



Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Jul 24, 2017 – 04:48 PM EDT

PDB ID : 4V8Y
EMDB ID: : EMD-2421
Title : Cryo-EM reconstruction of the 80S-eIF5B-Met-itRNAMet Eukaryotic Translation Initiation Complex
Authors : Fernandez, I.S.; Bai, X.C.; Hussain, T.; Kelley, A.C.; Lorsch, J.R.; Ramakrishnan, V.; Scheres, S.H.W.
Deposited on : unknown
Resolution : 4.30 Å(reported)

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report
for a publicly released PDB/EMDB entry.

We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

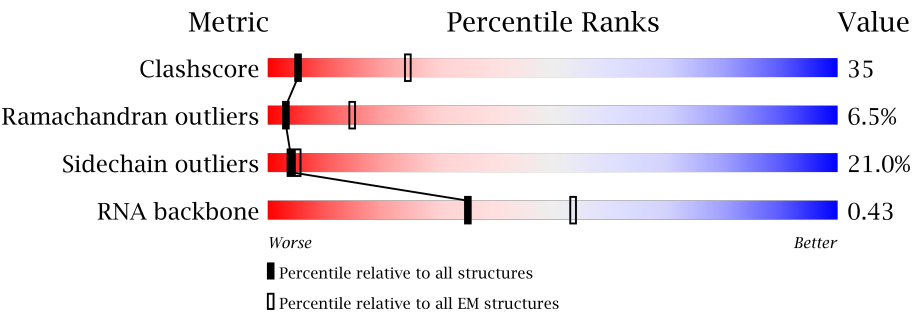
MolProbity : 4.02b-467
Mogul : 1.7.2 (RC1), CSD as538be (2017)
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20029824

1 Overall quality at a glance i

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

The reported resolution of this entry is 4.30 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



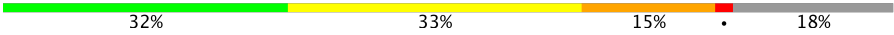


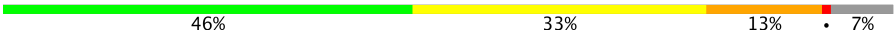
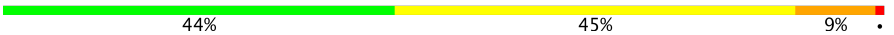
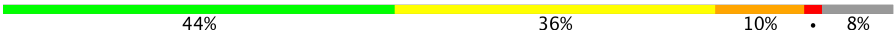
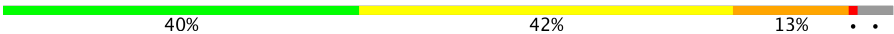
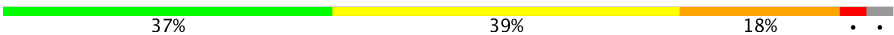
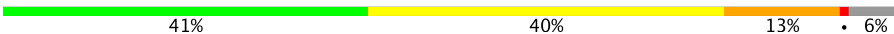
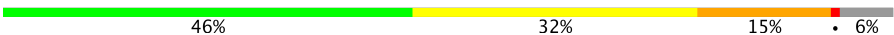
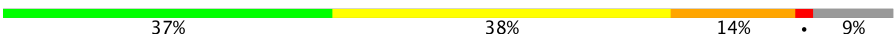
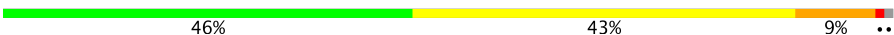
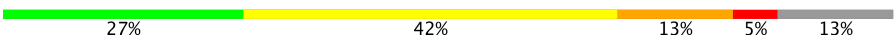







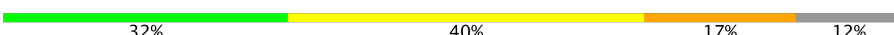




Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the 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 $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A0	119	31% 34% 13% • 18%
2	A1	82	55% 34% 9% ••
3	A2	67	28% 43% 22% 6%
4	A3	56	39% 45% 7% • 5%
5	A4	63	54% 33% 8% 5%
6	A5	152	19% 19% 7% • 53%
7	A6	319	58% 36% 5% •
8	A7	273	35% 15% 7% • 42%








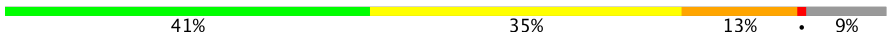
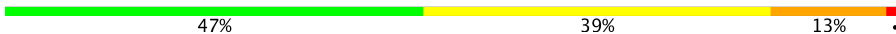

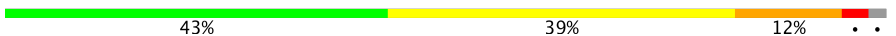














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Mol	Chain	Length	Quality of chain
9	AA	252	
10	AB	255	
11	AC	254	
12	AD	240	
13	AE	261	
14	AF	225	
15	AG	236	
16	AH	190	
17	AI	200	
18	AJ	197	
19	AK	105	
20	AL	156	
21	AM	143	
22	AN	151	
23	AO	137	
24	AP	142	
25	AQ	143	
26	AR	136	
27	AS	146	
28	AT	144	
29	AU	121	
30	AV	87	
31	AW	130	
32	AX	145	
33	AY	135	



















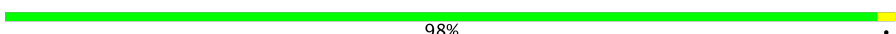
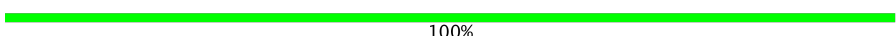





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Mol	Chain	Length	Quality of chain
34	AZ	108	
35	BA	253	
36	BB	386	
37	BC	361	
38	BD	296	
39	BE	175	
40	BF	243	
41	BG	255	
42	BH	191	
43	BI	220	
44	BJ	173	
45	BK	174	
46	BL	198	
47	BM	137	
48	BN	203	
49	BO	218	
50	BP	183	
51	BQ	185	
52	BR	188	
53	BS	172	
54	BT	159	
55	BU	120	
56	BV	136	
57	BW	155	
58	BX	141	

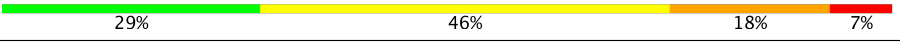


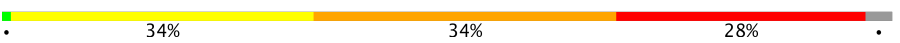
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Mol	Chain	Length	Quality of chain
59	BY	126	
60	BZ	135	
61	Ba	148	
62	Bb	58	
63	Bc	104	
64	Bd	112	
65	Be	129	
66	Bf	106	
67	Bg	120	
68	Bh	119	
69	Bi	99	
70	Bj	87	
71	Bk	77	
72	Bl	50	
73	Bm	128	
74	Bn	25	
75	Bo	105	
76	Bq	312	
77	Br	47	
78	Bs	46	
79	By	229	
79	CL	229	
80	B2	1800	
81	B5	3396	
82	B7	121	

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Mol	Chain	Length	Quality of chain
83	B8	158	
84	CN	87	
85	CP	339	
86	CW	76	

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
89	OHX	A3	102	-	-	X	-
89	OHX	AC	301	-	-	X	-
89	OHX	AL	201	-	-	X	-
89	OHX	B2	1907	-	-	X	-
89	OHX	B2	1915	-	-	X	-
89	OHX	B2	1918	-	-	X	-
89	OHX	B2	1921	-	-	X	-
89	OHX	B2	1922	-	-	X	-
89	OHX	B2	1940	-	-	X	-
89	OHX	B2	1954	-	-	X	-
89	OHX	B2	1961	-	-	X	-
89	OHX	B2	1963	-	-	X	-
89	OHX	B2	1964	-	-	X	-
89	OHX	B2	1968	-	-	X	-
89	OHX	B2	1969	-	-	X	-
89	OHX	B2	1974	-	-	X	-
89	OHX	B2	1977	-	-	X	-
89	OHX	B2	1982	-	-	X	-
89	OHX	B2	1988	-	-	X	-
89	OHX	B2	1996	-	-	X	-
89	OHX	B2	2013	-	-	X	-
89	OHX	B2	2016	-	-	X	-
89	OHX	B2	2027	-	-	X	-
89	OHX	B2	2046	-	-	X	-
89	OHX	B2	2050	-	-	X	-
89	OHX	B2	2064	-	-	X	-
89	OHX	B2	2068	-	-	X	-
89	OHX	B2	2071	-	-	X	-
89	OHX	B2	2073	-	-	X	-
89	OHX	B2	2079	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
89	OHX	B2	2083	-	-	X	-
89	OHX	BR	201	-	-	X	-
90	GCP	CP	401	-	-	X	-

2 Entry composition

There are 90 unique types of molecules in this entry. The entry contains 222555 atoms, of which 8300 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 40S RIBOSOMAL PROTEIN S26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A0	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 2 is a protein called 40S RIBOSOMAL PROTEIN S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A1	81	Total	C	N	O	S	0	0
			610	382	110	113	5		

- Molecule 3 is a protein called 40S RIBOSOMAL PROTEIN S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A2	63	Total	C	N	O	S	0	0
			497	306	99	91	1		

- Molecule 4 is a protein called 40S RIBOSOMAL PROTEIN S29-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	A3	53	Total	C	N	O	S	0	0
			442	274	92	72	4		

- Molecule 5 is a protein called 40S RIBOSOMAL PROTEIN S30-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	A4	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 6 is a protein called UBIQUITIN-40S RIBOSOMAL PROTEIN S31.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	A5	71	Total	C	N	O	S	0	0
			516	328	93	91	4		

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A5	82	UNK	LYS	SEE REMARK 999	UNP P05759
A5	83	UNK	LYS	SEE REMARK 999	UNP P05759
A5	84	UNK	VAL	SEE REMARK 999	UNP P05759
A5	85	UNK	TYR	SEE REMARK 999	UNP P05759
A5	86	UNK	THR	SEE REMARK 999	UNP P05759
A5	87	UNK	THR	SEE REMARK 999	UNP P05759
A5	88	UNK	PRO	SEE REMARK 999	UNP P05759
A5	89	UNK	LYS	SEE REMARK 999	UNP P05759
A5	90	UNK	LYS	SEE REMARK 999	UNP P05759
A5	91	UNK	ILE	SEE REMARK 999	UNP P05759
A5	92	UNK	LYS	SEE REMARK 999	UNP P05759
A5	93	UNK	HIS	SEE REMARK 999	UNP P05759
A5	94	UNK	LYS	SEE REMARK 999	UNP P05759
A5	95	UNK	HIS	SEE REMARK 999	UNP P05759
A5	96	UNK	LYS	SEE REMARK 999	UNP P05759
A5	97	UNK	LYS	SEE REMARK 999	UNP P05759
A5	98	UNK	VAL	SEE REMARK 999	UNP P05759
A5	99	UNK	LYS	SEE REMARK 999	UNP P05759
A5	100	UNK	LEU	SEE REMARK 999	UNP P05759
A5	101	UNK	ALA	SEE REMARK 999	UNP P05759

- Molecule 7 is a protein called GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-LIKE PROTEIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A6	318	Total	C	N	O	S	0	0
			2437	1541	418	470	8		

- Molecule 8 is a protein called SUPPRESSOR PROTEIN STM1.

Mol	Chain	Residues	Atoms				AltConf	Trace
8	A7	159	Total	C	N	O	0	0
			1105	653	221	231		

There are 37 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A7	9	UNK	GLY	SEE REMARK 999	UNP P39015
A7	10	UNK	ASN	SEE REMARK 999	UNP P39015
A7	11	UNK	ASP	SEE REMARK 999	UNP P39015
A7	12	UNK	VAL	SEE REMARK 999	UNP P39015

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Chain	Residue	Modelled	Actual	Comment	Reference
A7	13	UNK	GLU	SEE REMARK 999	UNP P39015
A7	14	UNK	ASP	SEE REMARK 999	UNP P39015
A7	15	UNK	ALA	SEE REMARK 999	UNP P39015
A7	16	UNK	ASP	SEE REMARK 999	UNP P39015
A7	17	UNK	VAL	SEE REMARK 999	UNP P39015
A7	18	UNK	VAL	SEE REMARK 999	UNP P39015
A7	19	UNK	VAL	SEE REMARK 999	UNP P39015
A7	20	UNK	LEU	SEE REMARK 999	UNP P39015
A7	151	UNK	LEU	SEE REMARK 999	UNP P39015
A7	152	UNK	GLN	SEE REMARK 999	UNP P39015
A7	153	UNK	ASP	SEE REMARK 999	UNP P39015
A7	154	UNK	TYR	SEE REMARK 999	UNP P39015
A7	155	UNK	LEU	SEE REMARK 999	UNP P39015
A7	156	UNK	ASN	SEE REMARK 999	UNP P39015
A7	157	UNK	GLN	SEE REMARK 999	UNP P39015
A7	158	UNK	GLN	SEE REMARK 999	UNP P39015
A7	159	UNK	ALA	SEE REMARK 999	UNP P39015
A7	160	UNK	ASN	SEE REMARK 999	UNP P39015
A7	161	UNK	ASN	SEE REMARK 999	UNP P39015
A7	162	UNK	GLN	SEE REMARK 999	UNP P39015
A7	163	UNK	PHE	SEE REMARK 999	UNP P39015
A7	164	UNK	ASN	SEE REMARK 999	UNP P39015
A7	165	UNK	LYS	SEE REMARK 999	UNP P39015
A7	166	UNK	VAL	SEE REMARK 999	UNP P39015
A7	167	UNK	PRO	SEE REMARK 999	UNP P39015
A7	168	UNK	GLU	SEE REMARK 999	UNP P39015
A7	169	UNK	ALA	SEE REMARK 999	UNP P39015
A7	170	UNK	LYS	SEE REMARK 999	UNP P39015
A7	171	UNK	LYS	SEE REMARK 999	UNP P39015
A7	172	UNK	VAL	SEE REMARK 999	UNP P39015
A7	173	UNK	GLU	SEE REMARK 999	UNP P39015
A7	174	UNK	LEU	SEE REMARK 999	UNP P39015
A7	175	UNK	ASP	SEE REMARK 999	UNP P39015

- Molecule 9 is a protein called 40S RIBOSOMAL PROTEIN S0-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AA	206	Total	C	N	O	S	0	0
			1577	1014	278	283	2		

- Molecule 10 is a protein called 40S RIBOSOMAL PROTEIN S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AB	214	Total	C	N	O	S	0	0
			1709	1084	310	311	4		

- Molecule 11 is a protein called 40S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AC	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 12 is a protein called 40S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AD	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 13 is a protein called 40S RIBOSOMAL PROTEIN S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AE	260	Total	C	N	O	S	0	0
			2068	1316	389	360	3		

- Molecule 14 is a protein called 40S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AF	206	Total	C	N	O	S	0	0
			1609	1007	300	299	3		

- Molecule 15 is a protein called 40S RIBOSOMAL PROTEIN S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AG	226	Total	C	N	O	S	0	0
			1799	1129	346	321	3		

- Molecule 16 is a protein called 40S RIBOSOMAL PROTEIN S7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AH	184	Total	C	N	O		0	0
			1481	951	265	265			

- Molecule 17 is a protein called 40S RIBOSOMAL PROTEIN S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AI	188	Total	C	N	O	S	0	0
			1489	925	298	264	2		

- Molecule 18 is a protein called 40S RIBOSOMAL PROTEIN S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AJ	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 19 is a protein called 40S RIBOSOMAL PROTEIN S10-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AK	96	Total	C	N	O	S	0	0
			772	499	126	145	2		

- Molecule 20 is a protein called 40S RIBOSOMAL PROTEIN S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AL	155	Total	C	N	O	S	0	0
			1213	774	230	206	3		

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AM	124	Total	C	N	O	S	0	0
			890	560	156	172	2		

- Molecule 22 is a protein called 40S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	AN	150	Total	C	N	O	S	0	0
			1192	759	224	207	2		

- Molecule 23 is a protein called 40S RIBOSOMAL PROTEIN S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	AO	127	Total	C	N	O	S	0	0
			891	545	182	163	1		

- Molecule 24 is a protein called 40S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	AP	124	Total	C	N	O	S	0	0
			977	622	182	166	7		

- Molecule 25 is a protein called 40S RIBOSOMAL PROTEIN S16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	AQ	141	Total	C	N	O	S	0	0
			1105	708	203	194			

- Molecule 26 is a protein called 40S RIBOSOMAL PROTEIN S17-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	AR	120	Total	C	N	O	S	0	0
			926	577	177	170	2		

- Molecule 27 is a protein called 40S RIBOSOMAL PROTEIN S18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AS	145	Total	C	N	O	S	0	0
			1192	743	237	210	2		

- Molecule 28 is a protein called 40S RIBOSOMAL PROTEIN S19-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	AT	143	Total	C	N	O	S	0	0
			1112	694	208	208	2		

- Molecule 29 is a protein called 40S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	AU	107	Total	C	N	O	S	0	0
			855	539	156	159	1		

- Molecule 30 is a protein called 40S RIBOSOMAL PROTEIN S21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	AV	87	Total	C	N	O	S	0	0
			684	420	125	137	2		

- Molecule 31 is a protein called 40S RIBOSOMAL PROTEIN S22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	AW	129	Total	C	N	O	S	0	0
			1021	650	188	180	3		

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	AX	144	Total	C	N	O	S	0	0
			1121	708	220	191	2		

- Molecule 33 is a protein called 40S RIBOSOMAL PROTEIN S24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	AY	134	Total	C	N	O		0	0
			1073	676	208	189			

- Molecule 34 is a protein called 40S RIBOSOMAL PROTEIN S25-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	AZ	70	Total	C	N	O		0	0
			563	360	104	99			

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L2-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BA	252	Total	C	N	O	S	0	0
			1912	1190	388	333	1		

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BB	386	Total	C	N	O	S	0	0
			3075	1950	584	533	8		

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BC	361	Total	C	N	O	S	0	0
			2748	1729	522	494	3		

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	BD	294	Total	C	N	O	S	0	0
			2359	1489	412	456	2		

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BE	157	Total	C	N	O	S	0	0
			1248	806	224	217	1		

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L7-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BF	223	Total	C	N	O	S	0	0
			1791	1155	325	310	1		

- Molecule 41 is a protein called 60S RIBOSOMAL PROTEIN L8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BG	231	Total	C	N	O	S	0	0
			1763	1130	316	314	3		

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BH	191	Total	C	N	O	S	0	0
			1518	963	274	277	4		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	BI	213	Total	C	N	O	S	0	0
			1722	1094	325	297	6		

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BJ	169	Total	C	N	O	S	0	0
			1353	847	253	249	4		

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BK	151	Total	C	H	N	O	0	1
			1507	450	756	151	150		

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L13-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
46	BL	194	Total	C	N	O	0	0
			1548	965	316	267		

- Molecule 47 is a protein called 60S RIBOSOMAL PROTEIN L14-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BM	137	Total	C	N	O	S	0	0
			1059	678	200	179	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BM	89	ALA	GLY	CONFLICT	UNP P38754

- Molecule 48 is a protein called 60S RIBOSOMAL PROTEIN L15-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BN	203	Total	C	N	O	S	0	0
			1720	1077	361	281	1		

- Molecule 49 is a protein called 60S RIBOSOMAL PROTEIN L16-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BO	197	Total	C	N	O	S	197	0
			3119	2008	581	528	2		

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BO	3	VAL	SER	MICROHETEROGENEITY	UNP P26784
BO	4	GLU	GLN	MICROHETEROGENEITY	UNP P26784
BO	11	GLY	ALA	MICROHETEROGENEITY	UNP P26784
BO	13	GLY	ASP	MICROHETEROGENEITY	UNP P26784
BO	16	VAL	LEU	MICROHETEROGENEITY	UNP P26784
BO	22	VAL	THR	MICROHETEROGENEITY	UNP P26784
BO	23	VAL	ILE	MICROHETEROGENEITY	UNP P26784

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Chain	Residue	Modelled	Actual	Comment	Reference
BO	27	LEU	VAL	MICROHETEROGENEITY	UNP P26784
BO	40	GLU	ALA	MICROHETEROGENEITY	UNP P26784
BO	80	PHE	LEU	MICROHETEROGENEITY	UNP P26784
BO	84	LEU	ILE	MICROHETEROGENEITY	UNP P26784
BO	104	VAL	ILE	MICROHETEROGENEITY	UNP P26784
BO	158	ALA	ASP	MICROHETEROGENEITY	UNP P26784
BO	163	SER	ARG	MICROHETEROGENEITY	UNP P26784
BO	179	ALA	SER	MICROHETEROGENEITY	UNP P26784
BO	182	ASN	SER	MICROHETEROGENEITY	UNP P26784
BO	184	THR	ALA	MICROHETEROGENEITY	UNP P26784
BO	186	ALA	SER	MICROHETEROGENEITY	UNP P26784
BO	196	ALA	SER	MICROHETEROGENEITY	UNP P26784
BO	197	LEU	PHE	MICROHETEROGENEITY	UNP P26784

- Molecule 50 is a protein called 60S RIBOSOMAL PROTEIN L17-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
50	BP	155	Total	C	N	O	0	0
			1227	764	238	225		

- Molecule 51 is a protein called 60S RIBOSOMAL PROTEIN L18-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	BQ	185	Total	C	N	O	S	0	0
			1441	908	290	241	2		

- Molecule 52 is a protein called 60S RIBOSOMAL PROTEIN L19-B.

Mol	Chain	Residues	Atoms				AltConf	Trace
52	BR	188	Total	C	N	O	0	0
			1521	935	326	260		

- Molecule 53 is a protein called 60S RIBOSOMAL PROTEIN L20-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	BS	172	Total	C	N	O	S	0	0
			1445	930	267	244	4		

- Molecule 54 is a protein called 60S RIBOSOMAL PROTEIN L21-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BT	159	Total	C	N	O	S	0	0
			1276	805	246	221	4		

- Molecule 55 is a protein called 60S RIBOSOMAL PROTEIN L22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	BU	98	Total	C	N	O		0	0
			778	505	127	146			

- Molecule 56 is a protein called 60S RIBOSOMAL PROTEIN L23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	BV	136	Total	C	N	O	S	0	0
			1003	628	189	179	7		

- Molecule 57 is a protein called 60S RIBOSOMAL PROTEIN L24-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	BW	135	Total	C	N	O	S	0	0
			1038	651	206	180	1		

- Molecule 58 is a protein called 60S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	BX	120	Total	C	N	O	S	0	0
			959	617	168	172	2		

- Molecule 59 is a protein called 60S RIBOSOMAL PROTEIN L26-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	BY	126	Total	C	N	O		0	0
			993	625	192	176			

- Molecule 60 is a protein called 60S RIBOSOMAL PROTEIN L27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	BZ	135	Total	C	N	O		0	0
			1092	710	202	180			

- Molecule 61 is a protein called 60S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	Ba	148	Total	C	N	O	S	0	0
			1173	749	231	190	3		

- Molecule 62 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Bb	58	Total	C	N	O		0	0
			462	289	100	73			

- Molecule 63 is a protein called 60S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Bc	100	Total	C	N	O	S	0	0
			767	492	128	146	1		

- Molecule 64 is a protein called 60S RIBOSOMAL PROTEIN L31-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Bd	109	Total	C	N	O	S	0	0
			883	559	167	156	1		

- Molecule 65 is a protein called 60S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Be	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 66 is a protein called 60S RIBOSOMAL PROTEIN L33-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Bf	106	Total	C	N	O	S	0	0
			850	540	165	144	1		

- Molecule 67 is a protein called 60S RIBOSOMAL PROTEIN L34-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Bg	112	Total	C	N	O	S	0	0
			880	545	179	152	4		

- Molecule 68 is a protein called 60S RIBOSOMAL PROTEIN L35-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Bh	119	Total	C	N	O	S	0	0
			965	612	185	167	1		

- Molecule 69 is a protein called 60S RIBOSOMAL PROTEIN L36-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Bi	99	Total	C	N	O	S	0	0
			770	481	156	131	2		

- Molecule 70 is a protein called 60S RIBOSOMAL PROTEIN L37-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Bj	87	Total	C	N	O	S	0	0
			681	414	148	114	5		

- Molecule 71 is a protein called 60S RIBOSOMAL PROTEIN L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Bk	77	Total	C	N	O		0	0
			608	388	114	106			

- Molecule 72 is a protein called 60S RIBOSOMAL PROTEIN L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Bl	50	Total	C	N	O	S	0	0
			436	272	97	65	2		

- Molecule 73 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Bm	52	Total	C	N	O	S	0	0
			417	259	86	67	5		

- Molecule 74 is a protein called 60S RIBOSOMAL PROTEIN L41-B.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Bn	25	Total	C	N	O	S	0	0
			233	142	63	27	1		

- Molecule 75 is a protein called 60S RIBOSOMAL PROTEIN L42-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Bo	105	Total	C	N	O	S	0	0
			847	534	170	138	5		

- Molecule 76 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P0.

Mol	Chain	Residues	Atoms						AltConf	Trace
76	Bq	143	Total	C	H	N	O	S	0	0
			2187	687	1110	192	195	3		

- Molecule 77 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P1.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Br	47	Total	C	H	N	O	0	0
			473	141	237	47	48		

- Molecule 78 is a protein called 60S ACIDIC RIBOSOMAL PROTEIN P2.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Bs	46	Total	C	H	N	O	0	0
			463	138	232	46	47		

- Molecule 79 is a protein called 50S RIBOSOMAL PROTEIN L1.

Mol	Chain	Residues	Atoms						AltConf	Trace
79	By	225	Total	C	H	N	O	S	0	0
			3492	1086	1773	315	316	2		
79	CL	225	Total	C	N	O	S		0	0
			1719	1086	315	316	2			

- Molecule 80 is a RNA chain called 18S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	B2	1781	Total	C	N	O	P	1	0
			37835	16910	6661	12482	1782		

- Molecule 81 is a RNA chain called 25S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
81	B5	3147	Total	C	H	N	O	P	0	0
			67972	30066	664	12132	21965	3145		

- Molecule 82 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	B7	121	Total	C	N	O	P	0	0
			2579	1152	461	845	121		

- Molecule 83 is a RNA chain called 5.8S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	B8	158	Total	C	N	O	P	0	0
			3353	1500	586	1109	158		

- Molecule 84 is a RNA chain called EUKARYOTIC RIBOSOMAL L1_RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	CN	87	Total	C	N	O	P	0	0
			1875	832	347	609	87		

- Molecule 85 is a protein called EUKARYOTIC TRANSLATION INITIATION FACTOR 5B.

Mol	Chain	Residues	Atoms					AltConf	Trace	
85	CP	339	Total	C	H	N	O	S	0	0
			5380	1679	2725	457	507	12		

- Molecule 86 is a RNA chain called EUKARYOTIC RIBOSOMAL P_E TRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
86	CW	74	Total	C	H	N	O	P	0	0
			2379	705	803	285	514	72		

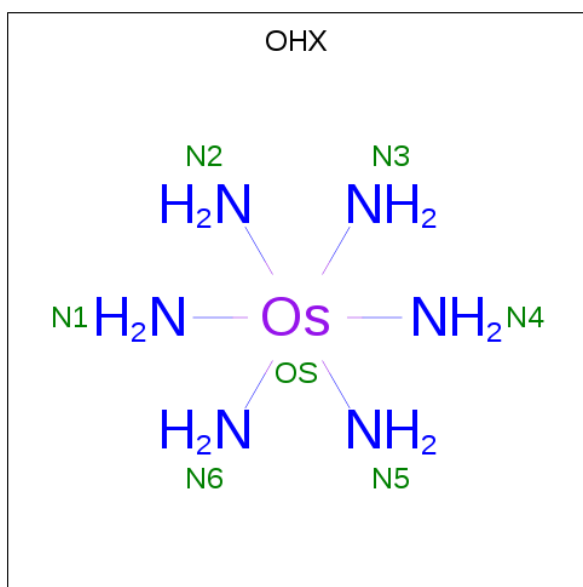
- Molecule 87 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
87	A0	1	Total	Zn	0
			1	1	
87	A1	1	Total	Zn	0
			1	1	
87	Bm	1	Total	Zn	0
			1	1	
87	A5	1	Total	Zn	0
			1	1	
87	Bj	1	Total	Zn	0
			1	1	
87	A3	1	Total	Zn	0
			1	1	

- Molecule 88 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
88	A0	2	Total 2	Mg 2	0
88	AG	1	Total 1	Mg 1	0
88	AJ	1	Total 1	Mg 1	0
88	AE	1	Total 1	Mg 1	0
88	AB	1	Total 1	Mg 1	0
88	AI	1	Total 1	Mg 1	0
88	AC	2	Total 2	Mg 2	0
88	AS	1	Total 1	Mg 1	0
88	B2	169	Total 169	Mg 169	0
88	B5	3	Total 3	Mg 3	0
88	AU	1	Total 1	Mg 1	0
88	AN	1	Total 1	Mg 1	0
88	A5	1	Total 1	Mg 1	0
88	AL	2	Total 2	Mg 2	0
88	A3	3	Total 3	Mg 3	0
88	AP	1	Total 1	Mg 1	0

- Molecule 89 is osmium (III) hexammine (three-letter code: OHX) (formula: H₁₂N₆Os).



