1	AA	708	C	Sidechain
1	AA	709	U	Sidechain
1	AA	71	A	Sidechain
1	AA	711	G	Sidechain
1	AA	714	G	Sidechain
1	AA	718	A	Sidechain
1	AA	720	C	Sidechain
1	AA	722	G	Sidechain
1	AA	726	C	Sidechain
1	AA	728	A	Sidechain
1	AA	729	A	Sidechain
1	AA	73	C	Sidechain
1	AA	730	G	Sidechain
1	AA	732	C	Sidechain
1	AA	733	G	Sidechain
1	AA	734	G	Sidechain
1	AA	737	C	Sidechain
1	AA	738	C	Sidechain
1	AA	739	C	Sidechain
1	AA	740	U	Sidechain
1	AA	742	G	Sidechain
1	AA	747	A	Sidechain
1	AA	748	G	Sidechain
1	AA	75	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	751	U	Sidechain
1	AA	752	G	Sidechain
1	AA	754	C	Sidechain
1	AA	755	G	Sidechain
1	AA	757	U	Sidechain
1	AA	758	C	Sidechain
1	AA	761	G	Sidechain
1	AA	762	U	Sidechain
1	AA	763	G	Sidechain
1	AA	764	C	Sidechain
1	AA	77	A	Sidechain
1	AA	771	G	Sidechain
1	AA	772	U	Sidechain
1	AA	774	G	Sidechain
1	AA	776	G	Sidechain
1	AA	778	G	Sidechain
1	AA	779	C	Sidechain
1	AA	784	A	Sidechain
1	AA	785	G	Sidechain
1	AA	786	G	Sidechain
1	AA	787	A	Sidechain
1	AA	788	U	Sidechain
1	AA	789	U	Sidechain
1	AA	790	A	Sidechain
1	AA	791	G	Sidechain
1	AA	799	G	Sidechain
1	AA	80	A	Sidechain
1	AA	800	G	Sidechain
1	AA	801	U	Sidechain
1	AA	805	C	Sidechain
1	AA	809	G	Sidechain
1	AA	810	C	Sidechain
1	AA	814	A	Sidechain
1	AA	817	C	Sidechain
1	AA	818	G	Sidechain
1	AA	819	A	Sidechain
1	AA	820	U	Sidechain
1	AA	821	G	Sidechain
1	AA	822	U	Sidechain
1	AA	824	G	Sidechain
1	AA	827	U	Sidechain
1	AA	828	U	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	829	G	Sidechain
1	AA	830	G	Sidechain
1	AA	836	G	Sidechain
1	AA	838	G	Sidechain
1	AA	839	C	Sidechain
1	AA	84	U	Sidechain
1	AA	841	C	Sidechain
1	AA	843	U	Sidechain
1	AA	844	G	Sidechain
1	AA	846	G	Sidechain
1	AA	847	G	Sidechain
1	AA	849	G	Sidechain
1	AA	850	U	Sidechain
1	AA	852	G	Sidechain
1	AA	853	C	Sidechain
1	AA	855	U	Sidechain
1	AA	856	C	Sidechain
1	AA	858	G	Sidechain
1	AA	86	G	Sidechain
1	AA	860	A	Sidechain
1	AA	861	G	Sidechain
1	AA	863	U	Sidechain
1	AA	864	A	Sidechain
1	AA	865	A	Sidechain
1	AA	867	G	Sidechain
1	AA	869	G	Sidechain
1	AA	87	C	Sidechain
1	AA	870	U	Sidechain
1	AA	871	U	Sidechain
1	AA	872	A	Sidechain
1	AA	874	G	Sidechain
1	AA	875	U	Sidechain
1	AA	876	C	Sidechain
1	AA	879	C	Sidechain
1	AA	88	U	Sidechain
1	AA	883	C	Sidechain
1	AA	884	U	Sidechain
1	AA	886	G	Sidechain
1	AA	888	G	Sidechain
1	AA	890	G	Sidechain
1	AA	894	G	Sidechain
1	AA	895	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	897	C	Sidechain
1	AA	898	G	Sidechain
1	AA	900	A	Sidechain
1	AA	903	G	Sidechain
1	AA	906	A	Sidechain
1	AA	909	A	Sidechain
1	AA	91	U	Sidechain
1	AA	915	A	Sidechain
1	AA	917	G	Sidechain
1	AA	918	A	Sidechain
1	AA	921	U	Sidechain
1	AA	923	A	Sidechain
1	AA	925	G	Sidechain
1	AA	927	G	Sidechain
1	AA	929	G	Sidechain
1	AA	93	U	Sidechain
1	AA	931	C	Sidechain
1	AA	933	G	Sidechain
1	AA	937	A	Sidechain
1	AA	938	A	Sidechain
1	AA	94	G	Sidechain
1	AA	942	G	Sidechain
1	AA	943	U	Sidechain
1	AA	944	G	Sidechain
1	AA	945	G	Sidechain
1	AA	947	G	Sidechain
1	AA	948	C	Sidechain
1	AA	949	A	Sidechain
1	AA	95	C	Sidechain
1	AA	951	G	Sidechain
1	AA	952	U	Sidechain
1	AA	954	G	Sidechain
1	AA	955	U	Sidechain
1	AA	959	A	Sidechain
1	AA	962	C	Sidechain
1	AA	963	G	Sidechain
1	AA	964	A	Sidechain
1	AA	966	G	Sidechain
1	AA	969	A	Sidechain
1	AA	970	C	Sidechain
1	AA	971	G	Sidechain
1	AA	973	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	974	A	Sidechain
1	AA	976	G	Sidechain
1	AA	978	A	Sidechain
1	AA	979	C	Sidechain
1	AA	98	A	Sidechain
1	AA	985	C	Sidechain
1	AA	988	G	Sidechain
1	AA	989	U	Sidechain
1	AA	99	C	Sidechain
1	AA	990	C	Sidechain
1	AA	992	U	Sidechain
1	AA	994	A	Sidechain
1	AA	997	U	Sidechain
1	AA	999	C	Sidechain
2	AB	112	ARG	Sidechain
2	AB	136	ARG	Sidechain
2	AB	212	TYR	Sidechain
2	AB	89	PHE	Sidechain
2	AB	94	ARG	Sidechain
3	AC	126	ARG	Sidechain
3	AC	142	ARG	Sidechain
3	AC	155	ARG	Sidechain
3	AC	163	ARG	Sidechain
3	AC	39	ARG	Sidechain
3	AC	41	TYR	Sidechain
3	AC	53	ARG	Sidechain
4	AD	110	ARG	Sidechain
4	AD	114	ARG	Sidechain
4	AD	127	ARG	Sidechain
4	AD	134	TYR	Sidechain
4	AD	164	ARG	Sidechain
4	AD	181	PHE	Peptide
4	AD	187	ARG	Sidechain
4	AD	203	TYR	Sidechain
4	AD	3	TYR	Sidechain
4	AD	62	ARG	Sidechain
4	AD	64	TYR	Sidechain
5	AE	111	ARG	Peptide
5	AE	127	TYR	Sidechain
5	AE	19	ARG	Sidechain
5	AE	33	THR	Peptide
5	AE	94	PHE	Sidechain

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Mol	Chain	Res	Type	Group
6	AF	2	ARG	Sidechain
6	AF	44	ARG	Sidechain
6	AF	49	TYR	Sidechain
7	AG	118	ARG	Sidechain
7	AG	52	ARG	Sidechain
7	AG	77	ARG	Sidechain
8	AH	113	ARG	Sidechain
8	AH	12	ARG	Sidechain
8	AH	127	TYR	Sidechain
9	AI	121	ARG	Sidechain
9	AI	129	ARG	Sidechain
9	AI	20	ILE	Peptide
9	AI	32	ARG	Sidechain
9	AI	48	ARG	Sidechain
9	AI	6	TYR	Sidechain
9	AI	89	TYR	Sidechain
10	AJ	48	ARG	Sidechain
10	AJ	49	PHE	Sidechain
10	AJ	62	ARG	Sidechain
10	AJ	68	ARG	Sidechain
10	AJ	7	ARG	Sidechain
10	AJ	72	ARG	Sidechain
11	AK	104	PHE	Sidechain
11	AK	51	PHE	Sidechain
11	AK	52	ARG	Sidechain
12	AL	109	ARG	Sidechain
12	AL	37	TYR	Sidechain
12	AL	65	TYR	Sidechain
12	AL	93	ARG	Sidechain
12	AL	94	TYR	Sidechain
13	AM	112	ARG	Sidechain
13	AM	2	ARG	Sidechain
13	AM	22	TYR	Sidechain
13	AM	25	GLY	Peptide
13	AM	69	ARG	Sidechain
13	AM	86	ARG	Sidechain
13	AM	89	ARG	Sidechain
13	AM	91	ARG	Sidechain
13	AM	92	ARG	Sidechain
14	AN	74	ARG	Sidechain
14	AN	8	ARG	Sidechain
14	AN	89	ARG	Sidechain

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Mol	Chain	Res	Type	Group
15	AO	37	HIS	Sidechain
15	AO	68	TYR	Sidechain
15	AO	71	ARG	Sidechain
15	AO	76	ARG	Sidechain
15	AO	79	ARG	Sidechain
15	AO	87	ARG	Sidechain
16	AP	17	TYR	Sidechain
16	AP	28	ARG	Sidechain
16	AP	5	ARG	Sidechain
16	AP	51	ARG	Sidechain
17	AQ	33	TYR	Sidechain
18	AR	22	TYR	Sidechain
18	AR	42	ARG	Sidechain
18	AR	50	TYR	Sidechain
18	AR	56	ARG	Sidechain
18	AR	69	TYR	Sidechain
19	AS	54	ARG	Sidechain
19	AS	74	ALA	Peptide
19	AS	77	ARG	Sidechain
19	AS	79	TYR	Sidechain
20	AT	17	ARG	Sidechain
20	AT	28	ARG	Sidechain
20	AT	74	HIS	Sidechain
22	AV	13	C	Sidechain
22	AV	3	G	Sidechain
22	AV	33	U	Sidechain
22	AV	37	G	Sidechain
22	AV	39	G	Sidechain
22	AV	4	C	Sidechain
22	AV	5	A	Sidechain
22	AV	66	C	Sidechain
22	AV	67	G	Sidechain
22	AV	69	G	Sidechain
22	AV	70	C	Sidechain
22	AV	71	C	Sidechain
22	AV	75	C	Sidechain
23	AX	13	A	Sidechain
23	AX	14	A	Sidechain
23	AX	15	A	Sidechain
23	AX	20	G	Sidechain
25	B0	36	ARG	Sidechain
25	B0	49	ARG	Sidechain

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Mol	Chain	Res	Type	Group
25	B0	52	ALA	Peptide
25	B0	73	ARG	Sidechain
26	B1	26	PHE	Sidechain
28	B3	12	ARG	Sidechain
28	B3	51	ARG	Sidechain
29	B4	13	SER	Peptide
29	B4	37	LYS	Peptide
29	B4	48	TYR	Sidechain
30	B5	144	THR	Peptide
30	B5	164	ARG	Sidechain
30	B5	208	TYR	Sidechain
30	B5	60	ARG	Sidechain
30	B5	71	ARG	Sidechain
30	B5	9	ARG	Sidechain
31	B6	12	ARG	Sidechain
31	B6	28	ARG	Sidechain
31	B6	39	ARG	Peptide
32	B7	25	HIS	Sidechain
34	BA	10	G	Sidechain
34	BA	100	G	Sidechain
34	BA	105	G	Sidechain
34	BA	107	G	Sidechain
34	BA	108	A	Sidechain
34	BA	112	G	Sidechain
34	BA	113	C	Sidechain
34	BA	114	C	Sidechain
34	BA	115	A	Sidechain
34	BA	116	G	Sidechain
34	BA	117	G	Sidechain
34	BA	12	C	Sidechain
34	BA	16	G	Sidechain
34	BA	17	C	Sidechain
34	BA	18	G	Sidechain
34	BA	2	G	Sidechain
34	BA	21	G	Sidechain
34	BA	24	G	Sidechain
34	BA	26	C	Sidechain
34	BA	27	C	Sidechain
34	BA	31	C	Sidechain
34	BA	37	C	Sidechain
34	BA	4	C	Sidechain
34	BA	40	U	Sidechain

