Full wwPDB X-ray Structure Validation Report ⓘ

Jan 14, 2024 – 10:26 am GMT

PDB ID	:	6I7V
Title	:	Ribosomal protein paralogs bL31 and bL36
Authors	:	Pulk, A.; Cate, J.H.D.; Remme, J.; Lilleorg, S.; Reier, K.; Peil, L.; Liiv, A.; Tammsalu, T.
Deposited on	:	2018-11-19
Resolution	:	2.90 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
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:

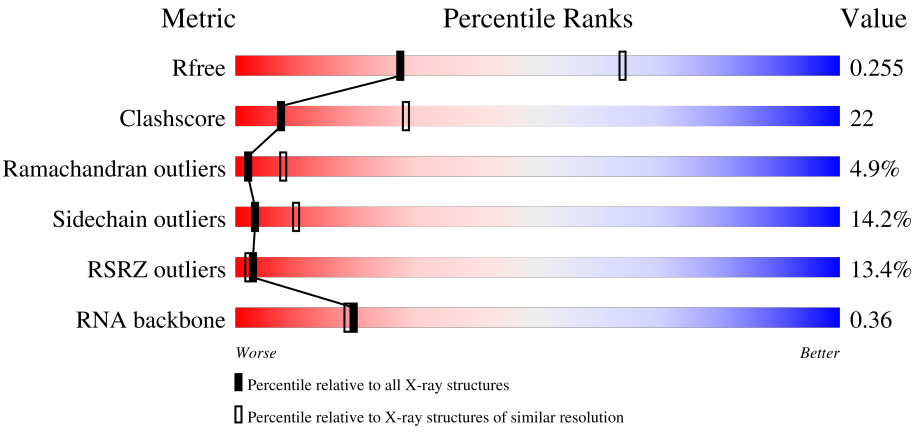
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)
RNA backbone	3102	1007 (3.16-2.64)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1533	16% 40% 37% 7%
2	BA	1533	19% 45% 30% 6%
3	DA	2903	7% 37% 43% 12%
4	CA	2904	3% 20% 48% 27%

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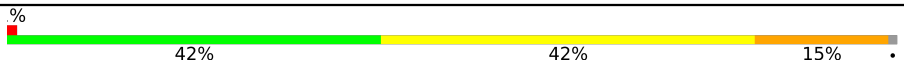
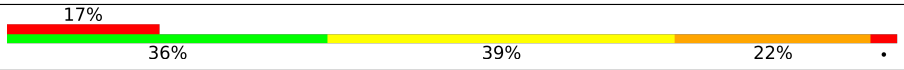
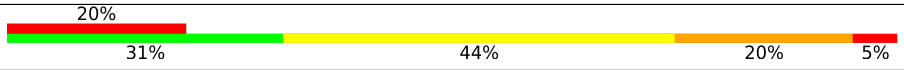
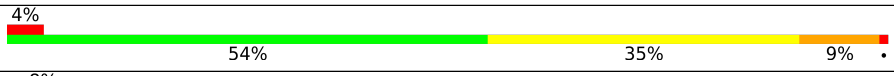
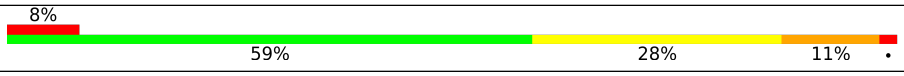
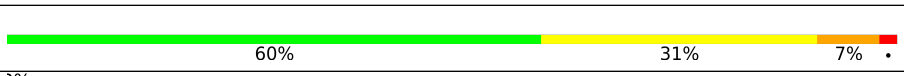
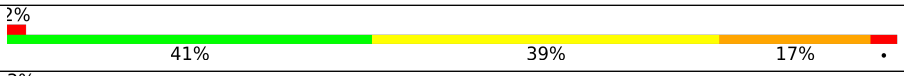
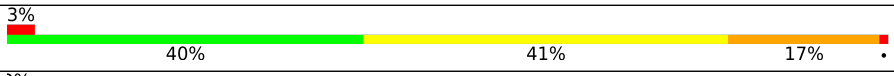
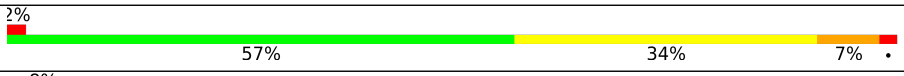
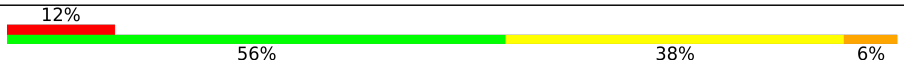
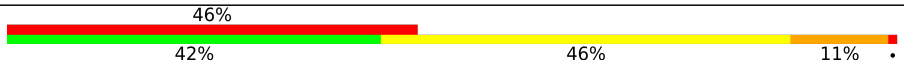
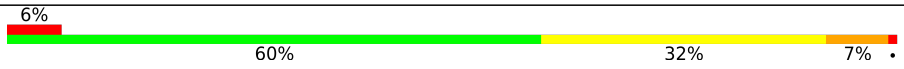
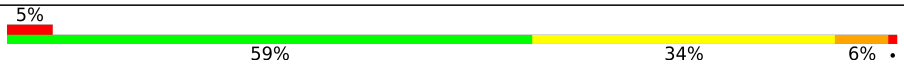
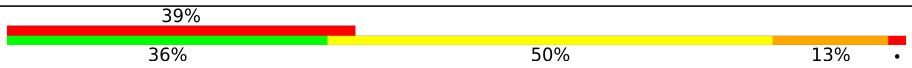
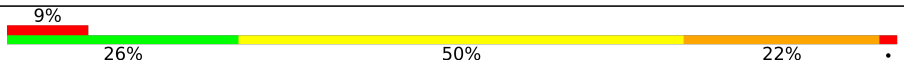
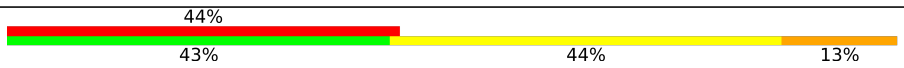
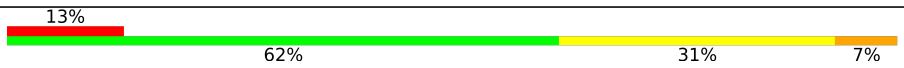
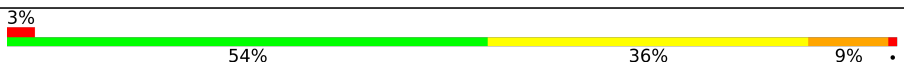
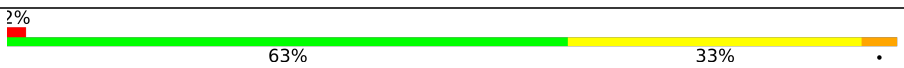
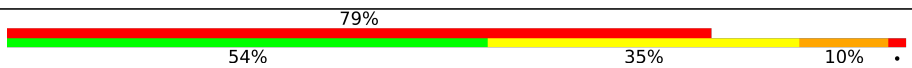
Mol	Chain	Length	Quality of chain
5	CB	119	
5	DB	119	
6	AB	218	
6	BB	218	
7	AC	206	
7	BC	206	
8	AD	205	
8	BD	205	
9	AE	150	
9	BE	150	
10	AF	100	
10	BF	100	
11	AG	151	
11	BG	151	
12	AH	129	
12	BH	129	
13	AI	127	
13	BI	127	
14	AJ	98	
14	BJ	98	
15	AK	117	
15	BK	117	
16	AL	123	
17	AM	114	
17	BM	114	

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Mol	Chain	Length	Quality of chain
18	AN	100	10% 36% 36% 20%
18	BN	100	36% 41% 39% 15%
19	AO	88	2% 48% 38% 13%
19	BO	88	6% 48% 39% 11%
20	AP	82	18% 56% 33% 9%
20	BP	82	40% 49% 39% 12%
21	AQ	80	9% 50% 35% 11%
21	BQ	80	46% 50% 32% 14%
22	AR	55	7% 73% 20% 5%
22	BR	55	4% 53% 40%
23	AS	79	29% 57% 32% 10%
23	BS	79	84% 61% 30% 9%
24	AT	85	11% 42% 45% 7% 6%
24	BT	85	52% 55% 29% 14%
25	AU	54	15% 61% 20% 13% 6%
25	BU	54	2% 43% 37% 19%
26	BL	123	7% 54% 35% 7%
27	CC	271	8% 59% 35% 6%
27	DC	271	63% 30% 7%
28	CD	209	40% 58% 36% 5%
29	CE	201	61% 55% 38% 7%
29	DE	201	67% 27% 6%
30	CF	177	71% 60% 32% 7%
30	DF	177	2% 55% 38% 6%
31	CG	176	65% 69% 26% 6%

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Mol	Chain	Length	Quality of chain
31	DG	176	% 70% 26%
32	CH	148	32% 55% 34% 10%
32	DH	148	31% 61% 30% 8%
33	CJ	141	85% 38% 41% 19%
33	DJ	141	67% 30% 47% 21%
34	CK	142	22% 61% 35%
34	DK	142	% 57% 35% 6%
35	CL	123	39% 67% 26% 6%
35	DL	123	66% 30%
36	CM	144	60% 53% 39% 6%
36	DM	144	% 68% 25% 6%
37	CN	136	49% 72% 25%
37	DN	136	63% 35%
38	CO	120	42% 52% 38% 10%
38	DO	120	52% 38% 8%
39	CP	117	66% 62% 29% 9%
39	DP	117	68% 26% 7%
40	CQ	114	37% 54% 39% 6%
40	DQ	114	70% 24% 5%
41	CR	117	44% 68% 28%
41	DR	117	55% 36% 9%
42	CS	103	62% 47% 45% 9%
42	DS	103	57% 32% 11%
43	CT	110	50% 54% 36% 9%
43	DT	110	53% 31% 15%

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Mol	Chain	Length	Quality of chain
44	CU	93	78% 53% 33% 13%
44	DU	93	2% 65% 31%
45	CV	102	83% 51% 40% 8%
45	DV	102	2% 68% 25% 5%
46	CW	94	37% 71% 26%
46	DW	94	% 70% 21% 9%
47	CX	76	61% 75% 21%
47	DX	76	% 63% 32% 5%
48	CY	77	40% 49% 44% 6%
48	DY	77	70% 26%
49	CZ	62	52% 60% 31% 8%
49	DZ	62	2% 52% 35% 11%
50	C0	58	33% 50% 41% 7%
50	D0	58	60% 31% 9%
51	C1	56	38% 50% 36% 14%
51	D1	56	57% 34% 5%
52	C2	51	57% 59% 39%
52	D2	51	73% 25%
53	C3	46	43% 39% 50% 11%
53	D3	46	2% 70% 22% 7%
54	C4	64	42% 48% 48%
54	D4	64	69% 22% 9%
55	C5	45	58% 40% 44% 11%
55	D5	45	36% 36% 29%
56	DD	209	66% 30% 5%

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Mol	Chain	Length	Quality of chain
57	D7	68	9% 12% 46% 31% 12%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	MA6	AA	1519	-	-	X	-
3	2MG	DA	1835	-	-	X	-
3	OMC	DA	2498	-	-	X	-
3	5MU	DA	747	-	-	X	-
58	MG	CA	3017	-	-	-	X
58	MG	CA	3049	-	-	-	X
58	MG	CA	3084	-	-	-	X
58	MG	CA	3102	-	-	-	X
58	MG	CA	3154	-	-	-	X
58	MG	CA	3159	-	-	-	X
58	MG	CA	3173	-	-	-	X
58	MG	D5	102	-	-	-	X
59	PGE	DD	301	-	-	-	X
59	PGE	DT	202	-	-	-	X
60	MPD	DA	3072	-	-	-	X
60	MPD	DE	301	-	-	-	X
60	MPD	DE	302	-	-	-	X
60	MPD	DT	201	-	-	-	X
61	PG4	DR	202	-	-	X	-
63	PUT	DA	3037	-	-	X	-
63	PUT	DA	3054	-	-	X	-
63	PUT	DP	202	-	-	X	-
65	ACY	DA	3064	-	-	X	-
66	PEG	D1	102	-	-	-	X
66	PEG	DA	3063	-	-	-	X
66	PEG	DP	201	-	-	-	X
66	PEG	DQ	201	-	-	-	X
67	EDO	DA	3059	-	-	X	-
67	EDO	DA	3060	-	-	X	-

2 Entry composition (i)

There are 69 unique types of molecules in this entry. The entry contains 484785 atoms, of which 191884 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
1	AA	1533	49352	14684	16444	6036	10655	1533	0	0	0

- Molecule 2 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
2	BA	1533	49448	14671	16553	6036	10655	1533	0	0	0

- Molecule 3 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trac
			Total	C	H	N	O	P			
3	DA	2897	93383	27779	31129	11456	20120	2899	0	2	0

- Molecule 4 is a RNA chain called 23S ribsomal RNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trac
			Total	C	H	N	O	P			
4	CA	2898	93503	27754	31288	11448	20115	2898	0	0	0

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	P			
5	DB	119	3840	1135	1291	466	829	119	0	0	0
5	CB	118	Total	C	H	N	O	P	0	0	0
			3810	1126	1281	464	821	118			

- Molecule 6 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
6	AB	218	Total	C	H	N	O	S	0	0	0
			3431	1081	1726	305	312	7			
6	BB	218	Total	C	H	N	O	S	0	0	0
			3431	1081	1726	305	312	7			

- Molecule 7 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
7	AC	206	Total	C	H	N	O	S	0	0	0
			3317	1028	1692	305	289	3			
7	BC	206	Total	C	H	N	O	S	0	0	0
			3317	1028	1692	305	289	3			

- Molecule 8 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
8	AD	205	Total	C	H	N	O	S	0	0	0
			3347	1026	1704	315	298	4			
8	BD	205	Total	C	H	N	O	S	0	0	0
			3347	1026	1704	315	298	4			

- Molecule 9 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
9	AE	150	Total	C	H	N	O	S	0	0	0
			2251	687	1145	211	202	6			
9	BE	150	Total	C	H	N	O	S	0	0	0
			2251	687	1145	211	202	6			

- Molecule 10 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
10	AF	100	Total	C	H	N	O	S	0	0	0
			1617	515	799	148	149	6			
10	BF	100	Total	C	H	N	O	S	0	0	0
			1617	515	799	148	149	6			

- Molecule 11 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
11	AG	151	Total	C	H	N	O	S	0	0	0
			2419	735	1237	227	216	4			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
11	BG	151	Total	C	H	N	O	S	0	0	0
			2419	735	1237	227	216	4			

- Molecule 12 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
12	AH	129	Total	C	H	N	O	S	0	0	0
			2010	616	1031	173	184	6			
12	BH	129	Total	C	H	N	O	S	0	0	0
			2010	616	1031	173	184	6			

- Molecule 13 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
13	AI	127	Total	C	H	N	O	S	0	0	0
			2091	634	1069	206	179	3			
13	BI	127	Total	C	H	N	O	S	0	0	0
			2091	634	1069	206	179	3			

- Molecule 14 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
14	AJ	98	Total	C	H	N	O	S	0	0	0
			1612	493	825	150	143	1			
14	BJ	98	Total	C	H	N	O	S	0	0	0
			1612	493	825	150	143	1			

- Molecule 15 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
15	AK	117	Total	C	H	N	O	S	0	0	0
			1761	540	884	174	160	3			
15	BK	117	Total	C	H	N	O	S	0	0	0
			1761	540	884	174	160	3			

- Molecule 16 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
16	AL	123	Total	C	H	N	O	S	0	0	0
			1966	591	1009	196	165	5			

- Molecule 17 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
17	AM	114	Total	C	H	N	O	S	0	0	0
			1822	546	938	178	157	3			
17	BM	114	Total	C	H	N	O	S	0	0	0
			1822	546	938	178	157	3			

- Molecule 18 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
18	AN	96	Total	C	H	N	O	S	0	0	0
			1597	483	823	160	128	3			
18	BN	96	Total	C	H	N	O	S	0	0	0
			1597	483	823	160	128	3			

- Molecule 19 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
19	AO	88	Total	C	H	N	O	S	0	0	0
			1450	440	734	146	129	1			
19	BO	88	Total	C	H	N	O	S	0	0	0
			1450	440	734	146	129	1			

- Molecule 20 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
20	AP	82	Total	C	H	N	O	S	0	0	0
			1310	406	661	128	114	1			
20	BP	82	Total	C	H	N	O	S	0	0	0
			1310	406	661	128	114	1			

- Molecule 21 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
21	AQ	80	Total	C	H	N	O	S	0	0	0
			1337	411	688	121	114	3			
21	BQ	80	Total	C	H	N	O	S	0	0	0
			1337	411	688	121	114	3			

- Molecule 22 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AR	55	Total	C	H	N	O	0	0	0
			933	288	477	86	82			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BR	55	Total	C	H	N	O	0	0	0
			933	288	477	86	82			

- Molecule 23 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	AS	79	Total	C	H	N	O	S	0	0	0
			1295	408	657	120	108	2			
23	BS	79	Total	C	H	N	O	S	0	0	0
			1299	408	661	120	108	2			

- Molecule 24 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
24	AT	85	Total	C	H	N	O	S	0	0	0
			1376	411	711	137	114	3			
24	BT	85	Total	C	H	N	O	S	0	0	0
			1376	411	711	137	114	3			

- Molecule 25 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
25	AU	54	Total	C	H	N	O	S	0	0	0
			924	280	473	94	76	1			
25	BU	54	Total	C	H	N	O	S	0	0	0
			924	280	473	94	76	1			

- Molecule 26 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	BL	123	Total	C	H	N	O	S	0	0	0
			1968	590	1013	196	165	4			

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
27	CC	271	Total	C	H	N	O	S	0	0	0
			4231	1288	2148	423	365	7			
27	DC	271	Total	C	H	N	O	S	0	0	0
			4231	1288	2148	423	365	7			

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
28	CD	209	Total	C	H	N	O	S	0	0	0
			3175	979	1610	288	294	4			

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
29	CE	201	Total	C	H	N	O	S	0	0	0
			3165	974	1613	283	290	5			
29	DE	201	Total	C	H	N	O	S	0	0	0
			3165	974	1613	283	290	5			

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
30	CF	177	Total	C	H	N	O	S	0	0	0
			2854	899	1443	249	257	6			
30	DF	177	Total	C	H	N	O	S	0	0	0
			2854	899	1443	249	257	6			

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
31	CG	176	Total	C	H	N	O	S	0	0	0
			2691	832	1368	243	246	2			
31	DG	176	Total	C	H	N	O	S	0	0	0
			2691	832	1368	243	246	2			

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
32	CH	148	Total	C	H	N	O	S	0	0	0
			2236	693	1134	197	211	1			
32	DH	148	Total	C	H	N	O	S	0	0	0
			2236	693	1134	197	211	1			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CH	?	-	LEU	deletion	UNP P0A7R1
CH	148	GLN	GLU	conflict	UNP P0A7R1
DH	?	-	LEU	deletion	UNP P0A7R1
DH	148	GLN	GLU	conflict	UNP P0A7R1

- Molecule 33 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
33	CJ	141	Total	C	H	N	O	S	0	0	0
			2117	651	1085	179	196	6			
33	DJ	141	Total	C	H	N	O	S	0	0	0
			2117	651	1085	179	196	6			

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
34	CK	142	Total	C	H	N	O	S	0	0	0
			2281	714	1152	212	199	4			
34	DK	142	Total	C	H	N	O	S	0	0	0
			2281	714	1152	212	199	4			

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
35	CL	122	Total	C	H	N	O	S	0	0	0
			1946	587	1008	180	165	6			
35	DL	123	Total	C	H	N	O	S	0	0	0
			1965	593	1019	181	166	6			

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
36	CM	143	Total	C	H	N	O	S	0	0	0
			2161	649	1116	206	189	1			
36	DM	144	Total	C	H	N	O	S	0	0	0
			2178	654	1125	207	190	2			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
37	CN	136	Total	C	H	N	O	S	0	0	0
			2227	686	1153	205	177	6			
37	DN	136	Total	C	H	N	O	S	0	1	0
			2248	691	1166	208	177	6			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
38	CO	120	Total	C	H	N	O	S	0	0	0
			1955	593	994	196	167	5			
38	DO	120	Total	C	H	N	O	S	0	0	0
			1955	593	994	196	167	5			

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
39	CP	116	Total	C	H	N	O		0	0	0
			1812	552	920	178	162				
39	DP	117	Total	C	H	N	O	S	0	0	0
			1829	557	929	179	163	1			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
40	CQ	114	Total	C	H	N	O	S	0	0	0
			1877	574	960	179	163	1			
40	DQ	114	Total	C	H	N	O	S	0	0	0
			1877	574	960	179	163	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	CR	117	Total	C	H	N	O	0	0	0
			1965	604	1018	192	151			
41	DR	117	Total	C	H	N	O	0	0	0
			1965	604	1018	192	151			

- Molecule 42 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
42	CS	103	Total	C	H	N	O	S	0	0	0
			1648	516	832	153	145	2			
42	DS	103	Total	C	H	N	O	S	0	0	0
			1648	516	832	153	145	2			

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
43	CT	110	Total	C	H	N	O	S	0	0	0
			1772	532	915	166	156	3			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
43	DT	110	Total	C	H	N	O	S	0	0	0
			1772	532	915	166	156	3			

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
44	CU	93	Total	C	H	N	O	S	0	0	0
			1541	466	802	139	132	2			
44	DU	92	Total	C	H	N	O	S	0	0	0
			1525	461	794	138	131	1			

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	CV	102	Total	C	H	N	O	0	0	0
			1610	492	830	146	142			
45	DV	102	Total	C	H	N	O	0	0	0
			1610	492	830	146	142			

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
46	CW	94	Total	C	H	N	O	S	0	0	0
			1527	479	774	137	134	3			
46	DW	94	Total	C	H	N	O	S	0	0	0
			1527	479	774	137	134	3			

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
47	CX	75	Total	C	H	N	O	S	0	0	0
			1148	353	579	113	102	1			
47	DX	76	Total	C	H	N	O	S	0	2	0
			1197	365	606	121	104	1			

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
48	CY	77	Total	C	H	N	O	S	0	0	0
			1274	388	649	129	106	2			
48	DY	77	Total	C	H	N	O	S	0	0	0
			1274	388	649	129	106	2			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
49	CZ	62	Total	C	H	N	O	S	0	0	0
			1031	308	530	98	94	1			
49	DZ	62	Total	C	H	N	O	S	0	0	0
			1031	308	530	98	94	1			

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

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
50	C0	58	Total	C	H	N	O	S	0	0	0
			935	281	486	87	79	2			
50	D0	58	Total	C	H	N	O	S	0	1	0
			935	281	486	87	79	2			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
51	C1	56	Total	C	H	N	O	S	0	0	0
			898	269	454	94	80	1			
51	D1	56	Total	C	H	N	O	S	0	0	0
			898	269	454	94	80	1			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	C2	50	Total	C	H	N	O	0	0	0
			847	263	438	75	71			
52	D2	51	Total	C	H	N	O	0	0	0
			857	266	443	76	72			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C2	53	ALA	-	expression tag	UNP P0A7N9
D2	53	ALA	-	expression tag	UNP P0A7N9

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
53	C3	46	Total	C	H	N	O	S	0	0	0
			791	228	414	90	57	2			

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
53	D3	46	Total	C	H	N	O	S	0	0	0
			791	228	414	90	57	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
54	C4	64	Total	C	H	N	O	S	0	0	0
			1072	323	568	105	74	2			
54	D4	64	Total	C	H	N	O	S	0	0	0
			1072	323	568	105	74	2			

- Molecule 55 is a protein called 50S ribosomal protein L36 2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
55	C5	44	Total	C	H	N	O	S	0	0	0
			754	224	395	76	56	3			
55	D5	45	Total	C	H	N	O	S	0	0	0
			763	230	395	78	57	3			

- Molecule 56 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	DD	209	Total	C	H	N	O	S	0	0	0
			3178	980	1612	288	294	4			

- Molecule 57 is a protein called 50S ribosomal protein L31 type B.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
57	D7	68	Total	C	H	N	O	S	0	0	0
			707	336	177	89	104	1			

- Molecule 58 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AA	57	Total	Mg	0	0
			57	57		
58	BA	49	Total	Mg	0	0
			49	49		
58	DA	156	Total	Mg	0	0
			156	156		
58	CA	176	Total	Mg	0	0
			176	176		

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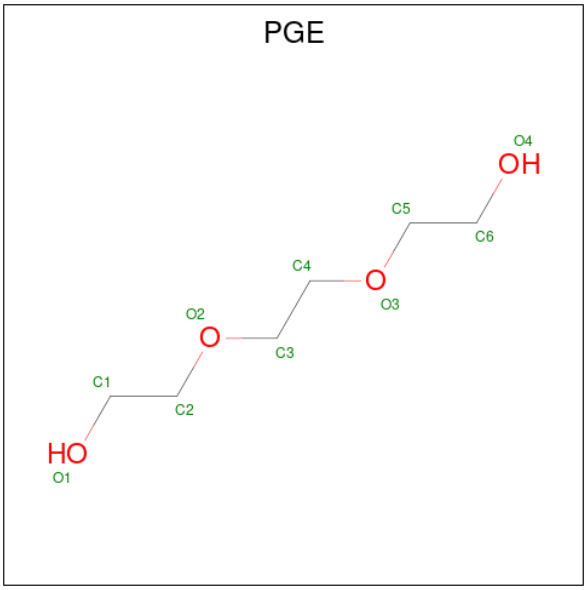
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	DB	4	Total Mg 4 4	0	0
58	CB	3	Total Mg 3 3	0	0
58	CM	1	Total Mg 1 1	0	0
58	CR	1	Total Mg 1 1	0	0
58	C3	1	Total Mg 1 1	0	0
58	DD	1	Total Mg 1 1	0	0
58	DM	1	Total Mg 1 1	0	0
58	DR	2	Total Mg 2 2	0	0
58	D5	1	Total Mg 1 1	0	0

- Molecule 59 is TRIETHYLENE GLYCOL (three-letter code: PGE) (formula: $C_6H_{14}O_4$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	AA	1	Total C H O 24 6 14 4	0	0
59	DA	1	Total C H O 24 6 14 4	0	0

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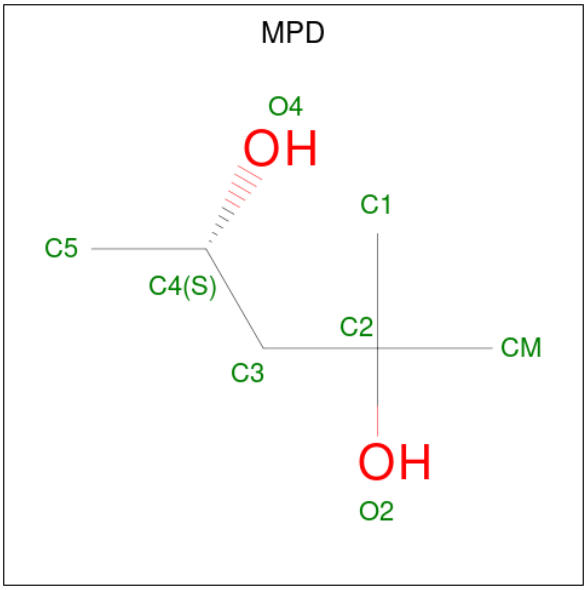
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	DA	1	Total C H O 24 6 14 4	0	0
59	DD	1	Total C H O 24 6 14 4	0	0
59	DS	1	Total C H O 24 6 14 4	0	0
59	DT	1	Total C H O 24 6 14 4	0	0
59	DU	1	Total C H O 24 6 14 4	0	0
59	D3	1	Total C H O 24 6 14 4	0	0

- Molecule 60 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0

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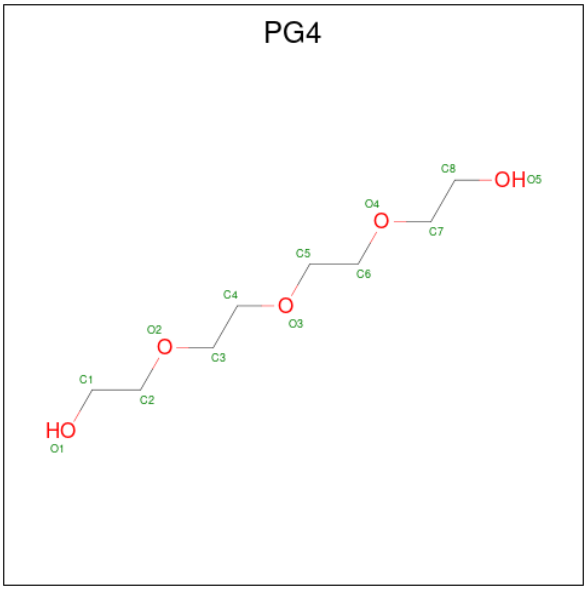
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DA	1	Total C H O 22 6 14 2	0	0
60	DE	1	Total C H O 22 6 14 2	0	0
60	DE	1	Total C H O 22 6 14 2	0	0
60	DK	1	Total C H O 22 6 14 2	0	0
60	DN	1	Total C H O 22 6 14 2	0	0
60	DT	1	Total C H O 22 6 14 2	0	0

- Molecule 61 is TETRAETHYLENE GLYCOL (three-letter code: PG4) (formula: $C_8H_{18}O_5$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	BA	1	Total C O 13 8 5	0	0
61	DA	1	Total C O 13 8 5	0	0
61	DQ	1	Total C O 13 8 5	0	0

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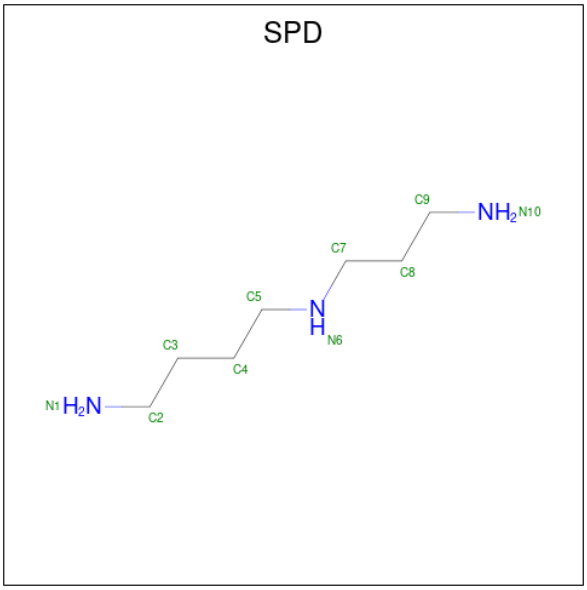
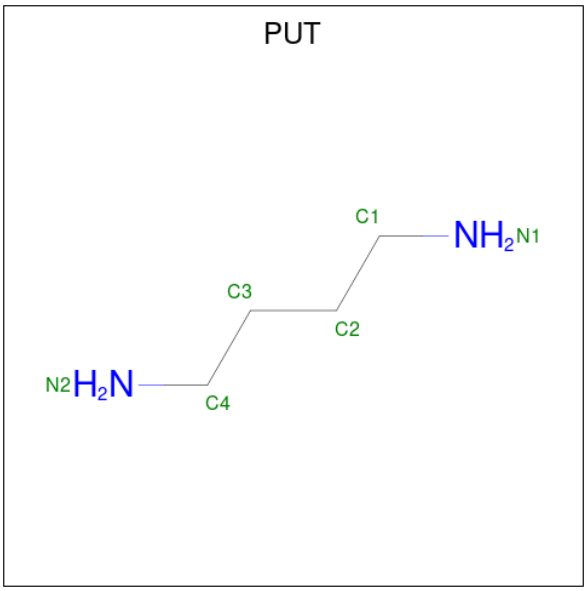
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
61	DR	1	Total C O 13 8 5	0	0
61	DS	1	Total C O 13 8 5	0	0

- Molecule 62 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



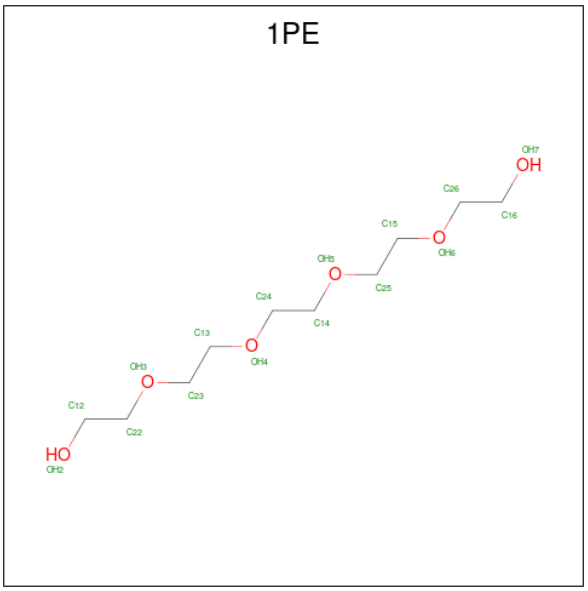
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0
62	DA	1	Total C N 10 7 3	0	0

- Molecule 63 is 1,4-DIAMINOBUTANE (three-letter code: PUT) (formula: $C_4H_{12}N_2$).



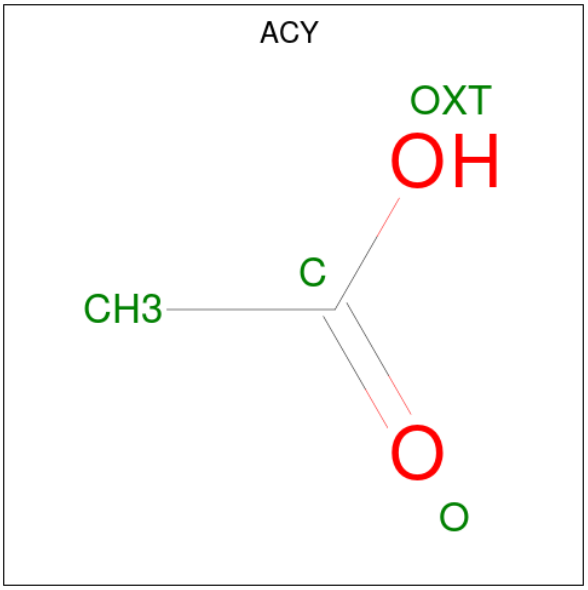
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DA	1	Total C N 6 4 2	0	0
63	DM	1	Total C N 6 4 2	0	0
63	DP	1	Total C N 6 4 2	0	0
63	D5	1	Total C N 6 4 2	0	0

- Molecule 64 is PENTAETHYLENE GLYCOL (three-letter code: 1PE) (formula: $C_{10}H_{22}O_6$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
64	DA	1	Total C O 16 10 6	0	0
64	DA	1	Total C O 16 10 6	0	0

- Molecule 65 is ACETIC ACID (three-letter code: ACY) (formula: $C_2H_4O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C H O 7 2 3 2	0	0
65	DA	1	Total C H O 7 2 3 2	0	0

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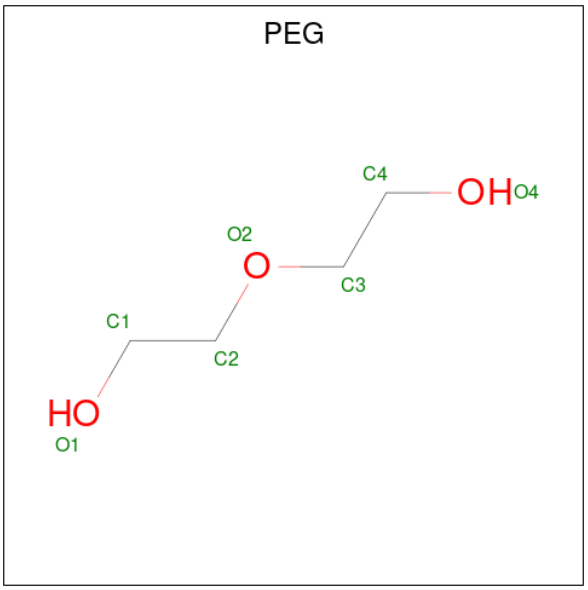
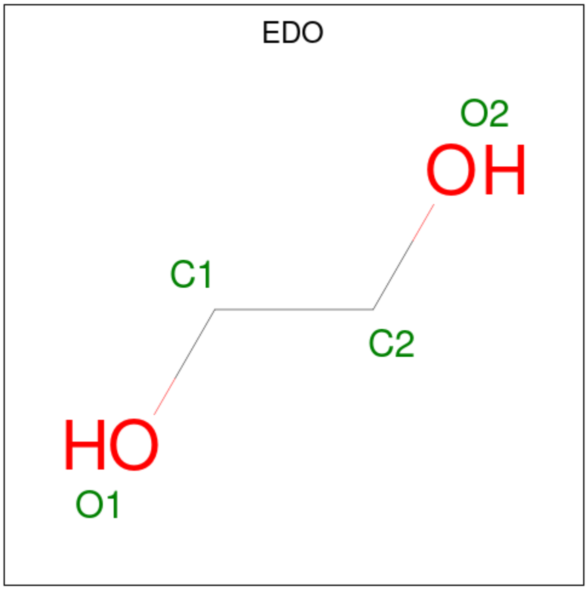
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
65	DA	1	Total C H O 7 2 3 2	0	0

- Molecule 66 is DI(HYDROXYETHYL)ETHER (three-letter code: PEG) (formula: $C_4H_{10}O_3$).



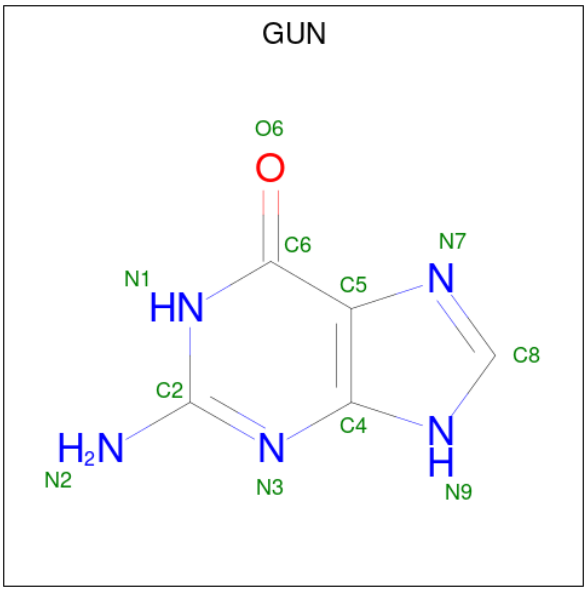
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DA	1	Total C O 7 4 3	0	0
66	DP	1	Total C O 7 4 3	0	0
66	DQ	1	Total C O 7 4 3	0	0
66	D1	1	Total C O 7 4 3	0	0
66	D3	1	Total C O 7 4 3	0	0

- Molecule 67 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DA	1	Total C O 4 2 2	0	0
67	DB	1	Total C O 4 2 2	0	0
67	DB	1	Total C O 4 2 2	0	0
67	DB	1	Total C O 4 2 2	0	0
67	DR	1	Total C O 4 2 2	0	0
67	D1	1	Total C O 4 2 2	0	0

- Molecule 68 is GUANINE (three-letter code: GUN) (formula: $C_5H_5N_5O$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
68	DA	1	Total C N O 11 5 5 1	0	0

- Molecule 69 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AA	371	Total O 371 371	0	0
69	BA	389	Total O 389 389	0	0
69	DA	3565	Total O 3565 3565	0	0
69	CA	1042	Total O 1042 1042	0	0
69	DB	90	Total O 90 90	0	0
69	CB	19	Total O 19 19	0	0
69	AB	11	Total O 11 11	0	0
69	AC	6	Total O 6 6	0	0
69	AD	3	Total O 3 3	0	0
69	AE	11	Total O 11 11	0	0
69	AF	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	AG	7	Total O 7 7	0	0
69	AH	2	Total O 2 2	0	0
69	AI	1	Total O 1 1	0	0
69	AJ	2	Total O 2 2	0	0
69	AK	8	Total O 8 8	0	0
69	AL	5	Total O 5 5	0	0
69	AM	7	Total O 7 7	0	0
69	AN	7	Total O 7 7	0	0
69	AO	1	Total O 1 1	0	0
69	AP	2	Total O 2 2	0	0
69	AQ	5	Total O 5 5	0	0
69	AS	3	Total O 3 3	0	0
69	AT	5	Total O 5 5	0	0
69	AU	2	Total O 2 2	0	0
69	BB	5	Total O 5 5	0	0
69	BC	3	Total O 3 3	0	0
69	BD	9	Total O 9 9	0	0
69	BE	5	Total O 5 5	0	0
69	BF	7	Total O 7 7	0	0
69	BG	7	Total O 7 7	0	0
69	BH	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	BI	4	Total O 4 4	0	0
69	BJ	1	Total O 1 1	0	0
69	BK	1	Total O 1 1	0	0
69	BL	3	Total O 3 3	0	0
69	BM	3	Total O 3 3	0	0
69	BN	8	Total O 8 8	0	0
69	BO	4	Total O 4 4	0	0
69	BP	4	Total O 4 4	0	0
69	BQ	1	Total O 1 1	0	0
69	BS	2	Total O 2 2	0	0
69	BT	5	Total O 5 5	0	0
69	BU	3	Total O 3 3	0	0
69	CC	8	Total O 8 8	0	0
69	CD	8	Total O 8 8	0	0
69	CE	7	Total O 7 7	0	0
69	CF	2	Total O 2 2	0	0
69	CG	4	Total O 4 4	0	0
69	CH	4	Total O 4 4	0	0
69	CK	5	Total O 5 5	0	0
69	CL	5	Total O 5 5	0	0
69	CM	8	Total O 8 8	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	CN	5	Total O 5 5	0	0
69	CO	5	Total O 5 5	0	0
69	CP	1	Total O 1 1	0	0
69	CQ	5	Total O 5 5	0	0
69	CR	3	Total O 3 3	0	0
69	CS	5	Total O 5 5	0	0
69	CT	3	Total O 3 3	0	0
69	CU	6	Total O 6 6	0	0
69	CV	7	Total O 7 7	0	0
69	CW	1	Total O 1 1	0	0
69	CZ	2	Total O 2 2	0	0
69	C0	3	Total O 3 3	0	0
69	C1	1	Total O 1 1	0	0
69	C2	1	Total O 1 1	0	0
69	C3	5	Total O 5 5	0	0
69	C4	3	Total O 3 3	0	0
69	C5	1	Total O 1 1	0	0
69	DC	59	Total O 59 59	0	0
69	DD	80	Total O 80 80	0	0
69	DE	51	Total O 51 51	0	0
69	DF	5	Total O 5 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	DG	5	Total O 5 5	0	0
69	DH	2	Total O 2 2	0	0
69	DJ	4	Total O 4 4	0	0
69	DK	37	Total O 37 37	0	0
69	DL	30	Total O 30 30	0	0
69	DM	52	Total O 52 52	0	0
69	DN	47	Total O 47 47	0	0
69	DO	33	Total O 33 33	0	0
69	DP	14	Total O 14 14	0	0
69	DQ	33	Total O 33 33	0	0
69	DR	52	Total O 52 52	0	0
69	DS	40	Total O 40 40	0	0
69	DT	57	Total O 57 57	0	0
69	DU	10	Total O 10 10	0	0
69	DV	14	Total O 14 14	0	0
69	DW	18	Total O 18 18	0	0
69	DX	15	Total O 15 15	0	0
69	DY	7	Total O 7 7	0	0
69	DZ	2	Total O 2 2	0	0
69	D0	14	Total O 14 14	0	0
69	D1	48	Total O 48 48	0	0

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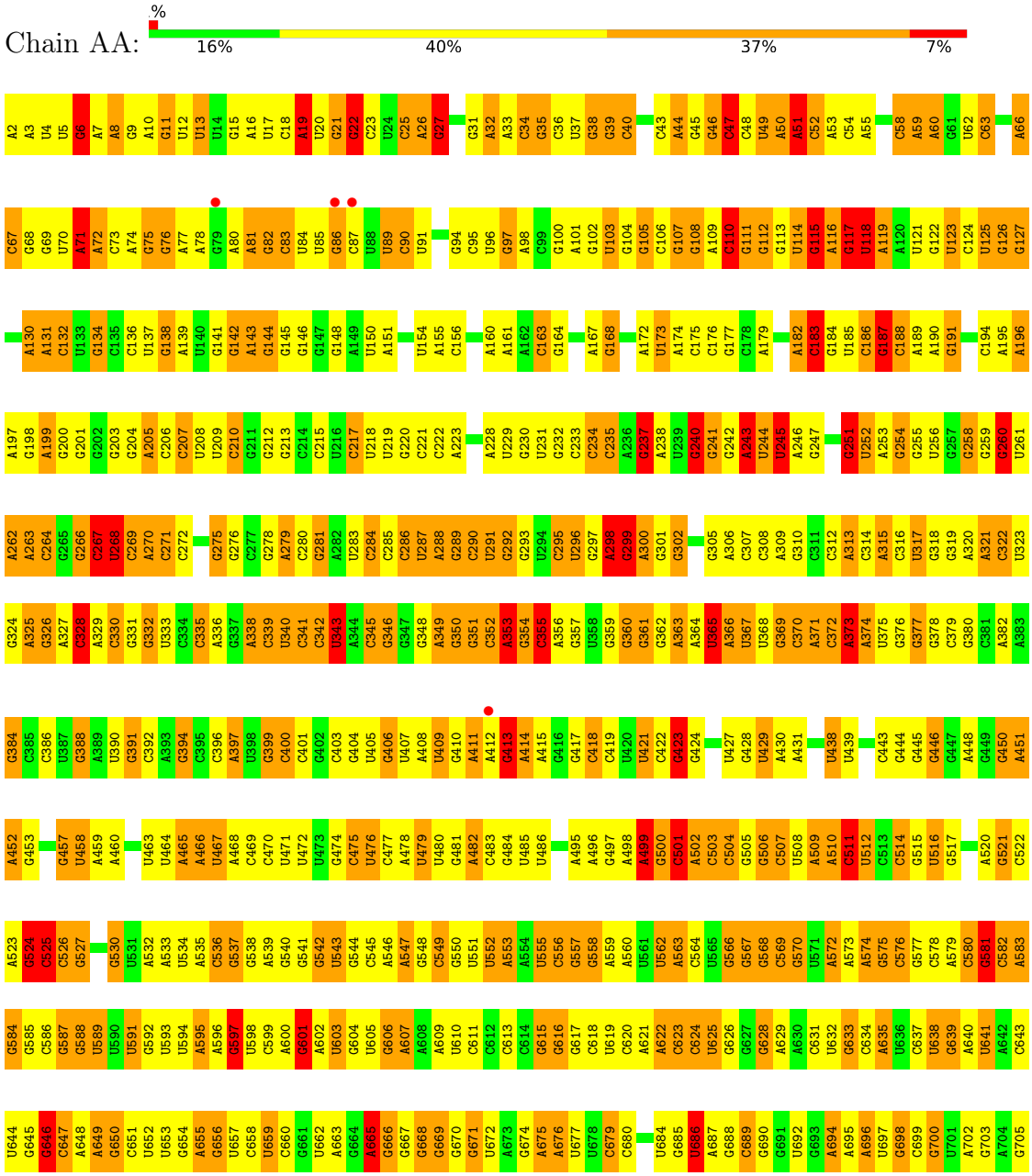
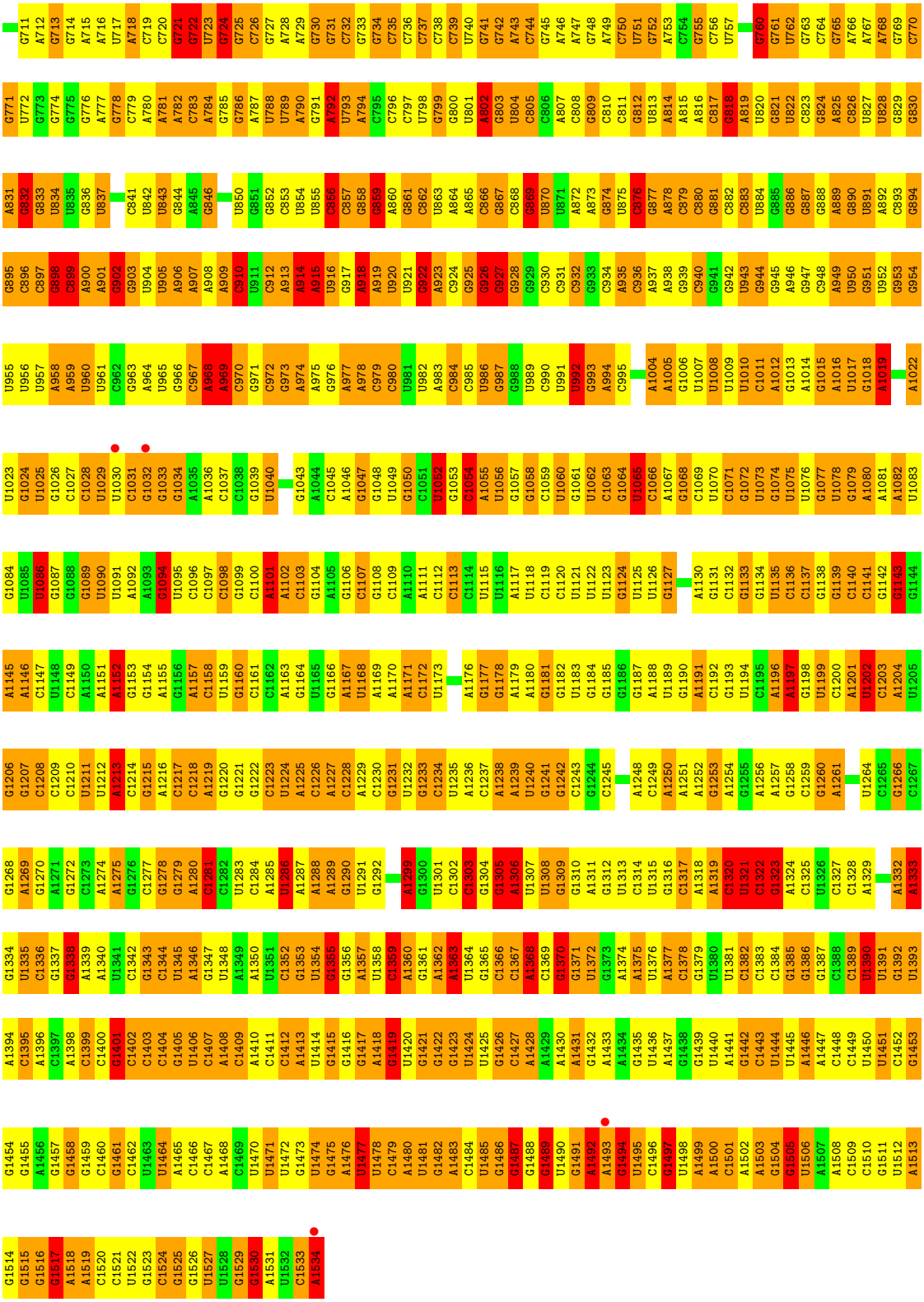
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
69	D2	4	Total O 4 4	0	0
69	D3	24	Total O 24 24	0	0
69	D4	27	Total O 27 27	0	0
69	D5	9	Total O 9 9	0	0

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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

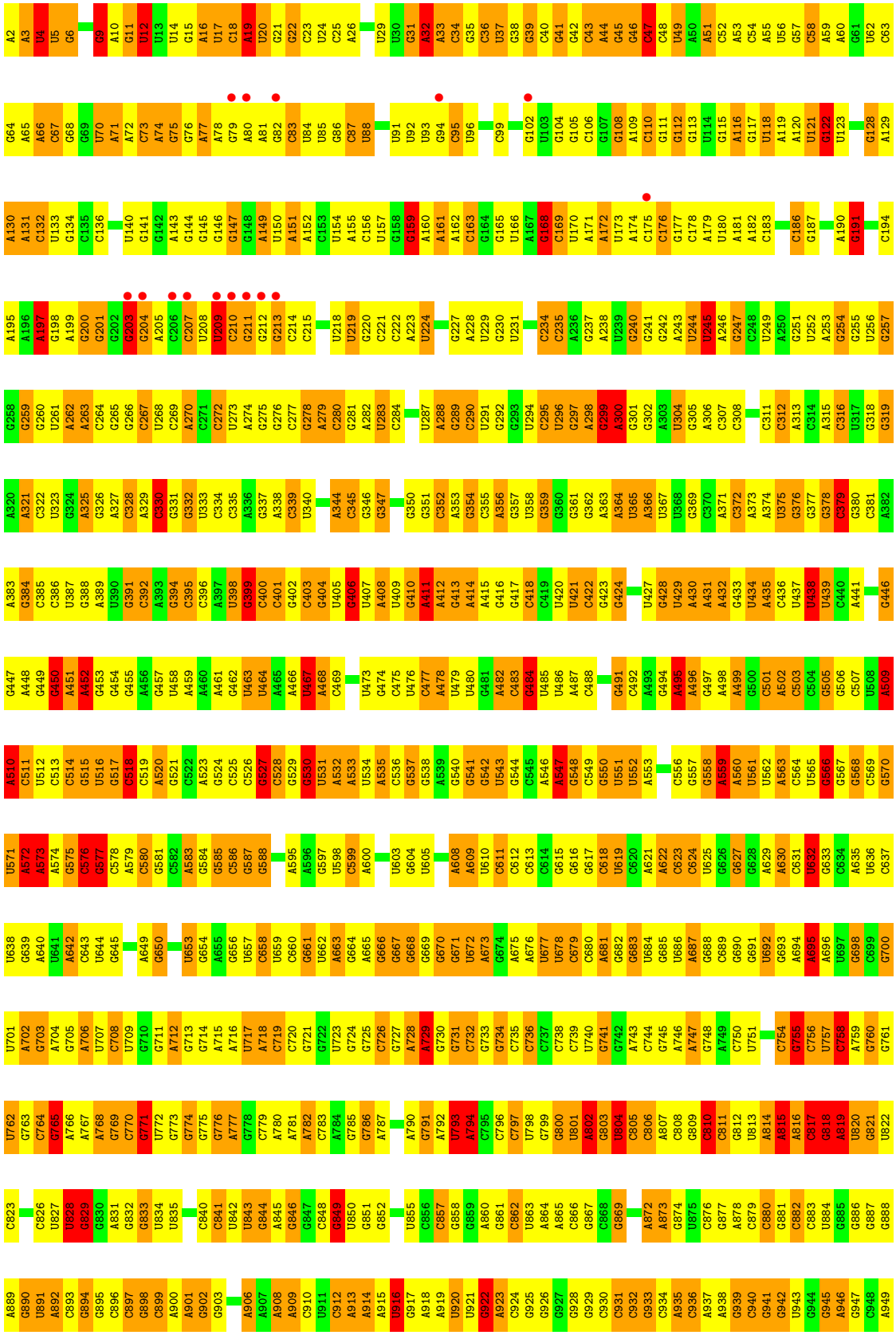
- Molecule 1: 16S ribosomal RNA

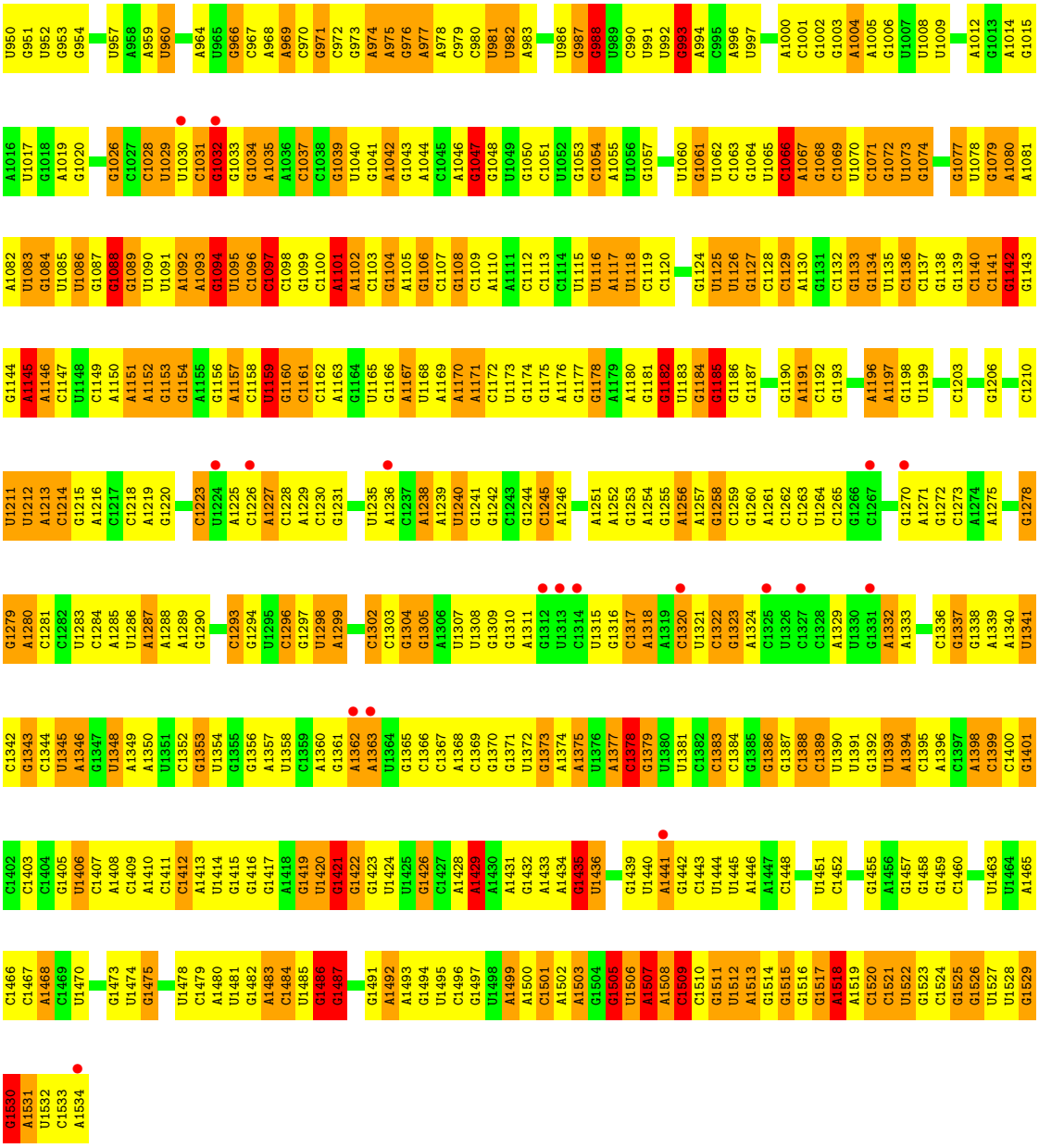




• Molecule 2: 16S ribosomal RNA

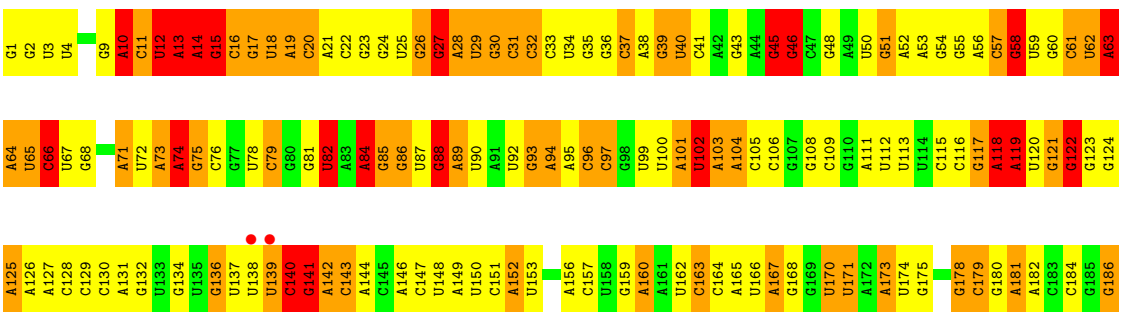
Chain BA:

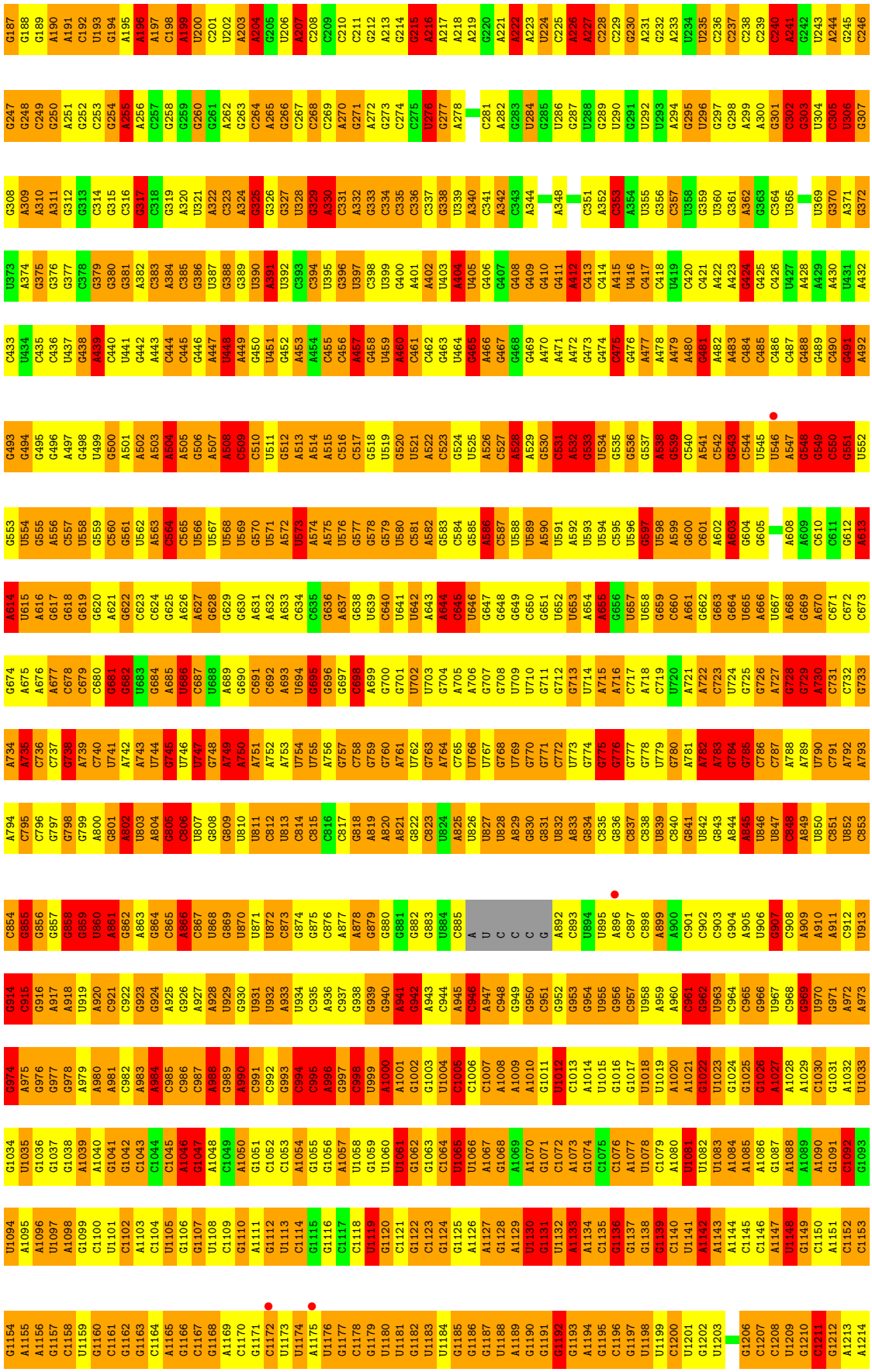


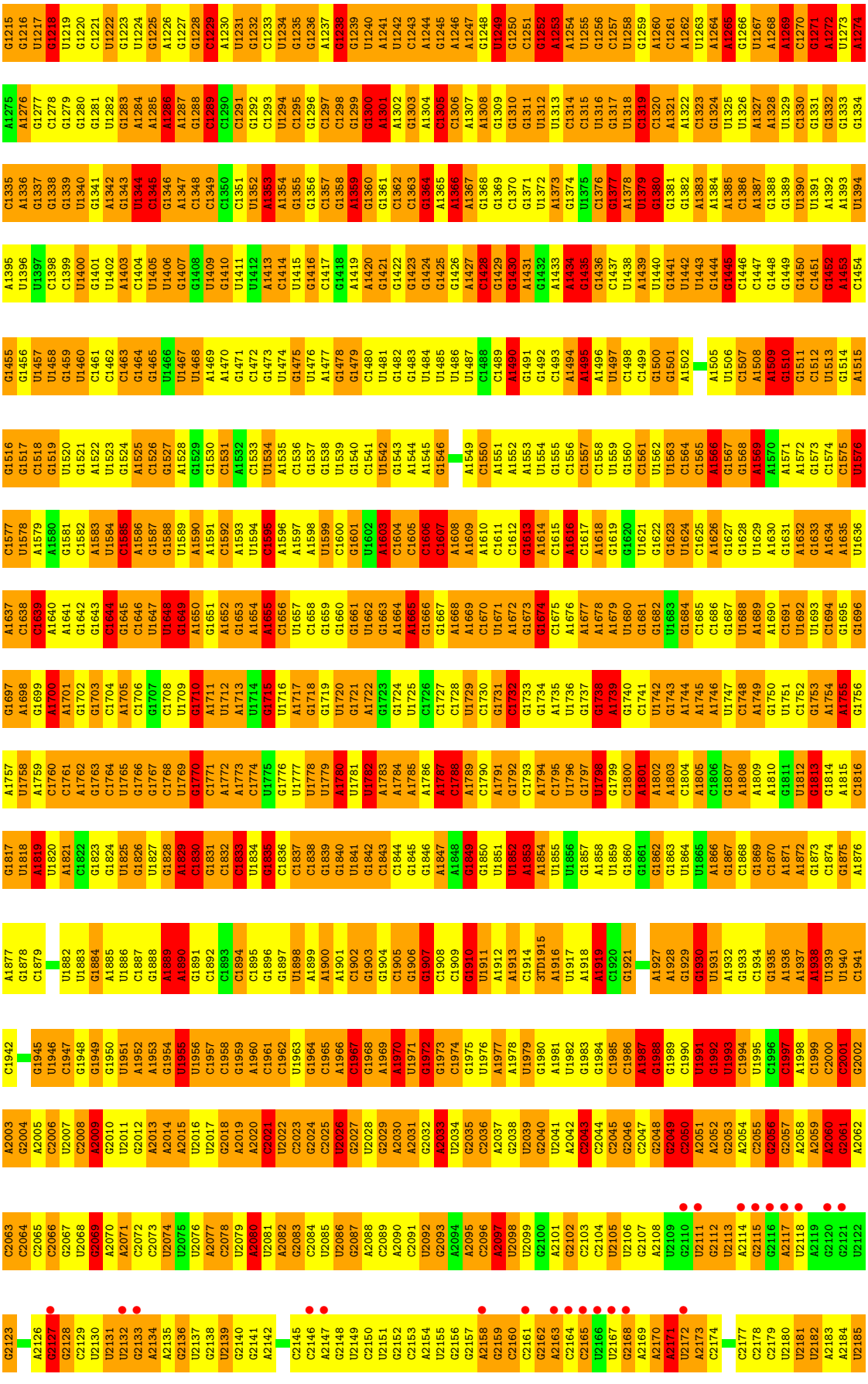


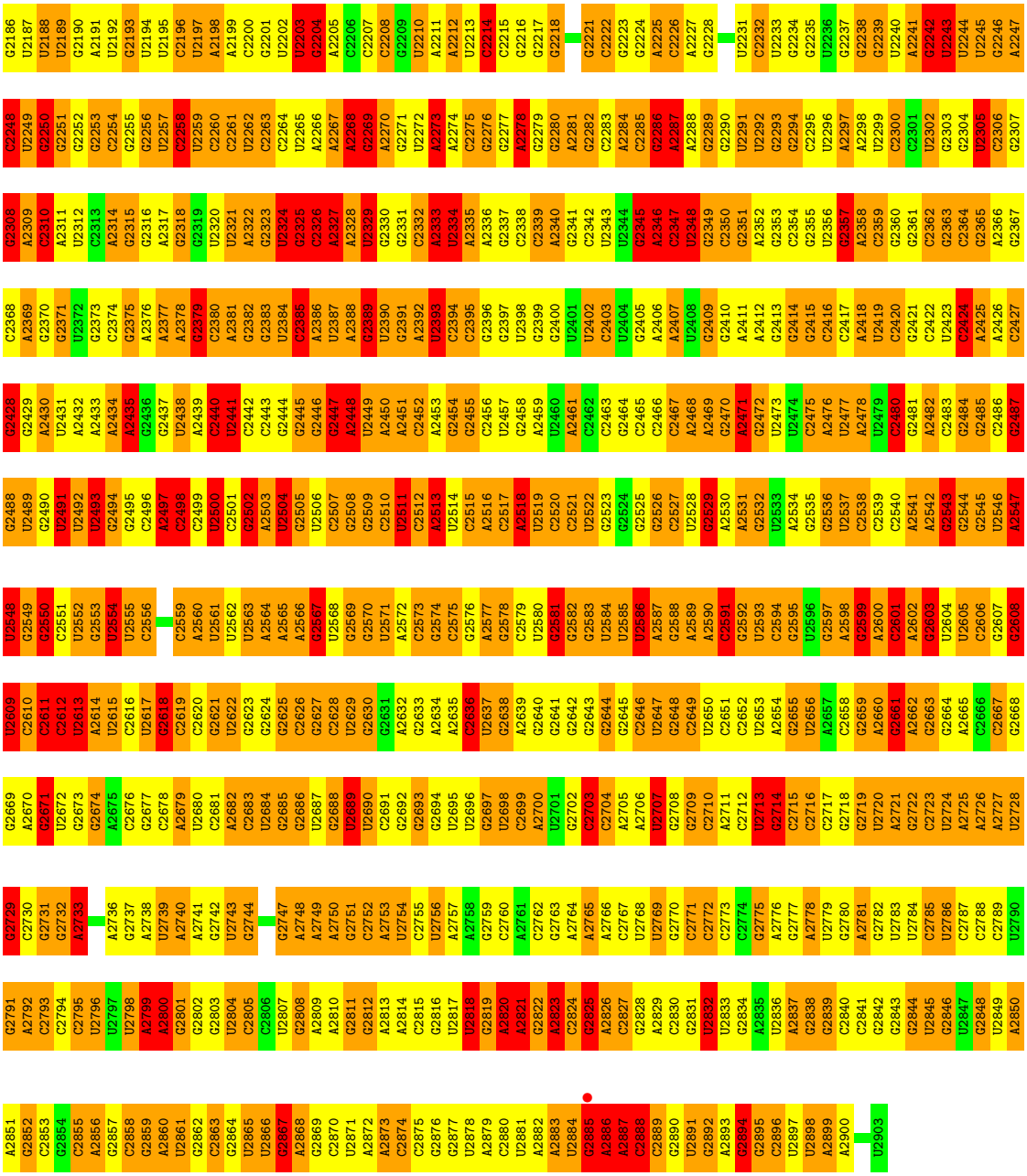
• Molecule 3: 23S ribosomal RNA

Chain DA:



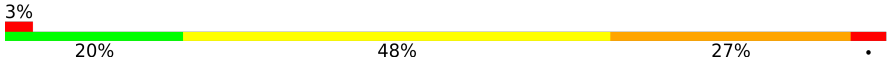


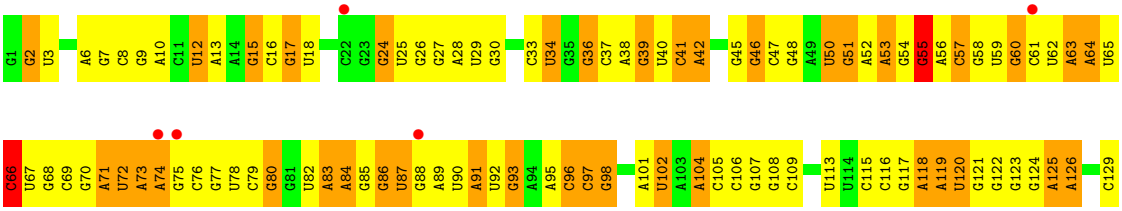


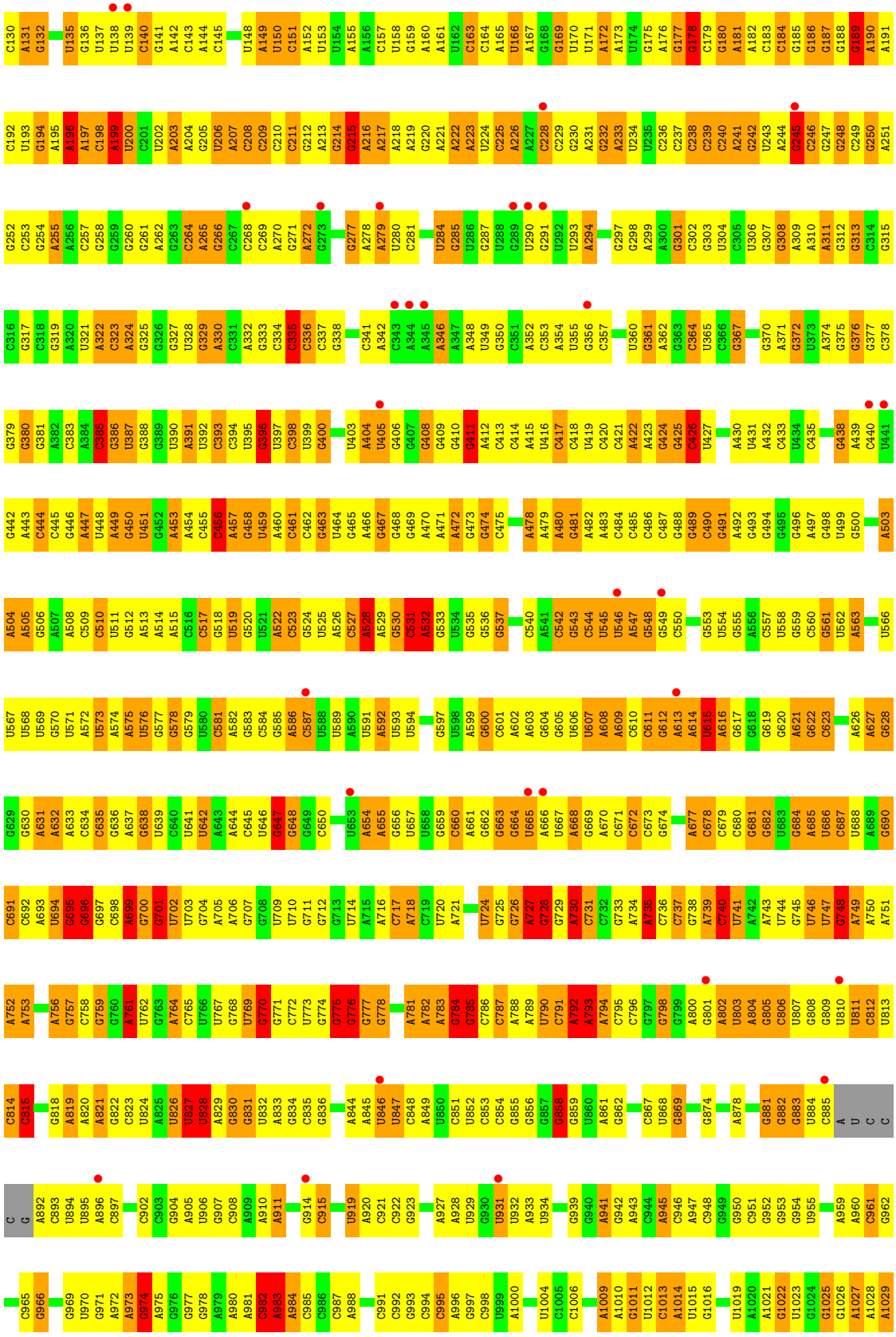


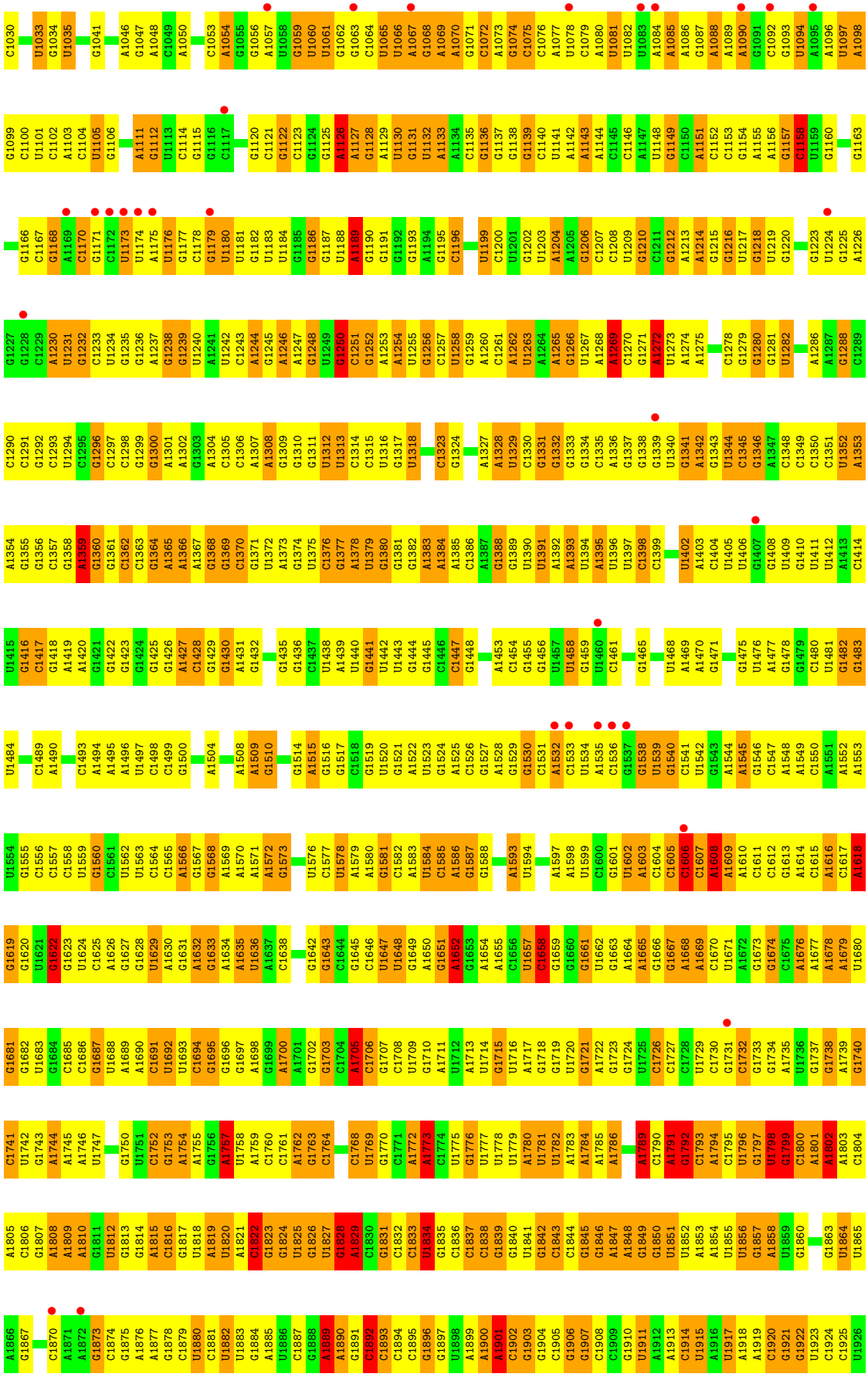
• Molecule 4: 23S ribosomal RNA

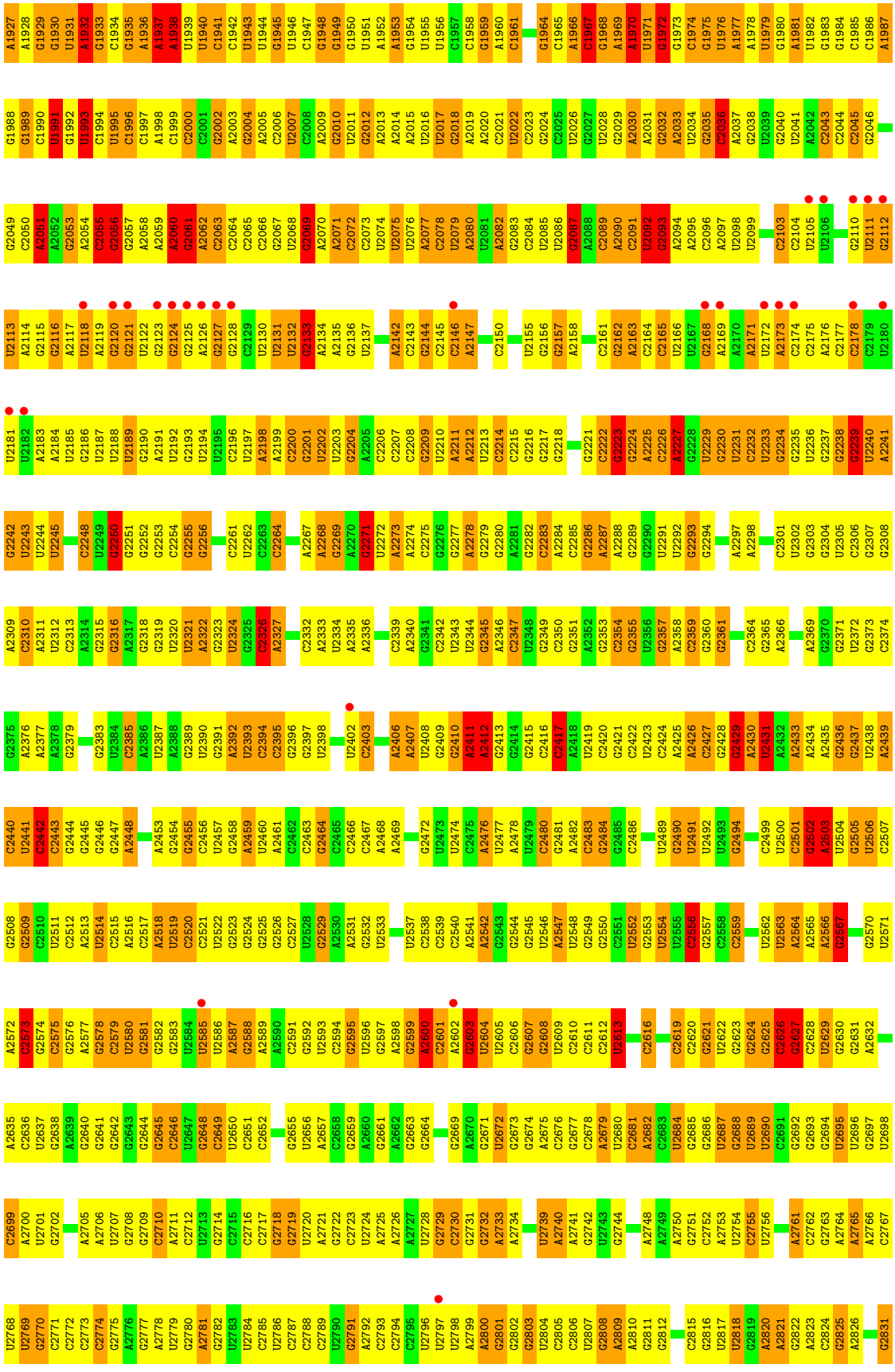
Chain CA:

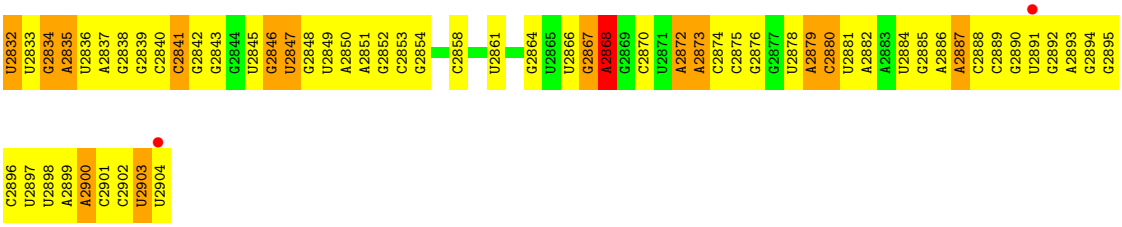






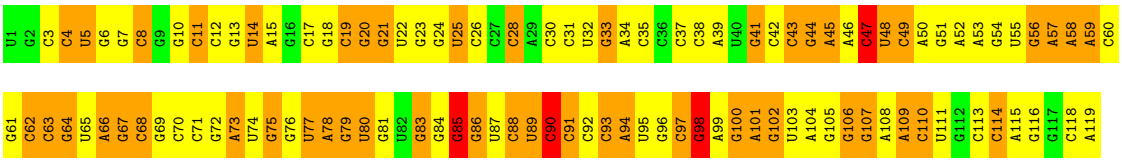






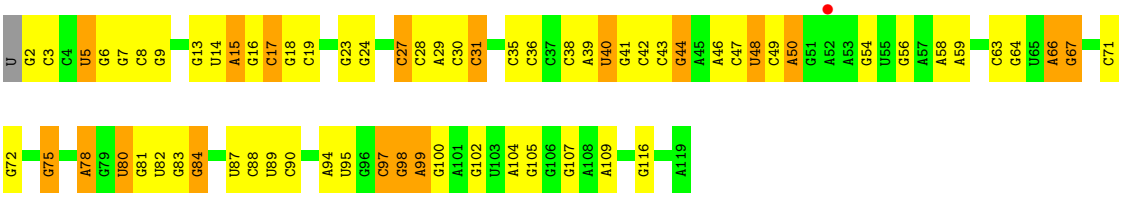
• Molecule 5: 5S ribosomal RNA

Chain DB:



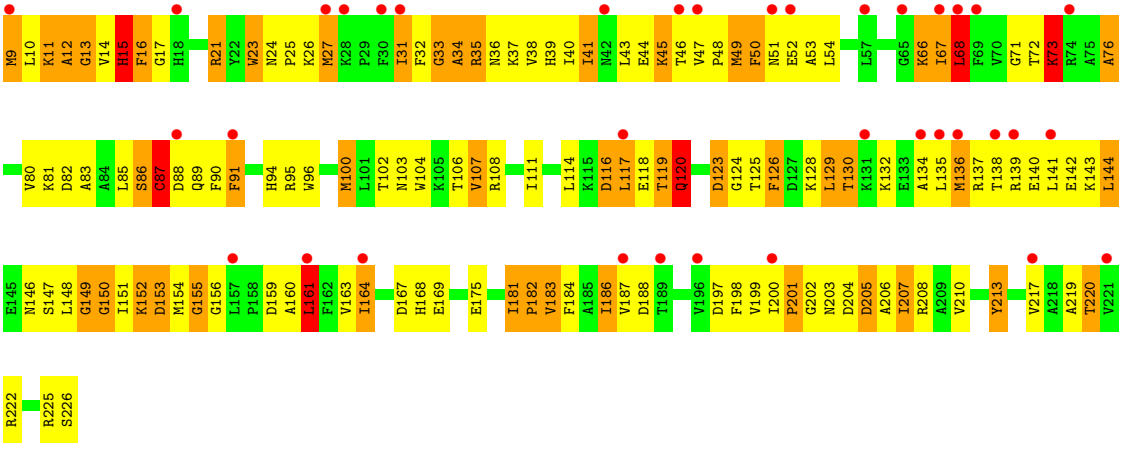
• Molecule 5: 5S ribosomal RNA

Chain CB:



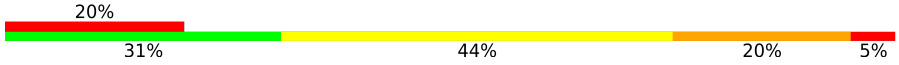
• Molecule 6: 30S ribosomal protein S2

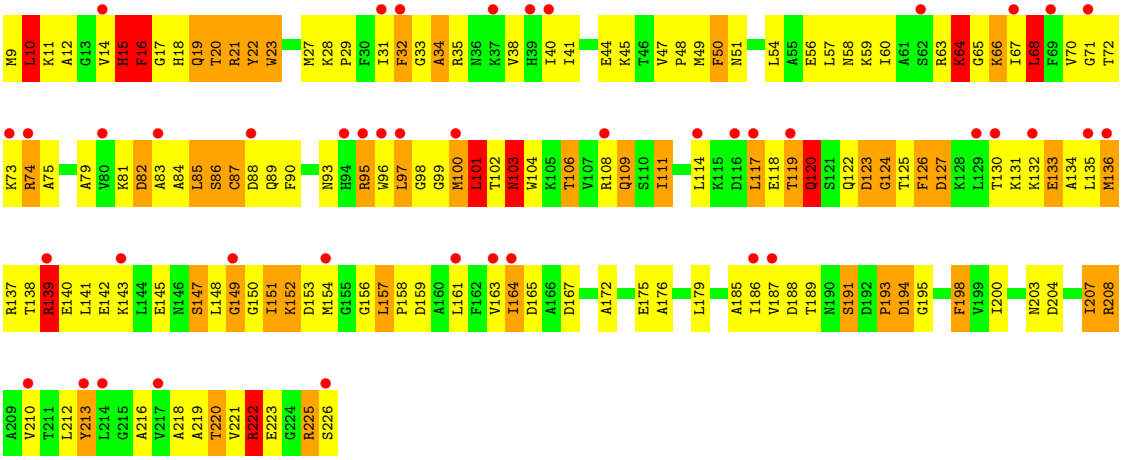
Chain AB:



• Molecule 6: 30S ribosomal protein S2

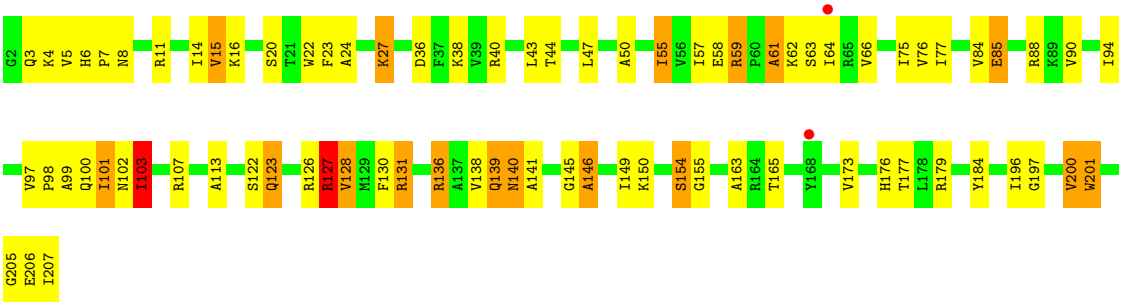
Chain BB:





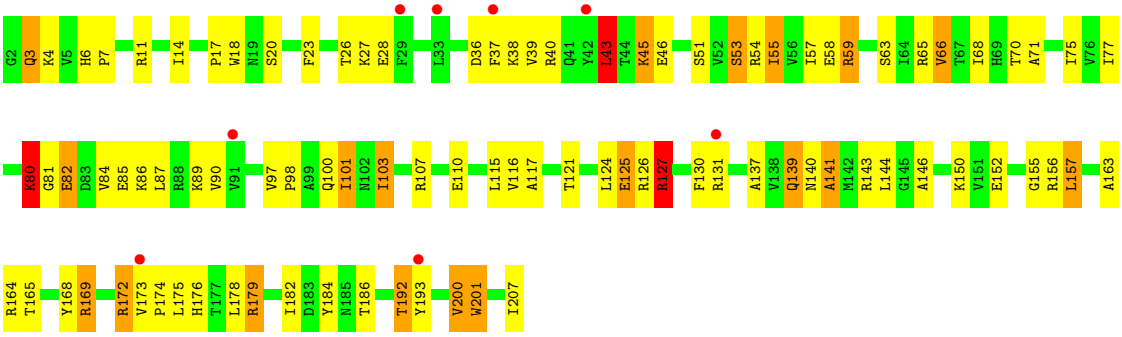
• Molecule 7: 30S ribosomal protein S3

Chain AC:



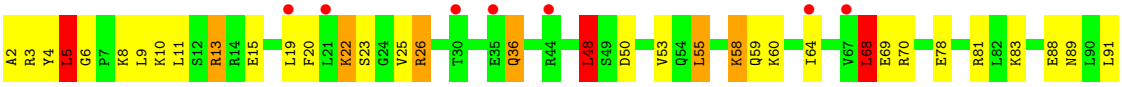
• Molecule 7: 30S ribosomal protein S3

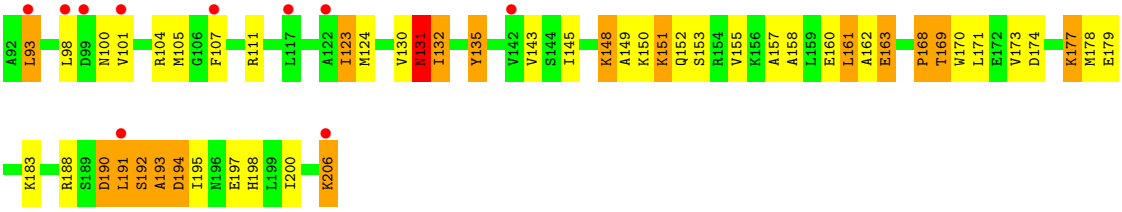
Chain BC:



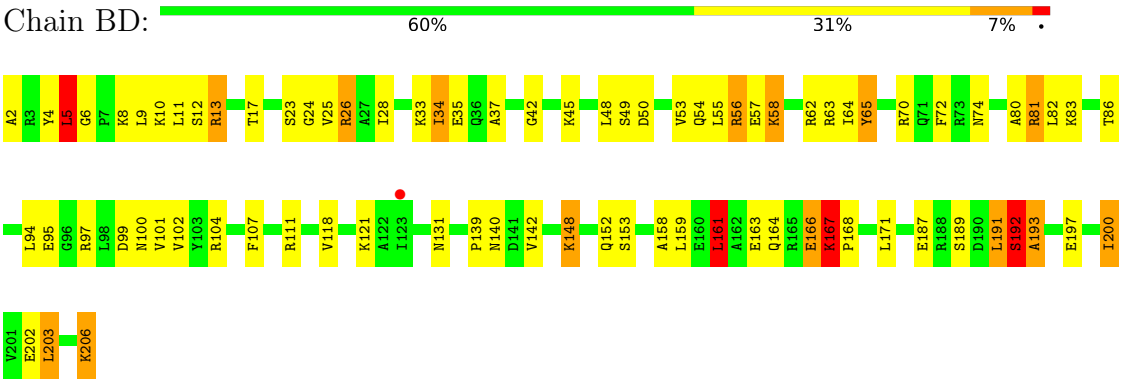
• Molecule 8: 30S ribosomal protein S4

Chain AD:

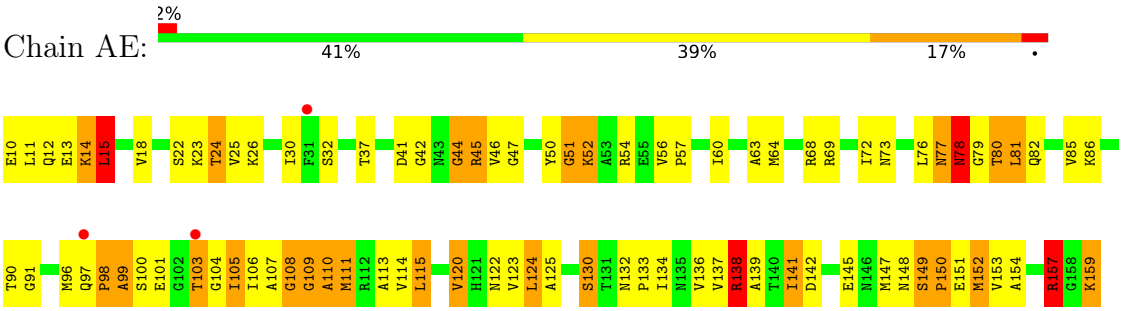




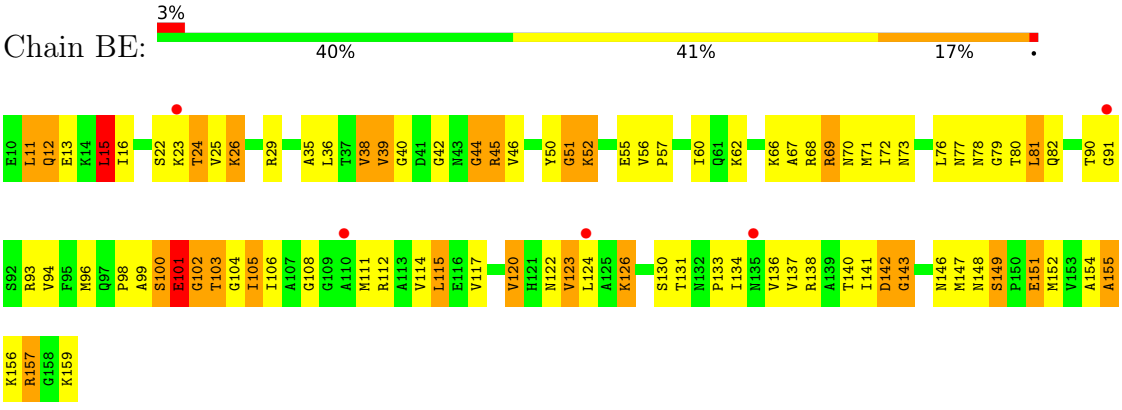
• Molecule 8: 30S ribosomal protein S4



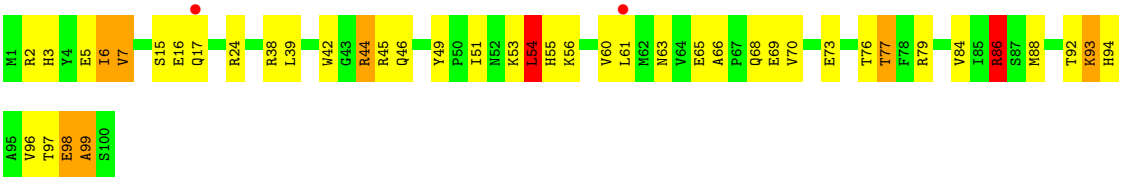
• Molecule 9: 30S ribosomal protein S5



• Molecule 9: 30S ribosomal protein S5

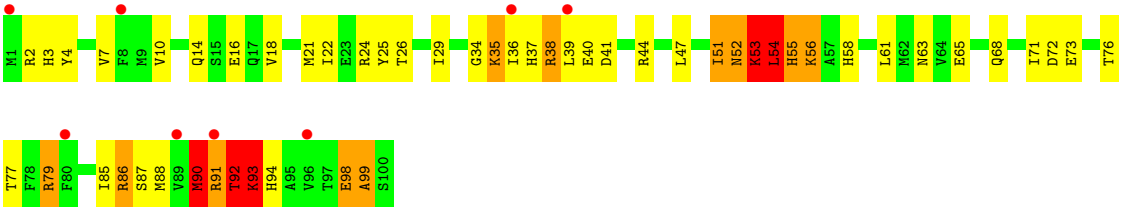


• Molecule 10: 30S ribosomal protein S6



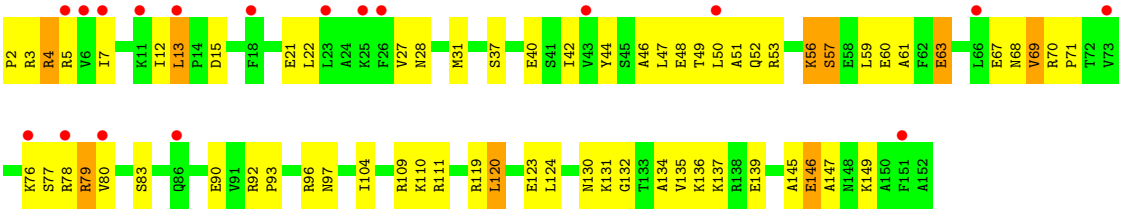
• Molecule 10: 30S ribosomal protein S6

Chain BF:



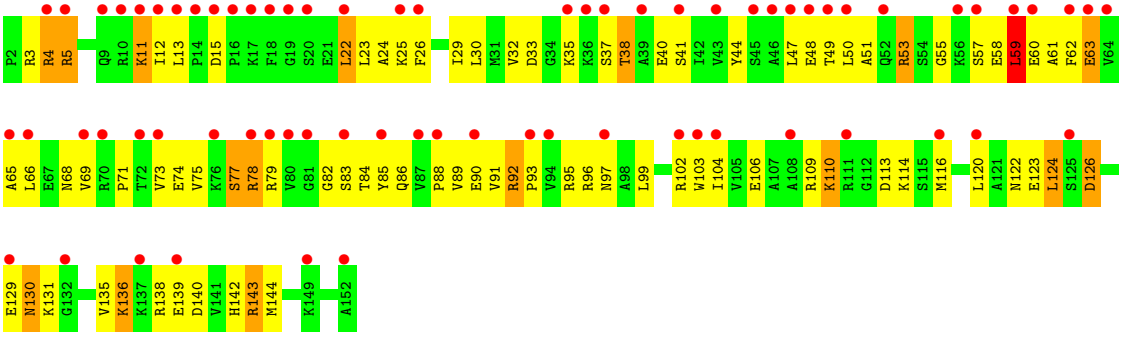
• Molecule 11: 30S ribosomal protein S7

Chain AG:



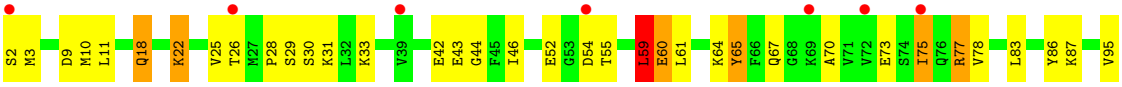
• Molecule 11: 30S ribosomal protein S7

Chain BG:



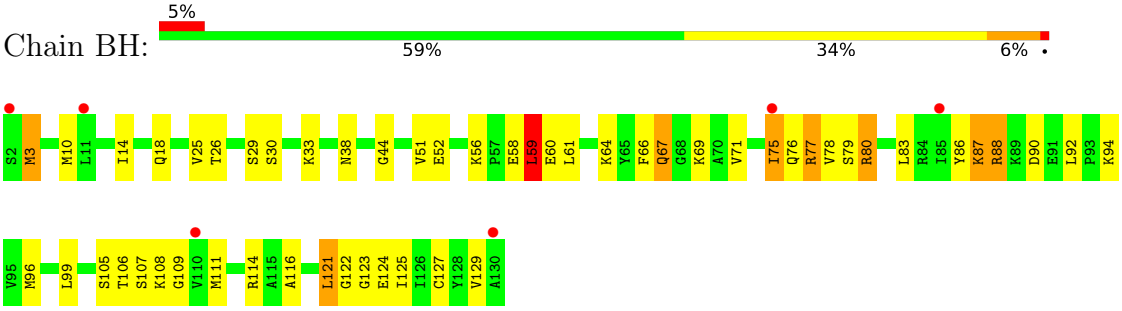
• Molecule 12: 30S ribosomal protein S8

Chain AH:



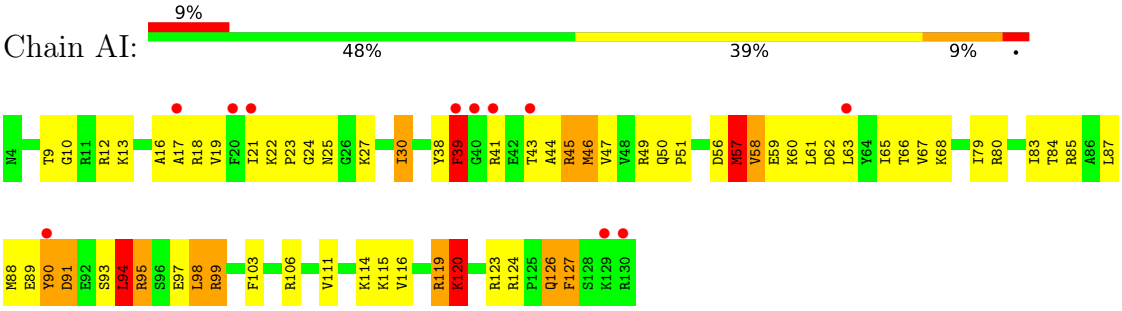
• Molecule 12: 30S ribosomal protein S8

Chain BH:



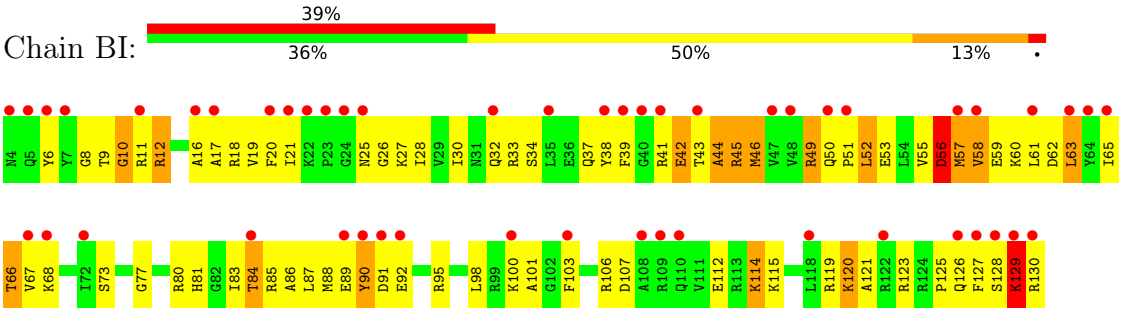
• Molecule 13: 30S ribosomal protein S9

Chain AI:



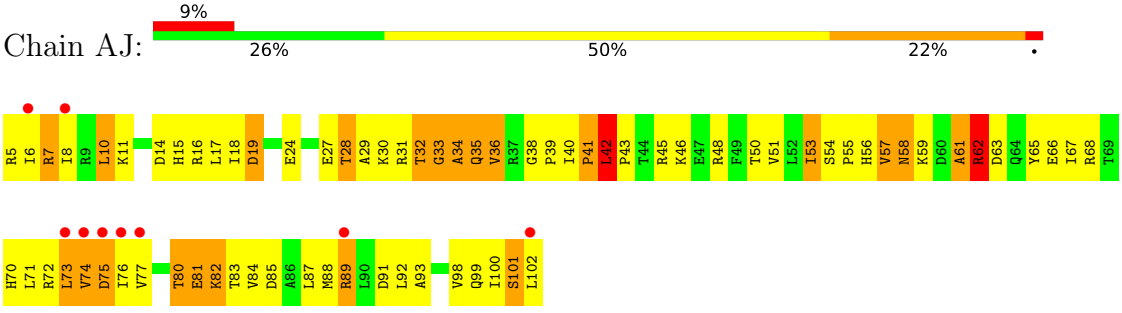
• Molecule 13: 30S ribosomal protein S9

Chain BI:



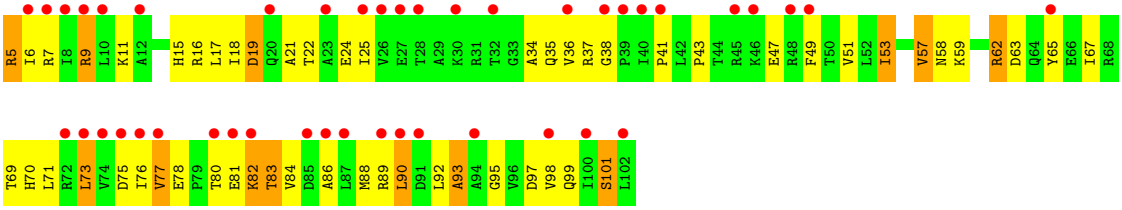
• Molecule 14: 30S ribosomal protein S10

Chain AJ:



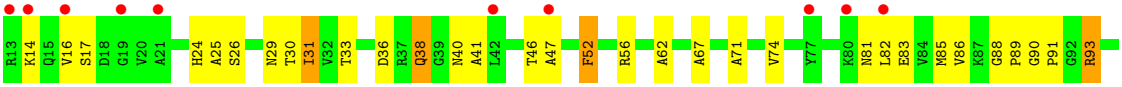
• Molecule 14: 30S ribosomal protein S10

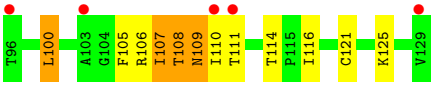
Chain BJ:



• Molecule 15: 30S ribosomal protein S11

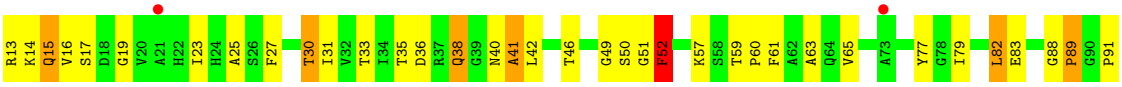
Chain AK:

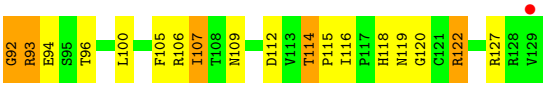




• Molecule 15: 30S ribosomal protein S11

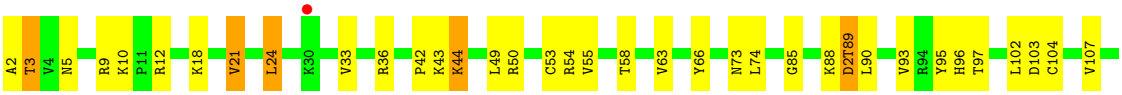
Chain BK:

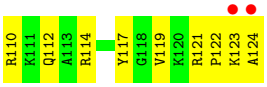




• Molecule 16: 30S ribosomal protein S12

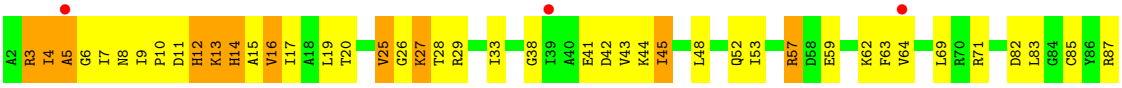
Chain AL:

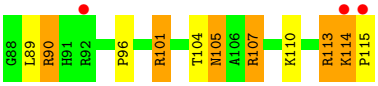




• Molecule 17: 30S ribosomal protein S13

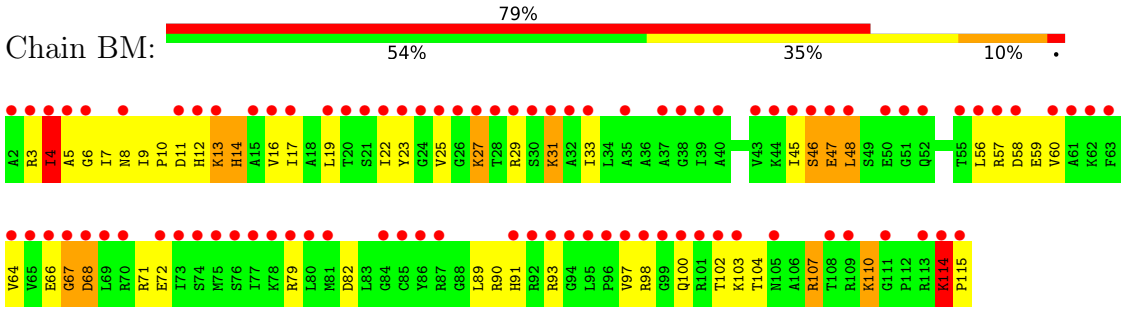
Chain AM:





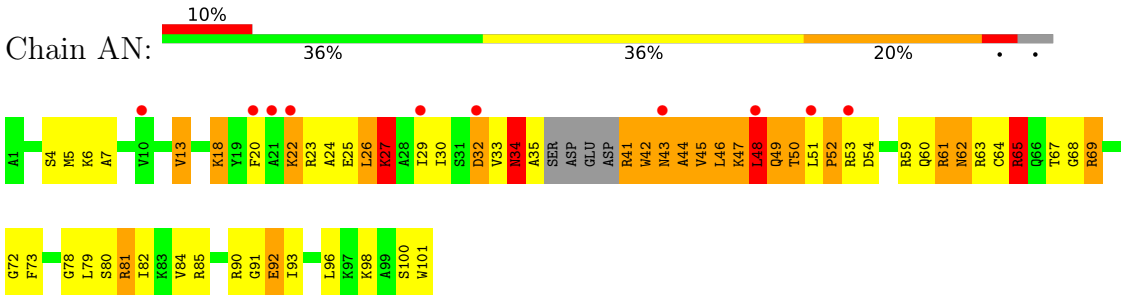
• Molecule 17: 30S ribosomal protein S13

Chain BM:



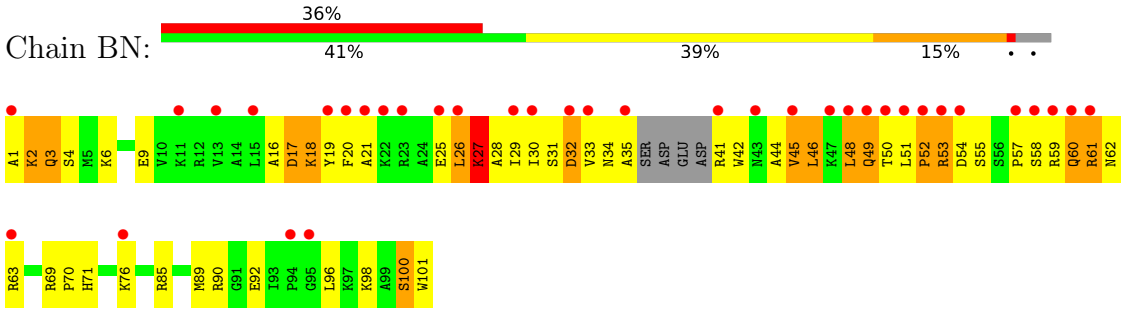
• Molecule 18: 30S ribosomal protein S14

Chain AN:



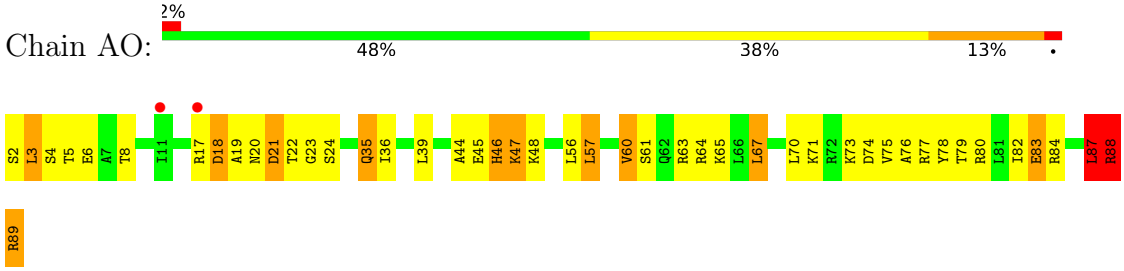
• Molecule 18: 30S ribosomal protein S14

Chain BN:



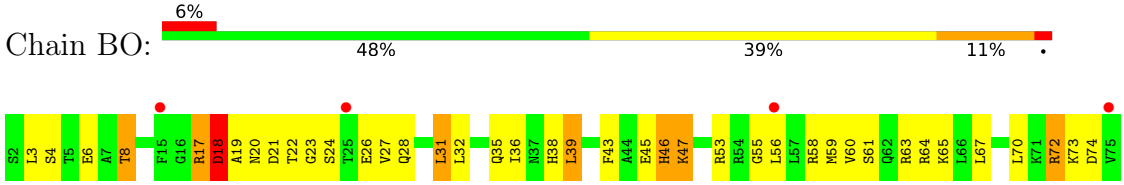
• Molecule 19: 30S ribosomal protein S15

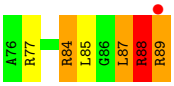
Chain AO:



• Molecule 19: 30S ribosomal protein S15

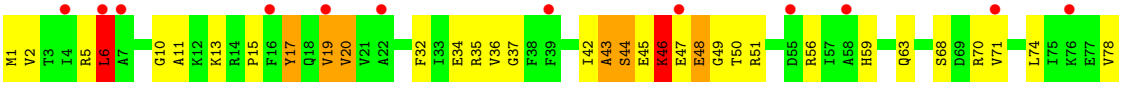
Chain BO:





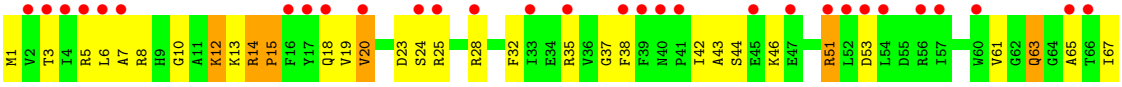
• Molecule 20: 30S ribosomal protein S16

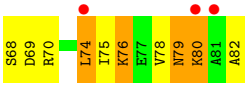
Chain AP:



• Molecule 20: 30S ribosomal protein S16

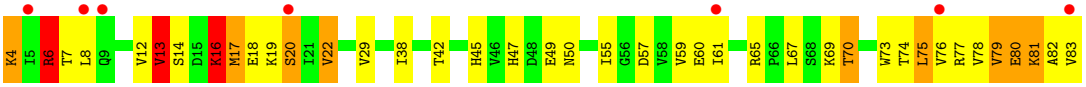
Chain BP:





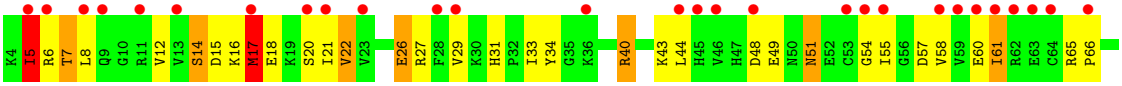
• Molecule 21: 30S ribosomal protein S17

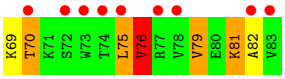
Chain AQ:



• Molecule 21: 30S ribosomal protein S17

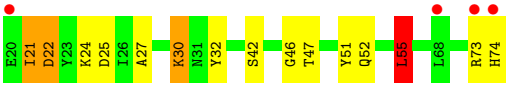
Chain BQ:





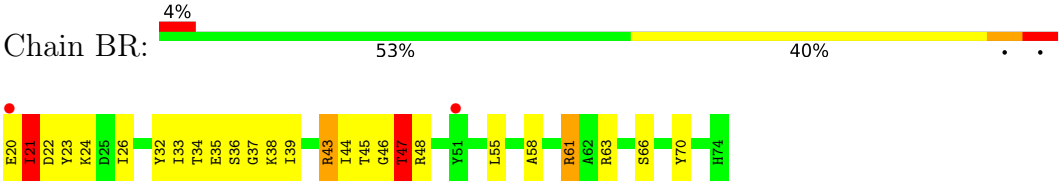
• Molecule 22: 30S ribosomal protein S18

Chain AR:



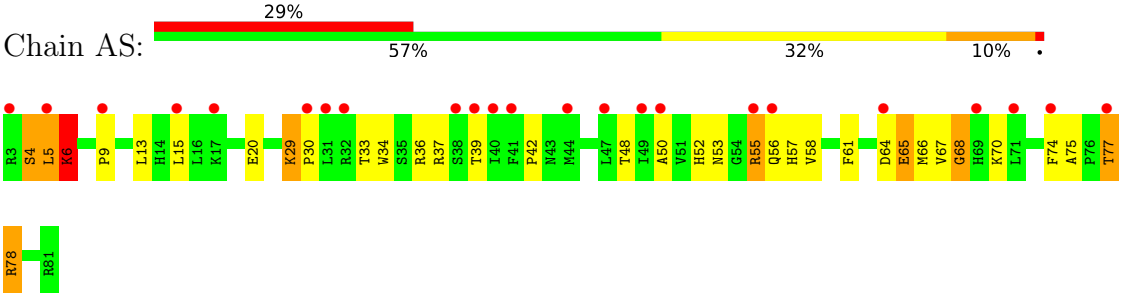
• Molecule 22: 30S ribosomal protein S18

Chain BR:



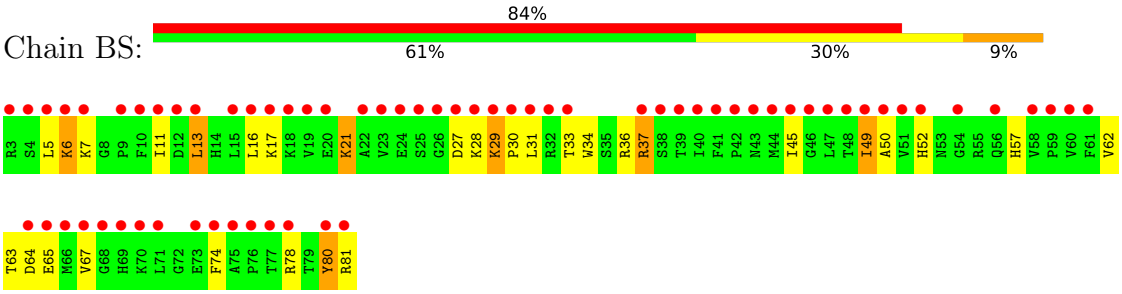
• Molecule 23: 30S ribosomal protein S19

Chain AS:



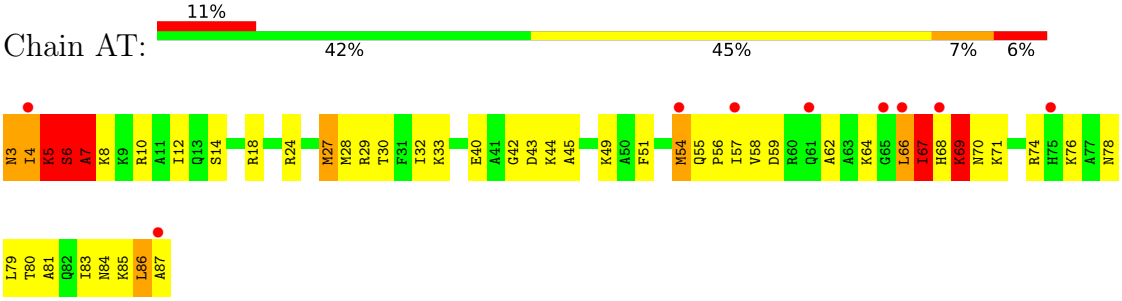
• Molecule 23: 30S ribosomal protein S19

Chain BS:



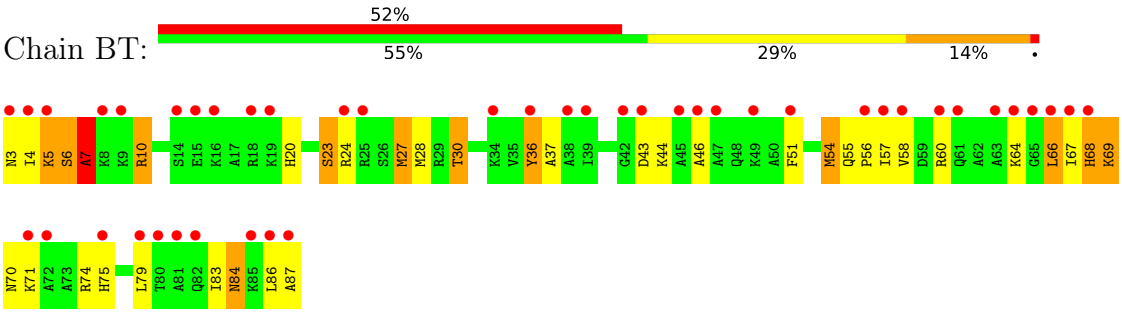
• Molecule 24: 30S ribosomal protein S20

Chain AT:



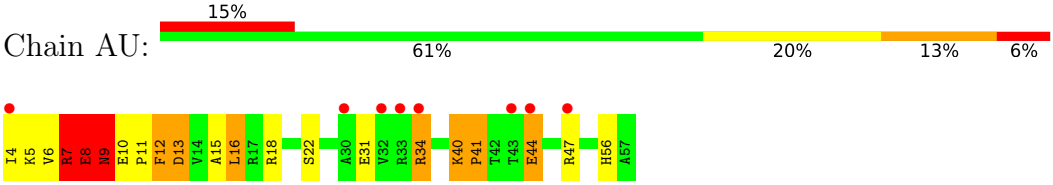
• Molecule 24: 30S ribosomal protein S20

Chain BT:



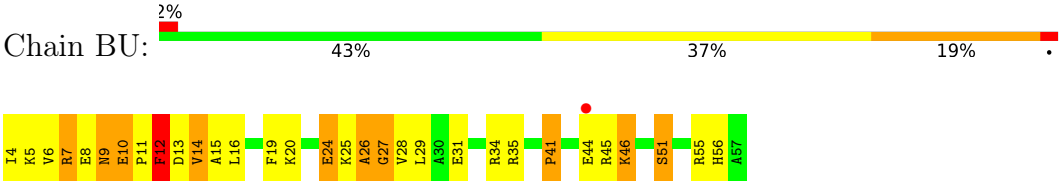
• Molecule 25: 30S ribosomal protein S21

Chain AU:



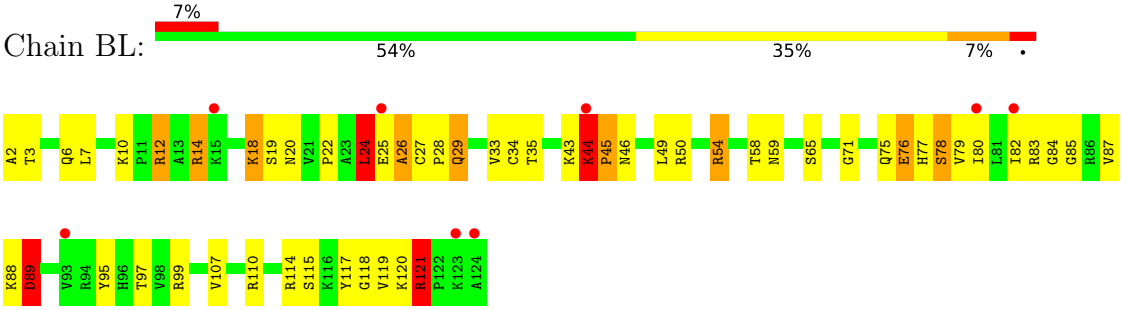
• Molecule 25: 30S ribosomal protein S21

Chain BU:



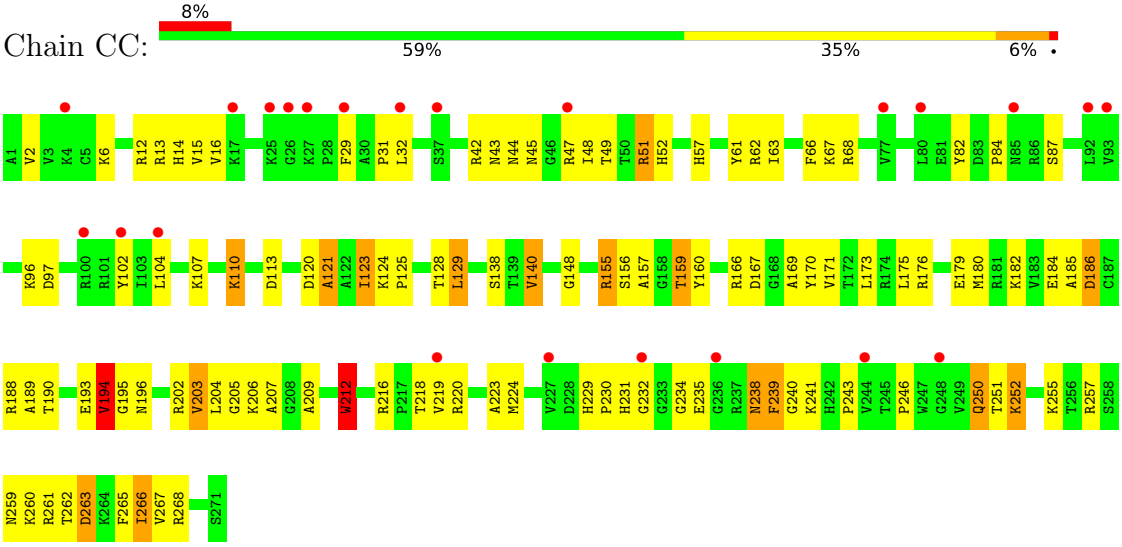
• Molecule 26: 30S ribosomal protein S12

Chain BL:



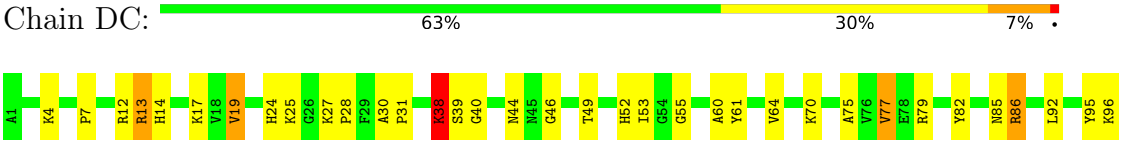
• Molecule 27: 50S ribosomal protein L2

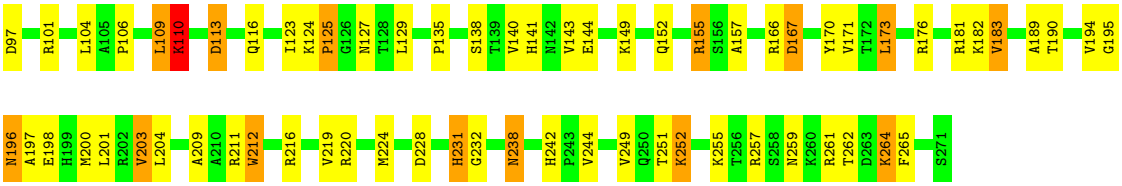
Chain CC:



• Molecule 27: 50S ribosomal protein L2

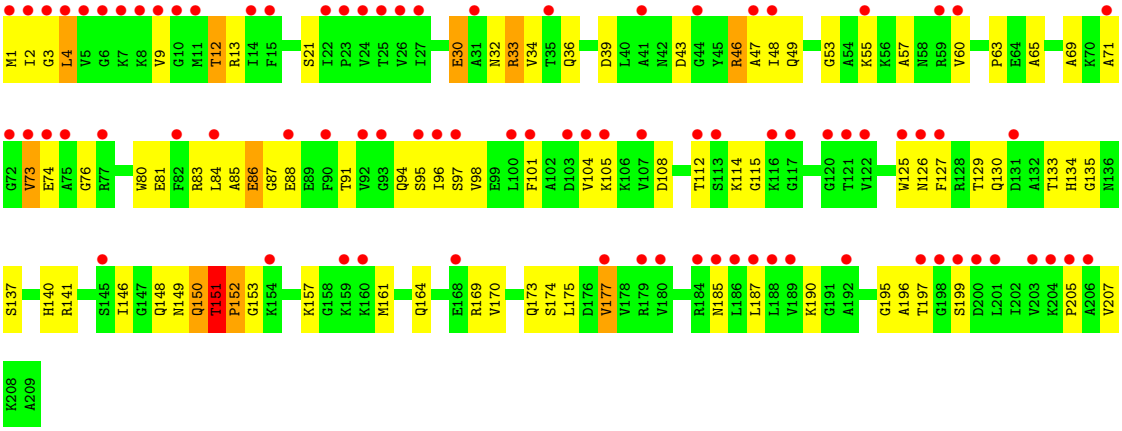
Chain DC:





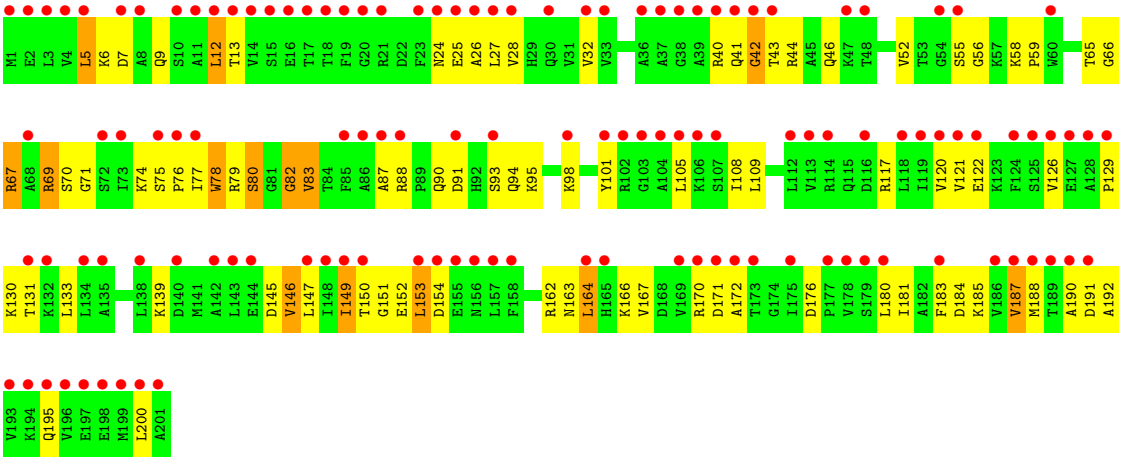
• Molecule 28: 50S ribosomal protein L3

Chain CD:



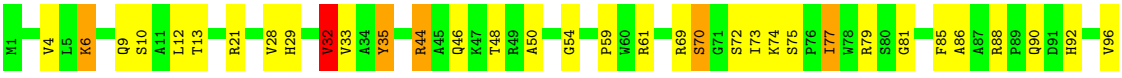
• Molecule 29: 50S ribosomal protein L4

Chain CE:



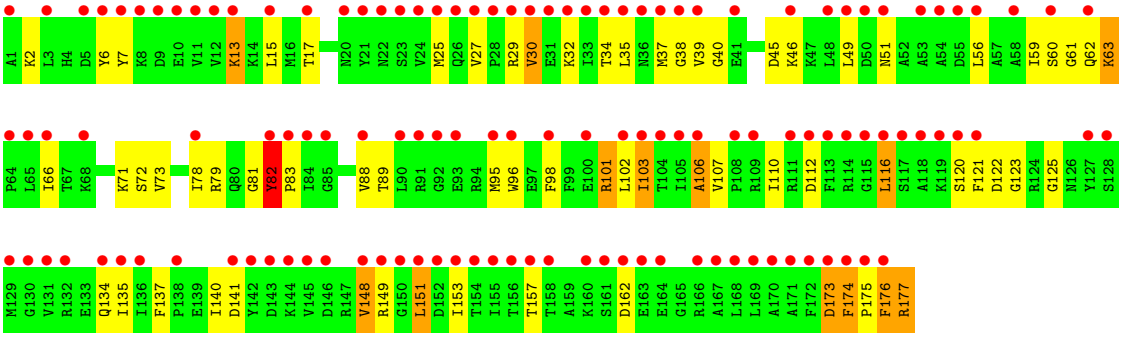
• Molecule 29: 50S ribosomal protein L4

Chain DE:



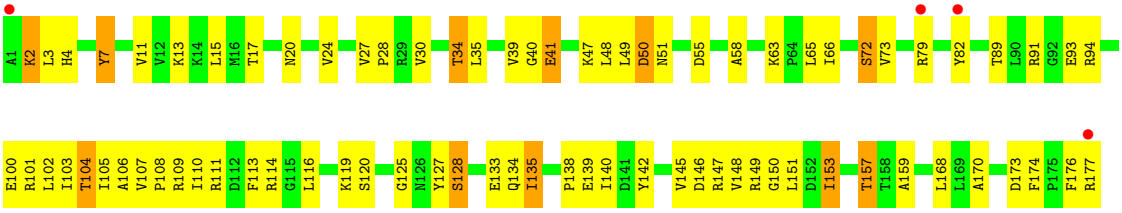
• Molecule 30: 50S ribosomal protein L5

Chain CF:



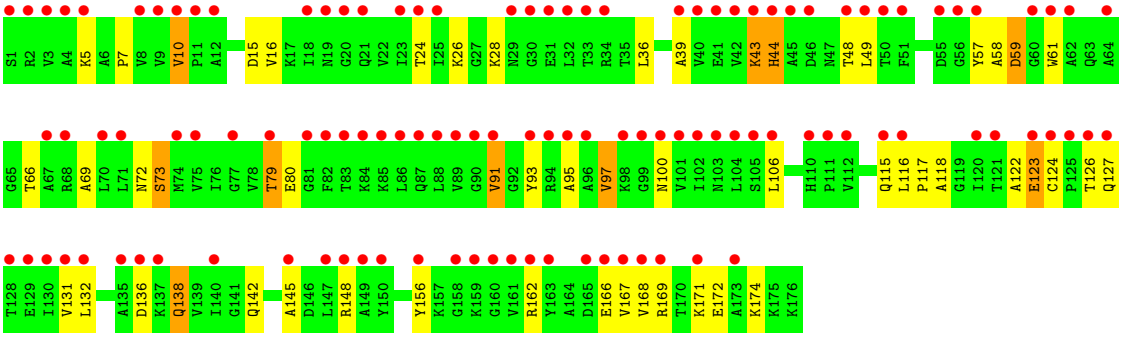
• Molecule 30: 50S ribosomal protein L5

Chain DF:



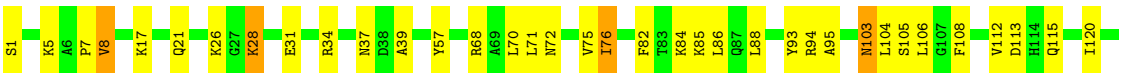
• Molecule 31: 50S ribosomal protein L6

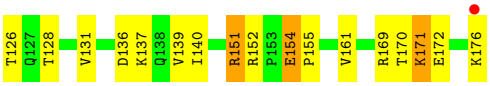
Chain CG:



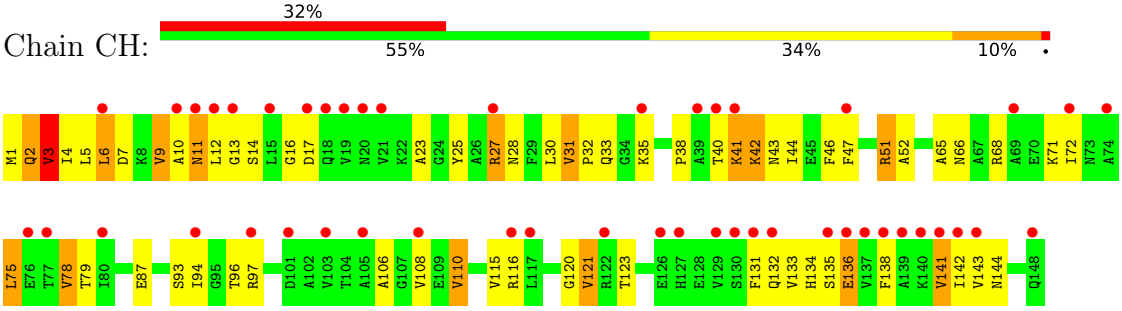
• Molecule 31: 50S ribosomal protein L6

Chain DG:

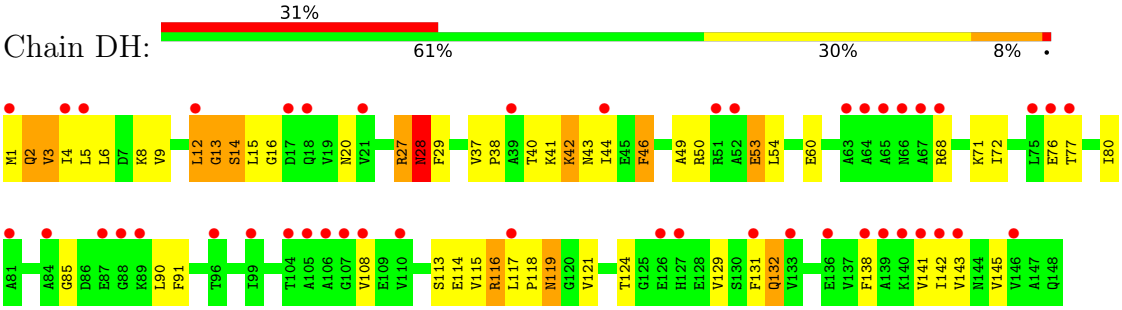




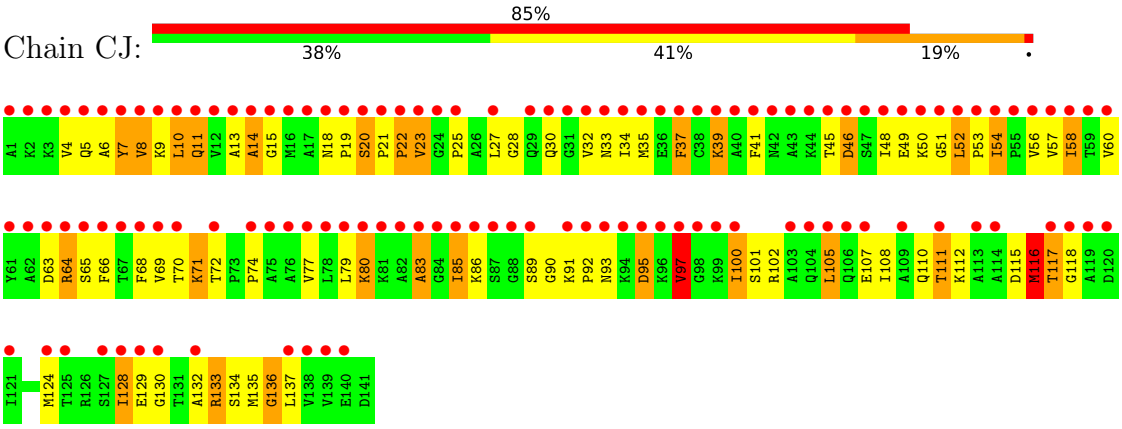
• Molecule 32: 50S ribosomal protein L9



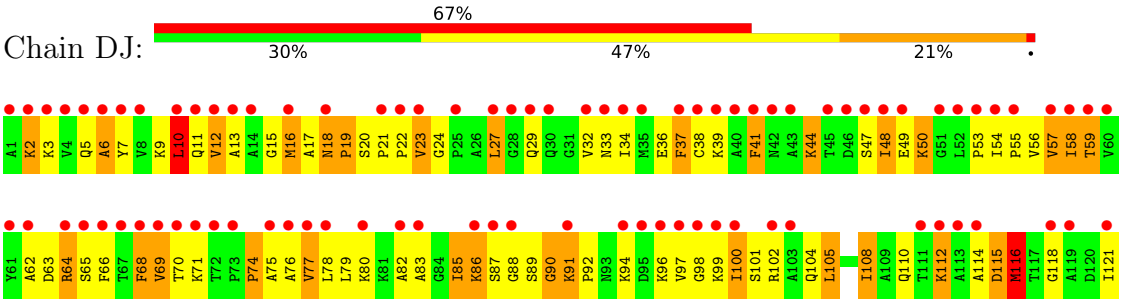
• Molecule 32: 50S ribosomal protein L9

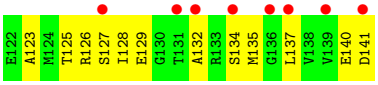


• Molecule 33: 50S ribosomal protein L11



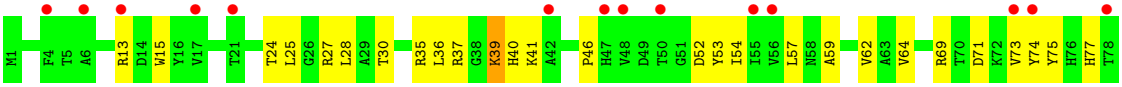
• Molecule 33: 50S ribosomal protein L11

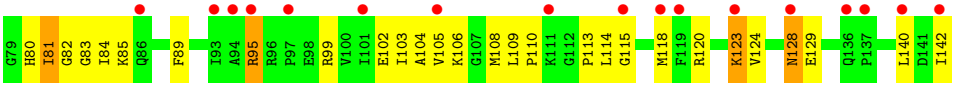




• Molecule 34: 50S ribosomal protein L13

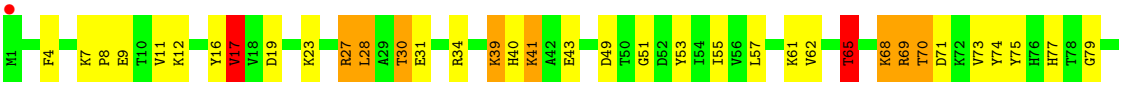
Chain CK:

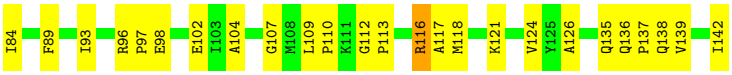




• Molecule 34: 50S ribosomal protein L13

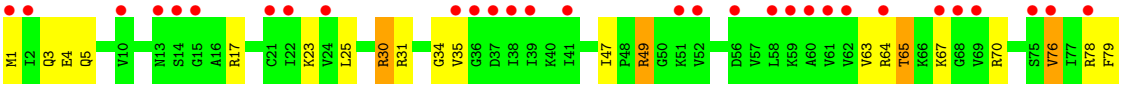
Chain DK:

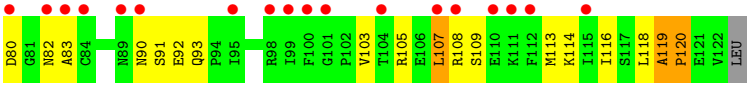




• Molecule 35: 50S ribosomal protein L14

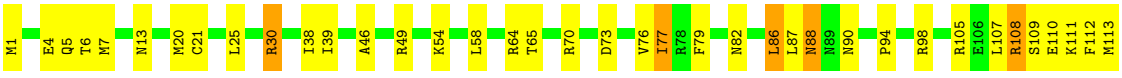
Chain CL:





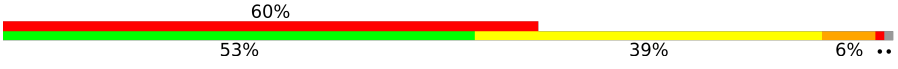
• Molecule 35: 50S ribosomal protein L14

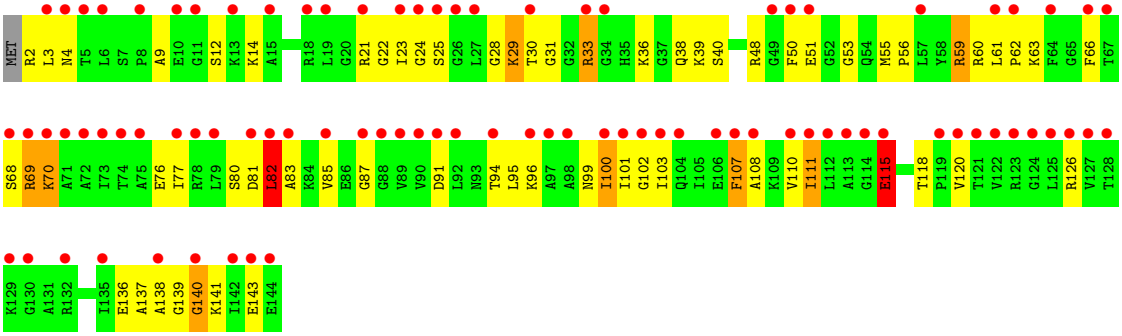
Chain DL:



• Molecule 36: 50S ribosomal protein L15

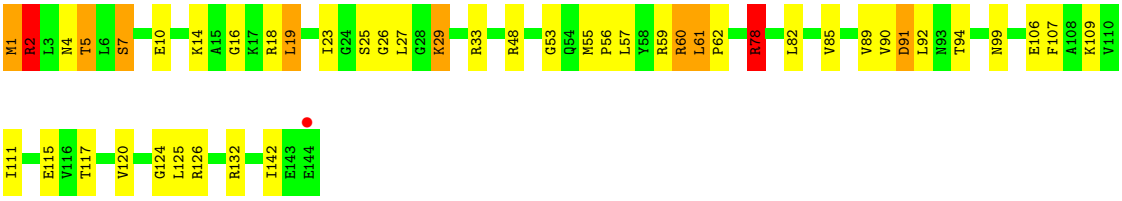
Chain CM:





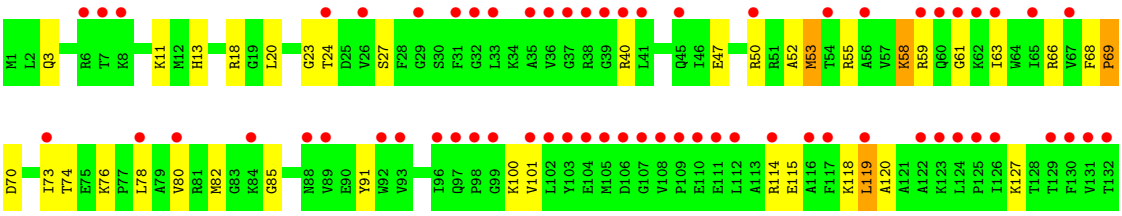
• Molecule 36: 50S ribosomal protein L15

Chain DM:



• Molecule 37: 50S ribosomal protein L16

Chain CN:

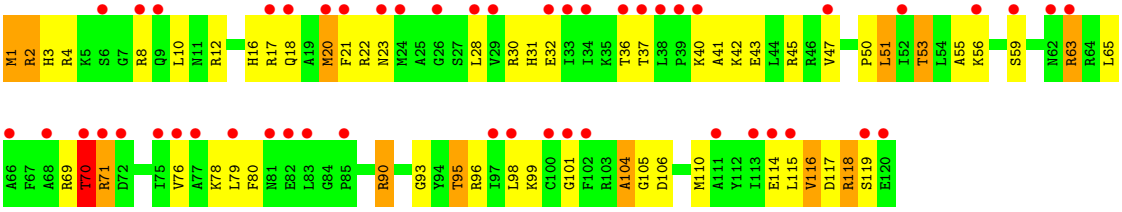


• Molecule 37: 50S ribosomal protein L16

Chain DN:

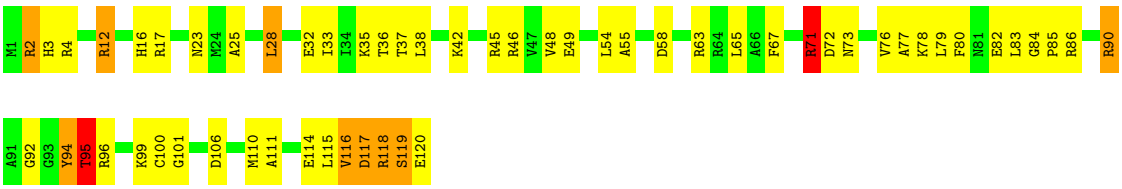
• Molecule 38: 50S ribosomal protein L17

Chain CO:



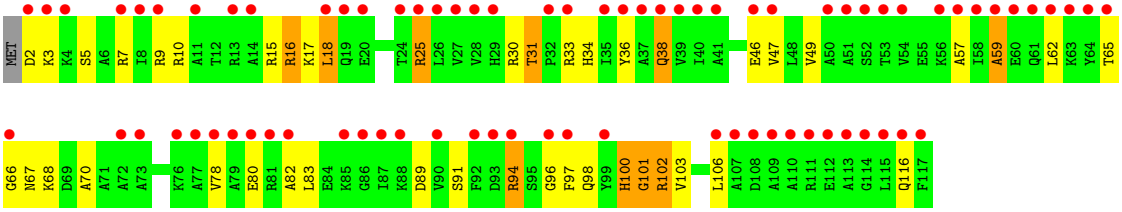
• Molecule 38: 50S ribosomal protein L17

Chain DO:



• Molecule 39: 50S ribosomal protein L18

Chain CP:

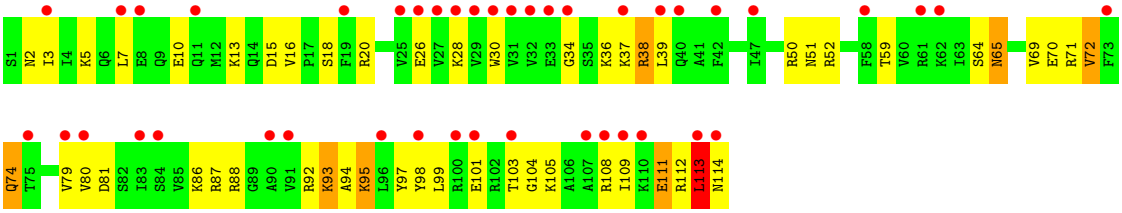


• Molecule 39: 50S ribosomal protein L18

Chain DP:

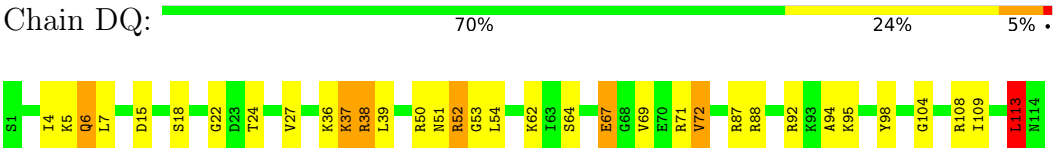
• Molecule 40: 50S ribosomal protein L19

Chain CQ:



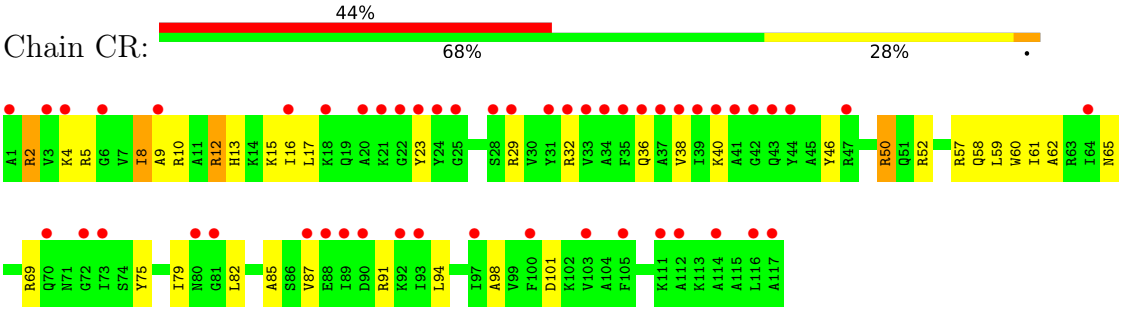
• Molecule 40: 50S ribosomal protein L19

Chain DQ:



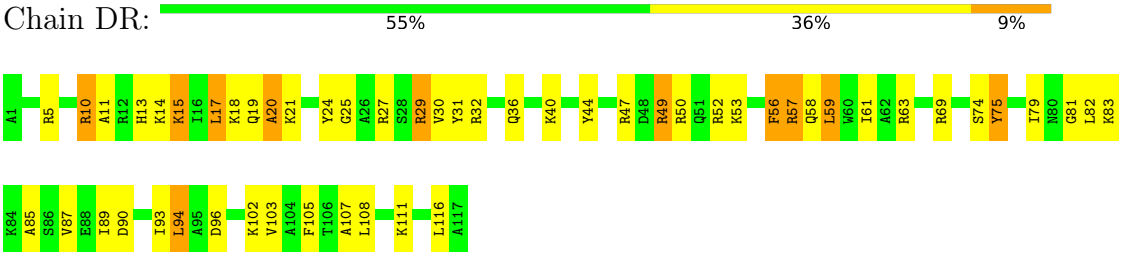
• Molecule 41: 50S ribosomal protein L20

Chain CR:



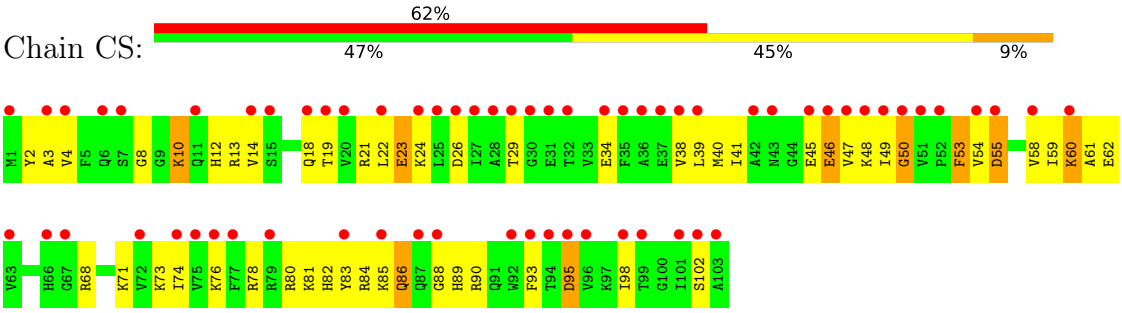
• Molecule 41: 50S ribosomal protein L20

Chain DR:



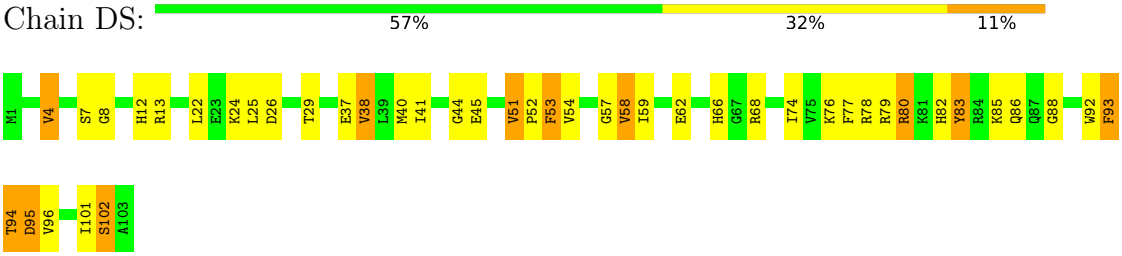
• Molecule 42: 50S ribosomal protein L21

Chain CS:



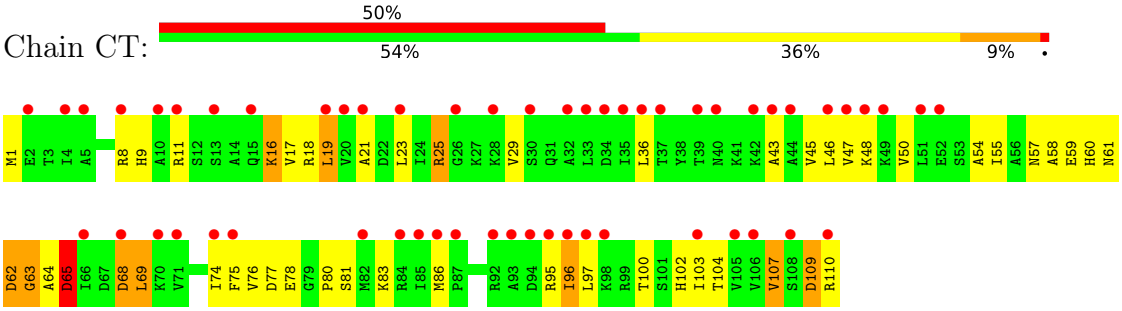
• Molecule 42: 50S ribosomal protein L21

Chain DS:



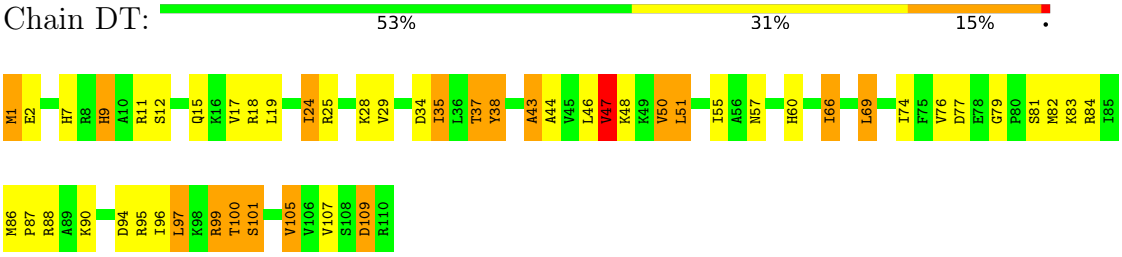
• Molecule 43: 50S ribosomal protein L22

Chain CT:



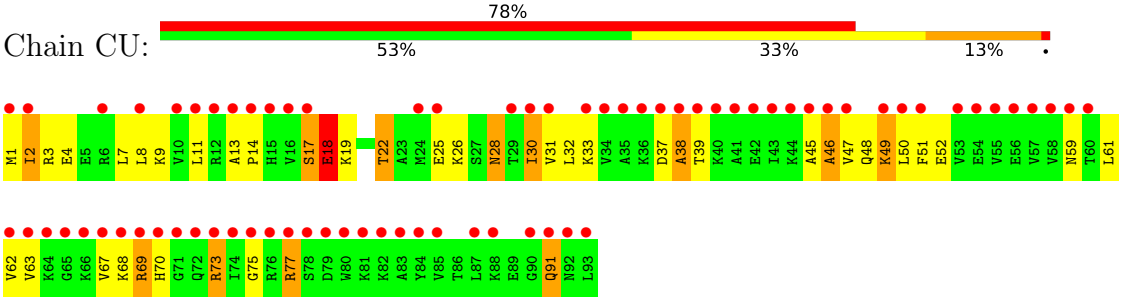
• Molecule 43: 50S ribosomal protein L22

Chain DT:



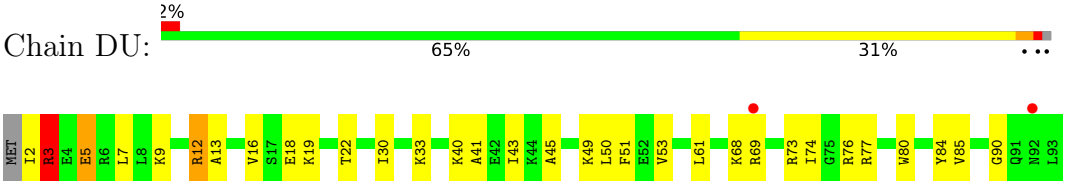
• Molecule 44: 50S ribosomal protein L23

Chain CU:



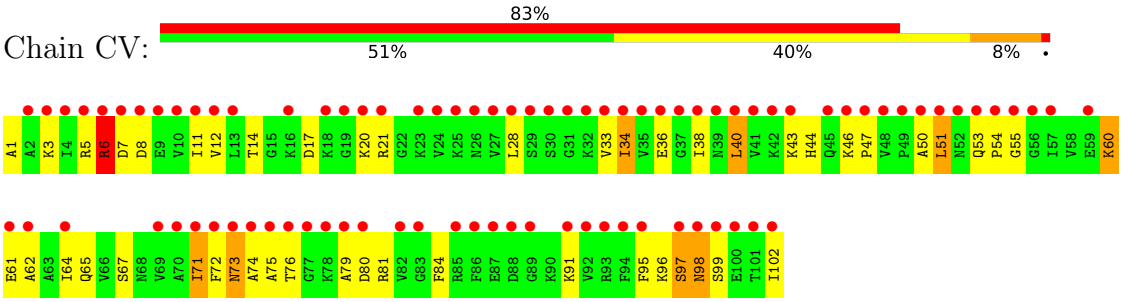
• Molecule 44: 50S ribosomal protein L23

Chain DU:



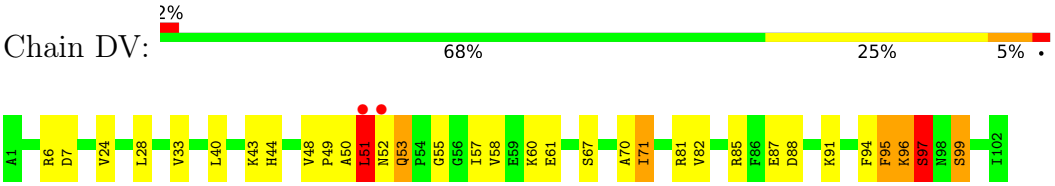
• Molecule 45: 50S ribosomal protein L24

Chain CV:



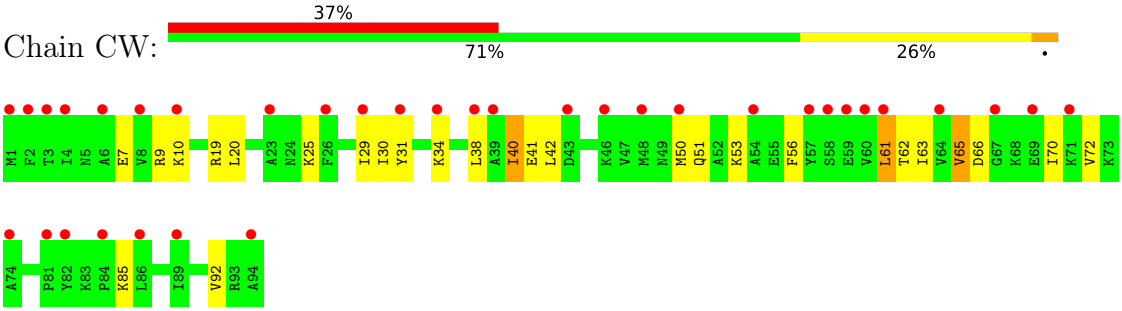
• Molecule 45: 50S ribosomal protein L24

Chain DV:



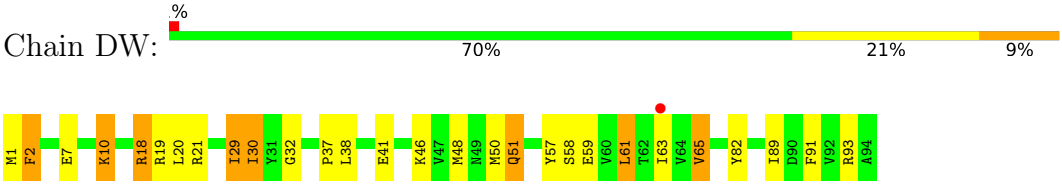
• Molecule 46: 50S ribosomal protein L25

Chain CW:



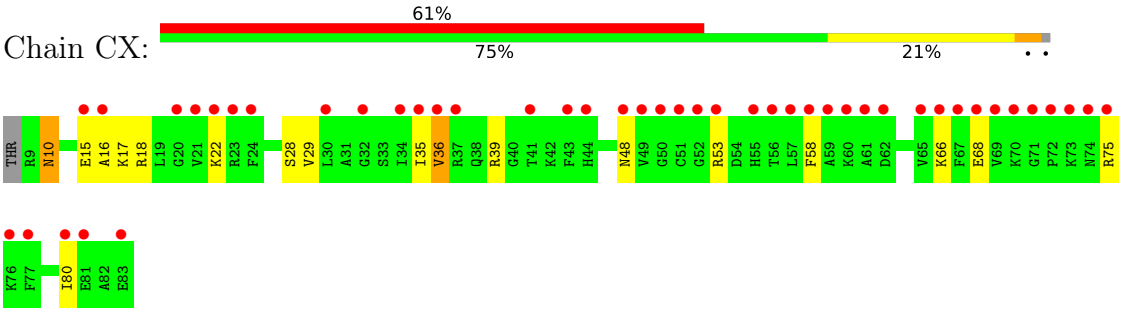
• Molecule 46: 50S ribosomal protein L25

Chain DW:



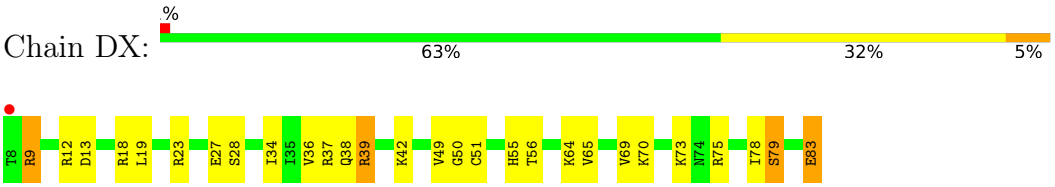
• Molecule 47: 50S ribosomal protein L27

Chain CX:



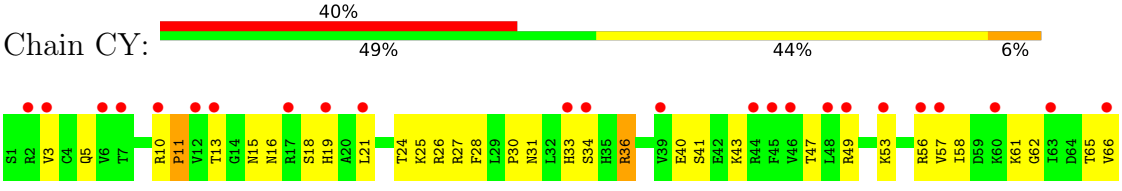
• Molecule 47: 50S ribosomal protein L27

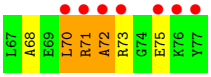
Chain DX:



• Molecule 48: 50S ribosomal protein L28

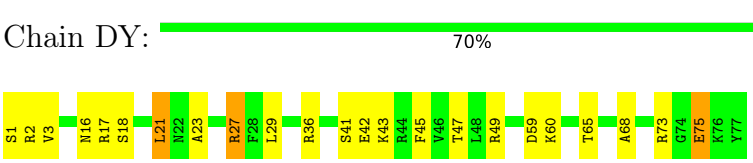
Chain CY:





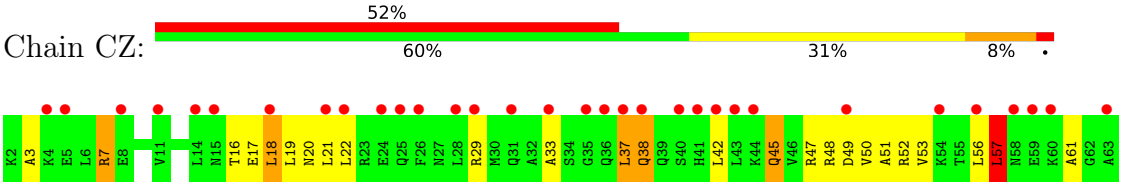
• Molecule 48: 50S ribosomal protein L28

Chain DY:



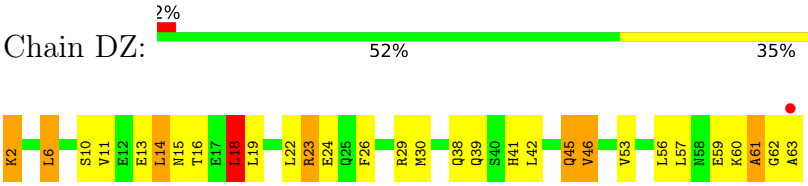
• Molecule 49: 50S ribosomal protein L29

Chain CZ:



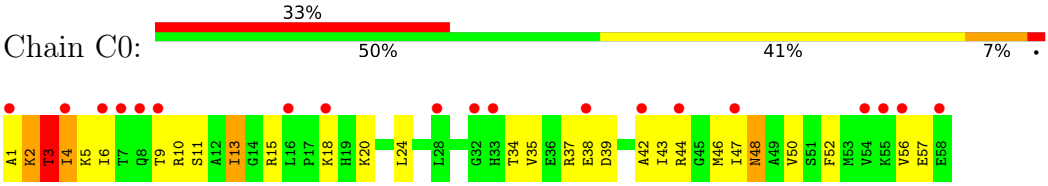
• Molecule 49: 50S ribosomal protein L29

Chain DZ:



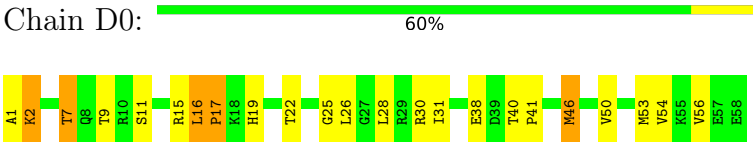
• Molecule 50: 50S ribosomal protein L30

Chain C0:



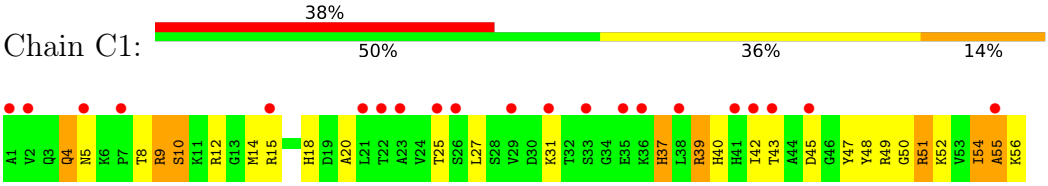
• Molecule 50: 50S ribosomal protein L30

Chain D0:



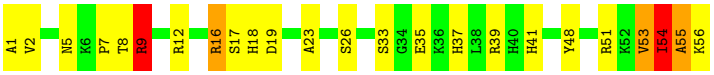
• Molecule 51: 50S ribosomal protein L32

Chain C1:



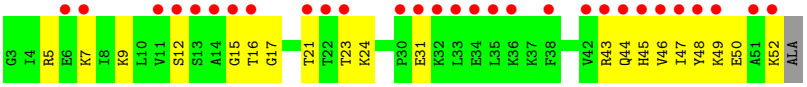
• Molecule 51: 50S ribosomal protein L32

Chain D1:



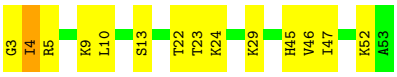
• Molecule 52: 50S ribosomal protein L33

Chain C2:



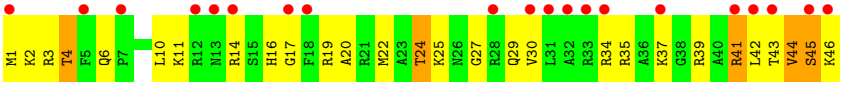
• Molecule 52: 50S ribosomal protein L33

Chain D2:



• Molecule 53: 50S ribosomal protein L34

Chain C3:

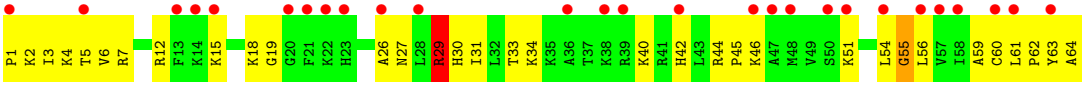


• Molecule 53: 50S ribosomal protein L34

Chain D3:

• Molecule 54: 50S ribosomal protein L35

Chain C4:

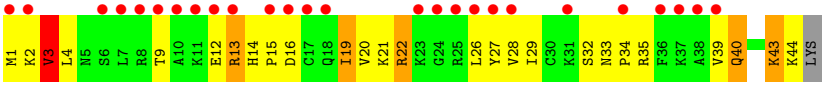


• Molecule 54: 50S ribosomal protein L35

Chain D4:

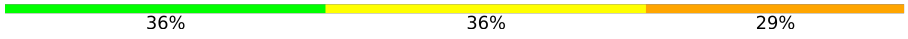
• Molecule 55: 50S ribosomal protein L36 2

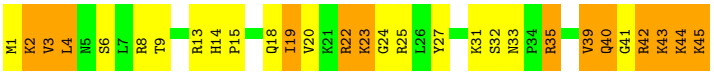
Chain C5:



• Molecule 55: 50S ribosomal protein L36 2

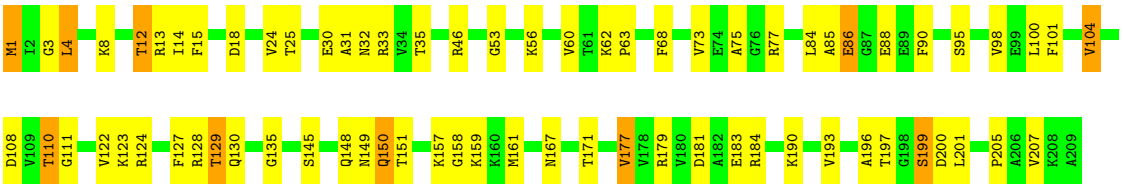
Chain D5:





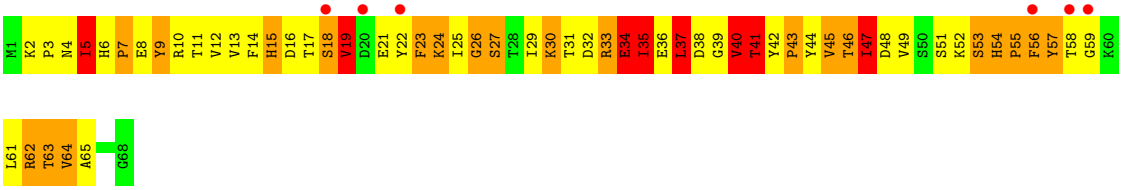
• Molecule 56: 50S ribosomal protein L3

Chain DD:



• Molecule 57: 50S ribosomal protein L31 type B

Chain D7:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	212.02Å 434.57Å 623.13Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.32 – 2.90 69.32 – 2.83	Depositor EDS
% Data completeness (in resolution range)	85.2 (69.32-2.90) 79.8 (69.32-2.83)	Depositor EDS
R_{merge}	0.21	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.26 (at 2.81Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.186 , 0.255 0.186 , 0.255	Depositor DCC
R_{free} test set	5389 reflections (0.50%)	wwPDB-VP
Wilson B-factor (Å^2)	45.6	Xtriage
Anisotropy	0.488	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 109.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	484785	wwPDB-VP
Average B, all atoms (Å^2)	124.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.34% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: OMU, PSU, 5MC, PUT, OMG, PEG, MEQ, 2MG, 2MA, 6MZ, D2T, MG, MPD, H2U, PG4, OMC, 3TD, EDO, G7M, PGE, UR3, 1MG, 5MU, 1PE, MA6, GUN, 4OC, SPD, ACY

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	1.13	110/36568 (0.3%)	1.87	1555/57042 (2.7%)
2	BA	0.95	49/36834 (0.1%)	1.61	852/57462 (1.5%)
3	DA	1.91	1848/69150 (2.7%)	2.50	6915/107874 (6.4%)
4	CA	0.77	39/69681 (0.1%)	1.45	1050/108706 (1.0%)
5	CB	0.53	0/2828	1.07	6/4410 (0.1%)
5	DB	1.79	68/2850 (2.4%)	2.47	288/4444 (6.5%)
6	AB	0.69	0/1736	1.12	6/2338 (0.3%)
6	BB	0.64	0/1736	1.11	8/2338 (0.3%)
7	AC	0.68	0/1652	0.97	2/2225 (0.1%)
7	BC	0.59	0/1652	0.97	5/2225 (0.2%)
8	AD	0.62	0/1665	0.97	4/2227 (0.2%)
8	BD	0.73	0/1665	1.05	7/2227 (0.3%)
9	AE	0.75	0/1119	1.21	5/1504 (0.3%)
9	BE	0.70	0/1119	1.13	4/1504 (0.3%)
10	AF	0.71	0/836	1.03	2/1128 (0.2%)
10	BF	0.65	0/836	1.09	3/1128 (0.3%)
11	AG	0.53	0/1196	0.83	0/1602
11	BG	0.50	0/1196	0.99	2/1602 (0.1%)
12	AH	0.71	0/989	1.07	4/1326 (0.3%)
12	BH	0.62	0/989	0.96	1/1326 (0.1%)
13	AI	0.58	0/1034	1.01	2/1375 (0.1%)
13	BI	0.54	0/1034	1.03	0/1375
14	AJ	0.73	1/797 (0.1%)	1.12	3/1077 (0.3%)
14	BJ	0.78	2/797 (0.3%)	1.02	0/1077
15	AK	0.53	0/893	0.90	0/1205
15	BK	0.63	0/893	1.05	2/1205 (0.2%)
16	AL	0.78	0/960	1.08	4/1286 (0.3%)
17	AM	0.56	0/893	0.98	1/1193 (0.1%)
17	BM	0.43	0/893	0.92	0/1193
18	AN	0.66	0/785	1.12	3/1043 (0.3%)
18	BN	0.51	0/785	0.95	0/1043

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
19	AO	0.63	0/724	1.07	3/966 (0.3%)
19	BO	0.58	0/724	1.03	2/966 (0.2%)
20	AP	0.66	0/659	1.03	1/884 (0.1%)
20	BP	0.67	0/659	1.11	2/884 (0.2%)
21	AQ	0.74	1/658 (0.2%)	0.99	2/881 (0.2%)
21	BQ	0.60	0/658	1.00	2/881 (0.2%)
22	AR	0.60	0/463	1.03	1/621 (0.2%)
22	BR	0.69	0/463	1.00	0/621
23	AS	0.72	1/653 (0.2%)	1.03	2/877 (0.2%)
23	BS	0.42	0/653	0.89	0/877
24	AT	0.70	0/671	0.94	2/888 (0.2%)
24	BT	0.54	0/671	1.01	2/888 (0.2%)
25	AU	0.69	0/457	1.12	2/606 (0.3%)
25	BU	0.76	0/457	1.22	2/606 (0.3%)
26	BL	0.74	0/969	1.23	8/1300 (0.6%)
27	CC	0.67	0/2122	1.02	4/2852 (0.1%)
27	DC	1.03	6/2122 (0.3%)	1.16	10/2852 (0.4%)
28	CD	0.52	0/1586	0.90	2/2134 (0.1%)
29	CE	0.47	0/1571	0.90	1/2113 (0.0%)
29	DE	0.93	3/1571 (0.2%)	1.15	6/2113 (0.3%)
30	CF	0.46	0/1435	0.98	4/1926 (0.2%)
30	DF	0.79	0/1435	1.10	7/1926 (0.4%)
31	CG	0.41	0/1343	0.71	0/1816
31	DG	0.83	1/1343 (0.1%)	1.02	4/1816 (0.2%)
32	CH	0.53	0/1113	0.82	1/1504 (0.1%)
32	DH	0.49	0/1113	0.91	2/1504 (0.1%)
33	CJ	0.45	0/1046	0.90	0/1410
33	DJ	0.47	0/1046	0.98	3/1410 (0.2%)
34	CK	0.51	0/1152	0.77	0/1551
34	DK	1.34	10/1152 (0.9%)	1.37	11/1551 (0.7%)
35	CL	0.59	0/947	0.96	1/1268 (0.1%)
35	DL	1.04	1/955 (0.1%)	1.23	4/1279 (0.3%)
36	CM	0.49	0/1054	0.99	3/1403 (0.2%)
36	DM	0.98	1/1062 (0.1%)	1.17	5/1413 (0.4%)
37	CN	0.55	0/1093	0.92	0/1460
37	DN	1.02	1/1104 (0.1%)	1.19	4/1474 (0.3%)
38	CO	0.54	0/974	0.98	1/1301 (0.1%)
38	DO	1.11	1/974 (0.1%)	1.43	9/1301 (0.7%)
39	CP	0.47	0/902	0.88	1/1209 (0.1%)
39	DP	0.93	1/910 (0.1%)	1.16	2/1219 (0.2%)
40	CQ	0.55	0/929	0.99	2/1242 (0.2%)
40	DQ	0.99	4/929 (0.4%)	1.13	5/1242 (0.4%)
41	CR	0.55	0/960	0.93	2/1278 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
41	DR	1.23	5/960 (0.5%)	1.37	11/1278 (0.9%)
42	CS	0.47	0/829	0.93	0/1107
42	DS	1.22	5/829 (0.6%)	1.25	6/1107 (0.5%)
43	CT	0.52	0/864	0.98	4/1156 (0.3%)
43	DT	1.12	2/864 (0.2%)	1.44	12/1156 (1.0%)
44	CU	0.46	0/745	0.92	0/994
44	DU	0.96	0/737	1.02	1/984 (0.1%)
45	CV	0.41	0/788	0.98	1/1051 (0.1%)
45	DV	1.06	4/788 (0.5%)	1.19	4/1051 (0.4%)
46	CW	0.40	0/766	0.77	0/1025
46	DW	0.98	2/766 (0.3%)	1.26	6/1025 (0.6%)
47	CX	0.59	0/576	0.82	0/762
47	DX	1.21	5/602 (0.8%)	1.24	0/795
48	CY	0.62	0/635	0.98	0/848
48	DY	0.92	1/635 (0.2%)	1.05	1/848 (0.1%)
49	CZ	0.42	0/502	0.92	0/667
49	DZ	0.79	1/502 (0.2%)	1.18	3/667 (0.4%)
50	C0	0.50	0/453	0.86	0/605
50	D0	1.09	1/460 (0.2%)	1.34	4/615 (0.7%)
51	C1	0.52	0/450	0.93	0/599
51	D1	1.02	1/450 (0.2%)	1.48	8/599 (1.3%)
52	C2	0.46	0/416	0.83	0/554
52	D2	0.93	0/421	1.09	1/561 (0.2%)
53	C3	0.72	0/380	1.02	1/498 (0.2%)
53	D3	1.01	0/380	1.43	8/498 (1.6%)
54	C4	0.57	0/513	1.02	0/676
54	D4	0.99	1/513 (0.2%)	1.18	2/676 (0.3%)
55	C5	0.54	0/363	0.68	0/479
55	D5	1.14	1/372 (0.3%)	1.19	1/490 (0.2%)
56	DD	1.09	4/1576 (0.3%)	1.20	5/2119 (0.2%)
57	D7	0.63	0/542	0.81	0/736
All	All	1.19	2181/309220 (0.7%)	1.75	10938/462249 (2.4%)

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
7	AC	0	1
8	BD	0	1
10	BF	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
13	AI	0	1
14	AJ	0	1
15	BK	0	1
19	AO	0	1
19	BO	0	1
21	AQ	0	1
23	AS	0	1
24	AT	0	2
24	BT	0	1
25	AU	0	1
27	CC	0	1
27	DC	0	5
28	CD	0	2
29	DE	0	6
30	DF	0	1
32	CH	0	1
33	CJ	0	1
33	DJ	0	1
34	DK	0	8
35	CL	0	1
35	DL	0	1
36	DM	0	3
38	DO	0	4
39	DP	0	1
40	DQ	0	1
41	DR	0	6
42	DS	0	1
43	DT	0	9
45	DV	0	1
46	DW	0	4
47	DX	0	4
49	DZ	0	2
50	D0	0	4
51	D1	0	2
57	D7	0	1
All	All	0	85

All (2181) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2098	U	C4-O4	16.35	1.36	1.23
3	DA	2014	A	N7-C5	-15.31	1.30	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2070	A	N9-C4	-13.38	1.29	1.37
3	DA	2886	A	N7-C5	13.28	1.47	1.39
3	DA	783	A	N9-C4	-13.27	1.29	1.37
3	DA	2886	A	C8-N7	13.27	1.40	1.31
3	DA	2885	G	N9-C4	13.13	1.48	1.38
3	DA	2885	G	C2-N2	12.96	1.47	1.34
3	DA	2885	G	C5-C4	12.84	1.47	1.38
3	DA	2885	G	C8-N7	12.62	1.38	1.30
3	DA	1985	C	N1-C6	-12.43	1.29	1.37
3	DA	948	C	N1-C6	-12.42	1.29	1.37
3	DA	2885	G	C6-O6	12.38	1.35	1.24
3	DA	578	G	N7-C5	-12.13	1.31	1.39
3	DA	2886	A	P-OP1	12.05	1.69	1.49
3	DA	2885	G	C5-C6	11.66	1.54	1.42
3	DA	979	A	N9-C4	-11.55	1.30	1.37
3	DA	804	A	N9-C4	-11.55	1.30	1.37
3	DA	737	C	N1-C6	-11.40	1.30	1.37
3	DA	2098	U	N1-C6	11.39	1.48	1.38
3	DA	2781	A	N3-C4	-11.35	1.28	1.34
3	DA	2885	G	C2-N3	11.33	1.41	1.32
3	DA	2628	C	N1-C6	-11.10	1.30	1.37
3	DA	450	G	N9-C8	-11.06	1.30	1.37
3	DA	2098	U	N3-C4	10.85	1.48	1.38
3	DA	2886	A	N9-C8	10.80	1.46	1.37
3	DA	1002	G	N3-C4	-10.79	1.27	1.35
3	DA	909	A	N9-C4	-10.77	1.31	1.37
3	DA	560	C	C2-O2	-10.72	1.14	1.24
3	DA	385	C	N1-C6	-10.71	1.30	1.37
3	DA	2029	G	N7-C5	-10.57	1.32	1.39
3	DA	2486	C	N1-C6	-10.54	1.30	1.37
3	DA	2070	A	N3-C4	-10.47	1.28	1.34
3	DA	2098	U	C2-O2	10.43	1.31	1.22
3	DA	1268	A	N9-C4	-10.41	1.31	1.37
3	DA	2730	C	N1-C6	-10.40	1.30	1.37
3	DA	996	A	N9-C4	-10.38	1.31	1.37
3	DA	1665	A	N7-C5	-10.38	1.33	1.39
3	DA	1638	C	N1-C6	-10.27	1.30	1.37
3	DA	2885	G	C6-N1	10.23	1.46	1.39
3	DA	334	C	N1-C6	-10.15	1.31	1.37
3	DA	2886	A	P-OP2	10.13	1.66	1.49
34	DK	17	VAL	CB-CG1	-10.13	1.31	1.52
3	DA	1977	A	N9-C4	-10.12	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	557	C	N1-C6	-10.10	1.31	1.37
3	DA	799	G	C6-N1	-10.09	1.32	1.39
1	AA	782	A	N3-C4	-10.06	1.28	1.34
3	DA	1614	A	N7-C5	-10.05	1.33	1.39
3	DA	1268	A	N3-C4	-10.04	1.28	1.34
3	DA	1678	A	N9-C4	-10.03	1.31	1.37
3	DA	560	C	C2-N3	-10.00	1.27	1.35
3	DA	1370	C	N1-C6	-9.99	1.31	1.37
3	DA	1525	A	N7-C5	-9.90	1.33	1.39
3	DA	30	G	N9-C8	-9.88	1.30	1.37
3	DA	208	C	N1-C6	-9.87	1.31	1.37
3	DA	1163	G	N9-C8	-9.82	1.30	1.37
3	DA	1267	U	N1-C6	-9.82	1.29	1.38
3	DA	677	A	N9-C4	-9.73	1.32	1.37
3	DA	972	A	N9-C8	-9.72	1.29	1.37
3	DA	947	A	N3-C4	-9.71	1.29	1.34
3	DA	981	A	C5-C4	-9.67	1.31	1.38
3	DA	2055	C	N1-C6	-9.67	1.31	1.37
5	DB	103	U	N1-C6	-9.62	1.29	1.38
3	DA	2885	G	N9-C8	9.55	1.44	1.37
3	DA	2886	A	C5-C4	9.55	1.45	1.38
3	DA	822	G	C6-N1	-9.52	1.32	1.39
3	DA	201	C	N1-C6	-9.50	1.31	1.37
3	DA	2068	U	N1-C6	-9.50	1.29	1.38
1	AA	892	A	N9-C4	-9.47	1.32	1.37
3	DA	530	G	N9-C8	-9.46	1.31	1.37
3	DA	2792	A	N9-C4	-9.46	1.32	1.37
3	DA	1829	A	N3-C4	-9.44	1.29	1.34
3	DA	203	A	N7-C5	-9.43	1.33	1.39
5	DB	99	A	N3-C4	-9.39	1.29	1.34
1	AA	1413	A	N3-C4	-9.37	1.29	1.34
3	DA	129	C	N1-C6	-9.34	1.31	1.37
3	DA	2068	U	N1-C2	-9.31	1.30	1.38
3	DA	1218	G	N3-C4	-9.30	1.28	1.35
3	DA	777	G	N9-C8	-9.29	1.31	1.37
3	DA	1774	C	N1-C6	-9.29	1.31	1.37
3	DA	502	A	N9-C4	-9.28	1.32	1.37
3	DA	793	A	N7-C5	-9.18	1.33	1.39
3	DA	1755	A	C6-N1	-9.17	1.29	1.35
3	DA	1608	A	N3-C4	-9.16	1.29	1.34
3	DA	2066	C	N1-C6	-9.16	1.31	1.37
3	DA	1164	C	N1-C6	-9.16	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	15	G	N9-C4	-9.15	1.30	1.38
3	DA	2895	G	N9-C4	-9.15	1.30	1.38
3	DA	1562	U	N1-C2	-9.11	1.30	1.38
3	DA	2516	A	C5-C4	-9.10	1.32	1.38
3	DA	2050	C	N1-C6	-9.10	1.31	1.37
3	DA	2452	C	C4-C5	-9.09	1.35	1.43
3	DA	2469	A	N3-C4	-9.08	1.29	1.34
3	DA	2461	A	N9-C4	-9.06	1.32	1.37
3	DA	2015	A	N3-C4	-9.04	1.29	1.34
3	DA	497	A	C5-C4	-9.03	1.32	1.38
3	DA	2386	A	C6-N1	-9.03	1.29	1.35
3	DA	973	A	N7-C5	-9.02	1.33	1.39
3	DA	470	A	N3-C4	-8.98	1.29	1.34
3	DA	981	A	N3-C4	-8.98	1.29	1.34
3	DA	2499	C	C4-C5	-8.97	1.35	1.43
3	DA	2887	A	P-O5'	8.97	1.68	1.59
3	DA	811	U	N1-C6	-8.95	1.29	1.38
3	DA	1650	A	N3-C4	-8.91	1.29	1.34
3	DA	1455	G	N7-C5	-8.90	1.33	1.39
1	AA	1413	A	N9-C4	-8.88	1.32	1.37
3	DA	1139	G	N7-C5	-8.88	1.33	1.39
3	DA	2827	C	N1-C6	-8.85	1.31	1.37
3	DA	592	A	C6-N1	-8.84	1.29	1.35
3	DA	2884	U	O3'-P	8.82	1.71	1.61
3	DA	1287	A	N3-C4	-8.81	1.29	1.34
3	DA	979	A	N3-C4	-8.81	1.29	1.34
5	DB	66	A	N9-C4	-8.77	1.32	1.37
5	DB	70	C	N1-C6	-8.76	1.31	1.37
3	DA	2386	A	N3-C4	-8.76	1.29	1.34
3	DA	1253	A	N9-C4	-8.72	1.32	1.37
3	DA	974	G	N9-C8	-8.71	1.31	1.37
3	DA	2510	C	N1-C6	-8.70	1.31	1.37
3	DA	2594	C	N1-C6	-8.68	1.31	1.37
21	AQ	20	SER	CA-CB	8.68	1.66	1.52
3	DA	794	A	N3-C4	-8.66	1.29	1.34
3	DA	189	G	N9-C8	-8.66	1.31	1.37
3	DA	819	A	C6-N1	-8.64	1.29	1.35
3	DA	1245	G	N3-C4	-8.64	1.29	1.35
3	DA	793	A	C5-C6	-8.63	1.33	1.41
3	DA	1200	C	N1-C6	-8.62	1.31	1.37
3	DA	1784	A	N3-C4	-8.62	1.29	1.34
5	DB	91	C	N3-C4	-8.62	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1010	A	N3-C4	-8.61	1.29	1.34
3	DA	1608	A	N9-C4	-8.61	1.32	1.37
3	DA	247	G	N7-C5	-8.60	1.34	1.39
3	DA	207	A	N7-C5	-8.60	1.34	1.39
3	DA	505	A	N3-C4	-8.60	1.29	1.34
3	DA	2282	G	N9-C8	-8.59	1.31	1.37
3	DA	566	U	C4-C5	-8.59	1.35	1.43
3	DA	2572	A	N3-C4	-8.57	1.29	1.34
3	DA	1556	C	N1-C6	-8.55	1.32	1.37
3	DA	773	U	C2-N3	-8.55	1.31	1.37
3	DA	2885	G	N3-C4	8.55	1.41	1.35
3	DA	1207	C	N1-C6	-8.53	1.32	1.37
3	DA	2013	A	N9-C4	-8.52	1.32	1.37
3	DA	128	C	N1-C6	-8.48	1.32	1.37
3	DA	2013	A	C6-N1	-8.46	1.29	1.35
3	DA	2232	C	N1-C6	-8.47	1.32	1.37
3	DA	2241	A	N3-C4	-8.47	1.29	1.34
3	DA	796	C	N1-C6	-8.46	1.32	1.37
3	DA	2063	C	N3-C4	-8.45	1.28	1.33
3	DA	1705	A	N9-C4	-8.45	1.32	1.37
3	DA	2267	A	N3-C4	-8.43	1.29	1.34
3	DA	416	U	C4-C5	-8.41	1.35	1.43
3	DA	471	A	N3-C4	-8.40	1.29	1.34
3	DA	524	G	C2-N3	-8.40	1.26	1.32
5	DB	97	C	N1-C6	-8.39	1.32	1.37
3	DA	2389	G	N7-C5	-8.39	1.34	1.39
3	DA	523	C	N1-C6	-8.38	1.32	1.37
47	DX	69	VAL	CB-CG2	-8.36	1.35	1.52
3	DA	965	C	N1-C6	-8.36	1.32	1.37
3	DA	559	G	N3-C4	-8.35	1.29	1.35
3	DA	561	G	N9-C4	-8.35	1.31	1.38
3	DA	2469	A	N9-C4	-8.35	1.32	1.37
3	DA	2023	C	N1-C6	-8.34	1.32	1.37
3	DA	2297	A	C6-N1	-8.33	1.29	1.35
3	DA	2058	A	N3-C4	-8.32	1.29	1.34
3	DA	2885	G	N7-C5	8.32	1.44	1.39
3	DA	1313	U	C4-C5	-8.31	1.36	1.43
3	DA	1784	A	N9-C4	-8.29	1.32	1.37
2	BA	873	A	N3-C4	-8.27	1.29	1.34
3	DA	2361	G	C6-N1	-8.27	1.33	1.39
3	DA	936	A	C5-C6	-8.26	1.33	1.41
3	DA	255	A	N9-C4	-8.26	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2592	G	C2-N3	-8.24	1.26	1.32
3	DA	1937	A	N7-C5	-8.22	1.34	1.39
3	DA	2772	C	N1-C6	-8.22	1.32	1.37
3	DA	384	A	N9-C4	-8.21	1.32	1.37
3	DA	2569	G	C2-N3	-8.21	1.26	1.32
3	DA	828	U	C2-N3	-8.21	1.32	1.37
3	DA	2023	C	C4-C5	-8.21	1.36	1.43
3	DA	238	C	N1-C6	-8.20	1.32	1.37
3	DA	2332	C	N3-C4	-8.20	1.28	1.33
3	DA	2516	A	N7-C5	-8.19	1.34	1.39
3	DA	1131	G	C8-N7	-8.17	1.26	1.30
3	DA	601	C	N1-C6	-8.16	1.32	1.37
3	DA	2044	C	N1-C6	-8.16	1.32	1.37
3	DA	979	A	C6-N1	-8.16	1.29	1.35
3	DA	2063	C	C4-C5	-8.16	1.36	1.43
3	DA	743	A	N3-C4	-8.13	1.29	1.34
3	DA	2273	A	C6-N6	-8.13	1.27	1.33
3	DA	2333	A	C5-C6	-8.12	1.33	1.41
3	DA	2828	G	N9-C4	-8.10	1.31	1.38
3	DA	1427	A	N3-C4	-8.09	1.29	1.34
35	DL	21	CYS	CB-SG	-8.09	1.68	1.82
3	DA	777	G	C5-C4	-8.08	1.32	1.38
3	DA	936	A	N9-C4	-8.08	1.32	1.37
3	DA	2791	G	N3-C4	-8.07	1.29	1.35
3	DA	515	A	C6-N1	-8.06	1.29	1.35
3	DA	946	C	N1-C6	-8.04	1.32	1.37
3	DA	972	A	C5-C4	-8.04	1.33	1.38
3	DA	486	C	N1-C6	-8.03	1.32	1.37
2	BA	1501	C	N1-C6	-8.03	1.32	1.37
3	DA	1934	C	N3-C4	-8.02	1.28	1.33
3	DA	445	C	N1-C6	-8.00	1.32	1.37
3	DA	460	A	N3-C4	-8.00	1.30	1.34
3	DA	1264	A	N3-C4	-8.00	1.30	1.34
3	DA	2601	C	N1-C6	-8.00	1.32	1.37
3	DA	496	G	C6-N1	-7.99	1.33	1.39
3	DA	2395	C	N1-C6	-7.99	1.32	1.37
3	DA	1010	A	C6-N1	-7.99	1.29	1.35
3	DA	1455	G	N9-C8	-7.98	1.32	1.37
3	DA	991	C	N1-C6	-7.98	1.32	1.37
3	DA	2426	A	N3-C4	-7.97	1.30	1.34
3	DA	1678	A	N3-C4	-7.97	1.30	1.34
3	DA	2279	G	N1-C2	-7.96	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2014	A	C5-C6	-7.94	1.33	1.41
3	DA	2826	A	C5-C4	-7.93	1.33	1.38
3	DA	2828	G	N3-C4	-7.93	1.29	1.35
3	DA	947	A	C6-N1	-7.93	1.29	1.35
3	DA	560	C	N1-C2	-7.93	1.32	1.40
3	DA	664	G	N9-C4	-7.93	1.31	1.38
3	DA	491	G	N3-C4	-7.93	1.29	1.35
3	DA	1019	U	N3-C4	-7.91	1.31	1.38
3	DA	812	C	N1-C6	-7.91	1.32	1.37
3	DA	2472	G	N7-C5	-7.91	1.34	1.39
3	DA	2000	C	C4-C5	-7.90	1.36	1.43
3	DA	487	C	N1-C6	-7.87	1.32	1.37
3	DA	1262	A	N7-C5	-7.86	1.34	1.39
3	DA	2632	A	C6-N6	-7.86	1.27	1.33
2	BA	499	A	N9-C4	-7.86	1.33	1.37
3	DA	991	C	C4-C5	-7.85	1.36	1.43
3	DA	2886	A	N1-C2	7.84	1.41	1.34
3	DA	2608	G	C5-C4	-7.84	1.32	1.38
3	DA	1800	C	N1-C6	-7.83	1.32	1.37
3	DA	470	A	C6-N1	-7.82	1.30	1.35
3	DA	2370	G	N7-C5	-7.81	1.34	1.39
3	DA	1244	A	N9-C4	-7.80	1.33	1.37
1	AA	901	A	N9-C4	-7.78	1.33	1.37
3	DA	2025	C	N3-C4	-7.78	1.28	1.33
3	DA	2280	G	N3-C4	-7.77	1.30	1.35
3	DA	920	A	N7-C5	-7.77	1.34	1.39
3	DA	804	A	N3-C4	-7.77	1.30	1.34
3	DA	1610	A	N9-C4	-7.77	1.33	1.37
3	DA	2361	G	N3-C4	-7.76	1.30	1.35
3	DA	950	G	C5-C4	-7.75	1.32	1.38
1	AA	866	C	N1-C6	-7.73	1.32	1.37
3	DA	753	A	N3-C4	-7.73	1.30	1.34
3	DA	1611	C	N1-C6	-7.72	1.32	1.37
3	DA	2472	G	C5-C6	-7.71	1.34	1.42
3	DA	927	A	C5-C4	-7.71	1.33	1.38
3	DA	1226	A	N7-C5	-7.71	1.34	1.39
3	DA	2619	C	N1-C6	-7.70	1.32	1.37
3	DA	783	A	C5-C6	-7.70	1.34	1.41
5	DB	73	A	C6-N1	-7.69	1.30	1.35
3	DA	488	G	N3-C4	-7.69	1.30	1.35
2	BA	923	A	N9-C4	-7.68	1.33	1.37
3	DA	74	A	N3-C4	-7.67	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1228	G	C6-N1	-7.67	1.34	1.39
3	DA	2324	U	C4-C5	-7.67	1.36	1.43
3	DA	1658	C	N1-C6	-7.67	1.32	1.37
1	AA	622	A	N9-C4	-7.66	1.33	1.37
3	DA	1634	A	N3-C4	-7.66	1.30	1.34
3	DA	529	A	C6-N1	-7.66	1.30	1.35
3	DA	1990	C	N1-C6	-7.66	1.32	1.37
3	DA	2039	U	N1-C6	-7.65	1.31	1.38
5	DB	93	C	N1-C6	-7.65	1.32	1.37
3	DA	2886	A	N3-C4	7.65	1.39	1.34
3	DA	1546	G	C2-N3	-7.64	1.26	1.32
3	DA	1771	C	N1-C6	-7.64	1.32	1.37
3	DA	1838	C	N1-C6	-7.64	1.32	1.37
3	DA	1604	C	N1-C6	-7.63	1.32	1.37
3	DA	517	C	N1-C6	-7.63	1.32	1.37
3	DA	127	A	C5-C4	-7.63	1.33	1.38
3	DA	907	G	N7-C5	-7.63	1.34	1.39
3	DA	2722	G	C2-N3	-7.62	1.26	1.32
3	DA	2254	C	C4-C5	-7.61	1.36	1.43
3	DA	2886	A	C6-N1	7.61	1.40	1.35
5	DB	57	A	N9-C4	-7.61	1.33	1.37
3	DA	258	G	N7-C5	-7.60	1.34	1.39
3	DA	1163	G	N7-C5	-7.60	1.34	1.39
47	DX	51	CYS	CB-SG	-7.60	1.69	1.82
3	DA	516	C	N1-C2	-7.60	1.32	1.40
3	DA	1768	C	N1-C6	-7.59	1.32	1.37
3	DA	1656	C	C2-N3	-7.59	1.29	1.35
3	DA	1664	A	N9-C4	-7.59	1.33	1.37
3	DA	538	A	N3-C4	-7.58	1.30	1.34
3	DA	1270	C	N3-C4	-7.58	1.28	1.33
3	DA	2488	G	N7-C5	-7.58	1.34	1.39
3	DA	561	G	C5-C6	-7.57	1.34	1.42
3	DA	1194	A	N3-C4	-7.57	1.30	1.34
3	DA	933	A	N9-C4	-7.56	1.33	1.37
3	DA	2868	A	N3-C4	-7.56	1.30	1.34
3	DA	564	C	C2-N3	-7.55	1.29	1.35
3	DA	2729	G	C6-N1	-7.53	1.34	1.39
3	DA	1304	A	N9-C4	-7.52	1.33	1.37
3	DA	920	A	N3-C4	-7.52	1.30	1.34
3	DA	2232	C	C4-C5	-7.51	1.36	1.43
3	DA	480	A	C5-C4	-7.51	1.33	1.38
3	DA	2820	A	N9-C4	-7.50	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	505	A	N7-C5	-7.50	1.34	1.39
3	DA	773	U	N3-C4	-7.49	1.31	1.38
3	DA	918	A	C5-C6	-7.49	1.34	1.41
3	DA	1158	C	N1-C6	-7.48	1.32	1.37
3	DA	995	C	N1-C6	-7.48	1.32	1.37
3	DA	1156	A	N3-C4	-7.47	1.30	1.34
3	DA	2565	A	C6-N1	-7.47	1.30	1.35
3	DA	2003	A	C5-C6	-7.46	1.34	1.41
3	DA	2015	A	C6-N1	-7.45	1.30	1.35
4	CA	1938	A	N9-C4	7.45	1.42	1.37
3	DA	1125	G	N9-C8	-7.45	1.32	1.37
3	DA	1268	A	N7-C5	-7.44	1.34	1.39
3	DA	2732	G	N3-C4	-7.43	1.30	1.35
3	DA	1216	G	C5-C4	-7.42	1.33	1.38
3	DA	1780	A	N9-C4	-7.42	1.33	1.37
3	DA	1278	C	N1-C6	-7.41	1.32	1.37
3	DA	1334	G	N9-C8	-7.41	1.32	1.37
3	DA	2618	G	C6-N1	-7.40	1.34	1.39
3	DA	2882	A	N7-C5	-7.40	1.34	1.39
3	DA	693	A	N9-C4	-7.39	1.33	1.37
3	DA	1163	G	C5-C4	-7.39	1.33	1.38
3	DA	940	G	N9-C8	-7.38	1.32	1.37
3	DA	988	A	N9-C4	-7.38	1.33	1.37
34	DK	9	GLU	CG-CD	7.38	1.63	1.51
3	DA	2268	A	N9-C4	-7.38	1.33	1.37
3	DA	322	A	C5-C4	-7.37	1.33	1.38
1	AA	577	G	N9-C4	-7.37	1.32	1.38
3	DA	152	A	N9-C4	-7.37	1.33	1.37
3	DA	2783	U	C4-C5	-7.37	1.36	1.43
5	DB	103	U	C4-C5	-7.36	1.36	1.43
3	DA	541	A	N3-C4	-7.35	1.30	1.34
1	AA	766	A	N9-C4	-7.35	1.33	1.37
3	DA	2017	U	N1-C2	-7.35	1.31	1.38
3	DA	621	A	C6-N1	-7.34	1.30	1.35
3	DA	2673	G	C5-C4	-7.33	1.33	1.38
3	DA	1937	A	N9-C8	-7.33	1.31	1.37
3	DA	800	A	N9-C4	-7.33	1.33	1.37
3	DA	1680	U	C2-N3	-7.33	1.32	1.37
1	AA	46	G	N9-C4	-7.33	1.32	1.38
3	DA	371	A	N9-C4	-7.31	1.33	1.37
3	DA	1322	A	N9-C4	-7.31	1.33	1.37
3	DA	2365	G	C5-C4	-7.30	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	900	A	C5-C6	-7.30	1.34	1.41
3	DA	575	A	C5-C4	-7.30	1.33	1.38
3	DA	2354	C	C4-C5	-7.30	1.37	1.43
3	DA	2015	A	C5-C4	-7.30	1.33	1.38
3	DA	382	A	N3-C4	-7.29	1.30	1.34
3	DA	677	A	C5-C6	-7.29	1.34	1.41
3	DA	2736	A	N9-C4	-7.29	1.33	1.37
3	DA	2023	C	N1-C2	-7.29	1.32	1.40
3	DA	2781	A	N1-C2	-7.29	1.27	1.34
3	DA	794	A	N9-C4	-7.29	1.33	1.37
3	DA	1659	G	N9-C4	-7.29	1.32	1.38
5	DB	99	A	C6-N1	-7.29	1.30	1.35
5	DB	102	G	N9-C4	-7.29	1.32	1.38
3	DA	949	G	N7-C5	-7.28	1.34	1.39
3	DA	1634	A	N9-C4	-7.28	1.33	1.37
3	DA	851	C	N3-C4	-7.28	1.28	1.33
1	AA	761	G	N7-C5	-7.28	1.34	1.39
1	AA	814	A	N3-C4	-7.28	1.30	1.34
3	DA	471	A	N9-C4	-7.28	1.33	1.37
3	DA	2517	C	C4-C5	-7.27	1.37	1.43
3	DA	930	G	C6-N1	7.27	1.44	1.39
3	DA	529	A	C5-C4	-7.27	1.33	1.38
5	DB	70	C	C4-C5	-7.27	1.37	1.43
3	DA	2051	A	N7-C5	-7.27	1.34	1.39
3	DA	972	A	C6-N1	-7.26	1.30	1.35
3	DA	505	A	N9-C4	-7.26	1.33	1.37
3	DA	322	A	N3-C4	-7.26	1.30	1.34
3	DA	497	A	N3-C4	-7.25	1.30	1.34
3	DA	1313	U	N1-C6	-7.25	1.31	1.38
3	DA	575	A	N7-C5	-7.25	1.34	1.39
3	DA	2066	C	C4-C5	-7.25	1.37	1.43
5	DB	76	G	N9-C8	-7.25	1.32	1.37
3	DA	2419	U	C2-N3	-7.25	1.32	1.37
3	DA	940	G	N3-C4	-7.24	1.30	1.35
2	BA	695	A	N9-C4	-7.23	1.33	1.37
3	DA	255	A	N3-C4	-7.23	1.30	1.34
1	AA	909	A	N3-C4	-7.22	1.30	1.34
3	DA	1021	A	C8-N7	-7.22	1.26	1.31
3	DA	432	A	N3-C4	-7.22	1.30	1.34
3	DA	524	G	N3-C4	-7.22	1.30	1.35
3	DA	2332	C	N1-C6	-7.22	1.32	1.37
3	DA	1269	A	N9-C4	-7.20	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	821	A	C5-C6	-7.20	1.34	1.41
3	DA	2465	C	N1-C2	-7.20	1.32	1.40
1	AA	452	A	N9-C4	-7.20	1.33	1.37
3	DA	770	G	C5-C6	-7.20	1.35	1.42
3	DA	1954	G	N3-C4	-7.19	1.30	1.35
3	DA	1966	A	C6-N1	-7.19	1.30	1.35
3	DA	2547	A	N3-C4	-7.19	1.30	1.34
3	DA	1162	G	C2-N3	-7.18	1.27	1.32
3	DA	2589	A	C5-C4	-7.18	1.33	1.38
3	DA	770	G	N3-C4	-7.18	1.30	1.35
3	DA	1155	A	N3-C4	-7.18	1.30	1.34
3	DA	383	C	N1-C6	-7.18	1.32	1.37
3	DA	751	A	C6-N1	-7.18	1.30	1.35
3	DA	1136	G	N7-C5	-7.18	1.34	1.39
3	DA	1912	A	N3-C4	-7.16	1.30	1.34
5	DB	99	A	N9-C4	-7.16	1.33	1.37
3	DA	64	A	N3-C4	-7.16	1.30	1.34
5	DB	64	G	C5-C6	-7.16	1.35	1.42
3	DA	2447	G	C5-C4	-7.15	1.33	1.38
3	DA	2828	G	C2-N3	-7.15	1.27	1.32
1	AA	1107	C	N1-C6	-7.15	1.32	1.37
3	DA	56	A	N9-C4	-7.14	1.33	1.37
3	DA	2846	G	C5-C6	-7.14	1.35	1.42
3	DA	33	C	N1-C6	-7.14	1.32	1.37
3	DA	2636	C	N1-C6	-7.14	1.32	1.37
3	DA	2868	A	N7-C5	-7.13	1.34	1.39
3	DA	131	A	N3-C4	-7.13	1.30	1.34
3	DA	1022	G	N7-C5	-7.13	1.34	1.39
1	AA	351	G	N9-C8	7.12	1.42	1.37
3	DA	624	C	N1-C6	-7.12	1.32	1.37
3	DA	995	C	N3-C4	-7.12	1.28	1.33
3	DA	2013	A	N9-C8	-7.12	1.32	1.37
3	DA	1134	A	N3-C4	-7.11	1.30	1.34
3	DA	2622	U	N1-C2	-7.11	1.32	1.38
3	DA	1611	C	C4-C5	-7.11	1.37	1.43
3	DA	2749	A	N7-C5	-7.11	1.34	1.39
3	DA	1756	G	C5-C6	-7.09	1.35	1.42
3	DA	2582	G	N9-C8	-7.09	1.32	1.37
3	DA	1616	A	C5-C6	-7.09	1.34	1.41
3	DA	2560	A	N3-C4	-7.09	1.30	1.34
3	DA	1191	G	N7-C5	-7.09	1.34	1.39
3	DA	2635	A	N9-C4	-7.08	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2737	G	N3-C4	-7.08	1.30	1.35
3	DA	687	C	N1-C6	-7.07	1.32	1.37
3	DA	45	G	N3-C4	-7.07	1.30	1.35
3	DA	930	G	N7-C5	-7.07	1.35	1.39
1	AA	391	G	N3-C4	-7.06	1.30	1.35
2	BA	401	C	N1-C6	-7.06	1.32	1.37
3	DA	1662	U	N1-C2	-7.06	1.32	1.38
2	BA	867	G	N7-C5	-7.05	1.35	1.39
3	DA	937	C	N1-C6	-7.05	1.32	1.37
3	DA	2727	A	N3-C4	-7.05	1.30	1.34
4	CA	781	A	N3-C4	-7.05	1.30	1.34
3	DA	1028	A	N7-C5	-7.05	1.35	1.39
3	DA	1310	G	C6-N1	-7.05	1.34	1.39
3	DA	668	A	C6-N1	-7.03	1.30	1.35
5	DB	76	G	C6-N1	-7.03	1.34	1.39
3	DA	976	G	P-OP1	-7.02	1.37	1.49
3	DA	1196	C	N1-C6	-7.02	1.32	1.37
14	AJ	53	ILE	C-N	7.02	1.50	1.34
3	DA	129	C	N3-C4	-7.02	1.29	1.33
1	AA	300	A	N9-C4	-7.02	1.33	1.37
55	D5	20	VAL	CB-CG2	-7.02	1.38	1.52
3	DA	618	G	N9-C4	-7.02	1.32	1.38
3	DA	820	A	C5-C6	-7.02	1.34	1.41
3	DA	30	G	N7-C5	-7.02	1.35	1.39
3	DA	750	A	N9-C4	-7.01	1.33	1.37
3	DA	1653	G	N9-C8	-7.01	1.32	1.37
3	DA	1292	G	N3-C4	-7.01	1.30	1.35
3	DA	1641	A	N3-C4	-7.00	1.30	1.34
3	DA	973	A	C6-N6	-6.99	1.28	1.33
3	DA	2025	C	N1-C6	-6.99	1.32	1.37
2	BA	897	C	N1-C6	-6.99	1.32	1.37
3	DA	1146	C	N3-C4	-6.99	1.29	1.33
3	DA	2744	G	N9-C4	-6.99	1.32	1.38
3	DA	14	A	C5-C6	-6.99	1.34	1.41
3	DA	2014	A	C5-C4	-6.98	1.33	1.38
3	DA	2517	C	N3-C4	-6.98	1.29	1.33
3	DA	528	A	N9-C4	-6.98	1.33	1.37
3	DA	1012	U	N1-C6	-6.98	1.31	1.38
37	DN	80	VAL	CB-CG2	-6.98	1.38	1.52
3	DA	463	G	C5-C4	-6.98	1.33	1.38
3	DA	1006	C	N3-C4	-6.98	1.29	1.33
3	DA	1678	A	N7-C5	-6.98	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1005	C	N1-C6	-6.97	1.32	1.37
41	DR	75	TYR	CE1-CZ	-6.97	1.29	1.38
3	DA	1261	C	C2-O2	-6.97	1.18	1.24
38	DO	2	ARG	CG-CD	6.96	1.69	1.51
3	DA	1439	A	N7-C5	-6.96	1.35	1.39
3	DA	970	U	C4-C5	-6.96	1.37	1.43
4	CA	781	A	N9-C4	-6.96	1.33	1.37
3	DA	567	U	N3-C4	-6.96	1.32	1.38
3	DA	916	G	C5-C6	-6.96	1.35	1.42
3	DA	983	A	N3-C4	-6.96	1.30	1.34
3	DA	2039	U	C4-C5	-6.96	1.37	1.43
3	DA	2744	G	N3-C4	-6.95	1.30	1.35
3	DA	106	C	C4-C5	-6.95	1.37	1.43
3	DA	1126	A	N7-C5	-6.95	1.35	1.39
5	DB	114	C	N1-C2	-6.95	1.33	1.40
3	DA	2767	C	N1-C6	-6.95	1.32	1.37
3	DA	1828	G	N9-C8	-6.95	1.32	1.37
3	DA	2643	G	C6-N1	-6.94	1.34	1.39
3	DA	115	C	C4-C5	-6.94	1.37	1.43
3	DA	117	G	N7-C5	-6.94	1.35	1.39
3	DA	2465	C	C4-C5	-6.94	1.37	1.43
3	DA	2353	G	N7-C5	-6.94	1.35	1.39
3	DA	191	A	C5-C6	-6.93	1.34	1.41
3	DA	2275	C	P-O5'	-6.93	1.52	1.59
3	DA	1643	G	N9-C4	-6.92	1.32	1.38
2	BA	1399	C	N1-C6	-6.92	1.32	1.37
3	DA	2377	A	N3-C4	-6.92	1.30	1.34
3	DA	2622	U	C2-N3	-6.91	1.32	1.37
3	DA	189	G	N7-C5	-6.91	1.35	1.39
3	DA	850	U	C2-O2	-6.91	1.16	1.22
3	DA	37	C	N1-C6	-6.91	1.33	1.37
3	DA	636	G	C5-C4	-6.91	1.33	1.38
3	DA	2542	A	C5-C6	-6.90	1.34	1.41
3	DA	2040	G	N9-C8	-6.90	1.33	1.37
3	DA	2284	A	N3-C4	-6.90	1.30	1.34
3	DA	2634	A	N3-C4	-6.90	1.30	1.34
3	DA	2885	G	N1-C2	6.90	1.43	1.37
3	DA	1819	A	N7-C5	-6.90	1.35	1.39
3	DA	1198	U	N1-C6	-6.89	1.31	1.38
3	DA	1269	A	C6-N1	-6.89	1.30	1.35
3	DA	2821	A	C5-C4	-6.89	1.33	1.38
3	DA	101	A	N7-C5	-6.89	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1468	A	N9-C4	-6.89	1.33	1.37
3	DA	758	C	N1-C6	-6.89	1.33	1.37
3	DA	2894	G	C8-N7	6.89	1.35	1.30
3	DA	53	A	N7-C5	-6.88	1.35	1.39
3	DA	1936	A	C6-N1	-6.88	1.30	1.35
1	AA	1484	C	C4-C5	-6.88	1.37	1.43
3	DA	980	A	C6-N1	-6.88	1.30	1.35
3	DA	848	C	N1-C6	-6.88	1.33	1.37
3	DA	1040	A	N3-C4	-6.88	1.30	1.34
3	DA	1994	C	N1-C6	-6.88	1.33	1.37
3	DA	488	G	C8-N7	6.88	1.35	1.30
3	DA	2872	A	N7-C5	-6.88	1.35	1.39
3	DA	1978	A	C5-C4	-6.88	1.33	1.38
3	DA	567	U	C2-N3	-6.87	1.32	1.37
1	AA	900	A	N7-C5	-6.87	1.35	1.39
3	DA	181	A	N3-C4	-6.87	1.30	1.34
3	DA	1271	G	N3-C4	-6.87	1.30	1.35
3	DA	1546	G	N3-C4	-6.87	1.30	1.35
4	CA	1936	A	N9-C4	-6.87	1.33	1.37
3	DA	2451	A	N3-C4	-6.87	1.30	1.34
3	DA	2646	C	N1-C6	-6.87	1.33	1.37
3	DA	26	G	N3-C4	-6.86	1.30	1.35
3	DA	2205	A	N3-C4	-6.86	1.30	1.34
3	DA	1786	A	N9-C8	-6.86	1.32	1.37
3	DA	1977	A	N3-C4	-6.86	1.30	1.34
3	DA	95	A	N3-C4	-6.86	1.30	1.34
3	DA	1142	A	N9-C4	-6.85	1.33	1.37
3	DA	748	G	C6-N1	-6.85	1.34	1.39
3	DA	483	A	C5-C4	-6.85	1.33	1.38
3	DA	1269	A	N3-C4	-6.85	1.30	1.34
3	DA	2000	C	N1-C6	-6.85	1.33	1.37
3	DA	2077	A	N9-C4	-6.83	1.33	1.37
3	DA	538	A	C6-N1	-6.83	1.30	1.35
4	CA	730	A	N9-C4	-6.83	1.33	1.37
47	DX	13	ASP	CB-CG	6.82	1.66	1.51
3	DA	428	A	N9-C4	-6.82	1.33	1.37
3	DA	927	A	C6-N1	-6.82	1.30	1.35
3	DA	986	C	N1-C6	-6.82	1.33	1.37
3	DA	2827	C	C4-C5	-6.82	1.37	1.43
3	DA	1126	A	N9-C4	-6.81	1.33	1.37
3	DA	2260	C	N1-C6	-6.81	1.33	1.37
3	DA	1767	G	C2-N3	-6.81	1.27	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1158	C	C2-N3	-6.81	1.30	1.35
3	DA	1617	C	N1-C6	-6.81	1.33	1.37
3	DA	1674	G	N9-C4	-6.81	1.32	1.38
3	DA	382	A	N9-C4	-6.80	1.33	1.37
3	DA	1185	G	C2-N3	-6.80	1.27	1.32
3	DA	820	A	N7-C5	-6.80	1.35	1.39
3	DA	2816	G	N3-C4	-6.80	1.30	1.35
3	DA	783	A	N3-C4	-6.80	1.30	1.34
3	DA	2781	A	C6-N1	-6.79	1.30	1.35
3	DA	530	G	C6-N1	6.79	1.44	1.39
3	DA	2611	C	N3-C4	-6.79	1.29	1.33
3	DA	573	U	C2-N3	-6.79	1.32	1.37
3	DA	2280	G	C2-N3	-6.79	1.27	1.32
5	DB	57	A	N3-C4	-6.79	1.30	1.34
5	DB	114	C	N1-C6	-6.78	1.33	1.37
3	DA	519	U	C4-C5	-6.78	1.37	1.43
3	DA	2256	G	N9-C4	-6.78	1.32	1.38
3	DA	1614	A	N9-C8	-6.78	1.32	1.37
3	DA	981	A	N1-C2	-6.78	1.28	1.34
3	DA	1193	G	N9-C8	-6.78	1.33	1.37
3	DA	2613	U	C4-C5	-6.78	1.37	1.43
3	DA	2613	U	N1-C6	-6.78	1.31	1.38
3	DA	533	G	N9-C8	-6.77	1.33	1.37
3	DA	1111	A	C5-C4	-6.77	1.34	1.38
3	DA	917	A	N7-C5	-6.76	1.35	1.39
3	DA	1661	G	C5-C4	-6.76	1.33	1.38
3	DA	2098	U	C4-C5	6.76	1.49	1.43
3	DA	1632	A	N7-C5	-6.76	1.35	1.39
3	DA	2486	C	C4-C5	-6.76	1.37	1.43
3	DA	839	U	C2-N3	-6.76	1.33	1.37
3	DA	1265	A	P-OP2	-6.75	1.37	1.49
3	DA	2692	G	N9-C8	-6.75	1.33	1.37
3	DA	1129	A	N9-C4	6.75	1.42	1.37
3	DA	528	A	N3-C4	-6.75	1.30	1.34
3	DA	1953	A	C6-N1	-6.75	1.30	1.35
3	DA	1750	G	N9-C8	-6.75	1.33	1.37
3	DA	1143	A	N3-C4	-6.74	1.30	1.34
3	DA	677	A	N7-C5	-6.74	1.35	1.39
3	DA	1385	A	N3-C4	-6.74	1.30	1.34
3	DA	1363	C	N1-C6	-6.74	1.33	1.37
3	DA	1634	A	C6-N1	-6.74	1.30	1.35
5	DB	85	G	N7-C5	-6.73	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1229	C	C4-N4	-6.73	1.27	1.33
3	DA	2814	A	C5-C6	-6.73	1.34	1.41
3	DA	2522	U	N1-C2	-6.73	1.32	1.38
3	DA	2435	A	N9-C4	-6.73	1.33	1.37
3	DA	2269	G	C6-N1	-6.72	1.34	1.39
3	DA	2455	G	C2-N3	-6.72	1.27	1.32
4	CA	1799	G	N7-C5	-6.72	1.35	1.39
3	DA	2022	U	N1-C6	-6.71	1.31	1.38
3	DA	2521	C	N1-C6	-6.71	1.33	1.37
3	DA	996	A	N3-C4	-6.71	1.30	1.34
1	AA	906	A	N7-C5	-6.71	1.35	1.39
3	DA	2288	A	C6-N6	-6.71	1.28	1.33
3	DA	2852	G	N3-C4	-6.71	1.30	1.35
3	DA	818	G	C2-N2	-6.70	1.27	1.34
34	DK	17	VAL	CB-CG2	-6.70	1.38	1.52
3	DA	2548	U	N1-C6	-6.70	1.31	1.38
3	DA	751	A	C6-N6	-6.70	1.28	1.33
3	DA	775	G	N9-C4	-6.69	1.32	1.38
3	DA	1355	G	C6-N1	-6.68	1.34	1.39
1	AA	327	A	N9-C4	-6.68	1.33	1.37
3	DA	2434	A	N3-C4	-6.68	1.30	1.34
3	DA	1600	C	N1-C6	-6.67	1.33	1.37
3	DA	2815	C	N1-C6	-6.67	1.33	1.37
3	DA	907	G	N9-C8	-6.67	1.33	1.37
3	DA	443	A	C6-N1	-6.66	1.30	1.35
3	DA	1276	A	N9-C4	-6.66	1.33	1.37
3	DA	2027	G	N9-C8	-6.66	1.33	1.37
3	DA	2347	C	N1-C6	-6.66	1.33	1.37
3	DA	1194	A	C5-C4	-6.66	1.34	1.38
3	DA	1005	C	C4-C5	-6.65	1.37	1.43
3	DA	381	G	N9-C4	-6.65	1.32	1.38
3	DA	2361	G	C2-N3	-6.65	1.27	1.32
3	DA	817	C	N1-C6	-6.65	1.33	1.37
3	DA	2592	G	N7-C5	-6.65	1.35	1.39
3	DA	2374	C	N1-C6	-6.65	1.33	1.37
5	DB	8	C	C4-C5	-6.65	1.37	1.43
5	DB	75	G	N9-C8	-6.65	1.33	1.37
3	DA	2689	U	N1-C2	-6.64	1.32	1.38
1	AA	1419	G	N7-C5	-6.64	1.35	1.39
1	AA	1079	G	N7-C5	-6.64	1.35	1.39
3	DA	2887	A	N9-C4	6.64	1.41	1.37
3	DA	2379	G	C2-N3	-6.63	1.27	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2618	G	N1-C2	-6.63	1.32	1.37
3	DA	1252	G	N9-C4	-6.63	1.32	1.38
3	DA	1313	U	N1-C2	-6.63	1.32	1.38
3	DA	2016	U	N3-C4	-6.63	1.32	1.38
3	DA	728	G	N3-C4	-6.63	1.30	1.35
3	DA	2684	U	C2-N3	-6.63	1.33	1.37
3	DA	833	A	N3-C4	-6.63	1.30	1.34
3	DA	1268	A	C5-C4	-6.63	1.34	1.38
3	DA	2516	A	N9-C8	-6.63	1.32	1.37
3	DA	2447	G	N7-C5	-6.62	1.35	1.39
3	DA	1349	C	N1-C6	-6.62	1.33	1.37
3	DA	1218	G	N9-C4	-6.62	1.32	1.38
3	DA	1149	G	N3-C4	-6.62	1.30	1.35
3	DA	627	A	C5-C4	-6.62	1.34	1.38
3	DA	2840	C	N1-C6	-6.62	1.33	1.37
3	DA	1111	A	C5-C6	-6.62	1.35	1.41
3	DA	1369	G	N9-C8	-6.62	1.33	1.37
3	DA	2885	G	P-OP2	6.61	1.60	1.49
3	DA	375	G	N3-C4	-6.61	1.30	1.35
3	DA	17	G	N7-C5	-6.61	1.35	1.39
5	DB	96	G	N9-C4	-6.61	1.32	1.38
3	DA	862	G	N3-C4	-6.61	1.30	1.35
3	DA	1298	C	C4-N4	-6.61	1.28	1.33
3	DA	2098	U	C2-N3	6.61	1.42	1.37
3	DA	1336	A	C5-C4	-6.60	1.34	1.38
5	DB	74	U	N3-C4	-6.60	1.32	1.38
3	DA	1012	U	C4-C5	-6.60	1.37	1.43
3	DA	2029	G	N9-C8	-6.60	1.33	1.37
3	DA	660	C	N1-C6	-6.59	1.33	1.37
1	AA	1513	A	N9-C4	-6.59	1.33	1.37
3	DA	1654	A	C6-N1	-6.59	1.30	1.35
3	DA	644	A	N3-C4	-6.59	1.30	1.34
3	DA	2248	C	C4-C5	-6.58	1.37	1.43
3	DA	814	C	C4-N4	-6.58	1.28	1.33
5	DB	73	A	N3-C4	-6.58	1.30	1.34
3	DA	1387	A	N9-C8	-6.58	1.32	1.37
3	DA	1777	U	N1-C2	-6.57	1.32	1.38
3	DA	2648	G	N7-C5	-6.57	1.35	1.39
3	DA	2814	A	N9-C4	-6.57	1.33	1.37
3	DA	316	C	N1-C6	-6.57	1.33	1.37
3	DA	2839	G	N7-C5	-6.56	1.35	1.39
3	DA	686	U	N3-C4	-6.56	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	783	A	N9-C8	6.56	1.43	1.37
3	DA	2354	C	N1-C6	-6.56	1.33	1.37
3	DA	2886	A	P-O5'	6.56	1.66	1.59
3	DA	432	A	N9-C4	-6.55	1.33	1.37
3	DA	1948	G	C2-N3	-6.55	1.27	1.32
3	DA	2828	G	C5-C4	-6.55	1.33	1.38
1	AA	584	G	N9-C4	-6.55	1.32	1.38
3	DA	965	C	N1-C2	-6.55	1.33	1.40
4	CA	756	A	N9-C4	-6.54	1.33	1.37
3	DA	1251	C	N1-C6	-6.54	1.33	1.37
3	DA	1020	A	C6-N1	6.54	1.40	1.35
3	DA	1562	U	C2-N3	-6.53	1.33	1.37
3	DA	2365	G	N9-C8	-6.53	1.33	1.37
3	DA	404	A	C5-C6	-6.53	1.35	1.41
3	DA	1601	G	N3-C4	-6.53	1.30	1.35
3	DA	1027	A	N9-C4	-6.53	1.33	1.37
5	DB	58	A	N9-C4	-6.53	1.33	1.37
3	DA	2468	A	C5-C4	-6.52	1.34	1.38
3	DA	2699	C	N1-C6	-6.52	1.33	1.37
3	DA	428	A	C5-C4	-6.51	1.34	1.38
3	DA	254	G	N9-C8	-6.51	1.33	1.37
3	DA	2371	G	N7-C5	-6.51	1.35	1.39
14	BJ	47	GLU	CB-CG	6.51	1.64	1.52
5	DB	76	G	N7-C5	-6.50	1.35	1.39
3	DA	2621	G	N1-C2	-6.50	1.32	1.37
3	DA	1228	G	N9-C8	-6.49	1.33	1.37
5	DB	78	A	N9-C8	-6.49	1.32	1.37
3	DA	1153	C	C3'-C2'	-6.49	1.45	1.52
3	DA	1254	A	N3-C4	-6.49	1.30	1.34
3	DA	28	A	N3-C4	-6.48	1.30	1.34
3	DA	1002	G	C2-N3	-6.48	1.27	1.32
3	DA	2508	G	C5-C4	-6.48	1.33	1.38
3	DA	590	A	N9-C4	-6.48	1.33	1.37
3	DA	860	U	N1-C6	-6.48	1.32	1.38
3	DA	1121	C	N3-C4	-6.48	1.29	1.33
3	DA	2440	C	N1-C6	-6.48	1.33	1.37
3	DA	802	A	N9-C8	-6.48	1.32	1.37
3	DA	2851	A	N3-C4	-6.48	1.30	1.34
1	AA	1515	G	N7-C5	-6.47	1.35	1.39
2	BA	1093	A	N3-C4	-6.47	1.30	1.34
3	DA	1323	C	C4-C5	-6.47	1.37	1.43
3	DA	1601	G	N9-C4	-6.47	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	782	A	N7-C5	-6.46	1.35	1.39
3	DA	740	C	N1-C6	-6.46	1.33	1.37
3	DA	1185	G	C6-N1	-6.46	1.35	1.39
3	DA	2026	U	C2-N3	-6.46	1.33	1.37
3	DA	1151	A	N7-C5	-6.46	1.35	1.39
3	DA	1337	G	N3-C4	-6.46	1.30	1.35
5	DB	94	A	N3-C4	-6.46	1.30	1.34
3	DA	2639	A	C5-C6	-6.46	1.35	1.41
3	DA	738	G	N3-C4	-6.45	1.30	1.35
3	DA	802	A	C5-C4	-6.45	1.34	1.38
3	DA	2874	C	N1-C6	-6.45	1.33	1.37
3	DA	89	A	N7-C5	-6.45	1.35	1.39
3	DA	648	G	N9-C8	-6.45	1.33	1.37
3	DA	1762	A	C5-C6	-6.45	1.35	1.41
3	DA	673	C	N1-C6	-6.45	1.33	1.37
3	DA	921	C	N3-C4	-6.44	1.29	1.33
3	DA	2843	G	N9-C8	-6.44	1.33	1.37
3	DA	873	C	N1-C6	-6.44	1.33	1.37
3	DA	1144	A	N9-C8	-6.44	1.32	1.37
3	DA	1187	G	C6-N1	-6.44	1.35	1.39
3	DA	250	G	N3-C4	-6.43	1.30	1.35
3	DA	802	A	C6-N1	-6.42	1.31	1.35
3	DA	1310	G	N9-C4	-6.42	1.32	1.38
2	BA	1526	G	N9-C8	-6.42	1.33	1.37
3	DA	1527	G	N7-C5	-6.42	1.35	1.39
3	DA	2009	A	N7-C5	-6.42	1.35	1.39
3	DA	798	G	N9-C4	-6.42	1.32	1.38
3	DA	1445	G	N3-C4	-6.42	1.30	1.35
3	DA	2762	C	N1-C6	-6.42	1.33	1.37
3	DA	1669	A	N3-C4	-6.42	1.31	1.34
3	DA	2537	U	N1-C6	-6.42	1.32	1.38
3	DA	1147	A	N9-C4	-6.41	1.34	1.37
3	DA	2048	G	C6-N1	-6.41	1.35	1.39
3	DA	2543	G	N9-C4	-6.41	1.32	1.38
3	DA	2288	A	N9-C4	-6.41	1.34	1.37
3	DA	2859	G	C2-N3	-6.41	1.27	1.32
3	DA	36	G	C5-C4	-6.41	1.33	1.38
3	DA	689	A	C5-C4	-6.41	1.34	1.38
3	DA	2509	G	C2-N3	-6.41	1.27	1.32
3	DA	784	G	C8-N7	6.40	1.34	1.30
3	DA	2098	U	N1-C2	6.40	1.44	1.38
3	DA	1567	G	N9-C8	-6.40	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1674	G	N9-C8	-6.40	1.33	1.37
3	DA	1970	A	N7-C5	-6.40	1.35	1.39
3	DA	74	A	C6-N1	-6.39	1.31	1.35
3	DA	2297	A	N9-C4	-6.39	1.34	1.37
1	AA	199	A	N9-C4	-6.39	1.34	1.37
3	DA	1137	G	C2-N3	-6.39	1.27	1.32
1	AA	524	G	N7-C5	-6.38	1.35	1.39
3	DA	574	A	N9-C8	-6.38	1.32	1.37
1	AA	1511	G	N9-C4	-6.38	1.32	1.38
3	DA	1226	A	C5-C4	-6.38	1.34	1.38
3	DA	308	G	C6-N1	-6.38	1.35	1.39
3	DA	670	A	N7-C5	-6.38	1.35	1.39
3	DA	1247	A	C6-N1	-6.38	1.31	1.35
3	DA	1986	C	C2-N3	-6.37	1.30	1.35
3	DA	2895	G	N3-C4	-6.37	1.30	1.35
3	DA	616	A	N9-C4	-6.37	1.34	1.37
3	DA	1270	C	C4-C5	-6.37	1.37	1.43
1	AA	980	C	N1-C6	-6.36	1.33	1.37
3	DA	1025	G	C6-N1	-6.36	1.35	1.39
3	DA	2843	G	N7-C5	-6.36	1.35	1.39
3	DA	1905	C	N3-C4	-6.36	1.29	1.33
5	DB	98	G	C5-C6	-6.36	1.35	1.42
3	DA	1124	G	N3-C4	-6.36	1.30	1.35
3	DA	2353	G	C5-C6	-6.36	1.35	1.42
3	DA	1966	A	N3-C4	-6.36	1.31	1.34
3	DA	2453	A	N7-C5	-6.36	1.35	1.39
3	DA	2589	A	N3-C4	-6.36	1.31	1.34
3	DA	1814	G	N7-C5	-6.36	1.35	1.39
3	DA	2513	A	N3-C4	-6.35	1.31	1.34
3	DA	2723	C	N1-C6	-6.35	1.33	1.37
3	DA	2813	A	N9-C4	-6.35	1.34	1.37
3	DA	106	C	N1-C6	-6.35	1.33	1.37
3	DA	260	G	N3-C4	-6.35	1.31	1.35
3	DA	821	A	C2-N3	-6.35	1.27	1.33
5	DB	70	C	N3-C4	-6.34	1.29	1.33
3	DA	830	G	C2-N2	-6.34	1.28	1.34
3	DA	2778	A	N9-C8	-6.34	1.32	1.37
3	DA	15	G	N3-C4	-6.33	1.31	1.35
3	DA	1262	A	N9-C4	6.33	1.41	1.37
3	DA	57	C	C4-N4	-6.33	1.28	1.33
3	DA	1307	A	N7-C5	-6.33	1.35	1.39
3	DA	2315	G	N9-C4	-6.33	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	921	C	N1-C6	-6.32	1.33	1.37
3	DA	2683	C	N1-C6	-6.32	1.33	1.37
3	DA	2496	C	C4-C5	-6.32	1.37	1.43
3	DA	1829	A	N9-C4	-6.31	1.34	1.37
3	DA	833	A	C6-N1	-6.31	1.31	1.35
3	DA	555	G	C8-N7	6.31	1.34	1.30
3	DA	1191	G	N3-C4	-6.31	1.31	1.35
3	DA	1732	C	N1-C6	-6.30	1.33	1.37
3	DA	685	A	N7-C5	-6.30	1.35	1.39
3	DA	1973	G	N9-C8	-6.30	1.33	1.37
3	DA	1354	A	N9-C8	-6.29	1.32	1.37
3	DA	250	G	N9-C8	-6.29	1.33	1.37
3	DA	19	A	C6-N1	-6.29	1.31	1.35
3	DA	540	C	N1-C6	-6.29	1.33	1.37
3	DA	1464	G	N7-C5	-6.29	1.35	1.39
3	DA	1875	G	C6-O6	6.29	1.29	1.24
3	DA	564	C	N3-C4	-6.29	1.29	1.33
3	DA	1336	A	N3-C4	-6.29	1.31	1.34
3	DA	2249	U	N1-C2	-6.29	1.32	1.38
3	DA	1292	G	C6-N1	-6.29	1.35	1.39
4	CA	2066	C	N1-C6	-6.29	1.33	1.37
1	AA	332	G	N3-C4	-6.29	1.31	1.35
3	DA	200	U	N1-C2	-6.29	1.32	1.38
3	DA	2280	G	N9-C4	-6.29	1.32	1.38
3	DA	2250	G	N3-C4	-6.28	1.31	1.35
3	DA	2078	C	N1-C6	-6.28	1.33	1.37
34	DK	53	TYR	CE1-CZ	-6.27	1.30	1.38
3	DA	668	A	C5-C6	-6.27	1.35	1.41
3	DA	1276	A	N7-C5	-6.27	1.35	1.39
3	DA	444	C	N3-C4	-6.27	1.29	1.33
3	DA	1247	A	N9-C4	-6.27	1.34	1.37
3	DA	124	G	N3-C4	-6.26	1.31	1.35
3	DA	1637	A	N3-C4	-6.26	1.31	1.34
3	DA	945	A	C5-C6	-6.26	1.35	1.41
3	DA	2287	A	C5-C6	-6.26	1.35	1.41
3	DA	574	A	N7-C5	-6.26	1.35	1.39
3	DA	1958	C	N1-C6	-6.25	1.33	1.37
3	DA	722	A	C6-N6	-6.25	1.28	1.33
3	DA	871	U	C2-O2	6.25	1.27	1.22
3	DA	1354	A	N7-C5	-6.25	1.35	1.39
3	DA	2589	A	N1-C2	-6.25	1.28	1.34
3	DA	198	C	N3-C4	-6.25	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	627	A	N3-C4	-6.25	1.31	1.34
3	DA	927	A	N9-C4	-6.25	1.34	1.37
3	DA	1124	G	C5-C4	-6.25	1.33	1.38
2	BA	542	G	C6-N1	-6.25	1.35	1.39
3	DA	636	G	C5-C6	-6.25	1.36	1.42
3	DA	1623	G	N9-C8	-6.25	1.33	1.37
3	DA	2594	C	N1-C2	-6.25	1.33	1.40
3	DA	2828	G	C6-N1	-6.25	1.35	1.39
3	DA	807	U	P-O5'	-6.25	1.53	1.59
3	DA	1756	G	N7-C5	-6.25	1.35	1.39
3	DA	1754	A	C6-N6	-6.25	1.28	1.33
3	DA	1708	C	N1-C6	-6.24	1.33	1.37
3	DA	1794	A	N7-C5	-6.24	1.35	1.39
3	DA	1970	A	N3-C4	-6.24	1.31	1.34
3	DA	2529	G	C6-N1	-6.23	1.35	1.39
3	DA	1194	A	C6-N1	-6.23	1.31	1.35
3	DA	1427	A	C6-N1	-6.23	1.31	1.35
3	DA	802	A	N3-C4	-6.23	1.31	1.34
3	DA	2461	A	C5-C6	-6.23	1.35	1.41
2	BA	764	C	N3-C4	-6.23	1.29	1.33
3	DA	1839	G	N9-C8	-6.23	1.33	1.37
45	DV	33	VAL	CB-CG1	-6.22	1.39	1.52
3	DA	1142	A	N7-C5	-6.22	1.35	1.39
3	DA	1264	A	O3'-P	-6.22	1.53	1.61
3	DA	1295	C	C4-C5	-6.22	1.38	1.43
3	DA	1768	C	N1-C2	-6.22	1.33	1.40
5	DB	115	A	N9-C4	-6.22	1.34	1.37
3	DA	863	A	N7-C5	-6.22	1.35	1.39
3	DA	2003	A	C2'-C1'	-6.22	1.46	1.53
3	DA	461	C	N1-C6	-6.22	1.33	1.37
3	DA	817	C	N1-C2	-6.22	1.33	1.40
3	DA	987	C	N1-C6	-6.21	1.33	1.37
3	DA	559	G	C6-N1	-6.21	1.35	1.39
3	DA	1786	A	C5-C4	-6.21	1.34	1.38
3	DA	2023	C	C5-C6	-6.21	1.29	1.34
1	AA	894	G	C6-N1	-6.21	1.35	1.39
3	DA	522	A	C6-N1	-6.21	1.31	1.35
3	DA	1763	G	N9-C4	-6.21	1.32	1.38
1	AA	768	A	N9-C4	-6.21	1.34	1.37
1	AA	796	C	C4-C5	-6.21	1.38	1.43
3	DA	1160	G	C2-N3	-6.21	1.27	1.32
3	DA	943	A	N9-C4	-6.20	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	738	G	N9-C8	-6.20	1.33	1.37
3	DA	1678	A	C6-N1	-6.20	1.31	1.35
1	AA	332	G	N9-C4	-6.20	1.32	1.38
3	DA	700	G	N9-C4	-6.19	1.32	1.38
3	DA	1331	G	N9-C8	-6.19	1.33	1.37
3	DA	2031	A	C5-C6	-6.19	1.35	1.41
3	DA	1780	A	N7-C5	-6.19	1.35	1.39
3	DA	2354	C	N3-C4	-6.19	1.29	1.33
3	DA	495	G	C6-N1	-6.19	1.35	1.39
3	DA	1978	A	N7-C5	-6.19	1.35	1.39
3	DA	1233	C	N1-C6	-6.19	1.33	1.37
3	DA	604	G	N9-C4	-6.18	1.33	1.38
3	DA	944	C	N3-C4	-6.18	1.29	1.33
3	DA	131	A	N9-C4	-6.18	1.34	1.37
3	DA	1268	A	C6-N1	-6.18	1.31	1.35
3	DA	2569	G	N3-C4	-6.18	1.31	1.35
3	DA	2590	A	N9-C4	-6.18	1.34	1.37
3	DA	1246	A	N9-C4	-6.18	1.34	1.37
2	BA	408	A	N9-C8	-6.18	1.32	1.37
3	DA	245	G	N7-C5	-6.18	1.35	1.39
3	DA	1243	C	C2-N3	-6.17	1.30	1.35
3	DA	1643	G	C5-C6	-6.17	1.36	1.42
3	DA	2416	C	N1-C2	-6.17	1.33	1.40
2	BA	695	A	N3-C4	-6.17	1.31	1.34
5	DB	45	A	N3-C4	-6.16	1.31	1.34
3	DA	1195	G	N9-C8	-6.16	1.33	1.37
56	DD	127	PHE	CD1-CE1	-6.16	1.26	1.39
3	DA	862	G	N9-C4	-6.15	1.33	1.38
3	DA	2291	U	N1-C2	-6.15	1.33	1.38
41	DR	75	TYR	CG-CD1	-6.15	1.31	1.39
3	DA	975	A	N9-C8	-6.14	1.32	1.37
3	DA	2589	A	N7-C5	-6.14	1.35	1.39
3	DA	1679	A	N7-C5	-6.14	1.35	1.39
3	DA	513	A	N7-C5	-6.14	1.35	1.39
4	CA	1687	G	C5-C6	6.14	1.48	1.42
3	DA	1134	A	C5-C4	-6.14	1.34	1.38
3	DA	2724	U	P-O5'	-6.14	1.53	1.59
56	DD	122	VAL	CB-CG2	-6.13	1.40	1.52
3	DA	2287	A	N9-C4	-6.13	1.34	1.37
2	BA	495	A	N3-C4	-6.13	1.31	1.34
3	DA	636	G	N3-C4	-6.13	1.31	1.35
3	DA	1286	A	N7-C5	-6.13	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	560	A	N9-C4	-6.13	1.34	1.37
3	DA	1789	A	N9-C4	-6.12	1.34	1.37
3	DA	88	G	C5-C4	-6.12	1.34	1.38
3	DA	1276	A	C5-C6	-6.12	1.35	1.41
3	DA	2549	G	N7-C5	-6.12	1.35	1.39
3	DA	2613	U	C2-N3	-6.12	1.33	1.37
3	DA	18	U	N1-C6	-6.12	1.32	1.38
3	DA	1270	C	N1-C6	-6.12	1.33	1.37
3	DA	795	C	N3-C4	-6.12	1.29	1.33
3	DA	592	A	N3-C4	-6.12	1.31	1.34
3	DA	2685	G	N9-C4	-6.12	1.33	1.38
31	DG	161	VAL	CB-CG1	-6.12	1.40	1.52
3	DA	707	G	N7-C5	-6.11	1.35	1.39
3	DA	2377	A	N9-C4	-6.11	1.34	1.37
3	DA	191	A	C6-N1	-6.11	1.31	1.35
3	DA	1824	G	N3-C4	-6.11	1.31	1.35
1	AA	742	G	N9-C4	-6.11	1.33	1.38
3	DA	2671	G	C5-C6	-6.11	1.36	1.42
3	DA	2896	C	N1-C6	-6.11	1.33	1.37
5	DB	77	U	N1-C6	-6.10	1.32	1.38
3	DA	2486	C	C5-C6	-6.10	1.29	1.34
3	DA	1772	A	N9-C8	-6.10	1.32	1.37
3	DA	2333	A	N7-C5	-6.10	1.35	1.39
27	DC	38	LYS	CD-CE	6.09	1.66	1.51
2	BA	559	A	N9-C4	-6.09	1.34	1.37
3	DA	504	A	N9-C4	-6.09	1.34	1.37
3	DA	738	G	C6-N1	-6.08	1.35	1.39
3	DA	2456	C	C4-C5	-6.08	1.38	1.43
3	DA	2519	U	N1-C2	-6.08	1.33	1.38
3	DA	2562	U	C4-C5	-6.08	1.38	1.43
3	DA	2723	C	N3-C4	-6.08	1.29	1.33
3	DA	1368	G	N3-C4	-6.08	1.31	1.35
5	DB	114	C	C4-C5	-6.08	1.38	1.43
3	DA	575	A	C6-N1	-6.08	1.31	1.35
3	DA	1777	U	N1-C6	-6.08	1.32	1.38
3	DA	621	A	N3-C4	-6.08	1.31	1.34
3	DA	802	A	N7-C5	-6.08	1.35	1.39
3	DA	1237	A	N9-C4	-6.07	1.34	1.37
3	DA	2789	C	N1-C6	-6.07	1.33	1.37
3	DA	1280	G	N3-C4	-6.06	1.31	1.35
3	DA	2642	G	N3-C4	-6.06	1.31	1.35
3	DA	2026	U	N3-C4	-6.06	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2760	C	N1-C6	-6.06	1.33	1.37
2	BA	857	C	N1-C6	-6.06	1.33	1.37
3	DA	534	U	N1-C6	-6.06	1.32	1.38
3	DA	2577	A	N7-C5	-6.06	1.35	1.39
3	DA	402	A	N3-C4	-6.06	1.31	1.34
3	DA	1969	A	C6-N1	-6.06	1.31	1.35
3	DA	1368	G	C2-N3	-6.05	1.27	1.32
3	DA	2060	A	N3-C4	-6.05	1.31	1.34
3	DA	95	A	N9-C4	-6.05	1.34	1.37
3	DA	2018	G	N7-C5	-6.05	1.35	1.39
3	DA	989	G	C2-N3	-6.05	1.27	1.32
3	DA	256	A	N9-C4	-6.05	1.34	1.37
3	DA	1230	A	N3-C4	-6.05	1.31	1.34
50	D0	16	LEU	C-N	-6.05	1.22	1.34
3	DA	449	A	C5-C4	-6.04	1.34	1.38
3	DA	828	U	N3-C4	-6.04	1.33	1.38
3	DA	20	C	N3-C4	-6.04	1.29	1.33
3	DA	2805	C	N1-C6	-6.04	1.33	1.37
3	DA	126	A	C5-C6	-6.04	1.35	1.41
3	DA	969	G	N3-C4	-6.04	1.31	1.35
3	DA	1784	A	C5-C6	-6.04	1.35	1.41
3	DA	2570	G	C6-N1	-6.03	1.35	1.39
3	DA	66	C	N1-C6	-6.03	1.33	1.37
3	DA	2046	G	C6-O6	-6.03	1.18	1.24
3	DA	181	A	N9-C4	-6.03	1.34	1.37
1	AA	47	C	N1-C6	-6.03	1.33	1.37
3	DA	602	A	C5-C4	-6.03	1.34	1.38
3	DA	813	U	N3-C4	-6.03	1.33	1.38
3	DA	2811	G	N3-C4	-6.02	1.31	1.35
3	DA	569	U	C4'-C3'	-6.02	1.46	1.53
3	DA	1786	A	N1-C2	-6.02	1.28	1.34
3	DA	256	A	N3-C4	-6.02	1.31	1.34
3	DA	1623	G	C8-N7	-6.02	1.27	1.30
3	DA	1677	A	N3-C4	-6.01	1.31	1.34
1	AA	235	C	N1-C6	-6.01	1.33	1.37
3	DA	1310	G	C6-O6	-6.01	1.18	1.24
3	DA	1525	A	N9-C4	-6.01	1.34	1.37
3	DA	570	G	C5-C6	-6.01	1.36	1.42
1	AA	1418	A	C6-N6	-6.01	1.29	1.33
3	DA	196	A	N3-C4	-6.01	1.31	1.34
3	DA	1390	U	N1-C2	-6.00	1.33	1.38
3	DA	1264	A	C6-N1	-6.00	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1797	G	N7-C5	-6.00	1.35	1.39
3	DA	681	G	N3-C4	-6.00	1.31	1.35
3	DA	795	C	N1-C6	-6.00	1.33	1.37
3	DA	1696	G	N9-C4	-6.00	1.33	1.38
3	DA	698	C	N1-C6	-6.00	1.33	1.37
3	DA	2359	C	C4-C5	-6.00	1.38	1.43
3	DA	2886	A	N9-C4	6.00	1.41	1.37
3	DA	1619	G	N3-C4	-5.99	1.31	1.35
3	DA	2823	A	N9-C8	-5.99	1.32	1.37
1	AA	892	A	N3-C4	-5.99	1.31	1.34
3	DA	222	A	N3-C4	-5.99	1.31	1.34
3	DA	1977	A	N9-C8	-5.99	1.32	1.37
1	AA	452	A	C5-C6	-5.99	1.35	1.41
3	DA	1025	G	N9-C8	-5.99	1.33	1.37
3	DA	1661	G	C5-C6	-5.98	1.36	1.42
3	DA	1254	A	C8-N7	5.98	1.35	1.31
3	DA	1010	A	N1-C2	-5.98	1.28	1.34
3	DA	2381	A	C6-N6	-5.98	1.29	1.33
3	DA	396	G	N3-C4	-5.97	1.31	1.35
4	CA	1803	A	N3-C4	-5.97	1.31	1.34
3	DA	2370	G	C5-C6	-5.97	1.36	1.42
3	DA	190	A	N9-C4	-5.97	1.34	1.37
3	DA	1232	G	C6-N1	-5.97	1.35	1.39
3	DA	1564	C	N1-C6	-5.96	1.33	1.37
34	DK	62	VAL	CB-CG1	-5.96	1.40	1.52
3	DA	1810	A	C5-C6	-5.96	1.35	1.41
3	DA	2273	A	C5-C6	-5.96	1.35	1.41
3	DA	540	C	N3-C4	-5.96	1.29	1.33
3	DA	770	G	N7-C5	-5.96	1.35	1.39
3	DA	2001	C	N1-C2	-5.96	1.34	1.40
3	DA	2012	G	C5-C6	-5.96	1.36	1.42
56	DD	123	LYS	CE-NZ	5.96	1.64	1.49
3	DA	1689	A	C6-N6	-5.96	1.29	1.33
3	DA	2067	G	N7-C5	-5.96	1.35	1.39
1	AA	1525	G	C5-C4	-5.95	1.34	1.38
3	DA	19	A	N9-C4	-5.95	1.34	1.37
3	DA	1157	G	N3-C4	-5.95	1.31	1.35
3	DA	2042	A	N9-C4	-5.95	1.34	1.37
3	DA	1238	G	N1-C2	-5.95	1.32	1.37
3	DA	928	A	C6-N6	-5.95	1.29	1.33
3	DA	180	G	N9-C4	-5.94	1.33	1.38
3	DA	1343	G	C6-N1	-5.94	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1608	A	C6-N1	-5.94	1.31	1.35
3	DA	2691	C	N1-C6	-5.94	1.33	1.37
3	DA	2359	C	N1-C6	-5.94	1.33	1.37
3	DA	122	G	N3-C4	-5.94	1.31	1.35
3	DA	2505	G	N9-C8	-5.93	1.33	1.37
3	DA	814	C	N1-C6	-5.93	1.33	1.37
3	DA	17	G	N1-C2	-5.93	1.33	1.37
3	DA	1207	C	C5-C6	-5.93	1.29	1.34
43	DT	47	VAL	CB-CG2	-5.93	1.40	1.52
2	BA	19	A	N9-C4	-5.92	1.34	1.37
3	DA	1007	C	P-O5'	-5.92	1.53	1.59
3	DA	1283	G	N9-C8	-5.92	1.33	1.37
1	AA	817	C	N1-C6	-5.92	1.33	1.37
3	DA	1891	G	N3-C4	-5.92	1.31	1.35
3	DA	57	C	C4-C5	-5.92	1.38	1.43
3	DA	2887	A	P-OP2	5.92	1.59	1.49
2	BA	344	A	N9-C4	5.92	1.41	1.37
3	DA	1778	U	N1-C2	-5.92	1.33	1.38
3	DA	1278	C	N3-C4	-5.91	1.29	1.33
5	DB	99	A	N9-C8	-5.91	1.33	1.37
3	DA	982	C	N1-C6	-5.91	1.33	1.37
3	DA	1967	C	N1-C6	-5.91	1.33	1.37
3	DA	2057	G	C2-N3	-5.91	1.28	1.32
3	DA	2250	G	N9-C4	-5.91	1.33	1.38
3	DA	2359	C	C5-C6	-5.91	1.29	1.34
3	DA	2458	G	C2-N3	-5.91	1.28	1.32
3	DA	2015	A	C6-N6	-5.91	1.29	1.33
4	CA	740	C	N1-C6	5.91	1.40	1.37
3	DA	940	G	C5-C4	-5.91	1.34	1.38
3	DA	928	A	C6-N1	-5.90	1.31	1.35
3	DA	2512	C	C3'-C2'	-5.90	1.46	1.52
3	DA	1254	A	N9-C4	-5.90	1.34	1.37
40	DQ	72	VAL	CB-CG2	-5.90	1.40	1.52
1	AA	507	C	N1-C6	-5.90	1.33	1.37
3	DA	599	A	C6-N1	-5.90	1.31	1.35
3	DA	839	U	C2-O2	-5.90	1.17	1.22
3	DA	2013	A	C6-N6	-5.90	1.29	1.33
3	DA	2407	A	N3-C4	-5.90	1.31	1.34
3	DA	851	C	C2-N3	-5.89	1.31	1.35
3	DA	1667	G	C2-N3	-5.89	1.28	1.32
3	DA	2562	U	N1-C6	-5.89	1.32	1.38
3	DA	1348	C	C4-C5	-5.89	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2024	G	N1-C2	-5.89	1.33	1.37
3	DA	2586	U	C4-C5	-5.89	1.38	1.43
3	DA	305	C	C4-C5	-5.89	1.38	1.43
3	DA	664	G	C5-C4	-5.89	1.34	1.38
3	DA	1329	U	C4-O4	-5.89	1.19	1.23
3	DA	417	C	N1-C6	-5.88	1.33	1.37
3	DA	1349	C	N3-C4	-5.88	1.29	1.33
2	BA	901	A	N9-C4	-5.88	1.34	1.37
3	DA	308	G	N1-C2	-5.88	1.33	1.37
3	DA	2330	G	C5-C4	-5.88	1.34	1.38
3	DA	619	G	N3-C4	-5.88	1.31	1.35
3	DA	1324	G	N7-C5	-5.88	1.35	1.39
3	DA	2248	C	N3-C4	-5.87	1.29	1.33
3	DA	1259	G	P-O5'	-5.87	1.53	1.59
3	DA	2610	C	N1-C6	-5.87	1.33	1.37
3	DA	2618	G	N9-C8	-5.87	1.33	1.37
3	DA	2601	C	N3-C4	-5.87	1.29	1.33
3	DA	2355	G	C6-N1	-5.86	1.35	1.39
3	DA	9	G	N9-C8	-5.86	1.33	1.37
3	DA	71	A	P-O5'	-5.86	1.53	1.59
1	AA	1102	A	N7-C5	-5.86	1.35	1.39
3	DA	249	C	N1-C6	-5.86	1.33	1.37
3	DA	681	G	C6-N1	-5.86	1.35	1.39
3	DA	990	A	C5-C6	-5.86	1.35	1.41
3	DA	370	G	N9-C4	-5.86	1.33	1.38
3	DA	743	A	C6-N1	-5.86	1.31	1.35
3	DA	991	C	N3-C4	-5.86	1.29	1.33
5	DB	81	G	N9-C4	-5.86	1.33	1.38
3	DA	584	C	C4-C5	-5.85	1.38	1.43
3	DA	936	A	N3-C4	-5.85	1.31	1.34
40	DQ	98	TYR	CD1-CE1	-5.85	1.30	1.39
4	CA	776	G	N9-C4	5.85	1.42	1.38
3	DA	575	A	C5-C6	-5.85	1.35	1.41
14	BJ	53	ILE	C-N	-5.85	1.20	1.34
3	DA	1794	A	C5-C6	-5.85	1.35	1.41
3	DA	2553	G	N1-C2	-5.84	1.33	1.37
3	DA	2723	C	C2-N3	-5.84	1.31	1.35
3	DA	1972	G	N7-C5	-5.84	1.35	1.39
51	D1	2	VAL	CB-CG2	-5.84	1.40	1.52
3	DA	1157	G	C6-N1	5.84	1.43	1.39
3	DA	1187	G	N9-C8	-5.84	1.33	1.37
3	DA	528	A	N7-C5	-5.84	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	675	A	N9-C4	-5.84	1.34	1.37
3	DA	1937	A	C5-C6	-5.84	1.35	1.41
3	DA	665	U	N1-C2	-5.84	1.33	1.38
3	DA	1814	G	N9-C8	-5.83	1.33	1.37
3	DA	2252	G	C2-N3	-5.83	1.28	1.32
3	DA	118	A	N3-C4	-5.83	1.31	1.34
3	DA	798	G	C5-C6	-5.83	1.36	1.42
3	DA	2005	A	N9-C4	-5.83	1.34	1.37
27	DC	212	TRP	CG-CD1	-5.83	1.28	1.36
3	DA	1641	A	N9-C4	-5.83	1.34	1.37
3	DA	1810	A	C6-N1	-5.83	1.31	1.35
3	DA	2468	A	N3-C4	-5.83	1.31	1.34
3	DA	67	U	N1-C2	-5.83	1.33	1.38
3	DA	913	U	N1-C2	-5.83	1.33	1.38
3	DA	1596	A	N9-C4	-5.83	1.34	1.37
3	DA	859	G	N3-C4	-5.82	1.31	1.35
3	DA	2031	A	C6-N6	-5.82	1.29	1.33
47	DX	65	VAL	CB-CG2	5.82	1.65	1.52
1	AA	1394	A	C6-N1	-5.82	1.31	1.35
2	BA	430	A	N9-C4	-5.82	1.34	1.37
3	DA	1305	C	N3-C4	-5.82	1.29	1.33
3	DA	1919	A	N7-C5	-5.82	1.35	1.39
3	DA	2591	C	C2-O2	-5.82	1.19	1.24
3	DA	2749	A	C5-C6	-5.82	1.35	1.41
4	CA	1970	A	N3-C4	-5.82	1.31	1.34
3	DA	554	U	C5-C6	-5.81	1.28	1.34
3	DA	794	A	C5-C6	-5.81	1.35	1.41
3	DA	1337	G	N9-C4	-5.81	1.33	1.38
3	DA	636	G	C6-N1	-5.81	1.35	1.39
3	DA	1134	A	C6-N1	-5.81	1.31	1.35
3	DA	2001	C	C4-C5	-5.81	1.38	1.43
3	DA	178	G	N9-C4	-5.80	1.33	1.38
3	DA	602	A	N7-C5	-5.80	1.35	1.39
3	DA	147	C	N1-C6	-5.80	1.33	1.37
3	DA	970	U	N1-C6	-5.80	1.32	1.38
3	DA	1705	A	N3-C4	-5.80	1.31	1.34
3	DA	1787	A	C8-N7	-5.80	1.27	1.31
3	DA	2776	A	N3-C4	-5.80	1.31	1.34
3	DA	749	A	N9-C4	-5.79	1.34	1.37
3	DA	2385	C	N1-C6	-5.79	1.33	1.37
3	DA	2781	A	C2-N3	-5.79	1.28	1.33
1	AA	26	A	N3-C4	-5.79	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1079	G	N9-C4	5.79	1.42	1.38
3	DA	561	G	C5-C4	-5.79	1.34	1.38
3	DA	89	A	C5-C6	-5.79	1.35	1.41
3	DA	2623	G	N3-C4	-5.79	1.31	1.35
2	BA	700	G	N9-C4	-5.79	1.33	1.38
3	DA	1143	A	N9-C4	-5.79	1.34	1.37
3	DA	1772	A	N7-C5	-5.79	1.35	1.39
3	DA	1912	A	N9-C4	-5.79	1.34	1.37
3	DA	1240	U	N1-C6	-5.79	1.32	1.38
3	DA	2088	A	N3-C4	-5.79	1.31	1.34
3	DA	2714	G	C6-N1	-5.79	1.35	1.39
3	DA	2409	G	N7-C5	-5.79	1.35	1.39
46	DW	82	TYR	CB-CG	-5.79	1.43	1.51
3	DA	1240	U	C2-N3	-5.78	1.33	1.37
3	DA	2764	A	N9-C4	-5.78	1.34	1.37
3	DA	1964	G	C5-C4	-5.78	1.34	1.38
3	DA	551	G	C5-C6	-5.78	1.36	1.42
3	DA	1120	G	N7-C5	-5.78	1.35	1.39
3	DA	2018	G	N9-C8	-5.78	1.33	1.37
49	DZ	24	GLU	CG-CD	5.78	1.60	1.51
3	DA	1145	C	C4-C5	-5.78	1.38	1.43
3	DA	230	G	N7-C5	-5.78	1.35	1.39
3	DA	1900	A	N3-C4	-5.78	1.31	1.34
3	DA	1935	G	N7-C5	-5.78	1.35	1.39
3	DA	533	G	N7-C5	-5.78	1.35	1.39
3	DA	818	G	N3-C4	-5.78	1.31	1.35
3	DA	976	G	C2-N3	-5.77	1.28	1.32
3	DA	763	G	N7-C5	-5.77	1.35	1.39
3	DA	997	G	N9-C4	-5.77	1.33	1.38
3	DA	2031	A	C6-N1	-5.77	1.31	1.35
3	DA	450	G	N7-C5	-5.77	1.35	1.39
3	DA	1240	U	N1-C2	-5.77	1.33	1.38
3	DA	807	U	N1-C6	-5.76	1.32	1.38
3	DA	1000	A	N3-C4	-5.76	1.31	1.34
3	DA	2801	G	C2-N3	-5.76	1.28	1.32
3	DA	789	A	N3-C4	-5.76	1.31	1.34
1	AA	1427	C	N1-C6	-5.76	1.33	1.37
3	DA	2641	G	N9-C8	-5.76	1.33	1.37
1	AA	105	G	C6-N1	-5.76	1.35	1.39
3	DA	1011	G	N9-C8	-5.76	1.33	1.37
3	DA	124	G	C2-N3	-5.76	1.28	1.32
3	DA	2387	U	N3-C4	-5.76	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	529	A	N9-C4	-5.75	1.34	1.37
3	DA	31	C	N1-C6	-5.75	1.33	1.37
5	DB	64	G	N9-C4	-5.75	1.33	1.38
3	DA	115	C	N1-C6	-5.75	1.33	1.37
1	AA	901	A	N7-C5	-5.75	1.35	1.39
2	BA	918	A	N7-C5	-5.75	1.35	1.39
3	DA	322	A	N9-C4	-5.75	1.34	1.37
3	DA	2549	G	C2-N2	-5.75	1.28	1.34
34	DK	139	VAL	CB-CG2	-5.75	1.40	1.52
3	DA	956	G	C2-N3	-5.74	1.28	1.32
3	DA	967	U	N3-C4	-5.74	1.33	1.38
4	CA	685	A	N9-C4	-5.74	1.34	1.37
3	DA	213	A	N9-C4	-5.74	1.34	1.37
3	DA	608	A	N3-C4	-5.74	1.31	1.34
3	DA	954	G	N9-C8	-5.74	1.33	1.37
3	DA	1622	G	N7-C5	-5.74	1.35	1.39
3	DA	2595	G	C5-C6	-5.74	1.36	1.42
5	DB	101	A	N3-C4	-5.74	1.31	1.34
3	DA	1182	G	N7-C5	-5.74	1.35	1.39
4	CA	777	G	C8-N7	-5.74	1.27	1.30
3	DA	909	A	C5-C6	-5.73	1.35	1.41
3	DA	1562	U	N3-C4	-5.73	1.33	1.38
3	DA	2582	G	N1-C2	-5.73	1.33	1.37
27	DC	64	VAL	CB-CG1	-5.73	1.40	1.52
1	AA	298	A	N9-C4	-5.72	1.34	1.37
3	DA	2508	G	N9-C8	-5.72	1.33	1.37
3	DA	334	C	C4-C5	-5.72	1.38	1.43
3	DA	1651	G	N7-C5	-5.72	1.35	1.39
3	DA	1470	A	N3-C4	-5.72	1.31	1.34
3	DA	254	G	N7-C5	-5.72	1.35	1.39
3	DA	1423	G	N1-C2	-5.72	1.33	1.37
3	DA	1770	G	C5-C4	-5.72	1.34	1.38
3	DA	2013	A	N3-C4	-5.72	1.31	1.34
3	DA	2792	A	N3-C4	-5.72	1.31	1.34
1	AA	918	A	N3-C4	-5.72	1.31	1.34
3	DA	15	G	C8-N7	-5.72	1.27	1.30
3	DA	1831	G	N1-C2	-5.72	1.33	1.37
3	DA	722	A	C6-N1	-5.72	1.31	1.35
3	DA	2403	C	N1-C6	-5.71	1.33	1.37
3	DA	1670	C	N1-C6	-5.71	1.33	1.37
2	BA	918	A	C5-C6	-5.71	1.35	1.41
3	DA	73	A	C5-C4	-5.71	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1706	C	C4-N4	-5.71	1.28	1.33
3	DA	2732	G	C5-C4	-5.71	1.34	1.38
3	DA	199	A	C6-N1	-5.71	1.31	1.35
3	DA	2007	U	C2-N3	5.71	1.41	1.37
29	DE	32	VAL	CB-CG2	-5.71	1.40	1.52
3	DA	201	C	N3-C4	-5.70	1.29	1.33
3	DA	1566	A	N9-C8	-5.70	1.33	1.37
3	DA	1575	C	N1-C6	-5.70	1.33	1.37
3	DA	2425	A	N3-C4	-5.70	1.31	1.34
1	AA	1492	A	N9-C4	5.70	1.41	1.37
3	DA	1950	G	N7-C5	-5.70	1.35	1.39
3	DA	2016	U	C4-C5	-5.70	1.38	1.43
3	DA	2639	A	C6-N1	-5.70	1.31	1.35
3	DA	2821	A	N1-C2	-5.70	1.29	1.34
3	DA	2836	U	N1-C2	-5.70	1.33	1.38
3	DA	556	A	C5-C4	-5.70	1.34	1.38
3	DA	2561	U	N1-C6	-5.70	1.32	1.38
3	DA	916	G	N7-C5	-5.69	1.35	1.39
3	DA	1345	C	C4-C5	-5.69	1.38	1.43
3	DA	1525	A	C5-C6	-5.69	1.35	1.41
1	AA	584	G	N3-C4	-5.69	1.31	1.35
3	DA	457	A	C5-C4	-5.69	1.34	1.38
3	DA	832	U	C2-O2	-5.69	1.17	1.22
3	DA	2064	C	C4-N4	-5.69	1.28	1.33
3	DA	337	C	N1-C6	-5.69	1.33	1.37
3	DA	1992	G	C4'-C3'	-5.68	1.46	1.52
3	DA	2850	A	C5-C6	-5.68	1.35	1.41
3	DA	75	G	N3-C4	-5.68	1.31	1.35
3	DA	332	A	N9-C4	-5.68	1.34	1.37
3	DA	457	A	N3-C4	-5.68	1.31	1.34
3	DA	852	U	C2-N3	5.68	1.41	1.37
3	DA	1322	A	N3-C4	-5.68	1.31	1.34
3	DA	2289	G	N9-C4	-5.68	1.33	1.38
3	DA	943	A	N3-C4	-5.68	1.31	1.34
3	DA	126	A	N7-C5	-5.68	1.35	1.39
3	DA	725	G	N9-C4	-5.68	1.33	1.38
3	DA	2764	A	C5-C4	-5.68	1.34	1.38
3	DA	2826	A	N7-C5	-5.68	1.35	1.39
4	CA	1822	C	C4-C5	5.68	1.47	1.43
47	DX	83	GLU	CB-CG	5.68	1.62	1.52
3	DA	1197	G	C6-N1	5.67	1.43	1.39
3	DA	1326	U	C5-C6	-5.67	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2633	G	N7-C5	5.67	1.42	1.39
54	D4	6	VAL	CB-CG2	-5.67	1.41	1.52
3	DA	2703	C	N3-C4	-5.67	1.29	1.33
3	DA	775	G	N7-C5	-5.67	1.35	1.39
3	DA	1959	G	N3-C4	-5.67	1.31	1.35
3	DA	2812	G	C6-N1	5.67	1.43	1.39
3	DA	777	G	C6-N1	-5.67	1.35	1.39
3	DA	2037	A	C3'-C2'	-5.67	1.46	1.52
3	DA	2791	G	N9-C4	-5.67	1.33	1.38
3	DA	916	G	C6-N1	-5.67	1.35	1.39
3	DA	514	A	N7-C5	-5.66	1.35	1.39
3	DA	1695	G	N9-C8	5.66	1.41	1.37
3	DA	2050	C	N3-C4	-5.66	1.29	1.33
3	DA	2281	A	N3-C4	-5.66	1.31	1.34
3	DA	2328	A	C6-N1	-5.66	1.31	1.35
3	DA	251	A	C5-C4	-5.66	1.34	1.38
3	DA	522	A	N9-C8	-5.66	1.33	1.37
3	DA	1292	G	N9-C4	-5.66	1.33	1.38
3	DA	1826	G	N7-C5	-5.66	1.35	1.39
3	DA	577	G	C6-N1	-5.66	1.35	1.39
3	DA	2068	U	C4-C5	-5.66	1.38	1.43
3	DA	950	G	N9-C4	-5.66	1.33	1.38
3	DA	2603	G	C6-N1	-5.66	1.35	1.39
5	DB	94	A	N9-C4	-5.66	1.34	1.37
3	DA	1845	G	N3-C4	-5.65	1.31	1.35
2	BA	1511	G	N7-C5	-5.65	1.35	1.39
3	DA	29	U	C4-C5	-5.65	1.38	1.43
3	DA	1676	A	C5-C4	-5.65	1.34	1.38
3	DA	1838	C	C4-C5	-5.65	1.38	1.43
1	AA	377	G	N9-C8	-5.65	1.33	1.37
2	BA	432	A	N9-C4	-5.65	1.34	1.37
2	BA	507	C	N1-C6	-5.65	1.33	1.37
3	DA	68	G	C5-C4	-5.65	1.34	1.38
3	DA	2268	A	N3-C4	-5.65	1.31	1.34
3	DA	444	C	C2-N3	-5.64	1.31	1.35
3	DA	1158	C	N3-C4	-5.64	1.29	1.33
3	DA	1978	A	N3-C4	-5.64	1.31	1.34
1	AA	743	A	N9-C4	-5.64	1.34	1.37
3	DA	633	A	N9-C4	-5.64	1.34	1.37
3	DA	991	C	C5-C6	-5.64	1.29	1.34
3	DA	2055	C	N3-C4	-5.64	1.30	1.33
3	DA	1330	C	C4-C5	-5.64	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2407	A	N9-C4	-5.64	1.34	1.37
3	DA	1307	A	C5-C6	-5.64	1.35	1.41
2	BA	575	G	N9-C4	-5.63	1.33	1.38
2	BA	577	G	N7-C5	-5.63	1.35	1.39
3	DA	29	U	N1-C6	-5.63	1.32	1.38
3	DA	2258	C	N1-C6	-5.63	1.33	1.37
3	DA	478	A	N3-C4	-5.63	1.31	1.34
3	DA	481	G	C5-C4	-5.63	1.34	1.38
3	DA	722	A	N3-C4	-5.63	1.31	1.34
3	DA	2003	A	C5-C4	-5.63	1.34	1.38
3	DA	2023	C	N3-C4	-5.63	1.30	1.33
3	DA	2064	C	N1-C6	-5.63	1.33	1.37
3	DA	666	A	N3-C4	-5.63	1.31	1.34
3	DA	950	G	N3-C4	-5.63	1.31	1.35
3	DA	1301	A	N7-C5	-5.63	1.35	1.39
3	DA	2416	C	C4-C5	-5.63	1.38	1.43
5	DB	70	C	C5-C6	-5.63	1.29	1.34
3	DA	310	A	C5-C6	-5.63	1.35	1.41
3	DA	950	G	C6-N1	-5.63	1.35	1.39
3	DA	2205	A	N9-C4	-5.63	1.34	1.37
5	DB	45	A	N9-C4	-5.62	1.34	1.37
3	DA	255	A	C6-N1	-5.62	1.31	1.35
3	DA	995	C	C4-C5	-5.62	1.38	1.43
3	DA	124	G	C6-N1	-5.62	1.35	1.39
3	DA	2058	A	N1-C2	-5.62	1.29	1.34
3	DA	2281	A	N9-C4	-5.62	1.34	1.37
3	DA	2599	G	N1-C2	-5.62	1.33	1.37
3	DA	68	G	N3-C4	-5.62	1.31	1.35
3	DA	203	A	C5-C6	-5.62	1.35	1.41
3	DA	773	U	N1-C6	-5.62	1.32	1.38
3	DA	1814	G	N3-C4	-5.62	1.31	1.35
3	DA	2053	G	N7-C5	-5.62	1.35	1.39
3	DA	2586	U	N1-C6	-5.62	1.32	1.38
2	BA	1389	C	N1-C6	-5.62	1.33	1.37
3	DA	736	C	C4-C5	-5.62	1.38	1.43
3	DA	1121	C	C4-N4	-5.62	1.28	1.33
3	DA	2546	U	C2-N3	-5.62	1.33	1.37
2	BA	1391	U	C4-O4	5.61	1.28	1.23
3	DA	1659	G	N3-C4	-5.61	1.31	1.35
3	DA	1785	A	N3-C4	-5.61	1.31	1.34
3	DA	1024	G	N9-C8	-5.61	1.33	1.37
3	DA	1403	A	C5-C4	-5.61	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2536	G	N3-C4	-5.61	1.31	1.35
3	DA	1181	U	C4-O4	5.61	1.28	1.23
3	DA	2428	G	C5-C4	-5.61	1.34	1.38
3	DA	2444	G	N3-C4	-5.61	1.31	1.35
3	DA	2493	U	N1-C2	5.61	1.43	1.38
3	DA	2098	U	C5-C6	5.61	1.39	1.34
3	DA	2338	C	N3-C4	-5.61	1.30	1.33
3	DA	26	G	C5-C4	-5.60	1.34	1.38
3	DA	216	A	N3-C4	-5.60	1.31	1.34
3	DA	2697	G	C5-C6	-5.60	1.36	1.42
3	DA	820	A	C6-N1	-5.59	1.31	1.35
3	DA	1308	A	N9-C4	-5.59	1.34	1.37
3	DA	2702	G	N1-C2	-5.59	1.33	1.37
2	BA	1520	C	C4-C5	-5.59	1.38	1.43
3	DA	400	G	N7-C5	-5.59	1.35	1.39
3	DA	449	A	C5-C6	-5.59	1.36	1.41
3	DA	1326	U	N1-C6	-5.59	1.32	1.38
3	DA	840	C	N1-C6	-5.59	1.33	1.37
3	DA	2268	A	C6-N1	-5.59	1.31	1.35
3	DA	1646	C	N1-C6	-5.59	1.33	1.37
3	DA	1782	U	N1-C6	-5.59	1.32	1.38
3	DA	444	C	N1-C6	-5.59	1.33	1.37
3	DA	570	G	N9-C4	-5.59	1.33	1.38
3	DA	1768	C	C4-C5	-5.59	1.38	1.43
3	DA	391	A	C5-C4	-5.58	1.34	1.38
3	DA	2242	G	N3-C4	-5.58	1.31	1.35
3	DA	691	C	C4-N4	-5.58	1.28	1.33
3	DA	1007	C	C4-N4	-5.58	1.28	1.33
3	DA	1833	C	P-O5'	-5.58	1.54	1.59
3	DA	1802	A	N9-C4	-5.58	1.34	1.37
3	DA	586	A	N9-C8	-5.58	1.33	1.37
3	DA	1562	U	C4-C5	-5.58	1.38	1.43
3	DA	2072	C	N1-C6	-5.58	1.33	1.37
3	DA	2608	G	C5-C6	-5.58	1.36	1.42
41	DR	21	LYS	CE-NZ	5.58	1.62	1.49
1	AA	899	C	C4-N4	-5.58	1.28	1.33
3	DA	507	A	N3-C4	-5.58	1.31	1.34
3	DA	2054	A	P-O5'	-5.57	1.54	1.59
3	DA	2302	U	C2-N3	-5.57	1.33	1.37
3	DA	2753	A	N9-C4	-5.57	1.34	1.37
3	DA	1203	U	N1-C2	-5.57	1.33	1.38
4	CA	1353	A	N9-C4	5.57	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	513	A	C5-C4	-5.57	1.34	1.38
3	DA	513	A	C5-C6	-5.57	1.36	1.41
3	DA	749	A	N3-C4	-5.57	1.31	1.34
3	DA	1797	G	N9-C8	-5.57	1.33	1.37
3	DA	2289	G	C2-N3	-5.57	1.28	1.32
4	CA	2595	G	N9-C8	-5.57	1.33	1.37
5	DB	91	C	C4-C5	-5.57	1.38	1.43
2	BA	573	A	N9-C4	-5.57	1.34	1.37
3	DA	1662	U	C4-C5	-5.57	1.38	1.43
3	DA	1759	A	N3-C4	-5.57	1.31	1.34
3	DA	2817	U	C4-O4	-5.57	1.19	1.23
3	DA	2873	A	C5-C4	-5.57	1.34	1.38
3	DA	619	G	N9-C4	-5.57	1.33	1.38
3	DA	858	G	N3-C4	-5.57	1.31	1.35
3	DA	2057	G	C5-C6	-5.57	1.36	1.42
3	DA	2253	G	N9-C8	-5.57	1.33	1.37
3	DA	1310	G	C5-C6	-5.56	1.36	1.42
3	DA	2873	A	N7-C5	-5.56	1.35	1.39
3	DA	848	C	C4-C5	-5.56	1.38	1.43
3	DA	1040	A	N9-C4	-5.56	1.34	1.37
1	AA	1479	C	N1-C2	-5.56	1.34	1.40
3	DA	33	C	C4-C5	-5.56	1.38	1.43
1	AA	1279	G	N9-C8	5.55	1.41	1.37
3	DA	631	A	N3-C4	-5.55	1.31	1.34
3	DA	1149	G	C2-N3	-5.55	1.28	1.32
3	DA	1680	U	N3-C4	-5.55	1.33	1.38
3	DA	201	C	C4-C5	-5.55	1.38	1.43
3	DA	509	C	C2-N3	-5.55	1.31	1.35
3	DA	817	C	C4-C5	-5.55	1.38	1.43
3	DA	1796	U	N1-C2	-5.55	1.33	1.38
3	DA	2722	G	C6-N1	-5.55	1.35	1.39
3	DA	2335	A	N9-C4	-5.55	1.34	1.37
3	DA	2755	C	N3-C4	-5.55	1.30	1.33
3	DA	2893	A	N9-C4	-5.54	1.34	1.37
3	DA	1024	G	C2-N2	-5.54	1.29	1.34
3	DA	1040	A	N7-C5	-5.54	1.35	1.39
3	DA	2289	G	N3-C4	-5.54	1.31	1.35
39	DP	99	TYR	CG-CD2	-5.54	1.31	1.39
3	DA	2800	A	C5-C4	-5.54	1.34	1.38
34	DK	68	LYS	CE-NZ	5.54	1.62	1.49
3	DA	2676	C	N1-C2	-5.54	1.34	1.40
3	DA	1326	U	C2-O2	5.54	1.27	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1639	C	N1-C6	-5.54	1.33	1.37
3	DA	1495	A	N7-C5	-5.54	1.35	1.39
3	DA	1782	U	C2-N3	-5.54	1.33	1.37
3	DA	760	G	N9-C4	-5.53	1.33	1.38
5	DB	113	C	C4-C5	-5.53	1.38	1.43
3	DA	537	G	C5-C6	-5.53	1.36	1.42
3	DA	312	G	N3-C4	-5.53	1.31	1.35
3	DA	809	G	N7-C5	-5.53	1.35	1.39
3	DA	2747	G	N3-C4	-5.53	1.31	1.35
3	DA	1164	C	C4-C5	-5.52	1.38	1.43
3	DA	1258	U	N1-C6	-5.52	1.32	1.38
2	BA	1396	A	N9-C4	-5.52	1.34	1.37
3	DA	522	A	N3-C4	-5.52	1.31	1.34
3	DA	695	G	C8-N7	-5.52	1.27	1.30
3	DA	1235	G	N7-C5	-5.52	1.35	1.39
3	DA	331	C	P-OP2	5.52	1.58	1.49
3	DA	1450	G	C5-C4	-5.52	1.34	1.38
3	DA	2614	A	N3-C4	-5.52	1.31	1.34
5	DB	28	C	N3-C4	-5.52	1.30	1.33
3	DA	1640	A	N7-C5	-5.52	1.35	1.39
3	DA	2046	G	C5-C6	-5.51	1.36	1.42
3	DA	2052	A	C6-N1	-5.51	1.31	1.35
3	DA	1114	C	N1-C6	-5.51	1.33	1.37
3	DA	1265	A	P-O5'	-5.51	1.54	1.59
3	DA	1788	C	N1-C6	-5.51	1.33	1.37
3	DA	2838	G	N3-C4	-5.51	1.31	1.35
3	DA	2860	A	N7-C5	-5.51	1.35	1.39
3	DA	636	G	C2-N3	-5.51	1.28	1.32
3	DA	1029	A	C6-N1	-5.51	1.31	1.35
3	DA	694	U	C2-O2	-5.51	1.17	1.22
3	DA	2090	A	N3-C4	-5.51	1.31	1.34
3	DA	2358	A	N7-C5	-5.51	1.35	1.39
3	DA	2037	A	N9-C8	-5.51	1.33	1.37
1	AA	1066	C	C4-C5	-5.50	1.38	1.43
3	DA	1315	C	N1-C6	-5.50	1.33	1.37
3	DA	190	A	C5-C6	-5.50	1.36	1.41
3	DA	775	G	C5-C6	-5.50	1.36	1.42
3	DA	1201	U	C4-C5	-5.50	1.38	1.43
3	DA	2023	C	P-O5'	-5.50	1.54	1.59
2	BA	1399	C	N1-C2	-5.50	1.34	1.40
2	BA	1511	G	C5-C6	-5.50	1.36	1.42
2	BA	499	A	N3-C4	-5.50	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2428	G	N3-C4	-5.50	1.31	1.35
3	DA	2598	A	N3-C4	-5.50	1.31	1.34
1	AA	317	U	N1-C2	-5.50	1.33	1.38
3	DA	192	C	N1-C6	-5.50	1.33	1.37
3	DA	524	G	N9-C4	-5.50	1.33	1.38
3	DA	1324	G	N9-C8	-5.50	1.34	1.37
3	DA	2398	U	N3-C4	-5.50	1.33	1.38
3	DA	93	G	N3-C4	-5.50	1.31	1.35
3	DA	2034	U	N3-C4	-5.50	1.33	1.38
3	DA	2442	C	N1-C2	-5.50	1.34	1.40
1	AA	676	A	N3-C4	-5.49	1.31	1.34
3	DA	1147	A	C5-C6	-5.49	1.36	1.41
3	DA	2361	G	N1-C2	-5.49	1.33	1.37
3	DA	2732	G	N9-C4	-5.49	1.33	1.38
3	DA	2263	C	C2-O2	5.49	1.29	1.24
3	DA	680	C	N1-C2	-5.49	1.34	1.40
36	DM	60	ARG	CB-CG	-5.49	1.37	1.52
40	DQ	27	VAL	CB-CG2	-5.49	1.41	1.52
3	DA	2684	U	N1-C6	-5.48	1.33	1.38
3	DA	413	C	N1-C6	-5.48	1.33	1.37
3	DA	517	C	C4-C5	-5.48	1.38	1.43
3	DA	2719	G	N9-C4	-5.48	1.33	1.38
1	AA	1466	C	N3-C4	-5.48	1.30	1.33
3	DA	2626	C	N1-C6	-5.48	1.33	1.37
3	DA	1776	G	N3-C4	-5.47	1.31	1.35
4	CA	1900	A	N3-C4	-5.47	1.31	1.34
3	DA	422	A	C5-C6	-5.47	1.36	1.41
3	DA	680	C	N1-C6	-5.47	1.33	1.37
3	DA	2417	C	N1-C6	-5.47	1.33	1.37
5	DB	57	A	C5-C6	-5.47	1.36	1.41
3	DA	664	G	N3-C4	-5.47	1.31	1.35
3	DA	2294	G	C2-N3	-5.47	1.28	1.32
3	DA	1279	G	N3-C4	-5.47	1.31	1.35
3	DA	1952	A	C5-C6	-5.47	1.36	1.41
3	DA	2887	A	N3-C4	5.47	1.38	1.34
3	DA	2748	A	N3-C4	-5.46	1.31	1.34
3	DA	905	A	N9-C4	-5.46	1.34	1.37
3	DA	2547	A	C6-N1	-5.46	1.31	1.35
4	CA	983	A	N9-C4	5.46	1.41	1.37
3	DA	1457	U	C2-N3	-5.46	1.33	1.37
1	AA	919	A	C5-C6	-5.45	1.36	1.41
3	DA	908	C	C4-C5	-5.45	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	947	A	N9-C4	-5.45	1.34	1.37
3	DA	966	G	C5-C6	-5.45	1.36	1.42
3	DA	1124	G	C6-N1	-5.45	1.35	1.39
29	DE	113	VAL	CB-CG1	-5.45	1.41	1.52
4	CA	1791	A	N3-C4	5.45	1.38	1.34
1	AA	361	G	N9-C8	-5.45	1.34	1.37
3	DA	75	G	C5-C4	-5.45	1.34	1.38
3	DA	494	G	N9-C4	-5.45	1.33	1.38
3	DA	1284	A	C6-N6	-5.45	1.29	1.33
3	DA	517	C	C5-C6	-5.45	1.29	1.34
3	DA	1813	G	N9-C8	-5.45	1.34	1.37
1	AA	971	G	C5-C6	-5.45	1.36	1.42
3	DA	1888	G	N9-C4	-5.44	1.33	1.38
3	DA	2032	G	N3-C4	-5.44	1.31	1.35
3	DA	2036	C	N1-C6	-5.44	1.33	1.37
3	DA	2426	A	C6-N1	-5.44	1.31	1.35
3	DA	1142	A	C8-N7	-5.44	1.27	1.31
3	DA	2821	A	N9-C8	-5.44	1.33	1.37
3	DA	770	G	C2-N3	-5.44	1.28	1.32
3	DA	2454	G	N9-C8	-5.44	1.34	1.37
3	DA	2750	A	N3-C4	-5.44	1.31	1.34
3	DA	560	C	C5-C6	-5.44	1.30	1.34
3	DA	763	G	N1-C2	-5.44	1.33	1.37
3	DA	1643	G	N3-C4	-5.44	1.31	1.35
3	DA	2488	G	C5-C6	-5.44	1.36	1.42
5	DB	71	C	N1-C6	-5.44	1.33	1.37
1	AA	824	G	N9-C4	-5.44	1.33	1.38
3	DA	1119	U	N1-C6	-5.44	1.33	1.38
3	DA	456	C	N1-C6	-5.43	1.33	1.37
3	DA	2817	U	N3-C4	-5.43	1.33	1.38
3	DA	2852	G	N9-C4	-5.43	1.33	1.38
3	DA	757	G	N9-C4	-5.43	1.33	1.38
3	DA	773	U	N1-C2	-5.43	1.33	1.38
3	DA	2397	G	N9-C8	-5.43	1.34	1.37
3	DA	2265	U	C2-N3	5.43	1.41	1.37
3	DA	2610	C	C2-O2	-5.43	1.19	1.24
3	DA	2674	G	N3-C4	-5.43	1.31	1.35
3	DA	927	A	N3-C4	-5.43	1.31	1.34
3	DA	1640	A	N9-C4	-5.43	1.34	1.37
3	DA	2297	A	N3-C4	-5.43	1.31	1.34
3	DA	1042	G	N3-C4	-5.42	1.31	1.35
5	DB	106	G	N3-C4	-5.42	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	768	A	C5-C4	-5.42	1.34	1.38
3	DA	2738	A	N9-C4	-5.42	1.34	1.37
3	DA	805	G	N9-C8	-5.42	1.34	1.37
3	DA	18	U	C4-C5	-5.42	1.38	1.43
3	DA	307	G	N7-C5	-5.42	1.35	1.39
3	DA	316	C	C5-C6	-5.42	1.30	1.34
3	DA	2005	A	N7-C5	-5.42	1.35	1.39
3	DA	2088	A	N7-C5	-5.42	1.35	1.39
3	DA	2280	G	C5-C4	-5.42	1.34	1.38
4	CA	1752	C	N1-C6	5.42	1.40	1.37
3	DA	1635	A	N3-C4	-5.42	1.31	1.34
3	DA	2547	A	C5-C4	-5.42	1.34	1.38
3	DA	907	G	C6-N1	5.42	1.43	1.39
3	DA	1214	A	N7-C5	-5.41	1.36	1.39
3	DA	484	C	N3-C4	-5.41	1.30	1.33
3	DA	2764	A	C5-C6	-5.41	1.36	1.41
3	DA	2510	C	C4-C5	-5.41	1.38	1.43
3	DA	2702	G	N7-C5	-5.41	1.36	1.39
3	DA	1251	C	N3-C4	-5.41	1.30	1.33
3	DA	101	A	N9-C4	-5.41	1.34	1.37
3	DA	1160	G	N3-C4	-5.41	1.31	1.35
3	DA	2781	A	N9-C4	-5.41	1.34	1.37
3	DA	522	A	C5-C4	-5.40	1.34	1.38
3	DA	2038	G	N9-C8	-5.40	1.34	1.37
3	DA	2828	G	N9-C8	-5.40	1.34	1.37
3	DA	2837	A	N3-C4	-5.40	1.31	1.34
3	DA	1667	G	N3-C4	-5.40	1.31	1.35
3	DA	833	A	N1-C2	-5.40	1.29	1.34
3	DA	2648	G	C5-C4	-5.40	1.34	1.38
3	DA	915	C	C4-N4	-5.40	1.29	1.33
3	DA	1967	C	C4-C5	-5.40	1.38	1.43
1	AA	230	G	N9-C4	-5.39	1.33	1.38
3	DA	68	G	C6-N1	-5.39	1.35	1.39
3	DA	203	A	C5-C4	-5.39	1.34	1.38
3	DA	2526	G	C5-C6	-5.39	1.36	1.42
4	CA	1819	A	N3-C4	-5.39	1.31	1.34
3	DA	2450	A	C6-N1	-5.39	1.31	1.35
1	AA	809	G	C2-N3	-5.39	1.28	1.32
3	DA	819	A	N3-C4	-5.39	1.31	1.34
3	DA	822	G	N1-C2	-5.39	1.33	1.37
3	DA	944	C	C2-N3	-5.39	1.31	1.35
3	DA	975	A	N7-C5	-5.39	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2035	G	N3-C4	-5.39	1.31	1.35
3	DA	1019	U	C2-N3	-5.39	1.33	1.37
3	DA	1837	C	C4-C5	-5.39	1.38	1.43
3	DA	2064	C	C4-C5	-5.39	1.38	1.43
5	DB	64	G	C5-C4	-5.39	1.34	1.38
3	DA	328	U	N1-C6	-5.38	1.33	1.38
3	DA	733	G	N7-C5	-5.38	1.36	1.39
3	DA	2674	G	C5-C4	-5.38	1.34	1.38
1	AA	918	A	C6-N1	-5.38	1.31	1.35
1	AA	804	U	N3-C4	-5.38	1.33	1.38
3	DA	538	A	N7-C5	-5.38	1.36	1.39
3	DA	2567	G	N7-C5	-5.38	1.36	1.39
27	DC	212	TRP	CB-CG	-5.38	1.40	1.50
3	DA	466	A	C6-N1	-5.38	1.31	1.35
3	DA	520	G	N3-C4	-5.38	1.31	1.35
3	DA	2055	C	C4-C5	-5.37	1.38	1.43
3	DA	988	A	C5-C4	-5.37	1.34	1.38
3	DA	1563	U	N1-C6	-5.37	1.33	1.38
3	DA	2343	U	N1-C2	-5.37	1.33	1.38
3	DA	981	A	N9-C4	-5.37	1.34	1.37
3	DA	1323	C	N1-C6	-5.37	1.33	1.37
3	DA	2511	U	C4-C5	-5.37	1.38	1.43
4	CA	2730	C	N1-C6	5.37	1.40	1.37
1	AA	1111	A	C6-N1	-5.37	1.31	1.35
3	DA	466	A	C6-N6	-5.37	1.29	1.33
3	DA	475	C	N1-C6	-5.37	1.33	1.37
3	DA	1928	A	C5-C4	-5.37	1.34	1.38
3	DA	2569	G	C6-N1	-5.37	1.35	1.39
3	DA	428	A	N3-C4	-5.37	1.31	1.34
3	DA	2478	A	N9-C4	-5.37	1.34	1.37
3	DA	2542	A	N9-C8	-5.37	1.33	1.37
3	DA	1945	G	C6-N1	-5.36	1.35	1.39
3	DA	2333	A	C5-C4	-5.36	1.34	1.38
3	DA	2447	G	N9-C8	-5.36	1.34	1.37
3	DA	671	C	C5-C6	5.36	1.38	1.34
3	DA	810	U	C2-N3	-5.36	1.33	1.37
3	DA	1163	G	C8-N7	-5.36	1.27	1.30
3	DA	624	C	C4-C5	-5.36	1.38	1.43
3	DA	1650	A	N9-C4	-5.36	1.34	1.37
3	DA	1898	U	N1-C2	-5.36	1.33	1.38
3	DA	665	U	N1-C6	-5.36	1.33	1.38
5	DB	21	G	C6-N1	-5.36	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2581	G	C2-N2	-5.36	1.29	1.34
5	DB	98	G	C5-C4	-5.36	1.34	1.38
34	DK	65	THR	CB-CG2	-5.36	1.34	1.52
3	DA	1765	U	C2-O2	5.35	1.27	1.22
1	AA	1430	A	N3-C4	-5.35	1.31	1.34
3	DA	479	A	C5-C4	-5.35	1.35	1.38
3	DA	501	A	N7-C5	-5.35	1.36	1.39
1	AA	524	G	C5-C6	-5.35	1.36	1.42
3	DA	1671	U	N1-C2	-5.35	1.33	1.38
3	DA	592	A	C6-N6	-5.35	1.29	1.33
3	DA	2886	A	C5-C6	5.35	1.45	1.41
3	DA	463	G	N3-C4	-5.35	1.31	1.35
3	DA	2688	G	N7-C5	-5.35	1.36	1.39
3	DA	798	G	N3-C4	-5.34	1.31	1.35
3	DA	1392	A	N1-C2	-5.34	1.29	1.34
3	DA	1596	A	C6-N6	-5.34	1.29	1.33
3	DA	2378	A	N3-C4	-5.34	1.31	1.34
3	DA	2333	A	N3-C4	-5.34	1.31	1.34
3	DA	2400	G	N7-C5	-5.34	1.36	1.39
3	DA	2679	A	C6-N6	-5.34	1.29	1.33
3	DA	463	G	N7-C5	-5.34	1.36	1.39
3	DA	668	A	N7-C5	-5.34	1.36	1.39
3	DA	1755	A	N3-C4	-5.34	1.31	1.34
3	DA	1930	G	N3-C4	-5.34	1.31	1.35
3	DA	2765	A	N3-C4	-5.34	1.31	1.34
42	DS	77	PHE	CD2-CE2	-5.34	1.28	1.39
3	DA	1198	U	N1-C2	-5.34	1.33	1.38
3	DA	478	A	C6-N1	-5.34	1.31	1.35
3	DA	636	G	N1-C2	-5.34	1.33	1.37
3	DA	190	A	C6-N6	-5.33	1.29	1.33
3	DA	817	C	C5-C6	-5.33	1.30	1.34
3	DA	1284	A	C5-C6	-5.33	1.36	1.41
3	DA	1525	A	N9-C8	-5.33	1.33	1.37
3	DA	1968	G	N7-C5	-5.33	1.36	1.39
29	DE	77	ILE	CB-CG2	5.33	1.69	1.52
3	DA	566	U	N1-C2	-5.33	1.33	1.38
3	DA	914	G	N9-C8	5.33	1.41	1.37
3	DA	1574	C	N1-C2	-5.33	1.34	1.40
3	DA	2559	C	N1-C6	-5.33	1.33	1.37
3	DA	537	G	C5-C4	-5.33	1.34	1.38
3	DA	705	A	C5-C6	-5.33	1.36	1.41
3	DA	2387	U	C4-C5	-5.33	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	541	A	N9-C4	-5.32	1.34	1.37
3	DA	1471	G	C5-C6	-5.32	1.37	1.42
3	DA	2246	G	N9-C8	-5.32	1.34	1.37
4	CA	1829	A	C6-N1	5.32	1.39	1.35
3	DA	1362	C	C4-C5	-5.32	1.38	1.43
3	DA	1655	A	C2-N3	5.32	1.38	1.33
3	DA	2421	G	N7-C5	-5.32	1.36	1.39
3	DA	2819	G	C2-N3	-5.32	1.28	1.32
3	DA	2822	G	N9-C4	-5.32	1.33	1.38
3	DA	1843	C	N1-C6	-5.32	1.33	1.37
3	DA	514	A	C3'-C2'	-5.32	1.47	1.52
3	DA	794	A	C5-C4	-5.32	1.35	1.38
3	DA	961	C	N3-C4	-5.32	1.30	1.33
3	DA	998	C	C2-O2	-5.32	1.19	1.24
3	DA	1191	G	N9-C4	-5.32	1.33	1.38
3	DA	1464	G	C5-C6	-5.32	1.37	1.42
4	CA	1954	G	C6-N1	5.31	1.43	1.39
3	DA	502	A	N3-C4	-5.31	1.31	1.34
3	DA	1336	A	C6-N1	-5.31	1.31	1.35
3	DA	2668	G	N7-C5	-5.31	1.36	1.39
3	DA	308	G	C5-C6	-5.31	1.37	1.42
3	DA	1318	U	C4-O4	-5.31	1.19	1.23
3	DA	1385	A	C6-N1	-5.31	1.31	1.35
3	DA	1619	G	N9-C4	-5.31	1.33	1.38
3	DA	2568	U	C2-N3	-5.31	1.34	1.37
3	DA	2621	G	C6-N1	-5.31	1.35	1.39
3	DA	953	G	N9-C4	-5.31	1.33	1.38
3	DA	2682	A	N9-C4	-5.31	1.34	1.37
3	DA	2088	A	N9-C4	-5.30	1.34	1.37
3	DA	707	G	N9-C8	-5.30	1.34	1.37
3	DA	1812	U	N1-C2	-5.30	1.33	1.38
3	DA	2728	U	N1-C6	-5.30	1.33	1.38
45	DV	58	VAL	CB-CG1	-5.30	1.41	1.52
3	DA	196	A	N7-C5	-5.30	1.36	1.39
3	DA	777	G	N7-C5	-5.30	1.36	1.39
3	DA	1448	G	N3-C4	-5.30	1.31	1.35
3	DA	2058	A	N9-C4	-5.30	1.34	1.37
3	DA	976	G	P-OP2	-5.29	1.40	1.49
3	DA	2441	U	N1-C6	-5.29	1.33	1.38
3	DA	1006	C	C2-N3	-5.29	1.31	1.35
3	DA	599	A	C5-C6	-5.29	1.36	1.41
3	DA	1022	G	N9-C4	-5.29	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	1964	G	C8-N7	-5.29	1.27	1.30
3	DA	2380	C	N3-C4	-5.29	1.30	1.33
1	AA	1067	A	C5-C6	-5.29	1.36	1.41
3	DA	532	A	C6-N1	-5.29	1.31	1.35
1	AA	234	C	N1-C6	-5.29	1.33	1.37
3	DA	909	A	C6-N6	-5.29	1.29	1.33
3	DA	973	A	C6-N1	-5.29	1.31	1.35
3	DA	1144	A	C5-C4	-5.29	1.35	1.38
43	DT	38	TYR	CE1-CZ	-5.29	1.31	1.38
3	DA	1565	C	N1-C6	-5.29	1.33	1.37
3	DA	859	G	N9-C8	-5.29	1.34	1.37
3	DA	2782	G	N9-C4	-5.29	1.33	1.38
3	DA	1150	C	C3'-C2'	-5.28	1.47	1.52
3	DA	2371	G	N9-C4	-5.28	1.33	1.38
1	AA	730	G	N3-C4	-5.28	1.31	1.35
3	DA	1239	G	N3-C4	-5.28	1.31	1.35
3	DA	2446	G	C8-N7	5.28	1.34	1.30
3	DA	2747	G	C5-C4	-5.28	1.34	1.38
3	DA	2750	A	N7-C5	-5.28	1.36	1.39
5	DB	92	C	C5-C6	-5.28	1.30	1.34
3	DA	1294	U	N3-C4	-5.28	1.33	1.38
3	DA	16	C	N1-C6	-5.28	1.33	1.37
3	DA	1142	A	C5-C6	-5.28	1.36	1.41
3	DA	2046	G	C6-N1	-5.28	1.35	1.39
3	DA	2472	G	C5-C4	-5.28	1.34	1.38
3	DA	2683	C	N3-C4	-5.28	1.30	1.33
3	DA	435	C	P-OP1	5.28	1.57	1.49
5	DB	110	C	C2-N3	-5.28	1.31	1.35
27	DC	183	VAL	CB-CG2	-5.28	1.41	1.52
3	DA	2080	A	C6-N1	-5.27	1.31	1.35
3	DA	460	A	N7-C5	-5.27	1.36	1.39
3	DA	859	G	C2-N3	-5.27	1.28	1.32
3	DA	1133	A	N9-C8	-5.27	1.33	1.37
3	DA	2711	A	N7-C5	-5.27	1.36	1.39
3	DA	2885	G	C2'-O2'	5.27	1.48	1.41
3	DA	131	A	C6-N1	-5.27	1.31	1.35
3	DA	226	A	N7-C5	-5.27	1.36	1.39
3	DA	939	G	N7-C5	-5.27	1.36	1.39
3	DA	218	A	C5-C6	-5.27	1.36	1.41
3	DA	948	C	C4-C5	-5.27	1.38	1.43
3	DA	2829	A	C5-C6	-5.27	1.36	1.41
3	DA	2	G	C6-N1	5.27	1.43	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2450	A	N3-C4	-5.27	1.31	1.34
1	AA	321	A	N9-C4	-5.26	1.34	1.37
3	DA	2808	G	N9-C8	-5.26	1.34	1.37
3	DA	820	A	C6-N6	-5.26	1.29	1.33
3	DA	1357	C	N1-C2	-5.26	1.34	1.40
3	DA	64	A	N9-C4	-5.26	1.34	1.37
3	DA	199	A	N3-C4	-5.26	1.31	1.34
3	DA	1637	A	C5-C6	-5.26	1.36	1.41
3	DA	2451	A	N7-C5	-5.26	1.36	1.39
3	DA	449	A	N9-C4	-5.26	1.34	1.37
3	DA	942	G	N9-C4	-5.26	1.33	1.38
45	DV	24	VAL	CB-CG2	-5.26	1.41	1.52
1	AA	270	A	N3-C4	-5.26	1.31	1.34
1	AA	971	G	N9-C4	-5.26	1.33	1.38
3	DA	530	G	N7-C5	-5.25	1.36	1.39
3	DA	2570	G	N7-C5	-5.25	1.36	1.39
3	DA	1325	U	N1-C2	-5.25	1.33	1.38
3	DA	1986	C	N3-C4	-5.25	1.30	1.33
1	AA	814	A	N9-C4	-5.25	1.34	1.37
3	DA	752	A	C5-C4	-5.25	1.35	1.38
3	DA	2737	G	C2-N3	-5.25	1.28	1.32
3	DA	2373	G	N9-C4	-5.25	1.33	1.38
3	DA	738	G	N1-C2	-5.25	1.33	1.37
3	DA	1839	G	N7-C5	-5.25	1.36	1.39
3	DA	1305	C	C2-N3	-5.25	1.31	1.35
4	CA	677	A	N3-C4	5.25	1.38	1.34
3	DA	1473	G	N3-C4	-5.25	1.31	1.35
3	DA	1951	U	N1-C2	-5.25	1.33	1.38
41	DR	56	PHE	CD2-CE2	-5.25	1.28	1.39
1	AA	906	A	N9-C4	-5.24	1.34	1.37
1	AA	1530	G	C5-C4	-5.24	1.34	1.38
3	DA	1226	A	C5-C6	-5.24	1.36	1.41
3	DA	1687	G	C6-N1	-5.24	1.35	1.39
3	DA	2501	C	N3-C4	-5.24	1.30	1.33
3	DA	982	C	C4-C5	-5.24	1.38	1.43
2	BA	575	G	C5-C4	-5.24	1.34	1.38
3	DA	2579	C	C4-C5	-5.24	1.38	1.43
3	DA	28	A	C6-N1	-5.24	1.31	1.35
3	DA	794	A	C6-N1	-5.24	1.31	1.35
46	DW	82	TYR	C-N	-5.24	1.22	1.34
2	BA	496	A	N3-C4	-5.24	1.31	1.34
3	DA	111	A	N9-C4	-5.24	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	196	A	N9-C4	-5.24	1.34	1.37
3	DA	1022	G	C5-C6	-5.24	1.37	1.42
3	DA	1189	A	N3-C4	-5.24	1.31	1.34
3	DA	2614	A	C5-C4	-5.24	1.35	1.38
3	DA	309	A	N9-C4	-5.23	1.34	1.37
3	DA	2263	C	N1-C6	-5.23	1.34	1.37
3	DA	576	U	C4-C5	-5.23	1.38	1.43
3	DA	2330	G	N3-C4	-5.23	1.31	1.35
3	DA	2595	G	C6-N1	-5.23	1.35	1.39
3	DA	1658	C	N3-C4	-5.22	1.30	1.33
3	DA	2276	G	N9-C8	-5.22	1.34	1.37
4	CA	1703	G	N1-C2	5.22	1.42	1.37
3	DA	1557	C	N1-C2	-5.22	1.34	1.40
3	DA	2435	A	C6-N6	-5.22	1.29	1.33
3	DA	2881	U	C4-C5	-5.22	1.38	1.43
3	DA	2485	G	C5-C4	-5.22	1.34	1.38
3	DA	2537	U	C4-C5	-5.22	1.38	1.43
3	DA	727	A	N9-C4	-5.22	1.34	1.37
3	DA	785	G	N7-C5	-5.22	1.36	1.39
3	DA	1141	U	C4-O4	5.22	1.27	1.23
3	DA	1928	A	N7-C5	-5.21	1.36	1.39
4	CA	1850	G	N9-C4	-5.21	1.33	1.38
3	DA	2232	C	N3-C4	-5.21	1.30	1.33
2	BA	431	A	N9-C4	-5.21	1.34	1.37
3	DA	305	C	N1-C6	-5.21	1.34	1.37
3	DA	471	A	C5-C4	-5.21	1.35	1.38
3	DA	1030	C	N1-C6	-5.21	1.34	1.37
3	DA	1655	A	N7-C5	-5.21	1.36	1.39
3	DA	578	G	C2-N2	-5.21	1.29	1.34
3	DA	659	G	C6-N1	-5.21	1.35	1.39
3	DA	830	G	N7-C5	-5.21	1.36	1.39
42	DS	93	PHE	CD1-CE1	-5.21	1.28	1.39
3	DA	838	C	N1-C6	-5.21	1.34	1.37
3	DA	998	C	C4-C5	-5.21	1.38	1.43
3	DA	1022	G	C2-N2	-5.21	1.29	1.34
5	DB	107	G	N9-C8	-5.21	1.34	1.37
3	DA	2517	C	N1-C6	-5.21	1.34	1.37
3	DA	2	G	N9-C4	-5.20	1.33	1.38
3	DA	787	C	N3-C4	-5.20	1.30	1.33
4	CA	197	A	N9-C4	5.20	1.41	1.37
3	DA	1020	A	N3-C4	5.20	1.38	1.34
3	DA	1769	U	C3'-C2'	-5.20	1.47	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	909	A	N7-C5	-5.20	1.36	1.39
3	DA	1977	A	C6-N1	-5.20	1.31	1.35
3	DA	937	C	C4-C5	-5.20	1.38	1.43
3	DA	398	C	N1-C6	-5.20	1.34	1.37
3	DA	1779	U	N1-C6	-5.20	1.33	1.38
4	CA	792	A	N9-C4	-5.20	1.34	1.37
3	DA	979	A	N7-C5	-5.19	1.36	1.39
3	DA	1223	G	N9-C4	-5.19	1.33	1.38
3	DA	2785	C	N1-C6	-5.19	1.34	1.37
3	DA	758	C	C2-N3	-5.19	1.31	1.35
3	DA	2418	A	N9-C4	-5.19	1.34	1.37
3	DA	2526	G	C6-N1	-5.19	1.35	1.39
3	DA	493	G	N3-C4	-5.19	1.31	1.35
3	DA	993	G	N3-C4	-5.19	1.31	1.35
42	DS	83	TYR	CE1-CZ	-5.19	1.31	1.38
1	AA	580	C	N1-C6	-5.18	1.34	1.37
3	DA	1000	A	C5-C4	-5.18	1.35	1.38
3	DA	1470	A	C6-N1	-5.18	1.31	1.35
3	DA	2454	G	N7-C5	-5.18	1.36	1.39
5	DB	79	G	C4'-C3'	-5.18	1.47	1.52
1	AA	909	A	N9-C4	-5.18	1.34	1.37
3	DA	1739	A	N7-C5	-5.18	1.36	1.39
3	DA	2553	G	C6-N1	-5.18	1.35	1.39
3	DA	233	A	N3-C4	-5.18	1.31	1.34
3	DA	1284	A	N9-C4	-5.18	1.34	1.37
3	DA	59	U	N1-C2	-5.18	1.33	1.38
3	DA	1564	C	N3-C4	-5.18	1.30	1.33
3	DA	152	A	C5-C6	-5.18	1.36	1.41
3	DA	524	G	C5-C4	-5.18	1.34	1.38
3	DA	562	U	C2-O2	-5.18	1.17	1.22
3	DA	1431	A	C5-C6	-5.18	1.36	1.41
3	DA	2032	G	C5-C4	-5.18	1.34	1.38
3	DA	2053	G	C3'-C2'	-5.17	1.47	1.52
3	DA	2350	C	N1-C6	-5.17	1.34	1.37
3	DA	749	A	N7-C5	-5.17	1.36	1.39
3	DA	752	A	N9-C4	-5.17	1.34	1.37
3	DA	1155	A	C6-N1	-5.17	1.31	1.35
3	DA	45	G	C2-N3	-5.17	1.28	1.32
3	DA	469	G	N9-C8	-5.17	1.34	1.37
3	DA	686	U	C2-N3	-5.17	1.34	1.37
3	DA	1902	C	N1-C2	-5.17	1.34	1.40
3	DA	448	U	C2-N3	-5.17	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	648	G	N7-C5	-5.17	1.36	1.39
3	DA	838	C	C4-C5	-5.17	1.38	1.43
3	DA	2225	A	N3-C4	-5.17	1.31	1.34
3	DA	2751	G	N7-C5	-5.17	1.36	1.39
4	CA	1802	A	N9-C8	-5.17	1.33	1.37
3	DA	948	C	C3'-C2'	-5.17	1.47	1.52
3	DA	2015	A	N1-C2	-5.17	1.29	1.34
4	CA	528	A	N9-C4	-5.17	1.34	1.37
5	DB	81	G	N3-C4	-5.17	1.31	1.35
48	DY	3	VAL	CB-CG2	-5.17	1.42	1.52
3	DA	1771	C	P-O5'	-5.17	1.54	1.59
3	DA	604	G	N7-C5	-5.16	1.36	1.39
3	DA	913	U	C4-O4	-5.16	1.19	1.23
42	DS	53	PHE	CA-CB	-5.16	1.42	1.53
3	DA	760	G	N3-C4	-5.16	1.31	1.35
3	DA	2442	C	C2-N3	-5.16	1.31	1.35
3	DA	2260	C	C4-C5	-5.16	1.38	1.43
3	DA	2739	U	N1-C6	-5.16	1.33	1.38
1	AA	928	G	C6-N1	-5.16	1.35	1.39
3	DA	1470	A	N9-C4	-5.16	1.34	1.37
3	DA	918	A	N9-C4	-5.16	1.34	1.37
3	DA	1623	G	C5-C4	-5.16	1.34	1.38
2	BA	496	A	N9-C4	-5.15	1.34	1.37
3	DA	2765	A	N9-C4	-5.15	1.34	1.37
3	DA	2087	G	N7-C5	-5.15	1.36	1.39
3	DA	471	A	C6-N1	-5.15	1.31	1.35
3	DA	533	G	C8-N7	-5.15	1.27	1.30
3	DA	578	G	N9-C8	-5.15	1.34	1.37
3	DA	1137	G	C6-O6	5.15	1.28	1.24
3	DA	2592	G	N3-C4	-5.15	1.31	1.35
3	DA	1406	U	N1-C6	-5.15	1.33	1.38
3	DA	1441	G	N3-C4	-5.15	1.31	1.35
2	BA	411	A	N3-C4	-5.14	1.31	1.34
3	DA	189	G	N9-C4	-5.14	1.33	1.38
3	DA	430	A	N7-C5	-5.14	1.36	1.39
3	DA	1194	A	C2-N3	-5.14	1.28	1.33
5	DB	62	C	N1-C6	-5.14	1.34	1.37
3	DA	2576	G	N7-C5	-5.14	1.36	1.39
3	DA	2234	G	C6-N1	-5.14	1.35	1.39
3	DA	36	G	C2-N3	-5.14	1.28	1.32
3	DA	2823	A	C5-C4	-5.14	1.35	1.38
3	DA	2725	A	N7-C5	-5.14	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1417	G	C6-N1	-5.14	1.35	1.39
3	DA	518	G	N3-C4	-5.14	1.31	1.35
3	DA	1605	C	N1-C6	-5.14	1.34	1.37
3	DA	2523	G	C6-N1	-5.14	1.35	1.39
1	AA	452	A	N7-C5	-5.13	1.36	1.39
5	DB	31	C	N3-C4	-5.13	1.30	1.33
3	DA	486	C	C5-C6	-5.13	1.30	1.34
3	DA	2077	A	C6-N1	-5.13	1.31	1.35
3	DA	2783	U	C4-O4	-5.13	1.19	1.23
3	DA	592	A	N9-C4	-5.13	1.34	1.37
3	DA	2502	G	C6-N1	-5.13	1.35	1.39
5	DB	93	C	C4-C5	-5.13	1.38	1.43
3	DA	638	G	N9-C4	-5.13	1.33	1.38
1	AA	699	C	N1-C6	-5.13	1.34	1.37
3	DA	1287	A	C5-C6	-5.13	1.36	1.41
3	DA	24	G	N7-C5	-5.12	1.36	1.39
3	DA	1312	U	N1-C2	-5.12	1.33	1.38
3	DA	1610	A	C6-N1	-5.12	1.31	1.35
3	DA	1195	G	C5-C4	-5.12	1.34	1.38
3	DA	1684	G	C5-C6	-5.12	1.37	1.42
3	DA	2719	G	N7-C5	-5.12	1.36	1.39
3	DA	241	A	C5-C6	-5.12	1.36	1.41
3	DA	443	A	N9-C8	-5.12	1.33	1.37
3	DA	733	G	C5-C6	-5.12	1.37	1.42
3	DA	2244	U	N1-C2	-5.12	1.33	1.38
3	DA	2722	G	N3-C4	-5.12	1.31	1.35
3	DA	2786	U	C2-N3	-5.12	1.34	1.37
3	DA	2775	G	N3-C4	-5.12	1.31	1.35
3	DA	621	A	N9-C4	-5.12	1.34	1.37
3	DA	494	G	C5-C6	-5.12	1.37	1.42
3	DA	748	G	N3-C4	-5.12	1.31	1.35
3	DA	1688	U	N1-C2	-5.12	1.33	1.38
34	DK	74	TYR	CD2-CE2	-5.11	1.31	1.39
3	DA	2521	C	N1-C2	-5.11	1.35	1.40
1	AA	782	A	C5-C4	-5.11	1.35	1.38
1	AA	897	C	N1-C6	-5.11	1.34	1.37
3	DA	1188	U	N1-C6	-5.11	1.33	1.38
3	DA	199	A	N9-C8	-5.11	1.33	1.37
3	DA	536	G	C5-C4	-5.11	1.34	1.38
3	DA	642	U	N1-C6	-5.11	1.33	1.38
3	DA	1679	A	C6-N1	-5.11	1.31	1.35
3	DA	1617	C	C2'-C1'	-5.10	1.47	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	452	G	N3-C4	-5.10	1.31	1.35
1	AA	732	C	C4-C5	-5.10	1.38	1.43
3	DA	926	G	C5-C4	-5.10	1.34	1.38
3	DA	1185	G	C5-C4	-5.10	1.34	1.38
3	DA	1666	G	C6-N1	-5.10	1.35	1.39
3	DA	89	A	C5-C4	-5.10	1.35	1.38
3	DA	670	A	C6-N1	-5.10	1.31	1.35
3	DA	1575	C	N3-C4	-5.10	1.30	1.33
5	DB	10	G	C6-N1	-5.10	1.35	1.39
3	DA	2815	C	C4-N4	-5.10	1.29	1.33
41	DR	105	PHE	CD2-CE2	-5.10	1.29	1.39
3	DA	708	G	N9-C4	-5.09	1.33	1.38
3	DA	1961	C	C4-C5	-5.09	1.38	1.43
3	DA	2253	G	N7-C5	-5.09	1.36	1.39
3	DA	1310	G	N7-C5	-5.09	1.36	1.39
3	DA	513	A	N9-C4	-5.09	1.34	1.37
3	DA	2243	U	C2-N3	-5.09	1.34	1.37
3	DA	2767	C	N1-C2	-5.09	1.35	1.40
3	DA	1225	G	C5-C6	-5.09	1.37	1.42
2	BA	908	A	N7-C5	-5.09	1.36	1.39
3	DA	2603	G	N3-C4	-5.09	1.31	1.35
4	CA	1612	C	N1-C6	-5.09	1.34	1.37
3	DA	1627	G	N9-C4	-5.08	1.33	1.38
45	DV	95	PHE	CB-CG	-5.08	1.42	1.51
3	DA	1447	C	C4-C5	-5.08	1.38	1.43
4	CA	2503	A	N9-C4	5.08	1.40	1.37
5	DB	8	C	N1-C6	-5.08	1.34	1.37
1	AA	1474	U	N1-C2	-5.08	1.33	1.38
3	DA	1139	G	N9-C8	-5.08	1.34	1.37
3	DA	1667	G	N9-C4	-5.08	1.33	1.38
3	DA	1986	C	P-O5'	-5.08	1.54	1.59
42	DS	51	VAL	CB-CG2	-5.08	1.42	1.52
3	DA	1970	A	N9-C4	-5.08	1.34	1.37
3	DA	2783	U	N1-C6	-5.08	1.33	1.38
3	DA	2837	A	N9-C4	-5.08	1.34	1.37
1	AA	906	A	N9-C8	-5.08	1.33	1.37
3	DA	2416	C	N3-C4	-5.08	1.30	1.33
3	DA	331	C	C5'-C4'	-5.08	1.45	1.51
3	DA	2544	G	N7-C5	-5.08	1.36	1.39
3	DA	2568	U	C5-C6	-5.08	1.29	1.34
3	DA	2815	C	N3-C4	-5.08	1.30	1.33
2	BA	1515	G	N7-C5	-5.07	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	99	U	C2-N3	-5.07	1.34	1.37
1	AA	1474	U	N1-C6	-5.07	1.33	1.38
3	DA	1284	A	N7-C5	-5.07	1.36	1.39
3	DA	1639	C	C4-C5	-5.07	1.38	1.43
40	DQ	69	VAL	CB-CG1	-5.07	1.42	1.52
3	DA	2025	C	N1-C2	-5.07	1.35	1.40
1	AA	1066	C	N1-C6	-5.07	1.34	1.37
2	BA	119	A	N3-C4	5.07	1.37	1.34
3	DA	330	A	N7-C5	-5.07	1.36	1.39
3	DA	1367	A	N3-C4	-5.07	1.31	1.34
3	DA	1677	A	N7-C5	-5.07	1.36	1.39
5	DB	115	A	N9-C8	-5.07	1.33	1.37
3	DA	695	G	N3-C4	-5.07	1.31	1.35
3	DA	1677	A	C6-N6	5.07	1.38	1.33
3	DA	2045	C	C4-N4	-5.07	1.29	1.33
5	DB	72	G	C8-N7	5.07	1.33	1.30
3	DA	1034	G	N3-C4	-5.06	1.31	1.35
3	DA	1832	C	N3-C4	-5.06	1.30	1.33
3	DA	36	G	N7-C5	-5.06	1.36	1.39
3	DA	381	G	C5-C6	-5.06	1.37	1.42
3	DA	1242	U	C2-N3	-5.06	1.34	1.37
3	DA	1306	C	C5-C6	-5.06	1.30	1.34
3	DA	1626	A	C5-C6	-5.06	1.36	1.41
3	DA	2568	U	C2-O2	-5.06	1.17	1.22
3	DA	690	G	C5-C6	-5.06	1.37	1.42
2	BA	495	A	N9-C4	-5.06	1.34	1.37
3	DA	1254	A	C6-N6	-5.06	1.29	1.33
3	DA	1629	U	C4-C5	-5.06	1.39	1.43
3	DA	2592	G	C5-C4	-5.06	1.34	1.38
3	DA	839	U	C4-C5	-5.06	1.39	1.43
3	DA	1192	G	N9-C8	-5.06	1.34	1.37
3	DA	1937	A	N9-C4	-5.06	1.34	1.37
3	DA	2035	G	N9-C8	-5.06	1.34	1.37
5	DB	37	C	N1-C6	-5.06	1.34	1.37
3	DA	773	U	C2-O2	-5.06	1.17	1.22
3	DA	1301	A	C5-C6	-5.06	1.36	1.41
3	DA	1973	G	N7-C5	-5.06	1.36	1.39
3	DA	86	G	C6-N1	-5.05	1.36	1.39
3	DA	1464	G	N3-C4	-5.05	1.31	1.35
3	DA	1830	C	N1-C6	-5.05	1.34	1.37
3	DA	2754	U	N1-C2	-5.05	1.34	1.38
3	DA	918	A	C6-N6	-5.05	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2529	G	N3-C4	-5.05	1.31	1.35
3	DA	2547	A	C2-N3	-5.05	1.29	1.33
1	AA	895	G	N7-C5	-5.05	1.36	1.39
3	DA	408	G	N9-C8	-5.05	1.34	1.37
3	DA	1445	G	C2-N3	-5.05	1.28	1.32
3	DA	2204	G	N7-C5	-5.05	1.36	1.39
3	DA	125	A	N9-C4	-5.05	1.34	1.37
3	DA	574	A	C5-C6	-5.05	1.36	1.41
3	DA	2442	C	C2-O2	-5.05	1.20	1.24
3	DA	472	A	N3-C4	-5.04	1.31	1.34
3	DA	990	A	C5-C4	-5.04	1.35	1.38
3	DA	2031	A	N3-C4	-5.04	1.31	1.34
3	DA	2363	G	N9-C4	-5.04	1.33	1.38
34	DK	41	LYS	CE-NZ	5.04	1.61	1.49
3	DA	375	G	N7-C5	-5.04	1.36	1.39
3	DA	774	G	N3-C4	-5.04	1.31	1.35
3	DA	1831	G	C6-N1	-5.04	1.36	1.39
3	DA	2297	A	C5-C6	-5.04	1.36	1.41
3	DA	191	A	N1-C2	-5.04	1.29	1.34
3	DA	470	A	N7-C5	-5.04	1.36	1.39
3	DA	2337	G	C6-N1	-5.04	1.36	1.39
2	BA	546	A	N9-C4	-5.04	1.34	1.37
3	DA	784	G	C6-O6	-5.04	1.19	1.24
3	DA	1333	G	N9-C4	-5.04	1.33	1.38
3	DA	1439	A	C5-C6	-5.04	1.36	1.41
3	DA	2453	A	C5-C6	-5.04	1.36	1.41
2	BA	819	A	N9-C4	-5.04	1.34	1.37
1	AA	812	G	N9-C8	-5.04	1.34	1.37
3	DA	1010	A	C5-C6	-5.04	1.36	1.41
3	DA	1216	G	N3-C4	-5.04	1.31	1.35
3	DA	2392	A	C5-C6	-5.03	1.36	1.41
5	DB	96	G	N7-C5	-5.03	1.36	1.39
3	DA	663	G	N9-C4	-5.03	1.33	1.38
3	DA	1817	G	N1-C2	-5.03	1.33	1.37
3	DA	1198	U	C2-N3	-5.03	1.34	1.37
3	DA	2900	A	N7-C5	5.03	1.42	1.39
56	DD	177	VAL	CB-CG2	-5.03	1.42	1.52
3	DA	73	A	N3-C4	-5.03	1.31	1.34
27	DC	231	HIS	CA-C	-5.03	1.39	1.52
3	DA	1695	G	C8-N7	5.03	1.33	1.30
5	DB	85	G	C5-C6	-5.03	1.37	1.42
3	DA	2034	U	N1-C6	-5.03	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2722	G	C5-C6	-5.03	1.37	1.42
4	CA	199	A	N9-C4	-5.03	1.34	1.37
3	DA	14	A	C5-C4	-5.02	1.35	1.38
3	DA	332	A	C6-N1	-5.02	1.32	1.35
3	DA	2093	G	N9-C4	-5.02	1.33	1.38
3	DA	1193	G	C5-C4	-5.02	1.34	1.38
3	DA	2355	G	N3-C4	-5.02	1.31	1.35
3	DA	2780	G	N9-C4	-5.02	1.33	1.38
5	DB	91	C	C4-N4	-5.02	1.29	1.33
3	DA	1297	C	N3-C4	-5.02	1.30	1.33
3	DA	986	C	N3-C4	-5.02	1.30	1.33
3	DA	2444	G	C2-N3	-5.02	1.28	1.32
3	DA	2399	G	N1-C2	-5.02	1.33	1.37
4	CA	1802	A	N7-C5	-5.02	1.36	1.39
3	DA	1329	U	N3-C4	-5.02	1.33	1.38
3	DA	2505	G	N9-C4	5.02	1.42	1.38
1	AA	1067	A	N9-C4	-5.01	1.34	1.37
1	AA	1479	C	N1-C6	-5.01	1.34	1.37
3	DA	258	G	C5-C6	-5.01	1.37	1.42
3	DA	875	G	N9-C4	-5.01	1.33	1.38
3	DA	1150	C	C2-N3	-5.01	1.31	1.35
3	DA	1360	G	C6-N1	-5.01	1.36	1.39
1	AA	399	G	N7-C5	-5.01	1.36	1.39
3	DA	2330	G	C2-N3	-5.01	1.28	1.32
4	CA	800	A	N3-C4	5.01	1.37	1.34
23	AS	65	GLU	CB-CG	5.01	1.61	1.52
4	CA	1677	A	C5-C6	-5.01	1.36	1.41
3	DA	571	U	C4-C5	-5.01	1.39	1.43
3	DA	693	A	C6-N6	-5.00	1.29	1.33
3	DA	1709	U	C2-O2	-5.00	1.17	1.22
1	AA	1408	A	N3-C4	-5.00	1.31	1.34
3	DA	498	G	N9-C4	-5.00	1.33	1.38
3	DA	512	G	C2-N3	-5.00	1.28	1.32
3	DA	1202	G	N3-C4	-5.00	1.31	1.35
3	DA	2510	C	N3-C4	-5.00	1.30	1.33
3	DA	2613	U	N3-C4	-5.00	1.33	1.38
3	DA	2877	G	N9-C8	-5.00	1.34	1.37