Mol	Chain	Residues	Atoms			AltConf
89	A3	1	Total	N	Os	0
			7	6	1	
89	A6	1	Total	N	Os	0
			7	6	1	
89	AC	1	Total	N	Os	0
			7	6	1	
89	AI	1	Total	N	Os	0
			14	12	2	
89	AI	1	Total	N	Os	0
			14	12	2	
89	AL	1	Total	N	Os	0
			7	6	1	
89	AN	1	Total	N	Os	0
			7	6	1	
89	AP	1	Total	N	Os	0
			7	6	1	
89	BR	1	Total	N	Os	0
			7	6	1	
89	Bn	1	Total	N	Os	0
			7	6	1	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	

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Mol	Chain	Residues	Atoms			AltConf
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	

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Mol	Chain	Residues	Atoms			AltConf
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	

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Mol	Chain	Residues	Atoms			AltConf
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
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89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	

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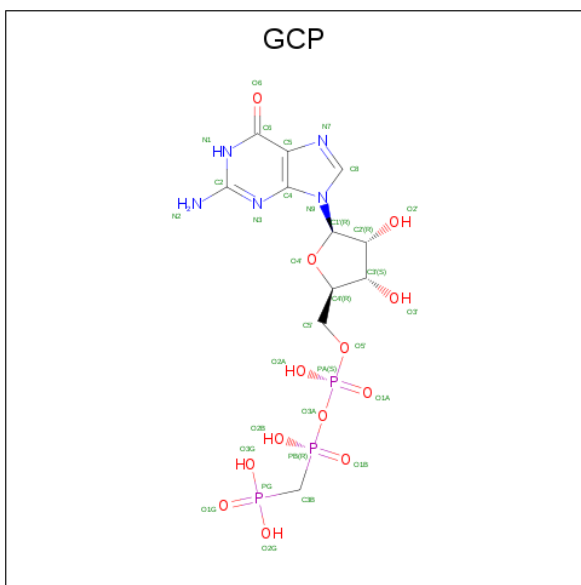
Mol	Chain	Residues	Atoms			AltConf
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	

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Mol	Chain	Residues	Atoms			AltConf
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B2	1	Total	N	Os	0
			1288	1104	184	
89	B5	1	Total	N	Os	0
			21	18	3	
89	B5	1	Total	N	Os	0
			21	18	3	
89	B5	1	Total	N	Os	0
			21	18	3	

- Molecule 90 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: GCP) (formula: C₁₁H₁₈N₅O₁₃P₃).

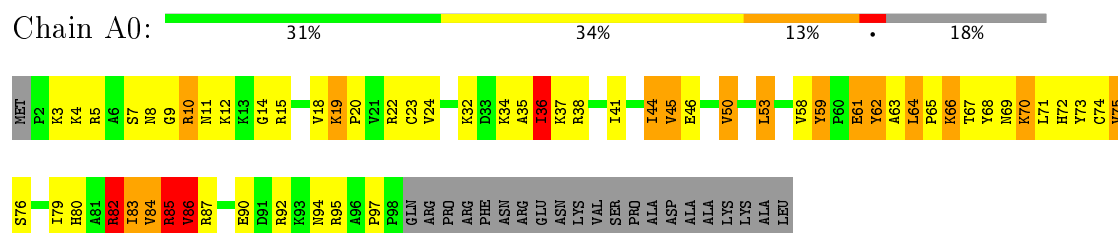


Mol	Chain	Residues	Atoms					AltConf
90	CP	1	Total	C	N	O	P	0
			32	11	5	13	3	

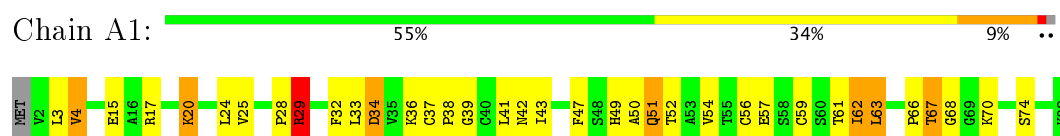
3 Residue-property plots [i](#)

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. 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. 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.

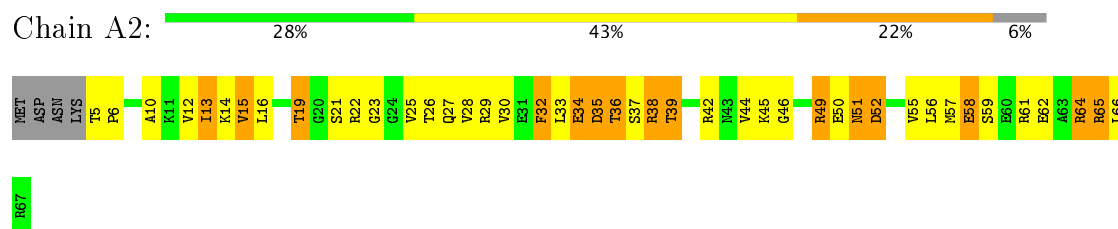
- Molecule 1: 40S RIBOSOMAL PROTEIN S26-A



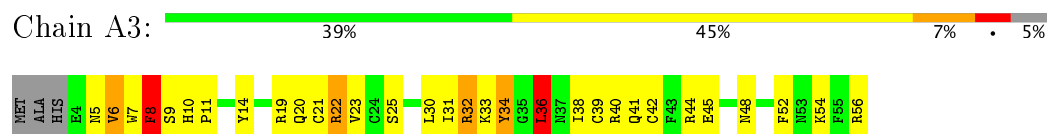
- Molecule 2: 40S RIBOSOMAL PROTEIN S27-A



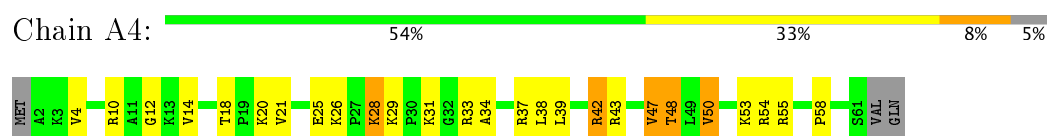
- Molecule 3: 40S RIBOSOMAL PROTEIN S28-A



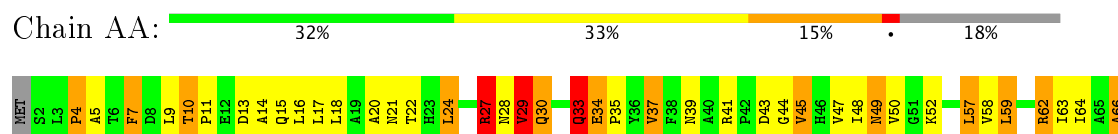
- Molecule 4: 40S RIBOSOMAL PROTEIN S29-A

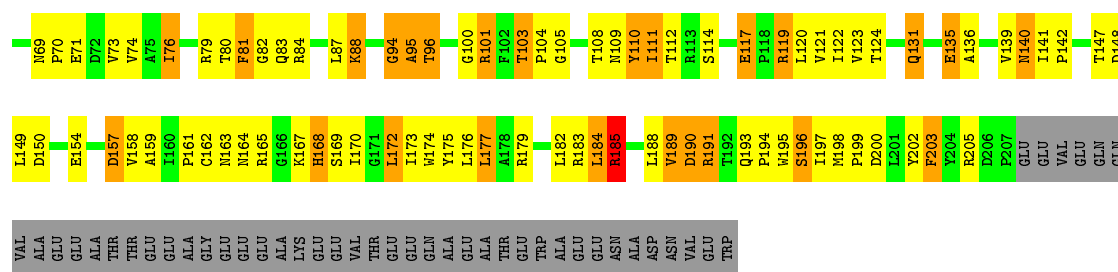


- Molecule 5: 40S RIBOSOMAL PROTEIN S30-A



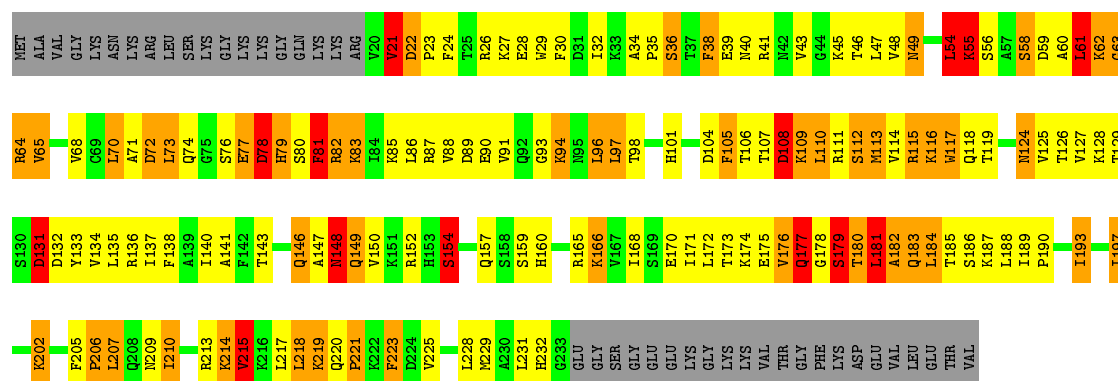
- Molecule 6: UBIQUITIN-40S RIBOSOMAL PROTEIN S31





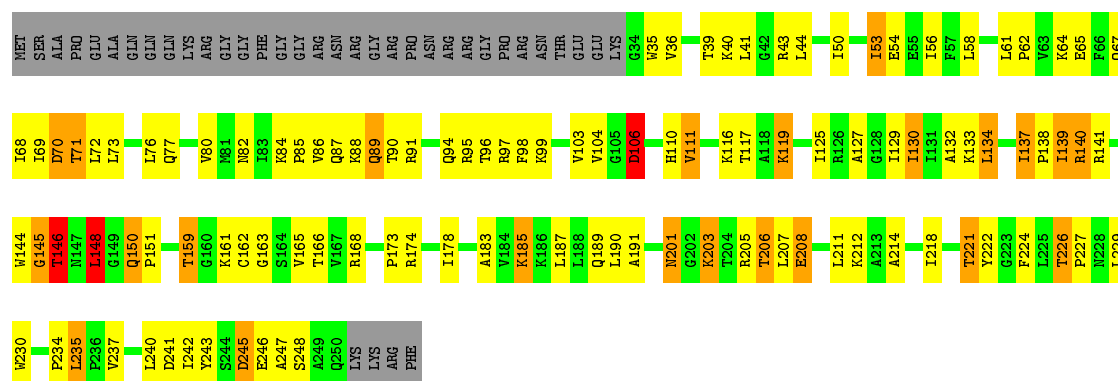
• Molecule 10: 40S RIBOSOMAL PROTEIN S1-A

Chain AB: 25% 35% 18% 5% 16%



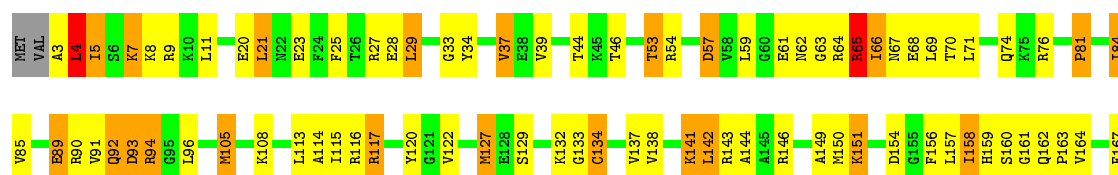
• Molecule 11: 40S RIBOSOMAL PROTEIN S2

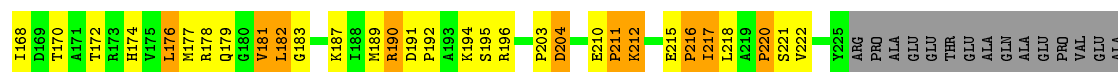
Chain AC: 42% 33% 9% 15%



• Molecule 12: 40S RIBOSOMAL PROTEIN S3

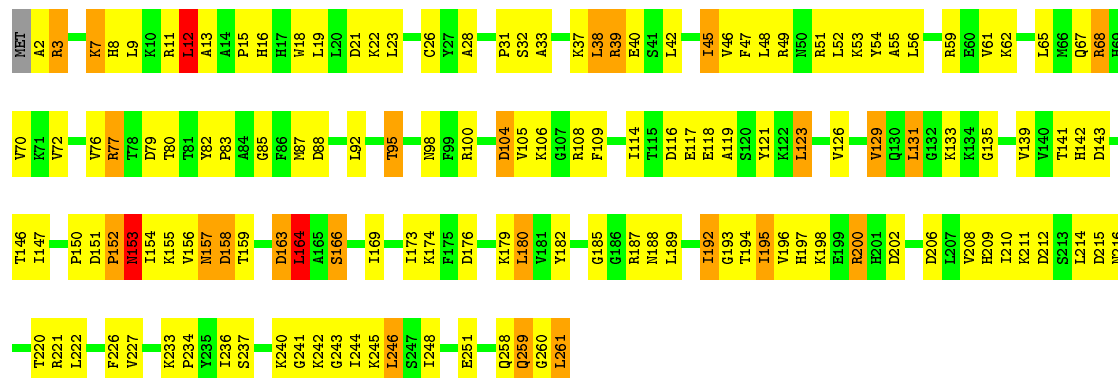
Chain AD: 46% 33% 13% 7%





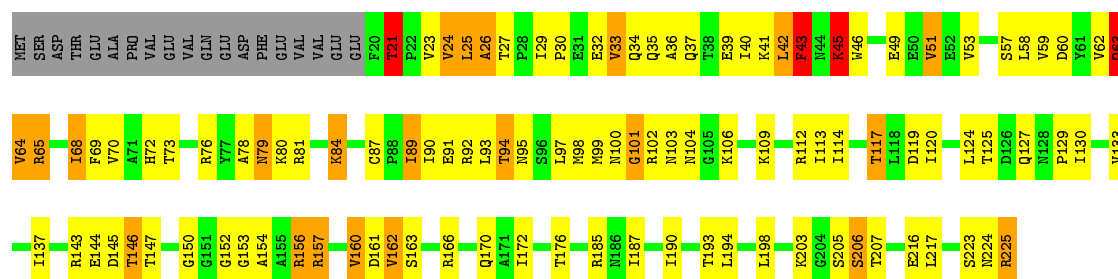
• Molecule 13: 40S RIBOSOMAL PROTEIN S4-A

Chain AE: 44% 45% 9%



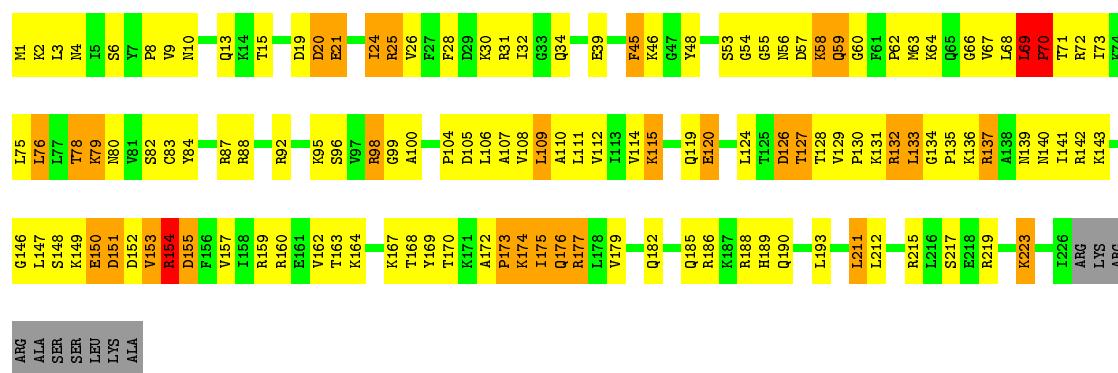
• Molecule 14: 40S RIBOSOMAL PROTEIN S5

Chain AF: 44% 36% 10% 8%



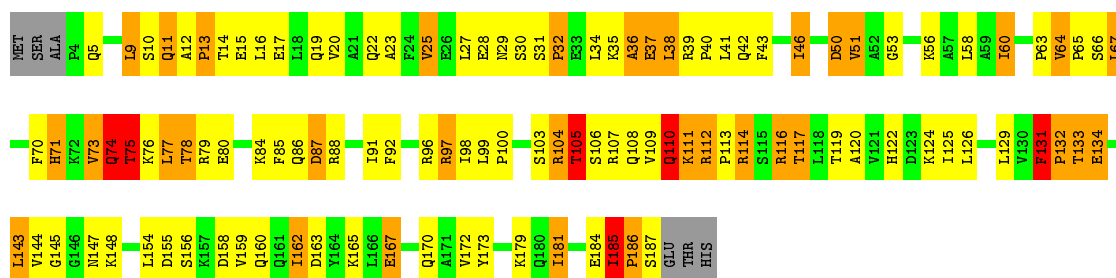
• Molecule 15: 40S RIBOSOMAL PROTEIN S6-A

Chain AG: 40% 42% 13%



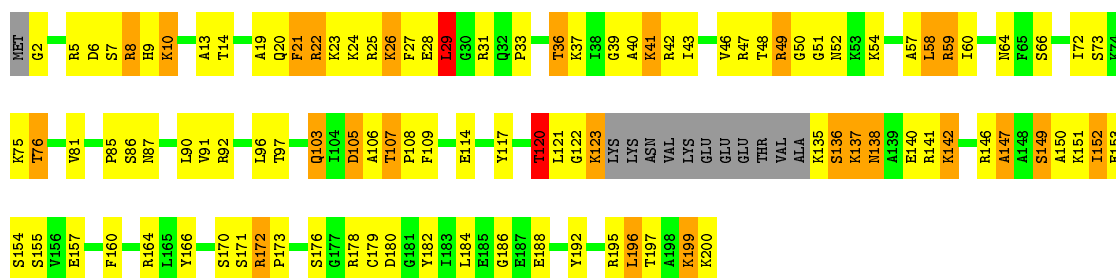
• Molecule 16: 40S RIBOSOMAL PROTEIN S7-A

Chain AH: 37% 39% 18%



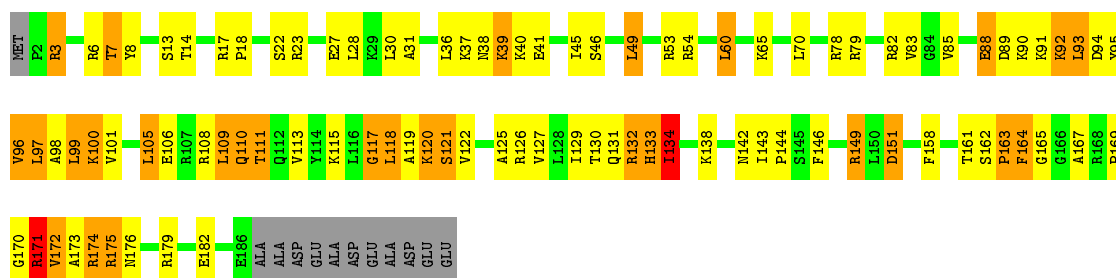
• Molecule 17: 40S RIBOSOMAL PROTEIN S8-A

Chain AI: 41% 40% 13% 6%



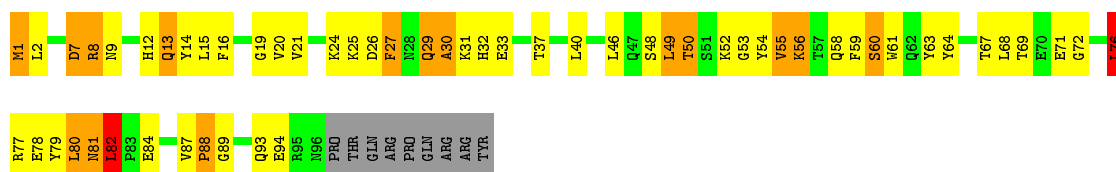
• Molecule 18: 40S RIBOSOMAL PROTEIN S9-A

Chain AJ: 46% 32% 15% 6%



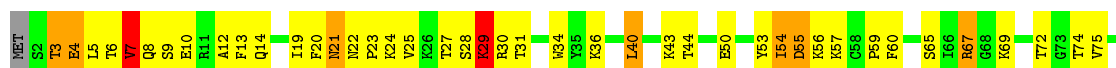
• Molecule 19: 40S RIBOSOMAL PROTEIN S10-A

Chain AK: 37% 38% 14% 9%



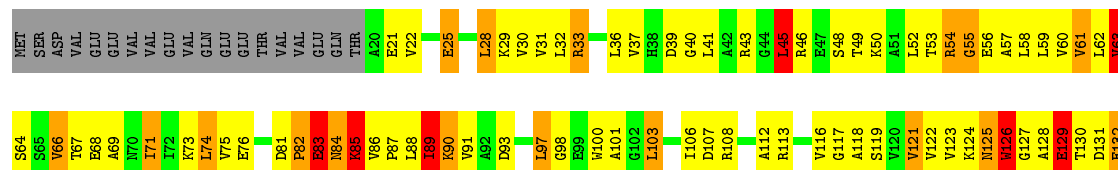
• Molecule 20: 40S RIBOSOMAL PROTEIN S11-A

Chain AL: 46% 43% 9% ..

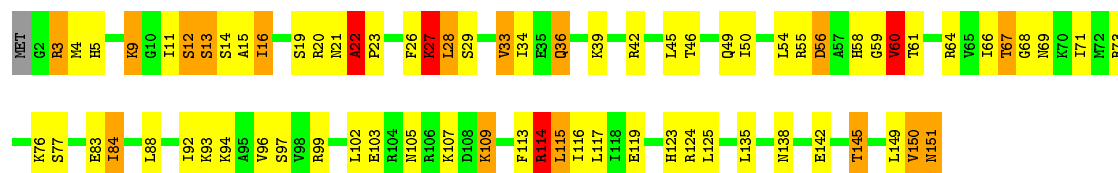




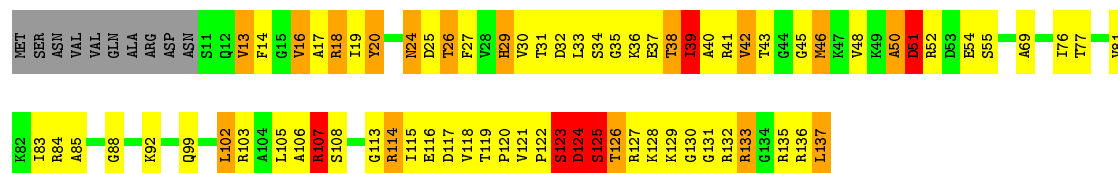
• Molecule 21: 40S RIBOSOMAL PROTEIN S12



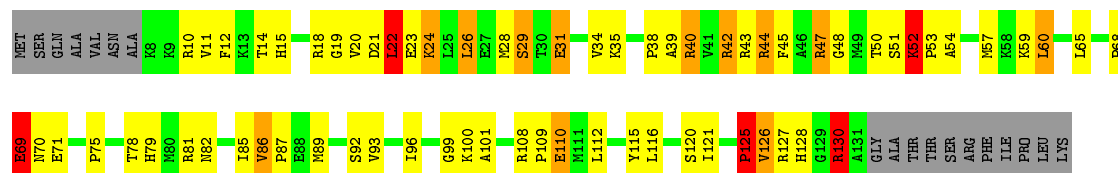
• Molecule 22: 40S RIBOSOMAL PROTEIN S13



• Molecule 23: 40S RIBOSOMAL PROTEIN S14-A

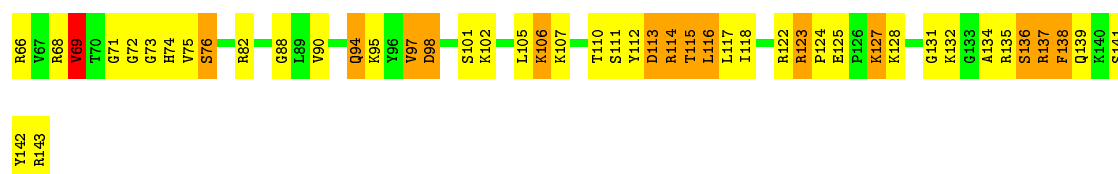


• Molecule 24: 40S RIBOSOMAL PROTEIN S15



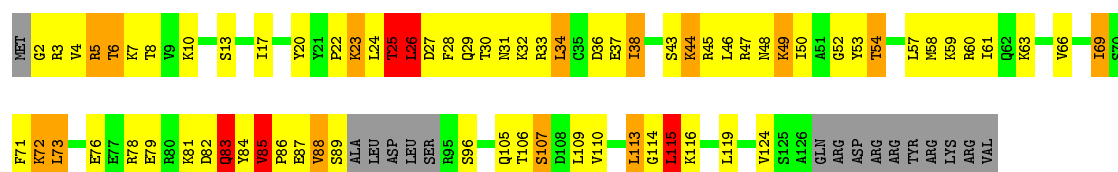
• Molecule 25: 40S RIBOSOMAL PROTEIN S16-A





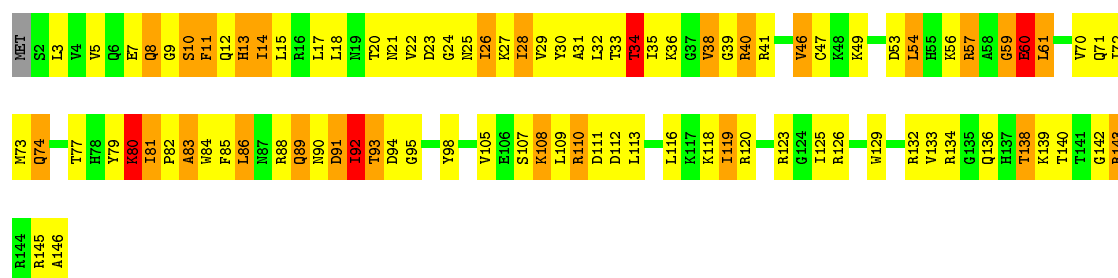
• Molecule 26: 40S RIBOSOMAL PROTEIN S17-A

Chain AR: 35% 40% 10% 12%



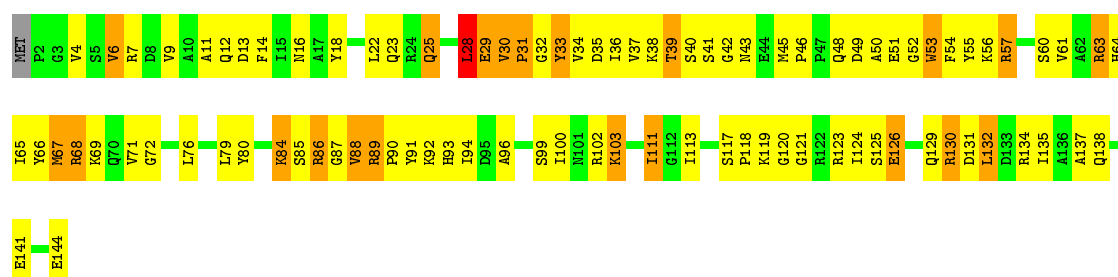
• Molecule 27: 40S RIBOSOMAL PROTEIN S18-A

Chain AS: 35% 44% 18%



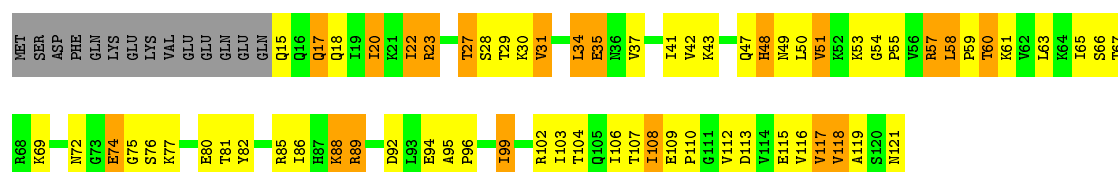
• Molecule 28: 40S RIBOSOMAL PROTEIN S19-A

