



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 13, 2018 – 04:01 pm GMT

PDB ID : 4V8H
Title : Crystal structure of HPF bound to the 70S ribosome.
Authors : Polikanov, Y.S.; Blaha, G.M.; Steitz, T.A.
Deposited on : 2011-12-11
Resolution : 3.10 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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : trunk31020
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)
Refmac : 5.8.0158
CCP4 : 7.0 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk31020

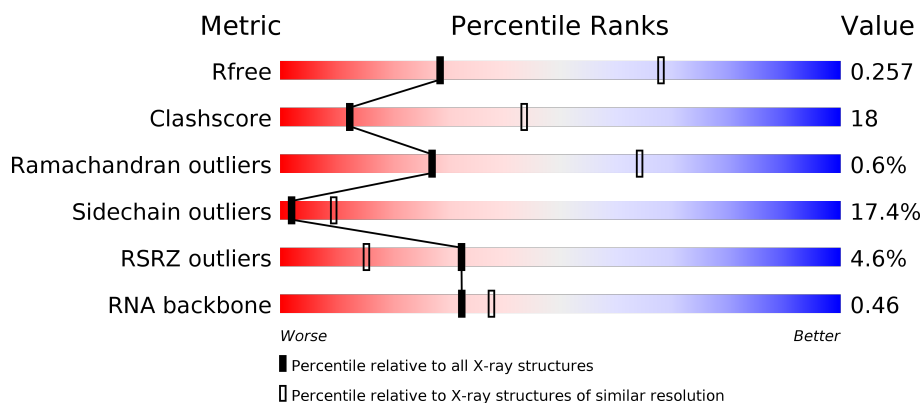
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 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}	111664	1115 (3.12-3.08)
Clashscore	122126	1042 (3.10-3.10)
Ramachandran outliers	120053	1010 (3.10-3.10)
Sidechain outliers	120020	1010 (3.10-3.10)
RSRZ outliers	108989	1089 (3.12-3.08)
RNA backbone	2636	1015 (3.44-2.76)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1522	 4% 23% 45% 24% 7%
1	CA	1522	 4% 23% 45% 23% 7%
2	AB	256	 3% 37% 40% 13% 10%
2	CB	256	 4% 35% 41% 13% 11%

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Mol	Chain	Length	Quality of chain
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	132	
12	CL	132	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	

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Mol	Chain	Length	Quality of chain
15	CO	89	% 51% 39% 8% ..
16	AP	88	9% 43% 41% 9% 7%
16	CP	88	5% 39% 43% 11% 7%
17	AQ	105	% 44% 44% 7% 6%
17	CQ	105	% 43% 45% 7% 6%
18	AR	88	2% 52% 22% .. 23%
18	CR	88	% 53% 20% . 23%
19	AS	93	40% 48% 20% 17% . 13%
19	CS	93	47% 45% 34% 8% 13%
20	AT	106	41% 36% 6% 18%
20	CT	106	42% 42% 6% . 8%
21	AU	27	52% 22% 48% 15% 15%
21	CU	27	67% 19% 44% 22% 15%
22	AX	101	4% 62% 23% 9% 6%
22	CX	101	17% 66% 24% . 6%
23	BA	2913	2% 28% 41% 21% 6% .
23	DA	2913	3% 31% 40% 20% 5% .
24	BB	122	28% 39% 27% . .
24	DB	122	% 28% 51% 15% 5% .
25	BD	276	63% 33% .
25	DD	276	61% 34% . .
26	BE	206	61% 31% 7% ..
26	DE	206	59% 32% 6% ..
27	BF	210	60% 29% 7% .
27	DF	210	55% 33% 8% .


























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Mol	Chain	Length	Quality of chain
28	BG	182	
28	DG	182	
29	BH	180	
29	DH	180	
30	BI	148	
30	DI	148	
31	BN	140	
31	DN	140	
32	BO	122	
32	DO	122	
33	BP	150	
33	DP	150	
34	BQ	141	
34	DQ	141	
35	BR	118	
35	DR	118	
36	BS	112	
36	DS	112	
37	BT	146	
37	DT	146	
38	BU	118	
38	DU	118	
39	BV	101	
39	DV	101	
40	BW	113	



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Mol	Chain	Length	Quality of chain
40	DW	113	
41	BX	96	
41	DX	96	
42	BY	110	
42	DY	110	
43	BZ	206	
43	DZ	206	
44	B0	85	
44	D0	85	
45	B1	98	
45	D1	98	
46	B2	72	
46	D2	72	
47	B3	60	
47	D3	60	
48	B4	71	
48	D4	71	
49	B5	60	
49	D5	60	
50	B6	54	
50	D6	54	
51	B7	49	
51	D7	49	
52	B8	65	
52	D8	65	

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Mol	Chain	Length	Quality of chain
53	B9	37	
53	D9	37	

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
54	MG	AA	1614	-	-	-	X
54	MG	AA	1618	-	-	-	X
54	MG	AA	1659	-	-	-	X
54	MG	AA	1678	-	-	-	X
54	MG	AA	1692	-	-	-	X
54	MG	BA	3014	-	-	-	X
54	MG	BA	3097	-	-	-	X
54	MG	BA	3109	-	-	-	X
54	MG	BA	3146	-	-	-	X
54	MG	CA	1604	-	-	-	X
54	MG	CA	1633	-	-	-	X
54	MG	CA	1637	-	-	-	X
54	MG	CA	1652	-	-	-	X
54	MG	CA	1657	-	-	-	X
54	MG	CA	1660	-	-	-	X
54	MG	CA	1670	-	-	-	X
54	MG	CA	1692	-	-	-	X
54	MG	CE	201	-	-	-	X
54	MG	DA	3058	-	-	-	X
54	MG	DA	3081	-	-	-	X
54	MG	DA	3096	-	-	-	X
54	MG	DA	3115	-	-	-	X
54	MG	DA	3165	-	-	-	X
54	MG	DA	3239	-	-	-	X
54	MG	DA	3280	-	-	-	X
54	MG	DA	3290	-	-	-	X
54	MG	DB	204	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 286308 atoms, of which 0 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
1	AA	1501	Total	C	N	O	P	0	0	0
			32270	14362	5983	10424	1501			
1	CA	1497	Total	C	N	O	P	0	0	0
			32185	14324	5968	10396	1497			

- Molecule 2 is a protein called 30S Ribosomal Protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	230	Total	C	N	O	S	0	0	0
			1787	1141	319	322	5			
2	CB	229	Total	C	N	O	S	0	0	0
			1775	1132	318	320	5			

- Molecule 3 is a protein called 30S Ribosomal Protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	206	Total	C	N	O	S	0	0	0
			1450	906	279	264	1			
3	CC	206	Total	C	N	O	S	0	0	0
			1450	906	279	264	1			

- Molecule 4 is a protein called 30S Ribosomal Protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1526	963	283	274	6			
4	CD	208	Total	C	N	O	S	0	0	0
			1526	963	283	274	6			

- Molecule 5 is a protein called 30S Ribosomal Protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	148	Total	C	N	O	S	0	0	0
			1105	699	204	198	4			
5	CE	148	Total	C	N	O	S	0	0	0
			1105	699	204	198	4			

- Molecule 6 is a protein called 30S Ribosomal Protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	100	Total	C	N	O	S	0	0	0
			777	493	137	144	3			
6	CF	100	Total	C	N	O	S	0	0	0
			777	493	137	144	3			

- Molecule 7 is a protein called 30S Ribosomal Protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1164	726	224	208	6			
7	CG	155	Total	C	N	O	S	0	0	0
			1164	726	224	208	6			

- Molecule 8 is a protein called 30S Ribosomal Protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1045	665	188	190	2			
8	CH	138	Total	C	N	O	S	0	0	0
			1045	665	188	190	2			

- Molecule 9 is a protein called 30S Ribosomal Protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	125	Total	C	N	O	0	0	0
			852	533	163	156			
9	CI	125	Total	C	N	O	0	0	0
			852	533	163	156			

- Molecule 10 is a protein called 30S Ribosomal Protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	AJ	96	Total	C	N	O	0	0	0
			663	410	132	121			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
10	CJ	96	Total	C	N	O	0	0	0
			663	410	132	121			

- Molecule 11 is a protein called 30S Ribosomal Protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			
11	CK	114	Total	C	N	O	S	0	0	0
			828	516	155	154	3			

- Molecule 12 is a protein called 30S Ribosomal Protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	122	Total	C	N	O	S	0	0	0
			905	567	178	159	1			
12	CL	122	Total	C	N	O	S	0	0	0
			905	567	178	159	1			

- Molecule 13 is a protein called 30S Ribosomal Protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	114	Total	C	N	O	S	0	0	0
			804	497	164	142	1			
13	CM	114	Total	C	N	O	S	0	0	0
			804	497	164	142	1			

- Molecule 14 is a protein called 30S Ribosomal Protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			478	303	99	72	4			
14	CN	60	Total	C	N	O	S	0	0	0
			478	303	99	72	4			

- Molecule 15 is a protein called 30S Ribosomal Protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			
15	CO	88	Total	C	N	O	S	0	0	0
			724	453	143	126	2			

- Molecule 16 is a protein called 30S Ribosomal Protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	82	Total	C	N	O	S	0	0	0
			651	416	123	111	1			
16	CP	82	Total	C	N	O	S	0	0	0
			651	416	123	111	1			

- Molecule 17 is a protein called 30S Ribosomal Protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
17	CQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 18 is a protein called 30S Ribosomal Protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	68	Total	C	N	O	0	0	0
			514	329	98	87			
18	CR	68	Total	C	N	O	0	0	0
			514	329	98	87			

- Molecule 19 is a protein called 30S Ribosomal Protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	81	Total	C	N	O	S	0	0	0
			560	351	108	99	2			
19	CS	81	Total	C	N	O	S	0	0	0
			560	351	108	99	2			

- Molecule 20 is a protein called 30S Ribosomal Protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	87	Total	C	N	O	S	0	0	0
			665	410	142	111	2			
20	CT	97	Total	C	N	O	S	0	0	0
			713	438	152	121	2			

- Molecule 21 is a protein called 30S Ribosomal Protein THX.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	23	Total	C	N	O	0	0	0
			199	122	48	29			
21	CU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 22 is a protein called Probable sigma(54) modulation protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AX	95	Total	C	N	O	S	0	0	0
			631	396	116	118	1			
22	CX	95	Total	C	N	O	S	0	0	0
			601	378	108	114	1			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AX	96	HIS	-	EXPRESSION TAG	UNP P0AFX0
AX	97	HIS	-	EXPRESSION TAG	UNP P0AFX0
AX	98	HIS	-	EXPRESSION TAG	UNP P0AFX0
AX	99	HIS	-	EXPRESSION TAG	UNP P0AFX0
AX	100	HIS	-	EXPRESSION TAG	UNP P0AFX0
AX	101	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	96	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	97	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	98	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	99	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	100	HIS	-	EXPRESSION TAG	UNP P0AFX0
CX	101	HIS	-	EXPRESSION TAG	UNP P0AFX0

- Molecule 23 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BA	2837	Total	C	N	O	P	0	0	0
			61112	27197	11440	19639	2836			
23	DA	2814	Total	C	N	O	P	0	0	0
			60621	26978	11351	19479	2813			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	?	-	U	DELETION	GB AP008226.1
BA	?	-	U	DELETION	GB AP008226.1
DA	?	-	U	DELETION	GB AP008226.1

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Chain	Residue	Modelled	Actual	Comment	Reference
DA	?	-	U	DELETION	GB AP008226.1

- Molecule 24 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
24	DB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 25 is a protein called 50S Ribosomal Protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	275	Total	C	N	O	S	0	0	0
			2135	1349	422	361	3			
25	DD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			

- Molecule 26 is a protein called 50S Ribosomal Protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			
26	DE	204	Total	C	N	O	S	0	0	0
			1555	982	297	270	6			

- Molecule 27 is a protein called 50S Ribosomal Protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	203	Total	C	N	O	S	0	0	1
			1580	1007	298	273	2			
27	DF	203	Total	C	N	O	S	0	0	1
			1580	1007	298	273	2			

- Molecule 28 is a protein called 50S Ribosomal Protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			
28	DG	181	Total	C	N	O	S	0	0	0
			1368	879	242	244	3			

- Molecule 29 is a protein called 50S Ribosomal Protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			
29	DH	174	Total	C	N	O	S	0	0	0
			1317	837	243	236	1			

- Molecule 30 is a protein called 50S Ribosomal Protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	146	Total	C	N	O	S	0	0	0
			1037	666	180	190	1			
30	DI	146	Total	C	N	O	S	0	0	0
			953	608	168	176	1			

- Molecule 31 is a protein called 50S Ribosomal Protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			
31	DN	140	Total	C	N	O	S	0	0	0
			1112	717	207	184	4			

- Molecule 32 is a protein called 50S Ribosomal Protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			
32	DO	122	Total	C	N	O	S	0	0	0
			923	583	168	168	4			

- Molecule 33 is a protein called 50S Ribosomal Protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			
33	DP	149	Total	C	N	O	S	0	0	0
			1131	703	229	196	3			

- Molecule 34 is a protein called 50S Ribosomal Protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
34	DQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 35 is a protein called 50S Ribosomal Protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
35	DR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 36 is a protein called 50S Ribosomal Protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BS	110	Total	C	N	O	0	0	0
			865	544	172	149			
36	DS	110	Total	C	N	O	0	0	0
			865	544	172	149			

- Molecule 37 is a protein called 50S Ribosomal Protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BT	131	Total	C	N	O	S	0	0	0
			1063	666	213	183	1			
37	DT	131	Total	C	N	O	S	0	0	0
			1063	666	213	183	1			

- Molecule 38 is a protein called 50S Ribosomal Protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
38	DU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 39 is a protein called 50S Ribosomal Protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	DV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 40 is a protein called 50S Ribosomal Protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BW	112	Total	C	N	O	S	0	0	0
			881	554	172	153	2			
40	DW	112	Total	C	N	O	S	0	0	0
			881	554	172	153	2			

- Molecule 41 is a protein called 50S Ribosomal Protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BX	95	Total	C	N	O	S	0	0	0
			742	483	134	124	1			
41	DX	95	Total	C	N	O	S	0	0	0
			742	483	134	124	1			

- Molecule 42 is a protein called 50S Ribosomal Protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BY	107	Total	C	N	O	S	0	0	0
			785	503	145	131	6			
42	DY	107	Total	C	N	O	S	0	0	0
			785	503	145	131	6			

- Molecule 43 is a protein called 50S Ribosomal Protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BZ	201	Total	C	N	O	S	0	0	0
			1536	980	272	282	2			
43	DZ	198	Total	C	N	O	S	0	0	0
			1522	972	269	279	2			

- Molecule 44 is a protein called 50S Ribosomal Protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	B0	76	Total	C	N	O	S	0	0	0
			594	368	125	100	1			
44	D0	76	Total	C	N	O	S	0	0	0
			594	368	125	100	1			

- Molecule 45 is a protein called 50S Ribosomal Protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	B1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			
45	D1	97	Total	C	N	O	S	0	0	0
			745	469	144	131	1			

- Molecule 46 is a protein called 50S Ribosomal Protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	B2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			
46	D2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 47 is a protein called 50S Ribosomal Protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
47	B3	59	Total	C	N	O	0	0	0
			458	293	87	78			
47	D3	59	Total	C	N	O	0	0	0
			458	293	87	78			

- Molecule 48 is a protein called 50S Ribosomal Protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			
48	D4	46	Total	C	N	O	S	0	0	0
			349	223	57	64	5			

- Molecule 49 is a protein called 50S Ribosomal Protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B5	59	Total	C	N	O	S	0	0	0
			455	286	90	74	5			
49	D5	59	Total	C	N	O	S	0	0	0
			455	286	90	74	5			

- Molecule 50 is a protein called 50S Ribosomal Protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B6	53	Total	C	N	O	S	0	0	0
			449	278	90	77	4			
50	D6	53	Total	C	N	O	S	0	0	0
			449	278	90	77	4			

- Molecule 51 is a protein called 50S Ribosomal Protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
51	D7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 52 is a protein called 50S Ribosomal Protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B8	64	Total	C	N	O	S	0	0	0
			509	326	99	82	2			
52	D8	64	Total	C	N	O	S	0	0	0
			509	326	99	82	2			

- Molecule 53 is a protein called 50S Ribosomal Protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B9	36	Total	C	N	O	S	0	0	0
			297	182	66	46	3			
53	D9	36	Total	C	N	O	S	0	0	0
			297	182	66	46	3			

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BA	660	Total	Mg	0	0
			660	660		
54	CA	162	Total	Mg	0	0
			162	162		
54	DQ	2	Total	Mg	0	0
			2	2		
54	DF	1	Total	Mg	0	0
			1	1		
54	B8	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BE	5	Total 5	Mg 5	0	0
54	B1	1	Total 1	Mg 1	0	0
54	BP	1	Total 1	Mg 1	0	0
54	B5	2	Total 2	Mg 2	0	0
54	BB	23	Total 23	Mg 23	0	0
54	BT	2	Total 2	Mg 2	0	0
54	D8	2	Total 2	Mg 2	0	0
54	B9	1	Total 1	Mg 1	0	0
54	BF	2	Total 2	Mg 2	0	0
54	DR	3	Total 3	Mg 3	0	0
54	B2	1	Total 1	Mg 1	0	0
54	AA	135	Total 135	Mg 135	0	0
54	BQ	4	Total 4	Mg 4	0	0
54	CQ	1	Total 1	Mg 1	0	0
54	AD	1	Total 1	Mg 1	0	0
54	DD	2	Total 2	Mg 2	0	0
54	D0	2	Total 2	Mg 2	0	0
54	BG	1	Total 1	Mg 1	0	0
54	B3	1	Total 1	Mg 1	0	0
54	BR	1	Total 1	Mg 1	0	0
54	DA	598	Total 598	Mg 598	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	DP	1	Total 1	Mg 1	0	0
54	BV	1	Total 1	Mg 1	0	0
54	DO	2	Total 2	Mg 2	0	0
54	DE	4	Total 4	Mg 4	0	0
54	AQ	1	Total 1	Mg 1	0	0
54	D1	1	Total 1	Mg 1	0	0
54	BZ	1	Total 1	Mg 1	0	0
54	AC	1	Total 1	Mg 1	0	0
54	BS	1	Total 1	Mg 1	0	0
54	D5	1	Total 1	Mg 1	0	0
54	BD	3	Total 3	Mg 3	0	0
54	B0	3	Total 3	Mg 3	0	0
54	CE	1	Total 1	Mg 1	0	0
54	BW	2	Total 2	Mg 2	0	0
54	AF	1	Total 1	Mg 1	0	0
54	DB	8	Total 8	Mg 8	0	0

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	B5	1	Total 1	Zn 1	0	0
55	B4	1	Total 1	Zn 1	0	0
55	AD	1	Total 1	Zn 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	CD	1	Total 1	Zn 1	0	0
55	B9	1	Total 1	Zn 1	0	0
55	BY	1	Total 1	Zn 1	0	0
55	DY	1	Total 1	Zn 1	0	0
55	D5	1	Total 1	Zn 1	0	0
55	D4	1	Total 1	Zn 1	0	0
55	AN	1	Total 1	Zn 1	0	0
55	CN	1	Total 1	Zn 1	0	0
55	D6	1	Total 1	Zn 1	0	0
55	D9	1	Total 1	Zn 1	0	0
55	B6	1	Total 1	Zn 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	268	Total 268	O 268	0	0
56	AE	1	Total 1	O 1	0	0
56	AL	1	Total 1	O 1	0	0
56	AO	1	Total 1	O 1	0	0
56	AP	1	Total 1	O 1	0	0
56	AT	1	Total 1	O 1	0	0
56	AX	1	Total 1	O 1	0	0
56	BA	1694	Total 1694	O 1694	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	BB	57	Total 57	O 57	0	0
56	BD	20	Total 20	O 20	0	0
56	BE	11	Total 11	O 11	0	0
56	BF	6	Total 6	O 6	0	0
56	BH	1	Total 1	O 1	0	0
56	BN	2	Total 2	O 2	0	0
56	BO	2	Total 2	O 2	0	0
56	BP	11	Total 11	O 11	0	0
56	BQ	5	Total 5	O 5	0	0
56	BR	6	Total 6	O 6	0	0
56	BT	1	Total 1	O 1	0	0
56	BU	3	Total 3	O 3	0	0
56	BV	3	Total 3	O 3	0	0
56	BW	3	Total 3	O 3	0	0
56	BX	2	Total 2	O 2	0	0
56	BY	4	Total 4	O 4	0	0
56	B0	8	Total 8	O 8	0	0
56	B1	2	Total 2	O 2	0	0
56	B3	1	Total 1	O 1	0	0
56	B5	3	Total 3	O 3	0	0
56	B6	1	Total 1	O 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B7	5	Total 5	O 5	0	0
56	B8	10	Total 10	O 10	0	0
56	B9	1	Total 1	O 1	0	0
56	CA	265	Total 265	O 265	0	0
56	CC	1	Total 1	O 1	0	0
56	CD	1	Total 1	O 1	0	0
56	CE	2	Total 2	O 2	0	0
56	CK	1	Total 1	O 1	0	0
56	CL	2	Total 2	O 2	0	0
56	CN	1	Total 1	O 1	0	0
56	CP	1	Total 1	O 1	0	0
56	CQ	1	Total 1	O 1	0	0
56	CT	1	Total 1	O 1	0	0
56	CX	1	Total 1	O 1	0	0
56	DA	1174	Total 1174	O 1174	0	0
56	DB	17	Total 17	O 17	0	0
56	DD	8	Total 8	O 8	0	0
56	DE	11	Total 11	O 11	0	0
56	DF	7	Total 7	O 7	0	0
56	DN	1	Total 1	O 1	0	0
56	DO	5	Total 5	O 5	0	0

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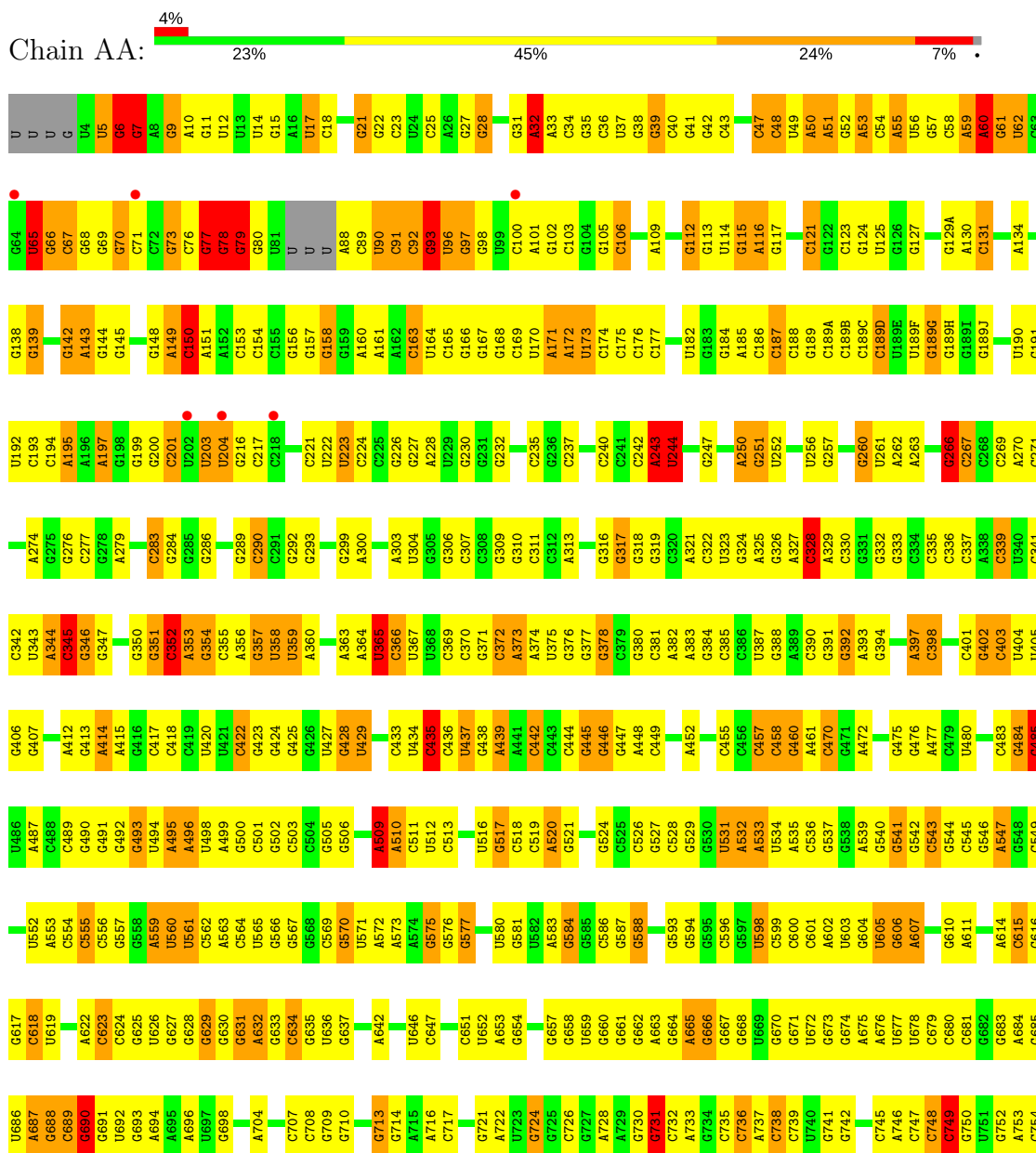
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	DP	10	Total	O	0	0
			10	10		
56	DQ	3	Total	O	0	0
			3	3		
56	DR	2	Total	O	0	0
			2	2		
56	DT	2	Total	O	0	0
			2	2		
56	DU	5	Total	O	0	0
			5	5		
56	DV	2	Total	O	0	0
			2	2		
56	DW	2	Total	O	0	0
			2	2		
56	DX	1	Total	O	0	0
			1	1		
56	DY	2	Total	O	0	0
			2	2		
56	D0	1	Total	O	0	0
			1	1		
56	D1	5	Total	O	0	0
			5	5		
56	D3	1	Total	O	0	0
			1	1		
56	D4	1	Total	O	0	0
			1	1		
56	D7	3	Total	O	0	0
			3	3		
56	D8	1	Total	O	0	0
			1	1		

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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.

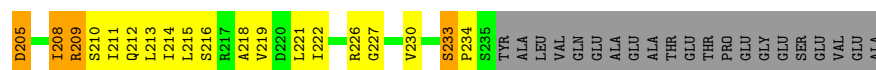
• Molecule 1: 16S Ribosomal RNA



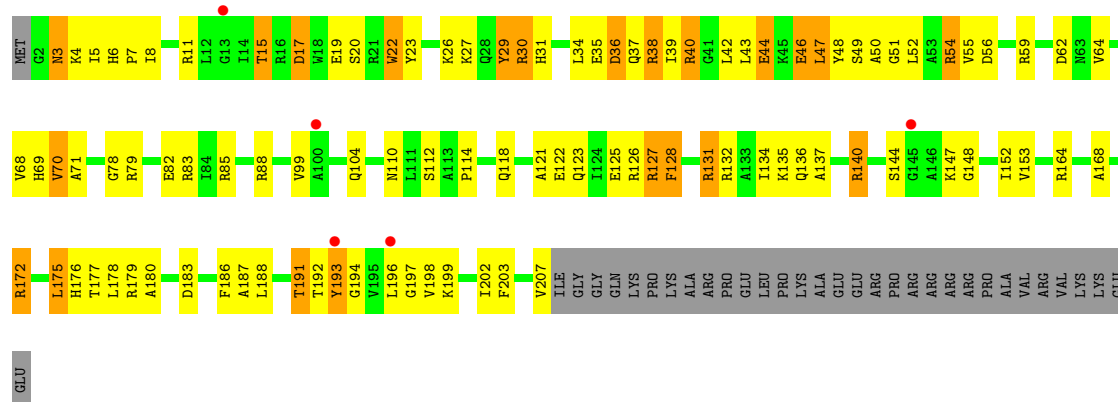




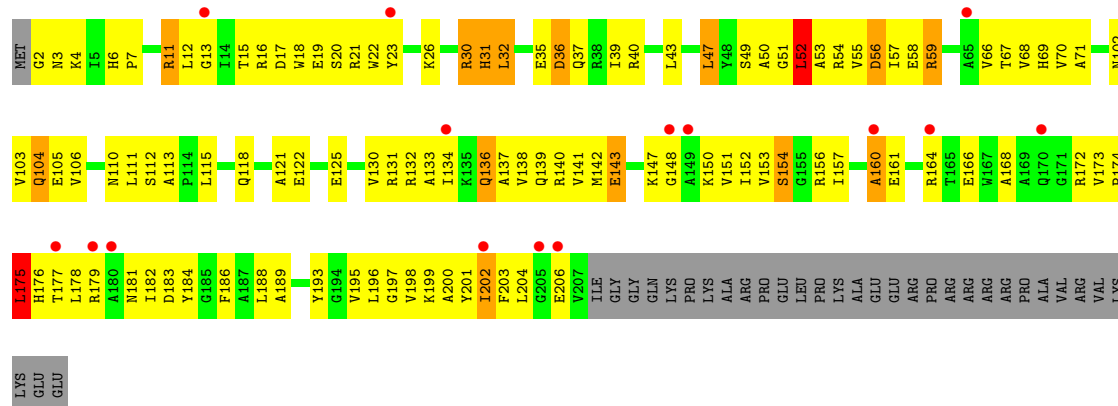




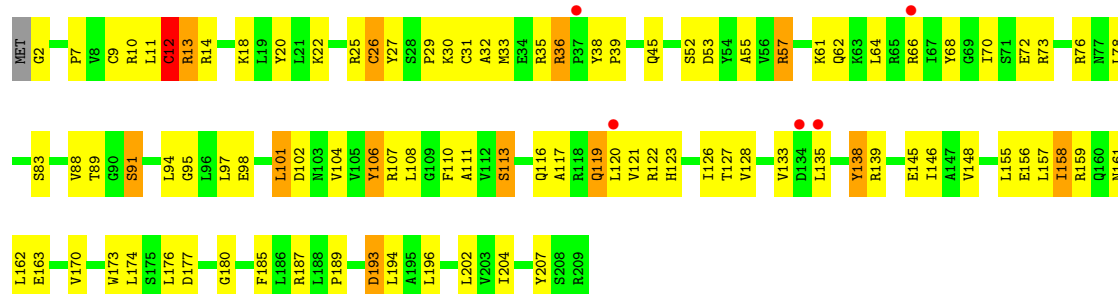
• Molecule 3: 30S Ribosomal Protein S3



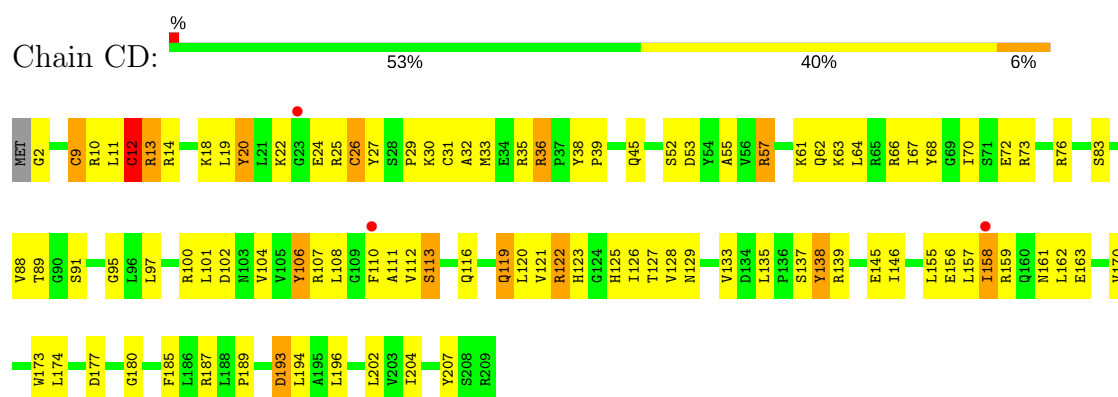
• Molecule 3: 30S Ribosomal Protein S3



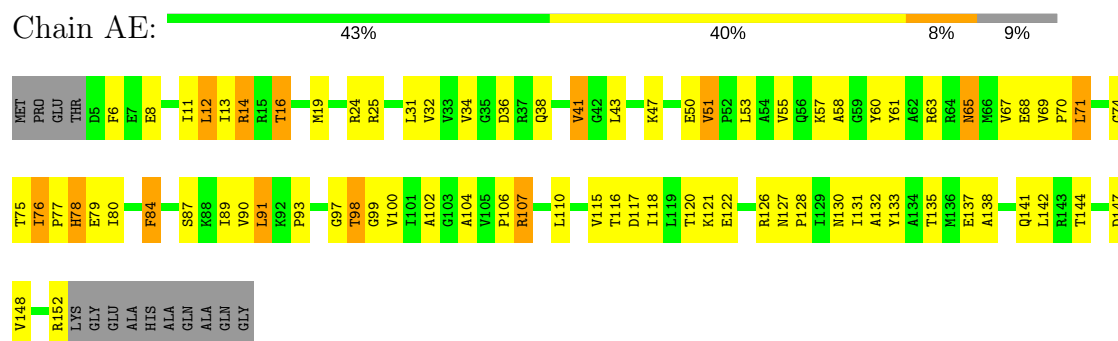
• Molecule 4: 30S Ribosomal Protein S4



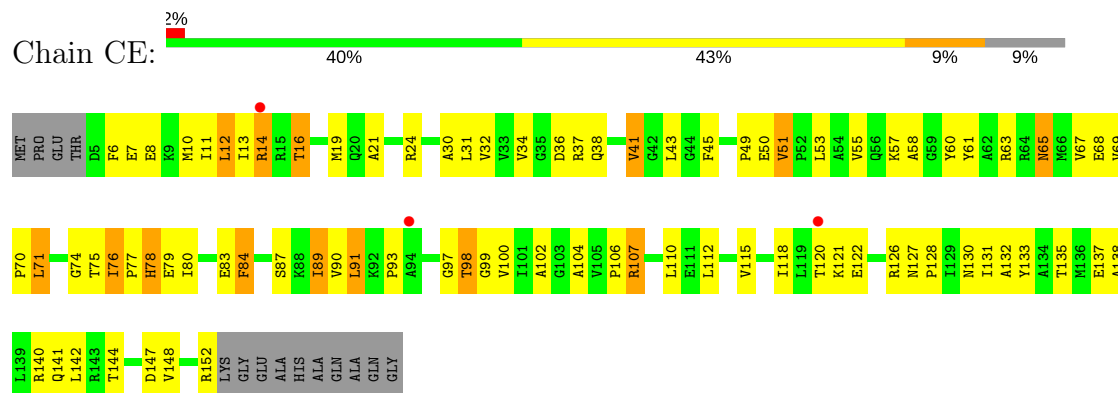
• Molecule 4: 30S Ribosomal Protein S4



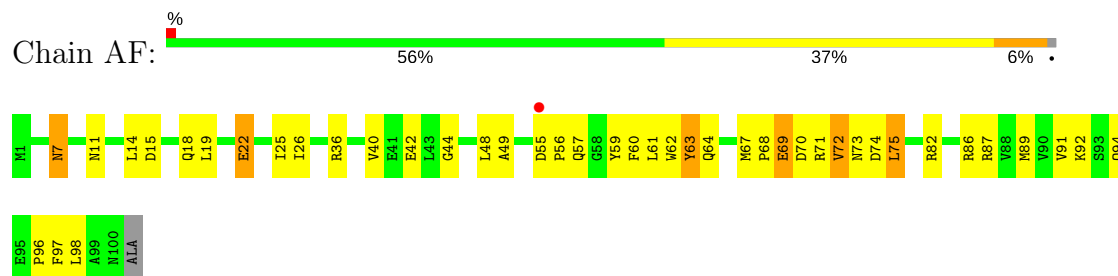
• Molecule 5: 30S Ribosomal Protein S5



• Molecule 5: 30S Ribosomal Protein S5

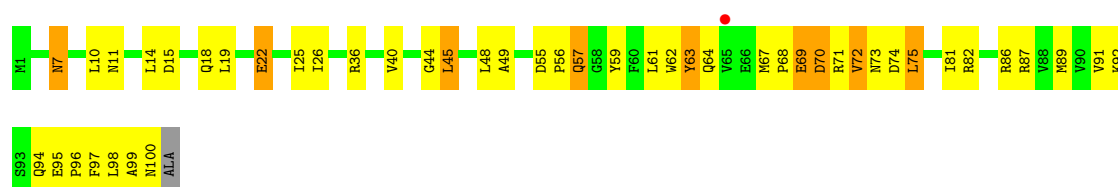


• Molecule 6: 30S Ribosomal Protein S6

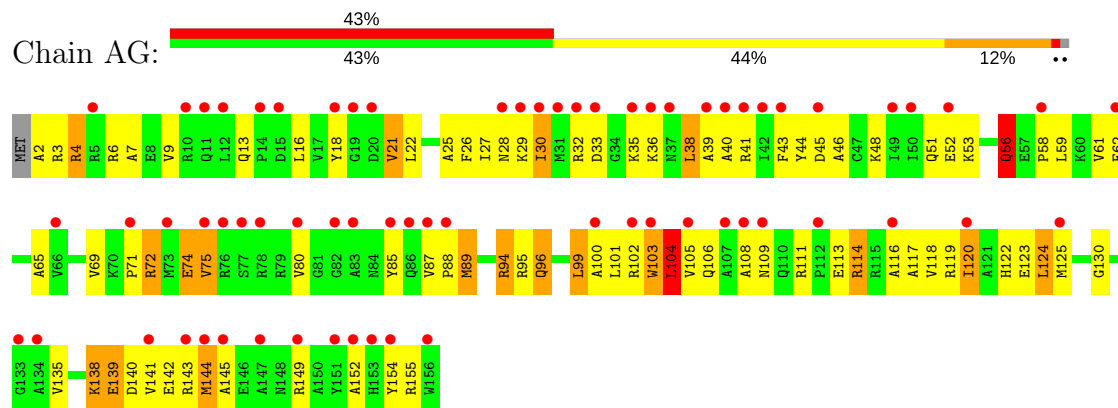


• Molecule 6: 30S Ribosomal Protein S6

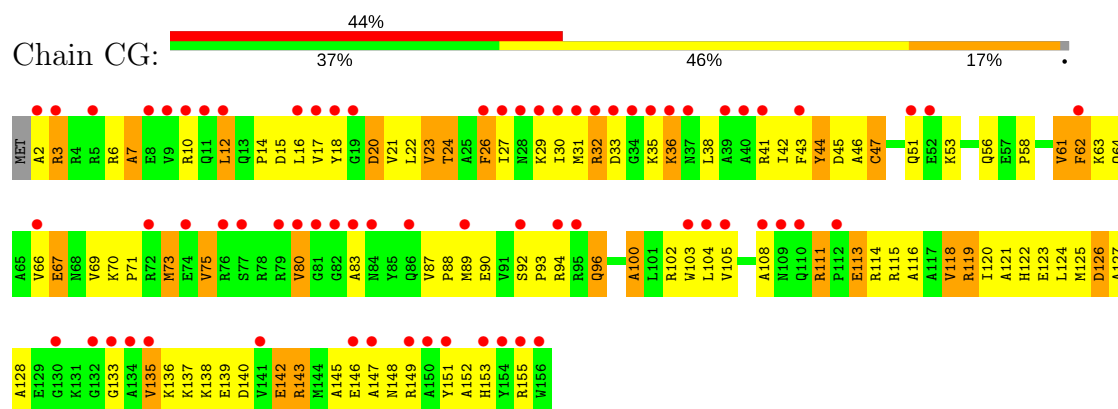




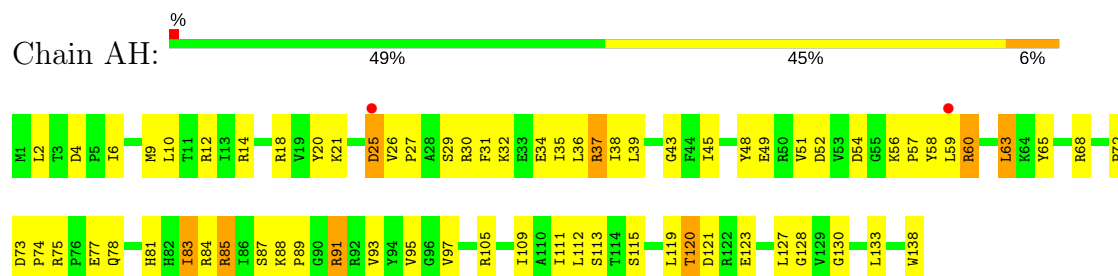
• Molecule 7: 30S Ribosomal Protein S7



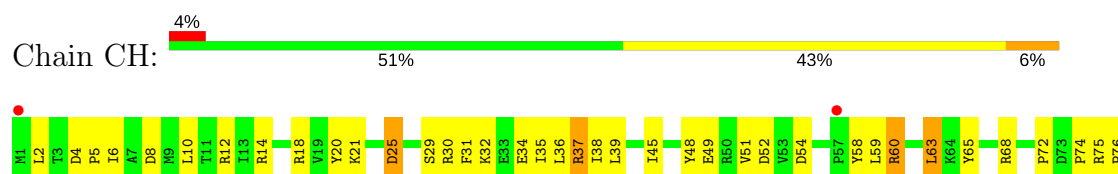
• Molecule 7: 30S Ribosomal Protein S7



• Molecule 8: 30S Ribosomal Protein S8



• Molecule 8: 30S Ribosomal Protein S8

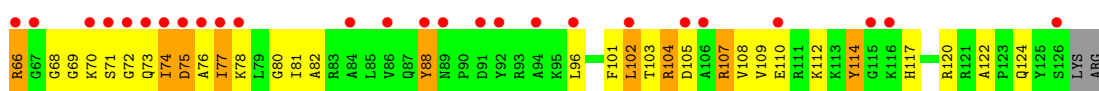
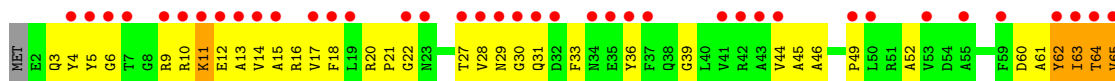




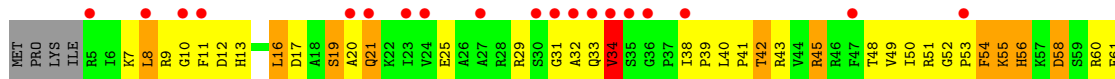
• Molecule 9: 30S Ribosomal Protein S9



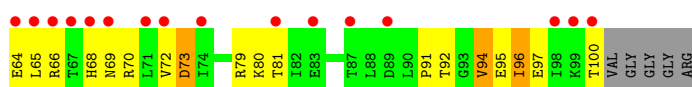
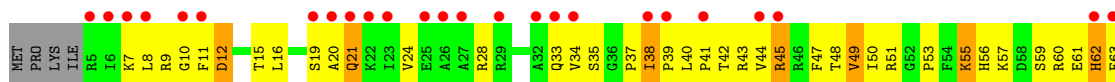
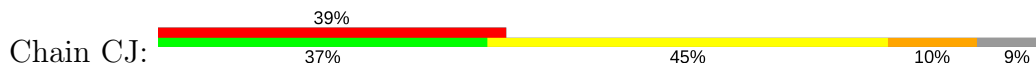
• Molecule 9: 30S Ribosomal Protein S9



• Molecule 10: 30S Ribosomal Protein S10

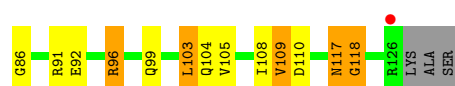


• Molecule 10: 30S Ribosomal Protein S10

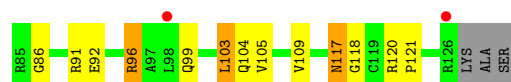
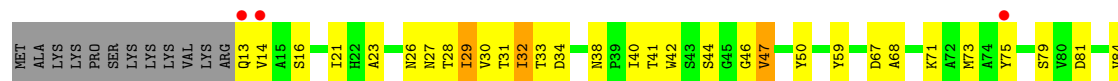


• Molecule 11: 30S Ribosomal Protein S11

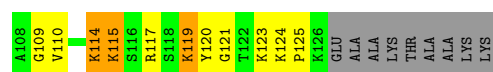




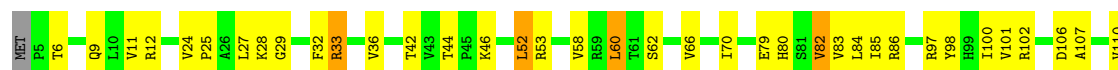
• Molecule 11: 30S Ribosomal Protein S11



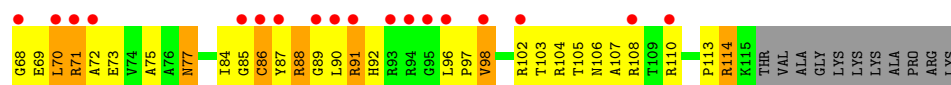
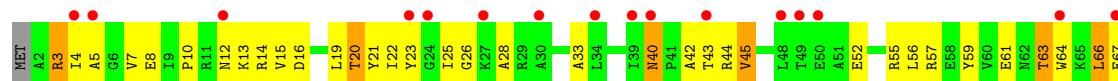
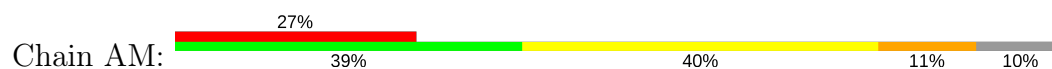
• Molecule 12: 30S Ribosomal Protein S12



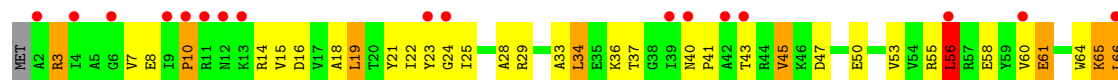
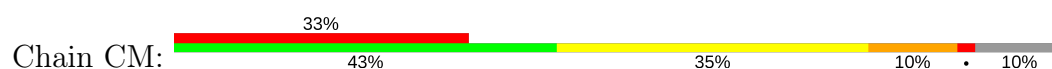
• Molecule 12: 30S Ribosomal Protein S12

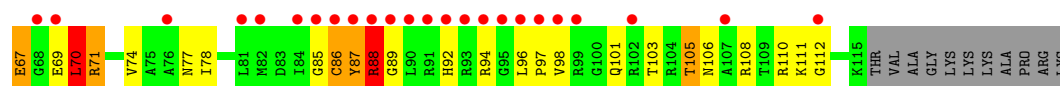


• Molecule 13: 30S Ribosomal Protein S13

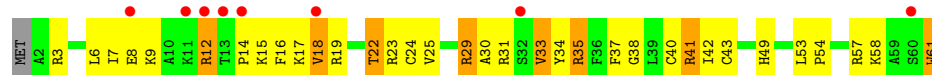


• Molecule 13: 30S Ribosomal Protein S13





• Molecule 14: 30S Ribosomal Protein S14



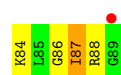
• Molecule 14: 30S Ribosomal Protein S14



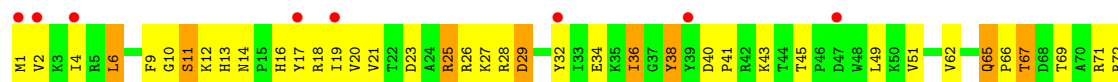
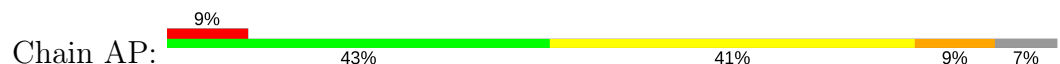
• Molecule 15: 30S Ribosomal Protein S15



• Molecule 15: 30S Ribosomal Protein S15

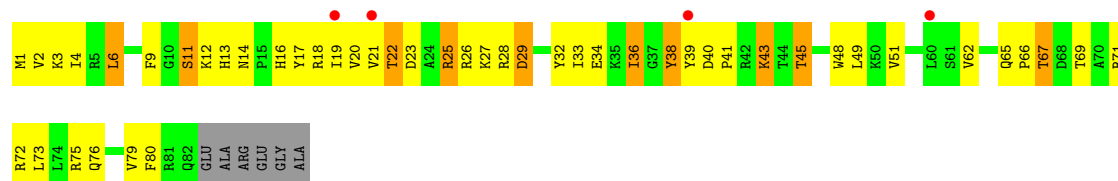


• Molecule 16: 30S Ribosomal Protein S16

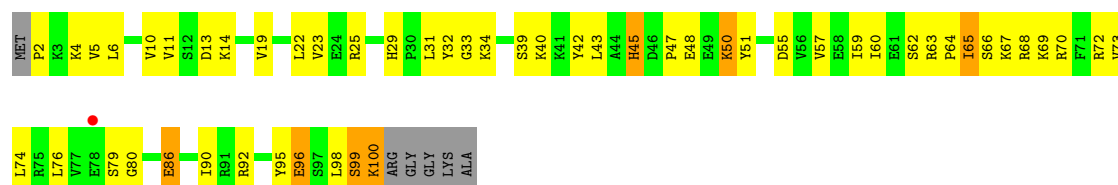


• Molecule 16: 30S Ribosomal Protein S16

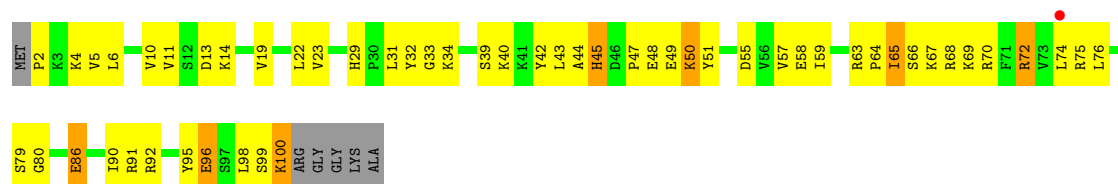




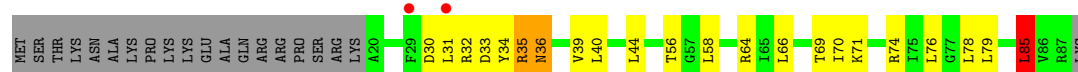
• Molecule 17: 30S Ribosomal Protein S17



• Molecule 17: 30S Ribosomal Protein S17



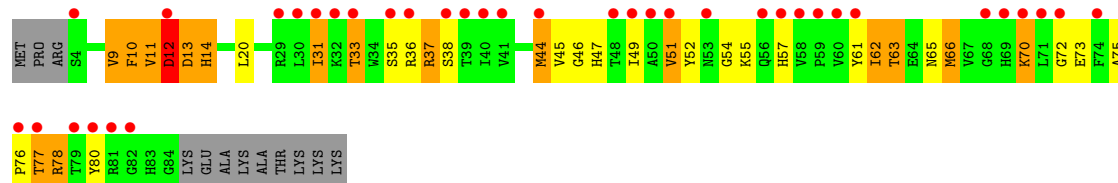
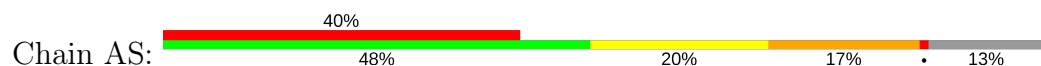
• Molecule 18: 30S Ribosomal Protein S18



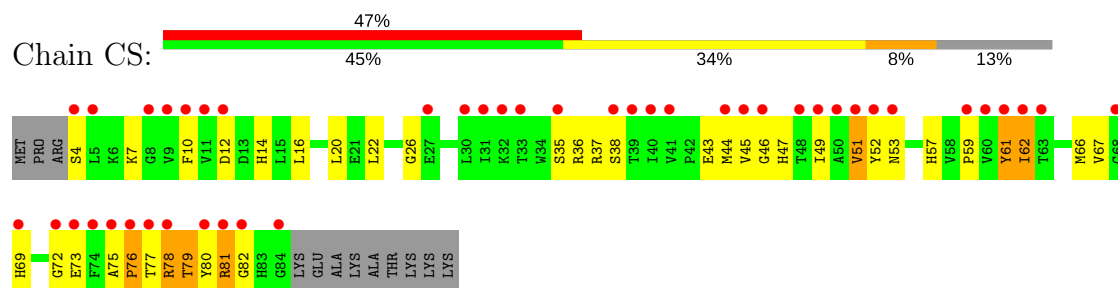
• Molecule 18: 30S Ribosomal Protein S18



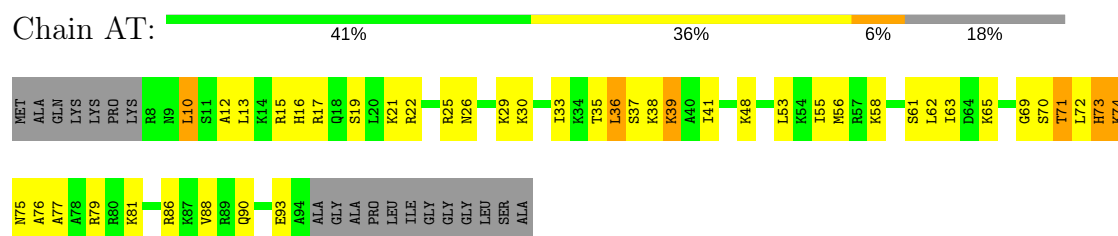
• Molecule 19: 30S Ribosomal Protein S19



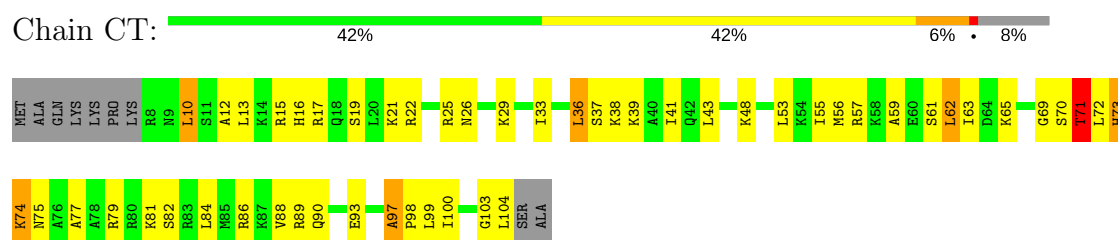
- Molecule 19: 30S Ribosomal Protein S19



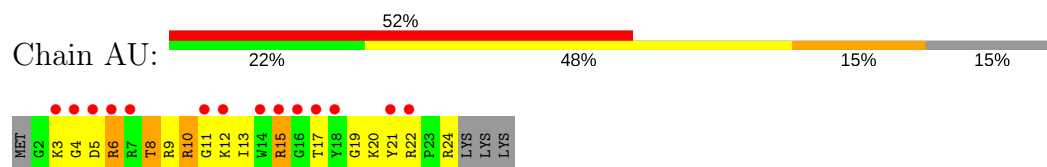
- Molecule 20: 30S Ribosomal Protein S20



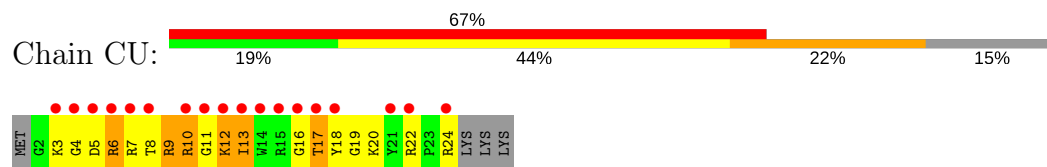
- Molecule 20: 30S Ribosomal Protein S20



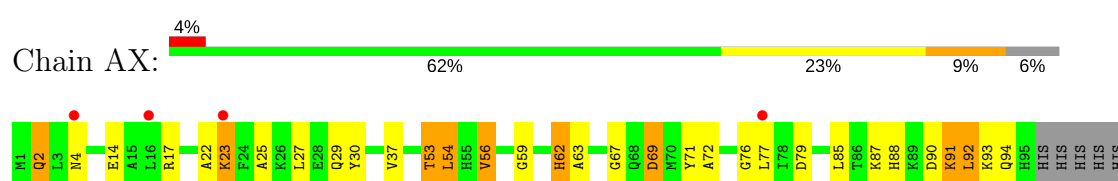
- Molecule 21: 30S Ribosomal Protein THX



- Molecule 21: 30S Ribosomal Protein THX

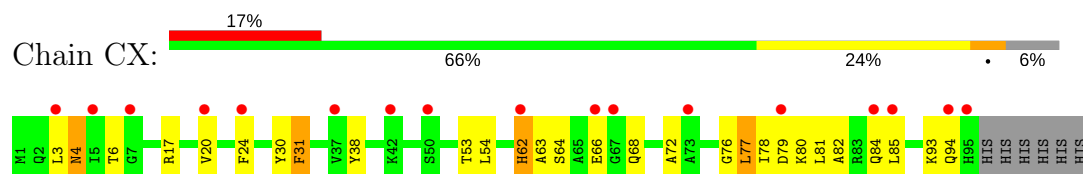


- Molecule 22: Probable sigma(54) modulation protein

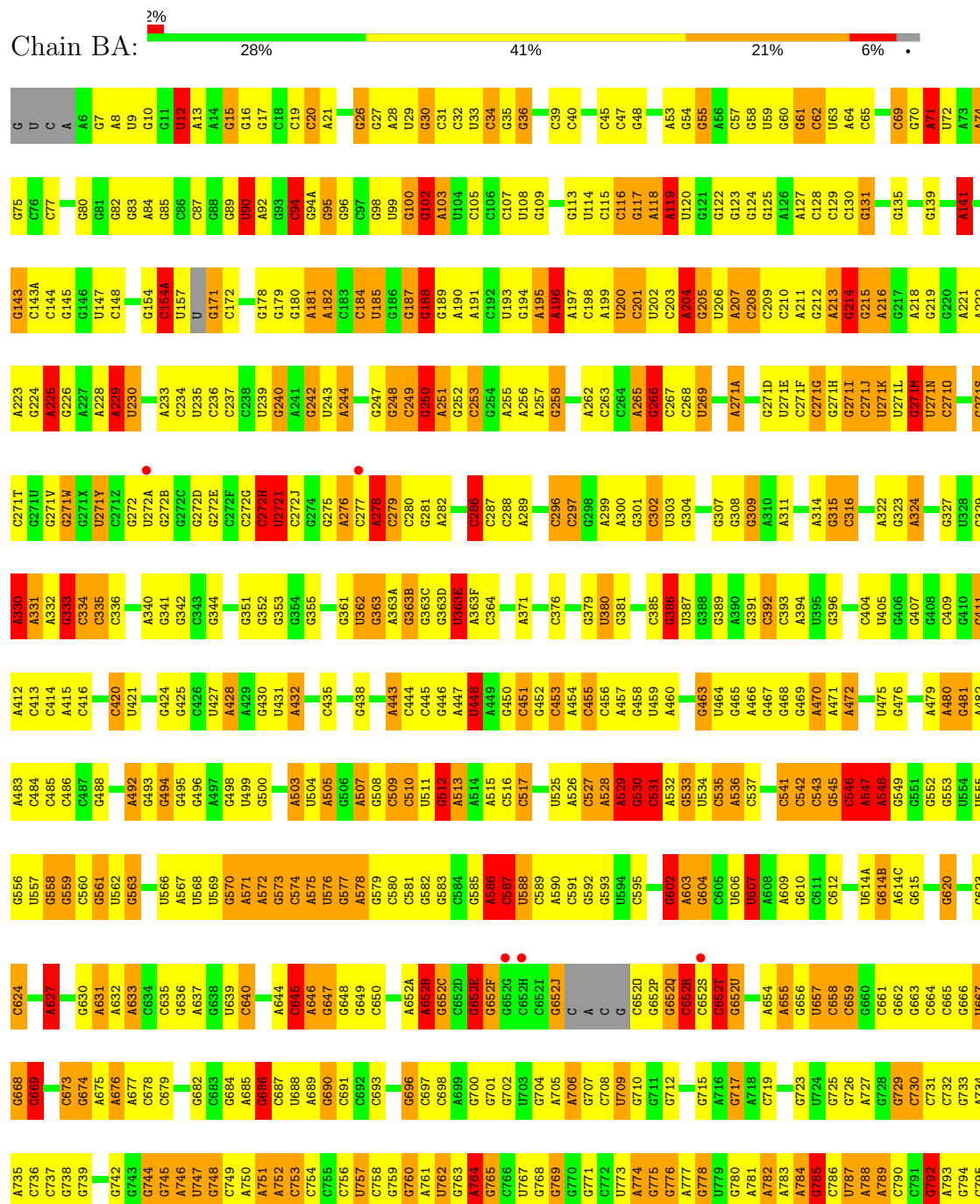


HIS

- Molecule 22: Probable sigma(54) modulation protein

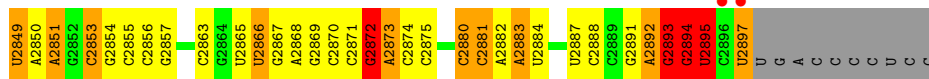


- Molecule 23: 23S Ribosomal RNA

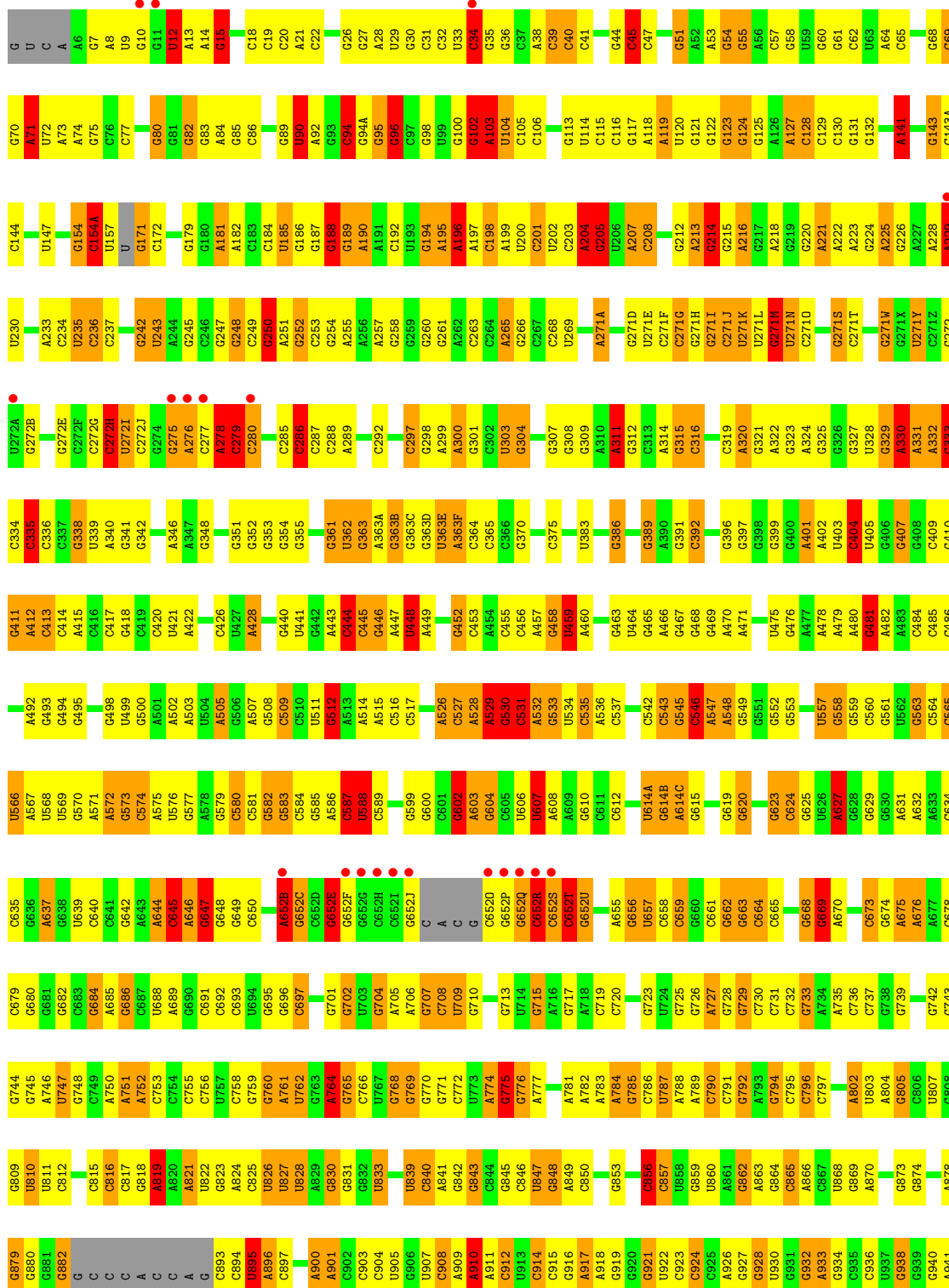


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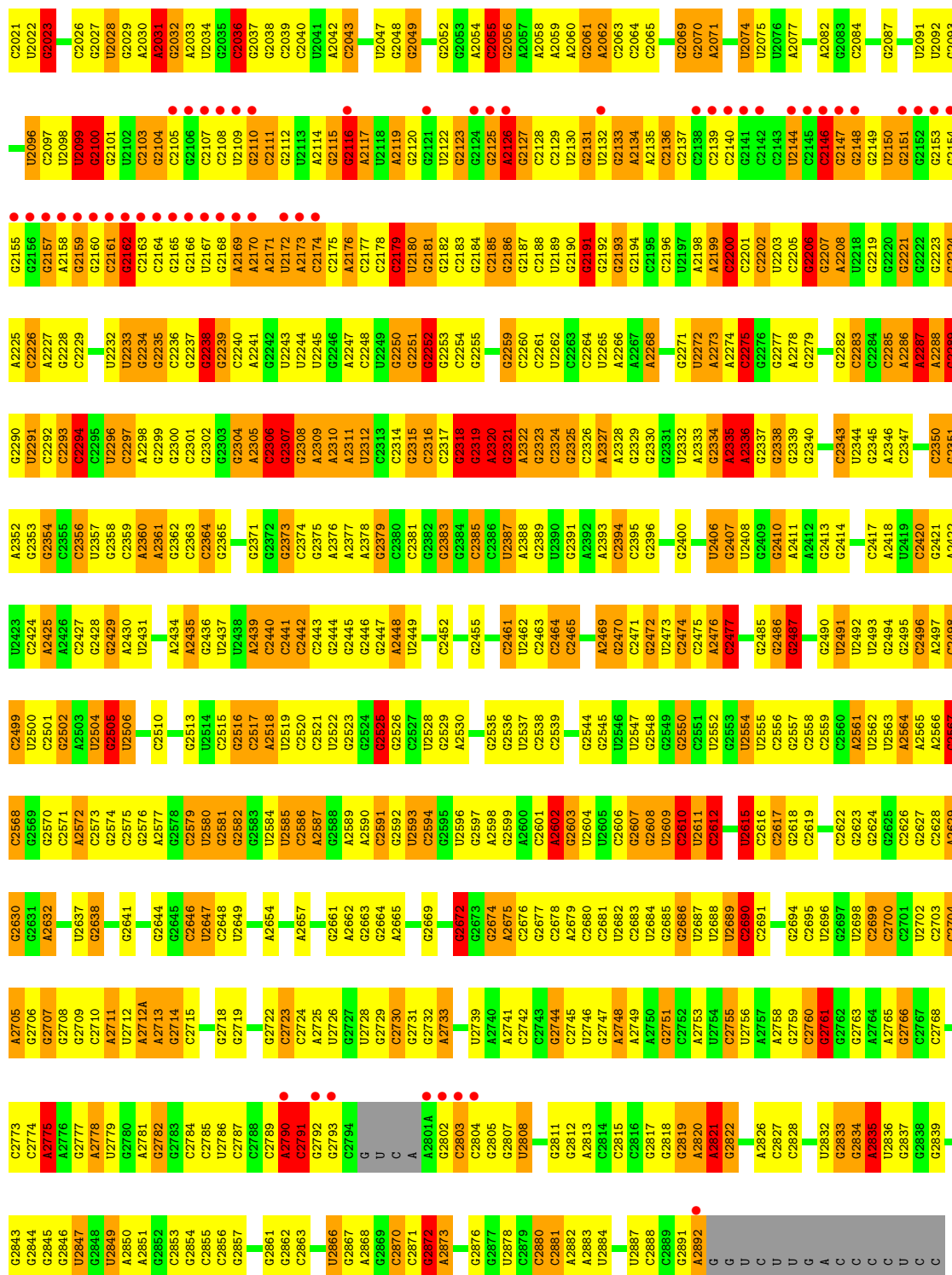
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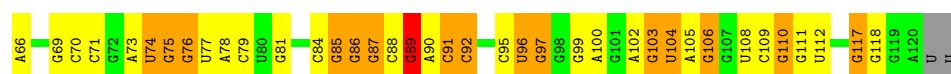


● Molecule 23: 23S Ribosomal RNA

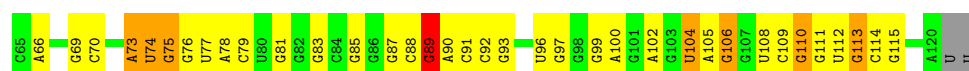
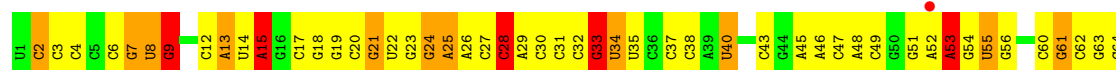




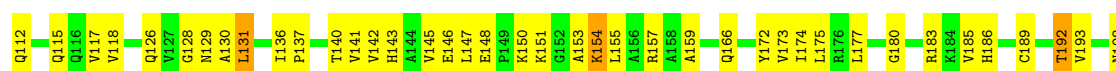




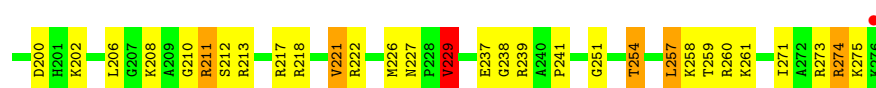
• Molecule 24: 5S Ribosomal RNA



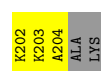
• Molecule 25: 50S Ribosomal Protein L2



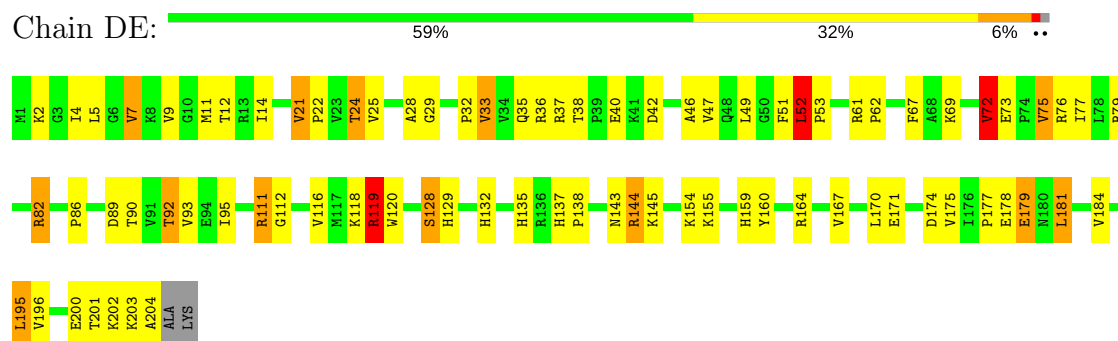
• Molecule 25: 50S Ribosomal Protein L2



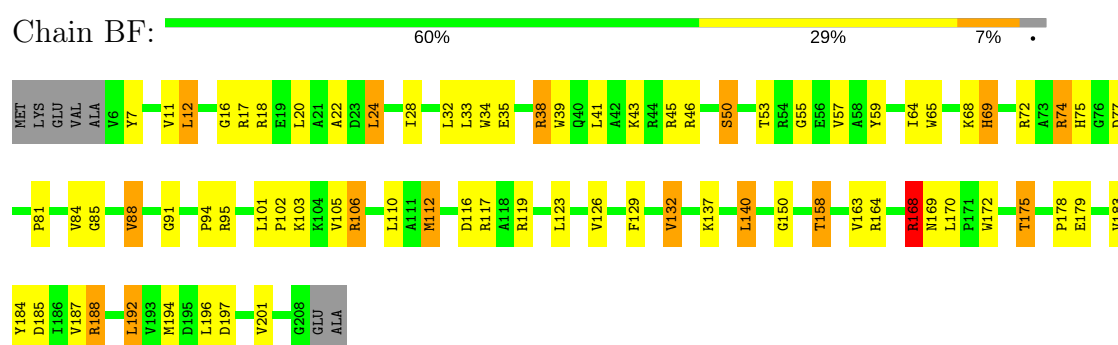
• Molecule 26: 50S Ribosomal Protein L3



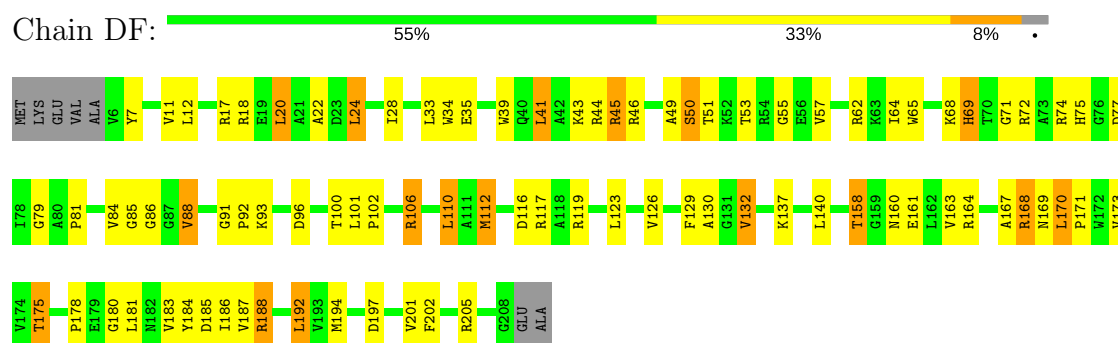
- Molecule 26: 50S Ribosomal Protein L3



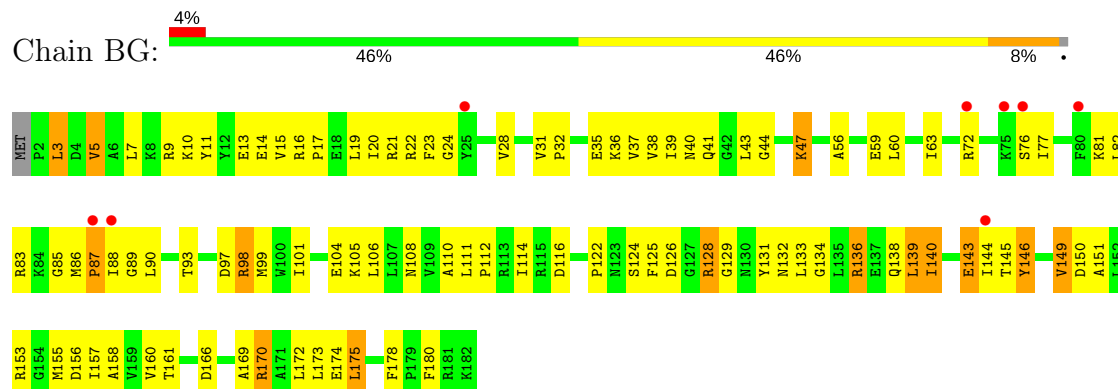
- Molecule 27: 50S Ribosomal Protein L4



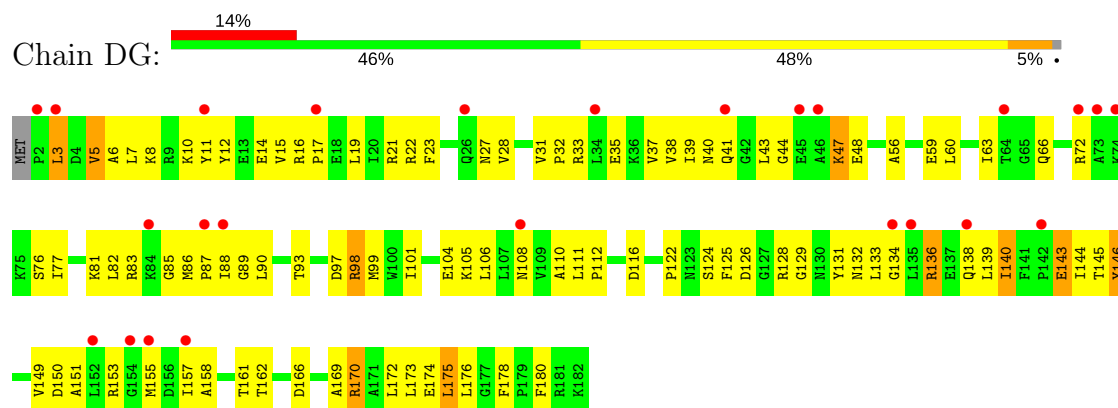
- Molecule 27: 50S Ribosomal Protein L4



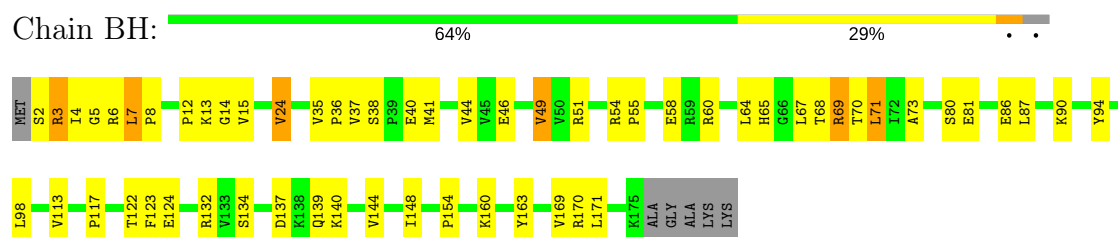
- Molecule 28: 50S Ribosomal Protein L5



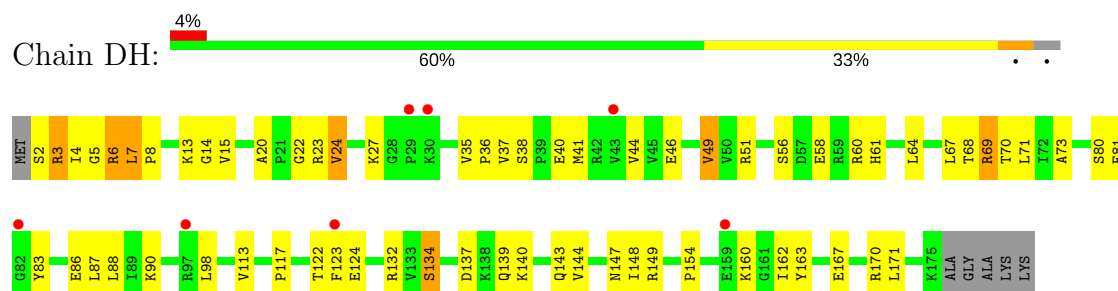
• Molecule 28: 50S Ribosomal Protein L5



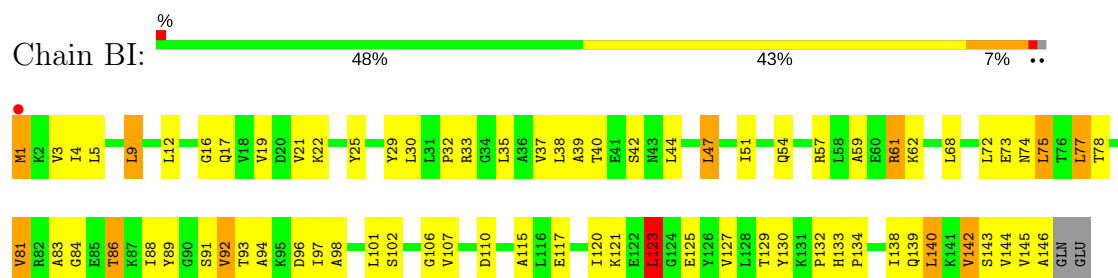
• Molecule 29: 50S Ribosomal Protein L6



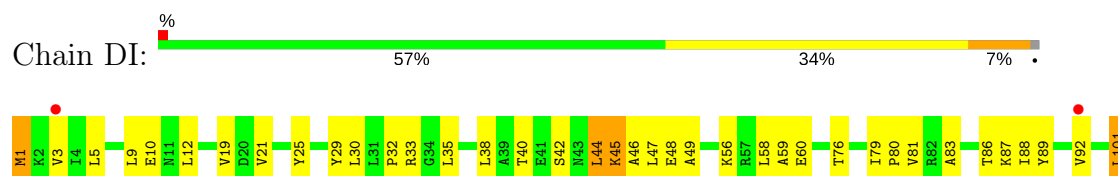
• Molecule 29: 50S Ribosomal Protein L6



• Molecule 30: 50S Ribosomal Protein L9

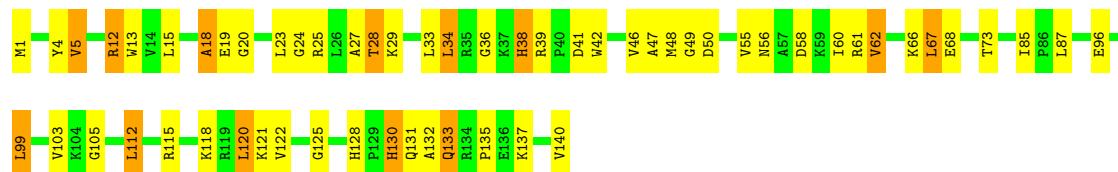


• Molecule 30: 50S Ribosomal Protein L9

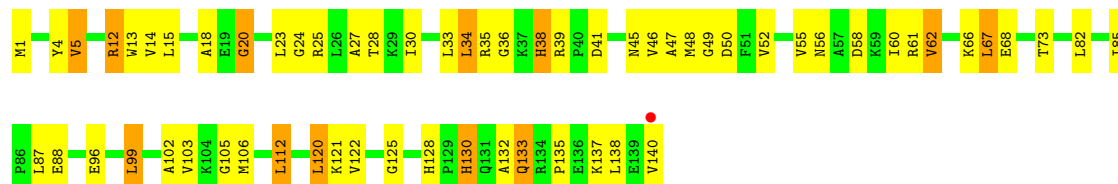




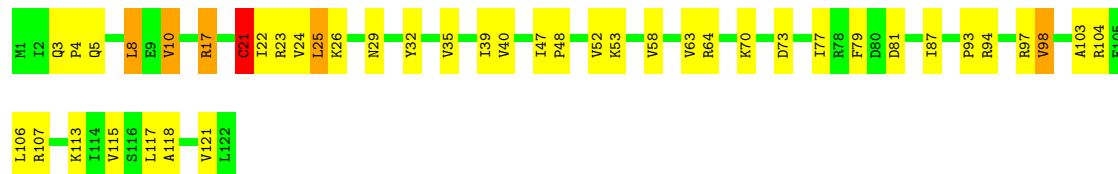
• Molecule 31: 50S Ribosomal Protein L13



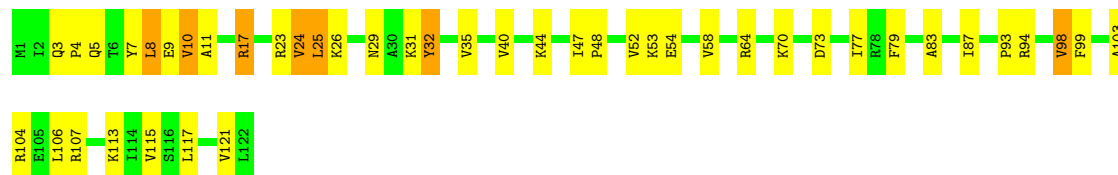
• Molecule 31: 50S Ribosomal Protein L13



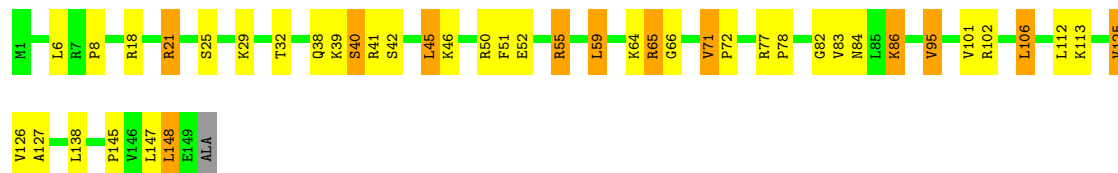
• Molecule 32: 50S Ribosomal Protein L14



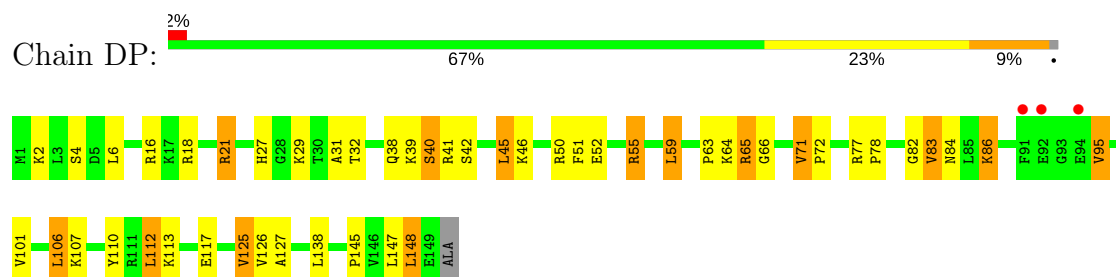
• Molecule 32: 50S Ribosomal Protein L14



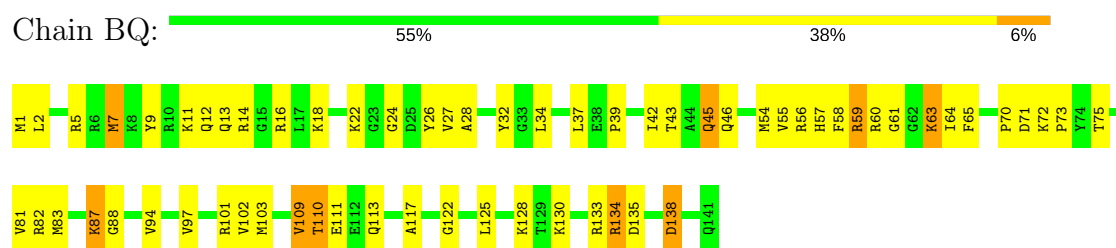
• Molecule 33: 50S Ribosomal Protein L15



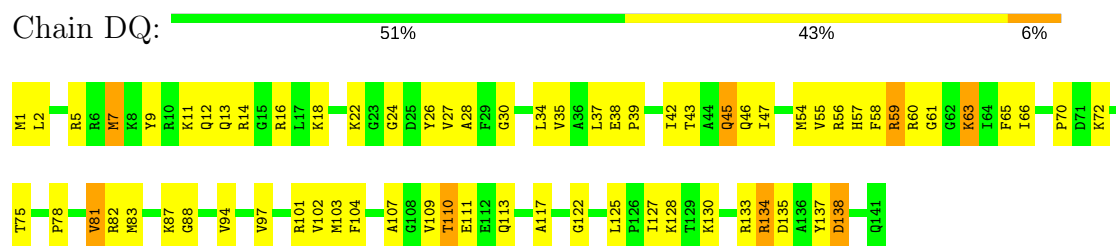
- Molecule 33: 50S Ribosomal Protein L15



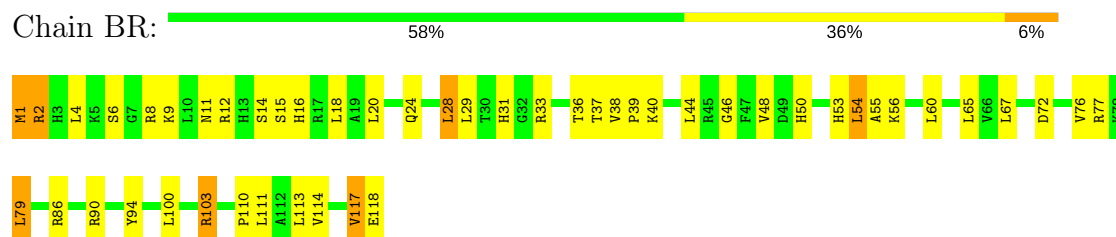
- Molecule 34: 50S Ribosomal Protein L16



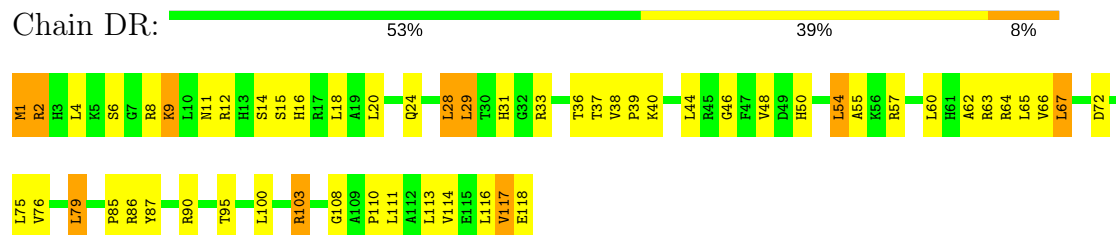
- Molecule 34: 50S Ribosomal Protein L16



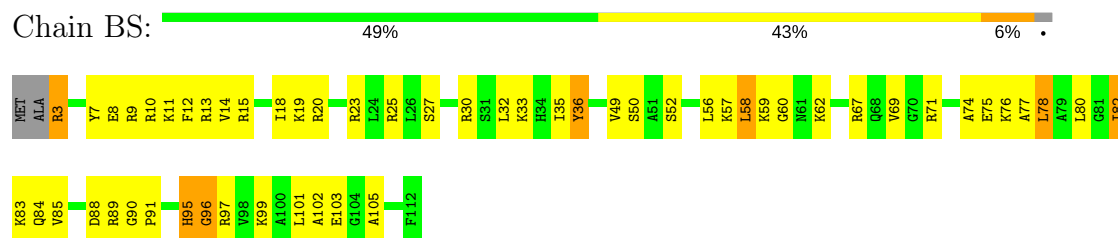
- Molecule 35: 50S Ribosomal Protein L17



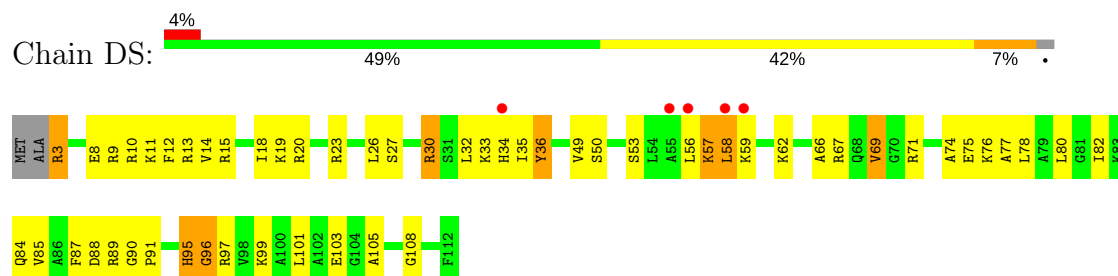
- Molecule 35: 50S Ribosomal Protein L17



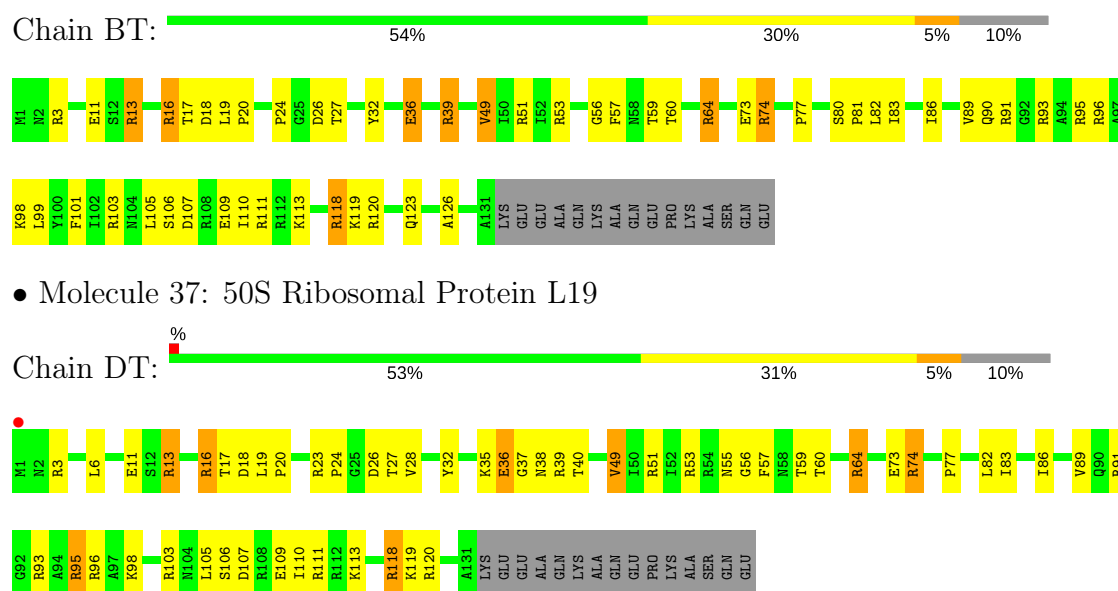
- Molecule 36: 50S Ribosomal Protein L18



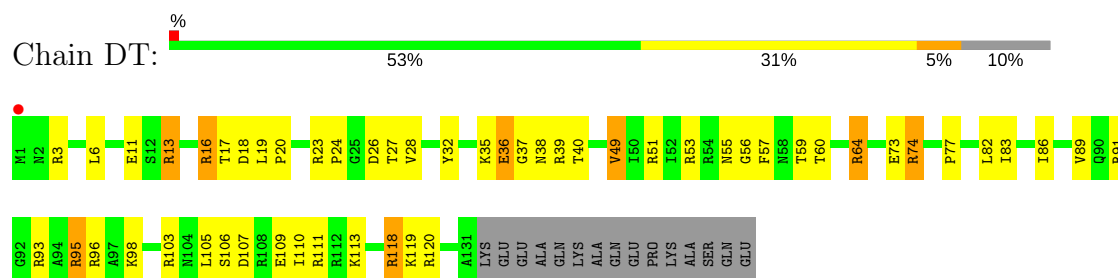
• Molecule 36: 50S Ribosomal Protein L18



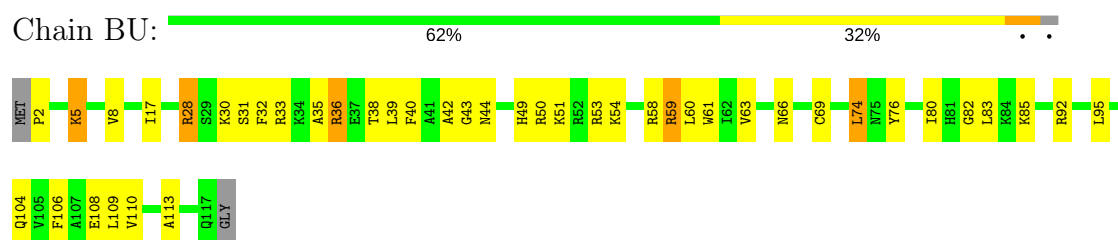
• Molecule 37: 50S Ribosomal Protein L19



• Molecule 37: 50S Ribosomal Protein L19

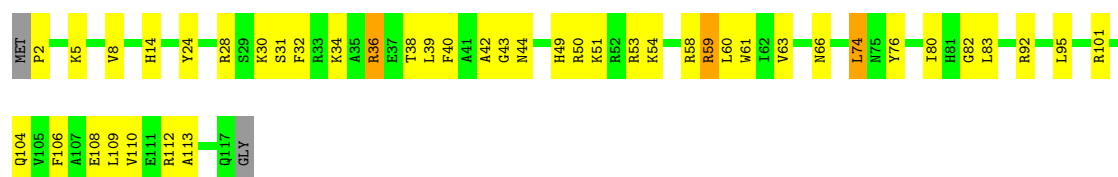


• Molecule 38: 50S Ribosomal Protein L20



• Molecule 38: 50S Ribosomal Protein L20

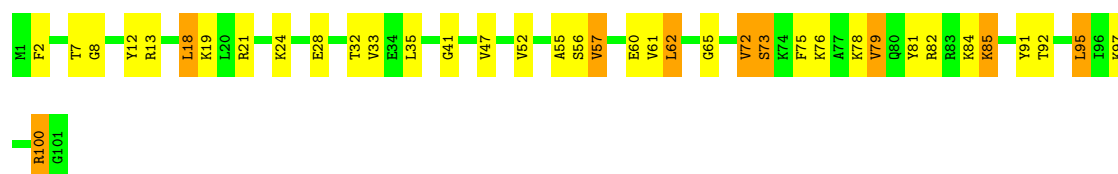




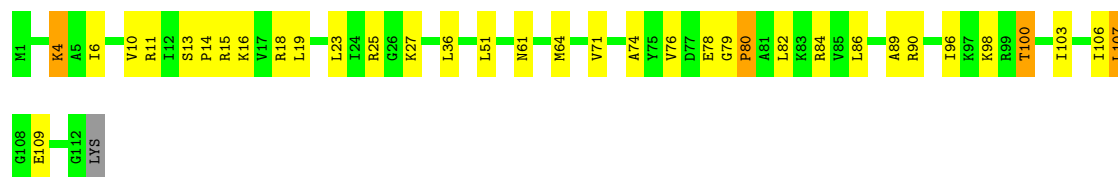
• Molecule 39: 50S Ribosomal Protein L21



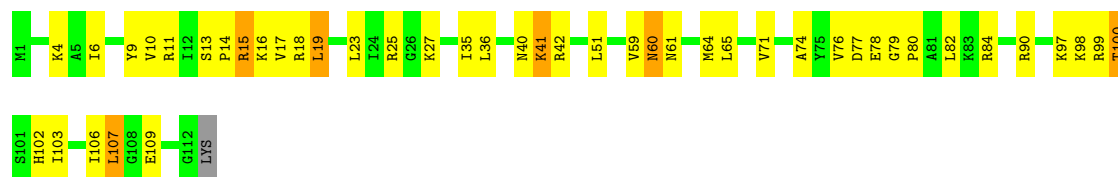
• Molecule 39: 50S Ribosomal Protein L21



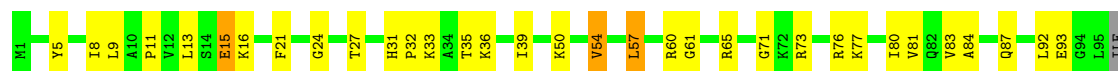
• Molecule 40: 50S Ribosomal Protein L22



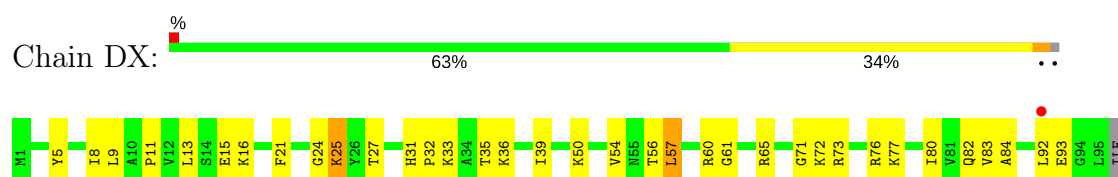
• Molecule 40: 50S Ribosomal Protein L22



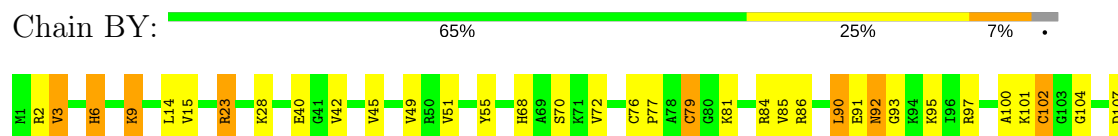
• Molecule 41: 50S Ribosomal Protein L23



• Molecule 41: 50S Ribosomal Protein L23

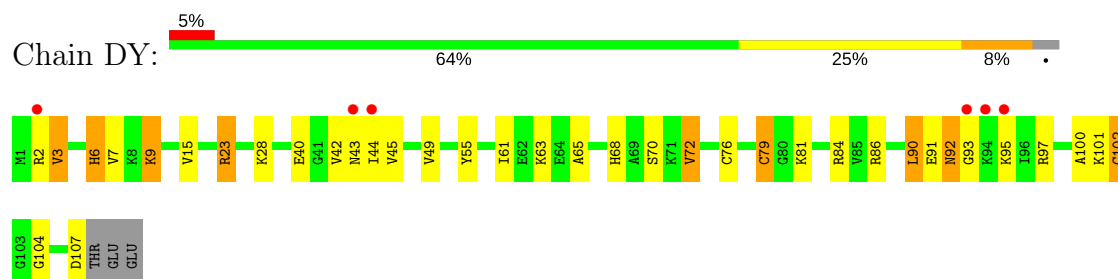


• Molecule 42: 50S Ribosomal Protein L24

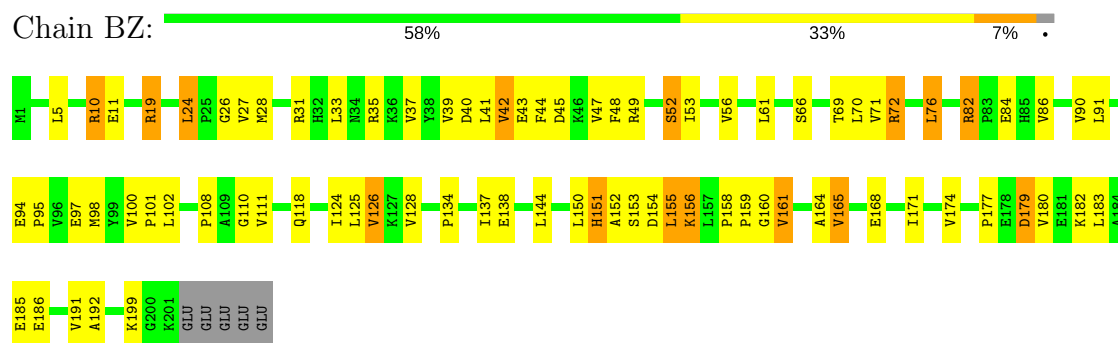


THR
GLU
GLU

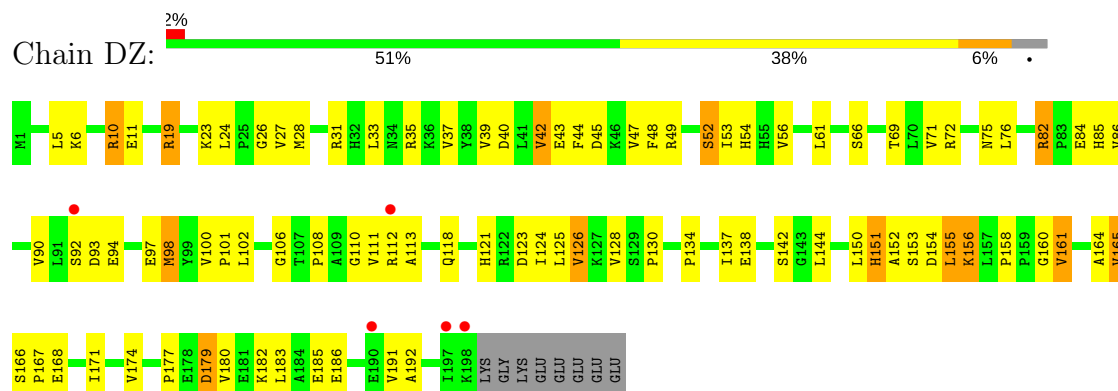
• Molecule 42: 50S Ribosomal Protein L24



• Molecule 43: 50S Ribosomal Protein L25

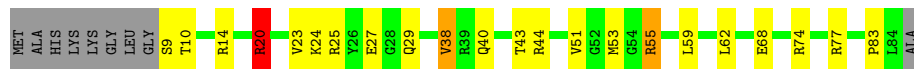


• Molecule 43: 50S Ribosomal Protein L25



- Molecule 44: 50S Ribosomal Protein L27

Chain B0: 



- Molecule 44: 50S Ribosomal Protein L27

Chain D0: 



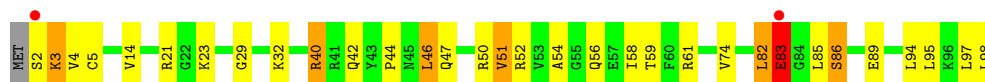
- Molecule 45: 50S Ribosomal Protein L28

Chain B1: 



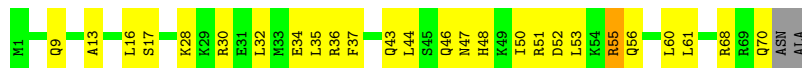
- Molecule 45: 50S Ribosomal Protein L28

Chain D1: 



- Molecule 46: 50S Ribosomal Protein L29

Chain B2: 




- Molecule 46: 50S Ribosomal Protein L29

Chain D2: 



- Molecule 47: 50S Ribosomal Protein L30

Chain B3: 

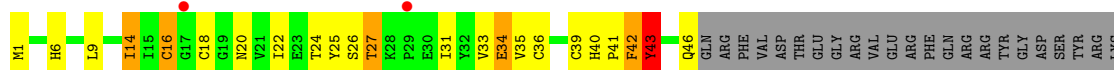


- Molecule 47: 50S Ribosomal Protein L30

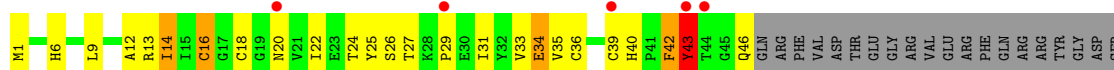
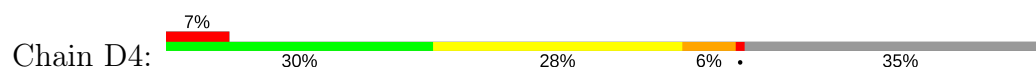
Chain D3: 



• Molecule 48: 50S Ribosomal Protein L31



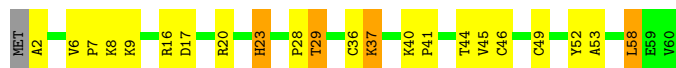
• Molecule 48: 50S Ribosomal Protein L31



• Molecule 49: 50S Ribosomal Protein L32



• Molecule 49: 50S Ribosomal Protein L32



• Molecule 50: 50S Ribosomal Protein L33



• Molecule 50: 50S Ribosomal Protein L33



• Molecule 51: 50S Ribosomal Protein L34

Chain B7:  57% 31% 8% ..



- Molecule 51: 50S Ribosomal Protein L34

Chain D7:  57% 29% 10% ..



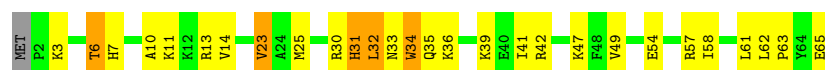
- Molecule 52: 50S Ribosomal Protein L35

Chain B8:  55% 38% ..



- Molecule 52: 50S Ribosomal Protein L35

Chain D8:  55% 35% 8% ..



- Molecule 53: 50S Ribosomal Protein L36

Chain B9:  62% 32% ..



- Molecule 53: 50S Ribosomal Protein L36

Chain D9:  3% 62% 32% ..



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.97Å 447.24Å 617.67Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.98 – 3.10 49.98 – 3.10	Depositor EDS
% Data completeness (in resolution range)	96.0 (49.98-3.10) 96.0 (49.98-3.10)	Depositor EDS
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.39 (at 3.12Å)	Xtriage
Refinement program	PHENIX 1.7.2 _869	Depositor
R, R_{free}	0.216 , 0.258 0.214 , 0.257	Depositor DCC
R_{free} test set	49829 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	65.0	Xtriage
Anisotropy	0.263	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 54.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.42$, $\langle L^2 \rangle = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	286308	wwPDB-VP
Average B, all atoms (Å ²)	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.51% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ 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: ZN, MG

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	1.14	57/36123 (0.2%)	1.54	760/56379 (1.3%)
1	CA	1.11	53/36028 (0.1%)	1.55	750/56231 (1.3%)
2	AB	0.69	0/1822	0.79	1/2468 (0.0%)
2	CB	0.75	0/1809	0.79	1/2450 (0.0%)
3	AC	0.80	0/1474	0.88	0/2003
3	CC	0.78	0/1474	0.86	2/2003 (0.1%)
4	AD	0.68	2/1556 (0.1%)	0.87	3/2113 (0.1%)
4	CD	0.72	2/1556 (0.1%)	0.87	3/2113 (0.1%)
5	AE	0.61	0/1121	0.80	1/1517 (0.1%)
5	CE	0.63	0/1121	0.82	1/1517 (0.1%)
6	AF	0.59	0/790	0.73	0/1077
6	CF	0.62	0/790	0.73	0/1077
7	AG	1.04	0/1183	0.98	2/1599 (0.1%)
7	CG	0.96	0/1183	0.90	0/1599
8	AH	0.57	0/1065	0.73	0/1445
8	CH	0.58	0/1065	0.75	0/1445
9	AI	0.92	0/867	0.92	0/1180
9	CI	1.00	0/867	0.91	1/1180 (0.1%)
10	AJ	0.83	0/676	0.91	1/924 (0.1%)
10	CJ	0.90	0/676	0.97	0/924
11	AK	0.62	0/843	0.75	1/1144 (0.1%)
11	CK	0.61	0/843	0.75	1/1144 (0.1%)
12	AL	0.63	0/921	0.78	0/1247
12	CL	0.64	0/921	0.80	0/1247
13	AM	1.02	0/814	1.00	0/1107
13	CM	1.03	0/814	1.03	2/1107 (0.2%)
14	AN	0.76	0/487	0.90	0/649
14	CN	0.77	1/487 (0.2%)	0.87	1/649 (0.2%)
15	AO	0.62	0/735	0.84	0/981
15	CO	0.66	0/735	0.85	0/981
16	AP	0.63	0/667	0.82	0/905
16	CP	0.56	0/667	0.82	0/905

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AQ	0.66	0/836	0.84	0/1117
17	CQ	0.69	1/836 (0.1%)	0.85	0/1117
18	AR	0.59	0/519	0.76	1/699 (0.1%)
18	CR	0.63	0/519	0.76	1/699 (0.1%)
19	AS	0.96	0/574	0.87	0/781
19	CS	0.98	0/574	0.93	0/781
20	AT	0.63	0/666	0.79	0/880
20	CT	0.62	0/715	0.84	1/947 (0.1%)
21	AU	0.82	0/203	0.92	0/266
21	CU	0.91	0/203	0.97	0/266
22	AX	0.69	0/637	0.84	1/864 (0.1%)
22	CX	0.77	0/606	0.82	0/828
23	BA	1.58	572/68445 (0.8%)	1.72	2187/106848 (2.0%)
23	DA	1.21	155/67893 (0.2%)	1.65	1848/105980 (1.7%)
24	BB	1.13	6/2878 (0.2%)	1.53	60/4490 (1.3%)
24	DB	1.13	2/2878 (0.1%)	1.52	49/4490 (1.1%)
25	BD	0.90	1/2185 (0.0%)	0.91	4/2942 (0.1%)
25	DD	0.82	0/2186	0.91	2/2944 (0.1%)
26	BE	0.90	0/1588	0.92	0/2145
26	DE	0.78	0/1588	0.92	3/2145 (0.1%)
27	BF	0.91	0/1615	0.95	3/2188 (0.1%)
27	DF	0.74	0/1615	0.92	2/2188 (0.1%)
28	BG	0.61	0/1393	0.79	0/1892
28	DG	0.72	0/1393	0.81	0/1892
29	BH	0.72	0/1343	0.82	1/1820 (0.1%)
29	DH	0.66	0/1343	0.81	0/1820
30	BI	0.64	0/1052	0.87	1/1441 (0.1%)
30	DI	0.63	0/967	0.84	1/1334 (0.1%)
31	BN	0.87	0/1139	0.87	0/1538
31	DN	0.71	0/1139	0.89	1/1538 (0.1%)
32	BO	0.87	1/933 (0.1%)	0.88	1/1257 (0.1%)
32	DO	0.73	0/933	0.83	1/1257 (0.1%)
33	BP	0.84	0/1148	0.91	1/1529 (0.1%)
33	DP	0.73	0/1148	0.89	1/1529 (0.1%)
34	BQ	0.84	0/1143	0.87	1/1527 (0.1%)
34	DQ	0.74	0/1143	0.86	0/1527
35	BR	0.80	0/982	0.92	0/1312
35	DR	0.75	0/982	0.92	1/1312 (0.1%)
36	BS	0.67	0/875	0.88	1/1168 (0.1%)
36	DS	0.69	0/875	0.87	1/1168 (0.1%)
37	BT	0.83	0/1077	0.92	0/1444
37	DT	0.73	0/1077	0.90	0/1444
38	BU	1.00	1/977 (0.1%)	0.87	1/1301 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DU	0.79	0/977	0.86	0/1301
39	BV	0.85	0/782	0.92	0/1049
39	DV	0.77	0/782	0.85	0/1049
40	BW	1.02	0/891	0.91	0/1197
40	DW	0.87	0/891	0.91	1/1197 (0.1%)
41	BX	0.91	0/756	0.88	2/1016 (0.2%)
41	DX	0.78	0/756	0.86	1/1016 (0.1%)
42	BY	0.80	1/798 (0.1%)	0.88	0/1073
42	DY	0.73	1/798 (0.1%)	0.89	0/1073
43	BZ	0.70	0/1569	0.82	1/2137 (0.0%)
43	DZ	0.72	0/1555	0.81	1/2118 (0.0%)
44	B0	0.85	0/602	0.92	1/804 (0.1%)
44	D0	0.78	0/602	0.92	0/804
45	B1	0.85	0/752	0.90	2/1003 (0.2%)
45	D1	0.80	0/752	0.89	1/1003 (0.1%)
46	B2	0.82	0/590	0.86	0/781
46	D2	0.79	0/590	0.86	0/781
47	B3	0.76	0/463	0.84	1/623 (0.2%)
47	D3	0.69	0/463	0.81	0/623
48	B4	0.68	0/358	0.84	1/487 (0.2%)
48	D4	0.85	0/358	0.83	1/487 (0.2%)
49	B5	0.93	1/469 (0.2%)	1.00	0/634
49	D5	0.86	1/469 (0.2%)	0.96	0/634
50	B6	0.93	2/456 (0.4%)	0.84	0/609
50	D6	0.75	0/456	0.87	2/609 (0.3%)
51	B7	1.03	1/426 (0.2%)	1.12	1/561 (0.2%)
51	D7	0.88	0/426	1.01	1/561 (0.2%)
52	B8	0.96	0/516	0.94	1/679 (0.1%)
52	D8	0.76	0/516	0.90	0/679
53	B9	0.79	0/300	0.95	0/395
53	D9	0.71	0/300	0.90	0/395
All	All	1.18	861/305420 (0.3%)	1.47	5724/457343 (1.3%)

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
2	AB	0	3
2	CB	0	4
3	AC	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	CC	0	1
4	AD	0	1
4	CD	0	1
7	CG	0	2
9	AI	0	1
9	CI	0	1
10	AJ	0	2
10	CJ	0	2
13	AM	0	4
13	CM	0	2
14	AN	0	1
15	AO	0	1
15	CO	0	1
17	AQ	0	1
17	CQ	0	1
19	AS	0	1
19	CS	0	1
20	AT	0	1
20	CT	0	1
23	BA	0	1
23	DA	0	1
26	BE	0	1
26	DE	0	1
27	DF	0	1
30	DI	0	1
34	BQ	0	1
34	DQ	0	1
36	BS	0	1
36	DS	0	1
41	BX	0	1
41	DX	0	1
43	BZ	0	3
43	DZ	0	1
45	B1	0	1
45	D1	0	1
48	B4	0	1
48	D4	0	1
All	All	0	56

All (861) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	1442(A)	G	N9-C4	17.19	1.51	1.38
1	AA	1442(A)	G	N9-C4	15.23	1.50	1.38
1	AA	1442(A)	G	C2-N3	15.04	1.44	1.32
1	CA	1442(A)	G	C2-N3	14.30	1.44	1.32
1	AA	1442(A)	G	N3-C4	13.24	1.44	1.35
1	CA	1442(A)	G	N3-C4	12.97	1.44	1.35
23	BA	1142(A)	A	N9-C4	-12.92	1.30	1.37
23	BA	945	A	N9-C4	-12.37	1.30	1.37
23	BA	207	A	N9-C4	-12.29	1.30	1.37
23	DA	1142(A)	A	N9-C4	-12.18	1.30	1.37
23	BA	676	A	N9-C4	-12.12	1.30	1.37
23	BA	528	A	N9-C4	-12.02	1.30	1.37
23	DA	945	A	N9-C4	-11.74	1.30	1.37
4	CD	12	CYS	CB-SG	11.03	2.00	1.82
23	DA	528	A	N9-C4	-9.70	1.32	1.37
23	BA	1204	A	N9-C4	-9.69	1.32	1.37
23	BA	2055	C	P-OP1	-9.53	1.32	1.49
23	BA	1142(A)	A	N3-C4	-9.27	1.29	1.34
23	BA	330	A	N9-C4	-9.14	1.32	1.37
23	BA	2015	A	N7-C5	-8.94	1.33	1.39
23	BA	1021	A	N9-C4	-8.86	1.32	1.37
23	BA	2440	C	N1-C6	-8.80	1.31	1.37
23	BA	933	A	N9-C4	-8.77	1.32	1.37
23	BA	1762	A	N9-C4	8.75	1.43	1.37
23	BA	2587	A	N9-C8	-8.67	1.30	1.37
23	DA	71	A	N9-C4	-8.63	1.32	1.37
23	BA	1570	A	N9-C4	-8.62	1.32	1.37
23	BA	1655	A	N9-C4	-8.61	1.32	1.37
23	DA	1308	A	N7-C5	-8.57	1.34	1.39
23	BA	1829	A	N9-C4	-8.52	1.32	1.37
23	BA	732	C	N1-C6	-8.51	1.32	1.37
23	BA	503	A	N3-C4	-8.48	1.29	1.34
23	DA	1204	A	N9-C4	-8.45	1.32	1.37
23	BA	2296	U	C4-C5	8.41	1.51	1.43
23	BA	1785	A	N7-C5	-8.40	1.34	1.39
23	DA	1490	A	N3-C4	8.38	1.39	1.34
23	BA	756	C	N1-C6	-8.38	1.32	1.37
23	DA	207	A	N9-C4	-8.37	1.32	1.37
23	BA	933	A	N3-C4	-8.32	1.29	1.34
23	DA	251	A	N3-C4	-8.31	1.29	1.34
23	BA	1210	A	N3-C4	-8.28	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	330	A	N9-C4	-8.27	1.32	1.37
23	BA	209	C	N1-C6	-8.25	1.32	1.37
23	BA	1570	A	N3-C4	-8.19	1.29	1.34
23	BA	1612	C	N1-C6	-8.15	1.32	1.37
23	BA	2032	G	N7-C5	-8.08	1.34	1.39
1	CA	1442(A)	G	C2-N2	8.08	1.42	1.34
1	CA	1116	C	N1-C6	8.07	1.42	1.37
1	CA	1492	A	N9-C4	8.06	1.42	1.37
23	BA	2030	A	N9-C4	-7.99	1.33	1.37
1	AA	1492	A	N9-C4	7.99	1.42	1.37
23	BA	745	G	N7-C5	-7.95	1.34	1.39
23	DA	652(B)	A	N9-C4	7.95	1.42	1.37
23	DA	1788	C	N1-C6	-7.92	1.32	1.37
23	BA	209	C	N3-C4	-7.92	1.28	1.33
23	DA	2725	A	N9-C4	-7.90	1.33	1.37
23	BA	689	A	N9-C4	-7.89	1.33	1.37
23	BA	2597	G	N7-C5	-7.88	1.34	1.39
23	BA	529	A	N9-C4	-7.79	1.33	1.37
1	CA	1340	A	N9-C4	7.78	1.42	1.37
50	B6	13	CYS	CB-SG	-7.75	1.69	1.82
23	DA	2296	U	C4-C5	7.73	1.50	1.43
1	AA	1442(A)	G	C2-N2	7.68	1.42	1.34
23	DA	1762	A	N9-C4	7.66	1.42	1.37
23	BA	1210	A	N7-C5	-7.60	1.34	1.39
23	BA	933	A	C5-C6	-7.57	1.34	1.41
23	BA	119	A	N7-C5	-7.55	1.34	1.39
23	BA	1791	A	N7-C5	-7.49	1.34	1.39
49	D5	49	CYS	CB-SG	-7.48	1.69	1.82
1	CA	1493	A	N9-C4	7.47	1.42	1.37
23	BA	472	A	N3-C4	-7.45	1.30	1.34
23	BA	1755	A	N3-C4	-7.45	1.30	1.34
23	BA	191	A	N7-C5	-7.43	1.34	1.39
23	BA	1254	A	N3-C4	-7.43	1.30	1.34
23	BA	575	A	C6-N1	-7.33	1.30	1.35
1	CA	1442(B)	A	N9-C4	7.33	1.42	1.37
23	BA	197	A	C5-C4	-7.31	1.33	1.38
23	DA	676	A	N9-C8	7.30	1.43	1.37
23	BA	2286	A	N7-C5	-7.30	1.34	1.39
23	BA	567	A	N9-C4	-7.30	1.33	1.37
23	BA	933	A	N7-C5	-7.29	1.34	1.39
23	BA	2575	C	N1-C6	-7.29	1.32	1.37
1	AA	1442(B)	A	N9-C4	7.26	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	69	G	O3'-P	-7.24	1.52	1.61
23	BA	983	A	N3-C4	-7.24	1.30	1.34
23	BA	2287	A	N9-C4	-7.22	1.33	1.37
23	BA	57	C	N1-C6	-7.21	1.32	1.37
1	CA	986	A	N9-C4	7.21	1.42	1.37
23	BA	2641	G	N7-C5	-7.21	1.34	1.39
23	BA	2680	C	N1-C6	-7.20	1.32	1.37
23	DA	746	A	N9-C4	-7.19	1.33	1.37
23	BA	1308	A	N7-C5	-7.17	1.34	1.39
23	BA	804	A	C5-C4	-7.15	1.33	1.38
23	BA	679	C	N1-C6	-7.14	1.32	1.37
23	DA	204	A	N3-C4	-7.12	1.30	1.34
23	BA	1301	A	N7-C5	-7.11	1.34	1.39
23	BA	1241	A	N9-C4	-7.11	1.33	1.37
23	BA	2055	C	P-O5'	-7.10	1.52	1.59
23	BA	1567	A	N9-C4	-7.09	1.33	1.37
23	BA	1789	A	N7-C5	-7.08	1.35	1.39
23	BA	1198	U	C2-N3	-7.07	1.32	1.37
23	BA	831	G	C8-N7	-7.06	1.26	1.30
23	DA	1142(A)	A	N3-C4	-7.06	1.30	1.34
23	DA	1045	A	N9-C4	7.04	1.42	1.37
23	BA	1210	A	C5-C6	-7.00	1.34	1.41
23	BA	783	A	N7-C5	-6.98	1.35	1.39
23	BA	2058	A	N9-C4	-6.97	1.33	1.37
1	CA	1333	A	N9-C4	6.97	1.42	1.37
23	BA	577	G	P-OP1	-6.97	1.37	1.49
4	CD	9	CYS	CB-SG	6.96	1.94	1.82
23	BA	1674	G	N7-C5	-6.95	1.35	1.39
23	BA	1901	A	C6-N1	-6.95	1.30	1.35
23	BA	2335	A	C5-C4	-6.94	1.33	1.38
1	AA	1442(A)	G	C5-C6	6.92	1.49	1.42
23	BA	983	A	N9-C4	-6.90	1.33	1.37
23	DA	2252	G	N3-C4	-6.89	1.30	1.35
23	BA	850	C	N3-C4	-6.89	1.29	1.33
23	BA	2052	G	N7-C5	-6.89	1.35	1.39
23	BA	570	G	C5-C4	-6.88	1.33	1.38
23	BA	804	A	N9-C4	-6.87	1.33	1.37
1	AA	1333	A	N9-C4	6.86	1.42	1.37
23	DA	1107	G	N9-C4	6.86	1.43	1.38
23	BA	2248	C	N1-C6	-6.84	1.33	1.37
23	BA	676	A	C5-C4	6.84	1.43	1.38
23	DA	2335	A	C5-C4	-6.82	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2561	A	N3-C4	-6.82	1.30	1.34
23	BA	2872	G	N3-C4	-6.81	1.30	1.35
42	BY	79	CYS	CB-SG	-6.81	1.70	1.82
23	BA	1225	G	N3-C4	-6.80	1.30	1.35
23	DA	2322	A	C6-N1	6.80	1.40	1.35
23	BA	676	A	N3-C4	-6.77	1.30	1.34
23	DA	2790	A	N9-C4	6.77	1.42	1.37
23	DA	960	A	N9-C4	-6.77	1.33	1.37
23	BA	1755	A	N9-C4	-6.77	1.33	1.37
23	BA	1571	A	N9-C4	-6.76	1.33	1.37
1	CA	946	A	N9-C4	6.74	1.41	1.37
23	BA	587	C	N3-C4	-6.74	1.29	1.33
23	BA	1648	C	N3-C4	-6.73	1.29	1.33
23	DA	2826	A	N3-C4	-6.72	1.30	1.34
23	BA	658	C	N3-C4	-6.71	1.29	1.33
1	AA	69	G	O3'-P	6.70	1.69	1.61
23	DA	1257	C	N1-C6	-6.70	1.33	1.37
23	BA	1564	C	N3-C4	-6.65	1.29	1.33
23	DA	571	A	N9-C4	-6.64	1.33	1.37
23	BA	1571	A	N7-C5	-6.64	1.35	1.39
23	BA	1785	A	C5-C6	-6.64	1.35	1.41
23	BA	676	A	N9-C8	6.63	1.43	1.37
1	CA	1310	G	N7-C5	6.62	1.43	1.39
23	BA	71	A	N9-C4	-6.62	1.33	1.37
23	BA	689	A	C5-C4	-6.61	1.34	1.38
23	DA	190	A	N9-C4	-6.61	1.33	1.37
23	BA	1269	A	N9-C4	-6.61	1.33	1.37
23	BA	204	A	N7-C5	-6.60	1.35	1.39
23	BA	2015	A	N3-C4	-6.60	1.30	1.34
23	BA	804	A	N3-C4	-6.59	1.30	1.34
23	BA	2715	C	N1-C6	-6.59	1.33	1.37
23	BA	663	G	N3-C4	-6.57	1.30	1.35
23	BA	831	G	C5-C4	-6.57	1.33	1.38
23	BA	371	A	N9-C4	-6.56	1.33	1.37
23	BA	1142(A)	A	C5-C6	-6.56	1.35	1.41
23	BA	1254	A	C6-N1	-6.56	1.30	1.35
23	BA	988	A	N7-C5	-6.55	1.35	1.39
23	BA	32	C	N1-C6	-6.55	1.33	1.37
23	BA	1755	A	N7-C5	-6.55	1.35	1.39
23	BA	472	A	N9-C4	-6.54	1.33	1.37
23	BA	732	C	C4-C5	-6.53	1.37	1.43
23	BA	1278	A	N9-C8	-6.53	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1653	G	N7-C5	-6.53	1.35	1.39
23	DA	1960	A	N9-C4	-6.53	1.33	1.37
23	BA	819	A	C6-N1	-6.52	1.30	1.35
23	BA	1314	C	N1-C6	-6.52	1.33	1.37
23	DA	251	A	N9-C4	-6.52	1.33	1.37
23	BA	1617	C	N1-C6	-6.52	1.33	1.37
23	BA	2619	C	N1-C6	-6.51	1.33	1.37
23	BA	675	A	C5-C6	-6.50	1.35	1.41
23	BA	2790	A	N9-C4	6.48	1.41	1.37
23	BA	32	C	N3-C4	-6.48	1.29	1.33
23	BA	577	G	P-O5'	-6.46	1.53	1.59
23	BA	609	A	N3-C4	-6.46	1.30	1.34
23	BA	2765	A	N7-C5	-6.46	1.35	1.39
23	BA	2606	C	N3-C4	-6.45	1.29	1.33
23	DA	1021	A	N9-C4	-6.45	1.33	1.37
23	BA	849	A	N9-C4	-6.44	1.33	1.37
1	CA	78	G	C6-N1	6.44	1.44	1.39
23	BA	1676	A	N3-C4	-6.43	1.30	1.34
23	BA	1278	A	N7-C5	-6.42	1.35	1.39
23	BA	1045	A	N9-C4	6.42	1.41	1.37
23	BA	1322	A	N9-C4	-6.39	1.34	1.37
23	BA	572	A	N3-C4	-6.39	1.31	1.34
23	BA	123	G	N3-C4	-6.39	1.30	1.35
23	BA	2055	C	P-OP2	-6.39	1.38	1.49
23	BA	74	A	N3-C4	-6.38	1.31	1.34
23	DA	2593	U	C2-N3	-6.35	1.33	1.37
23	DA	676	A	C5-C6	-6.35	1.35	1.41
23	BA	561	G	C5-C4	-6.34	1.33	1.38
23	BA	69	C	N1-C6	-6.33	1.33	1.37
23	BA	1655	A	N3-C4	-6.33	1.31	1.34
23	BA	945	A	N3-C4	-6.30	1.31	1.34
23	DA	802	A	C6-N1	-6.30	1.31	1.35
23	BA	74	A	N9-C4	-6.29	1.34	1.37
23	BA	1278	A	C5-C4	-6.29	1.34	1.38
24	DB	102	A	N7-C5	6.29	1.43	1.39
23	BA	2578	G	N1-C2	-6.28	1.32	1.37
23	BA	793	A	N3-C4	-6.28	1.31	1.34
23	BA	1046	A	N9-C4	6.28	1.41	1.37
1	AA	1447	A	N9-C4	6.27	1.41	1.37
23	BA	2287	A	N3-C4	-6.27	1.31	1.34
23	BA	2027	G	N1-C2	-6.27	1.32	1.37
23	BA	2621	A	C6-N6	-6.27	1.28	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	2454	G	C5-C4	-6.26	1.33	1.38
23	BA	2600	A	N7-C5	-6.25	1.35	1.39
23	BA	2587	A	N7-C5	-6.25	1.35	1.39
23	BA	750	A	C6-N1	-6.24	1.31	1.35
23	BA	1252	G	C5-C4	-6.23	1.33	1.38
23	DA	981	A	N9-C4	-6.23	1.34	1.37
23	BA	1800	C	N1-C6	-6.23	1.33	1.37
23	BA	1608	A	N9-C4	-6.21	1.34	1.37
23	BA	2199	A	C6-N1	-6.21	1.31	1.35
23	BA	1006	C	N3-C4	-6.21	1.29	1.33
24	BB	71	C	N1-C6	-6.21	1.33	1.37
1	CA	1456	G	N3-C4	6.21	1.39	1.35
23	BA	1296	G	N1-C2	-6.20	1.32	1.37
23	BA	1843	C	N1-C6	-6.18	1.33	1.37
23	BA	204	A	N3-C4	-6.17	1.31	1.34
23	BA	2723	C	N3-C4	-6.16	1.29	1.33
1	CA	1447	A	N9-C4	6.16	1.41	1.37
23	BA	122	G	C5-C4	-6.16	1.34	1.38
23	BA	463	G	N3-C4	-6.14	1.31	1.35
23	BA	201	C	N1-C6	-6.13	1.33	1.37
23	BA	1141	U	C2-N3	-6.12	1.33	1.37
23	BA	2515	C	N1-C6	-6.12	1.33	1.37
23	BA	959	A	C6-N1	-6.12	1.31	1.35
23	BA	2296	U	N1-C2	6.12	1.44	1.38
23	BA	2725	A	N9-C4	-6.11	1.34	1.37
23	BA	189	G	N9-C4	-6.11	1.33	1.38
23	BA	517	C	N1-C6	-6.11	1.33	1.37
23	BA	1836	C	N3-C4	-6.10	1.29	1.33
23	BA	689	A	N3-C4	-6.10	1.31	1.34
23	BA	789	A	N9-C4	-6.10	1.34	1.37
23	BA	2382	G	N9-C8	-6.09	1.33	1.37
23	BA	2442	C	N1-C6	-6.08	1.33	1.37
23	BA	1107	G	N9-C4	6.08	1.42	1.38
23	BA	2058	A	N3-C4	-6.08	1.31	1.34
23	BA	2505	G	N3-C4	-6.08	1.31	1.35
23	BA	531	C	N1-C6	-6.07	1.33	1.37
23	BA	652(B)	A	N9-C4	6.07	1.41	1.37
23	BA	687	C	N3-C4	-6.07	1.29	1.33
23	BA	2619	C	N3-C4	-6.07	1.29	1.33
23	BA	570	G	C5-C6	-6.07	1.36	1.42
23	BA	991	C	N3-C4	-6.07	1.29	1.33
23	DA	15	G	N7-C5	-6.07	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	567	A	N3-C4	-6.07	1.31	1.34
23	BA	122	G	N7-C5	-6.06	1.35	1.39
23	BA	1653	G	N9-C8	-6.05	1.33	1.37
1	CA	951	G	N9-C4	6.05	1.42	1.38
23	DA	789	A	N9-C4	-6.05	1.34	1.37
1	AA	948	C	N3-C4	6.04	1.38	1.33
1	AA	1377	A	N9-C4	6.04	1.41	1.37
23	BA	2579	C	N3-C4	-6.04	1.29	1.33
23	BA	2246	G	N1-C2	-6.02	1.32	1.37
23	BA	2072	G	C8-N7	-6.02	1.27	1.30
23	BA	2017	U	C2-N3	-6.01	1.33	1.37
23	DA	278	A	N3-C4	6.01	1.38	1.34
23	BA	90	U	N3-C4	6.00	1.43	1.38
23	BA	745	G	C6-N1	-6.00	1.35	1.39
23	DA	2320	A	N9-C4	6.00	1.41	1.37
23	BA	795	C	N1-C6	-6.00	1.33	1.37
23	BA	1123	C	N1-C6	-5.99	1.33	1.37
23	BA	1618	A	C6-N1	-5.99	1.31	1.35
23	BA	190	A	N9-C4	-5.98	1.34	1.37
23	BA	2046	G	N7-C5	-5.98	1.35	1.39
23	BA	468	G	C8-N7	-5.97	1.27	1.30
23	BA	1619	G	C5-C4	-5.97	1.34	1.38
23	BA	1241	A	N3-C4	-5.96	1.31	1.34
23	BA	2232	U	C2-N3	-5.96	1.33	1.37
23	BA	585	G	C5-C4	-5.96	1.34	1.38
24	BB	76	G	N9-C4	-5.96	1.33	1.38
23	DA	1569	A	N7-C5	-5.94	1.35	1.39
23	DA	2251	G	N7-C5	-5.94	1.35	1.39
1	CA	1442(A)	G	C5-C6	5.94	1.48	1.42
23	BA	2541	A	N7-C5	-5.93	1.35	1.39
23	BA	2607	G	C8-N7	-5.93	1.27	1.30
23	BA	2768	C	N3-C4	-5.92	1.29	1.33
1	AA	1350	A	N9-C4	5.92	1.41	1.37
23	BA	381	G	C5-C4	-5.92	1.34	1.38
23	BA	1785	A	C6-N1	-5.91	1.31	1.35
23	BA	191	A	N9-C4	-5.91	1.34	1.37
1	CA	1243	C	N1-C6	5.91	1.40	1.37
23	DA	1616	A	C5-C6	-5.91	1.35	1.41
23	BA	33	U	N1-C2	-5.90	1.33	1.38
23	DA	1981	A	C6-N1	-5.90	1.31	1.35
23	BA	940	G	N7-C5	-5.89	1.35	1.39
23	BA	2082	A	N7-C5	-5.89	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	265	A	N7-C5	-5.89	1.35	1.39
23	BA	2029	G	N9-C8	-5.89	1.33	1.37
1	AA	1014	A	N9-C4	5.89	1.41	1.37
23	BA	1021	A	N3-C4	-5.88	1.31	1.34
1	AA	1263	C	N1-C2	5.88	1.46	1.40
23	BA	2725	A	N3-C4	-5.88	1.31	1.34
23	BA	197	A	N7-C5	-5.87	1.35	1.39
23	BA	1819	A	P-O5'	-5.87	1.53	1.59
23	BA	1603	A	N3-C4	-5.87	1.31	1.34
23	BA	1978	A	N7-C5	-5.87	1.35	1.39
23	BA	2829	C	N1-C6	-5.87	1.33	1.37
23	DA	945	A	N3-C4	-5.87	1.31	1.34
23	DA	1378	A	N9-C4	-5.86	1.34	1.37
23	BA	530	G	C2-N3	-5.86	1.28	1.32
23	BA	21	A	N3-C4	-5.85	1.31	1.34
23	BA	198	C	N1-C6	-5.85	1.33	1.37
23	BA	2321	G	C2-N3	-5.85	1.28	1.32
23	BA	1285	G	C5-C4	-5.84	1.34	1.38
23	BA	2509	G	N7-C5	-5.84	1.35	1.39
23	BA	2740	A	N3-C4	-5.84	1.31	1.34
23	DA	2031	A	C5-C6	-5.84	1.35	1.41
23	BA	184	C	N1-C6	-5.83	1.33	1.37
4	AD	12	CYS	CB-SG	5.83	1.92	1.82
23	BA	16	G	C2-N3	-5.83	1.28	1.32
23	BA	2335	A	N9-C4	-5.83	1.34	1.37
23	BA	194	G	C2-N3	-5.82	1.28	1.32
23	BA	1938	A	N7-C5	-5.82	1.35	1.39
23	DA	1998	G	N3-C4	-5.82	1.31	1.35
23	DA	2032	G	N7-C5	-5.82	1.35	1.39
23	BA	204	A	C6-N1	-5.82	1.31	1.35
23	BA	2602	A	N9-C4	5.82	1.41	1.37
23	BA	2025	C	N1-C6	-5.82	1.33	1.37
1	CA	1030(D)	A	N9-C4	5.82	1.41	1.37
23	BA	978	G	C5-C4	-5.81	1.34	1.38
23	BA	330	A	N3-C4	-5.81	1.31	1.34
23	DA	2803	C	N1-C6	5.81	1.40	1.37
1	AA	1210	C	N1-C2	5.81	1.46	1.40
23	BA	1434	A	N9-C4	-5.81	1.34	1.37
23	BA	2451	A	N3-C4	-5.81	1.31	1.34
1	CA	1124	G	N9-C4	5.81	1.42	1.38
23	DA	1252	G	C5-C4	-5.80	1.34	1.38
23	BA	1789	A	C5-C4	-5.80	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	2304	G	C6-N1	5.80	1.43	1.39
23	BA	780	G	N9-C8	-5.79	1.33	1.37
1	AA	1442	G	C8-N7	-5.79	1.27	1.30
23	DA	57	C	N3-C4	-5.79	1.29	1.33
23	BA	2436	G	N1-C2	-5.78	1.33	1.37
23	DA	469	G	C5-C4	-5.78	1.34	1.38
23	BA	425	G	C6-N1	-5.78	1.35	1.39
23	BA	1669	A	N3-C4	-5.77	1.31	1.34
23	DA	1829	A	N3-C4	-5.77	1.31	1.34
23	BA	2442	C	C2-N3	-5.76	1.31	1.35
1	AA	993	G	N9-C4	5.76	1.42	1.38
23	BA	829	A	N9-C4	-5.76	1.34	1.37
23	BA	71	A	C5-C4	5.76	1.42	1.38
23	DA	1821	A	C5-C4	-5.76	1.34	1.38
23	BA	2740	A	N7-C5	-5.75	1.35	1.39
23	DA	2500	U	C4-O4	-5.75	1.19	1.23
1	AA	1316	G	N7-C5	5.75	1.42	1.39
23	DA	1787	A	N9-C4	-5.75	1.34	1.37
23	BA	794	G	C6-N1	-5.75	1.35	1.39
23	BA	609	A	C5-C4	-5.75	1.34	1.38
23	BA	2382	G	N7-C5	-5.75	1.35	1.39
23	DA	2602	A	N9-C4	5.75	1.41	1.37
23	BA	389	G	C8-N7	-5.75	1.27	1.30
23	BA	800	A	N3-C4	-5.74	1.31	1.34
23	BA	2346	A	N7-C5	-5.74	1.35	1.39
23	DA	2352	A	N9-C4	-5.74	1.34	1.37
23	BA	753	C	N3-C4	-5.74	1.29	1.33
1	CA	1004	A	N9-C4	5.74	1.41	1.37
1	AA	1034	G	C5-C4	5.73	1.42	1.38
23	BA	425	G	N9-C8	-5.73	1.33	1.37
23	BA	989	G	N7-C5	-5.72	1.35	1.39
23	BA	2000	G	C5-C4	-5.72	1.34	1.38
1	CA	1335	C	N1-C2	5.72	1.45	1.40
23	BA	1890	A	N9-C4	-5.71	1.34	1.37
23	DA	1649	G	C5-C4	-5.71	1.34	1.38
23	BA	181	A	N3-C4	-5.71	1.31	1.34
23	BA	571	A	C5-C4	-5.71	1.34	1.38
23	BA	47	C	C5-C6	-5.71	1.29	1.34
23	BA	344	G	C5-C4	-5.70	1.34	1.38
23	BA	2267	A	N9-C4	-5.70	1.34	1.37
1	CA	1492	A	N3-C4	5.70	1.38	1.34
23	BA	2507	C	C2-N3	-5.70	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1367	A	C5-C4	-5.70	1.34	1.38
23	BA	2676	C	N1-C6	-5.69	1.33	1.37
23	DA	2049	G	N9-C4	-5.69	1.33	1.38
23	BA	71	A	N9-C8	5.69	1.42	1.37
23	BA	87	C	N1-C6	-5.69	1.33	1.37
23	DA	514	A	N3-C4	-5.69	1.31	1.34
1	AA	1447	A	N7-C5	5.68	1.42	1.39
23	BA	1212	G	N9-C8	-5.67	1.33	1.37
23	BA	1430	C	N1-C6	-5.67	1.33	1.37
1	AA	1335	C	N1-C2	5.67	1.45	1.40
23	BA	119	A	N9-C8	-5.67	1.33	1.37
23	BA	884	C	N1-C6	5.67	1.40	1.37
1	AA	1355	G	N9-C4	5.66	1.42	1.38
23	DA	1772	G	N9-C4	-5.66	1.33	1.38
23	DA	2791	C	N1-C2	5.65	1.45	1.40
23	BA	983	A	C5-C4	-5.65	1.34	1.38
23	BA	492	A	N7-C5	-5.65	1.35	1.39
23	BA	2322	A	C5-C6	5.65	1.46	1.41
23	BA	1535	A	N9-C4	5.64	1.41	1.37
23	BA	197	A	N3-C4	-5.64	1.31	1.34
23	BA	788	A	N9-C8	-5.64	1.33	1.37
23	BA	1202	C	N1-C6	-5.64	1.33	1.37
23	BA	2445	G	N9-C8	-5.64	1.33	1.37
23	BA	751	A	N3-C4	-5.63	1.31	1.34
23	DA	1471	A	N9-C4	5.63	1.41	1.37
23	DA	1698	A	N9-C4	-5.63	1.34	1.37
23	BA	1960	A	N9-C4	-5.63	1.34	1.37
23	BA	55	G	N1-C2	-5.63	1.33	1.37
23	BA	2452	C	N1-C6	-5.63	1.33	1.37
1	AA	1243	C	N1-C6	5.63	1.40	1.37
23	BA	211	A	C5-C4	-5.63	1.34	1.38
23	BA	2322	A	C6-N1	5.63	1.39	1.35
1	AA	1493	A	N9-C4	5.62	1.41	1.37
23	BA	1363	C	N3-C4	-5.62	1.30	1.33
23	BA	2607	G	N9-C8	-5.62	1.33	1.37
23	BA	512	G	P-O5'	-5.62	1.54	1.59
23	BA	98	G	N9-C4	-5.61	1.33	1.38
23	DA	689	A	N9-C4	-5.61	1.34	1.37
23	BA	2515	C	C4-C5	-5.60	1.38	1.43
23	BA	190	A	C5-C6	-5.59	1.36	1.41
1	CA	1330	U	N1-C2	5.59	1.43	1.38
23	BA	682	G	C5-C6	-5.59	1.36	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	2028	U	C2-N3	-5.59	1.33	1.37
23	BA	1599	C	N3-C4	-5.59	1.30	1.33
23	BA	2541	A	N9-C8	-5.59	1.33	1.37
23	BA	425	G	N1-C2	-5.58	1.33	1.37
23	BA	815	C	N1-C6	-5.58	1.33	1.37
23	BA	1989	G	N7-C5	-5.58	1.35	1.39
23	DA	2502	G	C5-C6	-5.58	1.36	1.42
23	DA	1619	G	C2-N3	-5.58	1.28	1.32
23	BA	2695	C	N1-C6	-5.58	1.33	1.37
23	DA	2446	G	N3-C4	5.58	1.39	1.35
23	BA	425	G	C5-C4	-5.58	1.34	1.38
23	BA	783	A	C5-C4	-5.57	1.34	1.38
23	BA	2249	U	P-O5'	-5.57	1.54	1.59
23	BA	586	A	N7-C5	-5.57	1.35	1.39
23	BA	960	A	C5-C6	-5.56	1.36	1.41
23	BA	1570	A	C5-C6	-5.56	1.36	1.41
1	AA	1492	A	N3-C4	5.56	1.38	1.34
23	BA	558	G	C5-C4	-5.56	1.34	1.38
23	BA	794	G	N1-C2	-5.56	1.33	1.37
23	BA	1297	C	N1-C2	-5.56	1.34	1.40
1	CA	1290	G	N3-C4	5.56	1.39	1.35
23	BA	2284	C	N3-C4	-5.56	1.30	1.33
23	BA	553	G	C5-C6	-5.55	1.36	1.42
23	BA	1244	G	C2-N3	-5.55	1.28	1.32
23	BA	1653	G	C6-N1	-5.55	1.35	1.39
23	DA	1308	A	N9-C8	-5.55	1.33	1.37
17	CQ	49	GLU	CG-CD	5.55	1.60	1.51
23	DA	469	G	N9-C8	-5.55	1.33	1.37
23	BA	90	U	C2-N3	5.54	1.41	1.37
23	DA	1037	G	C6-N1	5.54	1.43	1.39
1	CA	1354	C	C2-N3	5.54	1.40	1.35
1	AA	1309	G	C6-N1	5.54	1.43	1.39
23	BA	560	C	N1-C6	-5.54	1.33	1.37
1	CA	1001	A	N9-C4	5.54	1.41	1.37
23	DA	12	U	N1-C2	5.54	1.43	1.38
23	DA	2607	G	C2-N3	5.54	1.37	1.32
23	BA	830	G	N9-C8	-5.53	1.33	1.37
23	BA	2058	A	C5-C4	-5.53	1.34	1.38
23	BA	1162	G	N7-C5	-5.53	1.35	1.39
23	DA	746	A	N3-C4	-5.53	1.31	1.34
23	DA	2296	U	N1-C2	5.53	1.43	1.38
23	BA	451	C	N1-C6	-5.52	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1567	A	N7-C5	-5.52	1.35	1.39
23	BA	1698	A	N7-C5	-5.52	1.35	1.39
23	BA	2642	G	N9-C8	-5.52	1.33	1.37
23	BA	2052	G	N9-C8	-5.52	1.33	1.37
23	DA	1760	A	N3-C4	-5.52	1.31	1.34
23	DA	1969	A	N9-C4	-5.51	1.34	1.37
23	BA	1668	A	C5-C4	-5.51	1.34	1.38
23	BA	2015	A	N9-C4	-5.51	1.34	1.37
23	BA	113	G	N9-C4	-5.51	1.33	1.38
23	DA	1783	A	C5-C6	-5.50	1.36	1.41
23	BA	1250	G	N7-C5	-5.50	1.35	1.39
23	BA	2431	U	N1-C2	-5.50	1.33	1.38
23	DA	1213	A	N9-C4	-5.50	1.34	1.37
23	DA	2826	A	N9-C4	-5.50	1.34	1.37
23	BA	229	A	N9-C4	5.50	1.41	1.37
23	BA	751	A	C5-C4	-5.50	1.34	1.38
23	BA	1254	A	N7-C5	-5.50	1.35	1.39
23	DA	1698	A	N7-C5	-5.50	1.35	1.39
23	DA	2606	C	N1-C6	-5.50	1.33	1.37
23	BA	480	A	N7-C5	-5.50	1.35	1.39
23	BA	745	G	C5-C6	-5.49	1.36	1.42
23	BA	2051	A	N3-C4	-5.49	1.31	1.34
23	DA	786	C	C4-N4	-5.49	1.29	1.33
23	BA	2747	G	C6-N1	-5.49	1.35	1.39
23	DA	2151	G	C6-N1	5.49	1.43	1.39
23	BA	207	A	N7-C5	-5.49	1.35	1.39
23	BA	189	G	N9-C8	-5.49	1.34	1.37
23	BA	975	C	N1-C6	-5.49	1.33	1.37
23	DA	1267	U	C2-N3	-5.48	1.33	1.37
23	BA	2011	U	N1-C2	-5.48	1.33	1.38
23	BA	802	A	N7-C5	-5.48	1.35	1.39
23	BA	1300	U	C3'-O3'	5.48	1.49	1.42
23	DA	2149	G	C6-N1	5.48	1.43	1.39
23	BA	1490	A	N3-C4	5.48	1.38	1.34
23	BA	2589	A	N9-C4	-5.48	1.34	1.37
23	BA	1988	C	N1-C6	-5.48	1.33	1.37
23	BA	572	A	N7-C5	-5.47	1.35	1.39
23	BA	2017	U	C2-O2	-5.47	1.17	1.22
23	BA	804	A	N9-C8	-5.47	1.33	1.37
23	BA	1804	C	N3-C4	-5.47	1.30	1.33
32	BO	21	CYS	CB-SG	-5.47	1.72	1.81
23	DA	2791	C	N1-C6	5.47	1.40	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	1142(A)	A	C5-C6	-5.47	1.36	1.41
23	BA	1698	A	C5-C6	-5.46	1.36	1.41
23	DA	1669	A	N3-C4	-5.46	1.31	1.34
25	BD	28	GLU	CG-CD	5.46	1.60	1.51
23	BA	1528	A	N3-C4	-5.46	1.31	1.34
23	BA	2426	A	C6-N1	-5.46	1.31	1.35
23	BA	1655	A	C5-C4	-5.45	1.34	1.38
23	BA	2054	A	C5-C6	-5.45	1.36	1.41
23	DA	1927	A	N9-C4	-5.45	1.34	1.37
23	BA	664	C	N1-C6	-5.45	1.33	1.37
23	BA	1330	C	N1-C6	-5.45	1.33	1.37
23	DA	2487	G	N9-C4	-5.45	1.33	1.38
23	DA	2561	A	N9-C4	-5.45	1.34	1.37
23	BA	1535	A	N3-C4	5.45	1.38	1.34
23	BA	483	A	C6-N1	-5.45	1.31	1.35
23	BA	1252	G	N3-C4	-5.45	1.31	1.35
1	AA	1174	G	N7-C5	5.44	1.42	1.39
24	BB	104	U	C2-N3	-5.44	1.33	1.37
23	BA	2017	U	N1-C6	-5.44	1.33	1.38
23	BA	1189	A	C5-C6	-5.44	1.36	1.41
23	DA	802	A	C6-N6	-5.44	1.29	1.33
1	CA	1149	C	N1-C2	5.44	1.45	1.40
23	BA	756	C	N1-C2	-5.44	1.34	1.40
23	BA	1771	C	N3-C4	-5.43	1.30	1.33
1	CA	1294	G	C6-N1	5.43	1.43	1.39
23	BA	1658	C	P-OP1	-5.43	1.39	1.49
23	BA	2058	A	N7-C5	-5.43	1.35	1.39
23	BA	2059	A	N9-C8	-5.43	1.33	1.37
23	BA	2447	G	C5-C4	-5.43	1.34	1.38
23	DA	2587	A	N7-C5	-5.43	1.35	1.39
23	BA	265	A	C5-C6	-5.43	1.36	1.41
23	DA	580	C	N1-C6	-5.43	1.33	1.37
23	BA	778	G	N7-C5	-5.42	1.35	1.39
23	BA	2053	G	C5-C4	-5.42	1.34	1.38
23	BA	2686	G	C5-C4	-5.42	1.34	1.38
23	BA	2572	A	C5-C4	-5.42	1.34	1.38
24	BB	56	G	N7-C5	-5.42	1.35	1.39
1	AA	143	A	N3-C4	5.42	1.38	1.34
1	AA	948	C	N1-C6	5.42	1.40	1.37
23	BA	1403	C	N3-C4	-5.42	1.30	1.33
24	BB	99	G	C5-C4	-5.41	1.34	1.38
4	AD	26	CYS	CB-SG	5.41	1.91	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	1456	G	N9-C4	5.41	1.42	1.38
23	BA	787	U	P-OP2	-5.41	1.39	1.49
23	BA	1614	A	N9-C4	-5.41	1.34	1.37
1	CA	1180	A	N9-C4	5.41	1.41	1.37
23	BA	1638	C	N1-C6	-5.41	1.33	1.37
23	BA	1643	G	C6-N1	-5.41	1.35	1.39
23	BA	1779	U	P-O5'	-5.41	1.54	1.59
1	CA	1360	A	N9-C4	5.40	1.41	1.37
23	BA	1308	A	C5-C4	-5.40	1.34	1.38
1	CA	1149	C	N1-C6	5.40	1.40	1.37
42	DY	79	CYS	CB-SG	-5.40	1.73	1.81
1	AA	1124	G	N3-C4	5.40	1.39	1.35
23	BA	204	A	C5-C6	-5.40	1.36	1.41
23	BA	505	A	N9-C4	-5.40	1.34	1.37
23	BA	785	G	N9-C4	-5.40	1.33	1.38
23	DA	775	G	C6-N1	-5.40	1.35	1.39
23	BA	141	A	N9-C4	-5.39	1.34	1.37
23	DA	676	A	N9-C4	-5.39	1.34	1.37
23	BA	734	A	N9-C4	-5.39	1.34	1.37
23	BA	994	C	N1-C6	-5.39	1.33	1.37
23	BA	536	A	C5-C4	-5.39	1.34	1.38
23	BA	1132	A	C6-N1	-5.39	1.31	1.35
23	DA	1567	A	N9-C4	-5.39	1.34	1.37
23	BA	971	C	N3-C4	-5.38	1.30	1.33
23	DA	2058	A	C6-N1	-5.38	1.31	1.35
23	DA	1314	C	C4-C5	-5.38	1.38	1.43
23	BA	466	A	P-O5'	-5.38	1.54	1.59
23	BA	2323	G	C5-C4	-5.37	1.34	1.38
1	AA	1123	A	N9-C4	5.37	1.41	1.37
23	BA	2251	G	N7-C5	-5.37	1.36	1.39
23	BA	57	C	N3-C4	-5.37	1.30	1.33
23	BA	1674	G	N9-C8	-5.37	1.34	1.37
23	DA	1142(A)	A	N7-C5	-5.37	1.36	1.39
1	AA	1184	G	N9-C4	5.36	1.42	1.38
1	AA	1001(A)	G	N3-C4	5.36	1.39	1.35
23	BA	2541	A	N3-C4	-5.36	1.31	1.34
49	B5	6	VAL	CB-CG2	-5.36	1.41	1.52
23	BA	2153	G	C6-N1	5.36	1.43	1.39
23	BA	1674	G	C5-C4	-5.36	1.34	1.38
23	BA	745	G	C5-C4	-5.35	1.34	1.38
23	BA	2614	A	N9-C8	-5.35	1.33	1.37
1	AA	994	A	N9-C4	5.35	1.41	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	1826	G	N9-C8	-5.35	1.34	1.37
23	BA	468	G	C5-C4	-5.34	1.34	1.38
23	BA	733	G	C5-C4	-5.34	1.34	1.38
23	BA	2246	G	C2-N3	-5.34	1.28	1.32
23	BA	1359	A	C6-N6	-5.33	1.29	1.33
23	BA	1606	G	N9-C8	-5.33	1.34	1.37
1	CA	1124	G	C5-C4	5.33	1.42	1.38
1	AA	1025	U	N3-C4	5.33	1.43	1.38
23	DA	727	A	N7-C5	-5.33	1.36	1.39
23	BA	989	G	C8-N7	-5.33	1.27	1.30
1	AA	1020	U	N1-C2	5.32	1.43	1.38
1	AA	78	G	C6-N1	5.32	1.43	1.39
23	BA	507	A	N7-C5	-5.32	1.36	1.39
23	BA	1157	G	N7-C5	-5.32	1.36	1.39
23	BA	981	A	N9-C4	-5.32	1.34	1.37
23	DA	2436	G	C2-N3	-5.32	1.28	1.32
23	BA	271(M)	G	N9-C4	5.31	1.42	1.38
23	BA	1137	G	C8-N7	-5.31	1.27	1.30
23	BA	1031	G	N1-C2	-5.31	1.33	1.37
23	DA	1308	A	N3-C4	-5.31	1.31	1.34
23	BA	690	G	N1-C2	-5.31	1.33	1.37
23	BA	85	G	N7-C5	-5.30	1.36	1.39
23	BA	527	C	N3-C4	-5.30	1.30	1.33
23	BA	2013	A	C5-C6	-5.30	1.36	1.41
23	BA	2330	G	N3-C4	-5.30	1.31	1.35
23	BA	211	A	N9-C4	-5.30	1.34	1.37
23	BA	2162	G	N3-C4	5.30	1.39	1.35
23	BA	1268	A	C6-N1	-5.30	1.31	1.35
23	DA	531	C	N1-C6	-5.29	1.33	1.37
23	BA	70	G	N1-C2	-5.29	1.33	1.37
23	BA	2432	A	C5-C6	-5.29	1.36	1.41
23	BA	2065	C	N1-C6	-5.28	1.33	1.37
23	BA	744	G	N9-C8	-5.28	1.34	1.37
23	BA	1132	A	N3-C4	-5.28	1.31	1.34
23	DA	255	A	N9-C4	-5.28	1.34	1.37
23	BA	1764	G	C6-N1	-5.27	1.35	1.39
23	BA	2599	G	N9-C8	-5.27	1.34	1.37
23	DA	251	A	C5-C4	-5.27	1.35	1.38
1	CA	1377	A	N9-C4	5.27	1.41	1.37
23	BA	1616	A	C5-C6	-5.27	1.36	1.41
1	AA	1012	U	C2-N3	5.26	1.41	1.37
23	BA	2225	A	N9-C4	-5.26	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	2577	A	P-OP2	-5.26	1.40	1.49
23	BA	733	G	C8-N7	-5.26	1.27	1.30
23	BA	978	G	C5-C6	-5.25	1.37	1.42
23	BA	981	A	N7-C5	-5.25	1.36	1.39
23	BA	2505	G	C2-N3	-5.25	1.28	1.32
23	BA	733	G	N7-C5	-5.25	1.36	1.39
23	BA	941	A	C5-C4	-5.25	1.35	1.38
23	BA	1657	C	N1-C6	-5.25	1.33	1.37
23	DA	1026	U	N1-C2	5.25	1.43	1.38
23	BA	13	A	C6-N1	-5.25	1.31	1.35
23	BA	994	C	N3-C4	-5.25	1.30	1.33
23	DA	38	A	C5-C4	-5.25	1.35	1.38
23	BA	2025	C	C4-C5	-5.25	1.38	1.43
23	BA	2571	C	C2-O2	-5.25	1.19	1.24
23	DA	739	G	C5-C4	-5.25	1.34	1.38
1	AA	1442(A)	G	C5-C4	5.25	1.42	1.38
23	BA	2778	A	C6-N1	-5.25	1.31	1.35
1	CA	1290	G	N9-C4	5.25	1.42	1.38
1	CA	1279	A	N9-C4	5.24	1.41	1.37
1	CA	1291	G	N3-C4	5.24	1.39	1.35
23	BA	2087	G	C5-C6	-5.24	1.37	1.42
23	DA	980	A	N9-C4	-5.24	1.34	1.37
23	BA	748	G	N9-C8	-5.24	1.34	1.37
1	CA	1370	G	C6-N1	5.24	1.43	1.39
23	BA	943	U	N1-C2	-5.24	1.33	1.38
23	DA	948	G	N3-C4	-5.24	1.31	1.35
23	BA	575	A	C6-N6	-5.24	1.29	1.33
23	BA	788	A	N7-C5	-5.24	1.36	1.39
23	DA	254	G	N9-C4	-5.23	1.33	1.38
1	AA	970	C	N1-C2	5.23	1.45	1.40
23	BA	1225	G	C2-N3	-5.23	1.28	1.32
23	BA	380	U	N1-C6	-5.22	1.33	1.38
23	BA	2778	A	N7-C5	-5.22	1.36	1.39
23	BA	2825	C	N1-C6	-5.22	1.34	1.37
23	DA	2286	A	N7-C5	-5.22	1.36	1.39
23	DA	1309	G	C5-C4	-5.22	1.34	1.38
23	BA	2506	U	N1-C2	5.22	1.43	1.38
23	DA	1490	A	C6-N1	5.22	1.39	1.35
23	BA	1698	A	N3-C4	-5.21	1.31	1.34
23	BA	2329	G	N1-C2	-5.21	1.33	1.37
23	DA	530	G	C6-O6	-5.21	1.19	1.24
23	DA	2028	U	C2-N3	-5.21	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	197	A	C5-C6	-5.21	1.36	1.41
23	BA	952	G	C5-C4	-5.21	1.34	1.38
23	BA	1195	G	C5-C4	-5.21	1.34	1.38
23	BA	1262	A	C6-N6	-5.21	1.29	1.33
23	BA	2602	A	O3'-P	5.21	1.67	1.61
1	CA	1030(A)	G	N9-C4	5.21	1.42	1.38
23	BA	463	G	C6-N1	-5.21	1.35	1.39
51	B7	30	VAL	CA-CB	-5.21	1.43	1.54
23	BA	253	C	N1-C6	-5.20	1.34	1.37
23	BA	1217	C	C4-C5	-5.20	1.38	1.43
23	BA	2436	G	C2-N3	-5.20	1.28	1.32
23	DA	2424	C	N1-C6	-5.20	1.34	1.37
23	BA	71	A	C5-C6	-5.20	1.36	1.41
23	BA	1368	G	P-O5'	-5.20	1.54	1.59
1	AA	1279	A	C5-C4	5.20	1.42	1.38
23	BA	278	A	C6-N1	5.20	1.39	1.35
23	BA	1195	G	C2-N3	-5.20	1.28	1.32
23	DA	1933	G	C6-N1	-5.20	1.35	1.39
23	BA	980	A	C5-C6	-5.19	1.36	1.41
23	DA	1257	C	N1-C2	-5.19	1.34	1.40
23	BA	936	C	N1-C2	-5.19	1.34	1.40
23	BA	1137	G	N7-C5	-5.19	1.36	1.39
23	BA	2822	G	N9-C8	-5.19	1.34	1.37
1	AA	143	A	N9-C4	5.18	1.41	1.37
1	AA	1502	A	C5-C6	-5.18	1.36	1.41
23	BA	2764	A	N3-C4	-5.18	1.31	1.34
23	BA	2020	A	N9-C8	-5.18	1.33	1.37
23	BA	2546	U	N1-C2	-5.18	1.33	1.38
23	BA	2606	C	N1-C6	-5.18	1.34	1.37
23	BA	15	G	N9-C8	-5.18	1.34	1.37
23	BA	686	G	C5-C6	-5.18	1.37	1.42
23	BA	980	A	N7-C5	-5.18	1.36	1.39
23	BA	1256	G	N3-C4	-5.18	1.31	1.35
24	BB	96	U	C2-N3	-5.18	1.34	1.37
23	BA	2304	G	N7-C5	5.17	1.42	1.39
23	BA	2376	A	N7-C5	-5.17	1.36	1.39
23	DA	652(B)	A	N3-C4	5.17	1.38	1.34
23	BA	1204	A	C5-C6	-5.17	1.36	1.41
23	BA	1618	A	P-O5'	-5.17	1.54	1.59
23	BA	733	G	C6-N1	-5.17	1.35	1.39
1	AA	1004	A	N9-C4	5.17	1.41	1.37
23	DA	750	A	N3-C4	-5.17	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	BA	1184	G	C2-N3	-5.17	1.28	1.32
23	BA	1889	A	N9-C4	-5.17	1.34	1.37
23	BA	1933	G	C6-N1	-5.17	1.35	1.39
23	BA	975	C	N3-C4	-5.16	1.30	1.33
23	BA	2587	A	P-O5'	-5.16	1.54	1.59
23	BA	819	A	N9-C4	-5.16	1.34	1.37
1	AA	1123	A	N3-C4	5.16	1.38	1.34
23	BA	1787	A	N3-C4	-5.16	1.31	1.34
23	BA	107	C	N1-C6	-5.15	1.34	1.37
23	BA	753	C	C2-N3	-5.15	1.31	1.35
23	BA	2422	A	N9-C4	-5.15	1.34	1.37
23	BA	119	A	N9-C4	-5.15	1.34	1.37
23	BA	1647	G	N9-C8	-5.15	1.34	1.37
1	CA	1256	A	N9-C4	5.15	1.41	1.37
23	BA	2517	C	N1-C6	-5.15	1.34	1.37
23	DA	2589	A	N9-C4	-5.15	1.34	1.37
23	BA	555	U	P-O5'	-5.14	1.54	1.59
23	BA	20	C	N1-C6	-5.14	1.34	1.37
23	BA	1195	G	N3-C4	-5.14	1.31	1.35
23	DA	2577	A	N9-C4	-5.14	1.34	1.37
23	BA	1791	A	N3-C4	-5.14	1.31	1.34
23	BA	2352	A	N9-C4	-5.14	1.34	1.37
23	BA	2149	G	C6-N1	5.14	1.43	1.39
23	BA	2542	A	N3-C4	-5.14	1.31	1.34
23	BA	2288	A	N9-C4	5.14	1.41	1.37
1	CA	1332	A	C5-C4	5.14	1.42	1.38
23	BA	244	A	C5-C6	-5.14	1.36	1.41
23	BA	1285	G	N7-C5	-5.14	1.36	1.39
23	BA	2819	G	N9-C8	-5.14	1.34	1.37
23	DA	220	G	N7-C5	-5.14	1.36	1.39
1	CA	1235	U	N1-C2	5.13	1.43	1.38
23	DA	1107	G	N3-C4	5.13	1.39	1.35
23	DA	71	A	C3'-O3'	5.13	1.49	1.42
23	BA	2724	C	N1-C6	-5.13	1.34	1.37
23	DA	2322	A	C5-C6	5.13	1.45	1.41
23	BA	783	A	N3-C4	-5.13	1.31	1.34
38	BU	69	CYS	CB-SG	-5.13	1.73	1.81
23	BA	2072	G	C5-C4	-5.12	1.34	1.38
23	BA	2684	U	N1-C6	-5.12	1.33	1.38
23	BA	189	G	N3-C4	-5.12	1.31	1.35
1	AA	70	G	C6-N1	5.12	1.43	1.39
23	BA	2287	A	C6-N6	-5.12	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	DB	53	A	N9-C4	5.12	1.41	1.37
23	DA	1369	G	N3-C4	-5.12	1.31	1.35
1	AA	1447	A	N3-C4	5.12	1.38	1.34
23	BA	204	A	C5-C4	-5.12	1.35	1.38
23	BA	2245	U	C2-N3	-5.12	1.34	1.37
23	BA	2699	C	N1-C6	-5.12	1.34	1.37
23	DA	245	G	N7-C5	-5.12	1.36	1.39
23	BA	939	G	N3-C4	-5.11	1.31	1.35
23	BA	2723	C	C2-N3	-5.11	1.31	1.35
23	DA	1301	A	N3-C4	-5.11	1.31	1.34
23	BA	2602	A	N7-C5	5.11	1.42	1.39
23	BA	849	A	C5-C4	-5.11	1.35	1.38
23	BA	1176	G	N3-C4	5.11	1.39	1.35
23	BA	2711	A	N9-C4	-5.11	1.34	1.37
23	DA	2437	U	N3-C4	-5.11	1.33	1.38
23	BA	1365	A	N9-C4	-5.10	1.34	1.37
1	AA	1175	G	N3-C4	5.10	1.39	1.35
1	AA	1456	G	N3-C4	5.10	1.39	1.35
23	DA	1989	G	N7-C5	-5.10	1.36	1.39
23	BA	1903	G	N7-C5	-5.10	1.36	1.39
23	DA	71	A	N9-C8	5.10	1.41	1.37
23	DA	1419	A	N9-C4	-5.10	1.34	1.37
23	BA	749	C	C4-C5	-5.10	1.38	1.43
23	BA	1314	C	N3-C4	-5.09	1.30	1.33
23	BA	2741	A	C5-C4	-5.09	1.35	1.38
23	BA	1034	G	C5-C4	-5.09	1.34	1.38
1	CA	1447	A	N3-C4	5.09	1.38	1.34
50	B6	16	CYS	CB-SG	-5.09	1.73	1.81
23	DA	2730	C	N3-C4	-5.09	1.30	1.33
23	BA	447	A	C5-C6	-5.09	1.36	1.41
23	BA	1564	C	N1-C6	-5.09	1.34	1.37
23	BA	2026	C	N1-C6	-5.09	1.34	1.37
23	DA	1022	G	N3-C4	-5.09	1.31	1.35
23	DA	2027	G	N3-C4	-5.09	1.31	1.35
23	BA	123	G	N9-C4	-5.09	1.33	1.38
23	BA	1279	G	C6-N1	-5.09	1.35	1.39
23	BA	1624	G	C5-C4	-5.09	1.34	1.38
23	BA	2063	C	N1-C6	-5.09	1.34	1.37
1	AA	947	G	N9-C4	5.08	1.42	1.38
23	DA	805	G	N9-C8	-5.08	1.34	1.37
23	BA	1308	A	N9-C8	-5.08	1.33	1.37
1	CA	839	U	N1-C2	5.08	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	2335	A	N9-C4	-5.08	1.34	1.37
1	CA	1124	G	N3-C4	5.08	1.39	1.35
23	BA	745	G	N1-C2	-5.07	1.33	1.37
23	BA	188	G	C8-N7	-5.07	1.27	1.30
1	CA	1050	G	N3-C4	5.07	1.39	1.35
23	DA	1021	A	N3-C4	-5.07	1.31	1.34
1	AA	1002	G	C5-C4	5.07	1.41	1.38
23	BA	577	G	P-OP2	-5.07	1.40	1.49
23	BA	2445	G	C6-N1	-5.07	1.36	1.39
23	BA	109	G	C6-N1	-5.06	1.36	1.39
23	BA	1827	C	N3-C4	-5.06	1.30	1.33
23	BA	533	G	C6-N1	-5.06	1.36	1.39
23	BA	658	C	C2-N3	-5.06	1.31	1.35
23	BA	70	G	C6-N1	-5.06	1.36	1.39
1	AA	65	U	N1-C2	5.05	1.43	1.38
23	BA	1199	U	C2-N3	-5.05	1.34	1.37
23	DA	1787	A	N3-C4	-5.05	1.31	1.34
23	BA	1199	U	N1-C2	-5.05	1.34	1.38
23	BA	1204	A	N3-C4	-5.05	1.31	1.34
23	BA	2054	A	O3'-P	-5.05	1.55	1.61
1	AA	1138	G	N9-C4	5.05	1.42	1.38
23	BA	972	G	N1-C2	-5.05	1.33	1.37
23	BA	934	G	N9-C8	-5.05	1.34	1.37
23	BA	555	U	N1-C2	-5.04	1.34	1.38
23	BA	1363	C	C4-N4	-5.04	1.29	1.33
1	CA	1033	G	N3-C4	5.04	1.39	1.35
1	CA	1333	A	C5-C4	5.04	1.42	1.38
1	AA	455	C	N1-C6	5.04	1.40	1.37
23	BA	214	G	C5-C4	-5.04	1.34	1.38
23	BA	1829	A	N3-C4	-5.04	1.31	1.34
23	BA	2117	A	N9-C4	5.04	1.40	1.37
23	DA	1981	A	N3-C4	-5.04	1.31	1.34
23	BA	1393	A	C6-N1	-5.04	1.32	1.35
23	BA	1363	C	C2-O2	-5.04	1.20	1.24
23	DA	194	G	N9-C4	-5.04	1.33	1.38
23	BA	1211	U	P-O5'	-5.04	1.54	1.59
23	BA	763	G	P-O5'	-5.03	1.54	1.59
23	BA	2575	C	N3-C4	-5.03	1.30	1.33
1	CA	986	A	N3-C4	5.03	1.37	1.34
23	BA	1611	C	N1-C6	-5.03	1.34	1.37
14	CN	43	CYS	CB-SG	-5.03	1.73	1.81
23	DA	585	G	N9-C4	-5.03	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	DA	745	G	N7-C5	-5.03	1.36	1.39
23	BA	841	A	N3-C4	-5.03	1.31	1.34
23	BA	940	G	N3-C4	-5.03	1.31	1.35
23	BA	659	C	N1-C6	-5.03	1.34	1.37
23	BA	2036	C	N1-C2	-5.03	1.35	1.40
23	BA	1970	A	N9-C8	-5.02	1.33	1.37
23	DA	1332	G	N7-C5	-5.02	1.36	1.39
23	BA	282	A	N7-C5	-5.02	1.36	1.39
23	BA	1127	A	N9-C4	-5.02	1.34	1.37
23	BA	1596	A	N9-C4	-5.02	1.34	1.37
23	BA	71	A	C6-N6	-5.02	1.29	1.33
23	BA	562	U	C2-O2	-5.01	1.17	1.22
1	CA	1266	G	N9-C4	5.01	1.42	1.38
23	BA	1251	C	N1-C6	-5.01	1.34	1.37
23	BA	2778	A	N9-C4	-5.01	1.34	1.37
1	AA	88	A	N3-C4	5.01	1.37	1.34
23	DA	1107	G	C2-N3	5.01	1.36	1.32
23	DA	1829	A	N9-C4	-5.01	1.34	1.37
23	BA	807	U	N1-C6	-5.01	1.33	1.38
1	AA	1272	G	C6-N1	5.00	1.43	1.39
23	BA	693	C	N1-C6	-5.00	1.34	1.37
23	BA	2588	G	N1-C2	-5.00	1.33	1.37