All (10938) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2588	G	O5'-P-OP2	-20.85	85.68	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1658	C	C6-N1-C2	20.56	128.52	120.30
3	DA	783	A	C5-N7-C8	-19.61	94.09	103.90
3	DA	541	A	O5'-P-OP2	-19.15	87.72	110.70
3	DA	2868	A	O5'-P-OP2	-18.93	87.99	110.70
3	DA	14	A	O5'-P-OP1	-18.36	88.67	110.70
3	DA	1143	A	O5'-P-OP2	-18.11	88.97	110.70
3	DA	2867	G	O5'-P-OP1	-17.90	89.22	110.70
3	DA	2391	G	O5'-P-OP2	-17.69	89.47	110.70
3	DA	930	G	C5-C6-O6	-17.63	118.02	128.60
3	DA	2263	C	C6-N1-C2	17.39	127.26	120.30
1	AA	1400	C	O5'-P-OP1	-17.33	89.90	110.70
5	DB	73	A	O5'-P-OP2	-17.09	90.19	110.70
3	DA	1695	G	O5'-P-OP1	-16.93	90.38	110.70
3	DA	1152	C	C2-N3-C4	-16.89	111.46	119.90
3	DA	1294	U	O5'-P-OP1	-16.88	90.44	110.70
3	DA	524	G	N3-C2-N2	-16.80	108.14	119.90
3	DA	1634	A	O5'-P-OP1	-16.79	90.55	110.70
1	AA	586	C	O5'-P-OP2	-16.77	90.57	110.70
3	DA	755	U	O5'-P-OP1	-16.73	90.62	110.70
3	DA	961	C	C6-N1-C2	-16.61	113.66	120.30
3	DA	1298	C	N3-C4-C5	16.55	128.52	121.90
1	AA	328	C	O5'-P-OP2	-16.39	90.95	105.70
3	DA	1643	G	N1-C6-O6	16.37	129.72	119.90
3	DA	2779	U	O5'-P-OP2	-16.26	91.07	105.70
3	DA	1625	C	O5'-P-OP2	-16.18	91.14	105.70
2	BA	234	C	C6-N1-C2	16.18	126.77	120.30
3	DA	2593	U	O5'-P-OP1	-16.13	91.18	105.70
3	DA	2365	G	O5'-P-OP2	-16.12	91.19	105.70
3	DA	561	G	O5'-P-OP2	15.74	129.59	110.70
1	AA	244	U	O5'-P-OP1	-15.68	91.58	105.70
2	BA	769	G	O5'-P-OP2	-15.68	91.59	105.70
3	DA	1132	U	N3-C2-O2	-15.44	111.39	122.20
4	CA	731	C	C6-N1-C2	15.40	126.46	120.30
3	DA	551	G	N1-C6-O6	15.23	129.03	119.90
3	DA	2553	G	N1-C6-O6	-15.19	110.78	119.90
3	DA	488	G	O5'-P-OP2	-15.13	92.08	105.70
3	DA	2572	A	O5'-P-OP2	-15.06	92.14	105.70
3	DA	2820	A	N1-C6-N6	15.02	127.61	118.60
3	DA	945	A	C5-C6-N6	-15.02	111.69	123.70
3	DA	1518	C	O5'-P-OP2	-15.02	92.19	105.70
3	DA	979	A	N1-C2-N3	14.97	136.79	129.30
3	DA	1875	G	C5-C6-N1	-14.89	104.06	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	682	G	O5'-P-OP2	-14.85	92.34	105.70
3	DA	1606	C	O5'-P-OP2	-14.79	92.39	105.70
3	DA	533	G	O5'-P-OP1	-14.53	92.62	105.70
3	DA	126	A	N1-C6-N6	14.50	127.30	118.60
2	BA	25	C	O5'-P-OP2	-14.47	92.68	105.70
3	DA	2438	U	O5'-P-OP2	-14.41	92.73	105.70
3	DA	2442	C	C6-N1-C2	14.41	126.06	120.30
4	CA	2229	U	O5'-P-OP2	-14.40	92.74	105.70
3	DA	1846	G	O5'-P-OP2	-14.37	92.77	105.70
3	DA	930	G	N1-C6-O6	14.36	128.52	119.90
3	DA	2324	U	N3-C4-O4	14.33	129.43	119.40
1	AA	1484	C	C5-C4-N4	-14.31	110.18	120.20
3	DA	2808	G	O5'-P-OP2	-14.30	92.83	105.70
3	DA	557	C	C6-N1-C2	14.30	126.02	120.30
3	DA	1386	C	O5'-P-OP2	-14.26	92.86	105.70
3	DA	2599	G	O5'-P-OP2	-14.26	92.87	105.70
3	DA	828	U	N3-C2-O2	-14.20	112.26	122.20
3	DA	188	G	N3-C2-N2	-14.19	109.97	119.90
3	DA	2872	A	C8-N9-C4	-14.19	100.12	105.80
3	DA	2681	C	O5'-P-OP2	-14.14	92.97	105.70
3	DA	2613	U	N1-C2-O2	14.13	132.69	122.80
3	DA	1229	C	O5'-P-OP2	-14.12	92.99	105.70
3	DA	812	C	C6-N1-C2	14.10	125.94	120.30
3	DA	783	A	C4-C5-N7	14.07	117.73	110.70
3	DA	437	U	O5'-P-OP2	-14.01	93.09	105.70
3	DA	2032	G	O5'-P-OP1	-14.01	93.09	105.70
3	DA	1649	G	C8-N9-C4	-14.00	100.80	106.40
3	DA	1209	U	O5'-P-OP2	-13.98	93.12	105.70
5	DB	118	C	C6-N1-C2	13.98	125.89	120.30
3	DA	863	A	O5'-P-OP2	-13.96	93.13	105.70
3	DA	1282	U	N3-C2-O2	13.96	131.97	122.20
3	DA	1162	G	O5'-P-OP1	-13.92	93.17	105.70
3	DA	2268	A	C2-N3-C4	-13.91	103.64	110.60
3	DA	1020	A	N1-C6-N6	13.90	126.94	118.60
3	DA	758	C	C6-N1-C2	13.88	125.85	120.30
3	DA	490	C	O5'-P-OP1	-13.85	93.23	105.70
3	DA	1001	A	N1-C6-N6	13.83	126.90	118.60
3	DA	2009	A	O5'-P-OP2	-13.82	93.26	105.70
3	DA	1276	A	N1-C6-N6	13.81	126.88	118.60
34	DK	116	ARG	NE-CZ-NH2	-13.79	113.40	120.30
3	DA	950	G	O5'-P-OP2	-13.78	93.30	105.70
3	DA	2572	A	N1-C6-N6	13.73	126.84	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	740	C	O5'-P-OP1	13.73	127.17	110.70
1	AA	378	G	O5'-P-OP2	-13.71	93.36	105.70
3	DA	578	G	C8-N9-C4	-13.66	100.94	106.40
3	DA	2386	A	N1-C6-N6	-13.64	110.41	118.60
3	DA	2626	C	C6-N1-C2	13.54	125.72	120.30
3	DA	1149	G	N3-C2-N2	-13.50	110.45	119.90
3	DA	126	A	C5-C6-N6	-13.49	112.91	123.70
3	DA	1020	A	C8-N9-C4	13.49	111.19	105.80
3	DA	2434	A	N9-C4-C5	13.47	111.19	105.80
3	DA	2452	C	C5-C4-N4	-13.46	110.78	120.20
3	DA	2346	A	O5'-P-OP1	-13.45	93.59	105.70
3	DA	2453	A	N1-C6-N6	13.45	126.67	118.60
1	AA	819	A	O5'-P-OP1	-13.40	93.64	105.70
3	DA	748	G	N9-C4-C5	13.32	110.73	105.40
3	DA	551	G	C6-C5-N7	-13.29	122.42	130.40
1	AA	780	A	O5'-P-OP1	-13.28	93.75	105.70
3	DA	2452	C	N3-C4-N4	13.24	127.27	118.00
3	DA	2590	A	OP1-P-OP2	-13.24	99.73	119.60
4	CA	1676	A	N1-C6-N6	-13.24	110.66	118.60
3	DA	852	U	C5-C4-O4	-13.23	117.96	125.90
3	DA	2772	C	C6-N1-C2	13.23	125.59	120.30
3	DA	2024	G	C5-C6-O6	13.21	136.52	128.60
2	BA	621	A	O5'-P-OP2	-13.17	93.84	105.70
3	DA	2699	C	O5'-P-OP2	-13.16	93.85	105.70
3	DA	783	A	C2-N3-C4	-13.15	104.02	110.60
3	DA	2722	G	C6-N1-C2	13.14	132.98	125.10
2	BA	768	A	O5'-P-OP1	-13.12	93.89	105.70
3	DA	1655	A	C5-C6-N6	-13.12	113.21	123.70
3	DA	2263	C	N3-C4-C5	13.07	127.13	121.90
3	DA	2840	C	C6-N1-C2	13.01	125.50	120.30
3	DA	1142	A	N1-C6-N6	13.00	126.40	118.60
3	DA	530	G	N3-C2-N2	-12.98	110.81	119.90
3	DA	708	G	O5'-P-OP2	-12.95	94.05	105.70
3	DA	2046	G	C4-C5-N7	12.95	115.98	110.80
3	DA	907	G	C5-C6-O6	-12.94	120.84	128.60
3	DA	1126	A	O5'-P-OP1	-12.94	94.06	105.70
3	DA	2428	G	N3-C2-N2	-12.94	110.84	119.90
3	DA	2064	C	C5-C4-N4	-12.93	111.15	120.20
1	AA	552	U	O5'-P-OP2	-12.92	94.07	105.70
3	DA	1940	U	O5'-P-OP2	-12.91	94.08	105.70
3	DA	493	G	N9-C4-C5	12.89	110.56	105.40
3	DA	946	C	C2-N3-C4	-12.88	113.46	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1152	C	C5-C4-N4	-12.86	111.20	120.20
3	DA	1428	C	N1-C2-O2	-12.84	111.19	118.90
3	DA	838	C	O5'-P-OP2	-12.79	94.19	105.70
3	DA	1278	C	C6-N1-C2	12.79	125.42	120.30
3	DA	2442	C	N3-C4-C5	12.77	127.01	121.90
3	DA	2820	A	C8-N9-C4	12.77	110.91	105.80
3	DA	2359	C	O5'-P-OP2	12.74	125.98	110.70
3	DA	1165	A	O5'-P-OP2	-12.73	94.24	105.70
3	DA	786	C	C6-N1-C2	12.73	125.39	120.30
4	CA	1974	C	C6-N1-C2	12.72	125.39	120.30
3	DA	996	A	O5'-P-OP1	-12.72	94.25	105.70
3	DA	835	C	O5'-P-OP2	-12.71	94.26	105.70
3	DA	1821	A	C5-C6-N6	-12.69	113.55	123.70
3	DA	2505	G	N1-C6-O6	-12.69	112.29	119.90
3	DA	945	A	N1-C6-N6	12.68	126.21	118.60
3	DA	1837	C	C6-N1-C2	-12.67	115.23	120.30
3	DA	914	G	C4-C5-N7	12.66	115.86	110.80
3	DA	537	G	O5'-P-OP2	12.64	125.87	110.70
3	DA	979	A	C2-N3-C4	-12.62	104.29	110.60
3	DA	2046	G	C5-N7-C8	-12.62	97.99	104.30
3	DA	2072	C	O5'-P-OP2	-12.62	94.34	105.70
3	DA	577	G	N3-C2-N2	12.59	128.71	119.90
3	DA	470	A	C8-N9-C4	-12.53	100.79	105.80
3	DA	859	G	C4-C5-N7	-12.51	105.79	110.80
3	DA	1427	A	N1-C6-N6	-12.51	111.09	118.60
3	DA	1268	A	C6-N1-C2	-12.46	111.12	118.60
3	DA	1988	G	C2-N3-C4	-12.46	105.67	111.90
3	DA	566	U	C5-C4-O4	-12.45	118.43	125.90
3	DA	524	G	N1-C2-N2	12.44	127.39	116.20
3	DA	803	U	O5'-P-OP2	-12.43	94.52	105.70
3	DA	1027	A	C2-N3-C4	-12.41	104.40	110.60
3	DA	744	U	N3-C4-O4	12.39	128.07	119.40
3	DA	2820	A	N9-C4-C5	-12.39	100.85	105.80
3	DA	2	G	N1-C6-O6	12.38	127.33	119.90
3	DA	2781	A	N1-C6-N6	-12.38	111.17	118.60
3	DA	2801	G	O5'-P-OP2	-12.36	94.57	105.70
3	DA	496	G	C5-C6-O6	12.33	136.00	128.60
3	DA	1020	A	N9-C4-C5	-12.32	100.87	105.80
3	DA	85	G	O5'-P-OP1	-12.32	94.61	105.70
3	DA	530	G	C4-C5-N7	-12.31	105.88	110.80
4	CA	1772	A	N1-C6-N6	-12.29	111.22	118.60
3	DA	2505	G	C5-C6-O6	12.29	135.97	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2697	G	C2-N3-C4	-12.29	105.76	111.90
3	DA	2353	G	N1-C6-O6	12.27	127.26	119.90
3	DA	1708	C	C6-N1-C2	12.27	125.21	120.30
3	DA	1815	A	O5'-P-OP1	-12.27	94.66	105.70
3	DA	1990	C	C6-N1-C2	12.25	125.20	120.30
4	CA	1804	C	C6-N1-C2	12.23	125.19	120.30
3	DA	946	C	C5-C6-N1	-12.22	114.89	121.00
3	DA	850	U	N1-C2-O2	-12.22	114.25	122.80
4	CA	1752	C	C6-N1-C2	-12.21	115.42	120.30
1	AA	314	C	O5'-P-OP2	-12.19	94.73	105.70
3	DA	2813	A	N1-C6-N6	12.18	125.91	118.60
3	DA	2781	A	N9-C4-C5	12.18	110.67	105.80
5	DB	96	G	N1-C6-O6	12.17	127.20	119.90
3	DA	817	C	N1-C2-O2	-12.16	111.61	118.90
3	DA	1937	A	N1-C6-N6	12.16	125.89	118.60
3	DA	967	U	N3-C2-O2	-12.16	113.69	122.20
3	DA	1149	G	O5'-P-OP2	-12.15	94.76	105.70
1	AA	1510	C	C6-N1-C2	12.15	125.16	120.30
3	DA	961	C	N3-C4-C5	-12.15	117.04	121.90
1	AA	698	G	O5'-P-OP1	-12.14	94.78	105.70
3	DA	977	G	C5-C6-O6	-12.12	121.33	128.60
3	DA	2000	C	O5'-P-OP2	-12.11	94.80	105.70
3	DA	577	G	N1-C2-N2	-12.10	105.31	116.20
3	DA	1643	G	C5-C6-O6	-12.10	121.34	128.60
3	DA	2781	A	O5'-P-OP2	-12.09	94.81	105.70
3	DA	858	G	O5'-P-OP2	-12.08	94.83	105.70
1	AA	1117	A	N1-C6-N6	12.06	125.84	118.60
3	DA	976	G	C5-C6-O6	12.06	135.83	128.60
3	DA	871	U	C5-C4-O4	-12.05	118.67	125.90
3	DA	2885	G	C2-N3-C4	12.04	117.92	111.90
3	DA	1390	U	N1-C2-O2	-12.04	114.38	122.80
1	AA	783	C	O5'-P-OP2	-12.02	94.88	105.70
3	DA	976	G	C4-C5-N7	-12.01	106.00	110.80
3	DA	1252	G	C2-N3-C4	-12.01	105.90	111.90
3	DA	1784	A	N1-C6-N6	12.01	125.80	118.60
3	DA	2619	C	O5'-P-OP1	-12.01	94.89	105.70
3	DA	37	C	N1-C2-O2	-11.99	111.70	118.90
3	DA	1191	G	C8-N9-C4	-11.99	101.60	106.40
3	DA	2366	A	O5'-P-OP2	-11.98	94.92	105.70
3	DA	2858	C	O5'-P-OP1	-11.96	94.94	105.70
3	DA	33	C	C5-C4-N4	-11.94	111.84	120.20
3	DA	127	A	C5-C6-N6	-11.94	114.15	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2250	G	N1-C6-O6	11.93	127.06	119.90
3	DA	512	G	O4'-C1'-N9	11.92	117.73	108.20
3	DA	529	A	C8-N9-C4	11.91	110.56	105.80
4	CA	203	A	N1-C6-N6	11.88	125.73	118.60
3	DA	224	U	O5'-P-OP2	-11.87	95.01	105.70
3	DA	538	A	C8-N9-C4	-11.87	101.05	105.80
3	DA	2885	G	C8-N9-C4	-11.87	101.65	106.40
3	DA	784	G	C2-N3-C4	-11.85	105.97	111.90
1	AA	577	G	N3-C4-C5	11.84	134.52	128.60
3	DA	1634	A	N1-C6-N6	-11.82	111.50	118.60
3	DA	2347	C	C6-N1-C2	11.81	125.02	120.30
1	AA	899	C	N3-C4-C5	11.80	126.62	121.90
2	BA	1406	U	O5'-P-OP2	-11.79	95.09	105.70
3	DA	566	U	N1-C2-O2	-11.79	114.55	122.80
3	DA	551	G	C4-C5-N7	11.78	115.51	110.80
3	DA	538	A	N1-C2-N3	11.77	135.18	129.30
3	DA	1142	A	O5'-P-OP2	-11.76	95.12	105.70
3	DA	1298	C	C2-N3-C4	-11.76	114.02	119.90
3	DA	559	G	O5'-P-OP2	-11.76	95.12	105.70
3	DA	493	G	N1-C2-N2	11.74	126.77	116.20
3	DA	1152	C	N1-C2-O2	-11.74	111.85	118.90
5	DB	80	U	N1-C2-O2	-11.72	114.59	122.80
3	DA	2863	C	N1-C2-O2	-11.72	111.87	118.90
5	DB	11	C	O5'-P-OP1	-11.72	95.16	105.70
3	DA	2492	U	O5'-P-OP2	-11.71	95.16	105.70
3	DA	502	A	C2-N3-C4	-11.69	104.75	110.60
3	DA	1779	U	C5-C4-O4	-11.67	118.90	125.90
3	DA	1259	G	O5'-P-OP2	-11.66	95.21	105.70
2	BA	1528	U	O5'-P-OP2	-11.65	95.22	105.70
3	DA	2354	C	O5'-P-OP2	-11.63	95.23	105.70
3	DA	2249	U	O5'-P-OP1	-11.63	95.23	105.70
3	DA	1185	G	C8-N9-C4	-11.62	101.75	106.40
3	DA	1674	G	N3-C4-C5	11.62	134.41	128.60
1	AA	33	A	O5'-P-OP2	-11.62	95.24	105.70
3	DA	2573	C	C2-N1-C1'	11.62	131.58	118.80
3	DA	1273	U	O5'-P-OP2	-11.61	95.25	105.70
2	BA	403	C	O5'-P-OP2	-11.61	95.25	105.70
5	DB	74	U	N3-C2-O2	-11.61	114.07	122.20
5	DB	75	G	O5'-P-OP2	11.61	124.63	110.70
3	DA	448	U	N3-C2-O2	-11.60	114.08	122.20
3	DA	936	A	C5-N7-C8	-11.59	98.11	103.90
3	DA	2553	G	C5-C6-O6	11.58	135.55	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1658	C	C5-C6-N1	-11.54	115.23	121.00
3	DA	705	A	N1-C6-N6	11.54	125.52	118.60
3	DA	686	U	O5'-P-OP1	-11.53	95.33	105.70
3	DA	1694	C	C6-N1-C2	11.53	124.91	120.30
4	CA	776	G	C4-N9-C1'	11.53	141.48	126.50
3	DA	750	A	C5-N7-C8	-11.52	98.14	103.90
3	DA	486	C	C6-N1-C2	11.52	124.91	120.30
3	DA	2265	U	N3-C4-O4	11.51	127.46	119.40
3	DA	575	A	C8-N9-C4	-11.50	101.20	105.80
3	DA	223	A	O5'-P-OP1	-11.49	95.36	105.70
3	DA	2699	C	N1-C2-O2	-11.49	112.00	118.90
3	DA	2265	U	C5-C4-O4	-11.49	119.01	125.90
3	DA	948	C	N1-C2-O2	-11.48	112.01	118.90
3	DA	1282	U	N1-C2-O2	-11.47	114.77	122.80
3	DA	983	A	C8-N9-C4	-11.47	101.21	105.80
3	DA	469	G	C8-N9-C4	11.45	110.98	106.40
3	DA	1677	A	C5-C6-N1	-11.44	111.98	117.70
3	DA	551	G	C5-C6-O6	-11.43	121.74	128.60
3	DA	665	U	N1-C2-O2	-11.42	114.81	122.80
3	DA	907	G	N1-C6-O6	11.42	126.75	119.90
1	AA	499	A	N1-C6-N6	-11.42	111.75	118.60
3	DA	2263	C	N3-C2-O2	11.41	129.89	121.90
2	BA	906	A	O5'-P-OP2	-11.40	95.44	105.70
3	DA	71	A	O5'-P-OP2	-11.40	95.44	105.70
4	CA	1791	A	N1-C6-N6	11.39	125.44	118.60
3	DA	2677	G	C2-N3-C4	-11.38	106.21	111.90
3	DA	86	G	C2-N3-C4	-11.38	106.21	111.90
3	DA	1390	U	N3-C2-O2	11.37	130.16	122.20
3	DA	2070	A	O5'-P-OP2	-11.37	95.47	105.70
3	DA	1985	C	C5-C6-N1	-11.36	115.32	121.00
3	DA	2626	C	O5'-P-OP1	-11.36	95.47	105.70
3	DA	541	A	OP1-P-OP2	11.36	136.64	119.60
3	DA	1264	A	N1-C6-N6	-11.36	111.78	118.60
3	DA	1676	A	O5'-P-OP2	-11.35	95.48	105.70
3	DA	2363	G	C2-N3-C4	-11.35	106.22	111.90
3	DA	2058	A	N9-C4-C5	11.34	110.34	105.80
3	DA	2005	A	O5'-P-OP2	-11.34	95.50	105.70
3	DA	2505	G	C4-C5-N7	-11.33	106.27	110.80
3	DA	1153	C	C6-N1-C2	-11.32	115.77	120.30
3	DA	2035	G	N1-C2-N2	-11.32	106.01	116.20
4	CA	2710	C	C6-N1-C2	-11.32	115.77	120.30
1	AA	351	G	C4-C5-N7	11.31	115.33	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	21	G	N1-C2-N2	-11.31	106.02	116.20
4	CA	741	U	N3-C2-O2	11.31	130.12	122.20
3	DA	1933	G	O5'-P-OP1	-11.30	95.53	105.70
3	DA	2466	C	N3-C2-O2	11.30	129.81	121.90
3	DA	152	A	N1-C6-N6	11.29	125.37	118.60
3	DA	448	U	N1-C2-O2	11.29	130.70	122.80
3	DA	2781	A	C5-C6-N6	11.29	132.73	123.70
3	DA	1985	C	C6-N1-C2	11.28	124.81	120.30
3	DA	1677	A	C2-N3-C4	-11.28	104.96	110.60
3	DA	2330	G	OP1-P-OP2	-11.28	102.68	119.60
4	CA	1974	C	N3-C4-C5	11.28	126.41	121.90
3	DA	848	C	N1-C2-O2	-11.28	112.14	118.90
3	DA	27	G	O5'-P-OP2	-11.27	95.55	105.70
3	DA	1464	G	N1-C6-O6	11.27	126.66	119.90
3	DA	516	C	C6-N1-C2	-11.27	115.79	120.30
2	BA	920	U	O5'-P-OP2	-11.26	95.57	105.70
3	DA	1379	U	N1-C2-O2	-11.25	114.93	122.80
3	DA	2573	C	N1-C2-O2	11.24	125.65	118.90
1	AA	399	G	N1-C6-O6	11.24	126.64	119.90
3	DA	783	A	N7-C8-N9	11.24	119.42	113.80
1	AA	1509	C	N1-C2-O2	-11.23	112.16	118.90
3	DA	1940	U	N1-C2-O2	11.22	130.65	122.80
3	DA	2024	G	N1-C6-O6	-11.22	113.17	119.90
3	DA	51	G	N1-C6-O6	-11.21	113.17	119.90
3	DA	2594	C	O5'-P-OP2	-11.20	95.62	105.70
3	DA	1128	G	C8-N9-C4	11.18	110.87	106.40
3	DA	532	A	O5'-P-OP2	-11.18	95.64	105.70
3	DA	1799	G	N1-C2-N2	-11.18	106.14	116.20
3	DA	2312	U	O5'-P-OP1	-11.17	95.65	105.70
1	AA	1484	C	N1-C2-O2	-11.17	112.20	118.90
3	DA	965	C	N3-C2-O2	11.17	129.72	121.90
3	DA	821	A	O5'-P-OP2	-11.17	95.65	105.70
3	DA	1649	G	N7-C8-N9	11.16	118.68	113.10
3	DA	2895	G	N3-C4-N9	-11.15	119.31	126.00
3	DA	969	G	C5-C6-O6	-11.15	121.91	128.60
3	DA	1994	C	C6-N1-C2	11.14	124.75	120.30
3	DA	527	C	C6-N1-C2	11.12	124.75	120.30
3	DA	1035	U	O5'-P-OP2	-11.11	95.70	105.70
3	DA	1678	A	C2-N3-C4	-11.10	105.05	110.60
3	DA	2618	G	C5-C6-O6	11.10	135.26	128.60
3	DA	566	U	N3-C2-O2	11.10	129.97	122.20
34	DK	116	ARG	NE-CZ-NH1	11.10	125.85	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	394	C	C6-N1-C2	11.10	124.74	120.30
3	DA	1260	A	O5'-P-OP2	-11.10	95.71	105.70
1	AA	900	A	O5'-P-OP2	11.09	124.01	110.70
3	DA	1261	C	N1-C2-O2	-11.09	112.25	118.90
3	DA	507	A	N1-C6-N6	-11.08	111.95	118.60
3	DA	2676	C	N1-C2-O2	-11.03	112.28	118.90
3	DA	2809	A	O5'-P-OP1	-11.04	95.77	105.70
4	CA	1797	G	N1-C2-N2	-11.04	106.27	116.20
5	DB	96	G	C5-N7-C8	-11.03	98.78	104.30
1	AA	1479	C	N3-C2-O2	11.03	129.62	121.90
3	DA	1326	U	N3-C2-O2	11.02	129.92	122.20
3	DA	1781	U	O5'-P-OP2	-11.02	95.78	105.70
4	CA	1983	G	C8-N9-C4	-11.02	101.99	106.40
3	DA	2592	G	C8-N9-C4	-11.01	102.00	106.40
3	DA	748	G	C5-C6-O6	11.01	135.21	128.60
3	DA	748	G	C8-N9-C4	-11.01	102.00	106.40
3	DA	515	A	N1-C6-N6	-11.01	112.00	118.60
3	DA	1807	G	C8-N9-C4	-11.00	102.00	106.40
3	DA	2072	C	C6-N1-C2	11.00	124.70	120.30
3	DA	783	A	N3-C4-C5	10.99	134.50	126.80
4	CA	777	G	C8-N9-C4	10.99	110.79	106.40
3	DA	998	C	O5'-P-OP2	-10.97	95.83	105.70
4	CA	1687	G	C5-C6-O6	10.97	135.18	128.60
4	CA	2248	C	N3-C4-N4	10.97	125.68	118.00
3	DA	1210	G	N1-C6-O6	10.95	126.47	119.90
3	DA	565	C	C6-N1-C2	10.93	124.67	120.30
3	DA	529	A	N7-C8-N9	-10.92	108.34	113.80
3	DA	2621	G	N1-C2-N2	-10.91	106.38	116.20
3	DA	2863	C	N3-C2-O2	10.91	129.54	121.90
3	DA	783	A	N1-C6-N6	10.91	125.15	118.60
3	DA	1017	G	N3-C2-N2	-10.91	112.26	119.90
3	DA	2252	G	C2-N3-C4	-10.91	106.44	111.90
3	DA	680	C	N1-C2-O2	-10.90	112.36	118.90
3	DA	2688	G	C8-N9-C4	-10.90	102.04	106.40
3	DA	965	C	C6-N1-C2	10.89	124.66	120.30
3	DA	2361	G	C8-N9-C4	-10.88	102.05	106.40
4	CA	411	G	N3-C4-N9	-10.88	119.47	126.00
3	DA	516	C	N1-C2-O2	-10.87	112.38	118.90
3	DA	241	A	O5'-P-OP2	-10.85	95.93	105.70
3	DA	850	U	O5'-P-OP1	-10.85	95.93	105.70
38	DO	71	ARG	NE-CZ-NH2	10.85	125.73	120.30
3	DA	2013	A	C5-N7-C8	-10.85	98.48	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1764	C	C6-N1-C2	10.84	124.63	120.30
1	AA	1279	G	C4-C5-N7	10.83	115.13	110.80
1	AA	1279	G	C6-C5-N7	-10.83	123.90	130.40
3	DA	1149	G	N1-C6-O6	10.82	126.39	119.90
3	DA	1302	A	C8-N9-C4	10.82	110.13	105.80
3	DA	1634	A	N9-C4-C5	10.82	110.13	105.80
3	DA	2730	C	C6-N1-C2	10.82	124.63	120.30
5	DB	97	C	N3-C4-C5	-10.82	117.57	121.90
1	AA	881	G	N1-C6-O6	10.80	126.38	119.90
3	DA	1121	C	N3-C2-O2	-10.80	114.34	121.90
3	DA	2045	C	C6-N1-C2	10.80	124.62	120.30
1	AA	285	C	C6-N1-C2	-10.80	115.98	120.30
3	DA	494	G	C2-N3-C4	-10.80	106.50	111.90
4	CA	1658	C	C6-N1-C2	-10.80	115.98	120.30
3	DA	995	C	O4'-C1'-N1	-10.80	99.56	108.20
3	DA	1519	G	O5'-P-OP2	-10.80	95.98	105.70
3	DA	946	C	N1-C2-O2	-10.79	112.43	118.90
4	CA	2240	U	N3-C2-O2	-10.79	114.65	122.20
5	DB	18	G	C8-N9-C4	10.79	110.72	106.40
3	DA	1027	A	O5'-P-OP2	-10.79	95.99	105.70
3	DA	1525	A	N1-C6-N6	10.78	125.07	118.60
3	DA	659	G	O5'-P-OP1	-10.78	96.00	105.70
3	DA	2633	G	C8-N9-C4	10.77	110.71	106.40
3	DA	57	C	N3-C4-C5	10.77	126.21	121.90
3	DA	1622	G	C5-C6-N1	-10.77	106.11	111.50
3	DA	1247	A	N1-C6-N6	-10.77	112.14	118.60
3	DA	2197	U	O5'-P-OP1	-10.76	96.02	105.70
3	DA	808	G	OP1-P-OP2	10.75	135.72	119.60
2	BA	867	G	O5'-P-OP2	-10.75	96.03	105.70
2	BA	1499	A	O5'-P-OP2	-10.73	96.04	105.70
3	DA	1444	G	C5-C6-O6	-10.73	122.16	128.60
3	DA	1674	G	C8-N9-C4	10.73	110.69	106.40
1	AA	11	G	N1-C6-O6	10.73	126.34	119.90
3	DA	1335	C	O5'-P-OP2	-10.72	96.05	105.70
3	DA	1839	G	O5'-P-OP2	10.72	123.56	110.70
3	DA	524	G	N3-C4-N9	-10.72	119.57	126.00
3	DA	811	U	O5'-P-OP2	-10.71	96.06	105.70
3	DA	2895	G	N3-C4-C5	10.71	133.96	128.60
4	CA	2075	U	N3-C2-O2	10.71	129.70	122.20
3	DA	2885	G	N3-C2-N2	10.71	127.40	119.90
3	DA	851	C	N3-C4-N4	-10.71	110.50	118.00
5	DB	98	G	C5-C6-O6	-10.71	122.18	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2248	C	N3-C2-O2	-10.70	114.41	121.90
3	DA	2820	A	C2-N3-C4	-10.70	105.25	110.60
3	DA	592	A	N1-C6-N6	-10.70	112.18	118.60
1	AA	675	A	C8-N9-C4	-10.69	101.52	105.80
3	DA	1821	A	N9-C4-C5	-10.69	101.53	105.80
3	DA	1799	G	C2-N3-C4	-10.69	106.56	111.90
3	DA	741	U	N3-C4-O4	10.68	126.88	119.40
3	DA	1016	G	C8-N9-C4	-10.67	102.13	106.40
3	DA	2442	C	C5-C6-N1	-10.66	115.67	121.00
3	DA	494	G	N3-C4-C5	10.66	133.93	128.60
3	DA	2039	U	N3-C4-O4	10.66	126.86	119.40
5	DB	96	G	C5-C6-O6	-10.66	122.20	128.60
3	DA	1152	C	N3-C4-C5	10.65	126.16	121.90
3	DA	2613	U	N3-C2-O2	-10.65	114.75	122.20
3	DA	2373	G	N1-C6-O6	10.64	126.29	119.90
3	DA	2517	C	C6-N1-C2	-10.64	116.04	120.30
3	DA	1002	G	N9-C4-C5	10.63	109.65	105.40
3	DA	1016	G	N9-C4-C5	10.63	109.65	105.40
3	DA	2091	C	C6-N1-C2	10.62	124.55	120.30
3	DA	2039	U	C5-C4-O4	-10.62	119.53	125.90
3	DA	914	G	C5-N7-C8	-10.62	98.99	104.30
3	DA	2072	C	N1-C2-O2	10.62	125.27	118.90
1	AA	540	G	O5'-P-OP2	-10.61	96.15	105.70
3	DA	1206	G	N1-C6-O6	10.61	126.26	119.90
3	DA	740	C	O5'-P-OP2	-10.60	96.16	105.70
3	DA	2874	C	C6-N1-C2	10.60	124.54	120.30
3	DA	1231	U	O5'-P-OP1	10.59	123.41	110.70
9	AE	157	ARG	NE-CZ-NH1	10.59	125.59	120.30
1	AA	365	U	C5-C4-O4	10.58	132.25	125.90
3	DA	496	G	N1-C6-O6	-10.58	113.55	119.90
3	DA	798	G	N1-C6-O6	10.58	126.25	119.90
3	DA	2783	U	C5-C4-O4	-10.58	119.55	125.90
3	DA	557	C	C2-N3-C4	-10.58	114.61	119.90
5	DB	96	G	N3-C2-N2	-10.58	112.49	119.90
3	DA	936	A	N1-C6-N6	10.57	124.94	118.60
3	DA	1986	C	O5'-P-OP1	-10.56	96.20	105.70
3	DA	1007	C	O5'-P-OP1	-10.55	96.20	105.70
3	DA	2250	G	O5'-P-OP2	-10.55	96.20	105.70
3	DA	680	C	N3-C2-O2	10.55	129.29	121.90
3	DA	1972	G	C8-N9-C4	-10.55	102.18	106.40
3	DA	1666	G	C5-C6-O6	10.54	134.93	128.60
3	DA	859	G	C5-C6-O6	10.54	134.92	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	969	A	O5'-P-OP2	-10.54	96.22	105.70
3	DA	1573	G	N9-C4-C5	-10.54	101.19	105.40
1	AA	1089	G	O5'-P-OP2	-10.53	96.22	105.70
3	DA	2442	C	C2-N3-C4	-10.53	114.63	119.90
1	AA	1468	A	C8-N9-C4	10.53	110.01	105.80
3	DA	566	U	N3-C4-O4	10.52	126.77	119.40
3	DA	1185	G	N9-C4-C5	10.52	109.61	105.40
1	AA	766	A	N1-C6-N6	10.52	124.91	118.60
3	DA	2267	A	N1-C2-N3	10.52	134.56	129.30
2	BA	9	G	O5'-P-OP2	-10.52	96.24	105.70
3	DA	857	G	O5'-P-OP2	-10.51	96.24	105.70
3	DA	1252	G	O5'-P-OP2	-10.51	96.24	105.70
4	CA	2056	G	C5-C6-O6	-10.51	122.29	128.60
3	DA	1629	U	C5-C4-O4	-10.51	119.60	125.90
3	DA	2725	A	O5'-P-OP1	-10.51	96.25	105.70
3	DA	17	G	C8-N9-C4	-10.49	102.20	106.40
3	DA	722	A	N1-C6-N6	-10.49	112.31	118.60
3	DA	1574	C	N1-C2-O2	-10.49	112.61	118.90
4	CA	1934	C	O5'-P-OP2	-10.49	96.26	105.70
3	DA	1310	G	C2-N3-C4	-10.48	106.66	111.90
3	DA	2384	U	C5-C4-O4	-10.48	119.61	125.90
3	DA	2768	U	O5'-P-OP2	-10.48	96.27	105.70
4	CA	1665	A	C5-C6-N6	-10.47	115.33	123.70
2	BA	1507	A	O5'-P-OP1	-10.46	96.29	105.70
3	DA	1762	A	N1-C6-N6	10.46	124.87	118.60
3	DA	2006	C	N1-C2-O2	-10.46	112.63	118.90
3	DA	2456	C	N1-C2-O2	-10.45	112.63	118.90
3	DA	755	U	C5-C4-O4	-10.45	119.63	125.90
3	DA	871	U	N1-C2-N3	-10.45	108.63	114.90
5	DB	86	G	C2-N3-C4	-10.45	106.67	111.90
1	AA	1484	C	N3-C4-N4	10.44	125.31	118.00
4	CA	2620	C	C6-N1-C2	10.44	124.48	120.30
3	DA	811	U	C5-C6-N1	-10.44	117.48	122.70
3	DA	822	G	C2-N3-C4	-10.44	106.68	111.90
2	BA	897	C	O5'-P-OP2	-10.44	96.31	105.70
3	DA	2012	G	C6-C5-N7	-10.43	124.14	130.40
3	DA	2465	C	C6-N1-C2	10.42	124.47	120.30
1	AA	452	A	N1-C6-N6	10.42	124.85	118.60
3	DA	741	U	C5-C4-O4	-10.42	119.65	125.90
3	DA	684	G	N3-C4-C5	10.41	133.81	128.60
3	DA	526	A	O5'-P-OP1	-10.41	96.33	105.70
3	DA	2459	A	N1-C6-N6	-10.40	112.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1750	G	O5'-P-OP2	-10.39	96.35	105.70
3	DA	874	G	C2-N3-C4	-10.38	106.71	111.90
3	DA	1985	C	C2-N3-C4	-10.38	114.71	119.90
3	DA	2003	A	N1-C6-N6	10.38	124.83	118.60
1	AA	888	G	O5'-P-OP2	-10.38	96.36	105.70
3	DA	1573	G	N3-C2-N2	10.38	127.17	119.90
3	DA	2711	A	O5'-P-OP2	-10.37	96.37	105.70
3	DA	522	A	C5-C6-N6	10.37	132.00	123.70
3	DA	1839	G	O5'-P-OP1	-10.37	96.37	105.70
3	DA	930	G	N3-C2-N2	-10.37	112.64	119.90
3	DA	959	A	O5'-P-OP1	-10.36	96.38	105.70
3	DA	1136	G	C6-C5-N7	-10.36	124.18	130.40
1	AA	771	G	O5'-P-OP1	10.35	123.12	110.70
2	BA	1499	A	N1-C6-N6	10.35	124.81	118.60
3	DA	1767	G	C8-N9-C4	-10.35	102.26	106.40
3	DA	1217	U	N1-C2-O2	-10.35	115.56	122.80
3	DA	2887	A	O5'-P-OP2	-10.34	96.39	105.70
3	DA	491	G	N9-C4-C5	10.34	109.54	105.40
3	DA	2722	G	C5-C6-N1	-10.34	106.33	111.50
3	DA	483	A	C8-N9-C4	10.34	109.94	105.80
3	DA	127	A	C5-C6-N1	10.34	122.87	117.70
3	DA	2493	U	N3-C2-O2	-10.34	114.96	122.20
3	DA	1191	G	N9-C4-C5	10.34	109.53	105.40
3	DA	1272	A	N1-C6-N6	-10.33	112.40	118.60
3	DA	1313	U	N3-C4-O4	10.33	126.63	119.40
3	DA	593	U	O5'-P-OP2	-10.33	96.40	105.70
3	DA	1655	A	C6-N1-C2	-10.33	112.40	118.60
3	DA	2531	A	O5'-P-OP2	-10.33	96.40	105.70
3	DA	1276	A	C2-N3-C4	-10.33	105.44	110.60
3	DA	2584	U	C5-C4-O4	-10.33	119.70	125.90
3	DA	2896	C	O5'-P-OP2	-10.33	96.41	105.70
3	DA	830	G	N3-C2-N2	-10.32	112.68	119.90
3	DA	956	G	OP1-P-O3'	10.32	127.90	105.20
1	AA	971	G	N1-C6-O6	10.31	126.09	119.90
3	DA	2024	G	C4-C5-N7	-10.31	106.68	110.80
3	DA	2302	U	O5'-P-OP2	-10.31	96.42	105.70
4	CA	1797	G	N3-C2-N2	10.31	127.12	119.90
3	DA	628	G	N1-C6-O6	10.30	126.08	119.90
3	DA	2352	A	C5-C6-N6	-10.30	115.46	123.70
3	DA	775	G	C5-C6-O6	-10.30	122.42	128.60
3	DA	814	C	C6-N1-C2	10.30	124.42	120.30
3	DA	2275	C	O5'-P-OP2	-10.30	96.43	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1878	G	N1-C6-O6	10.30	126.08	119.90
3	DA	700	G	C2-N3-C4	-10.30	106.75	111.90
2	BA	1185	G	N1-C6-O6	10.29	126.08	119.90
3	DA	969	G	O5'-P-OP1	10.29	123.05	110.70
3	DA	2505	G	C5-N7-C8	10.29	109.45	104.30
2	BA	1527	U	O5'-P-OP2	-10.29	96.44	105.70
3	DA	1137	G	C5-C6-N1	-10.29	106.36	111.50
3	DA	1428	C	N3-C2-O2	10.29	129.10	121.90
3	DA	2769	U	N3-C2-O2	10.29	129.40	122.20
1	AA	1279	G	N1-C6-O6	10.29	126.07	119.90
3	DA	1444	G	O5'-P-OP2	-10.29	96.44	105.70
3	DA	1197	G	N1-C2-N2	10.28	125.45	116.20
3	DA	533	G	C2-N3-C4	-10.28	106.76	111.90
3	DA	2353	G	C4-C5-N7	10.24	114.90	110.80
3	DA	2621	G	C5-C6-O6	10.24	134.75	128.60
3	DA	2434	A	C8-N9-C4	-10.24	101.70	105.80
3	DA	2751	G	C6-C5-N7	-10.23	124.26	130.40
3	DA	2249	U	O5'-P-OP2	10.22	122.97	110.70
1	AA	47	C	C6-N1-C2	10.22	124.39	120.30
3	DA	529	A	N1-C6-N6	-10.22	112.47	118.60
1	AA	1400	C	O5'-P-OP2	10.21	122.95	110.70
3	DA	973	A	C8-N9-C4	-10.21	101.72	105.80
3	DA	1136	G	C4-C5-N7	10.21	114.89	110.80
3	DA	2037	A	O5'-P-OP2	-10.21	96.51	105.70
1	AA	803	G	O5'-P-OP1	-10.21	96.51	105.70
3	DA	2038	G	O5'-P-OP1	-10.21	96.51	105.70
3	DA	1573	G	C4-C5-N7	10.20	114.88	110.80
3	DA	1604	C	C6-N1-C2	10.21	124.38	120.30
3	DA	744	U	C5-C4-O4	-10.20	119.78	125.90
3	DA	18	U	OP1-P-OP2	-10.20	104.30	119.60
3	DA	1144	A	C8-N9-C4	10.20	109.88	105.80
3	DA	310	A	N1-C6-N6	10.19	124.72	118.60
3	DA	1227	G	N3-C2-N2	-10.19	112.77	119.90
3	DA	1792	G	OP2-P-O3'	10.19	127.62	105.20
3	DA	51	G	C5-C6-O6	10.19	134.71	128.60
3	DA	538	A	N9-C4-C5	10.18	109.87	105.80
1	AA	910	C	C6-N1-C2	10.16	124.37	120.30
3	DA	1444	G	N1-C6-O6	10.16	126.00	119.90
3	DA	1136	G	C5-N7-C8	-10.16	99.22	104.30
1	AA	317	U	N1-C2-O2	-10.15	115.69	122.80
3	DA	1643	G	C2-N3-C4	-10.15	106.82	111.90
3	DA	640	C	C6-N1-C2	10.15	124.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	551	G	C5-N7-C8	-10.14	99.23	104.30
2	BA	887	G	C5-C6-O6	-10.14	122.52	128.60
3	DA	773	U	C5-C6-N1	-10.14	117.63	122.70
5	DB	38	C	N3-C2-O2	-10.14	114.80	121.90
3	DA	1234	U	O5'-P-OP1	-10.14	96.58	105.70
3	DA	2729	G	N1-C2-N2	-10.13	107.08	116.20
3	DA	817	C	N3-C2-O2	10.13	128.99	121.90
3	DA	2506	U	OP1-P-OP2	-10.13	104.41	119.60
3	DA	37	C	C5-C4-N4	-10.12	113.11	120.20
3	DA	491	G	C8-N9-C4	-10.13	102.35	106.40
3	DA	1193	G	C2-N3-C4	-10.12	106.84	111.90
3	DA	2033	A	O4'-C1'-N9	10.12	116.30	108.20
3	DA	2497	A	C6-N1-C2	-10.12	112.53	118.60
1	AA	1279	G	N7-C8-N9	10.11	118.16	113.10
3	DA	1252	G	N3-C4-C5	10.11	133.65	128.60
1	AA	1479	C	C6-N1-C2	10.10	124.34	120.30
3	DA	905	A	C8-N9-C4	10.10	109.84	105.80
3	DA	494	G	N1-C6-O6	10.09	125.95	119.90
3	DA	685	A	C8-N9-C4	-10.09	101.76	105.80
3	DA	1625	C	C6-N1-C2	-10.09	116.26	120.30
3	DA	2820	A	C4-C5-N7	10.09	115.74	110.70
3	DA	2813	A	C5-C6-N6	-10.08	115.64	123.70
3	DA	1223	G	C2-N3-C4	-10.08	106.86	111.90
1	AA	893	C	C5-C4-N4	-10.08	113.15	120.20
1	AA	892	A	C2-N3-C4	-10.07	105.56	110.60
3	DA	2248	C	N1-C2-O2	10.07	124.94	118.90
1	AA	1279	G	C5-N7-C8	-10.07	99.26	104.30
3	DA	733	G	N1-C6-O6	10.07	125.94	119.90
3	DA	1643	G	C4-C5-N7	10.07	114.83	110.80
3	DA	2353	G	C5-C6-O6	-10.07	122.56	128.60
1	AA	963	G	O5'-P-OP2	-10.07	96.64	105.70
3	DA	2677	G	N1-C2-N2	-10.07	107.14	116.20
1	AA	971	G	O4'-C1'-N9	10.05	116.24	108.20
3	DA	1905	C	C6-N1-C2	-10.05	116.28	120.30
3	DA	1780	A	N1-C6-N6	10.05	124.63	118.60
3	DA	562	U	N1-C2-N3	10.04	120.93	114.90
3	DA	446	G	C2-N3-C4	-10.04	106.88	111.90
3	DA	1940	U	N3-C2-O2	-10.04	115.17	122.20
3	DA	2499	C	C5-C4-N4	-10.04	113.17	120.20
3	DA	2010	G	C8-N9-C4	-10.04	102.38	106.40
3	DA	2545	G	N3-C2-N2	-10.04	112.87	119.90
3	DA	905	A	C2-N3-C4	-10.04	105.58	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	243	U	C5-C4-O4	-10.03	119.88	125.90
3	DA	957	C	O5'-P-OP2	-10.03	96.67	105.70
3	DA	1802	A	O5'-P-OP2	-10.03	96.67	105.70
3	DA	1947	C	N1-C2-O2	-10.03	112.88	118.90
3	DA	1236	G	O5'-P-OP1	-10.03	96.68	105.70
3	DA	2292	U	C5-C4-O4	-10.03	119.89	125.90
3	DA	2046	G	N3-C2-N2	10.02	126.92	119.90
3	DA	258	G	N1-C6-O6	10.02	125.91	119.90
3	DA	538	A	C6-N1-C2	-10.01	112.60	118.60
3	DA	808	G	O5'-P-OP2	-10.00	96.70	105.70
3	DA	2812	G	C5-C6-O6	-10.00	122.60	128.60
3	DA	2434	A	N1-C6-N6	-10.00	112.60	118.60
1	AA	371	A	O5'-P-OP2	-10.00	96.70	105.70
3	DA	2	G	N3-C4-C5	9.99	133.59	128.60
3	DA	2058	A	C8-N9-C4	-9.99	101.81	105.80
4	CA	1658	C	C5-C6-N1	9.98	125.99	121.00
3	DA	2685	G	N3-C2-N2	-9.98	112.91	119.90
3	DA	563	A	OP1-P-O3'	9.98	127.15	105.20
3	DA	2791	G	C5-C6-N1	-9.98	106.51	111.50
3	DA	1878	G	O5'-P-OP1	-9.97	96.72	105.70
3	DA	817	C	C5-C4-N4	-9.97	113.22	120.20
3	DA	2571	U	N1-C2-O2	-9.97	115.82	122.80
3	DA	1218	G	O5'-P-OP2	-9.96	96.73	105.70
3	DA	862	G	N3-C2-N2	-9.96	112.93	119.90
3	DA	2010	G	O5'-P-OP1	-9.96	96.74	105.70
3	DA	689	A	N1-C6-N6	-9.96	112.62	118.60
3	DA	1777	U	N1-C2-O2	-9.95	115.83	122.80
3	DA	2477	U	N1-C2-O2	9.96	129.77	122.80
3	DA	2894	G	N1-C6-O6	9.96	125.87	119.90
3	DA	835	C	O5'-P-OP1	9.95	122.64	110.70
3	DA	1166	G	C6-C5-N7	-9.95	124.43	130.40
4	CA	2455	G	C8-N9-C4	-9.95	102.42	106.40
3	DA	942	G	OP1-P-OP2	-9.95	104.67	119.60
3	DA	311	A	O5'-P-OP2	-9.95	96.75	105.70
3	DA	452	G	O5'-P-OP1	9.94	122.63	110.70
3	DA	508	A	N1-C6-N6	9.94	124.56	118.60
3	DA	2014	A	C5-C6-N6	-9.94	115.75	123.70
3	DA	2780	G	N3-C4-N9	-9.94	120.04	126.00
3	DA	1265	A	OP1-P-OP2	-9.93	104.71	119.60
1	AA	834	U	O5'-P-OP2	-9.92	96.77	105.70
3	DA	2003	A	C5-C6-N6	-9.92	115.76	123.70
5	DB	21	G	C2-N3-C4	-9.92	106.94	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2815	C	C6-N1-C2	9.92	124.27	120.30
3	DA	2621	G	N3-C2-N2	9.91	126.84	119.90
3	DA	1690	A	C8-N9-C4	-9.90	101.84	105.80
3	DA	2045	C	N3-C4-C5	9.90	125.86	121.90
3	DA	2637	U	C5-C4-O4	-9.90	119.96	125.90
2	BA	403	C	O5'-P-OP1	9.90	122.58	110.70
2	BA	1399	C	O5'-P-OP1	-9.90	96.79	105.70
3	DA	1153	C	N3-C4-C5	-9.90	117.94	121.90
3	DA	443	A	N9-C4-C5	9.90	109.76	105.80
1	AA	785	G	N1-C6-O6	9.89	125.84	119.90
3	DA	1804	C	N3-C4-C5	9.89	125.86	121.90
3	DA	33	C	N3-C4-N4	9.89	124.92	118.00
3	DA	1790	C	O5'-P-OP1	9.89	122.57	110.70
3	DA	2014	A	C6-N1-C2	-9.89	112.67	118.60
3	DA	1843	C	O5'-P-OP1	-9.88	96.81	105.70
4	CA	187	G	C8-N9-C4	9.88	110.35	106.40
3	DA	1679	A	C8-N9-C4	-9.88	101.85	105.80
4	CA	66	C	C6-N1-C2	-9.88	116.35	120.30
4	CA	2061	G	N1-C6-O6	9.88	125.83	119.90
3	DA	2250	G	C5-C6-O6	-9.88	122.67	128.60
3	DA	2630	G	O5'-P-OP1	-9.88	96.81	105.70
3	DA	648	G	N1-C2-N3	9.86	129.82	123.90
3	DA	336	C	O5'-P-OP1	-9.86	96.83	105.70
4	CA	385	C	C6-N1-C2	-9.86	116.36	120.30
3	DA	1767	G	N9-C4-C5	9.86	109.34	105.40
3	DA	1016	G	C5-C6-O6	9.86	134.51	128.60
3	DA	2886	A	O5'-P-OP2	-9.86	96.83	105.70
3	DA	693	A	C5-N7-C8	-9.85	98.97	103.90
1	AA	338	A	O5'-P-OP1	-9.85	96.84	105.70
1	AA	668	G	O5'-P-OP2	-9.85	96.84	105.70
3	DA	2581	G	N9-C4-C5	9.85	109.34	105.40
3	DA	1706	C	N3-C4-C5	9.83	125.83	121.90
3	DA	1282	U	N3-C4-O4	9.83	126.28	119.40
3	DA	2483	C	C5-C4-N4	-9.82	113.32	120.20
3	DA	2743	U	N1-C2-O2	-9.82	115.92	122.80
3	DA	18	U	N3-C4-O4	9.82	126.27	119.40
3	DA	724	U	N3-C2-O2	-9.81	115.33	122.20
5	DB	45	A	N1-C2-N3	9.81	134.21	129.30
3	DA	936	A	C4-C5-N7	9.80	115.60	110.70
3	DA	1194	A	N9-C4-C5	9.80	109.72	105.80
4	CA	2607	G	N3-C4-N9	9.80	131.88	126.00
3	DA	2618	G	C8-N9-C4	-9.79	102.48	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	561	G	N3-C4-C5	9.79	133.50	128.60
3	DA	1153	C	N3-C4-N4	9.79	124.85	118.00
3	DA	2634	A	N1-C2-N3	9.79	134.19	129.30
3	DA	1000	A	O5'-P-OP1	-9.79	96.89	105.70
3	DA	748	G	C4-C5-N7	-9.77	106.89	110.80
3	DA	2812	G	N3-C2-N2	-9.77	113.06	119.90
3	DA	2820	A	C5-C6-N6	-9.77	115.89	123.70
3	DA	477	A	O5'-P-OP2	-9.76	96.91	105.70
3	DA	1184	U	OP1-P-OP2	-9.76	104.96	119.60
3	DA	628	G	C2-N3-C4	-9.76	107.02	111.90
1	AA	1344	C	O5'-P-OP2	-9.76	96.92	105.70
3	DA	2308	G	N3-C4-C5	9.76	133.48	128.60
3	DA	2898	U	N1-C2-O2	-9.76	115.97	122.80
1	AA	584	G	O5'-P-OP1	-9.75	96.92	105.70
1	AA	881	G	O5'-P-OP2	9.75	122.40	110.70
3	DA	1622	G	C2-N3-C4	-9.75	107.02	111.90
3	DA	1132	U	N1-C2-O2	9.74	129.62	122.80
3	DA	1002	G	N3-C2-N2	-9.74	113.08	119.90
3	DA	2501	C	C6-N1-C2	-9.73	116.41	120.30
3	DA	1268	A	N9-C4-C5	9.73	109.69	105.80
3	DA	1612	C	C6-N1-C2	9.73	124.19	120.30
3	DA	1655	A	C5-C6-N1	9.73	122.56	117.70
1	AA	1178	G	C8-N9-C4	-9.73	102.51	106.40
1	AA	524	G	C5-C6-O6	-9.72	122.77	128.60
3	DA	1632	A	C8-N9-C4	-9.72	101.91	105.80
3	DA	443	A	N1-C6-N6	-9.72	112.77	118.60
1	AA	1497	G	O5'-P-OP1	-9.72	96.95	105.70
4	CA	203	A	C5-C6-N6	-9.72	115.93	123.70
3	DA	25	U	C5-C4-O4	-9.71	120.07	125.90
3	DA	822	G	N1-C2-N2	-9.71	107.46	116.20
3	DA	455	C	N3-C4-N4	-9.71	111.20	118.00
3	DA	493	G	N3-C4-N9	-9.71	120.17	126.00
3	DA	705	A	C5-C6-N6	-9.71	115.93	123.70
3	DA	733	G	C6-C5-N7	-9.71	124.58	130.40
3	DA	2858	C	C6-N1-C2	9.71	124.18	120.30
3	DA	2017	U	N1-C2-O2	-9.69	116.02	122.80
3	DA	2386	A	N9-C4-C5	9.69	109.68	105.80
3	DA	240	C	N3-C4-N4	9.69	124.78	118.00
3	DA	16	C	OP1-P-O3'	9.68	126.50	105.20
3	DA	2263	C	C5-C4-N4	-9.68	113.42	120.20
3	DA	191	A	C8-N9-C4	-9.68	101.93	105.80
3	DA	2271	G	O5'-P-OP1	-9.68	96.99	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	893	C	C6-N1-C2	9.68	124.17	120.30
3	DA	512	G	C5-N7-C8	-9.68	99.46	104.30
2	BA	811	C	O5'-P-OP1	-9.67	96.99	105.70
3	DA	1124	G	C8-N9-C4	9.67	110.27	106.40
3	DA	2689	U	N1-C2-O2	-9.67	116.03	122.80
3	DA	2693	G	O5'-P-OP2	-9.67	97.00	105.70
3	DA	696	G	O5'-P-OP2	-9.66	97.00	105.70
5	DB	38	C	N1-C2-O2	9.66	124.70	118.90
3	DA	394	C	N3-C4-C5	9.66	125.76	121.90
3	DA	600	G	O5'-P-OP1	-9.65	97.01	105.70
3	DA	502	A	N1-C2-N3	9.65	134.12	129.30
3	DA	1120	G	N1-C6-O6	9.65	125.69	119.90
3	DA	1132	U	C6-N1-C2	-9.65	115.21	121.00
3	DA	1516	G	N1-C6-O6	9.65	125.69	119.90
3	DA	1777	U	N3-C2-O2	9.65	128.95	122.20
3	DA	787	C	O5'-P-OP2	-9.64	97.02	105.70
3	DA	839	U	O5'-P-OP2	-9.64	97.02	105.70
3	DA	2892	G	C2-N3-C4	-9.64	107.08	111.90
3	DA	977	G	N1-C6-O6	9.64	125.68	119.90
3	DA	2522	U	N1-C2-O2	-9.64	116.05	122.80
3	DA	563	A	C6-N1-C2	-9.63	112.82	118.60
3	DA	2772	C	C5-C4-N4	-9.63	113.46	120.20
3	DA	443	A	C8-N9-C4	-9.63	101.95	105.80
3	DA	175	G	C2-N3-C4	-9.63	107.09	111.90
3	DA	920	A	N1-C2-N3	9.63	134.11	129.30
3	DA	2885	G	N3-C4-C5	-9.62	123.79	128.60
3	DA	967	U	C5-C4-O4	9.61	131.67	125.90
3	DA	706	A	O5'-P-OP2	9.61	122.23	110.70
1	AA	288	A	O5'-P-OP2	-9.61	97.05	105.70
3	DA	501	A	C8-N9-C4	-9.61	101.96	105.80
3	DA	1695	G	C5-N7-C8	-9.61	99.50	104.30
1	AA	134	G	N3-C4-N9	-9.60	120.24	126.00
3	DA	1194	A	C5-C6-N6	9.60	131.38	123.70
5	DB	77	U	C5-C4-O4	-9.60	120.14	125.90
3	DA	37	C	N3-C4-N4	9.60	124.72	118.00
1	AA	586	C	C6-N1-C2	9.60	124.14	120.30
3	DA	2815	C	N3-C4-C5	9.60	125.74	121.90
3	DA	1181	U	N1-C2-O2	-9.60	116.08	122.80
2	BA	22	G	N3-C4-C5	9.59	133.40	128.60
3	DA	2515	C	N1-C2-O2	9.59	124.66	118.90
3	DA	528	A	C8-N9-C4	-9.59	101.96	105.80
3	DA	781	A	O5'-P-OP1	-9.59	97.07	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	793	A	N1-C6-N6	9.59	124.35	118.60
3	DA	1298	C	C6-N1-C2	9.59	124.13	120.30
3	DA	2818	U	OP1-P-OP2	-9.58	105.22	119.60
5	DB	96	G	N7-C8-N9	9.58	117.89	113.10
3	DA	490	C	O5'-P-OP2	9.58	122.20	110.70
3	DA	1230	A	O5'-P-OP2	-9.58	97.08	105.70
3	DA	2038	G	O5'-P-OP2	9.58	122.19	110.70
3	DA	561	G	OP1-P-OP2	-9.57	105.25	119.60
3	DA	564	C	C2-N3-C4	9.57	124.69	119.90
3	DA	1452	G	C8-N9-C4	-9.57	102.57	106.40
3	DA	2743	U	N3-C2-O2	9.57	128.90	122.20
1	AA	781	A	N1-C6-N6	9.56	124.34	118.60
3	DA	1246	A	C2-N3-C4	-9.56	105.82	110.60
3	DA	2054	A	O5'-P-OP1	-9.56	97.09	105.70
3	DA	2583	G	C8-N9-C4	-9.56	102.58	106.40
3	DA	2527	C	O5'-P-OP2	-9.56	97.10	105.70
2	BA	543	U	O5'-P-OP2	-9.55	97.10	105.70
1	AA	570	G	C5-C6-O6	-9.55	122.87	128.60
3	DA	322	A	O5'-P-OP1	-9.55	97.10	105.70
3	DA	578	G	N7-C8-N9	9.55	117.88	113.10
3	DA	1614	A	O5'-P-OP2	-9.55	97.10	105.70
1	AA	811	C	C6-N1-C2	9.54	124.12	120.30
3	DA	1821	A	N1-C6-N6	9.55	124.33	118.60
3	DA	995	C	OP1-P-OP2	-9.54	105.28	119.60
3	DA	2813	A	N9-C4-C5	-9.54	101.98	105.80
2	BA	366	A	N1-C6-N6	-9.54	112.88	118.60
3	DA	247	G	C8-N9-C4	-9.53	102.59	106.40
3	DA	828	U	N1-C2-O2	9.53	129.47	122.80
3	DA	554	U	N3-C2-O2	9.53	128.87	122.20
3	DA	1948	G	N3-C2-N2	-9.53	113.23	119.90
3	DA	2692	G	OP2-P-O3'	9.53	126.16	105.20
3	DA	2759	G	C2-N3-C4	-9.53	107.14	111.90
4	CA	581	C	C6-N1-C2	-9.53	116.49	120.30
3	DA	1136	G	C8-N9-C4	-9.52	102.59	106.40
3	DA	2895	G	N1-C6-O6	9.52	125.61	119.90
3	DA	2324	U	C5-C4-O4	-9.52	120.19	125.90
3	DA	1833	C	O5'-P-OP2	-9.51	97.14	105.70
3	DA	742	A	N1-C2-N3	9.51	134.06	129.30
3	DA	986	C	N3-C4-C5	9.51	125.70	121.90
3	DA	1164	C	N1-C2-O2	-9.51	113.19	118.90
1	AA	790	A	N1-C6-N6	9.51	124.31	118.60
2	BA	889	A	O5'-P-OP1	-9.51	97.14	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1762	A	N9-C4-C5	-9.51	102.00	105.80
3	DA	440	C	N3-C2-O2	9.50	128.55	121.90
3	DA	2490	G	C8-N9-C4	9.50	110.20	106.40
5	DB	83	G	N1-C6-O6	9.50	125.60	119.90
3	DA	759	G	O5'-P-OP2	9.50	122.10	110.70
3	DA	1951	U	N1-C2-O2	-9.50	116.15	122.80
1	AA	944	G	C5-C6-O6	9.50	134.30	128.60
3	DA	2001	C	N1-C2-O2	-9.49	113.20	118.90
1	AA	1065	U	O5'-P-OP1	-9.49	97.16	105.70
3	DA	755	U	C6-N1-C2	9.49	126.69	121.00
3	DA	1430	G	O5'-P-OP1	-9.49	97.16	105.70
3	DA	789	A	C4-C5-C6	9.48	121.74	117.00
3	DA	2361	G	C5-C6-O6	9.48	134.29	128.60
3	DA	2014	A	C5-C6-N1	9.48	122.44	117.70
3	DA	2027	G	O5'-P-OP2	-9.48	97.17	105.70
2	BA	1084	G	C8-N9-C4	-9.47	102.61	106.40
1	AA	351	G	C5-N7-C8	-9.47	99.56	104.30
3	DA	526	A	O5'-P-OP2	-9.47	97.17	105.70
3	DA	679	C	C6-N1-C2	-9.47	116.51	120.30
3	DA	2722	G	N3-C4-C5	9.47	133.34	128.60
2	BA	765	G	C8-N9-C4	-9.47	102.61	106.40
3	DA	2544	G	C8-N9-C4	-9.47	102.61	106.40
1	AA	254	G	C8-N9-C4	-9.47	102.61	106.40
4	CA	2242	G	O5'-P-OP2	-9.47	97.18	105.70
3	DA	665	U	N3-C2-O2	9.46	128.82	122.20
3	DA	1762	A	C5-C6-N6	-9.46	116.13	123.70
3	DA	2308	G	C4-C5-N7	9.46	114.58	110.80
3	DA	2050	C	N1-C2-O2	-9.46	113.22	118.90
1	AA	524	G	C4-C5-N7	9.46	114.58	110.80
3	DA	2244	U	N1-C2-O2	-9.45	116.18	122.80
1	AA	1359	C	C6-N1-C2	9.45	124.08	120.30
4	CA	2649	C	C6-N1-C2	-9.45	116.52	120.30
3	DA	2680	U	C5-C4-O4	-9.45	120.23	125.90
3	DA	2722	G	C5-C6-O6	9.45	134.27	128.60
1	AA	235	C	C6-N1-C2	9.44	124.08	120.30
1	AA	524	G	N1-C6-O6	9.44	125.56	119.90
3	DA	793	A	C6-C5-N7	-9.44	125.70	132.30
5	DB	110	C	N3-C4-N4	-9.43	111.40	118.00
3	DA	648	G	C2-N3-C4	-9.43	107.19	111.90
3	DA	836	G	C8-N9-C4	9.42	110.17	106.40
3	DA	822	G	C5-C6-O6	9.42	134.25	128.60
3	DA	2064	C	N3-C4-N4	9.42	124.59	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2872	A	N9-C4-C5	9.42	109.57	105.80
3	DA	852	U	N3-C2-O2	9.41	128.79	122.20
46	DW	18	ARG	CA-CB-CG	9.41	134.11	113.40
1	AA	375	U	O5'-P-OP1	-9.41	97.23	105.70
3	DA	744	U	N1-C2-O2	-9.41	116.21	122.80
3	DA	848	C	N3-C2-O2	9.41	128.49	121.90
3	DA	1379	U	N3-C4-O4	9.41	125.98	119.40
3	DA	2840	C	C5-C6-N1	-9.40	116.30	121.00
1	AA	1117	A	C5-C6-N6	-9.40	116.18	123.70
3	DA	2352	A	N1-C6-N6	9.39	124.24	118.60
1	AA	1078	U	O5'-P-OP2	9.39	121.97	110.70
3	DA	2092	U	O5'-P-OP1	-9.39	97.25	105.70
3	DA	1512	C	O5'-P-OP1	-9.39	97.25	105.70
3	DA	733	G	N9-C4-C5	-9.38	101.65	105.40
3	DA	922	C	O5'-P-OP2	-9.38	97.26	105.70
3	DA	2616	C	N3-C4-N4	9.38	124.57	118.00
4	CA	776	G	N3-C4-C5	-9.38	123.91	128.60
3	DA	557	C	N3-C4-C5	9.38	125.65	121.90
3	DA	1001	A	C5-C6-N6	-9.37	116.20	123.70
2	BA	679	C	C6-N1-C2	9.37	124.05	120.30
3	DA	521	U	C6-N1-C2	-9.37	115.38	121.00
3	DA	2352	A	N9-C4-C5	-9.37	102.05	105.80
3	DA	1986	C	C6-N1-C2	-9.37	116.55	120.30
3	DA	530	G	C5-C6-N1	-9.37	106.82	111.50
3	DA	2238	G	O5'-P-OP2	-9.37	97.27	105.70
4	CA	776	G	C8-N9-C1'	-9.36	114.83	127.00
3	DA	2012	G	N1-C6-O6	9.36	125.52	119.90
3	DA	2895	G	C5-N7-C8	-9.36	99.62	104.30
3	DA	1149	G	C5-C6-O6	-9.36	122.99	128.60
3	DA	859	G	N9-C4-C5	9.35	109.14	105.40
3	DA	2671	G	C4-C5-N7	9.35	114.54	110.80
3	DA	692	C	C5-C4-N4	-9.35	113.65	120.20
3	DA	2725	A	N1-C6-N6	9.35	124.21	118.60
3	DA	538	A	N1-C6-N6	-9.35	112.99	118.60
3	DA	1002	G	C8-N9-C4	-9.35	102.66	106.40
3	DA	1666	G	N1-C6-O6	-9.35	114.29	119.90
3	DA	1799	G	N3-C2-N2	9.33	126.43	119.90
3	DA	2006	C	N3-C2-O2	9.33	128.43	121.90
3	DA	2370	G	N1-C6-O6	9.33	125.50	119.90
3	DA	2546	U	O5'-P-OP2	-9.33	97.30	105.70
3	DA	1826	G	O5'-P-OP2	-9.33	97.30	105.70
3	DA	1921	G	O5'-P-OP1	-9.33	97.30	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	781	A	C5-C6-N6	-9.32	116.24	123.70
3	DA	470	A	N7-C8-N9	9.32	118.46	113.80
3	DA	961	C	N3-C2-O2	-9.32	115.38	121.90
3	DA	2226	C	N3-C4-C5	9.32	125.63	121.90
3	DA	1428	C	C5-C4-N4	-9.32	113.68	120.20
3	DA	581	C	C2-N1-C1'	9.31	129.04	118.80
1	AA	1509	C	C6-N1-C2	9.31	124.02	120.30
3	DA	2356	U	C6-N1-C2	-9.31	115.42	121.00
1	AA	1111	A	O5'-P-OP2	-9.30	97.33	105.70
1	AA	1509	C	C2-N3-C4	-9.30	115.25	119.90
3	DA	2812	G	N1-C6-O6	9.30	125.48	119.90
4	CA	1900	A	N1-C6-N6	-9.30	113.02	118.60
38	CO	79	LEU	CB-CG-CD2	-9.30	95.20	111.00
1	AA	46	G	N3-C4-C5	9.29	133.25	128.60
1	AA	125	U	O5'-P-OP1	9.28	121.84	110.70
3	DA	1357	C	N1-C2-O2	-9.29	113.33	118.90
3	DA	738	G	C2-N3-C4	-9.28	107.26	111.90
3	DA	1217	U	O5'-P-OP1	-9.28	97.35	105.70
36	DM	59	ARG	NE-CZ-NH2	-9.27	115.66	120.30
3	DA	2446	G	O5'-P-OP2	-9.27	97.36	105.70
1	AA	889	A	OP1-P-OP2	9.27	133.50	119.60
3	DA	493	G	N3-C2-N2	-9.27	113.41	119.90
3	DA	1121	C	N3-C4-N4	-9.27	111.51	118.00
3	DA	2522	U	N3-C4-O4	9.27	125.89	119.40
3	DA	787	C	N3-C4-C5	9.27	125.61	121.90
1	AA	797	C	C6-N1-C2	-9.26	116.60	120.30
3	DA	1655	A	N1-C6-N6	9.26	124.16	118.60
3	DA	1528	A	N1-C6-N6	9.26	124.16	118.60
3	DA	200	U	N1-C2-O2	-9.26	116.32	122.80
3	DA	310	A	C5-C6-N6	-9.26	116.30	123.70
3	DA	2477	U	N3-C2-O2	-9.26	115.72	122.20
3	DA	1288	G	N9-C4-C5	-9.25	101.70	105.40
3	DA	1813	G	N3-C2-N2	-9.25	113.42	119.90
3	DA	2035	G	N3-C2-N2	9.25	126.37	119.90
3	DA	750	A	N7-C8-N9	9.25	118.42	113.80
3	DA	981	A	C2-N3-C4	9.25	115.22	110.60
3	DA	825	A	N1-C6-N6	-9.24	113.05	118.60
3	DA	924	G	C2-N3-C4	-9.24	107.28	111.90
3	DA	1611	C	O5'-P-OP2	-9.24	97.38	105.70
3	DA	1639	C	C5-C4-N4	-9.24	113.73	120.20
3	DA	37	C	C2-N3-C4	-9.24	115.28	119.90
3	DA	2808	G	OP1-P-OP2	9.23	133.45	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	976	G	N9-C4-C5	9.23	109.09	105.40
3	DA	2818	U	N3-C2-O2	9.23	128.66	122.20
3	DA	1628	G	C5-C6-O6	-9.23	123.06	128.60
3	DA	538	A	O5'-P-OP1	9.21	121.76	110.70
3	DA	1819	A	N1-C6-N6	9.21	124.13	118.60
3	DA	2465	C	N3-C2-O2	9.21	128.35	121.90
3	DA	515	A	O5'-P-OP2	9.21	121.75	110.70
3	DA	525	U	N1-C2-N3	9.21	120.42	114.90
3	DA	1695	G	OP1-P-OP2	9.21	133.41	119.60
3	DA	330	A	N1-C2-N3	9.20	133.90	129.30
3	DA	2456	C	N3-C4-N4	9.20	124.44	118.00
3	DA	1357	C	N3-C2-O2	9.20	128.34	121.90
3	DA	2574	G	O5'-P-OP2	-9.20	97.42	105.70
3	DA	729	G	C2-N3-C4	9.20	116.50	111.90
3	DA	2571	U	N3-C4-O4	9.20	125.84	119.40
3	DA	2813	A	C8-N9-C4	9.19	109.48	105.80
3	DA	1473	G	C5-C6-O6	9.19	134.11	128.60
3	DA	121	G	C2-N3-C4	-9.18	107.31	111.90
3	DA	836	G	C5-C6-O6	-9.18	123.09	128.60
1	AA	524	G	C6-C5-N7	-9.18	124.89	130.40
3	DA	1902	C	N1-C2-O2	-9.17	113.39	118.90
3	DA	2488	G	N1-C6-O6	9.17	125.40	119.90
1	AA	1117	A	N9-C4-C5	-9.17	102.13	105.80
3	DA	1662	U	N3-C2-O2	9.17	128.62	122.20
3	DA	2684	U	N3-C2-O2	-9.17	115.78	122.20
3	DA	2808	G	N1-C6-O6	9.17	125.40	119.90
3	DA	2275	C	O5'-P-OP1	-9.17	97.45	105.70
3	DA	2046	G	C5-C6-N1	9.16	116.08	111.50
3	DA	1026	G	OP2-P-O3'	9.16	125.36	105.20
1	AA	523	A	N1-C6-N6	9.16	124.09	118.60
3	DA	998	C	C5-C4-N4	-9.16	113.79	120.20
3	DA	2654	A	N1-C6-N6	9.16	124.10	118.60
5	DB	45	A	C2-N3-C4	-9.16	106.02	110.60
3	DA	2463	C	N3-C4-N4	9.16	124.41	118.00
3	DA	1755	A	C2-N3-C4	-9.16	106.02	110.60
3	DA	2529	G	O5'-P-OP1	9.15	121.68	110.70
3	DA	255	A	C2-N3-C4	-9.15	106.02	110.60
3	DA	1132	U	C2-N1-C1'	9.15	128.68	117.70
4	CA	1658	C	N3-C4-N4	9.15	124.41	118.00
3	DA	2621	G	C2-N3-C4	-9.15	107.33	111.90
5	DB	75	G	OP1-P-OP2	-9.14	105.88	119.60
3	DA	829	A	O5'-P-OP2	-9.14	97.47	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2748	A	O5'-P-OP1	-9.14	97.47	105.70
4	CA	2255	G	N1-C6-O6	9.14	125.38	119.90
1	AA	142	G	C4-N9-C1'	9.14	138.38	126.50
2	BA	1398	A	C5-C6-N1	9.14	122.27	117.70
3	DA	2013	A	N7-C8-N9	9.14	118.37	113.80
3	DA	799	G	C5-C6-O6	9.13	134.08	128.60
3	DA	821	A	N9-C4-C5	-9.13	102.15	105.80
3	DA	1667	G	N3-C4-N9	-9.13	120.52	126.00
1	AA	925	G	C8-N9-C4	-9.13	102.75	106.40
1	AA	399	G	C5-C6-O6	-9.13	123.12	128.60
3	DA	578	G	N1-C2-N3	9.13	129.38	123.90
3	DA	998	C	N3-C4-N4	9.13	124.39	118.00
3	DA	1437	C	N3-C2-O2	9.13	128.29	121.90
3	DA	512	G	O5'-P-OP2	-9.13	97.49	105.70
3	DA	836	G	N9-C4-C5	-9.13	101.75	105.40
3	DA	983	A	N1-C6-N6	-9.13	113.12	118.60
1	AA	578	C	OP2-P-O3'	9.12	125.27	105.20
3	DA	2362	C	C6-N1-C2	9.12	123.95	120.30
3	DA	1313	U	C2-N1-C1'	9.12	128.65	117.70
3	DA	1328	A	OP2-P-O3'	9.12	125.27	105.20
3	DA	1282	U	C5-C4-O4	-9.12	120.43	125.90
3	DA	2446	G	C8-N9-C4	-9.12	102.75	106.40
3	DA	2478	A	N9-C4-C5	-9.12	102.15	105.80
3	DA	1686	C	N1-C2-O2	-9.12	113.43	118.90
3	DA	124	G	N9-C4-C5	9.12	109.05	105.40
3	DA	523	C	N1-C2-O2	-9.12	113.43	118.90
3	DA	2252	G	N3-C4-C5	9.12	133.16	128.60
4	CA	2255	G	N3-C4-C5	9.12	133.16	128.60
3	DA	2581	G	N1-C2-N3	9.11	129.37	123.90
3	DA	2029	G	N1-C6-O6	9.11	125.37	119.90
3	DA	858	G	C5-C6-N1	-9.11	106.95	111.50
3	DA	2699	C	OP1-P-OP2	9.10	133.25	119.60
3	DA	2026	U	C5-C4-O4	9.10	131.36	125.90
3	DA	973	A	O5'-P-OP1	-9.10	97.51	105.70
2	BA	364	A	C8-N9-C4	9.10	109.44	105.80
3	DA	543	G	C2-N3-C4	-9.10	107.35	111.90
3	DA	565	C	N1-C2-O2	-9.10	113.44	118.90
3	DA	811	U	OP1-P-OP2	9.09	133.24	119.60
5	DB	80	U	C2-N3-C4	-9.09	121.55	127.00
3	DA	616	A	C2-N3-C4	-9.09	106.06	110.60
3	DA	2001	C	C5-C4-N4	-9.08	113.84	120.20
3	DA	1470	A	C2-N3-C4	-9.08	106.06	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	822	G	N3-C2-N2	9.08	126.25	119.90
3	DA	967	U	N1-C2-O2	9.08	129.16	122.80
3	DA	449	A	C5-C6-N6	-9.08	116.44	123.70
3	DA	962	G	O5'-P-OP1	-9.08	97.53	105.70
3	DA	1276	A	C6-C5-N7	-9.08	125.94	132.30
1	AA	1512	U	O5'-P-OP1	9.07	121.59	110.70
3	DA	15	G	N3-C4-C5	9.07	133.14	128.60
3	DA	830	G	C5-C6-O6	-9.07	123.16	128.60
3	DA	1759	A	N1-C6-N6	-9.07	113.16	118.60
3	DA	1368	G	C8-N9-C4	-9.07	102.77	106.40
3	DA	2447	G	O5'-P-OP1	-9.07	97.54	105.70
2	BA	294	U	O5'-P-OP2	9.07	121.58	110.70
3	DA	443	A	C5-C6-N6	9.07	130.95	123.70
3	DA	1187	G	OP2-P-O3'	9.07	125.15	105.20
3	DA	1182	G	C6-C5-N7	-9.06	124.96	130.40
3	DA	1695	G	C8-N9-C4	-9.06	102.77	106.40
3	DA	2581	G	N3-C2-N2	-9.06	113.56	119.90
4	CA	1954	G	N1-C6-O6	9.06	125.34	119.90
3	DA	2461	A	C2-N3-C4	-9.06	106.07	110.60
3	DA	381	G	N3-C4-C5	9.06	133.13	128.60
3	DA	1197	G	N3-C2-N2	-9.06	113.56	119.90
3	DA	1767	G	OP2-P-O3'	9.06	125.13	105.20
3	DA	2611	C	N1-C2-O2	-9.06	113.47	118.90
3	DA	2780	G	N3-C2-N2	-9.06	113.56	119.90
3	DA	1685	C	N1-C2-O2	-9.05	113.47	118.90
3	DA	947	A	N1-C2-N3	9.05	133.83	129.30
3	DA	1166	G	C2-N3-C4	-9.05	107.37	111.90
3	DA	1837	C	O5'-P-OP1	-9.04	97.56	105.70
3	DA	2785	C	C6-N1-C2	9.04	123.92	120.30
3	DA	483	A	N7-C8-N9	-9.04	109.28	113.80
3	DA	1399	C	N3-C2-O2	9.04	128.23	121.90
3	DA	2632	A	C5-C6-N1	9.04	122.22	117.70
3	DA	1525	A	C6-C5-N7	-9.04	125.97	132.30
3	DA	1812	U	N1-C2-O2	-9.04	116.47	122.80
5	DB	108	A	O5'-P-OP2	-9.04	97.57	105.70
2	BA	1096	C	O5'-P-OP1	-9.03	97.57	105.70
3	DA	522	A	C4-C5-N7	-9.03	106.18	110.70
2	BA	609	A	N1-C6-N6	9.03	124.02	118.60
5	DB	48	U	N1-C2-O2	-9.03	116.48	122.80
3	DA	446	G	O5'-P-OP1	-9.03	97.58	105.70
3	DA	1981	A	N1-C6-N6	9.03	124.02	118.60
3	DA	1310	G	C4-C5-N7	9.03	114.41	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	952	U	O5'-P-OP1	-9.03	97.58	105.70
3	DA	994	C	O5'-P-OP2	-9.02	97.58	105.70
3	DA	1956	U	N3-C4-C5	9.02	120.02	114.60
3	DA	713	G	C2-N3-C4	-9.02	107.39	111.90
3	DA	326	G	OP1-P-OP2	-9.02	106.08	119.60
3	DA	2009	A	C8-N9-C4	-9.02	102.19	105.80
2	BA	624	C	O5'-P-OP2	-9.02	97.59	105.70
1	AA	1322	C	O5'-P-OP2	-9.01	97.59	105.70
6	BB	32	PHE	CB-CG-CD1	-9.01	114.49	120.80
3	DA	238	C	C6-N1-C2	9.01	123.90	120.30
3	DA	517	C	C5-C4-N4	-9.01	113.89	120.20
3	DA	491	G	C5-C6-N1	-9.01	107.00	111.50
3	DA	1010	A	N9-C4-C5	9.01	109.40	105.80
4	CA	955	U	C6-N1-C2	-9.01	115.60	121.00
3	DA	2703	C	O5'-P-OP2	-9.00	97.60	105.70
4	CA	1665	A	C5-C6-N1	9.00	122.20	117.70
3	DA	1026	G	C8-N9-C4	-9.00	102.80	106.40
24	BT	66	LEU	CA-CB-CG	9.00	135.99	115.30
3	DA	2581	G	C4-C5-N7	-8.99	107.20	110.80
3	DA	2764	A	O5'-P-OP1	-8.99	97.61	105.70
3	DA	1396	U	OP1-P-O3'	-8.98	85.44	105.20
5	DB	6	G	C8-N9-C4	-8.98	102.81	106.40
3	DA	2560	A	C8-N9-C4	-8.98	102.21	105.80
3	DA	2883	A	N1-C6-N6	8.98	123.99	118.60
3	DA	1988	G	N1-C6-O6	8.98	125.29	119.90
3	DA	2773	C	N3-C4-C5	8.97	125.49	121.90
4	CA	690	G	C8-N9-C4	-8.97	102.81	106.40
3	DA	1525	A	C4-C5-C6	8.97	121.48	117.00
2	BA	1531	A	N1-C6-N6	8.96	123.98	118.60
3	DA	522	A	N9-C4-C5	8.96	109.39	105.80
3	DA	1121	C	N1-C2-O2	8.96	124.28	118.90
3	DA	2619	C	O5'-P-OP2	-8.96	97.63	105.70
3	DA	1134	A	N9-C4-C5	8.96	109.38	105.80
3	DA	1131	G	OP1-P-O3'	8.96	124.91	105.20
4	CA	2029	G	C4-C5-N7	8.96	114.38	110.80
3	DA	1630	A	N1-C6-N6	-8.96	113.23	118.60
1	AA	1477	U	O5'-P-OP2	-8.95	97.64	105.70
4	CA	335	C	C6-N1-C2	-8.95	116.72	120.30
2	BA	517	G	O5'-P-OP2	-8.95	97.65	105.70
3	DA	708	G	O5'-P-OP1	8.95	121.44	110.70
3	DA	559	G	C4-C5-N7	8.94	114.38	110.80
3	DA	600	G	O5'-P-OP2	8.94	121.43	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1078	U	O5'-P-OP1	-8.94	97.66	105.70
1	AA	1079	G	N3-C4-C5	-8.94	124.13	128.60
3	DA	563	A	N1-C2-N3	8.94	133.77	129.30
3	DA	783	A	N3-C4-N9	-8.94	120.25	127.40
3	DA	2632	A	O5'-P-OP2	-8.94	97.66	105.70
5	DB	84	G	C8-N9-C4	-8.94	102.83	106.40
3	DA	1355	G	N3-C2-N2	8.93	126.15	119.90
3	DA	2469	A	C2-N3-C4	-8.93	106.14	110.60
3	DA	443	A	O5'-P-OP2	-8.92	97.67	105.70
3	DA	914	G	C5-C6-O6	-8.92	123.25	128.60
3	DA	1988	G	C6-C5-N7	-8.92	125.05	130.40
4	CA	1821	A	N1-C6-N6	-8.92	113.25	118.60
4	CA	2692	G	N1-C6-O6	8.92	125.25	119.90
3	DA	946	C	C4-C5-C6	8.92	121.86	117.40
3	DA	482	A	O5'-P-OP2	-8.92	97.67	105.70
3	DA	1801	A	C6-N1-C2	-8.91	113.25	118.60
3	DA	2583	G	N7-C8-N9	8.91	117.56	113.10
1	AA	1466	C	N3-C4-N4	-8.91	111.76	118.00
3	DA	852	U	N3-C4-O4	8.91	125.64	119.40
3	DA	772	C	O5'-P-OP2	-8.91	97.68	105.70
3	DA	1703	G	C2-N3-C4	-8.91	107.44	111.90
1	AA	11	G	O5'-P-OP1	-8.91	97.68	105.70
3	DA	1628	G	C4-C5-N7	8.91	114.36	110.80
3	DA	1689	A	C5-C6-N1	8.91	122.15	117.70
3	DA	1240	U	C6-N1-C2	8.90	126.34	121.00
3	DA	2078	C	O5'-P-OP1	-8.90	97.69	105.70
3	DA	211	C	N1-C2-O2	-8.90	113.56	118.90
3	DA	1960	A	OP1-P-OP2	-8.90	106.25	119.60
3	DA	2674	G	N3-C4-N9	-8.90	120.66	126.00
3	DA	1003	G	N3-C2-N2	-8.90	113.67	119.90
1	AA	944	G	N1-C6-O6	-8.89	114.56	119.90
3	DA	1314	C	OP1-P-OP2	-8.89	106.26	119.60
3	DA	2483	C	N1-C2-O2	-8.89	113.56	118.90
3	DA	675	A	O5'-P-OP2	-8.89	97.70	105.70
3	DA	1149	G	N1-C2-N2	8.89	124.20	116.20
3	DA	1814	G	N3-C2-N2	-8.89	113.68	119.90
3	DA	1264	A	OP1-P-O3'	8.89	124.76	105.20
3	DA	2863	C	C6-N1-C2	8.89	123.86	120.30
3	DA	370	G	N3-C4-C5	8.88	133.04	128.60
3	DA	702	U	N1-C2-O2	-8.88	116.58	122.80
3	DA	2244	U	N3-C4-O4	8.88	125.61	119.40
3	DA	638	G	C2-N3-C4	-8.87	107.46	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1771	C	C5-C6-N1	-8.87	116.56	121.00
3	DA	2478	A	N1-C6-N6	8.87	123.92	118.60
3	DA	2420	C	O5'-P-OP2	-8.87	97.72	105.70
3	DA	2456	C	C5-C4-N4	-8.86	114.00	120.20
35	DL	39	ILE	CG1-CB-CG2	-8.86	91.90	111.40
3	DA	1616	A	C2-N3-C4	-8.86	106.17	110.60
3	DA	67	U	N3-C2-O2	8.86	128.40	122.20
2	BA	571	U	O5'-P-OP1	-8.86	97.73	105.70
3	DA	832	U	C2-N3-C4	-8.86	121.68	127.00
3	DA	871	U	C6-N1-C2	8.86	126.31	121.00
2	BA	552	U	O5'-P-OP2	-8.86	97.73	105.70
3	DA	1134	A	O5'-P-OP1	-8.86	97.73	105.70
3	DA	957	C	O5'-P-OP1	-8.86	97.73	105.70
3	DA	2386	A	C5-C6-N6	8.86	130.78	123.70
3	DA	258	G	C6-C5-N7	-8.85	125.09	130.40
3	DA	1516	G	C5-C6-O6	-8.85	123.29	128.60
3	DA	2012	G	C4-C5-N7	8.85	114.34	110.80
3	DA	2091	C	C5-C6-N1	-8.85	116.57	121.00
4	CA	1789	A	C8-N9-C4	8.85	109.34	105.80
3	DA	855	G	N3-C2-N2	-8.85	113.71	119.90
3	DA	993	G	C5-C6-O6	8.84	133.91	128.60
3	DA	2361	G	N3-C4-N9	-8.84	120.70	126.00
5	DB	90	C	C5-C6-N1	8.84	125.42	121.00
1	AA	1365	G	N1-C6-O6	8.84	125.20	119.90
2	BA	297	G	O5'-P-OP2	-8.84	97.75	105.70
3	DA	1399	C	N1-C2-O2	-8.83	113.60	118.90
3	DA	500	G	O5'-P-OP2	-8.83	97.75	105.70
3	DA	997	G	OP1-P-OP2	-8.83	106.35	119.60
3	DA	466	A	N1-C6-N6	-8.83	113.30	118.60
3	DA	991	C	OP2-P-O3'	8.83	124.62	105.20
3	DA	1464	G	C6-C5-N7	-8.83	125.10	130.40
3	DA	127	A	C6-N1-C2	-8.83	113.30	118.60
3	DA	1853	A	C8-N9-C4	-8.83	102.27	105.80
1	AA	270	A	C8-N9-C4	-8.82	102.27	105.80
3	DA	1635	A	O5'-P-OP2	-8.82	97.76	105.70
3	DA	737	C	O5'-P-OP2	-8.82	97.77	105.70
3	DA	1427	A	N9-C4-C5	8.82	109.33	105.80
3	DA	310	A	C5-N7-C8	-8.81	99.49	103.90
5	DB	81	G	O5'-P-OP2	-8.81	97.77	105.70
1	AA	244	U	O4'-C1'-N1	-8.81	101.15	108.20
3	DA	1643	G	N3-C4-C5	8.81	133.00	128.60
4	CA	776	G	N3-C4-N9	8.81	131.28	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	339	C	C6-N1-C2	8.80	123.82	120.30
3	DA	1264	A	C2-N3-C4	8.80	115.00	110.60
3	DA	681	G	N1-C6-O6	-8.80	114.62	119.90
3	DA	2353	G	C5-N7-C8	-8.80	99.90	104.30
3	DA	1662	U	N1-C2-O2	-8.79	116.64	122.80
38	DO	71	ARG	NE-CZ-NH1	-8.79	115.90	120.30
1	AA	1413	A	C2-N3-C4	-8.79	106.20	110.60
3	DA	2359	C	OP1-P-OP2	-8.79	106.41	119.60
1	AA	586	C	O5'-P-OP1	8.79	121.25	110.70
3	DA	2592	G	N3-C2-N2	-8.79	113.75	119.90
2	BA	1532	U	C6-N1-C2	-8.79	115.73	121.00
3	DA	797	G	N1-C6-O6	8.79	125.17	119.90
3	DA	2875	C	N1-C2-O2	-8.79	113.63	118.90
3	DA	2038	G	C4-C5-N7	-8.78	107.29	110.80
1	AA	1484	C	N3-C2-O2	8.78	128.05	121.90
3	DA	36	G	C5-C6-O6	8.78	133.87	128.60
3	DA	2353	G	C6-C5-N7	-8.78	125.13	130.40
3	DA	798	G	C5-C6-O6	-8.78	123.33	128.60
3	DA	848	C	N3-C4-N4	8.78	124.14	118.00
3	DA	2480	C	O5'-P-OP2	-8.78	97.80	105.70
1	AA	1178	G	C5-C6-N1	-8.77	107.11	111.50
1	AA	766	A	C5-C6-N6	-8.77	116.68	123.70
1	AA	783	C	O5'-P-OP1	8.77	121.22	110.70
2	BA	503	C	C6-N1-C2	-8.77	116.79	120.30
3	DA	2252	G	C5-C6-N1	-8.77	107.12	111.50
4	CA	692	C	C6-N1-C2	-8.77	116.79	120.30
3	DA	2621	G	N7-C8-N9	8.76	117.48	113.10
3	DA	623	C	C6-N1-C2	8.76	123.80	120.30
3	DA	794	A	C2-N3-C4	-8.76	106.22	110.60
4	CA	523	C	C6-N1-C2	-8.76	116.80	120.30
6	BB	32	PHE	CB-CG-CD2	8.76	126.93	120.80
1	AA	1200	C	N1-C2-O2	8.76	124.15	118.90
3	DA	818	G	N1-C2-N2	-8.75	108.32	116.20
3	DA	65	U	N1-C2-O2	-8.75	116.67	122.80
3	DA	456	C	O5'-P-OP2	-8.75	97.82	105.70
4	CA	1703	G	N1-C6-O6	8.75	125.15	119.90
5	DB	99	A	C2-N3-C4	-8.75	106.22	110.60
3	DA	1573	G	C8-N9-C4	8.75	109.90	106.40
1	AA	1404	C	N1-C2-O2	-8.75	113.65	118.90
2	BA	561	U	N3-C2-O2	-8.74	116.08	122.20
1	AA	1106	G	N1-C6-O6	8.74	125.14	119.90
1	AA	1344	C	C6-N1-C2	8.74	123.80	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	DO	2	ARG	NE-CZ-NH2	-8.74	115.93	120.30
3	DA	2045	C	N1-C2-O2	-8.74	113.66	118.90
1	AA	317	U	N3-C2-O2	8.74	128.31	122.20
3	DA	1756	G	OP1-P-OP2	8.74	132.71	119.60
3	DA	2284	A	O5'-P-OP1	-8.74	97.84	105.70
3	DA	2732	G	N3-C2-N2	-8.74	113.78	119.90
3	DA	786	C	C5-C6-N1	-8.73	116.63	121.00
3	DA	1633	G	O5'-P-OP2	8.73	121.18	110.70
3	DA	1771	C	O5'-P-OP1	-8.73	97.84	105.70
3	DA	509	C	O5'-P-OP2	-8.73	97.84	105.70
3	DA	2453	A	C6-C5-N7	-8.73	126.19	132.30
1	AA	1067	A	C5-C6-N6	-8.73	116.72	123.70
3	DA	1752	C	O5'-P-OP2	-8.72	97.85	105.70
3	DA	1574	C	N3-C2-O2	8.72	128.01	121.90
3	DA	687	C	C6-N1-C2	8.72	123.79	120.30
3	DA	1986	C	N3-C2-O2	-8.72	115.80	121.90
3	DA	2000	C	C5-C4-N4	-8.72	114.09	120.20
3	DA	2546	U	C5-C4-O4	8.72	131.13	125.90
3	DA	1821	A	C6-N1-C2	-8.72	113.37	118.60
3	DA	310	A	C4-C5-N7	8.71	115.06	110.70
3	DA	565	C	C5-C6-N1	-8.71	116.64	121.00
3	DA	670	A	C4-C5-C6	8.71	121.36	117.00
3	DA	980	A	N1-C6-N6	-8.71	113.37	118.60
3	DA	996	A	C5-N7-C8	-8.71	99.54	103.90
3	DA	1004	U	O5'-P-OP1	-8.71	97.86	105.70
3	DA	524	G	C5-C6-O6	-8.71	123.37	128.60
3	DA	998	C	C2-N1-C1'	8.71	128.38	118.80
4	CA	740	C	C6-N1-C2	8.71	123.78	120.30
3	DA	782	A	C6-N1-C2	-8.71	113.37	118.60
3	DA	542	C	C6-N1-C2	8.71	123.78	120.30
3	DA	1650	A	O5'-P-OP1	-8.71	97.86	105.70
3	DA	1821	A	C5-C6-N1	8.71	122.05	117.70
3	DA	2000	C	O5'-P-OP1	8.71	121.15	110.70
2	BA	611	C	O5'-P-OP2	-8.71	97.86	105.70
1	AA	27	G	OP1-P-O3'	8.70	124.35	105.20
3	DA	945	A	C5-C6-N1	8.70	122.05	117.70
3	DA	947	A	C5-C6-N6	8.71	130.66	123.70
3	DA	965	C	N1-C2-O2	-8.71	113.68	118.90
3	DA	2573	C	C6-N1-C1'	-8.70	110.36	120.80
3	DA	2549	G	C2-N3-C4	-8.70	107.55	111.90
3	DA	1109	C	O5'-P-OP1	-8.70	97.87	105.70
3	DA	1965	C	C2-N3-C4	-8.70	115.55	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	1502	A	O5'-P-OP2	-8.70	97.87	105.70
2	BA	1391	U	O5'-P-OP2	-8.70	97.88	105.70
3	DA	1366	A	O5'-P-OP1	-8.70	97.87	105.70
3	DA	491	G	C5-C6-O6	8.69	133.82	128.60
3	DA	2889	C	C6-N1-C2	8.69	123.78	120.30
3	DA	2822	G	N1-C6-O6	8.69	125.11	119.90
2	BA	22	G	C4-C5-N7	8.69	114.28	110.80
3	DA	2697	G	O5'-P-OP2	8.69	121.13	110.70
5	DB	66	A	C2-N3-C4	-8.69	106.26	110.60
3	DA	945	A	N9-C4-C5	-8.68	102.33	105.80
3	DA	2674	G	N3-C2-N2	-8.68	113.82	119.90
3	DA	2721	A	O5'-P-OP2	-8.68	97.89	105.70
4	CA	731	C	N3-C2-O2	8.68	127.98	121.90
1	AA	267	C	OP2-P-O3'	8.68	124.30	105.20
2	BA	499	A	N1-C6-N6	-8.68	113.39	118.60
3	DA	246	C	N1-C2-O2	-8.68	113.69	118.90
3	DA	520	G	C5-C6-O6	8.68	133.81	128.60
3	DA	1638	C	C5-C4-N4	-8.68	114.12	120.20
3	DA	2063	C	N1-C2-O2	8.68	124.11	118.90
3	DA	2326	C	N3-C4-C5	8.68	125.37	121.90
3	DA	1597	A	OP1-P-O3'	8.68	124.29	105.20
3	DA	727	A	O5'-P-OP2	-8.67	97.89	105.70
1	AA	1279	G	C8-N9-C4	-8.67	102.93	106.40
3	DA	1821	A	C8-N9-C4	8.67	109.27	105.80
3	DA	700	G	O5'-P-OP1	-8.67	97.90	105.70
3	DA	2007	U	N1-C2-O2	-8.67	116.73	122.80
3	DA	2722	G	N3-C4-N9	-8.67	120.80	126.00
2	BA	565	U	O5'-P-OP1	-8.66	97.90	105.70
3	DA	2894	G	C5-N7-C8	-8.66	99.97	104.30
3	DA	1247	A	O5'-P-OP2	-8.66	97.90	105.70
3	DA	1318	U	C2-N3-C4	-8.66	121.80	127.00
2	BA	764	C	C6-N1-C2	-8.66	116.84	120.30
3	DA	2002	G	N1-C6-O6	8.66	125.10	119.90
1	AA	452	A	C2-N3-C4	-8.66	106.27	110.60
3	DA	835	C	N1-C2-O2	-8.66	113.70	118.90
3	DA	1763	G	N3-C4-C5	8.65	132.93	128.60
3	DA	1779	U	N3-C4-O4	8.65	125.46	119.40
3	DA	977	G	C5-N7-C8	-8.65	99.97	104.30
4	CA	777	G	N9-C4-C5	-8.65	101.94	105.40
1	AA	1509	C	C5-C6-N1	-8.65	116.68	121.00
2	BA	925	G	C8-N9-C4	8.65	109.86	106.40
3	DA	1231	U	OP1-P-OP2	-8.65	106.63	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2805	C	N1-C2-O2	-8.64	113.71	118.90
1	AA	500	G	O5'-P-OP2	-8.64	97.92	105.70
3	DA	559	G	C5-N7-C8	-8.64	99.98	104.30
3	DA	560	C	OP1-P-O3'	8.64	124.21	105.20
3	DA	1315	C	C6-N1-C2	8.64	123.76	120.30
3	DA	124	G	C5-C6-O6	8.64	133.78	128.60
4	CA	1676	A	N9-C4-C5	8.64	109.25	105.80
3	DA	502	A	O5'-P-OP1	-8.63	97.93	105.70
3	DA	513	A	C5-C6-N6	-8.63	116.79	123.70
3	DA	975	A	O5'-P-OP1	-8.63	97.93	105.70
3	DA	1347	A	O5'-P-OP2	-8.63	97.93	105.70
3	DA	1617	C	O5'-P-OP1	-8.63	97.93	105.70
1	AA	46	G	N3-C4-N9	-8.63	120.82	126.00
3	DA	1668	A	C2-N3-C4	-8.63	106.29	110.60
3	DA	1674	G	C2-N3-C4	-8.62	107.59	111.90
1	AA	780	A	C5-N7-C8	-8.62	99.59	103.90
2	BA	572	A	N1-C6-N6	8.62	123.77	118.60
3	DA	930	G	N1-C2-N2	8.62	123.96	116.20
1	AA	1098	C	C6-N1-C2	-8.62	116.85	120.30
3	DA	770	G	C8-N9-C4	-8.62	102.95	106.40
3	DA	1901	A	N1-C6-N6	-8.62	113.43	118.60
3	DA	1875	G	C4-C5-C6	8.61	123.97	118.80
2	BA	530	G	C4-N9-C1'	8.61	137.69	126.50
3	DA	2497	A	O5'-P-OP1	-8.61	97.95	105.70
3	DA	1546	G	N9-C4-C5	8.61	108.84	105.40
2	BA	22	G	C8-N9-C4	8.60	109.84	106.40
2	BA	1386	G	C8-N9-C4	-8.60	102.96	106.40
3	DA	2796	U	N3-C4-O4	8.60	125.42	119.40
3	DA	1650	A	N1-C2-N3	8.60	133.60	129.30
2	BA	44	A	O5'-P-OP2	-8.60	97.96	105.70
3	DA	2846	G	N1-C6-O6	8.60	125.06	119.90
3	DA	522	A	N1-C6-N6	-8.60	113.44	118.60
3	DA	617	G	C4-C5-N7	8.60	114.24	110.80
3	DA	2594	C	N1-C2-O2	-8.60	113.74	118.90
3	DA	2007	U	C5-C4-O4	-8.59	120.74	125.90
3	DA	1272	A	O5'-P-OP1	-8.59	97.97	105.70
3	DA	2002	G	C6-C5-N7	-8.59	125.25	130.40
3	DA	604	G	N3-C4-C5	8.59	132.89	128.60
4	CA	577	G	C8-N9-C4	-8.59	102.97	106.40
3	DA	977	G	C4-C5-N7	8.59	114.23	110.80
3	DA	2618	G	N1-C6-O6	-8.59	114.75	119.90
1	AA	901	A	C2-N3-C4	-8.58	106.31	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	785	G	C5-C6-O6	-8.58	123.45	128.60
3	DA	733	G	C4-C5-N7	8.58	114.23	110.80
3	DA	2359	C	C5-C4-N4	-8.58	114.19	120.20
3	DA	2500	U	O5'-P-OP1	-8.58	97.98	105.70
3	DA	1322	A	C2-N3-C4	-8.58	106.31	110.60
3	DA	1392	A	N1-C6-N6	-8.58	113.45	118.60
3	DA	841	G	N1-C6-O6	8.57	125.04	119.90
3	DA	991	C	OP1-P-OP2	-8.57	106.74	119.60
3	DA	1986	C	O5'-P-OP2	-8.57	97.98	105.70
3	DA	2033	A	O5'-P-OP2	-8.57	97.99	105.70
1	AA	1368	A	C8-N9-C4	-8.57	102.37	105.80
3	DA	2760	C	O5'-P-OP2	-8.57	97.99	105.70
4	CA	757	G	N3-C4-N9	-8.57	120.86	126.00
3	DA	856	G	OP2-P-O3'	8.57	124.05	105.20
51	D1	9	ARG	NE-CZ-NH2	8.57	124.58	120.30
4	CA	1986	C	C6-N1-C2	8.56	123.72	120.30
3	DA	187	G	N3-C2-N2	-8.56	113.91	119.90
3	DA	1223	G	C5-C6-O6	8.56	133.74	128.60
3	DA	188	G	N1-C2-N2	8.56	123.90	116.20
3	DA	861	A	C2-N3-C4	-8.56	106.32	110.60
3	DA	2009	A	N1-C2-N3	8.55	133.57	129.30
1	AA	390	U	O5'-P-OP2	-8.55	98.01	105.70
3	DA	528	A	N7-C8-N9	8.55	118.08	113.80
3	DA	981	A	N1-C2-N3	-8.55	125.03	129.30
3	DA	1669	A	O5'-P-OP1	-8.55	98.01	105.70
3	DA	2288	A	O5'-P-OP1	-8.55	98.01	105.70
3	DA	97	C	C5-C4-N4	-8.54	114.22	120.20
3	DA	777	G	OP2-P-O3'	8.54	124.00	105.20
3	DA	950	G	O5'-P-OP1	8.54	120.95	110.70
3	DA	987	C	O5'-P-OP2	-8.54	98.01	105.70
1	AA	1069	C	O5'-P-OP1	-8.54	98.01	105.70
4	CA	1803	A	N1-C6-N6	-8.54	113.47	118.60
3	DA	1288	G	C4-C5-N7	8.54	114.22	110.80
3	DA	2852	G	O5'-P-OP2	-8.54	98.01	105.70
3	DA	2440	C	C5-C6-N1	-8.54	116.73	121.00
4	CA	1896	G	N1-C6-O6	8.54	125.02	119.90
3	DA	821	A	C8-N9-C4	8.54	109.21	105.80
3	DA	969	G	N1-C6-O6	8.54	125.02	119.90
3	DA	1609	A	N9-C4-C5	-8.53	102.39	105.80
3	DA	1272	A	N9-C4-C5	8.53	109.21	105.80
3	DA	702	U	N3-C2-O2	8.53	128.17	122.20
3	DA	1686	C	N3-C2-O2	8.53	127.87	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2317	A	O5'-P-OP1	-8.53	98.03	105.70
2	BA	20	U	O5'-P-OP2	-8.53	98.03	105.70
1	AA	1243	C	O5'-P-OP2	-8.52	98.03	105.70
3	DA	383	C	C6-N1-C2	8.52	123.71	120.30
3	DA	972	A	N1-C6-N6	-8.52	113.49	118.60
3	DA	2024	G	C6-C5-N7	8.52	135.51	130.40
3	DA	2536	G	C2-N3-C4	-8.52	107.64	111.90
1	AA	888	G	O5'-P-OP1	8.52	120.92	110.70
3	DA	1787	A	N9-C4-C5	-8.52	102.39	105.80
3	DA	1217	U	N3-C4-O4	8.52	125.36	119.40
4	CA	764	A	N1-C6-N6	-8.52	113.49	118.60
1	AA	1501	C	OP2-P-O3'	8.51	123.93	105.20
3	DA	2253	G	C5-C6-N1	-8.51	107.24	111.50
2	BA	580	C	C6-N1-C2	-8.51	116.90	120.30
3	DA	1136	G	N7-C8-N9	8.51	117.35	113.10
3	DA	1266	G	N1-C6-O6	-8.51	114.80	119.90
3	DA	2005	A	O5'-P-OP1	8.51	120.91	110.70
3	DA	1680	U	N3-C4-O4	-8.51	113.45	119.40
3	DA	1223	G	OP2-P-O3'	8.50	123.91	105.20
3	DA	1788	C	C2-N3-C4	-8.50	115.65	119.90
19	BO	58	ARG	NE-CZ-NH2	-8.50	116.05	120.30
4	CA	635	C	N3-C2-O2	-8.50	115.95	121.90
1	AA	235	C	C5-C4-N4	-8.50	114.25	120.20
1	AA	361	G	O5'-P-OP1	-8.50	98.05	105.70
2	BA	730	G	N3-C2-N2	-8.50	113.95	119.90
3	DA	455	C	OP1-P-OP2	8.50	132.35	119.60
1	AA	1070	U	O5'-P-OP1	-8.50	98.05	105.70
4	CA	2601	C	O5'-P-OP2	-8.50	98.05	105.70
3	DA	1368	G	N9-C4-C5	8.49	108.80	105.40
3	DA	2808	G	C6-C5-N7	-8.49	125.30	130.40
2	BA	931	C	C6-N1-C2	-8.49	116.91	120.30
3	DA	2465	C	N3-C4-C5	8.49	125.30	121.90
3	DA	2820	A	C5-N7-C8	-8.49	99.66	103.90
4	CA	189	G	C8-N9-C4	-8.49	103.01	106.40
3	DA	203	A	C6-C5-N7	-8.48	126.36	132.30
4	CA	693	A	C2-N3-C4	8.48	114.84	110.60
2	BA	1521	C	C6-N1-C2	-8.48	116.91	120.30
2	BA	392	C	C6-N1-C2	8.48	123.69	120.30
3	DA	513	A	N1-C6-N6	8.48	123.69	118.60
3	DA	11	C	C2-N3-C4	-8.47	115.66	119.90
3	DA	26	G	O5'-P-OP2	-8.47	98.07	105.70
4	CA	411	G	N3-C4-C5	8.47	132.84	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	84	G	C6-C5-N7	-8.47	125.31	130.40
4	CA	2601	C	N3-C4-C5	-8.47	118.51	121.90
3	DA	986	C	C2-N3-C4	-8.47	115.67	119.90
3	DA	2029	G	C5-C6-N1	-8.47	107.27	111.50
3	DA	2455	G	C5-C6-O6	8.47	133.68	128.60
2	BA	1510	C	N3-C4-N4	8.46	123.92	118.00
3	DA	2716	C	C6-N1-C2	8.46	123.69	120.30
3	DA	1738	G	N3-C4-C5	-8.46	124.37	128.60
3	DA	29	U	N3-C4-O4	8.46	125.32	119.40
3	DA	1812	U	N3-C2-O2	8.46	128.12	122.20
3	DA	591	U	N1-C2-O2	-8.46	116.88	122.80
3	DA	1142	A	N9-C4-C5	-8.46	102.42	105.80
3	DA	1763	G	N3-C4-N9	-8.46	120.93	126.00
3	DA	1799	G	OP2-P-O3'	8.46	123.80	105.20
4	CA	1941	C	O5'-P-OP1	-8.46	98.09	105.70
1	AA	558	G	C8-N9-C4	-8.45	103.02	106.40
3	DA	1754	A	C5-C6-N1	8.45	121.93	117.70
3	DA	1937	A	C6-C5-N7	-8.45	126.39	132.30
3	DA	2739	U	OP1-P-OP2	-8.45	106.93	119.60
3	DA	738	G	N1-C2-N2	-8.45	108.60	116.20
3	DA	1027	A	C5-C6-N1	-8.45	113.48	117.70
1	AA	880	C	C6-N1-C2	8.45	123.68	120.30
3	DA	668	A	C2-N3-C4	-8.45	106.38	110.60
3	DA	2250	G	N3-C2-N2	-8.45	113.99	119.90
3	DA	2375	G	OP1-P-OP2	8.44	132.26	119.60
3	DA	1682	G	C4-N9-C1'	8.44	137.48	126.50
3	DA	556	A	C2-N3-C4	8.44	114.82	110.60
3	DA	789	A	O5'-P-OP1	-8.44	98.10	105.70
4	CA	203	A	C6-C5-N7	-8.44	126.39	132.30
3	DA	140	C	C6-N1-C2	-8.44	116.92	120.30
3	DA	481	G	C2-N3-C4	8.44	116.12	111.90
3	DA	666	A	C6-N1-C2	-8.44	113.54	118.60
4	CA	1700	A	C6-N1-C2	-8.43	113.54	118.60
4	CA	2233	U	C6-N1-C2	-8.43	115.94	121.00
45	CV	40	LEU	CB-CG-CD1	-8.43	96.66	111.00
3	DA	832	U	N1-C2-N3	8.43	119.96	114.90
3	DA	848	C	C5-C4-N4	-8.43	114.30	120.20
3	DA	2866	U	O5'-P-OP1	-8.43	98.11	105.70
3	DA	2007	U	N3-C4-O4	8.43	125.30	119.40
3	DA	2553	G	N1-C2-N2	-8.43	108.62	116.20
26	BL	50	ARG	NE-CZ-NH2	-8.43	116.09	120.30
3	DA	2475	C	O5'-P-OP1	-8.42	98.12	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	977	G	N3-C2-N2	-8.42	114.00	119.90
3	DA	2023	C	N3-C4-C5	-8.42	118.53	121.90
3	DA	2308	G	C5-N7-C8	-8.42	100.09	104.30
3	DA	2499	C	OP1-P-O3'	8.42	123.72	105.20
4	CA	2437	G	N1-C6-O6	8.42	124.95	119.90
1	AA	4	U	C2-N1-C1'	8.42	127.80	117.70
1	AA	1508	A	C8-N9-C4	8.42	109.17	105.80
3	DA	1348	C	C5-C4-N4	-8.42	114.31	120.20
3	DA	465	G	O5'-P-OP1	-8.41	98.13	105.70
3	DA	1966	A	OP1-P-OP2	8.41	132.22	119.60
3	DA	2613	U	C2-N3-C4	8.41	132.05	127.00
1	AA	805	C	C2-N3-C4	8.41	124.10	119.90
3	DA	989	G	C2-N3-C4	-8.41	107.70	111.90
1	AA	971	G	N3-C4-C5	8.40	132.80	128.60
3	DA	1472	C	C6-N1-C2	8.40	123.66	120.30
3	DA	742	A	C2-N3-C4	-8.40	106.40	110.60
1	AA	324	G	O5'-P-OP2	-8.39	98.15	105.70
3	DA	1017	G	N1-C2-N2	8.39	123.75	116.20
3	DA	2613	U	C5-C6-N1	8.39	126.89	122.70
4	CA	2056	G	N1-C6-O6	8.39	124.93	119.90
2	BA	1171	A	O5'-P-OP1	-8.38	98.15	105.70
3	DA	668	A	O5'-P-OP1	-8.38	98.15	105.70
3	DA	1677	A	C4-C5-C6	8.38	121.19	117.00
4	CA	757	G	N3-C4-C5	8.38	132.79	128.60
3	DA	1959	G	OP2-P-O3'	8.38	123.64	105.20
3	DA	775	G	N1-C6-O6	8.38	124.93	119.90
3	DA	1188	U	OP2-P-O3'	8.38	123.64	105.20
3	DA	1311	G	O4'-C1'-N9	8.38	114.91	108.20
3	DA	1562	U	C2-N3-C4	8.38	132.03	127.00
3	DA	1817	G	C5-C6-O6	8.38	133.63	128.60
1	AA	881	G	OP1-P-OP2	-8.38	107.03	119.60
3	DA	691	C	N3-C4-C5	8.38	125.25	121.90
3	DA	760	G	C5-N7-C8	-8.38	100.11	104.30
1	AA	375	U	O5'-P-OP2	8.37	120.75	110.70
3	DA	789	A	C6-N1-C2	-8.37	113.58	118.60
3	DA	2009	A	C2-N3-C4	-8.37	106.41	110.60
3	DA	604	G	N3-C4-N9	-8.37	120.98	126.00
3	DA	2370	G	C5-C6-O6	-8.37	123.58	128.60
3	DA	686	U	C5-C4-O4	8.36	130.92	125.90
3	DA	840	C	C6-N1-C2	8.36	123.64	120.30
3	DA	1114	C	C5-C4-N4	-8.36	114.35	120.20
3	DA	2392	A	O5'-P-OP1	-8.36	98.18	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1959	G	N3-C4-C5	8.36	132.78	128.60
4	CA	2255	G	N3-C4-N9	-8.36	120.99	126.00
3	DA	1622	G	C5-C6-O6	8.35	133.61	128.60
3	DA	2098	U	N3-C2-O2	8.35	128.05	122.20
2	BA	1527	U	C5-C6-N1	-8.35	118.52	122.70
3	DA	1608	A	C2-N3-C4	-8.35	106.42	110.60
3	DA	1787	A	O4'-C1'-N9	-8.35	101.52	108.20
4	CA	1983	G	N9-C4-C5	8.35	108.74	105.40
1	AA	108	G	C4-C5-N7	8.35	114.14	110.80
3	DA	948	C	N3-C4-C5	-8.35	118.56	121.90
3	DA	2363	G	N1-C6-O6	8.35	124.91	119.90
3	DA	2788	C	C2-N3-C4	-8.35	115.73	119.90
2	BA	1072	G	O5'-P-OP2	-8.34	98.19	105.70
3	DA	1276	A	C4-C5-N7	8.34	114.87	110.70
3	DA	2204	G	C6-C5-N7	-8.34	125.39	130.40
3	DA	2560	A	C5-N7-C8	-8.34	99.73	103.90
3	DA	947	A	N1-C6-N6	-8.34	113.60	118.60
3	DA	1002	G	N3-C4-N9	-8.34	121.00	126.00
3	DA	1956	U	C6-N1-C2	8.34	126.00	121.00
3	DA	1268	A	C5-C6-N1	8.34	121.87	117.70
1	AA	1234	C	C6-N1-C2	-8.34	116.97	120.30
1	AA	1391	U	OP2-P-O3'	8.34	123.54	105.20
3	DA	782	A	C5-C6-N6	-8.33	117.03	123.70
3	DA	968	C	OP2-P-O3'	8.33	123.53	105.20
4	CA	635	C	C6-N1-C2	-8.33	116.97	120.30
3	DA	2032	G	C5-C6-N1	-8.33	107.34	111.50
3	DA	2587	A	N1-C2-N3	8.33	133.46	129.30
2	BA	1186	G	C2-N3-C4	-8.32	107.74	111.90
3	DA	491	G	N3-C4-N9	-8.32	121.01	126.00
3	DA	1194	A	N1-C6-N6	-8.32	113.61	118.60
1	AA	1075	U	OP1-P-OP2	-8.32	107.12	119.60
3	DA	126	A	C6-C5-N7	-8.32	126.47	132.30
3	DA	1238	G	N3-C2-N2	8.32	125.72	119.90
3	DA	1972	G	N7-C8-N9	8.32	117.26	113.10
3	DA	618	G	C2-N3-C4	-8.32	107.74	111.90
3	DA	2771	C	C5-C4-N4	-8.32	114.38	120.20
4	CA	1797	G	N1-C6-O6	-8.32	114.91	119.90
2	BA	22	G	N9-C4-C5	-8.31	102.08	105.40
3	DA	991	C	N3-C4-N4	8.31	123.82	118.00
2	BA	404	G	C5-C6-O6	-8.31	123.62	128.60
3	DA	14	A	N1-C2-N3	-8.31	125.15	129.30
3	DA	2440	C	C6-N1-C2	8.31	123.62	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2643	G	C2-N3-C4	-8.31	107.75	111.90
2	BA	24	U	OP2-P-O3'	8.31	123.47	105.20
3	DA	53	A	C4-C5-C6	8.30	121.15	117.00
3	DA	2892	G	OP1-P-OP2	8.30	132.06	119.60
3	DA	1147	A	C2-N3-C4	-8.30	106.45	110.60
3	DA	2846	G	C5-C6-O6	-8.30	123.62	128.60
1	AA	742	G	N3-C4-N9	-8.30	121.02	126.00
3	DA	689	A	N9-C4-C5	8.30	109.12	105.80
3	DA	842	U	OP1-P-O3'	-8.30	86.94	105.20
3	DA	1194	A	C4-C5-N7	-8.30	106.55	110.70
3	DA	2674	G	N1-C2-N2	8.30	123.67	116.20
4	CA	1995	U	C5-C4-O4	-8.30	120.92	125.90
3	DA	2050	C	C5-C6-N1	-8.30	116.85	121.00
3	DA	705	A	C6-C5-N7	-8.29	126.49	132.30
3	DA	1249	U	O5'-P-OP2	-8.29	98.23	105.70
3	DA	2310	C	O5'-P-OP2	-8.30	98.23	105.70
3	DA	1682	G	C8-N9-C1'	-8.29	116.22	127.00
5	DB	64	G	C5-C6-O6	-8.29	123.63	128.60
3	DA	814	C	N3-C4-C5	8.29	125.21	121.90
2	BA	1178	G	C8-N9-C4	-8.28	103.09	106.40
3	DA	1825	U	O5'-P-OP1	-8.28	98.24	105.70
3	DA	2013	A	N1-C2-N3	8.28	133.44	129.30
3	DA	1292	G	N3-C4-C5	8.28	132.74	128.60
3	DA	2045	C	N3-C2-O2	8.28	127.70	121.90
3	DA	2499	C	C4-C5-C6	-8.28	113.26	117.40
4	CA	411	G	C8-N9-C1'	8.28	137.77	127.00
5	DB	64	G	C4-C5-N7	8.28	114.11	110.80
3	DA	604	G	N1-C6-O6	8.28	124.87	119.90
3	DA	2361	G	C2-N3-C4	-8.28	107.76	111.90
1	AA	583	A	N1-C6-N6	8.28	123.56	118.60
3	DA	2066	C	C5-C4-N4	-8.28	114.41	120.20
3	DA	2310	C	N1-C2-O2	8.28	123.87	118.90
3	DA	909	A	O5'-P-OP2	-8.27	98.25	105.70
3	DA	1638	C	N3-C4-N4	8.27	123.79	118.00
3	DA	1843	C	C5-C4-N4	-8.27	114.41	120.20
3	DA	1399	C	C6-N1-C2	8.27	123.61	120.30
3	DA	2760	C	N1-C2-O2	-8.27	113.94	118.90
3	DA	700	G	N3-C4-C5	8.27	132.73	128.60
3	DA	1010	A	C8-N9-C4	-8.27	102.49	105.80
3	DA	2686	G	C2-N3-C4	-8.27	107.77	111.90
3	DA	773	U	N3-C4-O4	-8.27	113.61	119.40
3	DA	821	A	N1-C6-N6	8.27	123.56	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2054	A	O5'-P-OP2	8.27	120.62	110.70
3	DA	2820	A	N3-C4-C5	8.27	132.59	126.80
4	CA	2250	G	C8-N9-C4	-8.27	103.09	106.40
3	DA	1121	C	N3-C4-C5	8.26	125.20	121.90
4	CA	1822	C	OP1-P-OP2	-8.26	107.21	119.60
3	DA	2058	A	O5'-P-OP2	-8.26	98.27	105.70
3	DA	2823	A	O5'-P-OP1	-8.26	98.27	105.70
3	DA	1687	G	N3-C4-C5	-8.26	124.47	128.60
3	DA	1771	C	C2-N3-C4	-8.26	115.77	119.90
4	CA	1666	G	N1-C6-O6	-8.26	114.95	119.90
3	DA	2249	U	N3-C2-O2	8.26	127.98	122.20
3	DA	738	G	C5-C6-N1	-8.25	107.37	111.50
3	DA	2751	G	N7-C8-N9	8.25	117.23	113.10
3	DA	823	C	C6-N1-C2	8.25	123.60	120.30
3	DA	773	U	C5-C4-O4	8.25	130.85	125.90
3	DA	2070	A	N1-C2-N3	8.25	133.42	129.30
1	AA	1363	A	O5'-P-OP1	-8.25	98.28	105.70
3	DA	298	G	N3-C2-N2	-8.25	114.13	119.90
3	DA	771	G	O5'-P-OP1	-8.25	98.28	105.70
3	DA	1247	A	C8-N9-C4	8.24	109.10	105.80
3	DA	2635	A	C8-N9-C4	8.24	109.10	105.80
3	DA	1875	G	C2-N3-C4	-8.24	107.78	111.90
3	DA	1985	C	O5'-P-OP1	-8.24	98.28	105.70
3	DA	2791	G	N3-C4-N9	-8.24	121.06	126.00
3	DA	558	U	C5-C4-O4	-8.24	120.96	125.90
3	DA	1298	C	OP2-P-O3'	8.24	123.32	105.20
4	CA	785	G	N3-C4-C5	8.24	132.72	128.60
3	DA	2051	A	C8-N9-C4	-8.23	102.51	105.80
3	DA	2452	C	C6-N1-C2	-8.23	117.01	120.30
1	AA	326	G	C8-N9-C1'	-8.23	116.30	127.00
3	DA	1317	G	O5'-P-OP2	-8.23	98.29	105.70
2	BA	571	U	N3-C4-O4	8.23	125.16	119.40
3	DA	96	C	N3-C4-N4	-8.23	112.24	118.00
3	DA	2261	C	C6-N1-C2	-8.23	117.01	120.30
3	DA	1464	G	C5-C6-O6	-8.22	123.67	128.60
3	DA	2286	G	N1-C6-O6	8.22	124.83	119.90
3	DA	1048	A	C2-N3-C4	-8.22	106.49	110.60
1	AA	279	A	C5-N7-C8	-8.22	99.79	103.90
3	DA	771	G	OP1-P-OP2	8.22	131.93	119.60
2	BA	530	G	C8-N9-C1'	-8.22	116.32	127.00
3	DA	1644	C	OP1-P-O3'	-8.22	87.12	105.20
2	BA	869	G	O5'-P-OP1	-8.21	98.31	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1302	A	N9-C4-C5	-8.22	102.51	105.80
3	DA	15	G	N3-C4-N9	-8.21	121.07	126.00
3	DA	825	A	C8-N9-C4	-8.21	102.51	105.80
3	DA	701	G	N1-C6-O6	8.21	124.83	119.90
3	DA	854	C	N3-C4-C5	8.21	125.19	121.90
3	DA	1764	C	N3-C4-C5	8.21	125.19	121.90
3	DA	1031	G	C5-C6-O6	-8.21	123.67	128.60
3	DA	1163	G	N1-C6-O6	8.21	124.83	119.90
1	AA	910	C	N1-C2-O2	-8.21	113.97	118.90
3	DA	31	C	C6-N1-C2	8.21	123.58	120.30
3	DA	57	C	C5-C4-N4	-8.21	114.45	120.20
3	DA	1814	G	N1-C6-O6	8.21	124.82	119.90
1	AA	890	G	O4'-C1'-N9	8.20	114.76	108.20
3	DA	1981	A	N1-C2-N3	8.20	133.40	129.30
3	DA	830	G	N1-C2-N3	8.20	128.82	123.90
4	CA	2242	G	O5'-P-OP1	8.20	120.54	110.70
1	AA	781	A	C4-C5-N7	8.20	114.80	110.70
3	DA	1643	G	C5-N7-C8	-8.20	100.20	104.30
3	DA	1223	G	N3-C4-N9	-8.20	121.08	126.00
3	DA	1797	G	C8-N9-C1'	-8.19	116.35	127.00
3	DA	2334	U	OP1-P-O3'	8.19	123.22	105.20
3	DA	2453	A	C5-C6-N6	-8.19	117.15	123.70
1	AA	570	G	OP2-P-O3'	8.19	123.21	105.20
3	DA	1460	U	O5'-P-OP2	-8.19	98.33	105.70
2	BA	928	G	O5'-P-OP2	8.19	120.52	110.70
3	DA	2068	U	N1-C2-O2	-8.19	117.07	122.80
3	DA	2373	G	OP1-P-O3'	-8.19	87.19	105.20
3	DA	2644	G	C5-C6-N1	-8.19	107.41	111.50
3	DA	2895	G	C5-C6-O6	-8.19	123.69	128.60
1	AA	1111	A	N1-C6-N6	-8.18	113.69	118.60
3	DA	493	G	C8-N9-C4	-8.18	103.13	106.40
3	DA	1653	G	N1-C6-O6	8.18	124.81	119.90
3	DA	973	A	N1-C6-N6	-8.18	113.69	118.60
3	DA	1128	G	C5-C6-O6	-8.18	123.69	128.60
3	DA	2294	G	OP1-P-OP2	-8.18	107.34	119.60
3	DA	2546	U	N1-C2-O2	8.18	128.52	122.80
1	AA	332	G	N3-C4-N9	-8.17	121.09	126.00
1	AA	401	C	O5'-P-OP2	-8.17	98.34	105.70
3	DA	515	A	C5-C6-N6	8.17	130.24	123.70
2	BA	1077	G	C2-N3-C4	-8.17	107.81	111.90
3	DA	2367	G	O5'-P-OP2	-8.17	98.35	105.70
1	AA	1476	A	N1-C6-N6	-8.17	113.70	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
14	AJ	10	LEU	CB-CG-CD2	-8.17	97.12	111.00
2	BA	865	A	OP2-P-O3'	8.16	123.16	105.20
3	DA	1301	A	N1-C6-N6	8.16	123.50	118.60
3	DA	1565	C	N3-C4-C5	8.16	125.17	121.90
3	DA	1671	U	OP1-P-O3'	8.16	123.16	105.20
3	DA	1121	C	O5'-P-OP1	8.16	120.49	110.70
3	DA	983	A	N9-C4-C5	8.16	109.06	105.80
2	BA	1515	G	N1-C6-O6	8.16	124.79	119.90
3	DA	691	C	C2-N3-C4	-8.16	115.82	119.90
3	DA	787	C	N3-C4-N4	-8.16	112.29	118.00
3	DA	1772	A	C5-C6-N6	-8.16	117.17	123.70
3	DA	298	G	N9-C4-C5	8.15	108.66	105.40
3	DA	749	A	C5-N7-C8	-8.15	99.82	103.90
3	DA	2440	C	O5'-P-OP2	-8.15	98.36	105.70
1	AA	881	G	C5-C6-O6	-8.15	123.71	128.60
3	DA	1317	G	OP1-P-O3'	8.15	123.13	105.20
3	DA	2342	C	O5'-P-OP1	-8.15	98.36	105.70
3	DA	2789	C	C5-C4-N4	-8.15	114.49	120.20
4	CA	1823	G	OP1-P-OP2	-8.15	107.38	119.60
3	DA	73	A	N1-C6-N6	-8.15	113.71	118.60
3	DA	684	G	C2-N3-C4	-8.15	107.83	111.90
3	DA	750	A	C4-C5-N7	8.14	114.77	110.70
3	DA	150	U	O5'-P-OP2	-8.14	98.37	105.70
3	DA	1168	G	N3-C2-N2	8.14	125.60	119.90
3	DA	2676	C	C5-C4-N4	-8.14	114.50	120.20
4	CA	1677	A	N1-C6-N6	8.14	123.48	118.60
1	AA	780	A	O5'-P-OP2	8.14	120.47	110.70
3	DA	795	C	C5-C6-N1	-8.14	116.93	121.00
3	DA	2359	C	N3-C4-C5	8.14	125.16	121.90
3	DA	2867	G	C5-N7-C8	-8.14	100.23	104.30
1	AA	910	C	N3-C4-C5	8.14	125.15	121.90
3	DA	52	A	N1-C6-N6	8.13	123.48	118.60
3	DA	760	G	N1-C6-O6	8.13	124.78	119.90
3	DA	2507	C	C6-N1-C2	-8.13	117.05	120.30
5	DB	92	C	C6-N1-C2	8.13	123.55	120.30
1	AA	971	G	C5-C6-O6	-8.13	123.72	128.60
3	DA	811	U	C6-N1-C2	8.13	125.88	121.00
3	DA	1268	A	N1-C2-N3	8.13	133.37	129.30
3	DA	551	G	N7-C8-N9	8.13	117.16	113.10
3	DA	716	A	N1-C6-N6	8.13	123.48	118.60
3	DA	1695	G	N7-C8-N9	8.13	117.16	113.10
4	CA	784	G	N3-C4-C5	-8.13	124.54	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	880	C	C5-C4-N4	-8.13	114.51	120.20
3	DA	2699	C	C2-N3-C4	-8.12	115.84	119.90
3	DA	1006	C	N3-C4-C5	8.12	125.15	121.90
4	CA	2607	G	C8-N9-C1'	-8.12	116.44	127.00
1	AA	1481	U	OP2-P-O3'	8.12	123.06	105.20
2	BA	1526	G	OP1-P-OP2	8.12	131.78	119.60
3	DA	65	U	N3-C2-O2	8.12	127.88	122.20
3	DA	1322	A	N1-C2-N3	8.12	133.36	129.30
3	DA	680	C	C5-C4-N4	-8.12	114.52	120.20
3	DA	1102	C	C6-N1-C2	-8.12	117.05	120.30
3	DA	2577	A	N1-C6-N6	8.12	123.47	118.60
1	AA	361	G	N1-C6-O6	8.11	124.77	119.90
1	AA	893	C	N3-C4-N4	8.11	123.68	118.00
1	AA	1510	C	C5-C4-N4	-8.11	114.52	120.20
3	DA	2490	G	N1-C2-N2	-8.11	108.90	116.20
3	DA	2490	G	O5'-P-OP2	-8.11	98.40	105.70
4	CA	186	G	N3-C4-N9	-8.11	121.13	126.00
4	CA	1652	A	N1-C6-N6	8.11	123.47	118.60
3	DA	1139	G	C4-N9-C1'	8.11	137.04	126.50
3	DA	2393	U	C5-C6-N1	8.11	126.75	122.70
3	DA	2789	C	N3-C4-N4	8.11	123.67	118.00
3	DA	770	G	C5-C6-O6	-8.11	123.74	128.60
3	DA	1018	U	N1-C2-N3	-8.10	110.04	114.90
3	DA	1720	U	O5'-P-OP2	-8.10	98.41	105.70
3	DA	2308	G	C2-N3-C4	-8.10	107.85	111.90
3	DA	2347	C	N3-C4-C5	8.10	125.14	121.90
3	DA	2448	A	C2-N3-C4	-8.10	106.55	110.60
3	DA	2868	A	C4-C5-C6	8.10	121.05	117.00
3	DA	2626	C	N3-C4-C5	8.10	125.14	121.90
1	AA	1502	A	O5'-P-OP2	-8.10	98.41	105.70
3	DA	1638	C	C6-N1-C2	8.10	123.54	120.30
3	DA	2315	G	C5-C6-O6	-8.10	123.74	128.60
3	DA	2483	C	N3-C4-N4	8.10	123.67	118.00
3	DA	2751	G	C8-N9-C4	-8.10	103.16	106.40
3	DA	2571	U	N3-C2-O2	8.10	127.87	122.20
3	DA	25	U	C5-C6-N1	-8.09	118.65	122.70
3	DA	2267	A	OP1-P-O3'	8.09	123.01	105.20
3	DA	2268	A	N1-C2-N3	8.09	133.35	129.30
3	DA	1194	A	C5-N7-C8	8.09	107.94	103.90
3	DA	1665	A	C4-C5-C6	8.09	121.04	117.00
1	AA	1365	G	C5-C6-O6	-8.09	123.75	128.60
2	BA	1395	C	C6-N1-C2	8.09	123.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2230	G	N1-C2-N2	-8.09	108.92	116.20
1	AA	142	G	C6-C5-N7	-8.08	125.55	130.40
3	DA	661	A	C8-N9-C4	8.08	109.03	105.80
3	DA	684	G	N3-C4-N9	-8.08	121.15	126.00
3	DA	1157	G	OP1-P-OP2	-8.08	107.47	119.60
3	DA	1992	G	O5'-P-OP2	-8.08	98.43	105.70
3	DA	1163	G	C5-C6-O6	-8.08	123.75	128.60
3	DA	924	G	C5-C6-O6	8.08	133.45	128.60
1	AA	399	G	C6-C5-N7	-8.08	125.55	130.40
3	DA	577	G	C6-C5-N7	-8.08	125.55	130.40
1	AA	864	A	OP1-P-OP2	-8.07	107.49	119.60
2	BA	706	A	C2-N3-C4	-8.07	106.56	110.60
3	DA	789	A	N1-C2-N3	8.07	133.34	129.30
3	DA	807	U	N3-C4-O4	8.07	125.05	119.40
3	DA	906	U	C2-N1-C1'	-8.07	108.01	117.70
3	DA	2658	C	N1-C2-O2	-8.07	114.06	118.90
3	DA	1653	G	N3-C2-N2	-8.07	114.25	119.90
4	CA	1255	U	C5-C4-O4	-8.07	121.06	125.90
3	DA	1368	G	N3-C2-N2	-8.07	114.25	119.90
3	DA	583	G	C8-N9-C4	-8.07	103.17	106.40
3	DA	2271	G	C5-C6-O6	-8.07	123.76	128.60
3	DA	30	G	OP1-P-O3'	8.06	122.94	105.20
3	DA	189	G	N3-C2-N2	-8.06	114.25	119.90
3	DA	942	G	N3-C4-C5	8.06	132.63	128.60
1	AA	1426	G	C6-C5-N7	-8.06	125.56	130.40
3	DA	1141	U	C2-N3-C4	8.06	131.84	127.00
3	DA	952	G	C5-N7-C8	-8.06	100.27	104.30
3	DA	2728	U	C6-N1-C2	-8.06	116.17	121.00
3	DA	936	A	C2-N3-C4	-8.05	106.57	110.60
3	DA	2423	U	O5'-P-OP1	-8.05	98.45	105.70
3	DA	793	A	O5'-P-OP2	-8.05	98.45	105.70
3	DA	2428	G	N1-C2-N2	8.05	123.44	116.20
3	DA	2887	A	C5-C6-N1	8.05	121.72	117.70
2	BA	241	G	N3-C4-N9	-8.05	121.17	126.00
3	DA	446	G	C8-N9-C4	8.05	109.62	106.40
3	DA	531	C	O4'-C1'-N1	-8.05	101.76	108.20
3	DA	1139	G	C8-N9-C4	-8.05	103.18	106.40
3	DA	1661	G	N1-C2-N3	-8.05	119.07	123.90
3	DA	1686	C	C5-C4-N4	-8.05	114.57	120.20
3	DA	707	G	C2-N3-C4	-8.04	107.88	111.90
3	DA	2773	C	C2-N3-C4	-8.05	115.88	119.90
4	CA	1687	G	C4-C5-N7	-8.04	107.58	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	580	C	C6-N1-C2	8.04	123.52	120.30
3	DA	841	G	C5-C6-O6	-8.04	123.78	128.60
3	DA	770	G	N1-C6-O6	8.04	124.72	119.90
3	DA	933	A	C8-N9-C4	8.04	109.02	105.80
3	DA	1141	U	N3-C4-C5	-8.04	109.78	114.60
4	CA	1796	U	C5-C4-O4	8.04	130.72	125.90
5	DB	99	A	C5-C6-N6	8.04	130.13	123.70
3	DA	152	A	C5-N7-C8	-8.04	99.88	103.90
3	DA	570	G	C4-C5-N7	8.04	114.01	110.80
3	DA	2799	A	N1-C6-N6	8.04	123.42	118.60
3	DA	2286	G	C5-C6-O6	-8.03	123.78	128.60
3	DA	1020	A	C5-C6-N6	-8.03	117.28	123.70
3	DA	2281	A	O5'-P-OP1	-8.03	98.47	105.70
1	AA	987	G	C8-N9-C4	-8.03	103.19	106.40
1	AA	920	U	N3-C2-O2	-8.03	116.58	122.20
3	DA	2273	A	C5-C6-N6	-8.02	117.28	123.70
1	AA	134	G	N3-C4-C5	8.02	132.61	128.60
2	BA	524	G	O5'-P-OP1	-8.02	98.48	105.70
3	DA	17	G	N9-C4-C5	8.02	108.61	105.40
3	DA	561	G	C5-C6-O6	-8.02	123.79	128.60
3	DA	2559	C	C6-N1-C2	8.02	123.51	120.30
1	AA	553	A	O5'-P-OP2	-8.02	98.48	105.70
1	AA	1202	U	O5'-P-OP1	-8.02	98.49	105.70
2	BA	26	A	O5'-P-OP2	-8.02	98.49	105.70
2	BA	1106	G	C8-N9-C4	-8.02	103.19	106.40
3	DA	1546	G	N3-C2-N2	-8.02	114.29	119.90
3	DA	1794	A	N1-C6-N6	8.02	123.41	118.60
1	AA	737	C	C6-N1-C2	-8.01	117.10	120.30
3	DA	1958	C	C6-N1-C2	8.01	123.50	120.30
5	DB	21	G	N1-C2-N3	8.01	128.71	123.90
3	DA	813	U	OP1-P-OP2	8.01	131.61	119.60
3	DA	2784	U	C5-C4-O4	-8.01	121.09	125.90
3	DA	971	G	N3-C4-C5	-8.01	124.60	128.60
3	DA	2397	G	N3-C4-N9	8.01	130.80	126.00
3	DA	1611	C	C5-C4-N4	-8.00	114.60	120.20
3	DA	2688	G	N3-C4-C5	-8.00	124.60	128.60
56	DD	110	THR	CA-CB-CG2	-8.00	101.19	112.40
3	DA	1898	U	C6-N1-C2	-8.00	116.20	121.00
1	AA	330	C	C5-C4-N4	-8.00	114.60	120.20
1	AA	900	A	N1-C6-N6	8.00	123.40	118.60
3	DA	2478	A	C8-N9-C4	8.00	109.00	105.80
3	DA	2534	A	N1-C6-N6	8.00	123.40	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	28	C	C5-C6-N1	-8.00	117.00	121.00
3	DA	2013	A	O5'-P-OP2	-8.00	98.50	105.70
2	BA	910	C	C5-C4-N4	-8.00	114.60	120.20
3	DA	949	G	C2-N3-C4	-8.00	107.90	111.90
3	DA	2516	A	C6-N1-C2	-8.00	113.80	118.60
38	DO	65	LEU	CB-CG-CD2	-8.00	97.41	111.00
3	DA	480	A	C2-N3-C4	7.99	114.60	110.60
3	DA	634	C	C5-C4-N4	-7.99	114.61	120.20
3	DA	1271	G	C8-N9-C4	7.99	109.60	106.40
1	AA	568	G	O5'-P-OP1	-7.99	98.51	105.70
4	CA	635	C	N1-C2-O2	7.99	123.69	118.90
3	DA	2354	C	N3-C2-O2	-7.99	116.31	121.90
3	DA	2440	C	O5'-P-OP1	-7.99	98.51	105.70
5	DB	8	C	O5'-P-OP1	-7.98	98.51	105.70
1	AA	66	A	N1-C6-N6	7.98	123.39	118.60
1	AA	770	C	C6-N1-C2	7.98	123.49	120.30
3	DA	623	C	N3-C4-C5	7.98	125.09	121.90
3	DA	2508	G	C8-N9-C4	7.98	109.59	106.40
3	DA	1638	C	N1-C2-O2	-7.98	114.11	118.90
2	BA	1484	C	C6-N1-C2	7.98	123.49	120.30
3	DA	467	G	C2-N3-C4	-7.97	107.91	111.90
3	DA	905	A	N9-C4-C5	-7.97	102.61	105.80
3	DA	1198	U	OP2-P-O3'	7.97	122.74	105.20
3	DA	1595	C	N1-C2-O2	-7.97	114.12	118.90
3	DA	84	A	N1-C6-N6	-7.97	113.82	118.60
3	DA	33	C	O4'-C1'-N1	-7.97	101.83	108.20
3	DA	1133	A	N1-C6-N6	-7.97	113.82	118.60
3	DA	1226	A	O5'-P-OP2	-7.97	98.53	105.70
3	DA	1800	C	O5'-P-OP1	7.97	120.26	110.70
3	DA	1355	G	N1-C2-N2	-7.96	109.03	116.20
3	DA	2546	U	N3-C2-O2	-7.96	116.63	122.20
3	DA	1661	G	C4-C5-N7	7.96	113.98	110.80
3	DA	512	G	N7-C8-N9	7.96	117.08	113.10
3	DA	540	C	C2-N3-C4	-7.96	115.92	119.90
3	DA	1411	U	O5'-P-OP2	7.96	120.25	110.70
3	DA	509	C	N3-C4-N4	-7.96	112.43	118.00
3	DA	305	C	N1-C2-O2	-7.95	114.13	118.90
3	DA	760	G	C5-C6-O6	-7.95	123.83	128.60
3	DA	945	A	C4-C5-N7	7.95	114.68	110.70
3	DA	424	G	C8-N9-C4	7.95	109.58	106.40
3	DA	786	C	N3-C4-C5	7.95	125.08	121.90
43	DT	84	ARG	NE-CZ-NH1	-7.95	116.33	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	887	G	O5'-P-OP2	-7.95	98.55	105.70
3	DA	476	G	O5'-P-OP1	-7.95	98.55	105.70
3	DA	555	G	N1-C6-O6	-7.95	115.13	119.90
3	DA	1142	A	C2-N3-C4	-7.95	106.62	110.60
3	DA	2279	G	N3-C2-N2	7.95	125.46	119.90
2	BA	102	G	C8-N9-C4	-7.95	103.22	106.40
3	DA	2014	A	C8-N9-C4	-7.94	102.62	105.80
3	DA	203	A	N1-C6-N6	7.94	123.36	118.60
3	DA	2070	A	C6-N1-C2	-7.94	113.83	118.60
3	DA	2478	A	C5-C6-N6	-7.94	117.34	123.70
3	DA	2543	G	C5-C6-O6	-7.94	123.84	128.60
3	DA	507	A	N9-C4-C5	7.94	108.98	105.80
3	DA	1142	A	C8-N9-C4	7.94	108.97	105.80
1	AA	899	C	C4-C5-C6	-7.94	113.43	117.40
3	DA	481	G	O5'-P-OP2	-7.94	98.56	105.70
3	DA	695	G	C5-C6-O6	7.94	133.36	128.60
3	DA	973	A	N9-C4-C5	7.94	108.97	105.80
1	AA	231	U	O5'-P-OP2	-7.93	98.56	105.70
3	DA	449	A	N1-C6-N6	7.93	123.36	118.60
3	DA	2502	G	C8-N9-C4	-7.93	103.23	106.40
2	BA	786	G	O5'-P-OP1	-7.93	98.56	105.70
3	DA	86	G	O5'-P-OP1	-7.93	98.56	105.70
3	DA	1771	C	N1-C2-O2	-7.93	114.14	118.90
1	AA	43	C	C6-N1-C2	7.93	123.47	120.30
3	DA	2754	U	N3-C4-O4	7.93	124.95	119.40
3	DA	2791	G	C2-N3-C4	-7.93	107.94	111.90
5	DB	104	A	N1-C6-N6	7.93	123.36	118.60
3	DA	1643	G	C6-C5-N7	-7.92	125.64	130.40
3	DA	2064	C	C6-N1-C2	7.92	123.47	120.30
3	DA	2759	G	N3-C4-C5	7.92	132.56	128.60
2	BA	1084	G	N9-C4-C5	7.92	108.57	105.40
3	DA	952	G	N7-C8-N9	7.92	117.06	113.10
3	DA	970	U	N3-C4-O4	7.92	124.95	119.40
3	DA	2428	G	C6-N1-C2	-7.92	120.35	125.10
3	DA	513	A	O5'-P-OP1	-7.92	98.57	105.70
3	DA	2722	G	N1-C2-N3	-7.92	119.15	123.90
3	DA	689	A	O5'-P-OP2	-7.91	98.58	105.70
2	BA	1426	G	N3-C4-C5	7.91	132.55	128.60
3	DA	979	A	N7-C8-N9	7.91	117.75	113.80
3	DA	2855	C	OP2-P-O3'	7.91	122.60	105.20
3	DA	2799	A	C6-C5-N7	-7.91	126.77	132.30
1	AA	363	A	O5'-P-OP1	-7.91	98.58	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1098	C	C2-N1-C1'	7.91	127.50	118.80
3	DA	2887	A	C2-N3-C4	7.90	114.55	110.60
1	AA	1457	G	O5'-P-OP1	7.90	120.18	110.70
3	DA	96	C	C6-N1-C2	7.90	123.46	120.30
3	DA	962	G	C8-N9-C4	-7.90	103.24	106.40
3	DA	31	C	C5-C6-N1	-7.90	117.05	121.00
3	DA	914	G	N1-C6-O6	7.90	124.64	119.90
3	DA	799	G	N1-C6-O6	-7.89	115.16	119.90
1	AA	279	A	C8-N9-C4	-7.89	102.64	105.80
3	DA	437	U	O5'-P-OP1	7.89	120.17	110.70
3	DA	581	C	N3-C2-O2	-7.89	116.38	121.90
3	DA	2056	G	O5'-P-OP2	-7.89	98.60	105.70
3	DA	2780	G	N9-C4-C5	7.89	108.56	105.40
3	DA	756	A	OP1-P-OP2	7.88	131.43	119.60
3	DA	1142	A	C5-C6-N6	-7.88	117.39	123.70
3	DA	1978	A	C6-N1-C2	-7.88	113.87	118.60
3	DA	1937	A	C4-C5-C6	7.88	120.94	117.00
3	DA	966	G	C5-C6-O6	-7.88	123.87	128.60
3	DA	617	G	N1-C6-O6	7.88	124.63	119.90
3	DA	530	G	N1-C6-O6	7.88	124.63	119.90
3	DA	655	A	N1-C6-N6	-7.88	113.87	118.60
3	DA	760	G	N1-C2-N2	7.88	123.29	116.20
3	DA	2720	U	N3-C2-O2	7.88	127.71	122.20
3	DA	2875	C	N3-C2-O2	7.88	127.42	121.90
4	CA	1773	A	C6-N1-C2	-7.88	113.87	118.60
4	CA	2412	A	C8-N9-C4	7.88	108.95	105.80
3	DA	2431	U	C5-C6-N1	-7.88	118.76	122.70
4	CA	1773	A	C5-C6-N1	7.88	121.64	117.70
1	AA	1344	C	N3-C4-C5	7.88	125.05	121.90
3	DA	2222	C	N3-C4-N4	7.87	123.51	118.00
3	DA	203	A	C5-C6-N6	-7.87	117.40	123.70
3	DA	470	A	N9-C4-C5	7.87	108.95	105.80
3	DA	2539	C	O5'-P-OP2	-7.87	98.62	105.70
3	DA	2697	G	C5-C6-N1	-7.87	107.56	111.50
3	DA	2567	G	N1-C6-O6	7.87	124.62	119.90
2	BA	1109	C	O5'-P-OP2	-7.87	98.62	105.70
3	DA	1650	A	N9-C4-C5	7.87	108.95	105.80
5	DB	103	U	N3-C4-O4	7.87	124.91	119.40
3	DA	58	G	O5'-P-OP2	-7.87	98.62	105.70
3	DA	413	C	OP2-P-O3'	7.87	122.51	105.20
3	DA	1585	C	N1-C2-O2	7.87	123.62	118.90
3	DA	1267	U	N1-C2-O2	-7.87	117.29	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	411	G	C4-N9-C1'	-7.87	116.27	126.50
4	CA	1900	A	N9-C4-C5	7.87	108.95	105.80
3	DA	538	A	C4-C5-C6	7.86	120.93	117.00
3	DA	2291	U	N1-C2-O2	-7.86	117.30	122.80
3	DA	1278	C	C5-C6-N1	-7.86	117.07	121.00
3	DA	2010	G	N9-C4-C5	7.86	108.54	105.40
3	DA	916	G	C6-C5-N7	-7.86	125.69	130.40
3	DA	30	G	N3-C4-N9	7.86	130.72	126.00
3	DA	579	G	N3-C2-N2	-7.86	114.40	119.90
3	DA	851	C	C5-C4-N4	7.86	125.70	120.20
3	DA	1244	A	C2-N3-C4	-7.86	106.67	110.60
3	DA	2021	C	C2-N3-C4	-7.86	115.97	119.90
4	CA	672	C	N3-C4-C5	-7.86	118.76	121.90
3	DA	251	A	N7-C8-N9	-7.85	109.87	113.80
3	DA	733	G	C5-C6-O6	-7.85	123.89	128.60
3	DA	805	G	C5-C6-O6	-7.85	123.89	128.60
3	DA	1261	C	N1-C2-N3	7.85	124.70	119.20
3	DA	1801	A	OP2-P-O3'	7.85	122.47	105.20
3	DA	806	C	C6-N1-C2	-7.85	117.16	120.30
3	DA	1264	A	C8-N9-C4	-7.85	102.66	105.80
4	CA	955	U	N3-C2-O2	-7.85	116.71	122.20
3	DA	1443	U	C5-C4-O4	-7.85	121.19	125.90
3	DA	1794	A	C5-C6-N6	-7.85	117.42	123.70
3	DA	2044	C	N3-C2-O2	-7.85	116.41	121.90
2	BA	1527	U	C6-N1-C2	7.85	125.71	121.00
3	DA	26	G	C2-N3-C4	7.85	115.82	111.90
2	BA	361	G	N9-C4-C5	-7.84	102.26	105.40
3	DA	1019	U	C5-C4-O4	7.84	130.61	125.90
3	DA	1951	U	O5'-P-OP2	-7.84	98.64	105.70
3	DA	1767	G	N3-C2-N2	-7.84	114.41	119.90
3	DA	2013	A	C2-N3-C4	-7.84	106.68	110.60
1	AA	501	C	O5'-P-OP2	-7.83	98.65	105.70
3	DA	30	G	O5'-P-OP1	-7.83	98.65	105.70
3	DA	2804	U	N3-C4-O4	-7.83	113.92	119.40
3	DA	2	G	N3-C4-N9	-7.83	121.30	126.00
3	DA	32	C	N1-C2-O2	-7.83	114.20	118.90
3	DA	455	C	C2-N1-C1'	-7.83	110.19	118.80
3	DA	1764	C	N3-C2-O2	7.83	127.38	121.90
5	DB	71	C	C2-N1-C1'	-7.83	110.19	118.80
3	DA	444	C	N3-C2-O2	-7.83	116.42	121.90
3	DA	2483	C	C2-N3-C4	-7.83	115.99	119.90
3	DA	2466	C	N1-C2-O2	-7.83	114.20	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2536	G	N3-C4-C5	7.83	132.51	128.60
1	AA	137	U	N3-C2-O2	7.82	127.68	122.20
1	AA	258	G	C8-N9-C1'	7.82	137.17	127.00
3	DA	542	C	N3-C4-C5	7.82	125.03	121.90
3	DA	618	G	N3-C4-C5	7.82	132.51	128.60
3	DA	1560	G	O5'-P-OP2	-7.82	98.66	105.70
3	DA	2237	G	N3-C2-N2	-7.82	114.42	119.90
3	DA	2252	G	N1-C6-O6	7.82	124.59	119.90
3	DA	1370	C	C6-N1-C2	7.82	123.43	120.30
3	DA	2612	C	N3-C4-C5	7.82	125.03	121.90
8	BD	5	LEU	CA-CB-CG	7.82	133.29	115.30
51	D1	51	ARG	NE-CZ-NH2	7.82	124.21	120.30
3	DA	40	U	O5'-P-OP1	-7.82	98.66	105.70
3	DA	640	C	N1-C2-O2	-7.82	114.21	118.90
3	DA	1501	G	N3-C2-N2	-7.82	114.43	119.90
4	CA	1938	A	C8-N9-C4	-7.82	102.67	105.80
1	AA	560	A	N1-C6-N6	7.82	123.29	118.60
3	DA	254	G	N1-C2-N2	-7.82	109.17	116.20
3	DA	2655	G	O4'-C1'-N9	7.82	114.45	108.20
3	DA	2742	G	O5'-P-OP1	7.82	120.08	110.70
3	DA	2800	A	O5'-P-OP2	-7.82	98.67	105.70
2	BA	575	G	N3-C4-C5	7.81	132.51	128.60
3	DA	215	G	N3-C2-N2	-7.81	114.43	119.90
3	DA	2885	G	N9-C4-C5	7.81	108.53	105.40
3	DA	96	C	N3-C4-C5	7.81	125.02	121.90
3	DA	781	A	N1-C2-N3	-7.81	125.40	129.30
3	DA	2512	C	C6-N1-C1'	7.81	130.17	120.80
3	DA	2828	G	N3-C4-C5	7.81	132.50	128.60
4	CA	2230	G	N3-C2-N2	7.80	125.36	119.90
2	BA	288	A	N1-C6-N6	7.80	123.28	118.60
3	DA	488	G	C8-N9-C4	-7.80	103.28	106.40
3	DA	2002	G	N9-C4-C5	-7.80	102.28	105.40
5	DB	77	U	O5'-P-OP2	-7.80	98.68	105.70
2	BA	1389	C	C5-C4-N4	-7.80	114.74	120.20
3	DA	1268	A	N1-C6-N6	-7.80	113.92	118.60
3	DA	1431	A	C2-N3-C4	-7.80	106.70	110.60
3	DA	2273	A	C5-C6-N1	7.80	121.60	117.70
5	DB	86	G	N1-C6-O6	7.80	124.58	119.90
3	DA	430	A	C4-C5-C6	7.80	120.90	117.00
1	AA	1077	G	O5'-P-OP2	-7.79	98.69	105.70
3	DA	382	A	C2-N3-C4	-7.79	106.70	110.60
3	DA	122	G	O5'-P-OP2	-7.79	98.69	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	784	G	N1-C2-N2	-7.79	109.19	116.20
3	DA	1783	A	C5-C6-N6	-7.79	117.47	123.70
3	DA	2204	G	C5-N7-C8	-7.79	100.41	104.30
5	DB	98	G	C5-C6-N1	7.79	115.39	111.50
3	DA	495	G	N3-C2-N2	-7.79	114.45	119.90
3	DA	755	U	N3-C2-O2	7.79	127.65	122.20
3	DA	2659	G	N3-C2-N2	-7.79	114.45	119.90
4	CA	1936	A	C2-N3-C4	-7.79	106.71	110.60
4	CA	1896	G	C4-C5-N7	7.79	113.92	110.80
1	AA	878	A	N1-C6-N6	7.79	123.27	118.60
2	BA	712	A	N1-C2-N3	7.78	133.19	129.30
4	CA	1791	A	C5-C6-N6	-7.78	117.48	123.70
1	AA	903	G	C2-N3-C4	-7.78	108.01	111.90
3	DA	1183	U	C5-C4-O4	7.78	130.57	125.90
3	DA	1271	G	OP1-P-OP2	-7.78	107.94	119.60
3	DA	791	C	C2-N3-C4	-7.77	116.01	119.90
2	BA	585	G	C8-N9-C4	-7.77	103.29	106.40
1	AA	1418	A	C6-N1-C2	-7.77	113.94	118.60
3	DA	1228	G	C2-N3-C4	-7.77	108.02	111.90
3	DA	571	U	C5-C4-O4	-7.77	121.24	125.90
3	DA	837	C	N1-C2-O2	-7.77	114.24	118.90
3	DA	1280	G	N1-C6-O6	7.77	124.56	119.90
3	DA	1223	G	N3-C4-C5	7.77	132.48	128.60
3	DA	1315	C	C5-C6-N1	-7.77	117.12	121.00
3	DA	1119	U	N3-C4-O4	7.76	124.83	119.40
4	CA	1828	G	C8-N9-C4	-7.76	103.30	106.40
2	BA	501	C	OP2-P-O3'	7.76	122.28	105.20
3	DA	2097	A	N1-C6-N6	7.76	123.26	118.60
3	DA	2471	A	N1-C6-N6	-7.76	113.94	118.60
3	DA	951	C	C6-N1-C2	7.76	123.40	120.30
3	DA	2467	C	C5-C4-N4	-7.76	114.77	120.20
3	DA	724	U	N1-C2-O2	7.76	128.23	122.80
3	DA	1988	G	N1-C2-N3	7.76	128.55	123.90
3	DA	2214	C	C5-C4-N4	-7.76	114.77	120.20
5	DB	80	U	N1-C2-N3	7.76	119.55	114.90
3	DA	493	G	C2-N3-C4	7.75	115.78	111.90
1	AA	142	G	C8-N9-C4	-7.75	103.30	106.40
3	DA	624	C	C6-N1-C2	7.75	123.40	120.30
3	DA	691	C	C2-N1-C1'	7.75	127.33	118.80
3	DA	1650	A	C6-N1-C2	-7.75	113.95	118.60
5	DB	107	G	O5'-P-OP2	-7.75	98.72	105.70
2	BA	1510	C	C5-C4-N4	-7.75	114.78	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1829	A	C6-N1-C2	-7.75	113.95	118.60
2	BA	571	U	C5-C4-O4	-7.75	121.25	125.90
3	DA	240	C	N1-C2-O2	-7.75	114.25	118.90
3	DA	555	G	C5-C6-O6	7.75	133.25	128.60
3	DA	961	C	C5-C4-N4	7.75	125.62	120.20
3	DA	942	G	N3-C4-N9	-7.75	121.35	126.00
3	DA	623	C	C5-C4-N4	-7.74	114.78	120.20
3	DA	870	U	N3-C4-O4	7.74	124.82	119.40
3	DA	1739	A	N1-C6-N6	7.74	123.25	118.60
2	BA	1406	U	O5'-P-OP1	7.74	119.99	110.70
3	DA	52	A	C5-C6-N6	-7.74	117.51	123.70
3	DA	232	G	C2-N3-C4	-7.74	108.03	111.90
4	CA	1940	U	C5-C4-O4	7.74	130.54	125.90
2	BA	786	G	O5'-P-OP2	7.74	119.98	110.70
3	DA	2766	A	O5'-P-OP2	-7.74	98.74	105.70
3	DA	2828	G	C5-C6-N1	-7.73	107.63	111.50
3	DA	469	G	N9-C4-C5	-7.73	102.31	105.40
3	DA	2673	G	N1-C2-N3	-7.73	119.26	123.90
3	DA	331	C	O5'-P-OP1	-7.73	98.74	105.70
3	DA	1443	U	OP1-P-OP2	7.73	131.19	119.60
5	DB	84	G	N1-C6-O6	7.73	124.54	119.90
1	AA	108	G	C5-C6-O6	-7.73	123.96	128.60
3	DA	1441	G	N9-C4-C5	7.73	108.49	105.40
3	DA	2063	C	C2-N3-C4	7.72	123.76	119.90
3	DA	2630	G	C2-N3-C4	-7.72	108.04	111.90
3	DA	2691	C	N3-C2-O2	7.72	127.31	121.90
5	DB	84	G	C5-N7-C8	-7.72	100.44	104.30
3	DA	1957	C	C6-N1-C1'	-7.72	111.54	120.80
3	DA	2469	A	N1-C2-N3	7.72	133.16	129.30
1	AA	330	C	N3-C2-O2	7.72	127.30	121.90
1	AA	1234	C	C5-C6-N1	7.72	124.86	121.00
2	BA	902	G	N1-C6-O6	7.72	124.53	119.90
3	DA	104	A	C8-N9-C4	-7.71	102.71	105.80
3	DA	604	G	C2-N3-C4	-7.71	108.04	111.90
1	AA	1515	G	C6-C5-N7	-7.71	125.77	130.40
2	BA	931	C	N3-C2-O2	-7.71	116.50	121.90
3	DA	1266	G	N3-C2-N2	7.71	125.30	119.90
3	DA	1819	A	C4-C5-C6	7.71	120.86	117.00
1	AA	900	A	OP1-P-O3'	7.70	122.15	105.20
1	AA	910	C	C5-C4-N4	-7.70	114.81	120.20
3	DA	750	A	N1-C6-N6	7.70	123.22	118.60
3	DA	1135	C	N1-C2-O2	-7.70	114.28	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2716	C	N3-C2-O2	7.70	127.29	121.90
1	AA	569	C	N3-C4-C5	-7.70	118.82	121.90
3	DA	1661	G	N3-C4-C5	7.70	132.45	128.60
3	DA	1909	C	C6-N1-C2	-7.70	117.22	120.30
4	CA	1823	G	O5'-P-OP2	7.70	119.93	110.70
3	DA	1276	A	C5-C6-N6	-7.69	117.55	123.70
3	DA	2256	G	C5-N7-C8	-7.69	100.45	104.30
5	DB	32	U	O5'-P-OP1	7.69	119.93	110.70
1	AA	862	C	N3-C4-N4	-7.69	112.62	118.00
3	DA	1003	G	N1-C2-N2	7.69	123.12	116.20
3	DA	2818	U	N1-C2-O2	-7.69	117.42	122.80
3	DA	41	C	C2-N3-C4	-7.69	116.06	119.90
3	DA	210	C	C6-N1-C2	7.69	123.38	120.30
3	DA	473	G	C5-C6-O6	7.69	133.21	128.60
2	BA	1394	A	N1-C6-N6	7.69	123.21	118.60
4	CA	1687	G	N1-C6-O6	-7.69	115.29	119.90
3	DA	1838	C	C6-N1-C2	7.68	123.37	120.30
3	DA	1025	G	N9-C4-C5	-7.68	102.33	105.40
4	CA	1842	G	C5-C6-O6	-7.68	123.99	128.60
1	AA	765	G	O5'-P-OP2	-7.68	98.79	105.70
3	DA	1837	C	C5-C6-N1	7.68	124.84	121.00
4	CA	577	G	C6-C5-N7	-7.68	125.79	130.40
4	CA	1255	U	N3-C4-O4	7.68	124.78	119.40
3	DA	2549	G	N1-C6-O6	7.68	124.51	119.90
3	DA	1764	C	N1-C2-O2	-7.68	114.29	118.90
3	DA	1803	A	C8-N9-C4	7.68	108.87	105.80
3	DA	467	G	N3-C4-C5	7.67	132.44	128.60
3	DA	555	G	N9-C4-C5	7.67	108.47	105.40
3	DA	838	C	N3-C4-N4	7.67	123.37	118.00
3	DA	2351	G	OP2-P-O3'	7.67	122.08	105.20
43	DT	97	LEU	CA-CB-CG	7.67	132.95	115.30
3	DA	45	G	N9-C4-C5	7.67	108.47	105.40
3	DA	1684	G	C8-N9-C4	7.67	109.47	106.40
3	DA	1846	G	O5'-P-OP1	7.67	119.91	110.70
2	BA	918	A	N1-C6-N6	7.67	123.20	118.60
3	DA	2846	G	N3-C4-C5	7.67	132.44	128.60
3	DA	2068	U	N3-C4-O4	7.67	124.77	119.40
4	CA	693	A	N1-C6-N6	-7.67	114.00	118.60
4	CA	1666	G	C5-C6-O6	7.67	133.20	128.60
5	DB	114	C	N3-C2-O2	7.67	127.27	121.90
3	DA	202	U	C4-C5-C6	7.66	124.30	119.70
4	CA	2248	C	C5-C4-N4	-7.66	114.84	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	222	C	C6-N1-C2	-7.66	117.23	120.30
1	AA	781	A	N9-C4-C5	-7.66	102.74	105.80
3	DA	920	A	C6-N1-C2	-7.66	114.00	118.60
3	DA	1595	C	N3-C4-N4	7.66	123.36	118.00
4	CA	784	G	N3-C4-N9	7.66	130.60	126.00
5	DB	21	G	N3-C2-N2	7.66	125.26	119.90
3	DA	857	G	N3-C2-N2	-7.66	114.54	119.90
3	DA	2292	U	N3-C4-O4	7.65	124.76	119.40
3	DA	2719	G	C2-N3-C4	-7.65	108.07	111.90
3	DA	566	U	OP2-P-O3'	7.65	122.04	105.20
3	DA	964	C	OP2-P-O3'	-7.65	88.36	105.20
3	DA	2326	C	C2-N3-C4	-7.65	116.07	119.90
5	DB	70	C	N1-C2-O2	-7.65	114.31	118.90
1	AA	1108	G	N1-C6-O6	-7.65	115.31	119.90
3	DA	406	G	N3-C4-C5	7.65	132.43	128.60
3	DA	551	G	C2-N3-C4	-7.65	108.08	111.90
3	DA	2023	C	N3-C4-N4	7.65	123.35	118.00
3	DA	1628	G	N9-C4-C5	-7.65	102.34	105.40
3	DA	2380	C	C2-N3-C4	-7.65	116.08	119.90
1	AA	332	G	N3-C2-N2	-7.64	114.55	119.90
2	BA	1146	A	N1-C6-N6	-7.64	114.01	118.60
3	DA	1804	C	C2-N3-C4	-7.64	116.08	119.90
3	DA	2064	C	N3-C2-O2	7.64	127.25	121.90
3	DA	2659	G	N1-C6-O6	7.64	124.49	119.90
1	AA	340	U	C5-C4-O4	-7.64	121.31	125.90
3	DA	520	G	N1-C6-O6	-7.64	115.31	119.90
3	DA	640	C	N3-C2-O2	7.64	127.25	121.90
3	DA	1473	G	O5'-P-OP1	7.64	119.87	110.70
3	DA	2262	U	N3-C4-O4	-7.64	114.05	119.40
3	DA	739	A	N1-C6-N6	7.64	123.19	118.60
1	AA	207	C	C6-N1-C2	-7.64	117.25	120.30
1	AA	916	U	N3-C4-O4	7.64	124.75	119.40
3	DA	737	C	C6-N1-C2	7.64	123.36	120.30
3	DA	63	A	C8-N9-C4	-7.64	102.75	105.80
3	DA	1040	A	N1-C2-N3	7.64	133.12	129.30
3	DA	2868	A	C8-N9-C4	-7.64	102.75	105.80
3	DA	820	A	C2-N3-C4	-7.63	106.78	110.60
4	CA	1819	A	O5'-P-OP2	-7.63	98.83	105.70
3	DA	2472	G	C5-C6-O6	-7.63	124.02	128.60
3	DA	394	C	C5-C6-N1	-7.63	117.18	121.00
3	DA	1945	G	O5'-P-OP2	-7.63	98.83	105.70
3	DA	648	G	N1-C2-N2	-7.63	109.33	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1378	C	N3-C4-N4	7.63	123.34	118.00
2	BA	757	U	N3-C4-O4	7.63	124.74	119.40
3	DA	413	C	C6-N1-C2	7.63	123.35	120.30
3	DA	2259	U	C5-C4-O4	-7.63	121.32	125.90
3	DA	1595	C	N3-C2-O2	7.63	127.24	121.90
2	BA	794	A	OP1-P-OP2	-7.62	108.16	119.60
3	DA	670	A	N1-C2-N3	7.62	133.11	129.30
3	DA	833	A	N1-C2-N3	7.62	133.11	129.30
3	DA	1684	G	N3-C4-C5	7.62	132.41	128.60
4	CA	1954	G	C5-C6-O6	-7.62	124.03	128.60
5	DB	100	G	C8-N9-C1'	-7.62	117.09	127.00
3	DA	591	U	N3-C2-O2	7.62	127.53	122.20
3	DA	2804	U	C5-C4-O4	7.62	130.47	125.90
5	DB	101	A	C6-N1-C2	-7.62	114.03	118.60
4	CA	828	U	N3-C2-O2	-7.62	116.87	122.20
1	AA	581	G	C2-N3-C4	-7.62	108.09	111.90
3	DA	181	A	N1-C6-N6	-7.62	114.03	118.60
3	DA	2437	G	N3-C2-N2	-7.62	114.57	119.90
3	DA	2767	C	O5'-P-OP2	-7.62	98.84	105.70
4	CA	1323	C	C6-N1-C2	-7.62	117.25	120.30
49	DZ	6	LEU	CB-CG-CD2	7.62	123.95	111.00
3	DA	872	U	N3-C4-O4	7.62	124.73	119.40
3	DA	2764	A	C8-N9-C4	7.62	108.85	105.80
1	AA	530	G	N1-C6-O6	7.61	124.47	119.90
3	DA	1766	G	OP1-P-O3'	7.61	121.95	105.20
1	AA	361	G	N3-C4-C5	7.61	132.41	128.60
3	DA	1442	U	N3-C4-O4	7.61	124.73	119.40
3	DA	1759	A	N9-C4-C5	7.61	108.84	105.80
3	DA	1761	C	C5-C4-N4	-7.61	114.87	120.20
3	DA	1773	A	O5'-P-OP1	7.61	119.83	110.70
3	DA	2592	G	N1-C2-N2	7.61	123.05	116.20
3	DA	2751	G	C5-N7-C8	-7.61	100.50	104.30
12	AH	59	LEU	CA-CB-CG	7.61	132.81	115.30
3	DA	1245	G	N3-C2-N2	-7.61	114.57	119.90
3	DA	2676	C	N3-C2-O2	7.61	127.23	121.90
4	CA	1669	A	O5'-P-OP1	-7.61	98.85	105.70
5	DB	98	G	C4-C5-N7	7.61	113.84	110.80
3	DA	2061	G	OP1-P-OP2	-7.61	108.19	119.60
2	BA	319	G	C8-N9-C4	-7.61	103.36	106.40
3	DA	961	C	N1-C2-N3	7.61	124.52	119.20
3	DA	980	A	O5'-P-OP2	-7.61	98.86	105.70
3	DA	1642	G	C4-C5-N7	7.61	113.84	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1875	G	C8-N9-C4	-7.61	103.36	106.40
3	DA	2016	U	C2-N3-C4	7.61	131.56	127.00
2	BA	234	C	C5-C6-N1	-7.60	117.20	121.00
3	DA	509	C	C6-N1-C2	7.60	123.34	120.30
3	DA	509	C	N1-C2-O2	7.60	123.46	118.90
4	CA	250	G	C2-N3-C4	7.60	115.70	111.90
3	DA	1201	U	C5-C4-O4	-7.60	121.34	125.90
3	DA	1937	A	C5-C6-N6	-7.60	117.62	123.70
3	DA	189	G	N1-C6-O6	7.60	124.46	119.90
3	DA	2486	C	C4-C5-C6	7.60	121.20	117.40
4	CA	2559	C	N3-C2-O2	7.60	127.22	121.90
1	AA	889	A	O5'-P-OP2	-7.59	98.87	105.70
3	DA	2890	G	C4-C5-N7	7.59	113.84	110.80
1	AA	667	G	N3-C2-N2	-7.59	114.59	119.90
3	DA	474	G	C5-C6-O6	-7.59	124.05	128.60
3	DA	561	G	C2-N3-C4	-7.59	108.11	111.90
5	DB	5	U	N3-C2-O2	7.59	127.51	122.20
3	DA	2394	C	N3-C4-C5	7.58	124.93	121.90
3	DA	2865	U	N3-C2-O2	7.58	127.51	122.20
3	DA	2867	G	C8-N9-C1'	7.58	136.86	127.00
2	BA	38	G	C8-N9-C4	7.58	109.43	106.40
1	AA	340	U	O5'-P-OP2	-7.58	98.88	105.70
3	DA	836	G	C4-C5-N7	7.58	113.83	110.80
3	DA	2351	G	N3-C4-C5	-7.58	124.81	128.60
3	DA	2512	C	C2-N1-C1'	-7.58	110.46	118.80
2	BA	815	A	OP1-P-OP2	7.58	130.97	119.60
3	DA	1786	A	N7-C8-N9	-7.58	110.01	113.80
1	AA	319	G	C8-N9-C4	7.58	109.43	106.40
1	AA	587	G	O5'-P-OP1	7.58	119.79	110.70
1	AA	264	C	O5'-P-OP1	-7.57	98.88	105.70
3	DA	28	A	N9-C4-C5	7.57	108.83	105.80
3	DA	1427	A	C5-C6-N6	7.57	129.76	123.70
3	DA	989	G	C5-N7-C8	-7.57	100.52	104.30
1	AA	1098	C	N1-C2-O2	7.57	123.44	118.90
1	AA	1412	C	C5-C4-N4	-7.57	114.90	120.20
3	DA	1756	G	O4'-C1'-N9	-7.57	102.15	108.20
4	CA	2222	C	C6-N1-C2	-7.57	117.27	120.30
1	AA	569	C	C6-N1-C2	-7.57	117.27	120.30
1	AA	1203	C	N3-C4-N4	7.57	123.30	118.00
3	DA	353	C	C2-N1-C1'	7.57	127.12	118.80
3	DA	671	C	N3-C4-N4	-7.57	112.70	118.00
3	DA	1264	A	N9-C4-C5	7.57	108.83	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1695	G	C4-C5-N7	7.57	113.83	110.80
5	DB	77	U	C5-C6-N1	-7.57	118.92	122.70
3	DA	628	G	N3-C2-N2	-7.56	114.61	119.90
3	DA	804	A	C2-N3-C4	-7.56	106.82	110.60
3	DA	948	C	C4-C5-C6	7.56	121.18	117.40
3	DA	956	G	O5'-P-OP2	-7.56	98.89	105.70
3	DA	1139	G	N3-C4-C5	-7.56	124.82	128.60
3	DA	1152	C	C5-C6-N1	-7.56	117.22	121.00
4	CA	577	G	N7-C8-N9	7.56	116.88	113.10
4	CA	1772	A	C5-C6-N6	7.56	129.75	123.70
1	AA	570	G	N1-C6-O6	7.56	124.44	119.90
3	DA	1756	G	C6-C5-N7	-7.56	125.86	130.40
3	DA	1839	G	N3-C4-C5	-7.56	124.82	128.60
3	DA	476	G	OP1-P-OP2	7.56	130.94	119.60
3	DA	751	A	N1-C6-N6	-7.56	114.06	118.60
3	DA	2688	G	N1-C2-N2	-7.56	109.40	116.20
3	DA	96	C	N1-C2-O2	7.56	123.44	118.90
3	DA	470	A	C5-N7-C8	-7.56	100.12	103.90
3	DA	579	G	N1-C6-O6	7.56	124.43	119.90
3	DA	2058	A	C5-C6-N6	7.56	129.75	123.70
3	DA	2356	U	N1-C2-N3	7.56	119.44	114.90
5	DB	102	G	N3-C4-N9	-7.56	121.47	126.00
50	D0	46	MET	CG-SD-CE	7.56	112.29	100.20
3	DA	305	C	C5-C4-N4	-7.56	114.91	120.20
3	DA	453	A	C8-N9-C4	-7.56	102.78	105.80
2	BA	41	G	C5-C6-O6	-7.55	124.07	128.60
1	AA	391	G	C2-N3-C4	-7.55	108.12	111.90
2	BA	1094	G	C6-C5-N7	-7.55	125.87	130.40
2	BA	1531	A	N1-C2-N3	-7.55	125.52	129.30
3	DA	2221	G	C8-N9-C4	-7.55	103.38	106.40
4	CA	1025	G	N3-C2-N2	-7.55	114.61	119.90
4	CA	1666	G	C4-C5-N7	-7.55	107.78	110.80
3	DA	676	A	C2-N3-C4	-7.55	106.83	110.60
2	BA	406	G	C8-N9-C4	-7.55	103.38	106.40
3	DA	795	C	C2-N3-C4	-7.55	116.13	119.90
3	DA	1639	C	N3-C4-N4	7.55	123.28	118.00
3	DA	2589	A	N9-C4-C5	7.55	108.82	105.80
1	AA	503	C	C6-N1-C2	-7.55	117.28	120.30
3	DA	795	C	C4-C5-C6	7.55	121.17	117.40
3	DA	836	G	N1-C6-O6	7.55	124.43	119.90
3	DA	1632	A	C4-C5-C6	7.55	120.77	117.00
3	DA	1780	A	C5-C6-N6	-7.55	117.66	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2471	A	C8-N9-C4	-7.55	102.78	105.80
3	DA	2824	C	OP1-P-OP2	-7.55	108.28	119.60
3	DA	530	G	C5-N7-C8	7.54	108.07	104.30
3	DA	1164	C	N3-C2-O2	7.54	127.18	121.90
3	DA	1772	A	N1-C6-N6	7.54	123.13	118.60
3	DA	2356	U	N3-C2-O2	-7.54	116.92	122.20
3	DA	2359	C	C2-N3-C4	-7.54	116.13	119.90
3	DA	2685	G	C5-C6-O6	-7.54	124.07	128.60
1	AA	1084	G	O5'-P-OP2	-7.54	98.91	105.70
3	DA	800	A	O5'-P-OP2	7.54	119.75	110.70
3	DA	2472	G	O5'-P-OP1	-7.54	98.91	105.70
27	CC	212	TRP	CA-CB-CG	7.54	128.03	113.70
3	DA	2884	U	OP2-P-O3'	7.54	121.79	105.20
1	AA	245	U	OP1-P-OP2	-7.54	108.29	119.60
3	DA	1266	G	C5-C6-O6	7.54	133.12	128.60
3	DA	2500	U	N3-C4-O4	-7.54	114.12	119.40
5	DB	106	G	O5'-P-OP1	-7.54	98.92	105.70
4	CA	335	C	C2-N1-C1'	7.54	127.09	118.80
1	AA	926	G	O5'-P-OP2	-7.54	98.92	105.70
3	DA	529	A	C5-C6-N1	7.54	121.47	117.70
3	DA	1677	A	N1-C2-N3	7.54	133.07	129.30
3	DA	2584	U	N3-C4-O4	7.54	124.67	119.40
3	DA	938	G	C8-N9-C4	7.53	109.41	106.40
3	DA	2265	U	OP1-P-O3'	7.53	121.77	105.20
3	DA	240	C	N3-C4-C5	-7.53	118.89	121.90
3	DA	1573	G	C6-C5-N7	-7.53	125.88	130.40
3	DA	66	C	N3-C4-N4	7.53	123.27	118.00
3	DA	2204	G	C2-N3-C4	-7.53	108.14	111.90
3	DA	1784	A	C5-N7-C8	-7.53	100.14	103.90
3	DA	2584	U	O5'-P-OP1	-7.53	98.92	105.70
1	AA	824	G	N1-C6-O6	7.53	124.42	119.90
3	DA	575	A	N9-C4-C5	7.53	108.81	105.80
3	DA	741	U	N3-C2-O2	7.53	127.47	122.20
3	DA	1889	A	C5-N7-C8	-7.53	100.14	103.90
3	DA	1300	G	N1-C6-O6	7.52	124.41	119.90
1	AA	925	G	N9-C4-C5	7.52	108.41	105.40
1	AA	285	C	C2-N1-C1'	7.51	127.07	118.80
3	DA	1678	A	N1-C2-N3	7.51	133.06	129.30
3	DA	2629	U	O5'-P-OP2	-7.51	98.94	105.70
3	DA	807	U	C5-C4-O4	-7.51	121.40	125.90
3	DA	827	U	C5-C4-O4	-7.51	121.40	125.90
1	AA	790	A	C6-C5-N7	-7.50	127.05	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	818	G	C5-C6-O6	7.50	133.10	128.60
3	DA	554	U	C5-C4-O4	-7.50	121.40	125.90
3	DA	1988	G	C5-C6-N1	-7.50	107.75	111.50
3	DA	1127	A	C5-C6-N1	-7.50	113.95	117.70
3	DA	1379	U	C5-C4-O4	-7.50	121.40	125.90
3	DA	687	C	C5-C6-N1	-7.50	117.25	121.00
3	DA	786	C	O5'-P-OP2	-7.50	98.95	105.70
1	AA	1203	C	C6-N1-C2	-7.50	117.30	120.30
3	DA	1124	G	N7-C8-N9	-7.50	109.35	113.10
3	DA	1674	G	N3-C4-N9	-7.50	121.50	126.00
3	DA	2638	G	N1-C2-N2	-7.50	109.45	116.20
2	BA	814	A	OP2-P-O3'	7.50	121.70	105.20
2	BA	1072	G	C8-N9-C4	-7.50	103.40	106.40
3	DA	1302	A	N1-C6-N6	7.50	123.10	118.60
3	DA	1313	U	C5-C4-O4	-7.50	121.40	125.90
3	DA	2412	A	C2-N3-C4	-7.50	106.85	110.60
3	DA	2438	U	N1-C2-O2	-7.50	117.55	122.80
3	DA	2454	G	C5-C6-O6	7.50	133.10	128.60
4	CA	1797	G	C8-N9-C1'	-7.50	117.25	127.00
1	AA	1305	G	N9-C4-C5	7.50	108.40	105.40
3	DA	25	U	C6-N1-C2	7.50	125.50	121.00
3	DA	741	U	N1-C2-N3	-7.50	110.40	114.90
1	AA	298	A	C2-N3-C4	-7.49	106.85	110.60
1	AA	1066	C	C5-C4-N4	-7.49	114.96	120.20
3	DA	250	G	C8-N9-C4	-7.49	103.40	106.40
3	DA	2645	G	C4-C5-C6	7.49	123.29	118.80
3	DA	2793	C	N3-C4-C5	7.49	124.90	121.90
3	DA	2832	U	C5-C4-O4	-7.49	121.41	125.90
3	DA	525	U	N1-C2-O2	-7.49	117.56	122.80
3	DA	1437	C	N1-C2-O2	-7.49	114.41	118.90
3	DA	1206	G	C5-C6-N1	-7.49	107.76	111.50
5	DB	73	A	O5'-P-OP1	7.48	119.68	110.70
1	AA	1188	A	O5'-P-OP1	-7.48	98.97	105.70
4	CA	1959	G	N3-C4-N9	-7.48	121.51	126.00
3	DA	1821	A	O4'-C1'-N9	-7.48	102.22	108.20
1	AA	606	G	O5'-P-OP1	7.48	119.67	110.70
3	DA	1009	A	N1-C2-N3	-7.48	125.56	129.30
3	DA	2769	U	N1-C2-O2	-7.47	117.57	122.80
1	AA	1279	G	C5-C6-O6	-7.47	124.12	128.60
3	DA	1991	U	C5-C4-O4	-7.47	121.42	125.90
4	CA	793	A	C2-N3-C4	-7.47	106.86	110.60
1	AA	126	G	N1-C6-O6	7.47	124.38	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	520	A	N1-C6-N6	7.47	123.08	118.60
3	DA	941	A	OP1-P-O3'	7.47	121.64	105.20
3	DA	1123	C	OP2-P-O3'	7.47	121.64	105.20
3	DA	2001	C	N3-C4-C5	7.47	124.89	121.90
3	DA	2385	C	C6-N1-C2	7.47	123.29	120.30
3	DA	1473	G	N1-C6-O6	-7.47	115.42	119.90
3	DA	2205	A	OP1-P-OP2	7.47	130.80	119.60
1	AA	675	A	N9-C4-C5	7.47	108.79	105.80
1	AA	1504	G	O4'-C1'-N9	7.47	114.17	108.20
2	BA	1104	G	C8-N9-C4	-7.47	103.41	106.40
3	DA	938	G	C2-N3-C4	-7.47	108.17	111.90
1	AA	647	C	C6-N1-C2	-7.46	117.31	120.30
2	BA	613	C	O5'-P-OP1	-7.46	98.98	105.70
3	DA	487	C	N1-C2-O2	-7.46	114.42	118.90
3	DA	942	G	O5'-P-OP2	7.46	119.66	110.70
3	DA	1004	U	C6-N1-C2	-7.46	116.52	121.00
3	DA	1544	A	OP2-P-O3'	7.46	121.62	105.20
3	DA	2443	C	C2-N3-C4	-7.46	116.17	119.90
4	CA	2227	A	N1-C6-N6	7.46	123.08	118.60
2	BA	893	C	N3-C4-C5	7.46	124.89	121.90
3	DA	803	U	O5'-P-OP1	7.46	119.66	110.70
1	AA	1305	G	C4-C5-N7	-7.46	107.81	110.80
3	DA	2821	A	N7-C8-N9	-7.46	110.07	113.80
1	AA	1067	A	C5-C6-N1	7.46	121.43	117.70
2	BA	725	G	N1-C6-O6	7.46	124.38	119.90
3	DA	2884	U	N3-C2-O2	-7.46	116.98	122.20
1	AA	379	C	N1-C2-O2	7.46	123.38	118.90
3	DA	739	A	C5-C6-N6	-7.46	117.73	123.70
3	DA	781	A	OP2-P-O3'	7.46	121.61	105.20
3	DA	827	U	OP1-P-OP2	-7.46	108.42	119.60
3	DA	976	G	C5-N7-C8	7.46	108.03	104.30
3	DA	2824	C	N3-C4-C5	-7.46	118.92	121.90
5	DB	96	G	C8-N9-C4	-7.46	103.42	106.40
3	DA	1288	G	C2-N3-C4	-7.46	108.17	111.90
1	AA	541	G	C4-C5-N7	7.45	113.78	110.80
3	DA	1903	G	OP1-P-OP2	-7.45	108.42	119.60
1	AA	1178	G	C4-C5-C6	7.45	123.27	118.80
3	DA	540	C	N3-C4-C5	7.45	124.88	121.90
3	DA	979	A	C8-N9-C4	-7.45	102.82	105.80
3	DA	2239	G	N3-C4-C5	7.45	132.33	128.60
3	DA	1144	A	N7-C8-N9	-7.45	110.08	113.80
3	DA	1166	G	N1-C6-O6	7.45	124.37	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2354	C	N1-C2-O2	7.45	123.37	118.90
4	CA	1786	A	O4'-C1'-N9	7.45	114.16	108.20
3	DA	10	A	N1-C6-N6	-7.45	114.13	118.60
3	DA	1351	C	C6-N1-C2	7.45	123.28	120.30
1	AA	1079	G	C8-N9-C4	-7.44	103.42	106.40
3	DA	689	A	C2-N3-C4	7.44	114.32	110.60
3	DA	1645	G	C8-N9-C4	7.44	109.38	106.40
1	AA	575	G	C8-N9-C4	7.44	109.38	106.40
1	AA	914	A	O5'-P-OP1	-7.44	99.00	105.70
3	DA	237	C	N3-C4-C5	7.44	124.88	121.90
3	DA	618	G	N3-C4-N9	-7.44	121.53	126.00
4	CA	2242	G	N3-C4-N9	-7.44	121.53	126.00
3	DA	1656	C	N3-C2-O2	-7.44	116.69	121.90
3	DA	1948	G	N1-C2-N2	7.44	122.90	116.20
3	DA	1346	G	OP2-P-O3'	7.44	121.56	105.20
3	DA	830	G	C6-N1-C2	-7.44	120.64	125.10
1	AA	1423	G	OP1-P-OP2	7.43	130.75	119.60
2	BA	930	C	C6-N1-C2	-7.43	117.33	120.30
2	BA	1515	G	C6-C5-N7	-7.43	125.94	130.40
3	DA	433	C	C5-C6-N1	-7.43	117.28	121.00
3	DA	818	G	C5-C6-O6	7.43	133.06	128.60
3	DA	2612	C	C5-C4-N4	-7.43	115.00	120.20
3	DA	2899	A	N1-C6-N6	7.43	123.06	118.60
3	DA	2623	G	O5'-P-OP2	-7.43	99.01	105.70
3	DA	86	G	N3-C4-C5	7.43	132.31	128.60
3	DA	817	C	C2-N3-C4	-7.43	116.19	119.90
3	DA	1319	C	O5'-P-OP1	-7.43	99.01	105.70
3	DA	1878	G	C2-N3-C4	-7.43	108.19	111.90
4	CA	1263	U	O5'-P-OP1	-7.43	99.01	105.70
3	DA	1448	G	O5'-P-OP1	-7.43	99.02	105.70
1	AA	251	G	N1-C6-O6	7.43	124.36	119.90
2	BA	1522	U	N1-C2-O2	-7.43	117.60	122.80
3	DA	758	C	C5-C6-N1	-7.43	117.29	121.00
3	DA	1527	G	O5'-P-OP2	-7.43	99.02	105.70
4	CA	2229	U	O5'-P-OP1	7.43	119.61	110.70
5	DB	104	A	OP1-P-OP2	7.43	130.74	119.60
1	AA	586	C	C5-C6-N1	-7.42	117.29	121.00
5	DB	100	G	N7-C8-N9	-7.42	109.39	113.10
1	AA	973	G	C4-C5-N7	7.42	113.77	110.80
3	DA	1755	A	N1-C2-N3	7.42	133.01	129.30
3	DA	1991	U	N3-C4-O4	7.42	124.60	119.40
3	DA	579	G	N1-C2-N3	7.42	128.35	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	769	U	N1-C2-O2	7.42	127.99	122.80
1	AA	804	U	N3-C4-O4	-7.42	114.21	119.40
3	DA	1644	C	OP2-P-O3'	7.42	121.52	105.20
34	DK	4	PHE	CB-CG-CD2	-7.42	115.61	120.80
1	AA	577	G	N3-C4-N9	-7.42	121.55	126.00
3	DA	430	A	N1-C6-N6	7.42	123.05	118.60
3	DA	1276	A	C5-N7-C8	-7.42	100.19	103.90
3	DA	1557	C	O5'-P-OP2	-7.42	99.03	105.70
3	DA	2452	C	C2-N1-C1'	7.42	126.96	118.80
3	DA	2577	A	C8-N9-C4	-7.42	102.83	105.80
41	DR	17	LEU	CA-CB-CG	7.42	132.36	115.30
2	BA	755	G	C8-N9-C4	-7.41	103.44	106.40
3	DA	578	G	N9-C4-C5	7.41	108.36	105.40
3	DA	381	G	C2-N3-C4	-7.41	108.19	111.90
3	DA	913	U	N1-C2-O2	-7.41	117.61	122.80
3	DA	2592	G	N9-C4-C5	7.41	108.36	105.40
3	DA	2616	C	C6-N1-C2	-7.41	117.34	120.30
3	DA	1168	G	C8-N9-C4	7.41	109.36	106.40
3	DA	1687	G	C8-N9-C4	-7.41	103.44	106.40
3	DA	1978	A	C5-C6-N6	-7.41	117.77	123.70
3	DA	2836	U	OP1-P-OP2	-7.41	108.49	119.60
3	DA	1665	A	N1-C6-N6	7.41	123.04	118.60
3	DA	673	C	O5'-P-OP1	7.41	119.59	110.70
4	CA	1823	G	N3-C4-C5	7.41	132.30	128.60
4	CA	2556	C	C6-N1-C2	-7.41	117.34	120.30
1	AA	279	A	N7-C8-N9	7.40	117.50	113.80
1	AA	1242	G	C5-C6-N1	-7.40	107.80	111.50
1	AA	1523	G	N9-C4-C5	7.40	108.36	105.40
2	BA	764	C	N3-C2-O2	-7.40	116.72	121.90
3	DA	1963	U	OP1-P-OP2	7.40	130.71	119.60
1	AA	811	C	N1-C2-O2	-7.40	114.46	118.90
3	DA	680	C	N3-C4-N4	7.40	123.18	118.00
3	DA	1001	A	C6-C5-N7	-7.40	127.12	132.30
3	DA	1993	U	OP2-P-O3'	7.40	121.48	105.20
3	DA	2811	G	N3-C4-N9	-7.40	121.56	126.00
3	DA	1271	G	C2-N3-C4	-7.40	108.20	111.90
3	DA	1609	A	C8-N9-C4	7.40	108.76	105.80
5	DB	113	C	O5'-P-OP2	7.40	119.58	110.70
3	DA	1123	C	C6-N1-C2	7.40	123.26	120.30
3	DA	2677	G	N1-C2-N3	7.40	128.34	123.90
3	DA	2728	U	N3-C4-C5	-7.40	110.16	114.60
3	DA	849	A	O5'-P-OP2	-7.40	99.04	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1665	A	C6-C5-N7	-7.40	127.12	132.30
3	DA	2465	C	N1-C2-O2	-7.40	114.46	118.90
3	DA	525	U	OP2-P-O3'	7.40	121.47	105.20
3	DA	2488	G	C4-C5-N7	7.40	113.76	110.80
1	AA	318	G	OP1-P-OP2	7.39	130.69	119.60
3	DA	740	C	OP1-P-OP2	-7.39	108.51	119.60
3	DA	1759	A	C8-N9-C4	-7.39	102.84	105.80
3	DA	2598	A	O5'-P-OP1	-7.39	99.05	105.70
1	AA	332	G	N3-C4-C5	7.39	132.30	128.60
3	DA	1116	G	N1-C2-N3	7.39	128.34	123.90
3	DA	1649	G	C5-N7-C8	-7.39	100.60	104.30
3	DA	2573	C	N3-C2-O2	-7.39	116.73	121.90
1	AA	1482	G	N3-C4-N9	7.39	130.43	126.00
3	DA	739	A	OP2-P-O3'	7.39	121.46	105.20
4	CA	197	A	C5-C6-N1	7.39	121.39	117.70
2	BA	867	G	C6-C5-N7	-7.39	125.97	130.40
3	DA	2784	U	N3-C4-O4	7.39	124.57	119.40
56	DD	108	ASP	CB-CG-OD1	7.39	124.95	118.30
2	BA	530	G	C6-C5-N7	-7.38	125.97	130.40
3	DA	121	G	N1-C2-N2	-7.38	109.55	116.20
3	DA	2799	A	C5-C6-N6	-7.38	117.79	123.70
1	AA	1068	G	O5'-P-OP1	7.38	119.56	110.70
3	DA	670	A	C6-N1-C2	-7.38	114.17	118.60
3	DA	2036	C	OP1-P-OP2	7.38	130.67	119.60
2	BA	781	A	OP1-P-O3'	7.38	121.44	105.20
2	BA	1109	C	C5-C6-N1	-7.38	117.31	121.00
3	DA	1274	A	O5'-P-OP2	-7.38	99.06	105.70
3	DA	1291	C	OP1-P-OP2	7.38	130.67	119.60
4	CA	691	C	C6-N1-C2	-7.38	117.35	120.30
3	DA	1525	A	C2-N3-C4	-7.38	106.91	110.60
3	DA	2080	A	C2-N3-C4	-7.38	106.91	110.60
3	DA	1651	G	C6-C5-N7	-7.38	125.97	130.40
3	DA	2379	G	N1-C2-N2	7.38	122.84	116.20
3	DA	729	G	N1-C2-N3	-7.37	119.48	123.90
3	DA	1648	U	C5-C4-O4	7.37	130.32	125.90
5	DB	70	C	N3-C4-N4	7.37	123.16	118.00
29	DE	61	ARG	NE-CZ-NH1	-7.37	116.61	120.30
3	DA	124	G	OP2-P-O3'	7.37	121.42	105.20
3	DA	89	A	N1-C6-N6	7.37	123.02	118.60
3	DA	2295	C	OP1-P-O3'	7.37	121.41	105.20
5	DB	77	U	C2-N3-C4	-7.37	122.58	127.00
1	AA	603	U	O5'-P-OP1	-7.37	99.07	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1408	A	C8-N9-C4	-7.37	102.85	105.80
3	DA	1152	C	N1-C2-N3	7.37	124.36	119.20
5	DB	28	C	C6-N1-C2	7.37	123.25	120.30
3	DA	20	C	C6-N1-C2	-7.36	117.35	120.30
3	DA	2486	C	C2-N3-C4	-7.36	116.22	119.90
3	DA	2512	C	N1-C2-O2	-7.36	114.48	118.90
3	DA	562	U	O5'-P-OP2	-7.36	99.07	105.70
4	CA	203	A	C4-C5-N7	7.36	114.38	110.70
3	DA	1438	U	C5-C4-O4	-7.36	121.48	125.90
3	DA	2875	C	C5-C4-N4	-7.36	115.05	120.20
3	DA	551	G	O5'-P-OP2	7.36	119.53	110.70
3	DA	1265	A	O5'-P-OP1	7.36	119.53	110.70
3	DA	524	G	N9-C4-C5	7.36	108.34	105.40
3	DA	2325	G	C2-N3-C4	-7.36	108.22	111.90
3	DA	2793	C	O5'-P-OP2	-7.36	99.08	105.70
4	CA	2255	G	N3-C2-N2	-7.36	114.75	119.90
3	DA	2506	U	O5'-P-OP2	7.35	119.52	110.70
3	DA	2041	U	N3-C4-O4	7.35	124.55	119.40
3	DA	2082	A	N1-C6-N6	7.35	123.01	118.60
3	DA	2472	G	C4-C5-N7	7.35	113.74	110.80
3	DA	73	A	C5-C6-N1	7.35	121.38	117.70
3	DA	1634	A	C5-C6-N6	7.35	129.58	123.70
3	DA	1210	G	O5'-P-OP1	7.35	119.52	110.70
3	DA	1299	G	C6-C5-N7	-7.35	125.99	130.40
3	DA	2517	C	C5-C6-N1	7.35	124.67	121.00
3	DA	2802	G	C2-N3-C4	-7.35	108.22	111.90
3	DA	2840	C	O5'-P-OP2	-7.35	99.08	105.70
3	DA	1573	G	N1-C2-N2	-7.35	109.59	116.20
4	CA	245	G	N1-C6-O6	-7.35	115.49	119.90
3	DA	1160	G	N3-C2-N2	-7.34	114.76	119.90
3	DA	1651	G	C4-N9-C1'	7.34	136.05	126.50
3	DA	2308	G	N1-C6-O6	7.34	124.31	119.90
3	DA	1771	C	C4-C5-C6	7.34	121.07	117.40
4	CA	798	G	C8-N9-C4	-7.34	103.46	106.40
1	AA	535	A	O5'-P-OP2	-7.34	99.09	105.70
1	AA	804	U	O5'-P-OP2	-7.34	99.09	105.70
5	DB	92	C	C5-C6-N1	-7.34	117.33	121.00
1	AA	1416	G	C6-N1-C2	-7.34	120.70	125.10
2	BA	203	G	N3-C4-N9	-7.34	121.60	126.00
1	AA	1527	U	OP2-P-O3'	7.33	121.34	105.20
3	DA	557	C	C5-C6-N1	-7.33	117.33	121.00
3	DA	994	C	OP2-P-O3'	7.33	121.34	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1676	A	O5'-P-OP2	-7.33	99.10	105.70
1	AA	894	G	OP1-P-OP2	7.33	130.60	119.60
3	DA	559	G	OP2-P-O3'	7.33	121.33	105.20
3	DA	1633	G	O5'-P-OP1	-7.33	99.10	105.70
5	DB	74	U	N1-C2-O2	7.33	127.93	122.80
3	DA	2634	A	C8-N9-C4	-7.33	102.87	105.80
3	DA	2671	G	C5-C6-O6	-7.33	124.20	128.60
3	DA	2772	C	N3-C4-C5	7.33	124.83	121.90
4	CA	776	G	C6-C5-N7	-7.33	126.00	130.40
2	BA	379	C	N3-C4-C5	-7.33	118.97	121.90
3	DA	194	G	C2-N3-C4	-7.33	108.24	111.90
3	DA	829	A	C4-N9-C1'	-7.33	113.11	126.30
3	DA	2361	G	N7-C8-N9	7.33	116.76	113.10
3	DA	2227	A	C8-N9-C4	7.32	108.73	105.80
3	DA	859	G	C5-N7-C8	7.32	107.96	104.30
3	DA	1950	G	O5'-P-OP1	-7.32	99.11	105.70
2	BA	404	G	N1-C6-O6	7.32	124.29	119.90
3	DA	1120	G	C6-C5-N7	-7.32	126.01	130.40
43	CT	25	ARG	NE-CZ-NH2	-7.32	116.64	120.30
3	DA	1076	C	O4'-C1'-N1	7.32	114.06	108.20
3	DA	2277	G	N3-C2-N2	-7.32	114.78	119.90
4	CA	258	G	C8-N9-C1'	7.32	136.51	127.00
3	DA	1285	A	C2-N3-C4	-7.32	106.94	110.60
1	AA	822	U	C6-N1-C2	7.32	125.39	121.00
3	DA	264	C	C5-C4-N4	-7.32	115.08	120.20
3	DA	2497	A	N1-C2-N3	7.31	132.96	129.30
1	AA	784	A	C8-N9-C4	-7.31	102.88	105.80
1	AA	797	C	O5'-P-OP1	-7.31	99.12	105.70
1	AA	1467	C	C6-N1-C2	7.31	123.22	120.30
3	DA	1797	G	C4-N9-C1'	7.31	136.01	126.50
3	DA	2363	G	N3-C4-C5	7.31	132.26	128.60
3	DA	2036	C	C5-C4-N4	-7.31	115.08	120.20
3	DA	853	C	N3-C2-O2	7.31	127.02	121.90
3	DA	1670	C	N1-C2-O2	-7.31	114.51	118.90
4	CA	2699	C	C6-N1-C2	-7.31	117.38	120.30
2	BA	917	G	N3-C4-C5	7.31	132.25	128.60
3	DA	251	A	C8-N9-C4	7.31	108.72	105.80
3	DA	978	G	C2-N3-C4	-7.31	108.25	111.90
3	DA	991	C	C6-N1-C2	-7.31	117.38	120.30
3	DA	1318	U	N3-C4-O4	-7.31	114.28	119.40
3	DA	1653	G	C4-C5-N7	-7.31	107.88	110.80
3	DA	152	A	C4-C5-N7	7.31	114.35	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2751	G	C4-C5-N7	7.31	113.72	110.80
37	DN	53	MET	CG-SD-CE	7.31	111.89	100.20
1	AA	136	C	N3-C2-O2	-7.30	116.79	121.90
1	AA	1488	G	O5'-P-OP1	7.30	119.47	110.70
3	DA	475	C	O5'-P-OP2	-7.30	99.13	105.70
3	DA	1549	A	C4-C5-N7	7.30	114.35	110.70
3	DA	1614	A	C4-C5-C6	7.30	120.65	117.00
3	DA	2526	G	O5'-P-OP2	-7.30	99.13	105.70
1	AA	136	C	N1-C2-O2	7.30	123.28	118.90
3	DA	2253	G	C8-N9-C1'	-7.30	117.51	127.00
3	DA	798	G	O5'-P-OP2	-7.30	99.13	105.70
3	DA	1409	U	O5'-P-OP2	-7.30	99.13	105.70
3	DA	576	U	OP1-P-OP2	-7.30	108.66	119.60
3	DA	1472	C	C5-C6-N1	-7.30	117.35	121.00
4	CA	2012	G	N3-C4-N9	7.30	130.38	126.00
3	DA	772	C	C6-N1-C2	7.29	123.22	120.30
3	DA	1948	G	N3-C4-N9	-7.29	121.62	126.00
3	DA	2411	A	O5'-P-OP1	-7.29	99.14	105.70
3	DA	2098	U	N1-C1'-C2'	-7.29	103.98	112.00
4	CA	218	A	N1-C6-N6	7.29	122.97	118.60
4	CA	1936	A	N1-C2-N3	7.29	132.95	129.30
4	CA	2068	U	O5'-P-OP2	-7.29	99.14	105.70
5	DB	55	U	N3-C4-O4	7.29	124.50	119.40
3	DA	127	A	N1-C6-N6	7.29	122.97	118.60
1	AA	112	G	N3-C2-N2	-7.29	114.80	119.90
3	DA	681	G	C5-C6-O6	7.29	132.97	128.60
3	DA	1253	A	OP1-P-OP2	-7.29	108.67	119.60
3	DA	2618	G	O5'-P-OP2	-7.29	99.14	105.70
3	DA	443	A	OP1-P-OP2	7.29	130.53	119.60
3	DA	561	G	N3-C4-N9	-7.29	121.63	126.00
3	DA	804	A	N3-C4-C5	7.29	131.90	126.80
4	CA	2607	G	N9-C4-C5	-7.29	102.49	105.40
3	DA	430	A	N1-C2-N3	7.28	132.94	129.30
3	DA	2521	C	N1-C2-O2	-7.28	114.53	118.90
3	DA	964	C	C5-C4-N4	-7.28	115.10	120.20
3	DA	822	G	N1-C6-O6	-7.28	115.53	119.90
3	DA	825	A	N9-C4-C5	7.28	108.71	105.80
3	DA	2542	A	C2-N3-C4	-7.28	106.96	110.60
3	DA	2627	G	O5'-P-OP2	-7.28	99.15	105.70
5	DB	78	A	C8-N9-C4	7.28	108.71	105.80
2	BA	679	C	N3-C2-O2	7.28	126.99	121.90
3	DA	1467	U	N3-C2-O2	7.28	127.29	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2679	A	C8-N9-C4	7.28	108.71	105.80
4	CA	955	U	C5-C6-N1	7.28	126.34	122.70
4	CA	1942	C	C6-N1-C2	-7.28	117.39	120.30
4	CA	1815	A	O5'-P-OP2	-7.27	99.15	105.70
3	DA	2543	G	OP2-P-O3'	7.27	121.20	105.20
3	DA	1368	G	N3-C4-N9	-7.27	121.64	126.00
3	DA	1800	C	OP1-P-OP2	-7.27	108.69	119.60
3	DA	2072	C	C6-N1-C1'	-7.27	112.08	120.80
3	DA	105	C	N3-C2-O2	7.27	126.99	121.90
3	DA	443	A	C4-C5-N7	-7.27	107.06	110.70
3	DA	1443	U	N3-C4-O4	7.27	124.49	119.40
3	DA	1794	A	O5'-P-OP2	-7.27	99.16	105.70
3	DA	1965	C	N1-C2-O2	-7.27	114.54	118.90
3	DA	2333	A	C5-C6-N6	-7.27	117.89	123.70
3	DA	330	A	C4-C5-C6	7.27	120.63	117.00
3	DA	394	C	C2-N3-C4	-7.27	116.27	119.90
3	DA	524	G	N1-C6-O6	7.27	124.26	119.90
3	DA	1142	A	C6-C5-N7	-7.27	127.21	132.30
3	DA	2850	A	C2-N3-C4	-7.27	106.97	110.60
1	AA	1117	A	C4-C5-N7	7.26	114.33	110.70
1	AA	1505	G	N3-C2-N2	-7.26	114.81	119.90
3	DA	2576	G	C8-N9-C4	7.26	109.31	106.40
3	DA	2771	C	N1-C2-O2	-7.26	114.54	118.90
1	AA	291	U	OP2-P-O3'	7.26	121.18	105.20
3	DA	861	A	N1-C2-N3	7.26	132.93	129.30
3	DA	1845	G	N9-C4-C5	7.26	108.31	105.40
3	DA	2361	G	N9-C4-C5	7.26	108.31	105.40
1	AA	679	C	C6-N1-C2	7.26	123.20	120.30
3	DA	482	A	OP1-P-OP2	7.26	130.49	119.60
3	DA	1252	G	N1-C6-O6	7.26	124.26	119.90
3	DA	980	A	OP1-P-OP2	7.26	130.49	119.60
3	DA	1994	C	C2-N3-C4	-7.26	116.27	119.90
1	AA	696	A	C8-N9-C4	-7.26	102.90	105.80
3	DA	1300	G	C5-C6-O6	-7.26	124.25	128.60
3	DA	2892	G	O5'-P-OP1	-7.26	99.17	105.70
4	CA	1377	G	N3-C4-N9	7.26	130.35	126.00
5	DB	114	C	C6-N1-C2	7.26	123.20	120.30
3	DA	1710	G	C4-C5-N7	-7.25	107.90	110.80
5	DB	100	G	C5-N7-C8	7.25	107.93	104.30
3	DA	2	G	C2-N3-C4	-7.25	108.27	111.90
3	DA	15	G	C5-C6-N1	-7.25	107.88	111.50
4	CA	1791	A	N9-C4-C5	-7.25	102.90	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1961	C	C5-C4-N4	-7.25	115.12	120.20
3	DA	1318	U	O5'-P-OP2	7.25	119.40	110.70
3	DA	2003	A	C6-C5-N7	-7.25	127.23	132.30
4	CA	461	C	N1-C2-O2	7.25	123.25	118.90
5	DB	73	A	C5-C6-N6	7.25	129.50	123.70
1	AA	557	G	O5'-P-OP2	-7.25	99.18	105.70
3	DA	574	A	C8-N9-C4	7.25	108.70	105.80
3	DA	704	G	O5'-P-OP2	7.25	119.39	110.70
3	DA	873	C	N1-C2-O2	-7.25	114.55	118.90
3	DA	1762	A	C4-C5-N7	7.25	114.32	110.70
3	DA	449	A	C4-C5-N7	7.24	114.32	110.70
3	DA	481	G	N1-C2-N3	-7.24	119.55	123.90
3	DA	2787	C	C5-C6-N1	-7.24	117.38	121.00
5	DB	73	A	C2-N3-C4	-7.24	106.98	110.60
2	BA	1511	G	C5-C6-O6	-7.24	124.25	128.60
4	CA	2069	G	N3-C4-C5	7.24	132.22	128.60
4	CA	2601	C	C6-N1-C2	-7.24	117.40	120.30
3	DA	152	A	C2-N3-C4	-7.24	106.98	110.60
3	DA	474	G	N1-C6-O6	7.24	124.24	119.90
1	AA	1489	G	O5'-P-OP1	7.24	119.38	110.70
3	DA	2618	G	N7-C8-N9	7.24	116.72	113.10
3	DA	704	G	N3-C2-N2	7.23	124.96	119.90
3	DA	1471	G	C6-C5-N7	-7.23	126.06	130.40
3	DA	1509	A	O4'-C1'-N9	7.23	113.99	108.20
3	DA	2828	G	N3-C4-N9	-7.23	121.66	126.00
1	AA	22	G	N3-C4-N9	7.23	130.34	126.00
3	DA	1511	G	N1-C6-O6	7.23	124.24	119.90
4	CA	2076	U	C2-N1-C1'	7.23	126.38	117.70
1	AA	523	A	OP1-P-O3'	7.23	121.10	105.20
1	AA	1389	C	OP1-P-O3'	7.23	121.10	105.20
2	BA	576	C	O5'-P-OP2	-7.23	99.19	105.70
3	DA	1392	A	N9-C4-C5	7.23	108.69	105.80
3	DA	1778	U	C5-C4-O4	7.23	130.24	125.90
5	DB	64	G	O5'-P-OP1	7.23	119.37	110.70
3	DA	2415	G	N1-C6-O6	7.23	124.24	119.90
3	DA	211	C	N3-C2-O2	7.22	126.96	121.90
3	DA	245	G	N3-C2-N2	-7.22	114.84	119.90
3	DA	555	G	C8-N9-C4	-7.22	103.51	106.40
3	DA	2317	A	C5-C6-N6	7.22	129.48	123.70
5	DB	96	G	C4-C5-N7	7.22	113.69	110.80
3	DA	920	A	C4-C5-C6	7.22	120.61	117.00
3	DA	1762	A	C8-N9-C4	7.22	108.69	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	858	G	O5'-P-OP2	-7.22	99.20	105.70
3	DA	1969	A	N1-C6-N6	-7.22	114.27	118.60
3	DA	25	U	N3-C2-O2	7.21	127.25	122.20
3	DA	189	G	O5'-P-OP2	-7.21	99.21	105.70
3	DA	580	U	N3-C2-O2	-7.21	117.15	122.20
3	DA	1595	C	C5-C4-N4	-7.21	115.15	120.20
3	DA	2305	U	C5-C4-O4	7.21	130.23	125.90
3	DA	729	G	C5-C6-N1	7.21	115.11	111.50
3	DA	1452	G	N9-C4-C5	7.21	108.28	105.40
3	DA	2818	U	N3-C4-O4	7.21	124.45	119.40
3	DA	561	G	N1-C6-O6	7.21	124.22	119.90
1	AA	1385	G	O5'-P-OP1	-7.21	99.21	105.70
3	DA	2644	G	N1-C6-O6	7.21	124.22	119.90
4	CA	1890	A	N1-C6-N6	7.21	122.92	118.60
1	AA	525	C	C2-N3-C4	-7.20	116.30	119.90
3	DA	565	C	N3-C2-O2	7.20	126.94	121.90
3	DA	1986	C	N1-C2-O2	7.20	123.22	118.90
3	DA	628	G	C5-C6-O6	-7.20	124.28	128.60
3	DA	848	C	O5'-P-OP1	-7.20	99.22	105.70
3	DA	1137	G	N3-C2-N2	-7.20	114.86	119.90
3	DA	1685	C	N3-C2-O2	7.20	126.94	121.90
3	DA	2370	G	C2-N3-C4	-7.20	108.30	111.90
2	BA	573	A	C8-N9-C4	7.20	108.68	105.80
3	DA	685	A	OP1-P-O3'	7.20	121.04	105.20
3	DA	2019	A	O5'-P-OP2	-7.20	99.22	105.70
3	DA	2520	C	O5'-P-OP2	-7.20	99.22	105.70
4	CA	2427	C	O5'-P-OP2	-7.20	99.22	105.70
1	AA	742	G	N3-C4-C5	7.20	132.20	128.60
4	CA	1677	A	O5'-P-OP2	-7.20	99.22	105.70
2	BA	1394	A	C5-C6-N6	-7.20	117.94	123.70
3	DA	2004	G	OP2-P-O3'	7.20	121.03	105.20
3	DA	2314	A	C8-N9-C4	7.20	108.68	105.80
3	DA	2597	G	N1-C6-O6	-7.20	115.58	119.90
3	DA	2642	G	N3-C2-N2	-7.20	114.86	119.90
3	DA	640	C	C5-C4-N4	-7.19	115.16	120.20
3	DA	828	U	C6-N1-C2	-7.19	116.68	121.00
3	DA	924	G	N1-C2-N3	7.19	128.22	123.90
3	DA	2466	C	C6-N1-C2	7.19	123.18	120.30
3	DA	2819	G	N1-C6-O6	7.19	124.22	119.90
3	DA	2877	G	C2-N3-C4	-7.19	108.30	111.90
2	BA	502	A	OP2-P-O3'	7.19	121.02	105.20
2	BA	561	U	N1-C2-O2	7.19	127.83	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	581	C	C6-N1-C1'	-7.19	112.17	120.80
3	DA	938	G	N3-C4-C5	7.19	132.19	128.60
3	DA	987	C	C2-N1-C1'	7.19	126.71	118.80
3	DA	1235	G	C8-N9-C4	-7.19	103.52	106.40
4	CA	411	G	N3-C2-N2	-7.19	114.87	119.90
1	AA	569	C	N1-C2-O2	-7.19	114.59	118.90
3	DA	708	G	C2-N3-C4	-7.19	108.31	111.90
3	DA	792	A	C6-N1-C2	-7.19	114.29	118.60
3	DA	1780	A	N1-C2-N3	7.19	132.89	129.30
3	DA	1982	U	O5'-P-OP2	-7.19	99.23	105.70
1	AA	743	A	C2-N3-C4	-7.19	107.01	110.60
1	AA	1417	G	C6-C5-N7	-7.19	126.09	130.40
3	DA	488	G	N9-C4-C5	7.19	108.28	105.40
3	DA	1526	C	N3-C4-C5	7.19	124.78	121.90
3	DA	1026	G	N9-C4-C5	7.18	108.27	105.40
3	DA	1748	C	C5-C4-N4	-7.18	115.17	120.20
3	DA	63	A	C6-N1-C2	-7.18	114.29	118.60
3	DA	774	G	C6-C5-N7	-7.18	126.09	130.40
3	DA	817	C	N3-C4-C5	7.18	124.77	121.90
1	AA	822	U	C5-C6-N1	-7.18	119.11	122.70
1	AA	1355	G	C8-N9-C4	-7.18	103.53	106.40
1	AA	1431	A	N1-C6-N6	7.18	122.91	118.60
2	BA	887	G	N1-C6-O6	7.18	124.21	119.90
3	DA	173	A	N1-C6-N6	7.18	122.91	118.60
3	DA	1018	U	N3-C4-O4	7.18	124.43	119.40
3	DA	1190	G	N1-C2-N3	7.18	128.21	123.90
3	DA	1981	A	C5-C6-N6	-7.18	117.96	123.70
4	CA	1762	A	N1-C6-N6	-7.18	114.29	118.60
5	DB	109	A	O5'-P-OP2	-7.18	99.24	105.70
7	BC	172	ARG	CG-CD-NE	7.18	126.88	111.80
3	DA	1012	U	O4'-C1'-N1	7.18	113.94	108.20
1	AA	891	U	C6-N1-C2	7.18	125.31	121.00
3	DA	309	A	O5'-P-OP2	7.18	119.31	110.70
3	DA	400	G	C4-N9-C1'	7.18	135.83	126.50
3	DA	798	G	N3-C4-C5	7.18	132.19	128.60
3	DA	817	C	OP2-P-O3'	7.18	120.99	105.20
3	DA	1994	C	C5-C6-N1	-7.18	117.41	121.00
3	DA	2685	G	N1-C2-N2	7.18	122.66	116.20
5	DB	70	C	C4-C5-C6	7.18	120.99	117.40
3	DA	558	U	OP2-P-O3'	7.17	120.98	105.20
3	DA	1823	G	O5'-P-OP1	-7.17	99.24	105.70
1	AA	230	G	C2-N3-C4	-7.17	108.31	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	486	C	N1-C2-N3	-7.17	114.18	119.20
3	DA	2729	G	N1-C2-N3	7.17	128.20	123.90
4	CA	731	C	C5-C6-N1	-7.17	117.42	121.00
4	CA	1296	G	N1-C6-O6	-7.17	115.60	119.90
3	DA	152	A	O5'-P-OP1	7.17	119.30	110.70
3	DA	818	G	N1-C2-N3	7.17	128.20	123.90
3	DA	2812	G	N1-C2-N2	7.17	122.65	116.20
3	DA	2671	G	C6-C5-N7	-7.17	126.10	130.40
1	AA	399	G	C4-C5-N7	7.17	113.67	110.80
1	AA	1269	A	N1-C6-N6	-7.17	114.30	118.60
3	DA	1649	G	N9-C4-C5	7.16	108.27	105.40
3	DA	2248	C	C6-N1-C2	-7.16	117.43	120.30
1	AA	323	U	N3-C2-O2	-7.16	117.19	122.20
3	DA	1287	A	C5-N7-C8	-7.16	100.32	103.90
1	AA	928	G	N3-C4-N9	-7.16	121.70	126.00
3	DA	58	G	O5'-P-OP1	7.16	119.29	110.70
3	DA	1951	U	OP1-P-O3'	7.16	120.95	105.20
3	DA	2352	A	C4-C5-N7	7.16	114.28	110.70
3	DA	758	C	N3-C4-C5	7.16	124.76	121.90
2	BA	548	G	O5'-P-OP1	-7.16	99.26	105.70
1	AA	713	G	C8-N9-C4	-7.16	103.54	106.40
25	AU	47	ARG	NE-CZ-NH1	7.16	123.88	120.30
38	DO	12	ARG	NE-CZ-NH2	7.16	123.88	120.30
1	AA	1203	C	N3-C4-C5	-7.15	119.04	121.90
3	DA	565	C	N3-C4-C5	7.15	124.76	121.90
3	DA	1780	A	C5-N7-C8	-7.15	100.32	103.90
3	DA	180	G	C8-N9-C4	7.15	109.26	106.40
3	DA	750	A	C6-C5-N7	-7.15	127.29	132.30
3	DA	979	A	C4-C5-C6	7.15	120.58	117.00
4	CA	1633	G	O5'-P-OP1	-7.15	99.26	105.70
1	AA	1068	G	C6-C5-N7	-7.15	126.11	130.40
3	DA	1208	C	C6-N1-C2	7.15	123.16	120.30
3	DA	1322	A	OP2-P-O3'	7.15	120.93	105.20
3	DA	2781	A	C8-N9-C4	-7.15	102.94	105.80
3	DA	2829	A	C4-C5-N7	7.15	114.28	110.70
3	DA	2024	G	N9-C4-C5	7.15	108.26	105.40
3	DA	583	G	C5-C6-O6	-7.15	124.31	128.60
3	DA	1009	A	C2-N3-C4	7.15	114.17	110.60
3	DA	1740	G	O5'-P-OP1	-7.15	99.27	105.70
3	DA	1780	A	C6-C5-N7	-7.15	127.30	132.30
43	DT	51	LEU	CB-CG-CD1	-7.15	98.85	111.00
3	DA	332	A	C2-N3-C4	-7.15	107.03	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1765	U	N1-C2-N3	-7.15	110.61	114.90
3	DA	497	A	O5'-P-OP2	-7.14	99.27	105.70
3	DA	1263	U	N3-C2-O2	-7.14	117.20	122.20
3	DA	1298	C	C5-C6-N1	-7.14	117.43	121.00
3	DA	1334	G	OP2-P-O3'	7.14	120.91	105.20
3	DA	2843	G	OP2-P-O3'	7.14	120.92	105.20
3	DA	617	G	C5-N7-C8	-7.14	100.73	104.30
3	DA	1190	G	N3-C2-N2	-7.14	114.90	119.90
3	DA	2045	C	C2-N3-C4	-7.14	116.33	119.90
3	DA	2560	A	N9-C4-C5	7.14	108.66	105.80
4	CA	2426	A	O5'-P-OP1	-7.14	99.28	105.70
3	DA	1198	U	N3-C4-C5	-7.14	110.32	114.60
1	AA	881	G	N3-C4-C5	7.13	132.17	128.60
2	BA	18	C	O5'-P-OP1	-7.13	99.28	105.70
3	DA	1527	G	OP1-P-OP2	7.13	130.30	119.60
3	DA	2515	C	N3-C2-O2	-7.13	116.91	121.90
3	DA	2579	C	N3-C4-C5	7.13	124.75	121.90
3	DA	2626	C	N3-C2-O2	7.13	126.89	121.90
5	DB	96	G	C2-N3-C4	-7.13	108.33	111.90
3	DA	636	G	C8-N9-C4	7.13	109.25	106.40
3	DA	1227	G	N9-C4-C5	7.13	108.25	105.40
3	DA	1380	G	OP1-P-OP2	7.13	130.30	119.60
3	DA	1875	G	N3-C2-N2	-7.13	114.91	119.90
3	DA	2582	G	C5-C6-O6	7.13	132.88	128.60
3	DA	850	U	N3-C2-O2	7.13	127.19	122.20
3	DA	1305	C	N3-C4-N4	-7.13	113.01	118.00
4	CA	2781	A	N1-C6-N6	-7.13	114.32	118.60
3	DA	530	G	N1-C2-N3	7.13	128.18	123.90
3	DA	1297	C	OP1-P-OP2	-7.13	108.91	119.60
3	DA	569	U	N3-C4-O4	7.13	124.39	119.40
3	DA	707	G	OP2-P-O3'	7.13	120.88	105.20
3	DA	980	A	O5'-P-OP1	-7.13	99.29	105.70
3	DA	2361	G	C5-N7-C8	-7.13	100.74	104.30
3	DA	2737	G	N3-C2-N2	-7.13	114.91	119.90
4	CA	955	U	C2-N1-C1'	7.12	126.25	117.70
41	DR	94	LEU	CB-CG-CD1	7.12	123.11	111.00
1	AA	552	U	OP2-P-O3'	7.12	120.87	105.20
1	AA	1375	A	N1-C6-N6	-7.12	114.33	118.60
3	DA	481	G	C8-N9-C4	-7.12	103.55	106.40
3	DA	1163	G	O5'-P-OP1	-7.12	99.29	105.70
1	AA	336	A	O5'-P-OP1	-7.12	99.29	105.70
3	DA	39	G	C2-N3-C4	-7.12	108.34	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1247	A	N7-C8-N9	-7.12	110.24	113.80
3	DA	2029	G	C4-C5-C6	7.12	123.07	118.80
3	DA	2887	A	OP1-P-OP2	7.12	130.28	119.60
1	AA	278	G	O5'-P-OP2	-7.12	99.29	105.70
3	DA	1081	U	C2-N1-C1'	7.12	126.24	117.70
3	DA	1445	G	N3-C4-N9	-7.12	121.73	126.00
3	DA	2577	A	N7-C8-N9	7.12	117.36	113.80
1	AA	330	C	N1-C2-O2	-7.12	114.63	118.90
2	BA	719	C	N3-C4-C5	-7.12	119.05	121.90
3	DA	66	C	N3-C4-C5	-7.12	119.05	121.90
3	DA	969	G	OP1-P-OP2	-7.12	108.93	119.60
3	DA	2046	G	N7-C8-N9	7.12	116.66	113.10
3	DA	2265	U	C4-C5-C6	7.12	123.97	119.70
4	CA	1887	C	N1-C2-O2	7.12	123.17	118.90
5	DB	91	C	O5'-P-OP2	7.12	119.24	110.70
1	AA	1082	A	N1-C6-N6	7.11	122.87	118.60
3	DA	554	U	C6-N1-C2	7.11	125.27	121.00
1	AA	108	G	N1-C6-O6	7.11	124.17	119.90
3	DA	1252	G	C4-C5-N7	7.11	113.64	110.80
3	DA	2501	C	N3-C2-O2	-7.11	116.92	121.90
2	BA	42	G	N1-C6-O6	7.11	124.17	119.90
3	DA	783	A	O4'-C1'-N9	7.11	113.89	108.20
3	DA	2553	G	C4-C5-N7	-7.11	107.96	110.80
3	DA	2895	G	N3-C2-N2	-7.11	114.92	119.90
2	BA	344	A	C8-N9-C4	-7.11	102.96	105.80
4	CA	663	G	N1-C6-O6	7.11	124.16	119.90
1	AA	971	G	N3-C2-N2	-7.10	114.93	119.90
4	CA	258	G	C4-N9-C1'	-7.10	117.26	126.50
4	CA	581	C	C2-N1-C1'	7.10	126.61	118.80
3	DA	769	U	C2-N1-C1'	7.10	126.22	117.70
3	DA	2842	G	C6-N1-C2	-7.10	120.84	125.10
3	DA	2749	A	N1-C6-N6	7.10	122.86	118.60
3	DA	1230	A	OP2-P-O3'	7.10	120.82	105.20
2	BA	1483	A	C8-N9-C4	7.10	108.64	105.80
3	DA	1135	C	C6-N1-C2	7.10	123.14	120.30
3	DA	2616	C	N3-C4-C5	-7.10	119.06	121.90
3	DA	2394	C	C5-C4-N4	-7.10	115.23	120.20
3	DA	2691	C	C5-C4-N4	-7.10	115.23	120.20
1	AA	1067	A	C4-C5-N7	7.09	114.25	110.70
1	AA	1495	U	O5'-P-OP2	-7.09	99.31	105.70
3	DA	507	A	C5-C6-N6	7.09	129.38	123.70
4	CA	2730	C	C5-C6-N1	7.09	124.55	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	11	G	C6-C5-N7	-7.09	126.14	130.40
1	AA	117	G	N1-C6-O6	7.09	124.16	119.90
3	DA	2562	U	N3-C4-O4	7.09	124.36	119.40
1	AA	359	G	N1-C6-O6	-7.09	115.65	119.90
3	DA	1455	G	C4-C5-C6	7.09	123.05	118.80
3	DA	2017	U	N3-C4-C5	-7.09	110.35	114.60
4	CA	1377	G	N3-C4-C5	-7.09	125.06	128.60
3	DA	60	G	N3-C4-N9	-7.09	121.75	126.00
3	DA	1000	A	N9-C4-C5	7.09	108.64	105.80
3	DA	506	G	C4-C5-N7	7.08	113.63	110.80
3	DA	2061	G	N1-C6-O6	-7.08	115.65	119.90
1	AA	568	G	N3-C4-C5	-7.08	125.06	128.60
1	AA	910	C	N3-C2-O2	7.08	126.86	121.90
3	DA	519	U	N3-C4-O4	7.08	124.36	119.40
3	DA	950	G	N3-C4-C5	7.08	132.14	128.60
3	DA	1326	U	N3-C4-O4	7.08	124.36	119.40
3	DA	2397	G	C8-N9-C1'	-7.08	117.79	127.00
3	DA	2719	G	N1-C2-N3	7.08	128.15	123.90
3	DA	371	A	OP1-P-OP2	7.08	130.22	119.60
3	DA	1879	C	C6-N1-C2	-7.08	117.47	120.30
3	DA	1613	G	OP1-P-O3'	7.08	120.78	105.20
4	CA	1824	G	N3-C2-N2	-7.08	114.94	119.90
1	AA	785	G	OP1-P-OP2	-7.08	108.98	119.60
1	AA	1466	C	C5-C6-N1	-7.08	117.46	121.00
2	BA	818	G	C4-C5-N7	-7.08	107.97	110.80
3	DA	2073	C	OP1-P-OP2	-7.08	108.98	119.60
3	DA	2625	G	N3-C2-N2	-7.08	114.94	119.90
3	DA	905	A	N3-C4-C5	7.08	131.75	126.80
3	DA	679	C	N3-C2-O2	-7.08	116.95	121.90
3	DA	784	G	N3-C4-C5	7.08	132.14	128.60
3	DA	1379	U	N3-C2-O2	7.08	127.15	122.20
3	DA	1812	U	O5'-P-OP2	-7.08	99.33	105.70
3	DA	2373	G	C5-C6-O6	-7.08	124.35	128.60
5	DB	93	C	C5-C4-N4	-7.08	115.25	120.20
3	DA	577	G	C4-N9-C1'	7.07	135.69	126.50
3	DA	1761	C	O4'-C1'-N1	-7.07	102.54	108.20
3	DA	2658	C	C6-N1-C2	7.07	123.13	120.30
3	DA	2771	C	N3-C4-N4	7.07	122.95	118.00
1	AA	251	G	C4-C5-N7	7.07	113.63	110.80
3	DA	235	U	C5-C4-O4	-7.07	121.66	125.90
3	DA	2268	A	N3-C4-C5	7.07	131.75	126.80
3	DA	633	A	C8-N9-C4	7.07	108.63	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2071	A	N1-C6-N6	7.07	122.84	118.60
1	AA	1458	G	OP1-P-OP2	-7.07	109.00	119.60
3	DA	14	A	O5'-P-OP2	7.07	119.18	110.70
3	DA	61	C	N3-C4-C5	7.07	124.73	121.90
3	DA	563	A	N9-C4-C5	7.07	108.63	105.80
4	CA	1658	C	C2-N1-C1'	7.07	126.57	118.80
3	DA	1227	G	N3-C4-N9	-7.07	121.76	126.00
3	DA	1756	G	O5'-P-OP1	-7.07	99.34	105.70
4	CA	776	G	C4-C5-C6	7.06	123.04	118.80
2	BA	891	U	N3-C4-O4	7.06	124.34	119.40
3	DA	430	A	O5'-P-OP2	7.06	119.17	110.70
3	DA	2012	G	C5-C6-O6	-7.06	124.36	128.60
1	AA	300	A	C2-N3-C4	-7.06	107.07	110.60
3	DA	2254	C	OP1-P-OP2	-7.06	109.01	119.60
4	CA	2437	G	N3-C4-C5	7.06	132.13	128.60
3	DA	150	U	C5-C4-O4	-7.06	121.67	125.90
3	DA	1230	A	O5'-P-OP1	7.06	119.17	110.70
3	DA	1289	C	O5'-P-OP1	-7.06	99.35	105.70
3	DA	1784	A	C6-C5-N7	-7.06	127.36	132.30
3	DA	1313	U	O5'-P-OP1	-7.06	99.35	105.70
3	DA	2265	U	C2-N1-C1'	7.06	126.17	117.70
3	DA	2294	G	C2-N3-C4	-7.06	108.37	111.90
3	DA	2324	U	N3-C4-C5	-7.06	110.37	114.60
1	AA	136	C	O5'-P-OP2	-7.05	99.35	105.70
3	DA	1197	G	C6-C5-N7	7.05	134.63	130.40
3	DA	1976	U	N1-C2-O2	-7.05	117.86	122.80
4	CA	531	C	N1-C2-O2	7.05	123.13	118.90
3	DA	132	G	C8-N9-C4	7.05	109.22	106.40
3	DA	1267	U	N3-C2-O2	7.05	127.14	122.20
3	DA	1743	G	OP1-P-OP2	7.05	130.18	119.60
2	BA	119	A	N1-C6-N6	7.05	122.83	118.60
3	DA	2461	A	N3-C4-C5	7.05	131.74	126.80
1	AA	1206	G	N1-C6-O6	7.05	124.13	119.90
2	BA	765	G	N7-C8-N9	7.05	116.62	113.10
3	DA	761	A	O5'-P-OP1	-7.05	99.36	105.70
3	DA	930	G	C8-N9-C1'	7.05	136.16	127.00
3	DA	2799	A	C4-C5-N7	7.05	114.22	110.70
3	DA	1804	C	N1-C2-O2	-7.05	114.67	118.90
4	CA	1447	C	C6-N1-C2	-7.05	117.48	120.30
1	AA	345	C	C6-N1-C2	7.05	123.12	120.30
2	BA	768	A	OP1-P-OP2	7.05	130.17	119.60
3	DA	1634	A	C8-N9-C4	-7.05	102.98	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1322	C	C6-N1-C2	-7.04	117.48	120.30
3	DA	540	C	O5'-P-OP2	-7.04	99.36	105.70
3	DA	2864	G	N1-C6-O6	-7.04	115.67	119.90
1	AA	119	A	O5'-P-OP1	-7.04	99.36	105.70
3	DA	53	A	C6-C5-N7	-7.04	127.37	132.30
3	DA	440	C	N1-C2-O2	-7.04	114.67	118.90
3	DA	981	A	N7-C8-N9	-7.04	110.28	113.80
3	DA	718	A	C8-N9-C4	7.04	108.62	105.80
1	AA	786	G	C5-C6-O6	7.04	132.82	128.60
3	DA	4	U	N3-C2-O2	7.04	127.13	122.20
3	DA	1738	G	N1-C2-N2	-7.04	109.86	116.20
3	DA	1951	U	N1-C2-N3	7.04	119.12	114.90
3	DA	1216	G	C5-C6-N1	-7.04	107.98	111.50
3	DA	2226	C	N1-C2-O2	7.04	123.12	118.90
3	DA	2874	C	C5-C4-N4	-7.04	115.28	120.20
3	DA	1682	G	N3-C4-C5	-7.03	125.08	128.60
3	DA	2089	C	N1-C2-O2	-7.03	114.68	118.90
3	DA	2318	G	C4-N9-C1'	7.03	135.64	126.50
4	CA	973	A	C8-N9-C4	-7.03	102.99	105.80
3	DA	733	G	C2-N3-C4	-7.03	108.38	111.90
3	DA	1976	U	OP1-P-O3'	7.03	120.67	105.20
3	DA	2071	A	C5-C6-N6	-7.03	118.08	123.70
3	DA	2680	U	C2-N3-C4	-7.03	122.78	127.00
4	CA	777	G	N7-C8-N9	-7.03	109.58	113.10
3	DA	1240	U	N1-C2-N3	-7.03	110.68	114.90
1	AA	821	G	C5-C6-O6	7.03	132.82	128.60
2	BA	507	C	C6-N1-C2	7.03	123.11	120.30
3	DA	1807	G	N7-C8-N9	7.03	116.61	113.10
1	AA	258	G	C4-N9-C1'	-7.03	117.37	126.50
3	DA	4	U	C6-N1-C2	7.03	125.22	121.00
3	DA	2330	G	N3-C4-C5	7.03	132.11	128.60
1	AA	576	C	N1-C2-O2	-7.02	114.69	118.90
3	DA	455	C	C5-C4-N4	7.02	125.12	120.20
3	DA	314	C	C5-C4-N4	-7.02	115.28	120.20
3	DA	1191	G	N3-C4-N9	-7.02	121.79	126.00
3	DA	2502	G	O5'-P-OP2	-7.02	99.38	105.70
3	DA	951	C	N3-C2-O2	7.02	126.81	121.90
1	AA	1486	G	N1-C6-O6	7.02	124.11	119.90
3	DA	1513	U	N3-C2-O2	-7.02	117.29	122.20
1	AA	910	C	C2-N3-C4	-7.02	116.39	119.90
3	DA	2003	A	N9-C4-C5	-7.01	102.99	105.80
3	DA	2253	G	C2-N3-C4	-7.01	108.39	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	94	A	N1-C6-N6	7.01	122.81	118.60
3	DA	1792	G	N1-C6-O6	7.01	124.11	119.90
3	DA	2895	G	N1-C2-N2	7.01	122.51	116.20
3	DA	2518	A	OP1-P-OP2	-7.01	109.08	119.60
5	DB	84	G	N7-C8-N9	7.01	116.61	113.10
1	AA	1487	G	N1-C6-O6	-7.01	115.69	119.90
3	DA	264	C	O5'-P-OP2	-7.01	99.39	105.70
3	DA	519	U	N3-C4-C5	-7.01	110.39	114.60
3	DA	1138	G	N7-C8-N9	7.01	116.61	113.10
3	DA	2001	C	C2-N3-C4	-7.01	116.39	119.90
3	DA	2321	U	O5'-P-OP1	7.01	119.11	110.70
3	DA	2796	U	C5-C4-O4	-7.01	121.69	125.90
3	DA	1437	C	C6-N1-C2	7.01	123.10	120.30
3	DA	2	G	N3-C2-N2	-7.01	115.00	119.90
5	DB	88	C	O4'-C1'-N1	-7.01	102.59	108.20
3	DA	1348	C	N3-C4-N4	7.00	122.90	118.00
1	AA	1416	G	N9-C4-C5	7.00	108.20	105.40
3	DA	649	G	C2-N3-C4	-7.00	108.40	111.90
3	DA	2020	A	C5-C6-N6	-7.00	118.10	123.70
3	DA	2356	U	C4-C5-C6	7.00	123.90	119.70
4	CA	400	G	N3-C4-C5	-7.00	125.10	128.60
5	DB	118	C	N3-C2-O2	7.00	126.80	121.90
2	BA	1396	A	OP1-P-OP2	7.00	130.10	119.60
3	DA	1654	A	C5-N7-C8	-7.00	100.40	103.90
2	BA	575	G	C8-N9-C4	7.00	109.20	106.40
3	DA	857	G	N1-C6-O6	7.00	124.10	119.90
3	DA	1123	C	O5'-P-OP2	7.00	119.10	110.70
3	DA	527	C	O5'-P-OP2	-7.00	99.40	105.70
3	DA	1185	G	N1-C6-O6	-7.00	115.70	119.90
5	DB	18	G	N7-C8-N9	-7.00	109.60	113.10
5	DB	85	G	N1-C6-O6	7.00	124.10	119.90
3	DA	516	C	C5-C6-N1	7.00	124.50	121.00
3	DA	809	G	C8-N9-C4	-7.00	103.60	106.40
1	AA	326	G	C4-N9-C1'	7.00	135.59	126.50
1	AA	1286	U	C2-N1-C1'	7.00	126.09	117.70
3	DA	1126	A	C5-C6-N6	-7.00	118.10	123.70
3	DA	1628	G	N1-C6-O6	7.00	124.10	119.90
3	DA	2522	U	N3-C2-O2	7.00	127.10	122.20
3	DA	482	A	C6-N1-C2	-6.99	114.40	118.60
3	DA	2364	C	N3-C2-O2	-6.99	117.00	121.90
3	DA	2645	G	C4-N9-C1'	6.99	135.59	126.50
3	DA	1919	A	C8-N9-C4	-6.99	103.00	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	537	G	N3-C4-N9	-6.99	121.81	126.00
3	DA	537	G	OP2-P-O3'	6.99	120.58	105.20
3	DA	1007	C	OP1-P-OP2	6.99	130.09	119.60
3	DA	1153	C	O5'-P-OP1	-6.99	99.41	105.70
1	AA	584	G	N3-C2-N2	-6.99	115.01	119.90
3	DA	2204	G	N7-C8-N9	6.99	116.59	113.10
3	DA	2365	G	O5'-P-OP1	6.99	119.09	110.70
3	DA	2378	A	OP1-P-OP2	-6.99	109.12	119.60
4	CA	203	A	N7-C8-N9	6.99	117.29	113.80
4	CA	2730	C	C6-N1-C2	-6.99	117.50	120.30
5	DB	101	A	C5-C6-N1	6.99	121.19	117.70
3	DA	2619	C	OP1-P-O3'	6.99	120.57	105.20
3	DA	2890	G	C2-N3-C4	-6.99	108.41	111.90
1	AA	811	C	N3-C2-O2	6.99	126.79	121.90
2	BA	774	G	C8-N9-C4	-6.99	103.61	106.40
3	DA	557	C	N1-C2-O2	-6.98	114.71	118.90
3	DA	2712	C	N1-C2-O2	-6.98	114.71	118.90
3	DA	732	C	C6-N1-C2	6.98	123.09	120.30
3	DA	2040	G	C2-N3-C4	-6.98	108.41	111.90
3	DA	649	G	O5'-P-OP2	-6.98	99.42	105.70
3	DA	769	U	C2-N3-C4	6.98	131.19	127.00
3	DA	38	A	C5-C6-N1	6.98	121.19	117.70
3	DA	561	G	C5-N7-C8	-6.98	100.81	104.30
3	DA	2265	U	C2-N3-C4	-6.98	122.81	127.00
3	DA	517	C	C6-N1-C2	6.98	123.09	120.30
4	CA	186	G	C8-N9-C1'	6.98	136.07	127.00
3	DA	2002	G	C5-C6-O6	-6.97	124.42	128.60
3	DA	2698	U	C5-C6-N1	-6.97	119.21	122.70
3	DA	2801	G	N3-C4-C5	6.97	132.09	128.60
4	CA	911	A	C8-N9-C4	-6.97	103.01	105.80
3	DA	136	G	N1-C6-O6	6.97	124.08	119.90
3	DA	1108	U	O5'-P-OP1	-6.97	99.42	105.70
3	DA	1241	A	N1-C2-N3	6.97	132.79	129.30
3	DA	1314	C	N1-C2-O2	-6.97	114.72	118.90
3	DA	1686	C	N3-C4-N4	6.97	122.88	118.00
3	DA	1907	G	N3-C4-N9	6.97	130.18	126.00
3	DA	2321	U	C5-C6-N1	-6.97	119.21	122.70
3	DA	2689	U	N3-C2-O2	6.97	127.08	122.20
3	DA	1241	A	O5'-P-OP1	-6.97	99.43	105.70
3	DA	1721	G	N3-C2-N2	6.97	124.78	119.90
3	DA	1788	C	N1-C2-O2	-6.97	114.72	118.90
3	DA	2330	G	O5'-P-OP1	6.97	119.06	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2720	U	O5'-P-OP1	-6.97	99.43	105.70
4	CA	828	U	N1-C2-O2	6.97	127.68	122.80
3	DA	989	G	C5-C6-N1	-6.97	108.02	111.50
3	DA	1349	C	O5'-P-OP2	-6.97	99.43	105.70
3	DA	2227	A	OP1-P-OP2	6.97	130.05	119.60
4	CA	2601	C	N1-C2-O2	-6.97	114.72	118.90
3	DA	32	C	N3-C4-N4	-6.97	113.12	118.00
3	DA	577	G	N3-C4-N9	6.97	130.18	126.00
3	DA	1181	U	C2-N1-C1'	-6.97	109.34	117.70
4	CA	189	G	N7-C8-N9	6.97	116.58	113.10
3	DA	821	A	C6-N1-C2	6.97	122.78	118.60
3	DA	2002	G	N3-C2-N2	6.97	124.78	119.90
4	CA	184	C	C6-N1-C2	6.97	123.09	120.30
3	DA	1634	A	N3-C4-N9	-6.96	121.83	127.40
3	DA	2070	A	OP1-P-OP2	6.96	130.05	119.60
3	DA	2207	C	N3-C4-C5	6.96	124.69	121.90
3	DA	2242	G	N1-C2-N2	-6.96	109.93	116.20
5	DB	83	G	C6-C5-N7	-6.96	126.22	130.40
3	DA	16	C	O5'-P-OP2	-6.96	99.43	105.70
3	DA	1694	C	C5-C6-N1	-6.96	117.52	121.00
3	DA	15	G	C2-N3-C4	-6.96	108.42	111.90
3	DA	523	C	C4-C5-C6	6.96	120.88	117.40
3	DA	857	G	OP2-P-O3'	6.96	120.52	105.20
3	DA	953	G	C8-N9-C4	6.96	109.19	106.40
3	DA	2573	C	O5'-P-OP1	-6.96	99.44	105.70
1	AA	361	G	C8-N9-C4	6.96	109.18	106.40
1	AA	761	G	C6-C5-N7	-6.96	126.22	130.40
3	DA	2091	C	N3-C4-C5	6.96	124.68	121.90
3	DA	2208	C	O5'-P-OP2	6.96	119.05	110.70
3	DA	2684	U	N1-C2-O2	6.96	127.67	122.80
1	AA	899	C	C6-N1-C2	6.96	123.08	120.30
3	DA	488	G	N3-C4-N9	-6.96	121.83	126.00
3	DA	676	A	OP2-P-O3'	6.96	120.50	105.20
4	CA	17	G	C8-N9-C4	-6.96	103.62	106.40
1	AA	1418	A	O5'-P-OP1	-6.95	99.44	105.70
3	DA	46	G	O5'-P-OP2	-6.95	99.44	105.70
3	DA	539	G	OP2-P-O3'	6.95	120.50	105.20
3	DA	779	U	N3-C2-O2	6.95	127.07	122.20
3	DA	1182	G	C4-C5-N7	6.95	113.58	110.80
3	DA	1006	C	N3-C4-N4	-6.95	113.13	118.00
3	DA	2499	C	N3-C4-C5	6.95	124.68	121.90
3	DA	2843	G	C2-N3-C4	-6.95	108.42	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	551	G	C8-N9-C4	-6.95	103.62	106.40
1	AA	968	A	N1-C6-N6	6.95	122.77	118.60
3	DA	794	A	OP2-P-O3'	6.95	120.49	105.20
3	DA	1687	G	C5-C6-O6	6.95	132.77	128.60
3	DA	2252	G	N3-C4-N9	-6.95	121.83	126.00
3	DA	2813	A	C4-C5-N7	6.95	114.17	110.70
3	DA	523	C	C5-C6-N1	-6.95	117.53	121.00
3	DA	1133	A	C4-C5-N7	-6.95	107.23	110.70
3	DA	2661	G	N1-C6-O6	6.95	124.07	119.90
3	DA	738	G	N3-C2-N2	6.95	124.76	119.90
3	DA	1107	G	OP1-P-O3'	6.95	120.48	105.20
3	DA	1266	G	O4'-C1'-N9	6.95	113.76	108.20
3	DA	2516	A	C5-C6-N1	6.95	121.17	117.70
3	DA	2574	G	OP1-P-OP2	6.95	130.02	119.60
3	DA	2592	G	N3-C4-N9	-6.95	121.83	126.00
2	BA	1528	U	C6-N1-C2	6.94	125.17	121.00
3	DA	14	A	C8-N9-C4	6.94	108.58	105.80
3	DA	2545	G	N7-C8-N9	6.94	116.57	113.10
3	DA	2024	G	C5-N7-C8	6.94	107.77	104.30
3	DA	2554	U	O5'-P-OP1	-6.94	99.45	105.70
3	DA	2778	A	C8-N9-C4	6.94	108.58	105.80
5	DB	99	A	N9-C4-C5	6.94	108.58	105.80
1	AA	400	C	C6-N1-C2	6.94	123.08	120.30
2	BA	566	G	O5'-P-OP1	-6.94	99.45	105.70
3	DA	1269	A	O5'-P-OP1	6.94	119.03	110.70
3	DA	1681	G	O5'-P-OP2	6.94	119.03	110.70
1	AA	1416	G	N3-C2-N2	-6.94	115.04	119.90
2	BA	673	A	O5'-P-OP1	-6.94	99.46	105.70
1	AA	880	C	N3-C2-O2	6.93	126.75	121.90
3	DA	60	G	N9-C4-C5	6.93	108.17	105.40
3	DA	1065	U	C2-N1-C1'	6.93	126.02	117.70
3	DA	1645	G	N1-C6-O6	6.93	124.06	119.90
3	DA	1731	G	N3-C4-N9	-6.93	121.84	126.00
3	DA	1787	A	O5'-P-OP1	-6.93	99.46	105.70
45	DV	67	SER	CB-CA-C	-6.93	96.92	110.10
45	DV	97	SER	CB-CA-C	-6.93	96.92	110.10
3	DA	194	G	N3-C2-N2	-6.93	115.05	119.90
3	DA	1006	C	C5-C6-N1	-6.93	117.53	121.00
3	DA	1150	C	N3-C2-O2	-6.93	117.05	121.90
3	DA	1226	A	C5-C6-N6	-6.93	118.15	123.70
1	AA	292	G	OP2-P-O3'	6.93	120.45	105.20
3	DA	743	A	O5'-P-OP2	-6.93	99.46	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2591	C	OP1-P-OP2	-6.93	109.21	119.60
3	DA	1649	G	OP1-P-O3'	6.93	120.44	105.20
3	DA	795	C	N1-C2-N3	6.93	124.05	119.20
3	DA	2872	A	N7-C8-N9	6.93	117.26	113.80
1	AA	58	C	N3-C4-N4	-6.92	113.15	118.00
3	DA	2363	G	C5-N7-C8	-6.92	100.84	104.30
3	DA	2685	G	N1-C6-O6	6.92	124.06	119.90
4	CA	335	C	N1-C2-O2	6.92	123.06	118.90
3	DA	509	C	N3-C4-C5	6.92	124.67	121.90
2	BA	1074	G	N3-C2-N2	-6.92	115.06	119.90
3	DA	148	U	C5-C4-O4	-6.92	121.75	125.90
3	DA	1444	G	O5'-P-OP1	6.92	119.00	110.70
3	DA	1543	G	C5-C6-N1	-6.92	108.04	111.50
3	DA	2536	G	C5-C6-N1	-6.92	108.04	111.50
4	CA	757	G	C4-N9-C1'	-6.92	117.50	126.50
1	AA	349	A	OP2-P-O3'	6.92	120.42	105.20
1	AA	1464	U	O5'-P-OP1	-6.92	99.47	105.70
3	DA	976	G	N1-C6-O6	-6.92	115.75	119.90
3	DA	1004	U	N3-C4-C5	-6.92	110.45	114.60
3	DA	2594	C	N3-C4-C5	-6.92	119.13	121.90
3	DA	2621	G	C5-C6-N1	-6.92	108.04	111.50
1	AA	1305	G	C5-C6-O6	6.92	132.75	128.60
2	BA	570	G	C8-N9-C4	-6.92	103.63	106.40
3	DA	276	U	N1-C2-O2	6.92	127.64	122.80
3	DA	1650	A	O5'-P-OP2	6.92	119.00	110.70
3	DA	2054	A	OP1-P-OP2	-6.92	109.22	119.60
4	CA	769	U	C6-N1-C2	-6.92	116.85	121.00
4	CA	1797	G	N3-C4-N9	6.92	130.15	126.00
1	AA	142	G	N7-C8-N9	6.92	116.56	113.10
1	AA	1068	G	N3-C2-N2	6.92	124.74	119.90
3	DA	970	U	OP2-P-O3'	6.92	120.41	105.20
3	DA	1684	G	N9-C4-C5	-6.92	102.63	105.40
3	DA	1766	G	C6-N1-C2	6.92	129.25	125.10
1	AA	1210	C	C6-N1-C2	-6.91	117.53	120.30
3	DA	171	U	O5'-P-OP2	-6.91	99.48	105.70
3	DA	175	G	N3-C4-C5	6.91	132.06	128.60
3	DA	543	G	N1-C2-N3	6.91	128.05	123.90
3	DA	839	U	N3-C2-O2	-6.91	117.36	122.20
1	AA	522	C	O5'-P-OP2	-6.91	99.48	105.70
3	DA	2506	U	N3-C2-O2	-6.91	117.36	122.20
3	DA	2712	C	O5'-P-OP1	-6.91	99.48	105.70
3	DA	562	U	C6-N1-C2	-6.91	116.86	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	869	G	C8-N9-C4	-6.91	103.64	106.40
1	AA	1422	G	C2-N3-C4	-6.91	108.45	111.90
2	BA	1520	C	C5-C4-N4	-6.91	115.37	120.20
3	DA	121	G	N1-C2-N3	6.91	128.04	123.90
3	DA	1973	G	OP1-P-O3'	6.91	120.39	105.20
4	CA	1665	A	N3-C4-N9	6.91	132.92	127.40
4	CA	2056	G	C4-C5-N7	6.91	113.56	110.80
3	DA	1003	G	N1-C6-O6	6.90	124.04	119.90
3	DA	533	G	N1-C2-N3	6.90	128.04	123.90
3	DA	1909	C	N3-C4-C5	-6.90	119.14	121.90
4	CA	776	G	C8-N9-C4	-6.90	103.64	106.40
4	CA	1842	G	N1-C6-O6	6.90	124.04	119.90
4	CA	2061	G	C5-C6-O6	-6.90	124.46	128.60
1	AA	1080	A	N1-C2-N3	6.90	132.75	129.30
2	BA	1390	U	OP1-P-OP2	6.90	129.95	119.60
4	CA	2684	U	N3-C2-O2	-6.90	117.37	122.20
3	DA	1121	C	OP1-P-OP2	-6.90	109.25	119.60
3	DA	2577	A	C4-C5-N7	6.90	114.15	110.70
5	DB	106	G	N1-C6-O6	6.90	124.04	119.90
3	DA	2578	G	O5'-P-OP2	-6.90	99.49	105.70
1	AA	1509	C	N3-C2-O2	6.89	126.73	121.90
3	DA	928	A	N1-C6-N6	-6.89	114.46	118.60
3	DA	1229	C	OP2-P-O3'	6.89	120.37	105.20
3	DA	1276	A	N9-C4-C5	-6.89	103.04	105.80
3	DA	1942	C	N3-C2-O2	-6.89	117.08	121.90
3	DA	2549	G	C5-C6-N1	-6.89	108.05	111.50
3	DA	580	U	O5'-P-OP2	6.89	118.97	110.70
3	DA	1137	G	N1-C6-O6	6.89	124.03	119.90
3	DA	1513	U	C5-C4-O4	6.89	130.03	125.90
3	DA	1919	A	O5'-P-OP1	-6.89	99.50	105.70
3	DA	2546	U	OP2-P-O3'	6.89	120.36	105.20
3	DA	519	U	C4-C5-C6	6.89	123.83	119.70
3	DA	2704	C	N3-C4-C5	6.89	124.66	121.90
3	DA	16	C	C5-C4-N4	-6.89	115.38	120.20
3	DA	528	A	C5-N7-C8	-6.89	100.46	103.90
3	DA	1166	G	C5-C6-N1	-6.89	108.06	111.50
3	DA	1994	C	N3-C4-C5	6.89	124.65	121.90
3	DA	2573	C	N3-C4-N4	6.89	122.82	118.00
5	DB	73	A	N9-C4-C5	6.89	108.56	105.80
4	CA	1773	A	C2-N3-C4	6.88	114.04	110.60
1	AA	639	G	C8-N9-C4	-6.88	103.65	106.40
3	DA	809	G	O5'-P-OP1	6.88	118.96	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1310	G	N1-C2-N2	-6.88	110.00	116.20
4	CA	1843	C	C6-N1-C2	-6.88	117.55	120.30
1	AA	285	C	N3-C2-O2	-6.88	117.08	121.90
3	DA	1016	G	C4-C5-N7	-6.88	108.05	110.80
3	DA	1624	U	OP2-P-O3'	6.88	120.34	105.20
3	DA	874	G	N1-C6-O6	6.88	124.03	119.90
3	DA	1566	A	OP1-P-O3'	6.88	120.34	105.20
3	DA	1653	G	C5-C6-N1	-6.88	108.06	111.50
2	BA	558	G	C8-N9-C4	6.88	109.15	106.40
3	DA	2267	A	N9-C4-C5	6.88	108.55	105.80
3	DA	2443	C	C6-N1-C2	6.88	123.05	120.30
1	AA	667	G	OP2-P-O3'	6.88	120.33	105.20
3	DA	2043	C	C6-N1-C2	-6.88	117.55	120.30
4	CA	1246	A	C5-C6-N6	-6.88	118.20	123.70
3	DA	2278	A	O4'-C1'-N9	-6.88	102.70	108.20
3	DA	568	U	O5'-P-OP2	-6.87	99.51	105.70
1	AA	732	C	O5'-P-OP1	-6.87	99.52	105.70
1	AA	1094	G	N1-C2-N2	-6.87	110.02	116.20
1	AA	1357	A	N1-C6-N6	6.87	122.72	118.60
2	BA	754	C	N3-C4-N4	6.87	122.81	118.00
3	DA	1684	G	C4-C5-N7	6.87	113.55	110.80
3	DA	2337	G	O5'-P-OP2	-6.87	99.52	105.70
3	DA	945	A	C6-N1-C2	-6.87	114.48	118.60
3	DA	1381	G	O5'-P-OP1	6.87	118.94	110.70
3	DA	1521	G	C2-N3-C4	-6.87	108.47	111.90
3	DA	2665	A	O5'-P-OP2	-6.87	99.52	105.70
1	AA	1067	A	C6-N1-C2	-6.87	114.48	118.60
3	DA	73	A	O5'-P-OP1	-6.87	99.52	105.70
3	DA	489	G	C5-C6-O6	-6.87	124.48	128.60
3	DA	865	C	OP1-P-OP2	-6.87	109.30	119.60
3	DA	1314	C	N3-C4-N4	6.87	122.81	118.00
3	DA	2443	C	N1-C2-O2	-6.87	114.78	118.90
4	CA	2607	G	C4-N9-C1'	6.87	135.43	126.50
3	DA	1821	A	C4-C5-N7	6.87	114.13	110.70
3	DA	2697	G	N3-C4-C5	6.87	132.03	128.60
3	DA	2890	G	N9-C4-C5	-6.87	102.65	105.40
4	CA	2248	C	C5-C6-N1	6.86	124.43	121.00
5	DB	62	C	O5'-P-OP2	-6.86	99.52	105.70
1	AA	583	A	C5-C6-N6	-6.86	118.21	123.70
3	DA	1393	A	O5'-P-OP2	-6.86	99.52	105.70
1	AA	780	A	N7-C8-N9	6.86	117.23	113.80
2	BA	366	A	C5-C6-N6	6.86	129.19	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2029	G	O5'-P-OP1	-6.86	99.53	105.70
3	DA	2370	G	C6-C5-N7	-6.86	126.28	130.40
3	DA	2418	A	C2-N3-C4	-6.86	107.17	110.60
5	DB	88	C	C6-N1-C1'	-6.86	112.57	120.80
3	DA	105	C	C6-N1-C2	6.86	123.04	120.30
3	DA	2729	G	N3-C2-N2	6.86	124.70	119.90
3	DA	1201	U	N3-C4-O4	6.86	124.20	119.40
3	DA	763	G	OP2-P-O3'	6.86	120.28	105.20
3	DA	1469	A	C8-N9-C4	6.86	108.54	105.80
3	DA	1777	U	O5'-P-OP2	-6.86	99.53	105.70
3	DA	1815	A	C6-N1-C2	-6.86	114.49	118.60
3	DA	2067	G	C5-C6-O6	-6.86	124.49	128.60
3	DA	2082	A	C5-C6-N6	-6.85	118.22	123.70
3	DA	1233	C	N1-C2-O2	-6.85	114.79	118.90
1	AA	543	U	N3-C4-O4	6.85	124.19	119.40
1	AA	949	A	N1-C6-N6	6.85	122.71	118.60
3	DA	843	G	N1-C6-O6	6.85	124.01	119.90
3	DA	2453	A	C4-C5-C6	6.85	120.42	117.00
3	DA	2754	U	N3-C4-C5	-6.85	110.49	114.60
3	DA	202	U	N3-C2-O2	-6.85	117.41	122.20
3	DA	797	G	C5-N7-C8	-6.85	100.88	104.30
3	DA	1245	G	N9-C4-C5	6.85	108.14	105.40
3	DA	2686	G	C5-C6-N1	-6.85	108.08	111.50
4	CA	1636	U	N3-C4-O4	6.85	124.19	119.40
5	DB	59	A	C2-N3-C4	-6.85	107.18	110.60
1	AA	752	G	N3-C4-C5	-6.85	125.18	128.60
2	BA	1080	A	O5'-P-OP1	-6.84	99.54	105.70
2	BA	1455	G	N3-C4-C5	6.84	132.02	128.60
3	DA	127	A	N3-C4-N9	6.84	132.88	127.40
3	DA	501	A	N7-C8-N9	6.84	117.22	113.80
3	DA	2332	C	C5-C6-N1	-6.84	117.58	121.00
4	CA	1677	A	C5-C6-N6	-6.84	118.22	123.70
3	DA	53	A	C8-N9-C4	-6.84	103.06	105.80
3	DA	1127	A	C6-N1-C2	6.84	122.71	118.60
3	DA	1376	C	OP1-P-OP2	-6.84	109.34	119.60
3	DA	1629	U	OP1-P-OP2	6.84	129.86	119.60
3	DA	2024	G	N7-C8-N9	-6.84	109.68	113.10
3	DA	2867	G	C4-N9-C1'	-6.84	117.61	126.50
3	DA	774	G	OP2-P-O3'	6.84	120.25	105.20
3	DA	2840	C	O5'-P-OP1	6.84	118.91	110.70
4	CA	456	C	C6-N1-C2	-6.84	117.56	120.30
3	DA	617	G	C5-C6-O6	-6.84	124.50	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1718	G	C5-C6-O6	6.84	132.70	128.60
3	DA	2197	U	O5'-P-OP2	6.84	118.91	110.70
3	DA	2370	G	C4-C5-N7	6.84	113.53	110.80
3	DA	2729	G	C2-N3-C4	-6.84	108.48	111.90
4	CA	1969	A	C5-C6-N6	-6.84	118.23	123.70
1	AA	286	C	C2-N1-C1'	6.83	126.32	118.80
3	DA	1754	A	OP1-P-OP2	-6.83	109.35	119.60
3	DA	2333	A	N1-C6-N6	6.83	122.70	118.60
1	AA	400	C	C5-C4-N4	-6.83	115.42	120.20
2	BA	47	C	C6-N1-C2	6.83	123.03	120.30
2	BA	428	G	N9-C4-C5	6.83	108.13	105.40
3	DA	258	G	C2-N3-C4	-6.83	108.48	111.90
3	DA	1211	C	C6-N1-C2	6.83	123.03	120.30
3	DA	2057	G	O5'-P-OP1	-6.83	99.55	105.70
3	DA	72	U	C6-N1-C2	-6.83	116.90	121.00
3	DA	834	G	C6-C5-N7	-6.83	126.30	130.40
3	DA	1788	C	O5'-P-OP1	-6.83	99.55	105.70
3	DA	2621	G	C6-N1-C2	6.83	129.20	125.10
3	DA	2846	G	N3-C2-N2	-6.83	115.12	119.90
4	CA	530	G	N3-C4-N9	-6.83	121.90	126.00
2	BA	1499	A	C4-C5-N7	6.83	114.11	110.70
3	DA	1490	A	N1-C6-N6	-6.83	114.50	118.60
3	DA	2256	G	N3-C4-N9	-6.83	121.90	126.00
3	DA	2644	G	C2-N3-C4	-6.83	108.49	111.90
1	AA	868	C	C6-N1-C2	6.83	123.03	120.30
7	BC	43	LEU	CA-CB-CG	6.83	131.00	115.30
1	AA	1079	G	N3-C4-N9	6.83	130.09	126.00
2	BA	557	G	C5-C6-O6	-6.83	124.50	128.60
3	DA	1603	A	C8-N9-C4	-6.83	103.07	105.80
3	DA	30	G	N3-C4-C5	-6.82	125.19	128.60
3	DA	571	U	C5-C6-N1	6.82	126.11	122.70
3	DA	743	A	OP2-P-O3'	6.82	120.21	105.20
3	DA	1437	C	C5-C4-N4	-6.82	115.42	120.20
3	DA	2688	G	N7-C8-N9	6.82	116.51	113.10
3	DA	1667	G	N9-C4-C5	6.82	108.13	105.40
3	DA	2005	A	N1-C6-N6	-6.82	114.51	118.60
1	AA	833	G	C8-N9-C4	6.82	109.13	106.40
5	DB	14	U	C5-C4-O4	-6.82	121.81	125.90
5	DB	114	C	N1-C2-O2	-6.82	114.81	118.90
3	DA	51	G	C4-C5-N7	-6.82	108.07	110.80
3	DA	1018	U	N3-C2-O2	6.82	126.97	122.20
3	DA	1655	A	C6-C5-N7	-6.82	127.53	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2345	G	C4-C5-N7	-6.82	108.07	110.80
4	CA	1741	C	N3-C4-N4	6.82	122.77	118.00
4	CA	1797	G	O5'-P-OP2	-6.82	99.56	105.70
1	AA	235	C	N3-C4-N4	6.82	122.77	118.00
2	BA	910	C	N3-C4-C5	6.82	124.63	121.90
3	DA	494	G	C5-C6-N1	-6.82	108.09	111.50
3	DA	1271	G	N7-C8-N9	-6.82	109.69	113.10
3	DA	2297	A	N1-C6-N6	-6.82	114.51	118.60
3	DA	2329	U	O5'-P-OP2	-6.82	99.56	105.70
3	DA	2789	C	C2-N1-C1'	6.82	126.30	118.80
3	DA	467	G	C8-N9-C4	6.81	109.12	106.40
3	DA	531	C	C5-C6-N1	-6.81	117.59	121.00
3	DA	727	A	N1-C6-N6	6.81	122.69	118.60
3	DA	1759	A	C2-N3-C4	6.81	114.01	110.60
3	DA	2050	C	C2-N3-C4	-6.81	116.49	119.90
3	DA	783	A	C5-C6-N6	-6.81	118.25	123.70
3	DA	1607	C	O4'-C1'-N1	-6.81	102.75	108.20
3	DA	189	G	OP1-P-OP2	6.81	129.82	119.60
1	AA	113	G	N3-C2-N2	6.81	124.67	119.90
1	AA	724	G	C5-C6-O6	-6.81	124.52	128.60
3	DA	705	A	C4-C5-N7	6.81	114.11	110.70
3	DA	1815	A	N7-C8-N9	-6.81	110.39	113.80
3	DA	860	U	N3-C4-O4	6.81	124.17	119.40
40	DQ	7	LEU	CB-CG-CD2	-6.81	99.43	111.00
3	DA	2658	C	N3-C2-O2	6.80	126.66	121.90
2	BA	917	G	C4-C5-N7	6.80	113.52	110.80
3	DA	2508	G	N1-C6-O6	6.80	123.98	119.90
1	AA	229	U	O5'-P-OP2	6.80	118.86	110.70
3	DA	493	G	N1-C2-N3	-6.80	119.82	123.90
3	DA	1477	A	N1-C2-N3	6.80	132.70	129.30
3	DA	1645	G	O5'-P-OP1	6.80	118.86	110.70
40	DQ	113	LEU	CA-CB-CG	6.80	130.95	115.30
2	BA	1109	C	C2-N3-C4	-6.80	116.50	119.90
3	DA	430	A	C6-C5-N7	-6.80	127.54	132.30
3	DA	569	U	C5-C4-O4	-6.80	121.82	125.90
3	DA	1288	G	N3-C2-N2	6.80	124.66	119.90
3	DA	1785	A	C6-N1-C2	-6.80	114.52	118.60
6	BB	212	LEU	CA-CB-CG	6.80	130.94	115.30
3	DA	131	A	C2-N3-C4	-6.80	107.20	110.60
19	BO	58	ARG	NE-CZ-NH1	6.80	123.70	120.30
1	AA	730	G	N3-C2-N2	-6.80	115.14	119.90
2	BA	503	C	O5'-P-OP1	6.80	118.86	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	1412	C	O5'-P-OP1	-6.80	99.58	105.70
3	DA	548	G	N1-C6-O6	6.80	123.98	119.90
3	DA	2387	U	O5'-P-OP2	-6.80	99.58	105.70
3	DA	2619	C	N1-C2-O2	-6.80	114.82	118.90
3	DA	2893	A	C2-N3-C4	-6.80	107.20	110.60
5	DB	26	C	C6-N1-C2	6.80	123.02	120.30
38	DO	28	LEU	CB-CG-CD1	6.80	122.56	111.00
3	DA	2842	G	N1-C2-N3	6.79	127.98	123.90
2	BA	1102	A	OP2-P-O3'	6.79	120.15	105.20
3	DA	446	G	N1-C2-N3	6.79	127.98	123.90
3	DA	742	A	OP2-P-O3'	6.79	120.15	105.20
3	DA	440	C	C6-N1-C2	6.79	123.02	120.30
3	DA	494	G	C4-C5-N7	6.79	113.52	110.80
3	DA	1719	G	C2-N3-C4	-6.79	108.50	111.90
4	CA	189	G	C6-C5-N7	-6.79	126.33	130.40
3	DA	75	G	N3-C2-N2	-6.79	115.15	119.90
3	DA	493	G	C4-C5-N7	-6.79	108.08	110.80
3	DA	837	C	OP2-P-O3'	6.79	120.13	105.20
3	DA	2328	A	O4'-C1'-N9	-6.79	102.77	108.20
4	CA	1850	G	C8-N9-C4	6.79	109.11	106.40
1	AA	901	A	C5-N7-C8	-6.79	100.51	103.90
2	BA	295	C	C6-N1-C2	-6.79	117.58	120.30
3	DA	2	G	C5-C6-O6	-6.79	124.53	128.60
3	DA	586	A	C8-N9-C4	6.79	108.51	105.80
4	CA	730	A	C8-N9-C4	6.79	108.51	105.80
1	AA	769	G	O5'-P-OP1	6.78	118.84	110.70
2	BA	770	C	C5-C6-N1	-6.78	117.61	121.00
3	DA	804	A	O5'-P-OP2	-6.78	99.59	105.70
3	DA	1269	A	C5-N7-C8	-6.78	100.51	103.90
4	CA	2253	G	N3-C4-C5	-6.78	125.21	128.60
3	DA	1801	A	N1-C2-N3	6.78	132.69	129.30
3	DA	2437	G	N3-C4-N9	-6.78	121.93	126.00
1	AA	730	G	C5-C6-N1	-6.78	108.11	111.50
1	AA	1400	C	N1-C2-O2	6.78	122.97	118.90
2	BA	797	C	OP2-P-O3'	6.78	120.12	105.20
3	DA	306	U	C6-N1-C2	6.78	125.07	121.00
3	DA	991	C	C5-C4-N4	-6.78	115.45	120.20
3	DA	1132	U	N1-C2-N3	6.78	118.97	114.90
3	DA	2358	A	N1-C6-N6	6.78	122.67	118.60
3	DA	2606	C	N1-C2-O2	-6.78	114.83	118.90
3	DA	2890	G	C6-C5-N7	-6.78	126.33	130.40
3	DA	718	A	N1-C6-N6	6.78	122.67	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2089	C	N3-C2-O2	6.78	126.64	121.90
4	CA	775	G	N1-C6-O6	-6.78	115.83	119.90
4	CA	2684	U	C6-N1-C2	-6.78	116.93	121.00
1	AA	299	G	C8-N9-C4	-6.78	103.69	106.40
1	AA	803	G	OP2-P-O3'	6.78	120.11	105.20
3	DA	1829	A	N1-C2-N3	6.78	132.69	129.30
3	DA	2052	A	OP1-P-OP2	6.78	129.76	119.60
3	DA	2579	C	C4-C5-C6	-6.78	114.01	117.40
3	DA	2681	C	O5'-P-OP1	6.78	118.83	110.70
3	DA	2709	G	C5-C6-O6	6.78	132.67	128.60
1	AA	677	U	N3-C2-O2	6.77	126.94	122.20
3	DA	836	G	C6-C5-N7	-6.77	126.34	130.40
3	DA	2072	C	C5-C4-N4	-6.77	115.46	120.20
3	DA	2825	G	N7-C8-N9	6.77	116.49	113.10
3	DA	782	A	C5-C6-N1	6.77	121.09	117.70
3	DA	1266	G	N1-C2-N2	-6.77	110.11	116.20
3	DA	2577	A	C6-C5-N7	-6.77	127.56	132.30
3	DA	35	G	N1-C6-O6	-6.77	115.84	119.90
3	DA	446	G	N9-C4-C5	-6.77	102.69	105.40
3	DA	2426	A	N1-C2-N3	6.77	132.69	129.30
4	CA	411	G	C6-C5-N7	6.77	134.46	130.40
4	CA	2256	G	C2-N3-C4	-6.77	108.51	111.90
1	AA	943	U	O5'-P-OP1	-6.77	99.61	105.70
3	DA	127	A	C8-N9-C4	6.77	108.51	105.80
4	CA	2012	G	C8-N9-C1'	-6.77	118.20	127.00
4	CA	2355	G	N3-C4-C5	6.77	131.99	128.60
3	DA	518	G	O5'-P-OP2	-6.77	99.61	105.70
3	DA	1272	A	C4-C5-N7	-6.77	107.32	110.70
1	AA	910	C	C5-C6-N1	-6.77	117.62	121.00
3	DA	1129	A	C4-C5-N7	-6.77	107.32	110.70
3	DA	827	U	O5'-P-OP1	6.76	118.82	110.70
4	CA	1313	U	C2-N1-C1'	6.76	125.82	117.70
4	CA	2075	U	N1-C2-O2	-6.76	118.06	122.80
3	DA	1679	A	C4-C5-C6	6.76	120.38	117.00
3	DA	132	G	O5'-P-OP1	6.76	118.81	110.70
3	DA	238	C	C2-N3-C4	-6.76	116.52	119.90
3	DA	1561	C	O5'-P-OP2	6.76	118.81	110.70
3	DA	1930	G	OP1-P-OP2	6.76	129.74	119.60
27	CC	195	GLY	N-CA-C	6.76	130.00	113.10
3	DA	416	U	C5-C4-O4	-6.76	121.84	125.90
3	DA	936	A	C5-C6-N6	-6.76	118.29	123.70
3	DA	1337	G	C8-N9-C4	6.76	109.10	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2011	U	O5'-P-OP2	-6.76	99.62	105.70
3	DA	2039	U	N1-C2-N3	-6.76	110.84	114.90
3	DA	572	A	O5'-P-OP2	6.76	118.81	110.70
4	CA	730	A	C2-N3-C4	-6.76	107.22	110.60
4	CA	1829	A	C8-N9-C4	6.76	108.50	105.80
1	AA	1106	G	C5-C6-O6	-6.76	124.55	128.60
3	DA	823	C	C5-C4-N4	-6.76	115.47	120.20
3	DA	1471	G	N1-C6-O6	6.76	123.95	119.90
3	DA	1511	G	C5-C6-O6	-6.76	124.55	128.60
3	DA	2261	C	N3-C2-O2	-6.75	117.17	121.90
1	AA	525	C	C5-C4-N4	-6.75	115.47	120.20
3	DA	1480	C	C6-N1-C2	6.75	123.00	120.30
3	DA	2536	G	N1-C6-O6	6.75	123.95	119.90
5	DB	32	U	C6-N1-C2	6.75	125.05	121.00
1	AA	33	A	C5-C6-N1	6.75	121.08	117.70
3	DA	1428	C	N3-C4-N4	6.75	122.73	118.00
3	DA	1656	C	N1-C2-O2	6.75	122.95	118.90
3	DA	1431	A	N1-C6-N6	6.75	122.65	118.60
3	DA	2057	G	OP1-P-O3'	6.75	120.05	105.20
1	AA	912	C	C2-N3-C4	-6.75	116.53	119.90
3	DA	190	A	C5-N7-C8	-6.75	100.53	103.90
3	DA	1738	G	C8-N9-C4	-6.75	103.70	106.40
4	CA	741	U	C6-N1-C2	6.75	125.05	121.00
3	DA	579	G	C5-C6-O6	-6.75	124.55	128.60
3	DA	971	G	OP2-P-O3'	6.75	120.04	105.20
3	DA	1121	C	C2-N3-C4	-6.75	116.53	119.90
3	DA	1784	A	C5-C6-N6	-6.75	118.30	123.70
1	AA	563	A	N1-C6-N6	-6.74	114.55	118.60
3	DA	558	U	C2-N3-C4	-6.74	122.95	127.00
3	DA	1128	G	N9-C4-C5	-6.74	102.70	105.40
3	DA	2006	C	N3-C4-N4	6.74	122.72	118.00
3	DA	2292	U	C2-N1-C1'	6.74	125.79	117.70
3	DA	2490	G	N3-C2-N2	6.74	124.62	119.90
5	DB	88	C	C6-N1-C2	6.74	123.00	120.30
2	BA	381	C	N3-C4-N4	6.74	122.72	118.00
3	DA	1638	C	C5-C6-N1	-6.74	117.63	121.00
3	DA	115	C	N3-C4-N4	6.74	122.72	118.00
3	DA	302	C	N1-C2-O2	-6.74	114.86	118.90
4	CA	2239	G	N3-C4-N9	6.74	130.04	126.00
5	DB	62	C	O5'-P-OP1	6.74	118.79	110.70
6	AB	27	MET	CA-CB-CG	6.74	124.75	113.30
2	BA	1083	U	O5'-P-OP2	6.74	118.78	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	944	C	N3-C4-N4	-6.74	113.28	118.00
3	DA	956	G	C5-C6-N1	-6.74	108.13	111.50
3	DA	1517	G	OP1-P-OP2	6.74	129.70	119.60
3	DA	1646	C	N3-C4-N4	6.74	122.72	118.00
3	DA	1804	C	OP2-P-O3'	6.74	120.02	105.20
4	CA	974	G	C4-C5-N7	6.74	113.49	110.80
1	AA	1489	G	O5'-P-OP2	-6.73	99.64	105.70
3	DA	445	C	C6-N1-C1'	-6.73	112.72	120.80
3	DA	815	C	N1-C2-O2	-6.73	114.86	118.90
3	DA	2266	A	C6-N1-C2	-6.73	114.56	118.60
1	AA	142	G	C8-N9-C1'	-6.73	118.25	127.00
2	BA	1531	A	N9-C4-C5	-6.73	103.11	105.80
3	DA	1005	C	C5-C4-N4	-6.73	115.49	120.20
3	DA	1677	A	C8-N9-C4	-6.73	103.11	105.80
3	DA	1786	A	C6-N1-C2	-6.73	114.56	118.60
1	AA	1511	G	C2-N3-C4	-6.73	108.53	111.90
3	DA	442	G	N1-C6-O6	-6.73	115.86	119.90
3	DA	1447	C	O5'-P-OP1	-6.73	99.64	105.70
3	DA	1469	A	N7-C8-N9	-6.73	110.44	113.80
3	DA	1987	A	O5'-P-OP2	-6.73	99.64	105.70
3	DA	1999	C	OP2-P-O3'	6.73	120.01	105.20
3	DA	2895	G	C4-C5-N7	6.73	113.49	110.80
4	CA	2091	C	N1-C2-O2	6.73	122.94	118.90
4	CA	2255	G	C2-N3-C4	-6.73	108.53	111.90
1	AA	46	G	N3-C2-N2	-6.73	115.19	119.90
3	DA	964	C	OP1-P-O3'	6.73	120.00	105.20
3	DA	1657	U	OP2-P-O3'	6.73	120.00	105.20
3	DA	2541	A	OP2-P-O3'	6.73	120.00	105.20
3	DA	1051	G	O5'-P-OP1	6.73	118.77	110.70
3	DA	1210	G	C5-N7-C8	-6.73	100.94	104.30
4	CA	1676	A	C5-C6-N6	6.73	129.08	123.70
1	AA	1077	G	OP1-P-O3'	6.73	120.00	105.20
2	BA	817	C	C2-N3-C4	-6.73	116.54	119.90
3	DA	1628	G	C6-C5-N7	-6.73	126.36	130.40
3	DA	1930	G	N9-C4-C5	6.73	108.09	105.40
4	CA	966	G	C8-N9-C4	-6.73	103.71	106.40
2	BA	770	C	C6-N1-C2	6.72	122.99	120.30
3	DA	979	A	C5-N7-C8	-6.72	100.54	103.90
3	DA	1291	C	N1-C2-O2	-6.72	114.86	118.90
3	DA	2624	G	N3-C4-C5	6.72	131.96	128.60
4	CA	1942	C	N3-C4-N4	6.72	122.71	118.00
1	AA	1086	U	OP1-P-OP2	-6.72	109.52	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	23	C	OP2-P-O3'	6.72	119.99	105.20
2	BA	399	G	C8-N9-C4	-6.72	103.71	106.40
2	BA	677	U	O5'-P-OP1	-6.72	99.65	105.70
3	DA	580	U	C6-N1-C2	-6.72	116.97	121.00
3	DA	1313	U	C5-C6-N1	6.72	126.06	122.70
4	CA	1131	G	C8-N9-C4	-6.72	103.71	106.40
3	DA	1247	A	C6-C5-N7	6.72	137.00	132.30
3	DA	1337	G	C5-C6-O6	-6.72	124.57	128.60
5	DB	79	G	C4-C5-N7	6.72	113.49	110.80
2	BA	559	A	O5'-P-OP2	-6.72	99.65	105.70
3	DA	2469	A	C8-N9-C4	6.72	108.49	105.80
3	DA	2471	A	N9-C4-C5	6.72	108.49	105.80
3	DA	2415	G	C2-N3-C4	-6.72	108.54	111.90
3	DA	2808	G	C2-N3-C4	-6.72	108.54	111.90
2	BA	1443	C	N1-C2-O2	6.72	122.93	118.90
3	DA	12	U	O5'-P-OP1	6.72	118.76	110.70
3	DA	152	A	C5-C6-N6	-6.72	118.33	123.70
3	DA	1409	U	N3-C4-O4	-6.72	114.70	119.40
1	AA	689	C	N3-C4-N4	6.71	122.70	118.00
2	BA	1077	G	C5-C6-N1	-6.71	108.14	111.50
3	DA	2	G	C5-C6-N1	-6.71	108.14	111.50
3	DA	106	C	C5-C4-N4	-6.71	115.50	120.20
3	DA	445	C	C5-C4-N4	-6.71	115.50	120.20
3	DA	1978	A	C5-C6-N1	6.71	121.06	117.70
3	DA	2260	C	OP2-P-O3'	6.71	119.97	105.20
3	DA	2367	G	N3-C2-N2	-6.71	115.20	119.90
4	CA	530	G	N3-C2-N2	-6.71	115.20	119.90
4	CA	2017	U	C6-N1-C2	-6.71	116.97	121.00
5	DB	5	U	N1-C2-O2	-6.71	118.10	122.80
3	DA	1787	A	OP1-P-OP2	6.71	129.67	119.60
3	DA	1227	G	N1-C2-N3	6.71	127.93	123.90
1	AA	901	A	OP2-P-O3'	6.71	119.96	105.20
2	BA	730	G	N1-C6-O6	6.71	123.93	119.90
3	DA	499	U	N3-C4-O4	6.71	124.10	119.40
1	AA	696	A	OP2-P-O3'	6.71	119.96	105.20
3	DA	691	C	C6-N1-C1'	-6.71	112.75	120.80
3	DA	1329	U	N3-C4-O4	-6.71	114.70	119.40
3	DA	2609	U	C5-C4-O4	6.71	129.93	125.90
3	DA	748	G	C5-C6-N1	-6.71	108.15	111.50
3	DA	2076	U	N3-C2-O2	-6.71	117.51	122.20
3	DA	2400	G	C2-N3-C4	-6.71	108.55	111.90
3	DA	2547	A	O5'-P-OP2	-6.71	99.66	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	530	G	N3-C4-N9	6.71	130.02	126.00
3	DA	620	G	N3-C2-N2	6.71	124.59	119.90
3	DA	1828	G	C4-C5-N7	-6.71	108.12	110.80
3	DA	255	A	N1-C2-N3	6.70	132.65	129.30
3	DA	480	A	N1-C2-N3	-6.70	125.95	129.30
3	DA	537	G	N1-C6-O6	6.70	123.92	119.90
3	DA	2560	A	N7-C8-N9	6.70	117.15	113.80
4	CA	794	A	N1-C6-N6	6.70	122.62	118.60
4	CA	1827	U	O5'-P-OP2	-6.70	99.67	105.70
3	DA	178	G	N3-C4-N9	-6.70	121.98	126.00
3	DA	1181	U	C6-N1-C1'	6.70	130.58	121.20
5	DB	99	A	N1-C2-N3	6.70	132.65	129.30
1	AA	333	U	O5'-P-OP2	-6.70	99.67	105.70
1	AA	1530	G	O4'-C1'-N9	6.70	113.56	108.20
3	DA	854	C	OP2-P-O3'	6.70	119.94	105.20
3	DA	1524	G	C2-N3-C4	-6.70	108.55	111.90
3	DA	2289	G	N3-C4-N9	-6.70	121.98	126.00
1	AA	507	C	O5'-P-OP1	-6.70	99.67	105.70
1	AA	601	G	C8-N9-C4	-6.70	103.72	106.40
1	AA	675	A	N1-C6-N6	-6.70	114.58	118.60
3	DA	968	C	O5'-P-OP1	6.70	118.73	110.70
3	DA	1576	U	OP2-P-O3'	6.70	119.93	105.20
3	DA	2420	C	N3-C4-C5	6.70	124.58	121.90
3	DA	572	A	O5'-P-OP1	-6.69	99.68	105.70
3	DA	1426	G	O5'-P-OP2	-6.69	99.67	105.70
1	AA	558	G	OP2-P-O3'	6.69	119.92	105.20
3	DA	2586	U	C5-C4-O4	-6.69	121.88	125.90
4	CA	1896	G	C5-C6-O6	-6.69	124.58	128.60
5	DB	84	G	C4-C5-N7	6.69	113.48	110.80
3	DA	67	U	N1-C2-O2	-6.69	118.12	122.80
3	DA	117	G	N1-C6-O6	6.69	123.91	119.90
3	DA	1890	A	C8-N9-C4	-6.69	103.12	105.80
2	BA	1505	G	N9-C4-C5	6.69	108.08	105.40
3	DA	914	G	C6-C5-N7	-6.69	126.39	130.40
3	DA	1000	A	N1-C6-N6	-6.69	114.59	118.60
1	AA	1424	U	O5'-P-OP2	-6.69	99.68	105.70
2	BA	19	A	N1-C6-N6	-6.69	114.59	118.60
3	DA	1701	A	C2-N3-C4	6.69	113.94	110.60
3	DA	2243	U	OP2-P-O3'	6.69	119.92	105.20
3	DA	2646	C	OP2-P-O3'	6.69	119.91	105.20
1	AA	298	A	N1-C6-N6	6.69	122.61	118.60
3	DA	2618	G	OP1-P-O3'	6.69	119.91	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	793	U	C5-C4-O4	6.68	129.91	125.90
1	AA	1475	G	C5-C6-O6	6.68	132.61	128.60
2	BA	923	A	C2-N3-C4	-6.68	107.26	110.60
3	DA	760	G	C4-C5-N7	6.68	113.47	110.80
3	DA	1455	G	N1-C6-O6	6.68	123.91	119.90
3	DA	2318	G	C8-N9-C1'	-6.68	118.31	127.00
3	DA	523	C	N3-C2-O2	6.68	126.58	121.90
3	DA	530	G	N3-C4-N9	-6.68	121.99	126.00
3	DA	946	C	C6-N1-C2	6.68	122.97	120.30
3	DA	2009	A	C5-C6-N1	-6.68	114.36	117.70
1	AA	1383	C	C5-C4-N4	-6.68	115.52	120.20
3	DA	971	G	C4-C5-C6	6.68	122.81	118.80
1	AA	1366	C	N3-C4-C5	-6.68	119.23	121.90
1	AA	1466	C	N3-C4-C5	6.68	124.57	121.90
3	DA	524	G	N3-C4-C5	6.68	131.94	128.60
3	DA	577	G	C4-C5-C6	6.68	122.81	118.80
3	DA	871	U	N3-C4-O4	6.68	124.08	119.40
3	DA	1792	G	C5-C6-O6	-6.68	124.59	128.60
3	DA	2333	A	OP1-P-OP2	6.68	129.62	119.60
50	D0	7	THR	CA-CB-CG2	-6.68	103.05	112.40
1	AA	521	G	OP1-P-OP2	6.68	129.62	119.60
3	DA	2541	A	C8-N9-C4	-6.68	103.13	105.80
4	CA	1810	A	O5'-P-OP2	-6.68	99.69	105.70
2	BA	1108	G	O5'-P-OP1	-6.68	99.69	105.70
3	DA	981	A	OP1-P-O3'	6.68	119.89	105.20
3	DA	1208	C	OP1-P-OP2	6.68	129.61	119.60
3	DA	1247	A	C5-C6-N6	6.68	129.04	123.70
4	CA	197	A	C2-N3-C4	6.68	113.94	110.60
3	DA	1966	A	N1-C6-N6	-6.67	114.59	118.60
3	DA	2495	G	N1-C6-O6	-6.67	115.90	119.90
3	DA	2693	G	O5'-P-OP1	6.67	118.71	110.70
4	CA	2723	C	C6-N1-C2	-6.67	117.63	120.30
5	DB	92	C	OP1-P-O3'	-6.67	90.52	105.20
3	DA	2703	C	N3-C4-N4	-6.67	113.33	118.00
4	CA	1974	C	C5-C6-N1	-6.67	117.66	121.00
1	AA	1375	A	C8-N9-C4	-6.67	103.13	105.80
3	DA	370	G	N3-C4-N9	-6.67	122.00	126.00
3	DA	2016	U	N1-C2-N3	-6.67	110.90	114.90
1	AA	928	G	C5-C6-O6	6.67	132.60	128.60
1	AA	1202	U	OP1-P-OP2	6.67	129.60	119.60
3	DA	1632	A	C6-C5-N7	-6.67	127.63	132.30
3	DA	1637	A	C5-C6-N6	-6.67	118.36	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1905	C	OP1-P-O3'	6.67	119.87	105.20
3	DA	2601	C	N1-C2-O2	6.67	122.90	118.90
1	AA	127	G	N3-C4-N9	-6.67	122.00	126.00
2	BA	1168	U	C5-C4-O4	-6.67	121.90	125.90
3	DA	2676	C	C2-N3-C4	-6.67	116.57	119.90
2	BA	1511	G	C8-N9-C4	-6.67	103.73	106.40
3	DA	1977	A	C2-N3-C4	-6.67	107.27	110.60
3	DA	2822	G	C5-C6-N1	-6.67	108.17	111.50
3	DA	1519	G	O5'-P-OP1	6.66	118.69	110.70
3	DA	2409	G	C8-N9-C4	-6.66	103.73	106.40
3	DA	2475	C	C6-N1-C2	-6.66	117.63	120.30
4	CA	1665	A	C6-N1-C2	-6.66	114.60	118.60
5	DB	99	A	N3-C4-N9	-6.66	122.07	127.40
2	BA	915	A	C8-N9-C4	6.66	108.47	105.80
3	DA	148	U	C2-N3-C4	-6.66	123.00	127.00
3	DA	529	A	C4-C5-C6	-6.66	113.67	117.00
3	DA	874	G	N3-C4-C5	6.66	131.93	128.60
3	DA	1523	U	OP2-P-O3'	6.66	119.86	105.20
3	DA	2881	U	O5'-P-OP2	-6.66	99.70	105.70
3	DA	126	A	C6-N1-C2	-6.66	114.60	118.60
3	DA	238	C	N1-C2-O2	-6.66	114.90	118.90
3	DA	914	G	N9-C4-C5	-6.66	102.74	105.40
3	DA	947	A	N9-C4-C5	6.66	108.46	105.80
3	DA	2081	U	C5-C6-N1	-6.66	119.37	122.70
3	DA	2204	G	C4-C5-N7	6.66	113.46	110.80
3	DA	2581	G	O5'-P-OP2	-6.66	99.71	105.70
4	CA	323	C	N1-C2-O2	6.66	122.90	118.90
1	AA	563	A	O5'-P-OP2	-6.66	99.71	105.70
1	AA	1375	A	N9-C4-C5	6.66	108.46	105.80
3	DA	2340	A	OP1-P-O3'	6.66	119.85	105.20
3	DA	1632	A	O5'-P-OP2	-6.66	99.71	105.70
3	DA	2527	C	O5'-P-OP1	6.66	118.69	110.70
2	BA	364	A	N7-C8-N9	-6.66	110.47	113.80
3	DA	2595	G	C6-C5-N7	-6.66	126.41	130.40
3	DA	435	C	C6-N1-C2	6.65	122.96	120.30
1	AA	1139	G	C5-C6-O6	6.65	132.59	128.60
2	BA	700	G	C2-N3-C4	-6.65	108.57	111.90
3	DA	1354	A	O5'-P-OP2	6.65	118.68	110.70
3	DA	1660	G	N1-C6-O6	6.65	123.89	119.90
4	CA	1824	G	O5'-P-OP1	-6.65	99.71	105.70
3	DA	1314	C	C5-C4-N4	-6.65	115.55	120.20
3	DA	2300	C	C5-C6-N1	6.65	124.33	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2493	U	C2-N3-C4	-6.65	123.01	127.00
3	DA	1288	G	N1-C2-N2	-6.65	110.22	116.20
1	AA	509	A	OP2-P-O3'	6.65	119.82	105.20
2	BA	42	G	C5-C6-O6	-6.65	124.61	128.60
3	DA	65	U	C5-C4-O4	-6.65	121.91	125.90
3	DA	237	C	C2-N3-C4	-6.65	116.58	119.90
3	DA	309	A	O5'-P-OP1	-6.65	99.72	105.70
4	CA	1889	A	N1-C6-N6	6.65	122.59	118.60
3	DA	312	G	N1-C2-N3	6.65	127.89	123.90
3	DA	1001	A	N9-C4-C5	-6.65	103.14	105.80
3	DA	1625	C	N3-C2-O2	-6.65	117.25	121.90
3	DA	1259	G	N9-C4-C5	6.64	108.06	105.40
1	AA	814	A	N1-C6-N6	6.64	122.58	118.60
3	DA	737	C	OP1-P-OP2	6.64	129.56	119.60
3	DA	1569	A	C5-C6-N6	-6.64	118.39	123.70
3	DA	2574	G	C8-N9-C4	-6.64	103.74	106.40
3	DA	2801	G	N3-C4-N9	-6.64	122.01	126.00
1	AA	27	G	C8-N9-C4	-6.64	103.74	106.40
3	DA	1208	C	C5-C6-N1	-6.64	117.68	121.00
2	BA	295	C	OP2-P-O3'	6.64	119.81	105.20
3	DA	577	G	C8-N9-C1'	-6.64	118.37	127.00
3	DA	582	A	C4-C5-N7	6.64	114.02	110.70
3	DA	822	G	C8-N9-C1'	-6.64	118.37	127.00
3	DA	1679	A	N9-C4-C5	6.64	108.46	105.80
3	DA	444	C	C5-C6-N1	-6.64	117.68	121.00
3	DA	1564	C	OP2-P-O3'	6.64	119.80	105.20
3	DA	2352	A	N3-C4-N9	6.64	132.71	127.40
3	DA	2459	A	C5-C6-N6	6.64	129.01	123.70
3	DA	2805	C	N3-C4-C5	-6.64	119.25	121.90
16	AL	9	ARG	CA-CB-CG	6.64	128.00	113.40
1	AA	805	C	C5-C6-N1	6.63	124.32	121.00
3	DA	981	A	C8-N9-C4	6.63	108.45	105.80
3	DA	1762	A	O5'-P-OP2	-6.63	99.73	105.70
4	CA	1772	A	C4-C5-N7	-6.63	107.38	110.70
5	DB	76	G	C5-C6-O6	6.63	132.58	128.60
8	BD	192	SER	N-CA-C	6.63	128.91	111.00
1	AA	603	U	C5-C6-N1	6.63	126.02	122.70
2	BA	1520	C	N3-C4-N4	6.63	122.64	118.00
3	DA	4	U	N1-C2-N3	-6.63	110.92	114.90
4	CA	186	G	C4-N9-C1'	-6.63	117.88	126.50
1	AA	675	A	N1-C2-N3	6.63	132.62	129.30
3	DA	187	G	C5-N7-C8	-6.63	100.98	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1026	G	C2-N3-C4	6.63	115.22	111.90
3	DA	2486	C	N3-C4-N4	6.63	122.64	118.00
3	DA	2535	G	N1-C6-O6	6.63	123.88	119.90
1	AA	569	C	N3-C4-N4	6.63	122.64	118.00
2	BA	917	G	N1-C6-O6	6.63	123.88	119.90
3	DA	189	G	C5-C6-O6	-6.63	124.62	128.60
3	DA	2123	G	N3-C4-N9	-6.63	122.02	126.00
3	DA	2450	A	N1-C2-N3	6.63	132.62	129.30
3	DA	38	A	C6-N1-C2	-6.63	114.62	118.60
3	DA	583	G	N7-C8-N9	6.63	116.41	113.10
3	DA	1698	A	O4'-C1'-N9	-6.63	102.90	108.20
3	DA	2397	G	C4-N9-C1'	6.63	135.12	126.50
2	BA	1145	A	C8-N9-C4	6.63	108.45	105.80
2	BA	1531	A	C5-C6-N6	-6.62	118.40	123.70
3	DA	574	A	N1-C6-N6	6.62	122.58	118.60
3	DA	1790	C	N3-C4-C5	6.62	124.55	121.90
2	BA	813	U	O5'-P-OP1	-6.62	99.74	105.70
2	BA	917	G	C2-N3-C4	-6.62	108.59	111.90
3	DA	377	G	C6-C5-N7	-6.62	126.43	130.40
3	DA	481	G	OP1-P-OP2	-6.62	109.66	119.60
3	DA	1126	A	C5-C6-N1	6.62	121.01	117.70
3	DA	2031	A	C8-N9-C4	-6.62	103.15	105.80
3	DA	2728	U	C5-C6-N1	6.62	126.01	122.70
3	DA	2866	U	OP1-P-OP2	6.62	129.53	119.60
3	DA	793	A	C4-C5-C6	6.62	120.31	117.00
3	DA	1497	U	N3-C2-O2	-6.62	117.56	122.20
3	DA	1525	A	C5-C6-N6	-6.62	118.40	123.70
3	DA	2437	G	C5-N7-C8	-6.62	100.99	104.30
4	CA	1636	U	C5-C4-O4	-6.62	121.93	125.90
3	DA	496	G	C2-N3-C4	-6.62	108.59	111.90
3	DA	2713	U	OP1-P-OP2	6.62	129.53	119.60
1	AA	137	U	C6-N1-C2	6.62	124.97	121.00
2	BA	23	C	C6-N1-C2	6.62	122.95	120.30
3	DA	953	G	N1-C6-O6	6.62	123.87	119.90
3	DA	1785	A	N1-C6-N6	-6.62	114.63	118.60
3	DA	2244	U	C5-C4-O4	-6.62	121.93	125.90
5	DB	99	A	C5-C6-N1	-6.62	114.39	117.70
1	AA	1483	A	C2-N3-C4	6.62	113.91	110.60
2	BA	224	U	C6-N1-C2	6.62	124.97	121.00
5	DB	71	C	C6-N1-C2	6.62	122.95	120.30
1	AA	258	G	N3-C4-N9	-6.62	122.03	126.00
2	BA	42	G	N9-C4-C5	-6.62	102.75	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	51	G	N3-C4-C5	-6.62	125.29	128.60
3	DA	1612	C	C5-C6-N1	-6.62	117.69	121.00
1	AA	1068	G	N1-C2-N2	-6.61	110.25	116.20
2	BA	1398	A	C4-C5-C6	-6.61	113.69	117.00
3	DA	115	C	N1-C2-O2	-6.61	114.93	118.90
3	DA	1887	C	N1-C2-O2	6.61	122.87	118.90
3	DA	2020	A	C6-C5-N7	-6.61	127.67	132.30
3	DA	2040	G	N9-C4-C5	-6.61	102.75	105.40
3	DA	2425	A	O5'-P-OP1	-6.61	99.75	105.70
3	DA	2348	U	O5'-P-OP1	-6.61	99.75	105.70
4	CA	1642	G	N3-C2-N2	-6.61	115.27	119.90
2	BA	599	C	C6-N1-C2	6.61	122.94	120.30
3	DA	738	G	C8-N9-C1'	-6.61	118.41	127.00
3	DA	1114	C	C6-N1-C2	6.61	122.94	120.30
3	DA	1181	U	N3-C2-O2	6.61	126.83	122.20
3	DA	2881	U	N3-C2-O2	6.61	126.83	122.20
4	CA	240	C	N3-C4-N4	6.61	122.63	118.00
4	CA	1642	G	N3-C4-N9	-6.61	122.03	126.00
3	DA	1129	A	OP1-P-O3'	6.61	119.74	105.20
1	AA	609	A	N1-C6-N6	-6.61	114.64	118.60
1	AA	1513	A	OP2-P-O3'	6.61	119.74	105.20
3	DA	679	C	C5-C4-N4	6.61	124.83	120.20
3	DA	792	A	C8-N9-C4	-6.61	103.16	105.80
3	DA	1182	G	N1-C6-O6	6.61	123.86	119.90
5	DB	57	A	C2-N3-C4	-6.61	107.30	110.60
3	DA	1651	G	C4-C5-C6	6.61	122.76	118.80
3	DA	2339	C	C6-N1-C2	-6.61	117.66	120.30
3	DA	2555	U	N1-C2-O2	-6.61	118.18	122.80
1	AA	880	C	N3-C4-C5	6.60	124.54	121.90
3	DA	2481	G	C8-N9-C4	-6.60	103.76	106.40
1	AA	326	G	N3-C2-N2	6.60	124.52	119.90
1	AA	570	G	OP1-P-O3'	-6.60	90.68	105.20
3	DA	749	A	C6-C5-N7	-6.60	127.68	132.30
3	DA	1258	U	N3-C4-C5	-6.60	110.64	114.60
3	DA	1572	A	O5'-P-OP2	-6.60	99.76	105.70
1	AA	108	G	C5-N7-C8	-6.60	101.00	104.30
3	DA	1428	C	C2-N3-C4	-6.60	116.60	119.90
3	DA	1954	G	N3-C4-N9	-6.60	122.04	126.00
3	DA	2725	A	C6-C5-N7	-6.60	127.68	132.30
1	AA	510	A	O5'-P-OP1	-6.60	99.76	105.70
1	AA	1113	C	O5'-P-OP1	-6.60	99.76	105.70
3	DA	2542	A	O5'-P-OP2	-6.60	99.76	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2674	G	N9-C4-C5	6.60	108.04	105.40
4	CA	757	G	N1-C2-N2	6.60	122.14	116.20
3	DA	1495	A	C8-N9-C4	-6.60	103.16	105.80
3	DA	2442	C	N1-C2-O2	-6.60	114.94	118.90
3	DA	2884	U	O5'-P-OP1	-6.60	99.76	105.70
2	BA	197	A	C8-N9-C4	6.60	108.44	105.80
3	DA	870	U	C5-C4-O4	-6.60	121.94	125.90
3	DA	1259	G	N3-C4-N9	-6.60	122.04	126.00
3	DA	1655	A	N3-C4-N9	6.60	132.68	127.40
3	DA	2894	G	C6-C5-N7	-6.60	126.44	130.40
1	AA	134	G	C4-N9-C1'	-6.59	117.93	126.50
1	AA	1081	A	OP1-P-O3'	6.59	119.71	105.20
1	AA	1399	C	N1-C2-O2	6.59	122.86	118.90
3	DA	32	C	C2-N1-C1'	-6.59	111.55	118.80
3	DA	191	A	N9-C4-C5	6.59	108.44	105.80
3	DA	1598	A	O5'-P-OP1	-6.59	99.77	105.70
3	DA	2549	G	N1-C2-N3	6.59	127.86	123.90
3	DA	2838	G	N1-C6-O6	6.59	123.86	119.90
5	DB	118	C	C5-C6-N1	-6.59	117.70	121.00
3	DA	2070	A	C2-N3-C4	-6.59	107.30	110.60
1	AA	782	A	C6-N1-C2	-6.59	114.64	118.60
3	DA	1555	G	N3-C2-N2	-6.59	115.29	119.90
3	DA	2208	C	N1-C2-O2	-6.59	114.94	118.90
3	DA	2282	G	OP2-P-O3'	6.59	119.70	105.20
3	DA	2867	G	C4-C5-N7	6.59	113.44	110.80
2	BA	537	G	N3-C4-C5	6.59	131.89	128.60
3	DA	763	G	N1-C2-N2	-6.59	110.27	116.20
3	DA	2336	A	C6-N1-C2	-6.59	114.65	118.60
3	DA	2418	A	O5'-P-OP1	-6.59	99.77	105.70
3	DA	2887	A	N3-C4-N9	6.59	132.67	127.40
2	BA	1403	C	O5'-P-OP1	-6.59	99.77	105.70
3	DA	793	A	C4-C5-N7	6.59	113.99	110.70
3	DA	1957	C	C2-N1-C1'	6.59	126.05	118.80
3	DA	2677	G	N3-C2-N2	6.59	124.51	119.90
3	DA	181	A	C4-C5-N7	-6.59	107.41	110.70
3	DA	258	G	C5-C6-O6	-6.59	124.65	128.60
3	DA	759	G	C4-C5-C6	-6.59	114.85	118.80
3	DA	990	A	N1-C6-N6	6.59	122.55	118.60
3	DA	1310	G	C5-N7-C8	-6.59	101.01	104.30
3	DA	2618	G	N9-C4-C5	6.59	108.03	105.40
1	AA	413	G	N1-C6-O6	-6.58	115.95	119.90
1	AA	537	G	N3-C2-N2	-6.58	115.29	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	793	A	C5-N7-C8	-6.58	100.61	103.90
3	DA	535	G	N1-C6-O6	-6.58	115.95	119.90
3	DA	1249	U	OP1-P-OP2	6.58	129.47	119.60
23	AS	78	ARG	NE-CZ-NH2	6.58	123.59	120.30
1	AA	926	G	O5'-P-OP1	6.58	118.60	110.70
3	DA	494	G	N9-C4-C5	-6.58	102.77	105.40
3	DA	665	U	N3-C4-O4	6.58	124.01	119.40
3	DA	864	G	O5'-P-OP1	6.58	118.60	110.70
3	DA	1424	G	O5'-P-OP1	-6.58	99.78	105.70
3	DA	2017	U	N3-C4-O4	6.58	124.01	119.40
3	DA	2514	U	OP1-P-O3'	6.58	119.68	105.20
3	DA	695	G	N1-C6-O6	-6.58	115.95	119.90
3	DA	2839	G	C6-C5-N7	-6.58	126.45	130.40
1	AA	586	C	N3-C4-N4	-6.58	113.39	118.00
3	DA	573	U	C6-N1-C2	-6.58	117.05	121.00
3	DA	707	G	OP1-P-OP2	6.58	129.47	119.60
3	DA	1008	A	N1-C6-N6	-6.58	114.65	118.60
3	DA	1818	U	N1-C2-O2	6.58	127.40	122.80
5	DB	44	G	OP1-P-O3'	6.58	119.67	105.20
3	DA	2478	A	C4-C5-N7	6.58	113.99	110.70
1	AA	1471	U	O5'-P-OP1	6.58	118.59	110.70
3	DA	1132	U	O4'-C1'-N1	6.58	113.46	108.20
3	DA	2345	G	C8-N9-C4	6.58	109.03	106.40
3	DA	179	C	OP2-P-O3'	6.57	119.66	105.20
3	DA	957	C	C2-N3-C4	6.57	123.19	119.90
3	DA	1590	A	O5'-P-OP1	-6.57	99.78	105.70
4	CA	1349	C	C6-N1-C2	6.57	122.93	120.30
4	CA	1894	C	OP2-P-O3'	6.57	119.66	105.20
1	AA	1068	G	C4-C5-N7	6.57	113.43	110.80
3	DA	1272	A	C2-N3-C4	6.57	113.89	110.60
5	DB	113	C	O5'-P-OP1	-6.57	99.79	105.70
22	AR	55	LEU	CA-CB-CG	6.57	130.41	115.30
3	DA	597	G	O5'-P-OP2	-6.57	99.79	105.70
3	DA	2713	U	N3-C4-C5	6.57	118.54	114.60
3	DA	1139	G	OP1-P-OP2	-6.57	109.75	119.60
3	DA	2871	U	OP1-P-OP2	-6.57	109.75	119.60
4	CA	472	A	C5-C6-N1	6.57	120.98	117.70
3	DA	152	A	C6-C5-N7	-6.57	127.70	132.30
3	DA	578	G	N3-C4-C5	-6.57	125.32	128.60
3	DA	2603	G	N3-C2-N2	-6.57	115.30	119.90
5	DB	45	A	O5'-P-OP1	-6.57	99.79	105.70
5	DB	100	G	C8-N9-C4	6.57	109.03	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	313	A	OP2-P-O3'	6.56	119.64	105.20
3	DA	410	G	O5'-P-OP2	6.56	118.58	110.70
2	BA	551	U	OP2-P-O3'	6.56	119.64	105.20
3	DA	989	G	N1-C6-O6	6.56	123.84	119.90
3	DA	1330	C	OP2-P-O3'	6.56	119.64	105.20
3	DA	2553	G	N9-C4-C5	6.56	108.03	105.40
3	DA	2863	C	C2-N1-C1'	-6.56	111.58	118.80
1	AA	577	G	C2-N3-C4	-6.56	108.62	111.90
1	AA	1385	G	N3-C2-N2	-6.56	115.31	119.90
2	BA	305	G	C2-N3-C4	-6.56	108.62	111.90
3	DA	238	C	C5-C6-N1	-6.56	117.72	121.00
3	DA	677	A	N1-C6-N6	6.56	122.54	118.60
3	DA	1528	A	C5-C6-N6	-6.56	118.45	123.70
3	DA	1577	C	C2-N1-C1'	6.56	126.02	118.80
3	DA	2324	U	C4-C5-C6	6.56	123.64	119.70
1	AA	230	G	OP2-P-O3'	6.56	119.63	105.20
1	AA	1305	G	N1-C6-O6	-6.56	115.97	119.90
3	DA	3	U	OP1-P-OP2	-6.56	109.76	119.60
3	DA	438	G	OP1-P-OP2	-6.56	109.76	119.60
3	DA	567	U	C5-C4-O4	6.56	129.83	125.90
3	DA	700	G	N1-C6-O6	6.56	123.83	119.90
3	DA	842	U	OP2-P-O3'	6.56	119.62	105.20
3	DA	1552	A	O5'-P-OP2	-6.56	99.80	105.70
3	DA	2007	U	C2-N3-C4	-6.56	123.07	127.00
3	DA	2040	G	C8-N9-C4	6.56	109.02	106.40
5	DB	72	G	OP2-P-O3'	6.56	119.63	105.20
3	DA	1131	G	N3-C4-N9	6.56	129.93	126.00
3	DA	2576	G	N9-C4-C5	-6.56	102.78	105.40
3	DA	65	U	N3-C4-O4	6.55	123.99	119.40
3	DA	775	G	N3-C4-C5	6.55	131.88	128.60
3	DA	924	G	C5-C6-N1	-6.55	108.22	111.50
3	DA	963	U	O5'-P-OP1	-6.55	99.80	105.70
3	DA	1128	G	N7-C8-N9	-6.55	109.82	113.10
3	DA	2729	G	C8-N9-C1'	-6.55	118.48	127.00
3	DA	2871	U	C6-N1-C2	6.55	124.93	121.00
4	CA	1974	C	C2-N3-C4	-6.55	116.62	119.90
3	DA	470	A	N1-C2-N3	6.55	132.58	129.30
3	DA	1663	G	N1-C6-O6	6.55	123.83	119.90
2	BA	161	A	N9-C4-C5	6.55	108.42	105.80
3	DA	604	G	N3-C2-N2	-6.55	115.31	119.90
3	DA	712	G	N1-C6-O6	-6.55	115.97	119.90
3	DA	1229	C	N3-C4-N4	-6.55	113.41	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2002	G	N1-C2-N2	-6.55	110.30	116.20
4	CA	690	G	N7-C8-N9	6.55	116.38	113.10
2	BA	1508	A	O5'-P-OP2	-6.55	99.81	105.70
3	DA	677	A	C5-C6-N6	-6.55	118.46	123.70
3	DA	1210	G	C6-C5-N7	-6.55	126.47	130.40
3	DA	2572	A	C6-C5-N7	-6.55	127.72	132.30
3	DA	1330	C	N3-C2-O2	6.55	126.48	121.90
3	DA	1409	U	N3-C2-O2	-6.55	117.62	122.20
3	DA	2412	A	N1-C6-N6	6.55	122.53	118.60
4	CA	1804	C	N3-C4-C5	6.54	124.52	121.90
3	DA	308	G	C6-N1-C2	6.54	129.03	125.10
3	DA	522	A	C5-N7-C8	6.54	107.17	103.90
3	DA	1197	G	C4-N9-C1'	-6.54	117.99	126.50
3	DA	1396	U	OP2-P-O3'	6.54	119.60	105.20
3	DA	2578	G	O5'-P-OP1	6.54	118.55	110.70
3	DA	539	G	OP1-P-OP2	6.54	129.41	119.60
3	DA	1312	U	N3-C2-O2	6.54	126.78	122.20
3	DA	2003	A	C4-C5-N7	6.54	113.97	110.70
3	DA	2029	G	C2-N3-C4	-6.54	108.63	111.90
3	DA	1032	A	C8-N9-C4	-6.54	103.18	105.80
3	DA	2634	A	N9-C4-C5	6.54	108.42	105.80
1	AA	1223	C	N3-C4-C5	-6.54	119.28	121.90
3	DA	784	G	N1-C2-N3	6.54	127.82	123.90
3	DA	1025	G	C8-N9-C1'	-6.54	118.50	127.00
3	DA	1145	C	C5-C4-N4	-6.54	115.62	120.20
3	DA	1525	A	N1-C2-N3	6.54	132.57	129.30
3	DA	1230	A	N9-C4-C5	6.54	108.42	105.80
3	DA	2009	A	N9-C4-C5	6.54	108.42	105.80
4	CA	2271	G	N3-C4-N9	6.54	129.92	126.00
5	DB	48	U	N3-C2-O2	6.54	126.78	122.20
3	DA	2572	A	C5-C6-N6	-6.54	118.47	123.70
3	DA	851	C	C5-C6-N1	-6.53	117.73	121.00
3	DA	2023	C	OP2-P-O3'	6.53	119.57	105.20
3	DA	2324	U	C2-N1-C1'	6.53	125.54	117.70
3	DA	2333	A	C6-C5-N7	-6.53	127.73	132.30
3	DA	2497	A	C4-C5-C6	6.53	120.27	117.00
1	AA	1416	G	N1-C2-N3	6.53	127.82	123.90
3	DA	1138	G	C8-N9-C4	-6.53	103.79	106.40
4	CA	2606	C	C2-N1-C1'	6.53	125.99	118.80
2	BA	361	G	C4-C5-N7	6.53	113.41	110.80
3	DA	1123	C	N3-C4-C5	6.53	124.51	121.90
3	DA	1259	G	N3-C2-N2	-6.53	115.33	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	258	G	N3-C4-N9	-6.53	122.08	126.00
3	DA	686	U	N3-C4-C5	-6.53	110.68	114.60
3	DA	1839	G	N3-C4-N9	6.53	129.92	126.00
3	DA	2691	C	C6-N1-C2	6.53	122.91	120.30
1	AA	1526	G	C4-N9-C1'	6.53	134.99	126.50
3	DA	79	C	N1-C2-O2	6.53	122.82	118.90
3	DA	308	G	N3-C2-N2	6.53	124.47	119.90
3	DA	1178	C	C6-N1-C2	-6.53	117.69	120.30
3	DA	2002	G	N3-C4-N9	6.53	129.92	126.00
3	DA	2772	C	C6-N1-C1'	-6.53	112.97	120.80
3	DA	2893	A	N1-C6-N6	6.53	122.52	118.60
1	AA	51	A	N1-C2-N3	6.53	132.56	129.30
1	AA	353	A	O5'-P-OP1	-6.53	99.83	105.70
3	DA	276	U	N3-C2-O2	-6.53	117.63	122.20
3	DA	676	A	O5'-P-OP1	-6.53	99.83	105.70
3	DA	2271	G	N1-C6-O6	6.53	123.81	119.90
3	DA	2848	G	O4'-C1'-N9	6.53	113.42	108.20
1	AA	901	A	OP1-P-OP2	-6.52	109.81	119.60
3	DA	696	G	OP1-P-OP2	6.52	129.39	119.60
3	DA	1706	C	N3-C4-N4	-6.52	113.43	118.00
4	CA	1793	C	O5'-P-OP2	-6.52	99.83	105.70
3	DA	1292	G	C5-N7-C8	-6.52	101.04	104.30
3	DA	2455	G	C4-N9-C1'	6.52	134.98	126.50
3	DA	2825	G	C5-N7-C8	-6.52	101.04	104.30
1	AA	1177	G	C8-N9-C4	-6.52	103.79	106.40
1	AA	1483	A	N1-C2-N3	-6.52	126.04	129.30
3	DA	1152	C	N3-C4-N4	6.52	122.56	118.00
3	DA	2751	G	N1-C6-O6	6.52	123.81	119.90
1	AA	1484	C	N3-C4-C5	6.52	124.51	121.90
2	BA	1532	U	C5-C6-N1	6.52	125.96	122.70
3	DA	907	G	N3-C2-N2	-6.52	115.34	119.90
3	DA	976	G	N3-C4-N9	-6.52	122.09	126.00
3	DA	1157	G	N1-C2-N2	6.52	122.07	116.20
3	DA	2789	C	OP2-P-O3'	6.52	119.54	105.20
2	BA	818	G	N1-C2-N3	6.52	127.81	123.90
3	DA	784	G	N3-C4-N9	-6.52	122.09	126.00
3	DA	2433	A	N1-C2-N3	6.52	132.56	129.30
3	DA	2627	G	N1-C6-O6	-6.52	115.99	119.90
4	CA	1921	G	N3-C4-C5	6.52	131.86	128.60
4	CA	1974	C	N3-C4-N4	-6.52	113.44	118.00
1	AA	616	G	N1-C6-O6	6.52	123.81	119.90
3	DA	517	C	N3-C4-N4	6.52	122.56	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2491	U	OP2-P-O3'	6.52	119.54	105.20
3	DA	375	G	C8-N9-C4	-6.51	103.80	106.40
3	DA	1288	G	C6-C5-N7	-6.51	126.49	130.40
3	DA	1832	C	N1-C2-O2	-6.51	114.99	118.90
3	DA	2256	G	N3-C2-N2	-6.51	115.34	119.90
3	DA	2591	C	OP2-P-O3'	6.51	119.53	105.20
4	CA	197	A	C6-N1-C2	-6.51	114.69	118.60
1	AA	1071	C	C5-C4-N4	-6.51	115.64	120.20
3	DA	829	A	C8-N9-C1'	6.51	139.42	127.70
3	DA	1518	C	C6-N1-C2	6.51	122.91	120.30
1	AA	1474	U	N3-C2-O2	6.51	126.76	122.20
3	DA	1797	G	C4-C5-C6	6.51	122.71	118.80
3	DA	1875	G	N9-C4-C5	6.51	108.00	105.40
3	DA	1940	U	C5-C6-N1	6.51	125.96	122.70
3	DA	2285	C	N1-C2-O2	-6.51	114.99	118.90
3	DA	2573	C	C5-C6-N1	6.51	124.26	121.00
3	DA	2619	C	C5-C4-N4	-6.51	115.64	120.20
3	DA	2686	G	N1-C6-O6	6.51	123.81	119.90
3	DA	2799	A	C5-N7-C8	-6.51	100.64	103.90
41	DR	108	LEU	CB-CG-CD2	-6.51	99.93	111.00
3	DA	663	G	N3-C2-N2	-6.51	115.34	119.90
3	DA	2419	U	OP1-P-OP2	6.51	129.36	119.60
5	DB	85	G	C6-C5-N7	-6.51	126.49	130.40
3	DA	1424	G	O5'-P-OP2	6.51	118.51	110.70
3	DA	1722	A	C2-N3-C4	-6.51	107.35	110.60
4	CA	1752	C	C5-C6-N1	6.51	124.25	121.00
1	AA	1354	U	N1-C2-O2	6.51	127.35	122.80
2	BA	1527	U	N3-C2-O2	6.51	126.75	122.20
3	DA	568	U	OP2-P-O3'	6.51	119.52	105.20
3	DA	861	A	OP1-P-O3'	6.51	119.52	105.20
3	DA	1009	A	N1-C6-N6	-6.51	114.70	118.60
3	DA	1780	A	C6-N1-C2	-6.51	114.70	118.60
4	CA	787	C	N1-C2-O2	6.51	122.80	118.90
1	AA	1143	G	N1-C6-O6	6.50	123.80	119.90
1	AA	351	G	N3-C4-C5	6.50	131.85	128.60
1	AA	766	A	C4-C5-N7	6.50	113.95	110.70
2	BA	1396	A	O5'-P-OP2	-6.50	99.85	105.70
3	DA	770	G	C4-C5-N7	6.50	113.40	110.80
3	DA	1327	A	N1-C6-N6	6.50	122.50	118.60
3	DA	1546	G	C8-N9-C4	-6.50	103.80	106.40
3	DA	1819	A	C8-N9-C4	-6.50	103.20	105.80
3	DA	2046	G	C4-C5-C6	-6.50	114.90	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2496	C	C6-N1-C2	-6.50	117.70	120.30
4	CA	2255	G	C5-C6-N1	-6.50	108.25	111.50
5	DB	71	C	C2-N3-C4	-6.50	116.65	119.90
29	DE	96	VAL	CG1-CB-CG2	6.50	121.30	110.90
3	DA	757	G	N9-C4-C5	6.50	108.00	105.40
3	DA	1753	G	N3-C2-N2	6.50	124.45	119.90
3	DA	2266	A	O5'-P-OP1	-6.50	99.85	105.70
3	DA	2270	A	OP2-P-O3'	6.50	119.50	105.20
3	DA	2534	A	N9-C4-C5	-6.50	103.20	105.80
3	DA	1901	A	N9-C4-C5	6.50	108.40	105.80
3	DA	2488	G	C6-C5-N7	-6.50	126.50	130.40
2	BA	1185	G	C5-C6-O6	-6.50	124.70	128.60
3	DA	1130	U	N3-C4-O4	6.50	123.95	119.40
3	DA	2029	G	C6-C5-N7	-6.50	126.50	130.40
3	DA	562	U	N1-C2-O2	-6.50	118.25	122.80
3	DA	1435	G	C8-N9-C4	6.50	109.00	106.40
3	DA	2711	A	C8-N9-C4	-6.50	103.20	105.80
3	DA	2500	U	C5-C6-N1	6.50	125.95	122.70
3	DA	2873	A	C5-N7-C8	6.50	107.15	103.90
1	AA	35	G	C8-N9-C4	-6.49	103.80	106.40
3	DA	451	U	C5-C4-O4	6.49	129.80	125.90
3	DA	708	G	OP2-P-O3'	6.49	119.48	105.20
3	DA	838	C	OP1-P-OP2	6.49	129.34	119.60
3	DA	936	A	C6-C5-N7	-6.49	127.75	132.30
3	DA	2717	C	N1-C2-O2	-6.49	115.00	118.90
3	DA	524	G	C8-N9-C1'	6.49	135.44	127.00
3	DA	2574	G	N9-C4-C5	6.49	108.00	105.40
3	DA	1200	C	C2-N3-C4	-6.49	116.66	119.90
4	CA	1987	A	C8-N9-C4	6.49	108.40	105.80
1	AA	1378	C	C2-N1-C1'	6.49	125.94	118.80
1	AA	1387	G	C5-C6-O6	-6.49	124.71	128.60
3	DA	576	U	O5'-P-OP1	-6.49	99.86	105.70
3	DA	713	G	N1-C2-N2	-6.49	110.36	116.20
3	DA	1391	U	N1-C2-O2	-6.49	118.26	122.80
3	DA	2214	C	N3-C4-C5	6.49	124.50	121.90
3	DA	2644	G	C6-C5-N7	-6.49	126.51	130.40
4	CA	203	A	C5-N7-C8	-6.49	100.66	103.90
4	CA	1842	G	C4-C5-N7	6.49	113.40	110.80
4	CA	1893	C	N1-C2-O2	-6.49	115.01	118.90
5	DB	67	G	N1-C6-O6	-6.49	116.01	119.90
3	DA	446	G	N1-C2-N2	-6.49	110.36	116.20
3	DA	1815	A	N1-C6-N6	-6.49	114.71	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2083	G	C8-N9-C4	6.49	109.00	106.40
3	DA	690	G	C4-C5-N7	6.49	113.39	110.80
3	DA	1674	G	N7-C8-N9	-6.49	109.86	113.10
4	CA	1983	G	C5-C6-O6	6.49	132.49	128.60
1	AA	766	A	C5-N7-C8	-6.48	100.66	103.90
2	BA	631	C	C5-C4-N4	-6.48	115.66	120.20
2	BA	1531	A	O5'-P-OP2	6.48	118.48	110.70
3	DA	444	C	N1-C2-O2	6.48	122.79	118.90
3	DA	947	A	C2-N3-C4	-6.48	107.36	110.60
3	DA	1391	U	N3-C2-O2	6.48	126.74	122.20
3	DA	2900	A	C2-N3-C4	-6.48	107.36	110.60
4	CA	581	C	N3-C2-O2	-6.48	117.36	121.90
4	CA	1799	G	C4-C5-C6	6.48	122.69	118.80
1	AA	1406	U	N3-C2-O2	-6.48	117.66	122.20
3	DA	33	C	C6-N1-C2	6.48	122.89	120.30
3	DA	530	G	C2-N3-C4	-6.48	108.66	111.90
3	DA	2600	A	C4-C5-C6	6.48	120.24	117.00
1	AA	1425	U	N1-C2-O2	-6.48	118.27	122.80
2	BA	672	U	OP2-P-O3'	6.48	119.45	105.20
3	DA	311	A	O5'-P-OP1	6.48	118.47	110.70
3	DA	1007	C	N1-C2-O2	6.48	122.79	118.90
2	BA	483	C	C6-N1-C2	6.48	122.89	120.30
2	BA	855	U	N3-C2-O2	6.48	126.73	122.20
3	DA	127	A	N9-C4-C5	-6.48	103.21	105.80
3	DA	1887	C	N1-C2-N3	-6.48	114.67	119.20
4	CA	1821	A	N9-C4-C5	6.48	108.39	105.80
1	AA	732	C	C2-N1-C1'	6.48	125.92	118.80
3	DA	582	A	C5-N7-C8	-6.48	100.66	103.90
3	DA	1162	G	O5'-P-OP2	6.48	118.47	110.70
3	DA	1650	A	N1-C6-N6	-6.48	114.71	118.60
1	AA	859	G	C5-C6-O6	6.47	132.49	128.60
1	AA	902	G	C8-N9-C4	6.47	108.99	106.40
2	BA	353	A	N1-C6-N6	6.47	122.48	118.60
2	BA	359	G	C8-N9-C4	6.47	108.99	106.40
3	DA	940	G	C5-C6-N1	-6.47	108.26	111.50
3	DA	953	G	N3-C4-C5	6.47	131.84	128.60
3	DA	1200	C	N1-C2-O2	-6.47	115.02	118.90
3	DA	2022	U	N1-C2-O2	6.47	127.33	122.80
4	CA	2564	A	N1-C6-N6	-6.47	114.72	118.60
5	DB	69	G	C2-N3-C4	-6.47	108.66	111.90
1	AA	640	A	C5-N7-C8	-6.47	100.66	103.90
3	DA	521	U	N1-C2-N3	6.47	118.78	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1839	G	C4-N9-C1'	6.47	134.91	126.50
3	DA	2674	G	O5'-P-OP1	-6.47	99.87	105.70
4	CA	2233	U	C5-C4-O4	6.47	129.78	125.90
35	DL	64	ARG	NE-CZ-NH1	6.47	123.54	120.30
2	BA	1109	C	N1-C2-O2	-6.47	115.02	118.90
3	DA	875	G	O5'-P-OP2	-6.47	99.88	105.70
3	DA	1217	U	C6-N1-C2	-6.47	117.12	121.00
9	BE	44	GLY	N-CA-C	-6.47	96.92	113.10
1	AA	1365	G	N3-C4-C5	6.47	131.83	128.60
3	DA	495	G	C5-C6-O6	6.47	132.48	128.60
3	DA	1640	A	C2-N3-C4	-6.47	107.36	110.60
3	DA	1936	A	N1-C2-N3	6.47	132.53	129.30
3	DA	2009	A	OP1-P-OP2	6.47	129.30	119.60
3	DA	2012	G	C5-N7-C8	-6.47	101.06	104.30
3	DA	1410	G	C8-N9-C4	6.47	108.99	106.40
3	DA	2388	A	N1-C6-N6	-6.47	114.72	118.60
1	AA	27	G	O5'-P-OP1	-6.47	99.88	105.70
2	BA	887	G	C4-C5-N7	6.47	113.39	110.80
3	DA	781	A	C2-N3-C4	6.47	113.83	110.60
3	DA	2688	G	C4-N9-C1'	6.47	134.91	126.50
4	CA	2076	U	O5'-P-OP2	-6.47	99.88	105.70
3	DA	1132	U	C4-C5-C6	6.46	123.58	119.70
3	DA	1832	C	OP2-P-O3'	6.46	119.42	105.20
3	DA	2204	G	N1-C6-O6	6.46	123.78	119.90
4	CA	1829	A	N1-C6-N6	6.46	122.48	118.60
3	DA	1671	U	N3-C4-C5	-6.46	110.72	114.60
3	DA	2472	G	C6-C5-N7	-6.46	126.52	130.40
3	DA	2510	C	C6-N1-C2	6.46	122.89	120.30
5	DB	12	C	C2-N3-C4	-6.46	116.67	119.90
1	AA	1071	C	N3-C4-N4	6.46	122.52	118.00
2	BA	392	C	N3-C4-N4	-6.46	113.48	118.00
2	BA	632	U	N1-C2-O2	6.46	127.32	122.80
3	DA	671	C	C5-C4-N4	6.46	124.72	120.20
3	DA	1078	U	C5-C6-N1	6.46	125.93	122.70
3	DA	2256	G	C2-N3-C4	-6.46	108.67	111.90
3	DA	2354	C	C2-N1-C1'	6.46	125.91	118.80
4	CA	1834	U	O5'-P-OP1	-6.46	99.88	105.70
4	CA	1979	U	N1-C2-N3	6.46	118.78	114.90
1	AA	587	G	N3-C4-C5	6.46	131.83	128.60
2	BA	1528	U	C5-C6-N1	-6.46	119.47	122.70
3	DA	513	A	C4-C5-N7	6.46	113.93	110.70
3	DA	1845	G	C8-N9-C4	-6.46	103.82	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	899	C	C2-N1-C1'	-6.46	111.69	118.80
1	AA	1073	U	O5'-P-OP1	6.46	118.45	110.70
1	AA	1152	A	N1-C6-N6	-6.46	114.72	118.60
2	BA	1066	C	N1-C2-O2	6.46	122.78	118.90
3	DA	726	G	OP1-P-OP2	6.46	129.29	119.60
3	DA	1875	G	C5-C6-O6	6.46	132.47	128.60
3	DA	2544	G	N3-C4-C5	-6.46	125.37	128.60
3	DA	2613	U	C2-N1-C1'	6.46	125.45	117.70
3	DA	2700	A	N7-C8-N9	-6.46	110.57	113.80
3	DA	2718	G	N3-C4-C5	6.46	131.83	128.60
4	CA	1665	A	N1-C6-N6	6.46	122.47	118.60
1	AA	1443	C	O5'-P-OP2	6.46	118.45	110.70
3	DA	1282	U	O5'-P-OP1	-6.46	99.89	105.70
3	DA	1676	A	O5'-P-OP1	6.46	118.45	110.70
3	DA	2053	G	C8-N9-C4	-6.46	103.82	106.40
4	CA	1377	G	C6-C5-N7	-6.46	126.53	130.40
5	DB	43	C	OP2-P-O3'	6.46	119.40	105.20
5	DB	79	G	N9-C4-C5	-6.46	102.82	105.40
3	DA	276	U	C2-N1-C1'	6.46	125.45	117.70
3	DA	2347	C	C5-C6-N1	-6.46	117.77	121.00
1	AA	319	G	O5'-P-OP2	-6.45	99.89	105.70
3	DA	1565	C	C5-C4-N4	-6.45	115.68	120.20
3	DA	2020	A	N1-C6-N6	6.45	122.47	118.60
3	DA	2280	G	N3-C4-N9	-6.45	122.13	126.00
55	D5	25	ARG	NE-CZ-NH2	-6.45	117.07	120.30
3	DA	32	C	O5'-P-OP1	-6.45	99.89	105.70
3	DA	1081	U	C5-C6-N1	6.45	125.93	122.70
3	DA	2669	G	N3-C4-C5	6.45	131.83	128.60
3	DA	2715	C	O5'-P-OP2	-6.45	99.89	105.70
1	AA	622	A	N3-C4-N9	-6.45	122.24	127.40
2	BA	1482	G	C8-N9-C4	6.45	108.98	106.40
3	DA	132	G	OP2-P-O3'	6.45	119.39	105.20
3	DA	664	G	N3-C4-C5	6.45	131.82	128.60
3	DA	926	G	OP2-P-O3'	6.45	119.39	105.20
3	DA	1568	G	O5'-P-OP1	6.45	118.44	110.70
3	DA	2587	A	C6-N1-C2	-6.45	114.73	118.60
3	DA	2721	A	N1-C2-N3	-6.45	126.08	129.30
30	CF	82	TYR	CB-CG-CD2	6.45	124.87	121.00
1	AA	251	G	C6-C5-N7	-6.45	126.53	130.40
1	AA	887	G	N1-C2-N2	-6.45	110.39	116.20
1	AA	1466	C	C6-N1-C2	6.45	122.88	120.30
2	BA	288	A	N9-C4-C5	-6.45	103.22	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	917	G	C5-N7-C8	-6.45	101.08	104.30
3	DA	1318	U	N1-C2-N3	6.45	118.77	114.90
3	DA	2363	G	C4-C5-N7	6.45	113.38	110.80
4	CA	250	G	N3-C4-C5	-6.45	125.38	128.60
4	CA	532	A	N9-C4-C5	-6.45	103.22	105.80
4	CA	2490	G	C2-N3-C4	-6.45	108.68	111.90
3	DA	783	A	N9-C1'-C2'	-6.45	104.91	112.00
3	DA	981	A	OP2-P-O3'	-6.45	91.02	105.20
3	DA	1278	C	N3-C4-C5	6.45	124.48	121.90
1	AA	117	G	C4-C5-N7	6.45	113.38	110.80
1	AA	850	U	C5-C4-O4	6.45	129.77	125.90
1	AA	1417	G	C4-C5-N7	6.45	113.38	110.80
2	BA	43	C	C6-N1-C2	-6.45	117.72	120.30
3	DA	509	C	C5-C6-N1	-6.45	117.78	121.00
3	DA	1936	A	N1-C6-N6	-6.45	114.73	118.60
3	DA	2638	G	C2-N3-C4	-6.45	108.68	111.90
1	AA	1078	U	OP1-P-OP2	-6.44	109.93	119.60
3	DA	977	G	N7-C8-N9	6.44	116.32	113.10
3	DA	1677	A	C6-C5-N7	-6.44	127.79	132.30
4	CA	2046	G	N9-C4-C5	-6.44	102.82	105.40
4	CA	2887	A	N1-C6-N6	6.44	122.47	118.60
5	DB	49	C	N1-C2-O2	-6.44	115.03	118.90
1	AA	1288	A	N1-C6-N6	-6.44	114.74	118.60
2	BA	428	G	C8-N9-C1'	6.44	135.37	127.00
3	DA	203	A	C4-C5-C6	6.44	120.22	117.00
3	DA	312	G	C6-N1-C2	-6.44	121.23	125.10
3	DA	704	G	N1-C2-N2	-6.44	110.40	116.20
3	DA	2446	G	N9-C4-C5	6.44	107.98	105.40
4	CA	1971	U	OP2-P-O3'	6.44	119.37	105.20
2	BA	22	G	C5-C6-O6	-6.44	124.74	128.60
2	BA	362	G	C4-C5-N7	6.44	113.38	110.80
3	DA	1839	G	C4-C5-C6	6.44	122.66	118.80
2	BA	1496	C	N1-C2-O2	-6.44	115.04	118.90
3	DA	1081	U	N3-C4-O4	6.44	123.91	119.40
3	DA	1584	U	C2-N1-C1'	6.44	125.42	117.70
3	DA	2250	G	C5-N7-C8	-6.44	101.08	104.30
25	BU	12	PHE	C-N-CA	6.44	137.79	121.70
3	DA	962	G	C2-N3-C4	6.44	115.12	111.90
3	DA	1114	C	N3-C4-C5	6.44	124.47	121.90
4	CA	731	C	N1-C2-O2	-6.44	115.04	118.90
4	CA	1915	U	C5-C4-O4	-6.44	122.04	125.90
1	AA	284	C	N1-C2-O2	6.43	122.76	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2464	G	O5'-P-OP2	-6.43	99.91	105.70
3	DA	2517	C	OP2-P-O3'	6.43	119.36	105.20
4	CA	692	C	O5'-P-OP1	-6.43	99.91	105.70
1	AA	970	C	C6-N1-C2	-6.43	117.73	120.30
3	DA	903	C	C6-N1-C2	6.43	122.87	120.30
3	DA	2801	G	OP1-P-OP2	6.43	129.25	119.60
34	DK	57	LEU	CB-CG-CD2	-6.43	100.07	111.00
1	AA	1479	C	N1-C2-O2	-6.43	115.04	118.90
2	BA	1391	U	N1-C2-O2	-6.43	118.30	122.80
1	AA	968	A	N9-C4-C5	-6.43	103.23	105.80
3	DA	2781	A	N3-C4-N9	-6.43	122.26	127.40
2	BA	1186	G	N1-C6-O6	6.43	123.75	119.90
2	BA	1426	G	N1-C6-O6	6.43	123.76	119.90
3	DA	1078	U	N3-C4-O4	6.43	123.90	119.40
3	DA	2366	A	O5'-P-OP1	6.43	118.41	110.70
3	DA	2867	G	O5'-P-OP2	6.43	118.41	110.70
1	AA	832	G	O5'-P-OP1	-6.42	99.92	105.70
3	DA	970	U	OP1-P-OP2	-6.42	109.96	119.60
4	CA	246	C	C6-N1-C2	6.42	122.87	120.30
1	AA	824	G	N3-C4-C5	6.42	131.81	128.60
3	DA	1546	G	N3-C4-N9	-6.42	122.15	126.00
3	DA	1756	G	C4-C5-N7	6.42	113.37	110.80
4	CA	1692	U	N3-C2-O2	-6.42	117.70	122.20
2	BA	1389	C	N1-C2-O2	-6.42	115.05	118.90
3	DA	578	G	N3-C2-N2	-6.42	115.41	119.90
3	DA	998	C	C6-N1-C2	-6.42	117.73	120.30
3	DA	1791	A	OP2-P-O3'	6.42	119.33	105.20
3	DA	2890	G	N1-C2-N2	-6.42	110.42	116.20
4	CA	2443	C	C6-N1-C2	-6.42	117.73	120.30
1	AA	611	C	C6-N1-C1'	-6.42	113.10	120.80
2	BA	1117	A	O4'-C1'-N9	6.42	113.33	108.20
3	DA	2540	C	N3-C4-C5	-6.42	119.33	121.90
3	DA	2546	U	C2-N3-C4	6.42	130.85	127.00
2	BA	159	G	C4-N9-C1'	6.42	134.84	126.50
3	DA	181	A	N9-C4-C5	6.42	108.37	105.80
3	DA	471	A	C8-N9-C4	6.42	108.37	105.80
3	DA	928	A	O5'-P-OP2	-6.42	99.92	105.70
4	CA	982	C	C6-N1-C2	-6.42	117.73	120.30
2	BA	809	G	C2-N3-C4	-6.42	108.69	111.90
3	DA	1957	C	C5-C4-N4	-6.42	115.71	120.20
4	CA	701	G	N3-C4-C5	6.42	131.81	128.60
10	BF	92	THR	CA-CB-CG2	6.42	121.38	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1133	A	C5-C6-N6	6.41	128.83	123.70
4	CA	2271	G	C4-N9-C1'	6.41	134.84	126.50
1	AA	878	A	OP1-P-O3'	6.41	119.31	105.20
1	AA	792	A	N1-C6-N6	6.41	122.45	118.60
1	AA	1485	U	O5'-P-OP1	-6.41	99.93	105.70
3	DA	561	G	C4-C5-N7	6.41	113.36	110.80
3	DA	1438	U	OP2-P-O3'	6.41	119.30	105.20
3	DA	1651	G	N3-C4-C5	-6.41	125.39	128.60
3	DA	2493	U	N1-C2-N3	6.41	118.75	114.90
3	DA	2872	A	N1-C6-N6	-6.41	114.75	118.60
3	DA	1166	G	N1-C2-N2	-6.41	110.43	116.20
3	DA	1638	C	C2-N3-C4	-6.41	116.70	119.90
3	DA	1956	U	C5-C4-O4	-6.41	122.06	125.90
3	DA	1965	C	N1-C2-N3	6.41	123.69	119.20
3	DA	2064	C	N1-C2-O2	-6.41	115.06	118.90
3	DA	2791	G	N1-C6-O6	6.41	123.75	119.90
5	DB	70	C	C5-C4-N4	-6.41	115.71	120.20
3	DA	918	A	C2-N3-C4	-6.41	107.40	110.60
3	DA	2394	C	C6-N1-C2	6.41	122.86	120.30
8	AD	68	LEU	CA-CB-CG	6.41	130.04	115.30
1	AA	293	G	OP1-P-OP2	-6.41	109.99	119.60
3	DA	562	U	O5'-P-OP1	-6.41	99.93	105.70
3	DA	703	U	C2-N1-C1'	6.41	125.39	117.70
3	DA	2265	U	O5'-P-OP2	6.40	118.39	110.70
5	DB	100	G	N3-C4-N9	6.40	129.84	126.00
2	BA	292	G	O5'-P-OP1	-6.40	99.94	105.70
3	DA	381	G	N3-C4-N9	-6.40	122.16	126.00
3	DA	1637	A	N1-C6-N6	6.40	122.44	118.60
4	CA	2406	A	C8-N9-C4	6.40	108.36	105.80
2	BA	361	G	C8-N9-C4	6.40	108.96	106.40
2	BA	681	A	N1-C6-N6	6.40	122.44	118.60
2	BA	1389	C	OP1-P-OP2	6.40	129.20	119.60
4	CA	2029	G	C5-C6-O6	-6.40	124.76	128.60
1	AA	506	G	O5'-P-OP2	6.40	118.38	110.70
3	DA	951	C	N1-C2-O2	-6.40	115.06	118.90
3	DA	1632	A	C6-N1-C2	-6.40	114.76	118.60
3	DA	1645	G	N9-C4-C5	-6.40	102.84	105.40
4	CA	2672	U	C6-N1-C2	-6.40	117.16	121.00
3	DA	1193	G	C8-N9-C4	6.40	108.96	106.40
3	DA	2267	A	C2-N3-C4	-6.40	107.40	110.60
3	DA	2354	C	C6-N1-C2	-6.40	117.74	120.30
4	CA	2034	U	O5'-P-OP1	-6.40	99.94	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	142	G	N3-C4-C5	-6.39	125.40	128.60
3	DA	52	A	N9-C4-C5	-6.39	103.24	105.80
3	DA	573	U	OP1-P-OP2	-6.39	110.01	119.60
3	DA	937	C	P-O3'-C3'	-6.39	112.03	119.70
4	CA	258	G	C6-C5-N7	6.39	134.24	130.40
1	AA	867	G	C5-C6-O6	6.39	132.44	128.60
1	AA	1482	G	N3-C4-C5	-6.39	125.40	128.60
3	DA	510	C	N1-C2-N3	6.39	123.67	119.20
3	DA	2290	G	O5'-P-OP2	6.39	118.37	110.70
4	CA	1824	G	C2-N3-C4	-6.39	108.70	111.90
4	CA	2426	A	C8-N9-C4	6.39	108.36	105.80
41	DR	49	ARG	NE-CZ-NH1	6.39	123.50	120.30
1	AA	1491	G	C8-N9-C4	-6.39	103.84	106.40
2	BA	698	G	C4-C5-N7	6.39	113.36	110.80
3	DA	124	G	N3-C4-N9	-6.39	122.17	126.00
3	DA	916	G	C4-C5-N7	6.39	113.36	110.80
3	DA	1738	G	C4-N9-C1'	6.39	134.81	126.50
3	DA	701	G	C5-C6-O6	-6.39	124.77	128.60
3	DA	751	A	N1-C2-N3	6.39	132.50	129.30
3	DA	1783	A	C5-C6-N1	6.39	120.89	117.70
4	CA	400	G	N3-C4-N9	6.39	129.83	126.00
4	CA	2692	G	OP1-P-OP2	-6.39	110.01	119.60
3	DA	1116	G	C6-N1-C2	-6.39	121.27	125.10
1	AA	1524	C	N1-C2-O2	-6.39	115.07	118.90
2	BA	777	A	C8-N9-C4	-6.39	103.25	105.80
3	DA	306	U	N3-C2-O2	6.39	126.67	122.20
3	DA	834	G	C2-N3-C4	-6.39	108.71	111.90
3	DA	1830	C	C6-N1-C2	6.39	122.85	120.30
3	DA	2235	G	C2-N3-C4	-6.39	108.71	111.90
3	DA	2731	G	C8-N9-C1'	-6.39	118.70	127.00
3	DA	2788	C	N3-C4-C5	6.39	124.45	121.90
1	AA	63	C	N3-C4-C5	-6.38	119.35	121.90
1	AA	718	A	N1-C6-N6	6.38	122.43	118.60
1	AA	724	G	N1-C6-O6	6.38	123.73	119.90
1	AA	818	G	N1-C6-O6	-6.38	116.07	119.90
2	BA	499	A	C5-C6-N6	6.38	128.81	123.70
3	DA	768	G	N9-C4-C5	6.38	107.95	105.40
3	DA	1453	A	O5'-P-OP2	-6.38	99.95	105.70
4	CA	1668	A	C8-N9-C4	-6.38	103.25	105.80
3	DA	855	G	C2-N3-C4	-6.38	108.71	111.90
3	DA	1964	G	O5'-P-OP1	-6.38	99.96	105.70
3	DA	2740	A	OP1-P-OP2	6.38	129.17	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2832	U	N1-C2-N3	-6.38	111.07	114.90
4	CA	1246	A	N1-C6-N6	6.38	122.43	118.60
4	CA	1948	G	N1-C6-O6	6.38	123.73	119.90
5	DB	14	U	OP1-P-O3'	6.38	119.24	105.20
1	AA	900	A	C2-N3-C4	-6.38	107.41	110.60
3	DA	1902	C	N3-C2-O2	6.38	126.37	121.90
3	DA	2883	A	C5-C6-N6	-6.38	118.60	123.70
4	CA	1366	A	C5-C6-N1	6.38	120.89	117.70
1	AA	47	C	N3-C2-O2	6.38	126.36	121.90
1	AA	913	A	C2-N3-C4	-6.38	107.41	110.60
3	DA	952	G	C8-N9-C4	-6.38	103.85	106.40
4	CA	1269	A	N1-C6-N6	6.38	122.43	118.60
4	CA	1353	A	C8-N9-C4	-6.38	103.25	105.80
5	DB	47	C	N1-C2-O2	6.38	122.73	118.90
2	BA	1092	A	C5-C6-N6	6.38	128.80	123.70
3	DA	1335	C	O5'-P-OP1	6.38	118.35	110.70
3	DA	1785	A	C8-N9-C4	-6.38	103.25	105.80
4	CA	939	G	C8-N9-C4	6.38	108.95	106.40
1	AA	766	A	N9-C4-C5	-6.37	103.25	105.80
3	DA	104	A	OP2-P-O3'	6.37	119.22	105.20
3	DA	298	G	C8-N9-C4	-6.37	103.85	106.40
3	DA	685	A	N7-C8-N9	6.37	116.99	113.80
3	DA	1469	A	C4-C5-C6	-6.37	113.81	117.00
3	DA	1513	U	N1-C2-O2	6.37	127.26	122.80
3	DA	2089	C	C5-C4-N4	-6.37	115.74	120.20
3	DA	2348	U	C2-N3-C4	6.37	130.82	127.00
3	DA	2435	A	C5-N7-C8	-6.37	100.71	103.90
4	CA	2026	U	O5'-P-OP2	-6.37	99.96	105.70
1	AA	834	U	O5'-P-OP1	6.37	118.35	110.70
3	DA	1193	G	N1-C2-N2	-6.37	110.47	116.20
3	DA	1210	G	C2-N3-C4	-6.37	108.71	111.90
3	DA	1630	A	N9-C4-C5	6.37	108.35	105.80
3	DA	2061	G	C5-C6-O6	6.37	132.42	128.60
3	DA	2090	A	O5'-P-OP2	-6.37	99.97	105.70
3	DA	2690	U	O5'-P-OP2	-6.37	99.97	105.70
3	DA	2736	A	O5'-P-OP1	-6.37	99.97	105.70
4	CA	2046	G	C8-N9-C1'	-6.37	118.72	127.00
1	AA	611	C	N1-C2-O2	6.37	122.72	118.90
1	AA	568	G	C8-N9-C4	-6.37	103.85	106.40
1	AA	730	G	N3-C4-N9	-6.37	122.18	126.00
3	DA	492	A	N1-C6-N6	-6.37	114.78	118.60
4	CA	1652	A	C4-C5-N7	6.37	113.88	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	797	C	N1-C2-N3	6.37	123.66	119.20
3	DA	604	G	O5'-P-OP1	-6.37	99.97	105.70
4	CA	2394	C	C5-C4-N4	6.37	124.66	120.20
2	BA	700	G	C8-N9-C4	6.37	108.95	106.40
3	DA	801	G	OP2-P-O3'	6.37	119.20	105.20
3	DA	2351	G	C4-N9-C1'	6.37	134.78	126.50
3	DA	2495	G	C5-C6-O6	6.37	132.42	128.60
4	CA	2232	C	N1-C2-O2	-6.37	115.08	118.90
24	AT	66	LEU	CA-CB-CG	6.37	129.94	115.30
2	BA	798	U	OP2-P-O3'	6.36	119.20	105.20
3	DA	1980	G	C2-N3-C4	-6.36	108.72	111.90
4	CA	36	G	N3-C4-C5	6.36	131.78	128.60
3	DA	1026	G	N7-C8-N9	6.36	116.28	113.10
3	DA	2856	A	N1-C6-N6	-6.36	114.78	118.60
3	DA	327	G	N3-C4-N9	-6.36	122.18	126.00
3	DA	1598	A	OP1-P-O3'	6.36	119.19	105.20
4	CA	2455	G	N9-C4-C5	6.36	107.94	105.40
1	AA	574	A	OP1-P-OP2	-6.36	110.06	119.60
3	DA	25	U	C2-N3-C4	-6.36	123.19	127.00
3	DA	117	G	N3-C2-N2	-6.36	115.45	119.90
3	DA	570	G	C5-N7-C8	-6.36	101.12	104.30
4	CA	1353	A	C2-N3-C4	6.36	113.78	110.60
1	AA	349	A	C5-C6-N6	-6.36	118.61	123.70
1	AA	809	G	N3-C4-N9	-6.36	122.19	126.00
2	BA	1455	G	N3-C4-N9	-6.36	122.19	126.00
3	DA	460	A	N1-C2-N3	6.36	132.48	129.30
3	DA	504	A	N1-C6-N6	6.36	122.41	118.60
3	DA	1399	C	C5-C4-N4	-6.36	115.75	120.20
3	DA	2772	C	C5-C6-N1	-6.36	117.82	121.00
3	DA	2783	U	N3-C4-O4	6.36	123.85	119.40
1	AA	361	G	C2-N3-C4	-6.35	108.72	111.90
1	AA	1443	C	O5'-P-OP1	-6.35	99.98	105.70
3	DA	1788	C	C5-C4-N4	-6.35	115.75	120.20
1	AA	369	G	O5'-P-OP1	-6.35	99.98	105.70
2	BA	452	A	C8-N9-C4	6.35	108.34	105.80
2	BA	800	G	N1-C6-O6	6.35	123.71	119.90
3	DA	836	G	C2-N3-C4	-6.35	108.72	111.90
3	DA	1549	A	N1-C6-N6	6.35	122.41	118.60
3	DA	1669	A	C6-N1-C2	-6.35	114.79	118.60
1	AA	397	A	C4-C5-C6	6.35	120.17	117.00
1	AA	520	A	C6-C5-N7	-6.35	127.86	132.30
1	AA	562	U	N3-C2-O2	-6.35	117.75	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	575	G	C4-N9-C1'	-6.35	118.25	126.50
3	DA	426	C	O5'-P-OP2	-6.35	99.98	105.70
3	DA	1790	C	O5'-P-OP2	-6.35	99.99	105.70
4	CA	2233	U	N1-C2-N3	6.35	118.71	114.90
5	DB	66	A	N3-C4-C5	6.35	131.25	126.80
1	AA	776	G	C5-C6-O6	-6.35	124.79	128.60
3	DA	904	G	C5-C6-O6	-6.35	124.79	128.60
3	DA	995	C	N1-C2-O2	6.35	122.71	118.90
3	DA	2268	A	C8-N9-C4	6.35	108.34	105.80
3	DA	2652	C	O5'-P-OP2	-6.35	99.99	105.70
3	DA	2824	C	O5'-P-OP1	-6.35	99.99	105.70
1	AA	47	C	C5-C4-N4	-6.35	115.76	120.20
1	AA	912	C	C5-C4-N4	-6.35	115.76	120.20
2	BA	890	G	O4'-C1'-N9	6.35	113.28	108.20
3	DA	1814	G	N1-C2-N2	6.35	121.91	116.20
3	DA	2490	G	N7-C8-N9	-6.35	109.93	113.10
3	DA	2729	G	C4-N9-C1'	6.35	134.75	126.50
1	AA	584	G	N3-C4-N9	-6.34	122.19	126.00
3	DA	1210	G	C5-C6-N1	-6.34	108.33	111.50
4	CA	1825	U	C6-N1-C2	-6.34	117.19	121.00
2	BA	57	G	N1-C6-O6	6.34	123.71	119.90
3	DA	589	U	C6-N1-C2	-6.34	117.19	121.00
3	DA	2427	C	N1-C2-O2	-6.34	115.09	118.90
3	DA	2611	C	C6-N1-C2	-6.34	117.76	120.30
4	CA	2608	G	O5'-P-OP2	-6.34	99.99	105.70
3	DA	452	G	N9-C4-C5	6.34	107.94	105.40
3	DA	1021	A	C8-N9-C4	6.34	108.34	105.80
3	DA	1472	C	N3-C4-C5	6.34	124.44	121.90
3	DA	1549	A	C5-N7-C8	-6.34	100.73	103.90
3	DA	1690	A	N9-C4-C5	6.34	108.34	105.80
3	DA	2000	C	N3-C4-C5	6.34	124.44	121.90
3	DA	2092	U	OP1-P-OP2	6.34	129.11	119.60
1	AA	1266	G	N3-C2-N2	-6.34	115.46	119.90
3	DA	125	A	P-O3'-C3'	6.34	127.31	119.70
3	DA	256	A	C2-N3-C4	-6.34	107.43	110.60
3	DA	1032	A	N9-C4-C5	6.34	108.34	105.80
3	DA	1156	A	C8-N9-C4	-6.34	103.27	105.80
3	DA	2601	C	N3-C2-O2	-6.34	117.46	121.90
3	DA	575	A	OP1-P-O3'	6.34	119.14	105.20
3	DA	2618	G	N1-C2-N2	-6.34	110.50	116.20
4	CA	2012	G	N3-C4-C5	-6.34	125.43	128.60
3	DA	862	G	N1-C2-N2	6.33	121.90	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	326	G	N3-C4-N9	6.33	129.80	126.00
2	BA	1120	C	C6-N1-C2	-6.33	117.77	120.30
3	DA	416	U	N3-C4-O4	6.33	123.83	119.40
3	DA	1692	U	N3-C4-O4	6.33	123.83	119.40
3	DA	2397	G	N3-C4-C5	-6.33	125.43	128.60
2	BA	1417	G	N3-C4-N9	-6.33	122.20	126.00
3	DA	559	G	C6-C5-N7	-6.33	126.60	130.40
3	DA	636	G	N3-C4-C5	6.33	131.76	128.60
3	DA	755	U	N1-C2-N3	-6.33	111.10	114.90
36	CM	107	PHE	N-CA-CB	6.33	122.00	110.60
34	DK	96	ARG	NE-CZ-NH2	6.33	123.47	120.30
3	DA	2467	C	N3-C4-N4	6.33	122.43	118.00
1	AA	314	C	O5'-P-OP1	6.33	118.30	110.70
3	DA	999	U	C4-C5-C6	-6.33	115.90	119.70
3	DA	1118	C	N3-C4-C5	6.33	124.43	121.90
3	DA	1251	C	OP2-P-O3'	6.33	119.12	105.20
38	DO	54	LEU	CB-CG-CD2	-6.33	100.24	111.00
1	AA	560	A	N9-C4-C5	-6.33	103.27	105.80
3	DA	875	G	O5'-P-OP1	6.33	118.29	110.70
3	DA	2822	G	C5-N7-C8	-6.33	101.14	104.30
3	DA	2091	C	C2-N3-C4	-6.33	116.74	119.90
3	DA	764	A	O5'-P-OP2	-6.32	100.01	105.70
3	DA	2379	G	N3-C2-N2	-6.32	115.47	119.90
3	DA	2381	A	C5-C6-N1	6.32	120.86	117.70
3	DA	2622	U	O5'-P-OP1	6.32	118.29	110.70
4	CA	827	U	C6-N1-C2	6.32	124.79	121.00
2	BA	762	U	N3-C4-O4	6.32	123.83	119.40
3	DA	653	U	O5'-P-OP1	6.32	118.29	110.70
4	CA	2841	C	C6-N1-C2	6.32	122.83	120.30
1	AA	700	G	C5-C6-O6	6.32	132.39	128.60
3	DA	385	C	C6-N1-C2	6.32	122.83	120.30
3	DA	389	G	OP2-P-O3'	6.32	119.11	105.20
3	DA	1429	G	OP2-P-O3'	6.32	119.10	105.20
3	DA	1664	A	O5'-P-OP2	-6.32	100.01	105.70
3	DA	1804	C	C5-C4-N4	-6.32	115.78	120.20
3	DA	2056	G	N1-C2-N2	6.32	121.89	116.20
3	DA	2442	C	O4'-C1'-N1	-6.32	103.14	108.20
3	DA	2499	C	C5-C6-N1	6.32	124.16	121.00
4	CA	1572	A	O5'-P-OP2	-6.32	100.01	105.70
3	DA	751	A	N7-C8-N9	-6.32	110.64	113.80
3	DA	1587	G	C5-C6-O6	6.32	132.39	128.60
3	DA	1935	G	O5'-P-OP2	-6.32	100.01	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1430	G	C4-N9-C1'	6.32	134.72	126.50
1	AA	1510	C	N1-C2-N3	-6.32	114.78	119.20
2	BA	867	G	C8-N9-C4	-6.32	103.87	106.40
2	BA	913	A	O5'-P-OP2	-6.32	100.01	105.70
3	DA	962	G	O5'-P-OP2	-6.32	100.02	105.70
3	DA	2201	G	C8-N9-C4	-6.32	103.87	106.40
6	BB	101	LEU	CA-CB-CG	6.32	129.83	115.30
3	DA	574	A	C2-N3-C4	-6.32	107.44	110.60
3	DA	1213	A	OP2-P-O3'	6.32	119.09	105.20
3	DA	1803	A	N7-C8-N9	-6.32	110.64	113.80
2	BA	395	C	C6-N1-C2	-6.31	117.77	120.30
3	DA	310	A	C6-C5-N7	-6.31	127.88	132.30
3	DA	691	C	O5'-P-OP1	6.31	118.28	110.70
3	DA	851	C	C6-N1-C2	6.31	122.83	120.30
3	DA	2725	A	N9-C4-C5	-6.31	103.28	105.80
3	DA	193	U	N3-C2-O2	6.31	126.62	122.20
3	DA	571	U	N3-C4-O4	6.31	123.82	119.40
3	DA	1325	U	OP1-P-OP2	6.31	129.07	119.60
3	DA	2577	A	N1-C2-N3	-6.31	126.14	129.30
3	DA	2864	G	C5-C6-O6	6.31	132.39	128.60
3	DA	722	A	N9-C4-C5	6.31	108.33	105.80
4	CA	2240	U	N1-C2-O2	6.31	127.22	122.80
1	AA	1378	C	C5-C6-N1	6.31	124.15	121.00
3	DA	143	C	C6-N1-C2	6.31	122.82	120.30
3	DA	493	G	C8-N9-C1'	6.31	135.20	127.00
3	DA	1150	C	N1-C2-O2	6.31	122.69	118.90
3	DA	2274	A	N1-C6-N6	6.31	122.39	118.60
3	DA	2397	G	C4-C5-C6	6.31	122.59	118.80
3	DA	2630	G	C8-N9-C4	6.31	108.92	106.40
3	DA	1563	U	OP2-P-O3'	6.31	119.08	105.20
3	DA	2672	U	O5'-P-OP1	-6.31	100.02	105.70
3	DA	2868	A	C4-N9-C1'	6.31	137.66	126.30
2	BA	810	C	N3-C4-C5	6.31	124.42	121.90
2	BA	814	A	OP1-P-O3'	-6.31	91.33	105.20
3	DA	124	G	C4-C5-N7	-6.31	108.28	110.80
3	DA	1471	G	C4-C5-N7	6.31	113.32	110.80
3	DA	2573	C	C6-N1-C2	-6.31	117.78	120.30
1	AA	270	A	N9-C4-C5	6.30	108.32	105.80
1	AA	1487	G	C6-C5-N7	6.30	134.18	130.40
1	AA	1506	U	OP1-P-OP2	6.30	129.06	119.60
2	BA	535	A	C8-N9-C4	6.30	108.32	105.80
3	DA	496	G	N1-C2-N3	6.30	127.68	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2251	OMG	OP1-P-O3'	6.30	119.07	105.20
4	CA	1799	G	C6-C5-N7	-6.30	126.62	130.40
1	AA	892	A	N3-C4-C5	6.30	131.21	126.80
3	DA	237	C	O5'-P-OP2	-6.30	100.03	105.70
3	DA	240	C	C6-N1-C2	-6.30	117.78	120.30
3	DA	528	A	N1-C2-N3	6.30	132.45	129.30
3	DA	1843	C	O5'-P-OP2	6.30	118.26	110.70
3	DA	1909	C	C2-N1-C1'	6.30	125.73	118.80
4	CA	2514	U	C6-N1-C2	-6.30	117.22	121.00
3	DA	53	A	N1-C2-N3	6.30	132.45	129.30
3	DA	621	A	C2-N3-C4	-6.30	107.45	110.60
3	DA	1310	G	N9-C4-C5	-6.30	102.88	105.40
3	DA	1843	C	N3-C4-N4	6.30	122.41	118.00
4	CA	685	A	C8-N9-C4	6.30	108.32	105.80
4	CA	781	A	N1-C6-N6	-6.30	114.82	118.60
4	CA	2075	U	C5-C4-O4	-6.30	122.12	125.90
3	DA	2525	G	C2-N3-C4	-6.30	108.75	111.90
3	DA	2808	G	C4-C5-C6	6.30	122.58	118.80
5	DB	77	U	N3-C4-O4	6.30	123.81	119.40
1	AA	1098	C	N3-C2-O2	-6.30	117.49	121.90
3	DA	56	A	C5-N7-C8	-6.30	100.75	103.90
3	DA	522	A	C5-C6-N1	-6.30	114.55	117.70
3	DA	1774	C	N3-C2-O2	-6.30	117.49	121.90
3	DA	1898	U	N3-C4-C5	-6.30	110.82	114.60
3	DA	2588	G	N1-C6-O6	-6.30	116.12	119.90
3	DA	2692	G	C5-C6-O6	6.30	132.38	128.60
4	CA	615	U	N3-C2-O2	6.30	126.61	122.20
4	CA	2087	G	N1-C6-O6	6.29	123.68	119.90
1	AA	635	A	C4-C5-N7	6.29	113.85	110.70
3	DA	565	C	C2-N3-C4	-6.29	116.75	119.90
3	DA	691	C	OP1-P-OP2	-6.29	110.16	119.60
3	DA	834	G	N1-C6-O6	6.29	123.68	119.90
3	DA	2577	A	C5-N7-C8	-6.29	100.75	103.90
3	DA	2634	A	C2-N3-C4	-6.29	107.45	110.60
1	AA	4	U	N1-C2-O2	6.29	127.20	122.80
1	AA	230	G	C5-C6-N1	-6.29	108.35	111.50
2	BA	912	C	O5'-P-OP2	-6.29	100.04	105.70
3	DA	1157	G	N3-C2-N2	-6.29	115.50	119.90
3	DA	2546	U	N3-C4-C5	-6.29	110.83	114.60
4	CA	1353	A	N3-C4-C5	-6.29	122.40	126.80
4	CA	2455	G	C4-N9-C1'	6.29	134.68	126.50
3	DA	1658	C	N1-C2-N3	-6.29	114.80	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1721	G	N3-C4-N9	6.29	129.77	126.00
4	CA	2061	G	C6-C5-N7	-6.29	126.63	130.40
4	CA	2253	G	C8-N9-C4	-6.29	103.88	106.40
1	AA	899	C	N3-C2-O2	6.29	126.30	121.90
3	DA	14	A	N9-C4-C5	-6.29	103.28	105.80
3	DA	1262	A	C5-C6-N6	-6.29	118.67	123.70
3	DA	2253	G	C8-N9-C4	6.29	108.92	106.40
3	DA	2502	G	O4'-C1'-N9	6.29	113.23	108.20
5	DB	20	G	O5'-P-OP1	6.29	118.25	110.70
3	DA	371	A	O5'-P-OP2	-6.29	100.04	105.70
3	DA	1407	G	C2-N3-C4	-6.29	108.76	111.90
3	DA	1444	G	N9-C4-C5	-6.29	102.89	105.40
3	DA	2001	C	N3-C2-O2	6.29	126.30	121.90
19	AO	87	LEU	CA-CB-CG	6.29	129.76	115.30
1	AA	35	G	N3-C2-N2	-6.29	115.50	119.90
1	AA	1509	C	C2-N1-C1'	-6.29	111.89	118.80
3	DA	84	A	N7-C8-N9	-6.29	110.66	113.80
3	DA	425	G	C8-N9-C4	6.29	108.91	106.40
3	DA	1018	U	O5'-P-OP2	-6.29	100.04	105.70
3	DA	2045	C	C5-C6-N1	-6.29	117.86	121.00
3	DA	2068	U	N3-C4-C5	-6.29	110.83	114.60
3	DA	2526	G	C2-N3-C4	-6.29	108.76	111.90
3	DA	2576	G	C5-C6-O6	-6.29	124.83	128.60
4	CA	777	G	N3-C2-N2	6.29	124.30	119.90
4	CA	1797	G	C5-C6-O6	6.29	132.37	128.60
2	BA	914	A	N1-C2-N3	6.28	132.44	129.30
2	BA	1521	C	N3-C4-C5	-6.28	119.39	121.90
3	DA	619	G	N3-C4-N9	-6.28	122.23	126.00
3	DA	834	G	N9-C4-C5	-6.28	102.89	105.40
3	DA	1160	G	OP2-P-O3'	6.28	119.02	105.20
3	DA	2395	C	N1-C2-O2	-6.28	115.13	118.90
3	DA	2615	U	C5-C4-O4	-6.28	122.13	125.90
3	DA	2772	C	C2-N3-C4	-6.28	116.76	119.90
4	CA	756	A	C2-N3-C4	-6.28	107.46	110.60
2	BA	25	C	O5'-P-OP1	6.28	118.24	110.70
3	DA	417	C	O5'-P-OP2	6.28	118.24	110.70
3	DA	713	G	N1-C2-N3	6.28	127.67	123.90
3	DA	2353	G	N7-C8-N9	6.28	116.24	113.10
1	AA	675	A	N7-C8-N9	6.28	116.94	113.80
2	BA	361	G	C5-C6-O6	-6.28	124.83	128.60
3	DA	859	G	C6-C5-N7	6.28	134.17	130.40
4	CA	577	G	C4-N9-C1'	6.28	134.66	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	76	G	N1-C6-O6	-6.28	116.13	119.90
2	BA	1501	C	OP1-P-OP2	6.28	129.02	119.60
3	DA	972	A	C4-C5-N7	-6.28	107.56	110.70
3	DA	692	C	N3-C4-N4	6.28	122.39	118.00
3	DA	1292	G	N3-C4-N9	-6.28	122.23	126.00
1	AA	562	U	N1-C2-O2	6.28	127.19	122.80
2	BA	375	U	N1-C2-O2	6.28	127.19	122.80
3	DA	761	A	N9-C4-C5	6.28	108.31	105.80
3	DA	793	A	C2-N3-C4	-6.28	107.46	110.60
3	DA	1303	G	C6-N1-C2	-6.28	121.33	125.10
3	DA	1517	G	O5'-P-OP1	-6.28	100.05	105.70
3	DA	2061	G	N3-C4-C5	-6.28	125.46	128.60
3	DA	2256	G	O5'-P-OP1	-6.28	100.05	105.70
3	DA	2336	A	N1-C2-N3	6.28	132.44	129.30
3	DA	2685	G	N3-C4-C5	6.28	131.74	128.60
4	CA	2595	G	C4-C5-N7	-6.28	108.29	110.80
3	DA	1168	G	N1-C2-N2	-6.27	110.55	116.20
4	CA	858	G	N1-C6-O6	6.27	123.66	119.90
1	AA	1421	G	C8-N9-C4	-6.27	103.89	106.40
1	AA	1426	G	C2-N3-C4	-6.27	108.76	111.90
3	DA	317	G	C5-C6-O6	-6.27	124.84	128.60
3	DA	976	G	N1-C2-N3	6.27	127.66	123.90
3	DA	1357	C	N3-C4-C5	6.27	124.41	121.90
3	DA	1830	C	OP2-P-O3'	6.27	119.00	105.20
3	DA	2098	U	C6-N1-C2	6.27	124.76	121.00
3	DA	2279	G	OP2-P-O3'	6.27	119.00	105.20
3	DA	1203	U	OP1-P-OP2	-6.27	110.19	119.60
3	DA	2085	U	OP2-P-O3'	6.27	119.00	105.20
3	DA	2885	G	O5'-P-OP2	-6.27	100.06	105.70
1	AA	52	C	N1-C2-O2	-6.27	115.14	118.90
1	AA	1426	G	C8-N9-C4	-6.27	103.89	106.40
2	BA	392	C	C5-C6-N1	-6.27	117.86	121.00
3	DA	962	G	OP1-P-OP2	6.27	129.00	119.60
3	DA	2253	G	C6-C5-N7	-6.27	126.64	130.40
5	DB	33	G	O5'-P-OP1	6.27	118.22	110.70
3	DA	771	G	N1-C6-O6	6.27	123.66	119.90
3	DA	1292	G	C4-C5-N7	6.27	113.31	110.80
3	DA	1355	G	C5-C6-O6	6.27	132.36	128.60
3	DA	1792	G	N9-C1'-C2'	-6.27	105.11	112.00
3	DA	2543	G	N1-C6-O6	6.27	123.66	119.90
3	DA	2824	C	N3-C4-N4	6.27	122.39	118.00
4	CA	660	C	C6-N1-C2	6.27	122.81	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2677	G	N9-C4-C5	-6.27	102.89	105.40
3	DA	1054	A	N1-C6-N6	6.26	122.36	118.60
3	DA	1629	U	N3-C4-O4	6.26	123.78	119.40
4	CA	1940	U	N3-C2-O2	-6.26	117.81	122.20
4	CA	2012	G	C4-N9-C1'	6.26	134.64	126.50
1	AA	1218	C	OP1-P-O3'	6.26	118.98	105.20
2	BA	1186	G	N3-C4-C5	6.26	131.73	128.60
3	DA	1135	C	N3-C2-O2	6.26	126.28	121.90
3	DA	1445	G	O5'-P-OP1	6.26	118.22	110.70
3	DA	2253	G	N1-C6-O6	6.26	123.66	119.90
4	CA	197	A	N3-C4-C5	-6.26	122.42	126.80
1	AA	134	G	C8-N9-C1'	6.26	135.14	127.00
1	AA	1521	C	OP2-P-O3'	6.26	118.97	105.20
2	BA	428	G	C4-C5-N7	-6.26	108.30	110.80
3	DA	253	C	C6-N1-C2	6.26	122.80	120.30
3	DA	556	A	OP1-P-O3'	6.26	118.97	105.20
3	DA	1206	G	N3-C4-C5	6.26	131.73	128.60
3	DA	1562	U	N3-C2-O2	6.26	126.58	122.20
3	DA	2374	C	C6-N1-C2	6.26	122.80	120.30
3	DA	2836	U	C5-C4-O4	6.26	129.66	125.90
5	DB	4	C	C6-N1-C2	6.26	122.81	120.30
1	AA	892	A	OP2-P-O3'	6.26	118.97	105.20
2	BA	37	U	N3-C2-O2	6.26	126.58	122.20
3	DA	491	G	N7-C8-N9	6.26	116.23	113.10
3	DA	578	G	C6-N1-C2	-6.26	121.34	125.10
3	DA	1475	G	N3-C4-C5	6.26	131.73	128.60
3	DA	2850	A	N9-C4-C5	-6.26	103.30	105.80
4	CA	663	G	C5-C6-O6	-6.26	124.84	128.60
1	AA	1062	U	OP2-P-O3'	-6.26	91.43	105.20
3	DA	536	G	N1-C6-O6	6.26	123.66	119.90
3	DA	767	U	N3-C2-O2	6.26	126.58	122.20
3	DA	57	C	OP1-P-OP2	6.26	128.99	119.60
3	DA	1941	C	N1-C2-O2	-6.26	115.15	118.90
3	DA	2405	G	O5'-P-OP1	-6.26	100.07	105.70
3	DA	679	C	O5'-P-OP1	-6.25	100.07	105.70
3	DA	1197	G	OP2-P-O3'	6.25	118.96	105.20
1	AA	920	U	N1-C2-O2	6.25	127.18	122.80
2	BA	717	U	N3-C4-O4	6.25	123.78	119.40
3	DA	1183	U	N3-C2-O2	-6.25	117.82	122.20
3	DA	1738	G	N3-C2-N2	6.25	124.28	119.90
3	DA	1937	A	N1-C2-N3	6.25	132.43	129.30
3	DA	1993	U	N3-C2-O2	6.25	126.58	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2239	G	C2-N3-C4	-6.25	108.77	111.90
3	DA	2791	G	N3-C4-C5	6.25	131.73	128.60
4	CA	187	G	N9-C4-C5	-6.25	102.90	105.40
4	CA	1990	C	N1-C2-O2	-6.25	115.15	118.90
4	CA	2091	C	N3-C2-O2	-6.25	117.52	121.90
30	DF	15	LEU	CB-CG-CD2	-6.25	100.37	111.00
51	D1	9	ARG	NE-CZ-NH1	-6.25	117.17	120.30
1	AA	117	G	C6-C5-N7	-6.25	126.65	130.40
1	AA	1094	G	N3-C2-N2	6.25	124.28	119.90
2	BA	922	G	N1-C6-O6	6.25	123.65	119.90
3	DA	1738	G	N3-C4-N9	6.25	129.75	126.00
3	DA	2699	C	C5-C4-N4	-6.25	115.82	120.20
4	CA	2825	G	C8-N9-C4	-6.25	103.90	106.40
1	AA	751	U	OP1-P-O3'	6.25	118.95	105.20
3	DA	823	C	N3-C2-O2	6.25	126.28	121.90
3	DA	1009	A	N9-C4-C5	6.25	108.30	105.80
3	DA	2877	G	C5-C6-N1	-6.25	108.38	111.50
2	BA	698	G	C5-N7-C8	-6.25	101.18	104.30
2	BA	916	U	O5'-P-OP2	6.25	118.20	110.70
3	DA	1236	G	C8-N9-C4	6.25	108.90	106.40
3	DA	1257	C	C2-N3-C4	-6.25	116.78	119.90
3	DA	1973	G	O5'-P-OP2	-6.25	100.08	105.70
3	DA	2056	G	N3-C2-N2	-6.25	115.53	119.90
3	DA	2457	PSU	OP2-P-O3'	6.25	118.95	105.20
3	DA	2846	G	N1-C2-N2	6.25	121.82	116.20
5	DB	67	G	C5-C6-N1	6.25	114.62	111.50
3	DA	778	G	O5'-P-OP2	-6.25	100.08	105.70
3	DA	1940	U	C2-N1-C1'	6.25	125.19	117.70
3	DA	2500	U	N1-C2-O2	6.25	127.17	122.80
4	CA	2641	G	C8-N9-C4	-6.25	103.90	106.40
5	DB	77	U	C6-N1-C2	6.25	124.75	121.00
2	BA	161	A	C8-N9-C4	-6.24	103.30	105.80
3	DA	1188	U	OP1-P-O3'	-6.24	91.47	105.20
3	DA	1577	C	N3-C2-O2	-6.24	117.53	121.90
3	DA	1659	G	O5'-P-OP2	-6.24	100.08	105.70
3	DA	1824	G	N9-C4-C5	6.24	107.90	105.40
4	CA	911	A	N7-C8-N9	6.24	116.92	113.80
4	CA	2392	A	N1-C6-N6	-6.24	114.85	118.60
3	DA	244	A	C2-N3-C4	-6.24	107.48	110.60
3	DA	2773	C	C5-C4-N4	-6.24	115.83	120.20
1	AA	1416	G	N1-C6-O6	-6.24	116.16	119.90
3	DA	351	C	N3-C2-O2	-6.24	117.53	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	844	A	C5-C6-N1	6.24	120.82	117.70
3	DA	1124	G	N3-C4-C5	6.24	131.72	128.60
2	BA	621	A	O5'-P-OP1	6.24	118.19	110.70
2	BA	1389	C	C2-N3-C4	-6.24	116.78	119.90
2	BA	1391	U	O5'-P-OP1	6.24	118.19	110.70
3	DA	486	C	C5-C4-N4	-6.24	115.83	120.20
3	DA	823	C	OP1-P-OP2	6.24	128.96	119.60
3	DA	845	A	C6-N1-C2	-6.24	114.86	118.60
3	DA	1431	A	OP1-P-O3'	6.24	118.92	105.20
3	DA	2817	U	C5-C6-N1	-6.24	119.58	122.70
4	CA	453	A	C8-N9-C4	6.24	108.30	105.80
5	DB	97	C	C2-N3-C4	6.24	123.02	119.90
46	DW	38	LEU	CB-CG-CD2	6.24	121.61	111.00
3	DA	1150	C	N3-C4-N4	-6.24	113.63	118.00
3	DA	2256	G	N3-C4-C5	6.24	131.72	128.60
3	DA	2373	G	O5'-P-OP2	-6.24	100.09	105.70
3	DA	2793	C	C2-N1-C1'	-6.24	111.94	118.80
4	CA	1829	A	C5-C6-N6	-6.24	118.71	123.70
3	DA	557	C	N3-C2-O2	6.24	126.27	121.90
3	DA	1326	U	N1-C2-O2	-6.24	118.44	122.80
3	DA	1544	A	C8-N9-C4	-6.24	103.31	105.80
3	DA	2243	U	N3-C2-O2	-6.24	117.84	122.20
3	DA	2359	C	C6-N1-C2	6.24	122.79	120.30
3	DA	2691	C	N1-C2-O2	-6.24	115.16	118.90
3	DA	2882	A	C8-N9-C4	-6.24	103.31	105.80
5	DB	114	C	C2-N1-C1'	-6.24	111.94	118.80
3	DA	2514	U	C5-C6-N1	-6.23	119.58	122.70
3	DA	1209	U	N1-C2-O2	-6.23	118.44	122.80
3	DA	1470	A	C5-C6-N1	-6.23	114.58	117.70
3	DA	1803	A	OP2-P-O3'	6.23	118.91	105.20
5	DB	71	C	N3-C4-C5	6.23	124.39	121.90
42	DS	57	GLY	N-CA-C	6.23	128.68	113.10
1	AA	876	C	C6-N1-C2	6.23	122.79	120.30
1	AA	902	G	N9-C4-C5	-6.23	102.91	105.40
1	AA	1185	G	N9-C4-C5	6.23	107.89	105.40
3	DA	338	G	N3-C4-N9	6.23	129.74	126.00
3	DA	1763	G	C4-N9-C1'	-6.23	118.40	126.50
3	DA	1769	U	C6-N1-C2	-6.23	117.26	121.00
3	DA	1888	G	O5'-P-OP1	-6.23	100.09	105.70
3	DA	2455	G	C5-C6-N1	-6.23	108.39	111.50
3	DA	2829	A	C5-N7-C8	-6.23	100.78	103.90
4	CA	1793	C	N1-C2-N3	6.23	123.56	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	DC	262	THR	CA-CB-CG2	-6.23	103.68	112.40
1	AA	1082	A	N9-C4-C5	-6.23	103.31	105.80
2	BA	1443	C	N3-C2-O2	-6.23	117.54	121.90
3	DA	33	C	N3-C2-O2	6.23	126.26	121.90
3	DA	1113	U	N3-C2-O2	-6.23	117.84	122.20
3	DA	1157	G	O4'-C1'-N9	-6.23	103.22	108.20
3	DA	2067	G	C8-N9-C4	-6.23	103.91	106.40
5	DB	85	G	N3-C2-N2	-6.23	115.54	119.90
5	DB	100	G	N1-C2-N2	-6.23	110.60	116.20
1	AA	1394	A	N1-C6-N6	-6.22	114.86	118.60
3	DA	571	U	OP1-P-O3'	6.22	118.89	105.20
3	DA	814	C	C4-C5-C6	-6.22	114.29	117.40
3	DA	1038	G	N1-C6-O6	6.22	123.64	119.90
3	DA	1970	A	C8-N9-C4	-6.22	103.31	105.80
3	DA	2786	U	C5-C4-O4	-6.22	122.17	125.90
1	AA	55	A	C8-N9-C4	-6.22	103.31	105.80
3	DA	143	C	C5-C4-N4	-6.22	115.84	120.20
3	DA	488	G	OP1-P-OP2	6.22	128.93	119.60
3	DA	986	C	C6-N1-C2	6.22	122.79	120.30
3	DA	1972	G	N9-C4-C5	6.22	107.89	105.40
3	DA	2645	G	C4-C5-N7	-6.22	108.31	110.80
3	DA	100	U	O5'-P-OP2	6.22	118.17	110.70
3	DA	422	A	O4'-C1'-N9	-6.22	103.22	108.20
3	DA	1142	A	C5'-C4'-O4'	-6.22	101.64	109.10
1	AA	817	C	C6-N1-C2	6.22	122.79	120.30
3	DA	271	G	P-O3'-C3'	6.22	127.16	119.70
3	DA	433	C	N3-C4-N4	-6.22	113.65	118.00
3	DA	1521	G	N1-C6-O6	6.22	123.63	119.90
3	DA	1990	C	N1-C2-N3	-6.22	114.85	119.20
3	DA	2407	A	O5'-P-OP2	-6.22	100.10	105.70
3	DA	1500	G	C4-C5-N7	6.22	113.29	110.80
3	DA	1571	A	OP1-P-OP2	6.22	128.93	119.60
3	DA	2274	A	OP2-P-O3'	6.22	118.88	105.20
4	CA	1801	A	OP1-P-OP2	6.22	128.93	119.60
1	AA	1178	G	N7-C8-N9	6.22	116.21	113.10
3	DA	2263	C	N1-C2-N3	-6.22	114.85	119.20
4	CA	1889	A	C5-C6-N6	-6.22	118.73	123.70
30	DF	65	LEU	CB-CG-CD2	-6.22	100.43	111.00
1	AA	959	A	O4'-C1'-N9	6.21	113.17	108.20
3	DA	404	A	C4-C5-N7	6.21	113.81	110.70
3	DA	914	G	N7-C8-N9	6.21	116.21	113.10
3	DA	1441	G	C5-C6-O6	6.21	132.33	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1465	G	N3-C4-N9	-6.21	122.27	126.00
5	DB	7	G	O5'-P-OP2	6.21	118.16	110.70
30	DF	168	LEU	CB-CG-CD1	6.21	121.56	111.00
1	AA	308	C	O5'-P-OP2	-6.21	100.11	105.70
2	BA	857	C	C6-N1-C2	6.21	122.78	120.30
3	DA	952	G	C4-C5-N7	6.21	113.28	110.80
4	CA	2443	C	O5'-P-OP2	-6.21	100.11	105.70
1	AA	330	C	N3-C4-N4	6.21	122.35	118.00
3	DA	223	A	OP2-P-O3'	6.21	118.86	105.20
3	DA	277	G	O4'-C1'-N9	6.21	113.17	108.20
3	DA	832	U	C5-C6-N1	-6.21	119.59	122.70
3	DA	1989	G	C5-C6-O6	6.21	132.33	128.60
3	DA	2003	A	O5'-P-OP2	-6.21	100.11	105.70
3	DA	2752	C	N3-C4-C5	6.21	124.39	121.90
3	DA	2887	A	C5-C6-N6	-6.21	118.73	123.70
5	DB	55	U	C5-C4-O4	-6.21	122.17	125.90
1	AA	117	G	C8-N9-C4	-6.21	103.92	106.40
3	DA	481	G	C5-C6-O6	-6.21	124.88	128.60
3	DA	529	A	C6-C5-N7	6.21	136.65	132.30
3	DA	567	U	O5'-P-OP2	-6.21	100.11	105.70
3	DA	694	U	N3-C4-C5	-6.21	110.88	114.60
3	DA	979	A	N9-C4-C5	6.21	108.28	105.80
3	DA	1674	G	C5-C6-N1	-6.21	108.39	111.50
3	DA	2430[A]	A	O5'-P-OP1	6.21	118.15	110.70
3	DA	2430[B]	A	O5'-P-OP1	6.21	118.15	110.70
3	DA	2529	G	C5-C6-O6	6.21	132.33	128.60
3	DA	2715	C	C2-N1-C1'	6.21	125.63	118.80
1	AA	1354	U	N3-C2-O2	-6.21	117.86	122.20
2	BA	42	G	C4-C5-N7	6.21	113.28	110.80
2	BA	209	U	C2-N1-C1'	6.21	125.15	117.70
2	BA	319	G	N3-C4-C5	-6.21	125.50	128.60
3	DA	759	G	N3-C4-C5	6.21	131.70	128.60
3	DA	1619	G	C5-N7-C8	-6.21	101.20	104.30
3	DA	2477	U	C2-N1-C1'	6.21	125.15	117.70
9	AE	157	ARG	NE-CZ-NH2	-6.21	117.20	120.30
3	DA	2870	C	C6-N1-C2	6.21	122.78	120.30
1	AA	656	G	C8-N9-C4	-6.20	103.92	106.40
3	DA	553	G	OP2-P-O3'	6.20	118.85	105.20
3	DA	1385	A	OP2-P-O3'	6.20	118.85	105.20
3	DA	1560	G	C4-C5-N7	6.20	113.28	110.80
3	DA	1661	G	C8-N9-C4	6.20	108.88	106.40
3	DA	1821	A	N3-C4-N9	6.20	132.36	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1947	C	N3-C2-O2	6.20	126.24	121.90
3	DA	2391	G	OP1-P-O3'	6.20	118.85	105.20
4	CA	1272	A	N1-C6-N6	6.20	122.32	118.60
3	DA	208	C	C6-N1-C2	6.20	122.78	120.30
3	DA	1830	C	C5-C4-N4	-6.20	115.86	120.20
3	DA	2010	G	N7-C8-N9	6.20	116.20	113.10
1	AA	43	C	C5-C4-N4	-6.20	115.86	120.20
1	AA	113	G	N1-C2-N2	-6.20	110.62	116.20
3	DA	455	C	C6-N1-C1'	6.20	128.24	120.80
3	DA	1138	G	N3-C2-N2	-6.20	115.56	119.90
3	DA	1195	G	C8-N9-C4	6.20	108.88	106.40
3	DA	1414	C	N3-C4-N4	6.20	122.34	118.00
3	DA	1999	C	N1-C2-O2	-6.20	115.18	118.90
4	CA	1954	G	C5-N7-C8	-6.20	101.20	104.30
4	CA	2692	G	C6-C5-N7	-6.20	126.68	130.40
1	AA	1079	G	C4-N9-C1'	6.20	134.56	126.50
3	DA	1287	A	C8-N9-C4	-6.20	103.32	105.80
3	DA	1390	U	C5-C4-O4	-6.20	122.18	125.90
3	DA	1453	A	C8-N9-C4	6.20	108.28	105.80
3	DA	1878	G	C5-C6-O6	-6.20	124.88	128.60
3	DA	2825	G	C8-N9-C4	-6.20	103.92	106.40
4	CA	776	G	N7-C8-N9	6.20	116.20	113.10
2	BA	119	A	N9-C4-C5	-6.20	103.32	105.80
4	CA	1938	A	N9-C4-C5	6.20	108.28	105.80
51	D1	16	ARG	NE-CZ-NH2	6.20	123.40	120.30
2	BA	41	G	C8-N9-C4	-6.20	103.92	106.40
3	DA	443	A	OP1-P-O3'	6.20	118.83	105.20
3	DA	664	G	N3-C4-N9	-6.20	122.28	126.00
3	DA	797	G	C5-C6-O6	-6.20	124.88	128.60
3	DA	1155	A	C8-N9-C4	-6.20	103.32	105.80
3	DA	1292	G	C2-N3-C4	-6.20	108.80	111.90
4	CA	2442	C	C2-N1-C1'	-6.20	111.98	118.80
4	CA	2552	U	C5-C4-O4	-6.20	122.18	125.90
2	BA	886	G	N3-C4-C5	6.19	131.70	128.60
2	BA	928	G	N3-C2-N2	-6.19	115.56	119.90
3	DA	869	G	O5'-P-OP1	-6.19	100.12	105.70
3	DA	976	G	C5-C6-N1	-6.19	108.40	111.50
3	DA	1383	A	O5'-P-OP2	-6.19	100.12	105.70
1	AA	1408	A	C5-C6-N1	-6.19	114.60	117.70
3	DA	1	G	C8-N9-C4	6.19	108.88	106.40
3	DA	543	G	N1-C2-N2	-6.19	110.63	116.20
4	CA	1677	A	C4-C5-N7	6.19	113.80	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1944	U	O4'-C1'-N1	6.19	113.15	108.20
4	CA	2564	A	N9-C4-C5	6.19	108.28	105.80
1	AA	622	A	N3-C4-C5	6.19	131.13	126.80
2	BA	1468	A	N1-C6-N6	6.19	122.31	118.60
3	DA	218	A	C2-N3-C4	-6.19	107.50	110.60
3	DA	821	A	OP1-P-O3'	6.19	118.82	105.20
3	DA	1445	G	N9-C4-C5	6.19	107.88	105.40
3	DA	1986	C	OP2-P-O3'	6.19	118.82	105.20
3	DA	2361	G	C5-C6-N1	-6.19	108.41	111.50
3	DA	2876	G	C8-N9-C1'	-6.19	118.95	127.00
3	DA	798	G	C4-C5-N7	6.19	113.28	110.80
3	DA	1045	C	N1-C2-O2	6.19	122.61	118.90
3	DA	1238	G	N1-C2-N2	-6.19	110.63	116.20
4	CA	2250	G	N7-C8-N9	6.19	116.19	113.10
4	CA	2587	A	N1-C6-N6	-6.19	114.89	118.60
43	DT	99	ARG	NE-CZ-NH2	-6.19	117.20	120.30
2	BA	1527	U	C2-N1-C1'	-6.19	110.28	117.70
3	DA	381	G	C4-C5-N7	6.19	113.28	110.80
3	DA	528	A	N9-C1'-C2'	6.19	122.05	114.00
4	CA	2036	C	N3-C2-O2	-6.19	117.57	121.90
5	DB	93	C	C2-N3-C4	-6.19	116.81	119.90
18	AN	65	ARG	NE-CZ-NH1	6.19	123.39	120.30
1	AA	895	G	C4-C5-N7	6.19	113.27	110.80
3	DA	2629	U	OP1-P-O3'	6.19	118.81	105.20
21	BQ	27	ARG	NE-CZ-NH1	6.19	123.39	120.30
1	AA	830	G	C5-C6-O6	-6.18	124.89	128.60
2	BA	1482	G	N9-C4-C5	-6.18	102.93	105.40
3	DA	2497	A	N3-C4-C5	-6.18	122.47	126.80
3	DA	2553	G	N1-C2-N3	6.18	127.61	123.90
4	CA	1983	G	N7-C8-N9	6.18	116.19	113.10
3	DA	812	C	C5-C6-N1	-6.18	117.91	121.00
3	DA	1663	G	C2-N3-C4	-6.18	108.81	111.90
3	DA	2483	C	O5'-P-OP1	-6.18	100.14	105.70
3	DA	1150	C	OP1-P-OP2	-6.18	110.33	119.60
3	DA	2859	G	N9-C4-C5	6.18	107.87	105.40
4	CA	1991	U	C6-N1-C2	6.18	124.71	121.00
5	DB	7	G	OP1-P-OP2	-6.18	110.33	119.60
3	DA	2098	U	N1-C2-N3	-6.18	111.19	114.90
3	DA	2321	U	OP2-P-O3'	6.18	118.79	105.20
3	DA	2525	G	OP2-P-O3'	6.18	118.80	105.20
2	BA	1531	A	C4-C5-N7	6.18	113.79	110.70
3	DA	412	A	OP2-P-O3'	6.18	118.79	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	808	G	OP2-P-O3'	6.18	118.79	105.20
3	DA	1129	A	N9-C4-C5	6.18	108.27	105.80
3	DA	1142	A	C4-C5-C6	6.18	120.09	117.00
3	DA	1151	A	OP2-P-O3'	6.18	118.79	105.20
3	DA	1264	A	C5-C6-N1	6.18	120.79	117.70
3	DA	1301	A	C6-C5-N7	-6.18	127.98	132.30
3	DA	2035	G	OP1-P-OP2	6.18	128.86	119.60
1	AA	812	G	OP1-P-O3'	6.17	118.78	105.20
1	AA	880	C	N1-C2-O2	-6.17	115.19	118.90
3	DA	449	A	C5-N7-C8	-6.17	100.81	103.90
4	CA	2693	G	C6-C5-N7	-6.17	126.69	130.40
1	AA	1082	A	C2-N3-C4	-6.17	107.51	110.60
3	DA	1817	G	N9-C4-C5	6.17	107.87	105.40
4	CA	1568	G	C8-N9-C4	6.17	108.87	106.40
1	AA	289	G	C2-N3-C4	-6.17	108.81	111.90
1	AA	793	U	N3-C4-O4	-6.17	115.08	119.40
1	AA	896	C	N3-C2-O2	6.17	126.22	121.90
3	DA	783	A	C4-C5-C6	-6.17	113.91	117.00
3	DA	1959	G	N3-C2-N2	-6.17	115.58	119.90
39	CP	106	LEU	CA-CB-CG	6.17	129.50	115.30
4	CA	1917	U	C6-N1-C2	-6.17	117.30	121.00
1	AA	400	C	N3-C4-C5	6.17	124.37	121.90
3	DA	976	G	C6-C5-N7	6.17	134.10	130.40
3	DA	1345	C	O5'-P-OP1	-6.17	100.15	105.70
3	DA	1358	G	C5-C6-N1	-6.17	108.42	111.50
3	DA	1607	C	OP1-P-O3'	6.17	118.77	105.20
3	DA	1812	U	OP1-P-OP2	6.17	128.85	119.60
3	DA	2821	A	C5-N7-C8	6.17	106.98	103.90
4	CA	335	C	N3-C2-O2	-6.17	117.58	121.90
4	CA	1608	A	C8-N9-C4	-6.17	103.33	105.80
1	AA	6	G	N1-C6-O6	-6.17	116.20	119.90
1	AA	142	G	N3-C4-N9	6.17	129.70	126.00
3	DA	57	C	C6-N1-C2	6.17	122.77	120.30
3	DA	689	A	C4-C5-N7	-6.17	107.62	110.70
3	DA	857	G	C5-C6-O6	-6.17	124.90	128.60
3	DA	1586	A	C8-N9-C4	-6.17	103.33	105.80
3	DA	2696	U	N3-C4-O4	6.17	123.72	119.40
4	CA	530	G	N3-C4-C5	6.17	131.68	128.60
5	DB	90	C	N1-C2-O2	-6.17	115.20	118.90
3	DA	1690	A	N7-C8-N9	6.17	116.88	113.80
5	DB	84	G	C5-C6-O6	-6.17	124.90	128.60
1	AA	63	C	OP1-P-OP2	-6.16	110.36	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1245	C	C6-N1-C2	6.16	122.77	120.30
2	BA	769	G	OP1-P-OP2	6.16	128.84	119.60
3	DA	652	U	O5'-P-OP2	-6.16	100.15	105.70
2	BA	1171	A	OP1-P-O3'	6.16	118.76	105.20
3	DA	353	C	N1-C2-O2	6.16	122.60	118.90
12	BH	59	LEU	CA-CB-CG	6.16	129.47	115.30
2	BA	431	A	C8-N9-C4	6.16	108.26	105.80
3	DA	451	U	C6-N1-C1'	6.16	129.83	121.20
3	DA	1155	A	N9-C4-C5	6.16	108.26	105.80
5	DB	83	G	C5-C6-O6	-6.16	124.90	128.60
2	BA	1503	A	C8-N9-C4	6.16	108.26	105.80
3	DA	382	A	N1-C2-N3	6.16	132.38	129.30
3	DA	852	U	C6-N1-C2	6.16	124.69	121.00
3	DA	1043	C	C6-N1-C2	6.16	122.76	120.30
3	DA	1272	A	C6-C5-N7	6.16	136.61	132.30
3	DA	1777	U	C6-N1-C2	6.16	124.69	121.00
3	DA	2603	G	N9-C4-C5	6.16	107.86	105.40
4	CA	1824	G	N3-C4-C5	6.16	131.68	128.60
3	DA	1246	A	N1-C2-N3	6.16	132.38	129.30
3	DA	1295	C	OP1-P-OP2	6.16	128.83	119.60
3	DA	2005	A	OP1-P-OP2	-6.16	110.37	119.60
3	DA	2296	U	O5'-P-OP2	6.16	118.09	110.70
3	DA	540	C	OP2-P-O3'	6.15	118.74	105.20
3	DA	1563	U	N3-C4-C5	-6.15	110.91	114.60
5	DB	32	U	O5'-P-OP2	-6.15	100.16	105.70
3	DA	126	A	C4-C5-N7	6.15	113.78	110.70
3	DA	160	A	C2-N3-C4	-6.15	107.52	110.60
3	DA	787	C	C2-N3-C4	-6.15	116.82	119.90
3	DA	953	G	OP1-P-OP2	-6.15	110.37	119.60
3	DA	2450	A	C6-N1-C2	-6.15	114.91	118.60
3	DA	2540	C	C5-C4-N4	6.15	124.51	120.20
3	DA	2721	A	C2-N3-C4	6.15	113.68	110.60
1	AA	1488	G	OP2-P-O3'	6.15	118.73	105.20
3	DA	928	A	N9-C4-C5	6.15	108.26	105.80
3	DA	2417	C	C5-C4-N4	-6.15	115.89	120.20
3	DA	2843	G	C6-C5-N7	-6.15	126.71	130.40
4	CA	741	U	N1-C2-N3	-6.15	111.21	114.90
4	CA	1901	A	O5'-P-OP2	-6.15	100.16	105.70
26	BL	18	LYS	CD-CE-NZ	-6.15	97.55	111.70
1	AA	413	G	C5-C6-O6	6.15	132.29	128.60
3	DA	859	G	C5-C6-N1	-6.15	108.43	111.50
3	DA	1186	G	C2-N3-C4	-6.15	108.83	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1793	C	OP2-P-O3'	6.15	118.73	105.20
4	CA	2417	C	N3-C4-C5	-6.15	119.44	121.90
1	AA	780	A	N1-C6-N6	6.15	122.29	118.60
1	AA	971	G	C2-N3-C4	-6.15	108.83	111.90
3	DA	574	A	O5'-P-OP1	-6.15	100.17	105.70
3	DA	748	G	O4'-C1'-N9	6.15	113.12	108.20
3	DA	2463	C	C5-C4-N4	-6.15	115.90	120.20
5	DB	55	U	N3-C2-O2	6.15	126.50	122.20
2	BA	715	A	OP1-P-OP2	-6.14	110.38	119.60
3	DA	1941	C	C6-N1-C2	-6.14	117.84	120.30
5	DB	73	A	N1-C2-N3	6.14	132.37	129.30
5	DB	90	C	C6-N1-C2	-6.14	117.84	120.30
1	AA	921	U	O5'-P-OP2	6.14	118.07	110.70
4	CA	684	G	N1-C6-O6	6.14	123.59	119.90
4	CA	1665	A	N9-C4-C5	-6.14	103.34	105.80
1	AA	117	G	OP1-P-O3'	6.14	118.71	105.20
3	DA	2788	C	OP2-P-O3'	6.14	118.71	105.20
3	DA	741	U	C6-N1-C1'	-6.14	112.61	121.20
3	DA	2222	C	C6-N1-C2	-6.14	117.84	120.30
4	CA	1814	G	N1-C2-N2	-6.14	110.67	116.20
3	DA	1337	G	N1-C6-O6	6.14	123.58	119.90
4	CA	411	G	N1-C2-N2	6.14	121.72	116.20
3	DA	113	U	OP1-P-OP2	6.14	128.81	119.60
3	DA	770	G	C5-N7-C8	-6.14	101.23	104.30
3	DA	993	G	N1-C6-O6	-6.14	116.22	119.90
3	DA	1150	C	C5-C4-N4	6.14	124.50	120.20
3	DA	1197	G	C8-N9-C1'	6.14	134.98	127.00
3	DA	1549	A	N9-C4-C5	-6.14	103.34	105.80
3	DA	1565	C	C6-N1-C2	6.14	122.75	120.30
3	DA	2789	C	OP1-P-O3'	-6.14	91.70	105.20
1	AA	268	U	OP2-P-O3'	6.13	118.70	105.20
2	BA	1499	A	C5-C6-N6	-6.13	118.79	123.70
3	DA	1138	G	N1-C2-N2	6.13	121.72	116.20
4	CA	823	C	N3-C2-O2	6.13	126.19	121.90
3	DA	791	C	C5-C6-N1	-6.13	117.93	121.00
3	DA	2035	G	N1-C2-N3	6.13	127.58	123.90
4	CA	2069	G	C2-N3-C4	-6.13	108.83	111.90
3	DA	1658	C	N3-C4-C5	6.13	124.35	121.90
3	DA	1760	C	C6-N1-C2	-6.13	117.85	120.30
4	CA	2029	G	C6-C5-N7	-6.13	126.72	130.40
3	DA	41	C	N1-C2-O2	-6.13	115.22	118.90
3	DA	229	C	C6-N1-C2	6.13	122.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1776	G	O4'-C1'-N9	-6.13	103.30	108.20
3	DA	2089	C	N3-C4-N4	6.13	122.29	118.00
1	AA	1461	G	N3-C2-N2	6.13	124.19	119.90
3	DA	182	A	C2-N3-C4	-6.13	107.53	110.60
3	DA	1148	U	OP2-P-O3'	6.13	118.68	105.20
3	DA	2814	A	OP1-P-OP2	6.13	128.79	119.60
4	CA	1618	A	N1-C6-N6	-6.13	114.92	118.60
4	CA	1954	G	C4-C5-N7	6.13	113.25	110.80
1	AA	694	A	OP2-P-O3'	6.13	118.68	105.20
3	DA	513	A	C6-C5-N7	-6.13	128.01	132.30
3	DA	664	G	O5'-P-OP2	-6.13	100.19	105.70
3	DA	908	C	N3-C4-N4	6.13	122.29	118.00
3	DA	1185	G	O5'-P-OP2	-6.13	100.19	105.70
3	DA	2589	A	C8-N9-C4	-6.13	103.35	105.80
1	AA	552	U	N1-C2-N3	6.12	118.58	114.90
1	AA	1466	C	O5'-P-OP2	-6.12	100.19	105.70
3	DA	1651	G	C8-N9-C4	-6.12	103.95	106.40
4	CA	2600	A	C8-N9-C4	-6.12	103.35	105.80
1	AA	893	C	C2-N1-C1'	6.12	125.53	118.80
1	AA	1487	G	N3-C4-N9	-6.12	122.33	126.00
2	BA	42	G	O5'-P-OP2	6.12	118.05	110.70
3	DA	1632	A	C4-N9-C1'	6.12	137.32	126.30
3	DA	1949	G	C5-C6-O6	6.12	132.27	128.60
4	CA	217	A	N1-C6-N6	-6.12	114.93	118.60
4	CA	1606	C	C6-N1-C2	-6.12	117.85	120.30
43	CT	97	LEU	CA-CB-CG	6.12	129.38	115.30
3	DA	1131	G	OP2-P-O3'	-6.12	91.73	105.20
3	DA	1644	C	N1-C2-O2	-6.12	115.23	118.90
1	AA	1303	C	C6-N1-C2	-6.12	117.85	120.30
2	BA	1529	G	N1-C2-N2	-6.12	110.69	116.20
3	DA	1156	A	C5-N7-C8	-6.12	100.84	103.90
3	DA	2884	U	N1-C2-N3	6.12	118.57	114.90
1	AA	902	G	C8-N9-C1'	-6.12	119.05	127.00
1	AA	1404	C	N3-C2-O2	6.12	126.18	121.90
3	DA	549	G	OP2-P-O3'	6.12	118.66	105.20
3	DA	906	U	C6-N1-C1'	6.12	129.76	121.20
3	DA	1228	G	OP1-P-OP2	6.12	128.78	119.60
3	DA	2867	G	N3-C4-C5	6.12	131.66	128.60
4	CA	55	G	C8-N9-C4	6.12	108.85	106.40
2	BA	186	C	C6-N1-C2	-6.12	117.85	120.30
3	DA	777	G	OP1-P-OP2	6.12	128.78	119.60
4	CA	740	C	N3-C4-C5	6.12	124.35	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	527	C	N1-C2-N3	-6.12	114.92	119.20
3	DA	527	C	N3-C2-O2	6.12	126.18	121.90
3	DA	1142	A	O5'-P-OP1	6.12	118.04	110.70
3	DA	1802	A	C2-N3-C4	-6.12	107.54	110.60
3	DA	2289	G	O5'-P-OP2	-6.12	100.20	105.70
4	CA	757	G	C8-N9-C1'	6.12	134.95	127.00
1	AA	597	G	OP1-P-OP2	-6.11	110.43	119.60