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Mol	Chain	Res	Type	Group
34	BA	41	G	Sidechain
34	BA	44	G	Sidechain
34	BA	45	A	Sidechain
34	BA	47	C	Sidechain
34	BA	49	C	Sidechain
34	BA	5	U	Sidechain
34	BA	51	G	Sidechain
34	BA	54	G	Sidechain
34	BA	58	A	Sidechain
34	BA	59	A	Sidechain
34	BA	61	G	Sidechain
34	BA	64	G	Sidechain
34	BA	66	A	Sidechain
34	BA	68	C	Sidechain
34	BA	7	G	Sidechain
34	BA	70	C	Sidechain
34	BA	71	C	Sidechain
34	BA	72	G	Sidechain
34	BA	75	G	Sidechain
34	BA	78	A	Sidechain
34	BA	79	G	Sidechain
34	BA	83	G	Sidechain
34	BA	87	U	Sidechain
34	BA	90	C	Sidechain
34	BA	92	C	Sidechain
34	BA	96	G	Sidechain
35	BB	1	G	Sidechain
35	BB	1002	G	Sidechain
35	BB	1005	C	Sidechain
35	BB	1008	A	Sidechain
35	BB	1010	A	Sidechain
35	BB	1011	G	Sidechain
35	BB	1015	U	Sidechain
35	BB	102	U	Sidechain
35	BB	1021	A	Sidechain
35	BB	1023	U	Sidechain
35	BB	1025	G	Sidechain
35	BB	1026	G	Sidechain
35	BB	1027	A	Sidechain
35	BB	1031	G	Sidechain
35	BB	1035	U	Sidechain
35	BB	1037	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	104	A	Sidechain
35	BB	1040	A	Sidechain
35	BB	1041	G	Sidechain
35	BB	1045	C	Sidechain
35	BB	1046	A	Sidechain
35	BB	1047	G	Sidechain
35	BB	1048	A	Sidechain
35	BB	1049	C	Sidechain
35	BB	1051	G	Sidechain
35	BB	1052	C	Sidechain
35	BB	1053	C	Sidechain
35	BB	1055	G	Sidechain
35	BB	1057	A	Sidechain
35	BB	1059	G	Sidechain
35	BB	1060	U	Sidechain
35	BB	1061	U	Sidechain
35	BB	1062	G	Sidechain
35	BB	1064	C	Sidechain
35	BB	1067	A	Sidechain
35	BB	1069	A	Sidechain
35	BB	1071	G	Sidechain
35	BB	1074	G	Sidechain
35	BB	1077	A	Sidechain
35	BB	1079	C	Sidechain
35	BB	108	G	Sidechain
35	BB	1081	U	Sidechain
35	BB	1085	A	Sidechain
35	BB	109	C	Sidechain
35	BB	1095	A	Sidechain
35	BB	1097	U	Sidechain
35	BB	1098	A	Sidechain
35	BB	1099	G	Sidechain
35	BB	11	C	Sidechain
35	BB	1103	A	Sidechain
35	BB	1107	G	Sidechain
35	BB	1108	U	Sidechain
35	BB	1109	C	Sidechain
35	BB	111	A	Sidechain
35	BB	1110	G	Sidechain
35	BB	1115	G	Sidechain
35	BB	112	U	Sidechain
35	BB	1120	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1123	C	Sidechain
35	BB	1124	G	Sidechain
35	BB	1125	G	Sidechain
35	BB	1126	A	Sidechain
35	BB	1129	A	Sidechain
35	BB	113	U	Sidechain
35	BB	1131	G	Sidechain
35	BB	1133	A	Sidechain
35	BB	1137	G	Sidechain
35	BB	1138	G	Sidechain
35	BB	1143	A	Sidechain
35	BB	1148	U	Sidechain
35	BB	1149	G	Sidechain
35	BB	1151	A	Sidechain
35	BB	1153	C	Sidechain
35	BB	1154	G	Sidechain
35	BB	1159	U	Sidechain
35	BB	116	C	Sidechain
35	BB	1164	C	Sidechain
35	BB	1165	A	Sidechain
35	BB	1166	G	Sidechain
35	BB	1167	C	Sidechain
35	BB	1170	C	Sidechain
35	BB	1171	G	Sidechain
35	BB	1172	C	Sidechain
35	BB	1173	U	Sidechain
35	BB	1174	U	Sidechain
35	BB	1177	G	Sidechain
35	BB	1180	U	Sidechain
35	BB	1184	U	Sidechain
35	BB	1185	G	Sidechain
35	BB	1186	G	Sidechain
35	BB	1187	G	Sidechain
35	BB	1188	U	Sidechain
35	BB	1191	G	Sidechain
35	BB	1192	G	Sidechain
35	BB	1195	G	Sidechain
35	BB	1198	U	Sidechain
35	BB	12	U	Sidechain
35	BB	1204	A	Sidechain
35	BB	1206	G	Sidechain
35	BB	1207	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1209	U	Sidechain
35	BB	1211	C	Sidechain
35	BB	1212	G	Sidechain
35	BB	1216	G	Sidechain
35	BB	122	G	Sidechain
35	BB	1220	G	Sidechain
35	BB	1221	C	Sidechain
35	BB	1222	U	Sidechain
35	BB	1223	G	Sidechain
35	BB	1224	U	Sidechain
35	BB	123	G	Sidechain
35	BB	1231	U	Sidechain
35	BB	1234	U	Sidechain
35	BB	1235	G	Sidechain
35	BB	1237	A	Sidechain
35	BB	1238	G	Sidechain
35	BB	1242	U	Sidechain
35	BB	1244	A	Sidechain
35	BB	1245	G	Sidechain
35	BB	1249	U	Sidechain
35	BB	1250	G	Sidechain
35	BB	1252	G	Sidechain
35	BB	1253	A	Sidechain
35	BB	1254	A	Sidechain
35	BB	1255	U	Sidechain
35	BB	1260	A	Sidechain
35	BB	1264	A	Sidechain
35	BB	1267	U	Sidechain
35	BB	1269	A	Sidechain
35	BB	127	A	Sidechain
35	BB	1270	C	Sidechain
35	BB	1273	U	Sidechain
35	BB	1274	A	Sidechain
35	BB	1275	A	Sidechain
35	BB	1276	A	Sidechain
35	BB	1277	G	Sidechain
35	BB	1281	G	Sidechain
35	BB	1282	U	Sidechain
35	BB	1283	G	Sidechain
35	BB	1286	A	Sidechain
35	BB	1288	G	Sidechain
35	BB	1290	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1292	G	Sidechain
35	BB	1298	C	Sidechain
35	BB	1300	G	Sidechain
35	BB	1302	A	Sidechain
35	BB	1303	G	Sidechain
35	BB	1306	C	Sidechain
35	BB	1310	G	Sidechain
35	BB	1311	G	Sidechain
35	BB	1312	U	Sidechain
35	BB	1316	U	Sidechain
35	BB	1319	C	Sidechain
35	BB	132	G	Sidechain
35	BB	1320	C	Sidechain
35	BB	1321	A	Sidechain
35	BB	1322	A	Sidechain
35	BB	1325	U	Sidechain
35	BB	1327	A	Sidechain
35	BB	1332	G	Sidechain
35	BB	1334	G	Sidechain
35	BB	1336	A	Sidechain
35	BB	1338	G	Sidechain
35	BB	134	G	Sidechain
35	BB	1343	G	Sidechain
35	BB	1346	G	Sidechain
35	BB	1347	A	Sidechain
35	BB	1349	C	Sidechain
35	BB	135	U	Sidechain
35	BB	1350	C	Sidechain
35	BB	1351	C	Sidechain
35	BB	1359	A	Sidechain
35	BB	136	G	Sidechain
35	BB	1360	G	Sidechain
35	BB	1361	G	Sidechain
35	BB	1363	C	Sidechain
35	BB	1367	A	Sidechain
35	BB	1368	G	Sidechain
35	BB	1369	G	Sidechain
35	BB	1371	G	Sidechain
35	BB	1372	U	Sidechain
35	BB	1373	A	Sidechain
35	BB	1374	G	Sidechain
35	BB	1376	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1377	G	Sidechain
35	BB	1381	G	Sidechain
35	BB	1382	G	Sidechain
35	BB	1384	A	Sidechain
35	BB	1387	A	Sidechain
35	BB	1388	G	Sidechain
35	BB	1389	G	Sidechain
35	BB	139	U	Sidechain
35	BB	1390	U	Sidechain
35	BB	1394	U	Sidechain
35	BB	1396	U	Sidechain
35	BB	1399	C	Sidechain
35	BB	140	C	Sidechain
35	BB	1401	G	Sidechain
35	BB	1404	C	Sidechain
35	BB	1406	U	Sidechain
35	BB	1408	G	Sidechain
35	BB	141	G	Sidechain
35	BB	1413	A	Sidechain
35	BB	1415	U	Sidechain
35	BB	1416	G	Sidechain
35	BB	1418	G	Sidechain
35	BB	1419	A	Sidechain
35	BB	1421	G	Sidechain
35	BB	1423	G	Sidechain
35	BB	1424	G	Sidechain
35	BB	1427	A	Sidechain
35	BB	1428	C	Sidechain
35	BB	1429	G	Sidechain
35	BB	1433	A	Sidechain
35	BB	1435	G	Sidechain
35	BB	1438	U	Sidechain
35	BB	1441	G	Sidechain
35	BB	1442	U	Sidechain
35	BB	1445	G	Sidechain
35	BB	1447	C	Sidechain
35	BB	1449	G	Sidechain
35	BB	1451	C	Sidechain
35	BB	1453	A	Sidechain
35	BB	1459	G	Sidechain
35	BB	1461	C	Sidechain
35	BB	1463	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1465	G	Sidechain
35	BB	1467	U	Sidechain
35	BB	1468	U	Sidechain
35	BB	1469	A	Sidechain
35	BB	1470	A	Sidechain
35	BB	1471	G	Sidechain
35	BB	1473	G	Sidechain
35	BB	1474	U	Sidechain
35	BB	1475	G	Sidechain
35	BB	1477	A	Sidechain
35	BB	1479	G	Sidechain
35	BB	148	U	Sidechain
35	BB	1480	C	Sidechain
35	BB	1482	G	Sidechain
35	BB	1487	U	Sidechain
35	BB	1488	C	Sidechain
35	BB	1490	A	Sidechain
35	BB	1491	G	Sidechain
35	BB	1493	C	Sidechain
35	BB	1494	A	Sidechain
35	BB	1496	A	Sidechain
35	BB	1498	C	Sidechain
35	BB	15	G	Sidechain
35	BB	150	U	Sidechain
35	BB	1501	G	Sidechain
35	BB	1503	A	Sidechain
35	BB	1506	U	Sidechain
35	BB	1508	A	Sidechain
35	BB	1509	A	Sidechain
35	BB	1510	G	Sidechain
35	BB	1513	U	Sidechain
35	BB	1514	G	Sidechain
35	BB	1517	G	Sidechain
35	BB	1519	G	Sidechain
35	BB	152	A	Sidechain
35	BB	1520	U	Sidechain
35	BB	1521	G	Sidechain
35	BB	1522	A	Sidechain
35	BB	1524	G	Sidechain
35	BB	1525	A	Sidechain
35	BB	1528	A	Sidechain
35	BB	1532	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1533	C	Sidechain
35	BB	1535	A	Sidechain
35	BB	1537	G	Sidechain
35	BB	1538	G	Sidechain
35	BB	1539	U	Sidechain
35	BB	1540	G	Sidechain
35	BB	1545	A	Sidechain
35	BB	1547	C	Sidechain
35	BB	1548	A	Sidechain
35	BB	1552	A	Sidechain
35	BB	1553	A	Sidechain
35	BB	1555	G	Sidechain
35	BB	1558	C	Sidechain
35	BB	1559	U	Sidechain
35	BB	1560	G	Sidechain
35	BB	1561	C	Sidechain
35	BB	1562	U	Sidechain
35	BB	1564	C	Sidechain
35	BB	1569	A	Sidechain
35	BB	1573	G	Sidechain
35	BB	1574	C	Sidechain
35	BB	1578	U	Sidechain
35	BB	158	U	Sidechain
35	BB	1582	C	Sidechain
35	BB	1583	A	Sidechain
35	BB	1587	G	Sidechain
35	BB	1588	G	Sidechain
35	BB	159	G	Sidechain
35	BB	1590	A	Sidechain
35	BB	1591	A	Sidechain
35	BB	1596	A	Sidechain
35	BB	1597	A	Sidechain
35	BB	16	C	Sidechain
35	BB	160	A	Sidechain
35	BB	1602	U	Sidechain
35	BB	1605	C	Sidechain
35	BB	1607	C	Sidechain
35	BB	1608	A	Sidechain
35	BB	161	A	Sidechain
35	BB	1610	A	Sidechain
35	BB	1613	G	Sidechain
35	BB	1614	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1616	A	Sidechain
35	BB	1617	C	Sidechain
35	BB	1618	A	Sidechain
35	BB	1619	G	Sidechain
35	BB	1620	G	Sidechain
35	BB	1621	U	Sidechain
35	BB	1622	G	Sidechain
35	BB	1628	G	Sidechain
35	BB	163	C	Sidechain
35	BB	1631	G	Sidechain
35	BB	1635	A	Sidechain
35	BB	1636	U	Sidechain
35	BB	1638	C	Sidechain
35	BB	164	C	Sidechain
35	BB	1646	C	Sidechain
35	BB	1651	G	Sidechain
35	BB	1652	A	Sidechain
35	BB	1653	G	Sidechain
35	BB	1657	U	Sidechain
35	BB	1659	G	Sidechain
35	BB	1660	G	Sidechain
35	BB	1661	G	Sidechain
35	BB	1662	U	Sidechain
35	BB	1668	A	Sidechain
35	BB	1671	U	Sidechain
35	BB	1672	A	Sidechain
35	BB	1674	G	Sidechain
35	BB	1676	A	Sidechain
35	BB	1678	A	Sidechain
35	BB	168	G	Sidechain
35	BB	1680	U	Sidechain
35	BB	1681	G	Sidechain
35	BB	1682	G	Sidechain
35	BB	1686	C	Sidechain
35	BB	1688	U	Sidechain
35	BB	169	G	Sidechain
35	BB	1692	U	Sidechain
35	BB	1693	U	Sidechain
35	BB	1695	G	Sidechain
35	BB	1696	G	Sidechain
35	BB	1697	G	Sidechain
35	BB	1698	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1699	G	Sidechain
35	BB	1700	A	Sidechain
35	BB	1702	G	Sidechain
35	BB	1707	G	Sidechain
35	BB	171	U	Sidechain
35	BB	1710	G	Sidechain
35	BB	1714	U	Sidechain
35	BB	1715	G	Sidechain
35	BB	1716	U	Sidechain
35	BB	1718	G	Sidechain
35	BB	172	A	Sidechain
35	BB	1720	U	Sidechain
35	BB	1721	G	Sidechain
35	BB	1724	G	Sidechain
35	BB	1725	U	Sidechain
35	BB	173	A	Sidechain
35	BB	1730	C	Sidechain
35	BB	1731	G	Sidechain
35	BB	1734	G	Sidechain
35	BB	1736	U	Sidechain
35	BB	1740	G	Sidechain
35	BB	1741	C	Sidechain
35	BB	1747	U	Sidechain
35	BB	1754	A	Sidechain
35	BB	1756	G	Sidechain
35	BB	1759	A	Sidechain
35	BB	1760	C	Sidechain
35	BB	1761	C	Sidechain
35	BB	1763	G	Sidechain
35	BB	1765	U	Sidechain
35	BB	1767	G	Sidechain
35	BB	1768	C	Sidechain
35	BB	1769	U	Sidechain
35	BB	177	G	Sidechain
35	BB	1777	U	Sidechain
35	BB	1778	U	Sidechain
35	BB	1779	U	Sidechain
35	BB	1780	A	Sidechain
35	BB	1781	U	Sidechain
35	BB	1783	A	Sidechain
35	BB	1784	A	Sidechain
35	BB	1785	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1786	A	Sidechain
35	BB	1787	A	Sidechain
35	BB	1788	C	Sidechain
35	BB	1791	A	Sidechain
35	BB	1794	A	Sidechain
35	BB	1797	G	Sidechain
35	BB	180	G	Sidechain
35	BB	1800	C	Sidechain
35	BB	1801	A	Sidechain
35	BB	1802	A	Sidechain
35	BB	1803	A	Sidechain
35	BB	1807	G	Sidechain
35	BB	1809	A	Sidechain
35	BB	1813	G	Sidechain
35	BB	1814	G	Sidechain
35	BB	1815	A	Sidechain
35	BB	1816	C	Sidechain
35	BB	1818	U	Sidechain
35	BB	1820	U	Sidechain
35	BB	1821	A	Sidechain
35	BB	1823	G	Sidechain
35	BB	1825	U	Sidechain
35	BB	1826	G	Sidechain
35	BB	1829	A	Sidechain
35	BB	1839	G	Sidechain
35	BB	1841	U	Sidechain
35	BB	1842	G	Sidechain
35	BB	1844	C	Sidechain
35	BB	1845	G	Sidechain
35	BB	1846	G	Sidechain
35	BB	1854	A	Sidechain
35	BB	1855	U	Sidechain
35	BB	1856	U	Sidechain
35	BB	1857	G	Sidechain
35	BB	1858	A	Sidechain
35	BB	1859	U	Sidechain
35	BB	1860	G	Sidechain
35	BB	1863	G	Sidechain
35	BB	1866	A	Sidechain
35	BB	1868	C	Sidechain
35	BB	1869	G	Sidechain
35	BB	187	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1872	A	Sidechain
35	BB	1875	G	Sidechain
35	BB	1876	A	Sidechain
35	BB	1878	G	Sidechain
35	BB	188	G	Sidechain
35	BB	1880	U	Sidechain
35	BB	1885	A	Sidechain
35	BB	1888	G	Sidechain
35	BB	1891	G	Sidechain
35	BB	1896	G	Sidechain
35	BB	1898	U	Sidechain
35	BB	1899	A	Sidechain
35	BB	190	A	Sidechain
35	BB	1901	A	Sidechain
35	BB	1903	G	Sidechain
35	BB	1904	G	Sidechain
35	BB	1905	C	Sidechain
35	BB	1907	G	Sidechain
35	BB	191	A	Sidechain
35	BB	1911	U	Sidechain
35	BB	1913	A	Sidechain
35	BB	1914	C	Sidechain
35	BB	1917	U	Sidechain
35	BB	1918	A	Sidechain
35	BB	192	C	Sidechain
35	BB	1920	C	Sidechain
35	BB	1921	G	Sidechain
35	BB	1923	U	Sidechain
35	BB	1927	A	Sidechain
35	BB	1929	G	Sidechain
35	BB	1930	G	Sidechain
35	BB	1931	U	Sidechain
35	BB	1933	G	Sidechain
35	BB	1937	A	Sidechain
35	BB	194	G	Sidechain
35	BB	1940	U	Sidechain
35	BB	1941	C	Sidechain
35	BB	1942	C	Sidechain
35	BB	1943	U	Sidechain
35	BB	1945	G	Sidechain
35	BB	1949	G	Sidechain
35	BB	195	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	1952	A	Sidechain
35	BB	1953	A	Sidechain
35	BB	1957	C	Sidechain
35	BB	196	A	Sidechain
35	BB	1960	A	Sidechain
35	BB	1961	C	Sidechain
35	BB	1963	U	Sidechain
35	BB	1964	G	Sidechain
35	BB	1966	A	Sidechain
35	BB	197	A	Sidechain
35	BB	1971	U	Sidechain
35	BB	1974	C	Sidechain
35	BB	1975	G	Sidechain
35	BB	1976	U	Sidechain
35	BB	1978	A	Sidechain
35	BB	1979	U	Sidechain
35	BB	198	C	Sidechain
35	BB	1980	G	Sidechain
35	BB	1981	A	Sidechain
35	BB	1982	U	Sidechain
35	BB	1983	G	Sidechain
35	BB	1986	C	Sidechain
35	BB	1989	G	Sidechain
35	BB	1993	U	Sidechain
35	BB	1996	C	Sidechain
35	BB	1998	A	Sidechain
35	BB	1999	C	Sidechain
35	BB	20	C	Sidechain
35	BB	2002	G	Sidechain
35	BB	2003	A	Sidechain
35	BB	2005	A	Sidechain
35	BB	2009	A	Sidechain
35	BB	2010	G	Sidechain
35	BB	2011	U	Sidechain
35	BB	2012	G	Sidechain
35	BB	2019	A	Sidechain
35	BB	2021	C	Sidechain
35	BB	2023	C	Sidechain
35	BB	2025	C	Sidechain
35	BB	2026	U	Sidechain
35	BB	2029	G	Sidechain
35	BB	2034	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2035	G	Sidechain
35	BB	2037	A	Sidechain
35	BB	2043	C	Sidechain
35	BB	2044	C	Sidechain
35	BB	2046	G	Sidechain
35	BB	2047	C	Sidechain
35	BB	2048	G	Sidechain
35	BB	205	G	Sidechain
35	BB	2053	G	Sidechain
35	BB	2054	A	Sidechain
35	BB	2057	G	Sidechain
35	BB	2058	A	Sidechain
35	BB	2059	A	Sidechain
35	BB	206	U	Sidechain
35	BB	2062	A	Sidechain
35	BB	2065	C	Sidechain
35	BB	2066	C	Sidechain
35	BB	2068	U	Sidechain
35	BB	2069	G	Sidechain
35	BB	207	A	Sidechain
35	BB	2070	A	Sidechain
35	BB	2071	A	Sidechain
35	BB	2072	C	Sidechain
35	BB	2073	C	Sidechain
35	BB	2074	U	Sidechain
35	BB	2075	U	Sidechain
35	BB	2076	U	Sidechain
35	BB	2081	U	Sidechain
35	BB	2085	U	Sidechain
35	BB	2086	U	Sidechain
35	BB	2088	A	Sidechain
35	BB	2093	G	Sidechain
35	BB	210	C	Sidechain
35	BB	2100	G	Sidechain
35	BB	2102	G	Sidechain
35	BB	2104	C	Sidechain
35	BB	2106	U	Sidechain
35	BB	2109	U	Sidechain
35	BB	2115	G	Sidechain
35	BB	2117	A	Sidechain
35	BB	2119	A	Sidechain
35	BB	2122	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2124	G	Sidechain
35	BB	2125	G	Sidechain
35	BB	2126	A	Sidechain
35	BB	2128	G	Sidechain
35	BB	213	A	Sidechain
35	BB	2130	U	Sidechain
35	BB	2133	G	Sidechain
35	BB	2135	A	Sidechain
35	BB	2137	U	Sidechain
35	BB	2138	G	Sidechain
35	BB	2139	U	Sidechain
35	BB	2142	A	Sidechain
35	BB	2144	G	Sidechain
35	BB	2146	C	Sidechain
35	BB	2147	A	Sidechain
35	BB	2148	G	Sidechain
35	BB	2149	U	Sidechain
35	BB	215	G	Sidechain
35	BB	2150	C	Sidechain
35	BB	2151	U	Sidechain
35	BB	2152	G	Sidechain
35	BB	2156	G	Sidechain
35	BB	2157	G	Sidechain
35	BB	2158	A	Sidechain
35	BB	2159	G	Sidechain
35	BB	2166	U	Sidechain
35	BB	2167	U	Sidechain
35	BB	2168	G	Sidechain
35	BB	217	A	Sidechain
35	BB	2170	A	Sidechain
35	BB	2172	U	Sidechain
35	BB	2173	A	Sidechain
35	BB	2176	A	Sidechain
35	BB	2178	C	Sidechain
35	BB	218	A	Sidechain
35	BB	2180	U	Sidechain
35	BB	2181	U	Sidechain
35	BB	2182	U	Sidechain
35	BB	2183	A	Sidechain
35	BB	2186	G	Sidechain
35	BB	2187	U	Sidechain
35	BB	2189	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	219	A	Sidechain
35	BB	2190	G	Sidechain
35	BB	2192	U	Sidechain
35	BB	2197	U	Sidechain
35	BB	220	G	Sidechain
35	BB	2201	G	Sidechain
35	BB	2203	U	Sidechain
35	BB	2204	G	Sidechain
35	BB	2205	A	Sidechain
35	BB	2206	C	Sidechain
35	BB	2209	G	Sidechain
35	BB	221	A	Sidechain
35	BB	2213	U	Sidechain
35	BB	2219	U	Sidechain
35	BB	2222	C	Sidechain
35	BB	2224	G	Sidechain
35	BB	2226	C	Sidechain
35	BB	2227	A	Sidechain
35	BB	2228	G	Sidechain
35	BB	223	A	Sidechain
35	BB	2230	G	Sidechain
35	BB	2231	U	Sidechain
35	BB	2234	G	Sidechain
35	BB	2238	G	Sidechain
35	BB	2239	G	Sidechain
35	BB	2240	U	Sidechain
35	BB	2242	G	Sidechain
35	BB	2243	U	Sidechain
35	BB	2247	A	Sidechain
35	BB	2249	U	Sidechain
35	BB	2251	G	Sidechain
35	BB	2252	G	Sidechain
35	BB	2253	G	Sidechain
35	BB	2256	G	Sidechain
35	BB	2258	C	Sidechain
35	BB	2261	C	Sidechain
35	BB	2262	U	Sidechain
35	BB	2267	A	Sidechain
35	BB	2268	A	Sidechain
35	BB	2269	G	Sidechain
35	BB	2271	G	Sidechain
35	BB	2272	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2279	G	Sidechain
35	BB	2281	A	Sidechain
35	BB	2282	G	Sidechain
35	BB	2285	C	Sidechain
35	BB	2287	A	Sidechain
35	BB	2288	A	Sidechain
35	BB	2289	G	Sidechain
35	BB	229	C	Sidechain
35	BB	2290	G	Sidechain
35	BB	2292	U	Sidechain
35	BB	2294	G	Sidechain
35	BB	2296	U	Sidechain
35	BB	2297	A	Sidechain
35	BB	2299	U	Sidechain
35	BB	23	G	Sidechain
35	BB	230	G	Sidechain
35	BB	2300	C	Sidechain
35	BB	2301	C	Sidechain
35	BB	2302	U	Sidechain
35	BB	2303	G	Sidechain
35	BB	2305	U	Sidechain
35	BB	2307	G	Sidechain
35	BB	2308	G	Sidechain
35	BB	231	A	Sidechain
35	BB	2310	C	Sidechain
35	BB	2312	U	Sidechain
35	BB	2313	C	Sidechain
35	BB	2316	G	Sidechain
35	BB	2317	A	Sidechain
35	BB	2318	G	Sidechain
35	BB	232	G	Sidechain
35	BB	2320	U	Sidechain
35	BB	2322	A	Sidechain
35	BB	2327	A	Sidechain
35	BB	2329	U	Sidechain
35	BB	2330	G	Sidechain
35	BB	2333	A	Sidechain
35	BB	2335	A	Sidechain
35	BB	2336	A	Sidechain
35	BB	234	U	Sidechain
35	BB	2340	A	Sidechain
35	BB	2343	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2345	G	Sidechain
35	BB	2348	U	Sidechain
35	BB	235	U	Sidechain
35	BB	2350	C	Sidechain
35	BB	2352	A	Sidechain
35	BB	2355	G	Sidechain
35	BB	2356	U	Sidechain
35	BB	2357	G	Sidechain
35	BB	236	C	Sidechain
35	BB	2360	G	Sidechain
35	BB	2362	C	Sidechain
35	BB	2363	G	Sidechain
35	BB	2368	C	Sidechain
35	BB	2369	A	Sidechain
35	BB	237	C	Sidechain
35	BB	2372	U	Sidechain
35	BB	2375	G	Sidechain
35	BB	2379	G	Sidechain
35	BB	2381	A	Sidechain
35	BB	2382	G	Sidechain
35	BB	2383	G	Sidechain
35	BB	2385	C	Sidechain
35	BB	2388	A	Sidechain
35	BB	2389	G	Sidechain
35	BB	2390	U	Sidechain
35	BB	2392	A	Sidechain
35	BB	2393	U	Sidechain
35	BB	24	G	Sidechain
35	BB	2400	G	Sidechain
35	BB	2401	U	Sidechain
35	BB	2402	U	Sidechain
35	BB	2403	C	Sidechain
35	BB	2404	U	Sidechain
35	BB	2405	G	Sidechain
35	BB	2406	A	Sidechain
35	BB	2407	A	Sidechain
35	BB	2408	U	Sidechain
35	BB	2410	G	Sidechain
35	BB	2412	A	Sidechain
35	BB	2414	G	Sidechain
35	BB	2415	G	Sidechain
35	BB	242	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2428	G	Sidechain
35	BB	2429	G	Sidechain
35	BB	243	U	Sidechain
35	BB	2432	A	Sidechain
35	BB	2437	G	Sidechain
35	BB	2440	C	Sidechain
35	BB	2441	U	Sidechain
35	BB	2442	C	Sidechain
35	BB	2444	G	Sidechain
35	BB	2447	G	Sidechain
35	BB	2448	A	Sidechain
35	BB	2449	U	Sidechain
35	BB	245	G	Sidechain
35	BB	2454	G	Sidechain
35	BB	2455	G	Sidechain
35	BB	2456	C	Sidechain
35	BB	2457	U	Sidechain
35	BB	2458	G	Sidechain
35	BB	2459	A	Sidechain
35	BB	246	C	Sidechain
35	BB	2461	A	Sidechain
35	BB	2462	C	Sidechain
35	BB	2467	C	Sidechain
35	BB	2469	A	Sidechain
35	BB	2471	A	Sidechain
35	BB	2472	G	Sidechain
35	BB	2475	C	Sidechain
35	BB	2476	A	Sidechain
35	BB	2477	U	Sidechain
35	BB	2479	U	Sidechain
35	BB	248	G	Sidechain
35	BB	2483	C	Sidechain
35	BB	2486	C	Sidechain
35	BB	2488	G	Sidechain
35	BB	249	C	Sidechain
35	BB	2491	U	Sidechain
35	BB	2492	U	Sidechain
35	BB	2494	G	Sidechain
35	BB	2495	G	Sidechain
35	BB	25	U	Sidechain
35	BB	2500	U	Sidechain
35	BB	2503	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2504	U	Sidechain
35	BB	2505	G	Sidechain
35	BB	2507	C	Sidechain
35	BB	251	A	Sidechain
35	BB	2515	C	Sidechain
35	BB	2516	A	Sidechain
35	BB	2517	C	Sidechain
35	BB	2523	G	Sidechain
35	BB	2525	G	Sidechain
35	BB	2528	U	Sidechain
35	BB	253	C	Sidechain
35	BB	2530	A	Sidechain
35	BB	2532	G	Sidechain
35	BB	2534	A	Sidechain
35	BB	2535	G	Sidechain
35	BB	2536	G	Sidechain
35	BB	2538	C	Sidechain
35	BB	2540	C	Sidechain
35	BB	2541	A	Sidechain
35	BB	2542	A	Sidechain
35	BB	2546	U	Sidechain
35	BB	255	A	Sidechain
35	BB	2550	G	Sidechain
35	BB	2551	C	Sidechain
35	BB	2553	G	Sidechain
35	BB	2556	C	Sidechain
35	BB	2557	G	Sidechain
35	BB	2560	A	Sidechain
35	BB	2561	U	Sidechain
35	BB	2565	A	Sidechain
35	BB	2568	U	Sidechain
35	BB	257	C	Sidechain
35	BB	2570	G	Sidechain
35	BB	2572	A	Sidechain
35	BB	2574	G	Sidechain
35	BB	2576	G	Sidechain
35	BB	2578	G	Sidechain
35	BB	2580	U	Sidechain
35	BB	2581	G	Sidechain
35	BB	2582	G	Sidechain
35	BB	2583	G	Sidechain
35	BB	2584	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2585	U	Sidechain
35	BB	2587	A	Sidechain
35	BB	2588	G	Sidechain
35	BB	2593	U	Sidechain
35	BB	2596	U	Sidechain
35	BB	2598	A	Sidechain
35	BB	26	G	Sidechain
35	BB	260	G	Sidechain
35	BB	2601	C	Sidechain
35	BB	2602	A	Sidechain
35	BB	2604	U	Sidechain
35	BB	261	G	Sidechain
35	BB	2610	C	Sidechain
35	BB	2612	C	Sidechain
35	BB	2613	U	Sidechain
35	BB	2614	A	Sidechain
35	BB	2616	C	Sidechain
35	BB	2618	G	Sidechain
35	BB	2619	C	Sidechain
35	BB	262	A	Sidechain
35	BB	2620	C	Sidechain
35	BB	2622	U	Sidechain
35	BB	2624	G	Sidechain
35	BB	2627	G	Sidechain
35	BB	263	G	Sidechain
35	BB	2631	G	Sidechain
35	BB	2637	U	Sidechain
35	BB	264	C	Sidechain
35	BB	2641	G	Sidechain
35	BB	2643	G	Sidechain
35	BB	2645	G	Sidechain
35	BB	2648	G	Sidechain
35	BB	265	A	Sidechain
35	BB	2650	U	Sidechain
35	BB	2652	C	Sidechain
35	BB	2654	A	Sidechain
35	BB	2656	U	Sidechain
35	BB	2659	G	Sidechain
35	BB	2661	G	Sidechain
35	BB	2662	A	Sidechain
35	BB	2663	G	Sidechain
35	BB	2664	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2666	C	Sidechain
35	BB	2669	G	Sidechain
35	BB	2670	A	Sidechain
35	BB	2674	G	Sidechain
35	BB	2679	A	Sidechain
35	BB	268	C	Sidechain
35	BB	2680	U	Sidechain
35	BB	2683	C	Sidechain
35	BB	2685	G	Sidechain
35	BB	2688	G	Sidechain
35	BB	2689	U	Sidechain
35	BB	2690	U	Sidechain
35	BB	2692	G	Sidechain
35	BB	2694	G	Sidechain
35	BB	2695	U	Sidechain
35	BB	2699	C	Sidechain
35	BB	2700	A	Sidechain
35	BB	2702	G	Sidechain
35	BB	2703	C	Sidechain
35	BB	2706	A	Sidechain
35	BB	2708	G	Sidechain
35	BB	271	G	Sidechain
35	BB	2711	A	Sidechain
35	BB	2713	U	Sidechain
35	BB	2715	C	Sidechain
35	BB	2716	C	Sidechain
35	BB	2717	C	Sidechain
35	BB	2720	U	Sidechain
35	BB	2722	G	Sidechain
35	BB	2724	U	Sidechain
35	BB	2727	A	Sidechain
35	BB	273	G	Sidechain
35	BB	2731	G	Sidechain
35	BB	2732	G	Sidechain
35	BB	2735	G	Sidechain
35	BB	2737	G	Sidechain
35	BB	2738	A	Sidechain
35	BB	2739	U	Sidechain
35	BB	274	C	Sidechain
35	BB	2741	A	Sidechain
35	BB	2742	G	Sidechain
35	BB	2744	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2746	U	Sidechain
35	BB	2751	G	Sidechain
35	BB	2756	U	Sidechain
35	BB	2759	G	Sidechain
35	BB	2765	A	Sidechain
35	BB	2766	A	Sidechain
35	BB	277	G	Sidechain
35	BB	2770	G	Sidechain
35	BB	2771	C	Sidechain
35	BB	2773	C	Sidechain
35	BB	2774	C	Sidechain
35	BB	2775	G	Sidechain
35	BB	2776	A	Sidechain
35	BB	2778	A	Sidechain
35	BB	2779	U	Sidechain
35	BB	278	A	Sidechain
35	BB	2782	G	Sidechain
35	BB	2784	U	Sidechain
35	BB	2785	C	Sidechain
35	BB	2786	U	Sidechain
35	BB	2787	C	Sidechain
35	BB	2788	C	Sidechain
35	BB	279	A	Sidechain
35	BB	2790	U	Sidechain
35	BB	2791	G	Sidechain
35	BB	2792	A	Sidechain
35	BB	2794	C	Sidechain
35	BB	2798	U	Sidechain
35	BB	28	A	Sidechain
35	BB	280	U	Sidechain
35	BB	2802	G	Sidechain
35	BB	2804	U	Sidechain
35	BB	2806	C	Sidechain
35	BB	2809	A	Sidechain
35	BB	2810	A	Sidechain
35	BB	2813	A	Sidechain
35	BB	2816	G	Sidechain
35	BB	2818	U	Sidechain
35	BB	282	A	Sidechain
35	BB	2828	G	Sidechain
35	BB	2829	A	Sidechain
35	BB	2831	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	2832	U	Sidechain
35	BB	2838	G	Sidechain
35	BB	2847	U	Sidechain
35	BB	2848	G	Sidechain
35	BB	2849	U	Sidechain
35	BB	285	G	Sidechain
35	BB	2850	A	Sidechain
35	BB	2851	A	Sidechain
35	BB	2854	G	Sidechain
35	BB	2856	A	Sidechain
35	BB	2858	C	Sidechain
35	BB	286	U	Sidechain
35	BB	2866	U	Sidechain
35	BB	2867	G	Sidechain
35	BB	287	G	Sidechain
35	BB	2872	A	Sidechain
35	BB	2874	C	Sidechain
35	BB	2876	G	Sidechain
35	BB	2877	G	Sidechain
35	BB	2879	A	Sidechain
35	BB	2881	U	Sidechain
35	BB	2884	U	Sidechain
35	BB	2885	G	Sidechain
35	BB	2886	A	Sidechain
35	BB	2888	C	Sidechain
35	BB	289	G	Sidechain
35	BB	2890	G	Sidechain
35	BB	2891	U	Sidechain
35	BB	2892	G	Sidechain
35	BB	2895	G	Sidechain
35	BB	2897	U	Sidechain
35	BB	2900	A	Sidechain
35	BB	2901	C	Sidechain
35	BB	2902	C	Sidechain
35	BB	2903	U	Sidechain
35	BB	292	U	Sidechain
35	BB	293	U	Sidechain
35	BB	294	A	Sidechain
35	BB	295	G	Sidechain
35	BB	300	A	Sidechain
35	BB	303	G	Sidechain
35	BB	304	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	309	A	Sidechain
35	BB	310	A	Sidechain
35	BB	313	G	Sidechain
35	BB	316	C	Sidechain
35	BB	321	U	Sidechain
35	BB	324	A	Sidechain
35	BB	325	G	Sidechain
35	BB	327	G	Sidechain
35	BB	333	G	Sidechain
35	BB	336	C	Sidechain
35	BB	338	G	Sidechain
35	BB	339	U	Sidechain
35	BB	340	A	Sidechain
35	BB	344	A	Sidechain
35	BB	345	A	Sidechain
35	BB	346	A	Sidechain
35	BB	347	A	Sidechain
35	BB	35	G	Sidechain
35	BB	350	G	Sidechain
35	BB	352	A	Sidechain
35	BB	353	C	Sidechain
35	BB	354	A	Sidechain
35	BB	356	G	Sidechain
35	BB	358	U	Sidechain
35	BB	359	G	Sidechain
35	BB	36	G	Sidechain
35	BB	361	G	Sidechain
35	BB	363	G	Sidechain
35	BB	364	C	Sidechain
35	BB	366	C	Sidechain
35	BB	367	G	Sidechain
35	BB	37	C	Sidechain
35	BB	370	G	Sidechain
35	BB	372	G	Sidechain
35	BB	373	U	Sidechain
35	BB	376	G	Sidechain
35	BB	377	G	Sidechain
35	BB	379	G	Sidechain
35	BB	381	G	Sidechain
35	BB	385	C	Sidechain
35	BB	387	U	Sidechain
35	BB	388	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	39	G	Sidechain
35	BB	390	U	Sidechain
35	BB	392	U	Sidechain
35	BB	395	U	Sidechain
35	BB	40	U	Sidechain
35	BB	400	G	Sidechain
35	BB	401	A	Sidechain
35	BB	402	A	Sidechain
35	BB	404	A	Sidechain
35	BB	405	U	Sidechain
35	BB	407	G	Sidechain
35	BB	410	G	Sidechain
35	BB	411	G	Sidechain
35	BB	414	C	Sidechain
35	BB	415	A	Sidechain
35	BB	417	C	Sidechain
35	BB	419	U	Sidechain
35	BB	420	C	Sidechain
35	BB	421	C	Sidechain
35	BB	422	A	Sidechain
35	BB	426	C	Sidechain
35	BB	428	A	Sidechain
35	BB	429	A	Sidechain
35	BB	43	G	Sidechain
35	BB	431	U	Sidechain
35	BB	434	U	Sidechain
35	BB	437	U	Sidechain
35	BB	438	G	Sidechain
35	BB	442	G	Sidechain
35	BB	443	A	Sidechain
35	BB	446	G	Sidechain
35	BB	449	A	Sidechain
35	BB	450	G	Sidechain
35	BB	452	G	Sidechain
35	BB	457	A	Sidechain
35	BB	458	G	Sidechain
35	BB	459	U	Sidechain
35	BB	46	G	Sidechain
35	BB	463	G	Sidechain
35	BB	464	U	Sidechain
35	BB	465	G	Sidechain
35	BB	466	A	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	467	G	Sidechain
35	BB	468	G	Sidechain
35	BB	472	A	Sidechain
35	BB	473	G	Sidechain
35	BB	475	C	Sidechain
35	BB	479	A	Sidechain
35	BB	480	A	Sidechain
35	BB	484	C	Sidechain
35	BB	485	C	Sidechain
35	BB	488	G	Sidechain
35	BB	489	G	Sidechain
35	BB	491	G	Sidechain
35	BB	492	A	Sidechain
35	BB	494	G	Sidechain
35	BB	495	G	Sidechain
35	BB	497	A	Sidechain
35	BB	499	U	Sidechain
35	BB	5	A	Sidechain
35	BB	50	U	Sidechain
35	BB	500	G	Sidechain
35	BB	501	A	Sidechain
35	BB	505	A	Sidechain
35	BB	506	G	Sidechain
35	BB	507	A	Sidechain
35	BB	508	A	Sidechain
35	BB	51	G	Sidechain
35	BB	510	C	Sidechain
35	BB	511	U	Sidechain
35	BB	512	G	Sidechain
35	BB	513	A	Sidechain
35	BB	514	A	Sidechain
35	BB	52	A	Sidechain
35	BB	520	G	Sidechain
35	BB	521	U	Sidechain
35	BB	530	G	Sidechain
35	BB	532	A	Sidechain
35	BB	537	G	Sidechain
35	BB	539	G	Sidechain
35	BB	54	G	Sidechain
35	BB	542	C	Sidechain
35	BB	543	G	Sidechain
35	BB	544	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	546	U	Sidechain
35	BB	548	G	Sidechain
35	BB	55	G	Sidechain
35	BB	551	G	Sidechain
35	BB	553	G	Sidechain
35	BB	555	G	Sidechain
35	BB	565	C	Sidechain
35	BB	567	U	Sidechain
35	BB	568	U	Sidechain
35	BB	569	U	Sidechain
35	BB	570	G	Sidechain
35	BB	574	A	Sidechain
35	BB	575	A	Sidechain
35	BB	577	G	Sidechain
35	BB	578	G	Sidechain
35	BB	580	U	Sidechain
35	BB	590	A	Sidechain
35	BB	594	U	Sidechain
35	BB	596	U	Sidechain
35	BB	597	G	Sidechain
35	BB	598	U	Sidechain
35	BB	599	A	Sidechain
35	BB	60	G	Sidechain
35	BB	600	G	Sidechain
35	BB	602	A	Sidechain
35	BB	610	C	Sidechain
35	BB	611	C	Sidechain
35	BB	612	G	Sidechain
35	BB	615	U	Sidechain
35	BB	616	A	Sidechain
35	BB	617	G	Sidechain
35	BB	619	G	Sidechain
35	BB	62	U	Sidechain
35	BB	622	G	Sidechain
35	BB	624	C	Sidechain
35	BB	625	G	Sidechain
35	BB	628	G	Sidechain
35	BB	629	G	Sidechain
35	BB	630	G	Sidechain
35	BB	631	A	Sidechain
35	BB	633	A	Sidechain
35	BB	634	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	635	C	Sidechain
35	BB	636	G	Sidechain
35	BB	638	G	Sidechain
35	BB	64	A	Sidechain
35	BB	640	C	Sidechain
35	BB	642	U	Sidechain
35	BB	645	C	Sidechain
35	BB	646	U	Sidechain
35	BB	647	G	Sidechain
35	BB	648	G	Sidechain
35	BB	650	C	Sidechain
35	BB	651	G	Sidechain
35	BB	653	U	Sidechain
35	BB	658	U	Sidechain
35	BB	659	G	Sidechain
35	BB	66	C	Sidechain
35	BB	660	C	Sidechain
35	BB	661	A	Sidechain
35	BB	663	G	Sidechain
35	BB	664	G	Sidechain
35	BB	668	A	Sidechain
35	BB	669	G	Sidechain
35	BB	673	C	Sidechain
35	BB	674	G	Sidechain
35	BB	675	A	Sidechain
35	BB	676	A	Sidechain
35	BB	68	G	Sidechain
35	BB	680	C	Sidechain
35	BB	682	G	Sidechain
35	BB	685	A	Sidechain
35	BB	686	U	Sidechain
35	BB	687	C	Sidechain
35	BB	688	U	Sidechain
35	BB	689	A	Sidechain
35	BB	696	G	Sidechain
35	BB	698	C	Sidechain
35	BB	70	G	Sidechain
35	BB	700	G	Sidechain
35	BB	703	U	Sidechain
35	BB	704	G	Sidechain
35	BB	708	G	Sidechain
35	BB	710	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	711	G	Sidechain
35	BB	712	G	Sidechain
35	BB	713	G	Sidechain
35	BB	714	U	Sidechain
35	BB	715	A	Sidechain
35	BB	720	U	Sidechain
35	BB	722	A	Sidechain
35	BB	723	C	Sidechain
35	BB	725	G	Sidechain
35	BB	726	G	Sidechain
35	BB	728	G	Sidechain
35	BB	730	A	Sidechain
35	BB	732	C	Sidechain
35	BB	733	G	Sidechain
35	BB	737	C	Sidechain
35	BB	738	G	Sidechain
35	BB	744	U	Sidechain
35	BB	748	G	Sidechain
35	BB	749	A	Sidechain
35	BB	75	G	Sidechain
35	BB	750	A	Sidechain
35	BB	752	A	Sidechain
35	BB	755	U	Sidechain
35	BB	758	C	Sidechain
35	BB	76	C	Sidechain
35	BB	760	G	Sidechain
35	BB	761	A	Sidechain
35	BB	763	G	Sidechain
35	BB	764	A	Sidechain
35	BB	767	U	Sidechain
35	BB	77	G	Sidechain
35	BB	771	G	Sidechain
35	BB	772	C	Sidechain
35	BB	773	U	Sidechain
35	BB	774	G	Sidechain
35	BB	775	G	Sidechain
35	BB	778	G	Sidechain
35	BB	78	U	Sidechain
35	BB	780	G	Sidechain
35	BB	784	G	Sidechain
35	BB	785	G	Sidechain
35	BB	787	C	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	79	C	Sidechain
35	BB	791	C	Sidechain
35	BB	794	A	Sidechain
35	BB	795	C	Sidechain
35	BB	797	G	Sidechain
35	BB	798	G	Sidechain
35	BB	799	G	Sidechain
35	BB	800	A	Sidechain
35	BB	801	G	Sidechain
35	BB	805	G	Sidechain
35	BB	809	G	Sidechain
35	BB	81	G	Sidechain
35	BB	811	U	Sidechain
35	BB	814	C	Sidechain
35	BB	817	C	Sidechain
35	BB	82	U	Sidechain
35	BB	820	A	Sidechain
35	BB	821	A	Sidechain
35	BB	823	C	Sidechain
35	BB	824	U	Sidechain
35	BB	826	U	Sidechain
35	BB	830	G	Sidechain
35	BB	833	A	Sidechain
35	BB	838	C	Sidechain
35	BB	84	A	Sidechain
35	BB	842	U	Sidechain
35	BB	847	U	Sidechain
35	BB	849	A	Sidechain
35	BB	85	G	Sidechain
35	BB	852	U	Sidechain
35	BB	857	G	Sidechain
35	BB	858	G	Sidechain
35	BB	859	G	Sidechain
35	BB	86	G	Sidechain
35	BB	863	A	Sidechain
35	BB	864	G	Sidechain
35	BB	869	G	Sidechain
35	BB	871	U	Sidechain
35	BB	872	U	Sidechain
35	BB	877	A	Sidechain
35	BB	88	G	Sidechain
35	BB	880	G	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	882	G	Sidechain
35	BB	883	G	Sidechain
35	BB	887	U	Sidechain
35	BB	89	A	Sidechain
35	BB	891	G	Sidechain
35	BB	892	A	Sidechain
35	BB	894	U	Sidechain
35	BB	896	A	Sidechain
35	BB	897	C	Sidechain
35	BB	898	C	Sidechain
35	BB	899	A	Sidechain
35	BB	9	G	Sidechain
35	BB	901	C	Sidechain
35	BB	903	C	Sidechain
35	BB	906	U	Sidechain
35	BB	907	G	Sidechain
35	BB	909	A	Sidechain
35	BB	91	A	Sidechain
35	BB	911	A	Sidechain
35	BB	912	C	Sidechain
35	BB	915	C	Sidechain
35	BB	917	A	Sidechain
35	BB	919	U	Sidechain
35	BB	921	C	Sidechain
35	BB	924	G	Sidechain
35	BB	926	G	Sidechain
35	BB	93	G	Sidechain
35	BB	933	A	Sidechain
35	BB	937	C	Sidechain
35	BB	938	G	Sidechain
35	BB	939	G	Sidechain
35	BB	943	A	Sidechain
35	BB	945	A	Sidechain
35	BB	946	C	Sidechain
35	BB	947	A	Sidechain
35	BB	949	G	Sidechain
35	BB	95	A	Sidechain
35	BB	950	G	Sidechain
35	BB	952	G	Sidechain
35	BB	953	G	Sidechain
35	BB	954	G	Sidechain
35	BB	955	U	Sidechain