Chain AT: 35% 49% 15%

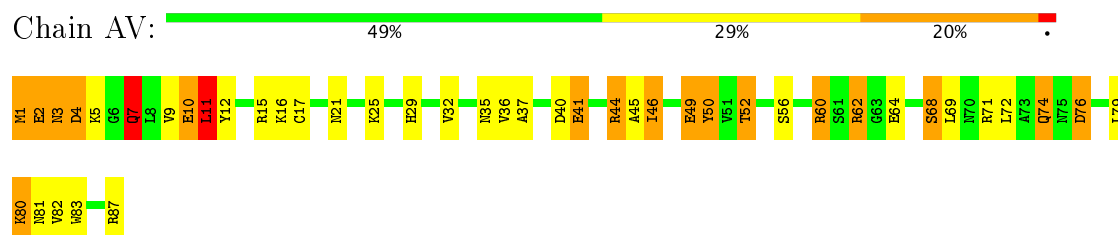


• Molecule 29: 40S RIBOSOMAL PROTEIN S20

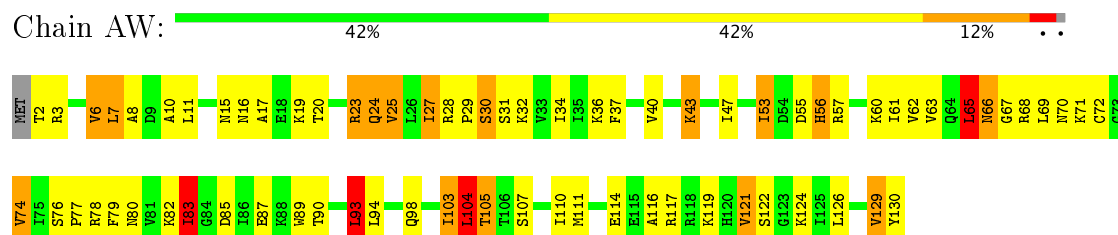
Chain AU: 32% 40% 17% 12%



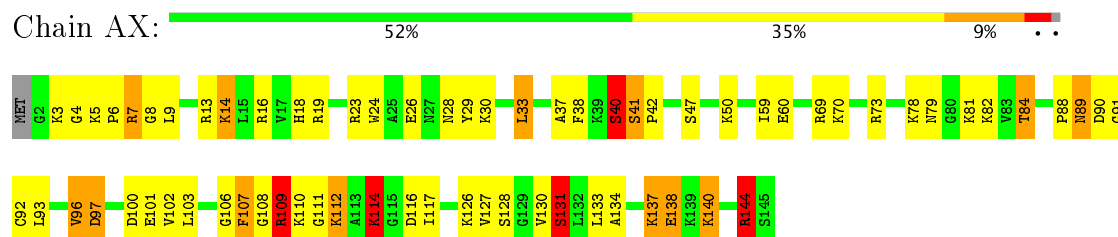
- Molecule 30: 40S RIBOSOMAL PROTEIN S21-A



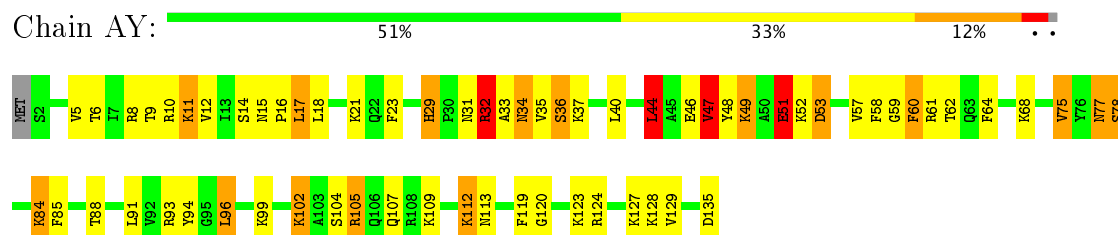
- Molecule 31: 40S RIBOSOMAL PROTEIN S22-A



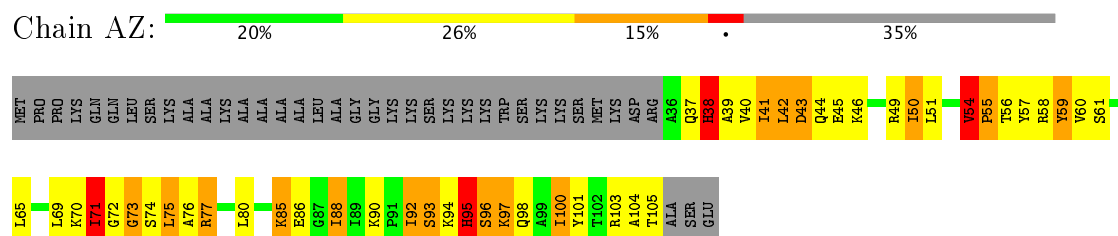
- Molecule 32: 40S RIBOSOMAL PROTEIN S23-A



- Molecule 33: 40S RIBOSOMAL PROTEIN S24-A

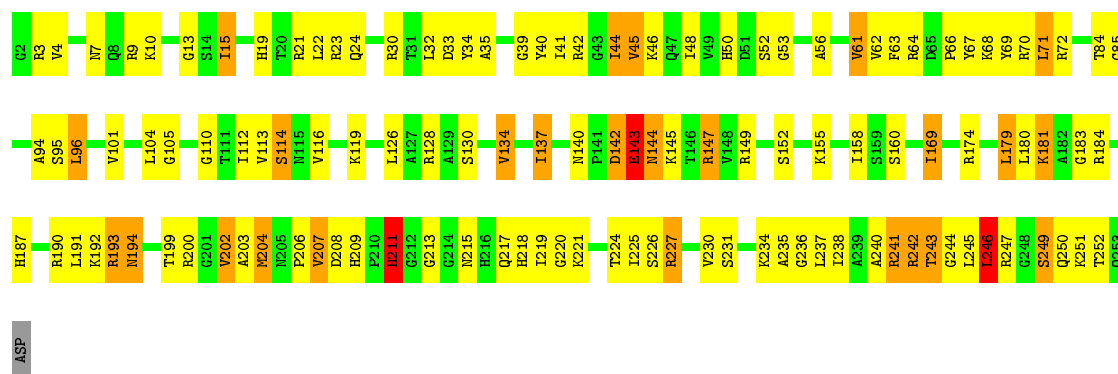


- Molecule 34: 40S RIBOSOMAL PROTEIN S25-A



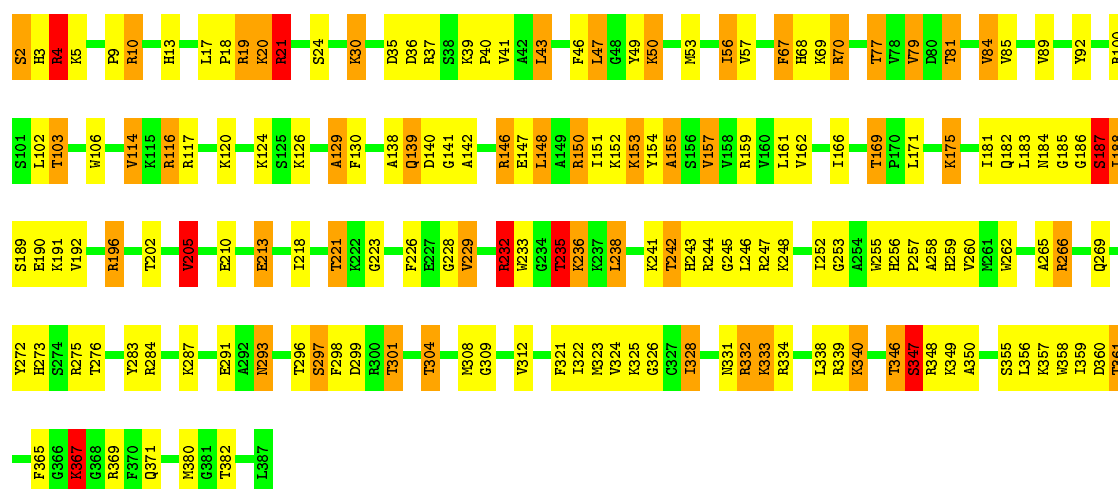
- Molecule 35: 60S RIBOSOMAL PROTEIN L2-B





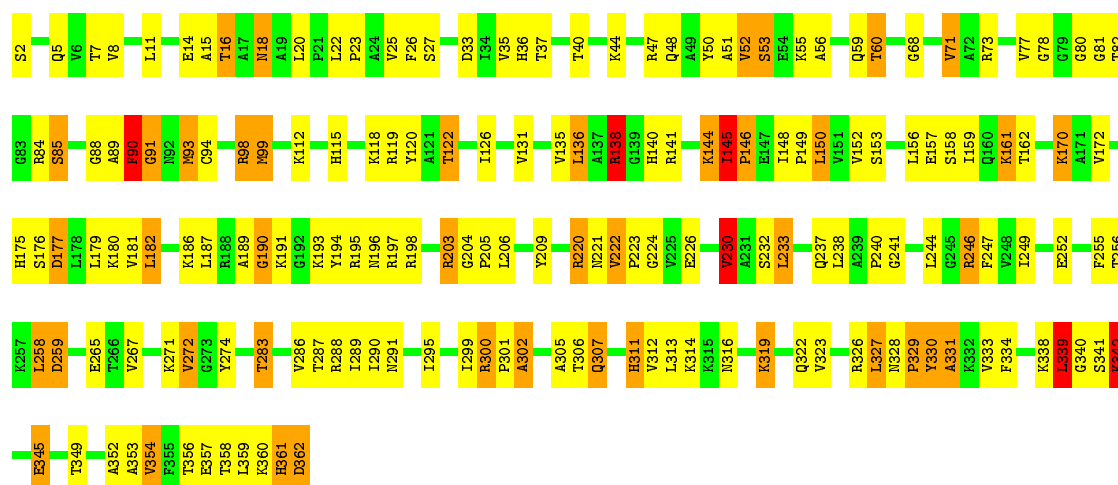
• Molecule 36: 60S RIBOSOMAL PROTEIN L3

Chain BB: 56% 30% 12%

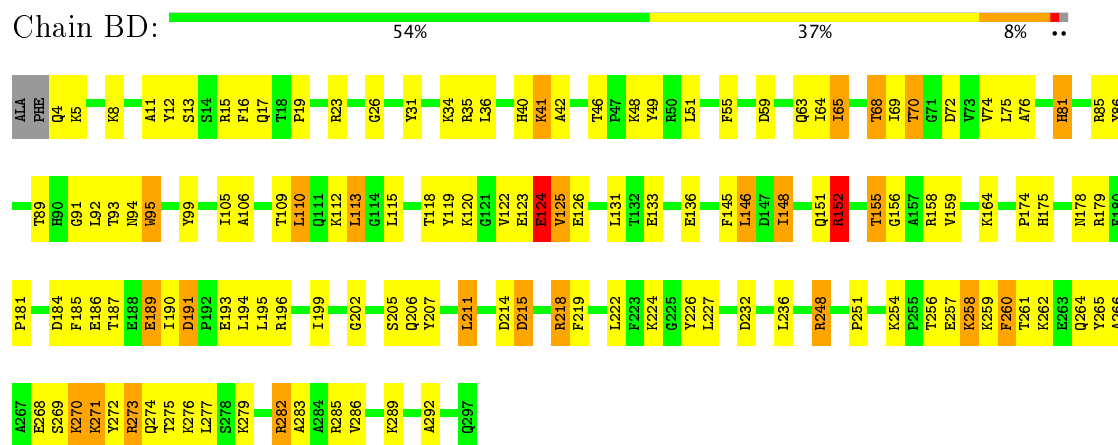


• Molecule 37: 60S RIBOSOMAL PROTEIN L4-A

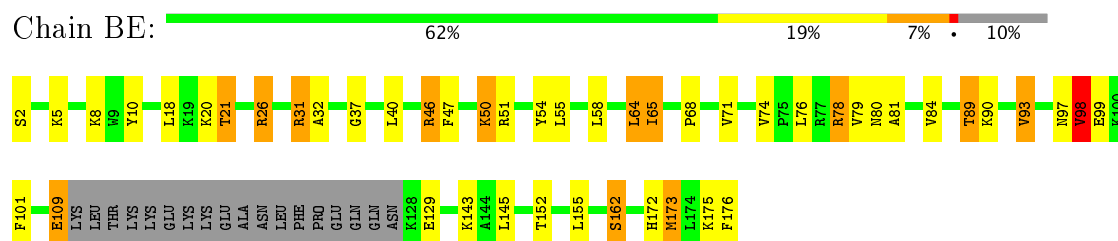
Chain BC: 51% 35% 12%



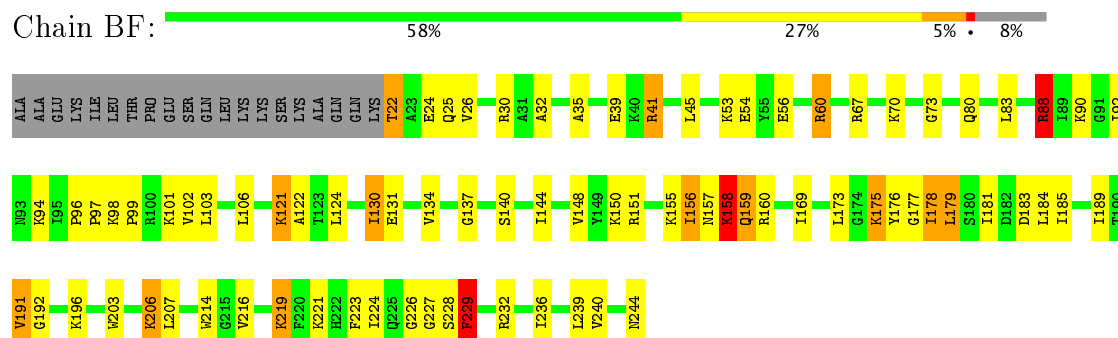
• Molecule 38: 60S RIBOSOMAL PROTEIN L5



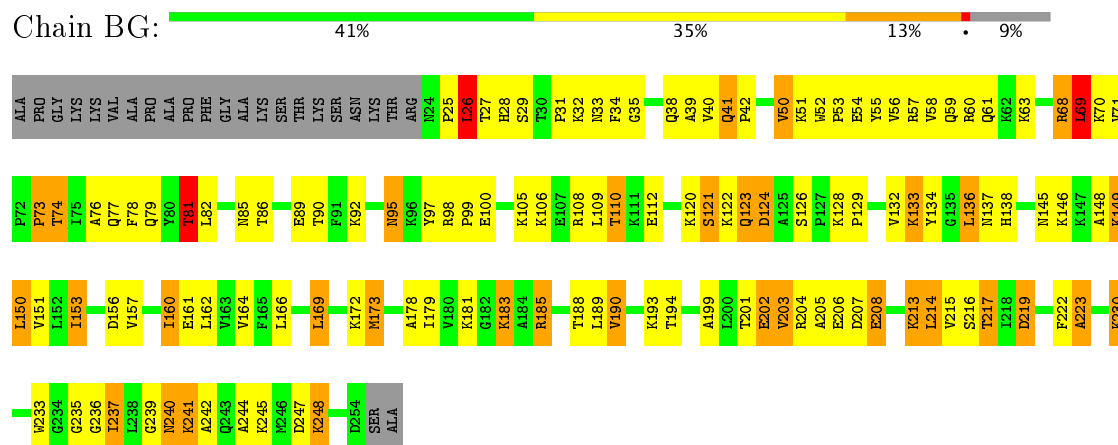
• Molecule 39: 60S RIBOSOMAL PROTEIN L6-A



• Molecule 40: 60S RIBOSOMAL PROTEIN L7-A

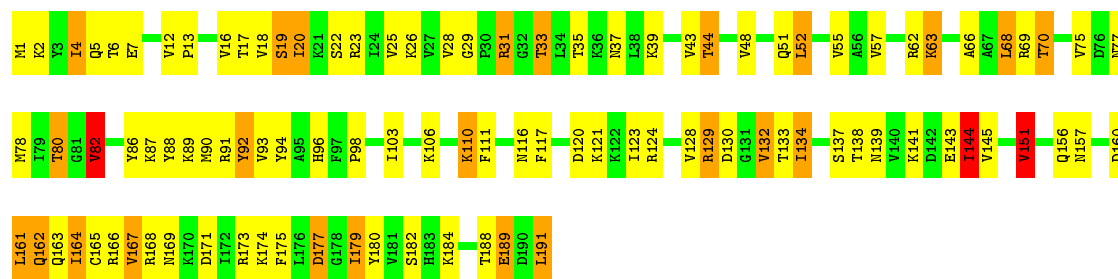


• Molecule 41: 60S RIBOSOMAL PROTEIN L8-A



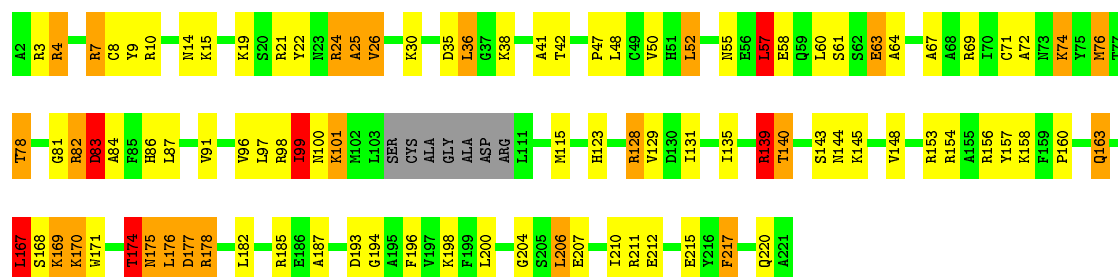
- Molecule 42: 60S RIBOSOMAL PROTEIN L9-A

Chain BH: 



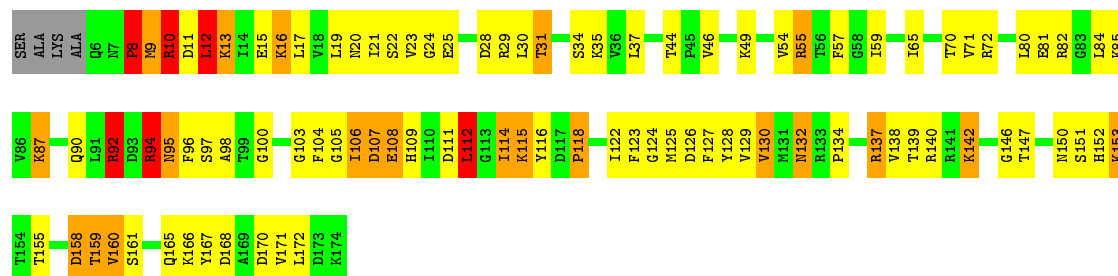
- Molecule 43: 60S RIBOSOMAL PROTEIN L10

Chain BI:  53% 30% 11% 6%

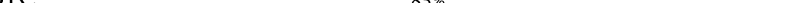


- Molecule 44: 60S RIBOSOMAL PROTEIN L11-A

Chain BJ:  43% 39% 12% . .



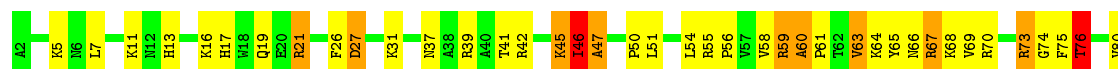
● Molecule 45: 60S RIBOSOMAL PROTEIN L11-A

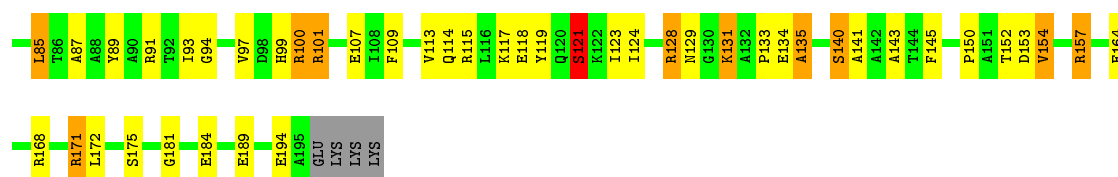
Chain BK:  85% • 13%



- Molecule 46: 60S RIBOSOMAL PROTEIN L13-A

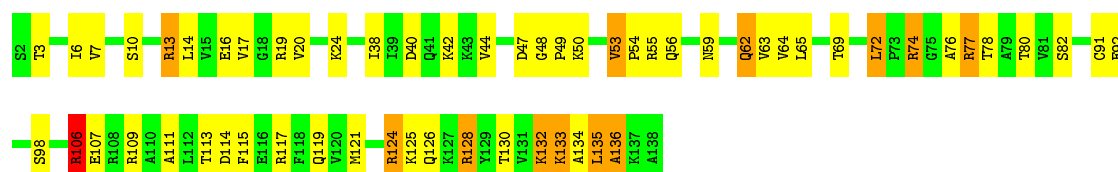
Chain BL: 





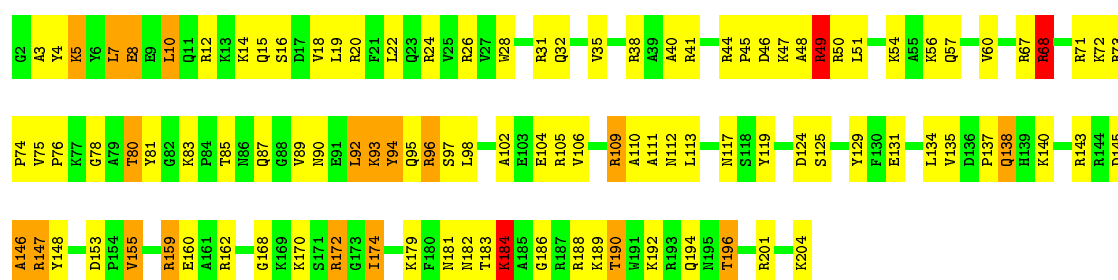
• Molecule 47: 60S RIBOSOMAL PROTEIN L14-B

Chain BM: 57% 34% 9% .



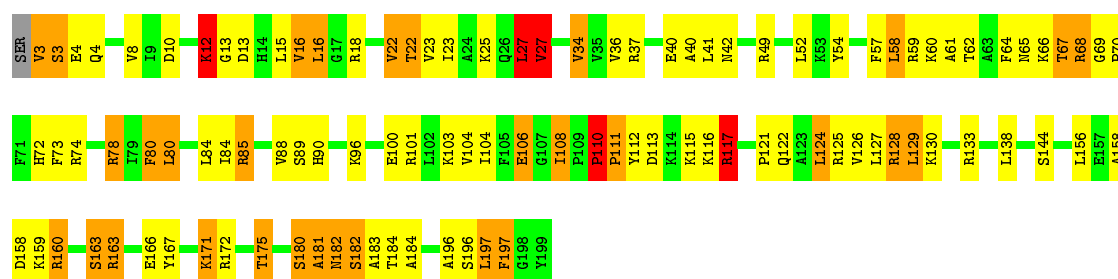
• Molecule 48: 60S RIBOSOMAL PROTEIN L15-A

Chain BN: 48% 41% 9% .



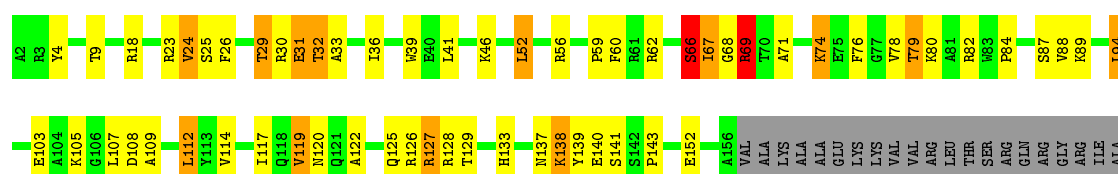
• Molecule 49: 60S RIBOSOMAL PROTEIN L16-A

Chain BO: 51% 32% 14% .



• Molecule 50: 60S RIBOSOMAL PROTEIN L17-A

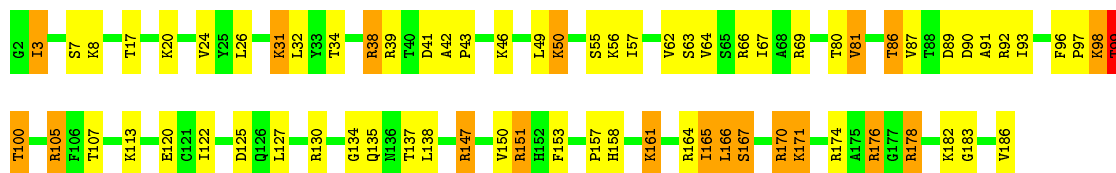
Chain BP: 51% 25% 7% . 15%



ALA
GLN
LYS
ARG
ILE
ALA
ALA

• Molecule 51: 60S RIBOSOMAL PROTEIN L18-A

Chain BQ:  61% 28% 10%



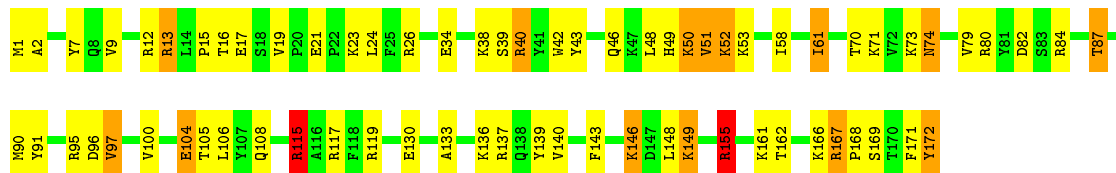
• Molecule 52: 60S RIBOSOMAL PROTEIN L19-B

Chain BR:  51% 40% 9%



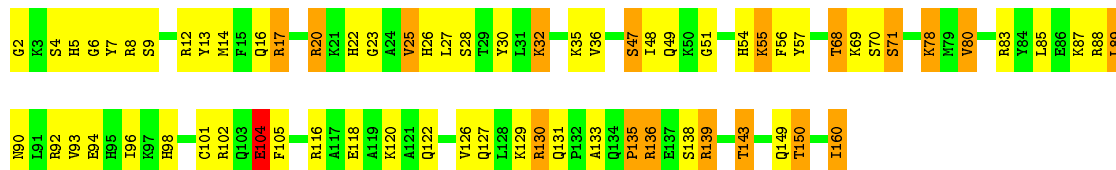
• Molecule 53: 60S RIBOSOMAL PROTEIN L20-B

Chain BS:  59% 31% 8%



• Molecule 54: 60S RIBOSOMAL PROTEIN L21-A

Chain BT:  56% 32% 11%



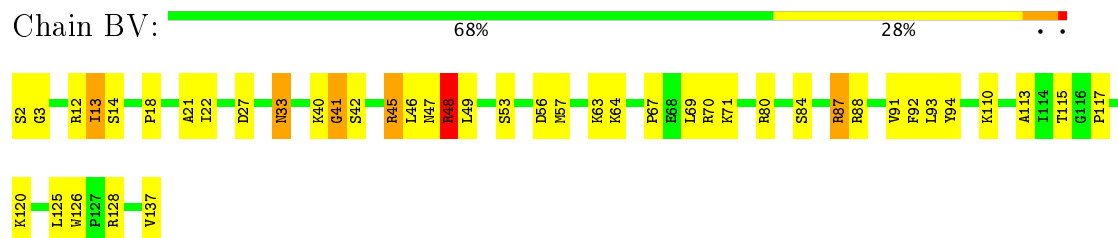
• Molecule 55: 60S RIBOSOMAL PROTEIN L22-A

Chain BU:  44% 26% 12% 18%

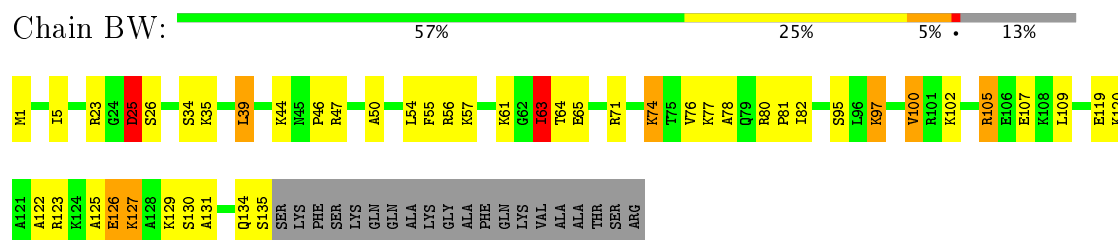




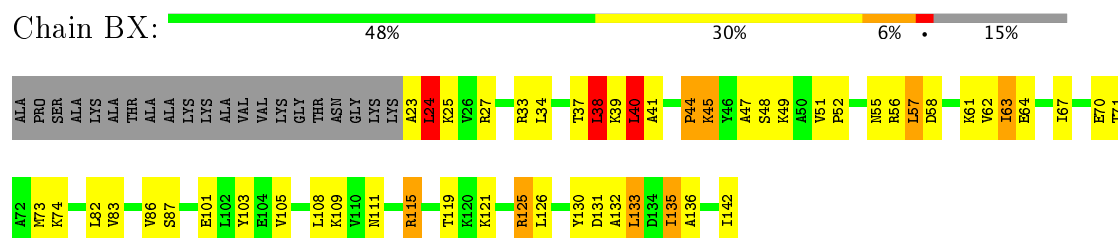
• Molecule 56: 60S RIBOSOMAL PROTEIN L23-A