All (5724) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1442(A)	G	N3-C4-C5	-26.14	115.53	128.60
23	DA	2296	U	N3-C4-O4	-25.95	101.23	119.40
1	AA	1442(A)	G	N3-C4-C5	-25.64	115.78	128.60
1	CA	1442(A)	G	N3-C4-N9	25.18	141.10	126.00
1	AA	1442(A)	G	N3-C4-N9	25.11	141.07	126.00
23	BA	2296	U	N3-C4-O4	-24.18	102.47	119.40
1	AA	1442(A)	G	N3-C2-N2	23.89	136.62	119.90
1	CA	1442(A)	G	N3-C2-N2	23.08	136.06	119.90
23	BA	2296	U	C2-N3-C4	-20.65	114.61	127.00
23	BA	2296	U	C5-C6-N1	-20.40	112.50	122.70
23	DA	2296	U	C2-N3-C4	-19.90	115.06	127.00
23	DA	2296	U	C5-C6-N1	-19.31	113.05	122.70
1	AA	1442(A)	G	C4-N9-C1'	19.05	151.27	126.50
23	DA	2296	U	C2-N1-C1'	-18.94	94.97	117.70
1	CA	1442(A)	G	C4-N9-C1'	18.90	151.07	126.50
23	BA	2296	U	C2-N1-C1'	-18.50	95.50	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2296	U	C5-C4-O4	18.26	136.86	125.90
23	BA	676	A	C2-N3-C4	-18.16	101.52	110.60
23	BA	2296	U	C5-C4-O4	18.02	136.71	125.90
1	AA	1442(A)	G	N1-C2-N2	-17.33	100.61	116.20
23	BA	945	A	C5-N7-C8	-17.19	95.31	103.90
1	CA	1149	C	N1-C2-O2	16.98	129.09	118.90
1	CA	1442(A)	G	C2-N3-C4	16.91	120.35	111.90
1	AA	1442(A)	G	C2-N3-C4	16.72	120.26	111.90
1	CA	1442(A)	G	N1-C2-N2	-16.62	101.24	116.20
23	BA	330	A	C2-N3-C4	-16.40	102.40	110.60
1	AA	1442(A)	G	C8-N9-C1'	-16.11	106.06	127.00
23	BA	2322	A	N9-C4-C5	15.93	112.17	105.80
1	CA	1442(A)	G	C8-N9-C1'	-15.76	106.52	127.00
23	DA	945	A	C2-N3-C4	-14.96	103.12	110.60
23	BA	528	A	C2-N3-C4	-14.74	103.23	110.60
23	BA	587	C	C6-N1-C2	-14.72	114.41	120.30
23	BA	1142(A)	A	C2-N3-C4	-14.71	103.25	110.60
1	AA	1442(A)	G	N1-C6-O6	-14.57	111.16	119.90
23	DA	1142(A)	A	C2-N3-C4	-14.54	103.33	110.60
1	AA	1051	C	N1-C2-O2	14.20	127.42	118.90
23	DA	676	A	C5-N7-C8	-14.08	96.86	103.90
1	CA	1442(A)	G	N1-C6-O6	-13.95	111.53	119.90
1	CA	1442(A)	G	C5-C6-N1	13.88	118.44	111.50
23	BA	2296	U	N1-C2-N3	13.85	123.21	114.90
23	DA	528	A	N3-C4-N9	-13.69	116.45	127.40
24	DB	115	G	C8-N9-C4	13.59	111.84	106.40
1	AA	1442(A)	G	C5-C6-N1	13.40	118.20	111.50
23	DA	528	A	C2-N3-C4	-13.39	103.91	110.60
23	BA	1049	C	C6-N1-C2	-13.36	114.95	120.30
23	DA	2296	U	C6-N1-C1'	13.36	139.90	121.20
23	DA	945	A	C5-N7-C8	-13.20	97.30	103.90
23	BA	528	A	N3-C4-N9	-13.17	116.86	127.40
23	BA	2322	A	C6-N1-C2	-13.05	110.77	118.60
1	AA	1377	A	C8-N9-C4	-13.04	100.58	105.80
23	BA	945	A	N7-C8-N9	13.03	120.31	113.80
23	DA	2296	U	N1-C2-N3	12.91	122.65	114.90
23	BA	71	A	C2-N3-C4	-12.91	104.15	110.60
23	DA	330	A	C2-N3-C4	-12.81	104.19	110.60
23	DA	2335	A	C5-C6-N1	12.79	124.10	117.70
23	BA	141	A	C5-N7-C8	-12.77	97.52	103.90
23	BA	2296	U	C6-N1-C1'	12.76	139.06	121.20
23	BA	2286	A	N1-C6-N6	12.72	126.23	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	856	C	C6-N1-C2	-12.70	115.22	120.30
23	DA	571	A	C8-N9-C4	12.68	110.87	105.80
23	BA	528	A	N3-C4-C5	12.66	135.66	126.80
23	BA	676	A	N3-C4-C5	12.62	135.64	126.80
23	DA	71	A	C5-N7-C8	-12.58	97.61	103.90
1	AA	1025	U	C5-C4-O4	-12.52	118.39	125.90
23	BA	676	A	C5-N7-C8	-12.39	97.70	103.90
23	DA	1565	C	C6-N1-C2	12.38	125.25	120.30
1	CA	1340	A	C8-N9-C4	-12.24	100.90	105.80
23	BA	975	C	C6-N1-C2	-12.23	115.41	120.30
23	BA	2296	U	N3-C2-O2	-12.18	113.67	122.20
23	DA	2296	U	N3-C4-C5	12.14	121.88	114.60
23	BA	945	A	C2-N3-C4	-12.12	104.54	110.60
1	CA	1006	C	C6-N1-C2	-12.10	115.46	120.30
23	BA	1049	C	C5-C6-N1	12.09	127.04	121.00
23	BA	1021	A	C2-N3-C4	-12.08	104.56	110.60
1	CA	1003	G	C5-C6-O6	12.08	135.85	128.60
23	DA	1359	A	N1-C6-N6	-12.01	111.39	118.60
1	AA	1207	G	C8-N9-C4	11.97	111.19	106.40
23	BA	676	A	C5-C6-N1	-11.91	111.74	117.70
23	DA	2028	U	C6-N1-C2	11.88	128.13	121.00
23	DA	676	A	C4-C5-N7	11.84	116.62	110.70
23	DA	2447	G	N1-C6-O6	11.84	127.00	119.90
23	BA	2322	A	C8-N9-C4	-11.83	101.07	105.80
1	CA	1352	C	C6-N1-C2	-11.78	115.59	120.30
23	DA	2371	G	N1-C6-O6	11.75	126.95	119.90
23	DA	928	G	N1-C6-O6	11.66	126.89	119.90
23	DA	2572	A	C8-N9-C4	11.60	110.44	105.80
1	CA	979	C	C6-N1-C2	-11.59	115.66	120.30
23	DA	945	A	N7-C8-N9	11.58	119.59	113.80
23	BA	945	A	C4-C5-N7	11.57	116.48	110.70
1	AA	1237	C	C6-N1-C2	-11.55	115.68	120.30
1	CA	1149	C	N3-C4-N4	-11.53	109.93	118.00
23	DA	676	A	C2-N3-C4	-11.52	104.84	110.60
23	BA	2286	A	C6-C5-N7	-11.49	124.25	132.30
23	DA	2322	A	N9-C4-C5	11.48	110.39	105.80
23	DA	1437	C	C6-N1-C2	-11.44	115.72	120.30
1	CA	1379	G	C6-C5-N7	-11.38	123.57	130.40
23	BA	1762	A	C8-N9-C4	-11.37	101.25	105.80
23	DA	1021	A	C2-N3-C4	-11.32	104.94	110.60
23	BA	2335	A	C5-C6-N1	11.28	123.34	117.70
23	DA	1204	A	C5-N7-C8	-11.25	98.27	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	141	A	N7-C8-N9	11.23	119.42	113.80
23	DA	528	A	N3-C4-C5	11.19	134.63	126.80
23	BA	265	A	C5-N7-C8	-11.15	98.33	103.90
1	AA	359	U	N1-C2-O2	-11.06	115.06	122.80
23	BA	857	C	C6-N1-C2	-11.02	115.89	120.30
23	DA	2791	C	C6-N1-C2	-10.97	115.91	120.30
1	CA	1003	G	C8-N9-C4	-10.94	102.02	106.40
23	BA	1698	A	C2-N3-C4	-10.94	105.13	110.60
23	BA	1359	A	N1-C6-N6	-10.90	112.06	118.60
23	DA	676	A	N7-C8-N9	10.90	119.25	113.80
1	CA	1149	C	C5-C4-N4	10.89	127.82	120.20
23	BA	928	G	N1-C6-O6	10.88	126.43	119.90
23	BA	933	A	C5-N7-C8	-10.83	98.48	103.90
1	AA	1335	C	N1-C2-O2	10.83	125.40	118.90
1	CA	1379	G	N9-C4-C5	-10.79	101.08	105.40
23	BA	71	A	C5-N7-C8	-10.79	98.51	103.90
23	DA	2322	A	C6-N1-C2	-10.75	112.15	118.60
1	AA	1207	G	N1-C6-O6	10.75	126.35	119.90
1	AA	1377	A	N7-C8-N9	10.74	119.17	113.80
1	CA	1149	C	N3-C2-O2	-10.72	114.39	121.90
23	DA	2028	U	N3-C4-C5	10.69	121.02	114.60
23	DA	2363	C	C6-N1-C2	10.68	124.57	120.30
23	DA	1107	G	N3-C4-N9	10.66	132.40	126.00
23	BA	141	A	N1-C6-N6	10.66	125.00	118.60
23	DA	728	G	C8-N9-C4	10.66	110.66	106.40
1	CA	1266	G	C8-N9-C4	-10.65	102.14	106.40
1	CA	1037	C	C2-N3-C4	10.62	125.21	119.90
1	AA	358	U	C2-N3-C4	10.61	133.37	127.00
1	AA	1003	G	C5-C6-O6	10.59	134.96	128.60
1	AA	1502	A	N1-C6-N6	10.59	124.95	118.60
1	AA	1277	C	C2-N3-C4	10.55	125.17	119.90
1	AA	357	G	N3-C2-N2	-10.49	112.56	119.90
23	BA	2723	C	N3-C4-C5	10.46	126.08	121.90
1	CA	1171	G	C5-C6-O6	10.42	134.85	128.60
23	BA	1204	A	C2-N3-C4	-10.41	105.40	110.60
23	BA	2322	A	C4-C5-N7	-10.37	105.52	110.70
23	DA	2646	C	C6-N1-C2	10.35	124.44	120.30
24	DB	104	U	C5-C6-N1	-10.32	117.54	122.70
1	CA	1163	C	C6-N1-C2	-10.31	116.17	120.30
1	CA	1379	G	C4-C5-N7	10.31	114.93	110.80
23	DA	2296	U	N3-C2-O2	-10.31	114.98	122.20
1	CA	1379	G	N3-C4-N9	10.31	132.19	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2296	U	N3-C4-C5	10.29	120.78	114.60
23	BA	2322	A	N1-C6-N6	-10.28	112.43	118.60
1	AA	1207	G	N9-C4-C5	-10.27	101.29	105.40
23	DA	71	A	C2-N3-C4	-10.27	105.47	110.60
24	BB	30	C	C6-N1-C2	-10.24	116.20	120.30
23	BA	330	A	N1-C2-N3	10.24	134.42	129.30
23	BA	2371	G	N1-C6-O6	10.23	126.04	119.90
23	DA	297	C	C6-N1-C2	-10.22	116.21	120.30
23	BA	1108	U	N3-C2-O2	-10.22	115.05	122.20
1	AA	910	C	C6-N1-C2	10.20	124.38	120.30
23	DA	1762	A	C8-N9-C4	-10.20	101.72	105.80
1	AA	1277	C	N1-C2-O2	10.20	125.02	118.90
23	DA	154(A)	C	N1-C2-O2	10.19	125.01	118.90
23	DA	2277	G	N1-C6-O6	-10.15	113.81	119.90
23	DA	2036	C	N1-C2-O2	-10.15	112.81	118.90
1	CA	1442(A)	G	C8-N9-C4	-10.13	102.35	106.40
23	BA	915	C	C6-N1-C2	-10.12	116.25	120.30
1	AA	1126	U	N1-C2-O2	10.10	129.87	122.80
23	DA	1142(A)	A	C5-C6-N1	-10.10	112.65	117.70
23	DA	2375	G	C8-N9-C4	10.07	110.43	106.40
23	BA	90	U	C5-C6-N1	10.07	127.73	122.70
23	DA	2619	C	C6-N1-C2	10.05	124.32	120.30
23	DA	205	G	N9-C4-C5	-10.04	101.38	105.40
23	BA	2319	G	C8-N9-C4	-10.02	102.39	106.40
23	DA	2286	A	C6-C5-N7	-10.00	125.30	132.30
23	DA	1123	C	C6-N1-C2	9.97	124.29	120.30
1	CA	1063	C	C6-N1-C2	-9.95	116.32	120.30
23	DA	1254	A	N1-C2-N3	9.94	134.27	129.30
23	DA	587	C	C6-N1-C2	-9.94	116.32	120.30
23	DA	2689	U	N3-C4-O4	-9.94	112.44	119.40
1	CA	1033	G	N3-C4-N9	9.94	131.96	126.00
1	AA	322	C	C6-N1-C2	9.93	124.27	120.30
1	CA	458	C	C6-N1-C2	-9.93	116.33	120.30
23	BA	1243	G	N1-C6-O6	9.92	125.85	119.90
23	DA	2286	A	N1-C6-N6	9.92	124.55	118.60
23	BA	1227	G	N1-C6-O6	9.91	125.85	119.90
23	BA	2040	C	C6-N1-C2	9.90	124.26	120.30
1	AA	53	A	C6-N1-C2	9.90	124.54	118.60
23	BA	884	C	C5-C6-N1	9.89	125.94	121.00
23	DA	1777	U	C5-C6-N1	-9.87	117.77	122.70
23	DA	678	C	C6-N1-C2	9.85	124.24	120.30
23	DA	1107	G	C4-N9-C1'	9.84	139.29	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	141	A	C4-C5-N7	9.83	115.62	110.70
23	BA	1107	G	C4-N9-C1'	9.82	139.26	126.50
23	DA	676	A	C8-N9-C4	-9.81	101.88	105.80
23	DA	2619	C	C5-C6-N1	-9.80	116.10	121.00
23	BA	1210	A	C6-C5-N7	-9.80	125.44	132.30
23	BA	676	A	N3-C4-N9	-9.79	119.56	127.40
23	DA	978	G	C8-N9-C4	9.79	110.31	106.40
23	BA	265	A	N7-C8-N9	9.79	118.69	113.80
23	BA	2287	A	C2-N3-C4	-9.78	105.71	110.60
23	BA	2719	G	C8-N9-C4	9.76	110.31	106.40
1	CA	1266	G	N7-C8-N9	9.76	117.98	113.10
23	BA	1107	G	C8-N9-C1'	-9.73	114.35	127.00
23	DA	1107	G	C8-N9-C1'	-9.72	114.37	127.00
23	DA	1022	G	N9-C4-C5	9.71	109.28	105.40
23	DA	201	C	N3-C4-C5	9.70	125.78	121.90
23	DA	1049	C	C5-C6-N1	9.68	125.84	121.00
23	DA	2626	C	C6-N1-C2	9.66	124.17	120.30
1	CA	1054	C	C6-N1-C2	-9.66	116.44	120.30
23	DA	856	C	C6-N1-C2	-9.63	116.45	120.30
1	CA	1006	C	C5-C6-N1	9.62	125.81	121.00
1	CA	1124	G	N3-C2-N2	9.62	126.63	119.90
23	DA	1565	C	N3-C4-C5	9.60	125.74	121.90
1	AA	1074	G	N1-C6-O6	9.60	125.66	119.90
23	DA	1800	C	C6-N1-C2	9.60	124.14	120.30
1	AA	1279	A	N7-C8-N9	9.58	118.59	113.80
23	BA	209	C	C5-C6-N1	-9.57	116.22	121.00
23	DA	62	C	C5-C6-N1	-9.56	116.22	121.00
23	DA	915	C	C6-N1-C2	-9.55	116.48	120.30
23	DA	2624	G	N1-C6-O6	9.55	125.63	119.90
1	AA	1169	A	C8-N9-C4	-9.54	101.98	105.80
23	BA	570	G	C8-N9-C4	9.54	110.22	106.40
1	CA	1335	C	N1-C2-O2	9.54	124.62	118.90
23	BA	409	C	C6-N1-C2	9.54	124.11	120.30
1	CA	1124	G	C5-C6-O6	9.53	134.32	128.60
23	DA	2107	C	C2-N3-C4	9.52	124.66	119.90
23	DA	2593	U	N3-C4-O4	-9.52	112.74	119.40
1	AA	1051	C	N3-C4-C5	9.50	125.70	121.90
23	DA	560	C	C6-N1-C2	9.48	124.09	120.30
23	BA	154(A)	C	N1-C2-O2	9.47	124.58	118.90
23	BA	754	C	C5-C4-N4	-9.46	113.58	120.20
1	AA	1025	U	N3-C4-O4	9.46	126.02	119.40
23	BA	1248	G	C5-C6-O6	-9.46	122.92	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1626	G	C5-C6-O6	9.46	134.27	128.60
24	BB	104	U	C5-C6-N1	-9.45	117.97	122.70
1	CA	1379	G	C5-C6-O6	-9.45	122.93	128.60
23	BA	2107	C	C2-N3-C4	9.44	124.62	119.90
23	BA	2581	G	C5-C6-O6	9.44	134.26	128.60
23	DA	735	A	C8-N9-C4	9.43	109.57	105.80
23	DA	122	G	C5-C6-O6	-9.43	122.94	128.60
1	AA	1442(A)	G	C8-N9-C4	-9.42	102.63	106.40
23	BA	265	A	C6-C5-N7	-9.41	125.71	132.30
23	BA	2017	U	N1-C2-N3	9.41	120.55	114.90
23	BA	47	C	C6-N1-C2	9.40	124.06	120.30
1	CA	972	C	C6-N1-C2	-9.39	116.54	120.30
23	DA	2591	C	N1-C2-O2	-9.39	113.27	118.90
1	CA	1044	A	C5-C6-N6	9.39	131.21	123.70
23	BA	2251	G	C8-N9-C4	-9.38	102.65	106.40
23	DA	123	G	C8-N9-C4	9.38	110.15	106.40
1	AA	1292	U	C5-C6-N1	9.36	127.38	122.70
1	CA	1335	C	N3-C2-O2	-9.36	115.35	121.90
23	DA	2322	A	N1-C6-N6	-9.36	112.98	118.60
23	BA	463	G	C5-C6-O6	9.34	134.21	128.60
1	CA	1044	A	N1-C6-N6	-9.34	112.99	118.60
23	BA	835	A	C2-N3-C4	9.34	115.27	110.60
23	BA	202	U	N3-C4-O4	-9.33	112.87	119.40
23	BA	194	G	N3-C2-N2	-9.33	113.37	119.90
23	BA	265	A	N1-C6-N6	9.30	124.18	118.60
23	DA	645	C	N1-C2-O2	9.30	124.48	118.90
23	DA	2447	G	C5-C6-O6	-9.30	123.02	128.60
23	BA	265	A	C4-C5-N7	9.30	115.35	110.70
1	AA	896	C	C6-N1-C2	9.29	124.02	120.30
23	DA	2286	A	C2-N3-C4	-9.29	105.95	110.60
23	DA	179	G	N1-C6-O6	9.29	125.47	119.90
1	CA	1502	A	C5-N7-C8	-9.29	99.26	103.90
23	BA	2375	G	C8-N9-C4	9.29	110.11	106.40
23	DA	1108	U	N3-C2-O2	-9.29	115.70	122.20
23	DA	1616	A	N1-C6-N6	9.28	124.17	118.60
23	DA	62	C	C6-N1-C2	9.27	124.01	120.30
23	BA	1142(A)	A	N3-C4-C5	9.27	133.29	126.80
23	DA	928	G	C6-C5-N7	-9.27	124.84	130.40
1	AA	1381	U	N1-C2-O2	9.27	129.28	122.80
23	BA	1437	C	C6-N1-C2	-9.26	116.59	120.30
23	BA	1612	C	C6-N1-C2	9.26	124.01	120.30
23	BA	391	G	N1-C6-O6	9.24	125.45	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1565	C	C5-C6-N1	-9.23	116.38	121.00
23	DA	2828	C	C6-N1-C2	9.23	123.99	120.30
23	DA	2322	A	C8-N9-C4	-9.22	102.11	105.80
1	CA	1116	C	C2-N3-C4	9.21	124.51	119.90
23	BA	508	G	N1-C6-O6	9.20	125.42	119.90
23	BA	2015	A	C8-N9-C4	-9.19	102.12	105.80
23	BA	933	A	C4-C5-N7	9.19	115.30	110.70
23	BA	465	G	C8-N9-C4	-9.19	102.72	106.40
23	DA	1107	G	N3-C4-C5	-9.18	124.01	128.60
23	BA	2572	A	C8-N9-C4	9.16	109.47	105.80
23	BA	1142(A)	A	N1-C6-N6	9.15	124.09	118.60
1	CA	1033	G	C4-C5-N7	9.15	114.46	110.80
23	BA	945	A	C8-N9-C4	-9.13	102.15	105.80
23	DA	2676	C	C2-N3-C4	-9.13	115.33	119.90
23	DA	2570	G	N1-C6-O6	9.13	125.38	119.90
23	BA	1490	A	C8-N9-C4	9.13	109.45	105.80
23	DA	2329	G	C8-N9-C4	9.12	110.05	106.40
23	DA	2277	G	C5-C6-O6	9.11	134.07	128.60
1	AA	934	C	C6-N1-C2	-9.11	116.66	120.30
1	AA	1158	C	C2-N1-C1'	9.11	128.82	118.80
23	DA	1490	A	C8-N9-C4	9.11	109.44	105.80
23	BA	928	G	C6-C5-N7	-9.10	124.94	130.40
23	BA	1210	A	C5-N7-C8	-9.08	99.36	103.90
23	BA	1142(A)	A	C5-N7-C8	-9.06	99.37	103.90
1	CA	818	G	C4-C5-N7	-9.06	107.18	110.80
23	DA	141	A	N7-C8-N9	9.06	118.33	113.80
23	BA	2036	C	C6-N1-C2	-9.05	116.68	120.30
23	BA	570	G	N9-C4-C5	-9.05	101.78	105.40
1	AA	357	G	N1-C2-N2	9.05	124.34	116.20
23	BA	2502	G	C5-C6-N1	9.04	116.02	111.50
1	CA	1293	G	C5-C6-N1	9.04	116.02	111.50
23	BA	1618	A	N1-C6-N6	-9.04	113.18	118.60
1	AA	998	G	N3-C4-N9	-9.03	120.58	126.00
23	DA	2755	C	C5-C6-N1	9.03	125.51	121.00
23	BA	94	C	C6-N1-C2	-9.03	116.69	120.30
23	BA	759	G	N1-C6-O6	9.02	125.31	119.90
23	BA	1391	U	N1-C2-O2	9.02	129.11	122.80
23	BA	2581	G	N1-C6-O6	-9.01	114.49	119.90
23	DA	71	A	N7-C8-N9	9.01	118.31	113.80
1	AA	1149	C	N1-C2-O2	9.01	124.31	118.90
1	AA	1442(A)	G	N7-C8-N9	9.01	117.60	113.10
23	DA	1049	C	C6-N1-C2	-9.00	116.70	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2322	A	N1-C2-N3	9.00	133.80	129.30
23	BA	1210	A	N7-C8-N9	8.99	118.30	113.80
23	BA	179	G	N1-C6-O6	8.99	125.29	119.90
23	BA	2572	A	N7-C8-N9	-8.99	109.31	113.80
23	BA	2273	A	C8-N9-C4	-8.98	102.21	105.80
23	BA	982	C	N3-C2-O2	-8.97	115.62	121.90
23	BA	71	A	N7-C8-N9	8.96	118.28	113.80
23	BA	391	G	C4-C5-N7	8.96	114.39	110.80
23	BA	1142(A)	A	C5-C6-N1	-8.96	113.22	117.70
23	BA	1210	A	N1-C6-N6	8.97	123.98	118.60
23	BA	1243	G	C2-N3-C4	-8.96	107.42	111.90
1	CA	1030(B)	C	C6-N1-C2	-8.96	116.72	120.30
23	BA	452	G	C5-C6-O6	8.96	133.97	128.60
23	DA	988	A	N1-C6-N6	8.96	123.97	118.60
23	BA	572	A	C8-N9-C4	-8.95	102.22	105.80
23	DA	764	A	N1-C2-N3	-8.95	124.82	129.30
1	AA	1153	C	N1-C2-O2	8.95	124.27	118.90
23	BA	2729	G	N1-C6-O6	8.95	125.27	119.90
23	DA	2723	C	C5-C6-N1	-8.94	116.53	121.00
23	DA	2393	A	C8-N9-C4	-8.94	102.22	105.80
1	AA	1169	A	N7-C8-N9	8.93	118.27	113.80
23	BA	141	A	C6-C5-N7	-8.93	126.05	132.30
23	DA	141	A	C5-N7-C8	-8.92	99.44	103.90
23	BA	574	C	C6-N1-C2	-8.91	116.74	120.30
23	BA	1992	G	C4-C5-N7	-8.91	107.24	110.80
23	DA	945	A	N1-C2-N3	8.90	133.75	129.30
23	DA	2615	U	N3-C4-O4	-8.90	113.17	119.40
1	AA	52	G	C6-N1-C2	8.89	130.44	125.10
23	BA	945	A	N3-C4-C5	8.89	133.03	126.80
23	DA	122	G	N1-C6-O6	8.89	125.23	119.90
1	CA	1343	G	C5-C6-O6	-8.89	123.27	128.60
1	CA	634	C	C6-N1-C2	-8.88	116.75	120.30
1	CA	1456	G	C2-N3-C4	8.87	116.33	111.90
23	DA	2624	G	C5-C6-O6	-8.87	123.28	128.60
23	BA	2250	G	C8-N9-C4	-8.86	102.86	106.40
23	DA	1230	C	C6-N1-C2	8.86	123.84	120.30
1	CA	1003	G	N1-C6-O6	-8.86	114.58	119.90
23	BA	2371	G	C5-C6-O6	-8.85	123.29	128.60
23	DA	1490	A	N9-C4-C5	-8.85	102.26	105.80
23	DA	71	A	C4-C5-N7	8.84	115.12	110.70
1	AA	1018	C	C5-C6-N1	8.83	125.42	121.00
23	DA	571	A	N9-C4-C5	-8.83	102.27	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	435	C	N1-C2-O2	8.83	124.20	118.90
23	DA	1248	G	C8-N9-C4	8.83	109.93	106.40
23	BA	689	A	C8-N9-C4	8.82	109.33	105.80
23	BA	676	A	N7-C8-N9	8.82	118.21	113.80
23	BA	794	G	N1-C6-O6	-8.82	114.61	119.90
1	CA	1033	G	N9-C4-C5	-8.81	101.88	105.40
1	AA	1258	G	N3-C2-N2	8.81	126.06	119.90
23	BA	1779	U	C6-N1-C2	8.81	126.28	121.00
23	BA	2538	C	C6-N1-C2	8.80	123.82	120.30
23	BA	2522	U	N3-C4-O4	8.79	125.55	119.40
1	AA	839	U	N1-C2-O2	8.79	128.95	122.80
23	DA	1328	G	C8-N9-C4	8.77	109.91	106.40
23	BA	675	A	N1-C6-N6	8.77	123.86	118.60
23	BA	759	G	C5-C6-O6	-8.76	123.34	128.60
23	BA	2791	C	C6-N1-C2	-8.76	116.80	120.30
23	DA	128	C	C6-N1-C2	8.76	123.80	120.30
23	BA	777	A	C5-N7-C8	8.75	108.28	103.90
23	BA	2041	U	N3-C2-O2	-8.75	116.08	122.20
23	DA	1325	G	C6-C5-N7	-8.74	125.15	130.40
23	DA	2449	U	N3-C2-O2	8.74	128.32	122.20
23	BA	2646	C	C6-N1-C2	8.74	123.80	120.30
23	BA	391	G	N9-C4-C5	-8.73	101.91	105.40
1	CA	910	C	C6-N1-C2	8.73	123.79	120.30
23	DA	1142(A)	A	N3-C4-C5	8.73	132.91	126.80
24	DB	79	C	C6-N1-C2	-8.73	116.81	120.30
1	AA	1059	C	N3-C2-O2	-8.73	115.79	121.90
1	AA	1043	C	N3-C4-C5	-8.71	118.42	121.90
23	BA	1845	G	N1-C6-O6	-8.71	114.67	119.90
23	BA	389	G	N9-C4-C5	-8.71	101.92	105.40
1	AA	943	U	C5-C6-N1	8.70	127.05	122.70
23	DA	528	A	C5-C6-N1	-8.70	113.35	117.70
1	AA	1333	A	C8-N9-C4	-8.70	102.32	105.80
23	DA	945	A	C8-N9-C4	-8.70	102.32	105.80
23	DA	760	G	C5-C6-O6	-8.70	123.38	128.60
23	BA	2440	C	C4-C5-C6	8.69	121.75	117.40
23	BA	1022	G	C4-C5-N7	-8.69	107.32	110.80
23	BA	2286	A	C4-C5-C6	8.69	121.34	117.00
23	BA	124	G	C4-C5-N7	8.68	114.27	110.80
23	BA	1107	G	N3-C4-N9	8.68	131.21	126.00
23	BA	698	C	N1-C2-O2	-8.67	113.70	118.90
23	BA	1779	U	C6-N1-C1'	-8.67	109.06	121.20
23	BA	2607	G	N1-C2-N2	-8.67	108.40	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	179	G	C5-C6-N1	-8.66	107.17	111.50
23	DA	945	A	N3-C4-C5	8.66	132.86	126.80
23	DA	665	C	C6-N1-C2	8.65	123.76	120.30
23	DA	676	A	N3-C4-C5	8.65	132.86	126.80
1	AA	1279	A	C8-N9-C4	-8.64	102.34	105.80
1	CA	1077	G	C8-N9-C4	8.64	109.86	106.40
1	CA	1379	G	N1-C6-O6	8.64	125.09	119.90
23	BA	885	C	N1-C2-O2	8.64	124.08	118.90
1	AA	112	G	N1-C6-O6	8.64	125.08	119.90
1	AA	1003	G	N1-C6-O6	-8.63	114.72	119.90
1	CA	818	G	C5-C6-O6	8.62	133.78	128.60
23	BA	528	A	C5-C6-N1	-8.62	113.39	117.70
23	BA	154(A)	C	N3-C4-N4	-8.61	111.97	118.00
23	DA	1437	C	C5-C6-N1	8.61	125.31	121.00
23	BA	735	A	C8-N9-C4	8.61	109.24	105.80
23	BA	884	C	C2-N3-C4	8.61	124.20	119.90
23	DA	915	C	N3-C2-O2	-8.60	115.88	121.90
23	DA	1698	A	C5-N7-C8	-8.59	99.60	103.90
23	DA	792	G	C8-N9-C4	8.59	109.83	106.40
23	DA	1992	G	C4-C5-N7	-8.57	107.37	110.80
23	BA	1001	A	C8-N9-C4	8.56	109.22	105.80
24	DB	89	G	N1-C6-O6	8.56	125.04	119.90
23	BA	1698	A	C6-C5-N7	-8.56	126.31	132.30
23	BA	2429	G	C8-N9-C4	-8.56	102.98	106.40
23	BA	2440	C	N3-C4-C5	-8.56	118.48	121.90
1	CA	117	G	N9-C4-C5	-8.55	101.98	105.40
23	BA	386	G	C8-N9-C4	-8.54	102.98	106.40
23	BA	1021	A	C5-N7-C8	-8.54	99.63	103.90
23	DA	2371	G	C5-C6-O6	-8.54	123.48	128.60
23	BA	1222	C	N3-C4-C5	8.54	125.31	121.90
1	CA	1243	C	C6-N1-C2	-8.53	116.89	120.30
23	DA	330	A	C5-N7-C8	-8.53	99.64	103.90
23	DA	2821	A	C8-N9-C4	8.53	109.21	105.80
1	CA	1340	A	N9-C4-C5	8.53	109.21	105.80
23	DA	1207	C	C6-N1-C2	8.52	123.71	120.30
23	BA	205	G	N9-C4-C5	-8.51	102.00	105.40
23	BA	1565	C	C6-N1-C2	8.51	123.70	120.30
23	DA	2087	G	C8-N9-C4	8.51	109.80	106.40
23	BA	330	A	N3-C4-C5	8.51	132.75	126.80
23	DA	2521	C	C6-N1-C2	8.50	123.70	120.30
23	DA	1204	A	C4-C5-N7	8.50	114.95	110.70
23	BA	1313	U	C6-N1-C2	-8.50	115.90	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1977	A	C8-N9-C4	8.49	109.20	105.80
23	BA	1645	G	C8-N9-C4	-8.48	103.01	106.40
1	AA	1371	G	C5-C6-O6	-8.48	123.51	128.60
23	DA	12	U	N1-C2-O2	8.48	128.73	122.80
1	AA	1018	C	C6-N1-C2	-8.47	116.91	120.30
1	AA	1002	G	C8-N9-C4	-8.47	103.01	106.40
23	BA	510	C	N3-C4-C5	-8.46	118.51	121.90
1	CA	1108	G	C4-C5-N7	-8.46	107.41	110.80
23	BA	1604	C	N1-C2-O2	-8.46	113.82	118.90
24	DB	104	U	C6-N1-C2	8.46	126.08	121.00
23	BA	1248	G	N1-C6-O6	8.46	124.97	119.90
23	BA	2286	A	C2-N3-C4	-8.45	106.37	110.60
23	BA	1695	G	C4-C5-N7	8.44	114.17	110.80
24	DB	115	G	N7-C8-N9	-8.43	108.89	113.10
1	CA	1442(A)	G	N7-C8-N9	8.43	117.31	113.10
23	DA	1022	G	C4-C5-N7	-8.42	107.43	110.80
23	BA	455	C	N1-C2-O2	8.42	123.95	118.90
23	BA	2725	A	C2-N3-C4	-8.42	106.39	110.60
23	BA	676	A	C4-C5-N7	8.42	114.91	110.70
1	CA	1442(A)	G	C6-N1-C2	-8.41	120.05	125.10
23	DA	2881	C	N1-C2-O2	-8.41	113.86	118.90
51	B7	47	ARG	NE-CZ-NH1	8.41	124.50	120.30
23	DA	446	G	C8-N9-C4	8.40	109.76	106.40
1	AA	77	G	C4-C5-N7	8.40	114.16	110.80
23	DA	2791	C	N1-C2-O2	8.40	123.94	118.90
23	BA	154(A)	C	N3-C2-O2	-8.40	116.02	121.90
1	CA	1343	G	N1-C6-O6	8.38	124.93	119.90
23	BA	684	G	N3-C2-N2	-8.38	114.04	119.90
1	AA	1034	G	C5-C6-O6	8.37	133.62	128.60
23	BA	1216	G	C6-C5-N7	-8.37	125.38	130.40
23	BA	1315	C	N3-C2-O2	-8.37	116.04	121.90
23	DA	154(A)	C	N3-C2-O2	-8.37	116.04	121.90
23	BA	975	C	N3-C2-O2	-8.36	116.05	121.90
1	CA	1158	C	N1-C2-O2	8.36	123.91	118.90
4	CD	12	CYS	CA-CB-SG	8.36	129.04	114.00
1	CA	1033	G	C5-C6-O6	-8.35	123.59	128.60
23	DA	2286	A	C4-C5-C6	8.35	121.18	117.00
23	DA	2287	A	N1-C6-N6	8.35	123.61	118.60
1	AA	1443	G	C5-C6-O6	-8.35	123.59	128.60
23	BA	1049	C	C2-N1-C1'	8.35	127.98	118.80
23	BA	2723	C	N3-C4-N4	-8.35	112.16	118.00
1	AA	283	C	N1-C2-O2	8.34	123.91	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BB	4	C	C6-N1-C2	8.34	123.64	120.30
23	BA	2318	G	C8-N9-C4	-8.34	103.06	106.40
1	AA	1051	C	N3-C2-O2	-8.34	116.06	121.90
1	AA	1051	C	C6-N1-C1'	-8.33	110.80	120.80
23	BA	2375	G	N7-C8-N9	-8.33	108.94	113.10
1	CA	1052	U	N1-C2-O2	8.33	128.63	122.80
1	CA	357	G	N1-C6-O6	-8.32	114.91	119.90
23	BA	910	A	C8-N9-C4	8.32	109.13	105.80
23	BA	1762	A	N7-C8-N9	8.32	117.96	113.80
23	BA	804	A	C8-N9-C4	8.31	109.12	105.80
1	CA	1171	G	N1-C6-O6	-8.31	114.91	119.90
24	DB	83	G	N1-C6-O6	8.31	124.89	119.90
23	DA	566	U	C6-N1-C2	8.31	125.98	121.00
1	CA	1192	C	C6-N1-C2	-8.30	116.98	120.30
23	BA	988	A	N1-C6-N6	8.30	123.58	118.60
1	CA	1230	C	C6-N1-C2	-8.30	116.98	120.30
23	BA	2286	A	N7-C8-N9	8.30	117.95	113.80
1	CA	1283	G	C8-N9-C4	-8.29	103.09	106.40
23	DA	1565	C	C2-N3-C4	-8.29	115.76	119.90
23	BA	508	G	C5-C6-O6	-8.28	123.63	128.60
23	BA	2321	G	N3-C2-N2	-8.28	114.10	119.90
23	BA	145	G	C8-N9-C4	8.28	109.71	106.40
23	BA	2619	C	C5-C6-N1	-8.27	116.86	121.00
23	BA	959	A	C5-C6-N6	8.27	130.32	123.70
23	BA	1695	G	N1-C6-O6	8.27	124.86	119.90
24	BB	76	G	C8-N9-C4	8.26	109.70	106.40
23	BA	188	G	C2-N3-C4	-8.26	107.77	111.90
23	BA	1210	A	C8-N9-C4	-8.26	102.50	105.80
1	CA	1216	G	N3-C4-C5	8.26	132.73	128.60
23	DA	2498	C	C6-N1-C2	8.26	123.60	120.30
23	BA	645	C	N1-C2-O2	8.25	123.85	118.90
23	BA	959	A	N1-C6-N6	-8.25	113.65	118.60
23	BA	2206	G	C4-N9-C1'	-8.25	115.78	126.50
1	CA	943	U	C5-C4-O4	8.25	130.85	125.90
23	BA	2100	G	N3-C4-N9	8.24	130.95	126.00
23	BA	971	C	C6-N1-C2	-8.24	117.00	120.30
23	DA	2572	A	N7-C8-N9	-8.24	109.68	113.80
23	BA	678	C	C6-N1-C2	8.24	123.60	120.30
23	DA	568	U	C5-C4-O4	-8.24	120.96	125.90
23	BA	844	C	C6-N1-C2	8.23	123.59	120.30
23	BA	1022	G	N9-C4-C5	8.23	108.69	105.40
23	DA	2827	C	C6-N1-C2	8.23	123.59	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1022	G	N3-C2-N2	-8.23	114.14	119.90
1	CA	839	U	N1-C2-O2	8.23	128.56	122.80
23	BA	849	A	C8-N9-C4	8.23	109.09	105.80
23	DA	440	G	N1-C6-O6	-8.23	114.96	119.90
23	BA	1655	A	C8-N9-C4	8.22	109.09	105.80
23	DA	2040	C	C6-N1-C2	8.22	123.59	120.30
23	DA	201	C	C6-N1-C2	8.22	123.59	120.30
23	DA	945	A	C5-C6-N1	-8.22	113.59	117.70
23	DA	2589	A	C2-N3-C4	-8.22	106.49	110.60
23	DA	2606	C	N3-C4-C5	8.22	125.19	121.90
23	DA	528	A	C5-C6-N6	8.22	130.27	123.70
23	DA	2690	C	N3-C4-C5	-8.22	118.61	121.90
23	DA	448	U	N1-C2-N3	8.21	119.83	114.90
27	BF	74	ARG	NE-CZ-NH2	-8.21	116.20	120.30
23	DA	271(S)	G	N1-C6-O6	8.21	124.82	119.90
23	DA	1698	A	N7-C8-N9	8.20	117.90	113.80
1	AA	458	C	C6-N1-C2	-8.20	117.02	120.30
1	CA	1050	G	N3-C2-N2	8.20	125.64	119.90
23	DA	945	A	N3-C4-N9	-8.20	120.84	127.40
1	AA	1174	G	C8-N9-C4	8.20	109.68	106.40
23	BA	1021	A	C5-C6-N1	-8.20	113.60	117.70
23	BA	2206	G	N3-C4-C5	8.19	132.69	128.60
38	BU	28	ARG	NE-CZ-NH1	-8.19	116.21	120.30
1	CA	52	G	C5-C6-O6	8.19	133.51	128.60
23	BA	782	A	C6-N1-C2	-8.18	113.69	118.60
23	DA	789	A	C8-N9-C4	8.18	109.07	105.80
23	BA	130	C	C6-N1-C2	8.18	123.57	120.30
1	CA	1351	U	C5-C6-N1	-8.18	118.61	122.70
23	BA	2700	C	C6-N1-C2	8.17	123.57	120.30
23	BA	745	G	N3-C4-C5	-8.16	124.52	128.60
23	BA	1328	G	C8-N9-C4	8.16	109.66	106.40
1	AA	1223	C	C6-N1-C2	-8.15	117.04	120.30
23	BA	2689	U	C5-C4-O4	8.15	130.79	125.90
23	DA	2371	G	N9-C4-C5	-8.14	102.14	105.40
1	CA	28	G	N1-C6-O6	8.13	124.78	119.90
23	BA	2105	C	C6-N1-C2	-8.13	117.05	120.30
23	DA	413	C	N1-C2-O2	-8.13	114.02	118.90
23	BA	1977	A	C8-N9-C4	8.13	109.05	105.80
1	AA	1158	C	N1-C2-O2	8.13	123.78	118.90
1	AA	1502	A	C6-C5-N7	-8.12	126.62	132.30
1	AA	1443	G	N9-C4-C5	-8.12	102.15	105.40
1	AA	1502	A	C5-N7-C8	-8.12	99.84	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1108	U	N1-C2-O2	8.12	128.48	122.80
1	AA	1210	C	C2-N1-C1'	8.12	127.73	118.80
1	AA	1006	C	C5-C6-N1	8.11	125.06	121.00
23	BA	2349	G	C8-N9-C4	-8.11	103.16	106.40
23	DA	1760	A	N1-C6-N6	-8.11	113.74	118.60
24	DB	30	C	C6-N1-C2	-8.11	117.06	120.30
23	DA	453	C	C6-N1-C2	8.10	123.54	120.30
23	DA	2296	U	O4'-C1'-N1	8.10	114.68	108.20
1	AA	557	G	N3-C4-C5	-8.10	124.55	128.60
1	AA	1051	C	C2-N1-C1'	8.09	127.70	118.80
23	DA	1350	C	C6-N1-C2	8.09	123.54	120.30
23	BA	272(D)	G	C8-N9-C4	8.09	109.64	106.40
23	BA	2261	C	C4-C5-C6	8.09	121.44	117.40
1	AA	1456	G	N3-C4-N9	8.09	130.85	126.00
23	BA	1452	A	C8-N9-C4	8.08	109.03	105.80
23	BA	1695	G	C5-N7-C8	-8.08	100.26	104.30
1	CA	1442(B)	A	N3-C4-C5	-8.08	121.14	126.80
23	DA	933	A	C5-N7-C8	-8.08	99.86	103.90
23	BA	552	G	C8-N9-C4	8.08	109.63	106.40
23	BA	2084	C	C5-C6-N1	-8.08	116.96	121.00
23	BA	1314	C	C2-N1-C1'	8.07	127.68	118.80
23	BA	207	A	C2-N3-C4	-8.07	106.56	110.60
23	BA	612	C	C6-N1-C2	8.07	123.53	120.30
23	BA	527	C	N3-C2-O2	-8.06	116.25	121.90
1	AA	1442	G	C5-N7-C8	8.06	108.33	104.30
23	BA	2596	U	N1-C2-O2	-8.05	117.16	122.80
24	BB	85	G	C5-C6-O6	-8.05	123.77	128.60
1	CA	936	C	C2-N1-C1'	8.05	127.66	118.80
23	BA	1695	G	C6-C5-N7	-8.05	125.57	130.40
23	BA	205	G	N3-C2-N2	8.04	125.53	119.90
23	BA	2242	G	N3-C2-N2	-8.04	114.27	119.90
23	DA	1992	G	N9-C4-C5	8.04	108.62	105.40
1	AA	1243	C	C5-C6-N1	8.04	125.02	121.00
23	BA	1617	C	N3-C4-C5	-8.04	118.68	121.90
23	DA	1779	U	C6-N1-C1'	-8.04	109.95	121.20
1	CA	1282	C	C6-N1-C2	-8.03	117.09	120.30
23	BA	2306	C	C2-N1-C1'	8.03	127.63	118.80
1	CA	1305	G	N1-C6-O6	8.03	124.72	119.90
23	BA	745	G	N3-C4-N9	8.03	130.82	126.00
23	BA	2497	A	C6-N1-C2	-8.03	113.78	118.60
1	CA	986	A	C2-N3-C4	8.03	114.61	110.60
23	DA	39	C	C5-C6-N1	-8.02	116.99	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2044	C	N1-C2-O2	-8.02	114.09	118.90
23	BA	2010	G	N1-C6-O6	8.02	124.71	119.90
23	BA	13	A	N1-C6-N6	-8.01	113.79	118.60
23	DA	2676	C	C5-C6-N1	-8.01	116.99	121.00
1	CA	1502	A	C6-C5-N7	-8.01	126.69	132.30
23	BA	587	C	N3-C4-C5	-8.01	118.70	121.90
1	AA	818	G	C5-C6-O6	8.00	133.40	128.60
23	DA	1608	A	C2-N3-C4	-8.00	106.60	110.60
23	BA	928	G	C5-C6-O6	-8.00	123.80	128.60
1	AA	927	G	C8-N9-C4	8.00	109.60	106.40
23	BA	1647	G	N1-C6-O6	8.00	124.70	119.90
23	DA	2292	C	C5-C6-N1	-8.00	117.00	121.00
1	AA	1442(A)	G	C6-N1-C2	-7.99	120.31	125.10
23	BA	1217	C	C6-N1-C2	7.99	123.50	120.30
23	DA	1377	G	N3-C4-C5	-7.99	124.61	128.60
23	BA	271(J)	C	C6-N1-C2	7.99	123.49	120.30
1	AA	1292	U	N1-C2-O2	7.98	128.39	122.80
23	DA	826	U	N1-C2-N3	7.98	119.69	114.90
1	AA	1014	A	C8-N9-C4	-7.98	102.61	105.80
23	BA	185	U	C5-C6-N1	-7.98	118.71	122.70
23	DA	2306	C	C5-C6-N1	7.98	124.99	121.00
1	AA	333	G	N1-C6-O6	7.98	124.69	119.90
23	DA	729	G	C5-C6-O6	-7.98	123.81	128.60
23	BA	71	A	C8-N9-C4	-7.97	102.61	105.80
1	CA	1456	G	N3-C4-N9	7.97	130.78	126.00
1	AA	1312	G	N3-C4-C5	-7.97	124.62	128.60
23	DA	208	C	N3-C4-C5	7.96	125.08	121.90
23	DA	736	C	N1-C2-O2	-7.96	114.12	118.90
1	CA	1039	C	N1-C2-O2	7.95	123.67	118.90
1	AA	1402	C	C6-N1-C2	-7.95	117.12	120.30
23	BA	2087	G	N1-C6-O6	7.95	124.67	119.90
23	DA	468	G	C8-N9-C4	7.95	109.58	106.40
23	BA	2286	A	C5-N7-C8	-7.95	99.93	103.90
23	BA	2080	G	C8-N9-C4	7.94	109.58	106.40
23	BA	2689	U	N3-C4-O4	-7.94	113.84	119.40
24	BB	61	G	N3-C2-N2	-7.94	114.34	119.90
23	BA	2307	G	N7-C8-N9	7.94	117.07	113.10
23	DA	12	U	N3-C2-O2	-7.93	116.64	122.20
23	DA	2100	G	N3-C4-N9	7.93	130.76	126.00
1	CA	242	C	N1-C2-O2	-7.93	114.14	118.90
23	BA	2404	C	C6-N1-C2	7.93	123.47	120.30
23	DA	1967	C	C6-N1-C2	7.93	123.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	844	C	C5-C6-N1	-7.92	117.04	121.00
23	DA	2250	G	C4-C5-N7	-7.92	107.63	110.80
23	BA	1372	U	N3-C2-O2	-7.92	116.66	122.20
1	CA	1081	G	N9-C4-C5	-7.92	102.23	105.40
1	AA	1274	G	N1-C6-O6	7.92	124.65	119.90
23	DA	1937	A	N1-C6-N6	7.92	123.35	118.60
23	BA	1992	G	N9-C4-C5	7.91	108.56	105.40
1	AA	1050	G	N1-C6-O6	7.91	124.64	119.90
23	DA	1142(A)	A	N1-C6-N6	7.91	123.34	118.60
1	AA	634	C	C6-N1-C2	-7.90	117.14	120.30
1	AA	1210	C	N1-C2-O2	7.90	123.64	118.90
23	DA	389	G	N9-C4-C5	-7.90	102.24	105.40
1	AA	1417	G	N3-C4-N9	7.90	130.74	126.00
23	DA	1993	U	N1-C2-O2	-7.90	117.27	122.80
23	DA	2319	G	N3-C2-N2	-7.89	114.38	119.90
23	DA	1021	A	C5-N7-C8	-7.89	99.95	103.90
1	CA	117	G	N1-C6-O6	7.89	124.63	119.90
23	BA	546	C	C5-C6-N1	7.88	124.94	121.00
23	DA	652(E)	G	C6-N1-C2	7.88	129.83	125.10
1	CA	77	G	C4-C5-N7	7.88	113.95	110.80
23	BA	475	U	C6-N1-C2	-7.88	116.28	121.00
23	BA	1570	A	C2-N3-C4	-7.87	106.67	110.60
1	CA	1116	C	C5-C4-N4	7.87	125.71	120.20
1	AA	1174	G	C6-C5-N7	7.86	135.12	130.40
1	CA	1409	C	C6-N1-C2	7.86	123.44	120.30
1	AA	1292	U	C2-N1-C1'	7.86	127.13	117.70
23	DA	1983	C	N1-C2-O2	-7.86	114.19	118.90
23	BA	1283	G	C5-C6-O6	7.85	133.31	128.60
1	CA	529	G	N1-C6-O6	7.85	124.61	119.90
23	BA	1047	G	N3-C4-N9	7.85	130.71	126.00
23	BA	2623	G	N3-C4-C5	-7.85	124.68	128.60
1	CA	1442(A)	G	C6-C5-N7	-7.84	125.69	130.40
23	BA	1128	A	C6-N1-C2	-7.84	113.90	118.60
1	AA	1243	C	C2-N3-C4	7.84	123.82	119.90
23	BA	1698	A	C5-N7-C8	-7.84	99.98	103.90
23	DA	1006	C	N3-C4-N4	-7.83	112.52	118.00
23	DA	1284	A	N1-C6-N6	7.83	123.30	118.60
23	DA	201	C	C2-N3-C4	-7.83	115.99	119.90
23	BA	124	G	N9-C4-C5	-7.83	102.27	105.40
23	DA	2335	A	C5-C6-N6	-7.83	117.44	123.70
23	BA	982	C	N1-C2-O2	7.83	123.60	118.90
1	AA	1263	C	N3-C2-O2	-7.82	116.42	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	928	G	C5-C6-O6	-7.82	123.91	128.60
1	AA	1502	A	C4-C5-N7	7.82	114.61	110.70
23	BA	2496	C	N1-C2-O2	-7.82	114.21	118.90
23	BA	972	G	C5-C6-O6	7.81	133.29	128.60
1	AA	1335	C	C2-N1-C1'	7.81	127.39	118.80
23	BA	572	A	N9-C4-C5	7.81	108.92	105.80
23	DA	1124	C	C6-N1-C2	7.81	123.42	120.30
1	AA	1442(A)	G	C6-C5-N7	-7.81	125.72	130.40
23	BA	737	C	C6-N1-C2	7.81	123.42	120.30
23	BA	2488	A	C8-N9-C4	7.80	108.92	105.80
23	DA	1001	A	C8-N9-C4	7.80	108.92	105.80
23	DA	2449	U	N1-C2-O2	-7.80	117.34	122.80
1	CA	925	G	C8-N9-C4	7.79	109.52	106.40
1	AA	1012	U	N1-C2-O2	-7.79	117.34	122.80
23	BA	202	U	N3-C4-C5	7.79	119.27	114.60
23	DA	528	A	N9-C4-C5	7.79	108.92	105.80
23	DA	1348	G	N1-C6-O6	7.79	124.57	119.90
23	DA	1333	C	N3-C4-C5	7.79	125.01	121.90
1	AA	1126	U	N3-C2-O2	-7.78	116.75	122.20
23	DA	205	G	C8-N9-C4	7.78	109.51	106.40
23	DA	792	G	N9-C4-C5	-7.78	102.29	105.40
1	CA	1050	G	N3-C4-N9	7.78	130.67	126.00
1	AA	1237	C	C5-C6-N1	7.78	124.89	121.00
23	BA	2505	G	C5-C6-N1	-7.78	107.61	111.50
23	DA	627	A	C8-N9-C4	7.78	108.91	105.80
23	DA	1204	A	N7-C8-N9	7.78	117.69	113.80
23	DA	2340	G	C8-N9-C4	7.78	109.51	106.40
23	BA	2306	C	N1-C2-O2	7.77	123.56	118.90
23	DA	121	G	C8-N9-C4	7.77	109.51	106.40
24	DB	61	G	N3-C2-N2	-7.77	114.46	119.90
1	AA	980	C	N1-C2-O2	7.77	123.56	118.90
23	DA	728	G	N7-C8-N9	-7.76	109.22	113.10
1	AA	1153	C	C6-N1-C1'	-7.76	111.49	120.80
23	BA	729	G	C5-N7-C8	-7.75	100.42	104.30
23	DA	2607	G	N1-C2-N2	-7.75	109.22	116.20
23	BA	2538	C	C5-C6-N1	-7.75	117.12	121.00
23	DA	2371	G	C4-C5-N7	7.75	113.90	110.80
23	DA	2502	G	C4-C5-N7	7.75	113.90	110.80
23	BA	2863	C	C6-N1-C2	7.75	123.40	120.30
23	DA	2515	C	N3-C4-C5	7.75	125.00	121.90
23	BA	2791	C	N1-C2-O2	7.74	123.55	118.90
23	BA	1657	C	N1-C2-O2	-7.74	114.26	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1054	C	N3-C2-O2	-7.74	116.48	121.90
23	DA	1979	C	C6-N1-C2	-7.73	117.21	120.30
1	CA	1033	G	C6-C5-N7	-7.73	125.76	130.40
23	DA	1659	U	C5-C6-N1	-7.73	118.83	122.70
1	AA	989	C	C2-N3-C4	7.73	123.77	119.90
23	BA	689	A	N7-C8-N9	-7.73	109.94	113.80
23	DA	1792	G	C8-N9-C4	7.73	109.49	106.40
23	DA	1807	G	N1-C6-O6	7.73	124.54	119.90
23	DA	1022	G	N3-C4-N9	-7.73	121.36	126.00
23	BA	287	C	C6-N1-C2	7.72	123.39	120.30
23	DA	2594	C	N1-C2-O2	-7.72	114.27	118.90
23	BA	676	A	N1-C6-N6	7.72	123.23	118.60
23	DA	934	G	C8-N9-C4	7.72	109.49	106.40
23	BA	455	C	N3-C2-O2	-7.72	116.50	121.90
50	D6	40	CYS	CA-CB-SG	-7.72	100.11	114.00
23	BA	2200	C	N3-C2-O2	-7.72	116.50	121.90
23	DA	1762	A	N7-C8-N9	7.72	117.66	113.80
23	BA	1343	G	N7-C8-N9	7.71	116.96	113.10
23	BA	2296	U	O4'-C1'-N1	7.71	114.37	108.20
23	BA	729	G	C4-C5-N7	7.71	113.89	110.80
1	CA	44	G	N1-C6-O6	7.71	124.53	119.90
23	DA	1776	G	C8-N9-C4	7.71	109.48	106.40
23	DA	759	G	N1-C6-O6	7.71	124.53	119.90
23	DA	47	C	C6-N1-C2	7.71	123.38	120.30
23	BA	102	G	C8-N9-C4	-7.70	103.32	106.40
1	CA	896	C	C6-N1-C2	7.70	123.38	120.30
23	BA	2182	G	C6-N1-C2	7.70	129.72	125.10
1	AA	1261	A	N1-C6-N6	7.70	123.22	118.60
1	CA	1216	G	N3-C4-N9	-7.70	121.38	126.00
1	CA	27	G	C5-C6-O6	-7.69	123.98	128.60
23	DA	572	A	N1-C2-N3	7.69	133.15	129.30
1	CA	1353	G	C2-N3-C4	7.69	115.74	111.90
23	BA	655	A	C8-N9-C4	-7.69	102.72	105.80
23	DA	2856	C	C5-C6-N1	7.68	124.84	121.00
23	BA	2364	C	C6-N1-C2	7.68	123.37	120.30
23	BA	2579	C	C5-C6-N1	-7.68	117.16	121.00
1	CA	572	A	C8-N9-C4	7.68	108.87	105.80
24	DB	83	G	C5-C6-O6	-7.68	123.99	128.60
23	BA	528	A	C5-N7-C8	-7.68	100.06	103.90
1	AA	998	G	C6-C5-N7	7.68	135.01	130.40
24	BB	117	G	C8-N9-C4	7.67	109.47	106.40
23	BA	745	G	C5-C6-N1	7.67	115.33	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1602	U	N3-C4-C5	-7.67	110.00	114.60
23	DA	2324	C	N3-C4-C5	7.67	124.97	121.90
23	BA	2144	U	C5-C6-N1	7.67	126.53	122.70
1	CA	1357	A	C8-N9-C4	-7.67	102.73	105.80
1	CA	691	G	N9-C4-C5	-7.66	102.34	105.40
1	CA	1223	C	C6-N1-C2	-7.65	117.24	120.30
1	CA	1165	C	C2-N3-C4	7.65	123.72	119.90
1	AA	1174	G	C4-N9-C1'	-7.64	116.56	126.50
23	BA	2694	G	N3-C4-C5	-7.64	124.78	128.60
23	DA	197	A	C6-N1-C2	-7.64	114.02	118.60
3	CC	52	LEU	CA-CB-CG	7.64	132.87	115.30
23	BA	1490	A	N9-C4-C5	-7.64	102.75	105.80
23	BA	655	A	N7-C8-N9	7.63	117.62	113.80
23	DA	1603	A	C8-N9-C4	-7.63	102.75	105.80
23	BA	2041	U	N1-C2-N3	7.63	119.48	114.90
23	BA	2286	A	C5-C6-N1	-7.63	113.89	117.70
1	AA	1006	C	C2-N3-C4	7.62	123.71	119.90
23	BA	1254	A	C8-N9-C4	-7.62	102.75	105.80
24	BB	76	G	N3-C4-C5	7.62	132.41	128.60
4	AD	12	CYS	CA-CB-SG	7.62	127.72	114.00
23	BA	465	G	N3-C4-C5	-7.62	124.79	128.60
24	BB	7	G	N1-C6-O6	7.62	124.47	119.90
1	CA	359	U	C2-N3-C4	-7.62	122.43	127.00
1	CA	1502	A	C4-C5-N7	7.62	114.51	110.70
23	DA	13	A	N1-C6-N6	-7.62	114.03	118.60
23	BA	945	A	N3-C4-N9	-7.61	121.31	127.40
1	AA	1274	G	N7-C8-N9	7.61	116.91	113.10
23	BA	756	C	N3-C4-C5	-7.61	118.86	121.90
23	DA	1302	A	N1-C6-N6	-7.61	114.03	118.60
23	DA	560	C	N3-C4-C5	7.61	124.94	121.90
23	DA	202	U	C6-N1-C2	7.61	125.56	121.00
23	DA	772	C	N1-C2-O2	-7.61	114.34	118.90
23	DA	2704	C	C6-N1-C2	7.61	123.34	120.30
1	AA	1120	G	C5-C6-O6	-7.60	124.04	128.60
23	DA	1314	C	C2-N1-C1'	7.60	127.16	118.80
1	AA	1059	C	N1-C2-O2	7.60	123.46	118.90
23	BA	2619	C	C6-N1-C2	7.60	123.34	120.30
23	DA	452	G	C8-N9-C4	-7.60	103.36	106.40
1	AA	1000	U	C5-C6-N1	7.59	126.50	122.70
23	BA	1314	C	C6-N1-C1'	-7.59	111.69	120.80
23	DA	729	G	N1-C6-O6	7.59	124.45	119.90
23	BA	655	A	C5-N7-C8	-7.59	100.11	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2200	C	N1-C2-O2	7.59	123.45	118.90
23	BA	530	G	N3-C4-C5	7.58	132.39	128.60
1	CA	1206	G	C5-C6-O6	-7.58	124.05	128.60
1	AA	1307	U	C5-C6-N1	7.58	126.49	122.70
23	DA	940	G	N1-C6-O6	7.58	124.45	119.90
23	BA	530	G	C4-C5-N7	7.58	113.83	110.80
23	BA	1779	U	N1-C2-N3	-7.58	110.35	114.90
23	BA	2641	G	C6-C5-N7	-7.58	125.85	130.40
23	BA	789	A	C8-N9-C4	7.57	108.83	105.80
1	AA	1350	A	C6-N1-C2	-7.57	114.06	118.60
23	DA	818	G	C8-N9-C4	7.57	109.43	106.40
23	DA	1821	A	C6-N1-C2	-7.57	114.06	118.60
1	AA	756	C	C6-N1-C2	7.57	123.33	120.30
23	BA	2028	U	N3-C4-C5	7.56	119.14	114.60
1	CA	1081	G	N1-C6-O6	7.56	124.44	119.90
23	DA	1325	G	N1-C6-O6	7.56	124.44	119.90
1	CA	1032	G	N3-C4-N9	-7.55	121.47	126.00
1	AA	1133	G	C4-C5-N7	-7.55	107.78	110.80
23	BA	2791	C	C5-C6-N1	7.55	124.77	121.00
23	BA	2768	C	C5-C6-N1	-7.54	117.23	121.00
23	BA	1464	C	C6-N1-C2	-7.54	117.28	120.30
23	DA	2501	C	C5-C4-N4	-7.54	114.92	120.20
23	BA	556	G	C8-N9-C4	7.54	109.42	106.40
23	BA	693	C	C6-N1-C2	-7.54	117.28	120.30
23	DA	2789	C	C6-N1-C2	7.54	123.31	120.30
23	BA	735	A	N7-C8-N9	-7.54	110.03	113.80
1	AA	352	C	N1-C2-O2	7.53	123.42	118.90
1	AA	1042	G	N9-C4-C5	7.53	108.41	105.40
1	CA	357	G	N9-C4-C5	7.53	108.41	105.40
23	BA	2597	G	C8-N9-C4	-7.53	103.39	106.40
1	CA	1108	G	N1-C6-O6	-7.53	115.38	119.90
23	DA	684	G	N3-C2-N2	-7.53	114.63	119.90
23	BA	202	U	C5-C6-N1	-7.53	118.94	122.70
23	BA	468	G	C8-N9-C4	7.53	109.41	106.40
36	BS	96	GLY	N-CA-C	-7.53	94.28	113.10
1	CA	21	G	C5-C6-O6	7.52	133.12	128.60
1	AA	418	C	N3-C2-O2	-7.52	116.63	121.90
23	BA	793	A	N1-C6-N6	7.52	123.11	118.60
23	BA	2567	G	C8-N9-C4	7.52	109.41	106.40
1	AA	1420	C	C6-N1-C2	-7.52	117.29	120.30
23	BA	297	C	N3-C4-C5	-7.52	118.89	121.90
1	CA	1446	U	N1-C2-N3	-7.52	110.39	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DB	89	G	C5-C6-O6	-7.52	124.09	128.60
23	BA	2764	A	N1-C6-N6	-7.51	114.09	118.60
23	DA	330	A	N3-C4-C5	7.51	132.06	126.80
23	BA	936	C	C6-N1-C2	7.51	123.31	120.30
23	DA	2791	C	N3-C2-O2	-7.51	116.64	121.90
1	AA	77	G	N3-C2-N2	7.51	125.16	119.90
23	BA	265	A	C8-N9-C4	-7.51	102.80	105.80
23	BA	188	G	N9-C4-C5	-7.51	102.40	105.40
23	BA	452	G	N1-C6-O6	-7.51	115.40	119.90
23	BA	1108	U	N1-C2-O2	7.50	128.05	122.80
23	DA	2241	A	C2-N3-C4	-7.50	106.85	110.60
23	DA	2306	C	C2-N1-C1'	7.50	127.05	118.80
23	BA	1616	A	C5-C6-N6	-7.50	117.70	123.70
23	DA	1950	G	C4-C5-N7	-7.50	107.80	110.80
23	BA	533	G	N3-C2-N2	-7.50	114.65	119.90
23	BA	664	C	C6-N1-C2	7.50	123.30	120.30
23	BA	577	G	C2-N3-C4	-7.50	108.15	111.90
23	BA	1047	G	N3-C2-N2	7.50	125.15	119.90
23	BA	62	C	C6-N1-C2	7.49	123.30	120.30
23	BA	1616	A	N1-C6-N6	7.49	123.10	118.60
23	DA	1800	C	C5-C6-N1	-7.49	117.25	121.00
1	CA	691	G	C8-N9-C4	7.49	109.40	106.40
23	BA	893	C	N1-C2-O2	7.49	123.39	118.90
1	CA	1030	C	N1-C2-O2	7.49	123.39	118.90
23	DA	51	G	N1-C6-O6	-7.49	115.41	119.90
1	CA	1343	G	C6-C5-N7	-7.49	125.91	130.40
1	CA	1003	G	N9-C4-C5	7.48	108.39	105.40
1	CA	1165	C	C5-C4-N4	7.48	125.44	120.20
23	DA	2206	G	C4-N9-C1'	-7.48	116.78	126.50
1	AA	1241	G	C8-N9-C4	-7.48	103.41	106.40
23	DA	945	A	C4-C5-N7	7.47	114.44	110.70
23	DA	2182	G	N3-C4-N9	-7.47	121.52	126.00
1	AA	1158	C	C6-N1-C2	-7.47	117.31	120.30
23	BA	1162	G	C8-N9-C4	-7.47	103.41	106.40
24	BB	37	C	C6-N1-C2	-7.47	117.31	120.30
23	DA	1415	U	C5-C6-N1	-7.47	118.96	122.70
1	CA	1184	G	C5-C6-O6	7.47	133.08	128.60
1	AA	1442	G	C8-N9-C4	7.47	109.39	106.40
23	BA	675	A	C4-C5-N7	7.47	114.43	110.70
23	DA	71	A	N1-C6-N6	7.46	123.08	118.60
23	DA	1021	A	C5-C6-N1	-7.46	113.97	117.70
23	BA	2449	U	N3-C4-O4	7.46	124.62	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	141	A	C8-N9-C4	-7.45	102.82	105.80
1	CA	1263	C	C5-C4-N4	-7.45	114.98	120.20
23	BA	386	G	C4-C5-N7	7.45	113.78	110.80
23	BA	562	U	N1-C2-N3	7.45	119.37	114.90
1	AA	372	C	C6-N1-C2	7.45	123.28	120.30
23	BA	2711	A	C8-N9-C4	7.45	108.78	105.80
23	DA	2346	A	C6-N1-C2	-7.45	114.13	118.60
1	AA	1310	G	N3-C4-C5	7.45	132.32	128.60
1	CA	1336	C	C6-N1-C2	-7.45	117.32	120.30
23	DA	751	A	C8-N9-C4	7.44	108.78	105.80
23	DA	1005	C	C6-N1-C2	7.44	123.28	120.30
1	AA	1502	A	C2-N3-C4	-7.44	106.88	110.60
1	AA	948	C	C5-C6-N1	7.44	124.72	121.00
23	BA	652(T)	C	C2-N3-C4	7.44	123.62	119.90
23	BA	1582	C	N3-C2-O2	-7.43	116.70	121.90
1	CA	1108	G	C5-C6-O6	7.43	133.06	128.60
23	BA	574	C	C5-C6-N1	7.43	124.72	121.00
23	BA	2893	G	C2-N3-C4	7.43	115.61	111.90
23	BA	1901	A	N1-C6-N6	-7.43	114.14	118.60
23	BA	810	U	N1-C2-O2	-7.42	117.60	122.80
23	BA	933	A	C8-N9-C4	-7.42	102.83	105.80
23	DA	2307	G	N7-C8-N9	7.42	116.81	113.10
1	AA	971	G	C8-N9-C4	-7.42	103.43	106.40
1	AA	1012	U	N3-C2-O2	7.42	127.39	122.20
23	BA	2464	C	C6-N1-C1'	-7.42	111.90	120.80
1	AA	1120	G	N3-C4-N9	7.42	130.45	126.00
23	DA	727	A	N1-C6-N6	7.42	123.05	118.60
1	AA	1124	G	N3-C4-N9	7.41	130.45	126.00
23	DA	1026	U	N1-C2-O2	7.41	127.99	122.80
23	DA	1779	U	C6-N1-C2	7.41	125.44	121.00
1	CA	998	G	C4-C5-N7	-7.41	107.84	110.80
23	BA	209	C	C6-N1-C2	7.41	123.26	120.30
1	CA	577	G	C8-N9-C4	7.41	109.36	106.40
23	DA	2013	A	C8-N9-C4	7.41	108.76	105.80
23	DA	2322	A	C4-C5-N7	-7.41	107.00	110.70
1	AA	1207	G	C5-C6-O6	-7.40	124.16	128.60
23	BA	1994	C	N3-C4-N4	-7.40	112.82	118.00
23	BA	2286	A	C4-C5-N7	7.40	114.40	110.70
23	DA	1698	A	C8-N9-C4	-7.40	102.84	105.80
23	DA	528	A	C6-N1-C2	7.40	123.04	118.60
23	DA	2700	C	C6-N1-C2	7.40	123.26	120.30
1	AA	53	A	N1-C2-N3	-7.40	125.60	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	769	G	C8-N9-C4	7.40	109.36	106.40
4	AD	26	CYS	CA-CB-SG	7.40	127.31	114.00
23	DA	932	G	N3-C4-N9	-7.39	121.56	126.00
23	BA	463	G	N9-C4-C5	7.39	108.36	105.40
1	CA	972	C	C5-C6-N1	7.39	124.70	121.00
23	BA	1653	G	N3-C4-C5	-7.39	124.91	128.60
23	DA	516	C	C6-N1-C2	-7.39	117.34	120.30
23	DA	1325	G	C4-C5-N7	7.39	113.76	110.80
23	BA	760	G	N1-C6-O6	7.39	124.33	119.90
23	DA	1251	C	N3-C4-C5	-7.38	118.95	121.90
23	DA	2307	G	C8-N9-C4	-7.38	103.45	106.40
23	BA	1258	C	N3-C4-C5	7.38	124.85	121.90
23	BA	2335	A	C8-N9-C4	7.38	108.75	105.80
23	DA	847	U	N3-C2-O2	-7.38	117.04	122.20
1	CA	1063	C	C5-C6-N1	7.37	124.69	121.00
23	BA	2018	G	C8-N9-C4	-7.37	103.45	106.40
23	DA	1663	C	C2-N3-C4	-7.37	116.21	119.90
1	CA	946	A	C6-N1-C2	-7.37	114.18	118.60
23	DA	1776	G	N9-C4-C5	-7.37	102.45	105.40
23	BA	2785	C	C6-N1-C2	-7.36	117.36	120.30
1	CA	47	C	N3-C2-O2	7.36	127.05	121.90
23	BA	1301	A	C8-N9-C4	-7.36	102.86	105.80
23	BA	1558	A	C8-N9-C4	7.36	108.74	105.80
1	CA	1163	C	C5-C6-N1	7.35	124.68	121.00
23	DA	2077	A	C5-C6-N1	7.35	121.38	117.70
23	DA	665	C	N3-C4-C5	7.35	124.84	121.90
1	CA	1120	G	N3-C4-N9	-7.35	121.59	126.00
23	BA	2312	U	N3-C2-O2	-7.35	117.06	122.20
23	DA	787	U	C5-C4-O4	7.35	130.31	125.90
23	DA	936	C	C6-N1-C2	7.35	123.24	120.30
23	BA	1990	C	N1-C2-O2	-7.35	114.49	118.90
1	AA	970	C	N1-C2-O2	7.34	123.31	118.90
23	BA	1937	A	N1-C2-N3	7.34	132.97	129.30
23	DA	569	U	C5-C4-O4	-7.34	121.49	125.90
23	DA	2247	A	C2-N3-C4	-7.34	106.93	110.60
23	BA	362	U	C5-C4-O4	-7.34	121.50	125.90
23	BA	2041	U	C4-C5-C6	7.34	124.10	119.70
23	DA	2593	U	C5-C4-O4	7.33	130.30	125.90
1	CA	1446	U	C5-C4-O4	-7.33	121.50	125.90
23	DA	263	C	N1-C2-O2	7.33	123.30	118.90
23	DA	764	A	C6-N1-C2	7.33	123.00	118.60
23	DA	1974	C	C6-N1-C2	7.33	123.23	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2375	G	N7-C8-N9	-7.33	109.44	113.10
1	AA	991	U	C5-C6-N1	7.33	126.36	122.70
23	BA	2689	U	C5-C6-N1	-7.33	119.04	122.70
23	BA	1815	A	N1-C6-N6	-7.33	114.20	118.60
1	CA	1124	G	C5-C6-N1	-7.33	107.84	111.50
1	CA	1231	G	N3-C4-C5	-7.33	124.94	128.60
23	BA	265	A	C2-N3-C4	-7.32	106.94	110.60
1	AA	1258	G	C5-C6-O6	7.32	132.99	128.60
23	BA	1123	C	C6-N1-C2	7.32	123.23	120.30
23	DA	570	G	C8-N9-C4	7.32	109.33	106.40
23	BA	736	C	C5-C4-N4	-7.32	115.08	120.20
1	CA	460	G	N7-C8-N9	7.32	116.76	113.10
1	CA	1352	C	N3-C2-O2	-7.32	116.78	121.90
23	BA	211	A	C8-N9-C4	7.31	108.72	105.80
23	BA	673	C	C6-N1-C2	7.31	123.22	120.30
23	DA	1655	A	C8-N9-C4	7.31	108.72	105.80
1	CA	1442	G	C5-N7-C8	7.31	107.95	104.30
23	BA	124	G	C2-N3-C4	-7.31	108.25	111.90
23	BA	674	G	N1-C6-O6	7.30	124.28	119.90
23	BA	271(M)	G	N3-C4-C5	-7.30	124.95	128.60
23	DA	1405	U	C5-C6-N1	-7.30	119.05	122.70
1	AA	346	G	N1-C2-N2	-7.30	109.63	116.20
23	BA	777	A	C2-N3-C4	7.30	114.25	110.60
23	DA	2338	G	N1-C6-O6	7.29	124.28	119.90
23	BA	1819	A	N1-C6-N6	-7.29	114.23	118.60
23	BA	117	G	N1-C2-N2	-7.29	109.64	116.20
23	BA	2321	G	N9-C4-C5	7.28	108.31	105.40
23	BA	975	C	N3-C4-C5	-7.27	118.99	121.90
23	BA	1471	A	C8-N9-C4	-7.27	102.89	105.80
23	BA	1963	U	C2-N1-C1'	7.27	126.43	117.70
23	DA	2015	A	N1-C6-N6	-7.27	114.24	118.60
23	DA	679	C	C2-N3-C4	-7.27	116.27	119.90
23	BA	47	C	N3-C4-C5	7.26	124.81	121.90
23	BA	933	A	N7-C8-N9	7.26	117.43	113.80
23	DA	2070	G	C5-C6-N1	7.26	115.13	111.50
23	DA	2293	C	C6-N1-C2	7.26	123.20	120.30
23	BA	2840	C	N3-C4-C5	7.26	124.80	121.90
23	DA	2501	C	N3-C4-C5	7.26	124.80	121.90
23	DA	2571	C	N1-C2-O2	-7.26	114.54	118.90
23	BA	135	G	C8-N9-C4	7.26	109.30	106.40
23	BA	1204	A	C5-N7-C8	-7.26	100.27	103.90
23	BA	2296	U	C4-C5-C6	7.26	124.05	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	79	G	C5-C6-O6	-7.25	124.25	128.60
1	AA	435	C	N1-C2-O2	7.25	123.25	118.90
23	DA	71	A	C8-N9-C4	-7.25	102.90	105.80
1	AA	930	C	C5-C6-N1	-7.25	117.38	121.00
1	AA	955	U	C5-C6-N1	7.25	126.33	122.70
1	AA	1258	G	C6-N1-C2	7.25	129.45	125.10
1	CA	1124	G	N1-C2-N2	-7.25	109.67	116.20
23	DA	308	G	C8-N9-C4	-7.25	103.50	106.40
23	BA	102	G	C4-N9-C1'	7.25	135.92	126.50
23	BA	745	G	C6-N1-C2	-7.25	120.75	125.10
23	DA	141	A	C4-C5-N7	7.24	114.32	110.70
23	BA	1367	A	C8-N9-C4	7.24	108.70	105.80
1	AA	1059	C	C6-N1-C2	-7.24	117.41	120.30
23	BA	1359	A	N9-C4-C5	7.24	108.69	105.80
1	CA	299	G	N3-C4-C5	7.24	132.22	128.60
24	BB	104	U	C2-N3-C4	-7.24	122.66	127.00
23	DA	1815	A	N1-C6-N6	-7.24	114.26	118.60
23	BA	765	G	N1-C6-O6	7.24	124.24	119.90
23	BA	1334	G	C8-N9-C4	-7.24	103.51	106.40
1	CA	1126	U	N1-C2-O2	7.24	127.86	122.80
1	CA	1502	A	N1-C6-N6	7.24	122.94	118.60
23	DA	271(J)	C	C6-N1-C2	7.24	123.19	120.30
1	AA	1033	G	N3-C4-N9	7.23	130.34	126.00
23	BA	2206	G	C8-N9-C1'	7.23	136.40	127.00
23	DA	1391	U	N1-C2-O2	7.23	127.86	122.80
23	DA	2144	U	C5-C6-N1	7.23	126.32	122.70
23	DA	265	A	N7-C8-N9	7.23	117.42	113.80
23	BA	570	G	C4-C5-N7	7.23	113.69	110.80
23	DA	1654	A	N1-C6-N6	-7.23	114.26	118.60
23	DA	657	U	C5-C6-N1	-7.23	119.09	122.70
23	DA	1779	U	N3-C4-C5	7.23	118.94	114.60
23	DA	2277	G	C4-C5-N7	-7.23	107.91	110.80
23	BA	1555	G	N1-C6-O6	7.22	124.23	119.90
1	CA	1502	A	C2-N3-C4	-7.22	106.99	110.60
23	DA	760	G	C4-C5-N7	7.22	113.69	110.80
23	BA	2361	A	N1-C6-N6	7.22	122.93	118.60
23	DA	265	A	C8-N9-C4	-7.22	102.91	105.80
1	AA	28	G	N1-C6-O6	7.21	124.23	119.90
1	AA	345	C	C6-N1-C2	7.21	123.19	120.30
23	BA	2015	A	N9-C4-C5	7.21	108.69	105.80
1	CA	936	C	C5-C4-N4	-7.21	115.15	120.20
1	AA	1174	G	N7-C8-N9	-7.21	109.50	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	446	G	N1-C6-O6	7.21	124.22	119.90
23	DA	2821	A	N9-C4-C5	-7.21	102.92	105.80
23	BA	1189	A	N1-C6-N6	7.20	122.92	118.60
23	DA	1698	A	C2-N3-C4	-7.20	107.00	110.60
23	BA	207	A	N3-C4-C5	7.20	131.84	126.80
23	BA	733	G	C5-N7-C8	7.20	107.90	104.30
23	BA	747	U	C5-C4-O4	-7.20	121.58	125.90
23	DA	2878	U	N1-C2-O2	7.19	127.83	122.80
23	BA	2017	U	N3-C2-O2	-7.19	117.17	122.20
23	DA	1142(A)	A	N3-C4-N9	-7.19	121.65	127.40
23	DA	912	C	C6-N1-C2	-7.19	117.43	120.30
23	DA	2598	A	N1-C6-N6	7.19	122.91	118.60
23	DA	1790	C	N1-C2-O2	-7.18	114.59	118.90
23	BA	1992	G	N1-C6-O6	-7.18	115.59	119.90
23	DA	1049	C	C2-N1-C1'	7.18	126.70	118.80
23	DA	2318	G	C8-N9-C4	-7.18	103.53	106.40
23	BA	777	A	C4-C5-N7	-7.18	107.11	110.70
23	BA	2028	U	C6-N1-C2	7.18	125.31	121.00
1	CA	1124	G	C6-N1-C2	7.18	129.41	125.10
23	DA	583	G	N1-C6-O6	7.18	124.21	119.90
23	DA	1698	A	C6-C5-N7	-7.17	127.28	132.30
1	AA	1059	C	C5-C4-N4	7.17	125.22	120.20
23	DA	735	A	N7-C8-N9	-7.17	110.22	113.80
23	DA	2803	C	C5-C6-N1	7.17	124.58	121.00
23	BA	2251	G	N3-C4-C5	-7.17	125.02	128.60
23	DA	2162	G	C2-N3-C4	7.16	115.48	111.90
23	BA	2312	U	N1-C2-O2	7.16	127.81	122.80
23	BA	2316	C	C6-N1-C2	-7.16	117.44	120.30
1	CA	21	G	N1-C6-O6	-7.16	115.61	119.90
23	BA	2041	U	C5-C6-N1	-7.15	119.12	122.70
44	B0	20	ARG	NE-CZ-NH1	-7.15	116.72	120.30
1	AA	1100	C	C6-N1-C2	7.15	123.16	120.30
23	BA	330	A	C5-N7-C8	-7.15	100.33	103.90
23	BA	570	G	C5-C6-O6	-7.15	124.31	128.60
23	BA	2182	G	N3-C4-N9	-7.15	121.71	126.00
1	CA	1149	C	C2-N3-C4	7.15	123.47	119.90
23	BA	652(E)	G	C6-N1-C2	7.14	129.39	125.10
1	AA	1297	C	C5-C6-N1	7.14	124.57	121.00
23	BA	575	A	N1-C2-N3	7.14	132.87	129.30
23	DA	280	C	C6-N1-C2	-7.14	117.44	120.30
23	BA	500	G	C4-C5-N7	-7.14	107.94	110.80
23	BA	2335	A	C6-N1-C2	-7.14	114.32	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	91	C	C5-C6-N1	7.14	124.57	121.00
1	CA	1029	C	C5-C4-N4	7.14	125.20	120.20
23	DA	679	C	N1-C2-O2	-7.14	114.62	118.90
1	CA	1284	C	C6-N1-C2	-7.14	117.45	120.30
23	BA	675	A	N9-C4-C5	-7.13	102.95	105.80
23	BA	1189	A	C5-N7-C8	-7.13	100.33	103.90
1	CA	1502	A	N1-C2-N3	7.13	132.87	129.30
23	BA	2020	A	C8-N9-C4	7.13	108.65	105.80
23	DA	751	A	N7-C8-N9	-7.12	110.24	113.80
23	BA	1610	A	N1-C6-N6	7.12	122.87	118.60
23	DA	123	G	N7-C8-N9	-7.12	109.54	113.10
23	BA	676	A	C6-N1-C2	7.12	122.87	118.60
23	BA	386	G	N7-C8-N9	7.12	116.66	113.10
23	BA	1107	G	N3-C4-C5	-7.12	125.04	128.60
23	DA	1807	G	C5-C6-O6	-7.12	124.33	128.60
1	AA	1029	C	C2-N1-C1'	-7.11	110.97	118.80
1	AA	1198	G	N1-C6-O6	-7.11	115.63	119.90
23	BA	910	A	N9-C4-C5	-7.11	102.95	105.80
1	CA	27	G	N1-C6-O6	7.11	124.17	119.90
1	CA	839	U	C2-N1-C1'	7.11	126.24	117.70
1	CA	991	U	N1-C2-O2	7.11	127.78	122.80
1	CA	1024	G	C4-C5-N7	7.11	113.64	110.80
1	CA	909	A	N1-C6-N6	7.11	122.87	118.60
23	DA	1558	A	C2-N3-C4	-7.11	107.04	110.60
23	DA	2315	G	C8-N9-C4	7.11	109.24	106.40
23	BA	1992	G	N3-C4-C5	-7.11	125.05	128.60
1	AA	1442(B)	A	C8-N9-C4	-7.11	102.96	105.80
23	DA	530	G	C5-C6-N1	7.11	115.05	111.50
23	BA	1790	C	N1-C2-O2	-7.11	114.64	118.90
23	BA	2761	G	C8-N9-C4	-7.10	103.56	106.40
1	CA	529	G	C6-C5-N7	-7.10	126.14	130.40
23	BA	691	C	N3-C4-C5	7.10	124.74	121.90
36	DS	96	GLY	N-CA-C	-7.10	95.35	113.10
23	BA	1604	C	N3-C2-O2	7.10	126.87	121.90
1	CA	936	C	C6-N1-C1'	-7.10	112.28	120.80
23	BA	1180	C	C6-N1-C2	7.10	123.14	120.30
1	AA	444	C	C6-N1-C2	7.10	123.14	120.30
23	BA	702	G	C2-N3-C4	-7.10	108.35	111.90
23	BA	1045	A	C2-N3-C4	7.09	114.15	110.60
23	BA	2755	C	C5-C6-N1	7.09	124.55	121.00
23	BA	536	A	C8-N9-C4	7.09	108.64	105.80
1	CA	940	C	C5-C6-N1	7.09	124.54	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	681	C	C6-N1-C2	7.09	123.13	120.30
23	BA	1951	U	N3-C4-C5	-7.08	110.35	114.60
23	DA	94	C	C2-N1-C1'	7.08	126.59	118.80
23	BA	595	C	N3-C4-N4	7.08	122.96	118.00
23	DA	2312	U	C6-N1-C2	-7.08	116.75	121.00
23	BA	2251	G	N9-C4-C5	7.08	108.23	105.40
23	DA	676	A	N3-C4-N9	-7.08	121.74	127.40
23	DA	2791	C	C2-N1-C1'	7.08	126.58	118.80
23	BA	1681	G	C4-C5-N7	7.07	113.63	110.80
23	DA	535	C	N1-C2-O2	-7.07	114.66	118.90
24	BB	89	G	C5-C6-O6	-7.07	124.36	128.60
23	DA	729	G	N3-C2-N2	-7.07	114.95	119.90
23	DA	2251	G	C8-N9-C4	-7.07	103.57	106.40
23	DA	2361	A	N1-C6-N6	7.07	122.84	118.60
23	BA	2319	G	N7-C8-N9	7.06	116.63	113.10
23	DA	330	A	C4-C5-N7	7.06	114.23	110.70
23	DA	1325	G	C5-C6-O6	-7.06	124.36	128.60
1	CA	460	G	C8-N9-C4	-7.06	103.58	106.40
1	CA	942	G	C5-C6-O6	7.06	132.84	128.60
23	BA	1698	A	N1-C2-N3	7.06	132.83	129.30
23	DA	2437	U	C5-C4-O4	7.06	130.13	125.90
23	BA	90	U	N3-C4-O4	7.06	124.34	119.40
24	DB	6	C	C6-N1-C2	7.05	123.12	120.30
23	DA	774	A	C8-N9-C4	-7.05	102.98	105.80
1	CA	163	C	N3-C4-C5	-7.05	119.08	121.90
23	BA	2503	A	N1-C2-N3	-7.05	125.78	129.30
23	DA	728	G	N9-C4-C5	-7.05	102.58	105.40
23	DA	791	C	C5-C6-N1	-7.04	117.48	121.00
23	BA	1745	C	N1-C2-O2	-7.04	114.67	118.90
1	CA	442	C	C6-N1-C2	-7.04	117.48	120.30
23	BA	1989	G	N1-C6-O6	7.04	124.12	119.90
23	DA	893	C	N1-C2-O2	7.04	123.12	118.90
23	BA	821	A	C8-N9-C4	-7.03	102.99	105.80
23	BA	1243	G	C4-C5-N7	7.03	113.61	110.80
23	BA	2609	U	N1-C2-O2	-7.03	117.88	122.80
1	AA	266	G	C8-N9-C4	7.03	109.21	106.40
23	BA	148	C	C2-N3-C4	-7.03	116.39	119.90
23	BA	1229	G	N1-C6-O6	7.03	124.12	119.90
1	CA	1230	C	C5-C6-N1	7.03	124.51	121.00
23	DA	1566	A	N1-C6-N6	7.03	122.82	118.60
23	BA	1776	G	C8-N9-C4	7.03	109.21	106.40
23	BA	884	C	C6-N1-C2	-7.02	117.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1940	U	N3-C4-O4	7.02	124.32	119.40
1	CA	1330	U	N1-C2-O2	7.02	127.72	122.80
23	BA	1835	G	C8-N9-C4	-7.02	103.59	106.40
23	BA	1249	U	N1-C2-O2	-7.02	117.89	122.80
1	CA	1045	C	C2-N3-C4	7.02	123.41	119.90
23	BA	141	A	C2-N3-C4	-7.02	107.09	110.60
23	BA	271(A)	A	C8-N9-C4	7.02	108.61	105.80
1	CA	936	C	N1-C2-O2	7.02	123.11	118.90
23	DA	1372	U	N3-C2-O2	-7.02	117.29	122.20
23	BA	1358	G	N1-C6-O6	-7.02	115.69	119.90
23	DA	587	C	N3-C4-C5	-7.02	119.09	121.90
23	BA	1784	A	C8-N9-C4	7.02	108.61	105.80
23	BA	2073	C	C5-C6-N1	-7.01	117.49	121.00
23	BA	673	C	N3-C4-C5	7.01	124.70	121.90
1	AA	1162	C	C6-N1-C2	7.01	123.10	120.30
23	BA	2351	G	C8-N9-C1'	-7.01	117.89	127.00
23	BA	2100	G	N3-C4-C5	-7.01	125.10	128.60
23	BA	2307	G	C8-N9-C4	-7.01	103.60	106.40
1	CA	1321	C	N3-C4-C5	-7.01	119.10	121.90
23	DA	1762	A	C2-N3-C4	7.00	114.10	110.60
23	DA	2324	C	C6-N1-C2	7.00	123.10	120.30
1	AA	1165	C	C6-N1-C2	-7.00	117.50	120.30
1	CA	1177	G	N7-C8-N9	7.00	116.60	113.10
23	DA	41	C	C5-C6-N1	-7.00	117.50	121.00
23	DA	154(A)	C	N3-C4-N4	-7.00	113.10	118.00
23	DA	2182	G	C8-N9-C1'	7.00	136.10	127.00
23	BA	729	G	C8-N9-C4	-7.00	103.60	106.40
23	BA	1343	G	C5-N7-C8	-7.00	100.80	104.30
1	CA	52	G	N1-C6-O6	-7.00	115.70	119.90
23	DA	1653	G	N3-C4-C5	-7.00	125.10	128.60
23	BA	102	G	N7-C8-N9	7.00	116.60	113.10
23	BA	729	G	N7-C8-N9	7.00	116.60	113.10
23	DA	2353	G	C8-N9-C4	6.99	109.20	106.40
1	AA	1074	G	C5-C6-O6	-6.99	124.41	128.60
23	BA	362	U	C2-N3-C4	-6.99	122.81	127.00
23	BA	1558	A	C2-N3-C4	-6.99	107.11	110.60
1	CA	117	G	C6-C5-N7	-6.99	126.21	130.40
1	CA	997	U	C2-N3-C4	6.99	131.19	127.00
23	DA	1612	C	C6-N1-C2	6.99	123.10	120.30
1	AA	21	G	N1-C6-O6	-6.99	115.71	119.90
23	BA	1250	G	N1-C6-O6	6.99	124.09	119.90
23	BA	804	A	N7-C8-N9	-6.99	110.31	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	391	G	C6-C5-N7	-6.99	126.21	130.40
1	AA	1442	G	C8-N9-C1'	-6.98	117.92	127.00
23	DA	1142(A)	A	C5-N7-C8	-6.98	100.41	103.90
1	AA	77	G	N9-C4-C5	-6.98	102.61	105.40
23	BA	425	G	N3-C4-C5	-6.98	125.11	128.60
23	BA	1776	G	N9-C4-C5	-6.98	102.61	105.40
1	CA	1350	A	C8-N9-C4	-6.98	103.01	105.80
23	DA	2250	G	C5-C6-O6	6.98	132.79	128.60
23	BA	1698	A	N7-C8-N9	6.98	117.29	113.80
23	BA	1628	G	C8-N9-C4	-6.98	103.61	106.40
23	BA	1625	C	N3-C4-C5	6.98	124.69	121.90
23	BA	1315	C	C6-N1-C2	-6.98	117.51	120.30
23	BA	1643	G	N1-C6-O6	-6.97	115.72	119.90
23	DA	2360	A	C8-N9-C4	6.97	108.59	105.80
23	BA	767	U	N3-C2-O2	-6.97	117.32	122.20
23	DA	2087	G	N9-C4-C5	-6.97	102.61	105.40
1	CA	1502	A	N7-C8-N9	6.97	117.28	113.80
23	BA	2191	G	C5-C6-O6	-6.96	124.42	128.60
23	BA	2579	C	C4-C5-C6	6.96	120.88	117.40
23	DA	2525	G	N9-C4-C5	-6.96	102.61	105.40
23	BA	1184	G	N3-C2-N2	-6.96	115.03	119.90
23	BA	1145	C	C6-N1-C2	-6.96	117.52	120.30
23	DA	102	G	C4-N9-C1'	6.96	135.55	126.50
23	BA	940	G	N1-C6-O6	6.96	124.07	119.90
1	CA	357	G	C6-N1-C2	-6.96	120.93	125.10
23	DA	2182	G	C6-C5-N7	6.96	134.57	130.40
23	DA	2420	C	C5-C4-N4	-6.96	115.33	120.20
1	AA	839	U	C2-N1-C1'	6.95	126.04	117.70
23	BA	71	A	N3-C4-N9	-6.95	121.84	127.40
23	DA	1989	G	N1-C6-O6	6.95	124.07	119.90
23	BA	33	U	C2-N1-C1'	-6.95	109.36	117.70
23	DA	2087	G	N1-C6-O6	6.95	124.07	119.90
23	BA	690	G	C5-C6-N1	6.95	114.97	111.50
23	BA	1757	U	C5-C4-O4	-6.95	121.73	125.90
1	CA	1153	C	C2-N1-C1'	-6.95	111.15	118.80
23	BA	793	A	C5-N7-C8	-6.95	100.43	103.90
23	BA	975	C	C5-C4-N4	6.95	125.06	120.20
1	AA	372	C	N1-C2-O2	6.95	123.07	118.90
1	AA	1120	G	N9-C4-C5	-6.94	102.62	105.40
1	AA	1198	G	C8-N9-C4	-6.94	103.62	106.40
1	AA	998	G	C5-C6-O6	6.94	132.76	128.60
23	BA	1313	U	C2-N1-C1'	6.94	126.03	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2346	A	C6-N1-C2	-6.94	114.43	118.60
23	BA	1340	U	C5-C6-N1	-6.94	119.23	122.70
23	BA	2837	G	C5-C6-O6	-6.94	124.44	128.60
23	DA	750	A	N1-C2-N3	6.94	132.77	129.30
1	AA	171	A	C8-N9-C4	-6.94	103.03	105.80
1	AA	1150	U	C5-C4-O4	6.94	130.06	125.90
23	BA	1006	C	C5-C4-N4	6.93	125.05	120.20
23	BA	575	A	C2-N3-C4	-6.93	107.13	110.60
23	DA	2146	C	N1-C2-O2	6.93	123.06	118.90
1	CA	1241	G	N7-C8-N9	6.93	116.56	113.10
23	DA	731	C	C6-N1-C2	6.92	123.07	120.30
23	DA	2476	A	C8-N9-C4	-6.92	103.03	105.80
1	CA	1457	G	C5-C6-N1	6.92	114.96	111.50
23	DA	1755	A	N1-C6-N6	-6.92	114.45	118.60
1	AA	317	G	N1-C6-O6	6.92	124.05	119.90
24	BB	102	A	N1-C6-N6	-6.92	114.45	118.60
23	DA	2277	G	C6-C5-N7	6.92	134.55	130.40
1	AA	1263	C	N1-C2-O2	6.92	123.05	118.90
23	BA	751	A	C8-N9-C4	6.92	108.57	105.80
23	BA	1210	A	C4-C5-C6	6.92	120.46	117.00
23	BA	2803	C	C6-N1-C2	-6.92	117.53	120.30
1	CA	713	G	N1-C6-O6	-6.92	115.75	119.90
23	DA	2221	G	N1-C6-O6	6.92	124.05	119.90
23	BA	1939	U	N3-C4-C5	6.92	118.75	114.60
1	AA	355	C	N1-C2-O2	-6.91	114.75	118.90
23	BA	2689	U	N1-C2-N3	6.91	119.05	114.90
23	BA	2728	U	C5-C6-N1	-6.91	119.25	122.70
1	CA	721	G	N1-C6-O6	6.91	124.05	119.90
23	BA	934	G	C8-N9-C4	6.91	109.16	106.40
23	BA	2182	G	C5-C6-O6	6.91	132.74	128.60
23	DA	652(T)	C	C2-N3-C4	6.91	123.35	119.90
23	DA	1372	U	N1-C2-O2	6.91	127.63	122.80
23	DA	2680	C	C5-C6-N1	-6.91	117.55	121.00
23	DA	122	G	C6-C5-N7	-6.90	126.26	130.40
23	DA	1490	A	N1-C2-N3	-6.90	125.85	129.30
23	BA	188	G	C6-C5-N7	-6.90	126.26	130.40
1	AA	1217	C	C6-N1-C2	6.90	123.06	120.30
23	BA	645	C	C2-N1-C1'	6.90	126.39	118.80
23	DA	679	C	C6-N1-C2	6.90	123.06	120.30
1	AA	731	G	C8-N9-C4	-6.90	103.64	106.40
23	DA	198	C	C2-N3-C4	-6.90	116.45	119.90
1	CA	1237	C	C6-N1-C2	-6.89	117.54	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1263	C	C6-N1-C2	-6.89	117.55	120.30
23	BA	2036	C	C5-C6-N1	6.89	124.44	121.00
24	DB	61	G	N1-C6-O6	6.88	124.03	119.90
23	DA	679	C	N3-C4-C5	6.88	124.65	121.90
23	DA	1800	C	C2-N3-C4	-6.88	116.46	119.90
23	DA	2323	G	C8-N9-C4	6.88	109.15	106.40
23	DA	2724	C	C6-N1-C2	6.88	123.05	120.30
1	AA	1312	G	N3-C4-N9	6.88	130.13	126.00
23	DA	2782	G	N1-C6-O6	6.88	124.03	119.90
23	DA	409	C	C6-N1-C2	6.88	123.05	120.30
23	DA	1252	G	N7-C8-N9	-6.88	109.66	113.10
1	AA	1198	G	C5-C6-O6	6.88	132.72	128.60
23	BA	803	U	C5-C6-N1	-6.88	119.26	122.70
23	DA	1123	C	C5-C6-N1	-6.88	117.56	121.00
23	BA	530	G	N3-C2-N2	-6.87	115.09	119.90
23	DA	1645	G	C4-C5-N7	-6.87	108.05	110.80
1	AA	925	G	C5-C6-O6	-6.87	124.48	128.60
1	AA	1244	C	C6-N1-C2	-6.87	117.55	120.30
23	BA	2471	C	N1-C2-O2	6.87	123.02	118.90
23	BA	2723	C	C2-N3-C4	-6.87	116.46	119.90
23	DA	1698	A	N1-C2-N3	6.87	132.74	129.30
23	DA	1795	C	N3-C4-C5	6.87	124.65	121.90
23	BA	196	A	C4-C5-N7	6.87	114.13	110.70
23	BA	475	U	N3-C4-C5	-6.87	110.48	114.60
1	CA	1442(A)	G	C4-C5-C6	6.87	122.92	118.80
23	DA	736	C	N3-C2-O2	6.87	126.71	121.90
23	DA	769	G	N7-C8-N9	-6.87	109.67	113.10
23	DA	2689	U	C5-C6-N1	-6.87	119.27	122.70
23	BA	1269	A	N9-C4-C5	-6.87	103.05	105.80
1	CA	1044	A	C6-N1-C2	6.87	122.72	118.60
23	DA	988	A	C5-C6-N6	-6.87	118.21	123.70
23	BA	807	U	C5-C4-O4	-6.87	121.78	125.90
23	BA	1207	C	C6-N1-C2	6.87	123.05	120.30
23	BA	2011	U	N3-C2-O2	6.87	127.00	122.20
1	CA	1160	G	N9-C4-C5	-6.87	102.65	105.40
23	DA	928	G	N7-C8-N9	6.86	116.53	113.10
23	BA	910	A	N1-C6-N6	6.86	122.72	118.60
1	CA	1017	G	N1-C6-O6	-6.86	115.78	119.90
23	BA	2371	G	C4-C5-N7	6.86	113.54	110.80
1	AA	226	G	C8-N9-C4	6.86	109.14	106.40
23	DA	2322	A	N1-C2-N3	6.86	132.73	129.30
1	AA	1225	A	N1-C2-N3	-6.85	125.87	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1710	C	C6-N1-C2	6.85	123.04	120.30
1	AA	1263	C	C2-N1-C1'	6.85	126.34	118.80
23	DA	2835	A	N1-C6-N6	-6.85	114.49	118.60
30	DI	106	GLY	N-CA-C	6.84	130.21	113.10
1	AA	946	A	N1-C6-N6	6.84	122.71	118.60
23	DA	271(J)	C	N3-C4-C5	6.84	124.64	121.90
23	BA	988	A	N9-C4-C5	-6.84	103.06	105.80
23	BA	1041	C	C6-N1-C2	-6.84	117.56	120.30
23	BA	1210	A	C2-N3-C4	-6.84	107.18	110.60
23	DA	1403	C	C2-N1-C1'	-6.84	111.28	118.80
24	BB	37	C	N3-C4-C5	-6.83	119.17	121.90
23	DA	2375	G	N3-C4-C5	6.83	132.02	128.60
23	DA	2791	C	C5-C6-N1	6.83	124.42	121.00
23	BA	547	A	C2-N3-C4	6.83	114.02	110.60
23	BA	2059	A	N7-C8-N9	-6.83	110.38	113.80
23	DA	1791	A	N1-C6-N6	6.83	122.70	118.60
23	DA	2107	C	N3-C4-C5	-6.83	119.17	121.90
23	DA	2497	A	N1-C6-N6	6.83	122.70	118.60
1	CA	691	G	N1-C6-O6	6.83	124.00	119.90
1	CA	1266	G	N3-C4-C5	-6.83	125.19	128.60
1	CA	921	U	C2-N3-C4	6.83	131.10	127.00
23	DA	147	U	C5-C6-N1	-6.83	119.29	122.70
23	BA	207	A	C5-N7-C8	-6.83	100.49	103.90
23	BA	1243	G	C6-C5-N7	-6.83	126.30	130.40
1	CA	1081	G	C8-N9-C4	6.83	109.13	106.40
23	DA	2744	G	N1-C6-O6	6.83	124.00	119.90
23	DA	2286	A	N1-C2-N3	6.82	132.71	129.30
1	AA	359	U	N3-C2-O2	6.82	126.97	122.20
23	BA	512	G	N1-C6-O6	-6.82	115.81	119.90
1	AA	52	G	C5-C6-N1	-6.82	108.09	111.50
23	BA	2705	A	C8-N9-C4	6.81	108.53	105.80
1	CA	365	U	C5-C6-N1	-6.81	119.29	122.70
23	BA	2442	C	C2-N3-C4	-6.81	116.49	119.90
1	CA	1443	G	N9-C4-C5	-6.81	102.67	105.40
23	DA	1829	A	C8-N9-C4	6.81	108.53	105.80
23	BA	2397	G	C8-N9-C4	-6.81	103.67	106.40
1	AA	93	G	C8-N9-C4	6.81	109.12	106.40
1	CA	1114	C	N1-C2-O2	6.81	122.99	118.90
1	CA	1357	A	N7-C8-N9	6.81	117.20	113.80
23	BA	1021	A	N3-C4-C5	6.81	131.56	126.80
23	BA	2582	G	N1-C6-O6	-6.81	115.81	119.90
24	BB	27	C	C6-N1-C2	-6.81	117.58	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	940	C	N1-C2-O2	6.81	122.98	118.90
23	DA	1949	G	C8-N9-C4	6.81	109.12	106.40
23	DA	2321	G	C8-N9-C4	-6.81	103.68	106.40
23	DA	2323	G	N3-C4-C5	6.80	132.00	128.60
1	AA	1229	A	C8-N9-C4	-6.80	103.08	105.80
23	BA	213	A	N1-C6-N6	6.80	122.68	118.60
23	BA	678	C	N3-C4-C5	6.80	124.62	121.90
23	BA	1758	G	N1-C6-O6	6.80	123.98	119.90
23	DA	2189	U	N1-C2-O2	6.80	127.56	122.80
23	BA	578	A	N9-C4-C5	6.80	108.52	105.80
23	BA	1210	A	C4-C5-N7	6.80	114.10	110.70
23	BA	1605	C	N3-C2-O2	-6.80	117.14	121.90
1	CA	1108	G	N3-C4-C5	-6.80	125.20	128.60
23	DA	645	C	C2-N1-C1'	6.80	126.28	118.80
23	BA	2363	C	C6-N1-C2	6.80	123.02	120.30
1	CA	1030(B)	C	C5-C6-N1	6.80	124.40	121.00
1	CA	1231	G	C5-C6-N1	6.80	114.90	111.50
23	DA	1827	C	N3-C4-N4	-6.79	113.24	118.00
23	DA	2782	G	C4-C5-N7	6.79	113.52	110.80
23	DA	253	C	N3-C4-C5	-6.79	119.18	121.90
23	BA	446	G	N3-C4-N9	6.79	130.07	126.00
23	BA	2571	C	N1-C2-O2	-6.79	114.83	118.90
23	DA	2074	U	C5-C6-N1	6.79	126.09	122.70
23	DA	2312	U	N3-C2-O2	-6.79	117.45	122.20
23	BA	744	G	C5-C6-N1	-6.79	108.11	111.50
1	CA	1024	G	N1-C6-O6	6.79	123.97	119.90
23	DA	647	G	C8-N9-C4	-6.79	103.69	106.40
23	BA	1405	U	N3-C4-O4	-6.79	114.65	119.40
23	BA	2821	A	N1-C6-N6	6.79	122.67	118.60
23	DA	1304	C	C6-N1-C2	6.79	123.01	120.30
23	DA	840	C	C6-N1-C2	6.78	123.01	120.30
23	BA	786	C	C5-C6-N1	-6.78	117.61	121.00
23	BA	2897	U	C2-N1-C1'	6.78	125.84	117.70
23	BA	1047	G	N3-C4-C5	-6.78	125.21	128.60
23	BA	885	C	C2-N1-C1'	6.78	126.25	118.80
1	CA	776	G	C5-C6-N1	-6.78	108.11	111.50
1	CA	1370	G	N3-C2-N2	-6.78	115.16	119.90
1	AA	913	A	N1-C6-N6	-6.77	114.54	118.60
1	AA	972	C	C6-N1-C2	-6.77	117.59	120.30
23	DA	389	G	C8-N9-C1'	-6.77	118.19	127.00
23	DA	1567	A	C2-N3-C4	-6.77	107.21	110.60
23	BA	458	G	N9-C4-C5	6.77	108.11	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2351	G	C4-N9-C1'	6.77	135.30	126.50
23	DA	1992	G	N1-C6-O6	-6.77	115.84	119.90
23	DA	2179	C	N1-C2-O2	6.77	122.96	118.90
23	DA	2289	G	C8-N9-C4	6.77	109.11	106.40
23	DA	2699	C	C6-N1-C2	6.77	123.01	120.30
23	DA	195	A	N1-C6-N6	6.77	122.66	118.60
1	AA	945	G	N9-C4-C5	-6.76	102.69	105.40
23	BA	1204	A	N3-C4-C5	6.76	131.53	126.80
1	CA	150	C	C5-C6-N1	6.76	124.38	121.00
23	BA	1021	A	N1-C6-N6	6.76	122.66	118.60
23	DA	2618	G	C4-C5-N7	-6.76	108.09	110.80
23	BA	530	G	N3-C4-N9	-6.76	121.94	126.00
1	CA	1235	U	C5-C4-O4	-6.76	121.84	125.90
23	BA	188	G	C5-C6-N1	-6.76	108.12	111.50
1	CA	34	C	C6-N1-C2	6.76	123.00	120.30
23	DA	141	A	N1-C6-N6	6.76	122.65	118.60
23	DA	205	G	C4-C5-N7	6.76	113.50	110.80
23	DA	2031	A	N1-C6-N6	6.76	122.65	118.60
23	DA	2238	G	N3-C4-C5	-6.76	125.22	128.60
1	AA	1377	A	N1-C2-N3	6.75	132.68	129.30
23	DA	132	G	N1-C6-O6	6.75	123.95	119.90
23	DA	2725	A	C2-N3-C4	-6.75	107.22	110.60
23	BA	2321	G	C8-N9-C4	-6.75	103.70	106.40
1	AA	1184	G	N3-C4-C5	-6.75	125.22	128.60
23	BA	2041	U	C2-N3-C4	-6.75	122.95	127.00
23	BA	2571	C	N1-C2-N3	6.75	123.92	119.20
1	CA	818	G	N9-C4-C5	6.75	108.10	105.40
23	DA	2335	A	C8-N9-C4	6.75	108.50	105.80
1	AA	939	G	C8-N9-C4	6.74	109.10	106.40
23	BA	1674	G	C5-C6-O6	-6.74	124.55	128.60
23	BA	1698	A	C4-C5-N7	6.74	114.07	110.70
23	BA	785	G	N3-C2-N2	-6.74	115.18	119.90
1	CA	1325	C	C2-N3-C4	6.74	123.27	119.90
23	DA	1277	G	C2-N3-C4	-6.74	108.53	111.90
1	AA	1309	G	N1-C2-N2	6.74	122.27	116.20
23	BA	1790	C	C2-N3-C4	-6.73	116.53	119.90
23	BA	1983	C	N1-C2-O2	-6.73	114.86	118.90
23	DA	417	C	C6-N1-C2	6.73	122.99	120.30
23	DA	2226	C	C6-N1-C2	6.73	122.99	120.30
23	DA	197	A	C5-C6-N1	6.73	121.06	117.70
23	BA	1283	G	N1-C6-O6	-6.73	115.86	119.90
23	DA	2411	A	C8-N9-C4	6.73	108.49	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	924	C	N3-C4-C5	6.73	124.59	121.90
1	AA	1371	G	N3-C4-N9	6.72	130.03	126.00
1	AA	934	C	C5-C6-N1	6.72	124.36	121.00
23	DA	426	C	C6-N1-C2	6.72	122.99	120.30
1	AA	1015	A	N1-C6-N6	6.72	122.63	118.60
23	BA	258	G	N1-C2-N2	-6.72	110.15	116.20
23	DA	2515	C	C2-N3-C4	-6.72	116.54	119.90
1	AA	54	C	N1-C2-O2	-6.72	114.87	118.90
23	DA	680	G	C2-N3-C4	-6.72	108.54	111.90
23	DA	2304	G	C8-N9-C1'	6.72	135.74	127.00
23	BA	2321	G	N1-C2-N2	6.72	122.25	116.20
1	AA	1273	G	C8-N9-C4	-6.72	103.71	106.40
23	BA	525	U	C6-N1-C2	-6.72	116.97	121.00
23	BA	2020	A	N7-C8-N9	-6.72	110.44	113.80
23	DA	1612	C	C5-C4-N4	-6.71	115.50	120.20
23	DA	1611	C	C6-N1-C2	6.71	122.98	120.30
23	DA	2464	C	C6-N1-C1'	-6.71	112.74	120.80
1	AA	806	C	N3-C4-C5	6.71	124.58	121.90
1	AA	836	G	C5-C6-O6	-6.71	124.57	128.60
23	DA	2028	U	C4-C5-C6	-6.71	115.67	119.70
1	AA	1023	G	C6-N1-C2	6.71	129.12	125.10
23	DA	1256	G	N3-C2-N2	-6.71	115.20	119.90
1	CA	1158	C	C2-N1-C1'	6.71	126.18	118.80
23	BA	945	A	C6-C5-N7	-6.71	127.61	132.30
23	DA	588	U	C5-C4-O4	6.71	129.92	125.90
23	BA	94	C	C5-C6-N1	6.70	124.35	121.00
23	BA	1026	U	N1-C2-O2	6.70	127.49	122.80
23	DA	39	C	N3-C2-O2	-6.70	117.21	121.90
23	BA	204	A	C8-N9-C4	-6.70	103.12	105.80
23	BA	1142(A)	A	N3-C4-N9	-6.70	122.04	127.40
23	DA	1021	A	N1-C2-N3	6.70	132.65	129.30
23	DA	1531	C	C5-C6-N1	6.70	124.35	121.00
1	AA	1274	G	C6-C5-N7	-6.70	126.38	130.40
23	BA	940	G	C6-C5-N7	-6.70	126.38	130.40
23	BA	2575	C	N3-C4-C5	-6.70	119.22	121.90
23	DA	1112	G	N3-C4-C5	6.70	131.95	128.60
1	CA	77	G	C5-C6-O6	-6.70	124.58	128.60
23	DA	2856	C	C6-N1-C2	-6.70	117.62	120.30
23	BA	465	G	C4-C5-C6	6.70	122.82	118.80
23	BA	2593	U	N3-C4-O4	-6.70	114.71	119.40
23	BA	2609	U	C2-N3-C4	-6.70	122.98	127.00
23	DA	446	G	N3-C4-N9	6.70	130.02	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1471	A	C8-N9-C4	-6.70	103.12	105.80
23	DA	1616	A	C4-C5-N7	6.70	114.05	110.70
23	BA	682	G	C4-C5-N7	6.69	113.48	110.80
23	BA	839	U	C5-C4-O4	6.69	129.92	125.90
23	BA	972	G	N1-C6-O6	-6.69	115.88	119.90
23	DA	570	G	N9-C4-C5	-6.69	102.72	105.40
23	DA	2321	G	N9-C4-C5	6.69	108.08	105.40
23	BA	1038	C	N3-C2-O2	-6.69	117.22	121.90
23	DA	1304	C	C5-C6-N1	-6.69	117.66	121.00
1	AA	1442(B)	A	N3-C4-C5	-6.68	122.12	126.80
23	BA	1254	A	N1-C2-N3	6.68	132.64	129.30
23	BA	754	C	N3-C4-C5	6.68	124.57	121.90
23	BA	1653	G	C4-N9-C1'	6.68	135.19	126.50
23	DA	12	U	C2-N1-C1'	6.68	125.72	117.70
23	DA	994	C	C6-N1-C2	6.68	122.97	120.30
23	BA	2107	C	N3-C4-C5	-6.68	119.23	121.90
23	DA	2371	G	C6-C5-N7	-6.68	126.39	130.40
23	DA	71	A	N3-C4-C5	6.68	131.47	126.80
23	DA	936	C	N3-C2-O2	6.68	126.57	121.90
23	DA	2182	G	C5-C6-O6	6.68	132.61	128.60
23	BA	1758	G	N3-C2-N2	-6.67	115.23	119.90
1	CA	1288	A	C8-N9-C4	6.67	108.47	105.80
23	DA	465	G	N1-C6-O6	6.67	123.90	119.90
24	BB	81	G	N1-C6-O6	6.67	123.90	119.90
23	DA	272(H)	C	C5-C4-N4	-6.67	115.53	120.20
23	DA	669	G	C8-N9-C4	6.67	109.07	106.40
23	DA	2070	G	N3-C4-N9	6.67	130.00	126.00
1	CA	972	C	N1-C2-O2	6.67	122.90	118.90
23	DA	94	C	C6-N1-C2	-6.67	117.63	120.30
23	DA	271(M)	G	N3-C4-C5	-6.67	125.27	128.60
23	BA	2519	U	N1-C2-O2	-6.67	118.13	122.80
23	DA	2491	U	N3-C4-C5	6.67	118.60	114.60
23	DA	2609	U	N1-C2-O2	-6.67	118.13	122.80
1	CA	1029	C	C2-N3-C4	6.67	123.23	119.90
23	BA	1934	C	C6-N1-C2	6.66	122.97	120.30
1	AA	1377	A	C4-C5-C6	6.66	120.33	117.00
23	BA	1327	C	C6-N1-C2	-6.66	117.64	120.30
1	CA	361	G	N1-C6-O6	6.66	123.90	119.90
23	DA	113	G	C5-C6-O6	-6.66	124.60	128.60
23	DA	2632	A	C8-N9-C4	6.66	108.46	105.80
23	BA	17	G	N1-C6-O6	-6.66	115.90	119.90
23	DA	389	G	C8-N9-C4	6.66	109.06	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	60	G	N1-C6-O6	6.66	123.89	119.90
23	DA	895	U	C5-C6-N1	6.66	126.03	122.70
1	AA	1329	A	C6-N1-C2	6.66	122.59	118.60
23	BA	1999	C	C2-N3-C4	-6.66	116.57	119.90
23	BA	12	U	N3-C2-O2	-6.65	117.54	122.20
1	CA	1030(A)	G	C2-N3-C4	6.65	115.23	111.90
23	DA	265	A	C6-C5-N7	-6.65	127.64	132.30
23	DA	444	C	N3-C4-C5	6.65	124.56	121.90
1	CA	1378	C	C6-N1-C2	-6.65	117.64	120.30
23	BA	1217	C	N3-C2-O2	6.65	126.55	121.90
23	DA	607	U	C6-N1-C2	6.64	124.99	121.00
23	DA	1925	C	N1-C2-O2	-6.64	114.91	118.90
23	BA	2100	G	C4-N9-C1'	6.64	135.14	126.50
23	DA	682	G	C5-C6-O6	-6.64	124.61	128.60
23	DA	1785	A	N1-C6-N6	6.64	122.59	118.60
23	DA	2286	A	C5-C6-N1	-6.64	114.38	117.70
1	AA	139	G	N1-C6-O6	6.64	123.88	119.90
1	CA	953	G	C8-N9-C4	6.64	109.06	106.40
23	DA	663	G	N3-C2-N2	-6.64	115.25	119.90
23	BA	675	A	C5-C6-N6	-6.64	118.39	123.70
23	BA	2676	C	C6-N1-C2	6.64	122.96	120.30
23	BA	1022	G	C6-C5-N7	6.64	134.38	130.40
23	DA	2464	C	N3-C4-C5	6.64	124.56	121.90
23	BA	213	A	C8-N9-C4	6.64	108.45	105.80
23	BA	330	A	N3-C4-N9	-6.63	122.09	127.40
1	CA	1166	G	C4-C5-N7	-6.63	108.15	110.80
1	CA	1231	G	C2-N3-C4	6.63	115.22	111.90
23	DA	772	C	N3-C2-O2	6.63	126.54	121.90
23	BA	698	C	N3-C2-O2	6.63	126.54	121.90
1	CA	979	C	C5-C6-N1	6.63	124.31	121.00
23	DA	1264	G	N1-C6-O6	6.63	123.88	119.90
1	AA	1119	C	C5-C6-N1	6.63	124.31	121.00
23	BA	577	G	N1-C6-O6	6.63	123.88	119.90
23	BA	2371	G	N9-C4-C5	-6.63	102.75	105.40
24	DB	64	C	C5-C6-N1	-6.63	117.69	121.00
23	BA	669	G	C8-N9-C4	6.62	109.05	106.40
23	BA	1345	C	C6-N1-C2	-6.62	117.65	120.30
23	BA	2020	A	C5-N7-C8	6.62	107.21	103.90
1	CA	484	G	N1-C6-O6	-6.62	115.93	119.90
23	BA	592	G	C8-N9-C4	-6.62	103.75	106.40
23	BA	2609	U	C5-C6-N1	-6.62	119.39	122.70
23	DA	335	C	N3-C4-C5	-6.62	119.25	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2329	G	N7-C8-N9	-6.62	109.79	113.10
1	CA	357	G	C5-C6-N1	6.62	114.81	111.50
23	BA	2464	C	C5-C4-N4	-6.62	115.57	120.20
1	CA	831	U	C6-N1-C2	-6.62	117.03	121.00
23	DA	1374	G	C8-N9-C4	-6.62	103.75	106.40
23	DA	2396	G	C8-N9-C4	-6.62	103.75	106.40
23	BA	885	C	C6-N1-C1'	-6.61	112.86	120.80
1	CA	1443	G	C5-C6-O6	-6.61	124.63	128.60
23	DA	1107	G	N3-C2-N2	6.61	124.53	119.90
1	AA	418	C	N1-C2-O2	6.61	122.87	118.90
23	BA	1132	A	C2-N3-C4	-6.61	107.29	110.60
23	BA	47	C	C5-C4-N4	-6.61	115.57	120.20
23	BA	2582	G	N7-C8-N9	6.61	116.41	113.10
23	BA	793	A	N7-C8-N9	6.61	117.10	113.80
23	BA	1613	G	N3-C2-N2	6.61	124.53	119.90
1	CA	1206	G	N3-C4-N9	6.61	129.96	126.00
1	AA	1371	G	N9-C4-C5	-6.61	102.76	105.40
23	BA	2832	U	C2-N1-C1'	6.61	125.63	117.70
23	DA	2591	C	C6-N1-C2	-6.61	117.66	120.30
1	AA	615	C	C6-N1-C2	-6.60	117.66	120.30
23	BA	1359	A	C5-C6-N1	6.60	121.00	117.70
23	BA	1217	C	C5-C4-N4	-6.60	115.58	120.20
23	BA	2250	G	N9-C4-C5	6.60	108.04	105.40
1	AA	1261	A	C5-C6-N6	-6.60	118.42	123.70
23	BA	458	G	C8-N9-C4	-6.60	103.76	106.40
23	BA	750	A	C8-N9-C4	-6.60	103.16	105.80
23	DA	188	G	N1-C2-N2	-6.60	110.26	116.20
23	BA	1013	C	N1-C2-O2	-6.60	114.94	118.90
23	BA	2182	G	C6-C5-N7	6.60	134.36	130.40
1	CA	1210	C	N1-C2-O2	6.60	122.86	118.90
1	AA	1477	C	N1-C2-O2	-6.59	114.94	118.90
1	CA	932	C	C2-N1-C1'	6.59	126.06	118.80
23	DA	465	G	C6-C5-N7	-6.59	126.44	130.40
23	DA	1604	C	N1-C2-O2	-6.59	114.94	118.90
23	DA	2335	A	C4-C5-C6	-6.59	113.70	117.00
23	DA	2487	G	N1-C6-O6	6.59	123.86	119.90
23	BA	2000	G	N7-C8-N9	-6.59	109.80	113.10
23	BA	2725	A	N1-C2-N3	6.59	132.60	129.30
1	AA	190	U	C5-C6-N1	6.59	125.99	122.70
23	BA	71	A	N3-C4-C5	6.58	131.41	126.80
1	AA	1301	U	C2-N1-C1'	6.58	125.60	117.70
23	BA	148	C	N3-C4-C5	6.58	124.53	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1275	A	N1-C6-N6	6.58	122.55	118.60
23	BA	1778	U	C5-C6-N1	-6.58	119.41	122.70
1	CA	1192	C	C5-C6-N1	6.58	124.29	121.00
23	DA	286	C	N1-C2-O2	6.58	122.85	118.90
23	DA	2206	G	C8-N9-C1'	6.58	135.56	127.00
23	DA	2552	U	C2-N3-C4	-6.58	123.05	127.00
1	AA	1335	C	N3-C2-O2	-6.58	117.29	121.90
1	CA	1003	G	N7-C8-N9	6.58	116.39	113.10
23	BA	90	U	C2-N3-C4	6.58	130.95	127.00
1	CA	951	G	N3-C4-C5	-6.58	125.31	128.60
23	DA	2487	G	C6-C5-N7	-6.58	126.45	130.40
23	DA	2689	U	C5-C4-O4	6.58	129.85	125.90
23	DA	802	A	C5-C6-N1	6.58	120.99	117.70
1	AA	1050	G	C5-C6-N1	-6.58	108.21	111.50
23	BA	1142(A)	A	C4-C5-N7	6.57	113.99	110.70
23	BA	552	G	N7-C8-N9	-6.57	109.81	113.10
23	DA	1963	U	C2-N1-C1'	6.57	125.59	117.70
1	CA	1050	G	N9-C4-C5	-6.57	102.77	105.40
23	BA	2572	A	C5-N7-C8	6.57	107.19	103.90
23	DA	449	A	C5-N7-C8	-6.57	100.62	103.90
1	AA	442	C	C6-N1-C2	-6.57	117.67	120.30
23	BA	2304	G	C6-C5-N7	6.56	134.34	130.40
1	AA	112	G	C5-C6-O6	-6.56	124.66	128.60
23	BA	124	G	C5-C6-O6	-6.56	124.66	128.60
23	DA	746	A	C6-N1-C2	-6.56	114.66	118.60
1	AA	998	G	C4-C5-N7	-6.56	108.18	110.80
23	BA	391	G	C5-C6-O6	-6.56	124.66	128.60
23	BA	1536	C	C6-N1-C2	-6.56	117.68	120.30
23	DA	327	G	N1-C6-O6	6.56	123.83	119.90
1	AA	286	G	N9-C4-C5	6.56	108.02	105.40
1	AA	1443	G	N3-C4-N9	6.56	129.93	126.00
23	BA	13	A	C8-N9-C4	-6.56	103.18	105.80
23	DA	1200	C	C6-N1-C2	6.56	122.92	120.30
23	BA	1342	A	C5-C6-N1	6.56	120.98	117.70
23	BA	2306	C	C5-C6-N1	6.56	124.28	121.00
23	BA	1229	G	C5-C6-O6	-6.55	124.67	128.60
1	AA	1153	C	C2-N1-C1'	6.55	126.01	118.80
23	DA	2264	C	C5-C6-N1	-6.55	117.72	121.00
23	BA	796	C	N3-C4-C5	6.55	124.52	121.90
24	BB	7	G	C4-C5-N7	6.55	113.42	110.80
23	DA	1459	G	C8-N9-C4	-6.55	103.78	106.40
23	DA	2609	U	N3-C2-O2	6.55	126.78	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	DB	81	G	C4-C5-N7	6.55	113.42	110.80
1	AA	79	G	N1-C6-O6	6.55	123.83	119.90
1	AA	1344	C	N1-C2-O2	6.55	122.83	118.90
23	BA	1391	U	N3-C2-O2	-6.55	117.62	122.20
1	CA	1392	G	N1-C2-N2	-6.55	110.31	116.20
1	AA	993	G	N3-C4-C5	-6.55	125.33	128.60
23	BA	769	G	C8-N9-C4	6.55	109.02	106.40
23	DA	2849	U	C5-C6-N1	-6.55	119.43	122.70
23	BA	527	C	N3-C4-N4	-6.55	113.42	118.00
23	BA	530	G	C5-N7-C8	-6.55	101.03	104.30
23	DA	978	G	N7-C8-N9	-6.55	109.83	113.10
23	DA	1269	A	C8-N9-C4	6.55	108.42	105.80
23	DA	1204	A	C2-N3-C4	-6.54	107.33	110.60
23	DA	207	A	C2-N3-C4	-6.54	107.33	110.60
23	DA	2329	G	N9-C4-C5	-6.54	102.78	105.40
1	CA	979	C	C2-N1-C1'	6.54	126.00	118.80
23	DA	2283	C	N1-C2-O2	-6.54	114.97	118.90
23	DA	2525	G	C5-C6-O6	-6.54	124.67	128.60
23	DA	2596	U	N1-C2-N3	6.54	118.83	114.90
23	DA	2615	U	C5-C4-O4	6.54	129.82	125.90
23	BA	2607	G	N1-C2-N3	6.54	127.82	123.90
23	DA	114	U	C2-N1-C1'	6.54	125.55	117.70
23	BA	1207	C	C5-C6-N1	-6.54	117.73	121.00
23	BA	1698	A	N1-C6-N6	6.54	122.52	118.60
23	BA	2623	G	C5-C6-O6	6.54	132.52	128.60
23	DA	185	U	C5-C6-N1	-6.54	119.43	122.70
23	BA	1125	G	C8-N9-C1'	-6.53	118.51	127.00
23	BA	1328	G	N9-C4-C5	-6.53	102.79	105.40
24	BB	89	G	N1-C6-O6	6.53	123.82	119.90
1	CA	102	G	C8-N9-C4	-6.53	103.79	106.40
23	DA	154	G	N1-C6-O6	6.53	123.82	119.90
1	AA	610	G	C8-N9-C1'	-6.53	118.51	127.00
23	BA	2107	C	C5-C4-N4	6.53	124.77	120.20
23	DA	535	C	C2-N1-C1'	-6.53	111.61	118.80
23	BA	2087	G	C4-C5-N7	6.53	113.41	110.80
1	AA	880	C	C6-N1-C2	6.53	122.91	120.30
23	BA	2206	G	N3-C4-N9	-6.53	122.08	126.00
23	DA	96	G	C2-N3-C4	-6.53	108.64	111.90
23	DA	1763	G	N3-C4-N9	-6.53	122.08	126.00
23	DA	727	A	C6-C5-N7	-6.53	127.73	132.30
23	BA	1334	G	N9-C4-C5	6.52	108.01	105.40
1	CA	1284	C	N3-C4-C5	-6.52	119.29	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1822	G	C8-N9-C4	6.52	109.01	106.40
1	CA	117	G	N3-C4-N9	6.51	129.91	126.00
23	BA	145	G	N7-C8-N9	-6.51	109.84	113.10
23	BA	2224	G	N1-C6-O6	6.51	123.81	119.90
23	DA	1613	G	N3-C2-N2	6.51	124.46	119.90
23	BA	210	C	C6-N1-C2	6.51	122.90	120.30
23	BA	2767	C	C6-N1-C2	6.51	122.90	120.30
23	DA	535	C	C6-N1-C2	6.51	122.90	120.30
23	BA	1222	C	C5-C4-N4	-6.51	115.64	120.20
1	CA	1270	C	C5-C6-N1	6.51	124.25	121.00
1	CA	1382	C	N1-C2-O2	6.51	122.80	118.90
23	DA	2689	U	C2-N3-C4	-6.51	123.10	127.00
23	BA	1189	A	C6-C5-N7	-6.50	127.75	132.30
23	BA	2391	G	C4-C5-N7	-6.50	108.20	110.80
23	DA	652(B)	A	C2-N3-C4	6.50	113.85	110.60
23	BA	324	A	C8-N9-C4	6.50	108.40	105.80
23	DA	1365	A	C8-N9-C4	-6.50	103.20	105.80
23	BA	1279	G	N1-C6-O6	-6.50	116.00	119.90
23	BA	271(O)	C	C5-C6-N1	-6.50	117.75	121.00
23	BA	1625	C	C6-N1-C2	6.50	122.90	120.30
23	BA	2334	G	C8-N9-C4	6.50	109.00	106.40
24	BB	30	C	C5-C6-N1	6.50	124.25	121.00
23	BA	2037	G	N1-C6-O6	-6.50	116.00	119.90
23	BA	2039	C	C5-C6-N1	6.50	124.25	121.00
23	BA	2068	U	N3-C4-C5	6.50	118.50	114.60
23	DA	1045	A	C2-N3-C4	6.50	113.85	110.60
23	DA	1677	A	C2-N3-C4	-6.50	107.35	110.60
23	DA	1539	G	C6-C5-N7	-6.50	126.50	130.40
23	BA	674	G	C5-C6-O6	-6.49	124.70	128.60
23	DA	463	G	C5-C6-O6	6.49	132.50	128.60
23	BA	1325	G	N3-C4-N9	6.49	129.90	126.00
23	BA	2306	C	C2-N3-C4	6.49	123.15	119.90
23	BA	2498	C	C6-N1-C2	6.49	122.89	120.30
1	AA	38	G	C5-C6-O6	-6.49	124.71	128.60
1	AA	1042	G	C8-N9-C4	-6.49	103.81	106.40
23	BA	1141	U	N1-C2-N3	6.49	118.79	114.90
23	BA	1674	G	N1-C6-O6	6.49	123.79	119.90
23	BA	205	G	N1-C2-N2	-6.49	110.36	116.20
23	BA	1141	U	N3-C2-O2	-6.49	117.66	122.20
23	BA	1343	G	C8-N9-C4	-6.49	103.81	106.40
24	BB	87	G	C8-N9-C4	6.49	108.99	106.40
1	AA	970	C	C6-N1-C2	-6.48	117.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2849	U	C5-C6-N1	-6.48	119.46	122.70
23	BA	71	A	N1-C2-N3	6.48	132.54	129.30
1	CA	54	C	C2-N3-C4	-6.48	116.66	119.90
23	DA	1192	G	C8-N9-C4	6.48	108.99	106.40
1	AA	939	G	N9-C4-C5	-6.48	102.81	105.40
23	BA	205	G	C8-N9-C4	6.48	108.99	106.40
23	BA	624	C	C6-N1-C2	6.48	122.89	120.30
23	BA	830	G	C4-C5-N7	-6.48	108.21	110.80
23	BA	1137	G	C5-C6-N1	-6.48	108.26	111.50
23	DA	746	A	C5-N7-C8	-6.48	100.66	103.90
23	BA	2107	C	C6-N1-C2	-6.48	117.71	120.30
1	CA	1178	G	N7-C8-N9	6.48	116.34	113.10
23	DA	2420	C	N3-C4-C5	6.48	124.49	121.90
23	DA	2618	G	C6-N1-C2	-6.48	121.21	125.10
1	CA	1325	C	N1-C2-O2	6.48	122.79	118.90
23	DA	1258	C	C6-N1-C2	6.48	122.89	120.30
23	DA	1788	C	N3-C4-C5	-6.48	119.31	121.90
23	DA	2461	C	C5-C6-N1	-6.48	117.76	121.00
23	BA	2659	G	C8-N9-C4	-6.47	103.81	106.40
1	CA	1056	U	N3-C4-C5	-6.47	110.72	114.60
23	DA	584	C	N1-C2-O2	-6.47	115.02	118.90
1	AA	1442(A)	G	C4-C5-C6	6.47	122.68	118.80
23	BA	33	U	C5-C4-O4	6.47	129.78	125.90
1	CA	839	U	N3-C2-O2	-6.47	117.67	122.20
1	CA	1120	G	N9-C4-C5	6.47	107.99	105.40
24	DB	63	G	C8-N9-C4	6.47	108.99	106.40
23	DA	2047	U	C5-C6-N1	-6.47	119.47	122.70
1	AA	32	A	N1-C6-N6	-6.47	114.72	118.60
1	AA	955	U	C6-N1-C2	-6.47	117.12	121.00
23	BA	1001	A	N7-C8-N9	-6.47	110.56	113.80
1	CA	1185	G	C4-C5-N7	-6.47	108.21	110.80
23	DA	2182	G	C6-N1-C2	6.47	128.98	125.10
23	BA	968	G	C8-N9-C4	6.47	108.99	106.40
23	BA	2129	C	C6-N1-C2	-6.47	117.71	120.30
23	BA	2336	A	C2-N3-C4	6.47	113.83	110.60
23	BA	2501	C	C6-N1-C2	6.47	122.89	120.30
1	CA	1166	G	C4-N9-C1'	-6.47	118.09	126.50
23	BA	62	C	C5-C6-N1	-6.46	117.77	121.00
23	BA	2318	G	N7-C8-N9	6.46	116.33	113.10
23	DA	102	G	C8-N9-C1'	-6.46	118.60	127.00
23	DA	2028	U	N1-C2-N3	-6.46	111.02	114.90
23	DA	2312	U	C5-C6-N1	6.46	125.93	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	663	G	N9-C4-C5	6.46	107.98	105.40
23	BA	1304	C	C6-N1-C2	6.46	122.89	120.30
1	CA	1305	G	C5-C6-N1	-6.46	108.27	111.50
23	BA	2198	A	C8-N9-C4	6.46	108.38	105.80
23	DA	39	C	C2-N3-C4	-6.46	116.67	119.90
1	CA	1442(B)	A	C4-N9-C1'	6.46	137.92	126.30
23	DA	62	C	C2-N3-C4	-6.46	116.67	119.90
23	DA	453	C	C5-C6-N1	-6.46	117.77	121.00
1	AA	1502	A	N7-C8-N9	6.46	117.03	113.80
23	BA	966	G	N1-C2-N2	-6.46	110.39	116.20
23	DA	1368	G	N3-C2-N2	-6.46	115.38	119.90
23	DA	1979	C	C5-C6-N1	6.46	124.23	121.00
1	AA	299	G	N3-C4-C5	6.45	131.83	128.60
1	AA	1034	G	N1-C6-O6	-6.45	116.03	119.90
23	BA	195	A	N1-C6-N6	6.45	122.47	118.60
1	CA	352	C	N1-C2-O2	6.45	122.77	118.90
1	AA	228	A	N1-C6-N6	6.45	122.47	118.60
23	BA	389	G	N3-C2-N2	6.45	124.42	119.90
23	BA	1970	A	C8-N9-C4	6.45	108.38	105.80
23	BA	2503	A	C2-N3-C4	6.45	113.83	110.60
23	BA	2259	G	N1-C6-O6	6.45	123.77	119.90
23	DA	287	C	C6-N1-C2	6.45	122.88	120.30
1	AA	1125	U	N3-C2-O2	6.45	126.71	122.20
23	BA	1610	A	N9-C4-C5	-6.45	103.22	105.80
23	BA	333	G	C4-N9-C1'	6.45	134.88	126.50
23	BA	2840	C	N3-C4-N4	-6.45	113.49	118.00
23	DA	1021	A	N7-C8-N9	6.45	117.02	113.80
23	DA	1141	U	N3-C4-O4	-6.45	114.89	119.40
1	AA	598	U	N3-C4-C5	-6.44	110.73	114.60
23	DA	1299	G	C8-N9-C4	-6.44	103.82	106.40
23	DA	2680	C	C6-N1-C2	6.44	122.88	120.30
1	AA	925	G	N1-C6-O6	6.44	123.76	119.90
23	BA	2385	C	C2-N3-C4	-6.44	116.68	119.90
23	BA	2441	C	N3-C2-O2	-6.44	117.39	121.90
23	DA	2335	A	O4'-C1'-N9	6.44	113.35	108.20
1	AA	987	G	N7-C8-N9	6.43	116.32	113.10
23	DA	2048	G	C8-N9-C4	-6.43	103.83	106.40
1	AA	1316	G	N1-C6-O6	-6.43	116.04	119.90
23	BA	213	A	N9-C4-C5	-6.43	103.23	105.80
23	BA	560	C	N1-C2-O2	-6.43	115.04	118.90
1	CA	1024	G	C6-C5-N7	-6.43	126.54	130.40
23	DA	1191	G	C8-N9-C4	6.43	108.97	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	196	A	N1-C6-N6	6.43	122.46	118.60
23	BA	974	G	N3-C4-C5	-6.43	125.39	128.60
23	DA	2321	G	N3-C2-N2	-6.43	115.40	119.90
23	DA	2393	A	N9-C4-C5	6.43	108.37	105.80
23	BA	2312	U	C2-N1-C1'	6.43	125.41	117.70
1	AA	1381	U	C2-N1-C1'	6.43	125.41	117.70
23	BA	781	A	C8-N9-C4	6.43	108.37	105.80
23	BA	984	A	N9-C4-C5	-6.43	103.23	105.80
23	BA	1041	C	C5-C6-N1	6.43	124.21	121.00
23	BA	1342	A	C6-N1-C2	-6.43	114.74	118.60
23	DA	1239	G	N3-C2-N2	-6.43	115.40	119.90
1	AA	967	C	C5-C6-N1	6.42	124.21	121.00
23	BA	1464	C	N3-C4-C5	-6.42	119.33	121.90
23	BA	1576	U	N3-C2-O2	-6.42	117.70	122.20
23	BA	2065	C	N3-C2-O2	-6.42	117.40	121.90
1	CA	322	C	C6-N1-C2	6.42	122.87	120.30
1	AA	1346	A	N1-C6-N6	6.42	122.45	118.60
23	BA	1802	A	C2-N3-C4	-6.42	107.39	110.60
23	BA	2587	A	N1-C6-N6	6.42	122.45	118.60
23	DA	265	A	C4-C5-C6	6.42	120.21	117.00
23	DA	1315	C	C6-N1-C2	-6.42	117.73	120.30
23	BA	776	G	C6-N1-C2	-6.42	121.25	125.10
1	CA	1367	C	C6-N1-C2	-6.42	117.73	120.30
23	DA	2681	C	C2-N3-C4	-6.42	116.69	119.90
23	BA	1616	A	C4-C5-N7	6.42	113.91	110.70
23	BA	2819	G	C8-N9-C4	6.42	108.97	106.40
1	AA	955	U	C2-N3-C4	6.42	130.85	127.00
23	BA	251	A	N1-C6-N6	-6.42	114.75	118.60
23	BA	229	A	C8-N9-C4	-6.41	103.23	105.80
23	BA	553	G	C4-C5-N7	6.41	113.37	110.80
1	CA	117	G	C4-C5-N7	6.41	113.36	110.80
23	DA	1955	U	C5-C6-N1	-6.41	119.49	122.70
24	DB	76	G	N3-C4-C5	6.41	131.81	128.60
23	BA	1648	C	N3-C2-O2	-6.41	117.41	121.90
23	BA	1273	U	N1-C2-N3	6.41	118.75	114.90
23	DA	113	G	N1-C6-O6	6.41	123.75	119.90
23	BA	1658	C	C5-C4-N4	-6.41	115.71	120.20
23	BA	2277	G	C5-C6-O6	6.41	132.44	128.60
23	DA	1207	C	C5-C6-N1	-6.41	117.80	121.00
23	BA	2067	G	N3-C4-C5	-6.41	125.40	128.60
1	CA	1241	G	N3-C4-N9	6.41	129.84	126.00
23	BA	2751	G	C5-C6-O6	6.41	132.44	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	297	C	N3-C4-C5	-6.41	119.34	121.90
23	DA	2676	C	C6-N1-C2	6.41	122.86	120.30
23	BA	696	G	N9-C4-C5	-6.40	102.84	105.40
23	BA	870	A	N7-C8-N9	-6.40	110.60	113.80
23	BA	1231	G	C2-N3-C4	-6.40	108.70	111.90
23	BA	2539	C	C6-N1-C2	6.40	122.86	120.30
23	DA	664	C	C2-N3-C4	-6.40	116.70	119.90
23	DA	673	C	N1-C2-O2	-6.40	115.06	118.90
23	DA	1651	G	C5-C6-N1	6.40	114.70	111.50
23	DA	2250	G	N9-C4-C5	6.40	107.96	105.40
23	DA	2623	G	N3-C4-C5	-6.40	125.40	128.60
23	BA	47	C	C2-N3-C4	-6.40	116.70	119.90
1	AA	1034	G	C8-N9-C4	-6.40	103.84	106.40
1	CA	330	C	C6-N1-C2	-6.40	117.74	120.30
23	DA	862	G	N9-C4-C5	6.40	107.96	105.40
23	DA	1254	A	C6-N1-C2	-6.40	114.76	118.60
23	DA	2421	G	N9-C4-C5	-6.40	102.84	105.40
23	BA	1216	G	C4-C5-N7	6.40	113.36	110.80
23	BA	1813	G	N1-C6-O6	6.40	123.74	119.90
23	DA	2675	A	N1-C6-N6	6.40	122.44	118.60
23	DA	2680	C	C2-N3-C4	-6.40	116.70	119.90
1	AA	945	G	N3-C4-N9	6.39	129.84	126.00
1	AA	998	G	N9-C4-C5	6.39	107.96	105.40
23	BA	2897	U	C5-C6-N1	6.39	125.90	122.70
23	DA	1308	A	C4-C5-C6	6.39	120.20	117.00
23	DA	1950	G	C5-N7-C8	6.39	107.50	104.30
23	DA	129	C	C2-N3-C4	-6.39	116.70	119.90
23	BA	760	G	C5-C6-O6	-6.39	124.77	128.60
23	DA	1942	C	N3-C4-N4	-6.39	113.53	118.00
23	DA	2485	G	N9-C4-C5	-6.39	102.84	105.40
23	BA	1639	U	N3-C2-O2	-6.39	117.73	122.20
23	DA	845	G	C6-C5-N7	-6.39	126.57	130.40
23	DA	2356	C	N1-C2-O2	-6.39	115.07	118.90
1	AA	557	G	N3-C4-N9	6.38	129.83	126.00
23	BA	296	C	N3-C4-C5	6.38	124.45	121.90
23	BA	2429	G	N9-C4-C5	6.38	107.95	105.40
23	DA	389	G	N3-C2-N2	6.38	124.37	119.90
23	BA	1695	G	N7-C8-N9	6.38	116.29	113.10
1	CA	1024	G	N7-C8-N9	6.38	116.29	113.10
23	DA	2030	A	C4-N9-C1'	-6.38	114.81	126.30
26	DE	118	LYS	N-CA-C	-6.38	93.77	111.00
1	AA	967	C	C6-N1-C2	-6.38	117.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1050	G	C6-C5-N7	-6.38	126.57	130.40
1	AA	1513	A	C8-N9-C4	6.38	108.35	105.80
23	BA	179	G	C8-N9-C4	6.38	108.95	106.40
23	BA	2043	C	N1-C2-O2	-6.38	115.07	118.90
23	BA	2633	G	N1-C6-O6	-6.38	116.07	119.90
1	CA	295	C	C6-N1-C2	6.38	122.85	120.30
23	BA	1261	C	N3-C2-O2	6.38	126.36	121.90
23	DA	664	C	C6-N1-C2	6.38	122.85	120.30
1	AA	433	C	N3-C2-O2	-6.37	117.44	121.90
1	AA	1261	A	N9-C4-C5	-6.37	103.25	105.80
23	BA	464	U	C5-C4-O4	6.37	129.72	125.90
23	BA	1204	A	C5-C6-N1	-6.37	114.51	117.70
23	BA	1325	G	C5-C6-O6	-6.37	124.78	128.60
23	BA	2182	G	C4-N9-C1'	-6.37	118.22	126.50
1	CA	163	C	C6-N1-C2	-6.37	117.75	120.30
23	DA	1864	U	C5-C6-N1	-6.37	119.51	122.70
23	BA	1790	C	C5-C4-N4	-6.37	115.74	120.20
23	BA	2607	G	C4-C5-C6	6.37	122.62	118.80
23	BA	453	C	C6-N1-C2	6.37	122.85	120.30
23	BA	731	C	C6-N1-C2	6.37	122.85	120.30
23	BA	886	C	C5-C6-N1	6.37	124.19	121.00
1	AA	328	C	C6-N1-C2	6.37	122.85	120.30
23	BA	302	C	C6-N1-C2	-6.37	117.75	120.30
23	DA	1359	A	C4-C5-C6	-6.37	113.82	117.00
23	DA	1616	A	N9-C4-C5	-6.37	103.25	105.80
23	DA	1930	G	C4-N9-C1'	-6.37	118.22	126.50
1	AA	1445	C	C6-N1-C2	-6.37	117.75	120.30
23	BA	1269	A	C4-C5-N7	6.37	113.88	110.70
23	BA	2837	G	N1-C6-O6	6.37	123.72	119.90
1	CA	1232	U	C6-N1-C2	-6.37	117.18	121.00
23	BA	206	U	N1-C2-O2	-6.36	118.34	122.80
23	BA	2080	G	N9-C4-C5	-6.36	102.86	105.40
23	BA	2571	C	C2-N3-C4	-6.36	116.72	119.90
1	CA	1178	G	C8-N9-C4	-6.36	103.85	106.40
23	DA	1216	G	N9-C4-C5	-6.36	102.85	105.40
23	DA	2070	G	C6-N1-C2	-6.36	121.28	125.10
1	AA	433	C	N3-C4-N4	-6.36	113.55	118.00
23	BA	278	A	C6-N1-C2	-6.36	114.78	118.60
23	DA	2285	C	C5-C4-N4	6.36	124.65	120.20
23	BA	893	C	C2-N1-C1'	6.36	125.80	118.80
23	BA	1982	C	C5-C6-N1	6.36	124.18	121.00
23	BA	2430	A	C6-N1-C2	-6.36	114.78	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1059	C	N3-C4-C5	-6.36	119.36	121.90
1	AA	1184	G	N3-C4-N9	6.36	129.81	126.00
23	BA	1555	G	C6-C5-N7	-6.36	126.58	130.40
23	BA	2761	G	N7-C8-N9	6.36	116.28	113.10
24	BB	85	G	C4-C5-N7	6.36	113.34	110.80
23	DA	1942	C	C2-N1-C1'	-6.36	111.81	118.80
23	BA	272(D)	G	N7-C8-N9	-6.36	109.92	113.10
23	BA	576	U	N3-C2-O2	-6.36	117.75	122.20
23	DA	1284	A	C5-C6-N6	-6.36	118.61	123.70
24	DB	76	G	C4-C5-N7	6.36	113.34	110.80
23	BA	679	C	C6-N1-C2	6.35	122.84	120.30
23	BA	2369	A	C5-C6-N1	6.35	120.88	117.70
23	DA	2755	C	C4-C5-C6	-6.35	114.22	117.40
1	AA	1000	U	C2-N3-C4	6.35	130.81	127.00
23	BA	760	G	C4-C5-N7	6.35	113.34	110.80
23	BA	2791	C	C2-N1-C1'	6.35	125.78	118.80
1	CA	1330	U	C2-N1-C1'	6.35	125.32	117.70
23	BA	48	G	C5-C6-N1	-6.35	108.33	111.50
23	DA	179	G	C2-N3-C4	-6.35	108.73	111.90
23	DA	1267	U	C4-C5-C6	-6.35	115.89	119.70
23	DA	2030	A	C4-C5-C6	-6.35	113.83	117.00
23	DA	2238	G	C2-N3-C4	6.35	115.07	111.90
23	BA	1791	A	C6-C5-N7	-6.35	127.86	132.30
23	BA	840	C	C6-N1-C2	6.34	122.84	120.30
23	BA	1125	G	C4-N9-C1'	6.34	134.75	126.50
23	BA	2259	G	C2-N3-C4	-6.34	108.73	111.90
23	DA	745	G	C6-C5-N7	-6.34	126.59	130.40
23	BA	61	G	C8-N9-C4	6.34	108.94	106.40
23	BA	2803	C	C5-C6-N1	6.34	124.17	121.00
1	AA	1225	A	C2-N3-C4	6.34	113.77	110.60
23	BA	512	G	C5-C6-O6	6.34	132.40	128.60
24	BB	7	G	C5-C6-O6	-6.34	124.80	128.60
1	CA	971	G	C8-N9-C4	-6.34	103.86	106.40
1	CA	976	G	C4-N9-C1'	-6.34	118.26	126.50
23	BA	2628	C	C6-N1-C2	6.34	122.83	120.30
23	BA	2719	G	N7-C8-N9	-6.34	109.93	113.10
23	BA	1243	G	C5-C6-N1	-6.34	108.33	111.50
23	BA	1938	A	C4-C5-C6	6.34	120.17	117.00
23	BA	2778	A	C2-N3-C4	-6.34	107.43	110.60
23	DA	80	G	C8-N9-C4	-6.34	103.87	106.40
23	DA	1647	G	N1-C6-O6	6.34	123.70	119.90
23	BA	570	G	N7-C8-N9	-6.33	109.93	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1478	G	N3-C4-N9	6.33	129.80	126.00
23	BA	200	U	C2-N3-C4	-6.33	123.20	127.00
23	BA	2181	G	N3-C4-N9	-6.33	122.20	126.00
23	DA	2030	A	C8-N9-C4	6.33	108.33	105.80
1	AA	1239	A	C8-N9-C4	-6.33	103.27	105.80
23	BA	1437	C	N3-C4-C5	-6.33	119.37	121.90
23	DA	1248	G	N9-C4-C5	-6.33	102.87	105.40
23	BA	829	A	C8-N9-C4	6.33	108.33	105.80
1	AA	1329	A	C5-C6-N6	6.33	128.76	123.70
23	BA	558	G	C8-N9-C4	6.33	108.93	106.40
23	DA	122	G	N9-C4-C5	-6.33	102.87	105.40
23	DA	458	G	C8-N9-C4	-6.33	103.87	106.40
23	DA	2803	C	C2-N3-C4	6.33	123.06	119.90
23	BA	745	G	C6-C5-N7	-6.33	126.61	130.40
23	BA	2306	C	C6-N1-C1'	-6.33	113.21	120.80
23	DA	1767	C	C2-N3-C4	-6.33	116.74	119.90
23	DA	2396	G	N7-C8-N9	6.33	116.26	113.10
23	DA	2607	G	C8-N9-C1'	-6.33	118.78	127.00
1	AA	1020	U	N1-C2-O2	6.32	127.23	122.80
23	BA	2721	A	C6-N1-C2	-6.32	114.81	118.60
23	DA	58	G	C8-N9-C4	-6.32	103.87	106.40
23	DA	933	A	C4-C5-N7	6.32	113.86	110.70
23	DA	2572	A	N9-C4-C5	-6.32	103.27	105.80
23	DA	2332	U	N1-C2-O2	6.32	127.23	122.80
23	BA	778	G	N1-C6-O6	-6.32	116.11	119.90
23	DA	2499	C	C5-C6-N1	6.32	124.16	121.00
23	BA	1404	C	N3-C2-O2	-6.32	117.48	121.90
23	BA	2296	U	C1'-O4'-C4'	-6.32	104.84	109.90
23	DA	760	G	N1-C6-O6	6.32	123.69	119.90
1	AA	1456	G	C8-N9-C4	6.32	108.93	106.40
23	BA	794	G	C5-C6-O6	6.32	132.39	128.60
23	BA	1696	G	C8-N9-C4	6.32	108.93	106.40
23	BA	1782	C	C5-C4-N4	-6.32	115.78	120.20
23	BA	2680	C	N3-C4-N4	6.32	122.42	118.00
23	DA	2496	C	N3-C4-C5	6.32	124.43	121.90
1	AA	506	G	C8-N9-C4	-6.32	103.87	106.40
23	BA	777	A	N1-C6-N6	-6.32	114.81	118.60
23	BA	2612	C	C6-N1-C2	6.32	122.83	120.30
23	BA	2617	C	C6-N1-C2	6.32	122.83	120.30
23	BA	2719	G	N9-C4-C5	-6.32	102.87	105.40
23	DA	188	G	C2-N3-C4	-6.32	108.74	111.90
23	DA	664	C	C5-C6-N1	-6.32	117.84	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	756	C	C4-C5-C6	6.31	120.56	117.40
23	DA	1781	C	N1-C2-O2	6.31	122.69	118.90
23	BA	1202	C	N1-C2-O2	-6.31	115.11	118.90
23	BA	2182	G	C8-N9-C1'	6.31	135.21	127.00
23	BA	2577	A	N1-C2-N3	-6.31	126.14	129.30
23	BA	1189	A	N7-C8-N9	6.31	116.95	113.80
23	BA	1189	A	C8-N9-C4	-6.31	103.28	105.80
23	BA	614(B)	G	C6-C5-N7	6.31	134.19	130.40
1	CA	1194	U	C6-N1-C2	-6.31	117.21	121.00
1	CA	1267	C	C6-N1-C2	-6.31	117.78	120.30
23	DA	444	C	N3-C4-N4	-6.31	113.58	118.00
23	DA	1950	G	N9-C4-C5	6.31	107.92	105.40
23	DA	2394	C	C5-C6-N1	-6.31	117.85	121.00
1	AA	1342	C	C6-N1-C2	6.31	122.82	120.30
23	BA	147	U	C5-C6-N1	-6.31	119.55	122.70
23	BA	189	G	C8-N9-C4	6.31	108.92	106.40
23	BA	2789	C	C6-N1-C2	6.31	122.82	120.30
23	DA	2224	G	N1-C6-O6	6.31	123.69	119.90
23	DA	98	G	C8-N9-C4	6.31	108.92	106.40
23	DA	1781	C	N3-C2-O2	-6.31	117.49	121.90
51	D7	47	ARG	NE-CZ-NH1	6.31	123.45	120.30
1	AA	28	G	C5-C6-O6	-6.30	124.82	128.60
23	BA	657	U	C5-C6-N1	-6.30	119.55	122.70
23	BA	2087	G	C5-C6-O6	-6.30	124.82	128.60
23	BA	60	G	C5-C6-O6	-6.30	124.82	128.60
23	BA	1044	G	N3-C4-C5	-6.30	125.45	128.60
23	BA	129	C	C2-N3-C4	-6.30	116.75	119.90
23	BA	753	C	N3-C2-O2	-6.30	117.49	121.90
23	BA	1593	G	C5-C6-N1	6.30	114.65	111.50
23	DA	449	A	C5-C6-N6	-6.30	118.66	123.70
23	DA	1614	A	C8-N9-C4	6.30	108.32	105.80
23	DA	2182	G	C4-N9-C1'	-6.30	118.31	126.50
24	DB	113	G	N9-C4-C5	-6.30	102.88	105.40
1	AA	1210	C	N3-C2-O2	-6.30	117.49	121.90
1	AA	1368	G	C5-C6-O6	-6.30	124.82	128.60
23	BA	1881	C	C6-N1-C2	-6.30	117.78	120.30
1	CA	73	G	C5-C6-O6	-6.30	124.82	128.60
1	CA	721	G	C5-C6-N1	-6.30	108.35	111.50
1	AA	577	G	C8-N9-C4	6.29	108.92	106.40
23	DA	2296	U	C1'-O4'-C4'	-6.29	104.86	109.90
23	BA	202	U	C6-N1-C2	6.29	124.78	121.00
23	BA	723	G	C8-N9-C4	6.29	108.92	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1896	G	N1-C6-O6	6.29	123.68	119.90
1	CA	1166	G	C5-C6-O6	6.29	132.38	128.60
23	BA	389	G	C4-C5-N7	6.29	113.32	110.80
23	BA	659	C	C5-C6-N1	-6.29	117.85	121.00
23	BA	1785	A	C2-N3-C4	-6.29	107.45	110.60
1	AA	73	G	C5-C6-O6	-6.29	124.83	128.60
1	AA	839	U	N3-C2-O2	-6.29	117.80	122.20
1	CA	888	G	C5-C6-O6	6.29	132.37	128.60
1	AA	818	G	N1-C6-O6	-6.29	116.13	119.90
1	AA	970	C	N3-C2-O2	-6.29	117.50	121.90
1	AA	1058	G	C8-N9-C4	6.29	108.91	106.40
23	BA	528	A	C8-N9-C1'	6.29	139.01	127.70
1	CA	1148	U	C5-C6-N1	6.29	125.84	122.70
23	BA	262	A	C6-N1-C2	-6.28	114.83	118.60
23	BA	1791	A	N1-C6-N6	6.28	122.37	118.60
23	BA	2487	G	N1-C6-O6	6.28	123.67	119.90
23	DA	1309	G	N7-C8-N9	-6.28	109.96	113.10
23	DA	1314	C	C6-N1-C1'	-6.28	113.26	120.80
1	AA	698	G	N1-C6-O6	6.28	123.67	119.90
1	AA	1175	G	C2-N3-C4	6.28	115.04	111.90
1	AA	1312	G	C4-N9-C1'	6.28	134.67	126.50
23	BA	386	G	C5-N7-C8	-6.28	101.16	104.30
23	BA	2335	A	O4'-C1'-N9	6.28	113.22	108.20
23	DA	645	C	C5-C6-N1	6.28	124.14	121.00
23	BA	2371	G	C6-C5-N7	-6.28	126.63	130.40
1	AA	989	C	C5-C6-N1	6.28	124.14	121.00
23	DA	2525	G	N1-C6-O6	6.28	123.67	119.90
23	DA	82	G	C8-N9-C4	6.28	108.91	106.40
23	BA	148	C	C6-N1-C2	6.27	122.81	120.30
23	BA	1616	A	N9-C4-C5	-6.27	103.29	105.80
1	CA	117	G	C5-C6-O6	-6.27	124.83	128.60
1	AA	1308	U	C5-C4-O4	6.27	129.66	125.90
1	AA	1316	G	C6-C5-N7	6.27	134.16	130.40
23	DA	2100	G	N3-C4-C5	-6.27	125.46	128.60
23	BA	271(J)	C	N3-C4-C5	6.27	124.41	121.90
23	BA	1227	G	C5-C6-O6	-6.27	124.84	128.60
1	AA	240	C	C5-C6-N1	-6.27	117.87	121.00
1	CA	435	C	N3-C2-O2	-6.27	117.51	121.90
1	CA	976	G	N3-C4-N9	-6.27	122.24	126.00
1	AA	1217	C	C2-N1-C1'	-6.27	111.91	118.80
23	BA	1661	G	N1-C2-N3	6.27	127.66	123.90
23	DA	2435	A	C5-N7-C8	-6.27	100.77	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	750	A	C4-C5-C6	6.27	120.13	117.00
23	BA	1021	A	N7-C8-N9	6.26	116.93	113.80
23	BA	2623	G	C4-C5-N7	-6.26	108.29	110.80
24	BB	8	U	C6-N1-C2	-6.26	117.24	121.00
1	CA	1017	G	C6-C5-N7	6.26	134.16	130.40
23	DA	2306	C	C2-N3-C4	6.26	123.03	119.90
23	BA	661	C	C6-N1-C2	-6.26	117.80	120.30
1	CA	1379	G	C8-N9-C1'	-6.26	118.86	127.00
23	BA	71	A	C4-C5-N7	6.26	113.83	110.70
23	BA	988	A	C6-C5-N7	-6.26	127.92	132.30
23	DA	2084	C	C6-N1-C2	6.26	122.80	120.30
1	AA	964	A	C8-N9-C4	6.26	108.30	105.80
1	AA	1043	C	C6-N1-C2	-6.26	117.80	120.30
1	CA	495	A	N1-C6-N6	-6.26	114.85	118.60
1	CA	1443	G	C4-C5-N7	6.26	113.30	110.80
23	DA	2353	G	N9-C4-C5	-6.26	102.90	105.40
23	BA	1005	C	N3-C4-C5	6.25	124.40	121.90
1	CA	1060	C	C6-N1-C2	-6.25	117.80	120.30
23	DA	928	G	C4-C5-N7	6.25	113.30	110.80
1	AA	930	C	C2-N1-C1'	-6.25	111.92	118.80
1	AA	1175	G	N1-C2-N3	-6.25	120.15	123.90
23	BA	1256	G	N1-C2-N3	6.25	127.65	123.90
23	BA	2036	C	C6-N1-C1'	6.25	128.31	120.80
1	CA	1076	C	C6-N1-C2	6.25	122.80	120.30
1	CA	765	G	C8-N9-C4	-6.25	103.90	106.40
23	DA	2322	A	C5-C6-N1	6.25	120.83	117.70
23	BA	2510	C	N3-C2-O2	-6.25	117.53	121.90
23	BA	859	G	N1-C6-O6	6.25	123.65	119.90
23	BA	109	G	N1-C6-O6	-6.25	116.15	119.90
23	BA	536	A	N7-C8-N9	-6.25	110.68	113.80
23	BA	2059	A	C5-N7-C8	6.25	107.02	103.90
23	BA	2700	C	N3-C4-C5	6.25	124.40	121.90
23	DA	776	G	C8-N9-C4	-6.25	103.90	106.40
23	DA	1603	A	N7-C8-N9	6.25	116.92	113.80
23	DA	2023	G	C5-C6-O6	-6.25	124.85	128.60
23	BA	526	A	C8-N9-C4	-6.24	103.30	105.80
23	BA	1431	U	C5-C6-N1	6.24	125.82	122.70
23	BA	2179	C	N1-C2-O2	6.24	122.65	118.90
23	BA	2683	C	C6-N1-C2	-6.24	117.80	120.30
23	BA	2712(A)	A	C2-N3-C4	-6.24	107.48	110.60
23	DA	530	G	C5-C6-O6	-6.24	124.85	128.60
23	DA	2260	C	C4-C5-C6	6.24	120.52	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	982	C	N3-C4-N4	-6.24	113.63	118.00
23	DA	1839	G	N1-C6-O6	-6.24	116.16	119.90
23	DA	2570	G	C5-C6-N1	-6.24	108.38	111.50
23	BA	194	G	N3-C4-C5	6.24	131.72	128.60
23	BA	640	C	N3-C4-C5	-6.24	119.40	121.90
23	BA	793	A	C8-N9-C4	-6.24	103.30	105.80
23	BA	988	A	C5-C6-N6	-6.24	118.71	123.70
23	DA	1022	G	C8-N9-C1'	6.24	135.11	127.00
1	AA	598	U	N3-C4-O4	6.24	123.77	119.40
23	BA	2338	G	N1-C6-O6	6.24	123.64	119.90
23	BA	2729	G	C5-C6-N1	-6.24	108.38	111.50
23	DA	1792	G	N7-C8-N9	-6.24	109.98	113.10
23	BA	416	C	N3-C4-C5	6.24	124.39	121.90
23	BA	2439	A	C2-N3-C4	-6.24	107.48	110.60
23	BA	2621	A	C5-C6-N1	6.24	120.82	117.70
23	BA	446	G	N9-C4-C5	-6.24	102.91	105.40
23	BA	2502	G	C6-N1-C2	-6.24	121.36	125.10
1	CA	1047	G	C6-N1-C2	6.24	128.84	125.10
1	CA	1235	U	C2-N3-C4	-6.24	123.26	127.00
23	DA	2827	C	N3-C2-O2	6.24	126.27	121.90
23	BA	2015	A	C2-N3-C4	-6.23	107.48	110.60
1	AA	1443	G	C4-C5-N7	6.23	113.29	110.80
1	AA	1158	C	C5-C6-N1	6.23	124.11	121.00
1	CA	63	C	C6-N1-C2	-6.23	117.81	120.30
23	BA	2011	U	N1-C2-O2	-6.23	118.44	122.80
23	DA	2596	U	C2-N3-C4	-6.23	123.26	127.00
23	BA	2587	A	C8-N9-C4	6.22	108.29	105.80
24	DB	115	G	N9-C4-C5	-6.22	102.91	105.40
1	AA	665	A	C8-N9-C4	6.22	108.29	105.80
23	DA	404	C	C6-N1-C2	6.22	122.79	120.30
23	BA	652(F)	G	N1-C6-O6	6.22	123.63	119.90
23	BA	2164	C	N3-C4-C5	-6.22	119.41	121.90
23	BA	2100	G	C6-C5-N7	-6.22	126.67	130.40
1	AA	1346	A	N9-C4-C5	-6.22	103.31	105.80
23	BA	745	G	C5-C6-O6	-6.22	124.87	128.60
23	BA	799	G	C6-N1-C2	-6.22	121.37	125.10
23	DA	2723	C	C4-C5-C6	6.22	120.51	117.40
1	AA	818	G	C4-C5-N7	-6.21	108.31	110.80
1	CA	866	C	N3-C4-C5	-6.21	119.42	121.90
1	CA	1246	C	C5-C6-N1	6.21	124.11	121.00
1	CA	1301	U	C6-N1-C2	-6.21	117.27	121.00
23	DA	271(G)	C	N1-C2-O2	6.21	122.63	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1616	A	C6-C5-N7	-6.21	127.95	132.30
23	BA	196	A	C5-N7-C8	-6.21	100.79	103.90
23	BA	1698	A	C8-N9-C4	-6.21	103.31	105.80
23	BA	2292	C	N3-C4-C5	6.21	124.39	121.90
23	BA	960	A	N1-C6-N6	6.21	122.33	118.60
23	BA	2692	C	N3-C4-C5	6.21	124.39	121.90
23	DA	675	A	C2-N3-C4	-6.21	107.49	110.60
23	DA	2728	U	C2-N3-C4	-6.21	123.27	127.00
23	BA	2769	C	N3-C4-C5	6.21	124.38	121.90
1	CA	1184	G	C6-N1-C2	6.21	128.83	125.10
1	AA	529	G	C5-C6-O6	-6.21	124.88	128.60
1	AA	1274	G	C5-C6-N1	-6.21	108.39	111.50
1	CA	963	G	N3-C4-N9	6.21	129.72	126.00
1	CA	998	G	N9-C4-C5	6.21	107.88	105.40
1	CA	1343	G	C4-C5-N7	6.21	113.28	110.80
24	DB	75	G	C8-N9-C4	6.21	108.88	106.40
23	BA	586	A	C8-N9-C4	-6.21	103.32	105.80
23	BA	763	G	C6-N1-C2	-6.21	121.38	125.10
23	BA	1243	G	N3-C4-C5	6.21	131.70	128.60
23	BA	2353	G	N9-C4-C5	-6.21	102.92	105.40
1	CA	1119	C	C6-N1-C2	-6.21	117.82	120.30
23	DA	2379	G	N7-C8-N9	6.21	116.20	113.10
23	BA	1803	A	C2-N3-C4	6.21	113.70	110.60
23	BA	2555	U	N1-C2-O2	-6.21	118.46	122.80
1	CA	976	G	N3-C4-C5	6.21	131.70	128.60
1	CA	1340	A	N7-C8-N9	6.21	116.90	113.80
23	DA	2028	U	C5-C6-N1	-6.21	119.60	122.70
1	AA	988	G	N9-C4-C5	6.20	107.88	105.40
23	BA	529	A	C5-N7-C8	-6.20	100.80	103.90
1	CA	529	G	C5-C6-O6	-6.20	124.88	128.60
23	DA	977	G	C5-C6-N1	6.20	114.60	111.50
23	DA	196	A	N1-C6-N6	6.20	122.32	118.60
23	BA	1864	U	N3-C2-O2	6.20	126.54	122.20
23	DA	2782	G	C6-C5-N7	-6.20	126.68	130.40
1	AA	366	C	C5-C6-N1	-6.20	117.90	121.00
1	AA	767	A	N1-C6-N6	-6.20	114.88	118.60
1	AA	855	G	N9-C4-C5	6.20	107.88	105.40
23	BA	124	G	C8-N9-C4	6.20	108.88	106.40
23	BA	1602	U	C4-C5-C6	6.20	123.42	119.70
1	CA	770	C	C5-C6-N1	-6.20	117.90	121.00
23	DA	1755	A	C5-C6-N6	6.20	128.66	123.70
1	AA	1297	C	C6-N1-C2	-6.20	117.82	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2353	G	C8-N9-C4	6.20	108.88	106.40
23	BA	2425	A	C8-N9-C4	-6.20	103.32	105.80
23	BA	2768	C	C2-N3-C4	-6.20	116.80	119.90
24	BB	118	G	C8-N9-C4	6.20	108.88	106.40
23	DA	389	G	C4-C5-N7	6.20	113.28	110.80
23	DA	673	C	N3-C4-C5	6.20	124.38	121.90
23	DA	1314	C	C5-C4-N4	-6.20	115.86	120.20
23	DA	1987	G	N1-C6-O6	6.20	123.62	119.90
1	CA	1042	G	C6-C5-N7	6.19	134.12	130.40
1	AA	1108	G	C5-C6-O6	6.19	132.32	128.60
23	BA	1304	C	N3-C4-C5	6.19	124.38	121.90
1	CA	1343	G	N3-C4-N9	6.19	129.72	126.00
23	DA	910	A	N1-C6-N6	6.19	122.31	118.60
23	BA	2296	U	C6-N1-C2	6.19	124.71	121.00
23	DA	2031	A	C4-C5-C6	6.19	120.10	117.00
23	BA	2059	A	C8-N9-C4	6.19	108.28	105.80
23	BA	2454	G	N7-C8-N9	-6.19	110.01	113.10
23	BA	989	G	N9-C4-C5	-6.19	102.92	105.40
23	BA	1021	A	N1-C2-N3	6.19	132.39	129.30
23	BA	1992	G	C5-C6-O6	6.19	132.31	128.60
23	DA	2038	G	C4-C5-N7	6.19	113.27	110.80
1	AA	1158	C	N3-C2-O2	-6.18	117.57	121.90
23	BA	1979	C	C5-C6-N1	6.18	124.09	121.00
23	DA	1298	C	N3-C2-O2	-6.18	117.57	121.90
1	AA	1093	A	N1-C6-N6	6.18	122.31	118.60
23	BA	729	G	N1-C6-O6	6.18	123.61	119.90
23	DA	766	C	C6-N1-C2	-6.18	117.83	120.30
23	BA	984	A	C8-N9-C4	6.18	108.27	105.80
23	BA	1128	A	C8-N9-C4	-6.18	103.33	105.80
23	BA	1578	U	C5-C4-O4	6.18	129.61	125.90
23	DA	1938	A	C4-C5-C6	6.18	120.09	117.00
23	DA	330	A	N1-C2-N3	6.18	132.39	129.30
23	DA	1977	A	N7-C8-N9	-6.18	110.71	113.80
1	AA	1239	A	N1-C6-N6	-6.18	114.89	118.60
23	BA	2018	G	N7-C8-N9	6.18	116.19	113.10
25	DD	229	VAL	CB-CA-C	-6.18	99.67	111.40
23	BA	558	G	N7-C8-N9	-6.17	110.01	113.10
23	BA	2487	G	C5-C6-O6	-6.17	124.89	128.60
23	BA	2808	U	N3-C4-O4	6.17	123.72	119.40
1	CA	1442(B)	A	C4-C5-C6	6.17	120.09	117.00
23	DA	459	U	N3-C4-O4	-6.17	115.08	119.40
23	BA	272(H)	C	C5-C6-N1	6.17	124.09	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1262	A	C8-N9-C4	-6.17	103.33	105.80
23	BA	2782	G	N1-C6-O6	6.17	123.60	119.90
23	BA	2768	C	N3-C2-O2	-6.17	117.58	121.90
1	CA	954	G	C8-N9-C4	6.17	108.87	106.40
1	CA	1527	C	C6-N1-C2	6.17	122.77	120.30
1	AA	60	A	N1-C6-N6	-6.17	114.90	118.60
1	AA	956	U	C5-C6-N1	6.17	125.78	122.70
23	BA	623	G	C8-N9-C4	6.17	108.87	106.40
1	CA	358	U	N1-C2-N3	6.17	118.60	114.90
23	DA	1391	U	C2-N1-C1'	6.17	125.10	117.70
23	BA	1655	A	N7-C8-N9	-6.17	110.72	113.80
23	BA	1858	G	C8-N9-C4	-6.17	103.93	106.40
23	DA	535	C	N3-C2-O2	6.17	126.22	121.90
23	DA	995	C	N1-C2-O2	-6.17	115.20	118.90
23	DA	1802	A	N1-C2-N3	6.17	132.38	129.30
23	DA	2364	C	C5-C6-N1	-6.17	117.92	121.00
1	AA	938	A	N7-C8-N9	6.17	116.88	113.80
23	BA	1200	C	C5-C6-N1	-6.16	117.92	121.00
1	CA	818	G	N1-C6-O6	-6.16	116.20	119.90
23	DA	1478	G	N3-C2-N2	6.16	124.22	119.90
23	DA	1963	U	C5-C6-N1	6.16	125.78	122.70
23	DA	2055	C	C2-N1-C1'	-6.16	112.02	118.80
23	BA	1304	C	C2-N3-C4	-6.16	116.82	119.90
23	BA	1350	C	C6-N1-C2	6.16	122.77	120.30
23	BA	1667	G	C5-C6-O6	-6.16	124.90	128.60
1	AA	357	G	N9-C4-C5	6.16	107.86	105.40
23	DA	2371	G	C8-N9-C4	6.16	108.86	106.40
23	BA	688	U	N1-C2-O2	-6.16	118.49	122.80
1	CA	39	G	C4-C5-N7	-6.16	108.34	110.80
23	DA	775	G	N1-C2-N2	-6.16	110.66	116.20
23	DA	1327	C	N1-C2-O2	-6.16	115.20	118.90
23	DA	1653	G	C4-N9-C1'	6.16	134.50	126.50
23	BA	12	U	N1-C2-O2	6.16	127.11	122.80
23	BA	1755	A	N9-C4-C5	6.16	108.26	105.80
23	BA	2764	A	N9-C4-C5	6.16	108.26	105.80
23	BA	1950	G	C5-C6-O6	6.15	132.29	128.60
1	CA	1009	G	N1-C6-O6	6.15	123.59	119.90
23	DA	397	G	N3-C4-C5	6.15	131.68	128.60
23	DA	2103	C	C2-N3-C4	6.15	122.98	119.90
23	DA	361	G	N1-C6-O6	6.15	123.59	119.90
23	DA	1204	A	N3-C4-C5	6.15	131.11	126.80
23	DA	2182	G	N9-C4-C5	6.15	107.86	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1443	G	C8-N9-C4	6.15	108.86	106.40
23	BA	678	C	C2-N3-C4	-6.15	116.83	119.90
23	BA	764	A	C8-N9-C4	-6.15	103.34	105.80
23	BA	2621	A	C4-C5-C6	-6.15	113.92	117.00
1	CA	1246	C	N1-C2-O2	6.15	122.59	118.90
1	AA	1333	A	N7-C8-N9	6.15	116.87	113.80
23	BA	278	A	C5-C6-N6	-6.15	118.78	123.70
23	BA	688	U	N1-C2-N3	6.15	118.59	114.90
23	BA	2286	A	C8-N9-C4	-6.15	103.34	105.80
23	DA	2581	G	C5-C6-O6	6.15	132.29	128.60
1	CA	1392	G	N3-C2-N2	6.15	124.20	119.90
23	DA	2335	A	N9-C4-C5	-6.15	103.34	105.80
23	BA	1178	C	C5-C6-N1	6.14	124.07	121.00
23	DA	1264	G	C5-C6-O6	-6.14	124.91	128.60
1	AA	1047	G	C5-C6-O6	-6.14	124.91	128.60
23	BA	1448	G	N1-C6-O6	6.14	123.59	119.90
23	DA	71	A	N3-C4-N9	-6.14	122.49	127.40
23	BA	2582	G	C5-C6-O6	6.14	132.28	128.60
1	CA	1214	C	N3-C4-C5	-6.14	119.44	121.90
1	CA	1231	G	C6-N1-C2	-6.14	121.42	125.10
23	DA	1371	G	N1-C6-O6	6.14	123.58	119.90
1	AA	1067	A	C8-N9-C4	-6.14	103.34	105.80
23	BA	1819	A	C4-C5-N7	-6.14	107.63	110.70
23	BA	2220	G	C8-N9-C4	-6.14	103.94	106.40
23	DA	201	C	C5-C6-N1	-6.14	117.93	121.00
23	DA	1934	C	C6-N1-C2	6.14	122.75	120.30
23	BA	2592	G	C8-N9-C4	-6.13	103.95	106.40
1	CA	804	U	C5-C6-N1	-6.13	119.63	122.70
23	DA	1047	G	N3-C4-N9	6.13	129.68	126.00
23	BA	272(H)	C	C5-C4-N4	-6.13	115.91	120.20
23	BA	452	G	N3-C4-C5	-6.13	125.53	128.60
1	CA	458	C	N3-C2-O2	-6.13	117.61	121.90
23	DA	1992	G	C8-N9-C4	-6.13	103.95	106.40
1	AA	1442	G	N3-C4-N9	6.13	129.68	126.00
1	AA	670	G	C4-C5-N7	-6.13	108.35	110.80
23	BA	380	U	C5-C6-N1	-6.13	119.64	122.70
23	BA	2300	G	N3-C4-N9	6.13	129.68	126.00
23	BA	2596	U	N1-C2-N3	6.13	118.58	114.90
1	CA	1286	A	N1-C2-N3	6.13	132.36	129.30
23	DA	2323	G	N9-C4-C5	-6.13	102.95	105.40
23	DA	1991	U	C5-C6-N1	-6.12	119.64	122.70
1	AA	1343	G	N3-C4-N9	6.12	129.67	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2446	G	C5-C6-O6	-6.12	124.93	128.60
23	DA	2751	G	C8-N9-C4	-6.12	103.95	106.40
23	BA	475	U	N3-C2-O2	-6.12	117.92	122.20
23	BA	2257	U	N3-C2-O2	6.12	126.48	122.20
23	DA	154	G	C5-C6-O6	-6.12	124.93	128.60
1	AA	1442	G	N9-C4-C5	-6.12	102.95	105.40
23	BA	363(B)	G	N3-C4-N9	6.12	129.67	126.00
23	BA	1200	C	C2-N3-C4	-6.12	116.84	119.90
23	BA	1531	C	C6-N1-C2	-6.12	117.85	120.30
23	DA	2107	C	C5-C4-N4	6.12	124.48	120.20
23	DA	1419	A	C8-N9-C4	6.12	108.25	105.80
23	DA	2607	G	N3-C2-N2	6.12	124.18	119.90
23	BA	667	U	N1-C2-O2	-6.12	118.52	122.80
23	BA	2445	G	C5-C6-O6	6.12	132.27	128.60
1	CA	1333	A	C8-N9-C4	-6.12	103.35	105.80
23	DA	691	C	C6-N1-C2	6.12	122.75	120.30
23	DA	865	C	C6-N1-C2	6.12	122.75	120.30
23	DA	2689	U	C2-N1-C1'	-6.12	110.36	117.70
23	DA	2340	G	N9-C4-C5	-6.11	102.95	105.40
23	DA	530	G	C4-C5-N7	6.11	113.25	110.80
23	BA	201	C	C6-N1-C2	6.11	122.74	120.30
23	BA	1936	A	C8-N9-C4	-6.11	103.36	105.80
23	DA	205	G	N3-C2-N2	6.11	124.18	119.90
23	DA	446	G	N9-C4-C5	-6.11	102.96	105.40
1	AA	1312	G	C8-N9-C4	-6.11	103.96	106.40
23	DA	279	C	C5-C6-N1	6.11	124.05	121.00
1	AA	1166	G	C4-N9-C1'	-6.11	118.56	126.50
23	BA	1536	C	C2-N1-C1'	6.11	125.52	118.80
23	BA	2100	G	C8-N9-C1'	-6.11	119.06	127.00
1	CA	444	C	C6-N1-C2	6.11	122.74	120.30
23	BA	2103	C	C2-N3-C4	6.10	122.95	119.90
1	CA	1008	C	N3-C4-N4	6.10	122.27	118.00
23	BA	196	A	N9-C4-C5	-6.10	103.36	105.80
1	CA	1165	C	N3-C4-C5	-6.10	119.46	121.90
1	CA	1283	G	N1-C6-O6	-6.10	116.24	119.90
23	DA	1006	C	C2-N1-C1'	-6.10	112.09	118.80
1	CA	1131	G	C8-N9-C4	6.10	108.84	106.40
1	CA	1277	C	C5-C4-N4	6.10	124.47	120.20
23	DA	1531	C	C6-N1-C2	-6.10	117.86	120.30
23	BA	592	G	N9-C4-C5	6.10	107.84	105.40
23	BA	1681	G	C6-C5-N7	-6.10	126.74	130.40
23	DA	1617	C	C5-C6-N1	-6.10	117.95	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2421	G	C5-C6-O6	-6.10	124.94	128.60
23	BA	1268	A	C2-N3-C4	-6.10	107.55	110.60
1	CA	1004	A	C8-N9-C4	-6.10	103.36	105.80
23	DA	278	A	N9-C4-C5	-6.10	103.36	105.80
23	DA	2031	A	C6-C5-N7	-6.10	128.03	132.30
23	DA	2731	G	C6-N1-C2	-6.10	121.44	125.10
1	CA	557	G	N3-C4-C5	-6.09	125.55	128.60
23	DA	847	U	N1-C2-O2	6.09	127.07	122.80
23	DA	1755	A	N1-C2-N3	6.09	132.35	129.30
23	DA	2335	A	C6-N1-C2	-6.09	114.94	118.60
1	AA	1216	G	C6-N1-C2	6.09	128.76	125.10
23	BA	2013	A	C5-N7-C8	-6.09	100.85	103.90
23	BA	682	G	C6-C5-N7	-6.09	126.75	130.40
1	CA	1166	G	C6-C5-N7	6.09	134.06	130.40
23	DA	2623	G	C2-N3-C4	6.09	114.95	111.90
23	BA	2049	G	C2-N3-C4	-6.09	108.86	111.90
23	BA	2286	A	N1-C2-N3	6.09	132.34	129.30
23	BA	2875	C	C6-N1-C2	6.09	122.74	120.30
1	CA	1171	G	C6-N1-C2	6.09	128.75	125.10
1	CA	1456	G	N3-C4-C5	-6.09	125.56	128.60
23	DA	893	C	C2-N1-C1'	6.09	125.50	118.80
24	BB	92	C	C5-C6-N1	6.09	124.04	121.00
23	BA	1137	G	N1-C6-O6	6.09	123.55	119.90
23	BA	1816	G	N9-C4-C5	-6.09	102.97	105.40
25	BD	131	LEU	CB-CG-CD2	-6.09	100.65	111.00
23	DA	2510	C	C5-C4-N4	6.09	124.46	120.20
23	DA	747	U	N1-C2-O2	-6.08	118.54	122.80
23	DA	2881	C	N3-C2-O2	6.08	126.16	121.90
23	BA	742	G	C8-N9-C4	6.08	108.83	106.40
23	BA	1391	U	C2-N1-C1'	6.08	125.00	117.70
23	DA	1830	C	C6-N1-C2	6.08	122.73	120.30
23	BA	143	G	C4-N9-C1'	-6.08	118.59	126.50
23	BA	759	G	C8-N9-C4	6.08	108.83	106.40
23	BA	2273	A	C5-N7-C8	-6.08	100.86	103.90
23	BA	2856	C	C6-N1-C2	-6.08	117.87	120.30
23	DA	2129	C	N1-C2-O2	6.08	122.55	118.90
23	DA	2300	G	N3-C4-N9	6.08	129.65	126.00
23	DA	693	C	C2-N3-C4	-6.08	116.86	119.90
23	DA	2768	C	C6-N1-C2	-6.08	117.87	120.30
23	BA	546	C	C6-N1-C2	-6.08	117.87	120.30
23	BA	2225	A	C4-C5-C6	-6.08	113.96	117.00
23	DA	271(W)	G	C8-N9-C4	-6.08	103.97	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2397	G	N7-C8-N9	6.08	116.14	113.10
1	AA	1279	A	C4-N9-C1'	6.08	137.24	126.30
23	BA	122	G	N1-C6-O6	6.08	123.55	119.90
23	BA	468	G	N9-C4-C5	-6.08	102.97	105.40
23	BA	679	C	C2-N3-C4	-6.08	116.86	119.90
23	BA	2015	A	C4-C5-C6	6.08	120.04	117.00
1	CA	1314	C	N1-C2-O2	6.08	122.55	118.90
23	DA	739	G	N7-C8-N9	-6.08	110.06	113.10
23	DA	2264	C	C2-N3-C4	-6.08	116.86	119.90
23	BA	533	G	N1-C2-N3	6.07	127.54	123.90
23	BA	1315	C	N1-C2-N3	6.07	123.45	119.20
23	DA	695	G	C5-C6-O6	6.07	132.24	128.60
23	BA	2003	G	C5-C6-N1	6.07	114.54	111.50
23	BA	886	C	N1-C2-O2	6.07	122.54	118.90
23	BA	2287	A	C5-N7-C8	-6.07	100.86	103.90
23	BA	2464	C	C2-N1-C1'	6.07	125.48	118.80
23	BA	2672	G	N1-C6-O6	6.07	123.54	119.90
23	DA	1989	G	C5-C6-O6	-6.07	124.96	128.60
1	AA	1442(B)	A	C4-N9-C1'	6.07	137.22	126.30
23	BA	239	U	C5-C6-N1	-6.07	119.67	122.70
23	BA	763	G	C4-C5-N7	-6.07	108.37	110.80
1	CA	1330	U	N3-C2-O2	-6.07	117.95	122.20
23	DA	1121	C	C5-C6-N1	-6.07	117.97	121.00
23	DA	2099	U	C6-N1-C2	-6.07	117.36	121.00
23	BA	527	C	C5-C4-N4	6.07	124.45	120.20
23	BA	2004	G	C5-N7-C8	-6.07	101.27	104.30
23	BA	2707	G	C4-C5-N7	6.07	113.23	110.80
1	CA	1030	C	N3-C2-O2	-6.07	117.65	121.90
23	DA	62	C	N3-C4-N4	-6.07	113.75	118.00
23	DA	791	C	N3-C2-O2	-6.07	117.65	121.90
23	DA	1316	U	N3-C2-O2	-6.07	117.95	122.20
23	DA	1845	G	N1-C6-O6	-6.07	116.26	119.90
23	DA	2100	G	C4-N9-C1'	6.07	134.38	126.50
1	AA	822	C	C6-N1-C2	6.06	122.72	120.30
23	BA	1478	G	N3-C2-N2	6.06	124.14	119.90
23	BA	2279	G	N1-C2-N2	-6.06	110.74	116.20
23	BA	2587	A	N1-C2-N3	6.06	132.33	129.30
23	DA	391	G	N9-C4-C5	-6.06	102.97	105.40
1	AA	1365	G	C5-C6-O6	-6.06	124.96	128.60
1	AA	1456	G	N9-C4-C5	-6.06	102.98	105.40
23	BA	1530	C	C6-N1-C1'	-6.06	113.53	120.80
1	AA	993	G	C4-N9-C1'	6.06	134.38	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1108	G	C8-N9-C4	-6.06	103.98	106.40
23	BA	1142(A)	A	N1-C2-N3	6.06	132.33	129.30
23	DA	2500	U	N3-C4-C5	6.06	118.23	114.60
23	BA	1471	A	N7-C8-N9	6.06	116.83	113.80
23	BA	1900	A	C2-N3-C4	6.06	113.63	110.60
23	BA	2065	C	N3-C4-C5	-6.06	119.48	121.90
23	BA	2607	G	C8-N9-C1'	-6.06	119.12	127.00
1	CA	741	G	C8-N9-C4	6.06	108.82	106.40
1	CA	1266	G	C2-N3-C4	6.06	114.93	111.90
23	DA	1313	U	C6-N1-C2	-6.06	117.37	121.00
23	BA	1358	G	N3-C4-C5	-6.05	125.57	128.60
23	BA	2312	U	C5-C6-N1	6.05	125.73	122.70
1	CA	1322	C	C6-N1-C2	-6.05	117.88	120.30
23	DA	1784	A	N1-C6-N6	-6.05	114.97	118.60
23	BA	535	C	C2-N1-C1'	-6.05	112.14	118.80
23	BA	1276	A	C2-N3-C4	-6.05	107.57	110.60
23	BA	1368	G	N9-C4-C5	6.05	107.82	105.40
23	BA	1970	A	C8-N9-C1'	-6.05	116.81	127.70
1	CA	1267	C	C5-C6-N1	6.05	124.03	121.00
1	AA	818	G	N9-C4-C5	6.05	107.82	105.40
1	AA	1066	C	C4-C5-C6	6.05	120.43	117.40
23	DA	300	A	C8-N9-C4	6.05	108.22	105.80
23	DA	975	C	C6-N1-C2	-6.05	117.88	120.30
1	AA	1268	A	C2-N3-C4	6.05	113.62	110.60
23	BA	2072	G	C6-C5-N7	-6.05	126.77	130.40
23	BA	2279	G	N3-C2-N2	6.05	124.13	119.90
23	BA	2575	C	C4-C5-C6	6.05	120.42	117.40
23	DA	1216	G	N1-C6-O6	6.05	123.53	119.90
23	BA	1698	A	C5-C6-N1	-6.05	114.68	117.70
23	BA	2026	C	N3-C4-C5	-6.04	119.48	121.90
23	DA	1653	G	C8-N9-C4	-6.04	103.98	106.40
1	AA	1277	C	C5-C4-N4	6.04	124.43	120.20
23	BA	12	U	C2-N1-C1'	6.04	124.95	117.70
23	BA	20	C	C2-N3-C4	-6.04	116.88	119.90
23	BA	94	C	C2-N1-C1'	6.04	125.45	118.80
23	BA	1245	G	N1-C6-O6	-6.04	116.27	119.90
23	DA	845	G	C8-N9-C1'	-6.04	119.14	127.00
23	DA	1575	C	C6-N1-C2	6.04	122.72	120.30
23	DA	468	G	N9-C4-C5	-6.04	102.98	105.40
23	BA	1130	U	C4-C5-C6	6.04	123.32	119.70
23	DA	2354	G	C8-N9-C4	-6.04	103.98	106.40
23	DA	2782	G	C5-C6-O6	-6.04	124.98	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1864	U	N1-C2-O2	-6.04	118.57	122.80
1	CA	836	G	C5-C6-O6	-6.04	124.98	128.60
23	DA	465	G	C4-C5-C6	6.04	122.42	118.80
23	DA	1530	C	C6-N1-C1'	-6.04	113.55	120.80
23	BA	1608	A	C2-N3-C4	-6.04	107.58	110.60
23	DA	1313	U	C2-N1-C1'	6.04	124.94	117.70
23	BA	1242	A	C8-N9-C4	6.04	108.22	105.80
1	CA	1442	G	C8-N9-C1'	-6.04	119.15	127.00
23	DA	1351	C	C6-N1-C2	6.04	122.71	120.30
1	AA	529	G	N1-C6-O6	6.03	123.52	119.90
23	BA	2304	G	C4-N9-C1'	-6.03	118.66	126.50
24	BB	61	G	N1-C2-N2	6.03	121.63	116.20
23	DA	90	U	C5-C6-N1	6.03	125.72	122.70
23	DA	403	U	N3-C2-O2	-6.03	117.98	122.20
1	AA	593	G	C8-N9-C4	-6.03	103.99	106.40
1	CA	1033	G	N3-C2-N2	6.03	124.12	119.90
1	CA	940	C	C2-N1-C1'	6.03	125.43	118.80
23	DA	2111	C	C6-N1-C2	-6.03	117.89	120.30
1	CA	1008	C	C5-C4-N4	-6.03	115.98	120.20
23	DA	2521	C	C5-C6-N1	-6.03	117.98	121.00
23	BA	2200	C	C2-N1-C1'	6.03	125.43	118.80
23	BA	2238	G	C2-N3-C4	6.03	114.91	111.90
23	BA	2578	G	N1-C2-N3	6.03	127.52	123.90
1	CA	1379	G	C4-N9-C1'	6.03	134.34	126.50
23	DA	529	A	C2-N3-C4	-6.03	107.59	110.60
23	BA	751	A	C6-N1-C2	-6.03	114.98	118.60
23	DA	103	A	N1-C6-N6	6.03	122.22	118.60
23	DA	122	G	C8-N9-C4	6.03	108.81	106.40
23	DA	528	A	C8-N9-C1'	6.03	138.55	127.70
23	DA	2719	G	C8-N9-C4	6.03	108.81	106.40
23	BA	131	G	C4-C5-N7	6.02	113.21	110.80
23	BA	752	A	N1-C2-N3	6.02	132.31	129.30
23	BA	2319	G	N3-C4-N9	-6.02	122.39	126.00
23	DA	783	A	C2-N3-C4	6.02	113.61	110.60
23	DA	988	A	N9-C4-C5	-6.02	103.39	105.80
23	DA	2387	U	C5-C6-N1	-6.02	119.69	122.70
1	CA	901	A	C2-N3-C4	-6.02	107.59	110.60
23	DA	2805	G	N1-C6-O6	-6.02	116.29	119.90
1	AA	1028	C	C5-C6-N1	6.02	124.01	121.00
23	BA	975	C	C4-C5-C6	6.02	120.41	117.40
23	BA	1632	A	N1-C6-N6	6.02	122.21	118.60
23	DA	926	A	N1-C6-N6	6.02	122.21	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1290	G	C4-N9-C1'	6.02	134.32	126.50
1	CA	365	U	C2-N1-C1'	-6.02	110.48	117.70
23	DA	445	C	C2-N3-C4	-6.02	116.89	119.90
23	DA	825	C	N3-C4-N4	6.02	122.21	118.00
1	AA	1014	A	N3-C4-C5	-6.01	122.59	126.80
23	BA	385	C	N3-C4-C5	-6.01	119.50	121.90
1	CA	946	A	N1-C6-N6	-6.01	114.99	118.60
23	DA	2790	A	C2-N3-C4	6.01	113.61	110.60
1	CA	1096	C	N3-C4-C5	6.01	124.31	121.90
1	AA	158	G	C8-N9-C4	-6.01	104.00	106.40
1	AA	1223	C	N1-C2-O2	6.01	122.51	118.90
23	BA	624	C	N3-C4-C5	6.01	124.30	121.90
23	BA	941	A	C2-N3-C4	6.01	113.61	110.60
23	DA	1210	A	C5-N7-C8	-6.01	100.89	103.90
23	DA	2312	U	C2-N1-C1'	6.01	124.91	117.70
1	AA	1205	U	C6-N1-C2	-6.01	117.39	121.00
23	BA	940	G	C8-N9-C4	-6.01	104.00	106.40
1	CA	1158	C	N3-C2-O2	-6.01	117.69	121.90
1	CA	1293	G	N3-C4-N9	6.01	129.61	126.00
23	DA	141	A	C6-C5-N7	-6.01	128.09	132.30
1	AA	38	G	N1-C6-O6	6.01	123.50	119.90
1	AA	1355	G	N3-C4-C5	-6.01	125.60	128.60
23	DA	205	G	C5-C6-O6	-6.01	125.00	128.60
1	AA	93	G	N9-C4-C5	-6.01	103.00	105.40
1	AA	359	U	C5-C6-N1	-6.01	119.70	122.70
1	AA	940	C	C5-C6-N1	6.01	124.00	121.00
1	CA	1320	C	N3-C2-O2	-6.01	117.69	121.90
23	DA	2708	G	N1-C6-O6	-6.01	116.30	119.90
1	AA	47	C	C2-N3-C4	-6.00	116.90	119.90
1	AA	1036	G	C5-C6-O6	6.00	132.20	128.60
23	BA	595	C	C5-C4-N4	-6.00	116.00	120.20
23	BA	737	C	N3-C2-O2	6.00	126.10	121.90
23	BA	1159	U	N1-C2-N3	6.00	118.50	114.90
1	CA	986	A	C5-C6-N1	6.00	120.70	117.70
23	DA	132	G	C5-C6-N1	-6.00	108.50	111.50
23	DA	1808	U	C2-N3-C4	6.00	130.60	127.00
23	DA	2759	G	N1-C6-O6	-6.00	116.30	119.90
23	DA	1337	G	N1-C6-O6	-6.00	116.30	119.90
1	AA	365	U	C5-C6-N1	-6.00	119.70	122.70
1	AA	998	G	C8-N9-C1'	6.00	134.80	127.00
23	BA	2361	A	C5-C6-N6	-6.00	118.90	123.70
1	AA	485	G	C4-N9-C1'	-6.00	118.70	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	392	C	N3-C4-C5	6.00	124.30	121.90
23	BA	723	G	N9-C4-C5	-6.00	103.00	105.40
23	BA	2319	G	N9-C4-C5	6.00	107.80	105.40
23	DA	465	G	C8-N9-C4	-6.00	104.00	106.40
23	DA	1762	A	N3-C4-C5	-6.00	122.60	126.80
1	AA	92	C	C2-N3-C4	6.00	122.90	119.90
23	BA	1243	G	N9-C4-C5	-6.00	103.00	105.40
1	CA	1081	G	C4-C5-N7	6.00	113.20	110.80
1	AA	698	G	C5-C6-O6	-6.00	125.00	128.60
23	BA	706	A	C8-N9-C4	6.00	108.20	105.80
1	CA	1028	C	C2-N3-C4	6.00	122.90	119.90
23	BA	920	G	N1-C2-N2	-5.99	110.81	116.20
23	BA	2727	G	N1-C6-O6	5.99	123.50	119.90
1	CA	1417	G	N3-C4-N9	5.99	129.60	126.00
1	CA	1442(B)	A	C8-N9-C4	-5.99	103.40	105.80
23	DA	1760	A	C6-N1-C2	-5.99	115.00	118.60
43	DZ	151	HIS	N-CA-C	5.99	127.18	111.00
23	BA	684	G	N1-C2-N2	5.99	121.59	116.20
23	DA	1325	G	N9-C4-C5	-5.99	103.00	105.40
1	AA	936	C	C2-N3-C4	-5.99	116.91	119.90
23	BA	893	C	C6-N1-C1'	-5.99	113.61	120.80
23	BA	1273	U	N3-C4-O4	-5.99	115.21	119.40
23	BA	1721	G	C4-C5-N7	5.99	113.20	110.80
23	BA	1819	A	N9-C4-C5	5.99	108.20	105.80
1	CA	1133	G	C4-C5-N7	-5.99	108.40	110.80
23	DA	1577	C	C6-N1-C2	5.99	122.70	120.30
23	DA	2523	G	C8-N9-C4	5.99	108.80	106.40
23	DA	2844	G	N1-C6-O6	5.99	123.49	119.90
1	AA	930	C	C2-N3-C4	-5.99	116.91	119.90
23	BA	782	A	C5-C6-N6	-5.99	118.91	123.70
23	BA	1531	C	C5-C6-N1	5.99	123.99	121.00
23	BA	1952	A	C8-N9-C4	-5.99	103.40	105.80
1	CA	122	G	N1-C6-O6	5.99	123.49	119.90
1	CA	1121	U	C5-C6-N1	5.99	125.69	122.70
1	CA	1045	C	N1-C2-O2	5.99	122.49	118.90
23	DA	627	A	N7-C8-N9	-5.99	110.81	113.80
23	BA	912	C	C6-N1-C2	-5.99	117.91	120.30
1	CA	204	U	C5-C6-N1	5.99	125.69	122.70
23	DA	2787	C	N1-C2-O2	5.99	122.49	118.90
1	AA	1023	G	N7-C8-N9	5.98	116.09	113.10
23	BA	2497	A	C5-C6-N1	5.98	120.69	117.70
1	CA	1487	G	C2-N3-C4	-5.98	108.91	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1643	G	C5-C6-O6	5.98	132.19	128.60
30	BI	123	LEU	CA-CB-CG	5.98	129.06	115.30
23	BA	1779	U	N1-C2-O2	5.98	126.99	122.80
23	DA	1992	G	C5-C6-O6	5.98	132.19	128.60
24	DB	7	G	C8-N9-C4	5.98	108.79	106.40
23	DA	1316	U	N1-C2-O2	5.98	126.98	122.80
23	DA	1350	C	N3-C4-C5	5.98	124.29	121.90
1	AA	594	G	N3-C4-C5	-5.98	125.61	128.60
23	BA	448	U	C6-N1-C2	-5.98	117.41	121.00
23	DA	2364	C	C6-N1-C2	5.98	122.69	120.30
23	BA	180	G	C5-C6-O6	-5.98	125.01	128.60
1	AA	999	C	N3-C4-N4	-5.97	113.82	118.00
23	BA	794	G	N1-C2-N2	-5.97	110.82	116.20
23	DA	179	G	C8-N9-C4	5.97	108.79	106.40
1	AA	779	C	N3-C4-C5	5.97	124.29	121.90
23	BA	500	G	C5-C6-O6	5.97	132.18	128.60
1	AA	1038	C	C2-N3-C4	5.97	122.89	119.90
1	AA	1424	C	C5-C6-N1	-5.97	118.02	121.00
23	BA	2028	U	N3-C4-O4	-5.97	115.22	119.40
1	CA	1277	C	C6-N1-C2	-5.97	117.91	120.30
23	DA	583	G	C5-C6-O6	-5.97	125.02	128.60
23	DA	2452	C	N3-C4-C5	-5.97	119.51	121.90
1	AA	346	G	C4-N9-C1'	5.97	134.26	126.50
23	BA	1811	G	N3-C2-N2	-5.97	115.72	119.90
23	BA	2791	C	N3-C2-O2	-5.97	117.72	121.90
1	CA	376	G	N1-C6-O6	5.97	123.48	119.90
23	DA	1777	U	N3-C2-O2	-5.97	118.02	122.20
23	DA	2315	G	N7-C8-N9	-5.97	110.11	113.10
23	DA	2580	U	C5-C6-N1	-5.97	119.72	122.70
23	DA	2599	G	N1-C2-N3	5.97	127.48	123.90
1	AA	1266	G	C2-N3-C4	5.97	114.88	111.90
23	BA	1760	A	N1-C6-N6	-5.97	115.02	118.60
1	CA	1154	G	C4-C5-N7	-5.97	108.41	110.80
23	DA	1698	A	C4-C5-N7	5.97	113.68	110.70
23	BA	652(T)	C	N1-C2-O2	5.97	122.48	118.90
23	BA	990	A	C2-N3-C4	-5.97	107.62	110.60
23	BA	2621	A	N1-C6-N6	-5.97	115.02	118.60
23	DA	389	G	N3-C4-N9	5.97	129.58	126.00
23	DA	446	G	C8-N9-C1'	-5.97	119.24	127.00
1	AA	1456	G	N3-C2-N2	5.96	124.08	119.90
24	BB	117	G	N7-C8-N9	-5.96	110.12	113.10
23	DA	70	G	C4-C5-N7	5.96	113.19	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	327	G	C5-C6-N1	-5.96	108.52	111.50
23	DA	915	C	N1-C2-O2	5.96	122.48	118.90
23	DA	1282	U	C5-C6-N1	-5.96	119.72	122.70
23	DA	1377	G	N3-C4-N9	5.96	129.58	126.00
23	DA	2351	G	N3-C4-C5	-5.96	125.62	128.60
1	AA	1249	C	C5-C6-N1	5.96	123.98	121.00
23	DA	566	U	C5-C6-N1	-5.96	119.72	122.70
23	BA	1546	C	C2-N1-C1'	5.96	125.36	118.80
23	BA	2522	U	N3-C4-C5	-5.96	111.02	114.60
23	DA	208	C	C5-C4-N4	-5.96	116.03	120.20
23	BA	1773	A	C2-N3-C4	5.96	113.58	110.60
23	BA	194	G	C5-C6-N1	-5.96	108.52	111.50
23	BA	2292	C	C2-N3-C4	-5.96	116.92	119.90
23	DA	587	C	N3-C2-O2	-5.96	117.73	121.90
23	DA	924	C	N3-C4-N4	-5.96	113.83	118.00
23	DA	1270	C	C5-C6-N1	-5.96	118.02	121.00
23	BA	892	G	C6-N1-C2	5.96	128.67	125.10
1	CA	831	U	N1-C2-N3	5.96	118.47	114.90
23	DA	1980	G	N3-C2-N2	-5.96	115.73	119.90
23	DA	2622	C	C6-N1-C2	5.96	122.68	120.30
23	BA	215	G	N1-C2-N3	5.96	127.47	123.90
23	BA	945	A	C1'-O4'-C4'	-5.96	105.14	109.90
23	DA	781	A	C8-N9-C4	5.96	108.18	105.80
1	AA	1001(A)	G	N3-C4-N9	5.95	129.57	126.00
23	BA	746	A	N1-C6-N6	5.95	122.17	118.60
23	BA	988	A	C4-C5-N7	5.95	113.68	110.70
23	DA	676	A	C6-C5-N7	-5.95	128.13	132.30
23	DA	392	C	N3-C2-O2	5.95	126.06	121.90
23	DA	862	G	N1-C6-O6	-5.95	116.33	119.90
23	DA	1129	A	N9-C4-C5	5.95	108.18	105.80
23	DA	2240	C	C4-C5-C6	-5.95	114.42	117.40
1	AA	1002	G	N7-C8-N9	5.95	116.07	113.10
23	DA	512	G	N1-C6-O6	-5.95	116.33	119.90
23	DA	756	C	C5-C6-N1	-5.95	118.03	121.00
23	DA	629	G	N3-C4-N9	-5.95	122.43	126.00
1	AA	1036	G	C4-C5-N7	-5.95	108.42	110.80
1	AA	1264	C	C2-N3-C4	5.95	122.87	119.90
1	CA	972	C	N3-C2-O2	-5.95	117.74	121.90
23	DA	34	C	N1-C2-O2	5.95	122.47	118.90
23	DA	1896	G	N1-C6-O6	5.95	123.47	119.90
23	DA	196	A	N9-C4-C5	-5.94	103.42	105.80
23	BA	114	U	C2-N1-C1'	5.94	124.83	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	508	G	N9-C4-C5	-5.94	103.02	105.40
23	BA	516	C	N1-C2-O2	-5.94	115.33	118.90
23	BA	2680	C	C6-N1-C2	5.94	122.68	120.30
1	CA	420	U	C6-N1-C2	-5.94	117.44	121.00
23	DA	572	A	C2-N3-C4	-5.94	107.63	110.60
23	DA	1618	A	C5-C6-N6	5.94	128.45	123.70
1	AA	139	G	C5-C6-O6	-5.94	125.04	128.60
1	CA	1234	C	N1-C2-O2	5.94	122.46	118.90
23	DA	508	G	C8-N9-C4	5.94	108.78	106.40
23	DA	762	U	N1-C2-N3	-5.94	111.34	114.90
23	DA	1944	U	C5-C6-N1	-5.94	119.73	122.70
23	DA	1992	G	P-O3'-C3'	5.94	126.82	119.70
23	DA	2107	C	C6-N1-C2	-5.94	117.92	120.30
23	BA	2894	G	C4-C5-N7	5.94	113.17	110.80
1	CA	1081	G	C2-N3-C4	-5.94	108.93	111.90
1	CA	1108	G	N9-C4-C5	5.94	107.77	105.40
1	CA	1456	G	N3-C2-N2	5.94	124.06	119.90
23	DA	659	C	C6-N1-C2	5.94	122.67	120.30
1	AA	1417	G	N3-C4-C5	-5.93	125.63	128.60
7	AG	104	LEU	CA-CB-CG	5.93	128.95	115.30
1	CA	1148	U	C6-N1-C2	-5.93	117.44	121.00
23	DA	1301	A	N1-C2-N3	5.93	132.27	129.30
23	BA	268	C	N3-C4-N4	5.93	122.15	118.00
23	BA	2518	A	C8-N9-C4	-5.93	103.43	105.80
23	DA	1296	G	N1-C2-N2	-5.93	110.86	116.20
23	BA	2335	A	C5-C6-N6	-5.93	118.95	123.70
23	DA	2612	C	C6-N1-C2	5.93	122.67	120.30
23	BA	1298	C	N3-C4-C5	5.93	124.27	121.90
24	BB	97	G	N7-C8-N9	-5.93	110.14	113.10
1	CA	944	G	N3-C4-N9	5.93	129.56	126.00
23	DA	2200	C	C2-N1-C1'	5.93	125.32	118.80
23	DA	2746	U	C5-C6-N1	-5.93	119.73	122.70
23	DA	652(T)	C	N1-C2-O2	5.93	122.46	118.90
23	BA	386	G	C6-C5-N7	-5.93	126.84	130.40
23	BA	951	C	C6-N1-C2	5.93	122.67	120.30
23	BA	1208	C	C5-C4-N4	-5.93	116.05	120.20
23	BA	1300	U	P-O3'-C3'	5.93	126.81	119.70
23	BA	2641	G	C4-N9-C1'	5.93	134.21	126.50
1	CA	1320	C	C6-N1-C2	-5.93	117.93	120.30
23	DA	776	G	N7-C8-N9	5.93	116.06	113.10
23	DA	1213	A	C8-N9-C4	5.93	108.17	105.80
23	DA	1583	A	C8-N9-C4	5.93	108.17	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	645	C	C2-N3-C4	5.92	122.86	119.90
23	BA	213	A	C5-C6-N6	-5.92	118.96	123.70
23	BA	1565	C	N3-C4-C5	5.92	124.27	121.90
23	DA	2105	C	C5-C6-N1	5.92	123.96	121.00
1	AA	1166	G	C6-C5-N7	5.92	133.95	130.40
23	BA	777	A	N3-C4-C5	-5.92	122.65	126.80
23	DA	1427	A	C6-N1-C2	-5.92	115.05	118.60
23	DA	2641	G	C4-N9-C1'	5.92	134.19	126.50
23	BA	989	G	C4-C5-N7	5.92	113.17	110.80
1	CA	1274	G	N1-C6-O6	5.92	123.45	119.90
23	DA	51	G	C5-C6-O6	5.92	132.15	128.60
23	BA	1681	G	N1-C6-O6	5.92	123.45	119.90
1	CA	1297	C	N3-C4-C5	-5.92	119.53	121.90
23	BA	1132	A	N1-C2-N3	5.91	132.26	129.30
23	BA	1208	C	N1-C2-O2	-5.91	115.35	118.90
23	BA	1858	G	N7-C8-N9	5.91	116.06	113.10
23	DA	777	A	N9-C4-C5	5.91	108.17	105.80
23	DA	2304	G	C4-N9-C1'	-5.91	118.81	126.50
23	BA	271(M)	G	N3-C4-N9	5.91	129.55	126.00
1	AA	1188	A	C8-N9-C4	5.91	108.16	105.80
23	BA	2609	U	C4-C5-C6	5.91	123.25	119.70
23	DA	2304	G	N9-C4-C5	5.91	107.76	105.40
1	CA	433	C	C5-C6-N1	-5.91	118.05	121.00
23	DA	363(B)	G	N3-C4-N9	5.91	129.54	126.00
23	DA	679	C	C5-C6-N1	-5.91	118.05	121.00
23	BA	886	C	C2-N1-C1'	5.91	125.30	118.80
1	AA	962	C	C6-N1-C2	-5.91	117.94	120.30
23	BA	271(G)	C	C6-N1-C2	-5.91	117.94	120.30
23	BA	578	A	C8-N9-C4	-5.91	103.44	105.80
23	BA	2391	G	N9-C4-C5	5.91	107.76	105.40
1	CA	1071	C	C6-N1-C2	-5.91	117.94	120.30
23	DA	765	G	N1-C6-O6	5.91	123.44	119.90
23	DA	1777	U	N1-C2-O2	5.91	126.93	122.80
23	DA	2525	G	C8-N9-C4	5.91	108.76	106.40
23	BA	2581	G	N3-C2-N2	5.90	124.03	119.90
23	BA	431	U	C5-C6-N1	5.90	125.65	122.70
23	BA	826	U	N3-C4-C5	-5.90	111.06	114.60
23	BA	2277	G	N1-C6-O6	-5.90	116.36	119.90
23	DA	673	C	C2-N3-C4	-5.90	116.95	119.90
1	AA	1032	G	N1-C2-N3	-5.90	120.36	123.90
1	AA	1457	G	C5-C6-O6	-5.90	125.06	128.60
23	BA	1290	C	C6-N1-C2	-5.90	117.94	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	792	G	C8-N9-C1'	-5.90	119.33	127.00
23	DA	645	C	C6-N1-C2	-5.90	117.94	120.30
23	DA	652(E)	G	N3-C2-N2	5.90	124.03	119.90
23	DA	1695	G	N7-C8-N9	5.90	116.05	113.10
1	AA	1299	A	N1-C6-N6	-5.90	115.06	118.60
1	CA	1342	C	N1-C2-O2	5.90	122.44	118.90
23	DA	1539	G	N1-C6-O6	5.90	123.44	119.90
23	BA	179	G	C5-C6-O6	-5.89	125.06	128.60
23	BA	424	G	C5-C6-O6	-5.89	125.06	128.60
23	DA	2162	G	N3-C4-N9	5.89	129.54	126.00
1	AA	121	C	C6-N1-C2	5.89	122.66	120.30
1	AA	1335	C	C6-N1-C1'	-5.89	113.73	120.80
23	BA	844	C	N3-C4-C5	5.89	124.26	121.90
23	DA	1271	G	N1-C6-O6	5.89	123.44	119.90
23	DA	984	A	C8-N9-C4	5.89	108.16	105.80
23	BA	297	C	N3-C4-N4	5.89	122.12	118.00
23	BA	1422	G	C2-N3-C4	5.89	114.84	111.90
23	BA	2381	C	N1-C2-N3	5.89	123.32	119.20
1	CA	1024	G	C5-C6-O6	-5.89	125.07	128.60
4	AD	26	CYS	N-CA-C	-5.89	95.10	111.00
1	CA	1153	C	C6-N1-C1'	5.89	127.87	120.80
23	DA	2455	G	C8-N9-C1'	-5.89	119.34	127.00
1	AA	1223	C	N3-C2-O2	-5.89	117.78	121.90
1	AA	1312	G	C5-C6-N1	5.89	114.44	111.50
23	BA	2226	C	C6-N1-C2	5.89	122.66	120.30
25	BD	229	VAL	CB-CA-C	-5.89	100.22	111.40
23	DA	214	G	C5-C6-O6	-5.89	125.07	128.60
23	BA	2319	G	C5-N7-C8	-5.88	101.36	104.30
23	BA	2335	A	N9-C4-C5	-5.88	103.45	105.80
1	CA	721	G	C6-C5-N7	-5.88	126.87	130.40
23	DA	179	G	N9-C4-C5	-5.88	103.05	105.40
23	DA	1653	G	N3-C4-N9	5.88	129.53	126.00
24	DB	81	G	C5-N7-C8	-5.88	101.36	104.30
23	DA	625	G	C2-N3-C4	-5.88	108.96	111.90
23	DA	1617	C	C4-C5-C6	5.88	120.34	117.40
1	AA	1524	C	C5-C6-N1	-5.88	118.06	121.00
23	BA	1721	G	C8-N9-C4	-5.88	104.05	106.40
23	BA	240	G	C5-C6-N1	5.88	114.44	111.50
23	BA	271(S)	G	N1-C6-O6	5.88	123.43	119.90
23	DA	1863	G	C8-N9-C4	5.88	108.75	106.40
23	BA	667	U	N3-C4-O4	5.88	123.51	119.40
23	DA	1464	C	N3-C4-C5	-5.88	119.55	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	256	A	C8-N9-C4	5.88	108.15	105.80
23	BA	819	A	N1-C6-N6	-5.88	115.08	118.60
23	BA	1428	C	C4-C5-C6	5.88	120.34	117.40
23	BA	1479	G	N1-C6-O6	5.88	123.43	119.90
1	CA	1312	G	C6-N1-C2	5.88	128.63	125.10
23	DA	242	G	C4-N9-C1'	-5.88	118.86	126.50
23	DA	1298	C	C2-N3-C4	-5.88	116.96	119.90
1	AA	509	A	C8-N9-C4	-5.88	103.45	105.80
23	BA	2297	C	C5-C4-N4	5.88	124.31	120.20
23	BA	2729	G	C6-C5-N7	-5.88	126.88	130.40
23	DA	1141	U	C5-C4-O4	5.88	129.43	125.90
23	DA	1281	G	N1-C6-O6	5.88	123.42	119.90
23	DA	1623	G	C2-N3-C4	-5.88	108.96	111.90
1	AA	610	G	N3-C4-N9	5.87	129.53	126.00
1	CA	240	C	C5-C6-N1	-5.87	118.06	121.00
1	CA	1042	G	N1-C2-N2	5.87	121.49	116.20
23	DA	1359	A	C5-C6-N1	5.87	120.64	117.70
1	AA	1030	C	N1-C2-O2	5.87	122.42	118.90
23	BA	209	C	C4-C5-C6	5.87	120.34	117.40
23	BA	752	A	P-O3'-C3'	5.87	126.75	119.70
23	BA	2129	C	N1-C2-O2	5.87	122.42	118.90
1	CA	1270	C	C6-N1-C2	-5.87	117.95	120.30
1	AA	1184	G	C2-N3-C4	5.87	114.83	111.90
23	DA	2587	A	N1-C6-N6	5.87	122.12	118.60
1	AA	1328	C	C2-N1-C1'	-5.87	112.34	118.80
2	CB	129	GLU	N-CA-C	-5.87	95.16	111.00
23	DA	448	U	C4-C5-C6	5.87	123.22	119.70
23	DA	582	G	C2-N3-C4	-5.87	108.97	111.90
23	DA	629	G	N3-C4-C5	5.87	131.53	128.60
23	DA	1257	C	N3-C4-C5	-5.87	119.55	121.90
23	BA	736	C	N1-C2-O2	-5.87	115.38	118.90
23	BA	1230	C	C6-N1-C2	5.87	122.65	120.30
1	AA	286	G	C5-C6-O6	5.86	132.12	128.60
1	AA	346	G	N3-C4-N9	5.86	129.52	126.00
1	AA	1371	G	C8-N9-C4	5.86	108.75	106.40
1	AA	1442	G	N7-C8-N9	-5.86	110.17	113.10
23	BA	610	G	C8-N9-C4	5.86	108.75	106.40
23	BA	1128	A	C5-C6-N1	5.86	120.63	117.70
23	BA	1926	U	N3-C2-O2	-5.86	118.09	122.20
1	CA	317	G	N1-C6-O6	5.86	123.42	119.90
1	CA	1120	G	N3-C2-N2	-5.86	115.80	119.90
23	DA	2351	G	C4-N9-C1'	5.86	134.12	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1265	A	N1-C6-N6	5.86	122.12	118.60
23	DA	2464	C	C4-C5-C6	-5.86	114.47	117.40
23	BA	756	C	N1-C2-O2	-5.86	115.38	118.90
23	BA	1128	A	N9-C4-C5	5.86	108.14	105.80
23	DA	1276	A	N1-C6-N6	5.86	122.12	118.60
23	BA	330	A	C5-C6-N1	-5.86	114.77	117.70
23	BA	1951	U	N3-C4-O4	5.86	123.50	119.40
1	AA	1038	C	C5-C4-N4	5.86	124.30	120.20
1	AA	1239	A	N9-C4-C5	5.86	108.14	105.80
23	BA	1405	U	C5-C6-N1	-5.86	119.77	122.70
23	DA	2510	C	C4-C5-C6	5.86	120.33	117.40
23	DA	2626	C	N3-C4-C5	5.86	124.24	121.90
23	DA	2805	G	C5-C6-O6	5.86	132.12	128.60
1	AA	54	C	N3-C2-O2	5.86	126.00	121.90
23	BA	845	G	N3-C4-N9	5.86	129.51	126.00
23	BA	846	C	C2-N3-C4	-5.86	116.97	119.90
23	BA	1989	G	C6-C5-N7	-5.86	126.89	130.40
13	CM	70	LEU	CA-CB-CG	5.86	128.77	115.30
23	DA	1619	G	C5-C6-N1	5.86	114.43	111.50
24	DB	4	C	C6-N1-C2	5.86	122.64	120.30
23	BA	2260	C	N1-C2-N3	5.85	123.30	119.20
1	AA	199	G	C8-N9-C4	5.85	108.74	106.40
23	BA	751	A	N7-C8-N9	-5.85	110.87	113.80
23	BA	822	U	N3-C2-O2	-5.85	118.10	122.20
23	BA	1304	C	C5-C6-N1	-5.85	118.07	121.00
23	BA	2441	C	C2-N3-C4	-5.85	116.97	119.90
23	BA	2751	G	C8-N9-C4	-5.85	104.06	106.40
23	BA	2857	G	N1-C6-O6	5.85	123.41	119.90
1	CA	357	G	C8-N9-C4	-5.85	104.06	106.40
1	CA	982	U	C5-C6-N1	5.85	125.63	122.70
1	CA	1282	C	C2-N1-C1'	5.85	125.24	118.80
1	AA	1150	U	N3-C4-O4	-5.85	115.31	119.40
1	AA	1467	G	C5-C6-O6	5.85	132.11	128.60
23	BA	679	C	N1-C2-O2	-5.85	115.39	118.90
23	BA	2201	C	C2-N3-C4	-5.85	116.97	119.90
1	CA	1030(A)	G	N3-C4-C5	-5.85	125.67	128.60
23	DA	571	A	N7-C8-N9	-5.85	110.88	113.80
1	AA	754	C	N1-C2-O2	5.85	122.41	118.90
1	AA	1256	A	N7-C8-N9	-5.85	110.88	113.80
23	BA	1677	A	C2-N3-C4	-5.85	107.68	110.60
23	BA	2004	G	N7-C8-N9	5.85	116.02	113.10
1	CA	307	C	C6-N1-C2	-5.85	117.96	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	150	C	C5-C6-N1	5.85	123.92	121.00
23	BA	1645	G	N9-C4-C5	5.84	107.74	105.40
23	DA	1881	C	C6-N1-C2	-5.84	117.96	120.30
24	DB	64	C	C6-N1-C2	5.84	122.64	120.30
1	AA	998	G	C4-N9-C1'	-5.84	118.90	126.50
1	CA	880	C	C6-N1-C2	5.84	122.64	120.30
23	DA	1252	G	C8-N9-C4	5.84	108.74	106.40
23	DA	1946	U	N3-C4-C5	5.84	118.11	114.60
1	AA	1523	G	C4-C5-N7	-5.84	108.46	110.80
23	BA	508	G	C6-C5-N7	-5.84	126.89	130.40
23	BA	1004	C	C6-N1-C2	-5.84	117.96	120.30
23	BA	1351	C	N1-C2-O2	-5.84	115.39	118.90
23	BA	1367	A	N7-C8-N9	-5.84	110.88	113.80
23	BA	2087	G	C2-N3-C4	-5.84	108.98	111.90
23	BA	2453	A	N1-C6-N6	-5.84	115.09	118.60
23	DA	1261	C	C6-N1-C2	5.84	122.64	120.30
1	AA	204	U	C5-C6-N1	5.84	125.62	122.70
23	BA	1290	C	N3-C2-O2	-5.84	117.81	121.90
23	BA	1382	G	C8-N9-C4	5.84	108.74	106.40
23	BA	1653	G	N3-C4-N9	5.84	129.50	126.00
23	BA	2740	A	N1-C2-N3	5.84	132.22	129.30
1	CA	1367	C	N1-C2-O2	5.84	122.40	118.90
1	AA	606	G	N3-C4-C5	-5.84	125.68	128.60
1	CA	577	G	N3-C4-C5	5.84	131.52	128.60
1	CA	1351	U	C6-N1-C2	5.84	124.50	121.00
23	DA	1751	C	N1-C2-O2	-5.84	115.40	118.90
1	AA	1037	C	C2-N3-C4	5.84	122.82	119.90
23	BA	1297	C	N1-C2-O2	-5.84	115.40	118.90
23	BA	1519	G	C8-N9-C4	-5.84	104.07	106.40
23	BA	1779	U	C5-C4-O4	-5.84	122.40	125.90
23	BA	2546	U	N3-C4-C5	-5.84	111.10	114.60
1	CA	1008	C	C5-C6-N1	5.84	123.92	121.00
23	DA	928	G	C5-N7-C8	-5.84	101.38	104.30
23	BA	793	A	C5-C6-N6	-5.83	119.03	123.70
23	BA	1211	U	N3-C2-O2	5.83	126.28	122.20
23	DA	1654	A	N9-C4-C5	5.83	108.13	105.80
23	BA	807	U	N3-C4-O4	5.83	123.48	119.40
1	CA	1354	C	C6-N1-C2	-5.83	117.97	120.30
23	DA	300	A	N9-C4-C5	-5.83	103.47	105.80
23	DA	1231	G	N1-C6-O6	5.83	123.40	119.90
23	BA	2044	C	N3-C2-O2	5.83	125.98	121.90
23	BA	2455	G	C5-C6-O6	-5.83	125.10	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BQ	87	LYS	CD-CE-NZ	5.83	125.11	111.70
1	CA	1064	G	C8-N9-C4	-5.83	104.07	106.40
1	CA	1254	C	C4-C5-C6	5.83	120.32	117.40
13	CM	56	LEU	CA-CB-CG	5.83	128.71	115.30
23	DA	391	G	C5-C6-O6	-5.83	125.10	128.60
23	DA	624	C	N3-C4-C5	5.83	124.23	121.90
23	DA	1776	G	N3-C2-N2	5.83	123.98	119.90
23	DA	2464	C	C2-N1-C1'	5.83	125.22	118.80
23	BA	1271	G	C5-C6-N1	-5.83	108.58	111.50
1	CA	610	G	C8-N9-C1'	-5.83	119.42	127.00
23	DA	529	A	C5-N7-C8	-5.83	100.98	103.90
23	DA	856	C	C5-C6-N1	5.83	123.92	121.00
1	AA	1308	U	N1-C2-O2	5.83	126.88	122.80
23	BA	848	G	C4-N9-C1'	5.83	134.08	126.50
23	DA	1292	U	N3-C2-O2	5.83	126.28	122.20
23	DA	1618	A	N1-C6-N6	-5.83	115.10	118.60
23	DA	2499	C	C6-N1-C2	-5.83	117.97	120.30
23	BA	640	C	C6-N1-C2	-5.83	117.97	120.30
1	AA	749	C	C6-N1-C2	-5.83	117.97	120.30
1	AA	1456	G	C2-N3-C4	5.83	114.81	111.90
23	DA	2843	G	N3-C2-N2	-5.83	115.82	119.90
23	DA	1435	G	C5-C6-O6	-5.82	125.11	128.60
23	DA	2425	A	C5-N7-C8	-5.82	100.99	103.90
23	DA	2617	C	C6-N1-C2	5.82	122.63	120.30
1	AA	993	G	C8-N9-C4	-5.82	104.07	106.40
23	BA	2017	U	C6-N1-C2	-5.82	117.51	121.00
23	DA	1304	C	N3-C4-C5	5.82	124.23	121.90
23	BA	1021	A	C4-C5-N7	5.82	113.61	110.70
23	BA	2348	U	N3-C4-C5	5.82	118.09	114.60
23	BA	2617	C	C5-C6-N1	-5.82	118.09	121.00
1	CA	1306	A	C8-N9-C4	-5.82	103.47	105.80
23	DA	1647	G	N3-C4-C5	5.82	131.51	128.60
23	DA	2070	G	N1-C2-N2	-5.82	110.96	116.20
23	BA	1680	U	C6-N1-C2	-5.82	117.51	121.00
23	BA	2146	C	N1-C2-O2	5.82	122.39	118.90
1	AA	187	C	C5-C6-N1	5.82	123.91	121.00
1	AA	696	A	N9-C4-C5	5.82	108.13	105.80
1	AA	1516	G	C2-N3-C4	-5.82	108.99	111.90
23	BA	968	G	N7-C8-N9	-5.82	110.19	113.10
23	BA	2746	U	C5-C4-O4	5.82	129.39	125.90
1	CA	304	U	C5-C4-O4	5.82	129.39	125.90
23	DA	1478	G	N3-C4-N9	5.82	129.49	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	485	G	C8-N9-C4	5.82	108.73	106.40
23	BA	141	A	C5-C6-N6	-5.82	119.05	123.70
23	BA	1432	C	N3-C4-N4	5.82	122.07	118.00
23	BA	2049	G	N3-C4-C5	5.82	131.51	128.60
1	CA	1306	A	N7-C8-N9	5.82	116.71	113.80
1	AA	307	C	C6-N1-C2	-5.81	117.97	120.30
23	BA	1333	C	N1-C2-O2	-5.81	115.41	118.90
23	DA	938	G	C8-N9-C4	5.81	108.73	106.40
1	AA	398	C	C5-C6-N1	-5.81	118.09	121.00
23	DA	60	G	C4-C5-N7	5.81	113.12	110.80
23	BA	1359	A	C4-C5-C6	-5.81	114.09	117.00
1	AA	32	A	N9-C4-C5	5.81	108.12	105.80
23	BA	746	A	C5-N7-C8	-5.81	101.00	103.90
23	BA	1207	C	C4-C5-C6	5.81	120.31	117.40
23	BA	2849	U	N1-C2-O2	-5.81	118.73	122.80
23	DA	445	C	C5-C6-N1	-5.81	118.10	121.00
23	DA	750	A	C5-C6-N1	-5.81	114.80	117.70
23	BA	1387	C	C6-N1-C2	-5.81	117.98	120.30
23	BA	2304	G	C5-C6-N1	5.81	114.40	111.50
23	DA	362	U	C5-C4-O4	-5.81	122.42	125.90
23	DA	1298	C	N3-C4-C5	5.81	124.22	121.90
23	DA	1539	G	C4-C5-N7	5.81	113.12	110.80
23	DA	1801	G	C5-C6-O6	-5.81	125.12	128.60
1	AA	1061	G	C4-C5-N7	-5.81	108.48	110.80
23	BA	1578	U	N3-C2-O2	-5.80	118.14	122.20
23	BA	2073	C	C4-C5-C6	5.80	120.30	117.40
23	DA	304	G	C5-C6-N1	-5.80	108.60	111.50
23	DA	1373	A	N7-C8-N9	-5.80	110.90	113.80
23	DA	2038	G	C5-N7-C8	-5.80	101.40	104.30
1	AA	244	U	C5-C6-N1	-5.80	119.80	122.70
1	CA	1145	C	C5-C4-N4	5.80	124.26	120.20
23	DA	1243	G	C8-N9-C4	5.80	108.72	106.40
23	DA	2497	A	C5-C6-N6	-5.80	119.06	123.70
1	AA	1447	A	C2-N3-C4	5.80	113.50	110.60
23	BA	446	G	C5-C6-O6	-5.80	125.12	128.60
23	BA	510	C	C5-C4-N4	5.80	124.26	120.20
1	CA	1183	A	C8-N9-C4	-5.80	103.48	105.80
1	CA	1272	G	N9-C4-C5	-5.80	103.08	105.40
23	DA	656	G	C8-N9-C4	5.80	108.72	106.40
23	DA	2413	G	C2-N3-C4	-5.80	109.00	111.90
1	AA	960	U	C2-N1-C1'	5.80	124.66	117.70
1	AA	960	U	C5-C6-N1	5.80	125.60	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1133	G	N9-C4-C5	5.80	107.72	105.40
23	BA	115	C	N1-C2-O2	-5.80	115.42	118.90
23	BA	2230	G	N1-C2-N2	5.80	121.42	116.20
1	CA	749	C	C6-N1-C2	-5.80	117.98	120.30
1	CA	993	G	N3-C4-C5	-5.80	125.70	128.60
1	CA	1031	G	C8-N9-C4	-5.80	104.08	106.40
1	CA	1405	G	N3-C2-N2	5.80	123.96	119.90
23	DA	391	G	C4-C5-N7	5.80	113.12	110.80
1	CA	1008	C	C2-N1-C1'	5.80	125.18	118.80
23	BA	1963	U	C5-C6-N1	5.79	125.60	122.70
23	BA	2592	G	N3-C4-C5	-5.79	125.70	128.60
23	BA	723	G	C5-C6-O6	-5.79	125.12	128.60
23	BA	1938	A	C8-N9-C4	-5.79	103.48	105.80
23	DA	1200	C	C5-C6-N1	-5.79	118.10	121.00
23	BA	1142(A)	A	C6-C5-N7	-5.79	128.25	132.30
23	BA	1769	G	C5-C6-O6	-5.79	125.12	128.60
23	BA	571	A	C5-C6-N6	-5.79	119.07	123.70
23	BA	1937	A	C6-N1-C2	-5.79	115.13	118.60
23	DA	644	A	N1-C6-N6	-5.79	115.13	118.60
23	DA	2077	A	C2-N3-C4	5.79	113.50	110.60
23	DA	2672	G	N1-C6-O6	5.79	123.37	119.90
1	AA	480	U	C5-C6-N1	-5.79	119.81	122.70
1	AA	1377	A	C6-C5-N7	-5.79	128.25	132.30
23	BA	475	U	N1-C2-N3	5.79	118.37	114.90
23	BA	2273	A	N7-C8-N9	5.79	116.69	113.80
1	AA	403	C	N3-C4-C5	-5.79	119.58	121.90
23	BA	188	G	C8-N9-C4	5.79	108.71	106.40
23	BA	452	G	C4-C5-N7	-5.79	108.49	110.80
23	DA	792	G	C8-N9-C1'	-5.79	119.48	127.00
23	DA	2323	G	C4-C5-N7	5.79	113.11	110.80
23	DA	2395	C	C6-N1-C2	5.79	122.61	120.30
1	AA	90	U	N1-C2-O2	5.78	126.85	122.80
1	AA	1158	C	C6-N1-C1'	-5.78	113.86	120.80
23	BA	496	G	N9-C4-C5	-5.78	103.09	105.40
23	BA	794	G	N1-C2-N3	5.78	127.37	123.90
1	CA	610	G	C4-N9-C1'	5.78	134.02	126.50
1	CA	1024	G	C5-N7-C8	-5.78	101.41	104.30
23	DA	179	G	N3-C4-C5	5.78	131.49	128.60
23	DA	825	C	C5-C4-N4	-5.78	116.15	120.20
23	DA	2221	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	460	G	N7-C8-N9	5.78	115.99	113.10
23	DA	129	C	C5-C6-N1	-5.78	118.11	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	774	A	N7-C8-N9	5.78	116.69	113.80
1	CA	982	U	C6-N1-C2	-5.78	117.53	121.00
18	CR	85	LEU	CA-CB-CG	5.78	128.59	115.30
23	DA	2745	C	N1-C2-O2	5.78	122.37	118.90
1	AA	517	G	N3-C4-C5	-5.78	125.71	128.60
23	BA	674	G	C4-C5-N7	5.78	113.11	110.80
23	BA	1273	U	C2-N3-C4	-5.78	123.53	127.00
24	BB	15	A	N1-C6-N6	5.78	122.07	118.60
1	CA	1160	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	1040	U	C5-C4-O4	5.78	129.37	125.90
23	BA	2054	A	C5-C6-N6	-5.78	119.08	123.70
23	DA	39	C	C4-C5-C6	5.78	120.29	117.40
23	DA	1381	G	C4-C5-N7	-5.78	108.49	110.80
1	AA	402	G	N1-C6-O6	5.77	123.36	119.90
1	AA	900	A	N1-C2-N3	-5.77	126.41	129.30
1	AA	1210	C	C5-C4-N4	-5.77	116.16	120.20
23	BA	2712(A)	A	N1-C6-N6	5.77	122.06	118.60
23	DA	2288	A	C8-N9-C4	-5.77	103.49	105.80
23	DA	2517	C	C2-N3-C4	-5.77	117.01	119.90
24	DB	27	C	N1-C2-O2	5.77	122.36	118.90
1	AA	90	U	C2-N3-C4	5.77	130.46	127.00
1	AA	1266	G	C8-N9-C4	-5.77	104.09	106.40
23	BA	1117	G	C5-C6-O6	-5.77	125.14	128.60
23	BA	2304	G	C8-N9-C1'	5.77	134.50	127.00
23	BA	2745	C	C2-N1-C1'	5.77	125.15	118.80
1	CA	1442(B)	A	N3-C4-N9	5.77	132.02	127.40
23	DA	1914	C	C6-N1-C1'	5.77	127.73	120.80
23	DA	1994	C	N3-C4-N4	-5.77	113.96	118.00
23	DA	2224	G	C4-C5-N7	5.77	113.11	110.80
23	BA	991	C	N1-C2-O2	-5.77	115.44	118.90
24	DB	33	G	N9-C4-C5	-5.77	103.09	105.40
23	BA	2370	G	N1-C6-O6	-5.77	116.44	119.90
23	DA	327	G	C6-C5-N7	-5.77	126.94	130.40
23	DA	775	G	N1-C6-O6	-5.77	116.44	119.90
23	DA	1544	A	C8-N9-C4	-5.77	103.49	105.80
23	DA	1208	C	C5-C4-N4	-5.77	116.16	120.20
1	AA	55	A	C8-N9-C4	-5.77	103.49	105.80
22	AX	54	LEU	CA-CB-CG	5.77	128.56	115.30
1	CA	1442(B)	A	C6-N1-C2	-5.77	115.14	118.60
23	DA	2254	C	C6-N1-C2	5.77	122.61	120.30
23	BA	1266	G	C4-C5-N7	5.76	113.11	110.80
23	BA	2609	U	N1-C2-N3	5.76	118.36	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	951	C	C5-C6-N1	-5.76	118.12	121.00
23	BA	2454	G	C8-N9-C4	5.76	108.70	106.40
23	BA	2790	A	C8-N9-C4	-5.76	103.50	105.80
23	DA	208	C	C6-N1-C2	5.76	122.61	120.30
23	DA	794	G	N1-C2-N2	-5.76	111.01	116.20
1	AA	534	U	C5-C4-O4	5.76	129.36	125.90
23	BA	1180	C	C5-C6-N1	-5.76	118.12	121.00
23	BA	2298	A	N1-C6-N6	-5.76	115.14	118.60
1	CA	1273	G	N7-C8-N9	5.76	115.98	113.10
1	CA	1350	A	N7-C8-N9	5.76	116.68	113.80
23	DA	1304	C	C2-N3-C4	-5.76	117.02	119.90
23	DA	2705	A	C2-N3-C4	-5.76	107.72	110.60
1	AA	1261	A	C4-C5-N7	5.76	113.58	110.70
1	AA	1351	U	N1-C2-O2	5.76	126.83	122.80
23	BA	1022	G	N3-C2-N2	-5.76	115.87	119.90
23	BA	2430	A	N1-C2-N3	5.76	132.18	129.30
1	CA	359	U	C5-C6-N1	-5.76	119.82	122.70
23	DA	2444	G	N1-C6-O6	-5.76	116.44	119.90
23	DA	1038	C	N3-C2-O2	-5.76	117.87	121.90
23	BA	1269	A	C5-N7-C8	-5.76	101.02	103.90
23	BA	2004	G	C8-N9-C4	-5.76	104.10	106.40
23	BA	1998	G	C5-C6-N1	-5.75	108.62	111.50
1	CA	998	G	N3-C2-N2	-5.75	115.87	119.90
23	DA	1261	C	N3-C4-C5	5.75	124.20	121.90
23	DA	1695	G	C6-C5-N7	-5.75	126.95	130.40
23	DA	2490	G	N1-C6-O6	5.75	123.35	119.90
1	AA	945	G	C5-C6-O6	-5.75	125.15	128.60
23	BA	633	A	N1-C6-N6	5.75	122.05	118.60
23	BA	803	U	C4-C5-C6	5.75	123.15	119.70
23	BA	1478	G	N1-C2-N2	-5.75	111.02	116.20
23	BA	1658	C	N3-C4-N4	5.75	122.03	118.00
23	BA	2300	G	N3-C4-C5	-5.75	125.72	128.60
1	CA	1182	G	N3-C4-N9	-5.75	122.55	126.00
23	DA	2306	C	N1-C2-O2	5.75	122.35	118.90
23	DA	2587	A	C4-C5-C6	5.75	119.88	117.00
23	BA	13	A	N9-C4-C5	5.75	108.10	105.80
23	BA	1398	C	N1-C2-O2	-5.75	115.45	118.90
23	BA	2322	A	N3-C4-C5	-5.75	122.77	126.80
1	CA	952	U	C5-C4-O4	5.75	129.35	125.90
1	CA	1116	C	N3-C4-N4	-5.75	113.97	118.00
23	DA	2171	A	N1-C6-N6	5.75	122.05	118.60
1	AA	569	C	N3-C2-O2	-5.75	117.88	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1760	A	N9-C4-C5	5.75	108.10	105.80
23	DA	2597	G	C8-N9-C1'	-5.75	119.53	127.00
1	CA	950	U	N3-C2-O2	-5.75	118.17	122.20
23	DA	2616	C	N3-C2-O2	-5.75	117.88	121.90
2	AB	129	GLU	N-CA-C	-5.75	95.49	111.00
23	BA	1254	A	N9-C4-C5	5.75	108.10	105.80
23	BA	2840	C	C2-N3-C4	-5.75	117.03	119.90
1	CA	1114	C	N3-C2-O2	-5.75	117.88	121.90
23	DA	2525	G	C4-C5-N7	5.75	113.10	110.80
23	DA	243	U	N3-C2-O2	-5.75	118.18	122.20
23	BA	677	A	C2-N3-C4	-5.74	107.73	110.60
23	DA	1930	G	C8-N9-C4	5.74	108.70	106.40
1	AA	1141	C	N1-C2-O2	-5.74	115.45	118.90
23	BA	193	U	N1-C2-N3	5.74	118.34	114.90
23	BA	848	G	C8-N9-C1'	-5.74	119.54	127.00
23	DA	265	A	C5-C6-N1	-5.74	114.83	117.70
23	DA	2506	U	N3-C2-O2	-5.74	118.18	122.20
1	AA	570	G	C8-N9-C4	-5.74	104.10	106.40
23	BA	1791	A	C2-N3-C4	-5.74	107.73	110.60
23	BA	2626	C	N3-C4-C5	5.74	124.20	121.90
1	CA	292	G	N3-C4-C5	-5.74	125.73	128.60
1	CA	1293	G	N9-C4-C5	-5.74	103.10	105.40
23	BA	810	U	N3-C2-O2	5.74	126.22	122.20
23	BA	1805	U	N3-C4-O4	5.74	123.42	119.40
23	BA	2589	A	C8-N9-C4	5.74	108.10	105.80
23	DA	1996	C	C6-N1-C2	5.74	122.59	120.30
1	AA	339	C	C5-C6-N1	-5.74	118.13	121.00
1	AA	346	G	C8-N9-C1'	-5.74	119.54	127.00
23	BA	1938	A	C6-N1-C2	-5.74	115.16	118.60
1	CA	1077	G	N7-C8-N9	-5.74	110.23	113.10
1	CA	1163	C	C2-N3-C4	5.74	122.77	119.90
23	DA	2306	C	C6-N1-C1'	-5.74	113.92	120.80
23	BA	510	C	C4-C5-C6	5.74	120.27	117.40
23	BA	712	G	C8-N9-C4	5.74	108.69	106.40
1	CA	1124	G	C4-N9-C1'	5.74	133.96	126.50
23	DA	216	A	C8-N9-C4	5.74	108.09	105.80
23	DA	1005	C	C5-C6-N1	-5.74	118.13	121.00
1	CA	1353	G	N3-C4-C5	-5.73	125.73	128.60
23	DA	968	G	C8-N9-C4	5.73	108.69	106.40
24	BB	97	G	C5-N7-C8	5.73	107.17	104.30
1	CA	980	C	N3-C4-N4	-5.73	113.99	118.00
23	DA	1989	G	C6-C5-N7	-5.73	126.96	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2376	A	N1-C6-N6	5.73	122.04	118.60
23	DA	2517	C	N3-C4-C5	5.73	124.19	121.90
23	BA	2014	A	N1-C6-N6	5.73	122.04	118.60
23	BA	2590	A	C5-N7-C8	-5.73	101.03	103.90
23	BA	2732	G	C5-C6-O6	-5.73	125.16	128.60
23	BA	2785	C	N3-C2-O2	-5.73	117.89	121.90
23	DA	1320	C	N3-C4-N4	5.73	122.01	118.00
23	DA	1428	C	C2-N3-C4	-5.73	117.03	119.90
23	BA	2442	C	C5-C6-N1	-5.73	118.14	121.00
24	BB	5	C	C6-N1-C2	5.73	122.59	120.30
1	CA	67	C	C6-N1-C2	-5.73	118.01	120.30
1	CA	204	U	C2-N1-C1'	5.73	124.57	117.70
23	DA	1637	A	N1-C6-N6	-5.73	115.16	118.60
23	DA	2310	A	N1-C6-N6	5.73	122.04	118.60
27	DF	45	ARG	NE-CZ-NH1	-5.73	117.44	120.30
1	AA	998	G	N3-C4-C5	5.73	131.46	128.60
23	DA	2146	C	N3-C2-O2	-5.73	117.89	121.90
1	AA	946	A	N9-C4-C5	-5.72	103.51	105.80
23	BA	1801	G	C5-C6-O6	-5.72	125.17	128.60
23	DA	1313	U	N3-C4-C5	-5.72	111.17	114.60
23	DA	1380	G	C2-N3-C4	-5.72	109.04	111.90
23	DA	1471	A	N1-C2-N3	5.72	132.16	129.30
23	BA	2260	C	C2-N3-C4	-5.72	117.04	119.90
1	CA	1054	C	N1-C2-O2	5.72	122.33	118.90
1	CA	1352	C	N1-C2-N3	5.72	123.20	119.20
23	DA	51	G	C4-C5-N7	-5.72	108.51	110.80
23	DA	695	G	N1-C6-O6	-5.72	116.47	119.90
23	BA	463	G	N1-C6-O6	-5.72	116.47	119.90
23	DA	2096	U	C6-N1-C2	-5.72	117.57	121.00
1	AA	418	C	C6-N1-C2	-5.72	118.01	120.30
23	BA	664	C	C5-C6-N1	-5.72	118.14	121.00
23	BA	2682	U	C5-C4-O4	-5.72	122.47	125.90
1	CA	1171	G	C8-N9-C4	-5.72	104.11	106.40
23	DA	1222	C	C6-N1-C2	5.72	122.59	120.30
23	DA	2681	C	N3-C2-O2	-5.72	117.90	121.90
1	AA	1199	U	N1-C2-O2	5.72	126.80	122.80
1	CA	357	G	C2-N3-C4	5.72	114.76	111.90
1	AA	144	G	N1-C6-O6	5.72	123.33	119.90
1	AA	1207	G	N3-C4-C5	5.72	131.46	128.60
23	BA	1543	C	N1-C2-O2	5.72	122.33	118.90
23	BA	2676	C	C5-C6-N1	-5.72	118.14	121.00
23	DA	728	G	C5-N7-C8	5.72	107.16	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	398	C	N3-C2-O2	-5.71	117.90	121.90
23	BA	607	U	C6-N1-C2	5.71	124.43	121.00
23	DA	1210	A	C6-C5-N7	-5.71	128.30	132.30
23	DA	1891	G	C2-N3-C4	-5.71	109.04	111.90
23	DA	2286	A	C5-N7-C8	-5.71	101.04	103.90
1	AA	1032	G	C6-N1-C2	5.71	128.53	125.10
23	BA	2066	C	C5-C6-N1	5.71	123.86	121.00
1	CA	691	G	C5-C6-O6	-5.71	125.17	128.60
1	AA	352	C	C2-N1-C1'	5.71	125.08	118.80
23	BA	324	A	N7-C8-N9	-5.71	110.94	113.80
23	BA	1225	G	N3-C4-N9	-5.71	122.57	126.00
23	BA	1858	G	N3-C4-C5	-5.71	125.75	128.60
23	BA	2694	G	N3-C4-N9	5.71	129.43	126.00
41	BX	57	LEU	CA-CB-CG	5.71	128.43	115.30
1	CA	1284	C	C2-N3-C4	5.71	122.75	119.90
23	BA	1261	C	N1-C2-O2	-5.71	115.47	118.90
1	CA	1493	A	C8-N9-C4	-5.71	103.52	105.80
23	DA	986	C	N3-C2-O2	-5.71	117.91	121.90
1	AA	1312	G	N7-C8-N9	5.71	115.95	113.10
23	BA	2261	C	N3-C4-C5	-5.71	119.62	121.90
24	BB	61	G	N1-C6-O6	5.71	123.32	119.90
23	BA	431	U	C2-N1-C1'	5.71	124.55	117.70
24	BB	14	U	C5-C6-N1	-5.71	119.85	122.70
23	DA	1999	C	C5-C6-N1	-5.71	118.15	121.00
23	DA	2023	G	N1-C6-O6	5.71	123.32	119.90
1	AA	438	G	N3-C4-C5	-5.70	125.75	128.60
1	CA	323	U	C5-C6-N1	5.70	125.55	122.70
23	DA	988	A	C6-C5-N7	-5.70	128.31	132.30
23	DA	1648	C	N3-C2-O2	-5.70	117.91	121.90
1	AA	1019	C	N1-C2-O2	5.70	122.32	118.90
23	BA	841	A	N1-C2-N3	5.70	132.15	129.30
23	BA	1341	U	N3-C2-O2	-5.70	118.21	122.20
23	BA	2764	A	C5-C6-N6	5.70	128.26	123.70
23	BA	2883	A	C8-N9-C4	5.70	108.08	105.80
1	CA	7	G	N3-C4-C5	5.70	131.45	128.60
1	CA	972	C	C2-N1-C1'	5.70	125.07	118.80
1	CA	1017	G	C5-C6-O6	5.70	132.02	128.60
1	CA	1367	C	N3-C2-O2	-5.70	117.91	121.90
23	DA	47	C	C5-C6-N1	-5.70	118.15	121.00
23	DA	1898	U	C5-C4-O4	5.70	129.32	125.90
1	AA	789	U	N3-C4-C5	-5.70	111.18	114.60
23	BA	1125	G	N3-C4-N9	5.70	129.42	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BB	74	U	N1-C2-N3	5.70	118.32	114.90
23	DA	1284	A	C4-C5-N7	5.70	113.55	110.70
23	BA	2577	A	C4-C5-C6	-5.70	114.15	117.00
23	DA	2421	G	C4-C5-N7	5.70	113.08	110.80
23	BA	48	G	C5-C6-O6	5.70	132.02	128.60
23	BA	1828	G	C8-N9-C4	5.70	108.68	106.40
23	BA	2189	U	N1-C2-O2	5.70	126.79	122.80
23	BA	2491	U	C6-N1-C2	5.70	124.42	121.00
1	CA	638	G	C8-N9-C4	5.70	108.68	106.40
23	DA	141	A	C2-N3-C4	-5.70	107.75	110.60
23	DA	733	G	N3-C2-N2	5.70	123.89	119.90
23	BA	1586	A	N7-C8-N9	5.69	116.65	113.80
23	DA	1394	U	N3-C2-O2	-5.69	118.21	122.20
23	BA	734	A	N1-C6-N6	5.69	122.02	118.60
23	BA	2893	G	C8-N9-C1'	5.69	134.40	127.00
1	CA	1443	G	N3-C4-N9	5.69	129.41	126.00
23	DA	1843	C	C6-N1-C2	5.69	122.58	120.30
23	BA	806	C	N3-C4-C5	5.69	124.18	121.90
23	BA	1139	G	N1-C6-O6	-5.69	116.49	119.90
23	BA	1858	G	C4-N9-C1'	5.69	133.90	126.50
23	BA	2445	G	N1-C6-O6	-5.69	116.49	119.90
23	BA	2623	G	N1-C6-O6	-5.69	116.49	119.90
45	B1	46	LEU	CA-CB-CG	5.69	128.39	115.30
23	DA	1319	G	C8-N9-C1'	-5.69	119.60	127.00
23	DA	1926	U	N3-C2-O2	-5.69	118.22	122.20
23	DA	2300	G	N3-C4-C5	-5.69	125.75	128.60
1	AA	1308	U	C2-N3-C4	5.69	130.41	127.00
1	AA	1327	C	N3-C4-C5	5.69	124.18	121.90
23	BA	2086	U	C5-C4-O4	5.69	129.31	125.90
23	DA	945	A	C1'-O4'-C4'	-5.69	105.35	109.90
23	DA	1990	C	N1-C2-O2	-5.69	115.49	118.90
23	DA	2708	G	C5-C6-O6	5.69	132.01	128.60
23	BA	194	G	C2-N3-C4	-5.69	109.06	111.90
23	BA	2832	U	C6-N1-C1'	-5.69	113.24	121.20
1	CA	615	C	C6-N1-C2	-5.69	118.03	120.30
1	CA	979	C	N3-C4-C5	-5.69	119.62	121.90
1	AA	1210	C	C6-N1-C1'	-5.69	113.98	120.80
23	BA	2186	G	C5-C6-N1	-5.69	108.66	111.50
23	DA	1554	A	N1-C6-N6	5.69	122.01	118.60
1	AA	1267	C	C2-N1-C1'	-5.68	112.55	118.80
23	BA	26	G	C8-N9-C4	-5.68	104.13	106.40
1	CA	1243	C	C6-N1-C1'	5.68	127.62	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1249	C	C6-N1-C2	-5.68	118.03	120.30
23	DA	509	C	N3-C2-O2	-5.68	117.92	121.90
23	DA	932	G	C4-N9-C1'	-5.68	119.11	126.50
23	DA	961	C	C5-C4-N4	-5.68	116.22	120.20
23	DA	1464	C	C6-N1-C2	-5.68	118.03	120.30
1	AA	39	G	N1-C6-O6	5.68	123.31	119.90
1	AA	529	G	C6-C5-N7	-5.68	126.99	130.40
1	AA	1256	A	C8-N9-C4	5.68	108.07	105.80
23	BA	508	G	C4-C5-N7	5.68	113.07	110.80
23	BA	1368	G	C8-N9-C4	-5.68	104.13	106.40
23	DA	751	A	C5-N7-C8	5.68	106.74	103.90
23	DA	1340	U	C6-N1-C2	5.68	124.41	121.00
23	DA	1659	U	C2-N3-C4	-5.68	123.59	127.00
23	DA	2444	G	C4-C5-N7	-5.68	108.53	110.80
24	DB	9	G	C5-C6-O6	-5.68	125.19	128.60
1	AA	1037	C	C5-C4-N4	5.68	124.18	120.20
23	BA	2597	G	C6-C5-N7	-5.68	126.99	130.40
1	CA	1378	C	C5-C6-N1	5.68	123.84	121.00
1	CA	1514	C	C6-N1-C2	-5.68	118.03	120.30
23	DA	2100	G	C6-C5-N7	-5.68	126.99	130.40
23	DA	2287	A	C2-N3-C4	-5.68	107.76	110.60
23	BA	1244	G	N3-C2-N2	-5.68	115.92	119.90
24	DB	115	G	C2-N3-C4	-5.68	109.06	111.90
23	BA	870	A	C8-N9-C4	5.68	108.07	105.80
23	BA	1443	G	N1-C6-O6	5.68	123.31	119.90
23	BA	1998	G	C2-N3-C4	-5.68	109.06	111.90
23	BA	2338	G	C5-C6-O6	-5.68	125.19	128.60
23	BA	2499	C	C6-N1-C2	-5.68	118.03	120.30
1	CA	1232	U	C5-C6-N1	5.68	125.54	122.70
23	DA	2596	U	N1-C2-O2	-5.68	118.83	122.80
23	BA	476	G	C5-C6-N1	-5.67	108.66	111.50
23	BA	528	A	C6-N1-C2	5.67	122.00	118.60
23	DA	208	C	N3-C2-O2	5.67	125.87	121.90
23	DA	1565	C	C2-N1-C1'	-5.67	112.56	118.80
23	DA	2181	G	N3-C4-N9	-5.67	122.59	126.00
23	DA	2287	A	N9-C4-C5	-5.67	103.53	105.80
1	AA	1340	A	C5-C6-N6	5.67	128.24	123.70
23	BA	512	G	C4-C5-N7	-5.67	108.53	110.80
23	BA	874	G	N3-C4-C5	5.67	131.44	128.60
23	BA	938	G	C8-N9-C4	5.67	108.67	106.40
23	BA	1586	A	C4-C5-C6	5.67	119.84	117.00
1	CA	358	U	N3-C4-O4	-5.67	115.43	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1467	G	N9-C4-C5	5.67	107.67	105.40
23	BA	431	U	N3-C4-O4	5.67	123.37	119.40
1	CA	403	C	C2-N3-C4	-5.67	117.06	119.90
23	DA	449	A	N7-C8-N9	5.67	116.64	113.80
1	AA	1442(A)	G	N9-C4-C5	-5.67	103.13	105.40
23	BA	363(E)	U	C6-N1-C2	-5.67	117.60	121.00
23	BA	734	A	C5-N7-C8	-5.67	101.07	103.90
23	BA	2699	C	C5-C4-N4	-5.67	116.23	120.20
23	DA	2100	G	C5-C6-O6	-5.67	125.20	128.60
23	DA	2100	G	C8-N9-C1'	-5.67	119.63	127.00
23	BA	2821	A	N9-C4-C5	-5.66	103.53	105.80
1	CA	53	A	C6-N1-C2	-5.66	115.20	118.60
23	DA	2826	A	N1-C6-N6	-5.66	115.20	118.60
23	BA	2182	G	C4-C5-N7	-5.66	108.53	110.80
23	DA	1325	G	N3-C4-N9	5.66	129.40	126.00
1	AA	1518	A	N9-C4-C5	5.66	108.06	105.80
23	BA	577	G	C6-C5-N7	-5.66	127.00	130.40
23	BA	1374	G	N1-C6-O6	5.66	123.30	119.90
23	BA	2826	A	C2-N3-C4	-5.66	107.77	110.60
1	CA	1441	G	C8-N9-C4	-5.66	104.14	106.40
23	DA	1191	G	N9-C4-C5	-5.66	103.14	105.40
23	BA	1845	G	C5-C6-O6	5.66	132.00	128.60
1	CA	1390	U	N1-C2-O2	-5.66	118.84	122.80
23	DA	509	C	C2-N3-C4	-5.66	117.07	119.90
23	DA	1635	G	C6-C5-N7	-5.66	127.00	130.40
23	DA	2318	G	N7-C8-N9	5.66	115.93	113.10
1	AA	398	C	C2-N3-C4	-5.66	117.07	119.90
23	DA	1645	G	N1-C2-N3	5.66	127.29	123.90
1	AA	932	C	C6-N1-C2	-5.66	118.04	120.30
23	BA	1459	G	C8-N9-C4	-5.66	104.14	106.40
23	DA	645	C	N3-C2-O2	-5.66	117.94	121.90
23	DA	926	A	C5-C6-N6	-5.66	119.18	123.70
23	DA	1359	A	N9-C4-C5	5.66	108.06	105.80
23	DA	2861	G	C8-N9-C4	-5.66	104.14	106.40
1	AA	1030(B)	C	N1-C2-O2	5.65	122.29	118.90
23	BA	1799	G	P-O3'-C3'	5.65	126.48	119.70
1	CA	1006	C	N1-C2-O2	-5.65	115.51	118.90
23	BA	1345	C	N1-C2-O2	-5.65	115.51	118.90
1	CA	455	C	C5-C6-N1	5.65	123.83	121.00
23	DA	2052	G	N3-C2-N2	-5.65	115.94	119.90
23	DA	60	G	N9-C4-C5	-5.65	103.14	105.40
23	DA	2189	U	N3-C2-O2	-5.65	118.25	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	DE	119	ARG	NE-CZ-NH1	5.65	123.12	120.30
23	BA	954	G	N3-C4-C5	-5.65	125.78	128.60
23	BA	1797	C	C6-N1-C2	5.65	122.56	120.30
1	AA	1124	G	N3-C2-N2	5.65	123.85	119.90
23	BA	577	G	C5-C6-N1	-5.65	108.68	111.50
23	BA	932	G	N9-C4-C5	5.65	107.66	105.40
1	CA	694	A	N1-C6-N6	5.65	121.99	118.60
1	CA	951	G	N3-C4-N9	5.65	129.39	126.00
23	DA	1685	C	C5-C4-N4	-5.65	116.25	120.20
23	BA	1409	C	C6-N1-C2	5.64	122.56	120.30
23	BA	1982	C	C6-N1-C2	-5.64	118.04	120.30
1	CA	940	C	C6-N1-C2	-5.64	118.04	120.30
23	DA	53	A	C2-N3-C4	-5.64	107.78	110.60
1	AA	1035	A	N7-C8-N9	5.64	116.62	113.80
1	AA	1505	G	C5-C6-N1	-5.64	108.68	111.50
23	BA	99	U	C6-N1-C2	5.64	124.39	121.00
23	BA	250	G	C5-C6-O6	-5.64	125.22	128.60
23	BA	1407	C	N1-C2-O2	-5.64	115.52	118.90
23	BA	2866	U	C5-C4-O4	5.64	129.29	125.90
23	BA	1316	U	N1-C2-O2	5.64	126.75	122.80
23	DA	692	C	N3-C4-C5	5.64	124.16	121.90
1	AA	172	A	C8-N9-C4	-5.64	103.54	105.80
23	BA	1779	U	C2-N1-C1'	5.64	124.47	117.70
1	CA	1029	C	N3-C4-C5	-5.64	119.64	121.90
23	DA	308	G	C4-N9-C1'	5.64	133.83	126.50
23	DA	1315	C	N3-C2-O2	-5.64	117.95	121.90
23	BA	1992	G	P-O3'-C3'	5.64	126.47	119.70
1	AA	944	G	C8-N9-C4	-5.64	104.14	106.40
23	DA	141	A	C8-N9-C4	-5.64	103.55	105.80
23	DA	271(S)	G	C6-C5-N7	-5.64	127.02	130.40
23	DA	1374	G	N7-C8-N9	5.64	115.92	113.10
23	DA	2516	G	N9-C4-C5	5.64	107.66	105.40
1	AA	888	G	C8-N9-C4	5.63	108.65	106.40
23	BA	1758	G	C5-C6-O6	-5.63	125.22	128.60
1	CA	1165	C	N1-C2-O2	5.63	122.28	118.90
23	DA	787	U	N3-C4-O4	-5.63	115.46	119.40
1	AA	250	A	N1-C6-N6	-5.63	115.22	118.60
23	DA	2581	G	N1-C6-O6	-5.63	116.52	119.90
23	BA	308	G	C4-N9-C1'	5.63	133.82	126.50
1	CA	1171	G	N7-C8-N9	5.63	115.92	113.10
23	DA	195	A	C4-C5-C6	5.63	119.81	117.00
23	DA	2049	G	N3-C4-N9	-5.63	122.62	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1002	G	C8-N9-C4	-5.63	104.15	106.40
23	BA	2471	C	N3-C2-O2	-5.63	117.96	121.90
23	BA	1900	A	C8-N9-C4	-5.63	103.55	105.80
1	CA	361	G	C5-C6-N1	-5.63	108.69	111.50
1	CA	976	G	C8-N9-C1'	5.63	134.31	127.00
23	DA	122	G	C4-C5-N7	5.63	113.05	110.80
24	DB	99	G	N1-C6-O6	5.63	123.28	119.90
1	AA	1124	G	N9-C4-C5	-5.62	103.15	105.40
23	DA	2785	C	C6-N1-C2	-5.62	118.05	120.30
23	BA	185	U	N1-C2-N3	5.62	118.27	114.90
23	BA	512	G	O4'-C1'-N9	5.62	112.70	108.20
23	BA	1001	A	C4-C5-C6	-5.62	114.19	117.00
23	BA	2055	C	C2-N1-C1'	-5.62	112.61	118.80
1	CA	1021	G	C5-C6-O6	-5.62	125.23	128.60
23	DA	816	C	C5-C4-N4	-5.62	116.26	120.20
23	DA	1008	C	C6-N1-C2	5.62	122.55	120.30
23	DA	2087	G	N3-C4-C5	5.62	131.41	128.60
23	DA	2510	C	N3-C2-O2	-5.62	117.96	121.90
1	AA	1183	A	C8-N9-C4	5.62	108.05	105.80
23	BA	907	U	N1-C2-O2	5.62	126.74	122.80
23	DA	251	A	C5-C6-N1	-5.62	114.89	117.70
23	DA	255	A	C5-N7-C8	-5.62	101.09	103.90
23	DA	1823	G	N3-C4-C5	5.62	131.41	128.60
23	BA	201	C	C2-N3-C4	-5.62	117.09	119.90
23	BA	706	A	N9-C4-C5	-5.62	103.55	105.80
23	BA	1322	A	N1-C2-N3	-5.62	126.49	129.30
1	CA	986	A	C5-C6-N6	-5.62	119.20	123.70
23	DA	2297	C	C6-N1-C1'	5.62	127.54	120.80
23	BA	116	C	C4-C5-C6	5.62	120.21	117.40
23	BA	1256	G	C4-N9-C1'	5.62	133.81	126.50
23	BA	1278	A	C4-C5-C6	5.62	119.81	117.00
23	BA	2857	G	C8-N9-C4	-5.62	104.15	106.40
23	DA	250	G	N1-C6-O6	5.62	123.27	119.90
1	AA	988	G	C4-C5-N7	-5.62	108.55	110.80
23	DA	821	A	C4-C5-C6	5.62	119.81	117.00
23	DA	2351	G	N3-C4-N9	5.62	129.37	126.00
1	AA	252	U	C6-N1-C2	5.62	124.37	121.00
1	AA	988	G	N1-C6-O6	-5.62	116.53	119.90
23	BA	1187	G	N1-C6-O6	-5.62	116.53	119.90
23	BA	1797	C	C5-C4-N4	-5.62	116.27	120.20
23	BA	2055	C	C6-N1-C1'	5.62	127.54	120.80
1	CA	713	G	C5-C6-N1	5.62	114.31	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	188	G	C6-C5-N7	-5.62	127.03	130.40
23	DA	940	G	C5-C6-O6	-5.62	125.23	128.60
1	AA	938	A	C8-N9-C4	-5.61	103.56	105.80
23	BA	58	G	N1-C2-N3	5.61	127.27	123.90
23	BA	1824	G	C5-N7-C8	5.61	107.11	104.30
23	BA	1916	A	C8-N9-C4	5.61	108.05	105.80
23	DA	2286	A	C4-C5-N7	5.61	113.51	110.70
23	BA	799	G	N1-C2-N3	5.61	127.27	123.90
23	BA	1022	G	N3-C4-N9	-5.61	122.63	126.00
23	DA	936	C	N1-C2-O2	-5.61	115.53	118.90
23	DA	2125	G	C8-N9-C4	-5.61	104.16	106.40
23	DA	2707	G	C4-C5-N7	5.61	113.05	110.80
1	AA	266	G	C2-N3-C4	-5.61	109.09	111.90
1	AA	1350	A	N3-C4-C5	-5.61	122.87	126.80
1	AA	1492	A	C2-N3-C4	5.61	113.41	110.60
23	BA	1049	C	N1-C2-O2	5.61	122.27	118.90
23	BA	1187	G	C8-N9-C4	-5.61	104.16	106.40
23	BA	1637	A	C8-N9-C4	-5.61	103.56	105.80
23	BA	1785	A	C6-C5-N7	-5.61	128.37	132.30
23	DA	229	A	C8-N9-C4	-5.61	103.56	105.80
23	DA	582	G	C8-N9-C4	5.61	108.64	106.40
1	AA	1126	U	C2-N1-C1'	5.61	124.43	117.70
23	DA	739	G	C5-N7-C8	5.61	107.10	104.30
23	DA	1619	G	C4-C5-C6	-5.61	115.44	118.80
1	AA	403	C	N1-C2-O2	-5.61	115.54	118.90
1	AA	1037	C	C6-N1-C1'	5.61	127.53	120.80
23	BA	271(W)	G	N1-C6-O6	-5.61	116.54	119.90
23	BA	1298	C	N3-C4-N4	-5.61	114.08	118.00
23	DA	194	G	N3-C2-N2	-5.61	115.97	119.90
23	DA	786	C	N3-C4-N4	-5.61	114.08	118.00
23	DA	1968	G	N3-C2-N2	-5.61	115.98	119.90
23	DA	311	A	N1-C6-N6	5.60	121.96	118.60
23	DA	1207	C	N3-C2-O2	5.60	125.82	121.90
1	AA	1309	G	C4-N9-C1'	-5.60	119.22	126.50
23	BA	739	G	C5-C6-O6	-5.60	125.24	128.60
23	BA	932	G	N3-C4-N9	-5.60	122.64	126.00
23	BA	1242	A	N1-C6-N6	5.60	121.96	118.60
23	BA	1989	G	C5-C6-O6	-5.60	125.24	128.60
23	BA	2554	U	N1-C2-O2	-5.60	118.88	122.80
23	BA	2676	C	C2-N3-C4	-5.60	117.10	119.90
1	CA	438	G	N3-C4-N9	5.60	129.36	126.00
1	AA	988	G	C8-N9-C4	-5.60	104.16	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2260	C	C5-C6-N1	-5.60	118.20	121.00
23	DA	2709	G	C4-C5-N7	5.60	113.04	110.80
1	AA	346	G	N3-C2-N2	5.60	123.82	119.90
1	AA	1341	U	N1-C2-O2	-5.60	118.88	122.80
23	BA	1170	G	C6-C5-N7	-5.60	127.04	130.40
23	BA	1333	C	N3-C4-C5	5.60	124.14	121.90
23	BA	1374	G	N3-C2-N2	-5.60	115.98	119.90
1	AA	1047	G	N1-C6-O6	5.60	123.26	119.90
23	BA	1829	A	C2-N3-C4	-5.60	107.80	110.60
24	BB	86	G	C5-C6-O6	-5.60	125.24	128.60
23	DA	188	G	N9-C4-C5	-5.60	103.16	105.40
23	DA	1261	C	C2-N3-C4	-5.60	117.10	119.90
1	AA	433	C	C2-N3-C4	-5.60	117.10	119.90
23	BA	1358	G	C4-C5-N7	-5.60	108.56	110.80
1	CA	150	C	C6-N1-C2	-5.60	118.06	120.30
1	CA	1362	C	N1-C2-O2	5.60	122.26	118.90
23	DA	526	A	N1-C6-N6	-5.60	115.24	118.60
1	AA	795	C	C6-N1-C2	-5.59	118.06	120.30
18	AR	85	LEU	CA-CB-CG	5.59	128.17	115.30
23	BA	496	G	C8-N9-C4	5.59	108.64	106.40
23	BA	729	G	C5-C6-O6	-5.59	125.24	128.60
1	CA	1457	G	C5-C6-O6	-5.59	125.24	128.60
23	DA	2395	C	N3-C4-C5	5.59	124.14	121.90
23	BA	2550	G	N3-C2-N2	-5.59	115.98	119.90
23	BA	2610	C	N3-C4-C5	5.59	124.14	121.90
1	CA	286	G	N1-C6-O6	-5.59	116.54	119.90
23	DA	2452	C	N3-C4-N4	5.59	121.92	118.00
23	DA	2746	U	N3-C4-O4	-5.59	115.48	119.40
23	BA	509	C	C4-C5-C6	5.59	120.19	117.40
23	BA	837	C	C6-N1-C2	-5.59	118.06	120.30
29	BH	71	LEU	N-CA-C	-5.59	95.90	111.00
23	DA	130	C	C5-C6-N1	-5.59	118.20	121.00
23	DA	988	A	C4-C5-N7	5.59	113.50	110.70
23	DA	2000	G	C2-N3-C4	-5.59	109.10	111.90
1	AA	1125	U	N1-C2-O2	-5.59	118.89	122.80
23	BA	959	A	C4-C5-N7	-5.59	107.91	110.70
23	BA	1022	G	C8-N9-C1'	5.59	134.27	127.00
1	CA	1420	C	C6-N1-C2	-5.59	118.06	120.30
23	DA	975	C	N3-C2-O2	-5.59	117.99	121.90
23	DA	2296	U	C6-N1-C2	5.59	124.35	121.00
1	AA	93	G	N1-C6-O6	5.59	123.25	119.90
23	DA	1808	U	N1-C2-N3	-5.59	111.55	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2021	C	C5-C6-N1	-5.59	118.21	121.00
23	DA	2828	C	C5-C6-N1	-5.59	118.21	121.00
1	AA	1357	A	N1-C6-N6	5.59	121.95	118.60
23	BA	425	G	C5-N7-C8	5.59	107.09	104.30
23	BA	1021	A	C6-C5-N7	-5.59	128.39	132.30
23	BA	2441	C	C5-C6-N1	-5.59	118.21	121.00
1	CA	998	G	C6-C5-N7	5.59	133.75	130.40
1	CA	1032	G	C5-C6-O6	5.59	131.95	128.60
23	DA	205	G	N1-C6-O6	5.59	123.25	119.90
23	DA	1373	A	C5-N7-C8	5.59	106.69	103.90
23	BA	1261	C	N3-C4-C5	-5.58	119.67	121.90
23	BA	2416	C	N1-C2-O2	-5.58	115.55	118.90
24	BB	97	G	C8-N9-C4	5.58	108.63	106.40
1	CA	1385	G	N1-C6-O6	5.58	123.25	119.90
1	CA	1456	G	N1-C2-N3	-5.58	120.55	123.90
23	DA	1155	A	N1-C6-N6	5.58	121.95	118.60
23	DA	2148	G	C6-C5-N7	5.58	133.75	130.40
23	BA	2087	G	C6-C5-N7	-5.58	127.05	130.40
1	CA	1133	G	N9-C4-C5	5.58	107.63	105.40
23	DA	403	U	C5-C6-N1	-5.58	119.91	122.70
1	AA	1217	C	N3-C4-N4	-5.58	114.09	118.00
1	AA	1327	C	C6-N1-C2	5.58	122.53	120.30
23	BA	560	C	C2-N3-C4	-5.58	117.11	119.90
1	CA	1230	C	N1-C2-O2	5.58	122.25	118.90
1	CA	1497	G	C8-N9-C4	-5.58	104.17	106.40
23	DA	961	C	N3-C4-N4	5.58	121.91	118.00
23	DA	2075	U	N1-C2-O2	-5.58	118.89	122.80
23	BA	2179	C	C2-N1-C1'	5.58	124.94	118.80
23	BA	2733	A	N1-C6-N6	5.58	121.95	118.60
23	BA	614(B)	G	C4-C5-N7	-5.58	108.57	110.80
23	BA	746	A	C4-C5-N7	5.58	113.49	110.70
23	DA	777	A	C8-N9-C4	-5.58	103.57	105.80
23	DA	1617	C	C6-N1-C2	5.58	122.53	120.30
23	DA	2245	U	N1-C2-O2	-5.58	118.89	122.80
1	AA	1467	G	C4-C5-N7	-5.58	108.57	110.80
23	BA	13	A	C5-C6-N6	5.58	128.16	123.70
23	DA	1539	G	N7-C8-N9	5.58	115.89	113.10
1	AA	274	A	N1-C6-N6	-5.58	115.25	118.60
1	AA	365	U	N3-C4-O4	-5.58	115.50	119.40
23	BA	1349	A	N1-C6-N6	5.58	121.94	118.60
1	CA	1232	U	N3-C4-O4	5.58	123.30	119.40
23	DA	2026	C	N3-C2-O2	5.58	125.80	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1779	U	N3-C4-C5	5.57	117.94	114.60
23	BA	2593	U	C5-C4-O4	5.57	129.24	125.90
23	BA	2661	G	N3-C4-C5	-5.57	125.81	128.60
1	CA	358	U	C5-C4-O4	5.57	129.24	125.90
1	CA	571	U	C5-C6-N1	5.57	125.49	122.70
23	DA	143	G	C4-N9-C1'	-5.57	119.26	126.50
23	DA	2424	C	C4-C5-C6	5.57	120.19	117.40
23	DA	2439	A	C5-C6-N1	-5.57	114.91	117.70
1	AA	1284	C	C2-N1-C1'	5.57	124.93	118.80
23	BA	1488	G	N1-C6-O6	5.57	123.24	119.90
23	BA	1653	G	C4-C5-C6	5.57	122.14	118.80
52	B8	34	TRP	N-CA-C	-5.57	95.96	111.00
23	DA	205	G	N3-C4-N9	5.57	129.34	126.00
23	DA	1125	G	C4-N9-C1'	5.57	133.74	126.50
23	BA	659	C	C4-C5-C6	5.57	120.19	117.40
23	BA	1597	A	N7-C8-N9	-5.57	111.02	113.80
23	BA	1999	C	N1-C2-O2	-5.57	115.56	118.90
23	DA	713	G	N1-C6-O6	5.57	123.24	119.90
23	DA	1022	G	C6-C5-N7	5.57	133.74	130.40
23	DA	1116	C	C6-N1-C2	5.57	122.53	120.30
23	DA	1819	A	N1-C6-N6	-5.57	115.26	118.60
23	DA	2129	C	C5-C4-N4	5.57	124.10	120.20
25	DD	131	LEU	CB-CG-CD2	-5.57	101.53	111.00
23	BA	1193	G	C8-N9-C4	5.57	108.63	106.40
23	BA	2351	G	N3-C4-N9	5.57	129.34	126.00
23	DA	704	G	C5-C6-O6	-5.57	125.26	128.60
1	CA	485	G	C4-N9-C1'	-5.57	119.26	126.50
1	CA	1317	C	N1-C2-O2	5.57	122.24	118.90
23	DA	848	G	N3-C4-N9	5.57	129.34	126.00
1	AA	971	G	N9-C4-C5	5.57	107.63	105.40
23	BA	2696	U	N3-C4-O4	-5.57	115.50	119.40
1	CA	1177	G	C8-N9-C4	-5.57	104.17	106.40
23	DA	733	G	N1-C2-N2	-5.57	111.19	116.20
23	DA	1616	A	C5-C6-N6	-5.57	119.25	123.70
23	BA	2538	C	C2-N3-C4	-5.56	117.12	119.90
23	BA	2545	G	N3-C2-N2	-5.56	116.00	119.90
24	BB	64	C	C2-N1-C1'	-5.56	112.68	118.80
1	CA	1343	G	C4-N9-C1'	5.56	133.73	126.50
23	DA	2607	G	N3-C4-N9	5.56	129.34	126.00
1	CA	1241	G	C6-C5-N7	-5.56	127.06	130.40
1	CA	1254	C	N1-C2-O2	-5.56	115.56	118.90
23	DA	1137	G	N3-C2-N2	-5.56	116.01	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1940	U	N3-C4-O4	5.56	123.29	119.40
23	DA	2259	G	C5-C6-N1	-5.56	108.72	111.50
23	DA	2505	G	N3-C4-C5	5.56	131.38	128.60
23	BA	1803	A	C8-N9-C4	-5.56	103.58	105.80
23	DA	2070	G	N1-C6-O6	-5.56	116.56	119.90
23	BA	2587	A	N9-C4-C5	-5.56	103.58	105.80
23	DA	440	G	C5-C6-O6	5.56	131.94	128.60
23	DA	2034	U	C5-C6-N1	-5.56	119.92	122.70
1	AA	1034	G	N9-C4-C5	5.56	107.62	105.40
23	BA	2342	C	C5-C6-N1	5.56	123.78	121.00
23	DA	2321	G	C5-C6-O6	5.56	131.93	128.60
1	AA	1035	A	C8-N9-C4	-5.56	103.58	105.80
1	CA	1163	C	N3-C4-C5	-5.56	119.68	121.90
23	DA	2363	C	C5-C6-N1	-5.56	118.22	121.00
24	DB	113	G	C8-N9-C4	5.56	108.62	106.40
23	BA	496	G	N1-C6-O6	5.55	123.23	119.90
23	BA	1204	A	C4-C5-N7	5.55	113.48	110.70
23	BA	2297	C	C6-N1-C1'	5.55	127.47	120.80
23	BA	2641	G	N7-C8-N9	5.55	115.88	113.10
23	DA	1645	G	N9-C4-C5	5.55	107.62	105.40
1	AA	1309	G	N3-C2-N2	-5.55	116.01	119.90
23	BA	1021	A	N3-C4-N9	-5.55	122.96	127.40
23	BA	1939	U	C4-C5-C6	-5.55	116.37	119.70
23	DA	1779	U	C2-N1-C1'	5.55	124.36	117.70
23	DA	2447	G	N9-C4-C5	-5.55	103.18	105.40
1	AA	93	G	C5-C6-O6	-5.55	125.27	128.60
23	BA	263	C	N1-C2-O2	5.55	122.23	118.90
23	BA	1250	G	C5-C6-O6	-5.55	125.27	128.60
1	AA	1258	G	N1-C6-O6	-5.55	116.57	119.90
23	BA	2611	U	C5-C4-O4	-5.55	122.57	125.90
1	CA	901	A	N1-C6-N6	5.55	121.93	118.60
23	DA	171	G	C6-N1-C2	5.55	128.43	125.10
23	DA	1001	A	N7-C8-N9	-5.55	111.03	113.80
23	DA	2872	G	N1-C6-O6	5.55	123.23	119.90
23	BA	1900	A	C5-C6-N1	5.55	120.47	117.70
1	CA	1216	G	C4-N9-C1'	-5.55	119.29	126.50
23	DA	190	A	C2-N3-C4	-5.55	107.83	110.60
23	DA	665	C	C4-C5-C6	-5.55	114.63	117.40
23	DA	822	U	C5-C4-O4	5.55	129.23	125.90
23	BA	1403	C	C2-N1-C1'	-5.55	112.70	118.80
23	BA	1822	G	N7-C8-N9	-5.55	110.33	113.10
23	DA	1041	C	C6-N1-C2	-5.55	118.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1965	C	N1-C2-O2	5.55	122.23	118.90
23	BA	90	U	N1-C2-N3	-5.54	111.57	114.90
1	CA	252	U	C5-C6-N1	-5.54	119.93	122.70
1	AA	356	A	C2-N3-C4	5.54	113.37	110.60
1	AA	555	C	N1-C2-O2	-5.54	115.57	118.90
1	AA	1367	C	C6-N1-C2	-5.54	118.08	120.30
1	CA	792	A	C8-N9-C4	5.54	108.02	105.80
1	CA	1120	G	N1-C2-N2	5.54	121.19	116.20
23	DA	1988	C	C5-C4-N4	-5.54	116.32	120.20
23	BA	1322	A	N1-C6-N6	5.54	121.92	118.60
23	BA	2567	G	N7-C8-N9	-5.54	110.33	113.10
23	BA	2607	G	N3-C2-N2	5.54	123.78	119.90
1	CA	946	A	C5-C6-N1	5.54	120.47	117.70
1	CA	1328	C	C6-N1-C2	5.54	122.52	120.30
23	DA	530	G	C8-N9-C1'	5.54	134.20	127.00
23	DA	1670	C	C5-C4-N4	5.54	124.08	120.20
23	DA	1677	A	N1-C6-N6	5.54	121.92	118.60
23	DA	2292	C	C6-N1-C2	5.54	122.52	120.30
1	AA	313	A	N1-C6-N6	-5.54	115.28	118.60
23	BA	425	G	N3-C4-N9	5.54	129.32	126.00
23	BA	966	G	N3-C2-N2	5.54	123.78	119.90
23	BA	1816	G	C4-C5-N7	5.54	113.02	110.80
23	DA	41	C	C2-N3-C4	-5.54	117.13	119.90
23	DA	956	G	C4-C5-N7	-5.54	108.58	110.80
23	DA	1315	C	N1-C2-N3	5.54	123.08	119.20
23	DA	2056	G	C6-C5-N7	-5.54	127.08	130.40
23	DA	2504	U	C6-N1-C2	5.54	124.32	121.00
1	AA	992	U	P-O3'-C3'	5.54	126.35	119.70
23	BA	2271	G	N3-C4-N9	5.54	129.32	126.00
1	CA	1241	G	C4-N9-C1'	5.54	133.70	126.50
23	DA	383	U	C4-C5-C6	5.54	123.02	119.70
23	DA	693	C	N3-C4-C5	5.54	124.11	121.90
23	BA	1805	U	C4-C5-C6	5.54	123.02	119.70
23	BA	154(A)	C	C5-C4-N4	5.54	124.07	120.20
23	BA	1581	G	C4-N9-C1'	5.54	133.69	126.50
23	DA	85	G	C8-N9-C4	5.54	108.61	106.40
23	DA	756	C	C4-C5-C6	5.54	120.17	117.40
23	DA	2048	G	N7-C8-N9	5.54	115.87	113.10
23	DA	2287	A	C8-N9-C4	5.54	108.01	105.80
23	DA	2819	G	C8-N9-C4	5.54	108.61	106.40
23	BA	179	G	N9-C4-C5	-5.53	103.19	105.40
23	BA	1800	C	N3-C4-C5	-5.53	119.69	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	115	C	N1-C2-O2	-5.53	115.58	118.90
23	DA	2304	G	C6-C5-N7	5.53	133.72	130.40
1	CA	942	G	C4-C5-N7	-5.53	108.59	110.80
1	CA	1283	G	N7-C8-N9	5.53	115.87	113.10
23	DA	2615	U	C4-C5-C6	-5.53	116.38	119.70
23	BA	768	G	N3-C4-N9	5.53	129.32	126.00
48	B4	42	PHE	C-N-CA	5.53	135.53	121.70
23	DA	1193	G	C8-N9-C4	5.53	108.61	106.40
23	DA	570	G	N3-C2-N2	5.53	123.77	119.90
1	AA	1003	G	C6-N1-C2	5.53	128.42	125.10
23	BA	2354	G	C5-N7-C8	-5.53	101.54	104.30
23	DA	742	G	N1-C2-N2	-5.53	111.22	116.20
23	DA	856	C	C3'-C2'-C1'	-5.53	97.08	101.50
23	DA	2775	A	C6-N1-C2	5.53	121.92	118.60
23	BA	830	G	C5-N7-C8	5.53	107.06	104.30
23	BA	1489	U	N1-C2-O2	-5.53	118.93	122.80
23	BA	2430	A	C8-N9-C4	-5.53	103.59	105.80
23	BA	2605	U	N1-C2-N3	5.53	118.22	114.90
1	CA	782	A	C8-N9-C4	-5.53	103.59	105.80
1	CA	1160	G	C4-C5-N7	5.53	113.01	110.80
1	CA	1442	G	N3-C4-N9	5.53	129.31	126.00
23	DA	2870	C	C2-N3-C4	-5.53	117.14	119.90
1	AA	1274	G	C8-N9-C4	-5.52	104.19	106.40
23	BA	648	G	N3-C2-N2	-5.52	116.03	119.90
23	BA	1391	U	C6-N1-C1'	-5.52	113.47	121.20
23	BA	1530	C	C5-C4-N4	-5.52	116.33	120.20
23	BA	2314	C	C2-N1-C1'	-5.52	112.72	118.80
23	DA	508	G	N9-C4-C5	-5.52	103.19	105.40
23	BA	1271	G	N1-C6-O6	5.52	123.21	119.90
23	BA	1628	G	N7-C8-N9	5.52	115.86	113.10
23	BA	1641	A	N1-C2-N3	5.52	132.06	129.30
23	BA	2043	C	C6-N1-C2	-5.52	118.09	120.30
23	BA	2590	A	N3-C4-C5	5.52	130.67	126.80
1	CA	171	A	N9-C4-C5	5.52	108.01	105.80
23	DA	292	C	C6-N1-C2	5.52	122.51	120.30
23	DA	803	U	C5-C6-N1	-5.52	119.94	122.70
1	AA	506	G	N7-C8-N9	5.52	115.86	113.10
23	BA	2716	U	N1-C2-O2	5.52	126.67	122.80
1	CA	809	G	C8-N9-C4	5.52	108.61	106.40
23	DA	1021	A	N3-C4-C5	5.52	130.66	126.80
23	DA	2026	C	N3-C4-C5	-5.52	119.69	121.90
1	AA	1012	U	N3-C4-O4	5.52	123.26	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2252	G	C8-N9-C4	5.52	108.61	106.40
24	BB	104	U	N3-C4-C5	5.52	117.91	114.60
24	BB	104	U	C6-N1-C2	5.52	124.31	121.00
1	CA	78	G	N1-C6-O6	5.52	123.21	119.90
1	CA	359	U	N1-C2-N3	5.52	118.21	114.90
1	CA	925	G	N9-C4-C5	-5.52	103.19	105.40
1	CA	1032	G	N3-C4-C5	5.52	131.36	128.60
23	DA	252	G	C8-N9-C4	5.52	108.61	106.40
23	DA	2126	A	C2-N3-C4	-5.52	107.84	110.60
23	DA	2293	C	N3-C4-C5	5.52	124.11	121.90
23	DA	2510	C	C5-C6-N1	-5.52	118.24	121.00
1	AA	455	C	C5-C6-N1	5.52	123.76	121.00
23	BA	1405	U	N3-C4-C5	5.52	117.91	114.60
23	BA	2225	A	C5-C6-N1	5.52	120.46	117.70
23	DA	441	U	C5-C4-O4	-5.52	122.59	125.90
23	DA	1125	G	C8-N9-C1'	-5.52	119.83	127.00
23	DA	1918	A	C8-N9-C4	5.52	108.01	105.80
1	AA	948	C	N3-C4-N4	5.52	121.86	118.00
23	DA	1328	G	N9-C4-C5	-5.52	103.19	105.40
23	BA	688	U	C2-N3-C4	-5.51	123.69	127.00
23	BA	990	A	N9-C4-C5	-5.51	103.59	105.80
23	DA	775	G	N3-C2-N2	5.51	123.76	119.90
23	BA	2895	U	C5-C6-N1	5.51	125.46	122.70
23	DA	1452	A	C2-N3-C4	-5.51	107.84	110.60
1	CA	1057	G	C5-C6-O6	-5.51	125.29	128.60
23	DA	308	G	N7-C8-N9	5.51	115.86	113.10
23	DA	1890	A	C8-N9-C4	5.51	108.00	105.80
23	DA	1896	G	C5-C6-O6	-5.51	125.29	128.60
41	DX	57	LEU	CA-CB-CG	5.51	127.98	115.30
1	AA	543	C	C6-N1-C2	-5.51	118.10	120.30
1	AA	824	C	N1-C2-O2	-5.51	115.60	118.90
23	BA	122	G	C6-C5-N7	-5.51	127.10	130.40
1	CA	1182	G	C8-N9-C1'	5.51	134.16	127.00
1	CA	1323	G	N7-C8-N9	5.51	115.85	113.10
23	DA	1990	C	C2-N3-C4	-5.51	117.15	119.90
23	DA	2162	G	N3-C4-C5	-5.51	125.85	128.60
23	BA	1561	G	C5-C6-O6	-5.50	125.30	128.60
23	DA	2326	C	N3-C4-C5	-5.50	119.70	121.90
23	DA	2522	U	C2-N1-C1'	5.50	124.31	117.70
23	BA	1752	C	N3-C2-O2	5.50	125.75	121.90
23	DA	1340	U	C5-C4-O4	-5.50	122.60	125.90
23	DA	1790	C	N3-C2-O2	5.50	125.75	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1379	G	N7-C8-N9	5.50	115.85	113.10
23	BA	1962	C	C5-C6-N1	5.50	123.75	121.00
1	AA	365	U	C2-N1-C1'	-5.50	111.10	117.70
1	AA	907	A	C2-N3-C4	-5.50	107.85	110.60
23	BA	675	A	C5-N7-C8	-5.50	101.15	103.90
23	DA	833	U	N3-C4-C5	-5.50	111.30	114.60
23	DA	1821	A	C5-C6-N1	5.50	120.45	117.70
23	BA	33	U	C5-C6-N1	-5.50	119.95	122.70
23	BA	1912	A	C8-N9-C4	-5.50	103.60	105.80
23	BA	2623	G	C8-N9-C4	-5.50	104.20	106.40
1	CA	960	U	C6-N1-C2	-5.50	117.70	121.00
23	DA	514	A	C6-N1-C2	-5.50	115.30	118.60
23	DA	1459	G	N3-C4-C5	-5.50	125.85	128.60
23	DA	2354	G	N7-C8-N9	5.50	115.85	113.10
23	DA	2447	G	C8-N9-C4	5.50	108.60	106.40
23	BA	652(F)	G	C5-C6-O6	-5.50	125.30	128.60
23	BA	754	C	N3-C4-N4	5.50	121.85	118.00
23	BA	1022	G	C4-N9-C1'	-5.50	119.35	126.50
23	BA	2162	G	N3-C4-N9	5.50	129.30	126.00
23	DA	2709	G	N1-C6-O6	5.50	123.20	119.90
23	BA	2370	G	C6-N1-C2	-5.50	121.80	125.10
23	BA	2881	C	N3-C2-O2	5.50	125.75	121.90
50	D6	13	CYS	CA-CB-SG	5.50	123.89	114.00
23	BA	446	G	C8-N9-C1'	-5.49	119.86	127.00
1	CA	1277	C	C2-N3-C4	5.49	122.65	119.90
23	DA	732	C	C6-N1-C2	5.49	122.50	120.30
23	BA	826	U	C4-C5-C6	5.49	122.99	119.70
23	BA	2238	G	N3-C4-C5	-5.49	125.86	128.60
24	BB	47	C	N3-C4-N4	5.49	121.84	118.00
23	DA	1192	G	N7-C8-N9	-5.49	110.36	113.10
23	DA	1219	G	N1-C6-O6	5.49	123.19	119.90
1	AA	438	G	N3-C4-N9	5.49	129.29	126.00
23	BA	2157	G	N9-C4-C5	5.49	107.59	105.40
1	CA	569	C	N1-C2-O2	5.49	122.19	118.90
1	CA	925	G	N1-C6-O6	5.49	123.19	119.90
1	CA	1101	A	N1-C6-N6	-5.49	115.31	118.60
23	DA	33	U	C2-N1-C1'	-5.49	111.11	117.70
23	DA	2447	G	C4-C5-N7	5.49	113.00	110.80
1	AA	1424	C	C2-N3-C4	-5.49	117.16	119.90
23	DA	1193	G	N1-C6-O6	5.49	123.19	119.90
23	BA	928	G	C4-C5-N7	5.49	112.99	110.80
23	BA	945	A	N1-C6-N6	5.49	121.89	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2496	C	N3-C2-O2	5.49	125.74	121.90
1	CA	1032	G	C6-N1-C2	5.49	128.39	125.10
23	DA	529	A	C4-C5-N7	5.49	113.44	110.70
23	DA	952	G	C5-C6-N1	5.49	114.24	111.50
23	DA	1211	U	C6-N1-C2	5.49	124.29	121.00
23	DA	2007	C	N3-C4-C5	-5.49	119.71	121.90
23	DA	2443	C	N1-C2-O2	-5.49	115.61	118.90
23	BA	299	A	N9-C4-C5	5.48	107.99	105.80
23	BA	1313	U	N3-C2-O2	-5.48	118.36	122.20
23	DA	1247	A	C8-N9-C4	5.48	107.99	105.80
1	AA	916	G	C4-N9-C1'	5.48	133.63	126.50
1	AA	1518	A	C8-N9-C4	-5.48	103.61	105.80
23	BA	1626	G	N1-C6-O6	-5.48	116.61	119.90
1	CA	71	C	C6-N1-C2	-5.48	118.11	120.30
1	CA	1340	A	N1-C6-N6	-5.48	115.31	118.60
23	BA	1269	A	C8-N9-C4	5.48	107.99	105.80
23	BA	1948	G	N1-C6-O6	-5.48	116.61	119.90
23	DA	205	G	C6-C5-N7	-5.48	127.11	130.40
23	DA	932	G	C4-C5-N7	-5.48	108.61	110.80
23	DA	1202	C	C5-C6-N1	-5.48	118.26	121.00
1	AA	21	G	N3-C4-C5	-5.48	125.86	128.60
23	BA	2590	A	C4-C5-N7	5.48	113.44	110.70
23	DA	2485	G	C4-C5-N7	5.48	112.99	110.80
23	BA	945	A	N1-C2-N3	5.48	132.04	129.30
23	BA	1306	C	N3-C4-C5	5.48	124.09	121.90
23	BA	1992	G	C8-N9-C4	-5.48	104.21	106.40
1	AA	1493	A	C8-N9-C4	-5.47	103.61	105.80
23	BA	230	U	C2-N1-C1'	5.47	124.27	117.70
23	BA	1942	C	C6-N1-C1'	5.47	127.37	120.80
23	DA	1038	C	N1-C2-O2	5.47	122.18	118.90
23	BA	736	C	N3-C4-N4	5.47	121.83	118.00
23	BA	1621	U	N3-C4-O4	5.47	123.23	119.40
23	BA	2506	U	N3-C2-O2	-5.47	118.37	122.20
1	CA	1237	C	C2-N3-C4	5.47	122.64	119.90
1	CA	1320	C	N1-C2-O2	5.47	122.18	118.90
23	DA	449	A	N1-C6-N6	5.47	121.88	118.60
23	DA	2723	C	C6-N1-C2	5.47	122.49	120.30
23	BA	631	A	N1-C6-N6	5.47	121.88	118.60
23	DA	1403	C	C6-N1-C1'	5.47	127.36	120.80
23	DA	2558	C	C5-C6-N1	-5.47	118.26	121.00
1	AA	1174	G	C4-C5-C6	-5.47	115.52	118.80
23	BA	488	G	C5-N7-C8	5.47	107.03	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1275	A	N1-C2-N3	5.47	132.03	129.30
23	BA	1330	C	N3-C4-N4	5.47	121.83	118.00
1	CA	240	C	C2-N3-C4	-5.47	117.17	119.90
1	CA	1031	G	C2-N3-C4	5.47	114.64	111.90
1	CA	1166	G	N1-C6-O6	-5.47	116.62	119.90
23	DA	1006	C	C5-C4-N4	5.47	124.03	120.20
1	CA	1228	C	C2-N3-C4	5.47	122.63	119.90
23	DA	657	U	C5-C4-O4	5.47	129.18	125.90
23	DA	1763	G	N3-C4-C5	5.47	131.33	128.60
23	BA	768	G	N3-C4-C5	-5.47	125.87	128.60
23	BA	1295	C	C6-N1-C2	-5.47	118.11	120.30
23	BA	1320	C	N1-C2-O2	-5.47	115.62	118.90
23	BA	1588	C	C6-N1-C2	-5.47	118.11	120.30
23	BA	2032	G	C4-C5-C6	5.47	122.08	118.80
1	AA	204	U	C2-N1-C1'	5.46	124.26	117.70
23	BA	1553	A	N9-C4-C5	5.46	107.99	105.80
23	BA	1624	G	C5-C6-N1	5.46	114.23	111.50
23	BA	2804	C	C5-C6-N1	5.46	123.73	121.00
1	CA	443	C	N1-C2-O2	5.46	122.18	118.90
1	CA	896	C	C5-C6-N1	-5.46	118.27	121.00
1	AA	786	G	C8-N9-C4	-5.46	104.22	106.40
23	BA	1930	G	C4-N9-C1'	-5.46	119.40	126.50
23	BA	2084	C	C4-C5-C6	5.46	120.13	117.40
23	DA	2817	G	N1-C6-O6	5.46	123.18	119.90
23	BA	2032	G	N1-C6-O6	5.46	123.18	119.90
1	CA	356	A	C2-N3-C4	5.46	113.33	110.60
1	CA	1305	G	N3-C4-C5	5.46	131.33	128.60
23	DA	2294	C	N3-C4-C5	5.46	124.08	121.90
23	DA	2711	A	C8-N9-C4	5.46	107.98	105.80
23	BA	948	G	C8-N9-C4	-5.46	104.22	106.40
23	BA	1257	C	N3-C2-O2	-5.46	118.08	121.90
23	BA	139	G	C8-N9-C4	-5.46	104.22	106.40
23	BA	443	A	C8-N9-C4	-5.46	103.62	105.80
23	BA	1343	G	C4-N9-C1'	5.46	133.59	126.50
1	CA	105	G	N9-C4-C5	5.46	107.58	105.40
1	CA	1326	C	C2-N3-C4	5.46	122.63	119.90
23	DA	945	A	C6-C5-N7	-5.46	128.48	132.30
23	DA	2055	C	C6-N1-C2	5.46	122.48	120.30
23	BA	835	A	N1-C2-N3	-5.46	126.57	129.30
23	BA	856	C	C5-C6-N1	5.46	123.73	121.00
1	CA	28	G	C5-C6-O6	-5.46	125.33	128.60
1	AA	939	G	C6-N1-C2	5.46	128.37	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1653	G	C8-N9-C1'	-5.46	119.91	127.00
23	DA	127	A	C2-N3-C4	-5.46	107.87	110.60
23	DA	413	C	N3-C2-O2	5.46	125.72	121.90
23	DA	1807	G	C8-N9-C4	5.46	108.58	106.40
23	DA	2857	G	N1-C6-O6	5.46	123.17	119.90
1	AA	117	G	C8-N9-C1'	-5.45	119.91	127.00
1	AA	1106	G	C8-N9-C4	-5.45	104.22	106.40
23	BA	885	C	C5-C4-N4	-5.45	116.38	120.20
23	BA	2373	G	C8-N9-C4	5.45	108.58	106.40
23	DA	124	G	C2-N3-C4	-5.45	109.17	111.90
23	DA	1983	C	C2-N3-C4	-5.45	117.17	119.90
23	DA	512	G	O4'-C1'-N9	5.45	112.56	108.20
23	DA	2641	G	C8-N9-C1'	-5.45	119.91	127.00
1	AA	605	U	N3-C4-C5	-5.45	111.33	114.60
1	AA	1423	G	N1-C6-O6	-5.45	116.63	119.90
1	CA	509	A	C8-N9-C4	-5.45	103.62	105.80
1	AA	28	G	N3-C2-N2	-5.45	116.09	119.90
11	AK	118	GLY	N-CA-C	5.45	126.72	113.10
23	BA	847	U	C2-N3-C4	-5.45	123.73	127.00
23	BA	928	G	N7-C8-N9	5.45	115.82	113.10
23	BA	1140	C	N1-C2-O2	5.45	122.17	118.90
23	DA	662	G	N3-C4-C5	-5.45	125.88	128.60
1	AA	1039	C	N1-C2-O2	5.45	122.17	118.90
23	BA	1048	A	N1-C6-N6	-5.45	115.33	118.60
23	BA	1216	G	N1-C2-N2	-5.45	111.30	116.20
23	BA	1257	C	N1-C2-N3	5.45	123.01	119.20
1	CA	1301	U	N3-C4-C5	-5.45	111.33	114.60
23	DA	1199	U	N1-C2-N3	5.45	118.17	114.90
1	AA	1166	G	C8-N9-C1'	5.45	134.08	127.00
23	DA	351	G	C8-N9-C4	5.45	108.58	106.40
23	DA	1609	A	C8-N9-C4	5.45	107.98	105.80
23	DA	2032	G	C5-C6-O6	-5.45	125.33	128.60
23	DA	2587	A	C2-N3-C4	-5.45	107.88	110.60
23	BA	1316	U	N3-C2-O2	-5.44	118.39	122.20
23	BA	1829	A	C8-N9-C4	5.44	107.98	105.80
1	CA	812	C	C6-N1-C2	5.44	122.48	120.30
23	DA	512	G	C5-C6-O6	5.44	131.87	128.60
23	DA	2435	A	C4-C5-N7	5.44	113.42	110.70
23	BA	2307	G	C5-N7-C8	-5.44	101.58	104.30
23	DA	623	G	C5-C6-O6	-5.44	125.33	128.60
23	DA	1276	A	N9-C4-C5	-5.44	103.62	105.80
23	BA	454	A	N1-C6-N6	5.44	121.86	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2035	G	C8-N9-C4	-5.44	104.22	106.40
1	CA	78	G	C5-C6-N1	-5.44	108.78	111.50
23	DA	308	G	C6-C5-N7	-5.44	127.14	130.40
23	DA	676	A	N1-C6-N6	5.44	121.86	118.60
23	DA	915	C	C2-N1-C1'	5.44	124.78	118.80
23	DA	1428	C	C5-C6-N1	-5.44	118.28	121.00
1	AA	378	G	C8-N9-C4	5.44	108.58	106.40
23	BA	528	A	C4-C5-C6	-5.44	114.28	117.00
23	BA	1204	A	N3-C4-N9	-5.44	123.05	127.40
23	BA	1348	G	N1-C6-O6	5.44	123.16	119.90
23	BA	2358	G	N1-C6-O6	-5.44	116.64	119.90
1	CA	1241	G	C8-N9-C4	-5.44	104.22	106.40
1	CA	1322	C	C5-C6-N1	5.44	123.72	121.00
23	DA	1938	A	N1-C2-N3	5.44	132.02	129.30
23	DA	2149	G	N1-C2-N2	5.44	121.09	116.20
23	BA	928	G	C4-C5-C6	5.44	122.06	118.80
23	BA	2286	A	C4-N9-C1'	5.44	136.09	126.30
24	BB	6	C	N1-C2-O2	5.44	122.16	118.90
23	DA	1377	G	C2-N3-C4	5.44	114.62	111.90
1	AA	1328	C	C6-N1-C1'	5.44	127.32	120.80
23	BA	1049	C	C4-C5-C6	-5.44	114.68	117.40
23	DA	53	A	N1-C2-N3	5.44	132.02	129.30
1	AA	333	G	C5-C6-O6	-5.43	125.34	128.60
1	AA	1338	G	N3-C4-N9	5.43	129.26	126.00
23	BA	1845	G	C4-C5-N7	-5.43	108.63	110.80
23	DA	624	C	C6-N1-C2	5.43	122.47	120.30
1	AA	25	C	N3-C4-N4	5.43	121.80	118.00
23	BA	309	G	N1-C6-O6	-5.43	116.64	119.90
23	BA	645	C	C6-N1-C2	-5.43	118.13	120.30
23	BA	1547	C	C5-C6-N1	-5.43	118.28	121.00
23	BA	2251	G	N1-C6-O6	-5.43	116.64	119.90
43	BZ	151	HIS	N-CA-C	5.43	125.67	111.00
1	CA	936	C	N3-C4-N4	5.43	121.80	118.00
23	DA	1112	G	N3-C4-N9	-5.43	122.74	126.00
23	DA	1123	C	C2-N1-C1'	-5.43	112.83	118.80
1	AA	1195	C	C6-N1-C2	-5.43	118.13	120.30
23	BA	2000	G	C8-N9-C4	5.43	108.57	106.40
23	BA	2264	C	C5-C6-N1	-5.43	118.28	121.00
23	BA	2769	C	N3-C2-O2	-5.43	118.10	121.90
1	AA	557	G	C4-N9-C1'	5.43	133.56	126.50
1	AA	1148	U	C5-C6-N1	5.43	125.41	122.70
23	BA	2084	C	C6-N1-C2	5.43	122.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	BP	148	LEU	CA-CB-CG	5.43	127.79	115.30
1	CA	77	G	N9-C4-C5	-5.43	103.23	105.40
23	DA	265	A	C4-N9-C1'	5.43	136.07	126.30
23	DA	546	C	C2-N1-C1'	5.43	124.77	118.80
23	DA	1371	G	C6-C5-N7	-5.43	127.14	130.40
23	DA	1432	C	C6-N1-C2	5.43	122.47	120.30
23	DA	2434	A	C8-N9-C4	5.43	107.97	105.80
1	AA	1468	A	C5-C6-N6	-5.43	119.36	123.70
23	DA	263	C	N3-C2-O2	-5.43	118.10	121.90
1	AA	149	A	N1-C6-N6	5.43	121.86	118.60
1	AA	801	U	C5-C6-N1	-5.43	119.99	122.70
1	AA	1116	C	N1-C2-O2	5.43	122.16	118.90
23	BA	2000	G	C5-N7-C8	5.43	107.01	104.30
23	DA	1021	A	C8-N9-C4	-5.43	103.63	105.80
1	AA	1259	C	C6-N1-C2	-5.42	118.13	120.30
23	BA	663	G	C8-N9-C4	-5.42	104.23	106.40
23	BA	2271	G	N3-C4-C5	-5.42	125.89	128.60
23	BA	2866	U	C4-C5-C6	5.42	122.95	119.70
23	DA	2338	G	N9-C4-C5	-5.42	103.23	105.40
23	BA	742	G	N9-C4-C5	-5.42	103.23	105.40
23	DA	652(R)	C	C5-C6-N1	5.42	123.71	121.00
23	BA	147	U	N1-C2-N3	5.42	118.15	114.90
23	BA	525	U	N1-C2-N3	5.42	118.15	114.90
23	BA	2680	C	C5-C4-N4	-5.42	116.41	120.20
1	CA	553	A	C8-N9-C4	-5.42	103.63	105.80
23	DA	1566	A	C2-N3-C4	-5.42	107.89	110.60
23	DA	1995	U	N1-C2-N3	5.42	118.15	114.90
23	DA	2728	U	C5-C6-N1	-5.42	119.99	122.70
23	BA	1233	C	C5-C6-N1	5.42	123.71	121.00
23	BA	1785	A	C4-C5-C6	5.42	119.71	117.00
23	DA	768	G	C6-C5-N7	-5.42	127.15	130.40
1	AA	21	G	C5-C6-O6	5.42	131.85	128.60
1	AA	286	G	N1-C6-O6	-5.42	116.65	119.90
23	BA	1319	G	N1-C2-N3	5.42	127.15	123.90
23	BA	1845	G	N3-C4-C5	-5.42	125.89	128.60
23	DA	529	A	N3-C4-C5	5.42	130.59	126.80
23	DA	1266	G	N3-C2-N2	5.42	123.69	119.90
23	BA	351	G	C8-N9-C4	5.42	108.57	106.40
23	BA	1022	G	N1-C6-O6	-5.42	116.65	119.90
23	BA	1471	A	N1-C2-N3	5.42	132.01	129.30
23	DA	2444	G	C5-C6-O6	5.42	131.85	128.60
1	AA	352	C	N3-C2-O2	-5.42	118.11	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1329	A	N1-C6-N6	-5.42	115.35	118.60
23	BA	195	A	N9-C4-C5	-5.42	103.63	105.80
23	BA	645	C	C5-C6-N1	5.42	123.71	121.00
23	BA	1034	G	C4-C5-N7	-5.42	108.63	110.80
23	BA	2287	A	N1-C2-N3	5.42	132.01	129.30
23	BA	2351	G	N3-C4-C5	-5.42	125.89	128.60
1	CA	1145	C	C2-N3-C4	5.42	122.61	119.90
1	CA	1238	A	C5-N7-C8	5.41	106.61	103.90
23	DA	1238	G	C8-N9-C4	5.41	108.56	106.40
23	DA	2491	U	C6-N1-C2	5.41	124.25	121.00
1	AA	1290	G	C8-N9-C1'	-5.41	119.96	127.00
23	DA	1026	U	N3-C2-O2	-5.41	118.41	122.20
23	BA	2441	C	N3-C4-C5	5.41	124.06	121.90
23	DA	1996	C	N3-C4-N4	-5.41	114.21	118.00
24	DB	70	C	C6-N1-C2	-5.41	118.14	120.30
23	BA	171	G	C6-N1-C2	5.41	128.34	125.10
23	BA	178	G	N1-C2-N3	5.41	127.15	123.90
23	BA	333	G	C8-N9-C1'	-5.41	119.97	127.00
23	BA	2240	C	N1-C2-O2	5.41	122.14	118.90
23	BA	2894	G	C5-N7-C8	-5.41	101.59	104.30
1	CA	610	G	N3-C4-N9	5.41	129.25	126.00
23	DA	505	A	C2-N3-C4	-5.41	107.90	110.60
23	DA	614(B)	G	C6-C5-N7	5.41	133.65	130.40
23	DA	2283	C	N3-C2-O2	5.41	125.69	121.90
23	BA	33	U	C6-N1-C2	5.41	124.24	121.00
23	BA	1206	G	N1-C2-N3	5.41	127.14	123.90
23	DA	1688	U	N1-C2-O2	-5.41	119.02	122.80
23	DA	2375	G	C2-N3-C4	-5.41	109.20	111.90
1	AA	1017	G	C6-N1-C2	5.41	128.34	125.10
23	BA	915	C	N3-C2-O2	-5.41	118.12	121.90
1	CA	841	U	C5-C6-N1	5.41	125.40	122.70
1	CA	1045	C	C5-C6-N1	5.41	123.70	121.00
23	BA	2489	G	N3-C4-C5	-5.40	125.90	128.60
1	CA	1099	G	C8-N9-C4	-5.40	104.24	106.40
23	DA	2393	A	N7-C8-N9	5.40	116.50	113.80
23	DA	2731	G	C5-C6-O6	-5.40	125.36	128.60
1	AA	1022	G	C2-N3-C4	5.40	114.60	111.90
23	BA	800	A	C6-N1-C2	-5.40	115.36	118.60
23	BA	2628	C	N3-C4-C5	5.40	124.06	121.90
1	CA	43	C	C2-N3-C4	5.40	122.60	119.90
23	DA	1022	G	C4-N9-C1'	-5.40	119.48	126.50
1	AA	21	G	C4-C5-N7	-5.40	108.64	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	717	G	N3-C4-C5	5.40	131.30	128.60
23	BA	1436	G	C6-C5-N7	-5.40	127.16	130.40
23	DA	268	C	N3-C4-N4	5.40	121.78	118.00
23	BA	654	A	C8-N9-C4	5.40	107.96	105.80
1	CA	261	U	C2-N1-C1'	-5.40	111.22	117.70
23	DA	446	G	N7-C8-N9	-5.40	110.40	113.10
1	AA	274	A	C5-C6-N1	5.40	120.40	117.70
23	BA	801	G	N9-C4-C5	5.40	107.56	105.40
23	BA	2727	G	C5-C6-O6	-5.40	125.36	128.60
23	DA	40	C	C6-N1-C2	5.40	122.46	120.30
23	DA	1006	C	C6-N1-C1'	5.40	127.28	120.80
23	DA	1530	C	C5-C4-N4	-5.40	116.42	120.20
23	DA	2151	G	N1-C2-N2	5.40	121.06	116.20
23	BA	432	A	C8-N9-C4	-5.39	103.64	105.80
23	BA	1133	U	N3-C4-C5	5.39	117.84	114.60
1	AA	171	A	N9-C4-C5	5.39	107.96	105.80
1	CA	1246	C	C2-N1-C1'	5.39	124.73	118.80
23	DA	383	U	N3-C4-C5	-5.39	111.36	114.60
23	DA	2515	C	C5-C4-N4	-5.39	116.42	120.20
24	DB	55	U	C6-N1-C2	-5.39	117.76	121.00
23	BA	393	C	N1-C2-O2	-5.39	115.67	118.90
23	BA	1536	C	N3-C4-C5	-5.39	119.74	121.90
23	DA	1941	C	N1-C2-O2	-5.39	115.67	118.90
1	AA	433	C	C5-C6-N1	-5.39	118.31	121.00
23	BA	676	A	C1'-O4'-C4'	-5.39	105.59	109.90
23	BA	763	G	C5-N7-C8	5.39	106.99	104.30
23	BA	1231	G	N1-C2-N3	5.39	127.13	123.90
23	BA	2276	G	N3-C2-N2	-5.39	116.13	119.90
23	DA	62	C	N3-C4-C5	5.39	124.06	121.90
23	DA	826	U	C4-C5-C6	5.39	122.93	119.70
23	DA	2547	U	C6-N1-C2	5.39	124.23	121.00
1	CA	1361	G	N3-C4-C5	-5.39	125.91	128.60
23	DA	348	G	C8-N9-C4	5.39	108.56	106.40
23	DA	2027	G	N1-C2-N3	5.39	127.13	123.90
23	DA	2272	U	N3-C2-O2	-5.39	118.43	122.20
33	DP	148	LEU	CA-CB-CG	5.39	127.69	115.30
1	AA	322	C	C5-C6-N1	-5.39	118.31	121.00
23	BA	2894	G	C5-C6-N1	5.39	114.19	111.50
23	DA	261	G	N1-C6-O6	5.39	123.13	119.90
23	DA	565	C	C4-C5-C6	5.39	120.09	117.40
23	DA	2330	G	C8-N9-C4	5.39	108.55	106.40
1	AA	1342	C	C2-N1-C1'	-5.38	112.88	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	776	G	N1-C2-N3	5.38	127.13	123.90
23	BA	1324	G	N1-C6-O6	5.38	123.13	119.90
23	BA	1448	G	C8-N9-C4	5.38	108.55	106.40
1	CA	1467	G	C8-N9-C4	-5.38	104.25	106.40
23	DA	530	G	C5-N7-C8	-5.38	101.61	104.30
23	DA	1031	G	C2-N3-C4	-5.38	109.21	111.90
23	DA	2515	C	C6-N1-C2	5.38	122.45	120.30
23	DA	2676	C	N3-C4-C5	5.38	124.05	121.90
1	AA	1043	C	C4-C5-C6	5.38	120.09	117.40
1	CA	791	G	N1-C6-O6	5.38	123.13	119.90
23	DA	446	G	C5-N7-C8	5.38	106.99	104.30
23	BA	941	A	N1-C2-N3	-5.38	126.61	129.30
23	BA	1448	G	C5-C6-O6	-5.38	125.37	128.60
23	BA	1490	A	N7-C8-N9	-5.38	111.11	113.80
23	BA	1681	G	C5-N7-C8	-5.38	101.61	104.30
23	BA	2031	A	C5-C6-N6	-5.38	119.39	123.70
23	BA	2129	C	N3-C2-O2	-5.38	118.13	121.90
23	BA	2515	C	N3-C4-N4	5.38	121.77	118.00
23	BA	2762	G	C5-C6-O6	-5.38	125.37	128.60
1	CA	381	C	N3-C4-C5	-5.38	119.75	121.90
1	CA	1235	U	N3-C2-O2	-5.38	118.43	122.20
1	CA	1361	G	N1-C6-O6	-5.38	116.67	119.90
23	DA	312	G	C5-C6-O6	-5.38	125.37	128.60
23	BA	1189	A	C4-C5-N7	5.38	113.39	110.70
23	BA	2790	A	C2-N3-C4	5.38	113.29	110.60
1	CA	79	G	C5-C6-O6	-5.38	125.37	128.60
1	CA	1216	G	C8-N9-C1'	5.38	133.99	127.00
23	BA	1231	G	C5-C6-N1	-5.38	108.81	111.50
23	BA	2443	C	C6-N1-C2	-5.38	118.15	120.30
23	BA	2767	C	C5-C6-N1	-5.38	118.31	121.00
1	CA	226	G	C8-N9-C4	5.38	108.55	106.40
23	DA	60	G	N1-C6-O6	5.38	123.13	119.90
23	DA	1377	G	C6-N1-C2	-5.38	121.87	125.10
23	DA	2027	G	C6-N1-C2	-5.38	121.87	125.10
23	BA	2224	G	C5-C6-O6	-5.38	125.38	128.60
23	BA	2536	G	N1-C2-N3	5.38	127.13	123.90
23	DA	585	G	C8-N9-C4	5.38	108.55	106.40
23	DA	1653	G	P-O3'-C3'	5.38	126.15	119.70
23	DA	1654	A	C5-C6-N6	5.38	128.00	123.70
1	AA	1068	G	N3-C4-N9	5.38	129.22	126.00
23	BA	2346	A	C5-C6-N6	-5.38	119.40	123.70
23	BA	2590	A	C2-N3-C4	-5.38	107.91	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	260	G	N3-C4-N9	-5.38	122.78	126.00
23	DA	1912	A	N7-C8-N9	5.38	116.49	113.80
23	BA	1428	C	N1-C2-O2	-5.37	115.68	118.90
23	BA	2319	G	N3-C2-N2	-5.37	116.14	119.90
1	CA	1182	G	N1-C2-N2	5.37	121.03	116.20
23	BA	1276	A	N1-C6-N6	5.37	121.82	118.60
23	BA	1905	C	C6-N1-C2	-5.37	118.15	120.30
23	BA	2740	A	C4-C5-C6	5.37	119.69	117.00
1	CA	11	G	N1-C6-O6	5.37	123.12	119.90
23	DA	2297	C	N1-C2-O2	-5.37	115.68	118.90
1	AA	738	C	C6-N1-C2	-5.37	118.15	120.30
23	BA	2517	C	C2-N3-C4	-5.37	117.22	119.90
23	DA	600	G	N1-C6-O6	5.37	123.12	119.90
23	DA	1658	C	C5-C6-N1	5.37	123.69	121.00
1	AA	975	A	C8-N9-C4	-5.37	103.65	105.80
23	BA	2105	C	C5-C6-N1	5.37	123.68	121.00
23	BA	2430	A	N7-C8-N9	5.37	116.48	113.80
23	BA	2453	A	C5-C6-N1	5.37	120.39	117.70
1	CA	171	A	C8-N9-C4	-5.37	103.65	105.80
23	DA	682	G	N3-C4-N9	5.37	129.22	126.00
23	DA	1785	A	C6-C5-N7	-5.37	128.54	132.30
1	AA	92	C	N1-C2-O2	5.37	122.12	118.90
32	BO	8	LEU	CA-CB-CG	5.37	127.64	115.30
23	DA	1220	A	C8-N9-C4	5.37	107.95	105.80
23	DA	2312	U	N1-C2-O2	5.37	126.56	122.80
1	AA	946	A	C4-C5-N7	5.36	113.38	110.70
23	BA	69	C	C5-C6-N1	-5.36	118.32	121.00
1	CA	1163	C	C2-N1-C1'	5.36	124.70	118.80
23	DA	743	G	C5-C6-N1	5.36	114.18	111.50
23	DA	1381	G	C5-C6-O6	5.36	131.82	128.60
23	DA	2296	U	C3'-C2'-C1'	-5.36	97.21	101.50
23	DA	2455	G	C4-N9-C1'	5.36	133.47	126.50
1	AA	487	A	N1-C6-N6	5.36	121.82	118.60
1	AA	754	C	N3-C2-O2	-5.36	118.15	121.90
23	BA	874	G	N1-C6-O6	5.36	123.12	119.90
23	BA	782	A	C5-C6-N1	5.36	120.38	117.70
23	BA	874	G	C5-C6-O6	-5.36	125.38	128.60
23	BA	994	C	C5-C6-N1	-5.36	118.32	121.00
23	BA	1365	A	C5-N7-C8	-5.36	101.22	103.90
23	BA	2373	G	C2-N3-C4	-5.36	109.22	111.90
1	CA	346	G	C4-N9-C1'	5.36	133.47	126.50
23	DA	94	C	N3-C2-O2	-5.36	118.15	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	791	C	C2-N3-C4	-5.36	117.22	119.90
23	DA	2300	G	C5-C6-O6	-5.36	125.38	128.60
23	DA	2878	U	N3-C2-O2	-5.36	118.45	122.20
23	BA	730	C	C6-N1-C2	-5.36	118.16	120.30
1	CA	1231	G	C8-N9-C4	-5.36	104.26	106.40
1	AA	483	C	C5-C6-N1	-5.36	118.32	121.00
23	BA	476	G	N1-C6-O6	5.36	123.11	119.90
23	BA	2335	A	C4-C5-C6	-5.36	114.32	117.00
23	DA	2442	C	N1-C2-O2	-5.36	115.69	118.90
23	BA	804	A	N1-C6-N6	5.36	121.81	118.60
23	BA	2016	U	N3-C2-O2	5.36	125.95	122.20
24	BB	8	U	C5-C6-N1	5.36	125.38	122.70
23	DA	546	C	C5-C6-N1	5.36	123.68	121.00
23	DA	1994	C	C5-C4-N4	5.36	123.95	120.20
1	AA	1029	C	C6-N1-C1'	5.35	127.22	120.80
1	AA	1034	G	C6-N1-C2	5.35	128.31	125.10
1	AA	1042	G	C8-N9-C1'	5.35	133.96	127.00
23	BA	702	G	N1-C6-O6	5.35	123.11	119.90
23	BA	2694	G	C4-N9-C1'	5.35	133.46	126.50
23	BA	2820	A	N1-C6-N6	5.35	121.81	118.60
25	BD	263	ARG	NE-CZ-NH1	-5.35	117.62	120.30
23	DA	236	C	C6-N1-C2	5.35	122.44	120.30
23	DA	652(S)	C	C5-C6-N1	5.35	123.68	121.00
23	DA	1299	G	N7-C8-N9	5.35	115.78	113.10
23	DA	2056	G	C2-N3-C4	-5.35	109.22	111.90
23	DA	2447	G	N3-C4-C5	5.35	131.28	128.60
23	BA	762	U	N1-C2-O2	5.35	126.55	122.80
23	BA	1558	A	P-O3'-C3'	5.35	126.12	119.70
23	DA	339	U	C6-N1-C2	5.35	124.21	121.00
23	DA	2681	C	N1-C2-N3	5.35	122.95	119.20
23	BA	380	U	C6-N1-C2	5.35	124.21	121.00
23	BA	697	C	N3-C4-N4	5.35	121.74	118.00
23	BA	1407	C	N3-C4-C5	-5.35	119.76	121.90
23	BA	1673	U	C5-C6-N1	-5.35	120.03	122.70
23	BA	1687	G	C8-N9-C4	-5.35	104.26	106.40
24	BB	95	C	C6-N1-C2	-5.35	118.16	120.30
1	CA	49	U	C5-C6-N1	-5.35	120.03	122.70
23	DA	2099	U	C2-N1-C1'	5.35	124.12	117.70
23	DA	2505	G	C2-N3-C4	-5.35	109.23	111.90
1	AA	217	C	N1-C2-O2	5.35	122.11	118.90
1	AA	1395	C	N1-C2-O2	5.35	122.11	118.90
23	BA	1010	A	C8-N9-C4	5.35	107.94	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	1283	G	N3-C4-C5	-5.35	125.93	128.60
23	DA	2266	A	C4-C5-N7	5.35	113.37	110.70
24	DB	64	C	C2-N1-C1'	-5.35	112.92	118.80
23	BA	614(B)	G	C4-N9-C1'	-5.35	119.55	126.50
23	DA	2849	U	C2-N3-C4	-5.35	123.79	127.00
1	AA	71	C	C2-N3-C4	5.34	122.57	119.90
1	AA	534	U	N3-C4-O4	-5.34	115.66	119.40
1	AA	1442(B)	A	N1-C2-N3	5.34	131.97	129.30
23	BA	1858	G	C6-C5-N7	-5.34	127.19	130.40
1	CA	370	C	C6-N1-C2	5.34	122.44	120.30
23	DA	1899	G	N3-C2-N2	-5.34	116.16	119.90
23	BA	553	G	C2-N3-C4	-5.34	109.23	111.90
23	BA	2074	U	N1-C2-O2	5.34	126.54	122.80
23	DA	2363	C	C2-N1-C1'	-5.34	112.92	118.80
23	DA	2396	G	C5-N7-C8	-5.34	101.63	104.30
23	DA	2689	U	N1-C2-N3	5.34	118.11	114.90
48	D4	42	PHE	C-N-CA	5.34	135.06	121.70
1	AA	1284	C	N1-C2-O2	5.34	122.11	118.90
23	BA	53	A	C5-N7-C8	-5.34	101.23	103.90
23	BA	185	U	C2-N3-C4	-5.34	123.80	127.00
23	BA	960	A	N9-C4-C5	-5.34	103.66	105.80
1	CA	1141	C	N1-C2-O2	-5.34	115.69	118.90
5	CE	71	LEU	CA-CB-CG	5.34	127.58	115.30
23	DA	574	C	N3-C4-N4	-5.34	114.26	118.00
23	DA	1645	G	C5-C6-O6	5.34	131.81	128.60
1	AA	940	C	C6-N1-C2	-5.34	118.16	120.30
23	BA	77	C	N3-C2-O2	-5.34	118.16	121.90
23	BA	700	G	N1-C2-N3	5.34	127.10	123.90
23	BA	733	G	N7-C8-N9	-5.34	110.43	113.10
23	BA	1573	G	N3-C2-N2	5.34	123.64	119.90
23	BA	1653	G	P-O3'-C3'	5.34	126.11	119.70
23	DA	252	G	N7-C8-N9	-5.34	110.43	113.10
23	DA	1777	U	C6-N1-C2	5.34	124.20	121.00
1	AA	670	G	N1-C6-O6	-5.34	116.70	119.90
23	BA	956	G	C5-C6-N1	-5.34	108.83	111.50
1	CA	1160	G	C5-C6-N1	5.34	114.17	111.50
23	DA	1359	A	C5-C6-N6	5.34	127.97	123.70
23	BA	568	U	C5-C4-O4	-5.33	122.70	125.90
23	BA	1721	G	N7-C8-N9	5.33	115.77	113.10
23	DA	924	C	C2-N3-C4	-5.33	117.23	119.90
1	AA	458	C	N3-C4-C5	-5.33	119.77	121.90
23	BA	1613	G	N1-C2-N2	-5.33	111.40	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2607	G	C5-C6-N1	-5.33	108.83	111.50
23	DA	60	G	C5-C6-O6	-5.33	125.40	128.60
23	DA	558	G	C8-N9-C4	5.33	108.53	106.40
1	AA	809	G	N3-C4-N9	-5.33	122.80	126.00
23	BA	69	C	C4-C5-C6	5.33	120.06	117.40
23	BA	130	C	C5-C6-N1	-5.33	118.33	121.00
23	BA	1225	G	N9-C4-C5	5.33	107.53	105.40
23	BA	1609	A	C6-N1-C2	-5.33	115.40	118.60
23	BA	2429	G	N7-C8-N9	5.33	115.77	113.10
23	BA	2602	A	C6-N1-C2	-5.33	115.40	118.60
24	BB	60	C	N3-C4-C5	-5.33	119.77	121.90
23	DA	71	A	C6-C5-N7	-5.33	128.57	132.30
23	DA	271(A)	A	C8-N9-C4	5.33	107.93	105.80
23	DA	1129	A	N1-C6-N6	-5.33	115.40	118.60
23	DA	2224	G	C2-N3-C4	-5.33	109.23	111.90
23	DA	2638	G	C5-C6-N1	-5.33	108.83	111.50
23	DA	956	G	C5-N7-C8	5.33	106.97	104.30
1	AA	1104	G	C8-N9-C4	-5.33	104.27	106.40
23	BA	750	A	N7-C8-N9	5.33	116.46	113.80
23	BA	1460	A	C2-N3-C4	5.33	113.26	110.60
23	BA	2420	C	C6-N1-C2	5.33	122.43	120.30
1	CA	577	G	N9-C4-C5	-5.33	103.27	105.40
23	DA	2708	G	N1-C2-N3	5.33	127.10	123.90
1	AA	59	A	C5-C6-N6	-5.33	119.44	123.70
1	CA	984	C	N3-C4-N4	5.33	121.73	118.00
1	AA	470	C	N1-C2-O2	5.33	122.10	118.90
23	BA	102	G	C8-N9-C1'	-5.33	120.08	127.00
23	BA	1231	G	N1-C6-O6	5.33	123.10	119.90
23	BA	1238	G	C5-C6-O6	-5.33	125.41	128.60
23	BA	1406	U	C5-C6-N1	5.33	125.36	122.70
23	BA	1693	U	C5-C6-N1	-5.33	120.04	122.70
1	CA	1120	G	C6-C5-N7	5.33	133.60	130.40
1	AA	317	G	C6-C5-N7	-5.32	127.21	130.40
23	BA	1983	C	C5-C4-N4	-5.32	116.47	120.20
1	CA	266	G	C2-N3-C4	-5.32	109.24	111.90
23	DA	818	G	N7-C8-N9	-5.32	110.44	113.10
23	DA	1142(A)	A	C6-C5-N7	-5.32	128.57	132.30
23	DA	1639	U	N3-C2-O2	-5.32	118.47	122.20
23	DA	2028	U	C5-C4-O4	-5.32	122.71	125.90
23	DA	2157	G	N9-C4-C5	5.32	107.53	105.40
23	DA	2379	G	C8-N9-C4	-5.32	104.27	106.40
1	CA	982	U	N3-C4-O4	5.32	123.13	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1031	G	N3-C4-C5	-5.32	125.94	128.60
23	DA	1380	G	N3-C2-N2	-5.32	116.17	119.90
23	BA	465	G	C4-N9-C1'	5.32	133.42	126.50
23	BA	1942	C	C2-N1-C1'	-5.32	112.95	118.80
23	DA	509	C	C5-C6-N1	-5.32	118.34	121.00
1	AA	1037	C	N3-C4-C5	-5.32	119.77	121.90
23	BA	1661	G	C6-N1-C2	-5.32	121.91	125.10
23	BA	2331	G	C5-C6-O6	-5.32	125.41	128.60
23	DA	1265	A	C4-C5-C6	5.32	119.66	117.00
23	DA	1380	G	N3-C4-C5	5.32	131.26	128.60
1	AA	402	G	C5-C6-N1	-5.32	108.84	111.50
23	BA	1336	A	C5-C6-N1	5.32	120.36	117.70
27	BF	168	ARG	NE-CZ-NH1	5.32	122.96	120.30
14	CN	43	CYS	CA-CB-SG	-5.32	104.43	114.00
23	DA	599	G	C2-N3-C4	-5.32	109.24	111.90
23	DA	1829	A	N7-C8-N9	-5.32	111.14	113.80
1	AA	1376	U	N3-C2-O2	5.32	125.92	122.20
1	AA	1381	U	C6-N1-C1'	-5.32	113.76	121.20
1	CA	1351	U	C2-N1-C1'	-5.32	111.32	117.70
23	DA	2699	C	N3-C4-C5	5.32	124.03	121.90
23	DA	2744	G	C2-N3-C4	-5.32	109.24	111.90
23	BA	787	U	N1-C2-N3	5.31	118.09	114.90
23	DA	2237	G	C8-N9-C4	5.31	108.53	106.40
1	AA	1017	G	C5-C6-O6	5.31	131.79	128.60
23	BA	1130	U	N3-C4-C5	-5.31	111.41	114.60
23	BA	1632	A	C5-C6-N6	-5.31	119.45	123.70
23	BA	2312	U	C6-N1-C2	-5.31	117.81	121.00
23	BA	2356	C	C6-N1-C2	5.31	122.42	120.30
23	BA	2587	A	C2-N3-C4	-5.31	107.94	110.60
23	DA	1284	A	C5-N7-C8	-5.31	101.24	103.90
23	BA	775	G	N3-C2-N2	5.31	123.62	119.90
23	BA	1404	C	N1-C2-O2	5.31	122.09	118.90
23	DA	2015	A	C5-C6-N6	5.31	127.95	123.70
24	DB	104	U	C2-N1-C1'	-5.31	111.33	117.70
1	CA	1000	U	C6-N1-C2	-5.31	117.81	121.00
1	CA	1468	A	C8-N9-C4	5.31	107.92	105.80
23	DA	1181	C	N1-C2-O2	5.31	122.08	118.90
23	DA	2622	C	N3-C4-C5	5.31	124.02	121.90
1	AA	243	A	C8-N9-C4	-5.31	103.68	105.80
23	BA	2242	G	N3-C4-N9	-5.31	122.82	126.00
1	CA	150	C	C2-N3-C4	5.31	122.55	119.90
1	CA	611	A	N1-C6-N6	-5.31	115.42	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	464	U	C5-C4-O4	5.31	129.08	125.90
23	DA	1612	C	N3-C4-N4	5.31	121.72	118.00
23	DA	2615	U	N1-C2-O2	5.31	126.52	122.80
23	DA	2761	G	C8-N9-C4	-5.31	104.28	106.40
23	BA	982	C	C6-N1-C2	-5.31	118.18	120.30
23	BA	1414	G	C8-N9-C4	-5.31	104.28	106.40
23	DA	2547	U	C5-C6-N1	-5.31	120.05	122.70
23	DA	2675	A	C5-C6-N6	-5.31	119.46	123.70
1	AA	1042	G	N3-C4-N9	-5.30	122.82	126.00
1	AA	1307	U	C5-C4-O4	-5.30	122.72	125.90
23	BA	1631(A)	A	C8-N9-C4	-5.30	103.68	105.80
23	BA	2067	G	N3-C4-N9	5.30	129.18	126.00
23	BA	2287	A	C4-C5-N7	5.30	113.35	110.70
1	CA	1060	C	C5-C6-N1	5.30	123.65	121.00
23	DA	614(B)	G	C4-N9-C1'	-5.30	119.60	126.50
23	DA	2059	A	C2-N3-C4	-5.30	107.95	110.60
23	BA	1187	G	N9-C4-C5	5.30	107.52	105.40
23	DA	2787	C	N3-C2-O2	-5.30	118.19	121.90
1	AA	1003	G	N9-C4-C5	5.30	107.52	105.40
1	AA	1153	C	C6-N1-C2	5.30	122.42	120.30
1	AA	1226	C	N3-C4-N4	-5.30	114.29	118.00
23	BA	452	G	N1-C2-N3	5.30	127.08	123.90
1	CA	981	U	N3-C4-O4	5.30	123.11	119.40
23	DA	2082	A	N1-C6-N6	5.30	121.78	118.60
1	AA	286	G	C8-N9-C4	-5.30	104.28	106.40
1	AA	1435	G	N1-C6-O6	5.30	123.08	119.90
23	BA	102	G	N3-C4-C5	-5.30	125.95	128.60
23	BA	757	U	N3-C2-O2	-5.30	118.49	122.20
23	BA	888	C	C5-C6-N1	5.30	123.65	121.00
23	BA	1762	A	N3-C4-C5	-5.30	123.09	126.80
23	BA	2033	A	N1-C6-N6	-5.30	115.42	118.60
1	CA	7	G	N3-C4-N9	-5.30	122.82	126.00
1	CA	454	C	C4-C5-C6	5.30	120.05	117.40
23	DA	463	G	N3-C4-N9	-5.30	122.82	126.00
23	DA	796	C	C2-N3-C4	-5.30	117.25	119.90
23	DA	1216	G	N3-C4-N9	5.30	129.18	126.00
23	DA	1881	C	C5-C6-N1	5.30	123.65	121.00
1	AA	855	G	C8-N9-C4	-5.30	104.28	106.40
23	BA	1618	A	C5-C6-N6	5.30	127.94	123.70
23	BA	1845	G	N1-C2-N2	-5.30	111.43	116.20
1	CA	1258	G	C6-N1-C2	5.30	128.28	125.10
1	AA	1034	G	C6-C5-N7	5.30	133.58	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	207	A	N3-C4-N9	-5.30	123.16	127.40
23	BA	856	C	N3-C4-C5	-5.30	119.78	121.90
23	BA	949	C	C6-N1-C2	5.30	122.42	120.30
23	BA	2080	G	N7-C8-N9	-5.30	110.45	113.10
23	DA	1452	A	C8-N9-C4	5.30	107.92	105.80
23	DA	2334	G	C8-N9-C4	5.30	108.52	106.40
1	AA	930	C	N3-C4-N4	-5.29	114.29	118.00
23	BA	889	C	N1-C2-O2	5.29	122.08	118.90
23	BA	2348	U	C6-N1-C2	5.29	124.18	121.00
1	AA	980	C	C2-N1-C1'	5.29	124.62	118.80
23	BA	796	C	C6-N1-C2	5.29	122.42	120.30
23	BA	1657	C	N3-C2-O2	5.29	125.61	121.90
47	B3	56	VAL	CB-CA-C	-5.29	101.34	111.40
1	CA	675	A	N1-C6-N6	5.29	121.78	118.60
1	CA	927	G	N1-C6-O6	5.29	123.08	119.90
23	DA	448	U	N3-C4-C5	-5.29	111.42	114.60
23	DA	723	G	N9-C4-C5	-5.29	103.28	105.40
1	AA	378	G	N3-C4-C5	5.29	131.25	128.60
23	BA	266	G	C8-N9-C4	5.29	108.52	106.40
23	BA	2613	U	N3-C2-O2	-5.29	118.50	122.20
23	DA	564	C	C5-C6-N1	-5.29	118.36	121.00
26	DE	119	ARG	NE-CZ-NH2	-5.29	117.65	120.30
23	BA	696	G	C8-N9-C4	5.29	108.52	106.40
1	CA	1003	G	C6-N1-C2	5.29	128.27	125.10
23	DA	530	G	C8-N9-C4	-5.29	104.28	106.40
23	BA	59	U	N1-C2-N3	5.29	118.07	114.90
23	BA	645	C	N3-C2-O2	-5.29	118.20	121.90
23	BA	1204	A	C3'-C2'-C1'	-5.29	97.27	101.50
23	BA	1318	C	N1-C2-O2	-5.29	115.73	118.90
1	CA	1150	U	C5-C4-O4	5.29	129.07	125.90
23	DA	1581	G	C4-N9-C1'	5.29	133.38	126.50
24	DB	30	C	N3-C4-N4	5.29	121.70	118.00
1	AA	1381	U	N3-C2-O2	-5.29	118.50	122.20
1	AA	1502	A	C5-C6-N6	-5.29	119.47	123.70
23	BA	2079	U	C4-C5-C6	5.29	122.87	119.70
23	DA	401	A	N1-C2-N3	5.29	131.94	129.30
1	AA	1022	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	1294	G	N3-C4-N9	-5.29	122.83	126.00
23	BA	394	A	C2-N3-C4	-5.29	107.96	110.60
23	BA	652(T)	C	C5-C4-N4	5.29	123.90	120.20
23	BA	1222	C	C6-N1-C2	5.29	122.41	120.30
1	CA	102	G	N9-C4-C5	5.29	107.51	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	874	G	N3-C4-C5	5.29	131.24	128.60
45	D1	40	ARG	NE-CZ-NH1	5.29	122.94	120.30
1	AA	1309	G	C8-N9-C1'	5.28	133.87	127.00
23	BA	389	G	C8-N9-C1'	-5.28	120.13	127.00
23	BA	587	C	N1-C2-N3	5.28	122.90	119.20
23	BA	966	G	N1-C6-O6	-5.28	116.73	119.90
23	BA	1608	A	N3-C4-N9	-5.28	123.17	127.40
1	CA	163	C	C2-N1-C1'	5.28	124.61	118.80
23	DA	1692	U	C5-C6-N1	-5.28	120.06	122.70
23	DA	1826	G	N1-C6-O6	-5.28	116.73	119.90
23	DA	2182	G	C4-C5-N7	-5.28	108.69	110.80
1	AA	1303	C	N1-C2-O2	5.28	122.07	118.90
23	BA	884	C	N3-C4-C5	-5.28	119.79	121.90
23	BA	2764	A	C8-N9-C4	-5.28	103.69	105.80
23	DA	602	G	C8-N9-C4	5.28	108.51	106.40
1	AA	1283	G	C2-N3-C4	5.28	114.54	111.90
1	AA	1328	C	N3-C4-N4	-5.28	114.30	118.00
1	AA	1362	C	N1-C2-O2	5.28	122.07	118.90
23	BA	108	U	N1-C2-O2	5.28	126.50	122.80
23	BA	765	G	N3-C2-N2	-5.28	116.20	119.90
23	BA	839	U	C6-N1-C2	-5.28	117.83	121.00
23	BA	861	A	N1-C2-N3	-5.28	126.66	129.30
23	BA	2088	G	N3-C2-N2	-5.28	116.20	119.90
23	DA	171	G	N3-C2-N2	5.28	123.60	119.90
23	DA	1612	C	N3-C2-O2	5.28	125.60	121.90
23	DA	2822	G	N1-C6-O6	5.28	123.07	119.90
1	AA	1249	C	N1-C2-O2	5.28	122.07	118.90
23	DA	1124	C	N3-C4-C5	5.28	124.01	121.90
23	DA	2359	C	C4-C5-C6	5.28	120.04	117.40
1	AA	927	G	N7-C8-N9	-5.28	110.46	113.10
1	AA	993	G	N3-C4-N9	5.28	129.17	126.00
23	BA	936	C	C5-C6-N1	-5.28	118.36	121.00
23	BA	1654	A	C5-C6-N6	5.28	127.92	123.70
23	BA	2488	A	N7-C8-N9	-5.28	111.16	113.80
23	DA	737	C	C5-C4-N4	-5.28	116.50	120.20
23	DA	2235	G	C6-C5-N7	-5.28	127.23	130.40
23	DA	2379	G	C5-N7-C8	-5.28	101.66	104.30
23	BA	512	G	N9-C4-C5	5.28	107.51	105.40
23	BA	607	U	C5-C6-N1	-5.28	120.06	122.70
23	BA	886	C	C6-N1-C2	-5.28	118.19	120.30
23	BA	2297	C	C6-N1-C2	-5.28	118.19	120.30
24	BB	70	C	C6-N1-C2	-5.28	118.19	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	BB	91	C	C6-N1-C2	5.28	122.41	120.30
1	CA	1166	G	C8-N9-C1'	5.28	133.86	127.00
23	DA	127	A	N1-C2-N3	5.28	131.94	129.30
23	DA	204	A	C5-N7-C8	-5.28	101.26	103.90
23	DA	1120	G	C5-C6-O6	5.28	131.76	128.60
23	DA	1210	A	N7-C8-N9	5.28	116.44	113.80
23	DA	1800	C	N3-C4-C5	5.28	124.01	121.90
23	DA	2297	C	C2-N1-C1'	-5.28	113.00	118.80
23	DA	652(T)	C	C5-C4-N4	5.27	123.89	120.20
23	DA	932	G	N3-C4-C5	5.27	131.24	128.60
23	DA	1993	U	N3-C2-O2	5.27	125.89	122.20
23	DA	2346	A	N3-C4-C5	-5.27	123.11	126.80
23	BA	2013	A	C4-C5-N7	5.27	113.34	110.70
23	BA	2607	G	N3-C4-N9	5.27	129.16	126.00
1	CA	78	G	N3-C4-C5	5.27	131.24	128.60
1	CA	1009	G	C5-C6-O6	-5.27	125.44	128.60
24	DB	93	G	C5-C6-O6	-5.27	125.44	128.60
1	AA	139	G	N7-C8-N9	5.27	115.74	113.10
23	DA	208	C	N1-C2-O2	-5.27	115.74	118.90
23	BA	351	G	N1-C6-O6	5.27	123.06	119.90
23	BA	2398	U	N3-C4-C5	-5.27	111.44	114.60
1	CA	954	G	N9-C4-C5	-5.27	103.29	105.40
1	CA	1006	C	N3-C4-N4	5.27	121.69	118.00
1	CA	1467	G	N3-C4-C5	-5.27	125.97	128.60
4	CD	26	CYS	CA-CB-SG	5.27	123.48	114.00
23	DA	195	A	C6-C5-N7	-5.27	128.61	132.30
23	DA	333	G	C4-N9-C1'	5.27	133.35	126.50
1	AA	979	C	C6-N1-C2	-5.27	118.19	120.30
23	BA	446	G	C6-C5-N7	-5.27	127.24	130.40
23	BA	2510	C	N1-C2-N3	5.27	122.89	119.20
23	DA	2866	U	C4-C5-C6	5.27	122.86	119.70
1	CA	419	C	N3-C2-O2	5.27	125.59	121.90
1	CA	1333	A	N7-C8-N9	5.27	116.43	113.80
23	DA	570	G	N1-C2-N2	-5.27	111.46	116.20
1	AA	1502	A	N1-C2-N3	5.26	131.93	129.30
23	BA	32	C	N3-C2-O2	-5.26	118.22	121.90
23	BA	849	A	N7-C8-N9	-5.26	111.17	113.80
23	BA	1531	C	C2-N1-C1'	5.26	124.59	118.80
23	BA	2254	C	C6-N1-C2	5.26	122.41	120.30
23	DA	2487	G	C4-C5-N7	5.26	112.91	110.80
1	AA	913	A	N9-C4-C5	5.26	107.91	105.80
23	BA	2114	A	N7-C8-N9	5.26	116.43	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	727	A	C4-C5-C6	5.26	119.63	117.00
23	DA	732	C	C5-C4-N4	-5.26	116.52	120.20
23	DA	1256	G	C2-N3-C4	-5.26	109.27	111.90
31	DN	20	GLY	N-CA-C	-5.26	99.94	113.10
23	BA	60	G	C6-C5-N7	-5.26	127.24	130.40
23	BA	171	G	N3-C2-N2	5.26	123.58	119.90
23	BA	363(B)	G	N9-C4-C5	-5.26	103.30	105.40
23	BA	1487	G	C8-N9-C4	-5.26	104.30	106.40
23	BA	1965	C	N1-C2-O2	5.26	122.06	118.90
23	BA	2487	G	N9-C4-C5	-5.26	103.30	105.40
1	CA	893	C	C6-N1-C2	5.26	122.40	120.30
1	CA	1350	A	C4-C5-C6	5.26	119.63	117.00
23	DA	1816	G	C8-N9-C1'	-5.26	120.16	127.00
23	DA	1992	G	C5-N7-C8	5.26	106.93	104.30
23	DA	2099	U	C5-C6-N1	5.26	125.33	122.70
23	BA	548	A	N9-C4-C5	-5.26	103.70	105.80
23	BA	690	G	C8-N9-C4	5.26	108.50	106.40
23	DA	2096	U	C5-C6-N1	5.26	125.33	122.70
23	DA	2329	G	C2-N3-C4	-5.26	109.27	111.90
23	DA	2518	A	C8-N9-C4	-5.26	103.70	105.80
1	AA	39	G	N1-C2-N2	5.26	120.93	116.20
23	BA	1187	G	C2-N3-C4	5.26	114.53	111.90
23	BA	1241	A	C2-N3-C4	-5.26	107.97	110.60
23	BA	1994	C	N3-C4-C5	5.26	124.00	121.90
23	BA	2048	G	C5-C6-N1	-5.26	108.87	111.50
23	BA	2157	G	C8-N9-C1'	5.26	133.83	127.00
1	CA	260	G	N3-C4-C5	5.26	131.23	128.60
1	CA	1370	G	N3-C4-N9	-5.26	122.85	126.00
23	DA	2032	G	C6-C5-N7	-5.26	127.25	130.40
5	AE	71	LEU	CA-CB-CG	5.25	127.39	115.30
23	BA	2350	C	N3-C4-N4	5.25	121.68	118.00
1	CA	413	G	C4-C5-N7	-5.25	108.70	110.80
1	AA	1001(A)	G	N9-C4-C5	-5.25	103.30	105.40
1	AA	1006	C	N1-C2-O2	5.25	122.05	118.90
23	BA	392	C	C6-N1-C2	5.25	122.40	120.30
23	BA	1341	U	N1-C2-O2	5.25	126.48	122.80
23	BA	2348	U	N1-C2-O2	5.25	126.48	122.80
23	DA	1267	U	N1-C2-O2	5.25	126.48	122.80
1	AA	457	C	C6-N1-C2	-5.25	118.20	120.30
23	BA	686	G	C6-C5-N7	-5.25	127.25	130.40
23	BA	1688	U	N1-C2-N3	5.25	118.05	114.90
23	BA	2303	G	C8-N9-C4	-5.25	104.30	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2623	G	N9-C4-C5	5.25	107.50	105.40
1	CA	631	G	N1-C6-O6	5.25	123.05	119.90
1	CA	1185	G	C2-N3-C4	5.25	114.53	111.90
1	AA	1226	C	C2-N1-C1'	-5.25	113.03	118.80
23	BA	790	C	N3-C2-O2	5.25	125.58	121.90
23	BA	2037	G	C5-C6-O6	5.25	131.75	128.60
23	BA	2425	A	C5-N7-C8	-5.25	101.28	103.90
1	CA	1343	G	N9-C4-C5	-5.25	103.30	105.40
23	DA	990	A	N1-C6-N6	5.25	121.75	118.60
23	DA	1775	U	C5-C6-N1	-5.25	120.08	122.70
23	BA	760	G	C5-N7-C8	-5.25	101.68	104.30
23	BA	1050	A	C8-N9-C4	-5.25	103.70	105.80
23	BA	2157	G	N3-C4-N9	-5.25	122.85	126.00
1	CA	1293	G	C8-N9-C4	5.25	108.50	106.40
23	DA	557	U	N1-C2-N3	5.25	118.05	114.90
24	DB	76	G	N1-C6-O6	5.25	123.05	119.90
23	BA	1582	C	N1-C2-O2	5.25	122.05	118.90
23	BA	1981	A	N9-C4-C5	5.25	107.90	105.80
1	CA	982	U	N3-C4-C5	-5.25	111.45	114.60
1	CA	1492	A	C2-N3-C4	5.25	113.22	110.60
23	DA	254	G	N3-C4-C5	5.25	131.22	128.60
23	DA	1942	C	C6-N1-C1'	5.25	127.09	120.80
23	DA	2723	C	C2-N1-C1'	-5.25	113.03	118.80
23	BA	1415	U	N3-C4-O4	-5.25	115.73	119.40
23	DA	39	C	N1-C2-N3	5.25	122.87	119.20
23	DA	933	A	N7-C8-N9	5.25	116.42	113.80
23	DA	2202	C	C6-N1-C2	5.25	122.40	120.30
1	AA	855	G	C5-C6-O6	5.24	131.75	128.60
41	BX	54	VAL	CB-CA-C	-5.24	101.44	111.40
45	B1	21	ARG	NE-CZ-NH1	5.24	122.92	120.30
1	CA	190	U	C5-C6-N1	5.24	125.32	122.70
23	DA	392	C	C4-C5-C6	-5.24	114.78	117.40
23	DA	412	A	C8-N9-C4	5.24	107.90	105.80
23	DA	2010	G	N3-C2-N2	-5.24	116.23	119.90
1	AA	1028	C	C5-C4-N4	-5.24	116.53	120.20
1	CA	1014	A	N7-C8-N9	5.24	116.42	113.80
1	AA	1475	G	N1-C6-O6	5.24	123.04	119.90
23	BA	2261	C	N3-C2-O2	-5.24	118.23	121.90
1	CA	1330	U	C6-N1-C2	-5.24	117.86	121.00
23	DA	271(S)	G	C5-C6-N1	-5.24	108.88	111.50
23	DA	1677	A	C8-N9-C4	5.24	107.90	105.80
23	DA	1985	G	C6-N1-C2	-5.24	121.96	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2011	U	N1-C2-O2	-5.24	119.13	122.80
1	AA	1267	C	N1-C2-O2	-5.24	115.76	118.90
23	BA	525	U	N3-C4-C5	-5.24	111.46	114.60
23	BA	1324	G	C5-C6-O6	-5.24	125.46	128.60
23	BA	2322	A	C5-C6-N1	5.24	120.32	117.70
23	BA	2626	C	C2-N3-C4	-5.24	117.28	119.90
1	CA	984	C	C5-C6-N1	5.24	123.62	121.00
1	CA	1293	G	C6-N1-C2	-5.24	121.96	125.10
23	DA	1539	G	C5-N7-C8	-5.24	101.68	104.30
23	DA	2105	C	C6-N1-C2	-5.24	118.20	120.30
23	BA	2081	C	C4-C5-C6	5.24	120.02	117.40
23	DA	822	U	N3-C4-O4	-5.24	115.73	119.40
1	AA	944	G	N7-C8-N9	5.24	115.72	113.10
23	BA	676	A	O4'-C1'-N9	5.24	112.39	108.20
23	BA	2602	A	C5-C6-N1	5.24	120.32	117.70
1	CA	981	U	C5-C6-N1	5.24	125.32	122.70
23	DA	51	G	C5-N7-C8	5.24	106.92	104.30
23	DA	827	U	N3-C2-O2	5.24	125.86	122.20
23	DA	1655	A	N7-C8-N9	-5.24	111.18	113.80
1	AA	939	G	N3-C4-C5	5.23	131.22	128.60
23	BA	124	G	N3-C4-C5	5.23	131.22	128.60
23	BA	915	C	C2-N1-C1'	5.23	124.56	118.80
23	DA	1546	C	C2-N1-C1'	5.23	124.56	118.80
23	BA	2763	G	C6-C5-N7	-5.23	127.26	130.40
1	CA	484	G	C5-C6-O6	5.23	131.74	128.60
23	DA	1021	A	N3-C4-N9	-5.23	123.21	127.40
23	DA	1311	G	C6-C5-N7	-5.23	127.26	130.40
23	DA	2084	C	C5-C6-N1	-5.23	118.38	121.00
1	AA	203	U	C6-N1-C2	-5.23	117.86	121.00
1	AA	934	C	N3-C4-C5	-5.23	119.81	121.90
23	BA	1308	A	C4-C5-C6	5.23	119.62	117.00
23	BA	1490	A	N1-C6-N6	5.23	121.74	118.60
23	BA	1586	A	C8-N9-C4	-5.23	103.71	105.80
23	DA	71	A	N1-C2-N3	5.23	131.92	129.30
23	BA	747	U	C2-N3-C4	-5.23	123.86	127.00
23	DA	1988	C	N3-C4-C5	5.23	123.99	121.90
23	DA	2055	C	N1-C2-O2	-5.23	115.76	118.90
1	AA	696	A	C8-N9-C4	-5.23	103.71	105.80
23	BA	1012	U	N3-C2-O2	-5.23	118.54	122.20
23	DA	448	U	N3-C2-O2	-5.23	118.54	122.20
23	DA	1424	G	C8-N9-C4	5.23	108.49	106.40
1	CA	1165	C	C6-N1-C1'	5.23	127.07	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1112	G	C5-C6-N1	-5.22	108.89	111.50
23	BA	1283	G	N1-C2-N2	-5.22	111.50	116.20
23	BA	2065	C	C4-C5-C6	5.22	120.01	117.40
1	CA	39	G	C6-N1-C2	-5.22	121.97	125.10
23	DA	54	G	C8-N9-C4	5.22	108.49	106.40
23	DA	202	U	N1-C2-N3	-5.22	111.77	114.90
23	DA	702	G	N3-C2-N2	-5.22	116.24	119.90
23	DA	758	C	N1-C2-O2	-5.22	115.77	118.90
23	DA	839	U	C5-C4-O4	5.22	129.03	125.90
1	AA	541	G	C8-N9-C1'	5.22	133.79	127.00
1	AA	736	C	C6-N1-C2	-5.22	118.21	120.30
1	AA	1350	A	C5-C6-N1	5.22	120.31	117.70
23	BA	2782	G	C6-C5-N7	-5.22	127.27	130.40
24	BB	87	G	N7-C8-N9	-5.22	110.49	113.10
23	DA	841	A	N1-C2-N3	5.22	131.91	129.30
1	CA	1081	G	C6-C5-N7	-5.22	127.27	130.40
1	CA	1315	U	C6-N1-C2	-5.22	117.87	121.00
23	BA	182	A	C8-N9-C4	-5.22	103.71	105.80
23	BA	2273	A	N1-C2-N3	-5.22	126.69	129.30
23	BA	2558	C	N3-C4-C5	5.22	123.99	121.90
24	BB	17	C	C6-N1-C2	5.22	122.39	120.30
23	DA	154	G	N9-C4-C5	-5.22	103.31	105.40
23	DA	1021	A	N1-C6-N6	5.22	121.73	118.60
23	DA	1381	G	N1-C6-O6	-5.22	116.77	119.90
23	BA	2152	G	C4-N9-C1'	-5.22	119.72	126.50
23	BA	2335	A	N7-C8-N9	-5.22	111.19	113.80
23	DA	583	G	C6-C5-N7	-5.22	127.27	130.40
23	DA	821	A	N1-C2-N3	5.22	131.91	129.30
23	DA	1930	G	N7-C8-N9	-5.22	110.49	113.10
1	AA	825	G	C5-C6-N1	-5.22	108.89	111.50
23	BA	391	G	C8-N9-C1'	-5.22	120.22	127.00
23	BA	1974	C	N3-C4-C5	5.22	123.99	121.90
23	DA	893	C	C6-N1-C1'	-5.22	114.54	120.80
23	DA	1613	G	N1-C2-N2	-5.22	111.51	116.20
23	DA	2071	A	C2-N3-C4	5.22	113.21	110.60
1	AA	1239	A	C5-C6-N6	5.21	127.87	123.70
23	BA	2582	G	C8-N9-C4	-5.21	104.31	106.40
23	DA	2496	C	C4-C5-C6	-5.21	114.79	117.40
23	DA	2822	G	C8-N9-C4	5.21	108.49	106.40
1	AA	1295	G	C8-N9-C4	-5.21	104.31	106.40
23	BA	1670	C	C2-N3-C4	-5.21	117.29	119.90
23	BA	2403	C	C6-N1-C2	-5.21	118.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2338	G	C6-C5-N7	-5.21	127.27	130.40
1	AA	1210	C	C6-N1-C2	-5.21	118.22	120.30
1	AA	1241	G	N7-C8-N9	5.21	115.71	113.10
23	BA	571	A	C8-N9-C4	5.21	107.88	105.80
23	BA	592	G	C5-C6-O6	5.21	131.73	128.60
23	BA	702	G	N1-C2-N3	5.21	127.03	123.90
23	BA	1698	A	C4-C5-C6	5.21	119.61	117.00
23	BA	2331	G	N1-C6-O6	5.21	123.03	119.90
23	BA	2412	A	N1-C6-N6	-5.21	115.47	118.60
1	CA	776	G	N3-C4-N9	-5.21	122.87	126.00
23	DA	1170	G	N3-C4-N9	5.21	129.13	126.00
23	DA	2609	U	C4-C5-C6	5.21	122.83	119.70
23	DA	130	C	N1-C2-O2	5.21	122.03	118.90
23	DA	1261	C	N1-C2-O2	-5.21	115.77	118.90
1	AA	106	C	C5-C6-N1	-5.21	118.40	121.00
23	BA	775	G	N1-C2-N2	-5.21	111.51	116.20
23	BA	1129	A	C8-N9-C4	-5.21	103.72	105.80
23	DA	188	G	C8-N9-C4	5.21	108.48	106.40
23	DA	213	A	N1-C6-N6	5.21	121.72	118.60
23	DA	1321	A	N1-C2-N3	5.21	131.91	129.30
23	BA	469	G	C5-C6-O6	-5.21	125.48	128.60
23	BA	857	C	N1-C2-N3	5.21	122.84	119.20
1	CA	361	G	C6-N1-C2	5.21	128.22	125.10
23	DA	1270	C	C4-C5-C6	5.21	120.00	117.40
23	DA	1530	C	N3-C4-C5	5.21	123.98	121.90
23	DA	2351	G	C8-N9-C1'	-5.21	120.23	127.00
23	DA	2362	G	N3-C4-C5	5.21	131.20	128.60
23	DA	2672	G	C2-N3-C4	-5.21	109.30	111.90
35	DR	114	VAL	CB-CA-C	-5.21	101.51	111.40
23	BA	190	A	N1-C2-N3	-5.21	126.70	129.30
23	BA	958	U	C6-N1-C2	-5.21	117.88	121.00
23	BA	1342	A	C8-N9-C4	-5.21	103.72	105.80
24	BB	60	C	C6-N1-C2	-5.21	118.22	120.30
23	DA	363(F)	A	C8-N9-C4	5.21	107.88	105.80
23	BA	1006	C	N3-C4-N4	-5.20	114.36	118.00
1	CA	1182	G	N3-C2-N2	-5.20	116.26	119.90
1	CA	1206	G	C6-N1-C2	-5.20	121.98	125.10
23	DA	527	C	N3-C4-N4	-5.20	114.36	118.00
23	DA	1816	G	C4-N9-C1'	5.20	133.27	126.50
27	DF	62	ARG	NE-CZ-NH2	-5.20	117.70	120.30
23	DA	303	U	N3-C4-C5	5.20	117.72	114.60
23	DA	1216	G	C5-C6-O6	-5.20	125.48	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	681	C	N3-C2-O2	5.20	125.54	121.90
23	BA	1822	G	N1-C2-N3	5.20	127.02	123.90
23	BA	2602	A	P-O3'-C3'	5.20	125.94	119.70
23	DA	921	G	C5-C6-O6	5.20	131.72	128.60
23	DA	2575	C	N3-C4-C5	-5.20	119.82	121.90
24	DB	87	G	N1-C6-O6	5.20	123.02	119.90
1	AA	938	A	C5-N7-C8	-5.20	101.30	103.90
23	BA	1131	G	C4-C5-N7	5.20	112.88	110.80
1	CA	823	G	C8-N9-C4	5.20	108.48	106.40
1	CA	1182	G	C4-N9-C1'	-5.20	119.74	126.50
23	DA	229	A	N7-C8-N9	5.20	116.40	113.80
23	DA	320	A	C4-C5-C6	5.20	119.60	117.00
23	BA	2328	A	C8-N9-C4	5.20	107.88	105.80
23	DA	271(M)	G	C8-N9-C4	-5.20	104.32	106.40
23	DA	697	C	C5-C4-N4	-5.20	116.56	120.20
23	DA	952	G	C2-N3-C4	5.20	114.50	111.90
1	AA	689	C	N1-C2-O2	5.20	122.02	118.90
1	AA	1023	G	C5-C6-N1	-5.20	108.90	111.50
23	BA	996	A	N1-C6-N6	-5.20	115.48	118.60
23	BA	1254	A	C4-C5-C6	5.20	119.60	117.00
23	BA	2421	G	C6-C5-N7	-5.20	127.28	130.40
23	BA	2487	G	C6-C5-N7	-5.20	127.28	130.40
23	BA	2681	C	N3-C2-O2	-5.20	118.26	121.90
1	CA	1120	G	C4-C5-N7	-5.20	108.72	110.80
1	CA	1350	A	N1-C2-N3	5.20	131.90	129.30
23	DA	2383	G	C5-C6-O6	5.20	131.72	128.60
23	DA	2574	G	C2-N3-C4	-5.20	109.30	111.90
24	DB	28	C	N3-C4-N4	-5.20	114.36	118.00
1	CA	1405	G	N3-C4-N9	5.19	129.12	126.00
23	DA	1471	A	N7-C8-N9	5.19	116.40	113.80
23	DA	2191	G	C5-C6-O6	-5.19	125.48	128.60
1	AA	991	U	C6-N1-C2	-5.19	117.89	121.00
1	AA	1378	C	C6-N1-C2	-5.19	118.22	120.30
23	BA	577	G	C4-C5-N7	5.19	112.88	110.80
23	BA	1279	G	C5-C6-N1	5.19	114.10	111.50
1	CA	96	U	N1-C2-N3	-5.19	111.78	114.90
1	CA	1262	C	C6-N1-C1'	-5.19	114.57	120.80
23	DA	612	C	C6-N1-C2	5.19	122.38	120.30
23	DA	752	A	C8-N9-C4	-5.19	103.72	105.80
23	DA	1391	U	C6-N1-C1'	-5.19	113.93	121.20
23	DA	1983	C	N3-C2-O2	5.19	125.53	121.90
23	BA	327	G	N9-C4-C5	-5.19	103.32	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2581	G	C4-N9-C1'	5.19	133.25	126.50
1	CA	502	G	C8-N9-C4	-5.19	104.32	106.40
23	DA	321	G	C8-N9-C4	5.19	108.48	106.40
23	DA	984	A	C5-C6-N1	5.19	120.30	117.70
23	DA	995	C	C2-N1-C1'	-5.19	113.09	118.80
23	DA	2725	A	C8-N9-C4	5.19	107.88	105.80
1	AA	185	A	C8-N9-C4	-5.19	103.72	105.80
23	DA	680	G	N1-C2-N3	5.19	127.01	123.90
24	DB	7	G	N1-C6-O6	5.19	123.01	119.90
23	BA	974	G	C8-N9-C4	-5.19	104.33	106.40
23	BA	988	A	C5-N7-C8	-5.19	101.31	103.90
23	BA	2689	U	C2-N1-C1'	-5.19	111.48	117.70
1	CA	1187	G	N1-C6-O6	5.19	123.01	119.90
24	DB	35	U	N3-C4-O4	-5.19	115.77	119.40
23	BA	147	U	C2-N3-C4	-5.19	123.89	127.00
23	BA	181	A	N1-C6-N6	-5.19	115.49	118.60
1	CA	240	C	N3-C4-N4	-5.19	114.37	118.00
1	CA	932	C	N1-C2-O2	5.19	122.01	118.90
23	DA	1321	A	C2-N3-C4	-5.19	108.01	110.60
23	DA	1882	C	C5-C6-N1	5.19	123.59	121.00
23	BA	528	A	C4-N9-C1'	-5.18	116.97	126.30
23	BA	1265	A	C6-N1-C2	-5.18	115.49	118.60
23	BA	2144	U	C6-N1-C2	-5.18	117.89	121.00
23	BA	2641	G	C8-N9-C4	-5.18	104.33	106.40
1	CA	1093	A	N9-C4-C5	-5.18	103.73	105.80
23	DA	189	G	C5-C6-O6	-5.18	125.49	128.60
23	DA	287	C	C5-C6-N1	-5.18	118.41	121.00
23	DA	1967	C	N1-C2-O2	5.18	122.01	118.90
1	AA	145	G	C8-N9-C4	-5.18	104.33	106.40
10	AJ	34	VAL	N-CA-C	5.18	125.00	111.00
23	BA	1128	A	N1-C2-N3	5.18	131.89	129.30
23	BA	1553	A	C8-N9-C4	-5.18	103.73	105.80
23	BA	2040	C	N1-C2-N3	-5.18	115.57	119.20
23	BA	2451	A	N9-C4-C5	5.18	107.87	105.80
27	BF	16	GLY	N-CA-C	5.18	126.06	113.10
4	CD	26	CYS	N-CA-C	-5.18	97.00	111.00
23	DA	481	G	P-O3'-C3'	5.18	125.92	119.70
23	DA	2699	C	C2-N3-C4	-5.18	117.31	119.90
1	CA	1500	A	C8-N9-C4	-5.18	103.73	105.80
23	DA	58	G	C4-N9-C1'	5.18	133.24	126.50
23	DA	2049	G	N3-C4-C5	5.18	131.19	128.60
7	AG	130	GLY	N-CA-C	5.18	126.05	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1127	G	C5-C6-O6	5.18	131.71	128.60
23	DA	1319	G	C8-N9-C4	5.18	108.47	106.40
23	DA	2036	C	N1-C2-N3	5.18	122.83	119.20
23	DA	2103	C	N3-C4-C5	-5.18	119.83	121.90
23	DA	2259	G	C2-N3-C4	-5.18	109.31	111.90
23	DA	2485	G	C2-N3-C4	-5.18	109.31	111.90
23	DA	2689	U	N3-C4-C5	5.18	117.71	114.60
23	DA	254	G	C2-N3-C4	-5.18	109.31	111.90
23	DA	564	C	C4-C5-C6	5.18	119.99	117.40
1	AA	217	C	C6-N1-C2	5.18	122.37	120.30
1	AA	731	G	N9-C4-C5	5.18	107.47	105.40
1	AA	959	A	C2-N3-C4	-5.18	108.01	110.60
23	BA	610	G	N9-C4-C5	-5.18	103.33	105.40
23	BA	1865	G	N1-C6-O6	5.18	123.01	119.90
1	CA	324	G	N3-C4-C5	-5.18	126.01	128.60
1	CA	557	G	N3-C4-N9	5.18	129.11	126.00
1	CA	1037	C	N1-C2-N3	-5.18	115.58	119.20
3	CC	175	LEU	CA-CB-CG	5.18	127.20	115.30
23	DA	972	G	C4-C5-N7	-5.18	108.73	110.80
1	AA	223	U	C5-C6-N1	5.17	125.29	122.70
1	AA	1207	G	N7-C8-N9	-5.17	110.51	113.10
1	AA	1277	C	N1-C2-N3	-5.17	115.58	119.20
23	BA	579	G	C5-C6-N1	-5.17	108.91	111.50
23	BA	2250	G	C5-C6-O6	5.17	131.70	128.60
23	BA	2705	A	N7-C8-N9	-5.17	111.21	113.80
1	CA	1120	G	C8-N9-C1'	5.17	133.73	127.00
23	BA	750	A	N1-C2-N3	5.17	131.89	129.30
23	BA	1181	C	C6-N1-C2	5.17	122.37	120.30
23	DA	2255	G	C6-C5-N7	5.17	133.50	130.40
1	AA	610	G	C4-N9-C1'	5.17	133.22	126.50
23	BA	488	G	N1-C6-O6	-5.17	116.80	119.90
23	BA	1932	A	N1-C6-N6	5.17	121.70	118.60
1	CA	1267	C	C2-N3-C4	5.17	122.49	119.90
23	DA	124	G	C4-C5-N7	5.17	112.87	110.80
23	DA	1313	U	C5-C6-N1	5.17	125.29	122.70
23	BA	102	G	C6-C5-N7	-5.17	127.30	130.40
1	CA	543	C	C2-N3-C4	5.17	122.48	119.90
1	AA	973	G	C6-C5-N7	5.17	133.50	130.40
1	AA	1153	C	N3-C2-O2	-5.17	118.28	121.90
23	BA	526	A	N9-C4-C5	5.17	107.87	105.80
23	BA	530	G	N1-C2-N2	5.17	120.85	116.20
23	BA	729	G	N3-C2-N2	-5.17	116.28	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2251	G	C2-N3-C4	5.17	114.48	111.90
24	BB	54	G	N1-C6-O6	5.17	123.00	119.90
1	CA	1325	C	N3-C4-C5	-5.17	119.83	121.90
23	DA	1779	U	N1-C2-O2	5.17	126.42	122.80
1	AA	690	G	N3-C2-N2	5.17	123.52	119.90
23	BA	494	G	N3-C2-N2	-5.17	116.28	119.90
23	BA	590	A	C8-N9-C4	-5.17	103.73	105.80
23	BA	1882	C	C2-N1-C1'	5.17	124.48	118.80
23	BA	2251	G	C4-N9-C1'	5.17	133.22	126.50
1	CA	1189	C	N3-C4-N4	-5.17	114.38	118.00
1	CA	1382	C	N3-C2-O2	-5.17	118.28	121.90
23	DA	516	C	N3-C2-O2	-5.17	118.28	121.90
23	DA	823	G	C2-N3-C4	-5.17	109.32	111.90
23	DA	1113	U	C5-C4-O4	5.17	129.00	125.90
23	DA	1302	A	N9-C4-C5	5.17	107.87	105.80
23	DA	2672	G	C6-C5-N7	-5.17	127.30	130.40
23	DA	2682	U	C5-C6-N1	-5.17	120.12	122.70
24	DB	9	G	N1-C2-N2	5.17	120.85	116.20
1	AA	815	A	C8-N9-C4	5.17	107.87	105.80
1	AA	839	U	C6-N1-C1'	-5.17	113.97	121.20
23	BA	809	G	C5-C6-O6	5.17	131.70	128.60
23	BA	1359	A	C8-N9-C4	-5.17	103.73	105.80
1	CA	1249	C	C5-C6-N1	5.17	123.58	121.00
23	DA	1779	U	C2-N3-C4	-5.17	123.90	127.00
23	DA	2487	G	C8-N9-C1'	-5.17	120.28	127.00
23	DA	2766	G	C4-C5-N7	5.17	112.87	110.80
1	AA	1005	A	C8-N9-C4	-5.16	103.73	105.80
23	BA	99	U	C5-C6-N1	-5.16	120.12	122.70
24	BB	1	U	C2-N1-C1'	5.16	123.90	117.70
1	CA	936	C	C5-C6-N1	5.16	123.58	121.00
23	DA	71	A	P-O3'-C3'	5.16	125.90	119.70
23	DA	845	G	C4-N9-C1'	5.16	133.21	126.50
23	DA	1180	C	C6-N1-C2	5.16	122.36	120.30
23	DA	1428	C	C4-C5-C6	5.16	119.98	117.40
23	BA	2090	G	C8-N9-C4	5.16	108.47	106.40
1	AA	6	G	N1-C6-O6	-5.16	116.80	119.90
1	AA	654	G	N3-C4-N9	-5.16	122.90	126.00
1	AA	1446	U	N1-C2-N3	-5.16	111.80	114.90
1	AA	1516	G	N3-C4-C5	5.16	131.18	128.60
23	BA	841	A	N1-C6-N6	-5.16	115.50	118.60
23	BA	2842	G	C5-C6-O6	-5.16	125.50	128.60
1	CA	1223	C	N3-C4-C5	-5.16	119.83	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	CI	96	LEU	N-CA-C	5.16	124.93	111.00
23	DA	196	A	C5-C6-N6	-5.16	119.57	123.70
23	DA	792	G	N3-C2-N2	5.16	123.51	119.90
23	DA	1142(A)	A	N1-C2-N3	5.16	131.88	129.30
23	DA	1541	G	N3-C4-C5	-5.16	126.02	128.60
23	DA	2013	A	N9-C4-C5	-5.16	103.74	105.80
1	AA	260	G	N3-C4-C5	5.16	131.18	128.60
1	AA	1095	U	C2-N1-C1'	5.16	123.89	117.70
1	CA	749	C	C6-N1-C1'	5.16	126.99	120.80
1	CA	966	G	N7-C8-N9	5.16	115.68	113.10
1	CA	1443	G	C5-C6-N1	5.16	114.08	111.50
23	DA	2157	G	C4-C5-N7	-5.16	108.74	110.80
23	DA	2157	G	N3-C4-N9	-5.16	122.90	126.00
1	AA	1174	G	C8-N9-C1'	5.16	133.70	127.00
23	BA	242	G	C4-N9-C1'	-5.16	119.80	126.50
23	BA	652(B)	A	C2-N3-C4	5.16	113.18	110.60
23	BA	2489	G	N3-C4-N9	5.16	129.09	126.00
23	BA	562	U	C6-N1-C2	-5.16	117.91	121.00
23	BA	732	C	C5-C4-N4	-5.16	116.59	120.20
23	BA	2026	C	C4-C5-C6	5.16	119.98	117.40
24	BB	43	C	C6-N1-C2	-5.16	118.24	120.30
23	DA	254	G	C5-C6-N1	-5.16	108.92	111.50
23	DA	736	C	N3-C4-C5	5.16	123.96	121.90
23	DA	2070	G	N3-C4-C5	-5.16	126.02	128.60
23	DA	2277	G	C5-N7-C8	5.16	106.88	104.30
23	DA	2296	U	C4-C5-C6	5.16	122.79	119.70
23	DA	268	C	N3-C4-C5	-5.15	119.84	121.90
23	DA	1772	G	N3-C4-C5	5.15	131.18	128.60
23	DA	2627	G	C5-C6-O6	5.15	131.69	128.60
1	AA	1120	G	C4-C5-N7	5.15	112.86	110.80
23	BA	1184	G	C5-C6-N1	-5.15	108.92	111.50
23	BA	2763	G	C8-N9-C4	-5.15	104.34	106.40
23	BA	2856	C	C5-C6-N1	5.15	123.58	121.00
1	CA	1312	G	N1-C6-O6	5.15	122.99	119.90
23	DA	70	G	N9-C4-C5	-5.15	103.34	105.40
23	DA	665	C	N1-C2-N3	-5.15	115.59	119.20
23	DA	1039	G	N9-C4-C5	-5.15	103.34	105.40
23	DA	1950	G	N3-C4-C5	-5.15	126.02	128.60
23	BA	2010	G	C5-C6-O6	-5.15	125.51	128.60
23	BA	2086	U	C4-C5-C6	5.15	122.79	119.70
1	CA	1284	C	C5-C6-N1	5.15	123.58	121.00
23	DA	271(M)	G	N1-C6-O6	-5.15	116.81	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	692	C	N1-C2-O2	-5.15	115.81	118.90
23	DA	2760	C	C6-N1-C2	5.15	122.36	120.30
23	BA	178	G	C8-N9-C4	5.15	108.46	106.40
23	BA	2322	A	C2-N3-C4	5.15	113.17	110.60
23	DA	607	U	C2-N1-C1'	-5.15	111.52	117.70
23	DA	1300	U	P-O3'-C3'	5.15	125.88	119.70
23	DA	1949	G	N9-C4-C5	-5.15	103.34	105.40
1	AA	713	G	N1-C6-O6	-5.15	116.81	119.90
23	BA	1029	A	C8-N9-C4	5.15	107.86	105.80
23	BA	2191	G	N1-C6-O6	5.15	122.99	119.90
23	BA	2522	U	C2-N1-C1'	5.15	123.88	117.70
23	BA	2669	G	N1-C6-O6	5.15	122.99	119.90
1	CA	43	C	N3-C2-O2	5.15	125.50	121.90
1	CA	1176	A	N1-C6-N6	-5.15	115.51	118.60
23	DA	196	A	C4-C5-N7	5.15	113.27	110.70
23	DA	2591	C	N1-C2-N3	5.15	122.80	119.20
23	BA	686	G	C5-C6-O6	-5.15	125.51	128.60
23	BA	1243	G	C5-N7-C8	-5.15	101.73	104.30
23	DA	260	G	N1-C6-O6	-5.15	116.81	119.90
23	DA	2020	A	C6-N1-C2	-5.15	115.51	118.60
23	DA	2116	G	P-O3'-C3'	5.15	125.88	119.70
23	DA	2181	G	C6-C5-N7	5.15	133.49	130.40
23	DA	2421	G	N1-C6-O6	5.15	122.99	119.90
1	AA	7	G	N3-C4-N9	-5.14	122.91	126.00
23	BA	1325	G	C6-C5-N7	-5.14	127.31	130.40
23	DA	843	G	N3-C4-N9	-5.14	122.91	126.00
23	DA	1799	G	P-O3'-C3'	5.14	125.87	119.70
23	BA	541	C	N3-C2-O2	-5.14	118.30	121.90
23	BA	602	G	N9-C4-C5	-5.14	103.34	105.40
23	BA	2088	G	N1-C6-O6	5.14	122.98	119.90
1	CA	1052	U	N1-C2-N3	-5.14	111.81	114.90
1	CA	1467	G	N9-C4-C5	5.14	107.46	105.40
23	DA	652(E)	G	C4-C5-N7	5.14	112.86	110.80
23	DA	1477	A	C2-N3-C4	-5.14	108.03	110.60
23	DA	2232	U	C5-C6-N1	-5.14	120.13	122.70
23	BA	2700	C	C5-C4-N4	-5.14	116.60	120.20
23	BA	2769	C	C2-N3-C4	-5.14	117.33	119.90
23	DA	2550	G	C8-N9-C4	-5.14	104.34	106.40
1	AA	189(D)	C	C6-N1-C2	-5.14	118.24	120.30
1	AA	1493	A	N7-C8-N9	5.14	116.37	113.80
23	BA	234	C	C6-N1-C2	-5.14	118.24	120.30
23	BA	281	G	C8-N9-C4	5.14	108.46	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	975	C	N1-C2-N3	5.14	122.80	119.20
23	BA	1340	U	C2-N3-C4	-5.14	123.92	127.00
23	BA	1417	C	N3-C4-C5	-5.14	119.84	121.90
23	BA	1957	C	N3-C4-C5	5.14	123.96	121.90
23	BA	2056	G	N3-C4-N9	5.14	129.08	126.00
1	CA	986	A	N3-C4-N9	5.14	131.51	127.40
23	DA	1570	A	C6-N1-C2	-5.14	115.52	118.60
23	DA	2039	C	C6-N1-C2	-5.14	118.24	120.30
23	DA	2567	G	N1-C6-O6	5.14	122.98	119.90
23	BA	2116	G	P-O3'-C3'	5.14	125.86	119.70
23	BA	2370	G	N1-C2-N2	-5.14	111.58	116.20
1	CA	304	U	C6-N1-C2	-5.14	117.92	121.00
1	CA	1206	G	N3-C4-C5	-5.14	126.03	128.60
23	DA	1309	G	C8-N9-C4	5.14	108.45	106.40
23	BA	792	G	C4-N9-C1'	5.14	133.18	126.50
23	BA	1307	A	C2-N3-C4	-5.14	108.03	110.60
23	BA	1932	A	C5-N7-C8	-5.14	101.33	103.90
24	BB	12	C	N3-C4-C5	5.14	123.95	121.90
23	BA	893	C	N3-C2-O2	-5.13	118.31	121.90
23	BA	1278	A	C6-N1-C2	-5.13	115.52	118.60
23	BA	2607	G	C4-N9-C1'	5.13	133.17	126.50
24	BB	29	A	C5-N7-C8	-5.13	101.33	103.90
1	CA	365	U	N3-C4-O4	-5.13	115.81	119.40
1	CA	575	G	C8-N9-C4	5.13	108.45	106.40
23	DA	272(G)	C	N1-C2-O2	5.13	121.98	118.90
1	CA	689	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	1270	C	N1-C2-O2	5.13	121.98	118.90
1	CA	1330	U	C5-C6-N1	5.13	125.27	122.70
23	DA	715	G	C8-N9-C4	-5.13	104.35	106.40
23	DA	755	C	N3-C4-N4	5.13	121.59	118.00
23	DA	845	G	N9-C4-C5	-5.13	103.35	105.40
23	DA	846	C	N1-C2-O2	-5.13	115.82	118.90
1	AA	59	A	C4-C5-N7	5.13	113.27	110.70
1	AA	1012	U	C5-C6-N1	5.13	125.27	122.70
23	BA	826	U	N1-C2-N3	5.13	117.98	114.90
1	CA	44	G	C5-C6-N1	-5.13	108.93	111.50
1	CA	1108	G	C5-N7-C8	5.13	106.86	104.30
1	CA	1241	G	N3-C4-C5	-5.13	126.03	128.60
23	BA	2572	A	N1-C6-N6	-5.13	115.52	118.60
1	CA	1442(A)	G	N9-C4-C5	-5.13	103.35	105.40
23	DA	1845	G	N3-C4-C5	-5.13	126.03	128.60
23	DA	1975	G	N1-C6-O6	5.13	122.98	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1120	G	N1-C6-O6	5.13	122.98	119.90
1	AA	1291	G	C8-N9-C4	-5.13	104.35	106.40
23	BA	1269	A	C2-N3-C4	-5.13	108.04	110.60
23	BA	2310	A	N1-C6-N6	5.13	121.68	118.60
23	DA	188	G	N3-C4-N9	5.13	129.08	126.00
23	DA	1368	G	N9-C4-C5	5.13	107.45	105.40
23	DA	2107	C	C5-C6-N1	5.13	123.56	121.00
23	DA	2314	C	C2-N1-C1'	-5.13	113.16	118.80
1	AA	34	C	N1-C2-O2	-5.13	115.82	118.90
1	AA	732	C	C6-N1-C2	-5.13	118.25	120.30
1	AA	1138	G	N3-C4-N9	5.13	129.07	126.00
23	BA	2362	G	N3-C4-C5	5.13	131.16	128.60
23	DA	1021	A	C4-C5-N7	5.13	113.26	110.70
23	BA	272(I)	U	C6-N1-C2	-5.12	117.92	121.00
23	BA	330	A	C4-C5-N7	5.12	113.26	110.70
23	BA	1669	A	C5-N7-C8	-5.12	101.34	103.90
1	CA	1442(B)	A	C2-N3-C4	5.12	113.16	110.60
23	DA	955	C	C6-N1-C2	5.12	122.35	120.30
23	DA	2233	U	C6-N1-C2	5.12	124.08	121.00
1	AA	1076	C	C5-C6-N1	5.12	123.56	121.00
23	BA	1047	G	C2-N3-C4	5.12	114.46	111.90
23	BA	1688	U	N1-C2-O2	-5.12	119.21	122.80
23	BA	1826	G	C5-C6-O6	5.12	131.67	128.60
23	BA	2182	G	C5-C6-N1	-5.12	108.94	111.50
23	BA	2259	G	C5-C6-N1	-5.12	108.94	111.50
23	BA	2330	G	N1-C2-N3	5.12	126.97	123.90
23	BA	2497	A	N3-C4-N9	5.12	131.50	127.40
23	BA	2597	G	C4-N9-C1'	5.12	133.16	126.50
23	DA	62	C	C2-N1-C1'	-5.12	113.16	118.80
23	DA	528	A	C4-C5-C6	-5.12	114.44	117.00
23	DA	790	C	C6-N1-C2	5.12	122.35	120.30
23	DA	1372	U	C5-C4-O4	5.12	128.97	125.90
23	DA	1577	C	C5-C6-N1	-5.12	118.44	121.00
23	BA	154(A)	C	N3-C4-C5	5.12	123.95	121.90
23	BA	2370	G	C5-C6-N1	5.12	114.06	111.50
23	BA	2819	G	N7-C8-N9	-5.12	110.54	113.10
23	DA	1366	A	N9-C4-C5	-5.12	103.75	105.80
23	DA	2550	G	N7-C8-N9	5.12	115.66	113.10
1	AA	290	C	C6-N1-C2	5.12	122.35	120.30
23	BA	636	G	C4-N9-C1'	5.12	133.16	126.50
23	BA	1216	G	C2-N3-C4	-5.12	109.34	111.90
23	BA	1626	G	C2-N3-C4	-5.12	109.34	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1687	G	N7-C8-N9	5.12	115.66	113.10
23	DA	13	A	C5-C6-N6	5.12	127.80	123.70
1	AA	988	G	C5-C6-O6	5.12	131.67	128.60
1	AA	1505	G	C6-N1-C2	5.12	128.17	125.10
23	BA	513	A	C8-N9-C4	-5.12	103.75	105.80
23	BA	676	A	N1-C2-N3	5.12	131.86	129.30
23	BA	1781	C	C6-N1-C2	5.12	122.35	120.30
23	BA	1816	G	N3-C4-N9	5.12	129.07	126.00
23	BA	2351	G	C6-C5-N7	-5.12	127.33	130.40
23	BA	2712(A)	A	C5-C6-N1	-5.12	115.14	117.70
1	CA	1028	C	C5-C6-N1	5.12	123.56	121.00
23	DA	748	G	C5-N7-C8	5.12	106.86	104.30
23	DA	2336	A	C2-N3-C4	5.12	113.16	110.60
23	DA	2861	G	N7-C8-N9	5.12	115.66	113.10
23	BA	774	A	N7-C8-N9	5.12	116.36	113.80
23	BA	1214	A	C5-C6-N6	-5.12	119.61	123.70
23	BA	1914	C	C6-N1-C1'	5.12	126.94	120.80
23	BA	2327	A	N7-C8-N9	-5.12	111.24	113.80
1	CA	77	G	C6-C5-N7	-5.12	127.33	130.40
1	CA	357	G	C6-C5-N7	5.12	133.47	130.40
1	CA	365	U	C5-C4-O4	5.12	128.97	125.90
24	DB	33	G	C4-C5-N7	5.12	112.85	110.80
23	BA	117	G	N3-C2-N2	5.12	123.48	119.90
23	BA	1123	C	C2-N1-C1'	-5.12	113.17	118.80
23	BA	2768	C	N3-C4-N4	-5.12	114.42	118.00
1	CA	1002	G	C8-N9-C4	-5.12	104.35	106.40
1	AA	73	G	N1-C6-O6	5.11	122.97	119.90
1	AA	359	U	N1-C2-N3	5.11	117.97	114.90
1	AA	1011	G	N3-C4-C5	5.11	131.16	128.60
23	BA	1291	C	N3-C4-N4	-5.11	114.42	118.00
1	CA	1253	G	C5-C6-O6	5.11	131.67	128.60
23	DA	526	A	C2-N3-C4	5.11	113.16	110.60
23	DA	657	U	C4-C5-C6	5.11	122.77	119.70
23	DA	1021	A	C6-C5-N7	-5.11	128.72	132.30
23	DA	1337	G	C5-C6-N1	5.11	114.06	111.50
23	DA	2070	G	N1-C2-N3	5.11	126.97	123.90
32	DO	8	LEU	CA-CB-CG	5.11	127.06	115.30
23	BA	2791	C	C2-N3-C4	5.11	122.46	119.90
1	CA	380	G	N3-C4-N9	-5.11	122.93	126.00
23	DA	1394	U	C5-C4-O4	5.11	128.97	125.90
1	AA	1108	G	N9-C4-C5	5.11	107.44	105.40
23	BA	286	C	N1-C2-O2	5.11	121.97	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	773	U	C5-C6-N1	-5.11	120.14	122.70
23	BA	1498	C	N3-C2-O2	5.11	125.48	121.90
23	BA	1941	C	N1-C2-O2	-5.11	115.83	118.90
23	BA	2296	U	C3'-C2'-C1'	-5.11	97.41	101.50
23	BA	2613	U	N1-C2-O2	5.11	126.38	122.80
1	CA	1277	C	C6-N1-C1'	5.11	126.93	120.80
1	AA	1185	G	N3-C4-N9	5.11	129.06	126.00
23	BA	1043	C	C6-N1-C2	-5.11	118.26	120.30
23	DA	982	C	C6-N1-C2	-5.11	118.26	120.30
1	AA	372	C	N1-C2-N3	-5.11	115.62	119.20
23	BA	30	G	N1-C6-O6	-5.11	116.84	119.90
23	BA	799	G	C4-C5-N7	-5.11	108.76	110.80
23	BA	1658	C	C6-N1-C2	-5.11	118.26	120.30
23	BA	1827	C	N3-C2-O2	-5.11	118.32	121.90
1	CA	1116	C	C5-C6-N1	5.11	123.55	121.00
1	CA	1160	G	N3-C4-N9	5.11	129.06	126.00
1	AA	733	A	C8-N9-C4	5.11	107.84	105.80
23	BA	652(E)	G	C5-C6-N1	-5.11	108.95	111.50
23	BA	886	C	C2-N3-C4	5.11	122.45	119.90
1	CA	681	C	N1-C2-N3	-5.11	115.63	119.20
1	CA	1004	A	N3-C4-C5	-5.11	123.23	126.80
1	CA	1301	U	C5-C4-O4	5.11	128.96	125.90
23	DA	1543	C	N1-C2-O2	5.11	121.96	118.90
23	DA	2844	G	C5-C6-O6	-5.11	125.54	128.60
23	BA	2356	C	C5-C6-N1	-5.10	118.45	121.00
1	AA	47	C	C5-C6-N1	-5.10	118.45	121.00
23	BA	2574	G	C4-C5-N7	5.10	112.84	110.80
1	CA	1045	C	C6-N1-C2	-5.10	118.26	120.30
1	CA	1241	G	C4-C5-N7	5.10	112.84	110.80
23	DA	125	G	C8-N9-C4	5.10	108.44	106.40
23	DA	761	A	C5-N7-C8	5.10	106.45	103.90
23	DA	930	U	N3-C2-O2	5.10	125.77	122.20
23	DA	2288	A	N7-C8-N9	5.10	116.35	113.80
23	BA	411	G	C5-C6-O6	5.10	131.66	128.60
23	BA	2346	A	C4-C5-C6	5.10	119.55	117.00
23	DA	2061	G	C8-N9-C4	5.10	108.44	106.40
1	AA	1015	A	N7-C8-N9	5.10	116.35	113.80
23	BA	1790	C	N3-C4-N4	5.10	121.57	118.00
23	BA	1819	A	C6-N1-C2	-5.10	115.54	118.60
1	CA	355	C	N1-C2-O2	-5.10	115.84	118.90
23	DA	583	G	C4-C5-N7	5.10	112.84	110.80
1	AA	1066	C	N3-C4-C5	-5.10	119.86	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1364	G	N9-C4-C5	-5.10	103.36	105.40
23	BA	2053	G	C8-N9-C4	5.10	108.44	106.40
23	BA	2706	G	C6-N1-C2	-5.10	122.04	125.10
1	CA	618	C	C6-N1-C2	-5.10	118.26	120.30
1	CA	1153	C	C5-C6-N1	-5.10	118.45	121.00
11	CK	118	GLY	N-CA-C	5.10	125.84	113.10
23	DA	928	G	C4-C5-C6	5.10	121.86	118.80
23	BA	591	C	N3-C4-C5	-5.10	119.86	121.90
24	BB	9	G	C2-N3-C4	5.10	114.45	111.90
23	DA	2610	C	P-O3'-C3'	5.10	125.81	119.70
1	AA	1295	G	N1-C2-N2	5.09	120.79	116.20
23	BA	389	G	C8-N9-C4	5.09	108.44	106.40
23	BA	420	C	N1-C2-O2	5.09	121.96	118.90
1	CA	242	C	N3-C2-O2	5.09	125.47	121.90
1	CA	1262	C	C2-N1-C1'	5.09	124.40	118.80
23	BA	208	C	C5-C4-N4	-5.09	116.64	120.20
23	BA	633	A	C4-C5-C6	5.09	119.55	117.00
23	BA	1327	C	N1-C2-O2	-5.09	115.84	118.90
23	BA	2519	U	N3-C2-O2	5.09	125.76	122.20
23	BA	2557	G	C4-C5-N7	5.09	112.84	110.80
1	CA	697	U	C5-C6-N1	-5.09	120.15	122.70
1	CA	1297	C	C6-N1-C2	-5.09	118.26	120.30
23	BA	627	A	C8-N9-C4	5.09	107.84	105.80
23	BA	1334	G	C4-C5-N7	-5.09	108.76	110.80
1	CA	60	A	C8-N9-C4	-5.09	103.76	105.80
1	CA	65	U	C5-C6-N1	5.09	125.25	122.70
1	CA	204	U	N1-C2-O2	5.09	126.36	122.80
23	DA	453	C	N1-C2-O2	5.09	121.95	118.90
23	DA	1047	G	N3-C4-C5	-5.09	126.06	128.60
23	DA	1107	G	C2-N3-C4	5.09	114.44	111.90
23	DA	1697	G	N3-C2-N2	-5.09	116.34	119.90
23	DA	2319	G	C8-N9-C4	-5.09	104.36	106.40
23	DA	2581	G	C8-N9-C1'	-5.09	120.38	127.00
1	AA	355	C	C6-N1-C1'	5.09	126.91	120.80
23	BA	122	G	C4-C5-C6	5.09	121.85	118.80
23	BA	1229	G	C6-C5-N7	-5.09	127.35	130.40
23	DA	325	G	C8-N9-C4	5.09	108.44	106.40
23	DA	466	A	N1-C2-N3	5.09	131.84	129.30
24	DB	27	C	C2-N1-C1'	5.09	124.40	118.80
23	BA	131	G	C5-C6-N1	5.09	114.04	111.50
23	BA	676	A	C6-C5-N7	-5.09	128.74	132.30
23	BA	801	G	N1-C2-N3	5.09	126.95	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2370	G	N3-C4-C5	-5.09	126.06	128.60
23	BA	2851	A	C4-C5-C6	5.09	119.54	117.00
1	CA	390	C	C2-N3-C4	-5.09	117.36	119.90
23	DA	329	G	C5-C6-N1	5.09	114.04	111.50
23	DA	1280	G	N1-C6-O6	5.09	122.95	119.90
23	DA	1553	A	C8-N9-C4	-5.09	103.77	105.80
23	DA	1566	A	C5-C6-N1	-5.09	115.16	117.70
23	DA	1604	C	C2-N3-C4	-5.09	117.36	119.90
24	DB	74	U	N3-C2-O2	-5.09	118.64	122.20
1	CA	514	C	C5-C6-N1	5.08	123.54	121.00
23	DA	1614	A	C2-N3-C4	-5.08	108.06	110.60
23	DA	2036	C	C6-N1-C2	-5.08	118.27	120.30
1	AA	40	C	C6-N1-C2	5.08	122.33	120.30
23	BA	2354	G	C4-C5-N7	5.08	112.83	110.80
23	BA	2495	G	C8-N9-C4	-5.08	104.37	106.40
23	BA	2552	U	N1-C2-O2	-5.08	119.24	122.80
1	CA	1124	G	C8-N9-C1'	-5.08	120.39	127.00
23	DA	951	C	N3-C4-C5	5.08	123.93	121.90
1	AA	1014	A	C6-N1-C2	-5.08	115.55	118.60
23	BA	955	C	N3-C2-O2	5.08	125.46	121.90
23	BA	989	G	N1-C6-O6	5.08	122.95	119.90
23	BA	1372	U	N1-C2-O2	5.08	126.36	122.80
23	BA	2610	C	C2-N3-C4	-5.08	117.36	119.90
1	CA	1249	C	N1-C2-O2	5.08	121.95	118.90
1	CA	1340	A	N3-C4-C5	-5.08	123.24	126.80
23	DA	2723	C	C2-N3-C4	-5.08	117.36	119.90
23	BA	975(A)	G	C5-C6-N1	5.08	114.04	111.50
23	BA	2230	G	N3-C2-N2	-5.08	116.34	119.90
23	BA	2440	C	C5-C6-N1	-5.08	118.46	121.00
1	CA	993	G	N3-C4-N9	5.08	129.05	126.00
1	AA	733	A	N9-C4-C5	-5.08	103.77	105.80
1	AA	1489	G	C8-N9-C4	5.08	108.43	106.40
23	BA	1020	A	C5-C6-N1	-5.08	115.16	117.70
23	BA	1990	C	C4-C5-C6	5.08	119.94	117.40
23	BA	2225	A	C2-N3-C4	5.08	113.14	110.60
23	BA	2242	G	N1-C2-N2	5.08	120.77	116.20
23	DA	1653	G	N3-C2-N2	5.08	123.45	119.90
23	DA	2559	C	C6-N1-C2	5.08	122.33	120.30
1	AA	1440	C	C6-N1-C2	5.08	122.33	120.30
23	BA	847	U	N3-C2-O2	-5.08	118.65	122.20
23	BA	1204	A	C1'-O4'-C4'	-5.08	105.84	109.90
23	BA	2038	G	C8-N9-C4	-5.08	104.37	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2832	U	C6-N1-C1'	-5.08	114.09	121.20
23	BA	555	U	N1-C2-O2	-5.08	119.25	122.80
23	BA	738	G	N7-C8-N9	5.08	115.64	113.10
23	BA	1672	C	C2-N3-C4	-5.08	117.36	119.90
23	BA	2556	C	C5-C4-N4	-5.08	116.65	120.20
23	BA	2689	U	C2-N3-C4	-5.08	123.95	127.00
23	DA	2338	G	C5-C6-O6	-5.08	125.56	128.60
1	AA	961	U	N3-C2-O2	-5.07	118.65	122.20
1	AA	1057	G	N9-C4-C5	-5.07	103.37	105.40
23	BA	100	G	C8-N9-C4	5.07	108.43	106.40
23	BA	2285	C	N3-C2-O2	-5.07	118.35	121.90
23	BA	2315	G	C8-N9-C4	5.07	108.43	106.40
1	CA	982	U	C2-N1-C1'	5.07	123.79	117.70
23	DA	1914	C	C2-N1-C1'	-5.07	113.22	118.80
23	DA	2265	U	C5-C6-N1	5.07	125.24	122.70
23	DA	2292	C	N3-C4-N4	-5.07	114.45	118.00
23	BA	1414	G	N7-C8-N9	5.07	115.64	113.10
1	AA	1012	U	C5-C4-O4	-5.07	122.86	125.90
23	BA	116	C	N1-C2-N3	5.07	122.75	119.20
23	BA	196	A	C5-C6-N6	-5.07	119.64	123.70
23	BA	1489	U	C5-C4-O4	5.07	128.94	125.90
23	BA	1974	C	C2-N3-C4	-5.07	117.36	119.90
25	BD	60	ARG	NE-CZ-NH1	-5.07	117.77	120.30
1	CA	78	G	C6-N1-C2	5.07	128.14	125.10
23	DA	1858	G	C4-N9-C1'	5.07	133.09	126.50
23	DA	2191	G	C4-C5-N7	5.07	112.83	110.80
23	DA	2607	G	C4-N9-C1'	5.07	133.09	126.50
1	AA	43	C	C2-N3-C4	-5.07	117.37	119.90
1	CA	1416	G	C5-C6-N1	-5.07	108.97	111.50
23	DA	94	C	N1-C2-O2	5.07	121.94	118.90
24	DB	89	G	C4-C5-N7	5.07	112.83	110.80
23	BA	187	G	C6-C5-N7	-5.07	127.36	130.40
23	BA	934	G	N7-C8-N9	-5.07	110.57	113.10
23	BA	1041	C	C2-N3-C4	5.07	122.43	119.90
23	BA	1256	G	C6-C5-N7	-5.07	127.36	130.40
23	BA	2273	A	C4-C5-N7	5.07	113.23	110.70
23	BA	2376	A	C4-C5-C6	5.07	119.53	117.00
1	CA	1008	C	N1-C2-O2	5.07	121.94	118.90
1	CA	1505	G	N3-C4-N9	-5.07	122.96	126.00
23	DA	2594	C	C2-N3-C4	-5.07	117.37	119.90
23	DA	2644	G	C2-N3-C4	-5.07	109.37	111.90
1	AA	728	A	N7-C8-N9	5.07	116.33	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1312	G	C2-N3-C4	5.07	114.43	111.90
23	BA	765	G	N1-C2-N2	5.07	120.76	116.20
23	BA	989	G	C6-C5-N7	-5.07	127.36	130.40
23	BA	1336	A	C2-N3-C4	5.07	113.13	110.60
23	BA	1463	C	N1-C2-O2	5.07	121.94	118.90
24	BB	27	C	C2-N1-C1'	5.07	124.37	118.80
24	BB	57	A	C8-N9-C4	5.07	107.83	105.80
23	DA	1415	U	C2-N1-C1'	-5.07	111.62	117.70
23	DA	1790	C	C4-C5-C6	5.07	119.93	117.40
23	DA	1864	U	C6-N1-C2	5.07	124.04	121.00
23	DA	1921	G	C4-C5-N7	5.07	112.83	110.80
23	DA	2579	C	C4-C5-C6	5.07	119.93	117.40
23	BA	2107	C	C5-C6-N1	5.06	123.53	121.00
1	AA	916	G	C2-N3-C4	5.06	114.43	111.90
23	BA	1597	A	N1-C6-N6	-5.06	115.56	118.60
23	BA	2874	C	N3-C4-C5	5.06	123.92	121.90
1	CA	292	G	N3-C4-N9	5.06	129.04	126.00
1	CA	487	A	N1-C6-N6	5.06	121.64	118.60
23	DA	1290	C	N3-C2-O2	-5.06	118.36	121.90
23	BA	1211	U	N1-C2-O2	-5.06	119.26	122.80
23	BA	1745	C	N3-C2-O2	5.06	125.44	121.90
23	BA	2330	G	C2-N3-C4	-5.06	109.37	111.90
1	CA	1124	G	N3-C4-N9	5.06	129.04	126.00
1	AA	1371	G	C5-C6-N1	5.06	114.03	111.50
1	CA	150	C	N3-C4-C5	-5.06	119.88	121.90
1	CA	922	G	N1-C6-O6	5.06	122.94	119.90
1	CA	1017	G	C2-N3-C4	5.06	114.43	111.90
23	DA	171	G	N9-C4-C5	-5.06	103.38	105.40
23	DA	770	G	C5-C6-N1	5.06	114.03	111.50
23	DA	1802	A	C2-N3-C4	-5.06	108.07	110.60
23	DA	2241	A	N1-C2-N3	5.06	131.83	129.30
23	DA	2304	G	C4-C5-N7	-5.06	108.78	110.80
23	DA	2876	G	C5-C6-N1	5.06	114.03	111.50
1	AA	1324	A	C8-N9-C4	-5.06	103.78	105.80
23	BA	211	A	N7-C8-N9	-5.06	111.27	113.80
23	BA	2755	C	C2-N3-C4	5.06	122.43	119.90
23	BA	2853	C	C6-N1-C2	5.06	122.32	120.30
1	CA	992	U	P-O3'-C3'	5.06	125.77	119.70
1	CA	1364	U	C2-N3-C4	5.06	130.03	127.00
23	DA	532	A	C4-C5-N7	5.06	113.23	110.70
23	DA	1193	G	N9-C4-C5	-5.06	103.38	105.40
23	DA	2647	U	C5-C6-N1	-5.06	120.17	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2743	C	N1-C2-N3	5.06	122.74	119.20
1	CA	297	G	C5-C6-O6	5.06	131.63	128.60
1	CA	662	G	N1-C6-O6	5.06	122.93	119.90
23	DA	362	U	N3-C4-O4	5.06	122.94	119.40
23	DA	662	G	N1-C6-O6	-5.06	116.87	119.90
23	DA	2447	G	C6-C5-N7	-5.06	127.37	130.40
23	BA	614(B)	G	N1-C6-O6	-5.05	116.87	119.90
23	BA	2053	G	C5-C6-O6	-5.05	125.57	128.60
23	BA	2291	U	N1-C2-N3	5.05	117.93	114.90
23	BA	2646	C	C5-C6-N1	-5.05	118.47	121.00
20	CT	97	ALA	C-N-CD	-5.05	109.48	120.60
23	DA	1261	C	C5-C6-N1	-5.05	118.47	121.00
23	DA	1635	G	N1-C6-O6	5.05	122.93	119.90
23	DA	2030	A	N3-C4-C5	5.05	130.34	126.80
24	DB	15	A	C8-N9-C4	5.05	107.82	105.80
23	BA	435	C	C6-N1-C2	5.05	122.32	120.30
23	BA	1824	G	N7-C8-N9	-5.05	110.57	113.10
1	CA	1033	G	N1-C6-O6	5.05	122.93	119.90
23	DA	235	U	C5-C6-N1	-5.05	120.17	122.70
1	AA	936	C	C5-C6-N1	-5.05	118.47	121.00
1	AA	959	A	N9-C4-C5	-5.05	103.78	105.80
23	BA	559	G	C8-N9-C4	-5.05	104.38	106.40
23	BA	607	U	C2-N1-C1'	-5.05	111.64	117.70
23	BA	2050	C	C2-N3-C4	-5.05	117.37	119.90
23	BA	2382	G	C8-N9-C4	5.05	108.42	106.40
23	DA	104	U	C6-N1-C2	5.05	124.03	121.00
23	DA	1205	U	C5-C6-N1	-5.05	120.17	122.70
23	DA	2359	C	N3-C4-C5	-5.05	119.88	121.90
23	BA	1042	G	C2-N3-C4	5.05	114.42	111.90
23	BA	1358	G	C5-C6-O6	5.05	131.63	128.60
23	BA	1368	G	C2-N3-C4	5.05	114.42	111.90
23	BA	2129	C	C5-C4-N4	5.05	123.73	120.20
23	DA	1526	G	C8-N9-C4	5.05	108.42	106.40
40	DW	17	VAL	CB-CA-C	-5.05	101.81	111.40
1	AA	1199	U	N3-C2-O2	-5.05	118.67	122.20
23	BA	686	G	C8-N9-C4	5.05	108.42	106.40
23	BA	1422	G	C4-C5-N7	-5.05	108.78	110.80
23	BA	2025	C	N1-C2-O2	-5.05	115.87	118.90
23	BA	2042	A	C8-N9-C4	-5.05	103.78	105.80
23	BA	2601	C	N3-C4-C5	-5.05	119.88	121.90
23	DA	1481	U	C5-C4-O4	5.05	128.93	125.90
23	BA	1256	G	C6-N1-C2	-5.05	122.07	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2603	G	C5-C6-O6	-5.05	125.57	128.60
1	CA	358	U	C2-N3-C4	-5.05	123.97	127.00
1	CA	1447	A	C2-N3-C4	5.05	113.12	110.60
23	DA	1315	C	C4-C5-C6	5.05	119.92	117.40
23	DA	1926	U	C5-C4-O4	5.05	128.93	125.90
23	DA	2548	G	N7-C8-N9	-5.05	110.58	113.10
23	BA	179	G	C2-N3-C4	-5.04	109.38	111.90
1	CA	1435	G	N1-C6-O6	5.04	122.93	119.90
23	DA	2013	A	C2-N3-C4	-5.04	108.08	110.60
23	DA	2292	C	C2-N3-C4	-5.04	117.38	119.90
23	DA	2477	C	C5-C6-N1	-5.04	118.48	121.00
23	BA	124	G	N1-C6-O6	5.04	122.93	119.90
1	CA	54	C	N1-C2-N3	5.04	122.73	119.20
1	CA	987	G	N1-C6-O6	5.04	122.93	119.90
23	DA	2275	C	N1-C2-O2	5.04	121.93	118.90
23	DA	2711	A	C4-C5-C6	-5.04	114.48	117.00
23	DA	2744	G	N3-C2-N2	-5.04	116.37	119.90
1	AA	973	G	C8-N9-C4	5.04	108.42	106.40
23	BA	465	G	C5-C6-N1	-5.04	108.98	111.50
23	BA	1603	A	C8-N9-C4	-5.04	103.78	105.80
1	CA	1258	G	C5-C6-O6	5.04	131.62	128.60
23	DA	181	A	N9-C4-C5	5.04	107.82	105.80
23	DA	728	G	C8-N9-C1'	-5.04	120.45	127.00
23	DA	1802	A	C6-N1-C2	-5.04	115.58	118.60
1	AA	1072	G	C4-C5-N7	-5.04	108.78	110.80
23	BA	48	G	C8-N9-C4	5.04	108.42	106.40
23	BA	1472	A	N1-C6-N6	-5.04	115.58	118.60
24	BB	6	C	C6-N1-C2	5.04	122.32	120.30
23	DA	2429	G	C8-N9-C4	-5.04	104.38	106.40
1	AA	1442(B)	A	C4-C5-C6	5.04	119.52	117.00
23	BA	729	G	C6-C5-N7	-5.04	127.38	130.40
23	BA	2237	G	C8-N9-C4	5.04	108.42	106.40
23	BA	2510	C	C6-N1-C2	-5.04	118.28	120.30
1	CA	776	G	N3-C4-C5	5.04	131.12	128.60
23	DA	1238	G	N7-C8-N9	-5.04	110.58	113.10
1	AA	814	A	C8-N9-C4	5.04	107.81	105.80
23	BA	2182	G	N3-C4-C5	5.04	131.12	128.60
23	BA	2563	U	N3-C4-C5	-5.04	111.58	114.60
1	AA	17	U	C2-N1-C1'	5.04	123.74	117.70
1	AA	584	G	N1-C6-O6	5.04	122.92	119.90
23	BA	745	G	C4-C5-N7	5.04	112.81	110.80
23	BA	1901	A	C5-C6-N6	5.04	127.73	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	2751	G	N1-C6-O6	-5.04	116.88	119.90
1	CA	818	G	C5-N7-C8	5.04	106.82	104.30
1	CA	1340	A	C5-C6-N6	5.04	127.73	123.70
23	DA	1257	C	C5-C6-N1	-5.04	118.48	121.00
23	DA	2439	A	C2-N3-C4	-5.04	108.08	110.60
23	BA	425	G	N7-C8-N9	-5.03	110.58	113.10
23	BA	844	C	C2-N3-C4	-5.03	117.38	119.90
23	BA	988	A	N7-C8-N9	5.03	116.32	113.80
1	CA	1122	U	C5-C6-N1	5.03	125.22	122.70
23	DA	531	C	C5-C6-N1	-5.03	118.48	121.00
1	AA	531	U	C2-N1-C1'	-5.03	111.66	117.70
1	AA	1068	G	C5-C6-N1	5.03	114.02	111.50
23	BA	1298	C	C6-N1-C2	5.03	122.31	120.30
23	BA	2842	G	N1-C6-O6	5.03	122.92	119.90
24	BB	61	G	C8-N9-C4	-5.03	104.39	106.40
1	CA	98	G	N7-C8-N9	5.03	115.62	113.10
23	DA	608	A	C5-N7-C8	-5.03	101.38	103.90
23	DA	1596	A	N1-C6-N6	-5.03	115.58	118.60
1	AA	1176	A	N7-C8-N9	5.03	116.31	113.80
23	BA	1427	A	N1-C2-N3	5.03	131.81	129.30
1	CA	986	A	N3-C4-C5	-5.03	123.28	126.80
1	CA	1379	G	N1-C2-N2	-5.03	111.67	116.20
23	DA	18	C	C6-N1-C2	-5.03	118.29	120.30
23	DA	45	C	C4-C5-C6	5.03	119.92	117.40
23	DA	682	G	C8-N9-C1'	-5.03	120.46	127.00
23	DA	819	A	C5-N7-C8	-5.03	101.38	103.90
23	DA	1121	C	C4-C5-C6	5.03	119.92	117.40
1	AA	1186	G	N3-C4-N9	5.03	129.02	126.00
1	AA	1380	U	C5-C4-O4	5.03	128.92	125.90
23	BA	908	C	C5-C4-N4	-5.03	116.68	120.20
1	CA	1442	G	C4-C5-N7	-5.03	108.79	110.80
23	DA	1677	A	N9-C4-C5	-5.03	103.79	105.80
1	AA	1028	C	N1-C2-O2	5.03	121.92	118.90
1	AA	1344	C	C2-N3-C4	5.03	122.41	119.90
1	AA	1442(A)	G	O4'-C1'-N9	5.03	112.22	108.20
23	BA	48	G	N3-C4-C5	5.03	131.11	128.60
23	BA	272(A)	U	P-O3'-C3'	5.03	125.73	119.70
23	BA	735	A	C5-N7-C8	5.03	106.41	103.90
23	BA	748	G	C6-N1-C2	-5.03	122.08	125.10
23	BA	1221(A)	C	N3-C4-C5	5.03	123.91	121.90
23	BA	1617	C	N3-C4-N4	5.03	121.52	118.00
1	CA	951	G	C8-N9-C4	-5.03	104.39	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	154	G	C4-C5-N7	5.03	112.81	110.80
23	DA	363(B)	G	N9-C4-C5	-5.03	103.39	105.40
23	DA	1016	G	N1-C6-O6	5.03	122.92	119.90
23	DA	1546	C	C6-N1-C1'	-5.03	114.77	120.80
23	DA	1695	G	N1-C6-O6	5.03	122.92	119.90
23	DA	2417	C	C4-C5-C6	5.03	119.91	117.40
23	DA	2487	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	945	G	N1-C6-O6	5.03	122.92	119.90
23	BA	393	C	N1-C2-N3	5.03	122.72	119.20
23	BA	1815	A	N9-C4-C5	5.03	107.81	105.80
23	DA	2445	G	N1-C6-O6	-5.03	116.89	119.90
23	DA	2602	A	P-O3'-C3'	5.03	125.73	119.70
24	DB	7	G	N9-C4-C5	-5.03	103.39	105.40
1	AA	935	A	C5-C6-N6	5.02	127.72	123.70
23	BA	848	G	N3-C4-N9	5.02	129.01	126.00
23	BA	1283	G	C4-C5-N7	-5.02	108.79	110.80
23	BA	2713	A	N1-C6-N6	-5.02	115.58	118.60
23	DA	1231	G	C2-N3-C4	-5.02	109.39	111.90
1	AA	1408	A	N9-C4-C5	5.02	107.81	105.80
23	BA	108	U	N3-C2-O2	-5.02	118.69	122.20
23	BA	179	G	C6-C5-N7	-5.02	127.39	130.40
23	BA	1970	A	N9-C4-C5	-5.02	103.79	105.80
23	BA	2623	G	C4-N9-C1'	5.02	133.03	126.50
23	DA	2444	G	N1-C2-N3	5.02	126.91	123.90
1	AA	1457	G	C8-N9-C4	5.02	108.41	106.40
23	BA	1330	C	C5-C4-N4	-5.02	116.69	120.20
1	CA	1190	G	N3-C4-C5	5.02	131.11	128.60
1	AA	1000	U	N1-C2-N3	-5.02	111.89	114.90
23	BA	265	A	C4-N9-C1'	5.02	135.33	126.30
23	BA	928	G	C5-N7-C8	-5.02	101.79	104.30
23	BA	1754	C	N1-C2-N3	5.02	122.71	119.20
23	BA	1963	U	C6-N1-C1'	-5.02	114.17	121.20
23	BA	2028	U	C4-C5-C6	-5.02	116.69	119.70
23	BA	2762	G	C5-C6-N1	5.02	114.01	111.50
1	CA	839	U	C6-N1-C1'	-5.02	114.17	121.20
1	CA	1442(B)	A	C8-N9-C1'	-5.02	118.67	127.70
23	DA	760	G	N9-C4-C5	-5.02	103.39	105.40
23	DA	1325	G	C5-N7-C8	-5.02	101.79	104.30
23	DA	1526	G	N9-C4-C5	-5.02	103.39	105.40
1	AA	150	C	C6-N1-C2	-5.02	118.29	120.30
23	BA	102	G	P-O3'-C3'	5.02	125.72	119.70
23	BA	767	U	C6-N1-C2	-5.02	117.99	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BA	1348	G	C5-C6-O6	-5.02	125.59	128.60
1	CA	1524	C	C6-N1-C2	5.02	122.31	120.30
23	DA	2373	G	N1-C6-O6	5.02	122.91	119.90
23	DA	2568	C	N1-C2-O2	-5.02	115.89	118.90
1	AA	1155	G	C8-N9-C4	5.02	108.41	106.40
23	BA	983	A	C8-N9-C4	5.02	107.81	105.80
23	BA	1808	U	N1-C2-O2	5.02	126.31	122.80
23	BA	1914	C	C2-N1-C1'	-5.02	113.28	118.80
1	AA	1215	G	N7-C8-N9	5.01	115.61	113.10
23	BA	205	G	C4-C5-N7	5.01	112.81	110.80
23	BA	607	U	N3-C4-O4	-5.01	115.89	119.40
23	DA	85	G	N3-C4-C5	5.01	131.11	128.60
23	DA	1688	U	N1-C2-N3	5.01	117.91	114.90
23	DA	2023	G	C8-N9-C4	-5.01	104.39	106.40
23	DA	2502	G	C5-N7-C8	-5.01	101.79	104.30
23	DA	2669	G	C5-C6-O6	-5.01	125.59	128.60
23	DA	476	G	N1-C6-O6	5.01	122.91	119.90
23	DA	691	C	C2-N1-C1'	-5.01	113.28	118.80
23	DA	727	A	C5-C6-N6	-5.01	119.69	123.70
1	AA	455	C	C4-C5-C6	-5.01	114.89	117.40
23	BA	77	C	C2-N1-C1'	5.01	124.31	118.80
23	BA	1452	A	N1-C2-N3	5.01	131.81	129.30
23	BA	1539	G	C4-N9-C1'	5.01	133.01	126.50
23	BA	2778	A	N1-C2-N3	5.01	131.81	129.30
1	CA	740	U	C5-C4-O4	5.01	128.91	125.90
23	DA	932	G	C8-N9-C1'	5.01	133.52	127.00
23	DA	1049	C	N1-C2-O2	5.01	121.91	118.90
23	DA	1368	G	C4-C5-N7	-5.01	108.80	110.80
23	DA	1772	G	C4-N9-C1'	-5.01	119.99	126.50
23	DA	2417	C	N1-C2-N3	5.01	122.71	119.20
1	AA	955	U	C5-C4-O4	5.01	128.91	125.90
1	AA	1221	G	N1-C6-O6	5.01	122.91	119.90
23	BA	225	A	C8-N9-C4	5.01	107.80	105.80
23	BA	267	C	N3-C4-C5	5.01	123.90	121.90
23	BA	652(R)	C	C5-C6-N1	5.01	123.50	121.00
23	BA	2070	G	N1-C2-N2	-5.01	111.69	116.20
23	BA	2148	G	C6-C5-N7	5.01	133.41	130.40
23	BA	2573	C	C6-N1-C2	5.01	122.30	120.30
24	BB	103	G	N3-C2-N2	-5.01	116.39	119.90
1	CA	1377	A	N1-C6-N6	-5.01	115.59	118.60
23	DA	1236	G	C2-N3-C4	-5.01	109.40	111.90
23	DA	1256	G	C4-N9-C1'	5.01	133.01	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	DA	2379	G	C6-C5-N7	-5.01	127.39	130.40
23	DA	2395	C	N3-C2-O2	5.01	125.41	121.90
23	BA	1233	C	C6-N1-C2	-5.01	118.30	120.30
23	BA	2425	A	N7-C8-N9	5.01	116.30	113.80
23	DA	2056	G	N9-C4-C5	-5.01	103.40	105.40
1	AA	1292	U	C6-N1-C1'	-5.01	114.19	121.20
23	BA	334	C	N1-C2-O2	-5.01	115.90	118.90
23	BA	723	G	C4-C5-N7	5.01	112.80	110.80
23	BA	754	C	C2-N3-C4	-5.01	117.40	119.90
23	BA	1121	C	N1-C2-O2	-5.01	115.90	118.90
23	BA	1752	C	C2-N1-C1'	-5.01	113.29	118.80
23	BA	1777	U	C5-C6-N1	-5.01	120.20	122.70
23	BA	1896	G	C5-C6-O6	-5.01	125.60	128.60
23	BA	2201	C	C5-C6-N1	-5.01	118.50	121.00
1	CA	60	A	N9-C4-C5	5.01	107.80	105.80
23	DA	272(H)	C	C2-N1-C1'	5.01	124.31	118.80
23	DA	452	G	N7-C8-N9	5.01	115.60	113.10
23	DA	2607	G	C5-N7-C8	5.01	106.80	104.30
23	BA	2038	G	C5-N7-C8	-5.00	101.80	104.30
23	DA	1943	U	C4-C5-C6	5.00	122.70	119.70
1	AA	801	U	N3-C4-O4	-5.00	115.90	119.40
23	BA	570	G	C5-C6-N1	5.00	114.00	111.50
23	BA	975(A)	G	C2-N3-C4	5.00	114.40	111.90
23	BA	1938	A	N3-C4-C5	-5.00	123.30	126.80
1	CA	1101	A	N7-C8-N9	-5.00	111.30	113.80
23	DA	1036	G	N1-C2-N3	5.00	126.90	123.90
23	DA	1050	A	C8-N9-C4	-5.00	103.80	105.80
23	DA	1372	U	N3-C4-O4	-5.00	115.90	119.40
1	AA	836	G	N1-C6-O6	5.00	122.90	119.90
23	BA	33	U	N3-C4-O4	-5.00	115.90	119.40
23	BA	569	U	C5-C4-O4	-5.00	122.90	125.90
23	BA	1606	G	N1-C6-O6	-5.00	116.90	119.90
23	BA	2303	G	N3-C2-N2	-5.00	116.40	119.90
1	CA	1216	G	C4-C5-C6	-5.00	115.80	118.80
23	DA	678	C	C5-C6-N1	-5.00	118.50	121.00
23	DA	819	A	N7-C8-N9	5.00	116.30	113.80
23	DA	1639	U	C5-C6-N1	-5.00	120.20	122.70
23	DA	2020	A	C4-C5-C6	5.00	119.50	117.00