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Mol	Chain	Res	Type	Group
35	BB	956	G	Sidechain
35	BB	957	C	Sidechain
35	BB	958	U	Sidechain
35	BB	959	A	Sidechain
35	BB	96	C	Sidechain
35	BB	962	G	Sidechain
35	BB	963	U	Sidechain
35	BB	966	G	Sidechain
35	BB	968	C	Sidechain
35	BB	969	G	Sidechain
35	BB	971	G	Sidechain
35	BB	972	A	Sidechain
35	BB	974	G	Sidechain
35	BB	976	G	Sidechain
35	BB	979	A	Sidechain
35	BB	98	G	Sidechain
35	BB	980	A	Sidechain
35	BB	981	A	Sidechain
35	BB	982	C	Sidechain
35	BB	984	A	Sidechain
35	BB	988	A	Sidechain
35	BB	989	G	Sidechain
35	BB	991	C	Sidechain
35	BB	995	C	Sidechain
35	BB	998	C	Sidechain
36	BC	132	ARG	Sidechain
36	BC	174	ARG	Sidechain
36	BC	188	ARG	Sidechain
36	BC	261	ARG	Sidechain
36	BC	269	ARG	Sidechain
36	BC	61	TYR	Sidechain
36	BC	82	TYR	Sidechain
36	BC	86	ARG	Sidechain
37	BD	124	ARG	Sidechain
37	BD	13	ARG	Sidechain
37	BD	151	THR	Peptide
37	BD	156	PHE	Sidechain
37	BD	184	ARG	Sidechain
37	BD	89	GLU	Peptide
38	BE	117	ARG	Sidechain
38	BE	170	ARG	Sidechain
38	BE	49	ARG	Sidechain

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Mol	Chain	Res	Type	Group
38	BE	57	LYS	Peptide
38	BE	88	ARG	Peptide
39	BF	111	ARG	Sidechain
39	BF	124	ARG	Sidechain
39	BF	127	TYR	Sidechain
39	BF	142	TYR	Sidechain
39	BF	147	ARG	Sidechain
39	BF	173	ASP	Peptide
39	BF	18	GLU	Peptide
39	BF	21	TYR	Sidechain
39	BF	6	TYR	Sidechain
39	BF	82	TYR	Sidechain
40	BG	150	TYR	Sidechain
40	BG	156	TYR	Sidechain
40	BG	83	THR	Peptide
41	BH	31	VAL	Peptide
43	BJ	112	GLY	Peptide
43	BJ	13	ARG	Sidechain
43	BJ	16	TYR	Sidechain
43	BJ	35	ARG	Sidechain
44	BK	17	ARG	Sidechain
44	BK	30	ARG	Sidechain
44	BK	70	ARG	Peptide
44	BK	71	ARG	Peptide
44	BK	88	ASN	Peptide
45	BL	41	ARG	Sidechain
46	BM	10	ARG	Sidechain
46	BM	37	GLY	Peptide
46	BM	66	ARG	Sidechain
47	BN	112	TYR	Sidechain
47	BN	4	ARG	Sidechain
47	BN	80	PHE	Sidechain
47	BN	86	ARG	Sidechain
47	BN	95	THR	Peptide
48	BO	102	ARG	Sidechain
48	BO	13	ARG	Sidechain
49	BP	108	ARG	Sidechain
49	BP	51	ASN	Peptide
49	BP	60	VAL	Peptide
49	BP	61	ARG	Sidechain
49	BP	97	TYR	Sidechain
50	BQ	10	ARG	Sidechain

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Mol	Chain	Res	Type	Group
50	BQ	23	TYR	Sidechain
50	BQ	24	TYR	Sidechain
50	BQ	57	ARG	Sidechain
50	BQ	6	GLY	Peptide
51	BR	21	ARG	Sidechain
51	BR	89	HIS	Sidechain
51	BR	90	ARG	Sidechain
52	BS	25	ARG	Sidechain
53	BT	76	ARG	Sidechain
54	BU	6	ARG	Sidechain
54	BU	95	PHE	Sidechain
55	BW	18	ARG	Sidechain
55	BW	19	ARG	Sidechain
55	BW	57	TYR	Sidechain
55	BW	82	TYR	Sidechain
56	BY	19	ARG	Sidechain
56	BY	34	SER	Mainchain
56	BY	40	ARG	Sidechain
56	BY	54	ARG	Sidechain
56	BY	68	PHE	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32831	0	16502	182	0
2	AB	1704	0	1732	3	0
3	AC	1624	0	1699	13	0
4	AD	1643	0	1710	5	0
5	AE	1105	0	1148	6	0
6	AF	817	0	808	7	0
7	AG	1174	0	1230	5	0
8	AH	979	0	1034	2	0
9	AI	1022	0	1070	9	0
10	AJ	786	0	828	3	0
11	AK	877	0	887	9	0
12	AL	955	0	1019	2	0
13	AM	876	0	937	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	AN	774	0	827	4	0
15	AO	716	0	742	3	0
16	AP	638	0	656	0	0
17	AQ	648	0	691	4	0
18	AR	455	0	478	1	0
19	AS	637	0	665	5	0
20	AT	665	0	714	4	0
21	AU	425	0	449	2	0
22	AV	1649	0	832	21	0
23	AX	236	0	121	10	0
24	AZ	100	0	99	0	0
25	B0	625	0	655	2	0
26	B1	509	0	543	1	0
27	B2	449	0	491	1	0
28	B3	444	0	461	3	0
29	B4	409	0	440	0	0
30	B5	1733	0	1824	3	0
31	B6	377	0	418	3	0
32	B7	504	0	574	5	0
33	B8	302	0	343	0	0
34	BA	2464	0	1246	8	0
35	BB	62321	0	31294	335	0
36	BC	2082	0	2157	15	0
37	BD	1565	0	1616	9	0
38	BE	1552	0	1619	9	0
39	BF	1420	0	1460	10	0
40	BG	1316	0	1364	6	0
41	BH	1111	0	1148	1	0
42	BI	1032	0	1088	126	0
43	BJ	1129	0	1162	9	0
44	BK	930	0	1003	7	0
45	BL	1045	0	1117	7	0
46	BM	1074	0	1157	4	0
47	BN	960	0	1000	2	0
48	BO	892	0	923	2	0
49	BP	917	0	965	4	0
50	BQ	947	0	1022	9	0
51	BR	816	0	839	9	0
52	BS	857	0	922	3	0
53	BT	738	0	807	5	0
54	BU	755	0	807	10	0
55	BW	753	0	780	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	BY	596	0	610	1	0
All	All	145960	0	98733	861	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 4.