1	AA	930	C	C6-N1-C2	-6.11	117.86	120.30
2	BA	130	A	N1-C6-N6	6.11	122.27	118.60
3	DA	198	C	C6-N1-C2	-6.11	117.85	120.30
3	DA	1168	G	N9-C4-C5	-6.11	102.95	105.40
3	DA	2597	G	C5-C6-O6	6.11	132.27	128.60
3	DA	2868	A	C6-C5-N7	-6.11	128.02	132.30
4	CA	736	C	C6-N1-C2	6.11	122.75	120.30
4	CA	939	G	N3-C4-C5	6.11	131.66	128.60
29	DE	35	TYR	CB-CG-CD1	6.11	124.67	121.00
4	CA	1772	A	C6-C5-N7	6.11	136.58	132.30
37	DN	119	LEU	CB-CG-CD2	-6.11	100.61	111.00
1	AA	315	A	C5-C6-N6	-6.11	118.81	123.70
3	DA	249	C	OP1-P-O3'	6.11	118.64	105.20
3	DA	967	U	OP2-P-O3'	6.11	118.64	105.20
3	DA	1460	U	OP1-P-OP2	6.11	128.76	119.60
3	DA	1899	A	C4-C5-C6	6.11	120.06	117.00
3	DA	2807	U	OP2-P-O3'	6.11	118.64	105.20
4	CA	823	C	N1-C2-O2	-6.11	115.23	118.90
50	D0	26	LEU	CB-CG-CD2	-6.11	100.61	111.00
3	DA	2020	A	C4-C5-N7	6.11	113.75	110.70
3	DA	1167	C	C4-C5-C6	6.11	120.45	117.40
3	DA	2317	A	N3-C4-N9	-6.11	122.51	127.40
4	CA	425	G	C4-N9-C1'	-6.11	118.56	126.50
3	DA	1263	U	O5'-P-OP2	6.11	118.03	110.70
3	DA	2490	G	O5'-P-OP1	6.11	118.03	110.70
2	BA	915	A	N7-C8-N9	-6.10	110.75	113.80
3	DA	449	A	OP2-P-O3'	6.10	118.63	105.20
1	AA	1230	C	N3-C2-O2	6.10	126.17	121.90
3	DA	260	G	O5'-P-OP2	-6.10	100.21	105.70
3	DA	342	A	C2-N3-C4	-6.10	107.55	110.60
3	DA	1038	G	C2-N3-C4	-6.10	108.85	111.90
3	DA	1900	A	C8-N9-C4	-6.10	103.36	105.80
4	CA	1696	G	C4-C5-N7	6.10	113.24	110.80
3	DA	29	U	O5'-P-OP2	-6.10	100.21	105.70
3	DA	1633	G	C2-N3-C4	-6.10	108.85	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2501	C	N1-C2-O2	6.10	122.56	118.90
1	AA	914	A	C8-N9-C4	-6.10	103.36	105.80
2	BA	169	C	C5-C4-N4	-6.10	115.93	120.20
3	DA	757	G	N3-C2-N2	-6.10	115.63	119.90
3	DA	1135	C	C2-N3-C4	-6.10	116.85	119.90
3	DA	1910	G	N3-C4-N9	-6.10	122.34	126.00
3	DA	2729	G	C6-C5-N7	-6.10	126.74	130.40
2	BA	705	G	C5-C6-O6	6.10	132.26	128.60
3	DA	526	A	OP2-P-O3'	6.10	118.61	105.20
3	DA	850	U	N1-C2-N3	6.10	118.56	114.90
3	DA	997	G	O5'-P-OP1	6.10	118.02	110.70
3	DA	2490	G	N9-C4-C5	-6.10	102.96	105.40
3	DA	2846	G	C8-N9-C4	6.10	108.84	106.40
2	BA	708	C	C5-C4-N4	-6.10	115.93	120.20
3	DA	191	A	N7-C8-N9	6.10	116.85	113.80
1	AA	379	C	O5'-P-OP1	6.09	118.01	110.70
3	DA	18	U	C5-C4-O4	-6.09	122.24	125.90
3	DA	642	U	N3-C4-O4	6.09	123.67	119.40
3	DA	2744	G	N1-C6-O6	6.09	123.56	119.90
3	DA	2885	G	N7-C8-N9	6.09	116.15	113.10
1	AA	240	G	N1-C6-O6	-6.09	116.24	119.90
3	DA	2035	G	N3-C4-C5	-6.09	125.55	128.60
3	DA	2097	A	C5-C6-N6	-6.09	118.83	123.70
1	AA	370	C	C2-N1-C1'	-6.09	112.10	118.80
2	BA	1443	C	C6-N1-C2	-6.09	117.86	120.30
3	DA	320	A	C6-N1-C2	-6.09	114.94	118.60
3	DA	381	G	C4-N9-C1'	-6.09	118.58	126.50
3	DA	600	G	C4-C5-N7	6.09	113.24	110.80
3	DA	802	A	N9-C4-C5	6.09	108.24	105.80
3	DA	950	G	C4-C5-N7	6.09	113.24	110.80
3	DA	993	G	C8-N9-C4	-6.09	103.96	106.40
3	DA	2258	C	N3-C4-N4	6.09	122.26	118.00
3	DA	2486	C	C5-C4-N4	-6.09	115.94	120.20
4	CA	269	C	N1-C2-O2	6.09	122.56	118.90
4	CA	1741	C	N3-C4-C5	-6.09	119.46	121.90
4	CA	1943	U	C2-N3-C4	6.09	130.66	127.00
4	CA	2719	G	N1-C6-O6	6.09	123.56	119.90
1	AA	813	U	C6-N1-C2	6.09	124.65	121.00
3	DA	1025	G	N3-C4-N9	6.09	129.65	126.00
3	DA	1767	G	N3-C4-N9	-6.09	122.35	126.00
3	DA	2005	A	OP2-P-O3'	6.09	118.60	105.20
3	DA	2850	A	N1-C6-N6	6.09	122.25	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	496	A	O4'-C1'-N9	6.09	113.07	108.20
3	DA	1688	U	OP2-P-O3'	6.09	118.59	105.20
3	DA	1875	G	C4-C5-N7	-6.09	108.36	110.80
3	DA	2890	G	C8-N9-C4	6.09	108.83	106.40
1	AA	11	G	O5'-P-OP2	6.09	118.00	110.70
1	AA	361	G	N9-C4-C5	-6.09	102.97	105.40
1	AA	524	G	C5-N7-C8	-6.09	101.26	104.30
1	AA	665	A	C8-N9-C4	6.09	108.23	105.80
3	DA	424	G	N9-C4-C5	-6.09	102.97	105.40
3	DA	920	A	C8-N9-C4	-6.09	103.36	105.80
3	DA	947	A	C8-N9-C4	-6.09	103.36	105.80
1	AA	351	G	O5'-P-OP1	-6.08	100.22	105.70
1	AA	973	G	N9-C4-C5	-6.08	102.97	105.40
2	BA	864	A	N1-C6-N6	-6.08	114.95	118.60
3	DA	1661	G	C4-C5-C6	-6.08	115.15	118.80
3	DA	2250	G	C4-C5-N7	6.08	113.23	110.80
1	AA	258	G	N3-C4-C5	6.08	131.64	128.60
3	DA	1830	C	N1-C2-O2	-6.08	115.25	118.90
3	DA	2262	U	C2-N1-C1'	-6.08	110.40	117.70
3	DA	2702	G	OP2-P-O3'	6.08	118.58	105.20
3	DA	323	C	O5'-P-OP1	-6.08	100.23	105.70
3	DA	329	G	C5-C6-O6	-6.08	124.95	128.60
3	DA	1166	G	N9-C4-C5	-6.08	102.97	105.40
3	DA	1905	C	P-O3'-C3'	6.08	127.00	119.70
3	DA	2059	A	O5'-P-OP1	-6.08	100.23	105.70
3	DA	2072	C	N1-C2-N3	-6.08	114.94	119.20
3	DA	2561	U	N3-C4-O4	6.08	123.66	119.40
3	DA	2598	A	N9-C4-C5	6.08	108.23	105.80
3	DA	2764	A	N7-C8-N9	-6.08	110.76	113.80
6	AB	73	LYS	N-CA-C	-6.08	94.58	111.00
3	DA	1133	A	O4'-C1'-N9	6.08	113.06	108.20
5	DB	75	G	P-O3'-C3'	-6.08	112.40	119.70
1	AA	114	U	N1-C2-N3	6.08	118.55	114.90
3	DA	1277	G	C8-N9-C4	-6.08	103.97	106.40
3	DA	1685	C	N3-C4-C5	6.08	124.33	121.90
3	DA	2434	A	C6-N1-C2	-6.08	114.95	118.60
3	DA	2530	A	C2-N3-C4	6.08	113.64	110.60
3	DA	2713	U	C6-N1-C2	6.08	124.65	121.00
3	DA	552	U	N3-C4-C5	-6.08	110.95	114.60
3	DA	592	A	N1-C2-N3	6.08	132.34	129.30
3	DA	822	G	O4'-C1'-N9	-6.08	103.34	108.20
3	DA	1028	A	OP2-P-O3'	6.08	118.57	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2751	G	O4'-C1'-N9	6.08	113.06	108.20
3	DA	2789	C	C6-N1-C1'	-6.08	113.51	120.80
4	CA	532	A	N1-C6-N6	6.08	122.25	118.60
4	CA	803	U	O5'-P-OP1	-6.08	100.23	105.70
4	CA	1131	G	N7-C8-N9	6.08	116.14	113.10
4	CA	1801	A	O5'-P-OP1	-6.08	100.23	105.70
4	CA	1904	G	N1-C6-O6	6.08	123.55	119.90
5	DB	116	G	N7-C8-N9	-6.08	110.06	113.10
2	BA	505	G	O5'-P-OP2	-6.07	100.23	105.70
3	DA	693	A	N7-C8-N9	6.07	116.84	113.80
3	DA	789	A	N3-C4-C5	-6.07	122.55	126.80
3	DA	1754	A	C6-N1-C2	-6.07	114.96	118.60
3	DA	2671	G	N1-C6-O6	6.07	123.54	119.90
3	DA	537	G	O5'-P-OP1	-6.07	100.23	105.70
3	DA	1667	G	C6-C5-N7	6.07	134.04	130.40
3	DA	2639	A	C8-N9-C4	6.07	108.23	105.80
1	AA	525	C	C2-N1-C1'	6.07	125.48	118.80
3	DA	187	G	O5'-P-OP2	-6.07	100.24	105.70
3	DA	1761	C	N3-C4-N4	6.07	122.25	118.00
3	DA	1842	G	C5-C6-N1	-6.07	108.47	111.50
3	DA	979	A	C5-C6-N1	-6.07	114.67	117.70
3	DA	1341	G	OP1-P-O3'	6.07	118.55	105.20
3	DA	1895	C	N3-C4-C5	6.07	124.33	121.90
4	CA	621	A	N1-C6-N6	-6.07	114.96	118.60
4	CA	2868	A	N1-C6-N6	6.07	122.24	118.60
1	AA	46	G	N1-C2-N2	6.07	121.66	116.20
1	AA	110	C	N1-C2-O2	6.07	122.54	118.90
1	AA	568	G	C2-N3-C4	6.07	114.93	111.90
1	AA	760	G	O5'-P-OP1	-6.07	100.24	105.70
2	BA	1527	U	N1-C2-O2	-6.07	118.55	122.80
3	DA	1586	A	C4-C5-C6	6.07	120.03	117.00
3	DA	1696	G	OP2-P-O3'	6.07	118.55	105.20
3	DA	2819	G	N3-C4-C5	6.07	131.63	128.60
3	DA	2894	G	C5-C6-O6	-6.07	124.96	128.60
4	CA	1781	U	C6-N1-C2	-6.07	117.36	121.00
3	DA	2263	C	N1-C2-O2	-6.07	115.26	118.90
3	DA	2421	G	N1-C2-N3	6.07	127.54	123.90
3	DA	1898	U	N1-C2-O2	-6.06	118.56	122.80
4	CA	1995	U	N1-C2-O2	6.06	127.05	122.80
4	CA	2241	A	O5'-P-OP2	-6.06	100.24	105.70
25	AU	16	LEU	CA-CB-CG	6.06	129.25	115.30
1	AA	730	G	N1-C6-O6	6.06	123.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1223	C	C2-N3-C4	6.06	122.93	119.90
1	AA	1365	G	N9-C4-C5	-6.06	102.97	105.40
3	DA	400	G	C6-C5-N7	-6.06	126.76	130.40
3	DA	574	A	N9-C4-C5	-6.06	103.38	105.80
3	DA	866	A	C8-N9-C4	6.06	108.22	105.80
3	DA	939	G	C2-N3-C4	-6.06	108.87	111.90
3	DA	1132	U	N3-C4-O4	6.06	123.64	119.40
3	DA	1796	U	OP1-P-OP2	6.06	128.69	119.60
3	DA	2549	G	N3-C2-N2	-6.06	115.66	119.90
4	CA	396	G	C8-N9-C4	6.06	108.83	106.40
4	CA	2606	C	N1-C2-O2	6.06	122.54	118.90
6	AB	49	MET	CB-CG-SD	6.06	130.59	112.40
1	AA	66	A	C6-C5-N7	-6.06	128.06	132.30
1	AA	1102	A	C6-C5-N7	-6.06	128.06	132.30
3	DA	707	G	N3-C4-C5	6.06	131.63	128.60
3	DA	1407	G	N3-C4-N9	-6.06	122.36	126.00
3	DA	1607	C	N1-C2-O2	-6.06	115.26	118.90
4	CA	240	C	N3-C4-C5	-6.06	119.48	121.90
1	AA	362	G	OP1-P-OP2	6.06	128.69	119.60
2	BA	1505	G	C8-N9-C4	-6.06	103.98	106.40
3	DA	101	A	C4-C5-C6	6.06	120.03	117.00
3	DA	117	G	C5-C6-O6	-6.06	124.97	128.60
3	DA	528	A	O5'-P-OP2	-6.06	100.25	105.70
3	DA	581	C	N1-C2-O2	6.06	122.53	118.90
3	DA	1167	C	C6-N1-C2	-6.06	117.88	120.30
3	DA	1786	A	C8-N9-C4	6.06	108.22	105.80
3	DA	1853	A	N9-C4-C5	6.06	108.22	105.80
3	DA	2084	C	N1-C2-O2	-6.06	115.27	118.90
1	AA	126	G	C8-N9-C4	-6.06	103.98	106.40
3	DA	750	A	C5-C6-N6	-6.06	118.86	123.70
1	AA	555	U	OP1-P-O3'	6.05	118.52	105.20
1	AA	1098	C	C5-C6-N1	6.05	124.03	121.00
3	DA	791	C	N1-C2-N3	6.05	123.44	119.20
3	DA	1442	U	C5-C4-O4	-6.05	122.27	125.90
3	DA	1896	G	C8-N9-C4	6.05	108.82	106.40
3	DA	2073	C	C5-C6-N1	-6.05	117.97	121.00
3	DA	2573	C	C5-C4-N4	-6.05	115.96	120.20
3	DA	2703	C	OP1-P-OP2	6.05	128.68	119.60
4	CA	756	A	N3-C4-C5	6.05	131.04	126.80
5	DB	115	A	OP1-P-OP2	6.05	128.68	119.60
30	CF	82	TYR	CB-CG-CD1	-6.05	117.37	121.00
40	CQ	38	ARG	CA-CB-CG	6.05	126.72	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	DQ	88	ARG	NE-CZ-NH2	6.05	123.33	120.30
1	AA	891	U	C5-C6-N1	-6.05	119.67	122.70
3	DA	180	G	N3-C4-C5	6.05	131.63	128.60
3	DA	737	C	C5-C6-N1	-6.05	117.97	121.00
3	DA	1528	A	C4-C5-N7	6.05	113.73	110.70
3	DA	404	A	C6-N1-C2	6.05	122.23	118.60
3	DA	1032	A	O4'-C1'-N9	6.05	113.04	108.20
3	DA	2207	C	OP1-P-O3'	6.05	118.52	105.20
3	DA	2868	A	C6-N1-C2	-6.05	114.97	118.60
3	DA	30	G	N1-C2-N3	6.05	127.53	123.90
3	DA	1293	C	N3-C2-O2	6.05	126.14	121.90
3	DA	1379	U	C4-C5-C6	6.05	123.33	119.70
3	DA	2020	A	N9-C4-C5	-6.05	103.38	105.80
3	DA	2426	A	O4'-C1'-N9	-6.05	103.36	108.20
4	CA	1817	G	N3-C4-C5	6.05	131.62	128.60
3	DA	2649	C	C6-N1-C2	6.05	122.72	120.30
2	BA	585	G	N3-C2-N2	-6.05	115.67	119.90
3	DA	804	A	N3-C4-N9	-6.05	122.56	127.40
3	DA	1601	G	N3-C4-N9	-6.05	122.37	126.00
3	DA	1887	C	C6-N1-C2	6.05	122.72	120.30
3	DA	2688	G	C6-C5-N7	-6.05	126.77	130.40
4	CA	426	C	O5'-P-OP1	-6.05	100.26	105.70
3	DA	2373	G	OP2-P-O3'	6.04	118.50	105.20
3	DA	254	G	N1-C2-N3	6.04	127.53	123.90
3	DA	1146	C	C5-C6-N1	-6.04	117.98	121.00
3	DA	1681	G	N3-C2-N2	-6.04	115.67	119.90
3	DA	2014	A	C6-C5-N7	-6.04	128.07	132.30
3	DA	2781	A	C4-C5-N7	-6.04	107.68	110.70
4	CA	1127	A	N1-C6-N6	-6.04	114.97	118.60
4	CA	2248	C	N3-C4-C5	-6.04	119.48	121.90
2	BA	714	G	OP2-P-O3'	6.04	118.49	105.20
3	DA	1139	G	C5-C6-O6	6.04	132.22	128.60
3	DA	1151	A	C2-N3-C4	-6.04	107.58	110.60
3	DA	1784	A	C4-C5-N7	6.04	113.72	110.70
3	DA	1910	G	N3-C2-N2	-6.04	115.67	119.90
3	DA	2600	A	N1-C6-N6	6.04	122.22	118.60
3	DA	1937	A	O4'-C1'-N9	6.04	113.03	108.20
1	AA	950	U	OP1-P-O3'	6.04	118.48	105.20
3	DA	54	G	N1-C6-O6	-6.04	116.28	119.90
3	DA	509	C	N3-C2-O2	-6.04	117.67	121.90
3	DA	516	C	C6-N1-C1'	6.04	128.05	120.80
3	DA	1149	G	O5'-P-OP1	6.04	117.95	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1280	G	N3-C2-N2	-6.04	115.67	119.90
3	DA	1794	A	OP1-P-OP2	6.04	128.66	119.60
3	DA	2041	U	O5'-P-OP2	-6.04	100.27	105.70
3	DA	2572	A	C5-C6-N1	-6.04	114.68	117.70
5	DB	96	G	C6-C5-N7	-6.04	126.78	130.40
1	AA	1530	G	C4-N9-C1'	-6.04	118.65	126.50
2	BA	1061	G	N1-C6-O6	6.04	123.52	119.90
3	DA	1271	G	N3-C4-C5	6.04	131.62	128.60
3	DA	2010	G	O5'-P-OP2	6.04	117.94	110.70
4	CA	2846	G	C8-N9-C4	6.04	108.81	106.40
5	DB	86	G	C5-C6-N1	-6.04	108.48	111.50
1	AA	801	U	OP1-P-O3'	6.04	118.48	105.20
1	AA	861	G	OP1-P-O3'	6.04	118.48	105.20
3	DA	213	A	C8-N9-C4	6.04	108.21	105.80
3	DA	749	A	N7-C8-N9	6.04	116.82	113.80
5	DB	108	A	N9-C4-C5	6.04	108.22	105.80
9	BE	39	VAL	CG1-CB-CG2	6.04	120.56	110.90
3	DA	1123	C	C2-N3-C4	-6.03	116.88	119.90
3	DA	1817	G	O5'-P-OP1	-6.03	100.27	105.70
3	DA	2228	G	C4-C5-N7	6.03	113.21	110.80
3	DA	2770	G	N1-C6-O6	-6.03	116.28	119.90
27	DC	204	LEU	CA-CB-CG	6.03	129.18	115.30
3	DA	1252	G	C6-C5-N7	-6.03	126.78	130.40
4	CA	2781	A	C5-C6-N6	6.03	128.53	123.70
1	AA	298	A	C5-C6-N1	-6.03	114.69	117.70
3	DA	677	A	C4-C5-N7	6.03	113.72	110.70
3	DA	1637	A	C6-N1-C2	-6.03	114.98	118.60
3	DA	2039	U	O5'-P-OP1	-6.03	100.27	105.70
3	DA	2275	C	C2-N1-C1'	6.03	125.43	118.80
3	DA	2749	A	OP1-P-OP2	6.03	128.65	119.60
1	AA	13	U	O5'-P-OP2	-6.03	100.27	105.70
2	BA	428	G	C4-N9-C1'	-6.03	118.66	126.50
3	DA	1619	G	C4-C5-N7	6.03	113.21	110.80
3	DA	2034	U	OP1-P-O3'	-6.03	91.94	105.20
4	CA	517	C	O5'-P-OP2	6.03	117.94	110.70
4	CA	815	C	C6-N1-C2	-6.03	117.89	120.30
1	AA	66	A	C2-N3-C4	-6.03	107.59	110.60
1	AA	646	G	N3-C4-C5	-6.03	125.59	128.60
2	BA	14	U	N3-C4-O4	6.03	123.62	119.40
2	BA	1429	A	OP2-P-O3'	6.03	118.46	105.20
3	DA	124	G	C8-N9-C4	-6.03	103.99	106.40
3	DA	874	G	OP2-P-O3'	6.03	118.46	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1051	G	N1-C6-O6	6.03	123.52	119.90
3	DA	1209	U	OP1-P-OP2	6.03	128.64	119.60
3	DA	2363	G	C6-C5-N7	-6.03	126.78	130.40
1	AA	1418	A	C5-C6-N1	6.03	120.71	117.70
3	DA	684	G	C4-N9-C1'	-6.03	118.67	126.50
3	DA	1473	G	N1-C2-N2	-6.03	110.78	116.20
3	DA	1606	C	OP1-P-OP2	6.03	128.64	119.60
4	CA	1975	G	C5-C6-O6	-6.03	124.98	128.60
3	DA	565	C	O4'-C1'-N1	-6.02	103.38	108.20
3	DA	1046	A	O4'-C1'-N9	-6.02	103.38	108.20
1	AA	11	G	C5-C6-N1	-6.02	108.49	111.50
1	AA	878	A	C5-C6-N6	-6.02	118.88	123.70
4	CA	1700	A	C5-C6-N1	6.02	120.71	117.70
32	DH	28	ASN	CB-CA-C	-6.02	98.36	110.40
1	AA	779	C	N3-C4-C5	6.02	124.31	121.90
2	BA	1421	G	C5-C6-N1	-6.02	108.49	111.50
3	DA	581	C	C5-C4-N4	-6.02	115.99	120.20
3	DA	2755	C	N3-C4-C5	6.02	124.31	121.90
1	AA	1365	G	C8-N9-C4	6.02	108.81	106.40
3	DA	210	C	O5'-P-OP2	-6.02	100.28	105.70
3	DA	1334	G	C5-C6-N1	-6.02	108.49	111.50
3	DA	1448	G	C6-C5-N7	-6.02	126.79	130.40
3	DA	1465	G	N3-C2-N2	-6.02	115.69	119.90
3	DA	1815	A	OP1-P-OP2	6.02	128.63	119.60
3	DA	1932	A	OP1-P-O3'	6.02	118.44	105.20
3	DA	2572	A	C4-C5-C6	6.02	120.01	117.00
3	DA	2621	G	C5-N7-C8	-6.02	101.29	104.30
1	AA	326	G	C6-C5-N7	-6.02	126.79	130.40
2	BA	488	C	C6-N1-C2	-6.02	117.89	120.30
3	DA	1181	U	C5-C4-O4	6.02	129.51	125.90
3	DA	1909	C	N3-C4-N4	6.02	122.21	118.00
3	DA	2377	A	OP2-P-O3'	6.02	118.44	105.20
4	CA	1550	C	C6-N1-C2	-6.02	117.89	120.30
4	CA	1658	C	C5-C4-N4	-6.02	115.99	120.20
2	BA	867	G	N3-C4-C5	-6.02	125.59	128.60
3	DA	1839	G	C6-C5-N7	-6.02	126.79	130.40
3	DA	2310	C	C2-N1-C1'	6.02	125.42	118.80
1	AA	268	U	OP1-P-O3'	-6.01	91.97	105.20
1	AA	361	G	C5-C6-O6	-6.01	124.99	128.60
3	DA	782	A	N3-C4-C5	-6.01	122.59	126.80
3	DA	1684	G	C2-N3-C4	-6.01	108.89	111.90
2	BA	1097	C	C6-N1-C2	-6.01	117.89	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	400	G	C8-N9-C1'	-6.01	119.18	127.00
3	DA	562	U	N3-C4-O4	6.01	123.61	119.40
3	DA	2828	G	C6-N1-C2	6.01	128.71	125.10
4	CA	804	A	C8-N9-C4	6.01	108.20	105.80
1	AA	825	A	C4-C5-N7	6.01	113.71	110.70
1	AA	1509	C	N3-C4-C5	6.01	124.30	121.90
3	DA	132	G	OP1-P-O3'	-6.01	91.97	105.20
3	DA	809	G	OP1-P-OP2	-6.01	110.58	119.60
3	DA	829	A	O4'-C1'-N9	-6.01	103.39	108.20
3	DA	1550	C	N3-C2-O2	6.01	126.11	121.90
3	DA	2240	U	N3-C2-O2	6.01	126.41	122.20
1	AA	1468	A	N9-C4-C5	-6.01	103.40	105.80
2	BA	698	G	C5-C6-O6	-6.01	125.00	128.60
2	BA	1487	G	C5-C6-O6	-6.01	124.99	128.60
3	DA	818	G	C2-N3-C4	-6.01	108.89	111.90
3	DA	974	G	N3-C2-N2	-6.01	115.69	119.90
3	DA	1247	A	C4-C5-C6	-6.01	114.00	117.00
3	DA	1543	G	C5-C6-O6	6.01	132.21	128.60
3	DA	2036	C	OP2-P-O3'	6.01	118.42	105.20
4	CA	2255	G	N1-C2-N2	6.01	121.61	116.20
5	DB	108	A	N1-C6-N6	-6.01	114.99	118.60
48	DY	21	LEU	CB-CG-CD2	-6.01	100.78	111.00
3	DA	1438	U	N3-C2-O2	6.01	126.41	122.20
3	DA	2294	G	N3-C4-N9	-6.01	122.39	126.00
3	DA	2894	G	C4-C5-N7	6.01	113.20	110.80
4	CA	2563	U	N1-C2-N3	6.01	118.50	114.90
1	AA	421	U	O5'-P-OP2	-6.01	100.29	105.70
3	DA	922	C	C6-N1-C2	6.01	122.70	120.30
3	DA	2827	C	N3-C4-N4	6.01	122.20	118.00
4	CA	740	C	N1-C2-N3	-6.01	115.00	119.20
3	DA	493	G	C6-C5-N7	6.00	134.00	130.40
3	DA	865	C	N3-C4-C5	6.00	124.30	121.90
3	DA	2807	U	C5-C6-N1	-6.00	119.70	122.70
1	AA	123	U	N3-C2-O2	6.00	126.40	122.20
2	BA	609	A	C5-C6-N6	-6.00	118.90	123.70
2	BA	1196	A	N1-C6-N6	-6.00	115.00	118.60
3	DA	1444	G	C4-C5-N7	6.00	113.20	110.80
3	DA	1605	C	C5-C4-N4	-6.00	116.00	120.20
3	DA	2098	U	O5'-P-OP2	6.00	117.90	110.70
3	DA	2708	G	O5'-P-OP1	6.00	117.91	110.70
3	DA	229	C	N3-C4-C5	6.00	124.30	121.90
3	DA	595	C	C2-N1-C1'	-6.00	112.20	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	646	U	N3-C2-O2	-6.00	118.00	122.20
3	DA	776	G	C5-C6-N1	-6.00	108.50	111.50
3	DA	949	G	C6-C5-N7	-6.00	126.80	130.40
3	DA	1182	G	C2-N3-C4	-6.00	108.90	111.90
3	DA	1700	A	OP2-P-O3'	6.00	118.40	105.20
3	DA	1951	U	OP1-P-OP2	6.00	128.60	119.60
3	DA	2578	G	N9-C4-C5	6.00	107.80	105.40
4	CA	1359	A	C8-N9-C4	-6.00	103.40	105.80
1	AA	1515	G	N1-C6-O6	6.00	123.50	119.90
3	DA	1134	A	O5'-P-OP2	6.00	117.90	110.70
3	DA	1797	G	C5-C6-N1	-6.00	108.50	111.50
4	CA	1797	G	N3-C4-C5	-6.00	125.60	128.60
3	DA	124	G	N1-C6-O6	-6.00	116.30	119.90
3	DA	1252	G	N3-C4-N9	-6.00	122.40	126.00
3	DA	2308	G	N3-C4-N9	-6.00	122.40	126.00
3	DA	2333	A	C4-C5-N7	6.00	113.70	110.70
4	CA	1986	C	N3-C4-C5	6.00	124.30	121.90
1	AA	108	G	O5'-P-OP2	6.00	117.90	110.70
2	BA	581	G	OP1-P-O3'	6.00	118.39	105.20
3	DA	15	G	N3-C2-N2	-6.00	115.70	119.90
3	DA	377	G	N1-C6-O6	6.00	123.50	119.90
3	DA	451	U	O4'-C1'-N1	6.00	113.00	108.20
3	DA	504	A	C8-N9-C4	6.00	108.20	105.80
3	DA	1678	A	O5'-P-OP1	-6.00	100.30	105.70
2	BA	769	G	C8-N9-C1'	-6.00	119.21	127.00
3	DA	1342	A	C8-N9-C4	6.00	108.20	105.80
4	CA	1938	A	N3-C4-C5	-6.00	122.60	126.80
1	AA	900	A	C4-C5-N7	5.99	113.70	110.70
3	DA	989	G	C4-C5-N7	5.99	113.20	110.80
3	DA	1153	C	C2-N1-C1'	5.99	125.39	118.80
3	DA	1550	C	C6-N1-C2	5.99	122.70	120.30
3	DA	2029	G	N3-C2-N2	-5.99	115.70	119.90
3	DA	2056	G	C5-N7-C8	-5.99	101.30	104.30
4	CA	169	G	O5'-P-OP1	-5.99	100.31	105.70
4	CA	1896	G	C6-C5-N7	-5.99	126.80	130.40
3	DA	1022	G	C2-N3-C4	-5.99	108.90	111.90
3	DA	1206	G	C2-N3-C4	-5.99	108.90	111.90
1	AA	570	G	C8-N9-C4	-5.99	104.00	106.40
2	BA	245	U	C5-C6-N1	-5.99	119.70	122.70
2	BA	365	U	C5-C6-N1	-5.99	119.70	122.70
3	DA	687	C	O5'-P-OP1	-5.99	100.31	105.70
3	DA	1828	G	C5-C6-O6	5.99	132.19	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2037	A	C5-C6-N1	-5.99	114.70	117.70
3	DA	2214	C	N3-C2-O2	5.99	126.09	121.90
3	DA	2454	G	OP2-P-O3'	5.99	118.38	105.20
3	DA	2703	C	OP1-P-O3'	-5.99	92.02	105.20
4	CA	1954	G	N3-C4-C5	5.99	131.60	128.60
4	CA	2607	G	C6-C5-N7	-5.99	126.81	130.40
3	DA	1739	A	C5-N7-C8	-5.99	100.91	103.90
3	DA	1783	A	C6-N1-C2	-5.99	115.01	118.60
3	DA	2234	G	C5-C6-O6	5.99	132.19	128.60
4	CA	186	G	N3-C4-C5	5.99	131.59	128.60
4	CA	1949	G	N1-C6-O6	5.99	123.49	119.90
4	CA	1993	U	N1-C2-O2	5.99	126.99	122.80
1	AA	677	U	N1-C2-O2	-5.99	118.61	122.80
3	DA	918	A	N1-C6-N6	5.99	122.19	118.60
3	DA	1081	U	C5-C4-O4	-5.99	122.31	125.90
1	AA	419	C	O5'-P-OP1	-5.99	100.31	105.70
1	AA	1368	A	C2-N3-C4	5.99	113.59	110.60
3	DA	227	A	O5'-P-OP2	-5.99	100.31	105.70
3	DA	628	G	N1-C2-N3	5.99	127.49	123.90
3	DA	843	G	N3-C4-C5	5.99	131.59	128.60
3	DA	1053	C	N1-C2-O2	-5.99	115.31	118.90
3	DA	1455	G	C6-C5-N7	-5.99	126.81	130.40
3	DA	1653	G	C4-C5-C6	5.99	122.39	118.80
3	DA	2688	G	C4-C5-C6	5.99	122.39	118.80
3	DA	977	G	N9-C4-C5	-5.98	103.01	105.40
3	DA	2250	G	OP1-P-OP2	5.98	128.58	119.60
3	DA	2399	G	C5-N7-C8	-5.98	101.31	104.30
4	CA	66	C	C2-N1-C1'	5.98	125.38	118.80
2	BA	37	U	N1-C2-O2	-5.98	118.61	122.80
3	DA	435	C	N3-C4-C5	5.98	124.29	121.90
3	DA	439	A	N1-C6-N6	5.98	122.19	118.60
2	BA	359	G	N3-C4-C5	5.98	131.59	128.60
3	DA	453	A	N9-C4-C5	5.98	108.19	105.80
3	DA	1034	G	C5-N7-C8	-5.98	101.31	104.30
3	DA	2763	G	N1-C2-N3	5.98	127.49	123.90
4	CA	1900	A	C5-C6-N6	5.98	128.48	123.70
5	DB	6	G	OP1-P-O3'	5.98	118.36	105.20
3	DA	178	G	N3-C2-N2	-5.98	115.72	119.90
3	DA	377	G	C5-C6-O6	-5.98	125.01	128.60
3	DA	2364	C	O5'-P-OP1	-5.98	100.32	105.70
3	DA	2685	G	N3-C4-N9	-5.98	122.41	126.00
5	DB	110	C	C5-C4-N4	5.98	124.38	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1390	U	N3-C2-O2	5.98	126.38	122.20
1	AA	811	C	C2-N1-C1'	-5.97	112.23	118.80
2	BA	866	C	OP2-P-O3'	5.97	118.34	105.20
2	BA	1389	C	N3-C4-C5	5.97	124.29	121.90
3	DA	204	A	N1-C2-N3	5.97	132.29	129.30
3	DA	415	A	OP2-P-O3'	5.97	118.35	105.20
3	DA	1261	C	O5'-P-OP2	5.97	117.87	110.70
3	DA	1780	A	N7-C8-N9	5.97	116.79	113.80
3	DA	2391	G	N1-C2-N2	-5.97	110.82	116.20
3	DA	2737	G	OP2-P-O3'	5.97	118.34	105.20
1	AA	862	C	C2-N1-C1'	-5.97	112.23	118.80
3	DA	857	G	N1-C2-N3	5.97	127.48	123.90
3	DA	952	G	OP1-P-OP2	-5.97	110.64	119.60
3	DA	1810	A	OP2-P-O3'	5.97	118.34	105.20
3	DA	1907	G	N3-C2-N2	5.97	124.08	119.90
3	DA	2535	G	C5-C6-O6	-5.97	125.02	128.60
3	DA	2543	G	OP1-P-O3'	-5.97	92.06	105.20
3	DA	2598	A	P-O3'-C3'	5.97	126.87	119.70
3	DA	2816	G	N9-C4-C5	5.97	107.79	105.40
4	CA	1821	A	O5'-P-OP2	-5.97	100.33	105.70
4	CA	2271	G	N3-C4-C5	-5.97	125.61	128.60
5	DB	90	C	N3-C4-N4	5.97	122.18	118.00
1	AA	113	G	N3-C4-C5	-5.97	125.62	128.60
1	AA	530	G	C6-C5-N7	-5.97	126.82	130.40
1	AA	1303	C	N3-C2-O2	-5.97	117.72	121.90
1	AA	1387	G	N9-C4-C5	-5.97	103.01	105.40
3	DA	691	C	N3-C2-O2	-5.97	117.72	121.90
3	DA	744	U	N3-C2-O2	5.97	126.38	122.20
3	DA	1026	G	N1-C2-N2	5.97	121.57	116.20
3	DA	1273	U	N3-C4-O4	5.97	123.58	119.40
3	DA	1899	A	C8-N9-C4	-5.97	103.41	105.80
3	DA	2323	G	N1-C6-O6	5.97	123.48	119.90
3	DA	2634	A	OP2-P-O3'	5.97	118.33	105.20
3	DA	2737	G	N1-C2-N3	5.97	127.48	123.90
14	AJ	42	LEU	CA-CB-CG	5.97	129.03	115.30
1	AA	1185	G	N1-C6-O6	-5.97	116.32	119.90
2	BA	1172	C	O5'-P-OP1	-5.97	100.33	105.70
2	BA	1191	A	C5-C6-N6	-5.97	118.93	123.70
3	DA	638	G	N1-C2-N3	5.97	127.48	123.90
3	DA	1377	G	C8-N9-C4	-5.97	104.01	106.40
3	DA	1662	U	C5-C4-O4	-5.97	122.32	125.90
3	DA	2330	G	N1-C6-O6	5.97	123.48	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2838	G	N3-C2-N2	-5.97	115.72	119.90
2	BA	1486	G	N9-C4-C5	-5.97	103.01	105.40
3	DA	324	A	OP2-P-O3'	5.97	118.33	105.20
3	DA	531	C	C2-N3-C4	-5.97	116.92	119.90
3	DA	1640	A	O5'-P-OP2	-5.97	100.33	105.70
3	DA	2633	G	N7-C8-N9	-5.97	110.12	113.10
1	AA	27	G	N7-C8-N9	5.96	116.08	113.10
1	AA	125	U	O5'-P-OP2	-5.96	100.33	105.70
3	DA	63	A	N9-C4-C5	5.96	108.19	105.80
3	DA	73	A	C6-N1-C2	-5.96	115.02	118.60
3	DA	1569	A	C5-C6-N1	5.96	120.68	117.70
3	DA	1887	C	O5'-P-OP2	5.96	117.86	110.70
3	DA	2420	C	C6-N1-C2	5.96	122.69	120.30
4	CA	1677	A	C6-C5-N7	-5.96	128.12	132.30
4	CA	1949	G	C2-N3-C4	-5.96	108.92	111.90
4	CA	1972	G	C8-N9-C4	-5.96	104.01	106.40
3	DA	730	A	C8-N9-C4	-5.96	103.42	105.80
3	DA	2852	G	O5'-P-OP1	5.96	117.86	110.70
4	CA	1744	A	N1-C6-N6	-5.96	115.02	118.60
1	AA	1510	C	N3-C4-C5	5.96	124.28	121.90
3	DA	39	G	N3-C4-C5	5.96	131.58	128.60
3	DA	517	C	C6-N1-C1'	-5.96	113.65	120.80
3	DA	834	G	C4-C5-N7	5.96	113.19	110.80
3	DA	1721	G	C6-C5-N7	-5.96	126.82	130.40
3	DA	2021	C	C5-C6-N1	-5.96	118.02	121.00
3	DA	2238	G	OP1-P-O3'	5.96	118.31	105.20
3	DA	2637	U	N3-C4-O4	5.96	123.57	119.40
49	DZ	45	GLN	N-CA-C	-5.96	94.90	111.00
3	DA	264	C	N3-C4-N4	5.96	122.17	118.00
3	DA	1421	G	C4-N9-C1'	5.96	134.25	126.50
3	DA	2513	A	C8-N9-C4	-5.96	103.42	105.80
1	AA	365	U	N3-C4-O4	-5.96	115.23	119.40
1	AA	1019	A	N1-C6-N6	5.96	122.17	118.60
1	AA	1401	G	OP1-P-OP2	5.96	128.54	119.60
1	AA	1521	C	C5-C4-N4	-5.96	116.03	120.20
2	BA	993	G	C4-N9-C1'	5.96	134.25	126.50
3	DA	1197	G	OP1-P-OP2	5.96	128.54	119.60
4	CA	684	G	N3-C4-C5	5.96	131.58	128.60
41	DR	63	ARG	NE-CZ-NH1	5.96	123.28	120.30
1	AA	576	C	N3-C4-N4	5.96	122.17	118.00
1	AA	862	C	C5-C4-N4	5.96	124.37	120.20
1	AA	1464	U	N3-C4-O4	5.96	123.57	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1803	A	C4-C5-C6	-5.96	114.02	117.00
4	CA	1694	C	C2-N3-C4	5.96	122.88	119.90
3	DA	2269	G	O5'-P-OP1	5.96	117.85	110.70
1	AA	788	U	O5'-P-OP2	-5.95	100.34	105.70
3	DA	1556	C	O5'-P-OP2	-5.95	100.34	105.70
3	DA	2285	C	C2-N1-C1'	-5.95	112.25	118.80
3	DA	1190	G	C2-N3-C4	-5.95	108.92	111.90
4	CA	777	G	N1-C2-N2	-5.95	110.84	116.20
4	CA	1948	G	C6-C5-N7	-5.95	126.83	130.40
4	CA	2605	U	O5'-P-OP1	-5.95	100.34	105.70
45	DV	55	GLY	N-CA-C	-5.95	98.22	113.10
2	BA	241	G	N3-C4-C5	5.95	131.57	128.60
3	DA	15	G	C5-C6-O6	5.95	132.17	128.60
3	DA	603	A	O5'-P-OP1	-5.95	100.34	105.70
3	DA	988	A	C5-N7-C8	-5.95	100.92	103.90
3	DA	1136	G	N1-C6-O6	5.95	123.47	119.90
3	DA	1875	G	N1-C6-O6	5.95	123.47	119.90
3	DA	2279	G	N1-C2-N2	-5.95	110.84	116.20
3	DA	2513	A	N1-C2-N3	5.95	132.28	129.30
1	AA	1513	A	C8-N9-C4	5.95	108.18	105.80
3	DA	650	C	C5-C6-N1	-5.95	118.03	121.00
3	DA	669	G	O4'-C1'-N9	-5.95	103.44	108.20
3	DA	1023	U	N3-C4-O4	5.95	123.56	119.40
3	DA	1166	G	C4-C5-C6	5.95	122.37	118.80
5	DB	99	A	C4-C5-N7	-5.95	107.73	110.70
3	DA	2058	A	N3-C4-N9	-5.95	122.64	127.40
1	AA	59	A	C5-C6-N1	5.95	120.67	117.70
1	AA	1387	G	N1-C6-O6	5.95	123.47	119.90
2	BA	622	A	O5'-P-OP1	5.95	117.83	110.70
3	DA	971	G	N3-C4-N9	5.95	129.57	126.00
3	DA	1016	G	N1-C6-O6	-5.95	116.33	119.90
3	DA	1026	G	N1-C2-N3	-5.95	120.33	123.90
3	DA	1359	A	C8-N9-C4	-5.95	103.42	105.80
3	DA	2060	A	O4'-C1'-N9	5.95	112.96	108.20
3	DA	2493	U	C2-N1-C1'	5.95	124.84	117.70
4	CA	961	C	C6-N1-C2	-5.95	117.92	120.30
4	CA	2503	A	C6-N1-C2	-5.95	115.03	118.60
1	AA	739	C	C5-C4-N4	-5.94	116.04	120.20
1	AA	782	A	C8-N9-C4	-5.94	103.42	105.80
2	BA	814	A	C8-N9-C4	-5.94	103.42	105.80
3	DA	186	G	O5'-P-OP2	-5.94	100.35	105.70
3	DA	308	G	C2-N3-C4	-5.94	108.93	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	391	A	C6-N1-C2	-5.94	115.03	118.60
3	DA	2221	G	N3-C4-C5	-5.94	125.63	128.60
3	DA	2808	G	C5-C6-N1	-5.94	108.53	111.50
1	AA	669	G	N1-C6-O6	5.94	123.47	119.90
2	BA	817	C	C6-N1-C2	5.94	122.68	120.30
3	DA	821	A	N3-C4-C5	5.94	130.96	126.80
3	DA	1006	C	N1-C2-O2	5.94	122.47	118.90
3	DA	1459	G	N1-C6-O6	5.94	123.47	119.90
3	DA	2638	G	N3-C2-N2	5.94	124.06	119.90
3	DA	2811	G	C5-N7-C8	-5.94	101.33	104.30
31	DG	86	LEU	CB-CG-CD2	5.94	121.10	111.00
1	AA	115	G	O5'-P-OP2	-5.94	100.35	105.70
1	AA	971	G	N3-C4-N9	-5.94	122.44	126.00
3	DA	527	C	O5'-P-OP1	5.94	117.83	110.70
3	DA	940	G	C4-C5-C6	5.94	122.36	118.80
3	DA	2736	A	C4-C5-C6	-5.94	114.03	117.00
2	BA	632	U	C2-N1-C1'	5.94	124.83	117.70
3	DA	1731	G	C4-N9-C1'	-5.94	118.78	126.50
3	DA	2093	G	N1-C6-O6	5.94	123.46	119.90
3	DA	2218	G	C5-C6-O6	5.94	132.16	128.60
2	BA	26	A	OP1-P-OP2	5.94	128.51	119.60
2	BA	891	U	C5-C4-O4	-5.94	122.34	125.90
3	DA	226	A	O5'-P-OP1	-5.94	100.36	105.70
3	DA	1157	G	N1-C6-O6	5.94	123.46	119.90
3	DA	1666	G	C6-C5-N7	5.94	133.96	130.40
3	DA	2885	G	C5-C6-O6	5.94	132.16	128.60
5	DB	102	G	N3-C4-C5	5.94	131.57	128.60
1	AA	308	C	OP1-P-OP2	5.94	128.50	119.60
3	DA	709	U	N3-C4-C5	5.94	118.16	114.60
3	DA	1269	A	C4-C5-N7	5.94	113.67	110.70
4	CA	2607	G	N3-C4-C5	-5.94	125.63	128.60
1	AA	1487	G	C4-N9-C1'	-5.93	118.79	126.50
3	DA	536	G	C5-C6-O6	-5.93	125.04	128.60
3	DA	538	A	N3-C4-C5	-5.93	122.65	126.80
3	DA	587	C	O4'-C1'-N1	-5.93	103.45	108.20
3	DA	731	C	N3-C2-O2	5.93	126.05	121.90
3	DA	992	C	C6-N1-C2	-5.93	117.93	120.30
3	DA	1166	G	C4-C5-N7	5.93	113.17	110.80
3	DA	1237	A	O5'-P-OP1	5.93	117.82	110.70
3	DA	2082	A	C8-N9-C4	5.93	108.17	105.80
3	DA	2899	A	C5-C6-N6	-5.93	118.95	123.70
1	AA	1200	C	N3-C2-O2	-5.93	117.75	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	330	A	C2-N3-C4	-5.93	107.63	110.60
3	DA	680	C	C6-N1-C2	5.93	122.67	120.30
3	DA	1976	U	N3-C2-O2	5.93	126.35	122.20
3	DA	2865	U	C6-N1-C2	5.93	124.56	121.00
2	BA	1185	G	N3-C2-N2	-5.93	115.75	119.90
3	DA	2012	G	C2-N3-C4	-5.93	108.93	111.90
3	DA	2263	C	C4-C5-C6	-5.93	114.44	117.40
4	CA	802	A	O5'-P-OP1	-5.93	100.36	105.70
1	AA	918	A	N1-C2-N3	5.93	132.26	129.30
1	AA	1103	C	N1-C2-O2	-5.93	115.34	118.90
2	BA	929	G	OP1-P-OP2	-5.93	110.71	119.60
3	DA	445	C	C2-N1-C1'	5.93	125.32	118.80
3	DA	909	A	N3-C4-C5	5.93	130.95	126.80
3	DA	1934	C	N1-C2-O2	5.93	122.46	118.90
3	DA	2234	G	N1-C6-O6	-5.93	116.34	119.90
4	CA	2090	A	C8-N9-C4	5.93	108.17	105.80
4	CA	2688	G	C8-N9-C4	-5.93	104.03	106.40
1	AA	332	G	C2-N3-C4	-5.93	108.94	111.90
1	AA	1223	C	C6-N1-C2	-5.93	117.93	120.30
1	AA	1396	A	C5-C6-N1	5.93	120.66	117.70
3	DA	2540	C	O5'-P-OP2	5.93	117.81	110.70
5	DB	100	G	N3-C2-N2	5.93	124.05	119.90
43	CT	25	ARG	CG-CD-NE	-5.93	99.35	111.80
1	AA	1066	C	C6-N1-C2	5.93	122.67	120.30
1	AA	1226	C	O4'-C1'-N1	-5.93	103.46	108.20
2	BA	428	G	N3-C4-N9	-5.93	122.44	126.00
3	DA	629	G	C5-C6-O6	-5.93	125.04	128.60
3	DA	1162	G	OP1-P-O3'	5.93	118.24	105.20
3	DA	1256	G	O4'-C1'-N9	-5.93	103.46	108.20
3	DA	2512	C	C5-C4-N4	5.93	124.35	120.20
4	CA	2599	G	C4-N9-C1'	5.93	134.21	126.50
1	AA	781	A	O5'-P-OP1	-5.92	100.37	105.70
3	DA	244	A	C5-C6-N1	-5.92	114.74	117.70
3	DA	330	A	C6-N1-C2	-5.92	115.05	118.60
3	DA	671	C	C2-N1-C1'	-5.92	112.28	118.80
3	DA	821	A	N1-C2-N3	-5.92	126.34	129.30
3	DA	997	G	N3-C4-N9	-5.92	122.44	126.00
3	DA	1839	G	C8-N9-C1'	-5.92	119.30	127.00
4	CA	2087	G	N3-C2-N2	-5.92	115.75	119.90
41	DR	59	LEU	CB-CG-CD2	-5.92	100.93	111.00
1	AA	634	C	C6-N1-C2	-5.92	117.93	120.30
3	DA	353	C	C6-N1-C2	-5.92	117.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1634	A	OP1-P-OP2	5.92	128.49	119.60
1	AA	343	U	C6-N1-C2	-5.92	117.45	121.00
2	BA	482	A	C8-N9-C4	-5.92	103.43	105.80
2	BA	658	C	OP2-P-O3'	5.92	118.23	105.20
3	DA	1018	U	C2-N3-C4	5.92	130.55	127.00
3	DA	1226	A	N1-C6-N6	5.92	122.15	118.60
3	DA	1402	U	N1-C2-N3	5.92	118.45	114.90
3	DA	2012	G	N9-C4-C5	-5.92	103.03	105.40
3	DA	2256	G	OP2-P-O3'	5.92	118.23	105.20
3	DA	2561	U	OP1-P-O3'	5.92	118.23	105.20
4	CA	647	G	C6-C5-N7	-5.92	126.85	130.40
1	AA	1117	A	C6-C5-N7	-5.92	128.16	132.30
2	BA	19	A	OP1-P-OP2	5.92	128.48	119.60
5	DB	63	C	C6-N1-C2	5.92	122.67	120.30
2	BA	869	G	N1-C6-O6	5.92	123.45	119.90
3	DA	194	G	N1-C2-N3	5.92	127.45	123.90
3	DA	458	G	OP1-P-O3'	5.92	118.22	105.20
3	DA	516	C	N1-C2-N3	5.92	123.34	119.20
3	DA	1286	A	C2-N3-C4	-5.92	107.64	110.60
3	DA	1666	G	OP2-P-O3'	5.92	118.22	105.20
3	DA	2719	G	C8-N9-C4	-5.92	104.03	106.40
3	DA	2737	G	C8-N9-C4	-5.92	104.03	106.40
29	DE	79	ARG	NE-CZ-NH1	5.92	123.26	120.30
1	AA	230	G	N3-C4-C5	5.92	131.56	128.60
1	AA	1390	U	N1-C2-O2	-5.92	118.66	122.80
2	BA	18	C	OP1-P-OP2	5.92	128.47	119.60
3	DA	32	C	C5-C4-N4	5.92	124.34	120.20
3	DA	856	G	OP1-P-OP2	5.92	128.47	119.60
3	DA	962	G	N1-C2-N2	5.92	121.53	116.20
3	DA	1272	A	C5-C6-N6	5.92	128.43	123.70
3	DA	1682	G	N3-C4-N9	5.92	129.55	126.00
3	DA	1815	A	C5-C6-N1	5.92	120.66	117.70
3	DA	2822	G	N1-C2-N2	5.92	121.53	116.20
4	CA	741	U	N1-C2-O2	-5.92	118.66	122.80
4	CA	783	A	N1-C6-N6	5.92	122.15	118.60
3	DA	190	A	C4-C5-N7	5.92	113.66	110.70
3	DA	467	G	N7-C8-N9	-5.92	110.14	113.10
3	DA	1651	G	N7-C8-N9	5.92	116.06	113.10
4	CA	335	C	C5-C6-N1	5.92	123.96	121.00
4	CA	2394	C	N3-C2-O2	-5.92	117.76	121.90
5	DB	86	G	N3-C4-C5	5.92	131.56	128.60
1	AA	607	A	C8-N9-C4	5.91	108.17	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1242	G	C4-C5-C6	5.91	122.35	118.80
3	DA	2858	C	C5-C4-N4	-5.91	116.06	120.20
4	CA	1850	G	C2-N3-C4	-5.91	108.94	111.90
25	BU	7	ARG	NE-CZ-NH1	5.91	123.26	120.30
3	DA	2671	G	N9-C4-C5	-5.91	103.03	105.40
4	CA	685	A	N3-C4-C5	5.91	130.94	126.80
1	AA	328	C	O4'-C1'-N1	5.91	112.93	108.20
3	DA	1762	A	C6-C5-N7	-5.91	128.16	132.30
3	DA	1902	C	OP1-P-O3'	5.91	118.20	105.20
3	DA	2061	G	OP1-P-O3'	5.91	118.20	105.20
3	DA	2332	C	N1-C2-O2	-5.91	115.35	118.90
3	DA	2885	G	N1-C2-N3	-5.91	120.35	123.90
4	CA	1622	G	N3-C4-C5	-5.91	125.64	128.60
2	BA	1522	U	N1-C2-N3	5.91	118.44	114.90
3	DA	406	G	C8-N9-C4	5.91	108.76	106.40
3	DA	985	C	O5'-P-OP1	5.91	117.79	110.70
3	DA	2055	C	OP1-P-OP2	-5.91	110.74	119.60
3	DA	2411	A	N1-C6-N6	-5.91	115.06	118.60
4	CA	1573	G	C5-C6-O6	-5.91	125.06	128.60
4	CA	2248	C	C6-N1-C2	-5.91	117.94	120.30
4	CA	2573	C	N1-C2-O2	5.91	122.44	118.90
4	CA	2613	U	O5'-P-OP1	-5.91	100.38	105.70
5	DB	77	U	OP1-P-OP2	5.91	128.46	119.60
50	D0	28	LEU	CB-CG-CD2	-5.91	100.96	111.00
1	AA	1391	U	OP1-P-O3'	-5.91	92.20	105.20
3	DA	2066	C	N3-C4-C5	5.91	124.26	121.90
3	DA	2397	G	C6-C5-N7	-5.91	126.86	130.40
4	CA	1663	G	N3-C4-C5	5.91	131.55	128.60
1	AA	503	C	C5-C6-N1	5.91	123.95	121.00
2	BA	503	C	OP1-P-OP2	-5.91	110.74	119.60
3	DA	471	A	N7-C8-N9	-5.91	110.85	113.80
3	DA	2499	C	N3-C4-N4	5.91	122.13	118.00
3	DA	2544	G	N9-C4-C5	5.91	107.76	105.40
3	DA	2545	G	C8-N9-C4	-5.91	104.04	106.40
3	DA	2872	A	O5'-P-OP1	-5.91	100.38	105.70
2	BA	770	C	O5'-P-OP1	5.90	117.78	110.70
3	DA	583	G	N3-C2-N2	-5.90	115.77	119.90
3	DA	2867	G	OP1-P-O3'	5.90	118.19	105.20
1	AA	391	G	N3-C4-C5	5.90	131.55	128.60
3	DA	433	C	C2-N3-C4	-5.90	116.95	119.90
3	DA	707	G	OP1-P-O3'	-5.90	92.21	105.20
3	DA	1371	G	C2-N3-C4	-5.90	108.95	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1901	A	C5-C6-N6	5.90	128.42	123.70
3	DA	2672	U	N3-C4-O4	5.90	123.53	119.40
4	CA	681	G	N1-C6-O6	-5.90	116.36	119.90
5	DB	49	C	C5-C6-N1	-5.90	118.05	121.00
1	AA	1431	A	N9-C4-C5	-5.90	103.44	105.80
1	AA	1505	G	N3-C4-N9	-5.90	122.46	126.00
3	DA	64	A	C8-N9-C4	-5.90	103.44	105.80
3	DA	803	U	C2-N3-C4	-5.90	123.46	127.00
3	DA	1442	U	O5'-P-OP2	5.90	117.78	110.70
3	DA	1731	G	N3-C4-C5	5.90	131.55	128.60
3	DA	1892	C	N3-C4-C5	5.90	124.26	121.90
4	CA	1157	G	O5'-P-OP2	-5.90	100.39	105.70
2	BA	886	G	C2-N3-C4	-5.90	108.95	111.90
3	DA	507	A	C8-N9-C4	-5.90	103.44	105.80
3	DA	623	C	O5'-P-OP1	-5.90	100.39	105.70
5	DB	85	G	N1-C2-N3	5.90	127.44	123.90
1	AA	780	A	C4-C5-N7	5.90	113.65	110.70
3	DA	806	C	OP1-P-O3'	5.90	118.17	105.20
3	DA	964	C	C2-N3-C4	-5.90	116.95	119.90
3	DA	1388	G	O5'-P-OP2	-5.90	100.39	105.70
3	DA	1643	G	N3-C2-N2	-5.90	115.77	119.90
3	DA	1786	A	C5-N7-C8	5.90	106.85	103.90
3	DA	2056	G	O4'-C1'-N9	-5.90	103.48	108.20
36	DM	2	ARG	NE-CZ-NH1	5.90	123.25	120.30
3	DA	1259	G	C8-N9-C4	-5.90	104.04	106.40
3	DA	1985	C	N3-C4-C5	5.90	124.26	121.90
3	DA	2038	G	C5-N7-C8	5.90	107.25	104.30
3	DA	2517	C	O4'-C1'-N1	5.90	112.92	108.20
4	CA	2559	C	C6-N1-C2	5.90	122.66	120.30
26	BL	24	LEU	CA-CB-CG	5.90	128.86	115.30
1	AA	790	A	C4-C5-N7	5.89	113.65	110.70
3	DA	41	C	N3-C4-C5	5.89	124.26	121.90
3	DA	56	A	N3-C4-C5	5.89	130.93	126.80
3	DA	250	G	C4-N9-C1'	5.89	134.16	126.50
3	DA	665	U	C5-C4-O4	-5.89	122.36	125.90
3	DA	2012	G	C8-N9-C1'	-5.89	119.34	127.00
3	DA	2064	C	N3-C4-C5	5.89	124.26	121.90
3	DA	2654	A	C4-C5-N7	5.89	113.65	110.70
4	CA	1545	A	C5-C6-N6	5.89	128.42	123.70
1	AA	286	C	N3-C4-N4	5.89	122.12	118.00
1	AA	666	G	C2-N3-C4	-5.89	108.95	111.90
1	AA	864	A	OP2-P-O3'	5.89	118.16	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1217	U	N3-C2-O2	5.89	126.33	122.20
3	DA	1859	U	C5-C6-N1	5.89	125.65	122.70
3	DA	2852	G	N3-C4-N9	-5.89	122.47	126.00
4	CA	699	A	N1-C6-N6	-5.89	115.06	118.60
1	AA	63	C	O5'-P-OP2	5.89	117.77	110.70
1	AA	527	G7M	OP1-P-O3'	5.89	118.16	105.20
2	BA	877	G	C8-N9-C4	-5.89	104.04	106.40
3	DA	528	A	C6-N1-C2	-5.89	115.07	118.60
3	DA	1313	U	C6-N1-C1'	-5.89	112.95	121.20
3	DA	2438	U	C2-N3-C4	-5.89	123.47	127.00
4	CA	2202	U	O5'-P-OP1	-5.89	100.40	105.70
4	CA	2679	A	N1-C6-N6	5.89	122.13	118.60
1	AA	251	G	N9-C4-C5	-5.89	103.05	105.40
3	DA	1617	C	OP1-P-OP2	5.89	128.43	119.60
3	DA	2046	G	N1-C2-N3	-5.89	120.37	123.90
1	AA	363	A	C8-N9-C4	-5.89	103.45	105.80
1	AA	731	G	C8-N9-C4	-5.89	104.05	106.40
2	BA	428	G	C6-C5-N7	5.89	133.93	130.40
3	DA	302	C	C2-N1-C1'	-5.89	112.33	118.80
3	DA	760	G	N3-C4-N9	-5.89	122.47	126.00
3	DA	1386	C	C6-N1-C2	-5.89	117.94	120.30
3	DA	1441	G	C8-N9-C4	-5.89	104.05	106.40
1	AA	60	A	N1-C6-N6	-5.88	115.07	118.60
1	AA	1367	C	C6-N1-C2	-5.88	117.95	120.30
1	AA	1404	C	OP2-P-O3'	5.88	118.14	105.20
2	BA	308	C	N1-C2-O2	5.88	122.43	118.90
3	DA	793	A	C5-C6-N6	-5.88	118.99	123.70
3	DA	1147	A	N3-C4-C5	5.88	130.92	126.80
5	DB	110	C	C2-N1-C1'	-5.88	112.33	118.80
3	DA	103	A	OP2-P-O3'	5.88	118.14	105.20
3	DA	181	A	C5-C6-N6	5.88	128.41	123.70
3	DA	1777	U	OP2-P-O3'	5.88	118.14	105.20
3	DA	2645	G	N3-C4-C5	-5.88	125.66	128.60
1	AA	386	C	N3-C4-N4	-5.88	113.88	118.00
1	AA	944	G	N3-C2-N2	5.88	124.02	119.90
3	DA	469	G	N7-C8-N9	-5.88	110.16	113.10
3	DA	757	G	N3-C4-N9	-5.88	122.47	126.00
3	DA	2205	A	O5'-P-OP2	-5.88	100.41	105.70
3	DA	2364	C	OP2-P-O3'	5.88	118.14	105.20
1	AA	339	C	C5-C6-N1	-5.88	118.06	121.00
1	AA	944	G	N3-C4-C5	-5.88	125.66	128.60
1	AA	1081	A	C8-N9-C4	5.88	108.15	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	504	A	N9-C4-C5	-5.88	103.45	105.80
3	DA	819	A	C5-C6-N6	5.88	128.40	123.70
3	DA	1010	A	N3-C4-N9	-5.88	122.70	127.40
4	CA	1969	A	N9-C4-C5	-5.88	103.45	105.80
1	AA	1368	A	N9-C4-C5	5.88	108.15	105.80
1	AA	1505	G	C2-N3-C4	-5.88	108.96	111.90
3	DA	1927	A	O5'-P-OP2	-5.88	100.41	105.70
3	DA	2098	U	C5-C4-O4	-5.88	122.37	125.90
3	DA	2482	A	OP1-P-O3'	5.88	118.14	105.20
4	CA	1772	A	N9-C4-C5	5.88	108.15	105.80
4	CA	2082	A	C5-C6-N6	-5.88	119.00	123.70
4	CA	2896	C	N1-C2-O2	5.88	122.43	118.90
1	AA	187	G	O5'-P-OP1	-5.88	100.41	105.70
1	AA	323	U	O5'-P-OP2	5.88	117.75	110.70
1	AA	1080	A	C6-N1-C2	-5.88	115.07	118.60
2	BA	1047	G	N1-C6-O6	5.88	123.43	119.90
3	DA	534	U	N3-C2-O2	5.88	126.31	122.20
4	CA	1849	G	C6-C5-N7	-5.88	126.87	130.40
1	AA	108	G	OP1-P-OP2	-5.88	110.79	119.60
3	DA	554	U	N3-C4-O4	5.88	123.51	119.40
3	DA	634	C	N3-C4-C5	5.88	124.25	121.90
3	DA	1392	A	C8-N9-C4	-5.88	103.45	105.80
3	DA	463	G	N9-C4-C5	5.87	107.75	105.40
3	DA	1187	G	C8-N9-C1'	-5.87	119.36	127.00
3	DA	1373	A	C5-C6-N1	5.87	120.64	117.70
3	DA	2566	A	C5-C6-N1	-5.87	114.76	117.70
3	DA	2677	G	C6-C5-N7	-5.87	126.88	130.40
3	DA	2836	U	C2-N1-C1'	-5.87	110.65	117.70
1	AA	127	G	N3-C4-C5	5.87	131.54	128.60
3	DA	58	G	C2-N3-C4	-5.87	108.96	111.90
3	DA	560	C	O5'-P-OP1	-5.87	100.42	105.70
3	DA	718	A	N9-C4-C5	-5.87	103.45	105.80
3	DA	822	G	N9-C4-C5	-5.87	103.05	105.40
3	DA	1024	G	O5'-P-OP1	-5.87	100.42	105.70
3	DA	1666	G	N3-C4-N9	-5.87	122.48	126.00
3	DA	2505	G	C6-C5-N7	5.87	133.92	130.40
3	DA	2600	A	C6-C5-N7	-5.87	128.19	132.30
4	CA	1430	G	C4-C5-C6	5.87	122.32	118.80
4	CA	1763	G	N1-C6-O6	5.87	123.42	119.90
8	BD	161	LEU	CA-CB-CG	5.87	128.81	115.30
1	AA	1406	U	C6-N1-C2	-5.87	117.48	121.00
3	DA	1632	A	N3-C4-C5	-5.87	122.69	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1768	C	N1-C2-O2	5.87	122.42	118.90
4	CA	1797	G	C8-N9-C4	5.87	108.75	106.40
1	AA	728	A	C5-N7-C8	-5.87	100.97	103.90
1	AA	735	C	C5-C4-N4	-5.87	116.09	120.20
3	DA	311	A	N1-C2-N3	5.87	132.23	129.30
3	DA	760	G	N3-C2-N2	-5.87	115.79	119.90
3	DA	977	G	N1-C2-N2	5.87	121.48	116.20
3	DA	1738	G	C4-C5-C6	5.87	122.32	118.80
3	DA	1771	C	C6-N1-C2	5.87	122.65	120.30
3	DA	985	C	O5'-P-OP2	-5.87	100.42	105.70
3	DA	1228	G	OP2-P-O3'	5.87	118.11	105.20
4	CA	695	G	C8-N9-C4	5.87	108.75	106.40
4	CA	2244	U	N1-C2-O2	-5.87	118.69	122.80
1	AA	112	G	N1-C2-N2	5.87	121.48	116.20
1	AA	1505	G	N1-C6-O6	5.87	123.42	119.90
2	BA	561	U	O5'-P-OP1	-5.87	100.42	105.70
3	DA	1027	A	N1-C2-N3	5.87	132.23	129.30
3	DA	1522	A	C5-N7-C8	-5.87	100.97	103.90
3	DA	2541	A	N9-C4-C5	5.87	108.15	105.80
3	DA	2645	G	C8-N9-C1'	-5.87	119.38	127.00
1	AA	581	G	C5-C6-O6	5.86	132.12	128.60
1	AA	802	A	N1-C6-N6	5.86	122.12	118.60
1	AA	1178	G	N9-C4-C5	5.86	107.75	105.40
1	AA	1375	A	C5-C6-N6	5.86	128.39	123.70
3	DA	1184	U	O5'-P-OP2	5.86	117.74	110.70
3	DA	1755	A	C5-C6-N6	5.86	128.39	123.70
3	DA	1776	G	C8-N9-C1'	-5.86	119.38	127.00
3	DA	2088	A	C6-C5-N7	-5.86	128.19	132.30
4	CA	2627	G	N3-C4-C5	-5.86	125.67	128.60
3	DA	592	A	C6-N1-C2	-5.86	115.08	118.60
3	DA	1267	U	N3-C4-O4	5.86	123.50	119.40
3	DA	2597	G	N9-C4-C5	5.86	107.75	105.40
1	AA	1108	G	C5-C6-O6	5.86	132.12	128.60
1	AA	1360	A	C5-C6-N1	-5.86	114.77	117.70
2	BA	1068	G	N1-C6-O6	5.86	123.42	119.90
3	DA	128	C	O5'-P-OP2	-5.86	100.43	105.70
3	DA	271	G	C8-N9-C4	-5.86	104.06	106.40
3	DA	817	C	C6-N1-C2	5.86	122.64	120.30
3	DA	949	G	C5-C6-O6	-5.86	125.08	128.60
3	DA	1755	A	N1-C6-N6	-5.86	115.08	118.60
3	DA	2331	G	C4-C5-N7	5.86	113.14	110.80
3	DA	2715	C	N1-C2-O2	5.86	122.42	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BL	24	LEU	CB-CG-CD1	5.86	120.97	111.00
3	DA	36	G	C5-C6-N1	-5.86	108.57	111.50
3	DA	370	G	C4-N9-C1'	-5.86	118.88	126.50
1	AA	570	G	C4-C5-N7	5.86	113.14	110.80
1	AA	1363	A	O5'-P-OP2	5.86	117.73	110.70
1	AA	1471	U	O5'-P-OP2	-5.86	100.43	105.70
3	DA	869	G	C8-N9-C4	-5.86	104.06	106.40
3	DA	2581	G	C6-N1-C2	-5.86	121.58	125.10
3	DA	2595	G	C8-N9-C1'	-5.86	119.39	127.00
3	DA	2703	C	C5-C6-N1	-5.86	118.07	121.00
5	DB	5	U	C2-N1-C1'	-5.86	110.67	117.70
5	DB	11	C	O5'-P-OP2	5.86	117.73	110.70
3	DA	404	A	C2-N3-C4	-5.86	107.67	110.60
3	DA	563	A	C4-C5-C6	5.86	119.93	117.00
3	DA	727	A	N1-C2-N3	5.86	132.23	129.30
3	DA	1799	G	N1-C2-N3	5.86	127.41	123.90
3	DA	2500	U	C4-C5-C6	-5.86	116.19	119.70
3	DA	2788	C	C5-C6-N1	-5.86	118.07	121.00
4	CA	615	U	N1-C2-O2	-5.86	118.70	122.80
4	CA	1255	U	N1-C2-N3	-5.86	111.39	114.90
4	CA	2077	A	O5'-P-OP1	-5.86	100.43	105.70
2	BA	1509	C	OP1-P-OP2	-5.85	110.82	119.60
4	CA	2242	G	C8-N9-C4	-5.85	104.06	106.40
1	AA	1320	C	C6-N1-C2	5.85	122.64	120.30
1	AA	1515	G	C4-N9-C1'	5.85	134.11	126.50
3	DA	1302	A	C5-C6-N6	-5.85	119.02	123.70
3	DA	1324	G	N1-C6-O6	5.85	123.41	119.90
3	DA	1518	C	C5-C6-N1	-5.85	118.07	121.00
3	DA	2265	U	N1-C2-N3	5.85	118.41	114.90
3	DA	2888	C	N1-C2-O2	-5.85	115.39	118.90
4	CA	2692	G	C5-C6-O6	-5.85	125.09	128.60
3	DA	1022	G	OP1-P-OP2	5.85	128.38	119.60
3	DA	2456	C	N3-C2-O2	5.85	126.00	121.90
1	AA	1233	G	O5'-P-OP1	-5.85	100.44	105.70
2	BA	203	G	N3-C4-C5	5.85	131.53	128.60
3	DA	118	A	N9-C4-C5	5.85	108.14	105.80
3	DA	519	U	OP2-P-O3'	5.85	118.07	105.20
3	DA	1168	G	N3-C4-N9	5.85	129.51	126.00
3	DA	1217	U	C5-C6-N1	5.85	125.62	122.70
3	DA	1263	U	N1-C2-O2	5.85	126.89	122.80
3	DA	1807	G	N9-C4-C5	5.85	107.74	105.40
3	DA	2091	C	C2-N1-C1'	-5.85	112.37	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2698	U	O5'-P-OP2	-5.85	100.44	105.70
3	DA	2780	G	O5'-P-OP2	-5.85	100.44	105.70
3	DA	2825	G	C4-C5-N7	5.85	113.14	110.80
4	CA	678	C	N3-C4-N4	5.85	122.09	118.00
5	DB	85	G	C2-N3-C4	-5.85	108.97	111.90
1	AA	1465	A	N1-C6-N6	-5.85	115.09	118.60
3	DA	173	A	C5-C6-N6	-5.85	119.02	123.70
3	DA	1131	G	C2-N3-C4	5.85	114.82	111.90
3	DA	1558	C	OP1-P-OP2	5.85	128.37	119.60
3	DA	2507	C	N3-C4-C5	-5.85	119.56	121.90
3	DA	2674	G	N1-C6-O6	5.85	123.41	119.90
3	DA	2676	C	N3-C4-C5	5.85	124.24	121.90
1	AA	1494	G	C8-N9-C4	-5.85	104.06	106.40
2	BA	1515	G	C4-C5-N7	5.85	113.14	110.80
1	AA	340	U	O5'-P-OP1	5.84	117.71	110.70
2	BA	741	G	OP1-P-O3'	5.84	118.06	105.20
3	DA	1576	U	OP1-P-O3'	-5.84	92.34	105.20
3	DA	1666	G	C4-C5-N7	-5.84	108.46	110.80
1	AA	622	A	C2-N3-C4	-5.84	107.68	110.60
3	DA	462	C	C2-N3-C4	-5.84	116.98	119.90
3	DA	604	G	C5-N7-C8	-5.84	101.38	104.30
3	DA	1833	C	C2-N3-C4	-5.84	116.98	119.90
4	CA	456	C	C5-C4-N4	5.84	124.29	120.20
4	CA	2692	G	N7-C8-N9	5.84	116.02	113.10
18	AN	69	ARG	NE-CZ-NH2	-5.84	117.38	120.30
1	AA	1063	C	OP1-P-OP2	5.84	128.36	119.60
1	AA	1108	G	N3-C2-N2	5.84	123.99	119.90
3	DA	125	A	OP2-P-O3'	5.84	118.05	105.20
3	DA	305	C	N3-C2-O2	5.84	125.99	121.90
3	DA	447	A	C5-C6-N6	-5.84	119.03	123.70
3	DA	2517	C	O5'-P-OP2	-5.84	100.44	105.70
3	DA	2535	G	C6-C5-N7	-5.84	126.90	130.40
3	DA	506	G	OP1-P-O3'	5.84	118.04	105.20
3	DA	666	A	C5-C6-N1	5.84	120.62	117.70
4	CA	250	G	N3-C4-N9	5.84	129.50	126.00
1	AA	1188	A	C2-N3-C4	-5.84	107.68	110.60
2	BA	631	C	N3-C4-N4	5.84	122.09	118.00
2	BA	770	C	N1-C2-O2	-5.84	115.40	118.90
3	DA	215	G	O5'-P-OP2	5.84	117.70	110.70
3	DA	1731	G	N3-C2-N2	-5.84	115.81	119.90
3	DA	2261	C	C5-C4-N4	5.84	124.29	120.20
3	DA	2318	G	C5-C6-N1	-5.84	108.58	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2505	G	N3-C4-C5	-5.84	125.68	128.60
3	DA	2595	G	C4-N9-C1'	5.84	134.09	126.50
3	DA	2885	G	C4-C5-N7	-5.84	108.47	110.80
3	DA	1643	G	N9-C4-C5	-5.83	103.07	105.40
1	AA	234	C	C6-N1-C2	5.83	122.63	120.30
2	BA	1499	A	C6-C5-N7	-5.83	128.22	132.30
3	DA	25	U	N1-C2-O2	-5.83	118.72	122.80
3	DA	428	A	N7-C8-N9	-5.83	110.88	113.80
3	DA	1207	C	C2-N3-C4	-5.83	116.98	119.90
3	DA	2394	C	C2-N3-C4	-5.83	116.98	119.90
1	AA	145	G	O5'-P-OP1	-5.83	100.45	105.70
1	AA	725	G	C8-N9-C4	-5.83	104.07	106.40
1	AA	771	G	O5'-P-OP2	-5.83	100.45	105.70
3	DA	151	C	N3-C4-C5	5.83	124.23	121.90
3	DA	939	G	N3-C2-N2	-5.83	115.82	119.90
3	DA	944	C	C5-C4-N4	5.83	124.28	120.20
3	DA	2013	A	C6-C5-N7	-5.83	128.22	132.30
4	CA	2051	A	OP1-P-OP2	5.83	128.35	119.60
2	BA	43	C	N3-C4-C5	-5.83	119.57	121.90
3	DA	1438	U	N1-C2-O2	-5.83	118.72	122.80
3	DA	1817	G	N1-C6-O6	-5.83	116.40	119.90
5	DB	79	G	N3-C2-N2	5.83	123.98	119.90
3	DA	421	C	C5-C4-N4	-5.83	116.12	120.20
3	DA	421	C	N3-C4-N4	5.83	122.08	118.00
3	DA	855	G	N1-C2-N3	5.83	127.40	123.90
3	DA	946	C	N1-C2-N3	5.83	123.28	119.20
3	DA	1135	C	N3-C4-C5	5.83	124.23	121.90
3	DA	1212	G	OP2-P-O3'	5.83	118.02	105.20
3	DA	1310	G	N3-C4-C5	5.83	131.51	128.60
4	CA	701	G	N3-C4-N9	-5.83	122.50	126.00
1	AA	105	G	C5-C6-O6	5.83	132.10	128.60
1	AA	112	G	C8-N9-C4	-5.83	104.07	106.40
36	CM	107	PHE	CB-CG-CD2	-5.83	116.72	120.80
2	BA	1394	A	N9-C4-C5	-5.83	103.47	105.80
3	DA	488	G	OP1-P-O3'	5.83	118.02	105.20
3	DA	947	A	N7-C8-N9	5.83	116.71	113.80
3	DA	2050	C	C4-C5-C6	5.83	120.31	117.40
3	DA	2662	A	N1-C6-N6	5.83	122.09	118.60
1	AA	781	A	C5-N7-C8	-5.82	100.99	103.90
1	AA	1489	G	OP2-P-O3'	5.82	118.01	105.20
2	BA	495	A	C2-N3-C4	-5.82	107.69	110.60
2	BA	1482	G	C8-N9-C1'	-5.82	119.43	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1128	G	C5-C6-N1	5.82	114.41	111.50
3	DA	2760	C	N3-C2-O2	5.82	125.98	121.90
3	DA	2562	U	N3-C2-O2	-5.82	118.12	122.20
1	AA	1417	G	N3-C2-N2	5.82	123.97	119.90
2	BA	428	G	N3-C2-N2	-5.82	115.83	119.90
3	DA	22	C	O5'-P-OP1	-5.82	100.46	105.70
3	DA	57	C	OP2-P-O3'	5.82	118.00	105.20
3	DA	555	G	C4-C5-N7	-5.82	108.47	110.80
3	DA	854	C	C5-C4-N4	-5.82	116.13	120.20
3	DA	1340	U	OP1-P-OP2	-5.82	110.87	119.60
3	DA	2837	A	C8-N9-C4	-5.82	103.47	105.80
4	CA	740	C	N3-C4-N4	-5.82	113.93	118.00
1	AA	54	C	O5'-P-OP2	5.82	117.68	110.70
1	AA	501	C	O5'-P-OP1	5.82	117.68	110.70
2	BA	381	C	C5-C4-N4	-5.82	116.13	120.20
2	BA	509	A	O5'-P-OP1	-5.82	100.46	105.70
3	DA	3	U	C5-C4-O4	-5.82	122.41	125.90
3	DA	785	G	C8-N9-C4	-5.82	104.07	106.40
3	DA	1043	C	O5'-P-OP2	-5.82	100.47	105.70
3	DA	1980	G	N1-C2-N3	5.82	127.39	123.90
4	CA	793	A	N1-C6-N6	5.82	122.09	118.60
4	CA	2606	C	C6-N1-C1'	-5.82	113.82	120.80
42	DS	29	THR	CA-CB-CG2	-5.82	104.26	112.40
1	AA	352	C	N1-C2-O2	5.82	122.39	118.90
1	AA	866	C	N1-C2-O2	-5.82	115.41	118.90
1	AA	974	A	OP1-P-OP2	-5.82	110.88	119.60
2	BA	433	G	N3-C4-C5	5.82	131.51	128.60
3	DA	302	C	OP2-P-O3'	5.82	118.00	105.20
3	DA	728	G	N3-C4-N9	-5.82	122.51	126.00
3	DA	1183	U	OP2-P-O3'	5.82	117.99	105.20
3	DA	1972	G	C5-N7-C8	-5.82	101.39	104.30
4	CA	2082	A	O5'-P-OP2	5.82	117.68	110.70
54	D4	12	ARG	NE-CZ-NH1	-5.82	117.39	120.30
1	AA	1461	G	N1-C6-O6	-5.81	116.41	119.90
3	DA	749	A	C4-C5-N7	5.81	113.61	110.70
3	DA	1364	G	C5-C6-N1	-5.81	108.59	111.50
3	DA	2082	A	N9-C4-C5	-5.81	103.47	105.80
3	DA	2315	G	C4-C5-N7	5.81	113.13	110.80
3	DA	2487	G	C4-C5-N7	5.81	113.13	110.80
3	DA	86	G	C8-N9-C4	5.81	108.72	106.40
3	DA	466	A	N9-C4-C5	5.81	108.12	105.80
3	DA	568	U	O5'-P-OP1	5.81	117.68	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2073	C	N1-C2-O2	-5.81	115.41	118.90
3	DA	2394	C	O5'-P-OP1	-5.81	100.47	105.70
3	DA	2416	C	C4-C5-C6	-5.81	114.49	117.40
3	DA	2822	G	N3-C4-C5	5.81	131.51	128.60
2	BA	570	G	N9-C4-C5	5.81	107.72	105.40
3	DA	2773	C	O5'-P-OP1	5.81	117.67	110.70
4	CA	1901	A	OP1-P-OP2	5.81	128.32	119.60
1	AA	1476	A	C6-C5-N7	5.81	136.37	132.30
3	DA	498	G	N1-C6-O6	5.81	123.39	119.90
3	DA	725	G	C2-N3-C4	-5.81	109.00	111.90
3	DA	1318	U	N1-C2-O2	-5.81	118.73	122.80
3	DA	2788	C	OP1-P-O3'	-5.81	92.42	105.20
3	DA	2811	G	N3-C4-C5	5.81	131.50	128.60
4	CA	1799	G	N3-C4-C5	-5.81	125.69	128.60
4	CA	2692	G	C8-N9-C4	-5.81	104.08	106.40
1	AA	972	C	C2-N3-C4	-5.81	117.00	119.90
2	BA	1146	A	N9-C4-C5	5.81	108.12	105.80
3	DA	918	A	N9-C1'-C2'	-5.81	105.61	112.00
3	DA	997	G	C6-C5-N7	5.81	133.88	130.40
3	DA	2014	A	O5'-P-OP2	-5.81	100.47	105.70
3	DA	2304	G	N1-C6-O6	5.81	123.39	119.90
3	DA	2314	A	C2-N3-C4	-5.81	107.70	110.60
5	DB	115	A	N1-C6-N6	-5.81	115.11	118.60
1	AA	899	C	N3-C4-N4	-5.81	113.94	118.00
3	DA	1133	A	N9-C4-C5	5.81	108.12	105.80
4	CA	1366	A	C8-N9-C4	-5.81	103.48	105.80
4	CA	1799	G	C6-N1-C2	-5.81	121.62	125.10
1	AA	615	G	C5-C6-N1	5.80	114.40	111.50
1	AA	1476	A	OP1-P-OP2	5.80	128.31	119.60
3	DA	706	A	O5'-P-OP1	-5.80	100.48	105.70
3	DA	1318	U	N3-C4-C5	5.80	118.08	114.60
3	DA	1391	U	N3-C4-O4	5.80	123.46	119.40
3	DA	2430[A]	A	O5'-P-OP2	-5.80	100.48	105.70
3	DA	2430[B]	A	O5'-P-OP2	-5.80	100.48	105.70
43	DT	25	ARG	NE-CZ-NH2	-5.80	117.40	120.30
1	AA	826	C	C5-C4-N4	-5.80	116.14	120.20
3	DA	73	A	C2-N3-C4	5.80	113.50	110.60
3	DA	134	G	N3-C2-N2	-5.80	115.84	119.90
3	DA	671	C	O5'-P-OP1	-5.80	100.48	105.70
3	DA	1235	G	N3-C4-N9	-5.80	122.52	126.00
3	DA	2027	G	O5'-P-OP1	5.80	117.66	110.70
3	DA	2405	G	N1-C2-N3	5.80	127.38	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	74	U	OP1-P-O3'	5.80	117.97	105.20
5	DB	83	G	OP2-P-O3'	5.80	117.97	105.20
42	DS	80	ARG	NE-CZ-NH2	-5.80	117.40	120.30
2	BA	667	G	OP1-P-O3'	5.80	117.96	105.20
3	DA	452	G	OP2-P-O3'	5.80	117.97	105.20
3	DA	619	G	O5'-P-OP1	-5.80	100.48	105.70
3	DA	942	G	C4-C5-N7	5.80	113.12	110.80
3	DA	1407	G	N3-C2-N2	-5.80	115.84	119.90
3	DA	1950	G	N1-C6-O6	5.80	123.38	119.90
3	DA	2222	C	C5-C4-N4	-5.80	116.14	120.20
3	DA	2323	G	C6-C5-N7	-5.80	126.92	130.40
4	CA	693	A	C5-C6-N1	5.80	120.60	117.70
4	CA	783	A	C5-N7-C8	-5.80	101.00	103.90
4	CA	1937	A	C5-C6-N1	-5.80	114.80	117.70
3	DA	977	G	OP1-P-O3'	5.80	117.96	105.20
3	DA	1249	U	O5'-P-OP1	-5.80	100.48	105.70
3	DA	2093	G	C5-N7-C8	-5.80	101.40	104.30
3	DA	2633	G	C2-N3-C4	-5.80	109.00	111.90
4	CA	2240	U	O4'-C1'-N1	5.80	112.84	108.20
4	CA	2242	G	N9-C4-C5	5.80	107.72	105.40
5	DB	33	G	N3-C4-N9	-5.80	122.52	126.00
5	DB	69	G	C8-N9-C4	5.80	108.72	106.40
11	BG	59	LEU	CA-CB-CG	5.80	128.64	115.30
3	DA	1895	C	C5-C4-N4	-5.80	116.14	120.20
4	CA	1996	C	N3-C4-C5	5.80	124.22	121.90
1	AA	824	G	C2-N3-C4	-5.80	109.00	111.90
1	AA	1487	G	OP1-P-OP2	5.80	128.29	119.60
2	BA	928	G	N1-C6-O6	5.80	123.38	119.90
3	DA	46	G	C5-C6-N1	5.80	114.40	111.50
3	DA	617	G	N3-C4-C5	5.80	131.50	128.60
3	DA	1764	C	C2-N3-C4	-5.80	117.00	119.90
3	DA	2619	C	C2-N3-C4	-5.80	117.00	119.90
4	CA	1740	G	N1-C6-O6	5.80	123.38	119.90
42	DS	95	ASP	CB-CG-OD1	-5.80	113.08	118.30
1	AA	1063	C	C6-N1-C2	5.79	122.62	120.30
3	DA	477	A	N1-C6-N6	-5.79	115.12	118.60
3	DA	1050	A	O5'-P-OP1	5.79	117.65	110.70
1	AA	114	U	C5-C4-O4	5.79	129.38	125.90
2	BA	33	A	N1-C2-N3	5.79	132.20	129.30
3	DA	803	U	C5-C6-N1	-5.79	119.80	122.70
3	DA	1030	C	N3-C4-N4	5.79	122.06	118.00
3	DA	1888	G	OP2-P-O3'	5.79	117.94	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	151	C	C6-N1-C2	-5.79	117.98	120.30
4	CA	2209	G	C8-N9-C4	-5.79	104.08	106.40
4	CA	2710	C	C5-C6-N1	5.79	123.90	121.00
53	D3	1	MET	CA-CB-CG	5.79	123.15	113.30
1	AA	446	G	C8-N9-C1'	5.79	134.53	127.00
3	DA	516	C	OP1-P-OP2	-5.79	110.91	119.60
3	DA	636	G	C2-N3-C4	-5.79	109.00	111.90
3	DA	1031	G	C6-N1-C2	-5.79	121.62	125.10
3	DA	1363	C	N1-C2-O2	-5.79	115.42	118.90
3	DA	1972	G	N3-C2-N2	-5.79	115.85	119.90
3	DA	2586	U	N3-C4-O4	5.79	123.45	119.40
3	DA	2762	C	N3-C4-C5	5.79	124.22	121.90
3	DA	2873	A	C6-N1-C2	-5.79	115.13	118.60
4	CA	2559	C	N1-C2-O2	-5.79	115.42	118.90
1	AA	961	U	O5'-P-OP2	-5.79	100.49	105.70
1	AA	971	G	C4-C5-N7	5.79	113.12	110.80
3	DA	1374	G	O5'-P-OP2	5.79	117.65	110.70
3	DA	1435	G	C5-C6-O6	5.79	132.07	128.60
3	DA	1457	U	O5'-P-OP2	-5.79	100.49	105.70
3	DA	2532	G	C8-N9-C4	5.79	108.72	106.40
1	AA	520	A	N7-C8-N9	5.79	116.69	113.80
1	AA	1415	G	C5-C6-O6	-5.79	125.13	128.60
2	BA	116	A	N1-C6-N6	5.79	122.07	118.60
2	BA	1389	C	C6-N1-C2	5.79	122.62	120.30
3	DA	377	G	C4-C5-N7	5.79	113.11	110.80
3	DA	753	A	C6-N1-C2	-5.79	115.13	118.60
3	DA	944	C	O5'-P-OP2	-5.79	100.49	105.70
3	DA	998	C	O5'-P-OP1	5.79	117.65	110.70
3	DA	2035	G	C6-N1-C2	-5.79	121.63	125.10
4	CA	784	G	OP2-P-O3'	5.79	117.94	105.20
51	D1	54	ILE	CG1-CB-CG2	-5.79	98.66	111.40
1	AA	315	A	N1-C6-N6	5.79	122.07	118.60
3	DA	916	G	C2-N3-C4	-5.79	109.01	111.90
3	DA	2008	C	N3-C4-C5	-5.79	119.58	121.90
3	DA	2063	C	OP1-P-O3'	-5.79	92.47	105.20
3	DA	2289	G	N3-C4-C5	5.79	131.49	128.60
2	BA	161	A	N1-C6-N6	-5.79	115.13	118.60
2	BA	630	A	O5'-P-OP2	-5.79	100.49	105.70
3	DA	277	G	C4-N9-C1'	5.79	134.02	126.50
3	DA	1051	G	N3-C4-C5	5.79	131.49	128.60
3	DA	1441	G	N3-C4-N9	-5.79	122.53	126.00
3	DA	1817	G	N3-C4-N9	-5.79	122.53	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2004	G	OP1-P-OP2	5.79	128.28	119.60
3	DA	2683	C	OP1-P-OP2	5.79	128.28	119.60
3	DA	2851	A	C2-N3-C4	-5.79	107.71	110.60
4	CA	2239	G	N3-C4-C5	-5.79	125.71	128.60
1	AA	611	C	C2-N1-C1'	5.78	125.16	118.80
3	DA	182	A	N1-C6-N6	5.78	122.07	118.60
3	DA	494	G	C8-N9-C4	5.78	108.71	106.40
3	DA	1889	A	C4-C5-N7	5.78	113.59	110.70
3	DA	2597	G	C8-N9-C4	-5.78	104.09	106.40
3	DA	451	U	N3-C4-O4	-5.78	115.35	119.40
3	DA	1027	A	N3-C4-C5	5.78	130.85	126.80
3	DA	1253	A	C2-N3-C4	-5.78	107.71	110.60
3	DA	2829	A	C5-C6-N6	-5.78	119.08	123.70
4	CA	1622	G	C4-N9-C1'	5.78	134.02	126.50
7	BC	179	ARG	CG-CD-NE	-5.78	99.66	111.80
1	AA	293	G	N3-C4-N9	-5.78	122.53	126.00
1	AA	556	C	O5'-P-OP1	-5.78	100.50	105.70
1	AA	826	C	N3-C4-N4	5.78	122.05	118.00
2	BA	244	U	N1-C2-O2	5.78	126.85	122.80
2	BA	1522	U	C6-N1-C1'	5.78	129.29	121.20
3	DA	189	G	OP2-P-O3'	5.78	117.92	105.20
3	DA	538	A	N7-C8-N9	5.78	116.69	113.80
3	DA	993	G	N9-C4-C5	5.78	107.71	105.40
3	DA	1191	G	N3-C2-N2	-5.78	115.85	119.90
3	DA	1299	G	C2-N3-C4	-5.78	109.01	111.90
3	DA	1339	G	OP2-P-O3'	5.78	117.92	105.20
1	AA	1417	G	N1-C2-N2	-5.78	111.00	116.20
3	DA	579	G	C8-N9-C4	-5.78	104.09	106.40
3	DA	1581	G	C2-N3-C4	-5.78	109.01	111.90
4	CA	1498	C	N3-C2-O2	5.78	125.94	121.90
5	DB	47	C	C4-C5-C6	-5.78	114.51	117.40
1	AA	137	U	N1-C2-O2	-5.78	118.76	122.80
1	AA	1444	U	O5'-P-OP1	-5.78	100.50	105.70
3	DA	776	G	O5'-P-OP1	5.78	117.63	110.70
3	DA	915	C	N3-C4-C5	5.78	124.21	121.90
3	DA	1792	G	P-O3'-C3'	5.78	126.63	119.70
3	DA	2595	G	OP1-P-OP2	5.78	128.27	119.60
3	DA	2713	U	N3-C4-O4	-5.78	115.36	119.40
3	DA	2875	C	N3-C4-C5	5.78	124.21	121.90
4	CA	1776	G	C4-N9-C1'	5.78	134.01	126.50
1	AA	1060	U	OP1-P-O3'	5.78	117.91	105.20
2	BA	1375	A	OP1-P-OP2	-5.78	110.94	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	38	A	C8-N9-C4	-5.78	103.49	105.80
3	DA	750	A	C8-N9-C4	-5.78	103.49	105.80
3	DA	1518	C	O5'-P-OP1	5.78	117.63	110.70
3	DA	2792	A	O5'-P-OP2	-5.78	100.50	105.70
5	DB	103	U	C2-N1-C1'	5.78	124.63	117.70
3	DA	41	C	C5-C6-N1	-5.77	118.11	121.00
3	DA	1748	C	N1-C2-O2	-5.77	115.44	118.90
1	AA	923	A	C8-N9-C4	-5.77	103.49	105.80
2	BA	330	C	C6-N1-C2	5.77	122.61	120.30
2	BA	718	A	N1-C6-N6	5.77	122.06	118.60
3	DA	486	C	N3-C4-N4	5.77	122.04	118.00
3	DA	998	C	C6-N1-C1'	-5.77	113.87	120.80
3	DA	1642	G	N9-C4-C5	-5.77	103.09	105.40
3	DA	2551	C	N1-C2-O2	-5.77	115.44	118.90
3	DA	2779	U	OP1-P-OP2	5.77	128.26	119.60
4	CA	425	G	N3-C4-C5	5.77	131.49	128.60
5	DB	37	C	N3-C4-N4	5.77	122.04	118.00
37	DN	22	GLN	C-N-CA	-5.77	110.18	122.30
3	DA	460	A	C2-N3-C4	-5.77	107.71	110.60
3	DA	843	G	C2-N3-C4	-5.77	109.02	111.90
3	DA	924	G	N1-C2-N2	-5.77	111.01	116.20
3	DA	1026	G	C5-N7-C8	-5.77	101.41	104.30
3	DA	2315	G	N1-C6-O6	5.77	123.36	119.90
3	DA	2836	U	N3-C4-O4	-5.77	115.36	119.40
3	DA	2890	G	O5'-P-OP2	-5.77	100.51	105.70
1	AA	371	A	C5-C6-N6	-5.77	119.08	123.70
1	AA	670	G	O5'-P-OP1	-5.77	100.51	105.70
2	BA	569	C	OP2-P-O3'	5.77	117.89	105.20
3	DA	53	A	N7-C8-N9	5.77	116.69	113.80
3	DA	1645	G	C2-N3-C4	-5.77	109.02	111.90
3	DA	1765	U	OP1-P-OP2	-5.77	110.94	119.60
3	DA	2434	A	O5'-P-OP1	5.77	117.62	110.70
3	DA	2815	C	N3-C4-N4	-5.77	113.96	118.00
4	CA	589	U	C5-C6-N1	5.77	125.58	122.70
1	AA	541	G	C5-N7-C8	-5.77	101.42	104.30
1	AA	623	C	OP1-P-OP2	-5.77	110.95	119.60
1	AA	1512	U	OP1-P-O3'	-5.77	92.51	105.20
2	BA	448	A	N1-C6-N6	5.77	122.06	118.60
3	DA	484	C	OP1-P-OP2	-5.77	110.95	119.60
3	DA	990	A	O5'-P-OP1	-5.77	100.51	105.70
3	DA	1342	A	N7-C8-N9	-5.77	110.92	113.80
3	DA	1731	G	C8-N9-C1'	5.77	134.50	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2078	C	N1-C2-O2	-5.77	115.44	118.90
3	DA	2291	U	N3-C2-O2	5.77	126.24	122.20
3	DA	2438	U	N1-C2-N3	5.77	118.36	114.90
3	DA	2459	A	OP2-P-O3'	5.77	117.89	105.20
3	DA	2586	U	C5-C6-N1	5.77	125.58	122.70
2	BA	727	G	N3-C2-N2	5.77	123.94	119.90
3	DA	2464	G	OP1-P-OP2	5.77	128.25	119.60
3	DA	2515	C	OP1-P-O3'	-5.77	92.52	105.20
3	DA	2732	G	C5-C6-O6	-5.77	125.14	128.60
3	DA	2898	U	N1-C2-N3	5.77	118.36	114.90
5	DB	68	C	C6-N1-C2	-5.77	117.99	120.30
2	BA	296	U	O5'-P-OP2	-5.76	100.51	105.70
3	DA	381	G	C5-N7-C8	-5.76	101.42	104.30
3	DA	483	A	C2-N3-C4	-5.76	107.72	110.60
3	DA	2440	C	C2-N3-C4	-5.76	117.02	119.90
3	DA	2072	C	N3-C4-C5	5.76	124.20	121.90
3	DA	2845	U	N3-C2-O2	5.76	126.23	122.20
1	AA	230	G	N1-C6-O6	5.76	123.36	119.90
1	AA	864	A	O5'-P-OP2	5.76	117.61	110.70
1	AA	901	A	N1-C2-N3	5.76	132.18	129.30
2	BA	814	A	N7-C8-N9	5.76	116.68	113.80
3	DA	16	C	N3-C4-N4	5.76	122.03	118.00
3	DA	82	U	C5-C6-N1	-5.76	119.82	122.70
3	DA	563	A	N3-C4-C5	-5.76	122.77	126.80
3	DA	1185	G	N3-C4-C5	-5.76	125.72	128.60
3	DA	2425	A	C6-N1-C2	-5.76	115.14	118.60
4	CA	1977	A	N1-C6-N6	5.76	122.06	118.60
4	CA	1995	U	C6-N1-C1'	-5.76	113.13	121.20
1	AA	1468	A	N7-C8-N9	-5.76	110.92	113.80
2	BA	864	A	C4-C5-C6	-5.76	114.12	117.00
3	DA	948	C	P-O3'-C3'	-5.76	112.79	119.70
3	DA	2041	U	OP1-P-OP2	5.76	128.24	119.60
3	DA	2317	A	C2-N3-C4	-5.76	107.72	110.60
3	DA	2385	C	N1-C2-O2	-5.76	115.44	118.90
1	AA	373	A	N1-C6-N6	-5.76	115.14	118.60
1	AA	813	U	C5-C4-O4	-5.76	122.44	125.90
3	DA	592	A	C5-C6-N1	5.76	120.58	117.70
4	CA	1789	A	N7-C8-N9	-5.76	110.92	113.80
1	AA	343	U	N3-C2-O2	-5.76	118.17	122.20
1	AA	584	G	C2-N3-C4	-5.76	109.02	111.90
3	DA	102	U	C2-N1-C1'	5.76	124.61	117.70
3	DA	705	A	C6-N1-C2	-5.76	115.15	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1022	G	O5'-P-OP1	-5.76	100.52	105.70
3	DA	1248	G	OP1-P-O3'	5.76	117.86	105.20
3	DA	1300	G	N1-C2-N2	5.76	121.38	116.20
3	DA	1756	G	C2-N3-C4	-5.76	109.02	111.90
3	DA	2819	G	N3-C4-N9	-5.76	122.55	126.00
35	DL	77	ILE	CG1-CB-CG2	-5.76	98.73	111.40
3	DA	1592	C	N3-C2-O2	-5.75	117.87	121.90
3	DA	1898	U	C5-C6-N1	5.75	125.58	122.70
3	DA	2349	G	N3-C2-N2	-5.75	115.87	119.90
3	DA	2473	U	OP1-P-O3'	5.75	117.86	105.20
3	DA	338	G	C6-C5-N7	-5.75	126.95	130.40
3	DA	678	C	O5'-P-OP2	-5.75	100.52	105.70
3	DA	948	C	N3-C2-O2	5.75	125.93	121.90
3	DA	974	G	O5'-P-OP2	-5.75	100.52	105.70
3	DA	1471	G	C2-N3-C4	-5.75	109.02	111.90
3	DA	1988	G	N9-C4-C5	-5.75	103.10	105.40
3	DA	2250	G	N3-C4-C5	5.75	131.48	128.60
3	DA	2515	C	OP2-P-O3'	5.75	117.86	105.20
3	DA	2817	U	C2-N1-C1'	-5.75	110.80	117.70
12	AH	67	GLN	C-N-CA	-5.75	110.22	122.30
1	AA	522	C	N1-C2-O2	-5.75	115.45	118.90
1	AA	541	G	N1-C6-O6	5.75	123.35	119.90
2	BA	769	G	O5'-P-OP1	5.75	117.60	110.70
2	BA	1436	U	N1-C2-O2	-5.75	118.77	122.80
3	DA	325	G	N9-C4-C5	5.75	107.70	105.40
3	DA	709	U	C2-N3-C4	-5.75	123.55	127.00
3	DA	1463	C	N1-C2-O2	-5.75	115.45	118.90
3	DA	1687	G	C4-C5-N7	-5.75	108.50	110.80
3	DA	2613	U	C6-N1-C2	-5.75	117.55	121.00
3	DA	2894	G	N7-C8-N9	5.75	115.98	113.10
4	CA	1938	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1487	G	C5-C6-O6	5.75	132.05	128.60
3	DA	2728	U	C2-N1-C1'	5.75	124.60	117.70
3	DA	1528	A	C6-C5-N7	-5.75	128.28	132.30
3	DA	2019	A	OP1-P-OP2	5.75	128.22	119.60
3	DA	2381	A	C6-N1-C2	-5.75	115.15	118.60
4	CA	531	C	N3-C2-O2	-5.75	117.88	121.90
4	CA	736	C	C5-C4-N4	-5.75	116.18	120.20
4	CA	1430	G	C8-N9-C4	-5.75	104.10	106.40
5	DB	65	U	C5-C4-O4	5.75	129.35	125.90
1	AA	553	A	O5'-P-OP1	5.75	117.60	110.70
1	AA	893	C	C6-N1-C1'	-5.75	113.90	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	970	U	N1-C2-O2	-5.75	118.78	122.80
3	DA	1133	A	C5-N7-C8	5.75	106.77	103.90
3	DA	1931	U	OP1-P-OP2	-5.75	110.98	119.60
3	DA	2447	G	C2-N3-C4	5.75	114.77	111.90
3	DA	2470	G	OP2-P-O3'	5.75	117.84	105.20
4	CA	1658	C	N3-C4-C5	-5.75	119.60	121.90
3	DA	456	C	C6-N1-C2	5.75	122.60	120.30
3	DA	508	A	C2-N3-C4	-5.75	107.73	110.60
3	DA	1552	A	OP1-P-OP2	5.75	128.22	119.60
1	AA	336	A	N1-C6-N6	-5.74	115.15	118.60
3	DA	56	A	C2-N3-C4	-5.74	107.73	110.60
3	DA	104	A	N7-C8-N9	5.74	116.67	113.80
3	DA	196	A	C2-N3-C4	-5.74	107.73	110.60
3	DA	320	A	C5-C6-N1	5.74	120.57	117.70
3	DA	464	U	N1-C2-O2	-5.74	118.78	122.80
3	DA	1153	C	C5-C6-N1	5.74	123.87	121.00
3	DA	1985	C	OP2-P-O3'	5.74	117.84	105.20
3	DA	2356	U	N3-C4-O4	5.74	123.42	119.40
3	DA	2691	C	N3-C4-N4	5.74	122.02	118.00
1	AA	951	G	OP1-P-O3'	5.74	117.83	105.20
2	BA	1468	A	C5-N7-C8	-5.74	101.03	103.90
3	DA	925	A	N1-C2-N3	5.74	132.17	129.30
3	DA	976	G	N3-C2-N2	-5.74	115.88	119.90
3	DA	2553	G	C6-N1-C2	-5.74	121.66	125.10
16	AL	24	LEU	CB-CG-CD2	-5.74	101.24	111.00
1	AA	300	A	N1-C6-N6	5.74	122.04	118.60
3	DA	17	G	OP1-P-O3'	5.74	117.83	105.20
3	DA	751	A	C6-N1-C2	-5.74	115.16	118.60
3	DA	2302	U	N3-C2-O2	-5.74	118.18	122.20
4	CA	695	G	N9-C4-C5	-5.74	103.10	105.40
4	CA	741	U	C5-C4-O4	-5.74	122.45	125.90
1	AA	113	G	N3-C4-N9	5.74	129.44	126.00
2	BA	572	A	C6-C5-N7	-5.74	128.28	132.30
2	BA	898	G	C2-N3-C4	5.74	114.77	111.90
3	DA	458	G	N1-C6-O6	-5.74	116.46	119.90
3	DA	1398	C	C6-N1-C2	5.74	122.60	120.30
3	DA	2080	A	N1-C2-N3	5.74	132.17	129.30
3	DA	2829	A	C6-C5-N7	-5.74	128.28	132.30
1	AA	944	G	C4-C5-N7	-5.74	108.50	110.80
3	DA	510	C	C6-N1-C2	-5.74	118.00	120.30
3	DA	1566	A	O4'-C1'-N9	-5.74	103.61	108.20
3	DA	1688	U	N1-C2-O2	-5.74	118.78	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2870	C	N3-C4-C5	5.74	124.19	121.90
4	CA	1753	G	N3-C2-N2	-5.74	115.88	119.90
1	AA	31	G	OP1-P-OP2	-5.74	111.00	119.60
2	BA	496	A	N1-C2-N3	5.74	132.17	129.30
2	BA	819	A	C2-N3-C4	-5.74	107.73	110.60
2	BA	916	U	OP1-P-OP2	-5.74	111.00	119.60
2	BA	1103	C	C6-N1-C2	-5.74	118.01	120.30
2	BA	1499	A	N9-C4-C5	-5.74	103.51	105.80
3	DA	187	G	N1-C2-N2	5.74	121.36	116.20
3	DA	469	G	C2-N3-C4	-5.74	109.03	111.90
3	DA	498	G	N3-C2-N2	-5.74	115.89	119.90
3	DA	620	G	N1-C2-N2	-5.74	111.04	116.20
3	DA	1002	G	N1-C2-N2	5.74	121.36	116.20
3	DA	1129	A	N3-C4-C5	-5.74	122.78	126.80
3	DA	1530	G	N3-C4-C5	5.74	131.47	128.60
3	DA	1753	G	N1-C2-N2	-5.74	111.04	116.20
5	DB	107	G	C8-N9-C1'	-5.74	119.54	127.00
5	DB	110	C	N3-C4-C5	5.74	124.19	121.90
3	DA	167	A	OP1-P-OP2	5.73	128.20	119.60
3	DA	440	C	N3-C4-C5	5.73	124.19	121.90
3	DA	721	A	C8-N9-C4	5.73	108.09	105.80
3	DA	782	A	N3-C4-N9	5.73	131.99	127.40
3	DA	1274	A	O5'-P-OP1	-5.73	100.54	105.70
1	AA	1424	U	OP1-P-OP2	5.73	128.20	119.60
2	BA	242	G	OP2-P-O3'	5.73	117.81	105.20
2	BA	1529	G	N3-C2-N2	5.73	123.91	119.90
3	DA	45	G	N3-C4-N9	-5.73	122.56	126.00
3	DA	870	U	O5'-P-OP1	-5.73	100.54	105.70
3	DA	1033	U	O5'-P-OP1	-5.73	100.54	105.70
3	DA	1440	U	N3-C4-O4	5.73	123.41	119.40
10	BF	54	LEU	CB-CG-CD2	5.73	120.75	111.00
43	DT	66	ILE	CG1-CB-CG2	5.73	124.01	111.40
1	AA	291	U	OP1-P-O3'	-5.73	92.59	105.20
1	AA	1230	C	OP2-P-O3'	5.73	117.81	105.20
2	BA	1074	G	O5'-P-OP1	-5.73	100.54	105.70
3	DA	470	A	C2-N3-C4	-5.73	107.73	110.60
3	DA	502	A	N3-C4-N9	-5.73	122.81	127.40
3	DA	604	G	C5-C6-N1	-5.73	108.63	111.50
3	DA	845	A	N1-C2-N3	5.73	132.16	129.30
3	DA	995	C	OP1-P-O3'	5.73	117.81	105.20
3	DA	1032	A	C5-N7-C8	-5.73	101.03	103.90
3	DA	1167	C	N1-C2-O2	-5.73	115.46	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1193	G	N9-C4-C5	-5.73	103.11	105.40
3	DA	2363	G	C5-C6-N1	-5.73	108.64	111.50
3	DA	2608	G	C5-C6-N1	5.73	114.36	111.50
1	AA	1385	G	N3-C4-N9	-5.73	122.56	126.00
3	DA	575	A	N1-C6-N6	-5.73	115.16	118.60
3	DA	769	U	C5-C6-N1	5.73	125.56	122.70
3	DA	1619	G	N3-C4-C5	5.73	131.47	128.60
4	CA	2256	G	N3-C4-C5	5.73	131.46	128.60
1	AA	729	A	N7-C8-N9	5.73	116.66	113.80
2	BA	1513	A	N1-C6-N6	-5.73	115.16	118.60
1	AA	944	G	N1-C2-N2	-5.73	111.05	116.20
2	BA	924	C	N3-C4-C5	5.73	124.19	121.90
3	DA	487	C	O5'-P-OP1	-5.73	100.55	105.70
4	CA	730	A	N3-C4-C5	5.73	130.81	126.80
4	CA	1652	A	C5-C6-N6	-5.73	119.12	123.70
4	CA	1969	A	N1-C6-N6	5.73	122.03	118.60
2	BA	1071	C	N3-C2-O2	-5.72	117.89	121.90
3	DA	436	C	C2-N3-C4	-5.72	117.04	119.90
3	DA	538	A	C5-C6-N6	5.72	128.28	123.70
3	DA	1395	A	OP1-P-OP2	-5.72	111.01	119.60
3	DA	1531	C	N3-C4-C5	5.72	124.19	121.90
3	DA	2647	U	OP2-P-O3'	5.72	117.79	105.20
5	DB	56	G	C5-N7-C8	-5.72	101.44	104.30
2	BA	363	A	C6-N1-C2	-5.72	115.17	118.60
3	DA	101	A	C2-N3-C4	-5.72	107.74	110.60
3	DA	243	U	N3-C4-O4	5.72	123.41	119.40
3	DA	553	G	OP1-P-O3'	-5.72	92.61	105.20
3	DA	783	A	C8-N9-C4	-5.72	103.51	105.80
3	DA	950	G	C8-N9-C4	5.72	108.69	106.40
3	DA	1259	G	C2-N3-C4	-5.72	109.04	111.90
3	DA	1638	C	N3-C2-O2	5.72	125.91	121.90
3	DA	2714	G	OP2-P-O3'	5.72	117.79	105.20
3	DA	320	A	N1-C6-N6	-5.72	115.17	118.60
3	DA	557	C	C5-C4-N4	-5.72	116.19	120.20
3	DA	756	A	C5-C6-N6	5.72	128.28	123.70
3	DA	2632	A	C6-N1-C2	-5.72	115.17	118.60
4	CA	784	G	C4-N9-C1'	5.72	133.94	126.50
5	DB	107	G	N3-C4-N9	5.72	129.43	126.00
2	BA	288	A	C8-N9-C4	5.72	108.09	105.80
3	DA	336	C	N1-C2-O2	-5.72	115.47	118.90
3	DA	2041	U	C5-C4-O4	-5.72	122.47	125.90
3	DA	2271	G	N3-C2-N2	-5.72	115.90	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2688	G	N1-C2-N3	5.72	127.33	123.90
3	DA	973	A	N3-C4-C5	-5.72	122.80	126.80
5	DB	100	G	O5'-P-OP2	-5.72	100.55	105.70
1	AA	349	A	C5-C6-N1	5.72	120.56	117.70
2	BA	829	G	N3-C4-C5	5.72	131.46	128.60
2	BA	906	A	O5'-P-OP1	5.72	117.56	110.70
3	DA	822	G	C8-N9-C4	5.72	108.69	106.40
3	DA	1254	A	C5-N7-C8	-5.72	101.04	103.90
3	DA	1395	A	O5'-P-OP2	5.72	117.56	110.70
3	DA	2572	A	OP1-P-OP2	5.72	128.17	119.60
3	DA	2667	C	C6-N1-C2	-5.72	118.01	120.30
4	CA	411	G	N9-C4-C5	5.72	107.69	105.40
4	CA	775	G	C4-C5-N7	-5.72	108.51	110.80
1	AA	520	A	C5-N7-C8	-5.71	101.04	103.90
1	AA	603	U	OP1-P-O3'	5.71	117.77	105.20
1	AA	825	A	N1-C6-N6	5.71	122.03	118.60
1	AA	867	G	N9-C4-C5	5.71	107.69	105.40
2	BA	1077	G	N3-C4-C5	5.71	131.46	128.60
3	DA	213	A	C4-C5-C6	-5.71	114.14	117.00
3	DA	523	C	C6-N1-C2	5.71	122.59	120.30
3	DA	582	A	C5-C6-N6	-5.71	119.13	123.70
3	DA	1644	C	OP1-P-OP2	5.71	128.17	119.60
3	DA	1766	G	N3-C2-N2	5.71	123.90	119.90
3	DA	2285	C	O5'-P-OP2	5.71	117.56	110.70
4	CA	1761	C	N1-C2-O2	-5.71	115.47	118.90
1	AA	320	A	O5'-P-OP2	-5.71	100.56	105.70
1	AA	928	G	C2-N3-C4	-5.71	109.04	111.90
3	DA	495	G	OP1-P-O3'	-5.71	92.63	105.20
3	DA	763	G	N3-C2-N2	5.71	123.90	119.90
3	DA	1122	G	C8-N9-C4	5.71	108.69	106.40
3	DA	1605	C	N1-C2-O2	-5.71	115.47	118.90
3	DA	2841	C	C6-N1-C2	5.71	122.58	120.30
1	AA	251	G	C5-C6-O6	-5.71	125.17	128.60
3	DA	983	A	C5-C6-N6	5.71	128.27	123.70
3	DA	998	C	C5'-C4'-O4'	5.71	115.95	109.10
3	DA	1875	G	N3-C4-N9	-5.71	122.57	126.00
3	DA	2058	A	C5-C6-N1	-5.71	114.84	117.70
3	DA	2443	C	C5-C6-N1	-5.71	118.14	121.00
3	DA	2884	U	C6-N1-C2	-5.71	117.57	121.00
3	DA	2885	G	C3'-C2'-C1'	-5.71	96.93	101.50
4	CA	1953	A	C5-C6-N1	-5.71	114.84	117.70
6	AB	181	ILE	C-N-CD	-5.71	108.03	120.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1742	U	OP2-P-O3'	5.71	117.76	105.20
5	DB	14	U	O4'-C1'-N1	-5.71	103.63	108.20
1	AA	11	G	C5-C6-O6	-5.71	125.17	128.60
1	AA	895	G	C6-C5-N7	-5.71	126.97	130.40
2	BA	277	C	O5'-P-OP2	-5.71	100.56	105.70
3	DA	38	A	O5'-P-OP2	-5.71	100.56	105.70
3	DA	737	C	C2-N3-C4	-5.71	117.05	119.90
3	DA	1273	U	C5-C4-O4	-5.71	122.47	125.90
3	DA	2015	A	N9-C4-C5	5.71	108.08	105.80
3	DA	2058	A	N1-C2-N3	5.71	132.16	129.30
3	DA	2253	G	N9-C4-C5	-5.71	103.12	105.40
3	DA	2327	A	C6-N1-C2	-5.71	115.17	118.60
3	DA	2809	A	OP2-P-O3'	5.71	117.76	105.20
4	CA	576	U	N3-C4-O4	5.71	123.40	119.40
1	AA	312	C	OP2-P-O3'	5.71	117.75	105.20
1	AA	1412	C	C6-N1-C2	5.71	122.58	120.30
3	DA	202	U	C5-C6-N1	-5.71	119.85	122.70
3	DA	371	A	N3-C4-N9	-5.71	122.83	127.40
3	DA	1006	C	C6-N1-C2	5.71	122.58	120.30
3	DA	1158	C	N1-C2-O2	5.71	122.32	118.90
3	DA	1353	A	O5'-P-OP2	5.71	117.55	110.70
3	DA	1815	A	C8-N9-C4	5.71	108.08	105.80
3	DA	1959	G	N9-C4-C5	5.71	107.68	105.40
3	DA	2061	G	N9-C4-C5	5.71	107.68	105.40
3	DA	2074	U	O5'-P-OP2	-5.71	100.56	105.70
3	DA	2095	A	OP2-P-O3'	5.71	117.75	105.20
3	DA	2267	A	C4-C5-C6	5.71	119.85	117.00
3	DA	2899	A	C8-N9-C4	5.71	108.08	105.80
4	CA	684	G	N3-C2-N2	-5.71	115.91	119.90
1	AA	628	G	C8-N9-C4	-5.71	104.12	106.40
2	BA	1377	A	C8-N9-C4	-5.71	103.52	105.80
3	DA	486	C	C6-N1-C1'	-5.71	113.95	120.80
4	CA	1296	G	C5-C6-O6	5.71	132.02	128.60
1	AA	646	G	C8-N9-C4	-5.70	104.12	106.40
2	BA	22	G	C4-C5-C6	-5.70	115.38	118.80
3	DA	326	G	N3-C2-N2	-5.70	115.91	119.90
3	DA	972	A	N3-C4-C5	-5.70	122.81	126.80
3	DA	995	C	N3-C4-N4	-5.70	114.01	118.00
3	DA	1616	A	N1-C6-N6	5.70	122.02	118.60
3	DA	1701	A	O5'-P-OP1	-5.70	100.57	105.70
3	DA	1875	G	N1-C2-N3	5.70	127.32	123.90
3	DA	2318	G	C4-C5-C6	5.70	122.22	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2385	C	C5-C6-N1	-5.70	118.15	121.00
3	DA	2513	A	N9-C4-C5	5.70	108.08	105.80
3	DA	2843	G	N1-C2-N3	5.70	127.32	123.90
3	DA	1380	G	OP2-P-O3'	5.70	117.74	105.20
4	CA	2089	C	N1-C2-N3	5.70	123.19	119.20
5	DB	8	C	N3-C4-N4	5.70	121.99	118.00
56	DD	100	LEU	CB-CG-CD1	-5.70	101.31	111.00
1	AA	1054	C	C6-N1-C2	5.70	122.58	120.30
3	DA	560	C	O3'-P-O5'	-5.70	93.17	104.00
3	DA	909	A	O4'-C1'-N9	-5.70	103.64	108.20
3	DA	1010	A	N1-C6-N6	-5.70	115.18	118.60
33	DJ	19	PRO	C-N-CA	5.70	135.95	121.70
1	AA	887	G	N3-C2-N2	5.70	123.89	119.90
1	AA	1094	G	N3-C4-N9	5.70	129.42	126.00
2	BA	523	A	O5'-P-OP2	5.70	117.54	110.70
3	DA	112	U	O5'-P-OP1	-5.70	100.57	105.70
3	DA	738	G	C4-N9-C1'	5.70	133.91	126.50
3	DA	836	G	OP2-P-O3'	5.70	117.73	105.20
3	DA	974	G	C4-C5-N7	-5.70	108.52	110.80
3	DA	1561	C	OP2-P-O3'	5.70	117.74	105.20
3	DA	1973	G	N3-C2-N2	-5.70	115.91	119.90
3	DA	2724	U	C6-N1-C2	-5.70	117.58	121.00
5	DB	66	A	N1-C6-N6	5.70	122.02	118.60
19	AO	60	VAL	CG1-CB-CG2	5.70	120.02	110.90
2	BA	499	A	N9-C4-C5	5.70	108.08	105.80
3	DA	28	A	C8-N9-C4	-5.70	103.52	105.80
3	DA	1942	C	C6-N1-C2	-5.70	118.02	120.30
3	DA	2718	G	N1-C6-O6	5.70	123.32	119.90
1	AA	903	G	N1-C2-N3	5.70	127.32	123.90
2	BA	20	U	O5'-P-OP1	5.70	117.54	110.70
2	BA	580	C	C5-C6-N1	5.70	123.85	121.00
3	DA	116	C	C2-N3-C4	-5.70	117.05	119.90
3	DA	344	A	OP1-P-OP2	5.70	128.14	119.60
3	DA	1001	A	O4'-C1'-N9	5.70	112.76	108.20
3	DA	2395	C	N3-C4-N4	5.70	121.99	118.00
3	DA	2455	G	C6-N1-C2	5.70	128.52	125.10
3	DA	2754	U	N1-C2-O2	-5.70	118.81	122.80
1	AA	926	G	C8-N9-C4	-5.69	104.12	106.40
3	DA	126	A	N9-C4-C5	-5.69	103.52	105.80
3	DA	2711	A	N1-C2-N3	5.69	132.15	129.30
1	AA	1482	G	N1-C2-N2	-5.69	111.08	116.20
2	BA	695	A	C2-N3-C4	-5.69	107.75	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	578	G	C4-C5-C6	5.69	122.22	118.80
3	DA	723	C	N3-C4-C5	5.69	124.18	121.90
3	DA	1031	G	C8-N9-C4	-5.69	104.12	106.40
3	DA	1158	C	O5'-P-OP1	-5.69	100.58	105.70
3	DA	1161	C	N3-C2-O2	-5.69	117.92	121.90
3	DA	1255	U	N3-C4-O4	5.69	123.39	119.40
3	DA	1257	C	N3-C4-C5	5.69	124.18	121.90
3	DA	1330	C	C5-C4-N4	-5.69	116.22	120.20
3	DA	1988	G	C4-C5-C6	5.69	122.22	118.80
3	DA	2036	C	O5'-P-OP1	-5.69	100.58	105.70
3	DA	2245	U	O5'-P-OP1	-5.69	100.58	105.70
3	DA	537	G	C5-C6-O6	-5.69	125.19	128.60
3	DA	1210	G	C5-C6-O6	-5.69	125.19	128.60
5	DB	88	C	C5-C4-N4	-5.69	116.22	120.20
27	DC	77	VAL	CA-CB-CG2	-5.69	102.36	110.90
3	DA	582	A	N1-C6-N6	5.69	122.01	118.60
3	DA	2276	G	N3-C2-N2	-5.69	115.92	119.90
1	AA	741	G	N1-C2-N3	5.69	127.31	123.90
1	AA	766	A	C8-N9-C4	5.69	108.08	105.80
1	AA	1099	G	C8-N9-C4	-5.69	104.12	106.40
1	AA	1476	A	N9-C4-C5	5.69	108.08	105.80
3	DA	1273	U	OP1-P-OP2	5.69	128.13	119.60
3	DA	1420	A	N9-C4-C5	5.69	108.08	105.80
3	DA	2258	C	C5-C4-N4	-5.69	116.22	120.20
3	DA	2386	A	N1-C2-N3	5.69	132.14	129.30
3	DA	2412	A	O5'-P-OP2	-5.69	100.58	105.70
3	DA	2865	U	N1-C2-O2	-5.69	118.82	122.80
4	CA	785	G	N3-C4-N9	-5.69	122.59	126.00
17	AM	113	ARG	NE-CZ-NH2	-5.69	117.46	120.30
1	AA	264	C	N3-C4-N4	5.69	121.98	118.00
1	AA	920	U	C6-N1-C2	-5.69	117.59	121.00
1	AA	1094	G	N3-C4-C5	-5.68	125.76	128.60
2	BA	22	G	N1-C6-O6	5.68	123.31	119.90
2	BA	159	G	C8-N9-C1'	-5.68	119.61	127.00
2	BA	705	G	C4-C5-N7	-5.68	108.53	110.80
3	DA	94	A	C2-N3-C4	-5.68	107.76	110.60
3	DA	245	G	N1-C6-O6	5.68	123.31	119.90
3	DA	1139	G	C4-C5-C6	5.68	122.21	118.80
3	DA	1142	A	P-O3'-C3'	5.68	126.52	119.70
3	DA	1197	G	N3-C4-N9	-5.68	122.59	126.00
3	DA	1819	A	C6-C5-N7	-5.68	128.32	132.30
1	AA	1106	G	C6-C5-N7	-5.68	126.99	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1766	G	C5-C6-N1	-5.68	108.66	111.50
3	DA	1938	A	O4'-C1'-N9	5.68	112.75	108.20
3	DA	2218	G	O5'-P-OP1	5.68	117.52	110.70
3	DA	2548	U	N3-C4-O4	5.68	123.38	119.40
3	DA	2866	U	N3-C4-O4	-5.68	115.42	119.40
5	DB	74	U	N3-C4-O4	-5.68	115.42	119.40
2	BA	36	C	N3-C4-C5	-5.68	119.63	121.90
2	BA	902	G	C4-C5-N7	5.68	113.07	110.80
3	DA	1552	A	C8-N9-C4	-5.68	103.53	105.80
3	DA	2026	U	N1-C2-N3	5.68	118.31	114.90
3	DA	2274	A	C4-C5-N7	5.68	113.54	110.70
5	CB	78	A	N1-C6-N6	-5.68	115.19	118.60
3	DA	1183	U	N3-C4-O4	-5.68	115.43	119.40
3	DA	1627	G	O5'-P-OP2	-5.68	100.59	105.70
3	DA	1672	A	O5'-P-OP1	-5.68	100.59	105.70
3	DA	2397	G	N1-C2-N2	-5.68	111.09	116.20
3	DA	2658	C	C5-C4-N4	-5.68	116.23	120.20
3	DA	2703	C	N3-C4-C5	5.68	124.17	121.90
9	BE	123	VAL	CB-CA-C	-5.68	100.61	111.40
1	AA	1431	A	O5'-P-OP2	5.68	117.51	110.70
3	DA	971	G	N1-C2-N3	5.68	127.31	123.90
3	DA	1764	C	C2-N1-C1'	-5.68	112.56	118.80
3	DA	2221	G	N7-C8-N9	5.68	115.94	113.10
3	DA	2239	G	OP2-P-O3'	5.68	117.69	105.20
3	DA	2490	G	C2-N3-C4	-5.68	109.06	111.90
4	CA	2503	A	C5-C6-N1	5.68	120.54	117.70
5	DB	19	C	C5-C4-N4	-5.68	116.23	120.20
26	BL	24	LEU	N-CA-C	5.68	126.33	111.00
41	DR	94	LEU	CB-CG-CD2	-5.68	101.35	111.00
1	AA	677	U	O5'-P-OP1	-5.67	100.59	105.70
3	DA	127	A	C2-N3-C4	5.67	113.44	110.60
3	DA	832	U	N3-C2-O2	-5.67	118.23	122.20
3	DA	1027	A	C5-N7-C8	-5.67	101.06	103.90
3	DA	1663	G	OP1-P-OP2	5.67	128.11	119.60
3	DA	2447	G	C5-C6-N1	5.67	114.34	111.50
3	DA	2801	G	N3-C2-N2	-5.67	115.93	119.90
4	CA	1823	G	C4-C5-N7	5.67	113.07	110.80
5	DB	18	G	N9-C4-C5	-5.67	103.13	105.40
5	DB	105	G	N9-C4-C5	5.67	107.67	105.40
5	DB	106	G	C5-C6-O6	-5.67	125.20	128.60
2	BA	1057	G	C6-C5-N7	-5.67	127.00	130.40
3	DA	121	G	C8-N9-C4	5.67	108.67	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1277	G	N9-C4-C5	5.67	107.67	105.40
4	CA	1959	G	C2-N3-C4	-5.67	109.06	111.90
1	AA	1323	G	C5-C6-O6	-5.67	125.20	128.60
3	DA	953	G	C5-C6-O6	-5.67	125.20	128.60
3	DA	1785	A	N9-C4-C5	5.67	108.07	105.80
3	DA	2869	G	OP1-P-OP2	-5.67	111.09	119.60
6	BB	109	GLN	CA-CB-CG	5.67	125.88	113.40
8	BD	192	SER	N-CA-CB	-5.67	101.99	110.50
1	AA	363	A	N9-C4-C5	5.67	108.07	105.80
2	BA	1517	G	N3-C4-N9	-5.67	122.60	126.00
3	DA	409	G	O5'-P-OP2	-5.67	100.60	105.70
3	DA	802	A	C4-C5-C6	5.67	119.83	117.00
3	DA	830	G	N1-C6-O6	5.67	123.30	119.90
3	DA	913	U	N3-C2-O2	5.67	126.17	122.20
3	DA	1255	U	O5'-P-OP2	-5.67	100.60	105.70
1	AA	293	G	N3-C2-N2	-5.67	115.93	119.90
3	DA	116	C	O5'-P-OP2	-5.67	100.60	105.70
3	DA	130	C	O5'-P-OP2	5.67	117.50	110.70
3	DA	131	A	OP2-P-O3'	5.67	117.67	105.20
3	DA	550	C	OP1-P-O3'	5.67	117.67	105.20
3	DA	1573	G	C8-N9-C1'	-5.67	119.63	127.00
3	DA	1687	G	C4-C5-C6	5.67	122.20	118.80
4	CA	696	G	N3-C4-N9	5.67	129.40	126.00
4	CA	1740	G	C4-C5-N7	5.67	113.07	110.80
4	CA	1834	U	C5-C4-O4	-5.67	122.50	125.90
1	AA	138	G	O5'-P-OP2	-5.67	100.60	105.70
2	BA	25	C	OP2-P-O3'	5.67	117.67	105.20
3	DA	327	G	N3-C2-N2	-5.67	115.93	119.90
3	DA	523	C	N3-C4-N4	5.67	121.97	118.00
3	DA	561	G	C4-N9-C1'	-5.67	119.13	126.50
3	DA	1256	G	C4-N9-C1'	5.67	133.87	126.50
3	DA	1670	C	N3-C4-C5	-5.67	119.63	121.90
3	DA	2218	G	C8-N9-C1'	-5.67	119.63	127.00
5	DB	93	C	N3-C4-N4	5.67	121.97	118.00
3	DA	518	G	OP2-P-O3'	5.67	117.66	105.20
3	DA	804	A	C5-C6-N1	-5.67	114.87	117.70
3	DA	1556	C	OP1-P-OP2	5.67	128.10	119.60
3	DA	1903	G	OP2-P-O3'	5.67	117.66	105.20
4	CA	458	G	N1-C6-O6	-5.67	116.50	119.90
1	AA	137	U	C2-N1-C1'	-5.66	110.91	117.70
1	AA	293	G	N3-C4-C5	5.66	131.43	128.60
1	AA	1486	G	C5-C6-O6	-5.66	125.20	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	667	G	N3-C2-N2	5.66	123.86	119.90
3	DA	700	G	N3-C4-N9	-5.66	122.60	126.00
3	DA	2242	G	C6-C5-N7	-5.66	127.00	130.40
3	DA	2481	G	C4-C5-N7	-5.66	108.53	110.80
3	DA	2868	A	N1-C2-N3	5.66	132.13	129.30
3	DA	2391	G	N1-C2-N3	5.66	127.30	123.90
3	DA	2715	C	C6-N1-C1'	-5.66	114.00	120.80
3	DA	166	U	OP1-P-O3'	-5.66	92.75	105.20
3	DA	211	C	C6-N1-C2	5.66	122.56	120.30
3	DA	1165	A	OP1-P-OP2	5.66	128.09	119.60
3	DA	1528	A	N9-C4-C5	-5.66	103.54	105.80
3	DA	1614	A	C8-N9-C4	-5.66	103.54	105.80
3	DA	1687	G	C4-N9-C1'	5.66	133.86	126.50
3	DA	2002	G	C8-N9-C1'	-5.66	119.64	127.00
3	DA	2579	C	C6-N1-C2	5.66	122.56	120.30
3	DA	2640	G	N3-C2-N2	-5.66	115.94	119.90
3	DA	2760	C	C2-N1-C1'	-5.66	112.57	118.80
4	CA	1922	G	N1-C6-O6	5.66	123.30	119.90
30	DF	148	VAL	CG1-CB-CG2	5.66	119.96	110.90
1	AA	696	A	C4-C5-C6	5.66	119.83	117.00
1	AA	782	A	N9-C4-C5	5.66	108.06	105.80
1	AA	915	A	OP1-P-O3'	5.66	117.65	105.20
1	AA	1387	G	O5'-P-OP2	-5.66	100.61	105.70
1	AA	1458	G	OP1-P-O3'	5.66	117.65	105.20
3	DA	489	G	N1-C6-O6	5.66	123.30	119.90
3	DA	754	U	OP1-P-O3'	5.66	117.65	105.20
3	DA	840	C	C5-C4-N4	-5.66	116.24	120.20
3	DA	1031	G	C5-N7-C8	-5.66	101.47	104.30
3	DA	1064	C	C6-N1-C2	-5.66	118.04	120.30
3	DA	1341	G	OP1-P-OP2	-5.66	111.11	119.60
3	DA	2250	G	C6-C5-N7	-5.66	127.00	130.40
3	DA	2814	A	OP2-P-O3'	5.66	117.65	105.20
3	DA	2858	C	N3-C2-O2	5.66	125.86	121.90
1	AA	640	A	C4-C5-N7	5.66	113.53	110.70
3	DA	25	U	N3-C4-O4	5.66	123.36	119.40
3	DA	2292	U	C6-N1-C1'	-5.66	113.28	121.20
3	DA	1446	C	O5'-P-OP2	5.66	117.49	110.70
3	DA	2896	C	OP2-P-O3'	5.66	117.64	105.20
4	CA	2056	G	N1-C2-N2	5.66	121.29	116.20
1	AA	1378	C	N3-C4-C5	-5.65	119.64	121.90
1	AA	1412	C	N3-C4-C5	5.65	124.16	121.90
3	DA	18	U	C6-N1-C2	-5.65	117.61	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1161	C	N1-C2-O2	5.65	122.29	118.90
3	DA	2218	G	N1-C2-N2	-5.65	111.11	116.20
2	BA	793	U	C5-C4-O4	5.65	129.29	125.90
2	BA	1391	U	N3-C4-C5	-5.65	111.21	114.60
3	DA	307	G	N1-C6-O6	5.65	123.29	119.90
3	DA	864	G	OP2-P-O3'	5.65	117.64	105.20
3	DA	1039	A	O5'-P-OP2	-5.65	100.61	105.70
3	DA	1225	G	C5-C6-N1	5.65	114.33	111.50
3	DA	1312	U	N1-C2-O2	-5.65	118.84	122.80
3	DA	1633	G	N1-C2-N3	5.65	127.29	123.90
3	DA	1690	A	N1-C2-N3	5.65	132.13	129.30
3	DA	2581	G	C8-N9-C4	-5.65	104.14	106.40
3	DA	2744	G	N3-C4-C5	5.65	131.43	128.60
4	CA	1652	A	N9-C4-C5	-5.65	103.54	105.80
4	CA	1821	A	N7-C8-N9	-5.65	110.97	113.80
1	AA	789	U	C5-C6-N1	5.65	125.53	122.70
1	AA	895	G	N1-C6-O6	5.65	123.29	119.90
2	BA	573	A	N7-C8-N9	-5.65	110.97	113.80
3	DA	477	A	C5-C6-N6	5.65	128.22	123.70
3	DA	491	G	C2-N3-C4	-5.65	109.08	111.90
3	DA	493	G	OP1-P-O3'	5.65	117.63	105.20
3	DA	834	G	C8-N9-C4	5.65	108.66	106.40
3	DA	1251	C	P-O3'-C3'	5.65	126.48	119.70
3	DA	1518	C	C2-N3-C4	-5.65	117.07	119.90
3	DA	2489	U	N3-C4-O4	5.65	123.36	119.40
4	CA	915	C	C6-N1-C2	-5.65	118.04	120.30
4	CA	1995	U	C2-N1-C1'	5.65	124.48	117.70
1	AA	290	C	N3-C4-C5	5.65	124.16	121.90
1	AA	328	C	N3-C4-N4	-5.65	114.05	118.00
3	DA	66	C	O5'-P-OP1	-5.65	100.62	105.70
3	DA	2390	U	O5'-P-OP2	-5.65	100.62	105.70
1	AA	339	C	OP2-P-O3'	5.65	117.62	105.20
1	AA	577	G	C4-C5-N7	5.65	113.06	110.80
1	AA	906	A	C2-N3-C4	-5.65	107.78	110.60
2	BA	1343	G	C8-N9-C4	-5.65	104.14	106.40
3	DA	783	A	C6-C5-N7	-5.65	128.35	132.30
3	DA	1831	G	OP2-P-O3'	5.65	117.62	105.20
3	DA	1934	C	N3-C4-N4	-5.65	114.05	118.00
2	BA	1528	U	OP1-P-OP2	5.65	128.07	119.60
3	DA	404	A	OP2-P-O3'	5.65	117.62	105.20
3	DA	496	G	N1-C2-N2	-5.65	111.12	116.20
3	DA	1649	G	C6-C5-N7	-5.65	127.01	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1812	U	N3-C4-O4	5.65	123.35	119.40
3	DA	2002	G	C4-C5-N7	5.65	113.06	110.80
3	DA	2619	C	OP1-P-OP2	5.65	128.07	119.60
4	CA	1958	C	C6-N1-C2	5.65	122.56	120.30
2	BA	708	C	N3-C4-N4	5.64	121.95	118.00
3	DA	671	C	C6-N1-C1'	5.64	127.57	120.80
3	DA	779	U	N3-C4-O4	5.64	123.35	119.40
3	DA	1426	G	C4-N9-C1'	5.64	133.84	126.50
3	DA	1546	G	N1-C2-N2	5.64	121.28	116.20
3	DA	2357	G	O5'-P-OP2	-5.64	100.62	105.70
3	DA	2805	C	N1-C2-N3	5.64	123.15	119.20
5	DB	100	G	C4-N9-C1'	5.64	133.84	126.50
2	BA	902	G	C5-C6-O6	-5.64	125.21	128.60
4	CA	41	C	C6-N1-C2	5.64	122.56	120.30
3	DA	495	G	N1-C6-O6	-5.64	116.52	119.90
3	DA	2443	C	C5-C4-N4	-5.64	116.25	120.20
3	DA	2545	G	N1-C2-N2	5.64	121.28	116.20
4	CA	57	C	O5'-P-OP2	5.64	117.47	110.70
1	AA	370	C	C6-N1-C1'	5.64	127.57	120.80
2	BA	894	G	N9-C4-C5	-5.64	103.14	105.40
3	DA	775	G	C2-N3-C4	-5.64	109.08	111.90
3	DA	1311	G	C8-N9-C1'	-5.64	119.67	127.00
3	DA	1627	G	N3-C4-N9	-5.64	122.62	126.00
3	DA	1785	A	N3-C4-C5	-5.64	122.85	126.80
3	DA	1892	C	C6-N1-C2	5.64	122.56	120.30
4	CA	1979	U	C6-N1-C2	-5.64	117.62	121.00
1	AA	582	C	C6-N1-C2	5.64	122.56	120.30
1	AA	761	G	C4-C5-N7	5.64	113.06	110.80
2	BA	1093	A	N1-C2-N3	5.64	132.12	129.30
3	DA	508	A	C5-C6-N6	-5.64	119.19	123.70
3	DA	703	U	N3-C2-O2	-5.64	118.25	122.20
3	DA	854	C	C2-N3-C4	-5.64	117.08	119.90
1	AA	251	G	O4'-C1'-N9	-5.64	103.69	108.20
3	DA	557	C	OP1-P-OP2	-5.64	111.15	119.60
3	DA	858	G	C4-C5-N7	-5.64	108.55	110.80
3	DA	1993	U	N1-C2-O2	-5.64	118.86	122.80
4	CA	522	A	N1-C6-N6	5.64	121.98	118.60
1	AA	1355	G	N3-C2-N2	-5.63	115.96	119.90
3	DA	13	A	N7-C8-N9	5.63	116.62	113.80
3	DA	51	G	N1-C2-N2	-5.63	111.13	116.20
3	DA	303	G	C5-C6-O6	-5.63	125.22	128.60
3	DA	548	G	C5-C6-O6	-5.63	125.22	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	729	G	N1-C2-N2	5.63	121.27	116.20
3	DA	1752	C	C2-N3-C4	-5.63	117.08	119.90
3	DA	2393	U	OP1-P-O3'	5.63	117.59	105.20
3	DA	2598	A	OP2-P-O3'	5.63	117.59	105.20
3	DA	2722	G	N1-C2-N2	5.63	121.27	116.20
4	CA	745	G	N3-C2-N2	5.63	123.84	119.90
4	CA	2564	A	C5-C6-N6	5.63	128.21	123.70
1	AA	1269	A	N9-C4-C5	5.63	108.05	105.80
3	DA	703	U	N1-C2-O2	5.63	126.74	122.80
3	DA	1626	A	OP1-P-OP2	-5.63	111.15	119.60
1	AA	134	G	C6-C5-N7	5.63	133.78	130.40
1	AA	1073	U	C6-N1-C2	5.63	124.38	121.00
2	BA	993	G	C8-N9-C1'	-5.63	119.68	127.00
3	DA	1837	C	N3-C4-N4	5.63	121.94	118.00
3	DA	1879	C	OP2-P-O3'	5.63	117.59	105.20
3	DA	2293	G	N1-C6-O6	-5.63	116.52	119.90
4	CA	1655	A	C2-N3-C4	-5.63	107.78	110.60
3	DA	1389	G	C5-C6-O6	-5.63	125.22	128.60
3	DA	2415	G	C5-C6-O6	-5.63	125.22	128.60
3	DA	2434	A	C2-N3-C4	5.63	113.42	110.60
56	DD	90	PHE	CB-CG-CD2	-5.63	116.86	120.80
1	AA	438	U	O5'-P-OP2	-5.63	100.63	105.70
1	AA	761	G	N1-C6-O6	5.63	123.28	119.90
2	BA	572	A	OP1-P-OP2	5.63	128.04	119.60
2	BA	887	G	C8-N9-C4	5.63	108.65	106.40
3	DA	28	A	O5'-P-OP1	-5.63	100.63	105.70
3	DA	923	G	O5'-P-OP2	-5.63	100.63	105.70
3	DA	2357	G	C5-C6-O6	5.63	131.98	128.60
3	DA	2362	C	N3-C2-O2	5.63	125.84	121.90
4	CA	761	A	N3-C4-N9	-5.63	122.90	127.40
4	CA	2012	G	N3-C2-N2	5.63	123.84	119.90
2	BA	446	G	N3-C2-N2	-5.63	115.96	119.90
2	BA	819	A	O4'-C1'-N9	-5.63	103.70	108.20
3	DA	501	A	OP1-P-OP2	-5.63	111.16	119.60
4	CA	577	G	O5'-P-OP1	-5.63	100.64	105.70
4	CA	1797	G	C4-N9-C1'	5.63	133.81	126.50
4	CA	2406	A	N7-C8-N9	-5.63	110.99	113.80
5	DB	21	G	C5-C6-O6	5.63	131.98	128.60
3	DA	2427	C	N3-C4-C5	5.62	124.15	121.90
4	CA	1754	A	N1-C6-N6	-5.62	115.22	118.60
1	AA	391	G	O5'-P-OP2	-5.62	100.64	105.70
1	AA	778	G	C4-N9-C1'	5.62	133.81	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1278	G	O5'-P-OP2	-5.62	100.64	105.70
1	AA	1338	G	N1-C6-O6	-5.62	116.53	119.90
1	AA	1443	C	C5-C4-N4	-5.62	116.26	120.20
1	AA	1506	U	N3-C4-O4	5.62	123.34	119.40
2	BA	1511	G	C4-C5-N7	5.62	113.05	110.80
3	DA	189	G	C8-N9-C4	5.62	108.65	106.40
3	DA	1216	G	N9-C4-C5	5.62	107.65	105.40
3	DA	2067	G	C6-N1-C2	-5.62	121.73	125.10
3	DA	2747	G	C8-N9-C4	-5.62	104.15	106.40
3	DA	2764	A	OP1-P-OP2	5.62	128.03	119.60
4	CA	532	A	C4-C5-N7	5.62	113.51	110.70
1	AA	384	G	C4-N9-C1'	5.62	133.81	126.50
1	AA	867	G	N1-C6-O6	-5.62	116.53	119.90
3	DA	830	G	C2-N3-C4	-5.62	109.09	111.90
3	DA	917	A	N1-C6-N6	5.62	121.97	118.60
3	DA	920	A	O5'-P-OP2	-5.62	100.64	105.70
3	DA	945	A	N3-C4-N9	5.62	131.90	127.40
3	DA	1407	G	N3-C4-C5	5.62	131.41	128.60
3	DA	2088	A	N1-C6-N6	5.62	121.97	118.60
1	AA	1403	C	C6-N1-C2	5.62	122.55	120.30
3	DA	1326	U	C5-C4-O4	-5.62	122.53	125.90
3	DA	2551	C	C6-N1-C2	-5.62	118.05	120.30
3	DA	2751	G	C5-C6-O6	-5.62	125.23	128.60
3	DA	2807	U	C6-N1-C2	5.62	124.37	121.00
1	AA	909	A	O5'-P-OP1	-5.62	100.64	105.70
2	BA	514	C	C2-N3-C4	-5.62	117.09	119.90
2	BA	829	G	C2-N3-C4	-5.62	109.09	111.90
3	DA	706	A	N1-C2-N3	5.62	132.11	129.30
3	DA	1039	A	C2-N3-C4	-5.62	107.79	110.60
3	DA	1121	C	C5-C6-N1	-5.62	118.19	121.00
3	DA	1303	G	C5-C6-N1	5.62	114.31	111.50
3	DA	2012	G	C4-N9-C1'	5.62	133.81	126.50
3	DA	2067	G	O5'-P-OP2	-5.62	100.64	105.70
3	DA	2096	C	N1-C2-O2	-5.62	115.53	118.90
3	DA	2424	C	P-O3'-C3'	5.62	126.44	119.70
4	CA	1677	A	N9-C4-C5	-5.62	103.55	105.80
4	CA	2053	G	N1-C6-O6	-5.62	116.53	119.90
2	BA	292	G	N1-C6-O6	5.62	123.27	119.90
3	DA	370	G	C2-N3-C4	-5.62	109.09	111.90
3	DA	2026	U	C5-C6-N1	-5.62	119.89	122.70
4	CA	528	A	C5-C6-N1	-5.62	114.89	117.70
11	BG	102	ARG	NE-CZ-NH2	-5.62	117.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	671	G	N1-C6-O6	5.62	123.27	119.90
3	DA	798	G	C5-N7-C8	-5.62	101.49	104.30
3	DA	2031	A	C5-N7-C8	-5.62	101.09	103.90
3	DA	2255	G	N3-C2-N2	-5.62	115.97	119.90
3	DA	2281	A	C5-C6-N6	-5.62	119.21	123.70
3	DA	2590	A	O5'-P-OP2	5.62	117.44	110.70
4	CA	1838	C	OP1-P-O3'	5.62	117.55	105.20
5	DB	93	C	C5-C6-N1	-5.62	118.19	121.00
16	AL	12	ARG	NE-CZ-NH2	-5.62	117.49	120.30
1	AA	724	G	C4-C5-N7	5.61	113.05	110.80
3	DA	997	G	N1-C6-O6	-5.61	116.53	119.90
3	DA	1025	G	O4'-C1'-N9	-5.61	103.71	108.20
3	DA	1149	G	OP2-P-O3'	5.61	117.55	105.20
3	DA	1213	A	OP1-P-OP2	-5.61	111.18	119.60
3	DA	1464	G	C4-C5-C6	5.61	122.17	118.80
3	DA	2633	G	N1-C6-O6	-5.61	116.53	119.90
4	CA	545	U	C2-N1-C1'	5.61	124.44	117.70
4	CA	727	A	C8-N9-C4	-5.61	103.56	105.80
20	BP	74	LEU	CB-CG-CD2	5.61	120.54	111.00
3	DA	828	U	N1-C2-N3	5.61	118.27	114.90
3	DA	1263	U	C5-C6-N1	-5.61	119.89	122.70
3	DA	1293	C	C5-C4-N4	-5.61	116.27	120.20
3	DA	2702	G	C6-C5-N7	-5.61	127.03	130.40
2	BA	24	U	N1-C2-O2	-5.61	118.87	122.80
2	BA	867	G	C4-N9-C1'	5.61	133.79	126.50
2	BA	1393	U	C6-N1-C2	5.61	124.37	121.00
2	BA	1426	G	C5-C6-O6	-5.61	125.23	128.60
3	DA	129	C	O5'-P-OP1	-5.61	100.65	105.70
3	DA	1777	U	C5-C6-N1	-5.61	119.89	122.70
3	DA	2308	G	C4-N9-C1'	-5.61	119.21	126.50
3	DA	2782	G	OP1-P-O3'	5.61	117.55	105.20
10	AF	86	ARG	NE-CZ-NH1	5.61	123.11	120.30
41	DR	29	ARG	NE-CZ-NH2	5.61	123.11	120.30
2	BA	423	G	C6-C5-N7	-5.61	127.03	130.40
3	DA	632	A	C5-C6-N1	-5.61	114.90	117.70
3	DA	1305	C	C5-C6-N1	-5.61	118.19	121.00
3	DA	1938	A	C4-C5-C6	-5.61	114.19	117.00
3	DA	2548	U	N3-C2-O2	5.61	126.13	122.20
41	CR	12	ARG	NE-CZ-NH1	-5.61	117.50	120.30
1	AA	235	C	N3-C2-O2	5.61	125.83	121.90
2	BA	434	U	OP2-P-O3'	5.61	117.54	105.20
2	BA	725	G	C2-N3-C4	-5.61	109.10	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	97	C	N3-C4-C5	5.61	124.14	121.90
3	DA	229	C	C6-N1-C1'	-5.61	114.07	120.80
3	DA	487	C	C4-C5-C6	5.61	120.20	117.40
3	DA	1793	C	N3-C4-N4	-5.61	114.07	118.00
3	DA	2780	G	N3-C4-C5	5.61	131.40	128.60
3	DA	2822	G	N3-C2-N2	-5.61	115.97	119.90
4	CA	1839	G	C4-N9-C1'	5.61	133.79	126.50
4	CA	2490	G	N3-C2-N2	-5.61	115.97	119.90
2	BA	727	G	N1-C2-N2	-5.61	111.16	116.20
2	BA	1193	G	OP1-P-OP2	5.61	128.01	119.60
3	DA	583	G	C5-N7-C8	-5.61	101.50	104.30
3	DA	2383	G	N1-C6-O6	5.61	123.26	119.90
3	DA	2777	G	O4'-C1'-N9	-5.61	103.72	108.20
4	CA	2455	G	N3-C4-C5	-5.61	125.80	128.60
5	DB	6	G	N9-C4-C5	5.61	107.64	105.40
2	BA	294	U	O5'-P-OP1	-5.60	100.66	105.70
2	BA	892	A	C6-N1-C2	-5.60	115.24	118.60
3	DA	784	G	C5-N7-C8	-5.60	101.50	104.30
3	DA	1590	A	C4-C5-C6	5.60	119.80	117.00
3	DA	1981	A	N9-C4-C5	-5.60	103.56	105.80
1	AA	451	A	N1-C6-N6	-5.60	115.24	118.60
3	DA	122	G	N1-C6-O6	5.60	123.26	119.90
3	DA	284	U	C5-C4-O4	5.60	129.26	125.90
3	DA	508	A	C4-C5-N7	5.60	113.50	110.70
3	DA	784	G	OP1-P-O3'	5.60	117.52	105.20
3	DA	966	G	OP1-P-OP2	5.60	128.00	119.60
3	DA	997	G	C4-N9-C1'	-5.60	119.22	126.50
3	DA	1937	A	C2-N3-C4	-5.60	107.80	110.60
3	DA	2369	A	O5'-P-OP1	-5.60	100.66	105.70
3	DA	2553	G	OP1-P-O3'	5.60	117.53	105.20
4	CA	2740	A	C8-N9-C4	-5.60	103.56	105.80
34	DK	53	TYR	CB-CG-CD2	5.60	124.36	121.00
3	DA	1480	C	N3-C2-O2	5.60	125.82	121.90
4	CA	678	C	C5-C4-N4	-5.60	116.28	120.20
4	CA	693	A	N3-C4-C5	-5.60	122.88	126.80
4	CA	740	C	N1-C2-O2	5.60	122.26	118.90
1	AA	314	C	N3-C2-O2	-5.60	117.98	121.90
1	AA	620	C	OP1-P-O3'	5.60	117.52	105.20
1	AA	768	A	N7-C8-N9	-5.60	111.00	113.80
2	BA	813	U	C6-N1-C2	5.60	124.36	121.00
3	DA	817	C	N3-C4-N4	5.60	121.92	118.00
3	DA	838	C	C2-N1-C1'	5.60	124.96	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1376	C	N3-C2-O2	-5.60	117.98	121.90
3	DA	1774	C	C2-N1-C1'	5.60	124.96	118.80
3	DA	1977	A	C8-N9-C4	5.60	108.04	105.80
3	DA	2826	A	C6-N1-C2	-5.60	115.24	118.60
4	CA	1822	C	C2-N3-C4	-5.60	117.10	119.90
1	AA	103	U	C6-N1-C2	-5.60	117.64	121.00
3	DA	473	G	N3-C4-N9	-5.60	122.64	126.00
3	DA	689	A	C6-C5-N7	5.60	136.22	132.30
3	DA	739	A	C4-C5-N7	5.60	113.50	110.70
3	DA	1445	G	N3-C2-N2	-5.60	115.98	119.90
3	DA	2356	U	N3-C4-C5	-5.60	111.24	114.60
3	DA	2414	G	C2-N3-C4	-5.60	109.10	111.90
3	DA	2562	U	C2-N1-C1'	5.60	124.42	117.70
3	DA	2725	A	OP1-P-OP2	5.60	128.00	119.60
3	DA	2759	G	N3-C4-N9	-5.60	122.64	126.00
4	CA	578	G	O5'-P-OP1	-5.60	100.66	105.70
3	DA	1933	G	OP1-P-OP2	5.60	127.99	119.60
3	DA	2256	G	N7-C8-N9	5.60	115.90	113.10
43	DT	88	ARG	NE-CZ-NH1	-5.60	117.50	120.30
2	BA	513	C	C5-C6-N1	-5.59	118.20	121.00
3	DA	526	A	N1-C2-N3	5.59	132.10	129.30
3	DA	582	A	C6-C5-N7	-5.59	128.38	132.30
3	DA	838	C	C5-C4-N4	-5.59	116.28	120.20
3	DA	860	U	C5-C4-O4	-5.59	122.54	125.90
3	DA	1139	G	C8-N9-C1'	-5.59	119.73	127.00
3	DA	1142	A	OP2-P-O3'	5.59	117.51	105.20
3	DA	1619	G	O4'-C1'-N9	-5.59	103.72	108.20
4	CA	1821	A	C4-C5-N7	-5.59	107.90	110.70
4	CA	1896	G	N9-C4-C5	-5.59	103.16	105.40
1	AA	244	U	N1-C1'-C2'	5.59	121.27	114.00
1	AA	584	G	N1-C6-O6	5.59	123.25	119.90
1	AA	686	U	O4'-C1'-N1	5.59	112.67	108.20
1	AA	1354	U	C2-N1-C1'	5.59	124.41	117.70
2	BA	430	A	C8-N9-C4	5.59	108.04	105.80
3	DA	592	A	N9-C4-C5	5.59	108.04	105.80
3	DA	735	A	N1-C6-N6	5.59	121.95	118.60
3	DA	1764	C	C5-C6-N1	-5.59	118.20	121.00
3	DA	2242	G	N1-C2-N3	5.59	127.25	123.90
3	DA	2819	G	C5-C6-O6	-5.59	125.25	128.60
42	DS	83	TYR	CB-CG-CD1	5.59	124.36	121.00
1	AA	560	A	C4-C5-N7	5.59	113.50	110.70
1	AA	905	U	N3-C2-O2	5.59	126.11	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1465	A	OP1-P-OP2	5.59	127.98	119.60
1	AA	1479	C	O5'-P-OP2	5.59	117.41	110.70
2	BA	491	G	N1-C6-O6	5.59	123.25	119.90
3	DA	32	C	C6-N1-C1'	5.59	127.51	120.80
3	DA	173	A	C4-C5-N7	5.59	113.49	110.70
3	DA	515	A	OP1-P-O3'	5.59	117.50	105.20
3	DA	587	C	N3-C2-O2	-5.59	117.99	121.90
3	DA	1661	G	N9-C4-C5	-5.59	103.16	105.40
3	DA	2606	C	C5-C4-N4	-5.59	116.29	120.20
3	DA	2627	G	C2-N3-C4	5.59	114.69	111.90
4	CA	623	C	C6-N1-C2	-5.59	118.06	120.30
4	CA	1189	A	N1-C6-N6	-5.59	115.25	118.60
4	CA	2002	G	N3-C4-N9	-5.59	122.65	126.00
4	CA	2880	C	C6-N1-C2	-5.59	118.06	120.30
40	DQ	71	ARG	NE-CZ-NH2	-5.59	117.50	120.30
44	DU	77	ARG	NE-CZ-NH2	-5.59	117.50	120.30
1	AA	762	U	N3-C2-O2	5.59	126.11	122.20
3	DA	679	C	N3-C4-N4	-5.59	114.09	118.00
3	DA	1801	A	N3-C4-C5	-5.59	122.89	126.80
3	DA	2514	U	C2-N3-C4	-5.59	123.65	127.00
1	AA	1400	C	C2-N1-C1'	5.59	124.94	118.80
2	BA	803	G	N1-C2-N2	-5.59	111.17	116.20
2	BA	1419	G	C2-N3-C4	-5.59	109.11	111.90
3	DA	1253	A	N3-C4-C5	5.59	130.71	126.80
3	DA	1829	A	N1-C6-N6	-5.59	115.25	118.60
3	DA	2846	G	C2-N3-C4	-5.59	109.11	111.90
3	DA	2895	G	C8-N9-C1'	5.59	134.26	127.00
4	CA	1346	G	C8-N9-C4	-5.59	104.17	106.40
9	AE	15	LEU	CB-CG-CD2	-5.59	101.50	111.00
38	DO	95	THR	N-CA-CB	-5.59	99.68	110.30
1	AA	1163	A	N1-C6-N6	5.58	121.95	118.60
3	DA	448	U	C6-N1-C1'	-5.58	113.38	121.20
3	DA	2463	C	N1-C2-O2	-5.58	115.55	118.90
5	DB	66	A	O4'-C1'-N9	-5.58	103.73	108.20
5	DB	113	C	N1-C2-O2	5.58	122.25	118.90
3	DA	17	G	C5-C6-O6	5.58	131.95	128.60
3	DA	202	U	N1-C2-N3	5.58	118.25	114.90
3	DA	793	A	C8-N9-C4	-5.58	103.57	105.80
3	DA	1034	G	N3-C2-N2	-5.58	115.99	119.90
3	DA	1339	G	C5-C6-N1	-5.58	108.71	111.50
3	DA	1606	C	C6-N1-C2	-5.58	118.07	120.30
3	DA	2018	G	N3-C4-C5	-5.58	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2608	G	C4-C5-N7	5.58	113.03	110.80
4	CA	781	A	N9-C4-C5	5.58	108.03	105.80
4	CA	2627	G	N3-C4-N9	5.58	129.35	126.00
1	AA	700	G	N1-C6-O6	-5.58	116.55	119.90
2	BA	757	U	C5-C6-N1	5.58	125.49	122.70
2	BA	925	G	N7-C8-N9	-5.58	110.31	113.10
3	DA	59	U	N3-C4-C5	-5.58	111.25	114.60
3	DA	779	U	N1-C2-O2	-5.58	118.89	122.80
3	DA	1830	C	N3-C2-O2	5.58	125.81	121.90
3	DA	1882	U	N3-C4-O4	5.58	123.31	119.40
3	DA	2088	A	N1-C2-N3	5.58	132.09	129.30
3	DA	457	A	C6-N1-C2	-5.58	115.25	118.60
3	DA	1789	A	OP1-P-OP2	5.58	127.97	119.60
3	DA	2451	A	C8-N9-C4	-5.58	103.57	105.80
4	CA	2055	C	C6-N1-C2	-5.58	118.07	120.30
1	AA	880	C	OP2-P-O3'	5.58	117.47	105.20
1	AA	1459	G	N3-C2-N2	-5.58	116.00	119.90
2	BA	119	A	C5-C6-N6	-5.58	119.24	123.70
2	BA	527	G	N3-C2-N2	-5.58	116.00	119.90
2	BA	1399	C	N1-C2-O2	-5.58	115.55	118.90
3	DA	2043	C	OP1-P-O3'	5.58	117.47	105.20
3	DA	2544	G	N7-C8-N9	5.58	115.89	113.10
3	DA	2720	U	N3-C4-O4	5.58	123.31	119.40
4	CA	974	G	C6-C5-N7	-5.58	127.05	130.40
3	DA	534	U	C6-N1-C2	5.58	124.35	121.00
3	DA	677	A	C6-C5-N7	-5.58	128.40	132.30
3	DA	2725	A	C5-C6-N6	-5.58	119.24	123.70
4	CA	2062	A	N1-C6-N6	-5.58	115.25	118.60
1	AA	66	A	C4-C5-N7	5.58	113.49	110.70
1	AA	118	U	O5'-P-OP1	-5.58	100.68	105.70
2	BA	1142	G	C8-N9-C4	-5.58	104.17	106.40
2	BA	1146	A	C5-C6-N6	5.58	128.16	123.70
3	DA	721	A	C2-N3-C4	-5.58	107.81	110.60
3	DA	1410	G	N3-C4-C5	5.58	131.39	128.60
3	DA	2823	A	C5-C6-N6	-5.58	119.24	123.70
4	CA	1798	U	C6-N1-C2	5.58	124.35	121.00
2	BA	287	U	C6-N1-C2	5.57	124.34	121.00
2	BA	318	G	C8-N9-C4	-5.57	104.17	106.40
2	BA	552	U	OP2-P-O3'	5.57	117.46	105.20
2	BA	872	A	C4-N9-C1'	5.57	136.33	126.30
3	DA	1271	G	O5'-P-OP1	5.57	117.39	110.70
3	DA	2616	C	C5-C4-N4	-5.57	116.30	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2748	A	C6-N1-C2	-5.57	115.26	118.60
34	DK	27	ARG	NE-CZ-NH1	5.57	123.09	120.30
2	BA	159	G	N3-C4-N9	5.57	129.34	126.00
3	DA	89	A	C5-C6-N6	-5.57	119.24	123.70
3	DA	687	C	N3-C2-O2	5.57	125.80	121.90
3	DA	1468	U	OP2-P-O3'	5.57	117.46	105.20
4	CA	2053	G	C5-C6-O6	5.57	131.94	128.60
5	DB	91	C	N1-C2-O2	-5.57	115.56	118.90
3	DA	1120	G	C5-C6-O6	-5.57	125.26	128.60
3	DA	1334	G	C2-N3-C4	-5.57	109.11	111.90
3	DA	1405	U	C6-N1-C2	-5.57	117.66	121.00
3	DA	2698	U	N3-C2-O2	-5.57	118.30	122.20
4	CA	1643	G	C5-C6-O6	5.57	131.94	128.60
30	CF	71	LYS	CB-CG-CD	5.57	126.08	111.60
1	AA	625	U	N3-C2-O2	5.57	126.10	122.20
1	AA	824	G	C5-C6-O6	-5.57	125.26	128.60
2	BA	1074	G	N3-C4-N9	-5.57	122.66	126.00
3	DA	473	G	N3-C4-C5	5.57	131.38	128.60
3	DA	1697	G	O5'-P-OP1	-5.57	100.69	105.70
3	DA	2653	U	N1-C2-N3	5.57	118.24	114.90
3	DA	2712	C	N1-C2-N3	5.57	123.10	119.20
3	DA	2778	A	O5'-P-OP1	-5.57	100.69	105.70
3	DA	524	G	C8-N9-C4	-5.57	104.17	106.40
3	DA	703	U	C6-N1-C1'	-5.57	113.41	121.20
3	DA	936	A	N7-C8-N9	5.57	116.58	113.80
3	DA	1302	A	N7-C8-N9	-5.57	111.02	113.80
3	DA	2426	A	N1-C6-N6	-5.57	115.26	118.60
3	DA	2878	U	N3-C4-O4	5.57	123.30	119.40
4	CA	2514	U	C5-C6-N1	5.57	125.48	122.70
1	AA	295	C	N1-C2-O2	-5.57	115.56	118.90
1	AA	605	U	N3-C2-O2	-5.57	118.30	122.20
1	AA	928	G	N3-C4-C5	5.57	131.38	128.60
1	AA	1478	U	N3-C2-O2	5.57	126.10	122.20
3	DA	76	C	N3-C4-C5	5.57	124.13	121.90
3	DA	397	U	N3-C2-O2	5.57	126.10	122.20
3	DA	695	G	OP2-P-O3'	5.57	117.45	105.20
3	DA	865	C	N1-C2-O2	5.57	122.24	118.90
3	DA	974	G	OP1-P-OP2	5.57	127.95	119.60
3	DA	1257	C	N1-C2-O2	-5.57	115.56	118.90
3	DA	1899	A	C6-C5-N7	-5.57	128.41	132.30
3	DA	2752	C	N1-C1'-C2'	-5.57	105.88	112.00
1	AA	588	G	OP2-P-O3'	5.56	117.44	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	331	C	N1-C2-O2	-5.56	115.56	118.90
3	DA	525	U	N1-C1'-C2'	-5.56	105.88	112.00
4	CA	1938	A	C2-N3-C4	5.56	113.38	110.60
4	CA	2017	U	N1-C2-N3	5.56	118.24	114.90
1	AA	576	C	C5-C4-N4	-5.56	116.31	120.20
1	AA	659	U	N1-C2-O2	5.56	126.69	122.80
1	AA	1368	A	N7-C8-N9	5.56	116.58	113.80
2	BA	754	C	C5-C4-N4	-5.56	116.31	120.20
3	DA	811	U	C6-N1-C1'	-5.56	113.41	121.20
3	DA	2395	C	C5-C4-N4	-5.56	116.31	120.20
3	DA	2764	A	OP2-P-O3'	5.56	117.44	105.20
4	CA	2433	A	C5-C6-N1	5.56	120.48	117.70
5	DB	101	A	C5-C6-N6	-5.56	119.25	123.70
1	AA	391	G	N1-C6-O6	5.56	123.24	119.90
1	AA	1526	G	C8-N9-C1'	-5.56	119.77	127.00
3	DA	577	G	C5-C6-O6	5.56	131.94	128.60
3	DA	1991	U	N1-C2-O2	-5.56	118.91	122.80
4	CA	690	G	OP1-P-OP2	-5.56	111.26	119.60
4	CA	1773	A	N1-C6-N6	-5.56	115.26	118.60
1	AA	22	G	N1-C2-N2	-5.56	111.20	116.20
1	AA	585	G	O5'-P-OP2	-5.56	100.70	105.70
1	AA	1386	G	O5'-P-OP2	-5.56	100.70	105.70
1	AA	1421	G	OP1-P-OP2	5.56	127.94	119.60
2	BA	577	G	C2-N3-C4	-5.56	109.12	111.90
3	DA	1323	C	OP2-P-O3'	5.56	117.43	105.20
3	DA	1680	U	N3-C4-C5	5.56	117.94	114.60
3	DA	1974	C	C5-C4-N4	5.56	124.09	120.20
3	DA	2512	C	N3-C4-N4	-5.56	114.11	118.00
3	DA	2819	G	N1-C2-N2	5.56	121.20	116.20
4	CA	700	G	N1-C2-N2	5.56	121.20	116.20
5	DB	68	C	OP2-P-O3'	5.56	117.43	105.20
5	DB	73	A	N3-C4-N9	-5.56	122.95	127.40
1	AA	326	G	N9-C4-C5	-5.56	103.18	105.40
1	AA	499	A	C5-C6-N6	5.56	128.15	123.70
2	BA	428	G	O4'-C1'-N9	5.56	112.65	108.20
3	DA	749	A	C6-N1-C2	-5.56	115.27	118.60
3	DA	1467	U	C6-N1-C2	5.56	124.33	121.00
3	DA	1586	A	OP2-P-O3'	5.56	117.43	105.20
3	DA	2047	C	C2-N3-C4	5.56	122.68	119.90
3	DA	2445	2MG	OP2-P-O3'	5.56	117.43	105.20
3	DA	2466	C	C5-C4-N4	-5.56	116.31	120.20
3	DA	2485	G	O5'-P-OP1	5.56	117.37	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2846	G	OP2-P-O3'	5.56	117.43	105.20
4	CA	528	A	C2-N3-C4	-5.56	107.82	110.60
4	CA	1158	C	C6-N1-C2	-5.56	118.08	120.30
6	AB	15	HIS	N-CA-CB	5.56	120.60	110.60
1	AA	11	G	N9-C4-C5	-5.56	103.18	105.40
3	DA	930	G	O4'-C1'-N9	5.56	112.64	108.20
3	DA	1155	A	O4'-C1'-N9	5.56	112.64	108.20
3	DA	1685	C	C6-N1-C2	5.56	122.52	120.30
3	DA	1748	C	N3-C4-N4	5.56	121.89	118.00
4	CA	729	G	N3-C2-N2	-5.56	116.01	119.90
4	CA	2056	G	N9-C4-C5	-5.56	103.18	105.40
49	DZ	14	LEU	CB-CG-CD2	-5.56	101.55	111.00
1	AA	782	A	N1-C2-N3	5.55	132.08	129.30
2	BA	1511	G	C6-C5-N7	-5.55	127.07	130.40
3	DA	247	G	N7-C8-N9	5.55	115.88	113.10
3	DA	674	G	C8-N9-C4	-5.55	104.18	106.40
3	DA	690	G	C6-C5-N7	-5.55	127.07	130.40
3	DA	973	A	C5-C6-N1	5.55	120.48	117.70
3	DA	1217	U	C5-C4-O4	-5.55	122.57	125.90
3	DA	1268	A	C8-N9-C4	-5.55	103.58	105.80
3	DA	2488	G	C5-C6-N1	-5.55	108.72	111.50
4	CA	1803	A	C4-C5-N7	-5.55	107.92	110.70
1	AA	1482	G	C4-N9-C1'	5.55	133.72	126.50
2	BA	145	G	C8-N9-C4	-5.55	104.18	106.40
3	DA	450	G	C4-C5-N7	-5.55	108.58	110.80
3	DA	915	C	C5-C4-N4	-5.55	116.31	120.20
3	DA	1031	G	C6-C5-N7	-5.55	127.07	130.40
3	DA	1813	G	N1-C6-O6	5.55	123.23	119.90
3	DA	2272	U	C6-N1-C2	5.55	124.33	121.00
1	AA	719	C	O5'-P-OP2	-5.55	100.70	105.70
3	DA	564	C	C5-C4-N4	5.55	124.09	120.20
3	DA	1500	G	C5-N7-C8	-5.55	101.52	104.30
3	DA	2317	A	C6-N1-C2	5.55	121.93	118.60
4	CA	1851	U	N1-C2-N3	-5.55	111.57	114.90
20	BP	67	ILE	CG1-CB-CG2	-5.55	99.19	111.40
1	AA	1269	A	C5-C6-N6	5.55	128.14	123.70
2	BA	525	C	OP2-P-O3'	5.55	117.41	105.20
3	DA	338	G	C4-N9-C1'	5.55	133.72	126.50
3	DA	461	C	N1-C2-O2	5.55	122.23	118.90
3	DA	766	U	OP2-P-O3'	5.55	117.41	105.20
3	DA	949	G	N1-C6-O6	5.55	123.23	119.90
3	DA	1326	U	C6-N1-C2	5.55	124.33	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1759	A	C5-C6-N1	5.55	120.47	117.70
3	DA	2688	G	C5-C6-O6	5.55	131.93	128.60
3	DA	2760	C	C6-N1-C2	5.55	122.52	120.30
3	DA	2850	A	C4-C5-N7	5.55	113.47	110.70
4	CA	1981	A	N1-C6-N6	5.55	121.93	118.60
2	BA	1054	C	N3-C4-N4	5.55	121.88	118.00
3	DA	30	G	C6-N1-C2	-5.55	121.77	125.10
3	DA	192	C	OP1-P-O3'	5.55	117.40	105.20
3	DA	400	G	N3-C4-C5	-5.55	125.83	128.60
3	DA	1233	C	N3-C4-C5	-5.55	119.68	121.90
3	DA	1688	U	O5'-P-OP2	-5.55	100.71	105.70
3	DA	1710	G	O5'-P-OP2	-5.55	100.71	105.70
3	DA	1798	U	N1-C2-N3	5.55	118.23	114.90
3	DA	1804	C	O5'-P-OP2	-5.55	100.71	105.70
3	DA	1954	G	C8-N9-C4	-5.55	104.18	106.40
4	CA	2091	C	O5'-P-OP2	5.55	117.36	110.70
2	BA	1092	A	N1-C6-N6	-5.54	115.27	118.60
3	DA	766	U	N3-C4-C5	-5.54	111.27	114.60
3	DA	1219	U	O5'-P-OP2	-5.54	100.71	105.70
3	DA	2260	C	OP1-P-OP2	5.54	127.92	119.60
30	DF	168	LEU	CB-CG-CD2	-5.54	101.57	111.00
1	AA	770	C	N3-C4-C5	5.54	124.12	121.90
1	AA	1523	G	C8-N9-C4	-5.54	104.18	106.40
3	DA	14	A	N1-C6-N6	5.54	121.93	118.60
3	DA	1569	A	O5'-P-OP1	-5.54	100.71	105.70
3	DA	2123	G	N3-C2-N2	-5.54	116.02	119.90
3	DA	2684	U	C2-N1-C1'	5.54	124.35	117.70
3	DA	2848	G	N3-C4-C5	5.54	131.37	128.60
4	CA	748	G	C8-N9-C1'	5.54	134.21	127.00
2	BA	1108	G	OP1-P-OP2	5.54	127.91	119.60
2	BA	1501	C	O5'-P-OP1	-5.54	100.71	105.70
3	DA	388	G	O5'-P-OP2	-5.54	100.71	105.70
3	DA	1018	U	C5-C4-O4	-5.54	122.58	125.90
3	DA	1288	G	C5-C6-O6	-5.54	125.28	128.60
3	DA	1332	G	OP1-P-O3'	5.54	117.39	105.20
3	DA	2647	U	C5-C6-N1	-5.54	119.93	122.70
3	DA	2816	G	OP2-P-O3'	5.54	117.39	105.20
3	DA	2859	G	N3-C2-N2	-5.54	116.02	119.90
2	BA	700	G	N3-C4-C5	5.54	131.37	128.60
3	DA	970	U	O5'-P-OP2	5.54	117.35	110.70
3	DA	1510	G	N9-C4-C5	5.54	107.62	105.40
3	DA	2828	G	N3-C2-N2	-5.54	116.02	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	305	G	C5-C6-O6	5.54	131.92	128.60
3	DA	212	G	C5-C6-O6	5.54	131.92	128.60
3	DA	1108	U	O5'-P-OP2	5.54	117.35	110.70
3	DA	1671	U	C6-N1-C2	-5.54	117.68	121.00
4	CA	1341	G	C8-N9-C4	-5.54	104.18	106.40
4	CA	1967	C	O5'-P-OP2	-5.54	100.72	105.70
1	AA	271	C	C2-N1-C1'	5.54	124.89	118.80
1	AA	968	A	C4-C5-N7	5.54	113.47	110.70
2	BA	11	G	N3-C4-C5	5.54	131.37	128.60
3	DA	97	C	C2-N3-C4	-5.54	117.13	119.90
3	DA	2297	A	OP1-P-OP2	5.54	127.91	119.60
3	DA	2544	G	OP1-P-OP2	5.54	127.91	119.60
4	CA	2271	G	C8-N9-C1'	-5.54	119.80	127.00
1	AA	4	U	C6-N1-C1'	-5.54	113.45	121.20
1	AA	1416	G	C4-C5-N7	-5.54	108.59	110.80
3	DA	722	A	C6-N1-C2	-5.54	115.28	118.60
3	DA	1528	A	OP2-P-O3'	5.54	117.38	105.20
3	DA	1703	G	C8-N9-C4	5.54	108.61	106.40
3	DA	2713	U	OP1-P-O3'	-5.54	93.02	105.20
1	AA	857	C	N3-C4-N4	5.53	121.87	118.00
1	AA	1200	C	N3-C4-C5	5.53	124.11	121.90
1	AA	1204	A	C5-C6-N6	-5.53	119.27	123.70
2	BA	521	G	C8-N9-C4	-5.53	104.19	106.40
3	DA	794	A	N3-C4-C5	5.53	130.67	126.80
3	DA	1907	G	N1-C2-N2	-5.53	111.22	116.20
3	DA	2308	G	C8-N9-C1'	5.53	134.19	127.00
3	DA	2553	G	N3-C2-N2	5.53	123.77	119.90
3	DA	2590	A	C5-N7-C8	-5.53	101.13	103.90
4	CA	2868	A	C5-C6-N6	-5.53	119.27	123.70
1	AA	896	C	N1-C2-O2	-5.53	115.58	118.90
3	DA	1125	G	OP1-P-O3'	5.53	117.37	105.20
3	DA	2673	G	C6-N1-C2	5.53	128.42	125.10
5	DB	45	A	OP2-P-O3'	5.53	117.37	105.20
13	AI	94	LEU	CA-CB-CG	5.53	128.02	115.30
1	AA	510	A	OP2-P-O3'	5.53	117.37	105.20
1	AA	1418	A	N1-C2-N3	5.53	132.06	129.30
1	AA	1479	C	OP2-P-O3'	5.53	117.36	105.20
3	DA	54	G	C5-C6-O6	5.53	131.92	128.60
3	DA	1882	U	OP1-P-OP2	-5.53	111.30	119.60
3	DA	2890	G	C5-C6-O6	-5.53	125.28	128.60
4	CA	240	C	C5-C6-N1	5.53	123.77	121.00
4	CA	718	A	N1-C6-N6	5.53	121.92	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	CR	2	ARG	NE-CZ-NH1	-5.53	117.53	120.30
3	DA	251	A	OP2-P-O3'	5.53	117.36	105.20
3	DA	2892	G	C6-C5-N7	-5.53	127.08	130.40
4	CA	1278	C	O5'-P-OP2	-5.53	100.72	105.70
1	AA	1367	C	N3-C2-O2	-5.53	118.03	121.90
2	BA	1401	G	C8-N9-C4	5.53	108.61	106.40
3	DA	463	G	C8-N9-C4	-5.53	104.19	106.40
3	DA	819	A	C6-N1-C2	5.53	121.92	118.60
3	DA	1130	U	C6-N1-C2	-5.53	117.68	121.00
3	DA	1425	G	N3-C2-N2	-5.53	116.03	119.90
3	DA	2340	A	C6-N1-C2	-5.53	115.28	118.60
3	DA	2465	C	C5-C4-N4	-5.53	116.33	120.20
3	DA	2591	C	O5'-P-OP2	5.53	117.33	110.70
4	CA	1740	G	C5-C6-O6	-5.53	125.28	128.60
4	CA	2603	G	N1-C6-O6	5.53	123.22	119.90
1	AA	230	G	N3-C4-N9	-5.53	122.68	126.00
1	AA	800	G	C8-N9-C4	-5.53	104.19	106.40
1	AA	854	U	OP1-P-OP2	-5.53	111.31	119.60
2	BA	929	G	N3-C2-N2	-5.53	116.03	119.90
3	DA	240	C	C5-C4-N4	-5.53	116.33	120.20
3	DA	380	G	N3-C2-N2	-5.53	116.03	119.90
3	DA	909	A	C8-N9-C4	5.53	108.01	105.80
3	DA	1731	G	N1-C2-N2	5.53	121.17	116.20
3	DA	1797	G	OP1-P-OP2	5.53	127.89	119.60
3	DA	1948	G	N9-C4-C5	5.53	107.61	105.40
9	AE	44	GLY	N-CA-C	-5.53	99.29	113.10
2	BA	1298	U	C2-N1-C1'	5.52	124.33	117.70
3	DA	446	G	C8-N9-C1'	-5.52	119.82	127.00
3	DA	694	U	N3-C4-O4	5.52	123.27	119.40
3	DA	1565	C	C2-N3-C4	-5.52	117.14	119.90
1	AA	578	C	OP1-P-O3'	-5.52	93.05	105.20
1	AA	688	G	C2-N3-C4	-5.52	109.14	111.90
3	DA	775	G	C4-C5-N7	5.52	113.01	110.80
3	DA	1455	G	N1-C2-N3	5.52	127.21	123.90
3	DA	2244	U	C2-N1-C1'	5.52	124.33	117.70
3	DA	2415	G	N3-C4-C5	5.52	131.36	128.60
1	AA	1479	C	N1-C2-N3	-5.52	115.33	119.20
3	DA	1154	G	N7-C8-N9	5.52	115.86	113.10
3	DA	2463	C	N3-C4-C5	-5.52	119.69	121.90
4	CA	2089	C	C4-C5-C6	5.52	120.16	117.40
1	AA	1071	C	N1-C2-O2	-5.52	115.59	118.90
1	AA	1409	C	OP1-P-OP2	-5.52	111.32	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	395	C	N3-C4-C5	-5.52	119.69	121.90
2	BA	887	G	N9-C4-C5	-5.52	103.19	105.40
3	DA	1750	G	N3-C4-C5	-5.52	125.84	128.60
3	DA	1965	C	C5-C4-N4	-5.52	116.34	120.20
3	DA	2003	A	N3-C4-N9	5.52	131.82	127.40
3	DA	2453	A	C2-N3-C4	-5.52	107.84	110.60
4	CA	785	G	C8-N9-C4	5.52	108.61	106.40
5	DB	116	G	OP1-P-OP2	5.52	127.88	119.60
34	DK	4	PHE	CB-CG-CD1	5.52	124.66	120.80
1	AA	1365	G	C4-C5-N7	5.52	113.01	110.80
2	BA	1068	G	C6-C5-N7	-5.52	127.09	130.40
3	DA	1209	U	N3-C2-O2	5.52	126.06	122.20
3	DA	1274	A	OP1-P-OP2	5.52	127.88	119.60
3	DA	1950	G	C6-C5-N7	-5.52	127.09	130.40
7	AC	136	ARG	CA-CB-CG	5.52	125.54	113.40
9	BE	15	LEU	CB-CG-CD2	-5.52	101.62	111.00
1	AA	763	G	O5'-P-OP2	5.52	117.32	110.70
3	DA	292	U	C6-N1-C2	5.52	124.31	121.00
3	DA	1709	U	N3-C4-O4	5.52	123.26	119.40
4	CA	1232	G	C5-C6-O6	-5.52	125.29	128.60
4	CA	1676	A	C4-C5-N7	-5.52	107.94	110.70
42	DS	44	GLY	N-CA-C	-5.52	99.31	113.10
1	AA	1102	A	C4-C5-C6	5.51	119.76	117.00
2	BA	404	G	C4-C5-N7	5.51	113.01	110.80
3	DA	2315	G	C2-N3-C4	-5.51	109.14	111.90
5	DB	55	U	N1-C2-O2	-5.51	118.94	122.80
14	AJ	45	ARG	NE-CZ-NH2	-5.51	117.54	120.30
1	AA	930	C	N3-C2-O2	-5.51	118.04	121.90
1	AA	1443	C	N3-C4-C5	5.51	124.11	121.90
3	DA	755	U	OP1-P-OP2	5.51	127.87	119.60
3	DA	1034	G	C8-N9-C4	-5.51	104.19	106.40
3	DA	2388	A	C2-N3-C4	5.51	113.36	110.60
3	DA	2800	A	N1-C2-N3	5.51	132.06	129.30
3	DA	1210	G	C4-C5-N7	5.51	113.00	110.80
3	DA	1236	G	C5-C6-O6	5.51	131.91	128.60
3	DA	1527	G	C6-C5-N7	-5.51	127.09	130.40
3	DA	1691	C	N3-C4-C5	5.51	124.11	121.90
4	CA	1027	A	N1-C6-N6	-5.51	115.29	118.60
2	BA	559	A	N1-C2-N3	5.51	132.06	129.30
2	BA	570	G	N3-C4-C5	-5.51	125.84	128.60
3	DA	1270	C	N3-C4-N4	5.51	121.86	118.00
3	DA	2049	G	C5-C6-O6	-5.51	125.30	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2054	A	N1-C2-N3	5.51	132.06	129.30
3	DA	2242	G	C2-N3-C4	-5.51	109.14	111.90
1	AA	729	A	C5-N7-C8	-5.51	101.15	103.90
1	AA	901	A	C6-C5-N7	-5.51	128.44	132.30
3	DA	1041	G	C2-N3-C4	-5.51	109.15	111.90
3	DA	1358	G	N1-C6-O6	5.51	123.20	119.90
3	DA	2632	A	OP1-P-OP2	5.51	127.86	119.60
1	AA	814	A	C2-N3-C4	-5.51	107.85	110.60
1	AA	1058	G	C4-C5-N7	5.51	113.00	110.80
1	AA	1466	C	C2-N3-C4	-5.51	117.15	119.90
3	DA	1233	C	O5'-P-OP2	-5.51	100.74	105.70
3	DA	2644	G	OP1-P-OP2	-5.51	111.34	119.60
3	DA	2737	G	C2-N3-C4	-5.51	109.15	111.90
4	CA	1744	A	O4'-C1'-N9	5.51	112.61	108.20
4	CA	2494	G	N1-C6-O6	5.51	123.20	119.90
36	DM	78	ARG	NE-CZ-NH1	-5.51	117.55	120.30
3	DA	322	A	O5'-P-OP2	5.50	117.31	110.70
3	DA	1721	G	N9-C4-C5	-5.50	103.20	105.40
3	DA	1889	A	N7-C8-N9	5.50	116.55	113.80
4	CA	186	G	C6-C5-N7	5.50	133.70	130.40
4	CA	240	C	C2-N3-C4	5.50	122.65	119.90
32	DH	116	ARG	C-N-CA	5.50	135.46	121.70
1	AA	357	G	C8-N9-C4	-5.50	104.20	106.40
1	AA	1281	C	N3-C4-C5	-5.50	119.70	121.90
3	DA	1818	U	N3-C2-O2	-5.50	118.35	122.20
3	DA	1891	G	N3-C2-N2	-5.50	116.05	119.90
3	DA	2428	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	739	C	N3-C2-O2	5.50	125.75	121.90
1	AA	756	C	O5'-P-OP2	-5.50	100.75	105.70
1	AA	1074	G	C6-C5-N7	-5.50	127.10	130.40
2	BA	344	A	C4-C5-C6	5.50	119.75	117.00
2	BA	484	G	C8-N9-C1'	-5.50	119.85	127.00
2	BA	1395	C	N3-C2-O2	5.50	125.75	121.90
3	DA	315	G	O5'-P-OP2	-5.50	100.75	105.70
3	DA	452	G	C8-N9-C4	-5.50	104.20	106.40
3	DA	962	G	O4'-C1'-N9	5.50	112.60	108.20
3	DA	1660	G	C6-C5-N7	-5.50	127.10	130.40
3	DA	1940	U	OP2-P-O3'	5.50	117.30	105.20
3	DA	2252	G	N1-C2-N3	5.50	127.20	123.90
3	DA	2469	A	OP2-P-O3'	5.50	117.30	105.20
4	CA	2071	A	N1-C6-N6	5.50	121.90	118.60
4	CA	2502	G	N1-C6-O6	-5.50	116.60	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	1092	A	O5'-P-OP1	-5.50	100.75	105.70
3	DA	1795	C	C2-N3-C4	-5.50	117.15	119.90
1	AA	22	G	C6-C5-N7	-5.50	127.10	130.40
1	AA	1512	U	OP2-P-O3'	5.50	117.30	105.20
2	BA	1104	G	C4-C5-C6	5.50	122.10	118.80
3	DA	388	G	N3-C4-N9	5.50	129.30	126.00
3	DA	601	C	N1-C2-O2	-5.50	115.60	118.90
4	CA	2412	A	N7-C8-N9	-5.50	111.05	113.80
29	DE	88	ARG	NE-CZ-NH1	-5.50	117.55	120.30
1	AA	22	G	C8-N9-C1'	-5.50	119.86	127.00
3	DA	2461	A	N1-C6-N6	5.50	121.90	118.60
4	CA	1679	A	O5'-P-OP1	-5.50	100.75	105.70
4	CA	1942	C	C2-N1-C1'	5.50	124.84	118.80
5	DB	60	C	OP1-P-O3'	-5.50	93.11	105.20
1	AA	71	A	N1-C6-N6	5.50	121.90	118.60
2	BA	108	G	OP1-P-O3'	5.50	117.29	105.20
3	DA	580	U	C2-N1-C1'	5.50	124.29	117.70
3	DA	1574	C	C5-C4-N4	-5.50	116.35	120.20
1	AA	49	U	OP1-P-OP2	5.49	127.84	119.60
1	AA	1370	G	N1-C6-O6	5.49	123.20	119.90
2	BA	448	A	C4-C5-N7	5.49	113.45	110.70
2	BA	917	G	O5'-P-OP2	5.49	117.29	110.70
3	DA	445	C	N3-C4-N4	5.49	121.85	118.00
3	DA	675	A	OP2-P-O3'	5.49	117.28	105.20
3	DA	2418	A	N1-C2-N3	5.49	132.05	129.30
3	DA	2754	U	N3-C2-O2	5.49	126.05	122.20
4	CA	2847	U	OP1-P-OP2	-5.49	111.36	119.60
1	AA	558	G	N3-C4-C5	-5.49	125.85	128.60
3	DA	1619	G	C2-N3-C4	-5.49	109.15	111.90
3	DA	2076	U	C2-N1-C1'	5.49	124.29	117.70
1	AA	19	A	C8-N9-C4	-5.49	103.60	105.80
3	DA	45	G	N1-C2-N2	5.49	121.14	116.20
3	DA	938	G	N9-C4-C5	-5.49	103.20	105.40
3	DA	1031	G	C4-C5-N7	5.49	113.00	110.80
3	DA	2616	C	C2-N1-C1'	5.49	124.84	118.80
1	AA	289	G	N3-C2-N2	-5.49	116.06	119.90
3	DA	20	C	C5-C4-N4	5.49	124.04	120.20
3	DA	508	A	N9-C4-C5	-5.49	103.60	105.80
4	CA	974	G	N1-C6-O6	5.49	123.19	119.90
4	CA	2740	A	N1-C6-N6	-5.49	115.31	118.60
1	AA	53	A	O5'-P-OP2	-5.49	100.76	105.70
1	AA	805	C	C6-N1-C2	-5.49	118.11	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	859	G	C8-N9-C4	-5.49	104.20	106.40
1	AA	972	C	N1-C2-N3	5.49	123.04	119.20
3	DA	37	C	N3-C2-O2	5.49	125.74	121.90
3	DA	980	A	C5-C6-N6	5.49	128.09	123.70
3	DA	2127	G	P-O3'-C3'	5.49	126.28	119.70
3	DA	2252	G	N3-C2-N2	-5.49	116.06	119.90
4	CA	1298	C	C6-N1-C2	5.49	122.50	120.30
4	CA	1573	G	N1-C6-O6	5.49	123.19	119.90
3	DA	1164	C	C5-C4-N4	-5.49	116.36	120.20
3	DA	1805	A	C6-N1-C2	-5.49	115.31	118.60
3	DA	2645	G	C5-C6-N1	-5.49	108.76	111.50
3	DA	661	A	OP2-P-O3'	5.48	117.26	105.20
3	DA	1304	A	C2-N3-C4	-5.48	107.86	110.60
2	BA	814	A	C6-C5-N7	-5.48	128.46	132.30
3	DA	2650	U	O5'-P-OP2	-5.48	100.77	105.70
4	CA	2719	G	C5-C6-N1	-5.48	108.76	111.50
53	D3	34	ARG	CG-CD-NE	-5.48	100.29	111.80
1	AA	541	G	C6-C5-N7	-5.48	127.11	130.40
1	AA	1529	G	C6-C5-N7	-5.48	127.11	130.40
2	BA	26	A	OP2-P-O3'	5.48	117.26	105.20
2	BA	530	G	O4'-C1'-N9	-5.48	103.81	108.20
3	DA	526	A	N1-C6-N6	-5.48	115.31	118.60
3	DA	2261	C	N3-C4-C5	-5.48	119.71	121.90
3	DA	2624	G	N3-C2-N2	-5.48	116.06	119.90
3	DA	2896	C	C5-C6-N1	-5.48	118.26	121.00
3	DA	2900	A	N1-C2-N3	5.48	132.04	129.30
1	AA	351	G	N9-C1'-C2'	5.48	121.12	114.00
1	AA	610	U	O5'-P-OP2	-5.48	100.77	105.70
1	AA	756	C	OP2-P-O3'	5.48	117.25	105.20
2	BA	49	U	C6-N1-C2	5.48	124.29	121.00
3	DA	792	A	N3-C4-C5	-5.48	122.97	126.80
3	DA	800	A	OP1-P-OP2	-5.48	111.38	119.60
3	DA	867	C	C6-N1-C2	5.48	122.49	120.30
3	DA	1786	A	C5-C6-N1	5.48	120.44	117.70
3	DA	2017	U	N1-C2-N3	5.48	118.19	114.90
3	DA	2810	A	C4-C5-C6	5.48	119.74	117.00
4	CA	2480	C	N1-C2-O2	5.48	122.19	118.90
5	DB	47	C	C2-N3-C4	5.48	122.64	119.90
5	DB	96	G	N3-C4-N9	-5.48	122.71	126.00
1	AA	333	U	OP2-P-O3'	5.48	117.25	105.20
3	DA	577	G	N3-C4-C5	-5.48	125.86	128.60
3	DA	1311	G	C4-N9-C1'	5.48	133.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1448	G	N1-C2-N3	5.48	127.19	123.90
3	DA	2893	A	C8-N9-C4	5.48	107.99	105.80
4	CA	1843	C	N3-C4-N4	5.48	121.83	118.00
1	AA	297	G	O5'-P-OP1	-5.47	100.77	105.70
1	AA	638	U	C5-C6-N1	5.47	125.44	122.70
1	AA	1500	A	N1-C6-N6	-5.47	115.31	118.60
2	BA	623	C	O5'-P-OP1	-5.47	100.77	105.70
2	BA	971	G	O4'-C1'-N9	5.47	112.58	108.20
3	DA	39	G	C5-C6-N1	-5.47	108.76	111.50
3	DA	515	A	O5'-P-OP1	-5.47	100.77	105.70
3	DA	839	U	N1-C2-N3	5.47	118.19	114.90
3	DA	2032	G	N3-C4-N9	-5.47	122.72	126.00
3	DA	2556	C	N3-C4-C5	-5.47	119.71	121.90
3	DA	2867	G	N3-C4-N9	-5.47	122.72	126.00
4	CA	2456	C	C6-N1-C2	-5.47	118.11	120.30
2	BA	919	A	N1-C6-N6	-5.47	115.32	118.60
3	DA	579	G	C6-N1-C2	-5.47	121.82	125.10
3	DA	798	G	N3-C4-N9	-5.47	122.72	126.00
3	DA	833	A	C2-N3-C4	-5.47	107.86	110.60
3	DA	1501	G	N1-C6-O6	5.47	123.18	119.90
3	DA	1568	G	C4-C5-N7	5.47	112.99	110.80
3	DA	1625	C	C5-C4-N4	-5.47	116.37	120.20
3	DA	1689	A	OP2-P-O3'	5.47	117.24	105.20
3	DA	2243	U	N1-C2-N3	5.47	118.18	114.90
3	DA	2487	G	C5-C6-O6	-5.47	125.32	128.60
3	DA	2609	U	OP2-P-O3'	5.47	117.24	105.20
4	CA	1839	G	N3-C4-N9	5.47	129.28	126.00
26	BL	121	ARG	CA-CB-CG	5.47	125.44	113.40
1	AA	1101	A	C4-C5-C6	-5.47	114.27	117.00
2	BA	175	C	C6-N1-C2	-5.47	118.11	120.30
3	DA	179	C	C5-C4-N4	-5.47	116.37	120.20
3	DA	1001	A	OP1-P-OP2	-5.47	111.39	119.60
3	DA	1223	G	O5'-P-OP2	5.47	117.27	110.70
4	CA	1196	C	C6-N1-C2	-5.47	118.11	120.30
4	CA	2761	A	N1-C6-N6	5.47	121.88	118.60
1	AA	123	U	O5'-P-OP2	-5.47	100.78	105.70
1	AA	418	C	C6-N1-C2	-5.47	118.11	120.30
2	BA	375	U	C2-N1-C1'	5.47	124.26	117.70
3	DA	645	C	O5'-P-OP1	-5.47	100.78	105.70
3	DA	748	G	N1-C6-O6	-5.47	116.62	119.90
4	CA	1793	C	N3-C2-O2	-5.47	118.07	121.90
4	CA	2501	C	O4'-C1'-N1	5.47	112.58	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	DG	171	LYS	CD-CE-NZ	-5.47	99.12	111.70
3	DA	2483	C	C6-N1-C1'	-5.47	114.24	120.80
3	DA	2732	G	N1-C2-N2	5.47	121.12	116.20
3	DA	2899	A	N9-C4-C5	-5.47	103.61	105.80
1	AA	323	U	C6-N1-C2	-5.47	117.72	121.00
1	AA	675	A	C4-C5-C6	5.47	119.73	117.00
1	AA	752	G	N3-C2-N2	5.47	123.73	119.90
1	AA	1185	G	C5-C6-O6	5.47	131.88	128.60
3	DA	701	G	N3-C2-N2	-5.47	116.07	119.90
3	DA	945	A	C6-C5-N7	-5.47	128.47	132.30
3	DA	945	A	C8-N9-C4	5.47	107.99	105.80
3	DA	1311	G	OP1-P-OP2	5.47	127.80	119.60
3	DA	1689	A	C5-C6-N6	-5.47	119.33	123.70
3	DA	1766	G	N9-C4-C5	-5.47	103.21	105.40
3	DA	2710	C	OP2-P-O3'	5.47	117.22	105.20
4	CA	30	G	N3-C4-N9	5.47	129.28	126.00
4	CA	1599	U	C5-C6-N1	5.47	125.43	122.70
5	DB	49	C	C4-C5-C6	5.47	120.13	117.40
26	BL	121	ARG	NE-CZ-NH1	5.47	123.03	120.30
32	CH	142	ILE	CG1-CB-CG2	-5.47	99.38	111.40
1	AA	1392	G	C6-C5-N7	-5.46	127.12	130.40
1	AA	1530	G	C8-N9-C1'	5.46	134.10	127.00
2	BA	560	A	C4-C5-C6	5.46	119.73	117.00
2	BA	1530	G	C5-C6-O6	-5.46	125.32	128.60
3	DA	150	U	C2-N3-C4	-5.46	123.72	127.00
3	DA	197	A	O5'-P-OP2	5.46	117.26	110.70
3	DA	1092	C	N1-C2-O2	5.46	122.18	118.90
3	DA	1213	A	N1-C6-N6	-5.46	115.32	118.60
3	DA	2367	G	C2-N3-C4	-5.46	109.17	111.90
4	CA	737	C	N3-C4-C5	-5.46	119.71	121.90
4	CA	1901	A	C8-N9-C4	5.46	107.99	105.80
4	CA	2198	A	N9-C4-C5	5.46	107.99	105.80
5	DB	80	U	C5-C4-O4	-5.46	122.62	125.90
5	DB	76	G	N3-C4-C5	-5.46	125.87	128.60
1	AA	1106	G	N3-C2-N2	-5.46	116.08	119.90
3	DA	41	C	C6-N1-C2	5.46	122.48	120.30
3	DA	1780	A	C4-C5-C6	5.46	119.73	117.00
3	DA	1908	C	N1-C2-O2	-5.46	115.62	118.90
3	DA	2383	G	N3-C2-N2	-5.46	116.08	119.90
3	DA	2522	U	N3-C4-C5	-5.46	111.32	114.60
4	CA	1822	C	C2-N1-C1'	-5.46	112.79	118.80
1	AA	263	A	C8-N9-C4	-5.46	103.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	971	G	N1-C2-N2	5.46	121.11	116.20
3	DA	489	G	N1-C2-N2	5.46	121.11	116.20
3	DA	853	C	N1-C2-O2	-5.46	115.62	118.90
3	DA	2294	G	C5-C6-N1	-5.46	108.77	111.50
1	AA	899	C	P-O3'-C3'	-5.46	113.15	119.70
2	BA	58	C	C6-N1-C2	-5.46	118.12	120.30
3	DA	383	C	N3-C2-O2	5.46	125.72	121.90
3	DA	628	G	N3-C4-C5	5.46	131.33	128.60
3	DA	811	U	C2-N3-C4	-5.46	123.72	127.00
3	DA	868	U	N1-C2-O2	-5.46	118.98	122.80
3	DA	1434	A	O4'-C1'-N9	5.46	112.57	108.20
3	DA	1606	C	OP1-P-O3'	5.46	117.21	105.20
3	DA	1813	G	N1-C2-N3	5.46	127.17	123.90
3	DA	2511	U	N3-C4-O4	5.46	123.22	119.40
4	CA	802	A	C8-N9-C4	-5.46	103.62	105.80
1	AA	577	G	C8-N9-C4	5.46	108.58	106.40
3	DA	76	C	C6-N1-C2	5.46	122.48	120.30
3	DA	86	G	C5-C6-N1	-5.46	108.77	111.50
3	DA	202	U	N3-C4-C5	-5.46	111.33	114.60
3	DA	732	C	C5-C6-N1	-5.46	118.27	121.00
3	DA	780	G	C5-N7-C8	-5.46	101.57	104.30
3	DA	2277	G	C2-N3-C4	-5.46	109.17	111.90
3	DA	2380	C	C5-C6-N1	-5.46	118.27	121.00
4	CA	1814	G	C8-N9-C4	5.46	108.58	106.40
39	DP	100	HIS	N-CA-C	5.46	125.73	111.00
1	AA	921	U	O5'-P-OP1	-5.46	100.79	105.70
3	DA	396	G	N1-C6-O6	5.46	123.17	119.90
4	CA	785	G	C2-N3-C4	-5.46	109.17	111.90
4	CA	2082	A	N1-C6-N6	5.46	121.87	118.60
1	AA	1461	G	O5'-P-OP2	-5.45	100.79	105.70
2	BA	518	C	N1-C2-O2	5.45	122.17	118.90
3	DA	933	A	C2-N3-C4	-5.45	107.87	110.60
3	DA	1606	C	P-O3'-C3'	5.45	126.25	119.70
3	DA	1653	G	N9-C4-C5	5.45	107.58	105.40
3	DA	2281	A	C5-N7-C8	-5.45	101.17	103.90
3	DA	2751	G	C4-N9-C1'	5.45	133.59	126.50
3	DA	1270	C	OP1-P-O3'	5.45	117.19	105.20
3	DA	1322	A	C6-N1-C2	-5.45	115.33	118.60
3	DA	1352	U	O5'-P-OP2	-5.45	100.79	105.70
3	DA	1748	C	N3-C2-O2	5.45	125.72	121.90
3	DA	2795	C	N1-C2-O2	-5.45	115.63	118.90
4	CA	769	U	N3-C2-O2	-5.45	118.38	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	127	G	N1-C6-O6	5.45	123.17	119.90
1	AA	892	A	N3-C4-N9	-5.45	123.04	127.40
1	AA	1467	C	C5-C6-N1	-5.45	118.28	121.00
2	BA	12	U	OP1-P-OP2	5.45	127.78	119.60
3	DA	1016	G	OP2-P-O3'	5.45	117.19	105.20
3	DA	1259	G	C5-C6-N1	-5.45	108.78	111.50
3	DA	1663	G	O5'-P-OP2	-5.45	100.79	105.70
3	DA	1667	G	N3-C4-C5	5.45	131.33	128.60
3	DA	1826	G	OP1-P-OP2	5.45	127.78	119.60
3	DA	1828	G	C5-N7-C8	5.45	107.03	104.30
4	CA	2061	G	O5'-P-OP1	-5.45	100.79	105.70
2	BA	112	G	C4-C5-N7	5.45	112.98	110.80
2	BA	586	C	C6-N1-C2	-5.45	118.12	120.30
3	DA	208	C	OP2-P-O3'	5.45	117.19	105.20
3	DA	1026	G	O5'-P-OP2	5.45	117.24	110.70
4	CA	1975	G	N1-C6-O6	5.45	123.17	119.90
3	DA	2885	G	N1-C6-O6	-5.45	116.63	119.90
1	AA	925	G	N1-C2-N2	5.45	121.10	116.20
1	AA	1343	G	C8-N9-C4	5.45	108.58	106.40
1	AA	1480	A	N1-C6-N6	5.45	121.87	118.60
3	DA	793	A	N7-C8-N9	5.45	116.52	113.80
3	DA	1220	G	C8-N9-C4	5.45	108.58	106.40
3	DA	1764	C	C5-C4-N4	-5.45	116.39	120.20
3	DA	2035	G	N1-C6-O6	-5.45	116.63	119.90
3	DA	2463	C	N3-C2-O2	5.45	125.71	121.90
3	DA	2469	A	N3-C4-N9	-5.45	123.04	127.40
3	DA	2566	A	C6-N1-C2	5.45	121.87	118.60
4	CA	2269	G	N9-C4-C5	-5.45	103.22	105.40
3	DA	1744	A	OP2-P-O3'	5.44	117.18	105.20
3	DA	2858	C	N3-C4-C5	5.44	124.08	121.90
4	CA	2693	G	N1-C6-O6	5.44	123.17	119.90
1	AA	779	C	C5-C4-N4	-5.44	116.39	120.20
2	BA	304	U	C5-C6-N1	-5.44	119.98	122.70
3	DA	911	A	O5'-P-OP2	5.44	117.23	110.70
3	DA	1155	A	C5-C6-N6	5.44	128.05	123.70
3	DA	2014	A	OP1-P-O3'	5.44	117.17	105.20
3	DA	2468	A	C8-N9-C4	5.44	107.98	105.80
5	DB	73	A	N1-C6-N6	-5.44	115.33	118.60
53	D3	35	ARG	NE-CZ-NH2	5.44	123.02	120.30
1	AA	296	U	O5'-P-OP2	-5.44	100.80	105.70
1	AA	1217	C	C6-N1-C2	-5.44	118.12	120.30
3	DA	551	G	C4-C5-C6	5.44	122.06	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2024	G	N3-C4-N9	-5.44	122.73	126.00
3	DA	2253	G	C4-N9-C1'	5.44	133.57	126.50
3	DA	2381	A	C5-C6-N6	-5.44	119.35	123.70
3	DA	2786	U	OP2-P-O3'	5.44	117.17	105.20
4	CA	1936	A	OP1-P-OP2	-5.44	111.44	119.60
5	DB	104	A	C5-C6-N6	-5.44	119.35	123.70
2	BA	806	C	N3-C4-C5	5.44	124.08	121.90
3	DA	716	A	C6-C5-N7	-5.44	128.49	132.30
3	DA	1040	A	C2-N3-C4	-5.44	107.88	110.60
3	DA	2308	G	C5-C6-O6	-5.44	125.34	128.60
3	DA	560	C	C6-N1-C2	5.44	122.47	120.30
3	DA	820	A	OP2-P-O3'	5.44	117.16	105.20
3	DA	939	G	N1-C6-O6	5.44	123.16	119.90
3	DA	996	A	C4-C5-N7	5.44	113.42	110.70
3	DA	1952	A	O5'-P-OP1	-5.44	100.81	105.70
3	DA	1955	U	OP1-P-OP2	5.44	127.75	119.60
3	DA	2578	G	N3-C4-N9	-5.44	122.74	126.00
1	AA	1127	G	N1-C6-O6	5.44	123.16	119.90
3	DA	203	A	C4-C5-N7	5.44	113.42	110.70
3	DA	500	G	OP1-P-OP2	5.44	127.75	119.60
4	CA	36	G	C8-N9-C4	5.44	108.58	106.40
4	CA	577	G	N3-C4-C5	-5.44	125.88	128.60
1	AA	116	A	OP1-P-OP2	-5.43	111.45	119.60
1	AA	796	C	N3-C4-N4	5.43	121.80	118.00
1	AA	1189	U	C2-N1-C1'	-5.43	111.18	117.70
2	BA	290	C	C2-N1-C1'	5.43	124.78	118.80
2	BA	520	A	OP1-P-O3'	5.43	117.16	105.20
3	DA	404	A	P-O3'-C3'	5.43	126.22	119.70
3	DA	911	A	O5'-P-OP1	-5.43	100.81	105.70
3	DA	1001	A	OP1-P-O3'	5.43	117.16	105.20
3	DA	1299	G	N1-C6-O6	5.43	123.16	119.90
3	DA	1521	G	C5-C6-N1	-5.43	108.78	111.50
3	DA	1981	A	C5-N7-C8	-5.43	101.18	103.90
3	DA	2281	A	C6-N1-C2	-5.43	115.34	118.60
4	CA	770	G	C8-N9-C4	-5.43	104.23	106.40
4	CA	1642	G	N1-C2-N2	5.43	121.09	116.20
4	CA	2240	U	OP1-P-OP2	-5.43	111.45	119.60
4	CA	2241	A	N1-C6-N6	-5.43	115.34	118.60
5	DB	67	G	OP1-P-O3'	5.43	117.16	105.20
2	BA	609	A	C4-C5-N7	5.43	113.42	110.70
3	DA	298	G	C4-C5-N7	-5.43	108.63	110.80
3	DA	308	G	C4-C5-N7	5.43	112.97	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	311	A	C4-C5-C6	5.43	119.72	117.00
3	DA	986	C	OP2-P-O3'	5.43	117.15	105.20
3	DA	1186	G	N1-C2-N3	5.43	127.16	123.90
3	DA	1245	G	N1-C2-N2	5.43	121.09	116.20
3	DA	1758	U	OP2-P-O3'	5.43	117.15	105.20
3	DA	2534	A	C2-N3-C4	-5.43	107.88	110.60
3	DA	2575	C	OP1-P-OP2	-5.43	111.45	119.60
1	AA	669	G	C4-C5-N7	5.43	112.97	110.80
1	AA	1523	G	C4-C5-N7	-5.43	108.63	110.80
2	BA	501	C	C6-N1-C2	5.43	122.47	120.30
3	DA	530	G	N9-C4-C5	5.43	107.57	105.40
3	DA	583	G	C6-N1-C2	-5.43	121.84	125.10
3	DA	1287	A	N7-C8-N9	5.43	116.52	113.80
3	DA	1622	G	N1-C2-N3	5.43	127.16	123.90
3	DA	2056	G	N7-C8-N9	5.43	115.81	113.10
1	AA	110	C	N3-C2-O2	-5.43	118.10	121.90
1	AA	309	A	C8-N9-C4	5.43	107.97	105.80
1	AA	567	G	N9-C4-C5	5.43	107.57	105.40
1	AA	824	G	O5'-P-OP1	5.43	117.21	110.70
1	AA	1213	A	N1-C6-N6	5.43	121.86	118.60
1	AA	1483	A	C5-C6-N1	5.43	120.42	117.70
2	BA	1084	G	N3-C4-N9	-5.43	122.74	126.00
3	DA	489	G	C2-N3-C4	5.43	114.61	111.90
3	DA	852	U	N1-C2-O2	-5.43	119.00	122.80
3	DA	1671	U	C5-C6-N1	5.43	125.41	122.70
3	DA	1878	G	N3-C2-N2	-5.43	116.10	119.90
3	DA	1977	A	O4'-C1'-N9	-5.43	103.86	108.20
3	DA	2625	G	N9-C4-C5	5.43	107.57	105.40
3	DA	2881	U	O5'-P-OP1	5.43	117.22	110.70
4	CA	2599	G	C6-C5-N7	-5.43	127.14	130.40
30	DF	7	TYR	CB-CG-CD2	5.43	124.26	121.00
1	AA	286	C	C5-C4-N4	-5.43	116.40	120.20
1	AA	514	C	C6-N1-C2	-5.43	118.13	120.30
1	AA	818	G	OP1-P-OP2	5.43	127.74	119.60
1	AA	1502	A	C2-N3-C4	-5.43	107.89	110.60
3	DA	203	A	N3-C4-N9	5.43	131.74	127.40
3	DA	258	G	OP1-P-OP2	-5.43	111.46	119.60
3	DA	1465	G	O5'-P-OP1	-5.43	100.81	105.70
3	DA	1608	A	N1-C2-N3	5.43	132.01	129.30
3	DA	2352	A	C6-C5-N7	-5.43	128.50	132.30
3	DA	2371	G	N3-C4-N9	-5.43	122.74	126.00
3	DA	2762	C	OP2-P-O3'	5.43	117.14	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	DL	30	ARG	NE-CZ-NH2	-5.43	117.59	120.30
1	AA	581	G	OP2-P-O3'	5.43	117.14	105.20
1	AA	968	A	C5-C6-N6	-5.43	119.36	123.70
2	BA	831	A	C4-C5-N7	5.43	113.41	110.70
2	BA	1468	A	N7-C8-N9	5.43	116.51	113.80
3	DA	147	C	O5'-P-OP2	5.43	117.21	110.70
3	DA	258	G	C4-C5-C6	5.43	122.06	118.80
3	DA	540	C	C5-C6-N1	-5.43	118.29	121.00
3	DA	795	C	O5'-P-OP1	5.43	117.21	110.70
3	DA	832	U	C4-C5-C6	5.43	122.96	119.70
3	DA	864	G	OP1-P-OP2	-5.43	111.46	119.60
3	DA	1776	G	C4-N9-C1'	5.43	133.55	126.50
3	DA	2058	A	N1-C6-N6	-5.43	115.34	118.60
3	DA	2349	G	N1-C2-N3	5.43	127.16	123.90
3	DA	2744	G	C2-N3-C4	-5.43	109.19	111.90
5	DB	44	G	N3-C2-N2	5.43	123.70	119.90
12	AH	67	GLN	N-CA-C	-5.43	96.35	111.00
1	AA	922	G	O5'-P-OP1	-5.42	100.82	105.70
3	DA	210	C	OP2-P-O3'	5.42	117.14	105.20
3	DA	502	A	N3-C4-C5	5.42	130.60	126.80
3	DA	930	G	C4-N9-C1'	-5.42	119.45	126.50
3	DA	956	G	N3-C2-N2	-5.42	116.10	119.90
3	DA	1454	C	C6-N1-C2	-5.42	118.13	120.30
3	DA	2242	G	P-O3'-C3'	5.42	126.21	119.70
3	DA	2351	G	C2-N3-C4	5.42	114.61	111.90
3	DA	2378	A	C2-N3-C4	5.42	113.31	110.60
3	DA	2393	U	C6-N1-C2	-5.42	117.75	121.00
3	DA	2506	U	C5-C4-O4	5.42	129.15	125.90
3	DA	2598	A	C8-N9-C4	-5.42	103.63	105.80
4	CA	592	A	C2-N3-C4	5.42	113.31	110.60
4	CA	741	U	N3-C4-O4	5.42	123.20	119.40
5	DB	113	C	C5-C4-N4	-5.42	116.40	120.20
3	DA	48	G	OP1-P-OP2	5.42	127.73	119.60
3	DA	268	C	C6-N1-C2	5.42	122.47	120.30
3	DA	1326	U	N1-C2-N3	-5.42	111.65	114.90
3	DA	1581	G	N3-C4-C5	5.42	131.31	128.60
3	DA	1840	G	N3-C2-N2	-5.42	116.10	119.90
3	DA	2469	A	C5-C6-N1	-5.42	114.99	117.70
3	DA	2594	C	N3-C2-O2	5.42	125.70	121.90
3	DA	2676	C	O5'-P-OP2	-5.42	100.82	105.70
4	CA	34	U	C5-C6-N1	5.42	125.41	122.70
4	CA	66	C	C5-C6-N1	5.42	123.71	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1837	C	C6-N1-C2	5.42	122.47	120.30
1	AA	448	A	N1-C6-N6	5.42	121.85	118.60
1	AA	804	U	N3-C2-O2	-5.42	118.41	122.20
2	BA	46	G	C4-C5-N7	5.42	112.97	110.80
2	BA	292	G	C6-C5-N7	-5.42	127.15	130.40
2	BA	1507	A	N1-C2-N3	5.42	132.01	129.30
3	DA	594	U	N3-C4-C5	-5.42	111.35	114.60
3	DA	859	G	N1-C6-O6	-5.42	116.65	119.90
3	DA	989	G	N3-C4-C5	5.42	131.31	128.60
3	DA	1828	G	C8-N9-C1'	-5.42	119.95	127.00
3	DA	1978	A	C8-N9-C4	-5.42	103.63	105.80
3	DA	2086	U	N1-C2-O2	-5.42	119.00	122.80
4	CA	1011	G	N1-C6-O6	5.42	123.15	119.90
4	CA	1430	G	C6-C5-N7	-5.42	127.15	130.40
4	CA	1803	A	C6-C5-N7	5.42	136.09	132.30
4	CA	2075	U	C6-N1-C2	5.42	124.25	121.00
4	CA	2245	U	C6-N1-C1'	5.42	128.79	121.20
27	DC	155	ARG	CG-CD-NE	5.42	123.18	111.80
2	BA	298	A	C2-N3-C4	-5.42	107.89	110.60
2	BA	1047	G	N3-C4-C5	5.42	131.31	128.60
2	BA	1054	C	C5-C6-N1	5.42	123.71	121.00
3	DA	1748	C	O5'-P-OP1	-5.42	100.82	105.70
27	DC	110	LYS	CB-CG-CD	5.42	125.69	111.60
3	DA	267	C	C5-C4-N4	-5.42	116.41	120.20
3	DA	1140	C	C2-N3-C4	5.42	122.61	119.90
3	DA	1706	C	C4-C5-C6	-5.42	114.69	117.40
3	DA	2624	G	N1-C6-O6	5.42	123.15	119.90
3	DA	2732	G	N1-C6-O6	5.42	123.15	119.90
3	DA	2844	G	C2-N3-C4	-5.42	109.19	111.90
3	DA	2873	A	C4-C5-C6	5.42	119.71	117.00
1	AA	241	G	OP2-P-O3'	5.42	117.12	105.20
1	AA	768	A	OP2-P-O3'	5.42	117.12	105.20
2	BA	698	G	N3-C4-C5	5.42	131.31	128.60
2	BA	1165	U	C6-N1-C2	-5.42	117.75	121.00
3	DA	567	U	OP1-P-O3'	5.42	117.11	105.20
3	DA	918	A	C4-C5-N7	5.42	113.41	110.70
3	DA	1399	C	N3-C4-N4	5.42	121.79	118.00
3	DA	2544	G	OP2-P-O3'	5.42	117.12	105.20
1	AA	374	A	OP1-P-O3'	5.42	117.11	105.20
1	AA	919	A	O5'-P-OP1	5.42	117.20	110.70
1	AA	1079	G	C4-C5-C6	5.42	122.05	118.80
3	DA	1017	G	OP2-P-O3'	5.42	117.11	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2285	C	C6-N1-C2	5.42	122.47	120.30
1	AA	253	A	O5'-P-OP1	-5.41	100.83	105.70
1	AA	306	A	O5'-P-OP1	-5.41	100.83	105.70
1	AA	619	U	OP1-P-O3'	5.41	117.11	105.20
1	AA	1067	A	N1-C6-N6	5.41	121.85	118.60
1	AA	1250	A	OP2-P-O3'	5.41	117.11	105.20
3	DA	338	G	C8-N9-C1'	-5.41	119.96	127.00
3	DA	1281	G	N1-C2-N2	-5.41	111.33	116.20
3	DA	1649	G	N3-C2-N2	-5.41	116.11	119.90
3	DA	1749	A	N1-C6-N6	5.41	121.85	118.60
3	DA	2469	A	N3-C4-C5	5.41	130.59	126.80
4	CA	589	U	C6-N1-C2	-5.41	117.75	121.00
4	CA	2688	G	C4-C5-N7	-5.41	108.64	110.80
43	DT	88	ARG	NE-CZ-NH2	-5.41	117.59	120.30
3	DA	211	C	N3-C4-C5	5.41	124.06	121.90
3	DA	1012	U	N3-C4-O4	5.41	123.19	119.40
1	AA	986	U	N1-C2-O2	5.41	126.59	122.80
1	AA	1521	C	N3-C2-O2	5.41	125.69	121.90
3	DA	406	G	C2-N3-C4	-5.41	109.19	111.90
3	DA	506	G	C5-N7-C8	-5.41	101.59	104.30
3	DA	875	G	N3-C4-C5	5.41	131.31	128.60
3	DA	990	A	C5-C6-N6	-5.41	119.37	123.70
3	DA	2508	G	N3-C4-C5	5.41	131.31	128.60
3	DA	2826	A	C5-C6-N1	5.41	120.41	117.70
3	DA	2872	A	O5'-P-OP2	5.41	117.19	110.70
4	CA	24	G	C5-C6-N1	-5.41	108.80	111.50
4	CA	1676	A	C6-N1-C2	-5.41	115.35	118.60
1	AA	348	G	C6-C5-N7	-5.41	127.16	130.40
1	AA	363	A	N1-C6-N6	-5.41	115.36	118.60
1	AA	925	G	N3-C2-N2	-5.41	116.11	119.90
2	BA	300	A	N9-C4-C5	5.41	107.96	105.80
3	DA	695	G	O5'-P-OP2	-5.41	100.83	105.70
3	DA	1036	G	OP2-P-O3'	5.41	117.10	105.20
3	DA	1130	U	N1-C2-N3	5.41	118.14	114.90
3	DA	1134	A	C5-C6-N6	5.41	128.03	123.70
3	DA	1244	A	C8-N9-C4	5.41	107.96	105.80
3	DA	1287	A	OP2-P-O3'	5.41	117.10	105.20
3	DA	1304	A	C5-N7-C8	-5.41	101.20	103.90
3	DA	1436	G	N1-C6-O6	5.41	123.15	119.90
3	DA	1758	U	N1-C2-O2	-5.41	119.01	122.80
4	CA	696	G	N3-C2-N2	5.41	123.69	119.90
4	CA	1568	G	C4-N9-C1'	-5.41	119.47	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	BL	85	GLY	N-CA-C	-5.41	99.58	113.10
2	BA	1509	C	N3-C4-C5	5.41	124.06	121.90
3	DA	60	G	C5-C6-O6	5.41	131.84	128.60
3	DA	295	G	OP1-P-OP2	-5.41	111.49	119.60
3	DA	742	A	C5-N7-C8	-5.41	101.20	103.90
3	DA	844	A	O5'-P-OP2	-5.41	100.83	105.70
5	DB	79	G	C8-N9-C1'	-5.41	119.97	127.00
1	AA	308	C	C6-N1-C2	5.41	122.46	120.30
1	AA	586	C	N3-C4-C5	5.41	124.06	121.90
1	AA	831	A	N7-C8-N9	5.41	116.50	113.80
3	DA	370	G	N1-C6-O6	5.41	123.14	119.90
3	DA	389	G	C8-N9-C4	5.41	108.56	106.40
3	DA	920	A	C6-C5-N7	-5.41	128.52	132.30
3	DA	1040	A	C6-N1-C2	-5.41	115.36	118.60
3	DA	2093	G	C5-C6-O6	-5.41	125.36	128.60
3	DA	2621	G	C8-N9-C4	-5.41	104.24	106.40
4	CA	806	C	N3-C4-N4	-5.41	114.22	118.00
5	DB	28	C	O5'-P-OP1	5.41	117.19	110.70
5	DB	65	U	C2-N1-C1'	-5.41	111.21	117.70
1	AA	1510	C	N3-C2-O2	5.40	125.68	121.90
3	DA	63	A	C5-C6-N1	5.40	120.40	117.70
3	DA	397	U	C6-N1-C2	5.40	124.24	121.00
3	DA	771	G	C2-N3-C4	-5.40	109.20	111.90
3	DA	1035	U	OP2-P-O3'	5.40	117.09	105.20
4	CA	1839	G	C8-N9-C1'	-5.40	119.97	127.00
4	CA	1839	G	N3-C4-C5	-5.40	125.90	128.60
1	AA	779	C	OP1-P-O3'	5.40	117.08	105.20
2	BA	1093	A	C8-N9-C4	-5.40	103.64	105.80
3	DA	400	G	O5'-P-OP1	-5.40	100.84	105.70
3	DA	692	C	C2-N3-C4	-5.40	117.20	119.90
3	DA	1983	G	C4-C5-C6	-5.40	115.56	118.80
3	DA	2052	A	O5'-P-OP2	-5.40	100.84	105.70
3	DA	2506	U	N1-C2-O2	5.40	126.58	122.80
3	DA	2559	C	N3-C4-N4	-5.40	114.22	118.00
3	DA	2793	C	C4-C5-C6	-5.40	114.70	117.40
3	DA	2832	U	C6-N1-C2	5.40	124.24	121.00
28	CD	187	LEU	CB-CG-CD2	-5.40	101.81	111.00
2	BA	557	G	N1-C6-O6	5.40	123.14	119.90
2	BA	1079	G	C8-N9-C4	-5.40	104.24	106.40
2	BA	1511	G	N7-C8-N9	5.40	115.80	113.10
3	DA	19	A	N1-C6-N6	-5.40	115.36	118.60
3	DA	53	A	C6-N1-C2	-5.40	115.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	72	U	C5-C6-N1	5.40	125.40	122.70
3	DA	496	G	OP2-P-O3'	5.40	117.08	105.20
3	DA	1302	A	OP1-P-OP2	5.40	127.70	119.60
3	DA	1368	G	N7-C8-N9	5.40	115.80	113.10
3	DA	1625	C	N3-C4-N4	5.40	121.78	118.00
4	CA	1703	G	C5-C6-O6	-5.40	125.36	128.60
3	DA	45	G	N3-C2-N2	-5.40	116.12	119.90
3	DA	2371	G	C2-N3-C4	-5.40	109.20	111.90
1	AA	961	U	C5-C4-O4	-5.40	122.66	125.90
3	DA	33	C	N1-C2-O2	-5.40	115.66	118.90
3	DA	89	A	OP2-P-O3'	5.40	117.07	105.20
3	DA	1020	A	C4-C5-N7	5.40	113.40	110.70
3	DA	1047	G	OP1-P-OP2	5.40	127.70	119.60
3	DA	1116	G	N1-C2-N2	-5.40	111.34	116.20
3	DA	1188	U	O5'-P-OP1	-5.40	100.84	105.70
3	DA	1610	A	O4'-C1'-N9	-5.40	103.88	108.20
3	DA	1621	U	OP2-P-O3'	5.40	117.07	105.20
3	DA	1630	A	O5'-P-OP1	-5.40	100.84	105.70
3	DA	1699	G	O5'-P-OP1	5.40	117.18	110.70
3	DA	2433	A	C8-N9-C4	-5.40	103.64	105.80
3	DA	2437	G	N3-C4-C5	5.40	131.30	128.60
3	DA	2674	G	N3-C4-C5	5.40	131.30	128.60
4	CA	1694	C	C5-C4-N4	5.40	123.98	120.20
1	AA	881	G	C4-C5-N7	5.40	112.96	110.80
1	AA	1461	G	C5-C6-O6	5.40	131.84	128.60
3	DA	2317	A	N3-C4-C5	5.40	130.58	126.80
3	DA	2890	G	O5'-P-OP1	5.40	117.17	110.70
4	CA	983	A	C4-N9-C1'	5.40	136.01	126.30
4	CA	1366	A	C2-N3-C4	5.40	113.30	110.60
1	AA	315	A	N9-C4-C5	-5.39	103.64	105.80
2	BA	467	U	C2-N1-C1'	5.39	124.17	117.70
3	DA	666	A	N1-C2-N3	5.39	132.00	129.30
3	DA	666	A	N1-C6-N6	-5.39	115.36	118.60
3	DA	1112	G	C5-C6-N1	-5.39	108.80	111.50
3	DA	1193	G	N1-C2-N3	5.39	127.14	123.90
3	DA	1344	U	C2-N1-C1'	5.39	124.17	117.70
3	DA	2044	C	C2-N3-C4	-5.39	117.20	119.90
3	DA	2594	C	N3-C4-N4	5.39	121.78	118.00
3	DA	2651	C	C5-C4-N4	-5.39	116.42	120.20
3	DA	2689	U	OP1-P-OP2	-5.39	111.51	119.60
4	CA	1696	G	N3-C4-C5	5.39	131.30	128.60
5	DB	85	G	C5-C6-O6	-5.39	125.36	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AQ	75	LEU	CB-CG-CD2	-5.39	101.83	111.00
1	AA	287	U	O5'-P-OP1	-5.39	100.85	105.70
1	AA	323	U	OP2-P-O3'	5.39	117.06	105.20
1	AA	520	A	C8-N9-C4	-5.39	103.64	105.80
1	AA	786	G	N9-C4-C5	5.39	107.56	105.40
2	BA	886	G	C4-C5-N7	5.39	112.96	110.80
3	DA	67	U	C6-N1-C2	5.39	124.23	121.00
3	DA	499	U	C2-N1-C1'	5.39	124.17	117.70
3	DA	533	G	OP1-P-OP2	5.39	127.69	119.60
3	DA	782	A	N1-C6-N6	5.39	121.84	118.60
3	DA	787	C	C5-C6-N1	-5.39	118.30	121.00
3	DA	1001	A	C4-C5-C6	5.39	119.70	117.00
3	DA	1222	U	N3-C4-O4	5.39	123.17	119.40
3	DA	1658	C	C2-N1-C1'	-5.39	112.87	118.80
3	DA	1981	A	C2-N3-C4	-5.39	107.90	110.60
4	CA	2413	G	N7-C8-N9	5.39	115.80	113.10
1	AA	750	C	C6-N1-C2	-5.39	118.14	120.30
3	DA	1651	G	C8-N9-C1'	-5.39	119.99	127.00
3	DA	2337	G	N1-C2-N2	-5.39	111.35	116.20
4	CA	2242	G	C2-N3-C4	-5.39	109.20	111.90
4	CA	2616	C	C6-N1-C2	-5.39	118.14	120.30
8	BD	55	LEU	CA-CB-CG	5.39	127.70	115.30
1	AA	309	A	N9-C4-C5	-5.39	103.64	105.80
2	BA	791	G	C5-C6-O6	5.39	131.83	128.60
3	DA	200	U	N3-C2-O2	5.39	125.97	122.20
3	DA	503	A	OP1-P-O3'	5.39	117.06	105.20
3	DA	1632	A	N7-C8-N9	5.39	116.50	113.80
3	DA	2013	A	C4-C5-N7	5.39	113.39	110.70
3	DA	2795	C	C6-N1-C2	-5.39	118.14	120.30
4	CA	1353	A	C5-C6-N1	5.39	120.39	117.70
4	CA	2518	A	C8-N9-C4	-5.39	103.64	105.80
5	DB	44	G	N1-C6-O6	-5.39	116.67	119.90
36	CM	107	PHE	CB-CG-CD1	5.39	124.57	120.80
43	DT	35	ILE	CG1-CB-CG2	-5.39	99.55	111.40
1	AA	360	G	N1-C2-N2	-5.39	111.35	116.20
1	AA	572	A	OP2-P-O3'	5.39	117.05	105.20
2	BA	857	C	O5'-P-OP2	-5.39	100.85	105.70
3	DA	208	C	C2-N3-C4	-5.39	117.21	119.90
3	DA	531	C	C4-C5-C6	5.39	120.09	117.40
3	DA	638	G	N1-C2-N2	-5.39	111.35	116.20
3	DA	1071	G	C4-N9-C1'	5.39	133.50	126.50
3	DA	2519	U	O5'-P-OP1	-5.39	100.85	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	867	G	C4-C5-C6	5.39	122.03	118.80
3	DA	131	A	N1-C2-N3	5.39	131.99	129.30
3	DA	579	G	N7-C8-N9	5.39	115.79	113.10
3	DA	681	G	P-O3'-C3'	5.39	126.16	119.70
3	DA	1030	C	O5'-P-OP1	5.39	117.17	110.70
3	DA	2036	C	C2-N1-C1'	5.39	124.72	118.80
3	DA	2281	A	C4-C5-N7	5.39	113.39	110.70
3	DA	2355	G	C2-N3-C4	-5.39	109.21	111.90
3	DA	2753	A	OP2-P-O3'	5.39	117.05	105.20
5	DB	48	U	O5'-P-OP2	-5.39	100.85	105.70
2	BA	49	U	N3-C4-O4	-5.38	115.63	119.40
2	BA	507	C	N3-C4-C5	5.38	124.05	121.90
2	BA	1077	G	OP1-P-O3'	5.38	117.04	105.20
3	DA	111	A	OP1-P-O3'	5.38	117.05	105.20
3	DA	381	G	C8-N9-C4	5.38	108.55	106.40
3	DA	849	A	N1-C2-N3	5.38	131.99	129.30
3	DA	1104	C	C6-N1-C2	5.38	122.45	120.30
3	DA	1248	G	N7-C8-N9	-5.38	110.41	113.10
3	DA	1328	A	P-O3'-C3'	5.38	126.16	119.70
3	DA	1392	A	C2-N3-C4	5.38	113.29	110.60
3	DA	1739	A	C4-C5-N7	5.38	113.39	110.70
3	DA	1853	A	OP1-P-O3'	5.38	117.05	105.20
3	DA	2815	C	C5-C6-N1	-5.38	118.31	121.00
4	CA	915	C	N3-C2-O2	-5.38	118.13	121.90
1	AA	1506	U	O5'-P-OP2	-5.38	100.86	105.70
2	BA	572	A	C5-C6-N6	-5.38	119.39	123.70
2	BA	869	G	OP1-P-OP2	5.38	127.67	119.60
3	DA	451	U	C2-N1-C1'	-5.38	111.24	117.70
3	DA	2093	G	N3-C4-C5	5.38	131.29	128.60
3	DA	2513	A	C6-N1-C2	-5.38	115.37	118.60
1	AA	251	G	C2-N3-C4	-5.38	109.21	111.90
2	BA	570	G	C2-N3-C4	5.38	114.59	111.90
3	DA	73	A	N9-C4-C5	5.38	107.95	105.80
3	DA	130	C	C2-N3-C4	-5.38	117.21	119.90
3	DA	136	G	C2-N3-C4	-5.38	109.21	111.90
3	DA	797	G	N7-C8-N9	5.38	115.79	113.10
3	DA	923	G	OP1-P-OP2	5.38	127.67	119.60
3	DA	1773	A	O5'-P-OP2	-5.38	100.86	105.70
3	DA	1898	U	C6-N1-C1'	5.38	128.73	121.20
3	DA	2009	A	N7-C8-N9	5.38	116.49	113.80
3	DA	2228	G	OP1-P-OP2	5.38	127.67	119.60
3	DA	2444	G	C5-C6-N1	-5.38	108.81	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1700	A	N1-C2-N3	5.38	131.99	129.30
4	CA	2240	U	N1-C2-N3	5.38	118.13	114.90
3	DA	521	U	N3-C4-C5	-5.38	111.37	114.60
3	DA	1768	C	N1-C2-O2	-5.38	115.67	118.90
3	DA	2615	U	C2-N1-C1'	5.38	124.16	117.70
2	BA	583	A	OP2-P-O3'	5.38	117.03	105.20
2	BA	1170	A	C8-N9-C4	-5.38	103.65	105.80
3	DA	11	C	N1-C2-O2	-5.38	115.67	118.90
3	DA	551	G	OP1-P-OP2	-5.38	111.53	119.60
3	DA	1010	A	C5-C6-N6	5.38	128.00	123.70
3	DA	1215	G	C8-N9-C4	-5.38	104.25	106.40
3	DA	1434	A	P-O3'-C3'	5.38	126.16	119.70
3	DA	2127	G	OP1-P-O3'	5.38	117.03	105.20
3	DA	2337	G	O5'-P-OP1	5.38	117.16	110.70
3	DA	2624	G	C2-N3-C4	-5.38	109.21	111.90
3	DA	2838	G	N1-C2-N2	5.38	121.04	116.20
4	CA	2060	A	N1-C6-N6	5.38	121.83	118.60
4	CA	2649	C	C5-C6-N1	5.38	123.69	121.00
6	BB	49	MET	CG-SD-CE	-5.38	91.59	100.20
1	AA	560	A	N3-C4-C5	5.38	130.56	126.80
1	AA	859	G	N9-C4-C5	5.38	107.55	105.40
1	AA	1382	C	N1-C2-O2	5.38	122.13	118.90
1	AA	1413	A	N1-C2-N3	5.38	131.99	129.30
1	AA	1478	U	C6-N1-C2	5.38	124.23	121.00
2	BA	1393	U	OP1-P-OP2	-5.38	111.53	119.60
3	DA	436	C	OP2-P-O3'	5.38	117.03	105.20
3	DA	1194	A	C5-C6-N1	-5.38	115.01	117.70
3	DA	1285	A	C5-C6-N1	-5.38	115.01	117.70
3	DA	1531	C	O5'-P-OP1	5.38	117.15	110.70
3	DA	2088	A	C6-N1-C2	-5.38	115.37	118.60
3	DA	2407	A	O4'-C1'-N9	-5.38	103.90	108.20
3	DA	2433	A	N1-C6-N6	5.38	121.83	118.60
4	CA	2439	A	C8-N9-C4	5.38	107.95	105.80
5	CB	75	G	N3-C4-C5	5.38	131.29	128.60
2	BA	1101	A	N1-C2-N3	5.38	131.99	129.30
2	BA	1515	G	C5-C6-O6	-5.38	125.38	128.60
3	DA	521	U	C5-C6-N1	5.38	125.39	122.70
1	AA	446	G	C4-N9-C1'	-5.37	119.52	126.50
1	AA	452	A	C4-C5-N7	5.37	113.39	110.70
2	BA	43	C	C5-C6-N1	5.37	123.69	121.00
2	BA	1399	C	OP1-P-OP2	5.37	127.66	119.60
3	DA	229	C	OP1-P-OP2	5.37	127.66	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	738	G	C6-C5-N7	-5.37	127.18	130.40
3	DA	759	G	C8-N9-C4	5.37	108.55	106.40
3	DA	759	G	OP1-P-OP2	-5.37	111.54	119.60
3	DA	1344	U	C5-C4-O4	-5.37	122.68	125.90
3	DA	1599	U	O5'-P-OP1	-5.37	100.86	105.70
3	DA	2433	A	C6-C5-N7	-5.37	128.54	132.30
3	DA	2838	G	OP2-P-O3'	5.37	117.02	105.20
4	CA	775	G	C6-C5-N7	5.37	133.62	130.40
4	CA	1933	G	N3-C2-N2	5.37	123.66	119.90
4	CA	1988	G	O5'-P-OP2	-5.37	100.86	105.70
3	DA	758	C	OP2-P-O3'	5.37	117.02	105.20
3	DA	1650	A	C8-N9-C4	-5.37	103.65	105.80
3	DA	1958	C	C5-C6-N1	-5.37	118.31	121.00
4	CA	663	G	N9-C4-C5	-5.37	103.25	105.40
4	CA	2076	U	C6-N1-C1'	-5.37	113.68	121.20
8	AD	5	LEU	CA-CB-CG	5.37	127.65	115.30
46	DW	20	LEU	CA-CB-CG	5.37	127.65	115.30
1	AA	323	U	N1-C2-N3	5.37	118.12	114.90
3	DA	45	G	OP1-P-OP2	5.37	127.66	119.60
3	DA	101	A	C5-C6-N1	-5.37	115.02	117.70
3	DA	1545	A	C4-C5-N7	5.37	113.39	110.70
3	DA	1791	A	N7-C8-N9	-5.37	111.11	113.80
3	DA	2625	G	N3-C4-N9	-5.37	122.78	126.00
4	CA	537	G	C8-N9-C4	-5.37	104.25	106.40
1	AA	112	G	N7-C8-N9	5.37	115.78	113.10
1	AA	317	U	N3-C4-O4	5.37	123.16	119.40
2	BA	585	G	N9-C4-C5	5.37	107.55	105.40
4	CA	2359	C	C6-N1-C2	-5.37	118.15	120.30
53	C3	37	LYS	CD-CE-NZ	5.37	124.05	111.70
2	BA	1089	G	C8-N9-C4	-5.37	104.25	106.40
3	DA	623	C	C5-C6-N1	-5.37	118.32	121.00
3	DA	659	G	C5-C6-O6	5.37	131.82	128.60
3	DA	1332	G	C5-C6-O6	5.37	131.82	128.60
3	DA	1630	A	OP1-P-OP2	5.37	127.65	119.60
1	AA	307	C	O5'-P-OP1	-5.37	100.87	105.70
1	AA	1172	C	N3-C4-C5	5.37	124.05	121.90
2	BA	304	U	C6-N1-C2	5.37	124.22	121.00
3	DA	301	G	C2-N3-C4	-5.37	109.22	111.90
3	DA	400	G	N3-C4-N9	5.37	129.22	126.00
3	DA	736	C	C4-C5-C6	-5.37	114.72	117.40
3	DA	984	A	O5'-P-OP2	-5.37	100.87	105.70
3	DA	1970	A	N7-C8-N9	5.37	116.48	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1975	G	N1-C6-O6	5.37	123.12	119.90
3	DA	1978	A	C4-C5-N7	5.37	113.38	110.70
3	DA	2731	G	O5'-P-OP2	-5.37	100.87	105.70
4	CA	1824	G	N3-C4-N9	-5.37	122.78	126.00
4	CA	1933	G	N1-C6-O6	-5.37	116.68	119.90
4	CA	2730	C	C2-N3-C4	5.37	122.58	119.90
5	DB	116	G	C5-N7-C8	5.37	106.98	104.30
1	AA	330	C	OP2-P-O3'	5.36	117.00	105.20
1	AA	507	C	C6-N1-C2	5.36	122.45	120.30
1	AA	769	G	OP2-P-O3'	5.36	117.00	105.20
2	BA	1066	C	N3-C2-O2	-5.36	118.14	121.90
3	DA	10	A	C5-C6-N6	5.36	127.99	123.70
3	DA	1260	A	OP1-P-OP2	5.36	127.65	119.60
3	DA	1369	G	C8-N9-C4	5.36	108.55	106.40
3	DA	1420	A	C5-C6-N6	5.36	127.99	123.70
3	DA	2210	U	N1-C2-O2	5.36	126.56	122.80
3	DA	2302	U	C5-C6-N1	-5.36	120.02	122.70
3	DA	2342	C	N3-C4-C5	5.36	124.05	121.90
3	DA	2702	G	C4-C5-N7	5.36	112.94	110.80
3	DA	2751	G	C4-C5-C6	5.36	122.02	118.80
3	DA	2872	A	C5-C6-N6	5.36	127.99	123.70
4	CA	1353	A	C6-N1-C2	-5.36	115.38	118.60
1	AA	275	G	N1-C6-O6	5.36	123.12	119.90
1	AA	802	A	C5-C6-N6	-5.36	119.41	123.70
2	BA	431	A	N3-C4-C5	5.36	130.55	126.80
3	DA	2494	G	OP1-P-O3'	5.36	117.00	105.20
3	DA	2802	G	N1-C2-N3	5.36	127.12	123.90
4	CA	391	A	C8-N9-C4	-5.36	103.66	105.80
4	CA	2326	C	P-O3'-C3'	5.36	126.13	119.70
1	AA	379	C	OP1-P-OP2	-5.36	111.56	119.60
1	AA	609	A	C5-C6-N6	5.36	127.99	123.70
2	BA	83	C	C6-N1-C2	-5.36	118.16	120.30
3	DA	1012	U	N3-C4-C5	-5.36	111.38	114.60
3	DA	1141	U	OP1-P-OP2	5.36	127.64	119.60
3	DA	1907	G	N3-C4-C5	-5.36	125.92	128.60
3	DA	2050	C	C6-N1-C2	5.36	122.44	120.30
3	DA	2461	A	C8-N9-C4	5.36	107.94	105.80
4	CA	1796	U	OP1-P-OP2	5.36	127.64	119.60
4	CA	2626	C	C6-N1-C2	5.36	122.44	120.30
5	DB	66	A	N3-C4-N9	-5.36	123.11	127.40
1	AA	821	G	N1-C6-O6	-5.36	116.69	119.90
1	AA	1534	A	O4'-C1'-N9	5.36	112.49	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	642	U	N3-C4-C5	-5.36	111.39	114.60
3	DA	2277	G	OP1-P-OP2	5.36	127.64	119.60
4	CA	1983	G	N3-C4-N9	-5.36	122.78	126.00
4	CA	2395	C	C6-N1-C2	-5.36	118.16	120.30
1	AA	351	G	C2-N3-C4	-5.36	109.22	111.90
1	AA	1371	G	O5'-P-OP1	-5.36	100.88	105.70
2	BA	433	G	OP2-P-O3'	5.36	116.98	105.20
2	BA	1047	G	N3-C2-N2	-5.36	116.15	119.90
2	BA	1343	G	N3-C4-N9	-5.36	122.78	126.00
2	BA	1518	A	C5-C6-N6	5.36	127.99	123.70
3	DA	930	G	C6-N1-C2	-5.36	121.89	125.10
3	DA	1246	A	N1-C6-N6	-5.36	115.39	118.60
3	DA	1472	C	O5'-P-OP2	-5.36	100.88	105.70
3	DA	1617	C	O5'-P-OP2	-5.36	100.88	105.70
3	DA	1622	G	OP1-P-OP2	-5.36	111.56	119.60
3	DA	2550	G	N3-C4-C5	-5.36	125.92	128.60
4	CA	199	A	C5-N7-C8	-5.36	101.22	103.90
4	CA	1776	G	N3-C4-C5	-5.36	125.92	128.60
4	CA	1908	C	OP2-P-O3'	5.36	116.99	105.20
4	CA	2437	G	C5-C6-O6	-5.36	125.39	128.60
4	CA	2887	A	C6-C5-N7	-5.36	128.55	132.30
1	AA	322	C	C5-C4-N4	-5.36	116.45	120.20
1	AA	718	A	C5-C6-N6	-5.36	119.42	123.70
1	AA	927	G	C5-C6-O6	5.36	131.81	128.60
1	AA	1515	G	C4-C5-C6	5.36	122.01	118.80
2	BA	362	G	C6-C5-N7	-5.36	127.19	130.40
2	BA	882	C	N1-C2-O2	-5.36	115.69	118.90
3	DA	51	G	C5-N7-C8	5.36	106.98	104.30
3	DA	1339	G	O5'-P-OP1	-5.36	100.88	105.70
3	DA	2073	C	C2-N1-C1'	-5.36	112.91	118.80
5	DB	96	G	C8-N9-C1'	5.36	133.96	127.00
3	DA	733	G	O5'-P-OP1	5.35	117.12	110.70
3	DA	1183	U	C5-C6-N1	-5.35	120.02	122.70
1	AA	253	A	OP2-P-O3'	5.35	116.97	105.20
2	BA	1455	G	C4-N9-C1'	-5.35	119.54	126.50
3	DA	568	U	C6-N1-C2	-5.35	117.79	121.00
3	DA	936	A	N3-C4-C5	5.35	130.55	126.80
3	DA	1164	C	C6-N1-C2	5.35	122.44	120.30
4	CA	2239	G	C8-N9-C1'	-5.35	120.04	127.00
2	BA	375	U	N3-C2-O2	-5.35	118.45	122.20
2	BA	802	A	OP1-P-O3'	5.35	116.97	105.20
3	DA	181	A	N1-C2-N3	5.35	131.97	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2453	A	C4-C5-N7	5.35	113.38	110.70
3	DA	295	G	C5-N7-C8	-5.35	101.63	104.30
3	DA	923	G	C2-N3-C4	-5.35	109.22	111.90
3	DA	1184	U	OP2-P-O3'	5.35	116.97	105.20
3	DA	1248	G	C5-N7-C8	5.35	106.97	104.30
3	DA	1667	G	C5-C6-O6	5.35	131.81	128.60
3	DA	2056	G	N1-C6-O6	5.35	123.11	119.90
3	DA	2637	U	C2-N3-C4	-5.35	123.79	127.00
3	DA	2677	G	C4-C5-N7	5.35	112.94	110.80
3	DA	2781	A	C6-C5-N7	5.35	136.04	132.30
4	CA	1428	C	O4'-C1'-N1	5.35	112.48	108.20
1	AA	269	C	OP2-P-O3'	5.35	116.96	105.20
1	AA	500	G	C4-C5-N7	-5.35	108.66	110.80
1	AA	1143	G	C5-C6-O6	-5.35	125.39	128.60
3	DA	117	G	C4-C5-C6	5.35	122.01	118.80
3	DA	1250	G	O5'-P-OP2	-5.35	100.89	105.70
3	DA	1421	G	C8-N9-C1'	-5.35	120.05	127.00
3	DA	2014	A	N1-C6-N6	5.35	121.81	118.60
3	DA	2569	G	N9-C4-C5	5.35	107.54	105.40
3	DA	2760	C	C5-C6-N1	-5.35	118.33	121.00
5	DB	111	U	N3-C4-O4	-5.35	115.66	119.40
1	AA	1386	G	C5-C6-O6	5.35	131.81	128.60
3	DA	940	G	C8-N9-C1'	-5.35	120.05	127.00
3	DA	2747	G	N9-C4-C5	5.35	107.54	105.40
1	AA	351	G	C6-C5-N7	-5.34	127.19	130.40
2	BA	484	G	C6-C5-N7	-5.34	127.19	130.40
3	DA	17	G	N7-C8-N9	5.34	115.77	113.10
3	DA	1131	G	OP1-P-OP2	-5.34	111.58	119.60
3	DA	1244	A	OP2-P-O3'	5.34	116.96	105.20
4	CA	1250	G	C5-C6-O6	-5.34	125.39	128.60
4	CA	1762	A	C5-C6-N6	5.34	127.97	123.70
4	CA	2588	G	OP2-P-O3'	5.34	116.96	105.20
5	DB	32	U	C5-C4-O4	-5.34	122.69	125.90
27	CC	212	TRP	N-CA-CB	5.34	120.22	110.60
33	DJ	90	GLY	N-CA-C	-5.34	99.74	113.10
1	AA	1408	A	N7-C8-N9	5.34	116.47	113.80
1	AA	1413	A	N1-C6-N6	5.34	121.81	118.60
2	BA	758	C	N3-C4-N4	5.34	121.74	118.00
3	DA	2273	A	C6-N1-C2	-5.34	115.39	118.60
3	DA	2325	G	N1-C2-N3	5.34	127.11	123.90
4	CA	1823	G	N1-C6-O6	5.34	123.11	119.90
1	AA	511	C	N3-C2-O2	-5.34	118.16	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1421	G	N3-C4-N9	-5.34	122.80	126.00
1	AA	1526	G	N3-C4-C5	-5.34	125.93	128.60
2	BA	577	G	C6-C5-N7	-5.34	127.20	130.40
2	BA	900	A	O5'-P-OP2	5.34	117.11	110.70
3	DA	1025	G	C2-N3-C4	-5.34	109.23	111.90
3	DA	1481	U	C5-C4-O4	5.34	129.10	125.90
3	DA	1878	G	N1-C2-N3	5.34	127.11	123.90
3	DA	2343	U	N3-C4-O4	5.34	123.14	119.40
3	DA	2442	C	C5-C4-N4	-5.34	116.46	120.20
3	DA	2818	U	C4-C5-C6	5.34	122.91	119.70
39	DP	21	LEU	CB-CG-CD1	-5.34	101.92	111.00
1	AA	1423	G	O5'-P-OP2	-5.34	100.89	105.70
3	DA	26	G	O4'-C1'-N9	-5.34	103.93	108.20
3	DA	126	A	C4-C5-C6	5.34	119.67	117.00
3	DA	1474	U	OP1-P-OP2	-5.34	111.59	119.60
3	DA	2033	A	N9-C4-C5	5.34	107.94	105.80
3	DA	2535	G	C4-C5-N7	5.34	112.94	110.80
3	DA	2842	G	C5-C6-O6	-5.34	125.40	128.60
4	CA	663	G	C4-C5-N7	5.34	112.94	110.80
4	CA	2648	G	C8-N9-C4	-5.34	104.27	106.40
4	CA	2732	G	C4-C5-N7	5.34	112.94	110.80
41	DR	15	LYS	CD-CE-NZ	5.34	123.98	111.70
46	DW	38	LEU	CB-CG-CD1	-5.34	101.92	111.00
2	BA	503	C	O5'-P-OP2	-5.34	100.90	105.70
19	AO	67	LEU	CB-CG-CD2	-5.34	101.92	111.00
52	D2	10	LEU	CB-CG-CD2	5.34	120.08	111.00
1	AA	943	U	N3-C2-O2	5.34	125.94	122.20
2	BA	513	C	C6-N1-C2	5.34	122.44	120.30
2	BA	800	G	C6-C5-N7	-5.34	127.20	130.40
3	DA	933	A	N3-C4-C5	5.34	130.54	126.80
3	DA	1845	G	OP2-P-O3'	5.34	116.94	105.20
3	DA	2025	C	N1-C2-O2	-5.34	115.70	118.90
3	DA	2259	U	C2-N3-C4	-5.34	123.80	127.00
3	DA	2471	A	O5'-P-OP2	-5.34	100.90	105.70
3	DA	2809	A	O5'-P-OP2	5.34	117.10	110.70
27	DC	173	LEU	CA-CB-CG	5.34	127.57	115.30
46	DW	19	ARG	NE-CZ-NH2	-5.34	117.63	120.30
1	AA	920	U	OP1-P-OP2	-5.33	111.60	119.60
3	DA	521	U	N3-C2-O2	-5.33	118.47	122.20
3	DA	1037	G	OP2-P-O3'	5.33	116.94	105.20
3	DA	1203	U	N3-C2-O2	5.33	125.94	122.20
3	DA	1287	A	P-O3'-C3'	5.33	126.10	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	D1	53	VAL	N-CA-C	-5.33	96.59	111.00
1	AA	722	G	O5'-P-OP2	-5.33	100.90	105.70
2	BA	435	A	C2-N3-C4	-5.33	107.93	110.60
2	BA	495	A	OP1-P-O3'	5.33	116.94	105.20
3	DA	30	G	C4-N9-C1'	5.33	133.43	126.50
3	DA	119	A	N1-C6-N6	-5.33	115.40	118.60
3	DA	487	C	N3-C4-C5	-5.33	119.77	121.90
3	DA	575	A	O5'-P-OP1	5.33	117.10	110.70
3	DA	875	G	N3-C4-N9	-5.33	122.80	126.00
3	DA	1520	U	C5-C4-O4	-5.33	122.70	125.90
3	DA	1588	G	N1-C6-O6	5.33	123.10	119.90
3	DA	1622	G	C4-C5-N7	-5.33	108.67	110.80
3	DA	2218	G	N1-C6-O6	-5.33	116.70	119.90
3	DA	2845	U	OP1-P-OP2	5.33	127.60	119.60
5	DB	93	C	C6-N1-C2	5.33	122.43	120.30
5	DB	107	G	N1-C6-O6	5.33	123.10	119.90
1	AA	739	C	N1-C2-O2	-5.33	115.70	118.90
3	DA	530	G	N1-C2-N2	5.33	121.00	116.20
3	DA	1787	A	C4-C5-N7	5.33	113.37	110.70
3	DA	2645	G	C5-N7-C8	5.33	106.97	104.30
4	CA	2522	U	N3-C4-O4	5.33	123.13	119.40
5	DB	47	C	N1-C2-N3	-5.33	115.47	119.20
1	AA	186	C	OP1-P-O3'	5.33	116.92	105.20
1	AA	321	A	C8-N9-C4	5.33	107.93	105.80
3	DA	630	G	C2-N3-C4	-5.33	109.23	111.90
3	DA	940	G	OP2-P-O3'	5.33	116.93	105.20
4	CA	2038	G	N3-C4-C5	5.33	131.26	128.60
4	CA	2494	G	C6-C5-N7	-5.33	127.20	130.40
1	AA	743	A	N1-C2-N3	5.33	131.96	129.30
3	DA	84	A	C4-C5-N7	-5.33	108.03	110.70
3	DA	100	U	OP1-P-OP2	-5.33	111.61	119.60
3	DA	929	U	C5-C4-O4	-5.33	122.70	125.90
3	DA	2317	A	C5-C6-N1	-5.33	115.03	117.70
3	DA	2412	A	C6-C5-N7	-5.33	128.57	132.30
3	DA	2643	G	N3-C4-C5	5.33	131.26	128.60
8	AD	161	LEU	CA-CB-CG	5.33	127.56	115.30
3	DA	2310	C	N3-C2-O2	-5.33	118.17	121.90
1	AA	319	G	OP1-P-OP2	5.33	127.59	119.60
1	AA	635	A	C5-N7-C8	-5.33	101.24	103.90
2	BA	22	G	OP2-P-O3'	5.33	116.92	105.20
2	BA	1032	G	C4-N9-C1'	5.33	133.42	126.50
3	DA	504	A	C2-N3-C4	-5.33	107.94	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1156	A	O5'-P-OP1	-5.33	100.91	105.70
3	DA	1310	G	N1-C2-N3	5.33	127.09	123.90
4	CA	196	A	C8-N9-C4	-5.33	103.67	105.80
1	AA	333	U	C6-N1-C2	5.32	124.19	121.00
1	AA	512	U	C5-C6-N1	5.32	125.36	122.70
2	BA	931	C	N1-C2-N3	5.32	122.93	119.20
3	DA	476	G	N3-C4-C5	-5.32	125.94	128.60
3	DA	1223	G	N1-C2-N3	5.32	127.09	123.90
3	DA	2326	C	C5-C4-N4	-5.32	116.47	120.20
3	DA	2345	G	N7-C8-N9	-5.32	110.44	113.10
4	CA	2093	G	N3-C4-N9	5.32	129.19	126.00
4	CA	2431	U	N3-C2-O2	-5.32	118.47	122.20
2	BA	1487	G	N1-C2-N2	5.32	120.99	116.20
3	DA	640	C	C2-N3-C4	-5.32	117.24	119.90
3	DA	1252	G	OP2-P-O3'	5.32	116.91	105.20
3	DA	2380	C	N1-C2-N3	5.32	122.93	119.20
3	DA	2416	C	N3-C4-C5	5.32	124.03	121.90
4	CA	215	G	C8-N9-C4	5.32	108.53	106.40
4	CA	1799	G	N1-C2-N3	5.32	127.09	123.90
4	CA	1834	U	N3-C4-O4	5.32	123.12	119.40
1	AA	380	G	N3-C4-N9	-5.32	122.81	126.00
1	AA	879	C	OP2-P-O3'	5.32	116.91	105.20
2	BA	725	G	C6-C5-N7	-5.32	127.21	130.40
2	BA	902	G	N3-C4-C5	5.32	131.26	128.60
2	BA	1518	A	O5'-P-OP1	-5.32	100.91	105.70
3	DA	238	C	N3-C4-C5	5.32	124.03	121.90
3	DA	505	A	N1-C2-N3	5.32	131.96	129.30
3	DA	1512	C	OP1-P-O3'	-5.32	93.49	105.20
3	DA	2405	G	C5-C6-N1	-5.32	108.84	111.50
4	CA	581	C	N3-C4-N4	5.32	121.72	118.00
4	CA	1216	G	C8-N9-C4	-5.32	104.27	106.40
4	CA	1655	A	N1-C6-N6	5.32	121.79	118.60
1	AA	776	G	C4-C5-N7	5.32	112.93	110.80
2	BA	771	G	OP1-P-OP2	-5.32	111.62	119.60
3	DA	970	U	N3-C4-C5	-5.32	111.41	114.60
3	DA	1510	G	N3-C4-N9	-5.32	122.81	126.00
3	DA	2801	G	N1-C2-N2	5.32	120.99	116.20
4	CA	2133	G	N3-C4-N9	5.32	129.19	126.00
56	DD	151	THR	CA-CB-CG2	-5.32	104.95	112.40
1	AA	1488	G	C6-N1-C2	-5.32	121.91	125.10
3	DA	483	A	N3-C4-C5	5.32	130.52	126.80
3	DA	722	A	N1-C2-N3	5.32	131.96	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2268	A	N3-C4-N9	-5.32	123.15	127.40
3	DA	2861	U	OP2-P-O3'	5.32	116.90	105.20
1	AA	566	G	O5'-P-OP2	-5.32	100.92	105.70
1	AA	1019	A	C5-C6-N6	-5.32	119.45	123.70
2	BA	1403	C	OP1-P-OP2	5.32	127.57	119.60
3	DA	388	G	N3-C4-C5	-5.32	125.94	128.60
3	DA	447	A	N1-C6-N6	5.32	121.79	118.60
3	DA	732	C	C2-N3-C4	-5.32	117.24	119.90
3	DA	1337	G	N7-C8-N9	-5.32	110.44	113.10
3	DA	1673	G	C4-C5-N7	5.32	112.93	110.80
3	DA	1712	U	OP1-P-O3'	5.32	116.89	105.20
3	DA	2619	C	N3-C4-N4	5.32	121.72	118.00
1	AA	1437	A	OP1-P-OP2	-5.31	111.63	119.60
3	DA	215	G	N1-C2-N2	5.31	120.98	116.20
3	DA	2648	G	C8-N9-C4	-5.31	104.27	106.40
4	CA	787	C	N3-C2-O2	-5.31	118.18	121.90
5	DB	39	A	C8-N9-C4	-5.31	103.67	105.80
1	AA	1071	C	N3-C2-O2	5.31	125.62	121.90
2	BA	515	G	C2-N3-C4	-5.31	109.24	111.90
2	BA	612	C	OP1-P-O3'	5.31	116.89	105.20
2	BA	1088	G	C8-N9-C4	-5.31	104.28	106.40
3	DA	101	A	C6-C5-N7	-5.31	128.58	132.30
3	DA	906	U	N1-C2-O2	-5.31	119.08	122.80
3	DA	924	G	O4'-C1'-N9	-5.31	103.95	108.20
3	DA	1005	C	N3-C4-N4	5.31	121.72	118.00
3	DA	1107	G	O5'-P-OP1	-5.31	100.92	105.70
3	DA	1490	A	C5-C6-N6	5.31	127.95	123.70
3	DA	2061	G	O5'-P-OP2	5.31	117.08	110.70
3	DA	2548	U	N3-C4-C5	-5.31	111.41	114.60
4	CA	960	A	C8-N9-C4	5.31	107.92	105.80
4	CA	2245	U	C5-C4-O4	5.31	129.09	125.90
1	AA	802	A	C4-C5-N7	5.31	113.36	110.70
3	DA	2412	A	C5-N7-C8	-5.31	101.25	103.90
1	AA	252	U	N3-C4-O4	-5.31	115.68	119.40
1	AA	886	G	N3-C2-N2	-5.31	116.18	119.90
3	DA	554	U	N1-C2-N3	-5.31	111.71	114.90
3	DA	794	A	C5-C6-N1	-5.31	115.05	117.70
3	DA	1158	C	C6-N1-C1'	-5.31	114.43	120.80
4	CA	694	U	OP1-P-O3'	5.31	116.88	105.20
1	AA	217	C	C6-N1-C2	-5.31	118.18	120.30
1	AA	378	G	OP1-P-OP2	5.31	127.56	119.60
1	AA	400	C	N1-C2-O2	-5.31	115.72	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	713	G	N9-C4-C5	5.31	107.52	105.40
1	AA	732	C	O5'-P-OP2	5.31	117.07	110.70
2	BA	257	G	O5'-P-OP2	-5.31	100.92	105.70
3	DA	553	G	N3-C2-N2	-5.31	116.19	119.90
3	DA	1110	G	OP1-P-OP2	5.31	127.56	119.60
3	DA	1764	C	N1-C1'-C2'	-5.31	106.16	112.00
3	DA	2047	C	O5'-P-OP2	-5.31	100.92	105.70
3	DA	2054	A	C6-N1-C2	-5.31	115.42	118.60
3	DA	2203	U	N1-C2-O2	-5.31	119.08	122.80
3	DA	2571	U	C5-C4-O4	-5.31	122.72	125.90
5	DB	94	A	C5-N7-C8	-5.31	101.25	103.90
30	CF	151	LEU	CA-CB-CG	5.31	127.51	115.30
1	AA	1050	G	N3-C4-C5	5.31	131.25	128.60
3	DA	677	A	C5-N7-C8	-5.31	101.25	103.90
3	DA	974	G	N1-C2-N2	5.31	120.97	116.20
31	DG	71	LEU	CB-CG-CD2	-5.31	101.98	111.00
1	AA	413	G	C4-C5-N7	-5.30	108.68	110.80
1	AA	577	G	C5-N7-C8	-5.30	101.65	104.30
2	BA	1378	C	C6-N1-C2	5.30	122.42	120.30
3	DA	1382	G	C5-C6-O6	5.30	131.78	128.60
3	DA	2733	A	C2-N3-C4	-5.30	107.95	110.60
3	DA	2813	A	OP1-P-OP2	5.30	127.56	119.60
4	CA	784	G	C8-N9-C1'	-5.30	120.10	127.00
3	DA	1611	C	N3-C4-N4	5.30	121.71	118.00
3	DA	1630	A	C5-C6-N6	5.30	127.94	123.70
3	DA	2772	C	N3-C4-N4	5.30	121.71	118.00
1	AA	134	G	N1-C2-N2	5.30	120.97	116.20
3	DA	460	A	OP1-P-O3'	5.30	116.86	105.20
3	DA	700	G	C6-C5-N7	-5.30	127.22	130.40
3	DA	752	A	N1-C2-N3	-5.30	126.65	129.30
3	DA	808	G	N3-C2-N2	5.30	123.61	119.90
3	DA	1202	G	N3-C4-N9	-5.30	122.82	126.00
3	DA	1349	C	OP1-P-OP2	5.30	127.55	119.60
3	DA	2208	C	N3-C4-N4	5.30	121.71	118.00
3	DA	2253	G	OP2-P-O3'	5.30	116.86	105.20
3	DA	2351	G	N3-C4-N9	5.30	129.18	126.00
1	AA	32	A	C8-N9-C4	-5.30	103.68	105.80
1	AA	66	A	C5-C6-N6	-5.30	119.46	123.70
1	AA	557	G	N1-C6-O6	-5.30	116.72	119.90
1	AA	595	A	C5-C6-N1	5.30	120.35	117.70
1	AA	1067	A	C5-N7-C8	-5.30	101.25	103.90
3	DA	17	G	O5'-P-OP1	-5.30	100.93	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	117	G	C6-C5-N7	-5.30	127.22	130.40
3	DA	2485	G	N1-C6-O6	5.30	123.08	119.90
3	DA	2645	G	O4'-C1'-N9	5.30	112.44	108.20
3	DA	2716	C	OP1-P-O3'	5.30	116.86	105.20
1	AA	342	C	C6-N1-C2	5.30	122.42	120.30
1	AA	1478	U	OP2-P-O3'	5.30	116.86	105.20
2	BA	122	G	OP1-P-OP2	-5.30	111.65	119.60
2	BA	576	C	OP2-P-O3'	5.30	116.86	105.20
3	DA	254	G	O4'-C1'-N9	5.30	112.44	108.20
3	DA	375	G	C6-C5-N7	-5.30	127.22	130.40
3	DA	1393	A	OP1-P-O3'	5.30	116.86	105.20
1	AA	362	G	N1-C2-N3	5.30	127.08	123.90
1	AA	1467	C	N1-C2-O2	-5.30	115.72	118.90
2	BA	403	C	C2-N1-C1'	-5.30	112.97	118.80
3	DA	668	A	N3-C4-N9	-5.30	123.16	127.40
3	DA	1256	G	C8-N9-C1'	-5.30	120.11	127.00
3	DA	1625	C	C2-N1-C1'	5.30	124.63	118.80
3	DA	1916	A	N1-C6-N6	5.30	121.78	118.60
2	BA	1420	U	C6-N1-C2	-5.29	117.82	121.00
3	DA	616	A	N1-C6-N6	5.29	121.78	118.60
3	DA	2027	G	P-O3'-C3'	5.29	126.05	119.70
3	DA	2383	G	C5-C6-O6	-5.29	125.42	128.60
3	DA	2843	G	C4-C5-C6	5.29	121.98	118.80
4	CA	2825	G	N7-C8-N9	5.29	115.75	113.10
1	AA	123	U	C6-N1-C2	5.29	124.18	121.00
1	AA	900	A	C5-C6-N6	-5.29	119.47	123.70
3	DA	780	G	O5'-P-OP1	-5.29	100.94	105.70
3	DA	1603	A	N9-C4-C5	5.29	107.92	105.80
3	DA	1814	G	C5-C6-O6	-5.29	125.42	128.60
3	DA	2472	G	N1-C6-O6	5.29	123.08	119.90
3	DA	2640	G	OP1-P-O3'	-5.29	93.55	105.20
4	CA	757	G	N3-C2-N2	-5.29	116.19	119.90
3	DA	326	G	C8-N9-C4	-5.29	104.28	106.40
3	DA	466	A	C5-C6-N1	5.29	120.34	117.70
3	DA	972	A	N9-C4-C5	5.29	107.92	105.80
3	DA	973	A	C2-N3-C4	5.29	113.25	110.60
3	DA	1185	G	OP2-P-O3'	5.29	116.84	105.20
3	DA	1603	A	N7-C8-N9	5.29	116.45	113.80
3	DA	2083	G	N3-C4-C5	5.29	131.25	128.60
3	DA	2707	U	OP2-P-O3'	5.29	116.84	105.20
4	CA	456	C	N1-C2-N3	5.29	122.91	119.20
5	DB	85	G	C4-C5-C6	5.29	121.97	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1188	A	C5-C6-N6	5.29	127.93	123.70
3	DA	67	U	N3-C4-O4	5.29	123.10	119.40
4	CA	749	A	C4-C5-C6	-5.29	114.36	117.00
31	DG	86	LEU	CB-CG-CD1	-5.29	102.01	111.00
1	AA	63	C	C6-N1-C2	-5.29	118.18	120.30
1	AA	599	C	OP1-P-O3'	5.29	116.84	105.20
2	BA	379	C	C2-N3-C4	5.29	122.54	119.90
3	DA	2064	C	C6-N1-C1'	-5.29	114.45	120.80
3	DA	2287	A	C5-N7-C8	-5.29	101.26	103.90
3	DA	2783	U	C6-N1-C1'	-5.29	113.80	121.20
4	CA	380	G	O5'-P-OP1	-5.29	100.94	105.70
4	CA	727	A	N3-C4-C5	-5.29	123.10	126.80
4	CA	827	U	N1-C2-N3	-5.29	111.73	114.90
2	BA	1511	G	C5-N7-C8	-5.29	101.66	104.30
3	DA	189	G	C2-N3-C4	-5.29	109.26	111.90
3	DA	943	A	C5-C6-N1	-5.29	115.06	117.70
3	DA	1146	C	OP2-P-O3'	5.29	116.83	105.20
3	DA	1932	A	N1-C2-N3	-5.29	126.66	129.30
27	DC	109	LEU	CB-CG-CD2	-5.29	102.01	111.00
1	AA	173	U	OP2-P-O3'	5.29	116.83	105.20
1	AA	254	G	N9-C4-C5	5.29	107.51	105.40
1	AA	333	U	C5-C6-N1	-5.29	120.06	122.70
1	AA	961	U	N3-C2-O2	5.29	125.90	122.20
1	AA	1321	U	N3-C2-O2	-5.29	118.50	122.20
2	BA	245	U	N3-C4-O4	-5.29	115.70	119.40
3	DA	30	G	C4-C5-C6	5.29	121.97	118.80
3	DA	106	C	N3-C4-C5	5.29	124.01	121.90
3	DA	245	G	C8-N9-C4	-5.29	104.29	106.40
3	DA	314	C	N3-C4-N4	5.29	121.70	118.00
3	DA	1252	G	O4'-C1'-N9	-5.29	103.97	108.20
3	DA	1423	G	C5-C6-N1	-5.29	108.86	111.50
3	DA	1883	U	N3-C4-O4	5.29	123.10	119.40
4	CA	126	A	O5'-P-OP2	-5.29	100.94	105.70
4	CA	1849	G	C4-C5-C6	5.29	121.97	118.80
4	CA	1977	A	C2-N3-C4	-5.29	107.96	110.60
1	AA	108	G	C6-C5-N7	-5.28	127.23	130.40
1	AA	756	C	C6-N1-C2	5.28	122.41	120.30
1	AA	824	G	C5-N7-C8	-5.28	101.66	104.30
1	AA	883	C	C6-N1-C2	-5.28	118.19	120.30
1	AA	1139	G	N1-C6-O6	-5.28	116.73	119.90
2	BA	159	G	N3-C4-C5	-5.28	125.96	128.60
3	DA	308	G	N9-C4-C5	-5.28	103.29	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	418	C	O5'-P-OP2	-5.28	100.94	105.70
3	DA	2231	U	OP2-P-O3'	5.28	116.83	105.20
4	CA	2441	U	C6-N1-C2	5.28	124.17	121.00
3	DA	1262	A	N1-C6-N6	5.28	121.77	118.60
4	CA	462	C	O5'-P-OP2	-5.28	100.95	105.70
4	CA	1972	G	N3-C2-N2	-5.28	116.20	119.90
51	D1	16	ARG	NE-CZ-NH1	-5.28	117.66	120.30
1	AA	782	A	C4-C5-C6	5.28	119.64	117.00
1	AA	1094	G	O4'-C1'-N9	5.28	112.42	108.20
2	BA	518	C	C6-N1-C1'	-5.28	114.46	120.80
2	BA	1109	C	C2-N1-C1'	-5.28	112.99	118.80
2	BA	1435	G	C2-N3-C4	-5.28	109.26	111.90
3	DA	90	U	N3-C2-O2	5.28	125.90	122.20
3	DA	570	G	O5'-P-OP2	5.28	117.04	110.70
3	DA	1343	G	O5'-P-OP2	-5.28	100.95	105.70
3	DA	1982	U	O5'-P-OP1	5.28	117.04	110.70
3	DA	2736	A	N3-C4-C5	5.28	130.50	126.80
4	CA	2770	G	N3-C4-N9	5.28	129.17	126.00
1	AA	1072	G	C8-N9-C4	-5.28	104.29	106.40
3	DA	542	C	C5-C6-N1	-5.28	118.36	121.00
3	DA	715	A	N9-C4-C5	-5.28	103.69	105.80
3	DA	753	A	O5'-P-OP2	-5.28	100.95	105.70
3	DA	2637	U	N1-C2-O2	-5.28	119.10	122.80
4	CA	2271	G	C6-C5-N7	-5.28	127.23	130.40
1	AA	1081	A	O5'-P-OP2	-5.28	100.95	105.70
1	AA	1359	C	C5-C6-N1	-5.28	118.36	121.00
2	BA	161	A	C5-C6-N6	5.28	127.92	123.70
2	BA	394	G	N1-C2-N2	5.28	120.95	116.20
2	BA	588	G	C8-N9-C4	-5.28	104.29	106.40
2	BA	730	G	C4-N9-C1'	5.28	133.36	126.50
2	BA	872	A	C8-N9-C1'	-5.28	118.20	127.70
2	BA	917	G	N3-C4-N9	-5.28	122.83	126.00
3	DA	410	G	O5'-P-OP1	-5.28	100.95	105.70
3	DA	1339	G	C8-N9-C4	-5.28	104.29	106.40
3	DA	1421	G	C6-C5-N7	-5.28	127.23	130.40
3	DA	1778	U	OP2-P-O3'	5.28	116.81	105.20
3	DA	1974	C	N3-C4-N4	-5.28	114.31	118.00
4	CA	1370	C	OP1-P-O3'	5.28	116.81	105.20
4	CA	1568	G	C6-C5-N7	5.28	133.57	130.40
4	CA	2230	G	O5'-P-OP1	5.28	117.03	110.70
5	DB	110	C	C6-N1-C2	5.28	122.41	120.30
3	DA	66	C	N1-C2-O2	-5.28	115.73	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	837	C	N3-C4-C5	5.28	124.01	121.90
3	DA	1137	G	C6-C5-N7	-5.28	127.23	130.40
3	DA	1819	A	N1-C2-N3	5.28	131.94	129.30
3	DA	2475	C	O5'-P-OP2	5.28	117.03	110.70
4	CA	376	G	C8-N9-C4	-5.28	104.29	106.40
4	CA	1568	G	N3-C4-C5	5.28	131.24	128.60
4	CA	1622	G	C8-N9-C4	-5.28	104.29	106.40
1	AA	391	G	C5-C6-N1	-5.27	108.86	111.50
1	AA	796	C	C5-C4-N4	-5.27	116.51	120.20
3	DA	1156	A	OP2-P-O3'	5.27	116.80	105.20
3	DA	1997	C	O5'-P-OP1	-5.27	100.95	105.70
3	DA	2051	A	N7-C8-N9	5.27	116.44	113.80
1	AA	332	G	OP2-P-O3'	5.27	116.80	105.20
2	BA	816	A	OP1-P-OP2	5.27	127.51	119.60
3	DA	979	A	C5-C6-N6	5.27	127.92	123.70
3	DA	1766	G	N3-C4-C5	5.27	131.24	128.60
4	CA	1937	A	C5-C6-N6	5.27	127.92	123.70
4	CA	2480	C	C2-N1-C1'	5.27	124.60	118.80
5	DB	4	C	C2-N3-C4	-5.27	117.26	119.90
5	DB	64	G	C5-N7-C8	-5.27	101.66	104.30
2	BA	1343	G	C8-N9-C1'	5.27	133.85	127.00
3	DA	458	G	C5-C6-O6	5.27	131.76	128.60
3	DA	559	G	N7-C8-N9	5.27	115.73	113.10
3	DA	1198	U	N3-C4-O4	5.27	123.09	119.40
4	CA	1953	A	C2-N3-C4	-5.27	107.96	110.60
1	AA	886	G	N3-C4-N9	-5.27	122.84	126.00
2	BA	872	A	C4-C5-C6	5.27	119.63	117.00
2	BA	1109	C	C6-N1-C2	5.27	122.41	120.30
3	DA	3	U	N3-C4-O4	5.27	123.09	119.40
3	DA	246	C	N3-C2-O2	5.27	125.59	121.90
3	DA	461	C	C2-N1-C1'	5.27	124.59	118.80
3	DA	494	G	C5-N7-C8	-5.27	101.67	104.30
3	DA	1528	A	C5-N7-C8	-5.27	101.27	103.90
4	CA	1025	G	N3-C4-N9	-5.27	122.84	126.00
5	DB	17	C	C2-N1-C1'	5.27	124.60	118.80
1	AA	1392	G	N1-C2-N3	5.27	127.06	123.90
2	BA	147	G	C8-N9-C4	-5.27	104.29	106.40
3	DA	24	G	C8-N9-C4	-5.27	104.29	106.40
3	DA	267	C	N1-C2-O2	-5.27	115.74	118.90
3	DA	447	A	OP1-P-O3'	5.27	116.79	105.20
3	DA	561	G	N3-C2-N2	-5.27	116.21	119.90
3	DA	977	G	C6-C5-N7	-5.27	127.24	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1039	A	N1-C2-N3	5.27	131.93	129.30
3	DA	1673	G	N3-C2-N2	5.27	123.59	119.90
3	DA	1739	A	C6-C5-N7	-5.27	128.61	132.30
3	DA	2692	G	N1-C6-O6	-5.27	116.74	119.90
4	CA	1804	C	N1-C2-N3	-5.27	115.51	119.20
2	BA	1510	C	C2-N1-C1'	5.27	124.59	118.80
3	DA	1163	G	OP1-P-O3'	5.27	116.78	105.20
3	DA	1332	G	N3-C2-N2	5.27	123.59	119.90
3	DA	2058	A	N7-C8-N9	5.27	116.43	113.80
1	AA	689	C	C5-C4-N4	-5.26	116.52	120.20
1	AA	822	U	O5'-P-OP1	5.26	117.02	110.70
1	AA	877	G	N1-C2-N2	-5.26	111.46	116.20
2	BA	396	C	C2-N3-C4	-5.26	117.27	119.90
2	BA	681	A	C5-C6-N6	-5.26	119.49	123.70
3	DA	222	A	C8-N9-C4	-5.26	103.69	105.80
3	DA	270	A	N1-C6-N6	5.26	121.76	118.60
3	DA	336	C	N3-C2-O2	5.26	125.58	121.90
3	DA	668	A	OP1-P-OP2	5.26	127.50	119.60
3	DA	814	C	N1-C2-O2	5.26	122.06	118.90
3	DA	1005	C	O5'-P-OP1	-5.26	100.96	105.70
3	DA	1229	C	OP1-P-O3'	-5.26	93.62	105.20
3	DA	1270	C	C5-C4-N4	-5.26	116.52	120.20
3	DA	1596	A	C8-N9-C4	5.26	107.91	105.80
3	DA	2353	G	C2-N3-C4	-5.26	109.27	111.90
3	DA	2873	A	O5'-P-OP1	-5.26	100.96	105.70
3	DA	2894	G	OP2-P-O3'	5.26	116.78	105.20
4	CA	1846	G	N1-C6-O6	5.26	123.06	119.90
1	AA	4	U	C5-C6-N1	5.26	125.33	122.70
2	BA	828	U	N3-C2-O2	5.26	125.88	122.20
2	BA	1531	A	C6-N1-C2	5.26	121.76	118.60
3	DA	2744	G	C5-C6-O6	-5.26	125.44	128.60
3	DA	2816	G	C4-C5-N7	-5.26	108.69	110.80
4	CA	203	A	N3-C4-N9	5.26	131.61	127.40
4	CA	663	G	C6-C5-N7	-5.26	127.24	130.40
4	CA	1822	C	C6-N1-C1'	5.26	127.11	120.80
10	AF	54	LEU	CA-CB-CG	5.26	127.40	115.30
1	AA	299	G	C4-N9-C1'	5.26	133.34	126.50
1	AA	577	G	C4-C5-C6	-5.26	115.64	118.80
1	AA	756	C	N3-C4-C5	5.26	124.00	121.90
1	AA	1428	A	N1-C2-N3	5.26	131.93	129.30
2	BA	108	G	N1-C6-O6	5.26	123.06	119.90
2	BA	530	G	N3-C4-C5	-5.26	125.97	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	670	G	C2-N3-C4	-5.26	109.27	111.90
2	BA	1502	A	OP1-P-OP2	5.26	127.49	119.60
3	DA	573	U	OP1-P-O3'	5.26	116.77	105.20
3	DA	573	U	C5-C4-O4	5.26	129.06	125.90
3	DA	916	G	C5-C6-N1	-5.26	108.87	111.50
3	DA	925	A	C2-N3-C4	-5.26	107.97	110.60
3	DA	1041	G	OP2-P-O3'	5.26	116.77	105.20
3	DA	1129	A	C5-N7-C8	5.26	106.53	103.90
3	DA	1131	G	N9-C4-C5	-5.26	103.30	105.40
3	DA	1389	G	O5'-P-OP2	-5.26	100.96	105.70
3	DA	2366	A	OP1-P-OP2	5.26	127.49	119.60
4	CA	2624	G	C8-N9-C4	-5.26	104.30	106.40
1	AA	298	A	C8-N9-C4	5.26	107.90	105.80
1	AA	502	A	OP1-P-O3'	5.26	116.77	105.20
2	BA	244	U	N3-C4-O4	-5.26	115.72	119.40
2	BA	1174	G	O5'-P-OP1	5.26	117.01	110.70
3	DA	916	G	C4-N9-C1'	5.26	133.34	126.50
3	DA	1277	G	N1-C2-N2	5.26	120.93	116.20
3	DA	1351	C	N3-C4-C5	5.26	124.00	121.90
3	DA	2232	C	C5-C4-N4	-5.26	116.52	120.20
3	DA	2359	C	P-O5'-C5'	-5.26	112.48	120.90
3	DA	2703	C	OP2-P-O3'	5.26	116.77	105.20
3	DA	2843	G	OP1-P-O3'	-5.26	93.63	105.20
4	CA	702	U	C5-C4-O4	-5.26	122.74	125.90
4	CA	1792	G	N3-C2-N2	5.26	123.58	119.90
4	CA	2755	C	N1-C2-O2	5.26	122.06	118.90
1	AA	1512	U	O5'-P-OP2	-5.26	100.97	105.70
2	BA	679	C	N3-C4-C5	5.26	124.00	121.90
2	BA	1388	C	O5'-P-OP2	5.26	117.01	110.70
3	DA	999	U	OP2-P-O3'	5.26	116.77	105.20
3	DA	1722	A	N1-C6-N6	5.26	121.75	118.60
4	CA	2620	C	N3-C4-C5	5.26	124.00	121.90
5	DB	51	G	O5'-P-OP1	5.26	117.01	110.70
1	AA	243	A	OP2-P-O3'	5.26	116.77	105.20
1	AA	552	U	C6-N1-C2	-5.26	117.85	121.00
1	AA	790	A	C5-C6-N6	-5.26	119.50	123.70
2	BA	681	A	OP1-P-OP2	-5.26	111.71	119.60
3	DA	106	C	C6-N1-C1'	-5.26	114.49	120.80
3	DA	1052	C	C6-N1-C2	-5.26	118.20	120.30
3	DA	1217	U	OP1-P-OP2	5.26	127.48	119.60
3	DA	1324	G	O4'-C1'-N9	5.26	112.41	108.20
3	DA	1459	G	OP1-P-O3'	-5.26	93.63	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1667	G	N1-C6-O6	-5.26	116.75	119.90
3	DA	1945	G	OP1-P-OP2	5.26	127.49	119.60
3	DA	2032	G	C4-C5-N7	-5.26	108.70	110.80
4	CA	781	A	O5'-P-OP2	-5.26	100.97	105.70
4	CA	1549	A	N1-C6-N6	5.26	121.75	118.60
4	CA	2575	C	N1-C2-O2	-5.26	115.75	118.90
1	AA	582	C	OP1-P-O3'	5.25	116.76	105.20
1	AA	1052	U	C5-C6-N1	5.25	125.33	122.70
2	BA	1532	U	N3-C4-C5	-5.25	111.45	114.60
3	DA	255	A	O5'-P-OP1	-5.25	100.97	105.70
3	DA	1660	G	C4-C5-C6	5.25	121.95	118.80
3	DA	1956	U	C5-C6-N1	-5.25	120.07	122.70
3	DA	2571	U	N3-C4-C5	-5.25	111.45	114.60
3	DA	2805	C	C6-N1-C1'	5.25	127.11	120.80
3	DA	823	C	O4'-C1'-N1	-5.25	104.00	108.20
3	DA	837	C	OP1-P-O3'	-5.25	93.64	105.20
3	DA	1138	G	N1-C6-O6	5.25	123.05	119.90
3	DA	2777	G	N3-C2-N2	-5.25	116.22	119.90
3	DA	2782	G	C5-C6-O6	-5.25	125.45	128.60
4	CA	1250	G	N1-C6-O6	5.25	123.05	119.90
4	CA	1622	G	OP1-P-OP2	-5.25	111.72	119.60
5	DB	86	G	N3-C2-N2	-5.25	116.22	119.90
1	AA	649	A	C8-N9-C4	-5.25	103.70	105.80
3	DA	613	A	O5'-P-OP1	5.25	117.00	110.70
3	DA	2571	U	OP2-P-O3'	5.25	116.75	105.20
4	CA	1705	A	C8-N9-C4	5.25	107.90	105.80
30	DF	177	ARG	CG-CD-NE	-5.25	100.77	111.80
1	AA	1224	U	N3-C4-C5	5.25	117.75	114.60
3	DA	575	A	N7-C8-N9	5.25	116.42	113.80
3	DA	1888	G	N3-C2-N2	-5.25	116.22	119.90
3	DA	1894	C	N1-C2-O2	-5.25	115.75	118.90
1	AA	297	G	C2-N3-C4	-5.25	109.28	111.90
1	AA	721	G	O5'-P-OP2	-5.25	100.98	105.70
1	AA	825	A	C5-N7-C8	-5.25	101.28	103.90
3	DA	211	C	C5-C4-N4	-5.25	116.53	120.20
3	DA	758	C	C5-C4-N4	-5.25	116.53	120.20
3	DA	1119	U	C5-C4-O4	-5.25	122.75	125.90
3	DA	1300	G	C8-N9-C4	-5.25	104.30	106.40
3	DA	1339	G	N7-C8-N9	5.25	115.72	113.10
3	DA	2476	A	C8-N9-C4	-5.25	103.70	105.80
4	CA	214	G	N3-C4-C5	5.25	131.22	128.60
4	CA	600	G	N3-C4-N9	-5.25	122.85	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2144	G	C8-N9-C4	-5.25	104.30	106.40
21	BQ	27	ARG	NE-CZ-NH2	-5.25	117.68	120.30
1	AA	524	G	N7-C8-N9	5.25	115.72	113.10
1	AA	1430	A	C4-C5-C6	5.25	119.62	117.00
2	BA	917	G	OP2-P-O3'	5.25	116.74	105.20
3	DA	327	G	N3-C4-C5	5.25	131.22	128.60
3	DA	726	G	C2-N3-C4	-5.25	109.28	111.90
3	DA	1051	G	N1-C2-N2	5.25	120.92	116.20
3	DA	1092	C	N3-C4-N4	-5.25	114.33	118.00
3	DA	1656	C	OP1-P-OP2	5.25	127.47	119.60
3	DA	1668	A	O5'-P-OP2	-5.25	100.98	105.70
3	DA	1695	G	OP2-P-O3'	5.25	116.74	105.20
3	DA	2562	U	C6-N1-C2	-5.25	117.85	121.00
3	DA	2629	U	O5'-P-OP1	5.25	117.00	110.70
3	DA	2840	C	N3-C4-C5	5.25	124.00	121.90
4	CA	203	A	N9-C4-C5	-5.25	103.70	105.80
1	AA	46	G	C4-N9-C1'	-5.25	119.68	126.50
3	DA	598	U	N1-C2-O2	-5.25	119.13	122.80
3	DA	792	A	OP2-P-O3'	5.25	116.74	105.20
3	DA	1900	A	O4'-C1'-N9	-5.25	104.00	108.20
1	AA	391	G	N3-C4-N9	-5.24	122.85	126.00
1	AA	958	A	OP1-P-OP2	5.24	127.46	119.60
2	BA	809	G	C5-C6-O6	5.24	131.75	128.60
3	DA	18	U	C2-N1-C1'	5.24	123.99	117.70
3	DA	29	U	N3-C4-C5	-5.24	111.45	114.60
3	DA	444	C	OP1-P-OP2	-5.24	111.73	119.60
3	DA	467	G	N3-C4-N9	-5.24	122.85	126.00
3	DA	699	A	N1-C6-N6	5.24	121.75	118.60
3	DA	939	G	C6-C5-N7	-5.24	127.25	130.40
3	DA	1444	G	C6-C5-N7	-5.24	127.25	130.40
3	DA	1932	A	N9-C4-C5	-5.24	103.70	105.80
3	DA	2713	U	O5'-P-OP1	-5.24	100.98	105.70
3	DA	2828	G	N1-C2-N2	5.24	120.92	116.20
4	CA	187	G	N3-C4-C5	5.24	131.22	128.60
4	CA	1757	A	N1-C2-N3	-5.24	126.68	129.30
4	CA	2248	C	C2-N3-C4	5.24	122.52	119.90
4	CA	2509	G	C4-N9-C1'	5.24	133.32	126.50
2	BA	1170	A	C2-N3-C4	5.24	113.22	110.60
3	DA	1888	G	P-O3'-C3'	5.24	125.99	119.70
3	DA	2334	U	OP2-P-O3'	-5.24	93.67	105.20
3	DA	2388	A	C5-C6-N1	5.24	120.32	117.70
4	CA	638	G	N1-C6-O6	5.24	123.05	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	955	U	N1-C2-O2	5.24	126.47	122.80
4	CA	2029	G	C5-N7-C8	-5.24	101.68	104.30
4	CA	2567	G	OP2-P-O3'	5.24	116.73	105.20
2	BA	400	C	C5-C4-N4	-5.24	116.53	120.20
3	DA	1053	C	N3-C4-N4	5.24	121.67	118.00
3	DA	1161	C	C5-C4-N4	-5.24	116.53	120.20
3	DA	2316	G	N1-C6-O6	5.24	123.05	119.90
3	DA	2536	G	OP1-P-OP2	5.24	127.46	119.60
3	DA	2570	G	C5-C6-O6	5.24	131.75	128.60
3	DA	2699	C	N3-C2-O2	5.24	125.57	121.90
4	CA	1752	C	N3-C4-C5	-5.24	119.80	121.90
4	CA	2012	G	N1-C2-N2	-5.24	111.48	116.20
5	DB	100	G	N9-C4-C5	-5.24	103.30	105.40
1	AA	1149	C	C6-N1-C2	5.24	122.39	120.30
2	BA	49	U	N3-C4-C5	5.24	117.74	114.60
2	BA	732	C	OP2-P-O3'	5.24	116.72	105.20
3	DA	170	U	C5-C4-O4	5.24	129.04	125.90
3	DA	328	U	N3-C4-C5	-5.24	111.46	114.60
3	DA	576	U	C5-C6-N1	5.24	125.32	122.70
3	DA	831	G	C2-N3-C4	-5.24	109.28	111.90
3	DA	1668	A	N3-C4-N9	-5.24	123.21	127.40
3	DA	2500	U	C5-C4-O4	5.24	129.04	125.90
3	DA	2736	A	OP2-P-O3'	5.24	116.72	105.20
4	CA	239	C	O5'-P-OP2	-5.24	100.99	105.70
4	CA	775	G	C5-C6-O6	5.24	131.74	128.60
4	CA	2446	G	C5-C6-O6	5.24	131.74	128.60
1	AA	1069	C	N3-C4-N4	5.24	121.67	118.00
2	BA	149	A	N1-C6-N6	-5.24	115.46	118.60
3	DA	1673	G	N9-C4-C5	-5.24	103.31	105.40
3	DA	2074	U	OP2-P-O3'	5.24	116.72	105.20
5	DB	43	C	C5-C4-N4	5.24	123.87	120.20
1	AA	27	G	O5'-P-OP2	5.24	116.98	110.70
1	AA	589	U	C6-N1-C2	-5.24	117.86	121.00
2	BA	132	C	C6-N1-C2	-5.24	118.21	120.30
2	BA	151	A	N1-C6-N6	-5.24	115.46	118.60
2	BA	433	G	C2-N3-C4	-5.24	109.28	111.90
2	BA	815	A	O5'-P-OP2	-5.24	100.99	105.70
2	BA	914	A	C4-C5-C6	5.24	119.62	117.00
3	DA	18	U	N3-C4-C5	-5.24	111.46	114.60
3	DA	56	A	C4-C5-N7	5.24	113.32	110.70
3	DA	2196	C	OP1-P-O3'	5.24	116.72	105.20
3	DA	2285	C	P-O5'-C5'	-5.24	112.53	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2519	U	C6-N1-C2	5.24	124.14	121.00
4	CA	258	G	N1-C6-O6	-5.24	116.76	119.90
4	CA	1802	A	OP1-P-OP2	-5.24	111.75	119.60
3	DA	537	G	N7-C8-N9	-5.23	110.48	113.10
3	DA	1957	C	O4'-C1'-N1	-5.23	104.01	108.20
3	DA	2239	G	C8-N9-C4	5.23	108.49	106.40
4	CA	1214	A	N1-C6-N6	-5.23	115.46	118.60
1	AA	394	G	N1-C2-N3	5.23	127.04	123.90
1	AA	1050	G	C2-N3-C4	-5.23	109.28	111.90
2	BA	379	C	N3-C4-N4	5.23	121.66	118.00
3	DA	1114	C	O5'-P-OP2	-5.23	100.99	105.70
3	DA	2353	G	OP2-P-O3'	5.23	116.71	105.20
5	DB	71	C	N1-C2-O2	-5.23	115.76	118.90
1	AA	504	C	C2-N3-C4	-5.23	117.28	119.90
2	BA	661	G	C8-N9-C4	-5.23	104.31	106.40
2	BA	681	A	C4-C5-N7	5.23	113.32	110.70
2	BA	1298	U	N1-C2-O2	5.23	126.46	122.80
3	DA	35	G	C8-N9-C4	-5.23	104.31	106.40
3	DA	981	A	O5'-P-OP2	5.23	116.97	110.70
3	DA	1229	C	N3-C4-C5	5.23	123.99	121.90
3	DA	1555	G	C4-C5-N7	-5.23	108.71	110.80
4	CA	1769	U	N1-C2-O2	-5.23	119.14	122.80
4	CA	2223	G	C8-N9-C4	-5.23	104.31	106.40
43	DT	24	ILE	CG1-CB-CG2	-5.23	99.89	111.40
2	BA	541	G	C5-C6-O6	-5.23	125.46	128.60
3	DA	381	G	O5'-P-OP2	-5.23	100.99	105.70
3	DA	975	A	OP2-P-O3'	5.23	116.70	105.20
3	DA	1130	U	N3-C4-C5	-5.23	111.46	114.60
3	DA	1368	G	N1-C2-N2	5.23	120.91	116.20
3	DA	1614	A	N9-C4-C5	5.23	107.89	105.80
3	DA	2005	A	C5-C6-N6	5.23	127.88	123.70
3	DA	2715	C	N3-C2-O2	-5.23	118.24	121.90
4	CA	1791	A	C6-C5-N7	-5.23	128.64	132.30
1	AA	446	G	N1-C2-N2	5.23	120.90	116.20
1	AA	541	G	C5-C6-O6	-5.23	125.46	128.60
1	AA	898	G	N1-C2-N3	5.23	127.04	123.90
1	AA	1082	A	C4-C5-N7	5.23	113.31	110.70
2	BA	818	G	N3-C4-C5	-5.23	125.99	128.60
3	DA	11	C	N1-C2-N3	5.23	122.86	119.20
3	DA	123	G	C5-C6-N1	-5.23	108.89	111.50
3	DA	499	U	C4-C5-C6	5.23	122.84	119.70
3	DA	648	G	OP1-P-OP2	5.23	127.44	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1129	A	C4-C5-C6	5.23	119.61	117.00
3	DA	1838	C	N1-C2-N3	-5.23	115.54	119.20
3	DA	1983	G	C8-N9-C4	-5.23	104.31	106.40
3	DA	2043	C	C6-N1-C1'	5.23	127.07	120.80
3	DA	2770	G	C5-C6-O6	5.23	131.74	128.60
3	DA	2866	U	N3-C2-O2	-5.23	118.54	122.20
4	CA	165	A	N1-C6-N6	5.23	121.74	118.60
3	DA	969	G	C6-N1-C2	-5.23	121.96	125.10
4	CA	60	G	C4-N9-C1'	-5.23	119.71	126.50
4	CA	178	G	C4-C5-N7	5.23	112.89	110.80
4	CA	784	G	N1-C2-N2	-5.23	111.50	116.20
4	CA	2687	U	O5'-P-OP1	-5.23	101.00	105.70
7	BC	18	TRP	CA-CB-CG	5.23	123.63	113.70
1	AA	1478	U	OP1-P-OP2	-5.22	111.76	119.60
2	BA	235	C	OP2-P-O3'	5.22	116.69	105.20
2	BA	729	A	OP1-P-O3'	5.22	116.69	105.20
2	BA	1185	G	C2-N3-C4	-5.22	109.29	111.90
3	DA	245	G	N1-C2-N2	5.22	120.90	116.20
3	DA	295	G	C4-C5-N7	5.22	112.89	110.80
3	DA	928	A	C5-N7-C8	5.22	106.51	103.90
3	DA	1464	G	O5'-P-OP1	-5.22	101.00	105.70
3	DA	1764	C	OP2-P-O3'	5.22	116.69	105.20
1	AA	50	A	O5'-P-OP2	5.22	116.97	110.70
3	DA	48	G	N1-C2-N2	-5.22	111.50	116.20
3	DA	61	C	C2-N3-C4	-5.22	117.29	119.90
3	DA	1878	G	C6-C5-N7	-5.22	127.27	130.40
3	DA	2007	U	N3-C2-O2	5.22	125.86	122.20
3	DA	2081	U	N3-C4-O4	-5.22	115.74	119.40
3	DA	2373	G	C5-N7-C8	-5.22	101.69	104.30
3	DA	2616	C	C4-C5-C6	5.22	120.01	117.40
3	DA	2708	G	O5'-P-OP2	-5.22	101.00	105.70
4	CA	740	C	C4-C5-C6	-5.22	114.79	117.40
4	CA	1666	G	C6-C5-N7	5.22	133.53	130.40
4	CA	1822	C	N1-C2-N3	5.22	122.86	119.20
2	BA	988	G	C8-N9-C4	-5.22	104.31	106.40
3	DA	797	G	N3-C2-N2	-5.22	116.25	119.90
3	DA	1796	U	O5'-P-OP1	-5.22	101.00	105.70
3	DA	1961	C	N3-C4-N4	5.22	121.66	118.00
1	AA	34	C	O5'-P-OP1	5.22	116.96	110.70
1	AA	888	G	N3-C4-C5	-5.22	125.99	128.60
2	BA	9	G	C8-N9-C4	5.22	108.49	106.40
2	BA	817	C	C5-C6-N1	-5.22	118.39	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	141	G	C4-N9-C1'	5.22	133.28	126.50
3	DA	570	G	O4'-C1'-N9	-5.22	104.03	108.20
3	DA	704	G	C2-N3-C4	-5.22	109.29	111.90
3	DA	806	C	C2-N1-C1'	5.22	124.54	118.80
3	DA	1153	C	OP2-P-O3'	5.22	116.68	105.20
3	DA	1692	U	C5-C4-O4	-5.22	122.77	125.90
3	DA	2317	A	N1-C6-N6	-5.22	115.47	118.60
3	DA	2523	G	C5-C6-O6	5.22	131.73	128.60
4	CA	576	U	C5-C4-O4	-5.22	122.77	125.90
1	AA	881	G	N3-C2-N2	-5.22	116.25	119.90
3	DA	1200	C	C5-C6-N1	-5.22	118.39	121.00
3	DA	1605	C	C2-N3-C4	-5.22	117.29	119.90
3	DA	2846	G	C4-C5-N7	5.22	112.89	110.80
4	CA	2063	C	OP1-P-OP2	-5.22	111.77	119.60
4	CA	2607	G	N1-C2-N2	-5.22	111.50	116.20
34	DK	69	ARG	NE-CZ-NH2	-5.22	117.69	120.30
1	AA	1392	G	O5'-P-OP1	5.22	116.96	110.70
1	AA	1481	U	N1-C2-O2	-5.22	119.15	122.80
2	BA	391	G	N3-C4-N9	5.22	129.13	126.00
2	BA	432	A	OP2-P-O3'	5.22	116.68	105.20
2	BA	1373	G	C8-N9-C4	-5.22	104.31	106.40
3	DA	115	C	N3-C2-O2	5.22	125.55	121.90
3	DA	458	G	O4'-C1'-N9	5.22	112.37	108.20
3	DA	1186	G	N7-C8-N9	5.22	115.71	113.10
3	DA	1560	G	C5-N7-C8	-5.22	101.69	104.30
3	DA	1666	G	N1-C2-N3	5.22	127.03	123.90
3	DA	1679	A	N3-C4-C5	-5.22	123.15	126.80
3	DA	2665	A	C6-N1-C2	-5.22	115.47	118.60
3	DA	2725	A	C4-C5-N7	5.22	113.31	110.70
4	CA	781	A	C5-C6-N6	5.22	127.87	123.70
4	CA	1799	G	C4-N9-C1'	5.22	133.28	126.50
4	CA	1843	C	C5-C6-N1	5.22	123.61	121.00
4	CA	2645	G	C4-N9-C1'	5.22	133.28	126.50
37	DN	36	VAL	CA-CB-CG2	-5.22	103.08	110.90
1	AA	25	C	O5'-P-OP1	-5.21	101.01	105.70
1	AA	183	C	C2-N1-C1'	5.21	124.53	118.80
1	AA	309	A	N1-C6-N6	5.21	121.73	118.60
1	AA	766	A	C6-C5-N7	-5.21	128.65	132.30
1	AA	1047	G	C6-C5-N7	-5.21	127.27	130.40
1	AA	1299	A	C5-C6-N1	5.21	120.31	117.70
2	BA	168	G	C4-C5-N7	5.21	112.89	110.80
3	DA	132	G	N7-C8-N9	-5.21	110.49	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1402	U	N3-C4-C5	-5.21	111.47	114.60
4	CA	1696	G	C5-N7-C8	-5.21	101.69	104.30
1	AA	796	C	C2-N3-C4	5.21	122.51	119.90
1	AA	1080	A	N1-C6-N6	-5.21	115.47	118.60
1	AA	1482	G	C6-C5-N7	-5.21	127.27	130.40
2	BA	576	C	C6-N1-C2	-5.21	118.22	120.30
3	DA	84	A	C5-N7-C8	5.21	106.51	103.90
3	DA	321	U	C6-N1-C2	5.21	124.13	121.00
3	DA	444	C	N3-C4-N4	-5.21	114.35	118.00
3	DA	1134	A	N1-C6-N6	-5.21	115.47	118.60
1	AA	107	G	OP1-P-O3'	5.21	116.67	105.20
1	AA	452	A	C6-C5-N7	-5.21	128.65	132.30
1	AA	1197	A	C8-N9-C4	-5.21	103.72	105.80
1	AA	1448	C	C2-N1-C1'	5.21	124.53	118.80
1	AA	1459	G	N1-C6-O6	5.21	123.03	119.90
2	BA	12	U	C2-N1-C1'	-5.21	111.45	117.70
2	BA	408	A	OP1-P-OP2	5.21	127.42	119.60
3	DA	342	A	N1-C2-N3	5.21	131.91	129.30
3	DA	1051	G	O5'-P-OP2	-5.21	101.01	105.70
3	DA	1459	G	OP2-P-O3'	5.21	116.66	105.20
3	DA	1518	C	N1-C2-O2	-5.21	115.77	118.90
3	DA	1980	G	OP1-P-OP2	-5.21	111.78	119.60
3	DA	2289	G	C5-N7-C8	-5.21	101.69	104.30
4	CA	458	G	C6-C5-N7	5.21	133.53	130.40
5	DB	47	C	C5-C6-N1	5.21	123.61	121.00
54	D4	53	ASP	CB-CG-OD2	5.21	122.99	118.30
1	AA	774	G	C4-N9-C1'	5.21	133.27	126.50
3	DA	124	G	N3-C2-N2	-5.21	116.25	119.90
3	DA	174	U	N3-C2-O2	5.21	125.85	122.20
3	DA	186	G	O5'-P-OP1	5.21	116.95	110.70
3	DA	562	U	C4-C5-C6	5.21	122.83	119.70
3	DA	967	U	N3-C4-O4	-5.21	115.75	119.40
3	DA	1134	A	N3-C4-N9	-5.21	123.23	127.40
3	DA	1164	C	C4-C5-C6	5.21	120.00	117.40
3	DA	1334	G	N3-C2-N2	-5.21	116.25	119.90
3	DA	1884	G	N1-C2-N3	5.21	127.03	123.90
3	DA	1949	G	C5-C6-N1	-5.21	108.89	111.50
3	DA	2250	G	N3-C4-N9	-5.21	122.87	126.00
4	CA	2851	A	O5'-P-OP1	-5.21	101.01	105.70
35	CL	30	ARG	NE-CZ-NH2	-5.21	117.69	120.30
34	DK	62	VAL	CG1-CB-CG2	-5.21	102.56	110.90
1	AA	1070	U	C6-N1-C2	-5.21	117.87	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	778	G	N1-C2-N2	-5.21	111.51	116.20
3	DA	1234	U	N3-C4-O4	5.21	123.05	119.40
3	DA	1739	A	OP1-P-O3'	5.21	116.66	105.20
3	DA	2362	C	N1-C2-N3	-5.21	115.55	119.20
3	DA	2434	A	C5-C6-N1	5.21	120.31	117.70
3	DA	2884	U	OP1-P-OP2	5.21	127.41	119.60
4	CA	1821	A	C6-C5-N7	5.21	135.95	132.30
4	CA	2443	C	N3-C2-O2	-5.21	118.25	121.90
1	AA	19	A	OP1-P-OP2	-5.21	111.79	119.60
2	BA	1153	G	N3-C4-C5	5.21	131.20	128.60
3	DA	379	G	N3-C2-N2	-5.21	116.26	119.90
3	DA	1012	U	C5-C6-N1	5.21	125.30	122.70
3	DA	1040	A	N1-C6-N6	5.21	121.72	118.60
3	DA	1050	A	O5'-P-OP2	-5.21	101.01	105.70
3	DA	1154	G	C8-N9-C4	-5.21	104.32	106.40
3	DA	1431	A	O5'-P-OP1	-5.21	101.02	105.70
3	DA	1543	G	N9-C4-C5	5.21	107.48	105.40
3	DA	2244	U	N3-C2-O2	5.21	125.84	122.20
3	DA	2662	A	C5-C6-N1	-5.21	115.10	117.70
4	CA	1369	G	C8-N9-C4	-5.21	104.32	106.40
4	CA	2429	G	N1-C2-N2	5.21	120.89	116.20
40	DQ	71	ARG	NE-CZ-NH1	5.21	122.90	120.30
2	BA	290	C	N1-C2-O2	5.21	122.02	118.90
2	BA	1172	C	O5'-P-OP2	5.21	116.95	110.70
3	DA	187	G	N1-C6-O6	5.21	123.02	119.90
3	DA	219	A	OP2-P-O3'	5.21	116.65	105.20
3	DA	481	G	N1-C2-N2	5.21	120.89	116.20
3	DA	722	A	C5-C6-N6	5.21	127.86	123.70
3	DA	971	G	C6-N1-C2	-5.21	121.98	125.10
3	DA	2440	C	C4-C5-C6	5.21	120.00	117.40
3	DA	2637	U	N3-C2-O2	5.21	125.84	122.20
41	DR	82	LEU	CB-CG-CD2	5.21	119.85	111.00
1	AA	306	A	OP1-P-OP2	5.20	127.41	119.60
1	AA	499	A	O5'-P-OP2	-5.20	101.02	105.70
2	BA	769	G	OP2-P-O3'	5.20	116.65	105.20
3	DA	416	U	C5-C6-N1	5.20	125.30	122.70
3	DA	548	G	C6-C5-N7	-5.20	127.28	130.40
3	DA	657	U	C5-C6-N1	-5.20	120.10	122.70
3	DA	761	A	C8-N9-C4	-5.20	103.72	105.80
3	DA	909	A	C2-N3-C4	-5.20	108.00	110.60
3	DA	1003	G	C4-N9-C1'	5.20	133.26	126.50
3	DA	1189	A	C6-N1-C2	-5.20	115.48	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2196	C	OP1-P-OP2	-5.20	111.79	119.60
3	DA	2285	C	C6-N1-C1'	5.20	127.04	120.80
3	DA	2352	A	C5-C6-N1	5.20	120.30	117.70
3	DA	2570	G	C2-N3-C4	-5.20	109.30	111.90
3	DA	2587	A	OP2-P-O3'	5.20	116.65	105.20
3	DA	2876	G	C4-N9-C1'	5.20	133.26	126.50
4	CA	425	G	N3-C4-N9	-5.20	122.88	126.00
4	CA	510	C	N1-C2-O2	5.20	122.02	118.90
4	CA	1821	A	C5-C6-N6	5.20	127.86	123.70
4	CA	2411	A	N1-C6-N6	-5.20	115.48	118.60
4	CA	2688	G	N3-C4-C5	-5.20	126.00	128.60
5	DB	99	A	N1-C6-N6	-5.20	115.48	118.60
24	AT	66	LEU	CB-CG-CD2	-5.20	102.16	111.00
1	AA	8	A	C8-N9-C4	5.20	107.88	105.80
1	AA	302	G	OP2-P-O3'	5.20	116.64	105.20
3	DA	2259	U	N3-C4-O4	5.20	123.04	119.40
3	DA	2741	A	OP1-P-O3'	-5.20	93.76	105.20
5	DB	101	A	OP2-P-O3'	5.20	116.64	105.20
1	AA	350	G	OP1-P-OP2	-5.20	111.80	119.60
1	AA	954	G	C4-C5-N7	5.20	112.88	110.80
2	BA	1510	C	C6-N1-C1'	-5.20	114.56	120.80
3	DA	430	A	C2-N3-C4	-5.20	108.00	110.60
3	DA	573	U	N3-C2-O2	-5.20	118.56	122.20
3	DA	733	G	N3-C4-N9	5.20	129.12	126.00
3	DA	974	G	OP1-P-O3'	5.20	116.64	105.20
3	DA	1250	G	C4-C5-N7	-5.20	108.72	110.80
3	DA	2042	A	C8-N9-C4	5.20	107.88	105.80
3	DA	2523	G	O5'-P-OP1	-5.20	101.02	105.70
3	DA	2597	G	OP2-P-O3'	5.20	116.64	105.20
3	DA	2830	C	O5'-P-OP1	5.20	116.94	110.70
3	DA	2873	A	C4-C5-N7	-5.20	108.10	110.70
3	DA	2895	G	C4-N9-C1'	-5.20	119.74	126.50
1	AA	992	U	C6-N1-C2	-5.20	117.88	121.00
1	AA	1072	G	N9-C4-C5	5.20	107.48	105.40
2	BA	705	G	N9-C4-C5	5.20	107.48	105.40
3	DA	646	U	N1-C2-O2	5.20	126.44	122.80
3	DA	685	A	C5-N7-C8	-5.20	101.30	103.90
3	DA	1131	G	N1-C2-N3	-5.20	120.78	123.90
3	DA	1567	G	N1-C6-O6	5.20	123.02	119.90
3	DA	2469	A	N7-C8-N9	-5.20	111.20	113.80
3	DA	2622	U	N3-C4-C5	-5.20	111.48	114.60
3	DA	2720	U	N1-C2-O2	-5.20	119.16	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1932	A	N1-C6-N6	5.20	121.72	118.60
2	BA	241	G	C8-N9-C1'	5.20	133.76	127.00
3	DA	1120	G	OP2-P-O3'	5.20	116.63	105.20
3	DA	1346	G	OP1-P-OP2	5.20	127.40	119.60
3	DA	2017	U	C6-N1-C2	-5.20	117.88	121.00
3	DA	2574	G	N3-C2-N2	-5.20	116.26	119.90
3	DA	2638	G	C6-C5-N7	-5.20	127.28	130.40
3	DA	2689	U	OP1-P-O3'	5.20	116.63	105.20
4	CA	1625	C	C6-N1-C2	5.20	122.38	120.30
1	AA	1524	C	N3-C2-O2	5.20	125.54	121.90
3	DA	35	G	OP2-P-O3'	5.20	116.63	105.20
3	DA	97	C	N3-C4-N4	5.20	121.64	118.00
3	DA	148	U	C5-C6-N1	-5.20	120.10	122.70
3	DA	223	A	N1-C6-N6	-5.20	115.48	118.60
3	DA	659	G	O4'-C1'-N9	-5.20	104.04	108.20
3	DA	708	G	C8-N9-C4	5.20	108.48	106.40
3	DA	1092	C	C6-N1-C2	5.20	122.38	120.30
3	DA	1118	C	C2-N3-C4	-5.20	117.30	119.90
3	DA	1159	U	O5'-P-OP2	5.20	116.94	110.70
3	DA	1679	A	C4-N9-C1'	5.20	135.65	126.30
4	CA	1128	G	N3-C2-N2	5.20	123.54	119.90
4	CA	1691	C	N1-C2-O2	-5.20	115.78	118.90
4	CA	2730	C	N3-C4-N4	5.20	121.64	118.00
1	AA	797	C	O5'-P-OP2	5.19	116.93	110.70
2	BA	609	A	C6-C5-N7	-5.19	128.66	132.30
3	DA	758	C	OP1-P-O3'	-5.19	93.77	105.20
3	DA	815	C	N3-C2-O2	5.19	125.54	121.90
3	DA	972	A	OP1-P-O3'	5.19	116.63	105.20
3	DA	2297	A	C8-N9-C4	-5.19	103.72	105.80
3	DA	2787	C	O5'-P-OP2	-5.19	101.03	105.70
21	AQ	6	ARG	NE-CZ-NH1	5.19	122.90	120.30
1	AA	734	G	C5-C6-O6	5.19	131.72	128.60
2	BA	1073	U	O5'-P-OP1	-5.19	101.03	105.70
3	DA	294	A	C8-N9-C4	5.19	107.88	105.80
3	DA	380	G	N1-C6-O6	5.19	123.02	119.90
3	DA	1158	C	O5'-P-OP2	5.19	116.93	110.70
3	DA	1217	U	N1-C2-N3	5.19	118.02	114.90
3	DA	1267	U	C2-N3-C4	-5.19	123.89	127.00
3	DA	1527	G	C4-C5-C6	5.19	121.92	118.80
3	DA	2046	G	C5-C6-O6	-5.19	125.48	128.60
4	CA	1146	C	C6-N1-C2	-5.19	118.22	120.30
4	CA	2092	U	C5-C4-O4	-5.19	122.78	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
43	DT	25	ARG	NE-CZ-NH1	5.19	122.90	120.30
1	AA	254	G	N7-C8-N9	5.19	115.69	113.10
1	AA	818	G	N3-C4-N9	-5.19	122.89	126.00
1	AA	983	A	N1-C2-N3	5.19	131.90	129.30
3	DA	86	G	N9-C4-C5	-5.19	103.32	105.40
3	DA	377	G	C2-N3-C4	-5.19	109.30	111.90
3	DA	525	U	C4-C5-C6	5.19	122.81	119.70
3	DA	1330	C	C6-N1-C2	5.19	122.38	120.30
3	DA	2020	A	OP2-P-O3'	5.19	116.62	105.20
3	DA	2542	A	OP1-P-O3'	5.19	116.62	105.20
3	DA	2618	G	C4-C5-N7	-5.19	108.72	110.80
3	DA	2840	C	C2-N3-C4	-5.19	117.30	119.90
4	CA	1252	G	C5-C6-O6	-5.19	125.48	128.60
1	AA	1230	C	N1-C2-O2	-5.19	115.79	118.90
1	AA	1482	G	N3-C2-N2	5.19	123.53	119.90
2	BA	855	U	N1-C2-O2	-5.19	119.17	122.80
3	DA	353	C	N3-C4-N4	5.19	121.63	118.00
4	CA	2201	G	C8-N9-C4	-5.19	104.32	106.40
4	CA	2239	G	N3-C2-N2	5.19	123.53	119.90
29	CE	88	ARG	CB-CG-CD	5.19	125.09	111.60
1	AA	1194	U	OP2-P-O3'	5.19	116.61	105.20
1	AA	1355	G	C5-C6-O6	-5.19	125.49	128.60
2	BA	561	U	C6-N1-C2	-5.19	117.89	121.00
2	BA	1073	U	N3-C2-O2	5.19	125.83	122.20
3	DA	43	G	N1-C6-O6	5.19	123.01	119.90
3	DA	254	G	N3-C4-N9	5.19	129.11	126.00
3	DA	440	C	C4-C5-C6	-5.19	114.81	117.40
3	DA	562	U	OP1-P-OP2	5.19	127.38	119.60
3	DA	821	A	C4-C5-N7	5.19	113.29	110.70
3	DA	1691	C	N1-C2-O2	-5.19	115.79	118.90
3	DA	2073	C	C6-N1-C2	5.19	122.38	120.30
3	DA	2378	A	C8-N9-C4	-5.19	103.72	105.80
4	CA	93	G	C8-N9-C4	-5.19	104.33	106.40
1	AA	43	C	N3-C4-C5	5.19	123.97	121.90
1	AA	117	G	N7-C8-N9	5.19	115.69	113.10
1	AA	125	U	OP1-P-OP2	-5.19	111.82	119.60
1	AA	790	A	C5-N7-C8	-5.19	101.31	103.90
3	DA	212	G	OP2-P-O3'	5.19	116.61	105.20
3	DA	2405	G	C2-N3-C4	-5.19	109.31	111.90
3	DA	2437	G	OP1-P-OP2	5.19	127.38	119.60
3	DA	2481	G	C4-N9-C1'	5.19	133.24	126.50
3	DA	2683	C	N1-C2-O2	-5.19	115.79	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	DB	62	C	N3-C2-O2	-5.19	118.27	121.90
1	AA	670	G	O5'-P-OP2	5.18	116.92	110.70
2	BA	516	U	OP2-P-O3'	5.18	116.61	105.20
2	BA	624	C	OP1-P-OP2	5.18	127.38	119.60
2	BA	873	A	O4'-C1'-N9	-5.18	104.05	108.20
3	DA	1027	A	N1-C6-N6	5.18	121.71	118.60
3	DA	1194	A	C4-C5-C6	5.18	119.59	117.00
3	DA	1682	G	O5'-P-OP1	-5.18	101.03	105.70
3	DA	2522	U	C5-C4-O4	-5.18	122.79	125.90
3	DA	2787	C	C2-N1-C1'	-5.18	113.10	118.80
4	CA	1376	C	C6-N1-C2	-5.18	118.23	120.30
1	AA	634	C	OP2-P-O3'	5.18	116.60	105.20
1	AA	886	G	OP2-P-O3'	5.18	116.60	105.20
1	AA	1099	G	N3-C4-C5	-5.18	126.01	128.60
1	AA	1460	C	N1-C2-O2	-5.18	115.79	118.90
2	BA	32	A	O5'-P-OP2	5.18	116.92	110.70
3	DA	210	C	N1-C2-O2	5.18	122.01	118.90
3	DA	381	G	OP2-P-O3'	5.18	116.60	105.20
3	DA	909	A	C5-N7-C8	-5.18	101.31	103.90
3	DA	1155	A	N1-C6-N6	-5.18	115.49	118.60
3	DA	1164	C	N3-C4-N4	5.18	121.63	118.00
3	DA	1239	G	OP2-P-O3'	5.18	116.60	105.20
3	DA	1799	G	O4'-C1'-N9	-5.18	104.05	108.20
3	DA	2050	C	O4'-C1'-N1	-5.18	104.06	108.20
3	DA	2459	A	N7-C8-N9	-5.18	111.21	113.80
4	CA	1545	A	C5-C6-N1	-5.18	115.11	117.70
1	AA	916	U	C6-N1-C2	-5.18	117.89	121.00
3	DA	1732	C	C2-N3-C4	-5.18	117.31	119.90
3	DA	1732	C	C5-C4-N4	-5.18	116.57	120.20
3	DA	1859	U	C2-N1-C1'	5.18	123.92	117.70
3	DA	2719	G	N3-C4-N9	-5.18	122.89	126.00
3	DA	2885	G	OP2-P-O3'	-5.18	93.80	105.20
5	DB	80	U	N3-C2-O2	5.18	125.83	122.20
1	AA	557	G	C8-N9-C4	-5.18	104.33	106.40
1	AA	740	U	N3-C2-O2	-5.18	118.58	122.20
1	AA	1117	A	C8-N9-C4	5.18	107.87	105.80
2	BA	558	G	C2-N3-C4	-5.18	109.31	111.90
2	BA	792	A	O4'-C1'-N9	5.18	112.34	108.20
3	DA	187	G	N7-C8-N9	5.18	115.69	113.10
3	DA	731	C	C6-N1-C2	5.18	122.37	120.30
3	DA	2267	A	O5'-P-OP1	-5.18	101.04	105.70
3	DA	2409	G	C6-C5-N7	-5.18	127.29	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	728	G	N3-C4-C5	-5.18	126.01	128.60
5	CB	48	U	O4'-C1'-N1	5.18	112.34	108.20
1	AA	400	C	N3-C2-O2	5.18	125.52	121.90
1	AA	496	A	O5'-P-OP1	-5.18	101.04	105.70
1	AA	1422	G	N1-C2-N3	5.18	127.01	123.90
3	DA	418	C	OP1-P-OP2	5.18	127.37	119.60
3	DA	1703	G	N3-C4-C5	5.18	131.19	128.60
4	CA	1126	A	N1-C6-N6	-5.18	115.49	118.60
1	AA	355	C	N3-C4-C5	5.18	123.97	121.90
2	BA	518	C	C2-N1-C1'	5.18	124.50	118.80
3	DA	675	A	C8-N9-C4	5.18	107.87	105.80
3	DA	751	A	C5-N7-C8	5.18	106.49	103.90
3	DA	875	G	OP2-P-O3'	5.18	116.59	105.20
3	DA	996	A	OP1-P-O3'	5.18	116.59	105.20
3	DA	1804	C	N3-C2-O2	5.18	125.52	121.90
3	DA	1981	A	C4-C5-N7	5.18	113.29	110.70
3	DA	2749	A	C2-N3-C4	-5.18	108.01	110.60
3	DA	2860	A	OP2-P-O3'	5.18	116.59	105.20
4	CA	1753	G	N3-C4-N9	-5.18	122.89	126.00
5	DB	115	A	O5'-P-OP2	-5.18	101.04	105.70
1	AA	243	A	O5'-P-OP2	-5.17	101.04	105.70
2	BA	683	G	C4-C5-N7	5.17	112.87	110.80
3	DA	369	U	C5-C4-O4	-5.17	122.80	125.90
3	DA	996	A	N7-C8-N9	5.17	116.39	113.80
3	DA	1609	A	N1-C6-N6	5.17	121.70	118.60
3	DA	2289	G	O5'-P-OP1	5.17	116.91	110.70
3	DA	2599	G	OP2-P-O3'	5.17	116.58	105.20
4	CA	385	C	O5'-P-OP1	-5.17	101.04	105.70
4	CA	707	G	C8-N9-C4	5.17	108.47	106.40
5	DB	83	G	N9-C1'-C2'	-5.17	106.31	112.00
1	AA	11	G	C2-N3-C4	-5.17	109.31	111.90
1	AA	669	G	C5-N7-C8	-5.17	101.71	104.30
3	DA	636	G	N9-C4-C5	-5.17	103.33	105.40
3	DA	1772	A	N3-C4-N9	5.17	131.54	127.40
3	DA	2278	A	C8-N9-C4	5.17	107.87	105.80
3	DA	2560	A	N1-C6-N6	-5.17	115.50	118.60
1	AA	916	U	N3-C4-C5	-5.17	111.50	114.60
2	BA	22	G	OP1-P-O3'	-5.17	93.82	105.20
3	DA	571	U	O4'-C1'-N1	5.17	112.34	108.20
3	DA	733	G	N1-C2-N3	5.17	127.00	123.90
3	DA	1610	A	N1-C6-N6	-5.17	115.50	118.60
3	DA	1766	G	C2-N3-C4	-5.17	109.31	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2171	A	O4'-C1'-N9	5.17	112.34	108.20
3	DA	2899	A	C4-C5-N7	5.17	113.28	110.70
4	CA	561	G	N3-C4-N9	-5.17	122.90	126.00
1	AA	813	U	N3-C2-O2	5.17	125.82	122.20
1	AA	892	A	C5-C6-N1	-5.17	115.11	117.70
3	DA	907	G	N1-C2-N2	5.17	120.85	116.20
3	DA	2198	A	OP2-P-O3'	5.17	116.57	105.20
4	CA	830	G	C4-C5-N7	5.17	112.87	110.80
4	CA	2466	C	N3-C4-N4	5.17	121.62	118.00
1	AA	335	C	OP2-P-O3'	5.17	116.57	105.20
1	AA	1482	G	C4-C5-N7	5.17	112.87	110.80
2	BA	1369	C	C6-N1-C2	5.17	122.37	120.30
3	DA	791	C	OP2-P-O3'	5.17	116.57	105.20
3	DA	1129	A	OP1-P-OP2	5.17	127.35	119.60
3	DA	2719	G	OP1-P-OP2	5.17	127.35	119.60
3	DA	2810	A	N1-C2-N3	5.17	131.88	129.30
3	DA	2816	G	C5-C6-N1	-5.17	108.92	111.50
5	DB	70	C	O5'-P-OP2	-5.17	101.05	105.70
5	DB	107	G	C4-N9-C1'	5.17	133.22	126.50
1	AA	859	G	OP1-P-O3'	5.17	116.57	105.20
2	BA	364	A	C4-C5-C6	-5.17	114.42	117.00
2	BA	526	C	O5'-P-OP2	-5.17	101.05	105.70
2	BA	540	G	OP2-P-O3'	5.17	116.56	105.20
2	BA	939	G	C8-N9-C4	-5.17	104.33	106.40
2	BA	1499	A	C5-N7-C8	-5.17	101.32	103.90
3	DA	554	U	N1-C2-O2	-5.17	119.18	122.80
3	DA	904	G	N1-C6-O6	5.17	123.00	119.90
3	DA	2744	G	C4-C5-N7	5.17	112.87	110.80
4	CA	568	U	C5-C6-N1	5.17	125.28	122.70
4	CA	581	C	N1-C2-O2	5.17	122.00	118.90
4	CA	1831	G	OP2-P-O3'	5.17	116.57	105.20
4	CA	2298	A	N1-C6-N6	-5.17	115.50	118.60
4	CA	2464	G	C4-N9-C1'	-5.17	119.78	126.50
1	AA	240	G	C5-C6-N1	5.17	114.08	111.50
1	AA	296	U	OP1-P-OP2	5.17	127.35	119.60
1	AA	380	G	N3-C4-C5	5.17	131.18	128.60
1	AA	1226	C	N3-C4-C5	-5.17	119.83	121.90
3	DA	149	A	C4-C5-C6	5.17	119.58	117.00
3	DA	649	G	C8-N9-C4	5.17	108.47	106.40
3	DA	1061	U	C2-N1-C1'	5.17	123.90	117.70
3	DA	1368	G	C5-N7-C8	-5.17	101.72	104.30
3	DA	2399	G	OP2-P-O3'	5.17	116.56	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2692	G	C8-N9-C4	-5.17	104.33	106.40
3	DA	2787	C	C2-N3-C4	-5.17	117.32	119.90
4	CA	1498	C	N1-C2-O2	-5.17	115.80	118.90
3	DA	351	C	N1-C2-O2	5.16	122.00	118.90
3	DA	836	G	N7-C8-N9	-5.16	110.52	113.10
3	DA	1755	A	O5'-P-OP1	-5.16	101.05	105.70
4	CA	1568	G	N7-C8-N9	-5.16	110.52	113.10
4	CA	1793	C	C2-N3-C4	-5.16	117.32	119.90
4	CA	1917	U	C5-C6-N1	5.16	125.28	122.70
4	CA	2103	C	C6-N1-C2	-5.16	118.23	120.30
1	AA	26	A	OP1-P-OP2	5.16	127.34	119.60
1	AA	521	G	O5'-P-OP2	-5.16	101.05	105.70
1	AA	624	C	C5-C4-N4	-5.16	116.59	120.20
2	BA	399	G	N7-C8-N9	5.16	115.68	113.10
3	DA	327	G	N7-C8-N9	-5.16	110.52	113.10
3	DA	512	G	C2-N3-C4	-5.16	109.32	111.90
3	DA	570	G	C2-N3-C4	-5.16	109.32	111.90
3	DA	734	A	C6-N1-C2	-5.16	115.50	118.60
3	DA	1674	G	C6-N1-C2	5.16	128.20	125.10
3	DA	2543	G	C5-N7-C8	-5.16	101.72	104.30
1	AA	423	G	C2-N3-C4	5.16	114.48	111.90
1	AA	866	C	C2-N3-C4	-5.16	117.32	119.90
2	BA	808	C	O5'-P-OP2	-5.16	101.06	105.70
3	DA	30	G	OP1-P-OP2	5.16	127.34	119.60
3	DA	84	A	C5-C6-N6	5.16	127.83	123.70
3	DA	832	U	C5-C4-O4	-5.16	122.80	125.90
3	DA	933	A	N9-C4-C5	-5.16	103.74	105.80
3	DA	1791	A	C5-N7-C8	5.16	106.48	103.90
3	DA	1890	A	N1-C6-N6	-5.16	115.50	118.60
3	DA	2001	C	P-O3'-C3'	5.16	125.89	119.70
3	DA	2454	G	C5-C6-N1	-5.16	108.92	111.50
3	DA	2727	A	N1-C2-N3	5.16	131.88	129.30
2	BA	631	C	C2-N1-C1'	5.16	124.47	118.80
3	DA	290	U	O5'-P-OP1	-5.16	101.06	105.70
3	DA	377	G	N9-C4-C5	-5.16	103.34	105.40
3	DA	809	G	C6-C5-N7	-5.16	127.31	130.40
3	DA	940	G	C4-N9-C1'	5.16	133.21	126.50
3	DA	1339	G	C2-N3-C4	-5.16	109.32	111.90
3	DA	2059	A	N7-C8-N9	5.16	116.38	113.80
4	CA	12	U	C2-N1-C1'	5.16	123.89	117.70
1	AA	288	A	C4-C5-C6	-5.16	114.42	117.00
1	AA	452	A	N3-C4-C5	5.16	130.41	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	1512	U	OP2-P-O3'	5.16	116.55	105.20
3	DA	1042	G	OP2-P-O3'	5.16	116.55	105.20
5	DB	91	C	N3-C2-O2	5.16	125.51	121.90
1	AA	587	G	C8-N9-C4	5.16	108.46	106.40
1	AA	973	G	C5-C6-O6	-5.16	125.51	128.60
3	DA	1277	G	OP1-P-OP2	5.16	127.33	119.60
3	DA	2320	U	OP1-P-OP2	5.16	127.33	119.60
3	DA	2353	G	O5'-P-OP1	-5.16	101.06	105.70
4	CA	2201	G	OP1-P-O3'	5.16	116.54	105.20
1	AA	1119	C	OP1-P-OP2	-5.15	111.87	119.60
2	BA	159	G	N1-C2-N2	-5.15	111.56	116.20
2	BA	588	G	C6-C5-N7	-5.15	127.31	130.40
3	DA	473	G	OP2-P-O3'	5.15	116.54	105.20
3	DA	1363	C	O5'-P-OP2	-5.15	101.06	105.70
4	CA	647	G	N1-C6-O6	5.15	122.99	119.90
1	AA	271	C	C5-C4-N4	-5.15	116.59	120.20
1	AA	908	A	O5'-P-OP1	-5.15	101.06	105.70
2	BA	782	A	N1-C6-N6	-5.15	115.51	118.60
2	BA	1389	C	N3-C2-O2	5.15	125.51	121.90
3	DA	792	A	C5-C6-N1	5.15	120.28	117.70
3	DA	862	G	N1-C6-O6	5.15	122.99	119.90
3	DA	862	G	O5'-P-OP2	5.15	116.88	110.70
3	DA	874	G	C5-C6-N1	-5.15	108.92	111.50
3	DA	1131	G	C5-C6-O6	-5.15	125.51	128.60
3	DA	1137	G	C8-N9-C4	-5.15	104.34	106.40
3	DA	1293	C	C4-C5-C6	-5.15	114.82	117.40
3	DA	2719	G	N7-C8-N9	5.15	115.68	113.10
3	DA	2839	G	C8-N9-C1'	-5.15	120.30	127.00
4	CA	1550	C	C5-C6-N1	5.15	123.58	121.00
4	CA	1964	G	N1-C2-N2	-5.15	111.56	116.20
4	CA	2858	C	C6-N1-C2	-5.15	118.24	120.30
5	DB	13	G	N3-C2-N2	-5.15	116.29	119.90
1	AA	306	A	C8-N9-C4	5.15	107.86	105.80
1	AA	384	G	C8-N9-C1'	-5.15	120.30	127.00
1	AA	744	C	O5'-P-OP1	5.15	116.88	110.70
1	AA	1323	G	N1-C6-O6	5.15	122.99	119.90
1	AA	1345	U	C2-N1-C1'	-5.15	111.52	117.70
3	DA	812	C	C6-N1-C1'	-5.15	114.62	120.80
3	DA	1021	A	C6-N1-C2	5.15	121.69	118.60
3	DA	1498	C	O5'-P-OP2	-5.15	101.06	105.70
3	DA	1643	G	C5-C6-N1	-5.15	108.92	111.50
4	CA	581	C	C5-C6-N1	5.15	123.58	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	1035	U	C6-N1-C2	-5.15	117.91	121.00
4	CA	1657	U	O5'-P-OP2	5.15	116.88	110.70
4	CA	2078	C	OP1-P-OP2	5.15	127.33	119.60
5	DB	91	C	N3-C4-C5	5.15	123.96	121.90
1	AA	4	U	N3-C2-O2	-5.15	118.60	122.20
1	AA	579	A	N1-C6-N6	-5.15	115.51	118.60
1	AA	784	A	OP1-P-O3'	5.15	116.53	105.20
2	BA	895	G	N1-C6-O6	5.15	122.99	119.90
3	DA	1107	G	N1-C6-O6	5.15	122.99	119.90
3	DA	1325	U	N1-C2-O2	-5.15	119.20	122.80
3	DA	2382	G	OP1-P-OP2	5.15	127.32	119.60
3	DA	2397	G	OP2-P-O3'	5.15	116.53	105.20
4	CA	1763	G	C5-C6-O6	-5.15	125.51	128.60
1	AA	585	G	OP2-P-O3'	5.15	116.53	105.20
2	BA	547	A	C8-N9-C4	5.15	107.86	105.80
3	DA	129	C	OP1-P-OP2	5.15	127.32	119.60
3	DA	416	U	OP1-P-OP2	-5.15	111.88	119.60
3	DA	521	U	OP2-P-O3'	5.15	116.53	105.20
3	DA	560	C	N1-C2-O2	-5.15	115.81	118.90
3	DA	1379	U	C2-N3-C4	-5.15	123.91	127.00
3	DA	1394	U	O5'-P-OP1	-5.15	101.07	105.70
3	DA	1616	A	OP2-P-O3'	5.15	116.52	105.20
3	DA	2358	A	C2-N3-C4	-5.15	108.03	110.60
3	DA	2514	U	C5-C4-O4	-5.15	122.81	125.90
3	DA	2582	G	OP1-P-OP2	-5.15	111.88	119.60
3	DA	2796	U	C2-N1-C1'	5.15	123.88	117.70
4	CA	1890	A	C2-N3-C4	-5.15	108.03	110.60
4	CA	2684	U	C5-C6-N1	5.15	125.27	122.70
1	AA	610	U	OP1-P-OP2	5.15	127.32	119.60
2	BA	627	G	C5-C6-O6	-5.15	125.51	128.60
3	DA	1182	G	C4-N9-C1'	5.15	133.19	126.50
3	DA	1277	G	N3-C4-N9	-5.15	122.91	126.00
3	DA	2029	G	N1-C2-N3	5.15	126.99	123.90
3	DA	2453	A	N9-C4-C5	-5.15	103.74	105.80
1	AA	635	A	OP1-P-OP2	-5.14	111.88	119.60
1	AA	721	G	N3-C4-N9	-5.14	122.91	126.00
1	AA	828	U	O4'-C1'-N1	5.14	112.31	108.20
3	DA	307	G	C2-N3-C4	-5.14	109.33	111.90
3	DA	743	A	C2-N3-C4	-5.14	108.03	110.60
3	DA	814	C	C5-C4-N4	-5.14	116.60	120.20
3	DA	1596	A	N1-C6-N6	-5.14	115.51	118.60
4	CA	1776	G	C8-N9-C4	-5.14	104.34	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2227	A	C4-C5-N7	5.14	113.27	110.70
5	DB	74	U	N1-C2-N3	5.14	117.99	114.90
1	AA	126	G	C5-C6-O6	-5.14	125.52	128.60
1	AA	615	G	N3-C2-N2	5.14	123.50	119.90
1	AA	907	A	C5-N7-C8	-5.14	101.33	103.90
1	AA	1400	C	C6-N1-C1'	-5.14	114.63	120.80
2	BA	118	U	N1-C2-O2	5.14	126.40	122.80
3	DA	203	A	C6-N1-C2	-5.14	115.52	118.60
3	DA	625	G	C2-N3-C4	-5.14	109.33	111.90
3	DA	736	C	N3-C4-C5	5.14	123.96	121.90
3	DA	752	A	OP1-P-OP2	5.14	127.31	119.60
3	DA	1125	G	O5'-P-OP2	-5.14	101.07	105.70
3	DA	1516	G	C6-C5-N7	-5.14	127.31	130.40
3	DA	2764	A	C2-N3-C4	-5.14	108.03	110.60
3	DA	2824	C	OP2-P-O3'	5.14	116.51	105.20
1	AA	1457	G	O5'-P-OP2	-5.14	101.07	105.70
1	AA	1525	G	OP2-P-O3'	5.14	116.51	105.20
3	DA	121	G	N3-C4-C5	5.14	131.17	128.60
3	DA	123	G	N3-C4-N9	-5.14	122.92	126.00
3	DA	179	C	O5'-P-OP2	-5.14	101.07	105.70
3	DA	1130	U	C4-C5-C6	5.14	122.78	119.70
3	DA	1754	A	C5-C6-N6	-5.14	119.59	123.70
1	AA	46	G	C8-N9-C1'	5.14	133.68	127.00
1	AA	570	G	N1-C2-N2	5.14	120.83	116.20
1	AA	1426	G	C4-C5-N7	5.14	112.86	110.80
2	BA	503	C	N1-C2-N3	5.14	122.80	119.20
3	DA	575	A	C5-N7-C8	-5.14	101.33	103.90
3	DA	623	C	C2-N3-C4	-5.14	117.33	119.90
3	DA	1766	G	C4-C5-N7	5.14	112.86	110.80
3	DA	2428	G	N9-C4-C5	5.14	107.46	105.40
3	DA	2597	G	O5'-P-OP2	5.14	116.87	110.70
3	DA	2617	U	N3-C4-C5	5.14	117.68	114.60
16	AL	18	LYS	CD-CE-NZ	5.14	123.52	111.70
1	AA	105	G	N1-C6-O6	-5.14	116.82	119.90
1	AA	520	A	C4-C5-N7	5.14	113.27	110.70
1	AA	766	A	C2-N3-C4	-5.14	108.03	110.60
1	AA	826	C	OP2-P-O3'	5.14	116.50	105.20
1	AA	1521	C	N1-C2-O2	-5.14	115.82	118.90
2	BA	774	G	N7-C8-N9	5.14	115.67	113.10
3	DA	1270	C	O5'-P-OP1	5.14	116.86	110.70
3	DA	1370	C	O5'-P-OP2	-5.14	101.08	105.70
1	AA	922	G	OP2-P-O3'	5.14	116.50	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	726	C	C5-C4-N4	-5.14	116.60	120.20
2	BA	771	G	C4-C5-N7	5.14	112.85	110.80
3	DA	296	U	O5'-P-OP2	-5.14	101.08	105.70
3	DA	535	G	C5-C6-O6	5.14	131.68	128.60
3	DA	564	C	N1-C1'-C2'	-5.14	106.35	112.00
3	DA	1038	G	C6-C5-N7	-5.14	127.32	130.40
3	DA	2017	U	N3-C2-O2	5.14	125.80	122.20
3	DA	2364	C	C2-N3-C4	-5.14	117.33	119.90
4	CA	269	C	C2-N1-C1'	5.14	124.45	118.80
4	CA	2355	G	C8-N9-C4	5.14	108.45	106.40
5	CB	97	C	N1-C2-O2	-5.14	115.82	118.90
1	AA	814	A	C6-C5-N7	-5.13	128.71	132.30
1	AA	881	G	N1-C2-N2	5.13	120.82	116.20
1	AA	903	G	N1-C2-N2	-5.13	111.58	116.20
2	BA	438	U	C5-C4-O4	-5.13	122.82	125.90
3	DA	919	U	C4-C5-C6	5.13	122.78	119.70
3	DA	1261	C	C6-N1-C2	-5.13	118.25	120.30
3	DA	1321	A	C5-C6-N1	5.13	120.27	117.70
3	DA	1467	U	OP1-P-OP2	5.13	127.30	119.60
3	DA	2098	U	C4-C5-C6	-5.13	116.62	119.70
3	DA	2800	A	C2-N3-C4	-5.13	108.03	110.60
4	CA	2437	G	C8-N9-C4	5.13	108.45	106.40
9	AE	138	ARG	N-CA-C	-5.13	97.14	111.00
10	BF	99	ALA	N-CA-C	5.13	124.86	111.00
1	AA	1063	C	N1-C2-O2	-5.13	115.82	118.90
2	BA	1515	G	C4-N9-C1'	5.13	133.17	126.50
3	DA	97	C	N1-C2-O2	-5.13	115.82	118.90
3	DA	302	C	C6-N1-C1'	5.13	126.96	120.80
3	DA	1261	C	OP1-P-OP2	-5.13	111.90	119.60
3	DA	1400	U	N3-C4-C5	5.13	117.68	114.60
3	DA	1684	G	N1-C6-O6	5.13	122.98	119.90
3	DA	1946	U	OP1-P-O3'	5.13	116.49	105.20
4	CA	411	G	C4-C5-C6	-5.13	115.72	118.80
1	AA	360	G	C2-N3-C4	-5.13	109.33	111.90
1	AA	452	A	C5-N7-C8	-5.13	101.33	103.90
2	BA	575	G	N3-C4-N9	-5.13	122.92	126.00
3	DA	598	U	OP1-P-O3'	-5.13	93.91	105.20
3	DA	1266	G	OP1-P-OP2	-5.13	111.90	119.60
3	DA	1993	U	P-O3'-C3'	5.13	125.86	119.70
3	DA	2300	C	OP1-P-OP2	-5.13	111.90	119.60
4	CA	821	A	C5-C6-N1	5.13	120.27	117.70
5	DB	56	G	N7-C8-N9	5.13	115.67	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	AD	48	LEU	CB-CG-CD2	-5.13	102.28	111.00
1	AA	124	C	OP2-P-O3'	5.13	116.48	105.20
3	DA	387	U	N3-C2-O2	5.13	125.79	122.20
3	DA	544	C	N3-C4-N4	-5.13	114.41	118.00
3	DA	573	U	N1-C2-N3	5.13	117.98	114.90
3	DA	1333	G	C5-N7-C8	-5.13	101.73	104.30
3	DA	1687	G	N1-C6-O6	-5.13	116.82	119.90
4	CA	2046	G	C8-N9-C4	5.13	108.45	106.40
1	AA	584	G	C5-N7-C8	-5.13	101.74	104.30
2	BA	176	C	N3-C4-N4	5.13	121.59	118.00
2	BA	1182	G	C8-N9-C4	5.13	108.45	106.40
3	DA	340	A	N1-C6-N6	-5.13	115.52	118.60
3	DA	536	G	N3-C2-N2	-5.13	116.31	119.90
3	DA	692	C	N3-C4-C5	5.13	123.95	121.90
3	DA	1279	G	N9-C4-C5	5.13	107.45	105.40
3	DA	1477	A	C6-N1-C2	-5.13	115.52	118.60
3	DA	1845	G	N3-C2-N2	-5.13	116.31	119.90
3	DA	1932	A	C4-C5-C6	-5.13	114.44	117.00
3	DA	2048	G	N1-C6-O6	-5.13	116.82	119.90
4	CA	207	A	C8-N9-C4	-5.13	103.75	105.80
4	CA	774	G	C5-C6-O6	5.13	131.68	128.60
4	CA	783	A	OP1-P-OP2	5.13	127.29	119.60
4	CA	2605	U	O5'-P-OP2	5.13	116.85	110.70
5	DB	48	U	C5-C4-O4	-5.13	122.82	125.90
1	AA	891	U	N3-C2-O2	5.13	125.79	122.20
1	AA	1405	G	O5'-P-OP2	-5.13	101.09	105.70
2	BA	503	C	N3-C4-C5	-5.13	119.85	121.90
2	BA	560	A	N1-C2-N3	5.13	131.86	129.30
2	BA	1054	C	C2-N3-C4	5.13	122.46	119.90
3	DA	326	G	N9-C4-C5	5.13	107.45	105.40
3	DA	693	A	C4-C5-N7	5.13	113.26	110.70
3	DA	858	G	C4-C5-C6	5.13	121.88	118.80
3	DA	1148	U	C5-C6-N1	-5.13	120.14	122.70
3	DA	1444	G	OP2-P-O3'	5.13	116.48	105.20
3	DA	1793	C	N1-C2-O2	-5.13	115.82	118.90
3	DA	2529	G	N1-C6-O6	-5.13	116.82	119.90
4	CA	1232	G	N1-C6-O6	5.13	122.98	119.90
4	CA	2397	G	N3-C4-C5	5.13	131.16	128.60
1	AA	134	G	N3-C2-N2	-5.12	116.31	119.90
2	BA	22	G	C4-N9-C1'	-5.12	119.84	126.50
2	BA	1093	A	C6-N1-C2	-5.12	115.53	118.60
3	DA	1738	G	N7-C8-N9	5.12	115.66	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	906	A	C4-C5-C6	5.12	119.56	117.00
2	BA	530	G	O5'-P-OP1	-5.12	101.09	105.70
2	BA	862	C	C2-N3-C4	-5.12	117.34	119.90
3	DA	636	G	O4'-C1'-N9	-5.12	104.10	108.20
3	DA	1373	A	C6-N1-C2	-5.12	115.53	118.60
3	DA	1632	A	C5'-C4'-O4'	5.12	115.25	109.10
3	DA	1882	U	C5-C4-O4	-5.12	122.83	125.90
3	DA	2415	G	C4-C5-N7	5.12	112.85	110.80
3	DA	2615	U	C6-N1-C1'	-5.12	114.03	121.20
3	DA	2626	C	OP1-P-OP2	5.12	127.29	119.60
4	CA	1368	G	N3-C4-C5	-5.12	126.04	128.60
4	CA	1942	C	C5-C6-N1	5.12	123.56	121.00
38	DO	38	LEU	CB-CG-CD2	-5.12	102.29	111.00
1	AA	38	G	N3-C4-C5	5.12	131.16	128.60
1	AA	123	U	N1-C2-O2	-5.12	119.22	122.80
1	AA	525	C	C6-N1-C2	-5.12	118.25	120.30
1	AA	700	G	N9-C4-C5	5.12	107.45	105.40
2	BA	928	G	C5-C6-O6	-5.12	125.53	128.60
3	DA	140	C	N3-C2-O2	-5.12	118.32	121.90
3	DA	460	A	C8-N9-C4	-5.12	103.75	105.80
3	DA	681	G	OP2-P-O3'	5.12	116.47	105.20
3	DA	749	A	C8-N9-C4	-5.12	103.75	105.80
3	DA	1011	G	C2-N3-C4	-5.12	109.34	111.90
3	DA	1197	G	C2-N3-C4	5.12	114.46	111.90
3	DA	1420	A	N1-C6-N6	-5.12	115.53	118.60
3	DA	2244	U	N1-C2-N3	5.12	117.97	114.90
3	DA	2371	G	N3-C2-N2	-5.12	116.31	119.90
3	DA	2504	PSU	OP2-P-O3'	5.12	116.47	105.20
3	DA	2769	U	C5-C4-O4	-5.12	122.83	125.90
3	DA	2782	G	N3-C2-N2	-5.12	116.31	119.90
4	CA	2903	U	N1-C2-N3	-5.12	111.83	114.90
1	AA	1333	A	C8-N9-C4	-5.12	103.75	105.80
2	BA	833	G	C6-C5-N7	-5.12	127.33	130.40
2	BA	1405	G	C2-N3-C4	-5.12	109.34	111.90
3	DA	212	G	C8-N9-C4	-5.12	104.35	106.40
3	DA	1000	A	C2-N3-C4	5.12	113.16	110.60
3	DA	1622	G	N3-C4-N9	-5.12	122.93	126.00
3	DA	2736	A	C2-N3-C4	-5.12	108.04	110.60
40	CQ	113	LEU	CA-CB-CG	5.12	127.08	115.30
1	AA	504	C	C6-N1-C2	-5.12	118.25	120.30
1	AA	1500	A	C5-C6-N6	5.12	127.80	123.70
3	DA	333	G	O5'-P-OP1	5.12	116.84	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	564	C	C2-N1-C1'	-5.12	113.17	118.80
3	DA	919	U	C6-N1-C1'	5.12	128.37	121.20
3	DA	1003	G	C5-C6-O6	-5.12	125.53	128.60
3	DA	1288	G	C5-N7-C8	-5.12	101.74	104.30
3	DA	1557	C	N3-C4-C5	5.12	123.95	121.90
3	DA	1921	G	C8-N9-C4	-5.12	104.35	106.40
4	CA	1911	U	C6-N1-C2	-5.12	117.93	121.00
1	AA	837	U	N1-C2-O2	-5.12	119.22	122.80
1	AA	1199	U	OP1-P-OP2	-5.12	111.92	119.60
1	AA	1526	G	N1-C2-N2	-5.12	111.59	116.20
2	BA	4	U	C2-N1-C1'	5.12	123.84	117.70
4	CA	1676	A	C5-C6-N1	5.12	120.26	117.70
4	CA	2770	G	C4-N9-C1'	5.12	133.15	126.50
1	AA	635	A	O5'-P-OP2	5.12	116.84	110.70
1	AA	1372	U	O5'-P-OP2	5.12	116.84	110.70
3	DA	241	A	C8-N9-C4	5.12	107.85	105.80
3	DA	522	A	OP1-P-OP2	-5.12	111.93	119.60
3	DA	1357	C	C4-C5-C6	-5.12	114.84	117.40
3	DA	1587	G	OP2-P-O3'	5.12	116.45	105.20
3	DA	2464	G	N3-C4-N9	-5.12	122.93	126.00
5	DB	64	G	N1-C6-O6	5.12	122.97	119.90
1	AA	134	G	O5'-P-OP2	-5.11	101.10	105.70
1	AA	300	A	C5-N7-C8	-5.11	101.34	103.90
1	AA	786	G	N3-C4-N9	-5.11	122.93	126.00
2	BA	1486	G	C8-N9-C4	5.11	108.44	106.40
3	DA	964	C	N3-C4-C5	5.11	123.94	121.90
3	DA	1179	G	N1-C6-O6	5.11	122.97	119.90
3	DA	1414	C	C5-C4-N4	-5.11	116.62	120.20
3	DA	2065	C	OP1-P-OP2	5.11	127.27	119.60
3	DA	2659	G	C5-C6-N1	-5.11	108.94	111.50
3	DA	2782	G	N1-C6-O6	5.11	122.97	119.90
3	DA	2822	G	N3-C4-N9	-5.11	122.93	126.00
4	CA	1968	G	C6-C5-N7	-5.11	127.33	130.40
4	CA	2239	G	C4-N9-C1'	5.11	133.15	126.50
53	D3	34	ARG	NE-CZ-NH2	-5.11	117.74	120.30
1	AA	1482	G	C5-C6-N1	5.11	114.06	111.50
3	DA	943	A	C8-N9-C4	5.11	107.84	105.80
3	DA	1651	G	N3-C4-N9	5.11	129.07	126.00
3	DA	2378	A	C4-C5-N7	5.11	113.26	110.70
3	DA	2431	U	C6-N1-C2	5.11	124.07	121.00
4	CA	728	G	N1-C6-O6	-5.11	116.83	119.90
20	AP	6	LEU	CA-CB-CG	5.11	127.06	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	DM	60	ARG	NE-CZ-NH1	-5.11	117.74	120.30
1	AA	40	C	C2-N1-C1'	-5.11	113.18	118.80
1	AA	1067	A	N9-C4-C5	-5.11	103.76	105.80
2	BA	811	C	OP2-P-O3'	5.11	116.44	105.20
2	BA	1223	C	C6-N1-C2	-5.11	118.26	120.30
2	BA	1524	C	C5-C4-N4	-5.11	116.62	120.20
3	DA	175	G	N3-C4-N9	-5.11	122.93	126.00
3	DA	940	G	C4-C5-N7	-5.11	108.76	110.80
3	DA	947	A	O5'-P-OP1	-5.11	101.10	105.70
3	DA	1316	U	OP2-P-O3'	5.11	116.44	105.20
3	DA	2274	A	C5-C6-N6	-5.11	119.61	123.70
4	CA	983	A	C8-N9-C4	-5.11	103.76	105.80
1	AA	1399	C	C2-N1-C1'	5.11	124.42	118.80
3	DA	79	C	C2-N3-C4	5.11	122.45	119.90
3	DA	1236	G	N3-C4-C5	5.11	131.15	128.60
3	DA	1346	G	N3-C4-C5	-5.11	126.05	128.60
4	CA	974	G	C5-N7-C8	-5.11	101.75	104.30
4	CA	2767	C	C6-N1-C2	5.11	122.34	120.30
12	AH	101	ILE	CG1-CB-CG2	5.11	122.64	111.40
1	AA	892	A	N1-C2-N3	5.11	131.85	129.30
2	BA	804	U	C6-N1-C2	-5.11	117.94	121.00
2	BA	1086	U	O5'-P-OP2	5.11	116.83	110.70
3	DA	174	U	C6-N1-C2	5.11	124.06	121.00
3	DA	1034	G	OP2-P-O3'	5.11	116.44	105.20
3	DA	1341	G	O4'-C1'-N9	5.11	112.29	108.20
3	DA	1467	U	N1-C2-O2	-5.11	119.22	122.80
3	DA	1745	A	OP2-P-O3'	5.11	116.44	105.20
3	DA	1794	A	C6-C5-N7	-5.11	128.72	132.30
3	DA	1824	G	N3-C4-N9	-5.11	122.94	126.00
3	DA	2063	C	C2-N1-C1'	5.11	124.42	118.80
3	DA	2304	G	C2-N3-C4	-5.11	109.35	111.90
3	DA	2386	A	C8-N9-C4	-5.11	103.76	105.80
3	DA	2831	G	N3-C2-N2	-5.11	116.33	119.90
1	AA	679	C	N3-C4-C5	5.11	123.94	121.90
1	AA	796	C	N1-C2-O2	5.11	121.96	118.90
1	AA	903	G	C5-C6-N1	-5.11	108.95	111.50
1	AA	1016	A	C2-N3-C4	5.11	113.15	110.60
1	AA	1431	A	C6-C5-N7	-5.11	128.73	132.30
2	BA	663	A	C4-C5-C6	5.11	119.55	117.00
3	DA	2718	G	C6-N1-C2	5.11	128.16	125.10
3	DA	2771	C	C2-N3-C4	-5.11	117.35	119.90
3	DA	2878	U	N1-C2-O2	-5.11	119.23	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2883	A	C8-N9-C4	5.11	107.84	105.80
4	CA	60	G	C8-N9-C4	5.11	108.44	106.40
7	AC	44	THR	CA-CB-CG2	-5.11	105.25	112.40
23	AS	77	THR	CA-CB-CG2	-5.11	105.25	112.40
1	AA	187	G	C2-N3-C4	-5.10	109.35	111.90
1	AA	714	G	C8-N9-C4	-5.10	104.36	106.40
2	BA	1468	A	C4-C5-N7	5.10	113.25	110.70
3	DA	75	G	N1-C2-N2	5.10	120.79	116.20
3	DA	1371	G	N3-C4-C5	5.10	131.15	128.60
3	DA	1400	U	C5-C4-O4	-5.10	122.84	125.90
3	DA	2582	G	O5'-P-OP1	5.10	116.83	110.70
4	CA	1809	A	N1-C6-N6	-5.10	115.54	118.60
1	AA	788	U	O5'-P-OP1	5.10	116.82	110.70
1	AA	1178	G	C4-N9-C1'	5.10	133.13	126.50
1	AA	1487	G	O5'-P-OP2	-5.10	101.11	105.70
2	BA	42	G	C6-C5-N7	-5.10	127.34	130.40
2	BA	514	C	C5-C6-N1	-5.10	118.45	121.00
2	BA	1074	G	N1-C2-N2	5.10	120.79	116.20
3	DA	82	U	C2-N1-C1'	-5.10	111.58	117.70
3	DA	85	G	N3-C2-N2	-5.10	116.33	119.90
3	DA	754	U	C2-N1-C1'	5.10	123.82	117.70
3	DA	1312	U	N3-C4-O4	5.10	122.97	119.40
3	DA	1649	G	C5-C6-N1	-5.10	108.95	111.50
3	DA	1909	C	C5-C6-N1	5.10	123.55	121.00
3	DA	2562	U	C5-C4-O4	-5.10	122.84	125.90
3	DA	2780	G	N1-C2-N2	5.10	120.79	116.20
2	BA	495	A	N1-C2-N3	5.10	131.85	129.30
2	BA	510	A	N1-C2-N3	5.10	131.85	129.30
2	BA	1094	G	C4-C5-C6	5.10	121.86	118.80
3	DA	251	A	N1-C6-N6	-5.10	115.54	118.60
3	DA	953	G	N9-C4-C5	-5.10	103.36	105.40
3	DA	1227	G	C2-N3-C4	-5.10	109.35	111.90
3	DA	2478	A	C5-N7-C8	-5.10	101.35	103.90
3	DA	2731	G	C4-N9-C1'	5.10	133.13	126.50
1	AA	33	A	C6-N1-C2	-5.10	115.54	118.60
1	AA	314	C	N1-C2-O2	5.10	121.96	118.90
1	AA	399	G	C2-N3-C4	-5.10	109.35	111.90
1	AA	809	G	N3-C4-C5	5.10	131.15	128.60
2	BA	22	G	C5-N7-C8	-5.10	101.75	104.30
2	BA	431	A	C2-N3-C4	-5.10	108.05	110.60
3	DA	1438	U	N3-C4-O4	5.10	122.97	119.40
3	DA	1555	G	N9-C4-C5	5.10	107.44	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1645	G	C4-C5-N7	5.10	112.84	110.80
4	CA	735	A	N1-C6-N6	5.10	121.66	118.60
4	CA	2688	G	N9-C4-C5	5.10	107.44	105.40
5	DB	98	G	C5-N7-C8	-5.10	101.75	104.30
1	AA	784	A	N7-C8-N9	5.10	116.35	113.80
1	AA	1306	A	O5'-P-OP1	-5.10	101.11	105.70
2	BA	41	G	C4-C5-N7	5.10	112.84	110.80
2	BA	793	U	N3-C4-O4	-5.10	115.83	119.40
3	DA	105	C	N3-C4-C5	5.10	123.94	121.90
3	DA	299	A	OP2-P-O3'	5.10	116.41	105.20
3	DA	1605	C	OP2-P-O3'	5.10	116.41	105.20
3	DA	1624	U	N1-C2-O2	-5.10	119.23	122.80
3	DA	1689	A	C6-N1-C2	-5.10	115.54	118.60
3	DA	1843	C	N3-C2-O2	5.10	125.47	121.90
3	DA	2300	C	C5-C4-N4	-5.10	116.63	120.20
1	AA	6	G	C6-C5-N7	5.10	133.46	130.40
1	AA	503	C	C2-N1-C1'	5.10	124.41	118.80
1	AA	586	C	OP2-P-O3'	5.10	116.41	105.20
1	AA	953	G	N3-C4-C5	5.10	131.15	128.60
1	AA	1321	U	C5-C4-O4	5.10	128.96	125.90
3	DA	1430	G	N3-C2-N2	-5.10	116.33	119.90
3	DA	1990	C	OP2-P-O3'	5.10	116.41	105.20
5	DB	103	U	C6-N1-C1'	-5.10	114.06	121.20
2	BA	698	G	N1-C6-O6	5.09	122.96	119.90
2	BA	813	U	N3-C2-O2	5.09	125.77	122.20
3	DA	930	G	C8-N9-C4	-5.09	104.36	106.40
3	DA	1798	U	O5'-P-OP2	-5.09	101.11	105.70
3	DA	2252	G	OP1-P-O3'	5.09	116.41	105.20
3	DA	2426	A	N9-C4-C5	5.09	107.84	105.80
3	DA	2665	A	N1-C2-N3	5.09	131.85	129.30
4	CA	1160	G	N1-C6-O6	5.09	122.96	119.90
4	CA	2601	C	C6-N1-C1'	5.09	126.91	120.80
45	DV	97	SER	N-CA-C	5.09	124.75	111.00
1	AA	721	G	C6-C5-N7	5.09	133.46	130.40
1	AA	857	C	C5-C4-N4	-5.09	116.64	120.20
3	DA	706	A	C4-C5-C6	5.09	119.55	117.00
3	DA	818	G	OP2-P-O3'	5.09	116.41	105.20
3	DA	1639	C	C6-N1-C1'	-5.09	114.69	120.80
3	DA	1859	U	C5-C4-O4	-5.09	122.84	125.90
3	DA	2591	C	N1-C2-N3	5.09	122.77	119.20
4	CA	1668	A	OP1-P-O3'	5.09	116.41	105.20
4	CA	1802	A	C4-C5-C6	5.09	119.55	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	901	A	N1-C6-N6	5.09	121.66	118.60
1	AA	1200	C	C2-N1-C1'	5.09	124.40	118.80
2	BA	38	G	N1-C6-O6	5.09	122.95	119.90
3	DA	711	G	N3-C4-C5	5.09	131.15	128.60
3	DA	713	G	C6-C5-N7	-5.09	127.34	130.40
3	DA	963	U	OP1-P-O3'	5.09	116.40	105.20
3	DA	1054	A	C5-N7-C8	-5.09	101.35	103.90
3	DA	1305	C	N3-C4-C5	5.09	123.94	121.90
3	DA	2237	G	N9-C4-C5	5.09	107.44	105.40
3	DA	2850	A	C8-N9-C4	5.09	107.84	105.80
4	CA	2083	G	C8-N9-C4	-5.09	104.36	106.40
2	BA	922	G	C6-C5-N7	-5.09	127.35	130.40
3	DA	35	G	C5-C6-O6	5.09	131.65	128.60
3	DA	452	G	N3-C2-N2	-5.09	116.34	119.90
3	DA	643	A	C5-C6-N6	-5.09	119.63	123.70
3	DA	855	G	C8-N9-C4	-5.09	104.36	106.40
3	DA	1024	G	N1-C2-N2	-5.09	111.62	116.20
3	DA	1195	G	N1-C6-O6	5.09	122.95	119.90
3	DA	1416	G	N3-C4-C5	5.09	131.15	128.60
3	DA	2482	A	C4-N9-C1'	5.09	135.46	126.30
3	DA	2545	G	C5-N7-C8	-5.09	101.76	104.30
3	DA	2857	G	C6-C5-N7	-5.09	127.35	130.40
4	CA	1892	C	N1-C2-O2	5.09	121.95	118.90
5	DB	76	G	C8-N9-C4	-5.09	104.36	106.40
3	DA	526	A	C8-N9-C4	-5.09	103.77	105.80
3	DA	727	A	C2-N3-C4	-5.09	108.06	110.60
3	DA	1431	A	O5'-P-OP2	-5.09	101.12	105.70
3	DA	2315	G	N3-C4-C5	5.09	131.14	128.60
4	CA	1972	G	N9-C4-C5	5.09	107.44	105.40
43	CT	16	LYS	N-CA-CB	5.09	119.76	110.60
53	D3	9	VAL	CG1-CB-CG2	5.09	119.04	110.90
1	AA	114	U	OP2-P-O3'	5.09	116.39	105.20
1	AA	1197	A	C4-C5-C6	5.09	119.54	117.00
2	BA	569	C	C6-N1-C2	5.09	122.33	120.30
3	DA	301	G	OP1-P-OP2	5.09	127.23	119.60
3	DA	457	A	O4'-C1'-N9	5.09	112.27	108.20
3	DA	1616	A	N1-C2-N3	5.09	131.84	129.30
3	DA	2455	G	C8-N9-C4	-5.09	104.37	106.40
4	CA	581	C	N3-C4-C5	-5.09	119.86	121.90
4	CA	1664	A	N1-C6-N6	5.09	121.65	118.60
4	CA	1822	C	C5-C6-N1	-5.09	118.46	121.00
4	CA	1904	G	C8-N9-C4	-5.09	104.36	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	504	C	N1-C2-N3	5.08	122.76	119.20
1	AA	551	U	N1-C2-O2	5.08	126.36	122.80
2	BA	805	C	C2-N1-C1'	5.08	124.39	118.80
3	DA	1849	G	C8-N9-C4	-5.08	104.37	106.40
3	DA	2335	A	N1-C6-N6	-5.08	115.55	118.60
3	DA	2584	U	OP2-P-O3'	5.08	116.39	105.20
4	CA	2606	C	C5-C4-N4	-5.08	116.64	120.20
29	DE	100	MET	CA-CB-CG	-5.08	104.66	113.30
1	AA	297	G	N3-C4-C5	5.08	131.14	128.60
1	AA	310	G	N3-C4-C5	5.08	131.14	128.60
1	AA	1139	G	C4-C5-N7	-5.08	108.77	110.80
1	AA	1515	G	N7-C8-N9	5.08	115.64	113.10
2	BA	1084	G	N3-C2-N2	-5.08	116.34	119.90
2	BA	1526	G	C8-N9-C4	5.08	108.43	106.40
3	DA	191	A	C5-N7-C8	-5.08	101.36	103.90
3	DA	709	U	OP1-P-OP2	-5.08	111.97	119.60
3	DA	981	A	C4-C5-C6	-5.08	114.46	117.00
3	DA	1288	G	C8-N9-C4	5.08	108.43	106.40
3	DA	1821	A	C6-C5-N7	-5.08	128.74	132.30
3	DA	1930	G	OP1-P-O3'	5.08	116.39	105.20
3	DA	1999	C	C2-N3-C4	-5.08	117.36	119.90
6	AB	100	MET	CG-SD-CE	5.08	108.33	100.20
36	DM	19	LEU	CB-CG-CD2	-5.08	102.36	111.00
1	AA	251	G	C5-N7-C8	-5.08	101.76	104.30
1	AA	777	A	C6-N1-C2	-5.08	115.55	118.60
2	BA	874	G	C8-N9-C4	5.08	108.43	106.40
2	BA	1101	A	C6-N1-C2	-5.08	115.55	118.60
3	DA	43	G	C2-N3-C4	-5.08	109.36	111.90
3	DA	301	G	N1-C6-O6	5.08	122.95	119.90
3	DA	555	G	N3-C4-C5	-5.08	126.06	128.60
3	DA	1279	G	N3-C4-N9	-5.08	122.95	126.00
3	DA	1577	C	N1-C2-O2	5.08	121.95	118.90
3	DA	1818	U	C6-N1-C1'	-5.08	114.09	121.20
3	DA	1970	A	C5-N7-C8	-5.08	101.36	103.90
3	DA	2482	A	C8-N9-C1'	-5.08	118.55	127.70
4	CA	1845	G	N1-C2-N2	-5.08	111.63	116.20
4	CA	2076	U	N1-C2-O2	5.08	126.36	122.80
4	CA	2393	U	C2-N1-C1'	5.08	123.80	117.70
1	AA	58	C	N3-C2-O2	-5.08	118.34	121.90
1	AA	553	A	C5-C6-N6	-5.08	119.64	123.70
1	AA	577	G	OP2-P-O3'	5.08	116.38	105.20
3	DA	1018	U	C6-N1-C2	5.08	124.05	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1542	U	OP2-P-O3'	5.08	116.38	105.20
3	DA	2216	G	N1-C6-O6	5.08	122.95	119.90
4	CA	737	C	N3-C4-N4	5.08	121.56	118.00
1	AA	103	U	C2-N1-C1'	5.08	123.80	117.70
2	BA	299	G	OP1-P-OP2	-5.08	111.98	119.60
2	BA	730	G	C5-C6-O6	-5.08	125.55	128.60
3	DA	40	U	C6-N1-C2	-5.08	117.95	121.00
3	DA	389	G	N7-C8-N9	-5.08	110.56	113.10
3	DA	913	U	OP1-P-OP2	-5.08	111.98	119.60
3	DA	1745	A	C4-C5-C6	-5.08	114.46	117.00
3	DA	2363	G	N1-C2-N3	5.08	126.95	123.90
3	DA	2866	U	N1-C2-O2	5.08	126.36	122.80
1	AA	830	G	C5-C6-N1	5.08	114.04	111.50
1	AA	1191	A	C4-N9-C1'	5.08	135.44	126.30
2	BA	914	A	C8-N9-C4	-5.08	103.77	105.80
3	DA	906	U	N3-C4-O4	-5.08	115.85	119.40
3	DA	1125	G	C5-C6-N1	-5.08	108.96	111.50
3	DA	2340	A	OP2-P-O3'	-5.08	94.03	105.20
4	CA	1667	G	O5'-P-OP2	-5.08	101.13	105.70
5	DB	73	A	C5-C6-N1	-5.08	115.16	117.70
1	AA	616	G	N3-C2-N2	-5.08	116.35	119.90
2	BA	191	G	N1-C6-O6	5.08	122.94	119.90
2	BA	862	C	N3-C4-C5	5.08	123.93	121.90
2	BA	1395	C	OP1-P-OP2	5.08	127.21	119.60
3	DA	553	G	N1-C6-O6	-5.08	116.85	119.90
3	DA	614	A	OP1-P-O3'	5.08	116.37	105.20
3	DA	1042	G	O5'-P-OP1	-5.08	101.13	105.70
3	DA	1182	G	N7-C8-N9	5.08	115.64	113.10
3	DA	1687	G	OP2-P-O3'	5.08	116.36	105.20
3	DA	2575	C	N1-C2-O2	-5.08	115.85	118.90
4	CA	830	G	C5-N7-C8	-5.08	101.76	104.30
4	CA	1968	G	C4-C5-C6	5.08	121.84	118.80
1	AA	1362	A	OP1-P-O3'	5.07	116.36	105.20
1	AA	1426	G	N1-C2-N3	5.07	126.94	123.90
2	BA	867	G	N3-C4-N9	5.07	129.04	126.00
2	BA	1100	C	N3-C4-N4	-5.07	114.45	118.00
3	DA	561	G	C8-N9-C1'	5.07	133.60	127.00
3	DA	1429	G	C8-N9-C4	-5.07	104.37	106.40
3	DA	1701	A	C5-C6-N1	5.07	120.24	117.70
3	DA	2432	A	N1-C6-N6	-5.07	115.56	118.60
4	CA	1804	C	C2-N1-C1'	-5.07	113.22	118.80
4	CA	1826	G	O5'-P-OP2	-5.07	101.13	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2241	A	C6-N1-C2	-5.07	115.56	118.60
5	DB	108	A	C4-C5-N7	-5.07	108.16	110.70
2	BA	1159	U	C5-C4-O4	5.07	128.94	125.90
3	DA	1376	C	O5'-P-OP1	5.07	116.79	110.70
3	DA	2846	G	N7-C8-N9	-5.07	110.56	113.10
4	CA	1360	G	C4-N9-C1'	5.07	133.09	126.50
1	AA	1333	A	C2-N3-C4	5.07	113.14	110.60
3	DA	329	G	O5'-P-OP2	-5.07	101.14	105.70
3	DA	529	A	O5'-P-OP2	-5.07	101.14	105.70
3	DA	676	A	OP1-P-OP2	5.07	127.20	119.60
3	DA	795	C	OP2-P-O3'	5.07	116.36	105.20
3	DA	947	A	N3-C4-N9	-5.07	123.34	127.40
3	DA	1435	G	N3-C4-C5	5.07	131.13	128.60
3	DA	1701	A	N1-C6-N6	-5.07	115.56	118.60
3	DA	1938	A	C5-C6-N1	5.07	120.23	117.70
3	DA	1967	C	O5'-P-OP1	-5.07	101.14	105.70
3	DA	2723	C	P-O3'-C3'	-5.07	113.61	119.70
4	CA	53	A	N1-C6-N6	5.07	121.64	118.60
4	CA	1377	G	C4-N9-C1'	5.07	133.09	126.50
5	DB	58	A	C5-C6-N6	-5.07	119.64	123.70
2	BA	67	C	C2-N1-C1'	-5.07	113.22	118.80
2	BA	1513	A	O5'-P-OP2	-5.07	101.14	105.70
3	DA	637	A	C6-N1-C2	-5.07	115.56	118.60
1	AA	1517	G	C8-N9-C4	5.07	108.43	106.40
2	BA	399	G	C4-C5-N7	5.07	112.83	110.80
3	DA	189	G	N1-C2-N3	5.07	126.94	123.90
3	DA	1337	G	N3-C2-N2	-5.07	116.35	119.90
3	DA	1571	A	O5'-P-OP1	-5.07	101.14	105.70
3	DA	1852	U	N1-C2-O2	-5.07	119.25	122.80
3	DA	2434	A	OP1-P-OP2	-5.07	112.00	119.60
3	DA	2697	G	C6-C5-N7	-5.07	127.36	130.40
4	CA	1035	U	N3-C2-O2	-5.07	118.65	122.20
5	DB	57	A	N3-C4-C5	5.07	130.35	126.80
2	BA	359	G	C4-N9-C1'	-5.07	119.92	126.50
3	DA	222	A	C4-C5-C6	5.07	119.53	117.00
3	DA	513	A	C5-N7-C8	-5.07	101.37	103.90
3	DA	1337	G	N3-C4-C5	5.07	131.13	128.60
3	DA	1715	G	N1-C6-O6	-5.07	116.86	119.90
3	DA	2351	G	C8-N9-C1'	-5.07	120.42	127.00
4	CA	1377	G	C8-N9-C4	-5.07	104.37	106.40
5	DB	97	C	OP2-P-O3'	5.07	116.34	105.20
2	BA	764	C	N3-C4-N4	-5.06	114.45	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	1394	A	C4-C5-N7	5.06	113.23	110.70
3	DA	1564	C	C2-N3-C4	-5.06	117.37	119.90
4	CA	1764	C	C6-N1-C2	5.06	122.33	120.30
4	CA	2010	G	N1-C6-O6	5.06	122.94	119.90
4	CA	2069	G	C4-N9-C1'	-5.06	119.92	126.50
1	AA	32	A	C6-N1-C2	-5.06	115.56	118.60
1	AA	352	C	N3-C2-O2	-5.06	118.36	121.90
1	AA	1479	C	C4-C5-C6	-5.06	114.87	117.40
3	DA	232	G	N3-C4-C5	5.06	131.13	128.60
3	DA	247	G	C6-C5-N7	-5.06	127.36	130.40
3	DA	961	C	O5'-P-OP2	-5.06	101.14	105.70
3	DA	964	C	C6-N1-C2	5.06	122.33	120.30
3	DA	971	G	C4-N9-C1'	5.06	133.08	126.50
3	DA	2405	G	N3-C2-N2	-5.06	116.36	119.90
3	DA	2411	A	C5-C6-N6	5.06	127.75	123.70
3	DA	2642	G	C8-N9-C4	-5.06	104.38	106.40
1	AA	526	C	O5'-P-OP1	-5.06	101.14	105.70
1	AA	726	C	OP1-P-O3'	5.06	116.33	105.20
2	BA	609	A	OP2-P-O3'	5.06	116.33	105.20
3	DA	484	C	OP2-P-O3'	5.06	116.33	105.20
3	DA	640	C	N3-C4-N4	5.06	121.54	118.00
3	DA	659	G	C8-N9-C1'	-5.06	120.42	127.00
3	DA	694	U	OP1-P-OP2	5.06	127.19	119.60
3	DA	1793	C	C5-C4-N4	5.06	123.74	120.20
1	AA	67	C	C6-N1-C2	-5.06	118.28	120.30
1	AA	125	U	OP2-P-O3'	5.06	116.33	105.20
2	BA	450	G	O4'-C1'-N9	5.06	112.25	108.20
3	DA	467	G	O5'-P-OP2	-5.06	101.15	105.70
3	DA	548	G	C8-N9-C4	-5.06	104.38	106.40
3	DA	938	G	C4-C5-N7	5.06	112.82	110.80
3	DA	1025	G	C6-C5-N7	-5.06	127.36	130.40
3	DA	2034	U	C2-N3-C4	-5.06	123.97	127.00
3	DA	2279	G	N1-C6-O6	-5.06	116.86	119.90
3	DA	2581	G	N3-C4-N9	-5.06	122.96	126.00
3	DA	2852	G	C5-C6-N1	-5.06	108.97	111.50
3	DA	2884	U	P-O3'-C3'	5.06	125.77	119.70
4	CA	830	G	N7-C8-N9	5.06	115.63	113.10
5	DB	99	A	O4'-C1'-N9	-5.06	104.15	108.20
1	AA	690	G	O5'-P-OP2	-5.06	101.15	105.70
1	AA	1192	C	N1-C2-O2	-5.06	115.86	118.90
2	BA	781	A	C8-N9-C4	-5.06	103.78	105.80
3	DA	252	G	OP1-P-OP2	-5.06	112.02	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	305	C	N3-C4-C5	5.06	123.92	121.90
3	DA	572	A	C6-N1-C2	-5.06	115.56	118.60
3	DA	1952	A	C4-C5-N7	5.06	113.23	110.70
3	DA	2328	A	C8-N9-C4	5.06	107.82	105.80
3	DA	2513	A	O4'-C1'-N9	5.06	112.25	108.20
3	DA	2813	A	C2-N3-C4	-5.06	108.07	110.60
4	CA	1323	C	C5-C6-N1	5.06	123.53	121.00
1	AA	285	C	N1-C2-O2	5.06	121.93	118.90
2	BA	507	C	OP1-P-OP2	5.06	127.18	119.60
2	BA	550	G	C5-C6-N1	-5.06	108.97	111.50
2	BA	918	A	C6-C5-N7	-5.06	128.76	132.30
2	BA	1061	G	C2-N3-C4	-5.06	109.37	111.90
3	DA	771	G	N1-C2-N3	5.06	126.93	123.90
4	CA	1635	A	N1-C6-N6	-5.06	115.57	118.60
28	CD	151	THR	C-N-CD	-5.06	109.48	120.60
1	AA	52	C	OP2-P-O3'	5.05	116.32	105.20
1	AA	641	U	N3-C4-O4	5.05	122.94	119.40
1	AA	1475	G	N1-C6-O6	-5.05	116.87	119.90
2	BA	1487	G	N1-C2-N3	-5.05	120.87	123.90
3	DA	53	A	N1-C6-N6	5.05	121.63	118.60
3	DA	758	C	C2-N1-C1'	-5.05	113.24	118.80
3	DA	1027	A	O4'-C1'-N9	-5.05	104.16	108.20
3	DA	1389	G	N1-C6-O6	5.05	122.93	119.90
3	DA	1860	G	N3-C4-C5	5.05	131.13	128.60
3	DA	1987	A	C5-N7-C8	-5.05	101.37	103.90
3	DA	2603	G	C8-N9-C4	-5.05	104.38	106.40
3	DA	2645	G	N1-C2-N3	5.05	126.93	123.90
7	BC	169	ARG	NE-CZ-NH1	5.05	122.83	120.30
1	AA	879	C	O5'-P-OP1	5.05	116.76	110.70
1	AA	1399	C	N3-C2-O2	-5.05	118.36	121.90
3	DA	495	G	C4-N9-C1'	5.05	133.07	126.50
3	DA	1157	G	C5-C6-O6	-5.05	125.57	128.60
3	DA	1253	A	C4-C5-C6	-5.05	114.47	117.00
3	DA	2490	G	C8-N9-C1'	-5.05	120.43	127.00
1	AA	275	G	C6-C5-N7	-5.05	127.37	130.40
3	DA	652	U	C5-C4-O4	-5.05	122.87	125.90
3	DA	842	U	C5-C6-N1	-5.05	120.17	122.70
3	DA	980	A	N3-C4-N9	-5.05	123.36	127.40
3	DA	1247	A	N3-C4-C5	5.05	130.34	126.80
3	DA	1842	G	N1-C6-O6	5.05	122.93	119.90
3	DA	2495	G	OP2-P-O3'	5.05	116.31	105.20
3	DA	2597	G	C4-C5-N7	-5.05	108.78	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2877	G	N1-C2-N3	5.05	126.93	123.90
4	CA	1665	A	C4-C5-N7	5.05	113.23	110.70
4	CA	2077	A	C5-C6-N6	5.05	127.74	123.70
1	AA	365	U	C2-N1-C1'	-5.05	111.64	117.70
1	AA	1073	U	C5-C6-N1	-5.05	120.17	122.70
1	AA	1485	U	OP1-P-OP2	5.05	127.17	119.60
2	BA	423	G	C4-C5-N7	5.05	112.82	110.80
3	DA	15	G	OP2-P-O3'	5.05	116.31	105.20
3	DA	335	C	O5'-P-OP2	-5.05	101.16	105.70
3	DA	450	G	OP2-P-O3'	5.05	116.31	105.20
3	DA	780	G	OP1-P-OP2	5.05	127.17	119.60
3	DA	866	A	N7-C8-N9	-5.05	111.28	113.80
3	DA	935	C	C5-C4-N4	-5.05	116.67	120.20
3	DA	1187	G	C8-N9-C4	5.05	108.42	106.40
3	DA	1526	C	C6-N1-C2	5.05	122.32	120.30
3	DA	1782	U	O4'-C1'-N1	5.05	112.24	108.20
3	DA	2556	C	C6-N1-C2	-5.05	118.28	120.30
4	CA	2583	G	OP2-P-O3'	5.05	116.31	105.20
5	DB	98	G	N1-C2-N2	5.05	120.74	116.20
3	DA	2000	C	C6-N1-C2	5.05	122.32	120.30
3	DA	2033	A	O5'-P-OP1	5.05	116.76	110.70
3	DA	2887	A	C6-N1-C2	-5.05	115.57	118.60
5	CB	80	U	O4'-C1'-N1	5.05	112.24	108.20
6	BB	198	PHE	CB-CG-CD1	-5.05	117.27	120.80
1	AA	889	A	O5'-P-OP1	-5.05	101.16	105.70
3	DA	127	A	O5'-P-OP1	5.05	116.75	110.70
3	DA	191	A	O5'-P-OP1	-5.05	101.16	105.70
3	DA	622	G	C4-N9-C1'	5.05	133.06	126.50
3	DA	2433	A	C4-C5-C6	5.05	119.52	117.00
3	DA	2480	C	N1-C2-O2	-5.05	115.87	118.90
3	DA	2559	C	N3-C4-C5	5.05	123.92	121.90
3	DA	2630	G	N1-C2-N2	-5.05	111.66	116.20
3	DA	2805	C	C4-C5-C6	5.05	119.92	117.40
4	CA	1843	C	C5-C4-N4	-5.05	116.67	120.20
1	AA	774	G	OP1-P-O3'	5.04	116.30	105.20
1	AA	1066	C	N3-C4-N4	5.04	121.53	118.00
3	DA	787	C	C6-N1-C2	5.04	122.32	120.30
3	DA	2469	A	N9-C1'-C2'	-5.04	106.45	112.00
1	AA	237	G	N3-C4-N9	-5.04	122.97	126.00
1	AA	856	C	OP2-P-O3'	5.04	116.30	105.20
1	AA	1064	G	OP1-P-O3'	5.04	116.30	105.20
1	AA	1511	G	N3-C4-C5	5.04	131.12	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	418	C	N3-C2-O2	-5.04	118.37	121.90
3	DA	67	U	C5-C4-O4	-5.04	122.87	125.90
3	DA	174	U	C2-N1-C1'	-5.04	111.65	117.70
3	DA	399	U	C6-N1-C2	-5.04	117.97	121.00
3	DA	456	C	OP1-P-OP2	5.04	127.17	119.60
3	DA	713	G	C4-C5-N7	5.04	112.82	110.80
3	DA	741	U	C6-N1-C2	5.04	124.03	121.00
3	DA	818	G	OP1-P-OP2	-5.04	112.03	119.60
3	DA	1229	C	O5'-P-OP1	5.04	116.75	110.70
3	DA	1272	A	C5-N7-C8	5.04	106.42	103.90
3	DA	2563	U	OP1-P-O3'	5.04	116.29	105.20
3	DA	2575	C	N3-C2-O2	5.04	125.43	121.90
51	D1	51	ARG	NE-CZ-NH1	-5.04	117.78	120.30
1	AA	1425	U	OP1-P-OP2	-5.04	112.04	119.60
2	BA	1510	C	OP1-P-O3'	-5.04	94.11	105.20
2	BA	1525	G	N3-C2-N2	-5.04	116.37	119.90
3	DA	1511	G	N3-C2-N2	-5.04	116.37	119.90
3	DA	2297	A	C5-C6-N6	5.04	127.73	123.70
3	DA	2438	U	OP1-P-O3'	5.04	116.29	105.20
3	DA	2508	G	N7-C8-N9	-5.04	110.58	113.10
3	DA	2595	G	O5'-P-OP1	-5.04	101.16	105.70
4	CA	821	A	C4-C5-C6	-5.04	114.48	117.00
4	CA	2264	C	C5-C6-N1	5.04	123.52	121.00
15	BK	52	PHE	CB-CA-C	-5.04	100.32	110.40
33	DJ	10	LEU	CA-CB-CG	5.04	126.90	115.30
1	AA	199	A	N3-C4-C5	5.04	130.33	126.80
1	AA	353	A	OP2-P-O3'	5.04	116.29	105.20
3	DA	1513	U	OP2-P-O3'	5.04	116.29	105.20
3	DA	1952	A	O5'-P-OP2	5.04	116.75	110.70
3	DA	2272	U	C5-C4-O4	-5.04	122.88	125.90
4	CA	717	C	C6-N1-C2	-5.04	118.28	120.30
27	CC	194	VAL	CG1-CB-CG2	5.04	118.96	110.90
1	AA	359	G	C5-C6-O6	5.04	131.62	128.60
1	AA	887	G	OP2-P-O3'	5.04	116.29	105.20
2	BA	410	G	C4-N9-C1'	5.04	133.05	126.50
2	BA	1168	U	N3-C4-O4	5.04	122.93	119.40
3	DA	705	A	N9-C4-C5	-5.04	103.78	105.80
3	DA	1051	G	OP1-P-OP2	-5.04	112.04	119.60
3	DA	1147	A	C8-N9-C4	5.04	107.81	105.80
3	DA	1451	C	O5'-P-OP2	5.04	116.75	110.70
3	DA	1526	C	C2-N1-C1'	-5.04	113.26	118.80
3	DA	2345	G	C6-C5-N7	5.04	133.42	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2539	C	C6-N1-C2	5.04	122.32	120.30
3	DA	2692	G	O5'-P-OP2	5.04	116.75	110.70
3	DA	2801	G	O5'-P-OP1	5.04	116.75	110.70
4	CA	1687	G	N3-C2-N2	5.04	123.43	119.90
4	CA	1949	G	N9-C4-C5	-5.04	103.38	105.40
1	AA	51	A	C2-N3-C4	-5.04	108.08	110.60
1	AA	1108	G	N1-C2-N2	-5.04	111.67	116.20
3	DA	258	G	C4-C5-N7	5.04	112.81	110.80
3	DA	2528	U	OP1-P-OP2	-5.04	112.05	119.60
3	DA	2822	G	C6-N1-C2	5.04	128.12	125.10
4	CA	1796	U	O5'-P-OP1	-5.04	101.17	105.70
4	CA	2046	G	N3-C4-N9	5.04	129.02	126.00
4	CA	2087	G	C2-N3-C4	-5.04	109.38	111.90
34	DK	28	LEU	CB-CG-CD1	5.04	119.56	111.00
1	AA	110	C	N3-C4-C5	5.04	123.91	121.90
1	AA	366	A	C8-N9-C4	5.04	107.81	105.80
1	AA	371	A	N1-C6-N6	5.04	121.62	118.60
1	AA	979	C	N3-C4-N4	5.04	121.53	118.00
1	AA	1305	G	C6-C5-N7	5.04	133.42	130.40
2	BA	507	C	C2-N3-C4	-5.04	117.38	119.90
3	DA	72	U	N1-C2-N3	5.04	117.92	114.90
3	DA	104	A	N9-C4-C5	5.04	107.81	105.80
3	DA	483	A	N9-C4-C5	-5.04	103.79	105.80
3	DA	1666	G	C2-N3-C4	-5.04	109.38	111.90
3	DA	1798	U	OP1-P-OP2	5.04	127.15	119.60
3	DA	2013	A	N9-C4-C5	-5.04	103.79	105.80
4	CA	1904	G	C5-C6-N1	-5.04	108.98	111.50
4	CA	2692	G	C5-N7-C8	-5.04	101.78	104.30
5	DB	31	C	OP1-P-O3'	-5.04	94.12	105.20
8	BD	159	LEU	CB-CG-CD2	-5.04	102.44	111.00
15	BK	52	PHE	N-CA-C	5.04	124.59	111.00
1	AA	824	G	N3-C4-N9	-5.03	122.98	126.00
1	AA	1068	G	N1-C6-O6	5.03	122.92	119.90
2	BA	572	A	OP2-P-O3'	5.03	116.27	105.20
2	BA	1530	G	OP1-P-OP2	5.03	127.15	119.60
3	DA	208	C	C5-C4-N4	-5.03	116.68	120.20
3	DA	404	A	N3-C4-C5	5.03	130.32	126.80
3	DA	449	A	OP1-P-O3'	-5.03	94.13	105.20
3	DA	453	A	C2-N3-C4	5.03	113.12	110.60
3	DA	481	G	O5'-P-OP1	5.03	116.74	110.70
3	DA	491	G	N1-C2-N3	5.03	126.92	123.90
3	DA	1705	A	N3-C4-N9	-5.03	123.37	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2483	C	O4'-C1'-N1	-5.03	104.17	108.20
4	CA	1308	A	C8-N9-C4	5.03	107.81	105.80
4	CA	1313	U	C5-C6-N1	5.03	125.22	122.70
5	DB	103	U	C5-C4-O4	-5.03	122.88	125.90
1	AA	833	G	N7-C8-N9	-5.03	110.58	113.10
3	DA	423	A	N1-C6-N6	-5.03	115.58	118.60
3	DA	704	G	O4'-C1'-N9	5.03	112.22	108.20
3	DA	1983	G	N1-C2-N2	5.03	120.73	116.20
4	CA	1216	G	C6-C5-N7	-5.03	127.38	130.40
4	CA	1961	C	N1-C2-O2	5.03	121.92	118.90
1	AA	246	A	C8-N9-C4	5.03	107.81	105.80
1	AA	769	G	N7-C8-N9	5.03	115.62	113.10
2	BA	849	G	C4-C5-N7	5.03	112.81	110.80
3	DA	338	G	N9-C4-C5	-5.03	103.39	105.40
3	DA	1379	U	N1-C2-N3	5.03	117.92	114.90
3	DA	1867	G	C5-C6-O6	-5.03	125.58	128.60
3	DA	1979	U	OP1-P-OP2	-5.03	112.05	119.60
3	DA	2828	G	C2-N3-C4	-5.03	109.39	111.90
4	CA	198	C	O5'-P-OP2	-5.03	101.17	105.70
4	CA	1792	G	N3-C4-N9	5.03	129.02	126.00
4	CA	2607	G	N3-C2-N2	5.03	123.42	119.90
4	CA	2903	U	C6-N1-C2	5.03	124.02	121.00
1	AA	987	G	N1-C2-N3	5.03	126.92	123.90
2	BA	550	G	C2-N3-C4	-5.03	109.39	111.90
3	DA	201	C	N1-C2-O2	-5.03	115.88	118.90
3	DA	408	G	OP2-P-O3'	5.03	116.27	105.20
3	DA	542	C	C2-N3-C4	-5.03	117.39	119.90
3	DA	916	G	N9-C4-C5	-5.03	103.39	105.40
3	DA	2315	G	C5-N7-C8	-5.03	101.78	104.30
6	BB	212	LEU	CB-CG-CD2	5.03	119.55	111.00
41	DR	69	ARG	CG-CD-NE	-5.03	101.24	111.80
1	AA	22	G	N3-C4-C5	-5.03	126.09	128.60
1	AA	59	A	C2-N3-C4	5.03	113.11	110.60
3	DA	472	A	P-O3'-C3'	5.03	125.73	119.70
3	DA	562	U	C2-N3-C4	-5.03	123.98	127.00
3	DA	625	G	C8-N9-C4	5.03	108.41	106.40
3	DA	1210	G	N7-C8-N9	5.03	115.61	113.10
3	DA	1824	G	C8-N9-C4	-5.03	104.39	106.40
3	DA	1981	A	C6-C5-N7	-5.03	128.78	132.30
3	DA	2027	G	C2-N3-C4	-5.03	109.39	111.90
4	CA	2269	G	C4-C5-N7	5.03	112.81	110.80
1	AA	228	A	O5'-P-OP2	5.03	116.73	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	306	A	N9-C4-C5	-5.03	103.79	105.80
2	BA	372	C	C2-N3-C4	5.03	122.41	119.90
2	BA	403	C	C6-N1-C2	5.03	122.31	120.30
2	BA	428	G	N1-C2-N2	5.03	120.72	116.20
2	BA	668	G	N1-C6-O6	5.03	122.92	119.90
2	BA	1191	A	N1-C6-N6	5.03	121.61	118.60
3	DA	182	A	C4-C5-N7	5.03	113.21	110.70
3	DA	340	A	OP2-P-O3'	5.03	116.26	105.20
3	DA	916	G	C8-N9-C1'	-5.03	120.47	127.00
3	DA	1295	C	OP2-P-O3'	5.03	116.26	105.20
3	DA	1929	G	O5'-P-OP2	-5.03	101.18	105.70
3	DA	2203	U	N3-C2-O2	5.03	125.72	122.20
3	DA	2725	A	C2-N3-C4	-5.03	108.09	110.60
3	DA	2812	G	C8-N9-C4	5.03	108.41	106.40
4	CA	2029	G	N9-C4-C5	-5.03	103.39	105.40
2	BA	219	U	C6-N1-C2	-5.02	117.99	121.00
3	DA	1442	U	O5'-P-OP1	-5.02	101.18	105.70
3	DA	2537	U	O5'-P-OP2	-5.02	101.18	105.70
4	CA	759	G	N1-C6-O6	5.02	122.91	119.90
1	AA	338	A	OP2-P-O3'	5.02	116.25	105.20
1	AA	804	U	C5-C4-O4	5.02	128.91	125.90
2	BA	361	G	OP2-P-O3'	5.02	116.25	105.20
2	BA	692	U	OP1-P-OP2	-5.02	112.07	119.60
2	BA	756	C	C5-C4-N4	-5.02	116.68	120.20
3	DA	679	C	N1-C2-N3	5.02	122.72	119.20
3	DA	1040	A	C6-C5-N7	-5.02	128.78	132.30
3	DA	1800	C	N3-C4-C5	-5.02	119.89	121.90
3	DA	2692	G	N7-C8-N9	5.02	115.61	113.10
3	DA	2778	A	N7-C8-N9	-5.02	111.29	113.80
4	CA	2	G	N1-C6-O6	-5.02	116.89	119.90
4	CA	984	A	C2-N3-C4	-5.02	108.09	110.60
1	AA	260	G	OP1-P-O3'	5.02	116.25	105.20
3	DA	489	G	N3-C2-N2	-5.02	116.39	119.90
3	DA	570	G	P-O5'-C5'	-5.02	112.87	120.90
3	DA	627	A	N7-C8-N9	-5.02	111.29	113.80
3	DA	1655	A	C4-C5-N7	5.02	113.21	110.70
3	DA	1794	A	C6-N1-C2	-5.02	115.59	118.60
3	DA	2697	G	N1-C6-O6	5.02	122.91	119.90
3	DA	2732	G	OP1-P-OP2	-5.02	112.07	119.60
5	DB	92	C	OP2-P-O3'	5.02	116.25	105.20
5	DB	96	G	N1-C2-N2	5.02	120.72	116.20
13	AI	119	ARG	NE-CZ-NH1	5.02	122.81	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	537	G	N3-C4-N9	-5.02	122.99	126.00
1	AA	931	C	O5'-P-OP2	-5.02	101.18	105.70
1	AA	951	G	C8-N9-C4	-5.02	104.39	106.40
1	AA	1280	A	N9-C4-C5	5.02	107.81	105.80
2	BA	34	C	O5'-P-OP1	-5.02	101.18	105.70
2	BA	477	C	C6-N1-C2	-5.02	118.29	120.30
2	BA	524	G	OP2-P-O3'	5.02	116.25	105.20
2	BA	1383	C	C6-N1-C2	5.02	122.31	120.30
3	DA	839	U	C4-C5-C6	5.02	122.71	119.70
3	DA	987	C	C6-N1-C1'	-5.02	114.78	120.80
3	DA	1134	A	C8-N9-C4	-5.02	103.79	105.80
3	DA	1373	A	C2-N3-C4	5.02	113.11	110.60
3	DA	2371	G	N1-C6-O6	5.02	122.91	119.90
3	DA	2553	G	N3-C4-C5	-5.02	126.09	128.60
3	DA	2776	A	O4'-C1'-N9	5.02	112.22	108.20
3	DA	2807	U	OP1-P-O3'	-5.02	94.16	105.20
4	CA	2625	G	C6-C5-N7	-5.02	127.39	130.40
5	DB	92	C	C4-C5-C6	5.02	119.91	117.40
53	D3	14	ARG	NE-CZ-NH1	-5.02	117.79	120.30
1	AA	908	A	C8-N9-C4	5.02	107.81	105.80
2	BA	169	C	N3-C4-N4	5.02	121.51	118.00
2	BA	430	A	C2-N3-C4	-5.02	108.09	110.60
3	DA	31	C	C2-N3-C4	-5.02	117.39	119.90
3	DA	56	A	C4-C5-C6	-5.02	114.49	117.00
3	DA	1247	A	N3-C4-N9	-5.02	123.39	127.40
3	DA	1257	C	C5-C4-N4	-5.02	116.69	120.20
3	DA	1263	U	C2-N1-C1'	5.02	123.72	117.70
3	DA	1427	A	N1-C2-N3	5.02	131.81	129.30
3	DA	1930	G	P-O3'-C3'	5.02	125.72	119.70
3	DA	2026	U	C4-C5-C6	5.02	122.71	119.70
3	DA	2215	C	N1-C2-O2	5.02	121.91	118.90
3	DA	2368	C	C2-N3-C4	-5.02	117.39	119.90
1	AA	694	A	N7-C8-N9	5.02	116.31	113.80
1	AA	1062	U	OP1-P-O3'	5.02	116.23	105.20
3	DA	211	C	OP2-P-O3'	5.02	116.23	105.20
3	DA	838	C	C6-N1-C1'	-5.02	114.78	120.80
3	DA	1928	A	C8-N9-C4	-5.02	103.79	105.80
4	CA	1996	C	C6-N1-C2	5.02	122.31	120.30
5	CB	31	C	C6-N1-C2	-5.02	118.29	120.30
27	DC	211	ARG	NE-CZ-NH1	-5.02	117.79	120.30
1	AA	351	G	N7-C8-N9	5.01	115.61	113.10
1	AA	769	G	C5-N7-C8	-5.01	101.79	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1360	A	C4-C5-C6	5.01	119.51	117.00
1	AA	1427	C	OP2-P-O3'	5.01	116.23	105.20
2	BA	174	A	C8-N9-C4	-5.01	103.79	105.80
2	BA	1094	G	N1-C6-O6	5.01	122.91	119.90
3	DA	105	C	C5-C4-N4	-5.01	116.69	120.20
3	DA	504	A	OP2-P-O3'	5.01	116.23	105.20
3	DA	570	G	C6-C5-N7	-5.01	127.39	130.40
3	DA	634	C	C2-N3-C4	-5.01	117.39	119.90
3	DA	1025	G	C4-N9-C1'	5.01	133.02	126.50
3	DA	1472	C	N3-C4-N4	-5.01	114.49	118.00
3	DA	1628	G	N3-C4-N9	5.01	129.01	126.00
3	DA	1638	C	C4-C5-C6	5.01	119.91	117.40
3	DA	2026	U	N3-C4-C5	-5.01	111.59	114.60
3	DA	2483	C	C2-N1-C1'	5.01	124.32	118.80
3	DA	2629	U	N3-C2-O2	-5.01	118.69	122.20
4	CA	2599	G	C8-N9-C1'	-5.01	120.48	127.00
8	BD	191	LEU	CB-CG-CD2	5.01	119.52	111.00
1	AA	142	G	C4-C5-C6	5.01	121.81	118.80
1	AA	671	G	C5-C6-O6	-5.01	125.59	128.60
3	DA	303	G	N1-C6-O6	5.01	122.91	119.90
3	DA	1019	U	OP1-P-O3'	5.01	116.23	105.20
3	DA	2873	A	N3-C4-C5	-5.01	123.29	126.80
24	BT	69	LYS	N-CA-C	5.01	124.53	111.00
27	DC	167	ASP	C-N-CA	-5.01	111.77	122.30
43	DT	46	LEU	CA-CB-CG	5.01	126.83	115.30
53	D3	10	LEU	CA-CB-CG	-5.01	103.77	115.30
1	AA	1494	G	C5-C6-O6	5.01	131.61	128.60
3	DA	187	G	C8-N9-C4	-5.01	104.40	106.40
3	DA	247	G	O4'-C1'-N9	5.01	112.21	108.20
3	DA	325	G	N3-C4-N9	-5.01	122.99	126.00
3	DA	741	U	O5'-P-OP1	-5.01	101.19	105.70
3	DA	760	G	N1-C2-N3	-5.01	120.89	123.90
3	DA	874	G	C6-C5-N7	-5.01	127.39	130.40
3	DA	1783	A	N1-C6-N6	5.01	121.61	118.60
3	DA	2002	G	OP1-P-O3'	5.01	116.22	105.20
3	DA	2262	U	C5-C4-O4	5.01	128.91	125.90
3	DA	2327	A	O4'-C1'-N9	-5.01	104.19	108.20
3	DA	2534	A	C5-C6-N6	-5.01	119.69	123.70
27	DC	204	LEU	CB-CG-CD1	-5.01	102.48	111.00
1	AA	1018	G	N3-C4-C5	-5.01	126.09	128.60
1	AA	1083	U	N1-C2-O2	-5.01	119.29	122.80
2	BA	34	C	OP1-P-OP2	5.01	127.11	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	BA	671	G	C5-C6-N1	-5.01	109.00	111.50
3	DA	748	G	N3-C4-N9	-5.01	122.99	126.00
3	DA	825	A	C5-C6-N6	5.01	127.71	123.70
3	DA	925	A	C8-N9-C4	5.01	107.80	105.80
3	DA	1053	C	C5-C4-N4	-5.01	116.69	120.20
3	DA	1481	U	N3-C4-O4	-5.01	115.89	119.40
3	DA	1781	U	N3-C2-O2	5.01	125.71	122.20
3	DA	2002	G	C2-N3-C4	-5.01	109.40	111.90
3	DA	2467	C	OP2-P-O3'	5.01	116.22	105.20
3	DA	2693	G	OP2-P-O3'	5.01	116.22	105.20
4	CA	776	G	N3-C2-N2	5.01	123.41	119.90
4	CA	1843	C	C2-N1-C1'	5.01	124.31	118.80
3	DA	249	C	C5-C6-N1	5.01	123.50	121.00
3	DA	453	A	N1-C2-N3	-5.01	126.80	129.30
3	DA	1688	U	N1-C2-N3	5.01	117.91	114.90
1	AA	369	G	C8-N9-C4	-5.01	104.40	106.40
1	AA	1346	A	OP1-P-OP2	5.01	127.11	119.60
1	AA	1479	C	OP1-P-OP2	-5.01	112.09	119.60
1	AA	1488	G	O5'-P-OP2	-5.01	101.19	105.70
2	BA	396	C	N3-C4-N4	-5.01	114.50	118.00
3	DA	612	G	N1-C2-N3	5.01	126.90	123.90
3	DA	706	A	C6-N1-C2	-5.01	115.60	118.60
3	DA	776	G	O4'-C1'-N9	-5.01	104.19	108.20
3	DA	786	C	C2-N3-C4	-5.01	117.40	119.90
3	DA	1136	G	OP2-P-O3'	5.01	116.22	105.20
3	DA	1763	G	C8-N9-C1'	5.01	133.51	127.00
3	DA	2032	G	N1-C2-N2	5.01	120.71	116.20
3	DA	2036	C	C2-N3-C4	-5.01	117.40	119.90
3	DA	2373	G	C6-C5-N7	-5.01	127.40	130.40
3	DA	2820	A	C6-C5-N7	-5.01	128.80	132.30
4	CA	730	A	O4'-C1'-N9	-5.01	104.20	108.20
1	AA	728	A	C8-N9-C4	-5.00	103.80	105.80
1	AA	785	G	O5'-P-OP2	5.00	116.71	110.70
1	AA	831	A	C8-N9-C4	-5.00	103.80	105.80
2	BA	1186	G	C8-N9-C4	5.00	108.40	106.40
3	DA	2736	A	C8-N9-C4	5.00	107.80	105.80
4	CA	2089	C	N3-C4-C5	-5.00	119.90	121.90
53	D3	34	ARG	NE-CZ-NH1	5.00	122.80	120.30
2	BA	1153	G	N3-C4-N9	-5.00	123.00	126.00
3	DA	40	U	C5-C6-N1	5.00	125.20	122.70
3	DA	1413	A	C8-N9-C4	-5.00	103.80	105.80
3	DA	2407	A	OP2-P-O3'	5.00	116.21	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	CA	2358	A	N1-C6-N6	5.00	121.60	118.60
1	AA	1458	G	N1-C6-O6	5.00	122.90	119.90
2	BA	813	U	N3-C4-C5	5.00	117.60	114.60
2	BA	1526	G	OP2-P-O3'	5.00	116.20	105.20
3	DA	412	A	C2-N3-C4	-5.00	108.10	110.60
3	DA	935	C	N1-C2-O2	-5.00	115.90	118.90
3	DA	980	A	C4-C5-C6	-5.00	114.50	117.00
3	DA	1154	G	N1-C2-N2	-5.00	111.70	116.20
3	DA	1399	C	C5-C6-N1	-5.00	118.50	121.00
3	DA	1473	G	OP2-P-O3'	5.00	116.20	105.20
3	DA	1948	G	C8-N9-C1'	5.00	133.50	127.00
3	DA	2481	G	N9-C4-C5	5.00	107.40	105.40
4	CA	635	C	C2-N1-C1'	5.00	124.30	118.80
4	CA	1700	A	C5-C6-N6	-5.00	119.70	123.70
4	CA	2427	C	C6-N1-C2	-5.00	118.30	120.30
18	AN	61	ARG	C-N-CA	5.00	134.20	121.70
46	DW	30	ILE	CA-CB-CG2	-5.00	100.90	110.90