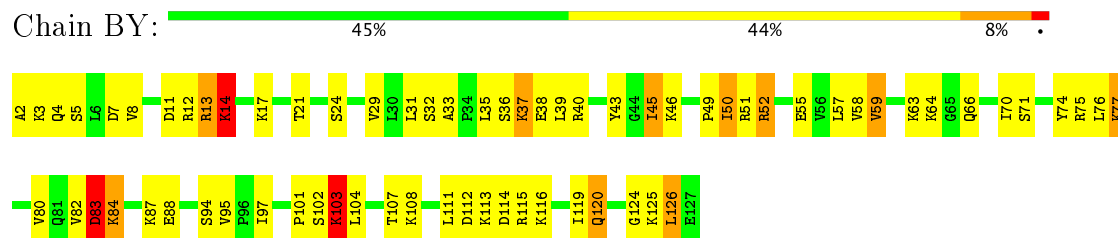
• Molecule 57: 60S RIBOSOMAL PROTEIN L24-A



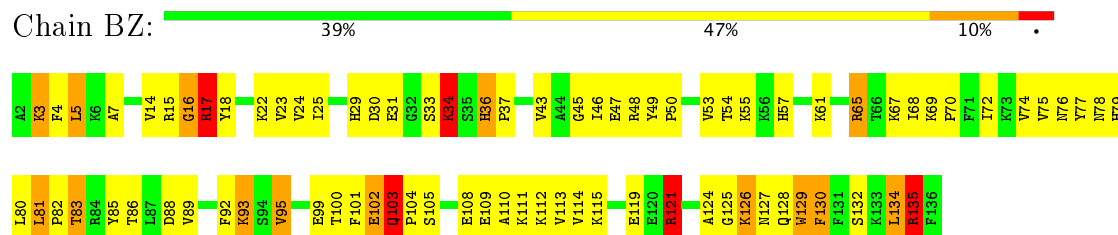
• Molecule 58: 60S RIBOSOMAL PROTEIN L25



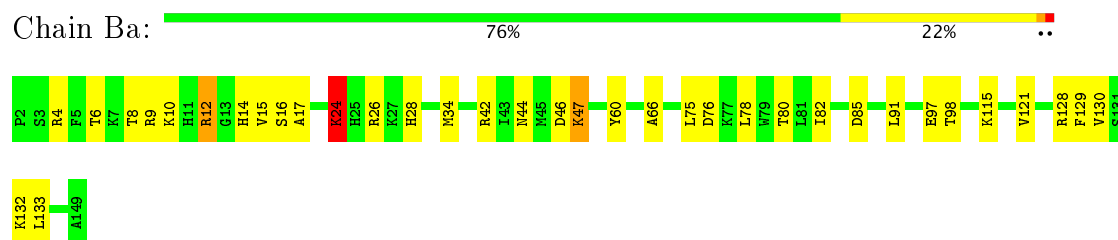
• Molecule 59: 60S RIBOSOMAL PROTEIN L26-A



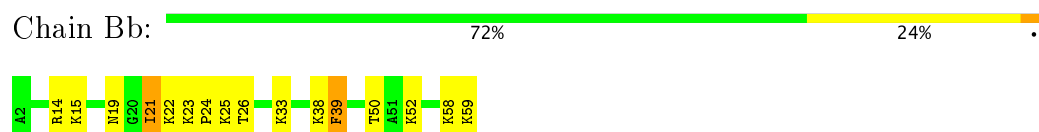
• Molecule 60: 60S RIBOSOMAL PROTEIN L27-A



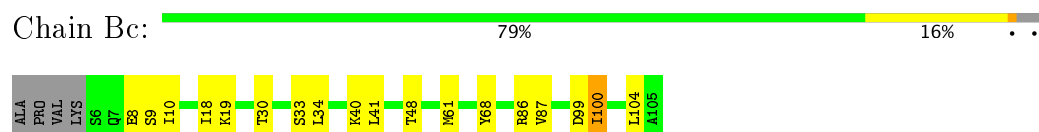
- Molecule 61: 60S RIBOSOMAL PROTEIN L28



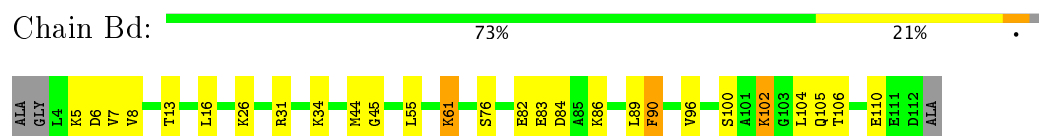
- Molecule 62: 60S RIBOSOMAL PROTEIN L29



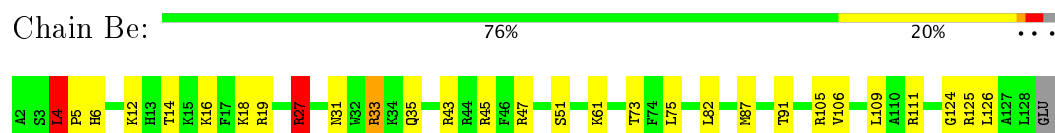
- Molecule 63: 60S RIBOSOMAL PROTEIN L30



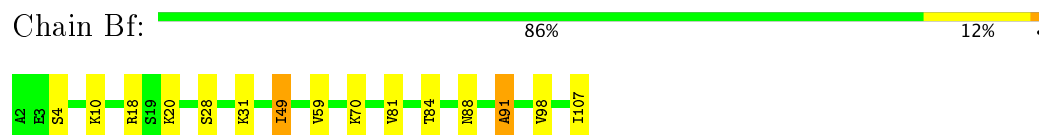
- Molecule 64: 60S RIBOSOMAL PROTEIN L31-A



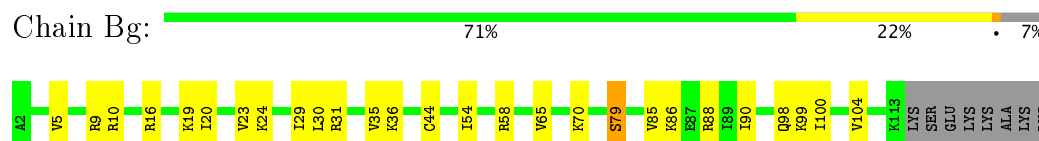
- Molecule 65: 60S RIBOSOMAL PROTEIN L32



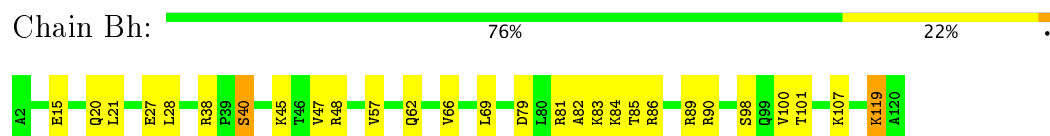
- Molecule 66: 60S RIBOSOMAL PROTEIN L33-A



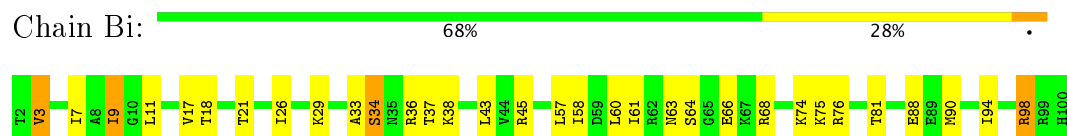
- Molecule 67: 60S RIBOSOMAL PROTEIN L34-A



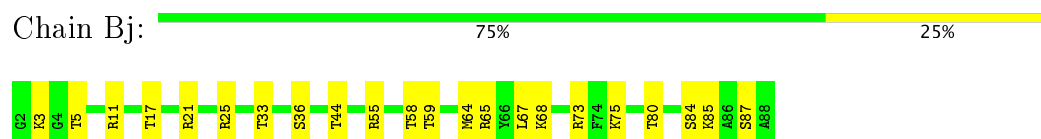
- Molecule 68: 60S RIBOSOMAL PROTEIN L35-B



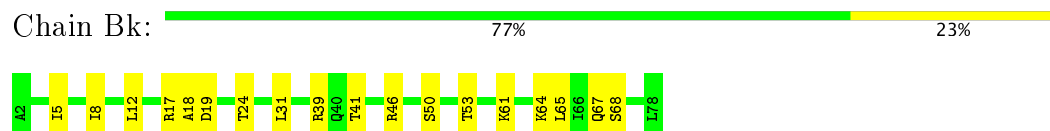
- Molecule 69: 60S RIBOSOMAL PROTEIN L36-A



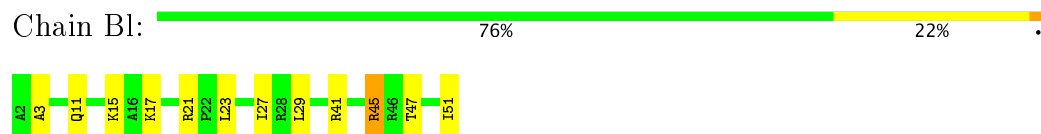
- Molecule 70: 60S RIBOSOMAL PROTEIN L37-A



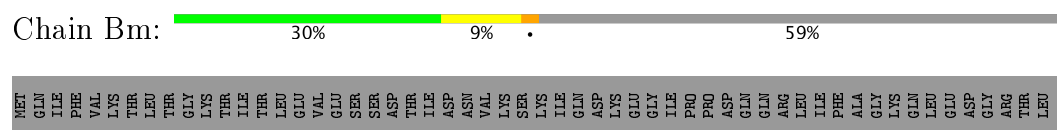
- Molecule 71: 60S RIBOSOMAL PROTEIN L38



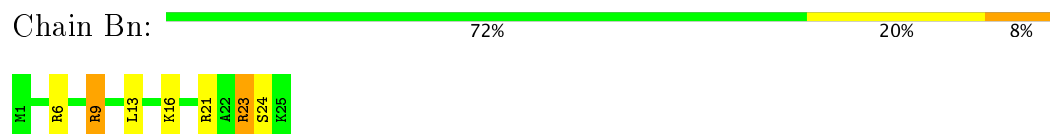
- Molecule 72: 60S RIBOSOMAL PROTEIN L39




- Molecule 73: UBIQUITIN-60S RIBOSOMAL PROTEIN L40

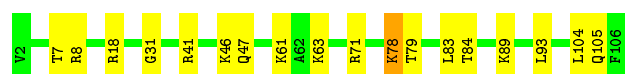


- Molecule 74: 60S RIBOSOMAL PROTEIN L41-B

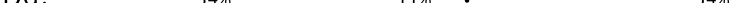


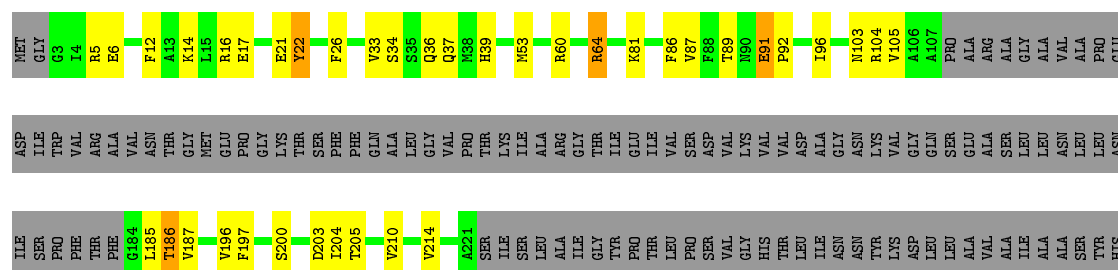
- Molecule 75: 60S RIBOSOMAL PROTEIN L42-A

Chain Bo:  83% 16%



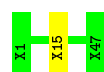
- Molecule 76: 60S ACIDIC RIBOSOMAL PROTEIN P0

Chain Bq: 



- Molecule 77: 60S ACIDIC RIBOSOMAL PROTEIN P1

Chain Br: 98%



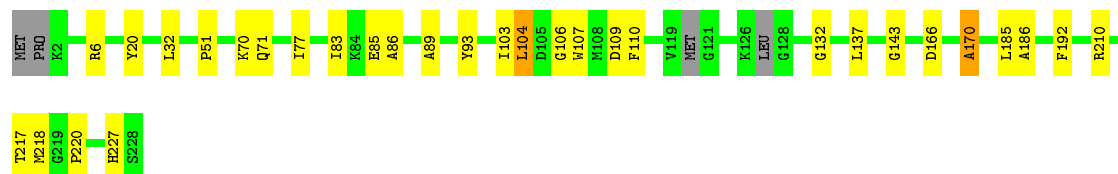
- Molecule 78: 60S ACIDIC RIBOSOMAL PROTEIN P2

Chain Bs: 100%

There are no outlier residues recorded for this chain.

- Molecule 79: 50S RIBOSOMAL PROTEIN L1

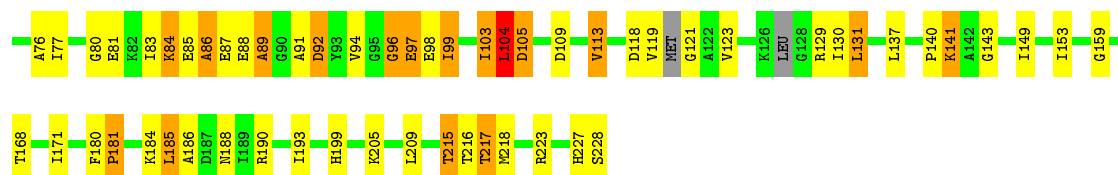
Chain By:  85% 13% ..



- Molecule 79: 50S RIBOSOMAL PROTEIN L1

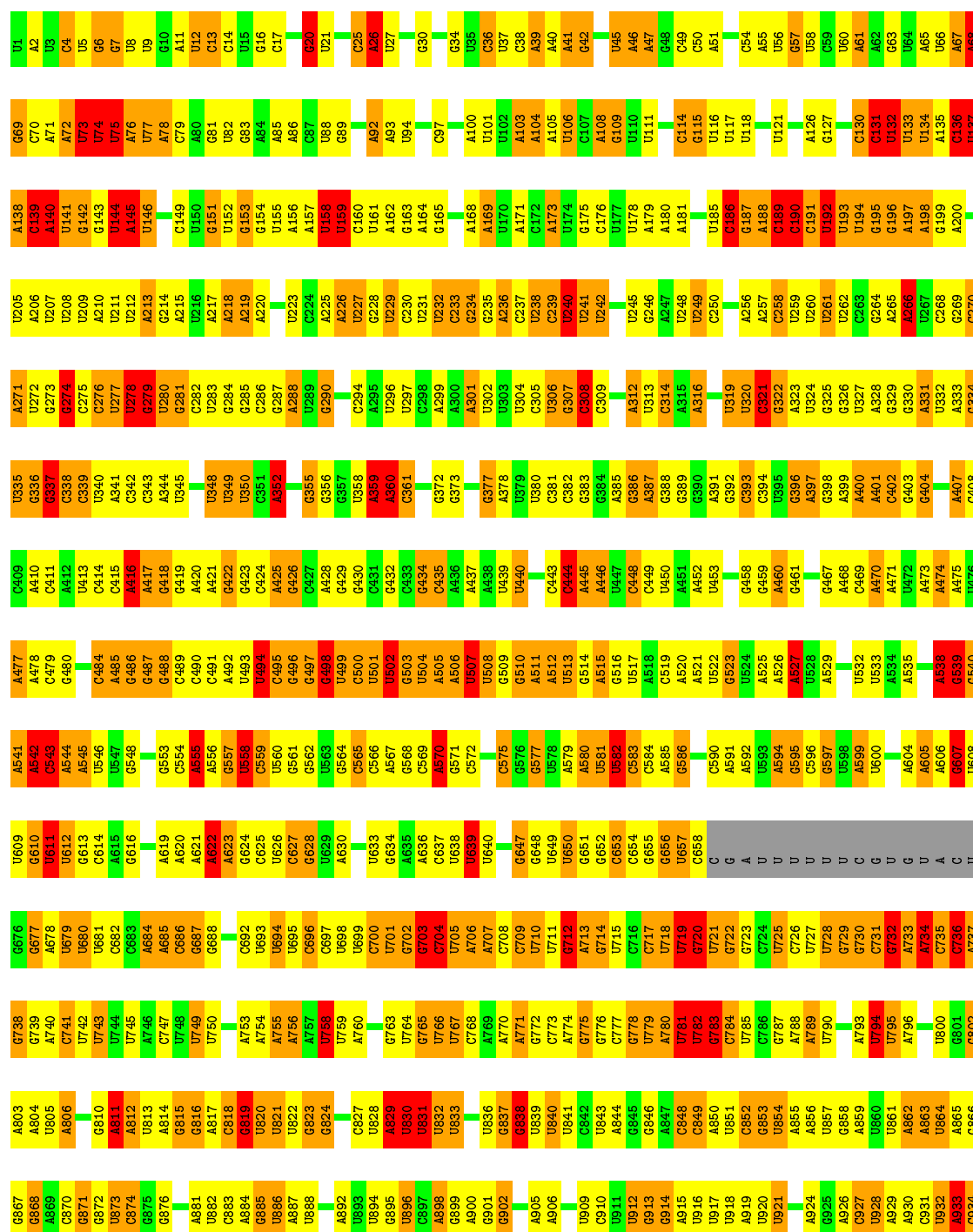
Chain CL:  57% 31% 10%

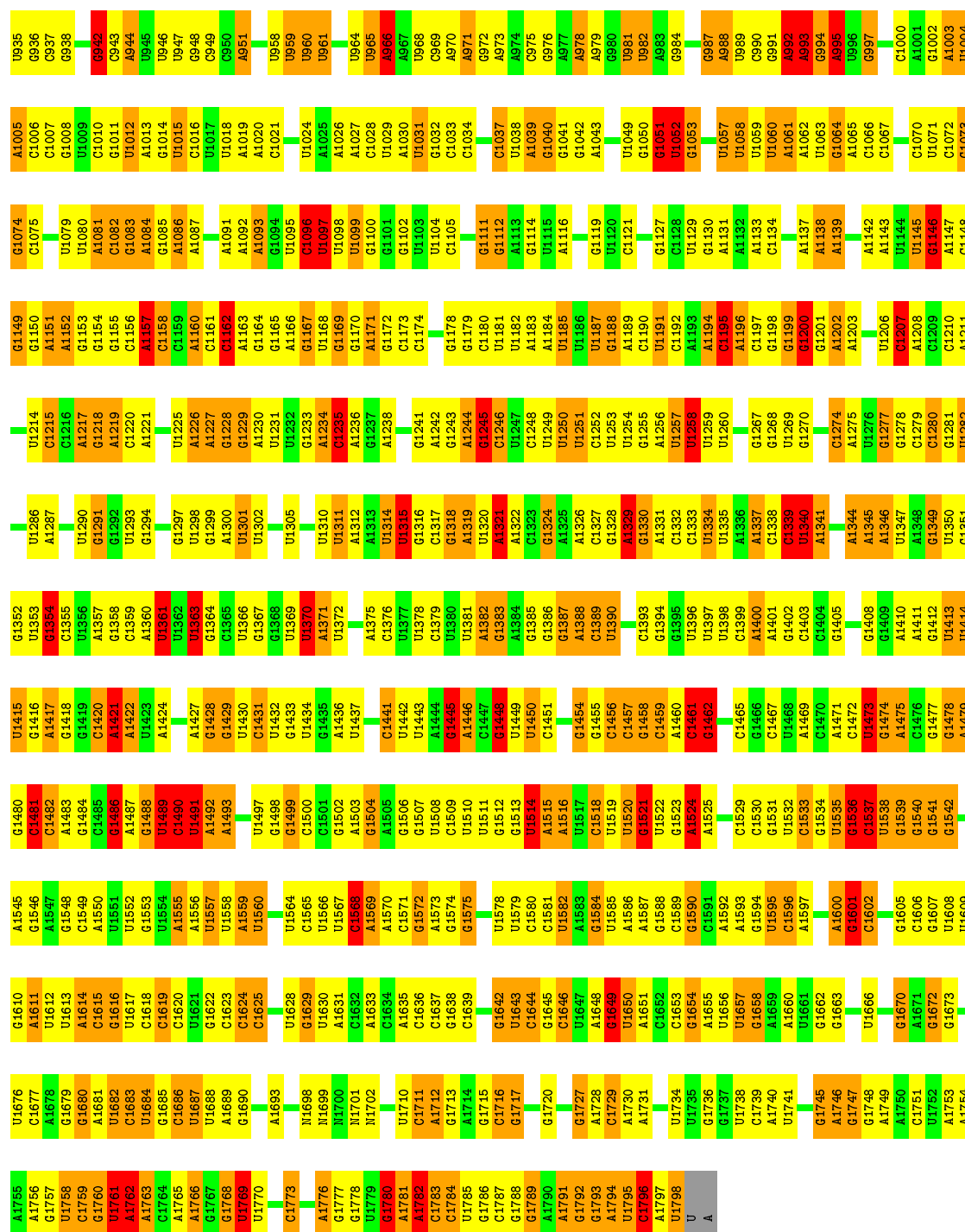




• Molecule 80: 18S RIBOSOMAL RNA

Chain B2: 26% 40% 26% 7%

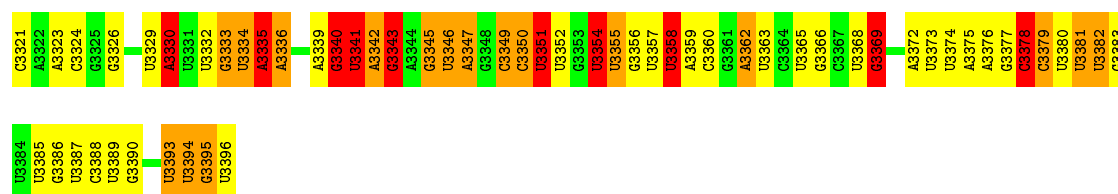




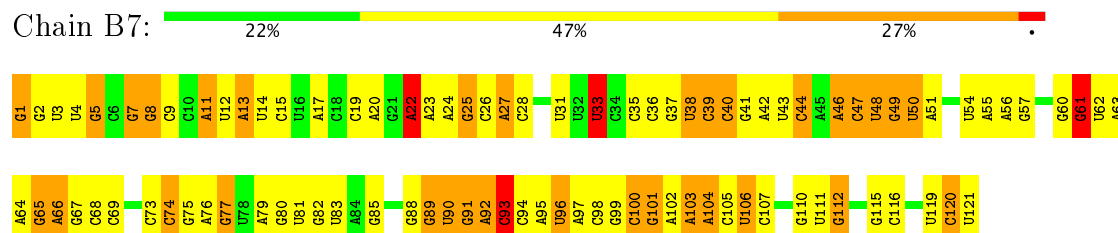
U1181	C132	C200	C269	C339	A399	G	A521	G588	G652	A720	G795	G860	U922	G984	A1048	U1121	U1181
A1182	U133	A201	U270	C340	G400	C	A522	A589	A653	G721	U796	C861	C923	U985	C1049	U1122	U1182
C1183	U134	C205	G272	G341	U401	U	A523	G590	A654	G722	U797	C862	G924	U986	U1050	U1123	U1183
A1184	C135		C271	A342	A402	C	U524	G591	C655		G798	C863	A925	U987		U1124	U1184
	G136			U343	C403	C	C525	A592	A656	G725	G799	C864	A926	U990	A1054	U1125	C1187
	G137	C208	U275	A344	G404	U	C526	G593	A657	G726	G800	U865	C927	U991	A1055	U1126	U1185
	G138	A209	U276	G345	U405	U	A527	U594	G658	G727	G801	A866	C928	U992	U1056	U1127	U1186
	U139	U210	U277	C346	G406	G	U528	G595	G659	G728	C802	A867	A929	U993	U1057	U1128	C1189
	G140	A211	U278	G347	U407	U	A529	C599	A660	G729	G803	C868	U930	U994	A1058	U1129	A1190
	C141	G212	U279	A348	A408	G	G531	G600	G661	U730	C804	U871	C931	G995	U1060	A1130	U1191
		A213	U280	A349	U409	G		U601	U662	G731	G805	U872	U932	U996	A1061	G1131	C1192
		G214	G281	C350	U410	G	U534		C663	G732	A806	C873	A933	U997	A1062	G1132	A1193
	G145	G215	G282	A351	U411	U	G535	G604	U664	G733	U807	C874	G934	U998	A1063	G1133	G1194
	U146	G216	G283	A352	G412	A	G536		A665	C734	A808	U874	U935	U999	A1064	G1134	A1195
	U147	U217	A284	G353	U413	G	U537	A607	A666	A735	G809	A875	C936	U1000	A1065	C1196	C1196
	G148	A219	U286	U354	U414	G	G538	A608	C667	U736	A810	A876	G937	C1000	A1066	A1135	A1197
	U149	G227	U287	A355	G415	G		G609	G668	G737	U811	C877	C938	G1001	U1070	C1137	C1198
	A150	G220	G293	C356	A416	G	C546	U610	U669		G812	G878	U939	G1002	U1071	U1138	C1199
	G156	G227	C293	C357	G417	G	G547	G611	U670	U741	G813	U879	G940	A1003	U1072	U1139	A1200
	A157	U228	U294	A357	U418	A	G548	G612	U671	G742	U814	C880	G941	U1004	U1073	G1140	C1201
	G158	G229	A295	G358	A419	A	G549	G613	U672	G743	U815	C881	G942		U1074	G1141	A1202
	A159		G299	U359	G420	U	G550	U614	A673	U744	G816	A882	U943	U1007	U1075	G1142	A1203
	G160	G234	G304	G360	C291	C	U551	G615	U674	A745	A817	A883	C944	U1008	U1076	A1143	A1204
	C163	G236	U305	A361	U292	U	G552	G616	G675	G746	C818	A884	U945	A1009	A1077	U1144	A1205
		G237	U306	G362	C293	C	G553	G617	U676	U747	G819		U946	G1010	A1078	G1145	A1206
	C166	A238	A306	U370	U430	A	U554	G618	A677	G748	U820	G887	G947	A1011	U1079	C1146	G1207
	U167	G239	G307	G371	U431	C491	U555	U619	U678	G749	U821	A888	C948	A1012	U1080	U1147	U1208
	U168	U240	A308	A372	G432	U	U556	A620	U688	U750	U822	U889	C949	G1013	G1082	G1148	G1209
	U169	G241	A308	A373	A433	U	U557	U621	U689	A751	G823	C890	G950	U1014	U1083	U1149	U1210
	G170	G242	C311	A374	U434	U	U558	U622	A690	G752	C824	G891		U1015	A1084	A1150	U1211
	G171	G243	C312	A375	C435	U	G559	U623	A691	U753	G825	U892	G953	C1016	A1085	G1151	A1212
	G172	G244	A313	G376	A436	C496	G560	U624	A692	G754	U826	C893	U954	C1017	C1086	G1152	G1213
	G173	U245	U314	A377	G437	C497	C561	U625	A693	U755	A828	C894	U955	G1018	G1087	A1153	U1214
	C174	U246	C315	A378	A438	U	C562	U626	C694	G756	U829	A895	U956	G1019	U1088	A1154	C1215
	C175	C247	U316	C379	C439	G499	U563	U627	C695	U757	G830	A896	C957	G1020	U1089	U1155	U1216
		U248	U317	U380	A440	C500	G564	U628	C696	G758	G831	U897	C958	G1021	U1090	C1156	
	U178	U249	A318	U381	U441	A501	G567	U629	A694	G759	G832	U898	C959	U1022	U1091	G1157	U1220
	C179	U250	A318	U382	G442	U502	G568	U630	A695	U760	G833	U899	U960	C1023	G1092	A1158	A1221
	C180	G251	U322	U383	G443	G505	G569	U631	C696	U761	G834	G900	C961	G1024	A1093	C1159	G
	U181	U252	A323	A384	U	U506	U574	U632	G701	U762	U835	A906	U962	A1025	U1094	U1160	A
	U182	A253	A324	A385	G	G507	C575	U633	C702	U763	U836	G907	G968	G1026	C1107	U1161	C
	G183	A254	A325	A386	U	U508	U576	U634	U704	G764	U837	G908	C969	A1027	U1108	U1162	A1225
	U184	A255	U326	A387	U	U509	C577	U635	A705	A765	U838	G909	A970	G1028	U1109	G1170	G1226
	C185	G256	A327	U388	U	U510	C578	U636	A706	G766	U839	G910	A971	A1029	U1110	U1171	G1227
	U186	U257	U328	U389	U	G511	A578	U637	G708	U767	A840	G911	A972	G1030	U1111	G1172	C1228
	U187	G258	U329	A390	G	G512	G579	U638	A709	A768	U841	G912	G973	G1031	A1112	U1173	U1235
	A187	C259	U329	A391	U	G513	C580	U639	A710	G769	C851	A913	G974	U1032	G1113	G1174	G1236
	G189	C260	C332	A392	G	G514	U581	U640	A711	U770	U852	A914	U975	U1033	U1114	G1175	C1237
	U190	U261	G333	U393	C	C515	G582	U641	A712	G771	U853	A915	U976	U1034	G1115	C1176	C1238
	C192	U262	A334	U394	C	A516	G583	U642	G712	C788	U854	A916	U977	G1035	U1116	G1177	C1239
	A266	G267	G335	A395	C	G517	G584	U643	A713		G856	A917	U978	U1036	U1117	U1178	A1240
	A268		A336	A396	U	G518	A585	U644	A714	G792	G857	A918	U980	A1037	C1118	G1179	U1241
			G337	A397	C	A519	C586	U645	A715	U793	A858	A919	U981	U1040	U1119	G1242	G1243
			U520	A398	U	U520	U587	G651	U719	U794	G859	A921	A983	A1047	A1120		