All (861) 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)
22:AV:35:G:N2	23:AX:18:C:C2	2.08	1.22
42:BI:11:GLN:HG2	42:BI:55:PRO:HB3	1.51	0.91
42:BI:140:GLU:O	42:BI:141:ASP:OXT	1.91	0.89
42:BI:27:LEU:HD23	42:BI:27:LEU:H	1.43	0.82
42:BI:121:ILE:HD13	42:BI:121:ILE:H	1.44	0.82
42:BI:21:PRO:HB2	42:BI:22:PRO:HD3	1.63	0.80
42:BI:9:LYS:HG2	42:BI:57:VAL:HG13	1.63	0.79
42:BI:45:THR:HA	42:BI:48:ILE:HG22	1.66	0.78
42:BI:105:LEU:HD13	42:BI:129:GLU:HG2	1.67	0.76
42:BI:102:ARG:HG3	42:BI:141:ASP:HA	1.66	0.75
42:BI:72:THR:HG21	42:BI:112:LYS:HA	1.69	0.75
42:BI:20:SER:HB3	42:BI:21:PRO:HD3	1.69	0.74
42:BI:55:PRO:HD3	42:BI:74:PRO:HD3	1.70	0.74
22:AV:35:G:N2	23:AX:18:C:N3	2.35	0.74
22:AV:35:G:C2	23:AX:18:C:C2	2.79	0.71
36:BC:257:ARG:HE	36:BC:260:LYS:H	1.39	0.70
42:BI:105:LEU:HD11	42:BI:139:VAL:HG21	1.73	0.70
42:BI:85:ILE:HD13	42:BI:137:LEU:HD21	1.73	0.70
42:BI:73:PRO:HG2	42:BI:78:LEU:HD21	1.75	0.69
54:BU:82:VAL:HG11	54:BU:93:ARG:HH11	1.56	0.69
50:BQ:87:VAL:HG12	51:BR:39:LEU:HD22	1.76	0.68
1:AA:827:U:H2'	1:AA:870:U:H3	1.59	0.67
35:BB:2091:C:H3'	35:BB:2092:U:H5"	1.77	0.67
1:AA:781:A:H2'	1:AA:782:A:H5'	1.75	0.67
5:AE:137:ARG:HE	5:AE:137:ARG:HA	1.60	0.67
35:BB:2132:U:H3'	35:BB:2132:U:H6	1.60	0.66
42:BI:112:LYS:O	42:BI:116:MET:HG3	1.96	0.66
35:BB:1082:U:C4	35:BB:1086:A:C2	2.84	0.65
35:BB:962:G:H21	35:BB:2250:G:H1	1.43	0.65
35:BB:877:A:C2	35:BB:901:C:C2	2.84	0.65
42:BI:121:ILE:HD13	42:BI:121:ILE:N	2.12	0.64
35:BB:900:A:H2'	35:BB:901:C:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:27:LEU:HD12	42:BI:32:VAL:HG11	1.78	0.64
54:BU:35:VAL:H	54:BU:39:ASN:HD21	1.45	0.64
42:BI:123:ALA:HA	42:BI:126:ARG:HH12	1.63	0.64
1:AA:243:A:H4'	1:AA:244:U:H5'	1.78	0.63
42:BI:41:PHE:O	42:BI:45:THR:HG23	1.98	0.63
42:BI:140:GLU:C	42:BI:141:ASP:OXT	2.38	0.63
35:BB:1358:G:C2	35:BB:1372:U:C5	2.87	0.63
1:AA:1305:G:H21	1:AA:1332:A:H8	1.46	0.63
1:AA:764:C:H2'	1:AA:765:G:H5'	1.81	0.62
53:BT:15:HIS:CE1	53:BT:17:SER:HB2	2.34	0.62
3:AC:6:PRO:HA	14:AN:88:MET:HE1	1.81	0.62
42:BI:72:THR:HG22	42:BI:115:ASP:OD2	1.99	0.62
42:BI:42:ASN:HA	42:BI:45:THR:OG1	1.99	0.62
42:BI:78:LEU:HA	42:BI:81:LYS:HE2	1.82	0.62
22:AV:35:G:C2	23:AX:18:C:N3	2.68	0.61
35:BB:28:A:C2	35:BB:513:A:C8	2.88	0.61
35:BB:1082:U:C5	35:BB:1083:U:C5	2.88	0.61
42:BI:27:LEU:H	42:BI:27:LEU:CD2	2.13	0.61
35:BB:2132:U:H3'	35:BB:2132:U:C6	2.35	0.61
42:BI:20:SER:O	42:BI:25:PRO:HD2	2.00	0.61
35:BB:2091:C:H3'	35:BB:2092:U:C5'	2.31	0.61
42:BI:116:MET:HE1	42:BI:128:ILE:HG13	1.81	0.61
35:BB:940:G:H2'	35:BB:941:A:H4'	1.83	0.61
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.82	0.61
42:BI:121:ILE:H	42:BI:121:ILE:CD1	2.14	0.60
35:BB:1024:G:H3'	35:BB:1025:G:H5"	1.82	0.60
45:BL:81:ASP:HA	45:BL:84:LYS:HD2	1.83	0.60
9:AI:83:THR:HG22	9:AI:97:LEU:HD22	1.84	0.60
35:BB:337:C:C5	35:BB:338:G:C8	2.89	0.60
49:BP:77:SER:HB3	49:BP:80:VAL:HG23	1.84	0.60
1:AA:920:U:H2'	1:AA:921:U:C6	2.37	0.60
35:BB:571:U:C5	35:BB:575:A:C6	2.90	0.59
46:BM:33:LEU:HD11	46:BM:117:PHE:HB3	1.84	0.59
42:BI:32:VAL:HG22	42:BI:60:VAL:HG21	1.85	0.59
1:AA:1526:G:OP1	21:AU:37:TYR:CG	2.55	0.59
9:AI:10:ARG:H	9:AI:80:HIS:CD2	2.21	0.59
35:BB:1216:G:H5"	50:BQ:10:ARG:HH12	1.65	0.59
23:AX:17:C:H2'	23:AX:18:C:C5	2.38	0.59
1:AA:979:C:H3'	1:AA:980:C:C6	2.38	0.58
36:BC:141:HIS:CE1	36:BC:190:THR:HB	2.38	0.58
42:BI:25:PRO:O	42:BI:29:GLN:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:1551:A:H3'	35:BB:1552:A:H5"	1.84	0.58
1:AA:82:G:H3'	1:AA:83:C:H4'	1.85	0.58
1:AA:673:A:H4'	6:AF:86:ARG:HE	1.69	0.58
1:AA:1306:A:C2	1:AA:1332:A:H1'	2.39	0.58
39:BF:4:HIS:HB2	39:BF:96:TRP:CE2	2.39	0.57
51:BR:36:ALA:HB2	51:BR:58:VAL:HG12	1.86	0.57
42:BI:99:LYS:HD3	42:BI:99:LYS:H	1.69	0.57
1:AA:1526:G:C4	1:AA:1527:U:C5	2.93	0.57
35:BB:1978:A:C5	35:BB:1979:U:C5	2.92	0.57
42:BI:45:THR:CA	42:BI:48:ILE:HG22	2.35	0.57
42:BI:54:ILE:HD13	42:BI:54:ILE:C	2.30	0.57
35:BB:2123:G:H22	35:BB:2176:A:H1'	1.70	0.57
39:BF:134:GLN:HE21	39:BF:149:ARG:HD2	1.68	0.57
1:AA:667:G:H4'	15:AO:50:HIS:CD2	2.39	0.57
35:BB:1437:C:H2'	35:BB:1438:U:C6	2.39	0.57
42:BI:37:PHE:CZ	42:BI:58:ILE:HD11	2.40	0.57
35:BB:1803:A:C8	35:BB:1804:C:C6	2.93	0.56
42:BI:108:ILE:HG22	42:BI:128:ILE:HD13	1.88	0.56
51:BR:26:ASP:O	51:BR:27:ILE:HG22	2.05	0.56
42:BI:17:ALA:O	42:BI:18:ASN:CB	2.54	0.56
42:BI:125:THR:O	42:BI:129:GLU:HG3	2.05	0.56
35:BB:641:U:C5	35:BB:642:U:C4	2.94	0.56
35:BB:1082:U:N3	35:BB:1086:A:C2	2.74	0.56
1:AA:350:G:H2'	1:AA:351:G:C8	2.41	0.56
35:BB:250:G:C6	35:BB:251:A:C6	2.94	0.56
1:AA:413:G:H21	1:AA:428:G:H1'	1.70	0.56
7:AG:78:ARG:HE	23:AX:13:A:N6	2.04	0.56
35:BB:851:C:H2'	35:BB:852:U:C6	2.41	0.56
1:AA:516:U:C4	1:AA:517:G:C6	2.94	0.56
32:B7:60:CYS:O	32:B7:61:LEU:HD23	2.06	0.56
55:BW:44:HIS:CE1	55:BW:85:LYS:HA	2.41	0.56
35:BB:1273:U:H5'	47:BN:12:ARG:HH12	1.71	0.55
42:BI:129:GLU:HB3	42:BI:133:ARG:HH12	1.71	0.55
35:BB:98:G:H22	54:BU:6:ARG:HH22	1.54	0.55
35:BB:877:A:C6	35:BB:901:C:N3	2.75	0.55
35:BB:418:C:C4	35:BB:419:U:C4	2.94	0.55
56:BY:51:GLY:HA2	56:BY:59:PHE:H	1.72	0.55
1:AA:973:G:H3'	1:AA:974:A:H5"	1.89	0.55
30:B5:1:MET:SD	35:BB:2174:C:H3'	2.47	0.55
1:AA:1111:A:H61	3:AC:175:HIS:HB3	1.72	0.55
35:BB:819:A:C4	35:BB:1189:A:C2	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:54:ILE:HD13	42:BI:55:PRO:N	2.22	0.55
1:AA:1110:A:H3'	1:AA:1111:A:H8	1.72	0.55
6:AF:18:VAL:HG21	6:AF:58:HIS:CD2	2.42	0.55
35:BB:1100:C:H2'	35:BB:1101:U:H6	1.71	0.55
42:BI:49:GLU:CB	42:BI:52:LEU:HD12	2.37	0.55
35:BB:704:G:H2'	35:BB:726:G:H22	1.72	0.55
35:BB:1410:G:C6	35:BB:1411:U:C4	2.94	0.54
35:BB:1805:A:H5"	36:BC:247:TRP:CD2	2.43	0.54
1:AA:71:A:H61	1:AA:99:C:H1'	1.72	0.54
5:AE:33:THR:HG22	5:AE:34:ALA:H	1.72	0.54
11:AK:21:HIS:CE1	11:AK:23:HIS:HB2	2.42	0.54
35:BB:1269:A:H2'	35:BB:1270:C:C6	2.42	0.54
35:BB:2643:G:C6	35:BB:2644:G:C6	2.96	0.54
35:BB:2308:G:H5'	35:BB:2308:G:C8	2.42	0.54
42:BI:71:LYS:HB3	42:BI:115:ASP:OD2	2.07	0.54
35:BB:880:G:H2'	35:BB:881:G:C8	2.43	0.54
35:BB:2147:A:H3'	35:BB:2148:G:H5'	1.88	0.54
35:BB:2229:U:H2'	35:BB:2230:G:H8	1.73	0.54
1:AA:818:G:H3'	1:AA:819:A:H5"	1.89	0.54
11:AK:20:ALA:HB2	11:AK:81:LEU:HD22	1.89	0.54
42:BI:76:ALA:HA	42:BI:135:MET:SD	2.48	0.54
35:BB:1022:G:C6	35:BB:1141:U:C5	2.96	0.54
35:BB:1057:A:C2	35:BB:1082:U:C2	2.95	0.54
35:BB:1311:G:H21	35:BB:1603:A:H62	1.55	0.54
35:BB:1483:G:C6	35:BB:1484:U:C4	2.96	0.54
42:BI:116:MET:HE1	42:BI:128:ILE:CG1	2.38	0.54
35:BB:877:A:N1	35:BB:901:C:C2	2.76	0.54
42:BI:63:ASP:O	42:BI:64:ARG:HB2	2.08	0.53
35:BB:2128:G:C6	35:BB:2160:C:C5	2.96	0.53
5:AE:57:ALA:HA	5:AE:60:GLN:HB3	1.90	0.53
20:AT:24:ARG:HE	20:AT:28:ARG:HE	1.56	0.53
35:BB:2723:C:C4	35:BB:2724:U:C4	2.97	0.53
1:AA:1531:A:H2'	1:AA:1532:U:C6	2.43	0.53
1:AA:668:G:H21	15:AO:45:HIS:HE1	1.57	0.53
42:BI:52:LEU:HD22	42:BI:81:LYS:HD3	1.90	0.53
42:BI:99:LYS:HD3	42:BI:99:LYS:N	2.24	0.53
42:BI:57:VAL:HG23	42:BI:71:LYS:NZ	2.24	0.53
35:BB:396:G:C6	35:BB:397:U:C4	2.97	0.53
35:BB:1858:A:C2	35:BB:1885:A:H1'	2.44	0.53
18:AR:38:ILE:HG22	18:AR:39:VAL:H	1.73	0.52
44:BK:30:ARG:HH21	44:BK:33:ALA:HB1	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:38:ARG:HH12	6:AF:96:VAL:HG12	1.74	0.52
1:AA:1446:A:H3'	1:AA:1447:A:H5"	1.91	0.52
35:BB:1065:U:H3	35:BB:1069:A:H2'	1.73	0.52
35:BB:15:G:C4	35:BB:16:C:C6	2.98	0.52
35:BB:962:G:N2	35:BB:2250:G:H1	2.08	0.52
42:BI:32:VAL:HG22	42:BI:60:VAL:CG2	2.40	0.52
36:BC:172:THR:HA	36:BC:182:LYS:HA	1.90	0.52
35:BB:1995:U:H2'	35:BB:1996:C:C5	2.44	0.52
42:BI:3:LYS:HG2	42:BI:4:VAL:H	1.75	0.52
35:BB:19:A:C2	35:BB:522:A:C2	2.98	0.52
35:BB:1805:A:H4'	36:BC:247:TRP:CZ2	2.44	0.52
35:BB:2345:G:C4	35:BB:2347:C:C5	2.98	0.52
42:BI:85:ILE:CD1	42:BI:137:LEU:HD21	2.39	0.52
50:BQ:87:VAL:CG1	51:BR:39:LEU:HD22	2.40	0.52
1:AA:664:G:H22	1:AA:741:G:H1	1.57	0.51
35:BB:831:G:H22	45:BL:53:GLY:H	1.58	0.51
35:BB:870:U:C2'	35:BB:871:U:H5"	2.40	0.51
42:BI:79:LEU:HD11	42:BI:131:THR:OG1	2.09	0.51
46:BM:19:GLY:CA	46:BM:38:ARG:HH12	2.23	0.51
55:BW:4:ILE:HG21	55:BW:42:LEU:HD23	1.91	0.51
35:BB:2014:A:C2	35:BB:2015:A:N1	2.78	0.51
42:BI:21:PRO:CB	42:BI:22:PRO:HD3	2.38	0.51
42:BI:140:GLU:CD	42:BI:140:GLU:H	2.19	0.51
1:AA:184:G:C6	1:AA:185:U:C4	2.98	0.51
1:AA:688:G:C6	1:AA:700:G:C5	2.98	0.51
35:BB:424:G:C6	35:BB:425:G:C5	2.99	0.51
43:BJ:77:HIS:CD2	43:BJ:79:GLY:H	2.29	0.51
35:BB:589:U:H2'	35:BB:590:A:C8	2.45	0.51
40:BG:96:ALA:HB2	40:BG:103:ASN:HD22	1.75	0.51
35:BB:720:U:H2'	35:BB:721:A:C8	2.46	0.51
35:BB:1844:C:H5'	36:BC:254:LYS:H	1.75	0.51
1:AA:646:G:C5	1:AA:647:C:C5	2.99	0.51
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.46	0.51
42:BI:45:THR:HA	42:BI:48:ILE:CG2	2.39	0.51
22:AV:33:U:C4	22:AV:35:G:OP2	2.63	0.51
35:BB:1506:U:H2'	35:BB:1507:C:C6	2.46	0.51
1:AA:507:C:H3'	1:AA:508:U:H5"	1.92	0.51
42:BI:126:ARG:HH11	42:BI:126:ARG:HB3	1.76	0.51
1:AA:858:G:C5	1:AA:869:G:C5	2.98	0.51
2:AB:103:TRP:CH2	2:AB:107:ARG:HD2	2.46	0.51
7:AG:78:ARG:HE	23:AX:13:A:H61	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:895:G:C5	1:AA:896:C:C5	2.99	0.51
35:BB:18:U:H2'	35:BB:19:A:C8	2.46	0.51
39:BF:4:HIS:HB2	39:BF:96:TRP:CD2	2.46	0.51
1:AA:699:C:H2'	1:AA:700:G:H5"	1.92	0.50
26:B1:25:GLN:HB3	26:B1:29:ARG:HH11	1.76	0.50
35:BB:15:G:C5	35:BB:16:C:C5	2.99	0.50
35:BB:2267:A:C8	35:BB:2267:A:H3'	2.45	0.50
42:BI:17:ALA:C	42:BI:19:PRO:HD3	2.36	0.50
30:B5:173:THR:HG21	30:B5:192:LEU:HG	1.93	0.50
35:BB:704:G:C2'	35:BB:726:G:H22	2.24	0.50
35:BB:2792:A:H3'	35:BB:2793:C:H5"	1.93	0.50
42:BI:52:LEU:HD13	42:BI:81:LYS:HZ3	1.77	0.50
35:BB:480:A:H3'	35:BB:481:G:H5"	1.93	0.50
35:BB:2591:C:H2'	35:BB:2592:G:C8	2.46	0.50
42:BI:92:PRO:O	42:BI:93:ASN:HB2	2.12	0.50
42:BI:72:THR:HG23	42:BI:112:LYS:NZ	2.27	0.50
35:BB:1000:A:H2'	35:BB:1001:A:C8	2.47	0.50
35:BB:2233:U:H2'	35:BB:2234:G:C8	2.45	0.50
35:BB:294:A:C5	35:BB:345:A:C5	2.99	0.50
1:AA:1320:C:H42	19:AS:36:ARG:HH11	1.60	0.50
35:BB:1206:G:C5	35:BB:1207:C:C5	3.00	0.50
3:AC:174:LEU:HD23	3:AC:200:TRP:CZ3	2.47	0.49
23:AX:16:C:C4	23:AX:17:C:C5	3.00	0.49
35:BB:2851:A:C5	35:BB:2852:G:C5	3.00	0.49
42:BI:78:LEU:HD13	42:BI:108:ILE:HG23	1.93	0.49
1:AA:1012:A:C6	1:AA:1013:G:C6	3.00	0.49
35:BB:569:U:C4	35:BB:570:G:C6	3.00	0.49
35:BB:584:C:H5"	50:BQ:2:ARG:HH12	1.77	0.49
35:BB:2063:C:C5	35:BB:2064:C:C5	2.99	0.49
42:BI:10:LEU:O	42:BI:10:LEU:HD12	2.13	0.49
42:BI:24:GLY:HA2	42:BI:34:ILE:HD12	1.93	0.49
1:AA:914:A:C6	1:AA:915:A:C5	3.00	0.49
35:BB:2360:G:N2	35:BB:2428:G:C4	2.80	0.49
4:AD:145:ARG:HE	4:AD:148:ALA:HB2	1.77	0.49
10:AJ:39:PRO:HA	10:AJ:74:VAL:HA	1.94	0.49
42:BI:90:GLY:C	42:BI:92:PRO:HD3	2.38	0.49
35:BB:950:G:C5	35:BB:951:C:C5	3.00	0.49
35:BB:870:U:H2'	35:BB:871:U:H5"	1.94	0.49
1:AA:1492:A:H2'	35:BB:1913:A:C2	2.48	0.49
35:BB:1100:C:H2'	35:BB:1101:U:C6	2.48	0.49
43:BJ:47:HIS:CE1	43:BJ:48:VAL:HG22	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:35:GLU:CD	9:AI:35:GLU:H	2.21	0.49
35:BB:2131:U:O3'	35:BB:2132:U:H4'	2.13	0.49
35:BB:2557:G:H2'	35:BB:2558:C:C6	2.47	0.49
35:BB:2709:G:C6	35:BB:2710:C:C4	3.01	0.49
3:AC:48:LYS:HD2	3:AC:74:ILE:HG22	1.95	0.49
4:AD:9:LYS:O	4:AD:12:ARG:HB2	2.13	0.49
35:BB:204:A:O3'	35:BB:205:G:H4'	2.12	0.49
35:BB:2540:C:C4	35:BB:2541:A:C5	3.01	0.49
36:BC:70:LYS:H	36:BC:101:ARG:HH12	1.61	0.49
55:BW:30:ILE:HG23	55:BW:72:VAL:HG11	1.94	0.49
55:BW:80:HIS:CG	55:BW:81:PRO:HD2	2.48	0.49
1:AA:527:G:C5	1:AA:528:C:C5	3.01	0.49
3:AC:133:MET:HB2	3:AC:150:VAL:HG21	1.94	0.49
35:BB:396:G:C5	35:BB:397:U:C5	3.00	0.48
35:BB:974:G:C6	35:BB:1186:G:C6	3.01	0.48
35:BB:1584:U:H2'	35:BB:1585:C:H5'	1.95	0.48
35:BB:2776:A:C5	35:BB:2782:G:C4	3.01	0.48
54:BU:41:VAL:HG22	54:BU:60:LYS:O	2.13	0.48
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.47	0.48
35:BB:24:G:C5	35:BB:25:U:C4	3.01	0.48
1:AA:795:C:C5	1:AA:796:C:C5	3.00	0.48
1:AA:895:G:C6	1:AA:896:C:C4	3.02	0.48
35:BB:1351:C:H2'	35:BB:1352:U:O4'	2.12	0.48
1:AA:1239:A:H62	1:AA:1299:A:H62	1.61	0.48
22:AV:35:G:N2	23:AX:18:C:N1	2.56	0.48
35:BB:711:G:C6	35:BB:712:G:C5	3.01	0.48
35:BB:976:G:C6	35:BB:988:A:C2	3.00	0.48
35:BB:2234:G:C4	35:BB:2235:G:C8	3.02	0.48
42:BI:17:ALA:O	42:BI:18:ASN:HB3	2.13	0.48
42:BI:85:ILE:HD12	42:BI:87:SER:O	2.13	0.48
42:BI:100:ILE:O	42:BI:139:VAL:HA	2.14	0.48
1:AA:668:G:H21	15:AO:45:HIS:CE1	2.31	0.48
35:BB:82:U:H3	35:BB:104:A:H61	1.61	0.48
35:BB:2235:G:C6	35:BB:2236:U:C4	3.01	0.48
42:BI:79:LEU:HD12	42:BI:135:MET:SD	2.53	0.48
42:BI:100:ILE:O	42:BI:139:VAL:HG13	2.13	0.48
44:BK:3:GLN:HA	44:BK:24:VAL:HG23	1.96	0.48
1:AA:1118:U:H2'	1:AA:1118:U:O2	2.14	0.48
1:AA:1446:A:C3'	1:AA:1447:A:H5"	2.44	0.48
35:BB:827:U:H4'	35:BB:828:U:OP2	2.14	0.48
35:BB:2123:G:N2	35:BB:2176:A:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:2694:G:C6	35:BB:2695:U:C4	3.01	0.48
40:BG:53:PRO:HD3	40:BG:61:TRP:CH2	2.49	0.48
42:BI:76:ALA:O	42:BI:135:MET:HE1	2.13	0.48
42:BI:129:GLU:HB3	42:BI:133:ARG:NH1	2.28	0.48
46:BM:114:ARG:HG3	46:BM:130:PHE:CE1	2.49	0.48
35:BB:460:A:C2	35:BB:470:A:C5	3.01	0.48
42:BI:11:GLN:HA	42:BI:55:PRO:HA	1.96	0.48
51:BR:5:PHE:HB3	51:BR:38:VAL:HA	1.96	0.48
1:AA:842:U:H3'	1:AA:843:U:H4'	1.94	0.48
1:AA:967:C:C4	1:AA:968:A:C5	3.02	0.48
22:AV:6:C:H2'	22:AV:7:G:H8	1.78	0.48
35:BB:17:G:H2'	35:BB:18:U:C6	2.49	0.48
35:BB:1025:G:C5	35:BB:1135:C:H1'	2.49	0.48
42:BI:19:PRO:HB2	42:BI:22:PRO:HD2	1.95	0.48
52:BS:30:SER:H	52:BS:33:LEU:HD13	1.78	0.48
1:AA:836:G:C6	1:AA:851:G:C6	3.02	0.48
22:AV:34:G:C2	22:AV:35:G:C4	3.02	0.48
44:BK:114:LYS:H	44:BK:114:LYS:HD3	1.79	0.48
5:AE:29:ILE:HG21	5:AE:53:ARG:HH21	1.79	0.47
42:BI:18:ASN:HB2	42:BI:38:CYS:SG	2.53	0.47
53:BT:68:LYS:HG2	53:BT:69:ARG:H	1.79	0.47
1:AA:879:C:H2'	1:AA:880:C:O4'	2.14	0.47
1:AA:920:U:H2'	1:AA:921:U:H6	1.79	0.47
20:AT:66:ILE:O	20:AT:67:HIS:CG	2.68	0.47
35:BB:46:G:C6	35:BB:180:G:C6	3.02	0.47
35:BB:1878:G:C5	35:BB:1879:C:C5	3.02	0.47
35:BB:2073:C:H5"	36:BC:227:VAL:HG13	1.95	0.47
35:BB:2132:U:C6	35:BB:2132:U:C3'	2.95	0.47
35:BB:2898:U:H2'	35:BB:2899:A:C8	2.49	0.47
54:BU:35:VAL:H	54:BU:39:ASN:ND2	2.10	0.47
1:AA:691:G:H1	11:AK:52:ARG:HH21	1.61	0.47
22:AV:6:C:H2'	22:AV:7:G:C8	2.49	0.47
35:BB:273:G:C5	35:BB:274:C:C5	3.02	0.47
39:BF:107:VAL:H	39:BF:108:PRO:CD	2.27	0.47
42:BI:37:PHE:HB2	42:BI:66:PHE:CE2	2.49	0.47
42:BI:75:ALA:O	42:BI:79:LEU:HG	2.13	0.47
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.49	0.47
35:BB:1268:A:C2	35:BB:2013:A:C4	3.02	0.47
35:BB:2684:U:C4	35:BB:2685:G:N7	2.82	0.47
42:BI:69:VAL:O	42:BI:69:VAL:HG23	2.14	0.47
42:BI:129:GLU:CB	42:BI:133:ARG:HH12	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BO:55:GLU:H	48:BO:55:GLU:CD	2.22	0.47
50:BQ:5:ARG:O	50:BQ:8:ILE:HG22	2.14	0.47
1:AA:199:A:H61	1:AA:218:U:H3	1.61	0.47
3:AC:88:LYS:HE2	3:AC:88:LYS:HA	1.95	0.47
35:BB:308:G:C8	35:BB:501:A:H1'	2.50	0.47
42:BI:102:ARG:CG	42:BI:141:ASP:HA	2.40	0.47
35:BB:695:G:N2	35:BB:696:G:H1'	2.30	0.47
35:BB:890:C:H41	35:BB:891:G:H21	1.63	0.47
4:AD:79:ALA:HA	4:AD:85:THR:HG21	1.96	0.47
6:AF:81:ASN:HD21	6:AF:83:ALA:HB3	1.80	0.47
9:AI:10:ARG:H	9:AI:80:HIS:HD2	1.60	0.47
35:BB:43:G:C2	35:BB:437:U:C2	3.03	0.47
35:BB:1871:A:C8	35:BB:1872:A:C5	3.03	0.47
35:BB:2064:C:H2'	35:BB:2065:C:C6	2.50	0.47
50:BQ:30:VAL:HG12	50:BQ:33:VAL:H	1.79	0.47
51:BR:11:GLN:O	51:BR:12:HIS:CG	2.68	0.47
1:AA:384:G:H2'	1:AA:385:C:C6	2.49	0.47
1:AA:600:A:H2'	1:AA:601:G:C8	2.50	0.47
1:AA:846:G:H2'	1:AA:846:G:N3	2.29	0.47
28:B3:22:THR:O	28:B3:24:VAL:HG23	2.15	0.47
35:BB:2214:C:C5	35:BB:2215:C:C5	3.03	0.47
35:BB:2229:U:H2'	35:BB:2230:G:C8	2.50	0.47
35:BB:2371:G:C6	35:BB:2372:U:C5	3.03	0.47
37:BD:56:LYS:HB2	37:BD:59:ARG:HG2	1.97	0.47
42:BI:27:LEU:HD23	42:BI:27:LEU:N	2.21	0.47
1:AA:98:A:H2'	1:AA:99:C:C6	2.49	0.47
12:AL:67:GLY:HA3	12:AL:116:TYR:CE2	2.50	0.47
35:BB:322:A:H3'	38:BE:163:ASN:HD21	1.80	0.47
35:BB:338:G:C5	35:BB:339:U:C5	3.02	0.47
42:BI:18:ASN:N	42:BI:19:PRO:CD	2.77	0.47
42:BI:80:LYS:HG3	42:BI:135:MET:HE1	1.97	0.47
1:AA:1004:A:H1'	1:AA:1026:G:C6	2.50	0.47
19:AS:15:LEU:O	19:AS:18:VAL:HG12	2.16	0.47
35:BB:1437:C:H2'	35:BB:1438:U:H6	1.80	0.47
42:BI:117:THR:O	42:BI:118:GLY:C	2.58	0.47
1:AA:171:A:C2	1:AA:172:A:C2	3.03	0.46
1:AA:323:U:C5	1:AA:324:G:C5	3.03	0.46
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.50	0.46
31:B6:30:VAL:HA	31:B6:33:ARG:HH11	1.80	0.46
35:BB:570:G:C5	35:BB:2030:A:C6	3.02	0.46
52:BS:75:PHE:CZ	52:BS:104:THR:HG21	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1083:U:C5	1:AA:1084:G:C6	3.03	0.46
1:AA:1112:C:C5	3:AC:177:LEU:HD12	2.50	0.46
20:AT:46:ALA:HB1	20:AT:82:ILE:HG22	1.98	0.46
35:BB:1560:G:C5	35:BB:1561:C:C4	3.03	0.46
35:BB:1566:A:C6	36:BC:212:TRP:CZ3	3.03	0.46
42:BI:96:LYS:HD3	42:BI:138:VAL:HG21	1.98	0.46
35:BB:367:G:C6	35:BB:368:A:C5	3.04	0.46
35:BB:2292:U:H2'	35:BB:2293:G:C8	2.50	0.46
44:BK:11:ALA:HB2	44:BK:83:ALA:HB1	1.96	0.46
32:B7:63:TYR:CE2	35:BB:242:G:H5"	2.51	0.46
34:BA:75:G:H21	55:BW:88:HIS:CD2	2.33	0.46
35:BB:1461:C:C4	35:BB:1462:C:C5	3.04	0.46
1:AA:1026:G:C5	1:AA:1027:C:C5	3.04	0.46
50:BQ:56:PHE:HB3	50:BQ:60:TRP:CE2	2.51	0.46
1:AA:792:A:C2	1:AA:794:A:C4	3.03	0.46
1:AA:1390:U:C4	1:AA:1391:U:C4	3.03	0.46
22:AV:26:A:H61	22:AV:44:G:H1	1.64	0.46
35:BB:2175:C:C2	35:BB:2176:A:C8	3.04	0.46
35:BB:2287:A:C2	35:BB:2289:G:C6	3.04	0.46
1:AA:332:G:C5	1:AA:333:U:C5	3.03	0.46
1:AA:665:A:C2	1:AA:733:G:C8	3.04	0.46
1:AA:978:A:C2	1:AA:1319:A:C4	3.03	0.46
35:BB:572:A:C2	35:BB:2033:A:C2	3.04	0.46
35:BB:877:A:C2	35:BB:900:A:N6	2.84	0.46
35:BB:2724:U:H2'	35:BB:2725:A:C8	2.51	0.46
42:BI:23:VAL:HG12	42:BI:24:GLY:N	2.30	0.46
53:BT:29:THR:HA	53:BT:87:LEU:HG	1.97	0.46
1:AA:1347:G:C4	1:AA:1373:G:C6	3.04	0.46
1:AA:1360:A:OP1	1:AA:1360:A:C8	2.69	0.46
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.97	0.46
13:AM:79:LEU:HA	13:AM:82:LEU:HD12	1.96	0.46
35:BB:877:A:C5	35:BB:901:C:N3	2.84	0.46
35:BB:1833:C:H2'	35:BB:1834:U:H6	1.81	0.46
1:AA:1295:U:H2'	1:AA:1296:C:C6	2.51	0.46
35:BB:1803:A:C8	35:BB:1804:C:C5	3.04	0.46
36:BC:12:ARG:HA	36:BC:15:VAL:HB	1.98	0.46
45:BL:8:PRO:HB3	45:BL:13:LYS:H	1.79	0.46
54:BU:45:GLN:HE22	54:BU:54:PRO:HD2	1.79	0.46
22:AV:70:C:H2'	22:AV:71:C:H5'	1.98	0.46
35:BB:1322:A:H2'	35:BB:1323:C:H5'	1.97	0.46
38:BE:3:LEU:O	38:BE:4:VAL:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:23:VAL:HG12	42:BI:27:LEU:HD21	1.96	0.46
42:BI:57:VAL:HG23	42:BI:71:LYS:HZ2	1.81	0.46
1:AA:966:G:C2	22:AV:34:G:H5'	2.50	0.45
1:AA:1223:C:H3'	1:AA:1224:U:C5'	2.46	0.45
1:AA:1486:G:C6	1:AA:1487:G:C6	3.03	0.45
22:AV:2:G:C6	22:AV:3:G:C5	3.04	0.45
35:BB:2694:G:C5	35:BB:2695:U:C5	3.04	0.45
48:BO:31:THR:HG22	48:BO:33:ARG:H	1.81	0.45
1:AA:1190:G:OP2	3:AC:4:VAL:HG22	2.16	0.45
1:AA:1421:G:C2	1:AA:1480:A:C2	3.04	0.45
22:AV:36:G:H2'	22:AV:37:G:O4'	2.17	0.45
35:BB:173:A:C5	35:BB:174:U:C5	3.04	0.45
35:BB:940:G:H2'	35:BB:941:A:C4'	2.46	0.45
43:BJ:93:ILE:HG23	43:BJ:97:PRO:HG3	1.97	0.45
1:AA:519:C:C4	1:AA:520:A:C5	3.05	0.45
1:AA:1055:A:C2	1:AA:1056:U:H1'	2.52	0.45
7:AG:8:GLN:CD	7:AG:9:ARG:H	2.24	0.45
32:B7:18:LYS:HG3	32:B7:20:GLY:H	1.81	0.45
35:BB:504:A:H4'	35:BB:505:A:H5'	1.98	0.45
35:BB:2684:U:C4	35:BB:2685:G:C8	3.04	0.45
42:BI:10:LEU:HD12	42:BI:10:LEU:C	2.41	0.45
46:BM:43:ALA:HA	46:BM:46:ILE:HG13	1.98	0.45
47:BN:44:LEU:HD23	47:BN:113:ILE:HD13	1.99	0.45
1:AA:691:G:N2	1:AA:695:A:C8	2.85	0.45
1:AA:1148:U:C5	1:AA:1149:C:C4	3.04	0.45
11:AK:79:LYS:HA	11:AK:104:PHE:HA	1.99	0.45
35:BB:629:G:C6	35:BB:630:G:C5	3.04	0.45
1:AA:1044:A:C5	1:AA:1045:C:H1'	2.51	0.45
1:AA:1321:U:C6	1:AA:1321:U:OP2	2.69	0.45
7:AG:31:VAL:HG11	7:AG:108:ARG:HH12	1.80	0.45
35:BB:45:G:H5'	35:BB:46:G:H5'	1.99	0.45
35:BB:1302:A:H5'	35:BB:1608:A:OP1	2.17	0.45
7:AG:49:LEU:HB3	7:AG:60:ALA:HB1	1.98	0.45
34:BA:48:U:H2'	34:BA:49:C:C6	2.52	0.45
35:BB:1054:A:C2	35:BB:1106:G:C6	3.05	0.45
35:BB:2637:U:C5	35:BB:2638:G:C5	3.05	0.45
42:BI:49:GLU:HB3	42:BI:52:LEU:HD12	1.97	0.45
1:AA:455:G:C2	1:AA:478:A:C2	3.04	0.45
1:AA:1024:G:C5	1:AA:1025:U:C4	3.05	0.45
35:BB:370:G:C5	35:BB:424:G:C8	3.05	0.45
37:BD:122:VAL:HA	37:BD:127:PHE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:52:LEU:HD13	42:BI:81:LYS:NZ	2.32	0.45
42:BI:78:LEU:HD23	42:BI:81:LYS:HE2	1.98	0.45
35:BB:541:A:C5	35:BB:542:C:C5	3.04	0.45
35:BB:589:U:H2'	35:BB:590:A:H8	1.81	0.45
35:BB:1021:A:C2	35:BB:1023:U:C2	3.05	0.45
35:BB:2199:A:H2'	35:BB:2199:A:N3	2.31	0.45
37:BD:157:LYS:HB2	43:BJ:80:HIS:CD2	2.52	0.45
42:BI:27:LEU:HB2	42:BI:32:VAL:HG21	1.98	0.45
42:BI:46:ASP:HA	42:BI:50:LYS:HE2	1.99	0.45
1:AA:257:G:C2	1:AA:258:G:C8	3.05	0.45
1:AA:1526:G:OP1	21:AU:37:TYR:CD2	2.70	0.45
17:AQ:58:VAL:HG12	17:AQ:77:VAL:HA	1.99	0.45
35:BB:196:A:C2	35:BB:805:G:C6	3.04	0.45
35:BB:327:G:C6	35:BB:328:U:C4	3.05	0.45
35:BB:822:G:C6	35:BB:823:C:C4	3.05	0.45
35:BB:1025:G:C4	35:BB:1135:C:H1'	2.52	0.45
35:BB:1651:G:C6	35:BB:1652:A:C6	3.05	0.45