There are no chirality outliers.

All (85) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	AC	123	GLN	Sidechain
13	AI	57	MET	Peptide
14	AJ	58	ASN	Mainchain
19	AO	36	ILE	Mainchain
21	AQ	78	VAL	Peptide
23	AS	42	PRO	Mainchain
24	AT	67	ILE	Peptide
24	AT	7	ALA	Peptide
25	AU	7	ARG	Peptide
8	BD	65	TYR	Mainchain
10	BF	90	MET	Peptide
15	BK	30	THR	Mainchain
19	BO	84	ARG	Mainchain
24	BT	7	ALA	Peptide
27	CC	263	ASP	Sidechain
28	CD	126	ASN	Mainchain
28	CD	151	THR	Peptide
32	CH	120	GLY	Peptide
33	CJ	97	VAL	Peptide
35	CL	34	GLY	Peptide

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Mol	Chain	Res	Type	Group
50	D0	15	ARG	Mainchain
50	D0	17	PRO	Mainchain
50	D0	22	THR	Mainchain
50	D0	41	PRO	Mainchain
51	D1	17	SER	Mainchain
51	D1	48	TYR	Mainchain
57	D7	3	PRO	Peptide
27	DC	166	ARG	Mainchain
27	DC	171	VAL	Mainchain
27	DC	231	HIS	Peptide
27	DC	264	LYS	Mainchain
27	DC	52	HIS	Sidechain
29	DE	101	TYR	Mainchain
29	DE	32	VAL	Mainchain
29	DE	54	GLY	Mainchain
29	DE	70	SER	Mainchain
29	DE	81	GLY	Mainchain
29	DE	86	ALA	Mainchain
30	DF	20	ASN	Mainchain
33	DJ	91	LYS	Peptide
34	DK	104	ALA	Mainchain
34	DK	110	PRO	Mainchain
34	DK	121	LYS	Mainchain
34	DK	28	LEU	Mainchain
34	DK	40	HIS	Sidechain
34	DK	41	LYS	Mainchain
34	DK	51	GLY	Mainchain
34	DK	84	ILE	Mainchain
35	DL	25	LEU	Mainchain
36	DM	56	PRO	Mainchain
36	DM	61	LEU	Mainchain
36	DM	7	SER	Mainchain
38	DO	101	GLY	Mainchain
38	DO	117	ASP	Peptide
38	DO	77	ALA	Mainchain
38	DO	94	TYR	Mainchain
39	DP	30	ARG	Mainchain
40	DQ	52	ARG	Mainchain
41	DR	103	VAL	Mainchain
41	DR	107	ALA	Mainchain
41	DR	11	ALA	Mainchain
41	DR	13	HIS	Mainchain

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Mol	Chain	Res	Type	Group
41	DR	20	ALA	Mainchain
41	DR	87	VAL	Mainchain
42	DS	95	ASP	Mainchain
43	DT	1	MET	Mainchain
43	DT	100	THR	Mainchain
43	DT	24	ILE	Mainchain
43	DT	35	ILE	Mainchain
43	DT	37	THR	Mainchain
43	DT	43	ALA	Mainchain
43	DT	44	ALA	Mainchain
43	DT	77	ASP	Mainchain
43	DT	9	HIS	Sidechain
45	DV	99	SER	Mainchain
46	DW	2	PHE	Mainchain
46	DW	46	LYS	Mainchain
46	DW	51	GLN	Mainchain
46	DW	58	SER	Mainchain
47	DX	23	ARG	Mainchain
47	DX	27	GLU	Mainchain
47	DX	28	SER	Mainchain
47	DX	50	GLY	Mainchain
49	DZ	11	VAL	Mainchain
49	DZ	18	LEU	Mainchain

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	32908	16444	16574	1167	1
2	BA	32895	16553	16553	1220	0
3	DA	62254	31129	31238	2187	1
4	CA	62215	31288	31289	2254	0
5	CB	2529	1281	1281	53	0
5	DB	2549	1291	1289	63	0
6	AB	1705	1726	1732	145	0
6	BB	1705	1726	1732	148	0
7	AC	1625	1692	1696	67	0
7	BC	1625	1692	1696	78	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	AD	1643	1704	1707	87	0
8	BD	1643	1704	1707	65	0
9	AE	1106	1145	1148	81	0
9	BE	1106	1145	1148	97	0
10	AF	818	799	808	34	0
10	BF	818	799	808	39	0
11	AG	1182	1237	1238	50	0
11	BG	1182	1237	1238	60	0
12	AH	979	1031	1031	35	0
12	BH	979	1031	1031	41	0
13	AI	1022	1069	1070	55	0
13	BI	1022	1069	1070	69	0
14	AJ	787	825	828	81	0
14	BJ	787	825	828	30	0
15	AK	877	884	887	30	0
15	BK	877	884	887	52	0
16	AL	957	1009	1017	29	0
17	AM	884	938	941	49	0
17	BM	884	938	941	38	0
18	AN	774	823	827	65	0
18	BN	774	823	827	49	0
19	AO	716	734	739	39	0
19	BO	716	734	739	31	0
20	AP	649	661	666	26	0
20	BP	649	661	666	37	0
21	AQ	649	688	691	35	0
21	BQ	649	688	691	32	0
22	AR	456	477	478	9	0
22	BR	456	477	478	26	0
23	AS	638	657	665	29	0
23	BS	638	661	665	19	0
24	AT	665	711	714	38	0
24	BT	665	711	714	32	0
25	AU	451	473	474	16	0
25	BU	451	473	474	26	0
26	BL	955	1013	1016	46	0
27	CC	2083	2148	2157	92	0
27	DC	2083	2148	2157	71	0
28	CD	1565	1610	1616	73	0
29	CE	1552	1613	1619	73	0
29	DE	1552	1613	1619	40	0
30	CF	1411	1443	1447	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	DF	1411	1443	1447	62	0
31	CG	1323	1368	1374	29	0
31	DG	1323	1368	1374	29	0
32	CH	1102	1134	1139	40	1
32	DH	1102	1134	1139	42	0
33	CJ	1032	1085	1088	73	0
33	DJ	1032	1085	1088	83	0
34	CK	1129	1152	1162	37	0
34	DK	1129	1152	1162	39	0
35	CL	938	1008	1012	32	0
35	DL	946	1019	1023	34	0
36	CM	1045	1116	1117	73	0
36	DM	1053	1125	1129	41	0
37	CN	1074	1153	1157	26	0
37	DN	1082	1166	1170	44	0
38	CO	961	994	1000	56	0
38	DO	961	994	1000	48	0
39	CP	892	920	923	31	0
39	DP	900	929	935	37	0
40	CQ	917	960	965	39	0
40	DQ	917	960	965	24	0
41	CR	947	1018	1022	39	0
41	DR	947	1018	1022	45	0
42	CS	816	832	839	40	0
42	DS	816	832	839	35	0
43	CT	857	915	922	40	0
43	DT	857	915	922	35	0
44	CU	739	802	807	44	0
44	DU	731	794	795	22	0
45	CV	780	830	834	53	0
45	DV	780	830	834	20	0
46	CW	753	774	780	13	0
46	DW	753	774	780	19	0
47	CX	569	579	581	12	0
47	DX	591	606	604	18	0
48	CY	625	649	655	36	0
48	DY	625	649	655	16	0
49	CZ	501	530	531	22	0
49	DZ	501	530	531	21	0
50	C0	449	486	491	19	0
50	D0	449	486	484	15	1
51	C1	444	454	461	31	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	D1	444	454	461	28	0
52	C2	409	438	440	14	0
52	D2	414	443	445	9	0
53	C3	377	414	418	27	0
53	D3	377	414	418	8	0
54	C4	504	568	574	31	0
54	D4	504	568	574	22	0
55	C5	359	395	397	15	0
55	D5	368	395	410	34	0
56	DD	1566	1612	1618	55	0
57	D7	530	177	517	101	0
58	AA	57	0	0	0	0
58	BA	49	0	0	0	0
58	C3	1	0	0	0	0
58	CA	176	0	0	0	0
58	CB	3	0	0	0	0
58	CM	1	0	0	0	0
58	CR	1	0	0	0	0
58	D5	1	0	0	0	0
58	DA	156	0	0	0	0
58	DB	4	0	0	0	0
58	DD	1	0	0	0	0
58	DM	1	0	0	0	0
58	DR	2	0	0	0	0
59	AA	10	14	14	0	0
59	D3	10	14	14	0	0
59	DA	20	28	28	2	0
59	DD	10	14	14	0	0
59	DS	10	14	14	0	0
59	DT	10	14	14	2	0
59	DU	10	14	14	0	0
60	AA	8	14	14	0	0
60	DA	56	98	98	10	0
60	DE	16	28	28	1	0
60	DK	8	14	14	0	0
60	DN	8	14	14	1	0
60	DT	8	14	14	0	0
61	BA	13	0	18	0	0
61	DA	13	0	18	3	0
61	DQ	13	0	18	3	0
61	DR	13	0	18	8	0
61	DS	13	0	18	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	DA	30	0	57	4	0
63	D5	6	0	12	2	0
63	DA	24	0	48	13	0
63	DM	6	0	12	1	0
63	DP	6	0	12	10	0
64	DA	32	0	44	7	0
65	DA	12	9	9	6	0
66	D1	7	0	10	3	0
66	D3	7	0	10	2	0
66	DA	35	0	50	5	0
66	DP	7	0	10	1	0
66	DQ	7	0	10	1	0
67	D1	4	0	6	0	0
67	DA	28	0	42	10	0
67	DB	12	0	18	1	0
67	DR	4	0	6	2	0
68	DA	11	0	5	2	0
69	AA	371	0	0	95	0
69	AB	11	0	0	6	0
69	AC	6	0	0	1	0
69	AD	3	0	0	1	0
69	AE	11	0	0	9	0
69	AF	5	0	0	1	0
69	AG	7	0	0	6	0
69	AH	2	0	0	1	0
69	AI	1	0	0	0	0
69	AJ	2	0	0	0	0
69	AK	8	0	0	1	0
69	AL	5	0	0	1	0
69	AM	7	0	0	1	0
69	AN	7	0	0	4	0
69	AO	1	0	0	0	0
69	AP	2	0	0	0	0
69	AQ	5	0	0	0	0
69	AS	3	0	0	4	0
69	AT	5	0	0	2	0
69	AU	2	0	0	0	0
69	BA	389	0	0	119	0
69	BB	5	0	0	5	0
69	BC	3	0	0	3	0
69	BD	9	0	0	0	0
69	BE	5	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	BF	7	0	0	1	0
69	BG	7	0	0	1	0
69	BH	5	0	0	1	0
69	BI	4	0	0	2	0
69	BJ	1	0	0	0	0
69	BK	1	0	0	0	0
69	BL	3	0	0	0	0
69	BM	3	0	0	0	0
69	BN	8	0	0	3	0
69	BO	4	0	0	1	0
69	BP	4	0	0	5	0
69	BQ	1	0	0	0	0
69	BS	2	0	0	0	0
69	BT	5	0	0	2	0
69	BU	3	0	0	0	0
69	C0	3	0	0	1	0
69	C1	1	0	0	1	0
69	C2	1	0	0	0	0
69	C3	5	0	0	2	0
69	C4	3	0	0	1	0
69	C5	1	0	0	0	0
69	CA	1042	0	0	324	0
69	CB	19	0	0	2	0
69	CC	8	0	0	2	0
69	CD	8	0	0	2	0
69	CE	7	0	0	2	0
69	CF	2	0	0	1	0
69	CG	4	0	0	3	0
69	CH	4	0	0	3	0
69	CK	5	0	0	1	0
69	CL	5	0	0	1	0
69	CM	8	0	0	2	0
69	CN	5	0	0	0	0
69	CO	5	0	0	3	0
69	CP	1	0	0	0	0
69	CQ	5	0	0	3	0
69	CR	3	0	0	1	0
69	CS	5	0	0	4	0
69	CT	3	0	0	5	0
69	CU	6	0	0	2	0
69	CV	7	0	0	3	0
69	CW	1	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	CZ	2	0	0	2	0
69	D0	14	0	0	0	0
69	D1	48	0	0	11	0
69	D2	4	0	0	0	0
69	D3	24	0	0	3	0
69	D4	27	0	0	3	0
69	D5	9	0	0	6	0
69	DA	3565	0	0	603	0
69	DB	90	0	0	17	0
69	DC	59	0	0	10	0
69	DD	80	0	0	7	0
69	DE	51	0	0	7	0
69	DF	5	0	0	0	0
69	DG	5	0	0	1	0
69	DH	2	0	0	0	0
69	DJ	4	0	0	2	0
69	DK	37	0	0	4	0
69	DL	30	0	0	5	0
69	DM	52	0	0	6	0
69	DN	47	0	0	10	0
69	DO	33	0	0	10	0
69	DP	14	0	0	7	0
69	DQ	33	0	0	7	0
69	DR	52	0	0	7	0
69	DS	40	0	0	9	0
69	DT	57	0	0	10	0
69	DU	10	0	0	4	0
69	DV	14	0	0	1	0
69	DW	18	0	0	3	0
69	DX	15	0	0	6	0
69	DY	7	0	0	0	0
69	DZ	2	0	0	0	0
All	All	292901	191884	193327	10306	2

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 22.