There are no chirality outliers.

All (56) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	129	GLU	Peptide
2	AB	14	GLY	Peptide
2	AB	71	VAL	Peptide
3	AC	147	LYS	Peptide
3	AC	19	GLU	Peptide
3	AC	51	GLY	Peptide
4	AD	29	PRO	Peptide
9	AI	117	HIS	Peptide
10	AJ	56	HIS	Peptide
10	AJ	86	MET	Peptide
13	AM	105	THR	Peptide
13	AM	40	ASN	Peptide
13	AM	85	GLY	Peptide
13	AM	86	CYS	Peptide
14	AN	12	ARG	Peptide
15	AO	75	PRO	Peptide
17	AQ	96	GLU	Peptide
19	AS	12	ASP	Peptide
20	AT	48	LYS	Peptide
45	B1	83	GLU	Peptide
48	B4	43	TYR	Peptide
23	BA	2335	A	Sidechain
26	BE	72	VAL	Peptide
34	BQ	18	LYS	Peptide
36	BS	82	ILE	Peptide
41	BX	93	GLU	Peptide
43	BZ	159	PRO	Peptide
43	BZ	191	VAL	Peptide
43	BZ	199	LYS	Peptide
2	CB	129	GLU	Peptide
2	CB	130	ARG	Peptide
2	CB	14	GLY	Peptide
2	CB	71	VAL	Peptide
3	CC	160	ALA	Peptide
4	CD	29	PRO	Peptide
7	CG	146	GLU	Peptide
7	CG	7	ALA	Peptide
9	CI	102	LEU	Peptide
10	CJ	21	GLN	Peptide
10	CJ	92	THR	Peptide
13	CM	65	LYS	Peptide
13	CM	86	CYS	Peptide
15	CO	75	PRO	Peptide

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Mol	Chain	Res	Type	Group
17	CQ	96	GLU	Peptide
19	CS	76	PRO	Peptide
20	CT	48	LYS	Peptide
45	D1	83	GLU	Peptide
48	D4	43	TYR	Peptide
23	DA	2335	A	Sidechain
26	DE	72	VAL	Peptide
27	DF	85	GLY	Peptide
30	DI	86	THR	Peptide
34	DQ	18	LYS	Peptide
36	DS	82	ILE	Peptide
41	DX	93	GLU	Peptide
43	DZ	191	VAL	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32270	0	16286	1214	0
1	CA	32185	0	16244	1267	1
2	AB	1787	0	1752	122	0
2	CB	1775	0	1743	121	0
3	AC	1450	0	1314	92	0
3	CC	1450	0	1314	123	0
4	AD	1526	0	1415	71	0
4	CD	1526	0	1415	85	0
5	AE	1105	0	1130	56	0
5	CE	1105	0	1130	60	0
6	AF	777	0	737	31	0
6	CF	777	0	737	35	0
7	AG	1164	0	1106	87	0
7	CG	1164	0	1106	99	0
8	AH	1045	0	1033	48	0
8	CH	1045	0	1033	51	0
9	AI	852	0	742	83	0
9	CI	852	0	742	79	0
10	AJ	663	0	558	56	0
10	CJ	663	0	558	70	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	AK	828	0	822	29	0
11	CK	828	0	822	28	0
12	AL	905	0	916	41	0
12	CL	905	0	916	32	0
13	AM	804	0	752	58	0
13	CM	804	0	752	60	0
14	AN	478	0	497	33	0
14	CN	478	0	496	58	0
15	AO	724	0	749	34	0
15	CO	724	0	749	31	0
16	AP	651	0	638	31	0
16	CP	651	0	638	36	0
17	AQ	823	0	891	43	0
17	CQ	823	0	891	47	0
18	AR	514	0	530	25	0
18	CR	514	0	530	21	0
19	AS	560	0	466	46	0
19	CS	560	0	466	40	0
20	AT	665	0	731	34	0
20	CT	713	0	766	39	0
21	AU	199	0	208	31	0
21	CU	199	0	208	23	0
22	AX	631	0	540	20	0
22	CX	601	0	485	16	0
23	BA	61112	0	30809	1210	1
23	DA	60621	0	30566	1219	0
24	BB	2573	0	1306	56	0
24	DB	2573	0	1306	55	0
25	BD	2135	0	2214	73	0
25	DD	2136	0	2218	79	0
26	BE	1555	0	1607	52	0
26	DE	1555	0	1607	56	0
27	BF	1580	0	1621	63	0
27	DF	1580	0	1621	63	0
28	BG	1368	0	1324	74	0
28	DG	1368	0	1324	86	0
29	BH	1317	0	1376	35	0
29	DH	1317	0	1376	36	0
30	BI	1037	0	1036	54	1
30	DI	953	0	858	38	0
31	BN	1112	0	1180	33	0
31	DN	1112	0	1180	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BO	923	0	981	26	0
32	DO	923	0	981	28	0
33	BP	1131	0	1201	45	0
33	DP	1131	0	1201	55	0
34	BQ	1122	0	1179	46	0
34	DQ	1122	0	1179	49	0
35	BR	968	0	1033	32	0
35	DR	968	0	1033	36	0
36	BS	865	0	905	50	0
36	DS	865	0	905	50	0
37	BT	1063	0	1103	42	0
37	DT	1063	0	1103	43	0
38	BU	959	0	1019	34	0
38	DU	959	0	1019	35	0
39	BV	771	0	830	23	0
39	DV	771	0	830	25	0
40	BW	881	0	935	21	0
40	DW	881	0	935	31	0
41	BX	742	0	799	23	0
41	DX	742	0	799	26	0
42	BY	785	0	828	23	0
42	DY	785	0	828	23	0
43	BZ	1536	0	1518	52	0
43	DZ	1522	0	1511	65	0
44	B0	594	0	604	16	0
44	D0	594	0	604	17	0
45	B1	745	0	804	21	0
45	D1	745	0	804	24	0
46	B2	588	0	643	16	0
46	D2	588	0	643	19	0
47	B3	458	0	503	8	0
47	D3	458	0	503	13	0
48	B4	349	0	336	23	0
48	D4	349	0	336	28	0
49	B5	455	0	472	13	0
49	D5	455	0	472	14	0
50	B6	449	0	462	18	0
50	D6	449	0	462	15	0
51	B7	418	0	467	14	0
51	D7	418	0	467	18	0
52	B8	509	0	565	18	0
52	D8	509	0	565	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	B9	297	0	316	9	0
53	D9	297	0	316	9	0
54	AA	135	0	0	0	0
54	AC	1	0	0	0	0
54	AD	1	0	0	0	0
54	AF	1	0	0	0	0
54	AQ	1	0	0	0	0
54	B0	3	0	0	0	0
54	B1	1	0	0	0	0
54	B2	1	0	0	0	0
54	B3	1	0	0	0	0
54	B5	2	0	0	0	0
54	B8	2	0	0	0	0
54	B9	1	0	0	0	0
54	BA	660	0	0	0	0
54	BB	23	0	0	0	0
54	BD	3	0	0	0	0
54	BE	5	0	0	0	0
54	BF	2	0	0	0	0
54	BG	1	0	0	0	0
54	BP	1	0	0	0	0
54	BQ	4	0	0	0	0
54	BR	1	0	0	0	0
54	BS	1	0	0	0	0
54	BT	2	0	0	0	0
54	BV	1	0	0	0	0
54	BW	2	0	0	0	0
54	BZ	1	0	0	0	0
54	CA	162	0	0	0	0
54	CE	1	0	0	0	0
54	CQ	1	0	0	0	0
54	D0	2	0	0	0	0
54	D1	1	0	0	0	0
54	D5	1	0	0	0	0
54	D8	2	0	0	0	0
54	DA	598	0	0	0	0
54	DB	8	0	0	0	0
54	DD	2	0	0	0	0
54	DE	4	0	0	0	0
54	DF	1	0	0	0	0
54	DO	2	0	0	0	0
54	DP	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	DQ	2	0	0	0	0
54	DR	3	0	0	0	0
55	AD	1	0	0	0	0
55	AN	1	0	0	0	0
55	B4	1	0	0	0	0
55	B5	1	0	0	0	0
55	B6	1	0	0	0	0
55	B9	1	0	0	0	0
55	BY	1	0	0	0	0
55	CD	1	0	0	0	0
55	CN	1	0	0	0	0
55	D4	1	0	0	0	0
55	D5	1	0	0	0	0
55	D6	1	0	0	0	0
55	D9	1	0	0	0	0
55	DY	1	0	0	0	0
56	AA	268	0	0	32	0
56	AE	1	0	0	0	0
56	AL	1	0	0	0	0
56	AO	1	0	0	0	0
56	AP	1	0	0	0	0
56	AT	1	0	0	0	0
56	AX	1	0	0	0	0
56	B0	8	0	0	0	0
56	B1	2	0	0	0	0
56	B3	1	0	0	0	0
56	B5	3	0	0	0	0
56	B6	1	0	0	1	0
56	B7	5	0	0	0	0
56	B8	10	0	0	0	0
56	B9	1	0	0	1	0
56	BA	1694	0	0	169	0
56	BB	57	0	0	3	1
56	BD	20	0	0	3	0
56	BE	11	0	0	0	0
56	BF	6	0	0	1	0
56	BH	1	0	0	0	0
56	BN	2	0	0	0	0
56	BO	2	0	0	0	0
56	BP	11	0	0	2	0
56	BQ	5	0	0	0	0
56	BR	6	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	BT	1	0	0	0	0
56	BU	3	0	0	0	0
56	BV	3	0	0	0	0
56	BW	3	0	0	0	0
56	BX	2	0	0	0	0
56	BY	4	0	0	0	0
56	CA	265	0	0	25	0
56	CC	1	0	0	2	0
56	CD	1	0	0	0	0
56	CE	2	0	0	0	0
56	CK	1	0	0	1	0
56	CL	2	0	0	1	0
56	CN	1	0	0	0	0
56	CP	1	0	0	0	0
56	CQ	1	0	0	0	0
56	CT	1	0	0	0	0
56	CX	1	0	0	0	0
56	D0	1	0	0	0	0
56	D1	5	0	0	0	0
56	D3	1	0	0	0	0
56	D4	1	0	0	0	0
56	D7	3	0	0	0	0
56	D8	1	0	0	0	0
56	DA	1174	0	0	171	0
56	DB	17	0	0	0	0
56	DD	8	0	0	2	0
56	DE	11	0	0	2	0
56	DF	7	0	0	1	0
56	DN	1	0	0	0	0
56	DO	5	0	0	1	0
56	DP	10	0	0	1	0
56	DQ	3	0	0	0	0
56	DR	2	0	0	1	0
56	DT	2	0	0	0	0
56	DU	5	0	0	0	0
56	DV	2	0	0	1	0
56	DW	2	0	0	0	0
56	DX	1	0	0	1	0
56	DY	2	0	0	0	0
All	All	286308	0	187082	8298	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 18.