35:BB:2809:A:C6	35:BB:2810:A:C6	3.05	0.45
37:BD:11:MET:HE1	37:BD:192:ALA:HB2	1.99	0.45
1:AA:38:G:N1	1:AA:397:A:C2	2.85	0.45
13:AM:2:ARG:HA	13:AM:8:ILE:HG13	1.99	0.45
35:BB:2116:G:H2'	35:BB:2116:G:N3	2.31	0.45
42:BI:126:ARG:HB3	42:BI:126:ARG:NH1	2.32	0.45
1:AA:527:G:C6	1:AA:528:C:C5	3.06	0.44
1:AA:764:C:C2'	1:AA:765:G:H5'	2.46	0.44
9:AI:117:LEU:HD13	9:AI:121:ARG:HA	1.98	0.44
28:B3:2:VAL:HG22	35:BB:2015:A:C2	2.51	0.44
35:BB:748:G:C8	35:BB:750:A:C8	3.05	0.44
35:BB:825:A:C6	35:BB:826:U:C4	3.05	0.44
35:BB:1501:G:H4'	36:BC:94:LEU:HD21	1.99	0.44
37:BD:78:GLY:HA3	37:BD:80:TRP:CH2	2.52	0.44
37:BD:111:GLY:HA2	37:BD:201:LEU:HA	1.98	0.44
45:BL:121:THR:HB	45:BL:123:ARG:HG2	1.99	0.44
1:AA:224:U:H2'	1:AA:225:C:C6	2.52	0.44
1:AA:296:U:C4	1:AA:297:G:C5	3.05	0.44
35:BB:1027:A:C2	35:BB:2488:G:H5'	2.52	0.44
35:BB:1659:G:C6	35:BB:1660:G:C5	3.05	0.44
35:BB:2259:U:H2'	35:BB:2260:C:C6	2.52	0.44
22:AV:34:G:H2'	22:AV:35:G:C8	2.52	0.44
31:B6:19:ARG:NH1	35:BB:124:G:C5	2.85	0.44
35:BB:730:A:C2	35:BB:731:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:2117:A:C5'	35:BB:2148:G:H21	2.30	0.44
1:AA:468:A:H3'	1:AA:469:C:C6	2.52	0.44
1:AA:855:U:C2	1:AA:856:C:C5	3.06	0.44
10:AJ:25:ILE:HG21	10:AJ:91:ASP:HB2	1.99	0.44
28:B3:28:SER:HB3	28:B3:39:ARG:HH21	1.82	0.44
35:BB:841:G:C5	35:BB:842:U:C5	3.05	0.44
35:BB:919:U:H2'	35:BB:920:A:C8	2.52	0.44
35:BB:2758:A:H2'	35:BB:2759:G:H5'	1.99	0.44
40:BG:44:HIS:CG	40:BG:45:ALA:N	2.84	0.44
42:BI:100:ILE:HG23	42:BI:104:GLN:OE1	2.17	0.44
42:BI:138:VAL:HG12	42:BI:139:VAL:N	2.31	0.44
31:B6:13:ASN:HD22	35:BB:125:A:H1'	1.83	0.44
35:BB:136:G:H2'	35:BB:137:U:C6	2.52	0.44
35:BB:2718:G:C6	35:BB:2719:G:C5	3.05	0.44
35:BB:2897:U:H2'	35:BB:2898:U:C6	2.53	0.44
38:BE:192:ALA:O	38:BE:196:VAL:HG23	2.18	0.44
39:BF:109:ARG:O	39:BF:110:ILE:HG23	2.18	0.44
50:BQ:56:PHE:C	50:BQ:58:GLN:H	2.25	0.44
54:BU:80:ASP:OD1	54:BU:95:PHE:HB3	2.17	0.44
1:AA:579:A:C6	1:AA:763:G:C6	3.05	0.44
13:AM:15:VAL:HG13	13:AM:16:ILE:H	1.83	0.44
22:AV:34:G:C6	22:AV:35:G:C6	3.05	0.44
35:BB:2131:U:H3'	35:BB:2131:U:O2	2.17	0.44
42:BI:70:THR:HG23	42:BI:70:THR:O	2.17	0.44
45:BL:124:GLY:C	45:BL:125:LEU:HD22	2.43	0.44
1:AA:1366:C:C4	1:AA:1367:C:C5	3.06	0.44
17:AQ:5:ARG:HA	17:AQ:5:ARG:HD3	1.83	0.44
35:BB:780:G:H2'	35:BB:782:A:C5	2.52	0.44
35:BB:1506:U:C2	35:BB:1507:C:C5	3.06	0.44
35:BB:2513:A:C6	35:BB:2574:G:C6	3.05	0.44
35:BB:2643:G:C5	35:BB:2644:G:C5	3.06	0.44
42:BI:54:ILE:HD11	42:BI:71:LYS:N	2.33	0.44
54:BU:57:ILE:H	54:BU:57:ILE:HG13	1.59	0.44
1:AA:232:G:H1'	1:AA:262:A:N1	2.33	0.44
1:AA:1110:A:H3'	1:AA:1111:A:C8	2.50	0.44
1:AA:1442:G:C6	1:AA:1443:C:C4	3.06	0.44
14:AN:3:GLN:CD	14:AN:3:GLN:H	2.25	0.44
35:BB:571:U:C4	35:BB:575:A:C5	3.06	0.44
35:BB:1231:U:H2'	35:BB:1232:G:H8	1.83	0.44
35:BB:1949:G:C6	35:BB:1950:G:C6	3.05	0.44
35:BB:2284:A:C5	35:BB:2285:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:2709:G:C5	35:BB:2710:C:C4	3.06	0.44
1:AA:151:A:C2	1:AA:152:A:H1'	2.53	0.44
1:AA:796:C:H4'	11:AK:126:ARG:HE	1.83	0.44
3:AC:38:VAL:HG21	3:AC:90:VAL:HG13	2.00	0.44
11:AK:83:VAL:CG1	11:AK:85:VAL:HG23	2.48	0.44
35:BB:1144:A:C6	35:BB:1145:C:C4	3.05	0.44
35:BB:2870:C:C4	35:BB:2871:U:C4	3.06	0.44
42:BI:59:THR:O	42:BI:59:THR:HG23	2.18	0.44
42:BI:72:THR:OG1	42:BI:73:PRO:HD2	2.18	0.44
53:BT:5:GLU:HA	53:BT:8:LEU:HD12	2.00	0.44
1:AA:21:G:H2'	1:AA:22:G:C8	2.53	0.43
1:AA:72:A:C6	1:AA:73:C:C4	3.06	0.43
1:AA:202:G:N2	1:AA:216:U:C2	2.86	0.43
1:AA:517:G:H2'	1:AA:531:U:C5	2.53	0.43
1:AA:1144:G:N2	1:AA:1146:A:H62	2.16	0.43
39:BF:35:LEU:HG	39:BF:90:LEU:HD11	2.00	0.43
1:AA:1088:G:C6	1:AA:1089:G:C5	3.06	0.43
1:AA:1170:A:C8	1:AA:1171:A:C8	3.06	0.43
35:BB:773:U:H5'	35:BB:774:G:OP2	2.19	0.43
35:BB:2327:A:H2'	35:BB:2328:A:C8	2.53	0.43
53:BT:43:ILE:O	53:BT:46:ALA:HB3	2.18	0.43
20:AT:13:SER:O	20:AT:16:ALA:HB3	2.17	0.43
22:AV:37:G:C2	22:AV:38:U:H1'	2.53	0.43
35:BB:778:G:C5	35:BB:779:U:C4	3.06	0.43
35:BB:1054:A:C2	35:BB:1106:G:C5	3.06	0.43
35:BB:1056:G:H5'	35:BB:1057:A:H5'	2.00	0.43
35:BB:1707:G:C5	35:BB:1756:G:C6	3.07	0.43
35:BB:1893:C:H2'	35:BB:1894:C:H5'	2.01	0.43
49:BP:45:VAL:H	49:BP:61:ARG:H	1.66	0.43
1:AA:1027:C:C2	1:AA:1035:A:C2	3.07	0.43
35:BB:200:U:C5	35:BB:201:C:C5	3.06	0.43
35:BB:469:G:OP1	38:BE:73:ILE:HD11	2.18	0.43
35:BB:1138:G:H2'	35:BB:1139:G:O4'	2.18	0.43
35:BB:1381:G:C6	35:BB:1382:G:C2	3.06	0.43
35:BB:1724:G:C6	35:BB:1725:U:C4	3.06	0.43
35:BB:1838:C:C5	35:BB:1899:A:C5	3.06	0.43
35:BB:2104:C:H4'	35:BB:2104:C:OP1	2.18	0.43
1:AA:872:A:C4	1:AA:874:G:C8	3.06	0.43
1:AA:1526:G:C5	1:AA:1527:U:C5	3.06	0.43
6:AF:41:ASP:HA	6:AF:60:VAL:HA	2.00	0.43
35:BB:352:A:C2	35:BB:353:C:C2	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:1358:G:C2	35:BB:1372:U:H5	2.36	0.43
35:BB:2302:U:H2'	35:BB:2303:G:C8	2.54	0.43
1:AA:768:A:OP1	1:AA:804:U:H4'	2.18	0.43
1:AA:1108:G:OP1	3:AC:175:HIS:CD2	2.71	0.43
35:BB:287:G:C2	35:BB:354:A:C4	3.06	0.43
35:BB:300:A:H1'	35:BB:319:G:H1'	2.00	0.43
35:BB:945:A:C5	35:BB:2448:A:C2	3.07	0.43
38:BE:15:SER:HB2	38:BE:18:THR:HB	2.01	0.43
42:BI:21:PRO:HB2	42:BI:22:PRO:CD	2.42	0.43
44:BK:71:ARG:H	44:BK:105:ARG:HH21	1.67	0.43
1:AA:627:G:C6	1:AA:628:G:C5	3.07	0.43
35:BB:2117:A:H5"	35:BB:2148:G:H21	1.84	0.43
35:BB:2183:A:H2'	35:BB:2184:A:C8	2.54	0.43
35:BB:2648:G:H2'	35:BB:2649:C:C6	2.54	0.43
42:BI:112:LYS:HB2	42:BI:116:MET:SD	2.59	0.43
43:BJ:32:LEU:HD22	43:BJ:122:LEU:HD13	2.00	0.43
51:BR:89:HIS:CD2	51:BR:89:HIS:C	2.96	0.43
1:AA:646:G:C4	1:AA:647:C:C6	3.06	0.43
1:AA:825:A:C6	1:AA:826:C:C4	3.06	0.43
1:AA:1249:C:O2	9:AI:71:ILE:HD11	2.18	0.43
1:AA:1301:U:C2	1:AA:1303:C:C6	3.07	0.43
13:AM:38:ILE:HD13	13:AM:51:GLN:HB2	2.01	0.43
14:AN:26:LEU:HD23	14:AN:30:ILE:HD12	2.00	0.43
34:BA:9:G:C6	34:BA:10:G:C5	3.07	0.43
35:BB:2897:U:C4	35:BB:2898:U:C4	3.06	0.43
1:AA:246:A:C8	1:AA:279:A:C2	3.07	0.43
1:AA:313:A:C6	1:AA:314:C:C4	3.06	0.43
1:AA:462:G:H2'	1:AA:463:U:H6	1.83	0.43
1:AA:1063:C:H3'	1:AA:1064:G:H2'	2.01	0.43
35:BB:77:G:C2	35:BB:78:U:C2	3.07	0.43
35:BB:303:G:H2'	35:BB:304:U:O4'	2.17	0.43
35:BB:1712:U:C4	35:BB:1713:A:C5	3.07	0.43
35:BB:2511:U:H2'	35:BB:2512:C:O4'	2.19	0.43
38:BE:135:ALA:HB1	38:BE:139:LYS:NZ	2.34	0.43
1:AA:202:G:H21	1:AA:465:A:H61	1.67	0.43
1:AA:751:U:C4	1:AA:752:G:C2	3.06	0.43
35:BB:98:G:N2	54:BU:6:ARG:HH22	2.16	0.43
35:BB:297:G:C6	35:BB:298:G:C4	3.06	0.43
1:AA:473:U:H2'	1:AA:474:G:C8	2.53	0.42
1:AA:842:U:H4'	1:AA:843:U:OP2	2.19	0.42
1:AA:1082:A:C5	1:AA:1083:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1309:G:C6	1:AA:1310:G:C5	3.07	0.42
35:BB:1726:C:H2'	35:BB:1727:C:C6	2.53	0.42
35:BB:2734:A:H2'	35:BB:2735:G:H5'	2.00	0.42
38:BE:22:ASP:HA	38:BE:114:ARG:HH22	1.83	0.42
39:BF:3:LEU:HD13	39:BF:3:LEU:HA	1.88	0.42
42:BI:12:VAL:HG13	42:BI:41:PHE:CE2	2.54	0.42
42:BI:123:ALA:HA	42:BI:126:ARG:NH1	2.33	0.42
42:BI:128:ILE:HA	42:BI:131:THR:HG23	2.00	0.42
1:AA:149:A:N6	1:AA:171:A:C8	2.87	0.42
1:AA:1133:G:C2	1:AA:1142:G:C2	3.07	0.42
3:AC:13:ILE:HG13	3:AC:14:VAL:HG22	2.01	0.42
35:BB:712:G:C6	35:BB:713:G:C4	3.07	0.42
35:BB:766:U:H2'	35:BB:767:U:C6	2.54	0.42
35:BB:890:C:H3'	35:BB:891:G:H4'	2.01	0.42
35:BB:2305:U:H3	39:BF:148:VAL:CG1	2.32	0.42
43:BJ:116:ARG:HA	43:BJ:119:PHE:CD2	2.54	0.42
1:AA:202:G:H21	1:AA:465:A:N6	2.18	0.42
2:AB:143:LEU:HD23	2:AB:143:LEU:HA	1.98	0.42
19:AS:62:THR:HG22	19:AS:63:ASP:H	1.83	0.42
35:BB:664:G:C5	35:BB:665:U:C5	3.07	0.42
35:BB:820:A:C2	35:BB:821:A:C4	3.07	0.42
35:BB:841:G:C6	35:BB:842:U:C4	3.07	0.42
35:BB:1172:C:H3'	35:BB:1173:U:H6	1.83	0.42
35:BB:1783:A:C2	35:BB:2587:A:C5	3.08	0.42
35:BB:1880:U:H2'	35:BB:1881:C:C6	2.54	0.42
35:BB:2051:A:C5	35:BB:2614:A:C5	3.07	0.42
36:BC:206:LYS:HG3	36:BC:209:ALA:H	1.84	0.42
42:BI:90:GLY:C	42:BI:91:LYS:HD2	2.44	0.42
1:AA:59:A:H3'	1:AA:60:A:C5'	2.49	0.42
1:AA:1130:A:C2	1:AA:1146:A:C4	3.07	0.42
1:AA:1225:A:C2	1:AA:1226:C:C2	3.08	0.42
1:AA:1332:A:H2'	1:AA:1333:A:C8	2.54	0.42
30:B5:37:LYS:HD2	35:BB:2130:U:OP2	2.19	0.42
35:BB:536:G:C6	35:BB:537:G:C4	3.07	0.42
35:BB:941:A:H2'	35:BB:942:G:C8	2.55	0.42
35:BB:1692:U:H2'	35:BB:1694:C:C5	2.55	0.42
35:BB:2601:C:H4'	35:BB:2602:A:OP2	2.18	0.42
42:BI:72:THR:CG2	42:BI:112:LYS:HD2	2.50	0.42
42:BI:73:PRO:HA	42:BI:74:PRO:HD3	1.92	0.42
1:AA:673:A:H2'	1:AA:674:G:C8	2.54	0.42
32:B7:29:ARG:HA	32:B7:29:ARG:NE	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:663:G:C5	35:BB:664:G:N7	2.87	0.42
35:BB:1283:G:H21	35:BB:1329:U:H3	1.66	0.42
35:BB:1893:C:C5	35:BB:1894:C:C5	3.07	0.42
39:BF:69:ALA:HB3	39:BF:80:GLN:HA	2.02	0.42
42:BI:89:SER:HA	42:BI:97:VAL:HG11	2.01	0.42
1:AA:113:G:H2'	1:AA:114:U:C6	2.55	0.42
1:AA:1506:U:H4'	11:AK:128:VAL:HG13	2.01	0.42
34:BA:29:A:C2	34:BA:30:C:C2	3.08	0.42
35:BB:1737:G:C6	35:BB:1738:G:N1	2.87	0.42
35:BB:2241:A:H2'	35:BB:2242:G:C8	2.55	0.42
35:BB:2898:U:H2'	35:BB:2899:A:H8	1.85	0.42
37:BD:33:ARG:HB2	37:BD:94:GLN:H	1.85	0.42
40:BG:87:GLN:HB3	40:BG:88:LEU:H	1.75	0.42
42:BI:91:LYS:HD2	42:BI:91:LYS:N	2.35	0.42
1:AA:226:G:C6	1:AA:227:G:C5	3.08	0.42
35:BB:918:A:C5	35:BB:919:U:H1'	2.55	0.42
35:BB:1681:G:C6	35:BB:1762:A:C6	3.07	0.42
42:BI:80:LYS:NZ	42:BI:135:MET:HE3	2.35	0.42
43:BJ:140:LEU:HD12	43:BJ:140:LEU:HA	1.95	0.42
1:AA:448:A:C4	1:AA:487:A:C2	3.08	0.42
1:AA:580:C:H2'	1:AA:581:G:C8	2.55	0.42
1:AA:677:U:C4	1:AA:678:U:C5	3.07	0.42
1:AA:814:A:H5'	1:AA:1511:G:H4'	2.01	0.42
3:AC:174:LEU:HD23	3:AC:200:TRP:CE3	2.54	0.42
35:BB:883:G:H22	35:BB:894:U:H1'	1.85	0.42
35:BB:2352:A:H2'	35:BB:2353:G:H5'	2.00	0.42
38:BE:122:GLU:HA	38:BE:189:THR:HG22	2.02	0.42
42:BI:101:SER:HG	42:BI:104:GLN:HG3	1.85	0.42
42:BI:129:GLU:O	42:BI:133:ARG:HG3	2.19	0.42
11:AK:20:ALA:CB	11:AK:81:LEU:HD22	2.49	0.42
35:BB:389:G:H2'	35:BB:390:U:H6	1.84	0.42
35:BB:605:G:C5	35:BB:606:U:C4	3.08	0.42
35:BB:631:A:C6	35:BB:632:A:C6	3.08	0.42
35:BB:1037:G:C6	35:BB:1038:G:N7	2.87	0.42
35:BB:1067:A:N7	35:BB:1068:G:C4	2.88	0.42
37:BD:67:HIS:CE1	37:BD:68:PHE:CE1	3.07	0.42
38:BE:14:VAL:HG21	38:BE:193:VAL:HG12	2.02	0.42
42:BI:68:PHE:CD1	42:BI:68:PHE:N	2.88	0.42
1:AA:429:U:H3'	4:AD:8:LEU:HD12	2.02	0.42
1:AA:469:C:C5	1:AA:470:C:C4	3.07	0.42
1:AA:942:G:C6	1:AA:943:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B0:4:CYS:O	25:B0:50:VAL:HA	2.19	0.42
42:BI:53:PRO:CG	42:BI:77:VAL:HG11	2.49	0.42
42:BI:131:THR:O	42:BI:135:MET:HG3	2.20	0.42
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.55	0.41
35:BB:460:A:C2	35:BB:470:A:C4	3.08	0.41
35:BB:722:A:C5	35:BB:723:C:C5	3.08	0.41
35:BB:1065:U:C5	35:BB:1066:U:C4	3.08	0.41
35:BB:1886:U:H2'	35:BB:1887:C:C6	2.55	0.41
35:BB:1995:U:H2'	35:BB:1996:C:C6	2.55	0.41
40:BG:102:ILE:C	40:BG:113:ASP:OD2	2.63	0.41
42:BI:54:ILE:O	42:BI:54:ILE:HG23	2.20	0.41
44:BK:34:GLY:C	44:BK:35:VAL:HG13	2.45	0.41
1:AA:439:U:C6	1:AA:440:C:C5	3.08	0.41
1:AA:1109:C:OP2	3:AC:175:HIS:CD2	2.74	0.41
1:AA:1188:A:H2'	1:AA:1189:U:H5'	2.02	0.41
1:AA:1458:G:N1	1:AA:1459:G:C5	2.88	0.41
9:AI:51:LEU:HB2	9:AI:56:MET:SD	2.60	0.41
35:BB:957:C:H42	35:BB:2494:G:H21	1.68	0.41
35:BB:1082:U:O4	35:BB:1086:A:C2	2.73	0.41
35:BB:1426:G:C6	35:BB:1427:A:C6	3.09	0.41
35:BB:1787:A:C4	35:BB:1788:C:C5	3.08	0.41
35:BB:2404:U:H2'	35:BB:2405:G:O4'	2.20	0.41
40:BG:94:ARG:HA	40:BG:127:GLN:CD	2.44	0.41
1:AA:518:C:H2'	1:AA:530:G:C8	2.55	0.41
9:AI:80:HIS:CE1	9:AI:105:ARG:HA	2.56	0.41
17:AQ:61:ARG:HD3	17:AQ:75:VAL:HG22	2.02	0.41
22:AV:36:G:N2	23:AX:17:C:H1'	2.34	0.41
35:BB:195:A:H5"	45:BL:47:ARG:HH11	1.85	0.41
35:BB:2038:G:C6	35:BB:2039:U:C4	3.08	0.41
35:BB:2517:C:C2	35:BB:2542:A:N6	2.89	0.41
41:BH:89:LYS:HD3	41:BH:126:GLY:HA2	2.01	0.41
35:BB:45:G:C5'	35:BB:46:G:H5'	2.50	0.41
35:BB:2116:G:H4'	35:BB:2146:C:C6	2.56	0.41
1:AA:735:C:H2'	1:AA:736:C:H6	1.85	0.41
35:BB:201:C:C5	35:BB:202:U:C5	3.08	0.41
35:BB:639:U:H2'	35:BB:640:C:C6	2.55	0.41
35:BB:2391:G:C4	35:BB:2424:C:C5	3.09	0.41
35:BB:2627:G:C5	35:BB:2628:C:C4	3.08	0.41
36:BC:162:GLN:H	36:BC:162:GLN:CD	2.29	0.41
43:BJ:132:HIS:CD2	43:BJ:132:HIS:C	2.97	0.41
49:BP:47:ILE:HG23	49:BP:96:LEU:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BS:66:ILE:HA	52:BS:69:LEU:HD12	2.02	0.41
1:AA:555:U:H2'	1:AA:556:C:C6	2.56	0.41
6:AF:42:TRP:HB2	6:AF:59:TYR:HB2	2.03	0.41
13:AM:84:CYS:HB2	19:AS:73:PHE:CE2	2.55	0.41
35:BB:568:U:O2	35:BB:570:G:C8	2.74	0.41
35:BB:1951:U:C2	35:BB:1954:G:C8	3.08	0.41
35:BB:2329:U:H2'	35:BB:2330:G:C8	2.55	0.41
35:BB:2351:G:N1	35:BB:2365:G:C6	2.89	0.41
35:BB:2731:G:C2	35:BB:2732:G:C6	3.09	0.41
44:BK:32:TYR:HB2	44:BK:33:ALA:H	1.73	0.41
1:AA:181:A:H1'	1:AA:182:A:C2	2.55	0.41
1:AA:299:G:H2'	1:AA:300:A:C8	2.55	0.41
1:AA:592:G:C6	1:AA:593:U:C4	3.09	0.41
5:AE:131:ASN:HA	5:AE:132:PRO:HD2	1.97	0.41
13:AM:9:PRO:O	13:AM:44:ILE:HG21	2.20	0.41
17:AQ:14:ASP:H	17:AQ:54:ILE:HD11	1.85	0.41
25:B0:18:SER:C	25:B0:20:ALA:H	2.28	0.41
35:BB:297:G:H4'	54:BU:85:ARG:HE	1.86	0.41
35:BB:345:A:N3	35:BB:346:A:N1	2.68	0.41
35:BB:700:G:C6	35:BB:701:G:C5	3.08	0.41
35:BB:945:A:H3'	35:BB:946:C:H5"	2.03	0.41
35:BB:1348:C:C5	35:BB:1349:C:C6	3.09	0.41
42:BI:45:THR:C	42:BI:48:ILE:HG22	2.46	0.41
42:BI:45:THR:O	42:BI:48:ILE:HG22	2.20	0.41
49:BP:44:GLY:HA3	49:BP:60:VAL:HG13	2.03	0.41
1:AA:208:U:C2	1:AA:212:G:N1	2.89	0.41
8:AH:66:GLN:HE22	8:AH:68:LYS:HB2	1.86	0.41
22:AV:72:G:C3'	22:AV:73:A:H5"	2.51	0.41
32:B7:38:LYS:HG2	32:B7:42:HIS:CE1	2.56	0.41
35:BB:486:C:H2'	35:BB:487:C:H6	1.86	0.41
35:BB:1662:U:H2'	35:BB:1663:G:O4'	2.20	0.41
35:BB:1674:G:H21	35:BB:1677:A:H61	1.67	0.41
35:BB:2661:G:H2'	35:BB:2662:A:C8	2.55	0.41
39:BF:109:ARG:C	39:BF:110:ILE:HG23	2.46	0.41
1:AA:38:G:C6	1:AA:397:A:C2	3.09	0.41
1:AA:90:C:H2'	1:AA:91:U:C6	2.56	0.41
1:AA:486:U:H2'	1:AA:487:A:H8	1.86	0.41
1:AA:741:G:N2	1:AA:742:G:H1'	2.36	0.41
1:AA:1004:A:H1'	1:AA:1026:G:C5	2.56	0.41
1:AA:1018:G:H2'	1:AA:1019:A:C8	2.55	0.41
14:AN:81:ILE:H	14:AN:81:ILE:HG13	1.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:B2:33:HIS:CE1	27:B2:34:THR:O	2.74	0.41
34:BA:33:G:C2	34:BA:50:A:C2	3.08	0.41
35:BB:271:G:C6	35:BB:367:G:C6	3.09	0.41
35:BB:492:A:H2'	35:BB:493:G:O4'	2.21	0.41
35:BB:950:G:C4	35:BB:951:C:C6	3.09	0.41
35:BB:1081:U:H4'	42:BI:126:ARG:NH1	2.35	0.41
35:BB:2298:A:C6	35:BB:2299:U:C2	3.09	0.41
35:BB:2615:U:C2	35:BB:2616:C:C6	3.09	0.41
35:BB:2747:G:H1	35:BB:2754:U:H2'	1.86	0.41
42:BI:41:PHE:CE2	42:BI:45:THR:HG21	2.55	0.41
42:BI:56:VAL:CG2	42:BI:68:PHE:HB2	2.51	0.41
42:BI:99:LYS:HB2	42:BI:140:GLU:OE1	2.20	0.41
1:AA:332:G:C4	1:AA:333:U:C6	3.09	0.41
1:AA:529:G:H4'	1:AA:533:A:C2	2.56	0.41
1:AA:875:U:C4	1:AA:876:C:C5	3.09	0.41
1:AA:1302:C:C2	1:AA:1302:C:OP1	2.74	0.41
22:AV:7:G:C6	22:AV:49:G:C5	3.09	0.41
34:BA:99:A:C5	34:BA:100:G:C5	3.08	0.41
35:BB:165:A:C2	35:BB:166:U:C2	3.09	0.41
35:BB:833:A:H2'	35:BB:834:G:C8	2.56	0.41
35:BB:1515:A:H2'	35:BB:1516:G:O4'	2.21	0.41
35:BB:2266:A:H4'	35:BB:2267:A:O5'	2.21	0.41
35:BB:2888:C:H2'	35:BB:2889:C:C6	2.56	0.41
42:BI:11:GLN:NE2	42:BI:74:PRO:HG3	2.35	0.41
51:BR:14:VAL:HG22	51:BR:16:GLU:H	1.85	0.41
1:AA:557:G:C6	1:AA:558:G:C2	3.09	0.40
1:AA:973:G:H3'	1:AA:974:A:H8	1.85	0.40
35:BB:2:G:C2	35:BB:3:U:C2	3.09	0.40
35:BB:339:U:H2'	35:BB:340:A:C8	2.57	0.40
35:BB:850:U:H2'	35:BB:851:C:C6	2.57	0.40
35:BB:1432:G:H2'	35:BB:1433:A:C8	2.56	0.40
35:BB:2063:C:C6	35:BB:2064:C:C5	3.10	0.40
35:BB:2235:G:C2	35:BB:2236:U:C2	3.09	0.40
35:BB:2547:A:H2'	35:BB:2548:U:C6	2.56	0.40
35:BB:2731:G:H5"	35:BB:2732:G:OP2	2.21	0.40
37:BD:131:ASP:HB2	37:BD:139:SER:HB3	2.02	0.40
50:BQ:13:HIS:O	50:BQ:17:LEU:HG	2.21	0.40
1:AA:57:G:C6	1:AA:58:C:C4	3.09	0.40
1:AA:230:G:C6	1:AA:231:U:C4	3.09	0.40
1:AA:376:G:C2	1:AA:389:A:C2	3.08	0.40
1:AA:404:G:H1	1:AA:499:A:H62	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:143:SER:HA	4:AD:178:GLU:HA	2.04	0.40
13:AM:78:ARG:HD2	19:AS:64:GLU:HG3	2.03	0.40
35:BB:341:C:H2'	35:BB:342:A:O4'	2.21	0.40
35:BB:670:A:H4'	35:BB:671:C:H5'	2.02	0.40
35:BB:811:U:H2'	45:BL:21:ARG:HA	2.03	0.40
35:BB:1416:G:C4	35:BB:1417:C:C5	3.09	0.40
35:BB:1481:U:H2'	35:BB:1482:G:H4'	2.03	0.40
42:BI:101:SER:OG	42:BI:104:GLN:HG3	2.21	0.40
1:AA:908:A:C2	1:AA:909:A:C4	3.09	0.40
6:AF:74:LEU:HA	6:AF:74:LEU:HD23	1.79	0.40
11:AK:83:VAL:HG12	11:AK:85:VAL:HG23	2.03	0.40
35:BB:132:G:O2'	35:BB:133:U:H5'	2.21	0.40
35:BB:311:A:O4'	35:BB:332:A:C4	2.75	0.40
35:BB:452:G:HO2'	35:BB:457:A:H2	1.64	0.40
35:BB:783:A:H2'	35:BB:784:G:H4'	2.02	0.40
35:BB:838:C:C5	35:BB:941:A:N6	2.89	0.40
35:BB:1171:G:C6	35:BB:1172:C:C4	3.09	0.40
35:BB:1378:A:C5	35:BB:1380:G:C5	3.10	0.40
35:BB:1759:A:C5	35:BB:1760:C:C4	3.09	0.40
36:BC:52:HIS:H	36:BC:216:ARG:NH2	2.18	0.40
43:BJ:132:HIS:CD2	43:BJ:132:HIS:N	2.88	0.40
51:BR:60:LYS:H	51:BR:100:GLY:HA3	1.86	0.40
1:AA:109:A:H3'	1:AA:110:C:H5'	2.03	0.40
1:AA:370:C:C2	1:AA:371:A:C8	3.10	0.40
2:AB:22:TRP:HA	2:AB:188:THR:HG23	2.02	0.40
10:AJ:23:ALA:HA	10:AJ:26:VAL:HG12	2.02	0.40
12:AL:53:ARG:HA	12:AL:63:THR:HA	2.04	0.40
34:BA:115:A:C2	34:BA:116:G:C5	3.09	0.40
35:BB:438:G:C2	35:BB:439:A:C4	3.10	0.40
35:BB:1499:C:C2	35:BB:1500:G:C8	3.09	0.40
35:BB:1684:G:C6	35:BB:1685:C:C4	3.09	0.40
35:BB:1818:U:C4	36:BC:152:GLN:HB2	2.57	0.40
35:BB:2051:A:C6	35:BB:2614:A:C4	3.10	0.40
35:BB:2702:G:H2'	35:BB:2703:C:C6	2.56	0.40
35:BB:2729:G:H2'	35:BB:2730:C:C6	2.56	0.40
42:BI:63:ASP:C	42:BI:65:SER:H	2.29	0.40
1:AA:175:C:O2	1:AA:1447:A:H2	2.04	0.40
1:AA:369:G:C6	1:AA:370:C:C4	3.10	0.40
1:AA:496:A:H5'	1:AA:497:G:OP2	2.22	0.40
1:AA:1261:A:C2	1:AA:1262:C:H1'	2.57	0.40
8:AH:117:GLN:C	8:AH:119:GLY:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:83:THR:HA	9:AI:97:LEU:HD13	2.04	0.40
22:AV:3:G:C2	22:AV:71:C:C2	3.08	0.40
34:BA:24:G:C6	34:BA:56:G:C2	3.10	0.40
35:BB:563:A:C5	35:BB:2018:G:C6	3.10	0.40
35:BB:877:A:C6	35:BB:901:C:C4	3.09	0.40
35:BB:1427:A:H4'	35:BB:1428:C:O4'	2.21	0.40
35:BB:1445:G:C5	35:BB:1446:C:C5	3.09	0.40
35:BB:2292:U:H2'	35:BB:2293:G:H8	1.85	0.40
42:BI:112:LYS:C	42:BI:116:MET:HG3	2.47	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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
2	AB	216/218 (99%)	159 (74%)	41 (19%)	16 (7%)	1 10
3	AC	204/206 (99%)	158 (78%)	31 (15%)	15 (7%)	1 10
4	AD	203/205 (99%)	160 (79%)	34 (17%)	9 (4%)	2 16
5	AE	148/150 (99%)	110 (74%)	27 (18%)	11 (7%)	1 10
6	AF	98/100 (98%)	73 (74%)	18 (18%)	7 (7%)	1 10
7	AG	148/150 (99%)	109 (74%)	33 (22%)	6 (4%)	2 17
8	AH	127/129 (98%)	94 (74%)	27 (21%)	6 (5%)	2 16
9	AI	125/127 (98%)	99 (79%)	21 (17%)	5 (4%)	2 18
10	AJ	96/98 (98%)	71 (74%)	14 (15%)	11 (12%)	0 5
11	AK	115/117 (98%)	96 (84%)	14 (12%)	5 (4%)	2 17
12	AL	121/123 (98%)	100 (83%)	12 (10%)	9 (7%)	1 10
13	AM	111/113 (98%)	80 (72%)	19 (17%)	12 (11%)	0 5
14	AN	92/96 (96%)	57 (62%)	22 (24%)	13 (14%)	0 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
15	AO	86/88 (98%)	73 (85%)	11 (13%)	2 (2%)	5 27
16	AP	78/80 (98%)	62 (80%)	10 (13%)	6 (8%)	1 9
17	AQ	78/80 (98%)	65 (83%)	7 (9%)	6 (8%)	1 9
18	AR	53/55 (96%)	42 (79%)	8 (15%)	3 (6%)	1 13
19	AS	77/79 (98%)	61 (79%)	13 (17%)	3 (4%)	2 18
20	AT	83/85 (98%)	68 (82%)	13 (16%)	2 (2%)	4 26
21	AU	49/51 (96%)	41 (84%)	5 (10%)	3 (6%)	1 12
24	AZ	18/20 (90%)	16 (89%)	1 (6%)	1 (6%)	1 14
25	B0	75/77 (97%)	52 (69%)	20 (27%)	3 (4%)	2 18
26	B1	61/63 (97%)	45 (74%)	14 (23%)	2 (3%)	3 21
27	B2	56/58 (97%)	49 (88%)	7 (12%)	0	100 100
28	B3	54/56 (96%)	42 (78%)	9 (17%)	3 (6%)	1 14
29	B4	48/50 (96%)	39 (81%)	7 (15%)	2 (4%)	2 17
30	B5	232/234 (99%)	190 (82%)	37 (16%)	5 (2%)	5 28
31	B6	44/46 (96%)	29 (66%)	11 (25%)	4 (9%)	0 8
32	B7	62/64 (97%)	52 (84%)	5 (8%)	5 (8%)	1 9
33	B8	36/38 (95%)	30 (83%)	4 (11%)	2 (6%)	1 14
36	BC	269/271 (99%)	209 (78%)	47 (18%)	13 (5%)	2 16
37	BD	207/209 (99%)	149 (72%)	37 (18%)	21 (10%)	0 6
38	BE	199/201 (99%)	161 (81%)	23 (12%)	15 (8%)	1 10
39	BF	176/178 (99%)	131 (74%)	26 (15%)	19 (11%)	0 5
40	BG	171/176 (97%)	134 (78%)	28 (16%)	9 (5%)	1 14
41	BH	147/149 (99%)	111 (76%)	31 (21%)	5 (3%)	3 20
42	BI	139/141 (99%)	113 (81%)	21 (15%)	5 (4%)	2 20
43	BJ	140/142 (99%)	106 (76%)	24 (17%)	10 (7%)	1 10
44	BK	119/121 (98%)	95 (80%)	14 (12%)	10 (8%)	0 8
45	BL	141/143 (99%)	115 (82%)	16 (11%)	10 (7%)	1 10
46	BM	134/136 (98%)	105 (78%)	21 (16%)	8 (6%)	1 12
47	BN	118/120 (98%)	96 (81%)	16 (14%)	6 (5%)	1 14
48	BO	114/116 (98%)	98 (86%)	14 (12%)	2 (2%)	6 34
49	BP	112/114 (98%)	85 (76%)	19 (17%)	8 (7%)	1 10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
50	BQ	115/117 (98%)	84 (73%)	21 (18%)	10 (9%)	0 8
51	BR	101/103 (98%)	80 (79%)	13 (13%)	8 (8%)	1 9
52	BS	108/110 (98%)	76 (70%)	21 (19%)	11 (10%)	0 6
53	BT	91/93 (98%)	60 (66%)	25 (28%)	6 (7%)	1 11
54	BU	94/102 (92%)	71 (76%)	16 (17%)	7 (7%)	1 10
55	BW	92/94 (98%)	76 (83%)	10 (11%)	6 (6%)	1 12
56	BY	77/79 (98%)	46 (60%)	18 (23%)	13 (17%)	0 2
All	All	5858/5971 (98%)	4523 (77%)	956 (16%)	379 (6%)	2 12