A2228	A2229	C2230	C2231	C2234	C2235	G2236	G2237	G2238	G2239	A2242	A2243	A2244	C2245	C2246	C2247	C2248	C2249	C2250	A1251	A1252	A1253	A1254	A1255	C1256	C1257	A1258	A1259	A1260	G1261	G1262	A1263	G1264	A1265	G1266	G1267	G1268	C1269	A1270	C1271	C1272	A1273	A1274	C1275	C1276	C1277	A1278	C1279	C1280	C1281	C1282	C1283	C1284	G1285	A1286	A1287	C1288	C1289	C1290	A1291	G1292	C1293	A1294	G1295	G1296	C1297	C1298	A1299	C1300	A1301	A1302	A1303	A1304																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
G1269	G1270	G1271	A1272	A1273	G1274	G1275	G1276	G1277	A1278	G1279	C1280	C1281	C1282	C1283	C1284	C1285	C1286	C1287	C1288	C1289	C1290	C1291	C1292	C1293	C1294	C1295	C1296	C1297	C1298	C1299	C1300	C1301	C1302	C1303	C1304	C1305	C1306	C1307	C1308	C1309	C1310	C1311	C1312	C1313	C1314	C1315	C1316	C1317	C1318	C1319	C1320	C1321	C1322	C1323	C1324	C1325	C1326	C1327	C1328	C1329	C1330	C1331	C1332	C1333	C1334	C1335	C1336	C1337	C1338	C1339	C1340	C1341	C1342	C1343	C1344	C1345	C1346	C1347	C1348	C1349	C1350	C1351	C1352	C1353	C1354	C1355	C1356	C1357	C1358	C1359	C1360	C1361	C1362	C1363	C1364																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
G1365	A1366	G1367	G1368	A1369	G1370	G1371	C1372	A1373	G1374	G1375	C1376	G1377	C1378	G1379	G1380	A1381	G1382	G1383	C1384	C1385	A1386	G1387	G1388	C1389	A1390	C1391	C1392	C1393	C1394	C1395	C1396	A1397	A1400	A1401	C1402	C1403	G1404	C1405	A1406	A1407	G1408	G1409	C1410	C1411	G1412	G1413	G1414	C1415	C1416	C1417	A1418	C1419	C1420	G1421	C1422	C1423	C1424	C1425	C1426	C1427	A1428																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
G1429	G1430	C1431	C1432	A1433	G1434	C1437	A1438	G1439	G1440	G1441	G1442	G1443	G1444	G1445	C1446	G1447	C1448	C1449	C1450	C1451	C1452	C1453	C1454	C1455	C1456	C1457	C1458	C1459	C1460	C1461	C1462	C1463	C1464	C1465	C1466	C1467	C1468	C1469	C1470	C1471	C1472	C1473	C1474	C1475	C1476	C1477	C1478	C1479	C1480	C1481	C1482	C1483	C1484	C1485	C1486	C1487	C1488	C1489	C1490	C1491	C1492	C1493																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
U1494	U1495	C1496	C1497	C1498	C1499	G1500	U1501	C1502	A1503	A1504	C1505	A1506	G1507	C1508	A1509	G1510	U1511	U1512	G1513	G1514	A1515	C1516	C1517	C1518	C1519	C1520	C1521	C1522	C1523	C1524	C1525	C1526	C1527	C1528	C1529	C1530	C1531	C1532	C1533	C1534	C1535	C1536	C1537	C1538	C1539	C1540	C1541	C1542	C1543	C1544	C1545	C1546	C1547	C1548	C1549	C1550	C1551	C1552	C1553	C1554	C1555	C1556	C1557	C1558	C1559	C1560	C1561	C1562	C1563	C1564																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1565	A1566	U1567	U1568	U1569	U1570	A1571	U1572	U1573	C1574	A1575	G1576	G1577	C1578	C1579	A1580	C1581	C1582	C1583	C1584	C1585	C1586	C1587	C1588	C1589	C1590	C1591	C1592	C1593	C1594	C1595	C1596	C1597	C1600	C1601	C1602	C1603	C1604	C1605	C1606	C1607	C1608	C1609	C1610	C1611	C1612	C1613	C1614	C1615	C1616	C1617	C1618	C1619	C1620	C1621	C1622	C1623	C1624	C1625	C1626	C1627	C1628	C1629	C1630	C1631	C1632	C1633	C1634																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
G1635	U1636	A1637	A1638	C1639	U1640	U1641	A1642	A1643	C1644	C1645	C1646	C1647	C1648	C1649	C1650	C1651	C1652	C1653	C1654	C1655	C1656	C1657	C1658	C1659	C1660	C1661	C1662	C1663	C1664	C1665	C1666	C1667	C1668	C1669	C1670	C1671	C1672	C1673	C1674	C1675	C1676	C1677	C1678	C1679	C1680	C1681	C1682	C1683	C1684	C1685	C1686	C1687	C1688	C1689	C1690	C1691	C1692	C1693	C1694	C1695	C1696	C1697	C1698	C1699	C1700	C1701	C1702	C1703																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
A1704	C1710	C1711	C1712	A1713	A1714	A1715	C1716	C1717	C1718	C1719	C1720	C1721	C1722	C1723	C1724	C1725	C1726	C1727	C1728	C1729	C1730	C1731	C1732	C1733	C1734	C1735	C1736	C1737	C1738	C1739	C1740	C1741	C1742	C1743	C1744	C1745	C1746	C1747	C1748	C1749	C1750	C1751	C1752	C1753	C1754	C1755	C1756	C1757	C1758	C1759	C1760	C1761	C1762	C1763	C1764	C1765	C1766	C1767	C1768	C1769	C1770	C1771	C1772	C1773	C1774	C1775	C1776	C1777	C1778	C1779	C1780	C1781	C1782	C1783																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
G1784	U1785	C1786	C1787	C1788	C1789	C1790	C1791	C1792	C1793	C1794	C1795	C1796	C1797	C1800	C1801	C1802	C1803	C1804	C1805	C1806	C1807	C1808	C1809	C1810	C1811	C1812	C1813	C1814	C1815	C1816	C1817	C1818	C1819	C1820	C1821	C1822	C1823	C1824	C1825	C1826	C1827	C1828	C1829	C1830	C1831	C1832	C1833	C1834	C1835	C1836	C1837	C1838	C1839	C1840	C1841	C1842	C1843	C1844	C1845	C1846	C1847	C1848	C1849	C1850	C1851																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
U1855	C1856	C1857	C1858	C1859	C1860	C1861	C1862	C1863	C1864	C1865	C1866	C1867	C1868	C1869	C1870	C1871	C1872	C1873	C1874	C1875	C1876	C1877	C1878	C1879	C1880	C1881	C1882	C1883	C1884	C1885	C1886	C1887	C1888	C1889	C1890	C1891	C1892	C1893	C1894	C1895	C1896	C1897	C1898	C1899	C1900	C1901	C1902	C1903	C1904	C1905	C1906	C1907	C1908	C1909	C1910	C1911	C1912	C1913	C1914	C1915	C1916	C1917																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
C1918	A1921	C1922	C1923	C1924	C1925	C1926	C1927	C1928	C1929	C1930	C1931	C1932	C1933	C1934	C1935	C1936	C1937	C1938	C1939	C1940	C1941	C1942	C1943	C1944	C1945	C1946	C1947	C1948	C1949	C1950	C1951	C1952	C1953	C1954	C1955	C1956	C1957	C1958	C1959	C1960	C1961	C1962	C1963	C1964	C1965	C1966	C1967	C1968	C1969	C1970	C1971	C1972	C1973	C1974	C1975	C1976	C1977	C1978	C1979	C1980	C1981	C1982	C1983	C1984	C1985	C1986	C1987	C1988	C1989	C1990	C1991	C1992	C1993	C1994	C1995	C1996	C1997	C1998	C1999	C2000	C2001	C2002	C2003	C2004	C2005	C2006	C2007	C2008	C2009	C2010	C2011	C2012	C2013	C2014	C2015	C2016	C2017	C2018	C2019	C2020	C2021	C2022	C2023	C2024	C2025	C2026	C2027	C2028	C2029	C2030	C2031	C2032	C2033	C2034	C2035	C2036	C2037	C2038	C2039	C2040	C2041	C2042	C2043	C2044	C2045	C2046	C2047	C2048	C2049	C2050	C2051	C2052	C2053	C2054	C2055	C2056	C2057	C2058	C2059	C2060	C2061	C2062	C2063	C2064	C2065	C2066	C2067	C2068	C2069	C2070	C2071	C2072	C2073	C2074	C2075	C2076	C2077	C2078	C2079	C2080	C2081	C2082	C2083	C2084	C2085	C2086	C2087	C2088	C2089	C2090	C2091	C2092	C2093	C2094	C2095	C2096	C2097	C2098	C2099	C2100	C2101	C2102	C2103	C2104	C2105	C2106	C2107	C2108	C2109	C2110	C2111	C2112	C2113	C2114	C2115	C2116	C2117	C2118	C2119	C2120	C2121	C2122	C2123	C2124	C2125	C2126	C2127	C2128	C2129	C2130	C2131	C2132	C2133	C2134	C2135	C2136	C2137	C2138	C2139	C2140	C2141	C2142	C2143	C2144	C2145	C2146	C2147	C2148	C2149	C2150	C2151	C2152	C2153	C2154	C2155	C2156	C2157	C2158	C2159	C2160	C2161	C2162	C2163	C2164	C2165	C2166	C2167	C2168	C2169	C2170	C2171	C2172	C2173	C2174	C2175	C2176	C2177	C2178	C2179	C2180	C2181	C2182	C2183	C2184	C2185	C2186	C2187	C2188	C2189	C2190	C2191	C2192	C2193	C2194	C2195	C2196	C2197	C2198	C2199	C2200	C2201	C2202	C2203	C2204	C2205	C2206	C2207	C2208	C2209	C2210	C2211	C2212	C2213	C2214	C2215	C2216	C2217	C2218	C2219	C2220	C2221	C2222	C2223	C2224	C2225	C2226	C2227	C2228	C2229	C2230	C2231	C2232	C2233	C2234	C2235	C2236	C2237	C2238	C2239	C2240	C2241	C2242	C2243	C2244	C2245	C2246	C2247	C2248	C2249	C2250	C2251	C2252	C2253	C2254	C2255	C2256	C2257	C2258	C2259	C2260	C2261	C2262	C2263	C2264	C2265	C2266	C2267	C2268	C2269	C2270	C2271	C2272	C2273	C2274	C2275	C2276	C2277	C2278	C2279	C2280	C2281	C2282	C2283	C2284	C2285	C2286	C2287	C2288	C2289	C2290	C2291	C2292	C2293	C2294	C2295	C2296	C2297	C2298	C2299	C2300	C2301	C2302	C2303	C2304	C2305	C2306	C2307	C2308	C2309	C2310	C2311	C2312	C2313	C2314	C2315	C2316	C2317	C2318	C2319	C2320	C2321	C2322	C2323	C2324	C2325	C2326	C2327	C2328	C2329	C2330	C2331	C2332	C2333	C2334	C2335	C2336	C2337	C2338	C2339	C2340	C2341	C2342	C2343	C2344	C2345	C2346	C2347	C2348	C2349	C2350	C2351	C2352	C2353	C2354	C2355	C2356	C2357	C2358	C2359	C2360	C2361	C2362	C2363	C2364	C2365	C2366	C2367	C2368	C2369	C2370	C2371	C2372	C2373	C2374	C2375	C2376	C2377	C2378	C2379	C2380	C2381	C2382	C2383	C2384	C2385	C2386	C2387	C2388	C2389	C2390	C2391	C2392	C2393	C2394	C2395	C2396	C2397	C2398	C2399	C2400	C2401	C2402	C2403	C2404	C2405	C2406	C2407	C2408	C2409	C2410	C2411	C2412	C2413	C2414	C2415	C2416	C2417	C2418	C2419	C2420	C2421	C2422	C2423	C2424	C2425	C2426	C2427	C2428	C2429	C2430	C2431	C2432	C2433	C2434	C2435	C2436	C2437	C2438	C2439	C2440	C2441	C2442	C2443	C2444	C2445	C2446	C2447	C2448	C2449	C2450	C2451	C2452	C2453	C2454	C2455	C2456	C2457	C2458	C2459	C2460	C2461	C2462	C2463	C2464	C2465	C2466	C2467	C2468	C2469	C2470	C2471	C2472	C2473	C2474	C2475	C2476	C2477	C2478	C2479	C2480	C2481	C2482	C2483	C2484	C2485	C2486	C2487	C2488	C2489	C2490	C2491	C2492	C2493	C2494	C2495	C2496	C2497	C2498	C2499	C2500	C2501	C2502	C2503	C2504	C2505	C2506	C2507	C2508	C2509	C2510	C2511	C2512	C2513	C2514	C2515	C2516	C2517	C2518	C2519	C2520	C2521	C2522	C2523	C2524	C2525	C2526	C2527	C2528	C2529	C2530	C2531	C2532	C2533	C2534	C2535	C2536	C2537	C2538	C2539	C2540	C2541	C2542	C2543	C2544	C2545	C2546	C2547	C2548	C2549	C2550	C2551	C2552	C2553	C2554	C2555	C2556	C2557	C2558	C2559	C2560	C2561	C2562	C2563	C2564	C2565	C2566	C2567	C2568

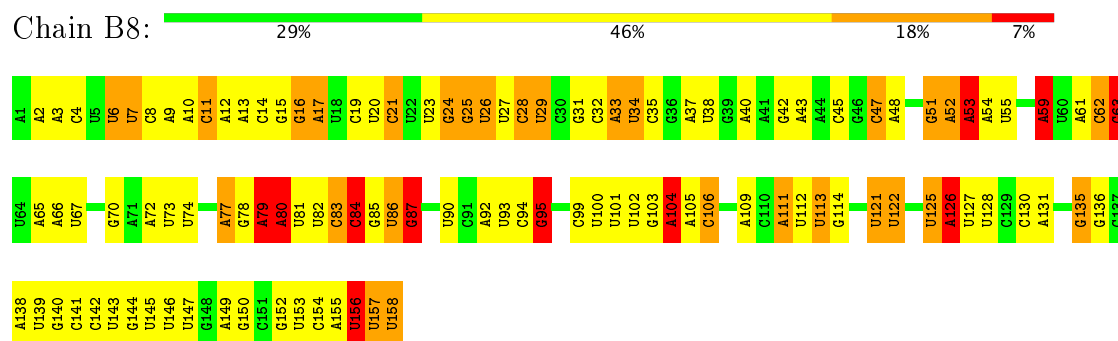


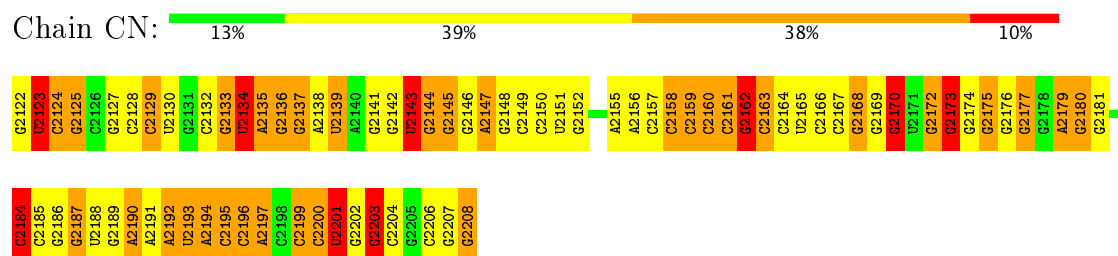
• Molecule 82: 5S RIBOSOMAL RNA



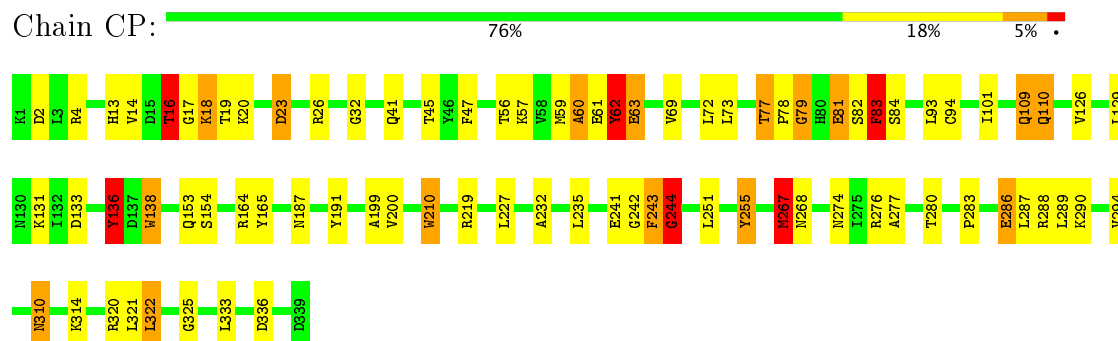
• Molecule 83: 5.8S RIBOSOMAL RNA



• Molecule 84: EUKARYOTIC RIBOSOMAL L1_RRNA

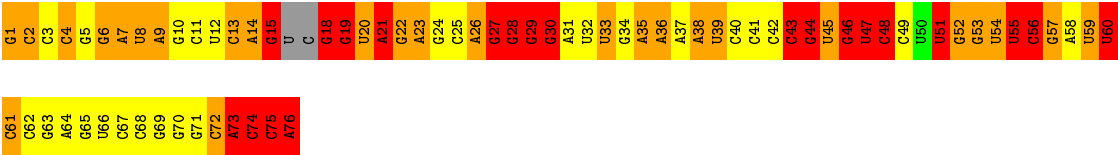


• Molecule 85: EUKARYOTIC TRANSLATION INITIATION FACTOR 5B



● Molecule 86: EUKARYOTIC RIBOSOMAL P_E TRNA

Chain CW: . 34% 34% 28% .



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	40729	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	EACH PARTICLE	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	16	Depositor
Minimum defocus (nm)	1900	Depositor
Maximum defocus (nm)	3900	Depositor
Magnification	79096	Depositor
Image detector	FEI FALCON I (4k x 4k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: GCP, ZN, OHX, MG, HSO

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	$\# Z > 2$	RMSZ	$\# Z > 2$
1	A0	0.54	0/782	0.77	0/1047
10	AB	0.45	0/1735	0.81	0/2335
11	AC	0.60	0/1665	0.77	0/2263
12	AD	0.59	0/1759	0.74	0/2368
13	AE	0.57	0/2109	0.86	1/2839 (0.0%)
14	AF	0.49	0/1629	0.72	0/2202
15	AG	0.55	0/1823	0.75	0/2439
16	AH	0.52	0/1506	0.77	0/2028
17	AI	0.68	0/1514	0.89	3/2021 (0.1%)
18	AJ	0.59	0/1519	0.81	0/2035
19	AK	0.55	0/789	0.83	3/1067 (0.3%)
2	A1	0.53	0/620	0.81	1/838 (0.1%)
20	AL	0.70	0/1239	0.81	0/1673
21	AM	0.49	0/898	0.76	0/1220
22	AN	0.61	0/1215	0.83	3/1638 (0.2%)
23	AO	0.48	0/901	0.82	1/1217 (0.1%)
24	AP	0.60	0/998	0.86	3/1341 (0.2%)
25	AQ	0.56	0/1125	0.85	3/1510 (0.2%)
26	AR	0.54	0/935	0.81	0/1254
27	AS	0.59	0/1211	0.80	0/1628
28	AT	0.57	0/1130	0.81	0/1517
29	AU	0.55	0/865	0.76	0/1169
3	A2	0.43	0/499	0.72	0/670
30	AV	0.52	0/693	0.75	0/935
31	AW	0.65	0/1038	0.86	3/1395 (0.2%)
32	AX	0.72	0/1139	0.91	2/1518 (0.1%)
33	AY	0.56	0/1087	0.77	1/1449 (0.1%)
34	AZ	0.50	0/571	0.85	1/768 (0.1%)
35	BA	0.87	1/1946 (0.1%)	1.05	4/2614 (0.2%)
36	BB	1.02	4/3146 (0.1%)	1.11	13/4228 (0.3%)
37	BC	0.87	0/2800	1.07	11/3790 (0.3%)
38	BD	0.89	1/2408 (0.0%)	0.96	3/3248 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
39	BE	0.90	1/1269 (0.1%)	1.00	3/1705 (0.2%)
4	A3	0.70	0/452	0.94	1/600 (0.2%)
40	BF	0.99	1/1828 (0.1%)	1.04	6/2461 (0.2%)
41	BG	0.64	0/1795	0.81	1/2429 (0.0%)
42	BH	0.97	2/1539 (0.1%)	1.01	1/2073 (0.0%)
43	BI	0.92	1/1758 (0.1%)	1.08	12/2358 (0.5%)
44	BJ	0.81	1/1374 (0.1%)	0.99	4/1842 (0.2%)
46	BL	0.82	0/1573	1.04	6/2113 (0.3%)
47	BM	0.96	0/1074	1.01	4/1446 (0.3%)
48	BN	0.83	1/1757 (0.1%)	1.00	6/2354 (0.3%)
49	BO	0.98	11/3159 (0.3%)	1.02	25/4205 (0.6%)
5	A4	0.50	0/483	0.71	0/643
50	BP	1.05	1/1250 (0.1%)	1.09	5/1683 (0.3%)
51	BQ	0.89	1/1465 (0.1%)	1.12	9/1965 (0.5%)
52	BR	0.78	1/1538 (0.1%)	0.87	2/2050 (0.1%)
53	BS	1.02	0/1481	1.09	7/1990 (0.4%)
54	BT	1.01	2/1300 (0.2%)	1.01	1/1743 (0.1%)
55	BU	0.56	0/794	0.77	0/1076
56	BV	0.98	0/1018	1.09	4/1369 (0.3%)
57	BW	0.80	0/1052	0.90	2/1398 (0.1%)
58	BX	0.72	0/974	0.86	0/1314
59	BY	0.79	1/1004 (0.1%)	0.98	2/1341 (0.1%)
6	A5	0.53	0/404	0.99	1/542 (0.2%)
60	BZ	0.55	0/1118	0.83	2/1497 (0.1%)
61	Ba	0.95	2/1204 (0.2%)	1.14	9/1612 (0.6%)
62	Bb	0.91	0/473	1.14	1/629 (0.2%)
63	Bc	0.61	0/775	0.77	0/1040
64	Bd	0.94	2/897 (0.2%)	0.95	1/1205 (0.1%)
65	Be	1.03	0/1041	1.27	12/1394 (0.9%)
66	Bf	1.12	0/868	1.09	3/1168 (0.3%)
67	Bg	0.72	0/890	0.92	0/1189
68	Bh	0.67	0/974	0.80	0/1297
69	Bi	0.67	0/777	0.85	0/1033
7	A6	0.49	0/2490	0.70	0/3389
70	Bj	0.87	0/696	1.04	3/923 (0.3%)
71	Bk	0.50	0/614	0.70	0/822
72	Bl	0.90	0/443	1.02	1/588 (0.2%)
73	Bm	1.08	2/423 (0.5%)	1.13	1/562 (0.2%)
74	Bn	0.90	0/234	1.15	1/300 (0.3%)
75	Bo	0.83	0/860	0.89	1/1136 (0.1%)
76	Bq	1.07	0/1092	1.31	4/1474 (0.3%)
79	By	0.98	0/1749	1.24	8/2355 (0.3%)
79	CL	0.80	2/1749 (0.1%)	1.02	4/2355 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
8	A7	0.86	2/925 (0.2%)	0.87	2/1240 (0.2%)
80	B2	0.92	33/42128 (0.1%)	1.49	828/65642 (1.3%)
81	B5	1.49	661/75336 (0.9%)	1.92	3722/117449 (3.2%)
82	B7	1.38	12/2883 (0.4%)	1.80	119/4491 (2.6%)
83	B8	1.16	4/3746 (0.1%)	1.70	128/5832 (2.2%)
84	CN	0.76	7/2097 (0.3%)	1.20	23/3273 (0.7%)
85	CP	2.24	8/2623 (0.3%)	1.38	24/3532 (0.7%)
86	CW	1.86	27/1761 (1.5%)	2.72	212/2743 (7.7%)
9	AA	0.54	0/1617	0.80	0/2215
All	All	1.13	792/226118 (0.4%)	1.51	5267/331349 (1.6%)

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
10	AB	0	1
16	AH	0	1
2	A1	0	1
20	AL	0	1
23	AO	0	1
26	AR	0	2
34	AZ	0	3
35	BA	0	2
37	BC	0	1
38	BD	0	1
39	BE	0	1
40	BF	0	2
49	BO	0	2
53	BS	0	1
56	BV	0	1
59	BY	0	1
6	A5	0	2
60	BZ	0	1
61	Ba	0	3
62	Bb	0	1
76	Bq	0	7
77	Br	0	1
79	By	0	4
79	CL	0	3
8	A7	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
81	B5	0	35
85	CP	0	8
86	CW	0	19
All	All	0	107