All (8298) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1441:G:H2'	1:AA:1459:C:N4	1.20	1.46
1:AA:1459:C:C5	1:AA:1460:A:N6	1.79	1.44
1:AA:1441:G:C2'	1:AA:1459:C:N4	1.88	1.36
1:AA:1441:G:C2'	1:AA:1459:C:H41	1.44	1.29
1:CA:1441:G:H2'	1:CA:1459:C:N4	1.50	1.25
1:CA:1441:G:C2'	1:CA:1459:C:H41	1.54	1.19
23:BA:2296:U:O4	23:BA:2335:A:N6	1.76	1.19
23:DA:2296:U:O4	23:DA:2335:A:N6	1.77	1.15
1:CA:989:C:N4	1:CA:1216:G:H1	1.46	1.14
23:BA:885:C:C4	23:BA:890:A:N6	2.20	1.10
1:AA:1007:C:N4	1:AA:1022:G:H1	1.49	1.08
23:BA:885:C:N4	23:BA:890:A:C6	2.22	1.08
23:BA:2820:A:OP2	35:BR:2:ARG:NH2	1.87	1.07
23:DA:2820:A:OP2	35:DR:2:ARG:NH2	1.88	1.06
7:AG:88:PRO:HB3	7:AG:145:ALA:HA	1.38	1.05
23:DA:2711:A:OP2	56:DA:3992:HOH:O	1.73	1.04
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.41	1.03
23:BA:2036:C:OP1	56:BA:4559:HOH:O	1.77	1.02
1:AA:1010:G:H1	1:AA:1019:C:N4	1.57	1.02
23:DA:847:U:O4	23:DA:933:A:N6	1.92	1.02
23:BA:847:U:O4	23:BA:933:A:N6	1.92	1.02
1:CA:1441:G:C2'	1:CA:1459:C:N4	2.17	1.01
4:AD:9:CYS:SG	4:AD:22:LYS:NZ	2.34	1.01
23:DA:1439:A:OP1	56:DA:4126:HOH:O	1.79	1.01
1:AA:1459:C:C3'	1:AA:1460:A:C8	2.44	1.00
1:CA:949:A:H61	1:CA:1232:U:H3	1.05	1.00
23:DA:527:C:OP1	56:DA:4533:HOH:O	1.77	1.00
1:CA:1089:G:H1	1:CA:1096:C:N4	1.58	1.00
23:DA:1671:U:OP2	56:DA:3807:HOH:O	1.78	0.99
1:AA:839:U:H5'	1:AA:840:C:H5	1.28	0.98
1:CA:1459:C:C5	1:CA:1460:A:N6	2.30	0.98
1:AA:1459:C:H3'	1:AA:1460:A:N7	1.77	0.98
1:AA:1051:C:N4	1:AA:1207:G:N1	2.11	0.97
1:AA:1457:G:H2'	1:AA:1458:G:H8	1.24	0.97
23:BA:463:G:OP1	56:BA:3949:HOH:O	1.79	0.97
23:BA:2122:U:H3	23:BA:2176:A:H61	1.00	0.97
48:D4:42:PHE:HB3	48:D4:43:TYR:HB2	1.45	0.96
23:DA:563:G:OP2	56:DA:4622:HOH:O	1.83	0.96
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.99	0.96
1:CA:1459:C:C3'	1:CA:1460:A:C8	2.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:50:ILE:HA	10:CJ:60:ARG:HG2	1.47	0.96
23:BA:631:A:OP1	33:BP:65:ARG:NH1	1.98	0.96
23:BA:450:G:O6	56:BA:4578:HOH:O	1.84	0.96
1:CA:1459:C:H3'	1:CA:1460:A:N7	1.81	0.95
1:AA:1458:G:OP1	20:AT:35:THR:OG1	1.85	0.95
1:AA:1459:C:H5	1:AA:1460:A:H62	1.02	0.95
1:AA:1168:A:H2'	1:AA:1169:A:H8	1.27	0.95
1:CA:839:U:H5'	1:CA:840:C:H5	1.28	0.95
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.01	0.95
1:AA:1051:C:N4	1:AA:1207:G:H1	1.63	0.95
8:AH:6:ILE:HB	8:AH:85:ARG:HH12	1.28	0.95
1:CA:1457:G:H2'	1:CA:1458:G:H8	1.27	0.95
7:AG:88:PRO:HG3	7:AG:149:ARG:HA	1.44	0.95
23:DA:2122:U:H3	23:DA:2176:A:N6	1.64	0.94
8:CH:6:ILE:HB	8:CH:85:ARG:HH12	1.29	0.94
23:DA:2227:A:OP2	56:DA:4145:HOH:O	1.85	0.94
1:AA:984:C:H42	1:AA:1221:G:H1	1.05	0.94
1:CA:950:U:H3	1:CA:1231:G:H1	1.05	0.94
13:CM:3:ARG:HE	13:CM:45:VAL:HG12	1.29	0.94
1:AA:986:A:H61	1:AA:1219:U:H3	0.97	0.94
23:BA:1359:A:N6	23:BA:1372:U:O4	1.99	0.94
1:CA:1089:G:H1	1:CA:1096:C:H42	0.96	0.94
1:CA:1113:C:N4	1:CA:1187:G:H1	1.64	0.94
1:CA:1128:C:H42	1:CA:1143:G:H1	1.11	0.93
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.50	0.93
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.47	0.93
1:AA:559:A:H4'	1:AA:560:U:H3'	1.50	0.93
1:CA:939:G:H1	1:CA:1344:C:H42	1.15	0.93
23:BA:2228:G:OP1	25:BD:261:LYS:NZ	2.01	0.93
48:B4:42:PHE:HB3	48:B4:43:TYR:HB2	1.48	0.93
1:CA:1350:A:H61	1:CA:1372:U:H3	1.11	0.93
1:AA:79:G:H2'	1:AA:80:G:H8	1.32	0.93
2:AB:20:GLU:O	2:AB:40:HIS:N	2.01	0.93
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.48	0.93
1:CA:932:C:N4	1:CA:1385:G:H1	1.66	0.93
37:DT:16:ARG:NH2	37:DT:83:ILE:O	2.02	0.93
3:AC:121:ALA:HB2	3:AC:187:ALA:HB1	1.48	0.93
1:AA:1459:C:C6	1:AA:1460:A:N6	2.36	0.93
23:BA:1689:A:H62	23:BA:1698:A:H2	1.14	0.93
1:CA:1262:C:H42	1:CA:1273:G:H1	1.16	0.93
23:BA:271(I):G:H1	23:BA:271(O):C:H42	0.97	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1113:C:H42	1:CA:1187:G:H1	0.93	0.92
1:CA:1349:A:N7	1:CA:1373:G:N2	2.15	0.92
2:CB:20:GLU:O	2:CB:40:HIS:N	2.02	0.92
1:CA:954:G:N2	1:CA:1227:A:N7	2.17	0.92
23:DA:271(I):G:H1	23:DA:271(O):C:H42	0.94	0.92
1:AA:1343:G:H4'	9:AI:122:ALA:HB3	1.52	0.92
2:AB:50:GLU:O	2:AB:54:THR:OG1	1.88	0.92
23:DA:271(I):G:H1	23:DA:271(O):C:N4	1.68	0.92
1:CA:932:C:N4	1:CA:1385:G:N1	2.17	0.92
6:CF:15:ASP:HB2	6:CF:18:GLN:H	1.34	0.92
1:CA:1441:G:H2'	1:CA:1459:C:H41	0.76	0.92
1:CA:1262:C:N4	1:CA:1273:G:H1	1.67	0.91
1:AA:1239:A:N6	1:AA:1299:A:H62	1.68	0.91
23:DA:1970:A:OP1	56:DA:4210:HOH:O	1.88	0.91
23:DA:2036:C:OP1	56:DA:4431:HOH:O	1.88	0.91
1:CA:1006:C:H42	1:CA:1024:G:H21	1.09	0.91
1:AA:1246:C:N4	1:AA:1291:G:H1	1.67	0.91
1:AA:963:G:H1	1:AA:972:C:H42	1.09	0.91
1:CA:1443:G:O6	1:CA:1459:C:O2	1.89	0.91
2:AB:19:HIS:ND1	2:AB:189:ASP:OD2	2.03	0.91
1:CA:581:G:OP2	56:CA:2043:HOH:O	1.87	0.91
1:AA:1128:C:H42	1:AA:1143:G:H1	1.17	0.91
1:AA:993:G:H2'	1:AA:995:C:H41	1.35	0.91
1:CA:949:A:N6	1:CA:1232:U:H3	1.68	0.91
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.52	0.90
23:BA:583:G:N7	56:BA:5068:HOH:O	2.03	0.90
23:DA:631:A:OP1	33:DP:65:ARG:NH1	2.03	0.90
23:BA:676:A:H8	23:BA:2069:G:H21	1.17	0.90
1:AA:1486:G:N7	56:AA:1839:HOH:O	2.03	0.90
23:BA:1533:G:H21	23:BA:1536:C:H5	1.19	0.90
1:CA:1055:A:N7	1:CA:1200:C:N4	2.17	0.90
6:AF:15:ASP:HB2	6:AF:18:GLN:H	1.36	0.90
23:BA:271(I):G:H1	23:BA:271(O):C:N4	1.69	0.90
23:DA:2304:G:H1	23:DA:2312:U:H3	1.19	0.90
28:BG:63:ILE:HA	28:BG:143:GLU:HG3	1.54	0.90
33:BP:39:LYS:HB2	33:BP:45:LEU:HG	1.53	0.90
1:CA:1346:A:OP1	9:CI:120:ARG:NH1	2.05	0.90
23:BA:2322:A:H61	23:BA:2335:A:N6	1.70	0.90
23:BA:1210:A:H5''	23:BA:1210:A:H8	1.35	0.90
1:AA:986:A:N6	1:AA:1219:U:H3	1.69	0.90
1:CA:1502:A:OP1	56:CA:2034:HOH:O	1.88	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:81:ILE:HD11	25:DD:125:ILE:HB	1.51	0.90
11:CK:29:ILE:HG23	11:CK:44:SER:HB3	1.51	0.90
23:DA:330:A:H2	23:DA:1210:A:H2'	1.36	0.89
23:BA:1189:A:OP2	56:BA:4525:HOH:O	1.88	0.89
1:CA:1371:G:H5''	9:CI:69:GLY:H	1.35	0.89
23:DA:407:G:OP2	56:DA:4603:HOH:O	1.89	0.89
1:CA:1170:A:H3'	1:CA:1171:G:H8	1.37	0.89
23:DA:1359:A:N6	23:DA:1372:U:O4	2.06	0.89
1:AA:1025:U:O2	1:AA:1036:G:O6	1.90	0.89
23:BA:2406:U:OP1	56:BA:4498:HOH:O	1.90	0.89
2:CB:19:HIS:ND1	2:CB:189:ASP:OD2	2.04	0.89
23:DA:2036:C:H6	23:DA:2036:C:H5'	1.37	0.89
1:AA:1239:A:H62	1:AA:1299:A:H62	0.89	0.89
1:CA:955:U:H1'	1:CA:1227:A:H61	1.36	0.89
1:AA:1459:C:H3'	1:AA:1460:A:C8	2.07	0.89
1:CA:673:G:H2'	1:CA:674:G:C8	2.07	0.89
37:BT:16:ARG:NH2	37:BT:83:ILE:O	2.05	0.88
23:DA:2122:U:H3	23:DA:2176:A:H61	0.91	0.88
1:CA:937:A:N6	1:CA:1345:U:O4	2.06	0.88
1:CA:989:C:N3	1:CA:1216:G:N2	2.22	0.88
28:DG:41:GLN:HB3	28:DG:43:LEU:HD13	1.52	0.88
1:AA:1441:G:C2'	1:AA:1459:C:H42	1.86	0.88
23:BA:2366:A:OP1	56:BA:4104:HOH:O	1.90	0.88
2:CB:50:GLU:O	2:CB:54:THR:OG1	1.89	0.88
23:DA:1376:C:OP2	56:DA:3934:HOH:O	1.90	0.88
1:CA:1444:C:N4	1:CA:1459:C:O2	2.07	0.88
23:DA:2228:G:OP1	25:DD:261:LYS:NZ	2.05	0.88
33:DP:39:LYS:HB2	33:DP:45:LEU:HG	1.55	0.88
45:B1:82:LEU:HA	45:B1:85:LEU:HD23	1.53	0.88
1:CA:1130:A:H61	1:CA:1144:G:H1'	1.39	0.88
23:DA:1019:U:H3	23:DA:1142(A):A:H62	1.21	0.87
23:DA:785:G:OP2	56:DA:4113:HOH:O	1.92	0.87
23:DA:2322:A:H61	23:DA:2335:A:N6	1.72	0.87
1:AA:1111:A:H61	3:AC:177:THR:HA	1.39	0.87
23:BA:974:G:N7	56:BA:4207:HOH:O	2.08	0.87
23:DA:927:G:N7	56:DA:4233:HOH:O	2.08	0.87
1:AA:1279:A:OP2	10:AJ:9:ARG:NH1	2.07	0.87
23:BA:2122:U:H3	23:BA:2176:A:N6	1.71	0.87
23:BA:2304:G:H1	23:BA:2312:U:H3	1.22	0.87
23:DA:1865:G:N7	56:DA:4472:HOH:O	2.06	0.87
1:AA:984:C:N4	1:AA:1221:G:H1	1.70	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:860:A:OP2	56:CA:1871:HOH:O	1.91	0.87
1:CA:559:A:H4'	1:CA:560:U:H3'	1.57	0.87
1:CA:986:A:N3	19:CS:52:TYR:OH	2.07	0.86
23:DA:1689:A:H62	23:DA:1698:A:H2	1.19	0.86
23:BA:1284:A:N7	56:BA:5015:HOH:O	2.06	0.86
1:CA:758:G:N7	56:CA:2044:HOH:O	2.06	0.86
23:DA:1352:U:OP2	56:DA:3935:HOH:O	1.94	0.86
1:CA:1030:C:N4	1:CA:1031:G:C6	2.43	0.86
1:CA:953:G:O6	1:CA:1228:C:N3	2.09	0.86
23:DA:1204:A:H2	23:DA:1241:A:H62	1.23	0.86
23:DA:1345:C:OP2	56:DA:3943:HOH:O	1.92	0.86
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.08	0.86
1:AA:1246:C:H42	1:AA:1291:G:H1	0.89	0.86
1:CA:949:A:H1'	1:CA:1364:U:N3	1.91	0.86
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.39	0.86
23:BA:1530:C:O2'	23:BA:1531:C:O5'	1.94	0.86
23:BA:883:G:H2'	23:BA:884:C:H5''	1.57	0.86
23:DA:2287:A:N6	23:DA:2344:U:H3	1.73	0.86
23:BA:558:G:N7	56:BA:4943:HOH:O	2.09	0.86
45:D1:82:LEU:HA	45:D1:85:LEU:HD23	1.58	0.86
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.41	0.85
23:BA:745:G:O6	56:BA:5274:HOH:O	1.94	0.85
7:CG:123:GLU:HA	7:CG:126:ASP:HB2	1.56	0.85
1:AA:1007:C:N3	1:AA:1022:G:N2	2.24	0.85
3:AC:152:ILE:HB	3:AC:199:LYS:HB2	1.57	0.85
23:BA:1474:C:N4	56:BA:4420:HOH:O	2.10	0.85
28:DG:63:ILE:HA	28:DG:143:GLU:HG3	1.58	0.85
1:AA:1459:C:C4	1:AA:1460:A:N6	2.44	0.85
1:CA:782:A:OP1	56:CA:1947:HOH:O	1.93	0.85
1:CA:1459:C:O3'	1:CA:1460:A:C8	2.30	0.85
23:BA:2639:A:OP2	56:BA:4119:HOH:O	1.94	0.85
19:CS:16:LEU:HA	19:CS:20:LEU:HB2	1.59	0.85
23:BA:885:C:N4	23:BA:890:A:N6	2.22	0.85
23:DA:1641:A:OP2	56:DA:4176:HOH:O	1.94	0.85
28:DG:15:VAL:HG13	28:DG:175:LEU:HB3	1.57	0.85
27:BF:101:LEU:O	27:BF:106:ARG:NH1	2.10	0.85
1:AA:1459:C:O3'	1:AA:1460:A:C8	2.30	0.84
23:BA:2317:C:H2'	23:BA:2318:G:H5'	1.58	0.84
1:CA:932:C:N3	1:CA:1385:G:N2	2.25	0.84
23:DA:2526:G:O6	56:DA:4287:HOH:O	1.95	0.84
11:AK:29:ILE:HG23	11:AK:44:SER:HB3	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:122:GLU:O	5:CE:126:ARG:NH1	2.09	0.84
23:BA:1177:A:O2'	23:BA:1178:C:O4'	1.95	0.84
33:BP:126:VAL:HG12	33:BP:148:LEU:HD22	1.60	0.84
1:CA:1458:G:C2	1:CA:1459:C:O4'	2.30	0.84
23:BA:242:G:OP1	56:BA:4242:HOH:O	1.94	0.84
30:BI:3:VAL:HG12	30:BI:38:LEU:HA	1.57	0.84
1:AA:673:G:H2'	1:AA:674:G:C8	2.13	0.84
1:CA:1327:C:OP1	21:CU:20:LYS:N	2.11	0.84
23:DA:1980:G:O2'	23:DA:1982:C:OP2	1.95	0.84
23:DA:833:U:O2	33:DP:55:ARG:NH2	2.09	0.84
23:BA:510:C:OP1	56:BA:3896:HOH:O	1.94	0.84
1:CA:1466:C:OP2	56:CA:1864:HOH:O	1.94	0.84
23:DA:1271:G:OP2	56:DA:3848:HOH:O	1.96	0.84
23:DA:1530:C:O2'	23:DA:1531:C:O5'	1.96	0.84
23:DA:2808:U:O2	23:DA:2892:A:N6	2.10	0.84
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.12	0.84
10:AJ:91:PRO:HG2	10:AJ:94:VAL:HB	1.60	0.84
1:CA:1459:C:H3'	1:CA:1460:A:C8	2.11	0.84
16:CP:19:ILE:HG22	16:CP:36:ILE:HG13	1.59	0.84
9:CI:16:ARG:HB2	9:CI:64:THR:HG23	1.57	0.83
23:DA:2161:C:OP2	23:DA:2161:C:C5	2.30	0.83
1:AA:1118:C:H42	1:AA:1155:G:H1	1.26	0.83
23:BA:2036:C:H5'	23:BA:2036:C:H6	1.42	0.83
23:BA:330:A:H2	23:BA:1210:A:H2'	1.43	0.83
10:CJ:8:LEU:HD11	10:CJ:20:ALA:HB2	1.59	0.83
23:BA:805:G:OP1	56:BA:4504:HOH:O	1.95	0.83
1:CA:1300:G:H1	1:CA:1334:G:H2'	1.43	0.83
23:DA:2298:A:H62	23:DA:2318:G:H8	1.24	0.83
1:AA:1158:C:H4'	2:AB:133:LYS:HD2	1.60	0.83
25:BD:118:VAL:H	25:BD:129:ASN:HD22	1.25	0.83
1:CA:973:G:H3'	1:CA:974:A:H5''	1.59	0.83
23:DA:2385:C:OP1	56:DA:4159:HOH:O	1.95	0.83
1:CA:1368:G:H5''	9:CI:112:LYS:HB3	1.60	0.83
23:BA:1210:A:H5''	23:BA:1210:A:C8	2.13	0.83
23:BA:2134:A:O2'	23:BA:2159:G:N2	2.12	0.83
1:CA:48:C:OP2	56:CA:1850:HOH:O	1.95	0.83
23:DA:2161:C:C6	23:DA:2161:C:OP2	2.31	0.83
31:BN:20:GLY:HA2	31:BN:61:ARG:HG3	1.60	0.82
7:CG:14:PRO:HG3	7:CG:21:VAL:HG12	1.61	0.82
1:AA:1130:A:H61	1:AA:1144:G:H1'	1.43	0.82
1:AA:1186:G:N2	14:AN:61:TRP:O	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:10:LEU:HG	20:AT:12:ALA:H	1.45	0.82
23:BA:624:C:OP1	56:BA:4243:HOH:O	1.96	0.82
1:CA:1508:G:OP1	56:CA:2021:HOH:O	1.97	0.82
3:CC:20:SER:HB3	3:CC:22:TRP:HE1	1.43	0.82
1:AA:1051:C:N3	1:AA:1207:G:N2	2.27	0.82
5:AE:122:GLU:O	5:AE:126:ARG:NH1	2.12	0.82
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.12	0.82
23:DA:2074:U:OP1	56:DA:4301:HOH:O	1.97	0.82
23:DA:2694:G:N7	56:DA:4770:HOH:O	2.12	0.82
30:DI:3:VAL:HG12	30:DI:38:LEU:HA	1.60	0.82
33:DP:126:VAL:HG12	33:DP:148:LEU:HD22	1.61	0.82
23:DA:2194:G:N7	56:DA:4551:HOH:O	2.13	0.82
23:BA:1667:G:O6	56:BA:4985:HOH:O	1.95	0.82
1:AA:812:C:N3	56:AA:1914:HOH:O	2.13	0.82
1:AA:893:C:O2	56:AA:1809:HOH:O	1.98	0.82
1:AA:963:G:H1	1:AA:972:C:N4	1.77	0.82
1:AA:977:A:O2'	1:AA:981:U:N3	2.12	0.82
23:BA:922:U:O4	56:BA:4369:HOH:O	1.98	0.82
1:CA:1156:G:H21	1:CA:1179:A:H61	1.24	0.82
23:DA:810:U:OP1	56:DA:4451:HOH:O	1.96	0.82
31:DN:130:HIS:HB3	31:DN:133:GLN:HE21	1.43	0.82
1:AA:97:G:HO2'	1:AA:98:G:H8	1.28	0.81
23:BA:578:A:OP2	56:BA:4057:HOH:O	1.97	0.81
31:BN:130:HIS:HB3	31:BN:133:GLN:HE21	1.43	0.81
9:CI:28:VAL:HB	9:CI:36:TYR:HB3	1.59	0.81
28:BG:41:GLN:HB3	28:BG:43:LEU:HD13	1.60	0.81
1:CA:1288:A:N1	1:CA:1371:G:H1'	1.94	0.81
1:CA:1457:G:C4	1:CA:1458:G:C8	2.68	0.81
1:AA:1457:G:H2'	1:AA:1458:G:C8	2.14	0.81
1:AA:642:A:N3	8:AH:113:SER:OG	2.14	0.81
38:BU:28:ARG:NH1	38:BU:38:THR:OG1	2.12	0.81
1:CA:1251:A:N6	1:CA:1285:A:N1	2.27	0.81
23:DA:2317:C:H2'	23:DA:2318:G:H5'	1.62	0.81
1:AA:1065:U:H6	1:AA:1190:G:H21	1.23	0.81
23:BA:2033:A:OP1	56:BA:4596:HOH:O	1.97	0.81
1:CA:1141:C:H2'	1:CA:1142:G:H8	1.44	0.81
1:CA:1422:G:H5'	32:DO:48:PRO:HB3	1.63	0.81
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.14	0.81
23:DA:676:A:H8	23:DA:2069:G:H21	1.25	0.81
1:AA:1121:U:H3	1:AA:1152:A:H61	1.24	0.81
23:BA:1320:C:OP2	56:BA:5012:HOH:O	1.99	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BV:62:LEU:HD11	39:BV:95:LEU:HB2	1.63	0.81
1:AA:1239:A:H62	1:AA:1299:A:N6	1.75	0.81
10:AJ:61:GLU:OE1	14:AN:58:LYS:NZ	2.14	0.81
1:CA:1009:G:O6	1:CA:1020:U:O2	1.98	0.81
1:CA:1237:C:O2'	1:CA:1300:G:N2	2.11	0.81
3:CC:137:ALA:HA	3:CC:140:ARG:HD3	1.62	0.81
1:AA:768:A:N7	56:AA:1907:HOH:O	2.14	0.81
23:DA:1303:G:OP1	56:DA:4525:HOH:O	1.97	0.81
23:BA:1173:G:N1	23:BA:1176:G:OP2	2.11	0.80
1:CA:977:A:HO2'	1:CA:981:U:H3	1.26	0.80
28:BG:15:VAL:HG13	28:BG:175:LEU:HB3	1.63	0.80
1:CA:581:G:N7	56:CA:2044:HOH:O	2.14	0.80
23:DA:2134:A:O2'	23:DA:2159:G:N2	2.15	0.80
1:AA:1119:C:H2'	1:AA:1120:G:H8	1.46	0.80
1:CA:940:C:H42	1:CA:1343:G:H1	1.25	0.80
1:AA:1457:G:C4	1:AA:1458:G:C8	2.70	0.80
23:BA:2287:A:N6	23:BA:2344:U:H3	1.80	0.80
23:DA:271(A):A:N7	23:DA:271(W):G:N2	2.30	0.80
8:AH:4:ASP:OD1	8:AH:85:ARG:NH1	2.14	0.80
1:CA:1235:U:H5''	21:CU:3:LYS:HB2	1.63	0.80
7:CG:42:ILE:HA	7:CG:45:ASP:HB2	1.63	0.80
23:DA:1022:G:H22	23:DA:1142(A):A:H2	1.29	0.80
23:BA:1541:G:O6	56:BA:4734:HOH:O	1.98	0.80
23:BA:300:A:N6	56:BA:3924:HOH:O	2.13	0.80
23:DA:71:A:C2	41:DX:31:HIS:HE1	1.99	0.80
23:BA:2161:C:C5	23:BA:2161:C:OP2	2.34	0.80
1:CA:1027:C:C2	1:CA:1034:G:N2	2.47	0.80
1:CA:1050:G:O6	1:CA:1208:C:N3	2.15	0.80
1:AA:148:G:H2'	1:AA:149:A:H8	1.47	0.79
23:BA:561:G:N7	56:BA:5347:HOH:O	2.15	0.79
52:D8:33:ASN:HA	52:D8:36:LYS:HD2	1.63	0.79
13:AM:72:ALA:HA	13:AM:75:ALA:HB3	1.64	0.79
7:CG:42:ILE:HB	7:CG:116:ALA:HB3	1.64	0.79
23:DA:1403:C:H5''	23:DA:1471:A:H1'	1.65	0.79
1:AA:1236:A:OP2	21:AU:3:LYS:NZ	2.14	0.79
13:CM:86:CYS:HB3	13:CM:89:GLY:H	1.44	0.79
27:DF:178:PRO:HB2	27:DF:201:VAL:HG11	1.64	0.79
1:AA:1013:G:H21	1:AA:1016:A:H8	1.30	0.79
1:AA:942:G:H2'	1:AA:943:U:H6	1.45	0.79
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.46	0.79
23:DA:2472:G:H5'	23:DA:2473:U:H5''	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:80:G:N7	56:DA:4050:HOH:O	2.15	0.79
23:BA:1517:G:O6	56:BA:4420:HOH:O	2.00	0.79
1:CA:1350:A:N6	1:CA:1372:U:H3	1.81	0.79
1:CA:90:U:H2'	1:CA:91:C:C6	2.18	0.79
1:CA:977:A:O2'	1:CA:981:U:N3	2.12	0.79
23:BA:1607:C:N4	23:BA:1622:G:OP2	2.16	0.79
23:BA:1888:G:N7	56:BA:4835:HOH:O	2.15	0.79
23:BA:2296:U:O4	23:BA:2335:A:C6	2.36	0.79
23:BA:885:C:C4	23:BA:890:A:C6	2.69	0.79
40:DW:25:ARG:NH2	40:DW:74:ALA:O	2.16	0.79
1:AA:1268:A:N3	1:AA:1326:C:O2'	2.15	0.79
25:BD:239:ARG:N	56:BD:410:HOH:O	2.15	0.79
1:CA:1457:G:H2'	1:CA:1458:G:C8	2.17	0.79
23:BA:2298:A:H62	23:BA:2318:G:H8	1.27	0.79
28:BG:105:LYS:NZ	48:B4:25:TYR:O	2.16	0.79
1:CA:1075:C:OP1	2:CB:179:LYS:NZ	2.13	0.79
23:DA:1604:C:OP1	56:DA:3790:HOH:O	2.01	0.79
19:AS:46:GLY:HA2	19:AS:61:TYR:HE1	1.47	0.78
23:BA:1019:U:H3	23:BA:1142(A):A:H62	1.29	0.78
23:BA:1664:A:OP1	56:BA:4771:HOH:O	2.00	0.78
1:AA:1010:G:H1	1:AA:1019:C:H42	0.82	0.78
1:AA:166:G:H2'	1:AA:167:G:H8	1.48	0.78
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.63	0.78
23:BA:784:A:OP1	56:BA:4425:HOH:O	2.00	0.78
2:CB:87:ARG:HE	2:CB:233:SER:HB2	1.47	0.78
1:AA:12:U:O4	56:AA:1980:HOH:O	2.02	0.78
2:AB:87:ARG:HE	2:AB:233:SER:HB2	1.48	0.78
1:CA:1128:C:N4	1:CA:1143:G:H1	1.80	0.78
1:CA:839:U:H5'	1:CA:840:C:C5	2.18	0.78
1:AA:1103:C:H5''	2:AB:98:LEU:HD13	1.64	0.78
20:AT:10:LEU:HD21	20:AT:12:ALA:HB3	1.65	0.78
1:CA:1170:A:H3'	1:CA:1171:G:C8	2.18	0.78
8:CH:29:SER:HB3	8:CH:32:LYS:HG3	1.65	0.78
8:CH:4:ASP:OD1	8:CH:85:ARG:NH1	2.16	0.78
1:CA:1179:A:H4'	9:CI:103:THR:HA	1.66	0.78
17:CQ:76:LEU:HD11	17:CQ:79:SER:HB2	1.62	0.78
37:DT:95:ARG:HG2	37:DT:95:ARG:HH11	1.47	0.78
1:AA:1327:C:OP1	21:AU:20:LYS:N	2.14	0.78
1:AA:977:A:HO2'	1:AA:981:U:H3	1.30	0.78
23:BA:1639:U:H2'	23:BA:1640:C:H5''	1.64	0.78
1:CA:1377:A:H2'	7:CG:7:ALA:HB1	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:138:GLN:HG3	28:DG:144:ILE:HG21	1.64	0.78
23:BA:1970:A:N1	56:BA:5040:HOH:O	2.16	0.78
43:BZ:82:ARG:HH21	43:BZ:82:ARG:HB3	1.48	0.78
23:BA:778:G:O6	56:BA:3910:HOH:O	2.02	0.78
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	1.66	0.78
23:BA:1022:G:H22	23:BA:1142(A):A:H2	1.31	0.78
23:DA:1022:G:O2'	56:DA:3688:HOH:O	2.01	0.78
23:DA:1670:C:OP1	56:DA:3807:HOH:O	2.01	0.78
1:AA:770:C:OP1	56:AA:1879:HOH:O	2.00	0.78
23:BA:31:C:OP1	56:BA:3883:HOH:O	2.01	0.78
3:CC:43:LEU:HD23	3:CC:47:LEU:HD13	1.65	0.78
1:AA:1259:C:O2'	1:AA:1283:G:N3	2.17	0.77
1:AA:1294:G:H2'	1:AA:1295:G:C8	2.19	0.77
23:BA:154(A):C:N4	23:BA:171:G:H1	1.83	0.77
13:AM:108:ARG:HD2	13:AM:113:PRO:HA	1.65	0.77
23:BA:2161:C:C6	23:BA:2161:C:OP2	2.38	0.77
40:BW:25:ARG:NH2	40:BW:74:ALA:O	2.16	0.77
1:CA:176:C:OP1	20:CT:29:LYS:NZ	2.15	0.77
2:CB:71:VAL:HG13	2:CB:93:VAL:HG23	1.66	0.77
9:CI:13:ALA:HB1	9:CI:73:GLN:HG3	1.66	0.77
23:DA:1416:G:O6	56:DA:4489:HOH:O	2.02	0.77
27:DF:101:LEU:O	27:DF:106:ARG:NH1	2.18	0.77
23:BA:1468:C:OP1	56:BA:4172:HOH:O	2.02	0.77
23:BA:2285:C:OP2	50:B6:6:ARG:NH1	2.17	0.77
7:CG:16:LEU:HD22	9:CI:45:ALA:H	1.49	0.77
23:DA:1639:U:OP1	56:DA:3985:HOH:O	2.02	0.77
23:DA:411:G:OP1	56:DA:4065:HOH:O	2.02	0.77
23:DA:574:C:OP1	56:DA:3903:HOH:O	2.03	0.77
23:DA:945:A:N7	56:DA:3684:HOH:O	2.17	0.77
1:CA:1349:A:H2'	1:CA:1350:A:H8	1.50	0.77
1:AA:352:C:OP2	56:AA:1847:HOH:O	2.01	0.77
1:AA:750:G:N3	15:AO:23:GLY:HA3	1.99	0.77
23:BA:2472:G:H5'	23:BA:2473:U:H5''	1.66	0.77
1:AA:1162:C:H42	1:AA:1174:G:H1	1.28	0.77
2:AB:71:VAL:HG13	2:AB:93:VAL:HG23	1.66	0.77
23:BA:1840:G:N7	56:BA:4640:HOH:O	2.17	0.77
23:DA:2206:G:H5'	23:DA:2207:G:N7	1.99	0.77
1:AA:1459:C:C3'	1:AA:1460:A:N7	2.46	0.77
1:CA:266:G:O2'	1:CA:267:C:OP2	2.02	0.77
14:CN:32:SER:HB3	14:CN:41:ARG:HB3	1.67	0.77
1:AA:266:G:O2'	1:AA:267:C:OP2	2.01	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1237:C:N4	1:CA:1337:G:H1	1.82	0.77
1:CA:235:C:H5'	17:CQ:70:ARG:HG2	1.64	0.77
23:DA:1971:A:OP1	56:DA:4210:HOH:O	2.02	0.77
1:CA:953:G:N1	1:CA:1228:C:O2	2.17	0.76
23:DA:452:G:OP2	56:DA:4034:HOH:O	2.01	0.76
1:AA:773:G:OP1	56:AA:1808:HOH:O	2.02	0.76
10:AJ:50:ILE:HA	10:AJ:60:ARG:HG2	1.65	0.76
6:CF:7:ASN:HD21	18:CR:34:TYR:HE1	1.31	0.76
23:BA:1535:A:OP2	23:BA:1535:A:H3'	1.84	0.76
1:CA:1235:U:O2'	1:CA:1305:G:OP1	2.03	0.76
23:DA:1639:U:H2'	23:DA:1640:C:H5''	1.66	0.76
1:CA:547:A:OP1	56:CA:1986:HOH:O	2.04	0.76
24:DB:66:A:H61	24:DB:109:C:H5'	1.49	0.76
25:BD:118:VAL:H	25:BD:129:ASN:ND2	1.83	0.76
1:CA:1222:G:OP2	1:CA:1322:C:N4	2.19	0.76
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.68	0.76
13:AM:23:TYR:HD1	13:AM:67:GLU:HG2	1.51	0.76
17:AQ:76:LEU:HD11	17:AQ:79:SER:HB2	1.68	0.76
31:DN:20:GLY:HA2	31:DN:61:ARG:HG3	1.66	0.76
1:AA:1030(C):G:O6	1:AA:1031:G:N2	2.19	0.76
1:AA:942:G:H2'	1:AA:943:U:C6	2.20	0.76
15:AO:54:ARG:HG2	15:AO:58:MET:HE2	1.67	0.76
23:BA:2408:U:OP2	56:BA:4497:HOH:O	2.04	0.76
23:BA:2439:A:O2'	56:BA:4426:HOH:O	2.03	0.76
1:CA:1005:A:H1'	1:CA:1036:G:H22	1.50	0.76
23:DA:2136:C:H42	23:DA:2155:G:H1	1.33	0.76
23:DA:2296:U:O4	23:DA:2335:A:C6	2.38	0.76
23:BA:2070:G:OP2	56:BA:3863:HOH:O	2.04	0.76
23:BA:2206:G:H5'	23:BA:2207:G:N7	2.01	0.76
1:CA:1130:A:H4'	9:CI:3:GLN:HE22	1.51	0.76
1:CA:1254:C:H42	1:CA:1283:G:H1	1.33	0.76
1:CA:1273:G:H3'	1:CA:1274:G:H8	1.50	0.76
1:AA:1244:C:H2'	1:AA:1245:A:C8	2.21	0.75
2:AB:197:VAL:O	8:AH:68:ARG:NH2	2.19	0.75
13:AM:19:LEU:HA	13:AM:22:ILE:HG13	1.69	0.75
23:BA:2365:G:OP1	56:BA:4102:HOH:O	2.03	0.75
23:BA:744:G:OP1	56:BA:4604:HOH:O	2.03	0.75
1:AA:345:C:P	37:BT:39:ARG:HH22	2.09	0.75
23:DA:1236:G:OP1	56:DA:4251:HOH:O	2.04	0.75
23:BA:1790:C:N3	56:BA:3738:HOH:O	2.18	0.75
23:BA:990:A:OP2	56:BA:4518:HOH:O	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.52	0.75
23:BA:188:G:N7	56:BA:4302:HOH:O	2.18	0.75
1:CA:1004:A:N6	1:CA:1035:A:N7	2.34	0.75
23:DA:1607:C:N4	23:DA:1622:G:OP2	2.19	0.75
23:DA:2407:G:OP1	56:DA:4068:HOH:O	2.04	0.75
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.49	0.75
23:BA:1319:G:OP2	56:BA:3806:HOH:O	2.04	0.75
23:BA:380:U:OP1	56:BA:4338:HOH:O	2.05	0.75
1:CA:177:C:OP1	20:CT:65:LYS:NZ	2.19	0.75
11:CK:79:SER:HA	11:CK:104:GLN:HB2	1.68	0.75
23:BA:942:G:O6	56:BA:4958:HOH:O	2.04	0.75
2:CB:54:THR:HG23	2:CB:199:TYR:HB3	1.69	0.75
23:DA:386:G:O3'	56:DA:4075:HOH:O	2.03	0.75
23:BA:2147:G:H2'	23:BA:2148:G:O4'	1.86	0.75
1:CA:1251:A:N6	1:CA:1354:C:O2'	2.17	0.75
7:CG:69:VAL:HG21	7:CG:104:LEU:HD13	1.69	0.75
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.01	0.75
23:DA:1268:A:OP1	56:DA:3880:HOH:O	2.04	0.75
23:DA:2005:A:OP1	56:DA:3802:HOH:O	2.03	0.75
23:DA:1226:A:OP1	39:DV:84:LYS:NZ	2.18	0.75
2:AB:54:THR:HG23	2:AB:199:TYR:HB3	1.69	0.75
23:DA:399:G:OP2	56:DA:4081:HOH:O	2.04	0.75
23:DA:853:G:O6	56:DA:4226:HOH:O	2.04	0.75
23:BA:1900:A:OP2	56:BA:4627:HOH:O	2.05	0.75
23:BA:1980:G:O2'	23:BA:1982:C:OP2	2.04	0.75
24:BB:31:C:O2'	24:BB:53:A:N6	2.20	0.75
2:CB:197:VAL:O	8:CH:68:ARG:NH2	2.20	0.75
23:DA:1376:C:OP2	56:DA:3933:HOH:O	2.05	0.75
4:AD:159:ARG:O	4:AD:163:GLU:N	2.16	0.75
50:B6:22:ALA:O	56:B6:201:HOH:O	2.05	0.75
3:CC:17:ASP:O	3:CC:54:ARG:NH2	2.19	0.75
23:DA:2296:U:OP2	36:DS:9:ARG:NH2	2.18	0.75
1:CA:166:G:H2'	1:CA:167:G:H8	1.52	0.74
1:CA:192:U:H2'	1:CA:193:C:H6	1.51	0.74
9:CI:15:ALA:HB2	9:CI:65:VAL:HG23	1.69	0.74
19:CS:36:ARG:NH1	19:CS:75:ALA:O	2.19	0.74
23:DA:1817:G:OP1	25:DD:88:ARG:NH2	2.19	0.74
31:DN:47:ALA:HB2	31:DN:112:LEU:HD11	1.68	0.74
1:AA:1304:G:O2'	1:AA:1333:A:N6	2.20	0.74
1:CA:1262:C:N3	1:CA:1273:G:N2	2.34	0.74
1:CA:1459:C:O3'	1:CA:1460:A:H8	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:73:MET:HG2	7:CG:145:ALA:HB1	1.69	0.74
23:DA:2147:G:H2'	23:DA:2148:G:O4'	1.87	0.74
30:DI:87:LYS:H	30:DI:122:GLU:HA	1.52	0.74
11:AK:79:SER:HA	11:AK:104:GLN:HB2	1.68	0.74
23:BA:2371:G:O6	56:BA:4873:HOH:O	2.05	0.74
1:AA:1060:C:H2'	1:AA:1061:G:H8	1.52	0.74
1:AA:839:U:H5'	1:AA:840:C:C5	2.18	0.74
4:AD:57:ARG:HE	4:AD:202:LEU:HD22	1.53	0.74
23:BA:71:A:C2	41:BX:31:HIS:HE1	2.05	0.74
1:CA:1010:G:H2'	1:CA:1011:G:H8	1.52	0.74
1:CA:1457:G:C5	1:CA:1458:G:N7	2.55	0.74
23:DA:2712:U:O2'	23:DA:2712(A):A:OP2	2.06	0.74
1:AA:1219:U:OP1	14:AN:19:ARG:NH2	2.20	0.74
23:BA:1190:G:N7	56:BA:4525:HOH:O	2.20	0.74
25:BD:234:GLY:O	56:BD:415:HOH:O	2.04	0.74
1:AA:1005:A:OP1	1:AA:1024:G:N2	2.20	0.74
1:AA:1156:G:H21	1:AA:1179:A:H61	1.36	0.74
23:BA:910:A:OP2	56:BA:4357:HOH:O	2.04	0.74
1:CA:949:A:H1'	1:CA:1364:U:H3	1.50	0.74
13:CM:86:CYS:HB3	13:CM:89:GLY:N	2.01	0.74
28:DG:76:SER:HA	28:DG:83:ARG:HA	1.69	0.74
1:CA:1006:C:H2'	1:CA:1007:C:C2	2.23	0.74
1:CA:447:G:OP2	56:CA:1821:HOH:O	2.05	0.74
1:CA:437:U:H5''	4:CD:155:LEU:HD11	1.69	0.74
23:DA:1637:A:OP2	56:DA:3960:HOH:O	2.06	0.74
23:DA:528:A:O2'	56:DA:4767:HOH:O	2.04	0.74
25:DD:118:VAL:H	25:DD:129:ASN:HD22	1.36	0.74
1:CA:946:A:H61	1:CA:1235:U:H3	1.35	0.74
23:DA:1913:A:OP2	23:DA:1913:A:H3'	1.86	0.74
1:CA:1346:A:H2	1:CA:1347:G:H21	1.33	0.74
9:CI:4:TYR:CZ	9:CI:88:TYR:HB2	2.23	0.74
48:D4:18:CYS:SG	48:D4:39:CYS:HB3	2.28	0.74
1:AA:1243:C:H42	1:AA:1294:G:H1	1.33	0.74
1:AA:1457:G:OP1	20:AT:39:LYS:NZ	2.21	0.74
23:BA:833:U:O2	33:BP:55:ARG:NH2	2.20	0.74
1:CA:1030:C:N3	1:CA:1031:G:C2	2.56	0.74
4:CD:159:ARG:O	4:CD:163:GLU:N	2.18	0.74
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.70	0.73
23:BA:1030:G:OP1	56:BA:4411:HOH:O	2.05	0.73
24:BB:60:C:N4	56:BB:316:HOH:O	2.19	0.73
23:DA:346:A:OP2	56:DA:4507:HOH:O	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:71:A:H2	41:DX:31:HIS:HE1	1.36	0.73
1:AA:1128:C:N4	1:AA:1143:G:H1	1.86	0.73
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.22	0.73
9:AI:26:VAL:HB	9:AI:33:PHE:HA	1.69	0.73
23:BA:1171:G:H1'	23:BA:1173:G:H5'	1.69	0.73
23:BA:883:G:H1	23:BA:893:C:H42	1.35	0.73
1:CA:1444:C:H42	1:CA:1458:G:H1	1.36	0.73
43:DZ:10:ARG:NH2	43:DZ:26:GLY:O	2.20	0.73
23:BA:1047:G:H2'	23:BA:1110:G:H22	1.53	0.73
23:BA:2296:U:OP2	36:BS:9:ARG:NH2	2.21	0.73
23:BA:271(A):A:N7	23:BA:271(W):G:N2	2.35	0.73
24:BB:86:G:O6	56:BB:339:HOH:O	2.06	0.73
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.51	0.73
1:AA:1442:G:N7	1:AA:1442(A):G:C6	2.57	0.73
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.71	0.73
52:B8:33:ASN:HA	52:B8:36:LYS:HD2	1.69	0.73
23:BA:1913:A:OP2	23:BA:1913:A:H3'	1.88	0.73
23:BA:2109:U:H3	23:BA:2180:U:H3	1.36	0.73
1:CA:940:C:N4	1:CA:1343:G:H1	1.84	0.73
7:CG:43:PHE:HA	7:CG:46:ALA:HB3	1.70	0.73
23:DA:1377:G:OP2	56:DA:3929:HOH:O	2.06	0.73
23:DA:607:U:OP1	27:DF:102:PRO:HA	1.88	0.73
37:BT:95:ARG:HG2	37:BT:95:ARG:HH11	1.53	0.73
7:CG:88:PRO:HG2	7:CG:152:ALA:HA	1.70	0.73
49:D5:16:ARG:HG2	49:D5:16:ARG:HH11	1.52	0.73
23:DA:271(F):C:H2'	23:DA:271(G):C:H6	1.51	0.73
23:DA:278:A:O2'	23:DA:279:C:OP1	2.06	0.73
1:AA:1294:G:H2'	1:AA:1295:G:H8	1.53	0.73
1:AA:1442(B):A:N7	37:BT:118:ARG:NH2	2.35	0.73
1:AA:484:G:O2'	1:AA:485:G:OP2	2.07	0.73
9:AI:71:SER:HA	9:AI:74:ILE:HG22	1.69	0.73
23:DA:141:A:H8	23:DA:1408:C:HO2'	1.32	0.73
23:DA:154(A):C:N4	23:DA:171:G:H1	1.85	0.73
6:AF:7:ASN:HD21	18:AR:34:TYR:HE1	1.34	0.73
23:BA:1845:G:N7	56:BA:5140:HOH:O	2.22	0.73
23:BA:531:C:OP1	23:BA:561:G:N2	2.20	0.73
14:CN:7:ILE:HG22	14:CN:23:ARG:HE	1.52	0.73
23:DA:29:U:H2'	23:DA:30:G:C8	2.22	0.73
1:CA:1376:U:H2'	1:CA:1377:A:C8	2.24	0.73
1:CA:484:G:O2'	1:CA:485:G:OP2	2.06	0.73
30:DI:40:THR:O	30:DI:44:LEU:N	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1250:G:N7	33:DP:18:ARG:NH2	2.37	0.73
1:AA:1457:G:C5	1:AA:1458:G:N7	2.56	0.73
1:CA:1324:A:H5'	1:CA:1363:C:H5''	1.71	0.73
14:CN:16:PHE:H	14:CN:19:ARG:HB2	1.54	0.73
37:DT:118:ARG:CZ	37:DT:118:ARG:HA	2.19	0.73
1:AA:1441:G:O2'	1:AA:1459:C:N4	2.21	0.73
1:AA:192:U:H2'	1:AA:193:C:H6	1.53	0.73
23:BA:2534:A:N7	56:BA:5059:HOH:O	2.21	0.73
1:CA:1165:C:N4	1:CA:1171:G:H1	1.86	0.73
2:CB:60:ASP:O	2:CB:64:ARG:HG3	1.89	0.73
1:AA:251:G:N7	56:AA:1924:HOH:O	2.22	0.72
1:AA:993:G:N2	1:AA:996:A:H61	1.86	0.72
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.53	0.72
23:BA:2136:C:H42	23:BA:2155:G:H1	1.36	0.72
23:BA:2706:G:O6	56:BA:4852:HOH:O	2.06	0.72
11:AK:31:THR:HG22	11:AK:42:TRP:HB2	1.71	0.72
7:CG:138:LYS:NZ	7:CG:142:GLU:OE1	2.20	0.72
23:DA:768:G:N7	56:DA:3978:HOH:O	2.21	0.72
1:AA:222:U:H2'	1:AA:223:U:C6	2.24	0.72
23:DA:2526:G:H21	53:D9:2:LYS:HG2	1.54	0.72
23:DA:1721:G:H8	23:DA:1741:A:H62	1.37	0.72
1:AA:1075:C:OP1	2:AB:179:LYS:NZ	2.15	0.72
23:BA:1817:G:OP1	25:BD:88:ARG:NH2	2.23	0.72
23:BA:2287:A:H62	23:BA:2344:U:H3	1.36	0.72
23:BA:674:G:OP2	56:BA:3870:HOH:O	2.07	0.72
43:BZ:10:ARG:NH2	43:BZ:26:GLY:O	2.22	0.72
1:CA:1442:G:N7	1:CA:1442(A):G:C6	2.57	0.72
1:CA:427:U:OP2	4:CD:36:ARG:NH2	2.22	0.72
1:AA:1118:C:H2'	1:AA:1119:C:C6	2.25	0.72
15:AO:39:LEU:HB3	15:AO:56:LEU:HD23	1.71	0.72
23:BA:1022:G:O2'	56:BA:3731:HOH:O	2.05	0.72
23:BA:1721:G:H8	23:BA:1741:A:H62	1.37	0.72
28:BG:76:SER:HA	28:BG:83:ARG:HA	1.71	0.72
1:CA:1147:C:O2	9:CI:16:ARG:NH2	2.23	0.72
1:AA:1377:A:H8	1:AA:1377:A:H3'	1.55	0.72
1:CA:1443:G:O6	1:CA:1459:C:C2	2.42	0.72
19:CS:46:GLY:HA2	19:CS:61:TYR:CE1	2.25	0.72
23:DA:1019:U:HO2'	23:DA:1021:A:H2	1.37	0.72
23:DA:1237:A:OP1	56:DA:4018:HOH:O	2.06	0.72
34:DQ:58:PHE:HB3	34:DQ:61:GLY:HA3	1.72	0.72
36:DS:11:LYS:HG3	36:DS:91:PRO:HD3	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:735:C:H2'	1:AA:736:C:H6	1.53	0.72
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.72	0.72
3:CC:36:ASP:HA	3:CC:39:ILE:HD12	1.70	0.72
15:CO:16:ALA:HB1	15:CO:21:ASP:HB3	1.72	0.72
23:DA:404:C:OP1	56:DA:4250:HOH:O	2.06	0.72
23:DA:411:G:H5''	56:DA:4065:HOH:O	1.90	0.72
25:DD:17:THR:O	25:DD:211:ARG:NH2	2.21	0.72
37:DT:64:ARG:NH1	37:DT:103:ARG:HA	2.05	0.72
1:AA:993:G:H21	1:AA:996:A:H61	1.37	0.72
23:BA:1429:G:H2'	23:BA:1430:C:C6	2.25	0.72
30:BI:83:ALA:HB2	30:BI:88:ILE:HA	1.70	0.72
1:CA:1231:G:N2	1:CA:1232:U:H1'	2.05	0.72
1:CA:964:A:H2'	1:CA:969:A:H1'	1.71	0.72
1:CA:97:G:HO2'	1:CA:98:G:H8	1.37	0.72
1:AA:1441:G:N2	1:AA:1459:C:C5	2.57	0.72
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HG22	1.71	0.72
23:BA:2117:A:H61	23:BA:2166:G:H22	1.38	0.72
23:BA:607:U:OP1	27:BF:102:PRO:HA	1.90	0.72
1:CA:148:G:H2'	1:CA:149:A:H8	1.54	0.72
2:CB:87:ARG:HH21	2:CB:233:SER:H	1.37	0.72
7:CG:41:ARG:NH2	9:CI:39:GLY:O	2.23	0.72
3:CC:13:GLY:HA3	14:CN:57:ARG:HH22	1.55	0.72
23:DA:1394:U:OP1	56:DA:3790:HOH:O	2.08	0.72
23:DA:1507:A:O2'	23:DA:1508:A:H8	1.72	0.72
23:BA:243:U:OP1	52:B8:6:THR:OG1	2.08	0.71
1:CA:1131:G:H1	1:CA:1143:G:H21	1.38	0.71
1:AA:1329:A:H5''	13:AM:25:ILE:HA	1.72	0.71
23:BA:882:G:H1	23:BA:894:C:H42	1.38	0.71
1:CA:939:G:H1	1:CA:1344:C:N4	1.87	0.71
2:CB:137:ARG:HH11	2:CB:137:ARG:HB2	1.55	0.71
20:CT:10:LEU:HG	20:CT:12:ALA:H	1.54	0.71
28:DG:105:LYS:NZ	48:D4:25:TYR:O	2.22	0.71
23:DA:1332:G:OP1	56:DA:3783:HOH:O	2.08	0.71
23:DA:2126:A:N6	23:DA:2163:C:H5'	2.05	0.71
23:DA:2287:A:H62	23:DA:2344:U:H3	1.37	0.71
23:BA:1324:G:O6	56:BA:4953:HOH:O	2.07	0.71
30:BI:130:TYR:HB3	30:BI:138:ILE:HB	1.70	0.71
1:CA:976:G:N2	1:CA:1363(A):A:OP1	2.23	0.71
23:BA:1370:C:OP1	56:BA:4694:HOH:O	2.08	0.71
23:BA:1634:A:N1	56:BA:4325:HOH:O	2.23	0.71
23:BA:2322:A:N6	23:BA:2335:A:H61	1.87	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:642:A:N3	8:CH:113:SER:OG	2.22	0.71
13:CM:71:ARG:HA	13:CM:74:VAL:HB	1.71	0.71
23:DA:1495:A:OP2	56:DA:4274:HOH:O	2.07	0.71
23:DA:2109:U:H3	23:DA:2180:U:H3	1.38	0.71
23:DA:2268:A:OP1	56:DA:4335:HOH:O	2.08	0.71
39:DV:62:LEU:HD11	39:DV:95:LEU:HB2	1.72	0.71
1:AA:1118:C:N4	1:AA:1155:G:H1	1.86	0.71
1:AA:1220:G:H2'	1:AA:1221:G:O4'	1.91	0.71
2:AB:167:PRO:O	2:AB:171:ALA:N	2.24	0.71
2:AB:60:ASP:O	2:AB:64:ARG:HG3	1.91	0.71
7:AG:74:GLU:O	7:AG:89:MET:N	2.23	0.71
13:AM:86:CYS:HB3	13:AM:89:GLY:HA3	1.72	0.71
23:BA:1045:A:N3	23:BA:1045:A:H2'	2.04	0.71
23:BA:1235:G:OP1	56:BA:4227:HOH:O	2.08	0.71
1:CA:538:G:H5''	12:CL:114:LYS:HB2	1.72	0.71
13:CM:70:LEU:O	13:CM:74:VAL:N	2.24	0.71
23:DA:2226:C:OP2	56:DA:4146:HOH:O	2.07	0.71
23:DA:2646:C:OP2	23:DA:2732:G:O2'	2.07	0.71
23:BA:269:U:OP1	56:BA:5071:HOH:O	2.07	0.71
1:CA:576:G:OP1	56:CA:1944:HOH:O	2.08	0.71
3:CC:6:HIS:HD2	3:CC:7:PRO:HD2	1.55	0.71
23:DA:1560:G:OP1	56:DA:4341:HOH:O	2.08	0.71
43:DZ:110:GLY:HA3	43:DZ:174:VAL:HG11	1.71	0.71
23:BA:1665:A:OP2	56:BA:4771:HOH:O	2.09	0.71
1:CA:1156:G:H21	1:CA:1179:A:N6	1.88	0.71
7:CG:15:ASP:N	7:CG:20:ASP:O	2.18	0.71
50:D6:3:SER:OG	50:D6:4:GLU:N	2.24	0.71
23:DA:392:C:OP1	56:DA:4594:HOH:O	2.07	0.71
39:DV:56:SER:H	39:DV:100:ARG:HB2	1.53	0.71
1:AA:1224:G:N1	1:AA:1363:C:O2	2.24	0.71
9:AI:3:GLN:NE2	9:AI:4:TYR:O	2.23	0.71
23:BA:1204:A:H2	23:BA:1241:A:H62	1.37	0.71
1:CA:1176:A:H2'	1:CA:1177:G:C8	2.26	0.71
1:CA:735:C:H2'	1:CA:736:C:H6	1.54	0.71
10:CJ:8:LEU:O	10:CJ:69:ASN:HA	1.89	0.71
2:AB:137:ARG:HB2	2:AB:137:ARG:HH11	1.56	0.71
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.72	0.71
1:CA:903:G:OP1	56:CA:1954:HOH:O	2.09	0.71
11:CK:31:THR:HG22	11:CK:42:TRP:HB2	1.72	0.71
14:CN:24:CYS:HB2	14:CN:40:CYS:N	2.06	0.71
23:DA:1047:G:H2'	23:DA:1110:G:H22	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1313:U:OP1	56:DA:3775:HOH:O	2.09	0.71
23:DA:2042:A:OP1	56:DA:3616:HOH:O	2.09	0.71
28:DG:56:ALA:HB2	28:DG:153:ARG:HE	1.56	0.71
1:AA:352:C:O2'	1:AA:354:G:OP1	2.07	0.71
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.55	0.71
23:BA:2126:A:N6	23:BA:2163:C:H5'	2.06	0.71
39:BV:72:VAL:HG13	39:BV:85:LYS:HB3	1.71	0.71
1:CA:1347:G:N2	1:CA:1374:A:O5'	2.24	0.71
13:CM:15:VAL:HG22	13:CM:41:PRO:HA	1.72	0.71
28:BG:56:ALA:HB2	28:BG:153:ARG:HE	1.56	0.70
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.25	0.70
23:DA:2747:G:N7	56:DA:4479:HOH:O	2.24	0.70
29:DH:56:SER:OG	29:DH:61:HIS:ND1	2.24	0.70
1:AA:73:G:H1	1:AA:96:U:H3	1.39	0.70
3:AC:186:PHE:CE2	3:AC:188:LEU:HB2	2.26	0.70
3:AC:78:GLY:HA3	3:AC:83:ARG:H	1.56	0.70
34:BQ:58:PHE:HB3	34:BQ:61:GLY:HA3	1.74	0.70
1:CA:1499:A:OP2	56:CA:1857:HOH:O	2.08	0.70
1:CA:605:U:H2'	1:CA:606:G:C8	2.26	0.70
3:CC:150:LYS:HB2	3:CC:173:VAL:HG21	1.73	0.70
13:CM:3:ARG:NH2	13:CM:45:VAL:O	2.21	0.70
23:DA:1914:C:H2'	23:DA:1915:U:C6	2.26	0.70
1:AA:1441:G:H2'	1:AA:1459:C:H41	0.83	0.70
1:AA:519:C:OP2	12:AL:50:SER:OG	2.08	0.70
27:BF:178:PRO:HB2	27:BF:201:VAL:HG11	1.72	0.70
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.73	0.70
23:DA:1210:A:H5''	23:DA:1210:A:C8	2.26	0.70
1:AA:48:C:O2	56:AA:1897:HOH:O	2.07	0.70
26:BE:47:VAL:HG11	26:BE:86:PRO:HD2	1.73	0.70
34:BQ:111:GLU:OE1	34:BQ:133:ARG:NH2	2.24	0.70
15:CO:54:ARG:HG2	15:CO:58:MET:HE2	1.70	0.70
23:DA:370:G:OP2	56:DA:4078:HOH:O	2.08	0.70
1:AA:262:A:H2'	1:AA:263:A:C8	2.25	0.70
1:AA:365:U:H5''	1:AA:366:C:OP1	1.91	0.70
1:AA:1367:C:OP1	9:AI:115:GLY:N	2.23	0.70
28:BG:16:ARG:HE	28:BG:31:VAL:HG21	1.57	0.70
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.55	0.70
1:CA:1273:G:H3'	1:CA:1274:G:C8	2.27	0.70
1:CA:1301:U:OP1	13:CM:21:TYR:OH	2.07	0.70
10:CJ:79:ARG:O	10:CJ:81:THR:N	2.21	0.70
1:CA:1286:A:H2	21:CU:22:ARG:HH21	1.37	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:882:G:H1	23:DA:894:C:H42	1.38	0.70
26:DE:175:VAL:HG23	26:DE:177:PRO:HD3	1.73	0.70
30:DI:83:ALA:HA	30:DI:89:TYR:CE2	2.27	0.70
1:AA:1444:C:H42	1:AA:1458:G:H1	1.38	0.70
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.56	0.70
29:BH:154:PRO:HB3	29:BH:163:TYR:CZ	2.27	0.70
1:CA:1237:C:H42	1:CA:1337:G:H1	1.39	0.70
23:DA:1186:G:OP1	56:DA:4637:HOH:O	2.09	0.70
23:DA:2781:A:H5''	23:DA:2782:G:H5'	1.71	0.70
23:BA:2600:A:OP2	56:BA:4426:HOH:O	2.09	0.70
1:CA:222:U:H2'	1:CA:223:U:C6	2.27	0.70
23:DA:2115:G:H4'	23:DA:2167:U:H4'	1.74	0.70
23:DA:531:C:OP1	23:DA:561:G:N2	2.24	0.70
3:CC:134:ILE:HG23	3:CC:151:VAL:HB	1.74	0.70
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.73	0.70
24:DB:31:C:O2'	24:DB:53:A:N6	2.24	0.70
1:AA:382:A:H2'	1:AA:383:A:C8	2.26	0.70
1:AA:986:A:H1'	19:AS:55:LYS:HA	1.73	0.70
40:BW:13:SER:HB3	40:BW:16:LYS:HD2	1.72	0.70
1:CA:1231:G:N1	1:CA:1232:U:O2	2.25	0.70
23:DA:2285:C:OP2	50:D6:6:ARG:NH1	2.24	0.70
43:DZ:82:ARG:HB3	43:DZ:82:ARG:HH21	1.56	0.70
3:AC:127:ARG:HB3	3:AC:127:ARG:HH11	1.55	0.70
23:BA:453:C:OP1	56:BA:4578:HOH:O	2.09	0.70
30:BI:1:MET:N	30:BI:21:VAL:O	2.24	0.70
4:CD:104:VAL:HA	4:CD:107:ARG:HB2	1.73	0.70
4:CD:57:ARG:HE	4:CD:202:LEU:HD22	1.57	0.70
23:DA:2130:U:HO2'	23:DA:2133:G:HO2'	1.38	0.70
39:DV:72:VAL:HG13	39:DV:85:LYS:HB3	1.73	0.70
41:DX:56:THR:O	56:DX:101:HOH:O	2.09	0.70
18:AR:35:ARG:NH1	18:AR:35:ARG:HB3	2.07	0.69
2:CB:167:PRO:O	2:CB:171:ALA:N	2.25	0.69
23:DA:1364:G:OP2	45:D1:3:LYS:HG2	1.92	0.69
28:DG:16:ARG:HE	28:DG:31:VAL:HG21	1.57	0.69
1:AA:1131:G:H1	1:AA:1143:G:H21	1.40	0.69
23:BA:2322:A:H61	23:BA:2335:A:H61	1.39	0.69
23:BA:2637:U:H5''	26:BE:82:ARG:HH21	1.57	0.69
23:DA:89:G:H3'	23:DA:90:U:H5''	1.74	0.69
36:DS:10:ARG:HH21	36:DS:91:PRO:HB2	1.57	0.69
23:BA:1997:G:OP2	56:BA:4618:HOH:O	2.10	0.69
23:BA:2781:A:H5''	23:BA:2782:G:H5'	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:17:THR:O	25:BD:211:ARG:NH2	2.23	0.69
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.73	0.69
13:CM:86:CYS:O	19:CS:73:GLU:HB3	1.91	0.69
23:DA:1778:U:OP2	56:DA:4141:HOH:O	2.10	0.69
23:DA:842:G:N7	56:DA:4657:HOH:O	2.24	0.69
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.20	0.69
23:BA:517:C:OP1	49:B5:16:ARG:NH2	2.24	0.69
23:BA:1507:A:O2'	23:BA:1508:A:H8	1.74	0.69
1:CA:1161:C:H2'	1:CA:1162:C:C6	2.27	0.69
23:DA:2887:U:H2'	23:DA:2888:C:C6	2.27	0.69
23:BA:1364:G:OP2	45:B1:3:LYS:HG2	1.91	0.69
23:BA:2306:C:H3'	23:BA:2307:G:C8	2.27	0.69
23:BA:278:A:O2'	23:BA:279:C:OP1	2.04	0.69
23:BA:29:U:H2'	23:BA:30:G:C8	2.27	0.69
30:BI:83:ALA:HA	30:BI:89:TYR:CE2	2.27	0.69
43:BZ:110:GLY:HA3	43:BZ:174:VAL:HG11	1.72	0.69
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.28	0.69
10:CJ:44:VAL:HG13	10:CJ:66:ARG:HG2	1.75	0.69
23:DA:1266:G:O5'	40:DW:15:ARG:NH2	2.24	0.69
23:DA:1380:G:OP2	56:DA:4635:HOH:O	2.09	0.69
23:DA:15:G:OP2	56:DA:4618:HOH:O	2.09	0.69
1:CA:1442(B):A:N7	37:DT:118:ARG:NH1	2.41	0.69
1:AA:1225:A:OP1	13:AM:103:THR:N	2.24	0.69
1:AA:1240:U:O4	7:AG:30:ILE:HG22	1.92	0.69
4:AD:104:VAL:HA	4:AD:107:ARG:HB2	1.74	0.69
7:AG:71:PRO:HG3	7:AG:138:LYS:HG3	1.74	0.69
23:BA:956:G:OP2	34:BQ:14:ARG:NH2	2.25	0.69
1:CA:1242:C:O2'	1:CA:1303:C:OP1	2.11	0.69
7:CG:139:GLU:O	7:CG:143:ARG:NE	2.25	0.69
10:CJ:8:LEU:HD13	10:CJ:16:LEU:HG	1.73	0.69
23:DA:1026:U:O2'	23:DA:1027:A:O5'	2.10	0.69
38:DU:92:ARG:HA	38:DU:95:LEU:HB2	1.75	0.69
43:DZ:45:ASP:OD2	43:DZ:49:ARG:NH1	2.25	0.69
1:AA:1246:C:N3	1:AA:1291:G:N2	2.40	0.69
51:B7:24:THR:HG23	51:B7:27:GLY:H	1.55	0.69
23:BA:1914:C:H2'	23:BA:1915:U:C6	2.28	0.69
42:BY:23:ARG:HG2	42:BY:42:VAL:HG22	1.75	0.69
1:CA:1089:G:N2	1:CA:1096:C:N3	2.36	0.69
1:CA:405:U:O4	4:CD:2:GLY:N	2.26	0.69
23:DA:2117:A:H61	23:DA:2166:G:H22	1.37	0.69
28:DG:124:SER:HB2	28:DG:131:TYR:CE1	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:126:TYR:HB2	30:DI:142:VAL:HG23	1.75	0.69
1:AA:1262:C:H42	1:AA:1273:G:H1	1.41	0.69
1:AA:1300:G:O2'	1:AA:1301:U:O5'	2.08	0.69
23:BA:2115:G:H4'	23:BA:2167:U:H4'	1.74	0.69
1:CA:1376:U:H5'	7:CG:102:ARG:HH22	1.57	0.69
23:DA:1434:A:H61	23:DA:1558:A:N6	1.90	0.69
23:DA:1828:G:OP2	56:DA:3773:HOH:O	2.10	0.69
23:DA:2002:G:O6	56:DA:3873:HOH:O	2.11	0.69
23:DA:587:C:OP2	33:DP:21:ARG:NH2	2.26	0.69
23:BA:1359:A:N6	23:BA:1372:U:C4	2.58	0.69
23:BA:438:G:O6	56:BA:4813:HOH:O	2.09	0.69
23:BA:94:C:H5'	23:BA:94(A):G:OP2	1.93	0.69
10:CJ:50:ILE:HD12	10:CJ:50:ILE:H	1.57	0.69
27:DF:53:THR:HG23	27:DF:55:GLY:H	1.57	0.69
1:AA:1459:C:H6	1:AA:1460:A:N7	1.90	0.69
1:AA:1222:G:H5''	19:AS:78:ARG:NE	2.08	0.69
23:BA:2588:G:OP1	56:BA:4425:HOH:O	2.10	0.69
23:BA:392:C:OP1	56:BA:3960:HOH:O	2.11	0.69
23:BA:580:C:H2'	23:BA:581:C:H6	1.57	0.69
1:CA:1460:A:P	1:CA:1460:A:H8	2.15	0.69
3:CC:40:ARG:HA	3:CC:43:LEU:HD12	1.75	0.69
5:CE:50:GLU:HB2	5:CE:53:LEU:HD22	1.74	0.69
15:CO:39:LEU:HB3	15:CO:56:LEU:HD23	1.75	0.69
26:DE:28:ALA:HB3	26:DE:93:VAL:HG12	1.74	0.69
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.28	0.69
1:AA:1104:G:O3'	2:AB:111:ARG:NH2	2.26	0.69
1:AA:1123:A:H61	1:AA:1150:U:H3	1.40	0.69
1:AA:1333:A:H3'	1:AA:1334:G:H8	1.59	0.69
1:AA:724:G:OP2	56:AA:1871:HOH:O	2.09	0.69
11:AK:27:ASN:OD1	11:AK:28:THR:N	2.26	0.69
23:BA:1226:A:OP1	39:BV:84:LYS:NZ	2.25	0.69
1:CA:434:U:H2'	1:CA:435:C:C6	2.27	0.69
3:CC:103:VAL:HG12	3:CC:104:GLN:H	1.58	0.69
23:DA:1495:A:OP2	56:DA:4271:HOH:O	2.11	0.69
23:DA:2322:A:N6	23:DA:2335:A:H61	1.91	0.69
1:AA:1459:C:O3'	1:AA:1460:A:H8	1.76	0.68
1:AA:377:G:H2'	1:AA:378:G:C8	2.28	0.68
44:B0:53:MET:HG3	44:B0:59:LEU:HD23	1.76	0.68
23:BA:1266:G:O5'	40:BW:15:ARG:NH2	2.26	0.68
1:CA:1502:A:H2	1:CA:1505:G:N1	1.92	0.68
33:DP:59:LEU:HD11	52:D8:10:ALA:HB2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1259:C:N4	1:AA:1260:C:O2	2.26	0.68
1:CA:426:G:OP1	4:CD:38:TYR:OH	2.12	0.68
1:CA:977:A:N6	1:CA:1224:G:OP1	2.26	0.68
10:CJ:39:PRO:HA	10:CJ:70:ARG:HG2	1.75	0.68
1:CA:952:U:H3	1:CA:1229:A:H61	1.39	0.68
28:DG:106:LEU:HD12	28:DG:110:ALA:HB3	1.75	0.68
43:DZ:33:LEU:HD23	43:DZ:90:VAL:HG21	1.75	0.68
1:AA:244:U:O2	56:AA:1809:HOH:O	2.07	0.68
23:BA:1529:G:C6	23:BA:1530:C:N4	2.61	0.68
23:BA:271(V):G:N7	56:BA:4906:HOH:O	2.26	0.68
23:BA:804:A:OP1	56:BA:4505:HOH:O	2.10	0.68
27:BF:185:ASP:HA	27:BF:188:ARG:HD3	1.75	0.68
28:BG:101:ILE:HD13	48:B4:25:TYR:HB2	1.76	0.68
23:DA:1950:G:OP2	56:DA:3603:HOH:O	2.11	0.68
40:DW:84:ARG:HG3	40:DW:98:LYS:HD2	1.76	0.68
1:AA:434:U:H2'	1:AA:435:C:C6	2.28	0.68
7:AG:48:LYS:O	7:AG:52:GLU:HG2	1.93	0.68
23:BA:2010:G:N7	56:BA:5219:HOH:O	2.27	0.68
2:CB:135:GLN:HA	2:CB:138:LEU:HD12	1.73	0.68
23:DA:2134:A:C2	23:DA:2159:G:H1'	2.28	0.68
23:DA:2760:C:H2'	23:DA:2761:G:H5''	1.74	0.68
23:DA:2773:C:H5''	26:DE:164:ARG:HG2	1.75	0.68
2:AB:135:GLN:HA	2:AB:138:LEU:HD12	1.75	0.68
23:BA:450:G:OP2	56:BA:4582:HOH:O	2.12	0.68
23:BA:975:C:OP2	56:BA:4205:HOH:O	2.10	0.68
30:BI:93:THR:HG23	30:BI:96:ASP:H	1.58	0.68
23:BA:1250:G:N7	33:BP:18:ARG:NH2	2.42	0.68
1:CA:1002:G:H22	1:CA:1039:C:H1'	1.58	0.68
1:CA:223:U:H2'	1:CA:224:C:H6	1.58	0.68
23:DA:248:G:OP1	56:DA:4076:HOH:O	2.10	0.68
23:BA:379:G:O6	56:BA:4400:HOH:O	2.11	0.68
23:BA:2786:U:O2'	26:BE:62:PRO:O	2.07	0.68
1:CA:1238:A:N1	1:CA:1241:G:N2	2.33	0.68
1:CA:975:A:O3'	1:CA:1358:U:O2'	2.12	0.68
7:CG:66:VAL:HG22	7:CG:100:ALA:HB1	1.74	0.68
24:DB:48:A:H4'	36:DS:95:HIS:HD2	1.58	0.68
27:DF:7:TYR:H	27:DF:22:ALA:HB3	1.59	0.68
1:AA:1004:A:H61	1:AA:1034:G:H2'	1.58	0.68
49:B5:16:ARG:NH1	49:B5:17:ASP:OD1	2.26	0.68
50:B6:13:CYS:SG	50:B6:47:THR:HG21	2.33	0.68
1:CA:1444:C:N4	1:CA:1458:G:H1	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.76	0.68
18:CR:35:ARG:HB3	18:CR:35:ARG:NH1	2.09	0.68
47:D3:23:LEU:HD13	47:D3:50:VAL:HG11	1.75	0.68
23:DA:1120:G:O6	56:DA:4641:HOH:O	2.08	0.68
27:DF:185:ASP:HA	27:DF:188:ARG:HD3	1.75	0.68
40:DW:18:ARG:HG3	40:DW:76:VAL:HB	1.75	0.68
1:AA:768:A:OP2	56:AA:1910:HOH:O	2.12	0.68
2:AB:222:ILE:O	2:AB:226:ARG:HG2	1.92	0.68
23:BA:1157:G:OP1	56:BA:4196:HOH:O	2.12	0.68
23:BA:1484:G:N7	56:BA:4165:HOH:O	2.26	0.68
23:BA:271(I):G:N2	23:BA:271(O):C:N3	2.38	0.68
1:CA:1459:C:C3'	1:CA:1460:A:N7	2.52	0.68
1:CA:959:A:H61	19:CS:78:ARG:HA	1.59	0.68
3:CC:20:SER:HB3	3:CC:22:TRP:NE1	2.08	0.68
23:DA:1355:G:O6	56:DA:4120:HOH:O	2.10	0.68
1:AA:1366:C:O2'	10:AJ:60:ARG:NH1	2.27	0.68
23:BA:2712(A):A:H5''	23:BA:2713:A:OP2	1.93	0.68
23:BA:2833:G:H3'	23:BA:2834:G:H5'	1.75	0.68
23:DA:1763:G:H4'	23:DA:1763:G:OP1	1.94	0.68
17:AQ:6:LEU:HD23	17:AQ:23:VAL:HG11	1.74	0.67
23:BA:1352:U:OP2	56:BA:3914:HOH:O	2.12	0.67
23:BA:821:A:N1	56:BA:5237:HOH:O	2.27	0.67
1:CA:1165:C:H42	1:CA:1171:G:H1	1.40	0.67
25:DD:108:PRO:HB3	25:DD:143:HIS:CE1	2.29	0.67
39:DV:35:LEU:HB2	39:DV:57:VAL:HG13	1.74	0.67
1:AA:1249:C:H42	1:AA:1287:A:H3'	1.59	0.67
13:AM:91:ARG:O	13:AM:110:ARG:NH1	2.28	0.67
1:CA:1150:U:O4	1:CA:1151:A:N6	2.27	0.67
1:CA:73:G:H1	1:CA:96:U:H3	1.41	0.67
23:DA:1670:C:H5''	56:DA:3807:HOH:O	1.95	0.67
23:DA:2206:G:H5'	23:DA:2207:G:C5	2.29	0.67
1:AA:1224:G:O6	1:AA:1363:C:N3	2.27	0.67
1:AA:1226:C:C4	13:AM:104:ARG:HA	2.30	0.67
1:AA:22:G:O6	56:AA:1983:HOH:O	2.09	0.67
2:CB:157:ARG:NH2	2:CB:160:ASP:OD1	2.23	0.67
4:CD:133:VAL:HG11	4:CD:138:TYR:HD1	1.58	0.67
23:DA:1529:G:C6	23:DA:1530:C:N4	2.61	0.67
1:AA:316:G:OP2	1:AA:351:G:O2'	2.12	0.67
1:AA:59:A:H5''	1:AA:60:A:H5''	1.75	0.67
10:AJ:16:LEU:HD13	10:AJ:70:ARG:HG2	1.77	0.67
23:BA:271(F):C:H2'	23:BA:271(G):C:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BS:11:LYS:HG3	36:BS:91:PRO:HD3	1.75	0.67
37:BT:118:ARG:CZ	37:BT:118:ARG:HA	2.25	0.67
1:CA:1158:C:N3	1:CA:1181:G:N2	2.42	0.67
23:BA:2336:A:H61	44:B0:43:THR:HG22	1.60	0.67
23:BA:885:C:C5	23:BA:890:A:N6	2.61	0.67
5:CE:57:LYS:HG2	5:CE:61:TYR:CE2	2.30	0.67
23:DA:1045:A:N3	23:DA:1045:A:H2'	2.08	0.67
1:AA:1316:G:H22	1:AA:1319:A:H5''	1.58	0.67
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.76	0.67
9:AI:118:LYS:O	9:AI:120:ARG:N	2.27	0.67
23:BA:1403:C:H5''	23:BA:1471:A:H1'	1.77	0.67
23:BA:2249:U:O2'	56:BA:4487:HOH:O	2.13	0.67
23:BA:620:G:H5''	23:BA:620:G:N3	2.10	0.67
1:CA:548:G:OP1	56:CA:1988:HOH:O	2.13	0.67
7:CG:142:GLU:HB3	7:CG:143:ARG:HH21	1.60	0.67
23:DA:2322:A:H61	23:DA:2335:A:H61	1.43	0.67
35:DR:11:ASN:ND2	56:DR:302:HOH:O	2.27	0.67
1:AA:1109:C:P	3:AC:176:HIS:HD1	2.17	0.67
23:BA:271(M):G:OP2	30:BI:57:ARG:NH2	2.28	0.67
2:CB:222:ILE:O	2:CB:226:ARG:HG2	1.94	0.67
3:CC:36:ASP:O	3:CC:39:ILE:HB	1.94	0.67
23:DA:2431:U:O4	56:DA:3998:HOH:O	2.10	0.67
23:DA:2519:U:OP2	56:DA:4292:HOH:O	2.13	0.67
23:DA:27:G:O2'	23:DA:28:A:OP2	2.09	0.67
1:AA:973:G:H3'	1:AA:974:A:H5''	1.77	0.67
16:AP:49:LEU:HD11	16:AP:51:VAL:HG23	1.76	0.67
23:BA:885:C:H4'	23:BA:885:C:OP1	1.92	0.67
29:BH:86:GLU:OE2	29:BH:132:ARG:NH1	2.28	0.67
1:CA:1144:G:H21	1:CA:1146:A:N6	1.92	0.67
1:CA:1309:G:OP1	13:CM:92:HIS:NE2	2.28	0.67
3:CC:11:ARG:HB2	3:CC:11:ARG:HH11	1.59	0.67
23:DA:1014:U:H2'	23:DA:1015:G:H8	1.60	0.67
1:AA:1010:G:N2	1:AA:1019:C:N3	2.40	0.67
1:AA:1157:A:H61	1:AA:1178:G:H1'	1.58	0.67
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.77	0.67
1:AA:1442(A):G:N3	1:AA:1442(B):A:H2'	2.10	0.67
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.76	0.67
23:BA:2243:U:H2'	23:BA:2244:U:C6	2.30	0.67
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.27	0.67
1:CA:1351:U:H2'	1:CA:1352:C:H6	1.60	0.67
1:CA:330:C:O2	56:CA:1861:HOH:O	2.11	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D4:42:PHE:CB	48:D4:43:TYR:HB2	2.25	0.67
23:DA:2427:C:OP2	56:DA:4447:HOH:O	2.12	0.67
1:AA:401:C:OP1	4:AD:73:ARG:NH2	2.27	0.67
4:AD:133:VAL:HG11	4:AD:138:TYR:HD1	1.60	0.67
23:BA:1186:G:OP2	56:BA:4518:HOH:O	2.11	0.67
45:D1:50:ARG:HG2	45:D1:59:THR:HG22	1.76	0.67
23:DA:1351:C:OP2	56:DA:3930:HOH:O	2.12	0.67
23:DA:2199:A:H3'	23:DA:2200:C:H6	1.58	0.67
23:DA:365:C:OP2	56:DA:4247:HOH:O	2.12	0.67
25:DD:71:ASP:HB3	25:DD:103:ARG:HH22	1.60	0.67
1:AA:1007:C:H42	1:AA:1022:G:H1	0.74	0.66
10:AJ:16:LEU:O	10:AJ:20:ALA:N	2.26	0.66
23:BA:2134:A:C2	23:BA:2159:G:H1'	2.30	0.66
3:CC:157:ILE:O	3:CC:164:ARG:NH2	2.28	0.66
3:CC:32:LEU:HD11	3:CC:59:ARG:HD2	1.76	0.66
23:DA:856:C:H5'	44:D0:27:GLU:OE2	1.94	0.66
44:D0:53:MET:HG3	44:D0:59:LEU:HD23	1.77	0.66
1:AA:605:U:H2'	1:AA:606:G:C8	2.29	0.66
5:AE:71:LEU:HD11	5:AE:74:GLY:H	1.60	0.66
23:BA:862:G:OP2	56:BA:4352:HOH:O	2.13	0.66
28:BG:138:GLN:HG3	28:BG:144:ILE:HG21	1.75	0.66
1:CA:1084:G:H21	1:CA:1102:A:N6	1.93	0.66
1:CA:425:G:O3'	4:CD:45:GLN:NE2	2.28	0.66
23:DA:1132:A:OP2	56:DA:3690:HOH:O	2.13	0.66
1:AA:1121:U:H3	1:AA:1152:A:N6	1.93	0.66
1:AA:142:G:H2'	1:AA:143:A:H8	1.59	0.66
9:AI:46:ALA:HB1	9:AI:77:ILE:HB	1.77	0.66
23:BA:1434:A:H61	23:BA:1558:A:N6	1.93	0.66
23:BA:587:C:OP2	33:BP:21:ARG:NH2	2.28	0.66
27:BF:7:TYR:H	27:BF:22:ALA:HB3	1.60	0.66
40:BW:4:LYS:HB2	40:BW:106:ILE:HG12	1.77	0.66
1:CA:976:G:P	14:CN:32:SER:H	2.19	0.66
23:DA:2022:U:OP1	56:DA:3884:HOH:O	2.13	0.66
1:AA:1299:A:H4'	1:AA:1300:G:OP1	1.95	0.66
9:AI:7:THR:H	9:AI:83:ARG:HD3	1.60	0.66
1:AA:1268:A:H4'	21:AU:20:LYS:HA	1.78	0.66
23:BA:105:C:OP1	56:BA:3776:HOH:O	2.13	0.66
23:BA:885:C:C2	23:BA:886:C:H1'	2.31	0.66
31:BN:47:ALA:HB2	31:BN:112:LEU:HD11	1.76	0.66
37:BT:24:PRO:HA	37:BT:49:VAL:HG22	1.75	0.66
1:CA:1297:C:H4'	1:CA:1298:C:H5'	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.30	0.66
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	1.78	0.66
26:DE:47:VAL:HG11	26:DE:86:PRO:HD2	1.77	0.66
42:DY:9:LYS:NZ	42:DY:28:LYS:O	2.28	0.66
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.09	0.66
1:AA:1457:G:C4	1:AA:1458:G:N7	2.63	0.66
2:AB:87:ARG:HH21	2:AB:233:SER:H	1.42	0.66
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.61	0.66
23:BA:1026:U:O2'	23:BA:1027:A:O5'	2.13	0.66
23:BA:1265:A:OP2	56:BA:4992:HOH:O	2.12	0.66
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.11	0.66
1:CA:1231:G:C2	1:CA:1232:U:H1'	2.31	0.66
1:CA:1381:U:H3'	1:CA:1382:C:H6	1.61	0.66
1:CA:382:A:H2'	1:CA:383:A:C8	2.30	0.66
3:CC:156:ARG:NE	3:CC:161:GLU:OE2	2.28	0.66
15:CO:70:LEU:HG	15:CO:78:TYR:HB2	1.77	0.66
23:DA:512:G:N7	56:DA:3836:HOH:O	2.29	0.66
23:DA:674:G:H1'	27:DF:74:ARG:HD3	1.78	0.66
9:AI:65:VAL:O	9:AI:73:GLN:NE2	2.28	0.66
10:AJ:31:GLY:HA3	10:AJ:78:ASN:CB	2.25	0.66
23:BA:2318:G:N2	36:BS:3:ARG:HD3	2.10	0.66
24:BB:66:A:H61	24:BB:109:C:H5'	1.60	0.66
39:BV:35:LEU:HB2	39:BV:57:VAL:HG13	1.77	0.66
1:CA:365:U:H5''	1:CA:366:C:OP1	1.95	0.66
4:CD:32:ALA:HA	4:CD:35:ARG:HB2	1.77	0.66
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.61	0.66
22:CX:4:ASN:HB2	22:CX:38:TYR:HA	1.78	0.66
23:DA:2130:U:O2'	23:DA:2133:G:O2'	2.10	0.66
31:DN:15:LEU:HB2	31:DN:135:PRO:HB2	1.77	0.66
1:AA:1417:G:O6	56:AA:1843:HOH:O	2.12	0.66
1:AA:242:C:OP1	56:AA:1818:HOH:O	2.12	0.66
23:BA:1171:G:O2'	23:BA:1173:G:OP2	2.06	0.66
23:BA:1379:A:H4'	23:BA:1380:G:OP2	1.95	0.66
23:BA:1561:G:OP2	56:BA:4362:HOH:O	2.14	0.66
1:CA:1046:A:H3'	1:CA:1047:G:H8	1.60	0.66
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.29	0.66
1:CA:171:A:H2'	1:CA:172:A:C8	2.29	0.66
4:CD:157:LEU:O	4:CD:161:ASN:ND2	2.20	0.66
19:CS:46:GLY:N	19:CS:62:ILE:O	2.28	0.66
23:DA:1970:A:H4'	56:DA:4210:HOH:O	1.95	0.66
23:DA:2786:U:O2'	26:DE:62:PRO:O	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1378:C:H1'	1:AA:1379:G:O5'	1.95	0.66
5:AE:57:LYS:HG2	5:AE:61:TYR:CE2	2.30	0.66
23:BA:1778:U:H2'	23:BA:1784:A:N6	2.10	0.66
28:BG:122:PRO:HG3	28:BG:180:PHE:HB3	1.78	0.66
1:CA:1457:G:C4	1:CA:1458:G:N7	2.64	0.66
1:CA:1457:G:N3	1:CA:1458:G:C8	2.63	0.66
1:CA:1112:C:N3	3:CC:178:LEU:HB2	2.10	0.66
20:CT:10:LEU:HD21	20:CT:12:ALA:HB3	1.76	0.66
23:DA:1315:C:OP2	56:DA:3783:HOH:O	2.14	0.66
1:AA:1304:G:N2	1:AA:1332:A:OP2	2.28	0.66
1:AA:1377:A:C8	1:AA:1377:A:H3'	2.31	0.66
1:AA:1459:C:C6	1:AA:1460:A:N7	2.64	0.66
1:AA:186:C:H2'	1:AA:187:C:C6	2.31	0.66
23:BA:2705:A:OP2	56:BA:4854:HOH:O	2.13	0.66
23:BA:563:G:OP2	56:BA:4466:HOH:O	2.14	0.66
23:BA:631:A:OP2	52:B8:47:LYS:NZ	2.22	0.66
29:DH:86:GLU:OE2	29:DH:132:ARG:NH1	2.29	0.66
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.95	0.66
1:AA:1441:G:H21	1:AA:1459:C:H5	1.43	0.66
1:AA:662:G:O2'	1:AA:836:G:OP1	2.13	0.66
4:AD:32:ALA:HA	4:AD:35:ARG:HB2	1.77	0.66
11:AK:41:THR:HG21	11:AK:71:LYS:HD2	1.78	0.66
23:BA:1016:G:N7	56:BA:5119:HOH:O	2.28	0.66
1:CA:1106:G:H5''	3:CC:172:ARG:HD3	1.77	0.66
23:DA:123:G:OP1	56:DA:3622:HOH:O	2.13	0.66
1:AA:1120:G:N2	1:AA:1154:G:H1'	2.11	0.65
1:AA:1296:C:OP2	1:AA:1297:C:N4	2.27	0.65
21:AU:15:ARG:HG3	21:AU:17:THR:HG23	1.79	0.65
34:BQ:54:MET:HE3	34:BQ:64:ILE:HD13	1.77	0.65
36:BS:10:ARG:HH21	36:BS:91:PRO:HB2	1.60	0.65
23:DA:1405:U:H2'	23:DA:1406:U:C6	2.30	0.65
23:DA:552:G:O6	56:DA:4483:HOH:O	2.13	0.65
23:DA:910:A:C5	34:DQ:13:GLN:HG3	2.31	0.65
37:DT:56:GLY:O	37:DT:59:THR:HG22	1.95	0.65
1:AA:174:C:H2'	1:AA:175:C:H6	1.61	0.65
1:AA:243:A:H4'	1:AA:244:U:O5'	1.97	0.65
1:AA:41:G:H2'	1:AA:42:G:C8	2.30	0.65
4:AD:155:LEU:HB3	4:AD:158:ILE:HB	1.79	0.65
5:AE:50:GLU:HB2	5:AE:53:LEU:HD22	1.76	0.65
23:BA:376:C:OP2	56:BA:3961:HOH:O	2.13	0.65
1:CA:1211:U:H4'	1:CA:1212:U:OP2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1245:A:H61	1:CA:1292:U:H3	1.43	0.65
17:CQ:6:LEU:HD23	17:CQ:23:VAL:HG11	1.77	0.65
21:CU:17:THR:OG1	21:CU:18:TYR:N	2.29	0.65
23:DA:688:U:O4	56:DA:3974:HOH:O	2.11	0.65
1:AA:1128:C:H5'	9:AI:16:ARG:NH2	2.11	0.65
1:AA:1502:A:H2	1:AA:1505:G:H1	1.42	0.65
47:B3:23:LEU:HD13	47:B3:50:VAL:HG11	1.78	0.65
23:BA:2319:G:N2	36:BS:3:ARG:HD2	2.11	0.65
23:BA:639:U:H2'	23:BA:640:C:C6	2.32	0.65
23:BA:856:C:H5'	44:B0:27:GLU:OE2	1.96	0.65
1:CA:1332:A:H2'	1:CA:1333:A:C8	2.31	0.65
5:CE:12:LEU:HB3	5:CE:31:LEU:HB3	1.78	0.65
23:DA:154(A):C:N4	23:DA:171:G:N1	2.45	0.65
23:DA:1838:C:O2'	56:DA:4310:HOH:O	2.13	0.65
1:AA:1120:G:H22	1:AA:1154:G:H1'	1.60	0.65
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.78	0.65
1:AA:1221:G:H5'	19:AS:36:ARG:HD3	1.79	0.65
21:AU:12:LYS:HE3	21:AU:19:GLY:HA3	1.79	0.65
51:B7:34:ARG:NH1	51:B7:41:ARG:O	2.30	0.65
23:BA:2533:A:OP2	56:BA:5056:HOH:O	2.14	0.65
23:BA:2712:U:O2'	23:BA:2712(A):A:OP2	2.14	0.65
37:BT:60:THR:HG22	37:BT:77:PRO:HA	1.79	0.65
1:CA:1028:C:N3	1:CA:1033:G:C6	2.65	0.65
1:CA:1078:U:H1'	5:CE:130:ASN:HD21	1.61	0.65
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.32	0.65
1:CA:1306:A:H3'	1:CA:1307:U:H6	1.62	0.65
22:CX:17:ARG:HA	22:CX:20:VAL:HG12	1.78	0.65
23:DA:1423:G:H2'	23:DA:1424:G:H8	1.62	0.65
26:DE:11:MET:HG2	26:DE:24:THR:HB	1.79	0.65
28:DG:11:TYR:CE2	28:DG:16:ARG:HD3	2.31	0.65
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.32	0.65
1:AA:166:G:H2'	1:AA:167:G:C8	2.31	0.65
1:AA:974:A:OP1	1:AA:974:A:H8	1.80	0.65
11:AK:13:GLN:N	11:AK:75:TYR:O	2.28	0.65
23:BA:1423:G:H2'	23:BA:1424:G:H8	1.62	0.65
23:BA:504:U:OP2	56:BA:4934:HOH:O	2.13	0.65
23:BA:606:U:H4'	23:BA:658:C:H4'	1.79	0.65
28:BG:11:TYR:CE2	28:BG:16:ARG:HD3	2.31	0.65
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.78	0.65
5:CE:43:LEU:O	5:CE:65:ASN:ND2	2.30	0.65
21:CU:10:ARG:HA	21:CU:10:ARG:HE	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:118:VAL:H	25:DD:129:ASN:ND2	1.94	0.65
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.31	0.65
1:AA:324:G:OP1	20:AT:70:SER:HB2	1.96	0.65
37:BT:64:ARG:NH1	37:BT:103:ARG:HA	2.11	0.65
43:BZ:45:ASP:OD2	43:BZ:49:ARG:NH1	2.29	0.65
1:CA:1015:A:N3	1:CA:1218:C:O2'	2.27	0.65
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.79	0.65
7:CG:43:PHE:HD1	7:CG:46:ALA:HB3	1.61	0.65
1:CA:1377:A:H2'	7:CG:7:ALA:CB	2.27	0.65
51:D7:24:THR:HG23	51:D7:27:GLY:H	1.61	0.65
23:DA:1352:U:OP2	56:DA:3932:HOH:O	2.14	0.65
32:DO:25:LEU:HD21	32:DO:40:VAL:HG23	1.79	0.65
23:DA:71:A:H2	41:DX:31:HIS:CE1	2.15	0.65
23:DA:301:G:OP2	42:DY:84:ARG:NH2	2.29	0.65
1:AA:1443:G:O6	1:AA:1459:C:H1'	1.96	0.65
23:BA:1587:A:H2'	23:BA:1588:C:C6	2.31	0.65
23:BA:2887:U:H2'	23:BA:2888:C:C6	2.32	0.65
1:CA:186:C:H2'	1:CA:187:C:C6	2.32	0.65
23:DA:1379:A:H4'	23:DA:1380:G:OP2	1.95	0.65
23:DA:2319:G:N2	36:DS:3:ARG:HD2	2.11	0.65
23:BA:154(A):C:N4	23:BA:171:G:N1	2.44	0.65
1:CA:1373:G:H5'	7:CG:36:LYS:HG3	1.79	0.65
23:DA:1914:C:H2'	23:DA:1915:U:H6	1.61	0.65
28:DG:122:PRO:HG3	28:DG:180:PHE:HB3	1.79	0.65
1:AA:1003:G:N2	1:AA:1037:C:C2	2.64	0.65
1:AA:1442(A):G:C2	1:AA:1442(B):A:H2'	2.32	0.65
1:AA:1460:A:H8	1:AA:1460:A:P	2.19	0.65
23:BA:1833:U:H2'	23:BA:1834:U:H6	1.60	0.65
1:CA:1500:A:OP1	56:CA:2021:HOH:O	2.15	0.65
1:CA:1502:A:H2	1:CA:1505:G:H1	1.42	0.65
5:CE:71:LEU:HD11	5:CE:74:GLY:H	1.62	0.65
23:DA:2322:A:N6	23:DA:2335:A:N6	2.44	0.65
23:DA:484:C:H2'	23:DA:485:C:C6	2.32	0.65
23:DA:252:G:OP2	33:DP:50:ARG:NH1	2.30	0.65
1:AA:1502:A:H2	1:AA:1505:G:N1	1.94	0.65
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.25	0.65
9:AI:8:GLY:HA3	9:AI:76:ALA:HB1	1.78	0.65
22:AX:87:LYS:O	22:AX:91:LYS:HG3	1.97	0.65
23:BA:1174:A:H5'	23:BA:1177:A:H62	1.61	0.65
23:BA:1560:G:OP1	56:BA:4362:HOH:O	2.13	0.65
23:BA:696:G:N7	56:BA:5334:HOH:O	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:20:TYR:HA	4:CD:26:CYS:SG	2.36	0.65
23:DA:1359:A:N6	23:DA:1372:U:C4	2.63	0.65
23:DA:639:U:H2'	23:DA:640:C:C6	2.32	0.65
30:DI:120:ILE:HG21	30:DI:126:TYR:CE1	2.31	0.65
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.30	0.64
1:AA:1378:C:O2'	1:AA:1379:G:H8	1.80	0.64
1:AA:382:A:H2'	1:AA:383:A:H8	1.61	0.64
14:AN:29:ARG:HD2	14:AN:31:ARG:HB2	1.78	0.64
21:AU:13:ILE:HA	21:AU:22:ARG:NH1	2.12	0.64
23:BA:1174:A:H4'	23:BA:1175:U:OP1	1.97	0.64
23:BA:2721:A:OP2	56:BA:4075:HOH:O	2.14	0.64
23:BA:314:A:N6	56:BA:5256:HOH:O	2.21	0.64
23:BA:886:C:H2'	23:BA:889:C:H41	1.62	0.64
1:CA:996:A:H2'	1:CA:997:U:C6	2.32	0.64
23:DA:2122:U:H2'	23:DA:2123:G:C8	2.32	0.64
23:DA:250:G:OP2	52:D8:13:ARG:NH2	2.29	0.64
26:DE:112:GLY:O	26:DE:159:HIS:HA	1.97	0.64
23:DA:2305:A:H5''	28:DG:134:GLY:HA3	1.79	0.64
40:DW:4:LYS:HB2	40:DW:106:ILE:HG12	1.79	0.64
1:AA:1458:G:C2	1:AA:1459:C:O4'	2.50	0.64
27:BF:53:THR:HG23	27:BF:55:GLY:H	1.62	0.64
42:BY:23:ARG:HB2	42:BY:23:ARG:HH11	1.61	0.64
1:CA:1142:G:C6	1:CA:1143:G:H1'	2.32	0.64
1:CA:1128:C:H4'	9:CI:16:ARG:HH22	1.62	0.64
14:CN:24:CYS:SG	14:CN:27:CYS:N	2.70	0.64
49:D5:16:ARG:NH1	49:D5:17:ASP:OD1	2.31	0.64
1:AA:1030(A):G:H2'	1:AA:1030(C):G:OP2	1.96	0.64
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.61	0.64
5:AE:43:LEU:O	5:AE:65:ASN:ND2	2.30	0.64
9:AI:27:THR:HB	9:AI:62:TYR:HA	1.80	0.64
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.62	0.64
23:BA:2305:A:H5''	28:BG:134:GLY:HA3	1.80	0.64
1:CA:1210:C:H3'	1:CA:1211:U:H5''	1.80	0.64
1:CA:538:G:OP2	12:CL:115:LYS:HB2	1.97	0.64
23:DA:96:G:H4'	46:D2:48:HIS:CD2	2.31	0.64
27:DF:129:PHE:CD2	27:DF:163:VAL:HG21	2.32	0.64
34:DQ:111:GLU:OE1	34:DQ:133:ARG:NH2	2.30	0.64
35:DR:117:VAL:HG12	35:DR:118:GLU:H	1.62	0.64
41:DX:27:THR:HG23	41:DX:80:ILE:HG13	1.79	0.64
1:AA:1243:C:N4	1:AA:1294:G:H1	1.95	0.64
1:AA:1444:C:N4	1:AA:1458:G:H1	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:27:LEU:O	12:AL:29:GLY:N	2.31	0.64
48:B4:16:CYS:SG	48:B4:20:ASN:HB3	2.38	0.64
23:BA:459:U:H5''	51:B7:40:TRP:CD2	2.33	0.64
23:BA:2526:G:H21	53:B9:2:LYS:HG2	1.63	0.64
23:BA:674:G:H1'	27:BF:74:ARG:HD3	1.78	0.64
1:CA:1111:A:N1	3:CC:177:THR:HG23	2.12	0.64
9:CI:22:GLY:HA3	9:CI:60:ASP:HB2	1.79	0.64
23:DA:1778:U:H2'	23:DA:1784:A:N6	2.12	0.64
23:DA:816:C:OP2	56:DA:4440:HOH:O	2.14	0.64
38:DU:76:TYR:HH	38:DU:92:ARG:HH11	1.43	0.64
1:AA:1444:C:N4	1:AA:1459:C:O2	2.30	0.64
1:AA:41:G:H2'	1:AA:42:G:H8	1.62	0.64
1:AA:946:A:H2'	1:AA:947:G:C8	2.33	0.64
2:AB:157:ARG:NH2	2:AB:160:ASP:OD1	2.21	0.64
23:BA:2322:A:N6	23:BA:2335:A:N6	2.42	0.64
26:BE:28:ALA:HB3	26:BE:93:VAL:HG12	1.78	0.64
38:BU:44:ASN:ND2	39:BV:75:PHE:O	2.24	0.64
40:BW:18:ARG:HG3	40:BW:76:VAL:HB	1.80	0.64
3:CC:54:ARG:HH11	3:CC:56:ASP:HB2	1.63	0.64
11:CK:41:THR:HG21	11:CK:71:LYS:HD2	1.79	0.64
14:CN:7:ILE:HG22	14:CN:23:ARG:NE	2.12	0.64
23:DA:1429:G:H2'	23:DA:1430:C:C6	2.32	0.64
23:DA:2637:U:H5''	26:DE:82:ARG:HH21	1.62	0.64
23:DA:910:A:H62	34:DQ:12:GLN:HA	1.61	0.64
27:DF:116:ASP:OD1	27:DF:119:ARG:NH2	2.31	0.64
30:DI:83:ALA:HB2	30:DI:88:ILE:HA	1.77	0.64
33:DP:50:ARG:HD3	52:D8:7:HIS:CD2	2.32	0.64
36:DS:14:VAL:O	36:DS:18:ILE:HG12	1.97	0.64
1:AA:1142:G:C6	1:AA:1143:G:H1'	2.33	0.64
7:AG:99:LEU:HA	7:AG:102:ARG:NH2	2.13	0.64
23:BA:1176:G:H1'	23:BA:1177:A:OP1	1.96	0.64
23:BA:2808:U:H5'	23:BA:2891:G:O6	1.97	0.64
23:BA:492:A:OP2	56:BA:4859:HOH:O	2.15	0.64
23:BA:90:U:H2'	23:BA:92:A:C8	2.32	0.64
25:BD:71:ASP:HB3	25:BD:103:ARG:HH22	1.63	0.64
36:BS:58:LEU:HB2	36:BS:59:LYS:HB2	1.78	0.64
2:CB:87:ARG:HD2	2:CB:219:VAL:HG11	1.77	0.64
28:DG:101:ILE:HD13	48:D4:25:TYR:HB2	1.80	0.64
23:DA:1210:A:H8	23:DA:1210:A:H5''	1.62	0.64
23:DA:188:G:H1	23:DA:208:C:H42	1.44	0.64
23:DA:526:A:OP1	56:DA:4533:HOH:O	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:102:G:H2'	1:AA:103:C:H6	1.60	0.64
1:AA:814:A:H2'	1:AA:816:A:H5''	1.78	0.64
14:AN:29:ARG:HG3	14:AN:31:ARG:H	1.63	0.64
23:BA:2492:U:H2'	23:BA:2493:U:C6	2.32	0.64
23:BA:787:U:OP1	56:BA:4569:HOH:O	2.15	0.64
1:CA:1181:G:H4'	1:CA:1184:G:H5'	1.78	0.64
1:CA:1381:U:H3'	1:CA:1382:C:C6	2.33	0.64
23:DA:1786:A:H1'	23:DA:1938:A:N6	2.13	0.64
23:DA:2833:G:H3'	23:DA:2834:G:H5'	1.79	0.64
23:DA:8:A:OP1	31:DN:121:LYS:NZ	2.30	0.64
15:AO:70:LEU:HG	15:AO:78:TYR:HB2	1.80	0.64
20:AT:63:ILE:HD12	20:AT:81:LYS:HG2	1.79	0.64
23:BA:1176:G:H21	23:BA:1178:C:P	2.21	0.64
33:BP:25:SER:O	56:BP:304:HOH:O	2.15	0.64
1:CA:59:A:H5''	1:CA:60:A:H5''	1.80	0.64
23:DA:1650:G:O6	56:DA:4754:HOH:O	2.11	0.64
23:DA:467:G:OP1	51:D7:33:ARG:NH1	2.31	0.64
3:AC:137:ALA:O	3:AC:140:ARG:HB3	1.96	0.64
23:BA:2122:U:H2'	23:BA:2123:G:C8	2.32	0.64
23:BA:271(J):C:O2'	23:BA:271(K):U:H5'	1.98	0.64
27:BF:123:LEU:HD13	27:BF:192:LEU:HD13	1.80	0.64
30:BI:12:LEU:HD22	30:BI:19:VAL:HG21	1.79	0.64
11:CK:73:MET:HG3	11:CK:103:LEU:HD21	1.80	0.64
45:D1:3:LYS:HB2	45:D1:61:ARG:HH11	1.63	0.64
1:AA:1144:G:H21	1:AA:1146:A:N6	1.96	0.64
1:AA:1457:G:N3	1:AA:1458:G:C8	2.66	0.64
1:AA:49:U:O4	1:AA:365:U:H5	1.81	0.64
23:BA:1288:U:C2	23:BA:1327:C:O2	2.51	0.64
23:BA:2206:G:O2'	23:BA:2207:G:OP1	2.13	0.64
23:BA:89:G:H3'	23:BA:90:U:H5''	1.79	0.64
25:BD:142:VAL:HG23	25:BD:193:VAL:HA	1.79	0.64
26:BE:128:SER:OG	26:BE:129:HIS:N	2.27	0.64
1:CA:1130:A:N6	1:CA:1144:G:H1'	2.11	0.64
9:CI:17:VAL:HG11	9:CI:81:ILE:HA	1.80	0.64
20:CT:97:ALA:HB3	20:CT:99:LEU:H	1.62	0.64
1:CA:1326:C:H5''	21:CU:18:TYR:O	1.98	0.64
23:DA:2206:G:O2'	23:DA:2207:G:OP1	2.15	0.64
23:DA:553:G:O6	56:DA:4483:HOH:O	2.14	0.64
5:AE:98:THR:HG22	5:AE:99:GLY:H	1.61	0.63
20:AT:33:ILE:O	20:AT:37:SER:OG	2.14	0.63
23:BA:1019:U:HO2'	23:BA:1021:A:H2	1.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1639:U:C2'	23:BA:1640:C:H5''	2.28	0.63
23:BA:994:C:H3'	38:BU:54:LYS:HE3	1.81	0.63
1:CA:1027:C:N1	1:CA:1034:G:N2	2.45	0.63
1:CA:991:U:H3'	1:CA:1212:U:H3	1.62	0.63
23:DA:271(J):C:O2'	23:DA:271(K):U:H5'	1.97	0.63
27:DF:68:LYS:HB3	27:DF:69:HIS:ND1	2.13	0.63
29:DH:70:THR:HA	29:DH:73:ALA:HB3	1.80	0.63
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.34	0.63
50:B6:3:SER:OG	50:B6:4:GLU:N	2.28	0.63
23:BA:2115:G:C2	23:BA:2117:A:N7	2.66	0.63
30:BI:62:LYS:HG2	30:BI:133:HIS:CE1	2.33	0.63
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.33	0.63
1:CA:926:G:H21	22:CX:94:GLN:HE22	1.44	0.63
23:DA:2602:A:H4'	23:DA:2603:G:OP1	1.98	0.63
25:DD:237:GLU:OE1	56:DD:407:HOH:O	2.15	0.63
1:AA:1059:C:OP1	3:AC:199:LYS:NZ	2.30	0.63
1:AA:1400:C:N3	22:AX:63:ALA:HA	2.13	0.63
23:BA:1536:C:H4'	23:BA:1537:G:OP1	1.97	0.63
23:BA:301:G:OP2	42:BY:84:ARG:NH2	2.31	0.63
1:CA:102:G:H2'	1:CA:103:C:H6	1.62	0.63
1:CA:171:A:H2'	1:CA:172:A:H8	1.63	0.63
9:CI:9:ARG:HH11	9:CI:104:ARG:HE	1.45	0.63
11:CK:84:VAL:HG11	11:CK:91:ARG:HD2	1.80	0.63
23:DA:1011:G:OP2	38:DU:66:ASN:ND2	2.28	0.63
23:DA:1784:A:OP1	56:DA:4604:HOH:O	2.15	0.63
23:DA:2306:C:H3'	23:DA:2307:G:C8	2.33	0.63
23:DA:83:G:OP1	42:DY:95:LYS:NZ	2.31	0.63
23:DA:90:U:H2'	23:DA:92:A:C8	2.33	0.63
25:DD:5:LYS:HA	25:DD:17:THR:HG22	1.81	0.63
3:AC:187:ALA:HB3	3:AC:198:VAL:HB	1.80	0.63
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.64	0.63
9:AI:28:VAL:HG21	9:AI:37:PHE:HE2	1.63	0.63
28:BG:56:ALA:HA	28:BG:153:ARG:HH21	1.63	0.63
1:CA:1121:U:O4	1:CA:1152:A:N1	2.31	0.63
5:CE:98:THR:HG22	5:CE:99:GLY:H	1.63	0.63
23:DA:2336:A:H61	44:D0:43:THR:HG22	1.64	0.63
38:DU:28:ARG:NH1	38:DU:38:THR:OG1	2.31	0.63
1:AA:1009:G:O6	1:AA:1020:U:O2	2.17	0.63
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.29	0.63
1:AA:1441:G:C3'	1:AA:1459:C:H42	2.12	0.63
1:AA:533:A:OP2	56:AA:1816:HOH:O	2.15	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:89:GLY:HA2	13:CM:92:HIS:CD2	2.33	0.63
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.14	0.63
1:CA:1243:C:H5''	21:CU:8:THR:HG21	1.80	0.63
23:DA:668:G:H5''	23:DA:669:G:OP2	1.97	0.63
33:DP:38:GLN:HA	33:DP:41:ARG:HG2	1.80	0.63
17:AQ:13:ASP:CG	17:AQ:14:LYS:H	2.02	0.63
32:BO:25:LEU:HD21	32:BO:40:VAL:HG23	1.81	0.63
43:BZ:82:ARG:NH2	43:BZ:82:ARG:HB3	2.14	0.63
1:CA:952:U:H3	1:CA:1229:A:N6	1.97	0.63
1:CA:989:C:H42	1:CA:1216:G:H1	0.72	0.63
23:DA:2592:G:OP1	56:DA:3768:HOH:O	2.15	0.63
23:DA:68:G:O6	56:DA:4046:HOH:O	2.15	0.63
25:DD:108:PRO:HG2	25:DD:111:LEU:HG	1.80	0.63
26:DE:9:VAL:HG22	26:DE:25:VAL:HB	1.81	0.63
23:BA:1968:G:OP1	56:BA:3899:HOH:O	2.15	0.63
23:BA:314:A:C2'	23:BA:315:G:H5'	2.28	0.63
23:BA:910:A:H62	34:BQ:12:GLN:HA	1.63	0.63
33:BP:127:ALA:O	33:BP:148:LEU:HD23	1.98	0.63
23:DA:546:C:H2'	23:DA:547:A:H5'	1.80	0.63
23:DA:95:G:O2'	46:D2:46:GLN:HA	1.99	0.63
30:DI:1:MET:N	30:DI:21:VAL:O	2.31	0.63
1:AA:174:C:H2'	1:AA:175:C:C6	2.33	0.63
49:B5:16:ARG:HG2	49:B5:16:ARG:HH11	1.62	0.63
53:B9:4:ARG:NH1	56:B9:201:HOH:O	2.32	0.63
23:BA:249:C:OP1	56:BA:4502:HOH:O	2.15	0.63
23:BA:484:C:H2'	23:BA:485:C:C6	2.34	0.63
23:BA:570:G:H5''	56:BA:4144:HOH:O	1.98	0.63
29:BH:3:ARG:CZ	29:BH:4:ILE:H	2.12	0.63
23:BA:1278:A:OP1	35:BR:36:THR:HG23	1.98	0.63
20:CT:33:ILE:O	20:CT:37:SER:OG	2.12	0.63
23:DA:2243:U:H2'	23:DA:2244:U:C6	2.34	0.63
1:AA:1310:G:H2'	1:AA:1311:G:C8	2.34	0.63
1:AA:1340:A:H2'	1:AA:1341:U:O4'	1.97	0.63
2:AB:17:PHE:HD2	2:AB:17:PHE:H	1.46	0.63
3:AC:47:LEU:HB3	3:AC:52:LEU:HD13	1.78	0.63
13:AM:40:ASN:O	13:AM:42:ALA:N	2.26	0.63
17:AQ:50:LYS:HD3	17:AQ:51:TYR:CE1	2.34	0.63
23:BA:1532:C:H2'	23:BA:1533:G:O4'	1.99	0.63
23:BA:240:G:O6	56:BA:4246:HOH:O	2.12	0.63
23:BA:2646:C:OP2	23:BA:2732:G:O2'	2.15	0.63
23:BA:1566:A:OP1	25:BD:211:ARG:NH1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:70:THR:HA	29:BH:73:ALA:HB3	1.81	0.63
1:AA:79:G:H2'	1:AA:80:G:C8	2.24	0.62
1:CA:352:C:O2'	1:CA:354:G:OP1	2.12	0.62
7:CG:111:ARG:NH1	7:CG:119:ARG:O	2.32	0.62
16:CP:29:ASP:OD2	16:CP:29:ASP:N	2.31	0.62
19:CS:80:TYR:O	19:CS:81:ARG:HG3	1.99	0.62
23:DA:1485:G:H1	23:DA:1504:C:H42	1.47	0.62
23:DA:993:G:OP1	38:DU:50:ARG:NH2	2.31	0.62
23:DA:1140:C:O3'	31:DN:25:ARG:NH1	2.31	0.62
1:AA:1378:C:HO2'	1:AA:1379:G:H8	1.45	0.62
1:AA:169:C:H2'	1:AA:170:U:H6	1.65	0.62
1:AA:171:A:H2'	1:AA:172:A:C8	2.34	0.62
7:AG:65:ALA:HB2	7:AG:124:LEU:HD23	1.81	0.62
7:AG:139:GLU:O	7:AG:143:ARG:N	2.32	0.62
17:AQ:65:ILE:HD13	17:AQ:69:LYS:HE2	1.79	0.62
23:BA:1171:G:O2'	23:BA:1173:G:H2'	2.00	0.62
1:CA:324:G:OP1	20:CT:70:SER:HB2	1.99	0.62
1:CA:920:U:H2'	1:CA:921:U:C6	2.34	0.62
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.80	0.62
23:DA:459:U:H5''	51:D7:40:TRP:CD2	2.33	0.62
36:DS:58:LEU:HB2	36:DS:59:LYS:HB2	1.80	0.62
40:DW:13:SER:HB3	40:DW:16:LYS:HD2	1.80	0.62
1:AA:1237:C:H2'	1:AA:1335:C:H5'	1.81	0.62
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.34	0.62
1:AA:1459:C:C6	1:AA:1460:A:C6	2.87	0.62
3:AC:140:ARG:HB2	3:AC:140:ARG:NH1	2.14	0.62
3:AC:43:LEU:HD22	3:AC:47:LEU:HB2	1.81	0.62
23:BA:1047:G:H2'	23:BA:1110:G:H1	1.64	0.62
23:BA:2562:U:H1'	32:BO:23:ARG:HH11	1.63	0.62
1:CA:1444:C:N3	1:CA:1459:C:H1'	2.14	0.62
1:CA:1359:C:OP2	14:CN:35:ARG:HD2	1.99	0.62
23:DA:2394:C:OP1	52:D8:30:ARG:NH1	2.32	0.62
23:DA:644:A:H4'	23:DA:645:C:C5	2.34	0.62
23:DA:956:G:OP2	34:DQ:14:ARG:NH2	2.33	0.62
1:AA:1135:U:H2'	1:AA:1137:C:O4'	1.99	0.62
1:AA:1306:A:H1'	1:AA:1332:A:C6	2.33	0.62
13:AM:87:TYR:HB2	19:AS:76:PRO:HG3	1.81	0.62
23:BA:1405:U:H2'	23:BA:1406:U:C6	2.35	0.62
23:BA:2567:G:H2'	23:BA:2568:C:C6	2.34	0.62
1:CA:1103:C:H2'	1:CA:1104:G:O4'	1.99	0.62
1:CA:166:G:H2'	1:CA:167:G:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.81	0.62
4:CD:138:TYR:HD2	4:CD:139:ARG:N	1.98	0.62
23:DA:2119:A:C2	23:DA:2170:A:H2'	2.35	0.62
23:DA:2306:C:H5'	23:DA:2307:G:H2'	1.80	0.62
23:DA:2318:G:N2	36:DS:3:ARG:HD3	2.14	0.62
1:AA:191:G:H1'	56:AA:1977:HOH:O	2.00	0.62
23:BA:1763:G:OP1	23:BA:1763:G:H4'	1.99	0.62
23:BA:1858:G:O6	56:BA:4008:HOH:O	2.13	0.62
23:BA:2327:A:H2'	23:BA:2328:A:C8	2.34	0.62
23:BA:83:G:OP1	42:BY:95:LYS:NZ	2.32	0.62
26:BE:175:VAL:HG23	26:BE:177:PRO:HD3	1.80	0.62
33:BP:59:LEU:HD11	52:B8:10:ALA:HB2	1.81	0.62
1:CA:1155:G:H2'	1:CA:1156:G:C8	2.34	0.62
1:CA:1356:G:H2'	1:CA:1357:A:H8	1.61	0.62
7:CG:149:ARG:HB2	11:CK:59:TYR:CD1	2.35	0.62
26:DE:135:HIS:H	26:DE:135:HIS:CD2	2.18	0.62
1:AA:1315:U:H2'	1:AA:1316:G:O4'	1.99	0.62
23:BA:1914:C:H2'	23:BA:1915:U:H6	1.65	0.62
37:BT:11:GLU:OE1	37:BT:57:PHE:HB3	2.00	0.62
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.00	0.62
1:CA:1239:A:H62	1:CA:1299:A:N6	1.97	0.62
1:CA:1347:G:N1	1:CA:1374:A:OP2	2.28	0.62
1:CA:918:A:H2'	1:CA:919:A:C8	2.33	0.62
1:AA:745:C:OP1	1:AA:851:G:O2'	2.18	0.62
1:AA:828:A:H2'	1:AA:829:G:O4'	2.00	0.62
2:AB:15:VAL:HG23	2:AB:209:ARG:HG2	1.82	0.62
9:AI:65:VAL:HG22	9:AI:73:GLN:HG2	1.81	0.62
23:BA:1049:C:H4'	23:BA:1050:A:OP1	1.99	0.62
23:BA:1560:G:H3'	56:BA:4361:HOH:O	1.99	0.62
23:BA:2127:G:H21	23:BA:2173:A:H1'	1.64	0.62
23:BA:2104:G:N7	23:BA:2186:G:N2	2.48	0.62
23:BA:2760:C:H2'	23:BA:2761:G:H5''	1.81	0.62
34:BQ:27:VAL:N	34:BQ:138:ASP:OD1	2.33	0.62
38:BU:92:ARG:HA	38:BU:95:LEU:HB2	1.81	0.62
1:CA:1005:A:H1'	1:CA:1036:G:N2	2.13	0.62
1:CA:1323:G:O2'	1:CA:1362:C:O2'	2.18	0.62
1:CA:158:G:N2	1:CA:163:C:O2	2.32	0.62
1:CA:735:C:H2'	1:CA:736:C:C6	2.33	0.62
1:CA:662:G:O2'	1:CA:836:G:OP1	2.17	0.62
25:DD:148:GLU:OE1	25:DD:151:LYS:NZ	2.22	0.62
27:DF:185:ASP:HA	27:DF:188:ARG:CD	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:H5''	9:AI:107:ARG:HG2	1.80	0.62
14:AN:12:ARG:O	14:AN:14:PRO:HD3	1.99	0.62
23:BA:2206:G:H5'	23:BA:2207:G:C5	2.35	0.62
23:BA:2318:G:O2'	23:BA:2319:G:OP1	2.15	0.62
23:BA:580:C:H2'	23:BA:581:C:C6	2.35	0.62
1:CA:1113:C:N3	1:CA:1187:G:N2	2.45	0.62
1:CA:1239:A:H62	1:CA:1299:A:H61	1.48	0.62
2:CB:78:GLN:O	2:CB:94:ASN:ND2	2.32	0.62
14:CN:24:CYS:HB2	14:CN:40:CYS:H	1.65	0.62
1:CA:664:G:P	18:CR:64:ARG:HH21	2.21	0.62
23:DA:184:C:H2'	23:DA:185:U:C6	2.35	0.62
36:DS:96:GLY:HA2	36:DS:97:ARG:C	2.20	0.62
1:AA:1026:G:H21	1:AA:1027:C:H5'	1.65	0.62
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.99	0.62
1:AA:194:C:H2'	1:AA:195:A:H5''	1.82	0.62
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.80	0.62
23:BA:1721:G:H2'	23:BA:1740:G:O6	2.00	0.62
27:BF:65:TRP:HH2	27:BF:72:ARG:HH21	1.48	0.62
1:CA:1135:U:H2'	1:CA:1137:C:O4'	1.99	0.62
1:CA:1238:A:OP2	1:CA:1335:C:H1'	1.99	0.62
1:CA:542:G:H2'	1:CA:543:C:C6	2.35	0.62
1:CA:745:C:H2'	1:CA:746:A:H8	1.63	0.62
21:CU:3:LYS:HG2	21:CU:10:ARG:HG3	1.82	0.62
23:DA:1495:A:H2'	23:DA:1496:A:C8	2.35	0.62
23:DA:203:C:H3'	23:DA:204:A:H5''	1.81	0.62
23:DA:271(I):G:N2	23:DA:271(O):C:N3	2.43	0.62
41:DX:36:LYS:HG2	41:DX:54:VAL:HB	1.81	0.62
2:AB:136:VAL:HA	2:AB:139:LYS:HB3	1.82	0.62
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.81	0.62
23:BA:188:G:H1	23:BA:208:C:H42	1.48	0.62
23:BA:2602:A:H4'	23:BA:2603:G:OP1	2.00	0.62
27:BF:185:ASP:HA	27:BF:188:ARG:CD	2.30	0.62
23:BA:1153:C:OP1	38:BU:92:ARG:NH1	2.33	0.62
1:CA:971:G:OP1	1:CA:972:C:H5''	2.00	0.62
3:CC:181:ASN:O	3:CC:181:ASN:ND2	2.33	0.62
1:AA:353:A:H5'	1:AA:353:A:H8	1.65	0.61
2:AB:28:PHE:HD2	2:AB:194:PRO:HG3	1.63	0.61
1:AA:1048:G:OP1	14:AN:3:ARG:HB3	1.99	0.61
23:BA:1165:U:H2'	23:BA:1166:C:C6	2.35	0.61
23:BA:307:G:N2	23:BA:309:G:H3'	2.15	0.61
24:BB:49:C:OP1	36:BS:97:ARG:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1165:C:N3	1:CA:1171:G:N2	2.48	0.61
1:CA:957:U:O2'	1:CA:959:A:N7	2.32	0.61
3:CC:131:ARG:NH2	3:CC:166:GLU:OE2	2.32	0.61
23:DA:1494:A:H2'	23:DA:1495:A:C8	2.35	0.61
23:DA:2377:A:H2'	23:DA:2378:A:C8	2.34	0.61
1:AA:142:G:H2'	1:AA:143:A:C8	2.34	0.61
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.81	0.61
13:AM:33:ALA:HB2	13:AM:64:TRP:CH2	2.35	0.61
23:BA:2119:A:C2	23:BA:2170:A:H2'	2.35	0.61
23:BA:2394:C:OP1	52:B8:30:ARG:NH1	2.33	0.61
23:BA:250:G:OP2	52:B8:13:ARG:NH2	2.33	0.61
1:CA:971:G:O2'	1:CA:1365:G:H4'	2.00	0.61
1:CA:1452:C:O2'	1:CA:1456:G:OP2	2.18	0.61
3:CC:184:TYR:HE1	3:CC:199:LYS:HB3	1.65	0.61
4:CD:155:LEU:HB3	4:CD:158:ILE:HB	1.82	0.61
23:DA:2161:C:H2'	23:DA:2162:G:C8	2.35	0.61
23:DA:2302:G:O2'	28:DG:126:ASP:O	2.16	0.61
32:DO:64:ARG:HG2	32:DO:79:PHE:CG	2.35	0.61
1:AA:1109:C:H2'	1:AA:1110:A:O4'	2.00	0.61
1:AA:984:C:N3	1:AA:1221:G:N2	2.43	0.61
25:BD:222:ARG:NH1	56:BD:420:HOH:O	2.32	0.61
37:BT:53:ARG:NH1	37:BT:60:THR:OG1	2.33	0.61
1:CA:1055:A:N1	1:CA:1056:U:H1'	2.14	0.61
1:CA:1379:G:H21	1:CA:1381:U:H5	1.47	0.61
3:CC:18:TRP:CD1	14:CN:54:PRO:HA	2.35	0.61
11:CK:13:GLN:N	11:CK:75:TYR:O	2.32	0.61
10:CJ:63:PHE:HD1	14:CN:58:LYS:HA	1.65	0.61
1:CA:663:A:O3'	18:CR:64:ARG:NH2	2.33	0.61
23:DA:1351:C:H3'	56:DA:3935:HOH:O	1.99	0.61
23:DA:2036:C:C6	23:DA:2036:C:H5'	2.29	0.61
23:DA:2127:G:H21	23:DA:2173:A:H1'	1.64	0.61
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.36	0.61
17:AQ:22:LEU:HD11	17:AQ:39:SER:HB3	1.82	0.61
23:BA:467:G:OP1	51:B7:33:ARG:NH1	2.32	0.61
31:BN:15:LEU:HB2	31:BN:135:PRO:HB2	1.82	0.61
7:CG:47:CYS:SG	7:CG:58:PRO:HB3	2.41	0.61
10:CJ:47:PHE:O	10:CJ:63:PHE:N	2.31	0.61
23:DA:559:G:H22	38:DU:49:HIS:CD2	2.19	0.61
38:DU:58:ARG:HA	38:DU:61:TRP:CE3	2.36	0.61
1:AA:1442:G:N7	1:AA:1442(A):G:C5	2.68	0.61
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1972:A:OP2	56:BA:4868:HOH:O	2.16	0.61
23:BA:2162:G:H1'	23:BA:2173:A:H1'	1.82	0.61
1:CA:1441:G:N2	1:CA:1459:C:H5	1.98	0.61
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.82	0.61
10:CJ:45:ARG:O	10:CJ:65:LEU:N	2.33	0.61
23:DA:2591:C:OP2	25:DD:239:ARG:HB3	1.99	0.61
1:AA:376:G:H1	1:AA:387:U:H3	1.47	0.61
23:BA:668:G:H5''	23:BA:669:G:OP2	2.01	0.61
37:BT:56:GLY:O	37:BT:59:THR:HG22	2.00	0.61
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.36	0.61
1:CA:376:G:H1	1:CA:387:U:H3	1.47	0.61
23:DA:15:G:H5''	56:DA:4619:HOH:O	2.00	0.61
23:DA:1815:A:OP2	25:DD:54:ARG:NH2	2.33	0.61
23:DA:2162:G:H1'	23:DA:2173:A:H1'	1.81	0.61
23:DA:2318:G:O2'	23:DA:2319:G:OP1	2.15	0.61
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.34	0.61
1:AA:977:A:H8	1:AA:1223:C:C4	2.19	0.61
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.81	0.61
12:AL:102:ARG:HA	12:AL:107:ALA:HB1	1.82	0.61
19:AS:46:GLY:HA2	19:AS:61:TYR:CE1	2.34	0.61
45:B1:50:ARG:HG2	45:B1:59:THR:HG22	1.83	0.61
1:CA:1238:A:N6	1:CA:1296:C:O2	2.33	0.61
1:CA:1442(A):G:N3	1:CA:1442(B):A:H2'	2.15	0.61
1:CA:955:U:H1'	1:CA:1227:A:N6	2.13	0.61
23:DA:1048:A:H4'	23:DA:1049:C:OP1	2.01	0.61
23:DA:143(A):C:H2'	23:DA:144:C:H6	1.65	0.61
23:BA:1030:G:OP2	34:BQ:128:LYS:NZ	2.32	0.61
23:BA:1534:U:H3'	23:BA:1535:A:C2	2.36	0.61
23:BA:2306:C:H5'	23:BA:2307:G:H2'	1.81	0.61
23:BA:910:A:C5	34:BQ:13:GLN:HG3	2.35	0.61
1:CA:1007:C:O2	1:CA:1023:G:N2	2.34	0.61
1:CA:1016:A:C5	1:CA:1017:G:H1'	2.35	0.61
1:CA:1306:A:H3'	1:CA:1307:U:C6	2.36	0.61
1:CA:142:G:H2'	1:CA:143:A:H8	1.64	0.61
1:CA:243:A:H4'	1:CA:244:U:O5'	2.00	0.61
1:CA:833:U:H2'	1:CA:834:C:C6	2.36	0.61
1:CA:532:A:N1	3:CC:193:TYR:HB3	2.16	0.61
7:CG:12:LEU:HD21	7:CG:24:THR:HB	1.82	0.61
23:DA:1327:C:OP2	56:DA:4452:HOH:O	2.16	0.61
23:DA:1584:C:H2'	23:DA:1586:A:H5'	1.83	0.61
1:AA:1245:A:H2'	1:AA:1246:C:H5'	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:765:G:H5''	1:AA:766:A:OP1	2.00	0.61
12:AL:79:GLU:O	12:AL:80:HIS:HB2	2.01	0.61
19:AS:63:THR:HB	19:AS:65:ASN:H	1.65	0.61
23:BA:271(E):U:H2'	23:BA:271(F):C:C6	2.36	0.61
36:BS:14:VAL:O	36:BS:18:ILE:HG12	2.01	0.61
1:CA:1128:C:H1'	1:CA:1146:A:H61	1.65	0.61
2:CB:178:ARG:HH22	8:CH:68:ARG:HH22	1.48	0.61
17:CQ:13:ASP:CG	17:CQ:14:LYS:H	2.04	0.61
18:CR:44:LEU:HD21	18:CR:70:ILE:HD13	1.82	0.61
27:DF:126:VAL:HG21	27:DF:129:PHE:CE1	2.36	0.61
38:DU:76:TYR:CE2	38:DU:80:ILE:HG13	2.35	0.61
1:AA:1377:A:C8	7:AG:7:ALA:HB1	2.36	0.61
1:AA:1442(A):G:C6	1:AA:1442(B):A:C2	2.89	0.61
1:AA:1190:G:H4'	3:AC:176:HIS:CE1	2.35	0.61
19:AS:36:ARG:HB2	19:AS:72:GLY:CA	2.31	0.61
23:BA:1584:C:H2'	23:BA:1586:A:H5'	1.82	0.61
1:AA:345:C:OP2	37:BT:39:ARG:NH2	2.32	0.61
1:CA:1131:G:H1	1:CA:1143:G:N2	1.98	0.61
1:CA:1242:C:H4'	1:CA:1303:C:O3'	2.01	0.61
1:CA:542:G:H2'	1:CA:543:C:H6	1.66	0.61
2:CB:15:VAL:HG23	2:CB:209:ARG:HG2	1.82	0.61
2:CB:54:THR:O	2:CB:58:ILE:HG13	2.00	0.61
1:CA:407:G:H4'	4:CD:116:GLN:HA	1.83	0.61
23:DA:2567:G:H2'	23:DA:2568:C:C6	2.36	0.61
23:DA:492:A:H2'	23:DA:493:G:O4'	2.01	0.61
23:DA:606:U:H4'	23:DA:658:C:H4'	1.83	0.61
28:DG:145:THR:OG1	28:DG:146:TYR:N	2.34	0.61
23:DA:1278:A:OP1	35:DR:36:THR:HG23	2.01	0.61
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.01	0.60
1:AA:1347:G:O2'	1:AA:1373:G:O6	2.13	0.60
1:AA:123:C:O2'	1:AA:290:C:O2	2.17	0.60
2:AB:82:ARG:HG2	2:AB:92:TYR:OH	2.01	0.60
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.01	0.60
23:BA:1047:G:H2'	23:BA:1110:G:N2	2.16	0.60
23:BA:1187:G:O6	56:BA:4432:HOH:O	2.13	0.60
30:BI:139:GLN:HE21	30:BI:139:GLN:HA	1.65	0.60
2:CB:77:ALA:HB2	2:CB:211:ILE:HG12	1.81	0.60
1:CA:994:A:H2	14:CN:4:LYS:HD3	1.66	0.60
23:DA:1816:G:OP2	56:DA:3705:HOH:O	2.16	0.60
23:DA:2327:A:H2'	23:DA:2328:A:C8	2.35	0.60
25:DD:206:LEU:HD22	25:DD:211:ARG:HG2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1459:C:H2'	1:AA:1460:A:C5	2.35	0.60
1:AA:501:C:OP1	12:AL:117:ARG:NH2	2.34	0.60
1:AA:983:A:H2	1:AA:984:C:C6	2.19	0.60
2:AB:24:TRP:HZ3	2:AB:29:ALA:HB2	1.65	0.60
22:AX:69:ASP:HB2	22:AX:72:ALA:HB2	1.83	0.60
23:BA:1784:A:OP1	56:BA:4606:HOH:O	2.16	0.60
23:BA:387:U:OP1	56:BA:3957:HOH:O	2.16	0.60
25:BD:108:PRO:HG2	25:BD:111:LEU:HG	1.83	0.60
43:BZ:158:PRO:O	43:BZ:161:VAL:HB	2.02	0.60
43:BZ:48:PHE:HE2	43:BZ:71:VAL:HG11	1.65	0.60
1:CA:376:G:OP2	16:CP:67:THR:HG21	2.00	0.60
1:CA:745:C:OP1	1:CA:851:G:O2'	2.18	0.60
4:CD:89:THR:HB	4:CD:204:ILE:HD11	1.83	0.60
12:CL:27:LEU:O	12:CL:29:GLY:N	2.34	0.60
51:D7:23:ARG:HB3	51:D7:23:ARG:HH11	1.65	0.60
23:DA:1014:U:H2'	23:DA:1015:G:C8	2.35	0.60
30:DI:102:SER:HA	30:DI:106:GLY:HA3	1.83	0.60
1:AA:1251:A:N3	1:AA:1369:C:O2'	2.29	0.60
1:AA:532:A:H61	3:AC:193:TYR:HB3	1.65	0.60
6:AF:69:GLU:O	6:AF:72:VAL:HG13	2.00	0.60
23:BA:644:A:H4'	23:BA:645:C:C5	2.36	0.60
1:CA:1442(A):G:C6	1:CA:1442(B):A:C2	2.89	0.60
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.33	0.60
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.81	0.60
23:DA:143:G:H2'	23:DA:143(A):C:C6	2.36	0.60
23:DA:2835:A:N3	56:DA:4320:HOH:O	2.30	0.60
24:DB:110:G:H2'	24:DB:111:G:H8	1.66	0.60
41:DX:32:PRO:HA	41:DX:77:LYS:HB2	1.84	0.60
42:DY:102:CYS:O	42:DY:104:GLY:N	2.34	0.60
1:AA:1186:G:H4'	9:AI:110:GLU:OE1	2.02	0.60
1:AA:1220:G:H1'	19:AS:52:TYR:CD2	2.36	0.60
23:BA:527:C:OP1	56:BA:4556:HOH:O	2.15	0.60
23:BA:1131:G:H21	31:BN:73:THR:HG21	1.65	0.60
37:BT:53:ARG:HH11	37:BT:53:ARG:HB3	1.66	0.60
1:CA:59:A:H1'	1:CA:354:G:N2	2.17	0.60
1:CA:509:A:H3'	56:CA:1939:HOH:O	2.00	0.60
16:CP:49:LEU:HD11	16:CP:51:VAL:HG23	1.83	0.60
23:DA:1047:G:H21	23:DA:1111:A:N6	1.99	0.60
24:DB:110:G:H2'	24:DB:111:G:C8	2.35	0.60
27:DF:46:ARG:HG2	27:DF:46:ARG:HH11	1.66	0.60
23:DA:1153:C:OP1	38:DU:92:ARG:NH1	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:100:C:H2'	1:AA:101:A:C8	2.36	0.60
1:AA:102:G:H2'	1:AA:103:C:C6	2.36	0.60
1:AA:1051:C:N4	1:AA:1207:G:C6	2.69	0.60
1:AA:1300:G:O2'	1:AA:1303:C:N4	2.34	0.60
1:AA:627:G:H2'	1:AA:628:G:H8	1.66	0.60
7:AG:41:ARG:O	7:AG:45:ASP:N	2.29	0.60
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.84	0.60
19:AS:51:VAL:HB	19:AS:75:ALA:HB3	1.84	0.60
23:BA:1819:A:H4'	23:BA:1820:U:O5'	2.01	0.60
23:BA:430:G:OP1	56:BA:4251:HOH:O	2.16	0.60
23:BA:9:U:H3	23:BA:2629:A:H2	1.48	0.60
28:BG:106:LEU:HD12	28:BG:110:ALA:HB3	1.81	0.60
23:BA:2318:G:H22	36:BS:3:ARG:HH11	1.48	0.60
1:CA:41:G:H2'	1:CA:42:G:C8	2.36	0.60
17:CQ:48:GLU:HB2	17:CQ:50:LYS:HG2	1.83	0.60
49:D5:20:ARG:HG2	49:D5:23:HIS:CD2	2.36	0.60
23:DA:528:A:N1	23:DA:2042:A:H2'	2.17	0.60
1:AA:171:A:H2'	1:AA:172:A:H8	1.65	0.60
1:AA:303:A:H2'	1:AA:304:U:O4'	2.01	0.60
1:AA:510:A:OP2	56:AA:1890:HOH:O	2.17	0.60
1:AA:735:C:H2'	1:AA:736:C:C6	2.34	0.60
3:AC:36:ASP:HA	3:AC:39:ILE:HB	1.83	0.60
19:AS:45:VAL:HA	19:AS:62:ILE:HB	1.81	0.60
23:BA:747:U:O2	23:BA:2014:A:H1'	2.01	0.60
1:CA:1401:G:OP1	22:CX:80:LYS:HE2	2.02	0.60
1:CA:745:C:H2'	1:CA:746:A:C8	2.37	0.60
12:CL:79:GLU:O	12:CL:80:HIS:HB2	2.01	0.60
14:CN:25:VAL:H	14:CN:39:LEU:HD23	1.65	0.60
23:DA:1165:U:H2'	23:DA:1166:C:C6	2.37	0.60
23:DA:1470:G:N7	56:DA:4123:HOH:O	2.32	0.60
23:DA:1587:A:H2'	23:DA:1588:C:C6	2.36	0.60
23:DA:2228:G:O6	56:DA:4148:HOH:O	2.11	0.60
23:DA:760:G:OP1	56:DA:3635:HOH:O	2.17	0.60
23:DA:2572:A:N7	26:DE:145:LYS:HB2	2.16	0.60
28:DG:11:TYR:CZ	28:DG:16:ARG:HD3	2.36	0.60
1:AA:1014:A:H4'	19:AS:14:HIS:CE1	2.37	0.60
1:AA:1256:A:OP2	1:AA:1279:A:N6	2.34	0.60
22:AX:69:ASP:HB3	22:AX:71:TYR:H	1.66	0.60
23:BA:2845:G:O2'	23:BA:2846:G:H5'	2.02	0.60
24:BB:110:G:H2'	24:BB:111:G:C8	2.36	0.60
25:BD:108:PRO:HB3	25:BD:143:HIS:CE1	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:77:ILE:N	28:BG:82:LEU:O	2.30	0.60
30:BI:145:VAL:HG12	30:BI:146:ALA:H	1.67	0.60
1:CA:1027:C:C4	1:CA:1034:G:N1	2.70	0.60
1:CA:1063:C:H2'	1:CA:1064:G:C8	2.36	0.60
1:CA:1236:A:H4'	1:CA:1304:G:H5'	1.84	0.60
1:CA:41:G:H2'	1:CA:42:G:H8	1.67	0.60
5:CE:6:PHE:HB2	5:CE:34:VAL:HG22	1.82	0.60
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.66	0.60
23:DA:1430:C:H2'	23:DA:1431:U:C6	2.36	0.60
23:DA:620:G:N3	23:DA:620:G:H5''	2.16	0.60
24:DB:14:U:O3'	24:DB:108:U:O2'	2.19	0.60
33:DP:127:ALA:O	33:DP:148:LEU:HD23	2.02	0.60
43:DZ:48:PHE:HE2	43:DZ:71:VAL:HG11	1.66	0.60
1:AA:937:A:H3'	1:AA:938:A:H8	1.65	0.60
2:AB:87:ARG:HD2	2:AB:219:VAL:HG11	1.83	0.60
23:BA:1796:U:H2'	23:BA:1797:C:C6	2.37	0.60
23:BA:2136:C:N4	23:BA:2155:G:H1	2.00	0.60
23:BA:887:A:H5'	23:BA:889:C:H41	1.67	0.60
24:BB:110:G:H2'	24:BB:111:G:H8	1.67	0.60
27:BF:184:TYR:O	27:BF:188:ARG:HG3	2.02	0.60
42:BY:76:CYS:HB3	42:BY:79:CYS:HB2	1.82	0.60
1:CA:1046:A:H3'	1:CA:1047:G:C8	2.37	0.60
1:CA:677:U:H3	1:CA:713:G:H22	1.48	0.60
1:CA:981:U:H2'	1:CA:982:U:C5	2.36	0.60
51:D7:34:ARG:NH1	51:D7:41:ARG:O	2.34	0.60
23:DA:1021:A:H62	23:DA:1141:U:H3	1.48	0.60
23:DA:226:G:H21	23:DA:228:A:H62	1.49	0.60
25:DD:108:PRO:HB3	25:DD:143:HIS:HE1	1.66	0.60
26:DE:32:PRO:HA	26:DE:90:THR:HG22	1.84	0.60
36:DS:10:ARG:NH2	36:DS:91:PRO:HB2	2.16	0.60
24:DB:49:C:OP1	36:DS:97:ARG:N	2.33	0.60
40:DW:80:PRO:O	40:DW:100:THR:HB	2.01	0.60
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.37	0.60
1:AA:158:G:N2	1:AA:163:C:O2	2.34	0.60
3:AC:35:GLU:O	3:AC:38:ARG:N	2.34	0.60
23:BA:1177:A:H3'	23:BA:1177:A:OP1	2.02	0.60
23:BA:1607:C:H4'	23:BA:1608:A:O5'	2.02	0.60
23:BA:2199:A:H3'	23:BA:2200:C:H6	1.65	0.60
30:BI:115:ALA:HB2	30:BI:129:THR:OG1	2.01	0.60
30:BI:83:ALA:HA	30:BI:89:TYR:CD2	2.36	0.60
37:BT:53:ARG:NH1	37:BT:53:ARG:HB3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:36:LYS:HG2	41:BX:54:VAL:HB	1.83	0.60
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.02	0.60
1:CA:1441:G:N2	1:CA:1459:C:C5	2.70	0.60
1:CA:174:C:H2'	1:CA:175:C:H6	1.65	0.60
1:CA:450:G:OP1	16:CP:43:LYS:NZ	2.35	0.60
23:DA:2199:A:H3'	23:DA:2200:C:C6	2.37	0.60
23:DA:2335:A:N7	23:DA:2337:G:C5	2.70	0.60
24:DB:52:A:N6	36:DS:33:LYS:HG2	2.16	0.60
34:DQ:122:GLY:HA2	34:DQ:125:LEU:HD12	1.83	0.60
1:AA:1125:U:H5'	1:AA:1126:U:H5	1.67	0.60
1:AA:323:U:O3'	20:AT:22:ARG:HD3	2.02	0.60
23:BA:1048:A:H4'	23:BA:1049:C:OP1	2.00	0.60
23:BA:1277:G:OP1	56:BA:3727:HOH:O	2.17	0.60
23:BA:71:A:H2	41:BX:31:HIS:HE1	1.47	0.60
1:CA:1305:G:H1'	1:CA:1306:A:C8	2.36	0.60
1:CA:1442(A):G:C2	1:CA:1442(B):A:H2'	2.37	0.60
3:CC:137:ALA:O	3:CC:141:VAL:HG23	2.02	0.60
9:CI:46:ALA:HB1	9:CI:77:ILE:HB	1.84	0.60
9:CI:49:PRO:HG2	9:CI:78:LYS:HA	1.84	0.60
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.84	0.60
48:D4:14:ILE:HG22	48:D4:33:VAL:HG23	1.84	0.60
23:DA:1721:G:H2'	23:DA:1740:G:O6	2.01	0.60
23:DA:2712(A):A:H5''	23:DA:2713:A:OP2	2.01	0.60
38:DU:76:TYR:OH	38:DU:92:ARG:NH1	2.35	0.60
1:AA:1100:C:O2'	1:AA:1102:A:OP1	2.13	0.59
1:AA:535:A:OP1	56:AA:1882:HOH:O	2.17	0.59
1:AA:904:C:OP2	56:AA:1900:HOH:O	2.17	0.59
4:AD:89:THR:HB	4:AD:204:ILE:HD11	1.82	0.59
9:AI:28:VAL:HG21	9:AI:37:PHE:CE2	2.37	0.59
1:AA:1305:G:H5''	21:AU:5:ASP:HA	1.84	0.59
50:B6:9:LEU:HD13	50:B6:51:GLU:HG3	1.84	0.59
27:BF:129:PHE:CD2	27:BF:163:VAL:HG21	2.37	0.59
1:CA:972:C:H2'	10:CJ:55:LYS:HB2	1.84	0.59
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.02	0.59
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.85	0.59
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.67	0.59
10:CJ:49:VAL:HG21	14:CN:41:ARG:HB2	1.83	0.59
44:D0:53:MET:HG3	44:D0:59:LEU:CD2	2.32	0.59
23:DA:2808:U:H5'	23:DA:2891:G:O6	2.02	0.59
25:DD:33:LEU:O	25:DD:64:ILE:HG13	2.02	0.59
23:DA:994:C:H3'	38:DU:54:LYS:HE3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1130:A:N6	1:AA:1144:G:H1'	2.17	0.59
1:AA:1162:C:N4	1:AA:1174:G:H1	1.98	0.59
1:AA:1309:G:O6	1:AA:1328:C:N3	2.35	0.59
1:AA:986:A:H2'	1:AA:987:G:C8	2.37	0.59
2:AB:195:ASP:O	8:AH:74:PRO:HG3	2.01	0.59
1:CA:1014:A:H2'	1:CA:1015:A:C8	2.37	0.59
1:CA:683:G:H2'	1:CA:684:A:C8	2.37	0.59
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.83	0.59
10:CJ:20:ALA:O	10:CJ:24:VAL:N	2.35	0.59
23:DA:1796:U:H2'	23:DA:1797:C:C6	2.37	0.59
23:DA:2104:G:N7	23:DA:2186:G:N2	2.49	0.59
23:DA:94:C:H5'	23:DA:94(A):G:OP2	2.01	0.59
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.38	0.59
1:AA:495:A:O2'	56:AA:1993:HOH:O	2.17	0.59
19:AS:62:ILE:HA	19:AS:66:MET:SD	2.42	0.59
48:B4:42:PHE:CB	48:B4:43:TYR:HB2	2.27	0.59
23:BA:2612:C:O5'	49:B5:2:ALA:HB3	2.02	0.59
41:BX:27:THR:HG23	41:BX:80:ILE:HG13	1.84	0.59
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.37	0.59
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.37	0.59
1:CA:316:G:OP2	1:CA:351:G:O2'	2.20	0.59
1:CA:927:G:O2'	1:CA:1503:A:N7	2.35	0.59
3:CC:11:ARG:HD3	3:CC:178:LEU:O	2.02	0.59
1:CA:542:G:P	4:CD:10:ARG:HH22	2.26	0.59
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG12	1.83	0.59
23:DA:580:C:H2'	23:DA:581:C:H6	1.66	0.59
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.84	0.59
44:B0:27:GLU:HG3	44:B0:68:GLU:HA	1.84	0.59
23:BA:1449:A:H5'	23:BA:1450:G:OP2	2.03	0.59
23:BA:2773:C:H5''	26:BE:164:ARG:HG2	1.84	0.59
1:CA:169:C:H2'	1:CA:170:U:H6	1.68	0.59
1:CA:509:A:H5''	4:CD:55:ALA:HB2	1.83	0.59
1:CA:583:A:H2'	1:CA:584:G:O4'	2.02	0.59
1:CA:973:G:H4'	14:CN:41:ARG:HH22	1.68	0.59
4:CD:26:CYS:HA	4:CD:31:CYS:HB2	1.83	0.59
4:CD:72:GLU:OE1	4:CD:207:TYR:OH	2.13	0.59
7:CG:16:LEU:HD22	9:CI:45:ALA:N	2.16	0.59
23:DA:330:A:C2	23:DA:1210:A:H2'	2.27	0.59
23:DA:192:C:OP1	56:DA:3825:HOH:O	2.16	0.59
26:DE:128:SER:OG	26:DE:129:HIS:N	2.35	0.59
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1422:G:H5'	32:BO:48:PRO:HB3	1.84	0.59
1:AA:484:G:HO2'	1:AA:485:G:P	2.25	0.59
7:AG:30:ILE:HA	7:AG:105:VAL:HG21	1.83	0.59
23:BA:2406:U:H2'	23:BA:2406:U:OP2	2.02	0.59
23:BA:652(B):A:H2'	23:BA:652(B):A:N3	2.18	0.59
40:BW:84:ARG:HG3	40:BW:98:LYS:HD2	1.84	0.59
1:CA:1015:A:H2'	1:CA:1016:A:O4'	2.02	0.59
1:CA:1117:G:H1'	1:CA:1184:G:H22	1.66	0.59
1:CA:765:G:H5''	1:CA:766:A:OP1	2.03	0.59
9:CI:9:ARG:HB2	9:CI:14:VAL:HG13	1.83	0.59
23:DA:1049:C:H4'	23:DA:1050:A:OP1	2.02	0.59
23:DA:1639:U:C2'	23:DA:1640:C:H5''	2.33	0.59
23:DA:873:G:N2	23:DA:905:U:O2	2.36	0.59
23:DA:2294:C:P	36:DS:89:ARG:HH22	2.26	0.59
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.17	0.59
1:AA:501:C:H1'	1:AA:549:C:H1'	1.85	0.59
1:AA:833:U:H2'	1:AA:834:C:C6	2.37	0.59
1:AA:975:A:H4'	1:AA:976:G:H5''	1.84	0.59
18:AR:44:LEU:HD21	18:AR:70:ILE:HD13	1.85	0.59
1:AA:958:A:N6	19:AS:77:THR:O	2.35	0.59
23:BA:2820:A:OP1	35:BR:4:LEU:HD23	2.01	0.59
23:BA:61:G:H1	23:BA:94:C:H42	1.49	0.59
1:CA:1158:C:O2'	1:CA:1160:G:OP1	2.12	0.59
1:CA:1371:G:H5''	9:CI:69:GLY:N	2.13	0.59
1:CA:1442(B):A:N7	37:DT:118:ARG:NH2	2.50	0.59
1:CA:166:G:N7	56:CA:1921:HOH:O	2.32	0.59
1:CA:627:G:H2'	1:CA:628:G:H8	1.68	0.59
1:CA:737:A:H2'	1:CA:738:C:C6	2.37	0.59
3:CC:115:LEU:HA	3:CC:118:GLN:HG2	1.85	0.59
1:CA:1373:G:H4'	7:CG:31:MET:HE3	1.84	0.59
13:CM:24:GLY:HA3	13:CM:66:LEU:HD22	1.84	0.59
38:DU:76:TYR:HH	38:DU:92:ARG:NH1	2.00	0.59
40:DW:79:GLY:HA3	40:DW:100:THR:HG22	1.85	0.59
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.32	0.59
1:AA:186:C:H2'	1:AA:187:C:H6	1.68	0.59
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.83	0.59
23:BA:196:A:O4'	33:BP:46:LYS:HE2	2.03	0.59
36:BS:96:GLY:HA2	36:BS:97:ARG:C	2.22	0.59
38:BU:76:TYR:CE2	38:BU:80:ILE:HG13	2.37	0.59
1:CA:1203:C:OP1	14:CN:3:ARG:NH1	2.33	0.59
1:CA:1249:C:N4	1:CA:1287:A:H5'	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:615:C:H2'	1:CA:616:G:H8	1.68	0.59
1:CA:753:A:OP1	15:CO:69:TYR:OH	2.19	0.59
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.66	0.59
23:DA:911:A:OP1	56:DA:4345:HOH:O	2.17	0.59
36:DS:67:ARG:HG2	36:DS:71:ARG:NH2	2.18	0.59
1:AA:1325:C:H5'	21:AU:17:THR:HG21	1.85	0.59
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.03	0.59
1:AA:652:U:C2	1:AA:752:G:N2	2.71	0.59
14:AN:24:CYS:HB2	14:AN:40:CYS:HB3	1.85	0.59
23:BA:1049:C:H2'	23:BA:1050:A:H8	1.68	0.59
23:BA:253:C:OP2	52:B8:5:LYS:NZ	2.30	0.59
23:BA:2867:G:OP2	37:BT:119:LYS:NZ	2.31	0.59
27:BF:85:GLY:O	56:BF:403:HOH:O	2.15	0.59
28:BG:124:SER:HB2	28:BG:131:TYR:CE1	2.37	0.59
29:BH:117:PRO:HB3	29:BH:123:PHE:CE2	2.37	0.59
1:CA:408:A:OP1	4:CD:113:SER:OG	2.17	0.59
1:CA:833:U:H2'	1:CA:834:C:H6	1.67	0.59
1:CA:913:A:H4'	1:CA:914:A:O5'	2.03	0.59
6:CF:70:ASP:OD1	6:CF:70:ASP:N	2.36	0.59
9:CI:31:GLN:CD	9:CI:36:TYR:HD1	2.05	0.59
23:DA:928:G:N1	56:DA:4230:HOH:O	2.32	0.59
1:CA:1442(B):A:N7	37:DT:118:ARG:CZ	2.66	0.59
1:AA:1328:C:OP1	13:AM:28:ALA:HB1	2.03	0.59
1:AA:15:G:H8	1:AA:1396:A:HO2'	1.51	0.59
1:AA:266:G:H5''	1:AA:267:C:C5	2.38	0.59
1:AA:858:G:O6	1:AA:869:G:H3'	2.02	0.59
1:AA:983:A:H3'	1:AA:984:C:C5'	2.33	0.59
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.84	0.59
19:AS:10:PHE:HZ	19:AS:37:ARG:HD3	1.68	0.59
22:AX:14:GLU:HA	22:AX:17:ARG:HD3	1.83	0.59
41:BX:8:ILE:O	46:B2:36:ARG:NH2	2.35	0.59
23:BA:203:C:H3'	23:BA:204:A:H5''	1.85	0.59
23:BA:2272:U:H5''	23:BA:2273:A:OP1	2.02	0.59
27:BF:50:SER:HB2	27:BF:94:PRO:HD3	1.84	0.59
1:CA:1189:C:OP1	14:CN:58:LYS:NZ	2.29	0.59
1:CA:382:A:H2'	1:CA:383:A:H8	1.68	0.59
3:CC:70:VAL:O	3:CC:105:GLU:HA	2.03	0.59
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.67	0.59
23:DA:1050:A:H2'	23:DA:1051:G:H8	1.68	0.59
23:DA:1509(A):A:H3'	23:DA:1509(B):A:H8	1.67	0.59
42:DY:23:ARG:HG2	42:DY:42:VAL:HG22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1459:C:C6	1:AA:1460:A:C5	2.91	0.59
3:AC:27:LYS:O	3:AC:31:HIS:CE1	2.55	0.59
23:BA:1047:G:H21	23:BA:1111:A:N6	2.01	0.59
23:BA:546:C:H2'	23:BA:547:A:H5'	1.83	0.59
23:BA:784:A:H5'	23:BA:785:G:OP1	2.02	0.59
1:CA:1246:C:N3	1:CA:1291:G:O6	2.36	0.59
1:CA:377:G:H2'	1:CA:378:G:C8	2.37	0.59
1:CA:857:C:H2'	1:CA:858:G:O4'	2.03	0.59
1:CA:944:G:H2'	1:CA:1338:G:O6	2.02	0.59
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.85	0.59
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.37	0.59
7:CG:64:GLN:HG3	7:CG:128:ALA:HB1	1.85	0.59
1:AA:626:U:H2'	1:AA:627:G:C8	2.37	0.58
4:AD:18:LYS:HA	4:AD:33:MET:HG3	1.84	0.58
45:B1:3:LYS:HB2	45:B1:61:ARG:HH11	1.68	0.58
23:BA:1790:C:H5''	23:BA:1791:A:OP1	2.02	0.58
23:BA:1865:G:H5'	23:BA:1866:C:OP2	2.03	0.58
23:BA:2406:U:OP1	56:BA:4496:HOH:O	2.17	0.58
1:CA:1131:G:H2'	1:CA:1132:C:C6	2.38	0.58
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.85	0.58
9:CI:29:ASN:HD21	9:CI:65:VAL:H	1.51	0.58
14:CN:24:CYS:HA	14:CN:39:LEU:HA	1.85	0.58
1:CA:1269:A:OP1	21:CU:24:ARG:HB2	2.03	0.58
23:DA:2150:U:H2'	23:DA:2151:G:H8	1.68	0.58
23:DA:2321:G:N3	23:DA:2321:G:H2'	2.17	0.58
23:DA:1156:A:C8	38:DU:51:LYS:HD2	2.38	0.58
41:DX:8:ILE:O	46:D2:36:ARG:NH2	2.36	0.58
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.38	0.58
1:AA:1309:G:N1	1:AA:1328:C:O2	2.27	0.58
3:AC:127:ARG:HB3	3:AC:127:ARG:NH1	2.17	0.58
9:AI:27:THR:HB	9:AI:62:TYR:CD1	2.38	0.58
23:BA:2196:C:OP2	56:BA:4415:HOH:O	2.17	0.58
31:BN:120:LEU:HD22	31:BN:122:VAL:HG23	1.83	0.58
23:DA:2612:C:O5'	49:D5:2:ALA:HB3	2.03	0.58
23:DA:1833:U:H2'	23:DA:1834:U:H6	1.68	0.58
23:DA:1882:C:H5'	23:DA:1883:G:OP2	2.02	0.58
23:DA:1899:G:H2'	23:DA:1899:G:N3	2.17	0.58
23:DA:1997:G:OP2	56:DA:4358:HOH:O	2.17	0.58
24:DB:43:C:H5''	48:D4:1:MET:HG2	1.86	0.58
25:DD:142:VAL:HG23	25:DD:193:VAL:HA	1.85	0.58
28:DG:60:LEU:HD23	28:DG:63:ILE:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:72:ARG:HH12	28:DG:87:PRO:HG3	1.68	0.58
23:DA:2406:U:C2	33:DP:72:PRO:HG2	2.38	0.58
23:DA:908:C:OP1	34:DQ:22:LYS:HB3	2.03	0.58
1:AA:1131:G:H1	1:AA:1143:G:N2	2.00	0.58
1:AA:1156:G:N2	1:AA:1179:A:H61	2.01	0.58
1:AA:1251:A:H2'	1:AA:1252:A:O4'	2.03	0.58
1:AA:988:G:H4'	1:AA:1014:A:H61	1.69	0.58
7:AG:99:LEU:HD23	7:AG:102:ARG:HH22	1.67	0.58
23:BA:226:G:H21	23:BA:228:A:H62	1.50	0.58
23:BA:588:U:H2'	23:BA:589:C:C6	2.38	0.58
23:BA:1426:G:N7	25:BD:31:LYS:NZ	2.51	0.58
23:BA:8:A:OP1	31:BN:121:LYS:NZ	2.36	0.58
1:CA:102:G:H2'	1:CA:103:C:C6	2.38	0.58
1:CA:1121:U:H2'	1:CA:1122:U:H5'	1.85	0.58
1:CA:1124:G:O2'	10:CJ:38:ILE:HG21	2.03	0.58
1:CA:1442:G:N7	1:CA:1442(A):G:C5	2.71	0.58
7:CG:14:PRO:HA	7:CG:21:VAL:HA	1.84	0.58
8:CH:31:PHE:CE2	8:CH:35:ILE:HD11	2.38	0.58
2:CB:195:ASP:O	8:CH:74:PRO:HG3	2.02	0.58
23:DA:2298:A:N6	23:DA:2318:G:H8	1.98	0.58
23:DA:314:A:C2'	23:DA:315:G:H5'	2.32	0.58
29:DH:124:GLU:HB2	29:DH:132:ARG:HB3	1.85	0.58
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.69	0.58
1:AA:279:A:C5	17:AQ:98:LEU:HD23	2.39	0.58
9:AI:13:ALA:HB2	9:AI:68:GLY:HA3	1.85	0.58
23:BA:184:C:H2'	23:BA:185:U:C6	2.38	0.58
23:BA:581:C:H2'	23:BA:582:G:H8	1.69	0.58
1:CA:100:C:H2'	1:CA:101:A:C8	2.38	0.58
1:CA:606:G:H5''	1:CA:607:A:H5'	1.85	0.58
3:CC:137:ALA:HA	3:CC:140:ARG:HB2	1.84	0.58
4:CD:193:ASP:OD1	4:CD:193:ASP:N	2.35	0.58
1:CA:979:C:H42	14:CN:18:VAL:HG12	1.66	0.58
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.69	0.58
23:DA:2023:G:H5'	23:DA:2617:C:H4'	1.85	0.58
33:DP:39:LYS:CB	33:DP:45:LEU:HG	2.32	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.38	0.58
1:AA:31:G:N7	56:AA:1893:HOH:O	2.32	0.58
1:AA:414:A:H2'	1:AA:415:A:C8	2.39	0.58
1:AA:615:C:H2'	1:AA:616:G:H8	1.68	0.58
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.03	0.58
25:BD:148:GLU:HB2	25:BD:151:LYS:HD2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:150:ASP:CG	28:BG:151:ALA:H	2.07	0.58
1:CA:353:A:H8	1:CA:353:A:H5'	1.69	0.58
2:CB:136:VAL:HA	2:CB:139:LYS:HB3	1.85	0.58
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.35	0.58
45:D1:23:LYS:HB3	45:D1:29:GLY:HA3	1.85	0.58
23:DA:1045:A:H4'	23:DA:1047:G:C4	2.38	0.58
23:DA:1991:U:H2'	23:DA:1992:G:H5''	1.86	0.58
23:DA:2406:U:OP2	23:DA:2406:U:H2'	2.04	0.58
28:DG:56:ALA:HA	28:DG:153:ARG:HH21	1.67	0.58
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.67	0.58
1:AA:148:G:H2'	1:AA:149:A:C8	2.34	0.58
1:AA:76:C:H3'	1:AA:77:G:H5''	1.85	0.58
4:AD:26:CYS:HA	4:AD:31:CYS:HB2	1.84	0.58
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.03	0.58
13:AM:19:LEU:O	13:AM:22:ILE:HB	2.04	0.58
13:AM:3:ARG:HB3	13:AM:8:GLU:O	2.04	0.58
19:AS:44:MET:O	19:AS:47:HIS:ND1	2.37	0.58
23:BA:2610:C:H4'	23:BA:2611:U:OP2	2.04	0.58
23:BA:581:C:H2'	23:BA:582:G:C8	2.39	0.58
28:BG:11:TYR:CZ	28:BG:16:ARG:HD3	2.38	0.58
30:BI:77:LEU:HB3	30:BI:142:VAL:HG12	1.85	0.58
1:CA:174:C:H2'	1:CA:175:C:C6	2.37	0.58
1:CA:951:G:N2	1:CA:952:U:H1'	2.19	0.58
51:D7:47:ARG:HG3	51:D7:47:ARG:HH11	1.69	0.58
23:DA:2115:G:C2	23:DA:2117:A:N7	2.71	0.58
29:DH:46:GLU:HB2	29:DH:49:VAL:HG12	1.83	0.58
37:DT:11:GLU:OE1	37:DT:57:PHE:HB3	2.03	0.58
1:AA:223:U:H2'	1:AA:224:C:H6	1.68	0.58
3:AC:3:ASN:OD1	3:AC:3:ASN:N	2.37	0.58
12:AL:83:VAL:HG13	12:AL:100:ILE:HG23	1.86	0.58
20:AT:61:SER:O	20:AT:65:LYS:HG2	2.03	0.58
47:B3:10:LYS:NZ	47:B3:15:TYR:OH	2.37	0.58
23:BA:1021:A:H62	23:BA:1141:U:H3	1.52	0.58
23:BA:1351:C:H3'	56:BA:3914:HOH:O	2.03	0.58
23:BA:1352:U:P	56:BA:3914:HOH:O	2.60	0.58
23:BA:662:G:OP1	56:BA:4541:HOH:O	2.17	0.58
1:CA:300:A:H1'	1:CA:565:U:O2	2.04	0.58
11:CK:27:ASN:OD1	11:CK:28:THR:N	2.36	0.58
19:CS:51:VAL:O	19:CS:57:HIS:HA	2.04	0.58
23:DA:1047:G:H2'	23:DA:1110:G:H1	1.67	0.58
30:DI:104:GLN:HG2	30:DI:105:HIS:CD2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DQ:43:THR:OG1	34:DQ:45:GLN:HG2	2.04	0.58
1:AA:1253:G:C6	1:AA:1254:C:C4	2.91	0.58
1:AA:17:U:H2'	1:AA:18:C:C6	2.38	0.58
18:AR:35:ARG:HH11	18:AR:35:ARG:HB3	1.66	0.58
23:BA:2892:A:H2'	23:BA:2893:G:H5'	1.84	0.58
24:BB:14:U:O3'	24:BB:108:U:O2'	2.20	0.58
2:CB:28:PHE:HD2	2:CB:194:PRO:HG3	1.68	0.58
7:CG:92:SER:HB2	7:CG:93:PRO:HD2	1.85	0.58
19:CS:36:ARG:HB3	19:CS:72:GLY:CA	2.34	0.58
23:DA:19:C:H2'	23:DA:20:C:H6	1.69	0.58
23:DA:2235:G:O6	56:DA:4468:HOH:O	2.17	0.58
23:DA:546:C:H6	23:DA:547:A:H5'	1.68	0.58
23:DA:548:A:N6	39:DV:19:LYS:H	2.02	0.58
23:DA:1188:U:H4'	39:DV:79:VAL:HG22	1.84	0.58
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.29	0.58
1:AA:1231:G:H2'	1:AA:1232:U:C6	2.39	0.58
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.69	0.58
1:AA:857:C:H2'	1:AA:858:G:O4'	2.04	0.58
10:AJ:25:GLU:O	10:AJ:29:ARG:N	2.35	0.58
1:AA:972:C:O2	10:AJ:55:LYS:HG3	2.03	0.58
16:AP:29:ASP:OD2	16:AP:29:ASP:N	2.35	0.58
22:AX:56:VAL:H	22:AX:59:GLY:HA2	1.69	0.58
23:BA:1429:G:H2'	23:BA:1430:C:H6	1.67	0.58
23:BA:1899:G:H2'	23:BA:1899:G:N3	2.18	0.58
23:BA:2002:G:OP2	35:BR:9:LYS:NZ	2.37	0.58
1:CA:1097:C:O2'	1:CA:1170:A:H1'	2.04	0.58
1:CA:194:C:H2'	1:CA:195:A:H5''	1.85	0.58
1:CA:56:U:H2'	1:CA:57:G:C8	2.38	0.58
1:CA:652:U:C2	1:CA:752:G:N2	2.71	0.58
1:CA:785:G:C2'	1:CA:786:G:H5'	2.34	0.58
1:CA:814:A:H2'	1:CA:816:A:H5''	1.85	0.58
3:CC:160:ALA:HB3	3:CC:164:ARG:NH2	2.19	0.58
8:CH:10:LEU:HD22	8:CH:83:ILE:HD11	1.85	0.58
3:CC:18:TRP:HD1	14:CN:54:PRO:HA	1.69	0.58
23:DA:1602:U:O4	56:DA:3941:HOH:O	2.14	0.58
23:DA:2136:C:N4	23:DA:2155:G:H1	1.98	0.58
23:DA:536:A:H2'	23:DA:537:C:C6	2.39	0.58
23:DA:543:C:H3'	23:DA:545:G:O4'	2.04	0.58
23:DA:661:C:O3'	56:DA:4438:HOH:O	2.17	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:HG22	1.84	0.58
23:BA:2593:U:H2'	23:BA:2594:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:32:PRO:HA	41:BX:77:LYS:HB2	1.84	0.58
19:CS:36:ARG:HB3	19:CS:72:GLY:N	2.18	0.58
20:CT:63:ILE:HD12	20:CT:81:LYS:HG2	1.85	0.58
23:DA:1047:G:H2'	23:DA:1110:G:N2	2.19	0.58
23:DA:1628:G:H2'	23:DA:1629:U:C6	2.39	0.58
23:DA:298:G:H5''	23:DA:299:A:OP1	2.04	0.58
1:AA:1095:U:H5''	1:AA:1109:C:O2	2.04	0.57
1:AA:601:C:H2'	1:AA:602:A:H8	1.68	0.57
5:AE:12:LEU:HB3	5:AE:31:LEU:HB3	1.86	0.57
9:AI:13:ALA:HA	9:AI:67:GLY:HA3	1.86	0.57
1:AA:664:G:P	18:AR:64:ARG:HH21	2.27	0.57
23:BA:83:G:N2	23:BA:102:G:H2'	2.19	0.57
23:BA:1689:A:N6	23:BA:1698:A:H2	1.93	0.57
23:BA:883:G:H1	23:BA:893:C:N4	2.02	0.57
23:BA:885:C:N3	23:BA:886:C:H1'	2.19	0.57
24:BB:52:A:O2'	24:BB:53:A:H5''	2.03	0.57
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.04	0.57
1:CA:303:A:H2'	1:CA:304:U:O4'	2.04	0.57
1:CA:709:G:H2'	1:CA:710:G:H8	1.69	0.57
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.18	0.57
1:AA:1318:A:H1'	19:AS:37:ARG:NH2	2.19	0.57
1:AA:448:A:OP2	1:AA:485:G:N1	2.35	0.57
2:AB:69:LEU:HD22	2:AB:91:PRO:HB2	1.85	0.57
2:AB:71:VAL:O	2:AB:165:VAL:HG23	2.05	0.57
3:AC:11:ARG:NH2	3:AC:177:THR:O	2.36	0.57
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.02	0.57
23:BA:2161:C:H2'	23:BA:2162:G:C8	2.38	0.57
23:BA:2294:C:P	36:BS:89:ARG:HH22	2.27	0.57
23:BA:2377:A:H2'	23:BA:2378:A:C8	2.39	0.57
23:BA:647:G:N7	56:BA:5356:HOH:O	2.32	0.57
24:BB:103:G:OP2	56:BB:314:HOH:O	2.18	0.57
1:CA:1441:G:C2	1:CA:1459:C:H5	2.21	0.57
1:CA:626:U:H2'	1:CA:627:G:C8	2.39	0.57
2:CB:17:PHE:H	2:CB:17:PHE:HD2	1.50	0.57
8:CH:6:ILE:O	8:CH:10:LEU:HG	2.04	0.57
21:CU:12:LYS:HB3	21:CU:22:ARG:HH11	1.69	0.57
27:DF:101:LEU:HD12	27:DF:102:PRO:HD2	1.85	0.57
28:DG:77:ILE:N	28:DG:82:LEU:O	2.37	0.57
1:AA:1459:C:C2'	1:AA:1460:A:C8	2.87	0.57
1:AA:745:C:H2'	1:AA:746:A:H8	1.69	0.57
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.07	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:80:ILE:HD11	2:AB:215:LEU:HB2	1.86	0.57
9:AI:29:ASN:HB2	9:AI:36:TYR:CZ	2.38	0.57
13:AM:15:VAL:HG12	13:AM:45:VAL:HG23	1.87	0.57
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.69	0.57
23:BA:1014:U:H2'	23:BA:1015:G:H8	1.69	0.57
23:BA:2318:G:N2	36:BS:3:ARG:HH11	2.02	0.57
23:BA:769:G:O6	56:BA:4262:HOH:O	2.13	0.57
1:CA:1007:C:H2'	1:CA:1008:C:C5	2.39	0.57
1:CA:1030(D):A:H62	1:CA:1031:G:H21	1.53	0.57
1:CA:1130:A:H61	1:CA:1144:G:C1'	2.15	0.57
1:CA:448:A:OP2	1:CA:485:G:N1	2.31	0.57
3:CC:132:ARG:O	3:CC:136:GLN:N	2.32	0.57
50:D6:9:LEU:HD13	50:D6:51:GLU:HG3	1.85	0.57
23:DA:2562:U:H1'	32:DO:23:ARG:HH11	1.69	0.57
42:DY:92:ASN:N	42:DY:93:GLY:HA2	2.19	0.57
1:AA:1492:A:H2'	1:AA:1492:A:N3	2.19	0.57
1:AA:606:G:H5''	1:AA:607:A:H5'	1.86	0.57
7:AG:35:LYS:HD2	7:AG:38:LEU:HB3	1.86	0.57
1:AA:1320:C:H1'	19:AS:73:GLU:HB3	1.85	0.57
23:BA:2184:G:H2'	23:BA:2185:C:O4'	2.03	0.57
23:BA:2853:C:H2'	23:BA:2854:G:H8	1.69	0.57
34:BQ:122:GLY:HA2	34:BQ:125:LEU:HD12	1.86	0.57
1:CA:359:U:H2'	1:CA:360:A:H8	1.69	0.57
1:CA:38:G:C2	1:CA:397:A:C2	2.92	0.57
1:CA:940:C:H1'	1:CA:1374:A:H2	1.68	0.57
4:CD:174:LEU:HD23	4:CD:185:PHE:HA	1.87	0.57
23:DA:271(M):G:O2'	23:DA:271(N):U:OP1	2.18	0.57
1:AA:1015:A:H2'	1:AA:1016:A:O4'	2.03	0.57
1:AA:1095:U:OP2	1:AA:1108:G:N1	2.31	0.57
1:AA:1458:G:N3	1:AA:1458:G:H2'	2.19	0.57
1:AA:677:U:H3	1:AA:713:G:H22	1.50	0.57
23:BA:2275:C:H5'	23:BA:2275:C:H6	1.69	0.57
39:BV:56:SER:H	39:BV:100:ARG:HB2	1.67	0.57
43:BZ:125:LEU:HG	43:BZ:164:ALA:HB3	1.87	0.57
1:CA:1457:G:C6	1:CA:1458:G:C5	2.92	0.57
23:DA:1406:U:H2'	23:DA:1407:C:C6	2.39	0.57
23:DA:1935:G:H1'	23:DA:1964:G:N2	2.19	0.57
25:DD:274:ARG:HA	25:DD:275:LYS:HB3	1.85	0.57
29:DH:3:ARG:CZ	29:DH:4:ILE:H	2.17	0.57
33:DP:46:LYS:HE3	33:DP:51:PHE:CD1	2.40	0.57
1:AA:414:A:H2'	1:AA:415:A:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:17:ASP:O	3:AC:54:ARG:NH2	2.37	0.57
3:AC:36:ASP:O	3:AC:40:ARG:HG2	2.04	0.57
8:AH:36:LEU:HA	8:AH:39:LEU:HD23	1.86	0.57
8:AH:63:LEU:HB2	8:AH:65:TYR:HE1	1.70	0.57
23:BA:1495:A:H2'	23:BA:1496:A:C8	2.39	0.57
23:BA:1833:U:H2'	23:BA:1834:U:C6	2.39	0.57
23:BA:2299:G:O6	56:BA:5003:HOH:O	2.14	0.57
23:BA:1669:A:H5''	23:BA:2550:G:OP1	2.04	0.57
23:BA:530:G:N3	23:BA:530:G:O4'	2.32	0.57
23:BA:543:C:H3'	23:BA:545:G:O4'	2.05	0.57
37:BT:26:ASP:OD2	37:BT:91:ARG:NH1	2.38	0.57
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.87	0.57
2:CB:87:ARG:HH11	2:CB:219:VAL:HG12	1.69	0.57
7:CG:41:ARG:O	7:CG:45:ASP:N	2.37	0.57
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.86	0.57
35:DR:36:THR:HG22	35:DR:37:THR:H	1.70	0.57
1:AA:1002:G:H2'	1:AA:1003:G:H5'	1.85	0.57
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.36	0.57
1:AA:359:U:H2'	1:AA:360:A:H8	1.70	0.57
8:AH:121:ASP:OD1	8:AH:121:ASP:N	2.38	0.57
13:AM:64:TRP:HB3	13:AM:66:LEU:HD23	1.87	0.57
1:AA:1305:G:H2'	21:AU:6:ARG:H	1.69	0.57
23:BA:1014:U:H2'	23:BA:1015:G:C8	2.40	0.57
23:BA:1045:A:H4'	23:BA:1047:G:C4	2.40	0.57
23:BA:2335:A:N7	23:BA:2337:G:C5	2.72	0.57
1:CA:763:G:H2'	1:CA:764:C:H6	1.70	0.57
17:CQ:65:ILE:HD13	17:CQ:69:LYS:HE2	1.86	0.57
23:DA:2853:C:H2'	23:DA:2854:G:H8	1.67	0.57
34:DQ:37:LEU:HD21	34:DQ:130:LYS:HB2	1.87	0.57
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.86	0.57
1:AA:169:C:H2'	1:AA:170:U:C6	2.39	0.57
1:AA:785:G:C2'	1:AA:786:G:H5'	2.35	0.57
1:AA:814:A:OP2	56:AA:2008:HOH:O	2.17	0.57
1:AA:943:U:H2'	1:AA:944:G:O4'	2.03	0.57
2:AB:54:THR:O	2:AB:58:ILE:HG13	2.05	0.57
7:AG:88:PRO:HG2	7:AG:152:ALA:HB2	1.87	0.57
20:AT:90:GLN:O	20:AT:93:GLU:HB3	2.04	0.57
44:B0:40:GLN:OE1	44:B0:44:ARG:N	2.31	0.57
51:B7:23:ARG:HH11	51:B7:23:ARG:HB3	1.70	0.57
23:BA:2790:A:N3	23:BA:2790:A:H3'	2.19	0.57
23:BA:602:G:O2'	23:BA:655:A:N6	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:76:C:H3'	1:CA:77:G:H5''	1.87	0.57
6:CF:7:ASN:N	6:CF:7:ASN:OD1	2.37	0.57
13:CM:37:THR:HG21	13:CM:56:LEU:HA	1.87	0.57
14:CN:22:THR:HG21	14:CN:35:ARG:HG2	1.86	0.57
49:D5:45:VAL:HG11	49:D5:58:LEU:HD13	1.87	0.57
23:DA:1627:G:OP2	56:DA:3954:HOH:O	2.17	0.57
23:DA:1963:U:H4'	23:DA:1964:G:OP1	2.05	0.57
28:DG:19:LEU:HD22	28:DG:23:PHE:HE1	1.70	0.57
28:DG:32:PRO:HB2	28:DG:172:LEU:HD22	1.87	0.57
3:AC:29:TYR:HE1	10:AJ:65:LEU:HD21	1.69	0.57
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.05	0.57
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.38	0.57
33:BP:84:ASN:HB2	33:BP:86:LYS:HD3	1.85	0.57
43:BZ:33:LEU:HD23	43:BZ:90:VAL:HG21	1.87	0.57
1:CA:1078:U:H2'	1:CA:1079:G:O4'	2.05	0.57
1:CA:186:C:H2'	1:CA:187:C:H6	1.69	0.57
1:CA:932:C:H5'	7:CG:3:ARG:HD3	1.86	0.57
10:CJ:40:LEU:HD11	10:CJ:69:ASN:HB3	1.86	0.57
49:D5:45:VAL:HA	49:D5:52:TYR:HB2	1.87	0.57
50:D6:16:CYS:HB3	50:D6:43:CYS:SG	2.44	0.57
23:DA:1049:C:H2'	23:DA:1050:A:H8	1.70	0.57
23:DA:1329:U:H5''	23:DA:1330:C:H5	1.69	0.57
23:DA:1434:A:H61	23:DA:1558:A:H62	1.52	0.57
23:DA:971:C:OP2	56:DA:4254:HOH:O	2.18	0.57
25:DD:2:ALA:HB3	25:DD:20:ASP:HB3	1.86	0.57
30:DI:123:LEU:H	30:DI:123:LEU:HD23	1.69	0.57
42:DY:76:CYS:HB3	42:DY:79:CYS:HB2	1.87	0.57
43:DZ:108:PRO:HB2	43:DZ:111:VAL:HG23	1.85	0.57
1:AA:1179:A:N6	1:AA:1180:A:C6	2.73	0.57
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.40	0.57
1:AA:840:C:H4'	1:AA:841:U:OP1	2.05	0.57
3:AC:23:TYR:OH	10:AJ:9:ARG:HD2	2.04	0.57
11:AK:84:VAL:HG11	11:AK:91:ARG:HD2	1.87	0.57
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.25	0.57
23:BA:1174:A:H1'	23:BA:1175:U:H5''	1.87	0.57
23:BA:2321:G:H2'	23:BA:2321:G:N3	2.20	0.57
35:BR:11:ASN:ND2	56:BR:304:HOH:O	2.38	0.57
1:CA:1297:C:C4'	1:CA:1298:C:H5'	2.34	0.57
1:CA:1305:G:H1'	1:CA:1306:A:H8	1.70	0.57
1:CA:359:U:H2'	1:CA:360:A:C8	2.39	0.57
1:CA:683:G:H2'	1:CA:684:A:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:437:U:OP1	4:CD:155:LEU:HG	2.04	0.57
19:CS:22:LEU:HA	19:CS:26:GLY:O	2.05	0.57
23:DA:1657:C:H2'	23:DA:1658:C:C6	2.39	0.57
23:DA:2184:G:H2'	23:DA:2185:C:O4'	2.05	0.57
23:DA:642:G:O6	56:DA:3715:HOH:O	2.16	0.57
23:DA:821:A:H2'	23:DA:946:G:H5''	1.87	0.57
1:AA:1072:G:C5	1:AA:1073:U:C4	2.93	0.56
1:AA:359:U:H2'	1:AA:360:A:C8	2.40	0.56
13:AM:70:LEU:H	13:AM:73:GLU:CB	2.17	0.56
23:BA:1329:U:H5''	23:BA:1330:C:H5	1.69	0.56
23:BA:2461:C:H2'	23:BA:2462:U:C6	2.39	0.56
24:BB:52:A:N6	36:BS:33:LYS:HG2	2.20	0.56
43:BZ:179:ASP:HB2	43:BZ:182:LYS:HD3	1.87	0.56
1:CA:1166:G:O2'	1:CA:1169:A:N7	2.28	0.56
1:CA:1343:G:H4'	9:CI:122:ALA:HB3	1.86	0.56
53:D9:10:ILE:N	53:D9:14:CYS:SG	2.77	0.56
23:DA:848:G:OP1	56:DA:4235:HOH:O	2.18	0.56
27:DF:184:TYR:O	27:DF:188:ARG:HG3	2.05	0.56
23:DA:495:G:H21	40:DW:61:ASN:HD21	1.53	0.56
1:AA:1245:A:C2'	1:AA:1246:C:H5'	2.35	0.56
1:AA:1249:C:N4	1:AA:1288:A:OP2	2.37	0.56
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.20	0.56
23:BA:1882:C:H5'	23:BA:1883:G:OP2	2.06	0.56
23:BA:1991:U:H2'	23:BA:1992:G:H5''	1.87	0.56
23:BA:558:G:C5	56:BA:4943:HOH:O	2.57	0.56
24:BB:40:U:H1'	24:BB:45:A:H61	1.70	0.56
25:BD:5:LYS:HA	25:BD:17:THR:HG22	1.88	0.56
1:CA:555:C:H2'	1:CA:556:C:C6	2.40	0.56
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.26	0.56
20:CT:73:HIS:HB3	20:CT:74:LYS:HG2	1.87	0.56
23:DA:1030:G:OP2	34:DQ:128:LYS:NZ	2.35	0.56
23:DA:2591:C:OP1	25:DD:239:ARG:HG2	2.05	0.56
23:DA:422:A:OP2	56:DA:4080:HOH:O	2.18	0.56
23:DA:580:C:H2'	23:DA:581:C:C6	2.40	0.56
33:DP:52:GLU:OE2	52:D8:57:ARG:NH1	2.37	0.56
37:DT:93:ARG:HH11	37:DT:93:ARG:HG2	1.69	0.56
1:AA:21:G:H2'	1:AA:22:G:C8	2.41	0.56
1:AA:683:G:H2'	1:AA:684:A:C8	2.40	0.56
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.88	0.56
1:AA:1148:U:O3'	9:AI:14:VAL:HG21	2.04	0.56
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1762:A:O5'	23:BA:1762:A:H8	1.88	0.56
23:BA:2322:A:H2'	23:BA:2323:G:O4'	2.05	0.56
23:BA:2023:G:H5'	23:BA:2617:C:H4'	1.87	0.56
26:BE:11:MET:HG2	26:BE:24:THR:HB	1.87	0.56
27:BF:28:ILE:HD13	27:BF:119:ARG:HE	1.69	0.56
28:BG:72:ARG:HH12	28:BG:87:PRO:HG3	1.69	0.56
23:BA:908:C:OP1	34:BQ:22:LYS:HB3	2.06	0.56
1:CA:1443:G:O6	1:CA:1459:C:H1'	2.05	0.56
1:CA:601:C:H2'	1:CA:602:A:H8	1.69	0.56
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.86	0.56
17:CQ:45:HIS:CD2	17:CQ:65:ILE:HG12	2.40	0.56
18:CR:35:ARG:HB3	18:CR:35:ARG:HH11	1.68	0.56
46:D2:50:ILE:C	46:D2:52:ASP:H	2.07	0.56
23:DA:1403:C:C5'	23:DA:1471:A:H1'	2.35	0.56
23:DA:747:U:O2	23:DA:2014:A:H1'	2.04	0.56
23:DA:2110:G:OP2	23:DA:2110:G:H8	1.88	0.56
23:DA:2273:A:H2'	23:DA:2274:A:C8	2.40	0.56
23:DA:271(E):U:H2'	23:DA:271(F):C:C6	2.39	0.56
31:DN:24:GLY:HA2	31:DN:27:ALA:HB3	1.85	0.56
36:DS:96:GLY:N	36:DS:99:LYS:H	2.03	0.56
40:DW:18:ARG:NH1	40:DW:76:VAL:O	2.38	0.56
40:DW:60:ASN:HD22	40:DW:60:ASN:N	2.02	0.56
1:AA:1005:A:N6	1:AA:1024:G:O2'	2.39	0.56
1:AA:1290:G:H3'	1:AA:1291:G:H8	1.70	0.56
1:AA:616:G:C2	1:AA:617:G:C8	2.93	0.56
1:AA:978:A:O2'	1:AA:1322:C:N3	2.39	0.56
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.85	0.56
4:AD:159:ARG:O	4:AD:162:LEU:N	2.38	0.56
1:AA:663:A:O3'	18:AR:64:ARG:NH2	2.38	0.56
23:BA:2350:C:O2	23:BA:2367:G:N2	2.29	0.56
23:BA:71:A:C8	23:BA:71:A:H5'	2.40	0.56
23:DA:1050:A:C4	23:DA:1051:G:C8	2.93	0.56
23:DA:1607:C:H4'	23:DA:1608:A:O5'	2.04	0.56
23:DA:2661:G:H2'	23:DA:2662:A:C8	2.41	0.56
43:DZ:82:ARG:HB3	43:DZ:82:ARG:NH2	2.19	0.56
1:AA:1249:C:H2'	1:AA:1250:A:H5''	1.87	0.56
1:AA:738:C:H2'	1:AA:739:C:H6	1.70	0.56
23:BA:2615:U:C2	49:B5:7:PRO:HA	2.40	0.56
51:B7:47:ARG:HH11	51:B7:47:ARG:HG3	1.70	0.56
23:BA:1935:G:H1'	23:BA:1964:G:N2	2.20	0.56
23:BA:1963:U:H4'	23:BA:1964:G:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:690:G:O6	56:BA:5170:HOH:O	2.15	0.56
29:BH:7:LEU:HD12	29:BH:8:PRO:HD2	1.87	0.56
1:CA:1160:G:C6	1:CA:1181:G:N1	2.74	0.56
1:CA:1237:C:N3	1:CA:1337:G:N2	2.53	0.56
1:CA:192:U:H2'	1:CA:193:C:C6	2.35	0.56
1:CA:858:G:O6	1:CA:869:G:H3'	2.05	0.56
5:CE:19:MET:SD	5:CE:24:ARG:HB3	2.46	0.56
23:DA:1812:A:O2'	25:DD:45:ASN:N	2.38	0.56
23:DA:1858:G:H1'	23:DA:1884:A:N6	2.21	0.56
23:DA:2322:A:H2'	23:DA:2323:G:O4'	2.05	0.56
26:DE:201:THR:OG1	26:DE:202:LYS:N	2.38	0.56
23:DA:1131:G:H21	31:DN:73:THR:HG21	1.71	0.56
37:DT:24:PRO:HA	37:DT:49:VAL:HG22	1.87	0.56
37:DT:60:THR:HG22	37:DT:77:PRO:HA	1.87	0.56
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.40	0.56
6:AF:7:ASN:OD1	6:AF:7:ASN:N	2.38	0.56
7:AG:28:ASN:HD21	7:AG:36:LYS:HE2	1.69	0.56
17:AQ:4:LYS:HD2	17:AQ:5:VAL:H	1.71	0.56
23:BA:1049:C:O2'	23:BA:1050:A:O5'	2.22	0.56
23:BA:1786:A:H1'	23:BA:1938:A:N6	2.19	0.56
25:BD:175:LEU:HD12	25:BD:185:VAL:HG21	1.87	0.56
26:BE:9:VAL:HG22	26:BE:25:VAL:HB	1.88	0.56
33:BP:39:LYS:CB	33:BP:45:LEU:HG	2.32	0.56
35:BR:28:LEU:HD12	35:BR:48:VAL:HG21	1.87	0.56
1:CA:828:A:H2'	1:CA:829:G:O4'	2.05	0.56
2:CB:88:ALA:HB1	2:CB:222:ILE:HG21	1.88	0.56
2:CB:74:LYS:O	2:CB:78:GLN:HB2	2.05	0.56
6:CF:67:MET:HE1	6:CF:75:LEU:HD13	1.86	0.56
7:CG:10:ARG:O	7:CG:94:ARG:NH2	2.38	0.56
23:DA:631:A:OP2	52:D8:47:LYS:NZ	2.25	0.56
35:DR:20:LEU:HD21	35:DR:40:LYS:HD3	1.87	0.56
1:CA:1442(B):A:H62	37:DT:118:ARG:NH2	2.04	0.56
38:DU:36:ARG:HD2	38:DU:40:PHE:CZ	2.41	0.56
1:AA:375:U:C2	1:AA:376:G:C8	2.94	0.56
1:AA:1396:A:C2	5:AE:19:MET:HG3	2.41	0.56
1:AA:277:C:H5''	17:AQ:68:ARG:NH2	2.21	0.56
44:B0:53:MET:HG3	44:B0:59:LEU:CD2	2.35	0.56
23:BA:1430:C:H2'	23:BA:1431:U:C6	2.39	0.56
23:BA:185:U:H4'	23:BA:218:A:H4'	1.88	0.56
26:BE:174:ASP:OD2	26:BE:175:VAL:N	2.39	0.56
28:BG:133:LEU:HG	28:BG:157:ILE:HB	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:252:G:OP2	33:BP:50:ARG:NH1	2.39	0.56
35:BR:50:HIS:CE1	35:BR:54:LEU:HD21	2.41	0.56
23:BA:559:G:H22	38:BU:49:HIS:CD2	2.23	0.56
42:BY:86:ARG:HD2	42:BY:100:ALA:HA	1.88	0.56
1:CA:1142:G:C5	1:CA:1143:G:H1'	2.40	0.56
1:CA:1392:G:H21	1:CA:1502:A:H8	1.52	0.56
3:CC:18:TRP:HE1	14:CN:56:VAL:N	2.02	0.56
6:CF:69:GLU:O	6:CF:72:VAL:HG13	2.06	0.56
12:CL:102:ARG:HA	12:CL:107:ALA:HB1	1.86	0.56
48:D4:35:VAL:HA	48:D4:39:CYS:SG	2.44	0.56
23:DA:1762:A:H8	23:DA:1762:A:O5'	1.87	0.56
23:DA:2835:A:N7	56:DA:4350:HOH:O	2.33	0.56
28:DG:86:MET:O	28:DG:88:ILE:HG13	2.06	0.56
1:AA:1371:G:H4'	9:AI:69:GLY:HA3	1.87	0.56
18:AR:31:LEU:HD23	18:AR:31:LEU:H	1.69	0.56
23:BA:1173:G:H1'	23:BA:1177:A:H61	1.70	0.56
23:BA:1488:G:N2	23:BA:1502:C:C2	2.73	0.56
23:BA:1494:A:H2'	23:BA:1495:A:C8	2.41	0.56
23:BA:1510:G:H2'	23:BA:1511:C:C6	2.41	0.56
23:BA:2199:A:H3'	23:BA:2200:C:C6	2.41	0.56
23:BA:1140:C:O3'	31:BN:25:ARG:NH1	2.38	0.56
32:BO:64:ARG:NH1	32:BO:81:ASP:OD2	2.38	0.56
1:CA:1124:G:H2'	1:CA:1126:U:O4	2.05	0.56
1:CA:142:G:H2'	1:CA:143:A:C8	2.40	0.56
1:CA:335:C:H2'	1:CA:336:C:C6	2.41	0.56
1:CA:991:U:H3'	1:CA:1212:U:N3	2.20	0.56
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.38	0.56
10:CJ:51:ARG:HB2	10:CJ:59:SER:OG	2.05	0.56
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.06	0.56
23:DA:2477:C:O2	53:D9:4:ARG:NH2	2.35	0.56
28:DG:5:VAL:HG12	48:D4:25:TYR:CE1	2.41	0.56
34:DQ:24:GLY:O	34:DQ:102:VAL:HG23	2.05	0.56
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.41	0.56
1:AA:1276:G:H1'	1:AA:1282:C:O2'	2.05	0.56
7:AG:116:ALA:HA	7:AG:119:ARG:HB3	1.88	0.56
17:AQ:45:HIS:CD2	17:AQ:65:ILE:HG12	2.41	0.56
23:BA:1268:A:H2'	23:BA:1269:A:O4'	2.06	0.56
23:BA:1587:A:H2'	23:BA:1588:C:H6	1.68	0.56
40:BW:80:PRO:O	40:BW:100:THR:HB	2.06	0.56
1:CA:1072:G:C5	1:CA:1073:U:C4	2.94	0.56
1:CA:1342:C:H2'	1:CA:1343:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1458:G:H2'	1:CA:1458:G:N3	2.20	0.56
1:CA:148:G:H2'	1:CA:149:A:C8	2.39	0.56
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.41	0.56
1:CA:559:A:OP1	5:CE:126:ARG:NH2	2.32	0.56
11:CK:23:ALA:O	11:CK:86:GLY:HA3	2.06	0.56
13:CM:94:ARG:HH11	13:CM:96:LEU:HD12	1.70	0.56
23:DA:1375:C:H3'	56:DA:3934:HOH:O	2.05	0.56
23:DA:1449:A:H5'	23:DA:1450:G:OP2	2.05	0.56
23:DA:1601:G:N7	56:DA:3941:HOH:O	2.33	0.56
23:DA:2335:A:O2'	23:DA:2336:A:OP2	2.21	0.56
43:DZ:158:PRO:O	43:DZ:161:VAL:HB	2.06	0.56
1:AA:160:A:H2'	1:AA:161:A:O4'	2.05	0.56
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.88	0.56
15:AO:69:TYR:HA	15:AO:72:ARG:HD3	1.86	0.56
1:CA:1084:G:H21	1:CA:1102:A:H62	1.54	0.56
1:CA:540:G:H2'	1:CA:541:G:O4'	2.06	0.56
1:CA:966:G:H8	1:CA:966:G:OP2	1.88	0.56
3:CC:125:GLU:HG3	3:CC:189:ALA:HB1	1.88	0.56
1:CA:1222:G:H5''	19:CS:78:ARG:HE	1.70	0.56
23:DA:1865:G:H5'	23:DA:1866:C:OP2	2.06	0.56
23:DA:2492:U:H2'	23:DA:2493:U:C6	2.40	0.56
23:DA:751:A:H5'	40:DW:90:ARG:HA	1.86	0.56
29:DH:144:VAL:O	29:DH:148:ILE:HG12	2.05	0.56
36:DS:15:ARG:O	36:DS:19:LYS:HG2	2.06	0.56
36:DS:99:LYS:HE2	36:DS:103:GLU:OE2	2.06	0.56
2:AB:51:LEU:O	2:AB:55:PHE:HD2	1.89	0.56
3:AC:11:ARG:NE	3:AC:180:ALA:HB3	2.20	0.56
7:AG:139:GLU:HB3	7:AG:143:ARG:CZ	2.34	0.56
19:AS:36:ARG:HB2	19:AS:72:GLY:HA3	1.87	0.56
23:BA:546:C:H6	23:BA:547:A:H5'	1.70	0.56
25:BD:118:VAL:N	25:BD:129:ASN:ND2	2.53	0.56
24:BB:8:U:O3'	36:BS:25:ARG:NH2	2.39	0.56
1:CA:1388:C:H2'	1:CA:1389:C:C6	2.40	0.56
1:CA:1492:A:H2'	1:CA:1492:A:N3	2.21	0.56
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.06	0.56
1:CA:631:G:H2'	1:CA:632:A:C8	2.41	0.56
2:CB:82:ARG:HG2	2:CB:92:TYR:OH	2.05	0.56
46:D2:13:ALA:HA	46:D2:16:LEU:HD12	1.88	0.56
23:DA:1635:G:OP1	56:DA:3959:HOH:O	2.18	0.56
23:DA:275:G:C2'	23:DA:276:A:H5'	2.36	0.56
26:DE:174:ASP:OD2	26:DE:175:VAL:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DZ:151:HIS:HD2	43:DZ:168:GLU:O	1.89	0.56
1:AA:999:C:H2'	1:AA:1000:U:H6	1.70	0.55
1:AA:1441:G:N2	1:AA:1459:C:H5	2.02	0.55
1:AA:684:A:H2'	1:AA:685:G:C8	2.41	0.55
23:BA:2298:A:N6	23:BA:2318:G:H8	2.02	0.55
23:BA:2591:C:OP2	25:BD:239:ARG:HB3	2.06	0.55
23:BA:2690:C:OP2	35:BR:14:SER:HB3	2.06	0.55
1:CA:1033:G:C8	1:CA:1034:G:C8	2.94	0.55
1:CA:1254:C:N3	1:CA:1283:G:N2	2.54	0.55
1:CA:189(F):U:O2	17:CQ:63:ARG:NH2	2.38	0.55
1:CA:434:U:H2'	1:CA:435:C:H6	1.69	0.55
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.10	0.55
7:CG:113:GLU:HG3	7:CG:119:ARG:HG3	1.88	0.55
22:CX:76:GLY:O	22:CX:80:LYS:HG2	2.05	0.55
32:DO:73:ASP:OD1	37:DT:32:TYR:OH	2.07	0.55
1:AA:1037:C:H2'	1:AA:1038:C:H6	1.70	0.55
1:AA:1459:C:C5'	1:AA:1460:A:OP2	2.54	0.55
1:AA:626:U:H2'	1:AA:627:G:H8	1.72	0.55
1:AA:833:U:H2'	1:AA:834:C:H6	1.70	0.55
5:AE:110:LEU:HD13	5:AE:118:ILE:HG21	1.88	0.55
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.39	0.55
3:AC:23:TYR:CG	10:AJ:10:GLY:HA2	2.42	0.55
23:BA:1050:A:C4	23:BA:1051:G:C8	2.95	0.55
23:BA:1357:U:OP2	56:BA:4686:HOH:O	2.18	0.55
24:BB:20:C:C2'	24:BB:21:G:H5'	2.36	0.55
28:BG:86:MET:O	28:BG:88:ILE:HG13	2.06	0.55
3:CC:154:SER:O	3:CC:196:LEU:HD13	2.07	0.55
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.21	0.55
7:CG:71:PRO:HG3	7:CG:103:TRP:CZ3	2.42	0.55
23:DA:1364:G:C8	45:D1:3:LYS:HD3	2.41	0.55
23:DA:2845:G:O2'	23:DA:2846:G:H5'	2.06	0.55
24:DB:66:A:N6	24:DB:109:C:H5'	2.19	0.55
26:DE:52:LEU:HB3	26:DE:76:ARG:HG2	1.89	0.55
43:DZ:52:SER:OG	43:DZ:53:ILE:N	2.39	0.55
1:AA:68:G:H22	1:AA:101:A:H2	1.54	0.55
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.06	0.55
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.35	0.55
1:AA:1442(A):G:C5	1:AA:1442(B):A:C2	2.94	0.55
1:AA:344:A:H4'	1:AA:345:C:OP2	2.06	0.55
1:AA:434:U:H2'	1:AA:435:C:H6	1.70	0.55
2:AB:97:TRP:CZ3	2:AB:99:GLY:HA2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:63:THR:H	19:AS:66:MET:CG	2.20	0.55
35:BR:117:VAL:HG12	35:BR:118:GLU:H	1.71	0.55
37:BT:106:SER:O	37:BT:110:ILE:HG12	2.06	0.55
1:CA:1060:C:O3'	10:CJ:59:SER:OG	2.15	0.55
1:CA:266:G:H5''	1:CA:267:C:C5	2.41	0.55
1:CA:428:G:H4'	1:CA:429:U:O5'	2.06	0.55
1:CA:553:A:H2'	1:CA:554:C:C6	2.41	0.55
1:CA:997:U:O4	1:CA:1044:A:N1	2.39	0.55
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	1.87	0.55
20:CT:90:GLN:O	20:CT:93:GLU:HB3	2.06	0.55
23:DA:1366:A:OP1	45:D1:3:LYS:NZ	2.38	0.55
23:DA:1019:U:H3	23:DA:1142(A):A:N6	1.99	0.55
23:DA:2014:A:OP1	56:DA:3657:HOH:O	2.18	0.55
23:DA:364:C:OP2	56:DA:4247:HOH:O	2.18	0.55
1:AA:1305:G:N1	1:AA:1331:G:O2'	2.32	0.55
1:AA:583:A:H2'	1:AA:584:G:O4'	2.06	0.55
1:AA:745:C:H2'	1:AA:746:A:C8	2.40	0.55
1:AA:806:C:H2'	1:AA:807:A:H8	1.70	0.55
6:AF:67:MET:HE1	6:AF:75:LEU:HD13	1.87	0.55
10:AJ:43:ARG:O	10:AJ:67:THR:HG23	2.06	0.55
13:AM:91:ARG:HB2	13:AM:98:VAL:HG22	1.87	0.55
45:B1:94:LEU:O	45:B1:97:LEU:HB2	2.06	0.55
23:BA:2096:U:H3	23:BA:2193:G:H1	1.54	0.55
23:BA:652(S):C:H2'	23:BA:652(T):C:O4'	2.06	0.55
23:BA:2562:U:H1'	32:BO:23:ARG:HD3	1.87	0.55
33:BP:50:ARG:HD3	52:B8:7:HIS:CD2	2.41	0.55
37:BT:20:PRO:HG2	37:BT:86:ILE:O	2.05	0.55
42:BY:15:VAL:HG21	42:BY:42:VAL:HG11	1.89	0.55
1:CA:616:G:C2	1:CA:617:G:C8	2.95	0.55
1:CA:615:C:H2'	1:CA:616:G:C8	2.42	0.55
1:CA:626:U:H2'	1:CA:627:G:H8	1.72	0.55
1:CA:97:G:O2'	1:CA:98:G:H8	1.90	0.55
6:CF:55:ASP:HB3	6:CF:86:ARG:HH12	1.72	0.55
23:DA:1632:A:N6	56:DA:3946:HOH:O	2.40	0.55
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.06	0.55
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.07	0.55
1:AA:957:U:N3	1:AA:960:U:OP2	2.39	0.55
2:AB:178:ARG:HH22	8:AH:68:ARG:HH22	1.54	0.55
23:BA:1018:C:O2'	23:BA:1019:U:H5'	2.07	0.55
23:BA:1509(A):A:H3'	23:BA:1509(B):A:H8	1.71	0.55
23:BA:511:U:C5	23:BA:512:G:C5	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:536:A:H2'	23:BA:537:C:C6	2.40	0.55
1:CA:946:A:N6	1:CA:1235:U:H3	2.03	0.55
1:CA:17:U:H2'	1:CA:18:C:C6	2.41	0.55
1:CA:575:G:OP1	1:CA:575:G:H4'	2.06	0.55
2:CB:137:ARG:NH1	2:CB:137:ARG:HB2	2.20	0.55
3:CC:118:GLN:HA	3:CC:121:ALA:HB3	1.87	0.55
3:CC:11:ARG:HB3	3:CC:15:THR:HB	1.88	0.55
3:CC:172:ARG:HH21	3:CC:174:PRO:HG3	1.71	0.55
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.07	0.55
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.87	0.55
23:DA:1833:U:H2'	23:DA:1834:U:C6	2.41	0.55
23:DA:27:G:HO2'	23:DA:28:A:P	2.27	0.55
23:DA:652(S):C:H2'	23:DA:652(T):C:O4'	2.05	0.55
1:AA:1276:G:N2	1:AA:1283:G:O4'	2.39	0.55
1:AA:1452:C:O2'	1:AA:1456:G:OP2	2.20	0.55
1:AA:865:A:H2'	1:AA:866:C:C6	2.42	0.55
2:AB:55:PHE:CD1	2:AB:58:ILE:HD12	2.41	0.55
2:AB:80:ILE:HG13	2:AB:215:LEU:HD12	1.89	0.55
23:BA:1419:A:O2'	23:BA:1421:G:N7	2.32	0.55
23:BA:1889:A:H2'	23:BA:1890:A:C8	2.41	0.55
23:BA:443:A:N7	27:BF:45:ARG:HG2	2.21	0.55
23:BA:674:G:C1'	27:BF:74:ARG:HD3	2.37	0.55
2:CB:187:LEU:HD23	2:CB:201:ILE:HB	1.87	0.55
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.89	0.55
48:D4:14:ILE:HD11	48:D4:24:THR:OG1	2.06	0.55
23:DA:1509(B):A:H3'	23:DA:1510:G:H8	1.72	0.55
23:DA:922:U:O4	56:DA:4224:HOH:O	2.16	0.55
28:DG:59:GLU:O	28:DG:63:ILE:N	2.40	0.55
1:AA:1002:G:C2'	1:AA:1003:G:H5'	2.35	0.55
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.07	0.55
1:AA:55:A:C5	1:AA:56:U:C5	2.95	0.55
1:AA:575:G:OP1	1:AA:575:G:H4'	2.07	0.55
20:AT:16:HIS:O	20:AT:19:SER:OG	2.21	0.55
46:B2:50:ILE:C	46:B2:52:ASP:H	2.07	0.55
23:BA:2732:G:H3'	23:BA:2733:A:O4'	2.07	0.55
30:BI:74:ASN:HD22	30:BI:75:LEU:HD13	1.70	0.55
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.06	0.55
1:CA:223:U:H2'	1:CA:224:C:C6	2.41	0.55
1:CA:277:C:H5''	17:CQ:68:ARG:NH2	2.22	0.55
23:DA:2463:C:C2'	23:DA:2464:C:H5'	2.37	0.55
24:DB:52:A:O2'	24:DB:53:A:H5''	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DN:99:LEU:HD22	31:DN:103:VAL:HG23	1.89	0.55
34:DQ:42:ILE:HD13	34:DQ:97:VAL:HG21	1.89	0.55
37:DT:23:ARG:HG3	37:DT:120:ARG:NH1	2.22	0.55
3:AC:42:LEU:O	3:AC:46:GLU:HB2	2.06	0.55
13:AM:3:ARG:NH2	13:AM:10:PRO:O	2.29	0.55
23:BA:71:A:H2	41:BX:31:HIS:CE1	2.24	0.55
30:BI:81:VAL:O	30:BI:146:ALA:HA	2.06	0.55
23:BA:548:A:N6	39:BV:19:LYS:H	2.04	0.55
1:CA:920:U:C2	1:CA:921:U:C5	2.95	0.55
1:CA:999:C:H2'	1:CA:1000:U:C6	2.41	0.55
3:CC:2:GLY:N	56:CC:301:HOH:O	2.40	0.55
23:DA:196:A:O4'	33:DP:46:LYS:HE2	2.07	0.55
25:DD:175:LEU:HD12	25:DD:185:VAL:HG21	1.89	0.55
27:DF:123:LEU:HD13	27:DF:192:LEU:HD13	1.88	0.55
27:DF:65:TRP:HH2	27:DF:72:ARG:HH21	1.55	0.55
24:DB:55:U:O3'	28:DG:27:ASN:ND2	2.40	0.55
33:DP:112:LEU:HD22	33:DP:113:LYS:N	2.22	0.55
35:DR:12:ARG:HG2	35:DR:16:HIS:CG	2.42	0.55
23:DA:2319:G:H22	36:DS:3:ARG:HD2	1.71	0.55
38:DU:59:ARG:O	38:DU:63:VAL:HG23	2.07	0.55
1:AA:1065:U:H6	1:AA:1190:G:N2	2.01	0.55
7:AG:9:VAL:HG21	7:AG:94:ARG:HE	1.71	0.55
14:AN:37:PHE:CE1	14:AN:53:LEU:HD13	2.41	0.55
23:BA:2629:A:O2'	23:BA:2630:G:OP2	2.17	0.55
23:BA:272:G:N7	23:BA:421:U:H2'	2.22	0.55
33:BP:38:GLN:O	33:BP:40:SER:N	2.40	0.55
36:BS:49:VAL:HG13	36:BS:76:LYS:HD2	1.89	0.55
40:BW:18:ARG:NH1	40:BW:76:VAL:O	2.39	0.55
1:CA:978:A:H5''	1:CA:979:C:OP2	2.06	0.55
3:CC:152:ILE:HD12	3:CC:199:LYS:HB2	1.88	0.55
1:CA:932:C:C5'	7:CG:3:ARG:HD3	2.37	0.55
7:CG:75:VAL:HA	7:CG:87:VAL:O	2.07	0.55
1:CA:1189:C:P	10:CJ:51:ARG:HH22	2.30	0.55
17:CQ:40:LYS:HD3	17:CQ:42:TYR:CZ	2.42	0.55
17:CQ:4:LYS:HD2	17:CQ:5:VAL:H	1.71	0.55
23:DA:1419:A:O2'	23:DA:1421:G:N7	2.29	0.55
37:DT:109:GLU:O	37:DT:113:LYS:N	2.35	0.55
42:DY:43:ASN:OD1	42:DY:65:ALA:HB3	2.07	0.55
1:AA:737:A:H2'	1:AA:738:C:C6	2.41	0.55
3:AC:191:THR:O	3:AC:194:GLY:N	2.36	0.55
11:AK:21:ILE:HB	11:AK:84:VAL:HG22	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:48:GLU:HB2	17:AQ:50:LYS:HG2	1.88	0.55
23:BA:2753:A:N3	53:B9:15:LYS:NZ	2.54	0.55
23:BA:1406:U:H2'	23:BA:1407:C:C6	2.42	0.55
23:BA:1858:G:H1'	23:BA:1884:A:N6	2.22	0.55
23:BA:885:C:N4	23:BA:890:A:C5	2.71	0.55
25:BD:274:ARG:HA	25:BD:275:LYS:HB3	1.88	0.55
26:BE:52:LEU:HB3	26:BE:76:ARG:HG2	1.88	0.55
28:BG:60:LEU:HD23	28:BG:63:ILE:HD12	1.89	0.55
23:BA:1279:G:H4'	35:BR:31:HIS:CD2	2.42	0.55
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.07	0.55
1:CA:678:U:H2'	1:CA:679:C:C6	2.41	0.55
5:CE:76:ILE:HG22	5:CE:93:PRO:HB3	1.89	0.55
10:CJ:48:THR:HA	10:CJ:62:HIS:HA	1.89	0.55
1:CA:537:G:H5''	12:CL:113:ARG:NH1	2.21	0.55
23:DA:517:C:OP1	49:D5:16:ARG:NH2	2.40	0.55
23:DA:1300:U:H4'	23:DA:1301:A:C5'	2.36	0.55
23:DA:1494:A:H2'	23:DA:1495:A:H8	1.70	0.55
23:DA:2463:C:O2'	23:DA:2464:C:H5'	2.07	0.55
23:DA:2699:C:H2'	23:DA:2700:C:O4'	2.06	0.55
1:AA:542:G:H2'	1:AA:543:C:C6	2.42	0.54
1:AA:598:U:H2'	1:AA:599:C:C6	2.42	0.54
1:AA:918:A:H2'	1:AA:919:A:C8	2.42	0.54
2:AB:218:ALA:O	2:AB:222:ILE:HG13	2.07	0.54
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.41	0.54
7:AG:35:LYS:HD2	7:AG:38:LEU:HD22	1.88	0.54
45:B1:23:LYS:HB3	45:B1:29:GLY:HA3	1.89	0.54
48:B4:18:CYS:SG	48:B4:39:CYS:HB3	2.47	0.54
23:BA:2110:G:OP2	23:BA:2110:G:H8	1.89	0.54
23:BA:2577:A:OP1	56:BA:4599:HOH:O	2.18	0.54
23:BA:275:G:C2'	23:BA:276:A:H5'	2.37	0.54
23:BA:530:G:N1	56:BA:4475:HOH:O	2.16	0.54
27:BF:46:ARG:HG2	27:BF:46:ARG:HH11	1.72	0.54
30:BI:21:VAL:HG23	30:BI:22:LYS:O	2.07	0.54
1:CA:1002:G:N2	1:CA:1039:C:H1'	2.19	0.54
1:CA:668:G:O2'	15:CO:46:HIS:HB3	2.07	0.54
1:CA:840:C:H4'	1:CA:841:U:OP1	2.06	0.54
17:CQ:22:LEU:HD11	17:CQ:39:SER:HB3	1.89	0.54
18:CR:36:ASN:HD22	18:CR:36:ASN:C	2.10	0.54
23:DA:1019:U:O2'	23:DA:1021:A:H2	1.90	0.54
23:DA:271(D):G:H2'	23:DA:271(E):U:O4'	2.07	0.54
23:DA:2867:G:OP2	37:DT:119:LYS:NZ	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:530:G:O4'	23:DA:530:G:N3	2.40	0.54
1:AA:1142:G:C5	1:AA:1143:G:H1'	2.42	0.54
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.11	0.54
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.71	0.54
31:BN:15:LEU:HD12	31:BN:137:LYS:HG2	1.90	0.54
34:BQ:43:THR:N	34:BQ:46:GLN:OE1	2.40	0.54
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.08	0.54
1:CA:1459:C:C4	1:CA:1460:A:N6	2.75	0.54
1:CA:21:G:H2'	1:CA:22:G:C8	2.42	0.54
2:CB:95:GLN:HG3	2:CB:147:LYS:HD3	1.89	0.54
23:DA:1912:A:O2'	23:DA:1913:A:OP2	2.25	0.54
23:DA:652(B):A:H2'	23:DA:652(B):A:N3	2.22	0.54
27:DF:28:ILE:HD13	27:DF:119:ARG:HE	1.71	0.54
28:DG:178:PHE:HB3	28:DG:180:PHE:CE1	2.43	0.54
28:DG:38:VAL:HG22	28:DG:93:THR:HG23	1.89	0.54
30:DI:12:LEU:HD22	30:DI:19:VAL:HG21	1.89	0.54
37:DT:53:ARG:HB3	37:DT:53:ARG:HH11	1.71	0.54
1:AA:1090:U:H3	1:AA:1095:U:H3	1.56	0.54
1:AA:951:G:C6	1:AA:1231:G:C6	2.96	0.54
1:AA:192:U:H2'	1:AA:193:C:C6	2.39	0.54
1:AA:615:C:H2'	1:AA:616:G:C8	2.42	0.54
2:AB:77:ALA:HB2	2:AB:211:ILE:HG12	1.88	0.54
6:AF:91:VAL:HG12	6:AF:92:LYS:O	2.07	0.54
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.07	0.54
44:B0:55:ARG:CZ	44:B0:55:ARG:HB3	2.37	0.54
26:BE:32:PRO:HA	26:BE:90:THR:HG22	1.89	0.54
23:BA:2880:C:O3'	35:BR:90:ARG:NH1	2.40	0.54
23:BA:2319:G:C2	36:BS:3:ARG:HA	2.42	0.54
38:BU:58:ARG:HA	38:BU:61:TRP:CE3	2.43	0.54
1:CA:1127:G:H5'	9:CI:66:ARG:HH22	1.72	0.54
1:CA:148:G:O2'	1:CA:149:A:H5'	2.08	0.54
3:CC:122:GLU:HA	3:CC:125:GLU:HB2	1.88	0.54
1:CA:429:U:H3'	4:CD:22:LYS:NZ	2.22	0.54
9:CI:17:VAL:HG21	9:CI:80:GLY:HA3	1.89	0.54
23:DA:2884:U:O2	49:D5:53:ALA:HB2	2.08	0.54
23:DA:2753:A:N3	53:D9:15:LYS:NZ	2.55	0.54
28:DG:37:VAL:HG23	28:DG:99:MET:HG3	1.88	0.54
33:DP:38:GLN:O	33:DP:40:SER:N	2.40	0.54
41:DX:5:TYR:CZ	46:D2:30:ARG:HB2	2.42	0.54
1:AA:944:G:N2	1:AA:1338:G:C8	2.75	0.54
1:AA:977:A:H2'	1:AA:978:A:H5'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:51:LEU:HD23	2:AB:55:PHE:HE2	1.73	0.54
13:AM:20:THR:HG23	13:AM:26:GLY:HA2	1.89	0.54
14:AN:24:CYS:SG	14:AN:25:VAL:N	2.80	0.54
1:AA:753:A:OP1	15:AO:69:TYR:OH	2.24	0.54
23:BA:271(M):G:O2'	23:BA:271(N):U:OP1	2.16	0.54
36:BS:67:ARG:HG2	36:BS:71:ARG:NH2	2.23	0.54
37:BT:51:ARG:HG3	37:BT:98:LYS:HE3	1.89	0.54
23:DA:2526:G:H5'	23:DA:2742:C:O2'	2.08	0.54
23:DA:2836:U:C4	23:DA:2883:A:N6	2.76	0.54
23:DA:997:G:OP1	38:DU:92:ARG:HG2	2.07	0.54
26:DE:72:VAL:HA	26:DE:73:GLU:OE2	2.08	0.54
1:AA:1025:U:O2	1:AA:1036:G:C6	2.61	0.54
1:AA:1333:A:H3'	1:AA:1334:G:C8	2.40	0.54
1:AA:407:G:H1	1:AA:435:C:H42	1.55	0.54
1:AA:749:C:H2'	1:AA:750:G:H8	1.72	0.54
1:AA:1239:A:O2'	7:AG:114:ARG:HB2	2.07	0.54
23:BA:2307:G:H5'	23:BA:2308:G:N2	2.21	0.54
23:BA:2492:U:H2'	23:BA:2493:U:H6	1.73	0.54
23:BA:630:G:N2	23:BA:633:A:OP2	2.38	0.54
28:BG:116:ASP:H	28:BG:136:ARG:HH22	1.54	0.54
1:CA:1030(A):G:H2'	1:CA:1030(C):G:OP2	2.08	0.54
1:CA:1242:C:O2'	1:CA:1303:C:H5''	2.08	0.54
1:CA:1490:C:H2'	1:CA:1491:G:O4'	2.07	0.54
1:CA:160:A:H2'	1:CA:161:A:O4'	2.07	0.54
2:CB:80:ILE:HD11	2:CB:215:LEU:HB2	1.88	0.54
2:CB:71:VAL:O	2:CB:165:VAL:HG23	2.07	0.54
7:CG:23:VAL:HG22	7:CG:43:PHE:HE2	1.71	0.54
23:DA:1028:A:N6	23:DA:1125:G:H2'	2.22	0.54
23:DA:185:U:H4'	23:DA:218:A:H4'	1.90	0.54
23:DA:446:G:OP2	56:DA:4028:HOH:O	2.19	0.54
31:DN:56:ASN:H	31:DN:125:GLY:HA3	1.72	0.54
1:AA:1261:A:H61	1:AA:1274:G:C2'	2.21	0.54
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.43	0.54
1:AA:154:C:H42	1:AA:167:G:H1	1.55	0.54
1:AA:509:A:H5''	4:AD:55:ALA:HB2	1.88	0.54
2:AB:137:ARG:HB2	2:AB:137:ARG:NH1	2.21	0.54
4:AD:174:LEU:HD23	4:AD:185:PHE:HA	1.89	0.54
17:AQ:65:ILE:HD12	17:AQ:65:ILE:H	1.73	0.54