All (10306) 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)
3:DA:783:A:OP1	69:DA:3201:HOH:O	1.53	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:852:U:OP1	69:DA:3202:HOH:O	1.55	1.21
3:DA:1828:G:OP1	69:DA:3203:HOH:O	1.58	1.16
1:AA:411:A:OP2	8:AD:26:ARG:NH2	1.80	1.15
3:DA:576:U:OP1	69:DA:3205:HOH:O	1.64	1.15
3:DA:2507:C:OP2	69:DA:3204:HOH:O	1.63	1.14
4:CA:1896:G:O5'	69:CA:3201:HOH:O	1.62	1.14
4:CA:2268:A:OP1	69:CA:3203:HOH:O	1.67	1.12
3:DA:511:U:OP2	69:DA:3206:HOH:O	1.64	1.12
2:BA:536:C:OP1	69:BA:1701:HOH:O	1.66	1.11
4:CA:1604:C:OP1	69:CA:3202:HOH:O	1.67	1.09
2:BA:395:C:OP2	69:BA:1702:HOH:O	1.71	1.09
3:DA:1298:C:OP2	69:DA:3211:HOH:O	1.71	1.09
3:DA:2563:U:OP2	69:DA:3209:HOH:O	1.70	1.09
3:DA:456:C:O2	44:DU:73:ARG:NH1	1.86	1.08
3:DA:738:G:OP2	69:DA:3208:HOH:O	1.68	1.08
3:DA:2685:G:O2'	69:DA:3212:HOH:O	1.71	1.08
3:DA:1134:A:OP1	69:DA:3207:HOH:O	1.67	1.08
4:CA:192:C:OP1	69:CA:3208:HOH:O	1.71	1.08
4:CA:2033:A:OP1	69:CA:3207:HOH:O	1.71	1.08
4:CA:2579:C:OP1	69:CA:3206:HOH:O	1.70	1.08
3:DA:2484:G:OP2	69:DA:3210:HOH:O	1.70	1.08
4:CA:1343:G:OP1	69:CA:3204:HOH:O	1.69	1.07
4:CA:1824:G:OP2	69:CA:3205:HOH:O	1.70	1.07
55:D5:45:LYS:HE2	55:D5:45:LYS:H	1.00	1.07
4:CA:1439:A:OP2	69:CA:3209:HOH:O	1.74	1.06
1:AA:1449:C:OP2	69:AA:1701:HOH:O	1.71	1.06
4:CA:36:G:O2'	4:CA:450:G:O2'	1.70	1.06
1:AA:1475:G:OP2	69:AA:1702:HOH:O	1.71	1.05
3:DA:1289:C:O2	69:DA:3213:HOH:O	1.72	1.05
3:DA:1568:G:OP1	69:DA:3218:HOH:O	1.73	1.05
2:BA:810:C:OP2	69:BA:1704:HOH:O	1.74	1.05
2:BA:1530:G:N7	25:BU:46:LYS:NZ	2.03	1.05
3:DA:1272:A:OP1	69:DA:3220:HOH:O	1.74	1.05
3:DA:2057:G:OP1	69:DA:3214:HOH:O	1.72	1.05
1:AA:980:C:OP1	69:AA:1703:HOH:O	1.73	1.05
3:DA:667:U:OP2	69:DA:3217:HOH:O	1.73	1.05
3:DA:2429[A]:G:OP1	69:DA:3221:HOH:O	1.74	1.05
3:DA:2382:G:N3	69:DA:3253:HOH:O	1.87	1.04
3:DA:2577:A:OP1	69:DA:3219:HOH:O	1.74	1.04
24:BT:27:MET:SD	69:BT:104:HOH:O	2.16	1.04
57:D7:24:LYS:H	57:D7:24:LYS:HE2	1.22	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1154:G:OP2	41:CR:57:ARG:NH1	1.91	1.04
2:BA:509:A:OP2	69:BA:1705:HOH:O	1.75	1.03
3:DA:1803:A:OP1	69:DA:3225:HOH:O	1.76	1.03
3:DA:1311:G:N7	69:DA:3270:HOH:O	1.90	1.03
3:DA:1970:A:OP2	69:DA:3223:HOH:O	1.75	1.03
3:DA:92:U:OP2	69:DA:3224:HOH:O	1.76	1.02
42:CS:55:ASP:O	69:CS:201:HOH:O	1.77	1.02
57:D7:54:HIS:HB3	57:D7:55:PRO:HD2	1.39	1.02
3:DA:1267:U:OP2	69:DA:3226:HOH:O	1.77	1.02
4:CA:945:A:OP2	69:CA:3211:HOH:O	1.78	1.02
4:CA:2505:G:OP1	69:CA:3210:HOH:O	1.74	1.02
2:BA:1383:C:OP2	69:BA:1706:HOH:O	1.77	1.02
3:DA:2029:G:O3'	69:DA:3222:HOH:O	1.75	1.02
3:DA:2720:U:OP1	40:DQ:52:ARG:NH2	1.92	1.02
4:CA:279:A:N6	4:CA:361:G:O2'	1.94	1.01
8:BD:192:SER:OG	8:BD:193:ALA:N	1.86	1.01
2:BA:736:C:OP1	22:BR:61:ARG:NH1	1.94	1.01
3:DA:1102:C:O2	69:DA:3227:HOH:O	1.77	1.01
8:AD:78:GLU:OE2	8:AD:81:ARG:NH2	1.93	1.01
6:BB:97:LEU:O	69:BB:301:HOH:O	1.77	1.01
3:DA:1192:G:OP1	69:DA:3228:HOH:O	1.78	1.00
43:DT:95:ARG:NH1	69:DT:302:HOH:O	1.94	1.00
1:AA:100:G:OP2	69:AA:1706:HOH:O	1.80	0.99
4:CA:790:U:OP2	69:CA:3213:HOH:O	1.79	0.99
1:AA:241:G:O3'	69:AA:1705:HOH:O	1.78	0.99
3:DA:1954:G:O2'	3:DA:1956:U:O4	1.78	0.99
4:CA:1892:C:OP1	69:CA:3214:HOH:O	1.80	0.99
4:CA:2806:C:O2'	69:CA:3212:HOH:O	1.78	0.99
44:DU:43:ILE:N	69:DU:201:HOH:O	1.93	0.99
56:DD:128:ARG:O	69:DD:401:HOH:O	1.78	0.99
3:DA:2502:G:OP2	69:DA:3230:HOH:O	1.80	0.99
2:BA:1095:U:OP2	69:BA:1707:HOH:O	1.79	0.99
1:AA:1275:A:N3	69:AA:1717:HOH:O	1.95	0.98
3:DA:2686:G:OP2	69:DA:3231:HOH:O	1.81	0.98
3:DA:801:G:OP1	69:DA:3234:HOH:O	1.82	0.98
9:AE:60:ILE:O	69:AE:201:HOH:O	1.81	0.98
2:BA:47:C:OP1	69:BA:1708:HOH:O	1.82	0.98
4:CA:761:A:OP2	69:CA:3216:HOH:O	1.81	0.98
38:DO:111:ALA:O	69:DO:201:HOH:O	1.80	0.98
3:DA:2546:U:OP1	69:DA:3229:HOH:O	1.80	0.97
4:CA:1607:C:N4	4:CA:1622:G:N7	2.12	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:869:G:N7	69:BA:1719:HOH:O	1.95	0.97
4:CA:684:G:OP2	69:CA:3221:HOH:O	1.83	0.97
4:CA:1816:C:OP1	69:CA:3218:HOH:O	1.82	0.97
3:DA:2837:A:OP2	69:DA:3232:HOH:O	1.81	0.97
47:DX:39[B]:ARG:NH2	69:DX:102:HOH:O	1.97	0.97
3:DA:195:A:N7	69:DA:3298:HOH:O	1.96	0.97
4:CA:1191:G:OP1	69:CA:3215:HOH:O	1.81	0.96
2:BA:1481:U:O4	69:BA:1710:HOH:O	1.84	0.96
3:DA:510:C:OP1	69:DA:3235:HOH:O	1.82	0.96
3:DA:1236:G:N7	63:DA:3037:PUT:H32	1.81	0.96
4:CA:1995:U:OP1	69:CA:3222:HOH:O	1.83	0.96
3:DA:461:C:OP2	69:DA:3233:HOH:O	1.81	0.96
38:DO:36:THR:N	69:DO:201:HOH:O	1.97	0.96
3:DA:2276:G:N3	69:DA:3305:HOH:O	1.97	0.96
3:DA:10:A:OP2	69:DA:3236:HOH:O	1.83	0.96
4:CA:1269:A:N7	69:CA:3288:HOH:O	1.98	0.96
4:CA:2017:U:OP2	69:CA:3224:HOH:O	1.83	0.96
18:BN:41:ARG:NH1	18:BN:42:TRP:O	1.98	0.96
4:CA:166:U:OP2	69:CA:3217:HOH:O	1.82	0.96
1:AA:1123:U:O2'	14:AJ:39:PRO:O	1.82	0.96
3:DA:953:G:OP2	37:DN:18[B]:ARG:NH1	1.98	0.96
4:CA:2448:A:OP2	69:CA:3223:HOH:O	1.83	0.96
32:CH:1:MET:SD	32:CH:27:ARG:NH1	2.38	0.95
3:DA:204:A:OP1	69:DA:3238:HOH:O	1.83	0.95
3:DA:1055:G:O5'	69:DA:3237:HOH:O	1.83	0.95
3:DA:1309:G:O3'	69:DA:3242:HOH:O	1.84	0.95
4:CA:547:A:O2'	69:CA:3219:HOH:O	1.82	0.95
42:DS:93:PHE:HB3	61:DS:202:PG4:H51	1.45	0.95
4:CA:1427:A:N6	4:CA:1571:A:OP2	1.99	0.95
28:CD:151:THR:O	28:CD:153:GLY:N	1.99	0.95
40:CQ:16:VAL:O	69:CQ:201:HOH:O	1.83	0.95
3:DA:2030:6MZ:H1'	69:DA:3952:HOH:O	1.66	0.95
60:DN:201:MPD:O2	69:DN:301:HOH:O	1.85	0.95
57:D7:34:GLU:OE2	57:D7:35:ILE:HG22	1.66	0.95
3:DA:2683:C:O3'	69:DA:3247:HOH:O	1.85	0.95
4:CA:376:G:OP2	69:CA:3220:HOH:O	1.82	0.95
39:DP:25:ARG:NH2	69:DP:301:HOH:O	1.99	0.95
2:BA:1289:A:OP1	69:BA:1709:HOH:O	1.83	0.95
3:DA:2820:A:OP2	69:DA:3249:HOH:O	1.85	0.95
4:CA:1371:G:N7	69:CA:3289:HOH:O	1.98	0.95
18:AN:64:CYS:SG	69:AN:202:HOH:O	2.24	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1198:G:OP2	69:AA:1707:HOH:O	1.84	0.95
4:CA:450:G:O6	69:CA:3228:HOH:O	1.85	0.95
4:CA:602:A:O2'	4:CA:604:G:O2'	1.85	0.95
4:CA:1294:U:O2	38:CO:23:ASN:ND2	2.00	0.95
4:CA:1604:C:OP2	69:CA:3226:HOH:O	1.84	0.95
2:BA:1163:A:O2'	69:BA:1711:HOH:O	1.84	0.94
4:CA:444:C:N4	69:CA:3287:HOH:O	1.98	0.94
4:CA:1654:A:OP2	38:CO:1:MET:N	2.00	0.94
4:CA:2058:A:N7	69:CA:3290:HOH:O	1.98	0.94
3:DA:963:U:OP1	69:DA:3240:HOH:O	1.84	0.94
18:AN:54:ASP:OD1	18:AN:59:ARG:NH1	2.00	0.94
55:D5:45:LYS:HE2	55:D5:45:LYS:N	1.82	0.94
3:DA:254:G:OP1	69:DA:3244:HOH:O	1.85	0.94
1:AA:1228:C:OP2	17:AM:107:ARG:NH2	2.00	0.94
4:CA:2468:A:O5'	69:CA:3227:HOH:O	1.85	0.94
2:BA:597:G:OP2	69:BA:1712:HOH:O	1.85	0.94
4:CA:2171:A:O2'	4:CA:2173:A:OP1	1.86	0.94
5:CB:8:C:O3'	39:CP:25:ARG:NH1	2.01	0.94
1:AA:937:A:OP2	69:AA:1708:HOH:O	1.86	0.94
3:DA:2259:U:OP2	69:DA:3245:HOH:O	1.85	0.94
4:CA:1251:C:OP2	41:CR:5:ARG:NH2	2.00	0.94
3:DA:2074:U:OP2	69:DA:3246:HOH:O	1.85	0.94
3:DA:2682:A:OP2	69:DA:3250:HOH:O	1.86	0.94
4:CA:1013:C:OP2	69:CA:3232:HOH:O	1.86	0.94
1:AA:1028:C:O2	1:AA:1033:G:N2	2.02	0.93
3:DA:763:G:OP1	69:DA:3241:HOH:O	1.84	0.93
2:BA:1256:A:O2'	2:BA:1278:G:O6	1.85	0.93
3:DA:715:A:N1	69:DA:3334:HOH:O	2.00	0.93
1:AA:408:A:OP2	8:AD:8:LYS:NZ	2.00	0.93
4:CA:1237:A:O4'	69:CA:3234:HOH:O	1.87	0.93
20:BP:79:ASN:OD1	69:BP:101:HOH:O	1.87	0.93
4:CA:1715:G:O2'	4:CA:1743:G:O6	1.85	0.93
4:CA:1949:G:OP2	69:CA:3231:HOH:O	1.86	0.93
4:CA:827:U:OP2	69:CA:3237:HOH:O	1.87	0.93
3:DA:532:A:OP2	69:DA:3248:HOH:O	1.85	0.93
6:AB:154:MET:O	6:AB:156:GLY:N	2.01	0.93
5:DB:77:U:OP2	69:DB:302:HOH:O	1.87	0.93
57:D7:31:THR:HG21	57:D7:41:THR:HG23	1.47	0.93
3:DA:197:A:OP1	69:DA:3243:HOH:O	1.84	0.93
46:DW:59:GLU:OE1	69:DW:101:HOH:O	1.85	0.93
49:CZ:3:ALA:O	69:CZ:101:HOH:O	1.85	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:24:LYS:HE2	57:D7:24:LYS:N	1.84	0.92
4:CA:1153:C:OP2	69:CA:3229:HOH:O	1.85	0.92
3:DA:163:C:O5'	69:DA:3251:HOH:O	1.87	0.92
4:CA:2711:A:OP2	69:CA:3239:HOH:O	1.88	0.92
4:CA:1260:A:OP1	69:CA:3233:HOH:O	1.86	0.92
4:CA:616:A:OP2	69:CA:3230:HOH:O	1.85	0.92
3:DA:1188:U:OP1	69:DA:3254:HOH:O	1.87	0.92
4:CA:1368:G:OP2	69:CA:3238:HOH:O	1.87	0.92
4:CA:2808:G:O2'	69:CA:3240:HOH:O	1.88	0.92
1:AA:69:G:O6	1:AA:98:A:N6	2.03	0.91
2:BA:533:A:O2'	2:BA:535:A:OP2	1.85	0.91
3:DA:555:G:OP1	69:DA:3256:HOH:O	1.88	0.91
4:CA:1605:C:N4	69:CA:3302:HOH:O	2.01	0.91
4:CA:1799:G:N2	4:CA:1818:U:O2'	2.03	0.91
1:AA:1197:A:OP1	69:AA:1707:HOH:O	1.87	0.91
4:CA:2511:U:O3'	69:CA:3242:HOH:O	1.89	0.91
3:DA:2440:C:O2'	69:DA:3255:HOH:O	1.88	0.91
4:CA:962:G:OP1	69:CA:3235:HOH:O	1.87	0.91
4:CA:1786:A:OP1	69:CA:3236:HOH:O	1.87	0.91
3:DA:1784:A:OP2	69:DA:3252:HOH:O	1.87	0.91
39:DP:42:PRO:O	63:DP:202:PUT:H11	1.70	0.91
1:AA:823:C:OP2	69:AA:1709:HOH:O	1.87	0.91
37:DN:9:PHE:O	69:DN:302:HOH:O	1.89	0.91
1:AA:1055:A:OP2	69:AA:1712:HOH:O	1.89	0.91
3:DA:957:C:OP2	69:DA:3258:HOH:O	1.89	0.91
9:BE:102:GLY:O	9:BE:104:GLY:N	2.04	0.91
1:AA:1222:G:O6	69:AA:1704:HOH:O	1.88	0.90
3:DA:768:G:O3'	69:DA:3268:HOH:O	1.90	0.90
3:DA:1073:A:O2'	3:DA:1074:G:OP1	1.88	0.90
57:D7:33:ARG:NH1	57:D7:33:ARG:HB3	1.87	0.90
57:D7:17:THR:O	57:D7:19:VAL:N	2.04	0.90
3:DA:2498:OMC:OP2	69:DA:3257:HOH:O	1.88	0.90
3:DA:2502:G:O3'	69:DA:3260:HOH:O	1.89	0.90
4:CA:1780:A:OP1	69:CA:3241:HOH:O	1.89	0.90
1:AA:1107:C:O3'	69:AA:1711:HOH:O	1.89	0.90
3:DA:731:C:OP2	69:DA:3265:HOH:O	1.90	0.90
4:CA:1019:U:OP1	4:CA:1035:U:O2'	1.88	0.90
4:CA:261:G:O2'	4:CA:610:C:O2'	1.89	0.90
4:CA:1665:A:OP2	69:CA:3244:HOH:O	1.89	0.90
1:AA:1444:U:OP2	69:AA:1710:HOH:O	1.89	0.89
3:DA:1656:C:OP2	69:DA:3262:HOH:O	1.89	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2552:OMU:OP1	69:DA:3266:HOH:O	1.90	0.89
4:CA:2642:G:O4'	69:CA:3247:HOH:O	1.90	0.89
2:BA:411:A:OP2	8:BD:26:ARG:NH2	2.05	0.89
3:DA:568:U:H1'	3:DA:2030:6MZ:H9C1	1.53	0.89
3:DA:614:A:O2'	3:DA:615:U:OP2	1.89	0.89
3:DA:878:A:N6	3:DA:899:A:O2'	2.05	0.89
4:CA:684:G:OP1	53:C3:16:HIS:ND1	2.04	0.89
2:BA:644:U:O5'	69:BA:1713:HOH:O	1.90	0.89
4:CA:622:G:OP2	69:CA:3245:HOH:O	1.90	0.89
4:CA:1396:U:O4'	69:CA:3249:HOH:O	1.91	0.89
24:AT:59:ASP:OD1	24:AT:76:LYS:NZ	2.04	0.89
57:D7:15:HIS:O	57:D7:43:PRO:HD2	1.73	0.89
2:BA:858:G:N7	69:BA:1719:HOH:O	2.05	0.89
3:DA:805:G:OP1	69:DA:3261:HOH:O	1.89	0.89
4:CA:1153:C:OP1	69:CA:3248:HOH:O	1.90	0.89
4:CA:1187:G:N7	69:CA:3311:HOH:O	2.04	0.89
3:DA:761:A:OP2	69:DA:3271:HOH:O	1.90	0.89
4:CA:186:G:N2	4:CA:211:C:O2	2.05	0.89
4:CA:1315:C:OP1	69:CA:3243:HOH:O	1.89	0.89
40:CQ:81:ASP:O	69:CQ:202:HOH:O	1.90	0.89
2:BA:978:A:OP2	2:BA:1362:A:N6	2.06	0.89
3:DA:861:A:OP2	69:DA:3259:HOH:O	1.89	0.89
3:DA:2513:A:OP1	69:DA:3274:HOH:O	1.91	0.89
1:AA:86:G:O2'	1:AA:87:C:OP2	1.89	0.89
2:BA:176:C:N4	69:BA:1731:HOH:O	2.04	0.89
4:CA:2392:A:N3	69:CA:3322:HOH:O	2.05	0.89
1:AA:1473:G:O3'	69:AA:1714:HOH:O	1.90	0.88
3:DA:1674:G:OP2	69:DA:3263:HOH:O	1.90	0.88
2:BA:1198:G:OP1	69:BA:1714:HOH:O	1.90	0.88
4:CA:51:G:OP2	69:CA:3246:HOH:O	1.90	0.88
3:DA:515:A:OP1	69:DA:3275:HOH:O	1.92	0.88
3:DA:2581:G:OP1	69:DA:3264:HOH:O	1.90	0.88
3:DA:975:A:OP2	69:DA:3272:HOH:O	1.90	0.88
55:D5:45:LYS:H	55:D5:45:LYS:CE	1.85	0.88
4:CA:332:A:O2'	4:CA:334:C:OP2	1.91	0.88
6:AB:167:ASP:OD1	6:AB:168:HIS:N	2.07	0.88
3:DA:678:C:OP1	69:DA:3269:HOH:O	1.90	0.88
4:CA:177:G:N3	69:CA:3317:HOH:O	2.05	0.88
4:CA:1030:C:OP2	37:CN:127:LYS:NZ	2.05	0.88
4:CA:2818:U:OP2	38:CO:42:LYS:NZ	2.07	0.88
56:DD:25:THR:OG1	69:DD:402:HOH:O	1.90	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1965:C:OP2	69:CA:3252:HOH:O	1.91	0.87
6:AB:36:ASN:O	69:AB:301:HOH:O	1.90	0.87
3:DA:2004:G:OP2	69:DA:3277:HOH:O	1.92	0.87
2:BA:1320:C:O2	23:BS:36:ARG:NH1	2.07	0.87
4:CA:2312:U:O4	69:CA:3250:HOH:O	1.91	0.87
2:BA:115:G:O2'	2:BA:116:A:OP2	1.90	0.87
3:DA:2511:U:O3'	69:DD:401:HOH:O	1.92	0.87
3:DA:2625:G:OP2	69:DA:3267:HOH:O	1.90	0.87
4:CA:1468:U:O2'	69:CA:3251:HOH:O	1.91	0.87
3:DA:2427:C:OP1	69:DA:3221:HOH:O	1.91	0.87
4:CA:948:C:OP1	69:CA:3235:HOH:O	1.91	0.87
4:CA:2788:C:O2'	4:CA:2809:A:N3	2.08	0.87
3:DA:784:G:OP2	69:DA:3276:HOH:O	1.92	0.87
3:DA:1344:U:O2'	3:DA:1345:C:OP1	1.91	0.87
3:DA:2611:C:OP2	69:DA:3273:HOH:O	1.91	0.87
3:DA:444:C:OP2	69:DA:3280:HOH:O	1.93	0.87
3:DA:2268:A:OP1	69:DA:3282:HOH:O	1.93	0.87
4:CA:2326:C:O2'	4:CA:2327:A:OP1	1.91	0.87
27:DC:228:ASP:OD2	69:DC:301:HOH:O	1.91	0.87
35:DL:109:SER:O	35:DL:111:LYS:N	2.08	0.87
1:AA:1527:U:O4	69:AA:1713:HOH:O	1.90	0.87
3:DA:866:A:N7	69:DA:3401:HOH:O	2.07	0.87
3:DA:1669:A:N7	69:DA:3397:HOH:O	2.07	0.87
47:DX:70:LYS:O	69:DX:101:HOH:O	1.93	0.87
4:CA:301:G:OP1	69:CA:3253:HOH:O	1.91	0.86
4:CA:1213:A:N3	4:CA:1238:G:O2'	2.08	0.86
4:CA:1667:G:O2'	4:CA:1991:U:O4	1.92	0.86
2:BA:562:U:OP2	26:BL:14:ARG:NH2	2.08	0.86
3:DA:1410:G:N7	69:DA:3398:HOH:O	2.07	0.86
3:DA:2043:C:OP2	69:DA:3278:HOH:O	1.92	0.86
4:CA:621:A:OP2	36:CM:99:ASN:ND2	2.07	0.86
4:CA:1619:G:N7	69:CA:3341:HOH:O	2.09	0.86
17:AM:82:ASP:OD2	30:DF:111:ARG:NH2	2.08	0.86
4:CA:394:C:OP2	69:CA:3255:HOH:O	1.92	0.86
3:DA:1257:C:O3'	69:DA:3283:HOH:O	1.93	0.86
3:DA:1308:A:N6	3:DA:1606:C:O2	2.07	0.86
4:CA:831:G:O6	69:CA:3254:HOH:O	1.92	0.86
18:BN:52:PRO:O	18:BN:54:ASP:N	2.08	0.86
33:DJ:140:GLU:OE2	69:DJ:201:HOH:O	1.92	0.86
2:BA:717:U:O2'	2:BA:734:G:O4'	1.92	0.86
4:CA:445:C:O5'	69:CA:3256:HOH:O	1.92	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:820:A:N1	69:CA:3334:HOH:O	2.07	0.86
7:BC:168:TYR:OH	9:BE:55:GLU:OE2	1.93	0.86
4:CA:73:A:N6	69:CA:3344:HOH:O	2.09	0.86
4:CA:266:G:O2'	69:CA:3258:HOH:O	1.93	0.86
4:CA:1378:A:O2'	4:CA:1380:G:N7	2.08	0.86
5:DB:90:C:OP1	69:DB:303:HOH:O	1.93	0.86
17:AM:26:GLY:O	17:AM:28:THR:N	2.07	0.86
8:BD:100:ASN:OD1	8:BD:111:ARG:NH1	2.08	0.86
4:CA:15:G:OP2	69:CA:3263:HOH:O	1.94	0.86
11:AG:57:SER:O	69:AG:201:HOH:O	1.94	0.86
4:CA:784:G:OP1	69:CA:3257:HOH:O	1.92	0.86
21:AQ:17:MET:SD	21:AQ:17:MET:N	2.49	0.86
32:CH:132:GLN:OE1	69:CH:201:HOH:O	1.92	0.86
3:DA:1257:C:OP1	69:DA:3279:HOH:O	1.93	0.85
3:DA:1675:C:O2'	69:DA:3288:HOH:O	1.94	0.85
4:CA:1509:A:OP2	69:CA:3260:HOH:O	1.93	0.85
3:DA:741:U:OP1	69:DA:3281:HOH:O	1.93	0.85
3:DA:1176:U:O2'	3:DA:1177:G:O4'	1.94	0.85
4:CA:2385:C:OP1	69:CA:3261:HOH:O	1.93	0.85
20:BP:42:ILE:O	20:BP:44:SER:N	2.09	0.85
3:DA:907:G:N7	69:DA:3411:HOH:O	2.08	0.85
3:DA:2247:A:OP1	69:DA:3286:HOH:O	1.93	0.85
57:D7:21:GLU:OE2	57:D7:47:ILE:HD12	1.74	0.85
36:CM:141:LYS:NZ	36:CM:143:GLU:OE1	2.08	0.85
1:AA:1518:MA6:H103	1:AA:1519:MA6:N6	1.92	0.85
4:CA:2589:A:OP1	69:CA:3259:HOH:O	1.93	0.85
5:CB:39:A:O2'	5:CB:46:A:N1	2.08	0.85
57:D7:36:GLU:O	57:D7:37:LEU:HB2	1.77	0.85
2:BA:172:A:OP2	69:BA:1717:HOH:O	1.95	0.85
38:CO:63:ARG:NH1	69:CO:201:HOH:O	2.07	0.85
3:DA:2429[B]:G:OP1	69:DA:3221:HOH:O	1.94	0.85
3:DA:2511:U:OP2	69:DA:3287:HOH:O	1.93	0.85
17:AM:11:ASP:OD1	17:AM:12:HIS:N	2.09	0.85
43:DT:94:ASP:OD2	69:DT:301:HOH:O	1.93	0.85
2:BA:195:A:OP1	24:BT:60:ARG:NH1	2.09	0.85
3:DA:480:A:OP2	45:DV:43:LYS:NZ	2.10	0.85
3:DA:2487:G:OP1	69:DA:3290:HOH:O	1.94	0.85
2:BA:747:A:O4'	69:BA:1718:HOH:O	1.95	0.84
4:CA:1919:A:OP1	69:CA:3265:HOH:O	1.95	0.84
4:CA:1938:A:O4'	69:CA:3269:HOH:O	1.95	0.84
4:CA:2301:C:O2	4:CA:2316:G:N2	2.09	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:970:C:OP2	69:AA:1715:HOH:O	1.94	0.84
18:AN:91:GLY:O	18:AN:93:ILE:N	2.09	0.84
3:DA:802:A:OP2	69:DA:3293:HOH:O	1.95	0.84
4:CA:2592:G:OP1	69:CA:3264:HOH:O	1.94	0.84
18:AN:43:ASN:OD1	18:AN:47:LYS:NZ	2.09	0.84
3:DA:854:C:OP1	69:DA:3289:HOH:O	1.94	0.84
3:DA:2363:G:OP2	69:DA:3284:HOH:O	1.93	0.84
1:AA:689:C:HO2'	1:AA:705:G:HO2'	1.05	0.84
1:AA:1381:U:O3'	69:AA:1716:HOH:O	1.94	0.84
2:BA:1054:C:OP1	69:BA:1716:HOH:O	1.94	0.84
4:CA:171:U:O3'	69:CA:3266:HOH:O	1.95	0.84
17:BM:11:ASP:OD1	17:BM:12:HIS:N	2.10	0.84
4:CA:529:A:N3	69:CA:3338:HOH:O	2.08	0.84
4:CA:2492:U:O3'	69:CA:3267:HOH:O	1.95	0.84
4:CA:2533:U:OP2	69:CA:3272:HOH:O	1.95	0.84
6:AB:87:CYS:O	6:AB:89:GLN:N	2.10	0.84
4:CA:1315:C:OP2	69:CA:3268:HOH:O	1.95	0.84
11:AG:145:ALA:O	11:AG:147:ALA:N	2.10	0.84
2:BA:374:A:O2'	2:BA:451:A:OP2	1.94	0.84
4:CA:2499:C:OP2	69:CA:3223:HOH:O	1.94	0.84
34:CK:120:ARG:O	34:CK:123:LYS:NZ	2.10	0.84
27:DC:106:PRO:HB3	27:DC:141:HIS:HE1	1.42	0.84
3:DA:981:A:OP1	69:DA:3299:HOH:O	1.96	0.83
3:DA:1057:A:OP2	69:DA:3294:HOH:O	1.95	0.83
2:BA:567:G:O2'	69:BA:1715:HOH:O	1.94	0.83
3:DA:846:U:O2'	3:DA:847:U:OP2	1.96	0.83
4:CA:1981:A:OP1	69:CA:3277:HOH:O	1.96	0.83
33:DJ:121:ILE:O	33:DJ:125:THR:OG1	1.95	0.83
3:DA:950:G:O6	69:DA:3297:HOH:O	1.96	0.83
3:DA:2273:A:OP1	69:DA:3303:HOH:O	1.97	0.83
4:CA:57:C:O2	69:CA:3271:HOH:O	1.95	0.83
4:CA:527:C:OP1	69:CA:3278:HOH:O	1.96	0.83
4:CA:1813:G:N3	27:CC:49:THR:OG1	2.10	0.83
54:C4:5:THR:N	69:C4:101:HOH:O	2.11	0.83
32:DH:40:THR:O	32:DH:42:LYS:N	2.10	0.83
3:DA:1455:G:OP2	69:DA:3301:HOH:O	1.96	0.83
1:AA:1335:U:O2'	1:AA:1336:C:OP2	1.96	0.83
3:DA:2449:H2U:O4	69:DA:3291:HOH:O	1.95	0.83
5:DB:64:G:O2'	69:DB:304:HOH:O	1.96	0.83
4:CA:965:C:OP2	69:CA:3270:HOH:O	1.95	0.83
4:CA:2581:G:OP1	69:CA:3274:HOH:O	1.96	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:73:C:N4	1:AA:94:G:O6	2.12	0.83
4:CA:2796:U:O2	4:CA:2799:A:N6	2.12	0.83
31:CG:123:GLU:N	69:CG:201:HOH:O	2.12	0.83
38:DO:36:THR:O	69:DO:201:HOH:O	1.96	0.83
38:DO:58:ASP:OD1	38:DO:63:ARG:NH2	2.11	0.83
2:BA:62:U:O2'	2:BA:379:C:O2	1.97	0.83
2:BA:1151:A:O2'	2:BA:1152:A:O4'	1.97	0.83
3:DA:600:G:O3'	69:DA:3292:HOH:O	1.95	0.83
2:BA:533:A:OP1	69:BA:1721:HOH:O	1.97	0.83
4:CA:1992:G:OP2	69:CA:3273:HOH:O	1.96	0.83
4:CA:2306:C:N4	30:CF:38:GLY:O	2.11	0.83
1:AA:1232:U:OP1	13:AI:126:GLN:NE2	2.12	0.83
2:BA:187:G:O3'	69:BA:1720:HOH:O	1.97	0.83
3:DA:336:C:OP1	69:DA:3295:HOH:O	1.96	0.83
4:CA:528:A:OP1	69:CA:3279:HOH:O	1.96	0.83
6:AB:12:ALA:O	69:AB:302:HOH:O	1.96	0.83
6:BB:9:MET:O	6:BB:11:LYS:N	2.12	0.83
6:BB:193:PRO:O	6:BB:195:GLY:N	2.12	0.83
3:DA:867:C:O2'	69:DA:3313:HOH:O	1.97	0.82
3:DA:1971:U:O2	69:DA:3296:HOH:O	1.96	0.82
4:CA:1601:G:N7	69:CA:3364:HOH:O	2.12	0.82
4:CA:1968:G:O2'	4:CA:1969:A:O4'	1.95	0.82
1:AA:1005:A:OP2	69:AA:1718:HOH:O	1.97	0.82
3:DA:2035:G:OP2	69:DA:3310:HOH:O	1.97	0.82
4:CA:433:C:OP2	69:CA:3281:HOH:O	1.97	0.82
3:DA:963:U:OP1	69:DA:3304:HOH:O	1.97	0.82
3:DA:1945:G:OP2	69:DA:3302:HOH:O	1.96	0.82
57:D7:32:ASP:O	57:D7:40:VAL:HG22	1.80	0.82
2:BA:1147:C:O2	13:BI:18:ARG:NH2	2.12	0.82
4:CA:1359:A:OP1	69:CA:3283:HOH:O	1.97	0.82
3:DA:1769:U:N3	69:DA:3434:HOH:O	2.11	0.82
39:DP:63:LYS:N	69:DP:302:HOH:O	2.11	0.82
4:CA:457:A:N6	4:CA:471:A:OP2	2.13	0.82
4:CA:543:G:O6	69:CA:3276:HOH:O	1.96	0.82
35:DL:54:LYS:N	69:DL:201:HOH:O	2.01	0.82
6:BB:151:ILE:O	6:BB:153:ASP:N	2.12	0.82
2:BA:257:G:N7	69:BA:1746:HOH:O	2.12	0.82
13:AI:45:ARG:NH2	13:AI:46:MET:SD	2.53	0.82
36:CM:81:ASP:O	36:CM:83:ALA:N	2.11	0.82
2:BA:1093:A:O2'	2:BA:1095:U:OP1	1.98	0.82
4:CA:1386:C:O2'	4:CA:1469:A:O2'	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:111:G:O6	1:AA:330:C:N4	2.12	0.81
1:AA:1367:C:OP2	13:AI:114:LYS:NZ	2.13	0.81
4:CA:2818:U:O2'	69:CA:3225:HOH:O	1.84	0.81
3:DA:1265:A:OP1	69:DA:3314:HOH:O	1.97	0.81
3:DA:2006:C:OP2	69:DA:3318:HOH:O	1.99	0.81
3:DA:716:A:OP2	19:AO:89:ARG:NH1	2.14	0.81
3:DA:729:G:O3'	69:DA:3306:HOH:O	1.97	0.81
4:CA:1975:G:OP2	69:CA:3285:HOH:O	1.98	0.81
63:DP:202:PUT:H12	69:DP:301:HOH:O	1.80	0.81
4:CA:2114:A:N6	4:CA:2119:A:N7	2.28	0.81
31:CG:138:GLN:O	31:CG:138:GLN:NE2	2.13	0.81
3:DA:1376:C:OP2	69:DA:3312:HOH:O	1.97	0.81
3:DA:2430[A]:A:OP2	69:DA:3311:HOH:O	1.97	0.81
4:CA:674:G:N2	4:CA:2445:G:OP1	2.13	0.81
4:CA:2740:A:OP1	69:CA:3280:HOH:O	1.97	0.81
27:DC:4:LYS:NZ	69:DC:304:HOH:O	2.12	0.81
3:DA:955:PSU:OP2	69:DA:3323:HOH:O	1.99	0.81
4:CA:576:U:OP1	69:CA:3291:HOH:O	1.99	0.81
4:CA:2684:U:OP2	40:CQ:50:ARG:NH2	2.14	0.81
36:CM:29:LYS:O	36:CM:30:THR:OG1	1.99	0.81
3:DA:658:U:OP2	69:DA:3321:HOH:O	1.99	0.81
3:DA:1655:A:OP1	69:DA:3324:HOH:O	1.99	0.81
3:DA:2098:U:H2'	3:DA:2099:U:O4'	1.81	0.81
4:CA:1523:U:O2	69:CA:3275:HOH:O	1.96	0.81
1:AA:826:C:OP1	69:AA:1720:HOH:O	1.99	0.81
3:DA:2359:C:N4	69:DA:3413:HOH:O	2.09	0.81
9:AE:152:MET:HB3	69:AE:204:HOH:O	1.79	0.81
47:DX:37:ARG:HD3	69:DX:111:HOH:O	1.80	0.81
3:DA:2269:G:O3'	69:DA:3317:HOH:O	1.98	0.81
4:CA:1157:G:OP2	69:CA:3282:HOH:O	1.97	0.81
3:DA:2550:G:OP2	69:DA:3320:HOH:O	1.99	0.80
3:DA:1023:U:OP2	69:DA:3322:HOH:O	1.99	0.80
3:DA:1239:G:O3'	69:DA:3319:HOH:O	1.99	0.80
3:DA:1783:A:OP1	69:DA:3307:HOH:O	1.97	0.80
4:CA:1266:G:O2'	4:CA:2012:G:O6	2.00	0.80
2:BA:846:G:OP2	22:BR:48:ARG:NH2	2.15	0.80
66:DA:3050:PEG:H21	69:DA:4678:HOH:O	1.79	0.80
4:CA:310:A:O2'	4:CA:311:A:OP2	1.99	0.80
4:CA:1779:U:OP1	69:CA:3293:HOH:O	1.99	0.80
4:CA:1824:G:O6	69:CA:3284:HOH:O	1.98	0.80
3:DA:1637:A:N3	69:DA:3456:HOH:O	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2233:U:OP1	69:DA:3316:HOH:O	1.98	0.80
4:CA:2619:C:N4	69:CA:3329:HOH:O	2.06	0.80
24:AT:68:HIS:O	24:AT:70:ASN:N	2.14	0.80
2:BA:684:U:O2'	15:BK:40:ASN:O	1.99	0.80
3:DA:15:G:OP1	69:DA:3326:HOH:O	1.99	0.80
20:AP:43:ALA:O	20:AP:44:SER:OG	1.98	0.80
3:DA:1124:G:OP2	69:DA:3329:HOH:O	2.00	0.80
3:DA:2825:G:O2'	69:DA:3308:HOH:O	1.97	0.80
4:CA:1532:A:N6	4:CA:1538:G:O6	2.15	0.80
8:AD:4:TYR:O	8:AD:6:GLY:N	2.15	0.80
9:BE:157:ARG:O	9:BE:159:LYS:N	2.13	0.80
41:DR:18:LYS:HB3	61:DR:202:PG4:H41	1.63	0.80
2:BA:455:G:O6	69:BA:1722:HOH:O	1.98	0.80
3:DA:1102:C:OP1	69:DA:3332:HOH:O	2.00	0.80
3:DA:2008:C:OP2	69:DA:3331:HOH:O	2.00	0.80
4:CA:1296:G:OP1	4:CA:2709:G:O2'	1.99	0.80
4:CA:2310:C:OP1	69:CA:3292:HOH:O	1.99	0.80
56:DD:85:ALA:O	56:DD:86:GLU:O	1.99	0.80
2:BA:487:A:O2'	69:BA:1725:HOH:O	1.99	0.80
2:BA:794:A:O2'	2:BA:1521:C:O2'	1.80	0.80
3:DA:853:C:OP2	69:DA:3309:HOH:O	1.97	0.80
4:CA:2245:U:O4	69:CA:3294:HOH:O	1.99	0.80
5:DB:46:A:OP2	69:DB:305:HOH:O	1.98	0.80
41:DR:19:GLN:HG2	61:DR:202:PG4:H42	1.64	0.80
2:BA:577:G:OP2	69:BA:1723:HOH:O	1.98	0.80
3:DA:1189:A:OP2	69:DA:3327:HOH:O	1.99	0.80
1:AA:1439:G:OP2	69:AA:1719:HOH:O	1.99	0.80
3:DA:1119:U:OP2	69:DA:3335:HOH:O	2.00	0.80
4:CA:1828:G:OP1	69:CA:3295:HOH:O	1.99	0.80
13:BI:56:ASP:O	69:BI:201:HOH:O	1.99	0.80
1:AA:652:U:O4	1:AA:752:G:O2'	1.98	0.79
4:CA:1313:U:OP1	69:CA:3296:HOH:O	2.00	0.79
4:CA:2051:A:OP2	69:CA:3286:HOH:O	1.98	0.79
40:CQ:64:SER:OG	40:CQ:65:ASN:OD1	1.99	0.79
57:D7:61:LEU:HB3	57:D7:62:ARG:HH21	1.47	0.79
4:CA:2874:C:OP2	69:CA:3297:HOH:O	2.00	0.79
39:DP:19:GLN:HG3	63:DP:202:PUT:H22	1.65	0.79
4:CA:160:A:N3	4:CA:2208:C:O2'	2.14	0.79
4:CA:1088:A:N6	33:CJ:134:SER:OG	2.15	0.79
7:BC:71:ALA:N	69:BC:301:HOH:O	2.13	0.79
51:C1:45:ASP:OD2	69:C1:101:HOH:O	2.01	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:54:HIS:HB3	57:D7:55:PRO:CD	2.11	0.79
3:DA:1613:G:N3	69:DA:3471:HOH:O	2.15	0.79
4:CA:370:G:N7	69:CA:3374:HOH:O	2.15	0.79
13:AI:57:MET:O	13:AI:60:LYS:N	2.14	0.79
1:AA:1366:C:O2'	14:AJ:62:ARG:NH2	2.16	0.79
3:DA:2031:A:OP2	69:DA:3328:HOH:O	2.00	0.79
3:DA:2684:U:O4	69:DA:3315:HOH:O	1.97	0.79
1:AA:939:G:N7	69:AA:1740:HOH:O	2.15	0.79
3:DA:2646:C:OP1	69:DA:3337:HOH:O	2.01	0.79
3:DA:2659:G:O3'	69:DA:3340:HOH:O	2.01	0.79
8:AD:9:LEU:HD11	8:AD:22:LYS:HD3	1.64	0.79
8:AD:192:SER:OG	8:AD:193:ALA:N	2.13	0.79
19:BO:45:GLU:OE2	69:BO:101:HOH:O	2.00	0.79
44:DU:40:LYS:O	69:DU:201:HOH:O	1.99	0.79
1:AA:1423:G:OP1	35:DL:49:ARG:NH2	2.15	0.79
3:DA:1063:G:N2	33:DJ:89:SER:OG	2.16	0.79
3:DA:1067:A:N1	69:DA:3473:HOH:O	2.15	0.79
4:CA:404:A:N6	69:CA:3373:HOH:O	2.14	0.79
4:CA:1929:G:O6	69:CA:3301:HOH:O	2.01	0.79
4:CA:2640:G:OP1	34:CK:95:ARG:NH1	2.16	0.79
5:DB:90:C:H5"	5:DB:90:C:H6	1.48	0.79
27:DC:46:GLY:O	69:DC:302:HOH:O	1.99	0.79
4:CA:197:A:OP1	69:CA:3300:HOH:O	2.01	0.79
4:CA:447:A:N1	4:CA:454:A:O2'	2.13	0.79
2:BA:1000:A:N6	2:BA:1039:G:O6	2.15	0.78
3:DA:1734:G:N7	69:DA:3470:HOH:O	2.15	0.78
4:CA:1710:G:N2	69:CA:3312:HOH:O	2.04	0.78
7:BC:37:PHE:HB3	69:BN:206:HOH:O	1.82	0.78
28:CD:12:THR:OG1	28:CD:13:ARG:N	2.14	0.78
3:DA:2839:G:OP1	38:DO:46:ARG:HD2	1.84	0.78
4:CA:225:C:N4	4:CA:419:U:O2'	2.15	0.78
4:CA:2714:G:OP2	69:CA:3303:HOH:O	2.02	0.78
5:DB:79:G:OP1	69:DB:306:HOH:O	2.00	0.78
39:DP:64:TYR:N	69:DP:302:HOH:O	2.12	0.78
1:AA:6:G:O2'	1:AA:7:A:O5'	2.01	0.78
4:CA:1056:G:O2'	4:CA:1103:A:N6	2.17	0.78
20:BP:35:ARG:O	69:BP:102:HOH:O	2.01	0.78
4:CA:981:A:OP1	69:CA:3298:HOH:O	2.01	0.78
4:CA:1996:C:OP1	35:CL:31:ARG:NE	2.17	0.78
30:DF:101:ARG:NH1	57:D7:9:TYR:OH	2.16	0.78
3:DA:1239:G:OP1	69:DA:3330:HOH:O	2.00	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2030:6MZ:H8	69:DA:4660:HOH:O	1.82	0.78
4:CA:1620:G:N7	69:CA:3375:HOH:O	2.15	0.78
1:AA:1178:G:N2	1:AA:1181:G:OP2	2.17	0.78
2:BA:1512:U:OP1	69:BA:1726:HOH:O	2.01	0.78
3:DA:2494:G:OP2	69:DA:3341:HOH:O	2.01	0.78
4:CA:563:A:N3	41:CR:36:GLN:NE2	2.31	0.78
4:CA:2057:G:OP1	69:CA:3299:HOH:O	2.01	0.78
3:DA:855:G:OP1	62:DA:3031:SPD:H92	1.83	0.78
3:DA:1782:U:O3'	69:DA:3346:HOH:O	2.01	0.78
3:DA:2848:G:OP2	69:DA:3348:HOH:O	2.01	0.78
4:CA:458:G:O2'	4:CA:469:G:O6	2.01	0.78
3:DA:2552:OMU:O5'	3:DA:2552:OMU:H6	1.84	0.78
3:DA:2688:G:OP1	69:DA:3351:HOH:O	2.02	0.78
6:AB:9:MET:O	6:AB:11:LYS:N	2.17	0.78
3:DA:962:G:OP1	69:DA:3338:HOH:O	2.01	0.78
4:CA:246:C:O2	69:CA:3304:HOH:O	2.02	0.78
2:BA:439:U:H4'	8:BD:121:LYS:HD2	1.66	0.78
3:DA:1316:U:C2	3:DA:1337:G:N2	2.51	0.78
3:DA:2364:C:OP2	69:DA:3345:HOH:O	2.01	0.78
64:DA:3034:1PE:H161	69:DA:5583:HOH:O	1.84	0.78
4:CA:784:G:OP2	69:CA:3259:HOH:O	2.01	0.78
3:DA:1613:G:OP2	69:DA:3342:HOH:O	2.01	0.77
7:AC:36:ASP:OD1	7:AC:59:ARG:NH1	2.17	0.77
8:AD:100:ASN:OD1	8:AD:111:ARG:NH1	2.17	0.77
24:AT:6:SER:OG	24:AT:7:ALA:N	2.14	0.77
3:DA:2754:U:O4'	69:DA:3333:HOH:O	2.00	0.77
4:CA:123:G:N7	69:CA:3387:HOH:O	2.18	0.77
1:AA:39:G:O3'	69:AA:1721:HOH:O	2.00	0.77
2:BA:890:G:O2'	2:BA:906:A:N6	2.18	0.77
3:DA:581:C:OP2	69:DA:3336:HOH:O	2.00	0.77
3:DA:2256:G:N2	61:DA:3048:PG4:H61	1.99	0.77
10:BF:24:ARG:NE	69:BF:201:HOH:O	2.17	0.77
57:D7:33:ARG:HB3	57:D7:33:ARG:HH11	1.46	0.77
3:DA:1187:G:OP2	69:DA:3339:HOH:O	2.01	0.77
3:DA:1829:A:OP2	69:DA:3344:HOH:O	2.01	0.77
3:DA:1857:G:N2	3:DA:1884:G:O2'	2.16	0.77
4:CA:782:A:O2'	27:CC:223:ALA:O	2.01	0.77
9:BE:104:GLY:O	9:BE:105:ILE:HG22	1.84	0.77
1:AA:1395:C:O2'	1:AA:1401:G:O2'	1.97	0.77
2:BA:263:A:OP1	24:BT:74:ARG:NH1	2.17	0.77
2:BA:1308:U:OP1	17:BM:97:VAL:N	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:46:G:OP2	69:CA:3305:HOH:O	2.02	0.77
4:CA:196:A:O2'	4:CA:805:G:O6	2.02	0.77
4:CA:219:A:N7	69:CA:3391:HOH:O	2.18	0.77
4:CA:680:C:N4	4:CA:681:G:O6	2.17	0.77
1:AA:263:A:OP2	24:AT:74:ARG:NH1	2.16	0.77
4:CA:1423:G:O6	69:CA:3310:HOH:O	2.03	0.77
29:DE:73:ILE:O	69:DE:401:HOH:O	2.01	0.77
1:AA:1011:C:N4	1:AA:1018:G:O6	2.17	0.77
2:BA:957:U:O2'	2:BA:959:A:N7	2.16	0.77
3:DA:978:G:OP1	69:DA:3350:HOH:O	2.02	0.77
3:DA:1951:U:O4	69:DA:3357:HOH:O	2.03	0.77
4:CA:684:G:N2	4:CA:788:A:OP2	2.17	0.77
4:CA:1378:A:O2'	69:CA:3308:HOH:O	2.02	0.77
9:AE:103:THR:O	9:AE:122:ASN:ND2	2.18	0.77
1:AA:686:U:O4	1:AA:703:G:O2'	2.01	0.77
2:BA:106:C:O2	2:BA:379:C:H4'	1.84	0.77
3:DA:1257:C:O5'	69:DA:3353:HOH:O	2.02	0.77
4:CA:1090:A:N6	4:CA:1102:C:O2	2.18	0.77
13:BI:49:ARG:NH2	13:BI:52:LEU:O	2.17	0.77
38:DO:49:GLU:OE2	69:DO:202:HOH:O	2.02	0.77
57:D7:35:ILE:HG12	57:D7:36:GLU:N	2.00	0.77
2:BA:1492:A:OP2	2:BA:1493:A:N6	2.18	0.76
3:DA:370:G:OP2	69:DA:3347:HOH:O	2.01	0.76
3:DA:1508:A:O2'	3:DA:1509:A:O4'	2.03	0.76
6:BB:15:HIS:O	6:BB:17:GLY:N	2.17	0.76
30:DF:72:SER:OG	30:DF:79:ARG:HA	1.85	0.76
2:BA:63:C:OP1	2:BA:383:A:N6	2.19	0.76
4:CA:107:G:O3'	4:CA:293:U:O2'	2.02	0.76
4:CA:1603:A:OP1	69:CA:3226:HOH:O	2.02	0.76
4:CA:1680:U:O2'	4:CA:1763:G:N7	2.17	0.76
2:BA:986:U:OP2	69:BA:1728:HOH:O	2.03	0.76
2:BA:1416:G:OP1	69:BA:1730:HOH:O	2.04	0.76
3:DA:1124:G:O6	69:DA:3354:HOH:O	2.02	0.76
6:BB:103:ASN:OD1	6:BB:106:THR:OG1	2.02	0.76
1:AA:956:U:O2'	69:AA:1722:HOH:O	2.03	0.76
2:BA:412:A:O2'	2:BA:413:G:O5'	2.03	0.76
3:DA:951:C:OP1	69:DA:3361:HOH:O	2.03	0.76
3:DA:1452:G:O6	69:DA:3343:HOH:O	2.01	0.76
3:DA:1946:U:OP2	69:DA:3352:HOH:O	2.02	0.76
3:DA:2615:U:OP1	69:DA:3349:HOH:O	2.02	0.76
4:CA:1395:A:OP2	69:CA:3226:HOH:O	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BI:114:LYS:NZ	13:BI:115:LYS:O	2.19	0.76
44:CU:91:GLN:OE1	69:CU:101:HOH:O	2.04	0.76
3:DA:845:A:O2'	69:DA:3285:HOH:O	1.93	0.76
3:DA:1188:U:O2'	3:DA:1189:A:H5'	1.84	0.76
3:DA:2346:A:O3'	69:DA:3358:HOH:O	2.03	0.76
4:CA:250:G:OP2	54:C4:12:ARG:NH1	2.17	0.76
2:BA:1160:G:O2'	2:BA:1161:C:O5'	2.03	0.76
3:DA:1697:G:OP1	69:DA:3367:HOH:O	2.04	0.76
11:BG:113:ASP:OD2	11:BG:122:ASN:ND2	2.18	0.76
2:BA:1251:A:N1	69:BA:1733:HOH:O	2.19	0.76
3:DA:766:U:OP1	69:DA:3371:HOH:O	2.04	0.76
3:DA:1710:G:O2'	3:DA:2858:C:N3	2.18	0.76
3:DA:2522:U:OP2	69:DA:3366:HOH:O	2.04	0.76
4:CA:2427:C:OP1	69:CA:3307:HOH:O	2.02	0.76
27:DC:135:PRO:O	27:DC:138:SER:OG	2.03	0.76
1:AA:1500:A:OP1	69:AA:1724:HOH:O	2.04	0.76
3:DA:1156:A:OP2	69:DA:3360:HOH:O	2.03	0.76
3:DA:2422:C:N3	69:DA:3506:HOH:O	2.18	0.76
4:CA:1305:C:N4	4:CA:1607:C:OP2	2.19	0.76
9:AE:63:ALA:N	69:AE:201:HOH:O	2.19	0.76
9:BE:45:ARG:HA	9:BE:72:ILE:O	1.86	0.76
3:DA:783:A:HO2'	3:DA:1779:U:H6	1.33	0.76
4:CA:1844:C:O3'	27:CC:255:LYS:NZ	2.19	0.76
41:DR:96:ASP:OD2	42:DS:13:ARG:NE	2.18	0.76
1:AA:738:C:OP1	10:AF:2:ARG:NH2	2.19	0.75
2:BA:322:C:O2	2:BA:332:G:N2	2.19	0.75
2:BA:1409:C:OP2	69:BA:1729:HOH:O	2.04	0.75
3:DA:1430:G:O2'	3:DA:1431:A:H5'	1.86	0.75
3:DA:1509:A:O2'	3:DA:1510:G:OP2	2.03	0.75
4:CA:1394:U:OP1	69:CA:3202:HOH:O	2.03	0.75
4:CA:1941:C:OP2	69:CA:3309:HOH:O	2.03	0.75
5:DB:45:A:OP2	69:DB:307:HOH:O	2.04	0.75
38:CO:69:ARG:O	38:CO:71:ARG:N	2.19	0.75
3:DA:2886:A:C4	3:DA:2887:A:C8	2.74	0.75
4:CA:699:A:N6	4:CA:733:G:O2'	2.19	0.75
4:CA:1395:A:N3	69:CA:3390:HOH:O	2.18	0.75
2:BA:200:G:N2	2:BA:218:U:O2	2.19	0.75
3:DA:760:G:O3'	69:DA:3355:HOH:O	2.02	0.75
3:DA:2204:G:O5'	27:DC:149:LYS:HE3	1.86	0.75
63:DA:3054:PUT:H41	69:DA:5353:HOH:O	1.85	0.75
8:BD:202:GLU:OE2	9:BE:112:ARG:NH1	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CQ:112:ARG:O	40:CQ:114:ASN:N	2.18	0.75
3:DA:577:G:OP1	69:DA:3370:HOH:O	2.04	0.75
3:DA:1679:A:OP2	69:DA:3356:HOH:O	2.02	0.75
3:DA:2251:OMG:OP2	69:DA:3369:HOH:O	2.04	0.75
18:BN:60:GLN:OE1	18:BN:60:GLN:N	2.19	0.75
27:CC:257:ARG:NH1	27:CC:263:ASP:OD1	2.20	0.75
43:CT:68:ASP:OD1	43:CT:68:ASP:N	2.16	0.75
1:AA:194:C:OP1	69:AA:1723:HOH:O	2.04	0.75
4:CA:987:C:O2'	4:CA:1000:A:N3	2.18	0.75
41:DR:29:ARG:O	69:DR:301:HOH:O	2.04	0.75
3:DA:376:G:O6	69:DA:3375:HOH:O	2.05	0.75
3:DA:1546:G:N1	69:DA:3497:HOH:O	2.17	0.75
3:DA:2103:C:O2	3:DA:2186:G:N2	2.19	0.75
4:CA:1789:A:OP2	27:CC:220:ARG:NH1	2.18	0.75
4:CA:1902:C:OP1	69:CA:3313:HOH:O	2.04	0.75
14:AJ:35:GLN:HG2	14:AJ:77:VAL:HB	1.67	0.75
21:BQ:51:ASN:O	21:BQ:51:ASN:ND2	2.19	0.75
2:BA:552:U:O2'	26:BL:83:ARG:O	2.05	0.75
3:DA:1141:U:H4'	3:DA:1142:A:O4'	1.87	0.75
3:DA:2066:C:OP2	69:DA:3376:HOH:O	2.05	0.75
4:CA:1011:G:OP2	41:CR:69:ARG:NH1	2.19	0.75
5:CB:7:G:O2'	39:CP:38:GLN:NE2	2.20	0.75
43:CT:102:HIS:ND1	69:CT:201:HOH:O	2.18	0.75
1:AA:372:C:O2	69:AA:1725:HOH:O	2.05	0.75
3:DA:2507:C:OP1	69:DA:3373:HOH:O	2.05	0.75
16:AL:43:LYS:HE2	16:AL:89:D2T:H7	1.69	0.75
2:BA:1178:G:O6	69:BA:1727:HOH:O	2.01	0.74
3:DA:2077:A:O5'	69:DA:3359:HOH:O	2.03	0.74
3:DA:62:U:H5'	60:DA:3067:MPD:H53	1.70	0.74
4:CA:856:G:OP1	47:CX:66:LYS:NZ	2.20	0.74
4:CA:1265:A:OP1	69:CA:3316:HOH:O	2.04	0.74
7:BC:51:SER:O	69:BC:301:HOH:O	2.04	0.74
41:DR:19:GLN:O	69:DR:302:HOH:O	2.05	0.74
1:AA:980:C:N3	69:AA:1744:HOH:O	2.20	0.74
3:DA:751:A:OP1	69:DA:3363:HOH:O	2.03	0.74
3:DA:2243:U:OP2	69:DA:3372:HOH:O	2.04	0.74
3:DA:2588:G:OP2	69:DA:3374:HOH:O	2.05	0.74
3:DA:2740:A:OP2	69:DA:3383:HOH:O	2.05	0.74
4:CA:184:C:O2'	4:CA:217:A:N3	2.19	0.74
19:BO:18:ASP:OD1	19:BO:19:ALA:N	2.20	0.74
3:DA:1244:A:OP2	69:DA:3365:HOH:O	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2022:U:O2	69:DA:3364:HOH:O	2.03	0.74
4:CA:993:G:N2	42:CS:23:GLU:OE1	2.21	0.74
4:CA:1209:U:O2	4:CA:1210:G:N2	2.21	0.74
10:BF:40:GLU:OE2	10:BF:99:ALA:HB3	1.88	0.74
35:DL:107:LEU:O	35:DL:109:SER:N	2.17	0.74
2:BA:971:G:HO2'	2:BA:1365:G:HO2'	1.25	0.74
3:DA:2039:U:OP2	69:DA:3386:HOH:O	2.06	0.74
3:DA:2188:U:OP1	69:DA:3381:HOH:O	2.05	0.74
3:DA:798:G:O3'	69:DA:3368:HOH:O	2.04	0.74
3:DA:1835:2MG:HM22	3:DA:1836:C:H1'	1.69	0.74
3:DA:1566:A:OP1	69:DA:3378:HOH:O	2.05	0.74
12:BH:10:MET:HE2	12:BH:33:LYS:HG2	1.70	0.74
18:BN:60:GLN:O	69:BN:201:HOH:O	2.05	0.74
2:BA:1210:C:O4'	2:BA:1214:C:N4	2.21	0.74
3:DA:572:A:N3	69:DA:3531:HOH:O	2.20	0.74
3:DA:1296:G:OP1	3:DA:2709:G:O2'	2.04	0.74
4:CA:2613:U:OP2	69:CA:3321:HOH:O	2.05	0.74
57:D7:45:VAL:O	57:D7:48:ASP:HB2	1.88	0.74
3:DA:1938:A:O3'	69:DA:3388:HOH:O	2.06	0.74
4:CA:459:U:O2'	44:CU:73:ARG:NH2	2.21	0.74
4:CA:971:G:O2'	4:CA:983:A:N3	2.18	0.74
4:CA:2004:G:OP2	69:CA:3323:HOH:O	2.06	0.74
15:AK:88:GLY:H	15:AK:114:THR:HG22	1.52	0.74
2:BA:912:C:OP1	26:BL:43:LYS:NZ	2.19	0.74
4:CA:1798:U:O2'	4:CA:1802:A:N3	2.20	0.74
11:AG:132:GLY:N	69:AG:203:HOH:O	2.19	0.74
4:CA:1515:A:O2'	4:CA:1556:C:O2'	2.06	0.73
4:CA:2588:G:OP1	69:CA:3257:HOH:O	2.06	0.73
7:AC:139:GLN:O	7:AC:141:ALA:N	2.18	0.73
30:DF:139:GLU:HA	57:D7:29:ILE:HG12	1.70	0.73
3:DA:1172:C:C4	3:DA:1173:U:H1'	2.23	0.73
3:DA:1774:C:OP2	69:DA:3377:HOH:O	2.05	0.73
4:CA:1938:A:OP2	69:CA:3327:HOH:O	2.06	0.73
4:CA:2541:A:N7	69:CA:3415:HOH:O	2.21	0.73
4:CA:2582:G:OP2	69:CA:3320:HOH:O	2.05	0.73
27:CC:68:ARG:O	27:CC:188:ARG:NH2	2.21	0.73
2:BA:109:A:O2'	69:BA:1736:HOH:O	2.06	0.73
2:BA:811:C:O2'	2:BA:901:A:N1	2.21	0.73
3:DA:761:A:OP1	69:DA:3265:HOH:O	2.06	0.73
3:DA:2484:G:OP1	37:DN:44:ARG:NH2	2.20	0.73
4:CA:1386:C:HO2'	4:CA:1469:A:HO2'	1.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2134:A:OP2	4:CA:2157:G:N2	2.21	0.73
5:DB:91:C:OP1	69:DB:308:HOH:O	2.05	0.73
12:BH:77:ARG:NE	12:BH:79:SER:O	2.20	0.73
34:DK:102:GLU:OE2	69:DK:301:HOH:O	2.05	0.73
2:BA:1384:C:OP2	69:BA:1732:HOH:O	2.05	0.73
3:DA:1475:G:OP1	69:DA:3379:HOH:O	2.05	0.73
4:CA:1085:A:N7	4:CA:1086:A:N6	2.36	0.73
33:CJ:13:ALA:O	33:CJ:15:GLY:N	2.21	0.73
51:D1:54:ILE:HG22	51:D1:55:ALA:H	1.51	0.73
2:BA:181:A:N7	69:BA:1762:HOH:O	2.21	0.73
4:CA:1166:G:OP1	69:CA:3319:HOH:O	2.05	0.73
3:DA:533:G:N7	69:DA:3547:HOH:O	2.21	0.73
3:DA:806:C:OP1	69:DA:3389:HOH:O	2.06	0.73
3:DA:939:G:OP2	69:DA:3390:HOH:O	2.06	0.73
3:DA:1378:A:O2'	3:DA:1380:G:OP2	2.05	0.73
4:CA:1064:C:N4	4:CA:1070:A:OP1	2.21	0.73
4:CA:1659:G:OP2	69:CA:3318:HOH:O	2.05	0.73
4:CA:2055:C:OP2	69:CA:3326:HOH:O	2.06	0.73
11:BG:77:SER:OG	11:BG:86:GLN:OE1	2.05	0.73
2:BA:1166:G:N1	2:BA:1169:A:OP2	2.20	0.73
4:CA:510:C:OP1	69:CA:3324:HOH:O	2.06	0.73
4:CA:777:G:N7	4:CA:793:A:H2	1.87	0.73
9:AE:41:ASP:OD1	9:AE:42:GLY:N	2.22	0.73
1:AA:1486:G:OP2	69:AA:1726:HOH:O	2.05	0.73
2:BA:1029:U:N3	2:BA:1031:C:O2	2.21	0.73
3:DA:1261:C:OP1	69:DA:3395:HOH:O	2.07	0.73
3:DA:2281:A:N3	69:DA:3545:HOH:O	2.21	0.73
3:DA:2321:U:O3'	69:DA:3380:HOH:O	2.05	0.73
3:DA:2445:2MG:N7	69:DA:3561:HOH:O	2.22	0.73
3:DA:2582:G:OP2	69:DA:3385:HOH:O	2.06	0.73
4:CA:27:G:O2'	4:CA:28:A:OP2	2.07	0.73
18:BN:48:LEU:O	18:BN:50:THR:N	2.22	0.73
30:CF:121:PHE:O	30:CF:123:GLY:N	2.22	0.73
3:DA:783:A:H2'	3:DA:784:G:H5'	1.70	0.73
4:CA:2022:U:OP1	69:CA:3335:HOH:O	2.07	0.73
4:CA:2303:G:OP2	69:CA:3315:HOH:O	2.04	0.73
5:CB:80:U:OP1	37:CN:18:ARG:NH1	2.21	0.73
13:AI:95:ARG:O	13:AI:98:LEU:N	2.22	0.73
2:BA:1419:G:O6	69:BA:1734:HOH:O	2.05	0.72
4:CA:1065:U:O4	4:CA:1069:A:N6	2.22	0.72
16:AL:114:ARG:NH1	69:AL:201:HOH:O	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DM:99:ASN:ND2	69:DM:302:HOH:O	2.15	0.72
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.22	0.72
3:DA:790:U:OP2	69:DA:3382:HOH:O	2.05	0.72
3:DA:1724:G:N1	3:DA:1736:U:O2	2.20	0.72
3:DA:2839:G:O2'	38:DO:49:GLU:OE1	2.06	0.72
4:CA:574:A:OP2	69:CA:3325:HOH:O	2.06	0.72
9:BE:13:GLU:HB2	9:BE:39:VAL:HG12	1.72	0.72
2:BA:869:G:H5"	69:BA:1816:HOH:O	1.89	0.72
3:DA:509:C:O2'	69:DA:3396:HOH:O	2.07	0.72
3:DA:2504:PSU:OP1	69:DA:3393:HOH:O	2.07	0.72
4:CA:1385:A:OP1	69:CA:3331:HOH:O	2.07	0.72
5:CB:44:G:OP2	69:CB:301:HOH:O	2.06	0.72
3:DA:1327:A:OP2	69:DA:3394:HOH:O	2.07	0.72
4:CA:2134:A:N6	4:CA:2157:G:O2'	2.23	0.72
4:CA:2304:G:O6	69:CA:3250:HOH:O	2.04	0.72
6:BB:21:ARG:CZ	6:BB:21:ARG:HA	2.19	0.72
3:DA:2549:G:OP2	69:DA:3392:HOH:O	2.07	0.72
3:DA:2728:U:O2'	3:DA:2729:G:OP2	2.08	0.72
4:CA:224:U:OP2	4:CA:408:G:N2	2.23	0.72
18:AN:65:ARG:HB2	18:AN:78:GLY:O	1.90	0.72
24:BT:84:ASN:ND2	69:BT:101:HOH:O	2.21	0.72
3:DA:2552:OMU:CM2	3:DA:2552:OMU:O3'	2.38	0.72
4:CA:1981:A:N6	69:CA:3383:HOH:O	2.16	0.72
39:DP:69:ASP:OD1	66:DP:201:PEG:H21	1.90	0.72
46:DW:32:GLY:O	46:DW:93:ARG:NH1	2.23	0.72
2:BA:453:G:N7	69:BA:1767:HOH:O	2.22	0.72
2:BA:1108:G:O6	69:BA:1737:HOH:O	2.06	0.72
4:CA:2597:G:OP1	69:CA:3337:HOH:O	2.08	0.72
1:AA:878:A:N3	69:AA:1753:HOH:O	2.23	0.72
2:BA:1354:U:O2'	69:BA:1733:HOH:O	2.05	0.72
3:DA:1340:U:OP1	44:DU:19:LYS:NZ	2.20	0.72
3:DA:1394:U:OP2	69:DA:3402:HOH:O	2.08	0.72
3:DA:1650:A:OP2	69:DA:3404:HOH:O	2.08	0.72
3:DA:2544:G:O2'	3:DA:2545:G:H5'	1.90	0.72
3:DA:2599:G:O2'	3:DA:2600:A:H5'	1.90	0.72
4:CA:941:A:O2'	4:CA:1190:G:O3'	2.06	0.72
57:D7:46:THR:OG1	57:D7:52:LYS:HD3	1.89	0.72
4:CA:1614:A:OP1	69:CA:3332:HOH:O	2.07	0.72
4:CA:1622:G:OP1	69:CA:3336:HOH:O	2.07	0.72
1:AA:784:A:N3	69:AA:1751:HOH:O	2.22	0.72
3:DA:2685:G:O6	69:DA:3391:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:236:C:HO2'	4:CA:431:U:HO2'	1.35	0.72
4:CA:1638:C:O2	4:CA:2698:U:O2'	2.04	0.72
4:CA:2209:G:OP2	4:CA:2210:U:O2'	2.06	0.72
4:CA:2594:C:N4	4:CA:2595:G:O6	2.22	0.72
6:BB:223:GLU:O	69:BB:302:HOH:O	2.08	0.72
29:DE:69:ARG:NH1	69:DE:405:HOH:O	2.23	0.72
2:BA:506:G:OP1	69:BA:1739:HOH:O	2.07	0.71
3:DA:1414:C:O3'	69:DA:3405:HOH:O	2.08	0.71
8:AD:169:THR:N	69:AD:301:HOH:O	2.11	0.71
37:DN:49:ALA:HB1	37:DN:120:ALA:HB1	1.72	0.71
4:CA:699:A:H2'	4:CA:700:G:O4'	1.89	0.71
4:CA:1323:C:N4	4:CA:1324:G:O6	2.23	0.71
14:AJ:81:GLU:O	14:AJ:84:VAL:HG12	1.90	0.71
8:BD:33:LYS:O	8:BD:35:GLU:N	2.23	0.71
3:DA:2053:G:N7	69:DA:3555:HOH:O	2.22	0.71
4:CA:540:C:N4	4:CA:553:G:O6	2.19	0.71
4:CA:1158:C:O2'	69:CA:3333:HOH:O	2.07	0.71
4:CA:2705:A:O2'	4:CA:2852:G:OP1	2.01	0.71
1:AA:675:A:OP1	22:AR:74:HIS:ND1	2.23	0.71
2:BA:667:G:C2	2:BA:740:U:O2	2.43	0.71
3:DA:1298:C:OP1	69:DA:3400:HOH:O	2.07	0.71
4:CA:567:U:OP1	69:CA:3340:HOH:O	2.09	0.71
4:CA:883:G:N1	4:CA:894:U:O2	2.22	0.71
4:CA:2407:A:OP1	69:CA:3339:HOH:O	2.08	0.71
29:CE:171:ASP:OD1	29:CE:172:ALA:N	2.24	0.71
2:BA:544:G:OP1	8:BD:56:ARG:NH2	2.23	0.71
3:DA:839:U:O2'	3:DA:1191:G:H1'	1.90	0.71
3:DA:978:G:H21	66:DA:3062:PEG:H21	1.56	0.71
3:DA:2601:C:O2'	3:DA:2602:A:H3'	1.90	0.71
25:AU:10:GLU:HB3	25:AU:11:PRO:HD3	1.72	0.71
36:CM:101:ILE:HG13	36:CM:102:GLY:H	1.55	0.71
34:DK:17:VAL:HG22	34:DK:137:PRO:HB2	1.71	0.71
1:AA:955:U:O4'	1:AA:1227:A:N6	2.23	0.71
2:BA:531:U:O4	69:BA:1735:HOH:O	2.06	0.71
3:DA:1525:A:N6	69:DA:3497:HOH:O	2.21	0.71
3:DA:2578:G:OP2	69:DA:3419:HOH:O	2.09	0.71
4:CA:1607:C:H4'	4:CA:1608:A:O5'	1.91	0.71
4:CA:2499:C:O2	69:CA:3330:HOH:O	2.06	0.71
3:DA:506:G:OP2	69:DA:3416:HOH:O	2.09	0.71
1:AA:187:G:O6	69:AA:1730:HOH:O	2.09	0.71
3:DA:829:A:N7	3:DA:2247:A:O2'	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2066:C:O2	3:DA:2445:2MG:HM22	1.91	0.71
4:CA:2269:G:OP1	69:CA:3203:HOH:O	2.07	0.71
2:BA:450:G:OP2	69:BA:1738:HOH:O	2.07	0.71
3:DA:572:A:C2	3:DA:2033:A:C2	2.79	0.71
3:DA:1050:A:O2'	69:DA:3415:HOH:O	2.09	0.71
3:DA:1768:C:OP1	69:DA:3409:HOH:O	2.08	0.71
3:DA:2162:G:O2'	3:DA:2163:A:OP2	2.09	0.71
4:CA:705:A:N1	69:CA:3430:HOH:O	2.24	0.71
4:CA:1071:G:O2'	4:CA:1072:C:O4'	2.05	0.71
4:CA:1826:G:C6	4:CA:1827:U:C4	2.78	0.71
18:AN:46:LEU:O	18:AN:48:LEU:N	2.23	0.71
1:AA:1464:U:OP2	40:DQ:108:ARG:NH1	2.23	0.71
2:BA:509:A:OP2	69:BA:1740:HOH:O	2.09	0.71
3:DA:560:C:O3'	69:DA:3412:HOH:O	2.08	0.71
31:DG:85:LYS:HG2	31:DG:131:VAL:HG22	1.73	0.71
35:DL:13:ASN:OD1	35:DL:98:ARG:N	2.23	0.71
1:AA:843:U:OP1	1:AA:846:G:N1	2.23	0.70
2:BA:667:G:OP1	2:BA:732:C:O2'	2.08	0.70
4:CA:2357:G:N2	4:CA:2360:G:OP2	2.21	0.70
4:CA:2526:G:N3	55:C5:1:MET:N	2.39	0.70
1:AA:1207:2MG:H2'	1:AA:1208:C:O4'	1.92	0.70
2:BA:1117:A:O3'	69:BA:1744:HOH:O	2.10	0.70
3:DA:664:G:N3	69:DA:3572:HOH:O	2.23	0.70
3:DA:2832:U:OP1	69:DA:3406:HOH:O	2.08	0.70
4:CA:971:G:OP2	4:CA:974:G:N2	2.23	0.70
6:BB:35:ARG:O	6:BB:38:VAL:HG12	1.90	0.70
43:CT:50:VAL:O	43:CT:54:ALA:N	2.24	0.70
50:D0:9:THR:HG22	50:D0:53:MET:C	2.12	0.70
40:DQ:92:ARG:NH1	69:DQ:302:HOH:O	2.25	0.70
42:DS:25:LEU:H	42:DS:94:THR:CG2	2.04	0.70
3:DA:163:C:OP2	69:DA:3418:HOH:O	2.09	0.70
3:DA:1835:2MG:HM22	3:DA:1836:C:C1'	2.21	0.70
4:CA:1791:A:OP2	69:CA:3346:HOH:O	2.10	0.70
39:DP:53:THR:HB	39:DP:65:THR:HG22	1.74	0.70
41:DR:18:LYS:HD3	61:DR:202:PG4:H22	1.73	0.70
3:DA:1231:U:H1'	67:DA:3060:EDO:H21	1.73	0.70
60:DA:3067:MPD:H52	60:DA:3067:MPD:HM2	1.72	0.70
4:CA:1257:C:N4	69:CA:3427:HOH:O	2.24	0.70
4:CA:1568:G:OP2	69:CA:3342:HOH:O	2.09	0.70
4:CA:2056:G:O6	4:CA:2612:C:N3	2.24	0.70
4:CA:2070:A:N3	69:CA:3426:HOH:O	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DL:1:MET:O	69:DL:202:HOH:O	2.09	0.70
1:AA:1048:G:OP1	69:AA:1727:HOH:O	2.08	0.70
2:BA:1156:G:O2'	2:BA:1180:A:N1	2.23	0.70
3:DA:685:A:OP2	69:DA:3414:HOH:O	2.09	0.70
3:DA:2127:G:O2'	3:DA:2128:G:O4'	2.08	0.70
3:DA:2160:C:O3'	69:DA:3410:HOH:O	2.08	0.70
3:DA:2439:A:N3	69:DA:3588:HOH:O	2.23	0.70
3:DA:2599:G:OP1	69:DA:3407:HOH:O	2.08	0.70
37:CN:76:LYS:NZ	37:CN:85:GLY:O	2.23	0.70
3:DA:577:G:O2'	3:DA:1254:A:OP1	2.08	0.70
3:DA:2549:G:OP2	69:DA:3399:HOH:O	2.07	0.70
38:CO:12:ARG:O	38:CO:17:ARG:NH2	2.23	0.70
3:DA:448:U:N3	69:DA:3570:HOH:O	2.22	0.70
3:DA:1900:A:OP2	69:DA:3417:HOH:O	2.09	0.70
3:DA:2327:A:H5"	69:DA:3715:HOH:O	1.91	0.70
65:DA:3064:ACY:H1	69:DA:3523:HOH:O	1.90	0.70
2:BA:207:C:O2'	2:BA:213:G:N2	2.25	0.70
2:BA:323:U:OP2	69:BA:1742:HOH:O	2.09	0.70
3:DA:297:G:OP1	45:DV:91:LYS:NZ	2.24	0.70
3:DA:1780:A:OP1	69:DA:3403:HOH:O	2.08	0.70
3:DA:2683:C:O2	35:DL:70:ARG:NH2	2.25	0.70
4:CA:2006:C:OP1	69:CA:3343:HOH:O	2.09	0.70
14:AJ:57:VAL:HG22	14:AJ:58:ASN:H	1.57	0.70
25:AU:7:ARG:O	25:AU:8:GLU:HB2	1.92	0.70
1:AA:662:U:O2'	1:AA:836:G:OP1	2.08	0.70
3:DA:2232:C:O2'	69:DA:3421:HOH:O	2.09	0.70
3:DA:2529:G:OP1	31:DG:171:LYS:NZ	2.25	0.70
3:DA:2705:A:OP2	69:DA:3408:HOH:O	2.08	0.70
4:CA:83:A:OP2	45:CV:91:LYS:NZ	2.24	0.70
4:CA:483:A:O2'	45:CV:55:GLY:O	2.09	0.70
11:AG:110:LYS:O	69:AG:202:HOH:O	2.10	0.70
6:BB:21:ARG:O	6:BB:23:TRP:N	2.25	0.70
4:CA:727:A:H2'	4:CA:728:G:C8	2.26	0.69
57:D7:15:HIS:O	57:D7:42:TYR:HA	1.92	0.69
2:BA:1307:U:OP1	17:BM:100:GLN:NE2	2.25	0.69
4:CA:1267:U:O3'	69:CA:3349:HOH:O	2.10	0.69
10:BF:18:VAL:HA	10:BF:21:MET:HE2	1.74	0.69
4:CA:2867:G:O2'	4:CA:2868:A:OP2	2.09	0.69
14:AJ:73:LEU:O	14:AJ:74:VAL:HB	1.92	0.69
1:AA:266:G:H3'	21:AQ:69:LYS:HB2	1.74	0.69
2:BA:656:G:O2'	19:BO:28:GLN:OE1	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2253:G:OP1	69:DA:3420:HOH:O	2.09	0.69
32:DH:2:GLN:O	32:DH:3:VAL:HG22	1.90	0.69
1:AA:207:C:O2	1:AA:213:G:N2	2.24	0.69
1:AA:626:G:O3'	20:AP:51:ARG:NH2	2.25	0.69
4:CA:1891:G:OP1	69:CA:3353:HOH:O	2.11	0.69
5:DB:58:A:N7	69:DB:312:HOH:O	2.25	0.69
15:BK:94:GLU:OE2	25:BU:20:LYS:NZ	2.23	0.69
39:CP:10:ARG:NH2	39:CP:96:GLY:O	2.24	0.69
3:DA:2697:G:N7	69:DA:3603:HOH:O	2.24	0.69
4:CA:425:G:O3'	69:CA:3348:HOH:O	2.10	0.69
4:CA:1604:C:N4	69:CA:3302:HOH:O	2.25	0.69
4:CA:2022:U:HO2'	4:CA:2616:C:HO2'	1.37	0.69
6:AB:104:TRP:O	6:AB:106:THR:O	2.09	0.69
17:BM:4:ILE:O	17:BM:6:GLY:N	2.25	0.69
27:DC:27:LYS:HB3	27:DC:28:PRO:HD2	1.75	0.69
1:AA:781:A:OP2	69:AA:1731:HOH:O	2.10	0.69
2:BA:586:C:OP2	69:BA:1741:HOH:O	2.09	0.69
3:DA:276:U:O2'	3:DA:278:A:N7	2.22	0.69
3:DA:622:G:OP2	69:DA:3427:HOH:O	2.11	0.69
3:DA:636:G:OP2	36:DM:109:LYS:NZ	2.24	0.69
6:BB:96:TRP:CH2	6:BB:172:ALA:HA	2.28	0.69
2:BA:261:U:OP2	24:BT:71:LYS:NZ	2.26	0.69
2:BA:537:G:OP1	26:BL:110:ARG:NH2	2.24	0.69
3:DA:370:G:N7	69:DA:3617:HOH:O	2.25	0.69
3:DA:762:U:OP1	69:DA:3426:HOH:O	2.11	0.69
3:DA:861:A:H5"	3:DA:862:G:OP2	1.92	0.69
3:DA:1835:2MG:HM22	3:DA:1836:C:N1	2.08	0.69
4:CA:1670:C:OP1	69:CA:3352:HOH:O	2.10	0.69
6:AB:49:MET:O	6:AB:53:ALA:HB2	1.92	0.69
31:CG:131:VAL:O	69:CG:201:HOH:O	2.10	0.69
37:DN:95:LEU:O	69:DN:303:HOH:O	2.09	0.69
41:DR:27:ARG:HD3	69:DR:313:HOH:O	1.91	0.69
2:BA:1242:G:O2'	2:BA:1303:C:OP1	2.11	0.69
3:DA:686:U:OP2	69:DA:3424:HOH:O	2.10	0.69
3:DA:1258:U:O3'	69:DA:3428:HOH:O	2.11	0.69
17:AM:4:ILE:O	17:AM:6:GLY:N	2.25	0.69
33:CJ:56:VAL:HG21	33:CJ:68:PHE:HD2	1.58	0.69
2:BA:1026:G:N1	2:BA:1035:A:N1	2.40	0.69
3:DA:940:G:OP2	69:DA:3423:HOH:O	2.10	0.69
3:DA:2357:G:N3	69:DA:3602:HOH:O	2.25	0.69
3:DA:2455:G:OP1	69:DA:3437:HOH:O	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:450:G:N1	4:CA:454:A:OP2	2.23	0.69
27:CC:44:ASN:OD1	27:CC:45:ASN:N	2.26	0.69
39:DP:19:GLN:HA	63:DP:202:PUT:HN11	1.58	0.69
1:AA:964:A:OP1	69:AA:1732:HOH:O	2.10	0.68
3:DA:561:G:N7	69:DA:3627:HOH:O	2.26	0.68
3:DA:855:G:OP2	62:DA:3031:SPD:N10	2.26	0.68
4:CA:1521:G:O6	4:CA:1522:A:N6	2.26	0.68
8:BD:70:ARG:O	8:BD:74:ASN:ND2	2.26	0.68
9:BE:154:ALA:O	9:BE:156:LYS:N	2.25	0.68
26:BL:75:GLN:O	26:BL:78:SER:OG	2.09	0.68
40:CQ:18:SER:OG	69:CQ:203:HOH:O	2.10	0.68
57:D7:25:ILE:HG22	57:D7:26:GLY:N	2.07	0.68
1:AA:1211:U:O4	69:AA:1729:HOH:O	2.09	0.68
3:DA:2592:G:OP1	69:DA:3430:HOH:O	2.11	0.68
4:CA:810:U:OP1	69:CA:3351:HOH:O	2.10	0.68
4:CA:2553:G:N1	4:CA:2554:U:O2	2.26	0.68
55:D5:41:GLY:N	69:D5:202:HOH:O	2.25	0.68
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.41	0.68
3:DA:447:A:OP2	69:DA:3441:HOH:O	2.12	0.68
3:DA:745:1MG:O6	69:DA:3425:HOH:O	2.10	0.68
4:CA:1854:A:N3	69:CA:3441:HOH:O	2.26	0.68
14:AJ:7:ARG:O	14:AJ:100:ILE:O	2.12	0.68
7:BC:70:THR:OG1	69:BC:301:HOH:O	2.11	0.68
9:BE:101:GLU:O	9:BE:103:THR:N	2.27	0.68
30:DF:55:ASP:OD2	30:DF:149:ARG:NH2	2.27	0.68
57:D7:35:ILE:HG12	57:D7:36:GLU:H	1.58	0.68
3:DA:1537:G:OP2	69:DA:3432:HOH:O	2.11	0.68
5:DB:94:A:OP1	69:DB:309:HOH:O	2.11	0.68
6:AB:49:MET:HG3	6:AB:201:PRO:HD2	1.75	0.68
57:D7:54:HIS:CB	57:D7:55:PRO:HD2	2.22	0.68
3:DA:1020:A:C2	3:DA:1141:U:C2	2.81	0.68
3:DA:1253:A:OP2	69:DA:3439:HOH:O	2.11	0.68
3:DA:2502:G:OP2	69:DA:3436:HOH:O	2.11	0.68
3:DA:2886:A:C2	3:DA:2887:A:H1'	2.29	0.68
4:CA:466:A:N1	4:CA:795:C:O2'	2.21	0.68
4:CA:1316:U:C2	4:CA:1337:G:N2	2.62	0.68
11:BG:25:LYS:O	11:BG:29:ILE:HG12	1.93	0.68
29:DE:119:ILE:HB	29:DE:187:VAL:HG22	1.74	0.68
57:D7:35:ILE:HG12	57:D7:36:GLU:HG2	1.74	0.68
2:BA:36:C:OP1	26:BL:120:LYS:NZ	2.25	0.68
2:BA:1255:G:O2'	2:BA:1258:G:O2'	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1376:C:OP1	69:DA:3445:HOH:O	2.12	0.68
3:DA:2861:U:O2	3:DA:2862:G:C8	2.47	0.68
23:AS:4:SER:O	23:AS:6:LYS:N	2.26	0.68
57:D7:57:TYR:HD2	57:D7:58:THR:H	1.39	0.68
2:BA:1074:G:H4'	6:BB:103:ASN:HB3	1.76	0.68
3:DA:747:5MU:H71	69:DA:5336:HOH:O	1.92	0.68
4:CA:1346:G:OP2	69:CA:3355:HOH:O	2.11	0.68
4:CA:1614:A:OP1	69:CA:3354:HOH:O	2.11	0.68
1:AA:919:A:O2'	1:AA:920:U:H5'	1.93	0.68
3:DA:1378:A:O3'	69:DA:3442:HOH:O	2.12	0.68
3:DA:1995:U:OP1	69:DA:3446:HOH:O	2.12	0.68
29:CE:170:ARG:NH2	29:CE:176:ASP:OD1	2.26	0.68
45:CV:61:GLU:OE1	45:CV:61:GLU:N	2.27	0.68
1:AA:1016:A:N6	1:AA:1017:U:O2'	2.27	0.68
3:DA:458:G:O5'	69:DA:3429:HOH:O	2.11	0.68
3:DA:636:G:C6	36:DM:111:ILE:HD11	2.29	0.68
3:DA:1130:U:H3'	69:DA:4781:HOH:O	1.95	0.68
3:DA:2892:G:H1'	69:DA:4461:HOH:O	1.94	0.68
4:CA:187:G:N2	4:CA:210:C:O2	2.27	0.68
4:CA:581:C:OP2	41:CR:32:ARG:NE	2.21	0.68
4:CA:2656:U:OP2	4:CA:2664:G:N1	2.27	0.68
6:AB:45:LYS:O	6:AB:49:MET:HG2	1.94	0.68
32:CH:78:VAL:O	32:CH:144:ASN:N	2.23	0.68
1:AA:587:G:N2	1:AA:755:G:C5	2.62	0.67
3:DA:217:A:OP2	69:DA:3448:HOH:O	2.12	0.67
4:CA:211:C:OP1	53:C3:25:LYS:NZ	2.24	0.67
4:CA:1263:U:O4	43:CT:95:ARG:NH1	2.26	0.67
30:DF:174:PHE:HD2	30:DF:176:PHE:CZ	2.12	0.67
2:BA:987:G:OP2	69:BA:1745:HOH:O	2.11	0.67
3:DA:1906:G:O3'	69:DA:3443:HOH:O	2.12	0.67
3:DA:2818:U:OP2	38:DO:42:LYS:NZ	2.27	0.67
13:AI:84:THR:HG21	13:AI:103:PHE:HB3	1.76	0.67
20:BP:82:ALA:OXT	69:BP:101:HOH:O	2.11	0.67
35:CL:78:ARG:NH1	40:CQ:70:GLU:OE2	2.28	0.67
2:BA:34:C:H2'	2:BA:35:G:C8	2.29	0.67
2:BA:574:A:OP2	69:BA:1747:HOH:O	2.12	0.67
3:DA:1712:U:OP2	3:DA:1713:A:O2'	2.08	0.67
64:DA:3065:1PE:H131	69:DA:6375:HOH:O	1.92	0.67
4:CA:447:A:OP2	69:CA:3360:HOH:O	2.12	0.67
4:CA:517:C:OP1	51:C1:12:ARG:NH1	2.27	0.67
4:CA:761:A:N7	69:CA:3440:HOH:O	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2005:A:OP1	69:CA:3362:HOH:O	2.12	0.67
8:BD:23:SER:O	8:BD:25:VAL:N	2.27	0.67
9:BE:13:GLU:CB	9:BE:39:VAL:HG12	2.24	0.67
13:BI:89:GLU:OE2	13:BI:90:TYR:N	2.27	0.67
15:BK:13:ARG:NH1	15:BK:77:TYR:OH	2.27	0.67
19:BO:3:LEU:HD13	19:BO:35:GLN:HG2	1.77	0.67
37:DN:12:MET:O	69:DN:304:HOH:O	2.11	0.67
45:DV:48:VAL:O	45:DV:50:ALA:N	2.26	0.67
2:BA:1305:G:O6	69:BA:1743:HOH:O	2.09	0.67
3:DA:1968:G:OP2	63:DA:3069:PUT:H12	1.93	0.67
4:CA:478:A:N6	4:CA:500:G:O2'	2.27	0.67
4:CA:1331:G:N2	69:CA:3438:HOH:O	2.26	0.67
4:CA:1652:A:OP1	38:CO:8:ARG:NH2	2.28	0.67
4:CA:2050:C:N4	4:CA:2051:A:N1	2.43	0.67
9:AE:154:ALA:HB1	9:AE:159:LYS:HA	1.76	0.67
3:DA:160:A:O2'	69:DA:3438:HOH:O	2.11	0.67
3:DA:585:G:N7	41:DR:5:ARG:NH1	2.41	0.67
4:CA:818:G:N1	4:CA:1188:U:OP2	2.22	0.67
4:CA:934:U:OP1	69:CA:3357:HOH:O	2.12	0.67
6:AB:151:ILE:O	6:AB:153:ASP:N	2.28	0.67
57:D7:61:LEU:HD23	57:D7:62:ARG:NH2	2.09	0.67
3:DA:192:C:OP1	69:DA:3431:HOH:O	2.11	0.67
4:CA:2499:C:OP1	69:CA:3356:HOH:O	2.11	0.67
9:AE:78:ASN:OD1	9:AE:79:GLY:N	2.28	0.67
9:BE:154:ALA:C	9:BE:156:LYS:H	1.96	0.67
42:CS:34:GLU:HG2	42:CS:60:LYS:HB3	1.77	0.67
35:DL:107:LEU:C	35:DL:109:SER:H	1.97	0.67
3:DA:1165:A:O3'	69:DA:3433:HOH:O	2.11	0.67
4:CA:180:G:OP1	53:C3:35:ARG:NH1	2.26	0.67
4:CA:1967:C:OP2	69:CA:3363:HOH:O	2.12	0.67
4:CA:1968:G:OP1	69:CA:3264:HOH:O	2.12	0.67
6:AB:66:LYS:HE3	6:AB:159:ASP:OD2	1.94	0.67
7:BC:77:ILE:HA	7:BC:84:VAL:HG23	1.76	0.67
1:AA:1359:C:OP2	18:AN:62:ASN:ND2	2.24	0.67
2:BA:246:A:N3	2:BA:279:A:N6	2.42	0.67
2:BA:1508:A:OP1	69:BA:1749:HOH:O	2.13	0.67
3:DA:1668:A:O2'	3:DA:1674:G:N7	2.24	0.67
4:CA:617:G:O6	69:CA:3345:HOH:O	2.09	0.67
6:BB:33:GLY:HA2	6:BB:40:ILE:H	1.60	0.67
29:CE:42:GLY:HA3	29:CE:90:GLN:O	1.95	0.67
52:C2:24:LYS:NZ	52:C2:31:GLU:O	2.19	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1516:2MG:N2	1:AA:1519:MA6:OP2	2.25	0.67
1:AA:1519:MA6:H92	1:AA:1520:C:O2'	1.94	0.67
2:BA:105:G:N2	2:BA:379:C:O3'	2.28	0.67
3:DA:841:G:N3	69:DA:3648:HOH:O	2.27	0.67
2:BA:680:C:N3	2:BA:711:G:N2	2.42	0.67
3:DA:37:C:OP1	69:DA:3453:HOH:O	2.12	0.67
3:DA:1715:G:O2'	3:DA:1743:G:O6	2.07	0.67
3:DA:2254:C:N4	69:DA:3601:HOH:O	2.24	0.67
4:CA:1430:G:H2'	4:CA:1431:A:O4'	1.95	0.67
4:CA:1717:A:H2'	4:CA:1718:G:O4'	1.95	0.67
27:CC:235:GLU:OE1	69:CC:301:HOH:O	2.10	0.67
1:AA:71:A:O2'	1:AA:72:A:OP2	2.12	0.66
1:AA:674:G:N2	1:AA:717:U:O2	2.28	0.66
3:DA:1478:G:H2'	3:DA:1479:G:H5'	1.77	0.66
3:DA:2574:G:OP1	69:DA:3449:HOH:O	2.12	0.66
4:CA:1351:C:OP2	69:CA:3367:HOH:O	2.13	0.66
34:CK:128:ASN:O	34:CK:128:ASN:ND2	2.25	0.66
45:CV:17:ASP:OD2	45:CV:38:ILE:HG23	1.95	0.66
2:BA:794:A:HO2'	2:BA:1521:C:HO2'	0.95	0.66
3:DA:954:G:P	69:DA:3463:HOH:O	2.52	0.66
3:DA:1603:A:H5"	3:DA:1604:C:OP2	1.96	0.66
3:DA:1757:A:N3	69:DA:3655:HOH:O	2.28	0.66
3:DA:2660:A:H2'	3:DA:2661:G:O4'	1.95	0.66
4:CA:2286:G:H4'	4:CA:2287:A:O5'	1.96	0.66
30:DF:101:ARG:HG3	57:D7:25:ILE:HG21	1.75	0.66
1:AA:894:G:N7	69:AA:1758:HOH:O	2.28	0.66
1:AA:1374:A:N3	1:AA:1375:A:C8	2.63	0.66
4:CA:1523:U:O4'	69:CA:3275:HOH:O	2.12	0.66
20:BP:5:ARG:HB3	69:BP:103:HOH:O	1.95	0.66
4:CA:532:A:N1	4:CA:2020:A:H1'	2.11	0.66
4:CA:981:A:OP2	4:CA:982:C:N4	2.27	0.66
4:CA:1477:A:N6	4:CA:1514:G:O2'	2.28	0.66
19:AO:83:GLU:N	19:AO:83:GLU:OE1	2.29	0.66
24:AT:71:LYS:N	69:AT:101:HOH:O	2.28	0.66
1:AA:1147:C:O2	13:AI:18:ARG:NH2	2.29	0.66
1:AA:1446:A:O3'	69:AA:1737:HOH:O	2.14	0.66
2:BA:106:C:O2'	2:BA:379:C:OP1	2.11	0.66
2:BA:1366:C:O2'	14:BJ:62:ARG:NH2	2.28	0.66
3:DA:1078:U:HO2'	3:DA:1088:A:H2	1.43	0.66
3:DA:1386:C:H2'	3:DA:1387:A:C8	2.31	0.66
4:CA:2550:G:OP1	69:CA:3371:HOH:O	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AD:168:PRO:O	8:AD:169:THR:OG1	2.11	0.66
10:BF:51:ILE:C	10:BF:53:LYS:H	1.99	0.66
1:AA:1173:U:OP1	11:AG:5:ARG:NH1	2.28	0.66
1:AA:1405:G:H1'	1:AA:1519:MA6:O4'	1.96	0.66
3:DA:448:U:C2	69:DA:3570:HOH:O	2.49	0.66
3:DA:1088:A:H62	33:DJ:134:SER:HA	1.60	0.66
4:CA:2468:A:C8	69:CA:3227:HOH:O	2.48	0.66
6:AB:13:GLY:O	69:AB:302:HOH:O	2.12	0.66
18:AN:63:ARG:HG2	18:AN:68:GLY:O	1.95	0.66
1:AA:1486:G:P	69:AA:1736:HOH:O	2.54	0.66
3:DA:1616:A:OP1	69:DA:3454:HOH:O	2.13	0.66
3:DA:1671:U:C2	3:DA:1673:G:OP2	2.49	0.66
3:DA:2390:U:OP2	54:D4:34:LYS:NZ	2.28	0.66
4:CA:1823:G:O6	69:CA:3358:HOH:O	2.12	0.66
9:BE:26:LYS:HE2	9:BE:26:LYS:O	1.96	0.66
27:CC:259:ASN:O	27:CC:261:ARG:N	2.25	0.66
47:DX:19:LEU:HD11	47:DX:39[A]:ARG:HE	1.61	0.66
57:D7:31:THR:HG21	57:D7:41:THR:CG2	2.23	0.66
1:AA:405:U:OP2	8:AD:3:ARG:NH1	2.27	0.66
4:CA:122:G:N7	69:CA:3459:HOH:O	2.29	0.66
23:AS:50:ALA:HB1	23:AS:57:HIS:HB3	1.76	0.66
38:CO:28:LEU:O	38:CO:32:GLU:N	2.22	0.66
3:DA:2454:G:OP1	69:DA:3444:HOH:O	2.12	0.66
4:CA:63:A:O2'	44:CU:77:ARG:NE	2.26	0.66
4:CA:613:A:N7	4:CA:616:A:N6	2.44	0.66
4:CA:2733:A:N1	69:CA:3446:HOH:O	2.27	0.66
6:AB:46:THR:O	6:AB:49:MET:HB2	1.96	0.66
25:BU:27:GLY:O	25:BU:29:LEU:N	2.29	0.66
2:BA:624:C:H2'	2:BA:625:U:O4'	1.96	0.65
3:DA:1283:G:N2	3:DA:1285:A:H3'	2.11	0.65
4:CA:1310:G:O6	69:CA:3302:HOH:O	2.12	0.65
4:CA:1719:G:N2	4:CA:1742:U:O2	2.29	0.65
1:AA:956:U:O3'	69:AA:1722:HOH:O	2.12	0.65
3:DA:965:C:OP1	69:DA:3459:HOH:O	2.14	0.65
69:DA:3632:HOH:O	38:DO:99:LYS:NZ	2.29	0.65
6:AB:205:ASP:OD1	6:AB:206:ALA:N	2.29	0.65
14:AJ:53:ILE:HG22	14:AJ:62:ARG:N	2.12	0.65
25:BU:12:PHE:CD1	25:BU:14:VAL:HG12	2.32	0.65
43:DT:7:HIS:ND1	69:DT:304:HOH:O	2.25	0.65
1:AA:365:U:H5"	1:AA:366:A:OP1	1.96	0.65
1:AA:1071:C:OP1	9:AE:54:ARG:NH2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1181:G:O2'	2:BA:1182:G:N7	2.30	0.65
3:DA:555:G:O2'	3:DA:556:A:OP2	2.15	0.65
3:DA:615:U:H4'	3:DA:616:A:OP2	1.96	0.65
3:DA:664:G:OP1	69:DA:3466:HOH:O	2.14	0.65
3:DA:787:C:OP1	69:DA:3469:HOH:O	2.15	0.65
4:CA:1394:U:H4'	4:CA:1603:A:H4'	1.78	0.65
6:AB:149:GLY:O	6:AB:151:ILE:N	2.29	0.65
17:AM:5:ALA:H	17:AM:57:ARG:HG3	1.60	0.65
27:DC:70:LYS:NZ	27:DC:97:ASP:OD2	2.28	0.65
51:D1:9:ARG:N	69:D1:201:HOH:O	2.29	0.65
55:D5:3:VAL:O	55:D5:39:VAL:O	2.15	0.65
3:DA:954:G:OP2	69:DA:3463:HOH:O	2.14	0.65
3:DA:1670:C:OP2	69:DA:3452:HOH:O	2.12	0.65
4:CA:2428:G:OP1	69:CA:3307:HOH:O	2.14	0.65
7:BC:77:ILE:HA	7:BC:84:VAL:CG2	2.26	0.65
27:DC:79:ARG:N	69:DC:303:HOH:O	2.03	0.65
37:DN:48:ALA:O	69:DN:305:HOH:O	2.14	0.65
1:AA:757:U:OP1	1:AA:822:U:O2'	2.14	0.65
2:BA:243:A:N7	69:BA:1782:HOH:O	2.30	0.65
2:BA:1140:C:O2'	2:BA:1141:C:OP2	2.11	0.65
2:BA:1160:G:O2'	2:BA:1161:C:P	2.55	0.65
3:DA:227:A:O2'	3:DA:228:C:OP2	2.13	0.65
4:CA:616:A:H4'	29:CE:101:TYR:CZ	2.30	0.65
4:CA:826:U:O2'	36:CM:53:GLY:HA3	1.97	0.65
4:CA:1475:G:O4'	4:CA:1732:C:N4	2.30	0.65
20:AP:48:GLU:HG3	20:AP:49:GLY:H	1.61	0.65
53:C3:43:THR:OG1	53:C3:44:VAL:N	2.26	0.65
32:DH:40:THR:O	32:DH:43:ASN:N	2.26	0.65
36:DM:23:ILE:HG13	69:DM:317:HOH:O	1.96	0.65
28:CD:149:ASN:OD1	28:CD:150:GLN:N	2.28	0.65
32:CH:6:LEU:N	32:CH:35:LYS:O	2.27	0.65
38:CO:101:GLY:O	69:CO:202:HOH:O	2.14	0.65
3:DA:1182:G:OP1	69:DA:3468:HOH:O	2.15	0.65
4:CA:117:G:OP2	69:CA:3365:HOH:O	2.13	0.65
18:AN:62:ASN:N	69:AN:201:HOH:O	2.29	0.65
20:AP:6:LEU:HB3	20:AP:17:TYR:HB3	1.79	0.65
32:CH:23:ALA:O	32:CH:27:ARG:N	2.28	0.65
57:D7:23:PHE:HZ	57:D7:45:VAL:HG21	1.61	0.65
1:AA:1485:U:O3'	69:AA:1736:HOH:O	2.14	0.65
2:BA:817:C:OP2	69:BA:1748:HOH:O	2.13	0.65
2:BA:1309:G:OP2	17:BM:98:ARG:NE	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:139:U:O2'	3:DA:141:G:N2	2.26	0.65
3:DA:1670:C:H3'	3:DA:1671:U:H6	1.62	0.65
5:DB:93:C:OP2	69:DB:310:HOH:O	2.13	0.65
18:BN:54:ASP:OD1	18:BN:59:ARG:NH1	2.30	0.65
56:DD:1:MET:HG3	56:DD:205:PRO:HG2	1.79	0.65
57:D7:41:THR:O	57:D7:43:PRO:HD3	1.97	0.65
1:AA:568:G:C2	1:AA:569:C:C5	2.85	0.65
1:AA:1006:G:N7	69:AA:1718:HOH:O	2.29	0.65
2:BA:527:G:C2	2:BA:528:C:C6	2.84	0.65
2:BA:980:C:OP1	69:BA:1751:HOH:O	2.14	0.65
4:CA:749:A:O2'	4:CA:1618:A:OP1	2.13	0.65
4:CA:2845:U:H2'	4:CA:2846:G:O4'	1.97	0.65
6:AB:182:PRO:O	6:AB:183:VAL:HB	1.97	0.65
1:AA:515:G:O6	69:AA:1739:HOH:O	2.14	0.65
2:BA:380:G:N2	2:BA:383:A:OP2	2.30	0.65
3:DA:82:U:H5"	3:DA:296:U:H5"	1.77	0.65
3:DA:1332:G:O3'	69:DA:3461:HOH:O	2.14	0.65
3:DA:2517:C:C5	3:DA:2542:A:C5	2.85	0.65
4:CA:192:C:O2'	4:CA:802:A:N3	2.29	0.65
14:AJ:53:ILE:CG2	14:AJ:61:ALA:HB1	2.27	0.65
36:DM:10:GLU:O	69:DM:301:HOH:O	2.14	0.65
66:D1:102:PEG:H12	66:D1:102:PEG:H41	1.79	0.65
55:D5:1:MET:O	69:D5:201:HOH:O	2.14	0.65
1:AA:865:A:H2'	1:AA:866:C:C6	2.32	0.64
2:BA:110:C:H2'	2:BA:111:G:O4'	1.97	0.64
3:DA:1782:U:OP1	69:DA:3403:HOH:O	2.13	0.64
3:DA:2430[B]:A:H2'	3:DA:2430[B]:A:N3	2.12	0.64
4:CA:1658:C:H6	4:CA:1658:C:O5'	1.80	0.64
36:CM:101:ILE:HG13	36:CM:102:GLY:N	2.11	0.64
30:DF:114:ARG:HH12	57:D7:62:ARG:NH1	1.94	0.64
52:D2:22:THR:OG1	52:D2:23:THR:N	2.30	0.64
1:AA:11:G:C5	1:AA:12:U:C5	2.84	0.64
3:DA:160:A:O3'	69:DA:3438:HOH:O	2.15	0.64
3:DA:1669:A:C8	69:DA:3397:HOH:O	2.47	0.64
3:DA:2061:G:OP1	69:DA:3467:HOH:O	2.14	0.64
3:DA:2256:G:H21	61:DA:3048:PG4:H61	1.63	0.64
3:DA:2414:G:C2'	3:DA:2415:G:H5'	2.27	0.64
3:DA:2683:C:OP1	40:DQ:50:ARG:NH2	2.30	0.64
4:CA:572:A:OP2	42:CS:80:ARG:NH2	2.29	0.64
4:CA:695:G:O2'	69:CA:3372:HOH:O	2.14	0.64
4:CA:1964:G:O4'	69:CA:3370:HOH:O	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2209:G:N7	4:CA:2210:U:N3	2.45	0.64
6:AB:86:SER:OG	6:AB:87:CYS:N	2.31	0.64
43:CT:9:HIS:N	69:CT:201:HOH:O	2.13	0.64
43:DT:74:ILE:HG23	43:DT:74:ILE:O	1.97	0.64
3:DA:515:A:H2'	3:DA:516:C:H5'	1.77	0.64
3:DA:1010:A:OP2	69:DA:3478:HOH:O	2.15	0.64
3:DA:1025:G:O2'	69:DA:3457:HOH:O	2.14	0.64
3:DA:2127:G:H4'	3:DA:2128:G:OP1	1.96	0.64
3:DA:2589:A:OP1	69:DA:3276:HOH:O	2.14	0.64
4:CA:1203:U:H1'	36:CM:4:ASN:HB3	1.77	0.64
4:CA:1300:G:OP1	69:CA:3369:HOH:O	2.14	0.64
11:AG:40:GLU:HB2	11:AG:44:TYR:CE2	2.33	0.64
6:BB:148:LEU:O	6:BB:150:GLY:N	2.30	0.64
9:BE:38:VAL:HG13	9:BE:117:VAL:HG21	1.78	0.64
1:AA:901:A:N7	1:AA:902:G:H1'	2.12	0.64
1:AA:1074:G:OP1	9:AE:69:ARG:NH2	2.31	0.64
3:DA:560:C:OP1	69:DA:3464:HOH:O	2.14	0.64
3:DA:2364:C:OP1	69:DA:3462:HOH:O	2.14	0.64
4:CA:2093:G:O2'	4:CA:2094:A:H5'	1.98	0.64
18:AN:45:VAL:HG23	18:AN:46:LEU:H	1.61	0.64
10:BF:55:HIS:ND1	10:BF:55:HIS:N	2.44	0.64
1:AA:363:A:N7	69:AA:1761:HOH:O	2.30	0.64
3:DA:2450:A:OP2	69:DA:3474:HOH:O	2.15	0.64
4:CA:2548:U:O2	35:CL:23:LYS:NZ	2.30	0.64
18:BN:29:ILE:O	18:BN:32:ASP:HB2	1.98	0.64
2:BA:261:U:O2'	2:BA:263:A:N7	2.22	0.64
2:BA:1001:C:H2'	2:BA:1002:G:N7	2.13	0.64
3:DA:966:G:OP1	69:DA:3472:HOH:O	2.15	0.64
3:DA:1344:U:HO2'	3:DA:1345:C:P	2.20	0.64
4:CA:352:A:H2'	4:CA:353:C:O4'	1.98	0.64
9:AE:80:THR:OG1	9:AE:122:ASN:O	2.15	0.64
9:BE:99:ALA:O	9:BE:101:GLU:N	2.30	0.64
9:BE:157:ARG:O	9:BE:159:LYS:HG2	1.98	0.64
39:CP:33:ARG:O	39:CP:34:HIS:HB2	1.97	0.64
2:BA:1071:C:O2	2:BA:1104:G:N2	2.19	0.64
3:DA:1550:C:O2'	3:DA:1551:A:H5'	1.98	0.64
3:DA:2541:A:OP1	55:D5:43:LYS:NZ	2.29	0.64
6:AB:116:ASP:O	6:AB:120:GLN:HB2	1.98	0.64
14:AJ:8:ILE:O	14:AJ:73:LEU:O	2.16	0.64
12:BH:75:ILE:HD13	12:BH:129:VAL:HG22	1.80	0.64
45:CV:73:ASN:O	45:CV:73:ASN:ND2	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.33	0.64
3:DA:784:G:OP1	69:DA:3460:HOH:O	2.14	0.64
3:DA:1462:C:O2'	3:DA:1463:C:H5'	1.97	0.64
4:CA:182:A:N6	4:CA:214:G:O6	2.31	0.64
9:BE:100:SER:O	9:BE:102:GLY:N	2.27	0.64
9:BE:111:MET:O	9:BE:115:LEU:HD22	1.96	0.64
4:CA:132:G:N2	4:CA:148:U:O2	2.30	0.64
4:CA:2638:G:O2'	4:CA:2775:G:N2	2.30	0.64
1:AA:663:A:N1	1:AA:743:A:C2	2.66	0.64
3:DA:1678:A:N6	69:DA:3709:HOH:O	2.31	0.64
3:DA:1817:G:H2'	3:DA:1818:U:H5'	1.80	0.64
3:DA:1835:2MG:HM23	3:DA:1836:C:C2	2.33	0.64
4:CA:2644:G:N2	4:CA:2733:A:OP2	2.31	0.64
11:AG:131:LYS:HG3	11:AG:131:LYS:O	1.96	0.64
25:BU:26:ALA:O	25:BU:28:VAL:N	2.30	0.64
45:CV:73:ASN:O	45:CV:75:ALA:N	2.30	0.64
1:AA:80:A:N6	1:AA:89:U:O4	2.26	0.63
1:AA:1029:U:O2'	1:AA:1032:G:N1	2.31	0.63
3:DA:1359:A:OP1	69:DA:3447:HOH:O	2.15	0.63
4:CA:2144:G:O6	69:CA:3350:HOH:O	2.10	0.63
14:AJ:53:ILE:HG23	14:AJ:61:ALA:HB1	1.81	0.63
6:BB:164:ILE:HG23	6:BB:165:ASP:H	1.62	0.63
15:BK:35:THR:HA	15:BK:41:ALA:HA	1.79	0.63
30:CF:60:SER:O	30:CF:62:GLN:N	2.31	0.63
32:DH:71:LYS:O	32:DH:108:VAL:HG21	1.97	0.63
36:DM:26:GLY:O	36:DM:27:LEU:HD23	1.98	0.63
1:AA:1191:A:H5"	7:AC:4:LYS:HE2	1.79	0.63
1:AA:1304:G:OP2	69:AA:1738:HOH:O	2.14	0.63
3:DA:1768:C:H1'	69:DA:5095:HOH:O	1.98	0.63
3:DA:2888:C:O2	3:DA:2888:C:H2'	1.98	0.63
4:CA:1188:U:H2'	4:CA:1189:A:O4'	1.98	0.63
4:CA:1360:G:C2	4:CA:1361:G:H1'	2.33	0.63
63:DP:202:PUT:H21	69:DP:311:HOH:O	1.97	0.63
2:BA:455:G:N2	2:BA:478:A:C2	2.66	0.63
2:BA:477:C:N4	69:BA:1722:HOH:O	2.21	0.63
2:BA:1098:C:H2'	2:BA:1099:G:O4'	1.98	0.63
3:DA:1008:A:OP1	69:DA:3477:HOH:O	2.15	0.63
3:DA:2247:A:C2'	3:DA:2248:C:H5'	2.28	0.63
13:AI:91:ASP:OD1	13:AI:94:LEU:N	2.26	0.63
24:AT:68:HIS:HB3	24:AT:69:LYS:HZ1	1.64	0.63
7:BC:3:GLN:OE1	7:BC:3:GLN:N	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CQ:92:ARG:O	40:CQ:93:LYS:O	2.17	0.63
3:DA:666:A:OP2	63:DM:201:PUT:H42	1.98	0.63
3:DA:1101:U:H2'	3:DA:1102:C:O4'	1.99	0.63
3:DA:2577:A:O3'	69:DA:3419:HOH:O	2.16	0.63
4:CA:579:G:O2'	4:CA:2019:A:OP1	2.16	0.63
9:AE:82:GLN:H	9:AE:147:MET:HE3	1.62	0.63
12:AH:106:THR:HG22	12:AH:122:GLY:O	1.98	0.63
16:AL:122:PRO:O	16:AL:124:ALA:N	2.31	0.63
15:BK:16:VAL:CG1	15:BK:79:ILE:HG13	2.28	0.63
33:CJ:56:VAL:HG22	33:CJ:57:VAL:H	1.62	0.63
2:BA:319:G:O6	69:BA:1752:HOH:O	2.14	0.63
3:DA:2424:C:H2'	3:DA:2429[A]:G:O2'	1.98	0.63
3:DA:2885:G:OP1	68:DA:3078:GUN:N2	2.32	0.63
4:CA:187:G:C2	4:CA:210:C:O2	2.52	0.63
4:CA:1248:G:C2	41:CR:2:ARG:HD2	2.33	0.63
4:CA:1937:A:N3	69:CA:3464:HOH:O	2.30	0.63
53:D3:29:GLN:HG2	66:D3:102:PEG:O1	1.98	0.63
1:AA:865:A:H2'	1:AA:866:C:H6	1.64	0.63
2:BA:1199:U:OP1	69:BA:1753:HOH:O	2.15	0.63
3:DA:523:C:O2	3:DA:554:U:O2'	2.12	0.63
3:DA:693:A:C5	3:DA:694:U:C5	2.86	0.63
3:DA:876:C:H2'	3:DA:877:A:O4'	1.98	0.63
3:DA:2497:A:P	69:DA:3475:HOH:O	2.56	0.63
3:DA:2822:G:O6	38:DO:2:ARG:NH1	2.31	0.63
9:AE:80:THR:HG23	9:AE:81:LEU:N	2.14	0.63
17:AM:3:ARG:O	17:AM:10:PRO:HD2	1.99	0.63
6:BB:64:LYS:HA	6:BB:64:LYS:HE2	1.81	0.63
31:CG:69:ALA:O	31:CG:73:SER:OG	2.14	0.63
33:CJ:37:PHE:O	33:CJ:41:PHE:HB3	1.98	0.63
54:C4:6:VAL:HB	54:C4:60:CYS:SG	2.38	0.63
3:DA:2104:C:H2'	3:DA:2105:U:O4'	1.98	0.63
3:DA:2327:A:H2'	3:DA:2328:A:C8	2.33	0.63
3:DA:2497:A:OP1	69:DA:3475:HOH:O	2.15	0.63
3:DA:2800:A:C2	3:DA:2895:G:H1'	2.34	0.63
4:CA:254:G:OP2	54:C4:4:LYS:NZ	2.31	0.63
4:CA:2529:G:O6	55:C5:35:ARG:NH2	2.32	0.63
8:AD:190:ASP:O	8:AD:191:LEU:HD12	1.99	0.63
15:BK:49:GLY:C	15:BK:51:GLY:H	2.02	0.63
51:D1:7:PRO:O	69:D1:201:HOH:O	2.15	0.63
51:D1:37:HIS:HB2	69:D1:224:HOH:O	1.99	0.63
2:BA:369:G:OP2	2:BA:388:G:N2	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1779:U:H5'	69:CA:3293:HOH:O	1.99	0.63
14:AJ:57:VAL:CG2	14:AJ:58:ASN:H	2.11	0.63
9:BE:57:PRO:O	9:BE:60:ILE:HG13	1.99	0.63
12:BH:44:GLY:O	12:BH:64:LYS:NZ	2.31	0.63
8:BD:192:SER:HG	8:BD:193:ALA:H	1.47	0.63
9:BE:155:ALA:HB1	12:BH:66:PHE:CZ	2.33	0.63
18:BN:51:LEU:O	18:BN:53:ARG:N	2.28	0.63
28:CD:151:THR:HG22	28:CD:152:PRO:N	2.14	0.63
34:DK:23:LYS:HE3	34:DK:142:ILE:OXT	1.98	0.63
4:CA:2360:G:H1'	36:CM:60:ARG:HD3	1.80	0.62
6:AB:148:LEU:O	6:AB:151:ILE:HG22	1.99	0.62
3:DA:1546:G:C2	69:DA:3497:HOH:O	2.52	0.62
4:CA:1357:C:H2'	4:CA:1358:G:O4'	1.99	0.62
69:DB:322:HOH:O	63:DP:202:PUT:H41	1.98	0.62
14:AJ:29:ALA:O	14:AJ:31:ARG:N	2.28	0.62
51:D1:16:ARG:HA	51:D1:19:ASP:OD2	1.98	0.62
2:BA:499:A:C6	2:BA:547:A:C8	2.86	0.62
3:DA:62:U:O4'	60:DA:3067:MPD:H31	1.99	0.62
3:DA:572:A:H5"	3:DA:573:U:OP2	2.00	0.62
4:CA:950:G:H2'	4:CA:951:C:O4'	2.00	0.62
4:CA:1827:U:H2'	4:CA:1828:G:C8	2.33	0.62
4:CA:2892:G:OP1	4:CA:2894:G:N2	2.31	0.62
10:AF:5:GLU:O	10:AF:6:ILE:HG13	1.98	0.62
6:BB:133:GLU:O	6:BB:137:ARG:HB3	1.99	0.62
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.23	0.62
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.30	0.62
1:AA:1533:C:H5'	1:AA:1534:A:OP1	1.99	0.62
3:DA:2334:U:O3'	39:DP:13:ARG:NH1	2.32	0.62
8:BD:158:ALA:HA	8:BD:161:LEU:HD21	1.81	0.62
13:BI:120:LYS:HG3	13:BI:123:ARG:HB3	1.79	0.62
43:CT:62:ASP:OD1	43:CT:63:GLY:N	2.31	0.62
27:DC:14:HIS:O	27:DC:203:VAL:CG2	2.47	0.62
29:DE:108:ILE:HD11	29:DE:180:LEU:HB3	1.80	0.62
57:D7:34:GLU:OE2	57:D7:35:ILE:CG2	2.45	0.62
3:DA:1217:U:OP2	41:DR:14:LYS:NZ	2.32	0.62
3:DA:2380:C:OP1	39:DP:17:LYS:NZ	2.32	0.62
4:CA:102:U:H3	49:CZ:3:ALA:HB3	1.63	0.62
4:CA:858:G:O2'	4:CA:2268:A:N3	2.28	0.62
4:CA:959:A:N6	37:CN:82:MET:HE3	2.15	0.62
4:CA:1981:A:OP2	69:CA:3379:HOH:O	2.16	0.62
4:CA:2079:U:O2'	4:CA:2080:A:O4'	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2882:A:H5'	38:CO:96:ARG:HG3	1.81	0.62
20:AP:19:VAL:HG22	20:AP:37:GLY:N	2.15	0.62
27:CC:61:TYR:CE2	27:CC:62:ARG:O	2.53	0.62
30:DF:107:VAL:HG13	30:DF:110:ILE:HD12	1.82	0.62
41:DR:15:LYS:HA	61:DR:202:PG4:H11	1.81	0.62
2:BA:755:G:C2	2:BA:756:C:C6	2.88	0.62
3:DA:64:A:H2'	3:DA:65:U:C6	2.33	0.62
3:DA:1937:A:N7	3:DA:1939:5MU:O2'	2.33	0.62
4:CA:528:A:C2	4:CA:2043:C:H4'	2.35	0.62
4:CA:1385:A:O2'	4:CA:1396:U:O2	2.18	0.62
16:AL:55:VAL:N	16:AL:63:VAL:O	2.32	0.62
27:CC:157:ALA:HB1	27:CC:196:ASN:HB3	1.80	0.62
27:DC:24:HIS:CE1	27:DC:25:LYS:O	2.52	0.62
57:D7:35:ILE:CG1	57:D7:36:GLU:HG2	2.29	0.62
1:AA:116:A:C2'	1:AA:117:G:H5'	2.30	0.62
2:BA:300:A:H2'	2:BA:301:G:O4'	2.00	0.62
2:BA:804:U:H5"	2:BA:805:C:OP2	1.99	0.62
3:DA:1704:C:OP1	69:DA:3479:HOH:O	2.16	0.62
3:DA:1905:C:O2	3:DA:1905:C:H2'	1.99	0.62
3:DA:2359:C:O2'	54:D4:53:ASP:OD2	2.15	0.62
4:CA:2461:A:C2	4:CA:2490:G:N2	2.68	0.62
4:CA:2500:U:H5"	4:CA:2501:C:OP2	2.00	0.62
11:AG:49:THR:O	11:AG:53:ARG:HG3	1.99	0.62
21:BQ:69:LYS:O	21:BQ:70:THR:CB	2.47	0.62
53:C3:11:LYS:NZ	69:C3:201:HOH:O	2.33	0.62
2:BA:428:G:OP2	8:BD:10:LYS:NZ	2.24	0.62
3:DA:364:C:H2'	3:DA:365:U:C6	2.35	0.62
3:DA:1869:G:N2	3:DA:1872:A:N7	2.48	0.62
3:DA:2291:U:H2'	3:DA:2292:U:C6	2.33	0.62
4:CA:1826:G:C5	4:CA:1827:U:C5	2.88	0.62
5:CB:29:A:O2'	5:CB:58:A:N1	2.30	0.62
5:CB:47:C:O2'	39:CP:98:GLN:OE1	2.16	0.62
7:AC:40:ARG:NH1	7:AC:55:ILE:O	2.33	0.62
31:CG:59:ASP:OD1	31:CG:59:ASP:N	2.32	0.62
46:DW:30:ILE:O	46:DW:37:PRO:HA	2.00	0.62
1:AA:6:G:O6	9:AE:99:ALA:HB1	2.00	0.62
1:AA:118:U:O4	1:AA:288:A:H2'	1.98	0.62
1:AA:1370:G:O5'	13:AI:111:VAL:HG21	1.99	0.62
2:BA:427:U:OP1	8:BD:13:ARG:NH2	2.32	0.62
2:BA:1521:C:C4	2:BA:1522:U:C5	2.88	0.62
4:CA:746:U:HO2'	4:CA:2611:C:HO2'	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AO:82:ILE:HG13	19:AO:83:GLU:OE1	1.99	0.62
6:BB:73:LYS:O	6:BB:75:ALA:N	2.24	0.62
27:CC:259:ASN:C	27:CC:261:ARG:H	2.03	0.62
28:CD:57:ALA:O	28:CD:60:VAL:HG12	2.00	0.62
43:CT:102:HIS:CE1	69:CT:201:HOH:O	2.50	0.62
42:DS:59:ILE:HG12	42:DS:101:ILE:HD13	1.81	0.62
43:DT:99:ARG:HA	69:DT:308:HOH:O	2.00	0.62
1:AA:1061:G:C6	1:AA:1197:A:C2	2.88	0.62
3:DA:1414:C:C4	3:DA:1415:U:C5	2.88	0.62
3:DA:2280:G:C2	3:DA:2281:A:C8	2.88	0.62
4:CA:1428:C:N4	4:CA:1570:A:OP2	2.23	0.62
5:CB:66:A:N6	5:CB:107:G:H2'	2.14	0.62
20:AP:50:THR:O	20:AP:50:THR:HG22	2.00	0.62
8:BD:99:ASP:OD1	8:BD:100:ASN:N	2.33	0.62
14:BJ:15:HIS:HB3	14:BJ:70:HIS:CD2	2.35	0.62
4:CA:449:A:OP2	69:CA:3377:HOH:O	2.16	0.61
4:CA:1689:A:OP2	4:CA:1698:A:N6	2.33	0.61
13:AI:94:LEU:O	13:AI:97:GLU:HG2	2.00	0.61
32:DH:27:ARG:NH2	48:DY:59:ASP:OD2	2.33	0.61
36:DM:55:MET:O	36:DM:60:ARG:HD3	1.99	0.61
57:D7:32:ASP:O	57:D7:40:VAL:CG2	2.48	0.61
1:AA:1335:U:HO2'	1:AA:1336:C:P	2.20	0.61
3:DA:2885:G:O5'	3:DA:2885:G:N3	2.33	0.61
3:DA:899:A:OP2	69:DA:3484:HOH:O	2.16	0.61
3:DA:1400:U:C2'	3:DA:1401:G:H5'	2.29	0.61
4:CA:1266:G:OP1	51:C1:15:ARG:NE	2.29	0.61
33:DJ:90:GLY:O	33:DJ:91:LYS:HD3	2.00	0.61
3:DA:2199:A:H4'	32:DH:28:ASN:OD1	2.00	0.61
3:DA:2517:C:C6	3:DA:2542:A:N7	2.69	0.61
3:DA:2548:U:H3'	69:DA:3392:HOH:O	1.99	0.61
4:CA:13:A:C2	4:CA:526:A:N7	2.69	0.61
4:CA:242:G:H8	54:C4:3:ILE:O	1.82	0.61
4:CA:1064:C:N3	4:CA:1074:G:N1	2.49	0.61
8:AD:150:LYS:O	8:AD:151:LYS:HB3	2.00	0.61
24:AT:71:LYS:HG3	24:AT:74:ARG:NH2	2.15	0.61
30:DF:106:ALA:H	30:DF:108:PRO:HD2	1.64	0.61
31:DG:169:ARG:NH1	55:D5:33:ASN:OD1	2.32	0.61
1:AA:73:C:O2'	1:AA:74:A:O4'	2.19	0.61
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.36	0.61
4:CA:135:U:H2'	4:CA:136:G:C8	2.35	0.61
4:CA:1351:C:O3'	69:CA:3382:HOH:O	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1628:G:N2	4:CA:2699:C:OP1	2.30	0.61
4:CA:2074:U:H2'	4:CA:2075:U:C6	2.35	0.61
4:CA:2349:G:OP1	54:C4:44:ARG:NH2	2.19	0.61
57:D7:45:VAL:HG23	57:D7:46:THR:N	2.15	0.61
1:AA:914:A:N3	1:AA:915:A:C8	2.69	0.61
2:BA:1211:U:O2'	2:BA:1212:U:OP2	2.17	0.61
2:BA:1387:G:H2'	2:BA:1388:C:H6	1.65	0.61
3:DA:1967:C:H2'	3:DA:1968:G:H5'	1.83	0.61
3:DA:2349:G:OP2	54:D4:41:ARG:HD3	2.00	0.61
66:DA:3063:PEG:O4	43:DT:11:ARG:NH2	2.33	0.61
69:CA:3233:HOH:O	43:CT:83:LYS:NZ	2.34	0.61
9:AE:137:VAL:O	9:AE:138:ARG:HB2	1.98	0.61
10:BF:3:HIS:N	10:BF:92:THR:OG1	2.33	0.61
21:BQ:14:SER:HB3	21:BQ:22:VAL:HG13	1.81	0.61
25:BU:9:ASN:HB2	25:BU:12:PHE:CE2	2.35	0.61
25:BU:31:GLU:O	25:BU:35:ARG:HG3	2.00	0.61
31:CG:15:ASP:OD1	31:CG:16:VAL:N	2.33	0.61
42:CS:39:LEU:O	42:CS:49:ILE:HG23	2.00	0.61
29:DE:149:ILE:HA	29:DE:170:ARG:O	2.00	0.61
1:AA:407:U:OP1	8:AD:3:ARG:NH2	2.34	0.61
2:BA:10:A:OP2	9:BE:131:THR:HG21	2.00	0.61
3:DA:940:G:P	69:DA:3423:HOH:O	2.59	0.61
3:DA:999:U:C2'	3:DA:1000:A:H5'	2.30	0.61
3:DA:1434:A:H4'	3:DA:1435:G:OP1	2.00	0.61
13:AI:57:MET:O	13:AI:59:GLU:N	2.33	0.61
13:BI:9:THR:OG1	13:BI:10:GLY:N	2.28	0.61
14:BJ:7:ARG:NH1	14:BJ:75:ASP:OD2	2.27	0.61
42:DS:25:LEU:H	42:DS:94:THR:HG21	1.65	0.61
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.36	0.61
3:DA:1645:G:H5"	3:DA:1646:C:H5'	1.82	0.61
3:DA:2141:G:O6	3:DA:2150:C:N4	2.34	0.61
3:DA:2297:A:N1	3:DA:2321:U:H5	1.98	0.61
4:CA:262:A:H4'	4:CA:611:C:OP1	2.00	0.61
4:CA:457:A:N1	4:CA:470:A:H5"	2.16	0.61
4:CA:991:C:H5'	4:CA:1186:G:H5'	1.82	0.61
4:CA:1050:A:O2'	4:CA:2752:C:O2	2.18	0.61
6:AB:33:GLY:HA2	6:AB:40:ILE:H	1.65	0.61
38:CO:104:ALA:O	38:CO:106:ASP:N	2.34	0.61
27:DC:92:LEU:HB3	69:DC:303:HOH:O	2.01	0.61
39:DP:10:ARG:NE	69:DP:303:HOH:O	2.33	0.61
1:AA:1322:C:O2	1:AA:1322:C:O4'	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1327:A:H2'	3:DA:1328:A:H5'	1.83	0.61
3:DA:1671:U:O3'	69:DA:3480:HOH:O	2.16	0.61
3:DA:2004:G:OP2	69:DA:3481:HOH:O	2.16	0.61
3:DA:2133:G:O2'	3:DA:2134:A:OP2	2.15	0.61
3:DA:2498:OMC:OP1	69:DA:3483:HOH:O	2.16	0.61
3:DA:2695:U:OP2	69:DA:3487:HOH:O	2.16	0.61
9:AE:151:GLU:O	9:AE:154:ALA:HB3	2.00	0.61
33:CJ:95:ASP:OD1	33:CJ:95:ASP:N	2.32	0.61
27:DC:27:LYS:CB	27:DC:28:PRO:HD2	2.31	0.61
33:DJ:123:ALA:HA	33:DJ:126:ARG:HG2	1.82	0.61
45:DV:70:ALA:HA	69:DV:209:HOH:O	2.00	0.61
1:AA:1152:A:OP1	14:AJ:70:HIS:ND1	2.33	0.61
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.35	0.61
3:DA:749:A:N7	3:DA:1618:6MZ:H9	2.15	0.61
3:DA:956:G:P	69:DA:3258:HOH:O	2.59	0.61
3:DA:1097:U:H3'	3:DA:1098:A:O4'	2.01	0.61
3:DA:1295:C:O3'	69:DA:3488:HOH:O	2.16	0.61
4:CA:777:G:C2	4:CA:778:G:C8	2.88	0.61
4:CA:1940:U:O4	69:CA:3370:HOH:O	2.15	0.61
4:CA:1973:G:C6	4:CA:1974:C:N4	2.69	0.61
8:AD:132:ILE:O	8:AD:132:ILE:HG13	2.00	0.61
57:D7:46:THR:C	57:D7:48:ASP:H	2.03	0.61
1:AA:872:A:C8	1:AA:874:G:C8	2.88	0.60
1:AA:914:A:C2	1:AA:915:A:C8	2.89	0.60
1:AA:956:U:C4	1:AA:957:U:C5	2.89	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.36	0.60
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.83	0.60
2:BA:1072:G:H2'	2:BA:1073:U:O4'	2.01	0.60
3:DA:532:A:OP1	3:DA:561:G:N2	2.33	0.60
4:CA:39:G:O6	4:CA:439:A:N6	2.34	0.60
4:CA:332:A:HO2'	4:CA:334:C:P	2.21	0.60
4:CA:994:C:OP1	41:CR:52:ARG:NH1	2.34	0.60
27:DC:181:ARG:NH2	27:DC:182:LYS:O	2.34	0.60
1:AA:1054:C:OP1	69:AA:1741:HOH:O	2.15	0.60
1:AA:1118:U:H5"	13:AI:106:ARG:HG3	1.82	0.60
1:AA:1264:U:O2	1:AA:1272:G:N2	2.35	0.60
1:AA:1374:A:C2	1:AA:1375:A:C8	2.88	0.60
2:BA:37:U:O5'	69:BA:1755:HOH:O	2.17	0.60
2:BA:1118:U:P	69:BA:1744:HOH:O	2.59	0.60
3:DA:1835:2MG:CM2	3:DA:1836:C:C2	2.84	0.60
3:DA:2544:G:OP2	69:DA:3482:HOH:O	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:194:G:N2	4:CA:251:A:N3	2.49	0.60
4:CA:1362:C:H2'	4:CA:1363:C:H5'	1.83	0.60
5:DB:52:A:N7	39:DP:64:TYR:OH	2.26	0.60
9:AE:41:ASP:OD1	9:AE:44:GLY:O	2.19	0.60
13:AI:91:ASP:OD1	13:AI:93:SER:N	2.35	0.60
6:BB:117:LEU:HB3	6:BB:141:LEU:HD11	1.83	0.60
2:BA:197:A:O2'	2:BA:220:G:N2	2.34	0.60
2:BA:842:U:H3'	2:BA:843:U:H5"	1.83	0.60
2:BA:1062:U:H2'	2:BA:1063:C:C6	2.36	0.60
3:DA:1937:A:O2'	3:DA:1939:5MU:H71	2.00	0.60
4:CA:1808:A:N1	48:CY:27:ARG:HD2	2.16	0.60
5:DB:80:U:P	37:DN:18[A]:ARG:HH12	2.24	0.60
8:AD:150:LYS:NZ	8:AD:177:LYS:O	2.31	0.60
16:AL:42:PRO:HB2	16:AL:89:D2T:H5	1.82	0.60
6:BB:221:VAL:O	6:BB:223:GLU:N	2.34	0.60
9:BE:114:VAL:HG22	9:BE:115:LEU:HD13	1.83	0.60
43:CT:25:ARG:NH2	43:CT:74:ILE:O	2.33	0.60
43:DT:12:SER:O	43:DT:101:SER:OG	2.19	0.60
2:BA:501:C:OP1	26:BL:114:ARG:NH2	2.31	0.60
2:BA:706:A:C5	2:BA:707:U:C5	2.89	0.60
3:DA:190:A:N3	3:DA:679:C:O2'	2.33	0.60
3:DA:2502:G:H5'	3:DA:2503:2MA:H5"	1.84	0.60
4:CA:1343:G:O6	4:CA:1403:A:N6	2.34	0.60
6:BB:99:GLY:HA2	6:BB:102:THR:HG22	1.83	0.60
9:BE:154:ALA:HA	9:BE:157:ARG:HB3	1.84	0.60
10:BF:92:THR:HG22	10:BF:93:LYS:H	1.66	0.60
18:BN:17:ASP:OD1	18:BN:18:LYS:N	2.35	0.60
27:CC:239:PHE:HD2	27:CC:240:GLY:H	1.50	0.60
39:DP:53:THR:HB	39:DP:65:THR:CG2	2.31	0.60
1:AA:1362:A:H5"	1:AA:1363:A:OP2	2.01	0.60
2:BA:579:A:H2'	2:BA:580:C:C6	2.36	0.60
3:DA:1236:G:O6	63:DA:3037:PUT:H41	2.01	0.60
3:DA:1427:A:H4'	3:DA:1428:C:O5'	2.00	0.60
3:DA:1433:A:O2'	3:DA:1434:A:H5'	2.01	0.60
3:DA:1782:U:H3'	69:DA:3596:HOH:O	2.00	0.60
3:DA:2324:U:H3'	3:DA:2325:G:C5'	2.31	0.60
4:CA:2461:A:N1	4:CA:2490:G:N2	2.49	0.60
8:AD:150:LYS:O	8:AD:151:LYS:CB	2.49	0.60
48:CY:10:ARG:HG2	48:CY:11:PRO:HD2	1.83	0.60
1:AA:906:A:N1	69:AA:1765:HOH:O	2.32	0.60
1:AA:1343:G:H4'	13:AI:124:ARG:HB3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:345:C:O4'	2:BA:346:G:C2	2.54	0.60
2:BA:1483:A:O2'	4:CA:1947:C:O2'	2.17	0.60
3:DA:543:G:C5'	3:DA:543:G:H8	2.14	0.60
4:CA:574:A:H4'	4:CA:575:A:C5'	2.31	0.60
30:CF:81:GLY:O	69:CF:201:HOH:O	2.16	0.60
42:DS:37:GLU:HB3	42:DS:53:PHE:CE2	2.37	0.60
1:AA:259:G:O6	69:AA:1733:HOH:O	2.10	0.60
1:AA:827:U:C4	1:AA:870:U:C2	2.89	0.60
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.32	0.60
3:DA:193:U:P	69:DA:3554:HOH:O	2.60	0.60
3:DA:438:G:C2'	3:DA:439:A:H5'	2.31	0.60
3:DA:2749:A:OP1	31:DG:1:SER:N	2.34	0.60
4:CA:1316:U:O2	4:CA:1337:G:N2	2.34	0.60
4:CA:2591:C:OP2	69:CA:3381:HOH:O	2.16	0.60
4:CA:2876:G:H4'	40:CQ:2:ASN:OD1	2.00	0.60
6:AB:82:ASP:OD1	6:AB:83:ALA:N	2.34	0.60
24:AT:28:MET:O	24:AT:32:ILE:HG13	2.02	0.60
6:BB:33:GLY:O	6:BB:34:ALA:HB2	2.01	0.60
7:BC:82:GLU:O	7:BC:85:GLU:CG	2.50	0.60
12:BH:105:SER:O	12:BH:123:GLY:HA3	2.01	0.60
33:DJ:18:ASN:ND2	33:DJ:34:ILE:O	2.33	0.60
1:AA:869:G:N7	69:AA:1767:HOH:O	2.32	0.60
2:BA:32:A:C2	2:BA:33:A:C5	2.90	0.60
3:DA:1177:G:H2'	3:DA:1178:C:O4'	2.02	0.60
3:DA:2305:U:C2	30:DF:150:GLY:HA3	2.37	0.60
4:CA:85:G:OP1	45:CV:6:ARG:N	2.34	0.60
4:CA:2607:G:H2'	4:CA:2608:G:O4'	2.02	0.60
30:CF:56:LEU:HD13	30:CF:88:VAL:HG23	1.82	0.60
35:CL:118:LEU:O	35:CL:119:ALA:O	2.20	0.60
35:DL:4:GLU:O	35:DL:5:GLN:HB2	2.02	0.60
3:DA:451:U:C2	3:DA:453:A:N7	2.70	0.60
3:DA:1429:G:C2'	3:DA:1430:G:H5'	2.31	0.60
3:DA:1509:A:O2'	3:DA:1510:G:P	2.59	0.60
3:DA:1835:2MG:H2'	3:DA:1836:C:H6	1.66	0.60
4:CA:199:A:OP1	69:CA:3380:HOH:O	2.16	0.60
4:CA:1941:C:N4	69:CA:3252:HOH:O	2.34	0.60
14:AJ:54:SER:OG	14:AJ:55:PRO:HD2	2.01	0.60
27:CC:15:VAL:HG22	27:CC:205:GLY:HA3	1.84	0.60
38:CO:55:ALA:HA	38:CO:80:PHE:CE2	2.37	0.60
2:BA:68:G:H5'	2:BA:171:A:O2'	2.02	0.60
2:BA:756:C:C2	2:BA:757:U:C6	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1077:G:H5”	2:BA:1078:U:OP2	2.02	0.60
3:DA:1012:U:OP2	69:DA:3476:HOH:O	2.15	0.60
3:DA:2725:A:P	69:DA:3672:HOH:O	2.60	0.60
4:CA:217:A:H4’	69:CA:3569:HOH:O	2.02	0.60
6:AB:21:ARG:HB2	69:AB:308:HOH:O	2.00	0.60
7:AC:84:VAL:HG13	7:AC:101:ILE:HG21	1.83	0.60
13:AI:9:THR:HG22	13:AI:10:GLY:H	1.66	0.60
57:D7:62:ARG:HG2	57:D7:63:THR:N	2.15	0.60
3:DA:1590:A:H2’	3:DA:1591:A:C8	2.37	0.59
3:DA:2752:C:OP1	60:DA:3071:MPD:O4	2.20	0.59
4:CA:1351:C:H2’	4:CA:1352:U:O4’	2.02	0.59
4:CA:1475:G:O2’	4:CA:1514:G:O6	2.19	0.59
9:BE:157:ARG:C	9:BE:159:LYS:N	2.56	0.59
10:BF:92:THR:CG2	10:BF:93:LYS:H	2.15	0.59
42:DS:24:LYS:HA	42:DS:94:THR:HG23	1.83	0.59
2:BA:263:A:P	24:BT:74:ARG:NH1	2.75	0.59
2:BA:770:C:C2’	2:BA:771:G:H5’	2.32	0.59
2:BA:946:A:HO2’	2:BA:1333:A:HO2’	1.51	0.59
2:BA:1190:G:H5’	7:BC:176:HIS:HE1	1.67	0.59
3:DA:281:C:H2’	3:DA:282:A:C8	2.35	0.59
13:AI:90:TYR:O	13:AI:91:ASP:HB3	2.03	0.59
15:AK:24:HIS:O	15:AK:30:THR:HA	2.02	0.59
26:BL:87:VAL:O	26:BL:89:ASP:N	2.34	0.59
32:CH:2:GLN:O	32:CH:3:VAL:HG22	2.02	0.59
2:BA:1151:A:C2	2:BA:1152:A:C4	2.91	0.59
2:BA:1216:A:OP1	18:BN:4:SER:OG	2.11	0.59
3:DA:244:A:C2	3:DA:255:A:C4	2.90	0.59
3:DA:1607:C:H6	3:DA:1607:C:H5’	1.67	0.59
3:DA:2886:A:C5	3:DA:2887:A:C8	2.90	0.59
7:BC:139:GLN:O	7:BC:141:ALA:N	2.35	0.59
1:AA:972:C:OP1	69:AA:1742:HOH:O	2.17	0.59
2:BA:775:G:C2’	2:BA:776:G:H5’	2.33	0.59
3:DA:1405:U:H2’	3:DA:1406:U:C6	2.37	0.59
3:DA:2728:U:O2’	3:DA:2729:G:P	2.61	0.59
4:CA:1416:G:O2’	4:CA:1417:C:OP2	2.16	0.59
8:AD:152:GLN:HB2	8:AD:155:VAL:HG13	1.83	0.59
45:DV:50:ALA:O	45:DV:51:LEU:O	2.20	0.59
1:AA:597:G:C2	1:AA:644:U:O2	2.55	0.59
1:AA:1408:A:H2’	1:AA:1409:C:C6	2.38	0.59
2:BA:9:G:H5’	9:BE:108:GLY:HA3	1.84	0.59
3:DA:163:C:H6	69:DA:3251:HOH:O	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:596:U:C2'	3:DA:597:G:H5'	2.33	0.59
3:DA:854:C:C2'	3:DA:855:G:H5'	2.33	0.59
3:DA:1119:U:H5"	69:DA:3335:HOH:O	2.02	0.59
3:DA:1972:G:OP1	69:DA:3492:HOH:O	2.17	0.59
3:DA:2419:U:O2'	3:DA:2420:C:H5'	2.02	0.59
4:CA:1097:U:C2'	33:CJ:8:VAL:HG11	2.33	0.59
4:CA:2655:G:O2'	4:CA:2664:G:O6	2.17	0.59
18:AN:43:ASN:C	18:AN:45:VAL:H	2.04	0.59
7:BC:65:ARG:O	7:BC:66:VAL:O	2.19	0.59
13:BI:19:VAL:HA	13:BI:65:ILE:HG22	1.83	0.59
15:BK:88:GLY:H	15:BK:114:THR:HG22	1.66	0.59
18:BN:25:GLU:O	18:BN:27:LYS:N	2.34	0.59
29:CE:5:LEU:O	29:CE:7:ASP:N	2.35	0.59
46:CW:9:ARG:HD2	46:CW:40:ILE:O	2.02	0.59
33:DJ:36:GLU:O	33:DJ:38:CYS:N	2.34	0.59
57:D7:29:ILE:HG22	57:D7:30:LYS:N	2.18	0.59
1:AA:1226:C:O2'	17:AM:110:LYS:NZ	2.33	0.59
1:AA:1518:MA6:H103	1:AA:1519:MA6:C10	2.32	0.59
3:DA:23:G:OP1	64:DA:3034:1PE:H251	2.03	0.59
3:DA:514:A:N3	3:DA:581:C:O2'	2.28	0.59
3:DA:745:1MG:O5'	69:DA:3490:HOH:O	2.17	0.59
3:DA:1254:A:O3'	69:DA:3486:HOH:O	2.16	0.59
3:DA:1356:G:C2	3:DA:1376:C:O2	2.55	0.59
3:DA:1439:A:C2	3:DA:1553:A:C4	2.90	0.59
3:DA:2351:G:OP2	69:DA:3485:HOH:O	2.16	0.59
4:CA:704:G:H1'	4:CA:726:G:N2	2.17	0.59
4:CA:893:C:H2'	4:CA:894:U:O4'	2.03	0.59
4:CA:2075:U:O2	4:CA:2077:A:OP2	2.21	0.59
4:CA:2822:G:H2'	4:CA:2823:A:H5"	1.84	0.59
8:AD:148:LYS:H	8:AD:148:LYS:HE2	1.67	0.59
17:AM:45:ILE:HD12	17:AM:45:ILE:N	2.18	0.59
10:BF:92:THR:CG2	10:BF:93:LYS:N	2.65	0.59
11:BG:130:ASN:HA	11:BG:135:VAL:HG11	1.84	0.59
13:BI:6:TYR:HB3	13:BI:89:GLU:HB3	1.84	0.59
1:AA:809:G:OP2	19:AO:48:LYS:NZ	2.33	0.59
1:AA:967:5MC:HM51	1:AA:967:5MC:OP2	2.02	0.59
1:AA:1073:U:O2'	6:AB:103:ASN:OD1	2.18	0.59
2:BA:71:A:C2	2:BA:72:A:C8	2.90	0.59
2:BA:978:A:OP1	2:BA:980:C:N4	2.35	0.59
3:DA:626:A:H2'	36:DM:78:ARG:NH1	2.18	0.59
4:CA:505:A:O2'	4:CA:509:C:O2'	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:591:U:H1'	54:C4:1:PRO:H2	1.66	0.59
4:CA:1906:G:H5"	4:CA:1929:G:O2'	2.03	0.59
9:BE:141:ILE:C	9:BE:143:GLY:H	2.05	0.59
20:BP:70:ARG:O	20:BP:74:LEU:HG	2.03	0.59
32:DH:12:LEU:O	32:DH:13:GLY:O	2.20	0.59
36:DM:89:VAL:O	36:DM:94:THR:HG21	2.03	0.59
42:DS:8:GLY:HA3	69:DS:301:HOH:O	2.03	0.59
2:BA:146:G:N2	2:BA:147:G:H1'	2.17	0.59
3:DA:2454:G:P	69:DA:3444:HOH:O	2.60	0.59
4:CA:2184:A:H2'	4:CA:2185:U:O4'	2.02	0.59
4:CA:2284:A:O2'	4:CA:2288:A:N1	2.23	0.59
23:BS:64:ASP:O	23:BS:67:VAL:HG23	2.02	0.59
29:CE:76:PRO:HA	29:CE:82:GLY:HA2	1.83	0.59
42:CS:2:TYR:HB2	42:CS:14:VAL:O	2.03	0.59
44:CU:69:ARG:NE	44:CU:69:ARG:O	2.35	0.59
2:BA:964:A:N3	2:BA:969:A:O2'	2.26	0.59
3:DA:616:A:H2'	3:DA:617:G:H5'	1.83	0.59
3:DA:1936:A:C8	3:DA:1940:U:O2	2.56	0.59
3:DA:2030:6MZ:H5'1	69:DA:3744:HOH:O	2.01	0.59
4:CA:190:A:H1'	4:CA:679:C:O2'	2.02	0.59
4:CA:1330:C:O2'	4:CA:1331:G:H5'	2.02	0.59
4:CA:1723:G:O6	4:CA:1737:G:O2'	2.19	0.59
4:CA:1847:A:O2'	4:CA:1848:A:O5'	2.19	0.59
4:CA:1930:G:HO2'	4:CA:1968:G:H1	1.48	0.59
4:CA:2489:U:HO2'	4:CA:2491:U:H5	1.50	0.59
13:AI:22:LYS:O	13:AI:62:ASP:N	2.35	0.59
11:BG:83:SER:HB3	11:BG:85:TYR:CZ	2.38	0.59
51:C1:52:LYS:HE3	51:C1:55:ALA:HA	1.84	0.59
57:D7:39:GLY:O	57:D7:40:VAL:HG22	2.02	0.59
57:D7:52:LYS:C	57:D7:54:HIS:H	2.05	0.59
2:BA:706:A:H4'	15:BK:31:ILE:HD11	1.84	0.59
2:BA:734:G:C2	2:BA:735:C:C6	2.90	0.59
4:CA:641:U:H5'	4:CA:642:U:OP2	2.02	0.59
4:CA:1857:G:O2'	4:CA:1884:G:N2	2.35	0.59
6:AB:186:ILE:HA	6:AB:200:ILE:O	2.03	0.59
31:DG:106:LEU:O	31:DG:151:ARG:NH2	2.36	0.59
39:DP:83:LEU:HD23	39:DP:87:ILE:O	2.03	0.59
1:AA:254:G:H4'	21:AQ:20:SER:HB2	1.85	0.58
1:AA:1100:C:H5"	69:AA:1948:HOH:O	2.02	0.58
3:DA:142:A:O2'	3:DA:143:C:H5'	2.03	0.58
3:DA:770:G:P	69:DA:4272:HOH:O	2.61	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1083:U:HO2'	3:DA:1084:A:H8	1.49	0.58
4:CA:1389:G:N2	4:CA:1398:C:N3	2.51	0.58
4:CA:2067:G:O6	4:CA:2444:G:C6	2.56	0.58
4:CA:2540:C:O2'	4:CA:2740:A:N3	2.33	0.58
4:CA:2854:G:C2	4:CA:2864:G:C2	2.91	0.58
6:AB:71:GLY:HA2	6:AB:164:ILE:HG22	1.85	0.58
7:AC:205:GLY:O	7:AC:206:GLU:HG2	2.03	0.58
14:AJ:29:ALA:HA	14:AJ:32:THR:HG22	1.85	0.58
13:BI:33:ARG:HD2	13:BI:37:GLN:OE1	2.03	0.58
24:BT:51:PHE:HA	24:BT:54:MET:HG2	1.85	0.58
27:CC:186:ASP:OD1	27:CC:186:ASP:N	2.36	0.58
43:CT:58:ALA:O	43:CT:63:GLY:N	2.36	0.58
1:AA:409:U:H2'	1:AA:410:G:O4'	2.02	0.58
1:AA:953:G:C2	1:AA:1229:A:C2	2.91	0.58
1:AA:967:5MC:H6	1:AA:967:5MC:O5'	1.86	0.58
1:AA:1112:C:O2	7:AC:179:ARG:HG3	2.03	0.58
2:BA:405:U:C2'	2:BA:406:G:OP1	2.52	0.58
3:DA:17:G:H2'	3:DA:18:U:C6	2.38	0.58
3:DA:2061:G:H5"	3:DA:2503:2MA:HM22	1.85	0.58
5:DB:22:U:H2'	5:DB:23:G:C8	2.39	0.58
6:AB:146:ASN:O	6:AB:147:SER:OG	2.11	0.58
6:BB:99:GLY:C	6:BB:101:LEU:H	2.06	0.58
9:BE:133:PRO:HA	9:BE:136:VAL:CG1	2.33	0.58
9:BE:151:GLU:O	9:BE:154:ALA:HB3	2.03	0.58
13:BI:95:ARG:O	13:BI:98:LEU:N	2.34	0.58
41:DR:19:GLN:CG	61:DR:202:PG4:H42	2.31	0.58
44:DU:41:ALA:C	69:DU:201:HOH:O	2.42	0.58
3:DA:160:A:N3	3:DA:2208:C:O2'	2.36	0.58
3:DA:2615:U:P	69:DA:3626:HOH:O	2.61	0.58
4:CA:335:C:H1'	45:CV:67:SER:O	2.03	0.58
5:CB:42:C:N3	30:CF:89:THR:OG1	2.27	0.58
6:BB:54:LEU:O	6:BB:58:ASN:N	2.24	0.58
6:BB:99:GLY:O	6:BB:101:LEU:N	2.32	0.58
2:BA:818:G:O2'	2:BA:819:A:H5'	2.03	0.58
3:DA:795:C:O5'	3:DA:795:C:H6	1.86	0.58
3:DA:1168:G:H2'	3:DA:1169:A:O4'	2.03	0.58
3:DA:2006:C:O5'	3:DA:2006:C:H6	1.85	0.58
3:DA:2171:A:O2'	3:DA:2172:U:H5'	2.02	0.58
3:DA:2247:A:P	69:DA:3622:HOH:O	2.61	0.58
3:DA:2470:G:C2'	3:DA:2471:A:H5'	2.33	0.58
3:DA:2550:G:P	69:DA:3320:HOH:O	2.60	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:225:C:H2'	4:CA:226:A:O4'	2.03	0.58
4:CA:321:U:H5'	29:CE:129:PRO:O	2.04	0.58
4:CA:475:C:O2	4:CA:481:G:N1	2.37	0.58
4:CA:666:A:H4'	36:CM:48:ARG:HD2	1.85	0.58
4:CA:1867:G:O6	4:CA:1875:G:N2	2.36	0.58
43:CT:16:LYS:HA	43:CT:19:LEU:HD22	1.85	0.58
44:CU:28:ASN:N	44:CU:28:ASN:OD1	2.36	0.58
27:DC:61:TYR:HA	27:DC:85:ASN:HD21	1.68	0.58
47:DX:39[B]:ARG:NE	69:DX:102:HOH:O	2.34	0.58
55:D5:44:LYS:CB	55:D5:45:LYS:HE2	2.32	0.58
55:D5:44:LYS:HB2	55:D5:45:LYS:HE2	1.86	0.58
1:AA:182:A:N1	1:AA:223:A:O2'	2.36	0.58
1:AA:671:G:C5	1:AA:672:U:C5	2.92	0.58
1:AA:914:A:C4	1:AA:915:A:C8	2.90	0.58
2:BA:378:G:C2	2:BA:386:C:O2	2.57	0.58
69:BA:1744:HOH:O	13:BI:106:ARG:NE	2.26	0.58
3:DA:1450:G:C6	3:DA:1451:C:N4	2.72	0.58
3:DA:2000:C:C2'	3:DA:2001:C:H5'	2.34	0.58
4:CA:249:C:O5'	4:CA:2394:C:O2'	2.22	0.58
4:CA:1252:G:O2'	69:CA:3384:HOH:O	2.17	0.58
8:AD:148:LYS:N	8:AD:148:LYS:HD3	2.19	0.58
11:AG:92:ARG:HB3	11:AG:93:PRO:HD2	1.86	0.58
13:AI:63:LEU:HD23	13:AI:63:LEU:H	1.68	0.58
29:CE:145:ASP:HA	29:CE:166:LYS:HB3	1.85	0.58
27:DC:124:LYS:HB2	27:DC:125:PRO:HD2	1.86	0.58
56:DD:149:ASN:OD1	56:DD:150:MEQ:N	2.36	0.58
29:DE:100:MET:SD	69:DE:433:HOH:O	2.57	0.58
2:BA:330:C:O2	69:BA:1750:HOH:O	2.14	0.58
3:DA:1009:A:P	34:DK:39:LYS:NZ	2.77	0.58
3:DA:1296:G:OP1	69:DA:3488:HOH:O	2.17	0.58
3:DA:1765:U:O2'	3:DA:1766:G:H5'	2.03	0.58
3:DA:1821:A:O5'	3:DA:1821:A:H8	1.85	0.58
4:CA:734:A:N3	69:CA:3472:HOH:O	2.31	0.58
4:CA:848:C:H2'	4:CA:849:A:C8	2.38	0.58
4:CA:945:A:C8	4:CA:2448:A:C2	2.91	0.58
5:DB:79:G:P	69:DB:306:HOH:O	2.60	0.58
5:CB:24:G:N3	5:CB:27:C:N4	2.49	0.58
5:CB:38:C:O4'	39:CP:100:HIS:CE1	2.56	0.58
6:AB:106:THR:O	6:AB:107:VAL:HB	2.03	0.58
13:AI:23:PRO:HA	13:AI:61:LEU:HA	1.84	0.58
15:AK:81:ASN:OD1	15:AK:106:ARG:NH1	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AO:74:ASP:OD2	19:AO:77:ARG:HG3	2.03	0.58
11:BG:91:VAL:O	11:BG:96:ARG:NH2	2.36	0.58
27:CC:124:LYS:HB2	27:CC:125:PRO:HD2	1.86	0.58
28:CD:13:ARG:HD3	28:CD:21:SER:OG	2.04	0.58
44:CU:49:LYS:HD3	44:CU:49:LYS:N	2.18	0.58
50:C0:15:ARG:O	50:C0:20:LYS:NZ	2.24	0.58
35:DL:76:VAL:HB	40:DQ:72:VAL:HG13	1.85	0.58
37:DN:47:GLU:OE2	37:DN:51:ARG:NE	2.36	0.58
39:DP:33:ARG:O	39:DP:65:THR:HB	2.04	0.58
1:AA:44:A:C2	1:AA:399:G:C2	2.91	0.58
1:AA:1057:G:N7	1:AA:1058:G:N7	2.52	0.58
1:AA:1518:MA6:H8	1:AA:1518:MA6:O5'	2.03	0.58
2:BA:496:A:C2	2:BA:497:G:C6	2.92	0.58
3:DA:730:A:P	69:DA:3306:HOH:O	2.61	0.58
3:DA:1778:U:H2'	3:DA:1784:A:N6	2.19	0.58
3:DA:1795:C:C4	3:DA:1796:U:C5	2.92	0.58
3:DA:2622:U:H5'	69:DA:4393:HOH:O	2.02	0.58
4:CA:592:A:O2'	54:C4:3:ILE:HG13	2.04	0.58
4:CA:1566:A:C2	27:CC:212:TRP:CE3	2.91	0.58
4:CA:1980:G:O2'	4:CA:1982:U:OP2	2.21	0.58
4:CA:2016:U:OP1	69:CA:3385:HOH:O	2.17	0.58
4:CA:2724:U:H2'	4:CA:2725:A:C8	2.39	0.58
14:AJ:33:GLY:O	14:AJ:34:ALA:CB	2.51	0.58
18:AN:42:TRP:O	18:AN:42:TRP:CD1	2.57	0.58
10:BF:98:GLU:HG3	10:BF:99:ALA:H	1.69	0.58
15:BK:16:VAL:O	15:BK:17:SER:OG	2.22	0.58
27:CC:159:THR:HG23	27:CC:176:ARG:HG2	1.86	0.58
2:BA:680:C:C2	2:BA:711:G:N2	2.72	0.58
3:DA:1122:G:H2'	3:DA:1122:G:N3	2.18	0.58
4:CA:185:G:H2'	4:CA:186:G:O4'	2.03	0.58
4:CA:1425:G:O6	69:CA:3376:HOH:O	2.15	0.58
4:CA:1965:C:P	69:CA:3252:HOH:O	2.57	0.58
4:CA:2853:C:H2'	4:CA:2854:G:C8	2.38	0.58
5:CB:14:U:H3'	5:CB:15:A:H5"	1.85	0.58
8:AD:192:SER:O	8:AD:193:ALA:HB3	2.03	0.58
19:AO:19:ALA:O	19:AO:21:ASP:N	2.34	0.58
23:AS:36:ARG:NE	23:AS:52:HIS:O	2.37	0.58
23:AS:39:THR:HG23	69:AS:101:HOH:O	2.03	0.58
34:CK:105:VAL:HG12	34:CK:109:LEU:CD1	2.34	0.58
39:CP:2:ASP:OD1	39:CP:5:SER:OG	2.21	0.58
49:CZ:53:VAL:O	49:CZ:57:LEU:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DH:27:ARG:O	32:DH:29:PHE:N	2.36	0.58
39:DP:31:THR:HG23	39:DP:34:HIS:H	1.69	0.58
47:DX:39[B]:ARG:HH11	47:DX:39[B]:ARG:HA	1.69	0.58
57:D7:52:LYS:O	57:D7:54:HIS:N	2.37	0.58
1:AA:338:A:N1	1:AA:351:G:O6	2.37	0.58
1:AA:354:G:H2'	1:AA:355:C:H5'	1.84	0.58
1:AA:1008:U:P	18:AN:23:ARG:HH22	2.26	0.58
1:AA:1086:U:H4'	1:AA:1086:U:OP1	2.04	0.58
2:BA:160:A:N6	2:BA:346:G:O6	2.37	0.58
2:BA:941:G:H3'	69:BA:1874:HOH:O	2.04	0.58
2:BA:1409:C:H4'	4:CA:1915:U:O4	2.03	0.58
69:BA:1744:HOH:O	13:BI:106:ARG:NH2	2.26	0.58
3:DA:565:C:H5'	69:DA:4157:HOH:O	2.03	0.58
3:DA:644:A:H2'	3:DA:645:C:O4'	2.04	0.58
3:DA:990:A:H5"	3:DA:991:C:P	2.44	0.58
3:DA:1616:A:O3'	69:DA:3489:HOH:O	2.17	0.58
3:DA:1825:U:O5'	69:DA:3496:HOH:O	2.17	0.58
3:DA:2003:A:H3'	69:DA:3277:HOH:O	2.03	0.58
3:DA:2578:G:P	69:DA:3419:HOH:O	2.62	0.58
4:CA:1359:A:C2	4:CA:1360:G:H1'	2.38	0.58
4:CA:2064:C:H2'	4:CA:2065:C:C6	2.39	0.58
5:DB:89:U:H3'	5:DB:90:C:H5"	1.85	0.58
9:AE:82:GLN:NE2	9:AE:150:PRO:HD3	2.18	0.58
19:BO:72:ARG:O	19:BO:74:ASP:N	2.36	0.58
60:DE:301:MPD:H52	60:DE:301:MPD:HM2	1.86	0.58
1:AA:859:G:H5"	1:AA:860:A:OP2	2.03	0.58
1:AA:953:G:C4	1:AA:1229:A:C2	2.91	0.58
2:BA:505:G:H2'	2:BA:506:G:C8	2.38	0.58
3:DA:586:A:H2'	69:DA:4285:HOH:O	2.02	0.58
3:DA:1359:A:P	69:DA:3447:HOH:O	2.62	0.58
3:DA:2107:G:N2	3:DA:2182:U:O2	2.36	0.58
3:DA:2544:G:C2'	3:DA:2545:G:H5'	2.33	0.58
3:DA:2799:A:N7	69:DA:3717:HOH:O	2.32	0.58
4:CA:668:A:N6	4:CA:670:A:O2'	2.37	0.58
4:CA:1827:U:O4'	4:CA:1970:A:O2'	2.21	0.58
4:CA:2679:A:N3	4:CA:2729:G:N2	2.52	0.58
5:DB:8:C:O3'	39:DP:25:ARG:NH1	2.37	0.58
6:AB:104:TRP:O	6:AB:104:TRP:CD1	2.57	0.58
10:AF:66:ALA:HB1	10:AF:70:VAL:HG21	1.86	0.58
30:CF:121:PHE:C	30:CF:123:GLY:H	2.07	0.58
33:CJ:79:LEU:HD11	33:CJ:132:ALA:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:CL:113:MET:SD	35:CL:116:ILE:HD11	2.44	0.58
48:CY:33:HIS:O	48:CY:49:ARG:HG3	2.04	0.58
49:DZ:45:GLN:O	49:DZ:46:VAL:HB	2.04	0.58
2:BA:1296:C:OP1	17:BM:14:HIS:NE2	2.37	0.57
3:DA:1188:U:O2'	69:DA:3300:HOH:O	1.96	0.57
3:DA:2223:G:H2'	3:DA:2224:G:H5'	1.86	0.57
3:DA:2259:U:H1'	3:DA:2427:C:C2	2.39	0.57
4:CA:2262:U:OP1	47:CX:39:ARG:NH2	2.37	0.57
13:BI:46:MET:O	13:BI:49:ARG:HB3	2.04	0.57
15:BK:88:GLY:H	15:BK:114:THR:CG2	2.17	0.57
24:BT:44:LYS:HD3	24:BT:87:ALA:HA	1.85	0.57
25:BU:24:GLU:O	25:BU:26:ALA:N	2.34	0.57
36:CM:139:GLY:O	36:CM:140:GLY:O	2.22	0.57
47:DX:39[B]:ARG:CZ	69:DX:102:HOH:O	2.44	0.57
66:D1:102:PEG:H32	69:D1:233:HOH:O	2.04	0.57
1:AA:919:A:C2'	1:AA:920:U:H5'	2.34	0.57
1:AA:1040:U:H1'	69:AA:1804:HOH:O	2.04	0.57
1:AA:1375:A:P	11:AG:28:ASN:HD22	2.27	0.57
2:BA:37:U:H6	69:BA:1755:HOH:O	1.87	0.57
2:BA:1151:A:HO2'	2:BA:1152:A:H8	1.53	0.57
3:DA:1515:A:H2'	3:DA:1516:G:O4'	2.04	0.57
3:DA:1662:U:OP2	69:DA:3494:HOH:O	2.17	0.57
3:DA:2609:U:H6	67:DA:3052:EDO:HO2	1.50	0.57
3:DA:2897:U:H2'	3:DA:2898:U:C6	2.39	0.57
64:DA:3034:1PE:H142	69:DA:5583:HOH:O	2.03	0.57
4:CA:591:U:C2	4:CA:592:A:C8	2.92	0.57
4:CA:1097:U:H2'	33:CJ:8:VAL:HG11	1.86	0.57
4:CA:1250:G:H5'	41:CR:5:ARG:HD2	1.87	0.57
9:AE:13:GLU:OE1	9:AE:68:ARG:NH1	2.35	0.57
13:BI:25:ASN:O	13:BI:27:LYS:N	2.37	0.57
27:CC:107:LYS:N	27:CC:193:GLU:O	2.29	0.57
28:CD:104:VAL:CG2	28:CD:177:VAL:HG11	2.34	0.57
36:CM:95:LEU:HD22	36:CM:100:ILE:HD13	1.86	0.57
57:D7:33:ARG:O	57:D7:34:GLU:HG3	2.04	0.57
2:BA:213:G:OP2	2:BA:214:C:N4	2.37	0.57
2:BA:1486:G:H2'	2:BA:1487:G:O4'	2.04	0.57
3:DA:923:G:H1'	69:DA:4438:HOH:O	2.04	0.57
3:DA:1838:C:C2	3:DA:1898:U:C4	2.93	0.57
3:DA:2722:G:H2'	3:DA:2723:C:C6	2.39	0.57
45:DV:96:LYS:O	45:DV:97:SER:OG	2.22	0.57
1:AA:74:A:C2	1:AA:97:G:C6	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:355:C:O4'	1:AA:388:G:O2'	2.23	0.57
1:AA:692:U:O2'	1:AA:694:A:N7	2.25	0.57
1:AA:928:G:C2	1:AA:1390:U:O2	2.56	0.57
1:AA:1050:G:C2	1:AA:1209:C:O2	2.58	0.57
2:BA:130:A:O2'	2:BA:131:A:O5'	2.22	0.57
2:BA:312:C:H2'	2:BA:313:A:O4'	2.04	0.57
2:BA:765:G:C6	2:BA:812:G:C4	2.93	0.57
3:DA:665:U:O2'	3:DA:666:A:H5'	2.04	0.57
3:DA:1070:A:N7	3:DA:1096:A:O2'	2.36	0.57
3:DA:1348:C:H2'	3:DA:1349:C:H5'	1.86	0.57
3:DA:1494:A:O2'	3:DA:1495:A:OP1	2.22	0.57
6:AB:96:TRP:HZ3	6:AB:175:GLU:OE2	1.87	0.57
13:AI:24:GLY:H	13:AI:61:LEU:HA	1.69	0.57
29:CE:5:LEU:HA	29:CE:120:VAL:HB	1.86	0.57
36:CM:77:ILE:HD11	36:CM:108:ALA:HB1	1.86	0.57
66:D1:102:PEG:H41	66:D1:102:PEG:C1	2.35	0.57
57:D7:10:ARG:O	57:D7:26:GLY:O	2.21	0.57
57:D7:13:VAL:HG23	57:D7:38:ASP:HB3	1.86	0.57
57:D7:49:VAL:O	57:D7:53:SER:OG	2.22	0.57
2:BA:1080:A:OP1	9:BE:52:LYS:HD2	2.04	0.57
2:BA:1310:G:H2'	2:BA:1311:A:O4'	2.04	0.57
3:DA:284:U:O2	3:DA:356:G:N2	2.33	0.57
3:DA:1637:A:N7	69:DA:3723:HOH:O	2.32	0.57
3:DA:1669:A:H5"	3:DA:1670:C:OP2	2.04	0.57
3:DA:2077:A:P	69:DA:3359:HOH:O	2.63	0.57
3:DA:2359:C:O2'	3:DA:2360:G:H5'	2.05	0.57
3:DA:2422:C:H1'	69:DA:3966:HOH:O	2.04	0.57
3:DA:2470:G:O2'	3:DA:2471:A:H5'	2.05	0.57
3:DA:2655:G:O2'	3:DA:2664:G:O6	2.19	0.57
4:CA:80:G:H4'	4:CA:346:A:C1'	2.35	0.57
4:CA:600:G:OP1	29:CE:24:ASN:ND2	2.37	0.57
4:CA:1027:A:N7	4:CA:1126:A:C2	2.73	0.57
4:CA:1362:C:C2'	4:CA:1363:C:H5'	2.34	0.57
6:BB:83:ALA:O	6:BB:86:SER:OG	2.16	0.57
41:DR:83:LYS:HD2	67:DR:204:EDO:H12	1.86	0.57
1:AA:558:G:C5	1:AA:559:A:C2	2.93	0.57
2:BA:1091:U:C2	2:BA:1093:A:OP2	2.57	0.57
2:BA:1316:G:N2	2:BA:1318:A:H3'	2.20	0.57
3:DA:576:U:H5	69:DA:3876:HOH:O	1.88	0.57
3:DA:726:G:O2'	3:DA:727:A:OP2	2.21	0.57
3:DA:1867:G:O2'	3:DA:1868:C:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2048:G:H2'	3:DA:2049:G:O5'	2.04	0.57
69:DA:3552:HOH:O	55:D5:13:ARG:NH1	2.37	0.57
4:CA:299:A:N3	4:CA:319:G:O2'	2.30	0.57
4:CA:1837:C:O2	4:CA:1927:A:H2	1.88	0.57
4:CA:2505:G:C6	4:CA:2576:G:N7	2.72	0.57
69:CA:3422:HOH:O	48:CY:31:ASN:HB2	2.04	0.57
17:BM:46:SER:O	17:BM:47:GLU:HB3	2.04	0.57
28:CD:115:GLY:O	38:CO:3:HIS:NE2	2.38	0.57
29:CE:58:LYS:NZ	29:CE:70:SER:O	2.38	0.57
35:CL:107:LEU:O	35:CL:109:SER:N	2.38	0.57
38:CO:16:HIS:O	38:CO:20:MET:HB3	2.04	0.57
56:DD:77:ARG:HD2	56:DD:200:ASP:OD1	2.04	0.57
30:DF:104:THR:HG22	30:DF:105:ILE:HG12	1.86	0.57
49:DZ:61:ALA:O	49:DZ:63:ALA:N	2.34	0.57
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.40	0.57
3:DA:196:A:H2'	3:DA:196:A:N3	2.20	0.57
3:DA:1271:G:O6	69:DA:3491:HOH:O	2.17	0.57
3:DA:1323:C:H3'	69:DA:3940:HOH:O	2.04	0.57
63:DA:3069:PUT:H32	69:DA:5978:HOH:O	2.04	0.57
4:CA:204:A:O4'	4:CA:206:U:C6	2.58	0.57
4:CA:587:C:OP2	36:CM:21:ARG:NH1	2.38	0.57
4:CA:684:G:C5'	53:C3:16:HIS:HE1	2.18	0.57
4:CA:1567:G:H2'	27:CC:84:PRO:HG3	1.87	0.57
14:AJ:41:PRO:O	14:AJ:42:LEU:CB	2.52	0.57
16:AL:21:VAL:O	16:AL:21:VAL:HG13	2.04	0.57
38:CO:90:ARG:NH2	38:CO:116:VAL:HG11	2.20	0.57
44:CU:48:GLN:O	44:CU:52:GLU:HA	2.05	0.57
1:AA:604:G:C2	1:AA:635:A:C2	2.93	0.57
1:AA:1058:G:C5	1:AA:1059:C:C5	2.93	0.57
1:AA:1130:A:H8	1:AA:1130:A:O5'	1.87	0.57
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.05	0.57
2:BA:376:G:H5'	20:BP:5:ARG:HB2	1.86	0.57
2:BA:1408:A:C2	2:BA:1494:G:C4	2.92	0.57
69:DA:3247:HOH:O	56:DD:13:ARG:NH1	2.33	0.57
8:AD:107:PHE:CG	8:AD:145:ILE:HD11	2.39	0.57
6:BB:99:GLY:N	69:BB:301:HOH:O	2.37	0.57
10:BF:25:TYR:O	10:BF:29:ILE:HD13	2.05	0.57
10:BF:38:ARG:CZ	10:BF:99:ALA:HB2	2.34	0.57
33:CJ:53:PRO:O	33:CJ:74:PRO:HD3	2.04	0.57
36:CM:77:ILE:CD1	36:CM:108:ALA:HB1	2.35	0.57
43:DT:60:HIS:CG	43:DT:60:HIS:O	2.58	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.35	0.57
1:AA:1519:MA6:C9	1:AA:1520:C:O2'	2.53	0.57
2:BA:227:G:O2'	20:BP:63:GLN:CG	2.52	0.57
2:BA:667:G:N1	2:BA:740:U:O2	2.38	0.57
2:BA:811:C:N4	2:BA:812:G:C6	2.72	0.57
2:BA:1029:U:C4	2:BA:1031:C:O2	2.57	0.57
2:BA:1162:C:O2	2:BA:1175:G:N2	2.38	0.57
4:CA:668:A:C5	4:CA:670:A:C8	2.93	0.57
4:CA:752:A:O3'	4:CA:753:A:H8	1.88	0.57
4:CA:1075:C:H2'	4:CA:1076:C:O4'	2.04	0.57
4:CA:1545:A:H2'	4:CA:1546:G:O4'	2.04	0.57
4:CA:2069:G:N2	4:CA:2443:C:C2	2.73	0.57
4:CA:2431:U:N3	4:CA:2434:A:OP2	2.31	0.57
4:CA:2454:G:N3	69:CA:3330:HOH:O	2.33	0.57
6:AB:187:VAL:HG23	6:AB:187:VAL:O	2.05	0.57
9:AE:141:ILE:HD13	9:AE:141:ILE:N	2.20	0.57
8:BD:161:LEU:HD22	8:BD:161:LEU:H	1.70	0.57
9:BE:101:GLU:OE1	9:BE:103:THR:N	2.26	0.57
10:BF:41:ASP:OD1	10:BF:58:HIS:NE2	2.36	0.57
27:CC:259:ASN:ND2	69:CC:303:HOH:O	2.37	0.57
29:CE:153:LEU:HB2	29:CE:171:ASP:HB2	1.85	0.57
32:CH:66:ASN:ND2	69:CH:202:HOH:O	2.38	0.57
1:AA:114:U:H2'	1:AA:115:G:C8	2.40	0.57
2:BA:299:G:C6	2:BA:300:A:C6	2.93	0.57
2:BA:676:A:H2'	2:BA:677:U:C6	2.39	0.57
3:DA:693:A:H2'	3:DA:694:U:H6	1.70	0.57
3:DA:826:U:OP1	69:DA:3221:HOH:O	2.18	0.57
3:DA:1042:G:C6	3:DA:1043:C:C4	2.93	0.57
3:DA:1268:A:C2	3:DA:2013:A:C4	2.93	0.57
69:DA:4692:HOH:O	41:DR:32:ARG:HD3	2.04	0.57
4:CA:1203:U:H5'	36:CM:3:LEU:HD23	1.87	0.57
4:CA:1231:U:H2'	4:CA:1232:G:C8	2.39	0.57
4:CA:1341:G:H5'	44:CU:61:LEU:HB3	1.87	0.57
5:DB:94:A:C2'	5:DB:95:U:H5'	2.35	0.57
15:BK:92:GLY:O	15:BK:94:GLU:N	2.38	0.57
28:CD:112:THR:O	28:CD:195:GLY:HA2	2.04	0.57
32:CH:79:THR:HA	32:CH:144:ASN:HB2	1.85	0.57
1:AA:71:A:O2'	1:AA:72:A:P	2.62	0.56
2:BA:246:A:H2'	69:BA:2020:HOH:O	2.03	0.56
2:BA:264:C:O2'	21:BQ:66:PRO:O	2.22	0.56
2:BA:645:G:O6	69:BA:1754:HOH:O	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1098:A:H3'	3:DA:1099:G:C8	2.39	0.56
3:DA:1492:G:N1	3:DA:1499:C:N3	2.53	0.56
3:DA:2189:U:C2	3:DA:2190:G:C8	2.93	0.56
3:DA:2334:U:H4'	69:DA:4094:HOH:O	2.04	0.56
3:DA:2887:A:N3	3:DA:2887:A:H2'	2.19	0.56
4:CA:2240:U:O5'	69:CA:3389:HOH:O	2.18	0.56
4:CA:2505:G:O6	4:CA:2576:G:C8	2.58	0.56
32:CH:11:ASN:OD1	32:CH:11:ASN:N	2.37	0.56
29:DE:44:ARG:NH2	69:DE:404:HOH:O	2.20	0.56
34:DK:7:LYS:O	34:DK:11:VAL:HG23	2.05	0.56
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.40	0.56
2:BA:9:G:OP2	9:BE:126:LYS:HE3	2.04	0.56
2:BA:1160:G:HO2'	2:BA:1161:C:P	2.28	0.56
3:DA:542:C:H2'	3:DA:543:G:H5"	1.87	0.56
3:DA:988:A:H5"	50:D0:11:SER:HB2	1.86	0.56
3:DA:1141:U:OP2	34:DK:65:THR:OG1	2.12	0.56
3:DA:1152:C:OP1	69:DA:3498:HOH:O	2.17	0.56
3:DA:1357:C:H2'	3:DA:1357:C:O2	2.04	0.56
3:DA:2326:C:H1'	3:DA:2327:A:OP1	2.05	0.56
4:CA:456:C:O2	44:CU:73:ARG:HD3	2.05	0.56
4:CA:1163:G:OP1	42:CS:24:LYS:NZ	2.26	0.56
4:CA:1370:C:H2'	4:CA:1371:G:C8	2.41	0.56
4:CA:1973:G:C6	4:CA:1974:C:C4	2.94	0.56
16:AL:102:LEU:O	16:AL:104:CYS:N	2.39	0.56
18:BN:44:ALA:O	18:BN:46:LEU:N	2.36	0.56
36:DM:25:SER:N	69:DM:304:HOH:O	2.33	0.56
1:AA:721:G:H4'	1:AA:722:G:O5'	2.05	0.56
1:AA:923:A:O2'	1:AA:924:C:H5'	2.03	0.56
2:BA:572:A:OP1	69:BA:1758:HOH:O	2.18	0.56
2:BA:1124:G:C2	2:BA:1127:G:N2	2.73	0.56
2:BA:1126:U:O2	2:BA:1280:A:H5"	2.06	0.56
3:DA:787:C:OP1	69:DA:3500:HOH:O	2.18	0.56
3:DA:912:C:O2'	3:DA:913:U:H5'	2.05	0.56
3:DA:2350:C:C2'	3:DA:2351:G:H5'	2.34	0.56
3:DA:2781:A:N6	63:DA:3054:PUT:H12	2.20	0.56
3:DA:2887:A:C5'	3:DA:2888:C:OP2	2.53	0.56
4:CA:370:G:O2'	4:CA:424:G:OP1	2.22	0.56
4:CA:532:A:N7	4:CA:2021:C:O2'	2.24	0.56
4:CA:536:G:N2	4:CA:558:U:O2	2.38	0.56
4:CA:666:A:H4'	36:CM:48:ARG:CD	2.35	0.56
4:CA:668:A:H3'	4:CA:669:G:H5"	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1392:A:N6	4:CA:1393:A:N1	2.52	0.56
4:CA:1606:C:H4'	4:CA:1607:C:H5'	1.88	0.56
5:DB:53:A:C2	5:DB:54:G:C8	2.93	0.56
7:AC:63:SER:N	69:AC:301:HOH:O	2.24	0.56
10:AF:16:GLU:HB3	8:BD:189:SER:HA	1.88	0.56
16:AL:21:VAL:O	16:AL:21:VAL:CG1	2.53	0.56
6:BB:21:ARG:HA	6:BB:21:ARG:NH1	2.20	0.56
15:BK:16:VAL:HG11	15:BK:79:ILE:HG13	1.87	0.56
25:BU:11:PRO:O	25:BU:12:PHE:CD2	2.58	0.56
28:CD:60:VAL:HG13	28:CD:65:ALA:HB2	1.87	0.56
29:CE:52:VAL:HB	29:CE:74:LYS:HD3	1.87	0.56
42:CS:8:GLY:O	42:CS:10:LYS:HD3	2.06	0.56
56:DD:3:GLY:O	56:DD:4:LEU:HD13	2.04	0.56
32:DH:68:ARG:HG2	32:DH:108:VAL:CG1	2.36	0.56
41:DR:83:LYS:HE3	67:DR:204:EDO:H21	1.87	0.56
49:DZ:45:GLN:O	49:DZ:46:VAL:CB	2.52	0.56
1:AA:251:G:H4'	1:AA:252:U:O5'	2.05	0.56
1:AA:1164:G:N2	1:AA:1173:U:O2	2.38	0.56
2:BA:453:G:N2	2:BA:480:U:O2	2.38	0.56
2:BA:1279:G:H4'	2:BA:1280:A:OP1	2.06	0.56
3:DA:878:A:N6	3:DA:899:A:HO2'	2.04	0.56
3:DA:2744:G:H1'	69:DA:4060:HOH:O	2.05	0.56
4:CA:232:G:N1	4:CA:420:C:OP1	2.38	0.56
4:CA:813:U:OP2	36:CM:24:GLY:N	2.34	0.56
4:CA:942:G:H5"	36:CM:33:ARG:O	2.05	0.56
4:CA:1265:A:C8	4:CA:1267:U:C2	2.93	0.56
4:CA:1343:G:H1'	4:CA:1597:A:C4	2.41	0.56
4:CA:1812:U:O2	27:CC:43:ASN:HB2	2.05	0.56
4:CA:2624:G:H2'	4:CA:2625:G:O4'	2.05	0.56
4:CA:2637:U:H5"	28:CD:83:ARG:NH2	2.21	0.56
7:AC:150:LYS:HE3	7:AC:201:TRP:CD2	2.40	0.56
28:CD:129:THR:HG23	28:CD:140:HIS:O	2.06	0.56
57:D7:48:ASP:O	57:D7:53:SER:OG	2.22	0.56
1:AA:953:G:N3	1:AA:1229:A:C2	2.73	0.56
2:BA:16:A:H2'	2:BA:17:U:H5'	1.87	0.56
2:BA:718:A:C8	2:BA:719:C:C5	2.93	0.56
3:DA:2249:U:O4	69:DA:3420:HOH:O	2.17	0.56
3:DA:2498:OMC:O2	3:DA:2498:OMC:HM23	2.05	0.56
4:CA:804:A:H2'	4:CA:806:C:C4	2.41	0.56
4:CA:1203:U:H3'	4:CA:1204:A:H5"	1.88	0.56
4:CA:1231:U:H2'	4:CA:1232:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:21:ARG:NH1	6:AB:21:ARG:HA	2.20	0.56
14:AJ:57:VAL:O	14:AJ:58:ASN:HB2	2.05	0.56
17:AM:4:ILE:O	17:AM:6:GLY:O	2.23	0.56
6:BB:225:ARG:O	6:BB:226:SER:CB	2.54	0.56
11:BG:92:ARG:HB3	11:BG:93:PRO:HD2	1.86	0.56
24:BT:54:MET:HE3	24:BT:58:VAL:HB	1.86	0.56
27:DC:7:PRO:HB3	27:DC:13:ARG:HB2	1.87	0.56
1:AA:685:G:C2	1:AA:686:U:C4	2.93	0.56
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.23	0.56
2:BA:1210:C:H1'	2:BA:1214:C:N3	2.20	0.56
3:DA:657:U:O2'	3:DA:658:U:H5'	2.06	0.56
3:DA:677:A:OP1	66:DA:3050:PEG:O4	2.21	0.56
3:DA:694:U:O2	3:DA:695:G:C8	2.59	0.56
3:DA:1795:C:H2'	3:DA:1796:U:O4'	2.05	0.56
3:DA:1820:U:O2'	27:DC:157:ALA:O	2.15	0.56
4:CA:64:A:H2'	4:CA:65:U:C6	2.40	0.56
4:CA:597:G:C2	4:CA:661:A:C2	2.94	0.56
4:CA:2019:A:N7	51:C1:5:ASN:ND2	2.47	0.56
4:CA:2209:G:C5	4:CA:2210:U:C4	2.94	0.56
13:AI:19:VAL:HA	13:AI:65:ILE:HG22	1.86	0.56
19:AO:63:ARG:HG2	19:AO:67:LEU:HD12	1.87	0.56
9:BE:15:LEU:C	9:BE:15:LEU:HD12	2.25	0.56
9:BE:148:ASN:OD1	12:BH:96:MET:HE1	2.05	0.56
27:CC:204:LEU:HB3	27:CC:209:ALA:HB3	1.88	0.56
29:DE:12:LEU:HD23	29:DE:13:THR:N	2.20	0.56
41:DR:40:LYS:HG3	41:DR:44:TYR:CE2	2.40	0.56
42:DS:80:ARG:N	69:DS:303:HOH:O	2.38	0.56
1:AA:89:U:O2'	1:AA:90:C:H5'	2.05	0.56
1:AA:232:G:C5	1:AA:233:C:C5	2.94	0.56
1:AA:1055:A:C2	1:AA:1206:G:C4	2.94	0.56
2:BA:577:G:C2	2:BA:578:C:C5	2.94	0.56
2:BA:1096:C:C2	2:BA:1097:C:C5	2.94	0.56
3:DA:226:A:H2'	3:DA:227:A:O5'	2.06	0.56
3:DA:578:G:OP2	69:DA:3502:HOH:O	2.18	0.56
3:DA:639:U:H2'	3:DA:640:C:C6	2.41	0.56
3:DA:1218:G:H22	67:DA:3060:EDO:H22	1.70	0.56
3:DA:1299:G:H3'	69:DA:3773:HOH:O	2.06	0.56
3:DA:2517:C:C2	3:DA:2542:A:N6	2.74	0.56
4:CA:380:G:N2	4:CA:395:U:O2	2.39	0.56
4:CA:443:A:OP1	29:CE:40:ARG:HB3	2.05	0.56
4:CA:1371:G:O2'	4:CA:1372:U:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1392:A:N6	44:CU:18:GLU:OE1	2.39	0.56
20:AP:19:VAL:CG2	20:AP:36:VAL:HG12	2.36	0.56
9:BE:133:PRO:HA	9:BE:136:VAL:HG12	1.88	0.56
24:BT:7:ALA:HB1	24:BT:10:ARG:HB2	1.88	0.56
28:CD:104:VAL:O	28:CD:105:LYS:HB3	2.05	0.56
33:CJ:20:SER:CB	33:CJ:21:PRO:HD3	2.36	0.56
48:CY:53:LYS:O	48:CY:56:ARG:N	2.39	0.56
56:DD:101:PHE:HA	56:DD:104:VAL:HG13	1.88	0.56
46:DW:48:MET:O	46:DW:51:GLN:HG3	2.05	0.56
1:AA:255:G:H4'	21:AQ:19:LYS:HD2	1.87	0.56
2:BA:243:A:C8	69:BA:1782:HOH:O	2.58	0.56
2:BA:332:G:OP2	24:BT:5:LYS:HB3	2.06	0.56
2:BA:1090:U:O2'	2:BA:1091:U:H5'	2.05	0.56
2:BA:1162:C:C2	2:BA:1175:G:N2	2.73	0.56
2:BA:1279:G:OP1	14:BJ:9:ARG:NH2	2.39	0.56
2:BA:1512:U:P	69:BA:1726:HOH:O	2.64	0.56
3:DA:1167:C:OP2	69:DA:3495:HOH:O	2.17	0.56
3:DA:2511:U:O4	3:DA:2575:C:N3	2.39	0.56
4:CA:230:G:C2	4:CA:231:A:C8	2.93	0.56
4:CA:489:G:HO2'	4:CA:491:G:H8	1.53	0.56
4:CA:2131:U:H5'	4:CA:2132:U:H5"	1.88	0.56
11:AG:146:GLU:N	69:AG:204:HOH:O	2.39	0.56
20:AP:20:VAL:HG21	20:AP:32:PHE:CG	2.41	0.56
25:AU:8:GLU:CD	25:AU:9:ASN:H	2.09	0.56
11:BG:99:LEU:HB3	11:BG:103:TRP:CH2	2.40	0.56
27:DC:116:GLN:N	27:DC:127:ASN:OD1	2.38	0.56
43:DT:1:MET:N	43:DT:109:ASP:OD1	2.39	0.56
1:AA:6:G:HO2'	1:AA:7:A:P	2.27	0.56
1:AA:104:G:O2'	1:AA:105:G:H5'	2.06	0.56
2:BA:109:A:C6	2:BA:327:A:C6	2.94	0.56
2:BA:572:A:HO2'	2:BA:916:U:HO2'	1.43	0.56
2:BA:637:C:H2'	2:BA:638:U:C6	2.41	0.56
2:BA:1465:A:O2'	69:BA:1757:HOH:O	2.17	0.56
3:DA:1766:G:O2'	3:DA:1767:G:H5'	2.06	0.56
4:CA:247:G:H4'	4:CA:386:G:C4	2.41	0.56
4:CA:519:U:H4'	43:CT:25:ARG:NH2	2.20	0.56
4:CA:1308:A:N6	4:CA:1309:G:C2	2.74	0.56
4:CA:2415:G:C6	4:CA:2416:C:C4	2.94	0.56
10:AF:73:GLU:O	10:AF:77:THR:OG1	2.23	0.56
18:AN:43:ASN:HA	18:AN:45:VAL:HG22	1.87	0.56
23:AS:29:LYS:HB3	23:AS:30:PRO:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AS:37:ARG:O	23:AS:70:LYS:HD2	2.05	0.56
6:BB:19:GLN:HB3	6:BB:189:THR:OG1	2.06	0.56
21:BQ:14:SER:HB3	21:BQ:22:VAL:CG1	2.36	0.56
42:CS:78:ARG:HB3	42:CS:83:TYR:HB3	1.88	0.56
37:DN:132:THR:HG22	37:DN:133:LYS:N	2.21	0.56
42:DS:78:ARG:NH1	69:DS:304:HOH:O	2.39	0.56
2:BA:369:G:OP2	2:BA:388:G:N1	2.39	0.56
2:BA:496:A:C2	2:BA:497:G:C5	2.93	0.56
3:DA:588:U:H2'	3:DA:589:U:C6	2.41	0.56
3:DA:814:C:P	69:DA:3566:HOH:O	2.64	0.56
3:DA:1021:A:H3'	3:DA:1021:A:N3	2.22	0.56
3:DA:1105:U:H2'	3:DA:1106:G:C8	2.40	0.56
3:DA:1967:C:H2'	3:DA:1967:C:O2	2.05	0.56
4:CA:122:G:H2'	4:CA:123:G:O4'	2.06	0.56
4:CA:659:G:H4'	29:CE:95:LYS:HD3	1.88	0.56
4:CA:1011:G:C2	4:CA:1013:C:C2	2.94	0.56
4:CA:1341:G:OP2	4:CA:1394:U:O2'	2.15	0.56
7:AC:85:GLU:OE1	7:AC:88:ARG:NH1	2.39	0.56
12:AH:28:PRO:O	12:AH:33:LYS:NZ	2.23	0.56
20:AP:46:LYS:HD3	20:AP:47:GLU:H	1.71	0.56
9:BE:137:VAL:HG22	9:BE:137:VAL:O	2.05	0.56
29:CE:55:SER:OG	29:CE:56:GLY:N	2.36	0.56
39:CP:34:HIS:HA	39:CP:65:THR:O	2.05	0.56
52:C2:50:GLU:OE2	52:C2:52:LYS:HG3	2.06	0.56
43:DT:47:VAL:HA	43:DT:50:VAL:HG23	1.87	0.56
55:D5:40:GLN:HB3	69:D5:208:HOH:O	2.05	0.56
1:AA:243:A:C5	1:AA:245:U:C4	2.94	0.55
1:AA:1239:A:OP1	11:AG:109:ARG:NH1	2.36	0.55
2:BA:495:A:C2	2:BA:496:A:C6	2.95	0.55
2:BA:706:A:C4'	15:BK:31:ILE:HD11	2.35	0.55
2:BA:858:G:O6	2:BA:869:G:H3'	2.06	0.55
3:DA:1246:A:H2'	3:DA:1247:A:O5'	2.06	0.55
3:DA:1360:G:H2'	3:DA:1361:G:H5'	1.88	0.55
3:DA:1424:G:H2'	3:DA:1425:G:O4'	2.07	0.55
3:DA:1711:A:O2'	3:DA:1712:U:H5'	2.06	0.55
4:CA:2550:G:N2	4:CA:2559:C:O2	2.38	0.55
6:BB:64:LYS:HA	6:BB:64:LYS:CE	2.36	0.55
29:DE:108:ILE:HD11	29:DE:180:LEU:CB	2.35	0.55
30:DF:174:PHE:CD2	30:DF:176:PHE:CZ	2.92	0.55
35:DL:38:ILE:HD11	35:DL:112:PHE:HZ	1.69	0.55
57:D7:25:ILE:CG2	57:D7:26:GLY:N	2.68	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:H2'	1:AA:36:C:C6	2.40	0.55
1:AA:66:A:C6	1:AA:67:C:C5	2.94	0.55
1:AA:1497:G:H1'	1:AA:1518:MA6:H2	1.89	0.55
2:BA:475:C:H2'	2:BA:476:U:C6	2.41	0.55
2:BA:568:G:O6	26:BL:2:ALA:HB2	2.06	0.55
2:BA:716:A:N3	15:BK:120:GLY:HA2	2.21	0.55
2:BA:1034:G:H2'	2:BA:1035:A:C8	2.41	0.55
2:BA:1289:A:N1	2:BA:1371:G:O2'	2.31	0.55
2:BA:1414:U:H4'	69:BA:1905:HOH:O	2.06	0.55
3:DA:820:A:H2'	3:DA:821:A:O4'	2.06	0.55
3:DA:2036:C:O2'	69:DA:3384:HOH:O	2.05	0.55
3:DA:2056:G:OP1	69:DA:3504:HOH:O	2.18	0.55
3:DA:2350:C:O2'	3:DA:2351:G:H5'	2.07	0.55
3:DA:2419:U:OP1	54:D4:40:LYS:NZ	2.36	0.55
4:CA:1627:G:C2	4:CA:1628:G:N7	2.74	0.55
4:CA:2509:G:N2	4:CA:2580:U:H1'	2.20	0.55
8:AD:60:LYS:NZ	8:AD:194:ASP:O	2.39	0.55
9:BE:81:LEU:CD1	9:BE:120:VAL:HG11	2.35	0.55
14:BJ:53:ILE:HD11	18:BN:85:ARG:CZ	2.36	0.55
19:BO:87:LEU:O	19:BO:88:ARG:CB	2.55	0.55
2:BA:299:G:C2'	2:BA:300:A:O5'	2.54	0.55
3:DA:20:C:O2'	3:DA:21:A:H5'	2.07	0.55
3:DA:1080:A:O2'	33:DJ:127:SER:HA	2.06	0.55
3:DA:1258:U:P	69:DA:3283:HOH:O	2.63	0.55
3:DA:1769:U:O2'	3:DA:1770:G:O5'	2.21	0.55
3:DA:2284:A:OP1	52:D2:3:GLY:O	2.23	0.55
4:CA:466:A:P	69:CA:3399:HOH:O	2.65	0.55
4:CA:1015:U:H2'	4:CA:1016:G:O4'	2.06	0.55
4:CA:1154:G:P	41:CR:57:ARG:HH11	2.29	0.55
4:CA:2053:G:N2	4:CA:2054:A:H1'	2.21	0.55
4:CA:2273:A:H2'	4:CA:2274:A:C8	2.41	0.55
4:CA:2852:G:H2'	4:CA:2853:C:O4'	2.07	0.55
29:CE:46:GLN:OE1	29:CE:87:ALA:N	2.39	0.55
45:CV:53:GLN:N	45:CV:54:PRO:HD3	2.22	0.55
54:C4:55:GLY:O	54:C4:56:LEU:HG	2.07	0.55
33:DJ:78:LEU:HD13	33:DJ:108:ILE:CG2	2.36	0.55
1:AA:1503:A:OP1	1:AA:1531:A:O2'	2.22	0.55
2:BA:230:G:H2'	2:BA:231:U:O4'	2.07	0.55
2:BA:609:A:O5'	2:BA:609:A:H8	1.89	0.55
2:BA:770:C:H2'	2:BA:771:G:H5'	1.87	0.55
2:BA:946:A:H2'	2:BA:947:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:156:A:H2'	3:DA:157:C:O4'	2.07	0.55
3:DA:306:U:C2'	3:DA:307:G:H5'	2.37	0.55
3:DA:2334:U:H4'	3:DA:2335:A:OP2	2.06	0.55
4:CA:243:U:O5'	54:C4:7:ARG:NH2	2.39	0.55
4:CA:566:U:O2'	4:CA:809:G:OP2	2.21	0.55
4:CA:2060:A:O4'	4:CA:2502:G:H1'	2.07	0.55
4:CA:2134:A:N7	4:CA:2157:G:O2'	2.38	0.55
4:CA:2585:U:O2'	4:CA:2586:U:H5'	2.07	0.55
4:CA:2619:C:OP1	28:CD:157:LYS:NZ	2.38	0.55
4:CA:2675:A:H5"	4:CA:2676:C:OP2	2.06	0.55
4:CA:2823:A:H2'	4:CA:2824:C:H5'	1.88	0.55
69:CA:3897:HOH:O	34:CK:39:LYS:HE3	2.05	0.55
6:AB:130:THR:HG22	6:AB:132:LYS:H	1.71	0.55
7:AC:205:GLY:O	7:AC:206:GLU:CG	2.55	0.55
14:AJ:57:VAL:HG22	14:AJ:58:ASN:N	2.20	0.55
6:BB:141:LEU:O	6:BB:145:GLU:N	2.33	0.55
6:BB:143:LYS:O	6:BB:147:SER:OG	2.22	0.55
22:BR:34:THR:HG23	22:BR:36:SER:H	1.72	0.55
29:CE:151:GLY:HA3	29:CE:191:ASP:HB3	1.89	0.55
33:CJ:28:GLY:HA2	33:CJ:32:VAL:HB	1.88	0.55
33:CJ:53:PRO:O	33:CJ:74:PRO:CD	2.54	0.55
34:CK:77:HIS:HA	34:CK:83:GLY:O	2.07	0.55
30:DF:7:TYR:HA	30:DF:11:VAL:CG2	2.37	0.55
38:DO:63:ARG:NE	69:DO:203:HOH:O	2.20	0.55
51:D1:7:PRO:HA	69:D1:209:HOH:O	2.06	0.55
1:AA:1016:A:N6	1:AA:1017:U:HO2'	2.00	0.55
2:BA:218:U:H2'	2:BA:219:U:O4'	2.07	0.55
2:BA:935:A:C2	2:BA:936:C:C2	2.93	0.55
3:DA:818:G:O5'	3:DA:818:G:H8	1.89	0.55
3:DA:851:C:O2'	3:DA:852:U:H5'	2.07	0.55
3:DA:1063:G:N2	33:DJ:89:SER:HG	2.01	0.55
3:DA:1177:G:H2'	3:DA:1178:C:C6	2.41	0.55
3:DA:1510:G:H2'	3:DA:1511:G:O4'	2.06	0.55
4:CA:187:G:O2'	4:CA:1365:A:N3	2.29	0.55
4:CA:660:C:H4'	29:CE:94:GLN:OE1	2.07	0.55
4:CA:1567:G:C5	27:CC:82:TYR:HD2	2.25	0.55
4:CA:2084:C:O2'	4:CA:2085:U:H5'	2.07	0.55
4:CA:2130:U:O2'	4:CA:2133:G:O2'	2.24	0.55
6:AB:16:PHE:O	6:AB:41:ILE:HD12	2.07	0.55
14:AJ:65:TYR:HB3	18:AN:96:LEU:HD11	1.89	0.55
13:BI:128:SER:O	13:BI:129:LYS:C	2.45	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CU:8:LEU:O	49:CZ:29:ARG:NH1	2.40	0.55
48:CY:71:ARG:O	48:CY:73:ARG:N	2.40	0.55
56:DD:18:ASP:HA	61:DQ:202:PG4:H42	1.87	0.55
31:DG:72:ASN:O	31:DG:76:ILE:HG13	2.07	0.55
33:DJ:53:PRO:O	33:DJ:74:PRO:HD3	2.06	0.55
37:DN:2:LEU:HD13	69:DN:325:HOH:O	2.05	0.55
1:AA:1024:G:HO2'	1:AA:1025:U:P	2.28	0.55
2:BA:109:A:C4	2:BA:327:A:C2	2.94	0.55
3:DA:1825:U:P	69:DA:3496:HOH:O	2.65	0.55
3:DA:1844:C:O3'	27:DC:255:LYS:NZ	2.38	0.55
4:CA:2592:G:C5	4:CA:2593:U:C5	2.95	0.55
6:BB:20:THR:N	6:BB:38:VAL:HG23	2.22	0.55
13:BI:83:ILE:O	13:BI:87:LEU:N	2.39	0.55
24:BT:36:TYR:C	24:BT:36:TYR:CD1	2.80	0.55
25:BU:6:VAL:HG21	25:BU:19:PHE:HA	1.89	0.55
27:CC:12:ARG:HG3	27:CC:12:ARG:O	2.06	0.55
2:BA:577:G:N9	2:BA:816:A:C2	2.75	0.55
2:BA:880:C:OP2	26:BL:3:THR:HG21	2.06	0.55
3:DA:493:G:H2'	3:DA:494:G:O4'	2.07	0.55
3:DA:911:A:OP1	62:DA:3036:SPD:H51	2.07	0.55
3:DA:1106:G:C2	3:DA:1107:G:C8	2.94	0.55
3:DA:1327:A:C2'	3:DA:1328:A:H5'	2.36	0.55
3:DA:1551:A:OP2	69:DA:3511:HOH:O	2.18	0.55
3:DA:1644:C:H5"	3:DA:1644:C:H6	1.72	0.55
3:DA:1935:G:N7	3:DA:1962:5MC:HM53	2.22	0.55
3:DA:2377:A:O2'	3:DA:2378:A:H5'	2.06	0.55
3:DA:2440:C:H1'	69:DA:3641:HOH:O	2.07	0.55
4:CA:377:G:C6	4:CA:378:C:C4	2.94	0.55
4:CA:2447:G:C8	4:CA:2500:U:H3'	2.42	0.55
8:AD:124:MET:O	8:AD:143:VAL:HA	2.07	0.55
9:BE:156:LYS:HD3	12:BH:71:VAL:HG13	1.89	0.55
33:CJ:20:SER:HB3	33:CJ:21:PRO:HD3	1.88	0.55
49:DZ:15:ASN:OD1	49:DZ:57:LEU:HD21	2.06	0.55
49:DZ:56:LEU:HA	49:DZ:59:GLU:HG2	1.89	0.55
54:D4:31:ILE:HG22	54:D4:34:LYS:HD2	1.88	0.55
1:AA:545:C:H5'	8:AD:69:GLU:HB2	1.88	0.55
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.07	0.55
2:BA:461:A:H2'	2:BA:462:G:O4'	2.07	0.55
2:BA:764:C:H2'	2:BA:765:G:H5'	1.89	0.55
3:DA:1693:U:H1'	27:DC:13:ARG:NH1	2.22	0.55
3:DA:1736:U:H2'	3:DA:1737:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2297:A:C2	3:DA:2298:A:C8	2.95	0.55
4:CA:1496:A:N3	4:CA:1577:C:O2'	2.40	0.55
4:CA:1792:G:O2'	4:CA:1793:C:H5'	2.07	0.55
4:CA:2201:G:O6	4:CA:2223:G:C6	2.60	0.55
10:AF:5:GLU:O	10:AF:6:ILE:CG1	2.55	0.55
14:AJ:41:PRO:O	14:AJ:71:LEU:O	2.24	0.55
17:AM:8:ASN:OD1	17:AM:9:ILE:N	2.40	0.55
17:AM:17:ILE:O	17:AM:20:THR:OG1	2.19	0.55
18:AN:25:GLU:HG3	18:AN:26:LEU:N	2.22	0.55
13:BI:16:ALA:O	13:BI:67:VAL:HA	2.06	0.55
18:BN:20:PHE:O	18:BN:21:ALA:HB3	2.06	0.55
38:CO:20:MET:C	38:CO:22:ARG:H	2.11	0.55
1:AA:86:G:HO2'	1:AA:87:C:P	2.26	0.55
1:AA:411:A:P	8:AD:26:ARG:NH2	2.78	0.55
1:AA:863:U:O2	1:AA:867:G:C2	2.60	0.55
1:AA:1125:U:H4'	14:AJ:7:ARG:NH2	2.21	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
1:AA:1464:U:P	40:DQ:108:ARG:HH12	2.29	0.55
2:BA:552:U:N3	2:BA:553:A:N7	2.55	0.55
2:BA:618:C:H3'	2:BA:619:U:H5"	1.89	0.55
3:DA:784:G:H5'	3:DA:785:G:OP1	2.07	0.55
3:DA:1014:A:C5	3:DA:1015:U:C5	2.95	0.55
3:DA:1478:G:C2'	3:DA:1479:G:H5'	2.37	0.55
3:DA:1851:U:C5	3:DA:1852:U:C5	2.95	0.55
3:DA:2015:A:H8	3:DA:2015:A:O5'	1.90	0.55
3:DA:2060:A:O2'	69:DA:3507:HOH:O	2.18	0.55
4:CA:335:C:O2	45:CV:67:SER:O	2.25	0.55
4:CA:1034:G:O4'	55:C5:21:LYS:NZ	2.37	0.55
4:CA:2353:G:H2'	4:CA:2354:C:O4'	2.06	0.55
7:AC:150:LYS:HE3	7:AC:201:TRP:CE2	2.42	0.55
11:AG:69:VAL:HG21	11:AG:104:ILE:HD11	1.89	0.55
6:BB:131:LYS:HE2	6:BB:131:LYS:HA	1.87	0.55
8:BD:203:LEU:HD12	8:BD:203:LEU:O	2.07	0.55
21:BQ:15:ASP:OD2	21:BQ:54:GLY:HA2	2.06	0.55
22:BR:43:ARG:HG3	22:BR:44:ILE:HD13	1.88	0.55
25:BU:9:ASN:HB2	25:BU:12:PHE:CD2	2.42	0.55
45:CV:60:LYS:HA	45:CV:60:LYS:HE3	1.89	0.55
31:DG:95:ALA:HA	31:DG:103:ASN:O	2.07	0.55
46:DW:10:LYS:NZ	46:DW:41:GLU:OE2	2.40	0.55
1:AA:760:G:N7	1:AA:761:G:N7	2.55	0.55
1:AA:872:A:OP1	1:AA:872:A:H3'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1028:C:N3	1:AA:1033:G:N1	2.54	0.55
2:BA:1113:C:H4'	7:BC:14:ILE:HD12	1.89	0.55
2:BA:1521:C:H2'	2:BA:1522:U:O5'	2.07	0.55
3:DA:528:A:OP2	34:DK:116:ARG:NH2	2.39	0.55
3:DA:854:C:H2'	3:DA:855:G:H5'	1.89	0.55
3:DA:1009:A:OP2	34:DK:39:LYS:NZ	2.40	0.55
3:DA:1585:C:C2'	3:DA:1586:A:H5'	2.37	0.55
3:DA:1805:A:H1'	27:DC:49:THR:O	2.07	0.55
3:DA:2324:U:H3'	3:DA:2325:G:H5"	1.87	0.55
3:DA:2552:OMU:O3'	3:DA:2552:OMU:HM22	2.07	0.55
3:DA:2595:G:N2	3:DA:2597:G:H3'	2.21	0.55
4:CA:520:G:OP1	43:CT:25:ARG:HD3	2.07	0.55
4:CA:812:C:H2'	4:CA:813:U:H5'	1.89	0.55
4:CA:1029:A:H5"	37:CN:127:LYS:NZ	2.22	0.55
4:CA:1577:C:H2'	4:CA:1578:U:C1'	2.37	0.55
13:AI:30:ILE:HD11	13:AI:38:TYR:CD1	2.42	0.55
24:AT:3:ASN:O	24:AT:5:LYS:N	2.40	0.55
6:BB:68:LEU:HA	6:BB:90:PHE:O	2.06	0.55
6:BB:135:LEU:HA	6:BB:138:THR:HG1	1.71	0.55
25:BU:12:PHE:CD1	25:BU:15:ALA:N	2.75	0.55
27:CC:209:ALA:HA	27:CC:212:TRP:CE2	2.41	0.55
30:CF:37:MET:HG2	30:CF:151:LEU:HB3	1.88	0.55
33:CJ:5:GLN:NE2	33:CJ:60:VAL:O	2.39	0.55
1:AA:558:G:C4	1:AA:559:A:C2	2.94	0.54
1:AA:1109:C:P	7:AC:176:HIS:HD1	2.30	0.54
1:AA:1197:A:OP1	69:AA:1741:HOH:O	2.18	0.54
2:BA:947:G:N2	2:BA:1235:U:O2	2.40	0.54
2:BA:1101:A:H4'	2:BA:1102:A:O5'	2.06	0.54
3:DA:372:G:H5"	48:DY:60:LYS:HD3	1.89	0.54
3:DA:980:A:N7	69:DA:3746:HOH:O	2.33	0.54
3:DA:2048:G:C2'	3:DA:2049:G:O5'	2.54	0.54
3:DA:2798:U:H6	3:DA:2798:U:H5'	1.72	0.54
3:DA:2886:A:N6	51:D1:26:SER:OG	2.32	0.54
4:CA:197:A:C8	4:CA:2430:A:C8	2.95	0.54
4:CA:414:C:H4'	4:CA:1879:C:O2	2.07	0.54
4:CA:1358:G:O2'	4:CA:1359:A:H5'	2.06	0.54
4:CA:1458:U:H5"	4:CA:1459:G:O4'	2.07	0.54
4:CA:2834:G:H2'	4:CA:2879:A:N6	2.22	0.54
9:BE:11:LEU:O	9:BE:40:GLY:O	2.25	0.54
11:BG:47:LEU:HB3	11:BG:58:GLU:OE2	2.07	0.54
15:BK:27:PHE:CZ	15:BK:89:PRO:HG2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BL:24:LEU:HD22	26:BL:59:ASN:ND2	2.23	0.54
27:CC:6:LYS:O	27:CC:12:ARG:O	2.25	0.54
44:DU:5:GLU:O	44:DU:9:LYS:HG3	2.08	0.54
57:D7:13:VAL:HG23	57:D7:38:ASP:CB	2.37	0.54
1:AA:1012:A:N6	1:AA:1013:G:C6	2.75	0.54
2:BA:1108:G:O6	69:BA:1707:HOH:O	2.18	0.54
2:BA:1144:G:C2	2:BA:1145:A:C2	2.95	0.54
3:DA:409:G:O2'	3:DA:410:G:H5'	2.07	0.54
3:DA:449:A:OP2	69:DA:3503:HOH:O	2.18	0.54
3:DA:728:G:H3'	3:DA:729:G:H5'	1.88	0.54
3:DA:1464:G:H2'	3:DA:1465:G:C8	2.42	0.54
3:DA:2503:2MA:O3'	69:DA:3512:HOH:O	2.18	0.54
4:CA:12:U:O2	4:CA:12:U:H2'	2.06	0.54
4:CA:180:G:N2	69:CA:3485:HOH:O	2.40	0.54
4:CA:1187:G:OP1	69:CA:3393:HOH:O	2.18	0.54
4:CA:1398:C:H5'	44:CU:59:ASN:ND2	2.22	0.54
4:CA:2199:A:N6	4:CA:2225:A:C5	2.75	0.54
11:AG:47:LEU:O	11:AG:51:ALA:N	2.32	0.54
14:AJ:29:ALA:C	14:AJ:31:ARG:H	2.09	0.54
14:AJ:32:THR:HG23	14:AJ:83:THR:OG1	2.07	0.54
24:AT:3:ASN:C	24:AT:3:ASN:OD1	2.45	0.54
7:BC:172:ARG:HG2	7:BC:174:PRO:HD3	1.89	0.54
34:CK:110:PRO:O	34:CK:115:GLY:HA3	2.07	0.54
45:CV:3:LYS:NZ	69:CV:203:HOH:O	2.39	0.54
33:DJ:79:LEU:HD13	33:DJ:135:MET:SD	2.47	0.54
42:DS:58:VAL:HG13	42:DS:102:SER:HB2	1.87	0.54
1:AA:354:G:C2'	1:AA:355:C:H5'	2.38	0.54
1:AA:1046:A:H2'	1:AA:1047:G:H5'	1.88	0.54
2:BA:2:A:H5"	2:BA:3:A:OP2	2.06	0.54
2:BA:132:C:H5'	2:BA:262:A:O2'	2.07	0.54
2:BA:600:A:C2	2:BA:639:G:C2	2.96	0.54
2:BA:764:C:N4	2:BA:765:G:C6	2.75	0.54
2:BA:1520:C:H6	2:BA:1520:C:H5"	1.73	0.54
3:DA:847:U:OP1	69:DA:3509:HOH:O	2.18	0.54
3:DA:965:C:P	69:DA:3459:HOH:O	2.65	0.54
3:DA:986:C:C2'	3:DA:987:C:H5'	2.38	0.54
3:DA:1812:U:H2'	3:DA:1813:G:C8	2.41	0.54
3:DA:1854:A:H2'	3:DA:1855:U:H5'	1.89	0.54
4:CA:388:G:N7	4:CA:390:U:H2'	2.23	0.54
4:CA:1125:G:C6	4:CA:1126:A:N6	2.76	0.54
4:CA:1367:A:H5"	69:CA:3238:HOH:O	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AE:100:SER:OG	9:AE:101:GLU:N	2.41	0.54
7:BC:117:ALA:HB2	7:BC:200:VAL:CG1	2.37	0.54
9:BE:66:LYS:O	9:BE:70:ASN:ND2	2.40	0.54
9:BE:106:ILE:O	9:BE:106:ILE:HG13	2.07	0.54
32:CH:71:LYS:HB3	32:CH:108:VAL:HG21	1.90	0.54
36:DM:19:LEU:HD23	36:DM:27:LEU:HB3	1.90	0.54
43:DT:12:SER:HA	69:DT:314:HOH:O	2.06	0.54
1:AA:254:G:OP1	21:AQ:70:THR:HG22	2.07	0.54
1:AA:340:U:H2'	1:AA:341:C:H6	1.72	0.54
1:AA:469:C:H2'	1:AA:470:C:O4'	2.08	0.54
1:AA:622:A:H2'	1:AA:623:C:H5'	1.89	0.54
1:AA:760:G:N7	1:AA:761:G:C8	2.75	0.54
1:AA:820:U:H4'	1:AA:821:G:OP2	2.06	0.54
1:AA:1152:A:H5"	14:AJ:15:HIS:CD2	2.42	0.54
2:BA:49:U:O4	2:BA:365:U:H5	1.89	0.54
2:BA:642:A:C4	12:BH:106:THR:O	2.60	0.54
3:DA:136:G:H1	3:DA:143:C:N4	2.06	0.54
3:DA:576:U:H2'	3:DA:577:G:C8	2.43	0.54
3:DA:686:U:H2'	3:DA:788:A:C2	2.42	0.54
3:DA:1592:C:H2'	3:DA:1593:A:O4'	2.07	0.54
3:DA:2050:C:C2'	3:DA:2051:A:O5'	2.56	0.54
3:DA:2706:A:H3'	69:DA:3548:HOH:O	2.06	0.54
4:CA:246:C:H2'	4:CA:247:G:H5'	1.90	0.54
4:CA:514:A:C2	4:CA:582:A:O4'	2.61	0.54
4:CA:1250:G:H4'	41:CR:5:ARG:HD2	1.89	0.54
4:CA:2415:G:C2	4:CA:2416:C:C2	2.96	0.54
6:AB:186:ILE:HD11	6:AB:204:ASP:HB3	1.88	0.54
14:AJ:73:LEU:O	14:AJ:74:VAL:CB	2.55	0.54
8:BD:166:GLU:O	8:BD:167:LYS:HB2	2.07	0.54
15:BK:31:ILE:HG22	15:BK:46:THR:CG2	2.38	0.54
15:BK:112:ASP:OD1	15:BK:114:THR:HG23	2.07	0.54
33:CJ:13:ALA:HB2	33:CJ:53:PRO:HG3	1.88	0.54
38:CO:47:VAL:O	38:CO:47:VAL:HG12	2.07	0.54
38:CO:101:GLY:N	69:CO:202:HOH:O	2.40	0.54
44:CU:18:GLU:O	44:CU:22:THR:OG1	2.26	0.54
32:DH:131:PHE:CE1	32:DH:141:VAL:HG23	2.42	0.54
36:DM:7:SER:N	69:DM:308:HOH:O	2.40	0.54
42:DS:79:ARG:HG2	69:DS:309:HOH:O	2.08	0.54
57:D7:46:THR:O	57:D7:48:ASP:N	2.40	0.54
1:AA:373:A:H2'	1:AA:374:A:H8	1.71	0.54
1:AA:555:U:H2'	1:AA:556:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:725:G:C2	1:AA:726:C:C6	2.94	0.54
3:DA:819:A:N3	3:DA:1189:A:C2	2.75	0.54
3:DA:1812:U:H2'	3:DA:1813:G:H8	1.72	0.54
4:CA:413:C:H4'	4:CA:1880:U:H4'	1.89	0.54
4:CA:450:G:H2'	4:CA:451:U:H5"	1.89	0.54
4:CA:1270:C:O2'	4:CA:1648:U:OP2	2.25	0.54
4:CA:1851:U:H2'	4:CA:1852:U:O4'	2.08	0.54
4:CA:1881:C:H2'	4:CA:1882:U:O4'	2.07	0.54
7:AC:77:ILE:HA	7:AC:84:VAL:CG2	2.37	0.54
14:AJ:91:ASP:C	14:AJ:92:LEU:HG	2.28	0.54
42:CS:41:ILE:HD12	42:CS:54:VAL:HG11	1.89	0.54
32:DH:27:ARG:HG3	32:DH:28:ASN:N	2.22	0.54
1:AA:262:A:C6	1:AA:263:A:C6	2.94	0.54
1:AA:1016:A:C6	1:AA:1017:U:O2'	2.60	0.54
2:BA:436:C:C2	2:BA:437:U:C5	2.94	0.54
2:BA:577:G:C8	2:BA:816:A:N1	2.76	0.54
2:BA:1004:A:H2'	2:BA:1005:A:O4'	2.08	0.54
2:BA:1074:G:H4'	6:BB:102:THR:O	2.07	0.54
2:BA:1092:A:N7	2:BA:1093:A:N6	2.56	0.54
2:BA:1167:A:N7	2:BA:1169:A:C6	2.75	0.54
3:DA:1018:U:O3'	3:DA:1120:G:N2	2.40	0.54
3:DA:2732:G:H3'	3:DA:2733:A:O4'	2.08	0.54
69:DA:4478:HOH:O	36:DM:18:ARG:HA	2.07	0.54
4:CA:769:U:C4	4:CA:770:G:N7	2.76	0.54
10:AF:76:THR:O	10:AF:79:ARG:N	2.38	0.54
18:AN:61:ARG:NH1	69:AN:203:HOH:O	2.40	0.54
6:BB:86:SER:OG	6:BB:87:CYS:N	2.41	0.54
6:BB:95:ARG:H	6:BB:95:ARG:NE	2.06	0.54
9:BE:155:ALA:HB1	12:BH:66:PHE:CE2	2.43	0.54
35:DL:107:LEU:C	35:DL:109:SER:N	2.59	0.54
1:AA:176:C:C2'	1:AA:177:G:O5'	2.56	0.54
1:AA:923:A:OP1	9:AE:26:LYS:HE2	2.08	0.54
2:BA:532:A:N3	2:BA:532:A:H2'	2.22	0.54
2:BA:692:U:H1'	2:BA:695:A:N7	2.23	0.54
2:BA:899:C:OP1	2:BA:899:C:H6	1.90	0.54
2:BA:1415:G:OP1	69:BA:1756:HOH:O	2.17	0.54
3:DA:215:G:O3'	3:DA:216:A:H4'	2.07	0.54
3:DA:286:U:H2'	3:DA:287:G:O4'	2.07	0.54
3:DA:877:A:H8	3:DA:877:A:OP2	1.91	0.54
3:DA:1670:C:C5	3:DA:1671:U:C5	2.96	0.54
3:DA:2286:G:OP2	52:D2:5:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2364:C:H2'	3:DA:2365:G:H5'	1.90	0.54
3:DA:2394:C:C2'	3:DA:2395:C:H5'	2.38	0.54
3:DA:2885:G:H4'	3:DA:2886:A:O5'	2.08	0.54
4:CA:690:G:H2'	4:CA:691:C:O4'	2.07	0.54
4:CA:1248:G:N3	41:CR:2:ARG:HD2	2.23	0.54
4:CA:1494:A:H2'	4:CA:1495:A:C8	2.43	0.54
4:CA:2689:U:H4'	4:CA:2690:U:OP2	2.08	0.54
10:AF:44:ARG:NH2	69:AF:201:HOH:O	2.38	0.54
17:AM:3:ARG:O	17:AM:4:ILE:HB	2.07	0.54
10:BF:72:ASP:O	10:BF:76:THR:HG23	2.08	0.54
13:BI:12:ARG:HD3	13:BI:107:ASP:HB3	1.89	0.54
26:BL:84:GLY:HA2	26:BL:95:TYR:HA	1.88	0.54
34:CK:81:ILE:HG12	34:CK:82:GLY:N	2.21	0.54
36:CM:82:LEU:O	36:CM:85:VAL:HG13	2.08	0.54
29:DE:29:HIS:HB2	69:DM:308:HOH:O	2.08	0.54
31:DG:126:THR:HG22	31:DG:128:THR:H	1.72	0.54
1:AA:232:G:C2'	1:AA:233:C:H5'	2.38	0.54
1:AA:857:C:N4	1:AA:858:G:C6	2.76	0.54
1:AA:1033:G:H2'	1:AA:1034:G:C8	2.43	0.54
2:BA:94:G:H4'	2:BA:95:C:OP1	2.08	0.54
2:BA:207:C:HO2'	2:BA:213:G:N2	2.05	0.54
2:BA:764:C:C2'	2:BA:765:G:H5'	2.37	0.54
2:BA:1066:C:N4	2:BA:1067:A:N6	2.55	0.54
2:BA:1072:G:H2'	2:BA:1073:U:C6	2.43	0.54
3:DA:163:C:H2'	3:DA:164:C:C6	2.43	0.54
3:DA:250:G:OP2	54:D4:12:ARG:NH1	2.41	0.54
3:DA:745:1MG:P	69:DA:3490:HOH:O	2.65	0.54
3:DA:993:G:C2'	3:DA:994:C:H5'	2.38	0.54
3:DA:2135:A:C8	3:DA:2136:G:C8	2.96	0.54
3:DA:2251:OMG:H5'	69:DA:3369:HOH:O	2.07	0.54
3:DA:2327:A:C5'	69:DA:3715:HOH:O	2.54	0.54
3:DA:2794:C:H2'	3:DA:2795:C:H6	1.73	0.54
4:CA:832:U:OP1	36:CM:39:LYS:N	2.37	0.54
4:CA:2201:G:H2'	4:CA:2202:U:H6	1.73	0.54
4:CA:2230:G:O5'	69:CA:3397:HOH:O	2.19	0.54
4:CA:2235:G:H2'	4:CA:2236:U:O4'	2.08	0.54
14:AJ:28:THR:O	14:AJ:28:THR:HG22	2.07	0.54
9:BE:24:THR:HA	9:BE:29:ARG:HA	1.90	0.54
11:BG:95:ARG:CZ	11:BG:99:LEU:HD21	2.38	0.54
13:BI:12:ARG:NH1	13:BI:107:ASP:OD1	2.41	0.54
17:BM:66:GLU:C	17:BM:68:ASP:H	2.11	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BM:71:ARG:CZ	30:CF:112:ASP:OD1	2.55	0.54
29:CE:151:GLY:O	29:CE:195:GLN:NE2	2.41	0.54
41:CR:16:ILE:HG23	41:CR:38:VAL:HG21	1.90	0.54
53:C3:10:LEU:HD11	53:C3:14:ARG:NE	2.23	0.54
31:DG:93:TYR:O	31:DG:94:ARG:HD3	2.07	0.54
1:AA:1124:G:O2'	1:AA:1145:A:N6	2.41	0.54
2:BA:511:C:O2'	2:BA:512:U:OP2	2.18	0.54
2:BA:1263:C:H2'	2:BA:1264:U:N1	2.23	0.54
3:DA:12:U:O2	3:DA:12:U:H2'	2.08	0.54
3:DA:1061:U:O2'	3:DA:1062:G:H5"	2.07	0.54
3:DA:1066:U:H3'	3:DA:1067:A:C5'	2.38	0.54
3:DA:1385:A:H1'	3:DA:1386:C:C6	2.42	0.54
3:DA:1590:A:H2'	3:DA:1591:A:H8	1.72	0.54
3:DA:2114:A:OP2	3:DA:2115:G:N1	2.41	0.54
3:DA:2638:G:O2'	3:DA:2775:G:N2	2.41	0.54
4:CA:202:U:H2'	4:CA:203:A:C8	2.43	0.54
4:CA:1033:U:O2'	4:CA:2750:A:N6	2.40	0.54
4:CA:1366:A:C4	4:CA:1367:A:C8	2.96	0.54
4:CA:2846:G:OP2	40:CQ:51:ASN:HB2	2.08	0.54
21:AQ:12:VAL:O	21:AQ:13:VAL:HG12	2.08	0.54
23:AS:36:ARG:NH2	23:AS:75:ALA:O	2.40	0.54
6:BB:151:ILE:HD11	6:BB:154:MET:SD	2.48	0.54
26:BL:24:LEU:HD22	26:BL:59:ASN:HD22	1.72	0.54
25:BU:12:PHE:CE1	25:BU:14:VAL:HG12	2.42	0.54
33:CJ:105:LEU:HD22	33:CJ:129:GLU:HG3	1.90	0.54
34:CK:36:LEU:HG	34:CK:54:ILE:HD12	1.89	0.54
43:CT:77:ASP:HB2	43:CT:102:HIS:HB2	1.89	0.54
31:DG:21:GLN:NE2	31:DG:37:ASN:O	2.41	0.54
40:DQ:38:ARG:NE	69:DQ:306:HOH:O	2.41	0.54
44:DU:69:ARG:NH2	69:DU:204:HOH:O	2.40	0.54
55:D5:27:TYR:CD1	55:D5:39:VAL:CG1	2.91	0.54
1:AA:778:G:OP2	1:AA:778:G:H8	1.91	0.54
1:AA:880:C:C2'	1:AA:881:G:H5'	2.37	0.54
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.08	0.54
1:AA:1486:G:OP1	69:AA:1736:HOH:O	2.18	0.54
2:BA:16:A:C2'	2:BA:17:U:H5'	2.38	0.54
2:BA:528:C:O2	2:BA:528:C:H2'	2.08	0.54
2:BA:1366:C:HO2'	14:BJ:62:ARG:HH22	1.53	0.54
2:BA:1429:A:H5'	69:BA:1995:HOH:O	2.07	0.54
3:DA:159:G:O2'	3:DA:167:A:N6	2.41	0.54
3:DA:1746:A:H2'	3:DA:1747:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1851:U:C4	3:DA:1852:U:C4	2.95	0.54
3:DA:1868:C:H2'	3:DA:1869:G:O4'	2.08	0.54
3:DA:2430[B]:A:OP2	3:DA:2430[B]:A:H4'	2.07	0.54
4:CA:219:A:N6	69:CA:3361:HOH:O	2.12	0.54
4:CA:334:C:OP1	4:CA:335:C:N4	2.40	0.54
4:CA:684:G:OP1	53:C3:16:HIS:CE1	2.60	0.54
4:CA:781:A:H2'	4:CA:1777:U:O2'	2.08	0.54
4:CA:1652:A:C2	4:CA:2006:C:O2	2.61	0.54
4:CA:1873:G:C2	4:CA:1874:C:N3	2.76	0.54
4:CA:2332:C:H4'	4:CA:2336:A:N6	2.23	0.54
10:AF:46:GLN:HB2	10:AF:56:LYS:HE2	1.89	0.54
10:AF:53:LYS:O	10:AF:54:LEU:HB2	2.09	0.54
11:AG:145:ALA:C	11:AG:147:ALA:H	2.07	0.54
15:AK:83:GLU:OE2	15:AK:109:ASN:ND2	2.41	0.54
7:BC:6:HIS:ND1	18:BN:89:MET:HB3	2.23	0.54
15:BK:51:GLY:O	15:BK:52:PHE:HB2	2.07	0.54
21:BQ:26:GLU:HA	21:BQ:40:ARG:O	2.08	0.54
29:CE:98:LYS:NZ	69:CE:301:HOH:O	2.41	0.54
45:CV:5:ARG:O	45:CV:6:ARG:O	2.26	0.54
56:DD:33:ARG:NH1	56:DD:53:GLY:O	2.40	0.54
46:DW:30:ILE:HD11	46:DW:63:ILE:HD12	1.90	0.54
47:DX:39[B]:ARG:O	47:DX:55:HIS:ND1	2.41	0.54
54:D4:30:HIS:CG	69:D4:120:HOH:O	2.61	0.54
1:AA:1065:U:O4	1:AA:1190:G:H5'	2.08	0.53
2:BA:404:G:O6	8:BD:2:ALA:N	2.41	0.53
2:BA:1226:C:C4	17:BM:103:LYS:HB2	2.43	0.53
2:BA:1499:A:O2'	2:BA:1500:A:H5'	2.09	0.53
3:DA:976:G:C2	3:DA:977:G:C8	2.96	0.53
3:DA:1452:G:O2'	3:DA:1453:A:OP2	2.25	0.53
3:DA:2472:G:H2'	3:DA:2475:C:H42	1.73	0.53
4:CA:26:G:O2'	4:CA:27:G:H5'	2.07	0.53
4:CA:484:C:OP1	45:CV:47:PRO:HG3	2.08	0.53
4:CA:528:A:H2	4:CA:2043:C:H4'	1.73	0.53
4:CA:971:G:H2'	4:CA:972:A:O4'	2.08	0.53
4:CA:1638:C:H5"	4:CA:2710:C:O2'	2.07	0.53
4:CA:2491:U:H5'	4:CA:2570:G:H5"	1.90	0.53
6:AB:146:ASN:O	6:AB:148:LEU:N	2.38	0.53
9:AE:106:ILE:HD12	9:AE:106:ILE:O	2.09	0.53
9:AE:107:ALA:HB2	9:AE:125:ALA:HB3	1.90	0.53
6:BB:163:VAL:HB	6:BB:185:ALA:HB2	1.90	0.53
6:BB:167:ASP:HB3	6:BB:191:SER:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CJ:8:VAL:O	33:CJ:56:VAL:O	2.26	0.53
33:CJ:27:LEU:HD22	33:CJ:37:PHE:CE2	2.44	0.53
37:CN:66:ARG:HB2	37:CN:101:VAL:O	2.07	0.53
30:DF:108:PRO:HD3	57:D7:52:LYS:HE3	1.90	0.53
32:DH:3:VAL:HB	32:DH:37:VAL:O	2.08	0.53
34:DK:31:GLU:HG3	34:DK:142:ILE:HG13	1.89	0.53
34:DK:73:VAL:HG11	34:DK:75:TYR:CZ	2.43	0.53
54:D4:14:LYS:HD3	54:D4:22:LYS:HE2	1.90	0.53
1:AA:824:G:H1	1:AA:876:C:H42	1.54	0.53
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.07	0.53
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.42	0.53
1:AA:1347:G:N2	1:AA:1374:A:OP2	2.38	0.53
2:BA:18:C:H3'	69:BA:1781:HOH:O	2.08	0.53
2:BA:405:U:O4	8:BD:2:ALA:N	2.41	0.53
2:BA:1238:A:H2'	2:BA:1241:G:H1'	1.89	0.53
3:DA:481:G:C4	3:DA:507:A:C2	2.97	0.53
3:DA:523:C:O3'	3:DA:539:G:N2	2.42	0.53
3:DA:1231:U:O2	67:DA:3060:EDO:H22	2.09	0.53
3:DA:1235:G:OP2	63:DA:3037:PUT:H21	2.09	0.53
3:DA:1748:C:H2'	3:DA:1749:A:O4'	2.09	0.53
3:DA:2217:G:O2'	3:DA:2218:G:H5'	2.08	0.53
4:CA:120:U:O4	4:CA:177:G:C8	2.61	0.53
4:CA:206:U:H2'	4:CA:207:A:H8	1.72	0.53
4:CA:1723:G:H2'	4:CA:1724:G:O4'	2.08	0.53
4:CA:1799:G:N2	4:CA:1819:A:OP2	2.39	0.53
4:CA:2104:C:H2'	4:CA:2105:U:O4'	2.09	0.53
4:CA:2681:C:O4'	4:CA:2682:A:N7	2.42	0.53
5:CB:104:A:C6	5:CB:105:G:H1'	2.43	0.53
19:AO:70:LEU:HD21	19:AO:77:ARG:HB2	1.90	0.53
6:BB:58:ASN:HB2	6:BB:220:THR:HG23	1.89	0.53
27:CC:120:ASP:OD1	27:CC:120:ASP:N	2.41	0.53
30:DF:125:GLY:O	30:DF:157:THR:HG21	2.08	0.53
30:DF:134:GLN:HG2	30:DF:140:ILE:HG12	1.90	0.53
36:DM:61:LEU:O	54:D4:12:ARG:HD3	2.08	0.53
41:DR:19:GLN:HG2	61:DR:202:PG4:H51	1.90	0.53
1:AA:833:G:O2'	1:AA:834:U:H5'	2.08	0.53
2:BA:1039:G:H2'	2:BA:1040:U:O4'	2.08	0.53
2:BA:1097:C:H2'	2:BA:1098:C:H6	1.72	0.53
3:DA:503:A:H1'	69:DA:3416:HOH:O	2.08	0.53
3:DA:819:A:C4	3:DA:1189:A:C2	2.97	0.53
3:DA:1206:G:C6	3:DA:1207:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2259:U:P	69:DA:3245:HOH:O	2.62	0.53
4:CA:586:A:P	4:CA:586:A:H8	2.31	0.53
4:CA:2096:C:H2'	4:CA:2097:A:C8	2.43	0.53
4:CA:2345:G:H5'	4:CA:2347:C:O4'	2.08	0.53
8:AD:145:ILE:N	8:AD:145:ILE:HD12	2.24	0.53
13:BI:34:SER:HA	69:BI:202:HOH:O	2.07	0.53
19:BO:45:GLU:O	19:BO:47:LYS:N	2.41	0.53
27:CC:51:ARG:HH12	27:CC:246:PRO:HG2	1.73	0.53
28:CD:85:ALA:O	28:CD:87:GLY:N	2.38	0.53
41:CR:75:TYR:CZ	41:CR:79:ILE:HG13	2.43	0.53
29:DE:176:ASP:OD2	29:DE:176:ASP:C	2.47	0.53
36:DM:132:ARG:HG3	36:DM:142:ILE:HD13	1.89	0.53
43:DT:43:ALA:O	43:DT:47:VAL:HG12	2.09	0.53
1:AA:475:C:C6	69:AA:1872:HOH:O	2.53	0.53
1:AA:475:C:H2'	1:AA:476:U:O4'	2.08	0.53
1:AA:1202:U:O2	1:AA:1202:U:H2'	2.08	0.53
2:BA:22:G:O2'	2:BA:913:A:N1	2.33	0.53
2:BA:112:G:H5'	2:BA:389:A:O2'	2.09	0.53
2:BA:252:U:O4	2:BA:253:A:N6	2.42	0.53
2:BA:283:U:C2	2:BA:284:C:C6	2.96	0.53
2:BA:354:G:C2	2:BA:355:C:C5	2.97	0.53
2:BA:552:U:C4	2:BA:553:A:N7	2.77	0.53
2:BA:728:A:C2	2:BA:729:A:C5	2.97	0.53
2:BA:1014:A:C2	23:BS:34:TRP:CZ2	2.96	0.53
3:DA:319:G:C4	3:DA:333:G:N2	2.77	0.53
3:DA:527:C:OP1	69:DA:3505:HOH:O	2.18	0.53
3:DA:947:A:H2'	3:DA:948:C:C6	2.44	0.53
3:DA:1055:G:P	69:DA:3237:HOH:O	2.61	0.53
4:CA:60:G:O2'	4:CA:62:U:OP2	2.23	0.53
4:CA:814:C:OP1	42:CS:86:GLN:HG3	2.09	0.53
4:CA:2232:C:OP1	48:CY:26:ARG:NH1	2.39	0.53
5:DB:86:G:H1'	69:DB:366:HOH:O	2.09	0.53
6:AB:146:ASN:C	6:AB:148:LEU:H	2.11	0.53
6:AB:217:VAL:O	6:AB:220:THR:HG22	2.09	0.53
19:AO:45:GLU:O	19:AO:46:HIS:HB2	2.08	0.53
29:CE:149:ILE:HG23	29:CE:187:VAL:O	2.09	0.53
39:CP:17:LYS:HE2	39:CP:17:LYS:HA	1.90	0.53
27:DC:104:LEU:O	27:DC:106:PRO:HD3	2.09	0.53
30:DF:114:ARG:NH1	57:D7:62:ARG:HH12	2.05	0.53
41:DR:49:ARG:NH2	42:DS:74:ILE:HG13	2.24	0.53
1:AA:452:A:H62	1:AA:480:U:H3	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:58:C:O2	2:BA:388:G:N7	2.42	0.53
2:BA:411:A:P	8:BD:26:ARG:NH2	2.81	0.53
2:BA:416:G:OP1	3:DA:2139:U:O2'	2.12	0.53
2:BA:577:G:C8	2:BA:816:A:C2	2.96	0.53
2:BA:1047:G:OP1	18:BN:3:GLN:NE2	2.42	0.53
2:BA:1108:G:C6	69:BA:1707:HOH:O	2.62	0.53
2:BA:1279:G:O2'	2:BA:1281:C:OP2	2.22	0.53
69:BA:1744:HOH:O	13:BI:11:ARG:HD2	2.08	0.53
3:DA:558:U:OP1	34:DK:113:PRO:HD2	2.08	0.53
3:DA:980:A:C6	3:DA:981:A:C2	2.97	0.53
3:DA:1097:U:H3'	3:DA:1098:A:C4'	2.39	0.53
3:DA:1430:G:C2'	3:DA:1431:A:H5'	2.38	0.53
3:DA:1601:G:H1'	60:DA:3072:MPD:H53	1.91	0.53
3:DA:1605:C:C2'	3:DA:1606:C:H5'	2.38	0.53
3:DA:1606:C:O2'	3:DA:1607:C:OP2	2.25	0.53
3:DA:2756:U:O5'	3:DA:2756:U:H6	1.91	0.53
4:CA:95:A:H4'	49:CZ:38:GLN:O	2.09	0.53
4:CA:1417:C:HO2'	4:CA:1587:G:HO2'	1.53	0.53
4:CA:1430:G:C4	4:CA:1431:A:C8	2.97	0.53
4:CA:1683:U:H3	4:CA:1705:A:H61	1.56	0.53
4:CA:2563:U:C1'	4:CA:2566:A:N6	2.71	0.53
9:AE:15:LEU:HB3	9:AE:37:THR:HG22	1.91	0.53
12:AH:64:LYS:C	12:AH:65:TYR:HD1	2.12	0.53
14:AJ:81:GLU:O	14:AJ:85:ASP:OD1	2.27	0.53
18:AN:18:LYS:O	18:AN:22:LYS:HD3	2.09	0.53
25:AU:41:PRO:HA	25:AU:44:GLU:HG3	1.90	0.53
6:BB:187:VAL:HG23	6:BB:187:VAL:O	2.09	0.53
9:BE:15:LEU:HD12	9:BE:15:LEU:O	2.09	0.53
9:BE:68:ARG:O	9:BE:71:MET:HE3	2.08	0.53
2:BA:747:A:H2'	2:BA:748:G:O4'	2.09	0.53
2:BA:976:G:O5'	2:BA:1358:U:O2'	2.27	0.53
2:BA:1169:A:H2'	2:BA:1170:A:C8	2.43	0.53
3:DA:686:U:H4'	3:DA:687:C:OP2	2.08	0.53
3:DA:832:U:H2'	3:DA:833:A:C8	2.44	0.53
3:DA:969:G:H2'	3:DA:970:U:C6	2.44	0.53
3:DA:1428:C:O2'	3:DA:1569:A:OP2	2.21	0.53
3:DA:2080:A:O5'	48:DY:18:SER:HB2	2.08	0.53
3:DA:2267:A:H5"	3:DA:2268:A:H5'	1.90	0.53
4:CA:301:G:C2	4:CA:302:C:C2	2.96	0.53
4:CA:484:C:N4	4:CA:497:A:C2	2.77	0.53
4:CA:517:C:C2'	4:CA:518:G:O5'	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:952:G:C2	4:CA:966:G:C2	2.96	0.53
4:CA:1920:C:H2'	4:CA:1921:G:O4'	2.09	0.53
4:CA:1953:A:C2	4:CA:2550:G:O4'	2.62	0.53
4:CA:2714:G:P	69:CA:3239:HOH:O	2.67	0.53
4:CA:2854:G:O2'	69:CA:3400:HOH:O	2.19	0.53
5:DB:19:C:H2'	5:DB:20:G:O4'	2.09	0.53
6:AB:96:TRP:CZ3	6:AB:175:GLU:OE2	2.62	0.53
7:AC:100:GLN:CG	7:AC:101:ILE:H	2.22	0.53
9:AE:105:ILE:HG23	9:AE:105:ILE:O	2.08	0.53
17:AM:45:ILE:N	17:AM:45:ILE:CD1	2.72	0.53
23:AS:64:ASP:O	23:AS:67:VAL:HG23	2.09	0.53
7:BC:55:ILE:C	7:BC:55:ILE:HD12	2.28	0.53
20:BP:78:VAL:O	20:BP:79:ASN:HB2	2.09	0.53
27:CC:123:ILE:HG22	27:CC:123:ILE:O	2.09	0.53
30:CF:32:LYS:HA	30:CF:95:MET:SD	2.48	0.53
36:CM:56:PRO:O	36:CM:60:ARG:HB2	2.09	0.53
27:DC:19:VAL:CG2	27:DC:19:VAL:O	2.57	0.53
30:DF:170:ALA:O	30:DF:173:ASP:N	2.31	0.53
33:DJ:83:ALA:HB1	33:DJ:100:ILE:HG23	1.91	0.53
37:DN:47:GLU:OE1	37:DN:50:ARG:NE	2.32	0.53
57:D7:47:ILE:C	57:D7:53:SER:HB3	2.29	0.53
1:AA:119:A:C5	1:AA:240:G:C5	2.97	0.53
1:AA:370:C:O2'	1:AA:371:A:H5'	2.09	0.53
1:AA:807:A:C5	1:AA:808:C:C5	2.97	0.53
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.08	0.53
2:BA:276:G:OP1	21:BQ:14:SER:OG	2.21	0.53
2:BA:659:U:O2'	2:BA:660:C:H5'	2.08	0.53
2:BA:1093:A:C2	2:BA:1095:U:O4'	2.62	0.53
2:BA:1304:G:O2'	2:BA:1333:A:N6	2.42	0.53
3:DA:45:G:H5"	3:DA:46:G:OP1	2.08	0.53
3:DA:733:G:O6	3:DA:761:A:C8	2.61	0.53
3:DA:945:A:H4'	3:DA:946:C:OP2	2.09	0.53
3:DA:1825:U:H2'	3:DA:1826:G:C8	2.44	0.53
4:CA:504:A:C2	4:CA:1234:U:H4'	2.44	0.53
4:CA:852:U:H2'	4:CA:853:C:O4'	2.08	0.53
4:CA:1837:C:H3'	69:CA:3475:HOH:O	2.08	0.53
4:CA:2224:G:OP1	69:CA:3395:HOH:O	2.19	0.53
4:CA:2431:U:O2'	4:CA:2433:A:N7	2.36	0.53
4:CA:2573:C:OP2	69:CA:3398:HOH:O	2.19	0.53
4:CA:2772:C:C2	4:CA:2773:C:C5	2.97	0.53
5:CB:58:A:H2'	5:CB:59:A:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:118:GLU:C	6:AB:120:GLN:H	2.11	0.53
6:AB:184:PHE:CE2	6:AB:198:PHE:CD2	2.97	0.53
11:AG:63:GLU:O	11:AG:67:GLU:N	2.36	0.53
19:AO:76:ALA:O	19:AO:80:ARG:HG2	2.07	0.53
25:AU:15:ALA:O	25:AU:18:ARG:HB2	2.08	0.53
17:BM:14:HIS:HB2	17:BM:17:ILE:HD12	1.90	0.53
36:DM:2:ARG:HA	36:DM:5:THR:HG23	1.90	0.53
57:D7:31:THR:CG2	57:D7:41:THR:HG23	2.30	0.53
1:AA:545:C:H2'	1:AA:546:A:H5'	1.90	0.53
1:AA:760:G:C5	1:AA:761:G:C8	2.97	0.53
1:AA:1103:C:OP1	6:AB:95:ARG:NH2	2.41	0.53
2:BA:66:A:P	2:BA:66:A:H8	2.32	0.53
2:BA:128:G:N2	2:BA:234:C:C2	2.76	0.53
2:BA:1252:A:H2'	2:BA:1253:G:O4'	2.08	0.53
3:DA:457:A:O4'	3:DA:459:U:C6	2.61	0.53
3:DA:2885:G:OP1	68:DA:3078:GUN:C2	2.57	0.53
4:CA:783:A:H1'	4:CA:1779:U:H1'	1.91	0.53
4:CA:783:A:H2'	4:CA:785:G:OP1	2.09	0.53
4:CA:1010:A:OP2	69:CA:3396:HOH:O	2.19	0.53
4:CA:1719:G:H1	4:CA:1741:C:H42	1.57	0.53
4:CA:1973:G:C5	4:CA:1974:C:C4	2.97	0.53
4:CA:2699:C:O2	4:CA:2709:G:N2	2.42	0.53
6:AB:182:PRO:O	6:AB:197:ASP:OD1	2.26	0.53
21:AQ:16:LYS:HE3	21:AQ:16:LYS:O	2.09	0.53
7:BC:126:ARG:O	7:BC:127:ARG:HB2	2.09	0.53
15:BK:16:VAL:HG13	15:BK:17:SER:H	1.73	0.53
33:CJ:37:PHE:O	33:CJ:41:PHE:CB	2.56	0.53
57:D7:64:VAL:O	57:D7:65:ALA:HB3	2.09	0.53
1:AA:81:A:H2'	1:AA:82:G:H5"	1.90	0.53
1:AA:407:U:P	8:AD:3:ARG:HH22	2.32	0.53
1:AA:597:G:C2	1:AA:644:U:C2	2.96	0.53
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.43	0.53
2:BA:437:U:N3	2:BA:438:U:C5	2.77	0.53
2:BA:511:C:C2	2:BA:512:U:C5	2.97	0.53
2:BA:1072:G:C5	2:BA:1073:U:C4	2.97	0.53
3:DA:1196:C:H2'	3:DA:1197:G:O4'	2.09	0.53
3:DA:1735:A:H2'	3:DA:1736:U:O4'	2.09	0.53
3:DA:2721:A:OP1	69:DA:3499:HOH:O	2.17	0.53
4:CA:570:G:O2'	4:CA:571:U:H5'	2.09	0.53
4:CA:630:G:H2'	4:CA:631:A:H5"	1.90	0.53
4:CA:1199:U:H3	4:CA:1246:A:H61	1.54	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1265:A:C8	4:CA:1267:U:N3	2.77	0.53
4:CA:1359:A:C2	4:CA:1360:G:C1'	2.92	0.53
4:CA:1838:C:C5	4:CA:1899:A:C5	2.96	0.53
4:CA:2116:G:N7	4:CA:2165:C:N4	2.57	0.53
4:CA:2229:U:H2'	4:CA:2230:G:H8	1.73	0.53
4:CA:2410:G:C2	4:CA:2411:A:H1'	2.44	0.53
7:AC:77:ILE:HA	7:AC:84:VAL:HG23	1.90	0.53
7:AC:97:VAL:HB	7:AC:98:PRO:HD2	1.90	0.53
25:AU:11:PRO:O	25:AU:12:PHE:HD1	1.92	0.53
7:BC:45:LYS:HG3	7:BC:46:GLU:N	2.23	0.53
13:BI:57:MET:CE	13:BI:58:VAL:H	2.22	0.53
18:BN:45:VAL:HG23	18:BN:45:VAL:O	2.09	0.53
36:CM:136:GLU:C	36:CM:138:ALA:H	2.11	0.53
1:AA:106:C:O2'	1:AA:107:G:H5'	2.08	0.53
1:AA:638:U:H2'	1:AA:639:G:O4'	2.08	0.53
1:AA:761:G:H2'	1:AA:762:U:H6	1.74	0.53
2:BA:161:A:H2'	2:BA:162:A:O4'	2.09	0.53
2:BA:357:G:N2	2:BA:358:U:C2	2.77	0.53
2:BA:491:G:O2'	2:BA:492:C:H5'	2.09	0.53
2:BA:672:U:O2'	2:BA:673:A:H5'	2.08	0.53
2:BA:774:G:C5	2:BA:775:G:C8	2.97	0.53
2:BA:1092:A:C8	2:BA:1093:A:N7	2.77	0.53
2:BA:1226:C:H4'	2:BA:1227:A:OP1	2.09	0.53
2:BA:1321:U:O2'	23:BS:78:ARG:NH2	2.42	0.53
3:DA:317:G:P	69:DA:3680:HOH:O	2.67	0.53
4:CA:60:G:HO2'	4:CA:62:U:P	2.31	0.53
4:CA:64:A:O2'	44:CU:75:GLY:HA3	2.08	0.53
4:CA:466:A:O5'	69:CA:3399:HOH:O	2.19	0.53
4:CA:804:A:H2'	4:CA:806:C:N4	2.23	0.53
4:CA:1215:G:H2'	4:CA:1216:G:H8	1.74	0.53
4:CA:1281:G:H2'	4:CA:1282:U:O4'	2.09	0.53
4:CA:2419:U:OP1	54:C4:40:LYS:NZ	2.41	0.53
4:CA:2780:G:OP2	34:CK:120:ARG:NE	2.41	0.53
5:CB:2:G:P	5:CB:2:G:O4'	2.67	0.53
17:BM:103:LYS:HG2	17:BM:104:THR:HG23	1.90	0.53
48:CY:61:LYS:O	48:CY:65:THR:HB	2.09	0.53
33:DJ:100:ILE:HG22	33:DJ:101:SER:H	1.73	0.53
36:DM:92:LEU:H	36:DM:92:LEU:HD12	1.74	0.53
1:AA:1444:U:H2'	1:AA:1445:U:C6	2.44	0.52
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.44	0.52
2:BA:687:A:N3	2:BA:688:G:H1'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:581:C:H2'	3:DA:582:A:C8	2.44	0.52
3:DA:999:U:OP1	69:DA:3520:HOH:O	2.19	0.52
3:DA:1599:U:P	44:DU:40:LYS:HG3	2.49	0.52
3:DA:1964:G:C2	3:DA:1967:C:C5	2.97	0.52
3:DA:2049:G:C2'	3:DA:2050:C:H5'	2.39	0.52
3:DA:2056:G:OP1	69:DA:3517:HOH:O	2.19	0.52
3:DA:2267:A:H3'	69:DA:3282:HOH:O	2.09	0.52
3:DA:2414:G:O2'	3:DA:2415:G:H5'	2.09	0.52
4:CA:1245:G:H2'	4:CA:1246:A:O4'	2.08	0.52
4:CA:1362:C:H2'	4:CA:1363:C:C5'	2.39	0.52
4:CA:1374:G:H2'	4:CA:1375:U:O4'	2.09	0.52
4:CA:1629:U:O2	4:CA:2698:U:H5"	2.09	0.52
4:CA:1930:G:O2'	4:CA:1968:G:N1	2.36	0.52
4:CA:2566:A:H4'	4:CA:2567:G:H5"	1.92	0.52
9:AE:148:ASN:ND2	12:AH:73:GLU:OE2	2.41	0.52
11:AG:22:LEU:HD21	11:AG:97:ASN:ND2	2.24	0.52
12:AH:75:ILE:HD12	12:AH:129:VAL:HG22	1.90	0.52
6:BB:164:ILE:O	6:BB:186:ILE:O	2.27	0.52
12:BH:67:GLN:O	12:BH:69:LYS:N	2.42	0.52
21:BQ:69:LYS:O	21:BQ:70:THR:OG1	2.25	0.52
22:BR:37:GLY:O	22:BR:63:ARG:NH2	2.41	0.52
28:CD:125:TRP:NE1	28:CD:161:MET:O	2.39	0.52
30:CF:102:LEU:O	30:CF:106:ALA:HB3	2.10	0.52
31:CG:97:VAL:HG11	31:CG:123:GLU:HA	1.91	0.52
32:CH:75:LEU:HD11	32:CH:106:ALA:O	2.08	0.52
29:DE:154:ASP:O	29:DE:157:LEU:N	2.41	0.52
33:DJ:68:PHE:HD1	33:DJ:69:VAL:H	1.57	0.52
1:AA:695:A:C6	1:AA:696:A:C2	2.97	0.52
1:AA:1135:U:H3'	1:AA:1137:C:N4	2.23	0.52
2:BA:503:C:O2	2:BA:510:A:H2	1.92	0.52
3:DA:16:C:O2'	3:DA:17:G:H5'	2.08	0.52
3:DA:88:G:C2	3:DA:89:A:C8	2.98	0.52
3:DA:404:A:H1'	3:DA:405:U:OP2	2.09	0.52
3:DA:475:C:C4	3:DA:481:G:O6	2.62	0.52
3:DA:574:A:H2	56:DD:150:MEQ:HE2	1.74	0.52
4:CA:1120:G:C6	4:CA:1121:C:C4	2.97	0.52
4:CA:1195:G:O2'	4:CA:1226:A:N1	2.34	0.52
4:CA:1398:C:OP1	44:CU:59:ASN:ND2	2.30	0.52
4:CA:2521:C:C2	4:CA:2545:G:N2	2.77	0.52
4:CA:2612:C:H5"	4:CA:2613:U:OP1	2.08	0.52
4:CA:2837:A:H2'	4:CA:2838:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AL:85:GLY:O	16:AL:96:HIS:ND1	2.38	0.52
6:BB:225:ARG:O	6:BB:226:SER:OG	2.26	0.52
15:BK:119:ASN:HA	25:BU:35:ARG:HH12	1.74	0.52
41:CR:8:ILE:HG13	41:CR:9:ALA:N	2.24	0.52
1:AA:451:A:H61	1:AA:481:G:H5'	1.73	0.52
1:AA:592:G:O6	1:AA:648:A:N6	2.41	0.52
1:AA:1115:U:P	14:AJ:68:ARG:HH22	2.32	0.52
2:BA:62:U:H4'	2:BA:385:C:O2	2.10	0.52
3:DA:988:A:OP2	50:D0:11:SER:HB3	2.08	0.52
3:DA:1599:U:O5'	3:DA:1599:U:H6	1.92	0.52
3:DA:2577:A:H5"	3:DA:2578:G:H5'	1.91	0.52
4:CA:1340:U:H5	4:CA:1603:A:C8	2.28	0.52
4:CA:1779:U:C5	4:CA:1784:A:N7	2.77	0.52
4:CA:1826:G:C4	4:CA:1827:U:C5	2.98	0.52
4:CA:2395:C:OP1	36:CM:63:LYS:NZ	2.34	0.52
4:CA:2508:G:H2'	4:CA:2509:G:H8	1.75	0.52
4:CA:2718:G:O2'	40:CQ:95:LYS:HG3	2.10	0.52
5:DB:78:A:H2'	5:DB:79:G:O4'	2.10	0.52
6:AB:106:THR:O	6:AB:107:VAL:CB	2.56	0.52
6:BB:16:PHE:O	6:BB:41:ILE:HG13	2.09	0.52
6:BB:118:GLU:C	6:BB:120:GLN:H	2.12	0.52
26:BL:82:ILE:HG12	26:BL:95:TYR:HB3	1.90	0.52
22:BR:32:TYR:CD2	22:BR:55:LEU:HD21	2.44	0.52
27:CC:67:LYS:HD3	27:CC:148:GLY:O	2.10	0.52
29:CE:41:GLN:O	29:CE:43:THR:N	2.31	0.52
41:CR:61:ILE:HD11	41:CR:91:ARG:HH11	1.75	0.52
45:CV:43:LYS:NZ	69:CV:204:HOH:O	2.40	0.52
33:DJ:104:GLN:O	33:DJ:105:LEU:HB2	2.09	0.52
1:AA:173:U:C2	1:AA:197:A:N1	2.78	0.52
1:AA:263:A:P	24:AT:74:ARG:HH11	2.32	0.52
1:AA:945:G:C2	1:AA:946:A:C8	2.97	0.52
2:BA:162:A:C5	2:BA:163:C:H1'	2.44	0.52
2:BA:209:U:H4'	2:BA:210:C:OP2	2.09	0.52
2:BA:356:A:H2'	2:BA:357:G:O4'	2.09	0.52
2:BA:821:G:H2'	2:BA:822:U:C6	2.44	0.52
2:BA:1459:G:H2'	2:BA:1460:C:O4'	2.10	0.52
60:DA:3077:MPD:H12	60:DA:3077:MPD:O4	2.08	0.52
4:CA:602:A:H2'	4:CA:655:A:N1	2.24	0.52
4:CA:1341:G:OP1	4:CA:1397:U:N3	2.39	0.52
4:CA:1469:A:C2	4:CA:1470:A:C5	2.97	0.52
4:CA:1896:G:P	69:CA:3201:HOH:O	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2699:C:H2'	4:CA:2700:A:O4'	2.09	0.52
4:CA:2817:U:O2	4:CA:2836:U:O2'	2.23	0.52
4:CA:2845:U:H5"	40:CQ:51:ASN:O	2.09	0.52
5:DB:8:C:O2'	39:DP:25:ARG:NH1	2.43	0.52
7:AC:113:ALA:HB1	7:AC:200:VAL:HG22	1.92	0.52
7:AC:126:ARG:O	7:AC:127:ARG:HB2	2.08	0.52
16:AL:44:LYS:O	16:AL:44:LYS:HD3	2.10	0.52
19:BO:17:ARG:N	19:BO:17:ARG:HD3	2.24	0.52
20:BP:12:LYS:HG3	20:BP:13:LYS:HG2	1.91	0.52
27:CC:166:ARG:HB2	27:CC:171:VAL:HG12	1.91	0.52
30:CF:82:TYR:CD1	30:CF:83:PRO:HD2	2.45	0.52
33:CJ:56:VAL:HG22	33:CJ:57:VAL:N	2.24	0.52
43:CT:60:HIS:N	69:CT:202:HOH:O	2.43	0.52
46:CW:25:LYS:HB3	46:CW:42:LEU:O	2.09	0.52
30:DF:66:ILE:O	30:DF:66:ILE:HG13	2.08	0.52
43:DT:81:SER:HA	69:DT:308:HOH:O	2.09	0.52
1:AA:787:A:C5	1:AA:788:U:C5	2.98	0.52
2:BA:502:A:C2'	2:BA:503:C:H5'	2.38	0.52
2:BA:764:C:N4	2:BA:765:G:C5	2.78	0.52
2:BA:1135:U:O2'	2:BA:1136:C:O2	2.28	0.52
3:DA:108:G:C6	3:DA:109:C:C4	2.97	0.52
3:DA:598:U:O2'	3:DA:599:A:H5'	2.09	0.52
3:DA:770:G:O2'	3:DA:771:G:H5'	2.10	0.52
3:DA:1190:G:O2'	3:DA:1191:G:H5'	2.09	0.52
3:DA:1826:G:C4	3:DA:1827:U:C5	2.98	0.52
3:DA:2348:U:O2'	3:DA:2349:G:H5'	2.08	0.52
3:DA:2846:G:H1'	69:DA:4134:HOH:O	2.09	0.52
69:DA:6601:HOH:O	37:DN:55:ARG:HG3	2.09	0.52
4:CA:980:A:H5"	4:CA:981:A:OP2	2.10	0.52
4:CA:1489:C:O2'	4:CA:1490:A:H5'	2.09	0.52
12:AH:11:LEU:HD12	12:AH:77:ARG:HG2	1.92	0.52
13:AI:57:MET:SD	13:AI:58:VAL:N	2.83	0.52
6:BB:72:THR:HG22	6:BB:73:LYS:N	2.25	0.52
6:BB:120:GLN:HG2	6:BB:120:GLN:O	2.10	0.52
9:BE:76:LEU:N	9:BE:76:LEU:HD12	2.24	0.52
12:BH:67:GLN:C	12:BH:69:LYS:H	2.11	0.52
29:CE:145:ASP:HB3	29:CE:184:ASP:HB2	1.92	0.52
32:CH:41:LYS:HA	32:CH:44:ILE:HG12	1.92	0.52
48:CY:71:ARG:HB3	48:CY:71:ARG:HH11	1.74	0.52
27:DC:14:HIS:O	27:DC:203:VAL:HG21	2.09	0.52
56:DD:85:ALA:O	56:DD:86:GLU:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DJ:98:GLY:C	33:DJ:99:LYS:HG2	2.30	0.52
38:DO:99:LYS:HG3	69:D1:227:HOH:O	2.08	0.52
43:DT:69:LEU:HG	43:DT:107:VAL:HB	1.91	0.52
1:AA:150:U:H2'	1:AA:151:A:H8	1.75	0.52
1:AA:956:U:H2'	1:AA:957:U:H5'	1.92	0.52
1:AA:1010:U:OP1	1:AA:1010:U:H4'	2.08	0.52
1:AA:1329:A:H5"	17:AM:26:GLY:H	1.74	0.52
1:AA:1417:G:C6	1:AA:1482:G:C6	2.98	0.52
2:BA:409:U:H2'	2:BA:410:G:O4'	2.10	0.52
2:BA:1000:A:N3	2:BA:1041:G:N2	2.57	0.52
3:DA:137:U:H3	3:DA:142:A:H61	1.56	0.52
3:DA:305:C:H2'	3:DA:306:U:O5'	2.10	0.52
3:DA:1148:U:H2'	3:DA:1149:G:O4'	2.10	0.52
3:DA:1768:C:N3	3:DA:1769:U:C5	2.77	0.52
3:DA:2059:A:O5'	69:DA:3519:HOH:O	2.19	0.52
3:DA:2427:C:H5"	3:DA:2428:G:OP1	2.09	0.52
3:DA:2617:U:H2'	3:DA:2618:G:H5'	1.92	0.52
3:DA:2886:A:C5	3:DA:2887:A:N7	2.78	0.52
4:CA:72:U:O2'	4:CA:73:A:O5'	2.24	0.52
4:CA:445:C:P	69:CA:3256:HOH:O	2.66	0.52
4:CA:558:U:OP2	34:CK:113:PRO:HG2	2.10	0.52
4:CA:1034:G:C6	4:CA:1035:U:C2	2.98	0.52
4:CA:1056:G:N1	4:CA:1102:C:OP2	2.33	0.52
4:CA:1711:A:H1'	69:CA:3978:HOH:O	2.10	0.52
4:CA:1840:G:H2'	4:CA:1841:U:O4'	2.09	0.52
4:CA:1931:U:OP2	4:CA:1968:G:N2	2.35	0.52
4:CA:1992:G:N2	4:CA:1996:C:O2'	2.43	0.52
4:CA:2472:G:N2	4:CA:2477:U:OP1	2.30	0.52
4:CA:2648:G:C5	4:CA:2673:G:C2	2.97	0.52
6:AB:160:ALA:O	6:AB:161:LEU:HB2	2.08	0.52
9:BE:106:ILE:HD11	9:BE:124:LEU:HD23	1.91	0.52
19:BO:45:GLU:HG2	19:BO:46:HIS:H	1.74	0.52
27:CC:169:ALA:O	27:CC:185:ALA:N	2.35	0.52
27:CC:224:MET:SD	27:CC:229:HIS:HB2	2.49	0.52
29:CE:146:VAL:O	29:CE:167:VAL:HA	2.09	0.52
38:CO:53:THR:HA	38:CO:56:LYS:HG3	1.90	0.52
42:CS:49:ILE:HG22	42:CS:53:PHE:C	2.30	0.52
39:DP:27:VAL:HG12	39:DP:38:GLN:O	2.10	0.52
49:DZ:10:SER:OG	49:DZ:13:GLU:HG3	2.10	0.52
1:AA:376:G:H2'	1:AA:377:G:H8	1.73	0.52
1:AA:901:A:N7	1:AA:902:G:C1'	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:H1'	9:AE:24:THR:HG22	1.90	0.52
1:AA:1328:C:H5"	17:AM:28:THR:HG21	1.90	0.52
1:AA:1418:A:C2	1:AA:1483:A:C2	2.98	0.52
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.45	0.52
2:BA:219:U:H2'	2:BA:220:G:C8	2.44	0.52
2:BA:416:G:N7	69:BA:1795:HOH:O	2.34	0.52
2:BA:719:C:O2'	22:BR:39:ILE:O	2.21	0.52
2:BA:922:G:C6	2:BA:923:A:C6	2.97	0.52
2:BA:1161:C:O2	2:BA:1176:A:C2	2.62	0.52
3:DA:978:G:P	69:DA:3350:HOH:O	2.65	0.52
3:DA:2305:U:C2'	3:DA:2306:C:H5'	2.40	0.52
4:CA:613:A:H3'	4:CA:614:A:H5"	1.91	0.52
4:CA:771:G:C2	4:CA:772:C:C6	2.97	0.52
4:CA:1906:G:OP1	4:CA:1930:G:C8	2.63	0.52
4:CA:2636:C:C2	4:CA:2637:U:C5	2.98	0.52
7:AC:64:ILE:HG23	7:AC:99:ALA:HA	1.92	0.52
11:BG:106:GLU:O	11:BG:110:LYS:HG3	2.10	0.52
23:BS:29:LYS:HG2	23:BS:30:PRO:HD2	1.91	0.52
29:CE:117:ARG:HH12	36:CM:2:ARG:HD3	1.74	0.52
41:DR:93:ILE:HG21	42:DS:4:VAL:HG11	1.92	0.52
2:BA:33:A:N3	2:BA:34:C:C6	2.77	0.52
2:BA:609:A:N7	69:BA:1796:HOH:O	2.34	0.52
2:BA:718:A:N7	2:BA:719:C:C5	2.78	0.52
2:BA:735:C:P	69:BA:1856:HOH:O	2.68	0.52
2:BA:799:G:C6	2:BA:800:G:C4	2.98	0.52
2:BA:1458:G:O2'	24:BT:23:SER:HB3	2.10	0.52
2:BA:1500:A:OP2	2:BA:1505:G:OP1	2.27	0.52
3:DA:1295:C:O2'	3:DA:1296:G:H5'	2.10	0.52
3:DA:1894:C:O5'	3:DA:1894:C:H6	1.93	0.52
3:DA:1915:3TD:H2'	3:DA:1916:A:C8	2.45	0.52
3:DA:1973:G:O2'	3:DA:1974:C:H5'	2.09	0.52
3:DA:2321:U:H5'	3:DA:2322:A:OP2	2.10	0.52
4:CA:1372:U:O4	4:CA:1373:A:N6	2.43	0.52
4:CA:2078:C:N4	4:CA:2079:U:O4	2.43	0.52
4:CA:2512:C:H4'	28:CD:127:PHE:CE2	2.45	0.52
5:CB:78:A:C6	5:CB:99:A:C8	2.98	0.52
6:AB:67:ILE:HG13	6:AB:89:GLN:HG2	1.91	0.52
8:AD:48:LEU:HD21	8:AD:53:VAL:HG12	1.91	0.52
8:AD:89:ASN:O	8:AD:93:LEU:HD22	2.10	0.52
9:AE:44:GLY:CA	9:AE:76:LEU:HD11	2.40	0.52
6:BB:71:GLY:HA2	6:BB:164:ILE:CG2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BH:78:VAL:HG23	12:BH:127:CYS:HA	1.92	0.52
27:CC:15:VAL:HG22	27:CC:204:LEU:O	2.10	0.52
29:CE:59:PRO:HD2	29:CE:70:SER:OG	2.09	0.52
31:DG:26:LYS:HG2	31:DG:31:GLU:HB2	1.92	0.52
33:DJ:68:PHE:HD1	33:DJ:69:VAL:N	2.07	0.52
1:AA:102:G:C2	1:AA:103:U:C5	2.98	0.52
1:AA:373:A:N3	1:AA:374:A:C8	2.77	0.52
1:AA:1089:G:C2'	1:AA:1090:U:H5'	2.40	0.52
2:BA:464:U:N3	2:BA:467:U:OP2	2.38	0.52
2:BA:1002:G:H2'	2:BA:1003:G:O4'	2.10	0.52
3:DA:206:U:C2'	3:DA:207:A:H5'	2.40	0.52
3:DA:2184:A:H2'	3:DA:2185:U:C6	2.45	0.52
3:DA:2233:U:P	69:DA:3316:HOH:O	2.65	0.52
4:CA:287:G:C2	4:CA:354:A:C6	2.98	0.52
4:CA:307:G:N1	4:CA:310:A:OP2	2.41	0.52
4:CA:493:G:H2'	4:CA:494:G:O4'	2.10	0.52
4:CA:1148:U:H2'	4:CA:1149:G:O4'	2.10	0.52
4:CA:2282:G:OP1	4:CA:2283:C:H1'	2.10	0.52
4:CA:2699:C:O2	4:CA:2709:G:C2	2.63	0.52
5:CB:46:A:OP1	39:CP:3:LYS:HE3	2.10	0.52
7:AC:55:ILE:C	7:AC:55:ILE:HD12	2.30	0.52
7:AC:206:GLU:O	7:AC:207:ILE:O	2.28	0.52
8:AD:148:LYS:H	8:AD:148:LYS:CE	2.23	0.52
9:AE:105:ILE:H	9:AE:123:VAL:H	1.57	0.52
23:AS:15:LEU:HD13	23:AS:33:THR:HG21	1.91	0.52
6:BB:57:LEU:O	6:BB:60:ILE:HG13	2.10	0.52
6:BB:130:THR:HG22	6:BB:132:LYS:H	1.74	0.52
9:BE:36:LEU:HD21	9:BE:137:VAL:HG11	1.92	0.52
9:BE:57:PRO:HA	9:BE:60:ILE:CG1	2.39	0.52
11:BG:50:LEU:HG	11:BG:124:LEU:HB3	1.92	0.52
36:CM:82:LEU:HD23	36:CM:83:ALA:N	2.25	0.52
40:CQ:87:ARG:NH2	40:CQ:109:ILE:O	2.38	0.52
33:DJ:64:ARG:NH1	33:DJ:65:SER:OG	2.42	0.52
44:DU:61:LEU:C	44:DU:61:LEU:HD12	2.30	0.52
47:DX:39[A]:ARG:O	47:DX:55:HIS:ND1	2.42	0.52
49:DZ:39:GLN:HB3	49:DZ:41:HIS:CE1	2.45	0.52
49:DZ:45:GLN:O	49:DZ:46:VAL:HG23	2.09	0.52
1:AA:878:A:H1'	69:AA:1753:HOH:O	2.09	0.52
2:BA:340:U:C2	2:BA:350:G:N2	2.78	0.52
2:BA:429:U:H5'	8:BD:9:LEU:HD23	1.91	0.52
2:BA:495:A:O4'	2:BA:496:A:C8	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1089:G:C6	2:BA:1090:U:C4	2.97	0.52
3:DA:13:A:N3	3:DA:15:G:C6	2.78	0.52
3:DA:449:A:H5'	69:DA:4317:HOH:O	2.10	0.52
3:DA:1492:G:C2	3:DA:1499:C:C2	2.97	0.52
3:DA:1607:C:H5'	3:DA:1607:C:C6	2.45	0.52
3:DA:1935:G:C6	3:DA:1962:5MC:C6	2.98	0.52
3:DA:1958:C:C2'	3:DA:1959:G:H5'	2.40	0.52
4:CA:64:A:H5'	44:CU:77:ARG:HA	1.92	0.52
4:CA:181:A:N6	69:CA:3485:HOH:O	2.34	0.52
4:CA:196:A:C2'	4:CA:805:G:O6	2.57	0.52
4:CA:224:U:O4	4:CA:232:G:N2	2.43	0.52
4:CA:414:C:O2	4:CA:2410:G:N2	2.42	0.52
4:CA:1013:C:C2'	4:CA:1014:A:H5'	2.40	0.52
4:CA:1613:G:H1	4:CA:1617:C:HO2'	1.56	0.52
4:CA:1770:G:H4'	4:CA:1938:A:OP1	2.10	0.52
4:CA:2028:U:O4	69:CA:3368:HOH:O	2.13	0.52
4:CA:2055:C:OP1	51:C1:4:GLN:NE2	2.42	0.52
4:CA:2552:U:C4	4:CA:2554:U:P	3.03	0.52
4:CA:2789:C:O2	4:CA:2892:G:H5"	2.10	0.52
9:AE:77:ASN:O	9:AE:79:GLY:N	2.43	0.52
9:AE:157:ARG:HB3	12:AH:44:GLY:O	2.10	0.52
11:AG:13:LEU:H	11:AG:13:LEU:HD22	1.75	0.52
11:AG:68:ASN:O	11:AG:70:ARG:N	2.43	0.52
14:AJ:91:ASP:O	14:AJ:92:LEU:HG	2.10	0.52
9:BE:12:GLN:OE1	9:BE:12:GLN:HA	2.10	0.52
26:BL:7:LEU:HD22	26:BL:12:ARG:HD2	1.92	0.52
43:CT:59:GLU:HG2	43:CT:64:ALA:HA	1.90	0.52
48:CY:71:ARG:HB3	48:CY:71:ARG:NH1	2.25	0.52
49:CZ:48:ARG:O	49:CZ:51:ALA:HB3	2.09	0.52
37:DN:68:PHE:O	69:DN:306:HOH:O	2.18	0.52
37:DN:114:ARG:HG2	37:DN:130:PHE:CE2	2.45	0.52
49:DZ:18:LEU:HB2	49:DZ:53:VAL:HG11	1.91	0.52
1:AA:276:G:OP1	21:AQ:17:MET:HE2	2.11	0.51
1:AA:328:C:O2	1:AA:328:C:H2'	2.09	0.51
1:AA:1054:C:OP1	69:AA:1707:HOH:O	2.18	0.51
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.91	0.51
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.10	0.51
1:AA:1478:U:H2'	1:AA:1479:C:H6	1.75	0.51
2:BA:44:A:H2'	2:BA:45:G:H8	1.74	0.51
2:BA:679:C:N3	2:BA:712:A:C2	2.77	0.51
2:BA:756:C:N3	2:BA:757:U:C6	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1323:G:H2'	2:BA:1324:A:C8	2.45	0.51
2:BA:1350:A:N6	2:BA:1373:G:N2	2.57	0.51
2:BA:1366:C:HO2'	14:BJ:62:ARG:NH2	2.08	0.51
2:BA:1378:C:H5"	2:BA:1379:G:OP2	2.10	0.51
3:DA:962:G:O2'	3:DA:963:U:H5'	2.09	0.51
3:DA:1129:A:N6	3:DA:2491:U:OP1	2.43	0.51
3:DA:1638:C:O3'	3:DA:2709:G:N2	2.43	0.51
4:CA:654:A:H3'	4:CA:654:A:N3	2.25	0.51
4:CA:1469:A:H2'	4:CA:1470:A:C8	2.45	0.51
4:CA:1483:G:C6	4:CA:1484:U:C4	2.99	0.51
4:CA:1773:A:N3	4:CA:1978:A:C2	2.79	0.51
4:CA:1789:A:H5"	27:CC:218:THR:O	2.10	0.51
4:CA:1969:A:O2'	4:CA:1972:G:N3	2.42	0.51
4:CA:2077:A:C2	4:CA:2078:C:C2	2.98	0.51
4:CA:2808:G:H4'	4:CA:2809:A:H8	1.74	0.51
4:CA:2886:A:C2	4:CA:2887:A:H1'	2.44	0.51
13:AI:44:ALA:HA	13:AI:46:MET:SD	2.50	0.51
11:BG:68:ASN:O	11:BG:138:ARG:NH1	2.43	0.51
26:BL:34:CYS:HB2	26:BL:76:GLU:O	2.10	0.51
27:CC:140:VAL:HG12	27:CC:190:THR:O	2.09	0.51
30:CF:56:LEU:HD13	30:CF:88:VAL:CG2	2.40	0.51
36:CM:61:LEU:O	54:C4:12:ARG:HD3	2.10	0.51
30:DF:50:ASP:OD1	30:DF:50:ASP:N	2.43	0.51
44:DU:7:LEU:HD11	44:DU:45:ALA:HB1	1.92	0.51
1:AA:592:G:C6	1:AA:648:A:C6	2.98	0.51
1:AA:654:G:H2'	1:AA:655:A:O5'	2.10	0.51
1:AA:901:A:C5	1:AA:902:G:H1'	2.45	0.51
1:AA:979:C:C6	1:AA:1318:A:N1	2.78	0.51
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.10	0.51
2:BA:407:U:H2'	2:BA:408:A:H8	1.75	0.51
2:BA:764:C:C4	2:BA:765:G:C5	2.99	0.51
2:BA:878:A:C5	2:BA:879:C:C5	2.98	0.51
3:DA:775:G:H8	69:DA:4267:HOH:O	1.93	0.51
3:DA:831:G:C6	3:DA:832:U:C4	2.98	0.51
3:DA:1161:C:C2'	3:DA:1162:G:H5'	2.40	0.51
3:DA:1231:U:O2'	67:DA:3060:EDO:H21	2.11	0.51
3:DA:1853:A:N1	3:DA:2087:G:H1'	2.25	0.51
4:CA:616:A:H4'	29:CE:101:TYR:OH	2.10	0.51
4:CA:1297:C:O5'	4:CA:1297:C:H6	1.93	0.51
4:CA:1526:C:O2	4:CA:1546:G:N2	2.43	0.51
4:CA:2722:G:O2'	38:CO:3:HIS:O	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:72:THR:OG1	6:AB:169:GLU:OE2	2.20	0.51
10:AF:45:ARG:O	10:AF:56:LYS:HA	2.10	0.51
12:AH:95:VAL:O	12:AH:98:GLY:N	2.41	0.51
6:BB:200:ILE:HD12	6:BB:200:ILE:N	2.25	0.51
12:BH:67:GLN:C	12:BH:69:LYS:N	2.63	0.51
17:BM:12:HIS:O	17:BM:13:LYS:HG3	2.11	0.51
18:BN:27:LYS:O	18:BN:31:SER:CB	2.58	0.51
21:BQ:14:SER:C	21:BQ:17:MET:HE1	2.30	0.51
36:CM:12:SER:OG	69:CM:301:HOH:O	2.17	0.51
36:CM:62:PRO:O	54:C4:12:ARG:HG2	2.10	0.51
36:DM:124:GLY:C	36:DM:125:LEU:HD12	2.30	0.51
1:AA:118:U:C5	1:AA:288:A:C6	2.98	0.51
1:AA:723:U:H2'	1:AA:855:U:H4'	1.90	0.51
1:AA:1152:A:H5"	14:AJ:15:HIS:HD2	1.75	0.51
1:AA:1190:G:OP2	7:AC:5:VAL:HB	2.11	0.51
1:AA:1319:A:C8	1:AA:1323:G:C5	2.98	0.51
1:AA:1406:U:H3'	1:AA:1407:5MC:HM51	1.91	0.51
2:BA:1066:C:H3'	2:BA:1067:A:C8	2.46	0.51
2:BA:1093:A:H2'	2:BA:1095:U:H6	1.75	0.51
2:BA:1110:A:N7	69:BA:1797:HOH:O	2.34	0.51
3:DA:644:A:H5"	3:DA:645:C:OP2	2.09	0.51
3:DA:1243:C:C2'	3:DA:1244:A:O5'	2.59	0.51
3:DA:1680:U:H2'	3:DA:1681:G:O4'	2.10	0.51
3:DA:2014:A:H2'	3:DA:2015:A:C8	2.45	0.51
4:CA:150:U:H2'	4:CA:151:C:C6	2.45	0.51
4:CA:454:A:H4'	4:CA:455:C:OP2	2.10	0.51
4:CA:669:G:N2	4:CA:670:A:C2	2.77	0.51
4:CA:681:G:H2'	4:CA:682:G:O4'	2.10	0.51
4:CA:788:A:OP1	4:CA:791:C:N4	2.43	0.51
4:CA:1654:A:P	38:CO:1:MET:H2	2.26	0.51
4:CA:1964:G:H4'	4:CA:1965:C:OP2	2.10	0.51
6:AB:119:THR:HG22	6:AB:119:THR:O	2.10	0.51
7:AC:55:ILE:HD11	7:AC:57:ILE:HG13	1.92	0.51
8:AD:158:ALA:HA	8:AD:161:LEU:CD2	2.39	0.51
22:AR:27:ALA:O	22:AR:30:LYS:HE2	2.09	0.51
7:BC:121:THR:O	7:BC:125:GLU:HG3	2.10	0.51
10:BF:35:LYS:HE2	10:BF:65:GLU:OE1	2.10	0.51
13:BI:63:LEU:O	13:BI:63:LEU:HD23	2.09	0.51
15:BK:25:ALA:HA	15:BK:30:THR:HG22	1.92	0.51
34:CK:71:ASP:HA	69:CK:205:HOH:O	2.10	0.51
39:CP:80:GLU:O	39:CP:83:LEU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DC:244:VAL:HA	27:DC:249:VAL:O	2.11	0.51
47:DX:49:VAL:HG21	47:DX:78:ILE:O	2.10	0.51
1:AA:222:C:H2'	1:AA:223:A:C8	2.46	0.51
1:AA:537:G:OP1	16:AL:110:ARG:NH2	2.43	0.51
2:BA:375:U:OP1	20:BP:70:ARG:HD2	2.10	0.51
2:BA:463:U:H5'	2:BA:464:U:OP2	2.11	0.51
2:BA:801:U:C2'	2:BA:802:A:O5'	2.59	0.51
3:DA:500:G:N1	3:DA:503:A:OP2	2.43	0.51
3:DA:569:U:C4	3:DA:570:G:C6	2.98	0.51
3:DA:1131:G:C5	34:DK:77:HIS:CD2	2.97	0.51
3:DA:1413:A:H2'	3:DA:1414:C:O4'	2.10	0.51
3:DA:1430:G:H2'	3:DA:1431:A:C8	2.45	0.51
3:DA:1889:A:H1'	3:DA:2086:U:O2'	2.11	0.51
3:DA:2105:U:O4	3:DA:2184:A:C2	2.64	0.51
3:DA:2332:C:H2'	3:DA:2335:A:C2	2.46	0.51
3:DA:2615:U:P	69:DA:3349:HOH:O	2.67	0.51
4:CA:397:U:OP1	48:CY:31:ASN:N	2.44	0.51
4:CA:691:C:OP1	69:CA:3392:HOH:O	2.18	0.51
4:CA:1291:C:C2	4:CA:1292:G:C8	2.99	0.51
4:CA:1754:A:N6	4:CA:1755:A:C6	2.78	0.51
4:CA:2073:C:O2'	4:CA:2074:U:H5'	2.10	0.51
4:CA:2339:C:H2'	4:CA:2340:A:O4'	2.10	0.51
5:CB:46:A:H5"	39:CP:3:LYS:HD2	1.93	0.51
5:CB:80:U:H2'	5:CB:81:G:C8	2.45	0.51
6:AB:17:GLY:HA2	6:AB:41:ILE:HG23	1.92	0.51
8:AD:145:ILE:N	8:AD:145:ILE:CD1	2.73	0.51
11:AG:111:ARG:NH1	11:AG:123:GLU:OE2	2.44	0.51
12:AH:78:VAL:HG11	12:AH:125:ILE:HD11	1.91	0.51
17:AM:25:VAL:O	17:AM:25:VAL:CG2	2.58	0.51
10:BF:29:ILE:HG22	10:BF:34:GLY:O	2.11	0.51
11:BG:51:ALA:O	11:BG:55:GLY:N	2.35	0.51
32:CH:134:HIS:CG	32:CH:135:SER:H	2.28	0.51
27:DC:53:ILE:O	69:DC:305:HOH:O	2.19	0.51
56:DD:159:LYS:HD2	69:DD:430:HOH:O	2.10	0.51
29:DE:149:ILE:HD12	29:DE:150:THR:N	2.26	0.51
33:DJ:55:PRO:O	33:DJ:56:VAL:HB	2.11	0.51
38:DO:33:ILE:HG23	38:DO:33:ILE:O	2.11	0.51
44:DU:19:LYS:HE2	44:DU:84:TYR:OH	2.09	0.51
1:AA:500:G:H2'	1:AA:501:C:C6	2.44	0.51
1:AA:587:G:C2	1:AA:755:G:C6	2.98	0.51
1:AA:606:G:N2	1:AA:633:G:N7	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:684:U:O2'	15:AK:40:ASN:HB3	2.11	0.51
1:AA:1517:G:N3	3:DA:1919:A:O2'	2.36	0.51
2:BA:262:A:H5"	2:BA:263:A:OP2	2.10	0.51
2:BA:407:U:C2	2:BA:408:A:N7	2.79	0.51
2:BA:578:C:C2	2:BA:579:A:C8	2.98	0.51
3:DA:918:A:H4'	5:DB:97:C:O2	2.10	0.51
3:DA:1215:G:H2'	3:DA:1216:G:H5'	1.92	0.51
3:DA:1372:U:C2'	3:DA:1373:A:H5'	2.40	0.51
3:DA:1673:G:H5"	69:DA:3263:HOH:O	2.11	0.51
3:DA:2391:G:O2'	3:DA:2424:C:N4	2.42	0.51
3:DA:2567:G:N2	69:DA:3750:HOH:O	2.42	0.51
4:CA:15:G:OP1	51:C1:20:ALA:HB2	2.09	0.51
4:CA:120:U:C2	4:CA:149:A:C6	2.98	0.51
4:CA:303:G:C2	4:CA:315:G:C6	2.98	0.51
4:CA:1204:A:H61	4:CA:1240:U:H2'	1.75	0.51
4:CA:1224:U:H4'	42:CS:88:GLY:O	2.11	0.51
4:CA:1268:A:H2'	4:CA:1269:A:O4'	2.10	0.51
4:CA:2053:G:H2'	4:CA:2054:A:O4'	2.10	0.51
4:CA:2146:C:H5"	4:CA:2147:A:OP1	2.11	0.51
6:AB:106:THR:HG22	6:AB:107:VAL:N	2.26	0.51
8:AD:190:ASP:O	8:AD:191:LEU:O	2.28	0.51
6:BB:50:PHE:HB2	6:BB:213:TYR:OH	2.11	0.51
6:BB:96:TRP:O	6:BB:97:LEU:C	2.47	0.51
13:BI:27:LYS:N	13:BI:62:ASP:OD1	2.44	0.51
15:BK:31:ILE:HG22	15:BK:46:THR:HB	1.92	0.51
19:BO:26:GLU:OE2	19:BO:77:ARG:HD2	2.10	0.51
27:CC:140:VAL:HG11	27:CC:189:ALA:HB1	1.93	0.51
51:C1:54:ILE:O	51:C1:55:ALA:CB	2.58	0.51
29:DE:77:ILE:O	29:DE:77:ILE:HG22	2.09	0.51
31:DG:154:GLU:HG2	31:DG:155:PRO:HD2	1.92	0.51
1:AA:96:U:O2'	1:AA:97:G:P	2.68	0.51
1:AA:111:G:H5"	1:AA:112:G:OP2	2.09	0.51
1:AA:428:G:O4'	1:AA:430:A:C8	2.63	0.51
1:AA:737:C:C2	1:AA:738:C:C5	2.99	0.51
2:BA:377:G:H5"	20:BP:24:SER:HB2	1.93	0.51
2:BA:495:A:C2	2:BA:496:A:N6	2.79	0.51
2:BA:617:G:C2'	69:BA:1777:HOH:O	2.58	0.51
3:DA:581:C:H2'	3:DA:582:A:H8	1.75	0.51
3:DA:1835:2MG:H2'	3:DA:1836:C:C6	2.44	0.51
3:DA:2531:A:N3	3:DA:2531:A:H2'	2.26	0.51
60:DA:3067:MPD:H52	60:DA:3067:MPD:CM	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:40:U:C4	4:CA:41:C:C4	2.99	0.51
4:CA:1683:U:O5'	4:CA:1683:U:H6	1.93	0.51
4:CA:2143:C:H2'	4:CA:2144:G:O4'	2.11	0.51
4:CA:2326:C:H3'	69:CA:4008:HOH:O	2.11	0.51
5:CB:30:C:OP1	39:CP:3:LYS:NZ	2.39	0.51
6:AB:51:ASN:O	6:AB:53:ALA:N	2.40	0.51
15:AK:16:VAL:HG23	15:AK:17:SER:N	2.25	0.51
6:BB:123:ASP:O	6:BB:124:GLY:O	2.29	0.51
10:BF:52:ASN:O	10:BF:53:LYS:HB2	2.11	0.51
11:BG:65:ALA:HB3	11:BG:124:LEU:HD23	1.91	0.51
12:BH:51:VAL:HG22	12:BH:51:VAL:O	2.09	0.51
14:BJ:92:LEU:O	14:BJ:93:ALA:HB2	2.10	0.51
43:CT:45:VAL:O	43:CT:45:VAL:HG12	2.10	0.51
27:DC:209:ALA:HA	27:DC:212:TRP:CE3	2.45	0.51
55:D5:3:VAL:O	55:D5:4:LEU:CB	2.59	0.51
57:D7:46:THR:HG23	57:D7:47:ILE:HG12	1.93	0.51
1:AA:624:C:C5	1:AA:625:U:C5	2.98	0.51
1:AA:977:A:O2'	1:AA:979:C:OP2	2.16	0.51
1:AA:1370:G:C2	1:AA:1371:G:C8	2.99	0.51
2:BA:604:G:H2'	2:BA:605:U:O4'	2.11	0.51
3:DA:580:U:H2'	3:DA:581:C:C6	2.45	0.51
3:DA:1997:C:H5	69:DA:6303:HOH:O	1.92	0.51
3:DA:2173:A:H2'	3:DA:2174:C:O4'	2.10	0.51
3:DA:2246:G:H2'	3:DA:2247:A:C8	2.46	0.51
3:DA:2518:A:OP2	63:D5:101:PUT:H22	2.11	0.51
3:DA:2602:A:H4'	69:DA:3870:HOH:O	2.10	0.51
3:DA:2719:G:H1'	69:DA:3914:HOH:O	2.10	0.51
4:CA:27:G:H1'	4:CA:512:G:N2	2.26	0.51
4:CA:297:G:OP1	45:CV:91:LYS:NZ	2.28	0.51
4:CA:601:C:O2'	4:CA:605:G:H5"	2.10	0.51
4:CA:720:U:H2'	4:CA:721:A:C8	2.46	0.51
4:CA:1339:G:OP1	44:CU:17:SER:OG	2.26	0.51
4:CA:1581:G:C6	4:CA:1582:C:N4	2.79	0.51
4:CA:1681:G:O2'	4:CA:1762:A:N3	2.34	0.51
4:CA:1688:U:C4	4:CA:1698:A:C2	2.99	0.51
4:CA:2835:A:H61	4:CA:2880:C:H41	1.59	0.51
7:AC:7:PRO:HG2	7:AC:184:TYR:CG	2.45	0.51
22:AR:42:SER:O	22:AR:46:GLY:N	2.37	0.51
6:BB:21:ARG:C	6:BB:23:TRP:N	2.64	0.51
17:BM:66:GLU:O	17:BM:68:ASP:N	2.44	0.51
18:BN:35:ALA:HA	18:BN:42:TRP:CZ3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:CC:110:LYS:HD2	27:CC:113:ASP:OD2	2.09	0.51
30:DF:157:THR:HG23	30:DF:159:ALA:H	1.76	0.51
44:DU:50:LEU:HD23	49:DZ:26:PHE:CZ	2.45	0.51
45:DV:48:VAL:O	45:DV:53:GLN:HB3	2.10	0.51
55:D5:23:LYS:NZ	69:D5:204:HOH:O	2.44	0.51
1:AA:254:G:C2'	1:AA:255:G:H5'	2.41	0.51
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.46	0.51
2:BA:527:G:N1	2:BA:528:C:C5	2.78	0.51
2:BA:558:G:H8	2:BA:558:G:O5'	1.94	0.51
2:BA:776:G:N2	2:BA:802:A:OP2	2.43	0.51
2:BA:953:G:H2'	2:BA:954:G:O4'	2.11	0.51
2:BA:1363:A:H2'	2:BA:1363:A:N3	2.26	0.51
3:DA:931:U:H4'	3:DA:932:U:OP2	2.11	0.51
3:DA:997:G:C2'	3:DA:998:C:O5'	2.59	0.51
3:DA:1251:C:C5'	69:DA:3618:HOH:O	2.59	0.51
3:DA:1287:A:N1	3:DA:1648:U:O2'	2.37	0.51
3:DA:1505:A:C5	3:DA:1506:U:C5	2.98	0.51
3:DA:1605:C:H2'	3:DA:1606:C:H5'	1.91	0.51
3:DA:1972:G:P	69:DA:3492:HOH:O	2.69	0.51
4:CA:198:C:H42	4:CA:248:G:H1	1.59	0.51
4:CA:1265:A:P	69:CA:3316:HOH:O	2.69	0.51
4:CA:1905:C:O4'	4:CA:1928:A:C2	2.64	0.51
4:CA:2600:A:H2'	4:CA:2601:C:C6	2.46	0.51
4:CA:2690:U:O2'	4:CA:2872:A:N3	2.40	0.51
4:CA:2821:A:OP2	28:CD:115:GLY:N	2.40	0.51
4:CA:2870:C:H5"	38:CO:65:LEU:HD21	1.92	0.51
7:AC:149:ILE:HA	7:AC:201:TRP:O	2.10	0.51
24:AT:14:SER:O	24:AT:18:ARG:N	2.42	0.51
8:BD:191:LEU:N	8:BD:191:LEU:HD12	2.26	0.51
9:BE:101:GLU:O	9:BE:102:GLY:C	2.49	0.51
12:BH:75:ILE:HD12	12:BH:76:GLN:N	2.26	0.51
12:BH:106:THR:OG1	12:BH:109:GLY:O	2.15	0.51
20:BP:75:ILE:O	20:BP:78:VAL:HG12	2.11	0.51
21:BQ:7:THR:C	21:BQ:8:LEU:HD12	2.31	0.51
31:CG:169:ARG:NH1	55:C5:33:ASN:OD1	2.44	0.51
27:DC:92:LEU:HD12	27:DC:101:ARG:O	2.11	0.51
56:DD:207:VAL:HG22	56:DD:207:VAL:O	2.09	0.51
31:DG:120:ILE:HD12	31:DG:140:ILE:HG22	1.91	0.51
1:AA:270:A:H2'	1:AA:271:C:C6	2.46	0.51
1:AA:624:C:H4'	20:AP:11:ALA:HB2	1.92	0.51
1:AA:658:C:O4'	19:AO:22:THR:OG1	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:C2	1:AA:959:A:OP2	2.64	0.51
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.46	0.51
2:BA:121:U:H3'	2:BA:122:G:C5'	2.41	0.51
2:BA:160:A:H1'	2:BA:344:A:C5	2.46	0.51
2:BA:826:C:H2'	2:BA:827:U:C6	2.45	0.51
2:BA:1112:C:C4	7:BC:178:LEU:CD2	2.93	0.51
2:BA:1492:A:C2	4:CA:1913:A:N7	2.78	0.51
3:DA:184:C:O2'	3:DA:217:A:N3	2.39	0.51
3:DA:192:C:OP1	69:DA:3513:HOH:O	2.19	0.51
3:DA:305:C:C2'	3:DA:306:U:O5'	2.59	0.51
3:DA:332:A:C2	3:DA:335:C:C5	2.99	0.51
3:DA:1261:C:OP1	69:DA:3521:HOH:O	2.19	0.51
3:DA:1735:A:C2'	3:DA:1736:U:H5'	2.41	0.51
3:DA:2469:A:O3'	37:DN:55:ARG:NH1	2.44	0.51
3:DA:2582:G:C2	3:DA:2583:G:C8	2.99	0.51
4:CA:121:G:H4'	4:CA:149:A:H5'	1.92	0.51
4:CA:157:C:H2'	4:CA:158:U:O4'	2.11	0.51
4:CA:1209:U:O3'	4:CA:1212:G:H5'	2.10	0.51
4:CA:1310:G:C2'	4:CA:1311:G:H5'	2.41	0.51
4:CA:1380:G:H2'	4:CA:1381:G:C8	2.46	0.51
4:CA:2112:G:H5'	4:CA:2113:U:OP2	2.10	0.51
4:CA:2371:G:C2	4:CA:2372:U:C6	2.99	0.51
8:AD:23:SER:HB3	8:AD:161:LEU:HD11	1.93	0.51
8:AD:157:ALA:O	8:AD:161:LEU:HD22	2.11	0.51
11:AG:120:LEU:CD2	11:AG:124:LEU:HD21	2.41	0.51
13:AI:27:LYS:HD2	13:AI:62:ASP:OD1	2.11	0.51
16:AL:89:D2T:N	16:AL:89:D2T:OD1	2.42	0.51
7:BC:11:ARG:HH21	7:BC:182:ILE:HG13	1.76	0.51
10:BF:76:THR:O	10:BF:79:ARG:N	2.38	0.51
13:BI:119:ARG:HB2	13:BI:125:PRO:HG3	1.93	0.51
15:BK:16:VAL:HG13	15:BK:17:SER:N	2.26	0.51
32:CH:131:PHE:O	32:CH:138:PHE:HD2	1.94	0.51
38:CO:114:GLU:OE2	38:CO:118:ARG:NE	2.44	0.51
1:AA:15:G:C2	1:AA:16:A:C4	2.99	0.51
1:AA:427:U:H3'	1:AA:428:G:H2'	1.93	0.51
1:AA:977:A:H1'	1:AA:982:U:O4	2.11	0.51
1:AA:1154:G:H2'	1:AA:1155:A:H8	1.76	0.51
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.92	0.51
2:BA:44:A:H2'	2:BA:45:G:C8	2.46	0.51
2:BA:79:G:N2	2:BA:91:U:O2	2.44	0.51
2:BA:204:G:H2'	2:BA:205:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:515:G:H2'	2:BA:516:U:O4'	2.10	0.51
2:BA:974:A:H4'	2:BA:975:A:O5'	2.11	0.51
3:DA:14:A:H1'	69:DA:3901:HOH:O	2.11	0.51
3:DA:136:G:H2'	3:DA:137:U:O4'	2.10	0.51
3:DA:662:G:H2'	3:DA:663:G:O5'	2.11	0.51
3:DA:710:U:P	69:DA:3692:HOH:O	2.68	0.51
3:DA:1224:U:H4'	42:DS:88:GLY:O	2.11	0.51
3:DA:1269:A:H8	3:DA:1269:A:O5'	1.93	0.51
3:DA:1360:G:O6	3:DA:1372:U:C2	2.64	0.51
3:DA:1378:A:C4'	3:DA:1379:U:OP1	2.59	0.51
3:DA:1941:C:O2	3:DA:1941:C:H2'	2.11	0.51
3:DA:2129:C:N4	3:DA:2130:U:C4	2.78	0.51
3:DA:2322:A:H2'	3:DA:2323:G:O4'	2.11	0.51
4:CA:724:U:H2'	4:CA:725:G:O4'	2.10	0.51
4:CA:1182:G:H2'	4:CA:1183:U:O4'	2.10	0.51
4:CA:1274:A:N3	4:CA:1297:C:H1'	2.26	0.51
4:CA:1429:G:N3	4:CA:1568:G:C2	2.79	0.51
4:CA:2773:C:C2'	4:CA:2774:C:O5'	2.59	0.51
6:AB:90:PHE:CE1	6:AB:153:ASP:O	2.64	0.51
9:AE:107:ALA:CB	9:AE:125:ALA:HB3	2.41	0.51
18:AN:93:ILE:HG21	18:AN:96:LEU:HD22	1.92	0.51
19:AO:87:LEU:O	19:AO:88:ARG:CB	2.59	0.51
7:BC:36:ASP:OD1	7:BC:57:ILE:HD13	2.11	0.51
7:BC:82:GLU:O	7:BC:85:GLU:HG2	2.11	0.51
8:BD:104:ARG:NH1	8:BD:111:ARG:HH22	2.08	0.51
9:BE:99:ALA:HB2	9:BE:124:LEU:CD1	2.41	0.51
33:CJ:111:THR:HG22	33:CJ:111:THR:O	2.10	0.51
40:CQ:74:GLN:HA	40:CQ:74:GLN:HE21	1.75	0.51
40:CQ:103:THR:O	40:CQ:105:LYS:N	2.32	0.51
43:CT:48:LYS:C	43:CT:50:VAL:H	2.14	0.51
55:C5:21:LYS:O	55:C5:22:ARG:HB2	2.11	0.51
30:DF:107:VAL:HA	30:DF:110:ILE:CD1	2.41	0.51
33:DJ:79:LEU:O	33:DJ:85:ILE:O	2.29	0.51
40:DQ:36:LYS:HD3	40:DQ:38:ARG:HH11	1.75	0.51
43:DT:47:VAL:O	43:DT:50:VAL:HG23	2.11	0.51
43:DT:57:ASN:HA	69:DT:309:HOH:O	2.10	0.51
44:DU:80:TRP:CD1	44:DU:80:TRP:N	2.79	0.51
46:DW:61:LEU:CD1	46:DW:61:LEU:N	2.74	0.51
50:D0:1:ALA:O	50:D0:2:LYS:C	2.47	0.51
54:D4:44:ARG:N	54:D4:45:PRO:HD2	2.25	0.51
1:AA:167:A:H2'	1:AA:168:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:U:O2	19:AO:22:THR:HG23	2.11	0.50
1:AA:668:G:O2'	1:AA:669:G:H5'	2.11	0.50
1:AA:1096:C:O2'	1:AA:1097:C:H5'	2.12	0.50
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.45	0.50
1:AA:1392:G:C5	1:AA:1393:U:C5	2.98	0.50
2:BA:32:A:C3'	2:BA:33:A:H8	2.24	0.50
2:BA:374:A:H5"	2:BA:452:A:N1	2.26	0.50
2:BA:451:A:H1'	2:BA:452:A:N7	2.26	0.50
2:BA:708:C:C5	2:BA:709:U:C5	2.99	0.50
2:BA:719:C:H3'	2:BA:720:C:C6	2.47	0.50
2:BA:938:A:N6	2:BA:939:G:C6	2.80	0.50
3:DA:1066:U:H2'	3:DA:1067:A:H5"	1.94	0.50
3:DA:1525:A:C5	3:DA:1526:C:C5	2.99	0.50
4:CA:18:U:H3	4:CA:522:A:H61	1.59	0.50
4:CA:193:U:O3'	4:CA:803:U:H4'	2.11	0.50
4:CA:364:C:H2'	4:CA:365:U:C6	2.46	0.50
4:CA:425:G:C2	4:CA:426:C:C4	2.99	0.50
4:CA:664:G:H2'	4:CA:665:U:O4'	2.11	0.50
4:CA:830:G:O6	4:CA:2448:A:H2'	2.11	0.50
4:CA:1719:G:N2	4:CA:1742:U:C2	2.79	0.50
4:CA:2032:G:O6	4:CA:2453:A:O2'	2.28	0.50
4:CA:2061:G:C2	4:CA:2063:C:C4	2.99	0.50
4:CA:2261:C:C2	4:CA:2280:G:N2	2.79	0.50
4:CA:2420:C:OP1	54:C4:33:THR:HB	2.11	0.50
4:CA:2531:A:C4	4:CA:2532:G:C8	3.00	0.50
4:CA:2552:U:N3	4:CA:2554:U:O5'	2.44	0.50
9:AE:115:LEU:HG	9:AE:120:VAL:HG21	1.92	0.50
12:AH:113:ASP:OD1	12:AH:117:ARG:NH2	2.44	0.50
6:BB:84:ALA:O	6:BB:86:SER:N	2.44	0.50
7:BC:80:LYS:HA	7:BC:80:LYS:HE3	1.93	0.50
7:BC:116:VAL:CG1	7:BC:137:ALA:HB1	2.41	0.50
13:BI:57:MET:SD	13:BI:58:VAL:N	2.82	0.50
17:BM:57:ARG:O	17:BM:60:VAL:HG12	2.11	0.50
30:CF:73:VAL:HG22	30:CF:78:ILE:HD11	1.91	0.50
38:CO:90:ARG:CZ	38:CO:116:VAL:HG11	2.41	0.50
30:DF:138:PRO:HB2	57:D7:29:ILE:HD11	1.93	0.50
33:DJ:89:SER:HB3	33:DJ:92:PRO:CG	2.40	0.50
57:D7:46:THR:HG23	57:D7:47:ILE:H	1.76	0.50
1:AA:68:G:C5	1:AA:69:G:H1'	2.47	0.50
1:AA:544:G:C5	1:AA:545:C:C5	2.99	0.50
2:BA:690:G:H2'	2:BA:691:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:840:C:H3'	2:BA:841:C:C5'	2.40	0.50
2:BA:882:C:O2'	2:BA:883:C:H5'	2.10	0.50
2:BA:1087:G:H22	2:BA:1099:G:H1'	1.76	0.50
2:BA:1522:U:H2'	2:BA:1523:G:H8	1.76	0.50
3:DA:545:U:H3'	3:DA:546:U:H4'	1.91	0.50
3:DA:1499:C:P	69:DA:3882:HOH:O	2.68	0.50
3:DA:1587:G:H2'	3:DA:1588:G:H8	1.77	0.50
3:DA:1870:C:H2'	3:DA:1871:A:C4	2.47	0.50
3:DA:1985:C:N3	3:DA:1986:C:C5	2.79	0.50
3:DA:2127:G:H1'	3:DA:2173:A:C2	2.46	0.50
3:DA:2838:G:H2'	3:DA:2839:G:O4'	2.11	0.50
59:DA:3066:PGE:H52	56:DD:167:ASN:O	2.11	0.50
4:CA:106:C:O2'	4:CA:294:A:O2'	1.92	0.50
4:CA:517:C:H1'	43:CT:78:GLU:OE2	2.10	0.50
4:CA:808:G:OP2	36:CM:36:LYS:HE2	2.11	0.50
4:CA:1041:G:N2	4:CA:1114:C:O2	2.38	0.50
4:CA:2284:A:OP2	52:C2:5:ARG:HD2	2.11	0.50
6:AB:31:ILE:HD13	6:AB:39:HIS:CD2	2.46	0.50
16:AL:110:ARG:HB2	16:AL:119:VAL:HG21	1.94	0.50
7:BC:155:GLY:O	7:BC:157:LEU:HG	2.10	0.50
9:BE:154:ALA:C	9:BE:156:LYS:N	2.65	0.50
15:BK:79:ILE:H	15:BK:79:ILE:HD12	1.76	0.50
33:DJ:17:ALA:O	33:DJ:18:ASN:CB	2.59	0.50
33:DJ:57:VAL:O	33:DJ:68:PHE:CB	2.60	0.50
38:DO:90:ARG:CZ	38:DO:116:VAL:HG11	2.41	0.50
39:DP:1:MET:O	39:DP:2:ASP:HB3	2.12	0.50
47:DX:64:LYS:HG3	47:DX:83:GLU:HB3	1.94	0.50
1:AA:144:G:C4	1:AA:179:A:C2	2.99	0.50
1:AA:254:G:O2'	21:AQ:18:GLU:O	2.29	0.50
1:AA:568:G:O6	16:AL:2:ALA:N	2.44	0.50
1:AA:695:A:N1	1:AA:696:A:C2	2.79	0.50
1:AA:923:A:O4'	1:AA:1398:A:C2	2.64	0.50
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.11	0.50
1:AA:1238:A:H5"	1:AA:1239:A:OP2	2.12	0.50
2:BA:115:G:HO2'	2:BA:116:A:P	2.26	0.50
2:BA:176:C:OP1	24:BT:20:HIS:NE2	2.32	0.50
2:BA:769:G:H4'	2:BA:1513:A:H4'	1.93	0.50
3:DA:225:C:C2	3:DA:231:A:C2	2.99	0.50
3:DA:249:C:OP1	69:DA:3516:HOH:O	2.19	0.50
3:DA:520:G:H2'	3:DA:521:U:C6	2.46	0.50
3:DA:1070:A:N6	33:DJ:10:LEU:HB3	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1745:A:H2'	3:DA:1746:A:O5'	2.12	0.50
3:DA:1768:C:P	69:DA:3409:HOH:O	2.67	0.50
3:DA:2270:A:P	69:DA:3317:HOH:O	2.69	0.50
65:DA:3064:ACY:CH3	69:DA:4579:HOH:O	2.58	0.50
4:CA:411:G:OP1	4:CA:2407:A:OP2	2.29	0.50
4:CA:1225:G:O2'	42:CS:86:GLN:OE1	2.22	0.50
4:CA:1373:A:OP1	69:CA:3401:HOH:O	2.19	0.50
4:CA:1680:U:H2'	4:CA:1681:G:O4'	2.12	0.50
4:CA:1792:G:C5	4:CA:1793:C:C5	3.00	0.50
6:AB:17:GLY:CA	6:AB:41:ILE:HG23	2.41	0.50
11:AG:27:VAL:O	11:AG:31:MET:N	2.40	0.50
15:AK:110:ILE:N	25:AU:6:VAL:O	2.42	0.50
12:BH:116:ALA:HB1	12:BH:121:LEU:CD1	2.41	0.50
39:CP:67:ASN:OD1	39:CP:70:ALA:N	2.30	0.50
42:CS:83:TYR:CD2	42:CS:84:ARG:N	2.80	0.50
51:D1:54:ILE:HG22	51:D1:55:ALA:N	2.24	0.50
1:AA:66:A:C2	1:AA:104:G:H1'	2.46	0.50
1:AA:232:G:O2'	1:AA:233:C:H5'	2.12	0.50
2:BA:268:U:C2	2:BA:269:C:C5	2.99	0.50
2:BA:268:U:H2'	2:BA:269:C:C6	2.47	0.50
2:BA:505:G:OP2	2:BA:534:U:O2'	2.18	0.50
2:BA:509:A:P	69:BA:1740:HOH:O	2.70	0.50
2:BA:561:U:HO2'	2:BA:562:U:P	2.34	0.50
2:BA:680:C:O2'	2:BA:681:A:H5'	2.11	0.50
2:BA:862:C:C2	2:BA:863:U:C6	3.00	0.50
2:BA:1318:A:O2'	23:BS:37:ARG:HD3	2.12	0.50
2:BA:1416:G:N2	2:BA:1485:U:H1'	2.27	0.50
3:DA:78:U:H2'	3:DA:79:C:C6	2.47	0.50
3:DA:255:A:OP1	69:DA:3508:HOH:O	2.18	0.50
3:DA:322:A:H5'	3:DA:340:A:H1'	1.92	0.50
3:DA:515:A:C2'	3:DA:516:C:H5'	2.41	0.50
3:DA:766:U:P	69:DA:3371:HOH:O	2.66	0.50
3:DA:920:A:C6	3:DA:921:C:C4	3.00	0.50
3:DA:1251:C:H5'	69:DA:3618:HOH:O	2.12	0.50
3:DA:1264:A:O5'	3:DA:1264:A:H8	1.94	0.50
3:DA:1588:G:C4	3:DA:1589:U:C5	3.00	0.50
3:DA:1670:C:H3'	3:DA:1671:U:C6	2.45	0.50
3:DA:2515:C:O2'	3:DA:2516:A:H5'	2.12	0.50
3:DA:2553:G:OP1	69:DA:3514:HOH:O	2.19	0.50
67:DA:3059:EDO:H12	59:DA:3066:PGE:H32	1.92	0.50
4:CA:186:G:C2	4:CA:211:C:O2	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:187:G:N2	4:CA:210:C:C2	2.79	0.50
4:CA:189:G:O2'	4:CA:190:A:O5'	2.25	0.50
4:CA:332:A:O2'	4:CA:334:C:P	2.68	0.50
4:CA:1567:G:N7	27:CC:82:TYR:CD2	2.79	0.50
4:CA:1948:G:H3'	69:CA:3231:HOH:O	2.10	0.50
4:CA:2287:A:O2'	4:CA:2289:G:N7	2.36	0.50
4:CA:2741:A:H2'	4:CA:2742:G:O4'	2.11	0.50
22:AR:22:ASP:OD2	22:AR:24:LYS:HB2	2.11	0.50
6:BB:164:ILE:O	6:BB:186:ILE:HG23	2.12	0.50
10:BF:2:ARG:HB3	10:BF:4:TYR:CE1	2.46	0.50
11:BG:50:LEU:CD1	11:BG:61:ALA:HB1	2.42	0.50
14:BJ:80:THR:HB	14:BJ:83:THR:HG22	1.94	0.50
17:BM:25:VAL:CG2	17:BM:25:VAL:O	2.60	0.50
18:BN:27:LYS:O	18:BN:31:SER:HB2	2.11	0.50
24:BT:6:SER:OG	24:BT:7:ALA:N	2.43	0.50
45:CV:50:ALA:O	45:CV:51:LEU:HB2	2.11	0.50
50:C0:39:ASP:OD1	50:C0:44:ARG:NH1	2.44	0.50
52:C2:9:LYS:O	52:C2:50:GLU:HG2	2.11	0.50
30:DF:41:GLU:HG3	30:DF:48:LEU:HD22	1.94	0.50
31:DG:39:ALA:HA	31:DG:57:TYR:CD2	2.47	0.50
32:DH:90:LEU:HD11	32:DH:145:VAL:HG11	1.93	0.50
1:AA:6:G:C6	9:AE:99:ALA:HB1	2.46	0.50
1:AA:373:A:C2	1:AA:374:A:C8	2.99	0.50
1:AA:453:G:O6	1:AA:479:U:C4	2.63	0.50
1:AA:568:G:N3	1:AA:569:C:C5	2.80	0.50
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.25	0.50
1:AA:1311:A:C2	1:AA:1327:C:N3	2.80	0.50
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.93	0.50
1:AA:1514:G:C2'	1:AA:1515:G:H5'	2.41	0.50
2:BA:51:A:H4'	2:BA:52:C:C5'	2.42	0.50
2:BA:405:U:H2'	2:BA:406:G:OP1	2.11	0.50
3:DA:408:G:O2'	3:DA:409:G:H5'	2.12	0.50
3:DA:722:A:H2'	3:DA:723:C:O4'	2.10	0.50
3:DA:747:5MU:C4	3:DA:2613:U:C5	3.00	0.50
3:DA:915:C:H2'	3:DA:916:G:H5'	1.93	0.50
3:DA:994:C:P	41:DR:53:LYS:HZ1	2.34	0.50
3:DA:1360:G:C6	3:DA:1372:U:C2	2.99	0.50
3:DA:1826:G:O2'	3:DA:1971:U:OP2	2.29	0.50
3:DA:2202:U:H5"	3:DA:2203:U:OP1	2.12	0.50
4:CA:490:C:C6	4:CA:490:C:OP1	2.64	0.50
4:CA:1130:U:HO2'	4:CA:1131:G:H8	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1131:G:O2'	4:CA:1133:A:N7	2.42	0.50
4:CA:1843:C:H4'	27:CC:250:GLN:CD	2.32	0.50
4:CA:2089:C:O2'	4:CA:2090:A:H5'	2.11	0.50
4:CA:2537:U:H2'	4:CA:2538:C:C6	2.47	0.50
69:CA:3823:HOH:O	53:C3:2:LYS:HE3	2.11	0.50
6:AB:24:ASN:OD1	6:AB:26:LYS:N	2.38	0.50
8:AD:152:GLN:O	8:AD:155:VAL:HG22	2.12	0.50
9:AE:157:ARG:HD2	12:AH:43:GLU:O	2.12	0.50
24:AT:54:MET:O	24:AT:57:ILE:HG22	2.12	0.50
7:BC:82:GLU:O	7:BC:85:GLU:HG3	2.11	0.50
9:BE:155:ALA:O	9:BE:156:LYS:HG2	2.11	0.50
31:CG:172:GLU:HB3	69:CG:203:HOH:O	2.11	0.50
32:CH:51:ARG:HG3	32:CH:52:ALA:N	2.25	0.50
40:CQ:30:TRP:CE3	40:CQ:37:LYS:HG2	2.46	0.50
33:DJ:74:PRO:HD2	33:DJ:77:VAL:HG21	1.93	0.50
53:D3:44:VAL:HB	69:D3:221:HOH:O	2.09	0.50
1:AA:340:U:H2'	1:AA:341:C:C6	2.46	0.50
1:AA:1053:G:O5'	1:AA:1054:C:H5'	2.12	0.50
2:BA:157:U:O2	2:BA:165:G:C2	2.65	0.50
2:BA:254:G:H4'	21:BQ:20:SER:HB2	1.92	0.50
2:BA:562:U:O3'	26:BL:12:ARG:HG2	2.10	0.50
2:BA:562:U:H1'	26:BL:12:ARG:HG3	1.94	0.50
2:BA:687:A:C8	2:BA:701:U:C5	3.00	0.50
3:DA:747:5MU:H4'	69:DA:3689:HOH:O	2.10	0.50
3:DA:1066:U:OP1	3:DA:1066:U:O4'	2.29	0.50
3:DA:1413:A:C6	3:DA:1414:C:C4	2.99	0.50
3:DA:1805:A:N3	27:DC:49:THR:HB	2.27	0.50
3:DA:2192:U:H2'	3:DA:2193:G:O4'	2.11	0.50
3:DA:2619:C:O2'	3:DA:2620:C:H5'	2.12	0.50
4:CA:68:G:H2'	4:CA:69:C:C6	2.47	0.50
4:CA:972:A:C2	4:CA:973:A:N6	2.80	0.50
4:CA:1799:G:H5'	4:CA:1819:A:N6	2.25	0.50
4:CA:1820:U:OP1	27:CC:176:ARG:HG3	2.11	0.50
4:CA:2463:C:O5'	4:CA:2463:C:H6	1.94	0.50
6:AB:181:ILE:O	6:AB:183:VAL:N	2.44	0.50
9:AE:142:ASP:HA	9:AE:145:GLU:HB3	1.93	0.50
23:AS:29:LYS:CB	23:AS:30:PRO:HD2	2.41	0.50
13:BI:73:SER:O	13:BI:77:GLY:N	2.36	0.50
27:CC:32:LEU:O	27:CC:63:ILE:HD12	2.12	0.50
43:CT:65:ASP:HB3	43:CT:68:ASP:OD1	2.11	0.50
44:CU:17:SER:O	44:CU:19:LYS:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:C3:11:LYS:NZ	69:C3:203:HOH:O	2.45	0.50
32:DH:2:GLN:O	32:DH:3:VAL:HG13	2.12	0.50
49:DZ:18:LEU:C	49:DZ:18:LEU:CD2	2.79	0.50
1:AA:71:A:O4'	1:AA:100:G:N2	2.45	0.50
1:AA:675:A:OP1	22:AR:74:HIS:CE1	2.65	0.50
1:AA:1367:C:C4	1:AA:1368:A:N7	2.80	0.50
1:AA:1375:A:O2'	1:AA:1376:U:H5'	2.11	0.50
1:AA:1518:MA6:N7	1:AA:1518:MA6:C9	2.74	0.50
2:BA:1071:C:H2'	2:BA:1072:G:C8	2.46	0.50
3:DA:814:C:H2'	3:DA:815:C:H6	1.76	0.50
3:DA:996:A:H4'	41:DR:90:ASP:OD2	2.12	0.50
3:DA:1026:G:H2'	3:DA:1027:A:C8	2.47	0.50
3:DA:1064:C:O5'	33:DJ:88:GLY:HA3	2.12	0.50
3:DA:2077:A:C2	3:DA:2078:C:C5	3.00	0.50
3:DA:2243:U:O2'	3:DA:2244:U:H5'	2.12	0.50
3:DA:2305:U:O2	30:DF:150:GLY:HA3	2.12	0.50
3:DA:2364:C:C2'	3:DA:2365:G:H5'	2.41	0.50
3:DA:2492:U:C2	3:DA:2493:U:C5	2.99	0.50
3:DA:2498:OMC:O2	3:DA:2498:OMC:H2'	2.11	0.50
4:CA:79:C:O2'	4:CA:346:A:N3	2.33	0.50
4:CA:532:A:H2'	4:CA:532:A:N3	2.27	0.50
4:CA:635:C:H2'	4:CA:636:G:O4'	2.11	0.50
4:CA:656:G:H2'	4:CA:657:U:O4'	2.11	0.50
4:CA:809:G:OP1	69:CA:3402:HOH:O	2.19	0.50
4:CA:821:A:H5'	4:CA:822:G:C8	2.47	0.50
4:CA:1509:A:O2'	4:CA:1510:G:P	2.69	0.50
4:CA:1661:G:C2	4:CA:1662:U:C6	2.99	0.50
4:CA:2803:G:H2'	4:CA:2804:U:C6	2.47	0.50
6:AB:140:GLU:O	6:AB:144:LEU:HD23	2.11	0.50
6:AB:203:ASN:OD1	6:AB:205:ASP:N	2.43	0.50
14:AJ:36:VAL:HG22	14:AJ:76:ILE:HG12	1.94	0.50
17:AM:14:HIS:HB2	17:AM:17:ILE:HD13	1.93	0.50
20:BP:14:ARG:O	20:BP:15:PRO:O	2.30	0.50
25:BU:25:LYS:O	25:BU:26:ALA:HB2	2.12	0.50
41:CR:29:ARG:HA	69:CR:301:HOH:O	2.11	0.50
42:CS:18:GLN:O	42:CS:19:THR:OG1	2.27	0.50
43:CT:96:ILE:H	43:CT:96:ILE:HD13	1.77	0.50
45:CV:11:ILE:HG21	45:CV:79:ALA:HB2	1.94	0.50
53:C3:44:VAL:HG22	53:C3:45:SER:H	1.76	0.50
56:DD:98:VAL:O	56:DD:98:VAL:HG22	2.12	0.50
30:DF:114:ARG:NH1	57:D7:62:ARG:NH1	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DG:8:VAL:HG12	31:DG:68:ARG:CZ	2.42	0.50
1:AA:411:A:C5	1:AA:429:U:C5	3.00	0.50
1:AA:598:U:H4'	12:AH:86:TYR:CG	2.47	0.50
1:AA:747:A:C6	1:AA:748:G:C6	3.00	0.50
1:AA:872:A:N7	1:AA:874:G:C8	2.80	0.50
1:AA:956:U:C3'	69:AA:1722:HOH:O	2.58	0.50
2:BA:134:G:N2	69:BA:1825:HOH:O	2.45	0.50
2:BA:247:G:C6	2:BA:278:G:N1	2.80	0.50
2:BA:505:G:C6	2:BA:535:A:C2	3.00	0.50
2:BA:869:G:H4'	2:BA:872:A:C8	2.47	0.50
2:BA:1031:C:H5'	2:BA:1032:G:C2	2.47	0.50
2:BA:1491:G:H5"	26:BL:44:LYS:HD2	1.94	0.50
3:DA:438:G:H2'	3:DA:439:A:H5'	1.94	0.50
3:DA:681:G:C2'	3:DA:682:G:O5'	2.59	0.50
3:DA:754:U:H2'	3:DA:755:U:C6	2.47	0.50
3:DA:993:G:H2'	3:DA:994:C:H5'	1.94	0.50
3:DA:1009:A:P	34:DK:39:LYS:HZ3	2.34	0.50
3:DA:1927:A:C6	3:DA:1928:A:C6	3.00	0.50
3:DA:1967:C:C2'	3:DA:1968:G:H5'	2.42	0.50
3:DA:2048:G:H1'	69:DA:3779:HOH:O	2.12	0.50
3:DA:2415:G:C5	3:DA:2416:C:C5	3.00	0.50
3:DA:2467:C:H5"	55:D5:8:ARG:NH2	2.27	0.50
3:DA:2548:U:H2'	3:DA:2549:G:O5'	2.12	0.50
3:DA:2821:A:H4'	67:DA:3059:EDO:H11	1.94	0.50
4:CA:271:G:C2	4:CA:367:G:N1	2.80	0.50
4:CA:1525:A:H2'	4:CA:1526:C:O4'	2.12	0.50
4:CA:1530:G:C2	4:CA:1542:U:O2	2.65	0.50
4:CA:1709:U:H2'	4:CA:1710:G:C8	2.47	0.50
4:CA:1782:U:H2'	4:CA:1783:A:H5'	1.94	0.50
4:CA:1889:A:N3	4:CA:2086:U:O2'	2.34	0.50
4:CA:1917:U:H2'	4:CA:1918:A:H5'	1.93	0.50
4:CA:1984:G:C6	4:CA:1985:C:C4	3.00	0.50
4:CA:2284:A:H5'	69:CA:3940:HOH:O	2.11	0.50
4:CA:2447:G:HO2'	4:CA:2500:U:H5	1.58	0.50
4:CA:2599:G:N7	27:CC:235:GLU:HB2	2.27	0.50
4:CA:2623:G:O4'	4:CA:2825:G:H8	1.95	0.50
4:CA:2879:A:H4'	69:CA:3879:HOH:O	2.12	0.50
9:AE:90:THR:HG22	9:AE:91:GLY:N	2.26	0.50
6:BB:15:HIS:C	6:BB:15:HIS:ND1	2.65	0.50
7:BC:40:ARG:NH1	7:BC:55:ILE:O	2.44	0.50
10:BF:3:HIS:O	10:BF:92:THR:OG1	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:26:PHE:CD2	11:BG:62:PHE:HE2	2.30	0.50
13:BI:20:PHE:O	13:BI:63:LEU:HA	2.12	0.50
15:BK:14:LYS:O	15:BK:15:GLN:HB3	2.11	0.50
20:BP:79:ASN:O	20:BP:80:LYS:HG3	2.11	0.50
36:CM:96:LYS:NZ	36:CM:103:ILE:O	2.36	0.50
56:DD:13:ARG:HD2	56:DD:15:PHE:CZ	2.47	0.50
30:DF:7:TYR:OH	30:DF:28:PRO:O	2.24	0.50
32:DH:15:LEU:HG	32:DH:16:GLY:N	2.27	0.50
47:DX:38:GLN:OE1	47:DX:42:LYS:N	2.45	0.50
1:AA:536:C:P	69:AA:1771:HOH:O	2.69	0.50
1:AA:594:U:H2'	1:AA:595:A:C8	2.47	0.50
1:AA:595:A:C6	1:AA:641:U:C6	2.99	0.50
1:AA:652:U:O2'	1:AA:752:G:N2	2.45	0.50
1:AA:905:U:H5"	1:AA:906:A:OP2	2.12	0.50
1:AA:1171:A:C2	1:AA:1172:C:C2	3.00	0.50
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.47	0.50
1:AA:1268:G:H2'	1:AA:1269:A:C8	2.47	0.50
1:AA:1321:U:O3'	23:AS:78:ARG:NH2	2.44	0.50
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.47	0.50
2:BA:31:G:C5	2:BA:306:A:H1'	2.47	0.50
2:BA:227:G:H2'	2:BA:228:A:O4'	2.11	0.50
2:BA:728:A:H2'	2:BA:729:A:H8	1.76	0.50
3:DA:118:A:C8	3:DA:119:A:C8	3.00	0.50
3:DA:1182:G:H2'	3:DA:1183:U:O4'	2.12	0.50
3:DA:1274:A:N1	3:DA:1644:C:O2'	2.39	0.50
3:DA:1788:C:O5'	3:DA:1788:C:H6	1.95	0.50
3:DA:2821:A:H2'	3:DA:2822:G:C8	2.47	0.50
4:CA:36:G:N1	4:CA:445:C:C4	2.80	0.50
4:CA:686:U:H1'	53:C3:6:GLN:O	2.12	0.50
4:CA:983:A:C6	4:CA:984:A:C2	2.99	0.50
4:CA:1682:G:C2	4:CA:1757:A:H1'	2.46	0.50
4:CA:1850:G:H2'	4:CA:1851:U:C6	2.47	0.50
4:CA:2326:C:O2'	4:CA:2327:A:P	2.70	0.50
4:CA:2355:G:H4'	47:CX:22:LYS:HG3	1.94	0.50
7:AC:23:PHE:CD1	7:AC:24:ALA:N	2.80	0.50
9:AE:132:ASN:OD1	9:AE:134:ILE:HG22	2.12	0.50
14:AJ:56:HIS:CG	14:AJ:57:VAL:HG12	2.47	0.50
21:AQ:17:MET:HG2	21:AQ:20:SER:HB3	1.92	0.50
6:BB:19:GLN:C	6:BB:38:VAL:HG23	2.32	0.50
6:BB:50:PHE:CD1	6:BB:50:PHE:C	2.85	0.50
7:BC:40:ARG:HG2	7:BC:55:ILE:HG12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:53:SER:HB2	7:BC:115:LEU:HG	1.92	0.50
13:BI:112:GLU:OE2	13:BI:115:LYS:NZ	2.45	0.50
34:CK:73:VAL:HG11	34:CK:75:TYR:CZ	2.46	0.50
27:DC:77:VAL:HG21	27:DC:109:LEU:HD21	1.93	0.50
56:DD:68:PHE:CE2	56:DD:75:ALA:HA	2.47	0.50
34:DK:98:GLU:O	34:DK:102:GLU:HG3	2.12	0.50
38:DO:28:LEU:O	38:DO:32:GLU:N	2.38	0.50
40:DQ:24:THR:HB	40:DQ:87:ARG:HG2	1.93	0.50
44:DU:12:ARG:O	44:DU:13:ALA:HB2	2.11	0.50
49:DZ:42:LEU:O	49:DZ:45:GLN:O	2.30	0.50
1:AA:237:G:OP1	21:AQ:42:THR:OG1	2.28	0.49
1:AA:542:G:C2	1:AA:543:U:C5	3.00	0.49
2:BA:159:G:N2	2:BA:162:A:OP2	2.45	0.49
2:BA:227:G:O2'	20:BP:63:GLN:HG3	2.11	0.49
2:BA:347:G:H4'	69:BA:2052:HOH:O	2.11	0.49
2:BA:708:C:O2'	2:BA:709:U:H5'	2.12	0.49
2:BA:790:A:C6	2:BA:791:G:C6	2.99	0.49
2:BA:1107:C:C4	2:BA:1108:G:N7	2.79	0.49
3:DA:356:G:H2'	3:DA:357:C:O4'	2.12	0.49
3:DA:852:U:H2'	3:DA:853:C:C6	2.47	0.49
3:DA:996:A:C2	3:DA:997:G:C8	3.00	0.49
3:DA:1501:G:O2'	3:DA:1502:A:H5'	2.12	0.49
3:DA:1585:C:H2'	3:DA:1586:A:H5'	1.94	0.49
3:DA:1753:G:N2	3:DA:1755:A:H3'	2.26	0.49
3:DA:2031:A:C8	3:DA:2498:OMC:HM21	2.47	0.49
3:DA:2636:C:H2'	3:DA:2637:U:C6	2.46	0.49
4:CA:108:G:H2'	4:CA:109:C:O4'	2.12	0.49
4:CA:370:G:O2'	4:CA:424:G:P	2.70	0.49
4:CA:397:U:OP1	48:CY:30:PRO:HA	2.12	0.49
4:CA:447:A:N1	4:CA:473:G:H1'	2.26	0.49
4:CA:1340:U:O2	4:CA:1340:U:H2'	2.10	0.49
4:CA:1431:A:C2	4:CA:1432:G:C4	3.00	0.49
4:CA:1686:C:H2'	4:CA:1687:G:O4'	2.12	0.49
4:CA:1775:U:H2'	4:CA:1776:G:O5'	2.11	0.49
4:CA:1992:G:C2	4:CA:1995:U:O4	2.64	0.49
4:CA:2550:G:C2	4:CA:2559:C:O2	2.65	0.49
4:CA:2637:U:OP1	28:CD:83:ARG:HD3	2.11	0.49
5:DB:49:C:O2'	5:DB:50:A:H5'	2.12	0.49
6:AB:152:LYS:HG3	6:AB:153:ASP:H	1.77	0.49
7:BC:117:ALA:HB2	7:BC:200:VAL:HG11	1.94	0.49
27:CC:232:GLY:H	27:CC:241:LYS:HE3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CD:65:ALA:O	28:CD:69:ALA:N	2.41	0.49
27:DC:140:VAL:HG23	27:DC:190:THR:C	2.32	0.49
46:DW:21:ARG:NH1	69:DW:102:HOH:O	2.22	0.49
1:AA:22:G:C6	1:AA:23:C:C4	3.00	0.49
1:AA:1350:A:OP1	13:AI:123:ARG:NE	2.45	0.49
2:BA:577:G:C2	2:BA:578:C:C6	3.01	0.49
2:BA:657:U:O2	19:BO:22:THR:HG23	2.11	0.49
2:BA:1106:G:C4	2:BA:1107:C:C5	3.00	0.49
2:BA:1494:G:C6	2:BA:1495:U:C4	3.00	0.49
3:DA:65:U:H2'	3:DA:66:C:H6	1.76	0.49
3:DA:628:G:H4'	3:DA:651:G:O2'	2.12	0.49
3:DA:990:A:H2'	69:DA:4851:HOH:O	2.11	0.49
3:DA:1062:G:C8	3:DA:1070:A:H5'	2.48	0.49
3:DA:1364:G:OP2	48:DY:49:ARG:NH2	2.41	0.49
3:DA:1829:A:P	69:DA:3344:HOH:O	2.67	0.49
3:DA:2299:U:H2'	3:DA:2300:C:C6	2.47	0.49
3:DA:2480:C:O2	3:DA:2480:C:C2'	2.59	0.49
4:CA:311:A:N6	4:CA:329:G:H3'	2.27	0.49
4:CA:636:G:O2'	4:CA:638:G:O2'	2.16	0.49
4:CA:868:U:C4	4:CA:869:G:N7	2.80	0.49
4:CA:1208:C:C5	4:CA:1209:U:C5	3.01	0.49
4:CA:1355:G:C2	4:CA:1356:G:C8	3.00	0.49
4:CA:1784:A:H4'	4:CA:1785:A:O5'	2.12	0.49
4:CA:1805:A:N3	27:CC:49:THR:HB	2.27	0.49
4:CA:2344:U:H5'	4:CA:2373:G:H4'	1.95	0.49
4:CA:2393:U:H2'	4:CA:2394:C:O4'	2.11	0.49
4:CA:2885:G:N2	51:C1:31:LYS:HB3	2.27	0.49
9:AE:50:TYR:O	9:AE:51:GLY:O	2.30	0.49
17:AM:48:LEU:HD23	17:AM:52:GLN:HB2	1.94	0.49
24:AT:27:MET:HG3	24:AT:28:MET:N	2.27	0.49
7:BC:124:LEU:C	7:BC:126:ARG:H	2.15	0.49
13:BI:42:GLU:O	13:BI:45:ARG:NH1	2.44	0.49
30:CF:51:ASN:O	30:CF:149:ARG:NH2	2.45	0.49
33:CJ:7:TYR:HB2	33:CJ:57:VAL:HG13	1.93	0.49
33:CJ:10:LEU:HD21	33:CJ:27:LEU:HA	1.94	0.49
1:AA:11:G:C6	1:AA:12:U:C5	3.00	0.49
1:AA:116:A:H2'	1:AA:117:G:H5'	1.95	0.49
1:AA:367:U:C6	1:AA:394:G:N2	2.79	0.49
2:BA:259:G:C4	2:BA:260:G:C8	3.00	0.49
2:BA:686:U:O2	2:BA:687:A:C8	2.65	0.49
2:BA:1115:U:H2'	2:BA:1116:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:309:A:N3	3:DA:329:G:O2'	2.40	0.49
3:DA:327:G:N2	3:DA:336:C:C2	2.80	0.49
3:DA:681:G:H2'	3:DA:682:G:O5'	2.12	0.49
3:DA:1009:A:O4'	41:DR:58:GLN:HG3	2.12	0.49
3:DA:1134:A:P	69:DA:3207:HOH:O	2.56	0.49
3:DA:1439:A:C2	3:DA:1553:A:C5	3.00	0.49
3:DA:2256:G:O2'	3:DA:2257:U:H5'	2.13	0.49
3:DA:2516:A:C2	3:DA:2569:G:C2	3.00	0.49
3:DA:2861:U:C2	3:DA:2862:G:C8	3.00	0.49
4:CA:211:C:H2'	4:CA:212:G:O4'	2.12	0.49
4:CA:1021:A:H8	4:CA:1122:G:HO2'	1.60	0.49
4:CA:1350:C:N3	4:CA:1382:G:C2	2.80	0.49
4:CA:2061:G:H2'	4:CA:2501:C:O2'	2.13	0.49
4:CA:2505:G:C6	4:CA:2576:G:C5	3.00	0.49
4:CA:2730:C:H2'	4:CA:2731:G:O4'	2.11	0.49
4:CA:2761:A:H1'	31:CG:142:GLN:NE2	2.26	0.49
5:DB:47:C:H5"	5:DB:48:U:OP2	2.11	0.49
69:DB:313:HOH:O	50:D0:19:HIS:CE1	2.65	0.49
8:AD:158:ALA:HA	8:AD:161:LEU:HD21	1.94	0.49
10:AF:5:GLU:O	10:AF:6:ILE:CB	2.60	0.49
14:AJ:11:LYS:HA	14:AJ:70:HIS:O	2.12	0.49
14:AJ:27:GLU:O	14:AJ:29:ALA:N	2.45	0.49
23:AS:66:MET:HG3	23:AS:74:PHE:CZ	2.46	0.49
6:BB:28:LYS:N	6:BB:29:PRO:HD2	2.28	0.49
13:BI:57:MET:O	13:BI:60:LYS:HB2	2.11	0.49
17:BM:64:VAL:HG13	17:BM:68:ASP:HB3	1.94	0.49
34:CK:102:GLU:O	34:CK:106:LYS:HB2	2.13	0.49
45:CV:34:ILE:HD13	45:CV:62:ALA:O	2.12	0.49
29:DE:46:GLN:NE2	69:DE:410:HOH:O	2.41	0.49
37:DN:74:THR:HG23	69:DN:323:HOH:O	2.12	0.49
1:AA:26:A:H2'	1:AA:27:G:H5'	1.93	0.49
1:AA:259:G:C4	1:AA:260:G:C8	3.01	0.49
1:AA:596:A:N1	1:AA:645:G:C4	2.80	0.49
1:AA:886:G:C2	1:AA:912:C:O2	2.65	0.49
1:AA:1057:G:H2'	1:AA:1058:G:H5'	1.94	0.49
1:AA:1176:A:H2'	1:AA:1177:G:O4'	2.11	0.49
2:BA:438:U:C2	2:BA:494:G:C6	3.01	0.49
2:BA:971:G:O2'	2:BA:1365:G:O2'	2.04	0.49
2:BA:1492:A:OP2	2:BA:1493:A:C6	2.65	0.49
3:DA:616:A:H4'	29:DE:101:TYR:CZ	2.47	0.49
3:DA:733:G:H8	3:DA:733:G:O5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1131:G:C6	34:DK:77:HIS:CD2	3.00	0.49
3:DA:1152:C:O2'	3:DA:1153:C:H5'	2.11	0.49
3:DA:1193:G:C2'	3:DA:1194:A:H5'	2.42	0.49
3:DA:1356:G:C4	3:DA:1357:C:C6	3.00	0.49
3:DA:1670:C:H5"	3:DA:1671:U:OP2	2.12	0.49
3:DA:1745:A:C2'	3:DA:1746:A:O5'	2.60	0.49
3:DA:1818:U:O2'	3:DA:1819:A:OP2	2.30	0.49
3:DA:2097:A:O2'	3:DA:2098:U:H5'	2.12	0.49
3:DA:2275:C:O2	37:DN:84:LYS:CD	2.61	0.49
3:DA:2302:U:O2'	3:DA:2303:G:H5'	2.12	0.49
3:DA:2538:C:H1'	69:D5:201:HOH:O	2.12	0.49
3:DA:2583:G:OP2	69:DA:3525:HOH:O	2.19	0.49
3:DA:2617:U:C2'	3:DA:2618:G:H5'	2.42	0.49
4:CA:82:U:H2'	4:CA:83:A:O4'	2.12	0.49
4:CA:792:A:H5"	4:CA:793:A:H5'	1.93	0.49
4:CA:1006:C:O5'	4:CA:1006:C:H6	1.96	0.49
4:CA:1791:A:N6	4:CA:1828:G:O2'	2.41	0.49
4:CA:1826:G:C5	4:CA:1827:U:C4	3.00	0.49
4:CA:1827:U:O2'	4:CA:1828:G:O4'	2.25	0.49
4:CA:2097:A:C2	4:CA:2193:G:C2	3.00	0.49
4:CA:2187:U:H2'	4:CA:2188:U:O4'	2.13	0.49
4:CA:2210:U:H4'	4:CA:2211:A:H5'	1.94	0.49
4:CA:2687:U:H2'	4:CA:2688:G:O4'	2.12	0.49
5:DB:30:C:H6	5:DB:30:C:O5'	1.96	0.49
6:AB:146:ASN:OD1	6:AB:146:ASN:N	2.42	0.49
8:AD:105:MET:HG2	8:AD:171:LEU:HD13	1.93	0.49
16:AL:21:VAL:HG22	16:AL:95:TYR:CE2	2.48	0.49
14:BJ:57:VAL:HG13	14:BJ:58:ASN:N	2.28	0.49
18:BN:41:ARG:NH1	18:BN:45:VAL:HG22	2.27	0.49
30:CF:116:LEU:O	30:CF:177:ARG:HB2	2.12	0.49
37:CN:76:LYS:HE3	37:CN:80:VAL:HG11	1.94	0.49
42:CS:82:HIS:CA	69:CS:204:HOH:O	2.60	0.49
56:DD:33:ARG:NE	69:DD:410:HOH:O	2.45	0.49
30:DF:2:LYS:HE2	30:DF:100:GLU:OE2	2.12	0.49
1:AA:542:G:C2	1:AA:543:U:C6	3.00	0.49
1:AA:591:U:OP2	12:AH:31:LYS:HD2	2.11	0.49
1:AA:770:C:H1'	1:AA:900:A:C2	2.46	0.49
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.42	0.49
2:BA:502:A:OP1	26:BL:115:SER:CB	2.60	0.49
2:BA:802:A:C2'	2:BA:803:G:H5'	2.43	0.49
2:BA:805:C:H2'	2:BA:806:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:860:A:N6	2:BA:861:G:C2	2.81	0.49
2:BA:947:G:OP1	17:BM:107:ARG:HG3	2.12	0.49
2:BA:1226:C:H2'	17:BM:102:THR:OG1	2.11	0.49
3:DA:1098:A:N7	3:DA:1099:G:C6	2.80	0.49
3:DA:1243:C:H3'	69:DA:3365:HOH:O	2.12	0.49
3:DA:1647:U:OP2	69:DA:3527:HOH:O	2.20	0.49
3:DA:1696:G:C6	3:DA:1697:G:C4	3.01	0.49
3:DA:2019:A:H1'	69:DA:4705:HOH:O	2.12	0.49
3:DA:2547:A:H2'	3:DA:2548:U:C6	2.46	0.49
3:DA:2552:OMU:O3'	3:DA:2552:OMU:HM23	2.13	0.49
3:DA:2656:U:C5	3:DA:2664:G:N2	2.81	0.49
3:DA:2820:A:P	38:DO:2:ARG:HH22	2.36	0.49
4:CA:92:U:H3'	4:CA:93:G:H8	1.78	0.49
4:CA:356:G:H2'	4:CA:357:C:C6	2.47	0.49
4:CA:591:U:H2'	4:CA:592:A:O4'	2.13	0.49
4:CA:1768:C:C4	4:CA:1769:U:C5	3.00	0.49
4:CA:1855:U:C5	4:CA:1856:U:C5	3.00	0.49
4:CA:2637:U:C2	4:CA:2782:G:N2	2.80	0.49
4:CA:2684:U:O4'	35:CL:70:ARG:NH2	2.45	0.49
4:CA:2791:G:O6	4:CA:2805:C:N3	2.44	0.49
5:DB:46:A:C5	5:DB:47:C:C5	3.01	0.49
6:AB:33:GLY:O	6:AB:34:ALA:HB3	2.12	0.49
17:AM:15:ALA:O	17:AM:19:LEU:HD23	2.11	0.49
6:BB:15:HIS:ND1	6:BB:16:PHE:N	2.61	0.49
6:BB:133:GLU:O	6:BB:137:ARG:CB	2.60	0.49
6:BB:161:LEU:HD22	6:BB:176:ALA:HB2	1.93	0.49
6:BB:203:ASN:OD1	6:BB:204:ASP:N	2.46	0.49
8:BD:50:ASP:O	8:BD:53:VAL:HG22	2.12	0.49
15:BK:23:ILE:O	15:BK:23:ILE:HG13	2.12	0.49
21:BQ:57:ASP:OD1	21:BQ:81:LYS:HA	2.12	0.49
30:CF:134:GLN:OE1	30:CF:134:GLN:N	2.43	0.49
30:CF:173:ASP:O	30:CF:174:PHE:O	2.31	0.49
43:CT:47:VAL:O	43:CT:50:VAL:HB	2.13	0.49
52:C2:49:LYS:O	52:C2:50:GLU:HB3	2.12	0.49
29:DE:125:SER:O	29:DE:137:LYS:HE3	2.12	0.49
57:D7:39:GLY:O	57:D7:40:VAL:HG13	2.12	0.49
1:AA:457:G:H5'	1:AA:458:U:OP2	2.13	0.49
1:AA:474:G:H2'	69:AA:1872:HOH:O	2.12	0.49
1:AA:574:A:P	69:AA:1802:HOH:O	2.71	0.49
1:AA:697:U:C5	1:AA:698:G:C8	3.01	0.49
1:AA:807:A:H2'	1:AA:808:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1240:U:O2	11:AG:42:ILE:HD12	2.12	0.49
2:BA:9:G:P	9:BE:126:LYS:HE3	2.52	0.49
2:BA:476:U:O2'	2:BA:477:C:H5'	2.12	0.49
2:BA:577:G:C4	2:BA:816:A:C2	2.99	0.49
2:BA:577:G:O2'	2:BA:578:C:H5'	2.12	0.49
2:BA:775:G:H2'	2:BA:776:G:H5'	1.95	0.49
2:BA:1040:U:H2'	2:BA:1041:G:C8	2.48	0.49
3:DA:858:G:H3'	3:DA:859:G:C8	2.48	0.49
3:DA:864:G:C2'	3:DA:865:C:H5'	2.42	0.49
3:DA:1449:G:H1	3:DA:1462:C:H42	1.60	0.49
3:DA:1563:U:O2'	3:DA:1564:C:H5'	2.12	0.49
4:CA:571:U:H1'	4:CA:573:U:C6	2.48	0.49
4:CA:1849:G:H1	4:CA:1893:C:H42	1.60	0.49
4:CA:2010:G:C5	4:CA:2011:U:C5	3.00	0.49
4:CA:2061:G:H5"	4:CA:2503:A:C2	2.48	0.49
4:CA:2293:G:H2'	4:CA:2294:G:O4'	2.12	0.49
4:CA:2899:A:H2'	4:CA:2900:A:C8	2.48	0.49
6:AB:49:MET:O	6:AB:53:ALA:CB	2.60	0.49
6:AB:71:GLY:HA2	6:AB:164:ILE:CG2	2.42	0.49
9:AE:97:GLN:HB2	9:AE:124:LEU:CD1	2.42	0.49
17:AM:114:LYS:CB	17:AM:115:PRO:HD3	2.42	0.49
33:CJ:108:ILE:HG22	33:CJ:108:ILE:O	2.11	0.49
38:CO:45:ARG:HG2	38:CO:95:THR:HG21	1.94	0.49
41:CR:94:LEU:O	41:CR:98:ALA:N	2.42	0.49
43:CT:57:ASN:O	43:CT:61:ASN:HB2	2.13	0.49
54:C4:30:HIS:ND1	54:C4:31:ILE:HG13	2.27	0.49
30:DF:41:GLU:HG3	30:DF:48:LEU:CD2	2.43	0.49
36:DM:85:VAL:HB	36:DM:94:THR:CG2	2.42	0.49
1:AA:207:C:H2'	1:AA:208:U:C2	2.48	0.49
1:AA:650:G:O2'	1:AA:651:C:H5'	2.13	0.49
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.12	0.49
2:BA:447:G:H5'	69:BA:1779:HOH:O	2.13	0.49
2:BA:1160:G:O2'	2:BA:1161:C:H6	1.96	0.49
2:BA:1255:G:C6	2:BA:1279:G:N7	2.80	0.49
2:BA:1361:G:C3'	2:BA:1362:A:H5"	2.43	0.49
3:DA:226:A:C2'	3:DA:227:A:O5'	2.61	0.49
3:DA:270:A:O3'	69:DA:3522:HOH:O	2.19	0.49
3:DA:276:U:O2	3:DA:276:U:H2'	2.12	0.49
3:DA:1295:C:C2'	3:DA:1296:G:H5'	2.42	0.49
3:DA:1327:A:P	69:DA:3544:HOH:O	2.71	0.49
3:DA:1738:G:HO2'	3:DA:1739:A:P	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1794:A:H2'	3:DA:1795:C:C6	2.48	0.49
3:DA:1833:C:O2	3:DA:1969:A:H2	1.95	0.49
4:CA:184:C:H4'	4:CA:217:A:C2	2.48	0.49
4:CA:203:A:H8	4:CA:203:A:O5'	1.94	0.49
4:CA:236:C:O2'	4:CA:431:U:O2'	2.15	0.49
4:CA:517:C:O2'	43:CT:18:ARG:NH1	2.45	0.49
4:CA:744:U:H4'	4:CA:1658:C:H4'	1.94	0.49
4:CA:1213:A:O2'	4:CA:1239:G:O4'	2.27	0.49
4:CA:1286:A:N6	4:CA:1329:U:C2	2.81	0.49
4:CA:1411:U:H2'	4:CA:1412:U:O4'	2.12	0.49
4:CA:2080:A:H61	4:CA:2240:U:H3	1.60	0.49
4:CA:2437:G:HO2'	4:CA:2599:G:HO2'	1.58	0.49
4:CA:2714:G:OP2	69:CA:3239:HOH:O	2.19	0.49
6:AB:91:PHE:CD1	6:AB:150:GLY:HA3	2.48	0.49
6:AB:118:GLU:C	6:AB:120:GLN:N	2.65	0.49
13:AI:16:ALA:C	13:AI:67:VAL:HG23	2.32	0.49
14:AJ:74:VAL:HG12	14:AJ:75:ASP:N	2.28	0.49
18:AN:43:ASN:C	18:AN:45:VAL:N	2.65	0.49
24:AT:3:ASN:O	24:AT:4:ILE:C	2.51	0.49
6:BB:102:THR:O	6:BB:103:ASN:HB3	2.12	0.49
7:BC:97:VAL:HB	7:BC:98:PRO:HD2	1.93	0.49
7:BC:173:VAL:HG12	7:BC:175:LEU:HD11	1.95	0.49
11:BG:49:THR:O	11:BG:53:ARG:HD3	2.12	0.49
33:CJ:39:LYS:O	33:CJ:39:LYS:HD3	2.12	0.49
44:CU:69:ARG:O	44:CU:69:ARG:CD	2.61	0.49
50:C0:5:LYS:HB2	50:C0:57:GLU:HG2	1.94	0.49
56:DD:110:THR:HG22	56:DD:111:GLY:N	2.27	0.49
30:DF:100:GLU:O	30:DF:101:ARG:C	2.51	0.49
32:DH:49:ALA:O	32:DH:53:GLU:HB3	2.12	0.49
38:DO:73:ASN:HA	38:DO:76:VAL:HG22	1.94	0.49
38:DO:90:ARG:O	38:DO:94:TYR:HE1	1.95	0.49
47:DX:49:VAL:CG2	47:DX:79:SER:HA	2.43	0.49
48:DY:36:ARG:HG2	48:DY:47:THR:HG22	1.95	0.49
57:D7:35:ILE:CG1	57:D7:36:GLU:N	2.72	0.49
1:AA:174:A:C2'	1:AA:175:C:H5'	2.42	0.49
1:AA:195:A:H1'	1:AA:222:C:O2'	2.12	0.49
1:AA:271:C:H2'	1:AA:272:C:C6	2.48	0.49
1:AA:1524:C:OP2	15:AK:125:LYS:NZ	2.33	0.49
2:BA:152:A:N6	2:BA:170:U:C2	2.81	0.49
2:BA:447:G:C5'	69:BA:1779:HOH:O	2.60	0.49
2:BA:649:A:H2'	2:BA:650:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:952:U:O4	17:BM:103:LYS:HE2	2.13	0.49
2:BA:1090:U:H2'	2:BA:1091:U:H6	1.78	0.49
2:BA:1160:G:O2'	2:BA:1161:C:C6	2.66	0.49
2:BA:1399:C:C2	2:BA:1401:G:C4	3.01	0.49
3:DA:578:G:P	69:DA:3595:HOH:O	2.71	0.49
3:DA:1276:A:H5"	3:DA:1276:A:H8	1.77	0.49
3:DA:1717:A:H5"	3:DA:1718:G:OP2	2.13	0.49
3:DA:1857:G:H1'	3:DA:1884:G:N2	2.28	0.49
3:DA:2117:A:N6	3:DA:2171:A:H61	2.10	0.49
3:DA:2307:G:O4'	3:DA:2308:G:C5	2.66	0.49
69:DA:3348:HOH:O	40:DQ:94:ALA:HB3	2.11	0.49
4:CA:71:A:H5'	4:CA:71:A:N3	2.28	0.49
4:CA:149:A:C2'	4:CA:150:U:H5'	2.43	0.49
4:CA:471:A:H8	4:CA:471:A:O5'	1.96	0.49
4:CA:528:A:H2'	4:CA:529:A:H5"	1.95	0.49
4:CA:1328:A:C2	4:CA:1330:C:N3	2.80	0.49
4:CA:2201:G:H2'	4:CA:2202:U:C6	2.48	0.49
4:CA:2443:C:H2'	4:CA:2444:G:O4'	2.13	0.49
8:AD:192:SER:O	8:AD:193:ALA:CB	2.61	0.49
8:BD:65:TYR:CD1	8:BD:94:LEU:HB3	2.48	0.49
10:BF:40:GLU:CD	10:BF:99:ALA:HB3	2.32	0.49
12:BH:86:TYR:C	12:BH:87:LYS:HD2	2.33	0.49
29:CE:146:VAL:HA	29:CE:185:LYS:O	2.12	0.49
30:CF:49:LEU:HD21	30:CF:66:ILE:CG2	2.42	0.49
45:DV:95:PHE:C	45:DV:96:LYS:O	2.48	0.49
57:D7:10:ARG:HG3	57:D7:12:VAL:HG23	1.94	0.49
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.49
1:AA:647:C:O2'	1:AA:648:A:H5'	2.13	0.49
1:AA:814:A:N7	1:AA:816:A:C4	2.81	0.49
1:AA:1011:C:N4	1:AA:1019:A:N6	2.60	0.49
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.48	0.49
1:AA:1049:U:O4'	1:AA:1201:A:C8	2.66	0.49
2:BA:81:A:N6	2:BA:88:U:O4	2.46	0.49
2:BA:280:C:H4'	2:BA:281:G:OP2	2.13	0.49
2:BA:319:G:N2	2:BA:335:C:C2	2.81	0.49
2:BA:510:A:H5"	2:BA:511:C:P	2.52	0.49
2:BA:584:G:H2'	2:BA:585:G:C8	2.48	0.49
2:BA:1160:G:O6	2:BA:1181:G:C6	2.66	0.49
3:DA:295:G:C2	3:DA:296:U:C6	3.01	0.49
3:DA:306:U:H2'	3:DA:307:G:H5'	1.94	0.49
3:DA:578:G:OP1	3:DA:1255:U:O2'	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:644:A:O3'	3:DA:645:C:H4'	2.12	0.49
3:DA:1360:G:C2'	3:DA:1361:G:H5'	2.43	0.49
3:DA:1441:G:H2'	3:DA:1442:U:C6	2.48	0.49
3:DA:1791:A:N6	3:DA:1828:G:H1'	2.27	0.49
3:DA:1979:U:H4'	69:DA:4262:HOH:O	2.12	0.49
4:CA:310:A:OP1	45:CV:14:THR:HA	2.13	0.49
4:CA:323:C:O2'	29:CE:163:ASN:O	2.27	0.49
4:CA:1021:A:H2'	4:CA:1022:G:O5'	2.13	0.49
4:CA:1516:G:H2'	4:CA:1517:G:O4'	2.12	0.49
4:CA:1519:G:C6	4:CA:1520:U:N3	2.81	0.49
4:CA:2509:G:C2	4:CA:2580:U:O2	2.66	0.49
5:DB:114:C:H1'	39:DP:47:VAL:HG11	1.94	0.49
7:AC:136:ARG:O	7:AC:140:ASN:OD1	2.30	0.49
9:AE:108:GLY:O	9:AE:110:ALA:N	2.46	0.49
9:AE:111:MET:CG	69:AE:203:HOH:O	2.61	0.49
14:AJ:5:ARG:HB2	14:AJ:77:VAL:O	2.12	0.49
14:AJ:8:ILE:HA	14:AJ:99:GLN:O	2.12	0.49
19:AO:19:ALA:O	19:AO:20:ASN:HB2	2.13	0.49
19:AO:87:LEU:O	19:AO:88:ARG:HB2	2.12	0.49
24:AT:51:PHE:HA	24:AT:54:MET:HG2	1.95	0.49
7:BC:26:THR:OG1	18:BN:76:LYS:HE3	2.12	0.49
11:BG:15:ASP:OD2	11:BG:23:LEU:HB3	2.12	0.49
11:BG:65:ALA:CB	11:BG:124:LEU:HD23	2.42	0.49
35:CL:108:ARG:HD3	35:CL:116:ILE:HD11	1.95	0.49
36:CM:77:ILE:O	36:CM:110:VAL:O	2.31	0.49
42:CS:82:HIS:N	69:CS:204:HOH:O	2.45	0.49
34:DK:17:VAL:HG13	34:DK:55:ILE:HB	1.95	0.49
41:DR:31:TYR:N	69:DR:301:HOH:O	2.45	0.49
1:AA:208:U:H5	1:AA:210:C:C4	2.30	0.49
2:BA:92:U:C4	2:BA:93:U:O4	2.66	0.49
2:BA:538:G:H8	2:BA:538:G:O5'	1.96	0.49
2:BA:1004:A:N6	2:BA:1005:A:N1	2.61	0.49
2:BA:1081:A:OP2	9:BE:52:LYS:NZ	2.45	0.49
2:BA:1288:A:C6	2:BA:1289:A:C5	3.00	0.49
3:DA:152:A:H2'	3:DA:153:U:C6	2.47	0.49
3:DA:194:G:N7	69:DA:3298:HOH:O	2.35	0.49
3:DA:616:A:C2'	3:DA:617:G:H5'	2.43	0.49
3:DA:918:A:C2	5:DB:80:U:H4'	2.48	0.49
3:DA:1339:G:OP1	69:DA:3532:HOH:O	2.20	0.49
3:DA:1991:U:O2'	3:DA:1992:G:H5"	2.13	0.49
3:DA:2667:C:H1'	31:DG:108:PHE:CD1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:DA:5837:HOH:O	63:D5:101:PUT:H31	2.13	0.49
4:CA:28:A:C6	4:CA:29:U:C2	3.01	0.49
4:CA:271:G:H4'	4:CA:272:A:OP1	2.12	0.49
4:CA:531:C:H5"	4:CA:532:A:C5	2.48	0.49
4:CA:1422:G:N2	4:CA:1577:C:H1'	2.28	0.49
9:AE:23:LYS:HB3	9:AE:30:ILE:HG23	1.94	0.49
10:AF:98:GLU:O	10:AF:99:ALA:HB2	2.12	0.49
14:AJ:48:ARG:NH1	14:AJ:66:GLU:OE1	2.45	0.49
6:BB:16:PHE:CE2	6:BB:18:HIS:CE1	3.01	0.49
10:BF:86:ARG:HH11	10:BF:86:ARG:CG	2.26	0.49
11:BG:95:ARG:NH2	11:BG:99:LEU:HD21	2.28	0.49
11:BG:139:GLU:O	11:BG:143:ARG:HG2	2.12	0.49
27:CC:61:TYR:CD2	27:CC:62:ARG:O	2.65	0.49
34:CK:35:ARG:NE	34:CK:140:LEU:HD21	2.28	0.49
39:CP:30:ARG:HD2	39:CP:102:ARG:NE	2.28	0.49
56:DD:8:LYS:HB2	56:DD:201:LEU:HD11	1.94	0.49
30:DF:13:LYS:O	30:DF:17:THR:HG22	2.12	0.49
30:DF:101:ARG:CG	57:D7:25:ILE:HG21	2.41	0.49
38:DO:55:ALA:HB1	38:DO:80:PHE:HA	1.95	0.49
66:DQ:201:PEG:H42	69:DQ:318:HOH:O	2.12	0.49
42:DS:80:ARG:CA	69:DS:303:HOH:O	2.61	0.49
53:D3:1:MET:HB3	69:D3:217:HOH:O	2.12	0.49
1:AA:18:C:N3	1:AA:918:A:C2	2.80	0.48
1:AA:502:A:O2'	1:AA:503:C:H5'	2.13	0.48
1:AA:824:G:C2	1:AA:877:G:C2	3.01	0.48
1:AA:830:G:H2'	1:AA:831:A:H8	1.77	0.48
1:AA:1190:G:P	7:AC:5:VAL:HG12	2.53	0.48
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.48	0.48
1:AA:1329:A:OP1	17:AM:29:ARG:HG3	2.12	0.48
1:AA:1432:G:OP1	40:DQ:104:GLY:HA3	2.13	0.48
2:BA:552:U:H2'	2:BA:553:A:O5'	2.12	0.48
2:BA:616:G:H2'	2:BA:617:G:O4'	2.13	0.48
2:BA:739:C:O2'	2:BA:740:U:H5'	2.12	0.48
2:BA:834:U:H2'	2:BA:835:U:H6	1.78	0.48
3:DA:1007:C:OP2	3:DA:1008:A:O2'	2.20	0.48
3:DA:1068:G:N2	3:DA:1096:A:OP1	2.46	0.48
3:DA:1079:C:N4	3:DA:1088:A:O4'	2.45	0.48
3:DA:1492:G:C5	3:DA:1496:A:N6	2.81	0.48
3:DA:1722:A:O5'	3:DA:1722:A:H8	1.95	0.48
3:DA:1746:A:H2'	3:DA:1747:U:H6	1.77	0.48
3:DA:1904:G:C5	3:DA:1905:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1968:G:O2'	3:DA:1969:A:O4'	2.28	0.48
3:DA:2003:A:OP2	69:DA:3529:HOH:O	2.20	0.48
3:DA:2796:U:C4	3:DA:2798:U:C4	3.01	0.48
4:CA:195:A:H1'	4:CA:250:G:H21	1.78	0.48
4:CA:303:G:C2	4:CA:304:U:C2	3.01	0.48
4:CA:468:G:C2'	4:CA:469:G:H5'	2.43	0.48
4:CA:1500:G:N2	27:CC:97:ASP:O	2.43	0.48
4:CA:1795:C:O2	27:CC:252:LYS:HE2	2.13	0.48
4:CA:1863:G:HO2'	4:CA:2411:A:HO2'	1.61	0.48
4:CA:2230:G:H2'	4:CA:2231:U:C6	2.48	0.48
4:CA:2499:C:O2'	69:CA:3405:HOH:O	2.20	0.48
4:CA:2659:G:C2	4:CA:2663:G:O6	2.66	0.48
5:DB:5:U:OP1	5:DB:61:G:O2'	2.28	0.48
11:AG:109:ARG:HH21	11:AG:119:ARG:NH1	2.10	0.48
18:AN:49:GLN:OE1	18:AN:49:GLN:CA	2.61	0.48
9:BE:26:LYS:HD3	9:BE:26:LYS:C	2.33	0.48
15:BK:36:ASP:CG	15:BK:38:GLN:HG2	2.33	0.48
24:BT:54:MET:O	24:BT:57:ILE:HG22	2.13	0.48
27:CC:175:LEU:HD12	27:CC:179:GLU:HB3	1.95	0.48
29:CE:75:SER:O	29:CE:78:TRP:HB2	2.13	0.48
35:CL:82:ASN:O	35:CL:83:ALA:HB2	2.13	0.48
37:CN:118:LYS:C	37:CN:120:ALA:H	2.15	0.48
35:DL:1:MET:HG2	69:DL:202:HOH:O	2.13	0.48
40:DQ:6:GLN:OE1	69:DQ:301:HOH:O	2.19	0.48
1:AA:201:G:C2	1:AA:217:C:O2	2.66	0.48
1:AA:237:G:H2'	1:AA:238:A:O4'	2.13	0.48
1:AA:580:C:H2'	1:AA:581:G:O5'	2.13	0.48
1:AA:927:G:C6	1:AA:1391:U:O2	2.66	0.48
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.78	0.48
2:BA:149:A:H2'	2:BA:150:U:C6	2.48	0.48
2:BA:438:U:HO2'	2:BA:439:U:P	2.35	0.48
2:BA:532:A:H3'	2:BA:533:A:H5'	1.95	0.48
2:BA:570:G:C5	2:BA:873:A:C6	3.02	0.48
2:BA:1190:G:H5'	7:BC:176:HIS:CE1	2.48	0.48
3:DA:686:U:H2'	3:DA:788:A:N1	2.29	0.48
3:DA:1947:C:N3	3:DA:1960:A:C2	2.81	0.48
3:DA:2077:A:C5	3:DA:2435:A:C5	3.01	0.48
3:DA:2362:C:O5'	3:DA:2362:C:H6	1.97	0.48
3:DA:2498:OMC:OP1	69:DA:3528:HOH:O	2.20	0.48
3:DA:2707:U:P	69:DA:3548:HOH:O	2.70	0.48
4:CA:176:A:N7	4:CA:177:G:N1	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:219:A:N6	4:CA:220:G:C6	2.81	0.48
4:CA:681:G:C4	4:CA:682:G:C8	3.00	0.48
4:CA:1079:C:O2	33:CJ:130:GLY:O	2.31	0.48
4:CA:1359:A:H2'	4:CA:1359:A:N3	2.28	0.48
4:CA:1440:U:H2'	4:CA:1441:G:O4'	2.14	0.48
4:CA:1526:C:N4	4:CA:1527:G:O6	2.47	0.48
4:CA:1691:C:C4	4:CA:1692:U:C5	3.01	0.48
4:CA:1800:C:HO2'	4:CA:1818:U:H3	1.56	0.48
4:CA:1863:G:H2'	4:CA:1864:U:O4'	2.13	0.48
4:CA:2392:A:C2'	69:CA:3322:HOH:O	2.61	0.48
4:CA:2628:C:O2'	4:CA:2782:G:OP1	2.30	0.48
6:AB:136:MET:O	6:AB:139:ARG:HG2	2.13	0.48
10:AF:7:VAL:HA	10:AF:60:VAL:O	2.13	0.48
10:AF:84:VAL:HG22	10:AF:84:VAL:O	2.13	0.48
13:AI:89:GLU:HG3	13:AI:90:TYR:N	2.28	0.48
24:AT:66:LEU:O	24:AT:67:ILE:HD12	2.13	0.48
6:BB:111:ILE:O	6:BB:114:LEU:HB3	2.13	0.48
8:BD:23:SER:C	8:BD:25:VAL:H	2.17	0.48
11:BG:40:GLU:HB2	11:BG:44:TYR:CE2	2.48	0.48
36:CM:68:SER:O	36:CM:69:ARG:HB2	2.13	0.48
36:CM:110:VAL:O	36:CM:111:ILE:O	2.31	0.48
43:CT:58:ALA:O	43:CT:63:GLY:CA	2.61	0.48
27:DC:181:ARG:NH2	27:DC:265:PHE:HB3	2.28	0.48
33:DJ:126:ARG:O	33:DJ:129:GLU:HB2	2.12	0.48
34:DK:112:GLY:O	34:DK:116:ARG:HG3	2.12	0.48
39:DP:31:THR:HG22	39:DP:34:HIS:O	2.12	0.48
42:DS:4:VAL:HG23	42:DS:40:MET:HB3	1.94	0.48
54:D4:30:HIS:O	54:D4:31:ILE:HB	2.13	0.48
1:AA:154:U:C2	1:AA:168:G:N2	2.81	0.48
1:AA:184:G:C4	1:AA:185:U:C5	3.01	0.48
1:AA:900:A:C6	1:AA:901:A:C2	3.02	0.48
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.32	0.48
1:AA:1167:A:N7	1:AA:1169:A:C6	2.81	0.48
1:AA:1375:A:C2	1:AA:1376:U:C2	3.02	0.48
2:BA:15:G:C1'	9:BE:29:ARG:HE	2.26	0.48
2:BA:32:A:H2'	2:BA:33:A:C8	2.48	0.48
2:BA:55:A:C8	2:BA:56:U:C5	3.02	0.48
2:BA:249:U:O2'	2:BA:252:U:O2'	2.30	0.48
2:BA:548:G:OP1	69:BA:1760:HOH:O	2.20	0.48
2:BA:579:A:H2'	2:BA:580:C:H6	1.76	0.48
2:BA:765:G:O6	2:BA:812:G:C8	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:833:G:C6	2:BA:834:U:C4	3.01	0.48
2:BA:1513:A:H2'	2:BA:1514:G:C8	2.48	0.48
3:DA:601:C:O2	3:DA:605:G:H4'	2.13	0.48
3:DA:743:A:C2'	3:DA:744:U:H5'	2.42	0.48
3:DA:860:U:C5	3:DA:2268:A:H1'	2.48	0.48
3:DA:1004:U:O5'	3:DA:1004:U:H6	1.96	0.48
3:DA:1197:G:O3'	69:DA:3530:HOH:O	2.20	0.48
3:DA:1808:A:C6	48:DY:27:ARG:HD2	2.48	0.48
3:DA:2345:G:H4'	3:DA:2346:A:O5'	2.12	0.48
3:DA:2498:OMC:O2	3:DA:2498:OMC:CM2	2.61	0.48
3:DA:2543:G:H2'	3:DA:2544:G:C8	2.48	0.48
3:DA:2855:C:H2'	3:DA:2856:A:H5'	1.94	0.48
4:CA:58:G:C2	4:CA:59:U:H1'	2.49	0.48
4:CA:447:A:O4'	4:CA:449:A:N6	2.47	0.48
4:CA:460:A:OP1	53:C3:41:ARG:NH1	2.46	0.48
4:CA:635:C:OP2	36:CM:126:ARG:NH2	2.46	0.48
4:CA:759:G:O5'	4:CA:759:G:H8	1.96	0.48
4:CA:2043:C:OP1	4:CA:2777:G:O2'	2.23	0.48
4:CA:2499:C:C4	4:CA:2500:U:O4	2.66	0.48
4:CA:2708:G:O2'	38:CO:71:ARG:HD3	2.13	0.48
5:DB:28:C:OP1	39:DP:31:THR:HG21	2.13	0.48
5:CB:81:G:C6	5:CB:82:U:C4	3.00	0.48
6:AB:96:TRP:CH2	6:AB:100:MET:HB3	2.48	0.48
14:AJ:51:VAL:O	14:AJ:62:ARG:HA	2.13	0.48
24:AT:76:LYS:O	24:AT:80:THR:OG1	2.19	0.48
27:CC:29:PHE:CE2	27:CC:31:PRO:HG2	2.47	0.48
30:CF:59:ILE:O	30:CF:101:ARG:NH2	2.46	0.48
36:CM:23:ILE:HG13	42:CS:82:HIS:CD2	2.48	0.48
56:DD:124:ARG:NH1	56:DD:161:MET:O	2.47	0.48
30:DF:63:LYS:H	57:D7:6:HIS:CE1	2.31	0.48
38:DO:58:ASP:CG	38:DO:63:ARG:HH22	2.14	0.48
42:DS:76:LYS:HA	69:DS:328:HOH:O	2.13	0.48
57:D7:16:ASP:CG	57:D7:45:VAL:HG13	2.32	0.48
1:AA:204:G:H2'	1:AA:205:A:H5"	1.94	0.48
1:AA:414:A:H2'	1:AA:415:A:O4'	2.12	0.48
1:AA:964:A:N3	1:AA:969:A:O2'	2.41	0.48
1:AA:1096:C:C2'	1:AA:1097:C:H5'	2.43	0.48
1:AA:1309:G:O6	1:AA:1329:A:C6	2.66	0.48
1:AA:1419:G:C6	1:AA:1420:U:C4	3.01	0.48
1:AA:1500:A:P	69:AA:1724:HOH:O	2.69	0.48
2:BA:203:G:N2	2:BA:215:C:N3	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:424:G:H5'	69:BA:1894:HOH:O	2.13	0.48
2:BA:427:U:P	8:BD:13:ARG:HH22	2.36	0.48
2:BA:1187:G:H5'	13:BI:115:LYS:HE2	1.94	0.48
3:DA:579:G:O2'	3:DA:2019:A:OP1	2.30	0.48
3:DA:666:A:H4'	36:DM:48:ARG:HD3	1.95	0.48
3:DA:747:5MU:P	43:DT:90:LYS:HE3	2.54	0.48
3:DA:974:G:C8	3:DA:1186:G:N2	2.82	0.48
3:DA:1339:G:H5'	69:DA:3818:HOH:O	2.13	0.48
3:DA:1847:A:OP2	3:DA:1847:A:C8	2.66	0.48
3:DA:2071:A:N3	69:DA:3767:HOH:O	2.34	0.48
3:DA:2493:U:C2'	3:DA:2494:G:O5'	2.61	0.48
3:DA:2593:U:O5'	3:DA:2593:U:H6	1.97	0.48
3:DA:2625:G:P	69:DA:3267:HOH:O	2.65	0.48
3:DA:2808:G:N2	3:DA:2891:U:C6	2.82	0.48
3:DA:2826:A:H2'	3:DA:2827:C:H5'	1.95	0.48
3:DA:2897:U:H2'	3:DA:2898:U:H6	1.78	0.48
4:CA:159:G:O2'	4:CA:167:A:N6	2.41	0.48
4:CA:185:G:C6	4:CA:212:G:N2	2.81	0.48
4:CA:572:A:H5"	4:CA:573:U:OP2	2.13	0.48
4:CA:601:C:N4	69:CA:3561:HOH:O	2.46	0.48
4:CA:684:G:P	69:CA:3221:HOH:O	2.60	0.48
4:CA:997:G:OP1	41:CR:91:ARG:NE	2.46	0.48
4:CA:1021:A:C2'	4:CA:1022:G:O5'	2.61	0.48
4:CA:1390:U:C2'	4:CA:1391:U:H5'	2.44	0.48
4:CA:1824:G:H21	27:CC:251:THR:HG22	1.78	0.48
4:CA:2085:U:H5"	69:CA:3449:HOH:O	2.12	0.48
4:CA:2086:U:H1'	4:CA:2234:G:N2	2.28	0.48
4:CA:2234:G:C6	4:CA:2235:G:N7	2.81	0.48
4:CA:2389:G:H5"	4:CA:2390:U:O4'	2.12	0.48
4:CA:2439:A:C8	4:CA:2439:A:O5'	2.66	0.48
4:CA:2564:A:OP1	4:CA:2648:G:O2'	2.29	0.48
8:AD:150:LYS:HE2	8:AD:178:MET:HB2	1.96	0.48
8:AD:170:TRP:O	8:AD:183:LYS:N	2.46	0.48
10:AF:15:SER:HB2	8:BD:193:ALA:HB1	1.94	0.48
17:AM:16:VAL:HG22	17:AM:41:GLU:O	2.12	0.48
6:BB:85:LEU:HG	6:BB:85:LEU:O	2.13	0.48
6:BB:99:GLY:HA2	6:BB:175:GLU:OE1	2.13	0.48
6:BB:187:VAL:O	6:BB:187:VAL:CG2	2.62	0.48
9:BE:99:ALA:O	9:BE:100:SER:C	2.51	0.48
11:BG:74:GLU:O	11:BG:88:PRO:HA	2.13	0.48
26:BL:14:ARG:HA	26:BL:14:ARG:HH11	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BM:3:ARG:O	17:BM:8:ASN:O	2.30	0.48
19:BO:67:LEU:CD2	19:BO:88:ARG:HH22	2.26	0.48
51:C1:9:ARG:HB3	51:C1:9:ARG:CZ	2.42	0.48
33:DJ:132:ALA:O	33:DJ:137:LEU:HD12	2.13	0.48
55:D5:23:LYS:HG3	55:D5:24:GLY:H	1.79	0.48
1:AA:391:G:C6	1:AA:392:C:C4	3.01	0.48
1:AA:969:A:C5	1:AA:970:C:C5	3.01	0.48
1:AA:1131:G:H2'	1:AA:1132:C:O4'	2.12	0.48
1:AA:1180:A:P	13:AI:99:ARG:HH22	2.36	0.48
2:BA:140:U:H2'	2:BA:141:G:O4'	2.14	0.48
2:BA:454:G:O5'	2:BA:454:G:H8	1.96	0.48
2:BA:862:C:N3	2:BA:863:U:C5	2.82	0.48
2:BA:1097:C:O2'	2:BA:1098:C:H5'	2.12	0.48
3:DA:543:G:H8	3:DA:543:G:H5'	1.78	0.48
3:DA:851:C:H2'	3:DA:852:U:C6	2.48	0.48
3:DA:1246:A:C2'	3:DA:1247:A:O5'	2.62	0.48
3:DA:1378:A:O2'	69:DA:3518:HOH:O	2.19	0.48
3:DA:2314:A:O2'	3:DA:2315:G:H5'	2.13	0.48
3:DA:2683:C:H4'	56:DD:13:ARG:NH1	2.28	0.48
3:DA:2844:G:H2'	3:DA:2845:U:O4'	2.14	0.48
69:DA:4150:HOH:O	37:DN:123:LYS:HE2	2.13	0.48
4:CA:442:G:H4'	29:CE:41:GLN:HG2	1.95	0.48
4:CA:566:U:OP1	36:CM:29:LYS:HD2	2.14	0.48
4:CA:592:A:C6	4:CA:593:U:C4	3.01	0.48
4:CA:747:U:O2	4:CA:2014:A:H1'	2.14	0.48
4:CA:833:A:H2'	4:CA:834:G:C8	2.48	0.48
4:CA:1429:G:H2'	4:CA:1430:G:C8	2.48	0.48
4:CA:1469:A:C2	4:CA:1470:A:C6	3.02	0.48
4:CA:1560:G:H8	4:CA:1560:G:OP2	1.97	0.48
4:CA:2087:G:C2	4:CA:2233:U:O2	2.67	0.48
4:CA:2226:C:H2'	4:CA:2227:A:O4'	2.13	0.48
4:CA:2636:C:H2'	4:CA:2637:U:C6	2.48	0.48
4:CA:2651:C:H42	4:CA:2669:G:H1	1.61	0.48
4:CA:2714:G:P	69:CA:3303:HOH:O	2.69	0.48
5:CB:95:U:O4	69:CB:302:HOH:O	2.19	0.48
19:AO:2:SER:O	19:AO:3:LEU:HB2	2.12	0.48
19:AO:71:LYS:HD2	19:AO:78:TYR:CE2	2.48	0.48
20:AP:34:GLU:HG2	20:AP:36:VAL:HG23	1.93	0.48
11:BG:32:VAL:HG22	11:BG:33:ASP:OD1	2.13	0.48
20:BP:20:VAL:HG13	20:BP:32:PHE:HB2	1.95	0.48
33:CJ:49:GLU:HG2	33:CJ:50:LYS:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CS:46:GLU:O	42:CS:46:GLU:CD	2.52	0.48
45:CV:1:ALA:HA	45:CV:5:ARG:NH1	2.29	0.48
49:CZ:16:THR:N	69:CZ:102:HOH:O	2.46	0.48
51:C1:40:HIS:HA	51:C1:48:TYR:OH	2.14	0.48
53:C3:44:VAL:HG22	53:C3:45:SER:N	2.27	0.48
56:DD:30:GLU:O	56:DD:31:ALA:C	2.52	0.48
55:D5:14:HIS:CD2	55:D5:15:PRO:HD2	2.47	0.48
1:AA:39:G:O2'	1:AA:40:C:H5'	2.13	0.48
1:AA:144:G:N3	1:AA:179:A:C2	2.81	0.48
1:AA:184:G:C5	1:AA:185:U:C5	3.01	0.48
1:AA:208:U:H5	1:AA:210:C:N3	2.12	0.48
1:AA:1141:C:H2'	1:AA:1142:G:O4'	2.12	0.48
1:AA:1398:A:H5"	1:AA:1398:A:H8	1.79	0.48
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.48	0.48
2:BA:339:C:O2	2:BA:351:G:N2	2.42	0.48
2:BA:1484:C:H2'	2:BA:1485:U:O4'	2.13	0.48
3:DA:84:A:H5'	69:DA:3691:HOH:O	2.13	0.48
3:DA:197:A:N6	3:DA:2430[B]:A:O2'	2.46	0.48
3:DA:235:U:C4	3:DA:236:C:N4	2.82	0.48
3:DA:986:C:H1'	66:DA:3062:PEG:H31	1.95	0.48
3:DA:1358:G:H2'	3:DA:1359:A:OP2	2.14	0.48
3:DA:1631:G:N2	3:DA:1633:G:H3'	2.29	0.48
3:DA:1820:U:H4'	3:DA:1821:A:OP2	2.13	0.48
3:DA:2013:A:H4'	43:DT:96:ILE:HD13	1.95	0.48
3:DA:2260:C:O2'	3:DA:2261:C:H5'	2.13	0.48
4:CA:53:A:C2	4:CA:179:C:H4'	2.47	0.48
4:CA:140:C:O2	4:CA:140:C:O4'	2.32	0.48
4:CA:212:G:H2'	4:CA:213:A:O4'	2.13	0.48
4:CA:503:A:C2	4:CA:506:G:C4	3.01	0.48
4:CA:714:U:C5	19:BO:89:ARG:NH1	2.82	0.48
4:CA:1176:U:H2'	4:CA:1177:G:C1'	2.44	0.48
4:CA:1203:U:H3'	4:CA:1204:A:C5'	2.43	0.48
4:CA:1530:G:N1	4:CA:1542:U:O2	2.47	0.48
4:CA:1790:C:O2'	27:CC:207:ALA:HB2	2.13	0.48
4:CA:2051:A:H4'	28:CD:146:ILE:HG12	1.96	0.48
4:CA:2291:U:H2'	4:CA:2292:U:C6	2.48	0.48
4:CA:2461:A:H1'	4:CA:2492:U:H3	1.77	0.48
4:CA:2771:C:O2'	28:CD:173:GLN:NE2	2.40	0.48
4:CA:2800:A:C2	4:CA:2895:G:H1'	2.49	0.48
6:AB:123:ASP:N	6:AB:123:ASP:OD1	2.45	0.48
7:AC:22:TRP:CG	7:AC:59:ARG:HG2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:20:PHE:HA	18:AN:24:ALA:HB3	1.96	0.48
21:AQ:18:GLU:O	21:AQ:19:LYS:HB2	2.12	0.48
23:AS:55:ARG:CZ	23:AS:56:GLN:HG3	2.43	0.48
8:BD:81:ARG:NH2	8:BD:82:LEU:HD23	2.28	0.48
9:BE:72:ILE:HG13	9:BE:73:ASN:H	1.77	0.48
15:BK:82:LEU:HD21	15:BK:105:PHE:HB3	1.94	0.48
25:BU:12:PHE:CE1	25:BU:15:ALA:N	2.81	0.48
27:CC:140:VAL:CG1	27:CC:190:THR:O	2.62	0.48
52:C2:9:LYS:O	52:C2:50:GLU:CG	2.61	0.48
33:DJ:89:SER:HB3	33:DJ:92:PRO:HG3	1.96	0.48
42:DS:93:PHE:CD1	42:DS:93:PHE:C	2.86	0.48
57:D7:34:GLU:CD	57:D7:35:ILE:H	2.16	0.48
1:AA:1072:G:C5	1:AA:1073:U:C4	3.02	0.48
1:AA:1406:U:C2'	1:AA:1407:5MC:H5'	2.43	0.48
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.77	0.48
1:AA:1486:G:C5'	69:AA:1736:HOH:O	2.61	0.48
2:BA:55:A:C2	32:DH:91:PHE:CD2	3.01	0.48
2:BA:552:U:C2	2:BA:553:A:C8	3.01	0.48
2:BA:600:A:OP1	12:BH:88:ARG:HB3	2.14	0.48
2:BA:931:C:O2	2:BA:931:C:H2'	2.13	0.48
2:BA:1053:G:H4'	2:BA:1054:C:H3'	1.95	0.48
2:BA:1060:U:O2'	2:BA:1061:G:H5'	2.14	0.48
3:DA:45:G:H5"	3:DA:46:G:H5'	1.95	0.48
3:DA:780:G:H21	3:DA:783:A:H62	1.61	0.48
3:DA:915:C:C2'	3:DA:916:G:H5'	2.44	0.48
3:DA:1384:A:H5"	3:DA:1385:A:OP2	2.14	0.48
3:DA:1536:C:O4'	3:DA:1537:G:C2	2.66	0.48
3:DA:2079:U:P	69:DA:3686:HOH:O	2.72	0.48
3:DA:2247:A:O2'	3:DA:2248:C:H5'	2.13	0.48
4:CA:514:A:N1	4:CA:515:A:C2	2.81	0.48
4:CA:609:A:H5"	4:CA:610:C:OP2	2.13	0.48
4:CA:980:A:C4	4:CA:1136:G:O4'	2.67	0.48
4:CA:1351:C:H2'	4:CA:1352:U:C1'	2.44	0.48
4:CA:1799:G:N1	4:CA:1819:A:OP2	2.43	0.48
4:CA:2235:G:C5	4:CA:2236:U:C5	3.02	0.48
4:CA:2519:U:C6	4:CA:2542:A:N6	2.82	0.48
4:CA:2547:A:O4'	4:CA:2566:A:C2	2.66	0.48
4:CA:2733:A:N6	69:CA:3446:HOH:O	2.41	0.48
4:CA:2840:C:H5"	38:CO:53:THR:OG1	2.14	0.48
5:DB:58:A:H2'	5:DB:59:A:O4'	2.13	0.48
6:AB:11:LYS:HE2	69:AB:306:HOH:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AG:57:SER:HB2	11:AG:60:GLU:CG	2.44	0.48
13:AI:116:VAL:CG2	14:AJ:62:ARG:HD3	2.43	0.48
17:AM:45:ILE:CD1	17:AM:45:ILE:H	2.26	0.48
19:AO:82:ILE:HA	19:AO:87:LEU:CD2	2.44	0.48
10:BF:18:VAL:O	10:BF:22:ILE:HG13	2.14	0.48
15:BK:42:LEU:HD22	15:BK:77:TYR:CE2	2.49	0.48
27:CC:42:ARG:CZ	27:CC:48:ILE:HD11	2.43	0.48
38:CO:51:LEU:N	38:CO:51:LEU:CD2	2.77	0.48
42:CS:3:ALA:HA	42:CS:40:MET:O	2.13	0.48
46:CW:63:ILE:HG22	46:CW:65:VAL:HG12	1.95	0.48
52:C2:47:ILE:H	52:C2:47:ILE:HD12	1.78	0.48
55:C5:39:VAL:HG12	55:C5:40:GLN:N	2.29	0.48
40:DQ:22:GLY:O	40:DQ:109:ILE:CD1	2.61	0.48
1:AA:39:G:N7	1:AA:547:A:H8	2.10	0.48
1:AA:146:G:C2	1:AA:177:G:N7	2.81	0.48
1:AA:897:C:C2'	1:AA:898:G:H5'	2.43	0.48
1:AA:1004:A:H3'	1:AA:1024:G:H22	1.79	0.48
1:AA:1221:G:OP1	1:AA:1321:U:N3	2.43	0.48
1:AA:1356:G:C2	1:AA:1367:C:O2	2.66	0.48
1:AA:1371:G:C6	1:AA:1372:U:C4	3.01	0.48
2:BA:384:G:H2'	2:BA:385:C:C6	2.49	0.48
2:BA:483:C:C2'	69:BA:1770:HOH:O	2.61	0.48
2:BA:756:C:N3	2:BA:757:U:C5	2.82	0.48
2:BA:1068:G:H2'	2:BA:1069:C:H5'	1.96	0.48
2:BA:1093:A:N3	2:BA:1095:U:O4'	2.47	0.48
2:BA:1511:G:O3'	69:BA:1726:HOH:O	2.20	0.48
3:DA:545:U:O2	3:DA:545:U:O5'	2.30	0.48
3:DA:560:C:O5'	3:DA:560:C:H6	1.96	0.48
3:DA:745:1MG:HN21	3:DA:745:1MG:HM11	1.41	0.48
3:DA:851:C:H2'	3:DA:852:U:O5'	2.13	0.48
3:DA:999:U:H2'	3:DA:1000:A:H5'	1.94	0.48
3:DA:1169:A:C2	3:DA:1181:U:O2	2.67	0.48
3:DA:1827:U:O2'	3:DA:1828:G:H5'	2.14	0.48
3:DA:1904:G:C6	3:DA:1905:C:C5	3.01	0.48
3:DA:1958:C:H2'	3:DA:1959:G:H5'	1.95	0.48
3:DA:2082:A:H2'	3:DA:2083:G:O4'	2.14	0.48
3:DA:2250:G:O4'	3:DA:2250:G:N3	2.46	0.48
3:DA:2480:C:O2	3:DA:2480:C:H2'	2.13	0.48
3:DA:2756:U:OP2	55:D5:22:ARG:HD2	2.13	0.48
4:CA:223:A:C4	4:CA:408:G:H1'	2.49	0.48
4:CA:412:A:N6	4:CA:2412:A:O4'	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:451:U:N3	69:CA:3347:HOH:O	2.10	0.48
4:CA:881:G:N2	4:CA:895:U:O2	2.46	0.48
4:CA:1833:C:N3	4:CA:1834:U:C5	2.81	0.48
4:CA:2243:U:OP1	69:CA:3208:HOH:O	2.20	0.48
4:CA:2436:G:C2'	4:CA:2437:G:H5'	2.44	0.48
6:AB:148:LEU:O	6:AB:148:LEU:HD13	2.13	0.48
15:AK:88:GLY:N	15:AK:114:THR:HG22	2.26	0.48
19:AO:61:SER:O	19:AO:65:LYS:HG3	2.12	0.48
21:AQ:81:LYS:O	21:AQ:83:VAL:N	2.47	0.48
10:BF:39:LEU:HD12	10:BF:61:LEU:O	2.14	0.48
44:CU:69:ARG:NH1	44:CU:69:ARG:HB3	2.29	0.48
32:DH:43:ASN:O	32:DH:46:PHE:HB3	2.14	0.48
46:DW:10:LYS:CD	46:DW:10:LYS:H	2.27	0.48
51:D1:9:ARG:O	51:D1:12:ARG:HB3	2.14	0.48
57:D7:41:THR:O	57:D7:43:PRO:CD	2.62	0.48
1:AA:891:U:P	69:AA:1763:HOH:O	2.72	0.48
1:AA:938:A:C5'	69:AA:1860:HOH:O	2.62	0.48
1:AA:1264:U:O2	1:AA:1272:G:C2	2.66	0.48
2:BA:71:A:O2'	2:BA:72:A:H5'	2.14	0.48
2:BA:123:U:O2'	2:BA:290:C:O2'	2.11	0.48
2:BA:260:G:OP1	24:BT:75:HIS:HE1	1.96	0.48
2:BA:502:A:OP1	26:BL:115:SER:HB3	2.14	0.48
2:BA:653:U:H5'	12:BH:56:LYS:NZ	2.29	0.48
2:BA:679:C:C2	2:BA:712:A:H2	2.32	0.48
2:BA:1141:C:C2	2:BA:1142:G:C8	3.01	0.48
3:DA:28:A:C5	3:DA:29:U:C5	3.01	0.48
3:DA:31:C:O2'	3:DA:1238:G:H5'	2.14	0.48
3:DA:1261:C:OP2	43:DT:83:LYS:HE2	2.14	0.48
3:DA:1343:G:C6	3:DA:1344:U:O4	2.66	0.48
3:DA:1566:A:O2'	3:DA:1567:G:H5'	2.14	0.48
3:DA:2241:A:H1'	69:DA:3325:HOH:O	2.13	0.48
3:DA:2493:U:H2'	3:DA:2494:G:O5'	2.14	0.48
3:DA:2498:OMC:O2	3:DA:2498:OMC:C2'	2.56	0.48
3:DA:2705:A:OP2	69:DA:3534:HOH:O	2.20	0.48
3:DA:2862:G:C2	3:DA:2863:C:C2	3.02	0.48
4:CA:250:G:H4'	36:CM:59:ARG:HD3	1.96	0.48
4:CA:301:G:O2'	4:CA:302:C:H5"	2.14	0.48
4:CA:426:C:H2'	4:CA:427:U:O4'	2.13	0.48
4:CA:468:G:H2'	4:CA:469:G:H5'	1.96	0.48
4:CA:612:G:H2'	4:CA:614:A:C8	2.49	0.48
4:CA:634:C:O2'	4:CA:635:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:998:C:OP2	41:CR:57:ARG:NH2	2.47	0.48
4:CA:1230:A:H2'	4:CA:1231:U:C6	2.48	0.48
4:CA:1243:C:H2'	4:CA:1244:A:O4'	2.14	0.48
4:CA:1447:C:H2'	4:CA:1448:G:C8	2.48	0.48
4:CA:1682:G:H2'	4:CA:1683:U:C6	2.49	0.48
4:CA:1731:G:C2	4:CA:1733:G:C5	3.02	0.48
4:CA:1791:A:O2'	27:CC:205:GLY:CA	2.61	0.48
4:CA:1975:G:N2	4:CA:1976:U:H1'	2.29	0.48
4:CA:2057:G:OP1	69:CA:3394:HOH:O	2.18	0.48
4:CA:2079:U:H2'	4:CA:2080:A:C8	2.49	0.48
4:CA:2250:G:OP1	4:CA:2275:C:O2'	2.22	0.48
4:CA:2376:A:H2'	4:CA:2377:A:O4'	2.14	0.48
4:CA:2552:U:C2	4:CA:2554:U:C5'	2.97	0.48
4:CA:2586:U:H2'	4:CA:2587:A:O4'	2.14	0.48
5:DB:94:A:H2'	5:DB:95:U:H5'	1.95	0.48
5:CB:66:A:H4'	5:CB:67:G:OP1	2.14	0.48
13:AI:9:THR:HG22	13:AI:10:GLY:N	2.29	0.48
6:BB:19:GLN:H	6:BB:38:VAL:CG2	2.26	0.48
9:BE:57:PRO:HA	9:BE:60:ILE:HG12	1.95	0.48
35:CL:25:LEU:HB2	69:CL:201:HOH:O	2.14	0.48
41:CR:82:LEU:O	41:CR:87:VAL:N	2.45	0.48
49:CZ:42:LEU:O	49:CZ:45:GLN:HG3	2.14	0.48
33:DJ:15:GLY:HA2	33:DJ:50:LYS:HG3	1.95	0.48
1:AA:107:G:OP1	1:AA:325:A:N6	2.47	0.48
1:AA:177:G:N3	1:AA:177:G:O4'	2.47	0.48
1:AA:724:G:C2	1:AA:725:G:C8	3.01	0.48
1:AA:857:C:C4	1:AA:858:G:C5	3.02	0.48
2:BA:219:U:H2'	2:BA:220:G:H8	1.77	0.48
2:BA:572:A:H5'	2:BA:573:A:OP2	2.13	0.48
2:BA:587:G:O2'	2:BA:588:G:O5'	2.26	0.48
2:BA:881:G:C6	2:BA:882:C:C4	3.02	0.48
2:BA:1053:G:C5'	2:BA:1054:C:H3'	2.44	0.48
2:BA:1140:C:O2'	2:BA:1141:C:P	2.71	0.48
2:BA:1368:A:OP2	13:BI:114:LYS:NZ	2.33	0.48
2:BA:1422:G:C6	2:BA:1423:G:N7	2.81	0.48
3:DA:860:U:C6	3:DA:2268:A:O4'	2.67	0.48
3:DA:980:A:C6	3:DA:981:A:N1	2.82	0.48
3:DA:1022:G:O6	34:DK:68:LYS:HE2	2.14	0.48
3:DA:1243:C:H2'	3:DA:1244:A:O4'	2.14	0.48
3:DA:1276:A:H5"	3:DA:1276:A:C8	2.49	0.48
3:DA:1366:A:P	69:DA:3624:HOH:O	2.72	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1827:U:H5'	3:DA:1971:U:H5'	1.95	0.48
3:DA:2029:G:H2'	3:DA:2031:A:OP1	2.14	0.48
3:DA:2052:A:H4'	56:DD:148:GLN:O	2.14	0.48
3:DA:2333:A:P	47:DX:75:ARG:HH22	2.36	0.48
3:DA:2584:U:H2'	3:DA:2585:U:H5'	1.96	0.48
3:DA:2825:G:H2'	3:DA:2826:A:H5'	1.95	0.48
4:CA:892:A:O5'	4:CA:893:C:OP2	2.32	0.48
4:CA:1181:U:H2'	4:CA:1182:G:C8	2.48	0.48
4:CA:1757:A:N1	4:CA:1762:A:C2	2.82	0.48
4:CA:1993:U:H4'	28:CD:133:THR:CG2	2.44	0.48
4:CA:2359:C:O2	36:CM:60:ARG:NH2	2.47	0.48
4:CA:2591:C:O5'	4:CA:2591:C:H6	1.96	0.48
9:AE:63:ALA:HB3	69:AE:201:HOH:O	2.14	0.48
11:AG:145:ALA:C	11:AG:147:ALA:N	2.67	0.48
6:BB:64:LYS:HZ3	6:BB:65:GLY:H	1.62	0.48
15:BK:107:ILE:HG23	15:BK:107:ILE:O	2.14	0.48
22:BR:22:ASP:OD2	22:BR:24:LYS:HB2	2.13	0.48
27:CC:42:ARG:NH2	27:CC:48:ILE:HD11	2.29	0.48
28:CD:55:LYS:HD2	28:CD:76:GLY:O	2.12	0.48
34:CK:71:ASP:O	34:CK:73:VAL:HG23	2.14	0.48
38:CO:32:GLU:HB3	38:CO:115:LEU:HD12	1.95	0.48
40:CQ:87:ARG:HG3	40:CQ:111:GLU:OE2	2.13	0.48
45:CV:81:ARG:HB2	45:CV:96:LYS:HB2	1.96	0.48
54:C4:26:ALA:O	54:C4:27:ASN:HB2	2.13	0.48
27:DC:110:LYS:HD2	27:DC:113:ASP:OD1	2.14	0.48
30:DF:106:ALA:N	30:DF:108:PRO:HD2	2.29	0.48
42:DS:74:ILE:HA	69:DS:307:HOH:O	2.13	0.48
46:DW:65:VAL:HG22	46:DW:65:VAL:O	2.14	0.48
1:AA:58:C:O2'	1:AA:59:A:H5'	2.13	0.47
1:AA:127:G:O2'	21:AQ:6:ARG:NH2	2.47	0.47
1:AA:408:A:H2'	1:AA:409:U:C6	2.49	0.47
1:AA:818:G:O2'	1:AA:819:A:H5'	2.13	0.47
1:AA:1275:A:C2'	69:AA:1717:HOH:O	2.61	0.47
1:AA:1402:4OC:HM22	1:AA:1403:C:H5'	1.96	0.47
1:AA:1492:A:H2'	1:AA:1493:A:O4'	2.14	0.47
2:BA:806:C:O2'	2:BA:807:A:H5'	2.14	0.47
2:BA:1349:A:OP1	13:BI:120:LYS:HE2	2.14	0.47
3:DA:538:A:O2'	34:DK:8:PRO:HD2	2.13	0.47
3:DA:783:A:O2'	3:DA:1779:U:H6	1.95	0.47
3:DA:1176:U:O2'	3:DA:1177:G:C8	2.67	0.47
3:DA:1442:U:H2'	3:DA:1443:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1606:C:C2'	3:DA:1607:C:OP2	2.61	0.47
3:DA:2752:C:OP2	69:DA:3524:HOH:O	2.19	0.47
3:DA:2753:A:C2'	3:DA:2754:U:H5'	2.44	0.47
3:DA:2799:A:O2'	3:DA:2800:A:OP2	2.28	0.47
4:CA:131:A:H4'	4:CA:131:A:OP1	2.14	0.47
4:CA:264:C:O2'	4:CA:265:A:H2'	2.14	0.47
4:CA:517:C:H2'	4:CA:518:G:O5'	2.14	0.47
4:CA:681:G:N3	4:CA:682:G:C8	2.81	0.47
4:CA:748:G:O6	4:CA:751:A:H5'	2.14	0.47
4:CA:1299:G:H5"	4:CA:1300:G:H5"	1.96	0.47
4:CA:1360:G:O6	4:CA:1372:U:C2	2.67	0.47
4:CA:1379:U:H4'	4:CA:1380:G:OP1	2.13	0.47
4:CA:2024:G:N2	4:CA:2040:G:H1'	2.29	0.47
6:AB:203:ASN:OD1	6:AB:204:ASP:N	2.47	0.47
7:AC:150:LYS:HG3	7:AC:201:TRP:CE3	2.48	0.47
8:AD:91:LEU:CD1	8:AD:195:ILE:HD11	2.44	0.47
9:AE:64:MET:N	69:AE:201:HOH:O	2.19	0.47
12:AH:18:GLN:CD	12:AH:70:ALA:HB1	2.35	0.47
17:AM:3:ARG:O	17:AM:4:ILE:CB	2.61	0.47
17:AM:19:LEU:O	17:AM:25:VAL:CG2	2.62	0.47
19:AO:56:LEU:O	19:AO:60:VAL:HG23	2.14	0.47
6:BB:151:ILE:O	6:BB:154:MET:N	2.43	0.47
20:BP:38:PHE:CE2	20:BP:51:ARG:HB3	2.50	0.47
27:CC:231:HIS:NE2	27:CC:243:PRO:HA	2.29	0.47
29:CE:52:VAL:HB	29:CE:74:LYS:HB3	1.96	0.47
45:CV:21:ARG:CZ	45:CV:72:PHE:CZ	2.97	0.47
50:C0:6:ILE:O	50:C0:34:THR:HA	2.13	0.47
38:DO:78:LYS:O	38:DO:79:LEU:C	2.52	0.47
54:D4:30:HIS:HB3	69:D4:120:HOH:O	2.14	0.47
57:D7:33:ARG:C	57:D7:34:GLU:HG3	2.33	0.47
1:AA:338:A:C6	1:AA:339:C:C5	3.02	0.47
1:AA:363:A:C2	1:AA:364:A:C4	3.02	0.47
1:AA:1202:U:C5	18:AN:82:ILE:HD13	2.49	0.47
1:AA:1324:A:C6	1:AA:1325:C:C4	3.02	0.47
1:AA:1402:4OC:H2'	1:AA:1403:C:O4'	2.14	0.47
1:AA:1443:C:H3'	69:AA:1710:HOH:O	2.13	0.47
2:BA:31:G:O4'	2:BA:306:A:C2	2.67	0.47
2:BA:55:A:C2	32:DH:91:PHE:CG	3.01	0.47
2:BA:435:A:C2'	2:BA:436:C:O5'	2.62	0.47
2:BA:571:U:H5"	2:BA:572:A:OP2	2.14	0.47
2:BA:951:G:N2	2:BA:1231:G:C4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1270:G:C6	2:BA:1271:A:C2	3.02	0.47
2:BA:1345:U:H4'	2:BA:1346:A:H5'	1.96	0.47
2:BA:1458:G:OP1	24:BT:30:THR:HG21	2.15	0.47
2:BA:1507:A:C2	2:BA:1508:A:C4	3.03	0.47
3:DA:909:A:OP2	69:DA:3539:HOH:O	2.20	0.47
3:DA:1001:A:C2'	3:DA:1002:G:H5'	2.44	0.47
3:DA:1060:U:P	33:DJ:75:ALA:HB3	2.54	0.47
3:DA:1255:U:P	69:DA:3486:HOH:O	2.71	0.47
3:DA:1614:A:C6	43:DT:87:PRO:HB3	2.49	0.47
3:DA:2339:C:O3'	5:DB:41:G:N2	2.47	0.47
3:DA:2527:C:H4'	55:D5:35:ARG:HA	1.96	0.47
3:DA:2593:U:H2'	3:DA:2594:C:H6	1.80	0.47
3:DA:2670:A:H2'	3:DA:2671:G:O4'	2.14	0.47
3:DA:2727:A:C2'	3:DA:2728:U:H5'	2.44	0.47
64:DA:3034:1PE:H222	69:DA:5084:HOH:O	2.12	0.47
4:CA:741:U:O2'	4:CA:1676:A:OP1	2.13	0.47
4:CA:1196:C:H1'	4:CA:1226:A:C4	2.49	0.47
4:CA:1373:A:C2	4:CA:1374:G:H1'	2.49	0.47
4:CA:1565:C:C5	4:CA:1567:G:C6	3.02	0.47
4:CA:1843:C:O5'	4:CA:1843:C:H6	1.97	0.47
4:CA:2095:A:C4	4:CA:2096:C:C5	3.02	0.47
4:CA:2176:A:H2'	4:CA:2177:C:O4'	2.14	0.47
4:CA:2254:C:H2'	4:CA:2255:G:H5'	1.94	0.47
4:CA:2457:U:C4	4:CA:2458:G:C6	3.03	0.47
4:CA:2467:C:N4	4:CA:2468:A:C6	2.82	0.47
4:CA:2768:U:OP1	34:CK:85:LYS:HE3	2.14	0.47
8:AD:130:VAL:HG12	8:AD:131:ASN:N	2.29	0.47
9:AE:47:GLY:HA2	69:AE:202:HOH:O	2.13	0.47
9:AE:136:VAL:O	9:AE:139:ALA:N	2.47	0.47
13:AI:24:GLY:N	13:AI:61:LEU:HA	2.28	0.47
16:AL:50:ARG:HB3	16:AL:66:TYR:HE1	1.79	0.47
24:AT:43:ASP:OD1	24:AT:45:ALA:N	2.48	0.47
7:BC:40:ARG:HG2	7:BC:55:ILE:CG1	2.45	0.47
11:BG:131:LYS:O	11:BG:131:LYS:HG3	2.14	0.47
12:BH:29:SER:HB2	12:BH:59:LEU:HB2	1.97	0.47
14:BJ:15:HIS:HB3	14:BJ:70:HIS:NE2	2.29	0.47
23:BS:80:TYR:O	23:BS:81:ARG:CB	2.62	0.47
33:CJ:7:TYR:HB3	33:CJ:58:ILE:O	2.13	0.47
37:CN:47:GLU:OE1	37:CN:50:ARG:NE	2.33	0.47
37:CN:69:PRO:O	37:CN:70:ASP:HB3	2.13	0.47
43:CT:62:ASP:OD1	43:CT:62:ASP:C	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:CY:71:ARG:C	48:CY:73:ARG:H	2.18	0.47
27:DC:195:GLY:O	27:DC:197:ALA:N	2.47	0.47
33:DJ:88:GLY:HA2	33:DJ:135:MET:CE	2.44	0.47
1:AA:363:A:O2'	1:AA:364:A:H5'	2.14	0.47
1:AA:545:C:C2'	1:AA:546:A:H5'	2.44	0.47
1:AA:582:C:N3	1:AA:583:A:C8	2.83	0.47
1:AA:990:C:N3	1:AA:991:U:C4	2.82	0.47
2:BA:243:A:C2	2:BA:245:U:C2	3.02	0.47
2:BA:734:G:N3	2:BA:735:C:C6	2.82	0.47
2:BA:1000:A:H2'	2:BA:1001:C:O4'	2.13	0.47
2:BA:1095:U:O2	2:BA:1095:U:H2'	2.14	0.47
2:BA:1133:G:C6	2:BA:1134:G:N7	2.82	0.47
3:DA:543:G:C5'	3:DA:543:G:C8	2.96	0.47
3:DA:747:5MU:N3	3:DA:2613:U:C4	2.82	0.47
3:DA:1165:A:C2	3:DA:1185:G:C2	3.02	0.47
3:DA:1379:U:OP1	3:DA:1379:U:C6	2.67	0.47
3:DA:1508:A:O2'	3:DA:1509:A:H5'	2.15	0.47
3:DA:2517:C:C4	3:DA:2542:A:C6	3.01	0.47
4:CA:9:G:C6	4:CA:2629:U:C6	3.02	0.47
4:CA:155:A:C2	4:CA:172:A:C2	3.01	0.47
4:CA:412:A:H2'	4:CA:413:C:O4'	2.15	0.47
4:CA:1373:A:P	69:CA:3401:HOH:O	2.71	0.47
4:CA:1779:U:H2'	4:CA:1783:A:H62	1.78	0.47
8:AD:148:LYS:N	8:AD:148:LYS:CD	2.76	0.47
9:AE:149:SER:O	9:AE:153:VAL:HG13	2.14	0.47
11:AG:120:LEU:O	11:AG:124:LEU:CD2	2.62	0.47
19:AO:46:HIS:O	19:AO:48:LYS:N	2.41	0.47
10:BF:51:ILE:O	10:BF:51:ILE:HG12	2.14	0.47
11:BG:75:VAL:HG23	11:BG:86:GLN:HE21	1.79	0.47
13:BI:51:PRO:HD3	13:BI:80:ARG:HG2	1.96	0.47
26:BL:35:THR:HB	26:BL:54:ARG:HG2	1.95	0.47
18:BN:18:LYS:HB3	18:BN:18:LYS:HZ3	1.78	0.47
32:CH:43:ASN:O	32:CH:47:PHE:HD1	1.97	0.47
42:CS:21:ARG:HG3	42:CS:95:ASP:OD1	2.14	0.47
44:CU:69:ARG:O	44:CU:69:ARG:CG	2.62	0.47
30:DF:34:THR:HG23	30:DF:89:THR:HG23	1.96	0.47
36:DM:91:ASP:H	36:DM:94:THR:HB	1.80	0.47
51:D1:12:ARG:O	51:D1:16:ARG:HG3	2.15	0.47
1:AA:767:A:H2'	1:AA:768:A:O4'	2.14	0.47
1:AA:781:A:C5	1:AA:802:A:C2	3.03	0.47
1:AA:1332:A:H2'	1:AA:1333:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1530:G:H2'	1:AA:1531:A:C8	2.50	0.47
2:BA:64:G:C2	2:BA:67:C:N4	2.82	0.47
2:BA:477:C:H2'	2:BA:478:A:C8	2.50	0.47
2:BA:756:C:C2'	2:BA:757:U:H5'	2.43	0.47
2:BA:1083:U:O2'	2:BA:1102:A:OP2	2.31	0.47
2:BA:1149:C:N4	2:BA:1150:A:N6	2.62	0.47
2:BA:1230:C:O2'	13:BI:129:LYS:NZ	2.47	0.47
2:BA:1288:A:N1	2:BA:1371:G:H1'	2.29	0.47
2:BA:1399:C:O2	2:BA:1401:G:C5	2.67	0.47
2:BA:1499:A:H3'	2:BA:1499:A:OP2	2.13	0.47
3:DA:747:5MU:C2	3:DA:2613:U:O4	2.67	0.47
3:DA:960:A:H2'	3:DA:962:G:H5'	1.96	0.47
3:DA:1343:G:H2'	3:DA:1344:U:H5'	1.97	0.47
3:DA:1358:G:C2'	3:DA:1359:A:OP2	2.62	0.47
3:DA:1536:C:O4'	3:DA:1537:G:N2	2.47	0.47
3:DA:1577:C:H2'	3:DA:1578:U:C1'	2.44	0.47
3:DA:1785:A:H5"	69:DA:4239:HOH:O	2.13	0.47
3:DA:1826:G:C5	3:DA:1827:U:C5	3.02	0.47
3:DA:1985:C:C4	3:DA:1986:C:C5	3.03	0.47
3:DA:1998:A:HO2'	3:DA:2724:U:HO2'	1.61	0.47
3:DA:2097:A:H61	3:DA:2192:U:H3	1.61	0.47
3:DA:2223:G:O3'	27:DC:264:LYS:NZ	2.48	0.47
3:DA:2860:A:N7	69:DA:3760:HOH:O	2.34	0.47
64:DA:3065:1PE:H252	69:DA:5947:HOH:O	2.14	0.47
4:CA:33:C:N3	4:CA:447:A:N7	2.62	0.47
4:CA:84:A:N1	4:CA:98:G:O2'	2.27	0.47
4:CA:374:A:H5"	69:CA:3927:HOH:O	2.13	0.47
4:CA:511:U:O4	4:CA:512:G:N1	2.48	0.47
4:CA:1265:A:N1	4:CA:2013:A:H5"	2.29	0.47
4:CA:1342:A:C6	4:CA:1397:U:C5	3.02	0.47
4:CA:1842:G:C6	4:CA:1843:C:N3	2.83	0.47
4:CA:2016:U:O5'	4:CA:2016:U:H6	1.98	0.47
4:CA:2032:G:H1'	28:CD:150:GLN:OE1	2.14	0.47
4:CA:2439:A:H4'	4:CA:2440:C:H5"	1.96	0.47
5:CB:28:C:C4	5:CB:29:A:N7	2.82	0.47
7:AC:61:ALA:O	7:AC:63:SER:OG	2.31	0.47
10:AF:5:GLU:O	10:AF:6:ILE:HB	2.15	0.47
18:AN:41:ARG:HH11	18:AN:45:VAL:HG11	1.79	0.47
20:AP:56:ARG:HH21	20:AP:59:HIS:CE1	2.33	0.47
23:AS:29:LYS:HB3	23:AS:30:PRO:CD	2.45	0.47
23:AS:67:VAL:O	69:AS:101:HOH:O	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BJ:11:LYS:HG2	14:BJ:71:LEU:HD13	1.96	0.47
20:BP:19:VAL:HG12	20:BP:37:GLY:C	2.34	0.47
20:BP:19:VAL:HG13	20:BP:37:GLY:N	2.29	0.47
23:BS:29:LYS:CB	23:BS:30:PRO:HD2	2.44	0.47
33:CJ:34:ILE:HG22	33:CJ:34:ILE:O	2.14	0.47
35:CL:92:GLU:O	35:CL:93:GLN:HB2	2.14	0.47
27:DC:200:MET:HG3	27:DC:201:LEU:CD1	2.43	0.47
30:DF:108:PRO:HG3	57:D7:52:LYS:HE3	1.95	0.47
37:DN:41:LEU:CD2	37:DN:125:PRO:HD2	2.44	0.47
43:DT:34:ASP:HA	69:DT:312:HOH:O	2.14	0.47
57:D7:23:PHE:CE2	57:D7:45:VAL:HG11	2.50	0.47
1:AA:125:U:H2'	1:AA:126:G:O4'	2.14	0.47
1:AA:574:A:H1'	1:AA:883:C:O4'	2.14	0.47
1:AA:890:G:N2	1:AA:907:A:OP2	2.28	0.47
1:AA:986:U:H2'	1:AA:987:G:C8	2.49	0.47
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.49	0.47
1:AA:1053:G:C6	1:AA:1199:U:C2	3.02	0.47
1:AA:1223:C:P	1:AA:1224:U:H2'	2.54	0.47
1:AA:1278:G:N7	7:AC:27:LYS:NZ	2.57	0.47
2:BA:17:U:C2	2:BA:18:C:C5	3.03	0.47
2:BA:505:G:H2'	2:BA:506:G:H8	1.79	0.47
2:BA:708:C:C5	2:BA:709:U:H5	2.32	0.47
2:BA:754:C:OP1	19:BO:72:ARG:NH2	2.47	0.47
2:BA:880:C:N3	2:BA:881:G:N7	2.63	0.47
2:BA:1142:G:N3	2:BA:1142:G:H2'	2.30	0.47
2:BA:1178:G:O2'	2:BA:1180:A:N7	2.38	0.47
2:BA:1343:G:H2'	2:BA:1344:C:C6	2.49	0.47
2:BA:1458:G:O3'	24:BT:23:SER:HA	2.14	0.47
3:DA:811:U:P	69:DA:3937:HOH:O	2.71	0.47
3:DA:975:A:H2'	3:DA:976:G:H5'	1.96	0.47
3:DA:1294:U:H5"	3:DA:1294:U:H6	1.79	0.47
3:DA:1422:G:C4	3:DA:1423:G:C8	3.03	0.47
3:DA:1436:G:N2	3:DA:1557:C:C2	2.82	0.47
3:DA:1644:C:H5"	3:DA:1644:C:C6	2.50	0.47
3:DA:1842:G:O4'	27:DC:242:HIS:CE1	2.68	0.47
3:DA:2028:U:H2'	3:DA:2029:G:O4'	2.14	0.47
65:DA:3064:ACY:OXT	69:DA:3523:HOH:O	2.19	0.47
4:CA:153:U:H3	4:CA:173:A:H61	1.62	0.47
4:CA:293:U:C3'	4:CA:294:A:H5"	2.44	0.47
4:CA:370:G:C6	4:CA:424:G:C5	3.02	0.47
4:CA:1066:U:O2'	4:CA:1067:A:OP1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1137:G:O2'	4:CA:1138:G:H5'	2.15	0.47
4:CA:1254:A:OP2	4:CA:1256:G:C8	2.67	0.47
4:CA:1330:C:H2'	4:CA:1331:G:O4'	2.14	0.47
4:CA:1922:G:H2'	4:CA:1923:U:O4'	2.15	0.47
6:AB:16:PHE:HD1	6:AB:17:GLY:H	1.62	0.47
10:AF:55:HIS:O	10:AF:56:LYS:HB2	2.14	0.47
14:AJ:6:ILE:HD12	14:AJ:76:ILE:HB	1.95	0.47
23:AS:53:ASN:O	23:AS:77:THR:HG22	2.14	0.47
7:BC:173:VAL:O	7:BC:175:LEU:CD1	2.63	0.47
12:BH:52:GLU:O	12:BH:58:GLU:HB3	2.14	0.47
22:BR:33:ILE:HD12	22:BR:37:GLY:HA2	1.95	0.47
28:CD:148:GLN:N	28:CD:148:GLN:OE1	2.48	0.47
32:CH:75:LEU:CD1	32:CH:106:ALA:O	2.62	0.47
34:CK:24:THR:HB	34:CK:27:ARG:HB3	1.95	0.47
39:CP:33:ARG:O	39:CP:34:HIS:CB	2.62	0.47
44:CU:11:LEU:HD11	44:CU:46:ALA:O	2.14	0.47
45:CV:1:ALA:HA	45:CV:5:ARG:HH11	1.79	0.47
46:CW:61:LEU:O	69:CW:101:HOH:O	2.20	0.47
47:CX:35:ILE:HG22	47:CX:36:VAL:HG22	1.97	0.47
54:C4:33:THR:HG23	54:C4:34:LYS:N	2.29	0.47
54:C4:56:LEU:O	54:C4:59:ALA:HB3	2.15	0.47
32:DH:8:LYS:HA	32:DH:14:SER:HA	1.96	0.47
33:DJ:79:LEU:HD11	33:DJ:132:ALA:HA	1.97	0.47
35:DL:86:LEU:N	35:DL:86:LEU:HD23	2.30	0.47
38:DO:86:ARG:HD3	38:DO:117:ASP:HB2	1.95	0.47
49:DZ:2:LYS:NZ	49:DZ:2:LYS:CB	2.77	0.47
54:D4:31:ILE:CG2	54:D4:34:LYS:HD2	2.45	0.47
57:D7:61:LEU:HD23	57:D7:62:ARG:HH22	1.79	0.47
1:AA:199:A:C2	1:AA:200:G:C4	3.02	0.47
1:AA:510:A:N3	1:AA:543:U:H1'	2.29	0.47
1:AA:665:A:C2	1:AA:732:C:C2	3.03	0.47
1:AA:702:A:H4'	1:AA:703:G:OP2	2.15	0.47
1:AA:992:U:C2	1:AA:1043:G:N7	2.83	0.47
1:AA:1039:G:N2	69:AA:1804:HOH:O	2.45	0.47
1:AA:1058:G:C6	1:AA:1059:C:C4	3.03	0.47
1:AA:1061:G:C5	1:AA:1197:A:C2	3.02	0.47
1:AA:1180:A:OP2	13:AI:99:ARG:NH2	2.47	0.47
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.79	0.47
2:BA:55:A:N7	2:BA:56:U:C5	2.82	0.47
2:BA:269:C:H2'	2:BA:270:A:C8	2.49	0.47
2:BA:398:U:H2'	2:BA:399:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:858:G:N7	2:BA:869:G:N7	2.63	0.47
2:BA:1071:C:H2'	2:BA:1072:G:H8	1.80	0.47
2:BA:1073:U:OP2	9:BE:62:LYS:HE2	2.15	0.47
2:BA:1521:C:N3	2:BA:1522:U:C5	2.83	0.47
3:DA:370:G:O2'	3:DA:424:G:OP1	2.22	0.47
3:DA:391:A:H1'	3:DA:411:G:O4'	2.15	0.47
3:DA:1073:A:C2	69:DA:3473:HOH:O	2.67	0.47
3:DA:1170:C:H2'	3:DA:1171:G:O4'	2.14	0.47
3:DA:1210:G:H4'	3:DA:1211:C:H5"	1.96	0.47
3:DA:1235:G:P	63:DA:3037:PUT:H12	2.55	0.47
3:DA:1429:G:N2	3:DA:1430:G:C4	2.82	0.47
3:DA:1489:C:O2'	3:DA:1490:A:C5'	2.63	0.47
3:DA:1889:A:C2	3:DA:1890:A:C4	3.03	0.47
3:DA:1937:A:C8	3:DA:1939:5MU:H2'	2.49	0.47
3:DA:2024:G:C4	3:DA:2040:G:N2	2.82	0.47
3:DA:2049:G:H5"	69:DA:5243:HOH:O	2.14	0.47
3:DA:2196:C:C2'	3:DA:2197:U:H5'	2.44	0.47
3:DA:2415:G:C4	3:DA:2416:C:C6	3.03	0.47
3:DA:2661:G:O2'	3:DA:2662:A:H5'	2.14	0.47
3:DA:2827:C:H1'	67:DA:3059:EDO:H21	1.95	0.47
4:CA:80:G:O2'	4:CA:294:A:N1	2.44	0.47
4:CA:455:C:N3	4:CA:472:A:H2'	2.30	0.47
4:CA:972:A:N1	4:CA:973:A:N6	2.62	0.47
4:CA:1313:U:O2	4:CA:1313:U:H2'	2.13	0.47
4:CA:1509:A:O2'	4:CA:1510:G:OP2	2.32	0.47
4:CA:1628:G:C2'	4:CA:1629:U:O5'	2.62	0.47
4:CA:1999:C:N3	4:CA:2000:C:C5	2.82	0.47
4:CA:2264:C:O5'	4:CA:2264:C:H6	1.98	0.47
4:CA:2395:C:H42	4:CA:2421:G:H1	1.62	0.47
4:CA:2436:G:O2'	4:CA:2437:G:H5'	2.15	0.47
5:DB:85:G:O2'	5:DB:86:G:H5'	2.13	0.47
5:CB:71:C:H2'	5:CB:72:G:H5'	1.97	0.47
9:AE:111:MET:HG2	69:AE:203:HOH:O	2.13	0.47
12:AH:46:ILE:HD13	12:AH:61:LEU:HD22	1.97	0.47
8:BD:95:GLU:HG3	8:BD:95:GLU:O	2.15	0.47
8:BD:161:LEU:HD22	8:BD:161:LEU:N	2.29	0.47
10:BF:44:ARG:HB3	10:BF:56:LYS:HD3	1.95	0.47
20:BP:14:ARG:N	20:BP:15:PRO:HD3	2.28	0.47
22:BR:20:GLU:N	22:BR:55:LEU:HD12	2.30	0.47
27:CC:265:PHE:CD1	27:CC:265:PHE:N	2.82	0.47
30:CF:82:TYR:HD1	30:CF:83:PRO:HD2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:CN:58:LYS:HD3	37:CN:58:LYS:N	2.30	0.47