All (792) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	CP	63	GLU	N-CA	69.03	2.84	1.46
85	CP	210	TRP	CD2-CE3	34.76	1.92	1.40
85	CP	210	TRP	CD2-CE2	33.01	1.80	1.41
85	CP	210	TRP	CE2-CZ2	31.95	1.94	1.39
85	CP	210	TRP	CE3-CZ3	26.33	1.83	1.38
85	CP	210	TRP	CZ3-CH2	24.12	1.78	1.40
85	CP	210	TRP	CZ2-CH2	23.88	1.82	1.37
49	BO	197[B]	PHE	C-N	-21.97	0.93	1.33
49	BO	182[B]	SER	C-N	18.03	1.75	1.34
81	B5	1152	G	N9-C8	15.03	1.48	1.37
81	B5	1152	G	N9-C4	-14.81	1.26	1.38
8	A7	134	ASP	CG-OD1	13.93	1.57	1.25
81	B5	1226	G	N9-C4	-13.53	1.27	1.38
81	B5	1152	G	C2-N3	-13.37	1.22	1.32
8	A7	134	ASP	CG-OD2	12.60	1.54	1.25
49	BO	23[B]	ILE	C-N	-11.04	1.08	1.34
79	CL	42	GLU	CD-OE1	9.78	1.36	1.25
49	BO	3[B]	SER	C-N	9.61	1.56	1.34
81	B5	3216	G	N7-C5	-9.39	1.33	1.39
81	B5	1434	G	N7-C5	-9.19	1.33	1.39
81	B5	1254	C	P-O5'	-9.11	1.50	1.59
81	B5	2941	A	N9-C4	-9.06	1.32	1.37
81	B5	2914	G	P-OP2	-9.05	1.33	1.49
81	B5	1449	A	N9-C4	-8.94	1.32	1.37
81	B5	652	G	N1-C2	-8.82	1.30	1.37
81	B5	953	G	C5-C4	-8.76	1.32	1.38
81	B5	367	A	N9-C4	-8.68	1.32	1.37
81	B5	1227	C	C2-N3	8.65	1.42	1.35
81	B5	1450	G	C8-N7	-8.62	1.25	1.30
49	BO	80[B]	LEU	C-N	8.56	1.53	1.34
81	B5	3088	G	C6-O6	-8.41	1.16	1.24
81	B5	2278	C	C2-O2	-8.28	1.17	1.24
81	B5	2899	C	N3-C4	-8.24	1.28	1.33
81	B5	1227	C	C1'-N1	8.21	1.61	1.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1887	A	N9-C4	-8.21	1.32	1.37
81	B5	2191	U	C4-C5	-8.20	1.36	1.43
80	B2	553	G	C6-N1	8.16	1.45	1.39
81	B5	1178	G	P-OP2	-8.14	1.35	1.49
81	B5	2726	C	N3-C4	-8.10	1.28	1.33
81	B5	2393	G	C8-N7	-8.08	1.26	1.30
81	B5	3216	G	N9-C8	-8.03	1.32	1.37
81	B5	1152	G	C5-C6	-8.03	1.34	1.42
81	B5	2817	A	P-OP1	-8.01	1.35	1.49
81	B5	1229	G	N7-C5	-7.99	1.34	1.39
35	BA	211	HIS	C-O	7.98	1.38	1.23
81	B5	2280	A	N9-C4	-7.96	1.33	1.37
81	B5	2314	U	N3-C4	7.95	1.45	1.38
81	B5	1152	G	N3-C4	-7.92	1.29	1.35
81	B5	1849	C	N3-C4	-7.91	1.28	1.33
81	B5	953	G	N7-C5	-7.87	1.34	1.39
81	B5	1311	G	C5-C4	-7.87	1.32	1.38
81	B5	917	A	N7-C5	-7.86	1.34	1.39
81	B5	2830	G	C6-N1	-7.86	1.34	1.39
81	B5	3245	A	N9-C4	-7.85	1.33	1.37
81	B5	3114	A	N9-C4	-7.83	1.33	1.37
81	B5	519	A	N7-C5	-7.79	1.34	1.39
81	B5	2945	G	P-O5'	-7.77	1.51	1.59
81	B5	2703	A	N7-C5	-7.72	1.34	1.39
81	B5	631	U	C2-N3	-7.69	1.32	1.37
81	B5	1902	G	C5-C4	-7.67	1.32	1.38
81	B5	2804	A	N9-C4	-7.65	1.33	1.37
81	B5	1434	G	N9-C8	-7.65	1.32	1.37
54	BT	104	GLU	CB-CG	7.64	1.66	1.52
81	B5	1301	A	N7-C5	-7.60	1.34	1.39
81	B5	41	G	P-OP1	-7.60	1.36	1.49
81	B5	1285	G	C6-N1	7.58	1.44	1.39
81	B5	345	G	N1-C2	-7.57	1.31	1.37
81	B5	3006	A	N3-C4	-7.57	1.30	1.34
49	BO	84[B]	ILE	C-N	7.55	1.51	1.34
81	B5	970	A	N9-C4	-7.54	1.33	1.37
81	B5	1276	U	C2-N3	7.54	1.43	1.37
81	B5	2314	U	C2-N3	7.52	1.43	1.37
81	B5	2272	G	C5-C4	-7.49	1.33	1.38
81	B5	1307	G	P-O5'	-7.49	1.52	1.59
51	BQ	171	LYS	CE-NZ	7.47	1.67	1.49
81	B5	2385	G	N9-C4	-7.43	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2335	G	N3-C4	-7.43	1.30	1.35
81	B5	2134	G	N1-C2	-7.42	1.31	1.37
81	B5	934	G	P-OP1	-7.40	1.36	1.49
81	B5	2948	C	N3-C4	-7.40	1.28	1.33
81	B5	2191	U	C4-O4	-7.39	1.17	1.23
81	B5	1902	G	P-OP1	-7.39	1.36	1.49
81	B5	960	U	N1-C2	7.35	1.45	1.38
81	B5	953	G	N9-C8	-7.34	1.32	1.37
81	B5	1303	A	C5-C4	-7.32	1.33	1.38
81	B5	2943	G	N7-C5	-7.30	1.34	1.39
81	B5	3122	A	N3-C4	-7.30	1.30	1.34
81	B5	3245	A	C5-C6	-7.29	1.34	1.41
81	B5	1374	G	N1-C2	-7.27	1.31	1.37
81	B5	345	G	C6-N1	-7.27	1.34	1.39
81	B5	1515	A	C5-C6	-7.26	1.34	1.41
81	B5	1443	G	C2-N3	-7.24	1.26	1.32
81	B5	2919	A	C6-N1	-7.21	1.30	1.35
81	B5	644	G	N7-C5	-7.21	1.34	1.39
84	CN	2190	A	O3'-P	-7.19	1.52	1.61
81	B5	2141	U	P-OP2	-7.19	1.36	1.49
82	B7	85	G	N1-C2	-7.19	1.31	1.37
81	B5	1849	C	C2-N3	-7.17	1.30	1.35
81	B5	2364	G	C6-N1	-7.16	1.34	1.39
81	B5	2689	A	N3-C4	-7.16	1.30	1.34
81	B5	2949	U	P-OP1	-7.16	1.36	1.49
81	B5	2364	G	N3-C4	-7.14	1.30	1.35
81	B5	1200	A	N3-C4	-7.12	1.30	1.34
81	B5	1430	U	P-OP1	-7.10	1.36	1.49
81	B5	2837	A	C5-C4	-7.10	1.33	1.38
80	B2	377	G	N9-C4	-7.09	1.32	1.38
86	CW	57	G	N7-C5	-7.08	1.35	1.39
82	B7	96	U	C2-O2	-7.07	1.16	1.22
81	B5	726	G	C5-C6	-7.03	1.35	1.42
83	B8	20	U	C4-O4	-7.03	1.18	1.23
81	B5	1233	G	C2'-C1'	-7.03	1.45	1.53
81	B5	1112	A	N7-C5	-7.01	1.35	1.39
81	B5	1887	A	N7-C5	-7.00	1.35	1.39
81	B5	2434	U	N3-C4	-6.99	1.32	1.38
81	B5	971	G	C5-C4	-6.98	1.33	1.38
81	B5	420	G	N7-C5	-6.96	1.35	1.39
81	B5	2887	A	P-OP2	-6.96	1.37	1.49
81	B5	1042	U	C2-N3	-6.96	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2335	G	C6-N1	-6.94	1.34	1.39
81	B5	1159	A	N9-C4	-6.94	1.33	1.37
81	B5	3180	A	N3-C4	-6.91	1.30	1.34
81	B5	1110	U	C4-O4	-6.90	1.18	1.23
81	B5	2361	A	N9-C4	6.90	1.42	1.37
86	CW	56	C	P-O5'	-6.90	1.52	1.59
80	B2	1456	C	N3-C4	-6.90	1.29	1.33
81	B5	2399	A	N9-C4	-6.88	1.33	1.37
81	B5	340	C	P-OP1	-6.86	1.37	1.49
81	B5	2336	U	C2-N3	-6.86	1.32	1.37
81	B5	2395	G	C5-C4	-6.84	1.33	1.38
81	B5	1184	A	N9-C4	-6.82	1.33	1.37
81	B5	1592	G	N1-C2	-6.79	1.32	1.37
81	B5	1901	A	N7-C5	-6.79	1.35	1.39
81	B5	2836	C	C4-C5	6.78	1.48	1.43
81	B5	1319	G	N7-C5	-6.77	1.35	1.39
81	B5	986	U	C4-C5	-6.76	1.37	1.43
81	B5	1178	G	C2-N3	-6.75	1.27	1.32
81	B5	1592	G	C6-N1	-6.75	1.34	1.39
81	B5	2636	A	C6-N1	-6.75	1.30	1.35
81	B5	334	A	C5-C4	-6.74	1.34	1.38
81	B5	429	U	C2-N3	-6.74	1.33	1.37
81	B5	930	U	C4-O4	-6.73	1.18	1.23
81	B5	2138	A	N7-C5	-6.73	1.35	1.39
81	B5	1449	A	P-OP2	-6.73	1.37	1.49
80	B2	1455	G	C6-O6	6.72	1.30	1.24
81	B5	3316	A	N9-C4	-6.71	1.33	1.37
81	B5	1227	C	N3-C4	6.70	1.38	1.33
81	B5	847	A	N9-C4	-6.70	1.33	1.37
81	B5	2912	G	N7-C5	-6.69	1.35	1.39
81	B5	2853	A	N9-C4	-6.69	1.33	1.37
80	B2	992	A	C2-N3	-6.69	1.27	1.33
82	B7	85	G	C6-N1	-6.68	1.34	1.39
80	B2	553	G	C6-O6	6.66	1.30	1.24
81	B5	3006	A	N9-C4	-6.64	1.33	1.37
86	CW	14	A	N7-C5	-6.64	1.35	1.39
82	B7	81	U	C4-O4	-6.63	1.18	1.23
81	B5	1301	A	C5-C6	-6.62	1.35	1.41
81	B5	2918	G	N7-C5	-6.61	1.35	1.39
81	B5	2911	A	N7-C5	-6.61	1.35	1.39
81	B5	2693	C	C2-N3	-6.61	1.30	1.35
80	B2	1200	G	C6-N1	6.59	1.44	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1371	G	C6-N1	-6.58	1.34	1.39
81	B5	3137	C	N1-C6	6.58	1.41	1.37
49	BO	22[B]	THR	C-N	6.57	1.49	1.34
81	B5	1515	A	C6-N1	-6.57	1.30	1.35
49	BO	158[B]	ASP	C-N	6.56	1.49	1.34
81	B5	267	G	C8-N7	-6.56	1.27	1.30
81	B5	91	G	N3-C4	-6.56	1.30	1.35
81	B5	1429	G	C6-N1	-6.55	1.34	1.39
81	B5	3362	A	N3-C4	-6.55	1.30	1.34
81	B5	859	G	N1-C2	-6.53	1.32	1.37
81	B5	1833	G	N1-C2	-6.53	1.32	1.37
81	B5	1841	A	N7-C5	-6.53	1.35	1.39
81	B5	1849	C	N1-C6	-6.52	1.33	1.37
81	B5	1142	G	N7-C5	-6.52	1.35	1.39
81	B5	3106	A	N7-C5	-6.51	1.35	1.39
81	B5	1307	G	C3'-O3'	6.51	1.51	1.42
81	B5	3209	A	C5-C4	6.50	1.43	1.38
81	B5	942	U	P-OP1	-6.50	1.38	1.49
81	B5	813	G	N7-C5	-6.48	1.35	1.39
81	B5	1406	A	N3-C4	-6.46	1.30	1.34
81	B5	642	U	N3-C4	-6.44	1.32	1.38
81	B5	2323	G	C6-N1	-6.44	1.35	1.39
81	B5	1487	G	N1-C2	-6.43	1.32	1.37
86	CW	15	G	N7-C5	-6.43	1.35	1.39
81	B5	637	C	C2-O2	-6.43	1.18	1.24
81	B5	1117	G	C5-C4	-6.43	1.33	1.38
81	B5	2816	G	C5-C4	-6.43	1.33	1.38
81	B5	2147	A	C5-C6	-6.42	1.35	1.41
81	B5	2987	A	N7-C5	-6.41	1.35	1.39
80	B2	992	A	N9-C4	-6.40	1.34	1.37
81	B5	1490	A	N7-C5	-6.40	1.35	1.39
81	B5	1370	G	N1-C2	-6.40	1.32	1.37
86	CW	74	C	C5'-C4'	6.40	1.59	1.51
80	B2	1754	A	N9-C4	-6.39	1.34	1.37
81	B5	3102	G	C6-N1	-6.38	1.35	1.39
81	B5	2123	G	C5-C4	-6.37	1.33	1.38
81	B5	2937	G	N9-C8	-6.37	1.33	1.37
81	B5	802	C	N1-C6	-6.36	1.33	1.37
81	B5	1143	A	N9-C4	-6.31	1.34	1.37
81	B5	2905	U	C2-N3	-6.31	1.33	1.37
86	CW	72	C	N3-C4	6.29	1.38	1.33
81	B5	2291	A	N3-C4	-6.29	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1902	G	N9-C8	-6.29	1.33	1.37
81	B5	2314	U	C4-O4	6.29	1.28	1.23
80	B2	1241	G	N9-C8	6.28	1.42	1.37
81	B5	2856	G	N9-C8	-6.28	1.33	1.37
81	B5	342	A	N9-C4	-6.28	1.34	1.37
81	B5	420	G	C5-C4	-6.28	1.33	1.38
81	B5	1259	A	N7-C5	-6.27	1.35	1.39
86	CW	19	G	O3'-P	-6.27	1.53	1.61
81	B5	1913	A	C5-C6	-6.26	1.35	1.41
81	B5	1258	U	P-O5'	-6.26	1.53	1.59
81	B5	3182	G	C6-N1	-6.26	1.35	1.39
81	B5	2754	G	P-OP1	-6.25	1.38	1.49
54	BT	32	LYS	CD-CE	6.25	1.66	1.51
81	B5	1487	G	C6-N1	-6.25	1.35	1.39
81	B5	1449	A	C5-C6	-6.23	1.35	1.41
81	B5	1226	G	N7-C5	-6.23	1.35	1.39
81	B5	872	U	C4-O4	-6.21	1.18	1.23
81	B5	1851	G	N9-C8	-6.21	1.33	1.37
81	B5	2194	G	C5-C4	-6.21	1.34	1.38
80	B2	49	C	P-OP2	-6.21	1.38	1.49
81	B5	953	G	N9-C4	-6.21	1.32	1.38
50	BP	66	SER	C-O	6.20	1.35	1.23
81	B5	434	U	C2-N3	-6.19	1.33	1.37
81	B5	1835	A	P-OP1	-6.19	1.38	1.49
81	B5	2881	C	C2-O2	-6.19	1.18	1.24
81	B5	1797	A	N7-C5	-6.18	1.35	1.39
81	B5	2858	U	N3-C4	-6.18	1.32	1.38
81	B5	1229	G	C5'-C4'	6.18	1.58	1.51
81	B5	884	A	C8-N7	6.18	1.35	1.31
81	B5	2128	C	N1-C6	-6.18	1.33	1.37
81	B5	363	G	C5-C4	-6.17	1.34	1.38
81	B5	795	G	C5-C4	-6.16	1.34	1.38
81	B5	421	G	C6-N1	-6.16	1.35	1.39
81	B5	1369	A	P-OP2	-6.16	1.38	1.49
82	B7	91	G	N9-C8	-6.16	1.33	1.37
36	BB	367	LYS	CE-NZ	6.16	1.64	1.49
61	Ba	24	LYS	CE-NZ	6.15	1.64	1.49
81	B5	1847	A	N9-C4	-6.15	1.34	1.37
81	B5	2848	G	N7-C5	-6.15	1.35	1.39
81	B5	2737	C	N1-C6	-6.14	1.33	1.37
81	B5	3008	A	N9-C4	-6.14	1.34	1.37
81	B5	218	G	P-O5'	-6.14	1.53	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2823	G	N7-C5	-6.14	1.35	1.39
86	CW	43	C	O3'-P	-6.14	1.53	1.61
81	B5	876	A	N3-C4	-6.13	1.31	1.34
81	B5	1279	C	C2'-C1'	-6.13	1.46	1.53
81	B5	649	A	C5-C6	-6.13	1.35	1.41
81	B5	3308	C	N3-C4	-6.13	1.29	1.33
39	BE	90	LYS	CD-CE	6.12	1.66	1.51
81	B5	659	G	N7-C5	-6.12	1.35	1.39
81	B5	1169	A	N9-C4	-6.12	1.34	1.37
81	B5	2830	G	N3-C4	-6.11	1.31	1.35
81	B5	3172	A	C8-N7	-6.11	1.27	1.31
81	B5	2377	G	N9-C8	-6.11	1.33	1.37
81	B5	1268	G	N7-C5	-6.10	1.35	1.39
82	B7	96	U	C4-O4	-6.10	1.18	1.23
81	B5	2975	U	C4-O4	-6.09	1.18	1.23
81	B5	1490	A	C5-C6	-6.08	1.35	1.41
81	B5	2980	U	C2-O2	-6.06	1.16	1.22
81	B5	2915	U	C2-O2	-6.06	1.16	1.22
81	B5	2733	A	N9-C4	-6.05	1.34	1.37
86	CW	73	A	C4'-C3'	6.05	1.59	1.53
81	B5	1152	G	C8-N7	6.04	1.34	1.30
81	B5	3102	G	N1-C2	-6.04	1.32	1.37
86	CW	44	G	C2'-C1'	-6.04	1.46	1.53
81	B5	2341	A	N3-C4	6.04	1.38	1.34
81	B5	859	G	C6-N1	-6.03	1.35	1.39
81	B5	3005	A	C6-N1	-6.03	1.31	1.35
81	B5	1454	A	C6-N6	-6.03	1.29	1.33
81	B5	2524	A	C5-C4	6.03	1.43	1.38
81	B5	2857	C	C4-N4	-6.02	1.28	1.33
81	B5	1149	G	C5-C4	-6.01	1.34	1.38
81	B5	3335	A	N9-C4	-6.01	1.34	1.37
36	BB	262	TRP	CB-CG	-6.01	1.39	1.50
81	B5	3006	A	N7-C5	-6.00	1.35	1.39
80	B2	1782	A	C6-N1	-6.00	1.31	1.35
81	B5	1256	G	O3'-P	-6.00	1.53	1.61
85	CP	63	GLU	CA-CB	6.00	1.67	1.53
81	B5	2372	A	N3-C4	-5.99	1.31	1.34
86	CW	22	G	N7-C5	-5.98	1.35	1.39
81	B5	2948	C	C4-N4	-5.98	1.28	1.33
81	B5	1837	U	P-OP2	-5.98	1.38	1.49
81	B5	647	A	N3-C4	-5.97	1.31	1.34
81	B5	2214	A	P-OP2	-5.97	1.38	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1504	A	C6-N1	-5.97	1.31	1.35
82	B7	89	G	C5-C4	-5.97	1.34	1.38
81	B5	2730	G	N9-C4	-5.94	1.33	1.38
83	B8	111	A	N9-C4	-5.94	1.34	1.37
81	B5	1152	G	N1-C2	5.93	1.42	1.37
81	B5	1274	A	N7-C5	-5.92	1.35	1.39
81	B5	348	A	P-OP1	-5.92	1.38	1.49
86	CW	54	U	P-O5'	-5.92	1.53	1.59
81	B5	1233	G	C5'-C4'	5.92	1.58	1.51
81	B5	1174	G	C5-C4	-5.91	1.34	1.38
81	B5	744	A	N9-C4	-5.91	1.34	1.37
81	B5	2946	A	C6-N1	-5.90	1.31	1.35
79	CL	42	GLU	CG-CD	5.90	1.60	1.51
84	CN	2149	C	O3'-P	-5.90	1.54	1.61
81	B5	1138	U	C4-O4	-5.89	1.19	1.23
81	B5	1203	A	C5-C6	-5.89	1.35	1.41
81	B5	2704	A	N7-C5	-5.88	1.35	1.39
81	B5	857	G	C6-O6	-5.88	1.18	1.24
81	B5	931	C	C4-N4	-5.88	1.28	1.33
81	B5	345	G	C5-C4	-5.87	1.34	1.38
81	B5	1449	A	N7-C5	-5.87	1.35	1.39
81	B5	2706	G	C5-C4	-5.87	1.34	1.38
81	B5	784	A	C5-C6	-5.87	1.35	1.41
81	B5	416	A	N7-C5	-5.87	1.35	1.39
81	B5	2971	A	N9-C4	5.87	1.41	1.37
81	B5	3005	A	N7-C5	-5.86	1.35	1.39
81	B5	1332	A	C6-N1	-5.86	1.31	1.35
81	B5	2335	G	C5-C4	-5.86	1.34	1.38
81	B5	922	U	P-OP2	-5.86	1.39	1.49
81	B5	1429	G	N9-C8	-5.85	1.33	1.37
81	B5	2884	C	C2-O2	-5.84	1.19	1.24
81	B5	3095	U	C4-O4	-5.84	1.19	1.23
81	B5	1332	A	C5-C4	-5.84	1.34	1.38
81	B5	1266	G	C6-N1	5.84	1.43	1.39
81	B5	2960	C	C4-N4	-5.84	1.28	1.33
81	B5	2977	G	C6-N1	-5.84	1.35	1.39
86	CW	38	A	N7-C5	-5.84	1.35	1.39
81	B5	3000	A	N9-C4	-5.84	1.34	1.37
81	B5	3227	A	N3-C4	-5.84	1.31	1.34
81	B5	3010	U	C2-N3	-5.83	1.33	1.37
81	B5	1172	G	N1-C2	-5.82	1.33	1.37
81	B5	2188	A	N3-C4	-5.82	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	518	G	C5-C4	-5.82	1.34	1.38
80	B2	992	A	N9-C8	5.81	1.42	1.37
81	B5	2278	C	N1-C6	5.81	1.40	1.37
81	B5	1462	A	N9-C4	-5.80	1.34	1.37
81	B5	1156	C	C4-N4	-5.80	1.28	1.33
81	B5	1149	G	N9-C8	-5.79	1.33	1.37
81	B5	2367	A	N9-C4	5.79	1.41	1.37
81	B5	1281	G	O3'-P	-5.79	1.54	1.61
80	B2	1291	G	N3-C4	-5.79	1.31	1.35
81	B5	2915	U	C2-N3	-5.79	1.33	1.37
81	B5	1208	U	N3-C4	-5.78	1.33	1.38
81	B5	1213	G	N1-C2	-5.78	1.33	1.37
81	B5	1477	A	N3-C4	-5.78	1.31	1.34
81	B5	2401	A	N9-C4	5.78	1.41	1.37
81	B5	1273	A	N7-C5	-5.77	1.35	1.39
81	B5	805	G	N7-C5	5.77	1.42	1.39
81	B5	3245	A	N7-C5	-5.77	1.35	1.39
83	B8	54	A	N9-C4	-5.77	1.34	1.37
81	B5	1305	U	N1-C6	-5.77	1.32	1.38
81	B5	1308	A	N9-C8	-5.77	1.33	1.37
81	B5	3047	U	C2-N3	-5.77	1.33	1.37
81	B5	984	G	N7-C5	-5.77	1.35	1.39
81	B5	883	A	P-OP1	5.76	1.58	1.49
81	B5	2612	U	C2-N3	-5.76	1.33	1.37
80	B2	993	A	N7-C5	-5.76	1.35	1.39
81	B5	868	C	N1-C6	-5.76	1.33	1.37
81	B5	2732	G	C6-N1	-5.76	1.35	1.39
81	B5	369	A	C6-N6	-5.75	1.29	1.33
81	B5	1849	C	C4-C5	-5.75	1.38	1.43
81	B5	2646	C	N1-C6	-5.75	1.33	1.37
81	B5	577	C	N1-C6	-5.75	1.33	1.37
81	B5	100	A	N9-C4	-5.74	1.34	1.37
81	B5	1898	G	C5-C4	-5.74	1.34	1.38
81	B5	1365	G	C6-N1	-5.73	1.35	1.39
81	B5	2888	U	C4-C5	-5.73	1.38	1.43
81	B5	1903	U	C4-O4	5.73	1.28	1.23
81	B5	1127	G	C5-C4	-5.73	1.34	1.38
81	B5	2858	U	C2-N3	-5.72	1.33	1.37
81	B5	953	G	N3-C4	-5.72	1.31	1.35
80	B2	1560	U	N3-C4	-5.72	1.33	1.38
49	BO	40[B]	ALA	C-N	-5.72	1.20	1.34
81	B5	1112	A	C6-N1	-5.72	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	339	C	N3-C4	-5.71	1.29	1.33
81	B5	1450	G	C5-C4	-5.71	1.34	1.38
81	B5	2375	G	C6-N1	-5.71	1.35	1.39
81	B5	1230	G	C2'-C1'	-5.71	1.47	1.53
81	B5	2860	U	C4-O4	5.71	1.28	1.23
81	B5	2888	U	C2-N3	-5.71	1.33	1.37
81	B5	428	A	N7-C5	-5.71	1.35	1.39
81	B5	1145	G	N3-C4	-5.70	1.31	1.35
81	B5	1309	U	N1-C2	-5.70	1.33	1.38
81	B5	3013	U	C2-N3	-5.70	1.33	1.37
81	B5	326	U	C4-O4	-5.69	1.19	1.23
81	B5	3039	C	N1-C6	-5.69	1.33	1.37
81	B5	2892	A	C6-N1	-5.69	1.31	1.35
81	B5	2921	U	C4-O4	-5.69	1.19	1.23
81	B5	876	A	N1-C2	-5.68	1.29	1.34
81	B5	2957	G	C8-N7	-5.68	1.27	1.30
81	B5	2419	A	C6-N1	-5.68	1.31	1.35
86	CW	9	A	C5'-C4'	5.68	1.58	1.51
84	CN	2193	U	O3'-P	-5.67	1.54	1.61
81	B5	1189	C	N1-C6	-5.66	1.33	1.37
82	B7	39	C	N3-C4	-5.66	1.29	1.33
81	B5	924	G	C2-N3	-5.66	1.28	1.32
81	B5	2412	G	N1-C2	-5.66	1.33	1.37
81	B5	1370	G	C6-N1	-5.66	1.35	1.39
80	B2	1746	A	N9-C4	-5.66	1.34	1.37