23:BA:1019:U:O2'	23:BA:1021:A:H2	1.91	0.54
23:BA:1833:U:O2'	23:BA:1969:A:N1	2.29	0.54
23:BA:2463:C:C2'	23:BA:2464:C:H5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:92:VAL:HG13	30:BI:120:ILE:HB	1.90	0.54
1:CA:1298:C:H5''	1:CA:1299:A:C8	2.43	0.54
1:CA:7:G:H21	5:CE:121:LYS:HG2	1.73	0.54
1:CA:826:C:H2'	1:CA:827:U:C6	2.42	0.54
3:CC:186:PHE:HE1	3:CC:197:GLY:HA2	1.71	0.54
4:CD:18:LYS:HA	4:CD:33:MET:HG3	1.90	0.54
1:CA:392:G:H5'	16:CP:13:HIS:CE1	2.42	0.54
17:CQ:92:ARG:O	17:CQ:95:TYR:HB2	2.07	0.54
44:D0:27:GLU:HG3	44:D0:68:GLU:HA	1.90	0.54
47:D3:18:ASP:N	47:D3:18:ASP:OD1	2.35	0.54
23:DA:2357:U:O2	56:DA:4163:HOH:O	2.18	0.54
23:DA:2850:A:C2	23:DA:2851:A:C4	2.96	0.54
23:DA:315:G:H2'	23:DA:316:C:C6	2.43	0.54
24:DB:61:G:C6	24:DB:62:C:C4	2.95	0.54
1:AA:539:A:H2'	1:AA:540:G:C8	2.43	0.54
1:AA:37:U:O2'	1:AA:547:A:N1	2.30	0.54
1:AA:945:G:H2'	1:AA:945:G:N3	2.22	0.54
3:AC:23:TYR:CD2	10:AJ:95:GLU:HB2	2.43	0.54
9:AI:9:ARG:HG2	9:AI:104:ARG:HE	1.72	0.54
46:B2:51:ARG:O	46:B2:55:ARG:HB2	2.06	0.54
23:BA:1912:A:O2'	23:BA:1913:A:OP2	2.25	0.54
23:BA:493:G:O6	56:BA:4858:HOH:O	2.18	0.54
26:BE:112:GLY:O	26:BE:159:HIS:HA	2.08	0.54
35:BR:103:ARG:HH12	35:BR:110:PRO:HD3	1.72	0.54
1:CA:65:U:H2'	1:CA:381:C:H5	1.73	0.54
3:CC:181:ASN:ND2	3:CC:204:LEU:O	2.41	0.54
7:CG:18:TYR:CE1	7:CG:58:PRO:HB2	2.43	0.54
23:DA:1507:A:O2'	23:DA:1508:A:O5'	2.17	0.54
24:DB:105:A:OP1	43:DZ:72:ARG:NH1	2.38	0.54
29:DH:69:ARG:HG3	29:DH:70:THR:N	2.23	0.54
1:AA:157:G:H1	1:AA:164:U:H3	1.56	0.54
1:AA:407:G:O6	1:AA:435:C:N4	2.41	0.54
1:AA:631:G:H2'	1:AA:632:A:C8	2.42	0.54
1:AA:1255:G:H5''	3:AC:26:LYS:NZ	2.22	0.54
5:AE:76:ILE:HG22	5:AE:93:PRO:HB3	1.90	0.54
16:AP:72:ARG:HG2	16:AP:73:LEU:HD23	1.90	0.54
18:AR:36:ASN:C	18:AR:36:ASN:HD22	2.10	0.54
47:B3:7:LYS:HG3	47:B3:34:GLU:HG2	1.90	0.54
23:BA:141:A:H8	23:BA:1408:C:HO2'	1.48	0.54
23:BA:1534:U:H3'	23:BA:1535:A:N1	2.23	0.54
23:BA:1774:C:H6	23:BA:1774:C:O5'	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1693:U:O2'	25:BD:14:ARG:NH2	2.40	0.54
27:BF:126:VAL:HG21	27:BF:129:PHE:CE1	2.43	0.54
42:BY:92:ASN:N	42:BY:93:GLY:HA2	2.22	0.54
1:CA:1250:A:H2	1:CA:1370:G:H1'	1.73	0.54
1:CA:1443:G:H1	1:CA:1459:C:C2'	2.20	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:605:U:H2'	1:CA:606:G:H8	1.72	0.54
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.07	0.54
23:DA:2116:G:H4'	23:DA:2117:A:OP1	2.08	0.54
23:DA:2849:U:H4'	23:DA:2868:A:C2	2.43	0.54
23:DA:903:C:H2'	23:DA:904:C:C6	2.43	0.54
27:DF:11:VAL:O	27:DF:17:ARG:HA	2.08	0.54
1:AA:1368:G:OP2	9:AI:112:LYS:HG2	2.07	0.54
1:AA:380:G:N2	1:AA:384:G:C5	2.76	0.54
1:AA:390:C:H2'	1:AA:391:G:C8	2.43	0.54
2:AB:87:ARG:HH11	2:AB:219:VAL:HG12	1.72	0.54
3:AC:34:LEU:HD13	14:AN:25:VAL:HG11	1.89	0.54
20:AT:73:HIS:HB3	20:AT:74:LYS:HG2	1.89	0.54
23:BA:1485:G:H1	23:BA:1504:C:H42	1.56	0.54
37:BT:109:GLU:O	37:BT:113:LYS:N	2.36	0.54
43:BZ:52:SER:OG	43:BZ:53:ILE:N	2.41	0.54
1:CA:1181:G:N2	1:CA:1182:G:H22	2.06	0.54
1:CA:1266:G:H8	1:CA:1266:G:OP2	1.90	0.54
1:CA:1260:C:OP1	1:CA:1284:C:H4'	2.08	0.54
1:CA:922:G:N3	1:CA:1398:A:H2	2.06	0.54
4:CD:173:TRP:CD2	4:CD:189:PRO:HG3	2.43	0.54
45:D1:2:SER:HB3	45:D1:46:LEU:HD11	1.90	0.54
51:D7:9:ARG:HH21	51:D7:47:ARG:HD3	1.73	0.54
23:DA:1321:A:H2'	23:DA:1322:A:O4'	2.08	0.54
23:DA:603:A:H4'	23:DA:604:G:H5'	1.89	0.54
23:DA:878:A:H2'	23:DA:879:G:H5'	1.90	0.54
23:DA:2562:U:H1'	32:DO:23:ARG:HD3	1.90	0.54
39:DV:78:LYS:O	56:DV:202:HOH:O	2.18	0.54
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.27	0.54
1:AA:1118:C:O4'	1:AA:1179:A:C4	2.60	0.54
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.90	0.54
1:AA:964:A:H5''	1:AA:1198:G:O3'	2.08	0.54
5:AE:127:ASN:O	5:AE:131:ILE:HG12	2.08	0.54
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.72	0.54
48:B4:36:CYS:N	48:B4:39:CYS:SG	2.76	0.54
23:BA:1050:A:H2'	23:BA:1051:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1173:G:O2'	23:BA:1174:A:O5'	2.26	0.54
23:BA:1586:A:H8	23:BA:1586:A:O5'	1.90	0.54
23:BA:1815:A:OP2	25:BD:54:ARG:NH2	2.41	0.54
23:BA:975(A):G:H1'	23:BA:990:A:C2	2.43	0.54
23:BA:322:A:OP1	27:BF:168:ARG:NH1	2.41	0.54
27:BF:11:VAL:O	27:BF:17:ARG:HA	2.08	0.54
27:BF:64:ILE:HD12	27:BF:65:TRP:CE3	2.42	0.54
28:BG:44:GLY:HA2	28:BG:88:ILE:HG22	1.90	0.54
1:CA:1076:C:H42	1:CA:1081:G:H1	1.56	0.54
1:CA:1157:A:C2	1:CA:1180:A:H2'	2.43	0.54
1:CA:1507:A:O3'	56:CA:2020:HOH:O	2.18	0.54
1:CA:60:A:H4'	1:CA:61:G:O5'	2.08	0.54
2:CB:24:TRP:HZ3	2:CB:29:ALA:HB2	1.73	0.54
3:CC:43:LEU:O	3:CC:47:LEU:HB2	2.08	0.54
9:CI:70:LYS:HA	9:CI:73:GLN:HB2	1.90	0.54
1:CA:393:A:OP2	16:CP:12:LYS:HD2	2.08	0.54
23:DA:2461:C:H2'	23:DA:2462:U:C6	2.43	0.54
23:DA:307:G:N2	23:DA:309:G:H3'	2.23	0.54
23:DA:828:U:H4'	23:DA:831:G:N1	2.23	0.54
3:AC:7:PRO:HB3	3:AC:175:LEU:HD21	1.90	0.53
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.91	0.53
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.08	0.53
20:AT:26:ASN:OD1	20:AT:71:THR:HG23	2.08	0.53
23:BA:1364:G:C8	45:B1:3:LYS:HD3	2.43	0.53
23:BA:1427:A:H4'	23:BA:1428:C:O5'	2.06	0.53
23:BA:1812:A:O2'	25:BD:45:ASN:N	2.40	0.53
23:BA:1948:G:O6	56:BA:4989:HOH:O	2.18	0.53
23:BA:2513:G:N2	26:BE:143:ASN:HD21	2.06	0.53
31:BN:56:ASN:H	31:BN:125:GLY:HA3	1.73	0.53
36:BS:10:ARG:NH2	36:BS:91:PRO:HB2	2.23	0.53
1:CA:15:G:H8	1:CA:1396:A:HO2'	1.56	0.53
1:CA:279:A:C5	17:CQ:98:LEU:HD23	2.42	0.53
3:CC:30:ARG:HG3	3:CC:31:HIS:CD2	2.43	0.53
9:CI:29:ASN:H	9:CI:63:ILE:HG22	1.73	0.53
13:CM:19:LEU:HA	13:CM:22:ILE:HD12	1.89	0.53
23:DA:911:A:H2'	34:DQ:9:TYR:OH	2.08	0.53
23:DA:9:U:H3	23:DA:2629:A:H2	1.52	0.53
25:DD:148:GLU:HB2	25:DD:151:LYS:HD2	1.90	0.53
28:DG:124:SER:HB2	28:DG:131:TYR:CZ	2.43	0.53
30:DI:101:LEU:HD21	30:DI:107:VAL:HG12	1.90	0.53
35:DR:36:THR:HG22	35:DR:37:THR:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1269:A:C8	1:AA:1270:C:H1'	2.43	0.53
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.08	0.53
3:AC:40:ARG:HE	3:AC:55:VAL:HB	1.73	0.53
12:AL:70:ILE:HG12	12:AL:100:ILE:HD13	1.90	0.53
23:BA:445:C:OP1	38:BU:2:PRO:HA	2.08	0.53
23:BA:603:A:H4'	23:BA:604:G:H5'	1.90	0.53
1:CA:950:U:O4	1:CA:1231:G:O6	2.26	0.53
1:CA:1305:G:H2'	21:CU:4:GLY:O	2.08	0.53
1:CA:1304:G:N2	1:CA:1332:A:OP2	2.38	0.53
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.53
1:CA:35:G:H2'	1:CA:36:C:C6	2.43	0.53
5:CE:127:ASN:O	5:CE:131:ILE:HG12	2.09	0.53
7:CG:26:PHE:HZ	7:CG:105:VAL:HB	1.73	0.53
7:CG:113:GLU:HB2	7:CG:118:VAL:HB	1.90	0.53
7:CG:114:ARG:O	7:CG:119:ARG:NH1	2.36	0.53
8:CH:85:ARG:NE	8:CH:87:SER:O	2.41	0.53
15:CO:69:TYR:HA	15:CO:72:ARG:HD3	1.89	0.53
19:CS:46:GLY:HA2	19:CS:61:TYR:HE1	1.73	0.53
31:DN:120:LEU:HD22	31:DN:122:VAL:HG23	1.90	0.53
1:AA:1249:C:OP1	9:AI:36:TYR:OH	2.24	0.53
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.09	0.53
12:AL:32:PHE:HE1	12:AL:86:ARG:HG3	1.74	0.53
34:BQ:27:VAL:HG11	34:BQ:134:ARG:HG2	1.89	0.53
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.35	0.53
1:CA:262:A:H2'	1:CA:263:A:C8	2.43	0.53
1:CA:35:G:N2	1:CA:550:G:H1'	2.23	0.53
1:CA:598:U:H2'	1:CA:599:C:C6	2.43	0.53
23:DA:19:C:H2'	23:DA:20:C:C6	2.43	0.53
23:DA:649:G:H2'	23:DA:650:C:C6	2.43	0.53
23:DA:674:G:C1'	27:DF:74:ARG:HD3	2.38	0.53
30:DI:5:LEU:HD11	30:DI:19:VAL:HG22	1.90	0.53
23:DA:1140:C:OP1	31:DN:23:LEU:O	2.25	0.53
32:DO:10:VAL:HG13	32:DO:17:ARG:O	2.09	0.53
32:DO:73:ASP:OD2	32:DO:73:ASP:N	2.39	0.53
36:DS:99:LYS:O	36:DS:103:GLU:HG3	2.08	0.53
1:AA:262:A:C6	1:AA:263:A:C6	2.97	0.53
1:AA:447:G:H2'	1:AA:485:G:N2	2.23	0.53
7:AG:30:ILE:O	7:AG:32:ARG:NH1	2.41	0.53
23:BA:1929:G:OP1	56:BA:3707:HOH:O	2.18	0.53
23:BA:271(E):U:H3	23:BA:271(S):G:H1	1.57	0.53
23:BA:2884:U:O2	49:B5:53:ALA:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:201:THR:OG1	26:BE:202:LYS:N	2.41	0.53
27:BF:68:LYS:HB3	27:BF:69:HIS:ND1	2.23	0.53
1:CA:1192:C:H3'	1:CA:1192:C:H6	1.74	0.53
1:CA:157:G:H1	1:CA:164:U:H3	1.55	0.53
1:CA:447:G:H2'	1:CA:485:G:N2	2.22	0.53
3:CC:148:GLY:HA3	3:CC:172:ARG:H	1.73	0.53
1:CA:407:G:O2'	4:CD:116:GLN:HG3	2.09	0.53
6:CF:7:ASN:ND2	18:CR:34:TYR:HE1	2.05	0.53
23:DA:1026:U:H5''	23:DA:1026:U:O2	2.09	0.53
23:DA:1138:G:O2'	31:DN:105:GLY:HA3	2.08	0.53
23:DA:1252:G:C2	23:DA:1253:A:C2	2.96	0.53
23:DA:769:G:H5'	23:DA:1379:A:N6	2.23	0.53
23:DA:2602:A:H1'	23:DA:2603:G:C5'	2.39	0.53
23:DA:2732:G:H3'	23:DA:2733:A:O4'	2.07	0.53
23:DA:2741:A:H2'	23:DA:2742:C:O4'	2.08	0.53
23:DA:330:A:HO2'	23:DA:331:A:H8	1.55	0.53
23:DA:413:C:H6	23:DA:413:C:O5'	1.92	0.53
23:DA:71:A:C8	23:DA:71:A:H5'	2.44	0.53
23:DA:729:G:OP2	25:DD:13:ARG:NH1	2.40	0.53
26:DE:9:VAL:HG13	26:DE:25:VAL:O	2.09	0.53
31:DN:36:GLY:HA2	31:DN:38:HIS:CE1	2.43	0.53
33:DP:84:ASN:HB2	33:DP:86:LYS:HD3	1.90	0.53
23:DA:1279:G:H4'	35:DR:31:HIS:CD2	2.43	0.53
37:DT:64:ARG:HB2	37:DT:73:GLU:HG2	1.89	0.53
1:AA:951:G:N1	1:AA:1231:G:C5	2.77	0.53
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.73	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53
1:AA:350:G:O2'	1:AA:351:G:H5'	2.08	0.53
1:AA:77:G:O6	1:AA:78:G:C2	2.62	0.53
13:AM:23:TYR:CE1	13:AM:70:LEU:HB3	2.44	0.53
13:AM:67:GLU:HB3	13:AM:71:ARG:HH21	1.73	0.53
15:AO:4:THR:O	15:AO:8:LYS:N	2.35	0.53
23:BA:459:U:H4'	51:B7:40:TRP:CZ3	2.44	0.53
23:BA:2296:U:N3	23:BA:2333:A:N3	2.56	0.53
23:BA:994:C:OP2	38:BU:54:LYS:NZ	2.34	0.53
1:CA:407:G:H1	1:CA:435:C:H42	1.55	0.53
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.73	0.53
10:CJ:45:ARG:HB3	10:CJ:65:LEU:HB3	1.91	0.53
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.43	0.53
23:DA:1352:U:P	56:DA:3932:HOH:O	2.67	0.53
23:DA:2097:C:H2'	23:DA:2098:U:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2318:G:H22	36:DS:3:ARG:HH11	1.56	0.53
24:DB:2:C:H2'	24:DB:3:C:C6	2.42	0.53
42:DY:79:CYS:HB3	42:DY:81:LYS:H	1.73	0.53
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.74	0.53
1:AA:1441:G:C2	1:AA:1459:C:C5	2.97	0.53
1:AA:1490:C:H2'	1:AA:1491:G:O4'	2.09	0.53
1:AA:14:U:O4	56:AA:2012:HOH:O	2.18	0.53
1:AA:176:C:H2'	1:AA:177:C:C6	2.44	0.53
1:AA:542:G:H2'	1:AA:543:C:H6	1.73	0.53
1:AA:683:G:H2'	1:AA:684:A:H8	1.73	0.53
1:AA:969:A:H2'	1:AA:970:C:H5'	1.90	0.53
3:AC:56:ASP:HB3	3:AC:69:HIS:HE1	1.73	0.53
1:AA:826:C:H4'	8:AH:12:ARG:HD3	1.91	0.53
48:B4:40:HIS:CE1	48:B4:42:PHE:HB2	2.44	0.53
25:BD:101:GLU:OE1	25:BD:103:ARG:NH1	2.40	0.53
28:BG:145:THR:OG1	28:BG:146:TYR:N	2.40	0.53
1:CA:1457:G:C6	1:CA:1458:G:N7	2.76	0.53
1:CA:414:A:H2'	1:CA:415:A:C8	2.44	0.53
1:CA:1349:A:H5'	9:CI:120:ARG:HB3	1.90	0.53
3:CC:23:TYR:CE2	10:CJ:95:GLU:HB2	2.44	0.53
17:CQ:50:LYS:HD3	17:CQ:51:TYR:CE1	2.44	0.53
49:D5:41:PRO:O	49:D5:44:THR:OG1	2.27	0.53
23:DA:2133:G:H21	23:DA:2158:A:H62	1.55	0.53
23:DA:2513:G:N2	26:DE:143:ASN:HD21	2.07	0.53
23:DA:2638:G:P	26:DE:82:ARG:HH22	2.31	0.53
25:DD:131:LEU:HD22	25:DD:136:ILE:HG12	1.91	0.53
41:DX:35:THR:O	41:DX:39:ILE:HG13	2.08	0.53
1:AA:1095:U:P	1:AA:1108:G:H1	2.32	0.53
1:AA:1206:G:C6	1:AA:1207:G:C6	2.96	0.53
3:AC:68:VAL:HG12	3:AC:70:VAL:HG22	1.90	0.53
10:AJ:8:LEU:HA	10:AJ:95:GLU:O	2.09	0.53
23:BA:1040:C:H2'	23:BA:1041:C:C1'	2.39	0.53
23:BA:1914:C:H6	23:BA:1914:C:OP2	1.91	0.53
27:BF:116:ASP:OD1	27:BF:119:ARG:NH2	2.42	0.53
30:BI:98:ALA:O	30:BI:101:LEU:N	2.38	0.53
1:CA:323:U:O3'	20:CT:22:ARG:HD3	2.09	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.77	0.53
1:CA:611:A:H61	1:CA:629:G:H1	1.55	0.53
1:CA:646:U:H2'	1:CA:647:C:H6	1.74	0.53
1:CA:738:C:H2'	1:CA:739:C:H6	1.73	0.53
1:CA:581:G:N2	1:CA:760:G:N7	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:112:SER:O	3:CC:112:SER:OG	2.25	0.53
5:CE:69:VAL:O	5:CE:71:LEU:N	2.41	0.53
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.12	0.53
13:CM:87:TYR:HB2	19:CS:73:GLU:HA	1.90	0.53
23:DA:1587:A:H2'	23:DA:1588:C:H6	1.74	0.53
23:DA:1858:G:H1'	23:DA:1884:A:H61	1.72	0.53
23:DA:566:U:H5''	33:DP:29:LYS:HE3	1.89	0.53
23:DA:71:A:OP2	23:DA:71:A:H3'	2.09	0.53
28:DG:105:LYS:NZ	48:D4:26:SER:HB2	2.24	0.53
35:DR:55:ALA:HB2	35:DR:79:LEU:HD13	1.90	0.53
43:DZ:152:ALA:HA	43:DZ:155:LEU:HD13	1.89	0.53
1:AA:1457:G:C6	1:AA:1458:G:C5	2.96	0.53
1:AA:345:C:H4'	1:AA:346:G:C4	2.44	0.53
13:AM:23:TYR:CD1	13:AM:67:GLU:HG2	2.39	0.53
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.09	0.53
23:BA:2104:G:O6	23:BA:2185:C:N3	2.41	0.53
23:BA:2320:A:H2'	23:BA:2320:A:N3	2.23	0.53
23:BA:2849:U:H4'	23:BA:2868:A:C2	2.43	0.53
23:BA:528:A:N1	23:BA:2042:A:H2'	2.23	0.53
24:BB:87:G:N2	24:BB:90:A:OP2	2.36	0.53
25:BD:130:ALA:HB2	25:BD:192:THR:HB	1.90	0.53
28:BG:19:LEU:HD22	28:BG:23:PHE:HE1	1.74	0.53
29:BH:124:GLU:HB2	29:BH:132:ARG:HB3	1.90	0.53
30:BI:110:ASP:N	30:BI:130:TYR:OH	2.35	0.53
1:CA:1030:C:N4	1:CA:1031:G:C5	2.71	0.53
1:CA:1208:C:H2'	1:CA:1209:C:C6	2.43	0.53
1:CA:951:G:C6	1:CA:1231:G:C6	2.97	0.53
2:CB:51:LEU:O	2:CB:55:PHE:HD2	1.92	0.53
7:CG:111:ARG:HH22	7:CG:122:HIS:HB3	1.74	0.53
7:CG:140:ASP:O	7:CG:143:ARG:HD2	2.08	0.53
47:D3:7:LYS:HG3	47:D3:34:GLU:HG2	1.91	0.53
23:DA:1288:U:C2	23:DA:1327:C:O2	2.61	0.53
34:DQ:27:VAL:N	34:DQ:138:ASP:OD1	2.41	0.53
40:DW:71:VAL:HA	40:DW:107:LEU:HD12	1.91	0.53
1:AA:1063:C:H2'	1:AA:1064:G:N7	2.24	0.53
1:AA:1267:C:O2	1:AA:1327:C:O2'	2.23	0.53
1:AA:946:A:O2'	1:AA:1333:A:N3	2.39	0.53
1:AA:189(A):C:H42	1:AA:189(J):G:H1	1.56	0.53
1:AA:1078:U:O2	5:AE:130:ASN:ND2	2.42	0.53
10:AJ:49:VAL:HG23	14:AN:41:ARG:HB2	1.89	0.53
22:AX:2:GLN:HA	22:AX:2:GLN:HE21	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:B1:82:LEU:O	45:B1:83:GLU:HG3	2.08	0.53
23:BA:2661:G:H2'	23:BA:2662:A:C8	2.44	0.53
23:BA:1297:C:OP1	23:BA:2710:C:H4'	2.08	0.53
23:BA:303:U:O4	56:BA:4551:HOH:O	2.19	0.53
35:BR:36:THR:HG22	35:BR:37:THR:H	1.73	0.53
38:BU:82:GLY:HA3	38:BU:113:ALA:HB1	1.90	0.53
1:CA:943:U:H2'	1:CA:944:G:C8	2.44	0.53
2:CB:162:ILE:HD11	2:CB:184:VAL:HG22	1.89	0.53
6:CF:97:PHE:HD2	18:CR:31:LEU:HD21	1.74	0.53
23:DA:2324:C:H5''	23:DA:2325:G:H5'	1.90	0.53
23:DA:826:U:OP1	23:DA:2428:G:H3'	2.09	0.53
23:DA:2629:A:O2'	23:DA:2630:G:OP2	2.21	0.53
37:DT:53:ARG:HB3	37:DT:53:ARG:NH1	2.24	0.53
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.91	0.53
1:AA:553:A:H2'	1:AA:554:C:C6	2.44	0.53
1:AA:59:A:H5''	1:AA:60:A:C5'	2.39	0.53
1:AA:78:G:H1	1:AA:91:C:H42	1.54	0.53
2:AB:187:LEU:HD13	2:AB:205:ASP:HA	1.90	0.53
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.09	0.53
17:AQ:92:ARG:O	17:AQ:95:TYR:HB2	2.09	0.53
1:AA:1220:G:H1'	19:AS:52:TYR:HD2	1.74	0.53
23:BA:1358:G:OP2	56:BA:4687:HOH:O	2.19	0.53
23:BA:2126:A:H4'	23:BA:2127:G:O5'	2.09	0.53
23:BA:2516:G:O6	23:BA:2517:C:N4	2.42	0.53
23:BA:2865:U:O4	56:BA:4115:HOH:O	2.14	0.53
24:BB:15:A:H1'	24:BB:110:G:C5	2.44	0.53
27:BF:164:ARG:HD2	27:BF:175:THR:HG23	1.90	0.53
30:BI:5:LEU:HD12	30:BI:5:LEU:H	1.74	0.53
33:BP:38:GLN:HA	33:BP:41:ARG:HG2	1.91	0.53
42:BY:9:LYS:NZ	42:BY:28:LYS:O	2.41	0.53
1:CA:1265:G:H2'	1:CA:1266:G:C8	2.44	0.53
1:CA:1316:G:H4'	14:CN:18:VAL:HG21	1.90	0.53
1:CA:169:C:H2'	1:CA:170:U:C6	2.43	0.53
1:CA:493:G:HO2'	1:CA:494:U:H6	1.55	0.53
1:CA:59:A:H3'	1:CA:331:G:H22	1.73	0.53
1:CA:742:G:OP2	15:CO:35:ARG:NH2	2.42	0.53
1:CA:932:C:N4	1:CA:1385:G:C6	2.77	0.53
5:CE:68:GLU:CD	5:CE:70:PRO:HG3	2.30	0.53
11:CK:32:ILE:HD11	11:CK:68:ALA:HB1	1.91	0.53
48:D4:40:HIS:CE1	48:D4:42:PHE:HB2	2.44	0.53
50:D6:13:CYS:SG	50:D6:47:THR:HG21	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2126:A:H4'	23:DA:2127:G:O5'	2.09	0.53
23:DA:2312:U:O2'	28:DG:40:ASN:ND2	2.37	0.53
23:DA:896:A:N1	34:DQ:60:ARG:NH2	2.56	0.53
23:DA:917:A:H5'	23:DA:918:A:OP2	2.08	0.53
28:DG:111:LEU:HB2	28:DG:112:PRO:HD3	1.91	0.53
42:DY:23:ARG:HH11	42:DY:23:ARG:HB2	1.74	0.53
1:AA:1004:A:H2	1:AA:1037:C:H42	1.58	0.52
1:AA:1442(A):G:H2'	1:AA:1442(B):A:O4'	2.09	0.52
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.09	0.52
1:AA:1059:C:O2'	10:AJ:53:PRO:HD3	2.09	0.52
12:AL:32:PHE:O	12:AL:33:ARG:HD2	2.09	0.52
23:BA:83:G:N2	23:BA:103:A:OP2	2.38	0.52
23:BA:1301:A:C8	23:BA:1303:G:C8	2.96	0.52
23:BA:2250:G:C5	34:BQ:83:MET:HB2	2.44	0.52
23:BA:2741:A:H2'	23:BA:2742:C:O4'	2.09	0.52
23:BA:821:A:H2'	23:BA:946:G:H5''	1.90	0.52
34:BQ:24:GLY:O	34:BQ:102:VAL:HG23	2.08	0.52
1:CA:1244:C:H2'	1:CA:1245:A:C8	2.44	0.52
1:CA:1247:U:H1'	1:CA:1291:G:N2	2.23	0.52
1:CA:1324:A:C5'	1:CA:1363:C:H5''	2.39	0.52
1:CA:292:G:N7	1:CA:293:G:H1'	2.24	0.52
1:CA:91:C:H2'	1:CA:92:C:C6	2.44	0.52
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.09	0.52
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.08	0.52
50:D6:14:THR:HB	50:D6:48:VAL:O	2.09	0.52
23:DA:2364:C:H2'	23:DA:2365:G:O4'	2.09	0.52
23:DA:61:G:H1	23:DA:94:C:H42	1.58	0.52
26:DE:195:LEU:HG	26:DE:196:VAL:N	2.24	0.52
30:DI:135:GLU:C	30:DI:137:PRO:HD3	2.30	0.52
1:AA:194:C:C2'	1:AA:195:A:H5''	2.40	0.52
1:AA:709:G:H2'	1:AA:710:G:H8	1.74	0.52
1:AA:742:G:OP2	15:AO:35:ARG:NH2	2.41	0.52
2:AB:134:GLU:O	2:AB:137:ARG:HG3	2.10	0.52
2:AB:21:ARG:H	2:AB:21:ARG:NE	2.07	0.52
3:AC:131:ARG:HH12	3:AC:135:LYS:HE3	1.73	0.52
9:AI:24:GLY:HA2	9:AI:59:PHE:C	2.29	0.52
50:B6:8:LYS:HD3	52:B8:34:TRP:CD2	2.44	0.52
23:BA:2469:A:H5'	23:BA:2470:G:OP2	2.09	0.52
23:BA:2564:A:C2	23:BA:2647:U:H4'	2.44	0.52
24:BB:40:U:H1'	24:BB:45:A:N6	2.25	0.52
1:CA:1252:A:H2	1:CA:1355:G:H1'	1.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.44	0.52
1:CA:1300:G:N1	1:CA:1334:G:H2'	2.19	0.52
1:CA:336:C:H2'	1:CA:337:C:H6	1.73	0.52
1:CA:609:A:H5'	16:CP:18:ARG:HH22	1.74	0.52
1:CA:79:G:N2	1:CA:91:C:O2	2.43	0.52
7:CG:26:PHE:CZ	7:CG:105:VAL:HB	2.45	0.52
10:CJ:10:GLY:HA3	10:CJ:94:VAL:HG22	1.91	0.52
23:DA:243:U:OP1	52:D8:6:THR:OG1	2.14	0.52
1:AA:105:G:H2'	1:AA:106:C:C6	2.44	0.52
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.45	0.52
1:AA:1443:G:H1	1:AA:1459:C:C2'	2.22	0.52
1:AA:184:G:C4'	1:AA:224:C:H4'	2.39	0.52
1:AA:50:A:OP1	1:AA:50:A:H8	1.92	0.52
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.08	0.52
23:BA:2580:U:O4	56:BA:4292:HOH:O	2.14	0.52
23:BA:2699:C:H2'	23:BA:2700:C:O4'	2.09	0.52
23:BA:975:C:H6	56:BA:4752:HOH:O	1.89	0.52
23:BA:2572:A:N7	26:BE:144:ARG:HD2	2.24	0.52
28:BG:32:PRO:HB2	28:BG:172:LEU:HD22	1.91	0.52
23:BA:1156:A:C8	38:BU:51:LYS:HD2	2.44	0.52
42:BY:23:ARG:HB2	42:BY:23:ARG:NH1	2.25	0.52
43:BZ:43:GLU:O	43:BZ:47:VAL:HG23	2.09	0.52
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.75	0.52
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.45	0.52
1:CA:1191:A:OP2	3:CC:3:ASN:ND2	2.42	0.52
4:CD:32:ALA:O	4:CD:36:ARG:N	2.42	0.52
9:CI:28:VAL:HB	9:CI:36:TYR:CB	2.34	0.52
11:CK:73:MET:HE2	11:CK:103:LEU:HD13	1.92	0.52
12:CL:32:PHE:HE1	12:CL:86:ARG:HG3	1.74	0.52
23:DA:2173:A:OP2	23:DA:2174:C:H5	1.93	0.52
23:DA:2282:G:H4'	23:DA:2389:G:O2'	2.08	0.52
23:DA:819:A:C4	23:DA:1189:A:C2	2.97	0.52
25:DD:85:ASP:OD2	25:DD:88:ARG:NH1	2.40	0.52
28:DG:150:ASP:CG	28:DG:151:ALA:H	2.11	0.52
1:AA:1003:G:H1	1:AA:1037:C:N4	2.07	0.52
1:AA:1316:G:H22	1:AA:1319:A:C5'	2.21	0.52
1:AA:913:A:H4'	1:AA:914:A:O5'	2.09	0.52
2:AB:213:LEU:HD22	2:AB:214:ILE:HD13	1.91	0.52
12:AL:110:VAL:HG23	12:AL:120:TYR:HB3	1.90	0.52
23:BA:2296:U:H4'	23:BA:2297:C:OP1	2.09	0.52
23:BA:315:G:H2'	23:BA:316:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:911:A:H2'	34:BQ:9:TYR:OH	2.08	0.52
38:BU:76:TYR:OH	38:BU:92:ARG:NH1	2.41	0.52
40:BW:82:LEU:HD22	40:BW:84:ARG:NH2	2.23	0.52
43:BZ:152:ALA:HA	43:BZ:155:LEU:HD13	1.92	0.52
1:CA:1442(A):G:C5	1:CA:1442(B):A:C2	2.96	0.52
1:CA:501:C:H1'	1:CA:549:C:H1'	1.92	0.52
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.39	0.52
46:D2:51:ARG:O	46:D2:55:ARG:HB2	2.09	0.52
23:DA:1628:G:H2'	23:DA:1629:U:H6	1.74	0.52
23:DA:2180:U:H2'	23:DA:2181:G:C8	2.44	0.52
23:DA:443:A:N7	27:DF:45:ARG:HG2	2.24	0.52
23:DA:485:C:H2'	23:DA:486:C:H6	1.74	0.52
25:DD:130:ALA:HB2	25:DD:192:THR:HB	1.91	0.52
1:AA:1238:A:H2	1:AA:1241:G:H21	1.56	0.52
1:AA:659:U:H2'	1:AA:660:G:O4'	2.10	0.52
1:AA:6:G:O2'	1:AA:7:G:H5''	2.09	0.52
1:AA:990:C:H2'	1:AA:991:U:C6	2.45	0.52
2:AB:42:ILE:HD12	2:AB:203:GLY:HA2	1.92	0.52
8:AH:111:ILE:HD12	8:AH:111:ILE:H	1.74	0.52
3:AC:29:TYR:OH	14:AN:54:PRO:O	2.28	0.52
17:AQ:79:SER:OG	17:AQ:80:GLY:N	2.41	0.52
23:BA:2850:A:C2	23:BA:2851:A:C4	2.97	0.52
23:BA:511:U:O4	23:BA:512:G:N1	2.43	0.52
25:BD:131:LEU:HD22	25:BD:136:ILE:HG12	1.91	0.52
25:BD:206:LEU:HD22	25:BD:211:ARG:HG2	1.91	0.52
30:BI:125:GLU:OE1	30:BI:143:SER:HB3	2.09	0.52
31:BN:24:GLY:HA2	31:BN:27:ALA:HB3	1.91	0.52
1:AA:1442(B):A:H62	37:BT:118:ARG:NH2	2.07	0.52
1:CA:1030(C):G:N7	1:CA:1031:G:N2	2.58	0.52
1:CA:1060:C:N4	56:CC:301:HOH:O	2.42	0.52
1:CA:1441:G:C3'	1:CA:1459:C:N4	2.73	0.52
21:CU:12:LYS:HB3	21:CU:22:ARG:NH1	2.24	0.52
21:CU:12:LYS:O	21:CU:16:GLY:N	2.37	0.52
23:DA:1914:C:H6	23:DA:1914:C:OP2	1.91	0.52
23:DA:528:A:C2	23:DA:2042:A:H2'	2.44	0.52
23:DA:853:G:H1	23:DA:924:C:H42	1.56	0.52
23:DA:7:G:H2'	23:DA:8:A:C8	2.44	0.52
27:DF:164:ARG:HD2	27:DF:175:THR:HG23	1.90	0.52
36:DS:11:LYS:O	36:DS:15:ARG:HG3	2.10	0.52
1:AA:66:G:O4'	1:AA:173:U:C4	2.63	0.52
1:AA:969:A:OP1	10:AJ:55:LYS:NZ	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:70:ASP:OD1	6:AF:70:ASP:N	2.42	0.52
8:AH:85:ARG:NE	8:AH:87:SER:O	2.42	0.52
23:BA:1971:A:C4	25:BD:241:PRO:HD3	2.44	0.52
23:BA:2180:U:H2'	23:BA:2181:G:C8	2.45	0.52
36:BS:15:ARG:O	36:BS:19:LYS:HG2	2.09	0.52
43:BZ:160:GLY:HA2	43:BZ:161:VAL:HB	1.91	0.52
1:CA:1125:U:H5'	1:CA:1126:U:C5	2.44	0.52
1:CA:1098:C:H5'	1:CA:1169:A:H1'	1.92	0.52
1:CA:1369:C:H2'	1:CA:1370:G:C8	2.45	0.52
1:CA:1459:C:C2'	1:CA:1460:A:C8	2.93	0.52
1:CA:18:C:H5''	5:CE:127:ASN:HD21	1.74	0.52
1:CA:586:C:H2'	1:CA:587:G:H5'	1.92	0.52
1:CA:785:G:H2'	1:CA:786:G:H5'	1.92	0.52
2:CB:21:ARG:NE	2:CB:21:ARG:H	2.08	0.52
3:CC:55:VAL:HG12	3:CC:57:ILE:HG13	1.91	0.52
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.09	0.52
9:CI:20:ARG:HB3	9:CI:60:ASP:O	2.10	0.52
23:DA:1049:C:O2'	23:DA:1050:A:O5'	2.25	0.52
23:DA:1546:C:H5'	23:DA:1547:C:H5'	1.92	0.52
24:DB:20:C:C2'	24:DB:21:G:H5'	2.39	0.52
34:DQ:26:TYR:CE1	34:DQ:28:ALA:HB2	2.44	0.52
43:DZ:182:LYS:O	43:DZ:186:GLU:HG2	2.09	0.52
1:AA:999:C:H2'	1:AA:1000:U:C6	2.45	0.52
2:AB:88:ALA:HB1	2:AB:222:ILE:HG21	1.92	0.52
23:BA:2319:G:N2	36:BS:3:ARG:HA	2.25	0.52
24:BB:61:G:C6	24:BB:62:C:C4	2.98	0.52
23:BA:1818:U:O4	25:BD:154:LYS:HE3	2.10	0.52
35:BR:55:ALA:HB2	35:BR:79:LEU:HD13	1.91	0.52
43:BZ:40:ASP:OD1	43:BZ:42:VAL:HG13	2.09	0.52
1:CA:1048:G:C6	1:CA:1210:C:N4	2.77	0.52
1:CA:1053:G:N7	1:CA:1199:U:H2'	2.25	0.52
1:CA:1109:C:O5'	1:CA:1109:C:H6	1.93	0.52
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.63	0.52
1:CA:860:A:N6	1:CA:861:G:C2	2.78	0.52
2:CB:97:TRP:CZ2	2:CB:101:MET:HB2	2.44	0.52
3:CC:153:VAL:HA	3:CC:197:GLY:O	2.10	0.52
7:CG:113:GLU:OE2	7:CG:119:ARG:HA	2.09	0.52
8:CH:121:ASP:OD1	8:CH:121:ASP:N	2.40	0.52
11:CK:26:ASN:O	56:CK:201:HOH:O	2.18	0.52
23:DA:1790:C:H5''	23:DA:1791:A:OP1	2.09	0.52
23:DA:2200:C:H5'	23:DA:2201:C:OP2	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:602:G:O2'	23:DA:655:A:N6	2.43	0.52
23:DA:652(O):C:H2'	23:DA:652(P):G:C8	2.45	0.52
23:DA:863:A:H2'	23:DA:864:G:C8	2.44	0.52
23:DA:2690:C:OP2	35:DR:14:SER:HB3	2.10	0.52
1:AA:1130:A:H61	1:AA:1144:G:C1'	2.20	0.52
1:AA:1388:C:H2'	1:AA:1389:C:H6	1.75	0.52
47:B3:18:ASP:N	47:B3:18:ASP:OD1	2.42	0.52
23:BA:102:G:O2'	23:BA:103:A:O5'	2.27	0.52
23:BA:1403:C:C5'	23:BA:1471:A:H1'	2.38	0.52
23:BA:218:A:C2	23:BA:235:U:H4'	2.45	0.52
23:BA:2672:G:H8	23:BA:2672:G:H5''	1.73	0.52
23:BA:492:A:H2'	23:BA:493:G:O4'	2.10	0.52
23:BA:498:G:O2'	23:BA:499:U:H5'	2.10	0.52
23:BA:993:G:OP1	38:BU:50:ARG:NH2	2.43	0.52
1:CA:1327:C:H2'	1:CA:1328:C:O4'	2.09	0.52
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.91	0.52
11:CK:21:ILE:HB	11:CK:84:VAL:HG22	1.90	0.52
19:CS:49:ILE:O	19:CS:59:PRO:HA	2.09	0.52
23:DA:143(A):C:H2'	23:DA:144:C:C6	2.44	0.52
23:DA:1669:A:H5''	23:DA:2550:G:OP1	2.10	0.52
23:DA:2096:U:H3	23:DA:2193:G:H1	1.57	0.52
31:DN:96:GLU:H	31:DN:96:GLU:CD	2.13	0.52
36:DS:26:LEU:HD22	36:DS:87:PHE:CD1	2.45	0.52
42:DY:28:LYS:HG3	42:DY:40:GLU:HG2	1.92	0.52
1:AA:756:C:N4	56:AA:2015:HOH:O	2.32	0.52
1:AA:971:G:O2'	1:AA:1365:G:O3'	2.28	0.52
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.45	0.52
4:AD:173:TRP:HB2	4:AD:187:ARG:O	2.10	0.52
1:AA:1298:C:N4	7:AG:114:ARG:HD2	2.24	0.52
7:AG:71:PRO:HG3	7:AG:138:LYS:CG	2.39	0.52
1:AA:750:G:C2	15:AO:23:GLY:HA3	2.44	0.52
23:BA:1335:U:O4	56:BA:4449:HOH:O	2.17	0.52
23:BA:2117:A:N6	23:BA:2171:A:C6	2.78	0.52
23:BA:229:A:H3'	23:BA:229:A:C8	2.45	0.52
23:BA:878:A:H2'	23:BA:879:G:H5'	1.92	0.52
36:BS:35:ILE:HG12	36:BS:101:LEU:HD12	1.91	0.52
43:BZ:98:MET:O	43:BZ:125:LEU:HD12	2.09	0.52
1:CA:1239:A:H4'	1:CA:1240:U:OP1	2.09	0.52
1:CA:1492:A:H4'	1:CA:1492:A:OP1	2.10	0.52
19:CS:16:LEU:CA	19:CS:20:LEU:HB2	2.37	0.52
23:DA:1819:A:H4'	23:DA:1820:U:O5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2308:G:H4'	23:DA:2309:A:OP2	2.08	0.52
23:DA:71:A:H8	23:DA:71:A:H5'	1.75	0.52
23:DA:944:G:O3'	56:DA:3793:HOH:O	2.19	0.52
35:DR:37:THR:OG1	35:DR:40:LYS:HG3	2.09	0.52
1:AA:374:A:N1	1:AA:390:C:O2'	2.36	0.52
1:AA:56:U:H2'	1:AA:57:G:C8	2.45	0.52
1:AA:763:G:H2'	1:AA:764:C:H6	1.75	0.52
1:AA:93:G:O2'	1:AA:96:U:H5'	2.10	0.52
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.45	0.52
47:B3:40:THR:HG23	47:B3:43:ILE:HD12	1.92	0.52
23:BA:2109:U:H1'	23:BA:2181:G:N2	2.24	0.52
23:BA:2364:C:H2'	23:BA:2365:G:O4'	2.10	0.52
23:BA:335:C:H2'	23:BA:336:C:H6	1.75	0.52
23:BA:582:G:H2'	23:BA:583:G:C8	2.44	0.52
23:BA:2319:G:H22	36:BS:3:ARG:HD2	1.75	0.52
1:CA:1004:A:H2	1:CA:1037:C:N4	2.08	0.52
1:CA:1238:A:N7	1:CA:1299:A:N1	2.57	0.52
1:CA:1459:C:C5'	1:CA:1460:A:OP2	2.57	0.52
1:CA:1458:G:H3'	1:CA:1459:C:H5''	1.92	0.52
1:CA:977:A:H1'	1:CA:982:U:H3	1.74	0.52
5:CE:14:ARG:HE	5:CE:16:THR:HG22	1.74	0.52
7:CG:142:GLU:CB	7:CG:143:ARG:HH21	2.22	0.52
23:DA:1810:A:H2'	23:DA:1811:G:O4'	2.09	0.52
23:DA:2537:U:H2'	23:DA:2538:C:C6	2.45	0.52
29:DH:7:LEU:HD12	29:DH:8:PRO:HD2	1.92	0.52
37:DT:95:ARG:NH1	37:DT:95:ARG:HG2	2.19	0.52
38:DU:44:ASN:ND2	39:DV:75:PHE:O	2.36	0.52
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.45	0.51
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.74	0.51
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.25	0.51
1:AA:189:G:H2'	1:AA:189(A):C:H6	1.73	0.51
7:AG:101:LEU:HA	7:AG:104:LEU:HD23	1.92	0.51
7:AG:140:ASP:HA	7:AG:143:ARG:HB2	1.91	0.51
7:AG:95:ARG:O	7:AG:99:LEU:HG	2.10	0.51
11:AK:73:MET:HG3	11:AK:103:LEU:HD21	1.91	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HB3	2.10	0.51
6:AF:7:ASN:ND2	18:AR:34:TYR:HE1	2.05	0.51
13:AM:87:TYR:HB2	19:AS:73:GLU:O	2.10	0.51
22:AX:56:VAL:N	22:AX:59:GLY:HA2	2.24	0.51
23:BA:1173:G:H1'	23:BA:1177:A:N6	2.24	0.51
23:BA:2308:G:H4'	23:BA:2309:A:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2755:C:HO2'	23:BA:2756:U:H6	1.58	0.51
24:BB:48:A:H4'	36:BS:95:HIS:HD2	1.75	0.51
36:BS:95:HIS:C	36:BS:99:LYS:HB3	2.31	0.51
1:CA:1029:C:N3	1:CA:1032:G:O6	2.43	0.51
1:CA:1128:C:N3	1:CA:1143:G:N2	2.47	0.51
1:CA:676:A:O2'	1:CA:677:U:H5'	2.10	0.51
12:CL:25:PRO:C	12:CL:27:LEU:H	2.11	0.51
18:CR:66:LEU:O	18:CR:70:ILE:HG13	2.11	0.51
23:DA:1688:U:H1'	23:DA:1701:A:C6	2.45	0.51
23:DA:2109:U:H1'	23:DA:2181:G:N2	2.25	0.51
23:DA:229:A:C8	23:DA:229:A:H3'	2.45	0.51
23:DA:2564:A:C2	23:DA:2647:U:H4'	2.45	0.51
23:DA:706:A:H2'	23:DA:707:G:O4'	2.10	0.51
23:DA:764:A:OP1	25:DD:208:LYS:HE2	2.10	0.51
24:DB:13:A:N1	24:DB:69:G:O2'	2.38	0.51
28:DG:116:ASP:H	28:DG:136:ARG:HH22	1.57	0.51
23:DA:2880:C:O3'	35:DR:90:ARG:NH1	2.43	0.51
1:AA:1126:U:H1'	1:AA:1280:A:C5	2.46	0.51
1:AA:1316:G:C6	1:AA:1318:A:H5''	2.46	0.51
1:AA:428:G:H4'	1:AA:429:U:O5'	2.10	0.51
7:AG:26:PHE:CG	7:AG:101:LEU:HD22	2.46	0.51
23:BA:1040:C:H2'	23:BA:1041:C:H1'	1.91	0.51
28:BG:111:LEU:HB2	28:BG:112:PRO:HD3	1.92	0.51
28:BG:22:ARG:HH21	28:BG:175:LEU:HD11	1.74	0.51
30:BI:83:ALA:HA	30:BI:89:TYR:HE2	1.74	0.51
32:BO:77:ILE:HG13	37:BT:74:ARG:HG2	1.92	0.51
42:BY:28:LYS:HG3	42:BY:40:GLU:HG2	1.93	0.51
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.09	0.51
1:CA:971:G:H1	1:CA:1363(A):A:H5'	1.75	0.51
1:CA:666:G:H5'	1:CA:726:C:H1'	1.93	0.51
2:CB:16:HIS:CD2	2:CB:209:ARG:HG3	2.45	0.51
1:CA:826:C:H4'	8:CH:12:ARG:HD3	1.91	0.51
9:CI:10:ARG:CB	9:CI:75:ASP:HB2	2.39	0.51
16:CP:72:ARG:HG2	16:CP:73:LEU:HD23	1.92	0.51
20:CT:61:SER:O	20:CT:65:LYS:HG2	2.11	0.51
23:DA:2441:C:OP2	23:DA:2586:C:O2'	2.27	0.51
23:DA:2790:A:N3	23:DA:2790:A:H3'	2.25	0.51
23:DA:581:C:H2'	23:DA:582:G:C8	2.46	0.51
23:DA:588:U:H2'	23:DA:589:C:C6	2.45	0.51
26:DE:111:ARG:HD3	26:DE:160:TYR:CE1	2.45	0.51
1:AA:1022:G:H2'	1:AA:1023:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.44	0.51
1:AA:1277:C:H2'	1:AA:1279:A:H8	1.76	0.51
1:AA:1372:U:H5''	9:AI:71:SER:CB	2.40	0.51
1:AA:611:A:H61	1:AA:629:G:H1	1.57	0.51
1:AA:920:U:O4'	1:AA:1080:A:C2	2.64	0.51
4:AD:193:ASP:N	4:AD:193:ASP:OD1	2.44	0.51
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.46	0.51
10:AJ:33:GLN:O	10:AJ:34:VAL:HG22	2.08	0.51
1:AA:881:G:P	12:AL:12:ARG:HH22	2.33	0.51
1:AA:277:C:OP1	17:AQ:68:ARG:NH2	2.41	0.51
1:AA:1222:G:H5''	19:AS:78:ARG:CZ	2.41	0.51
21:AU:15:ARG:HE	21:AU:15:ARG:HA	1.76	0.51
23:BA:1530:C:O2'	23:BA:1531:C:P	2.68	0.51
23:BA:1593:G:H2'	23:BA:1594:G:C8	2.46	0.51
23:BA:2200:C:H5'	23:BA:2201:C:OP2	2.09	0.51
25:BD:130:ALA:C	25:BD:131:LEU:HD12	2.31	0.51
30:BI:4:ILE:HG21	30:BI:47:LEU:HG	1.92	0.51
32:BO:73:ASP:OD1	37:BT:32:TYR:OH	2.22	0.51
36:BS:99:LYS:O	36:BS:103:GLU:HG3	2.10	0.51
1:CA:1347:G:H1'	1:CA:1348:U:H5	1.75	0.51
1:CA:746:A:H2'	1:CA:747:C:C6	2.45	0.51
1:CA:958:A:N3	1:CA:985:C:O2'	2.37	0.51
10:CJ:12:ASP:C	10:CJ:68:HIS:HD2	2.13	0.51
48:D4:40:HIS:O	48:D4:42:PHE:N	2.41	0.51
50:D6:11:LEU:HB2	50:D6:21:TYR:HB2	1.90	0.51
23:DA:83:G:N2	23:DA:102:G:H2'	2.25	0.51
23:DA:1427:A:H4'	23:DA:1428:C:O5'	2.11	0.51
23:DA:2208:A:H1'	23:DA:2219:G:C5	2.46	0.51
23:DA:228:A:H2'	23:DA:230:U:O4'	2.11	0.51
23:DA:2319:G:C2	36:DS:3:ARG:HA	2.46	0.51
23:DA:2853:C:H2'	23:DA:2854:G:C8	2.46	0.51
27:DF:183:VAL:O	27:DF:187:VAL:HG23	2.11	0.51
28:DG:41:GLN:HG3	28:DG:60:LEU:HD11	1.93	0.51
29:DH:154:PRO:HB3	29:DH:163:TYR:CZ	2.44	0.51
1:AA:1460:A:H8	1:AA:1460:A:O5'	1.93	0.51
1:AA:129(A):G:H1'	1:AA:189(F):U:H2'	1.91	0.51
1:AA:232:G:H1'	1:AA:262:A:N1	2.26	0.51
1:AA:266:G:H5''	1:AA:267:C:H5	1.73	0.51
1:AA:357:G:N7	56:AA:1886:HOH:O	2.35	0.51
1:AA:540:G:H2'	1:AA:541:G:O4'	2.10	0.51
1:AA:658:G:C2	1:AA:749:C:N3	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:68:GLU:CD	5:AE:70:PRO:HG3	2.31	0.51
23:BA:143(A):C:H2'	23:BA:144:C:H6	1.75	0.51
23:BA:1792:G:O2'	23:BA:1830:C:OP1	2.28	0.51
23:BA:2097:C:H2'	23:BA:2098:U:O4'	2.10	0.51
27:BF:34:TRP:HE3	27:BF:35:GLU:HG2	1.74	0.51
29:BH:24:VAL:HG13	29:BH:37:VAL:HG21	1.92	0.51
31:BN:99:LEU:HD22	31:BN:103:VAL:HG23	1.91	0.51
1:CA:1137:C:H5'	1:CA:1138:G:C6	2.45	0.51
1:CA:1157:A:N1	1:CA:1180:A:H2'	2.25	0.51
1:CA:1220:G:H2'	1:CA:1221:G:C8	2.45	0.51
1:CA:475:G:H2'	1:CA:476:G:C8	2.46	0.51
1:CA:806:C:H2'	1:CA:807:A:H8	1.76	0.51
1:CA:954:G:N2	1:CA:1227:A:H62	2.08	0.51
2:CB:55:PHE:CD1	2:CB:58:ILE:HD12	2.45	0.51
9:CI:28:VAL:O	9:CI:36:TYR:HB2	2.10	0.51
3:CC:30:ARG:HB3	14:CN:36:PHE:O	2.11	0.51
17:CQ:66:SER:O	17:CQ:69:LYS:N	2.26	0.51
23:DA:1113:U:H2'	23:DA:1114:G:C8	2.46	0.51
23:DA:1530:C:O2'	23:DA:1531:C:P	2.68	0.51
23:DA:188:G:H1	23:DA:208:C:N4	2.09	0.51
23:DA:573:G:O2'	23:DA:574:C:H3'	2.11	0.51
27:DF:129:PHE:O	27:DF:132:VAL:HG13	2.10	0.51
30:DI:134:PRO:C	30:DI:136:VAL:H	2.14	0.51
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.26	0.51
1:AA:149:A:O2'	1:AA:150:C:C6	2.63	0.51
2:AB:28:PHE:CZ	2:AB:189:ASP:HA	2.46	0.51
13:AM:23:TYR:HE1	13:AM:70:LEU:HB3	1.75	0.51
23:BA:1782:C:H2'	23:BA:2608:G:O2'	2.11	0.51
23:BA:2169:A:H3'	23:BA:2170:A:H8	1.75	0.51
23:BA:774:A:N3	23:BA:774:A:H2'	2.26	0.51
23:BA:2572:A:N7	26:BE:145:LYS:HB2	2.26	0.51
34:BQ:42:ILE:HD13	34:BQ:97:VAL:HG21	1.91	0.51
1:CA:1157:A:H61	1:CA:1178:G:H21	1.58	0.51
1:CA:939:G:N3	1:CA:1375:A:H2	2.08	0.51
1:CA:123:C:O2'	1:CA:290:C:O2	2.20	0.51
1:CA:659:U:H2'	1:CA:660:G:O4'	2.11	0.51
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.75	0.51
16:CP:75:ARG:HA	16:CP:80:PHE:HD1	1.75	0.51
23:DA:187:G:N3	23:DA:1365:A:H2	2.08	0.51
23:DA:2144:U:H2'	23:DA:2146:C:N4	2.26	0.51
28:DG:3:LEU:HD11	28:DG:97:ASP:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:40:GLU:OE2	29:DH:60:ARG:NH1	2.43	0.51
32:DO:31:LYS:HB3	32:DO:32:TYR:CE2	2.45	0.51
1:AA:1371:G:H4'	9:AI:69:GLY:CA	2.41	0.51
1:AA:939:G:C6	1:AA:940:C:N4	2.79	0.51
5:AE:69:VAL:O	5:AE:71:LEU:N	2.42	0.51
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.45	0.51
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.43	0.51
52:B8:61:LEU:O	52:B8:63:PRO:HD3	2.10	0.51
23:BA:271(D):G:H2'	23:BA:271(E):U:O4'	2.11	0.51
23:BA:2872:G:O2'	23:BA:2873:A:H5'	2.09	0.51
24:BB:2:C:H2'	24:BB:3:C:C6	2.45	0.51
26:BE:135:HIS:H	26:BE:135:HIS:CD2	2.26	0.51
28:BG:41:GLN:HG3	28:BG:60:LEU:HD11	1.92	0.51
30:BI:16:GLY:O	30:BI:47:LEU:HD11	2.10	0.51
37:BT:18:ASP:N	37:BT:18:ASP:OD1	2.37	0.51
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.10	0.51
1:CA:50:A:H8	1:CA:50:A:OP1	1.93	0.51
1:CA:586:C:O2'	1:CA:878:G:H4'	2.11	0.51
1:CA:757:U:OP1	1:CA:822:C:O2'	2.28	0.51
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.11	0.51
12:CL:110:VAL:HG23	12:CL:120:TYR:HB3	1.92	0.51
13:CM:14:ARG:CZ	13:CM:41:PRO:HB2	2.40	0.51
52:D8:23:VAL:HG12	52:D8:47:LYS:HB3	1.92	0.51
52:D8:61:LEU:C	52:D8:63:PRO:HD3	2.31	0.51
23:DA:2134:A:N6	23:DA:2157:G:H1'	2.26	0.51
24:DB:7:G:H8	24:DB:7:G:H5''	1.76	0.51
25:DD:67:PHE:HB3	25:DD:153:ALA:H	1.76	0.51
28:DG:6:ALA:O	28:DG:10:LYS:N	2.38	0.51
33:DP:95:VAL:HG22	33:DP:125:VAL:HB	1.93	0.51
1:AA:148:G:O2'	1:AA:149:A:H5'	2.10	0.51
5:AE:78:HIS:HA	8:AH:105:ARG:HG3	1.93	0.51
7:AG:103:TRP:HZ3	7:AG:138:LYS:HB2	1.75	0.51
13:AM:12:ASN:O	13:AM:44:ARG:HB3	2.10	0.51
23:BA:2036:C:H5'	23:BA:2036:C:C6	2.33	0.51
23:BA:2116:G:H4'	23:BA:2117:A:OP1	2.11	0.51
23:BA:26:G:H1'	23:BA:515:A:H61	1.76	0.51
24:BB:7:G:H5''	24:BB:7:G:H8	1.75	0.51
28:BG:105:LYS:NZ	48:B4:26:SER:HB2	2.26	0.51
29:BH:46:GLU:HB2	29:BH:49:VAL:HG12	1.93	0.51
1:CA:1188:A:H2'	1:CA:1189:C:H5'	1.93	0.51
1:CA:1240:U:O5'	1:CA:1241:G:H8	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1241:G:H5''	1:CA:1242:C:OP2	2.10	0.51
3:CC:36:ASP:O	3:CC:40:ARG:HG2	2.11	0.51
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.11	0.51
7:CG:69:VAL:HA	7:CG:138:LYS:HB2	1.93	0.51
9:CI:31:GLN:NE2	9:CI:36:TYR:HD1	2.09	0.51
9:CI:9:ARG:NH1	9:CI:104:ARG:HE	2.09	0.51
12:CL:32:PHE:O	12:CL:33:ARG:HD2	2.10	0.51
18:CR:36:ASN:ND2	18:CR:39:VAL:H	2.09	0.51
1:CA:1305:G:H8	21:CU:5:ASP:HA	1.76	0.51
23:DA:2199:A:H5''	23:DA:2200:C:OP2	2.10	0.51
23:DA:396:G:O3'	45:D1:44:PRO:HA	2.11	0.51
1:AA:1348:U:C2	1:AA:1349:A:C8	2.99	0.51
1:AA:300:A:H1'	1:AA:565:U:O2	2.11	0.51
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.10	0.51
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.46	0.51
9:AI:20:ARG:O	9:AI:60:ASP:N	2.44	0.51
10:AJ:13:HIS:HB3	10:AJ:68:HIS:ND1	2.26	0.51
14:AN:57:ARG:HG2	14:AN:58:LYS:N	2.26	0.51
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.10	0.51
23:BA:1252:G:C2	23:BA:1253:A:C2	2.99	0.51
23:BA:1999:C:H5''	23:BA:2723:C:O2'	2.11	0.51
23:BA:288:C:H2'	23:BA:289:A:H8	1.75	0.51
29:BH:137:ASP:HB3	29:BH:140:LYS:HE2	1.93	0.51
30:BI:25:TYR:CD1	30:BI:30:LEU:HD11	2.46	0.51
32:BO:64:ARG:HG2	32:BO:79:PHE:CG	2.46	0.51
42:BY:102:CYS:O	42:BY:104:GLY:N	2.44	0.51
43:BZ:69:THR:HG22	43:BZ:90:VAL:HA	1.93	0.51
1:CA:1359:C:OP1	14:CN:22:THR:OG1	2.20	0.51
1:CA:184:G:C4'	1:CA:224:C:H4'	2.41	0.51
1:CA:838:G:N2	1:CA:849:C:C2	2.79	0.51
1:CA:865:A:H2'	1:CA:866:C:C6	2.46	0.51
1:CA:990:C:C4	1:CA:991:U:C4	2.99	0.51
2:CB:12:GLU:O	2:CB:16:HIS:ND1	2.40	0.51
2:CB:20:GLU:HG3	2:CB:191:ASP:OD1	2.10	0.51
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.93	0.51
7:CG:137:LYS:HA	7:CG:140:ASP:CG	2.32	0.51
13:CM:18:ALA:HB2	13:CM:45:VAL:HG21	1.92	0.51
15:CO:39:LEU:HD13	15:CO:56:LEU:HD23	1.92	0.51
23:DA:340:A:H2'	23:DA:341:G:O4'	2.10	0.51
26:DE:111:ARG:HD3	26:DE:160:TYR:CD1	2.45	0.51
26:DE:37:ARG:HB2	26:DE:46:ALA:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:133:LEU:HG	28:DG:157:ILE:HB	1.92	0.51
31:DN:55:VAL:HG22	31:DN:125:GLY:HA3	1.92	0.51
23:DA:627:A:H62	33:DP:84:ASN:HD21	1.59	0.51
36:DS:14:VAL:HG11	36:DS:90:GLY:O	2.10	0.51
23:DA:2318:G:N2	36:DS:3:ARG:HH11	2.09	0.51
43:DZ:151:HIS:N	43:DZ:154:ASP:OD1	2.42	0.51
2:AB:97:TRP:HZ3	2:AB:99:GLY:HA2	1.76	0.51
1:AA:1190:G:H5'	3:AC:4:LYS:HA	1.93	0.51
4:AD:121:VAL:HA	4:AD:126:ILE:HG12	1.92	0.51
7:AG:58:PRO:HA	7:AG:61:VAL:HG23	1.93	0.51
9:AI:14:VAL:HG22	9:AI:66:ARG:O	2.11	0.51
50:B6:23:THR:OG1	50:B6:24:GLU:N	2.44	0.51
23:BA:1654:A:OP1	35:BR:1:MET:HA	2.11	0.51
23:BA:2134:A:N6	23:BA:2157:G:H1'	2.26	0.51
27:BF:101:LEU:HB3	27:BF:106:ARG:HD3	1.92	0.51
35:BR:36:THR:HG22	35:BR:37:THR:N	2.25	0.51
1:CA:1063:C:OP2	1:CA:1064:G:O2'	2.27	0.51
1:CA:1347:G:O2'	1:CA:1373:G:N1	2.38	0.51
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.11	0.51
8:CH:63:LEU:HB2	8:CH:65:TYR:CE1	2.46	0.51
13:CM:10:PRO:HG2	13:CM:45:VAL:HG11	1.93	0.51
19:CS:10:PHE:CE2	19:CS:38:SER:HB3	2.45	0.51
20:CT:16:HIS:O	20:CT:19:SER:N	2.44	0.51
45:D1:86:SER:HB3	45:D1:89:GLU:OE2	2.10	0.51
40:DW:35:ILE:HG23	49:D5:28:PRO:HD2	1.93	0.51
23:DA:1018:C:O2'	23:DA:1019:U:H5'	2.10	0.51
23:DA:1336:A:H2'	23:DA:1337:G:C8	2.46	0.51
23:DA:1510:G:H2'	23:DA:1511:C:C6	2.46	0.51
23:DA:265:A:H1'	23:DA:266:G:O4'	2.11	0.51
23:DA:784:A:C5	25:DD:229:VAL:HG21	2.46	0.51
27:DF:181:LEU:HD11	27:DF:186:ILE:HD11	1.93	0.51
43:DZ:101:PRO:O	43:DZ:102:LEU:HD12	2.11	0.51
43:DZ:160:GLY:HA2	43:DZ:161:VAL:HB	1.92	0.51
1:AA:978:A:H61	1:AA:1316:G:H1'	1.75	0.51
1:AA:189:G:H2'	1:AA:189(A):C:C6	2.46	0.51
1:AA:57:G:H2'	1:AA:58:C:C6	2.46	0.51
1:AA:77:G:O6	1:AA:78:G:N1	2.44	0.51
1:AA:91:C:H2'	1:AA:92:C:C6	2.46	0.51
2:AB:12:GLU:O	2:AB:16:HIS:ND1	2.41	0.51
7:AG:22:LEU:O	7:AG:25:ALA:HB3	2.11	0.51
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AX:88:HIS:O	22:AX:92:LEU:HB2	2.11	0.51
23:BA:187:G:N3	23:BA:1365:A:H2	2.09	0.51
23:BA:1927:A:H2'	23:BA:1928:A:C8	2.46	0.51
23:BA:71:A:OP2	23:BA:71:A:H3'	2.11	0.51
26:BE:7:VAL:HG13	26:BE:27:LEU:HB3	1.93	0.51
1:CA:1004:A:H2'	1:CA:1036:G:O6	2.11	0.51
1:CA:1284:C:H3'	1:CA:1285:A:H2'	1.93	0.51
1:CA:460:G:O6	1:CA:470:C:H5''	2.11	0.51
1:CA:616:G:C2	1:CA:617:G:N7	2.79	0.51
1:CA:6:G:O2'	1:CA:7:G:H5''	2.11	0.51
8:CH:63:LEU:HB2	8:CH:65:TYR:HE1	1.75	0.51
1:CA:1345:U:OP1	9:CI:120:ARG:HD3	2.11	0.51
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.10	0.51
16:CP:11:SER:OG	16:CP:12:LYS:N	2.44	0.51
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.43	0.51
23:DA:1342:A:OP2	56:DA:3939:HOH:O	2.19	0.51
23:DA:1796:U:H2'	23:DA:1797:C:H6	1.74	0.51
23:DA:229:A:H3'	23:DA:229:A:H8	1.76	0.51
23:DA:2320:A:N3	23:DA:2320:A:H2'	2.25	0.51
23:DA:2610:C:H4'	23:DA:2611:U:OP2	2.11	0.51
23:DA:1297:C:OP1	23:DA:2710:C:H4'	2.11	0.51
23:DA:271(F):C:H2'	23:DA:271(G):C:C6	2.38	0.51
23:DA:2839:G:H5'	35:DR:46:GLY:HA2	1.92	0.51
35:DR:72:ASP:O	35:DR:76:VAL:HG23	2.11	0.51
1:AA:1312:G:C2	1:AA:1326:C:C2	2.99	0.50
1:AA:581:G:N2	1:AA:760:G:N7	2.59	0.50
1:AA:953:G:C5	1:AA:1229:A:C6	2.98	0.50
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.76	0.50
13:AM:92:HIS:NE2	13:AM:98:VAL:HG11	2.25	0.50
23:BA:1858:G:H1'	23:BA:1884:A:H61	1.76	0.50
24:BB:37:C:C5	24:BB:38:C:C5	2.98	0.50
27:BF:158:THR:O	27:BF:164:ARG:NH1	2.44	0.50
1:CA:1006:C:O2	1:CA:1024:G:H1'	2.10	0.50
1:CA:1192:C:C5	1:CA:1193:G:C8	2.99	0.50
1:CA:1254:C:N4	1:CA:1283:G:H1	2.06	0.50
1:CA:189:G:H2'	1:CA:189(A):C:H6	1.76	0.50
1:CA:658:G:C2	1:CA:749:C:N3	2.79	0.50
1:CA:838:G:H2'	1:CA:839:U:H5''	1.93	0.50
1:CA:966:G:H5''	1:CA:969:A:N7	2.26	0.50
10:CJ:62:HIS:CD2	10:CJ:62:HIS:H	2.29	0.50
23:DA:2672:G:H5''	23:DA:2672:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:796:C:H2'	23:DA:797:C:C6	2.47	0.50
24:DB:37:C:C5	24:DB:38:C:C5	2.99	0.50
23:DA:1693:U:O2'	25:DD:14:ARG:NH2	2.44	0.50
29:DH:80:SER:OG	29:DH:81:GLU:N	2.44	0.50
41:DX:21:PHE:CZ	41:DX:92:LEU:HD12	2.46	0.50
43:DZ:39:VAL:HG21	43:DZ:44:PHE:HB2	1.93	0.50
1:AA:292:G:N7	1:AA:293:G:H1'	2.26	0.50
7:AG:88:PRO:HG3	7:AG:149:ARG:CA	2.30	0.50
23:BA:141:A:C8	23:BA:1408:C:O2'	2.60	0.50
23:BA:2173:A:OP2	23:BA:2174:C:H5	1.93	0.50
23:BA:2782:G:N7	56:BA:4087:HOH:O	2.35	0.50
23:BA:2839:G:C5'	35:BR:46:GLY:HA2	2.40	0.50
23:BA:2839:G:H5'	35:BR:46:GLY:HA2	1.92	0.50
23:BA:543:C:H42	23:BA:549:G:H1	1.60	0.50
23:BA:748:G:C8	40:BW:89:ALA:HB1	2.46	0.50
25:BD:137:PRO:O	25:BD:140:THR:HG23	2.12	0.50
27:BF:34:TRP:CE3	27:BF:35:GLU:HG2	2.45	0.50
31:BN:23:LEU:HB2	31:BN:60:ILE:HG12	1.92	0.50
38:BU:76:TYR:HH	38:BU:92:ARG:HH11	1.57	0.50
43:BZ:101:PRO:O	43:BZ:102:LEU:HD12	2.11	0.50
1:CA:688:G:O2'	1:CA:704:A:N1	2.36	0.50
3:CC:56:ASP:O	3:CC:67:THR:HB	2.11	0.50
12:CL:83:VAL:HG13	12:CL:100:ILE:HG23	1.93	0.50
15:CO:82:ILE:O	15:CO:86:GLY:N	2.44	0.50
23:DA:1586:A:H8	23:DA:1586:A:O5'	1.93	0.50
23:DA:2350:C:H2'	23:DA:2351:G:O4'	2.12	0.50
23:DA:2632:A:O2'	23:DA:2811:G:O2'	2.23	0.50
23:DA:459:U:H4'	51:D7:40:TRP:CZ3	2.46	0.50
23:DA:662:G:OP1	56:DA:4439:HOH:O	2.19	0.50
23:DA:2590:A:OP2	25:DD:238:GLY:HA2	2.12	0.50
37:DT:106:SER:O	37:DT:110:ILE:HG12	2.11	0.50
1:AA:130:A:C8	17:AQ:63:ARG:HG3	2.46	0.50
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.93	0.50
1:AA:586:C:C2'	1:AA:587:G:H5'	2.42	0.50
1:AA:586:C:H2'	1:AA:587:G:H5'	1.94	0.50
1:AA:601:C:H2'	1:AA:602:A:C8	2.45	0.50
3:AC:22:TRP:CH2	14:AN:54:PRO:HG2	2.46	0.50
23:BA:1977:A:OP2	56:BA:4902:HOH:O	2.18	0.50
23:BA:314:A:O2'	23:BA:315:G:H5'	2.10	0.50
23:BA:796:C:H2'	23:BA:797:C:C6	2.46	0.50
23:BA:80:G:O6	56:BA:4435:HOH:O	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1029:C:O2	1:CA:1032:G:N1	2.44	0.50
1:CA:1055:A:C2	1:CA:1056:U:H1'	2.46	0.50
1:CA:1058:G:N2	10:CJ:53:PRO:HG3	2.26	0.50
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.11	0.50
1:CA:436:C:O2'	1:CA:437:U:OP2	2.25	0.50
1:CA:586:C:C2'	1:CA:587:G:H5'	2.41	0.50
7:CG:87:VAL:HG22	7:CG:151:TYR:HB3	1.93	0.50
14:CN:23:ARG:HD2	14:CN:28:GLY:C	2.31	0.50
1:CA:750:G:C2	15:CO:23:GLY:HA3	2.46	0.50
17:CQ:45:HIS:HD2	17:CQ:65:ILE:HG12	1.76	0.50
48:D4:12:ALA:HA	48:D4:29:PRO:HA	1.93	0.50
23:DA:1641:A:H2'	23:DA:1642:G:O4'	2.11	0.50
23:DA:1799:G:H5'	23:DA:1819:A:H61	1.76	0.50
23:DA:1925:C:O2'	23:DA:1926:U:H5'	2.11	0.50
23:DA:207:A:H2'	23:DA:208:C:O4'	2.11	0.50
23:DA:2150:U:H2'	23:DA:2151:G:C8	2.47	0.50
23:DA:863:A:N7	56:DA:4347:HOH:O	2.35	0.50
28:DG:11:TYR:HA	28:DG:15:VAL:HB	1.92	0.50
28:DG:89:GLY:C	28:DG:90:LEU:HD23	2.31	0.50
30:DI:56:LYS:O	30:DI:60:GLU:HG2	2.11	0.50
1:AA:1016:A:H3'	1:AA:1017:G:H8	1.76	0.50
1:AA:872:A:C8	1:AA:874:G:C8	3.00	0.50
23:BA:2523:G:O6	56:BA:5195:HOH:O	2.19	0.50
23:BA:530:G:C6	23:BA:2022:U:H5''	2.46	0.50
23:BA:769:G:N7	56:BA:4267:HOH:O	2.35	0.50
24:BB:17:C:H2'	24:BB:18:G:O4'	2.11	0.50
1:CA:1016:A:O2'	1:CA:1217:C:O2'	2.25	0.50
1:CA:1346:A:H1'	1:CA:1347:G:H5''	1.94	0.50
1:CA:1378:C:H5''	1:CA:1379:G:OP2	2.11	0.50
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.46	0.50
1:CA:601:C:H2'	1:CA:602:A:C8	2.46	0.50
6:CF:69:GLU:N	6:CF:69:GLU:OE1	2.45	0.50
7:CG:115:ARG:O	7:CG:119:ARG:HD3	2.12	0.50
10:CJ:28:ARG:CB	10:CJ:34:VAL:HG21	2.42	0.50
23:DA:1364:G:OP1	45:D1:2:SER:HA	2.12	0.50
23:DA:1638:C:O2	23:DA:2698:U:O2'	2.25	0.50
23:DA:1794:U:H2'	23:DA:1795:C:C6	2.47	0.50
23:DA:2104:G:O6	23:DA:2185:C:N3	2.44	0.50
23:DA:2114:A:O2'	23:DA:2168:G:H5'	2.11	0.50
23:DA:2173:A:H2'	23:DA:2174:C:H5'	1.92	0.50
23:DA:2465:C:O2	23:DA:2486:G:C2	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:375:C:H5''	56:DA:4596:HOH:O	2.10	0.50
23:DA:979:G:H3'	23:DA:980:A:C5'	2.41	0.50
29:DH:24:VAL:HG13	29:DH:37:VAL:HG21	1.92	0.50
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.76	0.50
1:AA:1154:G:C6	1:AA:1155:G:C6	2.99	0.50
1:AA:1374:A:O2'	7:AG:28:ASN:HB3	2.12	0.50
4:AD:155:LEU:HD23	4:AD:156:GLU:N	2.26	0.50
6:AF:19:LEU:HD11	6:AF:59:TYR:CZ	2.47	0.50
7:AG:103:TRP:CZ3	7:AG:138:LYS:HB2	2.47	0.50
14:AN:34:TYR:O	14:AN:38:GLY:N	2.40	0.50
48:B4:35:VAL:HA	48:B4:39:CYS:SG	2.52	0.50
23:BA:1558:A:N3	23:BA:1558:A:O4'	2.45	0.50
23:BA:2130:U:O2'	23:BA:2133:G:O2'	2.11	0.50
23:BA:2206:G:HO2'	23:BA:2207:G:P	2.34	0.50
23:BA:2286:A:OP1	50:B6:29:ASN:ND2	2.44	0.50
23:BA:2638:G:P	26:BE:82:ARG:HH22	2.34	0.50
23:BA:649:G:H2'	23:BA:650:C:C6	2.46	0.50
1:CA:1141:C:H2'	1:CA:1142:G:C8	2.34	0.50
1:CA:1173:G:C5	1:CA:1174:G:N7	2.79	0.50
1:CA:1457:G:N1	1:CA:1458:G:C5	2.79	0.50
1:CA:187:C:H5''	20:CT:86:ARG:HG3	1.93	0.50
2:CB:167:PRO:CG	2:CB:188:ALA:HB2	2.42	0.50
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.44	0.50
9:CI:28:VAL:HG23	9:CI:33:PHE:HA	1.94	0.50
10:CJ:63:PHE:HA	14:CN:58:LYS:HA	1.94	0.50
23:DA:1766:U:H2'	23:DA:1767:C:H6	1.76	0.50
23:DA:2272:U:H5''	23:DA:2273:A:OP1	2.11	0.50
24:DB:90:A:N7	24:DB:91:C:H1'	2.27	0.50
26:DE:38:THR:O	26:DE:42:ASP:N	2.43	0.50
26:DE:37:ARG:HB2	26:DE:46:ALA:H	1.77	0.50
36:DS:49:VAL:HG13	36:DS:76:LYS:HD2	1.92	0.50
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.47	0.50
1:AA:1288:A:H2'	1:AA:1289:A:O4'	2.12	0.50
1:AA:1237:C:HO2'	1:AA:1300:G:H22	1.53	0.50
1:AA:142:G:N3	1:AA:143:A:C8	2.80	0.50
1:AA:1459:C:P	1:AA:1460:A:OP2	2.69	0.50
1:AA:148:G:C2	1:AA:149:A:N7	2.80	0.50
1:AA:269:C:H2'	1:AA:270:A:C8	2.47	0.50
1:AA:544:G:C2	1:AA:545:C:C2	3.00	0.50
1:AA:616:G:C2	1:AA:617:G:N7	2.79	0.50
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1026:U:HO2'	23:BA:1027:A:P	2.33	0.50
23:BA:1177:A:H3'	23:BA:1177:A:P	2.51	0.50
23:BA:1651:G:H2'	23:BA:1652:A:O4'	2.12	0.50
23:BA:2144:U:H2'	23:BA:2146:C:N4	2.26	0.50
23:BA:279:C:H42	23:BA:361:G:H1	1.59	0.50
23:BA:481:G:H1'	23:BA:507:A:N1	2.27	0.50
28:BG:98:ARG:HB2	28:BG:98:ARG:NH1	2.26	0.50
30:BI:29:TYR:O	30:BI:32:PRO:HD2	2.11	0.50
34:BQ:134:ARG:O	34:BQ:138:ASP:HB2	2.11	0.50
36:BS:11:LYS:O	36:BS:15:ARG:HG3	2.12	0.50
1:CA:1117:G:H1'	1:CA:1184:G:N2	2.26	0.50
1:CA:1328:C:H5''	13:CM:28:ALA:HB3	1.94	0.50
1:CA:1459:C:O5'	1:CA:1460:A:OP2	2.30	0.50
1:CA:407:G:O6	1:CA:435:C:N4	2.45	0.50
1:CA:749:C:H2'	1:CA:750:G:H8	1.77	0.50
2:CB:187:LEU:HD13	2:CB:205:ASP:HA	1.93	0.50
7:CG:24:THR:HG22	7:CG:27:ILE:HD11	1.93	0.50
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.80	0.50
23:DA:1328:G:H8	23:DA:1328:G:O5'	1.94	0.50
23:DA:1430:C:H2'	23:DA:1431:U:H6	1.77	0.50
24:DB:77:U:H4'	43:DZ:84:GLU:OE1	2.12	0.50
27:DF:22:ALA:HB1	27:DF:24:LEU:HD22	1.92	0.50
27:DF:71:GLY:N	56:DF:402:HOH:O	2.21	0.50
31:DN:34:LEU:O	31:DN:49:GLY:HA3	2.11	0.50
41:DX:31:HIS:CD2	41:DX:33:LYS:H	2.29	0.50
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.47	0.50
1:AA:1316:G:N1	1:AA:1318:A:H5''	2.27	0.50
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.46	0.50
1:AA:1459:C:O5'	1:AA:1460:A:OP2	2.30	0.50
1:AA:646:U:H2'	1:AA:647:C:H6	1.75	0.50
1:AA:1111:A:N6	3:AC:177:THR:HA	2.19	0.50
8:AH:63:LEU:HB2	8:AH:65:TYR:CE1	2.45	0.50
15:AO:82:ILE:O	15:AO:86:GLY:N	2.44	0.50
23:BA:95:G:O2'	46:B2:46:GLN:HA	2.12	0.50
23:BA:1021:A:H3'	23:BA:1021:A:C8	2.47	0.50
23:BA:1178:C:H2'	23:BA:1179:C:C6	2.46	0.50
23:BA:187:G:N7	56:BA:4299:HOH:O	2.35	0.50
23:BA:485:C:H2'	23:BA:486:C:H6	1.76	0.50
23:BA:576:U:O5'	23:BA:576:U:H6	1.95	0.50
29:BH:171:LEU:HD23	29:BH:171:LEU:H	1.76	0.50
1:CA:1088:G:N2	1:CA:1089:G:H1'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1352:C:H1'	1:CA:1371:G:N2	2.26	0.50
1:CA:811:C:H4'	1:CA:900:A:N6	2.27	0.50
1:CA:918:A:H2'	1:CA:919:A:H8	1.74	0.50
1:CA:976:G:OP2	14:CN:32:SER:N	2.43	0.50
3:CC:186:PHE:HA	3:CC:198:VAL:O	2.11	0.50
9:CI:71:SER:HA	9:CI:74:ILE:HB	1.94	0.50
1:CA:1151:A:N3	10:CJ:70:ARG:NH2	2.60	0.50
14:CN:2:ALA:HB1	14:CN:6:LEU:HD13	1.92	0.50
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.12	0.50
45:D1:51:VAL:HG11	45:D1:74:VAL:HG21	1.92	0.50
50:D6:4:GLU:HG3	50:D6:5:VAL:N	2.27	0.50
23:DA:2296:U:N3	23:DA:2333:A:N3	2.60	0.50
23:DA:2345:G:O6	56:DA:4167:HOH:O	2.19	0.50
31:DN:67:LEU:HA	31:DN:87:LEU:HD12	1.93	0.50
34:DQ:27:VAL:HG11	34:DQ:134:ARG:HG2	1.94	0.50
37:DT:51:ARG:HG3	37:DT:98:LYS:HE3	1.94	0.50
1:AA:1357:A:H5''	1:AA:1358:U:OP2	2.11	0.50
1:AA:1396:A:H2	5:AE:19:MET:HG3	1.77	0.50
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.76	0.50
1:AA:425:G:O3'	4:AD:45:GLN:NE2	2.44	0.50
1:AA:65:U:H2'	1:AA:381:C:C5	2.47	0.50
1:AA:688:G:O2'	1:AA:704:A:N1	2.41	0.50
1:AA:1279:A:H61	3:AC:26:LYS:NZ	2.09	0.50
4:AD:101:LEU:HD23	4:AD:102:ASP:N	2.27	0.50
13:AM:15:VAL:O	13:AM:19:LEU:HD13	2.12	0.50
23:BA:1026:U:H5''	23:BA:1026:U:O2	2.12	0.50
23:BA:1300:U:H4'	23:BA:1301:A:C5'	2.41	0.50
23:BA:2251:G:C6	23:BA:2252:G:C5	3.00	0.50
23:BA:860:U:C2	23:BA:2268:A:C8	3.00	0.50
23:BA:286:C:H42	23:BA:355:G:H1	1.60	0.50
23:BA:413:C:O5'	23:BA:413:C:H6	1.95	0.50
23:BA:980:A:N3	23:BA:2037:G:O2'	2.36	0.50
31:BN:132:ALA:HB3	31:BN:133:GLN:NE2	2.27	0.50
32:BO:35:VAL:HG21	32:BO:103:ALA:HB3	1.93	0.50
33:BP:38:GLN:C	33:BP:40:SER:H	2.14	0.50
1:CA:1339:A:N6	1:CA:1340:A:N3	2.59	0.50
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.46	0.50
1:CA:544:G:C2	1:CA:545:C:C2	3.00	0.50
2:CB:80:ILE:HG13	2:CB:215:LEU:HD12	1.93	0.50
21:CU:6:ARG:HA	21:CU:11:GLY:HA3	1.92	0.50
50:D6:14:THR:HG21	50:D6:48:VAL:HG13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2126:A:H1'	23:DA:2127:G:OP2	2.12	0.50
23:DA:2755:C:HO2'	23:DA:2756:U:H6	1.60	0.50
23:DA:2773:C:O2'	23:DA:2774:C:H5'	2.12	0.50
23:DA:69:C:N4	56:DA:4046:HOH:O	2.45	0.50
23:DA:996:A:C2	23:DA:997:G:C8	3.00	0.50
28:DG:81:LYS:CB	28:DG:82:LEU:HD12	2.41	0.50
43:DZ:180:VAL:O	43:DZ:183:LEU:HB2	2.12	0.50
1:AA:1178:G:N2	1:AA:1180:A:H3'	2.26	0.50
1:AA:1360:A:H3'	1:AA:1361:G:H8	1.77	0.50
1:AA:652:U:O4	1:AA:752:G:O2'	2.27	0.50
1:AA:954:G:N2	1:AA:1227:A:H62	2.09	0.50
2:AB:167:PRO:CG	2:AB:188:ALA:HB2	2.42	0.50
7:AG:43:PHE:HA	7:AG:46:ALA:HB3	1.93	0.50
17:AQ:31:LEU:HD23	17:AQ:32:TYR:CZ	2.47	0.50
23:BA:1339:G:H5''	41:BX:16:LYS:HD3	1.94	0.50
23:BA:2158:A:H1'	23:BA:2159:G:C8	2.47	0.50
23:BA:2275:C:H5'	23:BA:2275:C:C6	2.47	0.50
23:BA:979:G:H3'	23:BA:980:A:C5'	2.42	0.50
30:BI:123:LEU:H	30:BI:123:LEU:HD23	1.76	0.50
36:BS:96:GLY:N	36:BS:99:LYS:H	2.10	0.50
23:BA:534:U:H5'	38:BU:42:ALA:HB1	1.93	0.50
41:BX:61:GLY:HA3	41:BX:73:ARG:O	2.11	0.50
1:CA:1309:G:C6	1:CA:1329:A:C6	3.00	0.50
5:CE:104:ALA:O	5:CE:107:ARG:HG2	2.12	0.50
7:CG:113:GLU:HB2	7:CG:119:ARG:HG3	1.92	0.50
7:CG:143:ARG:O	7:CG:147:ALA:N	2.37	0.50
13:CM:69:GLU:C	13:CM:71:ARG:H	2.15	0.50
13:CM:3:ARG:HB3	13:CM:8:GLU:O	2.12	0.50
14:CN:26:ARG:HH11	14:CN:47:LEU:HD21	1.76	0.50
23:DA:2125:G:N2	23:DA:2126:A:H62	2.10	0.50
23:DA:784:A:H5'	23:DA:785:G:OP1	2.11	0.50
24:DB:111:G:H2'	24:DB:112:U:H6	1.77	0.50
25:DD:101:GLU:OE1	25:DD:103:ARG:HD3	2.12	0.50
25:DD:254:THR:OG1	25:DD:254:THR:O	2.28	0.50
28:DG:44:GLY:HA2	28:DG:88:ILE:HG22	1.94	0.50
30:DI:76:THR:O	30:DI:105:HIS:HE1	1.94	0.50
1:AA:1016:A:H3'	1:AA:1017:G:C8	2.47	0.49
1:AA:369:C:O2'	1:AA:370:C:H5'	2.12	0.49
1:AA:757:U:H2'	1:AA:758:G:O4'	2.12	0.49
1:AA:975:A:H8	1:AA:975:A:H5'	1.76	0.49
2:AB:132:LYS:O	2:AB:135:GLN:HG2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:40:LEU:HD12	10:AJ:69:ASN:HB2	1.94	0.49
10:AJ:8:LEU:HD22	10:AJ:96:ILE:HA	1.94	0.49
23:BA:330:A:C2	23:BA:1210:A:H2'	2.34	0.49
23:BA:1419:A:C8	23:BA:1421:G:C6	3.00	0.49
23:BA:216:A:C4	23:BA:432:A:C2	3.00	0.49
23:BA:725:G:C6	23:BA:726:G:N1	2.80	0.49
23:BA:960:A:C8	23:BA:962:G:C8	3.00	0.49
27:BF:22:ALA:HB1	27:BF:24:LEU:HD22	1.94	0.49
1:CA:1025:U:O2	1:CA:1036:G:O6	2.30	0.49
1:CA:1111:A:H8	1:CA:1111:A:O5'	1.94	0.49
1:CA:1278:U:H5'	1:CA:1279:A:O4'	2.12	0.49
1:CA:414:A:H2'	1:CA:415:A:H8	1.77	0.49
1:CA:966:G:H5''	1:CA:969:A:C8	2.46	0.49
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.27	0.49
45:D1:82:LEU:O	45:D1:83:GLU:HG3	2.11	0.49
51:D7:8:ASN:C	51:D7:8:ASN:OD1	2.50	0.49
23:DA:1328:G:H2'	23:DA:1330:C:C5	2.47	0.49
23:DA:1689:A:N6	23:DA:1698:A:H2	1.98	0.49
23:DA:2472:G:H5'	23:DA:2473:U:C5'	2.39	0.49
24:DB:17:C:H2'	24:DB:18:G:O4'	2.12	0.49
1:AA:587:G:O2'	1:AA:588:G:OP2	2.26	0.49
1:AA:1255:G:H5''	3:AC:26:LYS:HZ1	1.77	0.49
1:AA:1379:G:O6	7:AG:2:ALA:N	2.45	0.49
2:AB:179:LYS:HA	8:AH:72:PRO:HG3	1.93	0.49
9:AI:16:ARG:HB2	9:AI:64:THR:HG22	1.93	0.49
9:AI:8:GLY:CA	9:AI:76:ALA:HB1	2.41	0.49
23:BA:1174:A:H5'	23:BA:1177:A:N6	2.25	0.49
23:BA:2033:A:P	56:BA:4596:HOH:O	2.69	0.49
23:BA:2165:G:H2'	23:BA:2166:G:C8	2.47	0.49
23:BA:2350:C:H2'	23:BA:2351:G:O4'	2.12	0.49
23:BA:2782:G:OP2	56:BA:4090:HOH:O	2.18	0.49
23:BA:2853:C:H2'	23:BA:2854:G:C8	2.47	0.49
23:BA:30:G:H2'	23:BA:31:C:C6	2.47	0.49
23:BA:686:G:OP1	51:B7:11:LYS:NZ	2.30	0.49
25:BD:108:PRO:HB3	25:BD:143:HIS:HE1	1.75	0.49
32:BO:10:VAL:HG13	32:BO:17:ARG:O	2.12	0.49
40:BW:86:LEU:HD22	40:BW:96:ILE:HD11	1.94	0.49
41:BX:31:HIS:CD2	41:BX:33:LYS:H	2.30	0.49
41:BX:50:LYS:HB3	41:BX:84:ALA:HB2	1.93	0.49
1:CA:1370:G:H5''	9:CI:12:GLU:OE2	2.12	0.49
1:CA:502:G:C2	1:CA:503:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:55:A:C5	1:CA:56:U:C5	3.00	0.49
2:CB:84:GLU:OE1	2:CB:216:SER:HA	2.12	0.49
2:CB:28:PHE:CZ	2:CB:189:ASP:HA	2.47	0.49
4:CD:9:CYS:SG	4:CD:22:LYS:NZ	2.70	0.49
13:CM:33:ALA:HA	13:CM:36:LYS:CB	2.43	0.49
15:CO:15:PHE:CE2	15:CO:84:LYS:HD2	2.48	0.49
1:CA:191:G:N2	20:CT:103:GLY:HA2	2.26	0.49
23:DA:1506:C:H2'	23:DA:1507:A:H5'	1.95	0.49
23:DA:184:C:H2'	23:DA:185:U:H6	1.77	0.49
23:DA:2496:C:OP1	34:DQ:82:ARG:HB3	2.12	0.49
43:DZ:179:ASP:HB2	43:DZ:182:LYS:HD3	1.94	0.49
1:AA:1027:C:H2'	1:AA:1028:C:C4	2.47	0.49
1:AA:1123:A:N6	1:AA:1150:U:H3	2.08	0.49
1:AA:1517:G:H1'	23:BA:1919:A:O3'	2.12	0.49
1:AA:250:A:H4'	1:AA:251:G:O5'	2.12	0.49
1:AA:618:C:H5'	1:AA:619:U:H5''	1.94	0.49
6:AF:42:GLU:OE1	6:AF:59:TYR:OH	2.26	0.49
17:AQ:45:HIS:HD2	17:AQ:65:ILE:HG12	1.76	0.49
21:AU:5:ASP:O	21:AU:11:GLY:HA3	2.11	0.49
23:BA:1028:A:N6	23:BA:1125:G:H2'	2.28	0.49
23:BA:1434:A:H61	23:BA:1558:A:H62	1.59	0.49
23:BA:1506:C:H2'	23:BA:1507:A:H5'	1.94	0.49
23:BA:2516:G:C6	23:BA:2517:C:N4	2.80	0.49
31:BN:58:ASP:OD1	31:BN:58:ASP:N	2.43	0.49
1:CA:1001(A):G:H2'	1:CA:1002:G:H8	1.77	0.49
1:CA:103:C:P	20:CT:17:ARG:HH21	2.36	0.49
1:CA:448:A:P	1:CA:485:G:H22	2.35	0.49
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.12	0.49
3:CC:139:GLN:O	3:CC:143:GLU:HB2	2.13	0.49
3:CC:175:LEU:H	3:CC:175:LEU:HD12	1.77	0.49
23:DA:102:G:HO2'	23:DA:103:A:P	2.34	0.49
23:DA:1513:C:H2'	23:DA:1514:U:H6	1.77	0.49
23:DA:2010:G:O6	56:DA:4669:HOH:O	2.19	0.49
25:DD:238:GLY:O	25:DD:239:ARG:HB3	2.13	0.49
29:DH:171:LEU:H	29:DH:171:LEU:HD23	1.77	0.49
33:DP:38:GLN:C	33:DP:40:SER:H	2.13	0.49
41:DX:9:LEU:HA	46:D2:36:ARG:HH21	1.77	0.49
43:DZ:138:GLU:HG2	43:DZ:156:LYS:NZ	2.28	0.49
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.12	0.49
1:AA:1446:U:H4'	1:AA:1447:A:C2	2.48	0.49
2:AB:226:ARG:HG3	2:AB:227:GLY:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.70	0.49
46:B2:13:ALA:HA	46:B2:16:LEU:HD12	1.93	0.49
23:BA:2133:G:C2'	23:BA:2158:A:H61	2.26	0.49
23:BA:2602:A:H1'	23:BA:2603:G:C5'	2.41	0.49
23:BA:2406:U:C2	33:BP:72:PRO:HG2	2.48	0.49
37:BT:91:ARG:HH11	37:BT:120:ARG:NH1	2.09	0.49
1:CA:1094:G:H22	1:CA:1105:A:H62	1.61	0.49
1:CA:1371:G:H2'	1:CA:1372:U:O4'	2.12	0.49
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.49
1:CA:757:U:H2'	1:CA:758:G:O4'	2.11	0.49
1:CA:77:G:O6	1:CA:78:G:N1	2.45	0.49
2:CB:213:LEU:HD22	2:CB:214:ILE:HD13	1.95	0.49
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.12	0.49
4:CD:25:ARG:O	4:CD:27:TYR:N	2.43	0.49
6:CF:49:ALA:HB2	18:CR:78:LEU:O	2.12	0.49
7:CG:103:TRP:CE2	7:CG:137:LYS:HD2	2.47	0.49
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.94	0.49
13:CM:50:GLU:O	13:CM:53:VAL:HG12	2.12	0.49
21:CU:12:LYS:HZ1	21:CU:19:GLY:HA3	1.76	0.49
23:DA:105:C:H2'	23:DA:106:C:C6	2.47	0.49
23:DA:443:A:H1'	23:DA:1201:C:O4'	2.12	0.49
23:DA:1268:A:H2'	23:DA:1269:A:O4'	2.12	0.49
23:DA:1489:U:H6	23:DA:1489:U:H3'	1.78	0.49
23:DA:1512:U:H2'	23:DA:1513:C:C6	2.46	0.49
23:DA:1889:A:H2'	23:DA:1890:A:C8	2.47	0.49
23:DA:557:U:H2'	23:DA:558:G:H8	1.77	0.49
23:DA:2250:G:C5	34:DQ:83:MET:HB2	2.47	0.49
42:DY:40:GLU:O	42:DY:42:VAL:HG23	2.11	0.49
1:AA:1345:U:C6	1:AA:1377:A:H2	2.30	0.49
1:AA:336:C:H2'	1:AA:337:C:H6	1.77	0.49
1:AA:826:C:H2'	1:AA:827:U:C6	2.48	0.49
2:AB:187:LEU:HD23	2:AB:201:ILE:HB	1.94	0.49
2:AB:24:TRP:CZ3	2:AB:29:ALA:HB2	2.47	0.49
8:AH:48:TYR:HA	8:AH:60:ARG:O	2.13	0.49
23:BA:1171:G:OP2	23:BA:1171:G:H8	1.96	0.49
23:BA:2892:A:H2'	23:BA:2893:G:C5'	2.42	0.49
24:BB:106:G:H5'	43:BZ:31:ARG:HG2	1.94	0.49
1:CA:35:G:N1	1:CA:550:G:C2	2.81	0.49
5:CE:91:LEU:HD12	5:CE:120:THR:HG22	1.94	0.49
22:CX:53:THR:HG23	22:CX:62:HIS:HB3	1.94	0.49
47:D3:46:ASN:O	47:D3:50:VAL:HG22	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1774:C:O5'	23:DA:1774:C:H6	1.94	0.49
24:DB:15:A:H1'	24:DB:110:G:C5	2.47	0.49
1:AA:130:A:OP2	1:AA:189(F):U:C2	2.66	0.49
1:AA:1350:A:H2'	1:AA:1351:U:C6	2.47	0.49
1:AA:1459:C:H3'	1:AA:1459:C:H6	1.77	0.49
1:AA:436:C:O2'	1:AA:437:U:OP2	2.22	0.49
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.43	0.49
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.78	0.49
9:AI:3:GLN:NE2	9:AI:18:PHE:HA	2.27	0.49
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.46	0.49
17:AQ:76:LEU:HD21	17:AQ:79:SER:N	2.27	0.49
21:AU:10:ARG:HA	21:AU:13:ILE:HG22	1.94	0.49
24:BB:43:C:H5''	48:B4:1:MET:HG2	1.93	0.49
23:BA:1688:U:H1'	23:BA:1701:A:C6	2.48	0.49
23:BA:1840:G:C6	23:BA:1841:U:C4	3.01	0.49
23:BA:1952:A:C6	23:BA:1953:A:N1	2.80	0.49
23:BA:2580:U:C5	23:BA:2581:G:C6	3.01	0.49
24:BB:31:C:N4	36:BS:32:LEU:HD13	2.28	0.49
23:BA:784:A:C5	25:BD:229:VAL:HG21	2.47	0.49
28:BG:11:TYR:HA	28:BG:15:VAL:HB	1.93	0.49
38:BU:59:ARG:O	38:BU:63:VAL:HG23	2.12	0.49
42:BY:6:HIS:H	42:BY:6:HIS:CD2	2.30	0.49
1:CA:1023:G:H8	1:CA:1023:G:OP2	1.95	0.49
1:CA:1212:U:H5'	1:CA:1213:A:OP1	2.13	0.49
7:CG:137:LYS:HD3	7:CG:140:ASP:HB2	1.95	0.49
7:CG:51:GLN:HG3	7:CG:58:PRO:HD3	1.95	0.49
1:CA:254:G:OP1	17:CQ:67:LYS:O	2.30	0.49
53:D9:10:ILE:HD12	53:D9:32:HIS:HA	1.93	0.49
43:DZ:125:LEU:HG	43:DZ:164:ALA:HB3	1.94	0.49
1:AA:1083:U:C5	1:AA:1084:G:C6	3.01	0.49
1:AA:1178:G:O2'	1:AA:1180:A:N7	2.33	0.49
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.77	0.49
1:AA:460:G:O6	1:AA:470:C:H5''	2.13	0.49
6:AF:55:ASP:HB3	6:AF:86:ARG:HH12	1.75	0.49
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.47	0.49
23:BA:1364:G:OP1	45:B1:2:SER:HA	2.13	0.49
23:BA:2114:A:O2'	23:BA:2168:G:H5'	2.12	0.49
23:BA:2150:U:H2'	23:BA:2151:G:H8	1.77	0.49
23:BA:2203:U:O2'	23:BA:2205:C:H5'	2.12	0.49
23:BA:2335:A:O2'	23:BA:2336:A:OP2	2.28	0.49
23:BA:2648:C:H2'	23:BA:2649:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:528:A:C2	23:BA:2043:C:H4'	2.47	0.49
23:BA:826:U:C4'	33:BP:55:ARG:HB2	2.43	0.49
23:BA:886:C:H2'	23:BA:887:A:H5'	1.95	0.49
23:BA:885:C:H5'	23:BA:886:C:OP2	2.13	0.49
43:BZ:48:PHE:O	43:BZ:52:SER:N	2.45	0.49
1:CA:674:G:H2'	1:CA:675:A:C8	2.47	0.49
1:CA:951:G:C5	1:CA:1231:G:C6	3.01	0.49
1:CA:974:A:OP1	1:CA:974:A:H8	1.95	0.49
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.43	0.49
7:CG:29:LYS:HB3	7:CG:105:VAL:HG11	1.93	0.49
7:CG:71:PRO:HB3	7:CG:138:LYS:O	2.13	0.49
1:CA:1251:A:H4'	9:CI:12:GLU:OE2	2.12	0.49
10:CJ:51:ARG:CZ	10:CJ:61:GLU:HB3	2.43	0.49
17:CQ:65:ILE:HD12	17:CQ:65:ILE:H	1.78	0.49
20:CT:26:ASN:OD1	20:CT:71:THR:HG23	2.12	0.49
23:DA:1031:G:H1	23:DA:1123:C:H42	1.59	0.49
23:DA:2711:A:OP1	23:DA:2712(A):A:OP1	2.31	0.49
24:DB:90:A:C5	24:DB:91:C:H1'	2.48	0.49
32:DO:115:VAL:HG13	32:DO:121:VAL:HG21	1.94	0.49
1:AA:22:G:H2'	1:AA:23:C:C6	2.48	0.49
7:AG:139:GLU:HB3	7:AG:143:ARG:NH2	2.28	0.49
9:AI:15:ALA:HB1	9:AI:63:ILE:HG23	1.95	0.49
18:AR:30:ASP:HB3	18:AR:33:ASP:HB2	1.94	0.49
1:AA:1320:C:N4	19:AS:36:ARG:HG3	2.28	0.49
45:B1:2:SER:HB3	45:B1:46:LEU:HD11	1.95	0.49
23:BA:1533:G:N2	23:BA:1536:C:H5	2.00	0.49
23:BA:1799:G:H5'	23:BA:1819:A:H61	1.77	0.49
23:BA:96:G:H4'	46:B2:48:HIS:CD2	2.48	0.49
24:BB:105:A:OP1	43:BZ:72:ARG:NH1	2.37	0.49
26:BE:2:LYS:HG3	26:BE:200:GLU:HB2	1.95	0.49
33:BP:138:LEU:HD23	33:BP:145:PRO:HG3	1.94	0.49
40:BW:14:PRO:HG2	40:BW:78:GLU:HG2	1.94	0.49
42:BY:68:HIS:ND1	42:BY:70:SER:HB3	2.28	0.49
42:BY:90:LEU:C	42:BY:92:ASN:H	2.15	0.49
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.48	0.49
1:CA:396:G:O2'	1:CA:398:C:OP1	2.19	0.49
1:CA:950:U:N3	1:CA:1231:G:N1	2.42	0.49
1:CA:93:G:O2'	1:CA:96:U:H5'	2.13	0.49
1:CA:993:G:H2'	1:CA:995:C:H41	1.78	0.49
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.13	0.49
17:CQ:76:LEU:HD21	17:CQ:79:SER:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:186:C:O3'	20:CT:82:SER:HB2	2.13	0.49
23:DA:1156:A:OP2	56:DA:4263:HOH:O	2.20	0.49
23:DA:1405:U:H2'	23:DA:1406:U:H6	1.74	0.49
23:DA:143:G:H2'	23:DA:143(A):C:H6	1.77	0.49
23:DA:2307:G:H5'	23:DA:2308:G:N2	2.28	0.49
30:DI:58:LEU:HG	30:DI:59:ALA:N	2.28	0.49
1:AA:1003:G:N2	1:AA:1004:A:O2'	2.45	0.49
1:AA:1224:G:C6	1:AA:1363:C:N3	2.81	0.49
1:AA:270:A:H2'	1:AA:271:C:C6	2.47	0.49
1:AA:420:U:N3	1:AA:422:C:N3	2.60	0.49
7:AG:113:GLU:HG2	7:AG:119:ARG:HB2	1.95	0.49
8:AH:10:LEU:HD22	8:AH:83:ILE:HD11	1.95	0.49
10:AJ:40:LEU:HB2	10:AJ:69:ASN:HB2	1.94	0.49
23:BA:2322:A:N6	23:BA:2335:A:C6	2.72	0.49
23:BA:2593:U:H2'	23:BA:2594:C:H6	1.76	0.49
1:CA:1026:G:N3	1:CA:1027:C:H5'	2.28	0.49
1:CA:1210:C:H3'	1:CA:1211:U:C5'	2.43	0.49
1:CA:952:U:O2	1:CA:1229:A:N1	2.46	0.49
1:CA:448:A:OP2	1:CA:485:G:N2	2.45	0.49
1:CA:986:A:H2'	1:CA:987:G:C8	2.47	0.49
17:CQ:86:GLU:HG2	17:CQ:90:ILE:HD11	1.95	0.49
23:DA:2125:G:N2	23:DA:2126:A:N6	2.61	0.49
23:DA:2158:A:H1'	23:DA:2159:G:C8	2.48	0.49
23:DA:947:G:N2	23:DA:971:C:C2	2.81	0.49
1:AA:1057:G:N2	1:AA:1204:A:H1'	2.28	0.49
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.77	0.49
1:AA:417:C:H6	1:AA:417:C:O5'	1.96	0.49
1:AA:674:G:H2'	1:AA:675:A:C8	2.47	0.49
1:AA:692:U:O2'	1:AA:694:A:N7	2.39	0.49
1:AA:946:A:OP2	1:AA:946:A:H8	1.95	0.49
2:AB:78:GLN:O	2:AB:94:ASN:ND2	2.43	0.49
3:AC:59:ARG:HG2	3:AC:64:VAL:CB	2.43	0.49
21:AU:5:ASP:HB3	21:AU:8:THR:OG1	2.11	0.49
23:BA:1356:G:C6	23:BA:1357:U:C4	3.01	0.49
23:BA:1657:C:H2'	23:BA:1658:C:C6	2.48	0.49
23:BA:1796:U:H2'	23:BA:1797:C:H6	1.77	0.49
23:BA:2461:C:H2'	23:BA:2462:U:H6	1.77	0.49
23:BA:2648:C:H2'	23:BA:2649:U:H6	1.78	0.49
24:BB:96:U:H2'	24:BB:97:G:H8	1.78	0.49
31:BN:39:ARG:NH2	31:BN:41:ASP:OD2	2.44	0.49
23:BA:751:A:H5'	40:BW:90:ARG:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1240:U:H3'	1:CA:1241:G:O4'	2.13	0.49
1:CA:830:G:H2'	1:CA:831:U:O4'	2.13	0.49
1:CA:868:C:H2'	1:CA:869:G:O4'	2.13	0.49
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.95	0.49
3:CC:148:GLY:CA	3:CC:172:ARG:H	2.25	0.49
3:CC:32:LEU:HD21	3:CC:59:ARG:CZ	2.43	0.49
17:CQ:66:SER:HB3	17:CQ:69:LYS:HB2	1.95	0.49
19:CS:12:ASP:HB2	19:CS:38:SER:OG	2.13	0.49
33:DP:64:LYS:HA	52:D8:13:ARG:HB3	1.94	0.49
23:DA:1593:G:H2'	23:DA:1594:G:C8	2.48	0.49
23:DA:2462:U:H1'	23:DA:2491:U:O4	2.13	0.49
23:DA:271(E):U:H3	23:DA:271(S):G:H1	1.60	0.49
23:DA:2854:G:H2'	23:DA:2855:C:C6	2.47	0.49
23:DA:704:G:H1'	23:DA:726:G:N2	2.27	0.49
23:DA:774:A:N3	23:DA:774:A:H2'	2.28	0.49
33:DP:83:VAL:CG1	33:DP:112:LEU:HD21	2.43	0.49
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.13	0.48
1:AA:1458:G:H3'	1:AA:1459:C:H5''	1.94	0.48
1:AA:859:A:H2'	1:AA:860:A:O4'	2.13	0.48
1:AA:959:A:O2'	1:AA:961:U:H5'	2.13	0.48
1:AA:986:A:H1'	19:AS:54:GLY:O	2.13	0.48
4:AD:177:ASP:CG	4:AD:180:GLY:HA3	2.33	0.48
5:AE:91:LEU:HD12	5:AE:120:THR:HG22	1.94	0.48
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.95	0.48
23:BA:127:A:H5''	23:BA:128:C:C6	2.48	0.48
23:BA:1419:A:O2'	23:BA:1420:U:H5''	2.13	0.48
23:BA:1509(B):A:H3'	23:BA:1510:G:H8	1.77	0.48
23:BA:1632:A:C6	23:BA:1633:G:C6	3.01	0.48
23:BA:1638:C:O2	23:BA:2698:U:O2'	2.28	0.48
23:BA:1794:U:H2'	23:BA:1795:C:H6	1.78	0.48
23:BA:1866:C:H2'	23:BA:1876:A:O4'	2.13	0.48
23:BA:226:G:H21	23:BA:228:A:N6	2.10	0.48
23:BA:826:U:H4'	33:BP:55:ARG:HB2	1.95	0.48
23:BA:1140:C:OP1	31:BN:23:LEU:O	2.30	0.48
43:BZ:180:VAL:O	43:BZ:183:LEU:HB2	2.12	0.48
1:CA:1144:G:H21	1:CA:1146:A:H61	1.60	0.48
1:CA:1320:C:H42	19:CS:36:ARG:HE	1.61	0.48
1:CA:266:G:H5''	1:CA:267:C:H5	1.77	0.48
1:CA:766:A:H2'	1:CA:767:A:O4'	2.12	0.48
3:CC:139:GLN:HA	3:CC:142:MET:HB2	1.93	0.48
7:CG:66:VAL:HA	7:CG:69:VAL:HG23	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:70:ILE:HG12	12:CL:100:ILE:HD13	1.95	0.48
1:CA:881:G:P	12:CL:12:ARG:HH22	2.35	0.48
13:CM:23:TYR:CD1	13:CM:67:GLU:HA	2.48	0.48
20:CT:56:MET:HE2	20:CT:88:VAL:HG21	1.95	0.48
23:DA:2293:C:H2'	23:DA:2294:C:C6	2.48	0.48
23:DA:848:G:H2'	23:DA:849:A:C8	2.48	0.48
23:DA:955:C:OP1	34:DQ:87:LYS:HE2	2.13	0.48
31:DN:132:ALA:HB3	31:DN:133:GLN:NE2	2.28	0.48
42:DY:6:HIS:CD2	42:DY:6:HIS:H	2.31	0.48
1:AA:1067:A:H8	1:AA:1067:A:O5'	1.96	0.48
1:AA:1234:C:H2'	1:AA:1235:U:C6	2.48	0.48
1:AA:1360:A:H3'	1:AA:1361:G:C8	2.48	0.48
1:AA:775:G:O2'	1:AA:776:G:H5'	2.13	0.48
1:AA:963:G:N2	1:AA:972:C:N3	2.50	0.48
1:AA:978:A:N6	1:AA:1316:G:H1'	2.28	0.48
2:AB:149:LEU:HD23	2:AB:149:LEU:HA	1.62	0.48
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.96	0.48
5:AE:71:LEU:HD23	5:AE:115:VAL:HG22	1.95	0.48
1:AA:1202:G:N2	14:AN:43:CYS:SG	2.85	0.48
17:AQ:55:ASP:HA	17:AQ:79:SER:HA	1.95	0.48
18:AR:36:ASN:ND2	18:AR:39:VAL:H	2.11	0.48
23:BA:2130:U:H2'	23:BA:2131:G:N7	2.27	0.48
23:BA:784:A:C8	23:BA:792:G:C5	3.01	0.48
36:BS:96:GLY:N	36:BS:99:LYS:HB3	2.28	0.48
1:CA:1069:C:H4'	1:CA:1192:C:O2	2.13	0.48
1:CA:1124:G:H1'	10:CJ:38:ILE:HG21	1.95	0.48
1:CA:1373:G:OP1	7:CG:36:LYS:HB2	2.13	0.48
1:CA:346:G:H2'	1:CA:347:G:O4'	2.14	0.48
1:CA:420:U:N3	1:CA:422:C:N3	2.61	0.48
9:CI:20:ARG:HG2	9:CI:21:PRO:O	2.13	0.48
12:CL:42:THR:HB	12:CL:52:LEU:HD12	1.94	0.48
23:DA:1654:A:OP1	35:DR:1:MET:HA	2.13	0.48
23:DA:2154:G:H2'	23:DA:2155:G:C8	2.48	0.48
23:DA:2648:C:H2'	23:DA:2649:U:C6	2.48	0.48
23:DA:870:A:C2	23:DA:908:C:C2	3.01	0.48
31:DN:62:VAL:CG1	31:DN:66:LYS:HB2	2.44	0.48
32:DO:35:VAL:HG21	32:DO:103:ALA:HB3	1.95	0.48
41:DX:11:PRO:HG2	41:DX:13:LEU:HD21	1.95	0.48
1:AA:1058:G:C6	1:AA:1059:C:N3	2.80	0.48
1:AA:1231:G:H2'	1:AA:1232:U:H6	1.76	0.48
1:AA:1293:G:O2'	1:AA:1294:G:OP2	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.47	0.48
1:AA:1309:G:C6	1:AA:1329:A:C5	3.00	0.48
1:AA:1457:G:C6	1:AA:1458:G:N7	2.82	0.48
1:AA:335:C:H2'	1:AA:336:C:C6	2.48	0.48
1:AA:838:G:H2'	1:AA:839:U:H5''	1.94	0.48
3:AC:153:VAL:HG22	3:AC:198:VAL:HG13	1.95	0.48
1:AA:1059:C:P	3:AC:199:LYS:HZ1	2.35	0.48
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.46	0.48
9:AI:9:ARG:HG2	9:AI:104:ARG:HH21	1.78	0.48
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.94	0.48
22:AX:22:ALA:O	22:AX:25:ALA:HB3	2.13	0.48
41:BX:9:LEU:HA	46:B2:36:ARG:HH21	1.79	0.48
49:B5:20:ARG:HG2	49:B5:23:HIS:CD2	2.48	0.48
23:BA:1047:G:H2'	23:BA:1110:G:N1	2.26	0.48
23:BA:1664:A:OP1	56:BA:4773:HOH:O	2.19	0.48
23:BA:2205:C:O2	23:BA:2220:G:C2	2.66	0.48
23:BA:573:G:O2'	23:BA:574:C:H3'	2.13	0.48
23:BA:729:G:OP2	25:BD:13:ARG:NH1	2.45	0.48
24:BB:96:U:H2'	24:BB:97:G:C8	2.47	0.48
26:BE:119:ARG:HG2	26:BE:160:TYR:HB2	1.94	0.48
27:BF:197:ASP:O	27:BF:201:VAL:HG12	2.12	0.48
29:BH:67:LEU:O	29:BH:71:LEU:HB2	2.13	0.48
23:BA:955:C:OP1	34:BQ:87:LYS:HE2	2.13	0.48
1:CA:1004:A:C2	1:CA:1037:C:N4	2.82	0.48
1:CA:1013:G:HO2'	1:CA:1014:A:H8	1.58	0.48
1:CA:1165:C:C2	1:CA:1171:G:N2	2.81	0.48
1:CA:189(A):C:H42	1:CA:189(J):G:H1	1.60	0.48
1:CA:512:U:H2'	1:CA:513:C:H6	1.79	0.48
1:CA:9:G:H2'	1:CA:10:A:C8	2.48	0.48
2:CB:77:ALA:HB1	2:CB:211:ILE:HG21	1.94	0.48
3:CC:132:ARG:O	3:CC:136:GLN:HB2	2.13	0.48
4:CD:120:LEU:HB3	4:CD:126:ILE:HD11	1.94	0.48
48:D4:22:ILE:HG22	48:D4:24:THR:HG23	1.95	0.48
23:DA:102:G:O2'	23:DA:103:A:O5'	2.26	0.48
23:DA:1316:U:H2'	23:DA:1317:A:C8	2.49	0.48
23:DA:1505:C:H2'	23:DA:1506:C:H6	1.78	0.48
23:DA:171:G:H2'	23:DA:172:C:O4'	2.14	0.48
23:DA:333:G:H5''	23:DA:334:C:OP2	2.12	0.48
23:DA:975:C:H5	56:DA:4455:HOH:O	1.95	0.48
23:DA:444:C:H4'	27:DF:49:ALA:HB2	1.94	0.48
35:DR:103:ARG:HH12	35:DR:110:PRO:HD3	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DZ:150:LEU:O	43:DZ:171:ILE:HG13	2.13	0.48
1:AA:954:G:H21	1:AA:1227:A:H62	1.61	0.48
1:AA:1268:A:H1'	1:AA:1327:C:H5'	1.94	0.48
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.49	0.48
1:AA:1443:G:O6	1:AA:1444:C:C4	2.66	0.48
1:AA:1443:G:O6	1:AA:1459:C:O2	2.31	0.48
1:AA:1459:C:C2'	1:AA:1460:A:N7	2.77	0.48
1:AA:223:U:H2'	1:AA:224:C:C6	2.49	0.48
1:AA:230:G:H1'	16:AP:25:ARG:HH22	1.78	0.48
1:AA:806:C:H2'	1:AA:807:A:C8	2.48	0.48
1:AA:838:G:N2	1:AA:849:C:C2	2.81	0.48
1:AA:97:G:O2'	1:AA:98:G:H8	1.91	0.48
2:AB:95:GLN:HG3	2:AB:147:LYS:HD3	1.95	0.48
3:AC:114:PRO:HD3	3:AC:183:ASP:OD1	2.13	0.48
3:AC:59:ARG:HA	3:AC:64:VAL:HA	1.93	0.48
1:AA:1301:U:H4'	13:AM:21:TYR:OH	2.14	0.48
20:AT:86:ARG:CZ	20:AT:86:ARG:HB3	2.42	0.48
23:BA:1366:A:OP1	45:B1:3:LYS:NZ	2.46	0.48
48:B4:14:ILE:HG22	48:B4:33:VAL:HG23	1.95	0.48
50:B6:14:THR:HG21	50:B6:48:VAL:HG13	1.95	0.48
23:BA:83:G:H22	23:BA:102:G:H2'	1.77	0.48
23:BA:2318:G:N3	23:BA:2318:G:H2'	2.28	0.48
23:BA:848:G:H2'	23:BA:849:A:C8	2.49	0.48
26:BE:72:VAL:HA	26:BE:73:GLU:OE2	2.13	0.48
28:BG:59:GLU:O	28:BG:63:ILE:HG13	2.13	0.48
33:BP:52:GLU:OE1	33:BP:55:ARG:NH1	2.47	0.48
37:BT:95:ARG:NH1	37:BT:95:ARG:HG2	2.26	0.48
23:BA:535:C:O3'	38:BU:53:ARG:NH1	2.46	0.48
42:BY:79:CYS:HB3	42:BY:81:LYS:H	1.77	0.48
1:CA:1086:U:H4'	1:CA:1389:C:H5''	1.94	0.48
1:CA:390:C:H2'	1:CA:391:G:C8	2.49	0.48
1:CA:625:G:C6	1:CA:626:U:C4	3.01	0.48
1:CA:684:A:H2'	1:CA:685:G:C8	2.47	0.48
2:CB:37:ASN:O	2:CB:39:ILE:HD12	2.13	0.48
1:CA:1071:C:H5''	5:CE:49:PRO:HG2	1.94	0.48
8:CH:37:ARG:HE	8:CH:37:ARG:HB3	1.50	0.48
23:DA:2165:G:H2'	23:DA:2166:G:C8	2.48	0.48
23:DA:2275:C:H5'	23:DA:2275:C:H6	1.78	0.48
23:DA:2318:G:N3	23:DA:2318:G:H2'	2.29	0.48
23:DA:2713:A:N3	23:DA:2713:A:H2'	2.29	0.48
23:DA:223:A:O2'	23:DA:420:C:O2	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:659:C:H4'	27:DF:100:THR:O	2.12	0.48
23:DA:968:G:H2'	23:DA:969:U:O4'	2.13	0.48
27:DF:50:SER:OG	27:DF:51:THR:N	2.45	0.48
32:DO:77:ILE:HG13	37:DT:74:ARG:HG2	1.95	0.48
37:DT:28:VAL:HG13	37:DT:86:ILE:HG23	1.95	0.48
42:DY:15:VAL:HG21	42:DY:42:VAL:HG11	1.94	0.48
1:AA:1338:G:H5'	1:AA:1339:A:OP2	2.13	0.48
2:AB:178:ARG:NH1	2:AB:196:LEU:O	2.46	0.48
23:BA:2069:G:OP2	56:BA:3862:HOH:O	2.20	0.48
23:BA:271(I):G:H2'	23:BA:271(J):C:C6	2.48	0.48
23:BA:2807:G:N1	23:BA:2808:U:C2	2.82	0.48
23:BA:71:A:H8	23:BA:71:A:H5'	1.75	0.48
23:BA:828:U:H4'	23:BA:831:G:N1	2.28	0.48
33:BP:95:VAL:HG22	33:BP:125:VAL:HB	1.96	0.48
34:BQ:63:LYS:HD2	34:BQ:65:PHE:CZ	2.49	0.48
1:CA:1256:A:H5'	1:CA:1258:G:O4'	2.13	0.48
1:CA:1446:U:H4'	1:CA:1447:A:C2	2.49	0.48
1:CA:1508:G:P	56:CA:2020:HOH:O	2.71	0.48
1:CA:560:U:OP2	56:CA:1914:HOH:O	2.20	0.48
1:CA:626:U:C2	1:CA:627:G:C8	3.02	0.48
1:CA:859:A:H2'	1:CA:860:A:O4'	2.13	0.48
2:CB:42:ILE:HD12	2:CB:203:GLY:HA2	1.96	0.48
3:CC:111:LEU:HD23	3:CC:141:VAL:HG13	1.94	0.48
6:CF:19:LEU:HD11	6:CF:59:TYR:CZ	2.49	0.48
17:CQ:76:LEU:HD21	17:CQ:79:SER:H	1.79	0.48
23:DA:2469:A:H5'	23:DA:2470:G:OP2	2.13	0.48
23:DA:335:C:H2'	23:DA:336:C:H6	1.79	0.48
23:DA:493:G:H2'	23:DA:494:G:O4'	2.14	0.48
23:DA:2748:A:H5'	29:DH:4:ILE:HD12	1.94	0.48
31:DN:30:ILE:HG22	31:DN:34:LEU:HD22	1.94	0.48
31:DN:39:ARG:NH2	31:DN:41:ASP:OD2	2.46	0.48
1:AA:1084:G:H5''	1:AA:1085:U:OP2	2.13	0.48
1:AA:1206:G:C6	1:AA:1207:G:C5	3.00	0.48
1:AA:1441:G:N2	1:AA:1459:C:C6	2.82	0.48
1:AA:393:A:C2	1:AA:394:G:C8	3.02	0.48
1:AA:60:A:H4'	1:AA:61:G:O5'	2.14	0.48
1:AA:830:G:H2'	1:AA:831:U:O4'	2.14	0.48
5:AE:137:GLU:O	5:AE:141:GLN:HB2	2.14	0.48
15:AO:4:THR:H	15:AO:7:GLU:HB2	1.79	0.48
20:AT:38:LYS:O	20:AT:41:ILE:HG13	2.14	0.48
22:AX:69:ASP:HB3	22:AX:71:TYR:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:12:U:O2	23:BA:12:U:H2'	2.14	0.48
23:BA:2324:C:H5''	23:BA:2325:G:H5'	1.95	0.48
23:BA:7:G:H2'	23:BA:8:A:C8	2.48	0.48
26:BE:92:THR:O	26:BE:95:ILE:HG23	2.12	0.48
28:BG:104:GLU:O	28:BG:108:ASN:ND2	2.47	0.48
28:BG:132:ASN:OD1	28:BG:158:ALA:HA	2.13	0.48
30:BI:5:LEU:HD12	30:BI:17:GLN:O	2.13	0.48
35:BR:37:THR:OG1	35:BR:40:LYS:HG3	2.13	0.48
40:BW:71:VAL:HA	40:BW:107:LEU:HD12	1.94	0.48
1:CA:1023:G:C2'	1:CA:1024:G:H5'	2.43	0.48
1:CA:1245:A:N6	1:CA:1292:U:H3	2.10	0.48
1:CA:1460:A:O5'	1:CA:1460:A:H8	1.95	0.48
1:CA:990:C:N4	1:CA:991:U:O4	2.47	0.48
7:CG:88:PRO:O	7:CG:89:MET:HG3	2.13	0.48
8:CH:111:ILE:HD12	8:CH:111:ILE:H	1.78	0.48
17:CQ:31:LEU:HD23	17:CQ:32:TYR:CZ	2.48	0.48
23:DA:1040:C:H2'	23:DA:1041:C:H1'	1.95	0.48
23:DA:1999:C:H5''	23:DA:2723:C:O2'	2.14	0.48
23:DA:485:C:H2'	23:DA:486:C:C6	2.48	0.48
23:DA:910:A:C6	23:DA:911:A:C6	3.01	0.48
28:DG:104:GLU:O	28:DG:108:ASN:ND2	2.47	0.48
29:DH:67:LEU:O	29:DH:71:LEU:HB2	2.14	0.48
32:DO:4:PRO:O	32:DO:5:GLN:HB2	2.13	0.48
36:DS:96:GLY:H	36:DS:99:LYS:H	1.60	0.48
39:DV:60:GLU:HB2	39:DV:97:LYS:HE2	1.95	0.48
1:AA:1099:G:H3'	1:AA:1100:C:H6	1.77	0.48
1:AA:1262:C:N4	1:AA:1273:G:H1	2.07	0.48
1:AA:1326:C:H5''	21:AU:19:GLY:HA2	1.95	0.48
1:AA:391:G:C6	1:AA:392:G:C5	3.02	0.48
1:AA:677:U:H2'	1:AA:678:U:C6	2.48	0.48
1:AA:766:A:H2'	1:AA:767:A:O4'	2.13	0.48
7:AG:108:ALA:CB	7:AG:120:ILE:HG12	2.43	0.48
12:AL:102:ARG:NH2	12:AL:109:GLY:O	2.47	0.48
22:AX:27:LEU:HD21	22:AX:85:LEU:HD13	1.95	0.48
44:B0:23:VAL:HG13	44:B0:38:VAL:HG23	1.95	0.48
46:B2:50:ILE:O	46:B2:51:ARG:HB3	2.13	0.48
51:B7:9:ARG:HB3	51:B7:46:VAL:HG23	1.96	0.48
23:BA:1494:A:H2'	23:BA:1495:A:H8	1.78	0.48
23:BA:2127:G:N2	23:BA:2173:A:H1'	2.28	0.48
23:BA:2175:C:H2'	23:BA:2176:A:O4'	2.14	0.48
23:BA:2315:G:H2'	23:BA:2316:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2751:G:C4	29:BH:2:SER:N	2.82	0.48
25:BD:101:GLU:OE1	25:BD:103:ARG:HD3	2.14	0.48
30:BI:102:SER:HA	30:BI:106:GLY:HA3	1.95	0.48
32:BO:107:ARG:CZ	37:BT:36:GLU:HG3	2.43	0.48
1:CA:1003:G:H1	1:CA:1037:C:N4	2.12	0.48
1:CA:1210:C:H1'	1:CA:1214:C:C2	2.49	0.48
1:CA:1427:U:H2'	1:CA:1428:A:C8	2.49	0.48
1:CA:636:U:H2'	1:CA:637:G:H8	1.78	0.48
2:CB:102:LEU:HB3	2:CB:180:LEU:HD12	1.96	0.48
2:CB:97:TRP:CZ3	2:CB:99:GLY:HA2	2.49	0.48
9:CI:65:VAL:HG13	9:CI:73:GLN:NE2	2.28	0.48
10:CJ:9:ARG:O	10:CJ:95:GLU:N	2.28	0.48
11:CK:33:THR:HA	11:CK:40:ILE:HG12	1.95	0.48
23:BA:652(J):G:H21	47:D3:5:LYS:NZ	2.12	0.48
23:DA:1001:A:H2'	23:DA:1002:G:O4'	2.13	0.48
23:DA:1488:G:N2	23:DA:1502:C:C2	2.82	0.48
23:DA:2001:A:H2'	23:DA:2002:G:C8	2.49	0.48
23:DA:1651:G:N2	23:DA:2007:C:C2	2.82	0.48
23:DA:2464:C:H1'	56:DA:3666:HOH:O	2.13	0.48
23:DA:300:A:P	42:DY:86:ARG:HH22	2.36	0.48
23:DA:498:G:O2'	23:DA:499:U:H5'	2.14	0.48
23:DA:709:U:H2'	23:DA:710:G:C8	2.49	0.48
27:DF:39:TRP:O	27:DF:43:LYS:HG2	2.13	0.48
28:DG:59:GLU:O	28:DG:63:ILE:HG13	2.14	0.48
29:DH:117:PRO:HB3	29:DH:123:PHE:CE2	2.48	0.48
31:DN:67:LEU:HA	31:DN:67:LEU:HD22	1.71	0.48
34:DQ:38:GLU:HB2	34:DQ:127:ILE:HG22	1.95	0.48
37:DT:26:ASP:OD2	37:DT:91:ARG:NH1	2.47	0.48
1:AA:1271:G:C6	1:AA:1272:G:C6	3.01	0.48
1:AA:1377:A:C8	1:AA:1377:A:C3'	2.96	0.48
1:AA:375:U:C4	1:AA:376:G:N7	2.82	0.48
1:AA:767:A:H2'	1:AA:768:A:O4'	2.14	0.48
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.13	0.48
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.94	0.48
1:AA:1351:U:H1'	7:AG:33:ASP:HB3	1.94	0.48
13:AM:13:LYS:HA	13:AM:44:ARG:HB3	1.96	0.48
13:AM:5:ALA:HA	13:AM:61:GLU:HG2	1.96	0.48
16:AP:65:GLN:HE21	16:AP:65:GLN:HB3	1.42	0.48
16:AP:75:ARG:HA	16:AP:80:PHE:HD1	1.79	0.48
23:BA:1001:A:H2'	23:BA:1002:G:O4'	2.13	0.48
23:BA:1113:U:H2'	23:BA:1114:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:171:G:H2'	23:BA:172:C:O4'	2.13	0.48
23:BA:2001:A:H2'	23:BA:2002:G:C8	2.49	0.48
23:BA:363(A):A:H2'	23:BA:363(B):G:H8	1.78	0.48
23:BA:646:A:H2'	23:BA:647:G:O4'	2.14	0.48
26:BE:21:VAL:HG23	26:BE:185:LYS:HG3	1.96	0.48
31:BN:36:GLY:HA2	31:BN:38:HIS:CE1	2.49	0.48
36:BS:14:VAL:HG11	36:BS:90:GLY:O	2.14	0.48
36:BS:62:LYS:HB3	36:BS:97:ARG:HD2	1.95	0.48
1:CA:1085:U:C2	1:CA:1094:G:O6	2.67	0.48
1:CA:1251:A:H61	1:CA:1354:C:HO2'	1.55	0.48
1:CA:1508:G:H2'	1:CA:1509:C:C6	2.49	0.48
1:CA:38:G:H22	1:CA:397:A:H5''	1.78	0.48
1:CA:962:C:H2'	1:CA:963:G:O4'	2.13	0.48
1:CA:968:A:OP1	1:CA:968:A:H8	1.97	0.48
4:CD:101:LEU:HD23	4:CD:102:ASP:N	2.29	0.48
1:CA:921:U:O2	5:CE:19:MET:HB2	2.14	0.48
16:CP:28:ARG:HG2	16:CP:29:ASP:OD2	2.13	0.48
23:DA:1159:U:H2'	23:DA:1160:G:H8	1.79	0.48
23:DA:1464:C:H2'	23:DA:1465:G:C8	2.48	0.48
23:DA:1652:A:OP1	35:DR:8:ARG:NH1	2.44	0.48
23:DA:645:C:O2	23:DA:645:C:H2'	2.13	0.48
24:DB:110:G:C2	24:DB:111:G:C5	3.01	0.48
24:DB:33:G:C6	24:DB:34:U:N3	2.82	0.48
26:DE:120:TRP:CE3	26:DE:155:LYS:HD3	2.49	0.48
26:DE:175:VAL:CG2	26:DE:177:PRO:HD3	2.43	0.48
27:DF:34:TRP:HE3	27:DF:35:GLU:HG2	1.79	0.48
30:DI:29:TYR:O	30:DI:32:PRO:HD2	2.14	0.48
30:DI:5:LEU:H	30:DI:5:LEU:HD12	1.79	0.48
30:DI:79:ILE:HA	30:DI:80:PRO:HD2	1.66	0.48
36:DS:62:LYS:HB3	36:DS:97:ARG:HD2	1.96	0.48
43:DZ:43:GLU:O	43:DZ:47:VAL:HG23	2.14	0.48
1:AA:1303:C:H2'	1:AA:1304:G:H5'	1.95	0.48
1:AA:651:C:H2'	1:AA:652:U:C6	2.49	0.48
1:AA:1279:A:H61	3:AC:26:LYS:HZ3	1.61	0.48
3:AC:79:ARG:H	3:AC:82:GLU:HB3	1.76	0.48
18:AR:66:LEU:O	18:AR:70:ILE:HG13	2.14	0.48
23:BA:1359:A:N6	23:BA:1372:U:C5	2.82	0.48
23:BA:1423:G:H2'	23:BA:1424:G:C8	2.47	0.48
23:BA:1388:G:H4'	23:BA:1525:G:O2'	2.14	0.48
23:BA:1433:U:O2	23:BA:1561:G:C2	2.67	0.48
23:BA:2173:A:H2'	23:BA:2174:C:H5'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2312:U:O2'	28:BG:40:ASN:ND2	2.41	0.48
33:BP:101:VAL:HA	33:BP:106:LEU:O	2.13	0.48
37:BT:123:GLN:O	37:BT:126:ALA:HB3	2.14	0.48
40:BW:4:LYS:HE2	40:BW:6:ILE:HD11	1.96	0.48
1:CA:1149:C:H2'	1:CA:1150:U:C6	2.49	0.48
1:CA:1276:G:H2'	1:CA:1277:C:O4'	2.13	0.48
1:CA:300:A:O2'	1:CA:564:C:N3	2.38	0.48
2:CB:117:GLU:O	2:CB:120:ALA:HB3	2.14	0.48
3:CC:7:PRO:O	3:CC:11:ARG:NH1	2.47	0.48
7:CG:32:ARG:HA	7:CG:32:ARG:HD3	1.50	0.48
10:CJ:62:HIS:CD2	10:CJ:62:HIS:N	2.81	0.48
11:CK:92:GLU:HB3	11:CK:96:ARG:HH12	1.77	0.48
44:D0:40:GLN:OE1	44:D0:44:ARG:N	2.37	0.48
45:D1:94:LEU:O	45:D1:97:LEU:HB2	2.13	0.48
48:D4:14:ILE:HG23	48:D4:31:ILE:HB	1.95	0.48
23:DA:2196:C:OP2	56:DA:4151:HOH:O	2.20	0.48
23:DA:784:A:O4'	25:DD:227:ASN:ND2	2.46	0.48
23:DA:2722:G:H5'	35:DR:4:LEU:HD12	1.96	0.48
39:DV:82:ARG:HD2	39:DV:82:ARG:N	2.29	0.48
43:DZ:98:MET:HE3	43:DZ:100:VAL:HG22	1.95	0.48
1:AA:156:G:C6	1:AA:166:G:C6	3.02	0.48
1:AA:748:C:H6	1:AA:748:C:O5'	1.97	0.48
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.94	0.48
5:AE:104:ALA:O	5:AE:107:ARG:HG2	2.14	0.48
5:AE:36:ASP:OD2	5:AE:38:GLN:N	2.44	0.48
7:AG:62:PHE:HZ	7:AG:101:LEU:HD21	1.78	0.48
23:BA:1925:C:O2'	23:BA:1926:U:H5'	2.14	0.48
23:BA:2110:G:O2'	23:BA:2120:G:H5'	2.14	0.48
23:BA:528:A:O2'	23:BA:529:A:H5'	2.14	0.48
28:BG:3:LEU:HD11	28:BG:97:ASP:HB3	1.95	0.48
1:CA:1251:A:N3	1:CA:1369:C:O2'	2.34	0.48
1:CA:1236:A:O2'	1:CA:1304:G:H4'	2.13	0.48
1:CA:1516:G:N1	1:CA:1519:A:OP2	2.45	0.48
1:CA:324:G:OP2	56:CA:1973:HOH:O	2.20	0.48
1:CA:671:G:H2'	1:CA:672:U:C6	2.48	0.48
1:CA:989:C:C4	1:CA:990:C:C4	3.02	0.48
3:CC:175:LEU:HD23	3:CC:201:TYR:HE2	1.79	0.48
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.49	0.48
12:CL:32:PHE:HB3	12:CL:84:LEU:HD11	1.95	0.48
1:CA:1360:A:C6	14:CN:18:VAL:HG11	2.49	0.48
20:CT:25:ARG:O	20:CT:29:LYS:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1467:C:C5	23:DA:1546:C:H2'	2.49	0.48
23:DA:1564:C:H2'	23:DA:1565:C:C6	2.48	0.48
23:DA:1996:C:O3'	56:DA:4359:HOH:O	2.20	0.48
23:DA:2319:G:N2	36:DS:3:ARG:HA	2.29	0.48
23:DA:2665:A:OP2	56:DA:3746:HOH:O	2.20	0.48
23:DA:973:A:O4'	23:DA:1188:U:C6	2.66	0.48
29:DH:20:ALA:HB3	29:DH:23:ARG:HB2	1.96	0.48
32:DO:54:GLU:HB2	56:DO:303:HOH:O	2.14	0.48
35:DR:50:HIS:CE1	35:DR:54:LEU:HD21	2.48	0.48
23:DA:1188:U:C4'	39:DV:79:VAL:HG22	2.44	0.48
40:DW:82:LEU:HD22	40:DW:84:ARG:NH2	2.28	0.48
1:AA:1300:G:HO2'	1:AA:1301:U:P	2.37	0.47
1:AA:1459:C:H2'	1:AA:1460:A:C8	2.48	0.47
2:AB:102:LEU:HB3	2:AB:180:LEU:HD12	1.94	0.47
5:AE:75:THR:HA	5:AE:115:VAL:HG13	1.96	0.47
7:AG:75:VAL:CG1	7:AG:144:MET:HB3	2.44	0.47
7:AG:26:PHE:HA	7:AG:101:LEU:HD13	1.96	0.47
11:AK:23:ALA:O	11:AK:86:GLY:HA3	2.13	0.47
15:AO:61:GLY:O	15:AO:65:ARG:HG3	2.14	0.47
19:AS:47:HIS:HB2	19:AS:49:ILE:HG13	1.95	0.47
1:AA:1226:C:H5''	19:AS:80:TYR:CD1	2.50	0.47
20:AT:36:LEU:HA	20:AT:36:LEU:HD13	1.61	0.47
50:B6:11:LEU:HB3	50:B6:49:HIS:HB3	1.96	0.47
23:BA:1011:G:OP2	38:BU:66:ASN:ND2	2.44	0.47
23:BA:2208:A:H1'	23:BA:2219:G:C5	2.49	0.47
38:BU:109:LEU:HD23	38:BU:109:LEU:HA	1.67	0.47
41:BX:24:GLY:O	41:BX:83:VAL:HG22	2.14	0.47
1:CA:1296:C:H5''	1:CA:1302:U:C4	2.49	0.47
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.96	0.47
1:CA:176:C:H2'	1:CA:177:C:C6	2.49	0.47
1:CA:458:C:H2'	1:CA:460:G:C8	2.49	0.47
1:CA:57:G:H2'	1:CA:58:C:C6	2.49	0.47
3:CC:134:ILE:HD11	3:CC:153:VAL:HG23	1.95	0.47
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	1.96	0.47
1:CA:673:G:H5''	6:CF:87:ARG:CZ	2.44	0.47
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.46	0.47
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.94	0.47
44:D0:14:ARG:HH11	44:D0:14:ARG:HG3	1.78	0.47
23:DA:1388:G:H4'	23:DA:1525:G:O2'	2.13	0.47
25:DD:71:ASP:HB3	25:DD:103:ARG:NH2	2.27	0.47
25:DD:158:ALA:O	25:DD:161:THR:OG1	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DS:35:ILE:HG12	36:DS:101:LEU:HD12	1.96	0.47
36:DS:56:LEU:C	36:DS:58:LEU:HD22	2.34	0.47
43:DZ:98:MET:CE	43:DZ:100:VAL:HG22	2.43	0.47
1:AA:1128:C:H1'	1:AA:1146:A:N6	2.29	0.47
1:AA:1307:U:H6	1:AA:1307:U:O5'	1.97	0.47
1:AA:165:C:H2'	1:AA:166:G:H8	1.79	0.47
1:AA:600:C:H2'	1:AA:601:C:C6	2.49	0.47
1:AA:785:G:H2'	1:AA:786:G:H5'	1.94	0.47
1:AA:983:A:N3	1:AA:984:C:H5'	2.28	0.47
5:AE:8:GLU:HB2	5:AE:34:VAL:HG23	1.96	0.47
8:AH:56:LYS:HA	8:AH:57:PRO:HD2	1.73	0.47
23:BA:31:C:N4	56:BA:5264:HOH:O	2.46	0.47
23:BA:863:A:H2'	23:BA:864:G:C8	2.49	0.47
27:BF:183:VAL:O	27:BF:187:VAL:HG23	2.14	0.47
31:BN:34:LEU:O	31:BN:49:GLY:HA3	2.14	0.47
32:BO:98:VAL:HG13	32:BO:117:LEU:HB3	1.97	0.47
34:BQ:43:THR:OG1	34:BQ:45:GLN:HG2	2.13	0.47
43:BZ:108:PRO:HB2	43:BZ:111:VAL:HG23	1.96	0.47
1:CA:1089:G:N1	1:CA:1096:C:N4	2.39	0.47
1:CA:1442(A):G:H2'	1:CA:1442(B):A:O4'	2.14	0.47
1:CA:149:A:O2'	1:CA:150:C:C6	2.67	0.47
1:CA:309:G:H2'	1:CA:310:G:H8	1.79	0.47
1:CA:375:U:C2	1:CA:376:G:C8	3.01	0.47
1:CA:401:C:OP1	4:CD:73:ARG:NH2	2.47	0.47
1:CA:545:C:OP2	4:CD:62:GLN:NE2	2.46	0.47
7:CG:133:GLY:HA2	7:CG:136:LYS:CB	2.44	0.47
10:CJ:44:VAL:HG22	10:CJ:66:ARG:HD3	1.95	0.47
13:CM:85:GLY:HA3	13:CM:86:CYS:HA	1.32	0.47
13:CM:92:HIS:CE1	13:CM:98:VAL:HG21	2.49	0.47
1:CA:1319:A:H5'	19:CS:4:SER:HA	1.96	0.47
23:DA:1047:G:H2'	23:DA:1110:G:N1	2.29	0.47
27:DF:64:ILE:HD11	27:DF:75:HIS:HB2	1.95	0.47
1:AA:1246:C:H2'	1:AA:1247:U:O4'	2.14	0.47
1:AA:1277:C:H2'	1:AA:1278:U:H5''	1.97	0.47
1:AA:1347:G:H5''	9:AI:107:ARG:CG	2.44	0.47
1:AA:657:G:H2'	1:AA:658:G:H8	1.79	0.47
1:AA:977:A:C8	1:AA:1223:C:C4	3.00	0.47
1:AA:1127:G:O2'	9:AI:16:ARG:NH2	2.48	0.47
23:BA:2091:U:O2'	45:B1:47:GLN:HG3	2.14	0.47
23:BA:1246:A:OP1	27:BF:38:ARG:NH1	2.45	0.47
23:BA:2119:A:OP1	23:BA:2119:A:H2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:229:A:H8	23:BA:229:A:H3'	1.77	0.47
23:BA:2713:A:N3	23:BA:2713:A:H2'	2.30	0.47
23:BA:330:A:HO2'	23:BA:331:A:H8	1.62	0.47
23:BA:645:C:H2'	23:BA:645:C:O2	2.14	0.47
23:BA:789:A:H5''	56:BA:4568:HOH:O	2.14	0.47
28:BG:38:VAL:HG22	28:BG:93:THR:HG23	1.95	0.47
39:BV:52:VAL:CG2	39:BV:55:ALA:HB3	2.44	0.47
39:BV:76:LYS:HB2	39:BV:81:TYR:HB3	1.96	0.47
41:BX:5:TYR:CZ	46:B2:30:ARG:HB2	2.48	0.47
1:CA:1017:G:H2'	1:CA:1018:C:C6	2.49	0.47
1:CA:1157:A:C5	1:CA:1181:G:C2	3.03	0.47
1:CA:940:C:N3	1:CA:1343:G:N2	2.60	0.47
1:CA:564:C:O2'	8:CH:91:ARG:NH2	2.34	0.47
1:CA:717:C:H4'	11:CK:117:ASN:HB3	1.95	0.47
1:CA:806:C:H2'	1:CA:807:A:C8	2.50	0.47
3:CC:136:GLN:HB2	3:CC:136:GLN:HE21	1.50	0.47
5:CE:110:LEU:HD13	5:CE:118:ILE:HG21	1.95	0.47
7:CG:80:VAL:HG23	7:CG:83:ALA:O	2.14	0.47
27:DF:117:ARG:HD3	27:DF:117:ARG:HA	1.57	0.47
34:DQ:2:LEU:HB3	34:DQ:70:PRO:HG3	1.96	0.47
34:DQ:39:PRO:HA	34:DQ:97:VAL:O	2.14	0.47
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.48	0.47
1:AA:1128:C:N3	1:AA:1143:G:N2	2.51	0.47
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.14	0.47
1:AA:1375:A:O3'	7:AG:29:LYS:HE2	2.14	0.47
1:AA:370:C:H2'	1:AA:371:G:C8	2.49	0.47
1:AA:954:G:H2'	1:AA:955:U:C6	2.50	0.47
4:AD:72:GLU:OE1	4:AD:207:TYR:OH	2.19	0.47
7:AG:32:ARG:O	7:AG:35:LYS:HG3	2.15	0.47
10:AJ:38:ILE:HG13	10:AJ:40:LEU:HD21	1.96	0.47
16:AP:23:ASP:OD1	16:AP:25:ARG:HG3	2.14	0.47
50:B6:14:THR:HB	50:B6:48:VAL:O	2.13	0.47
23:BA:1320:C:P	56:BA:5012:HOH:O	2.67	0.47
23:BA:1513:C:H2'	23:BA:1514:U:H6	1.78	0.47
23:BA:1628:G:H2'	23:BA:1629:U:C6	2.49	0.47
23:BA:2094:G:H5'	30:BI:25:TYR:CD2	2.50	0.47
23:BA:495:G:H21	40:BW:61:ASN:HD21	1.61	0.47
25:BD:10:THR:OG1	25:BD:13:ARG:HB2	2.15	0.47
33:BP:65:ARG:HD3	33:BP:66:GLY:N	2.29	0.47
34:BQ:11:LYS:HE2	34:BQ:88:GLY:O	2.15	0.47
1:CA:263:A:OP2	20:CT:79:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:475:G:H2'	1:CA:476:G:H8	1.78	0.47
1:CA:604:G:C5	1:CA:605:U:C5	3.02	0.47
1:CA:616:G:N2	1:CA:624:C:O2	2.42	0.47
1:CA:930:C:H2'	1:CA:931:C:H6	1.79	0.47
1:CA:965:A:OP1	1:CA:1198:G:H5''	2.14	0.47
2:CB:70:PHE:CD2	2:CB:163:PHE:HB3	2.50	0.47
4:CD:14:ARG:HA	4:CD:39:PRO:HB3	1.97	0.47
7:CG:127:ALA:HB1	7:CG:135:VAL:HG13	1.96	0.47
13:CM:97:PRO:HB2	13:CM:103:THR:HG22	1.95	0.47
16:CP:71:ARG:O	16:CP:75:ARG:N	2.47	0.47
20:CT:86:ARG:CZ	20:CT:86:ARG:HB3	2.43	0.47
23:DA:1268:A:P	56:DA:3880:HOH:O	2.70	0.47
23:DA:1540:U:H2'	23:DA:1541:G:O4'	2.15	0.47
23:DA:557:U:O2	31:DN:45:ASN:HB2	2.15	0.47
23:DA:445:C:OP1	38:DU:2:PRO:HA	2.14	0.47
1:AA:1352:C:OP1	21:AU:3:LYS:NZ	2.47	0.47
1:AA:142:G:H1	1:AA:221:C:H42	1.61	0.47
1:AA:580:U:H2'	1:AA:581:G:O4'	2.15	0.47
1:AA:666:G:H5'	1:AA:726:C:H1'	1.97	0.47
1:AA:96:U:O2'	1:AA:97:G:H8	1.98	0.47
2:AB:16:HIS:CD2	2:AB:209:ARG:HG3	2.49	0.47
2:AB:86:GLU:C	2:AB:89:GLY:H	2.17	0.47
3:AC:153:VAL:HA	3:AC:197:GLY:O	2.14	0.47
8:AH:97:VAL:HG21	8:AH:128:GLY:HA2	1.96	0.47
11:AK:33:THR:HA	11:AK:40:ILE:HG12	1.97	0.47
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.95	0.47
45:B1:51:VAL:HG11	45:B1:74:VAL:HG21	1.95	0.47
28:BG:5:VAL:HG12	48:B4:25:TYR:CE1	2.49	0.47
23:BA:1321:A:H2'	23:BA:1322:A:O4'	2.14	0.47
23:BA:528:A:C2	23:BA:2042:A:H2'	2.49	0.47
23:BA:2133:G:H21	23:BA:2158:A:H62	1.61	0.47
23:BA:244:A:C2	23:BA:255:A:C4	3.02	0.47
23:BA:830:G:H4'	23:BA:831:G:OP2	2.15	0.47
30:BI:130:TYR:HD2	30:BI:132:PRO:HD3	1.79	0.47
1:CA:491:G:H2'	1:CA:492:G:O4'	2.15	0.47
1:CA:73:G:C6	1:CA:97:G:C6	3.02	0.47
1:CA:767:A:H2'	1:CA:768:A:O4'	2.14	0.47
2:CB:61:LEU:HD21	2:CB:160:ASP:HB2	1.97	0.47
7:CG:108:ALA:O	7:CG:119:ARG:HB3	2.14	0.47
7:CG:42:ILE:CA	7:CG:45:ASP:HB2	2.41	0.47
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:652(T):C:H2'	23:DA:652(U):G:C8	2.49	0.47
23:DA:868:U:H2'	23:DA:869:G:O4'	2.14	0.47
25:DD:118:VAL:N	25:DD:129:ASN:ND2	2.60	0.47
27:DF:158:THR:O	27:DF:164:ARG:NH1	2.44	0.47
23:DA:322:A:OP1	27:DF:168:ARG:NH1	2.48	0.47
43:DZ:126:VAL:HG21	43:DZ:161:VAL:HG13	1.96	0.47
1:AA:1307:U:C4	1:AA:1308:U:C5	3.03	0.47
1:AA:142:G:C4	1:AA:143:A:C8	3.03	0.47
1:AA:458:C:H2'	1:AA:460:G:C8	2.49	0.47
1:AA:460:G:H1'	1:AA:472:A:H61	1.80	0.47
3:AC:132:ARG:O	3:AC:136:GLN:N	2.39	0.47
3:AC:180:ALA:O	3:AC:203:PHE:HE1	1.96	0.47
8:AH:31:PHE:CE2	8:AH:35:ILE:HD11	2.49	0.47
7:AG:16:LEU:HD22	9:AI:45:ALA:H	1.79	0.47
17:AQ:66:SER:HB3	17:AQ:69:LYS:HB2	1.97	0.47
50:B6:25:LYS:HE3	50:B6:30:THR:O	2.15	0.47
23:BA:1545:A:H2'	23:BA:1546:C:O4'	2.15	0.47
23:BA:1578:U:H2'	23:BA:1579:A:H5'	1.96	0.47
23:BA:2126:A:H1'	23:BA:2127:G:OP2	2.14	0.47
23:BA:2243:U:H2'	23:BA:2244:U:H6	1.79	0.47
23:BA:2462:U:H1'	23:BA:2491:U:O4	2.15	0.47
23:BA:2505:G:H2'	23:BA:2576:G:O6	2.13	0.47
23:BA:993:G:C6	23:BA:994:C:C4	3.03	0.47
23:BA:322:A:OP2	27:BF:169:ASN:HB2	2.14	0.47
31:BN:96:GLU:H	31:BN:96:GLU:CD	2.18	0.47
33:BP:65:ARG:HB3	56:BP:311:HOH:O	2.14	0.47
1:CA:113:G:N3	1:CA:353:A:O2'	2.37	0.47
1:CA:1441:G:C2	1:CA:1459:C:C5	3.02	0.47
1:CA:1458:G:N2	1:CA:1459:C:O4'	2.47	0.47
1:CA:59:A:H5''	1:CA:60:A:C5'	2.45	0.47
1:CA:920:U:H2'	1:CA:921:U:H6	1.78	0.47
6:CF:45:LEU:HD11	6:CF:57:GLN:OE1	2.14	0.47
9:CI:9:ARG:HD2	9:CI:104:ARG:HH21	1.78	0.47
56:CA:1967:HOH:O	16:CP:13:HIS:CD2	2.67	0.47
22:CX:3:LEU:HD21	22:CX:24:PHE:HB2	1.96	0.47
23:DA:1339:G:H5''	41:DX:16:LYS:HD3	1.97	0.47
23:DA:141:A:C8	23:DA:1408:C:O2'	2.55	0.47
23:DA:1488:G:N1	23:DA:1489:U:O2	2.47	0.47
23:DA:212:G:O2'	23:DA:213:A:H5'	2.15	0.47
23:DA:530:G:C6	23:DA:2022:U:H5''	2.50	0.47
23:DA:684:G:OP1	51:D7:16:HIS:ND1	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:31:C:N4	36:DS:32:LEU:HD13	2.30	0.47
1:AA:131:C:OP2	1:AA:189(G):G:O2'	2.32	0.47
1:AA:345:C:H4'	1:AA:346:G:C5	2.50	0.47
1:AA:626:U:C2	1:AA:627:G:C8	3.03	0.47
1:AA:971:G:OP1	1:AA:972:C:H5''	2.15	0.47
5:AE:19:MET:SD	5:AE:24:ARG:HB3	2.55	0.47
11:AK:32:ILE:HD11	11:AK:68:ALA:HB1	1.96	0.47
11:AK:46:GLY:HA2	11:AK:50:TYR:O	2.15	0.47
1:AA:1327:C:H5''	21:AU:20:LYS:HB2	1.96	0.47
23:BA:1358:G:O2'	23:BA:1359:A:H5'	2.14	0.47
23:BA:1810:A:H2'	23:BA:1811:G:O4'	2.14	0.47
23:BA:2469:A:C2	23:BA:2482:G:C8	3.03	0.47
23:BA:2505:G:O6	23:BA:2576:G:H2'	2.14	0.47
23:BA:652(O):C:H2'	23:BA:652(P):G:C8	2.50	0.47
23:BA:975:C:C6	56:BA:4752:HOH:O	2.56	0.47
24:BB:110:G:C2	24:BB:111:G:C5	3.02	0.47
25:BD:33:LEU:O	25:BD:64:ILE:HG13	2.14	0.47
32:BO:4:PRO:O	32:BO:5:GLN:HB2	2.14	0.47
43:BZ:151:HIS:HD2	43:BZ:168:GLU:O	1.98	0.47
1:CA:505:G:C6	1:CA:535:A:C2	3.03	0.47
1:CA:819:A:H4'	1:CA:820:U:OP2	2.13	0.47
1:CA:946:A:C2	1:CA:1236:A:C2	3.02	0.47
2:CB:142:LEU:HG	2:CB:146:GLN:HE21	1.80	0.47
2:CB:179:LYS:HA	8:CH:72:PRO:HG3	1.96	0.47
2:CB:226:ARG:HG3	2:CB:227:GLY:H	1.80	0.47
3:CC:182:ILE:HG23	3:CC:202:ILE:C	2.34	0.47
7:CG:71:PRO:HA	7:CG:138:LYS:NZ	2.30	0.47
13:CM:60:VAL:HG13	13:CM:64:TRP:CZ3	2.50	0.47
23:DA:1545:A:H2'	23:DA:1546:C:O4'	2.14	0.47
23:DA:1578:U:H2'	23:DA:1579:A:H5'	1.97	0.47
23:DA:2127:G:N2	23:DA:2173:A:H1'	2.29	0.47
23:DA:226:G:H21	23:DA:228:A:N6	2.13	0.47
23:DA:218:A:C2	23:DA:235:U:H4'	2.49	0.47
23:DA:2698:U:H2'	23:DA:2699:C:C6	2.50	0.47
23:DA:2881:C:H2'	23:DA:2882:A:O4'	2.15	0.47
23:DA:543:C:H42	23:DA:549:G:H1	1.62	0.47
23:DA:192:C:O2'	23:DA:802:A:N3	2.42	0.47
37:DT:93:ARG:NH1	37:DT:93:ARG:HG2	2.30	0.47
23:DA:2011:U:OP1	40:DW:42:ARG:NH1	2.48	0.47
1:AA:1133:G:H2'	1:AA:1134:G:C8	2.50	0.47
1:AA:346:G:H2'	1:AA:347:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.96	0.47
1:AA:605:U:H2'	1:AA:606:G:H8	1.76	0.47
1:AA:676:A:O2'	1:AA:677:U:H5'	2.15	0.47
1:AA:977:A:C2'	1:AA:978:A:H5'	2.45	0.47
2:AB:155:LEU:HD11	2:AB:159:PRO:HD3	1.95	0.47
1:AA:1298:C:C4	7:AG:114:ARG:HD2	2.49	0.47
9:AI:27:THR:HA	9:AI:31:GLN:O	2.14	0.47
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.96	0.47
23:BA:1695:G:H2'	23:BA:1696:G:O4'	2.15	0.47
23:BA:1794:U:H2'	23:BA:1795:C:C6	2.49	0.47
23:BA:2674:G:H2'	23:BA:2675:A:C8	2.49	0.47
23:BA:885:C:H3'	23:BA:886:C:H6	1.79	0.47
26:BE:10:GLY:HA2	26:BE:192:ASN:OD1	2.14	0.47
27:BF:117:ARG:HA	27:BF:117:ARG:HD3	1.56	0.47
28:BG:81:LYS:CB	28:BG:82:LEU:HD12	2.44	0.47
31:BN:55:VAL:HG22	31:BN:125:GLY:HA3	1.96	0.47
32:BO:70:LYS:HE2	32:BO:70:LYS:HB3	1.70	0.47
43:BZ:126:VAL:HG21	43:BZ:161:VAL:HG13	1.95	0.47
1:CA:1023:G:H3'	1:CA:1024:G:C8	2.49	0.47
1:CA:1053:G:N7	1:CA:1200:C:H5''	2.30	0.47
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.96	0.47
1:CA:109:A:C6	1:CA:326:G:C6	3.03	0.47
1:CA:1225:A:N3	1:CA:1225:A:H2'	2.30	0.47
1:CA:709:G:C4	1:CA:710:G:C8	3.02	0.47
5:CE:8:GLU:HB2	5:CE:34:VAL:HG23	1.96	0.47
6:CF:99:ALA:HB3	18:CR:29:PHE:CE1	2.49	0.47
23:DA:1849:G:H2'	23:DA:1850:G:H8	1.79	0.47
23:DA:2117:A:N6	23:DA:2166:G:H22	2.11	0.47
23:DA:2336:A:H61	44:D0:43:THR:CG2	2.28	0.47
23:DA:396:G:H1'	45:D1:42:GLN:HB3	1.97	0.47
23:DA:86:C:H4'	23:DA:104:U:H1'	1.97	0.47
23:DA:879:G:H2'	23:DA:880:G:O4'	2.14	0.47
29:DH:37:VAL:HG12	29:DH:38:SER:O	2.14	0.47
32:DO:98:VAL:HG13	32:DO:117:LEU:HB3	1.96	0.47
33:DP:138:LEU:HD23	33:DP:145:PRO:HG3	1.97	0.47
38:DU:14:HIS:HA	38:DU:32:PHE:CE2	2.50	0.47
39:DV:65:GLY:HA3	39:DV:91:TYR:CZ	2.50	0.47
1:AA:1004:A:H2'	1:AA:1036:G:O6	2.15	0.47
1:AA:1027:C:C1'	1:AA:1034:G:H22	2.27	0.47
1:AA:1002:G:N2	1:AA:1039:C:H1'	2.30	0.47
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1125:U:H5'	1:AA:1126:U:C5	2.47	0.47
1:AA:1276:G:H2'	1:AA:1277:C:O4'	2.15	0.47
1:AA:1399:C:C2	1:AA:1401:G:C5	3.03	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.15	0.47
1:AA:51:A:C6	1:AA:353:A:C2	3.02	0.47
1:AA:937:A:H3'	1:AA:938:A:C8	2.48	0.47
2:AB:111:ARG:HD3	2:AB:111:ARG:HA	1.54	0.47
10:AJ:49:VAL:CG2	14:AN:41:ARG:HB2	2.44	0.47
23:BA:1641:A:H2'	23:BA:1642:G:O4'	2.14	0.47
23:BA:2516:G:C6	23:BA:2517:C:C4	3.02	0.47
23:BA:301:G:C4	23:BA:302:C:C5	3.03	0.47
23:BA:34:C:H5''	23:BA:35:G:OP2	2.15	0.47
39:BV:60:GLU:HB2	39:BV:97:LYS:HE2	1.96	0.47
43:BZ:151:HIS:N	43:BZ:154:ASP:OD1	2.46	0.47
1:CA:1133:G:H2'	1:CA:1134:G:C8	2.50	0.47
1:CA:555:C:H2'	1:CA:556:C:H6	1.79	0.47
1:CA:973:G:C3'	1:CA:974:A:H5''	2.37	0.47
2:CB:171:ALA:HA	2:CB:174:VAL:HB	1.96	0.47
5:CE:78:HIS:HA	8:CH:105:ARG:HG3	1.95	0.47
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.15	0.47
9:CI:10:ARG:O	9:CI:72:GLY:HA2	2.15	0.47
11:CK:32:ILE:HG12	11:CK:32:ILE:H	1.57	0.47
19:CS:12:ASP:O	19:CS:14:HIS:N	2.40	0.47
47:D3:44:ARG:O	47:D3:48:GLU:HG3	2.15	0.47
23:DA:1039:G:H1'	23:DA:1117:G:N2	2.30	0.47
23:DA:1204:A:N1	23:DA:1241:A:N7	2.63	0.47
23:DA:1429:G:H2'	23:DA:1430:C:H6	1.77	0.47
23:DA:2262:U:H4'	23:DA:2328:A:C2	2.50	0.47
23:DA:614(C):A:C4	27:DF:180:GLY:HA2	2.50	0.47
35:DR:50:HIS:O	35:DR:54:LEU:HD22	2.15	0.47
43:DZ:40:ASP:OD1	43:DZ:42:VAL:HG13	2.15	0.47
1:AA:1112:C:O5'	1:AA:1112:C:H6	1.98	0.47
1:AA:1492:A:H4'	1:AA:1492:A:OP1	2.14	0.47
1:AA:403:C:H2'	1:AA:404:U:H6	1.79	0.47
1:AA:475:G:H2'	1:AA:476:G:C8	2.49	0.47
1:AA:539:A:OP2	12:AL:115:LYS:HD2	2.14	0.47
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.48	0.47
1:AA:836:G:C6	1:AA:851:G:C6	3.03	0.47
1:AA:959:A:C2	1:AA:1221:G:N3	2.83	0.47
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.15	0.47
7:AG:13:GLN:O	7:AG:21:VAL:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:9:ARG:HG3	10:AJ:95:GLU:HB3	1.96	0.47
15:AO:15:PHE:CE2	15:AO:84:LYS:HD2	2.49	0.47
19:AS:52:TYR:HD1	19:AS:57:HIS:CD2	2.32	0.47
52:B8:54:GLU:O	52:B8:58:ILE:HG12	2.15	0.47
23:BA:1529:G:O2'	23:BA:1530:C:H5'	2.15	0.47
23:BA:2536:G:C6	23:BA:2537:U:C4	3.03	0.47
23:BA:576:U:H2'	23:BA:577:G:C8	2.49	0.47
30:BI:72:LEU:C	30:BI:74:ASN:H	2.17	0.47
35:BR:20:LEU:HD21	35:BR:40:LYS:HD3	1.96	0.47
1:CA:1229:A:H2'	1:CA:1230:C:C6	2.50	0.47
1:CA:1299:A:C4	1:CA:1301:U:H1'	2.50	0.47
1:CA:130:A:O2'	1:CA:131:C:O5'	2.32	0.47
1:CA:77:G:O6	1:CA:78:G:C2	2.68	0.47
1:CA:964:A:H8	1:CA:964:A:O5'	1.98	0.47
1:CA:9:G:H2'	1:CA:10:A:H8	1.79	0.47
4:CD:121:VAL:HA	4:CD:126:ILE:HG12	1.95	0.47
4:CD:159:ARG:O	4:CD:162:LEU:N	2.47	0.47
9:CI:105:ASP:HB2	9:CI:107:ARG:HD3	1.97	0.47
10:CJ:49:VAL:CG2	14:CN:41:ARG:HB2	2.43	0.47
10:CJ:45:ARG:N	10:CJ:65:LEU:O	2.33	0.47
15:CO:74:ASP:OD1	15:CO:76:GLU:HB2	2.15	0.47
23:DA:2777:G:H5''	23:DA:2778:A:H5'	1.97	0.47
23:DA:2807:G:N1	23:DA:2808:U:C2	2.83	0.47
25:DD:172:TYR:CD1	25:DD:186:HIS:HA	2.50	0.47
26:DE:67:PHE:HD1	26:DE:72:VAL:HG12	1.80	0.47
28:DG:5:VAL:HG11	28:DG:101:ILE:HG12	1.96	0.47
30:DI:110:ASP:N	30:DI:130:TYR:OH	2.45	0.47
30:DI:124:GLY:H	30:DI:144:VAL:HG13	1.80	0.47
31:DN:30:ILE:HG23	31:DN:52:VAL:HG11	1.97	0.47
38:DU:76:TYR:CZ	38:DU:80:ILE:HG13	2.49	0.47
1:AA:1446:U:H4'	1:AA:1447:A:C6	2.50	0.47
1:AA:627:G:N3	1:AA:628:G:C8	2.83	0.47
1:AA:627:G:H2'	1:AA:628:G:C8	2.48	0.47
1:AA:939:G:O2'	1:AA:1375:A:H2'	2.15	0.47
1:AA:943:U:O4	1:AA:1340:A:N1	2.48	0.47
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.48	0.47
9:AI:7:THR:HG21	9:AI:9:ARG:HH11	1.80	0.47
17:AQ:86:GLU:O	17:AQ:90:ILE:HG13	2.15	0.47
44:B0:24:LYS:O	44:B0:25:ARG:HD3	2.15	0.47
23:BA:819:A:C4	23:BA:1189:A:C2	3.03	0.47
23:BA:1649:G:N1	23:BA:2009:G:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:184:C:H2'	23:BA:185:U:H6	1.79	0.47
23:BA:2008:C:OP2	56:BA:4713:HOH:O	2.20	0.47
23:BA:2176:A:H5'	23:BA:2177:C:OP2	2.15	0.47
26:BE:52:LEU:O	26:BE:76:ARG:HG2	2.15	0.47
28:BG:37:VAL:HG23	28:BG:99:MET:HG3	1.96	0.47
37:BT:93:ARG:HG2	37:BT:93:ARG:HH11	1.79	0.47
1:CA:1395:C:O2'	1:CA:1401:G:O2'	2.13	0.47
1:CA:232:G:H1'	1:CA:262:A:N1	2.30	0.47
1:CA:56:U:H2'	1:CA:57:G:H8	1.80	0.47
1:CA:949:A:C6	1:CA:950:U:C4	3.03	0.47
6:CF:25:ILE:CD1	6:CF:82:ARG:HE	2.28	0.47
10:CJ:50:ILE:CA	10:CJ:60:ARG:HG2	2.32	0.47
13:CM:16:ASP:HB3	13:CM:34:LEU:HD11	1.97	0.47
14:CN:18:VAL:HG12	14:CN:18:VAL:O	2.15	0.47
14:CN:4:LYS:HA	14:CN:7:ILE:HG12	1.96	0.47
50:D6:25:LYS:HE3	50:D6:30:THR:O	2.13	0.47
53:D9:17:ILE:HD13	53:D9:17:ILE:HA	1.61	0.47
23:DA:1695:G:H2'	23:DA:1696:G:O4'	2.15	0.47
23:DA:1891:G:O5'	23:DA:1891:G:H8	1.97	0.47
23:DA:2311:A:O2'	23:DA:2312:U:O4'	2.33	0.47
23:DA:2317:C:N4	23:DA:2318:G:C6	2.83	0.47
23:DA:2319:G:H1'	23:DA:2320:A:H5''	1.97	0.47
23:DA:272:G:N7	23:DA:421:U:H2'	2.30	0.47
23:DA:2820:A:O2'	23:DA:2821:A:OP1	2.29	0.47
23:DA:2846:G:H2'	23:DA:2847:U:O4'	2.15	0.47
23:DA:652(Q):G:H2'	23:DA:652(R):C:C6	2.50	0.47
24:DB:24:G:H4'	24:DB:25:A:C8	2.49	0.47
26:DE:92:THR:O	26:DE:95:ILE:HG23	2.14	0.47
28:DG:66:GLN:HG2	48:D4:1:MET:HE3	1.97	0.47
32:DO:107:ARG:CZ	37:DT:36:GLU:HG3	2.44	0.47
33:DP:84:ASN:ND2	33:DP:117:GLU:HB2	2.29	0.47
43:DZ:102:LEU:HD13	43:DZ:123:ASP:HA	1.97	0.47
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.49	0.46
1:AA:1362:C:H2'	1:AA:1363:C:H5''	1.97	0.46
1:AA:309:G:H2'	1:AA:310:G:H8	1.79	0.46
1:AA:921:U:H2'	1:AA:922:G:O4'	2.15	0.46
1:AA:934:C:H42	1:AA:939:G:N2	2.13	0.46
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.15	0.46
12:AL:25:PRO:C	12:AL:27:LEU:H	2.16	0.46
16:AP:23:ASP:O	16:AP:26:ARG:HB2	2.15	0.46
20:AT:30:LYS:HA	20:AT:33:ILE:HD13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:414:C:H2'	23:BA:415:A:C8	2.51	0.46
23:BA:879:G:H2'	23:BA:880:G:O4'	2.15	0.46
29:BH:154:PRO:HB3	29:BH:163:TYR:CE2	2.51	0.46
29:BH:40:GLU:OE2	29:BH:60:ARG:NH1	2.48	0.46
30:BI:127:VAL:HA	30:BI:140:LEU:O	2.15	0.46
34:BQ:26:TYR:CE1	34:BQ:28:ALA:HB2	2.50	0.46
38:BU:76:TYR:CZ	38:BU:80:ILE:HG13	2.50	0.46
1:CA:1323:G:H4'	1:CA:1363:C:C2	2.50	0.46
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.50	0.46
1:CA:1441:G:N3	1:CA:1459:C:H5	2.13	0.46
1:CA:350:G:O2'	1:CA:351:G:H5'	2.15	0.46
1:CA:600:C:H2'	1:CA:601:C:C6	2.50	0.46
1:CA:956:U:H4'	19:CS:82:GLY:O	2.15	0.46
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.15	0.46
3:CC:19:GLU:HA	3:CC:54:ARG:HH12	1.80	0.46
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.50	0.46
7:CG:69:VAL:HG21	7:CG:104:LEU:CD1	2.40	0.46
8:CH:25:ASP:HA	8:CH:59:LEU:O	2.15	0.46
23:DA:1021:A:C8	23:DA:1021:A:H3'	2.50	0.46
23:DA:1530:C:H1'	23:DA:1531:C:OP1	2.14	0.46
23:DA:2206:G:HO2'	23:DA:2207:G:P	2.38	0.46
23:DA:2536:G:C6	23:DA:2537:U:C4	3.03	0.46
25:DD:132:PRO:HD3	25:DD:190:TYR:CZ	2.50	0.46
28:DG:11:TYR:HB2	28:DG:176:LEU:HD21	1.97	0.46
28:DG:132:ASN:OD1	28:DG:158:ALA:HA	2.15	0.46
34:DQ:133:ARG:HG2	34:DQ:134:ARG:N	2.29	0.46
42:DY:86:ARG:HD2	42:DY:100:ALA:HA	1.97	0.46
42:DY:7:VAL:HG21	42:DY:72:VAL:HG12	1.96	0.46
43:DZ:121:HIS:HB3	43:DZ:123:ASP:O	2.15	0.46
43:DZ:19:ARG:HA	43:DZ:23:LYS:O	2.15	0.46
1:AA:1137:C:H5'	1:AA:1138:G:C6	2.50	0.46
1:AA:1198:G:C6	1:AA:1199:U:C4	3.04	0.46
1:AA:555:C:H2'	1:AA:556:C:C6	2.50	0.46
1:AA:746:A:H2'	1:AA:747:C:C6	2.50	0.46
9:AI:43:ALA:O	9:AI:45:ALA:HA	2.15	0.46
13:AM:10:PRO:O	13:AM:45:VAL:HG11	2.15	0.46
16:AP:28:ARG:HG2	16:AP:29:ASP:OD2	2.15	0.46
23:BA:143(A):C:H2'	23:BA:144:C:C6	2.50	0.46
23:BA:2472:G:H5'	23:BA:2473:U:C5'	2.40	0.46
23:BA:443:A:H1'	23:BA:1201:C:O4'	2.14	0.46
23:BA:709:U:H2'	23:BA:710:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:47:VAL:CG1	26:BE:86:PRO:HD2	2.42	0.46
30:BI:9:LEU:HB3	30:BI:12:LEU:HB2	1.97	0.46
30:BI:73:GLU:HG2	30:BI:139:GLN:O	2.15	0.46
23:BA:896:A:N1	34:BQ:60:ARG:NH2	2.63	0.46
36:BS:96:GLY:H	36:BS:99:LYS:H	1.64	0.46
38:BU:36:ARG:HD2	38:BU:40:PHE:CZ	2.50	0.46
41:BX:35:THR:O	41:BX:39:ILE:HG13	2.16	0.46
43:BZ:138:GLU:HG2	43:BZ:156:LYS:NZ	2.30	0.46
1:CA:105:G:H2'	1:CA:106:C:C6	2.51	0.46
2:CB:233:SER:OG	2:CB:234:PRO:HD2	2.15	0.46
7:CG:119:ARG:HB2	7:CG:119:ARG:HE	1.45	0.46
11:CK:84:VAL:CG1	11:CK:91:ARG:HD2	2.44	0.46
17:CQ:55:ASP:HA	17:CQ:79:SER:HA	1.97	0.46
47:D3:10:LYS:NZ	47:D3:15:TYR:OH	2.47	0.46
23:DA:1049:C:H1'	23:DA:1113:U:H4'	1.97	0.46
23:DA:2169:A:H3'	23:DA:2170:A:H8	1.81	0.46
23:DA:2298:A:H2'	23:DA:2299:G:O4'	2.15	0.46
23:DA:527:C:C4	23:DA:2779:U:H2'	2.49	0.46
27:DF:110:LEU:HD21	27:DF:181:LEU:HG	1.96	0.46
23:DA:910:A:N7	34:DQ:13:GLN:HG3	2.29	0.46
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.80	0.46
1:AA:1380:U:C5	7:AG:3:ARG:HA	2.50	0.46
1:AA:928:G:C2	1:AA:1390:U:O2	2.68	0.46
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.97	0.46
10:AJ:32:ALA:HA	10:AJ:33:GLN:HA	1.70	0.46
19:AS:9:VAL:HG12	19:AS:10:PHE:H	1.80	0.46
23:BA:118:A:C8	23:BA:119:A:C8	3.03	0.46
23:BA:1450:G:H2'	23:BA:1450(A):C:H6	1.80	0.46
23:BA:207:A:H2'	23:BA:208:C:O4'	2.15	0.46
23:BA:54:G:O6	56:BA:3995:HOH:O	2.20	0.46
23:BA:944:G:H2'	56:BA:4981:HOH:O	2.15	0.46
24:BB:46:A:C5	24:BB:47:C:C5	3.03	0.46
33:BP:82:GLY:HA2	33:BP:113:LYS:O	2.15	0.46
34:BQ:2:LEU:HB3	34:BQ:70:PRO:HG3	1.97	0.46
36:BS:59:LYS:HE2	36:BS:60:GLY:HA2	1.98	0.46
1:CA:1006:C:H42	1:CA:1024:G:N2	1.93	0.46
1:CA:1016:A:H1'	1:CA:1218:C:H1'	1.97	0.46
1:CA:1106:G:H5''	3:CC:172:ARG:CD	2.44	0.46
1:CA:1157:A:C6	1:CA:1180:A:C5	3.03	0.46
1:CA:11:G:C6	1:CA:12:U:C4	3.03	0.46
1:CA:1240:U:C5'	1:CA:1241:G:H8	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1297:C:C3'	1:CA:1298:C:H5'	2.44	0.46
1:CA:1307:U:H2'	1:CA:1308:U:C6	2.50	0.46
1:CA:1349:A:H2'	1:CA:1350:A:C8	2.39	0.46
1:CA:707:C:O2'	1:CA:708:C:H5'	2.16	0.46
3:CC:147:LYS:O	3:CC:203:PHE:HD2	1.97	0.46
1:CA:413:G:N7	4:CD:35:ARG:NH2	2.63	0.46
4:CD:36:ARG:HB3	4:CD:38:TYR:CZ	2.51	0.46
7:CG:44:TYR:HA	7:CG:47:CYS:HB2	1.97	0.46
11:CK:99:GLN:HG3	11:CK:105:VAL:HG11	1.97	0.46
19:CS:36:ARG:HB3	19:CS:72:GLY:HA3	1.97	0.46
23:DA:1106:G:O2'	23:DA:1107:G:OP1	2.29	0.46
23:DA:1945:G:H2'	23:DA:1946:U:C6	2.51	0.46
23:DA:2544:G:H1'	23:DA:2646:C:H4'	1.97	0.46
23:DA:2870:C:H2'	23:DA:2871:C:O4'	2.16	0.46
23:DA:512:G:C8	56:DA:3836:HOH:O	2.68	0.46
23:DA:582:G:H2'	23:DA:583:G:C8	2.50	0.46
25:DD:118:VAL:N	25:DD:129:ASN:HD22	2.09	0.46
28:DG:19:LEU:HG	28:DG:175:LEU:HD22	1.97	0.46
29:DH:149:ARG:HG3	29:DH:162:ILE:O	2.15	0.46
29:DH:149:ARG:NH1	29:DH:167:GLU:OE1	2.49	0.46
33:DP:65:ARG:HD3	33:DP:66:GLY:N	2.30	0.46
37:DT:118:ARG:HG3	37:DT:118:ARG:HH11	1.80	0.46
1:AA:1027:C:C2	1:AA:1034:G:N1	2.82	0.46
1:AA:1104:G:C2	1:AA:1105:A:C4	3.03	0.46
1:AA:545:C:OP2	4:AD:62:GLN:NE2	2.49	0.46
3:AC:123:GLN:O	3:AC:128:PHE:HB2	2.16	0.46
3:AC:36:ASP:HB2	3:AC:40:ARG:NH1	2.30	0.46
4:AD:157:LEU:O	4:AD:161:ASN:ND2	2.29	0.46
9:AI:18:PHE:CD1	9:AI:62:TYR:HB3	2.51	0.46
13:AM:102:ARG:NH1	13:AM:104:ARG:HD3	2.31	0.46
21:AU:12:LYS:HE2	21:AU:21:TYR:HD1	1.81	0.46
23:BA:1505:C:H2'	23:BA:1506:C:H6	1.80	0.46
23:BA:1534:U:O2'	23:BA:1535:A:P	2.73	0.46
23:BA:188:G:H1	23:BA:208:C:N4	2.13	0.46
23:BA:1907:G:C6	23:BA:1908:C:C4	3.04	0.46
23:BA:228:A:H2'	23:BA:230:U:O4'	2.15	0.46
23:BA:2319:G:H1'	23:BA:2320:A:H5''	1.98	0.46
23:BA:2463:C:O2'	23:BA:2464:C:H5'	2.16	0.46
23:BA:2729:G:H2'	23:BA:2730:C:O4'	2.16	0.46
23:BA:2774:C:H2'	23:BA:2775:A:O4'	2.15	0.46
23:BA:27:G:O2'	23:BA:28:A:OP2	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:265:A:N6	23:BA:427:U:O2'	2.43	0.46
23:BA:706:A:H2'	23:BA:707:G:O4'	2.16	0.46
25:BD:13:ARG:HD2	25:BD:16:MET:HE3	1.96	0.46
43:BZ:39:VAL:HG21	43:BZ:44:PHE:HB2	1.98	0.46
1:CA:953:G:C6	1:CA:1228:C:N3	2.82	0.46
1:CA:1264:C:O2'	1:CA:1265:G:H5'	2.15	0.46
1:CA:1441:G:H5'	1:CA:1442:G:OP1	2.15	0.46
1:CA:1501:C:N4	1:CA:1504:G:C2	2.84	0.46
3:CC:32:LEU:CD1	3:CC:59:ARG:HD2	2.44	0.46
1:CA:191:G:H21	20:CT:103:GLY:HA2	1.81	0.46
47:D3:10:LYS:HB3	47:D3:53:LEU:HA	1.97	0.46
51:D7:9:ARG:HB3	51:D7:46:VAL:HG23	1.97	0.46
23:DA:1040:C:H2'	23:DA:1041:C:C1'	2.44	0.46
23:DA:1282:U:H2'	23:DA:1283:G:O4'	2.15	0.46
23:DA:2002:G:OP2	35:DR:9:LYS:NZ	2.48	0.46
23:DA:2110:G:O2'	23:DA:2120:G:H5'	2.15	0.46
23:DA:2175:C:H2'	23:DA:2176:A:O4'	2.16	0.46
23:DA:39:C:H2'	23:DA:40:C:H6	1.78	0.46
23:DA:634:C:H2'	23:DA:635:C:C6	2.51	0.46
23:DA:775:G:C4	23:DA:794:G:C8	3.03	0.46
25:DD:112:GLN:HB2	25:DD:115:GLN:OE1	2.16	0.46
25:DD:77:ALA:HA	25:DD:97:TYR:HA	1.97	0.46
34:DQ:103:MET:CE	34:DQ:125:LEU:HD13	2.45	0.46
39:DV:95:LEU:HD13	39:DV:97:LYS:HD3	1.98	0.46
1:AA:1151:A:O4'	10:AJ:39:PRO:HB2	2.16	0.46
1:AA:1164:G:C4	1:AA:1173:G:C2	3.03	0.46
1:AA:1330:U:O4	1:AA:1331:G:C2	2.68	0.46
1:AA:489:C:C4	1:AA:490:G:N7	2.84	0.46
1:AA:914:A:OP1	56:AA:1805:HOH:O	2.21	0.46
1:AA:986:A:O2'	19:AS:55:LYS:O	2.34	0.46
4:AD:173:TRP:CD2	4:AD:189:PRO:HG3	2.51	0.46
9:AI:8:GLY:O	9:AI:14:VAL:HA	2.15	0.46
3:AC:23:TYR:HA	10:AJ:11:PHE:CE1	2.51	0.46
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.69	0.46
23:BA:143:G:H2'	23:BA:143(A):C:C6	2.50	0.46
23:BA:1557:C:H5''	23:BA:1558:A:OP2	2.16	0.46
23:BA:2117:A:N6	23:BA:2166:G:H22	2.10	0.46
23:BA:2223:G:H2'	23:BA:2224:G:H5'	1.97	0.46
29:BH:90:LYS:O	29:BH:160:LYS:HA	2.16	0.46
35:BR:12:ARG:HG2	35:BR:16:HIS:CG	2.50	0.46
23:BA:534:U:O2'	38:BU:49:HIS:CD2	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1300:G:HO2'	1:CA:1301:U:P	2.38	0.46
1:CA:1349:A:C2	1:CA:1374:A:C5	3.02	0.46
1:CA:270:A:H2'	1:CA:271:C:C6	2.51	0.46
1:CA:324:G:N2	1:CA:327:A:C8	2.84	0.46
1:CA:922:G:H1'	5:CE:19:MET:HB2	1.98	0.46
4:CD:173:TRP:HB2	4:CD:187:ARG:O	2.15	0.46
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.16	0.46
7:CG:96:GLN:HE21	7:CG:96:GLN:HB3	1.49	0.46
20:CT:77:ALA:O	20:CT:81:LYS:HG3	2.15	0.46
22:CX:53:THR:HG23	22:CX:62:HIS:ND1	2.30	0.46
23:DA:1025:G:C4	23:DA:1135:C:H1'	2.51	0.46
23:DA:2133:G:C2'	23:DA:2158:A:H61	2.28	0.46
23:DA:2818:G:O2'	23:DA:2819:G:H5'	2.16	0.46
27:DF:185:ASP:OD1	27:DF:188:ARG:NH1	2.45	0.46
23:DA:448:U:H1'	27:DF:84:VAL:HG11	1.97	0.46
32:DO:23:ARG:HG3	32:DO:24:VAL:N	2.30	0.46
32:DO:87:ILE:HG22	32:DO:93:PRO:HA	1.97	0.46
34:DQ:2:LEU:HB3	34:DQ:70:PRO:CG	2.45	0.46
37:DT:18:ASP:OD1	37:DT:18:ASP:N	2.28	0.46
1:AA:1254:C:H5'	1:AA:1356:G:H4'	1.97	0.46
1:AA:102:G:O2'	1:AA:151:A:N3	2.46	0.46
1:AA:932:C:H2'	1:AA:933:G:C8	2.51	0.46
1:AA:963:G:HO2'	10:AJ:54:PHE:HE2	1.62	0.46
2:AB:74:LYS:O	2:AB:78:GLN:HB2	2.15	0.46
9:AI:15:ALA:HA	9:AI:65:VAL:HB	1.96	0.46
19:AS:12:ASP:O	19:AS:14:HIS:N	2.42	0.46
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	1.97	0.46
22:AX:23:LYS:HA	22:AX:23:LYS:HD3	1.72	0.46
51:B7:9:ARG:HH21	51:B7:47:ARG:HD3	1.80	0.46
51:B7:8:ASN:C	51:B7:8:ASN:OD1	2.53	0.46
23:BA:278:A:HO2'	23:BA:279:C:P	2.33	0.46
25:BD:112:GLN:HA	25:BD:112:GLN:NE2	2.31	0.46
36:BS:36:TYR:N	36:BS:36:TYR:CD1	2.84	0.46
43:BZ:24:LEU:C	43:BZ:24:LEU:HD12	2.36	0.46
1:CA:1170:A:H5''	1:CA:1171:G:OP2	2.16	0.46
1:CA:1206:G:C4	1:CA:1207:G:C8	3.04	0.46
1:CA:1499:A:O2'	1:CA:1520:G:H5'	2.15	0.46
1:CA:940:C:H1'	1:CA:1374:A:C2	2.49	0.46
1:CA:949:A:H1'	1:CA:1364:U:C2	2.49	0.46
1:CA:96:U:O2'	1:CA:97:G:H8	1.99	0.46
2:CB:55:PHE:HA	2:CB:58:ILE:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:27:THR:HB	9:CI:61:ALA:O	2.15	0.46
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.46
22:CX:63:ALA:HB3	22:CX:81:LEU:HD23	1.97	0.46
23:DA:2279:G:O6	44:D0:14:ARG:HD2	2.16	0.46
47:D3:40:THR:HG23	47:D3:43:ILE:HD12	1.98	0.46
52:D8:31:HIS:O	52:D8:32:LEU:HB2	2.16	0.46
23:DA:1797:C:C2'	23:DA:1798:U:H5'	2.46	0.46
23:DA:1866:C:H2'	23:DA:1876:A:O4'	2.16	0.46
23:DA:1910:G:O2'	23:DA:1911:U:H5'	2.15	0.46
23:DA:2054:A:H5''	23:DA:2055:C:O5'	2.16	0.46
23:DA:2130:U:OP2	23:DA:2132:U:H5	1.98	0.46
23:DA:247:G:H4'	23:DA:386:G:C5	2.51	0.46
23:DA:2839:G:C5'	35:DR:46:GLY:HA2	2.46	0.46
23:DA:787:U:OP1	56:DA:4090:HOH:O	2.20	0.46
24:DB:8:U:H5'	24:DB:9:G:OP2	2.16	0.46
28:DG:10:LYS:O	28:DG:14:GLU:HB3	2.16	0.46
33:DP:6:LEU:HA	33:DP:6:LEU:HD23	1.60	0.46
34:DQ:134:ARG:O	34:DQ:138:ASP:HB2	2.15	0.46
34:DQ:26:TYR:HE1	34:DQ:28:ALA:HB2	1.80	0.46
1:AA:1206:G:C2	1:AA:1207:G:C4	3.04	0.46
1:AA:1392:G:N2	1:AA:1502:A:H8	2.13	0.46
1:AA:269:C:H2'	1:AA:270:A:H8	1.79	0.46
1:AA:384:G:H2'	1:AA:385:C:H6	1.80	0.46
1:AA:678:U:H2'	1:AA:679:C:C6	2.50	0.46
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.49	0.46
23:BA:1142(A):A:C5	23:BA:1144:G:C5	3.03	0.46
23:BA:1259:G:H2'	23:BA:1260:G:C8	2.51	0.46
23:BA:1829:A:P	56:BA:5038:HOH:O	2.73	0.46
23:BA:1932:A:H2'	23:BA:1933:G:O4'	2.16	0.46
23:BA:213:A:H2'	23:BA:214:G:O4'	2.15	0.46
23:BA:2137:C:H42	23:BA:2154:G:H1	1.64	0.46
23:BA:807:U:OP2	33:BP:41:ARG:NH2	2.49	0.46
1:CA:1246:C:H2'	1:CA:1247:U:H6	1.81	0.46
1:CA:1443:G:O6	1:CA:1444:C:C4	2.69	0.46
1:CA:403:C:O2'	4:CD:122:ARG:NH1	2.49	0.46
1:CA:604:G:H2'	1:CA:605:U:O4'	2.16	0.46
1:CA:651:C:H2'	1:CA:652:U:C6	2.50	0.46
3:CC:110:ASN:O	3:CC:141:VAL:HG22	2.15	0.46
20:CT:43:LEU:HA	20:CT:43:LEU:HD23	1.71	0.46
45:D1:50:ARG:HG2	45:D1:59:THR:CG2	2.45	0.46
23:DA:1003:G:N2	23:DA:1153:C:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1485:G:H1	23:DA:1504:C:N4	2.13	0.46
23:DA:319:C:H2'	23:DA:320:A:O4'	2.16	0.46
23:DA:848:G:N3	23:DA:933:A:H1'	2.30	0.46
26:DE:2:LYS:HG3	26:DE:200:GLU:HB2	1.97	0.46
28:DG:106:LEU:HD12	28:DG:110:ALA:CB	2.43	0.46
28:DG:129:GLY:HA2	28:DG:166:ASP:HA	1.98	0.46
37:DT:105:LEU:HB3	37:DT:109:GLU:HB2	1.98	0.46
1:AA:1173:G:C6	1:AA:1174:G:C8	3.04	0.46
1:AA:1192:C:C5	1:AA:1193:G:C8	3.04	0.46
1:AA:377:G:H2'	1:AA:378:G:H8	1.76	0.46
1:AA:860:A:N6	1:AA:861:G:C2	2.84	0.46
1:AA:865:A:H2'	1:AA:866:C:H6	1.81	0.46
1:AA:868:C:H2'	1:AA:869:G:O4'	2.16	0.46
3:AC:64:VAL:O	3:AC:99:VAL:HA	2.15	0.46
8:AH:87:SER:HB2	8:AH:93:VAL:HB	1.96	0.46
10:AJ:61:GLU:OE2	14:AN:49:HIS:NE2	2.43	0.46
10:AJ:7:LYS:HA	10:AJ:71:LEU:HA	1.97	0.46
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.51	0.46
1:AA:982:U:H5''	14:AN:6:LEU:HD23	1.98	0.46
45:B1:86:SER:HB3	45:B1:89:GLU:OE2	2.16	0.46
23:BA:2186:G:H2'	23:BA:2186:G:N3	2.30	0.46
23:BA:2273:A:H2'	23:BA:2274:A:C8	2.50	0.46
23:BA:257:A:H2'	23:BA:258:G:O4'	2.16	0.46
23:BA:333:G:H5''	23:BA:334:C:OP2	2.14	0.46
23:BA:859:G:O2'	23:BA:916:G:O6	2.28	0.46
24:BB:91:C:C2'	24:BB:92:C:H5'	2.46	0.46
25:BD:172:TYR:CD1	25:BD:186:HIS:HA	2.50	0.46
23:BA:470:A:OP1	27:BF:59:TYR:HE2	1.99	0.46
30:BI:133:HIS:HD2	30:BI:134:PRO:HD2	1.80	0.46
1:CA:1266:G:C8	1:CA:1266:G:OP2	2.69	0.46
1:CA:192:U:O3'	20:CT:57:ARG:HD2	2.16	0.46
1:CA:854:G:H3'	1:CA:871:U:O4	2.16	0.46
2:CB:134:GLU:O	2:CB:137:ARG:HG3	2.16	0.46
3:CC:137:ALA:CA	3:CC:140:ARG:HD3	2.41	0.46
4:CD:119:GLN:HG2	4:CD:123:HIS:CD2	2.50	0.46
4:CD:88:VAL:HA	5:CE:97:GLY:HA2	1.98	0.46
5:CE:137:GLU:O	5:CE:141:GLN:HB2	2.15	0.46
8:CH:113:SER:O	8:CH:131:GLY:HA3	2.16	0.46
10:CJ:11:PHE:HA	10:CJ:66:ARG:O	2.15	0.46
23:DA:1529:G:O2'	23:DA:1530:C:H5'	2.15	0.46
23:DA:1646:C:H3'	56:DA:3850:HOH:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2440:C:H5'	56:DA:4295:HOH:O	2.14	0.46
30:DI:46:ALA:HA	30:DI:49:ALA:HB3	1.97	0.46
34:DQ:43:THR:N	34:DQ:46:GLN:OE1	2.42	0.46
40:DW:9:TYR:H	40:DW:102:HIS:CE1	2.34	0.46
43:DZ:75:ASN:HB2	43:DZ:85:HIS:HB3	1.98	0.46
1:AA:1055:A:H62	1:AA:1200:C:H42	1.64	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.46
1:AA:1222:G:OP1	1:AA:1321:C:H2'	2.15	0.46
1:AA:979:C:C4	1:AA:1318:A:N6	2.84	0.46
1:AA:1367:C:C4	1:AA:1368:G:N7	2.84	0.46
1:AA:512:U:H2'	1:AA:513:C:H6	1.81	0.46
1:AA:922:G:H1'	5:AE:19:MET:HB2	1.97	0.46
1:AA:941:G:C2	1:AA:942:G:C8	3.03	0.46
2:AB:20:GLU:HG3	2:AB:191:ASP:OD1	2.16	0.46
2:AB:55:PHE:HA	2:AB:58:ILE:HD12	1.98	0.46
15:AO:26:GLU:HG2	15:AO:26:GLU:H	1.44	0.46
19:AS:12:ASP:OD2	19:AS:37:ARG:NH1	2.44	0.46
1:AA:103:C:P	20:AT:17:ARG:HH21	2.39	0.46
48:B4:22:ILE:HG22	48:B4:24:THR:HG23	1.97	0.46
49:B5:41:PRO:O	49:B5:44:THR:OG1	2.34	0.46
23:BA:212:G:O2'	23:BA:213:A:H5'	2.16	0.46
23:BA:2464:C:O2'	23:BA:2465:C:P	2.74	0.46
23:BA:2836:U:H2'	23:BA:2837:G:C8	2.51	0.46
31:BN:13:TRP:O	31:BN:135:PRO:HA	2.16	0.46
39:BV:52:VAL:HG21	39:BV:55:ALA:HB3	1.98	0.46
41:BX:60:ARG:HE	41:BX:60:ARG:HB3	1.43	0.46
23:BA:64:A:O3'	41:BX:71:GLY:HA3	2.15	0.46
1:CA:1030(D):A:N6	1:CA:1031:G:H21	2.14	0.46
1:CA:1297:C:H5''	1:CA:1299:A:N7	2.30	0.46
1:CA:539:A:H2'	1:CA:540:G:C8	2.51	0.46
2:CB:110:GLN:O	2:CB:114:ARG:HB2	2.16	0.46
2:CB:155:LEU:HD11	2:CB:159:PRO:HD3	1.97	0.46
1:CA:1111:A:H61	3:CC:177:THR:HA	1.79	0.46
5:CE:75:THR:HG23	5:CE:76:ILE:O	2.16	0.46
7:CG:111:ARG:HH12	7:CG:122:HIS:HB2	1.80	0.46
9:CI:13:ALA:HB3	9:CI:72:GLY:C	2.37	0.46
9:CI:17:VAL:CG2	9:CI:80:GLY:HA3	2.46	0.46
17:CQ:79:SER:OG	17:CQ:80:GLY:N	2.48	0.46
44:D0:55:ARG:HB3	44:D0:55:ARG:CZ	2.46	0.46
46:D2:22:GLU:HG2	46:D2:64:LEU:HD11	1.97	0.46
23:DA:1026:U:HO2'	23:DA:1027:A:P	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2172:U:H4'	23:DA:2173:A:OP2	2.15	0.46
23:DA:2190:G:H2'	23:DA:2191:G:O4'	2.16	0.46
23:DA:2208:A:H1'	23:DA:2219:G:C4	2.51	0.46
23:DA:760:G:H2'	23:DA:761:A:O4'	2.15	0.46
24:DB:66:A:H61	24:DB:109:C:C5'	2.24	0.46
1:AA:1441:G:N3	1:AA:1459:C:C5	2.84	0.46
1:AA:536:C:H2'	1:AA:537:G:C8	2.51	0.46
4:AD:25:ARG:O	4:AD:27:TYR:N	2.46	0.46
9:AI:17:VAL:HG21	9:AI:80:GLY:C	2.36	0.46
15:AO:39:LEU:HD13	15:AO:56:LEU:HD23	1.98	0.46
23:BA:1188:U:H4'	39:BV:79:VAL:HG22	1.97	0.46
23:BA:2193:G:H2'	23:BA:2194:G:C8	2.51	0.46
23:BA:2233:U:H2'	23:BA:2234:G:C8	2.50	0.46
23:BA:2685:G:H2'	23:BA:2686:G:H5''	1.97	0.46
23:BA:2836:U:C4	23:BA:2883:A:N6	2.84	0.46
23:BA:2846:G:H2'	23:BA:2847:U:O4'	2.16	0.46
23:BA:2850:A:OP2	23:BA:2866:U:C5	2.69	0.46
23:BA:652(Q):G:H2'	23:BA:652(R):C:C6	2.51	0.46
36:BS:74:ALA:HB2	36:BS:105:ALA:HA	1.97	0.46
37:BT:105:LEU:HB3	37:BT:109:GLU:HB2	1.98	0.46
1:CA:262:A:C6	1:CA:263:A:C6	3.04	0.46
1:CA:614:A:H2'	1:CA:615:C:H6	1.80	0.46
1:CA:636:U:H2'	1:CA:637:G:C8	2.51	0.46
1:CA:763:G:H2'	1:CA:764:C:C6	2.50	0.46
2:CB:171:ALA:O	2:CB:175:ARG:N	2.39	0.46
9:CI:6:GLY:O	9:CI:17:VAL:HB	2.16	0.46
10:CJ:8:LEU:CD1	10:CJ:20:ALA:HB2	2.41	0.46
3:CC:37:GLN:NE2	14:CN:52:GLN:OE1	2.49	0.46
20:CT:59:ALA:O	20:CT:62:LEU:N	2.49	0.46
45:D1:54:ALA:HB1	45:D1:83:GLU:HB3	1.97	0.46
23:DA:77:C:OP1	46:D2:59:ARG:HD3	2.16	0.46
48:D4:34:GLU:CD	48:D4:35:VAL:H	2.20	0.46
33:DP:52:GLU:HG3	52:D8:57:ARG:HH22	1.81	0.46
52:D8:61:LEU:O	52:D8:63:PRO:HD3	2.16	0.46
23:DA:1423:G:H2'	23:DA:1424:G:C8	2.46	0.46
23:DA:1699:G:N2	56:DA:4405:HOH:O	2.34	0.46
23:DA:213:A:H2'	23:DA:214:G:O4'	2.16	0.46
23:DA:363(D):G:O2'	23:DA:363(E):U:H5'	2.16	0.46
25:DD:154:LYS:C	25:DD:155:LEU:HD12	2.36	0.46
25:DD:146:GLU:HB2	25:DD:189:CYS:HB3	1.96	0.46
27:DF:168:ARG:HH11	27:DF:168:ARG:CB	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:34:TRP:CE3	27:DF:35:GLU:HG2	2.51	0.46
28:DG:76:SER:CA	28:DG:83:ARG:HA	2.44	0.46
36:DS:74:ALA:HB2	36:DS:105:ALA:HA	1.97	0.46
40:DW:40:ASN:O	40:DW:41:LYS:HG2	2.16	0.46
1:AA:1104:G:C6	1:AA:1105:A:C5	3.04	0.45
1:AA:1381:U:H2'	1:AA:1381:U:O2	2.14	0.45
1:AA:154:C:N4	1:AA:167:G:H1	2.15	0.45
1:AA:173:U:C6	1:AA:197:A:C2	3.03	0.45
1:AA:516:U:C4	1:AA:517:G:C6	3.05	0.45
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.17	0.45
2:AB:143:GLU:O	2:AB:146:GLN:HB2	2.16	0.45
2:AB:233:SER:OG	2:AB:234:PRO:HD2	2.17	0.45
2:AB:74:LYS:HG2	2:AB:74:LYS:H	1.56	0.45
3:AC:30:ARG:NH2	14:AN:38:GLY:HA2	2.32	0.45
1:AA:599:C:H4'	8:AH:130:GLY:C	2.36	0.45
9:AI:7:THR:N	9:AI:83:ARG:HD3	2.29	0.45
13:AM:102:ARG:HH12	13:AM:104:ARG:HD3	1.80	0.45
1:AA:189(F):U:O2	17:AQ:63:ARG:NH2	2.49	0.45
52:B8:61:LEU:C	52:B8:63:PRO:HD3	2.37	0.45
23:BA:1652:A:OP1	35:BR:8:ARG:NH1	2.49	0.45
23:BA:2282:G:OP1	23:BA:2283:C:H1'	2.16	0.45
23:BA:2526:G:H5'	23:BA:2742:C:O2'	2.16	0.45
23:BA:2022:U:O2'	23:BA:2617:C:H5'	2.16	0.45
23:BA:2850:A:OP2	23:BA:2866:U:H5	1.98	0.45
25:BD:112:GLN:HB2	25:BD:115:GLN:OE1	2.15	0.45
27:BF:39:TRP:O	27:BF:43:LYS:HG2	2.15	0.45
23:BA:448:U:H1'	27:BF:84:VAL:HG11	1.98	0.45
23:BA:2304:G:H21	28:BG:156:ASP:CG	2.19	0.45
1:CA:1010:G:N2	1:CA:1020:U:H1'	2.31	0.45
4:CD:91:SER:O	4:CD:95:GLY:N	2.38	0.45
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.16	0.45
7:CG:61:VAL:O	7:CG:64:GLN:HB3	2.16	0.45
7:CG:73:MET:HG3	7:CG:89:MET:O	2.15	0.45
8:CH:97:VAL:HG21	8:CH:128:GLY:HA2	1.99	0.45
1:CA:1342:C:H1'	9:CI:124:GLN:OE1	2.17	0.45
11:CK:67:ASP:OD2	11:CK:71:LYS:HE3	2.16	0.45
21:CU:3:LYS:HG2	21:CU:10:ARG:CG	2.45	0.45
47:D3:7:LYS:HE2	47:D3:32:GLN:O	2.16	0.45
56:DA:4218:HOH:O	51:D7:48:LYS:NZ	2.47	0.45
23:DA:1434:A:O2'	23:DA:1435:G:H5'	2.16	0.45
23:DA:2592:G:H2'	23:DA:2593:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:29:U:H2'	23:DA:30:G:H8	1.77	0.45
23:DA:414:C:H2'	23:DA:415:A:C8	2.50	0.45
23:DA:2784:C:H1'	26:DE:37:ARG:HH12	1.80	0.45
28:DG:110:ALA:HA	28:DG:140:ILE:O	2.16	0.45
23:DA:2657:A:O3'	29:DH:160:LYS:NZ	2.49	0.45
31:DN:13:TRP:O	31:DN:135:PRO:HA	2.15	0.45
32:DO:117:LEU:HD23	32:DO:117:LEU:HA	1.74	0.45
23:DA:833:U:O2'	33:DP:52:GLU:HG2	2.15	0.45
33:DP:84:ASN:CG	33:DP:117:GLU:HB2	2.35	0.45
1:AA:1057:G:H2'	1:AA:1058:G:C8	2.51	0.45
1:AA:1060:C:H2'	1:AA:1061:G:C8	2.40	0.45
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.31	0.45
1:AA:1243:C:N3	1:AA:1294:G:N2	2.64	0.45
1:AA:1378:C:OP2	1:AA:1378:C:H2'	2.15	0.45
1:AA:65:U:H2'	1:AA:381:C:H5	1.79	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.17	0.45
2:AB:32:ILE:HD11	2:AB:40:HIS:CG	2.52	0.45
8:AH:37:ARG:HE	8:AH:37:ARG:HB3	1.51	0.45
9:AI:96:LEU:HA	9:AI:101:PHE:HB2	1.98	0.45
9:AI:99:LEU:HB3	9:AI:101:PHE:CD1	2.52	0.45
11:AK:34:ASP:OD2	11:AK:38:ASN:N	2.49	0.45
13:AM:14:ARG:HA	13:AM:44:ARG:HA	1.99	0.45
13:AM:4:ILE:HD11	13:AM:57:ARG:HA	1.97	0.45
3:AC:30:ARG:NE	14:AN:35:ARG:O	2.46	0.45
44:B0:51:VAL:N	44:B0:62:LEU:HD12	2.31	0.45
41:BX:11:PRO:HD3	46:B2:37:PHE:CE2	2.52	0.45
46:B2:9:GLN:HE22	46:B2:56:GLN:HG2	1.82	0.45
23:BA:2190:G:H2'	23:BA:2191:G:O4'	2.15	0.45
23:BA:2293:C:H2'	23:BA:2294:C:C6	2.51	0.45
25:BD:166:GLN:HB2	25:BD:174:ILE:HG22	1.97	0.45
23:BA:581:C:OP1	38:BU:33:ARG:HG3	2.16	0.45
40:BW:79:GLY:HA3	40:BW:100:THR:HG22	1.98	0.45
1:CA:1251:A:H1'	1:CA:1369:C:O2'	2.17	0.45
1:CA:1283:G:H2'	1:CA:1284:C:C6	2.51	0.45
1:CA:189:G:H2'	1:CA:189(A):C:C6	2.51	0.45
1:CA:560:U:H4'	1:CA:561:U:H5''	1.98	0.45
1:CA:624:C:H2'	1:CA:625:G:C8	2.51	0.45
2:CB:135:GLN:O	2:CB:139:LYS:N	2.42	0.45
1:CA:1106:G:O3'	3:CC:172:ARG:HD2	2.15	0.45
3:CC:18:TRP:HE1	14:CN:56:VAL:H	1.64	0.45
4:CD:107:ARG:NE	4:CD:173:TRP:HZ2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:62:GLN:HB3	4:CD:66:ARG:HD2	1.98	0.45
9:CI:110:GLU:OE1	9:CI:120:ARG:NH2	2.49	0.45
13:CM:23:TYR:HB3	13:CM:67:GLU:CD	2.37	0.45
16:CP:75:ARG:HA	16:CP:80:PHE:CD1	2.52	0.45
23:DA:1178:C:H2'	23:DA:1179:C:C6	2.51	0.45
23:DA:2335:A:N6	23:DA:2337:G:H1'	2.31	0.45
23:DA:2815:C:H5'	49:D5:29:THR:HG21	1.97	0.45
23:DA:288:C:H2'	23:DA:289:A:H8	1.81	0.45
23:DA:535:C:O3'	38:DU:53:ARG:NH1	2.48	0.45
23:DA:725:G:C6	23:DA:726:G:N1	2.84	0.45
23:DA:997:G:O2'	23:DA:998:C:H5'	2.16	0.45
30:DI:45:LYS:HD2	30:DI:45:LYS:HA	1.73	0.45
1:AA:1011:G:H2'	1:AA:1012:U:C6	2.52	0.45
1:AA:1146:A:C6	1:AA:1147:C:C4	3.05	0.45
1:AA:1220:G:C2	1:AA:1221:G:H1'	2.52	0.45
1:AA:1392:G:H21	1:AA:1502:A:H8	1.63	0.45
1:AA:509:A:OP2	56:AA:1888:HOH:O	2.21	0.45
1:AA:902:G:H2'	1:AA:903:G:H8	1.82	0.45
1:AA:1075:C:P	2:AB:179:LYS:HZ1	2.32	0.45
2:AB:87:ARG:HH21	2:AB:233:SER:N	2.13	0.45
3:AC:85:ARG:HA	3:AC:88:ARG:CB	2.46	0.45
4:AD:62:GLN:HB3	4:AD:66:ARG:HD2	1.98	0.45
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.16	0.45
9:AI:31:GLN:HG2	9:AI:36:TYR:HD1	1.81	0.45
9:AI:55:ALA:HB3	9:AI:58:HIS:CB	2.46	0.45
16:AP:75:ARG:HA	16:AP:80:PHE:CD1	2.51	0.45
21:AU:12:LYS:HB3	21:AU:17:THR:O	2.16	0.45
49:B5:36:CYS:O	49:B5:37:LYS:HD3	2.16	0.45
23:BA:1292:U:H2'	23:BA:1293:C:C6	2.51	0.45
23:BA:1512:U:H2'	23:BA:1513:C:C6	2.51	0.45
23:BA:2140:C:H2'	23:BA:2141:G:H8	1.80	0.45
23:BA:2287:A:C5	23:BA:2289:G:C5	3.04	0.45
23:BA:2387:U:OP1	44:B0:55:ARG:NH2	2.49	0.45
23:BA:2567:G:H2'	23:BA:2568:C:H6	1.81	0.45
23:BA:2711:A:OP1	23:BA:2712(A):A:OP1	2.34	0.45
23:BA:2833:G:C3'	23:BA:2834:G:H5'	2.44	0.45
23:BA:909:A:C6	23:BA:912:C:C2	3.05	0.45
25:BD:96:HIS:NE2	25:BD:102:LYS:HE2	2.31	0.45
26:BE:195:LEU:HG	26:BE:196:VAL:N	2.30	0.45
29:BH:37:VAL:HG12	29:BH:38:SER:O	2.15	0.45
1:CA:1022:G:H2'	1:CA:1023:G:CI'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1030:C:C5	1:CA:1032:G:N2	2.84	0.45
1:CA:1124:G:C5	1:CA:1127:G:N2	2.83	0.45
1:CA:1134:G:H2'	1:CA:1135:U:H5'	1.99	0.45
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.44	0.45
1:CA:1201:A:H1'	1:CA:1202:G:OP2	2.17	0.45
1:CA:1346:A:C1'	1:CA:1347:G:H5''	2.47	0.45
1:CA:958:A:N6	1:CA:959:A:C6	2.84	0.45
10:CJ:10:GLY:O	10:CJ:68:HIS:N	2.34	0.45
10:CJ:45:ARG:HD3	14:CN:36:PHE:CE1	2.51	0.45
15:CO:61:GLY:O	15:CO:65:ARG:HG3	2.17	0.45
23:DA:1050:A:H2'	23:DA:1051:G:C8	2.50	0.45
23:DA:1205:U:H4'	23:DA:1206:G:OP2	2.16	0.45
23:DA:1352:U:O2	23:DA:1570:A:H2	1.99	0.45
23:DA:1425:G:H2'	23:DA:1426:G:C8	2.51	0.45
23:DA:2296:U:H4'	23:DA:2297:C:OP1	2.15	0.45
23:DA:2318:G:O2'	23:DA:2319:G:H5''	2.15	0.45
23:DA:2505:G:O6	23:DA:2576:G:H2'	2.16	0.45
23:DA:2872:G:O2'	23:DA:2873:A:H5'	2.16	0.45
23:DA:314:A:O2'	23:DA:315:G:H5'	2.15	0.45
23:DA:586:A:N1	23:DA:809:G:O2'	2.34	0.45
23:DA:614(A):U:O5'	23:DA:614(A):U:H6	2.00	0.45
23:DA:878:A:C6	23:DA:900:A:C8	3.03	0.45
24:DB:28:C:H2'	24:DB:29:A:C8	2.50	0.45
26:DE:181:LEU:HA	26:DE:181:LEU:HD13	1.66	0.45
39:DV:52:VAL:CG2	39:DV:55:ALA:HB3	2.45	0.45
40:DW:4:LYS:HE2	40:DW:6:ILE:HD11	1.98	0.45
42:DY:44:ILE:HA	42:DY:63:LYS:O	2.17	0.45
1:AA:1149:C:H2'	1:AA:1150:U:O4'	2.16	0.45
1:AA:1275:A:H2'	1:AA:1276:G:C8	2.51	0.45
1:AA:445:G:N3	1:AA:445:G:H2'	2.31	0.45
1:AA:684:A:C6	1:AA:685:G:C6	3.04	0.45
1:AA:763:G:H2'	1:AA:764:C:C6	2.52	0.45
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.46	0.45
1:AA:1190:G:C5'	3:AC:4:LYS:HA	2.47	0.45
5:AE:126:ARG:HA	5:AE:131:ILE:HD11	1.98	0.45
8:AH:112:LEU:HB3	8:AH:133:LEU:HA	1.97	0.45
1:AA:35:G:O2'	12:AL:121:GLY:HA2	2.17	0.45
13:AM:114:ARG:H	13:AM:114:ARG:HG2	1.28	0.45
13:AM:90:LEU:C	13:AM:91:ARG:HG2	2.36	0.45
15:AO:56:LEU:O	15:AO:60:VAL:HG23	2.17	0.45
15:AO:26:GLU:OE1	15:AO:77:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:49:ALA:HB2	18:AR:78:LEU:O	2.16	0.45
20:AT:73:HIS:C	20:AT:74:LYS:HG2	2.37	0.45
20:AT:56:MET:HE2	20:AT:88:VAL:HG21	1.99	0.45
23:BA:1328:G:H8	23:BA:1328:G:O5'	1.99	0.45
23:BA:2054:A:H5''	23:BA:2055:C:O5'	2.16	0.45
23:BA:2115:G:H4'	23:BA:2167:U:C4'	2.45	0.45
23:BA:2777:G:H5''	23:BA:2778:A:H5'	1.98	0.45
23:BA:485:C:H2'	23:BA:486:C:C6	2.51	0.45
23:BA:1903:G:OP1	25:BD:241:PRO:HB2	2.16	0.45
25:BD:71:ASP:HB3	25:BD:103:ARG:NH2	2.28	0.45
28:BG:89:GLY:C	28:BG:90:LEU:HD23	2.36	0.45
31:BN:67:LEU:HA	31:BN:87:LEU:HD12	1.98	0.45
34:BQ:103:MET:CE	34:BQ:125:LEU:HD13	2.46	0.45
37:BT:120:ARG:HA	37:BT:123:GLN:HG2	1.97	0.45
1:CA:1190:G:H5''	3:CC:3:ASN:O	2.17	0.45
1:CA:1308:U:OP1	13:CM:110:ARG:HD2	2.17	0.45
1:CA:403:C:H2'	1:CA:404:U:H6	1.80	0.45
1:CA:580:U:H2'	1:CA:581:G:O4'	2.15	0.45
2:CB:21:ARG:H	2:CB:21:ARG:HE	1.64	0.45
4:CD:173:TRP:CG	4:CD:189:PRO:HG3	2.51	0.45
11:CK:46:GLY:HA2	11:CK:50:TYR:O	2.16	0.45
13:CM:87:TYR:CD1	19:CS:76:PRO:HB3	2.51	0.45
44:D0:51:VAL:N	44:D0:62:LEU:HD12	2.31	0.45
23:DA:1154:G:O5'	23:DA:1154:G:H8	1.99	0.45
23:DA:1441:G:H2'	23:DA:1442:G:C8	2.50	0.45
23:DA:1794:U:H2'	23:DA:1795:C:H6	1.80	0.45
23:DA:1266:G:O2'	23:DA:2012:G:O6	2.28	0.45
23:DA:2117:A:H61	23:DA:2166:G:N2	2.10	0.45
23:DA:2173:A:C2'	23:DA:2174:C:H5'	2.47	0.45
23:DA:2271:G:C6	23:DA:2272:U:C4	3.05	0.45
23:DA:2290:G:C2	23:DA:2343:C:O2	2.69	0.45
23:DA:2408:U:OP2	56:DA:4072:HOH:O	2.21	0.45
23:DA:2887:U:H2'	23:DA:2888:C:H6	1.80	0.45
23:DA:863:A:H2'	23:DA:864:G:H8	1.80	0.45
23:DA:945:A:H2	56:DA:3920:HOH:O	2.00	0.45
27:DF:64:ILE:HG13	27:DF:65:TRP:N	2.31	0.45
27:DF:51:THR:HG23	27:DF:92:PRO:HG2	1.97	0.45
36:DS:32:LEU:O	36:DS:62:LYS:HE2	2.15	0.45
43:DZ:144:LEU:HD12	43:DZ:144:LEU:HA	1.77	0.45
43:DZ:61:LEU:HD13	43:DZ:61:LEU:HA	1.72	0.45
43:DZ:69:THR:HG22	43:DZ:90:VAL:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.45
1:AA:1110:A:H2'	1:AA:1111:A:O4'	2.15	0.45
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.00	0.45
1:AA:1240:U:H3'	1:AA:1241:G:H8	1.80	0.45
1:AA:112:G:C2	1:AA:330:C:N4	2.84	0.45
1:AA:370:C:H2'	1:AA:371:G:H8	1.81	0.45
1:AA:436:C:O2'	1:AA:437:U:P	2.75	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:975:A:H5''	1:AA:1363(A):A:N6	2.32	0.45
4:AD:194:LEU:HB3	4:AD:196:LEU:HD11	1.99	0.45
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.43	0.45
22:AX:30:TYR:CD2	22:AX:30:TYR:N	2.84	0.45
23:BA:1320:C:O2'	56:BA:4949:HOH:O	2.21	0.45
23:BA:858:U:O2	23:BA:2268:A:H2'	2.17	0.45
28:BG:72:ARG:HD3	28:BG:85:GLY:HA2	1.98	0.45
30:BI:4:ILE:HD11	30:BI:44:LEU:HD12	1.99	0.45
43:BZ:35:ARG:HA	43:BZ:35:ARG:HD2	1.63	0.45
1:CA:1029:C:N4	1:CA:1030(A):G:H22	2.15	0.45
1:CA:1287:A:H61	1:CA:1370:G:H21	1.65	0.45
1:CA:1399:C:C2	1:CA:1502:A:N6	2.85	0.45
1:CA:458:C:H2'	1:CA:460:G:H8	1.81	0.45
1:CA:460:G:H1'	1:CA:472:A:H61	1.81	0.45
1:CA:516:U:C4	1:CA:517:G:C6	3.04	0.45
1:CA:627:G:H2'	1:CA:628:G:C8	2.50	0.45
1:CA:677:U:H2'	1:CA:678:U:C6	2.51	0.45
1:CA:957:U:O2	1:CA:959:A:C8	2.69	0.45
1:CA:990:C:H2'	1:CA:991:U:C6	2.51	0.45
5:CE:144:THR:O	5:CE:148:VAL:HG23	2.17	0.45
1:CA:706:A:N3	11:CK:31:THR:HG21	2.32	0.45
12:CL:85:ILE:HA	12:CL:85:ILE:HD13	1.74	0.45
13:CM:40:ASN:HA	13:CM:41:PRO:HD2	1.85	0.45
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.51	0.45
16:CP:43:LYS:HD3	16:CP:48:TRP:CZ3	2.50	0.45
21:CU:10:ARG:HE	21:CU:10:ARG:CA	2.27	0.45
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.16	0.45
23:DA:102:G:O2'	23:DA:103:A:P	2.75	0.45
23:DA:1394:U:C4	23:DA:1395:A:C5	3.04	0.45
23:DA:2275:C:H5'	23:DA:2275:C:C6	2.51	0.45
23:DA:2505:G:H2'	23:DA:2576:G:O6	2.17	0.45
23:DA:581:C:H2'	23:DA:582:G:H8	1.80	0.45
23:DA:979:G:H3'	23:DA:980:A:H5''	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:21:G:H2'	24:DB:22:U:O4'	2.16	0.45
26:DE:178:GLU:CD	26:DE:178:GLU:H	2.19	0.45
1:AA:1061:G:C6	1:AA:1197:G:C6	3.04	0.45
1:AA:1250:A:N6	1:AA:1251:A:N6	2.65	0.45
1:AA:1306:A:H2'	1:AA:1307:U:C6	2.52	0.45
1:AA:1338:G:H3'	1:AA:1339:A:C8	2.52	0.45
1:AA:1339:A:N6	1:AA:1340:A:N3	2.64	0.45
1:AA:1378:C:OP2	7:AG:7:ALA:HB3	2.16	0.45
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.45
1:AA:957:U:H3	1:AA:960:U:H5''	1.82	0.45
2:AB:28:PHE:CD2	2:AB:194:PRO:HG3	2.49	0.45
2:AB:197:VAL:HG12	2:AB:198:ASP:H	1.82	0.45
49:B5:45:VAL:HA	49:B5:52:TYR:HB2	1.98	0.45
33:BP:59:LEU:HD11	52:B8:10:ALA:CB	2.46	0.45
23:BA:1418:G:OP1	23:BA:1588:C:O2'	2.31	0.45
23:BA:2064:C:H2'	23:BA:2065:C:C6	2.51	0.45
23:BA:2154:G:H2'	23:BA:2155:G:C8	2.52	0.45
23:BA:2309:A:N6	23:BA:2310:A:N1	2.65	0.45
23:BA:2464:C:O2'	23:BA:2465:C:OP2	2.30	0.45
23:BA:2854:G:H2'	23:BA:2855:C:C6	2.51	0.45
23:BA:2870:C:H2'	23:BA:2871:C:O4'	2.16	0.45
24:BB:111:G:H2'	24:BB:112:U:H6	1.81	0.45