All (379) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	17	TRP
3	AC	116	ALA
5	AE	11	GLN
5	AE	17	VAL
9	AI	58	GLU
10	AJ	42	LEU
10	AJ	57	VAL
10	AJ	58	ASN
10	AJ	67	ILE
10	AJ	92	LEU
12	AL	32	VAL
13	AM	3	ILE
13	AM	104	ASN
14	AN	51	PRO
14	AN	80	ARG
16	AP	25	ARG
16	AP	45	GLU
17	AQ	71	SER
18	AR	22	TYR
21	AU	32	ARG
26	B1	37	LEU
30	B5	217	THR
30	B5	225	ASP
37	BD	31	ALA
37	BD	71	ALA
37	BD	107	VAL
37	BD	152	PRO
38	BE	4	VAL

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Mol	Chain	Res	Type
38	BE	183	PHE
39	BF	101	ARG
39	BF	112	ASP
40	BG	2	ARG
40	BG	100	ASN
41	BH	119	ASN
42	BI	18	ASN
43	BJ	132	HIS
43	BJ	140	LEU
44	BK	53	LYS
44	BK	71	ARG
45	BL	29	LYS
45	BL	113	ALA
47	BN	72	ASP
47	BN	119	SER
49	BP	25	VAL
50	BQ	71	ASN
50	BQ	73	ILE
50	BQ	87	VAL
50	BQ	88	GLU
51	BR	42	ALA
52	BS	61	ASN
52	BS	64	ALA
52	BS	76	VAL
52	BS	89	ALA
53	BT	38	ALA
54	BU	98	ASN
56	BY	14	ASP
56	BY	58	LEU
2	AB	22	TRP
2	AB	103	TRP
2	AB	216	VAL
2	AB	218	ALA
2	AB	224	ARG
3	AC	7	ASN
3	AC	53	ARG
3	AC	82	ASP
3	AC	164	THR
4	AD	7	LYS
4	AD	36	ALA
4	AD	146	GLU
5	AE	25	LYS

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Mol	Chain	Res	Type
5	AE	44	ARG
5	AE	89	THR
5	AE	119	VAL
6	AF	38	ARG
6	AF	63	ASN
6	AF	85	ILE
7	AG	116	ALA
8	AH	82	LEU
8	AH	95	MET
8	AH	116	ARG
10	AJ	17	LEU
10	AJ	33	GLY
10	AJ	35	GLN
10	AJ	85	ASP
11	AK	79	LYS
12	AL	33	CYS
12	AL	46	SER
12	AL	54	VAL
13	AM	16	ILE
13	AM	29	SER
13	AM	47	LEU
13	AM	87	GLY
14	AN	30	ILE
14	AN	43	ALA
14	AN	45	LEU
14	AN	99	SER
16	AP	12	LYS
16	AP	54	LEU
17	AQ	12	VAL
21	AU	29	ALA
26	B1	2	LYS
31	B6	15	SER
32	B7	30	HIS
33	B8	7	VAL
36	BC	19	VAL
36	BC	35	LYS
36	BC	121	ALA
36	BC	168	GLY
36	BC	177	SER
37	BD	74	GLU
37	BD	118	PHE
37	BD	137	SER

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Mol	Chain	Res	Type
37	BD	161	MET
37	BD	174	SER
38	BE	30	GLN
38	BE	116	ASP
38	BE	130	LYS
39	BF	44	ALA
39	BF	84	ILE
39	BF	103	ILE
39	BF	106	ALA
39	BF	145	VAL
40	BG	29	ASN
40	BG	39	ALA
40	BG	94	ARG
41	BH	91	PHE
43	BJ	47	HIS
43	BJ	111	LYS
44	BK	112	PHE
44	BK	113	MET
46	BM	55	ARG
46	BM	56	ALA
46	BM	67	VAL
46	BM	72	PRO
46	BM	73	ILE
46	BM	122	ALA
47	BN	63	ARG
49	BP	35	SER
49	BP	81	ASP
49	BP	105	LYS
51	BR	3	ALA
51	BR	16	GLU
51	BR	27	ILE
51	BR	53	PHE
51	BR	65	ALA
52	BS	53	SER
53	BT	36	LYS
53	BT	73	ARG
54	BU	63	ALA
54	BU	94	PHE
55	BW	44	HIS
55	BW	66	ASP
56	BY	33	GLY
56	BY	69	GLU

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Mol	Chain	Res	Type
56	BY	74	LYS
56	BY	75	ASN
2	AB	63	LYS
2	AB	84	LEU
3	AC	106	ARG
3	AC	126	ARG
4	AD	192	ALA
6	AF	94	HIS
6	AF	99	ALA
7	AG	118	ARG
7	AG	138	GLU
9	AI	9	GLY
10	AJ	79	PRO
11	AK	101	ALA
12	AL	24	GLU
12	AL	60	PHE
12	AL	90	PRO
13	AM	30	LYS
13	AM	105	ALA
14	AN	52	ARG
14	AN	61	ASN
17	AQ	49	ASN
17	AQ	63	CYS
17	AQ	66	LEU
18	AR	26	ALA
20	AT	47	GLN
21	AU	30	GLU
25	B0	17	ARG
28	B3	49	ARG
30	B5	159	GLY
30	B5	206	GLY
31	B6	35	ARG
32	B7	49	VAL
36	BC	189	ALA
36	BC	205	GLY
36	BC	240	GLY
37	BD	30	GLU
37	BD	65	ALA
37	BD	175	LEU
37	BD	176	ASP
37	BD	194	PRO
37	BD	207	VAL

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Mol	Chain	Res	Type
38	BE	2	GLU
38	BE	16	GLU
38	BE	45	ALA
38	BE	83	VAL
38	BE	106	LYS
39	BF	59	ILE
39	BF	107	VAL
39	BF	148	VAL
40	BG	136	ASP
41	BH	15	LEU
42	BI	23	VAL
43	BJ	59	ALA
43	BJ	71	ASP
44	BK	36	GLY
44	BK	92	GLU
44	BK	120	PRO
45	BL	43	GLY
45	BL	64	PHE
47	BN	42	LYS
49	BP	13	LYS
50	BQ	9	ALA
50	BQ	91	ARG
51	BR	98	ILE
52	BS	2	GLU
52	BS	30	SER
52	BS	62	ASP
54	BU	85	ARG
54	BU	99	SER
55	BW	45	ASP
55	BW	82	TYR
56	BY	40	ARG
2	AB	33	ALA
2	AB	79	VAL
2	AB	156	LEU
3	AC	15	LYS
3	AC	107	LYS
3	AC	111	ASP
4	AD	47	LEU
4	AD	119	HIS
4	AD	147	LYS
7	AG	40	SER
8	AH	66	GLN

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Mol	Chain	Res	Type
8	AH	72	GLU
9	AI	12	LYS
9	AI	121	ARG
12	AL	72	ASN
13	AM	7	ASN
13	AM	11	HIS
13	AM	22	TYR
14	AN	62	ARG
14	AN	66	THR
14	AN	68	ARG
15	AO	7	THR
17	AQ	5	ARG
24	AZ	18	ALA
25	B0	32	LEU
28	B3	44	ALA
29	B4	37	LYS
31	B6	33	ARG
32	B7	51	LYS
36	BC	58	LYS
36	BC	112	GLY
36	BC	132	ARG
37	BD	109	VAL
37	BD	151	THR
38	BE	96	VAL
39	BF	41	GLU
39	BF	46	LYS
39	BF	78	ILE
39	BF	82	TYR
40	BG	31	GLU
40	BG	175	LYS
43	BJ	81	ILE
43	BJ	84	ILE
44	BK	91	SER
45	BL	36	LYS
45	BL	117	THR
45	BL	143	GLU
46	BM	61	GLY
47	BN	98	LEU
47	BN	100	CYS
48	BO	16	ARG
48	BO	107	ALA
49	BP	47	ILE

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Mol	Chain	Res	Type
50	BQ	78	PHE
52	BS	31	GLN
52	BS	41	LYS
53	BT	28	ASN
54	BU	12	VAL
55	BW	10	LYS
55	BW	93	ARG
56	BY	52	CYS
56	BY	61	LYS
2	AB	47	PRO
2	AB	87	ASP
2	AB	132	GLU
2	AB	165	ALA
3	AC	42	LEU
3	AC	128	MET
3	AC	175	HIS
4	AD	68	GLU
4	AD	163	GLN
5	AE	131	ASN
5	AE	137	ARG
6	AF	79	ARG
7	AG	114	SER
10	AJ	16	ARG
12	AL	118	VAL
13	AM	65	GLU
15	AO	87	ARG
19	AS	23	GLU
19	AS	31	ARG
20	AT	67	HIS
25	B0	27	ARG
28	B3	20	ALA
29	B4	33	LEU
32	B7	7	ARG
32	B7	43	LEU
36	BC	203	VAL
37	BD	122	VAL
37	BD	138	LEU
38	BE	164	LEU
38	BE	167	VAL
39	BF	2	LYS
39	BF	27	VAL
39	BF	74	ALA

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Mol	Chain	Res	Type
39	BF	79	ARG
41	BH	123	ARG
42	BI	14	ALA
43	BJ	52	ASP
44	BK	6	THR
49	BP	54	LEU
49	BP	76	HIS
53	BT	21	SER
53	BT	70	HIS
54	BU	38	ILE
2	AB	72	LYS
5	AE	110	MET
6	AF	80	PHE
8	AH	43	GLY
9	AI	27	ILE
11	AK	125	LYS
14	AN	21	ALA
14	AN	31	SER
16	AP	17	TYR
18	AR	35	SER
30	B5	55	SER
33	B8	16	ILE
37	BD	203	VAL
39	BF	24	VAL
42	BI	2	LYS
46	BM	134	THR
50	BQ	81	GLY
52	BS	72	THR
56	BY	35	ILE
56	BY	73	PRO
2	AB	70	GLY
3	AC	154	GLY
5	AE	15	ILE
5	AE	118	GLY
16	AP	36	VAL
37	BD	9	VAL
38	BE	89	PRO
42	BI	4	VAL
43	BJ	96	ARG
45	BL	122	VAL
11	AK	96	ILE
38	BE	82	GLY

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Mol	Chain	Res	Type
40	BG	125	PRO
45	BL	100	ILE
50	BQ	33	VAL
56	BY	47	GLY
56	BY	50	VAL
7	AG	79	VAL
11	AK	15	VAL
31	B6	44	VAL
41	BH	16	GLY
19	AS	61	VAL
36	BC	125	PRO
44	BK	35	VAL
45	BL	114	GLY
50	BQ	39	ILE
51	BR	101	ILE

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	
2	AB	180/180 (100%)	171 (95%)	9 (5%)	22	42
3	AC	170/170 (100%)	158 (93%)	12 (7%)	13	35
4	AD	172/172 (100%)	161 (94%)	11 (6%)	16	37
5	AE	113/113 (100%)	107 (95%)	6 (5%)	20	41
6	AF	87/87 (100%)	83 (95%)	4 (5%)	24	45
7	AG	123/123 (100%)	122 (99%)	1 (1%)	73	79
8	AH	104/104 (100%)	101 (97%)	3 (3%)	37	57
9	AI	105/105 (100%)	101 (96%)	4 (4%)	29	50
10	AJ	86/86 (100%)	81 (94%)	5 (6%)	18	39
11	AK	90/90 (100%)	87 (97%)	3 (3%)	33	55
12	AL	103/103 (100%)	100 (97%)	3 (3%)	37	57
13	AM	91/91 (100%)	87 (96%)	4 (4%)	25	46

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	AN	79/79 (100%)	75 (95%)	4 (5%)	21	42
15	AO	76/76 (100%)	71 (93%)	5 (7%)	15	36
16	AP	65/65 (100%)	60 (92%)	5 (8%)	12	32
17	AQ	74/74 (100%)	71 (96%)	3 (4%)	27	48
18	AR	48/48 (100%)	46 (96%)	2 (4%)	26	48
19	AS	70/70 (100%)	67 (96%)	3 (4%)	26	47
20	AT	65/65 (100%)	62 (95%)	3 (5%)	24	45
21	AU	44/44 (100%)	39 (89%)	5 (11%)	5	18
25	B0	67/67 (100%)	64 (96%)	3 (4%)	24	46
26	B1	55/55 (100%)	50 (91%)	5 (9%)	9	27
27	B2	48/48 (100%)	46 (96%)	2 (4%)	26	48
28	B3	47/47 (100%)	46 (98%)	1 (2%)	47	65
29	B4	45/45 (100%)	42 (93%)	3 (7%)	15	36
30	B5	181/181 (100%)	173 (96%)	8 (4%)	25	46
31	B6	38/38 (100%)	36 (95%)	2 (5%)	20	41
32	B7	51/51 (100%)	50 (98%)	1 (2%)	48	66
33	B8	34/34 (100%)	34 (100%)	0	100	100
36	BC	216/216 (100%)	207 (96%)	9 (4%)	26	48
37	BD	164/164 (100%)	147 (90%)	17 (10%)	7	22
38	BE	165/165 (100%)	157 (95%)	8 (5%)	23	44
39	BF	149/149 (100%)	143 (96%)	6 (4%)	28	49
40	BG	136/137 (99%)	126 (93%)	10 (7%)	13	33
41	BH	114/114 (100%)	107 (94%)	7 (6%)	17	38
42	BI	109/109 (100%)	107 (98%)	2 (2%)	51	67
43	BJ	116/116 (100%)	112 (97%)	4 (3%)	32	54
44	BK	102/102 (100%)	95 (93%)	7 (7%)	14	36
45	BL	102/102 (100%)	97 (95%)	5 (5%)	22	43
46	BM	109/109 (100%)	104 (95%)	5 (5%)	24	45
47	BN	100/100 (100%)	97 (97%)	3 (3%)	36	57
48	BO	86/86 (100%)	84 (98%)	2 (2%)	44	63
49	BP	99/99 (100%)	94 (95%)	5 (5%)	21	42

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
50	BQ	89/89 (100%)	81 (91%)	8 (9%)	9 27
51	BR	84/84 (100%)	77 (92%)	7 (8%)	10 30
52	BS	93/93 (100%)	88 (95%)	5 (5%)	20 41
53	BT	80/80 (100%)	70 (88%)	10 (12%)	4 16
54	BU	81/83 (98%)	78 (96%)	3 (4%)	30 51
55	BW	78/78 (100%)	73 (94%)	5 (6%)	16 37
56	BY	59/59 (100%)	52 (88%)	7 (12%)	5 17
All	All	4842/4845 (100%)	4587 (95%)	255 (5%)	22 41

All (255) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	38	HIS
2	AB	46	VAL
2	AB	72	LYS
2	AB	81	ASP
2	AB	101	THR
2	AB	103	TRP
2	AB	162	VAL
2	AB	174	GLU
2	AB	186	VAL
3	AC	14	VAL
3	AC	25	THR
3	AC	27	GLU
3	AC	38	VAL
3	AC	44	LYS
3	AC	63	ILE
3	AC	83	VAL
3	AC	106	ARG
3	AC	137	VAL
3	AC	164	THR
3	AC	168	ARG
3	AC	174	LEU
4	AD	34	GLU
4	AD	43	ARG
4	AD	54	LEU
4	AD	63	ILE
4	AD	71	PHE
4	AD	81	LEU
4	AD	110	ARG

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Mol	Chain	Res	Type
4	AD	136	VAL
4	AD	142	VAL
4	AD	170	LEU
4	AD	198	LEU
5	AE	70	MET
5	AE	100	GLU
5	AE	110	MET
5	AE	121	ASN
5	AE	137	ARG
5	AE	150	GLU
6	AF	6	ILE
6	AF	55	HIS
6	AF	89	VAL
6	AF	91	ARG
7	AG	135	LYS
8	AH	28	SER
8	AH	41	GLU
8	AH	117	GLN
9	AI	11	ARG
9	AI	35	GLU
9	AI	60	LEU
9	AI	121	ARG
10	AJ	50	THR
10	AJ	56	HIS
10	AJ	57	VAL
10	AJ	73	LEU
10	AJ	75	ASP
11	AK	75	GLU
11	AK	90	PRO
11	AK	122	PRO
12	AL	20	VAL
12	AL	50	LYS
12	AL	54	VAL
13	AM	18	LEU
13	AM	46	GLU
13	AM	52	ILE
13	AM	91	ARG
14	AN	13	VAL
14	AN	33	VAL
14	AN	81	ILE
14	AN	88	MET
15	AO	2	LEU

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Mol	Chain	Res	Type
15	AO	28	VAL
15	AO	46	LYS
15	AO	72	LYS
15	AO	76	ARG
16	AP	12	LYS
16	AP	34	GLU
16	AP	59	HIS
16	AP	67	ILE
16	AP	71	VAL
17	AQ	7	LEU
17	AQ	51	GLU
17	AQ	73	THR
18	AR	65	SER
18	AR	66	LEU
19	AS	22	VAL
19	AS	23	GLU
19	AS	52	ASN
20	AT	55	PRO
20	AT	65	LEU
20	AT	84	LYS
21	AU	3	ILE
21	AU	7	GLU
21	AU	8	ASN
21	AU	16	ARG
21	AU	53	LYS
25	B0	26	ARG
25	B0	47	THR
25	B0	63	ILE
26	B1	9	LYS
26	B1	10	SER
26	B1	15	ASN
26	B1	50	VAL
26	B1	57	LEU
27	B2	3	THR
27	B2	47	ILE
28	B3	51	ARG
29	B4	11	VAL
29	B4	32	LYS
29	B4	45	HIS
30	B5	44	VAL
30	B5	56	ASP
30	B5	63	THR