29:DE:28:VAL:O	29:DE:32:VAL:HG13	2.13	0.47
30:DF:120:SER:HB2	30:DF:127:TYR:CE1	2.50	0.47
34:DK:17:VAL:CG2	34:DK:137:PRO:HB2	2.41	0.47
34:DK:77:HIS:CD2	34:DK:79:GLY:H	2.31	0.47
38:DO:95:THR:HG22	69:DO:202:HOH:O	2.14	0.47
43:DT:60:HIS:O	43:DT:60:HIS:ND1	2.48	0.47
55:D5:2:LYS:NZ	55:D5:35:ARG:O	2.48	0.47
1:AA:2:A:C6	1:AA:3:A:N1	2.83	0.47
1:AA:245:U:H4'	69:AA:1867:HOH:O	2.13	0.47
1:AA:376:G:H5"	20:AP:5:ARG:HB2	1.97	0.47
1:AA:397:A:C5	1:AA:548:G:N7	2.83	0.47
1:AA:397:A:C5	1:AA:548:G:C8	3.03	0.47
1:AA:648:A:H2'	1:AA:649:A:O4'	2.14	0.47
1:AA:674:G:H2'	1:AA:675:A:H8	1.79	0.47
1:AA:783:C:OP1	1:AA:1515:G:O2'	2.26	0.47
1:AA:837:U:OP2	69:AA:1745:HOH:O	2.20	0.47
1:AA:922:G:H1'	9:AE:24:THR:CG2	2.44	0.47
1:AA:1102:A:O3'	6:AB:95:ARG:NH2	2.47	0.47
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.14	0.47
1:AA:1217:C:H2'	1:AA:1218:C:C6	2.50	0.47
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.14	0.47
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.48	0.47
2:BA:10:A:C2	2:BA:11:G:C5	3.03	0.47
2:BA:72:A:C5	2:BA:73:C:C4	3.02	0.47
2:BA:214:C:H2'	2:BA:215:C:C6	2.49	0.47
2:BA:247:G:C6	2:BA:278:G:C2	3.02	0.47
2:BA:403:C:O2'	2:BA:404:G:H5'	2.15	0.47
2:BA:421:U:H5'	2:BA:422:C:C5	2.50	0.47
2:BA:642:A:N3	12:BH:106:THR:O	2.48	0.47
2:BA:834:U:H2'	2:BA:835:U:C6	2.49	0.47
2:BA:880:C:O2	2:BA:880:C:H2'	2.15	0.47
2:BA:1053:G:O6	2:BA:1199:U:H2'	2.15	0.47
2:BA:1173:U:OP1	11:BG:5:ARG:NH2	2.47	0.47
3:DA:29:U:H2'	3:DA:30:G:C8	2.50	0.47
3:DA:50:U:H3'	3:DA:51:G:H5'	1.97	0.47
3:DA:225:C:C2'	3:DA:226:A:H5'	2.45	0.47
3:DA:448:U:H1'	69:DA:4457:HOH:O	2.13	0.47
3:DA:484:C:C2'	3:DA:485:C:H5'	2.45	0.47
3:DA:520:G:H2'	3:DA:521:U:H6	1.79	0.47
3:DA:666:A:H2'	3:DA:667:U:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:695:G:C2	3:DA:696:G:C8	3.03	0.47
3:DA:793:A:H5"	69:DA:6271:HOH:O	2.14	0.47
3:DA:820:A:O2'	3:DA:821:A:H5'	2.14	0.47
3:DA:831:G:P	69:DA:3906:HOH:O	2.72	0.47
3:DA:986:C:H2'	3:DA:987:C:H5'	1.95	0.47
3:DA:999:U:O2	3:DA:1157:G:C2	2.67	0.47
3:DA:1247:A:C2	3:DA:1249:U:C6	3.03	0.47
3:DA:1312:U:H5'	69:DA:4855:HOH:O	2.14	0.47
3:DA:1794:A:O2'	3:DA:1795:C:H5'	2.15	0.47
3:DA:2026:U:H2'	3:DA:2027:G:O4'	2.14	0.47
3:DA:2033:A:O2'	3:DA:2035:G:OP2	2.26	0.47
3:DA:2326:C:C1'	3:DA:2327:A:OP1	2.62	0.47
3:DA:2377:A:N6	69:DA:4019:HOH:O	2.47	0.47
3:DA:2560:A:H2'	3:DA:2561:U:O4'	2.14	0.47
3:DA:2563:U:H2'	3:DA:2565:A:OP2	2.15	0.47
3:DA:2607:G:H2'	3:DA:2608:G:O4'	2.15	0.47
3:DA:2611:C:H2'	3:DA:2612:C:H6	1.80	0.47
3:DA:2852:G:H2'	3:DA:2853:C:O4'	2.14	0.47
4:CA:56:A:C2	4:CA:115:C:C2	3.02	0.47
4:CA:175:G:N1	4:CA:176:A:C2	2.82	0.47
4:CA:349:U:H2'	4:CA:350:G:H8	1.79	0.47
4:CA:526:A:N6	4:CA:2626:C:H4'	2.29	0.47
4:CA:566:U:O2	4:CA:576:U:C2	2.67	0.47
4:CA:608:A:H2'	4:CA:609:A:C8	2.50	0.47
4:CA:633:A:OP1	36:CM:70:LYS:HD3	2.15	0.47
4:CA:647:G:H2'	4:CA:648:G:O5'	2.14	0.47
4:CA:931:U:H4'	4:CA:932:U:OP2	2.15	0.47
4:CA:1269:A:H8	4:CA:1269:A:O5'	1.98	0.47
4:CA:1304:A:C6	4:CA:1305:C:C4	3.02	0.47
4:CA:1378:A:N3	4:CA:1379:U:H2'	2.29	0.47
4:CA:1495:A:H2'	4:CA:1496:A:C8	2.50	0.47
4:CA:1695:G:H3'	4:CA:1695:G:N3	2.29	0.47
4:CA:1842:G:N2	4:CA:1901:A:C4	2.83	0.47
4:CA:1910:G:C6	4:CA:1911:U:C4	3.02	0.47
4:CA:2156:G:H2'	4:CA:2157:G:O4'	2.13	0.47
4:CA:2188:U:C4	4:CA:2189:U:C4	3.03	0.47
4:CA:2264:C:H1'	4:CA:2277:G:N2	2.29	0.47
4:CA:2552:U:C2	4:CA:2554:U:H5'	2.49	0.47
4:CA:2836:U:H2'	4:CA:2837:A:C8	2.49	0.47
4:CA:2884:U:P	51:C1:40:HIS:HE2	2.37	0.47
5:CB:66:A:H61	5:CB:107:G:H2'	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:151:ILE:O	6:AB:152:LYS:C	2.53	0.47
13:AI:80:ARG:O	13:AI:84:THR:HG23	2.15	0.47
14:AJ:6:ILE:CD1	14:AJ:76:ILE:HB	2.44	0.47
19:AO:82:ILE:HA	19:AO:87:LEU:HD21	1.96	0.47
6:BB:84:ALA:O	6:BB:89:GLN:HB2	2.15	0.47
6:BB:207:ILE:HA	6:BB:210:VAL:CG1	2.45	0.47
7:BC:130:PHE:CE1	7:BC:131:ARG:HG3	2.49	0.47
8:BD:11:LEU:HD13	8:BD:63:ARG:HG2	1.97	0.47
11:BG:142:HIS:C	11:BG:143:ARG:HD3	2.35	0.47
18:BN:49:GLN:OE1	18:BN:49:GLN:HA	2.15	0.47
18:BN:61:ARG:NH2	18:BN:70:PRO:O	2.42	0.47
23:BS:49:ILE:HD11	23:BS:62:VAL:HG22	1.97	0.47
33:CJ:32:VAL:HG13	33:CJ:66:PHE:CE1	2.49	0.47
44:CU:73:ARG:HA	44:CU:73:ARG:NE	2.30	0.47
45:CV:53:GLN:N	45:CV:54:PRO:CD	2.77	0.47
45:CV:95:PHE:CE1	45:CV:102:ILE:HG13	2.50	0.47
49:CZ:50:VAL:O	49:CZ:53:VAL:HB	2.15	0.47
27:DC:106:PRO:HB3	27:DC:141:HIS:CE1	2.34	0.47
38:DO:114:GLU:OE2	38:DO:118:ARG:NH2	2.48	0.47
57:D7:33:ARG:HB3	57:D7:33:ARG:CZ	2.44	0.47
1:AA:106:C:C2'	1:AA:107:G:H5'	2.45	0.47
1:AA:316:C:C2	1:AA:317:U:C5	3.02	0.47
1:AA:592:G:H2'	1:AA:593:U:O4'	2.14	0.47
1:AA:863:U:O2	1:AA:867:G:N2	2.48	0.47
1:AA:984:C:N3	1:AA:1222:G:C2	2.83	0.47
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.30	0.47
2:BA:121:U:H3'	2:BA:122:G:H5'	1.97	0.47
2:BA:321:A:C8	2:BA:328:C:C2	3.03	0.47
2:BA:337:G:H2'	2:BA:338:A:C8	2.50	0.47
2:BA:404:G:C2'	2:BA:405:U:H5'	2.45	0.47
2:BA:632:U:H5"	2:BA:633:G:C8	2.49	0.47
2:BA:931:C:O2	2:BA:932:C:C6	2.67	0.47
2:BA:1338:G:H2'	2:BA:1339:A:C8	2.49	0.47
3:DA:301:G:H4'	3:DA:301:G:OP1	2.15	0.47
3:DA:691:C:O2'	27:DC:40:GLY:HA3	2.15	0.47
3:DA:1812:U:H1'	27:DC:44:ASN:OD1	2.15	0.47
3:DA:2030:6MZ:O1P	69:DA:3540:HOH:O	2.20	0.47
3:DA:2247:A:H2'	3:DA:2248:C:H5'	1.96	0.47
3:DA:2461:A:H1'	3:DA:2492:U:C2	2.50	0.47
3:DA:2515:C:H1'	3:DA:2570:G:N2	2.30	0.47
3:DA:2648:G:H2'	3:DA:2649:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2820:A:C6	56:DD:197:THR:HB	2.50	0.47
4:CA:277:G:H2'	4:CA:361:G:O6	2.15	0.47
4:CA:290:U:H2'	4:CA:291:G:O4'	2.15	0.47
4:CA:327:G:N2	45:CV:67:SER:CB	2.78	0.47
4:CA:613:A:H3'	4:CA:614:A:C5'	2.44	0.47
4:CA:1314:C:OP1	4:CA:1332:G:OP1	2.33	0.47
4:CA:1993:U:H2'	4:CA:1994:C:O4'	2.14	0.47
4:CA:2226:C:H2'	4:CA:2227:A:C8	2.49	0.47
4:CA:2241:A:N7	69:CA:3490:HOH:O	2.35	0.47
5:CB:49:C:OP1	39:CP:101:GLY:HA3	2.14	0.47
11:AG:71:PRO:O	11:AG:96:ARG:HG3	2.15	0.47
12:AH:29:SER:OG	12:AH:30:SER:N	2.47	0.47
14:AJ:70:HIS:O	14:AJ:71:LEU:HD22	2.14	0.47
15:AK:26:SER:N	15:AK:29:ASN:O	2.48	0.47
6:BB:18:HIS:O	6:BB:19:GLN:HB2	2.15	0.47
6:BB:47:VAL:HA	6:BB:50:PHE:HD2	1.79	0.47
11:BG:30:LEU:CD1	11:BG:120:LEU:HD12	2.45	0.47
22:BR:20:GLU:HG3	22:BR:55:LEU:CD1	2.44	0.47
25:BU:11:PRO:O	25:BU:12:PHE:CB	2.62	0.47
36:CM:23:ILE:HG21	42:CS:84:ARG:HG2	1.97	0.47
45:CV:46:LYS:HG3	45:CV:47:PRO:HD2	1.96	0.47
33:DJ:33:ASN:OD1	33:DJ:64:ARG:NH1	2.48	0.47
38:DO:100:CYS:O	51:D1:41:HIS:HD2	1.98	0.47
48:DY:36:ARG:NH2	48:DY:45:PHE:CD2	2.82	0.47
51:D1:8:THR:HB	69:D1:212:HOH:O	2.14	0.47
57:D7:61:LEU:CB	57:D7:62:ARG:HH21	2.23	0.47
1:AA:21:G:N2	1:AA:22:G:C6	2.83	0.47
1:AA:914:A:C6	1:AA:915:A:N7	2.82	0.47
1:AA:914:A:C5	1:AA:915:A:N7	2.83	0.47
1:AA:1024:G:O2'	1:AA:1025:U:OP1	2.28	0.47
2:BA:45:G:H5'	2:BA:307:C:O2	2.15	0.47
2:BA:110:C:O2'	20:BP:25:ARG:O	2.29	0.47
2:BA:237:G:C6	2:BA:238:A:C5	3.02	0.47
2:BA:355:C:H1'	2:BA:388:G:H1'	1.97	0.47
2:BA:517:G:C5'	2:BA:519:C:C2	2.98	0.47
2:BA:553:A:O2'	26:BL:26:ALA:HB1	2.14	0.47
2:BA:597:G:H2'	2:BA:598:U:H5'	1.96	0.47
2:BA:662:U:H2'	2:BA:663:A:C8	2.50	0.47
2:BA:1262:C:C4	2:BA:1263:C:C4	3.03	0.47
3:DA:136:G:H1	3:DA:143:C:H42	1.62	0.47
3:DA:170:U:C2	3:DA:171:U:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:192:C:O2'	3:DA:802:A:N3	2.44	0.47
3:DA:397:U:O5'	3:DA:397:U:H6	1.97	0.47
3:DA:561:G:P	69:DA:3412:HOH:O	2.71	0.47
3:DA:980:A:C4	3:DA:1136:G:O4'	2.68	0.47
3:DA:1215:G:C2'	3:DA:1216:G:H5'	2.45	0.47
3:DA:1421:G:C2	3:DA:1422:G:C8	3.03	0.47
3:DA:1462:C:H4'	3:DA:2703:C:O4'	2.15	0.47
3:DA:1907:G:P	69:DA:3443:HOH:O	2.73	0.47
3:DA:2706:A:N1	3:DA:2707:U:C2	2.83	0.47
4:CA:190:A:H2'	4:CA:191:A:O4'	2.14	0.47
4:CA:265:A:H4'	4:CA:266:G:OP1	2.15	0.47
4:CA:819:A:N7	4:CA:1188:U:O4	2.48	0.47
4:CA:1436:G:N2	4:CA:1557:C:C2	2.83	0.47
4:CA:1903:G:OP2	69:CA:3406:HOH:O	2.20	0.47
4:CA:1973:G:C4	4:CA:1974:C:C5	3.03	0.47
4:CA:2043:C:C2	4:CA:2044:C:C5	3.03	0.47
4:CA:2232:C:P	48:CY:26:ARG:HH22	2.34	0.47
4:CA:2472:G:O2'	4:CA:2478:A:N6	2.47	0.47
4:CA:2627:G:N2	4:CA:2777:G:OP2	2.48	0.47
69:CA:3757:HOH:O	53:C3:22:MET:HE1	2.14	0.47
13:AI:56:ASP:O	13:AI:60:LYS:NZ	2.31	0.47
20:AP:5:ARG:HA	20:AP:68:SER:OG	2.15	0.47
20:AP:42:ILE:O	20:AP:44:SER:N	2.48	0.47
6:BB:16:PHE:O	6:BB:41:ILE:CG1	2.63	0.47
6:BB:19:GLN:H	6:BB:38:VAL:HG22	1.80	0.47
6:BB:31:ILE:HG22	6:BB:33:GLY:H	1.79	0.47
6:BB:87:CYS:O	6:BB:88:ASP:OD1	2.32	0.47
24:BT:36:TYR:CD1	24:BT:37:ALA:N	2.83	0.47
24:BT:43:ASP:HB2	24:BT:46:ALA:HB3	1.97	0.47
29:CE:149:ILE:CG2	29:CE:188:MET:HG2	2.45	0.47
29:CE:150:THR:HG22	29:CE:151:GLY:H	1.80	0.47
36:CM:115:GLU:HB2	69:CM:302:HOH:O	2.15	0.47
32:DH:131:PHE:O	32:DH:138:PHE:CD2	2.68	0.47
33:DJ:86:LYS:C	33:DJ:88:GLY:H	2.18	0.47
38:DO:117:ASP:O	38:DO:118:ARG:HB3	2.15	0.47
41:DR:57:ARG:HG2	41:DR:61:ILE:CD1	2.44	0.47
45:DV:51:LEU:N	45:DV:53:GLN:OE1	2.48	0.47
57:D7:46:THR:C	57:D7:48:ASP:N	2.68	0.47
1:AA:19:A:C5	1:AA:20:U:C5	3.03	0.47
1:AA:196:A:OP1	24:AT:64:LYS:CE	2.63	0.47
1:AA:396:C:H3'	1:AA:397:A:H5"	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:735:C:O2'	10:AF:88:MET:HE3	2.14	0.47
1:AA:880:C:OP2	16:AL:5:ASN:HB3	2.14	0.47
1:AA:1052:U:C2	1:AA:1207:2MG:N2	2.83	0.47
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.15	0.47
1:AA:1309:G:C6	1:AA:1329:A:N1	2.83	0.47
1:AA:1447:A:P	69:AA:1737:HOH:O	2.73	0.47
2:BA:183:C:O2	2:BA:183:C:H2'	2.15	0.47
2:BA:246:A:C2	2:BA:279:A:N6	2.83	0.47
2:BA:273:U:H2'	2:BA:274:A:H5'	1.97	0.47
2:BA:644:U:P	69:BA:1713:HOH:O	2.69	0.47
2:BA:1293:C:N4	2:BA:1294:G:O6	2.48	0.47
2:BA:1484:C:O2'	4:CA:1961:C:H5'	2.15	0.47
3:DA:1047:G:N2	3:DA:1110:G:C4	2.83	0.47
3:DA:1267:U:O5'	3:DA:1267:U:H6	1.98	0.47
3:DA:1842:G:H2'	3:DA:1843:C:C6	2.50	0.47
3:DA:2887:A:H5"	3:DA:2888:C:OP2	2.15	0.47
69:DA:3264:HOH:O	56:DD:135:GLY:HA3	2.15	0.47
4:CA:1593:A:O2'	4:CA:1594:U:H5'	2.15	0.47
4:CA:1708:C:H2'	4:CA:1709:U:C6	2.50	0.47
4:CA:1833:C:C4	4:CA:1834:U:C5	3.03	0.47
4:CA:2035:G:H5'	4:CA:2036:C:H5	1.79	0.47
4:CA:2064:C:H2'	4:CA:2065:C:H6	1.79	0.47
4:CA:2199:A:C6	4:CA:2225:A:C5	3.03	0.47
4:CA:2360:G:N7	4:CA:2361:G:H1'	2.30	0.47
7:AC:22:TRP:CB	7:AC:59:ARG:HG2	2.44	0.47
7:AC:23:PHE:CG	7:AC:24:ALA:N	2.82	0.47
9:AE:82:GLN:CD	9:AE:150:PRO:HD3	2.35	0.47
14:AJ:101:SER:HB2	14:AJ:102:LEU:HD12	1.96	0.47
16:AL:73:ASN:O	16:AL:74:LEU:HD22	2.14	0.47
18:AN:33:VAL:C	18:AN:34:ASN:OD1	2.53	0.47
9:BE:38:VAL:HG11	9:BE:114:VAL:HA	1.96	0.47
13:BI:58:VAL:O	13:BI:59:GLU:HG3	2.15	0.47
17:BM:67:GLY:O	17:BM:71:ARG:NE	2.48	0.47
32:CH:31:VAL:HB	32:CH:32:PRO:HD3	1.97	0.47
33:CJ:23:VAL:HB	33:CJ:27:LEU:HD23	1.96	0.47
33:CJ:25:PRO:O	33:CJ:28:GLY:N	2.43	0.47
36:CM:136:GLU:HA	36:CM:139:GLY:O	2.15	0.47
27:DC:143:VAL:HG12	27:DC:144:GLU:O	2.15	0.47
30:DF:79:ARG:HB3	30:DF:82:TYR:CD2	2.50	0.47
32:DH:115:VAL:HG12	32:DH:117:LEU:HD22	1.97	0.47
33:DJ:89:SER:O	33:DJ:91:LYS:N	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:37:LYS:HD3	61:DQ:202:PG4:O5	2.15	0.47
57:D7:17:THR:HG23	57:D7:43:PRO:O	2.15	0.47
1:AA:123:U:O2'	1:AA:290:C:O2	2.25	0.46
1:AA:222:C:H2'	1:AA:223:A:H8	1.80	0.46
1:AA:789:U:O2	1:AA:791:G:C8	2.68	0.46
1:AA:880:C:OP2	16:AL:3:THR:HG21	2.15	0.46
1:AA:955:U:C1'	1:AA:1227:A:N6	2.77	0.46
1:AA:1426:G:C2'	1:AA:1427:C:H5'	2.45	0.46
2:BA:60:A:O2'	24:BT:5:LYS:HE3	2.15	0.46
2:BA:197:A:C6	2:BA:221:C:H4'	2.50	0.46
2:BA:378:G:N2	69:BA:1808:HOH:O	2.40	0.46
2:BA:558:G:H2'	2:BA:559:A:H2	1.80	0.46
2:BA:779:C:C2'	2:BA:780:A:H5'	2.45	0.46
2:BA:1169:A:C2	2:BA:1170:A:C4	3.03	0.46
3:DA:11:C:C3'	3:DA:12:U:H5'	2.45	0.46
3:DA:65:U:H2'	3:DA:66:C:C6	2.50	0.46
3:DA:164:C:OP2	69:DA:3543:HOH:O	2.21	0.46
3:DA:335:C:C2'	3:DA:336:C:H5'	2.44	0.46
3:DA:527:C:H4'	3:DA:528:A:O5'	2.15	0.46
3:DA:550:C:H2'	3:DA:551:G:H5"	1.97	0.46
3:DA:580:U:O3'	41:DR:30:VAL:HG13	2.15	0.46
3:DA:586:A:C2	3:DA:1254:A:C2	3.03	0.46
3:DA:596:U:H2'	3:DA:597:G:H5'	1.97	0.46
3:DA:1296:G:P	69:DA:3488:HOH:O	2.72	0.46
3:DA:1647:U:OP2	69:DA:3536:HOH:O	2.20	0.46
3:DA:1654:A:H2'	3:DA:1655:A:O5'	2.14	0.46
3:DA:1668:A:H4'	3:DA:1669:A:O5'	2.16	0.46
3:DA:1935:G:O2'	3:DA:1936:A:C5'	2.63	0.46
3:DA:2392:A:C2	3:DA:2393:U:N1	2.83	0.46
3:DA:2489:U:O2	3:DA:2491:U:C4	2.68	0.46
69:DA:3218:HOH:O	27:DC:60:ALA:HB3	2.15	0.46
4:CA:615:U:H5"	4:CA:616:A:C8	2.50	0.46
4:CA:882:G:O6	4:CA:894:U:O2	2.32	0.46
4:CA:1388:G:O3'	4:CA:1526:C:H5"	2.15	0.46
4:CA:1436:G:N2	4:CA:1557:C:O2	2.47	0.46
4:CA:1585:C:H2'	4:CA:1586:A:H5'	1.98	0.46
4:CA:2056:G:N3	4:CA:2056:G:H2'	2.30	0.46
4:CA:2443:C:C2'	4:CA:2444:G:H5'	2.44	0.46
5:CB:50:A:OP1	39:CP:68:LYS:N	2.42	0.46
9:AE:25:VAL:O	9:AE:26:LYS:C	2.53	0.46
14:AJ:100:ILE:HG13	14:AJ:101:SER:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AM:48:LEU:HD23	17:AM:48:LEU:C	2.36	0.46
18:AN:41:ARG:O	18:AN:43:ASN:N	2.48	0.46
21:AQ:8:LEU:O	21:AQ:60:GLU:HA	2.16	0.46
7:BC:178:LEU:H	7:BC:178:LEU:HD22	1.80	0.46
8:BD:80:ALA:HA	8:BD:86:THR:OG1	2.15	0.46
14:BJ:57:VAL:HG22	14:BJ:58:ASN:H	1.80	0.46
17:BM:8:ASN:O	17:BM:10:PRO:HD2	2.14	0.46
19:BO:45:GLU:HG2	19:BO:46:HIS:N	2.31	0.46
22:BR:45:THR:OG1	22:BR:47:THR:HG22	2.15	0.46
33:CJ:134:SER:C	33:CJ:136:GLY:H	2.18	0.46
36:CM:94:THR:HG23	36:CM:95:LEU:N	2.30	0.46
52:C2:50:GLU:OE2	52:C2:52:LYS:CG	2.63	0.46
30:DF:107:VAL:HG12	30:DF:113:PHE:CE2	2.50	0.46
33:DJ:33:ASN:HB3	33:DJ:36:GLU:HB2	1.97	0.46
42:DS:66:HIS:ND1	42:DS:94:THR:HG22	2.29	0.46
45:DV:85:ARG:HG2	45:DV:94:PHE:CD2	2.51	0.46
50:D0:30:ARG:HG3	50:D0:31:ILE:O	2.13	0.46
1:AA:8:A:C6	8:AD:206:LYS:HB3	2.51	0.46
1:AA:26:A:C3'	1:AA:27:G:C5'	2.93	0.46
1:AA:104:G:C2	1:AA:105:G:N7	2.82	0.46
1:AA:205:A:H2'	1:AA:206:C:H5'	1.97	0.46
1:AA:255:G:H2'	1:AA:256:U:H6	1.81	0.46
1:AA:601:G:H2'	1:AA:602:A:C8	2.50	0.46
1:AA:872:A:C4	1:AA:874:G:N7	2.83	0.46
1:AA:978:A:C4	1:AA:1319:A:C2	3.03	0.46
1:AA:1232:U:H6	1:AA:1232:U:O5'	1.98	0.46
2:BA:401:C:C2	2:BA:402:G:C8	3.03	0.46
2:BA:881:G:H2'	2:BA:882:C:O4'	2.14	0.46
2:BA:922:G:H4'	9:BE:25:VAL:HA	1.97	0.46
2:BA:1055:A:H8	2:BA:1055:A:OP2	1.97	0.46
2:BA:1298:U:H4'	2:BA:1299:A:C4	2.50	0.46
2:BA:1411:C:H2'	2:BA:1412:C:H6	1.80	0.46
3:DA:322:A:H5'	3:DA:340:A:C1'	2.45	0.46
3:DA:566:U:OP1	36:DM:29:LYS:NZ	2.44	0.46
3:DA:802:A:H2'	3:DA:803:U:C6	2.50	0.46
3:DA:1096:A:H3'	3:DA:1097:U:H5"	1.95	0.46
3:DA:1376:C:H2'	3:DA:1377:G:O4'	2.15	0.46
3:DA:1400:U:O2'	3:DA:1401:G:H5'	2.15	0.46
3:DA:1606:C:O2'	3:DA:1607:C:H5"	2.15	0.46
3:DA:1791:A:H2'	3:DA:1792:G:O4'	2.15	0.46
3:DA:1831:G:C5	3:DA:1832:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1832:C:H2'	3:DA:1833:C:O5'	2.15	0.46
3:DA:1993:U:C2'	3:DA:1994:C:H5'	2.45	0.46
3:DA:2217:G:C2'	3:DA:2218:G:H5'	2.44	0.46
3:DA:2299:U:H2'	3:DA:2300:C:H6	1.79	0.46
3:DA:2548:U:C2'	3:DA:2549:G:O5'	2.63	0.46
3:DA:2714:G:C2'	3:DA:2715:C:H5'	2.45	0.46
4:CA:7:G:H4'	34:CK:15:TRP:CZ2	2.51	0.46
4:CA:223:A:OP2	4:CA:422:A:OP1	2.33	0.46
4:CA:576:U:O4	69:CA:3404:HOH:O	2.20	0.46
4:CA:621:A:H2'	4:CA:622:G:O4'	2.14	0.46
4:CA:1676:A:C8	69:CA:3541:HOH:O	2.68	0.46
4:CA:1795:C:C4	4:CA:1796:U:C4	3.03	0.46
4:CA:1825:U:H3'	4:CA:1825:U:C6	2.50	0.46
69:CA:3855:HOH:O	37:CN:11:LYS:HE2	2.15	0.46
7:AC:15:VAL:HG23	7:AC:15:VAL:O	2.15	0.46
7:AC:102:ASN:C	7:AC:103:ILE:HG13	2.34	0.46
8:AD:2:ALA:HA	8:AD:68:LEU:HD21	1.98	0.46
9:AE:133:PRO:HA	9:AE:136:VAL:HG13	1.98	0.46
18:AN:35:ALA:HB2	18:AN:41:ARG:HE	1.81	0.46
21:AQ:57:ASP:OD1	21:AQ:81:LYS:HA	2.15	0.46
21:AQ:61:ILE:CG2	21:AQ:73:TRP:HE3	2.27	0.46
25:AU:5:LYS:O	25:AU:6:VAL:HG23	2.15	0.46
6:BB:157:LEU:O	6:BB:157:LEU:HD23	2.15	0.46
8:BD:57:GLU:OE1	8:BD:57:GLU:HA	2.15	0.46
9:BE:68:ARG:O	9:BE:71:MET:CE	2.63	0.46
17:BM:31:LYS:HA	17:BM:31:LYS:HE3	1.96	0.46
19:BO:53:ARG:O	19:BO:56:LEU:N	2.49	0.46
23:BS:29:LYS:HB3	23:BS:30:PRO:HD2	1.96	0.46
28:CD:101:PHE:HD1	28:CD:104:VAL:HG11	1.80	0.46
31:CG:79:THR:CG2	31:CG:80:GLU:N	2.77	0.46
32:CH:116:ARG:HG3	32:CH:132:GLN:OE1	2.15	0.46
33:CJ:116:MET:O	33:CJ:117:THR:C	2.54	0.46
36:CM:100:ILE:HG12	36:CM:101:ILE:HG23	1.97	0.46
35:DL:46:ALA:HB3	69:DL:201:HOH:O	2.15	0.46
43:DT:51:LEU:O	43:DT:55:ILE:HD12	2.15	0.46
49:DZ:18:LEU:HD21	49:DZ:22:LEU:HD11	1.98	0.46
1:AA:60:A:O3'	24:AT:5:LYS:NZ	2.48	0.46
1:AA:187:G:H5"	1:AA:188:C:OP2	2.15	0.46
1:AA:501:C:H2'	1:AA:502:A:H8	1.80	0.46
1:AA:516:PSU:C2	1:AA:517:G:C6	3.03	0.46
1:AA:751:U:H4'	19:AO:24:SER:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:900:A:N1	1:AA:901:A:C2	2.84	0.46
1:AA:932:C:OP2	11:AG:3:ARG:HG2	2.16	0.46
1:AA:956:U:C2'	1:AA:957:U:H5'	2.44	0.46
1:AA:984:C:C2	1:AA:1222:G:N2	2.83	0.46
1:AA:1353:G:C2	1:AA:1354:U:C6	3.04	0.46
2:BA:532:A:C6	7:BC:193:TYR:HB3	2.50	0.46
2:BA:728:A:H2'	2:BA:729:A:C8	2.50	0.46
2:BA:932:C:OP2	11:BG:3:ARG:HD2	2.15	0.46
2:BA:1348:U:C2	2:BA:1349:A:C8	3.04	0.46
2:BA:1387:G:C2	2:BA:1388:C:C5	3.03	0.46
3:DA:139:U:H3'	3:DA:140:C:O2	2.15	0.46
3:DA:301:G:C4	3:DA:302:C:C5	3.03	0.46
3:DA:600:G:H1'	29:DE:100:MET:SD	2.55	0.46
3:DA:618:G:C6	3:DA:619:G:C4	3.03	0.46
3:DA:780:G:N2	69:DA:4068:HOH:O	2.48	0.46
3:DA:783:A:C2'	3:DA:784:G:H5'	2.42	0.46
3:DA:971:G:C2'	3:DA:972:A:H5'	2.45	0.46
3:DA:1456:G:C5	3:DA:1457:U:C5	3.03	0.46
3:DA:1826:G:N3	3:DA:1827:U:C6	2.83	0.46
3:DA:1954:G:H5"	69:DA:5487:HOH:O	2.15	0.46
3:DA:2413:G:C2'	3:DA:2414:G:H5'	2.45	0.46
4:CA:593:U:C2	4:CA:594:U:C5	3.04	0.46
4:CA:1054:A:C2	4:CA:1106:G:N1	2.83	0.46
4:CA:1288:G:C4	4:CA:1327:A:C2	3.03	0.46
4:CA:1638:C:H4'	4:CA:2710:C:O2	2.14	0.46
4:CA:1999:C:H1'	4:CA:2687:U:H1'	1.97	0.46
4:CA:2239:G:H2'	4:CA:2240:U:O4'	2.15	0.46
4:CA:2460:U:H2'	4:CA:2461:A:O4'	2.16	0.46
4:CA:2524:G:H2'	4:CA:2525:G:O4'	2.15	0.46
4:CA:2563:U:C2	4:CA:2566:A:N7	2.83	0.46
8:AD:145:ILE:O	8:AD:150:LYS:HE3	2.16	0.46
9:AE:44:GLY:HA2	9:AE:76:LEU:HD11	1.96	0.46
9:AE:157:ARG:CD	12:AH:43:GLU:O	2.62	0.46
14:AJ:10:LEU:HD21	14:AJ:98:VAL:HG12	1.97	0.46
17:AM:104:THR:O	17:AM:105:ASN:C	2.54	0.46
6:BB:31:ILE:HG22	6:BB:32:PHE:N	2.30	0.46
7:BC:207:ILE:OXT	7:BC:207:ILE:HG12	2.15	0.46
9:BE:142:ASP:O	9:BE:146:ASN:ND2	2.48	0.46
12:BH:116:ALA:HA	12:BH:121:LEU:HD11	1.98	0.46
15:BK:88:GLY:N	15:BK:114:THR:HG22	2.28	0.46
17:BM:14:HIS:HB2	17:BM:17:ILE:CD1	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CJ:72:THR:CG2	33:CJ:112:LYS:HG2	2.45	0.46
34:CK:80:HIS:HB3	34:CK:81:ILE:HG22	1.98	0.46
36:CM:55:MET:SD	36:CM:59:ARG:CZ	3.03	0.46
51:C1:54:ILE:HG22	51:C1:56:LYS:H	1.80	0.46
33:DJ:20:SER:HB3	33:DJ:21:PRO:HD3	1.97	0.46
35:DL:5:GLN:HA	35:DL:20:MET:SD	2.56	0.46
41:DR:57:ARG:HG2	41:DR:61:ILE:HD12	1.97	0.46
51:D1:54:ILE:CG2	51:D1:55:ALA:H	2.17	0.46
57:D7:52:LYS:C	57:D7:54:HIS:N	2.69	0.46
1:AA:935:A:H2'	1:AA:936:C:O5'	2.16	0.46
1:AA:1028:C:C2	1:AA:1033:G:N2	2.82	0.46
2:BA:325:A:N6	2:BA:326:G:N1	2.63	0.46
2:BA:337:G:C6	2:BA:338:A:N6	2.83	0.46
2:BA:337:G:O6	2:BA:338:A:N6	2.48	0.46
2:BA:394:G:H5"	69:BA:1702:HOH:O	2.14	0.46
2:BA:669:G:C2	2:BA:738:C:O2	2.68	0.46
2:BA:676:A:C2	2:BA:677:U:C4	3.03	0.46
2:BA:786:G:C2	2:BA:797:C:O2	2.69	0.46
3:DA:186:G:O2'	3:DA:187:G:H5'	2.15	0.46
3:DA:239:C:N4	3:DA:240:C:N3	2.63	0.46
3:DA:697:G:H2'	3:DA:698:C:C6	2.50	0.46
3:DA:825:A:O2'	3:DA:826:U:H5'	2.15	0.46
3:DA:1142:A:H4'	3:DA:1143:A:OP1	2.15	0.46
3:DA:1588:G:N3	3:DA:1589:U:C6	2.84	0.46
3:DA:1635:A:C6	3:DA:1636:U:C2	3.03	0.46
3:DA:1889:A:C2'	3:DA:1890:A:O5'	2.63	0.46
3:DA:1957:C:P	69:DA:3600:HOH:O	2.73	0.46
3:DA:2259:U:C6	3:DA:2427:C:C4	3.03	0.46
3:DA:2299:U:O5'	3:DA:2299:U:H6	1.99	0.46
3:DA:2589:A:C2	3:DA:2606:C:C4	3.04	0.46
3:DA:2706:A:C2	3:DA:2707:U:C2	3.03	0.46
4:CA:41:C:H2'	4:CA:42:A:O4'	2.15	0.46
4:CA:270:A:OP2	4:CA:271:G:C8	2.68	0.46
4:CA:271:G:C2	4:CA:367:G:C2	3.04	0.46
4:CA:381:G:C2'	69:CA:3587:HOH:O	2.63	0.46
4:CA:443:A:OP1	29:CE:40:ARG:CB	2.63	0.46
4:CA:560:C:O5'	4:CA:560:C:H6	1.98	0.46
4:CA:830:G:N3	4:CA:2448:A:C6	2.84	0.46
4:CA:1312:U:C5	4:CA:1603:A:N6	2.84	0.46
4:CA:1838:C:C5	4:CA:1899:A:C6	3.04	0.46
4:CA:2017:U:H4'	51:C1:4:GLN:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2214:C:C2'	4:CA:2215:C:H5'	2.45	0.46
13:AI:57:MET:SD	13:AI:57:MET:N	2.78	0.46
14:AJ:80:THR:HG22	14:AJ:82:LYS:HG2	1.97	0.46
15:AK:110:ILE:O	25:AU:6:VAL:N	2.48	0.46
18:AN:67:THR:N	69:AN:202:HOH:O	2.49	0.46
22:AR:32:TYR:CD2	22:AR:55:LEU:HD11	2.50	0.46
24:AT:67:ILE:HG13	24:AT:71:LYS:HD3	1.97	0.46
6:BB:141:LEU:HB3	6:BB:145:GLU:HG3	1.97	0.46
7:BC:87:LEU:O	7:BC:90:VAL:HG22	2.16	0.46
15:BK:35:THR:OG1	15:BK:41:ALA:N	2.47	0.46
15:BK:63:ALA:CB	15:BK:92:GLY:HA2	2.45	0.46
27:CC:171:VAL:O	27:CC:182:LYS:HA	2.15	0.46
42:CS:34:GLU:HA	42:CS:59:ILE:O	2.16	0.46
44:CU:22:THR:HA	44:CU:25:GLU:OE2	2.15	0.46
27:DC:195:GLY:O	27:DC:196:ASN:C	2.53	0.46
29:DE:181:ILE:HG23	36:DM:2:ARG:HG3	1.96	0.46
38:DO:16:HIS:O	38:DO:17:ARG:C	2.49	0.46
46:DW:30:ILE:CD1	46:DW:63:ILE:HD12	2.45	0.46
57:D7:18:SER:O	57:D7:19:VAL:HG13	2.14	0.46
1:AA:258:G:C6	1:AA:259:G:C5	3.03	0.46
1:AA:346:G:O5'	35:DL:105:ARG:NH1	2.48	0.46
1:AA:418:C:O5'	1:AA:418:C:H6	1.98	0.46
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.16	0.46
1:AA:1164:G:N2	1:AA:1173:U:C2	2.83	0.46
1:AA:1253:G:H2'	1:AA:1254:A:O4'	2.15	0.46
2:BA:29:U:H5'	2:BA:296:U:OP1	2.16	0.46
2:BA:31:G:N7	2:BA:306:A:H1'	2.30	0.46
2:BA:505:G:C2	2:BA:506:G:C5	3.03	0.46
2:BA:577:G:N3	2:BA:578:C:C6	2.84	0.46
2:BA:858:G:C8	2:BA:869:G:C6	3.04	0.46
2:BA:949:A:C5	2:BA:950:U:C4	3.04	0.46
2:BA:966:G:H2'	2:BA:967:C:C6	2.50	0.46
2:BA:1439:G:N2	2:BA:1463:U:C2	2.83	0.46
2:BA:1467:C:H2'	2:BA:1468:A:C8	2.50	0.46
2:BA:1525:G:OP1	15:BK:122:ARG:NH2	2.48	0.46
3:DA:191:A:H2'	3:DA:192:C:C6	2.51	0.46
3:DA:751:A:C2	60:DA:3046:MPD:H51	2.50	0.46
3:DA:805:G:H5'	69:DA:5236:HOH:O	2.16	0.46
3:DA:1646:C:OP2	69:DA:3538:HOH:O	2.20	0.46
3:DA:1691:C:H2'	3:DA:1692:U:O5'	2.15	0.46
3:DA:1746:A:C2	3:DA:1747:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2004:G:P	69:DA:3277:HOH:O	2.69	0.46
3:DA:2258:C:H4'	3:DA:2259:U:OP2	2.15	0.46
3:DA:2282:G:H4'	3:DA:2389:G:O2'	2.15	0.46
3:DA:2731:G:O2'	3:DA:2732:G:H5'	2.15	0.46
3:DA:2811:G:O2'	3:DA:2812:G:H5'	2.16	0.46
4:CA:319:G:C6	4:CA:333:G:C6	3.04	0.46
4:CA:341:C:H2'	4:CA:342:A:C8	2.50	0.46
4:CA:370:G:N1	4:CA:424:G:C4	2.84	0.46
4:CA:833:A:OP1	36:CM:39:LYS:HE3	2.16	0.46
4:CA:931:U:O4	4:CA:1184:U:O4'	2.34	0.46
4:CA:1454:C:H5'	38:CO:63:ARG:HD3	1.97	0.46
4:CA:1568:G:O4'	27:CC:57:HIS:HE1	1.97	0.46
4:CA:1936:A:C8	4:CA:1945:G:C6	3.04	0.46
4:CA:2103:C:O2	4:CA:2104:C:C5	2.68	0.46
4:CA:2884:U:O2	4:CA:2884:U:O4'	2.34	0.46
4:CA:2888:C:H2'	4:CA:2889:C:C6	2.50	0.46
5:CB:14:U:H5'	5:CB:71:C:O4'	2.15	0.46
5:CB:28:C:P	39:CP:36:TYR:HH	2.39	0.46
6:AB:67:ILE:O	6:AB:68:LEU:CB	2.63	0.46
6:AB:86:SER:O	6:AB:87:CYS:O	2.33	0.46
7:AC:64:ILE:HG22	7:AC:98:PRO:O	2.16	0.46
8:AD:13:ARG:NH1	8:AD:36:GLN:O	2.43	0.46
14:AJ:18:ILE:HD13	14:AJ:72:ARG:HG2	1.98	0.46
15:AK:29:ASN:OD1	15:AK:30:THR:N	2.40	0.46
21:AQ:16:LYS:N	21:AQ:17:MET:HE1	2.30	0.46
6:BB:126:PHE:CE1	6:BB:127:ASP:OD2	2.68	0.46
7:BC:155:GLY:HA2	7:BC:163:ALA:HB1	1.98	0.46
17:BM:33:ILE:CG2	17:BM:56:LEU:HD23	2.45	0.46
22:BR:34:THR:HG22	22:BR:38:LYS:H	1.81	0.46
25:BU:41:PRO:HA	25:BU:44:GLU:HG2	1.96	0.46
29:CE:5:LEU:HD11	29:CE:12:LEU:HB2	1.98	0.46
31:CG:162:ARG:CZ	31:CG:168:VAL:HG21	2.46	0.46
32:CH:9:VAL:HB	32:CH:13:GLY:HA3	1.97	0.46
35:CL:108:ARG:HE	35:CL:116:ILE:CD1	2.29	0.46
44:CU:67:VAL:HG13	44:CU:75:GLY:O	2.16	0.46
48:CY:13:THR:OG1	48:CY:25:LYS:NZ	2.44	0.46
56:DD:35:THR:HG22	56:DD:73:VAL:HG21	1.98	0.46
32:DH:71:LYS:O	32:DH:108:VAL:HG11	2.15	0.46
33:DJ:18:ASN:N	33:DJ:19:PRO:CD	2.78	0.46
33:DJ:33:ASN:CB	33:DJ:36:GLU:HB2	2.46	0.46
33:DJ:86:LYS:C	33:DJ:88:GLY:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DT:55:ILE:HG23	43:DT:66:ILE:HG12	1.97	0.46
44:DU:2:ILE:O	44:DU:3:ARG:O	2.33	0.46
52:D2:9:LYS:HG2	52:D2:52:LYS:O	2.16	0.46
1:AA:965:U:O2	1:AA:969:A:C2	2.69	0.46
1:AA:974:A:OP2	18:AN:81:ARG:NH1	2.49	0.46
1:AA:1016:A:N3	1:AA:1016:A:H2'	2.31	0.46
2:BA:39:G:C6	2:BA:40:C:C4	3.04	0.46
2:BA:45:G:O2'	2:BA:46:G:H5'	2.16	0.46
2:BA:154:U:O4	2:BA:155:A:N6	2.49	0.46
2:BA:502:A:C2	2:BA:544:G:C2	3.03	0.46
2:BA:502:A:O2'	2:BA:503:C:H5'	2.16	0.46
2:BA:897:C:C4	2:BA:898:G:N7	2.83	0.46
2:BA:935:A:C6	11:BG:3:ARG:NH2	2.84	0.46
3:DA:265:A:H4'	3:DA:266:G:OP1	2.16	0.46
3:DA:323:C:OP1	3:DA:338:G:N2	2.49	0.46
3:DA:658:U:C2'	3:DA:659:G:O5'	2.63	0.46
3:DA:818:G:N7	3:DA:1187:G:C6	2.84	0.46
3:DA:834:G:H4'	69:DA:3653:HOH:O	2.15	0.46
3:DA:956:G:H5"	37:DN:76:LYS:HD2	1.96	0.46
3:DA:1768:C:C2	3:DA:1769:U:C5	3.03	0.46
3:DA:2262:U:C2'	3:DA:2263:C:H5'	2.45	0.46
3:DA:2276:G:P	69:DA:3673:HOH:O	2.74	0.46
3:DA:2894:G:H1'	69:DA:4736:HOH:O	2.15	0.46
4:CA:25:U:H2'	4:CA:26:G:O4'	2.14	0.46
4:CA:228:C:N3	4:CA:418:C:O4'	2.49	0.46
4:CA:572:A:H3'	4:CA:573:U:O4'	2.16	0.46
4:CA:672:C:C2	4:CA:809:G:N2	2.84	0.46
4:CA:709:U:OP2	69:CA:3407:HOH:O	2.20	0.46
4:CA:1170:C:H42	4:CA:1178:C:N4	2.14	0.46
4:CA:1258:U:O4'	29:CE:79:ARG:HD2	2.15	0.46
4:CA:1752:C:H3'	4:CA:1752:C:C6	2.51	0.46
4:CA:2250:G:C8	4:CA:2250:G:O5'	2.69	0.46
4:CA:2332:C:H4'	4:CA:2336:A:C6	2.51	0.46
4:CA:2359:C:O2'	36:CM:60:ARG:NH2	2.49	0.46
4:CA:2467:C:H3'	69:CA:3227:HOH:O	2.14	0.46
4:CA:2483:C:H2'	4:CA:2484:G:O4'	2.16	0.46
5:DB:90:C:O3'	37:DN:18[A]:ARG:HG2	2.16	0.46
5:CB:17:C:H2'	5:CB:18:G:H5'	1.98	0.46
7:AC:154:SER:O	7:AC:196:ILE:HG23	2.15	0.46
11:AG:130:ASN:ND2	11:AG:130:ASN:O	2.48	0.46
12:AH:54:ASP:OD1	12:AH:55:THR:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:41:ARG:NH1	18:AN:45:VAL:HG21	2.31	0.46
24:AT:5:LYS:O	24:AT:7:ALA:N	2.48	0.46
6:BB:44:GLU:O	6:BB:48:PRO:HD2	2.15	0.46
6:BB:125:THR:O	6:BB:126:PHE:HB3	2.15	0.46
12:BH:64:LYS:HB3	12:BH:71:VAL:HG21	1.97	0.46
13:BI:27:LYS:O	13:BI:63:LEU:HD23	2.15	0.46
15:BK:59:THR:C	15:BK:91:PRO:HB2	2.36	0.46
28:CD:1:MET:HA	28:CD:88:GLU:OE2	2.16	0.46
29:CE:149:ILE:HD11	29:CE:192:ALA:HB1	1.98	0.46
32:CH:94:ILE:O	32:CH:121:VAL:HG23	2.16	0.46
36:CM:28:GLY:O	36:CM:29:LYS:O	2.32	0.46
37:CN:76:LYS:HE3	37:CN:80:VAL:CG1	2.46	0.46
29:DE:21:ARG:HD2	69:DE:409:HOH:O	2.15	0.46
30:DF:107:VAL:HA	30:DF:110:ILE:HD12	1.96	0.46
30:DF:107:VAL:N	30:DF:108:PRO:CD	2.78	0.46
33:DJ:110:GLN:O	33:DJ:110:GLN:NE2	2.49	0.46
1:AA:268:U:H2'	1:AA:269:C:C6	2.50	0.46
1:AA:825:A:O2'	12:AH:9:ASP:OD1	2.20	0.46
1:AA:862:C:C2'	1:AA:863:U:H5'	2.46	0.46
1:AA:1415:G:C2	1:AA:1486:G:C4	3.03	0.46
1:AA:1461:G:C5	1:AA:1462:C:C5	3.04	0.46
2:BA:3:A:C2	2:BA:629:A:O4'	2.69	0.46
2:BA:112:G:C2'	2:BA:113:G:H5'	2.46	0.46
2:BA:140:U:O2	2:BA:183:C:N4	2.48	0.46
2:BA:146:G:C2	2:BA:147:G:C8	3.04	0.46
2:BA:547:A:P	69:BA:1813:HOH:O	2.73	0.46
2:BA:661:G:C2	2:BA:662:U:C5	3.03	0.46
2:BA:773:G:N3	2:BA:807:A:C2	2.84	0.46
2:BA:844:G:OP2	2:BA:844:G:C8	2.68	0.46
2:BA:880:C:C2	2:BA:881:G:C8	3.03	0.46
2:BA:993:G:O2'	2:BA:994:A:N7	2.48	0.46
2:BA:1124:G:N2	2:BA:1127:G:N2	2.63	0.46
3:DA:483:A:H2'	3:DA:484:C:H6	1.81	0.46
3:DA:503:A:H4'	3:DA:504:A:O5'	2.16	0.46
3:DA:662:G:C2'	3:DA:663:G:O5'	2.64	0.46
3:DA:1236:G:OP2	63:DA:3037:PUT:H11	2.15	0.46
3:DA:1489:C:O2'	3:DA:1490:A:H5"	2.15	0.46
3:DA:2097:A:C2'	3:DA:2098:U:H5'	2.45	0.46
3:DA:2526:G:C2'	55:D5:1:MET:H1	2.29	0.46
3:DA:2720:U:C1'	69:DA:3493:HOH:O	2.64	0.46
4:CA:1389:G:H1	4:CA:1398:C:H42	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1566:A:C2	27:CC:212:TRP:CD2	3.04	0.46
4:CA:1585:C:C2'	4:CA:1586:A:H5'	2.45	0.46
4:CA:1670:C:H2'	4:CA:1671:U:O4'	2.15	0.46
5:DB:58:A:O2'	5:DB:59:A:H5'	2.15	0.46
8:AD:9:LEU:O	8:AD:13:ARG:HG3	2.16	0.46
9:AE:56:VAL:N	9:AE:57:PRO:HD2	2.31	0.46
14:AJ:33:GLY:O	14:AJ:34:ALA:HB3	2.14	0.46
15:AK:106:ARG:N	69:AK:201:HOH:O	2.48	0.46
18:AN:68:GLY:O	18:AN:69:ARG:C	2.52	0.46
6:BB:154:MET:HG2	6:BB:156:GLY:H	1.80	0.46
7:BC:55:ILE:HD12	7:BC:55:ILE:O	2.14	0.46
9:BE:35:ALA:O	9:BE:50:TYR:O	2.33	0.46
12:BH:14:ILE:HD11	12:BH:61:LEU:HD13	1.97	0.46
30:CF:49:LEU:HD21	30:CF:66:ILE:HG23	1.97	0.46
34:CK:46:PRO:HD3	41:CR:59:LEU:CD1	2.46	0.46
40:CQ:105:LYS:HA	40:CQ:108:ARG:CD	2.45	0.46
40:CQ:105:LYS:HA	40:CQ:108:ARG:HD3	1.96	0.46
46:CW:30:ILE:HD11	46:CW:63:ILE:HD12	1.97	0.46
56:DD:46:ARG:NH1	56:DD:86:GLU:HA	2.31	0.46
33:DJ:18:ASN:O	33:DJ:18:ASN:OD1	2.33	0.46
33:DJ:66:PHE:N	33:DJ:66:PHE:CD1	2.84	0.46
38:DO:3:HIS:O	38:DO:4:ARG:HB2	2.15	0.46
42:DS:22:LEU:HA	69:DS:311:HOH:O	2.16	0.46
55:D5:27:TYR:CE1	55:D5:39:VAL:CG1	2.98	0.46
1:AA:316:C:O2	1:AA:316:C:H2'	2.15	0.46
1:AA:515:G:N3	1:AA:537:G:C2	2.83	0.46
1:AA:545:C:H5'	8:AD:69:GLU:CB	2.45	0.46
1:AA:569:C:H5"	1:AA:570:G:OP1	2.16	0.46
1:AA:622:A:C8	1:AA:623:C:C6	3.03	0.46
1:AA:720:C:OP2	1:AA:721:G:O2'	2.22	0.46
1:AA:939:G:H2'	1:AA:940:C:C6	2.51	0.46
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.51	0.46
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.51	0.46
1:AA:1476:A:H2'	1:AA:1477:U:O5'	2.15	0.46
1:AA:1492:A:C3'	1:AA:1493:A:H5"	2.46	0.46
1:AA:1496:C:H5"	1:AA:1497:G:OP2	2.15	0.46
2:BA:1088:G:C6	2:BA:1089:G:N7	2.84	0.46
2:BA:1125:U:O2'	2:BA:1126:U:H2'	2.16	0.46
2:BA:1263:C:H2'	2:BA:1264:U:C1'	2.45	0.46
2:BA:1480:A:H2'	2:BA:1481:U:O4'	2.16	0.46
3:DA:93:G:O2'	3:DA:94:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:237:C:H42	3:DA:260:G:H1	1.64	0.46
3:DA:971:G:C6	3:DA:972:A:C4	3.04	0.46
3:DA:1143:A:OP1	34:DK:27:ARG:NH2	2.47	0.46
3:DA:1153:C:OP2	69:DA:3542:HOH:O	2.21	0.46
3:DA:1594:U:H2'	3:DA:1595:C:C6	2.50	0.46
3:DA:1760:C:H2'	3:DA:1761:C:H5'	1.98	0.46
3:DA:1825:U:H2'	3:DA:1826:G:H8	1.81	0.46
3:DA:1835:2MG:C4	3:DA:1836:C:C5	3.03	0.46
3:DA:1955:U:OP2	69:DA:3535:HOH:O	2.20	0.46
3:DA:2170:A:C2	3:DA:2171:A:C2	3.04	0.46
3:DA:2575:C:O2'	56:DD:145:SER:HB2	2.15	0.46
3:DA:2698:U:H2'	3:DA:2699:C:C6	2.51	0.46
4:CA:7:G:H4'	34:CK:15:TRP:CH2	2.50	0.46
4:CA:65:U:C3'	4:CA:66:C:H6	2.29	0.46
4:CA:297:G:OP1	45:CV:1:ALA:HB2	2.15	0.46
4:CA:375:G:O6	4:CA:400:G:N3	2.49	0.46
4:CA:449:A:OP2	4:CA:449:A:C8	2.69	0.46
4:CA:523:C:H2'	4:CA:524:G:H8	1.80	0.46
4:CA:644:A:N1	4:CA:2369:A:H1'	2.31	0.46
4:CA:770:G:C4	4:CA:771:G:C8	3.04	0.46
4:CA:822:G:O6	4:CA:943:A:H2	1.99	0.46
4:CA:995:C:OP2	41:CR:52:ARG:HD2	2.16	0.46
4:CA:1250:G:H3'	4:CA:1251:C:H5'	1.98	0.46
4:CA:1444:G:C2	4:CA:1548:A:C2	3.04	0.46
4:CA:1635:A:H2'	4:CA:1636:U:O4'	2.16	0.46
4:CA:1797:G:H2'	4:CA:1798:U:O5'	2.16	0.46
4:CA:1956:U:O2	4:CA:1985:C:H4'	2.16	0.46
4:CA:2020:A:C2	4:CA:2022:U:O4'	2.69	0.46
4:CA:2059:A:OP1	29:CE:66:GLY:HA3	2.16	0.46
4:CA:2086:U:H2'	4:CA:2087:G:O4'	2.16	0.46
4:CA:2648:G:H2'	4:CA:2649:C:C6	2.51	0.46
5:DB:62:C:H2'	5:DB:63:C:H6	1.81	0.46
5:CB:29:A:H2'	5:CB:30:C:C6	2.51	0.46
6:AB:81:LYS:HG3	6:AB:91:PHE:CE2	2.51	0.46
6:AB:186:ILE:HG13	6:AB:186:ILE:O	2.15	0.46
6:AB:188:ASP:OD2	6:AB:204:ASP:OD1	2.33	0.46
8:AD:157:ALA:O	8:AD:161:LEU:CD2	2.64	0.46
12:AH:125:ILE:O	12:AH:125:ILE:CG1	2.64	0.46
18:AN:63:ARG:O	18:AN:73:PHE:HE1	1.99	0.46
6:BB:33:GLY:CA	6:BB:40:ILE:H	2.28	0.46
6:BB:50:PHE:O	6:BB:54:LEU:HD23	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:45:LYS:CG	7:BC:46:GLU:N	2.78	0.46
8:BD:62:ARG:CG	8:BD:72:PHE:CD1	2.99	0.46
14:BJ:35:GLN:HG2	14:BJ:77:VAL:H	1.81	0.46
18:BN:1:ALA:O	18:BN:2:LYS:CB	2.64	0.46
33:CJ:33:ASN:C	33:CJ:35:MET:H	2.19	0.46
35:CL:63:VAL:HB	35:CL:103:VAL:HG12	1.97	0.46
38:CO:1:MET:H3	38:CO:1:MET:HE3	1.81	0.46
40:CQ:98:TYR:CE2	40:CQ:99:LEU:CD2	2.99	0.46
35:DL:79:PHE:HB3	40:DQ:67:GLU:OE2	2.16	0.46
54:D4:51:LYS:HE3	54:D4:51:LYS:HB3	1.83	0.46
1:AA:16:A:O2'	1:AA:17:U:H5'	2.15	0.46
1:AA:507:C:C4	1:AA:508:U:C4	3.04	0.46
1:AA:880:C:H2'	1:AA:881:G:H5'	1.97	0.46
1:AA:913:A:H2'	69:AA:1755:HOH:O	2.15	0.46
1:AA:1133:G:C2	1:AA:1142:G:C4	3.04	0.46
1:AA:1231:G:C6	1:AA:1232:U:C4	3.04	0.46
1:AA:1333:A:H3'	1:AA:1334:G:C8	2.50	0.46
1:AA:1368:A:OP2	13:AI:114:LYS:HD2	2.15	0.46
1:AA:1392:G:H8	1:AA:1392:G:O5'	1.98	0.46
2:BA:81:A:N1	2:BA:88:U:O4	2.49	0.46
2:BA:321:A:O2'	2:BA:1436:U:H5'	2.16	0.46
2:BA:623:C:C4	2:BA:624:C:C5	3.04	0.46
2:BA:1130:A:C5	2:BA:1146:A:C6	3.04	0.46
2:BA:1259:C:O2'	2:BA:1283:U:O2	2.22	0.46
2:BA:1375:A:OP1	11:BG:12:ILE:HD11	2.15	0.46
2:BA:1439:G:H2'	2:BA:1440:U:C6	2.51	0.46
3:DA:268:C:H6	3:DA:268:C:O5'	1.99	0.46
3:DA:1068:G:H21	3:DA:1096:A:P	2.39	0.46
3:DA:1327:A:OP1	69:DA:3544:HOH:O	2.21	0.46
3:DA:1849:G:H2'	3:DA:1850:G:C8	2.51	0.46
3:DA:2112:G:O5'	3:DA:2113:U:OP2	2.34	0.46
69:DA:4580:HOH:O	56:DD:129:THR:HG22	2.16	0.46
4:CA:58:G:N3	4:CA:70:G:N2	2.64	0.46
4:CA:223:A:H2'	4:CA:408:G:N3	2.30	0.46
4:CA:593:U:H2'	4:CA:594:U:C6	2.51	0.46
4:CA:605:G:H1'	4:CA:657:U:O2'	2.16	0.46
4:CA:663:G:C6	4:CA:664:G:C5	3.04	0.46
4:CA:858:G:C4	4:CA:2268:A:C2	3.03	0.46
4:CA:1128:G:C4	4:CA:1129:A:C2	3.04	0.46
4:CA:1754:A:N1	4:CA:2716:C:O2'	2.48	0.46
4:CA:1797:G:H1	4:CA:1822:C:H42	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1845:G:H2'	4:CA:1846:G:O4'	2.15	0.46
4:CA:1852:U:H4'	69:CA:3951:HOH:O	2.15	0.46
4:CA:1905:C:C4	4:CA:1930:G:C2	3.04	0.46
4:CA:1959:G:C6	4:CA:1960:A:C5	3.04	0.46
4:CA:1965:C:H3'	4:CA:1966:A:H8	1.80	0.46
4:CA:2045:C:O3'	51:C1:14:MET:HB3	2.15	0.46
4:CA:2122:U:H2'	4:CA:2123:G:O4'	2.15	0.46
4:CA:2243:U:H1'	69:CA:3878:HOH:O	2.16	0.46
4:CA:2621:G:H2'	4:CA:2622:U:O4'	2.16	0.46
5:CB:83:G:H2'	5:CB:84:G:O4'	2.15	0.46
11:AG:130:ASN:HA	11:AG:135:VAL:HG11	1.97	0.46
21:AQ:17:MET:CG	21:AQ:20:SER:HB3	2.46	0.46
11:BG:35:LYS:HB3	11:BG:38:THR:CG2	2.46	0.46
27:CC:16:VAL:HB	27:CC:203:VAL:H	1.81	0.46
28:CD:73:VAL:HG23	28:CD:74:GLU:O	2.15	0.46
28:CD:108:ASP:OD2	28:CD:207:VAL:HG12	2.16	0.46
28:CD:173:GLN:O	28:CD:175:LEU:N	2.49	0.46
31:CG:97:VAL:CG2	31:CG:124:CYS:HB2	2.46	0.46
37:CN:53:MET:SD	37:CN:63:ILE:HD13	2.56	0.46
37:CN:73:ILE:HG21	37:CN:91:TYR:OH	2.16	0.46
29:DE:200:LEU:N	29:DE:200:LEU:HD13	2.31	0.46
32:DH:42:LYS:HG2	32:DH:43:ASN:N	2.31	0.46
33:DJ:12:VAL:O	33:DJ:53:PRO:HG3	2.15	0.46
33:DJ:78:LEU:HB3	33:DJ:105:LEU:CD2	2.46	0.46
35:DL:1:MET:N	69:DL:207:HOH:O	2.48	0.46
36:DM:82:LEU:HD22	36:DM:90:VAL:HG21	1.97	0.46
40:DQ:22:GLY:O	40:DQ:109:ILE:HD11	2.16	0.46
41:DR:102:LYS:N	69:DR:303:HOH:O	2.38	0.46
1:AA:600:A:H2'	1:AA:601:G:C8	2.51	0.46
1:AA:1011:C:C4	1:AA:1018:G:O6	2.69	0.46
1:AA:1073:U:O2'	1:AA:1074:G:H5'	2.16	0.46
1:AA:1123:U:OP2	69:AA:1746:HOH:O	2.20	0.46
1:AA:1317:C:OP1	18:AN:20:PHE:HE2	1.99	0.46
1:AA:1404:C:O2'	1:AA:1519:MA6:O2'	2.25	0.46
2:BA:66:A:N6	2:BA:67:C:C4	2.84	0.46
2:BA:146:G:N2	2:BA:177:G:C8	2.84	0.46
2:BA:562:U:H1'	26:BL:12:ARG:CG	2.45	0.46
2:BA:1005:A:H4'	2:BA:1037:C:O2	2.15	0.46
2:BA:1089:G:C5	2:BA:1090:U:C5	3.04	0.46
2:BA:1289:A:H5'	2:BA:1290:G:OP2	2.16	0.46
2:BA:1433:A:OP1	40:CQ:105:LYS:NZ	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1337:G:H2'	3:DA:1338:G:O4'	2.16	0.46
3:DA:1587:G:C5	3:DA:1588:G:N7	2.83	0.46
3:DA:1831:G:C2'	3:DA:1832:C:H5'	2.46	0.46
3:DA:2002:G:OP1	38:DO:17:ARG:NH1	2.39	0.46
3:DA:2056:G:H2'	3:DA:2056:G:N3	2.31	0.46
4:CA:53:A:C8	4:CA:54:G:C8	3.04	0.46
4:CA:323:C:O2	4:CA:323:C:O4'	2.32	0.46
4:CA:619:G:O6	29:CE:98:LYS:CE	2.64	0.46
4:CA:982:C:H4'	4:CA:983:A:OP1	2.14	0.46
4:CA:1096:A:H2'	4:CA:1097:U:O4'	2.15	0.46
4:CA:1130:U:O2'	4:CA:1131:G:C8	2.68	0.46
4:CA:1344:U:O2'	4:CA:1345:C:OP2	2.32	0.46
4:CA:1438:U:C5	4:CA:1552:A:C2	3.04	0.46
4:CA:1902:C:H6	4:CA:1902:C:H5'	1.80	0.46
4:CA:2091:C:O2	48:CY:33:HIS:CE1	2.69	0.46
4:CA:2345:G:H4'	4:CA:2346:A:H5"	1.96	0.46
4:CA:2408:U:H2'	4:CA:2409:G:C8	2.51	0.46
5:CB:48:U:H2'	5:CB:49:C:C6	2.51	0.46
6:AB:160:ALA:HA	6:AB:182:PRO:HG2	1.98	0.46
8:AD:50:ASP:O	8:AD:53:VAL:HG22	2.16	0.46
9:AE:108:GLY:O	9:AE:109:GLY:C	2.54	0.46
10:AF:2:ARG:O	10:AF:65:GLU:HA	2.16	0.46
23:AS:68:GLY:HA2	69:AS:101:HOH:O	2.16	0.46
24:AT:68:HIS:HB3	24:AT:69:LYS:NZ	2.29	0.46
6:BB:21:ARG:O	6:BB:22:TYR:C	2.54	0.46
6:BB:31:ILE:CG2	6:BB:32:PHE:N	2.79	0.46
6:BB:135:LEU:C	6:BB:137:ARG:H	2.19	0.46
8:BD:58:LYS:HB2	8:BD:200:ILE:HD12	1.97	0.46
8:BD:62:ARG:HG3	8:BD:72:PHE:CD1	2.51	0.46
9:BE:12:GLN:HB3	9:BE:40:GLY:O	2.15	0.46
9:BE:77:ASN:HB2	9:BE:82:GLN:HG3	1.97	0.46
9:BE:149:SER:OG	9:BE:152:MET:HG2	2.16	0.46
10:BF:53:LYS:HA	10:BF:53:LYS:NZ	2.31	0.46
13:BI:33:ARG:HD3	13:BI:34:SER:H	1.80	0.46
15:BK:19:GLY:O	15:BK:82:LEU:HA	2.16	0.46
26:BL:121:ARG:HG2	26:BL:121:ARG:HH11	1.81	0.46
21:BQ:14:SER:O	21:BQ:17:MET:HE1	2.16	0.46
33:CJ:45:THR:O	33:CJ:45:THR:HG22	2.16	0.46
38:CO:78:LYS:O	38:CO:78:LYS:HG2	2.15	0.46
45:CV:12:VAL:HG21	45:CV:38:ILE:HG23	1.98	0.46
45:CV:102:ILE:HG22	45:CV:102:ILE:OXT	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:CY:57:VAL:HG13	48:CY:61:LYS:HD2	1.98	0.46
27:DC:195:GLY:HA2	69:DC:328:HOH:O	2.16	0.46
33:DJ:58:ILE:O	33:DJ:59:THR:CB	2.64	0.46
33:DJ:79:LEU:CD1	33:DJ:132:ALA:HA	2.46	0.46
34:DK:65:THR:OG1	34:DK:68:LYS:NZ	2.43	0.46
39:DP:19:GLN:HA	63:DP:202:PUT:N1	2.30	0.46
39:DP:34:HIS:CE1	39:DP:65:THR:HG21	2.50	0.46
40:DQ:54:LEU:HG	40:DQ:54:LEU:O	2.16	0.46
57:D7:13:VAL:O	57:D7:40:VAL:HA	2.16	0.46
1:AA:200:G:N2	1:AA:218:U:C2	2.83	0.45
1:AA:291:U:O2'	1:AA:292:G:H5'	2.15	0.45
1:AA:568:G:C4	1:AA:569:C:C5	3.04	0.45
1:AA:582:C:C4	1:AA:583:A:N7	2.84	0.45
1:AA:601:G:H2'	1:AA:602:A:H8	1.81	0.45
1:AA:648:A:C2	1:AA:649:A:C4	3.04	0.45
1:AA:651:C:C4	1:AA:652:U:C4	3.04	0.45
1:AA:746:A:H4'	1:AA:837:U:O2'	2.16	0.45
1:AA:903:G:C5	1:AA:904:U:C5	3.04	0.45
1:AA:1253:G:C4	1:AA:1254:A:C8	3.03	0.45
1:AA:1317:C:C2'	1:AA:1318:A:H5'	2.45	0.45
2:BA:283:U:C4	2:BA:284:C:C4	3.04	0.45
2:BA:378:G:N2	2:BA:386:C:O2	2.49	0.45
2:BA:604:G:C4	2:BA:605:U:C6	3.04	0.45
2:BA:849:G:C6	2:BA:850:U:C4	3.04	0.45
2:BA:937:A:C2	2:BA:1379:G:C6	3.04	0.45
2:BA:1053:G:H5"	2:BA:1055:A:OP1	2.15	0.45
2:BA:1129:C:N3	2:BA:1144:G:N2	2.63	0.45
3:DA:644:A:O3'	3:DA:645:C:C4'	2.65	0.45
3:DA:851:C:C2'	3:DA:852:U:O5'	2.64	0.45
3:DA:1180:U:H2'	3:DA:1181:U:H5'	1.97	0.45
3:DA:1587:G:C4	3:DA:1588:G:C8	3.05	0.45
3:DA:1741:C:H2'	3:DA:1742:U:O4'	2.16	0.45
3:DA:1769:U:C2	69:DA:3434:HOH:O	2.59	0.45
3:DA:1784:A:OP2	69:DA:3307:HOH:O	2.21	0.45
3:DA:1889:A:H2'	3:DA:1890:A:O5'	2.16	0.45
3:DA:2080:A:O5'	48:DY:18:SER:CB	2.63	0.45
4:CA:9:G:N1	4:CA:2629:U:C6	2.84	0.45
4:CA:223:A:O2'	4:CA:420:C:O2	2.34	0.45
4:CA:224:U:P	4:CA:408:G:H21	2.38	0.45
4:CA:306:U:O4	4:CA:307:G:C6	2.69	0.45
4:CA:310:A:C2	4:CA:312:G:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:450:G:OP1	4:CA:1248:G:N1	2.47	0.45
4:CA:480:A:O3'	45:CV:43:LYS:HG3	2.16	0.45
4:CA:771:G:C2	4:CA:772:C:C5	3.04	0.45
4:CA:1142:A:H4'	4:CA:1143:A:OP1	2.17	0.45
4:CA:1313:U:H5"	69:CA:3685:HOH:O	2.16	0.45
4:CA:1950:G:O5'	4:CA:1950:G:H8	1.99	0.45
4:CA:2165:C:H2'	4:CA:2166:U:O4'	2.17	0.45
4:CA:2199:A:C6	4:CA:2225:A:C4	3.03	0.45
4:CA:2214:C:C2	4:CA:2215:C:C6	3.04	0.45
4:CA:2234:G:C6	4:CA:2235:G:C5	3.04	0.45
4:CA:2236:U:H5"	4:CA:2237:G:OP2	2.16	0.45
4:CA:2598:A:H2'	4:CA:2599:G:O4'	2.16	0.45
4:CA:2785:C:O4'	28:CD:36:GLN:NE2	2.50	0.45
4:CA:2810:A:H3'	4:CA:2811:G:C8	2.51	0.45
6:AB:148:LEU:HD22	6:AB:151:ILE:HG21	1.98	0.45
6:AB:182:PRO:O	6:AB:183:VAL:CB	2.64	0.45
6:AB:206:ALA:O	6:AB:210:VAL:HG23	2.16	0.45
7:AC:90:VAL:O	7:AC:94:ILE:HG13	2.16	0.45
10:AF:92:THR:HG22	10:AF:93:LYS:HE2	1.97	0.45
11:AG:22:LEU:HD21	11:AG:97:ASN:HD22	1.81	0.45
14:AJ:89:ARG:NH1	14:AJ:89:ARG:HB2	2.31	0.45
17:AM:19:LEU:O	17:AM:25:VAL:HG21	2.16	0.45
18:AN:13:VAL:HA	18:AN:60:GLN:OE1	2.17	0.45
18:AN:50:THR:O	18:AN:50:THR:OG1	2.29	0.45
20:AP:78:VAL:O	20:AP:79:ASN:HB2	2.16	0.45
24:AT:5:LYS:O	24:AT:6:SER:C	2.55	0.45
6:BB:73:LYS:HE3	6:BB:165:ASP:HB2	1.99	0.45
11:BG:69:VAL:HG13	11:BG:135:VAL:HG12	1.97	0.45
12:BH:59:LEU:HD13	12:BH:60:GLU:N	2.32	0.45
13:BI:8:GLY:HA3	13:BI:86:ALA:HB2	1.98	0.45
15:BK:49:GLY:O	15:BK:51:GLY:N	2.46	0.45
28:CD:33:ARG:NH2	28:CD:73:VAL:HG23	2.31	0.45
33:CJ:18:ASN:N	33:CJ:19:PRO:HD3	2.31	0.45
39:CP:7:ARG:CZ	39:CP:97:PHE:CZ	2.99	0.45
53:C3:30:VAL:O	53:C3:34:ARG:HG3	2.17	0.45
33:DJ:116:MET:SD	33:DJ:128:ILE:HD11	2.57	0.45
34:DK:19:ASP:O	34:DK:23:LYS:HE2	2.16	0.45
47:DX:34:ILE:HG23	47:DX:56:THR:HG23	1.98	0.45
1:AA:397:A:N7	1:AA:548:G:C8	2.85	0.45
1:AA:476:U:C5	1:AA:477:C:C5	3.03	0.45
1:AA:478:A:H2'	1:AA:479:U:C5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1361:G:H2'	1:AA:1362:A:O4'	2.17	0.45
1:AA:1492:A:H2'	1:AA:1493:A:H5"	1.97	0.45
1:AA:1494:G:C4	1:AA:1495:U:C5	3.04	0.45
2:BA:118:U:O4	69:BA:1761:HOH:O	2.21	0.45
2:BA:187:G:N2	2:BA:190:A:OP2	2.49	0.45
2:BA:234:C:H4'	21:BQ:66:PRO:HG3	1.98	0.45
2:BA:373:A:C2	2:BA:374:A:C8	3.05	0.45
2:BA:483:C:H2'	2:BA:484:G:C8	2.51	0.45
2:BA:861:G:H2'	2:BA:862:C:O5'	2.17	0.45
2:BA:869:G:H8	2:BA:869:G:O5'	2.00	0.45
2:BA:1001:C:H2'	2:BA:1002:G:C8	2.51	0.45
2:BA:1095:U:P	69:BA:1788:HOH:O	2.74	0.45
2:BA:1258:G:H2'	2:BA:1259:C:C6	2.51	0.45
3:DA:121:G:H2'	3:DA:122:G:C8	2.52	0.45
3:DA:1147:A:C2'	3:DA:1148:U:H5'	2.46	0.45
3:DA:1187:G:H5"	42:DS:83:TYR:CE1	2.52	0.45
3:DA:1224:U:C4	3:DA:1225:G:C6	3.04	0.45
3:DA:1346:G:H2'	3:DA:1347:A:H8	1.80	0.45
3:DA:1483:G:C6	3:DA:1484:U:C4	3.04	0.45
3:DA:1613:G:H1'	69:DA:3471:HOH:O	2.14	0.45
3:DA:1716:U:H2'	3:DA:1717:A:H8	1.81	0.45
3:DA:1787:A:H5'	3:DA:1787:A:H8	1.81	0.45
3:DA:1930:G:N2	3:DA:1968:G:H2'	2.31	0.45
3:DA:1964:G:H5'	69:DA:4311:HOH:O	2.15	0.45
3:DA:1979:U:C4'	69:DA:4262:HOH:O	2.64	0.45
3:DA:2059:A:P	69:DA:3519:HOH:O	2.74	0.45
3:DA:2077:A:C8	3:DA:2435:A:C4	3.04	0.45
3:DA:2183:A:H2'	3:DA:2184:A:N9	2.31	0.45
3:DA:2200:C:O2	3:DA:2226:C:N4	2.50	0.45
3:DA:2684:U:P	69:DA:3694:HOH:O	2.74	0.45
3:DA:2715:C:H2'	3:DA:2716:C:O5'	2.16	0.45
3:DA:2799:A:C5	3:DA:2801:G:C8	3.04	0.45
3:DA:2834:G:O6	3:DA:2879:A:H2'	2.16	0.45
4:CA:37:C:O2'	4:CA:38:A:H5'	2.17	0.45
4:CA:682:G:C2	4:CA:796:C:O2	2.69	0.45
4:CA:733:G:O6	4:CA:761:A:H3'	2.17	0.45
4:CA:749:A:C5	4:CA:750:A:N7	2.84	0.45
4:CA:1924:C:H2'	4:CA:1925:C:C6	2.51	0.45
4:CA:2020:A:H5'	51:C1:8:THR:HG22	1.97	0.45
4:CA:2191:A:C6	4:CA:2192:U:C4	3.04	0.45
6:AB:111:ILE:HD12	6:AB:111:ILE:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:181:ILE:O	6:AB:182:PRO:C	2.54	0.45
11:AG:13:LEU:HD13	11:AG:13:LEU:N	2.30	0.45
21:AQ:74:THR:HG22	21:AQ:75:LEU:N	2.32	0.45
6:BB:139:ARG:NH1	6:BB:140:GLU:HG3	2.31	0.45
8:BD:4:TYR:CZ	8:BD:6:GLY:HA3	2.52	0.45
27:CC:52:HIS:O	27:CC:216:ARG:N	2.40	0.45
28:CD:4:LEU:HB3	28:CD:32:ASN:OD1	2.16	0.45
29:CE:121:VAL:O	29:CE:190:ALA:HB2	2.16	0.45
30:CF:162:ASP:OD1	30:CF:162:ASP:N	2.49	0.45
46:CW:29:ILE:HG12	46:CW:30:ILE:N	2.31	0.45
54:C4:15:LYS:HE2	54:C4:19:GLY:HA2	1.98	0.45
56:DD:12:THR:HG23	69:DQ:303:HOH:O	2.16	0.45
29:DE:77:ILE:O	29:DE:77:ILE:CG2	2.64	0.45
30:DF:79:ARG:H	30:DF:82:TYR:HD2	1.64	0.45
33:DJ:54:ILE:CG2	33:DJ:70:THR:OG1	2.64	0.45
38:DO:82:GLU:O	38:DO:85:PRO:HD2	2.16	0.45
41:DR:10:ARG:HA	41:DR:10:ARG:NH1	2.31	0.45
49:DZ:26:PHE:O	49:DZ:30:MET:HG2	2.15	0.45
1:AA:283:U:C4	1:AA:284:C:C4	3.04	0.45
1:AA:524:G:H5"	1:AA:525:C:OP2	2.16	0.45
1:AA:606:G:N3	1:AA:633:G:C6	2.84	0.45
1:AA:844:G:H3'	1:AA:844:G:OP1	2.16	0.45
1:AA:958:A:C6	1:AA:959:A:N1	2.84	0.45
1:AA:993:G:O2'	1:AA:994:A:N7	2.50	0.45
1:AA:1015:G:H2'	1:AA:1218:C:O2'	2.16	0.45
2:BA:106:C:O2	2:BA:379:C:H5'	2.15	0.45
2:BA:552:U:O4	2:BA:553:A:N6	2.49	0.45
2:BA:680:C:N3	2:BA:711:G:C2	2.85	0.45
2:BA:931:C:N3	2:BA:932:C:C5	2.85	0.45
2:BA:939:G:C6	2:BA:940:C:C4	3.05	0.45
2:BA:943:U:H1'	13:BI:126:GLN:HE22	1.82	0.45
2:BA:1431:A:C6	2:BA:1432:G:N1	2.84	0.45
3:DA:136:G:N2	3:DA:144:A:C4	2.84	0.45
3:DA:246:C:C2'	3:DA:247:G:H5'	2.47	0.45
3:DA:304:U:C2'	3:DA:305:C:H5'	2.46	0.45
3:DA:465:G:H2'	3:DA:466:A:C8	2.52	0.45
3:DA:585:G:O5'	3:DA:585:G:H8	2.00	0.45
3:DA:747:5MU:C2	3:DA:2613:U:C4	3.05	0.45
3:DA:1076:C:O2	33:DJ:92:PRO:HG2	2.16	0.45
3:DA:1166:G:C2'	3:DA:1167:C:H5'	2.47	0.45
3:DA:1178:C:H2'	3:DA:1179:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1949:G:N2	3:DA:1958:C:C2	2.84	0.45
3:DA:2351:G:P	69:DA:3485:HOH:O	2.74	0.45
69:DA:5764:HOH:O	36:DM:14:LYS:HE2	2.16	0.45
4:CA:297:G:N1	4:CA:342:A:N6	2.64	0.45
4:CA:673:C:O2'	29:CE:77:ILE:HD11	2.16	0.45
4:CA:740:C:H5'	4:CA:1784:A:H5"	1.98	0.45
4:CA:743:A:O2'	69:CA:3306:HOH:O	2.02	0.45
4:CA:1584:U:O2	4:CA:1584:U:H3'	2.17	0.45
4:CA:1613:G:H3'	4:CA:1614:A:C5'	2.47	0.45
4:CA:1687:G:N1	4:CA:1700:A:OP1	2.42	0.45
4:CA:1799:G:H8	27:CC:179:GLU:OE1	1.99	0.45
4:CA:1832:C:H2'	4:CA:1833:C:O4'	2.16	0.45
4:CA:1951:U:H2'	4:CA:1953:A:OP2	2.17	0.45
4:CA:2212:A:C2	4:CA:2214:C:C4	3.05	0.45
4:CA:2619:C:OP1	28:CD:157:LYS:CE	2.65	0.45
4:CA:2799:A:C5	4:CA:2801:G:H1'	2.52	0.45
4:CA:2867:G:N7	40:CQ:20:ARG:HD3	2.32	0.45
7:AC:11:ARG:NH2	7:AC:177:THR:O	2.38	0.45
8:AD:158:ALA:O	8:AD:162:ALA:HB2	2.16	0.45
9:AE:91:GLY:HA3	9:AE:130:SER:HB3	1.98	0.45
13:AI:65:ILE:HD12	13:AI:79:ILE:HD13	1.97	0.45
17:AM:16:VAL:HG23	17:AM:17:ILE:HD12	1.99	0.45
23:AS:5:LEU:HD23	23:AS:9:PRO:HA	1.97	0.45
25:AU:7:ARG:O	25:AU:8:GLU:CB	2.63	0.45
8:BD:158:ALA:O	8:BD:161:LEU:CD2	2.64	0.45
12:BH:88:ARG:O	12:BH:92:LEU:CD2	2.65	0.45
26:BL:80:ILE:HD12	26:BL:97:THR:CG2	2.46	0.45
17:BM:8:ASN:OD1	17:BM:9:ILE:N	2.50	0.45
18:BN:35:ALA:HA	18:BN:42:TRP:CH2	2.52	0.45
19:BO:55:GLY:O	19:BO:59:MET:HG3	2.17	0.45
28:CD:46:ARG:NH1	28:CD:86:GLU:O	2.49	0.45
33:CJ:129:GLU:O	33:CJ:132:ALA:O	2.33	0.45
36:CM:76:GLU:HB2	36:CM:111:ILE:HD11	1.97	0.45
43:CT:80:PRO:HD2	43:CT:100:THR:OG1	2.17	0.45
27:DC:38:LYS:NZ	27:DC:55:GLY:O	2.39	0.45
56:DD:18:ASP:HB2	61:DQ:202:PG4:H72	1.97	0.45
32:DH:4:ILE:HD11	32:DH:44:ILE:HG22	1.97	0.45
33:DJ:13:ALA:HA	33:DJ:53:PRO:HG3	1.98	0.45
38:DO:90:ARG:NH1	69:DO:206:HOH:O	2.49	0.45
50:D0:2:LYS:H	50:D0:2:LYS:HE2	1.80	0.45
55:D5:3:VAL:O	55:D5:4:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:45:G:O2'	1:AA:46:G:H5'	2.16	0.45
1:AA:82:G:H5'	1:AA:83:C:O5'	2.16	0.45
1:AA:102:G:C2	1:AA:103:U:C4	3.05	0.45
1:AA:270:A:C2	1:AA:271:C:C2	3.04	0.45
1:AA:588:G:C6	1:AA:589:U:N3	2.84	0.45
1:AA:723:U:H5'	1:AA:724:G:OP1	2.17	0.45
2:BA:405:U:OP1	2:BA:406:G:O2'	2.17	0.45
2:BA:544:G:P	8:BD:56:ARG:HH22	2.38	0.45
2:BA:570:G:C4	2:BA:571:U:C5	3.04	0.45
2:BA:608:A:N6	2:BA:609:A:C2	2.85	0.45
2:BA:644:U:H2'	2:BA:645:G:O4'	2.15	0.45
2:BA:739:C:C2'	2:BA:740:U:H5'	2.47	0.45
2:BA:892:A:O2'	2:BA:1415:G:H4'	2.16	0.45
2:BA:1263:C:C4	2:BA:1264:U:C4	3.05	0.45
2:BA:1422:G:O3'	35:CL:49:ARG:NH2	2.49	0.45
3:DA:561:G:C8	69:DA:3627:HOH:O	2.69	0.45
3:DA:954:G:OP2	37:DN:16:ARG:NH1	2.47	0.45
3:DA:997:G:H2'	3:DA:998:C:O5'	2.17	0.45
3:DA:1065:U:O2	3:DA:1065:U:H2'	2.16	0.45
3:DA:2441:U:OP2	3:DA:2586:U:O2'	2.34	0.45
3:DA:2454:G:H5"	69:DA:3444:HOH:O	2.15	0.45
3:DA:2678:C:H2'	3:DA:2679:A:O4'	2.17	0.45
3:DA:2792:A:C2	3:DA:2793:C:C6	3.04	0.45
4:CA:622:G:H2'	4:CA:623:C:C6	2.51	0.45
4:CA:681:G:C2	4:CA:682:G:C8	3.05	0.45
4:CA:815:C:O2	4:CA:1193:G:N2	2.49	0.45
4:CA:861:A:H3'	4:CA:862:G:H8	1.82	0.45
4:CA:1384:A:O2'	4:CA:1404:C:O2	2.34	0.45
4:CA:1619:G:C2'	4:CA:1620:G:H5'	2.46	0.45
4:CA:1806:C:O2'	27:CC:47:ARG:HG3	2.17	0.45
4:CA:2199:A:N1	4:CA:2225:A:C4	2.85	0.45
4:CA:2548:U:H2'	4:CA:2549:G:O4'	2.16	0.45
4:CA:2684:U:O4'	35:CL:70:ARG:NH1	2.49	0.45
4:CA:2847:U:C5	4:CA:2848:G:C5	3.04	0.45
4:CA:2848:G:OP2	40:CQ:94:ALA:N	2.39	0.45
5:DB:119:A:H3'	69:DB:318:HOH:O	2.16	0.45
9:AE:80:THR:HG23	9:AE:81:LEU:H	1.81	0.45
11:AG:50:LEU:O	11:AG:50:LEU:HD13	2.17	0.45
17:AM:90:ARG:HD3	17:AM:96:PRO:O	2.16	0.45
18:AN:90:ARG:HB2	18:AN:92:GLU:HG3	1.97	0.45
8:BD:168:PRO:HB2	8:BD:171:LEU:HD12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BK:31:ILE:HG22	15:BK:46:THR:HG22	1.96	0.45
27:CC:171:VAL:HG23	27:CC:173:LEU:HD13	1.98	0.45
28:CD:1:MET:HE3	28:CD:205:PRO:HG3	1.99	0.45
30:CF:73:VAL:CG2	30:CF:78:ILE:HD11	2.47	0.45
33:CJ:13:ALA:CA	33:CJ:53:PRO:HG3	2.46	0.45
43:CT:29:VAL:CG1	43:CT:55:ILE:HD11	2.47	0.45
56:DD:24:VAL:HG23	56:DD:24:VAL:O	2.16	0.45
56:DD:199:SER:HB3	69:DD:448:HOH:O	2.16	0.45
30:DF:4:HIS:O	30:DF:7:TYR:HB3	2.17	0.45
30:DF:58:ALA:O	30:DF:139:GLU:HG2	2.17	0.45
30:DF:135:ILE:HA	30:DF:140:ILE:HG21	1.98	0.45
50:D0:25:GLY:HA3	50:D0:46:MET:HE1	1.98	0.45
1:AA:110:C:H2'	1:AA:111:G:C8	2.51	0.45
1:AA:242:G:C2	1:AA:245:U:C4	3.05	0.45
1:AA:269:C:H2'	1:AA:270:A:C8	2.51	0.45
1:AA:295:C:H2'	1:AA:296:U:O4'	2.17	0.45
1:AA:575:G:N2	1:AA:881:G:H1'	2.31	0.45
1:AA:582:C:C2	1:AA:583:A:C8	3.05	0.45
1:AA:859:G:H2'	1:AA:860:A:C8	2.52	0.45
1:AA:1014:A:C2	23:AS:34:TRP:CZ2	3.05	0.45
1:AA:1057:G:H4'	7:AC:197:GLY:H	1.82	0.45
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.65	0.45
1:AA:1248:A:C5	1:AA:1249:C:C5	3.04	0.45
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.50	0.45
1:AA:1431:A:C6	1:AA:1432:G:C6	3.04	0.45
2:BA:109:A:OP1	69:BA:1764:HOH:O	2.21	0.45
2:BA:133:U:C4	2:BA:228:A:N6	2.85	0.45
2:BA:209:U:H2'	2:BA:209:U:O2	2.15	0.45
2:BA:542:G:C2	2:BA:543:U:C5	3.05	0.45
2:BA:604:G:C5	2:BA:605:U:C5	3.05	0.45
2:BA:801:U:C2	2:BA:802:A:C8	3.04	0.45
2:BA:842:U:H3'	2:BA:843:U:C5'	2.47	0.45
2:BA:1151:A:C2	2:BA:1152:A:C5	3.04	0.45
2:BA:1212:U:H6	2:BA:1212:U:OP1	1.99	0.45
2:BA:1305:G:H21	2:BA:1332:A:H2	1.65	0.45
2:BA:1348:U:O2	2:BA:1348:U:H2'	2.16	0.45
2:BA:1356:G:H2'	2:BA:1357:A:C8	2.52	0.45
2:BA:1416:G:H8	2:BA:1416:G:O5'	1.99	0.45
3:DA:16:C:C2'	3:DA:17:G:H5'	2.46	0.45
3:DA:214:G:N2	3:DA:216:A:N3	2.64	0.45
3:DA:541:A:H2'	3:DA:542:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:858:G:O2'	3:DA:2268:A:C2'	2.65	0.45
3:DA:860:U:C5	3:DA:2268:A:C1'	2.99	0.45
3:DA:924:G:H8	3:DA:924:G:O5'	2.00	0.45
3:DA:941:A:H2'	3:DA:942:G:O4'	2.17	0.45
3:DA:969:G:H2'	3:DA:970:U:H6	1.80	0.45
3:DA:1077:A:C8	3:DA:1078:U:O2	2.70	0.45
3:DA:1300:G:C4	3:DA:1626:A:C2	3.04	0.45
3:DA:1318:U:O2'	3:DA:1319:C:H5'	2.17	0.45
3:DA:1343:G:C2'	3:DA:1344:U:H5'	2.47	0.45
3:DA:1761:C:H6	3:DA:1761:C:O5'	1.99	0.45
3:DA:1767:G:C6	3:DA:1768:C:C5	3.05	0.45
3:DA:2409:G:C2'	3:DA:2410:G:O5'	2.65	0.45
3:DA:2454:G:C5'	69:DA:3444:HOH:O	2.65	0.45
3:DA:2593:U:N3	3:DA:2594:C:C5	2.85	0.45
3:DA:2838:G:C6	3:DA:2839:G:C5	3.04	0.45
4:CA:16:C:HO2'	51:C1:10:SER:HG	1.61	0.45
4:CA:33:C:O2'	4:CA:446:G:N2	2.49	0.45
4:CA:85:G:P	45:CV:6:ARG:HG2	2.57	0.45
4:CA:189:G:C2'	4:CA:190:A:O5'	2.64	0.45
4:CA:194:G:O2'	4:CA:195:A:H5'	2.16	0.45
4:CA:200:U:C4	4:CA:248:G:N2	2.85	0.45
4:CA:919:U:H2'	4:CA:920:A:O4'	2.16	0.45
4:CA:1130:U:O2'	4:CA:1131:G:H8	2.00	0.45
4:CA:1250:G:H5'	41:CR:5:ARG:CD	2.46	0.45
4:CA:1250:G:H3'	4:CA:1251:C:C5'	2.47	0.45
4:CA:1279:G:O6	4:CA:1291:C:N3	2.49	0.45
4:CA:1331:G:C2	4:CA:1333:G:C8	3.05	0.45
4:CA:1623:G:C6	4:CA:1624:U:C4	3.05	0.45
4:CA:1668:A:N6	4:CA:1676:A:H61	2.15	0.45
4:CA:1965:C:H3'	4:CA:1966:A:C8	2.51	0.45
4:CA:2024:G:C4	4:CA:2040:G:N2	2.84	0.45
7:AC:55:ILE:O	7:AC:55:ILE:HG13	2.16	0.45
7:AC:130:PHE:CZ	7:AC:131:ARG:HD3	2.52	0.45
8:AD:206:LYS:HD2	8:AD:206:LYS:C	2.37	0.45
15:AK:38:GLN:CG	15:AK:40:ASN:OD1	2.65	0.45
18:AN:63:ARG:HG2	18:AN:68:GLY:C	2.36	0.45
20:AP:46:LYS:CD	20:AP:47:GLU:H	2.29	0.45
6:BB:100:MET:O	6:BB:101:LEU:HD23	2.17	0.45
6:BB:164:ILE:HG23	6:BB:165:ASP:N	2.31	0.45
9:BE:101:GLU:HA	9:BE:122:ASN:ND2	2.31	0.45
9:BE:104:GLY:O	9:BE:105:ILE:CG2	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BH:66:PHE:CE2	12:BH:67:GLN:NE2	2.85	0.45
27:CC:259:ASN:C	27:CC:261:ARG:N	2.68	0.45
31:CG:169:ARG:NH1	55:C5:32:SER:O	2.50	0.45
33:CJ:57:VAL:HG12	33:CJ:58:ILE:N	2.32	0.45
38:CO:2:ARG:O	38:CO:2:ARG:HD3	2.16	0.45
38:CO:99:LYS:O	51:C1:42:ILE:HG12	2.16	0.45
44:CU:13:ALA:O	44:CU:33:LYS:N	2.44	0.45
51:C1:42:ILE:HG22	51:C1:48:TYR:HB2	1.98	0.45
27:DC:224:MET:O	27:DC:232:GLY:O	2.34	0.45
30:DF:106:ALA:O	30:DF:109:ARG:N	2.47	0.45
33:DJ:5:GLN:O	33:DJ:6:ALA:O	2.34	0.45
36:DM:106:GLU:HB2	36:DM:107:PHE:CE2	2.52	0.45
39:DP:44:GLY:HA3	63:DP:202:PUT:H32	1.99	0.45
43:DT:17:VAL:HG12	43:DT:76:VAL:HG21	1.97	0.45
53:D3:44:VAL:CG2	69:D3:221:HOH:O	2.65	0.45
57:D7:31:THR:HG21	57:D7:40:VAL:O	2.17	0.45
57:D7:46:THR:HG23	57:D7:47:ILE:N	2.32	0.45
1:AA:115:G:N1	1:AA:313:A:C2	2.85	0.45
1:AA:451:A:H4'	1:AA:452:A:O4'	2.16	0.45
1:AA:738:C:N3	1:AA:739:C:C5	2.85	0.45
1:AA:757:U:O2'	1:AA:879:C:H1'	2.16	0.45
1:AA:819:A:H4'	1:AA:820:U:OP2	2.16	0.45
1:AA:949:A:C4	1:AA:950:U:C6	3.05	0.45
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.69	0.45
1:AA:1319:A:C4	1:AA:1323:G:C8	3.04	0.45
1:AA:1368:A:C2	1:AA:1369:C:C6	3.05	0.45
2:BA:3:A:N7	69:BA:1801:HOH:O	2.36	0.45
2:BA:18:C:H2'	2:BA:19:A:O4'	2.17	0.45
2:BA:407:U:H2'	2:BA:408:A:C8	2.52	0.45
2:BA:407:U:O2	2:BA:408:A:C8	2.69	0.45
2:BA:585:G:H3'	69:BA:1741:HOH:O	2.16	0.45
2:BA:642:A:C5	2:BA:643:C:C5	3.04	0.45
2:BA:821:G:H2'	2:BA:822:U:H6	1.80	0.45
2:BA:896:C:H2'	2:BA:897:C:H5'	1.98	0.45
2:BA:1190:G:C5'	7:BC:176:HIS:CE1	2.99	0.45
2:BA:1467:C:H2'	2:BA:1468:A:H8	1.82	0.45
3:DA:249:C:H1'	69:DA:3813:HOH:O	2.16	0.45
3:DA:511:U:C5	3:DA:512:G:C5	3.04	0.45
3:DA:517:C:OP2	51:D1:9:ARG:NH2	2.47	0.45
3:DA:543:G:N2	3:DA:551:G:C4	2.84	0.45
3:DA:558:U:O5'	3:DA:558:U:H6	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:776:G:O6	69:DA:3269:HOH:O	2.18	0.45
3:DA:907:G:OP1	37:DN:23:GLY:HA2	2.17	0.45
3:DA:1082:U:H5'	33:DJ:118:GLY:HA2	1.99	0.45
3:DA:1252:G:O3'	41:DR:32:ARG:NH1	2.49	0.45
3:DA:1406:U:C2	3:DA:1407:G:C8	3.04	0.45
3:DA:1768:C:C2	3:DA:1769:U:C6	3.04	0.45
3:DA:1904:G:C4	3:DA:1905:C:C6	3.04	0.45
3:DA:2008:C:C2'	3:DA:2009:A:O5'	2.64	0.45
3:DA:2488:G:O2'	3:DA:2489:U:H5'	2.17	0.45
3:DA:2504:PSU:H6	3:DA:2504:PSU:O5'	1.99	0.45
3:DA:2586:U:H2'	3:DA:2587:A:O4'	2.16	0.45
3:DA:2754:U:C1'	69:DA:3333:HOH:O	2.60	0.45
3:DA:2823:A:H4'	69:DA:4364:HOH:O	2.17	0.45
4:CA:25:U:C4	4:CA:26:G:C2	3.04	0.45
4:CA:177:G:H3'	4:CA:178:G:C8	2.52	0.45
4:CA:280:U:H2'	4:CA:281:C:C6	2.52	0.45
4:CA:634:C:OP2	36:CM:70:LYS:HE2	2.16	0.45
4:CA:812:C:C2'	4:CA:813:U:H5'	2.46	0.45
4:CA:833:A:C6	4:CA:834:G:C6	3.04	0.45
4:CA:1004:U:O5'	4:CA:1004:U:H6	1.99	0.45
4:CA:1480:C:H2'	4:CA:1481:U:O4'	2.16	0.45
4:CA:1838:C:C4	4:CA:1899:A:C4	3.05	0.45
4:CA:1855:U:C4	4:CA:1856:U:C4	3.04	0.45
4:CA:2050:C:C2'	4:CA:2051:A:O5'	2.64	0.45
4:CA:2215:C:C2	4:CA:2216:G:C8	3.05	0.45
4:CA:2235:G:C4	4:CA:2236:U:C6	3.04	0.45
4:CA:2519:U:O4'	4:CA:2542:A:N6	2.45	0.45
4:CA:2553:G:H3'	4:CA:2554:U:H5"	1.98	0.45
4:CA:2679:A:C2	4:CA:2729:G:C2	3.04	0.45
69:CA:3422:HOH:O	48:CY:31:ASN:CB	2.63	0.45
5:DB:83:G:H1	5:DB:93:C:H42	1.63	0.45
5:CB:63:C:H2'	5:CB:64:G:C8	2.52	0.45
6:AB:16:PHE:O	6:AB:41:ILE:CD1	2.65	0.45
6:AB:87:CYS:CB	6:AB:89:GLN:OE1	2.65	0.45
13:AI:39:PHE:C	13:AI:41:ARG:H	2.20	0.45
13:AI:50:GLN:N	13:AI:51:PRO:HD2	2.31	0.45
13:AI:120:LYS:HG3	13:AI:123:ARG:HB3	1.97	0.45
14:AJ:81:GLU:HA	14:AJ:84:VAL:HG12	1.98	0.45
6:BB:126:PHE:CE2	6:BB:127:ASP:OD1	2.69	0.45
8:BD:72:PHE:CZ	8:BD:200:ILE:HD11	2.51	0.45
9:BE:44:GLY:O	9:BE:45:ARG:O	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BL:18:LYS:O	26:BL:18:LYS:HG3	2.16	0.45
19:BO:35:GLN:OE1	19:BO:39:LEU:HD22	2.17	0.45
22:BR:20:GLU:O	22:BR:22:ASP:N	2.50	0.45
22:BR:45:THR:OG1	22:BR:47:THR:CG2	2.64	0.45
29:CE:12:LEU:HD23	29:CE:13:THR:H	1.82	0.45
29:CE:150:THR:HG22	29:CE:151:GLY:N	2.31	0.45
31:CG:43:LYS:O	31:CG:49:LEU:HD23	2.17	0.45
33:CJ:70:THR:O	33:CJ:71:LYS:HB3	2.16	0.45
37:CN:52:ALA:HB1	37:CN:119:LEU:O	2.15	0.45
49:CZ:17:GLU:O	49:CZ:20:ASN:HB2	2.17	0.45
49:CZ:57:LEU:HD12	49:CZ:61:ALA:HB3	1.99	0.45
33:DJ:32:VAL:HG13	33:DJ:66:PHE:CE1	2.51	0.45
38:DO:67:PHE:O	38:DO:71:ARG:N	2.45	0.45
48:DY:42:GLU:O	48:DY:43:LYS:C	2.55	0.45
1:AA:464:U:N3	1:AA:467:U:OP2	2.42	0.45
1:AA:557:G:C6	1:AA:558:G:C6	3.04	0.45
1:AA:812:G:OP1	1:AA:903:G:H1'	2.16	0.45
1:AA:1152:A:C5	1:AA:1153:G:N7	2.84	0.45
1:AA:1299:A:C6	1:AA:1301:U:O2	2.69	0.45
2:BA:4:U:H5'	2:BA:5:U:C5	2.52	0.45
2:BA:62:U:H6	2:BA:62:U:O5'	2.00	0.45
2:BA:453:G:C8	69:BA:1767:HOH:O	2.67	0.45
2:BA:761:G:O2'	2:BA:762:U:H5'	2.16	0.45
2:BA:1213:A:C2	2:BA:1215:G:H1'	2.51	0.45
2:BA:1265:C:N3	2:BA:1271:A:C2	2.84	0.45
2:BA:1365:G:N2	2:BA:1366:C:H1'	2.32	0.45
2:BA:1421:G:H1	2:BA:1479:C:H42	1.64	0.45
2:BA:1494:G:N1	2:BA:1495:U:C4	2.85	0.45
3:DA:122:G:H8	3:DA:122:G:O5'	1.99	0.45
3:DA:225:C:H2'	3:DA:226:A:H5'	1.98	0.45
3:DA:684:G:OP1	53:D3:21:ARG:NH1	2.50	0.45
3:DA:1443:U:H2'	3:DA:1444:G:C8	2.52	0.45
3:DA:1533:C:H3'	3:DA:1534:U:H5"	1.98	0.45
3:DA:1588:G:C2	3:DA:1589:U:C6	3.04	0.45
3:DA:2297:A:N3	3:DA:2297:A:H2'	2.32	0.45
3:DA:2418:A:H2'	3:DA:2419:U:O4'	2.17	0.45
3:DA:2771:C:H2'	3:DA:2772:C:C6	2.52	0.45
69:DA:4524:HOH:O	48:DY:21:LEU:HD12	2.16	0.45
4:CA:65:U:H3'	4:CA:66:C:H6	1.82	0.45
4:CA:82:U:C2	4:CA:83:A:C8	3.05	0.45
4:CA:187:G:N2	4:CA:210:C:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:824:U:O2	4:CA:833:A:N1	2.50	0.45
4:CA:833:A:H1'	36:CM:51:GLU:O	2.17	0.45
4:CA:1079:C:C2	4:CA:1088:A:N6	2.85	0.45
4:CA:1079:C:H5'	4:CA:1080:A:OP2	2.16	0.45
4:CA:1132:U:O2'	4:CA:1133:A:H5'	2.16	0.45
4:CA:1528:A:C8	4:CA:1544:A:N6	2.85	0.45
4:CA:1623:G:C2	4:CA:1624:U:C6	3.05	0.45
4:CA:1713:A:H8	4:CA:1713:A:OP1	1.99	0.45
4:CA:1860:G:N2	4:CA:1883:U:H1'	2.31	0.45
4:CA:2133:G:H2'	4:CA:2157:G:N2	2.31	0.45
4:CA:2642:G:C1'	69:CA:3247:HOH:O	2.59	0.45
4:CA:2721:A:N3	4:CA:2873:A:C8	2.85	0.45
5:DB:91:C:OP2	37:DN:18[A]:ARG:HG2	2.17	0.45
6:AB:76:ALA:O	6:AB:80:VAL:HG23	2.16	0.45
8:AD:191:LEU:O	8:AD:192:SER:CB	2.64	0.45
9:AE:137:VAL:O	9:AE:137:VAL:HG23	2.15	0.45
13:AI:30:ILE:HA	13:AI:65:ILE:HG13	1.99	0.45
14:AJ:91:ASP:O	14:AJ:92:LEU:CB	2.64	0.45
18:AN:25:GLU:O	18:AN:27:LYS:N	2.50	0.45
19:AO:3:LEU:HD13	19:AO:35:GLN:OE1	2.17	0.45
9:BE:111:MET:HG3	9:BE:140:THR:HG21	1.99	0.45
12:BH:96:MET:HB3	12:BH:99:LEU:HB2	1.98	0.45
13:BI:45:ARG:HE	13:BI:45:ARG:H	1.63	0.45
19:BO:4:SER:O	19:BO:8:THR:HG23	2.17	0.45
21:BQ:16:LYS:O	21:BQ:17:MET:SD	2.75	0.45
31:CG:10:VAL:HG22	31:CG:10:VAL:O	2.17	0.45
32:CH:110:VAL:HG21	32:CH:131:PHE:CE2	2.52	0.45
34:CK:41:LYS:NZ	34:CK:52:ASP:OD1	2.33	0.45
36:CM:101:ILE:CG1	36:CM:102:GLY:H	2.28	0.45
39:CP:94:ARG:HG3	39:CP:97:PHE:O	2.17	0.45
40:CQ:112:ARG:HG2	40:CQ:114:ASN:OD1	2.16	0.45
44:CU:45:ALA:O	44:CU:47:VAL:N	2.49	0.45
50:C0:11:SER:OG	50:C0:13:ILE:HG13	2.17	0.45
30:DF:139:GLU:HG3	57:D7:29:ILE:HG13	1.98	0.45
37:DN:24:THR:HG23	37:DN:24:THR:O	2.17	0.45
42:DS:62:GLU:O	42:DS:96:VAL:HA	2.17	0.45
43:DT:37:THR:HG22	43:DT:38:TYR:CD2	2.51	0.45
1:AA:203:G:N2	1:AA:215:C:C2	2.85	0.45
1:AA:1160:G:O2'	1:AA:1161:C:H5'	2.17	0.45
1:AA:1261:A:N7	1:AA:1274:A:H2	2.14	0.45
2:BA:109:A:C8	2:BA:327:A:O4'	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:173:U:H1'	2:BA:197:A:C6	2.50	0.45
2:BA:312:C:C5	2:BA:313:A:N7	2.85	0.45
2:BA:316:C:OP2	2:BA:351:G:O2'	2.35	0.45
2:BA:346:G:H2'	2:BA:347:G:O4'	2.17	0.45
2:BA:352:C:OP1	2:BA:352:C:H6	1.99	0.45
2:BA:392:C:OP1	20:BP:8:ARG:NH2	2.50	0.45
2:BA:567:G:O6	26:BL:12:ARG:NH2	2.49	0.45
2:BA:1388:C:N3	2:BA:1389:C:C5	2.85	0.45
2:BA:1412:C:H2'	2:BA:1413:A:C8	2.51	0.45
3:DA:57:C:H2'	3:DA:58:G:O4'	2.16	0.45
3:DA:328:U:O5'	3:DA:328:U:H6	2.00	0.45
3:DA:374:A:C2	3:DA:401:A:C4	3.04	0.45
3:DA:409:G:C2'	3:DA:410:G:H5'	2.47	0.45
3:DA:1070:A:C2	3:DA:1097:U:O2'	2.67	0.45
3:DA:1171:G:C6	3:DA:1172:C:N4	2.85	0.45
3:DA:1234:U:H2'	3:DA:1235:G:O4'	2.16	0.45
3:DA:1665:A:C2'	3:DA:1666:G:H5'	2.47	0.45
3:DA:1727:C:O2	3:DA:1734:G:C2	2.69	0.45
3:DA:2262:U:H4'	3:DA:2328:A:C2	2.51	0.45
3:DA:2298:A:H61	3:DA:2318:G:H1'	1.80	0.45
3:DA:2309:A:C6	3:DA:2310:C:C4	3.05	0.45
65:DA:3064:ACY:CH3	69:DA:3523:HOH:O	2.56	0.45
4:CA:46:G:P	69:CA:3305:HOH:O	2.71	0.45
4:CA:284:U:H5'	4:CA:285:G:OP1	2.17	0.45
4:CA:297:G:P	45:CV:91:LYS:HZ3	2.36	0.45
4:CA:463:G:C2	4:CA:467:G:C6	3.04	0.45
4:CA:696:G:C2	4:CA:767:U:O2	2.70	0.45
4:CA:915:C:O2	5:CB:100:G:H4'	2.16	0.45
4:CA:969:G:H2'	4:CA:970:U:C6	2.52	0.45
4:CA:1343:G:N2	4:CA:1405:U:C2	2.85	0.45
4:CA:2057:G:H2'	4:CA:2058:A:O4'	2.17	0.45
4:CA:2093:G:C2'	4:CA:2094:A:H5'	2.46	0.45
4:CA:2214:C:H2'	4:CA:2215:C:H5'	1.99	0.45
4:CA:2239:G:OP2	27:CC:230:PRO:HG3	2.17	0.45
4:CA:2292:U:OP1	4:CA:2379:G:N2	2.48	0.45
4:CA:2489:U:O2'	4:CA:2491:U:H5	2.00	0.45
4:CA:2553:G:H5"	4:CA:2554:U:OP2	2.17	0.45
4:CA:2854:G:C2'	69:CA:3400:HOH:O	2.65	0.45
5:DB:73:A:H2'	5:DB:73:A:N3	2.31	0.45
8:AD:145:ILE:CG2	8:AD:149:ALA:HB3	2.46	0.45
10:AF:97:THR:O	10:AF:98:GLU:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AP:17:TYR:CD2	20:AP:17:TYR:N	2.84	0.45
22:AR:51:TYR:O	22:AR:55:LEU:HB2	2.17	0.45
24:AT:81:ALA:O	24:AT:85:LYS:HG2	2.16	0.45
10:BF:35:LYS:HG3	10:BF:37:HIS:CE1	2.51	0.45
11:BG:57:SER:OG	11:BG:58:GLU:N	2.50	0.45
24:BT:54:MET:CE	24:BT:58:VAL:HB	2.47	0.45
28:CD:30:GLU:HG2	28:CD:185:ASN:ND2	2.32	0.45
30:CF:175:PRO:O	30:CF:176:PHE:HB2	2.16	0.45
37:CN:23:GLY:O	37:CN:101:VAL:HG23	2.17	0.45
41:CR:65:ASN:OD1	41:CR:69:ARG:NE	2.47	0.45
42:CS:4:VAL:O	42:CS:39:LEU:N	2.43	0.45
45:CV:73:ASN:C	45:CV:75:ALA:H	2.19	0.45
27:DC:140:VAL:CG2	27:DC:189:ALA:HB1	2.47	0.45
27:DC:203:VAL:CG2	27:DC:203:VAL:O	2.64	0.45
27:DC:238:ASN:ND2	69:DC:306:HOH:O	2.23	0.45
30:DF:128:SER:HA	30:DF:153:ILE:O	2.17	0.45
32:DH:116:ARG:HD2	32:DH:132:GLN:OE1	2.16	0.45
33:DJ:76:ALA:C	33:DJ:78:LEU:H	2.20	0.45
41:DR:18:LYS:CD	61:DR:202:PG4:H22	2.43	0.45
45:DV:71:ILE:CD1	45:DV:82:VAL:HG23	2.47	0.45
1:AA:75:G:H5'	1:AA:76:G:OP2	2.17	0.45
1:AA:299:G:C6	1:AA:300:A:C6	3.04	0.45
1:AA:345:C:O2'	35:DL:116:ILE:CD1	2.65	0.45
1:AA:574:A:N3	1:AA:883:C:H1'	2.31	0.45
1:AA:945:G:C6	1:AA:1337:G:C5	3.05	0.45
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.82	0.45
1:AA:1138:G:C2	1:AA:1140:C:C5	3.04	0.45
1:AA:1317:C:OP1	18:AN:20:PHE:CE2	2.70	0.45
1:AA:1360:A:P	69:AA:1786:HOH:O	2.74	0.45
1:AA:1426:G:C5	1:AA:1427:C:C5	3.05	0.45
1:AA:1450:U:O4	69:AA:1747:HOH:O	2.21	0.45
2:BA:177:G:C6	2:BA:178:C:N4	2.85	0.45
2:BA:200:G:N1	2:BA:201:G:N7	2.65	0.45
2:BA:1072:G:C5	2:BA:1073:U:C5	3.05	0.45
2:BA:1079:G:H2'	2:BA:1080:A:C8	2.50	0.45
3:DA:507:A:O4'	3:DA:509:C:C2	2.69	0.45
3:DA:872:U:H2'	3:DA:873:C:H6	1.81	0.45
3:DA:974:G:C5	3:DA:1186:G:C2	3.05	0.45
3:DA:1639:C:O2'	69:DA:3526:HOH:O	2.19	0.45
3:DA:2168:G:H2'	3:DA:2168:G:N3	2.31	0.45
3:DA:2526:G:N3	55:D5:1:MET:N	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2621:G:H2'	3:DA:2622:U:H5'	1.98	0.45
3:DA:2689:U:OP1	3:DA:2719:G:N1	2.28	0.45
4:CA:26:G:C2'	4:CA:27:G:H5'	2.47	0.45
4:CA:228:C:H4'	4:CA:229:C:H5"	1.98	0.45
4:CA:609:A:H3'	4:CA:610:C:C6	2.52	0.45
4:CA:677:A:O2'	4:CA:2071:A:H5'	2.16	0.45
4:CA:793:A:OP1	4:CA:2071:A:O2'	2.34	0.45
4:CA:846:U:O2'	4:CA:847:U:H6	1.99	0.45
4:CA:973:A:OP2	42:CS:81:LYS:HD2	2.16	0.45
4:CA:1680:U:O2	4:CA:1763:G:H3'	2.17	0.45
4:CA:2056:G:C2	4:CA:2057:G:C8	3.05	0.45
4:CA:2186:G:C6	4:CA:2187:U:C4	3.05	0.45
4:CA:2271:G:OP1	47:CX:16:ALA:HB1	2.17	0.45
4:CA:2563:U:O2	4:CA:2565:A:C8	2.70	0.45
4:CA:2650:U:H2'	4:CA:2651:C:C6	2.51	0.45
5:DB:47:C:OP2	39:DP:3:LYS:HE3	2.17	0.45
5:CB:9:G:P	39:CP:25:ARG:NH1	2.89	0.45
18:AN:32:ASP:C	18:AN:34:ASN:OD1	2.54	0.45
22:AR:47:THR:HG21	22:AR:52:GLN:OE1	2.17	0.45
6:BB:186:ILE:HA	6:BB:200:ILE:O	2.16	0.45
7:BC:7:PRO:O	7:BC:11:ARG:HG3	2.17	0.45
7:BC:150:LYS:HG2	7:BC:201:TRP:CE3	2.52	0.45
12:BH:121:LEU:HD12	12:BH:121:LEU:O	2.17	0.45
26:BL:80:ILE:HD12	26:BL:97:THR:HG22	1.99	0.45
19:BO:27:VAL:O	19:BO:31:LEU:HD12	2.16	0.45
29:CE:7:ASP:C	29:CE:9:GLN:H	2.20	0.45
29:CE:131:THR:HB	29:CE:164:LEU:CD2	2.46	0.45
37:CN:24:THR:HG22	37:CN:24:THR:O	2.17	0.45
42:CS:21:ARG:HD3	42:CS:93:PHE:CD2	2.52	0.45
50:C0:2:LYS:O	50:C0:3:THR:O	2.34	0.45
29:DE:4:VAL:HG22	29:DE:6:LYS:H	1.82	0.45
29:DE:104:ALA:O	29:DE:108:ILE:HG23	2.16	0.45
31:DG:136:ASP:HB3	31:DG:139:VAL:HB	1.99	0.45
33:DJ:68:PHE:O	33:DJ:69:VAL:O	2.34	0.45
33:DJ:89:SER:OG	33:DJ:135:MET:HA	2.16	0.45
39:DP:39:VAL:CG2	39:DP:49:VAL:HG12	2.46	0.45
57:D7:40:VAL:C	57:D7:41:THR:OG1	2.55	0.45
1:AA:2:A:H2'	1:AA:613:C:O2'	2.16	0.45
1:AA:270:A:C5	1:AA:271:C:C4	3.04	0.45
1:AA:555:U:H2'	1:AA:556:C:H6	1.81	0.45
1:AA:925:G:C2	1:AA:927:G:C8	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:995:C:H5'	18:AN:7:ALA:CB	2.47	0.45
1:AA:1198:G:P	69:AA:1762:HOH:O	2.75	0.45
2:BA:106:C:O2	2:BA:379:C:C5'	2.65	0.45
2:BA:340:U:O2	2:BA:350:G:N2	2.49	0.45
2:BA:391:G:H2'	2:BA:392:C:O4'	2.17	0.45
2:BA:399:G:C4	2:BA:400:C:C5	3.04	0.45
2:BA:511:C:C2	2:BA:512:U:C6	3.04	0.45
2:BA:954:G:C2	2:BA:1228:C:N3	2.84	0.45
3:DA:1083:U:O2	3:DA:1086:A:N1	2.49	0.45
3:DA:1506:U:H3	3:DA:1507:C:N4	2.16	0.45
3:DA:1665:A:H2'	3:DA:1666:G:H5'	1.98	0.45
3:DA:1758:U:O2	3:DA:1758:U:H2'	2.16	0.45
3:DA:1783:A:H5'	3:DA:2608:G:H4'	1.97	0.45
3:DA:1797:G:H2'	3:DA:1798:U:O5'	2.17	0.45
3:DA:2262:U:O2'	3:DA:2263:C:H5'	2.16	0.45
3:DA:2570:G:H2'	3:DA:2571:U:O4'	2.17	0.45
4:CA:50:U:H5"	4:CA:51:G:N7	2.31	0.45
4:CA:176:A:H8	4:CA:176:A:O5'	2.00	0.45
4:CA:277:G:H3'	4:CA:277:G:N3	2.31	0.45
4:CA:522:A:H2'	4:CA:523:C:O4'	2.16	0.45
4:CA:631:A:H8	4:CA:631:A:OP1	1.98	0.45
4:CA:661:A:P	29:CE:94:GLN:HE22	2.39	0.45
4:CA:992:C:H4'	42:CS:74:ILE:HD13	1.99	0.45
4:CA:1009:A:H1'	4:CA:1153:C:O2'	2.17	0.45
4:CA:1237:A:N3	4:CA:1238:G:H1'	2.32	0.45
4:CA:1338:G:H4'	44:CU:18:GLU:OE2	2.17	0.45
4:CA:1720:U:O4	4:CA:1721:G:N1	2.50	0.45
4:CA:1779:U:H5	4:CA:1784:A:N7	2.15	0.45
4:CA:1852:U:O2'	69:CA:3366:HOH:O	2.13	0.45
4:CA:2221:G:C5	4:CA:2222:C:C5	3.05	0.45
6:AB:129:LEU:HD13	6:AB:130:THR:H	1.82	0.45
13:AI:25:ASN:HB2	13:AI:27:LYS:HG3	1.98	0.45
19:AO:74:ASP:O	19:AO:77:ARG:N	2.49	0.45
6:BB:207:ILE:HD13	6:BB:207:ILE:N	2.32	0.45
7:BC:7:PRO:HG2	7:BC:184:TYR:CG	2.52	0.45
7:BC:65:ARG:O	7:BC:100:GLN:O	2.34	0.45
10:BF:51:ILE:O	10:BF:53:LYS:N	2.42	0.45
13:BI:130:ARG:HD2	13:BI:130:ARG:HA	1.85	0.45
20:BP:38:PHE:CZ	20:BP:51:ARG:HB3	2.52	0.45
22:BR:35:GLU:HG2	25:BU:4:ILE:HG21	1.99	0.45
23:BS:45:ILE:HD13	23:BS:64:ASP:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:CD:9:VAL:O	28:CD:197:THR:HG23	2.16	0.45
28:CD:71:ALA:HB3	28:CD:73:VAL:HG13	1.99	0.45
30:CF:59:ILE:CG2	30:CF:98:PHE:HE1	2.29	0.45
33:CJ:90:GLY:O	33:CJ:91:LYS:HD3	2.17	0.45
42:CS:76:LYS:O	42:CS:85:LYS:N	2.50	0.45
27:DC:70:LYS:CB	27:DC:95:TYR:CE2	3.00	0.45
30:DF:111:ARG:NH1	30:DF:133:GLU:OE2	2.45	0.45
34:DK:89:PHE:CE1	34:DK:93:ILE:HG13	2.51	0.45
39:DP:53:THR:CB	39:DP:65:THR:HG22	2.45	0.45
45:DV:6:ARG:O	45:DV:7:ASP:HB2	2.17	0.45
55:D5:27:TYR:CD1	55:D5:39:VAL:HG13	2.52	0.45
1:AA:130:A:N7	21:AQ:65:ARG:HB2	2.32	0.44
1:AA:566:G:H4'	1:AA:567:G:OP1	2.17	0.44
1:AA:606:G:H5"	1:AA:607:A:H5'	1.98	0.44
1:AA:919:A:O5'	1:AA:919:A:H8	2.00	0.44
1:AA:1151:A:C4	1:AA:1152:A:N7	2.84	0.44
2:BA:86:G:H1'	2:BA:87:C:C1'	2.47	0.44
2:BA:160:A:C6	2:BA:346:G:O6	2.69	0.44
2:BA:267:C:C4	2:BA:268:U:C5	3.05	0.44
2:BA:436:C:N3	2:BA:437:U:C5	2.85	0.44
2:BA:719:C:OP2	2:BA:720:C:H5	2.00	0.44
2:BA:920:U:H2'	2:BA:921:U:C6	2.52	0.44
2:BA:938:A:C2	2:BA:1345:U:O4	2.70	0.44
2:BA:1085:U:C6	2:BA:1094:G:N1	2.85	0.44
2:BA:1106:G:H2'	2:BA:1107:C:H6	1.82	0.44
2:BA:1147:C:H1'	13:BI:18:ARG:NH1	2.32	0.44
2:BA:1419:G:H1	2:BA:1481:U:H3	1.63	0.44
3:DA:163:C:C5'	69:DA:3251:HOH:O	2.58	0.44
3:DA:198:C:H4'	3:DA:2243:U:O2'	2.17	0.44
3:DA:1324:G:C4	3:DA:1328:A:N6	2.85	0.44
3:DA:1385:A:C4	3:DA:1386:C:C5	3.05	0.44
3:DA:1673:G:C2'	3:DA:1674:G:H5'	2.47	0.44
3:DA:1830:C:O5'	3:DA:1830:C:H6	2.00	0.44
3:DA:1889:A:C2	3:DA:1890:A:C5	3.05	0.44
3:DA:1952:A:C6	3:DA:1953:A:N1	2.85	0.44
3:DA:2275:C:O2	37:DN:84:LYS:HD2	2.18	0.44
3:DA:2553:G:N1	3:DA:2554:U:O2	2.50	0.44
3:DA:2592:G:C5	3:DA:2593:U:C4	3.05	0.44
3:DA:2599:G:C2'	3:DA:2600:A:H5'	2.46	0.44
4:CA:79:C:N4	4:CA:80:G:C6	2.85	0.44
4:CA:86:G:H2'	4:CA:87:U:H5"	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:246:C:C2'	4:CA:247:G:H5'	2.47	0.44
4:CA:933:A:H5'	4:CA:934:U:OP2	2.18	0.44
4:CA:1992:G:O6	69:CA:3411:HOH:O	2.21	0.44
4:CA:2050:C:H2'	4:CA:2051:A:O5'	2.17	0.44
4:CA:2093:G:C2	4:CA:2094:A:N7	2.85	0.44
4:CA:2623:G:O4'	4:CA:2825:G:C8	2.70	0.44
4:CA:2881:U:H5"	38:CO:96:ARG:HH11	1.82	0.44
5:DB:49:C:H2'	5:DB:50:A:C8	2.51	0.44
6:AB:82:ASP:CG	6:AB:83:ALA:N	2.68	0.44
12:AH:59:LEU:HD13	12:AH:60:GLU:N	2.32	0.44
19:AO:75:VAL:O	19:AO:79:THR:HG23	2.17	0.44
20:AP:70:ARG:O	20:AP:74:LEU:HG	2.17	0.44
9:BE:40:GLY:HA3	9:BE:117:VAL:O	2.17	0.44
22:BR:20:GLU:HG3	22:BR:55:LEU:HD13	1.99	0.44
44:CU:51:PHE:C	44:CU:52:GLU:HG2	2.38	0.44
31:DG:93:TYR:HA	31:DG:105:SER:O	2.17	0.44
38:DO:12:ARG:HA	69:DO:228:HOH:O	2.16	0.44
38:DO:45:ARG:HD2	69:DO:214:HOH:O	2.17	0.44
48:DY:65:THR:O	48:DY:68:ALA:HB3	2.18	0.44
50:D0:56:VAL:O	50:D0:56:VAL:HG13	2.17	0.44
54:D4:24:LYS:HG3	69:D4:106:HOH:O	2.17	0.44
1:AA:66:A:O4'	1:AA:173:U:C4	2.70	0.44
1:AA:198:G:O2'	1:AA:199:A:H5'	2.17	0.44
1:AA:207:C:C5	1:AA:208:U:C4	3.05	0.44
1:AA:497:G:N2	1:AA:498:A:C6	2.85	0.44
1:AA:581:G:O2'	1:AA:582:C:H5'	2.16	0.44
1:AA:654:G:C2'	1:AA:655:A:O5'	2.65	0.44
1:AA:674:G:H2'	1:AA:675:A:C8	2.53	0.44
1:AA:790:A:C6	1:AA:791:G:C6	3.05	0.44
1:AA:937:A:C2	1:AA:1379:G:C6	3.06	0.44
1:AA:957:U:O2	1:AA:959:A:OP2	2.35	0.44
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.52	0.44
2:BA:43:C:O2'	2:BA:623:C:H4'	2.17	0.44
2:BA:171:A:C6	2:BA:172:A:C6	3.05	0.44
2:BA:374:A:O3'	20:BP:70:ARG:NH1	2.50	0.44
2:BA:431:A:H2'	2:BA:432:A:O4'	2.17	0.44
2:BA:587:G:HO2'	2:BA:588:G:P	2.40	0.44
2:BA:766:A:H2'	2:BA:767:A:O4'	2.17	0.44
2:BA:1157:A:C4	2:BA:1180:A:C2	3.05	0.44
2:BA:1317:C:N3	2:BA:1318:A:H1'	2.32	0.44
3:DA:86:G:H8	3:DA:86:G:H5"	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:163:C:H2'	3:DA:164:C:H6	1.82	0.44
3:DA:402:A:N7	3:DA:403:U:C4	2.85	0.44
3:DA:866:A:C2	3:DA:914:G:H5"	2.52	0.44
3:DA:1138:G:O2'	34:DK:107:GLY:HA3	2.17	0.44
3:DA:1265:A:C8	3:DA:1267:U:C2	3.05	0.44
3:DA:1444:G:H2'	3:DA:1445:G:C8	2.52	0.44
3:DA:1491:G:C6	3:DA:1500:G:C2	3.05	0.44
3:DA:1588:G:C2	3:DA:1589:U:C5	3.06	0.44
3:DA:1623:G:C2'	3:DA:1624:U:H5'	2.47	0.44
3:DA:1648:U:H2'	3:DA:1649:G:O4'	2.18	0.44
3:DA:1945:G:P	69:DA:3352:HOH:O	2.75	0.44
3:DA:1972:G:C2	3:DA:1973:G:N7	2.85	0.44
3:DA:2394:C:OP2	54:D4:29:ARG:HD3	2.18	0.44
3:DA:2725:A:C4	3:DA:2727:A:C8	3.05	0.44
3:DA:2785:C:H2'	3:DA:2786:U:O4'	2.17	0.44
4:CA:55:G:C2	4:CA:56:A:C8	3.05	0.44
4:CA:492:A:H2'	4:CA:493:G:O4'	2.17	0.44
4:CA:536:G:C6	4:CA:537:G:C4	3.05	0.44
4:CA:1140:C:H4'	4:CA:1143:A:C6	2.52	0.44
4:CA:1719:G:N2	4:CA:1741:C:N3	2.55	0.44
4:CA:1794:A:H2'	4:CA:1795:C:H6	1.81	0.44
4:CA:1895:C:C4	4:CA:1896:G:N7	2.86	0.44
4:CA:2196:C:C2	4:CA:2197:U:C5	3.06	0.44
4:CA:2238:G:C4'	4:CA:2239:G:OP1	2.64	0.44
4:CA:2459:A:C2	4:CA:2460:U:C1'	2.99	0.44
4:CA:2729:G:H5'	28:CD:190:LYS:CE	2.47	0.44
4:CA:2773:C:O3'	28:CD:169:ARG:HD3	2.17	0.44
4:CA:2878:U:H6	4:CA:2878:U:O5'	1.99	0.44
5:CB:94:A:OP1	46:CW:19:ARG:HD3	2.17	0.44
6:AB:47:VAL:HB	6:AB:48:PRO:HD3	1.99	0.44
14:AJ:27:GLU:C	14:AJ:29:ALA:H	2.20	0.44
16:AL:107:VAL:CG2	16:AL:117:TYR:HB3	2.47	0.44
18:AN:63:ARG:O	18:AN:73:PHE:CE1	2.71	0.44
6:BB:137:ARG:O	6:BB:140:GLU:HB2	2.16	0.44
7:BC:124:LEU:O	7:BC:126:ARG:N	2.47	0.44
11:BG:71:PRO:HG3	11:BG:103:TRP:CH2	2.52	0.44
14:BJ:82:LYS:O	14:BJ:86:ALA:HB3	2.17	0.44
17:BM:114:LYS:CB	17:BM:115:PRO:HD3	2.47	0.44
18:BN:42:TRP:HE1	18:BN:45:VAL:CG1	2.30	0.44
21:BQ:12:VAL:HG11	21:BQ:21:ILE:HD11	1.98	0.44
28:CD:49:GLN:HG3	28:CD:80:TRP:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:CH:40:THR:C	32:CH:42:LYS:H	2.20	0.44
34:CK:105:VAL:HG12	34:CK:109:LEU:HD11	1.99	0.44
38:CO:51:LEU:N	38:CO:51:LEU:HD23	2.32	0.44
40:CQ:59:THR:OG1	40:CQ:72:VAL:HG13	2.16	0.44
43:CT:21:ALA:HB1	43:CT:74:ILE:HG12	1.99	0.44
48:CY:40:GLU:O	48:CY:43:LYS:HD2	2.16	0.44
53:C3:34:ARG:NH2	53:C3:39:ARG:HD2	2.32	0.44
31:DG:169:ARG:NH1	55:D5:32:SER:HB2	2.31	0.44
59:DT:202:PGE:H5	51:D1:23:ALA:HB3	1.99	0.44
46:DW:61:LEU:N	46:DW:61:LEU:HD12	2.33	0.44
1:AA:548:G:O2'	1:AA:549:C:H5'	2.16	0.44
1:AA:953:G:H1'	69:AA:1991:HOH:O	2.18	0.44
1:AA:1006:G:N7	1:AA:1007:U:C5	2.86	0.44
1:AA:1344:C:O5'	1:AA:1344:C:H6	2.00	0.44
1:AA:1375:A:C2'	1:AA:1376:U:H5'	2.47	0.44
1:AA:1384:C:N3	1:AA:1385:G:N7	2.65	0.44
1:AA:1501:C:C4	1:AA:1504:G:C5	3.06	0.44
2:BA:282:A:N7	2:BA:283:U:C5	2.85	0.44
2:BA:447:G:P	69:BA:1779:HOH:O	2.74	0.44
2:BA:773:G:C2	2:BA:807:A:C2	3.06	0.44
2:BA:909:A:H2	2:BA:1413:A:N3	2.15	0.44
2:BA:1087:G:N2	2:BA:1099:G:H1'	2.32	0.44
2:BA:1105:A:O2'	2:BA:1106:G:H5'	2.17	0.44
2:BA:1466:C:C5	2:BA:1467:C:C5	3.05	0.44
3:DA:19:A:OP2	69:DA:3546:HOH:O	2.21	0.44
3:DA:73:A:H2'	3:DA:74:A:OP2	2.16	0.44
3:DA:117:G:H8	3:DA:117:G:O5'	2.00	0.44
3:DA:564:C:H1'	41:DR:36:GLN:OE1	2.17	0.44
3:DA:826:U:P	69:DA:3810:HOH:O	2.75	0.44
3:DA:860:U:C6	3:DA:2268:A:C1'	3.00	0.44
3:DA:950:G:C6	3:DA:951:C:C4	3.06	0.44
3:DA:1078:U:O2'	3:DA:1088:A:H2	1.99	0.44
3:DA:1257:C:H3'	69:DA:3353:HOH:O	2.15	0.44
3:DA:1305:C:O2	3:DA:1305:C:C2'	2.63	0.44
3:DA:1678:A:C2'	3:DA:1679:A:H5'	2.47	0.44
3:DA:2256:G:C2'	3:DA:2257:U:H5'	2.47	0.44
3:DA:2679:A:H1'	69:DA:3950:HOH:O	2.16	0.44
3:DA:2715:C:C2'	3:DA:2716:C:O5'	2.65	0.44
3:DA:2888:C:O2	3:DA:2888:C:C2'	2.61	0.44
4:CA:53:A:H2'	4:CA:54:G:H5'	2.00	0.44
4:CA:222:A:H3'	4:CA:421:C:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:265:A:H2	4:CA:266:G:N3	2.15	0.44
4:CA:527:C:C5	4:CA:2779:U:C5	3.04	0.44
4:CA:835:C:C5	4:CA:836:G:N7	2.85	0.44
4:CA:1154:G:P	41:CR:57:ARG:NH1	2.87	0.44
4:CA:1262:A:C2	4:CA:1263:U:C2	3.05	0.44
4:CA:1307:A:C2	4:CA:1308:A:C4	3.06	0.44
4:CA:1323:C:H2'	4:CA:1324:G:H5'	1.99	0.44
4:CA:1399:C:O5'	4:CA:1399:C:H6	2.00	0.44
4:CA:1422:G:C6	4:CA:1423:G:C5	3.05	0.44
4:CA:1470:A:O2'	69:CA:3331:HOH:O	2.08	0.44
4:CA:1949:G:P	69:CA:3231:HOH:O	2.66	0.44
4:CA:2020:A:H5'	51:C1:8:THR:CG2	2.47	0.44
4:CA:2022:U:O2'	4:CA:2616:C:O2'	2.15	0.44
4:CA:2250:G:O5'	4:CA:2250:G:H8	1.99	0.44
4:CA:2571:U:C4	4:CA:2574:G:C8	3.05	0.44
4:CA:2657:A:N6	4:CA:2664:G:O2'	2.50	0.44
6:AB:44:GLU:O	6:AB:48:PRO:CD	2.66	0.44
6:AB:181:ILE:HA	6:AB:182:PRO:HD2	1.70	0.44
7:AC:155:GLY:O	7:AC:196:ILE:HG12	2.17	0.44
15:AK:31:ILE:O	15:AK:31:ILE:HG13	2.16	0.44
6:BB:96:TRP:O	6:BB:96:TRP:CE3	2.70	0.44
13:BI:61:LEU:HD23	13:BI:61:LEU:N	2.33	0.44
15:BK:13:ARG:O	15:BK:14:LYS:HB3	2.16	0.44
27:CC:173:LEU:O	27:CC:180:MET:HA	2.17	0.44
45:CV:73:ASN:ND2	69:CV:201:HOH:O	2.46	0.44
46:CW:63:ILE:HD11	46:CW:72:VAL:HG21	2.00	0.44
48:CY:11:PRO:HB3	48:CY:27:ARG:NH2	2.32	0.44
48:CY:26:ARG:HG3	48:CY:27:ARG:N	2.31	0.44
49:CZ:49:ASP:O	49:CZ:53:VAL:HG23	2.17	0.44
27:DC:75:ALA:HB2	27:DC:95:TYR:CD2	2.52	0.44
56:DD:129:THR:HG23	56:DD:130:GLN:O	2.17	0.44
29:DE:200:LEU:N	29:DE:200:LEU:CD1	2.80	0.44
30:DF:125:GLY:O	30:DF:157:THR:CG2	2.66	0.44
34:DK:43:GLU:N	34:DK:43:GLU:CD	2.71	0.44
40:DQ:113:LEU:HD12	40:DQ:113:LEU:O	2.17	0.44
43:DT:15:GLN:OE1	69:DT:303:HOH:O	2.21	0.44
53:D3:33:ARG:HD3	66:D3:102:PEG:O4	2.17	0.44
1:AA:172:A:C5	1:AA:174:A:N7	2.86	0.44
1:AA:183:C:O2	1:AA:183:C:H2'	2.17	0.44
1:AA:405:U:O4	8:AD:2:ALA:N	2.50	0.44
1:AA:587:G:C2	1:AA:755:G:C5	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1033:G:N2	1:AA:1034:G:C4	2.85	0.44
1:AA:1109:C:P	7:AC:176:HIS:ND1	2.91	0.44
1:AA:1123:U:H4'	14:AJ:39:PRO:HD2	1.99	0.44
1:AA:1241:G:C2	1:AA:1242:G:C5	3.06	0.44
1:AA:1362:A:C5'	1:AA:1363:A:OP2	2.63	0.44
1:AA:1405:G:O4'	1:AA:1519:MA6:H4'	2.17	0.44
1:AA:1516:2MG:H2'	1:AA:1518:MA6:OP2	2.18	0.44
1:AA:1519:MA6:H93	1:AA:1519:MA6:N7	2.32	0.44
2:BA:315:A:N6	69:BA:1790:HOH:O	2.32	0.44
2:BA:435:A:C6	2:BA:436:C:C5	3.05	0.44
2:BA:562:U:H2'	26:BL:14:ARG:NH1	2.32	0.44
2:BA:603:U:H2'	2:BA:604:G:H8	1.82	0.44
2:BA:750:C:H1'	19:BO:22:THR:HG22	1.97	0.44
2:BA:974:A:OP1	18:BN:71:HIS:HB3	2.17	0.44
2:BA:1107:C:N3	2:BA:1108:G:C8	2.85	0.44
2:BA:1434:A:N6	2:BA:1435:G:N1	2.65	0.44
3:DA:340:A:H2'	3:DA:341:C:O4'	2.17	0.44
3:DA:597:G:C2	3:DA:661:A:C2	3.05	0.44
3:DA:668:A:H2'	3:DA:670:A:H62	1.82	0.44
3:DA:1153:C:H2'	3:DA:1154:G:O4'	2.17	0.44
3:DA:1240:U:P	69:DA:3319:HOH:O	2.72	0.44
3:DA:1315:C:C2	3:DA:1338:G:N2	2.86	0.44
3:DA:1336:A:OP2	44:DU:68:LYS:HE2	2.17	0.44
3:DA:1355:G:C2	3:DA:1356:G:C8	3.05	0.44
3:DA:1720:U:H2'	3:DA:1721:G:O4'	2.17	0.44
3:DA:1757:A:C2	69:DA:3655:HOH:O	2.67	0.44
3:DA:1769:U:C2'	3:DA:1770:G:O5'	2.66	0.44
3:DA:2213:U:O2	3:DA:2213:U:C2'	2.66	0.44
3:DA:2278:A:OP1	37:DN:10:ARG:NH2	2.51	0.44
3:DA:2326:C:O2'	3:DA:2327:A:H5"	2.16	0.44
3:DA:2382:G:H1'	69:DA:3253:HOH:O	2.17	0.44
4:CA:121:G:N2	4:CA:131:A:C4	2.86	0.44
4:CA:152:A:C4	4:CA:175:G:N2	2.85	0.44
4:CA:397:U:H5"	69:CA:3422:HOH:O	2.17	0.44
4:CA:465:G:H2'	4:CA:466:A:C8	2.52	0.44
4:CA:522:A:C2	4:CA:523:C:O2	2.71	0.44
4:CA:584:C:C4	4:CA:585:G:C5	3.06	0.44
4:CA:701:G:N2	69:CA:3489:HOH:O	2.35	0.44
4:CA:733:G:OP2	69:CA:3414:HOH:O	2.21	0.44
4:CA:753:A:C8	4:CA:753:A:OP2	2.70	0.44
4:CA:1309:G:H2'	4:CA:1310:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1426:G:C8	4:CA:1427:A:H2'	2.52	0.44
4:CA:1526:C:H2'	4:CA:1527:G:C8	2.52	0.44
4:CA:1567:G:N7	27:CC:82:TYR:HD2	2.14	0.44
4:CA:1688:U:O2	4:CA:1700:A:H8	2.01	0.44
4:CA:1775:U:C2'	4:CA:1776:G:O5'	2.65	0.44
4:CA:1805:A:C2	4:CA:1813:G:N1	2.85	0.44
4:CA:1907:G:C2	4:CA:1924:C:C2	3.05	0.44
4:CA:2085:U:C3'	69:CA:3449:HOH:O	2.64	0.44
4:CA:2505:G:HO2'	4:CA:2506:U:H6	1.61	0.44
4:CA:2732:G:O2'	4:CA:2733:A:H5'	2.17	0.44
4:CA:2889:C:H2'	4:CA:2890:G:O4'	2.17	0.44
5:DB:62:C:H2'	5:DB:63:C:C6	2.53	0.44
6:AB:94:HIS:O	6:AB:95:ARG:C	2.56	0.44
6:AB:111:ILE:HD12	6:AB:111:ILE:H	1.81	0.44
6:AB:134:ALA:O	6:AB:138:THR:HG23	2.17	0.44
7:AC:138:VAL:O	7:AC:139:GLN:O	2.34	0.44
8:AD:19:LEU:HD22	8:AD:64:ILE:HG13	1.99	0.44
8:AD:150:LYS:O	8:AD:151:LYS:HG2	2.16	0.44
9:AE:63:ALA:CA	69:AE:201:HOH:O	2.64	0.44
9:AE:104:GLY:O	9:AE:105:ILE:HG22	2.17	0.44
9:AE:159:LYS:HD3	9:AE:159:LYS:N	2.31	0.44
14:AJ:67:ILE:HG13	18:AN:96:LEU:HD13	1.99	0.44
19:AO:4:SER:O	19:AO:8:THR:HG23	2.18	0.44
23:AS:4:SER:HB2	23:AS:5:LEU:HD12	2.00	0.44
6:BB:41:ILE:C	6:BB:41:ILE:HD12	2.37	0.44
9:BE:12:GLN:HG2	69:BE:203:HOH:O	2.17	0.44
9:BE:136:VAL:O	9:BE:140:THR:HG23	2.18	0.44
13:BI:57:MET:C	13:BI:58:VAL:HG23	2.38	0.44
20:BP:19:VAL:CG1	20:BP:37:GLY:CA	2.95	0.44
29:CE:46:GLN:HB3	29:CE:83:VAL:HG11	1.99	0.44
30:CF:7:TYR:OH	30:CF:29:ARG:HA	2.17	0.44
34:CK:99:ARG:NH1	34:CK:102:GLU:OE1	2.50	0.44
39:CP:7:ARG:HG3	39:CP:96:GLY:HA3	2.00	0.44
43:CT:69:LEU:HB3	43:CT:107:VAL:HG22	1.98	0.44
44:CU:4:GLU:O	44:CU:7:LEU:HB2	2.17	0.44
54:C4:2:LYS:HG2	54:C4:63:TYR:OH	2.17	0.44
32:DH:80:ILE:HD11	32:DH:143:VAL:HG13	1.99	0.44
37:DN:28:PHE:N	37:DN:104:GLU:OE2	2.44	0.44
42:DS:41:ILE:HD12	42:DS:54:VAL:HG11	1.99	0.44
52:D2:3:GLY:C	52:D2:4:ILE:HG13	2.37	0.44
1:AA:404:G:N7	8:AD:2:ALA:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:443:C:H2'	1:AA:444:G:C8	2.52	0.44
1:AA:501:C:OP1	16:AL:114:ARG:NH2	2.51	0.44
1:AA:646:G:C2	1:AA:647:C:O2	2.70	0.44
1:AA:711:G:O2'	1:AA:712:A:H5'	2.18	0.44
2:BA:64:G:H4'	2:BA:65:A:O5'	2.17	0.44
2:BA:371:A:H1'	2:BA:482:A:H1'	1.99	0.44
2:BA:684:U:O2	15:BK:41:ALA:HB3	2.17	0.44
2:BA:891:U:C5	2:BA:906:A:C2	3.05	0.44
2:BA:1190:G:C5'	7:BC:176:HIS:HE1	2.31	0.44
2:BA:1428:A:N1	2:BA:1473:G:C6	2.85	0.44
2:BA:1522:U:O2	2:BA:1523:G:C8	2.70	0.44
3:DA:101:A:O2'	3:DA:102:U:OP2	2.29	0.44
3:DA:262:A:H2'	3:DA:263:G:H5'	1.99	0.44
3:DA:404:A:H5'	3:DA:404:A:N3	2.33	0.44
3:DA:813:U:H2'	3:DA:814:C:C6	2.52	0.44
3:DA:1005:C:N3	3:DA:1143:A:C2	2.86	0.44
3:DA:1061:U:H3'	3:DA:1062:G:H5'	1.98	0.44
3:DA:1442:U:H2'	3:DA:1443:U:H6	1.82	0.44
3:DA:1475:G:O2'	3:DA:1476:U:OP2	2.32	0.44
3:DA:1539:U:H2'	3:DA:1540:G:C8	2.52	0.44
3:DA:1762:A:H8	3:DA:1762:A:O5'	2.00	0.44
3:DA:1833:C:N3	3:DA:1834:U:C5	2.86	0.44
3:DA:2063:C:O2	3:DA:2451:A:C2	2.70	0.44
3:DA:2104:C:H3'	3:DA:2105:U:H5"	2.00	0.44
3:DA:2128:G:C6	3:DA:2129:C:N3	2.85	0.44
3:DA:2153:C:H2'	3:DA:2154:A:O4'	2.17	0.44
3:DA:2799:A:O2'	3:DA:2800:A:P	2.75	0.44
4:CA:144:A:H2'	4:CA:145:C:O4'	2.17	0.44
4:CA:299:A:P	4:CA:299:A:H8	2.41	0.44
4:CA:697:G:C6	4:CA:698:C:N4	2.86	0.44
4:CA:995:C:O2	41:CR:60:TRP:HZ2	2.00	0.44
4:CA:1799:G:H22	4:CA:1819:A:P	2.40	0.44
4:CA:1858:A:H3'	4:CA:1858:A:OP2	2.17	0.44
4:CA:2030:A:N6	69:CA:3359:HOH:O	2.12	0.44
4:CA:2553:G:C2	4:CA:2554:U:H1'	2.52	0.44
4:CA:2624:G:H1'	51:C1:18:HIS:CE1	2.53	0.44
4:CA:2677:G:H2'	4:CA:2678:C:C6	2.53	0.44
4:CA:2810:A:H2'	4:CA:2811:G:O4'	2.18	0.44
4:CA:2841:C:H2'	4:CA:2842:G:H8	1.83	0.44
5:CB:5:U:H2'	5:CB:6:G:H8	1.82	0.44
8:AD:190:ASP:O	8:AD:191:LEU:CD1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AG:51:ALA:O	11:AG:52:GLN:C	2.56	0.44
13:AI:97:GLU:OE2	13:AI:97:GLU:N	2.45	0.44
14:AJ:29:ALA:C	14:AJ:31:ARG:N	2.71	0.44
15:AK:31:ILE:HB	15:AK:46:THR:HG22	1.99	0.44
11:BG:59:LEU:O	11:BG:62:PHE:HB3	2.18	0.44
26:BL:44:LYS:HB2	26:BL:45:PRO:HD3	2.00	0.44
17:BM:4:ILE:O	17:BM:6:GLY:O	2.35	0.44
29:CE:108:ILE:HD11	29:CE:180:LEU:HD13	2.00	0.44
30:CF:135:ILE:HG22	30:CF:135:ILE:O	2.17	0.44
38:CO:17:ARG:O	38:CO:21:PHE:HD1	1.99	0.44
41:CR:13:HIS:O	41:CR:17:LEU:HD22	2.18	0.44
42:CS:14:VAL:HG21	42:CS:98:ILE:HG13	1.99	0.44
41:DR:24:TYR:CD1	41:DR:25:GLY:N	2.85	0.44
45:DV:87:GLU:O	45:DV:88:ASP:HB3	2.17	0.44
57:D7:58:THR:HG1	57:D7:59:GLY:N	2.15	0.44
57:D7:63:THR:OG1	57:D7:64:VAL:N	2.49	0.44
1:AA:75:G:C8	1:AA:76:G:C8	3.05	0.44
1:AA:222:C:O2	1:AA:223:A:C8	2.70	0.44
1:AA:340:U:C2	1:AA:341:C:C5	3.06	0.44
1:AA:502:A:H2'	1:AA:503:C:H6	1.82	0.44
1:AA:597:G:N2	1:AA:644:U:C2	2.85	0.44
1:AA:685:G:N2	1:AA:686:U:C4	2.85	0.44
1:AA:855:U:C2'	1:AA:856:C:H5'	2.47	0.44
1:AA:947:G:H2'	1:AA:948:C:O4'	2.18	0.44
1:AA:1201:A:H4'	1:AA:1202:U:H5'	2.00	0.44
1:AA:1346:A:C8	1:AA:1348:U:C2	3.06	0.44
1:AA:1371:G:P	13:AI:13:LYS:HD3	2.57	0.44
2:BA:32:A:OP1	2:BA:398:U:H1'	2.18	0.44
2:BA:165:G:N2	2:BA:166:U:O2	2.51	0.44
2:BA:302:G:O2'	2:BA:556:C:H5"	2.18	0.44
2:BA:378:G:N1	2:BA:386:C:O2	2.51	0.44
2:BA:404:G:O2'	2:BA:405:U:H5'	2.17	0.44
2:BA:552:U:H2'	2:BA:553:A:H8	1.82	0.44
2:BA:1077:G:O2'	2:BA:1079:G:N7	2.41	0.44
2:BA:1422:G:C2	2:BA:1423:G:C8	3.06	0.44
2:BA:1526:G:OP1	25:BU:45:ARG:NH2	2.50	0.44
3:DA:664:G:P	69:DA:3466:HOH:O	2.76	0.44
3:DA:974:G:H5'	69:DA:4404:HOH:O	2.17	0.44
3:DA:990:A:H5"	3:DA:991:C:OP2	2.17	0.44
3:DA:1429:G:O2'	3:DA:1430:G:H5'	2.18	0.44
3:DA:1495:A:H2'	3:DA:1496:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1826:G:C2	3:DA:1827:U:C6	3.05	0.44
3:DA:1874:C:H2'	3:DA:1875:G:O4'	2.18	0.44
3:DA:2159:G:OP2	3:DA:2159:G:O4'	2.36	0.44
3:DA:2441:U:H6	69:DA:4217:HOH:O	2.00	0.44
3:DA:2590:A:H2'	3:DA:2591:C:C6	2.53	0.44
3:DA:2685:G:O2'	3:DA:2686:G:H5'	2.17	0.44
3:DA:2885:G:H5"	3:DA:2886:A:P	2.58	0.44
69:DA:5225:HOH:O	38:DO:23:ASN:HB3	2.17	0.44
4:CA:66:C:C4	4:CA:67:U:C5	3.05	0.44
4:CA:116:C:O2'	4:CA:126:A:H1'	2.17	0.44
4:CA:1385:A:OP1	4:CA:1385:A:H4'	2.18	0.44
4:CA:1570:A:H8	4:CA:1570:A:O5'	2.00	0.44
4:CA:1682:G:H1	4:CA:1706:C:H42	1.66	0.44
4:CA:2013:A:N6	4:CA:2014:A:C6	2.86	0.44
4:CA:2213:U:O2	4:CA:2213:U:O2'	2.28	0.44
4:CA:2229:U:H2'	69:CA:3397:HOH:O	2.18	0.44
4:CA:2387:U:O2'	47:CX:17:LYS:NZ	2.51	0.44
4:CA:2529:G:OP2	31:CG:171:LYS:NZ	2.46	0.44
4:CA:2546:U:O4'	4:CA:2565:A:C2	2.71	0.44
4:CA:2832:U:O4	51:C1:49:ARG:NH1	2.40	0.44
5:CB:94:A:H2'	5:CB:95:U:O4'	2.17	0.44
6:AB:47:VAL:O	6:AB:50:PHE:N	2.48	0.44
6:AB:151:ILE:CD1	6:AB:154:MET:SD	3.06	0.44
9:AE:81:LEU:HD21	9:AE:123:VAL:HG11	2.00	0.44
12:AH:113:ASP:HB2	12:AH:117:ARG:NH2	2.32	0.44
16:AL:102:LEU:C	16:AL:104:CYS:H	2.21	0.44
19:AO:46:HIS:C	19:AO:48:LYS:H	2.21	0.44
24:AT:71:LYS:HG3	24:AT:74:ARG:HH21	1.81	0.44
6:BB:71:GLY:HA2	6:BB:164:ILE:HG22	1.99	0.44
6:BB:151:ILE:O	6:BB:152:LYS:C	2.56	0.44
6:BB:218:ALA:C	6:BB:220:THR:H	2.21	0.44
12:BH:3:MET:SD	12:BH:3:MET:N	2.91	0.44
14:BJ:49:PHE:CZ	18:BN:76:LYS:HG2	2.52	0.44
33:CJ:100:ILE:HG12	33:CJ:137:LEU:HD22	1.99	0.44
34:CK:81:ILE:HG23	34:CK:82:GLY:H	1.82	0.44
35:CL:108:ARG:HD3	35:CL:113:MET:HE1	2.00	0.44
50:D0:7:THR:O	50:D0:54:VAL:HA	2.18	0.44
1:AA:286:C:H2'	1:AA:287:U:O4'	2.18	0.44
1:AA:298:A:H2'	1:AA:299:G:O4'	2.17	0.44
1:AA:403:C:H2'	1:AA:404:G:O4'	2.18	0.44
1:AA:501:C:O2'	1:AA:502:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:643:C:O2'	1:AA:644:U:H5'	2.18	0.44
1:AA:823:C:H2'	1:AA:824:G:C8	2.52	0.44
1:AA:880:C:O2'	1:AA:881:G:H5'	2.18	0.44
1:AA:1055:A:C6	1:AA:1206:G:C5	3.06	0.44
1:AA:1140:C:O2'	1:AA:1141:C:P	2.76	0.44
1:AA:1198:G:H2'	1:AA:1199:U:H6	1.81	0.44
1:AA:1215:G:C2'	1:AA:1216:A:H5'	2.47	0.44
1:AA:1219:A:C6	1:AA:1220:G:C6	3.05	0.44
1:AA:1336:C:O4'	1:AA:1337:G:C2	2.70	0.44
2:BA:59:A:H5"	2:BA:387:U:H5"	1.99	0.44
2:BA:600:A:OP2	12:BH:88:ARG:HD2	2.17	0.44
2:BA:658:C:C2'	2:BA:659:U:H5'	2.48	0.44
2:BA:743:A:C2	2:BA:744:C:C6	3.06	0.44
2:BA:841:C:H2'	2:BA:843:U:H5'	1.99	0.44
2:BA:849:G:C6	2:BA:850:U:N3	2.86	0.44
2:BA:972:C:OP1	14:BJ:59:LYS:CE	2.66	0.44
2:BA:1096:C:H2'	2:BA:1097:C:C6	2.53	0.44
2:BA:1342:C:O2'	13:BI:126:GLN:HA	2.18	0.44
2:BA:1394:A:C6	2:BA:1501:C:H4'	2.53	0.44
3:DA:262:A:C2'	3:DA:263:G:H5'	2.47	0.44
3:DA:449:A:C5'	69:DA:4317:HOH:O	2.64	0.44
3:DA:1009:A:C4'	41:DR:58:GLN:HG3	2.47	0.44
3:DA:1136:G:N2	3:DA:1137:G:C4	2.86	0.44
3:DA:1188:U:C2'	3:DA:1189:A:H5'	2.48	0.44
3:DA:1356:G:C2	3:DA:1357:C:C2	3.05	0.44
3:DA:1512:C:H2'	3:DA:1513:U:C5'	2.48	0.44
3:DA:1588:G:H2'	3:DA:1589:U:H6	1.82	0.44
3:DA:1677:A:H5'	69:DA:6214:HOH:O	2.17	0.44
3:DA:1862:G:O2'	3:DA:1863:G:H5'	2.18	0.44
3:DA:2163:A:H2'	3:DA:2165:C:OP2	2.18	0.44
3:DA:2364:C:H2'	3:DA:2365:G:C5'	2.48	0.44
3:DA:2485:G:OP1	37:DN:45:GLN:NE2	2.49	0.44
3:DA:2825:G:C2'	3:DA:2826:A:H5'	2.48	0.44
4:CA:109:C:H5'	4:CA:348:A:C1'	2.48	0.44
4:CA:158:U:O2	4:CA:169:G:C2	2.71	0.44
4:CA:192:C:C5	4:CA:193:U:C2	3.06	0.44
4:CA:223:A:C6	4:CA:408:G:O4'	2.70	0.44
4:CA:444:C:H3'	69:CA:3256:HOH:O	2.18	0.44
4:CA:563:A:H2	41:CR:36:GLN:OE1	2.01	0.44
4:CA:563:A:C2	41:CR:36:GLN:OE1	2.70	0.44
4:CA:579:G:N2	4:CA:1262:A:C4	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:687:C:H1'	53:C3:4:THR:HG23	1.98	0.44
4:CA:716:A:OP1	19:BO:89:ARG:NH1	2.50	0.44
4:CA:1021:A:H1'	4:CA:1123:C:H5"	1.99	0.44
4:CA:1371:G:H5"	69:CA:3583:HOH:O	2.18	0.44
4:CA:1744:A:H2'	4:CA:1745:A:O4'	2.17	0.44
4:CA:1827:U:O5'	4:CA:1827:U:H6	2.01	0.44
4:CA:2217:G:C6	4:CA:2218:G:C5	3.06	0.44
4:CA:2712:C:OP1	4:CA:2714:G:H4'	2.18	0.44
4:CA:2768:U:H2'	4:CA:2769:U:O4'	2.16	0.44
6:AB:104:TRP:C	6:AB:106:THR:O	2.56	0.44
11:AG:135:VAL:HG13	69:AG:203:HOH:O	2.18	0.44
12:AH:114:ARG:NH2	69:AH:201:HOH:O	2.29	0.44
14:AJ:63:ASP:OD2	18:AN:85:ARG:HD2	2.16	0.44
17:AM:64:VAL:HG12	17:AM:69:LEU:HB2	1.98	0.44
21:AQ:45:HIS:ND1	21:AQ:70:THR:HG21	2.33	0.44
25:AU:31:GLU:OE2	25:AU:34:ARG:NH1	2.51	0.44
9:BE:81:LEU:HB3	9:BE:147:MET:SD	2.58	0.44
14:BJ:78:GLU:O	14:BJ:78:GLU:CG	2.66	0.44
26:BL:33:VAL:HG22	26:BL:79:VAL:HG22	1.98	0.44
17:BM:67:GLY:O	17:BM:71:ARG:CZ	2.66	0.44
21:BQ:31:HIS:HD2	21:BQ:34:TYR:H	1.66	0.44
25:BU:12:PHE:HD1	25:BU:14:VAL:H	1.66	0.44
30:CF:103:ILE:O	30:CF:107:VAL:HB	2.18	0.44
36:CM:95:LEU:O	36:CM:100:ILE:HG23	2.17	0.44
43:CT:9:HIS:HB3	43:CT:11:ARG:NH1	2.33	0.44
44:CU:45:ALA:C	44:CU:47:VAL:H	2.21	0.44
45:CV:3:LYS:HG3	45:CV:84:PHE:HZ	1.82	0.44
27:DC:79:ARG:HG2	69:DC:303:HOH:O	2.17	0.44
56:DD:14:ILE:HD12	56:DD:179:ARG:NH2	2.33	0.44
33:DJ:56:VAL:N	69:DJ:203:HOH:O	2.42	0.44
39:DP:24:THR:HG22	39:DP:42:PRO:HD3	2.00	0.44
57:D7:46:THR:O	57:D7:52:LYS:HB2	2.18	0.44
1:AA:525:C:O2	69:AA:1749:HOH:O	2.21	0.44
1:AA:903:G:H2'	1:AA:904:U:H6	1.83	0.44
1:AA:935:A:C2'	1:AA:936:C:O5'	2.66	0.44
1:AA:995:C:H5'	18:AN:7:ALA:HB1	1.99	0.44
1:AA:1225:A:OP1	17:AM:101:ARG:HA	2.17	0.44
1:AA:1313:U:N3	1:AA:1314:C:C5	2.86	0.44
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.52	0.44
1:AA:1379:G:O2'	69:AA:1748:HOH:O	2.21	0.44
1:AA:1419:G:C5	1:AA:1420:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:257:G:C2	2:BA:270:A:C6	3.05	0.44
2:BA:412:A:HO2'	2:BA:413:G:P	2.41	0.44
2:BA:483:C:H2'	2:BA:484:G:N7	2.33	0.44
2:BA:770:C:O2'	2:BA:771:G:H5'	2.17	0.44
3:DA:933:A:C2'	3:DA:933:A:N3	2.81	0.44
3:DA:958:U:H5'	37:DN:14:LYS:HE2	1.99	0.44
3:DA:995:C:C6	3:DA:995:C:H5'	2.53	0.44
3:DA:1023:U:P	69:DA:3322:HOH:O	2.72	0.44
3:DA:1385:A:C2	3:DA:1386:C:C4	3.06	0.44
3:DA:1428:C:C5	3:DA:1569:A:H5"	2.52	0.44
3:DA:1452:G:O2'	3:DA:1453:A:P	2.75	0.44
3:DA:1490:A:H2'	27:DC:97:ASP:CB	2.47	0.44
3:DA:1689:A:C6	3:DA:1700:A:C2	3.05	0.44
3:DA:1712:U:H2'	3:DA:1713:A:C8	2.53	0.44
3:DA:1767:G:C2	3:DA:1768:C:C5	3.05	0.44
3:DA:1911:PSU:C4	3:DA:1918:A:C2	3.05	0.44
3:DA:1911:PSU:C2	3:DA:1918:A:C4	3.05	0.44
3:DA:1913:A:OP1	3:DA:1913:A:H4'	2.17	0.44
3:DA:2019:A:C2'	3:DA:2020:A:O5'	2.66	0.44
3:DA:2030:6MZ:C5'	69:DA:3744:HOH:O	2.62	0.44
3:DA:2071:A:H8	3:DA:2071:A:O5'	2.01	0.44
3:DA:2140:G:C2	3:DA:2152:G:C5	3.06	0.44
3:DA:2172:U:H4'	3:DA:2173:A:H5'	2.00	0.44
3:DA:2394:C:H2'	3:DA:2395:C:H5'	1.99	0.44
3:DA:2428:G:H4'	3:DA:2429[B]:G:C8	2.52	0.44
3:DA:2511:U:C5	3:DA:2512:C:C5	3.06	0.44
3:DA:2727:A:H2'	3:DA:2728:U:H5'	1.99	0.44
4:CA:6:A:H8	4:CA:6:A:O5'	2.00	0.44
4:CA:16:C:H2'	4:CA:17:G:O4'	2.18	0.44
4:CA:188:G:HO2'	4:CA:1365:A:N6	2.16	0.44
4:CA:298:G:P	45:CV:84:PHE:HD1	2.40	0.44
4:CA:584:C:C2	4:CA:585:G:C8	3.06	0.44
4:CA:592:A:C5	4:CA:593:U:C4	3.05	0.44
4:CA:911:A:H8	4:CA:911:A:O5'	2.01	0.44
4:CA:954:G:H4'	37:CN:13:HIS:CD2	2.53	0.44
4:CA:1139:G:C2'	4:CA:1140:C:H5'	2.48	0.44
4:CA:1340:U:O2	44:CU:63:VAL:HG22	2.17	0.44
4:CA:1605:C:H2'	4:CA:1606:C:H5'	2.00	0.44
4:CA:2131:U:H5'	4:CA:2132:U:OP1	2.17	0.44
4:CA:2394:C:OP2	54:C4:29:ARG:HD3	2.17	0.44
4:CA:2428:G:H5"	4:CA:2429:G:O5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2531:A:H5'	31:CG:156:TYR:CZ	2.51	0.44
4:CA:2540:C:O2'	4:CA:2541:A:H5'	2.17	0.44
4:CA:2806:C:H1'	69:CA:3212:HOH:O	2.18	0.44
4:CA:2831:G:N2	4:CA:2884:U:OP2	2.50	0.44
5:DB:100:G:N2	69:DB:328:HOH:O	2.50	0.44
6:AB:23:TRP:CH2	6:AB:25:PRO:HA	2.53	0.44
10:AF:92:THR:CG2	10:AF:93:LYS:HE2	2.47	0.44
10:AF:93:LYS:CD	10:AF:93:LYS:H	2.31	0.44
18:AN:47:LYS:O	23:AS:13:LEU:HD11	2.18	0.44
18:AN:79:LEU:HB2	18:AN:84:VAL:HG23	1.98	0.44
24:AT:83:ILE:O	24:AT:87:ALA:HB3	2.18	0.44
6:BB:17:GLY:HA3	6:BB:40:ILE:HA	1.99	0.44
10:BF:90:MET:HB2	10:BF:91:ARG:HB2	2.00	0.44
13:BI:17:ALA:HA	13:BI:66:THR:O	2.17	0.44
19:BO:32:LEU:O	19:BO:36:ILE:HG13	2.18	0.44
31:CG:93:TYR:CD1	31:CG:106:LEU:HA	2.53	0.44
36:CM:23:ILE:H	36:CM:23:ILE:HD12	1.82	0.44
39:CP:80:GLU:O	39:CP:83:LEU:HB2	2.17	0.44
42:CS:78:ARG:HB2	42:CS:83:TYR:CD1	2.53	0.44
27:DC:104:LEU:N	27:DC:104:LEU:HD12	2.33	0.44
29:DE:32:VAL:HG23	29:DE:33:VAL:N	2.33	0.44
31:DG:155:PRO:O	31:DG:171:LYS:N	2.48	0.44
33:DJ:27:LEU:HG	33:DJ:34:ILE:HD12	1.99	0.44
43:DT:37:THR:OG1	43:DT:48:LYS:HE3	2.17	0.44
45:DV:40:LEU:HD23	45:DV:61:GLU:HA	2.00	0.44
46:DW:21:ARG:HD2	69:DW:102:HOH:O	2.17	0.44
51:D1:55:ALA:O	51:D1:56:LYS:HG3	2.18	0.44
54:D4:30:HIS:CD2	54:D4:31:ILE:HG13	2.52	0.44
1:AA:233:C:O2'	1:AA:234:C:H5'	2.17	0.44
1:AA:302:G:N3	1:AA:556:C:H4'	2.32	0.44
1:AA:360:G:C6	1:AA:361:G:C6	3.06	0.44
1:AA:596:A:C6	1:AA:645:G:C2	3.06	0.44
1:AA:724:G:C2'	1:AA:725:G:H5'	2.48	0.44
1:AA:883:C:N3	1:AA:884:U:C4	2.86	0.44
1:AA:923:A:C6	1:AA:924:C:C4	3.06	0.44
1:AA:943:U:C2'	1:AA:944:G:H5'	2.48	0.44
1:AA:1458:G:OP1	24:AT:30:THR:OG1	2.35	0.44
2:BA:420:U:C2'	2:BA:421:U:H5"	2.48	0.44
2:BA:487:A:N3	2:BA:487:A:H2'	2.33	0.44
2:BA:675:A:C4	2:BA:676:A:C8	3.06	0.44
2:BA:1289:A:H2	2:BA:1372:U:O4'	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1387:G:C4	2:BA:1388:C:C5	3.06	0.44
2:BA:1480:A:H2'	2:BA:1481:U:H6	1.83	0.44
2:BA:1493:A:OP2	2:BA:1493:A:C8	2.71	0.44
2:BA:1508:A:P	69:BA:1765:HOH:O	2.76	0.44
3:DA:465:G:C6	3:DA:466:A:N6	2.86	0.44
3:DA:855:G:OP1	62:DA:3031:SPD:C9	2.61	0.44
3:DA:910:A:N3	3:DA:2264:C:O2'	2.40	0.44
3:DA:962:G:C2'	3:DA:963:U:H5'	2.48	0.44
3:DA:1022:G:C5	3:DA:1140:C:C4	3.05	0.44
3:DA:1155:A:C4	3:DA:1157:G:C8	3.06	0.44
3:DA:1584:U:O2	3:DA:1584:U:H2'	2.16	0.44
3:DA:1801:A:OP2	27:DC:152:GLN:NE2	2.50	0.44
3:DA:1941:C:O2	3:DA:1941:C:C2'	2.61	0.44
3:DA:1987:A:H2'	3:DA:1988:G:H8	1.82	0.44
3:DA:2223:G:C2'	3:DA:2224:G:H5'	2.47	0.44
3:DA:2293:G:H2'	3:DA:2294:G:O4'	2.18	0.44
3:DA:2469:A:N1	3:DA:2482:A:C8	2.86	0.44
3:DA:2518:A:P	69:DA:4234:HOH:O	2.76	0.44
4:CA:36:G:O6	69:CA:3287:HOH:O	2.21	0.44
4:CA:89:A:C6	4:CA:90:U:C4	3.06	0.44
4:CA:125:A:H5"	53:C3:19:ARG:HD3	1.99	0.44
4:CA:245:G:N7	54:C4:7:ARG:NH1	2.66	0.44
4:CA:473:G:H2'	4:CA:474:G:H5'	1.99	0.44
4:CA:777:G:N7	4:CA:793:A:C2	2.77	0.44
4:CA:856:G:H1	4:CA:921:C:H42	1.65	0.44
4:CA:1206:G:N1	4:CA:1207:C:C2	2.86	0.44
4:CA:1669:A:O4'	35:CL:5:GLN:HG3	2.18	0.44
4:CA:1746:A:H2'	4:CA:1747:U:C6	2.53	0.44
4:CA:1816:C:H5"	27:CC:61:TYR:CE1	2.53	0.44
4:CA:2360:G:C1'	36:CM:60:ARG:HH21	2.31	0.44
4:CA:2512:C:H5'	69:CA:3242:HOH:O	2.18	0.44
4:CA:2685:G:C4	4:CA:2686:G:C8	3.05	0.44
4:CA:2720:U:C2	4:CA:2872:A:N6	2.86	0.44
4:CA:2784:U:O2'	28:CD:43:ASP:OD1	2.18	0.44
4:CA:2873:A:H1'	38:CO:4:ARG:O	2.18	0.44
6:AB:51:ASN:C	6:AB:53:ALA:H	2.19	0.44
15:AK:85:MET:CE	15:AK:111:THR:HB	2.48	0.44
18:AN:49:GLN:C	18:AN:51:LEU:H	2.20	0.44
21:AQ:49:GLU:O	21:AQ:50:ASN:HB2	2.18	0.44
7:BC:143:ARG:HB3	7:BC:144:LEU:HD22	2.00	0.44
9:BE:78:ASN:OD1	9:BE:79:GLY:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:4:ARG:HG3	11:BG:5:ARG:N	2.33	0.44
12:BH:76:GLN:O	12:BH:127:CYS:HB2	2.18	0.44
14:BJ:19:ASP:C	14:BJ:21:ALA:H	2.21	0.44
26:BL:43:LYS:O	26:BL:45:PRO:CD	2.66	0.44
26:BL:65:SER:HB2	26:BL:82:ILE:HD11	1.99	0.44
27:CC:179:GLU:OE2	27:CC:266:ILE:HG13	2.18	0.44
28:CD:135:GLY:HA2	69:CD:305:HOH:O	2.17	0.44
30:CF:121:PHE:C	30:CF:123:GLY:N	2.71	0.44
31:CG:5:LYS:O	31:CG:7:PRO:HD3	2.18	0.44
48:CY:3:VAL:HG22	48:CY:10:ARG:HG3	2.00	0.44
30:DF:105:ILE:HD12	57:D7:14:PHE:CE2	2.53	0.44
34:DK:98:GLU:OE2	34:DK:126:ALA:HB2	2.18	0.44
36:DM:10:GLU:OE1	36:DM:10:GLU:HA	2.18	0.44
37:DN:114:ARG:HG2	37:DN:130:PHE:CZ	2.52	0.44
49:DZ:2:LYS:HG2	49:DZ:6:LEU:CD2	2.47	0.44
57:D7:25:ILE:CG2	57:D7:26:GLY:H	2.31	0.44
1:AA:36:C:H2'	1:AA:37:U:O4'	2.18	0.43
1:AA:355:C:H2'	1:AA:356:A:O4'	2.17	0.43
1:AA:411:A:C4	1:AA:413:G:O4'	2.71	0.43
1:AA:615:G:O2'	1:AA:616:G:H5'	2.18	0.43
1:AA:1048:G:N3	1:AA:1050:G:C8	2.86	0.43
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.99	0.43
2:BA:160:A:N6	2:BA:346:G:C6	2.86	0.43
2:BA:288:A:H2'	2:BA:289:G:H4'	2.00	0.43
2:BA:570:G:C2	2:BA:571:U:C4	3.06	0.43
2:BA:974:A:OP1	18:BN:69:ARG:NH1	2.48	0.43
2:BA:1176:A:H2'	2:BA:1177:G:O4'	2.18	0.43
2:BA:1183:U:H2'	69:BA:1802:HOH:O	2.16	0.43
2:BA:1321:U:C4	2:BA:1322:C:C5	3.05	0.43
2:BA:1508:A:OP1	69:BA:1765:HOH:O	2.21	0.43
2:BA:1522:U:C2	2:BA:1523:G:C8	3.05	0.43
3:DA:241:A:O2'	54:D4:2:LYS:NZ	2.51	0.43
3:DA:416:U:H2'	3:DA:417:C:O4'	2.18	0.43
3:DA:653:U:H3'	3:DA:653:U:H6	1.83	0.43
3:DA:1319:C:O2'	3:DA:1320:C:H5'	2.18	0.43
3:DA:1357:C:O2	3:DA:1357:C:C2'	2.53	0.43
3:DA:1492:G:N2	3:DA:1499:C:C2	2.86	0.43
3:DA:1578:U:O2	3:DA:1578:U:H2'	2.18	0.43
3:DA:1652:A:C2'	3:DA:1653:G:H5'	2.48	0.43
3:DA:1661:G:H4'	69:DA:4819:HOH:O	2.17	0.43
3:DA:1794:A:H2'	3:DA:1795:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1864:U:OP1	3:DA:2410:G:O2'	2.34	0.43
3:DA:1964:G:H4'	3:DA:1965:C:OP2	2.18	0.43
3:DA:2647:U:O2'	3:DA:2648:G:H5'	2.18	0.43
3:DA:2805:C:O2	3:DA:2805:C:C2'	2.62	0.43
3:DA:2886:A:N3	3:DA:2886:A:H2'	2.32	0.43
4:CA:205:G:H8	69:CA:3776:HOH:O	2.01	0.43
4:CA:219:A:H8	4:CA:219:A:O5'	2.01	0.43
4:CA:425:G:N1	4:CA:426:C:N4	2.66	0.43
4:CA:727:A:H5'	69:CA:3430:HOH:O	2.18	0.43
4:CA:1250:G:H4'	41:CR:5:ARG:HH21	1.83	0.43
4:CA:1355:G:O2'	4:CA:1356:G:H5'	2.17	0.43
4:CA:1824:G:OP1	27:CC:52:HIS:CE1	2.71	0.43
4:CA:2070:A:C2	4:CA:2442:C:C2	3.06	0.43
4:CA:2193:G:H2'	4:CA:2194:U:C6	2.53	0.43
5:DB:91:C:P	37:DN:18[A]:ARG:HG2	2.58	0.43
6:AB:138:THR:O	6:AB:142:GLU:N	2.42	0.43
9:AE:50:TYR:O	9:AE:63:ALA:HB2	2.17	0.43
11:AG:15:ASP:OD1	11:AG:44:TYR:OH	2.25	0.43
15:AK:36:ASP:CG	15:AK:38:GLN:HG2	2.38	0.43
18:AN:64:CYS:SG	18:AN:80:SER:N	2.81	0.43
19:AO:64:ARG:HH12	19:AO:88:ARG:NH2	2.16	0.43
21:AQ:81:LYS:H	21:AQ:81:LYS:HD3	1.83	0.43
7:BC:192:THR:HG23	7:BC:193:TYR:CD2	2.53	0.43
8:BD:34:ILE:HG23	8:BD:35:GLU:HG3	2.01	0.43
9:BE:42:GLY:CA	69:BE:203:HOH:O	2.65	0.43
15:BK:61:PHE:O	15:BK:65:VAL:HG13	2.18	0.43
25:BU:8:GLU:CD	25:BU:9:ASN:H	2.21	0.43
30:CF:125:GLY:O	30:CF:157:THR:HG21	2.18	0.43
33:CJ:10:LEU:C	33:CJ:11:GLN:HG3	2.39	0.43
33:CJ:19:PRO:CB	33:CJ:22:PRO:HG2	2.48	0.43
35:CL:76:VAL:HG22	40:CQ:72:VAL:HG23	1.99	0.43
36:CM:62:PRO:C	54:C4:12:ARG:HG2	2.38	0.43
45:CV:98:ASN:OD1	45:CV:99:SER:N	2.50	0.43
33:DJ:123:ALA:O	33:DJ:126:ARG:HG2	2.18	0.43
37:DN:24:THR:O	37:DN:24:THR:CG2	2.66	0.43
38:DO:83:LEU:O	38:DO:84:GLY:C	2.56	0.43
1:AA:47:C:OP2	1:AA:366:A:N6	2.46	0.43
1:AA:602:A:H2'	1:AA:603:U:C6	2.53	0.43
1:AA:671:G:C4	1:AA:672:U:C6	3.06	0.43
1:AA:744:C:O2'	1:AA:745:G:H5'	2.18	0.43
1:AA:749:A:C5	1:AA:750:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:955:U:C4	1:AA:956:U:C5	3.06	0.43
1:AA:956:U:H2'	1:AA:957:U:C5'	2.48	0.43
1:AA:1031:C:H1'	1:AA:1032:G:OP2	2.18	0.43
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.33	0.43
1:AA:1406:U:C5	1:AA:1407:5MC:C5	3.06	0.43
2:BA:321:A:H8	2:BA:328:C:C2	2.36	0.43
2:BA:374:A:C2	2:BA:375:U:C6	3.05	0.43
2:BA:375:U:O3'	20:BP:6:LEU:HD22	2.18	0.43
2:BA:558:G:P	69:BA:1703:HOH:O	2.63	0.43
2:BA:1061:G:C2	2:BA:1197:A:C2	3.05	0.43
2:BA:1077:G:C2	2:BA:1081:A:C2	3.06	0.43
2:BA:1191:A:H5"	7:BC:4:LYS:HE3	2.00	0.43
2:BA:1244:G:C6	2:BA:1245:C:C4	3.06	0.43
3:DA:96:C:H4'	49:DZ:41:HIS:CD2	2.53	0.43
3:DA:269:C:C2	3:DA:424:G:C2	3.06	0.43
3:DA:536:G:OP2	69:DA:3551:HOH:O	2.21	0.43
3:DA:587:C:N3	36:DM:33:ARG:HD2	2.33	0.43
3:DA:735:A:H5"	3:DA:736:C:OP2	2.18	0.43
3:DA:740:C:P	69:DA:3568:HOH:O	2.76	0.43
3:DA:845:A:N6	3:DA:847:U:C2	2.86	0.43
3:DA:1113:U:H2'	3:DA:1114:C:H6	1.83	0.43
3:DA:1680:U:O2	3:DA:1763:G:H3'	2.18	0.43
3:DA:1731:G:H2'	3:DA:1732:C:H5"	1.99	0.43
3:DA:1831:G:H2'	3:DA:1832:C:H5'	2.00	0.43
3:DA:1841:U:C2'	3:DA:1842:G:H5'	2.48	0.43
3:DA:1953:A:O2'	3:DA:2559:C:O2	2.34	0.43
3:DA:1973:G:C2'	3:DA:1974:C:H5'	2.47	0.43
3:DA:2242:G:H2'	3:DA:2243:U:O5'	2.18	0.43
3:DA:2447:G:C5	3:DA:2500:U:C5	3.06	0.43
3:DA:2512:C:H1'	56:DD:145:SER:O	2.18	0.43
3:DA:2536:G:C6	3:DA:2537:U:C4	3.06	0.43
3:DA:2545:G:H2'	3:DA:2546:U:C5'	2.49	0.43
3:DA:2600:A:C6	3:DA:2601:C:N4	2.86	0.43
3:DA:2621:G:C2'	3:DA:2622:U:H5'	2.48	0.43
3:DA:2698:U:H2'	3:DA:2699:C:H6	1.83	0.43
4:CA:89:A:H2'	4:CA:90:U:O4'	2.18	0.43
4:CA:126:A:H3'	69:CA:3888:HOH:O	2.17	0.43
4:CA:160:A:N6	4:CA:161:A:C6	2.86	0.43
4:CA:485:C:C4	4:CA:486:C:C5	3.06	0.43
4:CA:686:U:H2'	4:CA:788:A:N1	2.33	0.43
4:CA:812:C:H2'	4:CA:813:U:C5'	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1010:A:OP1	41:CR:62:ALA:HA	2.18	0.43
4:CA:1379:U:H2'	4:CA:1379:U:O2	2.16	0.43
4:CA:1402:U:O4'	69:CA:3409:HOH:O	2.20	0.43
4:CA:1998:A:H2	4:CA:2686:G:HO2'	1.62	0.43
4:CA:2084:C:H2'	4:CA:2085:U:O5'	2.18	0.43
4:CA:2086:U:P	69:CA:3449:HOH:O	2.77	0.43
4:CA:2720:U:H5"	40:CQ:52:ARG:HH22	1.83	0.43
4:CA:2755:C:O2'	4:CA:2756:U:H2'	2.18	0.43
4:CA:2812:G:N2	4:CA:2889:C:C2	2.87	0.43
11:AG:56:LYS:O	11:AG:57:SER:O	2.37	0.43
12:AH:18:GLN:NE2	12:AH:65:TYR:CE1	2.86	0.43
7:BC:40:ARG:NH2	7:BC:57:ILE:HD12	2.34	0.43
10:BF:39:LEU:CD1	10:BF:61:LEU:O	2.66	0.43
11:BG:22:LEU:HA	11:BG:25:LYS:HE2	2.00	0.43
13:BI:50:GLN:N	13:BI:51:PRO:HD2	2.33	0.43
13:BI:95:ARG:O	13:BI:98:LEU:CB	2.65	0.43
13:BI:101:ALA:HB1	13:BI:103:PHE:CZ	2.53	0.43
14:BJ:92:LEU:O	14:BJ:93:ALA:CB	2.66	0.43
26:BL:107:VAL:HG23	26:BL:117:TYR:HB3	1.98	0.43
22:BR:34:THR:CG2	22:BR:38:LYS:HB2	2.48	0.43
23:BS:29:LYS:CG	23:BS:30:PRO:HD2	2.48	0.43
28:CD:34:VAL:CG2	28:CD:96:ILE:HD11	2.48	0.43
40:CQ:3:ILE:HD12	40:CQ:3:ILE:H	1.83	0.43
40:CQ:30:TRP:CD1	40:CQ:81:ASP:HB2	2.53	0.43
40:CQ:80:VAL:HG23	40:CQ:80:VAL:O	2.17	0.43
45:CV:51:LEU:HD23	45:CV:51:LEU:HA	1.87	0.43
50:C0:46:MET:O	50:C0:50:VAL:HG22	2.18	0.43
56:DD:149:ASN:O	56:DD:150:MEQ:C	2.64	0.43
37:DN:132:THR:CG2	37:DN:133:LYS:N	2.81	0.43
1:AA:13:U:C4	1:AA:916:U:O4	2.71	0.43
1:AA:19:A:N3	1:AA:917:G:C2	2.86	0.43
1:AA:45:G:C2'	1:AA:46:G:H5'	2.49	0.43
1:AA:62:U:O2'	1:AA:63:C:H5'	2.18	0.43
1:AA:108:G:P	1:AA:326:G:H22	2.42	0.43
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.43
1:AA:444:G:C6	1:AA:445:G:N7	2.86	0.43
1:AA:738:C:C4	1:AA:739:C:C5	3.06	0.43
1:AA:968:A:H4'	1:AA:969:A:OP2	2.18	0.43
1:AA:1310:G:O2'	1:AA:1311:A:H5'	2.19	0.43
1:AA:1352:C:H2'	1:AA:1353:G:O4'	2.18	0.43
1:AA:1360:A:C4	1:AA:1361:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:32:A:H2'	2:BA:32:A:N3	2.33	0.43
2:BA:374:A:C5	2:BA:375:U:C5	3.05	0.43
2:BA:541:G:H2'	2:BA:542:G:H8	1.83	0.43
2:BA:586:C:H1'	2:BA:878:A:O2'	2.18	0.43
2:BA:787:A:C2	2:BA:796:C:N3	2.86	0.43
2:BA:861:G:C5	2:BA:862:C:C5	3.06	0.43
2:BA:942:G:C2	2:BA:943:U:C5	3.06	0.43
2:BA:1028:C:O2'	2:BA:1029:U:O4'	2.26	0.43
2:BA:1068:G:C2'	2:BA:1069:C:H5'	2.48	0.43
2:BA:1181:G:O2'	2:BA:1182:G:C8	2.65	0.43
2:BA:1220:G:OP1	23:BS:37:ARG:NH2	2.52	0.43
2:BA:1340:A:C2	2:BA:1341:U:H1'	2.53	0.43
2:BA:1352:C:H2'	2:BA:1353:G:O4'	2.18	0.43
2:BA:1505:G:H4'	2:BA:1506:U:H5"	2.00	0.43
3:DA:102:U:O2	3:DA:102:U:H2'	2.18	0.43
3:DA:137:U:H2'	3:DA:140:C:C6	2.53	0.43
3:DA:444:C:O2'	3:DA:445:C:H5'	2.19	0.43
3:DA:1101:U:H2'	3:DA:1102:C:C6	2.53	0.43
3:DA:1257:C:P	69:DA:3353:HOH:O	2.70	0.43
3:DA:1309:G:H4'	53:D3:7:PRO:HB2	2.00	0.43
3:DA:1330:C:O2	3:DA:1330:C:H2'	2.19	0.43
3:DA:1700:A:C3'	3:DA:1701:A:H5'	2.47	0.43
3:DA:1715:G:N2	3:DA:1743:G:H2'	2.33	0.43
3:DA:1863:G:H2'	3:DA:1864:U:O4'	2.18	0.43
3:DA:2095:A:O2'	3:DA:2096:C:H5'	2.18	0.43
3:DA:2111:U:OP1	3:DA:2111:U:H4'	2.17	0.43
3:DA:2520:C:H2'	3:DA:2521:C:H6	1.83	0.43
4:CA:170:U:H2'	4:CA:171:U:C6	2.53	0.43
4:CA:210:C:OP1	53:C3:29:GLN:NE2	2.51	0.43
4:CA:372:G:H1'	4:CA:400:G:O6	2.18	0.43
4:CA:579:G:C8	4:CA:2017:U:C4	3.06	0.43
4:CA:1100:C:H2'	4:CA:1101:U:C6	2.53	0.43
4:CA:1139:G:O2'	4:CA:1140:C:H5'	2.18	0.43
4:CA:1335:C:H2'	4:CA:1336:A:C8	2.52	0.43
4:CA:1441:G:H2'	4:CA:1442:U:C6	2.53	0.43
4:CA:1482:G:N1	4:CA:1508:A:C2	2.86	0.43
4:CA:1544:A:C6	4:CA:1545:A:N1	2.85	0.43
4:CA:1716:U:H3	4:CA:1744:A:H62	1.65	0.43
4:CA:2133:G:H21	4:CA:2158:A:N6	2.17	0.43
4:CA:2239:G:C2	4:CA:2240:U:C2	3.06	0.43
4:CA:2527:C:H5"	55:C5:34:PRO:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2599:G:OP2	4:CA:2599:G:H8	2.01	0.43
4:CA:2696:U:O4	4:CA:2697:G:O6	2.36	0.43
4:CA:2880:C:O2	38:CO:93:GLY:HA3	2.17	0.43
4:CA:2886:A:C6	51:C1:39:ARG:NE	2.86	0.43
7:AC:6:HIS:HD2	7:AC:8:ASN:H	1.67	0.43
9:AE:137:VAL:O	9:AE:137:VAL:CG2	2.66	0.43
14:AJ:41:PRO:O	14:AJ:42:LEU:HB2	2.18	0.43
17:AM:15:ALA:O	17:AM:19:LEU:CD2	2.66	0.43
19:AO:44:ALA:O	19:AO:47:LYS:HE3	2.18	0.43
23:AS:48:THR:HG22	23:AS:61:PHE:HD1	1.83	0.43
23:AS:58:VAL:HG11	23:AS:75:ALA:HB2	2.00	0.43
6:BB:207:ILE:HD13	6:BB:208:ARG:H	1.81	0.43
9:BE:67:ALA:O	9:BE:69:ARG:O	2.36	0.43
15:BK:107:ILE:HD13	15:BK:107:ILE:C	2.38	0.43
18:BN:57:PRO:O	18:BN:59:ARG:N	2.49	0.43
21:BQ:57:ASP:OD1	21:BQ:81:LYS:HB3	2.18	0.43
33:CJ:13:ALA:N	33:CJ:53:PRO:HG3	2.34	0.43
40:CQ:28:LYS:HB3	40:CQ:39:LEU:HD23	2.00	0.43
48:CY:68:ALA:HA	48:CY:71:ARG:HG2	2.00	0.43
54:C4:44:ARG:N	54:C4:45:PRO:HD2	2.33	0.43
27:DC:216:ARG:HD3	69:DC:318:HOH:O	2.18	0.43
29:DE:74:LYS:O	29:DE:75:SER:C	2.56	0.43
33:DJ:10:LEU:HD12	33:DJ:23:VAL:HG12	2.00	0.43
33:DJ:15:GLY:HA3	33:DJ:50:LYS:HB3	2.00	0.43
39:DP:19:GLN:HG3	63:DP:202:PUT:H42	2.00	0.43
39:DP:51:ALA:HB3	39:DP:78:VAL:HG13	1.99	0.43
55:D5:40:GLN:HA	69:D5:202:HOH:O	2.18	0.43
57:D7:46:THR:CB	57:D7:52:LYS:HD3	2.47	0.43
1:AA:47:C:H2'	69:AA:1914:HOH:O	2.17	0.43
1:AA:118:U:C5	1:AA:288:A:C5	3.07	0.43
1:AA:270:A:C6	1:AA:271:C:N3	2.86	0.43
1:AA:279:A:H4'	1:AA:280:C:H5"	1.99	0.43
1:AA:290:C:C2'	1:AA:291:U:H5'	2.47	0.43
1:AA:325:A:H2'	1:AA:326:G:O4'	2.19	0.43
1:AA:692:U:O2	1:AA:694:A:H3'	2.17	0.43
1:AA:949:A:C5	1:AA:1233:G:C2	3.06	0.43
1:AA:1015:G:N7	1:AA:1016:A:C8	2.86	0.43
1:AA:1057:G:C2	1:AA:1204:A:C2	3.06	0.43
1:AA:1079:G:C5'	9:AE:134:ILE:CD1	2.96	0.43
2:BA:49:U:C2	2:BA:364:A:N6	2.87	0.43
2:BA:75:G:C2	2:BA:96:U:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:79:G:N2	2:BA:91:U:C2	2.87	0.43
2:BA:179:A:H2'	2:BA:180:U:C6	2.53	0.43
2:BA:406:G:C2	2:BA:407:U:C5	3.06	0.43
2:BA:451:A:H5'	69:BP:104:HOH:O	2.18	0.43
2:BA:528:C:O2	2:BA:528:C:C2'	2.67	0.43
2:BA:1072:G:C4	2:BA:1104:G:N2	2.86	0.43
2:BA:1210:C:H1'	2:BA:1214:C:C4	2.53	0.43
2:BA:1245:C:C4	2:BA:1246:A:N7	2.86	0.43
3:DA:39:G:H2'	3:DA:40:U:C6	2.53	0.43
3:DA:460:A:P	69:DA:3233:HOH:O	2.77	0.43
3:DA:803:U:C2'	3:DA:804:A:H5'	2.48	0.43
3:DA:845:A:C6	3:DA:847:U:C6	3.06	0.43
3:DA:868:U:C4	3:DA:869:G:N7	2.86	0.43
3:DA:960:A:H5"	3:DA:961:C:P	2.58	0.43
3:DA:1054:A:H5'	3:DA:1055:G:P	2.58	0.43
3:DA:1235:G:OP2	63:DA:3037:PUT:C2	2.67	0.43
3:DA:1691:C:C2'	3:DA:1692:U:O5'	2.66	0.43
3:DA:1784:A:H1'	69:DA:4239:HOH:O	2.18	0.43
3:DA:1961:C:C2'	3:DA:1962:5MC:H5'	2.48	0.43
3:DA:1999:C:H2'	3:DA:2000:C:O4'	2.18	0.43
3:DA:2025:C:H6	3:DA:2025:C:O5'	2.00	0.43
3:DA:2307:G:H4'	3:DA:2308:G:O5'	2.18	0.43
3:DA:2602:A:H4'	3:DA:2603:G:OP2	2.19	0.43
3:DA:2706:A:H2'	3:DA:2707:U:O5'	2.18	0.43
3:DA:2855:C:C2'	3:DA:2856:A:H5'	2.48	0.43
3:DA:2861:U:O2	3:DA:2861:U:H2'	2.19	0.43
65:DA:3064:ACY:H2	69:DA:4579:HOH:O	2.16	0.43
69:DA:4232:HOH:O	36:DM:4:ASN:HA	2.19	0.43
4:CA:104:A:N7	4:CA:105:C:C4	2.86	0.43
4:CA:105:C:H2'	4:CA:106:C:C6	2.53	0.43
4:CA:240:C:OP2	4:CA:241:A:O2'	2.34	0.43
4:CA:421:C:O2'	69:CA:3373:HOH:O	2.18	0.43
4:CA:666:A:C5'	36:CM:48:ARG:HD2	2.48	0.43
4:CA:701:G:H5'	69:CA:3456:HOH:O	2.17	0.43
4:CA:737:C:H42	4:CA:759:G:H1	1.66	0.43
4:CA:855:G:C4	4:CA:923:G:N2	2.86	0.43
4:CA:1358:G:H2'	4:CA:1359:A:OP2	2.18	0.43
4:CA:1783:A:C6	4:CA:2587:A:C2	3.06	0.43
4:CA:1865:U:O4	4:CA:1875:G:C4	2.71	0.43
4:CA:1906:G:C8	4:CA:1929:G:H2'	2.53	0.43
4:CA:1947:C:H2'	4:CA:1948:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2365:G:H4'	47:CX:58:PHE:CE2	2.53	0.43
4:CA:2684:U:C4'	35:CL:70:ARG:HH12	2.32	0.43
4:CA:2815:C:H2'	4:CA:2816:G:C8	2.54	0.43
5:DB:63:C:C2	5:DB:64:G:C8	3.06	0.43
6:AB:207:ILE:HD13	6:AB:207:ILE:N	2.33	0.43
7:AC:22:TRP:HB3	7:AC:59:ARG:HG2	2.00	0.43
10:AF:38:ARG:HB3	10:AF:63:ASN:HB2	2.01	0.43
14:AJ:28:THR:O	14:AJ:28:THR:CG2	2.66	0.43
14:AJ:53:ILE:HG13	18:AN:85:ARG:NE	2.34	0.43
21:AQ:4:LYS:N	21:AQ:4:LYS:HZ2	2.16	0.43
22:AR:21:ILE:O	22:AR:22:ASP:HB2	2.17	0.43
6:BB:57:LEU:HD21	6:BB:67:ILE:HD12	2.00	0.43
7:BC:173:VAL:O	7:BC:175:LEU:HD12	2.19	0.43
8:BD:48:LEU:HD12	8:BD:48:LEU:HA	1.90	0.43
11:BG:78:ARG:O	11:BG:79:ARG:HB2	2.18	0.43
20:BP:8:ARG:NH2	20:BP:15:PRO:HG3	2.33	0.43
24:BT:67:ILE:O	24:BT:68:HIS:O	2.37	0.43
24:BT:79:LEU:O	24:BT:83:ILE:HG23	2.18	0.43
28:CD:133:THR:HG23	28:CD:134:HIS:N	2.34	0.43
30:CF:59:ILE:HG13	30:CF:140:ILE:HD11	2.00	0.43
46:CW:31:TYR:CE1	46:CW:92:VAL:HG22	2.54	0.43
55:C5:14:HIS:CD2	55:C5:15:PRO:HD2	2.54	0.43
42:DS:7:SER:O	69:DS:301:HOH:O	2.21	0.43
43:DT:29:VAL:HG13	43:DT:55:ILE:HD11	1.99	0.43
51:D1:8:THR:HA	69:D1:201:HOH:O	2.18	0.43
1:AA:66:A:H2'	1:AA:67:C:H5'	2.00	0.43
1:AA:142:G:C6	1:AA:143:A:C5	3.07	0.43
1:AA:499:A:H4'	1:AA:500:G:OP1	2.19	0.43
1:AA:501:C:H2'	1:AA:502:A:C8	2.53	0.43
1:AA:509:A:C6	1:AA:510:A:N1	2.87	0.43
1:AA:580:C:C2'	1:AA:581:G:O5'	2.67	0.43
1:AA:741:G:H2'	1:AA:742:G:O4'	2.18	0.43
2:BA:154:U:O2	2:BA:168:G:N2	2.51	0.43
2:BA:609:A:N7	2:BA:610:U:C5	2.86	0.43
2:BA:664:G:H22	2:BA:741:G:H1	1.66	0.43
2:BA:921:U:H2'	2:BA:922:G:O4'	2.18	0.43
2:BA:982:U:OP2	18:BN:63:ARG:NH2	2.45	0.43
2:BA:1406:U:H2'	2:BA:1407:C:H5'	1.99	0.43
3:DA:63:A:C2	3:DA:64:A:C5	3.07	0.43
3:DA:488:G:O2'	3:DA:491:G:N7	2.43	0.43
3:DA:590:A:C1'	69:DA:3790:HOH:O	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:846:U:HO2'	3:DA:847:U:P	2.36	0.43
3:DA:1199:U:H2'	3:DA:1200:C:C6	2.53	0.43
3:DA:1261:C:C2'	3:DA:1262:A:O5'	2.66	0.43
3:DA:1317:G:H1	3:DA:1335:C:H42	1.65	0.43
3:DA:1379:U:O2	3:DA:1379:U:H2'	2.17	0.43
3:DA:2250:G:H4'	69:DA:4907:HOH:O	2.18	0.43
3:DA:2309:A:C5	3:DA:2310:C:C4	3.06	0.43
3:DA:2581:G:C2	3:DA:2610:C:C5	3.07	0.43
3:DA:2714:G:O2'	3:DA:2715:C:H5'	2.19	0.43
3:DA:2793:C:H42	3:DA:2803:G:H1	1.66	0.43
3:DA:2826:A:C2'	3:DA:2827:C:H5'	2.47	0.43
3:DA:2867:G:O2'	3:DA:2868:A:P	2.77	0.43
4:CA:310:A:C5	4:CA:330:A:C6	3.07	0.43
4:CA:487:C:H2'	4:CA:488:G:H5'	2.00	0.43
4:CA:579:G:C2	4:CA:1262:A:C2	3.06	0.43
4:CA:585:G:C2	4:CA:1256:G:C6	3.07	0.43
4:CA:874:G:N3	4:CA:904:G:N2	2.66	0.43
4:CA:902:C:N4	69:CA:3601:HOH:O	2.52	0.43
4:CA:1203:U:C5'	36:CM:3:LEU:HD23	2.48	0.43
4:CA:1215:G:H2'	4:CA:1216:G:O4'	2.16	0.43
4:CA:1218:G:C2'	4:CA:1219:U:H5'	2.49	0.43
4:CA:1218:G:C5	4:CA:1232:G:C6	3.07	0.43
4:CA:1262:A:H2'	4:CA:1262:A:N3	2.33	0.43
4:CA:1286:A:N1	4:CA:1329:U:C5	2.87	0.43
4:CA:1439:A:C2	4:CA:1553:A:C4	3.07	0.43
4:CA:1439:A:C8	4:CA:1440:U:C6	3.07	0.43
4:CA:1563:U:O2'	4:CA:1564:C:H5'	2.19	0.43
4:CA:1847:A:O2'	4:CA:1848:A:P	2.76	0.43
4:CA:2054:A:OP1	4:CA:2055:C:O2'	2.32	0.43
4:CA:2061:G:C4	4:CA:2063:C:N4	2.86	0.43
4:CA:2301:C:H42	4:CA:2315:G:H1	1.65	0.43
4:CA:2351:G:O6	54:C4:42:HIS:HE1	2.02	0.43
4:CA:2364:C:OP1	47:CX:53:ARG:HD3	2.19	0.43
4:CA:2365:G:O2'	4:CA:2366:A:C8	2.69	0.43
4:CA:2478:A:OP1	55:C5:13:ARG:NH1	2.50	0.43
4:CA:2591:C:H42	4:CA:2603:G:H1	1.65	0.43
4:CA:2847:U:O4	4:CA:2848:G:C6	2.71	0.43
8:AD:150:LYS:O	8:AD:151:LYS:CG	2.65	0.43
14:AJ:42:LEU:HG	14:AJ:43:PRO:HD2	2.00	0.43
14:AJ:63:ASP:HB3	14:AJ:65:TYR:CE1	2.53	0.43
17:AM:3:ARG:HA	17:AM:9:ILE:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AN:72:GLY:O	18:AN:80:SER:HA	2.19	0.43
6:BB:66:LYS:HD2	6:BB:159:ASP:OD2	2.18	0.43
6:BB:99:GLY:C	6:BB:101:LEU:N	2.70	0.43
6:BB:130:THR:HG22	6:BB:131:LYS:N	2.33	0.43
8:BD:50:ASP:O	8:BD:54:GLN:HG3	2.19	0.43
9:BE:141:ILE:O	9:BE:143:GLY:N	2.51	0.43
14:BJ:6:ILE:HB	14:BJ:76:ILE:O	2.18	0.43
21:BQ:58:VAL:HB	21:BQ:79:VAL:O	2.18	0.43
29:CE:181:ILE:HG22	36:CM:3:LEU:HD13	2.01	0.43
30:CF:39:VAL:HG13	30:CF:40:GLY:N	2.34	0.43
30:CF:72:SER:O	30:CF:73:VAL:CG1	2.67	0.43
33:CJ:18:ASN:ND2	33:CJ:34:ILE:O	2.51	0.43
33:CJ:64:ARG:NH1	33:CJ:65:SER:OG	2.52	0.43
36:CM:91:ASP:H	36:CM:94:THR:HG22	1.83	0.43
39:CP:59:ALA:HA	39:CP:62:LEU:HD12	2.00	0.43
41:CR:82:LEU:HD22	41:CR:87:VAL:HG11	1.99	0.43
45:CV:38:ILE:HG22	45:CV:38:ILE:O	2.18	0.43
56:DD:46:ARG:NH2	56:DD:88:GLU:O	2.52	0.43
30:DF:39:VAL:HG21	30:DF:49:LEU:HD12	2.01	0.43
30:DF:145:VAL:HG23	30:DF:145:VAL:O	2.18	0.43
34:DK:93:ILE:HA	34:DK:97:PRO:HB3	2.01	0.43
44:DU:33:LYS:HG3	44:DU:80:TRP:CE3	2.53	0.43
44:DU:49:LYS:HD3	44:DU:49:LYS:N	2.34	0.43
1:AA:66:A:C2’	1:AA:67:C:H5’	2.47	0.43
1:AA:450:G:H2’	1:AA:451:A:OP1	2.19	0.43
1:AA:616:G:C2	1:AA:617:G:C8	3.07	0.43
1:AA:696:A:H3’	1:AA:696:A:C8	2.54	0.43
1:AA:751:U:H1’	19:AO:23:GLY:O	2.19	0.43
1:AA:1057:G:C8	1:AA:1058:G:C8	3.07	0.43
1:AA:1075:U:O2’	1:AA:1076:U:H5’	2.18	0.43
1:AA:1157:A:N7	1:AA:1180:A:N6	2.66	0.43
1:AA:1266:G:N2	1:AA:1270:G:C4	2.87	0.43
1:AA:1342:C:H4’	13:AI:127:PHE:O	2.18	0.43
1:AA:1370:G:C2	1:AA:1371:G:N7	2.86	0.43
1:AA:1404:C:C2’	1:AA:1519:MA6:O2’	2.67	0.43
2:BA:246:A:C4	2:BA:279:A:C6	3.07	0.43
2:BA:255:G:C2	2:BA:272:C:N3	2.87	0.43
2:BA:299:G:H2’	2:BA:300:A:O5’	2.18	0.43
2:BA:437:U:H4’	8:BD:152:GLN:NE2	2.34	0.43
2:BA:474:G:C2	2:BA:475:C:C2	3.06	0.43
2:BA:694:A:H2’	2:BA:695:A:O5’	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:739:C:H2'	2:BA:740:U:C5'	2.48	0.43
2:BA:1077:G:N2	2:BA:1080:A:OP2	2.50	0.43
3:DA:167:A:H2'	3:DA:168:G:O4'	2.18	0.43
3:DA:301:G:OP2	45:DV:81:ARG:NH1	2.51	0.43
3:DA:441:U:OP1	69:DA:3550:HOH:O	2.21	0.43
3:DA:572:A:N1	3:DA:2033:A:C2	2.85	0.43
3:DA:693:A:C8	3:DA:694:U:C5	3.07	0.43
3:DA:1091:G:O2'	3:DA:1092:C:H5'	2.18	0.43
3:DA:1314:C:O2	3:DA:1314:C:H2'	2.19	0.43
3:DA:2131:U:H5'	3:DA:2132:U:O5'	2.17	0.43
3:DA:2141:G:H2'	3:DA:2142:A:C8	2.54	0.43
3:DA:2232:C:C4	3:DA:2233:U:C5	3.06	0.43
3:DA:2478:A:OP2	69:DA:3552:HOH:O	2.21	0.43
4:CA:45:G:H5"	4:CA:46:G:H5'	2.00	0.43
4:CA:53:A:N3	4:CA:179:C:H4'	2.34	0.43
4:CA:185:G:H22	4:CA:212:G:H1'	1.83	0.43
4:CA:214:G:C2'	4:CA:216:A:O2'	2.66	0.43
4:CA:323:C:N3	4:CA:333:G:C8	2.86	0.43
4:CA:673:C:H4'	29:CE:75:SER:OG	2.18	0.43
4:CA:927:A:H2'	4:CA:928:A:C8	2.53	0.43
4:CA:1059:G:N2	4:CA:1080:A:H1'	2.34	0.43
4:CA:1127:A:C2'	4:CA:1128:G:H5"	2.48	0.43
4:CA:1527:G:N3	4:CA:1546:G:N2	2.66	0.43
4:CA:1597:A:O3'	4:CA:1598:A:H8	2.02	0.43
4:CA:1608:A:C5	4:CA:1611:C:C4	3.07	0.43
4:CA:2091:C:H3'	4:CA:2092:U:H5"	2.01	0.43
4:CA:2632:A:H61	4:CA:2786:U:H3	1.66	0.43
4:CA:2673:G:N1	4:CA:2674:G:C5	2.86	0.43
4:CA:2764:A:C2	4:CA:2766:A:C8	3.07	0.43
10:AF:3:HIS:CD2	10:AF:94:HIS:HA	2.54	0.43
11:AG:90:GLU:N	11:AG:90:GLU:OE2	2.52	0.43
13:AI:83:ILE:O	13:AI:87:LEU:HD13	2.19	0.43
17:AM:29:ARG:O	17:AM:33:ILE:HG12	2.19	0.43
23:AS:66:MET:HG2	23:AS:66:MET:O	2.17	0.43
24:AT:78:ASN:ND2	69:AT:103:HOH:O	2.43	0.43
11:BG:69:VAL:HG21	11:BG:104:ILE:HD11	2.01	0.43
11:BG:79:ARG:HD3	11:BG:84:THR:OG1	2.19	0.43
11:BG:136:LYS:HD2	11:BG:136:LYS:O	2.17	0.43
13:BI:129:LYS:N	13:BI:129:LYS:HD2	2.33	0.43
14:BJ:67:ILE:HD11	18:BN:96:LEU:HD12	2.01	0.43
26:BL:71:GLY:O	26:BL:99:ARG:NH1	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BN:33:VAL:O	18:BN:34:ASN:OD1	2.37	0.43
20:BP:78:VAL:O	20:BP:79:ASN:CB	2.66	0.43
23:BS:13:LEU:HD22	23:BS:16:LEU:HD23	2.00	0.43
27:CC:129:LEU:N	27:CC:129:LEU:HD23	2.33	0.43
30:CF:56:LEU:HD23	30:CF:56:LEU:HA	1.90	0.43
32:CH:25:TYR:CE2	32:CH:30:LEU:HD11	2.54	0.43
33:CJ:71:LYS:HD2	33:CJ:115:ASP:CG	2.39	0.43
34:CK:80:HIS:O	34:CK:81:ILE:C	2.56	0.43
53:C3:17:GLY:O	53:C3:20:ALA:HB3	2.18	0.43
27:DC:141:HIS:C	27:DC:141:HIS:CD2	2.92	0.43
36:DM:109:LYS:HG2	36:DM:126:ARG:CB	2.49	0.43
37:DN:46:ILE:HA	37:DN:103:TYR:OH	2.19	0.43
38:DO:106:ASP:N	38:DO:106:ASP:OD1	2.50	0.43
42:DS:82:HIS:CG	42:DS:82:HIS:O	2.71	0.43
46:DW:10:LYS:H	46:DW:10:LYS:CE	2.31	0.43
48:DY:2:ARG:CD	48:DY:29:LEU:HD13	2.49	0.43
48:DY:16:ASN:O	48:DY:23:ALA:HA	2.18	0.43
50:D0:9:THR:HG22	50:D0:53:MET:O	2.18	0.43
55:D5:18:GLN:O	55:D5:19:ILE:HB	2.19	0.43
1:AA:71:A:H3'	1:AA:71:A:OP2	2.18	0.43
1:AA:109:A:C8	1:AA:326:G:H2'	2.54	0.43
1:AA:109:A:H3'	1:AA:110:C:H5'	2.01	0.43
1:AA:148:G:N2	1:AA:175:C:O2	2.51	0.43
1:AA:502:A:H2'	1:AA:503:C:C6	2.53	0.43
1:AA:735:C:C2'	1:AA:736:C:H5'	2.48	0.43
1:AA:787:A:C4	1:AA:788:U:C6	3.06	0.43
1:AA:899:C:O5'	1:AA:899:C:H6	2.02	0.43
1:AA:938:A:H5"	69:AA:1860:HOH:O	2.19	0.43
1:AA:1055:A:C4	1:AA:1206:G:C2	3.06	0.43
1:AA:1486:G:H5'	69:AA:1736:HOH:O	2.18	0.43
2:BA:223:A:C6	2:BA:224:U:C4	3.06	0.43
2:BA:252:U:H5'	2:BA:253:A:OP2	2.19	0.43
2:BA:268:U:H2'	2:BA:269:C:H6	1.82	0.43
2:BA:328:C:O2	2:BA:328:C:C2'	2.66	0.43
2:BA:466:A:C2	2:BA:468:A:N7	2.86	0.43
2:BA:549:C:O5'	2:BA:549:C:H6	2.02	0.43
2:BA:632:U:H3'	2:BA:633:G:H5'	2.00	0.43
2:BA:793:U:O2	2:BA:1516:G:H4'	2.19	0.43
2:BA:932:C:C2'	2:BA:933:G:O5'	2.66	0.43
2:BA:1054:C:H4'	2:BA:1055:A:C5'	2.49	0.43
2:BA:1151:A:H4'	2:BA:1151:A:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1298:U:H3	11:BG:114:LYS:HA	1.84	0.43
2:BA:1467:C:H1'	69:BA:1803:HOH:O	2.17	0.43
3:DA:15:G:C6	3:DA:16:C:C4	3.07	0.43
3:DA:64:A:H2'	3:DA:65:U:H6	1.83	0.43
3:DA:199:A:C6	3:DA:2434:A:C6	3.07	0.43
3:DA:573:U:O3'	3:DA:574:A:H3'	2.18	0.43
3:DA:920:A:C2	3:DA:921:C:C2	3.06	0.43
3:DA:1001:A:H2'	3:DA:1002:G:H5'	1.99	0.43
3:DA:1244:A:OP1	36:DM:7:SER:CB	2.67	0.43
3:DA:1299:G:O2'	3:DA:1301:A:C5	2.71	0.43
3:DA:1372:U:O2'	3:DA:1373:A:H5'	2.17	0.43
3:DA:1494:A:HO2'	3:DA:1495:A:P	2.42	0.43
3:DA:1541:C:H2'	3:DA:1542:U:O4'	2.19	0.43
3:DA:1564:C:C2	3:DA:1565:C:C5	3.06	0.43
3:DA:1835:2MG:HM22	3:DA:1836:C:C2	2.50	0.43
3:DA:2392:A:H1'	3:DA:2429[A]:G:O6	2.17	0.43
4:CA:85:G:OP1	45:CV:6:ARG:HB2	2.18	0.43
4:CA:271:G:C2	4:CA:272:A:C5	3.07	0.43
4:CA:321:U:P	29:CE:130:LYS:HD3	2.59	0.43
4:CA:410:G:H2'	4:CA:2407:A:N7	2.34	0.43
4:CA:449:A:H2'	4:CA:450:G:H5'	2.01	0.43
4:CA:607:U:O2'	69:CA:3413:HOH:O	2.21	0.43
4:CA:1392:A:C6	4:CA:1393:A:N1	2.87	0.43
4:CA:1865:U:C5	4:CA:1875:G:C2	3.06	0.43
4:CA:2067:G:C6	4:CA:2444:G:C6	3.07	0.43
4:CA:2120:G:O6	4:CA:2178:C:N3	2.51	0.43
4:CA:2628:C:H3'	4:CA:2629:U:C5'	2.49	0.43
4:CA:2684:U:P	40:CQ:50:ARG:NH2	2.92	0.43
4:CA:2716:C:H2'	4:CA:2717:C:C6	2.54	0.43
4:CA:2752:C:C5	4:CA:2753:A:N7	2.86	0.43
6:AB:106:THR:C	6:AB:108:ARG:H	2.21	0.43
6:AB:186:ILE:HD11	6:AB:204:ASP:CA	2.48	0.43
7:AC:75:ILE:CG2	7:AC:76:VAL:N	2.82	0.43
8:AD:107:PHE:CD1	8:AD:145:ILE:HD11	2.54	0.43
8:AD:174:ASP:OD2	8:AD:177:LYS:HG2	2.18	0.43
9:AE:85:VAL:HG22	9:AE:86:LYS:N	2.33	0.43
11:AG:76:LYS:HE2	11:AG:76:LYS:HB2	1.93	0.43
23:AS:29:LYS:CB	23:AS:30:PRO:CD	2.97	0.43
25:AU:12:PHE:HB3	25:AU:13:ASP:H	1.56	0.43
6:BB:193:PRO:HG2	6:BB:194:ASP:H	1.83	0.43
7:BC:141:ALA:O	7:BC:146:ALA:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BH:29:SER:OG	12:BH:30:SER:N	2.52	0.43
12:BH:86:TYR:CE1	12:BH:124:GLU:HB2	2.53	0.43
26:BL:34:CYS:O	26:BL:76:GLU:O	2.36	0.43
22:BR:20:GLU:O	22:BR:21:ILE:C	2.56	0.43
24:BT:27:MET:HG3	24:BT:28:MET:N	2.33	0.43
29:CE:28:VAL:O	29:CE:32:VAL:HG23	2.19	0.43
32:CH:72:ILE:HG23	32:CH:141:VAL:HG22	2.00	0.43
38:CO:10:LEU:HD13	38:CO:40:LYS:HG2	2.00	0.43
49:CZ:7:ARG:HG2	49:CZ:56:LEU:HD13	2.01	0.43
35:DL:65:THR:HA	35:DL:82:ASN:OD1	2.19	0.43
39:DP:19:GLN:CG	63:DP:202:PUT:H22	2.41	0.43
1:AA:156:C:H1'	69:AA:1735:HOH:O	2.18	0.43
1:AA:190:A:N7	1:AA:191:G:C4	2.86	0.43
1:AA:268:U:H2'	1:AA:269:C:H6	1.84	0.43
1:AA:350:G:O2'	1:AA:351:G:H5'	2.19	0.43
1:AA:452:A:N6	1:AA:480:U:H3	2.17	0.43
1:AA:651:C:O2'	1:AA:652:U:H5'	2.19	0.43
1:AA:675:A:O2'	15:AK:116:ILE:O	2.21	0.43
1:AA:1007:U:N3	1:AA:1022:A:H2	2.17	0.43
1:AA:1059:C:N3	1:AA:1060:U:C5	2.87	0.43
1:AA:1091:U:O2	1:AA:1095:U:C2	2.71	0.43
1:AA:1199:U:H4'	14:AJ:56:HIS:ND1	2.33	0.43
1:AA:1261:A:N7	1:AA:1274:A:C2	2.87	0.43
1:AA:1405:G:H21	1:AA:1518:MA6:H1'	1.84	0.43
2:BA:211:G:H2'	2:BA:211:G:N3	2.33	0.43
2:BA:311:C:O2	2:BA:311:C:H2'	2.19	0.43
2:BA:449:G:H2'	2:BA:450:G:C8	2.54	0.43
2:BA:531:U:O3'	2:BA:532:A:C4'	2.67	0.43
2:BA:675:A:C6	2:BA:676:A:C5	3.07	0.43
2:BA:708:C:C4	2:BA:709:U:C5	3.07	0.43
2:BA:757:U:H2'	2:BA:758:C:O5'	2.19	0.43
2:BA:862:C:H2'	2:BA:863:U:O4'	2.18	0.43
2:BA:1061:G:C4	2:BA:1197:A:C2	3.07	0.43
2:BA:1081:A:H5'	9:BE:23:LYS:HG3	2.01	0.43
2:BA:1093:A:C2	2:BA:1095:U:C4'	3.01	0.43
2:BA:1115:U:O4'	18:BN:101:TRP:HA	2.19	0.43
2:BA:1119:C:P	13:BI:11:ARG:HH12	2.41	0.43
2:BA:1392:G:C2'	2:BA:1393:U:H5'	2.49	0.43
3:DA:137:U:H2'	3:DA:140:C:C2	2.53	0.43
3:DA:204:A:P	69:DA:3238:HOH:O	2.66	0.43
3:DA:278:A:C2	3:DA:362:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:289:G:C2	3:DA:352:A:C2	3.07	0.43
3:DA:380:G:H2'	3:DA:381:G:O4'	2.18	0.43
3:DA:544:C:N4	3:DA:548:G:OP1	2.44	0.43
3:DA:614:A:H8	3:DA:614:A:OP2	2.01	0.43
3:DA:1208:C:C4	3:DA:1209:U:C5	3.07	0.43
3:DA:1565:C:C2	3:DA:1567:G:C8	3.06	0.43
3:DA:1586:A:C6	3:DA:1587:G:C4	3.06	0.43
3:DA:1849:G:H2'	3:DA:1850:G:H8	1.83	0.43
3:DA:1897:G:C2	3:DA:1898:U:C2	3.06	0.43
3:DA:2172:U:OP2	3:DA:2174:C:C5	2.72	0.43
3:DA:2516:A:C2	3:DA:2569:G:N3	2.87	0.43
3:DA:2517:C:C6	3:DA:2542:A:C5	3.06	0.43
3:DA:2781:A:H62	63:DA:3054:PUT:H12	1.84	0.43
4:CA:24:G:O2'	43:CT:102:HIS:HD2	2.02	0.43
4:CA:39:G:C6	4:CA:40:U:C4	3.07	0.43
4:CA:50:U:H3'	4:CA:51:G:C8	2.54	0.43
4:CA:215:G:H4'	4:CA:216:A:OP1	2.19	0.43
4:CA:238:C:C2	4:CA:239:C:C6	3.06	0.43
4:CA:647:G:C2'	4:CA:648:G:O5'	2.67	0.43
4:CA:668:A:H3'	4:CA:669:G:C5'	2.47	0.43
4:CA:847:U:O2	4:CA:934:U:O2	2.37	0.43
4:CA:1207:C:N3	4:CA:1208:C:C5	2.87	0.43
4:CA:1408:G:O2'	4:CA:1409:U:H5'	2.19	0.43
4:CA:1523:U:H3'	4:CA:1524:G:H8	1.83	0.43
4:CA:1657:U:OP2	28:CD:141:ARG:HD2	2.19	0.43
4:CA:1838:C:C6	4:CA:1899:A:C6	3.07	0.43
4:CA:1935:G:H1'	4:CA:1964:G:N2	2.34	0.43
4:CA:2355:G:O3'	47:CX:22:LYS:NZ	2.50	0.43
4:CA:2523:G:C4	4:CA:2765:A:N6	2.87	0.43
4:CA:2773:C:O2'	4:CA:2774:C:O5'	2.31	0.43
4:CA:2785:C:C5	4:CA:2786:U:C5	3.06	0.43
4:CA:2833:U:O2'	4:CA:2834:G:H5'	2.19	0.43
6:AB:67:ILE:O	6:AB:68:LEU:HB3	2.18	0.43
6:AB:111:ILE:HG21	6:AB:152:LYS:O	2.18	0.43
6:AB:151:ILE:HD11	6:AB:154:MET:SD	2.59	0.43
8:AD:130:VAL:CG1	8:AD:131:ASN:N	2.81	0.43
20:AP:20:VAL:HG23	20:AP:35:ARG:HA	1.99	0.43
20:AP:44:SER:OG	20:AP:46:LYS:HD2	2.18	0.43
25:AU:4:ILE:N	25:AU:22:SER:HG	2.17	0.43
25:AU:4:ILE:HG22	25:AU:5:LYS:HG2	2.00	0.43
25:AU:12:PHE:CD2	25:AU:15:ALA:HB2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:21:ARG:C	6:BB:23:TRP:H	2.21	0.43
6:BB:154:MET:HE1	6:BB:158:PRO:HG3	2.01	0.43
7:BC:7:PRO:HG2	7:BC:184:TYR:CB	2.49	0.43
9:BE:90:THR:HG22	9:BE:91:GLY:N	2.34	0.43
14:BJ:81:GLU:HA	14:BJ:84:VAL:HG12	2.00	0.43
17:BM:45:ILE:O	17:BM:48:LEU:HB2	2.18	0.43
21:BQ:60:GLU:O	21:BQ:76:VAL:HG22	2.19	0.43
28:CD:114:LYS:HD3	28:CD:196:ALA:HB2	2.00	0.43
30:CF:72:SER:O	30:CF:73:VAL:HG13	2.18	0.43
32:CH:71:LYS:HB3	32:CH:108:VAL:CG2	2.49	0.43
33:CJ:7:TYR:CD1	33:CJ:7:TYR:O	2.72	0.43
33:CJ:49:GLU:OE1	33:CJ:52:LEU:HD22	2.19	0.43
34:CK:59:ALA:O	34:CK:62:VAL:HG12	2.18	0.43
42:CS:61:ALA:HB2	42:CS:98:ILE:HD13	2.01	0.43
44:CU:8:LEU:HD13	49:CZ:22:LEU:O	2.18	0.43
29:DE:90:GLN:HG3	29:DE:92:HIS:NE2	2.33	0.43
32:DH:12:LEU:O	32:DH:13:GLY:C	2.54	0.43
32:DH:85:GLY:HA2	32:DH:91:PHE:CE2	2.54	0.43
36:DM:85:VAL:HB	36:DM:94:THR:HG23	2.00	0.43
39:DP:35:ILE:HG21	39:DP:71:ALA:HA	2.00	0.43
41:DR:5:ARG:HG2	69:DR:329:HOH:O	2.19	0.43
51:D1:1:ALA:HA	69:D1:207:HOH:O	2.18	0.43
52:D2:13:SER:HB3	52:D2:47:ILE:HG23	2.01	0.43
1:AA:127:G:N2	1:AA:235:C:C2	2.87	0.43
1:AA:168:G:H8	1:AA:168:G:H5"	1.82	0.43
1:AA:207:C:H3'	1:AA:207:C:H6	1.82	0.43
1:AA:322:C:H5	1:AA:328:C:C5	2.37	0.43
1:AA:408:A:H2'	1:AA:409:U:H6	1.84	0.43
1:AA:712:A:H2'	1:AA:713:G:O4'	2.18	0.43
1:AA:1065:U:H5	1:AA:1190:G:C8	2.36	0.43
1:AA:1180:A:H8	1:AA:1180:A:O5'	2.02	0.43
1:AA:1181:G:H1'	1:AA:1182:G:C5	2.54	0.43
1:AA:1421:G:H3'	69:AA:1770:HOH:O	2.19	0.43
69:AA:1923:HOH:O	25:AU:40:LYS:HE2	2.19	0.43
2:BA:15:G:O4'	9:BE:29:ARG:NE	2.45	0.43
2:BA:333:U:C2'	2:BA:334:C:H5'	2.49	0.43
2:BA:403:C:H2'	2:BA:404:G:O5'	2.19	0.43
2:BA:518:C:H2'	2:BA:530:G:N7	2.33	0.43
2:BA:751:U:H4'	19:BO:24:SER:HA	2.01	0.43
2:BA:759:A:N7	2:BA:760:G:C8	2.87	0.43
2:BA:780:A:C2	2:BA:803:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1090:U:C2	2:BA:1091:U:C5	3.06	0.43
2:BA:1095:U:C2	2:BA:1096:C:C6	3.07	0.43
2:BA:1483:A:H1'	4:CA:1948:G:H1'	1.99	0.43
3:DA:84:A:H62	3:DA:101:A:H2	1.67	0.43
3:DA:560:C:O2	41:DR:47:ARG:NH1	2.45	0.43
3:DA:1904:G:C4	3:DA:1905:C:H6	2.37	0.43
3:DA:2674:G:H4'	35:DL:30:ARG:HD2	2.01	0.43
4:CA:2:G:H2'	4:CA:3:U:O4'	2.18	0.43
4:CA:26:G:C6	4:CA:27:G:N1	2.86	0.43
4:CA:42:A:C6	4:CA:438:G:N1	2.86	0.43
4:CA:179:C:N3	4:CA:180:G:C5	2.87	0.43
4:CA:241:A:H4'	4:CA:242:G:OP1	2.19	0.43
4:CA:405:U:H4'	4:CA:406:G:OP2	2.19	0.43
4:CA:498:G:C2	4:CA:499:U:C6	3.07	0.43
4:CA:526:A:C6	4:CA:2626:C:H4'	2.54	0.43
4:CA:631:A:C2	36:CM:66:PHE:HE2	2.36	0.43
4:CA:632:A:H4'	36:CM:68:SER:HB2	2.01	0.43
4:CA:786:C:H4'	4:CA:1780:A:N7	2.34	0.43
4:CA:851:C:H2'	4:CA:852:U:C6	2.54	0.43
4:CA:1138:G:O2'	34:CK:104:ALA:O	2.35	0.43
4:CA:1199:U:C6	4:CA:1199:U:OP2	2.72	0.43
4:CA:1272:A:OP1	4:CA:1647:U:OP1	2.37	0.43
4:CA:1824:G:OP2	27:CC:52:HIS:CE1	2.72	0.43
4:CA:1865:U:C4	4:CA:1875:G:C4	3.07	0.43
4:CA:1932:A:C2	4:CA:1933:G:H1'	2.54	0.43
4:CA:2018:G:H2'	4:CA:2019:A:O4'	2.19	0.43
4:CA:2477:U:O4	55:C5:9:THR:HG22	2.18	0.43
4:CA:2579:C:H2'	4:CA:2580:U:O4'	2.18	0.43
4:CA:2635:A:H8	4:CA:2635:A:O5'	2.02	0.43
4:CA:2772:C:H2'	4:CA:2773:C:H6	1.84	0.43
4:CA:2841:C:P	38:CO:53:THR:HG21	2.59	0.43
4:CA:2867:G:HO2'	4:CA:2868:A:P	2.38	0.43
5:DB:33:G:O2'	5:DB:34:A:H5'	2.18	0.43
8:BD:12:SER:HB3	8:BD:17:THR:O	2.19	0.43
8:BD:148:LYS:HD3	8:BD:148:LYS:N	2.32	0.43
9:BE:133:PRO:O	9:BE:137:VAL:HG12	2.18	0.43
27:CC:63:ILE:O	27:CC:102:TYR:HB2	2.19	0.43
28:CD:137:SER:CB	69:CD:302:HOH:O	2.67	0.43
45:CV:17:ASP:HB2	45:CV:20:LYS:HG3	1.99	0.43
48:CY:71:ARG:HG3	48:CY:72:ALA:N	2.33	0.43
54:C4:31:ILE:O	54:C4:31:ILE:HG22	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DF:135:ILE:CD1	30:DF:142:TYR:CD1	3.02	0.43
33:DJ:33:ASN:CB	33:DJ:36:GLU:HG3	2.49	0.43
33:DJ:88:GLY:HA2	33:DJ:135:MET:HE3	1.99	0.43
38:DO:55:ALA:HA	38:DO:80:PHE:CE2	2.53	0.43
41:DR:30:VAL:HA	69:DR:301:HOH:O	2.19	0.43
44:DU:3:ARG:HE	44:DU:3:ARG:HB3	1.70	0.43
46:DW:51:GLN:HB2	46:DW:57:TYR:OH	2.18	0.43
47:DX:49:VAL:HG21	47:DX:79:SER:HA	2.01	0.43
48:DY:17:ARG:CZ	48:DY:23:ALA:HB2	2.49	0.43
1:AA:131:A:C2	1:AA:132:C:C5	3.07	0.43
1:AA:345:C:O2'	35:DL:116:ILE:HD13	2.19	0.43
1:AA:369:G:C2	1:AA:370:C:C5	3.07	0.43
1:AA:684:U:C5	1:AA:685:G:C5	3.06	0.43
1:AA:696:A:H1'	1:AA:786:G:O2'	2.18	0.43
1:AA:736:C:H2'	1:AA:737:C:H6	1.84	0.43
1:AA:764:C:H2'	1:AA:765:G:O4'	2.18	0.43
1:AA:1059:C:C4	1:AA:1060:U:C5	3.07	0.43
1:AA:1118:U:C2	1:AA:1179:A:C2	3.07	0.43
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.53	0.43
1:AA:1403:C:H6	1:AA:1403:C:O5'	2.02	0.43
2:BA:64:G:C2	2:BA:67:C:C4	3.07	0.43
2:BA:74:A:H2'	2:BA:75:G:O4'	2.19	0.43
2:BA:583:A:C2	2:BA:759:A:C5	3.07	0.43
2:BA:726:C:H42	2:BA:731:G:H1	1.64	0.43
2:BA:745:G:H2'	2:BA:746:A:C8	2.54	0.43
2:BA:833:G:H2'	2:BA:834:U:O5'	2.19	0.43
2:BA:881:G:C5	2:BA:882:C:C5	3.06	0.43
2:BA:937:A:C2	2:BA:1379:G:O6	2.71	0.43
2:BA:1229:A:C2	2:BA:1230:C:C4	3.07	0.43
3:DA:571:U:OP1	42:DS:80:ARG:NH2	2.51	0.43
3:DA:1084:A:H2'	3:DA:1085:A:C8	2.54	0.43
3:DA:1101:U:H2'	3:DA:1102:C:H6	1.84	0.43
3:DA:1430:G:H2'	3:DA:1431:A:H8	1.83	0.43
3:DA:1576:U:C2	3:DA:1577:C:C5	3.07	0.43
3:DA:1854:A:C2'	3:DA:1855:U:H5'	2.49	0.43
3:DA:2006:C:O5'	3:DA:2006:C:C6	2.69	0.43
3:DA:2375:G:H1'	69:DA:4019:HOH:O	2.19	0.43
3:DA:2414:G:H2'	3:DA:2415:G:H5'	1.99	0.43
3:DA:2491:U:H2'	3:DA:2491:U:O5'	2.19	0.43
4:CA:76:C:O2'	49:CZ:52:ARG:HA	2.19	0.43
4:CA:277:G:C2	4:CA:360:U:O4	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:336:C:C4	4:CA:337:C:C5	3.07	0.43
4:CA:638:G:H2'	4:CA:639:U:O4'	2.19	0.43
4:CA:694:U:H2'	4:CA:695:G:O4'	2.19	0.43
4:CA:749:A:C6	4:CA:750:A:N7	2.87	0.43
4:CA:827:U:H5'	4:CA:828:U:O5'	2.19	0.43
4:CA:1187:G:H5"	42:CS:83:TYR:CZ	2.54	0.43
4:CA:1352:U:C5	4:CA:1377:G:C6	3.06	0.43
4:CA:1366:A:H2'	4:CA:1367:A:H8	1.84	0.43
4:CA:1395:A:O2'	4:CA:1397:U:C6	2.70	0.43
4:CA:1673:G:C2'	4:CA:1674:G:H5'	2.49	0.43
4:CA:1789:A:OP1	27:CC:219:VAL:HA	2.18	0.43
4:CA:1885:A:O5'	4:CA:1885:A:H8	2.02	0.43
4:CA:2016:U:C4	4:CA:2017:U:C4	3.07	0.43
4:CA:2050:C:N4	4:CA:2051:A:C6	2.87	0.43
4:CA:2084:C:C2'	4:CA:2085:U:O5'	2.66	0.43
4:CA:2204:G:C5	4:CA:2221:G:C2	3.07	0.43
4:CA:2321:U:H3'	4:CA:2322:A:H5'	2.01	0.43
4:CA:2523:G:O2'	4:CA:2524:G:H5'	2.19	0.43
6:AB:100:MET:O	6:AB:104:TRP:HB2	2.19	0.43
14:AJ:65:TYR:CB	18:AN:96:LEU:HD11	2.49	0.43
14:AJ:91:ASP:OD1	14:AJ:91:ASP:N	2.43	0.43
13:BI:21:ILE:HA	13:BI:62:ASP:O	2.19	0.43
15:BK:60:PRO:N	15:BK:91:PRO:HB2	2.34	0.43
27:CC:128:THR:C	27:CC:129:LEU:HD23	2.39	0.43
29:CE:191:ASP:O	29:CE:195:GLN:HG3	2.19	0.43
33:CJ:46:ASP:OD1	33:CJ:50:LYS:HD2	2.18	0.43
41:CR:57:ARG:C	41:CR:59:LEU:H	2.21	0.43
50:C0:4:ILE:HG22	50:C0:39:ASP:HB2	2.00	0.43
55:C5:3:VAL:HG23	55:C5:4:LEU:H	1.84	0.43
27:DC:30:ALA:HB3	27:DC:31:PRO:HD3	2.00	0.43
31:DG:152:ARG:HD2	69:DG:204:HOH:O	2.18	0.43
35:DL:87:LEU:HD23	35:DL:94:PRO:HA	2.01	0.43
36:DM:57:LEU:HD11	36:DM:61:LEU:HD11	2.01	0.43
45:DV:40:LEU:CD2	45:DV:61:GLU:HG3	2.49	0.43
1:AA:75:G:C5	1:AA:76:G:C8	3.07	0.42
1:AA:119:A:N7	1:AA:240:G:C6	2.86	0.42
1:AA:685:G:O4'	15:AK:41:ALA:HB3	2.19	0.42
1:AA:697:U:O4'	1:AA:786:G:H4'	2.19	0.42
1:AA:832:G:C2	1:AA:855:U:C2	3.07	0.42
1:AA:1309:G:C6	1:AA:1329:A:C6	3.07	0.42
1:AA:1381:U:C5	1:AA:1382:C:C5	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:37:U:P	69:BA:1755:HOH:O	2.76	0.42
2:BA:629:A:H8	2:BA:629:A:O5'	2.02	0.42
2:BA:678:U:N3	2:BA:713:G:N2	2.67	0.42
2:BA:822:U:H2'	2:BA:823:C:H6	1.84	0.42
2:BA:897:C:H2'	2:BA:898:G:H8	1.84	0.42
2:BA:996:A:H2'	2:BA:997:U:C6	2.54	0.42
2:BA:1003:G:H1	2:BA:1037:C:H42	1.66	0.42
2:BA:1163:A:H1'	69:BA:1711:HOH:O	2.19	0.42
2:BA:1219:A:C5	2:BA:1220:G:N7	2.87	0.42
2:BA:1377:A:H2'	2:BA:1378:C:OP2	2.19	0.42
3:DA:103:A:H2'	3:DA:104:A:O4'	2.19	0.42
3:DA:987:C:H2'	3:DA:988:A:O4'	2.19	0.42
3:DA:1319:C:H3'	69:DA:6294:HOH:O	2.18	0.42
3:DA:1735:A:C5	3:DA:1736:U:C6	3.07	0.42
3:DA:1754:A:C6	3:DA:1755:A:C6	3.06	0.42
3:DA:2045:C:O2	51:D1:18:HIS:NE2	2.45	0.42
3:DA:2142:A:H2	3:DA:2150:C:O2	2.02	0.42
3:DA:2221:G:H2'	3:DA:2222:C:H5'	2.00	0.42
3:DA:2502:G:H5'	3:DA:2503:2MA:C5'	2.49	0.42
4:CA:124:G:N7	53:C3:19:ARG:NH1	2.67	0.42
4:CA:243:U:P	54:C4:7:ARG:NH2	2.92	0.42
4:CA:299:A:H2'	4:CA:319:G:O2'	2.19	0.42
4:CA:442:G:N2	4:CA:444:C:C2	2.86	0.42
4:CA:517:C:O2'	43:CT:18:ARG:NH2	2.51	0.42
4:CA:907:G:O2'	4:CA:908:C:H5'	2.18	0.42
4:CA:942:G:H2'	4:CA:943:A:H5'	2.01	0.42
4:CA:1071:G:O2'	4:CA:1072:C:C5'	2.67	0.42
4:CA:1142:A:C2	4:CA:1144:A:C6	3.07	0.42
4:CA:1340:U:C5	4:CA:1603:A:C8	3.06	0.42
4:CA:1723:G:C2'	4:CA:1724:G:H5'	2.49	0.42
4:CA:1973:G:H2'	4:CA:1974:C:C6	2.54	0.42
4:CA:2009:A:H2'	4:CA:2010:G:H8	1.84	0.42
4:CA:2091:C:H5"	4:CA:2092:U:H5"	2.01	0.42
4:CA:2098:U:H2'	4:CA:2099:U:C6	2.53	0.42
4:CA:2111:U:C2	4:CA:2145:C:O2	2.72	0.42
4:CA:2278:A:N7	47:CX:10:ASN:ND2	2.62	0.42
4:CA:2635:A:C6	4:CA:2636:C:C5	3.07	0.42
4:CA:2820:A:C8	28:CD:196:ALA:HB1	2.54	0.42
4:CA:2840:C:OP1	38:CO:50:PRO:HA	2.19	0.42
5:DB:101:A:H2'	5:DB:102:G:O4'	2.19	0.42
6:AB:80:VAL:O	6:AB:82:ASP:OD2	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AD:58:LYS:HG3	8:AD:59:GLN:N	2.34	0.42
9:AE:14:LYS:HG3	9:AE:113:ALA:HB1	2.01	0.42
9:AE:23:LYS:HG2	9:AE:23:LYS:O	2.19	0.42
12:AH:113:ASP:O	12:AH:117:ARG:HB2	2.19	0.42
13:AI:57:MET:O	13:AI:58:VAL:C	2.58	0.42
7:BC:39:VAL:O	7:BC:43:LEU:HB2	2.19	0.42
8:BD:206:LYS:CG	8:BD:206:LYS:O	2.67	0.42
9:BE:81:LEU:O	9:BE:98:PRO:HB3	2.18	0.42
9:BE:98:PRO:O	9:BE:99:ALA:HB3	2.19	0.42
11:BG:131:LYS:HA	69:BG:201:HOH:O	2.18	0.42
13:BI:90:TYR:O	13:BI:91:ASP:HB3	2.19	0.42
17:BM:89:LEU:O	17:BM:93:ARG:HG3	2.18	0.42
27:CC:209:ALA:HA	27:CC:212:TRP:NE1	2.34	0.42
28:CD:60:VAL:O	28:CD:60:VAL:CG1	2.66	0.42
30:CF:59:ILE:HG12	30:CF:137:PHE:CG	2.54	0.42
33:CJ:18:ASN:OD1	33:CJ:34:ILE:HG22	2.19	0.42
39:CP:49:VAL:HG21	39:CP:82:ALA:HA	2.00	0.42
43:CT:1:MET:HB3	43:CT:109:ASP:OD1	2.19	0.42
43:CT:43:ALA:O	43:CT:47:VAL:HG12	2.18	0.42
50:C0:5:LYS:HE2	50:C0:57:GLU:OE2	2.18	0.42
50:C0:10:ARG:NE	69:C0:101:HOH:O	2.44	0.42
52:C2:12:SER:HB2	52:C2:48:TYR:CZ	2.54	0.42
56:DD:56:LYS:O	56:DD:60:VAL:HG23	2.19	0.42
56:DD:207:VAL:O	56:DD:207:VAL:CG2	2.67	0.42
32:DH:6:LEU:O	32:DH:15:LEU:HD13	2.19	0.42
32:DH:90:LEU:HD11	32:DH:145:VAL:CG1	2.49	0.42
36:DM:117:THR:HG22	36:DM:117:THR:O	2.18	0.42
38:DO:92:GLY:HA2	38:DO:94:TYR:CZ	2.54	0.42
41:DR:74:SER:O	41:DR:75:TYR:C	2.54	0.42
49:DZ:14:LEU:HB3	49:DZ:57:LEU:CD1	2.49	0.42
1:AA:189:A:H8	1:AA:189:A:O5'	2.02	0.42
1:AA:397:A:C6	1:AA:548:G:C5	3.07	0.42
1:AA:515:G:C2	1:AA:537:G:C2	3.07	0.42
1:AA:563:A:H2'	1:AA:567:G:C8	2.54	0.42
1:AA:685:G:H5'	15:AK:41:ALA:O	2.19	0.42
1:AA:723:U:H4'	1:AA:724:G:O5'	2.18	0.42
1:AA:874:G:C5	1:AA:875:U:C5	3.07	0.42
1:AA:919:A:H2'	1:AA:920:U:H5'	2.00	0.42
1:AA:927:G:C6	1:AA:1391:U:C2	3.07	0.42
1:AA:1053:G:C6	1:AA:1199:U:O2	2.72	0.42
1:AA:1423:G:P	35:DL:49:ARG:NH2	2.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:H4'	1:AA:1453:G:H5"	2.01	0.42
2:BA:6:G:H2'	9:BE:124:LEU:CD2	2.50	0.42
2:BA:76:G:N2	2:BA:95:C:C4	2.87	0.42
2:BA:186:C:N4	2:BA:187:G:O6	2.52	0.42
2:BA:418:C:H5'	69:BA:1914:HOH:O	2.17	0.42
2:BA:687:A:N1	2:BA:704:A:C5	2.87	0.42
2:BA:689:C:H2'	2:BA:690:G:O4'	2.18	0.42
2:BA:1012:A:N1	2:BA:1017:U:O4	2.52	0.42
2:BA:1074:G:O2'	6:BB:102:THR:HG23	2.18	0.42
2:BA:1152:A:C6	2:BA:1153:G:C5	3.08	0.42
2:BA:1169:A:C6	2:BA:1170:A:C6	3.07	0.42
2:BA:1323:G:O2'	2:BA:1324:A:O4'	2.27	0.42
3:DA:302:C:C2'	3:DA:303:G:O5'	2.68	0.42
3:DA:329:G:O4'	3:DA:477:A:H1'	2.19	0.42
3:DA:532:A:C5	69:DA:5198:HOH:O	2.72	0.42
3:DA:615:U:O2	29:DE:35:TYR:HA	2.19	0.42
3:DA:672:C:C2	3:DA:809:G:N2	2.87	0.42
3:DA:847:U:C2'	3:DA:848:C:H5'	2.48	0.42
3:DA:1025:G:N2	3:DA:1139:G:O6	2.49	0.42
3:DA:1059:G:H5"	3:DA:1060:U:H2'	2.02	0.42
3:DA:1068:G:N2	3:DA:1096:A:P	2.92	0.42
3:DA:1163:G:N3	69:DA:3803:HOH:O	2.36	0.42
3:DA:1228:G:C2'	3:DA:1229:C:H5'	2.49	0.42
3:DA:1261:C:O2'	3:DA:1262:A:O5'	2.29	0.42
3:DA:1385:A:C6	3:DA:1403:A:C5	3.07	0.42
3:DA:1672:A:P	69:DA:3480:HOH:O	2.76	0.42
3:DA:1678:A:H2'	3:DA:1679:A:C5'	2.49	0.42
3:DA:1832:C:N4	3:DA:1833:C:C5	2.87	0.42
3:DA:2130:U:H5'	3:DA:2131:U:OP1	2.19	0.42
3:DA:2134:A:C2	3:DA:2158:A:N3	2.87	0.42
3:DA:2140:G:C6	3:DA:2151:U:O2	2.72	0.42
3:DA:2159:G:H2'	3:DA:2160:C:C5	2.54	0.42
3:DA:2181:U:C5	3:DA:2182:U:C5	3.07	0.42
3:DA:2359:C:C2'	3:DA:2360:G:H5'	2.48	0.42
3:DA:2611:C:C2'	3:DA:2612:C:O5'	2.67	0.42
3:DA:2678:C:H1'	69:DA:4896:HOH:O	2.19	0.42
4:CA:122:G:OP1	4:CA:149:A:O2'	2.21	0.42
4:CA:523:C:O2'	4:CA:524:G:H5'	2.20	0.42
4:CA:535:G:H2'	4:CA:536:G:O4'	2.18	0.42
4:CA:570:G:C8	4:CA:2030:A:N7	2.88	0.42
4:CA:752:A:O2'	4:CA:753:A:P	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1365:A:C5	4:CA:1366:A:C5	3.06	0.42
4:CA:1478:G:N7	69:CA:3507:HOH:O	2.37	0.42
4:CA:1525:A:N6	4:CA:1546:G:N1	2.66	0.42
4:CA:1632:A:N1	4:CA:1633:G:N1	2.66	0.42
4:CA:1670:C:O2	28:CD:134:HIS:NE2	2.43	0.42
4:CA:1772:A:H2'	4:CA:1773:A:O3'	2.18	0.42
4:CA:1853:A:H1'	4:CA:2234:G:O4'	2.18	0.42
4:CA:1998:A:OP2	28:CD:141:ARG:NH2	2.51	0.42
4:CA:2322:A:H2'	4:CA:2323:G:O4'	2.19	0.42
4:CA:2345:G:H4'	4:CA:2346:A:C5'	2.49	0.42
4:CA:2636:C:H2'	4:CA:2637:U:H6	1.85	0.42
4:CA:2801:G:H2'	4:CA:2802:G:C8	2.55	0.42
5:DB:63:C:H2'	5:DB:64:G:O4'	2.19	0.42
7:AC:84:VAL:CG1	7:AC:101:ILE:HG21	2.49	0.42
14:AJ:27:GLU:C	14:AJ:29:ALA:N	2.72	0.42
14:AJ:53:ILE:HD11	18:AN:85:ARG:NH2	2.34	0.42
17:AM:12:HIS:HA	17:AM:44:LYS:HE3	2.01	0.42
17:AM:12:HIS:H	17:AM:45:ILE:HD13	1.84	0.42
6:BB:154:MET:SD	6:BB:158:PRO:HG3	2.59	0.42
7:BC:66:VAL:HG12	7:BC:68:ILE:HG13	2.01	0.42
11:BG:69:VAL:HG12	11:BG:135:VAL:HA	1.99	0.42
12:BH:75:ILE:HD12	12:BH:75:ILE:C	2.40	0.42
13:BI:49:ARG:HG2	13:BI:52:LEU:HD11	2.01	0.42
13:BI:63:LEU:H	13:BI:63:LEU:CD2	2.32	0.42
13:BI:92:GLU:OE1	13:BI:92:GLU:HA	2.19	0.42
19:BO:61:SER:O	19:BO:65:LYS:HG3	2.19	0.42
20:BP:8:ARG:CZ	20:BP:15:PRO:HG3	2.49	0.42
27:CC:159:THR:HG22	27:CC:160:TYR:H	1.85	0.42
28:CD:30:GLU:OE1	28:CD:53:GLY:HA2	2.20	0.42
35:CL:79:PHE:CD1	40:CQ:69:VAL:HG22	2.54	0.42
54:C4:51:LYS:HA	54:C4:54:LEU:HD12	2.01	0.42
27:DC:123:ILE:O	27:DC:123:ILE:HG22	2.19	0.42
29:DE:48:THR:OG1	29:DE:50:ALA:HB3	2.19	0.42
30:DF:51:ASN:HB3	30:DF:146:ASP:OD1	2.19	0.42
31:DG:5:LYS:O	31:DG:7:PRO:HD3	2.19	0.42
33:DJ:115:ASP:O	33:DJ:116:MET:CG	2.67	0.42
35:DL:113:MET:O	35:DL:116:ILE:HG13	2.19	0.42
37:DN:47:GLU:O	37:DN:48:ALA:C	2.57	0.42
41:DR:17:LEU:O	41:DR:20:ALA:N	2.43	0.42
46:DW:51:GLN:OE1	46:DW:57:TYR:OH	2.37	0.42
49:DZ:26:PHE:HD1	49:DZ:29:ARG:NH1	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:D7:48:ASP:C	57:D7:53:SER:OG	2.57	0.42
57:D7:61:LEU:HB3	57:D7:62:ARG:NH2	2.24	0.42
1:AA:22:G:C5	1:AA:23:C:C5	3.06	0.42
1:AA:51:A:C2	1:AA:353:A:N1	2.87	0.42
1:AA:105:G:H2'	1:AA:106:C:C6	2.54	0.42
1:AA:263:A:H2'	1:AA:264:C:C5	2.54	0.42
1:AA:510:A:H5"	1:AA:511:C:P	2.60	0.42
1:AA:654:G:O2'	1:AA:655:A:H5'	2.18	0.42
1:AA:980:C:N4	69:AA:1744:HOH:O	2.50	0.42
1:AA:1016:A:HO2'	1:AA:1217:C:HO2'	1.67	0.42
1:AA:1028:C:H3'	1:AA:1029:U:H5"	2.02	0.42
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.37	0.42
2:BA:72:A:C6	2:BA:73:C:N3	2.86	0.42
2:BA:136:C:O5'	2:BA:136:C:H6	2.02	0.42
2:BA:416:G:H2'	2:BA:417:G:O4'	2.20	0.42
2:BA:446:G:H2'	2:BA:447:G:H5'	2.01	0.42
2:BA:532:A:N1	7:BC:193:TYR:HD2	2.17	0.42
2:BA:672:U:H2'	2:BA:673:A:H8	1.84	0.42
2:BA:990:C:C4	2:BA:991:U:O4	2.73	0.42
2:BA:1092:A:H2'	2:BA:1093:A:C8	2.54	0.42
2:BA:1158:C:C2'	2:BA:1159:U:O5'	2.67	0.42
2:BA:1278:G:N3	2:BA:1278:G:H2'	2.34	0.42
2:BA:1321:U:C4	2:BA:1322:C:H5	2.37	0.42
2:BA:1513:A:H2'	2:BA:1514:G:H8	1.83	0.42
3:DA:178:G:C2'	3:DA:179:C:H5'	2.48	0.42
3:DA:520:G:C4	3:DA:521:U:C5	3.07	0.42
3:DA:532:A:H2'	3:DA:532:A:N3	2.33	0.42
3:DA:599:A:H2'	3:DA:600:G:O5'	2.19	0.42
3:DA:698:C:O2'	3:DA:734:A:N6	2.51	0.42
3:DA:956:G:OP1	69:DA:3258:HOH:O	2.21	0.42
3:DA:974:G:C6	3:DA:1186:G:C6	3.06	0.42
3:DA:1090:A:C2	3:DA:1091:G:C6	3.07	0.42
3:DA:1664:A:C2	3:DA:2726:A:C8	3.07	0.42
3:DA:1671:U:OP2	69:DA:3549:HOH:O	2.21	0.42
3:DA:1853:A:C6	3:DA:1854:A:N1	2.87	0.42
3:DA:1977:A:N3	69:DA:3801:HOH:O	2.36	0.42
3:DA:2071:A:H1'	69:DA:3767:HOH:O	2.19	0.42
3:DA:2107:G:C2	3:DA:2182:U:O2	2.72	0.42
3:DA:2140:G:H1'	3:DA:2152:G:N2	2.34	0.42
3:DA:2804:U:C2	3:DA:2805:C:C6	3.07	0.42
4:CA:77:G:P	49:CZ:52:ARG:HH21	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:208:C:H2'	4:CA:209:C:H6	1.83	0.42
4:CA:219:A:N3	4:CA:234:U:O2'	2.52	0.42
4:CA:571:U:C4	4:CA:2030:A:C6	3.07	0.42
4:CA:728:G:O2'	4:CA:730:A:H5"	2.20	0.42
4:CA:769:U:C2	4:CA:770:G:C8	3.07	0.42
4:CA:1068:G:H2'	4:CA:1068:G:N3	2.34	0.42
4:CA:1275:A:H3'	4:CA:1645:G:O2'	2.18	0.42
4:CA:1606:C:H3'	4:CA:1606:C:H6	1.84	0.42
4:CA:1939:U:H5'	69:CA:3506:HOH:O	2.18	0.42
4:CA:2067:G:C5	4:CA:2444:G:C2	3.07	0.42
4:CA:2447:G:O6	4:CA:2504:U:O4	2.37	0.42
4:CA:2648:G:C2	4:CA:2649:C:C2	3.07	0.42
4:CA:2744:G:O2'	31:CG:145:ALA:HB2	2.20	0.42
5:DB:100:G:P	69:DB:317:HOH:O	2.77	0.42
6:AB:117:LEU:O	6:AB:120:GLN:HB3	2.19	0.42
6:AB:128:LYS:HG3	6:AB:129:LEU:H	1.83	0.42
11:AG:139:GLU:OE1	11:AG:139:GLU:HA	2.18	0.42
12:AH:105:SER:O	12:AH:123:GLY:HA3	2.19	0.42
16:AL:114:ARG:HB3	16:AL:119:VAL:HB	2.01	0.42
19:AO:17:ARG:HD3	19:AO:17:ARG:N	2.34	0.42
24:AT:54:MET:SD	24:AT:79:LEU:CD1	3.08	0.42
6:BB:56:GLU:HG3	6:BB:198:PHE:CZ	2.53	0.42
6:BB:66:LYS:NZ	6:BB:154:MET:O	2.52	0.42
9:BE:81:LEU:CD1	9:BE:81:LEU:N	2.82	0.42
11:BG:30:LEU:HD11	11:BG:116:MET:HE2	2.01	0.42
14:BJ:5:ARG:C	14:BJ:6:ILE:HG13	2.39	0.42
17:BM:3:ARG:O	17:BM:4:ILE:HG13	2.19	0.42
18:BN:100:SER:O	18:BN:101:TRP:HB3	2.18	0.42
29:CE:75:SER:OG	29:CE:77:ILE:HG12	2.20	0.42
30:CF:15:LEU:HB2	30:CF:27:VAL:HG21	2.02	0.42
30:CF:82:TYR:HA	30:CF:83:PRO:HD3	1.95	0.42
31:CG:148:ARG:NH2	31:CG:166:GLU:OE2	2.52	0.42
32:CH:79:THR:CB	32:CH:144:ASN:HB2	2.49	0.42
32:CH:94:ILE:HB	32:CH:121:VAL:HG23	2.01	0.42
33:CJ:93:ASN:OD1	33:CJ:136:GLY:HA2	2.19	0.42
35:CL:119:ALA:HB1	35:CL:120:PRO:CD	2.50	0.42
51:C1:54:ILE:O	51:C1:55:ALA:HB2	2.20	0.42
29:DE:154:ASP:O	29:DE:155:GLU:C	2.58	0.42
33:DJ:54:ILE:HG21	33:DJ:70:THR:OG1	2.19	0.42
33:DJ:86:LYS:HD2	33:DJ:87:SER:N	2.33	0.42
34:DK:70:THR:OG1	34:DK:71:ASP:OD1	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DS:40:MET:HG2	42:DS:41:ILE:N	2.35	0.42
42:DS:66:HIS:CE1	42:DS:94:THR:CG2	3.02	0.42
57:D7:31:THR:OG1	57:D7:32:ASP:N	2.51	0.42
1:AA:19:A:C4	1:AA:917:G:C2	3.07	0.42
1:AA:186:C:H2'	1:AA:187:G:O4'	2.19	0.42
1:AA:221:C:H2'	1:AA:222:C:H6	1.84	0.42
1:AA:376:G:OP1	20:AP:5:ARG:HB2	2.19	0.42
1:AA:844:G:C6	1:AA:846:G:H1'	2.55	0.42
1:AA:1033:G:C2	1:AA:1034:G:C5	3.08	0.42
1:AA:1392:G:C6	1:AA:1393:U:C4	3.07	0.42
1:AA:1405:G:H1'	1:AA:1519:MA6:C4'	2.50	0.42
1:AA:1451:U:H5'	1:AA:1452:C:H5	1.84	0.42
2:BA:11:G:O5'	2:BA:11:G:H8	2.03	0.42
2:BA:204:G:H2'	2:BA:205:A:C8	2.54	0.42
2:BA:282:A:C8	2:BA:283:U:C5	3.08	0.42
2:BA:391:G:C6	2:BA:392:C:C4	3.08	0.42
2:BA:640:A:H5"	69:BA:1875:HOH:O	2.20	0.42
2:BA:659:U:C2'	2:BA:660:C:H5'	2.50	0.42
2:BA:932:C:O2'	2:BA:933:G:O5'	2.37	0.42
2:BA:1026:G:O6	2:BA:1035:A:N6	2.50	0.42
2:BA:1055:A:C6	2:BA:1206:G:C5	3.08	0.42
2:BA:1072:G:C6	2:BA:1073:U:C4	3.06	0.42
2:BA:1084:G:H2'	2:BA:1085:U:OP1	2.19	0.42
2:BA:1184:G:C2	2:BA:1185:G:C8	3.08	0.42
2:BA:1387:G:H2'	2:BA:1388:C:C6	2.50	0.42
2:BA:1530:G:H2'	2:BA:1531:A:C8	2.55	0.42
3:DA:118:A:N3	3:DA:178:G:H1'	2.34	0.42
3:DA:394:C:O2'	3:DA:395:U:H5'	2.20	0.42
3:DA:691:C:O2'	3:DA:692:C:H5'	2.19	0.42
3:DA:858:G:O2'	3:DA:2268:A:O2'	2.29	0.42
3:DA:974:G:C4	3:DA:1186:G:C2	3.07	0.42
3:DA:1173:U:C2'	3:DA:1174:U:O5'	2.66	0.42
3:DA:1429:G:C2	3:DA:1430:G:C5	3.07	0.42
3:DA:1997:C:H1'	69:DA:3662:HOH:O	2.19	0.42
3:DA:2020:A:H5'	51:D1:8:THR:HG22	2.02	0.42
3:DA:2162:G:H5'	3:DA:2173:A:C8	2.54	0.42
3:DA:2212:A:H4'	3:DA:2213:U:OP1	2.19	0.42
3:DA:2287:A:OP1	52:D2:29:LYS:HE2	2.18	0.42
3:DA:2484:G:OP1	37:DN:44:ARG:HD3	2.19	0.42
3:DA:2574:G:C2'	3:DA:2575:C:H5'	2.50	0.42
3:DA:2819:G:H2'	3:DA:2821:A:N7	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:125:A:H5"	53:C3:19:ARG:CD	2.49	0.42
4:CA:199:A:N6	4:CA:2433:A:H2'	2.34	0.42
4:CA:220:G:N3	4:CA:233:A:H2	2.17	0.42
4:CA:243:U:OP2	54:C4:7:ARG:CZ	2.67	0.42
4:CA:302:C:H2'	4:CA:303:G:O4'	2.19	0.42
4:CA:327:G:N2	4:CA:336:C:C2	2.87	0.42
4:CA:514:A:N3	4:CA:581:C:O2'	2.39	0.42
4:CA:627:A:O3'	4:CA:628:G:O4'	2.36	0.42
4:CA:635:C:C4	4:CA:636:G:N7	2.88	0.42
4:CA:694:U:H2'	4:CA:695:G:H5"	2.01	0.42
4:CA:769:U:N3	4:CA:770:G:N7	2.68	0.42
4:CA:1202:G:N1	4:CA:1244:A:C2	2.87	0.42
4:CA:1378:A:N3	4:CA:1380:G:C8	2.87	0.42
4:CA:1527:G:H21	4:CA:1545:A:H62	1.65	0.42
4:CA:1905:C:N4	4:CA:1930:G:C2	2.87	0.42
4:CA:2199:A:H1'	32:CH:28:ASN:ND2	2.34	0.42
4:CA:2232:C:OP2	48:CY:26:ARG:NH2	2.29	0.42
4:CA:2552:U:H6	4:CA:2552:U:O5'	2.03	0.42
4:CA:2684:U:C4'	35:CL:70:ARG:NH1	2.83	0.42
4:CA:2701:U:H3'	4:CA:2702:G:C5'	2.49	0.42
4:CA:2796:U:C4	4:CA:2798:U:C4	3.07	0.42
4:CA:2811:G:H2'	4:CA:2812:G:C8	2.54	0.42
6:AB:81:LYS:HA	6:AB:91:PHE:CE2	2.55	0.42
6:AB:128:LYS:HG3	6:AB:129:LEU:N	2.34	0.42
8:AD:145:ILE:HG23	8:AD:149:ALA:HB3	2.01	0.42
9:AE:52:LYS:HB2	9:AE:52:LYS:NZ	2.35	0.42
9:AE:81:LEU:HB3	9:AE:147:MET:CE	2.49	0.42
10:AF:3:HIS:HB2	10:AF:92:THR:O	2.20	0.42
12:AH:22:LYS:HE2	12:AH:22:LYS:HA	2.01	0.42
15:AK:86:VAL:HG11	15:AK:93:ARG:HG2	2.00	0.42
16:AL:90:LEU:HD23	16:AL:93:VAL:HG21	2.00	0.42
23:AS:20:GLU:HA	23:AS:20:GLU:OE2	2.18	0.42
6:BB:132:LYS:HG3	6:BB:136:MET:HB3	2.01	0.42
8:BD:4:TYR:O	8:BD:5:LEU:HB2	2.18	0.42
8:BD:37:ALA:O	8:BD:42:GLY:HA3	2.19	0.42
28:CD:149:ASN:C	28:CD:151:THR:N	2.72	0.42
32:CH:4:ILE:HG22	32:CH:5:LEU:N	2.35	0.42
32:CH:27:ARG:HH22	32:CH:38:PRO:HG3	1.84	0.42
38:CO:43:GLU:OE1	38:CO:43:GLU:HA	2.18	0.42
45:CV:33:VAL:CG2	45:CV:64:ILE:O	2.68	0.42
31:DG:104:LEU:HB2	31:DG:112:VAL:HB	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DH:2:GLN:HA	32:DH:20:ASN:HA	2.01	0.42
34:DK:69:ARG:CB	69:DK:313:HOH:O	2.66	0.42
38:DO:115:LEU:O	38:DO:118:ARG:HB2	2.19	0.42
40:DQ:109:ILE:HG13	40:DQ:109:ILE:O	2.19	0.42
42:DS:68:ARG:HD3	42:DS:92:TRP:CE2	2.55	0.42
1:AA:342:C:C2'	1:AA:343:U:H5'	2.49	0.42
1:AA:457:G:H3'	1:AA:458:U:H5"	2.01	0.42
1:AA:482:A:H2'	1:AA:483:C:O4'	2.19	0.42
1:AA:1015:G:N2	1:AA:1218:C:O2	2.53	0.42
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.20	0.42
1:AA:1304:G:N1	1:AA:1305:G:N2	2.67	0.42
1:AA:1476:A:C2'	1:AA:1477:U:O5'	2.67	0.42
2:BA:87:C:H2'	2:BA:88:U:C2	2.55	0.42
2:BA:213:G:C6	2:BA:214:C:C2	3.07	0.42
2:BA:449:G:H8	2:BA:449:G:O5'	2.02	0.42
2:BA:477:C:H2'	2:BA:478:A:C1'	2.50	0.42
2:BA:802:A:H2'	2:BA:803:G:O4'	2.19	0.42
2:BA:1048:G:C2	2:BA:1050:G:N7	2.87	0.42
2:BA:1073:U:C4	2:BA:1074:G:N7	2.88	0.42
2:BA:1082:A:C2'	2:BA:1083:U:H5'	2.49	0.42
2:BA:1309:G:O6	2:BA:1329:A:C6	2.72	0.42
3:DA:412:A:H2'	3:DA:413:C:H5'	2.01	0.42
3:DA:560:C:P	69:DA:3464:HOH:O	2.77	0.42
3:DA:668:A:H8	69:DA:6349:HOH:O	2.02	0.42
3:DA:872:U:H2'	3:DA:873:C:C6	2.55	0.42
3:DA:945:A:C5	3:DA:2448:A:C2	3.07	0.42
3:DA:1014:A:C6	3:DA:1015:U:C4	3.08	0.42
3:DA:1837:C:O2'	3:DA:1927:A:C2'	2.66	0.42
3:DA:1837:C:O2'	3:DA:1927:A:O2'	2.24	0.42
3:DA:1991:U:H2'	3:DA:1992:G:C5'	2.49	0.42
3:DA:2069:G7M:O6	3:DA:2069:G7M:HN71	2.18	0.42
3:DA:2133:G:H2'	3:DA:2157:G:H1	1.83	0.42
3:DA:2142:A:C2	3:DA:2150:C:N3	2.87	0.42
3:DA:2185:U:C5	3:DA:2186:G:N7	2.88	0.42
3:DA:2825:G:C3'	3:DA:2826:A:H5'	2.49	0.42
4:CA:48:G:O4'	4:CA:52:A:O4'	2.38	0.42
4:CA:370:G:N7	69:CA:3503:HOH:O	2.36	0.42
4:CA:404:A:N3	4:CA:404:A:OP2	2.53	0.42
4:CA:438:G:C6	4:CA:439:A:C6	3.08	0.42
4:CA:453:A:N3	4:CA:457:A:O2'	2.53	0.42
4:CA:684:G:H4'	53:C3:16:HIS:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:776:G:O2'	4:CA:2241:A:OP1	2.25	0.42
4:CA:974:G:O2'	4:CA:975:A:OP2	2.37	0.42
4:CA:1084:A:H2	4:CA:1106:G:H1'	1.84	0.42
4:CA:1140:C:H2'	4:CA:1141:U:H5'	2.00	0.42
4:CA:1259:G:H2'	4:CA:1260:A:O4'	2.19	0.42
4:CA:1351:C:O2'	4:CA:1571:A:N3	2.41	0.42
4:CA:1553:A:N7	4:CA:1555:G:C6	2.88	0.42
4:CA:1627:G:C2	4:CA:1628:G:C8	3.07	0.42
4:CA:1829:A:O2'	27:CC:14:HIS:CD2	2.72	0.42
4:CA:2064:C:O3'	4:CA:2251:G:N2	2.52	0.42
4:CA:2240:U:H6	69:CA:3389:HOH:O	2.03	0.42
4:CA:2318:G:C6	4:CA:2319:G:C6	3.08	0.42
4:CA:2342:C:O2'	4:CA:2374:C:H5"	2.19	0.42
4:CA:2611:C:P	69:CA:3314:HOH:O	2.77	0.42
4:CA:2835:A:O4'	4:CA:2836:U:H5	2.01	0.42
4:CA:2880:C:O2	4:CA:2880:C:H2'	2.20	0.42
5:DB:90:C:H5"	5:DB:90:C:C6	2.39	0.42
5:CB:40:U:C2	5:CB:43:C:OP2	2.73	0.42
5:CB:75:G:H22	5:CB:102:G:H22	1.67	0.42
6:AB:120:GLN:O	6:AB:125:THR:O	2.38	0.42
6:AB:181:ILE:O	6:AB:183:VAL:HG23	2.19	0.42
13:AI:30:ILE:HB	13:AI:65:ILE:CD1	2.49	0.42
14:AJ:18:ILE:CG2	14:AJ:19:ASP:N	2.82	0.42
15:AK:25:ALA:HA	15:AK:30:THR:HG22	2.00	0.42
17:AM:85:CYS:O	17:AM:89:LEU:HG	2.19	0.42
19:AO:3:LEU:HD12	19:AO:3:LEU:HA	1.96	0.42
21:AQ:17:MET:CG	21:AQ:20:SER:O	2.67	0.42
7:BC:57:ILE:HA	7:BC:66:VAL:HA	2.01	0.42
7:BC:77:ILE:HD11	7:BC:103:ILE:CD1	2.50	0.42
8:BD:97:ARG:O	8:BD:101:VAL:HG23	2.19	0.42
9:BE:16:ILE:HD11	9:BE:38:VAL:HB	2.02	0.42
26:BL:28:PRO:HG2	26:BL:29:GLN:OE1	2.19	0.42
21:BQ:17:MET:HE2	21:BQ:20:SER:O	2.18	0.42
33:CJ:105:LEU:HD21	33:CJ:128:ILE:HB	2.01	0.42
35:CL:30:ARG:HG3	35:CL:30:ARG:HH11	1.85	0.42
40:CQ:88:ARG:O	40:CQ:111:GLU:HA	2.19	0.42
44:CU:61:LEU:O	44:CU:62:VAL:HG23	2.19	0.42
47:CX:29:VAL:HG21	47:CX:80:ILE:HD11	2.01	0.42
49:CZ:57:LEU:O	49:CZ:61:ALA:N	2.53	0.42
51:C1:50:GLY:O	51:C1:51:ARG:C	2.57	0.42
56:DD:158:GLY:O	56:DD:159:LYS:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DH:71:LYS:O	32:DH:108:VAL:CG2	2.66	0.42
35:DL:88:ASN:ND2	35:DL:90:ASN:H	2.18	0.42
39:DP:99:TYR:N	69:DP:304:HOH:O	2.49	0.42
59:DT:202:PGE:H62	51:D1:23:ALA:H	1.83	0.42
44:DU:18:GLU:O	44:DU:22:THR:HG23	2.20	0.42
55:D5:18:GLN:O	55:D5:19:ILE:CB	2.66	0.42
1:AA:349:A:O2'	1:AA:350:G:H5'	2.19	0.42
1:AA:872:A:C5	1:AA:874:G:C8	3.07	0.42
1:AA:949:A:C5	1:AA:950:U:C5	3.08	0.42
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.42
1:AA:1402:4OC:HM22	1:AA:1403:C:C4'	2.48	0.42
2:BA:77:A:C6	2:BA:78:A:C6	3.08	0.42
2:BA:151:A:H2'	2:BA:152:A:O4'	2.19	0.42
2:BA:173:U:OP1	2:BA:198:G:H4'	2.20	0.42
2:BA:191:G:OP2	2:BA:191:G:H8	2.01	0.42
2:BA:230:G:O5'	2:BA:230:G:H8	2.02	0.42
2:BA:406:G:C2	2:BA:407:U:C6	3.07	0.42
2:BA:679:C:C2	2:BA:712:A:C2	3.07	0.42
2:BA:716:A:C2'	2:BA:717:U:O5'	2.68	0.42
2:BA:980:C:O2	18:BN:59:ARG:O	2.38	0.42
2:BA:987:G:C5	2:BA:988:G:C5	3.08	0.42
69:BA:1833:HOH:O	20:BP:25:ARG:HA	2.19	0.42
3:DA:84:A:H4'	3:DA:85:G:O5'	2.19	0.42
3:DA:940:G:H3'	3:DA:941:A:H5"	2.01	0.42
3:DA:1054:A:C2	3:DA:1106:G:C6	3.08	0.42
3:DA:1206:G:C5	3:DA:1207:C:C5	3.07	0.42
3:DA:1222:U:O2	3:DA:1228:G:C2	2.73	0.42
3:DA:1283:G:N2	3:DA:1286:A:OP2	2.51	0.42
3:DA:1283:G:H22	3:DA:1286:A:P	2.42	0.42
3:DA:1288:G:C5	3:DA:1327:A:C2	3.08	0.42
3:DA:1583:A:N3	3:DA:1583:A:O4'	2.53	0.42
3:DA:1591:A:H2'	3:DA:1592:C:H6	1.84	0.42
3:DA:1728:C:H5"	3:DA:1729:U:OP2	2.19	0.42
3:DA:1797:G:C2'	3:DA:1798:U:O5'	2.67	0.42
3:DA:1857:G:N3	3:DA:1884:G:C2	2.87	0.42
3:DA:2021:C:H3'	3:DA:2022:U:C5'	2.49	0.42
3:DA:2223:G:OP1	27:DC:170:TYR:OH	2.24	0.42
3:DA:2371:G:O2'	52:D2:45:HIS:HD2	2.03	0.42
3:DA:2545:G:H2'	3:DA:2546:U:H5'	2.02	0.42
3:DA:2592:G:N2	69:DA:4056:HOH:O	2.48	0.42
3:DA:2897:U:O2'	3:DA:2898:U:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:45:G:H1	4:CA:433:C:H42	1.67	0.42
4:CA:96:C:H2'	4:CA:97:C:C6	2.55	0.42
4:CA:122:G:C8	69:CA:3459:HOH:O	2.70	0.42
4:CA:123:G:C2	4:CA:129:C:N3	2.88	0.42
4:CA:187:G:O2'	4:CA:1365:A:C2	2.68	0.42
4:CA:513:A:N1	4:CA:514:A:C6	2.88	0.42
4:CA:856:G:N2	4:CA:922:C:C2	2.88	0.42
4:CA:1242:U:O2	36:CM:4:ASN:ND2	2.46	0.42
4:CA:1499:C:C2'	4:CA:1500:G:H5'	2.49	0.42
4:CA:1587:G:H2'	4:CA:1588:G:O4'	2.19	0.42
4:CA:1678:A:N7	4:CA:1679:A:N7	2.68	0.42
4:CA:1702:G:C6	4:CA:1703:G:N7	2.88	0.42
4:CA:1783:A:C2	4:CA:2588:G:O4'	2.73	0.42
4:CA:1877:A:H2'	4:CA:1878:G:C8	2.55	0.42
4:CA:1901:A:H2'	4:CA:1902:C:H5"	2.01	0.42
4:CA:1992:G:N1	4:CA:1995:U:O4	2.52	0.42
4:CA:2563:U:O2	4:CA:2565:A:H8	2.02	0.42
4:CA:2870:C:H5"	38:CO:65:LEU:CD2	2.49	0.42
5:CB:18:G:C6	5:CB:19:C:N4	2.88	0.42
6:AB:86:SER:O	6:AB:87:CYS:C	2.57	0.42
6:AB:107:VAL:O	6:AB:111:ILE:CD1	2.68	0.42
6:AB:111:ILE:O	6:AB:114:LEU:N	2.52	0.42
6:AB:205:ASP:OD1	6:AB:205:ASP:C	2.57	0.42
8:AD:130:VAL:HG21	8:AD:135:TYR:CE1	2.54	0.42
9:AE:45:ARG:HA	9:AE:72:ILE:O	2.19	0.42
11:AG:4:ARG:HG3	11:AG:5:ARG:N	2.35	0.42
15:AK:16:VAL:HG23	15:AK:17:SER:H	1.84	0.42
21:AQ:47:HIS:CG	21:AQ:67:LEU:HD23	2.55	0.42
21:AQ:61:ILE:CG2	21:AQ:73:TRP:CE3	3.03	0.42
6:BB:132:LYS:HA	6:BB:136:MET:HB2	2.02	0.42
6:BB:134:ALA:O	6:BB:138:THR:HG23	2.20	0.42
8:BD:9:LEU:HD11	8:BD:28:ILE:HD11	2.01	0.42
8:BD:72:PHE:CE2	8:BD:200:ILE:HD11	2.54	0.42
10:BF:51:ILE:C	10:BF:53:LYS:N	2.69	0.42
12:BH:108:LYS:CB	69:BH:1402:HOH:O	2.67	0.42
14:BJ:15:HIS:HA	14:BJ:18:ILE:HG22	2.01	0.42
18:BN:90:ARG:HH11	18:BN:92:GLU:CD	2.23	0.42
20:BP:76:LYS:HA	20:BP:76:LYS:HE2	2.01	0.42
22:BR:36:SER:HB3	25:BU:4:ILE:CD1	2.50	0.42
23:BS:31:LEU:O	23:BS:50:ALA:HB3	2.20	0.42
23:BS:45:ILE:CD1	23:BS:64:ASP:HA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:3:ASN:OD1	24:BT:4:ILE:N	2.53	0.42
27:CC:204:LEU:H	27:CC:204:LEU:HD22	1.84	0.42
34:CK:114:LEU:O	34:CK:118:MET:HG3	2.19	0.42
41:CR:60:TRP:HE3	41:CR:91:ARG:HG3	1.84	0.42
43:CT:75:PHE:CZ	43:CT:104:THR:HG21	2.55	0.42
29:DE:48:THR:HB	69:DE:402:HOH:O	2.20	0.42
36:DM:91:ASP:N	36:DM:91:ASP:OD1	2.53	0.42
42:DS:4:VAL:HA	42:DS:12:HIS:O	2.20	0.42
46:DW:2:PHE:HB3	46:DW:50:MET:CE	2.49	0.42
47:DX:12:ARG:HD3	69:DX:112:HOH:O	2.19	0.42
1:AA:409:U:P	8:AD:23:SER:HG	2.42	0.42
1:AA:749:A:H2	19:AO:22:THR:CG2	2.32	0.42
1:AA:1046:A:C2'	1:AA:1047:G:H5'	2.50	0.42
1:AA:1054:C:P	1:AA:1196:A:HO2'	2.43	0.42
1:AA:1357:A:H5"	1:AA:1358:U:OP2	2.19	0.42
1:AA:1494:G:H2'	1:AA:1495:U:O5'	2.20	0.42
2:BA:40:C:H2'	2:BA:41:G:O4'	2.19	0.42
2:BA:154:U:C2	2:BA:168:G:N2	2.87	0.42
2:BA:366:A:H2	2:BA:394:G:O6	2.03	0.42
2:BA:421:U:H5'	2:BA:422:C:C6	2.55	0.42
2:BA:695:A:H2'	2:BA:696:A:C8	2.54	0.42
2:BA:820:U:H4'	2:BA:821:G:OP2	2.19	0.42
2:BA:951:G:H1	2:BA:1230:C:N4	2.18	0.42
2:BA:1095:U:O2	2:BA:1096:C:C6	2.73	0.42
2:BA:1095:U:N3	2:BA:1096:C:C5	2.88	0.42
2:BA:1112:C:C4	7:BC:178:LEU:HD23	2.55	0.42
2:BA:1271:A:H2'	69:BA:1901:HOH:O	2.19	0.42
2:BA:1352:C:O2	2:BA:1371:G:C2	2.73	0.42
2:BA:1408:A:N1	2:BA:1494:G:C5	2.88	0.42
3:DA:136:G:C2	3:DA:144:A:C2	3.08	0.42
3:DA:178:G:O3'	69:DA:3556:HOH:O	2.22	0.42
3:DA:613:A:H2'	3:DA:614:A:H5'	2.01	0.42
3:DA:693:A:N7	3:DA:694:U:C5	2.87	0.42
3:DA:744:U:H2'	3:DA:745:1MG:O4'	2.20	0.42
3:DA:878:A:H5'	3:DA:879:G:OP2	2.19	0.42
3:DA:929:U:H1'	50:D0:25:GLY:O	2.20	0.42
3:DA:1050:A:C2	3:DA:2751:G:C4	3.08	0.42
3:DA:1457:U:H5"	3:DA:1458:U:OP1	2.19	0.42
3:DA:1688:U:N3	3:DA:1698:A:C2	2.88	0.42
3:DA:1829:A:H2'	3:DA:1830:C:H5'	2.02	0.42
3:DA:1984:G:O2'	3:DA:1985:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2008:C:P	69:DA:3331:HOH:O	2.76	0.42
3:DA:2213:U:H4'	3:DA:2214:C:OP2	2.19	0.42
3:DA:2243:U:H2'	3:DA:2244:U:C6	2.55	0.42
3:DA:2446:G:N3	69:DA:3812:HOH:O	2.36	0.42
3:DA:2520:C:C6	3:DA:2567:G:H1'	2.55	0.42
3:DA:2590:A:C2	3:DA:2605:PSU:C4	3.08	0.42
3:DA:2686:G:C6	3:DA:2687:U:C4	3.08	0.42
3:DA:2707:U:OP2	69:DA:3548:HOH:O	2.21	0.42
3:DA:2747:G:H1	3:DA:2754:U:H2'	1.85	0.42
4:CA:85:G:OP2	45:CV:6:ARG:HG2	2.20	0.42
4:CA:118:A:C8	4:CA:119:A:C8	3.08	0.42
4:CA:307:G:N2	4:CA:310:A:C8	2.88	0.42
4:CA:380:G:H4'	48:CY:15:ASN:O	2.18	0.42
4:CA:415:A:O2'	4:CA:1865:U:H5"	2.19	0.42
4:CA:1324:G:O4'	4:CA:1616:A:N6	2.53	0.42
4:CA:1367:A:H2'	4:CA:1367:A:N3	2.34	0.42
4:CA:1383:A:C2'	4:CA:1384:A:O5'	2.68	0.42
4:CA:1562:U:H2'	4:CA:1563:U:O4'	2.20	0.42
4:CA:1783:A:C2	4:CA:2587:A:C4	3.07	0.42
4:CA:1838:C:H4'	4:CA:1839:G:C8	2.55	0.42
4:CA:1893:C:P	69:CA:3432:HOH:O	2.77	0.42
4:CA:2145:C:H4'	4:CA:2146:C:OP2	2.20	0.42
4:CA:2271:G:H2'	4:CA:2272:U:O4'	2.19	0.42
4:CA:2286:G:H4'	4:CA:2287:A:O4'	2.19	0.42
4:CA:2508:G:H2'	4:CA:2509:G:C8	2.54	0.42
4:CA:2571:U:N3	4:CA:2574:G:C8	2.88	0.42
4:CA:2574:G:H2'	4:CA:2574:G:N3	2.35	0.42
14:AJ:36:VAL:HA	14:AJ:75:ASP:O	2.19	0.42
17:AM:63:PHE:HA	69:AM:206:HOH:O	2.19	0.42
18:AN:42:TRP:O	18:AN:44:ALA:N	2.52	0.42
18:AN:52:PRO:O	18:AN:54:ASP:N	2.52	0.42
24:AT:29:ARG:O	24:AT:33:LYS:HG3	2.20	0.42
6:BB:85:LEU:O	6:BB:85:LEU:CG	2.67	0.42
6:BB:104:TRP:O	6:BB:108:ARG:N	2.45	0.42
24:BT:67:ILE:O	24:BT:67:ILE:HG23	2.19	0.42
29:CE:79:ARG:O	29:CE:80:SER:HB2	2.19	0.42
33:CJ:11:GLN:NE2	33:CJ:54:ILE:O	2.39	0.42
40:CQ:28:LYS:HD3	40:CQ:39:LEU:HD23	2.01	0.42
44:CU:38:ALA:O	44:CU:39:THR:HB	2.20	0.42
48:CY:26:ARG:O	48:CY:27:ARG:HG3	2.19	0.42
51:C1:43:THR:HG23	51:C1:47:TYR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DE:149:ILE:HG23	29:DE:188:MET:HG2	2.01	0.42
30:DF:39:VAL:HG12	30:DF:40:GLY:N	2.35	0.42
31:DG:28:LYS:H	31:DG:28:LYS:HG3	1.62	0.42
37:DN:135:VAL:O	37:DN:136:MET:HB3	2.19	0.42
38:DO:37:THR:HG22	38:DO:110:MET:SD	2.59	0.42
41:DR:56:PHE:O	41:DR:59:LEU:N	2.52	0.42
43:DT:29:VAL:CG1	43:DT:55:ILE:HD11	2.49	0.42
1:AA:39:G:C2	1:AA:40:C:C6	3.08	0.42
1:AA:155:A:C2	1:AA:167:A:C2	3.08	0.42
1:AA:354:G:N2	1:AA:355:C:C2	2.88	0.42
1:AA:459:A:H2'	1:AA:460:A:C8	2.55	0.42
1:AA:547:A:P	69:AA:1816:HOH:O	2.78	0.42
1:AA:555:U:C4	1:AA:556:C:N4	2.88	0.42
1:AA:1389:C:H1'	69:AA:1877:HOH:O	2.19	0.42
2:BA:19:A:C2	2:BA:20:U:H1'	2.55	0.42
2:BA:68:G:H21	2:BA:152:A:H1'	1.85	0.42
2:BA:150:U:H2'	2:BA:151:A:H8	1.85	0.42
2:BA:200:G:N2	2:BA:218:U:C2	2.87	0.42
2:BA:610:U:C4	2:BA:611:C:C5	3.08	0.42
2:BA:690:G:C6	2:BA:691:G:C2	3.07	0.42
2:BA:1060:U:OP1	18:BN:85:ARG:NH2	2.52	0.42
2:BA:1089:G:C2	2:BA:1090:U:C2	3.08	0.42
2:BA:1097:C:H1'	2:BA:1170:A:H1'	2.01	0.42
2:BA:1107:C:C2	2:BA:1108:G:C8	3.07	0.42
2:BA:1118:U:OP1	69:BA:1744:HOH:O	2.21	0.42
2:BA:1315:U:C5	2:BA:1316:G:C6	3.08	0.42
2:BA:1480:A:C4	2:BA:1481:U:C6	3.07	0.42
3:DA:15:G:P	69:DA:3326:HOH:O	2.74	0.42
3:DA:74:A:N1	65:DA:3044:ACY:OXT	2.53	0.42
3:DA:247:G:H4'	3:DA:386:G:C5	2.55	0.42
3:DA:356:G:C2'	3:DA:357:C:H5'	2.50	0.42
3:DA:547:A:H3'	3:DA:548:G:C5'	2.50	0.42
3:DA:581:C:H6	3:DA:581:C:O5'	2.02	0.42
3:DA:855:G:H2'	3:DA:856:G:O5'	2.19	0.42
3:DA:1231:U:H1'	67:DA:3060:EDO:C2	2.48	0.42
3:DA:1255:U:OP2	3:DA:1255:U:O4'	2.38	0.42
3:DA:1400:U:H2'	3:DA:1401:G:H5'	1.99	0.42
3:DA:1444:G:H2'	3:DA:1445:G:H8	1.84	0.42
3:DA:1485:U:C5	3:DA:1486:U:C4	3.08	0.42
3:DA:1885:A:H2'	3:DA:1886:U:O4'	2.19	0.42
3:DA:1897:G:H2'	3:DA:1897:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2079:U:C4	3:DA:2080:A:N7	2.88	0.42
3:DA:2102:G:C2'	3:DA:2103:C:H5'	2.49	0.42
3:DA:2159:G:H2'	3:DA:2160:C:C6	2.55	0.42
3:DA:2339:C:C2	3:DA:2340:A:C8	3.08	0.42
3:DA:2438:U:H3'	69:DA:3774:HOH:O	2.19	0.42
3:DA:2849:U:O2'	3:DA:2866:U:O2	2.26	0.42
3:DA:2886:A:C6	51:D1:39:ARG:HD2	2.55	0.42
4:CA:572:A:H3'	4:CA:573:U:C4'	2.50	0.42
4:CA:600:G:C5'	29:CE:27:LEU:HD22	2.50	0.42
4:CA:811:U:O2	4:CA:1251:C:C6	2.72	0.42
4:CA:1336:A:H2'	4:CA:1337:G:C8	2.54	0.42
4:CA:1353:A:O2'	4:CA:1354:A:H5'	2.20	0.42
4:CA:1665:A:H2	35:CL:3:GLN:OE1	2.03	0.42
4:CA:1745:A:C4	4:CA:1746:A:C8	3.08	0.42
4:CA:1800:C:OP2	27:CC:262:THR:HG21	2.20	0.42
4:CA:2121:G:C6	4:CA:2122:U:C4	3.08	0.42
4:CA:2217:G:C4	4:CA:2218:G:C8	3.08	0.42
4:CA:2733:A:C6	69:CA:3446:HOH:O	2.71	0.42
4:CA:2854:G:N2	4:CA:2864:G:N3	2.68	0.42
9:AE:98:PRO:O	9:AE:99:ALA:O	2.37	0.42
10:AF:86:ARG:HH11	10:AF:86:ARG:CG	2.33	0.42
11:AG:50:LEU:HD11	11:AG:61:ALA:HB1	2.01	0.42
11:AG:134:ALA:O	11:AG:137:LYS:HB3	2.19	0.42
17:AM:33:ILE:HD11	17:AM:63:PHE:HE1	1.83	0.42
18:AN:65:ARG:CG	18:AN:65:ARG:HH11	2.32	0.42
20:AP:43:ALA:C	20:AP:44:SER:HG	2.10	0.42
6:BB:70:VAL:O	6:BB:164:ILE:HG22	2.19	0.42
7:BC:173:VAL:HG12	7:BC:175:LEU:CD1	2.49	0.42
11:BG:25:LYS:O	11:BG:29:ILE:CD1	2.67	0.42
11:BG:138:ARG:NH2	11:BG:139:GLU:OE2	2.42	0.42
12:BH:78:VAL:O	12:BH:80:ARG:HG2	2.19	0.42
13:BI:49:ARG:HG2	13:BI:52:LEU:CD1	2.50	0.42
15:BK:49:GLY:C	15:BK:51:GLY:N	2.70	0.42
21:BQ:43:LYS:HE2	21:BQ:43:LYS:HB3	1.83	0.42
31:CG:95:ALA:O	31:CG:127:GLN:HA	2.20	0.42
32:CH:27:ARG:O	32:CH:28:ASN:OD1	2.37	0.42
33:CJ:74:PRO:HD2	33:CJ:77:VAL:HG21	2.02	0.42
38:CO:20:MET:HG3	38:CO:21:PHE:N	2.34	0.42
42:CS:12:HIS:CE1	42:CS:22:LEU:CD2	3.03	0.42
51:C1:37:HIS:C	51:C1:37:HIS:HD1	2.22	0.42
56:DD:193:VAL:N	69:DD:402:HOH:O	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DH:132:GLN:HB3	32:DH:138:PHE:CE2	2.55	0.42
47:DX:73:LYS:HB2	47:DX:75:ARG:HG3	2.01	0.42
49:DZ:45:GLN:O	49:DZ:46:VAL:CG2	2.67	0.42
57:D7:58:THR:OG1	57:D7:59:GLY:N	2.52	0.42
1:AA:241:G:O2'	1:AA:242:G:H5'	2.20	0.42
1:AA:262:A:H2'	1:AA:263:A:C8	2.55	0.42
1:AA:538:G:OP2	16:AL:112:GLN:HB2	2.20	0.42
1:AA:715:A:H2'	1:AA:716:A:C8	2.55	0.42
1:AA:881:G:H2'	1:AA:882:C:O4'	2.19	0.42
1:AA:958:A:N6	1:AA:959:A:N1	2.68	0.42
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.73	0.42
1:AA:1260:G:OP1	1:AA:1284:C:O2'	2.37	0.42
1:AA:1269:A:H2	1:AA:1312:G:N3	2.17	0.42
1:AA:1270:G:H5'	69:AA:1875:HOH:O	2.19	0.42
1:AA:1283:U:O2'	1:AA:1284:C:H5'	2.20	0.42
1:AA:1377:A:O2'	11:AG:2:PRO:HG2	2.20	0.42
1:AA:1381:U:O2'	11:AG:79:ARG:O	2.36	0.42
1:AA:1410:A:H2'	1:AA:1411:C:O4'	2.19	0.42
2:BA:146:G:C2	2:BA:177:G:C8	3.08	0.42
2:BA:234:C:O2'	2:BA:235:C:H5'	2.20	0.42
2:BA:437:U:C4	2:BA:438:U:C5	3.08	0.42
2:BA:684:U:O2'	2:BA:685:G:H5'	2.20	0.42
2:BA:688:G:C5	2:BA:700:G:C2	3.08	0.42
2:BA:1005:A:H2'	2:BA:1006:G:O4'	2.19	0.42
2:BA:1228:C:H4'	17:BM:115:PRO:OXT	2.20	0.42
2:BA:1346:A:O4'	2:BA:1348:U:C6	2.73	0.42
2:BA:1360:A:H2'	2:BA:1361:G:O4'	2.20	0.42
3:DA:200:U:H5"	69:DA:3687:HOH:O	2.19	0.42
3:DA:587:C:N4	69:DA:4154:HOH:O	2.52	0.42
3:DA:861:A:C2	3:DA:917:A:C4	3.08	0.42
3:DA:972:A:C6	3:DA:973:A:C6	3.08	0.42
3:DA:1161:C:O2'	42:DS:8:GLY:HA2	2.20	0.42
3:DA:1171:G:N2	3:DA:1179:G:C4	2.87	0.42
3:DA:1238:G:O2'	3:DA:1239:G:H5'	2.20	0.42
3:DA:1312:U:C5'	69:DA:4855:HOH:O	2.68	0.42
3:DA:1486:U:O2'	3:DA:1487:U:H5'	2.19	0.42
3:DA:1817:G:C2'	3:DA:1818:U:H5'	2.47	0.42
3:DA:1903:G:O2'	3:DA:1904:G:H5'	2.19	0.42
3:DA:2131:U:C2	3:DA:2158:A:N6	2.87	0.42
3:DA:2141:G:C2	3:DA:2151:U:H1'	2.55	0.42
3:DA:2392:A:C8	3:DA:2429[A]:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2775:G:O6	69:DA:3501:HOH:O	2.18	0.42
4:CA:36:G:H4'	4:CA:451:U:C2	2.55	0.42
4:CA:45:G:N7	4:CA:215:G:O2'	2.48	0.42
4:CA:109:C:H5'	4:CA:348:A:O4'	2.20	0.42
4:CA:244:A:H61	4:CA:254:G:H1'	1.84	0.42
4:CA:310:A:O2'	4:CA:311:A:P	2.78	0.42
4:CA:381:G:H2'	69:CA:3587:HOH:O	2.19	0.42
4:CA:822:G:O6	4:CA:943:A:C2	2.73	0.42
4:CA:1028:A:C2	4:CA:1029:A:C5	3.08	0.42
4:CA:1097:U:H2'	4:CA:1098:A:H5'	2.01	0.42
4:CA:1307:A:C2	4:CA:1308:A:C5	3.08	0.42
4:CA:1435:G:O2'	4:CA:1436:G:H5'	2.20	0.42
4:CA:1847:A:HO2'	4:CA:1848:A:P	2.43	0.42
4:CA:1984:G:C6	4:CA:1985:C:N4	2.87	0.42
4:CA:2111:U:O2	4:CA:2118:U:O2	2.38	0.42
4:CA:2267:A:H5"	4:CA:2268:A:H5'	2.02	0.42
4:CA:2447:G:H8	4:CA:2500:U:H3'	1.82	0.42
4:CA:2463:C:O2'	4:CA:2464:G:H5'	2.20	0.42
4:CA:2546:U:H4'	4:CA:2565:A:C6	2.55	0.42
4:CA:2787:C:H1'	28:CD:63:PRO:HG3	2.02	0.42
6:AB:15:HIS:CD2	6:AB:16:PHE:N	2.88	0.42
6:AB:200:ILE:O	6:AB:201:PRO:O	2.37	0.42
6:AB:213:TYR:HB2	69:AB:311:HOH:O	2.20	0.42
8:AD:9:LEU:CD1	8:AD:9:LEU:N	2.83	0.42
8:AD:55:LEU:C	8:AD:55:LEU:CD2	2.88	0.42
17:AM:6:GLY:C	17:AM:8:ASN:N	2.73	0.42
21:AQ:12:VAL:O	21:AQ:22:VAL:O	2.37	0.42
7:BC:53:SER:O	7:BC:54:ARG:HB2	2.20	0.42
8:BD:118:VAL:O	8:BD:131:ASN:ND2	2.51	0.42
9:BE:134:ILE:HD12	9:BE:134:ILE:H	1.84	0.42
10:BF:25:TYR:N	10:BF:25:TYR:CD1	2.86	0.42
10:BF:88:MET:SD	10:BF:90:MET:SD	3.18	0.42
13:BI:30:ILE:HA	13:BI:65:ILE:HG13	2.01	0.42
14:BJ:65:TYR:CG	18:BN:96:LEU:HD21	2.54	0.42
18:BN:35:ALA:HB2	18:BN:41:ARG:HG3	2.00	0.42
29:CE:83:VAL:O	29:CE:83:VAL:HG12	2.20	0.42
31:CG:100:ASN:OD1	31:CG:115:GLN:NE2	2.51	0.42
32:CH:71:LYS:O	32:CH:108:VAL:HG21	2.19	0.42
38:CO:37:THR:HA	38:CO:110:MET:HA	2.02	0.42
42:CS:13:ARG:NH2	69:CS:205:HOH:O	2.51	0.42
44:CU:2:ILE:O	44:CU:2:ILE:CG2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:C5:19:ILE:HG12	55:C5:28:VAL:HG22	2.02	0.42
56:DD:77:ARG:NH2	56:DD:200:ASP:OD1	2.32	0.42
30:DF:24:VAL:O	30:DF:27:VAL:HG12	2.20	0.42
31:DG:34:ARG:HD3	31:DG:70:LEU:HD13	2.02	0.42
31:DG:120:ILE:HD11	31:DG:139:VAL:HG12	2.02	0.42
33:DJ:17:ALA:O	33:DJ:18:ASN:HB2	2.20	0.42
34:DK:34:ARG:NE	69:DK:302:HOH:O	2.18	0.42
35:DL:4:GLU:O	35:DL:5:GLN:CB	2.63	0.42
39:DP:1:MET:O	39:DP:1:MET:HG2	2.20	0.42
41:DR:25:GLY:O	41:DR:29:ARG:NH1	2.53	0.42
48:DY:73:ARG:CG	48:DY:75:GLU:HB2	2.50	0.42
54:D4:6:VAL:HB	54:D4:60:CYS:HB3	2.02	0.42
54:D4:28:LEU:HD12	54:D4:28:LEU:HA	1.90	0.42
1:AA:600:A:H2'	1:AA:601:G:H8	1.84	0.42
1:AA:659:U:H2'	1:AA:660:C:H6	1.85	0.42
1:AA:970:C:P	69:AA:1715:HOH:O	2.69	0.42
1:AA:1048:G:N3	1:AA:1050:G:N7	2.68	0.42
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.35	0.42
1:AA:1130:A:C4	1:AA:1146:A:C2	3.08	0.42
1:AA:1170:A:C8	1:AA:1171:A:C8	3.08	0.42
1:AA:1311:A:C2	1:AA:1327:C:C4	3.08	0.42
2:BA:32:A:C4	2:BA:33:A:N7	2.88	0.42
2:BA:619:U:H3	8:BD:131:ASN:HB3	1.85	0.42
2:BA:667:G:N1	2:BA:740:U:C2	2.88	0.42
2:BA:861:G:O2'	2:BA:862:C:H5'	2.20	0.42
2:BA:931:C:C2	2:BA:932:C:C5	3.08	0.42
2:BA:959:A:C3'	2:BA:960:U:H4'	2.50	0.42
2:BA:1070:U:C2	2:BA:1071:C:C5	3.08	0.42
2:BA:1278:G:H4'	2:BA:1279:G:C4	2.55	0.42
2:BA:1409:C:H2'	2:BA:1410:A:C8	2.55	0.42
3:DA:391:A:H2'	3:DA:392:U:H5'	2.01	0.42
3:DA:527:C:P	69:DA:3884:HOH:O	2.78	0.42
3:DA:533:G:H2'	3:DA:534:U:C6	2.55	0.42
3:DA:570:G:H8	3:DA:570:G:O5'	2.03	0.42
3:DA:598:U:H2'	3:DA:599:A:C8	2.54	0.42
3:DA:747:5MU:H73	69:DA:5053:HOH:O	2.20	0.42
3:DA:864:G:O2'	3:DA:865:C:H5'	2.19	0.42
3:DA:1070:A:C6	33:DJ:9:LYS:O	2.73	0.42
3:DA:1085:A:N7	3:DA:1086:A:C6	2.88	0.42
3:DA:1105:U:H2'	3:DA:1106:G:H8	1.80	0.42
3:DA:1194:A:C2'	3:DA:1195:G:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1245:G:O2'	3:DA:1246:A:H5'	2.20	0.42
3:DA:1251:C:OP2	41:DR:5:ARG:HD2	2.20	0.42
3:DA:1270:C:H5"	3:DA:1271:G:O5'	2.20	0.42
3:DA:1305:C:O2	3:DA:1305:C:H2'	2.19	0.42
3:DA:1462:C:H2'	3:DA:1463:C:H6	1.85	0.42
3:DA:1467:U:C4	3:DA:1468:U:C5	3.08	0.42
3:DA:1833:C:C2	3:DA:1834:U:C6	3.07	0.42
3:DA:1935:G:C6	3:DA:1962:5MC:C5	3.07	0.42
3:DA:1952:A:N3	3:DA:2560:A:O2'	2.50	0.42
3:DA:2191:A:C2	3:DA:2192:U:C2	3.08	0.42
3:DA:2247:A:H8	3:DA:2247:A:O5'	2.02	0.42
3:DA:2275:C:O2	37:DN:84:LYS:HD3	2.19	0.42
3:DA:2328:A:H2'	3:DA:2329:U:C6	2.55	0.42
3:DA:2388:A:C2'	3:DA:2389:G:H5'	2.50	0.42
3:DA:2504:PSU:P	69:DA:3512:HOH:O	2.77	0.42
3:DA:2614:A:H4'	69:DA:3349:HOH:O	2.19	0.42
3:DA:2663:G:C2'	3:DA:2664:G:H5'	2.49	0.42
3:DA:2684:U:C4	3:DA:2685:G:N7	2.88	0.42
67:DA:3059:EDO:C1	56:DD:167:ASN:OD1	2.68	0.42
4:CA:13:A:N1	4:CA:525:U:H2'	2.34	0.42
4:CA:90:U:C2	4:CA:91:A:N7	2.88	0.42
4:CA:511:U:H4'	4:CA:1235:G:H4'	2.01	0.42
4:CA:757:G:H2'	4:CA:758:C:H5'	2.01	0.42
4:CA:829:A:O2'	4:CA:2248:C:OP1	2.29	0.42
4:CA:836:G:O6	4:CA:943:A:C2	2.73	0.42
4:CA:846:U:O2'	4:CA:847:U:O5'	2.36	0.42
4:CA:1363:C:C2	4:CA:1369:G:N1	2.88	0.42
4:CA:1667:G:H8	4:CA:1667:G:O5'	2.02	0.42
4:CA:1709:U:C2	4:CA:1750:G:N2	2.88	0.42
4:CA:1885:A:O5'	4:CA:1885:A:C8	2.72	0.42
4:CA:2292:U:H2'	4:CA:2293:G:C8	2.55	0.42
4:CA:2755:C:O2'	4:CA:2756:U:H6	2.02	0.42
5:DB:11:C:O5'	5:DB:11:C:H6	2.03	0.42
5:DB:75:G:O4'	46:DW:29:ILE:HG13	2.20	0.42
6:AB:91:PHE:CE1	6:AB:150:GLY:CA	3.03	0.42
11:AG:109:ARG:NH2	11:AG:119:ARG:NH1	2.68	0.42
12:AH:29:SER:HB2	12:AH:59:LEU:HB2	2.01	0.42
13:AI:23:PRO:HA	13:AI:61:LEU:CB	2.49	0.42
17:AM:62:LYS:HD2	17:AM:62:LYS:O	2.19	0.42
21:AQ:12:VAL:O	21:AQ:13:VAL:CB	2.68	0.42
6:BB:54:LEU:HD22	6:BB:54:LEU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:BD:65:TYR:CD2	8:BD:65:TYR:N	2.88	0.42
9:BE:23:LYS:O	9:BE:24:THR:O	2.38	0.42
11:BG:11:LYS:O	11:BG:12:ILE:C	2.58	0.42
15:BK:23:ILE:HG21	15:BK:96:THR:HG21	2.01	0.42
19:BO:39:LEU:HG	19:BO:43:PHE:CE2	2.54	0.42
20:BP:61:VAL:HG22	20:BP:65:ALA:O	2.20	0.42
21:BQ:5:ILE:HB	21:BQ:6:ARG:H	1.65	0.42
27:CC:170:TYR:CD1	27:CC:184:GLU:HA	2.53	0.42
28:CD:108:ASP:OD2	28:CD:207:VAL:CG1	2.68	0.42
29:CE:67:ARG:CZ	69:CE:304:HOH:O	2.66	0.42
32:CH:65:ALA:HB1	32:CH:133:VAL:CG1	2.49	0.42
33:CJ:10:LEU:HD12	33:CJ:10:LEU:H	1.85	0.42
33:CJ:27:LEU:O	33:CJ:32:VAL:HB	2.20	0.42
34:CK:84:ILE:O	34:CK:84:ILE:HG23	2.19	0.42
35:CL:1:MET:N	35:CL:65:THR:HG21	2.35	0.42
38:CO:30:ARG:HD2	38:CO:31:HIS:CE1	2.54	0.42
38:CO:36:THR:HG23	38:CO:41:ALA:HB2	2.02	0.42
42:CS:71:LYS:HE3	42:CS:73:LYS:HE3	2.02	0.42
50:C0:6:ILE:HD11	50:C0:47:ILE:HD11	2.02	0.42
53:C3:46:LYS:OXT	53:C3:46:LYS:HG2	2.20	0.42
32:DH:5:LEU:CD1	32:DH:12:LEU:O	2.68	0.42
33:DJ:7:TYR:O	33:DJ:7:TYR:CD1	2.73	0.42
34:DK:16:TYR:HA	34:DK:138:GLN:O	2.20	0.42
34:DK:117:ALA:O	34:DK:118:MET:C	2.56	0.42
38:DO:35:LYS:HG3	69:DO:201:HOH:O	2.19	0.42
39:DP:115:LEU:HD12	39:DP:115:LEU:HA	1.86	0.42
43:DT:50:VAL:HB	43:DT:105:VAL:CG2	2.50	0.42
55:D5:44:LYS:HB2	55:D5:45:LYS:CE	2.49	0.42
1:AA:134:G:H1'	1:AA:325:A:C5	2.55	0.41
1:AA:142:G:C6	1:AA:143:A:C4	3.08	0.41
1:AA:220:G:C2'	1:AA:221:C:H5'	2.50	0.41
1:AA:232:G:C6	1:AA:233:C:C5	3.08	0.41
1:AA:266:G:OP2	1:AA:267:C:N4	2.41	0.41
1:AA:417:G:C2'	1:AA:418:C:H5'	2.50	0.41
1:AA:536:C:H5'	69:AA:1783:HOH:O	2.19	0.41
1:AA:557:G:H5"	1:AA:558:G:OP2	2.20	0.41
1:AA:1064:G:OP1	1:AA:1386:G:H4'	2.20	0.41
1:AA:1166:G:C2	1:AA:1169:A:OP2	2.73	0.41
1:AA:1317:C:O2'	18:AN:49:GLN:CG	2.68	0.41
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.19	0.41
1:AA:1415:G:N3	1:AA:1486:G:C2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1489:G:H2'	1:AA:1490:U:H5'	2.02	0.41
2:BA:53:A:C2	2:BA:359:G:C6	3.08	0.41
2:BA:209:U:H5"	2:BA:210:C:H5'	2.01	0.41
2:BA:358:U:H2'	2:BA:359:G:O4'	2.20	0.41
2:BA:383:A:H5"	2:BA:384:G:OP2	2.20	0.41
2:BA:414:A:C6	2:BA:431:A:C2	3.07	0.41
2:BA:945:G:C4	2:BA:1337:G:H1'	2.55	0.41
2:BA:994:A:N1	2:BA:1047:G:H4'	2.35	0.41
2:BA:1066:C:H41	2:BA:1067:A:N6	2.18	0.41
2:BA:1151:A:H2'	2:BA:1152:A:H8	1.85	0.41
2:BA:1287:A:C6	2:BA:1288:A:C6	3.08	0.41
2:BA:1388:C:O2	2:BA:1388:C:H2'	2.18	0.41
2:BA:1499:A:H2'	2:BA:1500:A:O5'	2.20	0.41
3:DA:300:A:H2'	3:DA:334:C:H1'	2.01	0.41
3:DA:483:A:C8	3:DA:484:C:C5	3.07	0.41
3:DA:790:U:H3'	69:DA:6667:HOH:O	2.18	0.41
3:DA:962:G:P	69:DA:3713:HOH:O	2.78	0.41
3:DA:1084:A:O2'	3:DA:1085:A:O4'	2.29	0.41
3:DA:1087:G:C8	3:DA:1087:G:O5'	2.73	0.41
3:DA:1682:G:C8	3:DA:1757:A:C2	3.08	0.41
3:DA:1910:G:O2'	3:DA:1911:PSU:H5"	2.20	0.41
3:DA:2182:U:H2'	3:DA:2183:A:C8	2.55	0.41
3:DA:2513:A:P	69:DA:4165:HOH:O	2.77	0.41
3:DA:2686:G:C5	3:DA:2687:U:C5	3.07	0.41
3:DA:2812:G:N2	3:DA:2889:C:C2	2.88	0.41
3:DA:2849:U:N3	3:DA:2867:G:O4'	2.53	0.41
4:CA:56:A:C2	4:CA:57:C:C2	3.07	0.41
4:CA:249:C:C5'	4:CA:2394:C:O2'	2.68	0.41
4:CA:251:A:H2'	4:CA:252:G:O5'	2.20	0.41
4:CA:310:A:H5"	45:CV:14:THR:HG22	2.01	0.41
4:CA:443:A:N7	29:CE:40:ARG:CG	2.82	0.41
4:CA:513:A:C2	4:CA:514:A:C5	3.08	0.41
4:CA:533:G:H5'	41:CR:23:TYR:CE1	2.55	0.41
4:CA:1082:U:H5'	33:CJ:118:GLY:HA2	2.03	0.41
4:CA:1427:A:OP2	4:CA:1559:U:O4	2.38	0.41
4:CA:1715:G:N2	4:CA:1743:G:H2'	2.35	0.41
4:CA:1757:A:N1	4:CA:1762:A:H2	2.18	0.41
4:CA:1797:G:H8	4:CA:1797:G:O5'	2.03	0.41
4:CA:1856:U:O4	4:CA:1857:G:C2	2.72	0.41
4:CA:2185:U:H6	4:CA:2185:U:O5'	2.02	0.41
4:CA:2538:C:H2'	4:CA:2539:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2694:G:C2'	4:CA:2695:U:O5'	2.68	0.41
4:CA:2839:G:O5'	4:CA:2839:G:H8	2.03	0.41
4:CA:2887:A:H5'	4:CA:2888:C:OP2	2.20	0.41
5:CB:83:G:H5'	50:C0:52:PHE:CE2	2.55	0.41
6:AB:222:ARG:NH1	6:AB:222:ARG:HB2	2.35	0.41
7:AC:40:ARG:HG2	7:AC:55:ILE:HG12	2.01	0.41
7:AC:145:GLY:O	7:AC:146:ALA:O	2.38	0.41
8:AD:148:LYS:H	8:AD:148:LYS:CD	2.33	0.41
8:AD:195:ILE:O	8:AD:195:ILE:CG1	2.67	0.41
17:AM:11:ASP:CG	17:AM:45:ILE:HG12	2.40	0.41
19:AO:3:LEU:HD13	19:AO:35:GLN:HG2	2.02	0.41
23:AS:15:LEU:HB2	23:AS:33:THR:HG21	2.01	0.41
6:BB:50:PHE:CZ	6:BB:51:ASN:OD1	2.73	0.41
9:BE:99:ALA:O	9:BE:122:ASN:ND2	2.50	0.41
20:BP:10:GLY:HA3	20:BP:15:PRO:HA	2.01	0.41
24:BT:54:MET:HG3	24:BT:55:GLN:N	2.34	0.41
28:CD:47:ALA:HA	28:CD:84:LEU:HG	2.01	0.41
29:CE:26:ALA:HB1	36:CM:9:ALA:HB2	2.01	0.41
33:CJ:4:VAL:HG12	33:CJ:6:ALA:H	1.85	0.41
33:CJ:56:VAL:HG23	33:CJ:69:VAL:C	2.40	0.41
38:CO:37:THR:HG22	38:CO:110:MET:SD	2.60	0.41
45:CV:71:ILE:H	45:CV:71:ILE:HD12	1.83	0.41
50:C0:1:ALA:CB	50:C0:38:GLU:HB3	2.49	0.41
56:DD:181:ASP:OD1	56:DD:183:GLU:HB2	2.20	0.41
30:DF:105:ILE:CD1	57:D7:14:PHE:CD2	3.03	0.41
43:DT:18:ARG:HG3	43:DT:76:VAL:HB	2.02	0.41
54:D4:32:LEU:O	54:D4:33:THR:C	2.58	0.41
1:AA:119:A:C4	1:AA:240:G:N7	2.88	0.41
1:AA:203:G:H1'	1:AA:465:A:H61	1.84	0.41
1:AA:406:G:H4'	8:AD:5:LEU:HD11	2.00	0.41
1:AA:408:A:P	8:AD:8:LYS:NZ	2.92	0.41
1:AA:957:U:H1'	1:AA:960:U:C4	2.55	0.41
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.35	0.41
1:AA:1130:A:C1'	1:AA:1146:A:C2	3.04	0.41
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.20	0.41
1:AA:1157:A:C5	1:AA:1180:A:C6	3.07	0.41
1:AA:1241:G:N2	1:AA:1242:G:C4	2.88	0.41
1:AA:1519:MA6:C9	1:AA:1519:MA6:N7	2.83	0.41
2:BA:9:G:H5'	9:BE:108:GLY:CA	2.51	0.41
2:BA:603:U:O2'	2:BA:604:G:H5'	2.19	0.41
2:BA:629:A:H2'	2:BA:630:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:682:G:H1	2:BA:708:C:N4	2.18	0.41
2:BA:1177:G:H2'	2:BA:1178:G:H5'	2.02	0.41
3:DA:26:G:C6	3:DA:27:G:N1	2.88	0.41
3:DA:340:A:H2'	3:DA:341:C:H5'	2.00	0.41
3:DA:491:G:H2'	3:DA:492:A:C8	2.55	0.41
3:DA:659:G:C6	3:DA:660:C:C4	3.09	0.41
3:DA:662:G:O3'	36:DM:16:GLY:HA2	2.20	0.41
3:DA:760:G:H2'	3:DA:761:A:O4'	2.20	0.41
3:DA:880:G:N2	3:DA:898:C:C2	2.88	0.41
3:DA:995:C:OP2	41:DR:52:ARG:HD2	2.20	0.41
3:DA:1057:A:H8	3:DA:1057:A:O5'	2.03	0.41
3:DA:1258:U:H5'	69:DA:3283:HOH:O	2.19	0.41
3:DA:1576:U:N3	3:DA:1577:C:C5	2.88	0.41
3:DA:1680:U:O2'	3:DA:1763:G:N7	2.34	0.41
3:DA:2251:OMG:HM23	3:DA:2251:OMG:H1'	1.67	0.41
3:DA:2386:A:H2'	3:DA:2387:U:O4'	2.20	0.41
3:DA:2821:A:H2'	3:DA:2822:G:H8	1.85	0.41
3:DA:2846:G:OP2	40:DQ:51:ASN:HB2	2.19	0.41
3:DA:2898:U:H2'	3:DA:2899:A:C8	2.54	0.41
60:DA:3072:MPD:HO4	60:DA:3072:MPD:HO2	1.66	0.41
4:CA:64:A:H8	4:CA:64:A:O5'	2.02	0.41
4:CA:177:G:C4	69:CA:3317:HOH:O	2.63	0.41
4:CA:237:C:H42	4:CA:260:G:H1	1.67	0.41
4:CA:323:C:H3'	29:CE:163:ASN:OD1	2.21	0.41
4:CA:410:G:H2'	4:CA:2407:A:C8	2.54	0.41
4:CA:416:U:H2'	4:CA:417:C:O4'	2.20	0.41
4:CA:583:G:C5	4:CA:584:C:C5	3.08	0.41
4:CA:830:G:C2	4:CA:2448:A:C5	3.08	0.41
4:CA:1076:C:H2'	4:CA:1077:A:O4'	2.20	0.41
4:CA:1084:A:N7	4:CA:1085:A:C8	2.89	0.41
4:CA:1280:G:C2	4:CA:1281:G:C8	3.07	0.41
4:CA:1429:G:H2'	4:CA:1430:G:H8	1.85	0.41
4:CA:1682:G:C5'	69:CA:3902:HOH:O	2.67	0.41
4:CA:1682:G:H5'	69:CA:3902:HOH:O	2.20	0.41
4:CA:1726:C:H2'	4:CA:1727:C:C6	2.55	0.41
4:CA:2252:G:H1'	69:CA:3328:HOH:O	2.19	0.41
4:CA:2255:G:H2'	4:CA:2256:G:O4'	2.20	0.41
4:CA:2403:C:O2	4:CA:2403:C:H2'	2.21	0.41
4:CA:2468:A:C5'	69:CA:3227:HOH:O	2.59	0.41
4:CA:2520:C:O2'	4:CA:2521:C:H5'	2.20	0.41
4:CA:2624:G:O2'	4:CA:2625:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AB:24:ASN:OD1	6:AB:24:ASN:C	2.58	0.41
6:AB:135:LEU:O	6:AB:139:ARG:N	2.39	0.41
6:AB:138:THR:O	6:AB:141:LEU:N	2.53	0.41
7:AC:47:LEU:HB3	7:AC:50:ALA:HB3	2.01	0.41
9:AE:136:VAL:HG22	9:AE:137:VAL:N	2.35	0.41
10:AF:38:ARG:HH21	10:AF:96:VAL:HG21	1.85	0.41
15:AK:91:PRO:C	15:AK:93:ARG:H	2.24	0.41
21:AQ:45:HIS:ND1	21:AQ:70:THR:CG2	2.83	0.41
21:AQ:79:VAL:O	21:AQ:80:GLU:O	2.38	0.41
24:AT:55:GLN:N	24:AT:56:PRO:HD2	2.35	0.41
6:BB:139:ARG:O	6:BB:142:GLU:HG2	2.20	0.41
6:BB:188:ASP:HB2	6:BB:204:ASP:CG	2.40	0.41
7:BC:14:ILE:N	7:BC:14:ILE:HD13	2.35	0.41
7:BC:59:ARG:CB	7:BC:63:SER:O	2.68	0.41
8:BD:64:ILE:HG22	8:BD:65:TYR:CD2	2.55	0.41
20:BP:14:ARG:N	20:BP:15:PRO:CD	2.83	0.41
25:BU:51:SER:O	25:BU:55:ARG:HG3	2.20	0.41
27:CC:66:PHE:CZ	27:CC:155:ARG:NH2	2.89	0.41
31:CG:59:ASP:O	31:CG:61:TRP:N	2.50	0.41
33:CJ:97:VAL:HG12	33:CJ:97:VAL:O	2.19	0.41
35:CL:108:ARG:HH12	40:CQ:34:GLY:N	2.17	0.41
38:CO:98:LEU:CD2	51:C1:48:TYR:CD2	3.03	0.41
45:CV:33:VAL:HG22	45:CV:64:ILE:O	2.20	0.41
54:C4:3:ILE:HG21	54:C4:62:PRO:HG3	2.02	0.41
32:DH:117:LEU:CD1	32:DH:129:VAL:HG22	2.50	0.41
37:DN:81:ARG:NH2	69:DN:309:HOH:O	2.53	0.41
41:DR:81:GLY:O	41:DR:85:ALA:N	2.53	0.41
50:D0:16:LEU:O	50:D0:17:PRO:C	2.56	0.41
57:D7:26:GLY:O	57:D7:27:SER:O	2.38	0.41
1:AA:10:A:C2	1:AA:25:C:C2	3.09	0.41
1:AA:464:U:N3	1:AA:466:A:H5"	2.35	0.41
1:AA:502:A:C2'	1:AA:503:C:O5'	2.68	0.41
1:AA:542:G:N3	1:AA:543:U:C6	2.88	0.41
1:AA:762:U:O2	1:AA:762:U:H2'	2.19	0.41
1:AA:880:C:C3'	1:AA:880:C:C6	3.03	0.41
1:AA:956:U:C2	1:AA:957:U:C6	3.08	0.41
1:AA:1060:U:H5"	14:AJ:53:ILE:CD1	2.50	0.41
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.20	0.41
1:AA:1234:C:C2	1:AA:1235:U:C5	3.08	0.41
1:AA:1474:U:H5'	69:AA:1714:HOH:O	2.20	0.41
2:BA:85:U:O2	2:BA:85:U:O4'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:156:C:H42	2:BA:165:G:H1	1.68	0.41
2:BA:675:A:C2	2:BA:676:A:N9	2.88	0.41
2:BA:782:A:N6	2:BA:801:U:C5	2.88	0.41
2:BA:815:A:O2'	2:BA:816:A:OP1	2.24	0.41
2:BA:951:G:N3	2:BA:970:C:O2'	2.37	0.41
2:BA:1399:C:C2	2:BA:1401:G:C5	3.08	0.41
3:DA:63:A:C2	3:DA:64:A:C8	3.09	0.41
3:DA:117:G:C6	3:DA:119:A:C6	3.08	0.41
3:DA:300:A:C2	3:DA:333:G:N3	2.88	0.41
3:DA:659:G:C5	3:DA:660:C:C5	3.09	0.41
3:DA:786:C:O2'	3:DA:787:C:H5'	2.19	0.41
3:DA:833:A:H2'	3:DA:834:G:H8	1.85	0.41
3:DA:1127:A:H2'	69:DA:5046:HOH:O	2.21	0.41
3:DA:1319:C:C2'	3:DA:1320:C:O5'	2.68	0.41
3:DA:1422:G:C6	3:DA:1423:G:C5	3.08	0.41
3:DA:1738:G:O2'	3:DA:1739:A:P	2.78	0.41
3:DA:1768:C:C4	3:DA:1769:U:C5	3.08	0.41
3:DA:1808:A:N1	48:DY:27:ARG:HD2	2.36	0.41
3:DA:1840:G:C2'	3:DA:1841:U:O5'	2.68	0.41
3:DA:2241:A:C2'	69:DA:3325:HOH:O	2.55	0.41
3:DA:2298:A:C6	3:DA:2321:U:O4	2.74	0.41
3:DA:2612:C:H5"	3:DA:2613:U:OP1	2.21	0.41
4:CA:304:U:C2	4:CA:313:G:O6	2.73	0.41
4:CA:324:A:C2	4:CA:325:G:H1'	2.54	0.41
4:CA:328:U:O3'	45:CV:65:GLN:HG3	2.20	0.41
4:CA:482:A:C8	4:CA:506:G:C2	3.08	0.41
4:CA:510:C:P	69:CA:3324:HOH:O	2.75	0.41
4:CA:574:A:H5"	69:CA:3665:HOH:O	2.19	0.41
4:CA:929:U:H4'	50:C0:37:ARG:NH2	2.36	0.41
4:CA:1111:A:H4'	4:CA:1112:G:OP1	2.21	0.41
4:CA:1166:G:H2'	4:CA:1167:C:O4'	2.20	0.41
4:CA:1248:G:C4	41:CR:2:ARG:HD2	2.55	0.41
4:CA:1310:G:N2	4:CA:1605:C:C2	2.88	0.41
4:CA:1565:C:C4	4:CA:1567:G:C5	3.09	0.41
4:CA:1608:A:C4	4:CA:1611:C:C5	3.08	0.41
4:CA:1943:U:H6	4:CA:1943:U:O5'	2.04	0.41
4:CA:1973:G:C5	4:CA:1974:C:N4	2.88	0.41
4:CA:2036:C:H2'	4:CA:2037:A:C8	2.54	0.41
4:CA:2168:G:O6	4:CA:2169:A:N6	2.53	0.41
4:CA:2359:C:C2'	36:CM:60:ARG:HH22	2.33	0.41
4:CA:2480:C:N4	4:CA:2481:G:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2514:U:H2'	4:CA:2515:C:C6	2.56	0.41
4:CA:2628:C:O2'	4:CA:2781:A:H2'	2.20	0.41
4:CA:2628:C:H3'	4:CA:2629:U:H5'	2.01	0.41
4:CA:2648:G:N2	4:CA:2649:C:H1'	2.34	0.41
4:CA:2728:U:O2'	4:CA:2729:G:P	2.78	0.41
4:CA:2817:U:O2	4:CA:2836:U:H1'	2.20	0.41
4:CA:2822:G:OP1	28:CD:164:GLN:NE2	2.41	0.41
5:CB:104:A:H1'	46:CW:31:TYR:CD1	2.55	0.41
6:AB:23:TRP:CZ3	6:AB:25:PRO:HA	2.55	0.41
7:AC:14:ILE:HG22	7:AC:15:VAL:CG1	2.51	0.41
10:AF:16:GLU:HG2	8:BD:193:ALA:HA	2.02	0.41
12:AH:64:LYS:C	12:AH:65:TYR:CD1	2.93	0.41
12:AH:125:ILE:O	12:AH:125:ILE:HG13	2.21	0.41
15:AK:107:ILE:HD13	15:AK:108:THR:N	2.35	0.41
24:AT:80:THR:O	24:AT:83:ILE:HG13	2.19	0.41
6:BB:73:LYS:C	6:BB:75:ALA:H	2.14	0.41
6:BB:87:CYS:HB2	6:BB:89:GLN:OE1	2.20	0.41
7:BC:68:ILE:HD12	7:BC:101:ILE:HD11	2.02	0.41
9:BE:46:VAL:C	9:BE:71:MET:HG3	2.40	0.41
10:BF:14:GLN:OE1	10:BF:14:GLN:N	2.54	0.41
10:BF:93:LYS:C	10:BF:94:HIS:CG	2.94	0.41
11:BG:13:LEU:O	11:BG:24:ALA:CB	2.69	0.41
15:BK:115:PRO:O	15:BK:116:ILE:HD13	2.20	0.41
30:CF:30:VAL:HG13	30:CF:96:TRP:CH2	2.55	0.41
38:CO:69:ARG:O	38:CO:70:THR:HG23	2.19	0.41
48:CY:70:LEU:HD13	48:CY:75:GLU:HB2	2.02	0.41
51:C1:37:HIS:HD2	51:C1:43:THR:HG22	1.85	0.41
27:DC:173:LEU:CD2	27:DC:183:VAL:CG2	2.98	0.41
56:DD:196:ALA:O	56:DD:199:SER:OG	2.37	0.41
32:DH:3:VAL:HG12	32:DH:38:PRO:HA	2.02	0.41
33:DJ:47:SER:O	33:DJ:48:ILE:HG23	2.20	0.41
34:DK:109:LEU:HD23	34:DK:109:LEU:HA	1.94	0.41
35:DL:6:THR:HG22	35:DL:7:MET:N	2.34	0.41
38:DO:72:ASP:C	38:DO:72:ASP:OD1	2.59	0.41
45:DV:48:VAL:O	45:DV:53:GLN:CB	2.68	0.41
51:D1:8:THR:CA	69:D1:201:HOH:O	2.68	0.41
51:D1:53:VAL:O	51:D1:54:ILE:C	2.57	0.41
1:AA:22:G:N3	1:AA:914:A:N7	2.67	0.41
1:AA:47:C:O2	1:AA:49:U:C5	2.73	0.41
1:AA:131:A:C2	1:AA:132:C:C4	3.08	0.41
1:AA:417:G:O2'	1:AA:418:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:727:G:N2	1:AA:730:G:OP2	2.52	0.41
1:AA:731:G:C2	1:AA:732:C:C5	3.09	0.41
1:AA:973:G:OP1	69:AA:1750:HOH:O	2.22	0.41
1:AA:1097:C:C2'	1:AA:1098:C:O5'	2.68	0.41
1:AA:1283:U:H2'	1:AA:1284:C:O4'	2.20	0.41
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.19	0.41
2:BA:11:G:H2'	2:BA:12:U:O5'	2.21	0.41
2:BA:35:G:O2'	26:BL:118:GLY:HA2	2.20	0.41
2:BA:204:G:C6	2:BA:205:A:C2	3.07	0.41
2:BA:434:U:C2'	2:BA:435:A:H5'	2.50	0.41
2:BA:496:A:H2'	2:BA:496:A:N3	2.35	0.41
2:BA:716:A:C6	2:BA:717:U:N3	2.88	0.41
2:BA:878:A:C6	2:BA:879:C:C5	3.07	0.41
3:DA:510:C:OP1	3:DA:511:U:OP2	2.39	0.41
3:DA:570:G:H2'	3:DA:2030:6MZ:N7	2.35	0.41
3:DA:580:U:H2'	3:DA:581:C:H6	1.85	0.41
3:DA:748:G:H4'	69:DA:3739:HOH:O	2.19	0.41
3:DA:1404:C:O2'	3:DA:1405:U:H5'	2.20	0.41
3:DA:1688:U:O4'	3:DA:1701:A:N6	2.53	0.41
3:DA:2269:G:H1'	69:DA:4667:HOH:O	2.21	0.41
3:DA:2564:A:H5"	3:DA:2565:A:OP2	2.20	0.41
3:DA:2625:G:C6	3:DA:2626:C:C4	3.09	0.41
3:DA:2852:G:H1	3:DA:2865:U:H3	1.69	0.41
64:DA:3034:1PE:H161	64:DA:3034:1PE:H152	1.77	0.41
4:CA:547:A:H5"	4:CA:548:G:P	2.60	0.41
4:CA:615:U:H3'	4:CA:616:A:C5'	2.51	0.41
4:CA:738:G:N1	4:CA:739:A:C2	2.89	0.41
4:CA:921:C:O2'	4:CA:922:C:H5'	2.20	0.41
4:CA:954:G:H5"	37:CN:13:HIS:HB3	2.01	0.41
4:CA:1137:G:H22	34:CK:108:MET:HA	1.84	0.41
4:CA:1179:G:C5	4:CA:1180:U:H1'	2.55	0.41
4:CA:1203:U:H4'	36:CM:3:LEU:HB3	2.03	0.41
4:CA:1366:A:N3	4:CA:1367:A:C8	2.89	0.41
4:CA:1394:U:H5"	4:CA:1603:A:O3'	2.21	0.41
4:CA:1737:G:N7	4:CA:1738:G:C6	2.88	0.41
4:CA:1800:C:OP1	27:CC:257:ARG:NH2	2.53	0.41
4:CA:1840:G:C2'	4:CA:1841:U:H5'	2.50	0.41
4:CA:1890:A:N3	4:CA:2234:G:N2	2.65	0.41
4:CA:1978:A:H2'	4:CA:1979:U:O4'	2.20	0.41
4:CA:2093:G:C5	4:CA:2225:A:C5	3.08	0.41
4:CA:2201:G:C6	4:CA:2223:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2416:C:H2'	4:CA:2417:C:C6	2.54	0.41
4:CA:2502:G:H5'	4:CA:2503:A:O5'	2.20	0.41
4:CA:2741:A:OP2	69:CA:3412:HOH:O	2.21	0.41
4:CA:2796:U:O2'	4:CA:2797:U:H5'	2.20	0.41
4:CA:2822:G:O6	38:CO:2:ARG:HG3	2.21	0.41
4:CA:2823:A:C6	4:CA:2824:C:C5	3.08	0.41
4:CA:2839:G:O2'	4:CA:2840:C:H5'	2.20	0.41
5:DB:97:C:H2'	5:DB:98:G:C5'	2.50	0.41
7:AC:22:TRP:CD1	7:AC:59:ARG:CD	3.03	0.41
7:AC:100:GLN:CG	7:AC:101:ILE:N	2.83	0.41
8:AD:160:GLU:O	8:AD:163:GLU:OE2	2.37	0.41
14:AJ:56:HIS:C	14:AJ:57:VAL:HG12	2.41	0.41
16:AL:43:LYS:HE2	16:AL:89:D2T:CB1	2.46	0.41
16:AL:66:TYR:O	16:AL:97:THR:OG1	2.34	0.41
17:AM:11:ASP:O	17:AM:12:HIS:HB2	2.20	0.41
20:AP:68:SER:HB2	20:AP:71:VAL:H	1.85	0.41
21:AQ:77:ARG:NH2	21:AQ:79:VAL:HG13	2.35	0.41
10:BF:38:ARG:HG2	10:BF:63:ASN:OD1	2.20	0.41
13:BI:84:THR:HG22	13:BI:98:LEU:HD21	2.01	0.41
13:BI:89:GLU:CD	13:BI:90:TYR:H	2.23	0.41
26:BL:117:TYR:O	26:BL:119:VAL:HG23	2.20	0.41
18:BN:16:ALA:O	18:BN:17:ASP:HB3	2.20	0.41
23:BS:50:ALA:HB1	23:BS:57:HIS:HB3	2.02	0.41
24:BT:7:ALA:CB	24:BT:10:ARG:HB2	2.51	0.41
28:CD:4:LEU:CB	28:CD:32:ASN:OD1	2.68	0.41
28:CD:151:THR:HG22	28:CD:152:PRO:CD	2.50	0.41
34:CK:69:ARG:NH1	34:CK:89:PHE:HE1	2.19	0.41
37:CN:24:THR:O	37:CN:24:THR:CG2	2.68	0.41
37:CN:114:ARG:O	37:CN:118:LYS:HB2	2.20	0.41
39:CP:100:HIS:CG	39:CP:101:GLY:N	2.85	0.41
27:DC:259:ASN:OD1	27:DC:261:ARG:HB3	2.21	0.41
38:DO:84:GLY:N	38:DO:85:PRO:CD	2.83	0.41
41:DR:10:ARG:HA	41:DR:10:ARG:HH11	1.84	0.41
42:DS:38:VAL:O	42:DS:54:VAL:HG23	2.21	0.41
45:DV:44:HIS:CD2	45:DV:57:ILE:HD13	2.55	0.41
57:D7:33:ARG:CG	57:D7:34:GLU:N	2.83	0.41
1:AA:13:U:N3	1:AA:916:U:O4	2.54	0.41
1:AA:35:G:N1	1:AA:550:G:C2	2.89	0.41
1:AA:102:G:N1	1:AA:103:U:C4	2.89	0.41
1:AA:138:G:C2'	1:AA:139:A:H5'	2.51	0.41
1:AA:141:G:N2	1:AA:142:G:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:O2'	1:AA:374:A:H5'	2.20	0.41
1:AA:411:A:P	8:AD:26:ARG:HH22	2.40	0.41
1:AA:588:G:N1	1:AA:589:U:C2	2.88	0.41
1:AA:895:G:H2'	1:AA:896:C:C6	2.54	0.41
1:AA:923:A:H5"	9:AE:26:LYS:HD3	2.03	0.41
1:AA:957:U:O2	1:AA:957:U:H2'	2.20	0.41
1:AA:1017:U:O2'	1:AA:1018:G:H8	2.03	0.41
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.21	0.41
1:AA:1306:A:C4	1:AA:1307:U:C6	3.09	0.41
2:BA:683:G:H2'	2:BA:684:U:H6	1.85	0.41
2:BA:687:A:C2	2:BA:704:A:C5	3.08	0.41
2:BA:731:G:O2'	2:BA:732:C:H5'	2.19	0.41
2:BA:977:A:O2'	2:BA:1223:C:N4	2.52	0.41
2:BA:1041:G:C6	2:BA:1042:A:N6	2.89	0.41
2:BA:1097:C:H2'	2:BA:1098:C:C6	2.53	0.41
2:BA:1141:C:OP2	2:BA:1141:C:H2'	2.20	0.41
2:BA:1157:A:H4'	2:BA:1158:C:O5'	2.20	0.41
2:BA:1374:A:H2'	2:BA:1375:A:O4'	2.21	0.41
2:BA:1478:U:C2	2:BA:1479:C:C5	3.09	0.41
3:DA:222:A:C5	3:DA:224:U:C2	3.08	0.41
3:DA:296:U:H2'	3:DA:297:G:C8	2.56	0.41
3:DA:547:A:N6	3:DA:549:G:H1	2.19	0.41
3:DA:869:G:C5	3:DA:870:U:C5	3.09	0.41
3:DA:920:A:H2'	3:DA:921:C:O4'	2.19	0.41
3:DA:928:A:H2'	3:DA:929:U:O4'	2.21	0.41
3:DA:1243:C:H2'	3:DA:1244:A:O5'	2.21	0.41
3:DA:1353:A:O2'	3:DA:1354:A:H5'	2.20	0.41
3:DA:1376:C:C5	3:DA:1377:G:C5	3.09	0.41
3:DA:1409:U:C2'	3:DA:1410:G:H5'	2.51	0.41
3:DA:1678:A:O2'	3:DA:1679:A:H5'	2.21	0.41
3:DA:2159:G:N3	3:DA:2160:C:C5	2.89	0.41
3:DA:2322:A:P	69:DA:3380:HOH:O	2.79	0.41
3:DA:2630:G:H1'	3:DA:2894:G:N3	2.35	0.41
69:DA:3885:HOH:O	51:D1:5:ASN:HB2	2.21	0.41
4:CA:58:G:C2	4:CA:70:G:C2	3.09	0.41
4:CA:68:G:H2'	4:CA:69:C:O4'	2.20	0.41
4:CA:184:C:O3'	4:CA:217:A:H2	2.04	0.41
4:CA:397:U:H2'	4:CA:398:C:H6	1.86	0.41
4:CA:422:A:C6	4:CA:423:A:C5	3.09	0.41
4:CA:439:A:H2'	4:CA:440:C:O4'	2.20	0.41
4:CA:449:A:OP2	4:CA:449:A:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:680:C:N3	4:CA:681:G:C5	2.89	0.41
4:CA:807:U:H4'	4:CA:2445:G:O3'	2.20	0.41
4:CA:1004:U:O2	4:CA:1152:C:O2	2.39	0.41
4:CA:1127:A:H2'	4:CA:1128:G:H5"	2.01	0.41
4:CA:1141:U:H4'	4:CA:1142:A:O4'	2.20	0.41
4:CA:1214:A:H4'	4:CA:1239:G:H4'	2.03	0.41
4:CA:1330:C:C2'	4:CA:1331:G:H5'	2.50	0.41
4:CA:1343:G:C4	4:CA:1597:A:C6	3.08	0.41
4:CA:1601:G:H2'	4:CA:1602:U:O4'	2.21	0.41
4:CA:1974:C:H2'	4:CA:1975:G:O4'	2.20	0.41
4:CA:2022:U:P	69:CA:3335:HOH:O	2.75	0.41
4:CA:2201:G:C4	4:CA:2202:U:C5	3.08	0.41
4:CA:2207:C:C2	4:CA:2218:G:N2	2.88	0.41
4:CA:2547:A:C2	4:CA:2562:U:C2	3.08	0.41
4:CA:2701:U:H3'	4:CA:2702:G:H5"	2.02	0.41
4:CA:2843:G:N2	4:CA:2875:C:N3	2.67	0.41
5:DB:14:U:O2	5:DB:107:G:H4'	2.20	0.41
5:CB:30:C:H2'	5:CB:31:C:H5'	2.02	0.41
9:AE:157:ARG:CB	12:AH:44:GLY:O	2.69	0.41
12:AH:111:MET:HE2	12:AH:115:ALA:HB1	2.02	0.41
14:AJ:14:ASP:HB3	14:AJ:17:LEU:HB3	2.02	0.41
15:AK:71:ALA:HA	15:AK:74:VAL:HG22	2.01	0.41
6:BB:200:ILE:HD12	6:BB:200:ILE:H	1.85	0.41
8:BD:102:VAL:HG13	8:BD:107:PHE:HB2	2.02	0.41
18:BN:6:LYS:NZ	69:BN:202:HOH:O	2.53	0.41
18:BN:26:LEU:HA	18:BN:30:ILE:HD13	2.02	0.41
21:BQ:48:ASP:O	21:BQ:49:GLU:C	2.56	0.41
28:CD:33:ARG:HA	28:CD:94:GLN:O	2.21	0.41
35:CL:4:GLU:O	35:CL:5:GLN:CB	2.69	0.41
39:CP:15:ARG:HA	39:CP:18:LEU:HD22	2.03	0.41
43:CT:17:VAL:HG11	43:CT:103:ILE:HG12	2.03	0.41
44:CU:25:GLU:HG2	44:CU:26:LYS:N	2.36	0.41
44:CU:30:ILE:HD13	44:CU:31:VAL:N	2.35	0.41
56:DD:184:ARG:NE	69:DQ:301:HOH:O	2.52	0.41
31:DG:82:PHE:CE1	31:DG:137:LYS:HD2	2.55	0.41
33:DJ:16:MET:O	33:DJ:41:PHE:CE1	2.73	0.41
33:DJ:80:LYS:HG2	33:DJ:86:LYS:HA	2.02	0.41
55:D5:42:ARG:O	55:D5:43:LYS:CB	2.67	0.41
57:D7:4:ASN:O	57:D7:5:ILE:CG2	2.68	0.41
1:AA:101:A:C5	1:AA:102:G:C8	3.08	0.41
1:AA:322:C:H5	1:AA:328:C:H5	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:396:C:C3'	1:AA:397:A:H5"	2.50	0.41
1:AA:509:A:C2	1:AA:510:A:C2	3.08	0.41
1:AA:679:C:O2'	1:AA:680:C:H5'	2.21	0.41
1:AA:781:A:C3'	1:AA:782:A:H5'	2.50	0.41
1:AA:901:A:C8	1:AA:902:G:C1'	3.04	0.41
1:AA:954:G:C2	1:AA:955:U:C2	3.09	0.41
1:AA:1028:C:N4	1:AA:1029:U:C4	2.89	0.41
1:AA:1060:U:OP1	18:AN:85:ARG:NH2	2.54	0.41
1:AA:1289:A:H5"	1:AA:1290:G:OP2	2.21	0.41
1:AA:1406:U:O2	1:AA:1517:G:N2	2.46	0.41
1:AA:1418:A:C8	1:AA:1419:G:O4'	2.74	0.41
2:BA:274:A:H1'	2:BA:275:G:C8	2.56	0.41
2:BA:291:U:O2	2:BA:291:U:H2'	2.21	0.41
2:BA:415:A:O3'	3:DA:2152:G:N2	2.54	0.41
2:BA:421:U:O5'	2:BA:422:C:H5	2.03	0.41
2:BA:568:G:O6	26:BL:2:ALA:CB	2.69	0.41
2:BA:576:C:H3'	2:BA:577:G:H5"	2.01	0.41
2:BA:668:G:N2	2:BA:739:C:C2	2.89	0.41
2:BA:1050:G:C2	2:BA:1051:C:C5	3.09	0.41
2:BA:1153:G:C6	2:BA:1154:G:C5	3.08	0.41
2:BA:1238:A:C2'	2:BA:1241:G:O2'	2.68	0.41
2:BA:1253:G:O2'	2:BA:1254:A:H5'	2.21	0.41
2:BA:1317:C:H2'	2:BA:1318:A:O4'	2.20	0.41
2:BA:1386:G:C2	2:BA:1387:G:C8	3.08	0.41
2:BA:1483:A:H5"	2:BA:1484:C:OP2	2.21	0.41
3:DA:324:A:C2	3:DA:325:G:H1'	2.55	0.41
3:DA:340:A:H2'	3:DA:341:C:C5'	2.51	0.41
3:DA:445:C:O2'	3:DA:449:A:H2'	2.21	0.41
3:DA:544:C:H5'	3:DA:545:U:OP2	2.21	0.41
3:DA:546:U:OP1	3:DA:547:A:OP1	2.38	0.41
3:DA:641:U:C5	3:DA:642:U:C4	3.08	0.41
3:DA:666:A:C4	3:DA:667:U:C5	3.09	0.41
3:DA:780:G:H2'	3:DA:782:A:N7	2.34	0.41
3:DA:928:A:H2	50:D0:46:MET:HE1	1.85	0.41
3:DA:1045:C:C3'	3:DA:1046:A:H5'	2.51	0.41
3:DA:1133:A:H3'	69:DA:3207:HOH:O	2.21	0.41
3:DA:1591:A:C6	3:DA:1592:C:N4	2.88	0.41
3:DA:1736:U:O4	3:DA:1737:G:N1	2.54	0.41
3:DA:1847:A:C8	3:DA:1847:A:P	3.13	0.41
3:DA:1905:C:O2	3:DA:1905:C:C2'	2.68	0.41
3:DA:2008:C:H2'	3:DA:2009:A:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2106:U:O2	3:DA:2183:A:N1	2.54	0.41
3:DA:2197:U:C6	3:DA:2224:G:N1	2.88	0.41
4:CA:83:A:OP1	4:CA:83:A:H4'	2.20	0.41
4:CA:241:A:N1	4:CA:255:A:H5"	2.35	0.41
4:CA:290:U:N3	4:CA:291:G:N7	2.69	0.41
4:CA:308:G:C6	4:CA:309:A:C6	3.09	0.41
4:CA:832:U:OP1	36:CM:38:GLN:HB3	2.21	0.41
4:CA:927:A:H2'	4:CA:928:A:O4'	2.20	0.41
4:CA:1470:A:H2'	4:CA:1471:G:H5'	2.03	0.41
4:CA:1807:G:H2'	4:CA:1808:A:O5'	2.21	0.41
4:CA:1845:G:C6	4:CA:1846:G:N7	2.88	0.41
4:CA:1967:C:H2'	4:CA:1968:G:H5'	2.03	0.41
4:CA:2013:A:N1	4:CA:2014:A:C4	2.89	0.41
4:CA:2061:G:N3	4:CA:2063:C:C4	2.88	0.41
4:CA:2067:G:C6	4:CA:2444:G:C2	3.09	0.41
4:CA:2221:G:C4	4:CA:2222:C:C6	3.09	0.41
4:CA:2740:A:N6	4:CA:2764:A:C8	2.89	0.41
4:CA:2742:G:C6	4:CA:2763:G:N2	2.89	0.41
4:CA:2772:C:N3	4:CA:2773:C:C5	2.88	0.41
4:CA:2882:A:C5'	38:CO:96:ARG:HG3	2.49	0.41
6:AB:186:ILE:HD11	6:AB:204:ASP:CB	2.50	0.41
10:AF:42:TRP:HZ2	10:AF:61:LEU:HD22	1.86	0.41
13:AI:17:ALA:CB	13:AI:79:ILE:HG13	2.50	0.41
15:AK:67:ALA:HB1	15:AK:100:LEU:HD13	2.03	0.41
18:AN:5:MET:HE2	18:AN:63:ARG:HH22	1.86	0.41
19:AO:17:ARG:HD3	19:AO:17:ARG:H	1.85	0.41
19:AO:17:ARG:O	19:AO:18:ASP:HB3	2.20	0.41
21:AQ:59:VAL:HG22	21:AQ:61:ILE:HD12	2.02	0.41
6:BB:58:ASN:HB2	6:BB:220:THR:CG2	2.50	0.41
6:BB:79:ALA:O	6:BB:82:ASP:OD2	2.39	0.41
8:BD:139:PRO:O	8:BD:140:ASN:HB2	2.20	0.41
11:BG:120:LEU:O	11:BG:120:LEU:HD23	2.19	0.41
15:BK:31:ILE:CG2	15:BK:46:THR:HG22	2.51	0.41
21:BQ:31:HIS:CD2	21:BQ:33:ILE:H	2.38	0.41
28:CD:115:GLY:O	38:CO:3:HIS:CE1	2.73	0.41
31:CG:122:ALA:CB	31:CG:132:LEU:HA	2.51	0.41
33:CJ:83:ALA:HB1	33:CJ:100:ILE:HD12	2.02	0.41
46:CW:50:MET:HB3	46:CW:56:PHE:CD2	2.56	0.41
48:CY:58:ILE:HG12	48:CY:66:VAL:HG21	2.02	0.41
33:DJ:85:ILE:C	33:DJ:85:ILE:CD1	2.88	0.41
36:DM:92:LEU:HD12	36:DM:92:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DQ:15:ASP:O	40:DQ:15:ASP:CG	2.59	0.41
40:DQ:95:LYS:NZ	69:DQ:304:HOH:O	2.37	0.41
41:DR:75:TYR:CZ	41:DR:79:ILE:HG13	2.55	0.41
61:DR:202:PG4:H51	61:DR:202:PG4:H71	1.89	0.41
49:DZ:19:LEU:CD2	49:DZ:23:ARG:NE	2.83	0.41
53:D3:34:ARG:HB3	53:D3:42:LEU:HD12	2.03	0.41
1:AA:184:G:C6	1:AA:185:U:C4	3.09	0.41
1:AA:254:G:C4'	21:AQ:20:SER:HB2	2.49	0.41
1:AA:275:G:C2	1:AA:276:G:C8	3.09	0.41
1:AA:335:C:O2	1:AA:1433:A:H2	2.03	0.41
1:AA:371:A:H2'	1:AA:372:C:O4'	2.20	0.41
1:AA:400:C:H6	1:AA:400:C:O5'	2.03	0.41
1:AA:591:U:OP2	12:AH:31:LYS:NZ	2.40	0.41
1:AA:628:G:O2'	1:AA:629:A:H5'	2.20	0.41
1:AA:652:U:C4	1:AA:752:G:N3	2.88	0.41
1:AA:675:A:H2'	1:AA:676:A:O4'	2.20	0.41
1:AA:900:A:H2'	1:AA:901:A:O4'	2.20	0.41
1:AA:910:C:O5'	1:AA:910:C:H6	2.04	0.41
1:AA:953:G:C6	1:AA:1229:A:N1	2.89	0.41
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.20	0.41
1:AA:1053:G:N2	1:AA:1056:U:C5	2.88	0.41
1:AA:1168:U:O2'	1:AA:1169:A:H5'	2.21	0.41
1:AA:1187:G:OP1	13:AI:115:LYS:HE2	2.20	0.41
2:BA:54:C:H2'	2:BA:352:C:N4	2.35	0.41
2:BA:386:C:C5	2:BA:387:U:C5	3.09	0.41
2:BA:662:U:C2	2:BA:663:A:N7	2.88	0.41
2:BA:693:G:P	15:BK:127:ARG:HH12	2.44	0.41
2:BA:754:C:O2	2:BA:754:C:H3'	2.20	0.41
2:BA:767:A:H2'	2:BA:768:A:O4'	2.21	0.41
2:BA:782:A:H2'	2:BA:783:C:O4'	2.21	0.41
2:BA:977:A:H4'	2:BA:981:U:O2	2.20	0.41
2:BA:1089:G:C4	2:BA:1090:U:C6	3.09	0.41
2:BA:1090:U:C2	2:BA:1091:U:C6	3.09	0.41
2:BA:1245:C:C2	2:BA:1246:A:C8	3.09	0.41
2:BA:1309:G:H2'	2:BA:1310:G:C8	2.56	0.41
3:DA:307:G:H1'	3:DA:330:A:N6	2.36	0.41
3:DA:561:G:O5'	3:DA:561:G:H8	2.04	0.41
3:DA:566:U:H4'	3:DA:809:G:OP2	2.20	0.41
3:DA:768:G:O2'	3:DA:769:U:H5'	2.21	0.41
3:DA:786:C:C2'	3:DA:787:C:H5'	2.50	0.41
3:DA:811:U:O2	3:DA:1250:G:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:833:A:H2'	3:DA:834:G:C8	2.56	0.41
3:DA:898:C:C4	3:DA:899:A:N7	2.89	0.41
3:DA:996:A:N7	3:DA:1160:G:N2	2.69	0.41
3:DA:1236:G:OP2	63:DA:3037:PUT:C1	2.69	0.41
3:DA:1550:C:C2'	3:DA:1551:A:H5'	2.50	0.41
3:DA:1634:A:H5"	69:DA:4139:HOH:O	2.20	0.41
3:DA:1638:C:H4'	3:DA:2710:C:O2	2.21	0.41
3:DA:1833:C:C4	3:DA:1834:U:C5	3.09	0.41
3:DA:2256:G:O2'	61:DA:3048:PG4:H31	2.20	0.41
3:DA:2384:U:H4'	3:DA:2385:C:OP2	2.21	0.41
3:DA:2590:A:O2'	3:DA:2591:C:H5'	2.21	0.41
4:CA:372:G:C2	4:CA:400:G:C8	3.09	0.41
4:CA:450:G:P	4:CA:1248:G:H22	2.43	0.41
4:CA:599:A:H1'	4:CA:659:G:N2	2.36	0.41
4:CA:601:C:H2'	4:CA:602:A:O4'	2.21	0.41
4:CA:686:U:H2'	4:CA:788:A:C2	2.56	0.41
4:CA:768:G:C2'	4:CA:769:U:H5'	2.50	0.41
4:CA:867:C:C5	4:CA:868:U:C5	3.09	0.41
4:CA:947:A:C5'	69:CA:3424:HOH:O	2.68	0.41
4:CA:1173:U:OP2	4:CA:1173:U:O4'	2.38	0.41
4:CA:1336:A:H2'	4:CA:1337:G:O4'	2.21	0.41
4:CA:1891:G:C5'	69:CA:3353:HOH:O	2.68	0.41
4:CA:1981:A:H5"	4:CA:1982:U:OP2	2.20	0.41
4:CA:1984:G:O6	4:CA:1985:C:N4	2.53	0.41
4:CA:2112:G:H1'	69:CA:3774:HOH:O	2.19	0.41
4:CA:2136:G:N1	4:CA:2156:G:H1'	2.35	0.41
4:CA:2142:A:N1	4:CA:2150:C:N3	2.69	0.41
4:CA:2334:U:N3	39:CP:16:ARG:HG3	2.36	0.41
4:CA:2360:G:C5	4:CA:2361:G:H1'	2.55	0.41
4:CA:2556:C:H3'	4:CA:2557:G:H8	1.85	0.41
4:CA:2671:G:C2	4:CA:2672:U:O2	2.74	0.41
4:CA:2719:G:H8	4:CA:2719:G:O5'	2.04	0.41
5:CB:6:G:H4'	5:CB:28:C:C4'	2.50	0.41
6:AB:106:THR:C	6:AB:107:VAL:HG23	2.41	0.41
11:AG:12:ILE:O	11:AG:21:GLU:HG2	2.21	0.41
12:AH:22:LYS:HA	12:AH:22:LYS:CE	2.50	0.41
6:BB:145:GLU:O	6:BB:149:GLY:HA3	2.20	0.41
7:BC:23:PHE:HD2	14:BJ:97:ASP:HB2	1.86	0.41
8:BD:192:SER:O	8:BD:193:ALA:CB	2.68	0.41
10:BF:3:HIS:HB2	10:BF:92:THR:OG1	2.20	0.41
10:BF:47:LEU:HD22	22:BR:66:SER:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BK:31:ILE:HG22	15:BK:46:THR:CB	2.50	0.41
21:BQ:69:LYS:O	21:BQ:70:THR:HB	2.20	0.41
21:BQ:75:LEU:O	21:BQ:76:VAL:HG13	2.20	0.41
25:BU:12:PHE:HD1	25:BU:15:ALA:N	2.19	0.41
32:CH:2:GLN:C	32:CH:3:VAL:HG13	2.41	0.41
33:CJ:19:PRO:HB2	33:CJ:22:PRO:HD2	2.01	0.41
42:CS:71:LYS:HE3	42:CS:73:LYS:CE	2.50	0.41
43:CT:48:LYS:C	43:CT:50:VAL:N	2.73	0.41
45:CV:3:LYS:HG3	45:CV:84:PHE:CZ	2.56	0.41
49:CZ:3:ALA:O	49:CZ:7:ARG:HG3	2.21	0.41
27:DC:104:LEU:N	27:DC:104:LEU:CD1	2.83	0.41
32:DH:118:PRO:O	32:DH:119:ASN:HB2	2.21	0.41
37:DN:96:ILE:HG21	37:DN:126:ILE:CD1	2.51	0.41
50:D0:50:VAL:HG23	50:D0:54:VAL:CG1	2.50	0.41
51:D1:8:THR:C	69:D1:201:HOH:O	2.56	0.41
52:D2:45:HIS:O	52:D2:46:VAL:HG23	2.21	0.41
57:D7:12:VAL:HG12	57:D7:13:VAL:N	2.36	0.41
1:AA:749:A:H2	19:AO:22:THR:HG21	1.86	0.41
1:AA:781:A:O2'	1:AA:1522:U:O2	2.36	0.41
1:AA:865:A:H5'	1:AA:1078:U:O4	2.21	0.41
1:AA:982:U:H5"	18:AN:5:MET:CE	2.51	0.41
1:AA:1016:A:C2	1:AA:1017:U:O3'	2.74	0.41
1:AA:1115:U:OP1	14:AJ:68:ARG:NH2	2.49	0.41
1:AA:1130:A:OP1	13:AI:18:ARG:NH1	2.54	0.41
1:AA:1167:A:N7	1:AA:1169:A:C5	2.89	0.41
1:AA:1239:A:H62	1:AA:1299:A:N6	2.19	0.41
1:AA:1345:U:C5	1:AA:1377:A:C2	3.09	0.41
1:AA:1449:C:C2	1:AA:1455:G:C2	3.09	0.41
2:BA:115:G:C2	2:BA:289:G:N7	2.89	0.41
2:BA:132:C:OP1	24:BT:70:ASN:ND2	2.53	0.41
2:BA:828:U:H2'	2:BA:829:G:O5'	2.20	0.41
2:BA:1262:C:C5	2:BA:1263:C:C5	3.09	0.41
2:BA:1296:C:OP1	17:BM:14:HIS:CE1	2.73	0.41
2:BA:1521:C:C2'	2:BA:1522:U:O5'	2.69	0.41
3:DA:300:A:H2	3:DA:333:G:N3	2.18	0.41
3:DA:415:A:N6	3:DA:2407:A:H61	2.19	0.41
3:DA:475:C:C5	3:DA:481:G:O6	2.73	0.41
3:DA:996:A:C6	3:DA:1160:G:C2	3.08	0.41
3:DA:1056:G:H1'	3:DA:1103:A:H61	1.85	0.41
3:DA:1166:G:O2'	3:DA:1167:C:H5'	2.21	0.41
3:DA:1238:G:C2'	3:DA:1239:G:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1242:U:C4	3:DA:1243:C:N4	2.88	0.41
3:DA:1251:C:P	69:DA:3618:HOH:O	2.79	0.41
3:DA:1403:A:H2'	3:DA:1404:C:C6	2.56	0.41
3:DA:1517:G:H2'	3:DA:1518:C:C6	2.56	0.41
3:DA:1568:G:P	69:DA:3218:HOH:O	2.61	0.41
3:DA:1654:A:C2'	3:DA:1655:A:O5'	2.68	0.41
3:DA:1735:A:C4	3:DA:1736:U:C6	3.08	0.41
3:DA:2026:U:P	69:DA:3925:HOH:O	2.79	0.41
3:DA:2138:G:C2	3:DA:2154:A:C2	3.09	0.41
3:DA:2181:U:C5	3:DA:2182:U:C4	3.09	0.41
3:DA:2811:G:C2'	3:DA:2812:G:H5'	2.51	0.41
60:DA:3045:MPD:O4	60:DA:3045:MPD:O2	2.30	0.41
4:CA:118:A:H1'	4:CA:178:G:O4'	2.21	0.41
4:CA:192:C:H2'	4:CA:193:U:H5'	2.03	0.41
4:CA:322:A:OP1	29:CE:162:ARG:HB3	2.20	0.41
4:CA:354:A:H2'	4:CA:355:U:O4'	2.21	0.41
4:CA:514:A:C2	4:CA:515:A:C2	3.08	0.41
4:CA:542:C:H5"	4:CA:543:G:OP2	2.21	0.41
4:CA:731:C:H5	69:CA:3946:HOH:O	2.04	0.41
4:CA:819:A:C8	4:CA:1188:U:O4	2.74	0.41
4:CA:827:U:H6	4:CA:827:U:OP1	2.03	0.41
4:CA:1156:A:H3'	69:CA:3282:HOH:O	2.21	0.41
4:CA:1248:G:O2'	41:CR:2:ARG:HA	2.21	0.41
4:CA:1260:A:C2	4:CA:1261:C:C2	3.09	0.41
4:CA:1363:C:C2'	4:CA:1364:G:O5'	2.69	0.41
4:CA:1745:A:H2'	4:CA:1746:A:O4'	2.21	0.41
4:CA:1965:C:OP1	4:CA:1966:A:H2'	2.20	0.41
4:CA:1972:G:C2	4:CA:1973:G:N7	2.89	0.41
4:CA:2237:G:H5'	69:CA:3419:HOH:O	2.20	0.41
4:CA:2302:U:N3	4:CA:2303:G:N7	2.69	0.41
4:CA:2365:G:OP1	47:CX:53:ARG:N	2.51	0.41
4:CA:2372:U:H4'	52:C2:45:HIS:CD2	2.55	0.41
4:CA:2499:C:C2'	69:CA:3405:HOH:O	2.69	0.41
4:CA:2811:G:H2'	4:CA:2812:G:O4'	2.21	0.41
5:DB:43:C:O2'	30:DF:91:ARG:HG3	2.20	0.41
5:CB:43:C:H1'	30:CF:89:THR:O	2.21	0.41
6:AB:35:ARG:HB2	6:AB:40:ILE:HG13	2.02	0.41
6:AB:91:PHE:H	6:AB:91:PHE:HD1	1.69	0.41
6:AB:104:TRP:HH2	6:AB:155:GLY:C	2.24	0.41
6:AB:222:ARG:HB2	6:AB:222:ARG:HH11	1.85	0.41
7:AC:6:HIS:CD2	7:AC:8:ASN:HB3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AC:123:GLN:O	7:AC:128:VAL:HG13	2.21	0.41
10:AF:49:TYR:CE2	10:AF:51:ILE:CG2	3.04	0.41
10:AF:86:ARG:HG3	10:AF:86:ARG:NH1	2.35	0.41
14:AJ:15:HIS:O	14:AJ:19:ASP:OD1	2.39	0.41
15:AK:29:ASN:OD1	15:AK:47:ALA:HB3	2.21	0.41
17:AM:114:LYS:HB3	17:AM:115:PRO:HD3	2.01	0.41
6:BB:98:GLY:HA2	69:BB:301:HOH:O	2.19	0.41
7:BC:77:ILE:HD11	7:BC:103:ILE:HD13	2.02	0.41
7:BC:130:PHE:CE2	7:BC:157:LEU:HB3	2.56	0.41
9:BE:50:TYR:O	9:BE:51:GLY:O	2.39	0.41
9:BE:115:LEU:HB3	9:BE:120:VAL:HG23	2.03	0.41
11:BG:33:ASP:HB2	11:BG:35:LYS:HG3	2.02	0.41
11:BG:122:ASN:O	11:BG:126:ASP:HB2	2.21	0.41
17:BM:19:LEU:O	17:BM:22:ILE:HD12	2.20	0.41
18:BN:1:ALA:O	18:BN:2:LYS:HB2	2.20	0.41
18:BN:98:LYS:HB3	18:BN:98:LYS:HE3	1.91	0.41
27:CC:206:LYS:HZ1	27:CC:212:TRP:HH2	1.68	0.41
35:CL:17:ARG:HA	35:CL:17:ARG:HD3	1.92	0.41
38:CO:117:ASP:O	38:CO:118:ARG:HB2	2.20	0.41
41:CR:46:TYR:CZ	41:CR:50:ARG:CZ	3.04	0.41
43:CT:36:LEU:HD13	43:CT:48:LYS:HG3	2.03	0.41
52:C2:16:THR:HG22	52:C2:17:GLY:N	2.35	0.41
27:DC:200:MET:HG3	27:DC:201:LEU:HD12	2.03	0.41
56:DD:177:VAL:O	56:DD:177:VAL:CG2	2.68	0.41
29:DE:189:THR:HG22	29:DE:191:ASP:H	1.86	0.41
41:DR:89:ILE:HG22	41:DR:94:LEU:HG	2.02	0.41
44:DU:51:PHE:O	44:DU:53:VAL:HG13	2.20	0.41
1:AA:102:G:O2'	1:AA:151:A:N3	2.48	0.41
1:AA:142:G:N2	1:AA:222:C:C6	2.89	0.41
1:AA:184:G:H2'	1:AA:185:U:H6	1.86	0.41
1:AA:219:U:H2'	1:AA:220:G:H8	1.84	0.41
1:AA:316:C:N3	1:AA:317:U:C5	2.89	0.41
1:AA:364:A:O2'	1:AA:365:U:O5'	2.32	0.41
1:AA:417:G:C5	1:AA:418:C:C4	3.08	0.41
1:AA:445:G:H2'	1:AA:446:G:O4'	2.20	0.41
1:AA:552:U:H2'	1:AA:553:A:C8	2.56	0.41
1:AA:588:G:C2	1:AA:589:U:C2	3.08	0.41
1:AA:663:A:C2	1:AA:743:A:C2	3.09	0.41
1:AA:716:A:C2'	1:AA:717:U:O5'	2.69	0.41
1:AA:858:G:O6	1:AA:869:G:C8	2.74	0.41
1:AA:954:G:C6	1:AA:955:U:N3	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1137:C:H1'	1:AA:1138:G:N2	2.36	0.41
1:AA:1152:A:H5'	14:AJ:15:HIS:HB2	2.02	0.41
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.55	0.41
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.21	0.41
1:AA:1371:G:C5	1:AA:1372:U:C4	3.09	0.41
1:AA:1404:C:H1'	1:AA:1499:A:C2	2.56	0.41
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.56	0.41
2:BA:21:G:P	69:BA:1805:HOH:O	2.78	0.41
2:BA:228:A:H2'	2:BA:229:U:C1'	2.51	0.41
2:BA:297:G:C4	2:BA:299:G:OP2	2.73	0.41
2:BA:345:C:O4'	2:BA:346:G:N2	2.53	0.41
2:BA:375:U:C2	2:BA:376:G:C8	3.09	0.41
2:BA:385:C:O5'	2:BA:385:C:H6	2.04	0.41
2:BA:436:C:O2	2:BA:436:C:H2'	2.20	0.41
2:BA:451:A:C8	2:BA:452:A:C6	3.09	0.41
2:BA:514:C:H42	2:BA:537:G:H1	1.67	0.41
2:BA:599:C:H4'	12:BH:122:GLY:C	2.40	0.41
2:BA:636:U:H2'	2:BA:637:C:C6	2.56	0.41
2:BA:756:C:C4	2:BA:757:U:C5	3.09	0.41
2:BA:851:G:C2	2:BA:852:G:C8	3.08	0.41
2:BA:1041:G:O2'	2:BA:1042:A:H5'	2.21	0.41
2:BA:1092:A:C5	2:BA:1093:A:N6	2.89	0.41
2:BA:1098:C:C2	2:BA:1099:G:C8	3.09	0.41
2:BA:1302:C:H4'	2:BA:1303:C:OP2	2.20	0.41
2:BA:1320:C:H2'	2:BA:1321:U:C6	2.56	0.41
3:DA:63:A:H2'	3:DA:64:A:O5'	2.21	0.41
3:DA:352:A:H5'	3:DA:353:C:P	2.61	0.41
3:DA:379:G:C2'	3:DA:380:G:O5'	2.68	0.41
3:DA:500:G:N2	3:DA:502:A:H3'	2.36	0.41
3:DA:588:U:H1'	29:DE:85:PHE:CD1	2.56	0.41
3:DA:814:C:H2'	3:DA:815:C:C6	2.55	0.41
3:DA:901:C:C5	3:DA:902:C:C5	3.09	0.41
3:DA:914:G:C8	3:DA:914:G:H3'	2.56	0.41
3:DA:960:A:N7	3:DA:962:G:C8	2.89	0.41
3:DA:972:A:N1	3:DA:973:A:N6	2.68	0.41
3:DA:999:U:C5	3:DA:1154:G:C5	3.09	0.41
3:DA:1171:G:C2	3:DA:1172:C:N4	2.89	0.41
3:DA:1206:G:C5	3:DA:1207:C:C4	3.09	0.41
3:DA:1260:A:H2'	3:DA:1261:C:C6	2.56	0.41
3:DA:1294:U:O2	38:DO:23:ASN:ND2	2.53	0.41
3:DA:1299:G:O5'	3:DA:1299:G:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:1362:C:C2'	3:DA:1363:C:H5'	2.51	0.41
3:DA:1362:C:H2'	3:DA:1363:C:H5'	2.03	0.41
3:DA:1419:A:N7	3:DA:1421:G:C6	2.89	0.41
3:DA:1490:A:H2'	27:DC:97:ASP:HB2	2.03	0.41
3:DA:1512:C:C4	3:DA:1513:U:C5	3.09	0.41
3:DA:1644:C:C2'	3:DA:1645:G:H5'	2.51	0.41
3:DA:1684:G:C2	3:DA:1705:A:C2	3.08	0.41
3:DA:1733:G:C5	69:DA:3470:HOH:O	2.73	0.41
3:DA:1789:A:OP1	27:DC:220:ARG:HD3	2.21	0.41
3:DA:1796:U:H2'	3:DA:1797:G:H8	1.86	0.41
3:DA:1820:U:OP1	27:DC:176:ARG:HG2	2.21	0.41
3:DA:1936:A:H3'	3:DA:1937:A:H5'	2.03	0.41
3:DA:1954:G:C5'	69:DA:5487:HOH:O	2.68	0.41
3:DA:2046:G:C2'	69:DA:3696:HOH:O	2.69	0.41
3:DA:2074:U:H4'	3:DA:2598:A:O4'	2.21	0.41
3:DA:2247:A:H5'	69:DA:3622:HOH:O	2.19	0.41
3:DA:2302:U:C2	3:DA:2303:G:C8	3.09	0.41
3:DA:2346:A:H4'	3:DA:2347:C:OP2	2.21	0.41
3:DA:2348:U:H2'	3:DA:2349:G:O5'	2.21	0.41
3:DA:2409:G:H2'	3:DA:2410:G:O5'	2.21	0.41
3:DA:2439:A:C5'	69:DA:4217:HOH:O	2.69	0.41
3:DA:2461:A:H1'	3:DA:2492:U:N3	2.36	0.41
3:DA:2467:C:C2'	3:DA:2468:A:H5'	2.51	0.41
3:DA:2519:U:H5"	69:DA:4275:HOH:O	2.20	0.41
3:DA:2628:C:OP1	63:DA:3054:PUT:N1	2.54	0.41
3:DA:2656:U:C4	3:DA:2664:G:N2	2.89	0.41
4:CA:58:G:C4	4:CA:70:G:N2	2.89	0.41
4:CA:60:G:H5'	4:CA:74:A:H2	1.86	0.41
4:CA:64:A:C2	4:CA:65:U:C2	3.09	0.41
4:CA:193:U:C5	4:CA:194:G:N7	2.89	0.41
4:CA:323:C:H2'	29:CE:163:ASN:OD1	2.21	0.41
4:CA:372:G:OP2	48:CY:61:LYS:HE3	2.21	0.41
4:CA:376:G:H2'	4:CA:377:G:H8	1.86	0.41
4:CA:417:C:H2'	4:CA:418:C:H6	1.86	0.41
4:CA:455:C:HO2'	4:CA:472:A:H2	1.65	0.41
4:CA:465:G:C6	4:CA:466:A:N6	2.88	0.41
4:CA:560:C:H2'	4:CA:561:G:O4'	2.21	0.41
4:CA:571:U:H4'	4:CA:573:U:H5	1.86	0.41
4:CA:792:A:H2'	4:CA:2440:C:O2	2.21	0.41
4:CA:874:G:C2	4:CA:904:G:C2	3.09	0.41
4:CA:992:C:O2'	42:CS:89:HIS:CG	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1048:A:C6	4:CA:1111:A:C2	3.08	0.41
4:CA:1093:G:H1'	4:CA:1098:A:H61	1.85	0.41
4:CA:1094:U:OP1	31:CG:172:GLU:HG3	2.21	0.41
4:CA:1317:G:C6	4:CA:1318:U:C4	3.09	0.41
4:CA:1356:G:C2	4:CA:1357:C:C1'	3.04	0.41
4:CA:1409:U:H2'	4:CA:1410:G:O4'	2.21	0.41
4:CA:1427:A:H4'	4:CA:1428:C:O4'	2.21	0.41
4:CA:1431:A:H2'	4:CA:1431:A:N3	2.35	0.41
4:CA:1445:G:O6	4:CA:1465:G:O6	2.39	0.41
4:CA:1461:C:O5'	4:CA:1461:C:H6	2.04	0.41
4:CA:1530:G:H2'	4:CA:1531:C:O4'	2.21	0.41
4:CA:1531:C:N4	4:CA:1532:A:H62	2.18	0.41
4:CA:1587:G:H2'	4:CA:1588:G:H8	1.86	0.41
4:CA:1773:A:N3	4:CA:1978:A:H2	2.18	0.41
4:CA:1845:G:C4	4:CA:1846:G:C8	3.09	0.41
4:CA:1905:C:O2'	4:CA:1929:G:H1'	2.21	0.41
4:CA:2123:G:N2	4:CA:2176:A:C2	2.89	0.41
4:CA:2124:G:N2	4:CA:2175:C:C2	2.89	0.41
4:CA:2127:G:O2'	4:CA:2173:A:N3	2.54	0.41
4:CA:2162:G:C4'	4:CA:2163:A:OP1	2.68	0.41
4:CA:2250:G:C2	37:CN:82:MET:CB	3.04	0.41
4:CA:2416:C:H2'	4:CA:2417:C:H6	1.86	0.41
4:CA:2544:G:H2'	4:CA:2545:G:C8	2.56	0.41
4:CA:2586:U:C5	4:CA:2608:G:N2	2.89	0.41
4:CA:2651:C:C2'	4:CA:2652:C:H5'	2.50	0.41
4:CA:2734:A:H61	4:CA:2770:G:C2'	2.33	0.41
4:CA:2739:U:C5	4:CA:2763:G:C5	3.09	0.41
4:CA:2785:C:H1'	28:CD:36:GLN:OE1	2.21	0.41
6:AB:73:LYS:NZ	6:AB:205:ASP:HA	2.36	0.41
6:AB:116:ASP:O	6:AB:120:GLN:CB	2.68	0.41
6:AB:117:LEU:HB3	6:AB:141:LEU:HD13	2.03	0.41
6:AB:186:ILE:HA	6:AB:200:ILE:HB	2.03	0.41
7:AC:5:VAL:HG22	7:AC:6:HIS:N	2.35	0.41
7:AC:23:PHE:CD1	7:AC:23:PHE:C	2.93	0.41
7:AC:155:GLY:HA2	7:AC:163:ALA:HB1	2.03	0.41
7:AC:173:VAL:O	7:AC:173:VAL:HG12	2.21	0.41
8:AD:88:GLU:HG2	8:AD:188:ARG:HD3	2.03	0.41
8:AD:135:TYR:C	8:AD:135:TYR:CD2	2.95	0.41
19:AO:57:LEU:O	19:AO:57:LEU:HD22	2.21	0.41
24:AT:44:LYS:CB	24:AT:87:ALA:HB1	2.51	0.41
6:BB:10:LEU:C	6:BB:12:ALA:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:17:GLY:O	6:BB:18:HIS:HB2	2.21	0.41
6:BB:213:TYR:O	6:BB:216:ALA:HB3	2.21	0.41
7:BC:59:ARG:HB3	7:BC:63:SER:O	2.21	0.41
9:BE:56:VAL:N	9:BE:57:PRO:HD2	2.35	0.41
11:BG:60:GLU:O	11:BG:63:GLU:N	2.54	0.41
13:BI:10:GLY:HA2	13:BI:81:HIS:ND1	2.36	0.41
13:BI:128:SER:O	13:BI:129:LYS:O	2.38	0.41
19:BO:24:SER:OG	19:BO:27:VAL:HG23	2.20	0.41
21:BQ:5:ILE:H	21:BQ:5:ILE:HG13	1.72	0.41
21:BQ:17:MET:CE	21:BQ:20:SER:O	2.69	0.41
21:BQ:44:LEU:HD13	21:BQ:61:ILE:HD11	2.02	0.41
24:BT:55:GLN:N	24:BT:56:PRO:HD2	2.36	0.41
27:CC:157:ALA:O	27:CC:196:ASN:N	2.50	0.41
28:CD:60:VAL:HG13	28:CD:60:VAL:O	2.19	0.41
29:CE:12:LEU:CD2	29:CE:13:THR:N	2.84	0.41
29:CE:121:VAL:O	29:CE:190:ALA:N	2.53	0.41
29:CE:122:GLU:O	29:CE:190:ALA:HB3	2.21	0.41
30:CF:13:LYS:C	30:CF:13:LYS:HD2	2.41	0.41
32:CH:42:LYS:HD3	32:CH:43:ASN:OD1	2.21	0.41
33:CJ:14:ALA:HB3	33:CJ:51:GLY:CA	2.51	0.41
33:CJ:110:GLN:C	33:CJ:112:LYS:H	2.24	0.41
34:CK:37:ARG:HA	34:CK:118:MET:SD	2.61	0.41
34:CK:99:ARG:HB3	34:CK:103:ILE:HD12	2.02	0.41
35:CL:1:MET:HB2	35:CL:67:LYS:HG3	2.02	0.41
35:CL:47:ILE:HD12	35:CL:49:ARG:H	1.86	0.41
36:CM:55:MET:SD	36:CM:59:ARG:NH2	2.94	0.41
36:CM:101:ILE:CG1	36:CM:102:GLY:N	2.82	0.41
37:CN:118:LYS:HD3	37:CN:118:LYS:HA	1.89	0.41
40:CQ:26:GLU:HB2	40:CQ:86:LYS:HE2	2.02	0.41
44:CU:1:MET:HG3	44:CU:2:ILE:HD12	2.02	0.41
44:CU:9:LYS:HA	49:CZ:29:ARG:HH12	1.86	0.41
45:CV:73:ASN:HB2	45:CV:80:ASP:OD1	2.20	0.41
46:CW:38:LEU:HG	46:CW:40:ILE:HD13	2.02	0.41
49:CZ:45:GLN:O	49:CZ:47:ARG:N	2.52	0.41
52:C2:43:ARG:O	52:C2:44:GLN:HG2	2.20	0.41
56:DD:84:LEU:HD22	56:DD:88:GLU:HB3	2.02	0.41
29:DE:131:THR:CG2	29:DE:164:LEU:HD13	2.50	0.41
32:DH:68:ARG:HG2	32:DH:108:VAL:HG13	2.01	0.41
33:DJ:110:GLN:O	33:DJ:110:GLN:CG	2.69	0.41
34:DK:49:ASP:C	34:DK:49:ASP:OD1	2.57	0.41
35:DL:73:ASP:OD1	35:DL:73:ASP:C	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DN:3:GLN:HB2	69:DN:308:HOH:O	2.20	0.41
40:DQ:52:ARG:O	40:DQ:53:GLY:C	2.59	0.41
43:DT:9:HIS:HB3	69:DT:324:HOH:O	2.20	0.41
57:D7:55:PRO:HB2	57:D7:56:PHE:H	1.69	0.41
1:AA:339:C:OP2	35:DL:98:ARG:HD3	2.21	0.41
1:AA:353:A:C2'	1:AA:354:G:OP2	2.68	0.41
1:AA:471:U:H2'	1:AA:472:U:H6	1.86	0.41
1:AA:597:G:H5"	1:AA:598:U:OP2	2.21	0.41
1:AA:659:U:H2'	1:AA:660:C:C6	2.56	0.41
1:AA:694:A:H2'	1:AA:695:A:O5'	2.21	0.41
1:AA:737:C:H2'	1:AA:738:C:H6	1.86	0.41
1:AA:771:G:H2'	1:AA:772:U:C6	2.55	0.41
1:AA:859:G:N3	1:AA:860:A:C8	2.89	0.41
1:AA:880:C:C6	1:AA:880:C:H3'	2.56	0.41
1:AA:1166:G:O6	1:AA:1168:U:H5"	2.21	0.41
1:AA:1344:C:OP1	13:AI:124:ARG:NE	2.54	0.41
1:AA:1406:U:H2'	1:AA:1407:5MC:O4'	2.21	0.41
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.41
2:BA:72:A:O2'	2:BA:73:C:H5'	2.20	0.41
2:BA:128:G:N1	2:BA:129:A:C6	2.89	0.41
2:BA:273:U:C2'	2:BA:274:A:H5'	2.51	0.41
2:BA:542:G:N3	2:BA:543:U:C6	2.88	0.41
2:BA:551:U:C4	2:BA:552:U:C4	3.09	0.41
2:BA:570:G:N3	2:BA:570:G:H2'	2.35	0.41
2:BA:627:G:OP1	20:BP:35:ARG:NH2	2.54	0.41
2:BA:932:C:O2	2:BA:933:G:C8	2.74	0.41
2:BA:1077:G:N2	2:BA:1081:A:C4	2.88	0.41
2:BA:1346:A:C1'	2:BA:1348:U:C6	3.04	0.41
2:BA:1518:A:C2	2:BA:1519:A:C2	3.09	0.41
3:DA:11:C:H2'	3:DA:12:U:H5'	2.03	0.41
3:DA:666:A:O2'	3:DA:667:U:H5'	2.21	0.41
3:DA:669:G:N3	3:DA:669:G:C2'	2.83	0.41
3:DA:882:G:N2	3:DA:895:U:H1'	2.36	0.41
3:DA:939:G:C6	3:DA:940:G:C5	3.09	0.41
3:DA:1085:A:N7	3:DA:1086:A:N6	2.69	0.41
3:DA:1140:C:O2'	3:DA:1141:U:H5'	2.20	0.41
3:DA:1376:C:H3'	69:DA:4583:HOH:O	2.21	0.41
3:DA:1485:U:H2'	3:DA:1486:U:O4'	2.20	0.41
3:DA:1618:6MZ:N7	69:DA:3829:HOH:O	2.37	0.41
3:DA:1760:C:C2'	3:DA:1761:C:H5'	2.51	0.41
3:DA:1866:A:C2	3:DA:1876:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:2162:G:OP2	3:DA:2162:G:H2'	2.21	0.41
3:DA:2378:A:H2'	3:DA:2379:G:O5'	2.21	0.41
4:CA:7:G:C6	4:CA:8:C:C4	3.09	0.41
4:CA:391:A:H5'	4:CA:412:A:H4'	2.03	0.41
4:CA:415:A:H1'	4:CA:1865:U:OP1	2.21	0.41
4:CA:445:C:H2'	4:CA:446:G:C8	2.56	0.41
4:CA:544:C:C4	4:CA:545:U:H6	2.39	0.41
4:CA:545:U:O2	4:CA:546:U:H4'	2.21	0.41
4:CA:570:G:C2'	4:CA:571:U:H5'	2.50	0.41
4:CA:712:G:OP1	19:BO:89:ARG:OXT	2.39	0.41
4:CA:734:A:C4	4:CA:735:A:C8	3.09	0.41
4:CA:776:G:N1	4:CA:2072:C:OP1	2.41	0.41
4:CA:846:U:HO2'	4:CA:847:U:P	2.44	0.41
4:CA:959:A:H62	37:CN:82:MET:HE3	1.85	0.41
4:CA:1027:A:C6	4:CA:1126:A:N3	2.89	0.41
4:CA:1167:C:H2'	4:CA:1168:G:C5'	2.50	0.41
4:CA:1292:G:H2'	4:CA:1293:C:C6	2.55	0.41
4:CA:1327:A:P	69:CA:3457:HOH:O	2.79	0.41
4:CA:1345:C:H5'	4:CA:1396:U:O4	2.20	0.41
4:CA:1468:U:H5'	4:CA:1469:A:OP1	2.21	0.41
4:CA:1753:G:H5"	40:CQ:92:ARG:HD3	2.03	0.41
4:CA:1831:G:C6	4:CA:1832:C:C4	3.09	0.41
4:CA:1914:C:O2	4:CA:1914:C:O4'	2.39	0.41
4:CA:2079:U:H2'	4:CA:2080:A:H8	1.86	0.41
4:CA:2223:G:N3	4:CA:2223:G:H2'	2.35	0.41
4:CA:2706:A:C2'	4:CA:2707:U:O5'	2.69	0.41
4:CA:2740:A:H4'	55:C5:43:LYS:HE3	2.01	0.41
4:CA:2823:A:C2'	4:CA:2824:C:H5'	2.50	0.41
4:CA:2884:U:O4	51:C1:37:HIS:CE1	2.74	0.41
4:CA:2899:A:C2	4:CA:2900:A:C5	3.09	0.41
5:DB:85:G:H1'	67:DB:203:EDO:H11	2.03	0.41
5:CB:30:C:N4	5:CB:31:C:O2	2.54	0.41
8:AD:98:LEU:HD21	8:AD:123:ILE:HG13	2.02	0.41
17:AM:25:VAL:O	17:AM:25:VAL:HG23	2.20	0.41
17:AM:48:LEU:CD2	17:AM:53:ILE:HG12	2.50	0.41
18:AN:46:LEU:O	18:AN:47:LYS:C	2.59	0.41
18:AN:49:GLN:OE1	18:AN:49:GLN:HA	2.21	0.41
18:AN:100:SER:O	18:AN:101:TRP:HB3	2.20	0.41
13:BI:43:THR:HG22	13:BI:44:ALA:N	2.36	0.41
15:BK:36:ASP:OD1	15:BK:40:ASN:N	2.43	0.41
28:CD:149:ASN:O	28:CD:151:THR:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CE:105:LEU:O	29:CE:109:LEU:HB2	2.21	0.41
32:CH:68:ARG:HD2	32:CH:133:VAL:HG22	2.03	0.41
33:CJ:77:VAL:O	33:CJ:80:LYS:HE3	2.21	0.41
35:CL:108:ARG:NE	35:CL:116:ILE:CD1	2.84	0.41
37:CN:68:PHE:O	37:CN:69:PRO:C	2.59	0.41
38:CO:55:ALA:HA	38:CO:80:PHE:CZ	2.56	0.41
44:CU:45:ALA:O	44:CU:49:LYS:HG2	2.21	0.41
48:CY:71:ARG:C	48:CY:73:ARG:N	2.74	0.41
49:CZ:18:LEU:HG	49:CZ:53:VAL:HG11	2.02	0.41
54:C4:61:LEU:HB3	54:C4:64:ALA:HB2	2.02	0.41
29:DE:117:ARG:NH2	36:DM:1:MET:HB3	2.35	0.41
30:DF:72:SER:O	30:DF:73:VAL:HG13	2.21	0.41
33:DJ:33:ASN:CG	33:DJ:36:GLU:HG3	2.42	0.41
33:DJ:102:ARG:HB2	33:DJ:141:ASP:HA	2.03	0.41
57:D7:43:PRO:HB2	57:D7:44:TYR:H	1.64	0.41
1:AA:279:A:H5"	1:AA:281:G:O4'	2.21	0.40
1:AA:301:G:C2'	1:AA:302:G:H5'	2.51	0.40
1:AA:617:G:C2	1:AA:618:C:C5	3.09	0.40
1:AA:617:G:N1	1:AA:618:C:C5	2.89	0.40
1:AA:687:A:C2	1:AA:700:G:N3	2.89	0.40
1:AA:880:C:P	16:AL:5:ASN:HD22	2.43	0.40
1:AA:909:A:H2'	1:AA:910:C:O4'	2.21	0.40
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.86	0.40
1:AA:1160:G:C6	1:AA:1161:C:C5	3.10	0.40
1:AA:1160:G:C5	1:AA:1161:C:C5	3.09	0.40
1:AA:1215:G:O2'	1:AA:1216:A:H5'	2.21	0.40
1:AA:1259:C:O2'	1:AA:1284:C:H1'	2.21	0.40
1:AA:1305:G:H21	1:AA:1332:A:H2	1.69	0.40
1:AA:1320:C:N3	23:AS:36:ARG:NH1	2.70	0.40
1:AA:1500:A:OP2	1:AA:1505:G:OP1	2.39	0.40
2:BA:3:A:C6	2:BA:629:A:H4'	2.57	0.40
2:BA:29:U:H4'	2:BA:295:C:O3'	2.21	0.40
2:BA:181:A:N1	2:BA:195:A:C5	2.88	0.40
2:BA:186:C:N4	2:BA:187:G:C6	2.89	0.40
2:BA:256:U:H2'	2:BA:257:G:O4'	2.21	0.40
2:BA:519:C:H2'	2:BA:520:A:O4'	2.21	0.40
2:BA:570:G:H5"	2:BA:571:U:OP2	2.22	0.40
2:BA:666:G:H5'	2:BA:726:C:H1'	2.02	0.40
2:BA:670:G:O2'	2:BA:671:G:H5'	2.21	0.40
2:BA:771:G:O2'	2:BA:772:U:H5'	2.21	0.40
2:BA:1028:C:H1'	2:BA:1034:G:N2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:BA:1272:G:H2'	2:BA:1273:C:C5'	2.51	0.40
2:BA:1480:A:C5	2:BA:1481:U:C5	3.10	0.40
2:BA:1521:C:C2	2:BA:1522:U:C6	3.10	0.40
3:DA:273:G:N2	3:DA:365:U:C2	2.88	0.40
3:DA:341:C:H2'	3:DA:342:A:O4'	2.21	0.40
3:DA:483:A:C4	45:DV:57:ILE:HD11	2.55	0.40
3:DA:520:G:C6	3:DA:521:U:C4	3.09	0.40
3:DA:713:G:C6	3:DA:714:U:C4	3.10	0.40
3:DA:749:A:H5"	3:DA:750:A:OP2	2.21	0.40
3:DA:837:C:H3'	69:DA:4238:HOH:O	2.20	0.40
3:DA:955:PSU:P	69:DA:3323:HOH:O	2.75	0.40
3:DA:1012:U:O4	34:DK:30:THR:HG21	2.21	0.40
3:DA:1059:G:H5"	3:DA:1060:U:C2'	2.51	0.40
3:DA:1157:G:N2	3:DA:1158:C:C2	2.89	0.40
3:DA:1485:U:O2	3:DA:1505:A:C2	2.74	0.40
3:DA:1717:A:C2	3:DA:1718:G:H1'	2.56	0.40
3:DA:1732:C:H4'	3:DA:1733:G:OP2	2.22	0.40
3:DA:1936:A:C5	3:DA:1945:G:C5	3.09	0.40
3:DA:2020:A:H5'	51:D1:8:THR:CG2	2.51	0.40
3:DA:2162:G:OP1	3:DA:2171:A:H2'	2.20	0.40
3:DA:2183:A:O2'	3:DA:2184:A:O4'	2.27	0.40
3:DA:2380:C:N4	3:DA:2381:A:N6	2.70	0.40
3:DA:2477:U:O4	55:D5:9:THR:CG2	2.69	0.40
3:DA:2552:OMU:C2	3:DA:2554:U:H5'	2.51	0.40
3:DA:2581:G:C4	3:DA:2610:C:C5	3.10	0.40
3:DA:2622:U:C5'	69:DA:4393:HOH:O	2.66	0.40
4:CA:28:A:C6	4:CA:513:A:C8	3.09	0.40
4:CA:42:A:C2	4:CA:438:G:C2	3.10	0.40
4:CA:329:G:H4'	4:CA:330:A:OP2	2.21	0.40
4:CA:392:U:H2'	4:CA:393:C:C6	2.56	0.40
4:CA:396:G:O4'	48:CY:28:PHE:HB3	2.21	0.40
4:CA:469:G:O2'	4:CA:470:A:O4'	2.35	0.40
4:CA:669:G:C2	4:CA:801:G:C6	3.09	0.40
4:CA:709:U:H2'	4:CA:710:U:O4'	2.21	0.40
4:CA:849:A:H61	4:CA:928:A:H61	1.68	0.40
4:CA:977:G:C6	4:CA:978:G:N7	2.89	0.40
4:CA:1178:C:N4	4:CA:1180:U:C2	2.89	0.40
4:CA:1223:G:N2	4:CA:1226:A:OP2	2.39	0.40
4:CA:1288:G:C5	4:CA:1327:A:C2	3.09	0.40
4:CA:1331:G:O2'	4:CA:1332:G:H5"	2.21	0.40
4:CA:1579:A:H2'	4:CA:1580:A:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1856:U:O4	4:CA:1857:G:N1	2.54	0.40
4:CA:2199:A:C6	4:CA:2200:C:C2	3.09	0.40
4:CA:2395:C:H2'	4:CA:2396:G:O4'	2.20	0.40
4:CA:2796:U:C2	4:CA:2799:A:N6	2.86	0.40
5:CB:28:C:OP1	39:CP:36:TYR:OH	2.31	0.40
8:AD:11:LEU:O	8:AD:15:GLU:HG2	2.21	0.40
8:AD:23:SER:HB3	8:AD:161:LEU:CD1	2.51	0.40
8:AD:195:ILE:O	8:AD:195:ILE:HG13	2.21	0.40
10:AF:46:GLN:HA	10:AF:56:LYS:HG2	2.02	0.40
17:AM:45:ILE:O	17:AM:48:LEU:HB3	2.21	0.40
24:AT:80:THR:O	24:AT:84:ASN:OD1	2.39	0.40
7:BC:87:LEU:HA	7:BC:90:VAL:HG22	2.03	0.40
7:BC:150:LYS:HG2	7:BC:201:TRP:CZ3	2.55	0.40
8:BD:187:GLU:O	8:BD:191:LEU:CD1	2.69	0.40
13:BI:61:LEU:HD23	13:BI:61:LEU:H	1.86	0.40
15:BK:106:ARG:HH11	15:BK:106:ARG:HG2	1.86	0.40
17:BM:107:ARG:HH21	17:BM:110:LYS:HB3	1.86	0.40
19:BO:20:ASN:O	19:BO:22:THR:N	2.52	0.40
22:BR:23:TYR:CB	22:BR:58:ALA:HB1	2.52	0.40
22:BR:46:GLY:O	22:BR:47:THR:HG23	2.21	0.40
27:CC:159:THR:O	27:CC:194:VAL:HG13	2.21	0.40
28:CD:32:ASN:O	28:CD:96:ILE:HG13	2.21	0.40
29:CE:152:GLU:O	29:CE:154:ASP:N	2.53	0.40
32:CH:132:GLN:NE2	69:CH:201:HOH:O	2.54	0.40
33:CJ:21:PRO:HB2	33:CJ:22:PRO:HD3	2.03	0.40
44:CU:37:ASP:CG	44:CU:38:ALA:H	2.25	0.40
45:CV:76:THR:CG2	45:CV:98:ASN:HD22	2.35	0.40
48:CY:71:ARG:HG3	48:CY:72:ALA:H	1.86	0.40
50:C0:4:ILE:HG13	50:C0:5:LYS:N	2.36	0.40
30:DF:3:LEU:HA	30:DF:3:LEU:HD23	1.90	0.40
32:DH:54:LEU:O	32:DH:54:LEU:HD23	2.21	0.40
36:DM:62:PRO:O	54:D4:12:ARG:HG2	2.21	0.40
38:DO:118:ARG:O	38:DO:120:GLU:N	2.43	0.40
43:DT:79:GLY:N	43:DT:100:THR:O	2.44	0.40
44:DU:30:ILE:HG12	44:DU:85:VAL:HB	2.03	0.40
57:D7:6:HIS:HB3	57:D7:7:PRO:CD	2.51	0.40
1:AA:38:G:C2	1:AA:397:A:C2	3.09	0.40
1:AA:131:A:C2	1:AA:132:C:C6	3.09	0.40
1:AA:131:A:N3	1:AA:132:C:C6	2.89	0.40
1:AA:163:C:H2'	1:AA:164:G:O4'	2.21	0.40
1:AA:261:U:H3'	1:AA:262:A:H5"	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:338:A:N6	1:AA:339:C:C4	2.89	0.40
1:AA:526:C:P	69:AA:1755:HOH:O	2.78	0.40
1:AA:625:U:H2'	1:AA:626:G:H8	1.86	0.40
1:AA:658:C:N3	1:AA:659:U:C5	2.89	0.40
1:AA:746:A:N6	1:AA:747:A:N6	2.69	0.40
1:AA:953:G:C5	1:AA:1229:A:N1	2.89	0.40
1:AA:1113:C:O2'	7:AC:14:ILE:HD11	2.21	0.40
1:AA:1191:A:OP1	7:AC:4:LYS:HD3	2.21	0.40
1:AA:1202:U:N3	1:AA:1203:C:C6	2.89	0.40
1:AA:1422:G:O3'	35:DL:49:ARG:NH2	2.54	0.40
1:AA:1494:G:C5	1:AA:1495:U:C5	3.08	0.40
2:BA:326:G:N2	69:BA:1736:HOH:O	2.54	0.40
2:BA:577:G:N1	2:BA:578:C:C4	2.89	0.40
2:BA:671:G:N1	2:BA:672:U:C2	2.89	0.40
2:BA:1014:A:C8	2:BA:1015:G:N7	2.89	0.40
2:BA:1211:U:O2'	2:BA:1212:U:P	2.79	0.40
2:BA:1265:C:N3	2:BA:1271:A:H2	2.20	0.40
2:BA:1386:G:C2	2:BA:1387:G:N7	2.90	0.40
3:DA:37:C:H4'	3:DA:451:U:OP1	2.20	0.40
3:DA:303:G:H2'	3:DA:304:U:O4'	2.20	0.40
3:DA:484:C:C3'	3:DA:485:C:H5'	2.50	0.40
3:DA:757:G:H2'	3:DA:758:C:H5'	2.02	0.40
3:DA:830:G:H4'	3:DA:831:G:OP2	2.20	0.40
3:DA:880:G:N2	3:DA:898:C:O2	2.55	0.40
3:DA:1009:A:H3'	69:DA:4385:HOH:O	2.21	0.40
3:DA:1746:A:N3	3:DA:1747:U:C6	2.89	0.40
3:DA:1876:A:C2	3:DA:1877:A:C4	3.09	0.40
3:DA:2509:G:C2'	3:DA:2510:C:H5'	2.51	0.40
3:DA:2729:G:H5'	56:DD:190:LYS:HE2	2.02	0.40
3:DA:2826:A:C5	3:DA:2827:C:C5	3.10	0.40
4:CA:125:A:H5"	53:C3:19:ARG:HB2	2.02	0.40
4:CA:379:G:C4	4:CA:396:G:C2	3.10	0.40
4:CA:457:A:H4'	4:CA:458:G:OP1	2.21	0.40
4:CA:475:C:O2	4:CA:479:A:N6	2.49	0.40
4:CA:519:U:H2'	4:CA:520:G:O4'	2.20	0.40
4:CA:775:G:O6	4:CA:787:C:H2'	2.20	0.40
4:CA:974:G:H1'	4:CA:975:A:C8	2.56	0.40
4:CA:1004:U:H3	4:CA:1151:A:H61	1.69	0.40
4:CA:1033:U:H5"	4:CA:1033:U:H6	1.85	0.40
4:CA:1060:U:H4'	4:CA:1061:U:H5'	2.03	0.40
4:CA:1080:A:O2'	4:CA:1081:U:O5'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1097:U:O2	33:CJ:8:VAL:HG11	2.20	0.40
4:CA:1139:G:OP1	34:CK:74:TYR:HE2	2.04	0.40
4:CA:1179:G:N7	4:CA:1180:U:H1'	2.36	0.40
4:CA:1333:G:C2	4:CA:1334:G:C8	3.09	0.40
4:CA:1338:G:O2'	4:CA:1392:A:N6	2.52	0.40
4:CA:1539:U:H2'	4:CA:1540:G:C8	2.56	0.40
4:CA:1565:C:H1'	4:CA:1566:A:H8	1.86	0.40
4:CA:1607:C:C4'	4:CA:1608:A:O5'	2.67	0.40
4:CA:1651:G:C2	4:CA:2007:U:C2	3.09	0.40
4:CA:1695:G:N3	4:CA:1695:G:H5"	2.36	0.40
4:CA:1697:G:H5"	4:CA:1979:U:OP1	2.22	0.40
4:CA:1838:C:N4	4:CA:1899:A:C4	2.89	0.40
4:CA:2080:A:C5'	48:CY:18:SER:HB2	2.51	0.40
4:CA:2476:A:N6	55:C5:9:THR:HG21	2.37	0.40
4:CA:2581:G:C2	4:CA:2610:C:C6	3.09	0.40
4:CA:2631:G:C6	4:CA:2632:A:N7	2.89	0.40
4:CA:2753:A:H2'	4:CA:2754:U:O4'	2.21	0.40
5:CB:38:C:H2'	5:CB:39:A:O4'	2.21	0.40
8:AD:190:ASP:O	8:AD:191:LEU:HG	2.22	0.40
9:AE:82:GLN:OE1	9:AE:148:ASN:O	2.40	0.40
9:AE:90:THR:HG22	9:AE:91:GLY:H	1.86	0.40
9:AE:141:ILE:N	9:AE:141:ILE:CD1	2.84	0.40
13:AI:25:ASN:O	13:AI:61:LEU:O	2.38	0.40
14:AJ:53:ILE:HG13	18:AN:85:ARG:CZ	2.51	0.40
15:AK:52:PHE:CE2	15:AK:62:ALA:HA	2.56	0.40
20:AP:13:LYS:C	20:AP:15:PRO:HD3	2.41	0.40
6:BB:222:ARG:NH2	69:BB:302:HOH:O	2.53	0.40
14:BJ:7:ARG:HD2	14:BJ:73:LEU:HD21	2.03	0.40
14:BJ:78:GLU:CG	14:BJ:83:THR:HG21	2.52	0.40
18:BN:18:LYS:HG2	18:BN:19:TYR:CD1	2.56	0.40
23:BS:17:LYS:O	23:BS:21:LYS:HB2	2.20	0.40
28:CD:2:ILE:HD12	28:CD:48:ILE:HD11	2.03	0.40
28:CD:32:ASN:O	28:CD:96:ILE:N	2.43	0.40
30:CF:107:VAL:HG22	30:CF:110:ILE:HD11	2.03	0.40
31:CG:39:ALA:HB2	31:CG:57:TYR:CG	2.57	0.40
31:CG:44:HIS:HD2	31:CG:49:LEU:HD21	1.85	0.40
32:CH:41:LYS:HA	32:CH:44:ILE:CD1	2.51	0.40
33:CJ:56:VAL:HG23	33:CJ:69:VAL:O	2.20	0.40
35:CL:63:VAL:HG23	35:CL:64:ARG:HG3	2.04	0.40
36:CM:76:GLU:HB2	36:CM:111:ILE:CD1	2.51	0.40
48:CY:36:ARG:HG2	48:CY:47:THR:HG22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C0:48:ASN:OD1	50:C0:48:ASN:C	2.59	0.40
51:C1:9:ARG:O	51:C1:12:ARG:HB3	2.21	0.40
52:C2:5:ARG:NH1	52:C2:23:THR:OG1	2.50	0.40
32:DH:40:THR:O	32:DH:40:THR:OG1	2.39	0.40
36:DM:109:LYS:HE3	36:DM:126:ARG:HB3	2.03	0.40
43:DT:1:MET:HG2	43:DT:2:GLU:N	2.36	0.40
55:D5:13:ARG:O	55:D5:14:HIS:HB2	2.20	0.40
57:D7:29:ILE:CG2	57:D7:30:LYS:N	2.83	0.40
1:AA:205:A:C2'	1:AA:206:C:H5'	2.51	0.40
1:AA:342:C:H2'	1:AA:343:U:H5'	2.03	0.40
1:AA:408:A:H2'	1:AA:409:U:O5'	2.22	0.40
1:AA:423:G:H2'	1:AA:424:G:O4'	2.20	0.40
1:AA:621:A:H2'	1:AA:622:A:O4'	2.21	0.40
1:AA:637:C:C2'	1:AA:638:U:H5'	2.51	0.40
1:AA:792:A:H1'	1:AA:794:A:N7	2.36	0.40
1:AA:798:U:H2'	1:AA:799:G:O4'	2.20	0.40
1:AA:855:U:O2'	1:AA:856:C:H5'	2.22	0.40
1:AA:926:G:C6	1:AA:1505:G:C6	3.10	0.40
1:AA:1285:A:H4'	1:AA:1286:U:C5	2.56	0.40
1:AA:1314:C:C2	1:AA:1315:U:C6	3.10	0.40
1:AA:1368:A:C2	1:AA:1369:C:C5	3.09	0.40
1:AA:1427:C:C2'	1:AA:1428:A:H5'	2.51	0.40
2:BA:36:C:H2'	2:BA:37:U:O4'	2.21	0.40
2:BA:54:C:H2'	2:BA:352:C:H41	1.87	0.40
2:BA:70:U:C2	2:BA:94:G:N7	2.89	0.40
2:BA:121:U:C3'	2:BA:122:G:H5'	2.52	0.40
2:BA:244:U:C6	2:BA:894:G:N2	2.89	0.40
2:BA:441:A:C2	2:BA:497:G:C6	3.10	0.40
2:BA:563:A:O2'	2:BA:566:G:O2'	2.36	0.40
2:BA:702:A:H3'	2:BA:703:G:C5'	2.51	0.40
2:BA:728:A:N1	2:BA:729:A:C6	2.89	0.40
2:BA:751:U:H1'	19:BO:23:GLY:O	2.21	0.40
2:BA:862:C:C4	2:BA:863:U:C5	3.10	0.40
2:BA:939:G:C6	2:BA:940:C:N4	2.90	0.40
2:BA:1169:A:H2'	2:BA:1170:A:O4'	2.21	0.40
2:BA:1346:A:C8	2:BA:1348:U:C2	3.10	0.40
2:BA:1367:C:C2'	2:BA:1368:A:O5'	2.69	0.40
2:BA:1420:U:C2'	2:BA:1421:G:H5'	2.52	0.40
2:BA:1424:U:P	69:BA:1772:HOH:O	2.79	0.40
2:BA:1474:U:H2'	2:BA:1475:G:O4'	2.21	0.40
3:DA:45:G:C5'	3:DA:46:G:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:88:G:C6	3:DA:89:A:N7	2.90	0.40
3:DA:379:G:H5"	69:DA:3316:HOH:O	2.22	0.40
3:DA:459:U:O5'	69:DA:3559:HOH:O	2.22	0.40
3:DA:526:A:H2'	69:DA:4839:HOH:O	2.21	0.40
3:DA:531:C:C5	3:DA:2035:G:C2	3.09	0.40
3:DA:603:A:C8	3:DA:655:A:C6	3.09	0.40
3:DA:696:G:N3	3:DA:696:G:H2'	2.37	0.40
3:DA:839:U:O2'	3:DA:1191:G:N3	2.47	0.40
3:DA:998:C:C2'	3:DA:999:U:O5'	2.69	0.40
3:DA:1041:G:O2'	3:DA:1042:G:H5'	2.21	0.40
3:DA:1080:A:H2'	3:DA:1081:U:C6	2.56	0.40
3:DA:1098:A:H5"	3:DA:1099:G:OP2	2.21	0.40
3:DA:1274:A:H2	3:DA:1644:C:O2	2.05	0.40
3:DA:1378:A:H4'	3:DA:1379:U:OP1	2.21	0.40
3:DA:1385:A:C2	3:DA:1386:C:N3	2.89	0.40
3:DA:1513:U:H2'	3:DA:1514:G:O4'	2.21	0.40
3:DA:1563:U:H2'	3:DA:1564:C:H6	1.86	0.40
3:DA:1826:G:H2'	3:DA:1827:U:H6	1.86	0.40
3:DA:1937:A:H1'	3:DA:1939:5MU:H73	2.03	0.40
3:DA:2172:U:O5'	3:DA:2174:C:OP2	2.39	0.40
3:DA:2261:C:C2'	3:DA:2262:U:O5'	2.70	0.40
3:DA:2287:A:C8	3:DA:2289:G:C8	3.09	0.40
3:DA:2402:U:H2'	3:DA:2403:C:H5'	2.03	0.40
3:DA:2508:G:C2	3:DA:2582:G:C6	3.09	0.40
3:DA:2601:C:C2	3:DA:2603:G:N7	2.89	0.40
3:DA:2693:G:O2'	3:DA:2694:G:H5'	2.21	0.40
69:DA:3674:HOH:O	56:DD:190:LYS:HG2	2.20	0.40
4:CA:67:U:C2	4:CA:68:G:C8	3.09	0.40
4:CA:190:A:O2'	4:CA:679:C:H4'	2.20	0.40
4:CA:196:A:C2	36:CM:50:PHE:CZ	3.10	0.40
4:CA:585:G:O6	69:CA:3408:HOH:O	2.20	0.40
4:CA:784:G:H5'	4:CA:785:G:OP1	2.22	0.40
4:CA:851:C:O2'	50:C0:42:ALA:O	2.26	0.40
4:CA:977:G:C2	4:CA:978:G:C8	3.09	0.40
4:CA:988:A:H8	4:CA:988:A:O5'	2.03	0.40
4:CA:1131:G:N2	4:CA:2024:G:H21	2.20	0.40
4:CA:1345:C:C2	4:CA:1346:G:C8	3.10	0.40
4:CA:1358:G:H1'	4:CA:1374:G:N2	2.37	0.40
4:CA:1540:G:C6	4:CA:1541:C:C4	3.09	0.40
4:CA:1674:G:N1	4:CA:1989:G:O6	2.54	0.40
4:CA:1974:C:H3'	69:CA:3285:HOH:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:2230:G:H8	69:CA:3397:HOH:O	2.03	0.40
4:CA:2343:U:H2'	4:CA:2344:U:C6	2.57	0.40
4:CA:2516:A:O2'	4:CA:2517:C:H5'	2.21	0.40
5:DB:25:U:O2	5:DB:25:U:H2'	2.20	0.40
5:DB:94:A:C6	5:DB:95:U:C4	3.09	0.40
5:CB:3:C:H6	5:CB:3:C:O5'	2.05	0.40
6:AB:15:HIS:O	6:AB:16:PHE:C	2.58	0.40
6:AB:123:ASP:O	6:AB:124:GLY:C	2.60	0.40
6:AB:167:ASP:OD1	6:AB:167:ASP:C	2.58	0.40
7:AC:40:ARG:HH11	7:AC:55:ILE:HG13	1.85	0.40
11:AG:46:ALA:O	11:AG:50:LEU:N	2.46	0.40
14:AJ:19:ASP:N	14:AJ:19:ASP:OD1	2.53	0.40
20:AP:42:ILE:HD13	20:AP:42:ILE:HA	1.96	0.40
23:AS:68:GLY:CA	69:AS:101:HOH:O	2.70	0.40
24:AT:6:SER:O	24:AT:8:LYS:N	2.55	0.40
24:AT:59:ASP:O	24:AT:62:ALA:HB3	2.20	0.40
8:BD:62:ARG:HG2	8:BD:72:PHE:CD1	2.56	0.40
13:BI:12:ARG:CZ	13:BI:107:ASP:CG	2.89	0.40
17:BM:27:LYS:C	17:BM:27:LYS:HD3	2.42	0.40
18:BN:3:GLN:HA	18:BN:6:LYS:HD3	2.03	0.40
23:BS:52:HIS:ND1	23:BS:57:HIS:CE1	2.89	0.40
28:CD:3:GLY:O	28:CD:4:LEU:HD13	2.21	0.40
29:CE:117:ARG:NH1	36:CM:2:ARG:HD3	2.36	0.40
30:CF:63:LYS:O	30:CF:63:LYS:HG2	2.21	0.40
34:CK:13:ARG:HB2	34:CK:53:TYR:CE2	2.57	0.40
41:CR:85:ALA:O	42:CS:50:GLY:O	2.40	0.40
42:CS:68:ARG:NH2	42:CS:90:ARG:HB2	2.36	0.40
29:DE:104:ALA:O	29:DE:105:LEU:C	2.60	0.40
31:DG:154:GLU:HG2	31:DG:155:PRO:CD	2.50	0.40
32:DH:141:VAL:HG12	32:DH:142:ILE:N	2.36	0.40
33:DJ:6:ALA:O	33:DJ:58:ILE:HB	2.21	0.40
33:DJ:9:LYS:O	33:DJ:10:LEU:HB3	2.21	0.40
33:DJ:112:LYS:HD3	33:DJ:116:MET:HG3	2.03	0.40
34:DK:135:GLN:O	34:DK:136:GLN:HB2	2.22	0.40
37:DN:54:THR:O	37:DN:55:ARG:C	2.59	0.40
1:AA:11:G:C4	1:AA:12:U:C6	3.10	0.40
1:AA:287:U:C2'	1:AA:288:A:H5'	2.52	0.40
1:AA:322:C:H41	1:AA:328:C:H6	1.70	0.40
1:AA:504:C:H3'	1:AA:504:C:H6	1.87	0.40
1:AA:702:A:N6	69:AA:1824:HOH:O	2.55	0.40
1:AA:973:G:H1'	14:AJ:56:HIS:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1018:G:C2	1:AA:1019:A:C8	3.09	0.40
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.51	0.40
1:AA:1055:A:N1	1:AA:1206:G:C4	2.89	0.40
1:AA:1063:C:H42	1:AA:1193:G:H1	1.69	0.40
1:AA:1089:G:H2'	1:AA:1090:U:H5'	2.02	0.40
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.51	0.40
2:BA:32:A:N1	2:BA:33:A:C6	2.89	0.40
2:BA:373:A:N3	2:BA:374:A:C8	2.89	0.40
2:BA:782:A:C2'	2:BA:783:C:H5'	2.51	0.40
2:BA:1138:G:C2	2:BA:1140:C:C5	3.09	0.40
2:BA:1151:A:N3	2:BA:1152:A:C8	2.90	0.40
2:BA:1508:A:H2'	2:BA:1509:C:O4'	2.22	0.40
3:DA:248:G:O5'	3:DA:249:C:H5"	2.21	0.40
3:DA:359:G:H2'	3:DA:360:U:H5'	2.02	0.40
3:DA:375:G:C2'	3:DA:376:G:H5'	2.51	0.40
3:DA:508:A:H4'	3:DA:509:C:OP2	2.21	0.40
3:DA:613:A:C8	3:DA:616:A:N1	2.90	0.40
3:DA:769:U:C2	3:DA:770:G:C8	3.09	0.40
3:DA:826:U:O2'	36:DM:53:GLY:HA3	2.22	0.40
3:DA:984:A:N3	3:DA:984:A:H2'	2.36	0.40
3:DA:1080:A:H5"	3:DA:1081:U:OP1	2.21	0.40
3:DA:1738:G:O2'	3:DA:1739:A:O5'	2.39	0.40
3:DA:1796:U:O2	3:DA:1796:U:C2'	2.66	0.40
3:DA:1803:A:P	69:DA:3225:HOH:O	2.67	0.40
3:DA:1816:C:H3'	27:DC:61:TYR:CE1	2.57	0.40
3:DA:2155:U:O4	3:DA:2156:G:C6	2.75	0.40
3:DA:2340:A:C2	3:DA:2341:G:C5	3.09	0.40
3:DA:2704:C:H2'	3:DA:2705:A:O4'	2.22	0.40
3:DA:2886:A:C2	3:DA:2887:A:C1'	3.03	0.40
4:CA:52:A:H2	4:CA:179:C:O4'	2.04	0.40
4:CA:163:C:O2'	4:CA:164:C:H5'	2.21	0.40
4:CA:220:G:H2'	4:CA:221:A:N7	2.36	0.40
4:CA:246:C:O2'	4:CA:385:C:H4'	2.22	0.40
4:CA:307:G:N2	4:CA:309:A:H3'	2.35	0.40
4:CA:397:U:H2'	4:CA:398:C:C6	2.57	0.40
4:CA:578:G:H3'	4:CA:579:G:H5"	2.03	0.40
4:CA:626:A:H3'	4:CA:627:A:H5"	2.03	0.40
4:CA:659:G:H2'	4:CA:660:C:C6	2.56	0.40
4:CA:674:G:H1'	29:CE:69:ARG:HD3	2.03	0.40
4:CA:1199:U:H2'	4:CA:1200:C:C6	2.57	0.40
4:CA:1220:G:C2	4:CA:1230:A:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CA:1317:G:C2	4:CA:1336:A:N1	2.89	0.40
4:CA:1565:C:O2	4:CA:1566:A:H8	2.04	0.40
4:CA:1572:A:H2'	4:CA:1573:G:H8	1.86	0.40
4:CA:1931:U:H2'	4:CA:1932:A:H8	1.86	0.40
4:CA:1946:U:H2'	4:CA:1947:C:C6	2.57	0.40
4:CA:2053:G:H21	4:CA:2054:A:H1'	1.85	0.40
4:CA:2235:G:C6	4:CA:2236:U:C4	3.10	0.40
4:CA:2571:U:C4	4:CA:2574:G:H8	2.38	0.40
4:CA:2577:A:H5"	4:CA:2578:G:H5'	2.02	0.40
4:CA:2646:C:N4	4:CA:2675:A:N1	2.70	0.40
4:CA:2706:A:C2	4:CA:2707:U:H1'	2.56	0.40
5:DB:3:C:C2'	5:DB:4:C:H5'	2.52	0.40
5:CB:97:C:C5	5:CB:98:G:C8	3.10	0.40
6:AB:91:PHE:CD1	6:AB:91:PHE:N	2.88	0.40
6:AB:129:LEU:HD22	6:AB:129:LEU:HA	2.00	0.40
7:AC:7:PRO:HG2	7:AC:184:TYR:CB	2.51	0.40
8:AD:105:MET:CG	8:AD:171:LEU:HD13	2.51	0.40
9:AE:101:GLU:HB3	9:AE:122:ASN:OD1	2.22	0.40
12:AH:26:THR:HG22	12:AH:60:GLU:HB2	2.02	0.40
16:AL:36:ARG:O	16:AL:53:CYS:HA	2.22	0.40
6:BB:132:LYS:O	6:BB:136:MET:HB3	2.21	0.40
6:BB:221:VAL:O	6:BB:222:ARG:C	2.59	0.40
13:BI:87:LEU:HD23	13:BI:87:LEU:HA	1.95	0.40
26:BL:3:THR:HB	26:BL:6:GLN:HB2	2.04	0.40
26:BL:27:CYS:HB3	26:BL:29:GLN:O	2.22	0.40
26:BL:43:LYS:O	26:BL:45:PRO:HD2	2.21	0.40
19:BO:60:VAL:O	19:BO:63:ARG:N	2.55	0.40
20:BP:7:ALA:HA	20:BP:28:ARG:HG2	2.04	0.40
22:BR:20:GLU:N	22:BR:55:LEU:CD1	2.85	0.40
22:BR:46:GLY:C	22:BR:47:THR:CG2	2.90	0.40
22:BR:63:ARG:HB3	22:BR:70:TYR:CE1	2.57	0.40
27:CC:120:ASP:O	27:CC:121:ALA:O	2.40	0.40
28:CD:97:SER:OG	28:CD:98:VAL:N	2.55	0.40
28:CD:101:PHE:HA	28:CD:104:VAL:CG1	2.52	0.40
32:CH:96:THR:HG22	32:CH:115:VAL:CG1	2.52	0.40
39:CP:31:THR:O	39:CP:102:ARG:NH1	2.51	0.40
43:CT:8:ARG:HB3	69:CT:201:HOH:O	2.21	0.40
44:CU:14:PRO:HD2	49:CZ:33:ALA:CB	2.52	0.40
44:CU:18:GLU:HB3	69:CU:106:HOH:O	2.21	0.40
45:CV:97:SER:O	45:CV:98:ASN:CB	2.68	0.40
48:CY:5:GLN:O	48:CY:70:LEU:HD21	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:C0:13:ILE:C	50:C0:15:ARG:H	2.24	0.40
53:C3:24:THR:OG1	53:C3:27:GLY:N	2.40	0.40
56:DD:62:LYS:N	56:DD:63:PRO:CD	2.85	0.40
35:DL:108:ARG:CG	35:DL:108:ARG:O	2.70	0.40
42:DS:51:VAL:N	42:DS:52:PRO:CA	2.85	0.40
46:DW:89:ILE:HG21	46:DW:91:PHE:CZ	2.57	0.40
51:D1:33:SER:OG	51:D1:35:GLU:HG3	2.21	0.40
57:D7:40:VAL:O	57:D7:41:THR:OG1	2.38	0.40
1:AA:173:U:C2	1:AA:197:A:C6	3.09	0.40
1:AA:428:G:OP2	8:AD:10:LYS:HD2	2.22	0.40
1:AA:587:G:N2	1:AA:755:G:C4	2.90	0.40
1:AA:778:G:OP2	1:AA:778:G:C8	2.73	0.40
1:AA:831:A:H2'	1:AA:832:G:O4'	2.22	0.40
1:AA:1057:G:O2'	1:AA:1058:G:H5'	2.22	0.40
1:AA:1201:A:H4'	1:AA:1202:U:C5'	2.52	0.40
1:AA:1316:G:H22	1:AA:1319:A:H5"	1.87	0.40
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.21	0.40
2:BA:51:A:C2	2:BA:116:A:H1'	2.57	0.40
2:BA:86:G:H1'	2:BA:87:C:O4'	2.21	0.40
2:BA:93:U:H2'	2:BA:95:C:H41	1.87	0.40
2:BA:240:G:OP1	2:BA:240:G:H4'	2.22	0.40
2:BA:253:A:H2'	2:BA:254:G:H8	1.87	0.40
2:BA:265:G:O2'	21:BQ:69:LYS:N	2.54	0.40
2:BA:374:A:C6	2:BA:375:U:C5	3.09	0.40
2:BA:415:A:O2'	3:DA:2152:G:N2	2.53	0.40
2:BA:529:G:O6	26:BL:46:ASN:HA	2.21	0.40
2:BA:575:G:C6	2:BA:821:G:C5	3.09	0.40
2:BA:577:G:H1'	2:BA:816:A:N3	2.36	0.40
2:BA:632:U:H2'	2:BA:633:G:OP1	2.22	0.40
2:BA:990:C:H2'	2:BA:991:U:C6	2.56	0.40
2:BA:1104:G:H4'	69:BA:1880:HOH:O	2.21	0.40
2:BA:1240:U:H5	11:BG:109:ARG:CZ	2.35	0.40
2:BA:1410:A:H2'	2:BA:1411:C:C6	2.55	0.40
2:BA:1441:A:H2'	2:BA:1441:A:N3	2.36	0.40
2:BA:1445:U:O2	2:BA:1457:G:C6	2.74	0.40
3:DA:11:C:C2'	3:DA:12:U:H5'	2.52	0.40
3:DA:388:G:N7	3:DA:390:U:H2'	2.37	0.40
3:DA:543:G:H8	3:DA:543:G:H5"	1.86	0.40
3:DA:696:G:C2'	3:DA:697:G:H5'	2.52	0.40
3:DA:739:A:H5"	69:DA:5762:HOH:O	2.21	0.40
3:DA:882:G:N2	3:DA:895:U:C2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:DA:971:G:H2'	3:DA:972:A:H5'	2.03	0.40
3:DA:1072:C:HO2'	3:DA:1094:U:H3	1.66	0.40
3:DA:1499:C:O2'	3:DA:1500:G:H5'	2.21	0.40
3:DA:2018:G:O2'	3:DA:2019:A:H5'	2.21	0.40
3:DA:2172:U:OP2	3:DA:2174:C:OP2	2.39	0.40
3:DA:2369:A:N7	69:DA:3805:HOH:O	2.36	0.40
3:DA:2713:U:P	69:DA:3712:HOH:O	2.79	0.40
4:CA:3:U:H3	4:CA:2900:A:H61	1.69	0.40
4:CA:65:U:H3'	4:CA:66:C:C6	2.57	0.40
4:CA:372:G:C2	4:CA:400:G:N7	2.90	0.40
4:CA:387:U:O4'	4:CA:387:U:OP2	2.39	0.40
4:CA:396:G:O2'	4:CA:397:U:H5'	2.22	0.40
4:CA:432:A:H2'	4:CA:433:C:C6	2.55	0.40
4:CA:667:U:O4	4:CA:668:A:C5	2.74	0.40
4:CA:791:C:N3	4:CA:794:A:O4'	2.54	0.40
4:CA:928:A:H1'	50:C0:43:ILE:HD11	2.03	0.40
4:CA:1084:A:C2'	4:CA:1105:U:O2'	2.70	0.40
4:CA:1482:G:C2	4:CA:1483:G:C8	3.10	0.40
4:CA:1608:A:O3'	4:CA:1609:A:H3'	2.22	0.40
4:CA:1775:U:O4	4:CA:1789:A:H2	2.05	0.40
4:CA:1835:G:C2	4:CA:1836:C:C6	3.09	0.40
4:CA:2040:G:C6	4:CA:2041:U:C4	3.10	0.40
4:CA:2132:U:H5'	4:CA:2133:G:O5'	2.22	0.40
4:CA:2173:A:C6	4:CA:2174:C:N4	2.89	0.40
4:CA:2206:C:O2'	4:CA:2207:C:H5'	2.21	0.40
4:CA:2209:G:C2	4:CA:2216:G:C2	3.09	0.40
4:CA:2226:C:H2'	4:CA:2227:A:H8	1.87	0.40
4:CA:2323:G:H2'	4:CA:2324:U:O4'	2.22	0.40
4:CA:2419:U:H5"	52:C2:21:THR:HG21	2.04	0.40
4:CA:2604:U:O2	4:CA:2604:U:H2'	2.20	0.40
4:CA:2718:G:OP1	40:CQ:97:TYR:HD2	2.04	0.40
4:CA:2823:A:C8	4:CA:2823:A:O5'	2.75	0.40
6:AB:91:PHE:HD1	6:AB:91:PHE:N	2.19	0.40
8:AD:58:LYS:NZ	8:AD:59:GLN:OE1	2.47	0.40
11:AG:135:VAL:CG1	69:AG:203:HOH:O	2.70	0.40
18:AN:26:LEU:O	18:AN:27:LYS:HB3	2.21	0.40
6:BB:63:ARG:O	6:BB:64:LYS:O	2.40	0.40
11:BG:23:LEU:HD23	11:BG:26:PHE:HB3	2.02	0.40
11:BG:25:LYS:O	11:BG:29:ILE:CG1	2.65	0.40
11:BG:139:GLU:HA	11:BG:139:GLU:OE1	2.21	0.40
14:BJ:18:ILE:HG23	14:BJ:19:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:BK:13:ARG:O	15:BK:14:LYS:CB	2.69	0.40
25:BU:15:ALA:O	25:BU:19:PHE:N	2.46	0.40
27:CC:234:GLY:HA3	27:CC:238:ASN:HB2	2.03	0.40
29:CE:147:LEU:HB2	29:CE:183:PHE:CD1	2.57	0.40
46:CW:50:MET:HB3	46:CW:56:PHE:HD2	1.86	0.40
27:DC:12:ARG:O	27:DC:13:ARG:C	2.60	0.40
27:DC:85:ASN:O	27:DC:86:ARG:HB3	2.22	0.40
29:DE:59:PRO:HB2	29:DE:70:SER:OG	2.22	0.40
31:DG:88:LEU:N	31:DG:88:LEU:CD1	2.83	0.40
34:DK:31:GLU:OE1	69:DK:302:HOH:O	2.22	0.40
35:DL:121:GLU:OE2	40:DQ:64:SER:OG	2.21	0.40
38:DO:25:ALA:HB1	38:DO:48:VAL:HG22	2.03	0.40
38:DO:28:LEU:HD23	38:DO:48:VAL:HG21	2.03	0.40
45:DV:71:ILE:HD11	45:DV:82:VAL:HG23	2.04	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:368:U:OP1	32:CH:93:SER:OG[4_455]	2.15	0.05
3:DA:2887:A:OP1	50:D0:1:ALA:N[4_545]	2.17	0.03