24:BB:89:G:OP2	24:BB:89:G:H8	2.00	0.45
27:BF:123:LEU:HD11	27:BF:194:MET:HE2	1.97	0.45
28:BG:56:ALA:CA	28:BG:153:ARG:HH21	2.29	0.45
29:BH:7:LEU:HD12	29:BH:8:PRO:CD	2.47	0.45
33:BP:101:VAL:HG23	33:BP:106:LEU:HB3	1.97	0.45
34:BQ:37:LEU:HD21	34:BQ:130:LYS:HB2	1.98	0.45
1:CA:1147:C:H2'	1:CA:1148:U:H6	1.81	0.45
1:CA:1159:U:H5	1:CA:1172:C:H5	1.65	0.45
1:CA:1418:A:H5''	1:CA:1419:G:OP2	2.16	0.45
1:CA:5:U:H5''	1:CA:6:G:C8	2.52	0.45
1:CA:953:G:C4	1:CA:1229:A:C2	3.05	0.45
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.99	0.45
4:CD:108:LEU:HB3	4:CD:110:PHE:CE1	2.52	0.45
4:CD:24:GLU:O	4:CD:27:TYR:HD1	1.98	0.45
5:CE:36:ASP:OD2	5:CE:38:GLN:N	2.43	0.45
7:CG:113:GLU:CB	7:CG:118:VAL:HB	2.45	0.45
10:CJ:15:THR:O	10:CJ:19:SER:OG	2.34	0.45
33:DP:63:PRO:HG2	52:D8:25:MET:HB2	1.98	0.45
23:DA:242:G:O4'	52:D8:3:LYS:HE3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2137:C:H42	23:DA:2154:G:H1	1.64	0.45
23:DA:2615:U:C2	49:D5:7:PRO:HA	2.52	0.45
23:DA:528:A:C2'	23:DA:529:A:H5'	2.47	0.45
23:DA:850:C:O3'	47:D3:49:LYS:HE2	2.17	0.45
25:DD:222:ARG:NH1	56:DD:402:HOH:O	2.48	0.45
36:DS:66:ALA:HA	36:DS:69:VAL:CG1	2.47	0.45
41:DX:36:LYS:HG3	41:DX:56:THR:HG23	1.99	0.45
43:DZ:48:PHE:O	43:DZ:52:SER:N	2.47	0.45
1:AA:1427:U:H2'	1:AA:1428:A:C8	2.52	0.45
1:AA:1457:G:N1	1:AA:1458:G:C5	2.84	0.45
1:AA:1459:C:H2'	1:AA:1460:A:N7	2.31	0.45
1:AA:327:A:C4	1:AA:329:A:C8	3.05	0.45
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.16	0.45
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.31	0.45
1:AA:741:G:H2'	1:AA:742:G:C8	2.52	0.45
4:AD:14:ARG:HA	4:AD:39:PRO:HB3	1.98	0.45
4:AD:64:LEU:HD12	4:AD:68:TYR:HE1	1.81	0.45
9:AI:19:LEU:HA	9:AI:19:LEU:HD23	1.66	0.45
20:AT:25:ARG:O	20:AT:29:LYS:HG3	2.17	0.45
23:BA:323:G:H1'	23:BA:1205:U:O2	2.17	0.45
23:BA:1287:A:C6	23:BA:1288:U:C4	3.05	0.45
23:BA:1540:U:H2'	23:BA:1541:G:O4'	2.16	0.45
23:BA:570:G:H2'	23:BA:2030:A:C5	2.52	0.45
23:BA:2056:G:C2	23:BA:2057:A:C8	3.05	0.45
23:BA:247:G:H4'	23:BA:386:G:C5	2.52	0.45
23:BA:26:G:C6	23:BA:27:G:N1	2.85	0.45
24:BB:20:C:H2'	24:BB:21:G:H5'	1.97	0.45
38:BU:5:LYS:HE3	38:BU:5:LYS:HB2	1.74	0.45
38:BU:43:GLY:HA3	39:BV:73:SER:OG	2.15	0.45
1:CA:1092:A:OP1	1:CA:1092:A:H8	2.00	0.45
1:CA:1254:C:H5	10:CJ:43:ARG:CZ	2.29	0.45
1:CA:1399:C:C2	1:CA:1401:G:C5	3.04	0.45
4:CD:194:LEU:HB3	4:CD:196:LEU:HD11	1.97	0.45
5:CE:75:THR:HA	5:CE:115:VAL:HG13	1.97	0.45
5:CE:7:GLU:OE2	5:CE:37:ARG:NH2	2.45	0.45
14:CN:26:ARG:HB3	14:CN:26:ARG:HE	1.51	0.45
20:CT:36:LEU:HD12	20:CT:55:ILE:HG23	1.98	0.45
23:DA:1028:A:H61	23:DA:1125:G:H2'	1.82	0.45
23:DA:2062:A:P	56:DA:4041:HOH:O	2.74	0.45
23:DA:2133:G:H2'	23:DA:2158:A:H61	1.81	0.45
23:DA:2309:A:N6	23:DA:2310:A:N1	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DB:2:C:H2'	24:DB:3:C:H6	1.82	0.45
25:DD:130:ALA:C	25:DD:131:LEU:HD12	2.37	0.45
27:DF:88:VAL:HG21	27:DF:91:GLY:HA3	1.98	0.45
33:DP:71:VAL:HG23	33:DP:72:PRO:HA	1.98	0.45
23:DA:534:U:O2'	38:DU:49:HIS:CD2	2.70	0.45
1:AA:1027:C:H1'	1:AA:1034:G:H22	1.82	0.45
1:AA:1027:C:H2'	1:AA:1028:C:C5	2.51	0.45
1:AA:1269:A:OP1	21:AU:24:ARG:HG3	2.16	0.45
1:AA:1317:C:C5	1:AA:1318:A:C8	3.04	0.45
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.47	0.45
1:AA:256:U:H2'	1:AA:257:G:C8	2.51	0.45
1:AA:502:G:C2	1:AA:503:C:C2	3.04	0.45
3:AC:140:ARG:HB2	3:AC:140:ARG:CZ	2.47	0.45
7:AG:108:ALA:O	7:AG:119:ARG:HG2	2.16	0.45
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.99	0.45
20:AT:77:ALA:O	20:AT:81:LYS:HG3	2.17	0.45
53:B9:11:CYS:HB3	53:B9:32:HIS:CE1	2.52	0.45
23:BA:2742:C:OP1	53:B9:35:ARG:HD3	2.17	0.45
23:BA:1287:A:C5	23:BA:1288:U:C4	3.05	0.45
23:BA:272(E):G:C2	23:BA:364:C:N3	2.85	0.45
23:BA:363(D):G:O2'	23:BA:363(E):U:H5'	2.16	0.45
26:BE:111:ARG:HD3	26:BE:160:TYR:CD1	2.52	0.45
27:BF:188:ARG:HG3	27:BF:188:ARG:H	1.48	0.45
34:BQ:60:ARG:NH1	43:BZ:177:PRO:HG3	2.31	0.45
38:BU:17:ILE:HA	38:BU:17:ILE:HD13	1.81	0.45
1:CA:1124:G:O2'	10:CJ:38:ILE:HD13	2.17	0.45
1:CA:1221:G:H1'	19:CS:53:ASN:O	2.17	0.45
1:CA:1252:A:H61	1:CA:1285:A:N6	2.15	0.45
1:CA:1457:G:C2	1:CA:1458:G:C8	3.05	0.45
1:CA:9:G:C2	1:CA:26:A:N1	2.84	0.45
1:CA:375:U:C4	1:CA:376:G:N7	2.84	0.45
1:CA:391:G:C6	1:CA:392:G:C5	3.05	0.45
1:CA:510:A:H5''	1:CA:511:C:OP2	2.17	0.45
1:CA:675:A:H2'	1:CA:676:A:C8	2.52	0.45
1:CA:872:A:C8	1:CA:874:G:C8	3.05	0.45
2:CB:44:LEU:HA	2:CB:47:THR:OG1	2.17	0.45
2:CB:51:LEU:HD23	2:CB:55:PHE:HE2	1.82	0.45
9:CI:114:TYR:N	9:CI:114:TYR:HD2	2.13	0.45
9:CI:11:LYS:O	9:CI:12:GLU:HB3	2.17	0.45
12:CL:113:ARG:NH2	56:CL:201:HOH:O	2.50	0.45
12:CL:11:VAL:HG22	17:CQ:29:HIS:CD2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1651:G:H2'	23:DA:1652:A:O4'	2.17	0.45
23:DA:1845:G:OP1	25:DD:258:LYS:NZ	2.39	0.45
23:DA:2203:U:O2	23:DA:2221:G:C2	2.70	0.45
23:DA:2319:G:H22	36:DS:3:ARG:CD	2.29	0.45
23:DA:2601:C:H3'	23:DA:2602:A:C8	2.52	0.45
23:DA:2820:A:OP1	35:DR:4:LEU:HD23	2.17	0.45
23:DA:652(E):G:O6	23:DA:652(T):C:N3	2.50	0.45
24:DB:106:G:H5'	43:DZ:31:ARG:HG2	1.99	0.45
26:DE:179:GLU:HB3	26:DE:181:LEU:HD23	1.99	0.45
27:DF:64:ILE:HD12	27:DF:65:TRP:CE3	2.51	0.45
28:DG:106:LEU:HA	28:DG:110:ALA:HB3	1.99	0.45
28:DG:33:ARG:HD3	28:DG:162:THR:OG1	2.17	0.45
38:DU:74:LEU:HD12	38:DU:74:LEU:H	1.82	0.45
43:DZ:54:HIS:ND1	43:DZ:101:PRO:HG3	2.31	0.45
1:AA:12:U:O2'	1:AA:526:C:H4'	2.17	0.45
1:AA:18:C:H5''	5:AE:127:ASN:HD21	1.81	0.45
1:AA:21:G:P	56:AA:1970:HOH:O	2.74	0.45
1:AA:35:G:H2'	1:AA:36:C:C6	2.51	0.45
1:AA:586:C:O2'	1:AA:878:G:H4'	2.17	0.45
1:AA:624:C:H2'	1:AA:625:G:C8	2.52	0.45
1:AA:67:C:H2'	1:AA:68:G:C8	2.52	0.45
2:AB:171:ALA:HA	2:AB:174:VAL:HB	1.98	0.45
1:AA:1190:G:OP2	3:AC:5:ILE:HB	2.17	0.45
4:AD:88:VAL:HA	5:AE:97:GLY:HA2	1.99	0.45
7:AG:102:ARG:NH1	7:AG:103:TRP:HE1	2.15	0.45
7:AG:118:VAL:HG13	7:AG:122:HIS:NE2	2.31	0.45
12:AL:84:LEU:HD13	12:AL:85:ILE:N	2.32	0.45
20:AT:53:LEU:HA	20:AT:56:MET:HG2	1.99	0.45
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.50	0.45
23:BA:396:G:O3'	45:B1:44:PRO:HA	2.16	0.45
47:B3:44:ARG:O	47:B3:48:GLU:HG3	2.17	0.45
23:BA:1025:G:C4	23:BA:1135:C:H1'	2.52	0.45
23:BA:1046:A:O2'	23:BA:1047:G:OP2	2.34	0.45
23:BA:1164:G:H2'	23:BA:1165:U:C6	2.52	0.45
23:BA:1814:G:H2'	23:BA:1815:A:C8	2.52	0.45
23:BA:2130:U:OP2	23:BA:2132:U:H5	2.00	0.45
23:BA:2252:G:H2'	23:BA:2253:G:O4'	2.17	0.45
23:BA:2607:G:H2'	23:BA:2608:G:O4'	2.17	0.45
23:BA:29:U:H2'	23:BA:30:G:H8	1.77	0.45
23:BA:30:G:H2'	23:BA:31:C:H6	1.82	0.45
23:BA:307:G:H21	23:BA:330:A:H62	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BB:104:U:O3'	43:BZ:72:ARG:NH1	2.50	0.45
32:BO:87:ILE:HG22	32:BO:93:PRO:HA	1.98	0.45
1:AA:339:C:OP2	32:BO:97:ARG:HD3	2.17	0.45
33:BP:147:LEU:HA	33:BP:147:LEU:HD22	1.83	0.45
34:BQ:109:VAL:HG22	34:BQ:113:GLN:OE1	2.17	0.45
37:BT:19:LEU:HA	37:BT:20:PRO:HD3	1.81	0.45
1:CA:1079:G:C2	1:CA:1080:A:C6	3.05	0.45
1:CA:1107:C:C4	1:CA:1108:G:C8	3.04	0.45
1:CA:949:A:N6	1:CA:1232:U:N3	2.40	0.45
1:CA:1299:A:C5	1:CA:1301:U:H1'	2.51	0.45
1:CA:1323:G:H8	1:CA:1323:G:OP2	1.99	0.45
1:CA:1360:A:C5	14:CN:18:VAL:HG11	2.51	0.45
1:CA:142:G:N3	1:CA:143:A:C8	2.85	0.45
1:CA:194:C:C2'	1:CA:195:A:H5''	2.47	0.45
2:CB:70:PHE:HB2	2:CB:92:TYR:HB3	1.98	0.45
3:CC:12:LEU:HB3	3:CC:18:TRP:CH2	2.52	0.45
1:CA:546:G:OP1	4:CD:73:ARG:HG2	2.17	0.45
9:CI:13:ALA:HB3	9:CI:72:GLY:HA3	1.99	0.45
13:CM:108:ARG:O	13:CM:112:GLY:N	2.50	0.45
13:CM:74:VAL:O	13:CM:78:ILE:HG12	2.17	0.45
19:CS:20:LEU:HD21	19:CS:43:GLU:HG2	1.99	0.45
19:CS:7:LYS:HA	19:CS:7:LYS:HD3	1.77	0.45
45:D1:3:LYS:HB2	45:D1:61:ARG:NH1	2.29	0.45
48:D4:36:CYS:N	48:D4:39:CYS:SG	2.89	0.45
23:DA:116:C:H2'	23:DA:117:G:O4'	2.17	0.45
23:DA:1419:A:O2'	23:DA:1420:U:H5''	2.17	0.45
23:DA:1448:G:H5''	23:DA:1542:A:OP1	2.17	0.45
23:DA:2251:G:C6	23:DA:2252:G:C5	3.05	0.45
23:DA:2290:G:H2'	23:DA:2291:U:O4'	2.16	0.45
23:DA:2563:U:O2	23:DA:2565:A:H8	2.00	0.45
23:DA:2581:G:H4'	23:DA:2582:G:C8	2.51	0.45
23:DA:673:C:H5''	27:DF:81:PRO:HD2	1.99	0.45
23:DA:1903:G:OP1	25:DD:241:PRO:HB2	2.16	0.45
31:DN:137:LYS:O	31:DN:138:LEU:HD23	2.17	0.45
31:DN:73:THR:CG2	31:DN:82:LEU:HD11	2.47	0.45
37:DT:13:ARG:HG2	37:DT:13:ARG:H	1.29	0.45
40:DW:9:TYR:HA	40:DW:100:THR:HG23	1.99	0.45
40:DW:4:LYS:CB	40:DW:106:ILE:HG12	2.47	0.45
41:DX:31:HIS:HA	41:DX:32:PRO:HD3	1.83	0.45
1:AA:1342:C:H1'	9:AI:124:GLN:HG2	1.98	0.45
1:AA:1345:U:H5''	9:AI:120:ARG:NH1	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:458:C:H2'	1:AA:460:G:H8	1.82	0.45
1:AA:509:A:H3'	1:AA:509:A:C8	2.51	0.45
1:AA:674:G:H2'	1:AA:675:A:H8	1.82	0.45
7:AG:138:LYS:HA	7:AG:141:VAL:HB	1.99	0.45
7:AG:85:TYR:O	7:AG:87:VAL:HG23	2.17	0.45
10:AJ:19:SER:CB	10:AJ:91:PRO:HG3	2.47	0.45
16:AP:19:ILE:CG2	16:AP:36:ILE:HG13	2.36	0.45
45:B1:3:LYS:HB2	45:B1:61:ARG:NH1	2.32	0.45
50:B6:4:GLU:HG3	50:B6:5:VAL:N	2.31	0.45
23:BA:1328:G:H2'	23:BA:1330:C:C5	2.52	0.45
23:BA:455:C:N3	23:BA:472:A:H2'	2.32	0.45
26:BE:178:GLU:CD	26:BE:178:GLU:H	2.21	0.45
31:BN:128:HIS:H	31:BN:128:HIS:CD2	2.34	0.45
33:BP:64:LYS:HA	52:B8:13:ARG:HB3	1.98	0.45
34:BQ:2:LEU:HB3	34:BQ:70:PRO:CG	2.47	0.45
38:BU:74:LEU:H	38:BU:74:LEU:HD12	1.82	0.45
42:BY:85:VAL:HG23	42:BY:86:ARG:O	2.17	0.45
43:BZ:182:LYS:O	43:BZ:186:GLU:HG2	2.16	0.45
43:BZ:94:GLU:HB2	43:BZ:95:PRO:HD2	1.99	0.45
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.52	0.45
1:CA:1224:G:N1	1:CA:1322:C:O4'	2.50	0.45
1:CA:1230:C:H2'	1:CA:1231:G:H8	1.82	0.45
1:CA:1237:C:C2	1:CA:1337:G:N2	2.83	0.45
1:CA:939:G:N2	1:CA:1344:C:N3	2.56	0.45
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.81	0.45
1:CA:148:G:N2	1:CA:175:C:C2	2.85	0.45
1:CA:16:A:N3	1:CA:1080:A:O2'	2.45	0.45
1:CA:276:G:O3'	17:CQ:68:ARG:NH1	2.50	0.45
1:CA:724:G:C2	1:CA:725:G:C8	3.05	0.45
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.17	0.45
15:CO:4:THR:H	15:CO:7:GLU:HB2	1.81	0.45
20:CT:36:LEU:HD13	20:CT:36:LEU:HA	1.68	0.45
23:DA:1357:U:H2'	23:DA:1358:G:O4'	2.17	0.45
23:DA:1814:G:H2'	23:DA:1815:A:C8	2.52	0.45
23:DA:2186:G:H2'	23:DA:2186:G:N3	2.32	0.45
23:DA:2674:G:H2'	23:DA:2675:A:C8	2.52	0.45
23:DA:2741:A:H61	23:DA:2763:G:H1'	1.81	0.45
23:DA:576:U:H5	56:DA:3905:HOH:O	2.00	0.45
25:DD:147:LEU:HD13	25:DD:155:LEU:HD11	1.99	0.45
30:DI:87:LYS:N	30:DI:122:GLU:HA	2.27	0.45
36:DS:27:SER:HA	36:DS:88:ASP:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.17	0.44
1:AA:1117:G:H1'	9:AI:106:ALA:HB1	1.99	0.44
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.44	0.44
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.17	0.44
1:AA:292:G:C5	1:AA:293:G:H1'	2.51	0.44
1:AA:113:G:O4'	1:AA:354:G:H4'	2.17	0.44
1:AA:402:G:C6	1:AA:403:C:C4	3.06	0.44
1:AA:491:G:H2'	1:AA:492:G:O4'	2.16	0.44
1:AA:614:A:H2'	1:AA:615:C:C6	2.52	0.44
1:AA:956:U:H2'	1:AA:957:U:H5'	1.99	0.44
2:AB:216:SER:OG	2:AB:217:ARG:N	2.50	0.44
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.16	0.44
9:AI:105:ASP:HB2	9:AI:107:ARG:HD3	1.99	0.44
10:AJ:48:THR:HG23	10:AJ:62:HIS:HB3	1.99	0.44
11:AK:41:THR:HG22	11:AK:42:TRP:N	2.31	0.44
13:AM:52:GLU:HG2	13:AM:55:ARG:NH2	2.32	0.44
15:AO:32:LEU:HA	15:AO:32:LEU:HD23	1.74	0.44
49:B5:36:CYS:HB3	49:B5:49:CYS:HB3	1.99	0.44
52:B8:23:VAL:HG12	52:B8:47:LYS:HB3	1.99	0.44
23:BA:1319:G:C2	23:BA:1334:G:C5	3.04	0.44
23:BA:195:A:H4'	23:BA:251:A:O2'	2.17	0.44
23:BA:979:G:H3'	23:BA:980:A:H5''	1.98	0.44
1:AA:1463:C:OP1	37:BT:111:ARG:NE	2.50	0.44
38:BU:83:LEU:HD12	38:BU:113:ALA:HB2	1.99	0.44
43:BZ:100:VAL:HG11	43:BZ:134:PRO:HG2	2.00	0.44
1:CA:1003:G:H3'	1:CA:1004:A:H4'	1.98	0.44
1:CA:1002:G:O6	1:CA:1038:C:N3	2.50	0.44
1:CA:1164:G:H1	1:CA:1171:G:H22	1.65	0.44
1:CA:991:U:C4	1:CA:1212:U:H1'	2.53	0.44
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.53	0.44
1:CA:156:G:C6	1:CA:166:G:C6	3.05	0.44
1:CA:690:G:H2'	1:CA:691:G:O4'	2.17	0.44
1:CA:966:G:C2	1:CA:967:C:C2	3.05	0.44
1:CA:984:C:H2'	1:CA:985:C:O4'	2.18	0.44
2:CB:21:ARG:O	2:CB:23:ARG:N	2.47	0.44
4:CD:64:LEU:HD12	4:CD:68:TYR:HE1	1.82	0.44
1:CA:9:G:OP1	5:CE:122:GLU:HB2	2.17	0.44
5:CE:84:PHE:CE1	5:CE:133:TYR:HB3	2.52	0.44
7:CG:73:MET:CG	7:CG:145:ALA:HB1	2.42	0.44
1:CA:1344:C:H5''	9:CI:120:ARG:HG2	1.99	0.44
10:CJ:61:GLU:OE2	14:CN:49:HIS:NE2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:23:ARG:HG3	14:CN:24:CYS:O	2.17	0.44
17:CQ:58:GLU:OE1	17:CQ:75:ARG:NH2	2.50	0.44
18:CR:30:ASP:HB3	18:CR:33:ASP:HB2	1.98	0.44
22:CX:77:LEU:HA	22:CX:77:LEU:HD23	1.81	0.44
23:DA:1782:C:H2'	23:DA:2608:G:O2'	2.17	0.44
23:DA:186:G:H2'	23:DA:187:G:H8	1.82	0.44
23:DA:530:G:O6	23:DA:2023:G:OP1	2.35	0.44
23:DA:257:A:H2'	23:DA:258:G:O4'	2.16	0.44
23:DA:272(H):C:H5''	23:DA:272(H):C:H6	1.81	0.44
23:DA:34:C:H41	23:DA:447:A:H61	1.65	0.44
23:DA:529:A:H5''	56:DA:4762:HOH:O	2.17	0.44
23:DA:986:C:C2'	23:DA:987:G:H5'	2.47	0.44
26:DE:171:GLU:O	26:DE:184:VAL:HG23	2.16	0.44
27:DF:20:LEU:HA	27:DF:20:LEU:HD23	1.82	0.44
27:DF:7:TYR:N	27:DF:22:ALA:HB3	2.29	0.44
29:DH:5:GLY:HA2	29:DH:69:ARG:HB3	1.99	0.44
33:DP:101:VAL:HA	33:DP:106:LEU:O	2.17	0.44
43:DZ:28:MET:HG3	43:DZ:35:ARG:HB2	1.99	0.44
1:AA:1065:U:H4'	1:AA:1066:C:O5'	2.17	0.44
1:AA:1240:U:H3	7:AG:39:ALA:CB	2.31	0.44
1:AA:1269:A:H1'	1:AA:1326:C:H1'	1.99	0.44
1:AA:1380:U:H2'	1:AA:1380:U:OP2	2.16	0.44
1:AA:138:G:H2'	1:AA:139:G:O4'	2.17	0.44
1:AA:1399:C:C2	1:AA:1502:A:N6	2.85	0.44
1:AA:1516:G:N1	1:AA:1519:A:OP2	2.50	0.44
1:AA:260:G:H2'	1:AA:261:U:C6	2.52	0.44
1:AA:510:A:H1'	1:AA:543:C:H1'	1.99	0.44
2:AB:70:PHE:HB2	2:AB:92:TYR:HB3	1.99	0.44
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.99	0.44
1:AA:673:G:H5''	6:AF:87:ARG:CZ	2.47	0.44
8:AH:26:VAL:HG23	8:AH:27:PRO:O	2.17	0.44
1:AA:1295:G:O3'	13:AM:14:ARG:NH1	2.50	0.44
23:BA:1300:U:H4'	23:BA:1301:A:H5'	1.99	0.44
23:BA:1464:C:H2'	23:BA:1465:G:C8	2.52	0.44
23:BA:1845:G:C2'	23:BA:1846:G:H5'	2.47	0.44
23:BA:2318:G:O2'	23:BA:2319:G:H5''	2.17	0.44
23:BA:2378:A:H4'	36:BS:23:ARG:HH11	1.82	0.44
23:BA:996:A:C2	23:BA:997:G:C8	3.05	0.44
23:BA:997:G:OP1	38:BU:92:ARG:HG2	2.18	0.44
24:BB:32:C:C2	24:BB:51:G:N2	2.85	0.44
28:BG:111:LEU:HA	28:BG:114:ILE:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:144:VAL:O	29:BH:148:ILE:HG12	2.17	0.44
30:BI:84:GLY:C	30:BI:86:THR:H	2.21	0.44
1:CA:1157:A:C2	1:CA:1181:G:N3	2.86	0.44
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.53	0.44
1:CA:369:C:O2'	1:CA:370:C:H5'	2.17	0.44
1:CA:838:G:C2'	1:CA:839:U:H5''	2.47	0.44
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.98	0.44
7:CG:18:TYR:HE1	7:CG:58:PRO:HB2	1.81	0.44
7:CG:26:PHE:CD2	7:CG:30:ILE:HD11	2.52	0.44
1:CA:609:A:H5'	16:CP:18:ARG:NH2	2.32	0.44
22:CX:81:LEU:HA	22:CX:84:GLN:HB2	1.98	0.44
23:DA:2356:C:O3'	44:D0:20:ARG:HD3	2.17	0.44
46:D2:65:ASN:O	46:D2:69:ARG:NH1	2.50	0.44
50:D6:8:LYS:HD3	52:D8:34:TRP:CD2	2.52	0.44
23:DA:2228:G:C5	23:DA:2229:C:C4	3.05	0.44
23:DA:300:A:H3'	42:DY:84:ARG:NH2	2.33	0.44
23:DA:1566:A:OP1	25:DD:211:ARG:NH1	2.50	0.44
26:DE:33:VAL:HG12	26:DE:89:ASP:O	2.16	0.44
28:DG:22:ARG:HH21	28:DG:175:LEU:HD11	1.81	0.44
36:DS:36:TYR:N	36:DS:36:TYR:CD1	2.85	0.44
36:DS:53:SER:O	36:DS:57:LYS:N	2.50	0.44
38:DU:112:ARG:NH2	39:DV:47:VAL:HB	2.32	0.44
1:AA:1005:A:H1'	1:AA:1036:G:N2	2.31	0.44
1:AA:1060:C:C2	1:AA:1198:G:N2	2.85	0.44
1:AA:113:G:H2'	1:AA:114:U:C6	2.52	0.44
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.17	0.44
1:AA:1508:G:H2'	1:AA:1509:C:C6	2.53	0.44
1:AA:560:U:H4'	1:AA:561:U:O5'	2.17	0.44
1:AA:838:G:C2'	1:AA:839:U:H5''	2.48	0.44
2:AB:55:PHE:CG	2:AB:58:ILE:HD12	2.52	0.44
4:AD:119:GLN:HE21	4:AD:119:GLN:HB3	1.57	0.44
11:AK:99:GLN:HG3	11:AK:105:VAL:HG11	1.99	0.44
11:AK:73:MET:HE2	11:AK:103:LEU:HD13	2.00	0.44
11:AK:84:VAL:CG1	11:AK:91:ARG:HD2	2.48	0.44
13:AM:108:ARG:O	13:AM:113:PRO:HD3	2.18	0.44
15:AO:78:TYR:O	15:AO:82:ILE:HG12	2.17	0.44
19:AS:51:VAL:HG11	19:AS:72:GLY:HA2	1.99	0.44
22:AX:53:THR:HA	22:AX:62:HIS:HB3	1.99	0.44
53:B9:10:ILE:HD12	53:B9:32:HIS:HA	1.99	0.44
23:BA:1282:U:H2'	23:BA:1283:G:O4'	2.17	0.44
23:BA:2208:A:H1'	23:BA:2219:G:C4	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2306:C:N3	23:BA:2307:G:O6	2.50	0.44
23:BA:2391:G:O6	23:BA:2425:A:H8	2.00	0.44
23:BA:2491:U:O2'	23:BA:2570:G:OP1	2.27	0.44
23:BA:271(F):C:H2'	23:BA:271(G):C:C6	2.46	0.44
23:BA:428:A:H8	23:BA:428:A:OP2	2.00	0.44
23:BA:545:G:H4'	23:BA:545:G:OP1	2.17	0.44
24:BB:60:C:C2	24:BB:61:G:C8	3.06	0.44
28:BG:9:ARG:NH1	28:BG:13:GLU:OE1	2.46	0.44
30:BI:33:ARG:HB2	30:BI:35:LEU:HD12	1.99	0.44
23:BA:566:U:H5''	33:BP:29:LYS:HE3	1.98	0.44
38:BU:106:PHE:O	38:BU:110:VAL:HG23	2.18	0.44
23:BA:1161:C:O2'	39:BV:8:GLY:HA2	2.18	0.44
1:CA:1041:A:H2'	1:CA:1042:G:O4'	2.17	0.44
1:CA:1096:C:O2'	1:CA:1097:C:H5'	2.17	0.44
1:CA:1361:G:H8	1:CA:1361:G:O5'	2.01	0.44
1:CA:1367:C:N4	1:CA:1368:G:O6	2.50	0.44
1:CA:152:A:N6	1:CA:169:C:N3	2.65	0.44
2:CB:143:GLU:O	2:CB:146:GLN:HB2	2.17	0.44
2:CB:178:ARG:HH22	8:CH:68:ARG:NH2	2.13	0.44
2:CB:24:TRP:CZ3	2:CB:29:ALA:HB2	2.51	0.44
9:CI:13:ALA:HB2	9:CI:68:GLY:N	2.33	0.44
10:CJ:50:ILE:HD13	14:CN:41:ARG:HH11	1.82	0.44
10:CJ:48:THR:HG23	10:CJ:62:HIS:HB3	1.98	0.44
13:CM:23:TYR:HB3	13:CM:67:GLU:OE1	2.17	0.44
23:DA:1108:U:H2'	23:DA:1108:U:O2	2.17	0.44
23:DA:1509(A):A:H3'	23:DA:1509(B):A:C8	2.50	0.44
23:DA:2130:U:H2'	23:DA:2131:G:N7	2.31	0.44
23:DA:2751:G:C4	29:DH:2:SER:N	2.86	0.44
23:DA:500:G:N1	23:DA:503:A:OP2	2.50	0.44
23:DA:646:A:H2'	23:DA:647:G:O4'	2.17	0.44
23:DA:649:G:H2'	23:DA:650:C:H6	1.82	0.44
28:DG:133:LEU:HD12	28:DG:134:GLY:N	2.32	0.44
32:DO:3:GLN:HB2	32:DO:4:PRO:HD2	2.00	0.44
34:DQ:59:ARG:HB3	34:DQ:60:ARG:H	1.69	0.44
40:DW:60:ASN:HD22	40:DW:60:ASN:H	1.63	0.44
43:DZ:111:VAL:C	43:DZ:113:ALA:H	2.21	0.44
24:DB:104:U:O3'	43:DZ:72:ARG:NH1	2.50	0.44
1:AA:1251:A:O2'	1:AA:1370:G:H5'	2.18	0.44
1:AA:153:C:H42	1:AA:169:C:N4	2.15	0.44
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.17	0.44
1:AA:439:A:C4	1:AA:496:A:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:997:U:H2'	1:AA:998:G:O4'	2.17	0.44
2:AB:162:ILE:HD11	2:AB:184:VAL:HG22	1.99	0.44
3:AC:110:ASN:ND2	3:AC:140:ARG:HD2	2.32	0.44
3:AC:178:LEU:HA	3:AC:178:LEU:HD13	1.53	0.44
5:AE:76:ILE:HD11	5:AE:142:LEU:HD11	1.99	0.44
1:AA:1350:A:O2'	7:AG:33:ASP:OD2	2.32	0.44
9:AI:71:SER:O	9:AI:75:ASP:N	2.28	0.44
12:AL:38:THR:OG1	12:AL:39:VAL:N	2.51	0.44
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.50	0.44
15:AO:43:LEU:HD23	15:AO:43:LEU:HA	1.84	0.44
20:AT:16:HIS:O	20:AT:19:SER:N	2.50	0.44
48:B4:26:SER:OG	48:B4:27:THR:N	2.43	0.44
23:BA:1049:C:H1'	23:BA:1113:U:H4'	1.99	0.44
23:BA:1949:G:C6	23:BA:1950:G:C6	3.06	0.44
23:BA:2058:A:H5''	23:BA:2059:A:OP2	2.17	0.44
23:BA:2306:C:H3'	23:BA:2307:G:H8	1.77	0.44
23:BA:504:U:H2'	56:BA:4228:HOH:O	2.18	0.44
23:BA:868:U:H2'	23:BA:869:G:O4'	2.17	0.44
24:BB:90:A:C5	24:BB:91:C:H1'	2.53	0.44
27:BF:101:LEU:HA	27:BF:101:LEU:HD12	1.74	0.44
28:BG:178:PHE:HB3	28:BG:180:PHE:CE1	2.53	0.44
34:BQ:7:MET:HE3	34:BQ:7:MET:HB2	1.66	0.44
23:BA:2319:G:H22	36:BS:3:ARG:CD	2.30	0.44
36:BS:88:ASP:OD1	36:BS:90:GLY:N	2.47	0.44
37:BT:27:THR:HB	37:BT:89:VAL:HG23	1.98	0.44
42:BY:76:CYS:HA	42:BY:77:PRO:HD3	1.87	0.44
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.52	0.44
1:CA:1026:G:H2'	1:CA:1026:G:N3	2.31	0.44
1:CA:1128:C:H1'	1:CA:1146:A:N6	2.32	0.44
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.17	0.44
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.99	0.44
7:CG:137:LYS:HA	7:CG:140:ASP:OD2	2.17	0.44
7:CG:53:LYS:HB3	7:CG:53:LYS:HE2	1.54	0.44
7:CG:70:LYS:HA	7:CG:71:PRO:HD2	1.74	0.44
9:CI:17:VAL:HG11	9:CI:81:ILE:CA	2.47	0.44
9:CI:74:ILE:HG22	9:CI:75:ASP:OD2	2.17	0.44
23:DA:1804:C:H2'	23:DA:1805:U:H6	1.83	0.44
23:DA:2125:G:H21	23:DA:2126:A:N6	2.15	0.44
23:DA:2226:C:H3'	56:DA:4145:HOH:O	2.18	0.44
23:DA:2695:C:H2'	23:DA:2696:U:C6	2.53	0.44
23:DA:389:G:O5'	23:DA:389:G:H8	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:528:A:O2'	23:DA:529:A:H5'	2.17	0.44
23:DA:627:A:C6	23:DA:637:A:C8	3.05	0.44
23:DA:729:G:H2'	23:DA:1775:U:H1'	2.00	0.44
24:DB:20:C:H2'	24:DB:21:G:H5'	2.00	0.44
28:DG:56:ALA:CA	28:DG:153:ARG:HH21	2.31	0.44
31:DN:128:HIS:H	31:DN:128:HIS:CD2	2.36	0.44
23:DA:1007:C:OP1	31:DN:35:ARG:NH1	2.50	0.44
35:DR:85:PRO:O	35:DR:87:TYR:N	2.50	0.44
36:DS:10:ARG:O	36:DS:14:VAL:HG12	2.17	0.44
41:DX:60:ARG:HB3	41:DX:60:ARG:HE	1.45	0.44
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.53	0.44
1:AA:960:U:C4	1:AA:1225:A:H1'	2.52	0.44
1:AA:373:A:H2'	1:AA:374:A:H8	1.82	0.44
1:AA:685:G:C2	1:AA:686:U:C4	3.06	0.44
2:AB:80:ILE:HG12	2:AB:211:ILE:HG22	2.00	0.44
9:AI:99:LEU:HB3	9:AI:101:PHE:HD1	1.83	0.44
13:AM:77:ASN:OD1	13:AM:77:ASN:N	2.50	0.44
19:AS:11:VAL:HG13	19:AS:13:ASP:H	1.82	0.44
19:AS:61:TYR:CG	19:AS:62:ILE:N	2.86	0.44
20:AT:74:LYS:HB2	20:AT:75:ASN:H	1.47	0.44
48:B4:14:ILE:HD11	48:B4:24:THR:OG1	2.16	0.44
23:BA:1171:G:HO2'	23:BA:1173:G:P	2.30	0.44
23:BA:125:G:C6	51:B7:10:ARG:HG3	2.52	0.44
23:BA:1547:C:H2'	23:BA:1548:C:C6	2.53	0.44
23:BA:1799:G:H5'	23:BA:1819:A:N6	2.32	0.44
23:BA:2282:G:H4'	23:BA:2389:G:O2'	2.17	0.44
23:BA:993:G:C6	23:BA:994:C:N4	2.85	0.44
25:BD:107:ALA:HA	25:BD:108:PRO:HD2	1.90	0.44
25:BD:145:VAL:HG12	25:BD:146:GLU:O	2.18	0.44
27:BF:168:ARG:CB	27:BF:168:ARG:HH11	2.31	0.44
28:BG:39:ILE:HG23	28:BG:157:ILE:HD13	2.00	0.44
23:BA:2496:C:OP1	34:BQ:82:ARG:HB3	2.18	0.44
38:BU:39:LEU:HA	38:BU:39:LEU:HD23	1.74	0.44
1:CA:1001(A):G:H2'	1:CA:1002:G:C8	2.52	0.44
1:CA:1155:G:H2'	1:CA:1156:G:H8	1.81	0.44
1:CA:1225:A:H5'	1:CA:1226:C:OP2	2.17	0.44
1:CA:1299:A:C8	1:CA:1301:U:H1'	2.52	0.44
1:CA:142:G:H1	1:CA:221:C:H42	1.64	0.44
1:CA:1459:C:P	1:CA:1460:A:OP2	2.75	0.44
2:CB:141:GLU:O	2:CB:145:LEU:HB2	2.17	0.44
3:CC:153:VAL:HG12	3:CC:196:LEU:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:62:PHE:HD1	7:CG:124:LEU:HD21	1.82	0.44
19:CS:81:ARG:HB2	19:CS:81:ARG:NH1	2.31	0.44
23:DA:1717:G:C2	23:DA:1718:G:C8	3.05	0.44
23:DA:864:G:C6	23:DA:865:C:N4	2.86	0.44
25:DD:148:GLU:CB	25:DD:151:LYS:HD2	2.47	0.44
23:DA:1827:C:OP2	25:DD:222:ARG:HD2	2.17	0.44
26:DE:119:ARG:HG2	26:DE:160:TYR:HB2	2.00	0.44
27:DF:123:LEU:HD11	27:DF:194:MET:HE2	2.00	0.44
27:DF:79:GLY:HA2	27:DF:86:GLY:HA2	1.99	0.44
29:DH:137:ASP:HB3	29:DH:140:LYS:HE2	2.00	0.44
29:DH:38:SER:HB2	29:DH:64:LEU:HD22	1.99	0.44
30:DI:33:ARG:HB2	30:DI:35:LEU:HD12	1.98	0.44
35:DR:103:ARG:HG2	35:DR:103:ARG:NH1	2.33	0.44
1:AA:1003:G:N2	1:AA:1004:A:HO2'	2.14	0.44
1:AA:1057:G:C5	1:AA:1204:A:C2	3.05	0.44
1:AA:1293:G:C2	1:AA:1294:G:C4	3.06	0.44
1:AA:1441:G:H5'	1:AA:1442:G:OP1	2.17	0.44
3:AC:40:ARG:O	3:AC:44:GLU:N	2.50	0.44
8:AH:73:ASP:OD2	8:AH:75:ARG:HB2	2.18	0.44
1:AA:717:C:H4'	11:AK:117:ASN:HB3	1.99	0.44
13:AM:52:GLU:HG2	13:AM:55:ARG:HH22	1.82	0.44
13:AM:63:THR:HB	13:AM:64:TRP:CE3	2.53	0.44
17:AQ:45:HIS:CE1	17:AQ:47:PRO:HG3	2.53	0.44
52:B8:62:LEU:HB3	52:B8:65:GLU:HG2	1.99	0.44
23:BA:1488:G:N1	23:BA:1489:U:O2	2.50	0.44
23:BA:1525:G:H2'	23:BA:1526:G:O4'	2.17	0.44
23:BA:1530:C:HO2'	23:BA:1531:C:P	2.35	0.44
23:BA:2150:U:H2'	23:BA:2151:G:C8	2.53	0.44
23:BA:2031:A:C6	23:BA:2498:C:H1'	2.53	0.44
23:BA:2698:U:H2'	23:BA:2699:C:C6	2.52	0.44
23:BA:272(H):C:H6	23:BA:272(H):C:H5''	1.82	0.44
24:BB:13:A:N1	24:BB:69:G:O2'	2.40	0.44
25:BD:69:ARG:NH2	25:BD:128:GLY:O	2.50	0.44
34:BQ:57:HIS:CD2	34:BQ:117:ALA:HB2	2.52	0.44
1:CA:1250:A:C2	1:CA:1370:G:H1'	2.53	0.44
1:CA:1296:C:H4'	1:CA:1302:U:C4	2.53	0.44
1:CA:1372:U:C4	1:CA:1373:G:C6	3.05	0.44
1:CA:317:G:C6	1:CA:318:G:C5	3.06	0.44
1:CA:346:G:N2	1:CA:347:G:C8	2.86	0.44
1:CA:958:A:N6	1:CA:959:A:N1	2.66	0.44
1:CA:982:U:H4'	1:CA:983:A:O5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:989:C:N4	1:CA:1216:G:N1	2.28	0.44
3:CC:71:ALA:HA	3:CC:106:VAL:N	2.32	0.44
1:CA:427:U:P	4:CD:13:ARG:HH22	2.40	0.44
10:CJ:51:ARG:NH2	10:CJ:61:GLU:HB3	2.33	0.44
12:CL:82:VAL:HG23	12:CL:106:ASP:OD2	2.17	0.44
13:CM:10:PRO:HG2	13:CM:45:VAL:HG21	1.98	0.44
19:CS:12:ASP:C	19:CS:14:HIS:H	2.17	0.44
52:D8:39:LYS:HA	52:D8:42:ARG:NH1	2.33	0.44
23:DA:83:G:H22	23:DA:102:G:H2'	1.81	0.44
23:DA:297:C:H3'	56:DA:3761:HOH:O	2.18	0.44
23:DA:311:A:C8	23:DA:332:A:N7	2.86	0.44
23:DA:579:G:H2'	23:DA:580:C:C6	2.53	0.44
23:DA:848:G:N9	23:DA:933:A:H8	2.15	0.44
23:DA:921:G:C5	23:DA:922:U:C4	3.05	0.44
23:DA:975(A):G:H1'	23:DA:990:A:C2	2.53	0.44
28:DG:16:ARG:HB2	28:DG:17:PRO:HD3	2.00	0.44
28:DG:178:PHE:HB3	28:DG:180:PHE:HE1	1.82	0.44
29:DH:27:LYS:HB3	29:DH:27:LYS:HE2	1.77	0.44
33:DP:77:ARG:HB2	33:DP:78:PRO:HD2	1.99	0.44
35:DR:95:THR:HG22	35:DR:116:LEU:HD23	1.99	0.44
23:DA:1161:C:O2'	39:DV:8:GLY:HA2	2.17	0.44
40:DW:19:LEU:HD12	40:DW:19:LEU:HA	1.70	0.44
42:DY:68:HIS:ND1	42:DY:70:SER:HB3	2.32	0.44
1:AA:115:G:H4'	1:AA:116:A:O5'	2.17	0.44
1:AA:1053:G:N7	1:AA:1199:U:H3'	2.33	0.44
1:AA:1242:C:H4'	1:AA:1303:C:O3'	2.18	0.44
1:AA:12:U:H4'	1:AA:526:C:O2'	2.18	0.44
1:AA:1267:C:O2	1:AA:1327:C:H4'	2.17	0.44
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.53	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:AA:9:G:OP1	5:AE:122:GLU:HB2	2.17	0.44
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	1.99	0.44
2:AB:97:TRP:CZ2	2:AB:101:MET:HB2	2.53	0.44
4:AD:107:ARG:NE	4:AD:173:TRP:HZ2	2.15	0.44
5:AE:75:THR:HG23	5:AE:76:ILE:O	2.17	0.44
1:AA:1291:G:H4'	9:AI:39:GLY:HA3	2.00	0.44
3:AC:22:TRP:O	10:AJ:11:PHE:HD1	2.00	0.44
10:AJ:50:ILE:HD13	14:AN:41:ARG:NH1	2.32	0.44
12:AL:60:LEU:HB3	12:AL:62:SER:H	1.82	0.44
12:AL:32:PHE:HB3	12:AL:84:LEU:HD11	1.99	0.44
17:AQ:13:ASP:CG	17:AQ:14:LYS:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B4:9:LEU:HD22	48:B4:26:SER:HA	2.00	0.44
50:B6:47:THR:HG22	50:B6:48:VAL:N	2.31	0.44
23:BA:2478:A:H5'	53:B9:31:LYS:HD3	2.00	0.44
53:B9:32:HIS:O	53:B9:34:GLN:HG3	2.18	0.44
23:BA:1530:C:H1'	23:BA:1531:C:OP1	2.18	0.44
23:BA:1965:C:H3'	23:BA:1966:A:H2'	1.99	0.44
23:BA:2032:G:O2'	26:BE:145:LYS:NZ	2.50	0.44
23:BA:2309:A:C6	23:BA:2310:A:C2	3.05	0.44
23:BA:2601:C:H3'	23:BA:2602:A:C8	2.53	0.44
23:BA:2881:C:H2'	23:BA:2882:A:O4'	2.18	0.44
23:BA:335:C:H2'	23:BA:336:C:C6	2.52	0.44
27:BF:64:ILE:HG13	27:BF:65:TRP:N	2.32	0.44
28:BG:143:GLU:H	28:BG:143:GLU:HG2	1.55	0.44
28:BG:59:GLU:O	28:BG:63:ILE:N	2.46	0.44
32:BO:17:ARG:HD2	32:BO:47:ILE:HG23	1.99	0.44
33:BP:71:VAL:HG23	33:BP:72:PRO:HA	2.00	0.44
26:BE:9:VAL:HB	37:BT:3:ARG:HG2	1.99	0.44
40:BW:36:LEU:HD23	40:BW:36:LEU:HA	1.71	0.44
43:BZ:144:LEU:HA	43:BZ:144:LEU:HD12	1.76	0.44
43:BZ:72:ARG:HD3	43:BZ:72:ARG:HA	1.58	0.44
1:CA:1006:C:C2	1:CA:1023:G:N1	2.86	0.44
1:CA:120:A:H2'	1:CA:121:C:H4'	1.98	0.44
1:CA:1323:G:N2	1:CA:1361:G:O2'	2.51	0.44
1:CA:1459:C:H6	1:CA:1459:C:H3'	1.83	0.44
1:CA:35:G:C2	1:CA:550:G:N3	2.85	0.44
1:CA:657:G:H2'	1:CA:658:G:H8	1.82	0.44
2:CB:197:VAL:HG12	2:CB:198:ASP:H	1.82	0.44
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.76	0.44
5:CE:76:ILE:HD11	5:CE:142:LEU:HD11	2.00	0.44
9:CI:73:GLN:O	9:CI:76:ALA:HB3	2.18	0.44
10:CJ:96:ILE:H	10:CJ:96:ILE:HG13	1.61	0.44
20:CT:21:LYS:O	20:CT:25:ARG:HG3	2.17	0.44
23:DA:857:C:H4'	44:D0:23:VAL:HG21	1.99	0.44
44:D0:24:LYS:O	44:D0:25:ARG:HD3	2.17	0.44
23:DA:1126:A:H8	23:DA:1126:A:OP1	2.01	0.44
23:DA:1426:G:N7	25:DD:31:LYS:NZ	2.58	0.44
23:DA:1547:C:H2'	23:DA:1548:C:C6	2.53	0.44
23:DA:1557:C:H5''	23:DA:1558:A:OP2	2.18	0.44
23:DA:2117:A:N6	23:DA:2171:A:C6	2.86	0.44
23:DA:2291:U:O2'	23:DA:2374:C:O2	2.35	0.44
24:DB:96:U:H2'	24:DB:97:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:68:LYS:HD2	25:DD:70:TRP:CZ2	2.52	0.44
43:DZ:98:MET:O	43:DZ:125:LEU:HD12	2.17	0.44
1:AA:1065:U:H5'	1:AA:1190:G:N2	2.33	0.44
1:AA:191:G:C6	1:AA:192:U:C4	3.06	0.44
1:AA:564:C:O2'	8:AH:91:ARG:NH2	2.42	0.44
2:AB:55:PHE:HA	2:AB:58:ILE:CG1	2.47	0.44
4:AD:120:LEU:HB3	4:AD:126:ILE:HD11	2.00	0.44
5:AE:84:PHE:CE1	5:AE:133:TYR:HB3	2.53	0.44
7:AG:103:TRP:HA	7:AG:106:GLN:HE21	1.82	0.44
7:AG:56:GLN:OE1	7:AG:61:VAL:HG22	2.17	0.44
7:AG:18:TYR:CZ	7:AG:58:PRO:HB2	2.53	0.44
7:AG:87:VAL:HA	7:AG:88:PRO:HD2	1.78	0.44
11:AK:92:GLU:HB3	11:AK:96:ARG:HH12	1.82	0.44
14:AN:6:LEU:HD12	14:AN:9:LYS:CB	2.48	0.44
19:AS:36:ARG:NH1	19:AS:52:TYR:O	2.51	0.44
48:B4:34:GLU:CD	48:B4:35:VAL:H	2.21	0.44
51:B7:43:THR:HA	51:B7:44:PRO:HD2	1.74	0.44
23:BA:1040:C:O5'	23:BA:1040:C:H6	2.00	0.44
23:BA:1108:U:H2'	23:BA:1108:U:O2	2.17	0.44
23:BA:1039:G:H1'	23:BA:1117:G:N2	2.32	0.44
23:BA:1142(A):A:C4	23:BA:1144:G:C8	3.05	0.44
23:BA:141:A:H8	23:BA:1408:C:O2'	1.99	0.44
23:BA:1790:C:H2'	23:BA:1791:A:C5	2.53	0.44
23:BA:1910:G:O2'	23:BA:1911:U:H5'	2.17	0.44
23:BA:1952:A:N3	32:BO:22:ILE:HD12	2.33	0.44
23:BA:2169:A:H3'	23:BA:2170:A:C8	2.51	0.44
23:BA:2336:A:H61	44:B0:43:THR:CG2	2.29	0.44
23:BA:2463:C:H2'	23:BA:2464:C:H5'	2.00	0.44
23:BA:36:G:O2'	23:BA:450:G:H2'	2.18	0.44
23:BA:63:U:OP2	56:BA:5009:HOH:O	2.21	0.44
26:BE:111:ARG:HD3	26:BE:160:TYR:CE1	2.52	0.44
27:BF:129:PHE:O	27:BF:132:VAL:HG13	2.18	0.44
32:BO:117:LEU:HA	32:BO:117:LEU:HD23	1.71	0.44
32:BO:63:VAL:HG12	32:BO:106:LEU:HD11	2.00	0.44
33:BP:38:GLN:HG3	33:BP:45:LEU:HD23	1.99	0.44
33:BP:46:LYS:HE3	33:BP:51:PHE:CD1	2.53	0.44
43:BZ:150:LEU:O	43:BZ:171:ILE:HG13	2.18	0.44
1:CA:1117:G:C8	1:CA:1117:G:H5''	2.53	0.44
1:CA:1065:U:H6	1:CA:1190:G:H21	1.64	0.44
1:CA:1442(A):G:H2'	1:CA:1442(B):A:H5''	2.00	0.44
1:CA:189(B):C:H2'	1:CA:189(C):C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:328:C:H4'	1:CA:329:A:H5'	1.99	0.44
1:CA:35:G:H2'	1:CA:36:C:H6	1.81	0.44
1:CA:560:U:H4'	1:CA:561:U:C5'	2.47	0.44
1:CA:1112:C:H42	3:CC:178:LEU:HD23	1.83	0.44
5:CE:71:LEU:HD23	5:CE:115:VAL:HG22	1.99	0.44
10:CJ:7:LYS:N	10:CJ:97:GLU:O	2.48	0.44
1:CA:687:A:H4'	11:CK:47:VAL:HG13	2.00	0.44
1:CA:979:C:O2	14:CN:19:ARG:HG2	2.18	0.44
20:CT:74:LYS:HB2	20:CT:75:ASN:H	1.47	0.44
23:DA:2884:U:H1'	49:D5:53:ALA:HB2	2.00	0.44
23:DA:2064:C:H2'	23:DA:2065:C:C6	2.53	0.44
23:DA:2378:A:H4'	36:DS:23:ARG:HH11	1.83	0.44
23:DA:2687:U:H2'	23:DA:2688:U:O4'	2.18	0.44
23:DA:2748:A:C6	23:DA:2749:A:C5	3.06	0.44
23:DA:303:U:H2'	23:DA:304:G:C8	2.53	0.44
23:DA:511:U:C5	23:DA:512:G:C5	3.05	0.44
23:DA:733:G:N7	56:DA:3799:HOH:O	2.36	0.44
23:DA:815:C:C2	23:DA:1193:G:C2	3.06	0.44
28:DG:169:ALA:O	28:DG:173:LEU:HG	2.17	0.44
28:DG:47:LYS:HG3	28:DG:48:GLU:H	1.82	0.44
33:DP:2:LYS:HG2	33:DP:4:SER:H	1.83	0.44
34:DQ:57:HIS:CD2	34:DQ:117:ALA:HB2	2.53	0.44
23:DA:548:A:H61	39:DV:19:LYS:H	1.65	0.44
43:DZ:111:VAL:O	43:DZ:112:ARG:HB2	2.18	0.44
1:AA:1418:A:H2	23:BA:1948:G:N3	2.15	0.44
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.48	0.44
1:AA:493:G:HO2'	1:AA:494:U:H6	1.62	0.44
1:AA:627:G:C2	1:AA:628:G:C8	3.06	0.44
1:AA:926:G:H21	22:AX:94:GLN:HE22	1.66	0.44
9:AI:13:ALA:HB2	9:AI:68:GLY:CA	2.47	0.44
10:AJ:13:HIS:HB3	10:AJ:68:HIS:HD1	1.82	0.44
12:AL:27:LEU:C	12:AL:29:GLY:H	2.21	0.44
1:AA:1308:U:OP1	13:AM:97:PRO:HA	2.18	0.44
18:AR:33:ASP:O	18:AR:40:LEU:HD11	2.17	0.44
23:BA:102:G:O2'	23:BA:103:A:P	2.76	0.44
23:BA:1185:C:H5''	23:BA:1186:G:OP1	2.18	0.44
23:BA:1357:U:H2'	23:BA:1358:G:O4'	2.18	0.44
23:BA:1648:C:H2'	23:BA:1649:G:O5'	2.18	0.44
23:BA:570:G:H2'	23:BA:2030:A:N7	2.33	0.44
23:BA:2199:A:H5''	23:BA:2200:C:OP2	2.18	0.44
23:BA:2296:U:C4	23:BA:2333:A:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:493:G:H2'	23:BA:494:G:O4'	2.17	0.44
23:BA:528:A:O2'	56:BA:4483:HOH:O	1.85	0.44
23:BA:973:A:O4'	23:BA:1188:U:C6	2.71	0.44
24:BB:7:G:H5''	24:BB:7:G:C8	2.52	0.44
23:BA:2572:A:C8	26:BE:144:ARG:HD2	2.52	0.44
30:BI:47:LEU:HA	30:BI:47:LEU:HD23	1.88	0.44
34:BQ:12:GLN:HG2	34:BQ:73:PRO:HD2	1.99	0.44
42:BY:40:GLU:O	42:BY:42:VAL:HG23	2.17	0.44
1:CA:1030(C):G:C5	1:CA:1030(D):A:N7	2.86	0.44
1:CA:1358:U:C5	1:CA:1359:C:C4	3.06	0.44
1:CA:148:G:C2	1:CA:175:C:C2	3.06	0.44
1:CA:129(A):G:O2'	1:CA:189(F):U:OP1	2.33	0.44
1:CA:269:C:H2'	1:CA:270:A:C8	2.52	0.44
1:CA:35:G:H22	1:CA:550:G:H1'	1.83	0.44
1:CA:614:A:H2'	1:CA:615:C:C6	2.53	0.44
5:CE:127:ASN:HA	5:CE:128:PRO:HD3	1.80	0.44
6:CF:25:ILE:HD12	6:CF:82:ARG:HE	1.83	0.44
10:CJ:55:LYS:O	10:CJ:56:HIS:CG	2.71	0.44
15:CO:55:GLY:O	15:CO:59:MET:HG3	2.18	0.44
15:CO:88:ARG:HA	15:CO:88:ARG:HD2	1.83	0.44
23:DA:1153:C:H2'	23:DA:1154:G:O4'	2.17	0.44
23:DA:1478:G:HO2'	23:DA:1558:A:H2	1.63	0.44
23:DA:1766:U:H2'	23:DA:1767:C:C6	2.53	0.44
23:DA:2119:A:H2'	23:DA:2119:A:OP1	2.18	0.44
23:DA:2133:G:N2	23:DA:2158:A:H62	2.16	0.44
23:DA:272(H):C:H5'	23:DA:272(I):U:OP2	2.17	0.44
23:DA:30:G:H2'	23:DA:31:C:C6	2.53	0.44
23:DA:484:C:H2'	23:DA:485:C:H6	1.80	0.44
23:DA:830:G:H4'	23:DA:831:G:OP2	2.18	0.44
28:DG:72:ARG:HD3	28:DG:85:GLY:HA2	1.99	0.44
1:AA:1010:G:H2'	1:AA:1010:G:N3	2.33	0.43
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.80	0.43
1:AA:1241:G:N3	1:AA:1241:G:H2'	2.33	0.43
1:AA:1267:C:O2'	21:AU:20:LYS:HD3	2.18	0.43
1:AA:1317:C:N3	19:AS:37:ARG:NH2	2.61	0.43
1:AA:1442(A):G:C5	1:AA:1442(B):A:N3	2.86	0.43
1:AA:983:A:C2	1:AA:984:C:H5'	2.53	0.43
2:AB:70:PHE:H	2:AB:92:TYR:HA	1.83	0.43
3:AC:122:GLU:HA	3:AC:125:GLU:OE2	2.18	0.43
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.99	0.43
7:AG:16:LEU:HD22	9:AI:45:ALA:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1342:C:O2'	9:AI:124:GLN:HA	2.17	0.43
52:B8:39:LYS:HA	52:B8:42:ARG:NH1	2.33	0.43
23:BA:102:G:HO2'	23:BA:103:A:P	2.40	0.43
23:BA:1956:U:H2'	23:BA:1957:C:H5'	2.01	0.43
23:BA:275:G:O2'	23:BA:276:A:H5'	2.18	0.43
23:BA:885:C:C4	23:BA:886:C:H1'	2.53	0.43
29:BH:13:LYS:HA	29:BH:14:GLY:HA2	1.60	0.43
31:BN:115:ARG:O	31:BN:118:LYS:HB2	2.18	0.43
43:BZ:151:HIS:C	43:BZ:153:SER:H	2.22	0.43
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.33	0.43
1:CA:991:U:N3	1:CA:1212:U:H1'	2.32	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
1:CA:516:U:O4	1:CA:517:G:N1	2.51	0.43
1:CA:959:A:H61	19:CS:78:ARG:CA	2.29	0.43
2:CB:70:PHE:H	2:CB:92:TYR:HA	1.82	0.43
3:CC:134:ILE:CG2	3:CC:151:VAL:HB	2.46	0.43
3:CC:15:THR:HG22	3:CC:16:ARG:N	2.33	0.43
4:CD:12:CYS:SG	4:CD:19:LEU:O	2.76	0.43
7:CG:22:LEU:HD12	7:CG:22:LEU:HA	1.78	0.43
15:CO:43:LEU:O	15:CO:44:LYS:C	2.57	0.43
23:DA:51:G:O2'	23:DA:119:A:N1	2.39	0.43
23:DA:1316:U:H2'	23:DA:1317:A:H8	1.83	0.43
23:DA:1804:C:H6	23:DA:1804:C:O5'	1.99	0.43
23:DA:2238:G:N7	56:DA:4648:HOH:O	2.36	0.43
23:DA:2677:G:H2'	23:DA:2678:C:C6	2.53	0.43
23:DA:55:G:N3	23:DA:127:A:H2	2.15	0.43
23:DA:980:A:N3	23:DA:2037:G:O2'	2.40	0.43
24:DB:38:C:O2	24:DB:48:A:H1'	2.17	0.43
24:DB:40:U:H1'	24:DB:45:A:N6	2.33	0.43
24:DB:46:A:C5	24:DB:47:C:C5	3.06	0.43
23:DA:2305:A:C5'	28:DG:134:GLY:HA3	2.47	0.43
39:DV:76:LYS:HD2	39:DV:81:TYR:CD1	2.53	0.43
1:AA:1046:A:H2'	1:AA:1047:G:O4'	2.17	0.43
1:AA:1221:G:O5'	1:AA:1221:G:H8	2.02	0.43
1:AA:1250:A:H1'	1:AA:1370:G:O2'	2.17	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.17	0.43
1:AA:427:U:C4	1:AA:428:G:C6	3.05	0.43
1:AA:475:G:H2'	1:AA:476:G:H8	1.82	0.43
1:AA:636:U:H2'	1:AA:637:G:H8	1.83	0.43
1:AA:73:G:C6	1:AA:97:G:C6	3.06	0.43
5:AE:144:THR:O	5:AE:148:VAL:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:20:LYS:HB3	21:AU:20:LYS:HZ3	1.82	0.43
23:BA:1740:G:H2'	23:BA:1741:A:H8	1.83	0.43
23:BA:1786:A:OP1	56:BA:4757:HOH:O	2.20	0.43
23:BA:2119:A:N6	23:BA:2168:G:H1'	2.33	0.43
23:BA:2789:C:N3	23:BA:2894:G:O6	2.51	0.43
23:BA:296:C:O2'	23:BA:297:C:H5'	2.18	0.43
23:BA:62:C:OP1	56:BA:5009:HOH:O	2.21	0.43
23:BA:1814:G:H4'	25:BD:51:VAL:HG21	2.01	0.43
27:BF:64:ILE:HG13	27:BF:65:TRP:H	1.83	0.43
1:CA:1014:A:H2'	1:CA:1015:A:N9	2.33	0.43
1:CA:1193:G:C5	1:CA:1194:U:C5	3.06	0.43
1:CA:1246:C:H2'	1:CA:1247:U:C6	2.53	0.43
1:CA:559:A:N3	1:CA:559:A:H5'	2.32	0.43
1:CA:713:G:H2'	1:CA:714:G:C8	2.52	0.43
1:CA:957:U:H4'	19:CS:79:THR:HG23	2.00	0.43
1:CA:994:A:O2'	14:CN:8:GLU:HG2	2.18	0.43
5:CE:32:VAL:O	5:CE:43:LEU:HD12	2.18	0.43
6:CF:67:MET:HE3	6:CF:75:LEU:HD22	1.99	0.43
1:CA:599:C:H4'	8:CH:130:GLY:C	2.38	0.43
8:CH:36:LEU:O	8:CH:45:ILE:HD11	2.18	0.43
15:CO:78:TYR:O	15:CO:82:ILE:HG12	2.18	0.43
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.71	0.43
23:DA:1210:A:C5'	23:DA:1210:A:H8	2.30	0.43
23:DA:1340:U:H4'	23:DA:1394:U:O2'	2.18	0.43
23:DA:1364:G:P	45:D1:3:LYS:HG2	2.57	0.43
23:DA:2176:A:H5'	23:DA:2177:C:OP2	2.18	0.43
23:DA:2343:C:HO2'	23:DA:2373:G:HO2'	1.64	0.43
23:DA:2685:G:H2'	23:DA:2686:G:H5''	2.00	0.43
23:DA:354:G:H2'	23:DA:355:G:O4'	2.18	0.43
23:DA:54:G:O2'	51:D7:35:ARG:HD3	2.18	0.43
23:DA:824:A:H1'	23:DA:2358:G:N7	2.34	0.43
25:DD:96:HIS:HD2	25:DD:102:LYS:HG2	1.82	0.43
25:DD:77:ALA:HB2	25:DD:97:TYR:CD2	2.53	0.43
34:DQ:60:ARG:NH1	43:DZ:177:PRO:HG3	2.33	0.43
36:DS:74:ALA:CB	36:DS:108:GLY:HA3	2.48	0.43
39:DV:18:LEU:HD23	39:DV:18:LEU:HA	1.84	0.43
43:DZ:35:ARG:HD2	43:DZ:35:ARG:HA	1.64	0.43
1:AA:988:G:C2	1:AA:1218:C:C2	3.05	0.43
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.53	0.43
4:AD:110:PHE:HD2	4:AD:148:VAL:HG22	1.84	0.43
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.17	0.43
12:AL:85:ILE:HD13	12:AL:85:ILE:HA	1.75	0.43
1:AA:981:U:OP1	14:AN:6:LEU:HD11	2.19	0.43
17:AQ:40:LYS:HD3	17:AQ:42:TYR:CZ	2.54	0.43
17:AQ:65:ILE:HD12	17:AQ:69:LYS:O	2.18	0.43
19:AS:31:ILE:HG23	19:AS:49:ILE:HA	1.99	0.43
49:B5:45:VAL:HG11	49:B5:58:LEU:HD13	1.99	0.43
23:BA:1003:G:N2	23:BA:1153:C:C2	2.86	0.43
23:BA:1050:A:H2'	23:BA:1051:G:C8	2.52	0.43
23:BA:1518:U:H2'	23:BA:1519:G:O4'	2.18	0.43
23:BA:1535:A:P	23:BA:1535:A:H3'	2.58	0.43
23:BA:1632:A:N6	23:BA:1633:G:C6	2.87	0.43
23:BA:2261:C:O2'	23:BA:2262:U:H5'	2.18	0.43
23:BA:265:A:H1'	23:BA:266:G:O4'	2.19	0.43
23:BA:300:A:H3'	42:BY:84:ARG:NH2	2.33	0.43
23:BA:652(B):A:O2'	23:BA:652(C):G:H5'	2.18	0.43
23:BA:652(E):G:O6	23:BA:652(T):C:N3	2.51	0.43
33:BP:77:ARG:HB2	33:BP:78:PRO:HD2	2.01	0.43
34:BQ:71:ASP:O	34:BQ:73:PRO:HD3	2.18	0.43
35:BR:103:ARG:HG2	35:BR:103:ARG:NH1	2.33	0.43
35:BR:72:ASP:O	35:BR:76:VAL:HG23	2.18	0.43
36:BS:56:LEU:C	36:BS:58:LEU:HD22	2.38	0.43
1:CA:1410:G:C4	1:CA:1491:G:N2	2.87	0.43
1:CA:256:U:H2'	1:CA:257:G:C8	2.53	0.43
1:CA:582:U:OP1	15:CO:64:ARG:NH1	2.51	0.43
1:CA:674:G:H2'	1:CA:675:A:H8	1.83	0.43
1:CA:883:C:O2'	1:CA:884:U:H5'	2.18	0.43
2:CB:55:PHE:CG	2:CB:58:ILE:HD12	2.52	0.43
2:CB:86:GLU:C	2:CB:89:GLY:H	2.22	0.43
1:CA:1367:C:H5''	9:CI:114:TYR:CB	2.48	0.43
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	2.00	0.43
12:CL:60:LEU:HB3	12:CL:62:SER:H	1.83	0.43
17:CQ:10:VAL:HG13	17:CQ:19:VAL:HB	2.00	0.43
18:CR:33:ASP:O	18:CR:40:LEU:HD11	2.18	0.43
45:D1:98:LEU:HD23	45:D1:98:LEU:HA	1.91	0.43
23:DA:1513:C:H2'	23:DA:1514:U:C6	2.53	0.43
23:DA:2223:G:H2'	23:DA:2224:G:H5'	2.00	0.43
23:DA:2704:C:H2'	23:DA:2705:A:O4'	2.18	0.43
23:DA:2793:G:N2	23:DA:2804:C:H1'	2.32	0.43
23:DA:34:C:H5''	23:DA:35:G:OP2	2.18	0.43
23:DA:675:A:N6	23:DA:676:A:N6	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:768:G:C5	56:DA:3978:HOH:O	2.67	0.43
23:DA:322:A:OP2	27:DF:169:ASN:HB2	2.17	0.43
27:DF:197:ASP:O	27:DF:201:VAL:HG12	2.18	0.43
36:DS:30:ARG:HG3	36:DS:97:ARG:CZ	2.48	0.43
37:DT:36:GLU:HB3	37:DT:37:GLY:H	1.72	0.43
43:DZ:166:SER:HA	43:DZ:167:PRO:HD3	1.93	0.43
43:DZ:45:ASP:O	43:DZ:48:PHE:N	2.50	0.43
1:AA:1096:C:HO2'	1:AA:1170:A:HO2'	1.61	0.43
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.53	0.43
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.49	0.43
1:AA:1442(A):G:C2'	1:AA:1442(B):A:H5''	2.49	0.43
1:AA:324:G:N2	1:AA:327:A:C8	2.86	0.43
1:AA:328:C:H4'	1:AA:329:A:H5'	2.00	0.43
1:AA:854:G:H3'	1:AA:871:U:O4	2.18	0.43
5:AE:100:VAL:O	5:AE:107:ARG:NH2	2.52	0.43
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	2.00	0.43
7:AG:87:VAL:HG11	7:AG:154:TYR:O	2.19	0.43
8:AH:39:LEU:O	8:AH:43:GLY:N	2.51	0.43
9:AI:27:THR:O	9:AI:63:ILE:N	2.51	0.43
9:AI:89:ASN:C	9:AI:91:ASP:H	2.21	0.43
11:AK:110:ASP:HB3	18:AR:85:LEU:HD12	2.00	0.43
45:B1:52:ARG:HA	45:B1:56:GLN:O	2.18	0.43
23:BA:1142(A):A:C4	23:BA:1144:G:N7	2.87	0.43
23:BA:2306:C:C4	23:BA:2307:G:O6	2.72	0.43
23:BA:2309:A:C6	23:BA:2310:A:N1	2.86	0.43
23:BA:503:A:O2'	56:BA:4932:HOH:O	2.20	0.43
23:BA:895:U:H6	23:BA:895:U:H5''	1.84	0.43
23:BA:2590:A:OP2	25:BD:238:GLY:HA2	2.18	0.43
29:BH:70:THR:HA	29:BH:73:ALA:CB	2.47	0.43
39:BV:76:LYS:HD2	39:BV:81:TYR:CD1	2.54	0.43
41:BX:15:GLU:CD	41:BX:15:GLU:H	2.21	0.43
41:BX:54:VAL:HG13	41:BX:81:VAL:HG12	2.01	0.43
1:CA:18:C:H4'	1:CA:1078:U:O2	2.18	0.43
1:CA:1149:C:O2'	1:CA:1150:U:H5'	2.18	0.43
1:CA:1210:C:H5''	1:CA:1211:U:C6	2.54	0.43
1:CA:1270:C:H2'	1:CA:1271:G:C8	2.52	0.43
1:CA:1321:C:H3'	1:CA:1322:C:H2'	2.00	0.43
1:CA:1362:C:O2'	1:CA:1363:C:H5'	2.17	0.43
1:CA:1379:G:H2'	1:CA:1380:U:H5'	2.00	0.43
1:CA:1443:G:O6	1:CA:1459:C:C1'	2.66	0.43
1:CA:1457:G:C6	1:CA:1458:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:79:G:N2	1:CA:91:C:C2	2.87	0.43
1:CA:946:A:N1	1:CA:1236:A:C2	2.87	0.43
2:CB:158:LEU:HA	2:CB:159:PRO:HD3	1.92	0.43
3:CC:21:ARG:O	3:CC:58:GLU:HG3	2.18	0.43
7:CG:115:ARG:O	7:CG:118:VAL:HG23	2.18	0.43
13:CM:14:ARG:NH1	13:CM:41:PRO:HB2	2.32	0.43
13:CM:58:GLU:O	13:CM:61:GLU:HB2	2.19	0.43
23:DA:2387:U:OP1	44:D0:55:ARG:NH2	2.51	0.43
44:D0:56:ASP:OD2	44:D0:56:ASP:N	2.48	0.43
46:D2:10:LEU:HD23	46:D2:10:LEU:HA	1.75	0.43
23:DA:2494:G:C4	23:DA:2495:G:C8	3.06	0.43
23:DA:272(E):G:C2	23:DA:364:C:N3	2.87	0.43
23:DA:2774:C:H2'	23:DA:2775:A:O4'	2.19	0.43
23:DA:842:G:H2'	23:DA:843:G:O4'	2.17	0.43
25:DD:145:VAL:HG12	25:DD:146:GLU:O	2.18	0.43
26:DE:52:LEU:O	26:DE:76:ARG:HG2	2.18	0.43
28:DG:43:LEU:HB3	28:DG:44:GLY:H	1.64	0.43
35:DR:103:ARG:HH11	35:DR:103:ARG:HG2	1.83	0.43
35:DR:103:ARG:CG	35:DR:103:ARG:HH11	2.32	0.43
1:AA:109:A:C6	1:AA:326:G:C6	3.06	0.43
1:AA:1176:A:O5'	1:AA:1176:A:H8	2.02	0.43
1:AA:1320:C:H5'	19:AS:70:LYS:HB2	2.00	0.43
1:AA:397:A:N3	1:AA:397:A:H3'	2.34	0.43
1:AA:614:A:H2'	1:AA:615:C:H6	1.82	0.43
1:AA:625:G:C6	1:AA:626:U:C4	3.06	0.43
1:AA:675:A:H2'	1:AA:676:A:C8	2.53	0.43
1:AA:730:G:C5	1:AA:731:G:H1'	2.53	0.43
4:AD:91:SER:O	4:AD:95:GLY:N	2.37	0.43
6:AF:68:PRO:HG2	6:AF:71:ARG:HD2	2.00	0.43
8:AH:9:MET:SD	8:AH:32:LYS:HB3	2.59	0.43
13:AM:68:GLY:H	13:AM:71:ARG:HE	1.66	0.43
17:AQ:76:LEU:HD21	17:AQ:79:SER:H	1.83	0.43
23:BA:769:G:H5'	23:BA:1379:A:N6	2.33	0.43
23:BA:729:G:H2'	23:BA:1775:U:H1'	1.99	0.43
23:BA:2165:G:H2'	23:BA:2166:G:H8	1.83	0.43
23:BA:316:C:N4	56:BA:5253:HOH:O	2.50	0.43
23:BA:885:C:H3'	23:BA:886:C:O4'	2.19	0.43
23:BA:94:C:H2'	23:BA:94:C:O2	2.17	0.43
25:BD:33:LEU:HA	25:BD:33:LEU:HD23	1.63	0.43
28:BG:76:SER:CA	28:BG:83:ARG:HA	2.45	0.43
33:BP:106:LEU:HA	33:BP:106:LEU:HD23	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1348:U:H2'	1:CA:1349:A:C8	2.53	0.43
1:CA:1357:A:C8	1:CA:1358:U:C5	3.07	0.43
1:CA:164:U:H2'	1:CA:165:C:C6	2.54	0.43
1:CA:277:C:OP1	17:CQ:68:ARG:NH2	2.48	0.43
1:CA:384:G:H2'	1:CA:385:C:H6	1.82	0.43
1:CA:397:A:H3'	1:CA:397:A:N3	2.34	0.43
1:CA:445:G:N3	1:CA:445:G:H2'	2.33	0.43
1:CA:650:G:O2'	1:CA:651:C:H5'	2.18	0.43
1:CA:965:A:H4'	1:CA:966:G:O5'	2.18	0.43
2:CB:28:PHE:CD2	2:CB:194:PRO:HG3	2.51	0.43
17:CQ:13:ASP:CG	17:CQ:14:LYS:N	2.71	0.43
23:DA:1358:G:O2'	23:DA:1359:A:H5'	2.18	0.43
23:DA:1722:A:C5	23:DA:1740:G:C6	3.07	0.43
23:DA:1740:G:H2'	23:DA:1741:A:H8	1.83	0.43
23:DA:2070:G:C2	23:DA:2442:C:C2	3.07	0.43
23:DA:234:C:H2'	23:DA:235:U:C6	2.54	0.43
23:DA:2470:G:C2	23:DA:2471:C:C6	3.07	0.43
23:DA:2556:C:H2'	23:DA:2557:G:O4'	2.19	0.43
23:DA:2850:A:OP2	23:DA:2866:U:H5	2.01	0.43
23:DA:475:U:C4	23:DA:481:G:O6	2.71	0.43
33:DP:27:HIS:O	33:DP:31:ALA:HA	2.19	0.43
33:DP:59:LEU:HD11	52:D8:10:ALA:CB	2.45	0.43
38:DU:39:LEU:HD23	38:DU:39:LEU:HA	1.85	0.43
40:DW:14:PRO:HG2	40:DW:78:GLU:HG2	1.99	0.43
41:DX:50:LYS:HB3	41:DX:84:ALA:HB2	1.99	0.43
1:AA:1305:G:H5''	21:AU:5:ASP:CA	2.46	0.43
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.83	0.43
1:AA:1442(A):G:H2'	1:AA:1442(B):A:H5''	2.00	0.43
1:AA:622:A:C8	1:AA:623:C:C5	3.07	0.43
1:AA:79:G:N2	1:AA:91:C:O2	2.52	0.43
4:AD:106:TYR:CD2	4:AD:106:TYR:C	2.91	0.43
4:AD:78:LEU:HA	4:AD:78:LEU:HD23	1.77	0.43
1:AA:687:A:H4'	11:AK:47:VAL:HG13	2.01	0.43
12:AL:93:LEU:HA	12:AL:93:LEU:HD23	1.83	0.43
16:AP:40:ASP:HA	16:AP:41:PRO:HD2	1.91	0.43
23:BA:1655:A:H3'	23:BA:1656:C:H6	1.84	0.43
23:BA:1842:G:C5	23:BA:1843:C:C4	3.06	0.43
23:BA:1954:G:O2'	23:BA:1956:U:O4	2.19	0.43
23:BA:2125:G:N2	23:BA:2126:A:H62	2.17	0.43
23:BA:2290:G:C2	23:BA:2343:C:O2	2.72	0.43
23:BA:2360:A:H2'	23:BA:2361:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:154:LYS:H	25:BD:154:LYS:HG2	1.70	0.43
25:BD:155:LEU:HD23	25:BD:177:LEU:HD22	1.99	0.43
25:BD:5:LYS:HB3	25:BD:5:LYS:HE3	1.77	0.43
23:BA:744:G:OP1	26:BE:132:HIS:ND1	2.50	0.43
27:BF:32:LEU:HD21	27:BF:105:VAL:HG13	2.01	0.43
31:BN:67:LEU:HD22	31:BN:67:LEU:HA	1.73	0.43
32:BO:21:CYS:HB2	32:BO:39:ILE:HD12	1.99	0.43
1:CA:1295:G:H2'	1:CA:1296:C:H5'	2.01	0.43
1:CA:142:G:C4	1:CA:143:A:C8	3.07	0.43
1:CA:189(F):U:C5	17:CQ:72:ARG:NH2	2.86	0.43
1:CA:370:C:H2'	1:CA:371:G:C8	2.53	0.43
1:CA:441:A:H3'	1:CA:442:C:C6	2.54	0.43
1:CA:527:G:O2'	1:CA:535:A:N1	2.46	0.43
1:CA:65:U:H5''	1:CA:65:U:H6	1.83	0.43
2:CB:80:ILE:HG12	2:CB:211:ILE:HG22	2.01	0.43
5:CE:30:ALA:O	5:CE:45:PHE:HD1	2.01	0.43
7:CG:31:MET:HG3	7:CG:35:LYS:O	2.18	0.43
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	2.01	0.43
9:CI:18:PHE:HD1	9:CI:62:TYR:HD2	1.66	0.43
9:CI:28:VAL:O	9:CI:31:GLN:HG2	2.18	0.43
1:CA:949:A:OP1	13:CM:101:GLN:HB3	2.19	0.43
13:CM:70:LEU:O	13:CM:74:VAL:HG23	2.18	0.43
16:CP:38:TYR:N	16:CP:38:TYR:CD2	2.86	0.43
19:CS:36:ARG:HG2	19:CS:51:VAL:HG12	2.00	0.43
41:DX:5:TYR:HB3	46:D2:33:MET:HB2	2.00	0.43
23:DA:2259:G:C2	23:DA:2282:G:N1	2.87	0.43
23:DA:2273:A:O2'	23:DA:2274:A:H5'	2.19	0.43
23:DA:2287:A:C5	23:DA:2289:G:C5	3.06	0.43
23:DA:2315:G:H2'	23:DA:2316:C:C6	2.53	0.43
23:DA:2695:C:H2'	23:DA:2696:U:H6	1.84	0.43
23:DA:2760:C:C2'	23:DA:2761:G:H5''	2.45	0.43
23:DA:2850:A:OP2	23:DA:2866:U:C5	2.72	0.43
23:DA:363(A):A:H2'	23:DA:363(B):G:H8	1.82	0.43
23:DA:39:C:H2'	23:DA:40:C:C6	2.53	0.43
23:DA:819:A:OP2	23:DA:1187:G:N2	2.35	0.43
28:DG:19:LEU:HD22	28:DG:23:PHE:CE1	2.51	0.43
29:DH:83:TYR:O	29:DH:134:SER:HA	2.19	0.43
30:DI:83:ALA:HA	30:DI:89:TYR:CD2	2.54	0.43
33:DP:101:VAL:HG23	33:DP:106:LEU:HB3	2.00	0.43
34:DQ:66:ILE:HG12	34:DQ:104:PHE:CD2	2.53	0.43
35:DR:29:LEU:HB3	35:DR:75:LEU:HD21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DR:38:VAL:HB	35:DR:39:PRO:HD3	1.99	0.43
1:AA:1044:A:H2'	1:AA:1045:C:H4'	2.00	0.43
1:AA:327:A:C5	1:AA:329:A:C5	3.06	0.43
1:AA:604:G:H2'	1:AA:605:U:O4'	2.18	0.43
3:AC:48:TYR:O	3:AC:50:ALA:N	2.50	0.43
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.53	0.43
7:AG:41:ARG:O	7:AG:44:TYR:N	2.50	0.43
7:AG:58:PRO:HA	7:AG:61:VAL:CG2	2.47	0.43
10:AJ:12:ASP:OD2	10:AJ:13:HIS:N	2.43	0.43
12:AL:62:SER:C	12:AL:64:TYR:H	2.21	0.43
15:AO:55:GLY:HA2	15:AO:58:MET:HG3	1.99	0.43
1:AA:1352:C:H5''	21:AU:3:LYS:HE2	2.00	0.43
23:BA:1042:G:C6	23:BA:1043:C:C4	3.07	0.43
23:BA:1049:C:H41	23:BA:1111:A:H2	1.63	0.43
23:BA:1169:G:H1	23:BA:1180:C:H42	1.64	0.43
23:BA:1693:U:O2'	23:BA:1695:G:O6	2.29	0.43
23:BA:2356:C:O3'	44:B0:20:ARG:HD3	2.18	0.43
23:BA:857:C:N4	23:BA:858:U:O4	2.52	0.43
32:BO:98:VAL:HG22	32:BO:118:ALA:HA	2.01	0.43
36:BS:10:ARG:O	36:BS:14:VAL:HG12	2.18	0.43
37:BT:80:SER:HA	37:BT:81:PRO:HD2	1.74	0.43
1:CA:1013:G:O2'	1:CA:1014:A:C8	2.69	0.43
1:CA:1005:A:N7	1:CA:1024:G:O2'	2.52	0.43
1:CA:1137:C:C5'	1:CA:1138:G:C6	3.01	0.43
1:CA:1178:G:N2	1:CA:1181:G:N7	2.65	0.43
1:CA:1299:A:N3	1:CA:1299:A:H2'	2.33	0.43
1:CA:1350:A:N1	1:CA:1372:U:O2	2.51	0.43
1:CA:187:C:H2'	1:CA:188:C:C6	2.54	0.43
1:CA:35:G:C6	1:CA:550:G:C2	3.07	0.43
1:CA:614:A:C6	1:CA:627:G:N1	2.87	0.43
1:CA:929:G:C6	1:CA:930:C:C4	3.07	0.43
3:CC:53:ALA:CB	3:CC:112:SER:HB2	2.48	0.43
3:CC:67:THR:HG22	3:CC:69:HIS:CE1	2.53	0.43
4:CD:106:TYR:CD2	4:CD:106:TYR:C	2.90	0.43
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	2.01	0.43
6:CF:10:LEU:HB2	6:CF:59:TYR:HB3	2.00	0.43
8:CH:29:SER:HB3	8:CH:32:LYS:CG	2.43	0.43
8:CH:4:ASP:HA	8:CH:5:PRO:HD3	1.91	0.43
8:CH:8:ASP:O	8:CH:12:ARG:N	2.43	0.43
1:CA:267:C:OP2	17:CQ:67:LYS:HD2	2.19	0.43
45:D1:52:ARG:HA	45:D1:56:GLN:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2286:A:OP1	50:D6:29:ASN:ND2	2.52	0.43
23:DA:1287:A:C5	23:DA:1288:U:C4	3.07	0.43
23:DA:1419:A:C8	23:DA:1421:G:C6	3.06	0.43
23:DA:1893:C:C5	23:DA:1894:C:C5	3.06	0.43
23:DA:2301:C:H2'	23:DA:2302:G:C8	2.54	0.43
23:DA:2647:U:H2'	23:DA:2648:C:C6	2.54	0.43
23:DA:271(H):G:O2'	23:DA:271(I):G:P	2.76	0.43
23:DA:428:A:H8	23:DA:428:A:OP2	2.02	0.43
23:DA:566:U:H2'	23:DA:567:A:O4'	2.19	0.43
25:DD:10:THR:OG1	25:DD:13:ARG:HB2	2.19	0.43
31:DN:58:ASP:OD1	31:DN:58:ASP:N	2.51	0.43
43:DZ:93:ASP:HA	43:DZ:130:PRO:HG2	2.00	0.43
43:DZ:151:HIS:C	43:DZ:153:SER:H	2.21	0.43
1:AA:1055:A:H62	1:AA:1200:C:N4	2.16	0.43
1:AA:1254:C:H5''	10:AJ:45:ARG:HH21	1.82	0.43
1:AA:189(B):C:H2'	1:AA:189(C):C:O4'	2.18	0.43
1:AA:671:G:H2'	1:AA:672:U:C6	2.53	0.43
1:AA:762:C:H2'	1:AA:763:G:H8	1.84	0.43
1:AA:863:U:H2'	1:AA:865:A:OP2	2.18	0.43
8:AH:25:ASP:HA	8:AH:59:LEU:O	2.19	0.43
16:AP:71:ARG:O	16:AP:75:ARG:N	2.52	0.43
12:AL:11:VAL:HG22	17:AQ:29:HIS:CD2	2.53	0.43
23:BA:1341:U:OP2	23:BA:1394:U:O2'	2.26	0.43
23:BA:2028:U:H2'	23:BA:2029:G:O4'	2.18	0.43
23:BA:219:G:C6	56:BA:3973:HOH:O	2.72	0.43
23:BA:2801(A):A:H1'	23:BA:2895:U:H1'	2.00	0.43
23:BA:451:C:H5'	56:BA:4580:HOH:O	2.19	0.43
23:BA:527:C:C4	23:BA:2779:U:H2'	2.54	0.43
23:BA:757:U:H2'	23:BA:758:C:O4'	2.19	0.43
23:BA:760:G:H2'	23:BA:761:A:O4'	2.19	0.43
24:BB:28:C:OP1	36:BS:36:TYR:OH	2.23	0.43
28:BG:122:PRO:HG3	28:BG:180:PHE:HD2	1.84	0.43
30:BI:59:ALA:HA	30:BI:62:LYS:HB2	2.01	0.43
39:BV:52:VAL:HG23	39:BV:52:VAL:O	2.18	0.43
43:BZ:137:ILE:HG23	43:BZ:156:LYS:HD2	2.01	0.43
1:CA:1415:G:C6	1:CA:1486:G:C6	3.06	0.43
1:CA:352:C:O2	1:CA:352:C:H2'	2.18	0.43
1:CA:652:U:O4	1:CA:752:G:O2'	2.33	0.43
1:CA:741:G:H2'	1:CA:742:G:C8	2.53	0.43
1:CA:1112:C:N4	3:CC:178:LEU:HD23	2.33	0.43
4:CD:155:LEU:HD23	4:CD:156:GLU:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:941:G:N2	9:CI:124:GLN:HE22	2.15	0.43
13:CM:15:VAL:HG13	13:CM:43:THR:O	2.19	0.43
17:CQ:45:HIS:CE1	17:CQ:47:PRO:HG3	2.54	0.43
19:CS:16:LEU:CB	19:CS:20:LEU:HD12	2.49	0.43
51:D7:24:THR:O	51:D7:28:ARG:HG3	2.19	0.43
52:D8:54:GLU:O	52:D8:58:ILE:HG12	2.19	0.43
23:DA:1169:G:N2	23:DA:1181:C:C2	2.87	0.43
23:DA:1204:A:H2	23:DA:1241:A:N6	2.04	0.43
23:DA:188:G:N2	23:DA:208:C:N3	2.46	0.43
23:DA:221:A:N1	23:DA:265:A:O2'	2.47	0.43
23:DA:533:G:H5'	38:DU:24:TYR:CD2	2.53	0.43
26:DE:5:LEU:HD21	26:DE:79:ARG:HB2	2.01	0.43
28:DG:98:ARG:HB2	28:DG:98:ARG:NH1	2.33	0.43
30:DI:108:THR:OG1	30:DI:109:ILE:N	2.51	0.43
32:DO:106:LEU:HD23	32:DO:106:LEU:HA	1.75	0.43
35:DR:103:ARG:NH1	35:DR:108:GLY:O	2.52	0.43
43:DZ:28:MET:HG2	43:DZ:37:VAL:HG11	2.00	0.43
43:DZ:44:PHE:CE2	43:DZ:86:VAL:HG11	2.54	0.43
1:AA:318:G:H2'	1:AA:319:G:H8	1.83	0.43
1:AA:499:A:H4'	1:AA:500:G:H5'	2.00	0.43
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.43
1:AA:970:C:C2	1:AA:1231:G:H1'	2.54	0.43
3:AC:70:VAL:N	3:AC:104:GLN:O	2.42	0.43
6:AF:60:PHE:O	6:AF:61:LEU:HD12	2.19	0.43
8:AH:4:ASP:HB2	8:AH:89:PRO:HG3	2.01	0.43
12:AL:53:ARG:HG2	12:AL:93:LEU:HD11	2.01	0.43
19:AS:35:SER:HB3	19:AS:38:SER:HB3	2.01	0.43
20:AT:55:ILE:O	20:AT:58:LYS:N	2.52	0.43
22:AX:4:ASN:HB2	22:AX:37:VAL:O	2.18	0.43
22:AX:76:GLY:O	22:AX:79:ASP:HB3	2.19	0.43
48:B4:40:HIS:HA	48:B4:41:PRO:HD3	1.81	0.43
23:BA:2133:G:H2'	23:BA:2158:A:H61	1.83	0.43
23:BA:223:A:O2'	23:BA:420:C:O2	2.35	0.43
23:BA:557:U:H2'	23:BA:558:G:H8	1.84	0.43
23:BA:903:C:H2'	23:BA:904:C:C6	2.53	0.43
25:BD:159:ALA:HB1	25:BD:198:ASN:O	2.19	0.43
26:BE:9:VAL:HG13	26:BE:25:VAL:O	2.19	0.43
28:BG:10:LYS:O	28:BG:14:GLU:HB3	2.19	0.43
29:BH:3:ARG:HG3	29:BH:3:ARG:NH1	2.34	0.43
23:BA:548:A:H61	39:BV:19:LYS:H	1.67	0.43
39:BV:65:GLY:HA3	39:BV:91:TYR:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1003:G:O2'	1:CA:1024:G:N2	2.52	0.43
1:CA:1026:G:H3'	1:CA:1027:C:C5'	2.49	0.43
1:CA:1265:G:O2'	1:CA:1266:G:H5'	2.18	0.43
1:CA:292:G:C5	1:CA:293:G:H1'	2.53	0.43
1:CA:604:G:C6	1:CA:605:U:C4	3.07	0.43
1:CA:984:C:H2'	1:CA:985:C:C6	2.53	0.43
3:CC:19:GLU:HB3	3:CC:40:ARG:NH2	2.34	0.43
5:CE:41:VAL:O	5:CE:67:VAL:HG12	2.17	0.43
6:CF:95:GLU:HA	6:CF:96:PRO:HD3	1.90	0.43
8:CH:14:ARG:O	8:CH:18:ARG:HD3	2.19	0.43
9:CI:9:ARG:HG3	9:CI:14:VAL:HG22	2.01	0.43
13:CM:64:TRP:HB2	13:CM:66:LEU:HD23	2.00	0.43
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	2.01	0.43
52:D8:62:LEU:HB3	52:D8:65:GLU:HG2	1.99	0.43
23:DA:1503:U:H2'	23:DA:1504:C:C6	2.53	0.43
23:DA:1647:G:H3'	23:DA:1647:G:P	2.59	0.43
23:DA:1946:U:H2'	23:DA:1947:C:C6	2.54	0.43
23:DA:2031:A:C6	23:DA:2498:C:H1'	2.54	0.43
23:DA:2119:A:N6	23:DA:2168:G:H1'	2.34	0.43
23:DA:328:U:H4'	42:DY:68:HIS:CD2	2.54	0.43
26:DE:52:LEU:HA	26:DE:53:PRO:HD2	1.82	0.43
35:DR:28:LEU:HD12	35:DR:48:VAL:HG21	2.00	0.43
43:DZ:137:ILE:HG23	43:DZ:156:LYS:HD2	2.01	0.43
1:AA:11:G:C6	1:AA:12:U:C4	3.07	0.43
1:AA:1237:C:H2'	1:AA:1335:C:C5'	2.49	0.43
1:AA:1442:G:C8	1:AA:1442(A):G:C5	3.07	0.43
1:AA:352:C:H2'	1:AA:352:C:O2	2.17	0.43
1:AA:66:G:N2	1:AA:172:A:N3	2.67	0.43
1:AA:707:C:O2'	1:AA:708:C:H5'	2.18	0.43
1:AA:713:G:H2'	1:AA:714:G:C8	2.54	0.43
2:AB:25:ASN:HA	2:AB:26:PRO:HD2	1.88	0.43
4:AD:32:ALA:O	4:AD:36:ARG:N	2.51	0.43
4:AD:61:LYS:HE3	4:AD:62:GLN:OE1	2.18	0.43
5:AE:41:VAL:O	5:AE:67:VAL:HG12	2.19	0.43
7:AG:26:PHE:CD1	7:AG:101:LEU:HD22	2.54	0.43
9:AI:20:ARG:HA	9:AI:21:PRO:HD2	1.90	0.43
9:AI:48:GLU:OE2	9:AI:48:GLU:HA	2.18	0.43
22:AX:29:GLN:C	22:AX:30:TYR:HD2	2.23	0.43
53:B9:6:SER:O	53:B9:6:SER:OG	2.37	0.43
23:BA:1011:G:C4	23:BA:1151:G:N2	2.87	0.43
23:BA:1163:G:O2'	23:BA:1164:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1425:G:H2'	23:BA:1426:G:C8	2.54	0.43
23:BA:1586:A:H2'	23:BA:1587:A:H5'	2.01	0.43
23:BA:1804:C:H6	23:BA:1804:C:O5'	2.01	0.43
23:BA:1804:C:H2'	23:BA:1805:U:H6	1.83	0.43
23:BA:1957:C:H2'	23:BA:1958:C:C6	2.54	0.43
23:BA:2296:U:C4	23:BA:2333:A:N3	2.87	0.43
23:BA:2307:G:H5'	23:BA:2308:G:C2	2.53	0.43
23:BA:272(H):C:H5'	23:BA:272(I):U:OP2	2.18	0.43
23:BA:2793:G:N2	23:BA:2804:C:H1'	2.34	0.43
23:BA:658:C:H2'	23:BA:659:C:C6	2.54	0.43
25:BD:112:GLN:O	25:BD:115:GLN:HG2	2.19	0.43
27:BF:12:LEU:HA	27:BF:12:LEU:HD22	1.73	0.43
28:BG:124:SER:HB2	28:BG:131:TYR:CZ	2.53	0.43
29:BH:69:ARG:HG3	29:BH:70:THR:N	2.33	0.43
37:BT:90:GLN:HG3	37:BT:91:ARG:N	2.34	0.43
43:BZ:128:VAL:HG23	43:BZ:161:VAL:HG22	2.00	0.43
43:BZ:124:ILE:HD11	43:BZ:165:VAL:HG11	2.00	0.43
1:CA:1010:G:C4	1:CA:1011:G:C8	3.07	0.43
1:CA:1013:G:N2	1:CA:1017:G:C6	2.87	0.43
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.84	0.43
1:CA:1238:A:C8	1:CA:1239:A:C8	3.07	0.43
1:CA:1279:A:O2'	1:CA:1282:C:N4	2.52	0.43
1:CA:902:G:H2'	1:CA:903:G:H8	1.84	0.43
3:CC:13:GLY:HA3	14:CN:57:ARG:NH2	2.30	0.43
4:CD:177:ASP:CG	4:CD:180:GLY:HA3	2.39	0.43
5:CE:126:ARG:HA	5:CE:131:ILE:HD11	2.00	0.43
10:CJ:39:PRO:HG3	10:CJ:70:ARG:HH21	1.84	0.43
13:CM:16:ASP:HB3	13:CM:34:LEU:CD1	2.48	0.43
46:D2:50:ILE:O	46:D2:52:ASP:N	2.45	0.43
46:D2:61:LEU:HA	46:D2:61:LEU:HD23	1.84	0.43
23:DA:1035:U:O4	56:DA:4641:HOH:O	2.22	0.43
23:DA:1042:G:C6	23:DA:1043:C:C4	3.07	0.43
23:DA:1356:G:C6	23:DA:1357:U:C4	3.07	0.43
23:DA:1586:A:H2'	23:DA:1587:A:H5'	2.00	0.43
23:DA:2171:A:H4'	23:DA:2172:U:O5'	2.18	0.43
23:DA:2360:A:H2'	23:DA:2361:A:O4'	2.18	0.43
23:DA:2593:U:H2'	23:DA:2594:C:C6	2.54	0.43
23:DA:64:A:O3'	41:DX:71:GLY:HA3	2.19	0.43
25:DD:101:GLU:OE1	25:DD:103:ARG:NH1	2.46	0.43
29:DH:90:LYS:O	29:DH:160:LYS:HA	2.19	0.43
33:DP:107:LYS:O	33:DP:110:TYR:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DS:96:GLY:N	36:DS:99:LYS:HB3	2.34	0.43
37:DT:37:GLY:HA2	37:DT:38:ASN:HA	1.52	0.43
40:DW:36:LEU:HD23	40:DW:36:LEU:HA	1.77	0.43
1:AA:1044:A:H8	1:AA:1044:A:OP2	2.02	0.42
1:AA:1118:C:N3	1:AA:1155:G:N2	2.56	0.42
1:AA:113:G:N3	1:AA:353:A:O2'	2.46	0.42
1:AA:1348:U:C4	1:AA:1373:G:N2	2.87	0.42
1:AA:445:G:H3'	1:AA:446:G:H8	1.84	0.42
2:AB:16:HIS:CD2	2:AB:213:LEU:HD12	2.54	0.42
2:AB:216:SER:O	2:AB:219:VAL:N	2.52	0.42
3:AC:36:ASP:N	3:AC:36:ASP:OD2	2.52	0.42
5:AE:14:ARG:HE	5:AE:16:THR:HG22	1.84	0.42
1:AA:1373:G:H5''	7:AG:36:LYS:HD2	2.00	0.42
1:AA:1240:U:O2	7:AG:38:LEU:HD23	2.20	0.42
9:AI:113:LYS:N	9:AI:113:LYS:HD3	2.34	0.42
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.18	0.42
17:AQ:60:ILE:O	17:AQ:62:SER:OG	2.33	0.42
19:AS:36:ARG:HB2	19:AS:72:GLY:HA2	1.99	0.42
46:B2:56:GLN:O	46:B2:60:LEU:HG	2.19	0.42
50:B6:30:THR:OG1	50:B6:30:THR:O	2.37	0.42
23:BA:1047:G:H2'	23:BA:1110:G:C2	2.54	0.42
23:BA:1205:U:H4'	23:BA:1206:G:OP2	2.19	0.42
23:BA:1546:C:H5'	23:BA:1547:C:H5'	2.00	0.42
23:BA:271(K):U:H2'	23:BA:271(K):U:H6	1.60	0.42
23:BA:968:G:H2'	23:BA:969:U:O4'	2.19	0.42
25:BD:118:VAL:N	25:BD:129:ASN:HD22	2.03	0.42
25:BD:223:GLY:HA3	25:BD:231:HIS:CE1	2.54	0.42
25:BD:85:ASP:OD2	25:BD:88:ARG:NH1	2.49	0.42
26:BE:134:ILE:HG13	26:BE:134:ILE:H	1.71	0.42
27:BF:140:LEU:HD13	27:BF:140:LEU:HA	1.61	0.42
28:BG:146:TYR:O	28:BG:149:VAL:HG12	2.19	0.42
28:BG:16:ARG:HB2	28:BG:17:PRO:HD3	2.01	0.42
29:BH:3:ARG:NH2	29:BH:5:GLY:H	2.17	0.42
29:BH:54:ARG:HA	29:BH:55:PRO:HD2	1.87	0.42
30:BI:40:THR:C	30:BI:42:SER:N	2.73	0.42
34:BQ:70:PRO:HA	34:BQ:94:VAL:O	2.19	0.42
1:CA:1050:G:N1	1:CA:1208:C:O2	2.40	0.42
1:CA:1234:C:C4	1:CA:1235:U:C4	3.07	0.42
1:CA:1283:G:N2	1:CA:1284:C:C2	2.87	0.42
1:CA:1288:A:C6	1:CA:1371:G:H1'	2.54	0.42
1:CA:235:C:H2'	1:CA:236:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:565:U:OP2	1:CA:566:G:O2'	2.30	0.42
2:CB:14:GLY:HA3	2:CB:16:HIS:HE1	1.84	0.42
3:CC:12:LEU:HD22	3:CC:18:TRP:CE3	2.53	0.42
3:CC:113:ALA:HB1	3:CC:200:ALA:HB3	2.01	0.42
5:CE:8:GLU:CB	5:CE:34:VAL:HG23	2.49	0.42
10:CJ:55:LYS:O	10:CJ:55:LYS:HG2	2.17	0.42
11:CK:41:THR:HG22	11:CK:42:TRP:N	2.34	0.42
13:CM:97:PRO:HG3	13:CM:110:ARG:HB3	2.00	0.42
22:CX:30:TYR:N	22:CX:30:TYR:CD2	2.86	0.42
48:D4:16:CYS:HB3	48:D4:20:ASN:HB3	2.00	0.42
23:DA:12:U:H2'	23:DA:12:U:O2	2.19	0.42
23:DA:1352:U:P	56:DA:3935:HOH:O	2.71	0.42
23:DA:1359:A:N6	23:DA:1372:U:C5	2.87	0.42
23:DA:1488:G:C2	23:DA:1489:U:O2	2.72	0.42
23:DA:2252:G:H2'	23:DA:2253:G:O4'	2.18	0.42
23:DA:2474:C:H5''	23:DA:2475:C:OP2	2.18	0.42
23:DA:2544:G:H2'	23:DA:2545:G:O4'	2.19	0.42
23:DA:2678:C:H2'	23:DA:2679:A:O4'	2.19	0.42
24:DB:78:A:C2	24:DB:100:A:C4	3.07	0.42
24:DB:28:C:H2'	24:DB:29:A:O4'	2.19	0.42
27:DF:41:LEU:O	27:DF:44:ARG:HG2	2.19	0.42
28:DG:5:VAL:HG12	48:D4:25:TYR:HE1	1.81	0.42
30:DI:92:VAL:CG1	30:DI:120:ILE:HB	2.49	0.42
31:DN:36:GLY:HA3	31:DN:49:GLY:HA2	2.01	0.42
34:DQ:63:LYS:HD2	34:DQ:65:PHE:CZ	2.53	0.42
34:DQ:137:TYR:HE2	43:DZ:49:ARG:NH1	2.17	0.42
1:AA:1004:A:H5'	1:AA:1025:U:O4	2.19	0.42
1:AA:1221:G:H4'	19:AS:77:THR:HG21	2.00	0.42
2:AB:158:LEU:HA	2:AB:159:PRO:HD3	1.97	0.42
5:AE:8:GLU:CB	5:AE:34:VAL:HG23	2.49	0.42
6:AF:14:LEU:HD22	6:AF:18:GLN:CB	2.49	0.42
13:AM:69:GLU:C	13:AM:71:ARG:H	2.21	0.42
1:AA:237:C:H5''	17:AQ:25:ARG:CZ	2.49	0.42
17:AQ:29:HIS:HB3	17:AQ:33:GLY:N	2.34	0.42
17:AQ:63:ARG:HA	17:AQ:64:PRO:HD3	1.86	0.42
20:AT:21:LYS:O	20:AT:25:ARG:HG3	2.18	0.42
1:AA:1456:G:O2'	20:AT:39:LYS:HD3	2.19	0.42
46:B2:61:LEU:HD23	46:B2:61:LEU:HA	1.76	0.42
47:B3:8:LEU:HD13	47:B3:31:LEU:HD23	2.00	0.42
23:BA:1488:G:H5''	23:BA:1489:U:OP2	2.18	0.42
23:BA:1891:G:H8	23:BA:1891:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2079:U:O3'	45:B1:35:THR:OG1	2.35	0.42
23:BA:302:C:O2'	23:BA:303:U:H5'	2.20	0.42
23:BA:39:C:H2'	23:BA:40:C:H6	1.83	0.42
23:BA:686:G:N2	23:BA:788:A:H61	2.17	0.42
25:BD:154:LYS:HB2	25:BD:155:LEU:HD12	2.01	0.42
26:BE:170:LEU:HA	26:BE:170:LEU:HD12	1.77	0.42
27:BF:106:ARG:H	27:BF:106:ARG:HG2	1.37	0.42
23:BA:673:C:H5''	27:BF:81:PRO:HD2	2.01	0.42
27:BF:88:VAL:HG21	27:BF:91:GLY:HA3	2.01	0.42
23:BA:2302:G:O2'	28:BG:126:ASP:O	2.32	0.42
30:BI:140:LEU:HA	30:BI:140:LEU:HD23	1.82	0.42
31:BN:62:VAL:CG1	31:BN:66:LYS:HB2	2.49	0.42
1:CA:1055:A:N6	1:CA:1206:G:N7	2.68	0.42
1:CA:1093:A:C2	1:CA:1095:U:H5'	2.54	0.42
1:CA:1055:A:C8	1:CA:1206:G:C2	3.07	0.42
1:CA:132:C:H2'	1:CA:133:U:O4'	2.19	0.42
1:CA:1350:A:C6	1:CA:1351:U:C4	3.07	0.42
1:CA:151:A:C2	1:CA:152:A:H1'	2.54	0.42
1:CA:373:A:H2'	1:CA:374:A:H8	1.84	0.42
1:CA:429:U:H3'	4:CD:22:LYS:HZ1	1.84	0.42
4:CD:111:ALA:HB1	4:CD:116:GLN:OE1	2.19	0.42
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.54	0.42
9:CI:27:THR:CG2	9:CI:30:GLY:H	2.33	0.42
16:CP:22:THR:HA	16:CP:33:ILE:HG12	2.01	0.42
20:CT:74:LYS:HE2	20:CT:74:LYS:HB3	1.84	0.42
23:DA:1022:G:C5	23:DA:1140:C:C4	3.08	0.42
23:DA:1046:A:O2'	23:DA:1047:G:OP2	2.31	0.42
23:DA:190:A:O5'	23:DA:205:G:N2	2.51	0.42
23:DA:1649:G:N1	23:DA:2009:G:C6	2.87	0.42
23:DA:2169:A:H3'	23:DA:2170:A:C8	2.54	0.42
23:DA:236:C:H2'	23:DA:237:C:C6	2.54	0.42
23:DA:2580:U:C5	23:DA:2581:G:C6	3.07	0.42
23:DA:2684:U:C4	23:DA:2685:G:N7	2.87	0.42
23:DA:330:A:H2	23:DA:1210:A:C2'	2.20	0.42
23:DA:479:A:H4'	23:DA:480:A:OP1	2.17	0.42
23:DA:588:U:O4	23:DA:670:A:H1'	2.20	0.42
23:DA:807:U:OP2	33:DP:41:ARG:NH2	2.52	0.42
23:DA:817:C:O2'	23:DA:839:U:H5''	2.20	0.42
23:DA:839:U:H2'	23:DA:840:C:C6	2.54	0.42
23:DA:866:A:C6	23:DA:914:C:C5	3.07	0.42
23:DA:1823:G:OP1	25:DD:54:ARG:NH1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:21:VAL:HA	26:DE:22:PRO:HD2	1.94	0.42
31:DN:15:LEU:HD12	31:DN:137:LYS:HG2	1.99	0.42
33:DP:38:GLN:O	33:DP:39:LYS:HB3	2.19	0.42
23:DA:2706:G:O2'	35:DR:64:ARG:HD3	2.19	0.42
43:DZ:27:VAL:HA	43:DZ:35:ARG:O	2.19	0.42
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.42
1:AA:1099:G:H3'	1:AA:1100:C:C6	2.53	0.42
1:AA:1238:A:H2'	1:AA:1239:A:H8	1.83	0.42
1:AA:1309:G:C6	1:AA:1310:G:C5	3.07	0.42
1:AA:5:U:H5''	1:AA:6:G:C8	2.54	0.42
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.42
2:AB:110:GLN:H	2:AB:110:GLN:HG3	1.51	0.42
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.20	0.42
1:AA:405:U:O4	4:AD:2:GLY:N	2.53	0.42
7:AG:113:GLU:O	7:AG:119:ARG:HD3	2.19	0.42
1:AA:1297:C:O2'	7:AG:114:ARG:NH2	2.52	0.42
7:AG:16:LEU:HD22	9:AI:44:VAL:O	2.19	0.42
12:AL:33:ARG:HD2	12:AL:33:ARG:HA	1.76	0.42
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG13	2.01	0.42
19:AS:33:THR:HG21	19:AS:49:ILE:HG23	2.01	0.42
22:AX:67:GLY:HA3	22:AX:72:ALA:HB3	2.00	0.42
48:B4:14:ILE:HG23	48:B4:31:ILE:HB	2.01	0.42
23:BA:1031:G:H1	23:BA:1123:C:H42	1.66	0.42
23:BA:2298:A:H2'	23:BA:2299:G:O4'	2.19	0.42
23:BA:2791:C:N4	23:BA:2893:G:O4'	2.52	0.42
24:BB:9:G:OP1	36:BS:25:ARG:NH2	2.52	0.42
25:BD:136:ILE:HA	25:BD:137:PRO:HD3	1.92	0.42
26:BE:40:GLU:CD	26:BE:40:GLU:H	2.22	0.42
26:BE:52:LEU:HA	26:BE:53:PRO:HD2	1.83	0.42
31:BN:36:GLY:O	31:BN:42:TRP:HD1	2.03	0.42
32:BO:3:GLN:HB2	32:BO:4:PRO:HD2	2.01	0.42
35:BR:103:ARG:HG2	35:BR:103:ARG:HH11	1.85	0.42
43:BZ:24:LEU:HD22	43:BZ:41:LEU:HD23	2.01	0.42
43:BZ:61:LEU:HD13	43:BZ:61:LEU:HA	1.72	0.42
1:CA:1192:C:C6	1:CA:1192:C:H3'	2.54	0.42
1:CA:1198:G:H2'	1:CA:1199:U:C6	2.55	0.42
1:CA:1250:A:N1	1:CA:1251:A:C2	2.87	0.42
1:CA:1263:C:N3	1:CA:1272:G:O6	2.51	0.42
1:CA:1321:C:H5''	1:CA:1322:C:H2'	2.01	0.42
1:CA:1378:C:OP2	7:CG:2:ALA:HB2	2.19	0.42
2:CB:132:LYS:O	2:CB:135:GLN:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.35	0.42
10:CJ:9:ARG:HG2	10:CJ:69:ASN:CG	2.39	0.42
12:CL:114:LYS:O	12:CL:117:ARG:HG3	2.20	0.42
15:CO:57:LEU:O	15:CO:60:VAL:N	2.52	0.42
17:CQ:66:SER:HB3	17:CQ:69:LYS:HD3	2.00	0.42
45:D1:32:LYS:HB3	45:D1:32:LYS:HE2	1.90	0.42
46:D2:9:GLN:HE22	46:D2:56:GLN:HG2	1.84	0.42
48:D4:1:MET:HB3	48:D4:6:HIS:CD2	2.53	0.42
23:DA:1292:U:H2'	23:DA:1293:C:C6	2.54	0.42
23:DA:248:G:H5'	23:DA:250:G:N7	2.35	0.42
23:DA:2683:C:O2	32:DO:70:LYS:NZ	2.29	0.42
23:DA:311:A:C6	23:DA:328:U:C4	3.07	0.42
23:DA:362:U:O2'	23:DA:363:G:H5''	2.20	0.42
23:DA:623:G:H2'	23:DA:624:C:C6	2.54	0.42
23:DA:744:G:OP1	26:DE:132:HIS:ND1	2.50	0.42
25:DD:180:GLY:HA3	25:DD:275:LYS:CG	2.49	0.42
25:DD:180:GLY:HA3	25:DD:275:LYS:HG2	2.00	0.42
28:DG:138:GLN:HE21	28:DG:144:ILE:HD13	1.83	0.42
32:DO:11:ALA:O	32:DO:99:PHE:N	2.40	0.42
34:DQ:66:ILE:HG12	34:DQ:104:PHE:HD2	1.84	0.42
37:DT:19:LEU:HA	37:DT:20:PRO:HD3	1.79	0.42
39:DV:52:VAL:HG21	39:DV:55:ALA:HB3	2.01	0.42
43:DZ:128:VAL:HG23	43:DZ:161:VAL:HG22	2.01	0.42
1:AA:1053:G:C6	1:AA:1199:U:H2'	2.54	0.42
1:AA:1172:C:C2	1:AA:1173:G:C8	3.07	0.42
1:AA:1277:C:C2'	1:AA:1279:A:H8	2.32	0.42
1:AA:1255:G:H3'	1:AA:1279:A:N6	2.34	0.42
1:AA:1363:C:H5'	1:AA:1363(A):A:O5'	2.19	0.42
1:AA:62:U:H5''	1:AA:385:C:O2	2.20	0.42
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.35	0.42
1:AA:950:U:N3	1:AA:951:G:N7	2.67	0.42
2:AB:165:VAL:O	2:AB:187:LEU:HB3	2.20	0.42
3:AC:164:ARG:HB2	3:AC:164:ARG:HE	1.38	0.42
1:AA:1111:A:N1	3:AC:177:THR:HG23	2.34	0.42
12:AL:114:LYS:O	12:AL:117:ARG:HG3	2.19	0.42
23:BA:1352:U:O2	23:BA:1570:A:H2	2.02	0.42
23:BA:1434:A:O2'	23:BA:1435:G:H5'	2.19	0.42
23:BA:2065:C:H2'	23:BA:2066:C:C6	2.54	0.42
23:BA:2584:U:H2'	23:BA:2585:U:H2'	2.00	0.42
23:BA:340:A:H2'	23:BA:341:G:O4'	2.19	0.42
23:BA:362:U:O2'	23:BA:363:G:H5''	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:528:A:C2'	23:BA:529:A:H5'	2.49	0.42
23:BA:674:G:H1'	27:BF:74:ARG:CD	2.48	0.42
31:BN:12:ARG:HD3	31:BN:50:ASP:OD2	2.19	0.42
37:BT:13:ARG:HG2	37:BT:13:ARG:H	1.27	0.42
1:CA:1157:A:OP1	1:CA:1158:C:C5	2.72	0.42
1:CA:1251:A:N6	1:CA:1285:A:C6	2.85	0.42
1:CA:1345:U:C5	1:CA:1377:A:C2	3.08	0.42
1:CA:512:U:H2'	1:CA:513:C:C6	2.53	0.42
1:CA:624:C:H2'	1:CA:625:G:H8	1.85	0.42
1:CA:748:C:H6	1:CA:748:C:O5'	2.03	0.42
1:CA:827:U:H5''	1:CA:828:A:OP2	2.19	0.42
2:CB:32:ILE:HD11	2:CB:40:HIS:HB3	2.00	0.42
2:CB:52:GLU:HG2	2:CB:56:ARG:NH1	2.35	0.42
2:CB:78:GLN:C	2:CB:94:ASN:HD21	2.22	0.42
3:CC:11:ARG:HB2	3:CC:11:ARG:NH1	2.31	0.42
4:CD:18:LYS:HD2	4:CD:33:MET:HB2	2.02	0.42
5:CE:89:ILE:HD13	5:CE:90:VAL:N	2.34	0.42
1:CA:1366:C:OP1	9:CI:117:HIS:ND1	2.52	0.42
1:CA:1150:U:O2'	10:CJ:39:PRO:HB2	2.19	0.42
22:CX:31:PHE:CG	22:CX:85:LEU:HB3	2.54	0.42
47:D3:8:LEU:HD13	47:D3:31:LEU:HD23	2.02	0.42
33:DP:52:GLU:CD	52:D8:57:ARG:HH12	2.22	0.42
23:DA:2202:C:H2'	23:DA:2203:U:O4'	2.19	0.42
23:DA:2235:G:H2'	23:DA:2236:C:C6	2.54	0.42
23:DA:279:C:H42	23:DA:361:G:H1	1.66	0.42
23:DA:576:U:H2'	23:DA:577:G:C8	2.54	0.42
24:DB:7:G:C8	24:DB:7:G:H5''	2.54	0.42
26:DE:35:GLN:HG3	26:DE:36:ARG:N	2.35	0.42
26:DE:93:VAL:HG13	56:DE:402:HOH:O	2.19	0.42
28:DG:143:GLU:H	28:DG:143:GLU:HG2	1.51	0.42
31:DN:34:LEU:HD12	31:DN:34:LEU:HA	1.76	0.42
36:DS:95:HIS:C	36:DS:99:LYS:HB3	2.39	0.42
38:DU:83:LEU:HD12	38:DU:113:ALA:HB2	2.01	0.42
40:DW:65:LEU:HA	40:DW:65:LEU:HD23	1.86	0.42
1:AA:1137:C:C5'	1:AA:1138:G:C6	3.02	0.42
1:AA:1237:C:C4	1:AA:1336:C:C2	3.08	0.42
1:AA:1443:G:O6	1:AA:1459:C:C2	2.72	0.42
1:AA:1501:C:N4	1:AA:1504:G:C2	2.87	0.42
1:AA:684:A:N6	56:AA:2047:HOH:O	2.46	0.42
2:AB:19:HIS:HE1	2:AB:205:ASP:OD1	2.02	0.42
4:AD:108:LEU:CB	4:AD:110:PHE:HE1	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:97:LEU:HD23	4:AD:97:LEU:HA	1.78	0.42
1:AA:1373:G:H5''	7:AG:36:LYS:CD	2.50	0.42
10:AJ:17:ASP:O	10:AJ:21:GLN:HB2	2.20	0.42
13:AM:106:ASN:HB3	13:AM:107:ALA:H	1.68	0.42
13:AM:96:LEU:C	13:AM:110:ARG:HD3	2.40	0.42
45:B1:82:LEU:CA	45:B1:85:LEU:HD23	2.36	0.42
47:B3:4:LEU:HA	47:B3:4:LEU:HD23	1.88	0.42
23:BA:1107:G:N7	23:BA:1108:U:C5	2.88	0.42
23:BA:1441:G:H2'	23:BA:1442:G:C8	2.55	0.42
23:BA:1912:A:HO2'	23:BA:1913:A:P	2.43	0.42
23:BA:571:A:H5'	23:BA:2030:A:N7	2.35	0.42
23:BA:2065:C:H2'	23:BA:2066:C:H6	1.85	0.42
23:BA:2070:G:C2	23:BA:2442:C:C2	3.08	0.42
23:BA:2632:A:O2'	23:BA:2811:G:O2'	2.21	0.42
23:BA:322:A:H4'	23:BA:323:G:OP2	2.20	0.42
23:BA:479:A:H4'	23:BA:480:A:OP1	2.20	0.42
23:BA:705:A:C2	23:BA:727:A:H1'	2.55	0.42
23:BA:824:A:H1'	23:BA:2358:G:N7	2.34	0.42
27:BF:64:ILE:HD11	27:BF:75:HIS:HB2	2.02	0.42
28:BG:47:LYS:HA	28:BG:88:ILE:HG22	2.01	0.42
30:BI:39:ALA:HB1	30:BI:44:LEU:HD11	2.01	0.42
30:BI:5:LEU:HD11	30:BI:19:VAL:HG22	2.01	0.42
34:BQ:110:THR:HG23	34:BQ:113:GLN:HB2	2.00	0.42
42:BY:51:VAL:O	42:BY:51:VAL:HG12	2.20	0.42
1:CA:1003:G:H2'	1:CA:1004:A:H4'	2.01	0.42
1:CA:1057:G:H2'	1:CA:1058:G:H8	1.85	0.42
1:CA:1105:A:N1	1:CA:1106:G:C5	2.87	0.42
1:CA:1306:A:H62	1:CA:1331:G:N2	2.17	0.42
1:CA:384:G:H2'	1:CA:385:C:C6	2.54	0.42
1:CA:617:G:C2	1:CA:618:C:C5	3.08	0.42
1:CA:773:G:H4'	25:DD:202:LYS:HE2	2.01	0.42
2:CB:114:ARG:HD2	2:CB:114:ARG:O	2.19	0.42
4:CD:112:VAL:HG22	4:CD:116:GLN:OE1	2.19	0.42
4:CD:158:ILE:O	4:CD:162:LEU:HD12	2.19	0.42
9:CI:46:ALA:CB	9:CI:77:ILE:HB	2.48	0.42
10:CJ:50:ILE:HD12	10:CJ:50:ILE:N	2.31	0.42
13:CM:15:VAL:O	13:CM:18:ALA:HB3	2.19	0.42
1:CA:1203:C:P	14:CN:3:ARG:HH12	2.42	0.42
3:CC:12:LEU:O	14:CN:57:ARG:NH1	2.52	0.42
17:CQ:29:HIS:HB3	17:CQ:33:GLY:N	2.34	0.42
41:DX:11:PRO:HD3	46:D2:37:PHE:CE2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1489:U:C6	23:DA:1489:U:H3'	2.53	0.42
23:DA:1638:C:H4'	23:DA:2710:C:O2	2.19	0.42
23:DA:1288:U:O2'	23:DA:1647:G:N2	2.52	0.42
23:DA:1799:G:H5'	23:DA:1819:A:N6	2.33	0.42
23:DA:1913:A:P	23:DA:1913:A:H3'	2.59	0.42
23:DA:2018:G:H2'	23:DA:2019:A:O4'	2.19	0.42
23:DA:2114:A:H3'	23:DA:2115:G:C8	2.55	0.42
23:DA:2273:A:H2'	23:DA:2274:A:H8	1.83	0.42
23:DA:2290:G:O2'	23:DA:2381:C:H1'	2.20	0.42
23:DA:2309:A:C6	23:DA:2310:A:C2	3.08	0.42
23:DA:2664:G:H3'	56:DA:3746:HOH:O	2.18	0.42
23:DA:2755:C:C4	53:D9:19:ARG:NH1	2.87	0.42
23:DA:323:G:OP1	23:DA:338:G:N2	2.48	0.42
23:DA:566:U:OP1	33:DP:29:LYS:HD2	2.19	0.42
23:DA:656:G:H2'	23:DA:657:U:O4'	2.19	0.42
23:DA:719:C:H2'	23:DA:720:C:C6	2.54	0.42
23:DA:916:G:H5'	23:DA:917:A:OP1	2.20	0.42
25:DD:39:LYS:NZ	25:DD:57:GLY:O	2.53	0.42
28:DG:43:LEU:HD22	28:DG:90:LEU:HG	2.01	0.42
31:DN:23:LEU:HB2	31:DN:60:ILE:HG12	2.00	0.42
36:DS:56:LEU:O	36:DS:58:LEU:HD22	2.20	0.42
37:DT:27:THR:HB	37:DT:89:VAL:HG23	2.02	0.42
38:DU:82:GLY:HA3	38:DU:113:ALA:HB1	2.00	0.42
1:AA:1067:A:H1'	1:AA:1068:G:O4'	2.19	0.42
1:AA:1248:A:H2	1:AA:1289:A:H62	1.67	0.42
1:AA:167:G:H2'	1:AA:168:G:C8	2.54	0.42
1:AA:353:A:H5'	1:AA:353:A:C8	2.51	0.42
1:AA:571:U:O5'	1:AA:571:U:H6	2.03	0.42
1:AA:741:G:H2'	1:AA:742:G:H8	1.85	0.42
1:AA:819:A:H4'	1:AA:820:U:OP2	2.20	0.42
1:AA:951:G:N1	1:AA:1231:G:N7	2.67	0.42
2:AB:70:PHE:CD2	2:AB:163:PHE:HB3	2.54	0.42
3:AC:11:ARG:HD3	3:AC:15:THR:HG21	2.01	0.42
3:AC:153:VAL:HG13	3:AC:197:GLY:O	2.20	0.42
3:AC:43:LEU:HA	3:AC:43:LEU:HD23	1.67	0.42
6:AF:25:ILE:HD12	6:AF:82:ARG:HE	1.84	0.42
13:AM:88:ARG:HG2	13:AM:88:ARG:O	2.19	0.42
14:AN:53:LEU:HA	14:AN:54:PRO:HD3	1.69	0.42
16:AP:9:PHE:CD2	16:AP:18:ARG:HG3	2.54	0.42
21:AU:12:LYS:CE	21:AU:19:GLY:HA3	2.48	0.42
23:BA:1166:C:O2	23:BA:1184:G:C2	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:586:A:C2	23:BA:1254:A:C2	3.08	0.42
23:BA:1259:G:O2'	23:BA:1260:G:H5'	2.20	0.42
23:BA:1489:U:H3'	23:BA:1489:U:H6	1.83	0.42
23:BA:1747(A):G:N7	56:BA:5107:HOH:O	2.36	0.42
23:BA:1749:A:N6	56:BA:5361:HOH:O	2.53	0.42
23:BA:2273:A:O2'	23:BA:2274:A:H5'	2.18	0.42
23:BA:2464:C:O2'	23:BA:2465:C:H5''	2.19	0.42
23:BA:248:G:H5'	23:BA:250:G:N7	2.34	0.42
23:BA:2821:A:H2'	23:BA:2822:G:O4'	2.19	0.42
23:BA:853:G:H1	23:BA:924:C:H42	1.67	0.42
23:BA:928:G:O5'	23:BA:928:G:H8	2.03	0.42
24:BB:79:C:O5'	24:BB:79:C:H6	2.02	0.42
25:BD:146:GLU:HB2	25:BD:189:CYS:HB3	2.02	0.42
25:BD:130:ALA:HA	25:BD:192:THR:HA	2.01	0.42
23:BA:764:A:OP1	25:BD:208:LYS:HE2	2.19	0.42
28:BG:110:ALA:HA	28:BG:140:ILE:O	2.19	0.42
29:BH:94:TYR:CD1	29:BH:94:TYR:N	2.87	0.42
32:BO:115:VAL:HG13	32:BO:121:VAL:HG21	2.02	0.42
34:BQ:39:PRO:HA	34:BQ:97:VAL:O	2.19	0.42
1:CA:1166:G:N2	1:CA:1169:A:H3'	2.35	0.42
1:CA:1160:G:O6	1:CA:1181:G:C6	2.73	0.42
1:CA:1459:C:H2'	1:CA:1460:A:C8	2.55	0.42
1:CA:170:U:O2'	1:CA:171:A:H5'	2.20	0.42
3:CC:179:ARG:HG3	3:CC:206:GLU:OE1	2.20	0.42
53:D9:32:HIS:O	53:D9:34:GLN:HG3	2.19	0.42
23:DA:1287:A:H5''	23:DA:1288:U:OP2	2.19	0.42
23:DA:1849:G:H2'	23:DA:1850:G:C8	2.55	0.42
23:DA:1927:A:H2'	23:DA:1928:A:C8	2.54	0.42
23:DA:229:A:OP1	23:DA:229:A:C8	2.73	0.42
23:DA:2309:A:C6	23:DA:2310:A:N1	2.88	0.42
23:DA:2420:C:H6	23:DA:2420:C:O5'	2.02	0.42
23:DA:271(S):G:C6	23:DA:271(T):C:C4	3.07	0.42
23:DA:2836:U:H2'	23:DA:2837:G:C8	2.55	0.42
23:DA:663:G:C6	23:DA:664:C:C4	3.08	0.42
23:DA:674:G:H1'	27:DF:74:ARG:CD	2.49	0.42
23:DA:922:U:H2'	23:DA:923:C:C6	2.55	0.42
24:DB:91:C:C2'	24:DB:92:C:H5'	2.49	0.42
26:DE:29:GLY:HA3	56:DE:402:HOH:O	2.20	0.42
27:DF:112:MET:HB2	27:DF:112:MET:HE2	1.86	0.42
33:DP:82:GLY:HA2	33:DP:113:LYS:O	2.20	0.42
33:DP:59:LEU:HD23	33:DP:59:LEU:HA	1.70	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DT:118:ARG:NE	37:DT:118:ARG:HA	2.34	0.42
1:AA:1063:C:OP2	1:AA:1064:G:O2'	2.37	0.42
1:AA:1077:G:N2	1:AA:1079:G:H3'	2.35	0.42
1:AA:1134:G:H2'	1:AA:1135:U:H5'	2.01	0.42
1:AA:116:A:C8	1:AA:116:A:OP2	2.73	0.42
1:AA:1207:G:O2'	1:AA:1208:C:H5'	2.20	0.42
1:AA:1299:A:H2'	1:AA:1301:U:H1'	2.01	0.42
1:AA:184:G:H5'	1:AA:224:C:O2'	2.20	0.42
1:AA:709:G:H2'	1:AA:710:G:C8	2.55	0.42
1:AA:757:U:OP1	1:AA:822:C:O2'	2.34	0.42
1:AA:778:G:H2'	1:AA:779:C:O4'	2.20	0.42
1:AA:958:A:H8	1:AA:958:A:OP1	2.02	0.42
2:AB:14:GLY:HA3	2:AB:16:HIS:HE1	1.85	0.42
2:AB:77:ALA:HB1	2:AB:211:ILE:HG21	2.00	0.42
2:AB:70:PHE:HB2	2:AB:92:TYR:CB	2.49	0.42
10:AJ:66:ARG:HB3	10:AJ:68:HIS:NE2	2.34	0.42
1:AA:502:G:OP1	12:AL:117:ARG:N	2.52	0.42
12:AL:42:THR:HB	12:AL:52:LEU:HD12	2.01	0.42
13:AM:91:ARG:HB2	13:AM:98:VAL:HG13	2.01	0.42
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.55	0.42
1:AA:1305:G:H2'	21:AU:5:ASP:HA	2.02	0.42
23:BA:1153:C:H2'	23:BA:1154:G:O4'	2.19	0.42
23:BA:1356:G:C5	23:BA:1357:U:C5	3.07	0.42
23:BA:1717:G:C2	23:BA:1718:G:C8	3.08	0.42
23:BA:2161:C:C5	23:BA:2162:G:N7	2.88	0.42
23:BA:219:G:O6	56:BA:3973:HOH:O	2.22	0.42
23:BA:2304:G:O6	23:BA:2312:U:O4	2.37	0.42
23:BA:804:A:H5''	23:BA:805:G:OP1	2.20	0.42
24:BB:75:G:H5''	24:BB:76:G:OP2	2.20	0.42
24:BB:78:A:C2	24:BB:100:A:C4	3.08	0.42
28:BG:138:GLN:HE22	28:BG:153:ARG:NH2	2.18	0.42
29:BH:137:ASP:HB3	29:BH:140:LYS:CB	2.49	0.42
33:BP:101:VAL:HG12	33:BP:102:ARG:N	2.34	0.42
37:BT:64:ARG:HB2	37:BT:73:GLU:HG2	2.00	0.42
43:BZ:27:VAL:HA	43:BZ:35:ARG:O	2.19	0.42
1:CA:1001(A):G:N2	1:CA:1040:U:C2	2.88	0.42
1:CA:1128:C:H1'	1:CA:1146:A:N1	2.35	0.42
1:CA:1151:A:C4	1:CA:1152:A:C8	3.08	0.42
1:CA:1286:A:H2	21:CU:22:ARG:NH2	2.09	0.42
1:CA:1309:G:C6	1:CA:1329:A:N6	2.87	0.42
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:235:C:H2'	1:CA:236:G:C8	2.55	0.42
1:CA:331:G:O4'	56:CA:1860:HOH:O	2.21	0.42
1:CA:439:A:C4	1:CA:496:A:C2	3.08	0.42
6:CF:68:PRO:HG2	6:CF:71:ARG:HD2	2.01	0.42
7:CG:43:PHE:CD1	7:CG:43:PHE:O	2.73	0.42
16:CP:23:ASP:OD1	16:CP:25:ARG:HG3	2.20	0.42
1:CA:472:A:H4'	16:CP:80:PHE:O	2.20	0.42
17:CQ:86:GLU:O	17:CQ:90:ILE:HG13	2.18	0.42
23:DA:1300:U:H4'	23:DA:1301:A:H5'	2.02	0.42
23:DA:1577:C:OP2	56:DA:4265:HOH:O	2.21	0.42
23:DA:1844:C:OP1	25:DD:257:LEU:HD23	2.19	0.42
23:DA:1932:A:H2'	23:DA:1933:G:O4'	2.19	0.42
23:DA:2005:A:H5''	23:DA:2006:C:OP2	2.20	0.42
23:DA:860:U:C2	23:DA:2268:A:C8	3.08	0.42
23:DA:2561:A:H2'	23:DA:2562:U:O4'	2.19	0.42
23:DA:2862:G:H2'	23:DA:2863:C:H6	1.85	0.42
23:DA:335:C:H2'	23:DA:336:C:C6	2.55	0.42
23:DA:696:G:O2'	23:DA:697:C:H5'	2.20	0.42
24:DB:40:U:H1'	24:DB:45:A:H61	1.83	0.42
24:DB:96:U:H2'	24:DB:97:G:H8	1.85	0.42
27:DF:64:ILE:HG13	27:DF:65:TRP:H	1.85	0.42
30:DI:9:LEU:HB3	30:DI:12:LEU:HB2	2.01	0.42
32:DO:17:ARG:HD2	32:DO:47:ILE:HG23	2.02	0.42
33:DP:55:ARG:HA	56:DP:309:HOH:O	2.20	0.42
34:DQ:70:PRO:HA	34:DQ:94:VAL:O	2.19	0.42
34:DQ:78:PRO:O	34:DQ:81:VAL:HG13	2.20	0.42
38:DU:43:GLY:HA3	39:DV:73:SER:OG	2.18	0.42
43:DZ:152:ALA:HA	43:DZ:155:LEU:HB2	2.00	0.42
1:AA:1009:G:N3	1:AA:1010:G:H1'	2.34	0.42
1:AA:1004:A:N6	1:AA:1034:G:H2'	2.31	0.42
1:AA:346:G:N2	1:AA:347:G:C8	2.88	0.42
1:AA:602:A:C6	1:AA:603:U:N3	2.88	0.42
1:AA:922:G:C6	1:AA:923:A:C6	3.07	0.42
2:AB:110:GLN:O	2:AB:114:ARG:HB2	2.20	0.42
2:AB:69:LEU:HD13	2:AB:92:TYR:HA	2.02	0.42
3:AC:23:TYR:CD1	10:AJ:10:GLY:HA2	2.55	0.42
17:AQ:99:SER:C	17:AQ:100:LYS:HD3	2.40	0.42
23:BA:2279:G:O6	44:B0:14:ARG:HD2	2.20	0.42
52:B8:8:LYS:HB3	52:B8:12:LYS:HE3	2.02	0.42
23:BA:1011:G:C2	23:BA:1151:G:C2	3.07	0.42
23:BA:1376:C:N4	23:BA:1377:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1467:C:C5	23:BA:1546:C:H2'	2.54	0.42
23:BA:1488:G:C6	23:BA:1489:U:N3	2.87	0.42
23:BA:2117:A:H61	23:BA:2166:G:N2	2.12	0.42
23:BA:2741:A:H61	23:BA:2763:G:H1'	1.85	0.42
23:BA:27:G:HO2'	23:BA:28:A:P	2.42	0.42
23:BA:330:A:H2	23:BA:1210:A:C2'	2.24	0.42
23:BA:839:U:H2'	23:BA:840:C:C6	2.54	0.42
24:BB:21:G:H2'	24:BB:22:U:O4'	2.20	0.42
27:BF:179:GLU:H	27:BF:179:GLU:CD	2.23	0.42
29:BH:38:SER:HB2	29:BH:64:LEU:HD22	2.02	0.42
29:BH:5:GLY:HA2	29:BH:69:ARG:HB3	2.01	0.42
29:BH:80:SER:OG	29:BH:81:GLU:N	2.53	0.42
30:BI:9:LEU:HD21	30:BI:35:LEU:CD2	2.50	0.42
30:BI:77:LEU:HD22	30:BI:77:LEU:HA	1.78	0.42
31:BN:18:ALA:O	31:BN:19:GLU:HB3	2.18	0.42
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.19	0.42
1:CA:1306:A:H1'	1:CA:1332:A:N3	2.35	0.42
1:CA:1309:G:OP1	13:CM:92:HIS:CE1	2.73	0.42
1:CA:1521:G:H2'	1:CA:1522:U:H6	1.85	0.42
1:CA:622:A:C8	1:CA:623:C:C5	3.07	0.42
1:CA:646:U:H2'	1:CA:647:C:C6	2.55	0.42
2:CB:172:ILE:H	2:CB:172:ILE:HG13	1.43	0.42
3:CC:30:ARG:HG3	3:CC:31:HIS:HD2	1.85	0.42
3:CC:31:HIS:H	3:CC:31:HIS:CD2	2.36	0.42
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	2.01	0.42
1:CA:1379:G:N7	7:CG:2:ALA:N	2.68	0.42
7:CG:31:MET:O	7:CG:32:ARG:NH1	2.53	0.42
10:CJ:35:SER:HB3	10:CJ:73:ASP:HB3	2.01	0.42
11:CK:120:ARG:HA	11:CK:121:PRO:HD3	1.85	0.42
1:CA:1309:G:O3'	13:CM:77:ASN:HB3	2.20	0.42
46:D2:50:ILE:C	46:D2:52:ASP:N	2.72	0.42
51:D7:1:MET:O	51:D7:2:LYS:C	2.57	0.42
23:DA:1022:G:C6	23:DA:1140:C:C4	3.08	0.42
23:DA:1163:G:O2'	23:DA:1164:G:H5'	2.20	0.42
23:DA:117:G:C6	23:DA:119:A:C6	3.08	0.42
23:DA:1525:G:H2'	23:DA:1526:G:O4'	2.19	0.42
23:DA:1833:U:O2'	23:DA:1969:A:N1	2.34	0.42
23:DA:2019:A:H4'	38:DU:34:LYS:HD2	2.01	0.42
23:DA:2114:A:C6	23:DA:2115:G:C2	3.07	0.42
23:DA:2833:G:C3'	23:DA:2834:G:H5'	2.48	0.42
23:DA:71:A:H5''	23:DA:73:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:907:U:O2'	34:DQ:101:ARG:NH2	2.43	0.42
42:DY:90:LEU:C	42:DY:92:ASN:H	2.21	0.42
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.55	0.42
1:AA:1440:C:H2'	1:AA:1441:G:O4'	2.20	0.42
1:AA:309:G:O2'	1:AA:607:A:N1	2.52	0.42
1:AA:791:G:C6	1:AA:792:A:N7	2.88	0.42
2:AB:21:ARG:HE	2:AB:21:ARG:H	1.66	0.42
10:AJ:8:LEU:O	10:AJ:69:ASN:HA	2.20	0.42
10:AJ:8:LEU:O	10:AJ:70:ARG:N	2.43	0.42
18:AR:71:LYS:HA	18:AR:74:ARG:HD2	2.02	0.42
21:AU:13:ILE:N	21:AU:22:ARG:HD2	2.35	0.42
46:B2:50:ILE:O	46:B2:52:ASP:N	2.45	0.42
23:BA:1138:G:O2'	31:BN:105:GLY:HA3	2.19	0.42
23:BA:1324:G:C5	23:BA:1328:G:O6	2.73	0.42
23:BA:2178:C:H2'	23:BA:2179:C:O4'	2.19	0.42
23:BA:2565:A:H5''	23:BA:2566:A:OP2	2.19	0.42
23:BA:2782:G:C8	56:BA:4087:HOH:O	2.70	0.42
23:BA:2791:C:OP2	23:BA:2791:C:H3'	2.19	0.42
23:BA:2838:G:C6	23:BA:2839:G:C5	3.08	0.42
23:BA:627:A:H62	33:BP:84:ASN:HD21	1.68	0.42
23:BA:863:A:H2'	23:BA:864:G:H8	1.83	0.42
23:BA:900:A:H2'	23:BA:901:A:H8	1.85	0.42
26:BE:181:LEU:HD13	26:BE:181:LEU:HA	1.74	0.42
23:BA:1952:A:C2	32:BO:22:ILE:HD12	2.55	0.42
35:BR:50:HIS:O	35:BR:54:LEU:HD22	2.20	0.42
1:CA:1003:G:C2	1:CA:1004:A:O2'	2.70	0.42
1:CA:1070:U:O2	1:CA:1106:G:C2	2.72	0.42
1:CA:1191:A:O5'	1:CA:1191:A:H8	2.03	0.42
1:CA:1357:A:C5	1:CA:1358:U:C4	3.08	0.42
1:CA:1378:C:O5'	1:CA:1378:C:H6	2.02	0.42
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.20	0.42
1:CA:45:U:H2'	1:CA:46:G:C8	2.55	0.42
1:CA:560:U:H4'	1:CA:561:U:O5'	2.18	0.42
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.84	0.42
5:CE:10:MET:HG2	5:CE:13:ILE:HD11	2.02	0.42
1:CA:1375:A:H4'	7:CG:29:LYS:HZ3	1.85	0.42
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	2.02	0.42
14:CN:25:VAL:N	14:CN:39:LEU:HD23	2.34	0.42
15:CO:50:HIS:O	15:CO:53:HIS:HB3	2.19	0.42
19:CS:53:ASN:ND2	19:CS:77:THR:O	2.49	0.42
20:CT:38:LYS:O	20:CT:41:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:105:LYS:HZ1	48:D4:26:SER:HB2	1.84	0.42
23:DA:1179:C:H2'	23:DA:1180:C:C6	2.55	0.42
23:DA:2525:G:C2	23:DA:2539:C:C2	3.08	0.42
23:DA:2022:U:O2'	23:DA:2617:C:H5'	2.20	0.42
23:DA:271(I):G:H2'	23:DA:271(J):C:C6	2.55	0.42
23:DA:652(E):G:C2	23:DA:652(U):G:C2	3.08	0.42
23:DA:7:G:H4'	31:DN:13:TRP:CH2	2.55	0.42
36:DS:34:HIS:ND1	36:DS:53:SER:OG	2.52	0.42
38:DU:106:PHE:O	38:DU:110:VAL:HG23	2.20	0.42
1:AA:1002:G:C2	1:AA:1039:C:C2	3.08	0.42
1:AA:1316:G:HO2'	1:AA:1318:A:H8	1.64	0.42
1:AA:1347:G:H5''	9:AI:107:ARG:CB	2.49	0.42
1:AA:448:A:H2'	1:AA:449:C:C6	2.55	0.42
7:AG:51:GLN:HG2	7:AG:58:PRO:HD3	2.02	0.42
7:AG:99:LEU:H	7:AG:99:LEU:HG	1.69	0.42
50:B6:9:LEU:CD2	50:B6:25:LYS:HB3	2.50	0.42
23:BA:19:C:H2'	23:BA:20:C:H6	1.84	0.42
23:BA:2121:G:O6	23:BA:2176:A:N6	2.53	0.42
23:BA:1889:A:N1	23:BA:2234:G:H1'	2.35	0.42
23:BA:635:C:O2'	23:BA:639:U:OP1	2.33	0.42
24:BB:91:C:O2'	24:BB:92:C:H5'	2.19	0.42
30:BI:121:LYS:HD3	30:BI:121:LYS:HA	1.91	0.42
1:CA:1074:G:C4	1:CA:1102:A:C2	3.08	0.42
1:CA:1084:G:C5	1:CA:1085:U:C4	3.07	0.42
1:CA:1123:A:H2'	1:CA:1124:G:O4'	2.19	0.42
1:CA:1262:C:N4	1:CA:1273:G:N1	2.39	0.42
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.19	0.42
1:CA:683:G:C6	1:CA:684:A:C5	3.08	0.42
1:CA:909:A:H2'	1:CA:910:C:O4'	2.20	0.42
2:CB:216:SER:O	2:CB:219:VAL:N	2.53	0.42
8:CH:25:ASP:HB2	8:CH:58:TYR:CD2	2.55	0.42
15:CO:56:LEU:O	15:CO:60:VAL:HG23	2.20	0.42
48:D4:13:ARG:N	48:D4:29:PRO:O	2.37	0.42
50:D6:19:ARG:H	50:D6:19:ARG:HD2	1.85	0.42
23:DA:1319:G:C6	23:DA:1320:C:N4	2.87	0.42
23:DA:1518:U:H2'	23:DA:1519:G:O4'	2.20	0.42
23:DA:21:A:O2'	23:DA:22:C:H5'	2.20	0.42
23:DA:2304:G:O6	23:DA:2312:U:O4	2.38	0.42
23:DA:2516:G:C6	23:DA:2517:C:C4	3.08	0.42
24:DB:32:C:C2	24:DB:51:G:N2	2.88	0.42
32:DO:70:LYS:HE2	32:DO:70:LYS:HB3	1.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DT:110:ILE:H	37:DT:110:ILE:HG12	1.58	0.42
43:DZ:6:LYS:HE2	43:DZ:6:LYS:HB3	1.88	0.42
1:AA:1096:C:O2'	1:AA:1170:A:O2'	2.33	0.41
1:AA:1219:U:N3	1:AA:1220:G:N7	2.68	0.41
1:AA:984:C:N3	1:AA:1222:G:C2	2.88	0.41
1:AA:1316:G:C2	1:AA:1318:A:H5''	2.55	0.41
1:AA:1237:C:N4	1:AA:1336:C:C2	2.88	0.41
1:AA:1348:U:N3	1:AA:1374:A:C8	2.84	0.41
1:AA:184:G:O4'	1:AA:224:C:H4'	2.19	0.41
4:AD:148:VAL:HG11	4:AD:158:ILE:HG13	2.02	0.41
7:AG:113:GLU:HG2	7:AG:119:ARG:CB	2.50	0.41
12:AL:123:LYS:HG2	12:AL:123:LYS:H	1.59	0.41
1:AA:392:G:H5'	16:AP:13:HIS:CE1	2.55	0.41
17:AQ:66:SER:HB3	17:AQ:69:LYS:HD3	2.01	0.41
45:B1:32:LYS:HB3	45:B1:32:LYS:HE2	1.93	0.41
46:B2:35:LEU:HA	46:B2:35:LEU:HD23	1.71	0.41
50:B6:40:CYS:HA	50:B6:41:PRO:HD3	1.68	0.41
23:BA:12:U:O2	23:BA:12:U:C2'	2.68	0.41
23:BA:1405:U:H2'	23:BA:1406:U:H6	1.80	0.41
23:BA:1797:C:C2'	23:BA:1798:U:H5'	2.50	0.41
23:BA:1814:G:O3'	25:BD:54:ARG:NH2	2.53	0.41
23:BA:2574:G:O2'	26:BE:143:ASN:HB3	2.20	0.41
23:BA:593:G:N2	23:BA:665:C:C2	2.87	0.41
23:BA:907:U:O2'	34:BQ:101:ARG:NH2	2.45	0.41
26:BE:14:ILE:HG13	26:BE:21:VAL:HG13	2.02	0.41
26:BE:4:ILE:HG12	26:BE:5:LEU:O	2.20	0.41
27:BF:7:TYR:N	27:BF:22:ALA:HB3	2.30	0.41
28:BG:19:LEU:HD22	28:BG:23:PHE:CE1	2.53	0.41
29:BH:87:LEU:HA	29:BH:87:LEU:HD23	1.84	0.41
34:BQ:34:LEU:HA	34:BQ:34:LEU:HD12	1.86	0.41
1:CA:1048:G:O4'	1:CA:1215:G:H5''	2.20	0.41
1:CA:1071:C:H5''	5:CE:49:PRO:CG	2.50	0.41
1:CA:1124:G:H1'	10:CJ:38:ILE:CG2	2.50	0.41
1:CA:611:A:N6	1:CA:629:G:H1	2.16	0.41
1:CA:706:A:C5	1:CA:707:C:C5	3.08	0.41
3:CC:136:GLN:CG	3:CC:140:ARG:HD2	2.50	0.41
7:CG:63:LYS:HA	7:CG:67:GLU:OE2	2.20	0.41
9:CI:9:ARG:N	9:CI:76:ALA:HA	2.35	0.41
15:CO:43:LEU:HD23	15:CO:43:LEU:HA	1.86	0.41
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	2.01	0.41
1:CA:1325:C:H4'	21:CU:17:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:2293:C:H2'	23:DA:2294:C:H6	1.83	0.41
23:DA:2464:C:O2'	23:DA:2465:C:P	2.78	0.41
23:DA:2748:A:N6	23:DA:2749:A:C6	2.88	0.41
23:DA:565:C:H2'	23:DA:566:U:O4'	2.20	0.41
23:DA:675:A:C8	23:DA:804:A:C6	3.08	0.41
23:DA:816:C:P	56:DA:4440:HOH:O	2.77	0.41
29:DH:13:LYS:HA	29:DH:14:GLY:HA2	1.59	0.41
34:DQ:11:LYS:HE2	34:DQ:88:GLY:O	2.20	0.41
36:DS:66:ALA:O	36:DS:69:VAL:N	2.53	0.41
38:DU:5:LYS:HB2	38:DU:5:LYS:HE3	1.83	0.41
41:DX:72:LYS:HE3	41:DX:72:LYS:HB3	1.92	0.41
41:DX:61:GLY:HA3	41:DX:73:ARG:O	2.20	0.41
1:AA:1043:C:H2'	1:AA:1044:A:C8	2.55	0.41
1:AA:124:G:H2'	1:AA:125:U:O4'	2.20	0.41
1:AA:1290:G:H3'	1:AA:1291:G:C8	2.51	0.41
1:AA:611:A:N6	1:AA:629:G:H1	2.17	0.41
1:AA:575:G:C5	1:AA:881:G:C2	3.08	0.41
2:AB:141:GLU:O	2:AB:145:LEU:HB2	2.19	0.41
2:AB:97:TRP:CZ2	2:AB:173:ALA:HA	2.55	0.41
9:AI:71:SER:O	9:AI:74:ILE:N	2.53	0.41
13:AM:71:ARG:HG3	13:AM:71:ARG:H	1.58	0.41
16:AP:6:LEU:HD12	16:AP:6:LEU:HA	1.83	0.41
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.50	0.41
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.20	0.41
21:AU:3:LYS:HA	21:AU:10:ARG:HB3	2.01	0.41
21:AU:15:ARG:CA	21:AU:15:ARG:HE	2.33	0.41
23:BA:857:C:H4'	44:B0:23:VAL:HG21	2.02	0.41
23:BA:1313:U:H3'	23:BA:1314:C:H5'	2.02	0.41
23:BA:1925:C:C2'	23:BA:1926:U:H5'	2.49	0.41
23:BA:2193:G:H2'	23:BA:2194:G:H8	1.85	0.41
23:BA:236:C:H2'	23:BA:237:C:C6	2.54	0.41
23:BA:656:G:H2'	23:BA:657:U:O4'	2.21	0.41
23:BA:666:G:O2'	23:BA:667:U:H5'	2.20	0.41
23:BA:817:C:O2'	23:BA:839:U:H5''	2.20	0.41
23:BA:916:G:H5'	23:BA:917:A:OP1	2.20	0.41
24:BB:46:A:C5	24:BB:47:C:C4	3.08	0.41
26:BE:32:PRO:HD2	26:BE:50:GLY:O	2.21	0.41
27:BF:150:GLY:HA2	27:BF:172:TRP:CD2	2.55	0.41
38:BU:32:PHE:O	38:BU:35:ALA:HB3	2.21	0.41
40:BW:107:LEU:HA	40:BW:107:LEU:HD12	1.85	0.41
1:CA:101:A:C6	1:CA:102:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:17:U:O2'	1:CA:1079:G:N3	2.49	0.41
1:CA:1095:U:P	1:CA:1108:G:H22	2.42	0.41
1:CA:1116:C:H2'	1:CA:1117:G:O4'	2.20	0.41
1:CA:1288:A:H1'	1:CA:1353:G:H4'	2.01	0.41
1:CA:1313:U:OP1	19:CS:7:LYS:NZ	2.53	0.41
1:CA:1442:G:N7	1:CA:1442(A):G:O6	2.53	0.41
1:CA:1445:C:H2'	1:CA:1446:U:H5'	2.02	0.41
1:CA:417:C:O5'	1:CA:417:C:H6	2.03	0.41
1:CA:445:G:H3'	1:CA:446:G:H8	1.85	0.41
1:CA:792:A:H4'	1:CA:793:U:H5''	2.02	0.41
1:CA:877:C:H5''	8:CH:88:LYS:HD3	2.02	0.41
1:CA:585:G:N3	1:CA:879:C:H4'	2.36	0.41
1:CA:961:U:OP2	1:CA:1223:C:O2'	2.12	0.41
2:CB:70:PHE:HB2	2:CB:92:TYR:CB	2.50	0.41
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.20	0.41
3:CC:12:LEU:HA	3:CC:16:ARG:O	2.20	0.41
4:CD:97:LEU:HA	4:CD:97:LEU:HD23	1.86	0.41
13:CM:111:LYS:HB3	13:CM:111:LYS:HE2	1.60	0.41
14:CN:13:THR:HG21	14:CN:20:ALA:HB2	2.02	0.41
46:D2:50:ILE:O	46:D2:51:ARG:HB3	2.20	0.41
48:D4:1:MET:HB3	48:D4:6:HIS:NE2	2.35	0.41
23:DA:323:G:H1'	23:DA:1205:U:O2	2.19	0.41
23:DA:1530:C:O2'	23:DA:1531:C:H6	2.03	0.41
23:DA:1740:G:H2'	23:DA:1741:A:C8	2.55	0.41
23:DA:1912:A:HO2'	23:DA:1913:A:P	2.43	0.41
23:DA:44:G:H5''	23:DA:45:C:OP1	2.20	0.41
24:DB:28:C:H2'	24:DB:29:A:H8	1.85	0.41
24:DB:89:G:H8	24:DB:89:G:OP2	2.03	0.41
27:DF:101:LEU:HB3	27:DF:106:ARG:HD3	2.01	0.41
29:DH:87:LEU:HD23	29:DH:87:LEU:HA	1.87	0.41
30:DI:44:LEU:HA	30:DI:44:LEU:HD12	1.74	0.41
31:DN:24:GLY:HA2	31:DN:27:ALA:CB	2.50	0.41
56:DA:4439:HOH:O	33:DP:16:ARG:HG3	2.20	0.41
40:DW:10:VAL:HG21	40:DW:103:ILE:HD12	2.02	0.41
1:AA:1126:U:O2	1:AA:1126:U:H2'	2.20	0.41
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.54	0.41
1:AA:1212:U:H5'	1:AA:1213:A:OP1	2.20	0.41
1:AA:1275:A:O2'	1:AA:1276:G:H5'	2.20	0.41
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.53	0.41
1:AA:951:G:C6	1:AA:952:U:C4	3.08	0.41
1:AA:9:G:H2'	1:AA:10:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:187:LEU:CD1	2:AB:205:ASP:HA	2.50	0.41
8:AH:87:SER:HA	8:AH:93:VAL:HG23	2.03	0.41
9:AI:41:VAL:HG12	9:AI:42:ARG:N	2.35	0.41
13:AM:5:ALA:HB1	13:AM:66:LEU:HD12	2.02	0.41
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.87	0.41
1:AA:1226:C:H5''	19:AS:80:TYR:CE1	2.55	0.41
1:AA:1305:G:H5'	21:AU:4:GLY:O	2.20	0.41
23:BA:141:A:OP2	56:BA:3981:HOH:O	2.22	0.41
23:BA:1488:G:C2	23:BA:1489:U:O2	2.73	0.41
23:BA:2435:A:H2'	23:BA:2436:G:O5'	2.21	0.41
23:BA:2811:G:N2	23:BA:2891:G:H1'	2.36	0.41
35:BR:94:TYR:O	35:BR:117:VAL:HG23	2.20	0.41
39:BV:91:TYR:CD1	39:BV:91:TYR:C	2.94	0.41
1:CA:1063:C:OP2	1:CA:1063:C:H6	2.04	0.41
1:CA:1050:G:C6	1:CA:1208:C:N3	2.87	0.41
1:CA:1308:U:O2'	1:CA:1309:G:H5'	2.20	0.41
1:CA:1339:A:C5	1:CA:1340:A:H1'	2.55	0.41
1:CA:1431:C:H2'	1:CA:1432:G:O4'	2.20	0.41
1:CA:165:C:H2'	1:CA:166:G:H8	1.86	0.41
1:CA:484:G:O2'	1:CA:485:G:P	2.78	0.41
1:CA:684:A:C6	1:CA:685:G:C6	3.08	0.41
1:CA:748:C:H4'	1:CA:749:C:O5'	2.20	0.41
1:CA:990:C:C4	1:CA:991:U:O4	2.73	0.41
2:CB:48:MET:HA	2:CB:51:LEU:HD12	2.03	0.41
3:CC:51:GLY:O	3:CC:52:LEU:HD22	2.20	0.41
4:CD:61:LYS:HE3	4:CD:62:GLN:OE1	2.20	0.41
5:CE:137:GLU:HA	5:CE:140:ARG:HB3	2.02	0.41
20:CT:53:LEU:HA	20:CT:56:MET:HG2	2.03	0.41
1:CA:1305:G:C8	21:CU:5:ASP:HA	2.53	0.41
50:D6:10:LEU:HG	50:D6:54:ILE:HD12	2.03	0.41
23:DA:1925:C:C2'	23:DA:1926:U:H5'	2.50	0.41
23:DA:2016:U:H2'	23:DA:2017:U:C6	2.55	0.41
23:DA:2321:G:C2'	23:DA:2321:G:N3	2.81	0.41
23:DA:2464:C:O2'	23:DA:2465:C:OP2	2.34	0.41
23:DA:2554:U:H2'	23:DA:2555:U:C6	2.55	0.41
23:DA:2821:A:H2'	23:DA:2822:G:O4'	2.19	0.41
23:DA:849:A:H5''	23:DA:850:C:OP2	2.19	0.41
23:DA:860:U:H1'	23:DA:2268:A:H5'	2.02	0.41
23:DA:900:A:H2'	23:DA:901:A:H8	1.85	0.41
23:DA:945:A:C4	23:DA:2448:A:C2	3.07	0.41
25:DD:107:ALA:HA	25:DD:108:PRO:HD2	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:125:PHE:CZ	28:DG:170:ARG:HA	2.55	0.41
30:DI:25:TYR:CD1	30:DI:30:LEU:HD11	2.55	0.41
37:DT:53:ARG:NH1	37:DT:60:THR:OG1	2.53	0.41
38:DU:106:PHE:O	38:DU:109:LEU:HB2	2.20	0.41
41:DX:24:GLY:O	41:DX:83:VAL:HG22	2.20	0.41
42:DY:23:ARG:NH1	42:DY:23:ARG:HB2	2.35	0.41
43:DZ:100:VAL:HG11	43:DZ:134:PRO:HG2	2.03	0.41
1:AA:1190:G:H3'	1:AA:1190:G:C8	2.56	0.41
1:AA:1277:C:H2'	1:AA:1279:A:C8	2.55	0.41
1:AA:1313:U:H2'	1:AA:1314:C:C6	2.56	0.41
1:AA:170:U:O2'	1:AA:171:A:H5'	2.20	0.41
1:AA:148:G:C2	1:AA:175:C:C2	3.09	0.41
1:AA:187:C:H2'	1:AA:188:C:C6	2.56	0.41
1:AA:384:G:H2'	1:AA:385:C:C6	2.55	0.41
1:AA:560:U:H2'	1:AA:560:U:H6	1.61	0.41
1:AA:872:A:C4	1:AA:874:G:N7	2.88	0.41
1:AA:9:G:H2'	1:AA:10:A:H8	1.85	0.41
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.18	0.41
6:AF:55:ASP:HA	6:AF:56:PRO:HD2	1.83	0.41
7:AG:40:ALA:O	7:AG:44:TYR:N	2.53	0.41
8:AH:37:ARG:HH21	8:AH:38:ILE:CD1	2.33	0.41
10:AJ:52:GLY:HA2	10:AJ:53:PRO:HD2	1.56	0.41
23:BA:1040:C:H2'	23:BA:1041:C:O4'	2.20	0.41
23:BA:1368:G:C2	23:BA:1369:G:C8	3.08	0.41
23:BA:1453:U:O2'	23:BA:1455:G:N7	2.46	0.41
23:BA:1740:G:H2'	23:BA:1741:A:C8	2.55	0.41
23:BA:1742:G:H2'	23:BA:1743:C:O4'	2.21	0.41
23:BA:1759:A:H1'	23:BA:2711:A:C2	2.55	0.41
23:BA:2126:A:C2	23:BA:2162:G:N3	2.88	0.41
23:BA:229:A:OP1	23:BA:229:A:C8	2.73	0.41
23:BA:541:C:O2'	23:BA:542:C:H5'	2.21	0.41
24:BB:33:G:C2	24:BB:50:G:C2	3.09	0.41
30:BI:61:ARG:HA	30:BI:61:ARG:HH11	1.85	0.41
33:BP:38:GLN:HA	33:BP:41:ARG:CG	2.50	0.41
43:BZ:28:MET:HG3	43:BZ:35:ARG:HB2	2.02	0.41
1:CA:1083:U:C5	1:CA:1084:G:C6	3.08	0.41
1:CA:1368:G:O2'	1:CA:1369:C:H5'	2.20	0.41
1:CA:409:G:OP1	4:CD:25:ARG:N	2.35	0.41
1:CA:509:A:C8	1:CA:509:A:H3'	2.55	0.41
1:CA:618:C:H5'	1:CA:619:U:H5''	2.03	0.41
1:CA:721:G:H4'	1:CA:722:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:165:VAL:O	2:CB:187:LEU:HB3	2.21	0.41
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	2.01	0.41
8:CH:87:SER:HB2	8:CH:93:VAL:HB	2.01	0.41
9:CI:82:ALA:HB2	9:CI:101:PHE:HB3	2.02	0.41
1:CA:994:A:C2	14:CN:4:LYS:HD3	2.52	0.41
23:DA:2742:C:OP1	53:D9:35:ARG:HD3	2.20	0.41
23:DA:1530:C:H42	23:DA:1539:G:H1	1.68	0.41
23:DA:1783:A:C2	23:DA:2587:A:C5	3.09	0.41
23:DA:2153:G:H2'	23:DA:2154:G:O4'	2.21	0.41
23:DA:2173:A:C3'	23:DA:2174:C:H5'	2.50	0.41
23:DA:2261:C:O2'	23:DA:2262:U:H5'	2.21	0.41
25:DD:210:GLY:O	25:DD:213:ARG:N	2.53	0.41
26:DE:47:VAL:CG1	26:DE:86:PRO:HD2	2.47	0.41
40:DW:97:LYS:HE3	40:DW:99:ARG:NH2	2.35	0.41
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.86	0.41
1:AA:1164:G:C6	1:AA:1173:G:C6	3.08	0.41
1:AA:1195:C:N3	1:AA:1197:G:C8	2.88	0.41
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.20	0.41
1:AA:1306:A:H1'	1:AA:1332:A:C5	2.55	0.41
1:AA:164:U:H2'	1:AA:165:C:C6	2.56	0.41
1:AA:317:G:C6	1:AA:318:G:C5	3.09	0.41
1:AA:520:A:OP2	12:AL:51:ALA:HB1	2.20	0.41
3:AC:123:GLN:HA	3:AC:126:ARG:HD2	2.02	0.41
3:AC:140:ARG:HH11	3:AC:140:ARG:HB2	1.84	0.41
4:AD:176:LEU:HD12	4:AD:176:LEU:HA	1.84	0.41
5:AE:12:LEU:HD22	5:AE:13:ILE:H	1.85	0.41
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.20	0.41
7:AG:71:PRO:HD2	7:AG:99:LEU:HD13	2.02	0.41
7:AG:72:ARG:HB3	7:AG:96:GLN:HE22	1.86	0.41
8:AH:25:ASP:HB2	8:AH:58:TYR:CD2	2.55	0.41
11:AK:82:VAL:CG1	11:AK:108:ILE:HG12	2.50	0.41
11:AK:30:VAL:HG21	11:AK:65:ALA:HA	2.02	0.41
23:BA:1028:A:H61	23:BA:1125:G:H2'	1.86	0.41
23:BA:1536:C:C5	23:BA:1537:G:C5	3.09	0.41
23:BA:2161:C:H5	23:BA:2161:C:OP2	1.97	0.41
23:BA:2415:G:H2'	23:BA:2416:C:C6	2.55	0.41
23:BA:910:A:C6	23:BA:911:A:C6	3.09	0.41
23:BA:962:G:C6	23:BA:963:U:C4	3.08	0.41
25:BD:275:LYS:HG3	25:BD:275:LYS:O	2.21	0.41
27:BF:101:LEU:HD12	27:BF:102:PRO:HD2	2.02	0.41
31:BN:28:THR:HG22	31:BN:29:LYS:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BP:6:LEU:HD23	33:BP:6:LEU:HA	1.61	0.41
34:BQ:32:TYR:HE2	34:BQ:133:ARG:HE	1.69	0.41
36:BS:7:TYR:CE1	36:BS:91:PRO:HG3	2.55	0.41
39:BV:70:ILE:HD13	39:BV:70:ILE:HA	1.78	0.41
39:BV:82:ARG:HD2	39:BV:82:ARG:N	2.36	0.41
41:BX:11:PRO:HG2	41:BX:13:LEU:HD21	2.02	0.41
41:BX:21:PHE:CZ	41:BX:92:LEU:HD12	2.56	0.41
1:CA:1003:G:C3'	1:CA:1004:A:H4'	2.51	0.41
1:CA:1030:C:H2'	1:CA:1030(A):G:H5'	2.00	0.41
1:CA:130:A:C8	17:CQ:63:ARG:HG3	2.56	0.41
1:CA:1416:G:H2'	1:CA:1417:G:O4'	2.20	0.41
1:CA:1437:C:H2'	1:CA:1438:G:C8	2.56	0.41
1:CA:1442:G:C8	1:CA:1442(A):G:C5	3.09	0.41
1:CA:766:A:H2	1:CA:1525:G:N3	2.19	0.41
1:CA:936:C:H3'	1:CA:937:A:H8	1.85	0.41
2:CB:110:GLN:HG3	2:CB:110:GLN:H	1.49	0.41
3:CC:35:GLU:OE2	3:CC:59:ARG:NH2	2.53	0.41
8:CH:4:ASP:HB2	8:CH:89:PRO:HG3	2.03	0.41
13:CM:23:TYR:HE1	13:CM:71:ARG:HG2	1.85	0.41
14:CN:23:ARG:HG3	14:CN:24:CYS:N	2.34	0.41
3:CC:18:TRP:NE1	14:CN:55:GLY:N	2.69	0.41
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.54	0.41
17:CQ:63:ARG:HA	17:CQ:64:PRO:HD3	1.89	0.41
17:CQ:91:ARG:HB2	17:CQ:91:ARG:HE	1.55	0.41
23:DA:1051:G:H2'	23:DA:1051:G:N3	2.36	0.41
23:DA:2092:U:H4'	23:DA:2093:G:O5'	2.21	0.41
23:DA:2239:G:H5'	25:DD:251:GLY:HA3	2.02	0.41
23:DA:2299:G:N1	23:DA:2318:G:C8	2.89	0.41
23:DA:2812:G:C2	23:DA:2813:A:C4	3.08	0.41
23:DA:286:C:H42	23:DA:355:G:H1	1.68	0.41
23:DA:478:A:C6	23:DA:480:A:C6	3.08	0.41
23:DA:909:A:C6	23:DA:912:C:C2	3.08	0.41
26:DE:137:HIS:HB3	26:DE:138:PRO:HD2	2.02	0.41
29:DH:35:VAL:HA	29:DH:36:PRO:HD2	1.77	0.41
29:DH:3:ARG:NH2	29:DH:5:GLY:H	2.19	0.41
30:DI:139:GLN:HA	30:DI:139:GLN:HE21	1.85	0.41
32:DO:7:TYR:OH	32:DO:44:LYS:HG3	2.20	0.41
32:DO:9:GLU:HB2	32:DO:83:ALA:HB2	2.03	0.41
34:DQ:54:MET:HB2	34:DQ:54:MET:HE2	1.86	0.41
39:DV:76:LYS:HB2	39:DV:81:TYR:HB3	2.03	0.41
43:DZ:106:GLY:HA3	43:DZ:142:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1168:A:C6	1:AA:1169:A:C6	3.09	0.41
1:AA:1169:A:C2'	1:AA:1170:A:C8	3.01	0.41
1:AA:1300:G:H4'	1:AA:1301:U:H6	1.85	0.41
1:AA:971:G:N2	1:AA:1363(A):A:O4'	2.51	0.41
1:AA:373:A:C2	1:AA:374:A:C8	3.08	0.41
1:AA:476:G:N2	1:AA:477:A:C4	2.88	0.41
1:AA:512:U:H2'	1:AA:513:C:C6	2.55	0.41
1:AA:59:A:H2'	1:AA:59:A:N3	2.35	0.41
1:AA:690:G:H2'	1:AA:691:G:O4'	2.19	0.41
2:AB:135:GLN:O	2:AB:139:LYS:N	2.44	0.41
3:AC:186:PHE:CZ	3:AC:188:LEU:HB2	2.55	0.41
4:AD:113:SER:O	4:AD:117:ALA:N	2.46	0.41
4:AD:13:ARG:NH2	4:AD:36:ARG:HH21	2.19	0.41
9:AI:31:GLN:HG2	9:AI:36:TYR:CD1	2.55	0.41
9:AI:14:VAL:O	9:AI:65:VAL:HA	2.20	0.41
48:B4:40:HIS:O	48:B4:42:PHE:N	2.49	0.41
50:B6:19:ARG:HD2	50:B6:19:ARG:H	1.85	0.41
23:BA:1319:G:C6	23:BA:1320:C:N4	2.89	0.41
23:BA:1686:C:C2'	23:BA:1687:G:H5'	2.50	0.41
23:BA:1832:C:N4	23:BA:1833:U:C4	2.88	0.41
23:BA:2051:A:C6	23:BA:2614:A:C5	3.08	0.41
23:BA:2516:G:O2'	23:BA:2517:C:H5'	2.20	0.41
23:BA:2537:U:H2'	23:BA:2538:C:C6	2.55	0.41
25:BD:111:LEU:HD23	25:BD:111:LEU:HA	1.67	0.41
25:BD:148:GLU:CB	25:BD:151:LYS:HD2	2.49	0.41
28:BG:129:GLY:HA2	28:BG:166:ASP:HA	2.02	0.41
30:BI:139:GLN:NE2	30:BI:139:GLN:HA	2.31	0.41
32:BO:106:LEU:HD23	32:BO:106:LEU:HA	1.84	0.41
36:BS:99:LYS:HE2	36:BS:103:GLU:OE2	2.20	0.41
40:BW:10:VAL:HG21	40:BW:103:ILE:HD12	2.03	0.41
1:CA:102:G:C4	1:CA:103:C:C5	3.09	0.41
1:CA:1176:A:C6	1:CA:1177:G:O6	2.73	0.41
1:CA:124:G:H2'	1:CA:125:U:O4'	2.20	0.41
1:CA:1265:G:N2	1:CA:1271:G:N3	2.69	0.41
1:CA:832:C:O2'	1:CA:833:U:P	2.79	0.41
2:CB:24:TRP:CZ2	2:CB:26:PRO:HB3	2.55	0.41
3:CC:130:VAL:HA	3:CC:133:ALA:HB3	2.02	0.41
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.56	0.41
4:CD:63:LYS:O	4:CD:67:ILE:HG13	2.21	0.41
8:CH:75:ARG:HA	8:CH:76:PRO:HD2	1.68	0.41
10:CJ:57:LYS:O	10:CJ:60:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:27:LEU:C	12:CL:29:GLY:H	2.24	0.41
12:CL:36:VAL:O	12:CL:58:VAL:HG13	2.20	0.41
16:CP:45:THR:O	16:CP:48:TRP:HB3	2.21	0.41
20:CT:53:LEU:HD12	20:CT:99:LEU:O	2.20	0.41
23:DA:1253:A:C5	56:DA:4450:HOH:O	2.72	0.41
23:DA:2130:U:O3'	23:DA:2133:G:H4'	2.20	0.41
23:DA:2127:G:H1'	23:DA:2173:A:C2	2.56	0.41
23:DA:2178:C:H2'	23:DA:2179:C:O4'	2.20	0.41
23:DA:2233:U:H2'	23:DA:2234:G:C8	2.56	0.41
23:DA:2528:U:H2'	23:DA:2530:A:O5'	2.21	0.41
23:DA:2791:C:H2'	23:DA:2792:G:C8	2.55	0.41
24:DB:73:A:C4	24:DB:105:A:C2	3.08	0.41
26:DE:7:VAL:HG12	26:DE:51:PHE:CE1	2.55	0.41
26:DE:51:PHE:O	26:DE:75:VAL:HG13	2.21	0.41
27:DF:158:THR:HG1	27:DF:160:ASN:H	1.59	0.41
28:DG:8:LYS:O	28:DG:12:TYR:HD1	2.03	0.41
28:DG:138:GLN:HE22	28:DG:153:ARG:NH2	2.19	0.41
28:DG:66:GLN:HG2	48:D4:1:MET:CE	2.51	0.41
31:DN:102:ALA:O	31:DN:106:MET:HG3	2.21	0.41
34:DQ:72:LYS:HB3	34:DQ:94:VAL:HG23	2.03	0.41
37:DT:20:PRO:HG2	37:DT:86:ILE:O	2.20	0.41
37:DT:55:ASN:H	37:DT:59:THR:HB	1.84	0.41
40:DW:64:MET:HE3	40:DW:109:GLU:HG3	2.02	0.41
1:AA:1025:U:C2	1:AA:1036:G:O6	2.68	0.41
1:AA:27:G:H2'	1:AA:28:G:O4'	2.21	0.41
1:AA:546:G:OP1	4:AD:73:ARG:HG2	2.21	0.41
1:AA:623:C:C4	1:AA:624:C:C5	3.08	0.41
1:AA:65:U:H5''	1:AA:65:U:H6	1.86	0.41
1:AA:688:G:H2'	1:AA:689:C:C6	2.56	0.41
1:AA:992:U:O2	1:AA:993:G:N2	2.54	0.41
2:AB:52:GLU:HG2	2:AB:56:ARG:NH1	2.36	0.41
3:AC:123:GLN:O	3:AC:126:ARG:HB2	2.21	0.41
4:AD:146:ILE:N	4:AD:146:ILE:HD12	2.36	0.41
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	2.21	0.41
7:AG:45:ASP:HB2	7:AG:117:ALA:HB1	2.03	0.41
1:AA:1371:G:O3'	9:AI:69:GLY:HA3	2.20	0.41
16:AP:11:SER:OG	16:AP:12:LYS:N	2.51	0.41
48:B4:1:MET:HB3	48:B4:6:HIS:CD2	2.56	0.41
23:BA:1106:G:H2'	23:BA:1107:G:H21	1.85	0.41
23:BA:1453:U:OP1	35:BR:77:ARG:NH1	2.53	0.41
23:BA:1936:A:C8	23:BA:1940:U:O2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:2114:A:H3'	23:BA:2115:G:C8	2.55	0.41
23:BA:2117:A:H2'	23:BA:2118:U:H3'	2.02	0.41
23:BA:2099:U:H3	23:BA:2190:G:H1	1.69	0.41
23:BA:2321:G:C2'	23:BA:2321:G:N3	2.84	0.41
23:BA:269:U:C5	23:BA:271(Y):U:C5	3.08	0.41
23:BA:303:U:H2'	23:BA:304:G:C8	2.56	0.41
23:BA:54:G:O2'	51:B7:35:ARG:HD3	2.21	0.41
24:BB:77:U:OP1	43:BZ:19:ARG:NH2	2.53	0.41
26:BE:120:TRP:CD1	26:BE:155:LYS:HB3	2.56	0.41
29:BH:137:ASP:HB3	29:BH:140:LYS:HB3	2.02	0.41
30:BI:77:LEU:HB3	30:BI:142:VAL:CG1	2.50	0.41
30:BI:94:ALA:HA	30:BI:97:ILE:HG13	2.03	0.41
1:CA:1004:A:N3	1:CA:1037:C:N3	2.69	0.41
1:CA:189(J):G:H2'	1:CA:189(K):U:C6	2.55	0.41
1:CA:317:G:C6	1:CA:318:G:N7	2.89	0.41
1:CA:627:G:O2'	1:CA:628:G:H5'	2.21	0.41
1:CA:67:C:H2'	1:CA:68:G:C8	2.55	0.41
1:CA:734:G:C5	1:CA:735:C:C4	3.09	0.41
1:CA:737:A:H2'	1:CA:738:C:H6	1.84	0.41
1:CA:855:G:C6	1:CA:856:C:C4	3.08	0.41
1:CA:881:G:H2'	1:CA:882:C:O4'	2.19	0.41
2:CB:55:PHE:HA	2:CB:58:ILE:CG1	2.51	0.41
7:CG:69:VAL:HG11	7:CG:104:LEU:HB2	2.02	0.41
8:CH:86:ILE:CB	8:CH:133:LEU:HD22	2.51	0.41
10:CJ:61:GLU:OE2	14:CN:45:ARG:HG2	2.20	0.41
13:CM:53:VAL:HA	13:CM:56:LEU:HD12	2.03	0.41
10:CJ:63:PHE:CD1	14:CN:58:LYS:HA	2.51	0.41
1:CA:1014:A:H5'	19:CS:14:HIS:CD2	2.56	0.41
19:CS:62:ILE:H	19:CS:62:ILE:HD12	1.86	0.41
23:DA:2091:U:O2'	45:D1:47:GLN:HG3	2.21	0.41
23:DA:1648:C:H2'	23:DA:1649:G:O5'	2.20	0.41
23:DA:1709:U:H2'	23:DA:1710:C:C6	2.56	0.41
23:DA:2165:G:H2'	23:DA:2166:G:H8	1.84	0.41
23:DA:224:G:H2'	23:DA:225:A:O4'	2.21	0.41
23:DA:401:A:H2'	23:DA:402:A:O4'	2.21	0.41
23:DA:528:A:C2	23:DA:2043:C:H4'	2.55	0.41
23:DA:647:G:H2'	23:DA:648:G:O4'	2.21	0.41
23:DA:725:G:H8	23:DA:725:G:O5'	2.04	0.41
23:DA:826:U:C4'	33:DP:55:ARG:HB2	2.51	0.41
23:DA:928:G:H8	23:DA:928:G:O5'	2.04	0.41
23:DA:1814:G:H4'	25:DD:51:VAL:HG21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:106:LEU:O	28:DG:111:LEU:HG	2.21	0.41
28:DG:174:GLU:HG2	28:DG:180:PHE:CD1	2.56	0.41
28:DG:82:LEU:HD22	28:DG:86:MET:CB	2.51	0.41
28:DG:72:ARG:NH1	28:DG:87:PRO:HG3	2.34	0.41
29:DH:3:ARG:HG2	29:DH:6:ARG:CZ	2.49	0.41
30:DI:106:GLY:HA2	30:DI:107:VAL:HB	2.03	0.41
31:DN:96:GLU:HB2	31:DN:122:VAL:HG12	2.03	0.41
34:DQ:34:LEU:HA	34:DQ:34:LEU:HD12	1.77	0.41
1:AA:1015:A:H8	1:AA:1015:A:O5'	2.03	0.41
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.21	0.41
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.56	0.41
1:AA:1128:C:H1'	1:AA:1146:A:N1	2.36	0.41
1:AA:963:G:O2'	1:AA:1199:U:H5''	2.21	0.41
1:AA:1206:G:C4	1:AA:1207:G:C8	3.09	0.41
1:AA:1442(B):A:N7	37:BT:118:ARG:CZ	2.83	0.41
1:AA:1502:A:C2	1:AA:1505:G:N1	2.76	0.41
2:AB:137:ARG:H	2:AB:137:ARG:HG3	1.71	0.41
15:AO:74:ASP:OD1	15:AO:76:GLU:HB2	2.21	0.41
23:BA:1022:G:C6	23:BA:1140:C:C4	3.09	0.41
23:BA:1537:G:O2'	23:BA:1538:G:H5'	2.21	0.41
23:BA:1947:C:N3	23:BA:1960:A:C2	2.89	0.41
23:BA:2172:U:H4'	23:BA:2173:A:OP2	2.21	0.41
23:BA:28:A:C5	23:BA:29:U:C5	3.09	0.41
23:BA:65:C:O2'	23:BA:456:C:O2	2.38	0.41
23:BA:1827:C:OP2	25:BD:222:ARG:HD2	2.21	0.41
26:BE:36:ARG:NH1	26:BE:86:PRO:O	2.37	0.41
28:BG:5:VAL:HG11	28:BG:101:ILE:HG12	2.02	0.41
29:BH:12:PRO:O	29:BH:14:GLY:HA2	2.20	0.41
34:BQ:26:TYR:HE1	34:BQ:28:ALA:HB2	1.85	0.41
35:BR:38:VAL:HB	35:BR:39:PRO:HD3	2.02	0.41
36:BS:27:SER:HA	36:BS:88:ASP:HB3	2.02	0.41
36:BS:78:LEU:HA	36:BS:78:LEU:HD13	1.82	0.41
38:BU:74:LEU:N	38:BU:74:LEU:HD12	2.36	0.41
1:CA:997:U:N3	1:CA:1044:A:C2	2.89	0.41
1:CA:1098:C:C5'	1:CA:1169:A:H1'	2.49	0.41
1:CA:954:G:N1	1:CA:1226:C:C2	2.88	0.41
1:CA:1443:G:H1	1:CA:1459:C:H2'	1.86	0.41
1:CA:22:G:H2'	1:CA:23:C:C6	2.56	0.41
1:CA:269:C:H2'	1:CA:270:A:H8	1.84	0.41
1:CA:329:A:C2	1:CA:332:G:C8	3.09	0.41
1:CA:560:U:H2'	1:CA:560:U:H6	1.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:57:ILE:HG23	3:CC:66:VAL:HA	2.03	0.41
3:CC:66:VAL:O	3:CC:102:ASN:HB3	2.21	0.41
5:CE:100:VAL:O	5:CE:107:ARG:NH2	2.53	0.41
1:CA:1368:G:OP2	9:CI:112:LYS:HG3	2.21	0.41
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	2.03	0.41
12:CL:46:LYS:H	12:CL:46:LYS:HG2	1.69	0.41
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.50	0.41
23:DA:1131:G:H21	31:DN:73:THR:CG2	2.34	0.41
23:DA:1188:U:O2'	23:DA:1189:A:H5'	2.20	0.41
23:DA:1441:G:H2'	23:DA:1442:G:H8	1.85	0.41
23:DA:2463:C:H2'	23:DA:2464:C:H5'	2.03	0.41
23:DA:272(E):G:C2	23:DA:364:C:C2	3.08	0.41
23:DA:534:U:H5'	38:DU:42:ALA:HB1	2.03	0.41
23:DA:918:A:C5	23:DA:919:G:H1'	2.56	0.41
25:DD:26:LYS:HE2	25:DD:28:GLU:O	2.21	0.41
26:DE:4:ILE:HG12	26:DE:5:LEU:O	2.20	0.41
28:DG:39:ILE:HG23	28:DG:157:ILE:HD13	2.02	0.41
36:DS:11:LYS:HD3	36:DS:15:ARG:NH2	2.36	0.41
39:DV:2:PHE:CZ	39:DV:41:GLY:HA3	2.56	0.41
43:DZ:39:VAL:CG2	43:DZ:44:PHE:HB2	2.51	0.41
43:DZ:72:ARG:HA	43:DZ:72:ARG:HD3	1.61	0.41
1:AA:283:C:H2'	1:AA:284:G:O4'	2.21	0.41
1:AA:448:A:P	1:AA:485:G:H22	2.43	0.41
1:AA:528:C:H41	12:AL:49:ASN:CG	2.23	0.41
1:AA:657:G:C2	1:AA:750:G:C5	3.08	0.41
1:AA:918:A:H2'	1:AA:919:A:H8	1.84	0.41
4:AD:101:LEU:CD2	4:AD:121:VAL:HG11	2.51	0.41
12:AL:124:LYS:HA	12:AL:125:PRO:HD3	1.88	0.41
14:AN:23:ARG:CZ	14:AN:30:ALA:HB2	2.50	0.41
15:AO:57:LEU:HA	15:AO:57:LEU:HD23	1.83	0.41
17:AQ:10:VAL:HG13	17:AQ:19:VAL:HB	2.02	0.41
21:AU:13:ILE:HA	21:AU:22:ARG:HH11	1.82	0.41
23:BA:116:C:H2'	23:BA:117:G:O4'	2.21	0.41
23:BA:2335:A:N6	23:BA:2337:G:H1'	2.35	0.41
23:BA:2695:C:H2'	23:BA:2696:U:H6	1.86	0.41
23:BA:2887:U:O2'	23:BA:2888:C:H5'	2.21	0.41
23:BA:330:A:O2'	23:BA:331:A:H8	2.04	0.41
23:BA:606:U:H4'	23:BA:658:C:C4'	2.49	0.41
23:BA:890:A:H3'	23:BA:892:G:C8	2.56	0.41
25:BD:147:LEU:HD13	25:BD:155:LEU:HD11	2.03	0.41
29:BH:5:GLY:HA3	29:BH:65:HIS:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BQ:101:ARG:HG3	34:BQ:102:VAL:N	2.36	0.41
34:BQ:133:ARG:HG2	34:BQ:134:ARG:N	2.36	0.41
36:BS:77:ALA:O	36:BS:80:LEU:N	2.48	0.41
36:BS:82:ILE:HA	36:BS:83:LYS:CB	2.51	0.41
23:BA:1224:C:O2'	39:BV:85:LYS:HA	2.21	0.41
42:BY:6:HIS:H	42:BY:6:HIS:HD2	1.68	0.41
1:CA:968:A:C8	1:CA:1062:U:H4'	2.55	0.41
1:CA:1065:U:O2'	1:CA:1066:C:OP2	2.27	0.41
1:CA:1126:U:O2	1:CA:1126:U:H2'	2.21	0.41
1:CA:1442(A):G:C2'	1:CA:1442(B):A:H5''	2.50	0.41
1:CA:373:A:C2	1:CA:374:A:C8	3.09	0.41
1:CA:499:A:H4'	1:CA:500:G:H5'	2.02	0.41
1:CA:657:G:C2	1:CA:750:G:C5	3.09	0.41
1:CA:575:G:O2'	1:CA:821:G:H5'	2.21	0.41
6:CF:55:ASP:HA	6:CF:56:PRO:HD2	1.78	0.41
1:CA:1380:U:H5	7:CG:3:ARG:HA	1.85	0.41
7:CG:62:PHE:HA	7:CG:124:LEU:CD2	2.50	0.41
8:CH:30:ARG:O	8:CH:34:GLU:HB2	2.20	0.41
8:CH:48:TYR:HA	8:CH:60:ARG:O	2.20	0.41
8:CH:87:SER:HB2	8:CH:93:VAL:H	1.86	0.41
9:CI:44:VAL:HA	9:CI:45:ALA:HA	1.58	0.41
12:CL:6:THR:O	12:CL:9:GLN:HB2	2.20	0.41
1:CA:1308:U:H5'	13:CM:110:ARG:NH1	2.36	0.41
13:CM:60:VAL:HG13	13:CM:64:TRP:HZ3	1.86	0.41
14:CN:23:ARG:HH11	14:CN:30:ALA:HB2	1.85	0.41
3:CC:12:LEU:HD11	14:CN:51:GLY:HA2	2.03	0.41
16:CP:9:PHE:HB2	16:CP:16:HIS:O	2.21	0.41
45:D1:82:LEU:CA	45:D1:85:LEU:HD23	2.40	0.41
48:D4:14:ILE:HD12	48:D4:22:ILE:HB	2.03	0.41
50:D6:40:CYS:SG	50:D6:42:TRP:N	2.92	0.41
23:DA:458:G:O2'	51:D7:39:ARG:HD3	2.20	0.41
23:DA:1171:G:H8	23:DA:1171:G:OP2	2.03	0.41
23:DA:1185:C:H5''	23:DA:1186:G:OP1	2.21	0.41
23:DA:127:A:H5''	23:DA:128:C:C6	2.54	0.41
23:DA:1742:G:H2'	23:DA:1743:C:O4'	2.20	0.41
23:DA:2305:A:H2'	23:DA:2306:C:O4'	2.20	0.41
23:DA:2498:C:O2'	23:DA:2499:C:H5'	2.21	0.41
23:DA:2572:A:N7	26:DE:144:ARG:HD2	2.35	0.41
23:DA:2607:G:H2'	23:DA:2608:G:O4'	2.21	0.41
23:DA:271(Y):U:H2'	23:DA:271(Y):U:H6	1.69	0.41
23:DA:285:C:H2'	23:DA:286:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:143:GLN:HG3	29:DH:147:ASN:ND2	2.36	0.41
30:DI:12:LEU:HA	30:DI:12:LEU:HD23	1.88	0.41
23:DA:1668:A:OP1	32:DO:5:GLN:HG3	2.21	0.41
33:DP:38:GLN:HG3	33:DP:45:LEU:HD23	2.02	0.41
36:DS:77:ALA:O	36:DS:80:LEU:N	2.48	0.41
1:AA:1004:A:H3'	1:AA:1025:U:H3	1.86	0.41
1:AA:1012:U:H6	1:AA:1012:U:O5'	2.04	0.41
1:AA:123:C:OP1	1:AA:311:C:O2'	2.24	0.41
1:AA:1261:A:C4	1:AA:1275:A:C2	3.09	0.41
1:AA:1457:G:C6	1:AA:1458:G:C6	3.08	0.41
1:AA:1459:C:H5'	1:AA:1460:A:OP2	2.21	0.41
1:AA:32:A:C6	1:AA:33:A:C6	3.09	0.41
1:AA:373:A:N3	1:AA:374:A:C8	2.89	0.41
2:AB:142:LEU:HG	2:AB:146:GLN:HE21	1.86	0.41
7:AG:27:ILE:O	7:AG:30:ILE:HG13	2.20	0.41
7:AG:9:VAL:HG21	7:AG:94:ARG:NE	2.35	0.41
9:AI:50:LEU:HA	9:AI:53:VAL:O	2.20	0.41
12:AL:82:VAL:HG23	12:AL:106:ASP:OD2	2.21	0.41
12:AL:84:LEU:HA	12:AL:84:LEU:HD22	1.93	0.41
15:AO:88:ARG:HA	15:AO:88:ARG:HD2	1.85	0.41
16:AP:38:TYR:CD2	16:AP:38:TYR:N	2.88	0.41
28:BG:98:ARG:HE	48:B4:1:MET:HE3	1.85	0.41
23:BA:2615:U:N1	49:B5:7:PRO:HA	2.35	0.41
23:BA:1473:G:H2'	23:BA:1474:C:O4'	2.21	0.41
23:BA:2202:C:H2'	23:BA:2203:U:O4'	2.20	0.41
23:BA:2869:G:H2'	23:BA:2870:C:O4'	2.20	0.41
23:BA:2872:G:HO2'	23:BA:2873:A:H5'	1.85	0.41
31:BN:128:HIS:O	31:BN:131:GLN:NE2	2.40	0.41
33:BP:59:LEU:HA	33:BP:59:LEU:HD23	1.73	0.41
23:BA:2278:A:OP1	34:BQ:11:LYS:HD2	2.20	0.41
35:BR:103:ARG:CG	35:BR:103:ARG:HH11	2.33	0.41
36:BS:99:LYS:O	36:BS:102:ALA:HB3	2.20	0.41
1:AA:1442(B):A:N7	37:BT:118:ARG:NH1	2.68	0.41
40:BW:64:MET:HE3	40:BW:109:GLU:HG3	2.02	0.41
1:CA:1072:G:O6	1:CA:1102:A:N6	2.53	0.41
1:CA:1154:G:C2	1:CA:1155:G:C5	3.09	0.41
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.51	0.41
1:CA:420:U:HO2'	1:CA:421:U:H6	1.67	0.41
2:CB:111:ARG:HA	2:CB:111:ARG:HD3	1.52	0.41
2:CB:180:LEU:HA	2:CB:180:LEU:HD23	1.79	0.41
3:CC:136:GLN:HG2	3:CC:140:ARG:HD2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:121:ALA:HB2	3:CC:198:VAL:HG21	2.03	0.41
3:CC:19:GLU:HA	3:CC:54:ARG:NH1	2.36	0.41
4:CD:146:ILE:N	4:CD:146:ILE:HD12	2.36	0.41
10:CJ:39:PRO:HG3	10:CJ:70:ARG:HE	1.85	0.41
10:CJ:62:HIS:HD2	10:CJ:62:HIS:H	1.68	0.41
10:CJ:15:THR:HG22	10:CJ:91:PRO:HB2	2.03	0.41
10:CJ:9:ARG:HG2	10:CJ:69:ASN:ND2	2.36	0.41
15:CO:21:ASP:OD2	15:CO:24:SER:HB3	2.20	0.41
1:CA:626:U:H4'	16:CP:38:TYR:CZ	2.56	0.41
1:CA:584:G:OP1	17:CQ:91:ARG:NH2	2.54	0.41
21:CU:18:TYR:CG	21:CU:24:ARG:HG3	2.55	0.41
22:CX:78:ILE:HA	22:CX:78:ILE:HD13	1.83	0.41
22:CX:79:ASP:O	22:CX:82:ALA:HB3	2.21	0.41
23:DA:1376:C:N4	23:DA:1377:G:C6	2.89	0.41
23:DA:1712:C:H2'	23:DA:1713:U:C6	2.55	0.41
23:DA:2203:U:O2'	23:DA:2205:C:H5'	2.20	0.41
23:DA:563:G:H5'	23:DA:572:A:H4'	2.02	0.41
23:DA:708:C:H5'	23:DA:709:U:OP2	2.21	0.41
23:DA:794:G:H2'	23:DA:795:C:C6	2.55	0.41
23:DA:928:G:O6	56:DA:3686:HOH:O	2.22	0.41
24:DB:46:A:C5	24:DB:47:C:C4	3.09	0.41
25:DD:136:ILE:HA	25:DD:137:PRO:HD3	1.95	0.41
25:DD:221:VAL:HG22	25:DD:226:MET:CE	2.51	0.41
26:DE:14:ILE:HG13	26:DE:21:VAL:HG13	2.03	0.41
27:DF:167:ALA:HB1	27:DF:173:VAL:HG11	2.02	0.41
29:DH:22:GLY:HA2	29:DH:37:VAL:O	2.20	0.41
31:DN:12:ARG:HG3	31:DN:14:VAL:HG23	2.03	0.41
37:DT:35:LYS:HA	37:DT:40:THR:HG22	2.03	0.41
41:DX:25:LYS:HG3	41:DX:82:GLN:OE1	2.21	0.41
43:DZ:124:ILE:HD11	43:DZ:165:VAL:HG11	2.03	0.41
1:AA:1170:A:C2	1:AA:1171:G:H1'	2.56	0.41
1:AA:1359:C:O2'	1:AA:1361:G:N7	2.53	0.41
1:AA:200:G:H2'	1:AA:201:C:O4'	2.21	0.41
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.55	0.41
2:AB:215:LEU:HD23	2:AB:215:LEU:HA	1.68	0.41
3:AC:40:ARG:O	3:AC:44:GLU:HB2	2.20	0.41
4:AD:156:GLU:OE1	4:AD:156:GLU:N	2.53	0.41
1:AA:933:G:P	7:AG:4:ARG:HE	2.41	0.41
7:AG:75:VAL:HG11	7:AG:144:MET:HB3	2.02	0.41
9:AI:76:ALA:O	9:AI:80:GLY:N	2.29	0.41
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1219:U:P	14:AN:19:ARG:HH22	2.42	0.41
1:AA:1235:U:H4'	21:AU:4:GLY:H	1.84	0.41
44:B0:25:ARG:HD2	44:B0:29:GLN:NE2	2.36	0.41
23:BA:1257:C:O2'	27:BF:84:VAL:HG23	2.20	0.41
23:BA:1336:A:H2'	23:BA:1337:G:C8	2.56	0.41
23:BA:2108:C:H42	23:BA:2181:G:H1	1.69	0.41
23:BA:2330:G:H2'	23:BA:2331:G:O4'	2.21	0.41
23:BA:2893:G:H2'	23:BA:2893:G:N3	2.36	0.41
26:BE:37:ARG:HB2	26:BE:46:ALA:N	2.36	0.41
27:BF:112:MET:HE2	27:BF:112:MET:HB2	1.91	0.41
27:BF:196:LEU:HA	27:BF:196:LEU:HD23	1.72	0.41
28:BG:128:ARG:HE	28:BG:128:ARG:HB2	1.55	0.41
28:BG:139:LEU:HB3	28:BG:144:ILE:HG22	2.03	0.41
28:BG:169:ALA:O	28:BG:173:LEU:HG	2.21	0.41
28:BG:174:GLU:HG2	28:BG:180:PHE:CD1	2.56	0.41
34:BQ:72:LYS:HB3	34:BQ:94:VAL:HG23	2.03	0.41
39:BV:18:LEU:HA	39:BV:18:LEU:HD23	1.84	0.41
43:BZ:152:ALA:HA	43:BZ:155:LEU:HB2	2.02	0.41
1:CA:1292:U:O2'	1:CA:1293:G:H5'	2.20	0.41
1:CA:1268:A:O2'	1:CA:1326:C:H4'	2.21	0.41
1:CA:148:G:C2	1:CA:149:A:N7	2.88	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.79	0.41
1:CA:437:U:C4	1:CA:438:G:C6	3.09	0.41
1:CA:627:G:N3	1:CA:628:G:C8	2.88	0.41
1:CA:685:G:C2	1:CA:686:U:C4	3.09	0.41
1:CA:836:G:C6	1:CA:851:G:C6	3.09	0.41
2:CB:74:LYS:H	2:CB:74:LYS:HG2	1.58	0.41
3:CC:150:LYS:O	3:CC:201:TYR:N	2.54	0.41
3:CC:184:TYR:HA	3:CC:200:ALA:O	2.21	0.41
9:CI:109:VAL:HG22	9:CI:110:GLU:H	1.86	0.41
13:CM:19:LEU:HA	13:CM:22:ILE:CD1	2.51	0.41
13:CM:25:ILE:HG23	13:CM:29:ARG:CB	2.51	0.41
47:D3:36:VAL:O	47:D3:37:LEU:HD23	2.20	0.41
23:DA:1507:A:O2'	23:DA:1508:A:C8	2.63	0.41
23:DA:1957:C:H2'	23:DA:1958:C:C6	2.56	0.41
23:DA:189:G:H2'	23:DA:205:G:N2	2.36	0.41
23:DA:2115:G:H4'	23:DA:2167:U:C4'	2.45	0.41
23:DA:198:C:H5'	23:DA:2244:U:OP1	2.21	0.41
23:DA:2338:G:O2'	23:DA:2339:G:H5'	2.21	0.41
23:DA:322:A:H4'	23:DA:323:G:OP2	2.21	0.41
23:DA:410:G:C2	23:DA:418:G:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:481:G:H1'	23:DA:507:A:N1	2.36	0.41
23:DA:862:G:OP2	56:DA:4349:HOH:O	2.21	0.41
24:DB:113:G:H2'	24:DB:114:C:O4'	2.21	0.41
34:DQ:110:THR:HG23	34:DQ:113:GLN:HB2	2.02	0.41
40:DW:79:GLY:CA	40:DW:100:THR:HG22	2.49	0.41
1:AA:1008:C:H2'	1:AA:1009:G:O4'	2.21	0.40
1:AA:1099:G:H5'	1:AA:1100:C:OP2	2.21	0.40
1:AA:1189:C:OP1	10:AJ:51:ARG:NH2	2.51	0.40
1:AA:1202:G:H1'	14:AN:42:ILE:HD13	2.02	0.40
1:AA:1255:G:H3'	1:AA:1279:A:H61	1.87	0.40
1:AA:134:A:H1'	1:AA:325:A:C5	2.56	0.40
1:AA:357:G:C2	1:AA:358:U:C5	3.09	0.40
1:AA:622:A:C8	1:AA:623:C:C6	3.09	0.40
1:AA:78:G:O2'	1:AA:79:G:OP2	2.36	0.40
1:AA:832:C:N3	1:AA:855:G:C6	2.89	0.40
1:AA:951:G:N3	1:AA:970:C:O2'	2.50	0.40
2:AB:37:ASN:O	2:AB:39:ILE:HD12	2.21	0.40
2:AB:38:GLY:O	2:AB:39:ILE:HG13	2.21	0.40
2:AB:70:PHE:HE2	2:AB:163:PHE:HD2	1.69	0.40
4:AD:94:LEU:HD23	4:AD:94:LEU:HA	1.89	0.40
4:AD:98:GLU:O	4:AD:104:VAL:HG23	2.21	0.40
10:AJ:91:PRO:CG	10:AJ:94:VAL:HB	2.42	0.40
13:AM:3:ARG:CZ	13:AM:3:ARG:HB2	2.51	0.40
6:AF:97:PHE:CD2	18:AR:31:LEU:HD21	2.50	0.40
18:AR:56:THR:HB	18:AR:58:LEU:HD13	2.03	0.40
23:BA:19:C:H2'	23:BA:20:C:C6	2.57	0.40
23:BA:2125:G:N2	23:BA:2126:A:N6	2.69	0.40
23:BA:2251:G:C6	23:BA:2252:G:C6	3.09	0.40
23:BA:224:G:H2'	23:BA:225:A:O4'	2.22	0.40
23:BA:288:C:H2'	23:BA:289:A:C8	2.56	0.40
23:BA:2791:C:C4	23:BA:2893:G:O4'	2.73	0.40
23:BA:652(T):C:H2'	23:BA:652(U):G:C8	2.56	0.40
23:BA:883:G:O5'	23:BA:883:G:H8	2.04	0.40
27:BF:103:LYS:HG3	27:BF:103:LYS:H	1.74	0.40
28:BG:36:LYS:HE3	28:BG:160:VAL:HG21	2.03	0.40
34:BQ:59:ARG:HB3	34:BQ:60:ARG:H	1.73	0.40
1:CA:1091:U:C2	1:CA:1095:U:C4	3.09	0.40
1:CA:1095:U:OP2	1:CA:1108:G:N1	2.50	0.40
1:CA:115:G:H4'	1:CA:116:A:O5'	2.19	0.40
1:CA:1204:A:H5''	1:CA:1205:U:OP2	2.21	0.40
1:CA:1206:G:C2'	1:CA:1207:G:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:145:G:C6	1:CA:146:G:C5	3.09	0.40
1:CA:489:C:C4	1:CA:490:G:N7	2.89	0.40
1:CA:628:G:O2'	1:CA:629:G:H5'	2.21	0.40
1:CA:693:G:H2'	1:CA:694:A:C8	2.56	0.40
1:CA:875:C:H5''	1:CA:876:G:OP2	2.21	0.40
2:CB:25:ASN:HA	2:CB:26:PRO:HD2	1.93	0.40
2:CB:94:ASN:HB3	2:CB:95:GLN:NE2	2.36	0.40
3:CC:54:ARG:HB3	3:CC:69:HIS:CD2	2.57	0.40
8:CH:134:ILE:HG22	8:CH:135:CYS:SG	2.61	0.40
9:CI:9:ARG:HA	9:CI:14:VAL:HA	2.03	0.40
17:CQ:99:SER:C	17:CQ:100:LYS:HD3	2.41	0.40
1:CA:1318:A:H4'	19:CS:10:PHE:CD2	2.56	0.40
19:CS:35:SER:HA	19:CS:37:ARG:HG2	2.03	0.40
23:DA:1417:C:H2'	23:DA:1418:G:O4'	2.21	0.40
23:DA:1655:A:H3'	23:DA:1656:C:H6	1.86	0.40
23:DA:1790:C:H2'	23:DA:1791:A:C5	2.56	0.40
23:DA:1971:A:H5''	56:DA:4209:HOH:O	2.19	0.40
23:DA:2110:G:C6	23:DA:2120:G:C8	3.09	0.40
23:DA:2464:C:N3	23:DA:2487:G:C2	2.89	0.40
23:DA:26:G:H1'	23:DA:515:A:H61	1.86	0.40
23:DA:2791:C:OP2	23:DA:2791:C:H3'	2.21	0.40
23:DA:652(B):A:O2'	23:DA:652(C):G:H5'	2.21	0.40
23:DA:686:G:N2	23:DA:788:A:H61	2.20	0.40
25:DD:146:GLU:HG2	25:DD:152:GLY:C	2.41	0.40
33:DP:147:LEU:HD22	33:DP:147:LEU:HA	1.87	0.40
33:DP:38:GLN:C	33:DP:40:SER:N	2.74	0.40
34:DQ:30:GLY:HA2	34:DQ:107:ALA:HB2	2.03	0.40
35:DR:62:ALA:O	35:DR:66:VAL:HG23	2.21	0.40
1:AA:1345:U:OP1	9:AI:120:ARG:NH1	2.54	0.40
1:AA:1445:C:H2'	1:AA:1446:U:H5'	2.04	0.40
1:AA:1452:C:H6	1:AA:1452:C:H5''	1.86	0.40
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.21	0.40
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.21	0.40
1:AA:35:G:H2'	1:AA:36:C:H6	1.86	0.40
1:AA:634:C:H2'	1:AA:635:G:H8	1.86	0.40
1:AA:690:G:C6	1:AA:691:G:C6	3.09	0.40
1:AA:693:G:H2'	1:AA:694:A:C8	2.56	0.40
1:AA:789:U:O2	1:AA:791:G:C8	2.74	0.40
4:AD:111:ALA:HB1	4:AD:116:GLN:OE1	2.21	0.40
8:AH:81:HIS:N	8:AH:138:TRP:O	2.54	0.40
11:AK:91:ARG:NH1	11:AK:110:ASP:OD1	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1194:A:N7	56:BA:5296:HOH:O	2.37	0.40
23:BA:1224:C:O5'	23:BA:1224:C:H6	2.04	0.40
23:BA:1247:A:OP1	27:BF:95:ARG:NH2	2.46	0.40
23:BA:1450:G:H2'	23:BA:1450(A):C:C6	2.56	0.40
23:BA:1817:G:H2'	23:BA:1818:U:H5'	2.03	0.40
23:BA:1876:A:OP2	23:BA:1876:A:H8	2.04	0.40
23:BA:2228:G:C5	23:BA:2229:C:C4	3.09	0.40
23:BA:2241:A:N7	56:BA:4293:HOH:O	2.37	0.40
23:BA:2349:G:OP1	56:BA:3933:HOH:O	2.22	0.40
23:BA:2342:C:O2'	23:BA:2374:C:H5''	2.21	0.40
23:BA:2561:A:H2'	23:BA:2562:U:O4'	2.21	0.40
23:BA:2709:G:N2	56:BA:4848:HOH:O	2.54	0.40
23:BA:271(H):G:O2'	23:BA:271(I):G:P	2.79	0.40
23:BA:2892:A:C2'	23:BA:2893:G:H5'	2.51	0.40
23:BA:719:C:O5'	23:BA:719:C:H6	2.04	0.40
23:BA:7:G:H2'	23:BA:8:A:O4'	2.20	0.40
24:BB:24:G:N7	24:BB:56:G:H2'	2.36	0.40
24:BB:90:A:N7	24:BB:91:C:H1'	2.36	0.40
25:BD:180:GLY:HA3	25:BD:275:LYS:HG2	2.03	0.40
25:BD:67:PHE:HB3	25:BD:153:ALA:H	1.86	0.40
29:BH:35:VAL:HA	29:BH:36:PRO:HD2	1.74	0.40
33:BP:127:ALA:C	33:BP:148:LEU:HD23	2.40	0.40
43:BZ:44:PHE:CE2	43:BZ:86:VAL:HG11	2.56	0.40
1:CA:1089:G:C6	1:CA:1090:U:C4	3.09	0.40
1:CA:1287:A:N6	1:CA:1370:G:H21	2.18	0.40
1:CA:318:G:H2'	1:CA:319:G:H8	1.85	0.40
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.56	0.40
1:CA:377:G:H2'	1:CA:378:G:H8	1.82	0.40
1:CA:536:C:H2'	1:CA:537:G:C8	2.56	0.40
1:CA:620:C:H2'	1:CA:621:A:O4'	2.21	0.40
1:CA:918:A:H2'	1:CA:919:A:O4'	2.21	0.40
1:CA:78:G:H1	1:CA:91:C:H42	1.68	0.40
1:CA:959:A:H2'	1:CA:960:U:H4'	2.02	0.40
1:CA:997:U:O5'	1:CA:997:U:H6	2.04	0.40
2:CB:70:PHE:HE2	2:CB:163:PHE:HD2	1.69	0.40
5:CE:102:ALA:O	5:CE:107:ARG:NH1	2.54	0.40
8:CH:38:ILE:HG13	8:CH:118:VAL:HG12	2.03	0.40
10:CJ:45:ARG:HD3	10:CJ:65:LEU:HD23	2.02	0.40
1:CA:1308:U:H5'	13:CM:110:ARG:CZ	2.51	0.40
16:CP:39:TYR:CG	16:CP:73:LEU:HD13	2.56	0.40
20:CT:89:ARG:HH22	20:CT:104:LEU:H	1.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:1512:U:H2'	23:DA:1513:C:H6	1.87	0.40
23:DA:1971:A:C4	25:DD:241:PRO:HD3	2.56	0.40
23:DA:2100:G:C6	23:DA:2101:G:C5	3.09	0.40
23:DA:2360:A:H8	23:DA:2360:A:O5'	2.05	0.40
23:DA:2492:U:H2'	23:DA:2493:U:H6	1.83	0.40
23:DA:2584:U:H2'	23:DA:2585:U:H2'	2.02	0.40
23:DA:2714:G:O2'	23:DA:2715:C:H5'	2.20	0.40
23:DA:28:A:C5	23:DA:29:U:C5	3.09	0.40
23:DA:31:C:C4	23:DA:32:C:C5	3.10	0.40
23:DA:478:A:N6	23:DA:502:A:N6	2.69	0.40
23:DA:610:G:N2	23:DA:619:G:H1'	2.35	0.40
23:DA:719:C:H2'	23:DA:720:C:H6	1.87	0.40
23:DA:895:U:H6	23:DA:895:U:H5''	1.86	0.40
25:DD:275:LYS:HG3	25:DD:275:LYS:O	2.21	0.40
27:DF:202:PHE:O	27:DF:205:ARG:HB3	2.21	0.40
27:DF:93:LYS:HD3	27:DF:93:LYS:HA	1.85	0.40
30:DI:45:LYS:O	30:DI:48:GLU:N	2.54	0.40
31:DN:12:ARG:HD3	31:DN:50:ASP:OD2	2.21	0.40
33:DP:86:LYS:HB3	33:DP:117:GLU:O	2.22	0.40
1:AA:1002:G:C2	1:AA:1003:G:H1'	2.57	0.40
1:AA:1030(C):G:H8	1:AA:1030(C):G:H3'	1.86	0.40
1:AA:1074:G:N3	1:AA:1102:A:C2	2.90	0.40
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.40
1:AA:267:C:OP2	17:AQ:67:LYS:HD2	2.21	0.40
1:AA:566:G:H4'	1:AA:567:G:OP1	2.21	0.40
1:AA:855:G:C6	1:AA:856:C:C4	3.09	0.40
1:AA:875:C:C4	1:AA:876:G:N7	2.90	0.40
1:AA:91:C:O5'	1:AA:91:C:H6	2.04	0.40
4:AD:22:LYS:HB3	4:AD:26:CYS:HB2	2.02	0.40
7:AG:108:ALA:O	7:AG:111:ARG:HB2	2.22	0.40
7:AG:113:GLU:O	7:AG:119:ARG:HB2	2.20	0.40
8:AH:36:LEU:O	8:AH:45:ILE:HD11	2.21	0.40
9:AI:5:TYR:HE1	9:AI:16:ARG:HA	1.87	0.40
9:AI:78:LYS:O	9:AI:82:ALA:HB3	2.22	0.40
11:AK:110:ASP:CB	18:AR:85:LEU:HD12	2.52	0.40
1:AA:127:G:O2'	17:AQ:2:PRO:O	2.39	0.40
20:AT:53:LEU:O	20:AT:56:MET:HG3	2.21	0.40
46:B2:50:ILE:C	46:B2:52:ASP:N	2.73	0.40
23:BA:1022:G:C5	23:BA:1140:C:C4	3.09	0.40
23:BA:1213:A:N3	23:BA:1238:G:O2'	2.45	0.40
23:BA:1647:G:H3'	23:BA:1647:G:P	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BA:1996:C:H4'	23:BA:1997:G:OP1	2.21	0.40
23:BA:530:G:O6	23:BA:2023:G:OP1	2.39	0.40
23:BA:2301:C:H2'	23:BA:2302:G:H8	1.86	0.40
23:BA:2317:C:C2'	23:BA:2318:G:H5'	2.39	0.40
23:BA:2296:U:N3	23:BA:2333:A:C2	2.89	0.40
23:BA:704:G:H1'	23:BA:726:G:N2	2.37	0.40
23:BA:884:C:H2'	23:BA:885:C:O4'	2.22	0.40
24:BB:8:U:H5'	24:BB:9:G:OP2	2.21	0.40
25:BD:183:ARG:HG3	25:BD:270:ILE:HG12	2.03	0.40
28:BG:20:ILE:O	28:BG:24:GLY:N	2.46	0.40
27:BF:34:TRP:NE1	33:BP:8:PRO:HD3	2.36	0.40
35:BR:53:HIS:O	35:BR:56:LYS:HB2	2.20	0.40
36:BS:32:LEU:HA	36:BS:32:LEU:HD23	1.85	0.40
37:BT:99:LEU:HD22	37:BT:101:PHE:HE1	1.85	0.40
41:BX:84:ALA:HB3	41:BX:87:GLN:CD	2.41	0.40
43:BZ:76:LEU:HD12	43:BZ:76:LEU:HA	1.64	0.40
1:CA:1250:A:N1	1:CA:1251:A:N1	2.70	0.40
1:CA:1265:G:N2	1:CA:1271:G:C4	2.90	0.40
1:CA:1270:C:H6	1:CA:1270:C:O5'	2.05	0.40
1:CA:1300:G:O2'	1:CA:1301:U:O5'	2.33	0.40
1:CA:1296:C:H4'	1:CA:1302:U:C5	2.56	0.40
1:CA:1300:G:O6	1:CA:1334:G:H3'	2.21	0.40
1:CA:1429:C:H2'	1:CA:1430:C:H6	1.86	0.40
1:CA:1429:C:O2'	23:DA:1704:G:H5'	2.21	0.40
1:CA:1392:G:N2	1:CA:1502:A:H8	2.19	0.40
1:CA:665:A:H2'	1:CA:725:G:N2	2.36	0.40
1:CA:729:A:H2'	1:CA:730:G:H8	1.87	0.40
3:CC:52:LEU:O	3:CC:52:LEU:HD23	2.21	0.40
4:CD:18:LYS:HG3	4:CD:31:CYS:SG	2.60	0.40
11:CK:34:ASP:OD2	11:CK:38:ASN:N	2.54	0.40
13:CM:86:CYS:SG	13:CM:88:ARG:HG2	2.62	0.40
1:CA:127:G:O2'	17:CQ:2:PRO:O	2.39	0.40
18:CR:53:ARG:HE	18:CR:59:SER:C	2.25	0.40
49:D5:36:CYS:O	49:D5:37:LYS:HD3	2.22	0.40
23:DA:123:G:H2'	23:DA:124:G:O4'	2.21	0.40
23:DA:1558:A:N3	23:DA:1558:A:O4'	2.52	0.40
23:DA:1864:U:H5''	23:DA:2410:G:O2'	2.22	0.40
23:DA:2286:A:H4'	23:DA:2287:A:O4'	2.22	0.40
23:DA:275:G:H2'	23:DA:276:A:H5'	2.04	0.40
23:DA:303:U:H2'	23:DA:304:G:H8	1.86	0.40
23:DA:414:C:O2'	23:DA:415:A:H5'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DA:996:A:N6	23:DA:1160:G:C6	2.90	0.40
24:DB:60:C:C2	24:DB:61:G:C8	3.09	0.40
26:DE:203:LYS:CB	26:DE:204:ALA:HA	2.51	0.40
27:DF:170:LEU:HA	27:DF:171:PRO:HD3	1.90	0.40
28:DG:97:ASP:O	28:DG:101:ILE:HG13	2.22	0.40
31:DN:67:LEU:O	31:DN:88:GLU:HG3	2.21	0.40
33:DP:106:LEU:HD23	33:DP:106:LEU:HA	1.88	0.40
35:DR:67:LEU:HD13	35:DR:67:LEU:HA	1.72	0.40
40:DW:59:VAL:HG12	40:DW:60:ASN:HD22	1.86	0.40
43:DZ:92:SER:HB2	43:DZ:94:GLU:HG2	2.03	0.40
1:AA:1005:A:C8	1:AA:1005:A:OP2	2.75	0.40
1:AA:1030(D):A:H62	1:AA:1031:G:H21	1.70	0.40
1:AA:1097:C:H1'	1:AA:1170:A:H1'	2.03	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.55	0.40
1:AA:628:G:O2'	1:AA:629:G:H5'	2.21	0.40
1:AA:663:A:C2'	1:AA:664:G:H5'	2.51	0.40
1:AA:683:G:C2	1:AA:708:C:C2	3.09	0.40
1:AA:827:U:H5''	1:AA:828:A:OP2	2.20	0.40
1:AA:870:U:H3'	56:AA:1963:HOH:O	2.21	0.40
3:AC:30:ARG:HH21	14:AN:35:ARG:HA	1.86	0.40
5:AE:127:ASN:HA	5:AE:128:PRO:HD3	1.85	0.40
5:AE:90:VAL:HG23	5:AE:121:LYS:O	2.21	0.40
8:AH:30:ARG:O	8:AH:34:GLU:HB2	2.21	0.40
9:AI:103:THR:HG23	9:AI:103:THR:O	2.21	0.40
1:AA:1151:A:C5'	10:AJ:41:PRO:HA	2.51	0.40
15:AO:21:ASP:OD2	15:AO:24:SER:HB3	2.21	0.40
19:AS:36:ARG:HH22	19:AS:76:PRO:HA	1.87	0.40
23:BA:1448:G:H5''	23:BA:1542:A:OP1	2.21	0.40
23:BA:528:A:N1	23:BA:2043:C:O5'	2.55	0.40
23:BA:2409:G:C6	23:BA:2410:G:C5	3.09	0.40
23:BA:2466:C:C2	23:BA:2485:G:C2	3.09	0.40
23:BA:2628:C:H5''	23:BA:2629:A:O5'	2.21	0.40
23:BA:2818:G:O2'	23:BA:2819:G:H5'	2.21	0.40
23:BA:563:G:H5'	23:BA:572:A:H4'	2.04	0.40
23:BA:921:G:H2'	23:BA:922:U:C6	2.57	0.40
28:BG:97:ASP:O	28:BG:101:ILE:HG13	2.22	0.40
35:BR:2:ARG:CZ	35:BR:2:ARG:HB3	2.46	0.40
43:BZ:70:LEU:HD23	43:BZ:70:LEU:HA	1.93	0.40
1:CA:1072:G:C2	1:CA:1104:G:C2	3.10	0.40
1:CA:1175:G:C2	1:CA:1176:A:C4	3.10	0.40
1:CA:1256:A:H5''	1:CA:1257:U:OP1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.51	0.40
1:CA:1446:U:H4'	1:CA:1447:A:C6	2.56	0.40
1:CA:68:G:N2	1:CA:152:A:O2'	2.55	0.40
1:CA:784:C:H4'	23:DA:1837:C:OP1	2.21	0.40
1:CA:794:A:H2'	1:CA:795:C:O4'	2.21	0.40
7:CG:38:LEU:O	7:CG:42:ILE:HG12	2.22	0.40
9:CI:52:ALA:HB2	9:CI:101:PHE:CE1	2.56	0.40
1:CA:35:G:N3	12:CL:118:SER:HB2	2.37	0.40
17:CQ:13:ASP:HB3	17:CQ:19:VAL:HG12	2.03	0.40
44:D0:14:ARG:HG3	44:D0:14:ARG:NH1	2.36	0.40
48:D4:9:LEU:HD22	48:D4:26:SER:HA	2.02	0.40
23:DA:1579:A:H2'	23:DA:1580:A:C8	2.56	0.40
23:DA:1602:U:O4	56:DA:3939:HOH:O	2.21	0.40
23:DA:1606:G:H5''	23:DA:1607:C:OP1	2.21	0.40
23:DA:1722:A:C2	23:DA:1740:G:C8	3.09	0.40
23:DA:1756:G:H4'	23:DA:1758:G:O4'	2.22	0.40
23:DA:1918:A:O2'	23:DA:1920:C:N4	2.54	0.40
23:DA:2099:U:H3	23:DA:2190:G:H1	1.68	0.40
23:DA:2287:A:N6	23:DA:2344:U:N3	2.56	0.40
23:DA:2427:C:H5''	23:DA:2428:G:OP1	2.22	0.40
23:DA:315:G:H2'	23:DA:316:C:H6	1.87	0.40
23:DA:994:C:OP1	38:DU:53:ARG:NH2	2.53	0.40
26:DE:179:GLU:HB3	26:DE:181:LEU:CD2	2.51	0.40
26:DE:9:VAL:HB	37:DT:3:ARG:HG2	2.02	0.40
28:DG:16:ARG:NE	28:DG:31:VAL:HG21	2.33	0.40
31:DN:47:ALA:HB2	31:DN:112:LEU:CD1	2.45	0.40
34:DQ:35:VAL:HG23	34:DQ:101:ARG:O	2.20	0.40
34:DQ:42:ILE:CG2	34:DQ:47:ILE:HG13	2.51	0.40
34:DQ:7:MET:HE3	34:DQ:7:MET:HB2	1.66	0.40
39:DV:24:LYS:HA	39:DV:92:THR:OG1	2.22	0.40
1:AA:1041:A:C2'	1:AA:1042:G:H5'	2.52	0.40
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.51	0.40
1:AA:560:U:H4'	1:AA:561:U:C5'	2.51	0.40
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.03	0.40
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	2.03	0.40
1:AA:1193:G:H4'	5:AE:25:ARG:NH2	2.37	0.40
9:AI:67:GLY:O	9:AI:73:GLN:HG3	2.22	0.40
11:AK:82:VAL:O	11:AK:109:VAL:HG23	2.21	0.40
13:AM:92:HIS:HA	13:AM:110:ARG:HH22	1.86	0.40
13:AM:92:HIS:CE1	13:AM:98:VAL:HG21	2.56	0.40
1:AA:1360:A:C8	14:AN:18:VAL:HG12	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:56:THR:CB	18:AR:58:LEU:HD13	2.52	0.40
56:BA:4338:HOH:O	45:B1:18:ILE:N	2.48	0.40
23:BA:1019:U:H3	23:BA:1142(A):A:N6	2.06	0.40
23:BA:1154:G:O5'	23:BA:1154:G:H8	2.04	0.40
23:BA:1260:G:C6	23:BA:1261:C:C4	3.10	0.40
23:BA:1406:U:H2'	23:BA:1407:C:H6	1.83	0.40
23:BA:2291:U:H2'	23:BA:2292:C:C6	2.57	0.40
23:BA:271(S):G:C6	23:BA:271(T):C:C4	3.09	0.40
23:BA:2762:G:H2'	23:BA:2763:G:H5'	2.04	0.40
23:BA:2791:C:H2'	23:BA:2792:G:C8	2.57	0.40
23:BA:314:A:H2'	23:BA:315:G:H5'	2.03	0.40
23:BA:515:A:H1'	23:BA:581:C:H1'	2.04	0.40
23:BA:646:A:H5'	56:BA:5354:HOH:O	2.21	0.40
24:BB:117:G:O5'	24:BB:117:G:H8	2.04	0.40
26:BE:203:LYS:CB	26:BE:204:ALA:HA	2.52	0.40
26:BE:38:THR:O	26:BE:42:ASP:N	2.51	0.40
26:BE:97:LYS:HA	26:BE:98:PRO:HD3	1.96	0.40
28:BG:125:PHE:CE1	28:BG:170:ARG:HG2	2.57	0.40
30:BI:37:VAL:HG12	30:BI:38:LEU:N	2.36	0.40
42:BY:14:LEU:HD12	42:BY:23:ARG:O	2.21	0.40
24:BB:77:U:H4'	43:BZ:84:GLU:OE1	2.22	0.40
1:CA:105:G:H2'	1:CA:106:C:H6	1.87	0.40
1:CA:1262:C:H2'	1:CA:1263:C:C6	2.56	0.40
1:CA:126:G:OP1	1:CA:605:U:O2'	2.39	0.40
1:CA:1313:U:H3	1:CA:1324:A:H61	1.69	0.40
1:CA:1336:C:H4'	1:CA:1337:G:O4'	2.22	0.40
1:CA:1346:A:H4'	1:CA:1347:G:OP1	2.21	0.40
1:CA:319:G:C2	1:CA:320:C:C2	3.10	0.40
1:CA:35:G:O2'	12:CL:121:GLY:HA2	2.21	0.40
1:CA:947:G:O2'	1:CA:1306:A:H4'	2.21	0.40
2:CB:100:GLY:HA3	2:CB:104:ASN:HB3	2.03	0.40
2:CB:14:GLY:HA3	2:CB:16:HIS:CE1	2.56	0.40
2:CB:205:ASP:C	2:CB:211:ILE:HD11	2.42	0.40
2:CB:80:ILE:HG21	2:CB:208:ILE:CG2	2.51	0.40
8:CH:112:LEU:HB3	8:CH:133:LEU:HA	2.03	0.40
9:CI:66:ARG:C	9:CI:73:GLN:HE21	2.25	0.40
10:CJ:40:LEU:HG	10:CJ:69:ASN:O	2.21	0.40
13:CM:105:THR:OG1	13:CM:106:ASN:N	2.52	0.40
16:CP:40:ASP:HA	16:CP:41:PRO:HD2	1.93	0.40
22:CX:68:GLN:O	22:CX:72:ALA:HB3	2.22	0.40
51:D7:47:ARG:HH11	51:D7:47:ARG:CG	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D7:48:LYS:HE2	51:D7:48:LYS:HB2	1.88	0.40
23:DA:1204:A:N6	23:DA:1240:U:H2'	2.37	0.40
23:DA:1676:A:C8	56:DA:4368:HOH:O	2.72	0.40
23:DA:194:G:H2'	23:DA:195:A:O4'	2.21	0.40
23:DA:2028:U:H2'	23:DA:2029:G:O4'	2.22	0.40
23:DA:2070:G:H2'	23:DA:2071:A:C8	2.57	0.40
23:DA:2139:C:H2'	23:DA:2140:C:O4'	2.22	0.40
23:DA:2406:U:H6	23:DA:2406:U:OP2	2.04	0.40
23:DA:2576:G:O2'	23:DA:2579:C:OP2	2.29	0.40
23:DA:2729:G:H2'	23:DA:2730:C:C6	2.56	0.40
23:DA:26:G:C6	23:DA:27:G:N1	2.89	0.40
23:DA:65:C:O2'	23:DA:456:C:O2	2.39	0.40
23:DA:705:A:C2	23:DA:727:A:H1'	2.57	0.40
23:DA:94:C:H2'	23:DA:94:C:O2	2.20	0.40
24:DB:23:G:H1	24:DB:60:C:H42	1.69	0.40
25:DD:154:LYS:HB2	25:DD:155:LEU:HD12	2.03	0.40
43:DZ:144:LEU:HD21	43:DZ:150:LEU:HG	2.03	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)
23:BA:1594:G:OP1	56:BB:323:HOH:O[1_455]	2.18	0.02
30:BI:91:SER:OG	1:CA:368:U:OP1[3_654]	2.19	0.01