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Mol	Chain	Res	Type
30	B5	64	VAL
30	B5	174	THR
30	B5	180	PHE
30	B5	207	VAL
30	B5	213	SER
31	B6	15	SER
31	B6	26	ASN
32	B7	53	ASP
36	BC	10	PRO
36	BC	58	LYS
36	BC	120	ASP
36	BC	129	LEU
36	BC	140	VAL
36	BC	162	GLN
36	BC	164	VAL
36	BC	173	LEU
36	BC	227	VAL
37	BD	2	ILE
37	BD	30	GLU
37	BD	33	ARG
37	BD	35	THR
37	BD	45	TYR
37	BD	46	ARG
37	BD	48	ILE
37	BD	60	VAL
37	BD	84	LEU
37	BD	105	LYS
37	BD	130	GLN
37	BD	149	ASN
37	BD	151	THR
37	BD	161	MET
37	BD	183	GLU
37	BD	197	THR
37	BD	201	LEU
38	BE	1	MET
38	BE	47	LYS
38	BE	79	ARG
38	BE	89	PRO
38	BE	134	LEU
38	BE	173	THR
38	BE	176	ASP
38	BE	185	LYS

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Mol	Chain	Res	Type
39	BF	3	LEU
39	BF	49	LEU
39	BF	87	LYS
39	BF	111	ARG
39	BF	135	ILE
39	BF	151	LEU
40	BG	21	GLN
40	BG	23	ILE
40	BG	25	ILE
40	BG	36	LEU
40	BG	72	ASN
40	BG	88	LEU
40	BG	112	VAL
40	BG	123	GLU
40	BG	154	GLU
40	BG	167	VAL
41	BH	12	LEU
41	BH	15	LEU
41	BH	97	ARG
41	BH	130	VAL
41	BH	141	LYS
41	BH	144	VAL
41	BH	147	VAL
42	BI	54	ILE
42	BI	121	ILE
43	BJ	124	VAL
43	BJ	132	HIS
43	BJ	135	GLN
43	BJ	139	VAL
44	BK	6	THR
44	BK	41	ILE
44	BK	57	VAL
44	BK	61	VAL
44	BK	69	VAL
44	BK	89	ASN
44	BK	114	LYS
45	BL	3	LEU
45	BL	6	LEU
45	BL	51	GLU
45	BL	73	ILE
45	BL	90	VAL
46	BM	22	GLN

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Mol	Chain	Res	Type
46	BM	60	GLN
46	BM	66	ARG
46	BM	70	ASP
46	BM	71	LYS
47	BN	50	PRO
47	BN	85	PRO
47	BN	99	LYS
48	BO	48	LEU
48	BO	106	LEU
49	BP	13	LYS
49	BP	27	VAL
49	BP	63	ILE
49	BP	88	ARG
49	BP	91	VAL
50	BQ	14	LYS
50	BQ	18	LYS
50	BQ	30	VAL
50	BQ	33	VAL
50	BQ	38	VAL
50	BQ	40	LYS
50	BQ	87	VAL
50	BQ	99	VAL
51	BR	13	ARG
51	BR	21	ARG
51	BR	49	ILE
51	BR	64	VAL
51	BR	72	VAL
51	BR	80	ARG
51	BR	86	GLN
52	BS	4	ILE
52	BS	20	VAL
52	BS	31	GLN
52	BS	48	LYS
52	BS	76	VAL
53	BT	3	ARG
53	BT	5	GLU
53	BT	7	LEU
53	BT	16	VAL
53	BT	29	THR
53	BT	32	LEU
53	BT	34	VAL
53	BT	61	LEU

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Mol	Chain	Res	Type
53	BT	86	THR
53	BT	91	GLN
54	BU	14	THR
54	BU	38	ILE
54	BU	85	ARG
55	BW	1	MET
55	BW	29	ILE
55	BW	42	LEU
55	BW	68	LYS
55	BW	75	GLN
56	BY	18	LYS
56	BY	19	ARG
56	BY	24	ARG
56	BY	34	SER
56	BY	35	ILE
56	BY	65	LYS
56	BY	66	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (153) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	17	HIS
2	AB	92	ASN
2	AB	167	HIS
2	AB	177	ASN
2	AB	189	ASN
3	AC	99	GLN
3	AC	175	HIS
3	AC	189	HIS
4	AD	70	GLN
4	AD	88	ASN
4	AD	99	ASN
4	AD	125	ASN
4	AD	130	ASN
4	AD	135	GLN
4	AD	151	GLN
4	AD	195	ASN
5	AE	11	GLN
5	AE	18	ASN
5	AE	72	ASN
5	AE	81	GLN
5	AE	88	HIS

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Mol	Chain	Res	Type
5	AE	96	GLN
5	AE	120	HIS
6	AF	3	HIS
6	AF	17	GLN
6	AF	37	HIS
6	AF	52	ASN
6	AF	63	ASN
6	AF	68	GLN
6	AF	81	ASN
7	AG	67	ASN
7	AG	129	ASN
7	AG	147	ASN
8	AH	20	ASN
8	AH	37	ASN
8	AH	117	GLN
9	AI	49	GLN
9	AI	80	HIS
9	AI	125	GLN
11	AK	21	HIS
11	AK	23	HIS
11	AK	63	GLN
11	AK	108	ASN
12	AL	5	GLN
12	AL	28	GLN
12	AL	45	ASN
12	AL	71	HIS
12	AL	74	GLN
13	AM	13	HIS
14	AN	65	GLN
15	AO	19	ASN
15	AO	45	HIS
15	AO	50	HIS
16	AP	9	HIS
16	AP	59	HIS
16	AP	79	ASN
17	AQ	46	HIS
19	AS	13	HIS
19	AS	51	HIS
19	AS	55	GLN
20	AT	19	HIS
20	AT	47	GLN
20	AT	67	HIS

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Mol	Chain	Res	Type
21	AU	8	ASN
25	B0	5	GLN
25	B0	33	HIS
25	B0	35	HIS
26	B1	20	ASN
26	B1	41	HIS
27	B2	33	HIS
28	B3	5	ASN
28	B3	40	HIS
28	B3	41	HIS
29	B4	18	HIS
29	B4	45	HIS
30	B5	103	GLN
30	B5	110	ASN
30	B5	129	GLN
30	B5	148	ASN
30	B5	203	GLN
31	B6	6	GLN
31	B6	16	HIS
31	B6	26	ASN
32	B7	25	HIS
32	B7	42	HIS
36	BC	36	ASN
36	BC	43	ASN
36	BC	52	HIS
36	BC	114	GLN
36	BC	133	ASN
36	BC	141	HIS
36	BC	238	ASN
36	BC	250	GLN
37	BD	32	ASN
37	BD	58	ASN
37	BD	67	HIS
38	BE	29	HIS
38	BE	41	GLN
38	BE	90	GLN
38	BE	92	HIS
38	BE	163	ASN
38	BE	165	HIS
39	BF	4	HIS
39	BF	51	ASN
39	BF	80	GLN

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Mol	Chain	Res	Type
39	BF	134	GLN
40	BG	44	HIS
40	BG	103	ASN
40	BG	142	GLN
41	BH	11	ASN
41	BH	135	HIS
42	BI	11	GLN
42	BI	33	ASN
42	BI	93	ASN
43	BJ	76	HIS
43	BJ	77	HIS
43	BJ	80	HIS
43	BJ	132	HIS
43	BJ	136	GLN
44	BK	29	HIS
44	BK	89	ASN
44	BK	90	ASN
45	BL	104	GLN
46	BM	22	GLN
47	BN	9	GLN
47	BN	16	HIS
47	BN	31	HIS
47	BN	73	ASN
48	BO	34	HIS
49	BP	9	GLN
49	BP	65	ASN
49	BP	76	HIS
50	BQ	13	HIS
50	BQ	36	GLN
50	BQ	43	GLN
51	BR	6	GLN
51	BR	87	GLN
52	BS	31	GLN
52	BS	57	ASN
52	BS	61	ASN
53	BT	15	HIS
53	BT	28	ASN
53	BT	59	ASN
53	BT	70	HIS
53	BT	72	GLN
54	BU	45	GLN
54	BU	52	ASN

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Mol	Chain	Res	Type
54	BU	53	GLN
54	BU	65	GLN
54	BU	73	ASN
55	BW	5	ASN
55	BW	78	GLN
55	BW	88	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1530 (99%)	270 (17%)	34 (2%)
22	AV	76/77 (98%)	15 (19%)	0
23	AX	10/11 (90%)	8 (80%)	0
34	BA	112/117 (95%)	17 (15%)	2 (1%)
35	BB	2902/2903 (99%)	472 (16%)	56 (1%)
All	All	4629/4638 (99%)	782 (16%)	92 (1%)

All (782) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	9	G
1	AA	15	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	55	A
1	AA	60	A
1	AA	61	G
1	AA	67	C
1	AA	70	U
1	AA	71	A
1	AA	75	G
1	AA	79	G
1	AA	80	A
1	AA	83	C

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Mol	Chain	Res	Type
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	88	U
1	AA	91	U
1	AA	101	A
1	AA	130	A
1	AA	144	G
1	AA	149	A
1	AA	155	A
1	AA	182	A
1	AA	197	A
1	AA	204	G
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	239	U
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	252	U
1	AA	253	A
1	AA	257	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	289	G
1	AA	306	A
1	AA	308	C
1	AA	328	C
1	AA	329	A
1	AA	332	G
1	AA	345	C
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	373	A
1	AA	374	A

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Mol	Chain	Res	Type
1	AA	381	C
1	AA	382	A
1	AA	397	A
1	AA	398	U
1	AA	406	G
1	AA	408	A
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	416	G
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	438	U
1	AA	451	A
1	AA	453	G
1	AA	456	A
1	AA	459	A
1	AA	460	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	468	A
1	AA	471	U
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	493	A
1	AA	499	A
1	AA	508	U
1	AA	511	C
1	AA	512	U
1	AA	518	C
1	AA	524	G
1	AA	527	G
1	AA	533	A

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Mol	Chain	Res	Type
1	AA	547	A
1	AA	562	U
1	AA	563	A
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	C
1	AA	577	G
1	AA	596	A
1	AA	631	C
1	AA	632	U
1	AA	633	G
1	AA	653	U
1	AA	665	A
1	AA	666	G
1	AA	700	G
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	724	G
1	AA	731	G
1	AA	747	A
1	AA	748	G
1	AA	752	G
1	AA	755	G
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	812	G
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	U
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	844	G
1	AA	845	A
1	AA	846	G
1	AA	847	G

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Mol	Chain	Res	Type
1	AA	849	G
1	AA	873	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	945	G
1	AA	960	U
1	AA	961	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	981	U
1	AA	993	G
1	AA	994	A
1	AA	996	A
1	AA	1004	A
1	AA	1018	G
1	AA	1020	G
1	AA	1028	C
1	AA	1030	U
1	AA	1032	G
1	AA	1034	G
1	AA	1035	A
1	AA	1036	A
1	AA	1050	G
1	AA	1053	G
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1070	U
1	AA	1085	U
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1112	C

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Mol	Chain	Res	Type
1	AA	1118	U
1	AA	1119	C
1	AA	1124	G
1	AA	1125	U
1	AA	1130	A
1	AA	1133	G
1	AA	1134	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1139	G
1	AA	1140	C
1	AA	1144	G
1	AA	1145	A
1	AA	1146	A
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1169	A
1	AA	1181	G
1	AA	1184	G
1	AA	1191	A
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1215	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1241	G
1	AA	1249	C
1	AA	1250	A
1	AA	1258	G
1	AA	1270	G
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A

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Mol	Chain	Res	Type
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1297	G
1	AA	1300	G
1	AA	1301	U
1	AA	1303	C
1	AA	1305	G
1	AA	1316	G
1	AA	1320	C
1	AA	1321	U
1	AA	1323	G
1	AA	1331	G
1	AA	1336	C
1	AA	1346	A
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1380	U
1	AA	1381	U
1	AA	1399	C
1	AA	1419	G
1	AA	1432	G
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1454	G
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1506	U
1	AA	1517	G
1	AA	1520	C
1	AA	1528	U
1	AA	1529	G
1	AA	1530	G
22	AV	4	C
22	AV	5	A
22	AV	8	U

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Mol	Chain	Res	Type
22	AV	19	G
22	AV	21	A
22	AV	31	C
22	AV	33	U
22	AV	43	G
22	AV	48	C
22	AV	49	G
22	AV	53	G
22	AV	67	G
22	AV	71	C
22	AV	73	A
22	AV	76	A
23	AX	13	A
23	AX	14	A
23	AX	16	C
23	AX	17	C
23	AX	18	C
23	AX	19	A
23	AX	20	G
23	AX	22	A
34	BA	9	G
34	BA	14	U
34	BA	16	G
34	BA	25	U
34	BA	26	C
34	BA	29	A
34	BA	30	C
34	BA	42	C
34	BA	45	A
34	BA	52	A
34	BA	53	A
34	BA	66	A
34	BA	67	G
34	BA	90	C
34	BA	91	C
34	BA	99	A
34	BA	109	A
35	BB	34	U
35	BB	35	G
35	BB	46	G
35	BB	71	A
35	BB	74	A

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Mol	Chain	Res	Type
35	BB	75	G
35	BB	84	A
35	BB	91	A
35	BB	95	A
35	BB	100	U
35	BB	101	A
35	BB	102	U
35	BB	103	A
35	BB	118	A
35	BB	120	U
35	BB	126	A
35	BB	128	C
35	BB	136	G
35	BB	137	U
35	BB	139	U
35	BB	140	C
35	BB	141	G
35	BB	143	C
35	BB	144	A
35	BB	160	A
35	BB	180	G
35	BB	181	A
35	BB	196	A
35	BB	199	A
35	BB	216	A
35	BB	221	A
35	BB	222	A
35	BB	233	A
35	BB	241	A
35	BB	248	G
35	BB	249	C
35	BB	255	A
35	BB	265	A
35	BB	266	G
35	BB	268	C
35	BB	271	G
35	BB	273	G
35	BB	276	U
35	BB	277	G
35	BB	281	C
35	BB	283	G
35	BB	285	G

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Mol	Chain	Res	Type
35	BB	286	U
35	BB	294	A
35	BB	299	A
35	BB	311	A
35	BB	321	U
35	BB	322	A
35	BB	329	G
35	BB	330	A
35	BB	333	G
35	BB	346	A
35	BB	352	A
35	BB	353	C
35	BB	362	A
35	BB	363	G
35	BB	364	C
35	BB	369	U
35	BB	371	A
35	BB	372	G
35	BB	386	G
35	BB	387	U
35	BB	406	G
35	BB	411	G
35	BB	412	A
35	BB	424	G
35	BB	451	U
35	BB	455	C
35	BB	456	C
35	BB	457	A
35	BB	479	A
35	BB	481	G
35	BB	490	C
35	BB	491	G
35	BB	504	A
35	BB	505	A
35	BB	508	A
35	BB	509	C
35	BB	512	G
35	BB	531	C
35	BB	532	A
35	BB	544	C
35	BB	545	U
35	BB	546	U

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Mol	Chain	Res	Type
35	BB	547	A
35	BB	548	G
35	BB	549	G
35	BB	550	C
35	BB	555	G
35	BB	563	A
35	BB	573	U
35	BB	575	A
35	BB	586	A
35	BB	588	U
35	BB	603	A
35	BB	613	A
35	BB	615	U
35	BB	627	A
35	BB	637	A
35	BB	646	U
35	BB	647	G
35	BB	653	U
35	BB	654	A
35	BB	655	A
35	BB	671	C
35	BB	686	U
35	BB	730	A
35	BB	746	U
35	BB	747	U
35	BB	757	G
35	BB	762	U
35	BB	764	A
35	BB	775	G
35	BB	782	A
35	BB	784	G
35	BB	785	G
35	BB	788	A
35	BB	793	A
35	BB	805	G
35	BB	812	C
35	BB	819	A
35	BB	827	U
35	BB	828	U
35	BB	846	U
35	BB	847	U
35	BB	858	G

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Mol	Chain	Res	Type
35	BB	859	G
35	BB	869	G
35	BB	871	U
35	BB	875	G
35	BB	876	C
35	BB	881	G
35	BB	887	U
35	BB	888	C
35	BB	891	G
35	BB	896	A
35	BB	897	C
35	BB	900	A
35	BB	901	C
35	BB	910	A
35	BB	912	C
35	BB	919	U
35	BB	931	U
35	BB	932	U
35	BB	941	A
35	BB	946	C
35	BB	958	U
35	BB	961	C
35	BB	973	A
35	BB	974	G
35	BB	983	A
35	BB	991	C
35	BB	995	C
35	BB	996	A
35	BB	1005	C
35	BB	1012	U
35	BB	1013	C
35	BB	1022	G
35	BB	1023	U
35	BB	1025	G
35	BB	1033	U
35	BB	1054	A
35	BB	1056	G
35	BB	1057	A
35	BB	1061	U
35	BB	1067	A
35	BB	1070	A
35	BB	1071	G

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Mol	Chain	Res	Type
35	BB	1078	U
35	BB	1088	A
35	BB	1090	A
35	BB	1095	A
35	BB	1096	A
35	BB	1104	C
35	BB	1112	G
35	BB	1116	G
35	BB	1130	U
35	BB	1132	U
35	BB	1133	A
35	BB	1134	A
35	BB	1135	C
35	BB	1136	G
35	BB	1139	G
35	BB	1142	A
35	BB	1176	U
35	BB	1205	A
35	BB	1206	G
35	BB	1238	G
35	BB	1241	A
35	BB	1242	U
35	BB	1248	G
35	BB	1250	G
35	BB	1253	A
35	BB	1256	G
35	BB	1266	G
35	BB	1271	G
35	BB	1272	A
35	BB	1273	U
35	BB	1275	A
35	BB	1276	A
35	BB	1300	G
35	BB	1301	A
35	BB	1312	U
35	BB	1313	U
35	BB	1321	A
35	BB	1325	U
35	BB	1332	G
35	BB	1333	G
35	BB	1337	G
35	BB	1341	G

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Mol	Chain	Res	Type
35	BB	1352	U
35	BB	1365	A
35	BB	1368	G
35	BB	1374	G
35	BB	1379	U
35	BB	1383	A
35	BB	1394	U
35	BB	1396	U
35	BB	1416	G
35	BB	1419	A
35	BB	1420	A
35	BB	1421	G
35	BB	1427	A
35	BB	1428	C
35	BB	1451	C
35	BB	1453	A
35	BB	1458	U
35	BB	1459	G
35	BB	1460	U
35	BB	1461	C
35	BB	1469	A
35	BB	1476	U
35	BB	1477	A
35	BB	1478	G
35	BB	1482	G
35	BB	1490	A
35	BB	1497	U
35	BB	1504	A
35	BB	1505	A
35	BB	1507	C
35	BB	1508	A
35	BB	1509	A
35	BB	1510	G
35	BB	1523	U
35	BB	1524	G
35	BB	1532	A
35	BB	1535	A
35	BB	1536	C
35	BB	1538	G
35	BB	1552	A
35	BB	1569	A
35	BB	1578	U

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Mol	Chain	Res	Type
35	BB	1585	C
35	BB	1608	A
35	BB	1609	A
35	BB	1610	A
35	BB	1618	A
35	BB	1634	A
35	BB	1635	A
35	BB	1640	A
35	BB	1647	U
35	BB	1648	U
35	BB	1654	A
35	BB	1674	G
35	BB	1699	G
35	BB	1700	A
35	BB	1714	U
35	BB	1715	G
35	BB	1729	U
35	BB	1731	G
35	BB	1733	G
35	BB	1738	G
35	BB	1756	G
35	BB	1758	U
35	BB	1761	C
35	BB	1762	A
35	BB	1764	C
35	BB	1773	A
35	BB	1776	G
35	BB	1781	U
35	BB	1800	C
35	BB	1801	A
35	BB	1808	A
35	BB	1809	A
35	BB	1816	C
35	BB	1829	A
35	BB	1870	C
35	BB	1884	G
35	BB	1896	G
35	BB	1906	G
35	BB	1913	A
35	BB	1914	C
35	BB	1929	G
35	BB	1930	G

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Mol	Chain	Res	Type
35	BB	1937	A
35	BB	1938	A
35	BB	1940	U
35	BB	1955	U
35	BB	1966	A
35	BB	1967	C
35	BB	1970	A
35	BB	1971	U
35	BB	1972	G
35	BB	1991	U
35	BB	1993	U
35	BB	1997	C
35	BB	2020	A
35	BB	2021	C
35	BB	2022	U
35	BB	2023	C
35	BB	2031	A
35	BB	2032	G
35	BB	2033	A
35	BB	2043	C
35	BB	2055	C
35	BB	2056	G
35	BB	2059	A
35	BB	2060	A
35	BB	2061	G
35	BB	2062	A
35	BB	2065	C
35	BB	2069	G
35	BB	2076	U
35	BB	2077	A
35	BB	2102	G
35	BB	2104	C
35	BB	2111	U
35	BB	2113	U
35	BB	2117	A
35	BB	2119	A
35	BB	2128	G
35	BB	2130	U
35	BB	2131	U
35	BB	2132	U
35	BB	2133	G
35	BB	2134	A

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Mol	Chain	Res	Type
35	BB	2135	A
35	BB	2136	G
35	BB	2137	U
35	BB	2144	G
35	BB	2145	C
35	BB	2146	C
35	BB	2148	G
35	BB	2149	U
35	BB	2152	G
35	BB	2153	C
35	BB	2155	U
35	BB	2158	A
35	BB	2159	G
35	BB	2160	C
35	BB	2163	A
35	BB	2164	C
35	BB	2165	C
35	BB	2166	U
35	BB	2167	U
35	BB	2176	A
35	BB	2179	C
35	BB	2181	U
35	BB	2187	U
35	BB	2192	U
35	BB	2198	A
35	BB	2203	U
35	BB	2204	G
35	BB	2212	A
35	BB	2213	U
35	BB	2214	C
35	BB	2225	A
35	BB	2226	C
35	BB	2238	G
35	BB	2239	G
35	BB	2250	G
35	BB	2251	G
35	BB	2266	A
35	BB	2278	A
35	BB	2279	G
35	BB	2283	C
35	BB	2286	G
35	BB	2287	A

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Mol	Chain	Res	Type
35	BB	2288	A
35	BB	2297	A
35	BB	2305	U
35	BB	2307	G
35	BB	2308	G
35	BB	2311	A
35	BB	2322	A
35	BB	2324	U
35	BB	2325	G
35	BB	2333	A
35	BB	2335	A
35	BB	2336	A
35	BB	2337	G
35	BB	2347	C
35	BB	2383	G
35	BB	2385	C
35	BB	2388	A
35	BB	2396	G
35	BB	2402	U
35	BB	2403	C
35	BB	2406	A
35	BB	2407	A
35	BB	2423	U
35	BB	2425	A
35	BB	2426	A
35	BB	2429	G
35	BB	2430	A
35	BB	2434	A
35	BB	2441	U
35	BB	2448	A
35	BB	2458	G
35	BB	2472	G
35	BB	2473	U
35	BB	2476	A
35	BB	2478	A
35	BB	2491	U
35	BB	2492	U
35	BB	2498	C
35	BB	2502	G
35	BB	2503	A
35	BB	2505	G
35	BB	2506	U

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Mol	Chain	Res	Type
35	BB	2518	A
35	BB	2529	G
35	BB	2530	A
35	BB	2534	A
35	BB	2535	G
35	BB	2554	U
35	BB	2555	U
35	BB	2566	A
35	BB	2567	G
35	BB	2573	C
35	BB	2586	U
35	BB	2602	A
35	BB	2609	U
35	BB	2613	U
35	BB	2629	U
35	BB	2630	G
35	BB	2682	A
35	BB	2689	U
35	BB	2713	U
35	BB	2714	G
35	BB	2726	A
35	BB	2744	G
35	BB	2748	A
35	BB	2751	G
35	BB	2757	A
35	BB	2765	A
35	BB	2778	A
35	BB	2791	G
35	BB	2793	C
35	BB	2796	U
35	BB	2797	U
35	BB	2798	U
35	BB	2799	A
35	BB	2800	A
35	BB	2808	G
35	BB	2809	A
35	BB	2820	A
35	BB	2821	A
35	BB	2832	U
35	BB	2836	U
35	BB	2849	U
35	BB	2850	A

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Mol	Chain	Res	Type
35	BB	2867	G
35	BB	2872	A
35	BB	2873	A
35	BB	2883	A
35	BB	2893	A

All (92) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	51	A
1	AA	60	A
1	AA	85	U
1	AA	243	A
1	AA	279	A
1	AA	328	C
1	AA	366	A
1	AA	372	C
1	AA	381	C
1	AA	412	A
1	AA	428	G
1	AA	429	U
1	AA	461	A
1	AA	484	G
1	AA	485	U
1	AA	632	U
1	AA	815	A
1	AA	843	U
1	AA	845	A
1	AA	960	U
1	AA	976	G
1	AA	1049	U
1	AA	1065	U
1	AA	1137	C
1	AA	1168	U
1	AA	1201	A
1	AA	1214	C
1	AA	1226	C
1	AA	1257	A
1	AA	1278	G
1	AA	1300	G
1	AA	1319	A

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Mol	Chain	Res	Type
1	AA	1529	G
34	BA	25	U
34	BA	66	A
35	BB	91	A
35	BB	241	A
35	BB	320	A
35	BB	321	U
35	BB	455	C
35	BB	670	A
35	BB	827	U
35	BB	829	A
35	BB	858	G
35	BB	876	C
35	BB	880	G
35	BB	887	U
35	BB	889	C
35	BB	890	C
35	BB	891	G
35	BB	973	A
35	BB	1088	A
35	BB	1174	U
35	BB	1205	A
35	BB	1272	A
35	BB	1312	U
35	BB	1332	G
35	BB	1458	U
35	BB	1459	G
35	BB	1509	A
35	BB	1608	A
35	BB	1617	C
35	BB	1699	G
35	BB	1730	C
35	BB	1808	A
35	BB	1938	A
35	BB	1944	U
35	BB	1966	A
35	BB	2076	U
35	BB	2130	U
35	BB	2131	U
35	BB	2132	U
35	BB	2133	G
35	BB	2144	G

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Mol	Chain	Res	Type
35	BB	2145	C
35	BB	2152	G
35	BB	2159	G
35	BB	2172	U
35	BB	2282	G
35	BB	2286	G
35	BB	2307	G
35	BB	2308	G
35	BB	2336	A
35	BB	2402	U
35	BB	2406	A
35	BB	2423	U
35	BB	2425	A
35	BB	2491	U
35	BB	2601	C
35	BB	2602	A
35	BB	2756	U

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

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	$\#\|Z\| > 2$
22	5MU	AV	54	22	18,21,23	0.65	0	25,30,35	0.74	1 (4%)

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
22	5MU	AV	54	22	-	0/7/25/26	0/2/2/2

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	AV	54	5MU	O4'-C1'-N1	2.45	113.90	108.36

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)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	BU	1
14	AN	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BU	4:ILE	C	6:ARG	N	4.65
1	AN	35:ALA	C	40:ARG	N	4.56

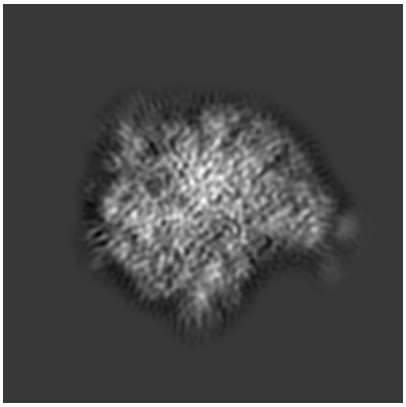
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1657. These allow visual inspection of the internal detail of the map and identification of artifacts.