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 X-ray entries followed by that with respect to entries of similar resolution.

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
6	AB	216/218 (99%)	165 (76%)	20 (9%)	31 (14%)	0 0
6	BB	216/218 (99%)	162 (75%)	22 (10%)	32 (15%)	0 0
7	AC	204/206 (99%)	177 (87%)	19 (9%)	8 (4%)	3 12
7	BC	204/206 (99%)	180 (88%)	14 (7%)	10 (5%)	2 8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
8	AD	203/205 (99%)	184 (91%)	9 (4%)	10 (5%)	2 8
8	BD	203/205 (99%)	188 (93%)	8 (4%)	7 (3%)	3 15
9	AE	148/150 (99%)	123 (83%)	12 (8%)	13 (9%)	1 2
9	BE	148/150 (99%)	117 (79%)	18 (12%)	13 (9%)	1 2
10	AF	98/100 (98%)	85 (87%)	8 (8%)	5 (5%)	2 7
10	BF	98/100 (98%)	84 (86%)	9 (9%)	5 (5%)	2 7
11	AG	149/151 (99%)	131 (88%)	13 (9%)	5 (3%)	3 15
11	BG	149/151 (99%)	128 (86%)	18 (12%)	3 (2%)	7 27
12	AH	127/129 (98%)	116 (91%)	11 (9%)	0	100 100
12	BH	127/129 (98%)	115 (91%)	11 (9%)	1 (1%)	19 51
13	AI	125/127 (98%)	104 (83%)	17 (14%)	4 (3%)	4 16
13	BI	125/127 (98%)	96 (77%)	18 (14%)	11 (9%)	1 2
14	AJ	96/98 (98%)	68 (71%)	10 (10%)	18 (19%)	0 0
14	BJ	96/98 (98%)	65 (68%)	19 (20%)	12 (12%)	0 0
15	AK	115/117 (98%)	99 (86%)	12 (10%)	4 (4%)	3 14
15	BK	115/117 (98%)	98 (85%)	10 (9%)	7 (6%)	1 4
16	AL	120/123 (98%)	109 (91%)	8 (7%)	3 (2%)	5 21
17	AM	112/114 (98%)	93 (83%)	10 (9%)	9 (8%)	1 2
17	BM	112/114 (98%)	94 (84%)	10 (9%)	8 (7%)	1 3
18	AN	92/100 (92%)	66 (72%)	13 (14%)	13 (14%)	0 0
18	BN	92/100 (92%)	64 (70%)	13 (14%)	15 (16%)	0 0
19	AO	86/88 (98%)	77 (90%)	3 (4%)	6 (7%)	1 3
19	BO	86/88 (98%)	78 (91%)	1 (1%)	7 (8%)	1 2
20	AP	80/82 (98%)	64 (80%)	8 (10%)	8 (10%)	0 1
20	BP	80/82 (98%)	60 (75%)	15 (19%)	5 (6%)	1 4
21	AQ	78/80 (98%)	66 (85%)	7 (9%)	5 (6%)	1 4
21	BQ	78/80 (98%)	60 (77%)	12 (15%)	6 (8%)	1 2
22	AR	53/55 (96%)	49 (92%)	2 (4%)	2 (4%)	3 13
22	BR	53/55 (96%)	46 (87%)	4 (8%)	3 (6%)	1 5
23	AS	77/79 (98%)	61 (79%)	11 (14%)	5 (6%)	1 3
23	BS	77/79 (98%)	59 (77%)	13 (17%)	5 (6%)	1 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	AT	83/85 (98%)	75 (90%)	1 (1%)	7 (8%)	1 2
24	BT	83/85 (98%)	75 (90%)	4 (5%)	4 (5%)	2 8
25	AU	52/54 (96%)	44 (85%)	5 (10%)	3 (6%)	1 5
25	BU	52/54 (96%)	43 (83%)	3 (6%)	6 (12%)	0 1
26	BL	121/123 (98%)	103 (85%)	9 (7%)	9 (7%)	1 2
27	CC	269/271 (99%)	247 (92%)	16 (6%)	6 (2%)	6 24
27	DC	269/271 (99%)	251 (93%)	15 (6%)	3 (1%)	14 42
28	CD	207/209 (99%)	189 (91%)	12 (6%)	6 (3%)	4 18
29	CE	199/201 (99%)	175 (88%)	17 (8%)	7 (4%)	3 14
29	DE	199/201 (99%)	187 (94%)	9 (4%)	3 (2%)	10 34
30	CF	175/177 (99%)	151 (86%)	15 (9%)	9 (5%)	2 7
30	DF	175/177 (99%)	161 (92%)	14 (8%)	0	100 100
31	CG	174/176 (99%)	138 (79%)	31 (18%)	5 (3%)	4 18
31	DG	174/176 (99%)	167 (96%)	7 (4%)	0	100 100
32	CH	146/148 (99%)	114 (78%)	24 (16%)	8 (6%)	2 5
32	DH	146/148 (99%)	117 (80%)	20 (14%)	9 (6%)	1 4
33	CJ	139/141 (99%)	89 (64%)	32 (23%)	18 (13%)	0 0
33	DJ	139/141 (99%)	87 (63%)	26 (19%)	26 (19%)	0 0
34	CK	140/142 (99%)	125 (89%)	12 (9%)	3 (2%)	7 26
34	DK	140/142 (99%)	137 (98%)	3 (2%)	0	100 100
35	CL	120/123 (98%)	104 (87%)	13 (11%)	3 (2%)	5 21
35	DL	121/123 (98%)	113 (93%)	5 (4%)	3 (2%)	5 21
36	CM	141/144 (98%)	113 (80%)	16 (11%)	12 (8%)	1 2
36	DM	142/144 (99%)	139 (98%)	2 (1%)	1 (1%)	22 54
37	CN	134/136 (98%)	120 (90%)	11 (8%)	3 (2%)	6 24
37	DN	135/136 (99%)	127 (94%)	8 (6%)	0	100 100
38	CO	118/120 (98%)	103 (87%)	11 (9%)	4 (3%)	3 15
38	DO	118/120 (98%)	108 (92%)	8 (7%)	2 (2%)	9 31
39	CP	114/117 (97%)	104 (91%)	5 (4%)	5 (4%)	2 10
39	DP	115/117 (98%)	110 (96%)	3 (3%)	2 (2%)	9 31
40	CQ	112/114 (98%)	101 (90%)	8 (7%)	3 (3%)	5 19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
40	DQ	112/114 (98%)	106 (95%)	5 (4%)	1 (1%)	17 48
41	CR	115/117 (98%)	111 (96%)	3 (3%)	1 (1%)	17 48
41	DR	115/117 (98%)	114 (99%)	1 (1%)	0	100 100
42	CS	101/103 (98%)	89 (88%)	7 (7%)	5 (5%)	2 7
42	DS	101/103 (98%)	95 (94%)	6 (6%)	0	100 100
43	CT	108/110 (98%)	97 (90%)	9 (8%)	2 (2%)	8 28
43	DT	108/110 (98%)	104 (96%)	4 (4%)	0	100 100
44	CU	91/93 (98%)	74 (81%)	13 (14%)	4 (4%)	2 10
44	DU	90/93 (97%)	82 (91%)	6 (7%)	2 (2%)	6 24
45	CV	100/102 (98%)	79 (79%)	15 (15%)	6 (6%)	1 4
45	DV	100/102 (98%)	91 (91%)	4 (4%)	5 (5%)	2 7
46	CW	92/94 (98%)	84 (91%)	8 (9%)	0	100 100
46	DW	92/94 (98%)	89 (97%)	3 (3%)	0	100 100
47	CX	73/76 (96%)	70 (96%)	3 (4%)	0	100 100
47	DX	76/76 (100%)	72 (95%)	3 (4%)	1 (1%)	12 37
48	CY	75/77 (97%)	69 (92%)	3 (4%)	3 (4%)	3 11
48	DY	75/77 (97%)	72 (96%)	3 (4%)	0	100 100
49	CZ	60/62 (97%)	51 (85%)	7 (12%)	2 (3%)	4 15
49	DZ	60/62 (97%)	55 (92%)	2 (3%)	3 (5%)	2 7
50	C0	56/58 (97%)	51 (91%)	3 (5%)	2 (4%)	3 14
50	D0	57/58 (98%)	56 (98%)	1 (2%)	0	100 100
51	C1	54/56 (96%)	41 (76%)	10 (18%)	3 (6%)	2 5
51	D1	54/56 (96%)	49 (91%)	3 (6%)	2 (4%)	3 13
52	C2	48/51 (94%)	41 (85%)	6 (12%)	1 (2%)	7 26
52	D2	49/51 (96%)	46 (94%)	2 (4%)	1 (2%)	7 27
53	C3	44/46 (96%)	40 (91%)	2 (4%)	2 (4%)	2 9
53	D3	44/46 (96%)	42 (96%)	2 (4%)	0	100 100
54	C4	62/64 (97%)	56 (90%)	4 (6%)	2 (3%)	4 16
54	D4	62/64 (97%)	59 (95%)	3 (5%)	0	100 100
55	C5	42/45 (93%)	26 (62%)	12 (29%)	4 (10%)	0 1
55	D5	43/45 (96%)	30 (70%)	6 (14%)	7 (16%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
56	DD	206/209 (99%)	198 (96%)	7 (3%)	1 (0%)	29 61
57	D7	66/68 (97%)	23 (35%)	22 (33%)	21 (32%)	0 0
All	All	11321/11536 (98%)	9810 (87%)	961 (8%)	550 (5%)	2 8

All (550) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	AB	10	LEU
6	AB	33	GLY
6	AB	88	ASP
6	AB	126	PHE
6	AB	150	GLY
6	AB	152	LYS
6	AB	155	GLY
6	AB	182	PRO
6	AB	201	PRO
6	AB	220	THR
7	AC	61	ALA
7	AC	127	ARG
7	AC	139	GLN
7	AC	140	ASN
8	AD	5	LEU
8	AD	20	PHE
8	AD	151	LYS
8	AD	168	PRO
8	AD	191	LEU
8	AD	192	SER
8	AD	193	ALA
9	AE	24	THR
9	AE	51	GLY
9	AE	103	THR
9	AE	109	GLY
9	AE	150	PRO
10	AF	6	ILE
10	AF	99	ALA
11	AG	57	SER
11	AG	146	GLU
13	AI	58	VAL
13	AI	91	ASP
14	AJ	34	ALA
14	AJ	35	GLN

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Mol	Chain	Res	Type
14	AJ	41	PRO
14	AJ	57	VAL
14	AJ	61	ALA
14	AJ	74	VAL
14	AJ	93	ALA
15	AK	14	LYS
15	AK	52	PHE
15	AK	89	PRO
16	AL	3	THR
16	AL	103	ASP
16	AL	123	LYS
17	AM	3	ARG
17	AM	5	ALA
17	AM	27	LYS
17	AM	114	LYS
18	AN	22	LYS
18	AN	26	LEU
18	AN	42	TRP
18	AN	43	ASN
18	AN	45	VAL
18	AN	47	LYS
18	AN	62	ASN
18	AN	92	GLU
20	AP	43	ALA
20	AP	46	LYS
21	AQ	13	VAL
21	AQ	80	GLU
21	AQ	82	ALA
24	AT	4	ILE
24	AT	6	SER
24	AT	69	LYS
25	AU	8	GLU
25	AU	9	ASN
6	BB	10	LEU
6	BB	16	PHE
6	BB	19	GLN
6	BB	20	THR
6	BB	21	ARG
6	BB	34	ALA
6	BB	74	ARG
6	BB	87	CYS
6	BB	103	ASN

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Mol	Chain	Res	Type
6	BB	123	ASP
6	BB	124	GLY
6	BB	126	PHE
6	BB	149	GLY
6	BB	152	LYS
6	BB	193	PRO
6	BB	194	ASP
6	BB	222	ARG
7	BC	66	VAL
7	BC	127	ARG
7	BC	140	ASN
7	BC	156	ARG
8	BD	5	LEU
8	BD	34	ILE
8	BD	192	SER
8	BD	193	ALA
9	BE	24	THR
9	BE	45	ARG
9	BE	51	GLY
9	BE	100	SER
9	BE	101	GLU
9	BE	102	GLY
9	BE	103	THR
9	BE	123	VAL
10	BF	53	LYS
10	BF	98	GLU
13	BI	26	GLY
13	BI	38	TYR
13	BI	56	ASP
13	BI	58	VAL
13	BI	129	LYS
14	BJ	93	ALA
15	BK	41	ALA
26	BL	24	LEU
26	BL	44	LYS
17	BM	5	ALA
17	BM	14	HIS
18	BN	17	ASP
18	BN	26	LEU
18	BN	45	VAL
18	BN	49	GLN
18	BN	53	ARG

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Mol	Chain	Res	Type
18	BN	60	GLN
18	BN	62	ASN
20	BP	15	PRO
20	BP	43	ALA
20	BP	80	LYS
21	BQ	5	ILE
21	BQ	17	MET
21	BQ	70	THR
22	BR	21	ILE
22	BR	47	THR
23	BS	5	LEU
23	BS	28	LYS
24	BT	6	SER
25	BU	12	PHE
25	BU	26	ALA
25	BU	27	GLY
27	CC	2	VAL
27	CC	121	ALA
28	CD	151	THR
28	CD	152	PRO
28	CD	174	SER
29	CE	42	GLY
29	CE	153	LEU
30	CF	61	GLY
30	CF	122	ASP
31	CG	91	VAL
31	CG	118	ALA
32	CH	3	VAL
32	CH	9	VAL
32	CH	10	ALA
32	CH	136	GLU
33	CJ	14	ALA
33	CJ	85	ILE
33	CJ	89	SER
33	CJ	92	PRO
33	CJ	116	MET
34	CK	81	ILE
35	CL	119	ALA
35	CL	120	PRO
36	CM	82	LEU
36	CM	111	ILE
36	CM	137	ALA

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Mol	Chain	Res	Type
36	CM	140	GLY
37	CN	61	GLY
38	CO	70	THR
38	CO	104	ALA
38	CO	105	GLY
40	CQ	93	LYS
40	CQ	113	LEU
43	CT	65	ASP
44	CU	17	SER
44	CU	46	ALA
45	CV	6	ARG
48	CY	62	GLY
50	C0	3	THR
51	C1	55	ALA
53	C3	45	SER
56	DD	86	GLU
32	DH	3	VAL
32	DH	13	GLY
32	DH	28	ASN
32	DH	41	LYS
33	DJ	6	ALA
33	DJ	18	ASN
33	DJ	44	LYS
33	DJ	57	VAL
33	DJ	62	ALA
33	DJ	82	ALA
33	DJ	116	MET
35	DL	108	ARG
35	DL	110	GLU
38	DO	118	ARG
38	DO	119	SER
44	DU	3	ARG
45	DV	51	LEU
45	DV	97	SER
47	DX	9	ARG
49	DZ	46	VAL
51	D1	55	ALA
52	D2	4	ILE
57	D7	5	ILE
57	D7	18	SER
57	D7	27	SER
57	D7	34	GLU

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Mol	Chain	Res	Type
57	D7	35	ILE
57	D7	37	LEU
57	D7	40	VAL
57	D7	47	ILE
57	D7	56	PHE
6	AB	12	ALA
6	AB	34	ALA
6	AB	68	LEU
6	AB	86	SER
6	AB	87	CYS
6	AB	120	GLN
6	AB	130	THR
6	AB	149	GLY
6	AB	202	GLY
7	AC	62	LYS
8	AD	25	VAL
8	AD	169	THR
9	AE	12	GLN
9	AE	99	ALA
9	AE	108	GLY
9	AE	110	ALA
9	AE	138	ARG
11	AG	56	LYS
11	AG	69	VAL
13	AI	39	PHE
13	AI	120	LYS
14	AJ	28	THR
14	AJ	30	LYS
14	AJ	33	GLY
14	AJ	36	VAL
14	AJ	62	ARG
14	AJ	101	SER
15	AK	90	GLY
17	AM	4	ILE
17	AM	12	HIS
17	AM	13	LYS
18	AN	27	LYS
18	AN	34	ASN
18	AN	44	ALA
18	AN	48	LEU
19	AO	3	LEU
19	AO	47	LYS

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Mol	Chain	Res	Type
19	AO	88	ARG
20	AP	44	SER
20	AP	80	LYS
23	AS	6	LYS
24	AT	5	LYS
25	AU	13	ASP
6	BB	22	TYR
6	BB	64	LYS
6	BB	86	SER
6	BB	97	LEU
6	BB	100	MET
6	BB	119	THR
6	BB	120	GLN
7	BC	81	GLY
7	BC	139	GLN
7	BC	141	ALA
8	BD	24	GLY
9	BE	138	ARG
9	BE	155	ALA
9	BE	157	ARG
11	BG	37	SER
13	BI	10	GLY
13	BI	41	ARG
13	BI	121	ALA
14	BJ	17	LEU
14	BJ	41	PRO
14	BJ	57	VAL
14	BJ	89	ARG
14	BJ	90	LEU
15	BK	50	SER
15	BK	52	PHE
15	BK	93	ARG
26	BL	25	GLU
26	BL	76	GLU
26	BL	89	ASP
17	BM	4	ILE
17	BM	67	GLY
18	BN	2	LYS
18	BN	27	LYS
18	BN	55	SER
18	BN	61	ARG
19	BO	18	ASP

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Mol	Chain	Res	Type
19	BO	73	LYS
19	BO	88	ARG
20	BP	79	ASN
23	BS	6	LYS
24	BT	7	ALA
24	BT	68	HIS
25	BU	9	ASN
25	BU	13	ASP
29	CE	6	LYS
29	CE	82	GLY
30	CF	101	ARG
30	CF	120	SER
31	CG	174	LYS
32	CH	16	GLY
33	CJ	71	LYS
33	CJ	97	VAL
33	CJ	100	ILE
33	CJ	111	THR
33	CJ	117	THR
33	CJ	133	ARG
33	CJ	136	GLY
34	CK	25	LEU
35	CL	35	VAL
36	CM	22	GLY
39	CP	57	ALA
39	CP	59	ALA
39	CP	101	GLY
40	CQ	104	GLY
42	CS	23	GLU
42	CS	29	THR
43	CT	63	GLY
44	CU	18	GLU
44	CU	38	ALA
45	CV	7	ASP
45	CV	51	LEU
45	CV	74	ALA
45	CV	98	ASN
48	CY	72	ALA
51	C1	51	ARG
53	C3	44	VAL
54	C4	55	GLY
55	C5	22	ARG

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Mol	Chain	Res	Type
55	C5	43	LYS
27	DC	196	ASN
27	DC	252	LYS
29	DE	10	SER
32	DH	2	GLN
33	DJ	2	LYS
33	DJ	3	LYS
33	DJ	10	LEU
33	DJ	24	GLY
33	DJ	37	PHE
33	DJ	48	ILE
33	DJ	58	ILE
33	DJ	59	THR
33	DJ	69	VAL
33	DJ	77	VAL
49	DZ	62	GLY
55	D5	19	ILE
55	D5	43	LYS
55	D5	44	LYS
57	D7	41	THR
57	D7	43	PRO
57	D7	53	SER
57	D7	54	HIS
6	AB	15	HIS
6	AB	21	ARG
6	AB	107	VAL
7	AC	66	VAL
7	AC	146	ALA
10	AF	69	GLU
10	AF	98	GLU
14	AJ	24	GLU
14	AJ	32	THR
14	AJ	38	GLY
21	AQ	16	LYS
22	AR	73	ARG
23	AS	4	SER
23	AS	5	LEU
24	AT	7	ALA
6	BB	82	ASP
6	BB	101	LEU
6	BB	136	MET
6	BB	219	ALA

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Mol	Chain	Res	Type
6	BB	225	ARG
7	BC	17	PRO
7	BC	80	LYS
9	BE	142	ASP
10	BF	52	ASN
14	BJ	43	PRO
14	BJ	95	GLY
14	BJ	101	SER
15	BK	92	GLY
17	BM	114	LYS
18	BN	46	LEU
18	BN	58	SER
19	BO	21	ASP
19	BO	46	HIS
19	BO	47	LYS
19	BO	72	ARG
21	BQ	82	ALA
22	BR	43	ARG
23	BS	74	PHE
24	BT	5	LYS
28	CD	86	GLU
28	CD	130	GLN
30	CF	106	ALA
30	CF	148	VAL
30	CF	176	PHE
31	CG	117	PRO
32	CH	2	GLN
33	CJ	30	GLN
33	CJ	83	ALA
33	CJ	107	GLU
36	CM	29	LYS
36	CM	40	SER
36	CM	69	ARG
36	CM	115	GLU
37	CN	69	PRO
37	CN	119	LEU
39	CP	66	GLY
42	CS	53	PHE
45	CV	97	SER
49	CZ	37	LEU
49	CZ	57	LEU
51	C1	54	ILE

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Mol	Chain	Res	Type
55	C5	19	ILE
29	DE	6	LYS
32	DH	9	VAL
32	DH	119	ASN
33	DJ	29	GLN
40	DQ	113	LEU
55	D5	42	ARG
57	D7	8	GLU
57	D7	55	PRO
6	AB	76	ALA
6	AB	119	THR
6	AB	183	VAL
7	AC	103	ILE
8	AD	131	ASN
9	AE	78	ASN
11	AG	80	VAL
19	AO	18	ASP
20	AP	79	ASN
21	AQ	6	ARG
6	BB	15	HIS
6	BB	139	ARG
8	BD	167	LYS
13	BI	44	ALA
14	BJ	36	VAL
26	BL	26	ALA
17	BM	82	ASP
18	BN	28	ALA
21	BQ	18	GLU
28	CD	30	GLU
30	CF	173	ASP
30	CF	174	PHE
31	CG	58	ALA
32	CH	33	GLN
33	CJ	22	PRO
33	CJ	64	ARG
36	CM	70	LYS
36	CM	87	GLY
38	CO	118	ARG
39	CP	100	HIS
54	C4	29	ARG
29	DE	9	GLN
33	DJ	22	PRO

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Mol	Chain	Res	Type
33	DJ	97	VAL
33	DJ	112	LYS
33	DJ	114	ALA
39	DP	2	ASP
45	DV	96	LYS
51	D1	54	ILE
55	D5	23	LYS
57	D7	7	PRO
57	D7	26	GLY
6	AB	13	GLY
6	AB	16	PHE
6	AB	73	LYS
6	AB	161	LEU
9	AE	45	ARG
9	AE	98	PRO
14	AJ	42	LEU
14	AJ	75	ASP
17	AM	105	ASN
18	AN	52	PRO
19	AO	21	ASP
19	AO	46	HIS
20	AP	48	GLU
22	AR	22	ASP
23	AS	29	LYS
24	AT	86	LEU
6	BB	68	LEU
11	BG	82	GLY
11	BG	130	ASN
13	BI	42	GLU
14	BJ	34	ALA
26	BL	22	PRO
27	CC	123	ILE
27	CC	239	PHE
27	CC	260	LYS
29	CE	5	LEU
32	CH	31	VAL
33	CJ	8	VAL
41	CR	58	GLN
33	DJ	105	LEU
35	DL	120	PRO
39	DP	100	HIS
45	DV	49	PRO

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Mol	Chain	Res	Type
45	DV	53	GLN
49	DZ	61	ALA
55	D5	4	LEU
57	D7	45	VAL
6	AB	219	ALA
10	AF	54	LEU
20	AP	45	GLU
7	BC	125	GLU
10	BF	54	LEU
10	BF	93	LYS
12	BH	88	ARG
13	BI	55	VAL
15	BK	15	GLN
15	BK	89	PRO
26	BL	77	HIS
17	BM	13	LYS
27	CC	252	LYS
42	CS	55	ASP
52	C2	15	GLY
33	DJ	74	PRO
36	DM	29	LYS
55	D5	6	SER
57	D7	2	LYS
57	D7	9	TYR
20	AP	10	GLY
24	AT	42	GLY
55	C5	3	VAL
44	DU	90	GLY
57	D7	19	VAL
8	BD	45	LYS
18	BN	52	PRO
48	CY	11	PRO
27	DC	125	PRO
32	DH	121	VAL
33	DJ	12	VAL
33	DJ	100	ILE
6	AB	67	ILE
9	BE	143	GLY
20	BP	14	ARG
50	C0	13	ILE
32	DH	72	ILE
17	AM	38	GLY

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Mol	Chain	Res	Type
23	AS	68	GLY
14	BJ	38	GLY
26	BL	45	PRO
17	BM	7	ILE
21	BQ	76	VAL
23	BS	29	LYS
25	BU	10	GLU
29	CE	71	GLY
29	CE	83	VAL
34	CK	64	VAL
36	CM	31	GLY
42	CS	50	GLY

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 X-ray entries followed by that with respect to entries of similar resolution.