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
2	AB	228/256 (89%)	199 (87%)	28 (12%)	1 (0%)	36	72
2	CB	227/256 (89%)	197 (87%)	29 (13%)	1 (0%)	36	72

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	204/239 (85%)	175 (86%)	28 (14%)	1 (0%)	31	68
3	CC	204/239 (85%)	177 (87%)	27 (13%)	0	100	100
4	AD	206/209 (99%)	190 (92%)	16 (8%)	0	100	100
4	CD	206/209 (99%)	190 (92%)	16 (8%)	0	100	100
5	AE	146/162 (90%)	134 (92%)	12 (8%)	0	100	100
5	CE	146/162 (90%)	135 (92%)	10 (7%)	1 (1%)	24	61
6	AF	98/101 (97%)	97 (99%)	1 (1%)	0	100	100
6	CF	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
7	AG	153/156 (98%)	138 (90%)	13 (8%)	2 (1%)	13	46
7	CG	153/156 (98%)	132 (86%)	20 (13%)	1 (1%)	24	61
8	AH	136/138 (99%)	131 (96%)	5 (4%)	0	100	100
8	CH	136/138 (99%)	131 (96%)	5 (4%)	0	100	100
9	AI	123/128 (96%)	112 (91%)	10 (8%)	1 (1%)	21	59
9	CI	123/128 (96%)	111 (90%)	11 (9%)	1 (1%)	21	59
10	AJ	94/105 (90%)	78 (83%)	13 (14%)	3 (3%)	4	25
10	CJ	94/105 (90%)	76 (81%)	16 (17%)	2 (2%)	8	34
11	AK	112/129 (87%)	106 (95%)	6 (5%)	0	100	100
11	CK	112/129 (87%)	106 (95%)	6 (5%)	0	100	100
12	AL	120/132 (91%)	110 (92%)	9 (8%)	1 (1%)	21	59
12	CL	120/132 (91%)	109 (91%)	10 (8%)	1 (1%)	21	59
13	AM	112/126 (89%)	89 (80%)	21 (19%)	2 (2%)	9	38
13	CM	112/126 (89%)	87 (78%)	21 (19%)	4 (4%)	4	22
14	AN	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	4	23
14	CN	58/61 (95%)	52 (90%)	6 (10%)	0	100	100
15	AO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	7	32
15	CO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	7	32
16	AP	80/88 (91%)	75 (94%)	4 (5%)	1 (1%)	13	46
16	CP	80/88 (91%)	74 (92%)	5 (6%)	1 (1%)	13	46
17	AQ	97/105 (92%)	90 (93%)	7 (7%)	0	100	100
17	CQ	97/105 (92%)	89 (92%)	8 (8%)	0	100	100
18	AR	66/88 (75%)	63 (96%)	3 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	CR	66/88 (75%)	63 (96%)	3 (4%)	0	100	100
19	AS	79/93 (85%)	67 (85%)	11 (14%)	1 (1%)	13	46
19	CS	79/93 (85%)	65 (82%)	13 (16%)	1 (1%)	13	46
20	AT	85/106 (80%)	78 (92%)	7 (8%)	0	100	100
20	CT	95/106 (90%)	84 (88%)	8 (8%)	3 (3%)	4	25
21	AU	21/27 (78%)	19 (90%)	2 (10%)	0	100	100
21	CU	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
22	AX	93/101 (92%)	79 (85%)	13 (14%)	1 (1%)	16	50
22	CX	93/101 (92%)	84 (90%)	9 (10%)	0	100	100
25	BD	273/276 (99%)	260 (95%)	12 (4%)	1 (0%)	36	72
25	DD	273/276 (99%)	259 (95%)	13 (5%)	1 (0%)	36	72
26	BE	202/206 (98%)	190 (94%)	10 (5%)	2 (1%)	17	53
26	DE	202/206 (98%)	188 (93%)	12 (6%)	2 (1%)	17	53
27	BF	201/210 (96%)	195 (97%)	6 (3%)	0	100	100
27	DF	201/210 (96%)	193 (96%)	7 (4%)	1 (0%)	31	68
28	BG	179/182 (98%)	150 (84%)	28 (16%)	1 (1%)	27	64
28	DG	179/182 (98%)	150 (84%)	29 (16%)	0	100	100
29	BH	172/180 (96%)	163 (95%)	8 (5%)	1 (1%)	27	64
29	DH	172/180 (96%)	162 (94%)	9 (5%)	1 (1%)	27	64
30	BI	144/148 (97%)	121 (84%)	21 (15%)	2 (1%)	12	44
30	DI	144/148 (97%)	123 (85%)	19 (13%)	2 (1%)	12	44
31	BN	138/140 (99%)	129 (94%)	6 (4%)	3 (2%)	7	33
31	DN	138/140 (99%)	128 (93%)	7 (5%)	3 (2%)	7	33
32	BO	120/122 (98%)	117 (98%)	3 (2%)	0	100	100
32	DO	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
33	BP	147/150 (98%)	137 (93%)	10 (7%)	0	100	100
33	DP	147/150 (98%)	136 (92%)	11 (8%)	0	100	100
34	BQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	24	61
34	DQ	139/141 (99%)	130 (94%)	8 (6%)	1 (1%)	24	61
35	BR	116/118 (98%)	111 (96%)	5 (4%)	0	100	100
35	DR	116/118 (98%)	110 (95%)	6 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	BS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
36	DS	108/112 (96%)	101 (94%)	7 (6%)	0	100	100
37	BT	129/146 (88%)	127 (98%)	2 (2%)	0	100	100
37	DT	129/146 (88%)	126 (98%)	3 (2%)	0	100	100
38	BU	114/118 (97%)	114 (100%)	0	0	100	100
38	DU	114/118 (97%)	114 (100%)	0	0	100	100
39	BV	99/101 (98%)	93 (94%)	6 (6%)	0	100	100
39	DV	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
40	BW	110/113 (97%)	108 (98%)	1 (1%)	1 (1%)	19	56
40	DW	110/113 (97%)	107 (97%)	3 (3%)	0	100	100
41	BX	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
41	DX	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
42	BY	105/110 (96%)	94 (90%)	10 (10%)	1 (1%)	17	53
42	DY	105/110 (96%)	94 (90%)	10 (10%)	1 (1%)	17	53
43	BZ	199/206 (97%)	183 (92%)	14 (7%)	2 (1%)	17	53
43	DZ	196/206 (95%)	180 (92%)	14 (7%)	2 (1%)	17	53
44	B0	74/85 (87%)	72 (97%)	2 (3%)	0	100	100
44	D0	74/85 (87%)	73 (99%)	1 (1%)	0	100	100
45	B1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	16	50
45	D1	95/98 (97%)	93 (98%)	1 (1%)	1 (1%)	16	50
46	B2	68/72 (94%)	64 (94%)	4 (6%)	0	100	100
46	D2	68/72 (94%)	63 (93%)	5 (7%)	0	100	100
47	B3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
47	D3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
48	B4	44/71 (62%)	36 (82%)	8 (18%)	0	100	100
48	D4	44/71 (62%)	36 (82%)	8 (18%)	0	100	100
49	B5	57/60 (95%)	52 (91%)	5 (9%)	0	100	100
49	D5	57/60 (95%)	52 (91%)	5 (9%)	0	100	100
50	B6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
50	D6	51/54 (94%)	48 (94%)	3 (6%)	0	100	100
51	B7	46/49 (94%)	43 (94%)	2 (4%)	1 (2%)	7	33

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	D7	46/49 (94%)	43 (94%)	2 (4%)	1 (2%)	7	33
52	B8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
52	D8	62/65 (95%)	59 (95%)	3 (5%)	0	100	100
53	B9	34/37 (92%)	34 (100%)	0	0	100	100
53	D9	34/37 (92%)	33 (97%)	1 (3%)	0	100	100
All	All	11552/12330 (94%)	10628 (92%)	855 (7%)	69 (1%)	27	64

All (69) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
20	CT	100	ILE
12	AL	28	LYS
14	AN	15	LYS
16	AP	79	VAL
12	CL	28	LYS
16	CP	79	VAL
15	AO	75	PRO
19	AS	13	ASP
31	BN	5	VAL
34	BQ	135	ASP
9	CI	102	LEU
10	CJ	80	LYS
13	CM	88	ARG
15	CO	75	PRO
31	DN	18	ALA
34	DQ	135	ASP
7	AG	56	GLN
9	AI	119	ALA
10	AJ	34	VAL
15	AO	76	GLU
30	BI	86	THR
31	BN	4	TYR
43	BZ	192	ALA
45	B1	3	LYS
51	B7	46	VAL
2	CB	150	SER
15	CO	76	GLU
31	DN	4	TYR
31	DN	5	VAL
43	DZ	192	ALA

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Mol	Chain	Res	Type
45	D1	3	LYS
51	D7	46	VAL
2	AB	150	SER
14	AN	17	LYS
29	BH	170	ARG
31	BN	18	ALA
7	CG	100	ALA
10	CJ	41	PRO
13	CM	87	TYR
29	DH	170	ARG
30	DI	10	GLU
3	AC	62	ASP
7	AG	100	ALA
30	BI	107	VAL
5	CE	21	ALA
20	CT	71	THR
27	DF	130	ALA
10	AJ	75	ILE
19	CS	45	VAL
30	DI	107	VAL
22	AX	56	VAL
26	BE	52	LEU
26	BE	72	VAL
26	DE	52	LEU
26	DE	72	VAL
13	AM	84	ILE
25	BD	3	VAL
40	BW	80	PRO
42	BY	3	VAL
13	CM	10	PRO
25	DD	3	VAL
42	DY	3	VAL
28	BG	87	PRO
13	CM	7	VAL
43	DZ	161	VAL
10	AJ	90	LEU
13	AM	7	VAL
43	BZ	161	VAL
20	CT	98	PRO

5.3.2 Protein sidechains ⓘ

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	
2	AB	178/220 (81%)	133 (75%)	45 (25%)	0	2
2	CB	177/220 (80%)	133 (75%)	44 (25%)	0	2
3	AC	114/188 (61%)	79 (69%)	35 (31%)	0	1
3	CC	114/188 (61%)	92 (81%)	22 (19%)	1	7
4	AD	141/181 (78%)	118 (84%)	23 (16%)	2	11
4	CD	141/181 (78%)	119 (84%)	22 (16%)	3	12
5	AE	108/123 (88%)	87 (81%)	21 (19%)	1	6
5	CE	108/123 (88%)	87 (81%)	21 (19%)	1	6
6	AF	76/90 (84%)	61 (80%)	15 (20%)	1	6
6	CF	76/90 (84%)	58 (76%)	18 (24%)	1	3
7	AG	103/127 (81%)	73 (71%)	30 (29%)	0	1
7	CG	103/127 (81%)	68 (66%)	35 (34%)	0	0
8	AH	103/119 (87%)	82 (80%)	21 (20%)	1	6
8	CH	103/119 (87%)	83 (81%)	20 (19%)	1	6
9	AI	62/99 (63%)	47 (76%)	15 (24%)	1	2
9	CI	62/99 (63%)	47 (76%)	15 (24%)	1	2
10	AJ	53/92 (58%)	38 (72%)	15 (28%)	0	1
10	CJ	53/92 (58%)	39 (74%)	14 (26%)	0	1
11	AK	81/99 (82%)	71 (88%)	10 (12%)	5	21
11	CK	81/99 (82%)	70 (86%)	11 (14%)	4	17
12	AL	91/109 (84%)	80 (88%)	11 (12%)	5	21
12	CL	91/109 (84%)	81 (89%)	10 (11%)	7	27
13	AM	64/101 (63%)	48 (75%)	16 (25%)	0	2
13	CM	64/101 (63%)	49 (77%)	15 (23%)	1	3
14	AN	46/50 (92%)	36 (78%)	10 (22%)	1	5
14	CN	46/50 (92%)	32 (70%)	14 (30%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	77/80 (96%)	68 (88%)	9 (12%)	6	24
15	CO	77/80 (96%)	68 (88%)	9 (12%)	6	24
16	AP	63/74 (85%)	46 (73%)	17 (27%)	0	1
16	CP	63/74 (85%)	44 (70%)	19 (30%)	0	1
17	AQ	94/97 (97%)	80 (85%)	14 (15%)	3	14
17	CQ	94/97 (97%)	81 (86%)	13 (14%)	4	17
18	AR	49/77 (64%)	44 (90%)	5 (10%)	8	30
18	CR	49/77 (64%)	44 (90%)	5 (10%)	8	30
19	AS	43/80 (54%)	26 (60%)	17 (40%)	0	0
19	CS	43/80 (54%)	32 (74%)	11 (26%)	0	1
20	AT	64/82 (78%)	55 (86%)	9 (14%)	4	16
20	CT	65/82 (79%)	55 (85%)	10 (15%)	3	13
21	AU	18/22 (82%)	13 (72%)	5 (28%)	0	1
21	CU	18/22 (82%)	11 (61%)	7 (39%)	0	0
22	AX	45/87 (52%)	34 (76%)	11 (24%)	1	2
22	CX	38/87 (44%)	29 (76%)	9 (24%)	1	3
25	BD	215/218 (99%)	182 (85%)	33 (15%)	3	13
25	DD	215/218 (99%)	183 (85%)	32 (15%)	3	14
26	BE	163/166 (98%)	135 (83%)	28 (17%)	2	10
26	DE	163/166 (98%)	137 (84%)	26 (16%)	2	11
27	BF	159/166 (96%)	135 (85%)	24 (15%)	3	13
27	DF	159/166 (96%)	134 (84%)	25 (16%)	3	12
28	BG	128/156 (82%)	109 (85%)	19 (15%)	3	14
28	DG	128/156 (82%)	109 (85%)	19 (15%)	3	14
29	BH	141/148 (95%)	123 (87%)	18 (13%)	5	20
29	DH	141/148 (95%)	123 (87%)	18 (13%)	5	20
30	BI	98/124 (79%)	81 (83%)	17 (17%)	2	10
30	DI	74/124 (60%)	60 (81%)	14 (19%)	1	7
31	BN	117/119 (98%)	98 (84%)	19 (16%)	2	11
31	DN	117/119 (98%)	98 (84%)	19 (16%)	2	11
32	BO	98/100 (98%)	82 (84%)	16 (16%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DO	98/100 (98%)	83 (85%)	15 (15%)	3	13
33	BP	114/116 (98%)	99 (87%)	15 (13%)	4	19
33	DP	114/116 (98%)	99 (87%)	15 (13%)	4	19
34	BQ	111/111 (100%)	96 (86%)	15 (14%)	4	18
34	DQ	111/111 (100%)	96 (86%)	15 (14%)	4	18
35	BR	101/101 (100%)	79 (78%)	22 (22%)	1	5
35	DR	101/101 (100%)	77 (76%)	24 (24%)	1	2
36	BS	84/88 (96%)	67 (80%)	17 (20%)	1	6
36	DS	84/88 (96%)	68 (81%)	16 (19%)	1	7
37	BT	110/127 (87%)	98 (89%)	12 (11%)	7	28
37	DT	110/127 (87%)	95 (86%)	15 (14%)	4	17
38	BU	93/94 (99%)	82 (88%)	11 (12%)	6	23
38	DU	93/94 (99%)	83 (89%)	10 (11%)	7	28
39	BV	80/82 (98%)	63 (79%)	17 (21%)	1	5
39	DV	80/82 (98%)	63 (79%)	17 (21%)	1	5
40	BW	89/92 (97%)	81 (91%)	8 (9%)	10	37
40	DW	89/92 (97%)	78 (88%)	11 (12%)	5	21
41	BX	75/78 (96%)	71 (95%)	4 (5%)	25	59
41	DX	75/78 (96%)	70 (93%)	5 (7%)	18	50
42	BY	80/91 (88%)	64 (80%)	16 (20%)	1	6
42	DY	80/91 (88%)	63 (79%)	17 (21%)	1	5
43	BZ	159/179 (89%)	137 (86%)	22 (14%)	4	17
43	DZ	159/179 (89%)	139 (87%)	20 (13%)	5	20
44	B0	59/67 (88%)	51 (86%)	8 (14%)	4	17
44	D0	59/67 (88%)	50 (85%)	9 (15%)	3	13
45	B1	78/83 (94%)	63 (81%)	15 (19%)	1	7
45	D1	78/83 (94%)	66 (85%)	12 (15%)	3	13
46	B2	65/67 (97%)	54 (83%)	11 (17%)	2	10
46	D2	65/67 (97%)	55 (85%)	10 (15%)	3	13
47	B3	49/52 (94%)	44 (90%)	5 (10%)	8	30
47	D3	49/52 (94%)	44 (90%)	5 (10%)	8	30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B4	39/63 (62%)	33 (85%)	6 (15%)	3	13
48	D4	39/63 (62%)	33 (85%)	6 (15%)	3	13
49	B5	50/52 (96%)	42 (84%)	8 (16%)	2	11
49	D5	50/52 (96%)	41 (82%)	9 (18%)	2	8
50	B6	50/52 (96%)	39 (78%)	11 (22%)	1	4
50	D6	50/52 (96%)	40 (80%)	10 (20%)	1	6
51	B7	41/42 (98%)	34 (83%)	7 (17%)	2	10
51	D7	41/42 (98%)	34 (83%)	7 (17%)	2	10
52	B8	52/55 (94%)	42 (81%)	10 (19%)	1	7
52	D8	52/55 (94%)	42 (81%)	10 (19%)	1	7
53	B9	32/34 (94%)	28 (88%)	4 (12%)	5	20
53	D9	32/34 (94%)	28 (88%)	4 (12%)	5	20
All	All	8775/10240 (86%)	7244 (83%)	1531 (17%)	2	9

All (1531) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	21	ARG
2	AB	24	TRP
2	AB	47	THR
2	AB	51	LEU
2	AB	67	THR
2	AB	69	LEU
2	AB	74	LYS
2	AB	80	ILE
2	AB	82	ARG
2	AB	86	GLU
2	AB	87	ARG
2	AB	93	VAL
2	AB	94	ASN
2	AB	110	GLN
2	AB	113	HIS
2	AB	114	ARG
2	AB	117	GLU
2	AB	121	LEU

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Mol	Chain	Res	Type
2	AB	124	SER
2	AB	133	LYS
2	AB	137	ARG
2	AB	139	LYS
2	AB	140	HIS
2	AB	150	SER
2	AB	153	ARG
2	AB	155	LEU
2	AB	157	ARG
2	AB	160	ASP
2	AB	163	PHE
2	AB	170	GLU
2	AB	185	ILE
2	AB	187	LEU
2	AB	191	ASP
2	AB	197	VAL
2	AB	200	ILE
2	AB	205	ASP
2	AB	208	ILE
2	AB	209	ARG
2	AB	210	SER
2	AB	212	GLN
2	AB	221	LEU
2	AB	230	VAL
3	AC	3	ASN
3	AC	6	HIS
3	AC	8	ILE
3	AC	15	THR
3	AC	17	ASP
3	AC	20	SER
3	AC	22	TRP
3	AC	29	TYR
3	AC	30	ARG
3	AC	36	ASP
3	AC	37	GLN
3	AC	38	ARG
3	AC	40	ARG
3	AC	44	GLU
3	AC	46	GLU
3	AC	47	LEU
3	AC	49	SER
3	AC	54	ARG

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Mol	Chain	Res	Type
3	AC	70	VAL
3	AC	112	SER
3	AC	118	GLN
3	AC	127	ARG
3	AC	128	PHE
3	AC	131	ARG
3	AC	140	ARG
3	AC	144	SER
3	AC	172	ARG
3	AC	175	LEU
3	AC	179	ARG
3	AC	191	THR
3	AC	192	THR
3	AC	193	TYR
3	AC	196	LEU
3	AC	202	ILE
3	AC	207	VAL
4	AD	11	LEU
4	AD	12	CYS
4	AD	13	ARG
4	AD	20	TYR
4	AD	36	ARG
4	AD	52	SER
4	AD	53	ASP
4	AD	57	ARG
4	AD	70	ILE
4	AD	76	ARG
4	AD	83	SER
4	AD	91	SER
4	AD	101	LEU
4	AD	106	TYR
4	AD	113	SER
4	AD	119	GLN
4	AD	122	ARG
4	AD	127	THR
4	AD	135	LEU
4	AD	138	TYR
4	AD	158	ILE
4	AD	170	VAL
4	AD	193	ASP
5	AE	11	ILE
5	AE	12	LEU

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Mol	Chain	Res	Type
5	AE	14	ARG
5	AE	16	THR
5	AE	41	VAL
5	AE	47	LYS
5	AE	51	VAL
5	AE	60	TYR
5	AE	63	ARG
5	AE	65	ASN
5	AE	76	ILE
5	AE	78	HIS
5	AE	79	GLU
5	AE	84	PHE
5	AE	87	SER
5	AE	89	ILE
5	AE	91	LEU
5	AE	98	THR
5	AE	107	ARG
5	AE	147	ASP
5	AE	152	ARG
6	AF	7	ASN
6	AF	22	GLU
6	AF	36	ARG
6	AF	40	VAL
6	AF	48	LEU
6	AF	57	GLN
6	AF	63	TYR
6	AF	69	GLU
6	AF	72	VAL
6	AF	73	ASN
6	AF	74	ASP
6	AF	75	LEU
6	AF	89	MET
6	AF	94	GLN
6	AF	98	LEU
7	AG	4	ARG
7	AG	6	ARG
7	AG	21	VAL
7	AG	30	ILE
7	AG	38	LEU
7	AG	53	LYS
7	AG	56	GLN
7	AG	59	LEU

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Mol	Chain	Res	Type
7	AG	72	ARG
7	AG	74	GLU
7	AG	75	VAL
7	AG	80	VAL
7	AG	89	MET
7	AG	94	ARG
7	AG	96	GLN
7	AG	99	LEU
7	AG	103	TRP
7	AG	104	LEU
7	AG	109	ASN
7	AG	114	ARG
7	AG	120	ILE
7	AG	123	GLU
7	AG	124	LEU
7	AG	125	MET
7	AG	135	VAL
7	AG	138	LYS
7	AG	139	GLU
7	AG	142	GLU
7	AG	144	MET
7	AG	155	ARG
8	AH	2	LEU
8	AH	21	LYS
8	AH	25	ASP
8	AH	37	ARG
8	AH	49	GLU
8	AH	52	ASP
8	AH	54	ASP
8	AH	60	ARG
8	AH	63	LEU
8	AH	77	GLU
8	AH	78	GLN
8	AH	83	ILE
8	AH	84	ARG
8	AH	85	ARG
8	AH	91	ARG
8	AH	95	VAL
8	AH	109	ILE
8	AH	115	SER
8	AH	119	LEU
8	AH	120	THR

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Mol	Chain	Res	Type
8	AH	127	LEU
9	AI	3	GLN
9	AI	9	ARG
9	AI	16	ARG
9	AI	17	VAL
9	AI	20	ARG
9	AI	27	THR
9	AI	34	ASN
9	AI	36	TYR
9	AI	37	PHE
9	AI	48	GLU
9	AI	62	TYR
9	AI	71	SER
9	AI	74	ILE
9	AI	99	LEU
9	AI	113	LYS
10	AJ	8	LEU
10	AJ	16	LEU
10	AJ	19	SER
10	AJ	21	GLN
10	AJ	42	THR
10	AJ	45	ARG
10	AJ	54	PHE
10	AJ	55	LYS
10	AJ	58	ASP
10	AJ	63	PHE
10	AJ	66	ARG
10	AJ	67	THR
10	AJ	69	ASN
10	AJ	73	ASP
10	AJ	100	THR
11	AK	14	VAL
11	AK	16	SER
11	AK	29	ILE
11	AK	30	VAL
11	AK	32	ILE
11	AK	47	VAL
11	AK	96	ARG
11	AK	103	LEU
11	AK	109	VAL
11	AK	117	ASN
12	AL	11	VAL

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Mol	Chain	Res	Type
12	AL	33	ARG
12	AL	44	THR
12	AL	52	LEU
12	AL	60	LEU
12	AL	66	VAL
12	AL	82	VAL
12	AL	97	ARG
12	AL	114	LYS
12	AL	115	LYS
12	AL	119	LYS
13	AM	3	ARG
13	AM	16	ASP
13	AM	20	THR
13	AM	43	THR
13	AM	45	VAL
13	AM	56	LEU
13	AM	59	TYR
13	AM	63	THR
13	AM	66	LEU
13	AM	70	LEU
13	AM	71	ARG
13	AM	77	ASN
13	AM	88	ARG
13	AM	91	ARG
13	AM	98	VAL
13	AM	114	ARG
14	AN	7	ILE
14	AN	8	GLU
14	AN	16	PHE
14	AN	18	VAL
14	AN	22	THR
14	AN	29	ARG
14	AN	33	VAL
14	AN	35	ARG
14	AN	41	ARG
14	AN	61	TRP
15	AO	3	ILE
15	AO	4	THR
15	AO	13	GLN
15	AO	24	SER
15	AO	26	GLU
15	AO	39	LEU

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Mol	Chain	Res	Type
15	AO	66	LEU
15	AO	72	ARG
15	AO	87	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	11	SER
16	AP	21	VAL
16	AP	25	ARG
16	AP	27	LYS
16	AP	29	ASP
16	AP	36	ILE
16	AP	38	TYR
16	AP	43	LYS
16	AP	45	THR
16	AP	62	VAL
16	AP	65	GLN
16	AP	67	THR
16	AP	69	THR
16	AP	76	GLN
17	AQ	11	VAL
17	AQ	34	LYS
17	AQ	43	LEU
17	AQ	45	HIS
17	AQ	50	LYS
17	AQ	57	VAL
17	AQ	59	ILE
17	AQ	65	ILE
17	AQ	72	ARG
17	AQ	74	LEU
17	AQ	86	GLU
17	AQ	96	GLU
17	AQ	99	SER
17	AQ	100	LYS
18	AR	35	ARG
18	AR	36	ASN
18	AR	76	LEU
18	AR	79	LEU
18	AR	85	LEU
19	AS	9	VAL
19	AS	10	PHE
19	AS	11	VAL

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Mol	Chain	Res	Type
19	AS	12	ASP
19	AS	14	HIS
19	AS	20	LEU
19	AS	31	ILE
19	AS	33	THR
19	AS	37	ARG
19	AS	44	MET
19	AS	51	VAL
19	AS	62	ILE
19	AS	63	THR
19	AS	66	MET
19	AS	70	LYS
19	AS	77	THR
19	AS	78	ARG
20	AT	10	LEU
20	AT	13	LEU
20	AT	36	LEU
20	AT	39	LYS
20	AT	62	LEU
20	AT	71	THR
20	AT	72	LEU
20	AT	73	HIS
20	AT	74	LYS
21	AU	6	ARG
21	AU	8	THR
21	AU	9	ARG
21	AU	10	ARG
21	AU	15	ARG
22	AX	2	GLN
22	AX	23	LYS
22	AX	53	THR
22	AX	54	LEU
22	AX	62	HIS
22	AX	69	ASP
22	AX	77	LEU
22	AX	90	ASP
22	AX	91	LYS
22	AX	92	LEU
22	AX	93	LYS
25	BD	12	SER
25	BD	13	ARG
25	BD	18	VAL

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Mol	Chain	Res	Type
25	BD	24	ILE
25	BD	27	THR
25	BD	54	ARG
25	BD	83	GLU
25	BD	94	LEU
25	BD	103	ARG
25	BD	106	ILE
25	BD	111	LEU
25	BD	117	VAL
25	BD	126	GLN
25	BD	141	VAL
25	BD	150	LYS
25	BD	154	LYS
25	BD	157	ARG
25	BD	173	VAL
25	BD	192	THR
25	BD	200	ASP
25	BD	211	ARG
25	BD	212	SER
25	BD	217	ARG
25	BD	218	ARG
25	BD	221	VAL
25	BD	229	VAL
25	BD	254	THR
25	BD	257	LEU
25	BD	259	THR
25	BD	260	ARG
25	BD	271	ILE
25	BD	273	ARG
25	BD	274	ARG
26	BE	7	VAL
26	BE	12	THR
26	BE	21	VAL
26	BE	24	THR
26	BE	33	VAL
26	BE	34	VAL
26	BE	40	GLU
26	BE	47	VAL
26	BE	49	LEU
26	BE	52	LEU
26	BE	61	ARG
26	BE	69	LYS

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Mol	Chain	Res	Type
26	BE	72	VAL
26	BE	75	VAL
26	BE	77	ILE
26	BE	82	ARG
26	BE	92	THR
26	BE	111	ARG
26	BE	116	VAL
26	BE	119	ARG
26	BE	128	SER
26	BE	144	ARG
26	BE	154	LYS
26	BE	167	VAL
26	BE	170	LEU
26	BE	179	GLU
26	BE	181	LEU
26	BE	195	LEU
27	BF	12	LEU
27	BF	18	ARG
27	BF	20	LEU
27	BF	24	LEU
27	BF	33	LEU
27	BF	38	ARG
27	BF	41	LEU
27	BF	50	SER
27	BF	57	VAL
27	BF	69	HIS
27	BF	77	ASP
27	BF	88	VAL
27	BF	106	ARG
27	BF	110	LEU
27	BF	112	MET
27	BF	132	VAL
27	BF	137	LYS
27	BF	140	LEU
27	BF	158	THR
27	BF	168	ARG
27	BF	170	LEU
27	BF	175	THR
27	BF	188	ARG
27	BF	192	LEU
28	BG	3	LEU
28	BG	5	VAL

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Mol	Chain	Res	Type
28	BG	7	LEU
28	BG	21	ARG
28	BG	28	VAL
28	BG	35	GLU
28	BG	47	LYS
28	BG	98	ARG
28	BG	128	ARG
28	BG	136	ARG
28	BG	139	LEU
28	BG	140	ILE
28	BG	143	GLU
28	BG	146	TYR
28	BG	149	VAL
28	BG	155	MET
28	BG	161	THR
28	BG	170	ARG
28	BG	175	LEU
29	BH	3	ARG
29	BH	6	ARG
29	BH	7	LEU
29	BH	15	VAL
29	BH	24	VAL
29	BH	41	MET
29	BH	44	VAL
29	BH	49	VAL
29	BH	51	ARG
29	BH	58	GLU
29	BH	68	THR
29	BH	69	ARG
29	BH	98	LEU
29	BH	113	VAL
29	BH	122	THR
29	BH	134	SER
29	BH	139	GLN
29	BH	169	VAL
30	BI	1	MET
30	BI	9	LEU
30	BI	47	LEU
30	BI	51	ILE
30	BI	54	GLN
30	BI	61	ARG
30	BI	68	LEU

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Mol	Chain	Res	Type
30	BI	75	LEU
30	BI	77	LEU
30	BI	78	THR
30	BI	81	VAL
30	BI	92	VAL
30	BI	117	GLU
30	BI	123	LEU
30	BI	140	LEU
30	BI	142	VAL
30	BI	144	VAL
31	BN	1	MET
31	BN	5	VAL
31	BN	12	ARG
31	BN	28	THR
31	BN	33	LEU
31	BN	34	LEU
31	BN	38	HIS
31	BN	46	VAL
31	BN	48	MET
31	BN	62	VAL
31	BN	67	LEU
31	BN	68	GLU
31	BN	85	ILE
31	BN	99	LEU
31	BN	112	LEU
31	BN	120	LEU
31	BN	130	HIS
31	BN	133	GLN
31	BN	140	VAL
32	BO	8	LEU
32	BO	10	VAL
32	BO	17	ARG
32	BO	21	CYS
32	BO	24	VAL
32	BO	25	LEU
32	BO	26	LYS
32	BO	29	ASN
32	BO	32	TYR
32	BO	52	VAL
32	BO	53	LYS
32	BO	58	VAL
32	BO	94	ARG

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Mol	Chain	Res	Type
32	BO	98	VAL
32	BO	104	ARG
32	BO	113	LYS
33	BP	21	ARG
33	BP	32	THR
33	BP	40	SER
33	BP	42	SER
33	BP	45	LEU
33	BP	55	ARG
33	BP	59	LEU
33	BP	65	ARG
33	BP	71	VAL
33	BP	83	VAL
33	BP	86	LYS
33	BP	95	VAL
33	BP	106	LEU
33	BP	112	LEU
33	BP	125	VAL
34	BQ	1	MET
34	BQ	5	ARG
34	BQ	7	MET
34	BQ	16	ARG
34	BQ	45	GLN
34	BQ	55	VAL
34	BQ	56	ARG
34	BQ	59	ARG
34	BQ	63	LYS
34	BQ	75	THR
34	BQ	81	VAL
34	BQ	109	VAL
34	BQ	110	THR
34	BQ	134	ARG
34	BQ	138	ASP
35	BR	1	MET
35	BR	2	ARG
35	BR	6	SER
35	BR	15	SER
35	BR	18	LEU
35	BR	24	GLN
35	BR	28	LEU
35	BR	29	LEU
35	BR	33	ARG

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Mol	Chain	Res	Type
35	BR	44	LEU
35	BR	54	LEU
35	BR	60	LEU
35	BR	65	LEU
35	BR	67	LEU
35	BR	79	LEU
35	BR	86	ARG
35	BR	100	LEU
35	BR	103	ARG
35	BR	111	LEU
35	BR	113	LEU
35	BR	114	VAL
35	BR	117	VAL
36	BS	3	ARG
36	BS	8	GLU
36	BS	12	PHE
36	BS	13	ARG
36	BS	20	ARG
36	BS	30	ARG
36	BS	36	TYR
36	BS	50	SER
36	BS	52	SER
36	BS	57	LYS
36	BS	58	LEU
36	BS	69	VAL
36	BS	75	GLU
36	BS	78	LEU
36	BS	84	GLN
36	BS	85	VAL
36	BS	95	HIS
37	BT	13	ARG
37	BT	16	ARG
37	BT	17	THR
37	BT	36	GLU
37	BT	39	ARG
37	BT	49	VAL
37	BT	64	ARG
37	BT	74	ARG
37	BT	82	LEU
37	BT	96	ARG
37	BT	107	ASP
37	BT	118	ARG

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Mol	Chain	Res	Type
38	BU	5	LYS
38	BU	8	VAL
38	BU	30	LYS
38	BU	31	SER
38	BU	36	ARG
38	BU	59	ARG
38	BU	60	LEU
38	BU	74	LEU
38	BU	85	LYS
38	BU	104	GLN
38	BU	108	GLU
39	BV	7	THR
39	BV	12	TYR
39	BV	18	LEU
39	BV	21	ARG
39	BV	28	GLU
39	BV	32	THR
39	BV	33	VAL
39	BV	57	VAL
39	BV	61	VAL
39	BV	62	LEU
39	BV	72	VAL
39	BV	73	SER
39	BV	79	VAL
39	BV	85	LYS
39	BV	89	GLN
39	BV	95	LEU
39	BV	100	ARG
40	BW	4	LYS
40	BW	11	ARG
40	BW	19	LEU
40	BW	23	LEU
40	BW	27	LYS
40	BW	51	LEU
40	BW	100	THR
40	BW	107	LEU
41	BX	15	GLU
41	BX	57	LEU
41	BX	65	ARG
41	BX	76	ARG
42	BY	2	ARG
42	BY	3	VAL

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Mol	Chain	Res	Type
42	BY	6	HIS
42	BY	9	LYS
42	BY	23	ARG
42	BY	45	VAL
42	BY	49	VAL
42	BY	55	TYR
42	BY	72	VAL
42	BY	90	LEU
42	BY	91	GLU
42	BY	92	ASN
42	BY	97	ARG
42	BY	101	LYS
42	BY	102	CYS
42	BY	107	ASP
43	BZ	5	LEU
43	BZ	10	ARG
43	BZ	11	GLU
43	BZ	19	ARG
43	BZ	24	LEU
43	BZ	37	VAL
43	BZ	42	VAL
43	BZ	52	SER
43	BZ	56	VAL
43	BZ	66	SER
43	BZ	72	ARG
43	BZ	76	LEU
43	BZ	82	ARG
43	BZ	91	LEU
43	BZ	97	GLU
43	BZ	118	GLN
43	BZ	126	VAL
43	BZ	155	LEU
43	BZ	156	LYS
43	BZ	165	VAL
43	BZ	179	ASP
43	BZ	185	GLU
44	B0	9	SER
44	B0	10	THR
44	B0	20	ARG
44	B0	38	VAL
44	B0	55	ARG
44	B0	74	ARG

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Mol	Chain	Res	Type
44	B0	77	ARG
44	B0	83	PRO
45	B1	4	VAL
45	B1	5	CYS
45	B1	14	VAL
45	B1	21	ARG
45	B1	39	LYS
45	B1	40	ARG
45	B1	46	LEU
45	B1	51	VAL
45	B1	58	ILE
45	B1	59	THR
45	B1	76	ARG
45	B1	82	LEU
45	B1	83	GLU
45	B1	86	SER
45	B1	95	LEU
46	B2	17	SER
46	B2	28	LYS
46	B2	32	LEU
46	B2	34	GLU
46	B2	43	GLN
46	B2	44	LEU
46	B2	47	ASN
46	B2	53	LEU
46	B2	55	ARG
46	B2	68	ARG
46	B2	70	GLN
47	B3	8	LEU
47	B3	18	ASP
47	B3	23	LEU
47	B3	31	LEU
47	B3	40	THR
48	B4	14	ILE
48	B4	16	CYS
48	B4	27	THR
48	B4	34	GLU
48	B4	43	TYR
48	B4	46	GLN
49	B5	6	VAL
49	B5	8	LYS
49	B5	9	LYS

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Mol	Chain	Res	Type
49	B5	23	HIS
49	B5	29	THR
49	B5	37	LYS
49	B5	40	LYS
49	B5	58	LEU
50	B6	4	GLU
50	B6	6	ARG
50	B6	13	CYS
50	B6	14	THR
50	B6	23	THR
50	B6	28	ARG
50	B6	30	THR
50	B6	34	LEU
50	B6	38	LYS
50	B6	40	CYS
50	B6	44	ARG
51	B7	1	MET
51	B7	4	THR
51	B7	8	ASN
51	B7	9	ARG
51	B7	23	ARG
51	B7	32	LYS
51	B7	47	ARG
52	B8	6	THR
52	B8	11	LYS
52	B8	14	VAL
52	B8	23	VAL
52	B8	31	HIS
52	B8	32	LEU
52	B8	34	TRP
52	B8	35	GLN
52	B8	41	ILE
52	B8	49	VAL
53	B9	6	SER
53	B9	7	VAL
53	B9	17	ILE
53	B9	26	ILE
2	CB	15	VAL
2	CB	17	PHE
2	CB	21	ARG
2	CB	24	TRP
2	CB	47	THR

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Mol	Chain	Res	Type
2	CB	51	LEU
2	CB	67	THR
2	CB	69	LEU
2	CB	74	LYS
2	CB	80	ILE
2	CB	82	ARG
2	CB	86	GLU
2	CB	87	ARG
2	CB	93	VAL
2	CB	94	ASN
2	CB	110	GLN
2	CB	113	HIS
2	CB	114	ARG
2	CB	117	GLU
2	CB	121	LEU
2	CB	124	SER
2	CB	133	LYS
2	CB	137	ARG
2	CB	139	LYS
2	CB	140	HIS
2	CB	150	SER
2	CB	153	ARG
2	CB	157	ARG
2	CB	160	ASP
2	CB	163	PHE
2	CB	170	GLU
2	CB	185	ILE
2	CB	187	LEU
2	CB	191	ASP
2	CB	197	VAL
2	CB	200	ILE
2	CB	205	ASP
2	CB	208	ILE
2	CB	209	ARG
2	CB	210	SER
2	CB	212	GLN
2	CB	221	LEU
2	CB	230	VAL
2	CB	233	SER
3	CC	4	LYS
3	CC	11	ARG
3	CC	26	LYS

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Mol	Chain	Res	Type
3	CC	30	ARG
3	CC	31	HIS
3	CC	32	LEU
3	CC	36	ASP
3	CC	47	LEU
3	CC	49	SER
3	CC	52	LEU
3	CC	56	ASP
3	CC	59	ARG
3	CC	104	GLN
3	CC	136	GLN
3	CC	143	GLU
3	CC	154	SER
3	CC	175	LEU
3	CC	176	HIS
3	CC	183	ASP
3	CC	188	LEU
3	CC	195	VAL
3	CC	202	ILE
4	CD	11	LEU
4	CD	12	CYS
4	CD	13	ARG
4	CD	20	TYR
4	CD	36	ARG
4	CD	52	SER
4	CD	53	ASP
4	CD	57	ARG
4	CD	70	ILE
4	CD	76	ARG
4	CD	83	SER
4	CD	106	TYR
4	CD	113	SER
4	CD	119	GLN
4	CD	122	ARG
4	CD	127	THR
4	CD	129	ASN
4	CD	135	LEU
4	CD	138	TYR
4	CD	158	ILE
4	CD	170	VAL
4	CD	193	ASP
5	CE	11	ILE

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Mol	Chain	Res	Type
5	CE	12	LEU
5	CE	14	ARG
5	CE	16	THR
5	CE	41	VAL
5	CE	51	VAL
5	CE	60	TYR
5	CE	63	ARG
5	CE	65	ASN
5	CE	76	ILE
5	CE	78	HIS
5	CE	79	GLU
5	CE	83	GLU
5	CE	84	PHE
5	CE	87	SER
5	CE	89	ILE
5	CE	91	LEU
5	CE	98	THR
5	CE	107	ARG
5	CE	147	ASP
5	CE	152	ARG
6	CF	7	ASN
6	CF	22	GLU
6	CF	36	ARG
6	CF	40	VAL
6	CF	45	LEU
6	CF	48	LEU
6	CF	57	GLN
6	CF	63	TYR
6	CF	69	GLU
6	CF	70	ASP
6	CF	72	VAL
6	CF	73	ASN
6	CF	74	ASP
6	CF	75	LEU
6	CF	89	MET
6	CF	94	GLN
6	CF	98	LEU
6	CF	100	ASN
7	CG	3	ARG
7	CG	6	ARG
7	CG	12	LEU
7	CG	17	VAL

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Mol	Chain	Res	Type
7	CG	20	ASP
7	CG	23	VAL
7	CG	24	THR
7	CG	26	PHE
7	CG	32	ARG
7	CG	33	ASP
7	CG	36	LYS
7	CG	44	TYR
7	CG	47	CYS
7	CG	56	GLN
7	CG	61	VAL
7	CG	62	PHE
7	CG	67	GLU
7	CG	73	MET
7	CG	75	VAL
7	CG	80	VAL
7	CG	90	GLU
7	CG	96	GLN
7	CG	111	ARG
7	CG	113	GLU
7	CG	118	VAL
7	CG	119	ARG
7	CG	120	ILE
7	CG	125	MET
7	CG	126	ASP
7	CG	135	VAL
7	CG	142	GLU
7	CG	143	ARG
7	CG	148	ASN
7	CG	153	HIS
7	CG	155	ARG
8	CH	2	LEU
8	CH	21	LYS
8	CH	25	ASP
8	CH	37	ARG
8	CH	49	GLU
8	CH	52	ASP
8	CH	54	ASP
8	CH	60	ARG
8	CH	63	LEU
8	CH	77	GLU
8	CH	78	GLN

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Mol	Chain	Res	Type
8	CH	83	ILE
8	CH	84	ARG
8	CH	85	ARG
8	CH	91	ARG
8	CH	95	VAL
8	CH	109	ILE
8	CH	119	LEU
8	CH	120	THR
8	CH	127	LEU
9	CI	5	TYR
9	CI	11	LYS
9	CI	62	TYR
9	CI	63	ILE
9	CI	64	THR
9	CI	65	VAL
9	CI	66	ARG
9	CI	74	ILE
9	CI	75	ASP
9	CI	77	ILE
9	CI	88	TYR
9	CI	104	ARG
9	CI	107	ARG
9	CI	108	VAL
9	CI	114	TYR
10	CJ	12	ASP
10	CJ	21	GLN
10	CJ	33	GLN
10	CJ	38	ILE
10	CJ	42	THR
10	CJ	45	ARG
10	CJ	49	VAL
10	CJ	55	LYS
10	CJ	62	HIS
10	CJ	64	GLU
10	CJ	73	ASP
10	CJ	94	VAL
10	CJ	96	ILE
10	CJ	100	THR
11	CK	14	VAL
11	CK	16	SER
11	CK	29	ILE
11	CK	30	VAL

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Mol	Chain	Res	Type
11	CK	32	ILE
11	CK	47	VAL
11	CK	81	ASP
11	CK	96	ARG
11	CK	103	LEU
11	CK	109	VAL
11	CK	117	ASN
12	CL	33	ARG
12	CL	44	THR
12	CL	52	LEU
12	CL	53	ARG
12	CL	60	LEU
12	CL	66	VAL
12	CL	82	VAL
12	CL	97	ARG
12	CL	115	LYS
12	CL	119	LYS
13	CM	3	ARG
13	CM	19	LEU
13	CM	34	LEU
13	CM	45	VAL
13	CM	47	ASP
13	CM	55	ARG
13	CM	56	LEU
13	CM	61	GLU
13	CM	65	LYS
13	CM	66	LEU
13	CM	67	GLU
13	CM	70	LEU
13	CM	71	ARG
13	CM	88	ARG
13	CM	105	THR
14	CN	3	ARG
14	CN	6	LEU
14	CN	7	ILE
14	CN	8	GLU
14	CN	13	THR
14	CN	17	LYS
14	CN	24	CYS
14	CN	25	VAL
14	CN	32	SER
14	CN	33	VAL

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Mol	Chain	Res	Type
14	CN	39	LEU
14	CN	42	ILE
14	CN	45	ARG
14	CN	53	LEU
15	CO	3	ILE
15	CO	4	THR
15	CO	13	GLN
15	CO	24	SER
15	CO	26	GLU
15	CO	39	LEU
15	CO	66	LEU
15	CO	72	ARG
15	CO	87	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	11	SER
16	CP	21	VAL
16	CP	22	THR
16	CP	25	ARG
16	CP	26	ARG
16	CP	27	LYS
16	CP	29	ASP
16	CP	36	ILE
16	CP	38	TYR
16	CP	43	LYS
16	CP	45	THR
16	CP	62	VAL
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
16	CP	76	GLN
17	CQ	11	VAL
17	CQ	34	LYS
17	CQ	43	LEU
17	CQ	45	HIS
17	CQ	50	LYS
17	CQ	57	VAL
17	CQ	59	ILE
17	CQ	65	ILE
17	CQ	72	ARG
17	CQ	74	LEU

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Mol	Chain	Res	Type
17	CQ	86	GLU
17	CQ	96	GLU
17	CQ	100	LYS
18	CR	35	ARG
18	CR	36	ASN
18	CR	76	LEU
18	CR	79	LEU
18	CR	85	LEU
19	CS	44	MET
19	CS	47	HIS
19	CS	51	VAL
19	CS	61	TYR
19	CS	62	ILE
19	CS	66	MET
19	CS	67	VAL
19	CS	69	HIS
19	CS	78	ARG
19	CS	79	THR
19	CS	81	ARG
20	CT	10	LEU
20	CT	13	LEU
20	CT	36	LEU
20	CT	39	LYS
20	CT	62	LEU
20	CT	71	THR
20	CT	72	LEU
20	CT	73	HIS
20	CT	74	LYS
20	CT	84	LEU
21	CU	6	ARG
21	CU	7	ARG
21	CU	9	ARG
21	CU	10	ARG
21	CU	12	LYS
21	CU	13	ILE
21	CU	17	THR
22	CX	4	ASN
22	CX	6	THR
22	CX	31	PHE
22	CX	54	LEU
22	CX	62	HIS
22	CX	64	SER

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Mol	Chain	Res	Type
22	CX	66	GLU
22	CX	77	LEU
22	CX	93	LYS
25	DD	12	SER
25	DD	13	ARG
25	DD	18	VAL
25	DD	24	ILE
25	DD	54	ARG
25	DD	83	GLU
25	DD	94	LEU
25	DD	103	ARG
25	DD	106	ILE
25	DD	111	LEU
25	DD	126	GLN
25	DD	131	LEU
25	DD	138	VAL
25	DD	141	VAL
25	DD	150	LYS
25	DD	154	LYS
25	DD	173	VAL
25	DD	192	THR
25	DD	200	ASP
25	DD	211	ARG
25	DD	212	SER
25	DD	217	ARG
25	DD	218	ARG
25	DD	221	VAL
25	DD	229	VAL
25	DD	254	THR
25	DD	257	LEU
25	DD	259	THR
25	DD	260	ARG
25	DD	271	ILE
25	DD	273	ARG
25	DD	274	ARG
26	DE	7	VAL
26	DE	12	THR
26	DE	21	VAL
26	DE	24	THR
26	DE	33	VAL
26	DE	40	GLU
26	DE	49	LEU

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Mol	Chain	Res	Type
26	DE	52	LEU
26	DE	61	ARG
26	DE	69	LYS
26	DE	72	VAL
26	DE	75	VAL
26	DE	77	ILE
26	DE	82	ARG
26	DE	92	THR
26	DE	111	ARG
26	DE	116	VAL
26	DE	119	ARG
26	DE	128	SER
26	DE	144	ARG
26	DE	154	LYS
26	DE	167	VAL
26	DE	170	LEU
26	DE	179	GLU
26	DE	181	LEU
26	DE	195	LEU
27	DF	12	LEU
27	DF	18	ARG
27	DF	20	LEU
27	DF	24	LEU
27	DF	33	LEU
27	DF	41	LEU
27	DF	50	SER
27	DF	57	VAL
27	DF	69	HIS
27	DF	77	ASP
27	DF	88	VAL
27	DF	96	ASP
27	DF	106	ARG
27	DF	110	LEU
27	DF	112	MET
27	DF	132	VAL
27	DF	137	LYS
27	DF	140	LEU
27	DF	158	THR
27	DF	161	GLU
27	DF	168	ARG
27	DF	170	LEU
27	DF	175	THR

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Mol	Chain	Res	Type
27	DF	188	ARG
27	DF	192	LEU
28	DG	3	LEU
28	DG	5	VAL
28	DG	7	LEU
28	DG	21	ARG
28	DG	28	VAL
28	DG	35	GLU
28	DG	47	LYS
28	DG	98	ARG
28	DG	128	ARG
28	DG	136	ARG
28	DG	139	LEU
28	DG	140	ILE
28	DG	143	GLU
28	DG	146	TYR
28	DG	149	VAL
28	DG	155	MET
28	DG	161	THR
28	DG	170	ARG
28	DG	175	LEU
29	DH	3	ARG
29	DH	6	ARG
29	DH	7	LEU
29	DH	15	VAL
29	DH	24	VAL
29	DH	41	MET
29	DH	44	VAL
29	DH	49	VAL
29	DH	51	ARG
29	DH	58	GLU
29	DH	68	THR
29	DH	69	ARG
29	DH	88	LEU
29	DH	98	LEU
29	DH	113	VAL
29	DH	122	THR
29	DH	134	SER
29	DH	139	GLN
30	DI	1	MET
30	DI	42	SER
30	DI	44	LEU

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Mol	Chain	Res	Type
30	DI	45	LYS
30	DI	47	LEU
30	DI	81	VAL
30	DI	101	LEU
30	DI	120	ILE
30	DI	123	LEU
30	DI	129	THR
30	DI	130	TYR
30	DI	139	GLN
30	DI	142	VAL
30	DI	145	VAL
31	DN	1	MET
31	DN	5	VAL
31	DN	12	ARG
31	DN	28	THR
31	DN	33	LEU
31	DN	34	LEU
31	DN	38	HIS
31	DN	46	VAL
31	DN	48	MET
31	DN	62	VAL
31	DN	67	LEU
31	DN	68	GLU
31	DN	85	ILE
31	DN	99	LEU
31	DN	112	LEU
31	DN	120	LEU
31	DN	130	HIS
31	DN	133	GLN
31	DN	140	VAL
32	DO	8	LEU
32	DO	10	VAL
32	DO	17	ARG
32	DO	24	VAL
32	DO	25	LEU
32	DO	26	LYS
32	DO	29	ASN
32	DO	32	TYR
32	DO	52	VAL
32	DO	53	LYS
32	DO	58	VAL
32	DO	94	ARG

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Mol	Chain	Res	Type
32	DO	98	VAL
32	DO	104	ARG
32	DO	113	LYS
33	DP	21	ARG
33	DP	32	THR
33	DP	40	SER
33	DP	42	SER
33	DP	45	LEU
33	DP	55	ARG
33	DP	59	LEU
33	DP	65	ARG
33	DP	71	VAL
33	DP	83	VAL
33	DP	86	LYS
33	DP	95	VAL
33	DP	106	LEU
33	DP	112	LEU
33	DP	125	VAL
34	DQ	1	MET
34	DQ	5	ARG
34	DQ	7	MET
34	DQ	16	ARG
34	DQ	45	GLN
34	DQ	55	VAL
34	DQ	56	ARG
34	DQ	59	ARG
34	DQ	63	LYS
34	DQ	75	THR
34	DQ	81	VAL
34	DQ	109	VAL
34	DQ	110	THR
34	DQ	134	ARG
34	DQ	138	ASP
35	DR	1	MET
35	DR	2	ARG
35	DR	6	SER
35	DR	9	LYS
35	DR	15	SER
35	DR	18	LEU
35	DR	24	GLN
35	DR	28	LEU
35	DR	29	LEU

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Mol	Chain	Res	Type
35	DR	33	ARG
35	DR	44	LEU
35	DR	54	LEU
35	DR	57	ARG
35	DR	60	LEU
35	DR	63	ARG
35	DR	65	LEU
35	DR	67	LEU
35	DR	79	LEU
35	DR	86	ARG
35	DR	100	LEU
35	DR	103	ARG
35	DR	111	LEU
35	DR	113	LEU
35	DR	117	VAL
36	DS	3	ARG
36	DS	8	GLU
36	DS	12	PHE
36	DS	13	ARG
36	DS	20	ARG
36	DS	30	ARG
36	DS	36	TYR
36	DS	50	SER
36	DS	57	LYS
36	DS	58	LEU
36	DS	69	VAL
36	DS	75	GLU
36	DS	78	LEU
36	DS	84	GLN
36	DS	85	VAL
36	DS	95	HIS
37	DT	6	LEU
37	DT	13	ARG
37	DT	16	ARG
37	DT	17	THR
37	DT	36	GLU
37	DT	39	ARG
37	DT	49	VAL
37	DT	64	ARG
37	DT	74	ARG
37	DT	82	LEU
37	DT	95	ARG

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Mol	Chain	Res	Type
37	DT	96	ARG
37	DT	107	ASP
37	DT	111	ARG
37	DT	118	ARG
38	DU	8	VAL
38	DU	30	LYS
38	DU	31	SER
38	DU	36	ARG
38	DU	59	ARG
38	DU	60	LEU
38	DU	74	LEU
38	DU	101	ARG
38	DU	104	GLN
38	DU	108	GLU
39	DV	7	THR
39	DV	12	TYR
39	DV	13	ARG
39	DV	18	LEU
39	DV	21	ARG
39	DV	28	GLU
39	DV	32	THR
39	DV	33	VAL
39	DV	57	VAL
39	DV	61	VAL
39	DV	62	LEU
39	DV	72	VAL
39	DV	73	SER
39	DV	79	VAL
39	DV	85	LYS
39	DV	95	LEU
39	DV	100	ARG
40	DW	11	ARG
40	DW	15	ARG
40	DW	19	LEU
40	DW	23	LEU
40	DW	27	LYS
40	DW	41	LYS
40	DW	51	LEU
40	DW	60	ASN
40	DW	77	ASP
40	DW	100	THR
40	DW	107	LEU

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Mol	Chain	Res	Type
41	DX	15	GLU
41	DX	25	LYS
41	DX	57	LEU
41	DX	65	ARG
41	DX	76	ARG
42	DY	2	ARG
42	DY	3	VAL
42	DY	6	HIS
42	DY	9	LYS
42	DY	23	ARG
42	DY	45	VAL
42	DY	49	VAL
42	DY	55	TYR
42	DY	61	ILE
42	DY	72	VAL
42	DY	90	LEU
42	DY	91	GLU
42	DY	92	ASN
42	DY	97	ARG
42	DY	101	LYS
42	DY	102	CYS
42	DY	107	ASP
43	DZ	5	LEU
43	DZ	10	ARG
43	DZ	11	GLU
43	DZ	19	ARG
43	DZ	24	LEU
43	DZ	42	VAL
43	DZ	52	SER
43	DZ	56	VAL
43	DZ	66	SER
43	DZ	76	LEU
43	DZ	82	ARG
43	DZ	97	GLU
43	DZ	98	MET
43	DZ	118	GLN
43	DZ	126	VAL
43	DZ	155	LEU
43	DZ	156	LYS
43	DZ	165	VAL
43	DZ	179	ASP
43	DZ	185	GLU

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Mol	Chain	Res	Type
44	D0	10	THR
44	D0	19	LYS
44	D0	20	ARG
44	D0	38	VAL
44	D0	49	LYS
44	D0	55	ARG
44	D0	74	ARG
44	D0	77	ARG
44	D0	83	PRO
45	D1	4	VAL
45	D1	5	CYS
45	D1	14	VAL
45	D1	21	ARG
45	D1	40	ARG
45	D1	46	LEU
45	D1	51	VAL
45	D1	58	ILE
45	D1	82	LEU
45	D1	83	GLU
45	D1	86	SER
45	D1	95	LEU
46	D2	17	SER
46	D2	32	LEU
46	D2	34	GLU
46	D2	43	GLN
46	D2	44	LEU
46	D2	47	ASN
46	D2	53	LEU
46	D2	55	ARG
46	D2	68	ARG
46	D2	70	GLN
47	D3	8	LEU
47	D3	18	ASP
47	D3	23	LEU
47	D3	31	LEU
47	D3	40	THR
48	D4	14	ILE
48	D4	16	CYS
48	D4	27	THR
48	D4	34	GLU
48	D4	43	TYR
48	D4	46	GLN

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Mol	Chain	Res	Type
49	D5	6	VAL
49	D5	8	LYS
49	D5	9	LYS
49	D5	23	HIS
49	D5	29	THR
49	D5	37	LYS
49	D5	40	LYS
49	D5	46	CYS
49	D5	58	LEU
50	D6	4	GLU
50	D6	6	ARG
50	D6	13	CYS
50	D6	14	THR
50	D6	28	ARG
50	D6	30	THR
50	D6	34	LEU
50	D6	38	LYS
50	D6	40	CYS
50	D6	44	ARG
51	D7	1	MET
51	D7	4	THR
51	D7	8	ASN
51	D7	9	ARG
51	D7	23	ARG
51	D7	32	LYS
51	D7	47	ARG
52	D8	6	THR
52	D8	11	LYS
52	D8	14	VAL
52	D8	23	VAL
52	D8	31	HIS
52	D8	32	LEU
52	D8	34	TRP
52	D8	35	GLN
52	D8	41	ILE
52	D8	49	VAL
53	D9	6	SER
53	D9	7	VAL
53	D9	17	ILE
53	D9	26	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (108) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	94	ASN
2	AB	110	GLN
2	AB	146	GLN
2	AB	212	GLN
3	AC	6	HIS
3	AC	31	HIS
5	AE	78	HIS
6	AF	64	GLN
6	AF	73	ASN
6	AF	94	GLN
7	AG	28	ASN
7	AG	64	GLN
7	AG	106	GLN
7	AG	109	ASN
9	AI	3	GLN
9	AI	38	GLN
10	AJ	21	GLN
10	AJ	56	HIS
16	AP	13	HIS
16	AP	16	HIS
16	AP	65	GLN
18	AR	36	ASN
19	AS	57	HIS
20	AT	16	HIS
22	AX	2	GLN
22	AX	35	ASN
22	AX	94	GLN
22	AX	95	HIS
25	BD	112	GLN
25	BD	129	ASN
25	BD	143	HIS
26	BE	143	ASN
27	BF	75	HIS
28	BG	40	ASN
28	BG	66	GLN
28	BG	108	ASN
28	BG	138	GLN
29	BH	74	ASN
29	BH	111	HIS
30	BI	74	ASN
30	BI	133	HIS
30	BI	139	GLN
31	BN	128	HIS

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Mol	Chain	Res	Type
31	BN	133	GLN
32	BO	3	GLN
33	BP	84	ASN
34	BQ	12	GLN
36	BS	68	GLN
38	BU	49	HIS
38	BU	72	HIS
39	BV	80	GLN
40	BW	60	ASN
40	BW	61	ASN
41	BX	31	HIS
46	B2	9	GLN
48	B4	46	GLN
50	B6	20	ASN
50	B6	49	HIS
2	CB	94	ASN
2	CB	110	GLN
2	CB	140	HIS
2	CB	146	GLN
2	CB	212	GLN
3	CC	31	HIS
3	CC	37	GLN
3	CC	69	HIS
3	CC	136	GLN
5	CE	65	ASN
5	CE	78	HIS
5	CE	130	ASN
6	CF	64	GLN
6	CF	73	ASN
6	CF	94	GLN
7	CG	96	GLN
7	CG	148	ASN
9	CI	3	GLN
10	CJ	68	HIS
13	CM	77	ASN
14	CN	52	GLN
16	CP	16	HIS
16	CP	65	GLN
17	CQ	45	HIS
18	CR	36	ASN
19	CS	83	HIS
22	CX	94	GLN

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Mol	Chain	Res	Type
25	DD	112	GLN
25	DD	129	ASN
25	DD	143	HIS
28	DG	40	ASN
28	DG	66	GLN
28	DG	108	ASN
28	DG	138	GLN
29	DH	74	ASN
29	DH	147	ASN
30	DI	105	HIS
30	DI	139	GLN
31	DN	128	HIS
31	DN	133	GLN
32	DO	3	GLN
33	DP	84	ASN
36	DS	68	GLN
37	DT	58	ASN
38	DU	49	HIS
40	DW	61	ASN
41	DX	31	HIS
43	DZ	151	HIS
46	D2	9	GLN
48	D4	46	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1499/1522 (98%)	385 (25%)	33 (2%)
1	CA	1495/1522 (98%)	396 (26%)	34 (2%)
23	BA	2833/2913 (97%)	609 (21%)	60 (2%)
23	DA	2807/2913 (96%)	600 (21%)	56 (1%)
24	BB	119/122 (97%)	25 (21%)	0
24	DB	119/122 (97%)	26 (21%)	0
All	All	8872/9114 (97%)	2041 (23%)	183 (2%)

All (2041) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	7	G

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Mol	Chain	Res	Type
1	AA	9	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	53	A
1	AA	60	A
1	AA	61	G
1	AA	62	U
1	AA	65	U
1	AA	66	G
1	AA	67	C
1	AA	70	G
1	AA	77	G
1	AA	78	G
1	AA	79	G
1	AA	89	C
1	AA	90	U
1	AA	91	C
1	AA	93	G
1	AA	96	U
1	AA	97	G
1	AA	115	G
1	AA	116	A
1	AA	121	C
1	AA	131	C
1	AA	142	G
1	AA	150	C
1	AA	163	C
1	AA	173	U
1	AA	182	U
1	AA	189(G)	G
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	201	C
1	AA	203	U
1	AA	204	U
1	AA	216	G
1	AA	227	G

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Mol	Chain	Res	Type
1	AA	243	A
1	AA	244	U
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	289	G
1	AA	306	G
1	AA	321	A
1	AA	328	C
1	AA	332	G
1	AA	341	C
1	AA	342	C
1	AA	343	U
1	AA	344	A
1	AA	345	C
1	AA	351	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	365	U
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	392	G
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	429	U
1	AA	435	C
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	445	G
1	AA	446	G

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Mol	Chain	Res	Type
1	AA	452	A
1	AA	457	C
1	AA	461	A
1	AA	484	G
1	AA	485	G
1	AA	493	G
1	AA	496	A
1	AA	498	U
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	520	A
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	547	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	570	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	596	C
1	AA	607	A
1	AA	618	C
1	AA	623	C
1	AA	629	G
1	AA	630	G
1	AA	631	G
1	AA	632	A
1	AA	633	G

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Mol	Chain	Res	Type
1	AA	653	A
1	AA	661	G
1	AA	665	A
1	AA	666	G
1	AA	680	C
1	AA	687	A
1	AA	688	G
1	AA	690	G
1	AA	724	G
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	766	A
1	AA	774	G
1	AA	777	A
1	AA	786	G
1	AA	787	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	796	C
1	AA	802	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	821	G
1	AA	827	U
1	AA	828	A
1	AA	833	U
1	AA	836	G
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	870	U
1	AA	875	C
1	AA	876	G
1	AA	902	G
1	AA	914	A
1	AA	926	G
1	AA	927	G

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Mol	Chain	Res	Type
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	939	G
1	AA	943	U
1	AA	944	G
1	AA	945	G
1	AA	946	A
1	AA	948	C
1	AA	958	A
1	AA	960	U
1	AA	961	U
1	AA	964	A
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	979	C
1	AA	980	C
1	AA	981	U
1	AA	983	A
1	AA	984	C
1	AA	985	C
1	AA	990	C
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	996	A
1	AA	997	U
1	AA	1000	U
1	AA	1001(A)	G
1	AA	1003	G
1	AA	1004	A
1	AA	1005	A
1	AA	1006	C
1	AA	1010	G
1	AA	1011	G
1	AA	1013	G

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Mol	Chain	Res	Type
1	AA	1014	A
1	AA	1016	A
1	AA	1021	G
1	AA	1022	G
1	AA	1023	G
1	AA	1026	G
1	AA	1027	C
1	AA	1030(A)	G
1	AA	1031	G
1	AA	1034	G
1	AA	1035	A
1	AA	1036	G
1	AA	1042	G
1	AA	1044	A
1	AA	1045	C
1	AA	1046	A
1	AA	1051	C
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1070	U
1	AA	1073	U
1	AA	1074	G
1	AA	1081	G
1	AA	1082	G
1	AA	1084	G
1	AA	1085	U
1	AA	1090	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1113	C
1	AA	1117	G
1	AA	1121	U
1	AA	1122	U
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U

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Mol	Chain	Res	Type
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1144	G
1	AA	1145	C
1	AA	1149	C
1	AA	1152	A
1	AA	1153	C
1	AA	1154	G
1	AA	1155	G
1	AA	1157	A
1	AA	1159	U
1	AA	1160	G
1	AA	1164	G
1	AA	1175	G
1	AA	1184	G
1	AA	1190	G
1	AA	1196	U
1	AA	1197	G
1	AA	1199	U
1	AA	1201	A
1	AA	1202	G
1	AA	1206	G
1	AA	1207	G
1	AA	1211	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1220	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G

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Mol	Chain	Res	Type
1	AA	1242	C
1	AA	1244	C
1	AA	1246	C
1	AA	1247	U
1	AA	1250	A
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C
1	AA	1266	G
1	AA	1270	C
1	AA	1275	A
1	AA	1277	C
1	AA	1278	U
1	AA	1280	A
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1294	G
1	AA	1297	C
1	AA	1298	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1304	G
1	AA	1305	G
1	AA	1306	A
1	AA	1308	U
1	AA	1312	G
1	AA	1316	G
1	AA	1318	A
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1325	C
1	AA	1328	C
1	AA	1330	U
1	AA	1331	G
1	AA	1332	A
1	AA	1333	A
1	AA	1334	G

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Mol	Chain	Res	Type
1	AA	1335	C
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1339	A
1	AA	1345	U
1	AA	1346	A
1	AA	1347	G
1	AA	1349	A
1	AA	1355	G
1	AA	1360	A
1	AA	1363	C
1	AA	1363(A)	A
1	AA	1364	U
1	AA	1365	G
1	AA	1369	C
1	AA	1378	C
1	AA	1379	G
1	AA	1380	U
1	AA	1388	C
1	AA	1395	C
1	AA	1398	A
1	AA	1401	G
1	AA	1419	G
1	AA	1441	G
1	AA	1442	G
1	AA	1442(B)	A
1	AA	1446	U
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1457	G
1	AA	1459	C
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1495	U
1	AA	1497	G
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U

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Mol	Chain	Res	Type
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
23	BA	10	G
23	BA	12	U
23	BA	15	G
23	BA	34	C
23	BA	36	G
23	BA	45	C
23	BA	55	G
23	BA	69	C
23	BA	71	A
23	BA	72	U
23	BA	74	A
23	BA	75	G
23	BA	82	G
23	BA	84	A
23	BA	90	U
23	BA	94	C
23	BA	95	G
23	BA	100	G
23	BA	102	G
23	BA	103	A
23	BA	118	A
23	BA	119	A
23	BA	120	U
23	BA	131	G
23	BA	141	A
23	BA	154	G
23	BA	154(A)	C
23	BA	157	U
23	BA	181	A
23	BA	182	A
23	BA	188	G
23	BA	196	A
23	BA	199	A
23	BA	200	U
23	BA	201	C
23	BA	204	A
23	BA	205	G
23	BA	214	G

Continued on next page...

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Mol	Chain	Res	Type
23	BA	215	G
23	BA	216	A
23	BA	221	A
23	BA	222	A
23	BA	225	A
23	BA	229	A
23	BA	233	A
23	BA	248	G
23	BA	250	G
23	BA	266	G
23	BA	269	U
23	BA	271(I)	G
23	BA	271(K)	U
23	BA	271(L)	U
23	BA	271(M)	G
23	BA	271(N)	U
23	BA	271(Y)	U
23	BA	272(B)	G
23	BA	272(G)	C
23	BA	272(H)	C
23	BA	272(I)	U
23	BA	272(J)	C
23	BA	276	A
23	BA	277	C
23	BA	278	A
23	BA	279	C
23	BA	280	C
23	BA	286	C
23	BA	311	A
23	BA	315	G
23	BA	316	C
23	BA	324	A
23	BA	329	G
23	BA	330	A
23	BA	331	A
23	BA	332	A
23	BA	333	G
23	BA	335	C
23	BA	342	G
23	BA	352	G
23	BA	353	G
23	BA	363	G

Continued on next page...

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Mol	Chain	Res	Type
23	BA	363(C)	G
23	BA	363(F)	A
23	BA	386	G
23	BA	404	C
23	BA	405	U
23	BA	407	G
23	BA	411	G
23	BA	412	A
23	BA	428	A
23	BA	444	C
23	BA	448	U
23	BA	457	A
23	BA	460	A
23	BA	470	A
23	BA	471	A
23	BA	481	G
23	BA	482	A
23	BA	505	A
23	BA	509	C
23	BA	512	G
23	BA	513	A
23	BA	529	A
23	BA	530	G
23	BA	531	C
23	BA	532	A
23	BA	533	G
23	BA	543	C
23	BA	545	G
23	BA	546	C
23	BA	547	A
23	BA	548	A
23	BA	563	G
23	BA	573	G
23	BA	575	A
23	BA	586	A
23	BA	587	C
23	BA	588	U
23	BA	602	G
23	BA	603	A
23	BA	604	G
23	BA	607	U
23	BA	614(A)	U

Continued on next page...

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Mol	Chain	Res	Type
23	BA	614(B)	G
23	BA	614(C)	A
23	BA	615	G
23	BA	620	G
23	BA	627	A
23	BA	632	A
23	BA	637	A
23	BA	645	C
23	BA	646	A
23	BA	647	G
23	BA	652(A)	A
23	BA	652(B)	A
23	BA	652(C)	G
23	BA	652(E)	G
23	BA	652(F)	G
23	BA	652(J)	G
23	BA	652(Q)	G
23	BA	652(R)	C
23	BA	652(T)	C
23	BA	652(U)	G
23	BA	668	G
23	BA	669	G
23	BA	686	G
23	BA	701	G
23	BA	708	C
23	BA	709	U
23	BA	715	G
23	BA	717	G
23	BA	730	C
23	BA	752	A
23	BA	753	C
23	BA	762	U
23	BA	764	A
23	BA	765	G
23	BA	771	G
23	BA	775	G
23	BA	776	G
23	BA	782	A
23	BA	784	A
23	BA	785	G
23	BA	792	G
23	BA	805	G

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Mol	Chain	Res	Type
23	BA	810	U
23	BA	812	C
23	BA	819	A
23	BA	827	U
23	BA	828	U
23	BA	830	G
23	BA	857	C
23	BA	859	G
23	BA	879	G
23	BA	882	G
23	BA	884	C
23	BA	885	C
23	BA	886	C
23	BA	888	C
23	BA	889	C
23	BA	890	A
23	BA	895	U
23	BA	896	A
23	BA	897	C
23	BA	900	A
23	BA	901	A
23	BA	910	A
23	BA	914	C
23	BA	917	A
23	BA	932	G
23	BA	938	G
23	BA	941	A
23	BA	945	A
23	BA	946	G
23	BA	953	A
23	BA	958	U
23	BA	959	A
23	BA	961	C
23	BA	974	G
23	BA	975	C
23	BA	975(A)	G
23	BA	983	A
23	BA	990	A
23	BA	991	C
23	BA	994	C
23	BA	996	A
23	BA	1005	C

Continued on next page...

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Mol	Chain	Res	Type
23	BA	1012	U
23	BA	1013	C
23	BA	1020	A
23	BA	1022	G
23	BA	1023	U
23	BA	1025	G
23	BA	1026	U
23	BA	1027	A
23	BA	1033	U
23	BA	1038	C
23	BA	1039	G
23	BA	1040	C
23	BA	1041	C
23	BA	1042	G
23	BA	1043	C
23	BA	1045	A
23	BA	1046	A
23	BA	1047	G
23	BA	1048	A
23	BA	1049	C
23	BA	1050	A
23	BA	1052	C
23	BA	1107	G
23	BA	1109	C
23	BA	1110	G
23	BA	1112	G
23	BA	1115	G
23	BA	1128	A
23	BA	1129	A
23	BA	1130	U
23	BA	1135	C
23	BA	1136	G
23	BA	1139	G
23	BA	1141	U
23	BA	1154	G
23	BA	1155	A
23	BA	1170	G
23	BA	1171	G
23	BA	1173	G
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G

Continued on next page...

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Mol	Chain	Res	Type
23	BA	1177	A
23	BA	1188	U
23	BA	1210	A
23	BA	1211	U
23	BA	1224	C
23	BA	1244	G
23	BA	1252	G
23	BA	1253	A
23	BA	1256	G
23	BA	1267	U
23	BA	1271	G
23	BA	1272	A
23	BA	1273	U
23	BA	1292	U
23	BA	1300	U
23	BA	1301	A
23	BA	1305	C
23	BA	1314	C
23	BA	1320	C
23	BA	1321	A
23	BA	1329	U
23	BA	1345	C
23	BA	1352	U
23	BA	1359	A
23	BA	1360	A
23	BA	1365	A
23	BA	1368	G
23	BA	1370	C
23	BA	1373	A
23	BA	1374	G
23	BA	1378	A
23	BA	1379	A
23	BA	1380	G
23	BA	1383	C
23	BA	1384	A
23	BA	1385	G
23	BA	1386	C
23	BA	1395	A
23	BA	1405	U
23	BA	1416	G
23	BA	1417	C
23	BA	1419	A

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Mol	Chain	Res	Type
23	BA	1420	U
23	BA	1421	G
23	BA	1427	A
23	BA	1428	C
23	BA	1429	G
23	BA	1437	C
23	BA	1445	A
23	BA	1449	A
23	BA	1455	G
23	BA	1459	G
23	BA	1467	C
23	BA	1471	A
23	BA	1482	G
23	BA	1488	G
23	BA	1490	A
23	BA	1493	C
23	BA	1497	U
23	BA	1507	A
23	BA	1508	A
23	BA	1509	C
23	BA	1509(A)	A
23	BA	1510	G
23	BA	1520	G
23	BA	1531	C
23	BA	1533	G
23	BA	1534	U
23	BA	1535	A
23	BA	1536	C
23	BA	1537	G
23	BA	1539	G
23	BA	1540	U
23	BA	1542	A
23	BA	1543	C
23	BA	1545	A
23	BA	1548	C
23	BA	1554	A
23	BA	1558	A
23	BA	1559	G
23	BA	1560	G
23	BA	1566	A
23	BA	1569	A
23	BA	1578	U

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Mol	Chain	Res	Type
23	BA	1579	A
23	BA	1580	A
23	BA	1581	G
23	BA	1584	C
23	BA	1586	A
23	BA	1598	C
23	BA	1608	A
23	BA	1609	A
23	BA	1610	A
23	BA	1617	C
23	BA	1635	G
23	BA	1640	C
23	BA	1647	G
23	BA	1648	C
23	BA	1652	A
23	BA	1654	A
23	BA	1674	G
23	BA	1675	C
23	BA	1696	G
23	BA	1698	A
23	BA	1700	A
23	BA	1701	A
23	BA	1703	G
23	BA	1721	G
23	BA	1722	A
23	BA	1746	G
23	BA	1763	G
23	BA	1764	G
23	BA	1773	A
23	BA	1780	A
23	BA	1782	C
23	BA	1791	A
23	BA	1799	G
23	BA	1800	C
23	BA	1801	G
23	BA	1812	A
23	BA	1816	G
23	BA	1819	A
23	BA	1820	U
23	BA	1826	G
23	BA	1828	G
23	BA	1829	A

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Mol	Chain	Res	Type
23	BA	1835	G
23	BA	1838	C
23	BA	1840	G
23	BA	1847	A
23	BA	1848	A
23	BA	1858	G
23	BA	1865	G
23	BA	1866	C
23	BA	1877	A
23	BA	1878	G
23	BA	1881	C
23	BA	1882	C
23	BA	1896	G
23	BA	1900	A
23	BA	1905	C
23	BA	1906	G
23	BA	1912	A
23	BA	1913	A
23	BA	1914	C
23	BA	1929	G
23	BA	1930	G
23	BA	1931	U
23	BA	1936	A
23	BA	1937	A
23	BA	1938	A
23	BA	1939	U
23	BA	1952	A
23	BA	1955	U
23	BA	1963	U
23	BA	1964	G
23	BA	1967	C
23	BA	1969	A
23	BA	1970	A
23	BA	1971	A
23	BA	1972	A
23	BA	1982	C
23	BA	1991	U
23	BA	1993	U
23	BA	1997	G
23	BA	2005	A
23	BA	2020	A
23	BA	2023	G

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Mol	Chain	Res	Type
23	BA	2031	A
23	BA	2032	G
23	BA	2033	A
23	BA	2036	C
23	BA	2043	C
23	BA	2049	G
23	BA	2055	C
23	BA	2056	G
23	BA	2060	A
23	BA	2061	G
23	BA	2062	A
23	BA	2069	G
23	BA	2099	U
23	BA	2100	G
23	BA	2103	C
23	BA	2104	G
23	BA	2108	C
23	BA	2110	G
23	BA	2111	C
23	BA	2112	G
23	BA	2115	G
23	BA	2116	G
23	BA	2117	A
23	BA	2119	A
23	BA	2123	G
23	BA	2126	A
23	BA	2127	G
23	BA	2128	C
23	BA	2131	G
23	BA	2133	G
23	BA	2134	A
23	BA	2135	A
23	BA	2136	C
23	BA	2146	C
23	BA	2147	G
23	BA	2150	U
23	BA	2159	G
23	BA	2160	G
23	BA	2161	C
23	BA	2162	G
23	BA	2164	C
23	BA	2169	A

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Mol	Chain	Res	Type
23	BA	2170	A
23	BA	2172	U
23	BA	2173	A
23	BA	2174	C
23	BA	2176	A
23	BA	2179	C
23	BA	2180	U
23	BA	2183	C
23	BA	2185	C
23	BA	2186	G
23	BA	2187	G
23	BA	2188	C
23	BA	2191	G
23	BA	2192	G
23	BA	2193	G
23	BA	2198	A
23	BA	2199	A
23	BA	2200	C
23	BA	2206	G
23	BA	2207	G
23	BA	2208	A
23	BA	2225	A
23	BA	2234	G
23	BA	2238	G
23	BA	2239	G
23	BA	2240	C
23	BA	2248	C
23	BA	2249	U
23	BA	2252	G
23	BA	2268	A
23	BA	2273	A
23	BA	2275	C
23	BA	2278	A
23	BA	2283	C
23	BA	2287	A
23	BA	2288	A
23	BA	2289	G
23	BA	2291	U
23	BA	2294	C
23	BA	2305	A
23	BA	2306	C
23	BA	2308	G

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Mol	Chain	Res	Type
23	BA	2309	A
23	BA	2311	A
23	BA	2316	C
23	BA	2319	G
23	BA	2320	A
23	BA	2321	G
23	BA	2325	G
23	BA	2334	G
23	BA	2336	A
23	BA	2343	C
23	BA	2347	C
23	BA	2350	C
23	BA	2354	G
23	BA	2379	G
23	BA	2383	G
23	BA	2385	C
23	BA	2388	A
23	BA	2400	G
23	BA	2406	U
23	BA	2410	G
23	BA	2414	G
23	BA	2418	A
23	BA	2422	A
23	BA	2425	A
23	BA	2429	G
23	BA	2430	A
23	BA	2435	A
23	BA	2439	A
23	BA	2441	C
23	BA	2448	A
23	BA	2465	C
23	BA	2469	A
23	BA	2470	G
23	BA	2472	G
23	BA	2474	C
23	BA	2476	A
23	BA	2477	C
23	BA	2486	G
23	BA	2487	G
23	BA	2502	G
23	BA	2504	U
23	BA	2505	G

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Mol	Chain	Res	Type
23	BA	2506	U
23	BA	2518	A
23	BA	2520	C
23	BA	2525	G
23	BA	2529	G
23	BA	2535	G
23	BA	2554	U
23	BA	2564	A
23	BA	2566	A
23	BA	2567	G
23	BA	2573	C
23	BA	2582	G
23	BA	2585	U
23	BA	2586	C
23	BA	2602	A
23	BA	2603	G
23	BA	2604	U
23	BA	2608	G
23	BA	2609	U
23	BA	2610	C
23	BA	2611	U
23	BA	2612	C
23	BA	2615	U
23	BA	2628	C
23	BA	2629	A
23	BA	2630	G
23	BA	2654	A
23	BA	2663	G
23	BA	2672	G
23	BA	2674	G
23	BA	2686	G
23	BA	2690	C
23	BA	2691	C
23	BA	2702	U
23	BA	2703	C
23	BA	2707	G
23	BA	2712(A)	A
23	BA	2713	A
23	BA	2714	G
23	BA	2726	U
23	BA	2733	A
23	BA	2739	U

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Mol	Chain	Res	Type
23	BA	2744	G
23	BA	2758	A
23	BA	2761	G
23	BA	2765	A
23	BA	2766	G
23	BA	2778	A
23	BA	2790	A
23	BA	2791	C
23	BA	2802	G
23	BA	2803	C
23	BA	2808	U
23	BA	2820	A
23	BA	2821	A
23	BA	2833	G
23	BA	2834	G
23	BA	2835	A
23	BA	2847	U
23	BA	2872	G
23	BA	2873	A
23	BA	2880	C
23	BA	2892	A
23	BA	2893	G
23	BA	2894	G
23	BA	2895	U
23	BA	2897	U
24	BB	2	C
24	BB	8	U
24	BB	9	G
24	BB	12	C
24	BB	13	A
24	BB	15	A
24	BB	19	G
24	BB	21	G
24	BB	24	G
24	BB	25	A
24	BB	28	C
24	BB	33	G
24	BB	40	U
24	BB	53	A
24	BB	54	G
24	BB	56	G
24	BB	73	A

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Mol	Chain	Res	Type
24	BB	74	U
24	BB	75	G
24	BB	84	C
24	BB	85	G
24	BB	88	C
24	BB	89	G
24	BB	106	G
24	BB	110	G
1	CA	5	U
1	CA	6	G
1	CA	7	G
1	CA	9	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	53	A
1	CA	60	A
1	CA	61	G
1	CA	62	U
1	CA	65	U
1	CA	66	G
1	CA	67	C
1	CA	77	G
1	CA	78	G
1	CA	79	G
1	CA	91	C
1	CA	93	G
1	CA	96	U
1	CA	97	G
1	CA	115	G
1	CA	116	A
1	CA	121	C
1	CA	131	C
1	CA	142	G
1	CA	150	C
1	CA	163	C
1	CA	173	U
1	CA	182	U
1	CA	189(G)	G

Continued on next page...

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Mol	Chain	Res	Type
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	201	C
1	CA	203	U
1	CA	204	U
1	CA	216	G
1	CA	227	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	289	G
1	CA	321	A
1	CA	328	C
1	CA	332	G
1	CA	342	C
1	CA	343	U
1	CA	344	A
1	CA	345	C
1	CA	351	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	365	U
1	CA	367	U
1	CA	372	C
1	CA	373	A
1	CA	388	G
1	CA	392	G
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	422	C
1	CA	423	G
1	CA	424	G

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Mol	Chain	Res	Type
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	445	G
1	CA	452	A
1	CA	457	C
1	CA	461	A
1	CA	484	G
1	CA	485	G
1	CA	493	G
1	CA	496	A
1	CA	498	U
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	518	C
1	CA	520	A
1	CA	521	G
1	CA	524	G
1	CA	525	C
1	CA	527	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	547	A
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	563	A
1	CA	564	C
1	CA	570	G
1	CA	572	A
1	CA	573	A
1	CA	575	G
1	CA	576	G
1	CA	577	G
1	CA	588	G

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Mol	Chain	Res	Type
1	CA	596	C
1	CA	607	A
1	CA	618	C
1	CA	623	C
1	CA	629	G
1	CA	630	G
1	CA	631	G
1	CA	632	A
1	CA	633	G
1	CA	634	C
1	CA	653	A
1	CA	661	G
1	CA	665	A
1	CA	666	G
1	CA	680	C
1	CA	687	A
1	CA	688	G
1	CA	690	G
1	CA	724	G
1	CA	731	G
1	CA	749	C
1	CA	755	G
1	CA	766	A
1	CA	774	G
1	CA	777	A
1	CA	786	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	796	C
1	CA	802	A
1	CA	816	A
1	CA	817	C
1	CA	818	G
1	CA	821	G
1	CA	827	U
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U

Continued on next page...

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Mol	Chain	Res	Type
1	CA	848	C
1	CA	859	A
1	CA	870	U
1	CA	873	A
1	CA	875	C
1	CA	876	G
1	CA	902	G
1	CA	914	A
1	CA	926	G
1	CA	927	G
1	CA	932	C
1	CA	933	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	937	A
1	CA	940	C
1	CA	942	G
1	CA	945	G
1	CA	950	U
1	CA	953	G
1	CA	954	G
1	CA	958	A
1	CA	960	U
1	CA	961	U
1	CA	964	A
1	CA	966	G
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	982	U
1	CA	984	C
1	CA	985	C
1	CA	989	C
1	CA	990	C
1	CA	991	U
1	CA	992	U

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Mol	Chain	Res	Type
1	CA	993	G
1	CA	996	A
1	CA	1001(A)	G
1	CA	1004	A
1	CA	1005	A
1	CA	1006	C
1	CA	1009	G
1	CA	1012	U
1	CA	1016	A
1	CA	1019	C
1	CA	1023	G
1	CA	1024	G
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1029	C
1	CA	1030	C
1	CA	1031	G
1	CA	1035	A
1	CA	1036	G
1	CA	1037	C
1	CA	1039	C
1	CA	1042	G
1	CA	1043	C
1	CA	1044	A
1	CA	1045	C
1	CA	1046	A
1	CA	1053	G
1	CA	1054	C
1	CA	1055	A
1	CA	1063	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1068	G
1	CA	1081	G
1	CA	1084	G
1	CA	1085	U
1	CA	1086	U
1	CA	1088	G
1	CA	1089	G
1	CA	1094	G

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Mol	Chain	Res	Type
1	CA	1096	C
1	CA	1101	A
1	CA	1107	C
1	CA	1109	C
1	CA	1112	C
1	CA	1114	C
1	CA	1115	C
1	CA	1117	G
1	CA	1118	C
1	CA	1119	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1131	G
1	CA	1134	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1144	G
1	CA	1145	C
1	CA	1149	C
1	CA	1150	U
1	CA	1151	A
1	CA	1152	A
1	CA	1155	G
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1162	C
1	CA	1166	G
1	CA	1170	A
1	CA	1182	G
1	CA	1183	A
1	CA	1184	G
1	CA	1185	G
1	CA	1186	G
1	CA	1187	G
1	CA	1188	A

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Mol	Chain	Res	Type
1	CA	1190	G
1	CA	1196	U
1	CA	1197	G
1	CA	1201	A
1	CA	1202	G
1	CA	1206	G
1	CA	1207	G
1	CA	1210	C
1	CA	1211	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1220	G
1	CA	1224	G
1	CA	1225	A
1	CA	1226	C
1	CA	1227	A
1	CA	1228	C
1	CA	1233	G
1	CA	1236	A
1	CA	1238	A
1	CA	1240	U
1	CA	1241	G
1	CA	1242	C
1	CA	1244	C
1	CA	1245	A
1	CA	1250	A
1	CA	1252	A
1	CA	1256	A
1	CA	1257	U
1	CA	1258	G
1	CA	1260	C
1	CA	1264	C
1	CA	1265	G
1	CA	1266	G
1	CA	1267	C
1	CA	1270	C
1	CA	1271	G
1	CA	1272	G
1	CA	1275	A
1	CA	1278	U
1	CA	1279	A

Continued on next page...