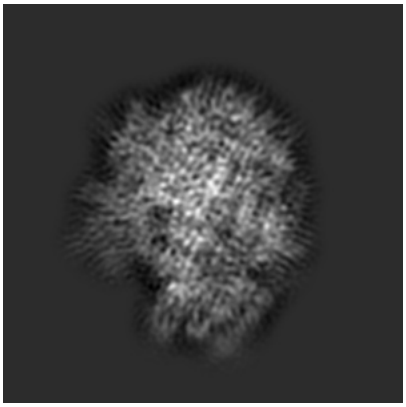
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

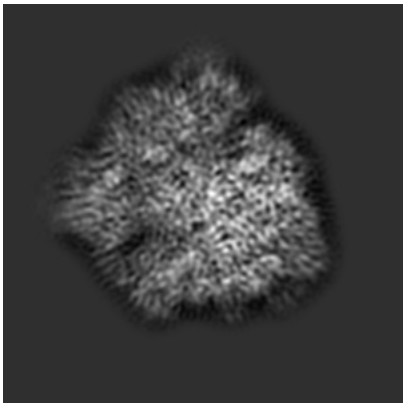
6.1.1 Primary map



X



Y

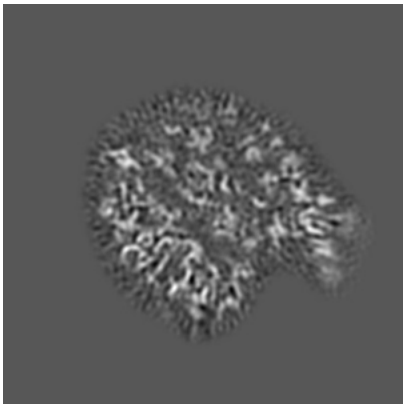


Z

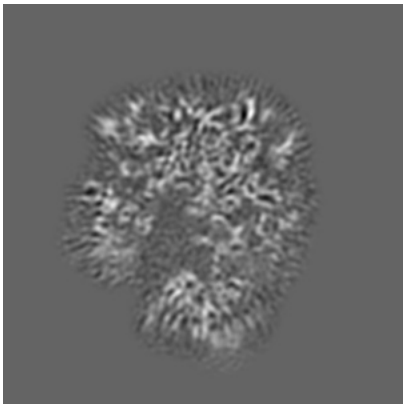
The images above show the map projected in three orthogonal directions.

6.2 Central slices

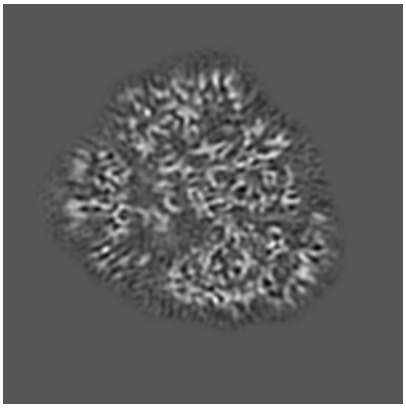
6.2.1 Primary map



X Index: 147



Y Index: 147

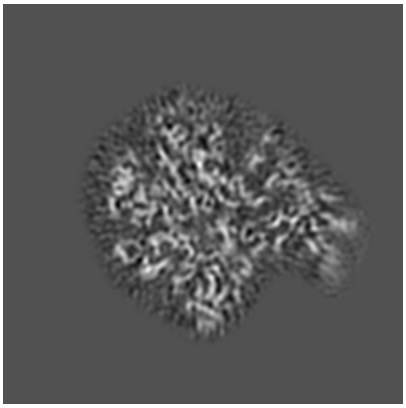


Z Index: 147

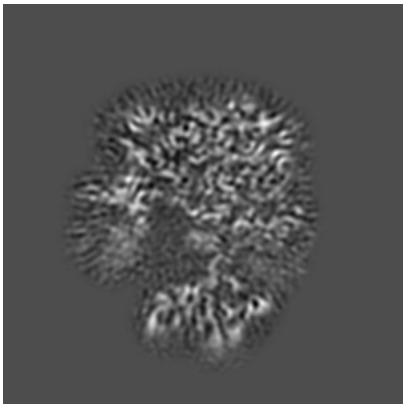
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

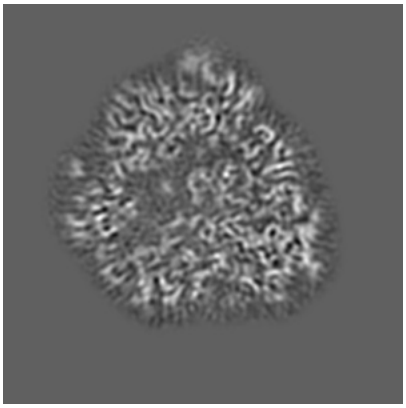
6.3.1 Primary map



X Index: 152



Y Index: 155



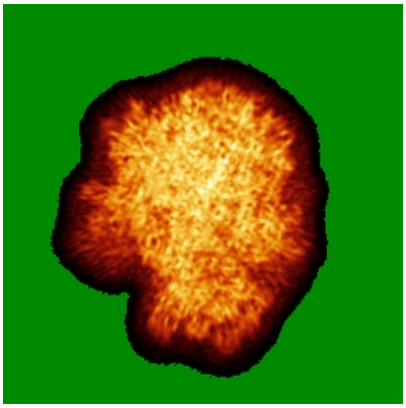
Z Index: 136

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

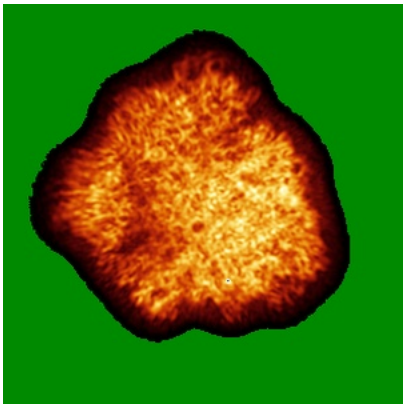
6.4 Orthogonal standard-deviation projections (False-color) (i)

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)

This section was not generated.

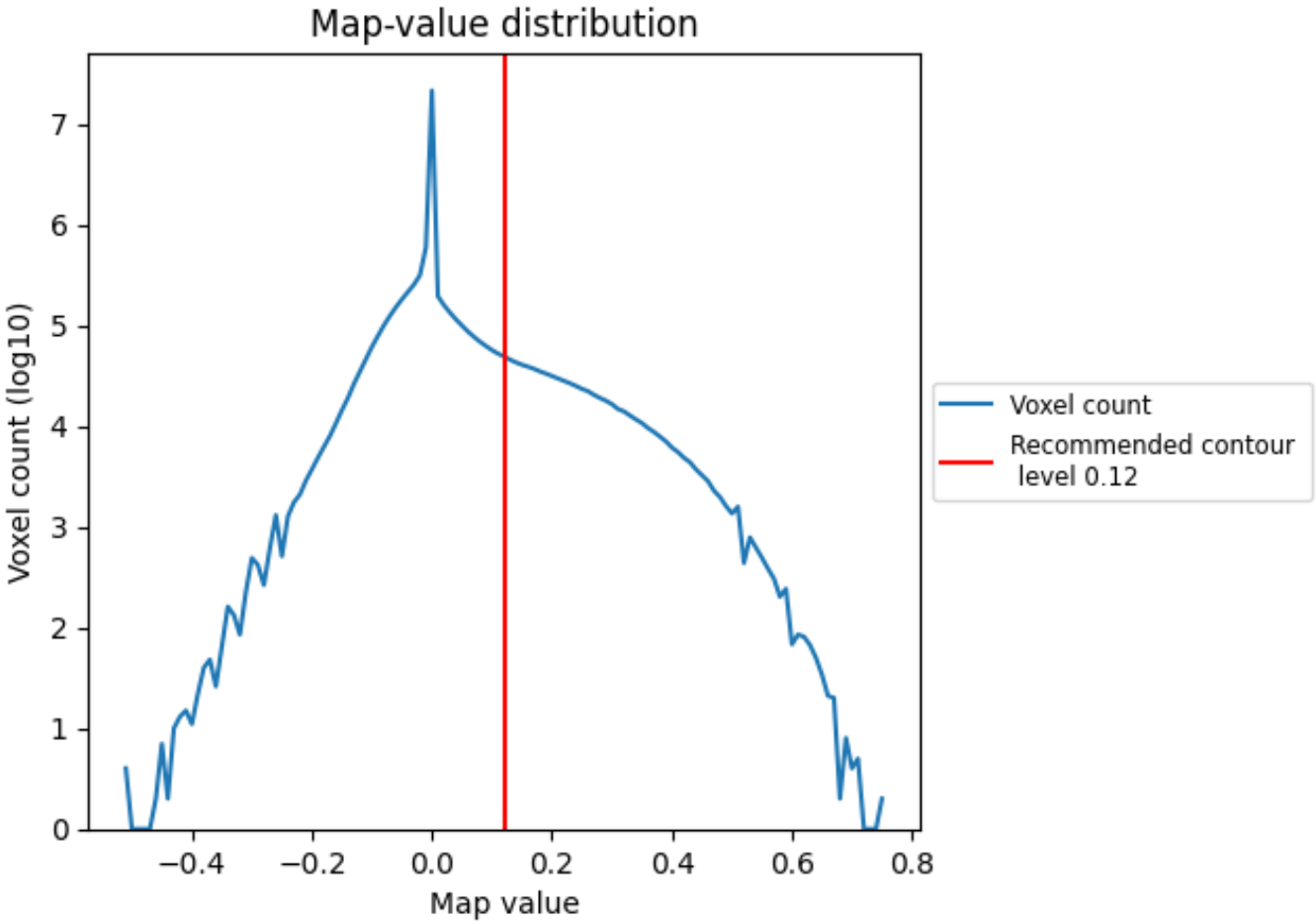
6.6 Mask visualisation (i)

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

7 Map analysis

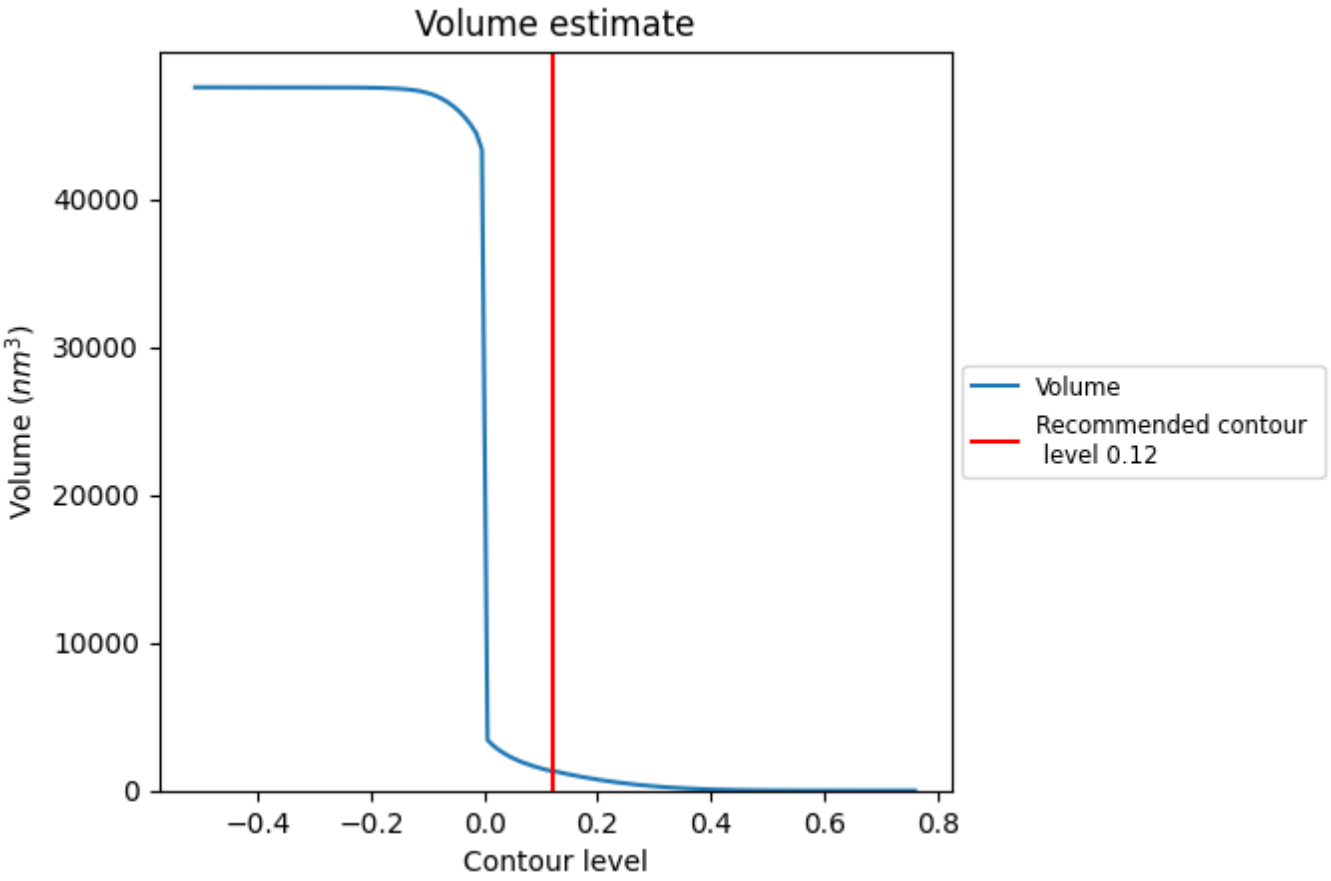
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

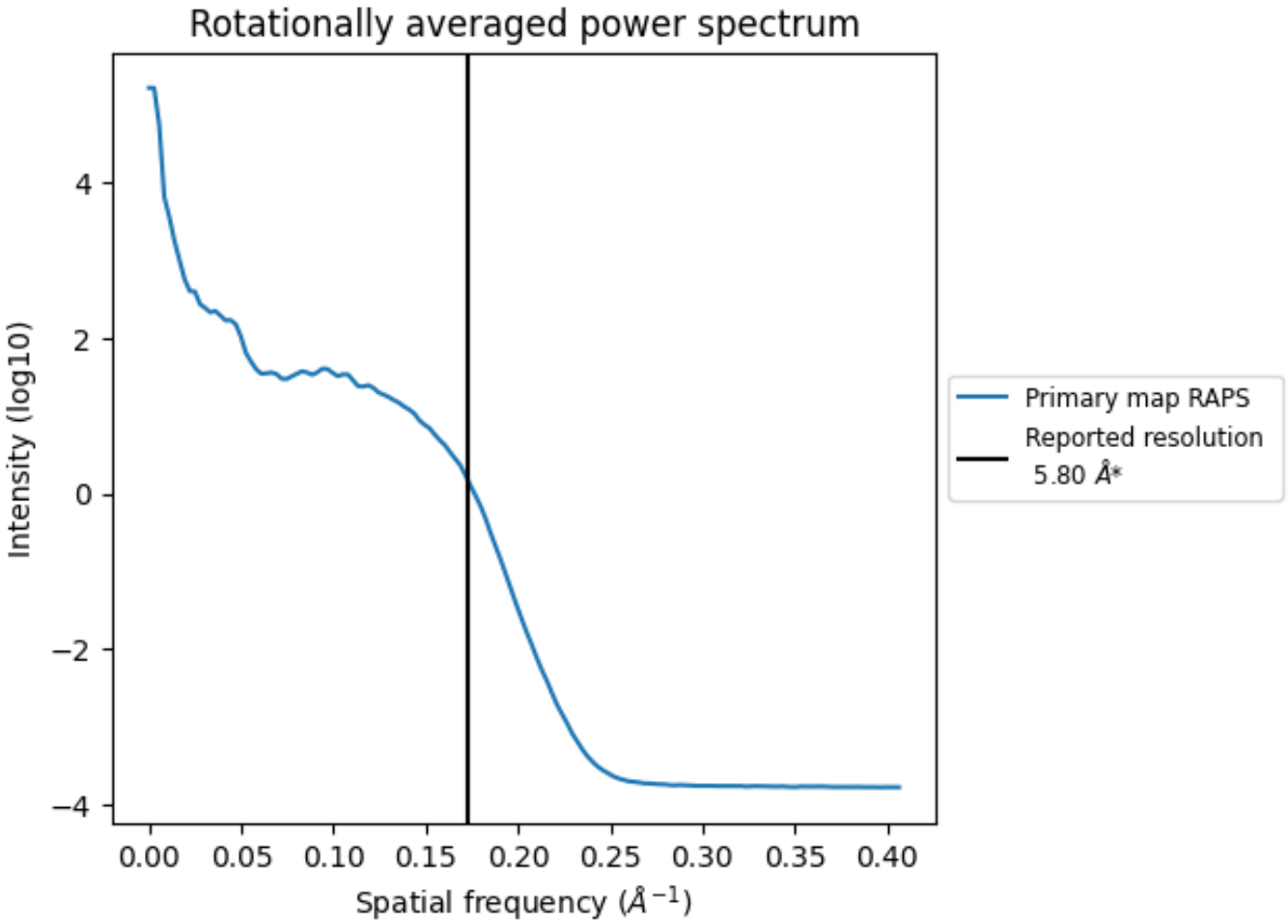
7.2 Volume estimate



The volume at the recommended contour level is 1327 nm^3; this corresponds to an approximate mass of 1198 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 (i)



*Reported resolution corresponds to spatial frequency of 0.172 Å^{-1}

8 Fourier-Shell correlation

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

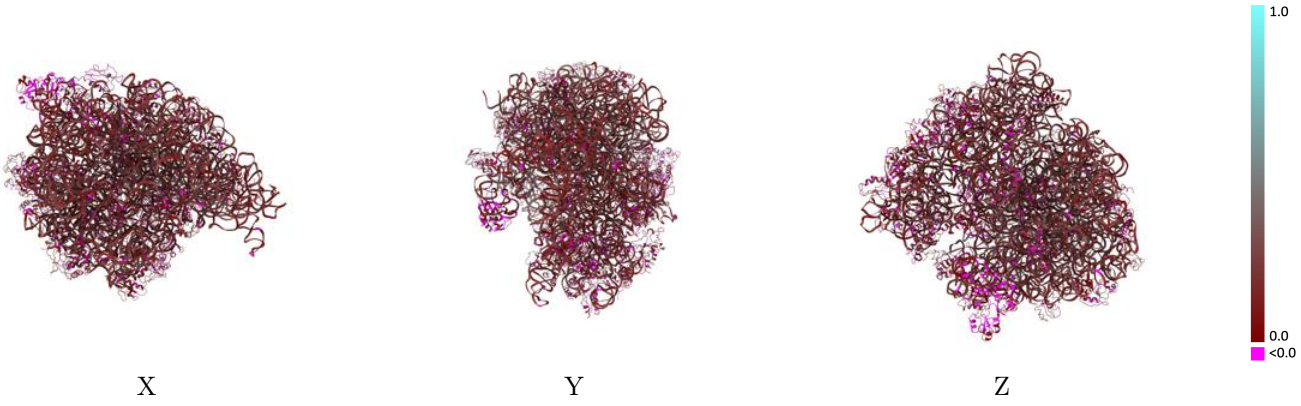
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1657 and PDB model 4V5H. Per-residue inclusion information can be found in section 3 on page 15.

9.1 Map-model overlay

This section was not generated.

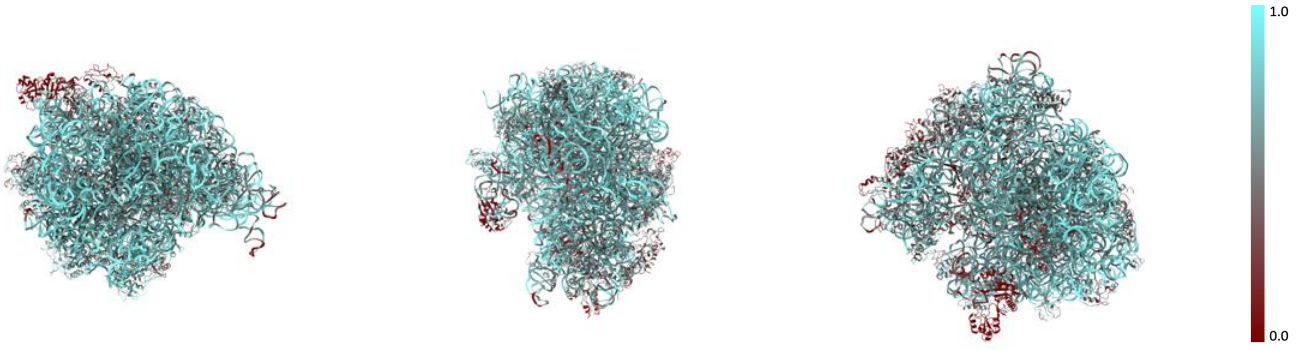
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according 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.

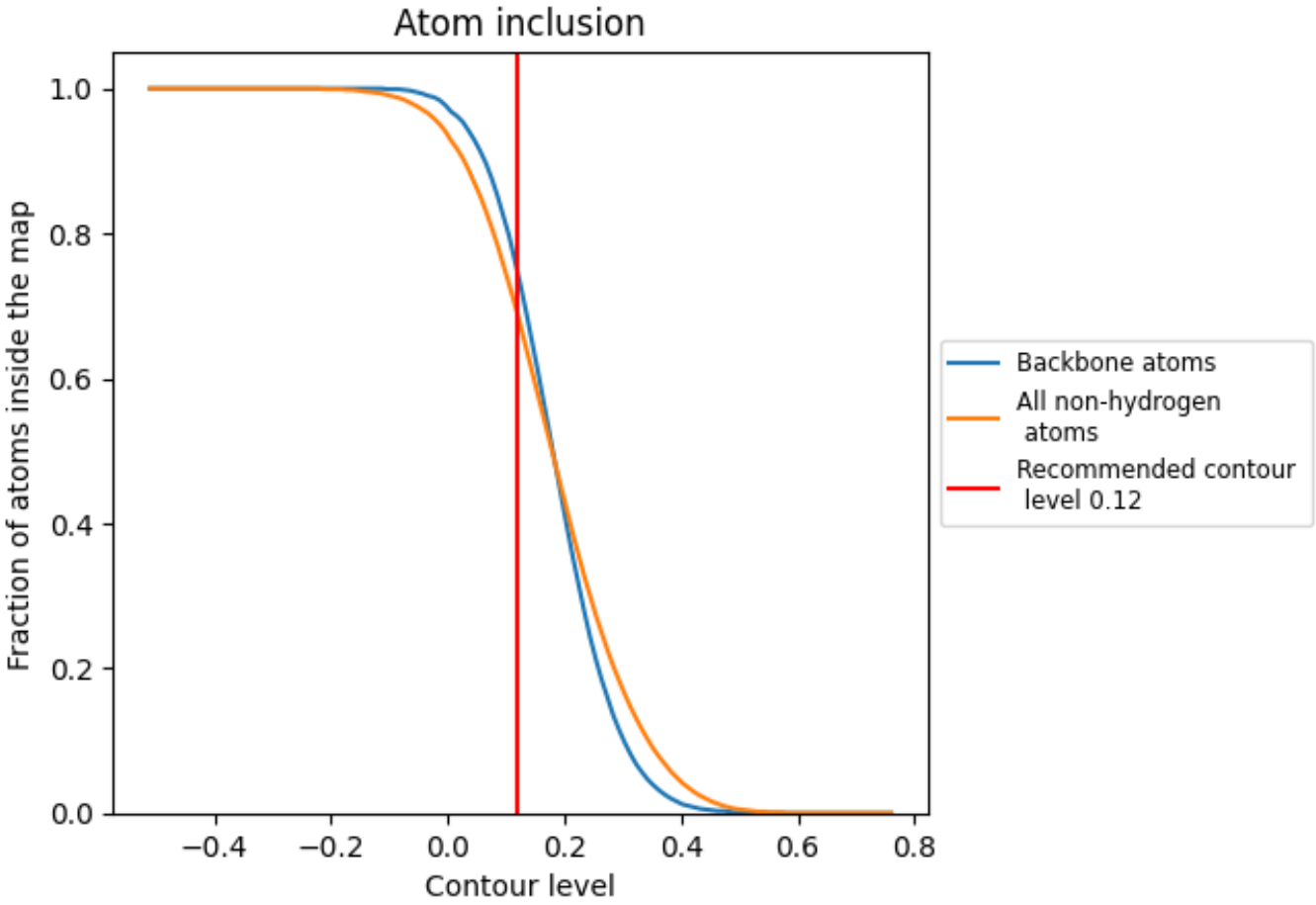
9.3 Atom inclusion mapped to coordinate model



X Y Z

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 (0.12).

9.4 Atom inclusion (i)



At the recommended contour level, 75% of all backbone atoms, 69% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6880	0.1890
AA	0.7560	0.2050
AB	0.3910	0.1500
AC	0.4960	0.1420
AD	0.4610	0.1350
AE	0.5320	0.1500
AF	0.6060	0.1760
AG	0.4700	0.1610
AH	0.5290	0.1450
AI	0.4710	0.1220
AJ	0.3250	0.1070
AK	0.5430	0.1610
AL	0.5160	0.1630
AM	0.5490	0.1550
AN	0.5610	0.1400
AO	0.5640	0.1650
AP	0.5310	0.1390
AQ	0.5680	0.1720
AR	0.5870	0.1720
AS	0.5860	0.1570
AT	0.5280	0.1460
AU	0.3500	0.1570
AV	0.5620	0.1430
AX	0.2630	0.1480
AZ	0.4900	0.3070
B0	0.5410	0.1620
B1	0.5510	0.1390
B2	0.5810	0.1740
B3	0.5650	0.1600
B4	0.5760	0.1680
B5	0.0180	-0.0020
B6	0.4650	0.1340
B7	0.5580	0.1530
B8	0.5620	0.1810
BA	0.8170	0.2140

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Chain	Atom inclusion	Q-score
BB	0.7850	0.2140
BC	0.5570	0.1700
BD	0.5980	0.1590
BE	0.4930	0.1400
BF	0.5940	0.1600
BG	0.6720	0.1850
BH	0.2460	0.1340
BI	0.2170	0.0320
BJ	0.6080	0.1750
BK	0.5070	0.1660
BL	0.5340	0.1610
BM	0.5540	0.1740
BN	0.5570	0.1360
BO	0.6230	0.1600
BP	0.5640	0.1720
BQ	0.5560	0.1160
BR	0.6200	0.1840
BS	0.5420	0.1360
BT	0.5230	0.1380
BU	0.5570	0.1560
BW	0.6440	0.1700
BY	0.5190	0.1080