81	B5	2340	U	C4-O4	-5.66	1.19	1.23
81	B5	1284	C	N1-C2	-5.65	1.34	1.40
81	B5	2350	C	N1-C6	-5.65	1.33	1.37
81	B5	949	C	N3-C4	-5.64	1.29	1.33
81	B5	1910	A	C5-C4	-5.64	1.34	1.38
81	B5	652	G	C5-C4	-5.64	1.34	1.38
81	B5	2302	G	N1-C2	-5.63	1.33	1.37
81	B5	1043	C	N3-C4	-5.63	1.30	1.33
59	BY	38	GLU	CG-CD	5.62	1.60	1.51
81	B5	1338	C	N1-C6	-5.62	1.33	1.37
81	B5	1370	G	N9-C8	-5.62	1.33	1.37
81	B5	1413	G	C6-N1	-5.62	1.35	1.39
81	B5	2382	G	N7-C5	-5.62	1.35	1.39
81	B5	200	C	N3-C4	-5.61	1.30	1.33
81	B5	657	A	N3-C4	-5.61	1.31	1.34
81	B5	2148	U	C4-O4	-5.60	1.19	1.23
81	B5	3088	G	C5-C6	-5.60	1.36	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B2	1555	A	N3-C4	-5.60	1.31	1.34
81	B5	2391	G	C6-O6	-5.60	1.19	1.24
81	B5	2810	C	N1-C6	-5.60	1.33	1.37
81	B5	2904	U	C2-N3	-5.60	1.33	1.37
81	B5	2361	A	N7-C5	-5.60	1.35	1.39
81	B5	1320	C	C4-C5	-5.59	1.38	1.43
81	B5	2164	A	N7-C5	-5.59	1.35	1.39
81	B5	817	A	C4'-C3'	-5.59	1.47	1.52
81	B5	640	U	C2-N3	-5.59	1.33	1.37
81	B5	39	A	N3-C4	-5.58	1.31	1.34
81	B5	2134	G	C6-N1	-5.58	1.35	1.39
81	B5	2626	A	N9-C8	-5.58	1.33	1.37
81	B5	2323	G	N1-C2	-5.58	1.33	1.37
81	B5	2147	A	N7-C5	-5.58	1.35	1.39
49	BO	4[B]	GLN	C-N	-5.58	1.23	1.34
80	B2	577	G	C5-C6	-5.58	1.36	1.42
84	CN	2201	U	O3'-P	5.57	1.67	1.61
81	B5	1099	A	C6-N1	-5.57	1.31	1.35
81	B5	2823	G	C5-C4	-5.57	1.34	1.38
81	B5	987	U	C2-O2	-5.57	1.17	1.22
81	B5	3374	U	C4-O4	-5.57	1.19	1.23
81	B5	706	A	C5-C4	-5.56	1.34	1.38
81	B5	2941	A	N9-C8	-5.56	1.33	1.37
81	B5	3218	A	N9-C4	-5.56	1.34	1.37
81	B5	1433	A	N7-C5	-5.56	1.35	1.39
81	B5	657	A	N9-C4	-5.55	1.34	1.37
80	B2	865	A	C6-N1	-5.55	1.31	1.35
81	B5	1434	G	C5-C4	-5.55	1.34	1.38
81	B5	2647	A	N3-C4	-5.55	1.31	1.34
81	B5	1233	G	C2-N3	5.54	1.37	1.32
81	B5	2419	A	P-O5'	5.54	1.65	1.59
81	B5	2860	U	P-OP2	-5.54	1.39	1.49
81	B5	2987	A	C6-N1	-5.54	1.31	1.35
81	B5	3184	A	N9-C4	-5.54	1.34	1.37
81	B5	824	C	N3-C4	-5.54	1.30	1.33
81	B5	344	A	N9-C8	-5.54	1.33	1.37
81	B5	1174	G	C8-N7	-5.54	1.27	1.30
81	B5	1195	A	N1-C2	-5.54	1.29	1.34
81	B5	2920	U	P-OP1	-5.53	1.39	1.49
81	B5	559	A	N7-C5	-5.53	1.35	1.39
81	B5	2301	U	C2-O2	-5.53	1.17	1.22
81	B5	49	A	C5-C4	-5.53	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2336	U	N3-C4	-5.53	1.33	1.38
81	B5	1911	A	C5-C6	-5.52	1.36	1.41
81	B5	2609	A	C5-C4	-5.52	1.34	1.38
81	B5	900	G	C6-N1	-5.52	1.35	1.39
81	B5	891	G	N9-C4	-5.51	1.33	1.38
81	B5	1432	C	N1-C6	-5.51	1.33	1.37
81	B5	2336	U	C2-O2	-5.51	1.17	1.22
81	B5	1226	G	N3-C4	-5.51	1.31	1.35
80	B2	553	G	N1-C2	5.50	1.42	1.37
81	B5	2122	G	C5-C4	-5.50	1.34	1.38
86	CW	76	A	N7-C5	-5.50	1.35	1.39
80	B2	1084	A	N3-C4	-5.50	1.31	1.34
36	BB	349	LYS	CD-CE	5.49	1.65	1.51
81	B5	1301	A	N9-C8	-5.49	1.33	1.37
81	B5	2932	U	C2-N3	-5.49	1.33	1.37
81	B5	1264	G	C6-N1	5.49	1.43	1.39
86	CW	36	A	N7-C5	-5.48	1.35	1.39
81	B5	420	G	N9-C8	-5.48	1.34	1.37
80	B2	377	G	C6-N1	5.48	1.43	1.39
81	B5	635	G	P-OP2	-5.48	1.39	1.49
81	B5	2908	G	C2-N3	-5.48	1.28	1.32
81	B5	3107	U	C2-N3	-5.48	1.33	1.37
81	B5	1285	G	N1-C2	5.47	1.42	1.37
81	B5	1320	C	C4-N4	-5.47	1.29	1.33
81	B5	3088	G	N7-C5	-5.47	1.35	1.39
81	B5	421	G	N1-C2	-5.47	1.33	1.37
81	B5	365	A	N7-C5	-5.47	1.35	1.39
86	CW	71	G	C2-N3	5.47	1.37	1.32
81	B5	755	A	C6-N1	-5.46	1.31	1.35
81	B5	1319	G	N9-C8	-5.46	1.34	1.37
81	B5	2775	U	C2-N3	-5.46	1.33	1.37
81	B5	2912	G	N9-C8	-5.46	1.34	1.37
83	B8	25	G	N1-C2	-5.46	1.33	1.37
81	B5	3052	G	N1-C2	-5.46	1.33	1.37
81	B5	360	G	N9-C8	-5.46	1.34	1.37
81	B5	1443	G	N3-C4	-5.45	1.31	1.35
81	B5	1414	G	C6-N1	-5.45	1.35	1.39
81	B5	1901	A	N9-C8	-5.45	1.33	1.37
81	B5	2744	U	C2-N3	-5.45	1.33	1.37
81	B5	1147	G	N9-C8	-5.44	1.34	1.37
82	B7	88	G	N1-C2	-5.44	1.33	1.37
81	B5	1324	U	C2-N3	-5.44	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	834	U	C4-O4	-5.43	1.19	1.23
81	B5	39	A	C5-C4	-5.43	1.34	1.38
81	B5	1492	G	C2-N3	5.43	1.37	1.32
81	B5	2824	G	N7-C5	-5.43	1.35	1.39
82	B7	5	G	N9-C8	-5.43	1.34	1.37
81	B5	95	A	C5-C4	-5.43	1.34	1.38
80	B2	542	A	N9-C4	-5.42	1.34	1.37
81	B5	899	U	C4-O4	-5.42	1.19	1.23
81	B5	3096	C	N1-C6	-5.42	1.33	1.37
81	B5	1177	G	N7-C5	-5.41	1.36	1.39
81	B5	2417	U	C4-O4	5.41	1.27	1.23
81	B5	3216	G	C5-C4	-5.41	1.34	1.38
81	B5	522	A	P-O5'	-5.41	1.54	1.59
81	B5	354	U	C2-N3	-5.41	1.33	1.37
81	B5	2198	A	N9-C4	-5.41	1.34	1.37
81	B5	1875	G	C6-N1	-5.40	1.35	1.39
81	B5	2611	U	P-OP1	-5.40	1.39	1.49
81	B5	3114	A	N3-C4	-5.40	1.31	1.34
81	B5	784	A	N7-C5	-5.40	1.36	1.39
81	B5	1135	A	N9-C8	-5.40	1.33	1.37
81	B5	1327	C	N3-C4	-5.40	1.30	1.33
81	B5	363	G	N3-C4	-5.39	1.31	1.35
81	B5	3307	A	C2-N3	-5.39	1.28	1.33
81	B5	889	U	C4-O4	-5.39	1.19	1.23
81	B5	1330	A	N3-C4	-5.39	1.31	1.34
81	B5	36	C	N1-C2	-5.39	1.34	1.40
80	B2	555	A	N9-C4	5.39	1.41	1.37
81	B5	1190	A	C6-N1	-5.39	1.31	1.35
81	B5	895	A	N3-C4	-5.38	1.31	1.34
81	B5	2342	U	C2-N3	-5.38	1.33	1.37
81	B5	2365	C	N3-C4	-5.38	1.30	1.33
86	CW	28	G	N9-C4	-5.38	1.33	1.38
81	B5	831	G	N7-C5	-5.38	1.36	1.39
81	B5	2434	U	C2-N3	-5.38	1.33	1.37
80	B2	331	A	N9-C4	-5.37	1.34	1.37
81	B5	864	G	C5-C4	-5.37	1.34	1.38
81	B5	1338	C	C4-C5	-5.37	1.38	1.43
81	B5	2128	C	C4-N4	-5.37	1.29	1.33
81	B5	2395	G	C6-N1	-5.37	1.35	1.39
81	B5	925	A	N7-C5	-5.37	1.36	1.39
81	B5	1908	A	C6-N1	-5.37	1.31	1.35
81	B5	1226	G	C5'-C4'	5.37	1.57	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1262	G	C2-N3	5.37	1.37	1.32
82	B7	66	A	P-OP2	-5.37	1.39	1.49
81	B5	417	A	N7-C5	-5.36	1.36	1.39
81	B5	2397	A	C5-C6	5.36	1.45	1.41
86	CW	9	A	N7-C5	-5.36	1.36	1.39
81	B5	52	A	N7-C5	-5.36	1.36	1.39
81	B5	2834	G	C2-N3	-5.36	1.28	1.32
81	B5	2376	G	C6-O6	-5.35	1.19	1.24
81	B5	3112	G	C5-C4	-5.35	1.34	1.38
81	B5	1130	A	N1-C2	-5.35	1.29	1.34
81	B5	1296	C	N3-C4	-5.35	1.30	1.33
81	B5	2717	U	C2-N3	-5.35	1.34	1.37
81	B5	2693	C	N1-C6	-5.35	1.33	1.37
81	B5	631	U	N3-C4	-5.35	1.33	1.38
81	B5	284	A	N9-C4	5.34	1.41	1.37
81	B5	2204	C	N3-C4	-5.34	1.30	1.33
81	B5	3273	A	N9-C4	-5.34	1.34	1.37
81	B5	3039	C	C4-C5	-5.34	1.38	1.43
81	B5	2937	G	C5-C4	-5.34	1.34	1.38
81	B5	41	G	N9-C4	-5.34	1.33	1.38
81	B5	903	U	C2-N3	-5.33	1.34	1.37
84	CN	2141	G	O3'-P	-5.33	1.54	1.61
81	B5	1895	A	N3-C4	-5.33	1.31	1.34
81	B5	508	U	C5-C6	-5.33	1.29	1.34
36	BB	287	LYS	CD-CE	5.33	1.64	1.51
81	B5	666	A	N3-C4	-5.33	1.31	1.34
81	B5	806	A	P-OP2	-5.32	1.40	1.49
81	B5	1845	G	C5-C4	-5.32	1.34	1.38
81	B5	2734	A	N3-C4	-5.32	1.31	1.34
81	B5	433	A	N9-C4	-5.31	1.34	1.37
81	B5	1404	G	N9-C8	-5.31	1.34	1.37
81	B5	2643	A	C6-N1	5.31	1.39	1.35
81	B5	1170	A	C8-N7	-5.31	1.27	1.31
49	BO	196[B]	SER	C-N	-5.31	1.21	1.34
81	B5	2632	G	C8-N7	5.31	1.34	1.30
81	B5	1443	G	N1-C2	-5.31	1.33	1.37
81	B5	994	G	C5-C4	-5.30	1.34	1.38
81	B5	1262	G	C2'-C1'	-5.30	1.47	1.53
81	B5	1415	U	C2-O2	-5.30	1.17	1.22
81	B5	818	C	P-OP1	-5.30	1.40	1.49
81	B5	2974	U	C2-N3	-5.30	1.34	1.37
43	BI	96	VAL	CB-CG2	-5.29	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	505	G	N3-C4	-5.29	1.31	1.35
86	CW	19	G	C2-N3	5.29	1.36	1.32
86	CW	21	A	N7-C5	-5.29	1.36	1.39
81	B5	290	G	C6-N1	-5.29	1.35	1.39
81	B5	2706	G	C8-N7	-5.29	1.27	1.30
81	B5	2697	A	N9-C4	5.29	1.41	1.37
81	B5	2730	G	N7-C5	-5.29	1.36	1.39
81	B5	934	G	C5-C4	-5.28	1.34	1.38
81	B5	1115	G	N7-C5	-5.28	1.36	1.39
81	B5	1116	G	N9-C8	-5.28	1.34	1.37
81	B5	1833	G	C6-N1	-5.28	1.35	1.39
81	B5	990	U	C2-N3	-5.28	1.34	1.37
81	B5	1362	G	C6-N1	-5.28	1.35	1.39
81	B5	1151	U	C4-O4	-5.28	1.19	1.23
81	B5	1888	U	N1-C6	-5.28	1.33	1.38
81	B5	1477	A	C6-N1	-5.28	1.31	1.35
81	B5	2163	C	N3-C4	-5.28	1.30	1.33
81	B5	2692	A	N7-C5	-5.28	1.36	1.39
81	B5	1266	G	C2-N3	5.27	1.36	1.32
61	Ba	15	VAL	C-O	5.27	1.33	1.23
81	B5	1131	G	N7-C5	-5.27	1.36	1.39
81	B5	2666	C	N1-C6	-5.27	1.33	1.37
81	B5	1278	A	C5'-C4'	5.27	1.57	1.51
81	B5	956	U	N3-C4	-5.26	1.33	1.38
81	B5	2619	G	C6-O6	-5.26	1.19	1.24
81	B5	2341	A	N9-C8	-5.26	1.33	1.37
80	B2	582	U	P-O5'	-5.26	1.54	1.59
81	B5	912	G	N3-C4	5.26	1.39	1.35
81	B5	1326	A	C5-C4	-5.26	1.35	1.38
81	B5	1086	C	C4-C5	-5.25	1.38	1.43
81	B5	2172	A	N9-C4	-5.25	1.34	1.37
81	B5	1226	G	C5-C6	-5.25	1.37	1.42
81	B5	1840	U	C2-N3	-5.25	1.34	1.37
81	B5	2191	U	N3-C4	-5.25	1.33	1.38
81	B5	3032	A	N7-C5	-5.25	1.36	1.39
40	BF	131	GLU	CD-OE2	5.25	1.31	1.25
81	B5	1425	U	C2-N3	-5.25	1.34	1.37
81	B5	436	A	C5-C4	5.25	1.42	1.38
81	B5	1171	G	N7-C5	-5.24	1.36	1.39
80	B2	538	A	N3-C4	5.24	1.38	1.34
81	B5	2214	A	N9-C4	-5.24	1.34	1.37
86	CW	2	C	N3-C4	5.24	1.37	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B2	973	A	N7-C5	-5.24	1.36	1.39
81	B5	658	G	N3-C4	-5.24	1.31	1.35
81	B5	3070	A	C6-N1	-5.23	1.31	1.35
81	B5	1282	G	C2-N3	5.23	1.36	1.32
81	B5	1250	G	N1-C2	5.23	1.42	1.37
81	B5	1250	G	C6-N1	5.23	1.43	1.39
81	B5	798	G	C6-O6	-5.23	1.19	1.24
81	B5	1468	A	N7-C5	-5.22	1.36	1.39
81	B5	1902	G	C6-N1	-5.22	1.35	1.39
81	B5	2734	A	N9-C4	-5.22	1.34	1.37
81	B5	2318	U	N3-C4	-5.22	1.33	1.38
81	B5	3065	G	C6-N1	-5.21	1.35	1.39
81	B5	70	A	N7-C5	-5.21	1.36	1.39
81	B5	2617	U	C4-O4	-5.21	1.19	1.23
73	Bm	79	GLU	CD-OE1	5.21	1.31	1.25
81	B5	1851	G	C8-N7	-5.21	1.27	1.30
81	B5	693	A	N9-C4	-5.21	1.34	1.37
81	B5	3316	A	N3-C4	-5.21	1.31	1.34
81	B5	835	G	C5-C4	-5.21	1.34	1.38
81	B5	3000	A	C5-C4	-5.20	1.35	1.38
81	B5	1262	G	N7-C5	-5.20	1.36	1.39
81	B5	1338	C	C4-N4	-5.20	1.29	1.33
81	B5	1832	C	N1-C6	-5.20	1.34	1.37
81	B5	2375	G	P-OP2	-5.20	1.40	1.49
81	B5	1607	U	C3'-O3'	5.20	1.49	1.42
81	B5	2837	A	N3-C4	-5.20	1.31	1.34
81	B5	2922	G	C6-O6	-5.20	1.19	1.24
86	CW	7	A	N7-C5	-5.20	1.36	1.39
81	B5	1117	G	N7-C5	-5.19	1.36	1.39
81	B5	884	A	C5-C6	-5.19	1.36	1.41
81	B5	1143	A	N3-C4	-5.19	1.31	1.34
81	B5	1209	G	C2-N3	-5.19	1.28	1.32
81	B5	1409	G	C6-N1	-5.19	1.35	1.39
81	B5	2272	G	C6-N1	-5.19	1.35	1.39
81	B5	652	G	N7-C5	-5.18	1.36	1.39
81	B5	2634	U	N3-C4	5.18	1.43	1.38
81	B5	3372	A	N9-C4	5.18	1.41	1.37
81	B5	999	G	C5-C4	-5.18	1.34	1.38
81	B5	282	G	C2-N3	-5.18	1.28	1.32
81	B5	1151	U	C2-N3	-5.18	1.34	1.37
81	B5	1208	U	C2-N3	-5.18	1.34	1.37
81	B5	1515	A	N7-C5	-5.18	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2620	G	N1-C2	-5.18	1.33	1.37
81	B5	3179	U	C4-O4	-5.17	1.19	1.23
81	B5	345	G	C6-O6	-5.17	1.19	1.24
81	B5	1228	C	P-O5'	-5.17	1.54	1.59
81	B5	917	A	N3-C4	-5.17	1.31	1.34
81	B5	645	A	C8-N7	-5.17	1.27	1.31
81	B5	2859	U	C2-N3	-5.17	1.34	1.37
38	BD	95	TRP	CG-CD1	5.16	1.44	1.36
44	BJ	8	PRO	CB-CG	5.16	1.75	1.50
81	B5	2859	U	N3-C4	-5.16	1.33	1.38
80	B2	352	A	N9-C8	-5.16	1.33	1.37
81	B5	404	G	N9-C8	-5.15	1.34	1.37
81	B5	3115	C	N3-C4	-5.15	1.30	1.33
81	B5	2858	U	C2-O2	-5.15	1.17	1.22
81	B5	658	G	N9-C4	-5.15	1.33	1.38
81	B5	2993	G	N7-C5	-5.15	1.36	1.39
81	B5	1838	G	C5-C4	-5.14	1.34	1.38
81	B5	2659	G	N1-C2	-5.14	1.33	1.37
81	B5	859	G	C2-N3	-5.14	1.28	1.32
86	CW	5	G	N7-C5	-5.14	1.36	1.39
81	B5	2936	A	C4'-C3'	-5.14	1.47	1.52
81	B5	649	A	N7-C5	-5.14	1.36	1.39
81	B5	1311	G	N7-C5	-5.14	1.36	1.39
80	B2	474	A	N9-C4	-5.13	1.34	1.37
81	B5	2327	U	N3-C4	-5.13	1.33	1.38
81	B5	1898	G	N9-C8	-5.13	1.34	1.37
81	B5	1056	U	C2-N3	5.13	1.41	1.37
42	BH	82	VAL	CB-CG2	-5.12	1.42	1.52
81	B5	1886	A	N3-C4	-5.12	1.31	1.34
86	CW	30	G	C2-N3	5.12	1.36	1.32
73	Bm	79	GLU	CD-OE2	5.11	1.31	1.25
81	B5	2372	A	C6-N1	-5.11	1.31	1.35
81	B5	49	A	N3-C4	-5.11	1.31	1.34
81	B5	1902	G	C8-N7	-5.11	1.27	1.30
81	B5	627	U	C2-N3	-5.11	1.34	1.37
81	B5	1188	U	C5-C6	-5.11	1.29	1.34
81	B5	984	G	C6-N1	-5.11	1.35	1.39
81	B5	1117	G	C6-O6	-5.11	1.19	1.24
81	B5	2928	C	C4'-C3'	-5.11	1.47	1.52
81	B5	333	G	C6-N1	-5.10	1.35	1.39
81	B5	2993	G	N1-C2	-5.10	1.33	1.37
81	B5	1299	U	C4-O4	-5.10	1.19	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	2291	A	N9-C4	-5.10	1.34	1.37
81	B5	2912	G	C5-C4	-5.10	1.34	1.38
81	B5	877	C	C4-N4	-5.09	1.29	1.33
81	B5	609	G	N3-C4	-5.09	1.31	1.35
81	B5	1049	C	C4-N4	-5.09	1.29	1.33
81	B5	585	A	N3-C4	-5.09	1.31	1.34
81	B5	1114	U	C2-N3	-5.09	1.34	1.37
64	Bd	61	LYS	CD-CE	5.09	1.64	1.51
80	B2	142	G	N9-C4	-5.09	1.33	1.38
81	B5	1244	A	N7-C5	-5.09	1.36	1.39
81	B5	867	G	C2-N3	-5.08	1.28	1.32
81	B5	1237	G	C2-N3	5.08	1.36	1.32
81	B5	2934	A	C6-N1	-5.08	1.31	1.35
81	B5	38	U	O3'-P	-5.08	1.55	1.61
81	B5	2243	A	N3-C4	-5.08	1.31	1.34
81	B5	3122	A	N7-C5	-5.08	1.36	1.39
81	B5	397	A	N3-C4	-5.08	1.31	1.34
81	B5	1238	C	N3-C4	5.08	1.37	1.33
81	B5	2372	A	C3'-O3'	5.08	1.49	1.42
81	B5	656	A	O3'-P	-5.08	1.55	1.61
81	B5	1150	A	C6-N1	-5.08	1.31	1.35
81	B5	2329	C	N3-C4	-5.08	1.30	1.33
81	B5	2717	U	C2-O2	-5.08	1.17	1.22
81	B5	1188	U	C2-N3	-5.08	1.34	1.37
81	B5	2414	G	C5-C4	-5.08	1.34	1.38
81	B5	2640	A	N3-C4	-5.08	1.31	1.34
81	B5	2743	A	C6-N6	-5.08	1.29	1.33
81	B5	103	G	C8-N7	5.07	1.33	1.30
81	B5	1179	A	P-OP2	-5.07	1.40	1.49
81	B5	2302	G	C6-N1	-5.07	1.36	1.39
81	B5	1332	A	N3-C4	-5.07	1.31	1.34
81	B5	2652	U	N1-C2	-5.07	1.33	1.38
81	B5	891	G	N3-C4	-5.06	1.31	1.35
81	B5	1157	G	N9-C8	-5.06	1.34	1.37
81	B5	2141	U	P-OP1	-5.06	1.40	1.49
86	CW	35	A	N7-C5	-5.06	1.36	1.39
52	BR	72	GLU	CG-CD	5.06	1.59	1.51
81	B5	332	C	N1-C6	-5.06	1.34	1.37
81	B5	1265	U	P-O5'	-5.06	1.54	1.59
81	B5	2958	A	N9-C4	-5.06	1.34	1.37
81	B5	2620	G	C5-C4	-5.06	1.34	1.38
81	B5	1308	A	N7-C5	-5.05	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	1371	G	C5-C4	-5.05	1.34	1.38
81	B5	1863	G	N1-C2	-5.04	1.33	1.37
86	CW	12	U	P-O5'	-5.04	1.54	1.59
81	B5	1145	G	C2-N3	-5.04	1.28	1.32
81	B5	2323	G	N3-C4	-5.04	1.31	1.35
81	B5	1295	G	C6-N1	-5.04	1.36	1.39
81	B5	2366	C	C2-N3	5.04	1.39	1.35
42	BH	110	LYS	CD-CE	5.04	1.63	1.51
48	BN	94	TYR	CE1-CZ	5.04	1.45	1.38
81	B5	2359	C	C2-N3	-5.04	1.31	1.35
80	B2	387	A	N7-C5	5.04	1.42	1.39
81	B5	755	A	N3-C4	-5.04	1.31	1.34
81	B5	1231	A	N7-C5	-5.03	1.36	1.39
82	B7	94	C	C4-C5	-5.03	1.39	1.43
81	B5	3245	A	N1-C2	5.03	1.38	1.34
81	B5	987	U	C4-C5	5.03	1.48	1.43
81	B5	1910	A	C6-N6	-5.03	1.29	1.33
81	B5	2147	A	C5-C4	-5.03	1.35	1.38
81	B5	2922	G	C5-C6	-5.03	1.37	1.42
81	B5	1123	U	N3-C4	-5.03	1.33	1.38
81	B5	2190	U	C2-O2	-5.02	1.17	1.22
81	B5	2371	G	N1-C2	-5.02	1.33	1.37
81	B5	2921	U	N3-C4	-5.02	1.33	1.38
81	B5	1791	C	N1-C6	-5.02	1.34	1.37
81	B5	1797	A	C5-C4	-5.02	1.35	1.38
81	B5	1851	G	C5-C4	-5.02	1.34	1.38
81	B5	2977	G	N1-C2	-5.02	1.33	1.37
81	B5	282	G	N3-C4	-5.02	1.31	1.35
84	CN	2196	C	O3'-P	-5.02	1.55	1.61
81	B5	984	G	N9-C8	-5.01	1.34	1.37
81	B5	2865	U	N1-C2	5.01	1.43	1.38
64	Bd	102	LYS	CD-CE	5.01	1.63	1.51
81	B5	1117	G	C8-N7	-5.01	1.27	1.30
81	B5	2303	A	N3-C4	-5.01	1.31	1.34
81	B5	2693	C	N3-C4	-5.01	1.30	1.33
81	B5	106	A	N9-C4	-5.01	1.34	1.37
81	B5	1427	U	C2-N3	-5.01	1.34	1.37
81	B5	2315	G	N9-C4	-5.01	1.33	1.38
81	B5	2327	U	C4-O4	-5.01	1.19	1.23
81	B5	2702	A	N7-C5	-5.01	1.36	1.39
81	B5	2882	U	C2-O2	-5.01	1.17	1.22
81	B5	726	G	N7-C5	-5.00	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	B5	875	G	P-OP1	-5.00	1.40	1.49
84	CN	2173	G	O3'-P	-5.00	1.55	1.61