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
6	AB	180/180 (100%)	134 (74%)	46 (26%)	0 1
6	BB	180/180 (100%)	141 (78%)	39 (22%)	1 3
7	AC	170/170 (100%)	148 (87%)	22 (13%)	4 13
7	BC	170/170 (100%)	139 (82%)	31 (18%)	1 5
8	AD	172/172 (100%)	142 (83%)	30 (17%)	2 6
8	BD	172/172 (100%)	150 (87%)	22 (13%)	4 13
9	AE	113/113 (100%)	86 (76%)	27 (24%)	0 2
9	BE	113/113 (100%)	92 (81%)	21 (19%)	1 5
10	AF	87/87 (100%)	78 (90%)	9 (10%)	7 22
10	BF	87/87 (100%)	63 (72%)	24 (28%)	0 1
11	AG	124/124 (100%)	110 (89%)	14 (11%)	6 18
11	BG	124/124 (100%)	97 (78%)	27 (22%)	1 3
12	AH	104/104 (100%)	84 (81%)	20 (19%)	1 4
12	BH	104/104 (100%)	85 (82%)	19 (18%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
13	AI	105/105 (100%)	82 (78%)	23 (22%)	1 3
13	BI	105/105 (100%)	82 (78%)	23 (22%)	1 3
14	AJ	86/86 (100%)	70 (81%)	16 (19%)	1 5
14	BJ	86/86 (100%)	65 (76%)	21 (24%)	0 2
15	AK	90/90 (100%)	78 (87%)	12 (13%)	4 11
15	BK	90/90 (100%)	78 (87%)	12 (13%)	4 11
16	AL	102/102 (100%)	92 (90%)	10 (10%)	8 24
17	AM	92/92 (100%)	74 (80%)	18 (20%)	1 4
17	BM	92/92 (100%)	73 (79%)	19 (21%)	1 3
18	AN	79/83 (95%)	61 (77%)	18 (23%)	1 2
18	BN	79/83 (95%)	72 (91%)	7 (9%)	9 29
19	AO	76/76 (100%)	65 (86%)	11 (14%)	3 9
19	BO	76/76 (100%)	62 (82%)	14 (18%)	1 5
20	AP	65/65 (100%)	57 (88%)	8 (12%)	4 14
20	BP	65/65 (100%)	52 (80%)	13 (20%)	1 4
21	AQ	74/74 (100%)	59 (80%)	15 (20%)	1 3
21	BQ	74/74 (100%)	58 (78%)	16 (22%)	1 3
22	AR	48/48 (100%)	44 (92%)	4 (8%)	11 32
22	BR	48/48 (100%)	44 (92%)	4 (8%)	11 32
23	AS	70/70 (100%)	67 (96%)	3 (4%)	29 62
23	BS	70/70 (100%)	58 (83%)	12 (17%)	2 6
24	AT	65/65 (100%)	51 (78%)	14 (22%)	1 3
24	BT	65/65 (100%)	53 (82%)	12 (18%)	1 5
25	AU	46/46 (100%)	36 (78%)	10 (22%)	1 3
25	BU	46/46 (100%)	34 (74%)	12 (26%)	0 1
26	BL	103/103 (100%)	88 (85%)	15 (15%)	3 9
27	CC	216/216 (100%)	193 (89%)	23 (11%)	6 20
27	DC	216/216 (100%)	195 (90%)	21 (10%)	8 25
28	CD	164/164 (100%)	151 (92%)	13 (8%)	12 34
29	CE	165/165 (100%)	147 (89%)	18 (11%)	6 19
29	DE	165/165 (100%)	151 (92%)	14 (8%)	10 31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	CF	148/148 (100%)	129 (87%)	19 (13%)	4 13
30	DF	148/148 (100%)	127 (86%)	21 (14%)	3 10
31	CG	137/137 (100%)	116 (85%)	21 (15%)	2 8
31	DG	137/137 (100%)	123 (90%)	14 (10%)	7 22
32	CH	113/113 (100%)	91 (80%)	22 (20%)	1 4
32	DH	113/113 (100%)	98 (87%)	15 (13%)	4 11
33	CJ	109/109 (100%)	83 (76%)	26 (24%)	0 2
33	DJ	109/109 (100%)	87 (80%)	22 (20%)	1 4
34	CK	116/116 (100%)	105 (90%)	11 (10%)	8 26
34	DK	116/116 (100%)	108 (93%)	8 (7%)	15 41
35	CL	103/104 (99%)	94 (91%)	9 (9%)	10 30
35	DL	104/104 (100%)	99 (95%)	5 (5%)	25 58
36	CM	102/103 (99%)	91 (89%)	11 (11%)	6 20
36	DM	103/103 (100%)	96 (93%)	7 (7%)	16 42
37	CN	109/109 (100%)	97 (89%)	12 (11%)	6 19
37	DN	110/109 (101%)	102 (93%)	8 (7%)	14 38
38	CO	100/100 (100%)	85 (85%)	15 (15%)	3 9
38	DO	100/100 (100%)	94 (94%)	6 (6%)	19 49
39	CP	86/87 (99%)	71 (83%)	15 (17%)	2 6
39	DP	87/87 (100%)	79 (91%)	8 (9%)	9 27
40	CQ	99/99 (100%)	83 (84%)	16 (16%)	2 7
40	DQ	99/99 (100%)	90 (91%)	9 (9%)	9 28
41	CR	89/89 (100%)	81 (91%)	8 (9%)	9 29
41	DR	89/89 (100%)	84 (94%)	5 (6%)	21 52
42	CS	84/84 (100%)	71 (84%)	13 (16%)	2 8
42	DS	84/84 (100%)	75 (89%)	9 (11%)	6 20
43	CT	93/93 (100%)	79 (85%)	14 (15%)	3 9
43	DT	93/93 (100%)	82 (88%)	11 (12%)	5 16
44	CU	80/80 (100%)	65 (81%)	15 (19%)	1 4
44	DU	79/80 (99%)	73 (92%)	6 (8%)	13 36
45	CV	83/83 (100%)	73 (88%)	10 (12%)	5 15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	DV	83/83 (100%)	77 (93%)	6 (7%)	14 39
46	CW	78/78 (100%)	64 (82%)	14 (18%)	2 5
46	DW	78/78 (100%)	71 (91%)	7 (9%)	9 29
47	CX	56/58 (97%)	48 (86%)	8 (14%)	3 10
47	DX	58/58 (100%)	52 (90%)	6 (10%)	7 22
48	CY	67/67 (100%)	58 (87%)	9 (13%)	4 11
48	DY	67/67 (100%)	63 (94%)	4 (6%)	19 49
49	CZ	54/54 (100%)	46 (85%)	8 (15%)	3 9
49	DZ	54/54 (100%)	48 (89%)	6 (11%)	6 19
50	C0	48/48 (100%)	39 (81%)	9 (19%)	1 4
50	D0	49/48 (102%)	46 (94%)	3 (6%)	18 48
51	C1	47/47 (100%)	40 (85%)	7 (15%)	3 9
51	D1	47/47 (100%)	46 (98%)	1 (2%)	53 81
52	C2	45/45 (100%)	43 (96%)	2 (4%)	28 61
52	D2	45/45 (100%)	44 (98%)	1 (2%)	52 81
53	C3	38/38 (100%)	32 (84%)	6 (16%)	2 8
53	D3	38/38 (100%)	33 (87%)	5 (13%)	4 12
54	C4	51/51 (100%)	48 (94%)	3 (6%)	19 49
54	D4	51/51 (100%)	48 (94%)	3 (6%)	19 49
55	C5	39/41 (95%)	28 (72%)	11 (28%)	0 1
55	D5	40/41 (98%)	32 (80%)	8 (20%)	1 4
56	DD	163/163 (100%)	153 (94%)	10 (6%)	18 48
57	D7	60/63 (95%)	39 (65%)	21 (35%)	0 0
All	All	9401/9419 (100%)	8070 (86%)	1331 (14%)	3 10

All (1331) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	AB	9	MET
6	AB	11	LYS
6	AB	14	VAL
6	AB	15	HIS
6	AB	23	TRP
6	AB	27	MET

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Mol	Chain	Res	Type
6	AB	31	ILE
6	AB	32	PHE
6	AB	35	ARG
6	AB	37	LYS
6	AB	38	VAL
6	AB	41	ILE
6	AB	43	LEU
6	AB	45	LYS
6	AB	50	PHE
6	AB	52	GLU
6	AB	54	LEU
6	AB	66	LYS
6	AB	68	LEU
6	AB	73	LYS
6	AB	85	LEU
6	AB	87	CYS
6	AB	91	PHE
6	AB	102	THR
6	AB	116	ASP
6	AB	117	LEU
6	AB	120	GLN
6	AB	123	ASP
6	AB	126	PHE
6	AB	129	LEU
6	AB	136	MET
6	AB	137	ARG
6	AB	143	LYS
6	AB	144	LEU
6	AB	153	ASP
6	AB	161	LEU
6	AB	163	VAL
6	AB	164	ILE
6	AB	186	ILE
6	AB	199	VAL
6	AB	205	ASP
6	AB	207	ILE
6	AB	208	ARG
6	AB	213	TYR
6	AB	225	ARG
6	AB	226	SER
7	AC	3	GLN
7	AC	15	VAL

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Mol	Chain	Res	Type
7	AC	16	LYS
7	AC	20	SER
7	AC	27	LYS
7	AC	38	LYS
7	AC	43	LEU
7	AC	55	ILE
7	AC	58	GLU
7	AC	59	ARG
7	AC	85	GLU
7	AC	101	ILE
7	AC	103	ILE
7	AC	107	ARG
7	AC	122	SER
7	AC	127	ARG
7	AC	128	VAL
7	AC	131	ARG
7	AC	154	SER
7	AC	165	THR
7	AC	200	VAL
7	AC	201	TRP
8	AD	5	LEU
8	AD	13	ARG
8	AD	22	LYS
8	AD	26	ARG
8	AD	36	GLN
8	AD	48	LEU
8	AD	55	LEU
8	AD	58	LYS
8	AD	68	LEU
8	AD	70	ARG
8	AD	83	LYS
8	AD	93	LEU
8	AD	101	VAL
8	AD	104	ARG
8	AD	123	ILE
8	AD	131	ASN
8	AD	132	ILE
8	AD	135	TYR
8	AD	148	LYS
8	AD	153	SER
8	AD	163	GLU
8	AD	173	VAL

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Mol	Chain	Res	Type
8	AD	177	LYS
8	AD	179	GLU
8	AD	190	ASP
8	AD	194	ASP
8	AD	197	GLU
8	AD	198	HIS
8	AD	200	ILE
8	AD	206	LYS
9	AE	10	GLU
9	AE	11	LEU
9	AE	14	LYS
9	AE	15	LEU
9	AE	18	VAL
9	AE	22	SER
9	AE	32	SER
9	AE	46	VAL
9	AE	52	LYS
9	AE	73	ASN
9	AE	77	ASN
9	AE	78	ASN
9	AE	80	THR
9	AE	81	LEU
9	AE	96	MET
9	AE	105	ILE
9	AE	111	MET
9	AE	114	VAL
9	AE	115	LEU
9	AE	120	VAL
9	AE	124	LEU
9	AE	130	SER
9	AE	141	ILE
9	AE	149	SER
9	AE	152	MET
9	AE	157	ARG
9	AE	159	LYS
10	AF	7	VAL
10	AF	17	GLN
10	AF	24	ARG
10	AF	39	LEU
10	AF	44	ARG
10	AF	68	GLN
10	AF	77	THR

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Mol	Chain	Res	Type
10	AF	86	ARG
10	AF	93	LYS
11	AG	4	ARG
11	AG	7	ILE
11	AG	13	LEU
11	AG	37	SER
11	AG	48	GLU
11	AG	59	LEU
11	AG	63	GLU
11	AG	77	SER
11	AG	78	ARG
11	AG	79	ARG
11	AG	83	SER
11	AG	120	LEU
11	AG	136	LYS
11	AG	149	LYS
12	AH	2	SER
12	AH	3	MET
12	AH	10	MET
12	AH	18	GLN
12	AH	22	LYS
12	AH	25	VAL
12	AH	42	GLU
12	AH	52	GLU
12	AH	59	LEU
12	AH	60	GLU
12	AH	65	TYR
12	AH	75	ILE
12	AH	77	ARG
12	AH	83	LEU
12	AH	87	LYS
12	AH	105	SER
12	AH	107	SER
12	AH	111	MET
12	AH	121	LEU
12	AH	125	ILE
13	AI	12	ARG
13	AI	21	ILE
13	AI	30	ILE
13	AI	39	PHE
13	AI	43	THR
13	AI	45	ARG

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Mol	Chain	Res	Type
13	AI	46	MET
13	AI	47	VAL
13	AI	49	ARG
13	AI	57	MET
13	AI	66	THR
13	AI	68	LYS
13	AI	85	ARG
13	AI	88	MET
13	AI	90	TYR
13	AI	94	LEU
13	AI	95	ARG
13	AI	98	LEU
13	AI	99	ARG
13	AI	119	ARG
13	AI	120	LYS
13	AI	126	GLN
13	AI	127	PHE
14	AJ	7	ARG
14	AJ	16	ARG
14	AJ	19	ASP
14	AJ	40	ILE
14	AJ	42	LEU
14	AJ	46	LYS
14	AJ	50	THR
14	AJ	59	LYS
14	AJ	62	ARG
14	AJ	73	LEU
14	AJ	80	THR
14	AJ	81	GLU
14	AJ	82	LYS
14	AJ	87	LEU
14	AJ	88	MET
14	AJ	89	ARG
15	AK	31	ILE
15	AK	33	THR
15	AK	38	GLN
15	AK	56	ARG
15	AK	82	LEU
15	AK	93	ARG
15	AK	100	LEU
15	AK	105	PHE
15	AK	107	ILE

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Mol	Chain	Res	Type
15	AK	108	THR
15	AK	109	ASN
15	AK	121	CYS
16	AL	10	LYS
16	AL	21	VAL
16	AL	24	LEU
16	AL	33	VAL
16	AL	44	LYS
16	AL	49	LEU
16	AL	54	ARG
16	AL	58	THR
16	AL	88	LYS
16	AL	121	ARG
17	AM	7	ILE
17	AM	13	LYS
17	AM	14	HIS
17	AM	16	VAL
17	AM	25	VAL
17	AM	27	LYS
17	AM	42	ASP
17	AM	43	VAL
17	AM	45	ILE
17	AM	57	ARG
17	AM	59	GLU
17	AM	71	ARG
17	AM	83	LEU
17	AM	87	ARG
17	AM	90	ARG
17	AM	101	ARG
17	AM	107	ARG
17	AM	113	ARG
18	AN	4	SER
18	AN	6	LYS
18	AN	13	VAL
18	AN	18	LYS
18	AN	27	LYS
18	AN	29	ILE
18	AN	30	ILE
18	AN	32	ASP
18	AN	34	ASN
18	AN	41	ARG
18	AN	46	LEU

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Mol	Chain	Res	Type
18	AN	48	LEU
18	AN	49	GLN
18	AN	50	THR
18	AN	53	ARG
18	AN	65	ARG
18	AN	81	ARG
18	AN	98	LYS
19	AO	5	THR
19	AO	6	GLU
19	AO	35	GLN
19	AO	39	LEU
19	AO	57	LEU
19	AO	73	LYS
19	AO	83	GLU
19	AO	84	ARG
19	AO	87	LEU
19	AO	88	ARG
19	AO	89	ARG
20	AP	1	MET
20	AP	2	VAL
20	AP	6	LEU
20	AP	17	TYR
20	AP	19	VAL
20	AP	20	VAL
20	AP	46	LYS
20	AP	63	GLN
21	AQ	4	LYS
21	AQ	6	ARG
21	AQ	7	THR
21	AQ	13	VAL
21	AQ	14	SER
21	AQ	16	LYS
21	AQ	17	MET
21	AQ	22	VAL
21	AQ	29	VAL
21	AQ	38	ILE
21	AQ	55	ILE
21	AQ	70	THR
21	AQ	76	VAL
21	AQ	79	VAL
21	AQ	81	LYS
22	AR	21	ILE

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Mol	Chain	Res	Type
22	AR	25	ASP
22	AR	30	LYS
22	AR	55	LEU
23	AS	6	LYS
23	AS	55	ARG
23	AS	65	GLU
24	AT	3	ASN
24	AT	5	LYS
24	AT	6	SER
24	AT	10	ARG
24	AT	12	ILE
24	AT	24	ARG
24	AT	27	MET
24	AT	40	GLU
24	AT	49	LYS
24	AT	54	MET
24	AT	58	VAL
24	AT	67	ILE
24	AT	69	LYS
24	AT	86	LEU
25	AU	7	ARG
25	AU	8	GLU
25	AU	9	ASN
25	AU	12	PHE
25	AU	16	LEU
25	AU	34	ARG
25	AU	40	LYS
25	AU	41	PRO
25	AU	44	GLU
25	AU	56	HIS
6	BB	10	LEU
6	BB	14	VAL
6	BB	15	HIS
6	BB	16	PHE
6	BB	23	TRP
6	BB	27	MET
6	BB	45	LYS
6	BB	50	PHE
6	BB	59	LYS
6	BB	64	LYS
6	BB	66	LYS
6	BB	68	LEU

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Mol	Chain	Res	Type
6	BB	74	ARG
6	BB	81	LYS
6	BB	85	LEU
6	BB	93	ASN
6	BB	95	ARG
6	BB	103	ASN
6	BB	106	THR
6	BB	109	GLN
6	BB	111	ILE
6	BB	117	LEU
6	BB	119	THR
6	BB	120	GLN
6	BB	122	GLN
6	BB	127	ASP
6	BB	133	GLU
6	BB	139	ARG
6	BB	147	SER
6	BB	151	ILE
6	BB	157	LEU
6	BB	164	ILE
6	BB	179	LEU
6	BB	191	SER
6	BB	207	ILE
6	BB	208	ARG
6	BB	213	TYR
6	BB	220	THR
6	BB	222	ARG
7	BC	3	GLN
7	BC	20	SER
7	BC	27	LYS
7	BC	28	GLU
7	BC	38	LYS
7	BC	43	LEU
7	BC	45	LYS
7	BC	53	SER
7	BC	55	ILE
7	BC	58	GLU
7	BC	59	ARG
7	BC	75	ILE
7	BC	80	LYS
7	BC	82	GLU
7	BC	86	LYS

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Mol	Chain	Res	Type
7	BC	89	LYS
7	BC	101	ILE
7	BC	103	ILE
7	BC	107	ARG
7	BC	110	GLU
7	BC	127	ARG
7	BC	152	GLU
7	BC	157	LEU
7	BC	164	ARG
7	BC	165	THR
7	BC	169	ARG
7	BC	179	ARG
7	BC	186	THR
7	BC	192	THR
7	BC	200	VAL
7	BC	201	TRP
8	BD	5	LEU
8	BD	8	LYS
8	BD	13	ARG
8	BD	26	ARG
8	BD	49	SER
8	BD	56	ARG
8	BD	58	LYS
8	BD	81	ARG
8	BD	83	LYS
8	BD	142	VAL
8	BD	148	LYS
8	BD	153	SER
8	BD	161	LEU
8	BD	163	GLU
8	BD	164	GLN
8	BD	166	GLU
8	BD	167	LYS
8	BD	192	SER
8	BD	197	GLU
8	BD	200	ILE
8	BD	203	LEU
8	BD	206	LYS
9	BE	11	LEU
9	BE	12	GLN
9	BE	15	LEU
9	BE	22	SER

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Mol	Chain	Res	Type
9	BE	26	LYS
9	BE	38	VAL
9	BE	52	LYS
9	BE	69	ARG
9	BE	80	THR
9	BE	81	LEU
9	BE	93	ARG
9	BE	94	VAL
9	BE	96	MET
9	BE	101	GLU
9	BE	105	ILE
9	BE	115	LEU
9	BE	120	VAL
9	BE	126	LYS
9	BE	130	SER
9	BE	149	SER
9	BE	151	GLU
10	BF	7	VAL
10	BF	10	VAL
10	BF	16	GLU
10	BF	26	THR
10	BF	35	LYS
10	BF	36	ILE
10	BF	38	ARG
10	BF	51	ILE
10	BF	53	LYS
10	BF	54	LEU
10	BF	55	HIS
10	BF	56	LYS
10	BF	68	GLN
10	BF	71	ILE
10	BF	73	GLU
10	BF	77	THR
10	BF	79	ARG
10	BF	85	ILE
10	BF	86	ARG
10	BF	87	SER
10	BF	90	MET
10	BF	91	ARG
10	BF	92	THR
10	BF	93	LYS
11	BG	4	ARG

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Mol	Chain	Res	Type
11	BG	5	ARG
11	BG	11	LYS
11	BG	22	LEU
11	BG	38	THR
11	BG	41	SER
11	BG	48	GLU
11	BG	53	ARG
11	BG	59	LEU
11	BG	63	GLU
11	BG	66	LEU
11	BG	73	VAL
11	BG	77	SER
11	BG	78	ARG
11	BG	89	VAL
11	BG	90	GLU
11	BG	92	ARG
11	BG	97	ASN
11	BG	110	LYS
11	BG	123	GLU
11	BG	124	LEU
11	BG	126	ASP
11	BG	129	GLU
11	BG	136	LYS
11	BG	140	ASP
11	BG	143	ARG
11	BG	144	MET
12	BH	3	MET
12	BH	18	GLN
12	BH	25	VAL
12	BH	26	THR
12	BH	38	ASN
12	BH	59	LEU
12	BH	67	GLN
12	BH	75	ILE
12	BH	77	ARG
12	BH	80	ARG
12	BH	83	LEU
12	BH	87	LYS
12	BH	90	ASP
12	BH	94	LYS
12	BH	107	SER
12	BH	111	MET

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Mol	Chain	Res	Type
12	BH	114	ARG
12	BH	121	LEU
12	BH	125	ILE
13	BI	12	ARG
13	BI	28	ILE
13	BI	32	GLN
13	BI	39	PHE
13	BI	45	ARG
13	BI	46	MET
13	BI	49	ARG
13	BI	52	LEU
13	BI	53	GLU
13	BI	56	ASP
13	BI	57	MET
13	BI	63	LEU
13	BI	66	THR
13	BI	68	LYS
13	BI	84	THR
13	BI	85	ARG
13	BI	88	MET
13	BI	90	TYR
13	BI	100	LYS
13	BI	114	LYS
13	BI	120	LYS
13	BI	127	PHE
13	BI	129	LYS
14	BJ	5	ARG
14	BJ	9	ARG
14	BJ	16	ARG
14	BJ	19	ASP
14	BJ	22	THR
14	BJ	24	GLU
14	BJ	25	ILE
14	BJ	37	ARG
14	BJ	51	VAL
14	BJ	62	ARG
14	BJ	63	ASP
14	BJ	69	THR
14	BJ	73	LEU
14	BJ	77	VAL
14	BJ	82	LYS
14	BJ	83	THR

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Mol	Chain	Res	Type
14	BJ	88	MET
14	BJ	90	LEU
14	BJ	98	VAL
14	BJ	99	GLN
14	BJ	101	SER
15	BK	33	THR
15	BK	38	GLN
15	BK	57	LYS
15	BK	82	LEU
15	BK	83	GLU
15	BK	93	ARG
15	BK	100	LEU
15	BK	107	ILE
15	BK	109	ASN
15	BK	114	THR
15	BK	118	HIS
15	BK	122	ARG
26	BL	10	LYS
26	BL	12	ARG
26	BL	14	ARG
26	BL	19	SER
26	BL	20	ASN
26	BL	24	LEU
26	BL	29	GLN
26	BL	44	LYS
26	BL	49	LEU
26	BL	54	ARG
26	BL	58	THR
26	BL	78	SER
26	BL	88	LYS
26	BL	89	ASP
26	BL	121	ARG
17	BM	4	ILE
17	BM	16	VAL
17	BM	23	TYR
17	BM	27	LYS
17	BM	29	ARG
17	BM	31	LYS
17	BM	46	SER
17	BM	47	GLU
17	BM	48	LEU
17	BM	58	ASP

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Mol	Chain	Res	Type
17	BM	59	GLU
17	BM	68	ASP
17	BM	72	GLU
17	BM	79	ARG
17	BM	90	ARG
17	BM	91	HIS
17	BM	107	ARG
17	BM	110	LYS
17	BM	114	LYS
18	BN	3	GLN
18	BN	9	GLU
18	BN	18	LYS
18	BN	27	LYS
18	BN	32	ASP
18	BN	48	LEU
18	BN	100	SER
19	BO	6	GLU
19	BO	8	THR
19	BO	17	ARG
19	BO	18	ASP
19	BO	31	LEU
19	BO	38	HIS
19	BO	39	LEU
19	BO	64	ARG
19	BO	70	LEU
19	BO	84	ARG
19	BO	85	LEU
19	BO	87	LEU
19	BO	88	ARG
19	BO	89	ARG
20	BP	1	MET
20	BP	3	THR
20	BP	12	LYS
20	BP	18	GLN
20	BP	20	VAL
20	BP	23	ASP
20	BP	46	LYS
20	BP	51	ARG
20	BP	53	ASP
20	BP	63	GLN
20	BP	68	SER
20	BP	69	ASP

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Mol	Chain	Res	Type
20	BP	76	LYS
21	BQ	5	ILE
21	BQ	7	THR
21	BQ	14	SER
21	BQ	17	MET
21	BQ	22	VAL
21	BQ	26	GLU
21	BQ	29	VAL
21	BQ	40	ARG
21	BQ	51	ASN
21	BQ	55	ILE
21	BQ	61	ILE
21	BQ	65	ARG
21	BQ	75	LEU
21	BQ	76	VAL
21	BQ	79	VAL
21	BQ	81	LYS
22	BR	21	ILE
22	BR	26	ILE
22	BR	47	THR
22	BR	61	ARG
23	BS	6	LYS
23	BS	7	LYS
23	BS	11	ILE
23	BS	13	LEU
23	BS	21	LYS
23	BS	27	ASP
23	BS	33	THR
23	BS	37	ARG
23	BS	49	ILE
23	BS	63	THR
23	BS	65	GLU
23	BS	80	TYR
24	BT	10	ARG
24	BT	23	SER
24	BT	24	ARG
24	BT	27	MET
24	BT	30	THR
24	BT	36	TYR
24	BT	54	MET
24	BT	64	LYS
24	BT	66	LEU

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Mol	Chain	Res	Type
24	BT	69	LYS
24	BT	84	ASN
24	BT	86	LEU
25	BU	5	LYS
25	BU	7	ARG
25	BU	10	GLU
25	BU	12	PHE
25	BU	14	VAL
25	BU	16	LEU
25	BU	24	GLU
25	BU	34	ARG
25	BU	41	PRO
25	BU	46	LYS
25	BU	51	SER
25	BU	56	HIS
27	CC	13	ARG
27	CC	51	ARG
27	CC	87	SER
27	CC	96	LYS
27	CC	104	LEU
27	CC	110	LYS
27	CC	129	LEU
27	CC	138	SER
27	CC	140	VAL
27	CC	155	ARG
27	CC	156	SER
27	CC	159	THR
27	CC	167	ASP
27	CC	186	ASP
27	CC	194	VAL
27	CC	202	ARG
27	CC	203	VAL
27	CC	212	TRP
27	CC	238	ASN
27	CC	250	GLN
27	CC	266	ILE
27	CC	267	VAL
27	CC	268	ARG
28	CD	4	LEU
28	CD	12	THR
28	CD	33	ARG
28	CD	39	ASP

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Mol	Chain	Res	Type
28	CD	46	ARG
28	CD	73	VAL
28	CD	81	GLU
28	CD	91	THR
28	CD	95	SER
28	CD	150	GLN
28	CD	170	VAL
28	CD	177	VAL
28	CD	199	SER
29	CE	12	LEU
29	CE	25	GLU
29	CE	44	ARG
29	CE	65	THR
29	CE	67	ARG
29	CE	69	ARG
29	CE	78	TRP
29	CE	80	SER
29	CE	91	ASP
29	CE	93	SER
29	CE	126	VAL
29	CE	133	LEU
29	CE	139	LYS
29	CE	146	VAL
29	CE	149	ILE
29	CE	164	LEU
29	CE	187	VAL
29	CE	200	LEU
30	CF	2	LYS
30	CF	6	TYR
30	CF	13	LYS
30	CF	17	THR
30	CF	25	MET
30	CF	30	VAL
30	CF	34	THR
30	CF	35	LEU
30	CF	45	ASP
30	CF	46	LYS
30	CF	63	LYS
30	CF	79	ARG
30	CF	82	TYR
30	CF	103	ILE
30	CF	116	LEU

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Mol	Chain	Res	Type
30	CF	141	ASP
30	CF	148	VAL
30	CF	153	ILE
30	CF	177	ARG
31	CG	10	VAL
31	CG	24	THR
31	CG	26	LYS
31	CG	28	LYS
31	CG	36	LEU
31	CG	43	LYS
31	CG	44	HIS
31	CG	48	THR
31	CG	59	ASP
31	CG	66	THR
31	CG	72	ASN
31	CG	73	SER
31	CG	79	THR
31	CG	91	VAL
31	CG	97	VAL
31	CG	116	LEU
31	CG	123	GLU
31	CG	126	THR
31	CG	136	ASP
31	CG	138	GLN
31	CG	167	VAL
32	CH	3	VAL
32	CH	6	LEU
32	CH	7	ASP
32	CH	11	ASN
32	CH	12	LEU
32	CH	14	SER
32	CH	17	ASP
32	CH	27	ARG
32	CH	41	LYS
32	CH	42	LYS
32	CH	46	PHE
32	CH	51	ARG
32	CH	75	LEU
32	CH	78	VAL
32	CH	87	GLU
32	CH	97	ARG
32	CH	110	VAL

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Mol	Chain	Res	Type
32	CH	121	VAL
32	CH	123	THR
32	CH	136	GLU
32	CH	141	VAL
32	CH	143	VAL
33	CJ	7	TYR
33	CJ	9	LYS
33	CJ	10	LEU
33	CJ	11	GLN
33	CJ	20	SER
33	CJ	23	VAL
33	CJ	37	PHE
33	CJ	39	LYS
33	CJ	46	ASP
33	CJ	48	ILE
33	CJ	52	LEU
33	CJ	54	ILE
33	CJ	58	ILE
33	CJ	63	ASP
33	CJ	80	LYS
33	CJ	85	ILE
33	CJ	86	LYS
33	CJ	95	ASP
33	CJ	101	SER
33	CJ	102	ARG
33	CJ	105	LEU
33	CJ	116	MET
33	CJ	124	MET
33	CJ	128	ILE
33	CJ	133	ARG
33	CJ	135	MET
34	CK	28	LEU
34	CK	30	THR
34	CK	39	LYS
34	CK	40	HIS
34	CK	57	LEU
34	CK	95	ARG
34	CK	123	LYS
34	CK	124	VAL
34	CK	128	ASN
34	CK	129	GLU
34	CK	142	ILE

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Mol	Chain	Res	Type
35	CL	49	ARG
35	CL	65	THR
35	CL	76	VAL
35	CL	80	ASP
35	CL	90	ASN
35	CL	91	SER
35	CL	105	ARG
35	CL	107	LEU
35	CL	114	LYS
36	CM	14	LYS
36	CM	25	SER
36	CM	33	ARG
36	CM	59	ARG
36	CM	80	SER
36	CM	82	LEU
36	CM	100	ILE
36	CM	107	PHE
36	CM	115	GLU
36	CM	118	THR
36	CM	120	VAL
37	CN	3	GLN
37	CN	20	LEU
37	CN	27	SER
37	CN	40	ARG
37	CN	53	MET
37	CN	55	ARG
37	CN	58	LYS
37	CN	59	ARG
37	CN	74	THR
37	CN	78	LEU
37	CN	100	LYS
37	CN	115	GLU
38	CO	1	MET
38	CO	2	ARG
38	CO	18	GLN
38	CO	20	MET
38	CO	51	LEU
38	CO	53	THR
38	CO	59	SER
38	CO	63	ARG
38	CO	70	THR
38	CO	71	ARG

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Mol	Chain	Res	Type
38	CO	76	VAL
38	CO	90	ARG
38	CO	95	THR
38	CO	116	VAL
38	CO	119	SER
39	CP	9	ARG
39	CP	16	ARG
39	CP	18	LEU
39	CP	25	ARG
39	CP	31	THR
39	CP	38	GLN
39	CP	46	GLU
39	CP	47	VAL
39	CP	78	VAL
39	CP	89	ASP
39	CP	91	SER
39	CP	94	ARG
39	CP	102	ARG
39	CP	103	VAL
39	CP	116	GLN
40	CQ	5	LYS
40	CQ	7	LEU
40	CQ	10	GLU
40	CQ	13	LYS
40	CQ	15	ASP
40	CQ	36	LYS
40	CQ	38	ARG
40	CQ	65	ASN
40	CQ	71	ARG
40	CQ	72	VAL
40	CQ	74	GLN
40	CQ	79	VAL
40	CQ	95	LYS
40	CQ	101	GLU
40	CQ	111	GLU
40	CQ	113	LEU
41	CR	4	LYS
41	CR	8	ILE
41	CR	10	ARG
41	CR	12	ARG
41	CR	15	LYS
41	CR	40	LYS

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Mol	Chain	Res	Type
41	CR	50	ARG
41	CR	101	ASP
42	CS	10	LYS
42	CS	26	ASP
42	CS	38	VAL
42	CS	45	GLU
42	CS	46	GLU
42	CS	47	VAL
42	CS	48	LYS
42	CS	58	VAL
42	CS	60	LYS
42	CS	62	GLU
42	CS	86	GLN
42	CS	95	ASP
42	CS	102	SER
43	CT	19	LEU
43	CT	23	LEU
43	CT	46	LEU
43	CT	62	ASP
43	CT	65	ASP
43	CT	68	ASP
43	CT	69	LEU
43	CT	76	VAL
43	CT	81	SER
43	CT	86	MET
43	CT	96	ILE
43	CT	107	VAL
43	CT	109	ASP
43	CT	110	ARG
44	CU	2	ILE
44	CU	3	ARG
44	CU	18	GLU
44	CU	22	THR
44	CU	28	ASN
44	CU	30	ILE
44	CU	32	LEU
44	CU	49	LYS
44	CU	50	LEU
44	CU	68	LYS
44	CU	69	ARG
44	CU	70	HIS
44	CU	73	ARG

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Mol	Chain	Res	Type
44	CU	77	ARG
44	CU	91	GLN
45	CV	6	ARG
45	CV	8	ASP
45	CV	28	LEU
45	CV	34	ILE
45	CV	36	GLU
45	CV	40	LEU
45	CV	44	HIS
45	CV	60	LYS
45	CV	71	ILE
45	CV	73	ASN
46	CW	7	GLU
46	CW	10	LYS
46	CW	20	LEU
46	CW	34	LYS
46	CW	40	ILE
46	CW	41	GLU
46	CW	51	GLN
46	CW	53	LYS
46	CW	61	LEU
46	CW	62	THR
46	CW	65	VAL
46	CW	66	ASP
46	CW	70	ILE
46	CW	85	LYS
47	CX	10	ASN
47	CX	15	GLU
47	CX	18	ARG
47	CX	28	SER
47	CX	36	VAL
47	CX	48	ASN
47	CX	68	GLU
47	CX	75	ARG
48	CY	16	ASN
48	CY	19	HIS
48	CY	21	LEU
48	CY	24	THR
48	CY	34	SER
48	CY	36	ARG
48	CY	41	SER
48	CY	70	LEU

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Mol	Chain	Res	Type
48	CY	71	ARG
49	CZ	7	ARG
49	CZ	18	LEU
49	CZ	19	LEU
49	CZ	21	LEU
49	CZ	37	LEU
49	CZ	38	GLN
49	CZ	45	GLN
49	CZ	57	LEU
50	C0	2	LYS
50	C0	3	THR
50	C0	4	ILE
50	C0	9	THR
50	C0	18	LYS
50	C0	24	LEU
50	C0	35	VAL
50	C0	48	ASN
50	C0	56	VAL
51	C1	4	GLN
51	C1	9	ARG
51	C1	10	SER
51	C1	25	THR
51	C1	27	LEU
51	C1	37	HIS
51	C1	39	ARG
52	C2	7	LYS
52	C2	46	VAL
53	C3	1	MET
53	C3	3	ARG
53	C3	4	THR
53	C3	24	THR
53	C3	41	ARG
53	C3	42	LEU
54	C4	18	LYS
54	C4	29	ARG
54	C4	46	LYS
55	C5	2	LYS
55	C5	3	VAL
55	C5	12	GLU
55	C5	13	ARG
55	C5	16	ASP
55	C5	20	VAL

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Mol	Chain	Res	Type
55	C5	26	LEU
55	C5	27	TYR
55	C5	29	ILE
55	C5	40	GLN
55	C5	44	LYS
27	DC	13	ARG
27	DC	17	LYS
27	DC	19	VAL
27	DC	38	LYS
27	DC	39	SER
27	DC	82	TYR
27	DC	86	ARG
27	DC	96	LYS
27	DC	110	LYS
27	DC	113	ASP
27	DC	129	LEU
27	DC	155	ARG
27	DC	167	ASP
27	DC	194	VAL
27	DC	198	GLU
27	DC	203	VAL
27	DC	219	VAL
27	DC	238	ASN
27	DC	251	THR
27	DC	252	LYS
27	DC	257	ARG
56	DD	1	MET
56	DD	4	LEU
56	DD	12	THR
56	DD	32	ASN
56	DD	95	SER
56	DD	104	VAL
56	DD	129	THR
56	DD	157	LYS
56	DD	171	THR
56	DD	199	SER
29	DE	44	ARG
29	DE	72	SER
29	DE	108	ILE
29	DE	116	ASP
29	DE	125	SER
29	DE	126	VAL

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Mol	Chain	Res	Type
29	DE	127	GLU
29	DE	130	LYS
29	DE	141	MET
29	DE	149	ILE
29	DE	159	LEU
29	DE	164	LEU
29	DE	185	LYS
29	DE	200	LEU
30	DF	2	LYS
30	DF	30	VAL
30	DF	34	THR
30	DF	35	LEU
30	DF	41	GLU
30	DF	47	LYS
30	DF	50	ASP
30	DF	72	SER
30	DF	93	GLU
30	DF	94	ARG
30	DF	102	LEU
30	DF	103	ILE
30	DF	104	THR
30	DF	116	LEU
30	DF	119	LYS
30	DF	128	SER
30	DF	135	ILE
30	DF	147	ARG
30	DF	151	LEU
30	DF	153	ILE
30	DF	157	THR
31	DG	8	VAL
31	DG	17	LYS
31	DG	28	LYS
31	DG	75	VAL
31	DG	76	ILE
31	DG	84	LYS
31	DG	103	ASN
31	DG	113	ASP
31	DG	115	GLN
31	DG	151	ARG
31	DG	154	GLU
31	DG	170	THR
31	DG	172	GLU

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Mol	Chain	Res	Type
31	DG	176	LYS
32	DH	1	MET
32	DH	12	LEU
32	DH	14	SER
32	DH	27	ARG
32	DH	42	LYS
32	DH	46	PHE
32	DH	50	ARG
32	DH	53	GLU
32	DH	60	GLU
32	DH	76	GLU
32	DH	77	THR
32	DH	113	SER
32	DH	114	GLU
32	DH	124	THR
32	DH	132	GLN
33	DJ	2	LYS
33	DJ	11	GLN
33	DJ	16	MET
33	DJ	23	VAL
33	DJ	27	LEU
33	DJ	37	PHE
33	DJ	39	LYS
33	DJ	41	PHE
33	DJ	44	LYS
33	DJ	49	GLU
33	DJ	50	LYS
33	DJ	63	ASP
33	DJ	64	ARG
33	DJ	68	PHE
33	DJ	71	LYS
33	DJ	85	ILE
33	DJ	86	LYS
33	DJ	94	LYS
33	DJ	96	LYS
33	DJ	108	ILE
33	DJ	115	ASP
33	DJ	116	MET
34	DK	12	LYS
34	DK	17	VAL
34	DK	30	THR
34	DK	39	LYS

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Mol	Chain	Res	Type
34	DK	61	LYS
34	DK	65	THR
34	DK	70	THR
34	DK	124	VAL
35	DL	58	LEU
35	DL	77	ILE
35	DL	86	LEU
35	DL	88	ASN
35	DL	114	LYS
36	DM	1	MET
36	DM	2	ARG
36	DM	5	THR
36	DM	78	ARG
36	DM	91	ASP
36	DM	115	GLU
36	DM	120	VAL
37	DN	2	LEU
37	DN	24	THR
37	DN	27	SER
37	DN	100	LYS
37	DN	110	GLU
37	DN	111	GLU
37	DN	129	THR
37	DN	135	VAL
38	DO	71	ARG
38	DO	90	ARG
38	DO	95	THR
38	DO	96	ARG
38	DO	116	VAL
38	DO	119	SER
39	DP	4	LYS
39	DP	13	ARG
39	DP	17	LYS
39	DP	45	SER
39	DP	47	VAL
39	DP	49	VAL
39	DP	54	VAL
39	DP	65	THR
40	DQ	4	ILE
40	DQ	5	LYS
40	DQ	6	GLN
40	DQ	18	SER

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Mol	Chain	Res	Type
40	DQ	37	LYS
40	DQ	38	ARG
40	DQ	39	LEU
40	DQ	62	LYS
40	DQ	67	GLU
41	DR	10	ARG
41	DR	50	ARG
41	DR	57	ARG
41	DR	111	LYS
41	DR	116	LEU
42	DS	4	VAL
42	DS	26	ASP
42	DS	38	VAL
42	DS	45	GLU
42	DS	58	VAL
42	DS	85	LYS
42	DS	86	GLN
42	DS	94	THR
42	DS	102	SER
43	DT	19	LEU
43	DT	28	LYS
43	DT	47	VAL
43	DT	50	VAL
43	DT	69	LEU
43	DT	82	MET
43	DT	86	MET
43	DT	97	LEU
43	DT	101	SER
43	DT	105	VAL
43	DT	109	ASP
44	DU	3	ARG
44	DU	5	GLU
44	DU	12	ARG
44	DU	16	VAL
44	DU	74	ILE
44	DU	76	ARG
45	DV	28	LEU
45	DV	51	LEU
45	DV	52	ASN
45	DV	60	LYS
45	DV	71	ILE
45	DV	99	SER

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Mol	Chain	Res	Type
46	DW	1	MET
46	DW	7	GLU
46	DW	10	LYS
46	DW	18	ARG
46	DW	29	ILE
46	DW	61	LEU
46	DW	65	VAL
47	DX	9	ARG
47	DX	18	ARG
47	DX	36	VAL
47	DX	39[A]	ARG
47	DX	39[B]	ARG
47	DX	79	SER
48	DY	1	SER
48	DY	27	ARG
48	DY	41	SER
48	DY	75	GLU
49	DZ	2	LYS
49	DZ	16	THR
49	DZ	18	LEU
49	DZ	23	ARG
49	DZ	38	GLN
49	DZ	60	LYS
50	D0	2	LYS
50	D0	38	GLU
50	D0	40	THR
51	D1	9	ARG
52	D2	24	LYS
53	D3	1	MET
53	D3	15	SER
53	D3	21	ARG
53	D3	25	LYS
53	D3	42	LEU
54	D4	29	ARG
54	D4	30	HIS
54	D4	34	LYS
55	D5	2	LYS
55	D5	3	VAL
55	D5	22	ARG
55	D5	31	LYS
55	D5	35	ARG
55	D5	39	VAL

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Mol	Chain	Res	Type
55	D5	40	GLN
55	D5	45	LYS
57	D7	5	ILE
57	D7	11	THR
57	D7	15	HIS
57	D7	19	VAL
57	D7	22	TYR
57	D7	23	PHE
57	D7	24	LYS
57	D7	30	LYS
57	D7	33	ARG
57	D7	34	GLU
57	D7	35	ILE
57	D7	37	LEU
57	D7	40	VAL
57	D7	41	THR
57	D7	46	THR
57	D7	47	ILE
57	D7	51	SER
57	D7	57	TYR
57	D7	62	ARG
57	D7	63	THR
57	D7	64	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
6	AB	15	HIS
7	AC	3	GLN
7	AC	6	HIS
7	AC	190	HIS
11	AG	28	ASN
20	AP	59	HIS
20	AP	63	GLN
23	AS	14	HIS
24	AT	70	ASN
6	BB	18	HIS
6	BB	39	HIS
7	BC	69	HIS
7	BC	176	HIS
8	BD	120	HIS
20	BP	9	HIS

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Mol	Chain	Res	Type
21	BQ	31	HIS
21	BQ	47	HIS
21	BQ	51	ASN
23	BS	69	HIS
27	CC	52	HIS
27	CC	141	HIS
29	CE	29	HIS
30	CF	20	ASN
31	CG	110	HIS
34	CK	47	HIS
35	CL	90	ASN
37	CN	13	HIS
39	CP	38	GLN
42	CS	66	HIS
42	CS	89	HIS
43	CT	102	HIS
48	CY	33	HIS
52	C2	45	HIS
53	C3	29	GLN
54	C4	42	HIS
55	C5	14	HIS
27	DC	141	HIS
27	DC	242	HIS
31	DG	110	HIS
33	DJ	18	ASN
34	DK	47	HIS
34	DK	77	HIS
36	DM	35	HIS
38	DO	31	HIS
42	DS	12	HIS
42	DS	89	HIS
44	DU	70	HIS
50	D0	19	HIS
51	D1	41	HIS
52	D2	18	HIS
52	D2	45	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1529/1533 (99%)	388 (25%)	18 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	BA	1532/1533 (99%)	410 (26%)	13 (0%)
3	DA	2890/2903 (99%)	718 (24%)	42 (1%)
4	CA	2896/2904 (99%)	862 (29%)	38 (1%)
5	CB	117/119 (98%)	26 (22%)	0
5	DB	118/119 (99%)	23 (19%)	0
All	All	9082/9111 (99%)	2427 (26%)	111 (1%)

All (2427) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	19	A
1	AA	21	G
1	AA	22	G
1	AA	27	G
1	AA	32	A
1	AA	34	C
1	AA	39	G
1	AA	44	A
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	78	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	84	U
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U

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Mol	Chain	Res	Type
1	AA	95	C
1	AA	97	G
1	AA	110	C
1	AA	111	G
1	AA	115	G
1	AA	117	G
1	AA	118	U
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	131	A
1	AA	132	C
1	AA	143	A
1	AA	144	G
1	AA	160	A
1	AA	161	A
1	AA	163	C
1	AA	168	G
1	AA	182	A
1	AA	183	C
1	AA	187	G
1	AA	188	C
1	AA	191	G
1	AA	196	A
1	AA	205	A
1	AA	209	U
1	AA	210	C
1	AA	212	G
1	AA	237	G
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	260	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	281	G
1	AA	289	G

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Mol	Chain	Res	Type
1	AA	298	A
1	AA	299	G
1	AA	315	A
1	AA	321	A
1	AA	325	A
1	AA	328	C
1	AA	329	A
1	AA	331	G
1	AA	332	G
1	AA	341	C
1	AA	343	U
1	AA	346	G
1	AA	352	C
1	AA	354	G
1	AA	355	C
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	382	A
1	AA	384	G
1	AA	388	G
1	AA	406	G
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	429	U
1	AA	431	A
1	AA	439	U
1	AA	450	G
1	AA	457	G
1	AA	458	U
1	AA	463	U
1	AA	465	A
1	AA	466	A
1	AA	467	U
1	AA	468	A

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Mol	Chain	Res	Type
1	AA	475	C
1	AA	476	U
1	AA	479	U
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	501	C
1	AA	505	G
1	AA	506	G
1	AA	511	C
1	AA	512	U
1	AA	514	C
1	AA	521	G
1	AA	524	G
1	AA	525	C
1	AA	527	G7M
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	536	C
1	AA	539	A
1	AA	542	G
1	AA	547	A
1	AA	549	C
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	581	G
1	AA	584	G
1	AA	591	U
1	AA	597	G
1	AA	601	G
1	AA	631	C
1	AA	632	U
1	AA	633	G
1	AA	646	G

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Mol	Chain	Res	Type
1	AA	650	G
1	AA	653	U
1	AA	655	A
1	AA	656	G
1	AA	665	A
1	AA	666	G
1	AA	686	U
1	AA	718	A
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	733	G
1	AA	734	G
1	AA	753	A
1	AA	755	G
1	AA	760	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	799	G
1	AA	802	A
1	AA	803	G
1	AA	804	U
1	AA	805	C
1	AA	810	C
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	828	U
1	AA	829	G
1	AA	832	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	846	G
1	AA	852	G
1	AA	853	C
1	AA	856	C
1	AA	859	G
1	AA	861	G
1	AA	869	G
1	AA	870	U

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Mol	Chain	Res	Type
1	AA	873	A
1	AA	874	G
1	AA	876	C
1	AA	887	G
1	AA	889	A
1	AA	898	G
1	AA	899	C
1	AA	902	G
1	AA	910	C
1	AA	914	A
1	AA	915	A
1	AA	918	A
1	AA	922	G
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	936	C
1	AA	940	C
1	AA	942	G
1	AA	951	G
1	AA	960	U
1	AA	968	A
1	AA	969	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	984	C
1	AA	985	C
1	AA	989	U
1	AA	992	U
1	AA	993	G
1	AA	994	A
1	AA	1004	A
1	AA	1005	A
1	AA	1008	U
1	AA	1009	U
1	AA	1010	U
1	AA	1011	C
1	AA	1012	A

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Mol	Chain	Res	Type
1	AA	1015	G
1	AA	1017	U
1	AA	1019	A
1	AA	1022	A
1	AA	1023	U
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1040	U
1	AA	1045	C
1	AA	1052	U
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1065	U
1	AA	1066	C
1	AA	1082	A
1	AA	1086	U
1	AA	1090	U
1	AA	1092	A
1	AA	1094	G
1	AA	1101	A
1	AA	1120	C
1	AA	1124	G
1	AA	1127	G
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	1141	C

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Mol	Chain	Res	Type
1	AA	1143	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1208	C
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1215	G
1	AA	1219	A
1	AA	1225	A
1	AA	1227	A
1	AA	1228	C
1	AA	1231	G
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1261	A
1	AA	1275	A
1	AA	1280	A
1	AA	1281	C
1	AA	1286	U
1	AA	1287	A
1	AA	1288	A

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Mol	Chain	Res	Type
1	AA	1289	A
1	AA	1290	G
1	AA	1299	A
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1306	A
1	AA	1308	U
1	AA	1309	G
1	AA	1317	C
1	AA	1319	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1332	A
1	AA	1333	A
1	AA	1335	U
1	AA	1336	C
1	AA	1338	G
1	AA	1352	C
1	AA	1353	G
1	AA	1355	G
1	AA	1359	C
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1377	A
1	AA	1378	C
1	AA	1390	U
1	AA	1393	U
1	AA	1395	C
1	AA	1399	C
1	AA	1401	G
1	AA	1414	U
1	AA	1419	G
1	AA	1424	U
1	AA	1440	U
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A

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Mol	Chain	Res	Type
1	AA	1451	U
1	AA	1453	G
1	AA	1454	G
1	AA	1477	U
1	AA	1487	G
1	AA	1489	G
1	AA	1491	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1525	G
1	AA	1529	G
1	AA	1530	G
1	AA	1534	A
2	BA	3	A
2	BA	4	U
2	BA	5	U
2	BA	6	G
2	BA	9	G
2	BA	12	U
2	BA	16	A
2	BA	17	U
2	BA	19	A
2	BA	31	G
2	BA	32	A
2	BA	39	G
2	BA	45	G
2	BA	47	C
2	BA	48	C
2	BA	51	A
2	BA	66	A
2	BA	70	U
2	BA	71	A
2	BA	73	C
2	BA	74	A
2	BA	75	G

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Mol	Chain	Res	Type
2	BA	77	A
2	BA	80	A
2	BA	82	G
2	BA	83	C
2	BA	84	U
2	BA	87	C
2	BA	88	U
2	BA	95	C
2	BA	99	C
2	BA	104	G
2	BA	108	G
2	BA	110	C
2	BA	117	G
2	BA	120	A
2	BA	121	U
2	BA	122	G
2	BA	128	G
2	BA	131	A
2	BA	143	A
2	BA	144	G
2	BA	159	G
2	BA	163	C
2	BA	168	G
2	BA	169	C
2	BA	172	A
2	BA	182	A
2	BA	191	G
2	BA	194	C
2	BA	197	A
2	BA	199	A
2	BA	200	G
2	BA	201	G
2	BA	203	G
2	BA	204	G
2	BA	207	C
2	BA	208	U
2	BA	209	U
2	BA	210	C
2	BA	211	G
2	BA	212	G
2	BA	213	G
2	BA	240	G

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Mol	Chain	Res	Type
2	BA	245	U
2	BA	247	G
2	BA	251	G
2	BA	254	G
2	BA	259	G
2	BA	262	A
2	BA	263	A
2	BA	266	G
2	BA	267	C
2	BA	270	A
2	BA	272	C
2	BA	278	G
2	BA	279	A
2	BA	280	C
2	BA	283	U
2	BA	289	G
2	BA	298	A
2	BA	299	G
2	BA	300	A
2	BA	304	U
2	BA	312	C
2	BA	316	C
2	BA	321	A
2	BA	325	A
2	BA	328	C
2	BA	329	A
2	BA	330	C
2	BA	331	G
2	BA	332	G
2	BA	339	C
2	BA	345	C
2	BA	347	G
2	BA	352	C
2	BA	354	G
2	BA	356	A
2	BA	367	U
2	BA	372	C
2	BA	376	G
2	BA	378	G
2	BA	379	C
2	BA	384	G
2	BA	398	U

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Mol	Chain	Res	Type
2	BA	399	G
2	BA	406	G
2	BA	411	A
2	BA	412	A
2	BA	413	G
2	BA	414	A
2	BA	421	U
2	BA	422	C
2	BA	424	G
2	BA	429	U
2	BA	430	A
2	BA	438	U
2	BA	439	U
2	BA	450	G
2	BA	451	A
2	BA	452	A
2	BA	457	G
2	BA	458	U
2	BA	459	A
2	BA	463	U
2	BA	464	U
2	BA	467	U
2	BA	468	A
2	BA	469	C
2	BA	473	U
2	BA	478	A
2	BA	479	U
2	BA	484	G
2	BA	485	U
2	BA	486	U
2	BA	495	A
2	BA	498	A
2	BA	509	A
2	BA	510	A
2	BA	511	C
2	BA	518	C
2	BA	527	G
2	BA	528	C
2	BA	530	G
2	BA	531	U
2	BA	532	A
2	BA	533	A

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Mol	Chain	Res	Type
2	BA	547	A
2	BA	550	G
2	BA	559	A
2	BA	560	A
2	BA	563	A
2	BA	564	C
2	BA	566	G
2	BA	568	G
2	BA	572	A
2	BA	573	A
2	BA	576	C
2	BA	577	G
2	BA	587	G
2	BA	595	A
2	BA	608	A
2	BA	615	G
2	BA	618	C
2	BA	619	U
2	BA	622	A
2	BA	632	U
2	BA	635	A
2	BA	642	A
2	BA	650	G
2	BA	653	U
2	BA	654	G
2	BA	665	A
2	BA	666	G
2	BA	678	U
2	BA	687	A
2	BA	695	A
2	BA	698	G
2	BA	702	A
2	BA	703	G
2	BA	721	G
2	BA	723	U
2	BA	724	G
2	BA	728	A
2	BA	729	A
2	BA	731	G
2	BA	733	G
2	BA	734	G
2	BA	736	C

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Mol	Chain	Res	Type
2	BA	747	A
2	BA	755	G
2	BA	758	C
2	BA	760	G
2	BA	763	G
2	BA	765	G
2	BA	771	G
2	BA	776	G
2	BA	777	A
2	BA	785	G
2	BA	793	U
2	BA	794	A
2	BA	801	U
2	BA	802	A
2	BA	804	U
2	BA	810	C
2	BA	814	A
2	BA	815	A
2	BA	817	C
2	BA	818	G
2	BA	819	A
2	BA	820	U
2	BA	821	G
2	BA	828	U
2	BA	829	G
2	BA	832	G
2	BA	841	C
2	BA	843	U
2	BA	844	G
2	BA	845	A
2	BA	846	G
2	BA	848	C
2	BA	849	G
2	BA	857	C
2	BA	876	C
2	BA	880	C
2	BA	888	G
2	BA	899	C
2	BA	902	G
2	BA	903	G
2	BA	908	A
2	BA	909	A

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Mol	Chain	Res	Type
2	BA	914	A
2	BA	916	U
2	BA	922	G
2	BA	926	G
2	BA	932	C
2	BA	933	G
2	BA	934	C
2	BA	935	A
2	BA	936	C
2	BA	940	C
2	BA	941	G
2	BA	942	G
2	BA	945	G
2	BA	946	A
2	BA	960	U
2	BA	966	G
2	BA	968	A
2	BA	969	A
2	BA	973	G
2	BA	974	A
2	BA	975	A
2	BA	976	G
2	BA	977	A
2	BA	979	C
2	BA	981	U
2	BA	982	U
2	BA	983	A
2	BA	987	G
2	BA	988	G
2	BA	992	U
2	BA	993	G
2	BA	1004	A
2	BA	1008	U
2	BA	1009	U
2	BA	1019	A
2	BA	1020	G
2	BA	1026	G
2	BA	1028	C
2	BA	1029	U
2	BA	1030	U
2	BA	1031	C
2	BA	1032	G

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Mol	Chain	Res	Type
2	BA	1033	G
2	BA	1034	G
2	BA	1035	A
2	BA	1037	C
2	BA	1039	G
2	BA	1042	A
2	BA	1043	G
2	BA	1044	A
2	BA	1046	A
2	BA	1047	G
2	BA	1064	G
2	BA	1065	U
2	BA	1066	C
2	BA	1067	A
2	BA	1069	C
2	BA	1086	U
2	BA	1088	G
2	BA	1094	G
2	BA	1095	U
2	BA	1097	C
2	BA	1101	A
2	BA	1116	U
2	BA	1118	U
2	BA	1125	U
2	BA	1126	U
2	BA	1127	G
2	BA	1128	C
2	BA	1129	C
2	BA	1132	C
2	BA	1133	G
2	BA	1134	G
2	BA	1136	C
2	BA	1137	C
2	BA	1139	G
2	BA	1140	C
2	BA	1141	C
2	BA	1142	G
2	BA	1143	G
2	BA	1145	A
2	BA	1151	A
2	BA	1152	A
2	BA	1154	G

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Mol	Chain	Res	Type
2	BA	1157	A
2	BA	1159	U
2	BA	1160	G
2	BA	1161	C
2	BA	1167	A
2	BA	1171	A
2	BA	1182	G
2	BA	1184	G
2	BA	1185	G
2	BA	1192	C
2	BA	1196	A
2	BA	1197	A
2	BA	1203	C
2	BA	1212	U
2	BA	1213	A
2	BA	1214	C
2	BA	1218	C
2	BA	1225	A
2	BA	1227	A
2	BA	1236	A
2	BA	1238	A
2	BA	1239	A
2	BA	1240	U
2	BA	1245	C
2	BA	1256	A
2	BA	1257	A
2	BA	1258	G
2	BA	1260	G
2	BA	1261	A
2	BA	1275	A
2	BA	1278	G
2	BA	1280	A
2	BA	1284	C
2	BA	1285	A
2	BA	1286	U
2	BA	1287	A
2	BA	1293	C
2	BA	1296	C
2	BA	1297	G
2	BA	1299	A
2	BA	1302	C
2	BA	1304	G

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Mol	Chain	Res	Type
2	BA	1305	G
2	BA	1317	C
2	BA	1318	A
2	BA	1320	C
2	BA	1322	C
2	BA	1323	G
2	BA	1332	A
2	BA	1336	C
2	BA	1337	G
2	BA	1341	U
2	BA	1345	U
2	BA	1346	A
2	BA	1348	U
2	BA	1353	G
2	BA	1362	A
2	BA	1363	A
2	BA	1370	G
2	BA	1378	C
2	BA	1379	G
2	BA	1381	U
2	BA	1398	A
2	BA	1400	C
2	BA	1421	G
2	BA	1422	G
2	BA	1426	G
2	BA	1429	A
2	BA	1435	G
2	BA	1441	A
2	BA	1442	G
2	BA	1444	U
2	BA	1446	A
2	BA	1448	C
2	BA	1451	U
2	BA	1452	C
2	BA	1470	U
2	BA	1475	G
2	BA	1486	G
2	BA	1487	G
2	BA	1492	A
2	BA	1497	G
2	BA	1503	A
2	BA	1505	G

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Mol	Chain	Res	Type
2	BA	1506	U
2	BA	1507	A
2	BA	1509	C
2	BA	1515	G
2	BA	1517	G
2	BA	1518	A
2	BA	1529	G
2	BA	1530	G
2	BA	1533	C
2	BA	1534	A
3	DA	10	A
3	DA	12	U
3	DA	13	A
3	DA	14	A
3	DA	15	G
3	DA	32	C
3	DA	34	U
3	DA	45	G
3	DA	46	G
3	DA	55	G
3	DA	58	G
3	DA	61	C
3	DA	63	A
3	DA	66	C
3	DA	71	A
3	DA	74	A
3	DA	75	G
3	DA	81	G
3	DA	82	U
3	DA	84	A
3	DA	87	U
3	DA	88	G
3	DA	97	C
3	DA	102	U
3	DA	118	A
3	DA	119	A
3	DA	120	U
3	DA	122	G
3	DA	125	A
3	DA	138	U
3	DA	139	U
3	DA	140	C

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Mol	Chain	Res	Type
3	DA	141	G
3	DA	142	A
3	DA	146	A
3	DA	162	U
3	DA	163	C
3	DA	165	A
3	DA	173	A
3	DA	181	A
3	DA	196	A
3	DA	199	A
3	DA	203	A
3	DA	204	A
3	DA	207	A
3	DA	215	G
3	DA	216	A
3	DA	221	A
3	DA	222	A
3	DA	227	A
3	DA	228	C
3	DA	230	G
3	DA	240	C
3	DA	241	A
3	DA	248	G
3	DA	255	A
3	DA	264	C
3	DA	265	A
3	DA	266	G
3	DA	271	G
3	DA	272	A
3	DA	274	C
3	DA	276	U
3	DA	277	G
3	DA	302	C
3	DA	303	G
3	DA	305	C
3	DA	306	U
3	DA	311	A
3	DA	317	G
3	DA	325	G
3	DA	329	G
3	DA	330	A
3	DA	331	C

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Mol	Chain	Res	Type
3	DA	339	U
3	DA	348	A
3	DA	353	C
3	DA	355	U
3	DA	357	C
3	DA	361	G
3	DA	362	A
3	DA	372	G
3	DA	383	C
3	DA	384	A
3	DA	385	C
3	DA	386	G
3	DA	390	U
3	DA	391	A
3	DA	396	G
3	DA	404	A
3	DA	405	U
3	DA	411	G
3	DA	412	A
3	DA	414	C
3	DA	420	C
3	DA	424	G
3	DA	439	A
3	DA	448	U
3	DA	455	C
3	DA	457	A
3	DA	459	U
3	DA	460	A
3	DA	465	G
3	DA	467	G
3	DA	475	C
3	DA	479	A
3	DA	481	G
3	DA	485	C
3	DA	490	C
3	DA	491	G
3	DA	504	A
3	DA	505	A
3	DA	508	A
3	DA	509	C
3	DA	513	A
3	DA	522	A

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Mol	Chain	Res	Type
3	DA	528	A
3	DA	530	G
3	DA	531	C
3	DA	532	A
3	DA	533	G
3	DA	538	A
3	DA	539	G
3	DA	543	G
3	DA	546	U
3	DA	547	A
3	DA	548	G
3	DA	549	G
3	DA	550	C
3	DA	551	G
3	DA	557	C
3	DA	563	A
3	DA	564	C
3	DA	573	U
3	DA	575	A
3	DA	586	A
3	DA	597	G
3	DA	603	A
3	DA	610	C
3	DA	613	A
3	DA	614	A
3	DA	615	U
3	DA	627	A
3	DA	637	A
3	DA	644	A
3	DA	645	C
3	DA	646	U
3	DA	647	G
3	DA	654	A
3	DA	655	A
3	DA	682	G
3	DA	686	U
3	DA	695	G
3	DA	698	C
3	DA	702	U
3	DA	717	C
3	DA	719	C
3	DA	728	G

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Mol	Chain	Res	Type
3	DA	729	G
3	DA	730	A
3	DA	735	A
3	DA	738	G
3	DA	745	1MG
3	DA	747	5MU
3	DA	749	A
3	DA	750	A
3	DA	759	G
3	DA	765	C
3	DA	772	C
3	DA	775	G
3	DA	776	G
3	DA	782	A
3	DA	783	A
3	DA	784	G
3	DA	785	G
3	DA	790	U
3	DA	791	C
3	DA	792	A
3	DA	802	A
3	DA	805	G
3	DA	806	C
3	DA	812	C
3	DA	823	C
3	DA	827	U
3	DA	828	U
3	DA	845	A
3	DA	846	U
3	DA	847	U
3	DA	848	C
3	DA	849	A
3	DA	855	G
3	DA	858	G
3	DA	859	G
3	DA	860	U
3	DA	861	A
3	DA	866	A
3	DA	878	A
3	DA	879	G
3	DA	883	G
3	DA	885	C

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Mol	Chain	Res	Type
3	DA	893	C
3	DA	896	A
3	DA	897	C
3	DA	899	A
3	DA	907	G
3	DA	910	A
3	DA	914	G
3	DA	915	C
3	DA	931	U
3	DA	932	U
3	DA	934	U
3	DA	941	A
3	DA	942	G
3	DA	946	C
3	DA	961	C
3	DA	962	G
3	DA	969	G
3	DA	974	G
3	DA	983	A
3	DA	984	A
3	DA	985	C
3	DA	988	A
3	DA	989	G
3	DA	990	A
3	DA	994	C
3	DA	995	C
3	DA	996	A
3	DA	998	C
3	DA	1000	A
3	DA	1005	C
3	DA	1012	U
3	DA	1013	C
3	DA	1022	G
3	DA	1026	G
3	DA	1027	A
3	DA	1030	C
3	DA	1033	U
3	DA	1035	U
3	DA	1039	A
3	DA	1046	A
3	DA	1047	G
3	DA	1057	A

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Mol	Chain	Res	Type
3	DA	1058	U
3	DA	1061	U
3	DA	1062	G
3	DA	1065	U
3	DA	1066	U
3	DA	1067	A
3	DA	1068	G
3	DA	1070	A
3	DA	1071	G
3	DA	1072	C
3	DA	1073	A
3	DA	1074	G
3	DA	1077	A
3	DA	1081	U
3	DA	1083	U
3	DA	1084	A
3	DA	1085	A
3	DA	1088	A
3	DA	1090	A
3	DA	1091	G
3	DA	1092	C
3	DA	1094	U
3	DA	1095	A
3	DA	1096	A
3	DA	1097	U
3	DA	1098	A
3	DA	1100	C
3	DA	1105	U
3	DA	1112	G
3	DA	1119	U
3	DA	1123	C
3	DA	1130	U
3	DA	1131	G
3	DA	1132	U
3	DA	1133	A
3	DA	1135	C
3	DA	1136	G
3	DA	1139	G
3	DA	1142	A
3	DA	1148	U
3	DA	1172	C
3	DA	1174	U

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Mol	Chain	Res	Type
3	DA	1175	A
3	DA	1176	U
3	DA	1177	G
3	DA	1180	U
3	DA	1192	G
3	DA	1198	U
3	DA	1211	C
3	DA	1212	G
3	DA	1218	G
3	DA	1221	C
3	DA	1229	C
3	DA	1232	G
3	DA	1238	G
3	DA	1241	A
3	DA	1249	U
3	DA	1252	G
3	DA	1253	A
3	DA	1256	G
3	DA	1265	A
3	DA	1269	A
3	DA	1271	G
3	DA	1272	A
3	DA	1274	A
3	DA	1284	A
3	DA	1286	A
3	DA	1289	C
3	DA	1291	C
3	DA	1297	C
3	DA	1300	G
3	DA	1301	A
3	DA	1303	G
3	DA	1305	C
3	DA	1306	C
3	DA	1310	G
3	DA	1319	C
3	DA	1320	C
3	DA	1321	A
3	DA	1338	G
3	DA	1342	A
3	DA	1344	U
3	DA	1345	C
3	DA	1352	U

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Mol	Chain	Res	Type
3	DA	1353	A
3	DA	1359	A
3	DA	1364	G
3	DA	1365	A
3	DA	1366	A
3	DA	1367	A
3	DA	1377	G
3	DA	1378	A
3	DA	1379	U
3	DA	1380	G
3	DA	1383	A
3	DA	1390	U
3	DA	1416	G
3	DA	1417	C
3	DA	1420	A
3	DA	1428	C
3	DA	1430	G
3	DA	1435	G
3	DA	1445	G
3	DA	1452	G
3	DA	1453	A
3	DA	1458	U
3	DA	1459	G
3	DA	1460	U
3	DA	1461	C
3	DA	1478	G
3	DA	1479	G
3	DA	1482	G
3	DA	1490	A
3	DA	1493	C
3	DA	1494	A
3	DA	1495	A
3	DA	1497	U
3	DA	1507	C
3	DA	1508	A
3	DA	1509	A
3	DA	1510	G
3	DA	1515	A
3	DA	1519	G
3	DA	1527	G
3	DA	1531	C
3	DA	1534	U

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Mol	Chain	Res	Type
3	DA	1535	A
3	DA	1538	G
3	DA	1554	U
3	DA	1559	U
3	DA	1561	C
3	DA	1566	A
3	DA	1569	A
3	DA	1575	C
3	DA	1576	U
3	DA	1578	U
3	DA	1579	A
3	DA	1582	C
3	DA	1583	A
3	DA	1585	C
3	DA	1595	C
3	DA	1603	A
3	DA	1606	C
3	DA	1607	C
3	DA	1608	A
3	DA	1609	A
3	DA	1613	G
3	DA	1615	C
3	DA	1616	A
3	DA	1632	A
3	DA	1639	C
3	DA	1644	C
3	DA	1647	U
3	DA	1648	U
3	DA	1649	G
3	DA	1652	A
3	DA	1655	A
3	DA	1663	G
3	DA	1665	A
3	DA	1674	G
3	DA	1694	C
3	DA	1700	A
3	DA	1702	G
3	DA	1703	G
3	DA	1710	G
3	DA	1711	A
3	DA	1715	G
3	DA	1717	A

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Mol	Chain	Res	Type
3	DA	1725	U
3	DA	1729	U
3	DA	1730	C
3	DA	1732	C
3	DA	1738	G
3	DA	1739	A
3	DA	1744	A
3	DA	1746	A
3	DA	1751	U
3	DA	1755	A
3	DA	1764	C
3	DA	1770	G
3	DA	1771	C
3	DA	1772	A
3	DA	1773	A
3	DA	1780	A
3	DA	1782	U
3	DA	1787	A
3	DA	1788	C
3	DA	1798	U
3	DA	1800	C
3	DA	1801	A
3	DA	1802	A
3	DA	1807	G
3	DA	1808	A
3	DA	1809	A
3	DA	1813	G
3	DA	1816	C
3	DA	1819	A
3	DA	1829	A
3	DA	1830	C
3	DA	1833	C
3	DA	1835	2MG
3	DA	1839	G
3	DA	1841	U
3	DA	1847	A
3	DA	1849	G
3	DA	1852	U
3	DA	1853	A
3	DA	1854	A
3	DA	1858	A
3	DA	1862	G

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Mol	Chain	Res	Type
3	DA	1866	A
3	DA	1869	G
3	DA	1870	C
3	DA	1871	A
3	DA	1872	A
3	DA	1873	G
3	DA	1889	A
3	DA	1890	A
3	DA	1902	C
3	DA	1906	G
3	DA	1907	G
3	DA	1910	G
3	DA	1913	A
3	DA	1914	C
3	DA	1919	A
3	DA	1921	G
3	DA	1929	G
3	DA	1930	G
3	DA	1931	U
3	DA	1938	A
3	DA	1955	U
3	DA	1966	A
3	DA	1967	C
3	DA	1970	A
3	DA	1971	U
3	DA	1972	G
3	DA	1987	A
3	DA	1988	G
3	DA	1991	U
3	DA	1992	G
3	DA	1993	U
3	DA	1997	C
3	DA	2001	C
3	DA	2009	A
3	DA	2021	C
3	DA	2023	C
3	DA	2026	U
3	DA	2033	A
3	DA	2043	C
3	DA	2049	G
3	DA	2050	C
3	DA	2055	C

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Mol	Chain	Res	Type
3	DA	2056	G
3	DA	2060	A
3	DA	2061	G
3	DA	2062	A
3	DA	2064	C
3	DA	2069	G7M
3	DA	2080	A
3	DA	2092	U
3	DA	2093	G
3	DA	2097	A
3	DA	2101	A
3	DA	2102	G
3	DA	2105	U
3	DA	2108	A
3	DA	2111	U
3	DA	2112	G
3	DA	2113	U
3	DA	2115	G
3	DA	2117	A
3	DA	2118	U
3	DA	2123	G
3	DA	2126	A
3	DA	2127	G
3	DA	2128	G
3	DA	2131	U
3	DA	2132	U
3	DA	2133	G
3	DA	2134	A
3	DA	2136	G
3	DA	2137	U
3	DA	2139	U
3	DA	2145	C
3	DA	2146	C
3	DA	2147	A
3	DA	2148	G
3	DA	2149	U
3	DA	2159	G
3	DA	2160	C
3	DA	2161	C
3	DA	2162	G
3	DA	2163	A
3	DA	2164	C

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Mol	Chain	Res	Type
3	DA	2165	C
3	DA	2167	U
3	DA	2168	G
3	DA	2169	A
3	DA	2170	A
3	DA	2171	A
3	DA	2172	U
3	DA	2173	A
3	DA	2177	C
3	DA	2178	C
3	DA	2179	C
3	DA	2180	U
3	DA	2181	U
3	DA	2182	U
3	DA	2185	U
3	DA	2187	U
3	DA	2188	U
3	DA	2189	U
3	DA	2193	G
3	DA	2194	U
3	DA	2195	U
3	DA	2198	A
3	DA	2203	U
3	DA	2204	G
3	DA	2210	U
3	DA	2211	A
3	DA	2212	A
3	DA	2214	C
3	DA	2225	A
3	DA	2238	G
3	DA	2239	G
3	DA	2242	G
3	DA	2243	U
3	DA	2245	U
3	DA	2247	A
3	DA	2248	C
3	DA	2250	G
3	DA	2257	U
3	DA	2258	C
3	DA	2268	A
3	DA	2269	G
3	DA	2273	A

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Mol	Chain	Res	Type
3	DA	2278	A
3	DA	2283	C
3	DA	2285	C
3	DA	2286	G
3	DA	2287	A
3	DA	2305	U
3	DA	2306	C
3	DA	2308	G
3	DA	2309	A
3	DA	2310	C
3	DA	2311	A
3	DA	2322	A
3	DA	2325	G
3	DA	2327	A
3	DA	2329	U
3	DA	2333	A
3	DA	2334	U
3	DA	2345	G
3	DA	2346	A
3	DA	2347	C
3	DA	2348	U
3	DA	2357	G
3	DA	2358	A
3	DA	2376	A
3	DA	2379	G
3	DA	2383	G
3	DA	2385	C
3	DA	2389	G
3	DA	2393	U
3	DA	2396	G
3	DA	2402	U
3	DA	2406	A
3	DA	2424	C
3	DA	2425	A
3	DA	2428	G
3	DA	2435	A
3	DA	2440	C
3	DA	2441	U
3	DA	2447	G
3	DA	2448	A
3	DA	2452	C
3	DA	2471	A

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Mol	Chain	Res	Type
3	DA	2476	A
3	DA	2480	C
3	DA	2484	G
3	DA	2487	G
3	DA	2491	U
3	DA	2493	U
3	DA	2497	A
3	DA	2498	OMC
3	DA	2500	U
3	DA	2502	G
3	DA	2504	PSU
3	DA	2505	G
3	DA	2511	U
3	DA	2513	A
3	DA	2518	A
3	DA	2529	G
3	DA	2532	G
3	DA	2538	C
3	DA	2543	G
3	DA	2547	A
3	DA	2548	U
3	DA	2550	G
3	DA	2554	U
3	DA	2555	U
3	DA	2556	C
3	DA	2564	A
3	DA	2566	A
3	DA	2567	G
3	DA	2573	C
3	DA	2581	G
3	DA	2585	U
3	DA	2586	U
3	DA	2591	C
3	DA	2599	G
3	DA	2601	C
3	DA	2602	A
3	DA	2603	G
3	DA	2608	G
3	DA	2609	U
3	DA	2611	C
3	DA	2612	C
3	DA	2613	U

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Mol	Chain	Res	Type
3	DA	2618	G
3	DA	2627	G
3	DA	2629	U
3	DA	2636	C
3	DA	2644	G
3	DA	2656	U
3	DA	2660	A
3	DA	2661	G
3	DA	2663	G
3	DA	2671	G
3	DA	2689	U
3	DA	2690	U
3	DA	2700	A
3	DA	2703	C
3	DA	2707	U
3	DA	2713	U
3	DA	2714	G
3	DA	2726	A
3	DA	2729	G
3	DA	2733	A
3	DA	2739	U
3	DA	2743	U
3	DA	2748	A
3	DA	2750	A
3	DA	2756	U
3	DA	2757	A
3	DA	2765	A
3	DA	2769	U
3	DA	2778	A
3	DA	2791	G
3	DA	2798	U
3	DA	2799	A
3	DA	2800	A
3	DA	2818	U
3	DA	2820	A
3	DA	2821	A
3	DA	2823	A
3	DA	2824	C
3	DA	2825	G
3	DA	2832	U
3	DA	2833	U
3	DA	2850	A

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Mol	Chain	Res	Type
3	DA	2859	G
3	DA	2867	G
3	DA	2873	A
3	DA	2874	C
3	DA	2880	C
3	DA	2883	A
3	DA	2884	U
3	DA	2885	G
3	DA	2886	A
3	DA	2887	A
3	DA	2888	C
3	DA	2891	U
3	DA	2894	G
3	DA	2896	C
4	CA	10	A
4	CA	15	G
4	CA	34	U
4	CA	39	G
4	CA	42	A
4	CA	46	G
4	CA	47	C
4	CA	50	U
4	CA	51	G
4	CA	55	G
4	CA	61	C
4	CA	63	A
4	CA	64	A
4	CA	66	C
4	CA	71	A
4	CA	72	U
4	CA	73	A
4	CA	74	A
4	CA	75	G
4	CA	78	U
4	CA	80	G
4	CA	83	A
4	CA	84	A
4	CA	86	G
4	CA	87	U
4	CA	88	G
4	CA	91	A
4	CA	96	C

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Mol	Chain	Res	Type
4	CA	97	C
4	CA	98	G
4	CA	101	A
4	CA	102	U
4	CA	104	A
4	CA	113	U
4	CA	118	A
4	CA	119	A
4	CA	120	U
4	CA	130	C
4	CA	131	A
4	CA	132	G
4	CA	135	U
4	CA	137	U
4	CA	138	U
4	CA	139	U
4	CA	140	C
4	CA	141	G
4	CA	142	A
4	CA	143	C
4	CA	149	A
4	CA	150	U
4	CA	163	C
4	CA	166	U
4	CA	172	A
4	CA	177	G
4	CA	178	G
4	CA	180	G
4	CA	181	A
4	CA	183	C
4	CA	189	G
4	CA	190	A
4	CA	194	G
4	CA	196	A
4	CA	199	A
4	CA	200	U
4	CA	206	U
4	CA	208	C
4	CA	209	C
4	CA	211	C
4	CA	215	G
4	CA	216	A

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Mol	Chain	Res	Type
4	CA	222	A
4	CA	223	A
4	CA	225	C
4	CA	226	A
4	CA	228	C
4	CA	232	G
4	CA	233	A
4	CA	238	C
4	CA	242	G
4	CA	245	G
4	CA	248	G
4	CA	253	C
4	CA	255	A
4	CA	257	C
4	CA	264	C
4	CA	265	A
4	CA	266	G
4	CA	268	C
4	CA	272	A
4	CA	277	G
4	CA	278	A
4	CA	279	A
4	CA	284	U
4	CA	285	G
4	CA	294	A
4	CA	301	G
4	CA	308	G
4	CA	311	A
4	CA	313	G
4	CA	317	G
4	CA	322	A
4	CA	324	A
4	CA	329	G
4	CA	330	A
4	CA	335	C
4	CA	336	C
4	CA	338	G
4	CA	346	A
4	CA	361	G
4	CA	362	A
4	CA	364	C
4	CA	367	G

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Mol	Chain	Res	Type
4	CA	371	A
4	CA	372	G
4	CA	383	C
4	CA	385	C
4	CA	386	G
4	CA	387	U
4	CA	393	C
4	CA	396	G
4	CA	398	C
4	CA	399	U
4	CA	404	A
4	CA	405	U
4	CA	408	G
4	CA	409	G
4	CA	411	G
4	CA	417	C
4	CA	422	A
4	CA	424	G
4	CA	426	C
4	CA	430	A
4	CA	435	C
4	CA	438	G
4	CA	444	C
4	CA	447	A
4	CA	448	U
4	CA	449	A
4	CA	450	G
4	CA	451	U
4	CA	456	C
4	CA	457	A
4	CA	459	U
4	CA	461	C
4	CA	463	G
4	CA	464	U
4	CA	467	G
4	CA	474	G
4	CA	478	A
4	CA	480	A
4	CA	481	G
4	CA	489	G
4	CA	490	C
4	CA	491	G

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Mol	Chain	Res	Type
4	CA	496	G
4	CA	504	A
4	CA	505	A
4	CA	508	A
4	CA	519	U
4	CA	527	C
4	CA	528	A
4	CA	530	G
4	CA	531	C
4	CA	532	A
4	CA	542	C
4	CA	543	G
4	CA	544	C
4	CA	546	U
4	CA	547	A
4	CA	548	G
4	CA	549	G
4	CA	550	C
4	CA	554	U
4	CA	555	G
4	CA	557	C
4	CA	559	G
4	CA	562	U
4	CA	563	A
4	CA	569	U
4	CA	573	U
4	CA	575	A
4	CA	586	A
4	CA	587	C
4	CA	603	A
4	CA	606	U
4	CA	607	U
4	CA	608	A
4	CA	609	A
4	CA	611	C
4	CA	613	A
4	CA	614	A
4	CA	615	U
4	CA	616	A
4	CA	620	G
4	CA	622	G
4	CA	627	A

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Mol	Chain	Res	Type
4	CA	628	G
4	CA	631	A
4	CA	632	A
4	CA	637	A
4	CA	642	U
4	CA	645	C
4	CA	646	U
4	CA	647	G
4	CA	648	G
4	CA	650	C
4	CA	654	A
4	CA	655	A
4	CA	662	G
4	CA	664	G
4	CA	665	U
4	CA	668	A
4	CA	671	C
4	CA	678	C
4	CA	682	G
4	CA	685	A
4	CA	686	U
4	CA	687	C
4	CA	688	U
4	CA	695	G
4	CA	696	G
4	CA	699	A
4	CA	701	G
4	CA	702	U
4	CA	703	U
4	CA	706	A
4	CA	711	G
4	CA	717	C
4	CA	718	A
4	CA	724	U
4	CA	726	G
4	CA	727	A
4	CA	728	G
4	CA	730	A
4	CA	735	A
4	CA	739	A
4	CA	740	C
4	CA	746	U

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Mol	Chain	Res	Type
4	CA	747	U
4	CA	748	G
4	CA	752	A
4	CA	753	A
4	CA	756	A
4	CA	761	A
4	CA	762	U
4	CA	764	A
4	CA	765	C
4	CA	770	G
4	CA	773	U
4	CA	775	G
4	CA	776	G
4	CA	778	G
4	CA	782	A
4	CA	784	G
4	CA	785	G
4	CA	789	A
4	CA	790	U
4	CA	791	C
4	CA	792	A
4	CA	793	A
4	CA	798	G
4	CA	805	G
4	CA	811	U
4	CA	812	C
4	CA	814	C
4	CA	815	C
4	CA	819	A
4	CA	826	U
4	CA	827	U
4	CA	828	U
4	CA	831	G
4	CA	844	A
4	CA	845	A
4	CA	846	U
4	CA	847	U
4	CA	854	C
4	CA	858	G
4	CA	859	G
4	CA	869	G
4	CA	878	A

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Mol	Chain	Res	Type
4	CA	881	G
4	CA	882	G
4	CA	883	G
4	CA	884	U
4	CA	885	C
4	CA	896	A
4	CA	897	C
4	CA	905	A
4	CA	906	U
4	CA	910	A
4	CA	914	G
4	CA	919	U
4	CA	931	U
4	CA	941	A
4	CA	945	A
4	CA	946	C
4	CA	953	G
4	CA	961	C
4	CA	974	G
4	CA	983	A
4	CA	985	C
4	CA	995	C
4	CA	996	A
4	CA	1009	A
4	CA	1012	U
4	CA	1013	C
4	CA	1014	A
4	CA	1022	G
4	CA	1023	U
4	CA	1025	G
4	CA	1026	G
4	CA	1029	A
4	CA	1033	U
4	CA	1046	A
4	CA	1047	G
4	CA	1053	C
4	CA	1054	A
4	CA	1057	A
4	CA	1059	G
4	CA	1060	U
4	CA	1061	U
4	CA	1062	G

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Mol	Chain	Res	Type
4	CA	1063	G
4	CA	1065	U
4	CA	1066	U
4	CA	1067	A
4	CA	1068	G
4	CA	1069	A
4	CA	1070	A
4	CA	1072	C
4	CA	1073	A
4	CA	1074	G
4	CA	1075	C
4	CA	1078	U
4	CA	1081	U
4	CA	1085	A
4	CA	1087	G
4	CA	1088	A
4	CA	1089	A
4	CA	1090	A
4	CA	1092	C
4	CA	1094	U
4	CA	1097	U
4	CA	1098	A
4	CA	1099	G
4	CA	1104	C
4	CA	1105	U
4	CA	1111	A
4	CA	1112	G
4	CA	1115	G
4	CA	1122	G
4	CA	1126	A
4	CA	1130	U
4	CA	1132	U
4	CA	1133	A
4	CA	1135	C
4	CA	1136	G
4	CA	1139	G
4	CA	1143	A
4	CA	1149	G
4	CA	1151	A
4	CA	1155	A
4	CA	1158	C
4	CA	1168	G

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Mol	Chain	Res	Type
4	CA	1170	C
4	CA	1171	G
4	CA	1173	U
4	CA	1174	U
4	CA	1175	A
4	CA	1176	U
4	CA	1179	G
4	CA	1180	U
4	CA	1186	G
4	CA	1189	A
4	CA	1199	U
4	CA	1204	A
4	CA	1206	G
4	CA	1210	G
4	CA	1212	G
4	CA	1217	U
4	CA	1218	G
4	CA	1230	A
4	CA	1231	U
4	CA	1233	C
4	CA	1236	G
4	CA	1238	G
4	CA	1239	G
4	CA	1244	A
4	CA	1247	A
4	CA	1248	G
4	CA	1250	G
4	CA	1251	C
4	CA	1253	A
4	CA	1254	A
4	CA	1256	G
4	CA	1258	U
4	CA	1262	A
4	CA	1265	A
4	CA	1266	G
4	CA	1269	A
4	CA	1271	G
4	CA	1272	A
4	CA	1273	U
4	CA	1280	G
4	CA	1282	U
4	CA	1288	G

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Mol	Chain	Res	Type
4	CA	1290	C
4	CA	1300	G
4	CA	1301	A
4	CA	1302	A
4	CA	1306	C
4	CA	1312	U
4	CA	1318	U
4	CA	1328	A
4	CA	1329	U
4	CA	1331	G
4	CA	1332	G
4	CA	1342	A
4	CA	1344	U
4	CA	1345	C
4	CA	1348	C
4	CA	1352	U
4	CA	1359	A
4	CA	1362	C
4	CA	1364	G
4	CA	1365	A
4	CA	1376	C
4	CA	1378	A
4	CA	1379	U
4	CA	1380	G
4	CA	1383	A
4	CA	1384	A
4	CA	1388	G
4	CA	1391	U
4	CA	1393	A
4	CA	1395	A
4	CA	1398	C
4	CA	1402	U
4	CA	1406	U
4	CA	1414	C
4	CA	1416	G
4	CA	1417	C
4	CA	1418	G
4	CA	1419	A
4	CA	1420	A
4	CA	1427	A
4	CA	1441	G
4	CA	1443	U

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Mol	Chain	Res	Type
4	CA	1453	A
4	CA	1455	G
4	CA	1456	G
4	CA	1458	U
4	CA	1476	U
4	CA	1482	G
4	CA	1483	G
4	CA	1493	C
4	CA	1497	U
4	CA	1504	A
4	CA	1509	A
4	CA	1510	G
4	CA	1515	A
4	CA	1529	G
4	CA	1530	G
4	CA	1532	A
4	CA	1533	C
4	CA	1534	U
4	CA	1535	A
4	CA	1536	C
4	CA	1538	G
4	CA	1539	U
4	CA	1540	G
4	CA	1547	C
4	CA	1558	C
4	CA	1560	G
4	CA	1566	A
4	CA	1569	A
4	CA	1576	U
4	CA	1578	U
4	CA	1581	G
4	CA	1583	A
4	CA	1584	U
4	CA	1585	C
4	CA	1586	A
4	CA	1587	G
4	CA	1593	A
4	CA	1602	U
4	CA	1603	A
4	CA	1605	C
4	CA	1606	C
4	CA	1607	C

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Mol	Chain	Res	Type
4	CA	1608	A
4	CA	1609	A
4	CA	1610	A
4	CA	1615	C
4	CA	1616	A
4	CA	1618	A
4	CA	1619	G
4	CA	1622	G
4	CA	1626	A
4	CA	1629	U
4	CA	1630	A
4	CA	1631	G
4	CA	1632	A
4	CA	1634	A
4	CA	1643	G
4	CA	1646	C
4	CA	1647	U
4	CA	1648	U
4	CA	1649	G
4	CA	1650	A
4	CA	1651	G
4	CA	1652	A
4	CA	1658	C
4	CA	1661	G
4	CA	1674	G
4	CA	1678	A
4	CA	1681	G
4	CA	1685	C
4	CA	1690	A
4	CA	1693	U
4	CA	1694	C
4	CA	1695	G
4	CA	1705	A
4	CA	1706	C
4	CA	1707	G
4	CA	1714	U
4	CA	1715	G
4	CA	1722	A
4	CA	1726	C
4	CA	1729	U
4	CA	1730	C
4	CA	1732	C

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Mol	Chain	Res	Type
4	CA	1734	G
4	CA	1735	A
4	CA	1738	G
4	CA	1739	A
4	CA	1740	G
4	CA	1757	A
4	CA	1758	U
4	CA	1759	A
4	CA	1760	C
4	CA	1764	C
4	CA	1773	A
4	CA	1778	U
4	CA	1780	A
4	CA	1781	U
4	CA	1782	U
4	CA	1784	A
4	CA	1789	A
4	CA	1791	A
4	CA	1792	G
4	CA	1794	A
4	CA	1798	U
4	CA	1799	G
4	CA	1800	C
4	CA	1801	A
4	CA	1802	A
4	CA	1808	A
4	CA	1809	A
4	CA	1810	A
4	CA	1812	U
4	CA	1815	A
4	CA	1816	C
4	CA	1820	U
4	CA	1822	C
4	CA	1828	G
4	CA	1829	A
4	CA	1833	C
4	CA	1834	U
4	CA	1848	A
4	CA	1856	U
4	CA	1857	G
4	CA	1858	A
4	CA	1864	U

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Mol	Chain	Res	Type
4	CA	1870	C
4	CA	1873	G
4	CA	1876	A
4	CA	1880	U
4	CA	1882	U
4	CA	1889	A
4	CA	1892	C
4	CA	1897	G
4	CA	1900	A
4	CA	1901	A
4	CA	1902	C
4	CA	1903	G
4	CA	1906	G
4	CA	1907	G
4	CA	1914	C
4	CA	1920	C
4	CA	1927	A
4	CA	1929	G
4	CA	1930	G
4	CA	1931	U
4	CA	1932	A
4	CA	1935	G
4	CA	1937	A
4	CA	1938	A
4	CA	1945	G
4	CA	1952	A
4	CA	1955	U
4	CA	1966	A
4	CA	1967	C
4	CA	1970	A
4	CA	1971	U
4	CA	1972	G
4	CA	1976	U
4	CA	1977	A
4	CA	1987	A
4	CA	1989	G
4	CA	1991	U
4	CA	1993	U
4	CA	1997	C
4	CA	2000	C
4	CA	2002	G
4	CA	2003	A

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Mol	Chain	Res	Type
4	CA	2004	G
4	CA	2007	U
4	CA	2015	A
4	CA	2018	G
4	CA	2022	U
4	CA	2023	C
4	CA	2030	A
4	CA	2031	A
4	CA	2032	G
4	CA	2033	A
4	CA	2035	G
4	CA	2036	C
4	CA	2043	C
4	CA	2045	C
4	CA	2049	G
4	CA	2051	A
4	CA	2055	C
4	CA	2056	G
4	CA	2060	A
4	CA	2061	G
4	CA	2062	A
4	CA	2069	G
4	CA	2072	C
4	CA	2079	U
4	CA	2080	A
4	CA	2082	A
4	CA	2087	G
4	CA	2092	U
4	CA	2093	G
4	CA	2110	G
4	CA	2111	U
4	CA	2112	G
4	CA	2113	U
4	CA	2115	G
4	CA	2116	G
4	CA	2117	A
4	CA	2118	U
4	CA	2120	G
4	CA	2121	G
4	CA	2124	G
4	CA	2125	G
4	CA	2126	A

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Mol	Chain	Res	Type
4	CA	2127	G
4	CA	2128	G
4	CA	2131	U
4	CA	2132	U
4	CA	2133	G
4	CA	2135	A
4	CA	2137	U
4	CA	2142	A
4	CA	2147	A
4	CA	2155	U
4	CA	2157	G
4	CA	2161	C
4	CA	2163	A
4	CA	2164	C
4	CA	2165	C
4	CA	2168	G
4	CA	2171	A
4	CA	2172	U
4	CA	2173	A
4	CA	2178	C
4	CA	2181	U
4	CA	2183	A
4	CA	2189	U
4	CA	2190	G
4	CA	2198	A
4	CA	2200	C
4	CA	2203	U
4	CA	2204	G
4	CA	2211	A
4	CA	2212	A
4	CA	2214	C
4	CA	2223	G
4	CA	2224	G
4	CA	2225	A
4	CA	2226	C
4	CA	2227	A
4	CA	2231	U
4	CA	2234	G
4	CA	2238	G
4	CA	2239	G
4	CA	2242	G
4	CA	2243	U

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Mol	Chain	Res	Type
4	CA	2250	G
4	CA	2268	A
4	CA	2271	G
4	CA	2273	A
4	CA	2278	A
4	CA	2279	G
4	CA	2283	C
4	CA	2287	A
4	CA	2293	G
4	CA	2297	A
4	CA	2305	U
4	CA	2307	G
4	CA	2308	G
4	CA	2309	A
4	CA	2310	C
4	CA	2311	A
4	CA	2313	C
4	CA	2316	G
4	CA	2320	U
4	CA	2321	U
4	CA	2322	A
4	CA	2324	U
4	CA	2327	A
4	CA	2333	A
4	CA	2335	A
4	CA	2345	G
4	CA	2347	C
4	CA	2350	C
4	CA	2354	C
4	CA	2357	G
4	CA	2361	G
4	CA	2383	G
4	CA	2385	C
4	CA	2391	G
4	CA	2398	U
4	CA	2402	U
4	CA	2403	C
4	CA	2406	A
4	CA	2407	A
4	CA	2410	G
4	CA	2411	A
4	CA	2412	A

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Mol	Chain	Res	Type
4	CA	2417	C
4	CA	2422	C
4	CA	2423	U
4	CA	2424	C
4	CA	2425	A
4	CA	2426	A
4	CA	2429	G
4	CA	2430	A
4	CA	2431	U
4	CA	2435	A
4	CA	2436	G
4	CA	2438	U
4	CA	2440	C
4	CA	2441	U
4	CA	2442	C
4	CA	2448	A
4	CA	2455	G
4	CA	2459	A
4	CA	2469	A
4	CA	2474	U
4	CA	2476	A
4	CA	2482	A
4	CA	2483	C
4	CA	2484	G
4	CA	2486	C
4	CA	2491	U
4	CA	2494	G
4	CA	2502	G
4	CA	2503	A
4	CA	2505	G
4	CA	2506	U
4	CA	2507	C
4	CA	2513	A
4	CA	2518	A
4	CA	2519	U
4	CA	2520	C
4	CA	2529	G
4	CA	2542	A
4	CA	2547	A
4	CA	2554	U
4	CA	2556	C
4	CA	2566	A

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Mol	Chain	Res	Type
4	CA	2567	G
4	CA	2572	A
4	CA	2573	C
4	CA	2575	C
4	CA	2578	G
4	CA	2579	C
4	CA	2580	U
4	CA	2581	G
4	CA	2585	U
4	CA	2596	U
4	CA	2600	A
4	CA	2602	A
4	CA	2603	G
4	CA	2604	U
4	CA	2609	U
4	CA	2613	U
4	CA	2619	C
4	CA	2621	G
4	CA	2626	C
4	CA	2627	G
4	CA	2629	U
4	CA	2630	G
4	CA	2645	G
4	CA	2646	C
4	CA	2661	G
4	CA	2681	C
4	CA	2682	A
4	CA	2689	U
4	CA	2690	U
4	CA	2695	U
4	CA	2718	G
4	CA	2726	A
4	CA	2729	G
4	CA	2733	A
4	CA	2739	U
4	CA	2748	A
4	CA	2751	G
4	CA	2762	C
4	CA	2765	A
4	CA	2769	U
4	CA	2774	C
4	CA	2778	A

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Mol	Chain	Res	Type
4	CA	2791	G
4	CA	2792	A
4	CA	2793	C
4	CA	2794	C
4	CA	2800	A
4	CA	2801	G
4	CA	2803	G
4	CA	2807	U
4	CA	2808	G
4	CA	2809	A
4	CA	2818	U
4	CA	2820	A
4	CA	2821	A
4	CA	2826	A
4	CA	2831	G
4	CA	2832	U
4	CA	2834	G
4	CA	2835	A
4	CA	2849	U
4	CA	2850	A
4	CA	2861	U
4	CA	2866	U
4	CA	2867	G
4	CA	2868	A
4	CA	2872	A
4	CA	2873	A
4	CA	2879	A
4	CA	2891	U
4	CA	2893	A
4	CA	2897	U
4	CA	2898	U
4	CA	2900	A
4	CA	2901	C
4	CA	2902	C
4	CA	2903	U
4	CA	2904	U
5	DB	15	A
5	DB	21	G
5	DB	24	G
5	DB	25	U
5	DB	35	C
5	DB	41	G

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Mol	Chain	Res	Type
5	DB	42	C
5	DB	44	G
5	DB	47	C
5	DB	56	G
5	DB	57	A
5	DB	66	A
5	DB	67	G
5	DB	68	C
5	DB	85	G
5	DB	87	U
5	DB	88	C
5	DB	89	U
5	DB	90	C
5	DB	98	G
5	DB	106	G
5	DB	109	A
5	DB	110	C
5	CB	5	U
5	CB	13	G
5	CB	15	A
5	CB	16	G
5	CB	17	C
5	CB	23	G
5	CB	27	C
5	CB	35	C
5	CB	36	C
5	CB	40	U
5	CB	41	G
5	CB	44	G
5	CB	50	A
5	CB	54	G
5	CB	56	G
5	CB	66	A
5	CB	67	G
5	CB	84	G
5	CB	87	U
5	CB	88	C
5	CB	89	U
5	CB	90	C
5	CB	98	G
5	CB	99	A
5	CB	109	A

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Mol	Chain	Res	Type
5	CB	116	G

All (111) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	121	U
1	AA	209	U
1	AA	243	A
1	AA	329	A
1	AA	353	A
1	AA	438	U
1	AA	653	U
1	AA	722	G
1	AA	723	U
1	AA	1010	U
1	AA	1024	G
1	AA	1031	C
1	AA	1211	U
1	AA	1227	A
1	AA	1260	G
1	AA	1280	A
1	AA	1335	U
1	AA	1533	C
2	BA	4	U
2	BA	209	U
2	BA	429	U
2	BA	438	U
2	BA	559	A
2	BA	560	A
2	BA	793	U
2	BA	884	U
2	BA	1065	U
2	BA	1211	U
2	BA	1279	G
2	BA	1317	C
2	BA	1346	A
3	DA	27	G
3	DA	62	U
3	DA	125	A
3	DA	215	G
3	DA	226	A
3	DA	271	G

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Mol	Chain	Res	Type
3	DA	310	A
3	DA	404	A
3	DA	627	A
3	DA	681	G
3	DA	764	A
3	DA	784	G
3	DA	790	U
3	DA	859	G
3	DA	892	A
3	DA	1073	A
3	DA	1128	G
3	DA	1342	A
3	DA	1378	A
3	DA	1434	A
3	DA	1452	G
3	DA	1494	A
3	DA	1606	C
3	DA	1713	A
3	DA	1738	G
3	DA	1800	C
3	DA	1929	G
3	DA	2127	G
3	DA	2133	G
3	DA	2158	A
3	DA	2242	G
3	DA	2308	G
3	DA	2324	U
3	DA	2326	C
3	DA	2406	A
3	DA	2513	A
3	DA	2585	U
3	DA	2602	A
3	DA	2756	U
3	DA	2820	A
3	DA	2873	A
3	DA	2885	G
4	CA	125	A
4	CA	177	G
4	CA	189	G
4	CA	199	A
4	CA	241	A
4	CA	335	C

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Mol	Chain	Res	Type
4	CA	403	U
4	CA	404	A
4	CA	503	A
4	CA	527	C
4	CA	612	G
4	CA	647	G
4	CA	784	G
4	CA	793	A
4	CA	846	U
4	CA	945	A
4	CA	982	C
4	CA	1066	U
4	CA	1344	U
4	CA	1378	A
4	CA	1379	U
4	CA	1458	U
4	CA	1606	C
4	CA	1610	A
4	CA	1721	G
4	CA	1847	A
4	CA	1900	A
4	CA	2146	C
4	CA	2162	G
4	CA	2211	A
4	CA	2225	A
4	CA	2238	G
4	CA	2286	G
4	CA	2326	C
4	CA	2425	A
4	CA	2581	G
4	CA	2602	A
4	CA	2680	U

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

37 non-standard protein/DNA/RNA residues are 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	$\#\|Z\|>2$
1	5MC	AA	1407	1	18,22,23	1.04	2 (11%)	26,32,35	1.63	4 (15%)
3	5MU	DA	747	3	19,22,23	1.69	5 (26%)	28,32,35	2.54	10 (35%)
56	MEQ	DD	150	56	8,9,10	1.51	1 (12%)	5,10,12	1.52	1 (20%)
1	MA6	AA	1518	1	19,26,27	0.94	1 (5%)	18,38,41	1.67	3 (16%)
3	G7M	DA	2069	3	20,26,27	1.44	3 (15%)	17,39,42	1.43	2 (11%)
3	OMG	DA	2251	3	18,26,27	1.15	1 (5%)	19,38,41	1.44	4 (21%)
1	G7M	AA	527	1	20,26,27	1.16	1 (5%)	17,39,42	0.98	2 (11%)
3	3TD	DA	1915	3	18,22,23	1.56	4 (22%)	22,32,35	2.57	6 (27%)
3	2MG	DA	2445	3	18,26,27	1.19	2 (11%)	16,38,41	2.02	3 (18%)
1	2MG	AA	966	1	18,26,27	0.93	1 (5%)	16,38,41	1.36	3 (18%)
16	D2T	AL	89	16	7,9,10	1.00	0	6,11,13	2.31	3 (50%)
3	OMU	DA	2552	3	19,22,23	1.52	4 (21%)	26,31,34	2.78	7 (26%)
1	5MC	AA	967	1	18,22,23	1.03	1 (5%)	26,32,35	1.81	4 (15%)
3	2MG	DA	1835	3	18,26,27	1.10	1 (5%)	16,38,41	0.97	1 (6%)
3	PSU	DA	2504	3	18,21,22	1.74	4 (22%)	22,30,33	2.03	5 (22%)
3	PSU	DA	2604	3	18,21,22	1.21	1 (5%)	22,30,33	1.63	3 (13%)
3	2MA	DA	2503	3,58	17,25,26	1.20	1 (5%)	17,37,40	1.24	2 (11%)
3	PSU	DA	1917	3	18,21,22	1.21	2 (11%)	22,30,33	1.89	7 (31%)
1	4OC	AA	1402	1	20,23,24	0.99	1 (5%)	26,32,35	1.26	4 (15%)
3	1MG	DA	745	3	18,26,27	1.17	3 (16%)	19,39,42	2.53	6 (31%)
1	UR3	AA	1498	1	19,22,23	1.03	2 (10%)	26,32,35	1.94	4 (15%)
3	PSU	DA	2605	3	18,21,22	1.69	4 (22%)	22,30,33	1.90	4 (18%)
1	2MG	AA	1207	1	18,26,27	0.88	0	16,38,41	1.31	4 (25%)
3	6MZ	DA	2030	3	18,25,26	1.33	2 (11%)	16,36,39	3.21	5 (31%)
3	OMC	DA	2498	3,58	19,22,23	1.32	3 (15%)	26,31,34	1.24	4 (15%)
3	6MZ	DA	1618	3	18,25,26	1.09	0	16,36,39	3.51	5 (31%)
3	PSU	DA	2457	3	18,21,22	1.30	3 (16%)	22,30,33	1.48	4 (18%)
3	H2U	DA	2449	3	18,21,22	1.57	3 (16%)	21,30,33	2.15	3 (14%)
3	PSU	DA	746	3,58	18,21,22	1.18	2 (11%)	22,30,33	1.91	4 (18%)
3	PSU	DA	2580	3	18,21,22	1.03	2 (11%)	22,30,33	1.65	4 (18%)
1	2MG	AA	1516	1	18,26,27	0.98	1 (5%)	16,38,41	1.37	4 (25%)
3	5MC	DA	1962	3	18,22,23	0.89	1 (5%)	26,32,35	1.37	3 (11%)
1	PSU	AA	516	1,58	18,21,22	1.06	2 (11%)	22,30,33	1.65	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	MA6	AA	1519	1	19,26,27	0.99	1 (5%)	18,38,41	1.44	3 (16%)
3	PSU	DA	955	3	18,21,22	1.13	0	22,30,33	2.18	4 (18%)
3	PSU	DA	1911	3	18,21,22	1.09	1 (5%)	22,30,33	1.74	4 (18%)
3	5MU	DA	1939	3	19,22,23	1.46	2 (10%)	28,32,35	2.87	9 (32%)

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
1	5MC	AA	1407	1	-	0/7/25/26	0/2/2/2
3	5MU	DA	747	3	-	2/7/25/26	0/2/2/2
56	MEQ	DD	150	56	-	2/8/9/11	-
1	MA6	AA	1518	1	-	2/7/29/30	0/3/3/3
3	G7M	DA	2069	3	-	2/3/25/26	0/3/3/3
3	OMG	DA	2251	3	-	1/5/27/28	0/3/3/3
1	G7M	AA	527	1	-	2/3/25/26	0/3/3/3
3	3TD	DA	1915	3	-	2/7/25/26	0/2/2/2
3	2MG	DA	2445	3	-	0/5/27/28	0/3/3/3
1	2MG	AA	966	1	-	2/5/27/28	0/3/3/3
16	D2T	AL	89	16	-	2/7/12/14	-
3	OMU	DA	2552	3	-	2/9/27/28	0/2/2/2
1	5MC	AA	967	1	-	0/7/25/26	0/2/2/2
3	2MG	DA	1835	3	-	4/5/27/28	0/3/3/3
3	PSU	DA	2504	3	-	2/7/25/26	0/2/2/2
3	PSU	DA	2604	3	-	0/7/25/26	0/2/2/2
3	2MA	DA	2503	3,58	-	3/3/25/26	0/3/3/3
3	PSU	DA	1917	3	-	0/7/25/26	0/2/2/2
1	4OC	AA	1402	1	-	1/9/29/30	0/2/2/2
3	1MG	DA	745	3	-	2/3/25/26	0/3/3/3
1	UR3	AA	1498	1	-	0/7/25/26	0/2/2/2
3	PSU	DA	2605	3	-	0/7/25/26	0/2/2/2
1	2MG	AA	1207	1	-	2/5/27/28	0/3/3/3
3	6MZ	DA	2030	3	-	1/5/27/28	0/3/3/3
3	OMC	DA	2498	3,58	-	3/9/27/28	0/2/2/2
3	6MZ	DA	1618	3	-	1/5/27/28	0/3/3/3
3	PSU	DA	2457	3	-	1/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	H2U	DA	2449	3	-	0/7/38/39	0/2/2/2
3	PSU	DA	746	3,58	-	3/7/25/26	0/2/2/2
3	PSU	DA	2580	3	-	0/7/25/26	0/2/2/2
1	2MG	AA	1516	1	-	0/5/27/28	0/3/3/3
3	5MC	DA	1962	3	-	4/7/25/26	0/2/2/2
1	PSU	AA	516	1,58	-	0/7/25/26	0/2/2/2
1	MA6	AA	1519	1	-	3/7/29/30	0/3/3/3
3	PSU	DA	955	3	-	0/7/25/26	0/2/2/2
3	PSU	DA	1911	3	-	0/7/25/26	0/2/2/2
3	5MU	DA	1939	3	-	0/7/25/26	0/2/2/2

All (68) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2504	PSU	C6-C5	4.79	1.40	1.35
3	DA	1939	5MU	C6-N1	-4.69	1.30	1.38
3	DA	2449	H2U	C2-N3	-4.27	1.30	1.38
3	DA	2605	PSU	C6-C5	3.89	1.39	1.35
3	DA	746	PSU	C6-C5	3.85	1.39	1.35
3	DA	2552	OMU	C4-N3	-3.82	1.31	1.38
3	DA	747	5MU	C6-N1	-3.78	1.31	1.38
3	DA	2449	H2U	C4-N3	-3.74	1.31	1.37
1	AA	967	5MC	C6-N1	-3.61	1.31	1.38
3	DA	2251	OMG	C6-N1	-3.57	1.32	1.37
3	DA	1835	2MG	C6-N1	-3.39	1.32	1.37
3	DA	1915	3TD	C10-N3	3.29	1.53	1.47
3	DA	1911	PSU	C6-C5	3.29	1.39	1.35
3	DA	2069	G7M	C6-N1	-3.26	1.33	1.37
1	AA	527	G7M	C5-C4	3.25	1.45	1.39
3	DA	2503	2MA	C6-N1	-3.17	1.31	1.38
3	DA	1915	3TD	C6-C5	3.16	1.39	1.35
3	DA	1917	PSU	C6-C5	3.15	1.39	1.35
1	AA	516	PSU	C6-C5	3.08	1.38	1.35
56	DD	150	MEQ	CE-NE2	-3.03	1.40	1.45
3	DA	747	5MU	C4-C5	3.02	1.49	1.44
3	DA	2069	G7M	C5-C4	3.00	1.45	1.39
3	DA	1962	5MC	C6-N1	-2.94	1.33	1.38
3	DA	2504	PSU	C4-C5	-2.94	1.35	1.44
3	DA	2552	OMU	C5-C4	-2.91	1.37	1.43
3	DA	1915	3TD	C4-N3	-2.74	1.34	1.40
3	DA	747	5MU	O4-C4	2.72	1.28	1.23
3	DA	2445	2MG	C6-N1	-2.71	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	DA	2457	PSU	O4'-C1'	-2.68	1.40	1.43
3	DA	2604	PSU	C4-C5	-2.66	1.36	1.44
3	DA	1917	PSU	C4-C5	-2.63	1.36	1.44
1	AA	1407	5MC	C6-C5	2.58	1.38	1.34
3	DA	2445	2MG	C2-N1	-2.57	1.32	1.36
3	DA	2504	PSU	O4'-C1'	-2.52	1.40	1.43
3	DA	2605	PSU	O4-C4	-2.52	1.18	1.23
3	DA	747	5MU	C4-N3	-2.50	1.34	1.38
3	DA	2457	PSU	C6-C5	2.50	1.38	1.35
3	DA	2580	PSU	O4'-C1'	-2.47	1.40	1.43
3	DA	2552	OMU	C6-N1	-2.47	1.32	1.38
3	DA	2504	PSU	O5'-C5'	-2.45	1.38	1.44
1	AA	1516	2MG	C6-N1	-2.44	1.34	1.37
3	DA	2069	G7M	C8-N9	2.44	1.37	1.33
3	DA	2449	H2U	C2-N1	2.33	1.39	1.35
3	DA	2498	OMC	O5'-C5'	-2.32	1.39	1.44
3	DA	2030	6MZ	C2-N3	2.30	1.35	1.32
1	AA	1407	5MC	C6-N1	-2.29	1.34	1.38
1	AA	1498	UR3	C6-C5	2.29	1.40	1.35
1	AA	1519	MA6	C5-C4	2.25	1.46	1.40
3	DA	2580	PSU	C4-C5	-2.25	1.37	1.44
3	DA	2605	PSU	C4-C5	-2.19	1.37	1.44
3	DA	2605	PSU	O4'-C1'	-2.17	1.40	1.43
3	DA	747	5MU	C2-N1	2.16	1.41	1.38
1	AA	1498	UR3	C6-N1	-2.15	1.32	1.38
3	DA	746	PSU	C2-N1	2.15	1.39	1.36
1	AA	1518	MA6	C5-C4	2.13	1.46	1.40
3	DA	745	1MG	O6-C6	2.13	1.26	1.22
3	DA	2030	6MZ	C5-N7	-2.12	1.32	1.39
3	DA	1915	3TD	O4'-C1'	-2.12	1.40	1.43
3	DA	745	1MG	C6-N1	2.12	1.43	1.39
1	AA	966	2MG	C5-C4	2.11	1.48	1.43
3	DA	2457	PSU	C4-C5	-2.11	1.38	1.44
3	DA	2552	OMU	C2-N3	-2.11	1.34	1.38
3	DA	2498	OMC	C6-N1	-2.10	1.32	1.38
3	DA	2498	OMC	C5-C4	-2.07	1.38	1.42
3	DA	745	1MG	O5'-C5'	-2.04	1.39	1.44
3	DA	1939	5MU	C4-N3	-2.03	1.35	1.38
1	AA	516	PSU	C4-C5	-2.02	1.38	1.44
1	AA	1402	4OC	C6-N1	-2.01	1.33	1.38

All (151) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	1618	6MZ	C9-N6-C6	-11.88	112.64	122.87
3	DA	2030	6MZ	C9-N6-C6	-9.14	115.00	122.87
3	DA	1915	3TD	N1-C2-N3	9.04	123.27	116.14
3	DA	2449	H2U	C4-N3-C2	-7.62	119.47	125.79
3	DA	2552	OMU	O2-C2-N1	-7.22	113.19	122.79
1	AA	1498	UR3	C4-N3-C2	-7.00	117.97	124.56
3	DA	2552	OMU	C4-N3-C2	-6.99	117.35	126.58
3	DA	1939	5MU	C4-N3-C2	-6.76	118.60	127.35
3	DA	1939	5MU	N3-C2-N1	6.59	123.64	114.89
3	DA	747	5MU	N3-C2-N1	6.43	123.42	114.89
3	DA	955	PSU	C4-N3-C2	-6.41	117.10	126.34
3	DA	2030	6MZ	C2-N1-C6	6.38	122.06	116.59
3	DA	1939	5MU	O4-C4-C5	-6.28	117.62	124.90
3	DA	745	1MG	CM1-N1-C6	6.23	126.09	117.55
3	DA	1939	5MU	O2-C2-N1	-6.23	114.50	122.79
3	DA	747	5MU	O2-C2-N1	-5.82	115.05	122.79
3	DA	745	1MG	CM1-N1-C2	-5.79	114.71	120.72
3	DA	746	PSU	C4-N3-C2	-5.55	118.34	126.34
3	DA	2552	OMU	N3-C2-N1	5.43	122.09	114.89
3	DA	2605	PSU	C6-C5-C4	-5.42	114.41	118.20
1	AA	967	5MC	C5-C6-N1	-5.41	117.77	123.34
3	DA	2504	PSU	N1-C2-N3	5.41	121.26	115.13
3	DA	747	5MU	C4-N3-C2	-5.25	120.55	127.35
1	AA	1407	5MC	C5-C4-N3	-5.15	116.12	121.67
3	DA	2445	2MG	O6-C6-C5	-5.11	114.39	124.37
3	DA	955	PSU	N1-C2-N3	4.93	120.71	115.13
3	DA	746	PSU	N1-C2-N3	4.88	120.66	115.13
3	DA	1618	6MZ	C2-N1-C6	4.87	120.76	116.59
3	DA	2030	6MZ	N3-C2-N1	-4.86	121.08	128.68
3	DA	2445	2MG	O6-C6-N1	4.74	126.24	120.65
3	DA	1915	3TD	C4-N3-C2	-4.68	119.53	124.61
3	DA	1911	PSU	C4-N3-C2	-4.65	119.64	126.34
3	DA	2504	PSU	C4-N3-C2	-4.62	119.68	126.34
1	AA	1518	MA6	N1-C6-N6	4.53	121.82	117.06
3	DA	2605	PSU	C4-N3-C2	-4.52	119.82	126.34
3	DA	2604	PSU	C4-N3-C2	-4.43	119.96	126.34
1	AA	1498	UR3	C6-N1-C2	-4.35	117.90	121.79
3	DA	2552	OMU	C5-C4-N3	4.30	121.28	114.84
3	DA	1911	PSU	N1-C2-N3	4.17	119.85	115.13
3	DA	747	5MU	C5M-C5-C6	-4.16	117.30	122.85
1	AA	516	PSU	O2-C2-N1	-4.14	118.23	122.79
3	DA	2457	PSU	O2-C2-N1	-4.13	118.24	122.79
3	DA	745	1MG	O6-C6-C5	-4.12	116.89	124.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1519	MA6	N1-C6-N6	4.08	121.35	117.06
1	AA	967	5MC	C1'-N1-C6	-4.01	114.44	121.12
3	DA	2604	PSU	O2-C2-N1	-3.99	118.40	122.79
1	AA	1402	4OC	CM4-N4-C4	-3.99	114.66	122.45
3	DA	2552	OMU	O4-C4-C5	-3.96	118.20	125.16
1	AA	967	5MC	CM5-C5-C6	-3.90	117.64	122.85
3	DA	1939	5MU	C6-C5-C4	3.89	121.28	118.03
3	DA	1618	6MZ	N3-C2-N1	-3.88	122.61	128.68
3	DA	745	1MG	O6-C6-N1	3.88	126.69	120.47
3	DA	1917	PSU	C4-N3-C2	-3.87	120.76	126.34
3	DA	2580	PSU	C4-N3-C2	-3.83	120.82	126.34
1	AA	516	PSU	C4-N3-C2	-3.83	120.82	126.34
3	DA	2552	OMU	C5-C6-N1	-3.77	115.50	121.81
3	DA	2449	H2U	C5-C6-N1	-3.77	99.21	111.61
1	AA	1518	MA6	N3-C2-N1	-3.65	122.97	128.68
3	DA	2504	PSU	C6-N1-C2	-3.61	118.99	122.68
3	DA	1939	5MU	C5-C6-N1	-3.60	119.64	123.34
1	AA	516	PSU	N1-C2-N3	3.58	119.19	115.13
3	DA	2605	PSU	C5-C4-N3	3.54	124.58	116.58
3	DA	1962	5MC	C5-C6-N1	-3.53	119.71	123.34
16	AL	89	D2T	OD1-CG-CB	-3.50	115.11	122.44
3	DA	1939	5MU	C5M-C5-C6	-3.42	118.28	122.85
3	DA	2580	PSU	C6-C5-C4	-3.39	115.83	118.20
3	DA	1917	PSU	O2-C2-N1	-3.35	119.10	122.79
3	DA	1917	PSU	N1-C2-N3	3.34	118.91	115.13
16	AL	89	D2T	CB-CA-N	3.29	116.12	109.10
3	DA	747	5MU	C6-N1-C2	-3.27	117.98	121.30
3	DA	747	5MU	C6-C5-C4	3.26	120.76	118.03
3	DA	2251	OMG	C5-C6-N1	3.25	119.68	113.95
3	DA	955	PSU	O2-C2-N1	-3.24	119.22	122.79
3	DA	1915	3TD	O2-C2-N3	-3.24	117.05	121.83
3	DA	2449	H2U	C5-C4-N3	3.24	120.28	116.65
3	DA	747	5MU	O4-C4-C5	-3.19	121.20	124.90
3	DA	1915	3TD	C5-C6-N1	-3.18	117.33	122.11
1	AA	1407	5MC	O2-C2-N3	-3.17	117.18	122.33
3	DA	1911	PSU	O2-C2-N1	-3.13	119.34	122.79
3	DA	2445	2MG	C5-C6-N1	3.07	119.37	113.95
3	DA	1917	PSU	O4-C4-C5	-3.04	116.09	124.05
3	DA	1917	PSU	C6-C5-C4	3.00	120.30	118.20
3	DA	955	PSU	C5-C4-N3	2.99	123.34	116.58
3	DA	2069	G7M	C2-N1-C6	-2.98	119.61	125.10
1	AA	967	5MC	C5-C4-N3	-2.97	118.47	121.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	DA	2069	G7M	N2-C2-N3	-2.91	114.08	119.74
3	DA	747	5MU	C5M-C5-C4	2.89	121.94	118.77
1	AA	1516	2MG	O6-C6-C5	-2.84	118.82	124.37
3	DA	2251	OMG	O6-C6-C5	-2.81	118.89	124.37
1	AA	966	2MG	O6-C6-N1	2.79	123.94	120.65
3	DA	1962	5MC	C5-C4-N4	-2.78	117.33	121.48
3	DA	2251	OMG	C8-N7-C5	2.75	108.24	102.99
3	DA	2580	PSU	O2-C2-N1	-2.72	119.79	122.79
3	DA	2457	PSU	C4-N3-C2	-2.72	122.42	126.34
3	DA	1915	3TD	C6-C5-C4	2.68	120.08	118.22
3	DA	745	1MG	C8-N7-C5	2.66	108.07	102.99
3	DA	1939	5MU	O4-C4-N3	2.66	125.22	120.12
3	DA	2504	PSU	O4-C4-C5	-2.66	117.10	124.05
3	DA	2251	OMG	C2-N1-C6	-2.62	120.27	125.10
3	DA	1618	6MZ	C1'-N9-C4	-2.61	122.06	126.64
3	DA	2030	6MZ	O3'-C3'-C2'	-2.59	103.44	111.82
3	DA	1618	6MZ	C4-C5-N7	-2.57	106.72	109.40
3	DA	2457	PSU	N1-C2-N3	2.56	118.04	115.13
16	AL	89	D2T	OD2-CG-OD1	2.55	129.88	124.09
3	DA	1917	PSU	C6-N1-C2	-2.54	120.09	122.68
3	DA	1962	5MC	N4-C4-N3	2.51	123.06	118.48
3	DA	2504	PSU	O2-C2-N3	-2.51	117.08	121.82
1	AA	1519	MA6	N3-C2-N1	-2.47	124.83	128.68
1	AA	1498	UR3	C3U-N3-C2	2.43	121.57	117.31
3	DA	1915	3TD	O4'-C1'-C2'	2.42	108.56	105.14
56	DD	150	MEQ	CB-CG-CD	-2.41	107.65	113.04
1	AA	1407	5MC	C4-N3-C2	2.40	123.93	120.69
3	DA	1917	PSU	O4-C4-N3	2.39	124.70	120.12
1	AA	966	2MG	O6-C6-C5	-2.37	119.73	124.37
3	DA	2552	OMU	CM2-O2'-C2'	2.34	120.66	114.52
3	DA	2605	PSU	O4-C4-C5	-2.34	117.94	124.05
3	DA	2503	2MA	C8-N7-C5	2.32	107.41	102.99
1	AA	1402	4OC	CM2-O2'-C2'	-2.32	108.44	114.52
3	DA	2498	OMC	C5-C6-N1	-2.30	117.95	121.81
1	AA	1402	4OC	C2'-C1'-N1	-2.30	109.76	114.22
3	DA	2498	OMC	C2'-C1'-N1	-2.30	109.76	114.22
3	DA	2498	OMC	C1'-N1-C2	-2.30	113.30	118.42
1	AA	527	G7M	O6-C6-N1	2.27	123.33	120.65
3	DA	2030	6MZ	C1'-N9-C4	-2.27	122.66	126.64
1	AA	1516	2MG	O6-C6-N1	2.27	123.33	120.65
1	AA	1207	2MG	CM2-N2-C2	-2.26	118.86	123.86
3	DA	2580	PSU	N1-C2-N3	2.26	117.69	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1207	2MG	O6-C6-C5	-2.26	119.96	124.37
1	AA	1207	2MG	C8-N7-C5	2.24	107.25	102.99
3	DA	2503	2MA	CM2-C2-N1	-2.23	111.27	116.23
3	DA	746	PSU	C5-C6-N1	-2.23	118.76	122.11
3	DA	746	PSU	C5-C4-N3	2.22	121.61	116.58
1	AA	1498	UR3	O2-C2-N1	-2.22	117.53	122.72
1	AA	1516	2MG	CM2-N2-C2	-2.21	118.98	123.86
1	AA	1516	2MG	C5-C6-N1	2.21	117.85	113.95
1	AA	966	2MG	CM2-N2-C2	-2.19	119.03	123.86
3	DA	745	1MG	C2-N1-C6	-2.18	119.17	120.95
1	AA	1518	MA6	C10-N6-C6	-2.18	112.91	119.51
1	AA	1519	MA6	C4-C5-N7	-2.18	107.13	109.40
3	DA	747	5MU	C5-C6-N1	-2.17	121.11	123.34
3	DA	2604	PSU	N1-C2-N3	2.16	117.57	115.13
3	DA	1939	5MU	C5-C4-N3	2.15	117.15	115.31
3	DA	1911	PSU	C6-N1-C2	-2.15	120.49	122.68
3	DA	2457	PSU	O2'-C2'-C1'	-2.14	106.14	111.23
1	AA	527	G7M	C2-N1-C6	-2.13	121.17	125.10
1	AA	1407	5MC	C5-C6-N1	-2.11	121.17	123.34
3	DA	2498	OMC	C1'-N1-C6	2.10	125.42	120.84
3	DA	747	5MU	C1'-N1-C2	2.08	121.34	117.57
1	AA	1207	2MG	C5-C6-N1	2.08	117.62	113.95
3	DA	1835	2MG	C8-N7-C5	2.07	106.94	102.99
1	AA	1402	4OC	C5-C4-N4	-2.03	118.47	122.61

There are no chirality outliers.

All (49) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	AA	527	G7M	O4'-C4'-C5'-O5'
1	AA	527	G7M	C3'-C4'-C5'-O5'
1	AA	1518	MA6	C5-C6-N6-C10
1	AA	1519	MA6	C5-C6-N6-C10
3	DA	746	PSU	C2'-C1'-C5-C4
3	DA	1618	6MZ	N1-C6-N6-C9
3	DA	1835	2MG	N1-C2-N2-CM2
3	DA	1835	2MG	N3-C2-N2-CM2
3	DA	2251	OMG	C1'-C2'-O2'-CM2
3	DA	2504	PSU	C3'-C4'-C5'-O5'
3	DA	2504	PSU	O4'-C4'-C5'-O5'
3	DA	2552	OMU	C3'-C2'-O2'-CM2
16	AL	89	D2T	CA-CB-SB-CB1

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Mol	Chain	Res	Type	Atoms
3	DA	745	1MG	O4'-C4'-C5'-O5'
3	DA	2503	2MA	O4'-C4'-C5'-O5'
1	AA	966	2MG	O4'-C4'-C5'-O5'
1	AA	1519	MA6	O4'-C4'-C5'-O5'
3	DA	745	1MG	C3'-C4'-C5'-O5'
3	DA	2498	OMC	O4'-C4'-C5'-O5'
3	DA	2503	2MA	C3'-C4'-C5'-O5'
1	AA	1518	MA6	N1-C6-N6-C10
56	DD	150	MEQ	NE2-CD-CG-CB
56	DD	150	MEQ	OE1-CD-CG-CB
3	DA	1962	5MC	C2'-C1'-N1-C2
3	DA	1835	2MG	O4'-C4'-C5'-O5'
3	DA	1962	5MC	C2'-C1'-N1-C6
3	DA	1835	2MG	C3'-C4'-C5'-O5'
1	AA	1519	MA6	C3'-C4'-C5'-O5'
3	DA	1962	5MC	O4'-C1'-N1-C2
3	DA	2503	2MA	C4'-C5'-O5'-P
1	AA	1207	2MG	O4'-C4'-C5'-O5'
3	DA	747	5MU	C3'-C4'-C5'-O5'
3	DA	1915	3TD	O4'-C4'-C5'-O5'
3	DA	1962	5MC	O4'-C1'-N1-C6
3	DA	2552	OMU	O4'-C4'-C5'-O5'
3	DA	2069	G7M	C4'-C5'-O5'-P
3	DA	1915	3TD	C3'-C4'-C5'-O5'
3	DA	746	PSU	O4'-C1'-C5-C4
3	DA	2457	PSU	O4'-C1'-C5-C4
1	AA	966	2MG	C3'-C4'-C5'-O5'
3	DA	2498	OMC	C3'-C4'-C5'-O5'
3	DA	2498	OMC	C2'-C1'-N1-C2
3	DA	747	5MU	O4'-C4'-C5'-O5'
3	DA	746	PSU	O4'-C1'-C5-C6
16	AL	89	D2T	CG-CB-SB-CB1
1	AA	1402	4OC	O4'-C4'-C5'-O5'
3	DA	2030	6MZ	O4'-C4'-C5'-O5'
3	DA	2069	G7M	O4'-C4'-C5'-O5'
1	AA	1207	2MG	C3'-C4'-C5'-O5'

There are no ring outliers.

29 monomers are involved in 110 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	AA	1407	5MC	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	DA	747	5MU	8	0
56	DD	150	MEQ	3	0
1	AA	1518	MA6	7	0
3	DA	2069	G7M	1	0
3	DA	2251	OMG	3	0
3	DA	1915	3TD	1	0
3	DA	2445	2MG	2	0
16	AL	89	D2T	4	0
3	DA	2552	OMU	6	0
1	AA	967	5MC	2	0
3	DA	1835	2MG	9	0
3	DA	2504	PSU	3	0
3	DA	2503	2MA	4	0
1	AA	1402	4OC	3	0
3	DA	745	1MG	5	0
3	DA	2605	PSU	1	0
1	AA	1207	2MG	2	0
3	DA	2030	6MZ	7	0
3	DA	2498	OMC	8	0
3	DA	1618	6MZ	2	0
3	DA	2449	H2U	1	0
1	AA	1516	2MG	2	0
3	DA	1962	5MC	4	0
1	AA	516	PSU	1	0
1	AA	1519	MA6	12	0
3	DA	955	PSU	2	0
3	DA	1911	PSU	3	0
3	DA	1939	5MU	4	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 516 ligands modelled in this entry, 453 are monoatomic - leaving 63 for Mogul analysis.

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	$\#\|Z\| > 2$
66	PEG	DP	201	-	6,6,6	1.16	0	5,5,5	0.64	0
62	SPD	DA	3070	-	9,9,9	0.44	0	8,8,8	1.07	0
59	PGE	DA	3066	-	9,9,9	1.07	1 (11%)	8,8,8	0.93	0
67	EDO	DB	203	-	3,3,3	0.40	0	2,2,2	0.16	0
67	EDO	D1	101	-	3,3,3	0.38	0	2,2,2	0.15	0
62	SPD	DA	3031	-	9,9,9	0.62	0	8,8,8	0.31	0
67	EDO	DA	3059	-	3,3,3	0.52	0	2,2,2	0.61	0
68	GUN	DA	3078	-	7,12,12	1.58	1 (14%)	8,17,17	1.85	3 (37%)
59	PGE	DT	202	-	9,9,9	1.16	1 (11%)	8,8,8	0.71	0
62	SPD	DA	3036	-	9,9,9	0.48	0	8,8,8	0.53	0
65	ACY	DA	3055	-	3,3,3	1.03	0	3,3,3	1.30	0
67	EDO	DA	3075	-	3,3,3	0.35	0	2,2,2	0.18	0
60	MPD	DA	3043	-	7,7,7	0.58	0	9,10,10	0.70	0
67	EDO	DA	3052	-	3,3,3	0.50	0	2,2,2	0.16	0
59	PGE	DU	101	-	9,9,9	1.09	1 (11%)	8,8,8	0.58	0
60	MPD	DA	3045	-	7,7,7	0.34	0	9,10,10	1.38	2 (22%)
63	PUT	DA	3032	-	5,5,5	0.30	0	4,4,4	0.41	0
63	PUT	DM	201	-	5,5,5	0.35	0	4,4,4	0.51	0
66	PEG	DA	3073	-	6,6,6	1.04	0	5,5,5	0.67	0
60	MPD	DT	201	-	7,7,7	0.55	0	9,10,10	1.02	1 (11%)
61	PG4	DA	3048	-	12,12,12	0.89	0	11,11,11	0.67	0
66	PEG	DA	3061	-	6,6,6	1.08	0	5,5,5	0.32	0
67	EDO	DA	3060	-	3,3,3	0.46	0	2,2,2	0.26	0
63	PUT	DA	3054	-	5,5,5	0.47	0	4,4,4	0.81	0
60	MPD	DA	3071	-	7,7,7	0.65	0	9,10,10	0.46	0
61	PG4	BA	1607	-	12,12,12	0.89	0	11,11,11	0.57	0
60	MPD	DA	3046	-	7,7,7	0.76	0	9,10,10	0.99	1 (11%)
59	PGE	AA	1613	-	9,9,9	1.13	1 (11%)	8,8,8	0.70	0
60	MPD	DE	301	-	7,7,7	0.56	0	9,10,10	0.56	0
66	PEG	DA	3050	-	6,6,6	1.03	0	5,5,5	0.51	0
66	PEG	D3	102	-	6,6,6	0.92	0	5,5,5	0.27	0
66	PEG	DA	3063	-	6,6,6	1.06	0	5,5,5	0.42	0
65	ACY	DA	3044	-	3,3,3	0.87	0	3,3,3	1.23	0
63	PUT	DA	3069	-	5,5,5	0.35	0	4,4,4	0.19	0
65	ACY	DA	3064	-	3,3,3	0.61	0	3,3,3	1.12	0
66	PEG	DA	3062	-	6,6,6	1.17	1 (16%)	5,5,5	0.57	0
60	MPD	DA	3072	-	7,7,7	0.56	0	9,10,10	0.30	0
61	PG4	DS	202	-	12,12,12	0.74	0	11,11,11	0.73	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
61	PG4	DQ	202	-	12,12,12	0.71	0	11,11,11	0.45	0
67	EDO	DA	3076	-	3,3,3	0.53	0	2,2,2	0.06	0
59	PGE	DS	201	-	9,9,9	1.25	1 (11%)	8,8,8	1.03	0
64	1PE	DA	3034	-	15,15,15	0.74	0	14,14,14	1.04	1 (7%)
67	EDO	DR	204	-	3,3,3	0.55	0	2,2,2	0.28	0
60	MPD	AA	1615	-	7,7,7	0.54	0	9,10,10	0.67	0
67	EDO	DA	3057	-	3,3,3	0.43	0	2,2,2	0.11	0
60	MPD	DE	302	-	7,7,7	0.56	0	9,10,10	0.43	0
66	PEG	DQ	201	-	6,6,6	1.01	0	5,5,5	0.26	0
61	PG4	DR	202	-	12,12,12	0.86	0	11,11,11	0.57	0
59	PGE	DA	3035	-	9,9,9	1.32	2 (22%)	8,8,8	1.12	1 (12%)
59	PGE	DD	301	-	9,9,9	1.16	1 (11%)	8,8,8	0.77	0
60	MPD	DK	201	-	7,7,7	0.55	0	9,10,10	0.66	0
63	PUT	DP	202	-	5,5,5	0.36	0	4,4,4	0.16	0
67	EDO	DB	202	-	3,3,3	0.52	0	2,2,2	0.30	0
60	MPD	DA	3067	-	7,7,7	0.65	0	9,10,10	0.67	0
63	PUT	D5	101	-	5,5,5	0.29	0	4,4,4	0.30	0
67	EDO	DA	3058	-	3,3,3	0.52	0	2,2,2	0.10	0
67	EDO	DB	201	-	3,3,3	0.42	0	2,2,2	0.38	0
60	MPD	DN	201	-	7,7,7	0.49	0	9,10,10	0.84	1 (11%)
63	PUT	DA	3037	-	5,5,5	0.32	0	4,4,4	0.81	0
66	PEG	D1	102	-	6,6,6	1.50	1 (16%)	5,5,5	1.35	0
60	MPD	DA	3077	-	7,7,7	0.50	0	9,10,10	1.43	2 (22%)
64	1PE	DA	3065	-	15,15,15	0.86	0	14,14,14	0.88	0
59	PGE	D3	101	-	9,9,9	0.92	0	8,8,8	0.43	0

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
66	PEG	DP	201	-	-	2/4/4/4	-
62	SPD	DA	3070	-	-	3/7/7/7	-
59	PGE	DA	3066	-	-	3/7/7/7	-
67	EDO	DB	203	-	-	0/1/1/1	-
67	EDO	D1	101	-	-	1/1/1/1	-
62	SPD	DA	3031	-	-	6/7/7/7	-
67	EDO	DA	3059	-	-	0/1/1/1	-
68	GUN	DA	3078	-	-	-	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	PGE	DT	202	-	-	3/7/7/7	-
62	SPD	DA	3036	-	-	3/7/7/7	-
67	EDO	DA	3075	-	-	1/1/1/1	-
60	MPD	DA	3043	-	-	2/5/5/5	-
67	EDO	DA	3052	-	-	1/1/1/1	-
59	PGE	DU	101	-	-	4/7/7/7	-
60	MPD	DA	3045	-	-	2/5/5/5	-
63	PUT	DA	3032	-	-	2/3/3/3	-
63	PUT	DM	201	-	-	2/3/3/3	-
66	PEG	DA	3073	-	-	1/4/4/4	-
60	MPD	DT	201	-	-	0/5/5/5	-
61	PG4	DA	3048	-	-	7/10/10/10	-
66	PEG	DA	3061	-	-	3/4/4/4	-
67	EDO	DA	3060	-	-	1/1/1/1	-
63	PUT	DA	3054	-	-	0/3/3/3	-
60	MPD	DA	3071	-	-	2/5/5/5	-
61	PG4	BA	1607	-	-	1/10/10/10	-
60	MPD	DA	3046	-	-	0/5/5/5	-
59	PGE	AA	1613	-	-	5/7/7/7	-
60	MPD	DE	301	-	-	1/5/5/5	-
66	PEG	DA	3050	-	-	1/4/4/4	-
66	PEG	D3	102	-	-	3/4/4/4	-
66	PEG	DA	3063	-	-	3/4/4/4	-
63	PUT	DA	3069	-	-	1/3/3/3	-
66	PEG	DA	3062	-	-	3/4/4/4	-
60	MPD	DA	3072	-	-	0/5/5/5	-
61	PG4	DS	202	-	-	3/10/10/10	-
61	PG4	DQ	202	-	-	5/10/10/10	-
67	EDO	DA	3076	-	-	1/1/1/1	-
59	PGE	DS	201	-	-	2/7/7/7	-
64	1PE	DA	3034	-	-	7/13/13/13	-
67	EDO	DR	204	-	-	1/1/1/1	-
60	MPD	AA	1615	-	-	3/5/5/5	-
67	EDO	DA	3057	-	-	0/1/1/1	-
60	MPD	DE	302	-	-	0/5/5/5	-
66	PEG	DQ	201	-	-	4/4/4/4	-
61	PG4	DR	202	-	-	5/10/10/10	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	PGE	DA	3035	-	-	2/7/7/7	-
59	PGE	DD	301	-	-	1/7/7/7	-
60	MPD	DK	201	-	-	0/5/5/5	-
63	PUT	DP	202	-	-	0/3/3/3	-
67	EDO	DB	202	-	-	1/1/1/1	-
60	MPD	DA	3067	-	-	1/5/5/5	-
63	PUT	D5	101	-	-	1/3/3/3	-
67	EDO	DA	3058	-	-	0/1/1/1	-
67	EDO	DB	201	-	-	1/1/1/1	-
60	MPD	DN	201	-	-	3/5/5/5	-
63	PUT	DA	3037	-	-	1/3/3/3	-
66	PEG	D1	102	-	-	3/4/4/4	-
60	MPD	DA	3077	-	-	2/5/5/5	-
64	1PE	DA	3065	-	-	9/13/13/13	-
59	PGE	D3	101	-	-	4/7/7/7	-

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
68	DA	3078	GUN	C6-N1	-2.67	1.33	1.37
66	D1	102	PEG	C2-C1	2.46	1.62	1.49
59	DA	3035	PGE	C2-C1	2.30	1.61	1.49
59	DA	3066	PGE	C2-C1	2.28	1.61	1.49
59	DT	202	PGE	C2-C1	2.23	1.61	1.49
59	DD	301	PGE	C2-C1	2.18	1.61	1.49
59	AA	1613	PGE	C2-C1	2.18	1.61	1.49
59	DS	201	PGE	C2-C1	2.18	1.61	1.49
59	DU	101	PGE	C2-C1	2.17	1.61	1.49
59	DA	3035	PGE	C4-C3	2.15	1.60	1.49
66	DA	3062	PEG	C2-C1	2.03	1.60	1.49

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	DA	3045	MPD	CM-C2-C1	-3.28	103.74	110.57
68	DA	3078	GUN	C5-C6-N1	3.00	119.25	113.95
64	DA	3034	1PE	OH3-C23-C13	-2.86	97.49	110.39
68	DA	3078	GUN	O6-C6-N1	-2.78	117.37	120.65
68	DA	3078	GUN	C8-N7-C5	2.54	107.83	102.99
60	DA	3077	MPD	CM-C2-C1	-2.42	105.53	110.57
60	DN	201	MPD	CM-C2-C1	-2.22	105.95	110.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	DA	3046	MPD	O2-C2-C1	2.20	115.13	108.08
59	DA	3035	PGE	O3-C5-C6	2.19	119.70	110.07
60	DA	3077	MPD	C5-C4-C3	-2.15	101.57	111.69
60	DA	3045	MPD	O2-C2-CM	2.07	114.73	108.08
60	DT	201	MPD	CM-C2-C1	-2.03	106.35	110.57

There are no chirality outliers.

All (127) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	DA	3067	MPD	C2-C3-C4-O4
60	DA	3077	MPD	C1-C2-C3-C4
60	DA	3077	MPD	O2-C2-C3-C4
60	DE	301	MPD	C2-C3-C4-O4
60	DN	201	MPD	O2-C2-C3-C4
60	DN	201	MPD	CM-C2-C3-C4
64	DA	3034	1PE	C16-C26-OH6-C15
64	DA	3065	1PE	C14-C24-OH4-C13
59	DT	202	PGE	C4-C3-O2-C2
61	DA	3048	PG4	O3-C5-C6-O4
64	DA	3034	1PE	OH4-C13-C23-OH3
64	DA	3065	1PE	OH4-C13-C23-OH3
61	DR	202	PG4	O2-C3-C4-O3
61	DR	202	PG4	O1-C1-C2-O2
62	DA	3031	SPD	C3-C4-C5-N6
59	DU	101	PGE	O2-C3-C4-O3
61	DA	3048	PG4	O2-C3-C4-O3
66	DQ	201	PEG	C1-C2-O2-C3
66	D1	102	PEG	C1-C2-O2-C3
59	AA	1613	PGE	O1-C1-C2-O2
61	DQ	202	PG4	O1-C1-C2-O2
64	DA	3034	1PE	OH2-C12-C22-OH3
64	DA	3034	1PE	OH5-C14-C24-OH4
62	DA	3031	SPD	N6-C7-C8-C9
62	DA	3070	SPD	C3-C4-C5-N6
61	DR	202	PG4	O3-C5-C6-O4
62	DA	3036	SPD	C8-C7-N6-C5
64	DA	3065	1PE	OH5-C14-C24-OH4
59	DA	3035	PGE	O1-C1-C2-O2
59	DA	3066	PGE	O3-C5-C6-O4
66	DA	3061	PEG	O1-C1-C2-O2
66	DA	3062	PEG	O1-C1-C2-O2

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Mol	Chain	Res	Type	Atoms
66	DA	3063	PEG	O1-C1-C2-O2
66	D3	102	PEG	O1-C1-C2-O2
59	DD	301	PGE	O2-C3-C4-O3
66	DA	3073	PEG	O2-C3-C4-O4
62	DA	3036	SPD	C3-C4-C5-N6
63	D5	101	PUT	C1-C2-C3-C4
59	DT	202	PGE	O1-C1-C2-O2
61	DA	3048	PG4	O1-C1-C2-O2
61	DS	202	PG4	O1-C1-C2-O2
67	DA	3075	EDO	O1-C1-C2-O2
67	DB	202	EDO	O1-C1-C2-O2
67	DR	204	EDO	O1-C1-C2-O2
59	DA	3066	PGE	C4-C3-O2-C2
63	DM	201	PUT	C1-C2-C3-C4
64	DA	3065	1PE	OH6-C15-C25-OH5
62	DA	3031	SPD	C2-C3-C4-C5
62	DA	3031	SPD	C7-C8-C9-N10
59	DU	101	PGE	O3-C5-C6-O4
59	DU	101	PGE	O1-C1-C2-O2
59	D3	101	PGE	O1-C1-C2-O2
64	DA	3065	1PE	OH2-C12-C22-OH3
66	DA	3061	PEG	O2-C3-C4-O4
66	DA	3063	PEG	O2-C3-C4-O4
66	D1	102	PEG	O1-C1-C2-O2
59	AA	1613	PGE	O2-C3-C4-O3
62	DA	3070	SPD	C2-C3-C4-C5
59	DA	3066	PGE	O2-C3-C4-O3
61	DQ	202	PG4	O2-C3-C4-O3
61	DS	202	PG4	O2-C3-C4-O3
61	DS	202	PG4	O3-C5-C6-O4
62	DA	3070	SPD	N6-C7-C8-C9
60	AA	1615	MPD	O2-C2-C3-C4
62	DA	3036	SPD	C4-C5-N6-C7
63	DA	3032	PUT	C2-C3-C4-N2
63	DA	3069	PUT	N1-C1-C2-C3
63	DM	201	PUT	C2-C3-C4-N2
59	D3	101	PGE	O3-C5-C6-O4
66	DA	3061	PEG	C4-C3-O2-C2
66	DA	3062	PEG	C4-C3-O2-C2
59	AA	1613	PGE	C3-C4-O3-C5
64	DA	3034	1PE	C14-C24-OH4-C13
64	DA	3065	1PE	C15-C25-OH5-C14

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Mol	Chain	Res	Type	Atoms
66	DA	3063	PEG	C4-C3-O2-C2
66	D3	102	PEG	C4-C3-O2-C2
59	DA	3035	PGE	C3-C4-O3-C5
61	DR	202	PG4	C5-C6-O4-C7
66	D3	102	PEG	C1-C2-O2-C3
62	DA	3031	SPD	C8-C7-N6-C5
61	DA	3048	PG4	C6-C5-O3-C4
60	DA	3043	MPD	C2-C3-C4-C5
60	DA	3045	MPD	C2-C3-C4-C5
61	DQ	202	PG4	O4-C7-C8-O5
64	DA	3034	1PE	C12-C22-OH3-C23
66	DA	3062	PEG	C1-C2-O2-C3
61	DQ	202	PG4	C8-C7-O4-C6
59	AA	1613	PGE	C6-C5-O3-C4
60	DA	3045	MPD	C2-C3-C4-O4
61	DA	3048	PG4	C4-C3-O2-C2
64	DA	3065	1PE	C24-C14-OH5-C25
66	DP	201	PEG	O1-C1-C2-O2
60	DN	201	MPD	C1-C2-C3-C4
64	DA	3065	1PE	C23-C13-OH4-C24
66	DQ	201	PEG	O1-C1-C2-O2
61	DA	3048	PG4	C8-C7-O4-C6
62	DA	3031	SPD	C4-C5-N6-C7
66	D1	102	PEG	C4-C3-O2-C2
59	D3	101	PGE	C3-C4-O3-C5
61	BA	1607	PG4	C4-C3-O2-C2
59	D3	101	PGE	O2-C3-C4-O3
61	DQ	202	PG4	C6-C5-O3-C4
66	DQ	201	PEG	C4-C3-O2-C2
67	D1	101	EDO	O1-C1-C2-O2
61	DR	202	PG4	C4-C3-O2-C2
61	DA	3048	PG4	C5-C6-O4-C7
59	DS	201	PGE	O1-C1-C2-O2
67	DA	3052	EDO	O1-C1-C2-O2
66	DQ	201	PEG	O2-C3-C4-O4
66	DP	201	PEG	C1-C2-O2-C3
63	DA	3032	PUT	N1-C1-C2-C3
67	DA	3060	EDO	O1-C1-C2-O2
67	DA	3076	EDO	O1-C1-C2-O2
60	AA	1615	MPD	C2-C3-C4-C5
60	DA	3071	MPD	C2-C3-C4-C5
64	DA	3065	1PE	C25-C15-OH6-C26

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Mol	Chain	Res	Type	Atoms
64	DA	3034	1PE	C25-C15-OH6-C26
67	DB	201	EDO	O1-C1-C2-O2
59	DT	202	PGE	O2-C3-C4-O3
59	DU	101	PGE	C6-C5-O3-C4
59	AA	1613	PGE	C4-C3-O2-C2
63	DA	3037	PUT	N1-C1-C2-C3
60	AA	1615	MPD	C2-C3-C4-O4
60	DA	3043	MPD	C2-C3-C4-O4
60	DA	3071	MPD	C2-C3-C4-O4
59	DS	201	PGE	O2-C3-C4-O3
66	DA	3050	PEG	O2-C3-C4-O4

There are no ring outliers.

39 monomers are involved in 100 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
66	DP	201	PEG	1	0
59	DA	3066	PGE	2	0
67	DB	203	EDO	1	0
62	DA	3031	SPD	3	0
67	DA	3059	EDO	4	0
68	DA	3078	GUN	2	0
59	DT	202	PGE	2	0
62	DA	3036	SPD	1	0
67	DA	3052	EDO	1	0
60	DA	3045	MPD	1	0
63	DM	201	PUT	1	0
61	DA	3048	PG4	3	0
67	DA	3060	EDO	5	0
63	DA	3054	PUT	4	0
60	DA	3071	MPD	1	0
60	DA	3046	MPD	1	0
60	DE	301	MPD	1	0
66	DA	3050	PEG	2	0
66	D3	102	PEG	2	0
66	DA	3063	PEG	1	0
65	DA	3044	ACY	1	0
63	DA	3069	PUT	2	0
65	DA	3064	ACY	5	0
66	DA	3062	PEG	2	0
60	DA	3072	MPD	2	0
61	DS	202	PG4	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	DQ	202	PG4	3	0
64	DA	3034	1PE	5	0
67	DR	204	EDO	2	0
66	DQ	201	PEG	1	0
61	DR	202	PG4	8	0
63	DP	202	PUT	10	0
60	DA	3067	MPD	4	0
63	D5	101	PUT	2	0
60	DN	201	MPD	1	0
63	DA	3037	PUT	7	0
66	D1	102	PEG	3	0
60	DA	3077	MPD	1	0
64	DA	3065	1PE	2	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AA	1522/1533 (99%)	-0.45	8 (0%) 91 91	40, 89, 181, 376	0
2	BA	1533/1533 (100%)	-0.15	33 (2%) 62 59	52, 116, 235, 316	0
3	DA	2873/2903 (98%)	-0.40	30 (1%) 82 82	13, 44, 165, 340	0
4	CA	2898/2904 (99%)	0.24	97 (3%) 46 41	68, 150, 267, 488	0
5	CB	118/119 (99%)	-0.08	1 (0%) 86 86	112, 187, 233, 258	0
5	DB	119/119 (100%)	-0.62	0 100 100	21, 53, 81, 104	0
6	AB	218/218 (100%)	0.91	36 (16%) 1 1	56, 120, 185, 241	0
6	BB	218/218 (100%)	0.91	44 (20%) 1 0	75, 126, 188, 242	0
7	AC	206/206 (100%)	0.15	2 (0%) 82 82	54, 95, 145, 202	0
7	BC	206/206 (100%)	0.30	8 (3%) 39 35	68, 111, 159, 198	0
8	AD	205/205 (100%)	0.49	17 (8%) 11 8	60, 107, 155, 210	0
8	BD	205/205 (100%)	0.02	1 (0%) 91 91	53, 84, 126, 146	0
9	AE	150/150 (100%)	0.16	3 (2%) 65 63	52, 87, 148, 219	0
9	BE	150/150 (100%)	0.13	5 (3%) 46 41	55, 89, 151, 191	0
10	AF	100/100 (100%)	0.07	2 (2%) 65 63	60, 100, 136, 195	0
10	BF	100/100 (100%)	0.42	8 (8%) 12 9	79, 116, 156, 241	0
11	AG	151/151 (100%)	0.67	18 (11%) 4 3	83, 130, 170, 184	0
11	BG	151/151 (100%)	2.25	70 (46%) 0 0	102, 192, 268, 311	0
12	AH	129/129 (100%)	0.31	8 (6%) 20 16	59, 94, 138, 169	0
12	BH	129/129 (100%)	0.35	6 (4%) 31 28	76, 108, 153, 194	0
13	AI	127/127 (100%)	0.72	11 (8%) 10 7	75, 123, 185, 258	0
13	BI	127/127 (100%)	1.98	50 (39%) 0 0	102, 158, 232, 270	0
14	AJ	98/98 (100%)	0.48	9 (9%) 9 6	60, 102, 135, 146	0
14	BJ	98/98 (100%)	1.85	43 (43%) 0 0	75, 123, 150, 162	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
15	AK	117/117 (100%)	0.75	15 (12%) 3 2	48, 106, 157, 184	0
15	BK	117/117 (100%)	0.34	3 (2%) 56 52	57, 106, 151, 177	0
16	AL	122/123 (99%)	0.13	3 (2%) 57 55	48, 73, 119, 184	0
17	AM	114/114 (100%)	0.48	6 (5%) 26 22	77, 121, 178, 234	0
17	BM	114/114 (100%)	3.83	90 (78%) 0 0	157, 261, 336, 381	0
18	AN	96/100 (96%)	0.61	10 (10%) 6 5	62, 110, 194, 228	0
18	BN	96/100 (96%)	1.83	36 (37%) 0 0	94, 160, 244, 307	0
19	AO	88/88 (100%)	0.13	2 (2%) 60 58	52, 90, 130, 169	0
19	BO	88/88 (100%)	0.31	5 (5%) 23 19	73, 108, 144, 217	0
20	AP	82/82 (100%)	0.90	15 (18%) 1 0	67, 92, 191, 230	0
20	BP	82/82 (100%)	2.23	33 (40%) 0 0	78, 122, 184, 281	0
21	AQ	80/80 (100%)	0.68	7 (8%) 10 7	61, 93, 139, 255	0
21	BQ	80/80 (100%)	2.15	37 (46%) 0 0	81, 138, 200, 249	0
22	AR	55/55 (100%)	0.37	4 (7%) 15 11	69, 98, 148, 204	0
22	BR	55/55 (100%)	-0.22	2 (3%) 42 37	60, 88, 137, 161	0
23	AS	79/79 (100%)	1.35	23 (29%) 0 0	86, 122, 173, 208	0
23	BS	79/79 (100%)	5.42	66 (83%) 0 0	158, 244, 332, 391	0
24	AT	85/85 (100%)	0.66	9 (10%) 6 4	70, 94, 138, 181	0
24	BT	85/85 (100%)	2.26	44 (51%) 0 0	95, 145, 195, 224	0
25	AU	54/54 (100%)	1.02	8 (14%) 2 1	74, 118, 185, 235	0
25	BU	54/54 (100%)	0.32	1 (1%) 66 65	59, 103, 157, 187	0
26	BL	123/123 (100%)	0.40	8 (6%) 18 14	63, 92, 137, 187	0
27	CC	271/271 (100%)	0.58	23 (8%) 10 8	67, 107, 141, 188	0
27	DC	271/271 (100%)	-0.36	0 100 100	24, 55, 84, 115	0
28	CD	209/209 (100%)	2.20	84 (40%) 0 0	86, 143, 237, 384	0
29	CE	201/201 (100%)	2.92	123 (61%) 0 0	92, 220, 455, 650	0
29	DE	201/201 (100%)	-0.37	0 100 100	17, 56, 108, 211	0
30	CF	177/177 (100%)	3.73	125 (70%) 0 0	142, 213, 268, 324	0
30	DF	177/177 (100%)	-0.08	4 (2%) 60 58	43, 73, 121, 163	0
31	CG	176/176 (100%)	3.29	114 (64%) 0 0	131, 203, 310, 435	0
31	DG	176/176 (100%)	-0.11	1 (0%) 89 89	40, 74, 104, 181	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
32	CH	148/148 (100%)	1.49	48 (32%) 0 0	82, 147, 207, 323	0
32	DH	148/148 (100%)	1.47	46 (31%) 0 0	60, 153, 228, 323	0
33	CJ	141/141 (100%)	4.98	120 (85%) 0 0	170, 248, 330, 407	0
33	DJ	141/141 (100%)	4.41	95 (67%) 0 0	137, 217, 299, 345	0
34	CK	142/142 (100%)	1.18	31 (21%) 0 0	86, 140, 201, 269	0
34	DK	142/142 (100%)	-0.59	1 (0%) 87 87	16, 34, 62, 119	0
35	CL	122/123 (99%)	1.86	48 (39%) 0 0	88, 127, 175, 245	0
35	DL	123/123 (100%)	-0.49	0 100 100	26, 47, 78, 135	0
36	CM	143/144 (99%)	3.01	87 (60%) 0 0	99, 187, 295, 413	0
36	DM	144/144 (100%)	-0.38	1 (0%) 87 87	16, 55, 85, 124	0
37	CN	136/136 (100%)	2.03	66 (48%) 0 0	84, 131, 174, 197	0
37	DN	136/136 (100%)	-0.59	0 100 100	19, 42, 73, 126	0
38	CO	120/120 (100%)	1.90	50 (41%) 0 0	101, 155, 266, 459	0
38	DO	120/120 (100%)	-0.49	0 100 100	16, 37, 58, 172	0
39	CP	116/117 (99%)	2.96	77 (66%) 0 0	141, 186, 251, 276	0
39	DP	117/117 (100%)	-0.24	0 100 100	34, 57, 94, 117	0
40	CQ	114/114 (100%)	1.82	42 (36%) 0 0	94, 148, 198, 298	0
40	DQ	114/114 (100%)	-0.42	0 100 100	33, 56, 97, 126	0
41	CR	117/117 (100%)	2.02	51 (43%) 0 0	102, 148, 210, 243	0
41	DR	117/117 (100%)	-0.66	0 100 100	8, 29, 56, 116	0
42	CS	103/103 (100%)	3.30	64 (62%) 0 0	104, 176, 281, 363	0
42	DS	103/103 (100%)	-0.63	0 100 100	14, 40, 78, 150	0
43	CT	110/110 (100%)	2.50	55 (50%) 0 0	99, 165, 276, 367	0
43	DT	110/110 (100%)	-0.56	0 100 100	11, 33, 63, 104	0
44	CU	93/93 (100%)	4.03	73 (78%) 0 0	130, 230, 437, 563	0
44	DU	92/93 (98%)	0.01	2 (2%) 62 59	26, 60, 116, 158	0
45	CV	102/102 (100%)	6.48	85 (83%) 0 0	141, 375, 591, 635	0
45	DV	102/102 (100%)	-0.38	2 (1%) 65 63	32, 59, 96, 202	0
46	CW	94/94 (100%)	1.64	35 (37%) 0 0	128, 172, 231, 275	0
46	DW	94/94 (100%)	-0.28	1 (1%) 80 80	24, 49, 86, 108	0
47	CX	75/76 (98%)	2.79	46 (61%) 0 0	94, 149, 187, 210	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
47	DX	76/76 (100%)	-0.44	1 (1%) 77 77	21, 43, 67, 110	0
48	CY	77/77 (100%)	2.08	31 (40%) 0 0	90, 137, 205, 223	0
48	DY	77/77 (100%)	-0.20	0 100 100	29, 62, 98, 128	0
49	CZ	62/62 (100%)	2.55	32 (51%) 0 0	130, 327, 506, 577	0
49	DZ	62/62 (100%)	0.04	1 (1%) 72 71	46, 72, 114, 228	0
50	C0	58/58 (100%)	1.53	19 (32%) 0 0	109, 144, 193, 216	0
50	D0	58/58 (100%)	-0.50	0 100 100	19, 34, 64, 121	0
51	C1	56/56 (100%)	1.81	21 (37%) 0 0	103, 175, 307, 370	0
51	D1	56/56 (100%)	-0.63	0 100 100	9, 39, 67, 147	0
52	C2	50/51 (98%)	2.70	29 (58%) 0 0	129, 173, 229, 244	0
52	D2	51/51 (100%)	-0.10	0 100 100	47, 64, 98, 145	0
53	C3	46/46 (100%)	1.89	20 (43%) 0 0	101, 130, 206, 237	0
53	D3	46/46 (100%)	-0.32	1 (2%) 62 59	27, 44, 67, 231	0
54	C4	64/64 (100%)	2.14	27 (42%) 0 0	103, 139, 181, 213	0
54	D4	64/64 (100%)	-0.37	0 100 100	27, 42, 58, 70	0
55	C5	44/45 (97%)	3.07	26 (59%) 0 0	102, 147, 198, 254	0
55	D5	45/45 (100%)	-0.38	0 100 100	28, 52, 77, 103	0
56	DD	208/209 (99%)	-0.49	0 100 100	14, 41, 71, 152	0
57	D7	68/68 (100%)	0.39	6 (8%) 10 7	58, 116, 185, 264	0
All	All	20582/20647 (99%)	0.53	2751 (13%) 3 2	8, 107, 246, 650	0

All (2751) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
33	DJ	52	LEU	37.8
23	BS	39	THR	31.4
33	DJ	1	ALA	24.3
23	BS	74	PHE	23.8
33	DJ	113	ALA	22.8
45	CV	35	VAL	21.8
45	CV	77	GLY	19.9
45	CV	38	ILE	19.6
45	CV	50	ALA	18.9
33	DJ	10	LEU	18.7
45	CV	11	ILE	18.2

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Mol	Chain	Res	Type	RSRZ
33	DJ	40	ALA	18.0
45	CV	79	ALA	17.7
33	CJ	2	LYS	17.5
28	CD	10	GLY	17.5
45	CV	49	PRO	17.1
45	CV	12	VAL	16.6
4	CA	1175	A	16.2
30	CF	131	VAL	16.2
33	DJ	11	GLN	16.0
33	DJ	51	GLY	15.8
33	CJ	47	SER	15.8
33	CJ	69	VAL	15.7
42	CS	96	VAL	15.6
23	BS	69	HIS	15.4
33	CJ	6	ALA	15.2
45	CV	24	VAL	15.1
45	CV	19	GLY	14.7
36	CM	144	GLU	14.3
45	CV	28	LEU	14.0
33	DJ	4	VAL	14.0
33	DJ	13	ALA	13.9
42	CS	50	GLY	13.8
33	DJ	2	LYS	13.8
33	CJ	66	PHE	13.5
45	CV	78	LYS	13.4
33	CJ	58	ILE	13.4
33	DJ	66	PHE	13.1
45	CV	54	PRO	13.1
52	C2	35	LEU	13.0
29	CE	42	GLY	13.0
31	CG	102	ILE	12.9
23	BS	68	GLY	12.9
36	CM	89	VAL	12.8
29	CE	180	LEU	12.8
28	CD	25	THR	12.7
33	CJ	67	THR	12.7
23	BS	31	LEU	12.6
23	BS	41	PHE	12.4
44	CU	43	ILE	12.3
33	CJ	63	ASP	12.3
44	CU	8	LEU	12.1
39	CP	51	ALA	12.1

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Mol	Chain	Res	Type	RSRZ
17	BM	85	CYS	11.9
45	CV	29	SER	11.6
23	BS	49	ILE	11.5
45	CV	36	GLU	11.5
31	CG	83	THR	11.4
29	CE	128	ALA	11.4
45	CV	61	GLU	11.4
33	DJ	67	THR	11.3
28	CD	6	GLY	11.2
45	CV	76	THR	11.2
33	CJ	46	ASP	11.0
11	BG	62	PHE	11.0
47	CX	61	ALA	10.9
23	BS	71	LEU	10.8
45	CV	40	LEU	10.8
45	CV	34	ILE	10.8
45	CV	32	LYS	10.7
45	CV	37	GLY	10.7
30	CF	151	LEU	10.6
29	CE	131	THR	10.5
36	CM	114	GLY	10.5
42	CS	27	ILE	10.5
13	BI	39	PHE	10.4
49	DZ	63	ALA	10.4
31	CG	104	LEU	10.4
11	BG	16	PRO	10.4
23	BS	51	VAL	10.3
33	DJ	77	VAL	10.3
30	CF	30	VAL	10.2
36	CM	92	LEU	10.2
30	CF	127	TYR	10.1
30	CF	9	ASP	10.1
17	BM	40	ALA	10.1
33	CJ	31	GLY	10.1
47	CX	36	VAL	10.0
45	CV	27	VAL	10.0
42	CS	20	VAL	10.0
33	CJ	5	GLN	9.9
45	CV	82	VAL	9.9
33	CJ	7	TYR	9.8
17	BM	65	VAL	9.8
30	CF	129	MET	9.7

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Mol	Chain	Res	Type	RSRZ
29	CE	43	THR	9.7
55	C5	17	CYS	9.6
11	BG	87	VAL	9.6
45	CV	4	ILE	9.6
48	CY	48	LEU	9.5
51	C1	26	SER	9.4
44	CU	50	LEU	9.3
31	CG	1	SER	9.3
20	BP	81	ALA	9.3
33	CJ	4	VAL	9.3
30	CF	130	GLY	9.3
35	CL	68	GLY	9.3
33	CJ	61	TYR	9.3
33	CJ	68	PHE	9.2
17	BM	63	PHE	9.2
33	CJ	56	VAL	9.2
43	CT	40	ASN	9.1
29	CE	104	ALA	9.1
23	BS	4	SER	9.1
30	CF	128	SER	9.0
52	C2	46	VAL	9.0
33	DJ	78	LEU	8.9
45	CV	39	ASN	8.9
17	BM	86	TYR	8.9
43	CT	93	ALA	8.8
33	DJ	3	LYS	8.8
43	CT	103	ILE	8.8
43	CT	97	LEU	8.7
33	DJ	57	VAL	8.7
45	CV	87	GLU	8.7
23	BS	50	ALA	8.7
30	CF	116	LEU	8.7
29	CE	129	PRO	8.7
44	CU	55	VAL	8.7
42	CS	87	GLN	8.7
20	BP	39	PHE	8.6
33	DJ	7	TYR	8.6
33	CJ	3	LYS	8.6
44	CU	87	LEU	8.5
45	CV	74	ALA	8.5
30	CF	31	GLU	8.5
45	CV	88	ASP	8.5

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Mol	Chain	Res	Type	RSRZ
40	CQ	109	ILE	8.5
55	C5	10	ALA	8.5
30	CF	150	GLY	8.5
35	CL	15	GLY	8.4
14	BJ	74	VAL	8.4
20	BP	80	LYS	8.4
44	CU	62	VAL	8.4
45	CV	18	LYS	8.4
31	CG	105	SER	8.4
45	CV	56	GLY	8.3
44	CU	1	MET	8.3
44	CU	47	VAL	8.3
28	CD	186	LEU	8.3
45	CV	75	ALA	8.3
23	BS	76	PRO	8.3
33	CJ	19	PRO	8.3
28	CD	60	VAL	8.3
29	CE	143	LEU	8.2
29	CE	103	GLY	8.2
45	CV	86	PHE	8.1
33	CJ	52	LEU	8.1
33	DJ	114	ALA	8.1
40	CQ	83	ILE	8.1
42	CS	7	SER	8.1
45	CV	20	LYS	8.1
30	CF	53	ALA	8.1
38	CO	111	ALA	8.1
49	CZ	8	GLU	8.1
27	CC	26	GLY	8.1
39	CP	50	ALA	8.0
49	CZ	63	ALA	8.0
17	BM	73	ILE	8.0
31	CG	42	VAL	7.9
43	CT	85	ILE	7.9
33	CJ	97	VAL	7.9
45	CV	48	VAL	7.9
36	CM	142	ILE	7.9
23	BS	38	SER	7.8
33	CJ	12	VAL	7.8
40	CQ	114	ASN	7.8
29	CE	14	VAL	7.8
33	DJ	98	GLY	7.8

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Mol	Chain	Res	Type	RSRZ
30	CF	163	GLU	7.8
28	CD	77	ARG	7.8
23	BS	77	THR	7.8
40	CQ	29	VAL	7.7
37	CN	129	THR	7.7
29	CE	172	ALA	7.7
33	CJ	59	THR	7.7
44	CU	83	ALA	7.7
29	CE	190	ALA	7.7
54	C4	21	PHE	7.7
28	CD	203	VAL	7.6
33	CJ	62	ALA	7.6
42	CS	75	VAL	7.6
17	BM	64	VAL	7.6
44	CU	33	LYS	7.6
33	CJ	33	ASN	7.6
36	CM	106	GLU	7.5
33	DJ	12	VAL	7.5
31	CG	130	ILE	7.5
35	CL	60	ALA	7.5
30	CF	34	THR	7.5
30	CF	155	ILE	7.5
13	BI	41	ARG	7.5
17	BM	99	GLY	7.5
33	CJ	11	GLN	7.5
31	CG	5	LYS	7.5
45	CV	31	GLY	7.5
18	BN	51	LEU	7.5
44	CU	34	VAL	7.4
33	DJ	38	CYS	7.4
23	AS	39	THR	7.4
30	CF	84	ILE	7.4
28	CD	26	VAL	7.4
42	CS	32	THR	7.4
30	CF	55	ASP	7.4
33	CJ	65	SER	7.3
44	CU	36	LYS	7.3
17	BM	51	GLY	7.3
44	CU	57	VAL	7.3
17	BM	76	SER	7.3
17	BM	115	PRO	7.3
21	BQ	83	VAL	7.2

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Mol	Chain	Res	Type	RSRZ
31	CG	39	ALA	7.2
17	BM	84	GLY	7.2
33	CJ	60	VAL	7.2
44	CU	45	ALA	7.2
39	CP	106	LEU	7.2
38	CO	63	ARG	7.2
36	CM	79	LEU	7.2
33	CJ	23	VAL	7.2
29	CE	173	THR	7.2
14	BJ	76	ILE	7.1
17	BM	39	ILE	7.1
13	BI	130	ARG	7.1
45	CV	30	SER	7.1
42	CS	35	PHE	7.1
18	AN	20	PHE	7.1
20	BP	52	LEU	7.1
31	CG	147	LEU	7.1
28	CD	8	LYS	7.1
17	BM	23	TYR	7.1
23	BS	58	VAL	7.1
39	CP	27	VAL	7.1
44	CU	41	ALA	7.1
42	CS	29	THR	7.1
39	CP	117	PHE	7.1
30	CF	35	LEU	7.0
34	CK	142	ILE	7.0
23	BS	60	VAL	7.0
23	BS	43	ASN	7.0
33	CJ	16	MET	7.0
17	BM	43	VAL	7.0
24	BT	4	ILE	7.0
33	CJ	57	VAL	6.9
41	CR	38	VAL	6.9
33	DJ	75	ALA	6.9
45	CV	100	GLU	6.9
47	CX	16	ALA	6.9
42	CS	26	ASP	6.9
31	CG	101	VAL	6.9
42	CS	49	ILE	6.9
45	CV	2	ALA	6.9
20	AP	80	LYS	6.9
23	BS	37	ARG	6.9

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Mol	Chain	Res	Type	RSRZ
28	CD	1	MET	6.9
31	CG	20	GLY	6.9
30	CF	117	SER	6.9
31	CG	51	PHE	6.9
23	BS	13	LEU	6.8
36	CM	83	ALA	6.8
28	CD	9	VAL	6.8
33	CJ	51	GLY	6.8
49	CZ	14	LEU	6.8
31	CG	55	ASP	6.8
33	CJ	1	ALA	6.8
33	CJ	120	ASP	6.8
23	BS	5	LEU	6.8
36	CM	108	ALA	6.8
44	CU	80	TRP	6.8
49	CZ	22	LEU	6.8
33	CJ	45	THR	6.8
11	BG	76	LYS	6.8
57	D7	18	SER	6.8
2	BA	211	G	6.8
33	DJ	33	ASN	6.8
43	CT	94	ASP	6.8
4	CA	1535	A	6.7
23	BS	29	LYS	6.7
4	CA	1537	G	6.7
23	BS	40	ILE	6.7
33	CJ	125	THR	6.7
33	CJ	20	SER	6.7
36	CM	121	THR	6.7
45	CV	8	ASP	6.7
23	AS	49	ILE	6.7
30	CF	105	ILE	6.7
36	CM	101	ILE	6.7
31	CG	8	VAL	6.7
49	CZ	11	VAL	6.7
30	CF	173	ASP	6.6
33	CJ	119	ALA	6.6
31	CG	86	LEU	6.6
32	CH	12	LEU	6.6
33	CJ	82	ALA	6.6
17	BM	69	LEU	6.6
39	CP	97	PHE	6.6

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Mol	Chain	Res	Type	RSRZ
36	CM	15	ALA	6.6
44	CU	10	VAL	6.6
31	CG	85	LYS	6.6
43	CT	5	ALA	6.5
30	CF	22	ASN	6.5
37	CN	124	LEU	6.5
30	CF	118	ALA	6.5
43	CT	34	ASP	6.5
17	BM	38	GLY	6.5
42	CS	63	VAL	6.5
44	CU	31	VAL	6.5
45	CV	72	PHE	6.5
31	CG	115	GLN	6.5
45	CV	94	PHE	6.5
13	BI	22	LYS	6.5
30	CF	10	GLU	6.5
20	AP	81	ALA	6.5
29	CE	120	VAL	6.5
6	AB	67	ILE	6.4
47	CX	24	PHE	6.4
13	BI	51	PRO	6.4
23	BS	66	MET	6.4
13	AI	130	ARG	6.4
44	CU	58	VAL	6.4
33	DJ	95	ASP	6.4
30	CF	64	PRO	6.4
30	CF	154	THR	6.4
43	CT	105	VAL	6.4
30	CF	174	PHE	6.4
31	CG	10	VAL	6.3
13	BI	40	GLY	6.3
43	CT	26	GLY	6.3
36	CM	4	ASN	6.3
17	BM	81	MET	6.3
37	CN	99	GLY	6.3
39	CP	40	ILE	6.3
55	C5	1	MET	6.3
30	CF	169	LEU	6.3
33	CJ	95	ASP	6.3
29	CE	177	PRO	6.3
33	DJ	22	PRO	6.3
38	CO	62	ASN	6.3

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Mol	Chain	Res	Type	RSRZ
31	CG	61	TRP	6.3
23	BS	75	ALA	6.3
42	CS	103	ALA	6.3
43	CT	32	ALA	6.2
6	AB	18	HIS	6.2
45	CV	25	LYS	6.2
21	BQ	78	VAL	6.2
38	CO	24	MET	6.2
30	CF	54	ALA	6.2
17	BM	47	GLU	6.2
33	DJ	58	ILE	6.2
45	CV	21	ARG	6.2
20	BP	20	VAL	6.2
21	BQ	59	VAL	6.2
2	BA	209	U	6.2
13	BI	48	VAL	6.2
23	BS	33	THR	6.2
33	CJ	42	ASN	6.2
41	CR	80	ASN	6.2
23	BS	11	ILE	6.2
13	BI	32	GLN	6.2
13	BI	61	LEU	6.2
52	C2	52	LYS	6.1
4	CA	1536	C	6.1
29	CE	183	PHE	6.1
45	CV	51	LEU	6.1
23	BS	30	PRO	6.1
46	CW	23	ALA	6.1
31	CG	9	VAL	6.1
17	BM	96	PRO	6.1
44	CU	59	ASN	6.1
45	CV	10	VAL	6.1
44	CU	42	GLU	6.1
17	BM	109	ARG	6.1
33	DJ	27	LEU	6.1
41	CR	105	PHE	6.1
29	CE	147	LEU	6.1
17	BM	95	LEU	6.0
41	CR	28	SER	6.0
36	CM	70	LYS	6.0
33	CJ	48	ILE	6.0
29	CE	124	PHE	6.0

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Mol	Chain	Res	Type	RSRZ
13	BI	4	ASN	6.0
30	CF	93	GLU	6.0
55	C5	13	ARG	6.0
33	CJ	13	ALA	6.0
21	AQ	5	ILE	6.0
36	CM	102	GLY	6.0
13	BI	16	ALA	6.0
39	CP	64	TYR	6.0
45	CV	85	ARG	6.0
36	CM	5	THR	6.0
39	CP	78	VAL	6.0
39	CP	56	LYS	6.0
29	CE	13	THR	6.0
11	BG	116	MET	6.0
44	CU	78	SER	5.9
21	BQ	17	MET	5.9
13	AI	43	THR	5.9
28	CD	201	LEU	5.9
31	CG	82	PHE	5.9
39	CP	7	ARG	5.9
31	CG	46	ASP	5.9
28	CD	180	VAL	5.9
29	CE	126	VAL	5.9
30	CF	33	ILE	5.9
4	CA	138	U	5.9
31	CG	168	VAL	5.9
53	C3	42	LEU	5.9
42	CS	101	ILE	5.9
21	BQ	8	LEU	5.9
33	DJ	46	ASP	5.9
17	BM	55	THR	5.9
33	CJ	22	PRO	5.9
30	CF	96	TRP	5.8
29	CE	119	ILE	5.8
55	C5	18	GLN	5.8
42	CS	88	GLY	5.8
23	BS	15	LEU	5.8
18	BN	1	ALA	5.8
29	CE	4	VAL	5.8
28	CD	90	PHE	5.8
41	CR	89	ILE	5.8
52	C2	51	ALA	5.8

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Mol	Chain	Res	Type	RSRZ
48	CY	75	GLU	5.8
20	BP	60	TRP	5.8
54	C4	14	LYS	5.8
43	CT	66	ILE	5.8
47	CX	35	ILE	5.8
31	CG	75	VAL	5.8
29	CE	40	ARG	5.8
3	DA	2132	U	5.8
39	CP	14	ALA	5.8
42	CS	24	LYS	5.8
31	CG	32	LEU	5.8
6	BB	130	THR	5.7
33	CJ	138	VAL	5.7
23	AS	50	ALA	5.7
29	CE	75	SER	5.7
36	CM	67	THR	5.7
44	CU	60	THR	5.7
23	BS	18	LYS	5.7
30	CF	172	PHE	5.7
50	C0	47	ILE	5.7
31	CG	21	GLN	5.7
28	CD	2	ILE	5.7
44	CU	30	ILE	5.7
49	CZ	44	LYS	5.7
30	CF	121	PHE	5.7
33	CJ	81	LYS	5.7
33	DJ	32	VAL	5.7
37	CN	33	LEU	5.7
33	CJ	35	MET	5.7
47	CX	59	ALA	5.7
23	BS	67	VAL	5.7
37	CN	41	LEU	5.7
23	BS	3	ARG	5.7
17	BM	5	ALA	5.7
41	CR	43	GLN	5.7
29	CE	121	VAL	5.7
45	CV	52	ASN	5.6
47	CX	23	ARG	5.6
33	CJ	85	ILE	5.6
45	CV	42	LYS	5.6
50	C0	55	LYS	5.6
30	CF	171	ALA	5.6

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Mol	Chain	Res	Type	RSRZ
29	CE	186	VAL	5.6
29	CE	200	LEU	5.6
37	CN	116	ALA	5.6
23	AS	3	ARG	5.6
32	CH	129	VAL	5.6
55	C5	39	VAL	5.6
30	CF	119	LYS	5.6
30	CF	160	LYS	5.6
11	BG	17	LYS	5.6
24	BT	67	ILE	5.6
42	CS	36	ALA	5.6
30	CF	11	VAL	5.6
43	CT	20	VAL	5.6
30	CF	92	GLY	5.6
14	BJ	8	ILE	5.6
11	BG	66	LEU	5.6
33	CJ	24	GLY	5.6
11	AG	5	ARG	5.6
31	CG	49	LEU	5.6
36	CM	73	ILE	5.6
31	CG	67	ALA	5.5
32	DH	141	VAL	5.5
11	BG	59	LEU	5.5
33	CJ	84	GLY	5.5
57	D7	58	THR	5.5
28	CD	198	GLY	5.5
14	AJ	102	LEU	5.5
36	CM	3	LEU	5.5
52	C2	22	THR	5.5
50	C0	1	ALA	5.5
29	CE	157	LEU	5.5
38	CO	83	LEU	5.5
13	BI	129	LYS	5.5
30	CF	109	ARG	5.5
36	CM	90	VAL	5.5
38	CO	52	ILE	5.5
33	CJ	70	THR	5.5
24	BT	72	ALA	5.5
33	CJ	21	PRO	5.5
38	CO	39	PRO	5.5
45	CV	97	SER	5.5
36	CM	74	THR	5.5

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Mol	Chain	Res	Type	RSRZ
45	CV	98	ASN	5.5
47	CX	34	ILE	5.5
30	CF	158	THR	5.5
23	BS	64	ASP	5.5
42	CS	52	PRO	5.5
38	CO	72	ASP	5.5
38	CO	28	LEU	5.4
33	CJ	55	PRO	5.4
29	CE	193	VAL	5.4
33	CJ	10	LEU	5.4
18	BN	47	LYS	5.4
24	BT	46	ALA	5.4
30	CF	12	VAL	5.4
35	CL	69	VAL	5.4
47	CX	57	LEU	5.4
30	CF	156	THR	5.4
30	CF	113	PHE	5.4
30	CF	146	ASP	5.4
31	CG	166	GLU	5.4
51	C1	41	HIS	5.4
54	C4	13	PHE	5.4
41	CR	36	GLN	5.4
36	CM	107	PHE	5.4
26	BL	124	ALA	5.4
3	DA	2115	G	5.4
44	CU	64	LYS	5.4
21	BQ	61	ILE	5.4
33	DJ	68	PHE	5.4
32	DH	77	THR	5.4
30	CF	85	GLY	5.3
34	CK	118	MET	5.3
33	CJ	34	ILE	5.3
49	CZ	15	ASN	5.3
30	CF	175	PRO	5.3
11	BG	41	SER	5.3
23	BS	56	GLN	5.3
39	CP	2	ASP	5.3
17	BM	75	MET	5.3
11	BG	120	LEU	5.3
11	BG	18	PHE	5.3
44	CU	2	ILE	5.3
1	AA	1030	U	5.3

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Mol	Chain	Res	Type	RSRZ
24	BT	66	LEU	5.3
40	CQ	108	ARG	5.3
38	CO	101	GLY	5.3
33	CJ	41	PHE	5.3
54	C4	48	MET	5.3
33	DJ	53	PRO	5.3
20	BP	47	GLU	5.3
17	BM	25	VAL	5.3
39	CP	73	ALA	5.3
51	C1	5	ASN	5.3
33	DJ	72	THR	5.3
44	CU	15	HIS	5.3
29	CE	191	ASP	5.3
57	D7	59	GLY	5.3
23	BS	70	LYS	5.2
30	CF	115	GLY	5.2
33	CJ	78	LEU	5.2
45	CV	13	LEU	5.2
54	C4	60	CYS	5.2
18	BN	58	SER	5.2
40	CQ	26	GLU	5.2
35	CL	22	ILE	5.2
31	CG	160	GLY	5.2
32	CH	15	LEU	5.2
13	BI	38	TYR	5.2
24	BT	68	HIS	5.2
51	C1	1	ALA	5.2
49	CZ	41	HIS	5.2
54	C4	61	LEU	5.2
23	BS	10	PHE	5.2
39	CP	60	GLU	5.2
44	CU	35	ALA	5.2
29	CE	17	THR	5.2
30	CF	8	LYS	5.2
28	CD	192	ALA	5.2
29	CE	164	LEU	5.1
31	CG	89	VAL	5.1
55	C5	38	ALA	5.1
31	CG	120	ILE	5.1
28	CD	197	THR	5.1
36	CM	127	VAL	5.1
41	CR	29	ARG	5.1

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Mol	Chain	Res	Type	RSRZ
33	DJ	118	GLY	5.1
21	BQ	21	ILE	5.1
40	CQ	84	SER	5.1
33	CJ	14	ALA	5.1
36	CM	85	VAL	5.1
55	C5	15	PRO	5.1
23	BS	44	MET	5.1
13	BI	68	LYS	5.1
4	CA	139	U	5.1
37	CN	32	GLY	5.1
28	CD	74	GLU	5.1
44	CU	51	PHE	5.1
11	BG	39	ALA	5.1
32	CH	35	LYS	5.1
18	BN	60	GLN	5.1
39	CP	4	LYS	5.0
11	BG	73	VAL	5.0
13	BI	7	TYR	5.0
29	CE	122	GLU	5.0
52	C2	47	ILE	5.0
31	CG	159	LYS	5.0
39	CP	88	LYS	5.0
2	BA	1534	A	5.0
48	CY	39	VAL	5.0
20	BP	57	ILE	5.0
31	CG	50	THR	5.0
36	CM	82	LEU	5.0
33	DJ	8	VAL	5.0
48	CY	19	HIS	5.0
32	CH	135	SER	5.0
6	AB	135	LEU	5.0
30	CF	170	ALA	5.0
35	CL	35	VAL	5.0
53	C3	1	MET	5.0
44	CU	65	GLY	5.0
47	CX	50	GLY	5.0
17	BM	37	ALA	5.0
29	CE	11	ALA	5.0
13	AI	63	LEU	5.0
30	CF	7	TYR	5.0
54	C4	42	HIS	5.0
31	CG	171	LYS	5.0

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Mol	Chain	Res	Type	RSRZ
48	CY	33	HIS	4.9
28	CD	185	ASN	4.9
29	CE	48	THR	4.9
2	BA	94	G	4.9
17	BM	91	HIS	4.9
11	BG	88	PRO	4.9
18	BN	23	ARG	4.9
33	CJ	77	VAL	4.9
42	CS	51	VAL	4.9
33	DJ	70	THR	4.9
49	CZ	24	GLU	4.9
18	BN	95	GLY	4.9
11	BG	43	VAL	4.9
24	BT	34	LYS	4.9
30	CF	32	LYS	4.9
32	CH	136	GLU	4.9
4	CA	846	U	4.9
17	BM	80	LEU	4.9
17	BM	29	ARG	4.9
45	CV	59	GLU	4.9
17	BM	77	ILE	4.9
30	CF	104	THR	4.9
57	D7	20	ASP	4.9
31	CG	79	THR	4.9
28	CD	5	VAL	4.9
30	CF	3	LEU	4.9
54	C4	46	LYS	4.9
42	CS	28	ALA	4.9
36	CM	129	LYS	4.9
3	DA	138	U	4.9
24	BT	3	ASN	4.9
33	DJ	65	SER	4.9
29	CE	144	GLU	4.8
33	DJ	35	MET	4.9
38	CO	20	MET	4.9
29	CE	150	THR	4.8
33	CJ	53	PRO	4.8
29	CE	32	VAL	4.8
20	BP	17	TYR	4.8
35	CL	83	ALA	4.8
36	CM	125	LEU	4.8
39	CP	26	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
33	CJ	44	LYS	4.8
33	DJ	39	LYS	4.8
21	BQ	70	THR	4.8
48	CY	7	THR	4.8
25	AU	4	ILE	4.8
31	CG	156	TYR	4.8
29	CE	199	MET	4.8
31	CG	129	GLU	4.8
42	CS	58	VAL	4.8
23	BS	12	ASP	4.8
31	CG	4	ALA	4.8
38	CO	77	ALA	4.8
48	CY	72	ALA	4.8
55	C5	11	LYS	4.8
55	C5	37	LYS	4.8
42	CS	6	GLN	4.8
33	CJ	88	GLY	4.8
44	CU	44	LYS	4.8
41	CR	33	VAL	4.8
29	CE	127	GLU	4.8
55	C5	36	PHE	4.7
44	CU	49	LYS	4.7
49	CZ	54	LYS	4.7
50	C0	7	THR	4.7
28	CD	3	GLY	4.7
34	CK	119	PHE	4.7
16	AL	124	ALA	4.7
30	CF	120	SER	4.7
33	CJ	32	VAL	4.7
24	BT	42	GLY	4.7
20	BP	54	LEU	4.7
53	C3	32	ALA	4.7
31	CG	167	VAL	4.7
30	CF	164	GLU	4.7
31	CG	111	PRO	4.7
15	BK	129	VAL	4.7
30	CF	26	GLN	4.7
33	CJ	132	ALA	4.7
47	CX	66	LYS	4.7
33	DJ	73	PRO	4.7
30	CF	132	ARG	4.7
55	C5	12	GLU	4.7

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Mol	Chain	Res	Type	RSRZ
31	CG	112	VAL	4.7
45	CV	43	LYS	4.7
31	CG	64	ALA	4.7
28	CD	200	ASP	4.7
31	CG	106	LEU	4.7
33	DJ	111	THR	4.7
4	CA	1174	U	4.7
17	BM	48	LEU	4.6
23	BS	80	TYR	4.6
20	AP	82	ALA	4.6
28	CD	75	ALA	4.6
44	CU	71	GLY	4.6
45	CV	6	ARG	4.6
43	CT	49	LYS	4.6
28	CD	189	VAL	4.6
20	BP	56	ARG	4.6
24	BT	47	ALA	4.6
35	CL	39	ILE	4.6
36	CM	75	ALA	4.6
37	CN	36	VAL	4.6
24	BT	87	ALA	4.6
42	CS	74	ILE	4.6
17	BM	108	THR	4.6
42	CS	99	THR	4.6
4	CA	290	U	4.6
23	BS	32	ARG	4.6
47	CX	60	LYS	4.6
31	CG	81	GLY	4.6
17	BM	20	THR	4.6
11	BG	64	VAL	4.6
29	CE	41	GLN	4.6
29	CE	165	HIS	4.6
45	CV	83	GLY	4.6
43	CT	95	ARG	4.6
33	CJ	111	THR	4.6
46	CW	69	GLU	4.6
29	CE	20	GLY	4.6
39	CP	28	VAL	4.6
33	CJ	128	ILE	4.6
44	CU	74	ILE	4.6
49	CZ	40	SER	4.6
14	BJ	38	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
40	CQ	73	PHE	4.6
49	CZ	36	GLN	4.6
30	CF	38	GLY	4.6
49	CZ	29	ARG	4.5
42	CS	48	LYS	4.5
55	C5	27	TYR	4.5
7	BC	29	PHE	4.5
6	BB	67	ILE	4.5
23	BS	48	THR	4.5
43	CT	43	ALA	4.5
45	CV	5	ARG	4.5
36	CM	100	ILE	4.5
41	CR	1	ALA	4.5
2	BA	1032	G	4.5
35	CL	38	ILE	4.5
14	BJ	94	ALA	4.5
17	BM	21	SER	4.5
32	CH	131	PHE	4.5
11	BG	85	TYR	4.5
17	BM	114	LYS	4.5
18	BN	15	LEU	4.5
30	CF	39	VAL	4.5
42	CS	25	LEU	4.5
43	CT	4	ILE	4.5
38	CO	70	THR	4.5
13	BI	128	SER	4.5
36	CM	25	SER	4.5
33	DJ	100	ILE	4.5
41	CR	37	ALA	4.5
48	CY	2	ARG	4.5
35	CL	101	GLY	4.5
29	CE	118	LEU	4.5
29	CE	21	ARG	4.5
53	C3	33	ARG	4.5
33	DJ	25	PRO	4.5
31	CG	74	MET	4.5
35	CL	37	ASP	4.5
15	AK	19	GLY	4.5
33	CJ	98	GLY	4.5
51	C1	22	THR	4.5
39	CP	3	LYS	4.5
6	BB	161	LEU	4.5

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Mol	Chain	Res	Type	RSRZ
35	CL	67	LYS	4.5
40	CQ	113	LEU	4.5
29	CE	169	VAL	4.5
13	AI	21	ILE	4.4
24	BT	39	ILE	4.4
23	BS	42	PRO	4.4
32	DH	136	GLU	4.4
30	CF	168	LEU	4.4
31	CG	131	VAL	4.4
55	C5	9	THR	4.4
4	CA	344	A	4.4
4	CA	1067	A	4.4
11	BG	4	ARG	4.4
33	CJ	79	LEU	4.4
44	CU	63	VAL	4.4
6	BB	129	LEU	4.4
28	CD	104	VAL	4.4
18	BN	19	TYR	4.4
31	CG	98	LYS	4.4
22	AR	20	GLU	4.4
36	CM	69	ARG	4.4
38	CO	100	CYS	4.4
17	BM	28	THR	4.4
29	CE	135	ALA	4.4
43	CT	82	MET	4.4
54	C4	20	GLY	4.4
31	CG	127	GLN	4.4
37	CN	56	ALA	4.4
41	CR	20	ALA	4.4
21	BQ	20	SER	4.4
51	C1	45	ASP	4.4
33	CJ	94	LYS	4.4
42	CS	76	LYS	4.4
48	CY	60	LYS	4.4
28	CD	199	SER	4.4
54	C4	57	VAL	4.4
32	DH	18	GLN	4.3
55	C5	8	ARG	4.3
45	CV	3	LYS	4.3
4	CA	546	U	4.3
44	DU	92	ASN	4.3
45	CV	62	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
17	BM	62	LYS	4.3
24	BT	86	LEU	4.3
33	DJ	69	VAL	4.3
29	CE	158	PHE	4.3
36	CM	78	ARG	4.3
44	CU	12	ARG	4.3
47	CX	75	ARG	4.3
49	CZ	59	GLU	4.3
14	BJ	26	VAL	4.3
39	CP	25	ARG	4.3
32	DH	44	ILE	4.3
4	CA	2168	G	4.3
40	CQ	8	GLU	4.3
20	BP	65	ALA	4.3
55	C5	16	ASP	4.3
18	BN	26	LEU	4.3
30	CF	83	PRO	4.3
17	BM	102	THR	4.3
31	CG	24	THR	4.3
39	CP	65	THR	4.3
18	BN	49	GLN	4.3
33	CJ	30	GLN	4.3
33	DJ	54	ILE	4.3
36	CM	143	GLU	4.3
44	CU	37	ASP	4.3
17	BM	30	SER	4.3
30	CF	24	VAL	4.3
44	CU	81	LYS	4.3
17	BM	32	ALA	4.3
34	CK	95	ARG	4.3
37	CN	103	TYR	4.3
41	CR	23	TYR	4.3
44	CU	40	LYS	4.3
28	CD	145	SER	4.3
24	BT	60	ARG	4.3
31	CG	148	ARG	4.3
33	CJ	43	ALA	4.3
38	CO	23	ASN	4.3
30	CF	90	LEU	4.3
31	CG	40	VAL	4.3
14	BJ	25	ILE	4.3
25	AU	43	THR	4.3

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Mol	Chain	Res	Type	RSRZ
12	AH	130	ALA	4.3
24	BT	64	LYS	4.3
13	BI	35	LEU	4.3
23	BS	9	PRO	4.3
39	CP	99	TYR	4.3
33	DJ	41	PHE	4.3
23	AS	71	LEU	4.2
28	CD	4	LEU	4.2
38	CO	76	VAL	4.2
39	CP	29	HIS	4.2
46	CW	1	MET	4.2
52	C2	36	LYS	4.2
33	DJ	14	ALA	4.2
36	CM	94	THR	4.2
42	CS	37	GLU	4.2
14	BJ	77	VAL	4.2
33	CJ	80	LYS	4.2
47	CX	21	VAL	4.2
2	BA	1030	U	4.2
4	CA	1533	C	4.2
38	CO	119	SER	4.2
2	BA	203	G	4.2
11	BG	36	LYS	4.2
30	CF	112	ASP	4.2
44	CU	6	ARG	4.2
11	BG	94	VAL	4.2
24	AT	61	GLN	4.2
33	CJ	104	GLN	4.2
36	CM	120	VAL	4.2
42	CS	93	PHE	4.2
30	CF	103	ILE	4.2
24	BT	65	GLY	4.2
39	CP	24	THR	4.2
33	DJ	121	ILE	4.2
37	CN	109	PRO	4.2
39	CP	58	ILE	4.2
3	DA	2167	U	4.2
29	CE	194	LYS	4.2
40	CQ	110	LYS	4.2
31	CG	173	ALA	4.2
49	CZ	21	LEU	4.2
30	CF	176	PHE	4.2

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Mol	Chain	Res	Type	RSRZ
36	CM	104	GLN	4.2
24	BT	49	LYS	4.2
28	CD	7	LYS	4.2
29	CE	36	ALA	4.2
48	CY	6	VAL	4.2
18	BN	57	PRO	4.2
3	DA	2120	G	4.2
21	AQ	20	SER	4.2
24	AT	4	ILE	4.2
11	BG	47	LEU	4.2
13	BI	127	PHE	4.2
47	CX	48	ASN	4.2
6	BB	32	PHE	4.1
6	BB	88	ASP	4.1
43	CT	92	ARG	4.1
33	DJ	21	PRO	4.1
43	CT	98	LYS	4.1
28	CD	31	ALA	4.1
40	CQ	90	ALA	4.1
14	AJ	75	ASP	4.1
29	CE	88	ARG	4.1
31	CG	165	ASP	4.1
36	CM	122	VAL	4.1
46	CW	48	MET	4.1
14	BJ	90	LEU	4.1
18	BN	63	ARG	4.1
31	CG	45	ALA	4.1
44	CU	76	ARG	4.1
45	CV	70	ALA	4.1
33	DJ	99	LYS	4.1
30	CF	27	VAL	4.1
23	BS	46	GLY	4.1
32	DH	107	GLY	4.1
50	C0	38	GLU	4.1
11	BG	5	ARG	4.1
34	CK	78	THR	4.1
44	CU	13	ALA	4.1
38	CO	26	GLY	4.1
14	BJ	102	LEU	4.1
36	CM	71	ALA	4.1
43	CT	33	LEU	4.1
4	CA	345	A	4.1

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Mol	Chain	Res	Type	RSRZ
36	CM	124	GLY	4.1
30	CF	111	ARG	4.1
49	CZ	60	LYS	4.1
32	CH	139	ALA	4.1
42	CS	55	ASP	4.1
48	CY	57	VAL	4.1
29	CE	179	SER	4.1
45	CV	99	SER	4.1
11	BG	97	ASN	4.1
31	CG	103	ASN	4.1
41	CR	41	ALA	4.1
29	CE	178	VAL	4.1
39	CP	111	ARG	4.1
4	CA	2121	G	4.1
36	CM	27	LEU	4.1
29	CE	189	THR	4.1
43	CT	39	THR	4.1
33	CJ	54	ILE	4.1
30	CF	49	LEU	4.1
23	BS	52	HIS	4.0
52	C2	48	TYR	4.0
40	CQ	40	GLN	4.0
4	CA	2402	U	4.0
36	CM	87	GLY	4.0
41	CR	31	TYR	4.0
37	CN	6	ARG	4.0
49	CZ	56	LEU	4.0
31	CG	161	VAL	4.0
36	CM	110	VAL	4.0
6	BB	40	ILE	4.0
11	BG	13	LEU	4.0
17	BM	56	LEU	4.0
20	AP	22	ALA	4.0
11	BG	57	SER	4.0
17	AM	115	PRO	4.0
1	AA	1534	A	4.0
6	BB	136	MET	4.0
36	CM	26	GLY	4.0
45	CV	93	ARG	4.0
14	BJ	6	ILE	4.0
2	BA	204	G	4.0
39	CP	85	LYS	4.0

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Mol	Chain	Res	Type	RSRZ
39	CP	79	ALA	4.0
36	CM	8	PRO	4.0
17	BM	33	ILE	4.0
17	BM	27	LYS	4.0
21	BQ	44	LEU	4.0
29	CE	27	LEU	4.0
38	CO	82	GLU	4.0
18	AN	22	LYS	4.0
31	CG	137	LYS	4.0
33	CJ	27	LEU	4.0
40	CQ	96	LEU	4.0
19	BO	89	ARG	4.0
25	AU	34	ARG	4.0
33	CJ	113	ALA	4.0
54	C4	47	ALA	4.0
6	BB	37	LYS	4.0
12	BH	75	ILE	4.0
29	CE	175	ILE	4.0
36	CM	77	ILE	4.0
46	CW	82	TYR	4.0
36	CM	88	GLY	4.0
46	CW	94	ALA	4.0
23	BS	20	GLU	4.0
4	CA	2110	G	3.9
4	CA	885	C	3.9
17	BM	70	ARG	3.9
24	BT	24	ARG	3.9
31	CG	71	LEU	3.9
37	CN	92	TRP	3.9
41	CR	73	ILE	3.9
21	BQ	54	GLY	3.9
35	CL	58	LEU	3.9
47	CX	30	LEU	3.9
37	CN	123	LYS	3.9
41	CR	111	LYS	3.9
31	CG	44	HIS	3.9
31	CG	150	TYR	3.9
33	CJ	124	MET	3.9
34	CK	13	ARG	3.9
37	CN	122	ALA	3.9
39	CP	37	ALA	3.9
49	CZ	33	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
3	DA	2163	A	3.9
34	CK	55	ILE	3.9
36	CM	91	ASP	3.9
31	CG	30	GLY	3.9
24	BT	5	LYS	3.9
39	CP	57	ALA	3.9
33	CJ	8	VAL	3.9
44	CU	79	ASP	3.9
53	C3	18	PHE	3.9
39	CP	59	ALA	3.9
40	CQ	101	GLU	3.9
32	DH	12	LEU	3.9
35	CL	107	LEU	3.9
36	CM	21	ARG	3.9
40	CQ	100	ARG	3.9
55	C5	25	ARG	3.9
39	CP	77	ALA	3.9
13	AI	90	TYR	3.8
13	BI	21	ILE	3.8
21	BQ	46	VAL	3.8
32	CH	140	LYS	3.8
39	CP	33	ARG	3.8
40	CQ	107	ALA	3.8
44	CU	29	THR	3.8
31	CG	68	ARG	3.8
33	CJ	127	SER	3.8
44	CU	73	ARG	3.8
54	C4	23	HIS	3.8
30	CF	135	ILE	3.8
50	C0	54	VAL	3.8
37	CN	110	GLU	3.8
30	CF	134	GLN	3.8
28	CD	14	ILE	3.8
37	CN	130	PHE	3.8
40	CQ	19	PHE	3.8
29	CE	197	GLU	3.8
17	BM	92	ARG	3.8
33	DJ	5	GLN	3.8
45	CV	26	ASN	3.8
29	CE	116	ASP	3.8
49	CZ	26	PHE	3.8
45	DV	51	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
36	CM	115	GLU	3.8
43	CT	84	ARG	3.8
14	BJ	86	ALA	3.8
39	CP	41	ALA	3.8
33	DJ	88	GLY	3.8
13	AI	20	PHE	3.8
31	CG	88	LEU	3.8
43	CT	19	LEU	3.8
33	DJ	6	ALA	3.8
16	AL	123	LYS	3.8
35	CL	59	LYS	3.8
17	BM	68	ASP	3.8
35	CL	24	VAL	3.8
31	CG	2	ARG	3.8
20	BP	41	PRO	3.8
44	CU	46	ALA	3.8
11	BG	79	ARG	3.8
28	CD	82	PHE	3.8
32	CH	80	ILE	3.8
47	CX	68	GLU	3.8
49	CZ	42	LEU	3.8
49	CZ	49	ASP	3.8
53	C3	13	ASN	3.8
28	CD	95	SER	3.8
31	CG	169	ARG	3.8
37	CN	59	ARG	3.8
48	CY	46	VAL	3.8
18	BN	43	ASN	3.8
30	CF	5	ASP	3.8
41	CR	44	TYR	3.8
45	CV	16	LYS	3.8
6	AB	134	ALA	3.8
45	CV	95	PHE	3.8
26	BL	44	LYS	3.7
52	C2	23	THR	3.7
14	BJ	41	PRO	3.7
20	BP	45	GLU	3.7
47	CX	53	ARG	3.7
33	DJ	86	LYS	3.7
11	BG	12	ILE	3.7
28	CD	22	ILE	3.7
31	CG	25	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
44	CU	16	VAL	3.7
44	CU	53	VAL	3.7
6	AB	136	MET	3.7
52	C2	6	GLU	3.7
53	C3	45	SER	3.7
52	C2	14	ALA	3.7
3	DA	2166	U	3.7
11	AG	23	LEU	3.7
20	BP	4	ILE	3.7
33	DJ	60	VAL	3.7
40	CQ	31	VAL	3.7
37	CN	37	GLY	3.7
29	CE	37	ALA	3.7
48	CY	34	SER	3.7
4	CA	88	G	3.7
33	CJ	96	LYS	3.7
39	CP	107	ALA	3.7
32	DH	99	ILE	3.7
36	CM	19	LEU	3.7
37	CN	126	ILE	3.7
42	CS	98	ILE	3.7
45	CV	57	ILE	3.7
13	AI	41	ARG	3.7
49	CZ	37	LEU	3.7
35	CL	51	LYS	3.7
42	CS	30	GLY	3.7
11	BG	52	GLN	3.7
21	BQ	23	VAL	3.7
28	CD	100	LEU	3.7
30	CF	148	VAL	3.7
2	BA	1314	C	3.7
4	CA	1078	U	3.7
43	CT	86	MET	3.7
17	BM	13	LYS	3.7
53	D3	46	LYS	3.7
11	BG	80	VAL	3.7
20	BP	33	ILE	3.7
39	CP	62	LEU	3.7
41	CR	3	VAL	3.7
29	CE	1	MET	3.7
41	CR	70	GLN	3.7
23	AS	74	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
33	DJ	49	GLU	3.7
12	AH	2	SER	3.7
18	BN	45	VAL	3.7
42	CS	15	SER	3.7
47	CX	65	VAL	3.7
30	CF	37	MET	3.7
37	CN	31	PHE	3.7
31	CG	124	CYS	3.7
31	CG	163	TYR	3.7
36	CM	62	PRO	3.7
14	BJ	87	LEU	3.7
17	BM	46	SER	3.7
35	CL	75	SER	3.7
13	BI	100	LYS	3.6
33	DJ	29	GLN	3.6
4	CA	613	A	3.6
23	BS	22	ALA	3.6
46	CW	60	VAL	3.6
26	BL	123	LYS	3.6
11	BG	152	ALA	3.6
17	BM	61	ALA	3.6
46	CW	6	ALA	3.6
24	BT	36	TYR	3.6
41	CR	103	VAL	3.6
47	CX	69	VAL	3.6
48	CY	12	VAL	3.6
13	BI	91	ASP	3.6
17	BM	93	ARG	3.6
52	C2	15	GLY	3.6
11	BG	125	SER	3.6
20	BP	18	GLN	3.6
44	CU	72	GLN	3.6
4	CA	228	C	3.6
33	DJ	82	ALA	3.6
30	CF	36	ASN	3.6
42	CS	38	VAL	3.6
47	CX	80	ILE	3.6
34	CK	115	GLY	3.6
46	CW	58	SER	3.6
54	C4	51	LYS	3.6
47	CX	77	PHE	3.6
23	AS	40	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
38	CO	38	LEU	3.6
49	CZ	43	LEU	3.6
18	BN	94	PRO	3.6
28	CD	117	GLY	3.6
39	CP	32	PRO	3.6
47	CX	72	PRO	3.6
11	BG	63	GLU	3.6
32	DH	65	ALA	3.6
15	AK	16	VAL	3.6
21	BQ	5	ILE	3.6
29	CE	105	LEU	3.6
31	CG	23	ILE	3.6
42	CS	22	LEU	3.6
47	CX	52	GLY	3.6
54	C4	56	LEU	3.6
47	CX	70	LYS	3.6
29	CE	23	PHE	3.6
48	CY	45	PHE	3.6
35	CL	2	ILE	3.6
36	CM	24	GLY	3.6
30	CF	20	ASN	3.6
33	DJ	42	ASN	3.6
45	CV	80	ASP	3.6
42	CS	42	ALA	3.6
47	CX	83	GLU	3.6
32	CH	21	VAL	3.6
48	CY	3	VAL	3.6
35	CL	78	ARG	3.6
40	CQ	42	PHE	3.6
31	CG	84	LYS	3.6
21	BQ	63	GLU	3.6
28	CD	121	THR	3.6
32	DH	105	ALA	3.6
29	CE	33	VAL	3.6
41	CR	16	ILE	3.6
41	CR	39	ILE	3.6
55	C5	28	VAL	3.6
6	BB	74	ARG	3.6
11	BG	10	ARG	3.6
44	CU	14	PRO	3.6
43	CT	42	LYS	3.5
4	CA	1171	G	3.5

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Mol	Chain	Res	Type	RSRZ
15	AK	21	ALA	3.5
37	CN	73	ILE	3.5
43	CT	36	LEU	3.5
45	CV	45	GLN	3.5
50	C0	8	GLN	3.5
4	CA	2172	U	3.5
10	BF	80	PHE	3.5
42	CS	34	GLU	3.5
23	BS	45	ILE	3.5
29	CE	107	SER	3.5
39	CP	115	LEU	3.5
44	CU	85	VAL	3.5
30	CF	138	PRO	3.5
37	CN	106	ASP	3.5
38	CO	21	PHE	3.5
11	BG	19	GLY	3.5
4	CA	2797	U	3.5
18	BN	20	PHE	3.5
39	CP	46	GLU	3.5
4	CA	1172	C	3.5
29	CE	3	LEU	3.5
30	CF	58	ALA	3.5
28	CD	24	VAL	3.5
32	DH	4	ILE	3.5
52	C2	11	VAL	3.5
21	BQ	6	ARG	3.5
23	AS	32	ARG	3.5
32	CH	27	ARG	3.5
3	DA	2110	G	3.5
54	C4	26	ALA	3.5
33	CJ	49	GLU	3.5
42	CS	11	GLN	3.5
47	CX	49	VAL	3.5
13	BI	89	GLU	3.5
30	CF	100	GLU	3.5
24	BT	19	LYS	3.5
33	DJ	96	LYS	3.5
45	CV	101	THR	3.5
33	CJ	130	GLY	3.5
33	DJ	18	ASN	3.5
43	CT	10	ALA	3.5
14	AJ	74	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
43	CT	96	ILE	3.5
29	CE	30	GLN	3.5
39	CP	80	GLU	3.5
28	CD	97	SER	3.5
29	CE	114	ARG	3.5
28	CD	131	ASP	3.5
31	CG	128	THR	3.5
37	CN	136	MET	3.5
24	BT	38	ALA	3.5
33	CJ	114	ALA	3.5
51	C1	42	ILE	3.5
31	CG	94	ARG	3.5
32	DH	51	ARG	3.5
39	CP	39	VAL	3.5
33	DJ	134	SER	3.5
11	BG	14	PRO	3.5
13	AI	40	GLY	3.5
33	DJ	28	GLY	3.5
18	AN	43	ASN	3.5
28	CD	88	GLU	3.5
29	CE	142	ALA	3.5
41	CR	24	TYR	3.5
30	CF	153	ILE	3.5
35	CL	61	VAL	3.5
45	CV	64	ILE	3.5
4	CA	2126	A	3.5
17	BM	67	GLY	3.4
24	BT	9	LYS	3.4
18	BN	50	THR	3.4
20	BP	3	THR	3.4
30	CF	25	MET	3.4
13	BI	90	TYR	3.4
48	CY	49	ARG	3.4
20	BP	53	ASP	3.4
41	CR	21	LYS	3.4
23	BS	47	LEU	3.4
28	CD	188	LEU	3.4
42	CS	1	MET	3.4
32	CH	18	GLN	3.4
34	CK	6	ALA	3.4
39	CP	90	VAL	3.4
54	C4	58	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
13	AI	39	PHE	3.4
33	CJ	50	LYS	3.4
39	CP	92	PHE	3.4
51	C1	31	LYS	3.4
17	BM	50	GLU	3.4
23	BS	73	GLU	3.4
37	CN	111	GLU	3.4
52	C2	34	GLU	3.4
39	CP	52	SER	3.4
55	C5	34	PRO	3.4
43	CT	46	LEU	3.4
46	CW	38	LEU	3.4
3	DA	2121	G	3.4
29	CE	28	VAL	3.4
33	DJ	139	VAL	3.4
38	CO	34	ILE	3.4
42	CS	14	VAL	3.4
44	CU	66	LYS	3.4
28	CD	59	ARG	3.4
41	CR	72	GLY	3.4
46	CW	67	GLY	3.4
24	BT	79	LEU	3.4
14	BJ	36	VAL	3.4
18	AN	29	ILE	3.4
32	DH	106	ALA	3.4
33	CJ	83	ALA	3.4
37	CN	105	MET	3.4
38	CO	68	ALA	3.4
18	BN	53	ARG	3.4
3	DA	139	U	3.4
37	CN	112	LEU	3.4
44	CU	11	LEU	3.4
53	C3	46	LYS	3.4
11	BG	45	SER	3.4
17	BM	15	ALA	3.4
29	CE	39	ALA	3.4
34	CK	101	ILE	3.4
37	CN	80	VAL	3.4
38	CO	29	VAL	3.4
44	CU	70	HIS	3.4
50	C0	33	HIS	3.4
7	BC	37	PHE	3.4

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Mol	Chain	Res	Type	RSRZ
17	BM	72	GLU	3.4
46	CW	3	THR	3.4
48	CY	44	ARG	3.4
30	CF	143	ASP	3.4
33	CJ	74	PRO	3.4
17	BM	79	ARG	3.4
39	CP	13	ARG	3.4
51	C1	23	ALA	3.4
18	BN	25	GLU	3.4
27	CC	227	VAL	3.4
44	CU	92	ASN	3.4
17	BM	78	LYS	3.4
28	CD	160	LYS	3.4
4	CA	2120	G	3.4
17	BM	111	GLY	3.4
31	CG	158	GLY	3.4
41	CR	100	PHE	3.4
14	BJ	80	THR	3.4
12	BH	85	ILE	3.4
29	CE	16	GLU	3.4
6	BB	62	SER	3.4
11	BG	56	LYS	3.4
28	CD	105	LYS	3.4
33	DJ	91	LYS	3.4
27	CC	232	GLY	3.4
40	CQ	79	VAL	3.4
4	CA	896	A	3.3
11	BG	78	ARG	3.3
37	CN	50	ARG	3.3
30	CF	13	LYS	3.3
13	BI	108	ALA	3.3
21	BQ	13	VAL	3.3
31	CG	95	ALA	3.3
36	CM	68	SER	3.3
29	CE	154	ASP	3.3
27	CC	104	LEU	3.3
39	CP	38	GLN	3.3
33	DJ	34	ILE	3.3
6	AB	69	PHE	3.3
17	BM	60	VAL	3.3
4	CA	1117	C	3.3
33	DJ	47	SER	3.3

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Mol	Chain	Res	Type	RSRZ
7	BC	42	TYR	3.3
30	CF	21	TYR	3.3
38	CO	81	ASN	3.3
48	CY	76	LYS	3.3
22	AR	68	LEU	3.3
32	DH	67	ALA	3.3
48	CY	63	ILE	3.3
51	C1	33	SER	3.3
54	C4	22	LYS	3.3
23	BS	65	GLU	3.3
34	CK	136	GLN	3.3
32	CH	77	THR	3.3
27	CC	17	LYS	3.3
30	CF	91	ARG	3.3
37	CN	131	VAL	3.3
46	CW	84	PRO	3.3
53	C3	14	ARG	3.3
2	BA	213	G	3.3
17	BM	103	LYS	3.3
45	CV	89	GLY	3.3
28	CD	127	PHE	3.3
4	CA	666	A	3.3
35	CL	84	CYS	3.3
30	CF	65	LEU	3.3
31	CG	132	LEU	3.3
52	C2	7	LYS	3.3
41	CR	6	GLY	3.3
53	C3	28	ARG	3.3
55	C5	24	GLY	3.3
20	BP	38	PHE	3.3
20	BP	5	ARG	3.3
36	CM	126	ARG	3.3
50	C0	28	LEU	3.3
3	DA	546	U	3.3
6	AB	31	ILE	3.3
6	BB	14	VAL	3.3
18	BN	35	ALA	3.3
40	CQ	27	VAL	3.3
37	CN	98	PRO	3.3
43	CT	37	THR	3.3
27	CC	27	LYS	3.3
29	CE	10	SER	3.3

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Mol	Chain	Res	Type	RSRZ
3	DA	2114	A	3.3
6	BB	164	ILE	3.3
30	CF	66	ILE	3.3
29	CE	201	ALA	3.3
33	CJ	139	VAL	3.3
24	BT	85	LYS	3.3
11	BG	72	THR	3.3
54	C4	1	PRO	3.3
35	CL	64	ARG	3.3
4	CA	2128	G	3.3
18	AN	48	LEU	3.3
28	CD	205	PRO	3.2
31	CG	48	THR	3.2
13	BI	50	GLN	3.2
41	CR	90	ASP	3.2
42	CS	95	ASP	3.2
14	BJ	27	GLU	3.2
28	CD	96	ILE	3.2
30	CF	6	TYR	3.2
33	CJ	93	ASN	3.2
35	CL	99	ILE	3.2
31	CG	96	ALA	3.2
30	CF	95	MET	3.2
45	CV	47	PRO	3.2
39	CP	19	GLN	3.2
23	BS	27	ASP	3.2
31	CG	136	ASP	3.2
32	DH	5	LEU	3.2
33	CJ	36	GLU	3.2
35	CL	56	ASP	3.2
55	C5	23	LYS	3.2
32	CH	130	SER	3.2
46	CW	8	VAL	3.2
39	CP	63	LYS	3.2
47	CX	56	THR	3.2
32	CH	39	ALA	3.2
33	CJ	129	GLU	3.2
29	CE	38	GLY	3.2
21	BQ	77	ARG	3.2
24	BT	43	ASP	3.2
52	C2	38	PHE	3.2
18	BN	22	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
31	CG	93	TYR	3.2
43	CT	15	GLN	3.2
14	BJ	75	ASP	3.2
36	CM	132	ARG	3.2
41	CR	32	ARG	3.2
44	CU	93	LEU	3.2
53	C3	34	ARG	3.2
2	BA	1441	A	3.2
23	BS	61	PHE	3.2
27	CC	29	PHE	3.2
36	CM	50	PHE	3.2
23	BS	17	LYS	3.2
28	CD	204	LYS	3.2
33	CJ	40	ALA	3.2
33	CJ	75	ALA	3.2
30	CF	82	TYR	3.2
11	BG	25	LYS	3.2
33	DJ	94	LYS	3.2
33	CJ	121	ILE	3.2
38	CO	75	ILE	3.2
3	DA	2172	U	3.2
29	CE	87	ALA	3.2
35	CL	52	VAL	3.2
41	CR	9	ALA	3.2
43	CT	30	SER	3.2
40	CQ	62	LYS	3.2
52	C2	49	LYS	3.2
37	CN	63	ILE	3.2
4	CA	2181	U	3.2
44	CU	56	GLU	3.2
4	CA	1095	A	3.2
44	CU	77	ARG	3.2
47	CX	44	HIS	3.2
13	BI	126	GLN	3.2
23	BS	6	LYS	3.2
34	CK	111	LYS	3.2
46	CW	57	TYR	3.2
49	CZ	31	GLN	3.2
29	CE	153	LEU	3.2
55	C5	26	LEU	3.2
18	BN	13	VAL	3.1
24	BT	45	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
30	CF	157	THR	3.1
4	CA	2602	A	3.1
14	BJ	20	GLN	3.1
36	CM	49	GLY	3.1
7	AC	168	TYR	3.1
40	CQ	98	TYR	3.1
52	C2	43	ARG	3.1
11	BG	35	LYS	3.1
55	C5	2	LYS	3.1
29	CE	54	GLY	3.1
32	DH	104	THR	3.1
42	CS	66	HIS	3.1
14	BJ	73	LEU	3.1
29	CE	125	SER	3.1
32	DH	117	LEU	3.1
1	AA	86	G	3.1
28	CD	101	PHE	3.1
42	CS	31	GLU	3.1
32	CH	97	ARG	3.1
11	AG	6	VAL	3.1
29	CE	196	VAL	3.1
47	CX	20	GLY	3.1
12	BH	2	SER	3.1
14	BJ	46	LYS	3.1
45	CV	9	GLU	3.1
30	CF	167	ALA	3.1
23	AS	15	LEU	3.1
27	CC	25	LYS	3.1
19	BO	15	PHE	3.1
33	DJ	37	PHE	3.1
34	CK	48	VAL	3.1
2	BA	82	G	3.1
43	CT	44	ALA	3.1
45	CV	46	LYS	3.1
48	CY	10	ARG	3.1
28	CD	187	LEU	3.1
32	CH	127	HIS	3.1
42	CS	39	LEU	3.1
30	CF	142	TYR	3.1
32	CH	10	ALA	3.1
32	DH	39	ALA	3.1
41	CR	88	GLU	3.1

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Mol	Chain	Res	Type	RSRZ
3	DA	2116	G	3.1
29	CE	134	LEU	3.1
34	CK	97	PRO	3.1
6	BB	95	ARG	3.1
29	CE	170	ARG	3.1
8	AD	21	LEU	3.1
14	BJ	10	LEU	3.1
4	CA	2127	G	3.1
17	BM	45	ILE	3.1
39	CP	66	GLY	3.1
34	CK	105	VAL	3.1
42	CS	4	VAL	3.1
45	CV	92	VAL	3.1
6	BB	31	ILE	3.1
40	CQ	11	GLN	3.1
13	BI	103	PHE	3.0
46	CW	61	LEU	3.0
17	BM	17	ILE	3.0
29	CE	148	ILE	3.0
6	AB	189	THR	3.0
31	CG	3	VAL	3.0
4	CA	2106	U	3.0
11	BG	108	ALA	3.0
14	BJ	12	ALA	3.0
33	CJ	107	GLU	3.0
33	DJ	141	ASP	3.0
33	DJ	61	TYR	3.0
37	CN	96	ILE	3.0
33	CJ	117	THR	3.0
29	CE	15	SER	3.0
14	BJ	72	ARG	3.0
11	BG	139	GLU	3.0
45	CV	102	ILE	3.0
52	C2	45	HIS	3.0
32	DH	133	VAL	3.0
3	DA	2111	U	3.0
47	CX	41	THR	3.0
6	BB	117	LEU	3.0
23	AS	31	LEU	3.0
30	CF	102	LEU	3.0
31	CG	41	GLU	3.0
32	DH	75	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
21	BQ	53	CYS	3.0
13	BI	109	ARG	3.0
18	BN	52	PRO	3.0
31	CG	57	TYR	3.0
42	CS	47	VAL	3.0
35	CL	89	ASN	3.0
46	CW	26	PHE	3.0
28	CD	27	ILE	3.0
33	DJ	30	GLN	3.0
21	AQ	83	VAL	3.0
45	CV	41	VAL	3.0
23	BS	24	GLU	3.0
29	CE	47	LYS	3.0
9	BE	124	LEU	3.0
39	CP	114	GLY	3.0
6	BB	186	ILE	3.0
14	BJ	89	ARG	3.0
24	BT	61	GLN	3.0
46	CW	89	ILE	3.0
42	CS	60	LYS	3.0
43	CT	70	LYS	3.0
1	AA	1032	G	3.0
14	BJ	81	GLU	3.0
29	CE	86	ALA	3.0
29	CE	198	GLU	3.0
30	CF	1	ALA	3.0
8	AD	19	LEU	3.0
17	BM	19	LEU	3.0
2	BA	1327	C	3.0
45	CV	55	GLY	3.0
43	CT	11	ARG	3.0
6	AB	88	ASP	3.0
33	CJ	86	LYS	3.0
42	CS	54	VAL	3.0
11	BG	93	PRO	3.0
32	DH	52	ALA	3.0
36	CM	97	ALA	3.0
38	CO	66	ALA	3.0
31	CG	100	ASN	3.0
39	CP	9	ARG	3.0
12	AH	26	THR	3.0
32	DH	96	THR	3.0

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Mol	Chain	Res	Type	RSRZ
39	CP	53	THR	3.0
20	AP	55	ASP	3.0
31	CG	31	GLU	3.0
40	CQ	47	ILE	3.0
15	BK	21	ALA	2.9
17	BM	98	ARG	2.9
33	DJ	137	LEU	2.9
57	D7	22	TYR	2.9
24	BT	71	LYS	2.9
45	CV	73	ASN	2.9
47	CX	76	LYS	2.9
4	CA	1870	C	2.9
4	CA	2123	G	2.9
42	CS	92	TRP	2.9
17	BM	22	ILE	2.9
30	CF	141	ASP	2.9
17	BM	12	HIS	2.9
34	CK	137	PRO	2.9
4	CA	2111	U	2.9
44	CU	68	LYS	2.9
21	BQ	9	GLN	2.9
11	BG	83	SER	2.9
20	BP	66	THR	2.9
32	CH	72	ILE	2.9
33	DJ	80	LYS	2.9
33	DJ	97	VAL	2.9
47	CX	22	LYS	2.9
43	CT	47	VAL	2.9
4	CA	1063	G	2.9
4	CA	653	U	2.9
11	BG	90	GLU	2.9
46	CW	31	TYR	2.9
51	C1	36	LYS	2.9
6	BB	139	ARG	2.9
36	CM	30	THR	2.9
18	BN	48	LEU	2.9
33	DJ	83	ALA	2.9
55	C5	7	LEU	2.9
22	AR	74	HIS	2.9
47	CX	73	LYS	2.9
35	CL	13	ASN	2.9
31	CG	91	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
38	CO	37	THR	2.9
47	DX	8	THR	2.9
51	C1	25	THR	2.9
7	BC	33	LEU	2.9
32	DH	76	GLU	2.9
20	BP	51	ARG	2.9
21	BQ	62	ARG	2.9
6	AB	117	LEU	2.9
27	CC	80	LEU	2.9
32	DH	139	ALA	2.9
37	CN	84	LYS	2.9
39	CP	82	ALA	2.9
4	CA	2105	U	2.9
31	CG	162	ARG	2.9
30	CF	62	GLN	2.9
37	CN	125	PRO	2.9
50	C0	6	ILE	2.9
2	BA	1312	G	2.9
21	BQ	36	LYS	2.9
33	CJ	99	LYS	2.9
32	CH	13	GLY	2.9
37	CN	67	VAL	2.9
6	BB	226	SER	2.9
24	AT	87	ALA	2.9
33	CJ	105	LEU	2.9
53	C3	12	ARG	2.9
3	DA	2146	C	2.9
39	CP	61	GLN	2.9
45	CV	71	ILE	2.9
41	CR	25	GLY	2.9
18	AN	51	LEU	2.9
29	CE	112	LEU	2.9
33	CJ	137	LEU	2.9
39	CP	81	ARG	2.9
36	CM	113	ALA	2.9
37	CN	54	THR	2.8
53	C3	43	THR	2.8
6	BB	116	ASP	2.8
11	BG	104	ILE	2.8
29	CE	149	ILE	2.8
11	BG	81	GLY	2.8
27	CC	244	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
34	CK	17	VAL	2.8
35	CL	36	GLY	2.8
32	CH	117	LEU	2.8
33	DJ	132	ALA	2.8
39	CP	109	ALA	2.8
4	CA	289	G	2.8
43	CT	13	SER	2.8
20	BP	28	ARG	2.8
32	DH	142	ILE	2.8
40	CQ	3	ILE	2.8
45	CV	7	ASP	2.8
29	CE	19	PHE	2.8
37	CN	117	PHE	2.8
39	CP	54	VAL	2.8
57	D7	56	PHE	2.8
8	AD	206	LYS	2.8
23	AS	9	PRO	2.8
32	DH	87	GLU	2.8
6	BB	149	GLY	2.8
15	AK	80	LYS	2.8
40	CQ	25	VAL	2.8
30	CF	56	LEU	2.8
44	CU	88	LYS	2.8
4	CA	1173	U	2.8
4	CA	2904	U	2.8
28	CD	23	PRO	2.8
53	C3	7	PRO	2.8
4	CA	343	C	2.8
36	CM	13	LYS	2.8
37	CN	107	GLY	2.8
4	CA	2125	G	2.8
6	BB	217	VAL	2.8
34	CK	56	VAL	2.8
40	CQ	32	VAL	2.8
20	BP	40	ASN	2.8
36	CM	57	LEU	2.8
31	CG	62	ALA	2.8
35	CL	1	MET	2.8
54	C4	39	ARG	2.8
14	BJ	30	LYS	2.8
28	CD	116	LYS	2.8
33	DJ	127	SER	2.8

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Mol	Chain	Res	Type	RSRZ
40	CQ	28	LYS	2.8
15	AK	110	ILE	2.8
28	CD	120	GLY	2.8
30	CF	152	ASP	2.8
4	CA	914	G	2.8
15	AK	42	LEU	2.8
28	CD	122	VAL	2.8
38	CO	47	VAL	2.8
50	C0	16	LEU	2.8
7	BC	131	ARG	2.8
17	BM	57	ARG	2.8
32	CH	74	ALA	2.8
32	CH	126	GLU	2.8
41	CR	117	ALA	2.8
49	CZ	38	GLN	2.8
51	C1	35	GLU	2.8
28	CD	55	LYS	2.8
6	BB	94	HIS	2.8
19	BO	25	THR	2.8
18	BN	59	ARG	2.8
20	AP	6	LEU	2.8
48	CY	71	ARG	2.8
48	CY	77	TYR	2.8
17	AM	114	LYS	2.8
55	C5	31	LYS	2.8
37	CN	29	GLY	2.8
42	CS	77	PHE	2.8
10	BF	39	LEU	2.8
11	AG	11	LYS	2.8
31	CG	116	LEU	2.8
33	CJ	39	LYS	2.8
45	CV	53	GLN	2.8
11	AG	151	PHE	2.8
11	BG	26	PHE	2.8
30	CF	136	ILE	2.8
33	CJ	25	PRO	2.8
35	CL	112	PHE	2.8
6	AB	217	VAL	2.8
11	BG	69	VAL	2.8
36	CM	6	LEU	2.8
52	C2	42	VAL	2.8
13	BI	110	GLN	2.8

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Mol	Chain	Res	Type	RSRZ
41	CR	112	ALA	2.8
4	CA	2891	U	2.7
17	BM	6	GLY	2.7
40	CQ	34	GLY	2.7
27	CC	47	ARG	2.7
29	CE	77	ILE	2.7
31	CG	18	ILE	2.7
33	CJ	37	PHE	2.7
34	CK	4	PHE	2.7
41	CR	4	LYS	2.7
14	BJ	39	PRO	2.7
8	AD	122	ALA	2.7
15	BK	73	ALA	2.7
4	CA	2174	C	2.7
17	BM	24	GLY	2.7
29	CE	132	LYS	2.7
36	CM	64	PHE	2.7
38	CO	113	ILE	2.7
8	AD	117	LEU	2.7
14	AJ	73	LEU	2.7
29	CE	55	SER	2.7
32	CH	6	LEU	2.7
38	CO	59	SER	2.7
44	CU	67	VAL	2.7
4	CA	2112	G	2.7
21	BQ	11	ARG	2.7
28	CD	11	MET	2.7
43	CT	8	ARG	2.7
4	CA	405	U	2.7
32	CH	47	PHE	2.7
33	CJ	100	ILE	2.7
47	CX	43	PHE	2.7
6	AB	57	LEU	2.7
33	CJ	89	SER	2.7
34	CK	47	HIS	2.7
13	BI	11	ARG	2.7
29	CE	26	ALA	2.7
39	CP	76	LYS	2.7
46	CW	34	LYS	2.7
46	CW	50	MET	2.7
47	CX	58	PHE	2.7
9	AE	97	GLN	2.7

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Mol	Chain	Res	Type	RSRZ
10	AF	61	LEU	2.7
13	BI	47	VAL	2.7
38	CO	40	LYS	2.7
45	CV	23	LYS	2.7
46	CW	10	LYS	2.7
14	BJ	45	ARG	2.7
29	CE	72	SER	2.7
35	CL	110	GLU	2.7
43	CT	52	GLU	2.7
4	CA	356	G	2.7
6	BB	69	PHE	2.7
31	CG	33	THR	2.7
52	C2	21	THR	2.7
18	BN	29	ILE	2.7
24	BT	57	ILE	2.7
35	CL	80	ASP	2.7
38	CO	71	ARG	2.7
38	CO	85	PRO	2.7
39	CP	108	ASP	2.7
4	CA	2169	A	2.7
42	CS	46	GLU	2.7
11	BG	137	LYS	2.7
6	AB	51	ASN	2.7
29	CE	24	ASN	2.7
23	AS	55	ARG	2.7
28	CD	184	ARG	2.7
17	BM	97	VAL	2.7
31	CG	11	PRO	2.7
32	CH	141	VAL	2.7
36	CM	119	PRO	2.7
37	CN	89	VAL	2.7
24	BT	81	ALA	2.7
36	CM	130	GLY	2.7
39	CP	72	ALA	2.7
47	CX	55	HIS	2.7
6	BB	132	LYS	2.7
6	BB	143	LYS	2.7
28	CD	154	LYS	2.7
33	DJ	71	LYS	2.7
53	C3	37	LYS	2.7
23	AS	41	PHE	2.7
30	CF	98	PHE	2.7

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Mol	Chain	Res	Type	RSRZ
28	CD	48	ILE	2.7
31	CG	19	ASN	2.7
44	CU	39	THR	2.7
29	CE	138	LEU	2.7
36	CM	81	ASP	2.7
4	CA	801	G	2.7
33	CJ	76	ALA	2.7
43	CT	21	ALA	2.7
48	CY	53	LYS	2.7
4	CA	1532	A	2.7
24	BT	75	HIS	2.7
15	AK	13	ARG	2.7
31	CG	140	ILE	2.7
39	CP	8	ILE	2.7
17	BM	100	GLN	2.7
28	CD	103	ASP	2.7
29	CE	91	ASP	2.7
42	CS	18	GLN	2.7
42	CS	45	GLU	2.7
37	CN	93	VAL	2.7
40	CQ	80	VAL	2.7
43	CT	23	LEU	2.7
2	BA	1267	C	2.7
23	BS	7	LYS	2.7
39	CP	110	ALA	2.7
30	CF	29	ARG	2.7
32	DH	127	HIS	2.7
4	CA	1872	A	2.6
13	BI	57	MET	2.6
39	CP	35	ILE	2.6
11	BG	129	GLU	2.6
6	BB	97	LEU	2.6
15	AK	82	LEU	2.6
17	BM	52	GLN	2.6
27	CC	4	LYS	2.6
30	CF	68	LYS	2.6
21	BQ	48	ASP	2.6
28	CD	107	VAL	2.6
29	CE	171	ASP	2.6
37	CN	119	LEU	2.6
35	CL	76	VAL	2.6
35	CL	104	THR	2.6

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Mol	Chain	Res	Type	RSRZ
54	C4	5	THR	2.6
23	BS	59	PRO	2.6
31	CG	77	GLY	2.6
41	CR	22	GLY	2.6
44	CU	75	GLY	2.6
11	AG	18	PHE	2.6
31	CG	110	HIS	2.6
4	CA	1407	G	2.6
21	BQ	73	TRP	2.6
43	CT	74	ILE	2.6
38	CO	98	LEU	2.6
6	BB	187	VAL	2.6
14	BJ	85	ASP	2.6
17	BM	58	ASP	2.6
32	DH	17	ASP	2.6
37	CN	101	VAL	2.6
42	CS	72	VAL	2.6
33	CJ	118	GLY	2.6
39	CP	94	ARG	2.6
17	BM	44	LYS	2.6
50	C0	58	GLU	2.6
26	BL	80	ILE	2.6
41	CR	93	ILE	2.6
4	CA	1731	G	2.6
54	C4	54	LEU	2.6
6	AB	74	ARG	2.6
10	BF	89	VAL	2.6
11	AG	80	VAL	2.6
12	AH	39	VAL	2.6
13	BI	67	VAL	2.6
17	BM	87	ARG	2.6
18	AN	32	ASP	2.6
36	CM	128	THR	2.6
32	DH	81	ALA	2.6
33	DJ	119	ALA	2.6
52	C2	32	LYS	2.6
2	BA	1226	C	2.6
25	AU	44	GLU	2.6
38	CO	9	GLN	2.6
13	BI	64	TYR	2.6
35	CL	98	ARG	2.6
43	CT	51	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
28	CD	93	GLY	2.6
29	CE	140	ASP	2.6
20	AP	76	LYS	2.6
11	BG	60	GLU	2.6
31	CG	123	GLU	2.6
14	AJ	8	ILE	2.6
4	CA	810	U	2.6
4	CA	2180	U	2.6
6	BB	100	MET	2.6
30	CF	166	ARG	2.6
6	AB	161	LEU	2.6
38	CO	79	LEU	2.6
17	AM	5	ALA	2.6
17	BM	66	GLU	2.6
33	CJ	103	ALA	2.6
17	AM	92	ARG	2.6
2	BA	1224	U	2.6
4	CA	1224	U	2.6
4	CA	2118	U	2.6
34	CK	123	LYS	2.6
47	CX	71	GLY	2.6
47	CX	81	GLU	2.6
24	BT	63	ALA	2.6
11	BG	49	THR	2.6
42	CS	19	THR	2.6
4	CA	75	G	2.6
38	CO	97	ILE	2.6
46	CW	71	LYS	2.6
28	CD	72	GLY	2.6
52	C2	33	LEU	2.6
28	CD	73	VAL	2.6
30	CF	60	SER	2.6
45	CV	69	VAL	2.6
13	AI	129	LYS	2.6
17	BM	8	ASN	2.6
17	BM	105	ASN	2.6
32	CH	41	LYS	2.6
36	CM	96	LYS	2.6
13	BI	84	THR	2.6
33	CJ	72	THR	2.6
35	CL	115	ILE	2.6
11	BG	132	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
24	AT	66	LEU	2.6
3	DA	2164	C	2.6
24	AT	75	HIS	2.6
39	CP	18	LEU	2.6
48	CY	70	LEU	2.6
17	BM	16	VAL	2.6
19	BO	75	VAL	2.6
36	CM	10	GLU	2.6
37	CN	108	VAL	2.6
28	CD	159	LYS	2.6
31	CG	12	ALA	2.6
45	CV	91	LYS	2.6
49	CZ	4	LYS	2.6
13	BI	25	ASN	2.6
23	AS	30	PRO	2.6
11	AG	7	ILE	2.5
6	AB	52	GLU	2.5
6	AB	157	LEU	2.5
24	BT	80	THR	2.5
34	CK	93	ILE	2.5
49	CZ	28	LEU	2.5
33	CJ	64	ARG	2.5
46	CW	64	VAL	2.5
51	C1	2	VAL	2.5
11	BG	65	ALA	2.5
39	CP	96	GLY	2.5
41	CR	64	ILE	2.5
11	BG	22	LEU	2.5
27	CC	32	LEU	2.5
48	CY	21	LEU	2.5
14	BJ	7	ARG	2.5
18	AN	53	ARG	2.5
22	AR	73	ARG	2.5
23	BS	23	VAL	2.5
23	BS	78	ARG	2.5
43	CT	48	LYS	2.5
26	BL	93	VAL	2.5
2	BA	210	C	2.5
4	CA	268	C	2.5
27	CC	37	SER	2.5
41	CR	114	ALA	2.5
33	CJ	18	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
23	AS	5	LEU	2.5
15	AK	129	VAL	2.5
12	AH	54	ASP	2.5
2	BA	206	C	2.5
10	BF	8	PHE	2.5
23	AS	17	LYS	2.5
46	CW	46	LYS	2.5
14	AJ	89	ARG	2.5
20	AP	4	ILE	2.5
21	AQ	61	ILE	2.5
30	DF	79	ARG	2.5
13	BI	43	THR	2.5
18	BN	54	ASP	2.5
11	AG	26	PHE	2.5
14	BJ	49	PHE	2.5
2	BA	175	C	2.5
30	CF	41	GLU	2.5
33	CJ	9	LYS	2.5
33	CJ	17	ALA	2.5
3	DA	896	A	2.5
37	CN	61	GLY	2.5
42	CS	67	GLY	2.5
29	CE	12	LEU	2.5
14	BJ	98	VAL	2.5
28	CD	125	TRP	2.5
40	CQ	91	VAL	2.5
28	CD	15	PHE	2.5
37	CN	38	ARG	2.5
48	CY	73	ARG	2.5
17	BM	74	SER	2.5
30	CF	23	SER	2.5
54	C4	50	SER	2.5
30	CF	51	ASN	2.5
54	C4	28	LEU	2.5
30	CF	145	VAL	2.5
32	DH	108	VAL	2.5
32	DH	110	VAL	2.5
53	C3	30	VAL	2.5
3	DA	2168	G	2.5
32	CH	17	ASP	2.5
30	CF	106	ALA	2.5
33	DJ	62	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
7	BC	193	TYR	2.5
37	CN	60	GLN	2.5
8	BD	123	ILE	2.5
30	CF	108	PRO	2.5
38	CO	6	SER	2.5
38	CO	33	ILE	2.5
41	CR	18	LYS	2.5
2	BA	1362	A	2.5
2	BA	1363	A	2.5
4	CA	1084	A	2.5
3	DA	2118	U	2.5
32	CH	108	VAL	2.5
2	BA	212	G	2.5
9	BE	110	ALA	2.5
28	CD	206	ALA	2.5
33	DJ	43	ALA	2.5
34	CK	42	ALA	2.5
37	CN	45	GLN	2.5
31	DG	176	LYS	2.5
13	BI	118	LEU	2.5
29	CE	102	ARG	2.5
35	CL	82	ASN	2.5
33	DJ	23	VAL	2.5
43	CT	2	GLU	2.5
17	BM	31	LYS	2.5
17	BM	35	ALA	2.5
18	AN	21	ALA	2.5
29	CE	8	ALA	2.5
32	CH	148	GLN	2.5
32	CH	40	THR	2.5
7	AC	64	ILE	2.5
29	CE	76	PRO	2.4
33	CJ	87	SER	2.4
4	CA	665	U	2.4
6	AB	27	MET	2.4
47	CX	62	ASP	2.4
13	AI	17	ALA	2.4
31	CG	99	GLY	2.4
37	CN	35	ALA	2.4
39	CP	116	GLN	2.4
11	BG	103	TRP	2.4
13	BI	63	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
29	CE	155	GLU	2.4
11	BG	37	SER	2.4
20	BP	24	SER	2.4
35	CL	14	SER	2.4
6	AB	9	MET	2.4
8	AD	107	PHE	2.4
29	CE	156	ASN	2.4
33	DJ	112	LYS	2.4
43	CT	28	LYS	2.4
8	AD	99	ASP	2.4
29	CE	7	ASP	2.4
13	BI	5	GLN	2.4
53	C3	17	GLY	2.4
3	DA	1175	A	2.4
11	AG	78	ARG	2.4
25	BU	44	GLU	2.4
51	C1	21	LEU	2.4
44	CU	84	TYR	2.4
27	CC	219	VAL	2.4
49	CZ	25	GLN	2.4
28	CD	41	ALA	2.4
33	DJ	76	ALA	2.4
36	CM	18	ARG	2.4
48	CY	17	ARG	2.4
49	CZ	5	GLU	2.4
6	AB	187	VAL	2.4
13	BI	20	PHE	2.4
10	BF	1	MET	2.4
23	BS	26	GLY	2.4
39	CP	93	ASP	2.4
18	BN	21	ALA	2.4
20	AP	47	GLU	2.4
18	BN	30	ILE	2.4
1	AA	1493	A	2.4
33	DJ	131	THR	2.4
50	C0	56	VAL	2.4
26	BL	25	GLU	2.4
27	CC	85	ASN	2.4
29	CE	195	GLN	2.4
46	CW	43	ASP	2.4
30	CF	46	LYS	2.4
32	DH	89	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	79	G	2.4
11	AG	66	LEU	2.4
19	BO	56	LEU	2.4
6	BB	119	THR	2.4
12	AH	72	VAL	2.4
13	BI	23	PRO	2.4
17	BM	113	ARG	2.4
28	CD	179	ARG	2.4
29	CE	18	THR	2.4
37	CN	24	THR	2.4
50	C0	9	THR	2.4
8	AD	35	GLU	2.4
11	BG	9	GLN	2.4
28	CD	168	GLU	2.4
38	CO	56	LYS	2.4
47	CX	51	CYS	2.4
25	AU	47	ARG	2.4
33	DJ	102	ARG	2.4
8	AD	30	THR	2.4
2	BA	1236	A	2.4
4	CA	1057	A	2.4
21	BQ	82	ALA	2.4
8	AD	98	LEU	2.4
20	BP	6	LEU	2.4
36	CM	112	LEU	2.4
49	CZ	18	LEU	2.4
6	AB	131	LYS	2.4
25	AU	33	ARG	2.4
32	CH	122	ARG	2.4
40	CQ	61	ARG	2.4
48	CY	56	ARG	2.4
21	BQ	28	PHE	2.4
36	CM	51	GLU	2.4
37	CN	104	GLU	2.4
50	C0	32	GLY	2.4
4	CA	441	U	2.4
4	CA	1228	G	2.4
34	CK	21	THR	2.4
14	BJ	23	ALA	2.4
20	BP	7	ALA	2.4
32	DH	84	ALA	2.4
13	BI	72	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
32	DH	140	LYS	2.4
2	BA	1325	C	2.4
21	BQ	45	HIS	2.3
38	CO	102	PHE	2.3
39	CP	20	GLU	2.3
6	AB	47	VAL	2.3
21	AQ	76	VAL	2.3
21	BQ	66	PRO	2.3
51	C1	7	PRO	2.3
13	BI	17	ALA	2.3
39	CP	113	ALA	2.3
32	CH	11	ASN	2.3
34	CK	128	ASN	2.3
42	CS	79	ARG	2.3
46	CW	54	ALA	2.3
34	CK	140	LEU	2.3
42	CS	102	SER	2.3
50	C0	44	ARG	2.3
41	CR	97	ILE	2.3
39	CP	86	GLY	2.3
47	CX	32	GLY	2.3
18	AN	10	VAL	2.3
33	CJ	29	GLN	2.3
34	CK	74	TYR	2.3
54	C4	38	LYS	2.3
20	BP	35	ARG	2.3
29	CE	188	MET	2.3
30	CF	17	THR	2.3
31	CG	121	THR	2.3
32	CH	105	ALA	2.3
46	CW	74	ALA	2.3
2	BA	1270	G	2.3
4	CA	291	G	2.3
37	CN	88	ASN	2.3
4	CA	2173	A	2.3
3	DA	1172	C	2.3
3	DA	2161	C	2.3
11	BG	149	LYS	2.3
31	CG	43	LYS	2.3
32	CH	132	GLN	2.3
35	CL	62	VAL	2.3
39	CP	47	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
17	BM	11	ASP	2.3
30	CF	28	PRO	2.3
37	CN	40	ARG	2.3
43	CT	110	ARG	2.3
30	DF	1	ALA	2.3
31	CG	135	ALA	2.3
44	CU	38	ALA	2.3
14	AJ	76	ILE	2.3
52	C2	16	THR	2.3
52	C2	12	SER	2.3
6	AB	30	PHE	2.3
23	BS	54	GLY	2.3
27	CC	248	GLY	2.3
31	CG	56	GLY	2.3
4	CA	549	G	2.3
8	AD	44	ARG	2.3
20	AP	19	VAL	2.3
32	CH	143	VAL	2.3
32	DH	143	VAL	2.3
33	CJ	106	GLN	2.3
40	CQ	7	LEU	2.3
6	AB	28	LYS	2.3
21	BQ	74	THR	2.3
40	CQ	103	THR	2.3
9	AE	31	PHE	2.3
29	CE	85	PHE	2.3
53	C3	5	PHE	2.3
41	CR	47	ARG	2.3
28	CD	92	VAL	2.3
29	CE	187	VAL	2.3
1	AA	412	A	2.3
11	AG	25	LYS	2.3
19	AO	11	ILE	2.3
21	BQ	55	ILE	2.3
46	CW	86	LEU	2.3
7	BC	91	VAL	2.3
20	BP	2	VAL	2.3
34	CK	86	GLN	2.3
6	BB	73	LYS	2.3
24	BT	16	LYS	2.3
30	CF	162	ASP	2.3
33	DJ	55	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
40	CQ	37	LYS	2.3
6	BB	135	LEU	2.3
17	BM	26	GLY	2.3
36	CM	123	ARG	2.3
47	CX	67	PHE	2.3
8	AD	67	VAL	2.3
41	CR	87	VAL	2.3
33	CJ	91	LYS	2.3
41	CR	92	LYS	2.3
3	DA	2117	A	2.3
11	BG	70	ARG	2.3
17	BM	2	ALA	2.3
36	CM	138	ALA	2.3
8	AD	64	ILE	2.3
36	CM	34	GLY	2.3
24	BT	51	PHE	2.3
6	BB	163	VAL	2.3
13	BI	58	VAL	2.3
29	CE	113	VAL	2.3
33	DJ	45	THR	2.3
30	DF	177	ARG	2.3
47	CX	37	ARG	2.3
6	AB	68	LEU	2.3
25	AU	30	ALA	2.3
28	CD	84	LEU	2.3
41	CR	116	LEU	2.3
42	CS	3	ALA	2.3
12	AH	75	ILE	2.3
15	AK	77	TYR	2.3
32	CH	142	ILE	2.3
4	CA	279	A	2.3
5	CB	52	A	2.3
43	CT	75	PHE	2.3
52	C2	31	GLU	2.3
9	AE	103	THR	2.2
32	CH	20	ASN	2.2
29	CE	93	SER	2.2
34	CK	50	THR	2.2
51	C1	43	THR	2.2
24	BT	18	ARG	2.2
12	BH	130	ALA	2.2
29	CE	68	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
31	CG	125	PRO	2.2
14	BJ	40	ILE	2.2
29	CE	106	LYS	2.2
30	CF	78	ILE	2.2
46	CW	2	PHE	2.2
22	BR	20	GLU	2.2
37	CN	97	GLN	2.2
47	CX	15	GLU	2.2
6	BB	210	VAL	2.2
21	BQ	58	VAL	2.2
27	CC	100	ARG	2.2
32	DH	146	VAL	2.2
14	BJ	32	THR	2.2
11	BG	15	ASP	2.2
17	BM	94	GLY	2.2
33	CJ	92	PRO	2.2
23	AS	44	MET	2.2
32	CH	94	ILE	2.2
35	CL	41	ILE	2.2
6	BB	213	TYR	2.2
21	BQ	60	GLU	2.2
32	CH	76	GLU	2.2
35	CL	100	PHE	2.2
41	CR	35	PHE	2.2
4	CA	440	C	2.2
19	AO	17	ARG	2.2
23	BS	28	LYS	2.2
31	CG	29	ASN	2.2
2	BA	1313	U	2.2
2	BA	1331	G	2.2
3	DA	2127	G	2.2
6	AB	141	LEU	2.2
6	BB	71	GLY	2.2
11	BG	48	GLU	2.2
20	AP	39	PHE	2.2
21	BQ	64	CYS	2.2
26	BL	82	ILE	2.2
51	C1	55	ALA	2.2
6	BB	96	TRP	2.2
11	BG	111	ARG	2.2
31	CG	34	ARG	2.2
11	AG	73	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
12	AH	69	LYS	2.2
6	AB	42	ASN	2.2
4	CA	1090	A	2.2
6	AB	138	THR	2.2
18	BN	32	ASP	2.2
24	BT	14	SER	2.2
23	AS	69	HIS	2.2
29	CE	2	GLU	2.2
42	CS	94	THR	2.2
32	DH	131	PHE	2.2
35	CL	95	ILE	2.2
46	CW	4	ILE	2.2
21	AQ	9	GLN	2.2
30	CF	114	ARG	2.2
16	AL	30	LYS	2.2
42	CS	83	TYR	2.2
4	CA	2146	C	2.2
28	CD	177	VAL	2.2
34	CK	73	VAL	2.2
48	CY	66	VAL	2.2
14	BJ	91	ASP	2.2
3	DA	2158	A	2.2
20	BP	16	PHE	2.2
23	AS	38	SER	2.2
23	BS	16	LEU	2.2
36	DM	144	GLU	2.2
39	CP	112	GLU	2.2
6	AB	139	ARG	2.2
23	BS	25	SER	2.2
28	CD	35	THR	2.2
32	DH	63	ALA	2.2
32	DH	64	ALA	2.2
36	CM	23	ILE	2.2
36	CM	72	ALA	2.2
11	AG	76	LYS	2.2
18	BN	76	LYS	2.2
24	AT	68	HIS	2.2
26	BL	15	LYS	2.2
36	CM	135	ILE	2.2
4	CA	2124	G	2.2
14	AJ	77	VAL	2.2
20	AP	71	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
24	BT	15	GLU	2.2
31	CG	90	GLY	2.2
32	DH	126	GLU	2.2
44	CU	25	GLU	2.2
46	CW	59	GLU	2.2
4	CA	1460	U	2.2
14	BJ	9	ARG	2.2
37	CN	102	LEU	2.2
43	CT	68	ASP	2.2
15	AK	14	LYS	2.2
53	C3	31	LEU	2.2
15	AK	96	THR	2.2
23	AS	77	THR	2.2
29	CE	73	ILE	2.2
30	CF	161	SER	2.2
31	CG	149	ALA	2.2
36	CM	103	ILE	2.2
36	CM	111	ILE	2.2
44	CU	17	SER	2.2
46	CW	39	ALA	2.2
44	CU	24	MET	2.2
46	CW	81	PRO	2.2
27	CC	93	VAL	2.2
32	CH	19	VAL	2.2
4	CA	245	G	2.2
4	CA	1092	C	2.2
14	BJ	48	ARG	2.2
18	BN	11	LYS	2.2
24	AT	65	GLY	2.2
31	CG	60	GLY	2.2
33	DJ	64	ARG	2.2
50	C0	18	LYS	2.2
32	DH	66	ASN	2.2
10	BF	36	ILE	2.2
24	BT	56	PRO	2.2
37	CN	132	THR	2.2
43	CT	108	SER	2.2
52	C2	30	PRO	2.2
17	BM	101	ARG	2.2
4	CA	587	C	2.2
6	BB	214	LEU	2.2
36	CM	61	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
40	CQ	39	LEU	2.2
11	BG	46	ALA	2.2
20	AP	7	ALA	2.2
47	CX	74	ASN	2.2
54	C4	36	ALA	2.2
6	BB	154	MET	2.2
33	CJ	38	CYS	2.2
8	AD	142	VAL	2.2
20	BP	25	ARG	2.2
37	CN	62	LYS	2.2
51	C1	15	ARG	2.2
39	CP	36	TYR	2.2
51	C1	29	VAL	2.2
53	C3	41	ARG	2.2
6	AB	65	GLY	2.1
13	BI	24	GLY	2.1
27	CC	102	TYR	2.2
28	CD	44	GLY	2.1
30	DF	82	TYR	2.2
23	AS	47	LEU	2.1
27	CC	92	LEU	2.1
36	CM	66	PHE	2.1
40	CQ	30	TRP	2.1
2	BA	1320	C	2.1
24	AT	57	ILE	2.1
44	CU	91	GLN	2.1
2	BA	79	G	2.1
4	CA	1339	G	2.1
24	BT	8	LYS	2.1
55	C5	6	SER	2.1
37	CN	7	THR	2.1
37	CN	114	ARG	2.1
12	BH	110	VAL	2.1
21	BQ	29	VAL	2.1
11	BG	50	LEU	2.1
29	CE	60	TRP	2.1
37	CN	65	ILE	2.1
32	CH	116	ARG	2.1
35	CL	108	ARG	2.1
38	CO	120	GLU	2.1
11	AG	43	VAL	2.1
30	CF	88	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
33	CJ	15	GLY	2.1
33	DJ	59	THR	2.1
33	DJ	136	GLY	2.1
37	CN	26	VAL	2.1
8	AD	93	LEU	2.1
30	CF	15	LEU	2.1
35	CL	21	CYS	2.1
38	CO	115	LEU	2.1
42	CS	85	LYS	2.1
13	BI	92	GLU	2.1
39	CP	87	ILE	2.1
50	C0	4	ILE	2.1
49	CZ	58	ASN	2.1
4	CA	61	C	2.1
4	CA	2178	C	2.1
17	AM	64	VAL	2.1
36	CM	11	GLY	2.1
37	CN	135	VAL	2.1
14	BJ	65	TYR	2.1
21	AQ	8	LEU	2.1
31	CG	70	LEU	2.1
23	AS	56	GLN	2.1
23	AS	64	ASP	2.1
6	AB	200	ILE	2.1
14	BJ	100	ILE	2.1
28	CD	71	ALA	2.1
39	CP	11	ALA	2.1
44	CU	54	GLU	2.1
35	CL	90	ASN	2.1
4	CA	1606	C	2.1
34	DK	1	MET	2.1
7	BC	173	VAL	2.1
9	BE	23	LYS	2.1
33	DJ	87	SER	2.1
43	CT	106	VAL	2.1
49	CZ	35	GLY	2.1
28	CD	113	SER	2.1
52	C2	13	SER	2.1
6	AB	46	THR	2.1
14	BJ	28	THR	2.1
15	AK	111	THR	2.1
17	BM	3	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
40	CQ	75	THR	2.1
32	DH	138	PHE	2.1
33	CJ	140	GLU	2.1
37	CN	78	LEU	2.1
38	CO	8	ARG	2.1
4	CA	1179	G	2.1
29	CE	25	GLU	2.1
4	CA	931	U	2.1
15	AK	103	ALA	2.1
17	AM	39	ILE	2.1
33	DJ	103	ALA	2.1
2	BA	80	A	2.1
9	BE	135	ASN	2.1
29	CE	98	LYS	2.1
35	CL	111	LYS	2.1
24	AT	54	MET	2.1
32	DH	1	MET	2.1
36	CM	140	GLY	2.1
6	AB	196	VAL	2.1
25	AU	32	VAL	2.1
6	BB	39	HIS	2.1
13	BI	122	ARG	2.1
30	CF	149	ARG	2.1
31	CG	126	THR	2.1
4	CA	2585	U	2.1
6	AB	164	ILE	2.1
31	CG	145	ALA	2.1
27	CC	236	GLY	2.1
32	DH	88	GLY	2.1
41	CR	81	GLY	2.1
40	CQ	33	GLU	2.1
11	BG	11	LYS	2.1
30	CF	50	ASP	2.1
30	CF	144	LYS	2.1
4	CA	1083	U	2.1
14	AJ	6	ILE	2.1
32	CH	101	ASP	2.1
20	AP	58	ALA	2.1
28	CD	47	ALA	2.1
32	CH	69	ALA	2.1
41	CR	34	ALA	2.1
6	BB	108	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
18	BN	41	ARG	2.1
23	BS	19	VAL	2.1
28	CD	126	ASN	2.1
32	CH	103	VAL	2.1
38	CO	32	GLU	2.1
4	CA	22	C	2.1
6	BB	114	LEU	2.1
11	BG	20	SER	2.1
20	AP	16	PHE	2.1
32	CH	138	PHE	2.1
31	CG	87	GLN	2.1
4	CA	2182	U	2.1
6	BB	83	ALA	2.1
15	AK	47	ALA	2.1
17	BM	4	ILE	2.1
34	CK	94	ALA	2.1
38	CO	36	THR	2.1
46	DW	63	ILE	2.1
11	BG	102	ARG	2.1
18	BN	61	ARG	2.1
24	BT	25	ARG	2.1
37	CN	39	GLY	2.1
44	DU	69	ARG	2.1
8	AD	101	VAL	2.1
43	CT	71	VAL	2.1
44	CU	82	LYS	2.1
2	BA	102	G	2.1
11	AG	50	LEU	2.0
51	C1	38	LEU	2.0
4	CA	74	A	2.0
4	CA	1169	A	2.0
21	BQ	72	SER	2.0
13	BI	65	ILE	2.0
33	DJ	48	ILE	2.0
44	CU	69	ARG	2.0
46	CW	29	ILE	2.0
48	CY	13	THR	2.0
50	C0	42	ALA	2.0
37	CN	8	LYS	2.0
6	AB	221	VAL	2.0
10	BF	96	VAL	2.0
6	AB	91	PHE	2.0

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Mol	Chain	Res	Type	RSRZ
8	AD	191	LEU	2.0
21	BQ	75	LEU	2.0
24	BT	82	GLN	2.0
38	CO	18	GLN	2.0
3	DA	2133	G	2.0
38	CO	17	ARG	2.0
3	DA	2147	A	2.0
13	BI	6	TYR	2.0
33	CJ	109	ALA	2.0
14	BJ	82	LYS	2.0
28	CD	112	THR	2.0
38	CO	114	GLU	2.0
41	CR	40	LYS	2.0
54	C4	15	LYS	2.0
18	BN	33	VAL	2.0
32	DH	21	VAL	2.0
45	CV	33	VAL	2.0
10	AF	17	GLN	2.0
11	AG	86	GLN	2.0
29	CE	5	LEU	2.0
40	CQ	58	PHE	2.0
23	BS	81	ARG	2.0
36	CM	33	ARG	2.0
41	CR	42	GLY	2.0
43	CT	35	ILE	2.0
3	DA	2165	C	2.0
3	DA	2885	G	2.0
22	BR	51	TYR	2.0
24	BT	58	VAL	2.0
27	CC	77	VAL	2.0
33	DJ	16	MET	2.0
10	BF	91	ARG	2.0
12	BH	11	LEU	2.0
43	CT	87	PRO	2.0
45	DV	52	ASN	2.0
52	C2	44	GLN	2.0
9	BE	91	GLY	2.0
36	CM	98	ALA	2.0
44	CU	90	GLY	2.0
1	AA	87	C	2.0
2	BA	207	C	2.0
29	CE	101	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
54	C4	63	TYR	2.0
4	CA	273	G	2.0
6	BB	80	VAL	2.0
32	CH	137	VAL	2.0
32	DH	68	ARG	2.0
35	CL	10	VAL	2.0
11	AG	13	LEU	2.0
20	BP	74	LEU	2.0
30	CF	48	LEU	2.0
42	CS	43	ASN	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	3TD	DA	1915	21/22	0.96	0.09	59,91,109,122	0
1	G7M	AA	527	24/25	0.97	0.13	56,75,85,87	0
1	2MG	AA	966	24/25	0.97	0.15	48,77,86,88	0
1	5MC	AA	967	21/22	0.97	0.19	69,77,90,103	0
1	2MG	AA	1207	24/25	0.97	0.11	54,77,99,121	0
3	PSU	DA	1911	20/21	0.97	0.10	51,84,101,113	0
1	PSU	AA	516	20/21	0.97	0.09	53,86,108,117	0
1	UR3	AA	1498	21/22	0.98	0.13	32,52,68,74	0
1	MA6	AA	1519	24/25	0.98	0.17	37,65,78,84	0
1	4OC	AA	1402	22/23	0.98	0.15	44,63,81,91	0
1	5MC	AA	1407	21/22	0.98	0.12	45,56,73,104	0
3	PSU	DA	1917	20/21	0.98	0.09	42,78,92,94	0
3	5MU	DA	1939	21/22	0.98	0.16	9,38,57,72	0
16	D2T	AL	89	10/11	0.98	0.20	44,60,96,108	0
56	MEQ	DD	150	10/11	0.98	0.16	6,23,48,48	0
3	6MZ	DA	1618	23/24	0.99	0.17	7,32,46,47	0
3	2MG	DA	1835	24/25	0.99	0.13	27,50,59,62	0
1	MA6	AA	1518	24/25	0.99	0.13	21,41,61,72	0
1	2MG	AA	1516	24/25	0.99	0.12	33,63,70,86	0
3	1MG	DA	745	24/25	0.99	0.17	5,29,42,63	0
3	PSU	DA	746	20/21	0.99	0.14	3,21,34,43	0
3	5MC	DA	1962	21/22	0.99	0.13	35,51,64,84	0
3	6MZ	DA	2030	23/24	0.99	0.15	2,12,24,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	G7M	DA	2069	24/25	0.99	0.14	8,35,48,61	0
3	OMG	DA	2251	24/25	0.99	0.15	3,28,44,58	0
3	2MG	DA	2445	24/25	0.99	0.15	13,28,44,45	0
3	H2U	DA	2449	20/21	0.99	0.16	3,20,42,50	0
3	PSU	DA	2457	20/21	0.99	0.14	3,30,46,59	0
3	OMC	DA	2498	21/22	0.99	0.16	3,20,38,49	0
3	2MA	DA	2503	23/24	0.99	0.16	3,24,39,56	0
3	PSU	DA	2504	20/21	0.99	0.14	2,22,42,46	0
3	OMU	DA	2552	21/22	0.99	0.14	13,27,47,70	0
3	PSU	DA	2580	20/21	0.99	0.16	6,38,52,53	0
3	PSU	DA	2604	20/21	0.99	0.12	14,33,48,70	0
3	PSU	DA	2605	20/21	0.99	0.12	12,38,48,57	0
3	5MU	DA	747	21/22	0.99	0.15	3,19,31,42	0
3	PSU	DA	955	20/21	0.99	0.15	8,30,58,70	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3154	1/1	-0.07	0.57	134,134,134,134	0
58	MG	CA	3129	1/1	0.10	0.31	176,176,176,176	0
58	MG	CA	3068	1/1	0.39	0.23	181,181,181,181	0
58	MG	BA	1643	1/1	0.45	0.15	171,171,171,171	0
58	MG	CA	3084	1/1	0.47	0.41	163,163,163,163	0
58	MG	CA	3159	1/1	0.55	1.10	202,202,202,202	0
58	MG	CA	3157	1/1	0.65	0.32	157,157,157,157	0
66	PEG	DP	201	7/7	0.66	0.65	78,92,105,106	0
60	MPD	DE	302	8/8	0.68	0.61	135,162,187,187	0
58	MG	CA	3135	1/1	0.68	0.14	158,158,158,158	0
58	MG	CA	3017	1/1	0.69	0.42	112,112,112,112	0
58	MG	D5	102	1/1	0.69	0.71	207,207,207,207	0
58	MG	CA	3050	1/1	0.71	0.19	181,181,181,181	0
58	MG	CA	3049	1/1	0.72	0.41	188,188,188,188	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3144	1/1	0.72	0.40	143,143,143,143	0
66	PEG	DA	3063	7/7	0.73	0.75	82,120,134,137	0
63	PUT	DA	3054	6/6	0.73	0.39	38,81,86,88	0
66	PEG	DQ	201	7/7	0.74	0.91	109,111,119,123	0
58	MG	CA	3044	1/1	0.75	0.15	157,157,157,157	0
58	MG	CA	3140	1/1	0.75	0.32	161,161,161,161	0
59	PGE	DT	202	10/10	0.76	0.53	78,121,145,152	0
60	MPD	DT	201	8/8	0.76	0.55	115,144,166,166	0
59	PGE	DD	301	10/10	0.77	0.68	82,129,155,165	0
58	MG	CA	3176	1/1	0.78	0.10	128,128,128,128	0
58	MG	BA	1642	1/1	0.78	0.27	120,120,120,120	0
60	MPD	DA	3072	8/8	0.78	0.96	117,148,172,178	0
58	MG	BA	1612	1/1	0.79	0.07	135,135,135,135	0
60	MPD	DE	301	8/8	0.79	0.71	142,176,194,201	0
58	MG	CA	3173	1/1	0.79	0.73	201,201,201,201	0
58	MG	CA	3102	1/1	0.79	0.92	199,199,199,199	0
66	PEG	D1	102	7/7	0.80	0.41	57,70,83,89	0
58	MG	BA	1609	1/1	0.81	0.18	141,141,141,141	0
58	MG	BA	1637	1/1	0.81	0.14	143,143,143,143	0
63	PUT	DP	202	6/6	0.81	1.09	98,114,117,119	0
58	MG	BA	1638	1/1	0.81	0.10	156,156,156,156	0
58	MG	CA	3027	1/1	0.81	0.14	94,94,94,94	0
58	MG	CA	3036	1/1	0.81	0.20	67,67,67,67	0
58	MG	CB	201	1/1	0.81	0.04	131,131,131,131	0
63	PUT	DA	3069	6/6	0.83	0.38	53,86,95,96	0
58	MG	CA	3133	1/1	0.83	0.41	163,163,163,163	0
58	MG	AA	1606	1/1	0.84	0.23	77,77,77,77	0
58	MG	CA	3052	1/1	0.85	0.14	136,136,136,136	0
59	PGE	D3	101	10/10	0.85	0.64	97,121,145,145	0
58	MG	CA	3118	1/1	0.85	0.20	207,207,207,207	0
58	MG	BA	1602	1/1	0.85	0.21	74,74,74,74	0
58	MG	CA	3075	1/1	0.85	0.10	107,107,107,107	0
60	MPD	DK	201	8/8	0.85	0.31	113,136,162,162	0
58	MG	CA	3008	1/1	0.85	0.24	97,97,97,97	0
60	MPD	AA	1615	8/8	0.86	0.62	83,114,154,154	0
58	MG	CA	3047	1/1	0.86	0.25	170,170,170,170	0
58	MG	CA	3021	1/1	0.86	0.38	83,83,83,83	0
58	MG	CA	3043	1/1	0.86	0.26	69,69,69,69	0
58	MG	CA	3014	1/1	0.86	0.13	82,82,82,82	0
58	MG	CA	3053	1/1	0.86	0.16	123,123,123,123	0
61	PG4	BA	1607	13/13	0.86	0.28	77,89,111,117	0
67	EDO	DB	202	4/4	0.86	0.21	74,84,88,90	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3045	1/1	0.87	0.08	133,133,133,133	0
58	MG	CA	3155	1/1	0.87	0.13	110,110,110,110	0
58	MG	CA	3145	1/1	0.87	0.04	119,119,119,119	0
63	PUT	DA	3032	6/6	0.87	0.28	50,68,76,81	0
58	MG	CA	3048	1/1	0.88	0.09	172,172,172,172	0
58	MG	CA	3096	1/1	0.88	0.14	111,111,111,111	0
59	PGE	DU	101	10/10	0.88	0.34	59,92,160,162	0
67	EDO	DA	3076	4/4	0.88	0.34	74,92,96,101	0
58	MG	CA	3083	1/1	0.88	0.36	135,135,135,135	0
58	MG	CA	3109	1/1	0.89	0.11	112,112,112,112	0
58	MG	CA	3113	1/1	0.89	0.10	106,106,106,106	0
58	MG	CA	3164	1/1	0.89	0.10	117,117,117,117	0
58	MG	CA	3117	1/1	0.89	0.28	143,143,143,143	0
61	PG4	DR	202	13/13	0.89	0.47	93,108,117,118	0
58	MG	CA	3066	1/1	0.89	0.44	141,141,141,141	0
58	MG	CA	3026	1/1	0.89	0.30	89,89,89,89	0
58	MG	CA	3131	1/1	0.89	0.08	142,142,142,142	0
58	MG	CA	3070	1/1	0.89	0.32	199,199,199,199	0
58	MG	BA	1604	1/1	0.89	0.35	70,70,70,70	0
58	MG	BA	1605	1/1	0.89	0.10	107,107,107,107	0
58	MG	AA	1612	1/1	0.89	0.35	71,71,71,71	0
58	MG	CA	3086	1/1	0.89	0.11	136,136,136,136	0
67	EDO	DA	3060	4/4	0.89	0.44	55,57,80,84	0
58	MG	CA	3019	1/1	0.89	0.33	84,84,84,84	0
58	MG	AA	1609	1/1	0.89	0.13	69,69,69,69	0
58	MG	CA	3059	1/1	0.90	0.30	167,167,167,167	0
58	MG	CA	3119	1/1	0.90	0.04	112,112,112,112	0
63	PUT	D5	101	6/6	0.90	0.33	82,99,108,108	0
65	ACY	DA	3055	4/4	0.90	0.21	43,67,78,78	0
58	MG	CA	3098	1/1	0.90	0.54	171,171,171,171	0
58	MG	AA	1610	1/1	0.90	0.13	82,82,82,82	0
58	MG	AA	1611	1/1	0.90	0.30	65,65,65,65	0
58	MG	CA	3158	1/1	0.90	0.08	132,132,132,132	0
58	MG	BA	1615	1/1	0.90	0.07	124,124,124,124	0
58	MG	CA	3090	1/1	0.90	0.08	134,134,134,134	0
58	MG	CA	3170	1/1	0.90	0.10	111,111,111,111	0
58	MG	BA	1618	1/1	0.91	0.05	107,107,107,107	0
58	MG	BA	1606	1/1	0.91	0.13	60,60,60,60	0
58	MG	DA	3051	1/1	0.91	0.24	57,57,57,57	0
58	MG	DA	3056	1/1	0.91	0.22	69,69,69,69	0
58	MG	CA	3168	1/1	0.91	0.12	93,93,93,93	0
58	MG	CA	3120	1/1	0.91	0.10	143,143,143,143	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3079	1/1	0.91	0.10	156,156,156,156	0
58	MG	CA	3022	1/1	0.91	0.18	89,89,89,89	0
58	MG	CA	3002	1/1	0.91	0.38	70,70,70,70	0
58	MG	CR	201	1/1	0.91	0.31	75,75,75,75	0
58	MG	CA	3005	1/1	0.91	0.09	81,81,81,81	0
58	MG	CA	3032	1/1	0.91	0.28	79,79,79,79	0
59	PGE	DS	201	10/10	0.91	0.28	38,84,110,122	0
66	PEG	DA	3062	7/7	0.91	0.37	56,86,100,103	0
58	MG	BA	1611	1/1	0.91	0.07	136,136,136,136	0
58	MG	CA	3037	1/1	0.91	0.26	63,63,63,63	0
58	MG	CA	3061	1/1	0.91	0.13	139,139,139,139	0
58	MG	CA	3065	1/1	0.91	0.11	115,115,115,115	0
67	EDO	DA	3059	4/4	0.91	0.33	50,62,77,77	0
60	MPD	DA	3045	8/8	0.91	0.62	69,120,140,144	0
60	MPD	DA	3046	8/8	0.91	0.26	56,87,103,110	0
60	MPD	DA	3071	8/8	0.91	0.37	52,97,138,149	0
67	EDO	DR	204	4/4	0.91	0.41	49,74,82,89	0
61	PG4	DA	3048	13/13	0.92	0.47	48,76,98,100	0
58	MG	CA	3025	1/1	0.92	0.12	84,84,84,84	0
59	PGE	DA	3066	10/10	0.92	0.32	52,88,126,129	0
58	MG	AA	1616	1/1	0.92	0.34	91,91,91,91	0
58	MG	CA	3148	1/1	0.92	0.15	126,126,126,126	0
58	MG	DA	3039	1/1	0.92	0.27	82,82,82,82	0
58	MG	CA	3030	1/1	0.92	0.10	67,67,67,67	0
58	MG	CA	3015	1/1	0.92	0.15	91,91,91,91	0
66	PEG	DA	3061	7/7	0.92	0.32	52,94,106,108	0
58	MG	BA	1634	1/1	0.92	0.16	114,114,114,114	0
58	MG	CA	3122	1/1	0.92	0.28	109,109,109,109	0
66	PEG	DA	3073	7/7	0.92	0.41	53,58,93,101	0
58	MG	CA	3125	1/1	0.92	0.14	115,115,115,115	0
58	MG	CA	3056	1/1	0.92	0.11	130,130,130,130	0
58	MG	AA	1623	1/1	0.92	0.35	107,107,107,107	0
66	PEG	D3	102	7/7	0.92	0.55	82,87,94,100	0
58	MG	AA	1631	1/1	0.92	0.10	100,100,100,100	0
58	MG	CA	3134	1/1	0.92	0.12	145,145,145,145	0
58	MG	AA	1636	1/1	0.92	0.07	101,101,101,101	0
58	MG	CM	201	1/1	0.92	0.24	135,135,135,135	0
58	MG	CA	3023	1/1	0.92	0.30	82,82,82,82	0
58	MG	CA	3035	1/1	0.93	0.34	66,66,66,66	0
58	MG	CA	3004	1/1	0.93	0.25	80,80,80,80	0
62	SPD	DA	3070	10/10	0.93	0.27	59,83,96,97	0
58	MG	CA	3136	1/1	0.93	0.18	143,143,143,143	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1635	1/1	0.93	0.07	112,112,112,112	0
58	MG	CA	3110	1/1	0.93	0.06	136,136,136,136	0
58	MG	CA	3071	1/1	0.93	0.16	118,118,118,118	0
58	MG	CA	3072	1/1	0.93	0.08	95,95,95,95	0
58	MG	CA	3018	1/1	0.93	0.13	75,75,75,75	0
58	MG	CA	3054	1/1	0.93	0.06	98,98,98,98	0
58	MG	CA	3156	1/1	0.93	0.09	142,142,142,142	0
58	MG	CA	3082	1/1	0.93	0.18	137,137,137,137	0
58	MG	DA	3038	1/1	0.93	0.28	56,56,56,56	0
60	MPD	DA	3067	8/8	0.93	0.52	79,113,125,135	0
58	MG	CA	3123	1/1	0.93	0.05	103,103,103,103	0
58	MG	CA	3009	1/1	0.93	0.18	85,85,85,85	0
58	MG	CA	3126	1/1	0.93	0.31	183,183,183,183	0
67	EDO	DA	3058	4/4	0.93	0.30	62,73,84,87	0
58	MG	CA	3060	1/1	0.93	0.13	114,114,114,114	0
58	MG	CA	3130	1/1	0.93	0.10	149,149,149,149	0
60	MPD	DN	201	8/8	0.93	0.38	51,89,115,115	0
58	MG	CA	3031	1/1	0.93	0.10	64,64,64,64	0
58	MG	AA	1618	1/1	0.93	0.10	105,105,105,105	0
67	EDO	D1	101	4/4	0.93	0.19	47,52,68,74	0
58	MG	CA	3175	1/1	0.94	0.07	107,107,107,107	0
65	ACY	DA	3044	4/4	0.94	0.18	60,73,98,98	0
58	MG	CA	3141	1/1	0.94	0.20	129,129,129,129	0
58	MG	CA	3012	1/1	0.94	0.17	82,82,82,82	0
58	MG	AA	1608	1/1	0.94	0.15	64,64,64,64	0
58	MG	CA	3091	1/1	0.94	0.15	153,153,153,153	0
58	MG	BA	1610	1/1	0.94	0.13	78,78,78,78	0
58	MG	CA	3034	1/1	0.94	0.11	60,60,60,60	0
58	MG	CA	3058	1/1	0.94	0.15	124,124,124,124	0
58	MG	CA	3103	1/1	0.94	0.19	98,98,98,98	0
58	MG	AA	1648	1/1	0.94	0.13	96,96,96,96	0
58	MG	CA	3077	1/1	0.94	0.10	139,139,139,139	0
62	SPD	DA	3031	10/10	0.94	0.25	27,70,87,89	0
58	MG	BA	1649	1/1	0.94	0.12	107,107,107,107	0
58	MG	DA	3139	1/1	0.94	0.05	85,85,85,85	0
60	MPD	DA	3043	8/8	0.94	0.16	75,104,118,125	0
58	MG	CA	3062	1/1	0.94	0.10	102,102,102,102	0
58	MG	CA	3051	1/1	0.94	0.04	129,129,129,129	0
58	MG	BA	1645	1/1	0.95	0.06	94,94,94,94	0
58	MG	BA	1636	1/1	0.95	0.16	131,131,131,131	0
63	PUT	DM	201	6/6	0.95	0.23	25,58,65,71	0
58	MG	DA	3026	1/1	0.95	0.26	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	3033	1/1	0.95	0.18	52,52,52,52	0
64	1PE	DA	3065	16/16	0.95	0.23	40,72,82,90	0
58	MG	CA	3007	1/1	0.95	0.33	83,83,83,83	0
58	MG	CA	3039	1/1	0.95	0.26	74,74,74,74	0
58	MG	CA	3163	1/1	0.95	0.15	113,113,113,113	0
58	MG	CA	3132	1/1	0.95	0.32	177,177,177,177	0
58	MG	BA	1603	1/1	0.95	0.15	65,65,65,65	0
58	MG	BA	1627	1/1	0.95	0.06	81,81,81,81	0
58	MG	CA	3112	1/1	0.95	0.12	102,102,102,102	0
58	MG	CA	3080	1/1	0.95	0.25	111,111,111,111	0
58	MG	CA	3138	1/1	0.95	0.06	117,117,117,117	0
58	MG	CA	3010	1/1	0.95	0.15	89,89,89,89	0
58	MG	AA	1655	1/1	0.95	0.09	148,148,148,148	0
58	MG	AA	1602	1/1	0.95	0.10	73,73,73,73	0
58	MG	DA	3074	1/1	0.95	0.30	75,75,75,75	0
59	PGE	AA	1613	10/10	0.95	0.16	41,88,109,113	0
67	EDO	DB	201	4/4	0.95	0.19	62,69,70,77	0
58	MG	CA	3087	1/1	0.95	0.10	139,139,139,139	0
67	EDO	DB	203	4/4	0.95	0.15	61,72,76,79	0
58	MG	CA	3151	1/1	0.95	0.21	92,92,92,92	0
58	MG	CA	3152	1/1	0.95	0.09	138,138,138,138	0
68	GUN	DA	3078	11/11	0.95	0.20	77,96,105,107	0
63	PUT	DA	3037	6/6	0.96	0.12	28,40,58,59	0
58	MG	CA	3115	1/1	0.96	0.08	109,109,109,109	0
58	MG	DA	3053	1/1	0.96	0.23	44,44,44,44	0
58	MG	DA	3020	1/1	0.96	0.06	46,46,46,46	0
58	MG	BA	1644	1/1	0.96	0.04	94,94,94,94	0
58	MG	DA	3089	1/1	0.96	0.16	46,46,46,46	0
58	MG	CA	3153	1/1	0.96	0.11	96,96,96,96	0
58	MG	AA	1656	1/1	0.96	0.05	94,94,94,94	0
58	MG	CA	3033	1/1	0.96	0.34	60,60,60,60	0
58	MG	CA	3124	1/1	0.96	0.09	115,115,115,115	0
58	MG	AA	1637	1/1	0.96	0.16	92,92,92,92	0
58	MG	CA	3092	1/1	0.96	0.12	93,93,93,93	0
58	MG	CA	3127	1/1	0.96	0.03	106,106,106,106	0
58	MG	CA	3094	1/1	0.96	0.06	118,118,118,118	0
58	MG	DA	3009	1/1	0.96	0.17	54,54,54,54	0
60	MPD	DA	3077	8/8	0.96	0.30	44,97,123,123	0
58	MG	CA	3166	1/1	0.96	0.10	123,123,123,123	0
58	MG	DA	3041	1/1	0.96	0.34	52,52,52,52	0
58	MG	CA	3100	1/1	0.96	0.24	149,149,149,149	0
58	MG	CA	3171	1/1	0.96	0.12	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
67	EDO	DA	3075	4/4	0.96	0.23	68,83,95,95	0
58	MG	CA	3073	1/1	0.96	0.12	109,109,109,109	0
58	MG	CA	3074	1/1	0.96	0.45	159,159,159,159	0
58	MG	CA	3107	1/1	0.96	0.18	92,92,92,92	0
58	MG	DA	3047	1/1	0.96	0.17	52,52,52,52	0
58	MG	CA	3038	1/1	0.96	0.09	61,61,61,61	0
58	MG	DA	3049	1/1	0.96	0.13	56,56,56,56	0
58	MG	DA	3017	1/1	0.96	0.15	60,60,60,60	0
58	MG	CA	3089	1/1	0.97	0.25	148,148,148,148	0
58	MG	CA	3028	1/1	0.97	0.10	73,73,73,73	0
58	MG	CA	3029	1/1	0.97	0.15	59,59,59,59	0
58	MG	AA	1630	1/1	0.97	0.16	89,89,89,89	0
58	MG	BA	1648	1/1	0.97	0.07	91,91,91,91	0
58	MG	AA	1645	1/1	0.97	0.09	93,93,93,93	0
58	MG	CA	3142	1/1	0.97	0.06	103,103,103,103	0
58	MG	CA	3097	1/1	0.97	0.21	115,115,115,115	0
58	MG	AA	1605	1/1	0.97	0.33	54,54,54,54	0
58	MG	CA	3011	1/1	0.97	0.14	87,87,87,87	0
58	MG	CA	3149	1/1	0.97	0.13	111,111,111,111	0
58	MG	CA	3101	1/1	0.97	0.24	147,147,147,147	0
58	MG	CA	3063	1/1	0.97	0.11	92,92,92,92	0
58	MG	BA	1613	1/1	0.97	0.04	96,96,96,96	0
58	MG	CA	3106	1/1	0.97	0.12	106,106,106,106	0
58	MG	DA	3018	1/1	0.97	0.19	49,49,49,49	0
61	PG4	DQ	202	13/13	0.97	0.12	42,58,66,70	0
58	MG	CA	3067	1/1	0.97	0.17	117,117,117,117	0
61	PG4	DS	202	13/13	0.97	0.19	29,44,81,89	0
58	MG	AA	1632	1/1	0.97	0.08	63,63,63,63	0
58	MG	CA	3111	1/1	0.97	0.25	55,55,55,55	0
58	MG	CA	3069	1/1	0.97	0.09	96,96,96,96	0
58	MG	CA	3160	1/1	0.97	0.11	157,157,157,157	0
58	MG	CA	3161	1/1	0.97	0.08	78,78,78,78	0
58	MG	CA	3016	1/1	0.97	0.16	100,100,100,100	0
58	MG	AA	1601	1/1	0.97	0.21	54,54,54,54	0
58	MG	CA	3165	1/1	0.97	0.15	84,84,84,84	0
58	MG	CA	3116	1/1	0.97	0.06	106,106,106,106	0
58	MG	CA	3041	1/1	0.97	0.14	75,75,75,75	0
58	MG	DA	3027	1/1	0.97	0.13	77,77,77,77	0
58	MG	DA	3029	1/1	0.97	0.22	57,57,57,57	0
58	MG	CA	3172	1/1	0.97	0.07	94,94,94,94	0
58	MG	CA	3020	1/1	0.97	0.13	71,71,71,71	0
58	MG	CA	3174	1/1	0.97	0.09	123,123,123,123	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3121	1/1	0.97	0.06	88,88,88,88	0
58	MG	CA	3076	1/1	0.97	0.17	105,105,105,105	0
58	MG	CA	3046	1/1	0.97	0.17	107,107,107,107	0
58	MG	CB	203	1/1	0.97	0.07	123,123,123,123	0
58	MG	CA	3078	1/1	0.97	0.15	73,73,73,73	0
67	EDO	DA	3052	4/4	0.97	0.20	48,48,57,58	0
67	EDO	DA	3057	4/4	0.97	0.24	47,57,58,71	0
58	MG	DA	3166	1/1	0.97	0.18	12,12,12,12	0
58	MG	C3	101	1/1	0.97	0.20	168,168,168,168	0
58	MG	DR	201	1/1	0.97	0.29	27,27,27,27	0
58	MG	DA	3188	1/1	0.97	0.12	36,36,36,36	0
58	MG	DA	3030	1/1	0.97	0.14	37,37,37,37	0
59	PGE	DA	3035	10/10	0.97	0.17	38,81,109,119	0
58	MG	CA	3024	1/1	0.97	0.09	61,61,61,61	0
58	MG	CA	3003	1/1	0.97	0.34	61,61,61,61	0
58	MG	AA	1657	1/1	0.97	0.08	95,95,95,95	0
58	MG	BA	1628	1/1	0.97	0.06	95,95,95,95	0
58	MG	CA	3088	1/1	0.97	0.15	127,127,127,127	0
58	MG	AA	1620	1/1	0.98	0.06	84,84,84,84	0
58	MG	CA	3139	1/1	0.98	0.11	124,124,124,124	0
58	MG	AA	1622	1/1	0.98	0.12	73,73,73,73	0
58	MG	BA	1631	1/1	0.98	0.12	76,76,76,76	0
58	MG	CA	3013	1/1	0.98	0.10	66,66,66,66	0
58	MG	CA	3095	1/1	0.98	0.10	82,82,82,82	0
58	MG	BA	1633	1/1	0.98	0.08	66,66,66,66	0
58	MG	CA	3146	1/1	0.98	0.08	106,106,106,106	0
58	MG	CA	3147	1/1	0.98	0.12	95,95,95,95	0
58	MG	AA	1639	1/1	0.98	0.13	50,50,50,50	0
58	MG	AA	1604	1/1	0.98	0.28	51,51,51,51	0
58	MG	CA	3150	1/1	0.98	0.21	84,84,84,84	0
58	MG	CA	3099	1/1	0.98	0.10	77,77,77,77	0
58	MG	AA	1617	1/1	0.98	0.06	61,61,61,61	0
58	MG	CA	3057	1/1	0.98	0.17	90,90,90,90	0
58	MG	AA	1650	1/1	0.98	0.13	65,65,65,65	0
58	MG	DA	3042	1/1	0.98	0.15	60,60,60,60	0
58	MG	CA	3104	1/1	0.98	0.12	80,80,80,80	0
58	MG	CA	3105	1/1	0.98	0.09	83,83,83,83	0
58	MG	AA	1652	1/1	0.98	0.08	80,80,80,80	0
62	SPD	DA	3036	10/10	0.98	0.17	33,53,66,69	0
58	MG	AA	1603	1/1	0.98	0.15	45,45,45,45	0
58	MG	AA	1619	1/1	0.98	0.05	80,80,80,80	0
58	MG	AA	1633	1/1	0.98	0.08	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	CA	3162	1/1	0.98	0.18	94,94,94,94	0
58	MG	CA	3064	1/1	0.98	0.08	104,104,104,104	0
58	MG	BA	1616	1/1	0.98	0.12	96,96,96,96	0
58	MG	BA	1617	1/1	0.98	0.12	73,73,73,73	0
58	MG	CA	3114	1/1	0.98	0.14	116,116,116,116	0
64	1PE	DA	3034	16/16	0.98	0.15	21,51,96,96	0
58	MG	CA	3167	1/1	0.98	0.14	93,93,93,93	0
58	MG	DA	3085	1/1	0.98	0.05	75,75,75,75	0
58	MG	AA	1635	1/1	0.98	0.05	89,89,89,89	0
66	PEG	DA	3050	7/7	0.98	0.20	51,62,68,78	0
58	MG	DA	3118	1/1	0.98	0.13	80,80,80,80	0
58	MG	DA	3120	1/1	0.98	0.18	31,31,31,31	0
58	MG	DA	3125	1/1	0.98	0.15	48,48,48,48	0
58	MG	DA	3002	1/1	0.98	0.14	10,10,10,10	0
58	MG	DA	3147	1/1	0.98	0.08	104,104,104,104	0
58	MG	DA	3156	1/1	0.98	0.03	58,58,58,58	0
58	MG	DA	3157	1/1	0.98	0.07	75,75,75,75	0
58	MG	CB	202	1/1	0.98	0.09	116,116,116,116	0
58	MG	DA	3005	1/1	0.98	0.24	35,35,35,35	0
58	MG	BA	1619	1/1	0.98	0.05	81,81,81,81	0
58	MG	CA	3001	1/1	0.98	0.35	68,68,68,68	0
58	MG	DA	3012	1/1	0.98	0.18	33,33,33,33	0
58	MG	DA	3013	1/1	0.98	0.27	44,44,44,44	0
58	MG	BA	1620	1/1	0.98	0.15	87,87,87,87	0
58	MG	CA	3042	1/1	0.98	0.20	57,57,57,57	0
58	MG	BA	1622	1/1	0.98	0.08	89,89,89,89	0
58	MG	CA	3006	1/1	0.98	0.21	49,49,49,49	0
58	MG	BA	1626	1/1	0.98	0.11	62,62,62,62	0
58	MG	DA	3022	1/1	0.98	0.09	51,51,51,51	0
58	MG	DA	3023	1/1	0.98	0.28	36,36,36,36	0
58	MG	CA	3137	1/1	0.98	0.07	95,95,95,95	0
58	MG	AA	1607	1/1	0.99	0.14	46,46,46,46	0
58	MG	DA	3019	1/1	0.99	0.19	34,34,34,34	0
58	MG	BA	1621	1/1	0.99	0.10	69,69,69,69	0
58	MG	DA	3021	1/1	0.99	0.26	37,37,37,37	0
58	MG	AA	1653	1/1	0.99	0.09	70,70,70,70	0
58	MG	BA	1623	1/1	0.99	0.13	68,68,68,68	0
58	MG	DA	3024	1/1	0.99	0.14	60,60,60,60	0
58	MG	DA	3025	1/1	0.99	0.20	25,25,25,25	0
58	MG	BA	1624	1/1	0.99	0.14	70,70,70,70	0
58	MG	BA	1625	1/1	0.99	0.21	107,107,107,107	0
58	MG	DA	3028	1/1	0.99	0.14	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	AA	1654	1/1	0.99	0.10	63,63,63,63	0
58	MG	CA	3143	1/1	0.99	0.32	117,117,117,117	0
58	MG	AA	1624	1/1	0.99	0.20	65,65,65,65	0
58	MG	AA	1625	1/1	0.99	0.06	77,77,77,77	0
58	MG	BA	1629	1/1	0.99	0.08	65,65,65,65	0
58	MG	BA	1630	1/1	0.99	0.07	74,74,74,74	0
58	MG	AA	1626	1/1	0.99	0.06	69,69,69,69	0
58	MG	BA	1632	1/1	0.99	0.09	59,59,59,59	0
58	MG	AA	1658	1/1	0.99	0.15	59,59,59,59	0
58	MG	BA	1601	1/1	0.99	0.25	67,67,67,67	0
58	MG	AA	1627	1/1	0.99	0.17	55,55,55,55	0
58	MG	AA	1638	1/1	0.99	0.05	51,51,51,51	0
58	MG	AA	1628	1/1	0.99	0.09	70,70,70,70	0
58	MG	CA	3040	1/1	0.99	0.30	60,60,60,60	0
58	MG	DA	3068	1/1	0.99	0.22	47,47,47,47	0
58	MG	AA	1640	1/1	0.99	0.04	71,71,71,71	0
58	MG	DA	3080	1/1	0.99	0.10	29,29,29,29	0
58	MG	DA	3081	1/1	0.99	0.15	63,63,63,63	0
58	MG	DA	3083	1/1	0.99	0.04	74,74,74,74	0
58	MG	DA	3084	1/1	0.99	0.07	46,46,46,46	0
58	MG	BA	1639	1/1	0.99	0.15	91,91,91,91	0
58	MG	BA	1640	1/1	0.99	0.08	85,85,85,85	0
58	MG	DA	3092	1/1	0.99	0.16	24,24,24,24	0
58	MG	DA	3093	1/1	0.99	0.12	22,22,22,22	0
58	MG	DA	3095	1/1	0.99	0.09	35,35,35,35	0
58	MG	DA	3096	1/1	0.99	0.13	35,35,35,35	0
58	MG	DA	3097	1/1	0.99	0.12	31,31,31,31	0
58	MG	CA	3169	1/1	0.99	0.22	80,80,80,80	0
58	MG	DA	3098	1/1	0.99	0.12	27,27,27,27	0
58	MG	CA	3055	1/1	0.99	0.19	82,82,82,82	0
58	MG	DA	3101	1/1	0.99	0.19	50,50,50,50	0
58	MG	DA	3104	1/1	0.99	0.15	20,20,20,20	0
58	MG	DA	3105	1/1	0.99	0.12	32,32,32,32	0
58	MG	DA	3106	1/1	0.99	0.20	40,40,40,40	0
58	MG	DA	3107	1/1	0.99	0.19	41,41,41,41	0
58	MG	DB	204	1/1	0.99	0.12	62,62,62,62	0
58	MG	DB	205	1/1	0.99	0.07	38,38,38,38	0
58	MG	DB	206	1/1	0.99	0.08	41,41,41,41	0
58	MG	DA	3108	1/1	0.99	0.15	28,28,28,28	0
58	MG	DA	3109	1/1	0.99	0.16	7,7,7,7	0
58	MG	DA	3111	1/1	0.99	0.17	15,15,15,15	0
58	MG	DA	3112	1/1	0.99	0.22	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	BA	1641	1/1	0.99	0.12	62,62,62,62	0
58	MG	DA	3119	1/1	0.99	0.13	51,51,51,51	0
58	MG	DD	302	1/1	0.99	0.21	49,49,49,49	0
58	MG	DM	202	1/1	0.99	0.11	47,47,47,47	0
58	MG	AA	1641	1/1	0.99	0.06	70,70,70,70	0
58	MG	DR	203	1/1	0.99	0.18	38,38,38,38	0
58	MG	DA	3121	1/1	0.99	0.05	68,68,68,68	0
58	MG	BA	1608	1/1	0.99	0.11	82,82,82,82	0
58	MG	DA	3126	1/1	0.99	0.19	44,44,44,44	0
58	MG	DA	3129	1/1	0.99	0.07	19,19,19,19	0
58	MG	DA	3130	1/1	0.99	0.11	52,52,52,52	0
58	MG	DA	3131	1/1	0.99	0.17	34,34,34,34	0
58	MG	DA	3133	1/1	0.99	0.15	24,24,24,24	0
58	MG	DA	3134	1/1	0.99	0.15	38,38,38,38	0
58	MG	AA	1642	1/1	0.99	0.16	73,73,73,73	0
58	MG	DA	3142	1/1	0.99	0.14	20,20,20,20	0
58	MG	DA	3143	1/1	0.99	0.17	15,15,15,15	0
58	MG	DA	3145	1/1	0.99	0.17	38,38,38,38	0
58	MG	DA	3146	1/1	0.99	0.06	55,55,55,55	0
58	MG	CA	3081	1/1	0.99	0.21	102,102,102,102	0
58	MG	AA	1643	1/1	0.99	0.07	78,78,78,78	0
58	MG	DA	3148	1/1	0.99	0.13	65,65,65,65	0
58	MG	DA	3149	1/1	0.99	0.17	55,55,55,55	0
58	MG	CA	3085	1/1	0.99	0.09	91,91,91,91	0
58	MG	DA	3150	1/1	0.99	0.18	18,18,18,18	0
58	MG	DA	3153	1/1	0.99	0.18	26,26,26,26	0
58	MG	BA	1646	1/1	0.99	0.11	59,59,59,59	0
58	MG	BA	1647	1/1	0.99	0.11	68,68,68,68	0
58	MG	DA	3158	1/1	0.99	0.05	27,27,27,27	0
58	MG	DA	3159	1/1	0.99	0.04	56,56,56,56	0
58	MG	DA	3162	1/1	0.99	0.16	42,42,42,42	0
58	MG	CA	3093	1/1	0.99	0.09	65,65,65,65	0
58	MG	DA	3165	1/1	0.99	0.23	22,22,22,22	0
58	MG	AA	1644	1/1	0.99	0.07	83,83,83,83	0
58	MG	DA	3168	1/1	0.99	0.17	51,51,51,51	0
58	MG	DA	3169	1/1	0.99	0.16	8,8,8,8	0
58	MG	DA	3171	1/1	0.99	0.11	60,60,60,60	0
58	MG	DA	3172	1/1	0.99	0.20	46,46,46,46	0
58	MG	DA	3173	1/1	0.99	0.10	50,50,50,50	0
58	MG	DA	3174	1/1	0.99	0.10	67,67,67,67	0
58	MG	DA	3175	1/1	0.99	0.15	22,22,22,22	0
58	MG	DA	3177	1/1	0.99	0.13	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	3179	1/1	0.99	0.10	36,36,36,36	0
58	MG	DA	3180	1/1	0.99	0.18	19,19,19,19	0
58	MG	DA	3183	1/1	0.99	0.11	38,38,38,38	0
58	MG	DA	3185	1/1	0.99	0.12	28,28,28,28	0
58	MG	CA	3108	1/1	0.99	0.09	92,92,92,92	0
65	ACY	DA	3064	4/4	0.99	0.22	12,15,38,45	0
58	MG	DA	3186	1/1	0.99	0.16	36,36,36,36	0
58	MG	DA	3187	1/1	0.99	0.10	18,18,18,18	0
58	MG	AA	1629	1/1	0.99	0.07	30,30,30,30	0
58	MG	DA	3189	1/1	0.99	0.14	47,47,47,47	0
58	MG	DA	3191	1/1	0.99	0.19	16,16,16,16	0
58	MG	BA	1650	1/1	0.99	0.09	96,96,96,96	0
58	MG	AA	1646	1/1	0.99	0.12	99,99,99,99	0
58	MG	DA	3003	1/1	0.99	0.17	53,53,53,53	0
58	MG	DA	3004	1/1	0.99	0.15	30,30,30,30	0
58	MG	AA	1647	1/1	0.99	0.20	100,100,100,100	0
58	MG	DA	3006	1/1	0.99	0.21	31,31,31,31	0
58	MG	DA	3007	1/1	0.99	0.15	48,48,48,48	0
58	MG	DA	3008	1/1	0.99	0.27	27,27,27,27	0
58	MG	AA	1621	1/1	0.99	0.14	63,63,63,63	0
58	MG	DA	3010	1/1	0.99	0.14	40,40,40,40	0
58	MG	AA	1649	1/1	0.99	0.04	66,66,66,66	0
58	MG	AA	1614	1/1	0.99	0.12	39,39,39,39	0
58	MG	DA	3014	1/1	0.99	0.17	36,36,36,36	0
58	MG	DA	3015	1/1	0.99	0.31	48,48,48,48	0
58	MG	CA	3128	1/1	0.99	0.07	104,104,104,104	0
58	MG	DA	3016	1/1	0.99	0.27	41,41,41,41	0
58	MG	AA	1651	1/1	0.99	0.12	74,74,74,74	0
58	MG	AA	1634	1/1	1.00	0.10	64,64,64,64	0
58	MG	DA	3102	1/1	1.00	0.14	35,35,35,35	0
58	MG	DA	3181	1/1	1.00	0.16	47,47,47,47	0
58	MG	DA	3182	1/1	1.00	0.19	73,73,73,73	0
58	MG	DA	3132	1/1	1.00	0.16	12,12,12,12	0
58	MG	DA	3184	1/1	1.00	0.16	60,60,60,60	0
58	MG	DA	3103	1/1	1.00	0.10	37,37,37,37	0
58	MG	DA	3086	1/1	1.00	0.12	15,15,15,15	0
58	MG	DA	3135	1/1	1.00	0.08	25,25,25,25	0
58	MG	DA	3136	1/1	1.00	0.12	9,9,9,9	0
58	MG	DA	3137	1/1	1.00	0.18	52,52,52,52	0
58	MG	DA	3190	1/1	1.00	0.09	29,29,29,29	0
58	MG	DA	3138	1/1	1.00	0.13	30,30,30,30	0
58	MG	DA	3087	1/1	1.00	0.13	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
58	MG	DA	3140	1/1	1.00	0.11	38,38,38,38	0
58	MG	DA	3141	1/1	1.00	0.10	12,12,12,12	0
58	MG	DA	3088	1/1	1.00	0.15	25,25,25,25	0
58	MG	DA	3011	1/1	1.00	0.17	27,27,27,27	0
58	MG	DA	3144	1/1	1.00	0.13	52,52,52,52	0
58	MG	DA	3090	1/1	1.00	0.14	4,4,4,4	0
58	MG	DA	3091	1/1	1.00	0.14	30,30,30,30	0
58	MG	DA	3110	1/1	1.00	0.13	19,19,19,19	0
58	MG	DA	3079	1/1	1.00	0.10	25,25,25,25	0
58	MG	AA	1659	1/1	1.00	0.10	55,55,55,55	0
58	MG	DA	3113	1/1	1.00	0.20	75,75,75,75	0
58	MG	DA	3151	1/1	1.00	0.10	61,61,61,61	0
58	MG	DA	3152	1/1	1.00	0.19	38,38,38,38	0
58	MG	DA	3114	1/1	1.00	0.24	17,17,17,17	0
58	MG	DA	3154	1/1	1.00	0.10	38,38,38,38	0
58	MG	DA	3155	1/1	1.00	0.11	65,65,65,65	0
58	MG	DA	3115	1/1	1.00	0.12	28,28,28,28	0
58	MG	DA	3116	1/1	1.00	0.12	23,23,23,23	0
58	MG	DA	3117	1/1	1.00	0.06	16,16,16,16	0
58	MG	DB	207	1/1	1.00	0.12	36,36,36,36	0
58	MG	DA	3094	1/1	1.00	0.15	10,10,10,10	0
58	MG	DA	3160	1/1	1.00	0.08	31,31,31,31	0
58	MG	DA	3161	1/1	1.00	0.10	29,29,29,29	0
58	MG	BA	1614	1/1	1.00	0.15	96,96,96,96	0
58	MG	DA	3163	1/1	1.00	0.10	27,27,27,27	0
58	MG	DA	3164	1/1	1.00	0.17	27,27,27,27	0
58	MG	DA	3082	1/1	1.00	0.13	61,61,61,61	0
58	MG	DA	3040	1/1	1.00	0.16	38,38,38,38	0
58	MG	DA	3167	1/1	1.00	0.15	21,21,21,21	0
58	MG	DA	3122	1/1	1.00	0.13	27,27,27,27	0
58	MG	DA	3123	1/1	1.00	0.12	19,19,19,19	0
58	MG	DA	3170	1/1	1.00	0.18	64,64,64,64	0
58	MG	DA	3124	1/1	1.00	0.09	19,19,19,19	0
58	MG	DA	3001	1/1	1.00	0.12	12,12,12,12	0
58	MG	DA	3099	1/1	1.00	0.24	177,177,177,177	0
58	MG	DA	3127	1/1	1.00	0.13	19,19,19,19	0
58	MG	DA	3128	1/1	1.00	0.12	34,34,34,34	0
58	MG	DA	3176	1/1	1.00	0.12	27,27,27,27	0
58	MG	DA	3100	1/1	1.00	0.14	29,29,29,29	0
58	MG	DA	3178	1/1	1.00	0.13	36,36,36,36	0

6.5 Other polymers (i)

There are no such residues in this entry.