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Mol	Chain	Res	Type
1	CA	1280	A
1	CA	1282	C
1	CA	1284	C
1	CA	1286	A
1	CA	1287	A
1	CA	1288	A
1	CA	1293	G
1	CA	1294	G
1	CA	1295	G
1	CA	1297	C
1	CA	1298	C
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1304	G
1	CA	1305	G
1	CA	1307	U
1	CA	1319	A
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1333	A
1	CA	1335	C
1	CA	1336	C
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1348	U
1	CA	1357	A
1	CA	1359	C
1	CA	1362	C
1	CA	1363	C
1	CA	1363(A)	A
1	CA	1364	U
1	CA	1369	C
1	CA	1372	U
1	CA	1373	G
1	CA	1379	G
1	CA	1381	U
1	CA	1394	A
1	CA	1397	C

Continued on next page...

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Mol	Chain	Res	Type
1	CA	1398	A
1	CA	1401	G
1	CA	1419	G
1	CA	1441	G
1	CA	1442	G
1	CA	1442(B)	A
1	CA	1446	U
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1457	G
1	CA	1459	C
1	CA	1460	A
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1495	U
1	CA	1497	G
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1520	G
1	CA	1529	G
1	CA	1530	G
23	DA	10	G
23	DA	12	U
23	DA	14	A
23	DA	15	G
23	DA	34	C
23	DA	36	G
23	DA	45	C
23	DA	55	G
23	DA	69	C
23	DA	71	A
23	DA	72	U
23	DA	74	A
23	DA	75	G
23	DA	82	G
23	DA	84	A
23	DA	90	U

Continued on next page...

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Mol	Chain	Res	Type
23	DA	94	C
23	DA	95	G
23	DA	96	G
23	DA	100	G
23	DA	102	G
23	DA	103	A
23	DA	118	A
23	DA	119	A
23	DA	120	U
23	DA	131	G
23	DA	141	A
23	DA	154	G
23	DA	154(A)	C
23	DA	157	U
23	DA	181	A
23	DA	182	A
23	DA	188	G
23	DA	196	A
23	DA	199	A
23	DA	200	U
23	DA	201	C
23	DA	204	A
23	DA	205	G
23	DA	214	G
23	DA	215	G
23	DA	216	A
23	DA	221	A
23	DA	222	A
23	DA	225	A
23	DA	229	A
23	DA	233	A
23	DA	248	G
23	DA	250	G
23	DA	269	U
23	DA	271(I)	G
23	DA	271(K)	U
23	DA	271(L)	U
23	DA	271(M)	G
23	DA	271(N)	U
23	DA	271(Y)	U
23	DA	272(B)	G
23	DA	272(H)	C

Continued on next page...

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Mol	Chain	Res	Type
23	DA	272(I)	U
23	DA	272(J)	C
23	DA	275	G
23	DA	276	A
23	DA	277	C
23	DA	278	A
23	DA	279	C
23	DA	280	C
23	DA	286	C
23	DA	311	A
23	DA	315	G
23	DA	316	C
23	DA	324	A
23	DA	329	G
23	DA	330	A
23	DA	331	A
23	DA	332	A
23	DA	333	G
23	DA	335	C
23	DA	338	G
23	DA	342	G
23	DA	352	G
23	DA	353	G
23	DA	363	G
23	DA	363(C)	G
23	DA	363(F)	A
23	DA	386	G
23	DA	404	C
23	DA	405	U
23	DA	407	G
23	DA	411	G
23	DA	412	A
23	DA	428	A
23	DA	444	C
23	DA	448	U
23	DA	455	C
23	DA	457	A
23	DA	459	U
23	DA	460	A
23	DA	470	A
23	DA	471	A
23	DA	481	G

Continued on next page...

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Mol	Chain	Res	Type
23	DA	482	A
23	DA	505	A
23	DA	509	C
23	DA	512	G
23	DA	529	A
23	DA	530	G
23	DA	531	C
23	DA	532	A
23	DA	533	G
23	DA	543	C
23	DA	545	G
23	DA	546	C
23	DA	547	A
23	DA	548	A
23	DA	563	G
23	DA	573	G
23	DA	575	A
23	DA	587	C
23	DA	588	U
23	DA	602	G
23	DA	603	A
23	DA	604	G
23	DA	607	U
23	DA	614(A)	U
23	DA	614(B)	G
23	DA	614(C)	A
23	DA	615	G
23	DA	620	G
23	DA	627	A
23	DA	632	A
23	DA	637	A
23	DA	645	C
23	DA	646	A
23	DA	647	G
23	DA	652(B)	A
23	DA	652(C)	G
23	DA	652(E)	G
23	DA	652(F)	G
23	DA	652(J)	G
23	DA	652(Q)	G
23	DA	652(R)	C
23	DA	652(T)	C

Continued on next page...

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Mol	Chain	Res	Type
23	DA	652(U)	G
23	DA	668	G
23	DA	669	G
23	DA	686	G
23	DA	701	G
23	DA	702	G
23	DA	707	G
23	DA	708	C
23	DA	709	U
23	DA	715	G
23	DA	717	G
23	DA	730	C
23	DA	752	A
23	DA	753	C
23	DA	762	U
23	DA	764	A
23	DA	765	G
23	DA	771	G
23	DA	775	G
23	DA	776	G
23	DA	782	A
23	DA	784	A
23	DA	785	G
23	DA	790	C
23	DA	792	G
23	DA	805	G
23	DA	810	U
23	DA	811	U
23	DA	812	C
23	DA	819	A
23	DA	827	U
23	DA	828	U
23	DA	830	G
23	DA	857	C
23	DA	859	G
23	DA	879	G
23	DA	882	G
23	DA	895	U
23	DA	896	A
23	DA	897	C
23	DA	900	A
23	DA	901	A

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Mol	Chain	Res	Type
23	DA	908	C
23	DA	910	A
23	DA	914	C
23	DA	917	A
23	DA	932	G
23	DA	938	G
23	DA	941	A
23	DA	945	A
23	DA	946	G
23	DA	953	A
23	DA	958	U
23	DA	959	A
23	DA	961	C
23	DA	965	C
23	DA	974	G
23	DA	975	C
23	DA	975(A)	G
23	DA	983	A
23	DA	990	A
23	DA	991	C
23	DA	996	A
23	DA	1005	C
23	DA	1012	U
23	DA	1013	C
23	DA	1020	A
23	DA	1022	G
23	DA	1023	U
23	DA	1025	G
23	DA	1026	U
23	DA	1027	A
23	DA	1033	U
23	DA	1038	C
23	DA	1039	G
23	DA	1040	C
23	DA	1041	C
23	DA	1042	G
23	DA	1043	C
23	DA	1045	A
23	DA	1046	A
23	DA	1047	G
23	DA	1048	A
23	DA	1049	C

Continued on next page...

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Mol	Chain	Res	Type
23	DA	1050	A
23	DA	1052	C
23	DA	1107	G
23	DA	1109	C
23	DA	1110	G
23	DA	1112	G
23	DA	1115	G
23	DA	1128	A
23	DA	1129	A
23	DA	1130	U
23	DA	1135	C
23	DA	1136	G
23	DA	1139	G
23	DA	1141	U
23	DA	1155	A
23	DA	1170	G
23	DA	1171	G
23	DA	1188	U
23	DA	1210	A
23	DA	1211	U
23	DA	1224	C
23	DA	1244	G
23	DA	1250	G
23	DA	1252	G
23	DA	1253	A
23	DA	1256	G
23	DA	1267	U
23	DA	1271	G
23	DA	1272	A
23	DA	1273	U
23	DA	1300	U
23	DA	1301	A
23	DA	1305	C
23	DA	1314	C
23	DA	1320	C
23	DA	1321	A
23	DA	1329	U
23	DA	1345	C
23	DA	1352	U
23	DA	1359	A
23	DA	1360	A
23	DA	1365	A

Continued on next page...

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Mol	Chain	Res	Type
23	DA	1368	G
23	DA	1370	C
23	DA	1373	A
23	DA	1374	G
23	DA	1378	A
23	DA	1379	A
23	DA	1383	C
23	DA	1384	A
23	DA	1385	G
23	DA	1386	C
23	DA	1395	A
23	DA	1405	U
23	DA	1416	G
23	DA	1417	C
23	DA	1419	A
23	DA	1420	U
23	DA	1421	G
23	DA	1427	A
23	DA	1428	C
23	DA	1437	C
23	DA	1445	A
23	DA	1449	A
23	DA	1455	G
23	DA	1459	G
23	DA	1467	C
23	DA	1471	A
23	DA	1472	A
23	DA	1482	G
23	DA	1488	G
23	DA	1490	A
23	DA	1493	C
23	DA	1497	U
23	DA	1507	A
23	DA	1508	A
23	DA	1509	C
23	DA	1509(A)	A
23	DA	1510	G
23	DA	1520	G
23	DA	1531	C
23	DA	1539	G
23	DA	1542	A
23	DA	1543	C

Continued on next page...

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Mol	Chain	Res	Type
23	DA	1545	A
23	DA	1548	C
23	DA	1554	A
23	DA	1558	A
23	DA	1559	G
23	DA	1560	G
23	DA	1566	A
23	DA	1569	A
23	DA	1578	U
23	DA	1579	A
23	DA	1580	A
23	DA	1581	G
23	DA	1584	C
23	DA	1586	A
23	DA	1598	C
23	DA	1608	A
23	DA	1609	A
23	DA	1610	A
23	DA	1617	C
23	DA	1640	C
23	DA	1647	G
23	DA	1648	C
23	DA	1652	A
23	DA	1654	A
23	DA	1655	A
23	DA	1674	G
23	DA	1675	C
23	DA	1696	G
23	DA	1698	A
23	DA	1700	A
23	DA	1701	A
23	DA	1703	G
23	DA	1721	G
23	DA	1722	A
23	DA	1746	G
23	DA	1750	G
23	DA	1763	G
23	DA	1764	G
23	DA	1773	A
23	DA	1777	U
23	DA	1780	A
23	DA	1782	C

Continued on next page...

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Mol	Chain	Res	Type
23	DA	1791	A
23	DA	1799	G
23	DA	1800	C
23	DA	1801	G
23	DA	1812	A
23	DA	1816	G
23	DA	1819	A
23	DA	1820	U
23	DA	1829	A
23	DA	1835	G
23	DA	1838	C
23	DA	1840	G
23	DA	1847	A
23	DA	1848	A
23	DA	1858	G
23	DA	1865	G
23	DA	1866	C
23	DA	1877	A
23	DA	1878	G
23	DA	1881	C
23	DA	1882	C
23	DA	1896	G
23	DA	1900	A
23	DA	1905	C
23	DA	1906	G
23	DA	1912	A
23	DA	1913	A
23	DA	1914	C
23	DA	1929	G
23	DA	1930	G
23	DA	1931	U
23	DA	1936	A
23	DA	1937	A
23	DA	1938	A
23	DA	1939	U
23	DA	1952	A
23	DA	1955	U
23	DA	1963	U
23	DA	1964	G
23	DA	1966	A
23	DA	1967	C
23	DA	1969	A

Continued on next page...

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Mol	Chain	Res	Type
23	DA	1970	A
23	DA	1971	A
23	DA	1972	A
23	DA	1982	C
23	DA	1991	U
23	DA	1993	U
23	DA	1997	G
23	DA	2005	A
23	DA	2018	G
23	DA	2023	G
23	DA	2031	A
23	DA	2032	G
23	DA	2033	A
23	DA	2036	C
23	DA	2043	C
23	DA	2049	G
23	DA	2055	C
23	DA	2056	G
23	DA	2060	A
23	DA	2061	G
23	DA	2062	A
23	DA	2063	C
23	DA	2069	G
23	DA	2099	U
23	DA	2100	G
23	DA	2103	C
23	DA	2104	G
23	DA	2108	C
23	DA	2110	G
23	DA	2111	C
23	DA	2112	G
23	DA	2115	G
23	DA	2116	G
23	DA	2117	A
23	DA	2119	A
23	DA	2123	G
23	DA	2126	A
23	DA	2127	G
23	DA	2128	C
23	DA	2131	G
23	DA	2133	G
23	DA	2134	A

Continued on next page...

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Mol	Chain	Res	Type
23	DA	2135	A
23	DA	2136	C
23	DA	2146	C
23	DA	2147	G
23	DA	2150	U
23	DA	2159	G
23	DA	2160	G
23	DA	2161	C
23	DA	2162	G
23	DA	2164	C
23	DA	2169	A
23	DA	2170	A
23	DA	2172	U
23	DA	2173	A
23	DA	2174	C
23	DA	2176	A
23	DA	2179	C
23	DA	2180	U
23	DA	2183	C
23	DA	2185	C
23	DA	2186	G
23	DA	2187	G
23	DA	2188	C
23	DA	2191	G
23	DA	2192	G
23	DA	2193	G
23	DA	2198	A
23	DA	2199	A
23	DA	2200	C
23	DA	2206	G
23	DA	2207	G
23	DA	2208	A
23	DA	2225	A
23	DA	2234	G
23	DA	2238	G
23	DA	2239	G
23	DA	2248	C
23	DA	2252	G
23	DA	2268	A
23	DA	2273	A
23	DA	2275	C
23	DA	2278	A

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Mol	Chain	Res	Type
23	DA	2283	C
23	DA	2287	A
23	DA	2288	A
23	DA	2289	G
23	DA	2291	U
23	DA	2294	C
23	DA	2305	A
23	DA	2306	C
23	DA	2307	G
23	DA	2308	G
23	DA	2309	A
23	DA	2311	A
23	DA	2316	C
23	DA	2319	G
23	DA	2320	A
23	DA	2321	G
23	DA	2325	G
23	DA	2327	A
23	DA	2334	G
23	DA	2336	A
23	DA	2343	C
23	DA	2347	C
23	DA	2350	C
23	DA	2354	G
23	DA	2379	G
23	DA	2383	G
23	DA	2385	C
23	DA	2388	A
23	DA	2391	G
23	DA	2400	G
23	DA	2406	U
23	DA	2407	G
23	DA	2410	G
23	DA	2414	G
23	DA	2418	A
23	DA	2422	A
23	DA	2425	A
23	DA	2429	G
23	DA	2430	A
23	DA	2435	A
23	DA	2439	A
23	DA	2440	C

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Mol	Chain	Res	Type
23	DA	2441	C
23	DA	2448	A
23	DA	2465	C
23	DA	2469	A
23	DA	2470	G
23	DA	2472	G
23	DA	2474	C
23	DA	2476	A
23	DA	2477	C
23	DA	2486	G
23	DA	2487	G
23	DA	2502	G
23	DA	2504	U
23	DA	2505	G
23	DA	2506	U
23	DA	2518	A
23	DA	2520	C
23	DA	2525	G
23	DA	2529	G
23	DA	2535	G
23	DA	2554	U
23	DA	2564	A
23	DA	2566	A
23	DA	2567	G
23	DA	2573	C
23	DA	2582	G
23	DA	2585	U
23	DA	2586	C
23	DA	2602	A
23	DA	2603	G
23	DA	2604	U
23	DA	2608	G
23	DA	2609	U
23	DA	2610	C
23	DA	2611	U
23	DA	2612	C
23	DA	2615	U
23	DA	2628	C
23	DA	2629	A
23	DA	2630	G
23	DA	2654	A
23	DA	2663	G

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Mol	Chain	Res	Type
23	DA	2672	G
23	DA	2674	G
23	DA	2686	G
23	DA	2690	C
23	DA	2691	C
23	DA	2702	U
23	DA	2703	C
23	DA	2707	G
23	DA	2712(A)	A
23	DA	2713	A
23	DA	2714	G
23	DA	2718	G
23	DA	2726	U
23	DA	2733	A
23	DA	2739	U
23	DA	2744	G
23	DA	2748	A
23	DA	2758	A
23	DA	2761	G
23	DA	2765	A
23	DA	2766	G
23	DA	2775	A
23	DA	2778	A
23	DA	2790	A
23	DA	2791	C
23	DA	2802	G
23	DA	2803	C
23	DA	2808	U
23	DA	2820	A
23	DA	2821	A
23	DA	2833	G
23	DA	2834	G
23	DA	2835	A
23	DA	2847	U
23	DA	2872	G
23	DA	2873	A
23	DA	2880	C
23	DA	2892	A
24	DB	2	C
24	DB	8	U
24	DB	9	G
24	DB	12	C

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Mol	Chain	Res	Type
24	DB	13	A
24	DB	15	A
24	DB	19	G
24	DB	21	G
24	DB	24	G
24	DB	25	A
24	DB	26	A
24	DB	28	C
24	DB	33	G
24	DB	34	U
24	DB	40	U
24	DB	53	A
24	DB	54	G
24	DB	56	G
24	DB	73	A
24	DB	74	U
24	DB	75	G
24	DB	85	G
24	DB	88	C
24	DB	89	G
24	DB	106	G
24	DB	110	G

All (183) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	60	A
1	AA	115	G
1	AA	173	U
1	AA	243	A
1	AA	266	G
1	AA	344	A
1	AA	428	G
1	AA	484	G
1	AA	495	A
1	AA	509	A
1	AA	532	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	793	U
1	AA	913	A

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Mol	Chain	Res	Type
1	AA	934	C
1	AA	968	A
1	AA	992	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1156	G
1	AA	1201	A
1	AA	1285	A
1	AA	1299	A
1	AA	1300	G
1	AA	1346	A
1	AA	1378	C
1	AA	1442	G
1	AA	1452	C
1	AA	1493	A
1	AA	1504	G
23	BA	71	A
23	BA	102	G
23	BA	196	A
23	BA	249	C
23	BA	271(K)	U
23	BA	271(L)	U
23	BA	271(M)	G
23	BA	278	A
23	BA	363(E)	U
23	BA	481	G
23	BA	542	C
23	BA	547	A
23	BA	587	C
23	BA	669	G
23	BA	685	A
23	BA	746	A
23	BA	752	A
23	BA	764	A
23	BA	827	U
23	BA	856	C
23	BA	900	A
23	BA	945	A
23	BA	974	G
23	BA	1026	U
23	BA	1047	G

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Mol	Chain	Res	Type
23	BA	1049	C
23	BA	1106	G
23	BA	1108	U
23	BA	1110	G
23	BA	1155	A
23	BA	1174	A
23	BA	1175	U
23	BA	1176	G
23	BA	1210	A
23	BA	1300	U
23	BA	1378	A
23	BA	1419	A
23	BA	1427	A
23	BA	1507	A
23	BA	1530	C
23	BA	1536	C
23	BA	1538	G
23	BA	1558	A
23	BA	1608	A
23	BA	1653	G
23	BA	1799	G
23	BA	1819	A
23	BA	1992	G
23	BA	2116	G
23	BA	2126	A
23	BA	2172	U
23	BA	2308	G
23	BA	2318	G
23	BA	2406	U
23	BA	2439	A
23	BA	2602	A
23	BA	2610	C
23	BA	2689	U
23	BA	2778	A
23	BA	2802	G
1	CA	60	A
1	CA	115	G
1	CA	173	U
1	CA	243	A
1	CA	266	G
1	CA	344	A
1	CA	428	G

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Mol	Chain	Res	Type
1	CA	429	U
1	CA	484	G
1	CA	495	A
1	CA	509	A
1	CA	560	U
1	CA	561	U
1	CA	687	A
1	CA	748	C
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1211	U
1	CA	1227	A
1	CA	1256	A
1	CA	1280	A
1	CA	1285	A
1	CA	1299	A
1	CA	1300	G
1	CA	1346	A
1	CA	1442	G
1	CA	1493	A
1	CA	1504	G
23	DA	71	A
23	DA	102	G
23	DA	196	A
23	DA	249	C
23	DA	271(K)	U
23	DA	271(L)	U
23	DA	271(M)	G
23	DA	278	A
23	DA	363(E)	U
23	DA	481	G
23	DA	542	C
23	DA	547	A
23	DA	587	C
23	DA	669	G
23	DA	685	A

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Mol	Chain	Res	Type
23	DA	752	A
23	DA	764	A
23	DA	827	U
23	DA	856	C
23	DA	900	A
23	DA	945	A
23	DA	1026	U
23	DA	1047	G
23	DA	1049	C
23	DA	1106	G
23	DA	1108	U
23	DA	1110	G
23	DA	1155	A
23	DA	1210	A
23	DA	1300	U
23	DA	1301	A
23	DA	1378	A
23	DA	1396	U
23	DA	1419	A
23	DA	1427	A
23	DA	1507	A
23	DA	1530	C
23	DA	1538	G
23	DA	1558	A
23	DA	1608	A
23	DA	1653	G
23	DA	1799	G
23	DA	1819	A
23	DA	1992	G
23	DA	2116	G
23	DA	2126	A
23	DA	2172	U
23	DA	2308	G
23	DA	2318	G
23	DA	2406	U
23	DA	2439	A
23	DA	2602	A
23	DA	2610	C
23	DA	2689	U
23	DA	2778	A
23	DA	2802	G

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 1662 ligands modelled in this entry, 1662 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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, 95th 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	1501/1522 (98%)	0.01	57 (3%) 40 20	47, 95, 155, 169	0
1	CA	1497/1522 (98%)	-0.01	63 (4%) 36 17	50, 96, 158, 171	0
2	AB	230/256 (89%)	-0.08	8 (3%) 44 22	87, 114, 134, 148	0
2	CB	229/256 (89%)	0.31	9 (3%) 39 19	92, 116, 136, 149	0
3	AC	206/239 (86%)	0.06	5 (2%) 59 36	85, 109, 127, 136	0
3	CC	206/239 (86%)	0.34	15 (7%) 15 6	94, 120, 143, 158	0
4	AD	208/209 (99%)	-0.05	5 (2%) 59 36	75, 94, 114, 125	0
4	CD	208/209 (99%)	0.03	3 (1%) 75 56	76, 93, 114, 124	0
5	AE	148/162 (91%)	-0.21	0 100 100	66, 86, 103, 125	0
5	CE	148/162 (91%)	-0.07	3 (2%) 65 43	69, 88, 104, 127	0
6	AF	100/101 (99%)	-0.31	1 (1%) 82 67	67, 82, 100, 116	0
6	CF	100/101 (99%)	-0.32	1 (1%) 82 67	70, 86, 103, 117	0
7	AG	155/156 (99%)	1.94	67 (43%) 0 0	113, 139, 153, 159	0
7	CG	155/156 (99%)	1.93	69 (44%) 0 0	122, 137, 149, 159	0
8	AH	138/138 (100%)	0.10	2 (1%) 75 56	71, 90, 100, 110	0
8	CH	138/138 (100%)	-0.04	5 (3%) 42 21	71, 92, 103, 113	0
9	AI	125/128 (97%)	1.16	33 (26%) 0 0	110, 137, 149, 154	0
9	CI	125/128 (97%)	2.58	65 (52%) 0 0	115, 139, 152, 163	0
10	AJ	96/105 (91%)	1.55	32 (33%) 0 0	92, 126, 141, 147	0
10	CJ	96/105 (91%)	1.93	41 (42%) 0 0	108, 134, 150, 160	0
11	AK	114/129 (88%)	-0.05	1 (0%) 84 70	60, 86, 108, 120	0
11	CK	114/129 (88%)	0.07	5 (4%) 34 16	63, 89, 107, 126	0
12	AL	122/132 (92%)	-0.12	1 (0%) 86 72	62, 77, 95, 112	0
12	CL	122/132 (92%)	-0.03	0 100 100	63, 77, 96, 109	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AM	114/126 (90%)	1.46	34 (29%) 0 0	112, 139, 150, 153	0
13	CM	114/126 (90%)	1.84	41 (35%) 0 0	116, 140, 151, 160	0
14	AN	60/61 (98%)	0.70	8 (13%) 3 1	93, 118, 131, 144	0
14	CN	60/61 (98%)	0.79	8 (13%) 3 1	103, 122, 134, 139	0
15	AO	88/89 (98%)	-0.12	0 100 100	63, 85, 103, 113	0
15	CO	88/89 (98%)	0.02	1 (1%) 80 64	63, 85, 105, 111	0
16	AP	82/88 (93%)	0.56	8 (9%) 7 2	76, 88, 110, 120	0
16	CP	82/88 (93%)	0.33	4 (4%) 29 13	73, 85, 105, 117	0
17	AQ	99/105 (94%)	-0.02	1 (1%) 82 67	68, 82, 102, 106	0
17	CQ	99/105 (94%)	0.08	1 (1%) 82 67	69, 83, 101, 108	0
18	AR	68/88 (77%)	-0.10	2 (2%) 51 28	71, 82, 105, 112	0
18	CR	68/88 (77%)	0.17	1 (1%) 73 54	75, 85, 105, 117	0
19	AS	81/93 (87%)	2.34	37 (45%) 0 0	113, 138, 147, 152	0
19	CS	81/93 (87%)	2.81	44 (54%) 0 0	114, 140, 150, 153	0
20	AT	87/106 (82%)	0.30	0 100 100	75, 88, 103, 111	0
20	CT	97/106 (91%)	0.06	0 100 100	72, 86, 105, 115	0
21	AU	23/27 (85%)	3.23	14 (60%) 0 0	128, 136, 145, 154	0
21	CU	23/27 (85%)	4.11	18 (78%) 0 0	129, 137, 148, 150	0
22	AX	95/101 (94%)	0.18	4 (4%) 36 17	69, 94, 115, 123	0
22	CX	95/101 (94%)	1.08	17 (17%) 1 0	88, 106, 129, 145	0
23	BA	2837/2913 (97%)	-0.26	49 (1%) 70 48	26, 47, 132, 176	0
23	DA	2814/2913 (96%)	-0.41	77 (2%) 54 30	28, 50, 133, 176	0
24	BB	120/122 (98%)	-0.37	0 100 100	43, 72, 93, 110	0
24	DB	120/122 (98%)	-0.14	1 (0%) 86 72	48, 81, 106, 117	0
25	BD	275/276 (99%)	-0.44	0 100 100	29, 45, 63, 113	0
25	DD	275/276 (99%)	-0.44	1 (0%) 92 85	30, 47, 66, 116	0
26	BE	204/206 (99%)	-0.40	0 100 100	28, 49, 72, 95	0
26	DE	204/206 (99%)	-0.42	0 100 100	29, 50, 76, 95	0
27	BF	203/210 (96%)	-0.40	0 100 100	29, 54, 88, 111	0
27	DF	203/210 (96%)	-0.35	0 100 100	31, 59, 90, 112	0
28	BG	181/182 (99%)	-0.03	8 (4%) 34 16	76, 110, 133, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	DG	181/182 (99%)	0.81	25 (13%) 3 1	86, 117, 138, 148	0
29	BH	174/180 (96%)	-0.30	0 100 100	54, 73, 94, 110	0
29	DH	174/180 (96%)	0.33	7 (4%) 38 18	65, 82, 101, 119	0
30	BI	146/148 (98%)	-0.38	1 (0%) 87 75	54, 81, 99, 115	0
30	DI	146/148 (98%)	-0.04	2 (1%) 75 56	56, 89, 108, 120	0
31	BN	140/140 (100%)	-0.38	0 100 100	38, 49, 78, 92	0
31	DN	140/140 (100%)	-0.29	1 (0%) 87 75	40, 54, 82, 96	0
32	BO	122/122 (100%)	-0.41	0 100 100	35, 50, 69, 77	0
32	DO	122/122 (100%)	-0.57	0 100 100	36, 52, 69, 77	0
33	BP	149/150 (99%)	-0.31	0 100 100	30, 58, 89, 105	0
33	DP	149/150 (99%)	-0.18	3 (2%) 65 43	31, 62, 92, 112	0
34	BQ	141/141 (100%)	-0.33	0 100 100	39, 54, 71, 83	0
34	DQ	141/141 (100%)	-0.36	0 100 100	41, 58, 77, 88	0
35	BR	118/118 (100%)	-0.32	0 100 100	34, 44, 58, 77	0
35	DR	118/118 (100%)	-0.32	0 100 100	36, 47, 62, 78	0
36	BS	110/112 (98%)	-0.11	0 100 100	50, 69, 89, 96	0
36	DS	110/112 (98%)	0.29	5 (4%) 33 16	55, 74, 94, 102	0
37	BT	131/146 (89%)	-0.44	0 100 100	43, 55, 92, 119	0
37	DT	131/146 (89%)	-0.36	1 (0%) 86 72	46, 57, 93, 128	0
38	BU	116/118 (98%)	-0.43	0 100 100	32, 44, 62, 71	0
38	DU	116/118 (98%)	-0.51	0 100 100	34, 48, 66, 73	0
39	BV	101/101 (100%)	-0.35	1 (0%) 82 67	29, 56, 79, 103	0
39	DV	101/101 (100%)	-0.23	0 100 100	32, 62, 85, 103	0
40	BW	112/113 (99%)	-0.42	0 100 100	33, 40, 62, 103	0
40	DW	112/113 (99%)	-0.49	0 100 100	35, 42, 67, 105	0
41	BX	95/96 (98%)	-0.28	0 100 100	38, 49, 72, 88	0
41	DX	95/96 (98%)	-0.31	1 (1%) 80 64	41, 52, 77, 90	0
42	BY	107/110 (97%)	-0.29	0 100 100	47, 61, 85, 108	0
42	DY	107/110 (97%)	0.16	6 (5%) 24 10	52, 65, 89, 113	0
43	BZ	201/206 (97%)	-0.42	0 100 100	53, 76, 99, 122	0
43	DZ	198/206 (96%)	0.02	5 (2%) 57 34	62, 81, 102, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	B0	76/85 (89%)	-0.31	0 100 100	39, 48, 64, 91	0
44	D0	76/85 (89%)	0.04	2 (2%) 56 32	43, 52, 66, 92	0
45	B1	97/98 (98%)	-0.23	0 100 100	36, 48, 82, 97	0
45	D1	97/98 (98%)	-0.18	2 (2%) 63 42	36, 51, 83, 98	0
46	B2	70/72 (97%)	-0.26	0 100 100	46, 60, 76, 107	0
46	D2	70/72 (97%)	-0.23	0 100 100	50, 64, 81, 103	0
47	B3	59/60 (98%)	-0.25	0 100 100	38, 49, 86, 97	0
47	D3	59/60 (98%)	0.14	1 (1%) 70 48	41, 53, 93, 102	0
48	B4	46/71 (64%)	-0.30	2 (4%) 35 17	101, 129, 144, 148	0
48	D4	46/71 (64%)	0.46	5 (10%) 5 2	113, 133, 144, 152	0
49	B5	59/60 (98%)	-0.54	0 100 100	30, 45, 66, 80	0
49	D5	59/60 (98%)	-0.54	0 100 100	32, 47, 68, 81	0
50	B6	53/54 (98%)	-0.56	0 100 100	42, 51, 70, 79	0
50	D6	53/54 (98%)	-0.26	2 (3%) 40 20	43, 54, 72, 82	0
51	B7	48/49 (97%)	-0.31	0 100 100	30, 34, 55, 80	0
51	D7	48/49 (97%)	-0.22	0 100 100	32, 35, 58, 84	0
52	B8	64/65 (98%)	-0.27	0 100 100	38, 43, 52, 70	0
52	D8	64/65 (98%)	-0.21	0 100 100	40, 45, 55, 70	0
53	B9	36/37 (97%)	0.24	0 100 100	44, 55, 62, 73	0
53	D9	36/37 (97%)	0.41	1 (2%) 53 29	47, 59, 68, 75	0
All	All	20641/21444 (96%)	-0.05	943 (4%) 32 15	26, 71, 144, 176	0

All (943) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
21	CU	11	GLY	11.7
19	CS	69	HIS	10.9
21	CU	12	LYS	10.2
19	CS	4	SER	10.1
19	AS	33	THR	9.4
19	CS	39	THR	9.4
1	CA	1030(B)	C	8.6
23	BA	888	C	8.5
19	AS	50	ALA	8.3
19	AS	39	THR	8.2

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Mol	Chain	Res	Type	RSRZ
9	CI	13	ALA	8.2
10	AJ	10	GLY	7.9
11	CK	13	GLN	7.9
21	CU	16	GLY	7.8
9	CI	65	VAL	7.8
9	CI	63	ILE	7.8
19	CS	68	GLY	7.7
13	AM	89	GLY	7.7
9	CI	10	ARG	7.6
10	CJ	26	ALA	7.6
21	AU	14	TRP	7.5
13	CM	85	GLY	7.4
9	CI	29	ASN	7.4
7	CG	83	ALA	7.2
19	CS	33	THR	7.1
19	AS	59	PRO	7.0
21	AU	12	LYS	7.0
10	CJ	72	VAL	7.0
7	AG	108	ALA	7.0
9	CI	15	ALA	7.0
23	DA	2125	G	6.9
21	AU	5	ASP	6.9
28	DG	2	PRO	6.9
21	CU	17	THR	6.8
13	CM	93	ARG	6.7
13	AM	86	CYS	6.7
19	AS	35	SER	6.6
13	CM	89	GLY	6.5
7	CG	28	ASN	6.5
19	CS	62	ILE	6.5
19	CS	74	PHE	6.5
21	AU	16	GLY	6.3
1	CA	1036	G	6.3
10	AJ	72	VAL	6.2
19	CS	76	PRO	6.2
19	AS	32	LYS	6.2
21	AU	4	GLY	6.2
10	CJ	65	LEU	6.1
7	CG	154	TYR	6.1
7	AG	75	VAL	6.1
7	CG	37	ASN	6.1
19	CS	31	ILE	6.0

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Mol	Chain	Res	Type	RSRZ
7	CG	80	VAL	6.0
21	CU	22	ARG	6.0
7	CG	33	ASP	6.0
13	CM	87	TYR	5.9
23	DA	2146	C	5.9
10	AJ	23	ILE	5.9
13	CM	40	ASN	5.9
13	AM	68	GLY	5.9
19	AS	57	HIS	5.9
7	CG	40	ALA	5.9
7	AG	156	TRP	5.9
19	CS	40	ILE	5.9
9	CI	71	SER	5.8
7	AG	76	ARG	5.8
13	CM	98	VAL	5.8
7	CG	84	ASN	5.8
9	CI	106	ALA	5.7
28	DG	155	MET	5.7
7	AG	83	ALA	5.7
9	CI	9	ARG	5.7
9	CI	30	GLY	5.7
19	AS	31	ILE	5.7
23	DA	2107	C	5.7
7	CG	146	GLU	5.6
9	CI	73	GLN	5.6
9	AI	64	THR	5.6
23	DA	2152	G	5.6
1	CA	1286	A	5.6
19	CS	38	SER	5.5
13	AM	71	ARG	5.5
13	CM	68	GLY	5.5
19	CS	49	ILE	5.5
19	AS	49	ILE	5.5
10	AJ	20	ALA	5.5
28	DG	45	GLU	5.5
1	CA	1287	A	5.4
7	CG	17	VAL	5.4
21	CU	10	ARG	5.4
1	AA	1226	C	5.4
1	CA	1030(A)	G	5.3
13	CM	92	HIS	5.3
7	AG	62	PHE	5.3

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Mol	Chain	Res	Type	RSRZ
9	CI	14	VAL	5.3
7	AG	12	LEU	5.3
19	CS	75	ALA	5.3
1	CA	1035	A	5.2
13	CM	91	ARG	5.2
19	AS	41	VAL	5.2
10	CJ	45	ARG	5.2
23	DA	2147	G	5.2
7	AG	43	PHE	5.2
19	CS	82	GLY	5.2
19	CS	50	ALA	5.2
1	CA	1030(C)	G	5.2
10	AJ	34	VAL	5.2
21	AU	18	TYR	5.1
10	AJ	24	VAL	5.1
19	AS	77	THR	5.1
23	BA	887	A	5.1
1	AA	204	U	5.1
23	DA	2162	G	5.1
13	CM	13	LYS	5.1
9	CI	70	LYS	5.1
13	CM	43	THR	5.0
7	CG	39	ALA	5.0
7	AG	105	VAL	5.0
9	CI	75	ASP	5.0
13	CM	86	CYS	5.0
7	AG	40	ALA	5.0
13	CM	88	ARG	5.0
1	CA	1026	G	4.9
13	AM	96	LEU	4.9
21	CU	14	TRP	4.9
9	CI	7	THR	4.9
19	AS	40	ILE	4.9
1	CA	956	U	4.9
9	CI	36	TYR	4.9
19	AS	38	SER	4.8
9	CI	19	LEU	4.8
21	CU	15	ARG	4.8
10	AJ	76	ASN	4.8
1	AA	1035	A	4.8
28	DG	88	ILE	4.7
7	CG	36	LYS	4.7

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Mol	Chain	Res	Type	RSRZ
7	AG	109	ASN	4.7
14	AN	32	SER	4.7
19	AS	76	PRO	4.7
10	CJ	21	GLN	4.6
1	CA	1001	A	4.6
9	CI	74	ILE	4.6
23	DA	652(H)	C	4.6
7	CG	29	LYS	4.6
7	CG	79	ARG	4.6
7	CG	32	ARG	4.6
13	AM	94	ARG	4.6
3	CC	206	GLU	4.6
13	AM	34	LEU	4.6
23	DA	652(I)	C	4.6
7	CG	19	GLY	4.5
7	AG	37	ASN	4.5
9	CI	50	LEU	4.5
14	AN	13	THR	4.5
19	AS	81	ARG	4.5
1	AA	1030(B)	C	4.5
9	CI	77	ILE	4.5
10	CJ	23	ILE	4.4
7	AG	11	GLN	4.4
1	CA	1001(A)	G	4.4
21	AU	21	TYR	4.4
13	CM	12	ASN	4.4
7	CG	141	VAL	4.4
13	CM	112	GLY	4.4
9	CI	37	PHE	4.4
7	CG	10	ARG	4.4
7	CG	109	ASN	4.4
13	AM	87	TYR	4.3
21	CU	18	TYR	4.3
1	AA	1002	G	4.3
13	CM	69	GLU	4.3
1	AA	1026	G	4.3
21	CU	8	THR	4.3
1	CA	1353	G	4.3
7	AG	134	ALA	4.3
13	CM	24	GLY	4.3
19	AS	70	LYS	4.3
9	CI	31	GLN	4.3

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Mol	Chain	Res	Type	RSRZ
39	BV	101	GLY	4.3
7	AG	85	TYR	4.2
9	CI	88	TYR	4.2
1	AA	1287	A	4.2
23	DA	229	A	4.2
23	DA	2169	A	4.2
19	CS	53	ASN	4.2
7	AG	73	MET	4.2
14	AN	14	PRO	4.2
10	CJ	5	ARG	4.2
7	CG	81	GLY	4.2
23	DA	2108	C	4.2
23	BA	2116	G	4.1
9	CI	72	GLY	4.1
9	CI	32	ASP	4.1
7	AG	154	TYR	4.1
7	CG	16	LEU	4.1
1	AA	1137	C	4.1
10	CJ	27	ALA	4.1
19	CS	11	VAL	4.1
7	CG	86	GLN	4.1
19	AS	74	PHE	4.1
7	AG	141	VAL	4.1
9	CI	110	GLU	4.1
1	AA	1001(A)	G	4.1
1	CA	1002	G	4.1
7	AG	50	ILE	4.1
23	DA	652(G)	G	4.1
23	DA	2124	G	4.1
7	CG	62	PHE	4.0
2	CB	99	GLY	4.0
10	CJ	6	ILE	4.0
9	AI	65	VAL	4.0
10	AJ	35	SER	4.0
10	CJ	22	LYS	4.0
23	DA	2155	G	4.0
7	AG	147	ALA	4.0
9	CI	34	ASN	4.0
9	CI	115	GLY	4.0
23	DA	2144	U	4.0
1	CA	1312	G	4.0
1	AA	1030	C	3.9

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Mol	Chain	Res	Type	RSRZ
13	CM	95	GLY	3.9
19	AS	56	GLN	3.9
23	DA	2126	A	3.9
7	AG	152	ALA	3.9
28	BG	87	PRO	3.9
45	D1	2	SER	3.9
7	AG	77	SER	3.9
23	DA	2139	C	3.9
47	D3	60	GLU	3.9
19	CS	80	TYR	3.9
36	DS	55	ALA	3.9
13	AM	85	GLY	3.9
9	CI	66	ARG	3.9
7	CG	52	GLU	3.9
3	CC	65	ALA	3.9
7	AG	87	VAL	3.9
13	AM	90	LEU	3.9
19	AS	60	VAL	3.9
10	CJ	10	GLY	3.9
19	CS	61	TYR	3.9
21	AU	17	THR	3.8
10	AJ	73	ASP	3.8
19	CS	60	VAL	3.8
9	CI	18	PHE	3.8
9	CI	42	ARG	3.8
14	CN	2	ALA	3.8
1	AA	1288	A	3.8
23	DA	2165	G	3.8
10	CJ	20	ALA	3.8
9	AI	101	PHE	3.8
19	CS	63	THR	3.7
19	AS	53	ASN	3.7
7	CG	112	PRO	3.7
7	AG	31	MET	3.7
13	AM	49	THR	3.7
28	BG	75	LYS	3.7
1	AA	1030(A)	G	3.7
9	AI	98	PRO	3.7
7	AG	120	ILE	3.7
1	AA	1447	A	3.7
7	AG	28	ASN	3.7
9	AI	9	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
10	AJ	33	GLN	3.7
22	CX	94	GLN	3.7
10	CJ	69	ASN	3.7
23	DA	2801(A)	A	3.7
7	AG	49	ILE	3.7
42	DY	93	GLY	3.7
1	CA	1285	A	3.7
8	CH	131	GLY	3.7
9	CI	55	ALA	3.7
19	AS	69	HIS	3.7
21	AU	15	ARG	3.7
19	CS	8	GLY	3.7
1	AA	1332	A	3.7
10	AJ	65	LEU	3.6
13	CM	84	ILE	3.6
23	DA	2166	G	3.6
19	CS	52	TYR	3.6
9	CI	105	ASP	3.6
13	CM	42	ALA	3.6
21	CU	5	ASP	3.6
1	AA	1138	G	3.6
13	AM	24	GLY	3.6
19	CS	77	THR	3.6
9	CI	89	ASN	3.6
23	DA	652(F)	G	3.6
22	CX	66	GLU	3.6
1	AA	1257	U	3.5
23	BA	2793	G	3.5
10	CJ	64	GLU	3.5
19	CS	48	THR	3.5
29	DH	159	GLU	3.5
7	AG	20	ASP	3.5
9	AI	63	ILE	3.5
7	AG	116	ALA	3.5
1	CA	1240	U	3.5
3	CC	23	TYR	3.5
9	CI	23	ASN	3.5
9	CI	27	THR	3.5
23	BA	2108	C	3.5
10	CJ	25	GLU	3.5
9	CI	28	VAL	3.5
1	AA	1028	C	3.5

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Mol	Chain	Res	Type	RSRZ
22	CX	95	HIS	3.5
13	AM	91	ARG	3.5
1	AA	1001	A	3.5
10	AJ	27	ALA	3.5
13	AM	64	TRP	3.5
19	AS	58	VAL	3.5
19	AS	71	LEU	3.5
23	DA	275	G	3.5
7	CG	18	TYR	3.5
19	AS	79	THR	3.5
1	CA	1030	C	3.4
9	CI	4	TYR	3.4
7	AG	78	ARG	3.4
7	AG	143	ARG	3.4
13	AM	98	VAL	3.4
7	AG	42	ILE	3.4
28	DG	87	PRO	3.4
19	CS	81	ARG	3.4
23	DA	2151	G	3.4
23	DA	2153	G	3.4
10	CJ	100	THR	3.4
13	CM	90	LEU	3.4
23	DA	2173	A	3.4
9	AI	4	TYR	3.4
23	DA	2110	G	3.4
23	DA	2154	G	3.4
1	CA	1116	C	3.4
41	DX	92	LEU	3.4
23	DA	2156	G	3.4
7	AG	112	PRO	3.4
13	AM	5	ALA	3.4
28	DG	26	GLN	3.4
9	AI	30	GLY	3.4
10	AJ	36	GLY	3.4
7	CG	35	LYS	3.4
9	CI	126	SER	3.4
7	AG	153	HIS	3.4
1	CA	958	A	3.4
29	DH	97	ARG	3.4
13	AM	70	LEU	3.3
13	CM	96	LEU	3.3
7	CG	134	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
43	DZ	198	LYS	3.3
13	AM	43	THR	3.3
23	DA	2159	G	3.3
2	AB	188	ALA	3.3
3	AC	13	GLY	3.3
23	DA	2803	C	3.3
7	AG	45	ASP	3.3
1	AA	1290	G	3.3
13	CM	107	ALA	3.3
13	AM	95	GLY	3.3
19	AS	82	GLY	3.3
19	CS	59	PRO	3.3
1	AA	1240	U	3.3
1	AA	1291	G	3.3
13	AM	4	ILE	3.3
7	AG	102	ARG	3.3
19	AS	61	TYR	3.3
23	BA	2160	G	3.3
23	DA	2174	C	3.3
22	CX	84	GLN	3.3
10	CJ	89	ASP	3.3
2	CB	90	MET	3.3
7	CG	92	SER	3.3
10	CJ	32	ALA	3.3
22	CX	37	VAL	3.3
1	CA	1447	A	3.2
13	CM	97	PRO	3.2
21	AU	11	GLY	3.2
4	CD	110	PHE	3.2
7	AG	41	ARG	3.2
4	AD	134	ASP	3.2
9	AI	105	ASP	3.2
10	AJ	11	PHE	3.2
7	CG	2	ALA	3.2
21	CU	24	ARG	3.2
28	DG	64	THR	3.2
1	AA	1025	U	3.2
23	DA	2132	U	3.2
10	CJ	81	THR	3.2
23	BA	2132	U	3.2
13	CM	76	ALA	3.2
9	CI	62	TYR	3.2

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Mol	Chain	Res	Type	RSRZ
3	AC	196	LEU	3.2
7	AG	39	ALA	3.2
7	AG	35	LYS	3.2
23	DA	2802	G	3.2
3	AC	100	ALA	3.2
19	CS	45	VAL	3.2
9	CI	86	VAL	3.2
2	AB	121	LEU	3.2
28	DG	73	ALA	3.2
1	CA	1149	C	3.1
10	CJ	39	PRO	3.1
7	CG	156	TRP	3.1
9	CI	96	LEU	3.1
16	AP	47	ASP	3.1
1	AA	1036	G	3.1
18	AR	29	PHE	3.1
23	DA	2148	G	3.1
23	BA	2118	U	3.1
9	AI	102	LEU	3.1
9	CI	44	VAL	3.1
7	AG	107	ALA	3.1
23	DA	652(O)	C	3.1
23	DA	2141	G	3.1
28	DG	135	LEU	3.1
9	CI	43	ALA	3.1
1	AA	1286	A	3.1
13	CM	9	ILE	3.1
10	CJ	66	ARG	3.1
13	CM	94	ARG	3.1
10	CJ	11	PHE	3.1
1	CA	1326	C	3.1
23	DA	2170	A	3.1
9	AI	17	VAL	3.1
21	AU	6	ARG	3.1
28	DG	142	PRO	3.1
23	DA	652(J)	G	3.1
14	AN	18	VAL	3.1
10	CJ	29	ARG	3.1
23	DA	277	C	3.1
1	CA	1313	U	3.1
7	CG	77	SER	3.1
7	AG	133	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
7	AG	19	GLY	3.1
23	DA	652(P)	G	3.1
23	DA	2804	C	3.1
36	DS	59	LYS	3.0
9	AI	14	VAL	3.0
14	CN	13	THR	3.0
13	AM	48	LEU	3.0
23	BA	2125	G	3.0
21	CU	13	ILE	3.0
28	BG	88	ILE	3.0
9	CI	64	THR	3.0
7	CG	153	HIS	3.0
7	CG	95	ARG	3.0
7	CG	9	VAL	3.0
4	AD	135	LEU	3.0
23	BA	2152	G	3.0
3	CC	205	GLY	3.0
22	CX	73	ALA	3.0
9	CI	12	GLU	3.0
2	CB	135	GLN	3.0
1	CA	1459	C	3.0
9	AI	88	TYR	3.0
1	CA	1249	C	3.0
23	DA	2145	C	3.0
1	AA	1248	A	3.0
8	CH	57	PRO	3.0
9	CI	49	PRO	3.0
23	DA	2790	A	3.0
8	AH	25	ASP	3.0
10	AJ	100	THR	3.0
1	CA	1129	C	3.0
13	CM	66	LEU	3.0
10	CJ	83	GLU	3.0
1	CA	1280	A	3.0
3	AC	193	TYR	3.0
1	CA	1025	U	3.0
2	AB	135	GLN	3.0
19	AS	44	MET	3.0
7	CG	94	ARG	2.9
13	CM	81	LEU	2.9
19	AS	80	TYR	2.9
29	DH	43	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
29	DH	29	PRO	2.9
23	DA	1509	C	2.9
36	DS	58	LEU	2.9
13	CM	60	VAL	2.9
3	CC	179	ARG	2.9
22	CX	20	VAL	2.9
1	CA	1034	G	2.9
7	AG	80	VAL	2.9
1	AA	999	C	2.9
1	CA	1373	G	2.9
1	CA	1030(D)	A	2.9
9	AI	19	LEU	2.9
7	AG	15	ASP	2.9
10	AJ	5	ARG	2.9
9	CI	17	VAL	2.9
7	CG	130	GLY	2.9
22	CX	5	ILE	2.9
13	CM	6	GLY	2.9
23	BA	2130	U	2.9
1	AA	1031	G	2.9
23	BA	2173	A	2.9
23	DA	10	G	2.9
33	DP	92	GLU	2.9
7	AG	58	PRO	2.9
10	CJ	62	HIS	2.9
36	DS	56	LEU	2.9
9	CI	76	ALA	2.8
7	CG	11	GLN	2.8
9	CI	84	ALA	2.8
7	CG	82	GLY	2.8
19	AS	68	GLY	2.8
7	CG	8	GLU	2.8
16	AP	4	ILE	2.8
23	BA	652(H)	C	2.8
23	BA	2794	C	2.8
10	CJ	41	PRO	2.8
9	AI	5	TYR	2.8
9	AI	103	THR	2.8
21	CU	7	ARG	2.8
2	CB	70	PHE	2.8
1	CA	1314	C	2.8
7	AG	100	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
9	CI	22	GLY	2.8
21	AU	3	LYS	2.8
5	CE	120	THR	2.8
19	AS	48	THR	2.8
7	AG	149	ARG	2.8
23	DA	2163	C	2.8
28	BG	25	TYR	2.8
23	DA	2157	G	2.8
28	DG	134	GLY	2.8
10	AJ	47	PHE	2.8
22	CX	24	PHE	2.8
7	CG	41	ARG	2.8
1	CA	1297	C	2.8
13	CM	102	ARG	2.8
23	BA	2166	G	2.8
7	CG	105	VAL	2.8
7	AG	5	ARG	2.8
23	DA	2140	C	2.8
13	CM	82	MET	2.8
23	BA	1535	A	2.8
1	CA	1296	C	2.8
23	BA	652(G)	G	2.7
23	BA	2124	G	2.7
23	BA	2131	G	2.7
23	DA	2792	G	2.7
3	CC	170	GLN	2.7
10	CJ	87	THR	2.7
23	BA	1509	C	2.7
1	CA	1031	G	2.7
19	CS	46	GLY	2.7
21	CU	4	GLY	2.7
2	AB	165	VAL	2.7
10	CJ	98	ILE	2.7
10	CJ	71	LEU	2.7
42	DY	2	ARG	2.7
23	BA	2161	C	2.7
7	CG	27	ILE	2.7
7	CG	5	ARG	2.7
23	BA	2133	G	2.7
7	CG	103	TRP	2.7
3	CC	202	ILE	2.7
23	DA	652(R)	C	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	1241	G	2.7
21	CU	21	TYR	2.7
48	D4	43	TYR	2.7
3	CC	164	ARG	2.7
16	CP	19	ILE	2.7
23	BA	277	C	2.7
7	CG	31	MET	2.7
14	CN	8	GLU	2.7
23	BA	2168	G	2.7
14	CN	14	PRO	2.7
23	BA	2167	U	2.7
13	CM	99	ARG	2.7
7	AG	125	MET	2.7
10	CJ	63	PHE	2.7
10	CJ	68	HIS	2.7
23	BA	272(A)	U	2.7
1	AA	1113	C	2.7
28	DG	157	ILE	2.7
53	D9	10	ILE	2.7
18	AR	31	LEU	2.7
13	CM	11	ARG	2.7
13	AM	39	ILE	2.7
9	CI	91	ASP	2.7
21	CU	3	LYS	2.7
10	AJ	67	THR	2.7
1	AA	1459	C	2.7
7	CG	26	PHE	2.7
23	BA	2804	C	2.7
2	CB	143	GLU	2.7
19	CS	51	VAL	2.7
23	DA	2793	G	2.7
9	AI	106	ALA	2.7
19	CS	35	SER	2.6
9	AI	91	ASP	2.6
9	AI	3	GLN	2.6
10	AJ	21	GLN	2.6
28	DG	17	PRO	2.6
7	AG	18	TYR	2.6
23	BA	2153	G	2.6
9	CI	78	LYS	2.6
19	CS	41	VAL	2.6
7	AG	14	PRO	2.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1331	G	2.6
7	CG	66	VAL	2.6
14	AN	8	GLU	2.6
30	DI	92	VAL	2.6
3	CC	160	ALA	2.6
13	AM	30	ALA	2.6
28	BG	144	ILE	2.6
23	BA	889	C	2.6
7	AG	144	MET	2.6
16	AP	19	ILE	2.6
1	CA	1379	G	2.6
23	DA	1044	G	2.6
1	AA	1129	C	2.6
1	AA	1267	C	2.6
1	CA	1029	C	2.6
1	CA	1140	C	2.6
28	DG	138	GLN	2.6
22	CX	85	LEU	2.6
7	AG	88	PRO	2.6
23	BA	2144	U	2.6
19	CS	84	GLY	2.6
6	AF	55	ASP	2.6
16	CP	39	TYR	2.6
7	CG	149	ARG	2.6
4	AD	37	PRO	2.6
9	AI	39	GLY	2.6
9	CI	6	GLY	2.6
23	DA	2164	C	2.6
7	CG	76	ARG	2.6
21	CU	6	ARG	2.6
24	DB	52	A	2.6
1	AA	1354	C	2.6
10	CJ	19	SER	2.6
9	AI	31	GLN	2.6
14	CN	16	PHE	2.6
13	CM	2	ALA	2.6
3	CC	177	THR	2.6
13	CM	4	ILE	2.5
9	AI	15	ALA	2.5
10	CJ	33	GLN	2.5
11	CK	126	ARG	2.5
10	AJ	8	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
7	AG	30	ILE	2.5
37	DT	1	MET	2.5
7	AG	10	ARG	2.5
7	AG	32	ARG	2.5
7	CG	147	ALA	2.5
28	DG	41	GLN	2.5
31	DN	140	VAL	2.5
19	CS	32	LYS	2.5
28	DG	152	LEU	2.5
21	AU	7	ARG	2.5
10	CJ	67	THR	2.5
3	CC	134	ILE	2.5
1	AA	202	U	2.5
19	AS	4	SER	2.5
9	AI	94	ALA	2.5
1	CA	1311	G	2.5
2	AB	122	PHE	2.5
9	AI	66	ARG	2.5
13	AM	108	ARG	2.5
9	AI	62	TYR	2.5
9	CI	11	LYS	2.5
23	BA	2172	U	2.5
30	DI	3	VAL	2.5
1	AA	1374	A	2.5
1	CA	959	A	2.5
1	CA	1005	A	2.5
29	DH	123	PHE	2.5
16	AP	2	VAL	2.5
9	AI	37	PHE	2.5
22	CX	42	LYS	2.5
7	CG	108	ALA	2.5
19	AS	72	GLY	2.5
23	DA	2116	G	2.5
7	CG	133	GLY	2.5
19	CS	30	LEU	2.5
28	BG	76	SER	2.5
1	CA	1020	U	2.5
7	CG	135	VAL	2.5
13	CM	56	LEU	2.5
23	DA	2158	A	2.5
1	AA	1266	G	2.5
13	AM	93	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
23	BA	2159	G	2.5
23	BA	2146	C	2.4
14	AN	11	LYS	2.4
7	AG	66	VAL	2.4
23	DA	2105	C	2.4
1	AA	1005	A	2.4
4	CD	158	ILE	2.4
7	AG	36	LYS	2.4
1	AA	218	C	2.4
1	CA	1027	C	2.4
9	AI	89	ASN	2.4
1	AA	1330	U	2.4
1	CA	1004	A	2.4
9	CI	41	VAL	2.4
11	CK	75	TYR	2.4
19	CS	10	PHE	2.4
22	AX	16	LEU	2.4
22	CX	62	HIS	2.4
9	CI	94	ALA	2.4
10	AJ	30	SER	2.4
14	AN	60	SER	2.4
16	AP	32	TYR	2.4
16	AP	39	TYR	2.4
10	AJ	69	ASN	2.4
16	CP	21	VAL	2.4
22	AX	77	LEU	2.4
23	DA	2168	G	2.4
33	DP	94	GLU	2.4
28	DG	72	ARG	2.4
43	DZ	112	ARG	2.4
11	CK	98	LEU	2.4
13	AM	40	ASN	2.4
2	CB	33	TYR	2.4
5	CE	94	ALA	2.4
7	CG	150	ALA	2.4
16	AP	17	TYR	2.4
1	CA	1045	C	2.4
23	BA	652(S)	C	2.4
1	CA	1024	G	2.4
2	AB	132	LYS	2.4
10	CJ	34	VAL	2.4
28	DG	3	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
19	AS	29	ARG	2.4
23	DA	2161	C	2.4
19	CS	5	LEU	2.4
23	DA	652(B)	A	2.4
25	DD	276	LYS	2.4
7	CG	74	GLU	2.4
42	DY	44	ILE	2.4
1	CA	1250	A	2.3
9	AI	104	ARG	2.3
9	CI	67	GLY	2.3
14	AN	12	ARG	2.3
19	AS	36	ARG	2.3
1	CA	1000	U	2.3
7	AG	29	LYS	2.3
10	CJ	7	LYS	2.3
1	CA	1243	C	2.3
48	D4	20	ASN	2.3
2	CB	122	PHE	2.3
12	AL	29	GLY	2.3
48	D4	29	PRO	2.3
11	CK	14	VAL	2.3
8	CH	99	GLU	2.3
10	CJ	74	ILE	2.3
13	CM	10	PRO	2.3
16	CP	60	LEU	2.3
1	AA	1033	G	2.3
1	AA	1220	G	2.3
10	AJ	32	ALA	2.3
23	DA	652(S)	C	2.3
23	DA	1052	C	2.3
13	AM	110	ARG	2.3
28	DG	34	LEU	2.3
1	CA	1319	A	2.3
10	AJ	98	ILE	2.3
10	CJ	8	LEU	2.3
42	DY	94	LYS	2.3
1	AA	71	C	2.3
1	CA	1037	C	2.3
9	CI	35	GLU	2.3
1	CA	723	U	2.3
2	AB	118	LEU	2.3
7	CG	30	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
10	CJ	44	VAL	2.3
23	DA	2892	A	2.3
45	D1	83	GLU	2.3
1	CA	1354	C	2.3
9	CI	53	VAL	2.3
7	AG	71	PRO	2.3
48	D4	39	CYS	2.3
7	CG	43	PHE	2.3
7	CG	151	TYR	2.3
13	CM	23	TYR	2.3
29	DH	82	GLY	2.3
1	AA	1034	G	2.3
7	CG	104	LEU	2.3
9	CI	59	PHE	2.3
19	CS	12	ASP	2.3
23	DA	272(A)	U	2.3
23	DA	2172	U	2.3
10	AJ	66	ARG	2.3
1	CA	1288	A	2.3
7	CG	110	GLN	2.3
28	DG	84	LYS	2.3
1	CA	1032	G	2.2
7	AG	103	TRP	2.2
23	DA	2160	G	2.2
22	CX	3	LEU	2.2
13	AM	23	TYR	2.2
43	DZ	92	SER	2.2
1	AA	996	A	2.2
7	CG	3	ARG	2.2
1	AA	100	C	2.2
1	CA	1378	C	2.2
8	CH	1	MET	2.2
23	BA	2171	A	2.2
48	D4	44	THR	2.2
7	CG	72	ARG	2.2
9	CI	5	TYR	2.2
14	CN	38	GLY	2.2
23	DA	11	G	2.2
10	CJ	99	LYS	2.2
8	AH	59	LEU	2.2
28	DG	154	GLY	2.2
1	AA	1024	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	CA	1028	C	2.2
23	BA	2140	C	2.2
30	BI	1	MET	2.2
22	CX	7	GLY	2.2
23	DA	2109	U	2.2
1	AA	1037	C	2.2
7	CG	34	GLY	2.2
15	CO	89	GLY	2.2
17	AQ	78	GLU	2.2
7	AG	145	ALA	2.2
48	B4	29	PRO	2.2
23	DA	276	A	2.2
3	CC	148	GLY	2.2
13	AM	67	GLU	2.2
19	CS	73	GLU	2.2
18	CR	31	LEU	2.2
23	BA	2142	C	2.2
1	AA	1347	G	2.2
1	CA	1310	G	2.2
23	BA	2162	G	2.2
10	CJ	38	ILE	2.2
23	BA	2117	A	2.2
7	CG	12	LEU	2.2
9	AI	90	PRO	2.2
9	AI	107	ARG	2.2
1	AA	1029	C	2.2
1	AA	1023	G	2.2
23	DA	652(Q)	G	2.2
9	CI	92	TYR	2.2
7	CG	51	GLN	2.2
7	AG	33	ASP	2.2
2	CB	81	VAL	2.2
43	DZ	197	ILE	2.2
19	CS	72	GLY	2.2
4	AD	66	ARG	2.2
4	AD	120	LEU	2.2
9	AI	82	ALA	2.2
13	AM	72	ALA	2.2
1	AA	64	G	2.2
28	BG	80	PHE	2.2
7	CG	132	GLY	2.2
7	CG	155	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
29	DH	30	LYS	2.2
42	DY	43	ASN	2.2
10	AJ	74	ILE	2.1
19	AS	51	VAL	2.1
28	BG	72	ARG	2.1
7	AG	82	GLY	2.1
23	BA	2154	G	2.1
7	AG	86	GLN	2.1
1	CA	1210	C	2.1
43	DZ	190	GLU	2.1
50	D6	54	ILE	2.1
23	DA	2167	U	2.1
17	CQ	74	LEU	2.1
7	AG	151	TYR	2.1
5	CE	14	ARG	2.1
23	DA	1048	A	2.1
42	DY	95	LYS	2.1
19	CS	44	MET	2.1
48	B4	17	GLY	2.1
3	CC	149	ALA	2.1
19	CS	78	ARG	2.1
16	AP	1	MET	2.1
23	BA	2147	G	2.1
23	DA	2106	G	2.1
23	BA	2143	C	2.1
14	CN	61	TRP	2.1
28	DG	108	ASN	2.1
19	AS	30	LEU	2.1
10	AJ	99	LYS	2.1
13	AM	27	LYS	2.1
13	AM	50	GLU	2.1
13	CM	39	ILE	2.1
22	AX	4	ASN	2.1
23	DA	34	C	2.1
23	DA	280	C	2.1
21	AU	22	ARG	2.1
28	DG	74	LYS	2.1
50	D6	11	LEU	2.1
10	AJ	64	GLU	2.1
1	AA	1003	G	2.1
1	CA	1266	G	2.1
4	CD	23	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
19	CS	9	VAL	2.1
36	DS	34	HIS	2.1
1	CA	1289	A	2.1
23	BA	2803	C	2.1
23	BA	2896	C	2.1
19	CS	27	GLU	2.1
8	CH	129	VAL	2.1
9	CI	116	LYS	2.1
22	CX	50	SER	2.1
3	CC	13	GLY	2.1
19	AS	12	ASP	2.1
2	CB	163	PHE	2.1
1	AA	1004	A	2.1
1	AA	1289	A	2.1
23	BA	2151	G	2.1
23	DA	2121	G	2.1
9	AI	18	PHE	2.1
1	CA	1235	U	2.1
7	AG	52	GLU	2.1
14	CN	25	VAL	2.1
1	CA	1183	A	2.1
44	D0	75	LEU	2.1
22	CX	79	ASP	2.1
23	BA	2137	C	2.1
23	DA	2142	C	2.1
23	BA	2115	G	2.0
28	DG	11	TYR	2.0
28	DG	46	ALA	2.0
23	BA	2897	U	2.0
7	CG	89	MET	2.0
13	AM	102	ARG	2.0
3	CC	180	ALA	2.0
6	CF	65	VAL	2.0
10	AJ	38	ILE	2.0
2	AB	133	LYS	2.0
3	AC	145	GLY	2.0
10	AJ	63	PHE	2.0
33	DP	91	PHE	2.0
9	AI	126	SER	2.0
23	BA	2801(A)	A	2.0
1	AA	1353	G	2.0
10	AJ	31	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1027	C	2.0
10	AJ	53	PRO	2.0
44	D0	70	GLN	2.0
22	AX	23	LYS	2.0
9	CI	102	LEU	2.0
11	AK	126	ARG	2.0
22	CX	67	GLY	2.0
13	AM	12	ASN	2.0
23	DA	2138	C	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates 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
54	MG	AA	1669	1/1	0.15	0.17	103,103,103,103	0
54	MG	AA	1717	1/1	0.46	0.14	93,93,93,93	0
54	MG	CA	1755	1/1	0.50	0.12	129,129,129,129	0
54	MG	CA	1692	1/1	0.50	0.51	86,86,86,86	0
54	MG	CA	1660	1/1	0.51	0.41	70,70,70,70	0
54	MG	BA	3237	1/1	0.51	0.32	71,71,71,71	0
54	MG	BA	3232	1/1	0.53	0.18	64,64,64,64	0
54	MG	DA	3532	1/1	0.54	0.23	116,116,116,116	0
54	MG	AA	1705	1/1	0.55	0.39	97,97,97,97	0
54	MG	BA	3570	1/1	0.55	0.12	78,78,78,78	0
54	MG	BA	3654	1/1	0.57	0.15	126,126,126,126	0
55	ZN	D4	101	1/1	0.58	0.08	214,214,214,214	0
54	MG	BA	3512	1/1	0.59	0.28	109,109,109,109	0
54	MG	BA	3337	1/1	0.60	0.21	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3202	1/1	0.61	0.33	66,66,66,66	0
54	MG	DA	3530	1/1	0.61	0.24	132,132,132,132	0
54	MG	DA	3410	1/1	0.61	0.12	86,86,86,86	0
54	MG	AA	1625	1/1	0.62	0.40	79,79,79,79	0
54	MG	CA	1633	1/1	0.64	0.56	77,77,77,77	0
54	MG	DA	3177	1/1	0.64	0.13	88,88,88,88	0
54	MG	BA	3240	1/1	0.65	0.28	71,71,71,71	0
54	MG	AA	1723	1/1	0.65	0.12	112,112,112,112	0
54	MG	DA	3164	1/1	0.66	0.38	56,56,56,56	0
54	MG	CA	1711	1/1	0.66	0.11	103,103,103,103	0
54	MG	BA	3367	1/1	0.67	0.20	71,71,71,71	0
54	MG	AA	1706	1/1	0.67	0.10	91,91,91,91	0
54	MG	AA	1603	1/1	0.67	0.36	79,79,79,79	0
54	MG	DA	3506	1/1	0.67	0.11	96,96,96,96	0
54	MG	BA	3239	1/1	0.67	0.15	67,67,67,67	0
54	MG	DA	3278	1/1	0.67	0.07	83,83,83,83	0
54	MG	BA	3097	1/1	0.68	0.54	47,47,47,47	0
54	MG	AA	1622	1/1	0.68	0.19	81,81,81,81	0
54	MG	CA	1757	1/1	0.69	0.25	80,80,80,80	0
54	MG	AA	1614	1/1	0.69	0.50	56,56,56,56	0
54	MG	CE	201	1/1	0.69	0.56	77,77,77,77	0
54	MG	BA	3593	1/1	0.69	0.21	84,84,84,84	0
54	MG	DA	3165	1/1	0.69	0.41	60,60,60,60	0
54	MG	CA	1637	1/1	0.69	0.42	73,73,73,73	0
54	MG	BA	3600	1/1	0.69	0.07	81,81,81,81	0
54	MG	BA	3554	1/1	0.69	0.10	88,88,88,88	0
54	MG	AA	1651	1/1	0.70	0.31	60,60,60,60	0
54	MG	BA	3442	1/1	0.70	0.16	76,76,76,76	0
54	MG	BA	3146	1/1	0.70	0.60	65,65,65,65	0
54	MG	AA	1637	1/1	0.70	0.24	84,84,84,84	0
54	MG	DA	3081	1/1	0.70	0.58	58,58,58,58	0
54	MG	CA	1604	1/1	0.71	0.51	81,81,81,81	0
54	MG	DA	3401	1/1	0.71	0.29	108,108,108,108	0
54	MG	DA	3075	1/1	0.71	0.26	58,58,58,58	0
54	MG	BA	3340	1/1	0.71	0.14	79,79,79,79	0
54	MG	BA	3369	1/1	0.71	0.13	52,52,52,52	0
54	MG	DB	204	1/1	0.71	0.70	74,74,74,74	0
54	MG	BA	3642	1/1	0.72	0.15	139,139,139,139	0
54	MG	DA	3212	1/1	0.72	0.26	75,75,75,75	0
54	MG	CA	1684	1/1	0.72	0.33	91,91,91,91	0
54	MG	AA	1709	1/1	0.73	0.15	101,101,101,101	0
54	MG	CA	1747	1/1	0.73	0.11	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3524	1/1	0.73	0.17	79,79,79,79	0
54	MG	AA	1659	1/1	0.73	0.86	70,70,70,70	0
54	MG	BA	3510	1/1	0.74	0.11	56,56,56,56	0
54	MG	BA	3532	1/1	0.74	0.23	79,79,79,79	0
54	MG	AA	1618	1/1	0.74	1.13	94,94,94,94	0
54	MG	AA	1619	1/1	0.74	0.26	86,86,86,86	0
54	MG	DA	3058	1/1	0.74	0.43	58,58,58,58	0
54	MG	DA	3290	1/1	0.74	0.48	58,58,58,58	0
54	MG	CA	1652	1/1	0.74	0.50	76,76,76,76	0
54	MG	AA	1678	1/1	0.74	0.52	74,74,74,74	0
54	MG	DA	3187	1/1	0.74	0.14	71,71,71,71	0
54	MG	BB	223	1/1	0.75	0.14	133,133,133,133	0
54	MG	CA	1640	1/1	0.75	0.23	82,82,82,82	0
54	MG	BA	3638	1/1	0.75	0.14	67,67,67,67	0
54	MG	AA	1607	1/1	0.76	0.19	78,78,78,78	0
54	MG	BA	3347	1/1	0.76	0.16	94,94,94,94	0
54	MG	DA	3331	1/1	0.76	0.13	71,71,71,71	0
54	MG	BA	3524	1/1	0.76	0.12	38,38,38,38	0
54	MG	BA	3646	1/1	0.76	0.18	142,142,142,142	0
54	MG	DA	3541	1/1	0.76	0.12	130,130,130,130	0
54	MG	BA	3317	1/1	0.76	0.17	34,34,34,34	0
54	MG	DA	3342	1/1	0.76	0.18	38,38,38,38	0
54	MG	AA	1702	1/1	0.76	0.16	68,68,68,68	0
54	MG	BA	3038	1/1	0.76	0.26	76,76,76,76	0
54	MG	AA	1688	1/1	0.76	0.16	96,96,96,96	0
54	MG	BA	3261	1/1	0.77	0.36	34,34,34,34	0
54	MG	BA	3264	1/1	0.77	0.38	41,41,41,41	0
54	MG	BA	3368	1/1	0.77	0.21	53,53,53,53	0
54	MG	AA	1729	1/1	0.77	0.08	80,80,80,80	0
54	MG	DA	3280	1/1	0.77	0.44	58,58,58,58	0
54	MG	CA	1697	1/1	0.77	0.13	57,57,57,57	0
54	MG	BA	3113	1/1	0.77	0.09	60,60,60,60	0
54	MG	DA	3179	1/1	0.77	0.21	68,68,68,68	0
54	MG	BA	3338	1/1	0.77	0.15	62,62,62,62	0
54	MG	CA	1670	1/1	0.77	0.64	73,73,73,73	0
54	MG	BA	3133	1/1	0.78	0.27	53,53,53,53	0
54	MG	BA	3543	1/1	0.78	0.20	119,119,119,119	0
54	MG	DA	3096	1/1	0.78	0.53	59,59,59,59	0
54	MG	AA	1628	1/1	0.78	0.25	68,68,68,68	0
54	MG	DA	3115	1/1	0.78	0.42	59,59,59,59	0
54	MG	CA	1704	1/1	0.78	0.15	92,92,92,92	0
54	MG	DA	3284	1/1	0.79	0.22	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3298	1/1	0.79	0.27	49,49,49,49	0
54	MG	DA	3196	1/1	0.79	0.39	58,58,58,58	0
54	MG	BA	3581	1/1	0.79	0.11	86,86,86,86	0
54	MG	AA	1719	1/1	0.79	0.16	144,144,144,144	0
54	MG	BA	3216	1/1	0.79	0.30	43,43,43,43	0
54	MG	BA	3109	1/1	0.79	0.41	62,62,62,62	0
54	MG	CA	1657	1/1	0.79	0.41	61,61,61,61	0
54	MG	DA	3239	1/1	0.79	0.55	58,58,58,58	0
54	MG	BV	201	1/1	0.79	0.22	67,67,67,67	0
54	MG	BA	3238	1/1	0.79	0.36	53,53,53,53	0
54	MG	BA	3236	1/1	0.79	0.23	66,66,66,66	0
54	MG	AA	1704	1/1	0.79	0.16	86,86,86,86	0
54	MG	DA	3172	1/1	0.79	0.29	64,64,64,64	0
54	MG	BA	3477	1/1	0.80	0.11	53,53,53,53	0
54	MG	CA	1706	1/1	0.80	0.10	103,103,103,103	0
54	MG	CA	1667	1/1	0.80	0.33	77,77,77,77	0
54	MG	DA	3466	1/1	0.80	0.15	68,68,68,68	0
54	MG	BA	3241	1/1	0.80	0.23	65,65,65,65	0
54	MG	AA	1699	1/1	0.80	0.20	99,99,99,99	0
54	MG	BA	3287	1/1	0.80	0.42	44,44,44,44	0
54	MG	BA	3014	1/1	0.80	0.54	65,65,65,65	0
54	MG	CA	1707	1/1	0.80	0.19	94,94,94,94	0
54	MG	CA	1705	1/1	0.80	0.14	96,96,96,96	0
54	MG	CA	1720	1/1	0.80	0.14	89,89,89,89	0
54	MG	BA	3547	1/1	0.80	0.24	105,105,105,105	0
54	MG	BA	3102	1/1	0.80	0.34	44,44,44,44	0
54	MG	AA	1690	1/1	0.80	0.09	72,72,72,72	0
54	MG	BA	3616	1/1	0.80	0.28	131,131,131,131	0
54	MG	AA	1692	1/1	0.80	0.57	144,144,144,144	0
54	MG	BA	3582	1/1	0.80	0.23	79,79,79,79	0
54	MG	AA	1697	1/1	0.80	0.20	106,106,106,106	0
54	MG	DA	3478	1/1	0.81	0.17	87,87,87,87	0
54	MG	DA	3525	1/1	0.81	0.16	106,106,106,106	0
54	MG	DA	3591	1/1	0.81	0.11	66,66,66,66	0
54	MG	BA	3394	1/1	0.81	0.15	50,50,50,50	0
54	MG	CA	1753	1/1	0.81	0.14	86,86,86,86	0
54	MG	AA	1671	1/1	0.81	0.34	67,67,67,67	0
54	MG	DA	3134	1/1	0.81	0.28	62,62,62,62	0
54	MG	DA	3361	1/1	0.81	0.10	30,30,30,30	0
54	MG	BA	3544	1/1	0.81	0.15	46,46,46,46	0
54	MG	BA	3627	1/1	0.81	0.10	50,50,50,50	0
54	MG	BA	3648	1/1	0.81	0.11	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1686	1/1	0.81	0.21	61,61,61,61	0
54	MG	DA	3055	1/1	0.81	0.32	56,56,56,56	0
54	MG	BA	3234	1/1	0.81	0.14	69,69,69,69	0
54	MG	BA	3403	1/1	0.81	0.15	67,67,67,67	0
54	MG	DA	3110	1/1	0.81	0.31	53,53,53,53	0
54	MG	AA	1731	1/1	0.81	0.17	119,119,119,119	0
54	MG	AA	1646	1/1	0.81	0.22	59,59,59,59	0
54	MG	BA	3358	1/1	0.81	0.12	55,55,55,55	0
54	MG	DA	3149	1/1	0.81	0.37	53,53,53,53	0
54	MG	DA	3424	1/1	0.81	0.10	52,52,52,52	0
54	MG	CA	1714	1/1	0.81	0.15	87,87,87,87	0
54	MG	CA	1608	1/1	0.81	0.53	93,93,93,93	0
54	MG	BA	3074	1/1	0.81	0.44	53,53,53,53	0
54	MG	BA	3269	1/1	0.81	0.48	35,35,35,35	0
54	MG	BA	3645	1/1	0.81	0.09	102,102,102,102	0
54	MG	BE	305	1/1	0.82	0.16	60,60,60,60	0
54	MG	CA	1626	1/1	0.82	0.39	62,62,62,62	0
54	MG	DA	3198	1/1	0.82	0.78	57,57,57,57	0
54	MG	BA	3016	1/1	0.82	0.23	47,47,47,47	0
54	MG	DA	3476	1/1	0.82	0.13	66,66,66,66	0
54	MG	DA	3297	1/1	0.82	0.22	78,78,78,78	0
54	MG	DA	3180	1/1	0.82	0.24	49,49,49,49	0
54	MG	BA	3343	1/1	0.82	0.09	73,73,73,73	0
54	MG	DA	3220	1/1	0.82	0.24	51,51,51,51	0
54	MG	BA	3504	1/1	0.82	0.14	65,65,65,65	0
54	MG	CA	1702	1/1	0.82	0.12	64,64,64,64	0
54	MG	CA	1756	1/1	0.82	0.19	80,80,80,80	0
54	MG	BA	3062	1/1	0.82	0.34	45,45,45,45	0
54	MG	BA	3577	1/1	0.82	0.13	77,77,77,77	0
54	MG	BA	3562	1/1	0.82	0.13	59,59,59,59	0
54	MG	CA	1681	1/1	0.82	0.40	82,82,82,82	0
54	MG	DA	3246	1/1	0.82	0.38	68,68,68,68	0
54	MG	CA	1717	1/1	0.82	0.14	110,110,110,110	0
54	MG	DA	3268	1/1	0.82	0.59	54,54,54,54	0
54	MG	AA	1629	1/1	0.82	0.29	44,44,44,44	0
54	MG	AA	1661	1/1	0.82	0.26	55,55,55,55	0
54	MG	DA	3590	1/1	0.82	0.23	82,82,82,82	0
54	MG	BA	3149	1/1	0.83	0.28	57,57,57,57	0
54	MG	DA	3063	1/1	0.83	0.32	60,60,60,60	0
54	MG	DA	3309	1/1	0.83	0.40	28,28,28,28	0
54	MG	BA	3637	1/1	0.83	0.18	108,108,108,108	0
54	MG	DA	3557	1/1	0.83	0.16	103,103,103,103	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1603	1/1	0.83	0.30	56,56,56,56	0
54	MG	DA	3167	1/1	0.83	0.21	51,51,51,51	0
54	MG	DA	3247	1/1	0.83	0.32	67,67,67,67	0
54	MG	DA	3569	1/1	0.83	0.12	104,104,104,104	0
54	MG	DA	3438	1/1	0.83	0.17	90,90,90,90	0
54	MG	DA	3451	1/1	0.83	0.14	103,103,103,103	0
54	MG	BA	3164	1/1	0.83	0.35	50,50,50,50	0
54	MG	BA	3304	1/1	0.83	0.35	54,54,54,54	0
54	MG	AA	1686	1/1	0.83	0.11	68,68,68,68	0
54	MG	DA	3282	1/1	0.83	0.14	64,64,64,64	0
54	MG	BA	3141	1/1	0.83	0.30	36,36,36,36	0
54	MG	DA	3170	1/1	0.83	0.13	56,56,56,56	0
54	MG	CA	1618	1/1	0.83	0.39	64,64,64,64	0
54	MG	BA	3399	1/1	0.83	0.13	43,43,43,43	0
54	MG	CA	1664	1/1	0.83	0.08	80,80,80,80	0
54	MG	BA	3649	1/1	0.83	0.22	125,125,125,125	0
54	MG	BA	3567	1/1	0.83	0.10	54,54,54,54	0
54	MG	DA	3515	1/1	0.83	0.28	37,37,37,37	0
54	MG	BA	3370	1/1	0.83	0.23	41,41,41,41	0
54	MG	BA	3090	1/1	0.83	0.12	62,62,62,62	0
54	MG	BA	3061	1/1	0.83	0.47	54,54,54,54	0
54	MG	BS	201	1/1	0.83	0.55	49,49,49,49	0
54	MG	DA	3371	1/1	0.83	0.26	43,43,43,43	0
54	MG	DA	3189	1/1	0.83	0.18	84,84,84,84	0
54	MG	BA	3531	1/1	0.83	0.09	89,89,89,89	0
54	MG	DA	3122	1/1	0.84	0.20	49,49,49,49	0
54	MG	DA	3587	1/1	0.84	0.24	95,95,95,95	0
54	MG	AA	1635	1/1	0.84	0.15	61,61,61,61	0
54	MG	DA	3207	1/1	0.84	0.28	54,54,54,54	0
54	MG	BA	3077	1/1	0.84	0.27	42,42,42,42	0
54	MG	BA	3225	1/1	0.84	0.18	44,44,44,44	0
54	MG	AA	1636	1/1	0.84	0.27	79,79,79,79	0
54	MG	DA	3523	1/1	0.84	0.07	74,74,74,74	0
54	MG	DA	3193	1/1	0.84	0.58	40,40,40,40	0
54	MG	DA	3197	1/1	0.84	0.33	49,49,49,49	0
54	MG	DA	3065	1/1	0.84	0.14	53,53,53,53	0
54	MG	BA	3139	1/1	0.84	0.27	46,46,46,46	0
54	MG	CA	1683	1/1	0.84	0.21	100,100,100,100	0
54	MG	BA	3288	1/1	0.84	0.21	66,66,66,66	0
54	MG	DA	3195	1/1	0.84	0.24	48,48,48,48	0
54	MG	DA	3398	1/1	0.84	0.26	88,88,88,88	0
54	MG	BA	3018	1/1	0.84	0.59	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3462	1/1	0.84	0.09	43,43,43,43	0
54	MG	BB	206	1/1	0.84	0.20	57,57,57,57	0
54	MG	AD	302	1/1	0.84	0.29	77,77,77,77	0
54	MG	DA	3548	1/1	0.84	0.12	89,89,89,89	0
54	MG	DA	3271	1/1	0.84	0.38	57,57,57,57	0
54	MG	DA	3497	1/1	0.84	0.26	83,83,83,83	0
54	MG	BA	3534	1/1	0.84	0.19	25,25,25,25	0
54	MG	BP	201	1/1	0.84	0.13	45,45,45,45	0
54	MG	DA	3257	1/1	0.84	0.32	56,56,56,56	0
54	MG	BA	3068	1/1	0.84	0.40	50,50,50,50	0
54	MG	DA	3016	1/1	0.84	0.21	62,62,62,62	0
54	MG	DA	3358	1/1	0.84	0.12	39,39,39,39	0
54	MG	AA	1712	1/1	0.85	0.34	86,86,86,86	0
54	MG	DA	3454	1/1	0.85	0.08	64,64,64,64	0
54	MG	DA	3258	1/1	0.85	0.45	52,52,52,52	0
54	MG	CA	1661	1/1	0.85	0.63	67,67,67,67	0
54	MG	DA	3353	1/1	0.85	0.20	61,61,61,61	0
54	MG	BA	3455	1/1	0.85	0.23	22,22,22,22	0
54	MG	BA	3123	1/1	0.85	0.27	43,43,43,43	0
54	MG	BA	3424	1/1	0.85	0.21	72,72,72,72	0
54	MG	DA	3289	1/1	0.85	0.58	54,54,54,54	0
54	MG	D8	102	1/1	0.85	0.28	45,45,45,45	0
54	MG	BA	3142	1/1	0.85	0.26	42,42,42,42	0
54	MG	DA	3130	1/1	0.85	0.33	47,47,47,47	0
54	MG	BA	3366	1/1	0.85	0.15	83,83,83,83	0
54	MG	BA	3658	1/1	0.85	0.14	114,114,114,114	0
54	MG	DA	3024	1/1	0.85	0.35	47,47,47,47	0
54	MG	DA	3209	1/1	0.85	0.25	51,51,51,51	0
54	MG	BA	3114	1/1	0.85	0.32	63,63,63,63	0
54	MG	BA	3486	1/1	0.85	0.17	75,75,75,75	0
54	MG	BA	3385	1/1	0.85	0.15	63,63,63,63	0
54	MG	CA	1632	1/1	0.85	0.27	69,69,69,69	0
54	MG	DA	3528	1/1	0.85	0.17	124,124,124,124	0
54	MG	BG	201	1/1	0.85	0.21	60,60,60,60	0
54	MG	DA	3559	1/1	0.85	0.07	79,79,79,79	0
54	MG	BA	3329	1/1	0.85	0.19	74,74,74,74	0
54	MG	BA	3100	1/1	0.85	0.20	42,42,42,42	0
54	MG	AA	1676	1/1	0.85	0.29	59,59,59,59	0
54	MG	D5	101	1/1	0.85	0.34	52,52,52,52	0
54	MG	BA	3215	1/1	0.85	0.22	50,50,50,50	0
54	MG	DA	3397	1/1	0.85	0.19	34,34,34,34	0
54	MG	DA	3185	1/1	0.85	0.16	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3028	1/1	0.85	0.31	67,67,67,67	0
54	MG	DA	3526	1/1	0.85	0.12	98,98,98,98	0
54	MG	DA	3262	1/1	0.85	0.33	53,53,53,53	0
54	MG	CA	1645	1/1	0.85	0.93	60,60,60,60	0
54	MG	DA	3488	1/1	0.85	0.17	58,58,58,58	0
54	MG	DA	3434	1/1	0.85	0.14	60,60,60,60	0
54	MG	CA	1677	1/1	0.85	0.15	64,64,64,64	0
54	MG	BA	3388	1/1	0.85	0.10	47,47,47,47	0
54	MG	DA	3025	1/1	0.85	0.27	49,49,49,49	0
54	MG	AA	1663	1/1	0.85	0.52	64,64,64,64	0
54	MG	DA	3567	1/1	0.85	0.24	46,46,46,46	0
54	MG	BA	3075	1/1	0.85	0.19	46,46,46,46	0
54	MG	DA	3222	1/1	0.85	0.22	68,68,68,68	0
54	MG	BQ	204	1/1	0.85	0.10	43,43,43,43	0
55	ZN	AN	101	1/1	0.85	0.12	117,117,117,117	0
54	MG	BA	3104	1/1	0.85	0.23	63,63,63,63	0
54	MG	BA	3339	1/1	0.85	0.11	70,70,70,70	0
54	MG	CA	1649	1/1	0.86	0.41	66,66,66,66	0
54	MG	BA	3587	1/1	0.86	0.14	60,60,60,60	0
54	MG	DA	3059	1/1	0.86	0.22	45,45,45,45	0
54	MG	BB	204	1/1	0.86	0.21	52,52,52,52	0
54	MG	BA	3107	1/1	0.86	0.20	60,60,60,60	0
54	MG	DA	3324	1/1	0.86	0.13	51,51,51,51	0
54	MG	DA	3153	1/1	0.86	0.42	58,58,58,58	0
54	MG	BB	207	1/1	0.86	0.20	52,52,52,52	0
54	MG	CA	1621	1/1	0.86	0.56	64,64,64,64	0
54	MG	AA	1606	1/1	0.86	0.19	79,79,79,79	0
54	MG	AA	1654	1/1	0.86	0.52	59,59,59,59	0
54	MG	DA	3537	1/1	0.86	0.09	63,63,63,63	0
54	MG	CA	1738	1/1	0.86	0.08	112,112,112,112	0
54	MG	CA	1635	1/1	0.86	0.10	60,60,60,60	0
54	MG	DA	3312	1/1	0.86	0.52	29,29,29,29	0
54	MG	AA	1718	1/1	0.86	0.05	96,96,96,96	0
54	MG	BA	3437	1/1	0.86	0.11	49,49,49,49	0
54	MG	BA	3043	1/1	0.86	0.12	39,39,39,39	0
54	MG	DA	3368	1/1	0.86	0.16	52,52,52,52	0
54	MG	AA	1647	1/1	0.86	0.23	55,55,55,55	0
54	MG	CA	1679	1/1	0.86	0.50	59,59,59,59	0
54	MG	AA	1674	1/1	0.86	0.32	63,63,63,63	0
54	MG	DA	3436	1/1	0.86	0.14	81,81,81,81	0
54	MG	BA	3279	1/1	0.86	0.49	27,27,27,27	0
54	MG	BA	3557	1/1	0.86	0.15	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3452	1/1	0.86	0.10	90,90,90,90	0
54	MG	DA	3223	1/1	0.86	0.18	54,54,54,54	0
54	MG	DA	3465	1/1	0.86	0.08	75,75,75,75	0
54	MG	DA	3308	1/1	0.86	0.31	33,33,33,33	0
54	MG	BA	3414	1/1	0.86	0.13	29,29,29,29	0
54	MG	DR	203	1/1	0.86	0.51	51,51,51,51	0
54	MG	BA	3408	1/1	0.86	0.22	50,50,50,50	0
54	MG	DA	3521	1/1	0.86	0.12	86,86,86,86	0
54	MG	CA	1627	1/1	0.86	0.37	55,55,55,55	0
54	MG	CA	1606	1/1	0.86	0.23	59,59,59,59	0
55	ZN	B4	101	1/1	0.86	0.07	199,199,199,199	0
54	MG	DA	3277	1/1	0.86	0.17	77,77,77,77	0
54	MG	BA	3128	1/1	0.86	0.18	49,49,49,49	0
54	MG	AA	1707	1/1	0.86	0.17	102,102,102,102	0
54	MG	BA	3503	1/1	0.86	0.10	64,64,64,64	0
54	MG	DA	3328	1/1	0.86	0.40	57,57,57,57	0
54	MG	BA	3609	1/1	0.86	0.10	75,75,75,75	0
54	MG	BQ	201	1/1	0.86	0.19	51,51,51,51	0
54	MG	DA	3433	1/1	0.86	0.12	47,47,47,47	0
54	MG	DA	3442	1/1	0.86	0.13	82,82,82,82	0
54	MG	BA	3037	1/1	0.86	0.20	75,75,75,75	0
54	MG	AA	1627	1/1	0.86	0.33	59,59,59,59	0
54	MG	DA	3245	1/1	0.87	0.27	57,57,57,57	0
54	MG	BA	3448	1/1	0.87	0.14	38,38,38,38	0
54	MG	BA	3143	1/1	0.87	0.21	30,30,30,30	0
54	MG	BA	3203	1/1	0.87	0.50	55,55,55,55	0
54	MG	AA	1620	1/1	0.87	0.17	65,65,65,65	0
54	MG	BA	3514	1/1	0.87	0.12	61,61,61,61	0
54	MG	DA	3221	1/1	0.87	0.47	51,51,51,51	0
54	MG	DA	3522	1/1	0.87	0.23	61,61,61,61	0
54	MG	BA	3427	1/1	0.87	0.14	89,89,89,89	0
54	MG	AA	1684	1/1	0.87	0.82	60,60,60,60	0
54	MG	AA	1734	1/1	0.87	0.11	96,96,96,96	0
54	MG	DA	3417	1/1	0.87	0.16	31,31,31,31	0
54	MG	BA	3411	1/1	0.87	0.08	63,63,63,63	0
54	MG	BA	3185	1/1	0.87	0.51	51,51,51,51	0
54	MG	CA	1651	1/1	0.87	0.35	46,46,46,46	0
54	MG	BA	3048	1/1	0.87	0.18	68,68,68,68	0
54	MG	BA	3579	1/1	0.87	0.09	100,100,100,100	0
54	MG	DA	3188	1/1	0.87	0.11	69,69,69,69	0
54	MG	DA	3364	1/1	0.87	0.13	32,32,32,32	0
54	MG	BA	3580	1/1	0.87	0.15	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1681	1/1	0.87	0.24	50,50,50,50	0
54	MG	AA	1609	1/1	0.87	0.27	51,51,51,51	0
54	MG	BB	209	1/1	0.87	0.11	60,60,60,60	0
54	MG	DA	3391	1/1	0.87	0.09	37,37,37,37	0
54	MG	CA	1732	1/1	0.87	0.12	110,110,110,110	0
54	MG	DA	3276	1/1	0.87	0.85	60,60,60,60	0
54	MG	BA	3029	1/1	0.87	0.18	32,32,32,32	0
54	MG	DA	3563	1/1	0.87	0.15	70,70,70,70	0
54	MG	BA	3553	1/1	0.87	0.11	89,89,89,89	0
54	MG	DA	3589	1/1	0.87	0.12	75,75,75,75	0
54	MG	BA	3120	1/1	0.87	0.13	51,51,51,51	0
54	MG	DA	3001	1/1	0.87	0.31	48,48,48,48	0
54	MG	DA	3176	1/1	0.87	0.43	70,70,70,70	0
54	MG	CA	1758	1/1	0.87	0.22	84,84,84,84	0
54	MG	DA	3402	1/1	0.87	0.13	44,44,44,44	0
54	MG	BA	3523	1/1	0.87	0.11	110,110,110,110	0
54	MG	BF	302	1/1	0.87	0.24	42,42,42,42	0
54	MG	BA	3459	1/1	0.87	0.17	38,38,38,38	0
54	MG	DA	3139	1/1	0.87	0.50	59,59,59,59	0
54	MG	BA	3194	1/1	0.87	0.20	63,63,63,63	0
54	MG	BA	3333	1/1	0.87	0.19	40,40,40,40	0
54	MG	BA	3084	1/1	0.87	0.11	59,59,59,59	0
54	MG	BA	3552	1/1	0.87	0.23	82,82,82,82	0
54	MG	BA	3470	1/1	0.88	0.27	60,60,60,60	0
54	MG	CA	1698	1/1	0.88	0.10	47,47,47,47	0
54	MG	CA	1674	1/1	0.88	0.10	74,74,74,74	0
54	MG	BA	3335	1/1	0.88	0.11	66,66,66,66	0
54	MG	AA	1612	1/1	0.88	0.31	86,86,86,86	0
54	MG	DA	3370	1/1	0.88	0.10	32,32,32,32	0
54	MG	CA	1708	1/1	0.88	0.07	80,80,80,80	0
54	MG	BA	3035	1/1	0.88	0.19	45,45,45,45	0
54	MG	DA	3457	1/1	0.88	0.08	64,64,64,64	0
54	MG	BA	3569	1/1	0.88	0.08	69,69,69,69	0
54	MG	DE	301	1/1	0.88	0.22	41,41,41,41	0
54	MG	DA	3215	1/1	0.88	0.09	49,49,49,49	0
54	MG	DA	3435	1/1	0.88	0.44	57,57,57,57	0
54	MG	DA	3125	1/1	0.88	0.30	50,50,50,50	0
54	MG	CA	1676	1/1	0.88	0.24	73,73,73,73	0
54	MG	BA	3065	1/1	0.88	0.24	41,41,41,41	0
54	MG	DA	3147	1/1	0.88	0.42	54,54,54,54	0
54	MG	DA	3325	1/1	0.88	0.19	38,38,38,38	0
54	MG	AA	1658	1/1	0.88	0.51	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3049	1/1	0.88	0.19	49,49,49,49	0
54	MG	CA	1762	1/1	0.88	0.07	156,156,156,156	0
54	MG	DA	3029	1/1	0.88	0.30	40,40,40,40	0
54	MG	CA	1612	1/1	0.88	0.14	65,65,65,65	0
54	MG	BA	3655	1/1	0.88	0.18	104,104,104,104	0
54	MG	BA	3301	1/1	0.88	0.66	75,75,75,75	0
54	MG	DA	3383	1/1	0.88	0.10	54,54,54,54	0
54	MG	DA	3087	1/1	0.88	0.09	54,54,54,54	0
54	MG	DA	3003	1/1	0.88	0.22	46,46,46,46	0
54	MG	DA	3235	1/1	0.88	0.38	54,54,54,54	0
54	MG	BA	3659	1/1	0.88	0.07	81,81,81,81	0
54	MG	CA	1751	1/1	0.88	0.26	61,61,61,61	0
54	MG	AA	1638	1/1	0.88	0.13	53,53,53,53	0
54	MG	BA	3119	1/1	0.88	0.34	42,42,42,42	0
54	MG	AA	1642	1/1	0.88	0.81	54,54,54,54	0
54	MG	BA	3461	1/1	0.88	0.17	79,79,79,79	0
54	MG	CA	1616	1/1	0.88	0.26	58,58,58,58	0
54	MG	BB	213	1/1	0.88	0.14	38,38,38,38	0
54	MG	BA	3621	1/1	0.88	0.30	52,52,52,52	0
54	MG	DA	3191	1/1	0.88	0.19	51,51,51,51	0
54	MG	BA	3214	1/1	0.88	0.22	52,52,52,52	0
54	MG	BA	3217	1/1	0.88	0.23	41,41,41,41	0
54	MG	BA	3598	1/1	0.88	0.11	65,65,65,65	0
54	MG	BA	3572	1/1	0.88	0.17	63,63,63,63	0
54	MG	BA	3159	1/1	0.88	0.22	46,46,46,46	0
54	MG	DA	3281	1/1	0.88	0.20	42,42,42,42	0
54	MG	DA	3319	1/1	0.88	0.32	57,57,57,57	0
54	MG	DA	3237	1/1	0.88	0.29	62,62,62,62	0
54	MG	BA	3397	1/1	0.88	0.17	86,86,86,86	0
54	MG	BB	216	1/1	0.88	0.10	82,82,82,82	0
54	MG	DA	3318	1/1	0.88	0.14	58,58,58,58	0
54	MG	AA	1616	1/1	0.88	0.14	92,92,92,92	0
54	MG	CA	1617	1/1	0.88	0.13	87,87,87,87	0
54	MG	BA	3153	1/1	0.88	0.38	51,51,51,51	0
54	MG	DA	3255	1/1	0.88	0.20	58,58,58,58	0
54	MG	DA	3487	1/1	0.88	0.17	48,48,48,48	0
54	MG	DA	3012	1/1	0.88	0.19	30,30,30,30	0
54	MG	AA	1604	1/1	0.88	0.15	73,73,73,73	0
54	MG	DA	3254	1/1	0.88	0.19	64,64,64,64	0
54	MG	BA	3219	1/1	0.88	0.15	46,46,46,46	0
54	MG	DA	3201	1/1	0.88	0.30	49,49,49,49	0
54	MG	CA	1665	1/1	0.88	0.23	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1642	1/1	0.88	0.17	87,87,87,87	0
54	MG	BA	3021	1/1	0.88	0.20	44,44,44,44	0
54	MG	CA	1693	1/1	0.88	0.86	59,59,59,59	0
54	MG	BA	3303	1/1	0.88	0.11	64,64,64,64	0
54	MG	DA	3583	1/1	0.88	0.10	65,65,65,65	0
54	MG	DE	303	1/1	0.89	0.12	45,45,45,45	0
54	MG	CA	1731	1/1	0.89	0.12	74,74,74,74	0
54	MG	DA	3092	1/1	0.89	0.32	41,41,41,41	0
54	MG	CA	1648	1/1	0.89	0.40	60,60,60,60	0
54	MG	CA	1639	1/1	0.89	0.26	76,76,76,76	0
54	MG	BA	3060	1/1	0.89	0.14	54,54,54,54	0
54	MG	BA	3002	1/1	0.89	0.34	51,51,51,51	0
54	MG	CA	1739	1/1	0.89	0.12	87,87,87,87	0
54	MG	CA	1631	1/1	0.89	0.45	48,48,48,48	0
54	MG	BA	3300	1/1	0.89	0.42	48,48,48,48	0
54	MG	AF	201	1/1	0.89	0.20	62,62,62,62	0
54	MG	DA	3413	1/1	0.89	0.12	56,56,56,56	0
54	MG	BA	3056	1/1	0.89	0.16	57,57,57,57	0
54	MG	BA	3285	1/1	0.89	0.57	38,38,38,38	0
54	MG	BA	3297	1/1	0.89	0.26	46,46,46,46	0
54	MG	DA	3211	1/1	0.89	0.22	48,48,48,48	0
54	MG	DA	3287	1/1	0.89	0.27	57,57,57,57	0
54	MG	DA	3227	1/1	0.89	0.28	52,52,52,52	0
54	MG	DA	3464	1/1	0.89	0.10	89,89,89,89	0
54	MG	BA	3015	1/1	0.89	0.18	48,48,48,48	0
54	MG	DA	3141	1/1	0.89	0.52	60,60,60,60	0
54	MG	AA	1682	1/1	0.89	0.13	76,76,76,76	0
54	MG	DA	3384	1/1	0.89	0.08	45,45,45,45	0
54	MG	DA	3508	1/1	0.89	0.10	60,60,60,60	0
54	MG	CA	1701	1/1	0.89	0.08	72,72,72,72	0
54	MG	BA	3026	1/1	0.89	0.19	52,52,52,52	0
54	MG	DA	3109	1/1	0.89	0.17	59,59,59,59	0
54	MG	CA	1620	1/1	0.89	0.12	58,58,58,58	0
54	MG	BA	3179	1/1	0.89	0.27	37,37,37,37	0
54	MG	DA	3458	1/1	0.89	0.05	62,62,62,62	0
54	MG	BA	3243	1/1	0.89	0.30	42,42,42,42	0
54	MG	CA	1607	1/1	0.89	0.20	50,50,50,50	0
54	MG	DA	3412	1/1	0.89	0.09	58,58,58,58	0
54	MG	CA	1694	1/1	0.89	0.17	62,62,62,62	0
54	MG	BT	202	1/1	0.89	0.27	52,52,52,52	0
54	MG	DA	3416	1/1	0.89	0.13	66,66,66,66	0
54	MG	DA	3380	1/1	0.89	0.10	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
54	MG	DA	3596	1/1	0.89	0.19	125,125,125,125	0
54	MG	DA	3492	1/1	0.89	0.07	56,56,56,56	0
54	MG	BA	3221	1/1	0.89	0.34	57,57,57,57	0
54	MG	DA	3231	1/1	0.89	0.29	36,36,36,36	0
54	MG	BA	3342	1/1	0.89	0.15	32,32,32,32	0
54	MG	DA	3163	1/1	0.89	0.39	30,30,30,30	0
54	MG	BA	3539	1/1	0.89	0.08	47,47,47,47	0
54	MG	CA	1638	1/1	0.89	0.26	52,52,52,52	0
54	MG	AA	1708	1/1	0.89	0.29	91,91,91,91	0
54	MG	BA	3131	1/1	0.89	0.81	62,62,62,62	0
54	MG	BA	3085	1/1	0.89	0.49	52,52,52,52	0
54	MG	CA	1646	1/1	0.89	0.38	59,59,59,59	0
54	MG	DA	3017	1/1	0.89	0.20	50,50,50,50	0
54	MG	CA	1625	1/1	0.89	0.36	63,63,63,63	0
54	MG	AA	1649	1/1	0.89	0.30	43,43,43,43	0
54	MG	BA	3471	1/1	0.89	0.18	27,27,27,27	0
54	MG	CA	1672	1/1	0.89	0.20	66,66,66,66	0
54	MG	BA	3030	1/1	0.89	0.20	48,48,48,48	0
54	MG	DA	3576	1/1	0.89	0.09	48,48,48,48	0
54	MG	DA	3070	1/1	0.89	0.36	57,57,57,57	0
54	MG	AA	1621	1/1	0.89	0.29	62,62,62,62	0
54	MG	BA	3117	1/1	0.89	0.27	39,39,39,39	0
54	MG	DA	3387	1/1	0.89	0.11	60,60,60,60	0
54	MG	BA	3054	1/1	0.89	0.17	34,34,34,34	0
54	MG	BA	3205	1/1	0.89	0.12	54,54,54,54	0
54	MG	DA	3322	1/1	0.89	0.38	49,49,49,49	0
54	MG	DA	3145	1/1	0.89	0.23	61,61,61,61	0
54	MG	DA	3273	1/1	0.89	0.33	50,50,50,50	0
54	MG	AA	1716	1/1	0.89	0.08	116,116,116,116	0
54	MG	DA	3447	1/1	0.89	0.27	74,74,74,74	0
54	MG	DA	3517	1/1	0.89	0.24	66,66,66,66	0
54	MG	BA	3407	1/1	0.89	0.17	47,47,47,47	0
54	MG	DA	3512	1/1	0.89	0.13	42,42,42,42	0
54	MG	AQ	201	1/1	0.89	0.25	58,58,58,58	0
54	MG	CA	1713	1/1	0.89	0.14	73,73,73,73	0
54	MG	DA	3089	1/1	0.89	0.11	52,52,52,52	0
54	MG	DA	3251	1/1	0.89	0.18	40,40,40,40	0
54	MG	DA	3073	1/1	0.89	0.51	68,68,68,68	0
54	MG	DA	3119	1/1	0.89	0.33	48,48,48,48	0
54	MG	DA	3146	1/1	0.89	0.17	44,44,44,44	0
54	MG	B0	101	1/1	0.89	0.18	39,39,39,39	0
54	MG	BA	3353	1/1	0.89	0.21	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3013	1/1	0.89	0.25	49,49,49,49	0
54	MG	DA	3090	1/1	0.89	0.11	53,53,53,53	0
54	MG	DQ	202	1/1	0.89	0.17	33,33,33,33	0
54	MG	DA	3582	1/1	0.89	0.24	63,63,63,63	0
54	MG	DA	3132	1/1	0.89	0.43	49,49,49,49	0
54	MG	DA	3260	1/1	0.89	0.20	41,41,41,41	0
54	MG	DA	3437	1/1	0.89	0.16	85,85,85,85	0
54	MG	DA	3275	1/1	0.89	0.35	47,47,47,47	0
54	MG	DA	3152	1/1	0.89	0.44	61,61,61,61	0
54	MG	BA	3008	1/1	0.89	0.23	28,28,28,28	0
54	MG	BA	3292	1/1	0.89	0.32	70,70,70,70	0
54	MG	DA	3504	1/1	0.89	0.07	63,63,63,63	0
54	MG	AA	1655	1/1	0.90	0.46	43,43,43,43	0
54	MG	CA	1716	1/1	0.90	0.16	102,102,102,102	0
54	MG	BA	3152	1/1	0.90	0.37	54,54,54,54	0
54	MG	BA	3586	1/1	0.90	0.10	63,63,63,63	0
54	MG	BA	3346	1/1	0.90	0.12	52,52,52,52	0
54	MG	AA	1644	1/1	0.90	0.33	39,39,39,39	0
54	MG	CA	1613	1/1	0.90	0.34	66,66,66,66	0
54	MG	BA	3421	1/1	0.90	0.07	68,68,68,68	0
54	MG	BA	3080	1/1	0.90	0.23	39,39,39,39	0
54	MG	DA	3086	1/1	0.90	0.21	48,48,48,48	0
54	MG	CA	1680	1/1	0.90	0.23	78,78,78,78	0
54	MG	BA	3393	1/1	0.90	0.19	37,37,37,37	0
54	MG	DA	3238	1/1	0.90	0.44	56,56,56,56	0
54	MG	BB	215	1/1	0.90	0.17	65,65,65,65	0
54	MG	BB	211	1/1	0.90	0.21	47,47,47,47	0
54	MG	DA	3148	1/1	0.90	0.16	48,48,48,48	0
54	MG	DA	3020	1/1	0.90	0.18	56,56,56,56	0
54	MG	CA	1668	1/1	0.90	0.54	87,87,87,87	0
54	MG	BA	3007	1/1	0.90	0.30	28,28,28,28	0
54	MG	DA	3593	1/1	0.90	0.15	83,83,83,83	0
54	MG	BA	3073	1/1	0.90	0.42	52,52,52,52	0
54	MG	BA	3086	1/1	0.90	0.95	57,57,57,57	0
54	MG	AA	1683	1/1	0.90	0.66	58,58,58,58	0
54	MG	DA	3218	1/1	0.90	0.65	62,62,62,62	0
54	MG	DA	3027	1/1	0.90	0.35	56,56,56,56	0
54	MG	DA	3128	1/1	0.90	0.24	45,45,45,45	0
54	MG	BA	3456	1/1	0.90	0.22	32,32,32,32	0
54	MG	DA	3346	1/1	0.90	0.12	35,35,35,35	0
54	MG	DA	3213	1/1	0.90	0.33	48,48,48,48	0
54	MG	DA	3261	1/1	0.90	0.31	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3094	1/1	0.90	0.21	54,54,54,54	0
54	MG	DA	3174	1/1	0.90	0.19	51,51,51,51	0
54	MG	AA	1689	1/1	0.90	0.06	99,99,99,99	0
54	MG	DA	3248	1/1	0.90	0.18	42,42,42,42	0
54	MG	BA	3231	1/1	0.90	0.11	47,47,47,47	0
54	MG	DA	3098	1/1	0.90	0.19	37,37,37,37	0
54	MG	BA	3594	1/1	0.90	0.05	86,86,86,86	0
54	MG	DA	3597	1/1	0.90	0.11	93,93,93,93	0
54	MG	DA	3486	1/1	0.90	0.21	64,64,64,64	0
54	MG	BA	3212	1/1	0.90	0.21	68,68,68,68	0
54	MG	DA	3456	1/1	0.90	0.08	42,42,42,42	0
54	MG	BA	3218	1/1	0.90	0.15	55,55,55,55	0
54	MG	DA	3495	1/1	0.90	0.06	83,83,83,83	0
54	MG	DA	3214	1/1	0.90	0.24	37,37,37,37	0
54	MG	DA	3030	1/1	0.90	0.29	55,55,55,55	0
54	MG	CA	1729	1/1	0.90	0.17	81,81,81,81	0
54	MG	DA	3230	1/1	0.90	0.20	45,45,45,45	0
54	MG	CA	1629	1/1	0.90	0.20	87,87,87,87	0
54	MG	CA	1656	1/1	0.90	0.31	86,86,86,86	0
54	MG	DA	3270	1/1	0.90	0.17	64,64,64,64	0
54	MG	DA	3274	1/1	0.90	0.41	61,61,61,61	0
54	MG	DA	3094	1/1	0.90	0.16	56,56,56,56	0
54	MG	BA	3222	1/1	0.90	0.49	60,60,60,60	0
54	MG	DA	3229	1/1	0.90	0.30	44,44,44,44	0
54	MG	BA	3010	1/1	0.90	0.22	39,39,39,39	0
54	MG	DA	3459	1/1	0.90	0.07	53,53,53,53	0
54	MG	DA	3321	1/1	0.90	0.43	51,51,51,51	0
54	MG	BB	208	1/1	0.90	0.23	43,43,43,43	0
54	MG	AA	1730	1/1	0.90	0.10	51,51,51,51	0
54	MG	DA	3479	1/1	0.90	0.16	62,62,62,62	0
54	MG	DA	3252	1/1	0.90	0.53	59,59,59,59	0
54	MG	BA	3323	1/1	0.90	0.17	23,23,23,23	0
54	MG	AA	1675	1/1	0.90	0.23	76,76,76,76	0
54	MG	BA	3045	1/1	0.90	0.22	45,45,45,45	0
54	MG	CA	1636	1/1	0.90	0.36	59,59,59,59	0
54	MG	BA	3590	1/1	0.90	0.31	31,31,31,31	0
54	MG	BA	3144	1/1	0.90	0.25	46,46,46,46	0
54	MG	BA	3229	1/1	0.90	0.22	41,41,41,41	0
54	MG	DA	3326	1/1	0.90	0.21	46,46,46,46	0
54	MG	BA	3210	1/1	0.90	0.20	40,40,40,40	0
54	MG	BA	3298	1/1	0.90	0.54	54,54,54,54	0
54	MG	DA	3408	1/1	0.90	0.15	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BD	302	1/1	0.90	0.21	28,28,28,28	0
54	MG	BA	3076	1/1	0.90	0.22	44,44,44,44	0
54	MG	DA	3421	1/1	0.90	0.10	93,93,93,93	0
54	MG	BA	3267	1/1	0.90	0.33	36,36,36,36	0
54	MG	CA	1695	1/1	0.90	0.35	50,50,50,50	0
54	MG	DA	3111	1/1	0.90	0.17	50,50,50,50	0
54	MG	AA	1624	1/1	0.90	0.38	70,70,70,70	0
54	MG	BA	3482	1/1	0.90	0.19	27,27,27,27	0
54	MG	DA	3354	1/1	0.90	0.09	49,49,49,49	0
54	MG	DA	3372	1/1	0.90	0.15	41,41,41,41	0
54	MG	DA	3470	1/1	0.90	0.10	47,47,47,47	0
54	MG	AA	1670	1/1	0.90	0.32	53,53,53,53	0
54	MG	DF	301	1/1	0.90	0.30	50,50,50,50	0
54	MG	BB	210	1/1	0.90	0.15	60,60,60,60	0
54	MG	BA	3175	1/1	0.90	0.14	43,43,43,43	0
54	MG	CA	1746	1/1	0.90	0.11	97,97,97,97	0
54	MG	DO	202	1/1	0.90	0.17	39,39,39,39	0
54	MG	BA	3046	1/1	0.90	0.18	36,36,36,36	0
54	MG	DA	3400	1/1	0.90	0.17	66,66,66,66	0
54	MG	BA	3592	1/1	0.90	0.13	47,47,47,47	0
54	MG	AA	1640	1/1	0.90	0.20	58,58,58,58	0
54	MG	DA	3500	1/1	0.90	0.12	74,74,74,74	0
54	MG	BA	3332	1/1	0.90	0.09	50,50,50,50	0
54	MG	CA	1609	1/1	0.90	0.24	70,70,70,70	0
54	MG	BA	3525	1/1	0.90	0.14	35,35,35,35	0
54	MG	BA	3439	1/1	0.90	0.16	59,59,59,59	0
54	MG	DA	3543	1/1	0.90	0.09	53,53,53,53	0
54	MG	BA	3589	1/1	0.90	0.17	94,94,94,94	0
54	MG	DA	3295	1/1	0.90	0.25	59,59,59,59	0
54	MG	BA	3025	1/1	0.91	0.23	48,48,48,48	0
54	MG	BA	3425	1/1	0.91	0.15	53,53,53,53	0
54	MG	DA	3136	1/1	0.91	0.34	62,62,62,62	0
54	MG	BA	3468	1/1	0.91	0.18	24,24,24,24	0
54	MG	DA	3151	1/1	0.91	0.11	43,43,43,43	0
54	MG	BA	3154	1/1	0.91	0.37	50,50,50,50	0
54	MG	CA	1745	1/1	0.91	0.34	116,116,116,116	0
54	MG	BA	3011	1/1	0.91	0.29	26,26,26,26	0
54	MG	BE	301	1/1	0.91	0.43	34,34,34,34	0
54	MG	BB	218	1/1	0.91	0.09	45,45,45,45	0
54	MG	DA	3360	1/1	0.91	0.20	37,37,37,37	0
54	MG	DA	3267	1/1	0.91	0.27	54,54,54,54	0
54	MG	BA	3091	1/1	0.91	0.35	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3550	1/1	0.91	0.06	87,87,87,87	0
54	MG	DD	301	1/1	0.91	0.22	47,47,47,47	0
54	MG	BA	3546	1/1	0.91	0.18	73,73,73,73	0
54	MG	AA	1634	1/1	0.91	0.10	56,56,56,56	0
54	MG	BA	3563	1/1	0.91	0.09	70,70,70,70	0
54	MG	BA	3363	1/1	0.91	0.14	64,64,64,64	0
54	MG	BA	3108	1/1	0.91	0.24	51,51,51,51	0
54	MG	AA	1611	1/1	0.91	0.28	83,83,83,83	0
54	MG	BA	3377	1/1	0.91	0.22	32,32,32,32	0
54	MG	BA	3396	1/1	0.91	0.16	29,29,29,29	0
54	MG	BA	3578	1/1	0.91	0.10	44,44,44,44	0
54	MG	BA	3230	1/1	0.91	0.19	30,30,30,30	0
54	MG	BA	3452	1/1	0.91	0.13	64,64,64,64	0
54	MG	AA	1713	1/1	0.91	0.10	91,91,91,91	0
54	MG	BA	3017	1/1	0.91	0.13	31,31,31,31	0
54	MG	BA	3566	1/1	0.91	0.14	44,44,44,44	0
54	MG	CA	1650	1/1	0.91	0.20	60,60,60,60	0
54	MG	BA	3177	1/1	0.91	0.10	57,57,57,57	0
54	MG	BB	219	1/1	0.91	0.06	105,105,105,105	0
54	MG	CA	1750	1/1	0.91	0.12	78,78,78,78	0
54	MG	DA	3008	1/1	0.91	0.44	58,58,58,58	0
54	MG	BA	3438	1/1	0.91	0.20	65,65,65,65	0
54	MG	DA	3166	1/1	0.91	0.30	45,45,45,45	0
54	MG	DA	3542	1/1	0.91	0.07	83,83,83,83	0
54	MG	BA	3262	1/1	0.91	0.37	27,27,27,27	0
54	MG	BA	3515	1/1	0.91	0.16	72,72,72,72	0
54	MG	DA	3066	1/1	0.91	0.20	62,62,62,62	0
54	MG	BA	3626	1/1	0.91	0.09	64,64,64,64	0
54	MG	DA	3123	1/1	0.91	0.23	53,53,53,53	0
54	MG	DA	3288	1/1	0.91	0.25	39,39,39,39	0
54	MG	DA	3499	1/1	0.91	0.14	67,67,67,67	0
54	MG	BA	3571	1/1	0.91	0.17	44,44,44,44	0
54	MG	DA	3169	1/1	0.91	0.16	45,45,45,45	0
54	MG	CA	1754	1/1	0.91	0.05	74,74,74,74	0
54	MG	CA	1602	1/1	0.91	0.39	62,62,62,62	0
54	MG	DA	3431	1/1	0.91	0.10	59,59,59,59	0
54	MG	BA	3024	1/1	0.91	0.40	41,41,41,41	0
54	MG	BA	3101	1/1	0.91	0.11	37,37,37,37	0
54	MG	BA	3418	1/1	0.91	0.12	49,49,49,49	0
54	MG	BA	3612	1/1	0.91	0.07	59,59,59,59	0
54	MG	DA	3033	1/1	0.91	0.16	66,66,66,66	0
54	MG	BA	3469	1/1	0.91	0.15	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1656	1/1	0.91	0.57	59,59,59,59	0
54	MG	BA	3650	1/1	0.91	0.17	88,88,88,88	0
54	MG	BA	3305	1/1	0.91	0.26	69,69,69,69	0
54	MG	AA	1617	1/1	0.91	0.17	45,45,45,45	0
54	MG	BA	3254	1/1	0.91	0.35	25,25,25,25	0
54	MG	CA	1718	1/1	0.91	0.15	83,83,83,83	0
54	MG	DP	201	1/1	0.91	0.18	54,54,54,54	0
54	MG	CA	1615	1/1	0.91	0.12	65,65,65,65	0
54	MG	DA	3419	1/1	0.91	0.11	44,44,44,44	0
54	MG	BA	3003	1/1	0.91	0.31	74,74,74,74	0
54	MG	AA	1727	1/1	0.91	0.10	61,61,61,61	0
54	MG	DA	3509	1/1	0.91	0.19	37,37,37,37	0
54	MG	CA	1700	1/1	0.91	0.09	70,70,70,70	0
54	MG	BA	3001	1/1	0.91	0.21	43,43,43,43	0
54	MG	BA	3183	1/1	0.91	0.33	29,29,29,29	0
54	MG	BA	3601	1/1	0.91	0.15	76,76,76,76	0
54	MG	BA	3507	1/1	0.91	0.28	41,41,41,41	0
54	MG	BA	3039	1/1	0.91	0.20	32,32,32,32	0
54	MG	BA	3012	1/1	0.91	0.34	27,27,27,27	0
54	MG	BB	212	1/1	0.91	0.27	60,60,60,60	0
54	MG	AA	1645	1/1	0.91	0.26	60,60,60,60	0
54	MG	BA	3585	1/1	0.91	0.10	52,52,52,52	0
54	MG	BA	3055	1/1	0.91	0.20	53,53,53,53	0
54	MG	DA	3127	1/1	0.91	0.25	56,56,56,56	0
54	MG	DA	3366	1/1	0.91	0.19	31,31,31,31	0
54	MG	DA	3236	1/1	0.92	0.30	47,47,47,47	0
54	MG	BB	205	1/1	0.92	0.38	45,45,45,45	0
54	MG	AA	1679	1/1	0.92	0.22	44,44,44,44	0
54	MG	DA	3409	1/1	0.92	0.09	73,73,73,73	0
54	MG	DA	3244	1/1	0.92	0.52	33,33,33,33	0
54	MG	BA	3022	1/1	0.92	0.27	46,46,46,46	0
54	MG	BA	3150	1/1	0.92	0.12	42,42,42,42	0
54	MG	DA	3060	1/1	0.92	0.34	41,41,41,41	0
54	MG	AA	1677	1/1	0.92	0.32	62,62,62,62	0
54	MG	DA	3144	1/1	0.92	0.46	42,42,42,42	0
54	MG	DA	3200	1/1	0.92	0.24	34,34,34,34	0
54	MG	DA	3352	1/1	0.92	0.11	33,33,33,33	0
54	MG	CQ	201	1/1	0.92	0.35	62,62,62,62	0
54	MG	DA	3544	1/1	0.92	0.06	72,72,72,72	0
54	MG	BA	3656	1/1	0.92	0.16	68,68,68,68	0
54	MG	BA	3390	1/1	0.92	0.08	62,62,62,62	0
54	MG	BA	3584	1/1	0.92	0.11	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3171	1/1	0.92	0.32	31,31,31,31	0
54	MG	CA	1759	1/1	0.92	0.22	69,69,69,69	0
54	MG	DA	3513	1/1	0.92	0.14	34,34,34,34	0
54	MG	BA	3422	1/1	0.92	0.17	76,76,76,76	0
54	MG	BA	3067	1/1	0.92	0.18	43,43,43,43	0
54	MG	DA	3382	1/1	0.92	0.23	53,53,53,53	0
54	MG	BA	3137	1/1	0.92	0.22	38,38,38,38	0
54	MG	BA	3290	1/1	0.92	0.17	63,63,63,63	0
54	MG	DR	202	1/1	0.92	0.37	34,34,34,34	0
54	MG	DB	202	1/1	0.92	0.21	50,50,50,50	0
54	MG	BA	3564	1/1	0.92	0.11	59,59,59,59	0
54	MG	DA	3175	1/1	0.92	0.36	44,44,44,44	0
54	MG	DA	3162	1/1	0.92	0.35	35,35,35,35	0
54	MG	DA	3306	1/1	0.92	0.35	29,29,29,29	0
54	MG	DA	3427	1/1	0.92	0.06	59,59,59,59	0
54	MG	AA	1613	1/1	0.92	0.19	65,65,65,65	0
54	MG	BA	3233	1/1	0.92	0.44	41,41,41,41	0
54	MG	BA	3318	1/1	0.92	0.20	35,35,35,35	0
54	MG	DA	3022	1/1	0.92	0.16	34,34,34,34	0
54	MG	B5	103	1/1	0.92	0.08	57,57,57,57	0
54	MG	BA	3191	1/1	0.92	0.27	40,40,40,40	0
54	MG	DA	3445	1/1	0.92	0.17	42,42,42,42	0
54	MG	DA	3048	1/1	0.92	0.25	40,40,40,40	0
54	MG	DA	3411	1/1	0.92	0.11	49,49,49,49	0
54	MG	BA	3641	1/1	0.92	0.22	72,72,72,72	0
54	MG	BA	3405	1/1	0.92	0.15	61,61,61,61	0
54	MG	AA	1664	1/1	0.92	0.14	57,57,57,57	0
54	MG	BA	3331	1/1	0.92	0.15	48,48,48,48	0
54	MG	DA	3332	1/1	0.92	0.23	53,53,53,53	0
54	MG	BA	3096	1/1	0.92	0.43	47,47,47,47	0
54	MG	BA	3458	1/1	0.92	0.17	35,35,35,35	0
54	MG	DA	3116	1/1	0.92	0.20	43,43,43,43	0
54	MG	BA	3124	1/1	0.92	0.19	33,33,33,33	0
54	MG	DA	3103	1/1	0.92	0.17	54,54,54,54	0
54	MG	DA	3225	1/1	0.92	0.50	51,51,51,51	0
54	MG	DA	3142	1/1	0.92	0.21	37,37,37,37	0
54	MG	DA	3432	1/1	0.92	0.10	70,70,70,70	0
54	MG	BA	3083	1/1	0.92	0.18	43,43,43,43	0
54	MG	BA	3103	1/1	0.92	0.20	29,29,29,29	0
54	MG	DA	3545	1/1	0.92	0.08	82,82,82,82	0
54	MG	BA	3431	1/1	0.92	0.08	71,71,71,71	0
54	MG	BA	3400	1/1	0.92	0.21	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3526	1/1	0.92	0.13	22,22,22,22	0
54	MG	BT	201	1/1	0.92	0.15	53,53,53,53	0
54	MG	BA	3516	1/1	0.92	0.25	63,63,63,63	0
54	MG	DA	3460	1/1	0.92	0.19	65,65,65,65	0
54	MG	DA	3031	1/1	0.92	0.23	53,53,53,53	0
54	MG	AA	1660	1/1	0.92	0.51	80,80,80,80	0
54	MG	BA	3019	1/1	0.92	0.18	34,34,34,34	0
54	MG	BA	3496	1/1	0.92	0.17	39,39,39,39	0
54	MG	CA	1673	1/1	0.92	0.60	57,57,57,57	0
54	MG	CA	1605	1/1	0.92	0.34	67,67,67,67	0
54	MG	BB	202	1/1	0.92	0.12	43,43,43,43	0
54	MG	BA	3306	1/1	0.92	0.18	55,55,55,55	0
54	MG	DA	3378	1/1	0.92	0.15	33,33,33,33	0
54	MG	DA	3129	1/1	0.92	0.13	61,61,61,61	0
54	MG	BA	3356	1/1	0.92	0.17	29,29,29,29	0
54	MG	BA	3330	1/1	0.92	0.13	34,34,34,34	0
54	MG	AA	1633	1/1	0.92	0.28	62,62,62,62	0
54	MG	DA	3556	1/1	0.92	0.06	56,56,56,56	0
54	MG	DA	3305	1/1	0.92	0.22	35,35,35,35	0
54	MG	DA	3266	1/1	0.92	0.32	47,47,47,47	0
54	MG	DA	3343	1/1	0.92	0.06	37,37,37,37	0
54	MG	BA	3162	1/1	0.92	0.35	42,42,42,42	0
54	MG	DA	3489	1/1	0.92	0.14	79,79,79,79	0
54	MG	DA	3538	1/1	0.92	0.14	87,87,87,87	0
54	MG	BA	3132	1/1	0.92	0.12	33,33,33,33	0
54	MG	DA	3444	1/1	0.92	0.14	41,41,41,41	0
54	MG	CA	1634	1/1	0.92	0.18	64,64,64,64	0
54	MG	DA	3120	1/1	0.92	0.26	43,43,43,43	0
54	MG	BA	3196	1/1	0.92	0.17	46,46,46,46	0
54	MG	BA	3197	1/1	0.92	0.35	41,41,41,41	0
54	MG	BA	3040	1/1	0.92	0.34	30,30,30,30	0
54	MG	DA	3481	1/1	0.92	0.44	61,61,61,61	0
54	MG	AA	1632	1/1	0.92	0.22	71,71,71,71	0
54	MG	BA	3020	1/1	0.92	0.09	82,82,82,82	0
54	MG	DA	3100	1/1	0.92	0.22	38,38,38,38	0
54	MG	BA	3308	1/1	0.92	0.17	52,52,52,52	0
54	MG	DA	3093	1/1	0.92	0.27	56,56,56,56	0
54	MG	DA	3228	1/1	0.92	0.48	40,40,40,40	0
54	MG	BA	3138	1/1	0.92	0.35	42,42,42,42	0
54	MG	BA	3193	1/1	0.92	0.67	35,35,35,35	0
55	ZN	BY	201	1/1	0.92	0.11	69,69,69,69	0
54	MG	BA	3134	1/1	0.92	0.43	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3536	1/1	0.92	0.08	68,68,68,68	0
54	MG	BA	3410	1/1	0.92	0.08	77,77,77,77	0
54	MG	DA	3074	1/1	0.92	0.19	54,54,54,54	0
54	MG	DA	3329	1/1	0.92	0.13	41,41,41,41	0
54	MG	DA	3469	1/1	0.93	0.07	56,56,56,56	0
54	MG	DA	3002	1/1	0.93	0.12	69,69,69,69	0
54	MG	CA	1737	1/1	0.93	0.13	89,89,89,89	0
54	MG	BA	3115	1/1	0.93	0.12	45,45,45,45	0
54	MG	BA	3548	1/1	0.93	0.13	29,29,29,29	0
54	MG	DA	3550	1/1	0.93	0.13	58,58,58,58	0
54	MG	BA	3559	1/1	0.93	0.07	71,71,71,71	0
54	MG	DA	3040	1/1	0.93	0.26	48,48,48,48	0
54	MG	BQ	202	1/1	0.93	0.21	34,34,34,34	0
54	MG	BA	3436	1/1	0.93	0.13	70,70,70,70	0
54	MG	DA	3316	1/1	0.93	0.73	69,69,69,69	0
54	MG	BA	3373	1/1	0.93	0.08	44,44,44,44	0
54	MG	BA	3258	1/1	0.93	0.37	55,55,55,55	0
54	MG	BA	3359	1/1	0.93	0.11	70,70,70,70	0
54	MG	DA	3259	1/1	0.93	0.19	43,43,43,43	0
54	MG	BA	3538	1/1	0.93	0.11	66,66,66,66	0
54	MG	DA	3407	1/1	0.93	0.06	70,70,70,70	0
54	MG	DA	3536	1/1	0.93	0.16	51,51,51,51	0
54	MG	BA	3252	1/1	0.93	0.32	36,36,36,36	0
54	MG	BA	3565	1/1	0.93	0.07	68,68,68,68	0
54	MG	DA	3314	1/1	0.93	0.39	43,43,43,43	0
54	MG	DA	3061	1/1	0.93	0.17	32,32,32,32	0
54	MG	BA	3176	1/1	0.93	0.16	60,60,60,60	0
54	MG	DA	3505	1/1	0.93	0.13	91,91,91,91	0
54	MG	BA	3519	1/1	0.93	0.05	64,64,64,64	0
54	MG	DA	3256	1/1	0.93	0.24	52,52,52,52	0
54	MG	BA	3009	1/1	0.93	0.29	45,45,45,45	0
54	MG	DA	3117	1/1	0.93	0.17	47,47,47,47	0
54	MG	DA	3137	1/1	0.93	0.11	38,38,38,38	0
54	MG	AA	1714	1/1	0.93	0.25	57,57,57,57	0
54	MG	BA	3417	1/1	0.93	0.08	48,48,48,48	0
54	MG	BA	3257	1/1	0.93	0.41	23,23,23,23	0
54	MG	CA	1740	1/1	0.93	0.40	68,68,68,68	0
54	MG	BE	302	1/1	0.93	0.20	41,41,41,41	0
54	MG	DA	3588	1/1	0.93	0.18	34,34,34,34	0
54	MG	DA	3171	1/1	0.93	0.17	61,61,61,61	0
54	MG	CA	1643	1/1	0.93	0.22	70,70,70,70	0
54	MG	DA	3461	1/1	0.93	0.14	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3555	1/1	0.93	0.14	56,56,56,56	0
54	MG	AA	1623	1/1	0.93	0.17	74,74,74,74	0
54	MG	BA	3450	1/1	0.93	0.10	38,38,38,38	0
54	MG	DA	3586	1/1	0.93	0.14	49,49,49,49	0
55	ZN	CD	301	1/1	0.93	0.26	71,71,71,71	0
54	MG	DA	3133	1/1	0.93	0.38	36,36,36,36	0
54	MG	DA	3296	1/1	0.93	0.09	67,67,67,67	0
54	MG	DA	3333	1/1	0.93	0.15	37,37,37,37	0
54	MG	DA	3085	1/1	0.93	0.21	43,43,43,43	0
54	MG	DA	3199	1/1	0.93	0.18	44,44,44,44	0
54	MG	DA	3571	1/1	0.93	0.14	55,55,55,55	0
54	MG	BA	3095	1/1	0.93	0.19	48,48,48,48	0
54	MG	BA	3492	1/1	0.93	0.21	27,27,27,27	0
54	MG	AA	1605	1/1	0.93	0.17	66,66,66,66	0
54	MG	DA	3077	1/1	0.93	0.17	49,49,49,49	0
54	MG	DA	3565	1/1	0.93	0.20	34,34,34,34	0
54	MG	DA	3283	1/1	0.93	0.18	61,61,61,61	0
54	MG	BA	3005	1/1	0.93	0.28	60,60,60,60	0
54	MG	BA	3250	1/1	0.93	0.40	26,26,26,26	0
54	MG	BA	3295	1/1	0.93	0.58	54,54,54,54	0
54	MG	DA	3186	1/1	0.93	0.13	54,54,54,54	0
54	MG	DA	3194	1/1	0.93	0.23	37,37,37,37	0
54	MG	BA	3181	1/1	0.93	0.20	38,38,38,38	0
54	MG	CA	1611	1/1	0.93	0.22	43,43,43,43	0
54	MG	DA	3375	1/1	0.93	0.14	31,31,31,31	0
54	MG	DA	3042	1/1	0.93	0.23	33,33,33,33	0
54	MG	CA	1628	1/1	0.93	0.09	75,75,75,75	0
54	MG	DA	3091	1/1	0.93	0.17	55,55,55,55	0
54	MG	AA	1643	1/1	0.93	0.59	47,47,47,47	0
54	MG	DA	3443	1/1	0.93	0.11	75,75,75,75	0
54	MG	BA	3660	1/1	0.93	0.13	104,104,104,104	0
54	MG	BA	3522	1/1	0.93	0.11	74,74,74,74	0
54	MG	BA	3111	1/1	0.93	0.20	56,56,56,56	0
54	MG	DA	3021	1/1	0.93	0.13	51,51,51,51	0
54	MG	DA	3113	1/1	0.93	0.41	59,59,59,59	0
54	MG	BA	3050	1/1	0.93	0.22	35,35,35,35	0
54	MG	BA	3348	1/1	0.93	0.08	59,59,59,59	0
54	MG	DA	3264	1/1	0.93	0.45	61,61,61,61	0
54	MG	DA	3019	1/1	0.93	0.16	40,40,40,40	0
54	MG	BD	301	1/1	0.93	0.46	49,49,49,49	0
54	MG	AA	1657	1/1	0.93	0.39	58,58,58,58	0
54	MG	BA	3474	1/1	0.93	0.08	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1655	1/1	0.93	0.22	98,98,98,98	0
54	MG	BA	3105	1/1	0.93	0.36	28,28,28,28	0
54	MG	BA	3041	1/1	0.93	0.26	40,40,40,40	0
54	MG	BA	3583	1/1	0.93	0.15	34,34,34,34	0
54	MG	BA	3201	1/1	0.93	0.33	31,31,31,31	0
54	MG	BA	3072	1/1	0.93	0.10	59,59,59,59	0
54	MG	DA	3272	1/1	0.93	0.39	30,30,30,30	0
54	MG	BA	3053	1/1	0.93	0.44	57,57,57,57	0
54	MG	BA	3433	1/1	0.93	0.09	55,55,55,55	0
54	MG	BA	3161	1/1	0.93	0.18	40,40,40,40	0
54	MG	BA	3147	1/1	0.93	0.11	55,55,55,55	0
54	MG	CA	1658	1/1	0.93	0.34	58,58,58,58	0
54	MG	CA	1663	1/1	0.93	0.33	64,64,64,64	0
54	MG	BA	3444	1/1	0.93	0.11	53,53,53,53	0
54	MG	DA	3204	1/1	0.93	0.44	43,43,43,43	0
54	MG	AA	1601	1/1	0.93	0.28	55,55,55,55	0
54	MG	BA	3204	1/1	0.93	0.13	38,38,38,38	0
54	MG	BA	3398	1/1	0.93	0.14	52,52,52,52	0
54	MG	DA	3192	1/1	0.93	0.17	50,50,50,50	0
54	MG	DA	3340	1/1	0.93	0.12	45,45,45,45	0
54	MG	BA	3291	1/1	0.93	0.13	39,39,39,39	0
54	MG	BA	3432	1/1	0.93	0.04	67,67,67,67	0
54	MG	BA	3027	1/1	0.93	0.15	38,38,38,38	0
54	MG	DA	3263	1/1	0.93	0.20	40,40,40,40	0
54	MG	DA	3595	1/1	0.93	0.12	58,58,58,58	0
54	MG	DA	3046	1/1	0.93	0.19	42,42,42,42	0
54	MG	BA	3170	1/1	0.93	0.22	29,29,29,29	0
54	MG	DA	3004	1/1	0.93	0.07	88,88,88,88	0
54	MG	BA	3479	1/1	0.93	0.18	32,32,32,32	0
54	MG	BA	3311	1/1	0.93	0.17	24,24,24,24	0
54	MG	BA	3180	1/1	0.93	0.28	41,41,41,41	0
54	MG	CA	1662	1/1	0.93	0.39	75,75,75,75	0
54	MG	BA	3280	1/1	0.93	0.30	46,46,46,46	0
54	MG	BA	3574	1/1	0.93	0.31	33,33,33,33	0
54	MG	CA	1610	1/1	0.93	0.29	60,60,60,60	0
54	MG	BA	3622	1/1	0.93	0.11	45,45,45,45	0
54	MG	CA	1712	1/1	0.93	0.29	87,87,87,87	0
54	MG	DA	3558	1/1	0.93	0.15	36,36,36,36	0
54	MG	DA	3015	1/1	0.93	0.13	38,38,38,38	0
54	MG	BA	3256	1/1	0.93	0.34	23,23,23,23	0
54	MG	DA	3450	1/1	0.93	0.10	67,67,67,67	0
54	MG	BA	3355	1/1	0.93	0.14	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3592	1/1	0.93	0.06	83,83,83,83	0
54	MG	BA	3404	1/1	0.93	0.10	45,45,45,45	0
54	MG	DA	3503	1/1	0.93	0.24	34,34,34,34	0
54	MG	BA	3063	1/1	0.93	0.12	54,54,54,54	0
54	MG	BA	3478	1/1	0.93	0.16	41,41,41,41	0
54	MG	DA	3339	1/1	0.93	0.07	44,44,44,44	0
54	MG	DA	3095	1/1	0.93	0.24	53,53,53,53	0
54	MG	BA	3374	1/1	0.93	0.08	34,34,34,34	0
54	MG	BA	3542	1/1	0.94	0.11	83,83,83,83	0
54	MG	DA	3293	1/1	0.94	0.25	33,33,33,33	0
54	MG	CA	1671	1/1	0.94	0.42	49,49,49,49	0
54	MG	DR	201	1/1	0.94	0.31	40,40,40,40	0
54	MG	BA	3428	1/1	0.94	0.09	56,56,56,56	0
54	MG	DA	3159	1/1	0.94	0.20	45,45,45,45	0
54	MG	BA	3643	1/1	0.94	0.11	59,59,59,59	0
54	MG	DA	3344	1/1	0.94	0.09	30,30,30,30	0
54	MG	BA	3165	1/1	0.94	0.28	51,51,51,51	0
54	MG	DA	3226	1/1	0.94	0.49	55,55,55,55	0
54	MG	DA	3064	1/1	0.94	0.36	48,48,48,48	0
54	MG	DQ	201	1/1	0.94	0.15	40,40,40,40	0
54	MG	BA	3607	1/1	0.94	0.17	99,99,99,99	0
54	MG	AA	1673	1/1	0.94	0.59	60,60,60,60	0
54	MG	DA	3414	1/1	0.94	0.17	51,51,51,51	0
54	MG	BA	3169	1/1	0.94	0.23	31,31,31,31	0
54	MG	BA	3623	1/1	0.94	0.12	73,73,73,73	0
54	MG	DA	3072	1/1	0.94	0.49	50,50,50,50	0
54	MG	BA	3336	1/1	0.94	0.12	45,45,45,45	0
54	MG	BA	3122	1/1	0.94	0.31	49,49,49,49	0
54	MG	DA	3568	1/1	0.94	0.11	78,78,78,78	0
54	MG	CA	1630	1/1	0.94	0.62	72,72,72,72	0
54	MG	DA	3292	1/1	0.94	0.27	33,33,33,33	0
54	MG	BA	3446	1/1	0.94	0.15	30,30,30,30	0
54	MG	BA	3615	1/1	0.94	0.12	52,52,52,52	0
54	MG	BA	3207	1/1	0.94	0.13	33,33,33,33	0
54	MG	CA	1752	1/1	0.94	0.13	71,71,71,71	0
54	MG	BA	3268	1/1	0.94	0.37	27,27,27,27	0
54	MG	BA	3220	1/1	0.94	0.27	31,31,31,31	0
54	MG	BA	3004	1/1	0.94	0.08	76,76,76,76	0
54	MG	AA	1666	1/1	0.94	0.13	74,74,74,74	0
54	MG	AA	1722	1/1	0.94	0.18	66,66,66,66	0
54	MG	DA	3477	1/1	0.94	0.15	53,53,53,53	0
54	MG	BA	3129	1/1	0.94	0.37	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1675	1/1	0.94	0.59	61,61,61,61	0
54	MG	DA	3250	1/1	0.94	0.17	49,49,49,49	0
54	MG	DA	3484	1/1	0.94	0.07	64,64,64,64	0
54	MG	BA	3088	1/1	0.94	0.19	33,33,33,33	0
54	MG	CA	1703	1/1	0.94	0.18	56,56,56,56	0
54	MG	BA	3379	1/1	0.94	0.09	22,22,22,22	0
54	MG	CA	1614	1/1	0.94	0.43	85,85,85,85	0
54	MG	DA	3491	1/1	0.94	0.19	44,44,44,44	0
54	MG	DA	3317	1/1	0.94	0.23	47,47,47,47	0
54	MG	DA	3216	1/1	0.94	0.15	51,51,51,51	0
54	MG	DA	3356	1/1	0.94	0.16	60,60,60,60	0
54	MG	BA	3081	1/1	0.94	0.35	42,42,42,42	0
54	MG	BA	3495	1/1	0.94	0.13	35,35,35,35	0
54	MG	AC	301	1/1	0.94	0.14	57,57,57,57	0
54	MG	BA	3413	1/1	0.94	0.12	57,57,57,57	0
54	MG	BA	3235	1/1	0.94	0.20	50,50,50,50	0
54	MG	BA	3031	1/1	0.94	0.17	44,44,44,44	0
54	MG	DA	3462	1/1	0.94	0.12	51,51,51,51	0
54	MG	DA	3482	1/1	0.94	0.19	56,56,56,56	0
54	MG	CA	1622	1/1	0.94	0.28	47,47,47,47	0
54	MG	DA	3579	1/1	0.94	0.08	57,57,57,57	0
54	MG	DA	3099	1/1	0.94	0.23	36,36,36,36	0
54	MG	BA	3473	1/1	0.94	0.23	30,30,30,30	0
54	MG	BA	3653	1/1	0.94	0.15	104,104,104,104	0
54	MG	BA	3382	1/1	0.94	0.19	100,100,100,100	0
54	MG	BA	3535	1/1	0.94	0.11	55,55,55,55	0
54	MG	B3	101	1/1	0.94	0.35	51,51,51,51	0
54	MG	DA	3265	1/1	0.94	0.32	44,44,44,44	0
54	MG	AA	1732	1/1	0.94	0.10	94,94,94,94	0
54	MG	CA	1682	1/1	0.94	0.13	58,58,58,58	0
54	MG	D8	101	1/1	0.94	0.15	48,48,48,48	0
54	MG	DA	3357	1/1	0.94	0.19	36,36,36,36	0
54	MG	CA	1735	1/1	0.94	0.27	69,69,69,69	0
54	MG	DA	3035	1/1	0.94	0.17	60,60,60,60	0
54	MG	AA	1733	1/1	0.94	0.07	78,78,78,78	0
54	MG	AA	1735	1/1	0.94	0.17	110,110,110,110	0
54	MG	BA	3172	1/1	0.94	0.38	47,47,47,47	0
54	MG	CA	1653	1/1	0.94	0.80	57,57,57,57	0
54	MG	DA	3584	1/1	0.94	0.30	48,48,48,48	0
54	MG	DA	3561	1/1	0.94	0.19	71,71,71,71	0
54	MG	BA	3383	1/1	0.94	0.13	70,70,70,70	0
54	MG	BA	3273	1/1	0.94	0.40	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3294	1/1	0.94	0.15	42,42,42,42	0
54	MG	DA	3510	1/1	0.94	0.10	74,74,74,74	0
54	MG	B0	103	1/1	0.94	0.12	89,89,89,89	0
54	MG	DA	3011	1/1	0.94	0.26	42,42,42,42	0
54	MG	AA	1626	1/1	0.94	0.42	71,71,71,71	0
54	MG	BA	3349	1/1	0.94	0.10	36,36,36,36	0
54	MG	CA	1666	1/1	0.94	0.37	64,64,64,64	0
54	MG	DA	3044	1/1	0.94	0.19	46,46,46,46	0
54	MG	DA	3184	1/1	0.94	0.15	46,46,46,46	0
54	MG	BA	3449	1/1	0.94	0.29	29,29,29,29	0
54	MG	BA	3481	1/1	0.94	0.16	25,25,25,25	0
54	MG	DA	3224	1/1	0.94	0.37	32,32,32,32	0
54	MG	BA	3182	1/1	0.94	0.41	37,37,37,37	0
54	MG	AA	1668	1/1	0.94	0.57	62,62,62,62	0
54	MG	BB	221	1/1	0.94	0.06	50,50,50,50	0
54	MG	DA	3047	1/1	0.94	0.15	38,38,38,38	0
54	MG	CA	1669	1/1	0.94	0.30	76,76,76,76	0
54	MG	BA	3249	1/1	0.94	0.35	25,25,25,25	0
54	MG	DA	3539	1/1	0.94	0.09	67,67,67,67	0
54	MG	BA	3387	1/1	0.94	0.06	63,63,63,63	0
54	MG	BZ	301	1/1	0.94	0.17	55,55,55,55	0
54	MG	BA	3490	1/1	0.94	0.10	28,28,28,28	0
54	MG	CA	1710	1/1	0.94	0.09	48,48,48,48	0
54	MG	BA	3281	1/1	0.94	0.25	24,24,24,24	0
54	MG	BA	3272	1/1	0.94	0.37	31,31,31,31	0
54	MG	DA	3468	1/1	0.94	0.07	53,53,53,53	0
54	MG	DE	302	1/1	0.94	0.35	21,21,21,21	0
54	MG	CA	1685	1/1	0.94	0.34	71,71,71,71	0
54	MG	BA	3435	1/1	0.94	0.15	48,48,48,48	0
54	MG	BA	3528	1/1	0.94	0.17	39,39,39,39	0
54	MG	DA	3057	1/1	0.94	0.15	35,35,35,35	0
54	MG	DA	3069	1/1	0.94	0.39	42,42,42,42	0
54	MG	DA	3540	1/1	0.94	0.10	53,53,53,53	0
54	MG	BA	3520	1/1	0.94	0.14	95,95,95,95	0
54	MG	DA	3190	1/1	0.94	0.09	59,59,59,59	0
54	MG	BA	3155	1/1	0.94	0.19	41,41,41,41	0
54	MG	BA	3613	1/1	0.94	0.07	65,65,65,65	0
54	MG	AA	1615	1/1	0.94	0.36	54,54,54,54	0
54	MG	DA	3473	1/1	0.94	0.20	38,38,38,38	0
54	MG	BA	3354	1/1	0.94	0.09	37,37,37,37	0
54	MG	DA	3126	1/1	0.94	0.59	63,63,63,63	0
54	MG	B8	102	1/1	0.94	0.10	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3136	1/1	0.94	0.36	45,45,45,45	0
54	MG	BA	3110	1/1	0.94	0.20	66,66,66,66	0
54	MG	BA	3406	1/1	0.94	0.06	66,66,66,66	0
54	MG	BA	3426	1/1	0.94	0.08	37,37,37,37	0
54	MG	BA	3401	1/1	0.94	0.14	58,58,58,58	0
54	MG	DA	3304	1/1	0.94	0.42	29,29,29,29	0
54	MG	DA	3182	1/1	0.94	0.31	46,46,46,46	0
54	MG	BA	3341	1/1	0.94	0.05	44,44,44,44	0
54	MG	BA	3195	1/1	0.94	0.22	60,60,60,60	0
54	MG	DA	3514	1/1	0.94	0.19	42,42,42,42	0
54	MG	BA	3098	1/1	0.94	0.24	40,40,40,40	0
54	MG	BA	3488	1/1	0.94	0.17	24,24,24,24	0
54	MG	BA	3224	1/1	0.94	0.28	50,50,50,50	0
54	MG	DA	3291	1/1	0.94	0.33	53,53,53,53	0
54	MG	DA	3551	1/1	0.94	0.20	62,62,62,62	0
54	MG	BA	3555	1/1	0.94	0.12	47,47,47,47	0
54	MG	DA	3527	1/1	0.94	0.15	91,91,91,91	0
54	MG	DA	3173	1/1	0.94	0.13	52,52,52,52	0
54	MG	DA	3494	1/1	0.94	0.14	37,37,37,37	0
54	MG	DA	3426	1/1	0.94	0.07	81,81,81,81	0
54	MG	BA	3189	1/1	0.94	0.32	41,41,41,41	0
54	MG	AA	1662	1/1	0.94	0.12	58,58,58,58	0
54	MG	AA	1694	1/1	0.94	0.08	80,80,80,80	0
54	MG	BA	3242	1/1	0.94	0.20	38,38,38,38	0
54	MG	BA	3036	1/1	0.94	0.12	36,36,36,36	0
54	MG	DA	3155	1/1	0.95	0.37	64,64,64,64	0
54	MG	BA	3389	1/1	0.95	0.18	46,46,46,46	0
54	MG	DO	201	1/1	0.95	0.09	120,120,120,120	0
54	MG	BA	3632	1/1	0.95	0.05	54,54,54,54	0
54	MG	DA	3051	1/1	0.95	0.14	38,38,38,38	0
54	MG	DA	3233	1/1	0.95	0.14	38,38,38,38	0
54	MG	BA	3049	1/1	0.95	0.37	53,53,53,53	0
54	MG	BA	3125	1/1	0.95	0.31	45,45,45,45	0
54	MG	DA	3300	1/1	0.95	0.14	41,41,41,41	0
54	MG	BA	3460	1/1	0.95	0.30	61,61,61,61	0
54	MG	DA	3381	1/1	0.95	0.05	42,42,42,42	0
54	MG	DA	3140	1/1	0.95	0.32	64,64,64,64	0
54	MG	BA	3364	1/1	0.95	0.07	81,81,81,81	0
54	MG	BA	3652	1/1	0.95	0.06	97,97,97,97	0
54	MG	BA	3174	1/1	0.95	0.18	32,32,32,32	0
54	MG	BA	3244	1/1	0.95	0.14	30,30,30,30	0
54	MG	BA	3202	1/1	0.95	0.16	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3026	1/1	0.95	0.08	39,39,39,39	0
54	MG	DA	3379	1/1	0.95	0.12	59,59,59,59	0
54	MG	BA	3071	1/1	0.95	0.17	34,34,34,34	0
54	MG	B2	101	1/1	0.95	0.17	45,45,45,45	0
54	MG	BA	3208	1/1	0.95	0.28	38,38,38,38	0
54	MG	DA	3301	1/1	0.95	0.46	50,50,50,50	0
54	MG	AA	1700	1/1	0.95	0.09	42,42,42,42	0
54	MG	DA	3108	1/1	0.95	0.11	42,42,42,42	0
54	MG	DB	203	1/1	0.95	0.39	58,58,58,58	0
54	MG	BA	3657	1/1	0.95	0.45	65,65,65,65	0
54	MG	DA	3455	1/1	0.95	0.05	68,68,68,68	0
54	MG	DA	3546	1/1	0.95	0.11	64,64,64,64	0
54	MG	BA	3093	1/1	0.95	0.19	42,42,42,42	0
54	MG	CA	1699	1/1	0.95	0.16	83,83,83,83	0
54	MG	DA	3007	1/1	0.95	0.14	48,48,48,48	0
54	MG	BA	3639	1/1	0.95	0.20	65,65,65,65	0
54	MG	BA	3633	1/1	0.95	0.12	43,43,43,43	0
54	MG	D0	101	1/1	0.95	0.09	41,41,41,41	0
54	MG	BA	3253	1/1	0.95	0.44	19,19,19,19	0
54	MG	AA	1631	1/1	0.95	0.16	41,41,41,41	0
54	MG	BA	3521	1/1	0.95	0.09	40,40,40,40	0
54	MG	DA	3313	1/1	0.95	0.35	29,29,29,29	0
54	MG	DA	3056	1/1	0.95	0.18	43,43,43,43	0
54	MG	BA	3344	1/1	0.95	0.31	61,61,61,61	0
54	MG	BA	3441	1/1	0.95	0.08	56,56,56,56	0
54	MG	B1	101	1/1	0.95	0.18	45,45,45,45	0
54	MG	BA	3476	1/1	0.95	0.18	49,49,49,49	0
54	MG	BA	3286	1/1	0.95	0.46	52,52,52,52	0
55	ZN	D9	101	1/1	0.95	0.06	65,65,65,65	0
54	MG	DA	3249	1/1	0.95	0.29	49,49,49,49	0
54	MG	BA	3245	1/1	0.95	0.34	23,23,23,23	0
54	MG	BA	3251	1/1	0.95	0.25	27,27,27,27	0
54	MG	BA	3052	1/1	0.95	0.17	52,52,52,52	0
54	MG	BA	3617	1/1	0.95	0.07	94,94,94,94	0
54	MG	DA	3560	1/1	0.95	0.14	57,57,57,57	0
54	MG	BA	3378	1/1	0.95	0.16	25,25,25,25	0
54	MG	DA	3131	1/1	0.95	0.32	56,56,56,56	0
54	MG	DA	3118	1/1	0.95	0.24	43,43,43,43	0
54	MG	DA	3406	1/1	0.95	0.07	58,58,58,58	0
54	MG	BA	3228	1/1	0.95	0.40	37,37,37,37	0
54	MG	DA	3485	1/1	0.95	0.26	58,58,58,58	0
54	MG	BA	3033	1/1	0.95	0.10	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	AA	1687	1/1	0.95	0.18	62,62,62,62	0
54	MG	AA	1667	1/1	0.95	0.19	38,38,38,38	0
54	MG	DA	3547	1/1	0.95	0.17	29,29,29,29	0
54	MG	DA	3598	1/1	0.95	0.11	76,76,76,76	0
54	MG	DA	3441	1/1	0.95	0.26	48,48,48,48	0
54	MG	DA	3104	1/1	0.95	0.22	34,34,34,34	0
54	MG	DA	3553	1/1	0.95	0.08	54,54,54,54	0
54	MG	DA	3520	1/1	0.95	0.13	56,56,56,56	0
54	MG	DA	3045	1/1	0.95	0.12	38,38,38,38	0
54	MG	DA	3299	1/1	0.95	0.42	65,65,65,65	0
54	MG	BB	222	1/1	0.95	0.18	80,80,80,80	0
54	MG	CA	1742	1/1	0.95	0.07	113,113,113,113	0
54	MG	DA	3320	1/1	0.95	0.14	38,38,38,38	0
54	MG	DA	3574	1/1	0.95	0.07	41,41,41,41	0
54	MG	BA	3384	1/1	0.95	0.15	88,88,88,88	0
54	MG	BA	3079	1/1	0.95	0.20	50,50,50,50	0
54	MG	DA	3210	1/1	0.95	0.26	53,53,53,53	0
54	MG	DA	3178	1/1	0.95	0.33	32,32,32,32	0
54	MG	BA	3529	1/1	0.95	0.07	65,65,65,65	0
54	MG	BF	301	1/1	0.95	0.21	33,33,33,33	0
54	MG	BA	3070	1/1	0.95	0.20	37,37,37,37	0
54	MG	DA	3084	1/1	0.95	0.24	37,37,37,37	0
54	MG	DA	3013	1/1	0.95	0.12	37,37,37,37	0
54	MG	BA	3028	1/1	0.95	0.15	22,22,22,22	0
54	MG	DA	3511	1/1	0.95	0.09	49,49,49,49	0
54	MG	DA	3564	1/1	0.95	0.10	61,61,61,61	0
54	MG	BA	3560	1/1	0.95	0.08	74,74,74,74	0
54	MG	DA	3156	1/1	0.95	0.20	35,35,35,35	0
54	MG	BA	3457	1/1	0.95	0.19	27,27,27,27	0
54	MG	BA	3314	1/1	0.95	0.17	37,37,37,37	0
54	MG	DA	3219	1/1	0.95	0.16	38,38,38,38	0
54	MG	DA	3071	1/1	0.95	0.19	44,44,44,44	0
54	MG	DA	3269	1/1	0.95	0.29	47,47,47,47	0
54	MG	DA	3154	1/1	0.95	0.33	26,26,26,26	0
54	MG	BA	3608	1/1	0.95	0.26	71,71,71,71	0
54	MG	BA	3166	1/1	0.95	0.29	36,36,36,36	0
54	MG	AA	1639	1/1	0.95	0.45	67,67,67,67	0
54	MG	DA	3311	1/1	0.95	0.35	26,26,26,26	0
54	MG	BB	217	1/1	0.95	0.11	67,67,67,67	0
54	MG	DA	3472	1/1	0.95	0.33	50,50,50,50	0
54	MG	BA	3533	1/1	0.95	0.14	61,61,61,61	0
54	MG	DA	3053	1/1	0.95	0.14	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3651	1/1	0.95	0.21	87,87,87,87	0
54	MG	DA	3429	1/1	0.95	0.07	56,56,56,56	0
54	MG	DA	3349	1/1	0.95	0.15	35,35,35,35	0
54	MG	CA	1725	1/1	0.95	0.17	65,65,65,65	0
54	MG	DA	3135	1/1	0.95	0.32	47,47,47,47	0
54	MG	BA	3351	1/1	0.95	0.08	60,60,60,60	0
54	MG	DA	3067	1/1	0.95	0.23	49,49,49,49	0
54	MG	DA	3161	1/1	0.95	0.34	39,39,39,39	0
54	MG	BA	3409	1/1	0.95	0.07	68,68,68,68	0
54	MG	BA	3157	1/1	0.95	0.30	48,48,48,48	0
54	MG	BA	3429	1/1	0.95	0.21	47,47,47,47	0
54	MG	DA	3054	1/1	0.95	0.12	46,46,46,46	0
54	MG	CA	1696	1/1	0.95	0.43	61,61,61,61	0
54	MG	BA	3453	1/1	0.95	0.08	46,46,46,46	0
54	MG	CA	1619	1/1	0.95	0.15	50,50,50,50	0
54	MG	CA	1715	1/1	0.95	0.05	103,103,103,103	0
54	MG	BQ	203	1/1	0.95	0.12	73,73,73,73	0
54	MG	CA	1734	1/1	0.95	0.23	66,66,66,66	0
54	MG	BA	3392	1/1	0.95	0.13	110,110,110,110	0
54	MG	AA	1695	1/1	0.95	0.11	74,74,74,74	0
54	MG	BA	3209	1/1	0.95	0.21	56,56,56,56	0
54	MG	BA	3265	1/1	0.95	0.39	29,29,29,29	0
54	MG	BA	3058	1/1	0.95	0.14	32,32,32,32	0
54	MG	BA	3255	1/1	0.95	0.31	25,25,25,25	0
54	MG	BA	3513	1/1	0.95	0.09	86,86,86,86	0
54	MG	DA	3359	1/1	0.95	0.10	33,33,33,33	0
54	MG	DA	3241	1/1	0.95	0.27	35,35,35,35	0
54	MG	BA	3588	1/1	0.95	0.12	64,64,64,64	0
54	MG	BA	3610	1/1	0.95	0.08	63,63,63,63	0
54	MG	BA	3116	1/1	0.95	0.17	53,53,53,53	0
54	MG	DA	3393	1/1	0.95	0.14	41,41,41,41	0
54	MG	DA	3531	1/1	0.95	0.18	91,91,91,91	0
54	MG	DA	3552	1/1	0.95	0.39	35,35,35,35	0
54	MG	DA	3439	1/1	0.95	0.07	57,57,57,57	0
54	MG	BA	3618	1/1	0.95	0.08	52,52,52,52	0
54	MG	BA	3246	1/1	0.95	0.47	20,20,20,20	0
54	MG	DA	3430	1/1	0.95	0.12	30,30,30,30	0
54	MG	BA	3275	1/1	0.95	0.29	26,26,26,26	0
54	MG	BW	202	1/1	0.95	0.12	33,33,33,33	0
54	MG	BA	3517	1/1	0.95	0.11	26,26,26,26	0
54	MG	DA	3010	1/1	0.95	0.18	42,42,42,42	0
54	MG	CA	1691	1/1	0.95	0.42	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BB	201	1/1	0.95	0.12	57,57,57,57	0
54	MG	AA	1725	1/1	0.95	0.20	56,56,56,56	0
54	MG	BA	3597	1/1	0.96	0.24	84,84,84,84	0
54	MG	BA	3508	1/1	0.96	0.14	29,29,29,29	0
54	MG	B0	102	1/1	0.96	0.17	54,54,54,54	0
54	MG	DA	3327	1/1	0.96	0.49	52,52,52,52	0
54	MG	DA	3534	1/1	0.96	0.14	28,28,28,28	0
54	MG	BA	3211	1/1	0.96	0.10	26,26,26,26	0
54	MG	BA	3135	1/1	0.96	0.41	45,45,45,45	0
54	MG	DA	3018	1/1	0.96	0.20	54,54,54,54	0
54	MG	BA	3467	1/1	0.96	0.24	30,30,30,30	0
54	MG	DA	3158	1/1	0.96	0.29	46,46,46,46	0
54	MG	BA	3324	1/1	0.96	0.10	42,42,42,42	0
54	MG	DB	207	1/1	0.96	0.24	57,57,57,57	0
54	MG	DD	302	1/1	0.96	0.41	38,38,38,38	0
54	MG	BA	3160	1/1	0.96	0.35	39,39,39,39	0
54	MG	DA	3323	1/1	0.96	0.13	40,40,40,40	0
54	MG	DA	3157	1/1	0.96	0.35	44,44,44,44	0
54	MG	DA	3082	1/1	0.96	0.42	36,36,36,36	0
54	MG	DB	208	1/1	0.96	0.10	104,104,104,104	0
54	MG	DA	3039	1/1	0.96	0.20	28,28,28,28	0
54	MG	BA	3620	1/1	0.96	0.05	68,68,68,68	0
54	MG	BA	3412	1/1	0.96	0.17	78,78,78,78	0
54	MG	DA	3347	1/1	0.96	0.17	35,35,35,35	0
54	MG	CA	1641	1/1	0.96	0.09	52,52,52,52	0
54	MG	BA	3640	1/1	0.96	0.14	116,116,116,116	0
54	MG	DA	3150	1/1	0.96	0.33	42,42,42,42	0
54	MG	CA	1678	1/1	0.96	0.24	55,55,55,55	0
54	MG	AA	1648	1/1	0.96	0.43	44,44,44,44	0
54	MG	DA	3453	1/1	0.96	0.07	79,79,79,79	0
54	MG	AA	1691	1/1	0.96	0.12	43,43,43,43	0
54	MG	DA	3043	1/1	0.96	0.10	54,54,54,54	0
54	MG	DA	3037	1/1	0.96	0.12	43,43,43,43	0
54	MG	BA	3130	1/1	0.96	0.24	43,43,43,43	0
54	MG	BA	3629	1/1	0.96	0.09	24,24,24,24	0
54	MG	BA	3223	1/1	0.96	0.51	60,60,60,60	0
55	ZN	AD	301	1/1	0.96	0.28	74,74,74,74	0
54	MG	BA	3263	1/1	0.96	0.38	36,36,36,36	0
54	MG	BA	3386	1/1	0.96	0.09	40,40,40,40	0
54	MG	CA	1654	1/1	0.96	0.13	65,65,65,65	0
54	MG	CA	1690	1/1	0.96	0.25	64,64,64,64	0
54	MG	BA	3371	1/1	0.96	0.11	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3367	1/1	0.96	0.24	30,30,30,30	0
54	MG	CA	1709	1/1	0.96	0.14	63,63,63,63	0
54	MG	DA	3386	1/1	0.96	0.08	39,39,39,39	0
54	MG	BA	3042	1/1	0.96	0.27	40,40,40,40	0
54	MG	CA	1730	1/1	0.96	0.10	62,62,62,62	0
54	MG	BA	3112	1/1	0.96	0.19	55,55,55,55	0
54	MG	DA	3448	1/1	0.96	0.10	42,42,42,42	0
54	MG	DA	3475	1/1	0.96	0.11	30,30,30,30	0
54	MG	BA	3106	1/1	0.96	0.21	52,52,52,52	0
54	MG	DA	3369	1/1	0.96	0.07	50,50,50,50	0
54	MG	BA	3168	1/1	0.96	0.26	28,28,28,28	0
54	MG	DA	3168	1/1	0.96	0.20	42,42,42,42	0
54	MG	DA	3390	1/1	0.96	0.07	47,47,47,47	0
54	MG	DA	3501	1/1	0.96	0.08	58,58,58,58	0
54	MG	BA	3628	1/1	0.96	0.15	35,35,35,35	0
54	MG	DA	3009	1/1	0.96	0.27	46,46,46,46	0
54	MG	AA	1701	1/1	0.96	0.12	48,48,48,48	0
54	MG	DA	3208	1/1	0.96	0.39	53,53,53,53	0
54	MG	DA	3405	1/1	0.96	0.16	32,32,32,32	0
54	MG	DA	3106	1/1	0.96	0.40	37,37,37,37	0
54	MG	CA	1723	1/1	0.96	0.13	55,55,55,55	0
54	MG	DA	3493	1/1	0.96	0.04	63,63,63,63	0
54	MG	BA	3625	1/1	0.96	0.06	53,53,53,53	0
54	MG	CA	1601	1/1	0.96	0.21	45,45,45,45	0
54	MG	BA	3069	1/1	0.96	0.36	42,42,42,42	0
54	MG	DA	3315	1/1	0.96	0.11	31,31,31,31	0
54	MG	BA	3199	1/1	0.96	0.14	41,41,41,41	0
54	MG	DA	3396	1/1	0.96	0.17	52,52,52,52	0
54	MG	CA	1689	1/1	0.96	0.38	61,61,61,61	0
54	MG	AA	1728	1/1	0.96	0.12	53,53,53,53	0
54	MG	BA	3415	1/1	0.96	0.08	33,33,33,33	0
54	MG	BA	3247	1/1	0.96	0.46	26,26,26,26	0
54	MG	AA	1711	1/1	0.96	0.24	46,46,46,46	0
54	MG	DA	3575	1/1	0.96	0.21	35,35,35,35	0
54	MG	BA	3276	1/1	0.96	0.24	23,23,23,23	0
54	MG	BA	3313	1/1	0.96	0.08	37,37,37,37	0
54	MG	BA	3126	1/1	0.96	0.22	41,41,41,41	0
54	MG	DA	3581	1/1	0.96	0.09	52,52,52,52	0
54	MG	B9	102	1/1	0.96	0.12	28,28,28,28	0
54	MG	DA	3535	1/1	0.96	0.15	64,64,64,64	0
54	MG	DA	3079	1/1	0.96	0.18	47,47,47,47	0
54	MG	DA	3348	1/1	0.96	0.15	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3278	1/1	0.96	0.38	30,30,30,30	0
54	MG	DA	3080	1/1	0.96	0.16	44,44,44,44	0
54	MG	BA	3381	1/1	0.96	0.06	66,66,66,66	0
54	MG	BD	303	1/1	0.96	0.18	35,35,35,35	0
54	MG	BA	3541	1/1	0.96	0.09	42,42,42,42	0
54	MG	DA	3302	1/1	0.96	0.51	21,21,21,21	0
54	MG	DA	3023	1/1	0.96	0.06	43,43,43,43	0
54	MG	DA	3498	1/1	0.96	0.10	28,28,28,28	0
54	MG	BA	3440	1/1	0.96	0.07	46,46,46,46	0
54	MG	BA	3140	1/1	0.96	0.56	36,36,36,36	0
54	MG	BA	3296	1/1	0.96	0.22	43,43,43,43	0
54	MG	AA	1665	1/1	0.96	0.10	51,51,51,51	0
54	MG	DA	3206	1/1	0.96	0.60	52,52,52,52	0
54	MG	BA	3556	1/1	0.96	0.20	57,57,57,57	0
54	MG	BR	201	1/1	0.96	0.17	29,29,29,29	0
54	MG	BA	3604	1/1	0.96	0.07	50,50,50,50	0
54	MG	BA	3167	1/1	0.96	0.45	31,31,31,31	0
54	MG	DA	3362	1/1	0.96	0.10	26,26,26,26	0
54	MG	DA	3385	1/1	0.96	0.09	49,49,49,49	0
54	MG	BA	3127	1/1	0.96	0.28	38,38,38,38	0
54	MG	DA	3076	1/1	0.96	0.15	42,42,42,42	0
54	MG	DA	3006	1/1	0.96	0.29	38,38,38,38	0
54	MG	BA	3391	1/1	0.96	0.11	39,39,39,39	0
54	MG	DA	3036	1/1	0.96	0.29	44,44,44,44	0
54	MG	BA	3647	1/1	0.96	0.15	70,70,70,70	0
54	MG	BA	3078	1/1	0.96	0.27	30,30,30,30	0
54	MG	DA	3205	1/1	0.96	0.28	47,47,47,47	0
54	MG	BA	3376	1/1	0.96	0.11	26,26,26,26	0
54	MG	AA	1685	1/1	0.96	0.10	71,71,71,71	0
54	MG	CA	1624	1/1	0.96	0.54	63,63,63,63	0
54	MG	DA	3041	1/1	0.96	0.51	36,36,36,36	0
54	MG	BA	3545	1/1	0.96	0.07	43,43,43,43	0
54	MG	DA	3392	1/1	0.96	0.14	35,35,35,35	0
54	MG	BA	3395	1/1	0.96	0.10	60,60,60,60	0
54	MG	DA	3307	1/1	0.96	0.22	35,35,35,35	0
54	MG	BA	3325	1/1	0.96	0.11	40,40,40,40	0
54	MG	DA	3351	1/1	0.96	0.12	40,40,40,40	0
54	MG	DA	3440	1/1	0.96	0.28	42,42,42,42	0
54	MG	BA	3226	1/1	0.96	0.22	50,50,50,50	0
54	MG	BA	3192	1/1	0.96	0.10	51,51,51,51	0
54	MG	BA	3518	1/1	0.96	0.10	50,50,50,50	0
54	MG	AA	1610	1/1	0.96	0.41	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1687	1/1	0.96	0.22	62,62,62,62	0
54	MG	BA	3148	1/1	0.96	0.23	47,47,47,47	0
54	MG	DA	3395	1/1	0.96	0.11	39,39,39,39	0
54	MG	BA	3362	1/1	0.96	0.10	43,43,43,43	0
54	MG	DA	3160	1/1	0.96	0.10	42,42,42,42	0
55	ZN	DY	201	1/1	0.96	0.05	94,94,94,94	0
54	MG	BA	3487	1/1	0.96	0.15	20,20,20,20	0
54	MG	DA	3253	1/1	0.96	0.09	50,50,50,50	0
54	MG	DA	3389	1/1	0.96	0.07	51,51,51,51	0
54	MG	BB	203	1/1	0.96	0.23	70,70,70,70	0
54	MG	BA	3059	1/1	0.96	0.12	48,48,48,48	0
54	MG	DA	3232	1/1	0.96	0.32	57,57,57,57	0
54	MG	BA	3561	1/1	0.96	0.09	54,54,54,54	0
54	MG	BA	3145	1/1	0.96	0.20	44,44,44,44	0
54	MG	DA	3183	1/1	0.96	0.45	26,26,26,26	0
54	MG	BA	3619	1/1	0.96	0.13	64,64,64,64	0
54	MG	AA	1693	1/1	0.96	0.11	51,51,51,51	0
54	MG	DA	3310	1/1	0.96	0.37	28,28,28,28	0
54	MG	BA	3445	1/1	0.96	0.17	31,31,31,31	0
54	MG	DA	3303	1/1	0.96	0.48	34,34,34,34	0
54	MG	BA	3530	1/1	0.96	0.14	56,56,56,56	0
54	MG	BA	3509	1/1	0.96	0.15	50,50,50,50	0
54	MG	DE	304	1/1	0.96	0.21	42,42,42,42	0
54	MG	BA	3605	1/1	0.96	0.07	55,55,55,55	0
54	MG	BA	3321	1/1	0.96	0.06	32,32,32,32	0
54	MG	AA	1672	1/1	0.96	0.41	46,46,46,46	0
54	MG	BA	3494	1/1	0.97	0.13	34,34,34,34	0
54	MG	BA	3057	1/1	0.97	0.24	51,51,51,51	0
54	MG	BA	3505	1/1	0.97	0.21	41,41,41,41	0
54	MG	CA	1727	1/1	0.97	0.17	46,46,46,46	0
54	MG	BA	3602	1/1	0.97	0.05	56,56,56,56	0
54	MG	BA	3485	1/1	0.97	0.10	32,32,32,32	0
54	MG	DA	3052	1/1	0.97	0.37	52,52,52,52	0
54	MG	DA	3285	1/1	0.97	0.04	64,64,64,64	0
54	MG	BA	3289	1/1	0.97	0.34	34,34,34,34	0
54	MG	CA	1743	1/1	0.97	0.08	61,61,61,61	0
54	MG	BB	220	1/1	0.97	0.18	60,60,60,60	0
54	MG	DA	3365	1/1	0.97	0.08	40,40,40,40	0
54	MG	BA	3434	1/1	0.97	0.11	62,62,62,62	0
54	MG	DA	3474	1/1	0.97	0.10	30,30,30,30	0
54	MG	BE	303	1/1	0.97	0.13	26,26,26,26	0
54	MG	DA	3243	1/1	0.97	0.22	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3467	1/1	0.97	0.11	43,43,43,43	0
54	MG	BA	3352	1/1	0.97	0.14	81,81,81,81	0
54	MG	BA	3184	1/1	0.97	0.21	40,40,40,40	0
54	MG	BA	3624	1/1	0.97	0.11	36,36,36,36	0
54	MG	BA	3023	1/1	0.97	0.14	52,52,52,52	0
54	MG	DA	3088	1/1	0.97	0.39	55,55,55,55	0
54	MG	BA	3551	1/1	0.97	0.11	82,82,82,82	0
54	MG	BA	3299	1/1	0.97	0.28	66,66,66,66	0
54	MG	BA	3248	1/1	0.97	0.41	27,27,27,27	0
54	MG	CA	1726	1/1	0.97	0.19	52,52,52,52	0
54	MG	DA	3143	1/1	0.97	0.20	60,60,60,60	0
54	MG	CA	1647	1/1	0.97	0.15	86,86,86,86	0
54	MG	DA	3337	1/1	0.97	0.28	30,30,30,30	0
54	MG	DA	3422	1/1	0.97	0.18	43,43,43,43	0
54	MG	BA	3089	1/1	0.97	0.32	41,41,41,41	0
54	MG	CA	1728	1/1	0.97	0.16	60,60,60,60	0
54	MG	DA	3578	1/1	0.97	0.22	29,29,29,29	0
54	MG	AA	1726	1/1	0.97	0.14	86,86,86,86	0
54	MG	BA	3271	1/1	0.97	0.14	30,30,30,30	0
54	MG	BA	3006	1/1	0.97	0.19	25,25,25,25	0
54	MG	DA	3562	1/1	0.97	0.14	58,58,58,58	0
54	MG	AA	1724	1/1	0.97	0.27	74,74,74,74	0
54	MG	BA	3260	1/1	0.97	0.39	30,30,30,30	0
54	MG	BA	3316	1/1	0.97	0.13	45,45,45,45	0
54	MG	BA	3178	1/1	0.97	0.29	43,43,43,43	0
54	MG	CA	1644	1/1	0.97	0.26	53,53,53,53	0
54	MG	BA	3365	1/1	0.97	0.07	69,69,69,69	0
54	MG	DA	3496	1/1	0.97	0.20	66,66,66,66	0
54	MG	BA	3156	1/1	0.97	0.27	39,39,39,39	0
54	MG	BA	3360	1/1	0.97	0.22	35,35,35,35	0
54	MG	DA	3373	1/1	0.97	0.27	32,32,32,32	0
54	MG	CA	1760	1/1	0.97	0.09	87,87,87,87	0
54	MG	DA	3518	1/1	0.97	0.09	69,69,69,69	0
54	MG	CA	1721	1/1	0.97	0.21	64,64,64,64	0
54	MG	BA	3163	1/1	0.97	0.28	23,23,23,23	0
54	MG	BA	3484	1/1	0.97	0.18	27,27,27,27	0
54	MG	DA	3490	1/1	0.97	0.12	33,33,33,33	0
54	MG	AA	1721	1/1	0.97	0.06	62,62,62,62	0
54	MG	BA	3274	1/1	0.97	0.29	26,26,26,26	0
54	MG	CA	1724	1/1	0.97	0.11	49,49,49,49	0
54	MG	DA	3415	1/1	0.97	0.11	43,43,43,43	0
54	MG	DA	3102	1/1	0.97	0.47	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3234	1/1	0.97	0.18	41,41,41,41	0
54	MG	BA	3540	1/1	0.97	0.13	35,35,35,35	0
54	MG	BA	3310	1/1	0.97	0.35	23,23,23,23	0
54	MG	CA	1623	1/1	0.97	0.39	43,43,43,43	0
54	MG	DA	3471	1/1	0.97	0.19	31,31,31,31	0
54	MG	DA	3529	1/1	0.97	0.09	56,56,56,56	0
54	MG	DA	3062	1/1	0.97	0.36	49,49,49,49	0
54	MG	DA	3388	1/1	0.97	0.14	43,43,43,43	0
54	MG	CA	1688	1/1	0.97	0.35	54,54,54,54	0
54	MG	AA	1710	1/1	0.97	0.07	79,79,79,79	0
54	MG	BA	3326	1/1	0.97	0.11	49,49,49,49	0
54	MG	BB	214	1/1	0.97	0.12	40,40,40,40	0
54	MG	BA	3573	1/1	0.97	0.21	23,23,23,23	0
54	MG	BA	3293	1/1	0.97	0.18	48,48,48,48	0
54	MG	DA	3181	1/1	0.97	0.28	49,49,49,49	0
54	MG	BA	3284	1/1	0.97	0.37	24,24,24,24	0
54	MG	BA	3334	1/1	0.97	0.09	51,51,51,51	0
54	MG	DB	206	1/1	0.97	0.26	58,58,58,58	0
54	MG	DA	3279	1/1	0.97	0.12	44,44,44,44	0
54	MG	BA	3614	1/1	0.97	0.04	66,66,66,66	0
54	MG	DA	3533	1/1	0.97	0.10	89,89,89,89	0
54	MG	BA	3511	1/1	0.97	0.15	32,32,32,32	0
54	MG	DA	3446	1/1	0.97	0.24	42,42,42,42	0
54	MG	DA	3341	1/1	0.97	0.14	43,43,43,43	0
54	MG	BA	3047	1/1	0.97	0.30	35,35,35,35	0
54	MG	DA	3420	1/1	0.97	0.22	37,37,37,37	0
54	MG	CA	1659	1/1	0.97	0.20	48,48,48,48	0
54	MG	AA	1630	1/1	0.97	0.26	39,39,39,39	0
54	MG	BA	3576	1/1	0.97	0.19	21,21,21,21	0
54	MG	BA	3599	1/1	0.97	0.17	30,30,30,30	0
54	MG	DA	3034	1/1	0.97	0.10	32,32,32,32	0
54	MG	BA	3064	1/1	0.97	0.24	34,34,34,34	0
54	MG	BA	3282	1/1	0.97	0.33	27,27,27,27	0
54	MG	DA	3138	1/1	0.97	0.31	41,41,41,41	0
54	MG	CA	1749	1/1	0.97	0.23	61,61,61,61	0
54	MG	B5	102	1/1	0.97	0.10	52,52,52,52	0
54	MG	DA	3121	1/1	0.97	0.13	34,34,34,34	0
54	MG	BA	3315	1/1	0.97	0.15	31,31,31,31	0
54	MG	BA	3493	1/1	0.97	0.20	40,40,40,40	0
54	MG	BA	3118	1/1	0.97	0.22	44,44,44,44	0
54	MG	DA	3114	1/1	0.97	0.39	30,30,30,30	0
54	MG	AA	1608	1/1	0.97	0.33	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DB	205	1/1	0.97	0.16	55,55,55,55	0
54	MG	DA	3083	1/1	0.97	0.22	37,37,37,37	0
54	MG	BA	3596	1/1	0.97	0.07	48,48,48,48	0
54	MG	BA	3464	1/1	0.97	0.11	39,39,39,39	0
54	MG	BA	3595	1/1	0.97	0.29	27,27,27,27	0
54	MG	AA	1602	1/1	0.97	0.29	89,89,89,89	0
54	MG	BA	3480	1/1	0.97	0.13	31,31,31,31	0
54	MG	BA	3489	1/1	0.97	0.15	23,23,23,23	0
54	MG	DA	3097	1/1	0.97	0.26	23,23,23,23	0
54	MG	BA	3206	1/1	0.97	0.26	49,49,49,49	0
54	MG	BA	3472	1/1	0.97	0.27	26,26,26,26	0
54	MG	AA	1720	1/1	0.97	0.07	68,68,68,68	0
54	MG	BA	3227	1/1	0.97	0.14	32,32,32,32	0
54	MG	BA	3451	1/1	0.97	0.21	28,28,28,28	0
54	MG	BA	3294	1/1	0.97	0.18	39,39,39,39	0
54	MG	BA	3611	1/1	0.97	0.08	44,44,44,44	0
54	MG	DA	3124	1/1	0.97	0.37	37,37,37,37	0
54	MG	CA	1733	1/1	0.97	0.14	82,82,82,82	0
54	MG	DA	3014	1/1	0.97	0.19	31,31,31,31	0
54	MG	BA	3092	1/1	0.97	0.40	26,26,26,26	0
54	MG	BA	3568	1/1	0.97	0.12	39,39,39,39	0
55	ZN	CN	101	1/1	0.97	0.08	107,107,107,107	0
54	MG	BA	3606	1/1	0.97	0.10	34,34,34,34	0
54	MG	DA	3107	1/1	0.97	0.08	54,54,54,54	0
54	MG	DA	3335	1/1	0.97	0.10	36,36,36,36	0
54	MG	DA	3399	1/1	0.97	0.10	51,51,51,51	0
54	MG	DA	3573	1/1	0.97	0.24	31,31,31,31	0
54	MG	AA	1652	1/1	0.97	0.25	49,49,49,49	0
54	MG	BA	3499	1/1	0.97	0.12	60,60,60,60	0
54	MG	DA	3005	1/1	0.97	0.23	77,77,77,77	0
54	MG	DA	3418	1/1	0.97	0.15	31,31,31,31	0
54	MG	BA	3051	1/1	0.97	0.17	48,48,48,48	0
54	MG	DA	3078	1/1	0.97	0.17	48,48,48,48	0
54	MG	BA	3322	1/1	0.97	0.08	37,37,37,37	0
54	MG	CA	1744	1/1	0.97	0.06	83,83,83,83	0
54	MG	BA	3187	1/1	0.97	0.59	42,42,42,42	0
54	MG	BA	3491	1/1	0.97	0.10	28,28,28,28	0
54	MG	BA	3420	1/1	0.97	0.19	61,61,61,61	0
54	MG	BA	3283	1/1	0.97	0.45	21,21,21,21	0
54	MG	D0	102	1/1	0.97	0.16	72,72,72,72	0
54	MG	DA	3376	1/1	0.97	0.14	30,30,30,30	0
54	MG	BA	3497	1/1	0.97	0.26	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1741	1/1	0.97	0.31	79,79,79,79	0
54	MG	BA	3302	1/1	0.97	0.13	47,47,47,47	0
54	MG	CA	1748	1/1	0.97	0.06	58,58,58,58	0
54	MG	BA	3259	1/1	0.97	0.34	27,27,27,27	0
54	MG	BA	3066	1/1	0.97	0.35	39,39,39,39	0
54	MG	BA	3636	1/1	0.97	0.06	28,28,28,28	0
54	MG	BA	3307	1/1	0.97	0.11	44,44,44,44	0
54	MG	AA	1696	1/1	0.97	0.16	66,66,66,66	0
54	MG	DA	3338	1/1	0.97	0.21	42,42,42,42	0
54	MG	AA	1715	1/1	0.97	0.10	61,61,61,61	0
54	MG	BA	3644	1/1	0.97	0.08	88,88,88,88	0
54	MG	BA	3213	1/1	0.98	0.10	43,43,43,43	0
54	MG	BA	3500	1/1	0.98	0.17	44,44,44,44	0
54	MG	AA	1703	1/1	0.98	0.05	66,66,66,66	0
54	MG	DA	3404	1/1	0.98	0.14	36,36,36,36	0
54	MG	DA	3050	1/1	0.98	0.27	34,34,34,34	0
54	MG	BA	3198	1/1	0.98	0.12	44,44,44,44	0
54	MG	DA	3240	1/1	0.98	0.15	53,53,53,53	0
54	MG	DA	3394	1/1	0.98	0.06	47,47,47,47	0
54	MG	DA	3502	1/1	0.98	0.11	37,37,37,37	0
54	MG	BA	3186	1/1	0.98	0.35	26,26,26,26	0
54	MG	CA	1761	1/1	0.98	0.18	65,65,65,65	0
54	MG	DA	3105	1/1	0.98	0.09	46,46,46,46	0
54	MG	BA	3537	1/1	0.98	0.17	31,31,31,31	0
54	MG	BA	3099	1/1	0.98	0.16	46,46,46,46	0
54	MG	AA	1641	1/1	0.98	0.17	42,42,42,42	0
54	MG	BA	3200	1/1	0.98	0.18	31,31,31,31	0
54	MG	BA	3465	1/1	0.98	0.15	44,44,44,44	0
54	MG	DA	3572	1/1	0.98	0.10	71,71,71,71	0
54	MG	DA	3345	1/1	0.98	0.31	54,54,54,54	0
54	MG	BA	3158	1/1	0.98	0.09	40,40,40,40	0
54	MG	DA	3463	1/1	0.98	0.09	69,69,69,69	0
54	MG	BA	3121	1/1	0.98	0.33	36,36,36,36	0
54	MG	BA	3312	1/1	0.98	0.10	51,51,51,51	0
54	MG	BA	3430	1/1	0.98	0.06	49,49,49,49	0
54	MG	DA	3101	1/1	0.98	0.19	39,39,39,39	0
54	MG	BA	3402	1/1	0.98	0.06	54,54,54,54	0
54	MG	DA	3374	1/1	0.98	0.20	37,37,37,37	0
54	MG	DA	3203	1/1	0.98	0.41	33,33,33,33	0
54	MG	BW	201	1/1	0.98	0.12	32,32,32,32	0
54	MG	BA	3447	1/1	0.98	0.14	29,29,29,29	0
54	MG	BA	3603	1/1	0.98	0.08	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	BA	3380	1/1	0.98	0.14	26,26,26,26	0
54	MG	BA	3151	1/1	0.98	0.35	33,33,33,33	0
54	MG	DA	3112	1/1	0.98	0.24	51,51,51,51	0
54	MG	DA	3242	1/1	0.98	0.56	34,34,34,34	0
54	MG	BA	3375	1/1	0.98	0.16	34,34,34,34	0
54	MG	DA	3068	1/1	0.98	0.12	33,33,33,33	0
54	MG	BA	3345	1/1	0.98	0.10	71,71,71,71	0
54	MG	BA	3087	1/1	0.98	0.20	46,46,46,46	0
54	MG	BA	3309	1/1	0.98	0.10	31,31,31,31	0
54	MG	BA	3372	1/1	0.98	0.07	49,49,49,49	0
54	MG	DA	3507	1/1	0.98	0.13	80,80,80,80	0
54	MG	D1	101	1/1	0.98	0.22	38,38,38,38	0
54	MG	DA	3334	1/1	0.98	0.12	52,52,52,52	0
55	ZN	D6	101	1/1	0.98	0.07	63,63,63,63	0
54	MG	BA	3635	1/1	0.98	0.08	23,23,23,23	0
54	MG	DA	3423	1/1	0.98	0.16	32,32,32,32	0
54	MG	DA	3350	1/1	0.98	0.11	47,47,47,47	0
54	MG	DA	3428	1/1	0.98	0.05	68,68,68,68	0
54	MG	AA	1650	1/1	0.98	0.55	53,53,53,53	0
54	MG	BA	3266	1/1	0.98	0.47	22,22,22,22	0
54	MG	BA	3361	1/1	0.98	0.04	59,59,59,59	0
54	MG	DA	3363	1/1	0.98	0.18	26,26,26,26	0
54	MG	DA	3286	1/1	0.98	0.20	33,33,33,33	0
54	MG	CA	1736	1/1	0.98	0.18	70,70,70,70	0
54	MG	BA	3443	1/1	0.98	0.21	47,47,47,47	0
54	MG	CA	1722	1/1	0.98	0.08	71,71,71,71	0
54	MG	BA	3558	1/1	0.98	0.19	28,28,28,28	0
54	MG	DA	3480	1/1	0.98	0.18	52,52,52,52	0
54	MG	DA	3516	1/1	0.98	0.20	32,32,32,32	0
54	MG	BA	3466	1/1	0.98	0.16	39,39,39,39	0
54	MG	DA	3483	1/1	0.98	0.26	59,59,59,59	0
54	MG	DA	3577	1/1	0.98	0.09	57,57,57,57	0
54	MG	BA	3173	1/1	0.98	0.39	32,32,32,32	0
54	MG	DA	3570	1/1	0.98	0.18	28,28,28,28	0
54	MG	BA	3527	1/1	0.98	0.18	29,29,29,29	0
54	MG	DA	3519	1/1	0.98	0.07	52,52,52,52	0
54	MG	DA	3425	1/1	0.98	0.07	47,47,47,47	0
54	MG	DA	3449	1/1	0.98	0.20	42,42,42,42	0
54	MG	BA	3419	1/1	0.98	0.40	21,21,21,21	0
54	MG	BA	3549	1/1	0.98	0.04	55,55,55,55	0
54	MG	DA	3330	1/1	0.98	0.13	37,37,37,37	0
54	MG	DA	3554	1/1	0.98	0.09	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	CA	1719	1/1	0.98	0.07	54,54,54,54	0
54	MG	BA	3630	1/1	0.98	0.08	34,34,34,34	0
54	MG	BA	3277	1/1	0.98	0.37	22,22,22,22	0
54	MG	AA	1653	1/1	0.98	0.08	49,49,49,49	0
54	MG	BA	3328	1/1	0.98	0.21	30,30,30,30	0
54	MG	DA	3549	1/1	0.98	0.20	45,45,45,45	0
54	MG	BA	3032	1/1	0.98	0.09	40,40,40,40	0
54	MG	AA	1698	1/1	0.98	0.15	69,69,69,69	0
54	MG	DA	3566	1/1	0.98	0.13	54,54,54,54	0
54	MG	BA	3502	1/1	0.98	0.24	34,34,34,34	0
55	ZN	D5	102	1/1	0.98	0.08	69,69,69,69	0
54	MG	BA	3475	1/1	0.98	0.14	39,39,39,39	0
54	MG	BA	3483	1/1	0.98	0.13	28,28,28,28	0
54	MG	DA	3580	1/1	0.98	0.17	52,52,52,52	0
54	MG	BA	3498	1/1	0.98	0.08	32,32,32,32	0
54	MG	BA	3575	1/1	0.98	0.08	41,41,41,41	0
54	MG	DB	201	1/1	0.98	0.14	43,43,43,43	0
54	MG	BA	3320	1/1	0.98	0.17	42,42,42,42	0
54	MG	DA	3032	1/1	0.98	0.21	49,49,49,49	0
54	MG	BA	3454	1/1	0.98	0.12	25,25,25,25	0
54	MG	AA	1680	1/1	0.98	0.25	72,72,72,72	0
54	MG	DA	3377	1/1	0.99	0.07	33,33,33,33	0
54	MG	B8	101	1/1	0.99	0.21	51,51,51,51	0
54	MG	BA	3188	1/1	0.99	0.27	39,39,39,39	0
54	MG	BA	3034	1/1	0.99	0.10	41,41,41,41	0
54	MG	BA	3044	1/1	0.99	0.08	33,33,33,33	0
54	MG	BA	3631	1/1	0.99	0.16	26,26,26,26	0
54	MG	BA	3463	1/1	0.99	0.09	28,28,28,28	0
54	MG	BA	3634	1/1	0.99	0.11	53,53,53,53	0
54	MG	DA	3038	1/1	0.99	0.08	37,37,37,37	0
54	MG	BA	3506	1/1	0.99	0.11	30,30,30,30	0
54	MG	BA	3270	1/1	0.99	0.45	25,25,25,25	0
54	MG	BA	3190	1/1	0.99	0.17	27,27,27,27	0
54	MG	DA	3217	1/1	0.99	0.49	32,32,32,32	0
55	ZN	B5	101	1/1	0.99	0.09	45,45,45,45	0
55	ZN	B6	101	1/1	0.99	0.11	48,48,48,48	0
54	MG	BA	3591	1/1	0.99	0.10	34,34,34,34	0
54	MG	DA	3336	1/1	0.99	0.17	41,41,41,41	0
54	MG	BA	3350	1/1	0.99	0.09	40,40,40,40	0
54	MG	BA	3357	1/1	0.99	0.16	25,25,25,25	0
54	MG	BA	3416	1/1	0.99	0.08	25,25,25,25	0
54	MG	BA	3082	1/1	0.99	0.12	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
54	MG	DA	3355	1/1	0.99	0.13	49,49,49,49	0
54	MG	DA	3585	1/1	0.99	0.13	33,33,33,33	0
54	MG	BA	3319	1/1	0.99	0.12	54,54,54,54	0
54	MG	DA	3403	1/1	0.99	0.07	34,34,34,34	0
54	MG	DA	3594	1/1	0.99	0.18	58,58,58,58	0
54	MG	BA	3327	1/1	0.99	0.18	23,23,23,23	0
54	MG	BA	3423	1/1	0.99	0.17	33,33,33,33	0
55	ZN	B9	101	1/1	0.99	0.08	50,50,50,50	0
54	MG	BA	3501	1/1	0.99	0.10	29,29,29,29	0
54	MG	BE	304	1/1	1.00	0.19	25,25,25,25	0

6.5 Other polymers [i](#)

There are no such residues in this entry.