All (5267) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1152	G	N3-C4-C5	33.59	145.40	128.60
81	B5	1256	G	P-O3'-C3'	32.78	159.04	119.70
81	B5	1152	G	N3-C4-N9	-31.65	107.01	126.00
81	B5	1152	G	N3-C2-N2	-26.89	101.08	119.90
81	B5	1152	G	C2-N3-C4	-23.94	99.93	111.90
81	B5	1238	C	P-O3'-C3'	22.24	146.38	119.70
81	B5	922	U	C5-C6-N1	-22.07	111.67	122.70
81	B5	922	U	C2-N3-C4	-21.57	114.06	127.00
81	B5	1152	G	C5-N7-C8	-19.99	94.31	104.30
81	B5	922	U	N1-C2-N3	19.42	126.55	114.90
81	B5	3245	A	C2-N3-C4	-18.99	101.10	110.60
81	B5	1152	G	C8-N9-C1'	18.97	151.67	127.00
81	B5	3245	A	C5-N7-C8	-18.62	94.59	103.90
80	B2	553	G	N1-C6-O6	18.57	131.04	119.90
80	B2	1200	G	N1-C6-O6	17.86	130.62	119.90
81	B5	1152	G	N1-C6-O6	17.22	130.23	119.90
81	B5	1284	C	C6-N1-C2	-16.95	113.52	120.30
81	B5	1152	G	C4-N9-C1'	-16.82	104.64	126.50
81	B5	1152	G	C4-C5-N7	16.65	117.46	110.80
81	B5	1152	G	N1-C2-N2	16.24	130.82	116.20
81	B5	922	U	N1-C2-O2	-16.08	111.54	122.80
81	B5	3245	A	N7-C8-N9	15.79	121.70	113.80
81	B5	1226	G	C5'-C4'-C3'	15.75	141.20	116.00
81	B5	776	U	C5-C6-N1	-15.52	114.94	122.70
81	B5	2726	C	C6-N1-C2	-15.41	114.14	120.30
81	B5	1450	G	C5-N7-C8	15.27	111.94	104.30
81	B5	1274	A	N1-C6-N6	15.11	127.67	118.60
81	B5	3245	A	C4-C5-N7	15.02	118.21	110.70
80	B2	577	G	C4-C5-N7	15.00	116.80	110.80
86	CW	19	G	P-O3'-C3'	14.99	137.68	119.70
81	B5	3245	A	N1-C6-N6	14.81	127.49	118.60
86	CW	76	A	N1-C6-N6	14.64	127.39	118.60
81	B5	3245	A	C6-C5-N7	-14.53	122.13	132.30
81	B5	1152	G	C5-C6-O6	-14.41	119.95	128.60
80	B2	1773	C	N3-C4-C5	-14.32	116.17	121.90
80	B2	1200	G	C5-C6-O6	-14.21	120.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2353	G	C5-C6-O6	-14.08	120.15	128.60
81	B5	2634	U	C5-C4-O4	-13.98	117.51	125.90
81	B5	2726	C	C5-C4-N4	13.97	129.98	120.20
81	B5	2634	U	C2-N3-C4	-13.96	118.63	127.00
86	CW	38	A	N1-C6-N6	13.85	126.91	118.60
81	B5	776	U	N1-C2-N3	13.84	123.21	114.90
81	B5	1592	G	N1-C6-O6	-13.84	111.60	119.90
81	B5	1260	A	N1-C6-N6	13.69	126.81	118.60
86	CW	31	A	N1-C6-N6	13.58	126.75	118.60
81	B5	776	U	C4-C5-C6	13.44	127.76	119.70
81	B5	1450	G	N7-C8-N9	-13.39	106.40	113.10
81	B5	1266	G	N1-C6-O6	13.39	127.93	119.90
80	B2	1560	U	C5-C4-O4	13.35	133.91	125.90
81	B5	2245	C	C6-N1-C2	-13.34	114.96	120.30
81	B5	2372	A	C8-N9-C4	-13.29	100.48	105.80
80	B2	1773	C	C6-N1-C2	-13.28	114.99	120.30
81	B5	922	U	C4-C5-C6	13.23	127.64	119.70
81	B5	1271	A	N1-C6-N6	13.20	126.52	118.60
81	B5	631	U	N3-C2-O2	-13.11	113.02	122.20
81	B5	1258	U	P-O5'-C5'	13.10	141.87	120.90
81	B5	2278	C	N1-C2-O2	-13.06	111.07	118.90
81	B5	1226	G	N1-C6-O6	13.04	127.72	119.90
81	B5	2303	A	C2-N3-C4	13.04	117.12	110.60
81	B5	1245	A	N1-C6-N6	12.95	126.37	118.60
81	B5	3214	U	C5-C4-O4	12.94	133.66	125.90
81	B5	2361	A	C2-N3-C4	12.88	117.04	110.60
81	B5	2726	C	N1-C2-N3	12.84	128.19	119.20
86	CW	18	G	P-O3'-C3'	12.82	135.08	119.70
86	CW	43	C	P-O3'-C3'	12.80	135.06	119.70
81	B5	1208	U	N3-C4-O4	-12.76	110.47	119.40
81	B5	2308	C	N1-C2-O2	-12.71	111.27	118.90
86	CW	36	A	N1-C6-N6	12.71	126.22	118.60
81	B5	1266	G	C5-C6-O6	-12.68	120.99	128.60
80	B2	577	G	C5-N7-C8	-12.67	97.97	104.30
81	B5	1208	U	C5-C4-O4	12.66	133.50	125.90
81	B5	3214	U	N3-C2-O2	-12.66	113.34	122.20
81	B5	2327	U	C5-C6-N1	-12.64	116.38	122.70
81	B5	1152	G	C4-C5-C6	-12.62	111.22	118.80
65	Be	43	ARG	NE-CZ-NH1	12.61	126.61	120.30
86	CW	35	A	N1-C6-N6	12.60	126.16	118.60
81	B5	1251	A	N1-C6-N6	12.60	126.16	118.60
81	B5	1258	U	P-O3'-C3'	12.58	134.79	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	1541	G	N1-C6-O6	-12.56	112.37	119.90
86	CW	14	A	N1-C6-N6	12.56	126.13	118.60
81	B5	1371	G	N1-C6-O6	-12.54	112.38	119.90
81	B5	2758	A	C2-N3-C4	12.49	116.84	110.60
81	B5	1846	C	C5-C6-N1	-12.46	114.77	121.00
86	CW	21	A	N1-C6-N6	12.38	126.03	118.60
81	B5	1434	G	C5-N7-C8	12.35	110.48	104.30
81	B5	776	U	N3-C2-O2	-12.35	113.55	122.20
81	B5	1450	G	C4-C5-N7	-12.29	105.88	110.80
82	B7	120	C	C6-N1-C2	12.29	125.22	120.30
81	B5	1233	G	C5'-C4'-C3'	12.26	135.61	116.00
81	B5	591	G	C5-C6-O6	-12.25	121.25	128.60
86	CW	26	A	N1-C6-N6	12.23	125.94	118.60
81	B5	3245	A	N1-C2-N3	12.11	135.35	129.30
86	CW	73	A	N1-C6-N6	12.07	125.84	118.60
81	B5	1278	A	N1-C6-N6	12.06	125.83	118.60
81	B5	2340	U	N3-C4-O4	-11.99	111.00	119.40
81	B5	1268	G	N1-C6-O6	11.96	127.07	119.90
81	B5	2726	C	C4-C5-C6	11.96	123.38	117.40
81	B5	1285	G	N1-C6-O6	11.92	127.05	119.90
81	B5	1308	A	N7-C8-N9	11.92	119.76	113.80
81	B5	1252	A	N1-C6-N6	11.91	125.75	118.60
80	B2	1200	G	N3-C2-N2	-11.91	111.57	119.90
81	B5	1056	U	C4-C5-C6	11.90	126.84	119.70
81	B5	1225	A	N1-C6-N6	11.86	125.71	118.60
81	B5	667	C	C6-N1-C2	11.84	125.04	120.30
86	CW	23	A	N1-C6-N6	11.80	125.68	118.60
81	B5	290	G	N1-C6-O6	-11.80	112.82	119.90
81	B5	966	U	N3-C2-O2	-11.76	113.97	122.20
81	B5	1231	A	N1-C6-N6	11.76	125.65	118.60
81	B5	2278	C	N1-C2-N3	11.73	127.41	119.20
80	B2	577	G	C5-C6-O6	-11.67	121.60	128.60
81	B5	2726	C	N3-C4-C5	-11.66	117.23	121.90
81	B5	2808	A	N9-C4-C5	-11.66	101.14	105.80
81	B5	1263	A	N1-C6-N6	11.64	125.59	118.60
86	CW	9	A	N1-C6-N6	11.53	125.52	118.60
81	B5	1130	A	C2-N3-C4	11.52	116.36	110.60
81	B5	1389	G	C4-C5-N7	11.52	115.41	110.80
86	CW	37	A	N1-C6-N6	11.46	125.48	118.60
80	B2	1782	A	N9-C4-C5	11.44	110.38	105.80
81	B5	1592	G	N3-C2-N2	11.42	127.90	119.90
81	B5	1226	G	O4'-C1'-N9	11.41	117.33	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1797	A	C5-N7-C8	11.41	109.60	103.90
81	B5	1232	C	O4'-C1'-N1	11.37	117.30	108.20
81	B5	2899	C	N3-C2-O2	-11.36	113.95	121.90
81	B5	2142	A	C5-C6-N1	11.34	123.37	117.70
80	B2	553	G	N3-C2-N2	-11.29	112.00	119.90
86	CW	64	A	N1-C6-N6	11.28	125.37	118.60
80	B2	1280	C	N3-C4-C5	-11.27	117.39	121.90
80	B2	393	C	C6-N1-C2	11.26	124.80	120.30
81	B5	414	U	C4-C5-C6	11.26	126.46	119.70
81	B5	1240	A	N1-C6-N6	11.26	125.36	118.60
80	B2	1600	A	C2-N3-C4	-11.25	104.98	110.60
81	B5	1273	A	N1-C6-N6	11.24	125.34	118.60
80	B2	639	U	N3-C2-O2	-11.22	114.35	122.20
81	B5	1229	G	O4'-C1'-N9	11.21	117.17	108.20
85	CP	63	GLU	CB-CA-C	-11.20	88.00	110.40
81	B5	1227	C	C6-N1-C2	-11.20	115.82	120.30
86	CW	7	A	N1-C6-N6	11.20	125.32	118.60
81	B5	1257	C	O4'-C1'-N1	11.19	117.15	108.20
81	B5	3377	G	C5-C6-O6	-11.18	121.89	128.60
81	B5	2744	U	N3-C2-O2	-11.17	114.38	122.20
81	B5	1249	G	N1-C6-O6	11.12	126.57	119.90
81	B5	1004	U	N1-C2-O2	11.11	130.58	122.80
86	CW	24	G	N1-C6-O6	11.11	126.57	119.90
80	B2	577	G	N1-C6-O6	11.08	126.55	119.90
81	B5	2278	C	N3-C4-N4	-11.06	110.26	118.00
81	B5	2836	C	C2-N3-C4	-11.06	114.37	119.90
86	CW	58	A	N1-C6-N6	11.06	125.24	118.60
81	B5	15	C	C6-N1-C2	-11.04	115.88	120.30
86	CW	27	G	N1-C6-O6	11.03	126.52	119.90
86	CW	52	G	N1-C6-O6	11.01	126.51	119.90
86	CW	28	G	N1-C6-O6	11.00	126.50	119.90
81	B5	1270	A	N1-C6-N6	11.00	125.20	118.60
81	B5	3060	C	N1-C2-O2	-10.99	112.31	118.90
86	CW	29	G	N1-C6-O6	10.96	126.47	119.90
81	B5	776	U	C5-C4-O4	10.93	132.46	125.90
81	B5	3138	U	N1-C2-O2	-10.92	115.15	122.80
81	B5	41	G	N1-C6-O6	10.88	126.43	119.90
81	B5	947	G	N3-C4-C5	-10.88	123.16	128.60
81	B5	420	G	C6-N1-C2	-10.87	118.58	125.10
81	B5	931	C	C2-N3-C4	-10.85	114.47	119.90
81	B5	1119	C	N3-C4-C5	10.85	126.24	121.90
81	B5	2632	G	N1-C6-O6	-10.85	113.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	41	G	C5-C6-O6	-10.83	122.10	128.60
81	B5	1403	C	C6-N1-C2	10.82	124.63	120.30
85	CP	63	GLU	N-CA-CB	10.82	130.08	110.60
81	B5	1259	A	N1-C6-N6	10.81	125.09	118.60
80	B2	144	U	N3-C2-O2	-10.81	114.63	122.20
80	B2	1782	A	C8-N9-C4	-10.79	101.48	105.80
81	B5	2726	C	N3-C2-O2	-10.79	114.34	121.90
81	B5	922	U	C2-N1-C1'	-10.78	104.77	117.70
81	B5	2343	C	N3-C4-C5	10.76	126.21	121.90
80	B2	1560	U	N3-C2-O2	-10.74	114.68	122.20
81	B5	2634	U	C5-C6-N1	-10.74	117.33	122.70
81	B5	2341	A	C8-N9-C4	10.74	110.09	105.80
80	B2	1455	G	C5-C6-N1	-10.73	106.14	111.50
81	B5	1147	G	C4-C5-N7	-10.68	106.53	110.80
81	B5	1228	C	C6-N1-C2	-10.67	116.03	120.30
81	B5	2288	G	C5-C6-N1	10.67	116.83	111.50
81	B5	2353	G	N1-C6-O6	10.67	126.30	119.90
81	B5	1434	G	N7-C8-N9	-10.65	107.77	113.10
81	B5	2290	C	C5-C6-N1	-10.65	115.68	121.00
81	B5	957	C	N3-C4-C5	10.64	126.16	121.90
81	B5	2631	U	C2-N3-C4	-10.64	120.62	127.00
81	B5	2899	C	N1-C2-N3	10.63	126.64	119.20
81	B5	2905	U	C5-C6-N1	-10.59	117.41	122.70
81	B5	2234	G	C5-C6-O6	-10.57	122.26	128.60
80	B2	553	G	C5-C6-N1	-10.52	106.24	111.50
81	B5	546	C	C2-N1-C1'	10.52	130.37	118.80
81	B5	1592	G	N1-C2-N2	-10.52	106.73	116.20
81	B5	1907	C	C6-N1-C2	-10.51	116.09	120.30
81	B5	2314	U	C5-C4-O4	-10.51	119.59	125.90
81	B5	3172	A	C8-N9-C4	10.51	110.00	105.80
81	B5	1848	G	C5-C6-O6	-10.50	122.30	128.60
80	B2	577	G	C6-C5-N7	-10.50	124.10	130.40
81	B5	1911	A	C8-N9-C4	10.46	109.98	105.80
81	B5	2836	C	C5-C6-N1	-10.45	115.78	121.00
81	B5	965	A	C2-N3-C4	10.44	115.82	110.60
81	B5	2314	U	N3-C4-O4	10.43	126.70	119.40
81	B5	2512	C	C6-N1-C2	-10.42	116.13	120.30
80	B2	639	U	N1-C2-O2	10.41	130.09	122.80
81	B5	2211	U	C4-C5-C6	10.41	125.95	119.70
81	B5	930	U	N3-C4-C5	10.40	120.84	114.60
81	B5	819	U	C5-C6-N1	-10.39	117.50	122.70
80	B2	1782	A	C5-C6-N6	10.38	132.00	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3122	A	C8-N9-C4	-10.37	101.65	105.80
65	Be	27	ARG	NE-CZ-NH2	-10.35	115.12	120.30
81	B5	1301	A	N1-C6-N6	10.34	124.80	118.60
81	B5	1241	U	P-O3'-C3'	10.34	132.10	119.70
81	B5	1004	U	N3-C4-O4	-10.33	112.17	119.40
81	B5	1303	A	N1-C2-N3	-10.31	124.14	129.30
81	B5	2364	G	N1-C6-O6	-10.31	113.71	119.90
81	B5	1297	C	C2-N3-C4	-10.29	114.75	119.90
81	B5	2257	C	C6-N1-C2	-10.28	116.19	120.30
81	B5	1262	G	N1-C6-O6	10.28	126.07	119.90
81	B5	1429	G	N3-C2-N2	10.28	127.09	119.90
81	B5	1797	A	N7-C8-N9	-10.27	108.66	113.80
81	B5	2211	U	C5-C4-O4	10.26	132.05	125.90
81	B5	1391	C	N1-C2-O2	-10.25	112.75	118.90
81	B5	847	A	C8-N9-C4	10.23	109.89	105.80
81	B5	1903	U	N3-C4-O4	10.21	126.55	119.40
81	B5	2148	U	N1-C2-O2	-10.20	115.66	122.80
81	B5	414	U	C5-C6-N1	-10.19	117.61	122.70
83	B8	8	C	C6-N1-C2	-10.19	116.23	120.30
81	B5	1513	G	C8-N9-C4	-10.18	102.33	106.40
81	B5	1240	A	P-O3'-C3'	10.15	131.89	119.70
81	B5	1284	C	C4'-C3'-C2'	10.14	112.74	102.60
81	B5	1481	A	C8-N9-C4	-10.13	101.75	105.80
86	CW	30	G	N1-C6-O6	10.12	125.97	119.90
81	B5	652	G	N1-C2-N2	-10.12	107.09	116.20
81	B5	1056	U	C6-N1-C2	-10.11	114.93	121.00
86	CW	29	G	C5-C6-O6	-10.11	122.53	128.60
81	B5	1226	G	P-O3'-C3'	10.10	131.82	119.70
80	B2	507	U	N3-C2-O2	-10.10	115.13	122.20
81	B5	1285	G	C5-C6-O6	-10.09	122.54	128.60
81	B5	1440	G	N1-C6-O6	-10.09	113.85	119.90
86	CW	30	G	C5-C6-O6	-10.07	122.56	128.60
81	B5	2632	G	C5-C6-O6	10.07	134.64	128.60
81	B5	3096	C	C4-C5-C6	10.06	122.43	117.40
81	B5	2343	C	C2-N3-C4	-10.04	114.88	119.90
81	B5	1124	U	C4-C5-C6	-10.03	113.68	119.70
86	CW	6	G	N1-C6-O6	10.02	125.91	119.90
81	B5	3006	A	C2-N3-C4	-10.02	105.59	110.60
83	B8	25	G	N1-C6-O6	-10.00	113.90	119.90
86	CW	52	G	C5-C6-O6	-10.00	122.60	128.60
80	B2	542	A	N7-C8-N9	9.99	118.80	113.80
81	B5	1208	U	N3-C2-O2	-9.99	115.21	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	70	G	N1-C6-O6	9.98	125.89	119.90
81	B5	1308	A	C8-N9-C4	-9.98	101.81	105.80
81	B5	420	G	C5-C6-O6	-9.95	122.63	128.60
81	B5	2905	U	C2-N3-C4	-9.95	121.03	127.00
81	B5	2366	C	C5-C6-N1	9.95	125.98	121.00
81	B5	2952	G	C5-C6-O6	-9.95	122.63	128.60
81	B5	2808	A	C8-N9-C4	9.94	109.78	105.80
81	B5	340	C	C2-N3-C4	-9.94	114.93	119.90
81	B5	2824	G	N3-C2-N2	-9.94	112.94	119.90
83	B8	32	C	N1-C2-O2	-9.94	112.94	118.90
81	B5	877	C	N3-C4-C5	9.93	125.87	121.90
81	B5	1484	U	C5-C6-N1	-9.93	117.74	122.70
81	B5	3362	A	C2-N3-C4	-9.91	105.64	110.60
80	B2	1096	C	C2-N1-C1'	9.90	129.69	118.80
81	B5	1246	G	P-O3'-C3'	9.89	131.57	119.70
81	B5	1284	C	O4'-C1'-N1	9.89	116.11	108.20
81	B5	1389	G	N9-C4-C5	-9.89	101.44	105.40
80	B2	1486	G	C5-N7-C8	-9.89	99.36	104.30
81	B5	1655	G	C8-N9-C4	-9.89	102.44	106.40
81	B5	339	C	N3-C4-N4	-9.86	111.10	118.00
80	B2	1198	G	C8-N9-C4	-9.86	102.46	106.40
80	B2	1745	G	C5-C6-O6	-9.85	122.69	128.60
81	B5	1152	G	N7-C8-N9	9.84	118.02	113.10
81	B5	1655	G	N7-C8-N9	9.84	118.02	113.10
81	B5	2118	C	N3-C2-O2	-9.83	115.02	121.90
81	B5	1258	U	O4'-C1'-N1	9.82	116.06	108.20
80	B2	553	G	C5-C6-O6	-9.82	122.71	128.60
80	B2	1456	C	N3-C4-N4	-9.81	111.13	118.00
49	BO	182[B]	SER	O-C-N	-9.80	107.03	122.70
81	B5	947	G	C5-C6-N1	9.77	116.38	111.50
81	B5	1248	C	O4'-C1'-N1	9.76	116.01	108.20
81	B5	835	G	C5-C6-O6	-9.76	122.74	128.60
81	B5	1392	G	C8-N9-C4	9.76	110.30	106.40
81	B5	2134	G	N1-C6-O6	-9.76	114.05	119.90
81	B5	3096	C	C2-N3-C4	-9.76	115.02	119.90
81	B5	1064	A	N1-C6-N6	9.74	124.44	118.60
81	B5	1057	A	N1-C6-N6	9.74	124.44	118.60
81	B5	1147	G	C5-N7-C8	9.73	109.17	104.30
81	B5	2948	C	N3-C4-N4	-9.73	111.19	118.00
81	B5	2917	G	C5-C6-O6	-9.73	122.76	128.60
81	B5	2278	C	C6-N1-C2	-9.72	116.41	120.30
81	B5	815	G	N1-C6-O6	-9.71	114.07	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1260	A	O4'-C1'-N9	9.71	115.97	108.20
81	B5	645	A	C6-N1-C2	-9.71	112.77	118.60
81	B5	1448	U	C5-C6-N1	-9.71	117.84	122.70
81	B5	2361	A	N3-C4-C5	-9.71	120.00	126.80
81	B5	1152	G	C8-N9-C4	-9.71	102.52	106.40
81	B5	1888	U	C5-C6-N1	-9.70	117.85	122.70
81	B5	1229	G	N1-C6-O6	9.68	125.71	119.90
81	B5	1250	G	C5-C6-O6	-9.68	122.79	128.60
81	B5	3060	C	N3-C4-N4	9.68	124.77	118.00
81	B5	2757	U	N1-C2-N3	9.67	120.70	114.90
36	BB	10	ARG	NE-CZ-NH2	-9.66	115.47	120.30
80	B2	553	G	C6-C5-N7	-9.64	124.61	130.40
80	B2	1280	C	N3-C4-N4	9.64	124.75	118.00
81	B5	1262	G	C5-C6-O6	-9.64	122.82	128.60
81	B5	1127	G	C5-C6-O6	-9.63	122.82	128.60
81	B5	2246	G	N9-C4-C5	9.63	109.25	105.40
86	CW	24	G	C5-C6-O6	-9.63	122.82	128.60
81	B5	2211	U	N1-C2-N3	9.63	120.68	114.90
81	B5	591	G	N1-C6-O6	9.62	125.67	119.90
81	B5	1327	C	N3-C4-N4	-9.61	111.27	118.00
81	B5	2391	G	C8-N9-C4	-9.60	102.56	106.40
80	B2	1782	A	N1-C6-N6	-9.60	112.84	118.60
82	B7	49	G	N1-C6-O6	9.58	125.65	119.90
81	B5	518	G	C5-C6-O6	-9.57	122.86	128.60
86	CW	73	A	C5'-C4'-C3'	9.57	131.32	116.00
81	B5	340	C	C5-C6-N1	-9.57	116.21	121.00
81	B5	2899	C	C5-C4-N4	9.56	126.89	120.20
81	B5	2424	A	N1-C6-N6	9.56	124.33	118.60
81	B5	776	U	C2-N3-C4	-9.55	121.27	127.00
81	B5	1056	U	N1-C2-N3	9.53	120.62	114.90
81	B5	2572	C	N1-C2-O2	9.53	124.62	118.90
81	B5	905	U	C5-C4-O4	-9.52	120.19	125.90
86	CW	74	C	P-O5'-C5'	9.52	136.13	120.90
81	B5	1042	U	N3-C4-O4	-9.52	112.74	119.40
81	B5	1403	C	C5-C4-N4	-9.51	113.55	120.20
81	B5	2705	A	C5-C6-N1	9.51	122.45	117.70
81	B5	1848	G	N1-C6-O6	9.50	125.60	119.90
81	B5	1888	U	C4-C5-C6	9.49	125.39	119.70
81	B5	708	G	C4-C5-N7	9.48	114.59	110.80
80	B2	1486	G	N7-C8-N9	9.48	117.84	113.10
83	B8	113	U	C5-C6-N1	9.48	127.44	122.70
81	B5	2202	C	C5-C4-N4	-9.46	113.58	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3362	A	N7-C8-N9	9.45	118.53	113.80
80	B2	139	C	C6-N1-C2	-9.45	116.52	120.30
81	B5	1858	A	C8-N9-C4	-9.45	102.02	105.80
80	B2	453	U	N3-C2-O2	-9.45	115.59	122.20
80	B2	1456	C	C5-C4-N4	9.45	126.81	120.20
86	CW	48	C	P-O3'-C3'	9.45	131.04	119.70
81	B5	2978	U	N3-C2-O2	-9.44	115.59	122.20
81	B5	644	G	C2-N3-C4	9.44	116.62	111.90
81	B5	386	A	N1-C6-N6	9.42	124.25	118.60
81	B5	1902	G	C5-C6-O6	-9.42	122.95	128.60
81	B5	40	A	N1-C2-N3	9.42	134.01	129.30
81	B5	2830	G	N9-C4-C5	9.42	109.17	105.40
81	B5	1210	U	C5-C4-O4	9.41	131.55	125.90
80	B2	1282	U	N3-C2-O2	-9.41	115.61	122.20
81	B5	1449	A	C2-N3-C4	-9.41	105.89	110.60
81	B5	947	G	C2-N3-C4	9.41	116.61	111.90
81	B5	546	C	N1-C2-O2	9.41	124.55	118.90
80	B2	1258	U	N3-C2-O2	-9.39	115.62	122.20
81	B5	966	U	N1-C2-O2	9.39	129.37	122.80
81	B5	1447	G	C8-N9-C4	-9.39	102.64	106.40
81	B5	3218	A	C5-N7-C8	-9.38	99.21	103.90
81	B5	1437	C	C6-N1-C2	-9.38	116.55	120.30
81	B5	994	G	C5-C6-N1	9.37	116.18	111.50
81	B5	2899	C	C6-N1-C2	-9.37	116.55	120.30
80	B2	1654	G	C5-C6-N1	9.36	116.18	111.50
81	B5	282	G	C8-N9-C4	-9.36	102.66	106.40
86	CW	27	G	C5-C6-O6	-9.35	122.99	128.60
81	B5	21	G	C2-N3-C4	-9.34	107.23	111.90
81	B5	1849	C	N1-C2-O2	9.34	124.50	118.90
81	B5	811	U	C5-C6-N1	-9.33	118.03	122.70
81	B5	1274	A	C5-C6-N6	-9.32	116.25	123.70
81	B5	3214	U	N3-C4-O4	-9.32	112.88	119.40
86	CW	28	G	C5-C6-O6	-9.32	123.01	128.60
81	B5	3309	G	N3-C4-C5	-9.31	123.95	128.60
80	B2	1169	G	C8-N9-C4	-9.30	102.68	106.40
81	B5	1246	G	N1-C6-O6	9.28	125.47	119.90
81	B5	1284	C	N3-C4-C5	-9.28	118.19	121.90
81	B5	1879	A	N1-C6-N6	9.27	124.16	118.60
81	B5	2364	G	N9-C4-C5	9.27	109.11	105.40
83	B8	80	A	C8-N9-C4	-9.27	102.09	105.80
81	B5	3050	U	N3-C2-O2	-9.26	115.72	122.20
81	B5	3060	C	C5-C4-N4	-9.26	113.72	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3376	A	C8-N9-C4	-9.26	102.09	105.80
81	B5	721	G	N1-C6-O6	-9.26	114.34	119.90
81	B5	1371	G	C5-C6-N1	9.26	116.13	111.50
81	B5	1151	U	N3-C4-O4	-9.26	112.92	119.40
81	B5	1449	A	N1-C6-N6	9.25	124.15	118.60
81	B5	2550	U	C5-C4-O4	9.23	131.44	125.90
81	B5	968	G	N3-C2-N2	9.23	126.36	119.90
86	CW	45	U	O4'-C1'-N1	9.23	115.58	108.20
36	BB	4	ARG	NE-CZ-NH1	9.22	124.91	120.30
81	B5	3377	G	C4-C5-N7	9.22	114.49	110.80
81	B5	2340	U	N3-C4-C5	9.22	120.13	114.60
81	B5	2693	C	N3-C2-O2	-9.21	115.45	121.90
86	CW	43	C	O4'-C1'-N1	9.21	115.57	108.20
81	B5	2142	A	C6-N1-C2	-9.20	113.08	118.60
81	B5	3186	A	C8-N9-C4	-9.19	102.12	105.80
81	B5	1156	C	N3-C4-C5	9.19	125.58	121.90
86	CW	63	G	N1-C6-O6	9.18	125.41	119.90
36	BB	2	SER	N-CA-C	-9.17	86.24	111.00
81	B5	1050	U	N3-C2-O2	-9.17	115.78	122.20
81	B5	1843	C	C6-N1-C2	-9.16	116.64	120.30
81	B5	1450	G	C8-N9-C4	9.15	110.06	106.40
81	B5	2354	C	N1-C2-O2	-9.15	113.41	118.90
81	B5	2246	G	C4-C5-N7	-9.14	107.14	110.80
81	B5	1064	A	N9-C4-C5	-9.14	102.14	105.80
81	B5	834	U	N3-C4-C5	9.13	120.08	114.60
81	B5	1101	G	N3-C2-N2	9.13	126.29	119.90
80	B2	142	G	N3-C2-N2	-9.12	113.52	119.90
81	B5	3362	A	C5-N7-C8	-9.12	99.34	103.90
81	B5	2365	C	N3-C4-N4	-9.12	111.62	118.00
81	B5	3266	G	C5-C6-O6	9.11	134.07	128.60
80	B2	558	U	N3-C2-O2	-9.11	115.82	122.20
86	CW	20	U	O4'-C1'-N1	9.11	115.49	108.20
81	B5	1133	A	C2-N3-C4	9.11	115.15	110.60
81	B5	3245	A	C8-N9-C4	-9.11	102.16	105.80
80	B2	402	C	C6-N1-C2	9.09	123.94	120.30
81	B5	3308	C	C4-C5-C6	9.09	121.95	117.40
86	CW	5	G	N1-C6-O6	9.09	125.35	119.90
86	CW	44	G	N1-C6-O6	9.07	125.34	119.90
51	BQ	66	ARG	NE-CZ-NH2	-9.07	115.76	120.30
81	B5	2744	U	N1-C2-O2	9.07	129.15	122.80
81	B5	2942	C	N3-C4-N4	9.07	124.35	118.00
81	B5	1911	A	N9-C4-C5	-9.06	102.17	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	794	U	N1-C2-O2	9.06	129.14	122.80
81	B5	1181	U	C5-C6-N1	-9.05	118.17	122.70
81	B5	2176	U	N3-C2-O2	-9.05	115.86	122.20
81	B5	369	A	C8-N9-C4	-9.04	102.19	105.80
80	B2	1596	C	N3-C2-O2	-9.03	115.58	121.90
81	B5	1234	G	N1-C6-O6	9.03	125.32	119.90
81	B5	1317	A	C5-C6-N6	-9.02	116.48	123.70
81	B5	1911	A	N1-C6-N6	9.02	124.01	118.60
80	B2	542	A	C5-N7-C8	-9.01	99.39	103.90
81	B5	1250	G	N1-C6-O6	9.01	125.31	119.90
81	B5	2830	G	N1-C2-N3	9.01	129.30	123.90
81	B5	2836	C	C4-C5-C6	9.01	121.90	117.40
81	B5	631	U	N1-C2-N3	9.00	120.30	114.90
84	CN	2135	A	O5'-P-OP1	-8.99	97.61	105.70
81	B5	2728	G	N9-C4-C5	8.99	109.00	105.40
81	B5	2320	A	C5-C6-N6	8.98	130.88	123.70
81	B5	3212	C	C2-N3-C4	-8.97	115.42	119.90
81	B5	802	C	C5-C6-N1	-8.96	116.52	121.00
83	B8	113	U	C2-N1-C1'	8.96	128.46	117.70
81	B5	2202	C	N1-C2-O2	-8.96	113.52	118.90
80	B2	969	C	C6-N1-C2	8.96	123.88	120.30
81	B5	3049	A	C5-C6-N1	-8.96	113.22	117.70
81	B5	1268	G	C5-C6-O6	-8.95	123.23	128.60
81	B5	881	C	N1-C2-O2	8.94	124.27	118.90
81	B5	726	G	C4-C5-N7	8.94	114.38	110.80
86	CW	6	G	C5-C6-O6	-8.94	123.24	128.60
81	B5	2857	C	N3-C4-C5	8.93	125.47	121.90
81	B5	1113	G	C2-N3-C4	-8.93	107.43	111.90
81	B5	2393	G	C8-N9-C4	8.93	109.97	106.40
81	B5	2905	U	N3-C4-O4	-8.93	113.15	119.40
81	B5	1044	U	N3-C4-O4	-8.93	113.15	119.40
81	B5	2824	G	C6-N1-C2	-8.93	119.75	125.10
82	B7	101	G	N1-C6-O6	8.93	125.25	119.90
81	B5	1242	G	O4'-C1'-N9	8.92	115.34	108.20
81	B5	1487	G	N1-C6-O6	-8.92	114.55	119.90
81	B5	819	U	C4-C5-C6	8.92	125.05	119.70
19	AK	88	PRO	N-CA-CB	8.92	114.00	103.30
81	B5	1158	A	N1-C6-N6	8.92	123.95	118.60
81	B5	631	U	N3-C4-O4	-8.91	113.17	119.40
81	B5	1116	G	C4-C5-N7	-8.91	107.24	110.80
81	B5	2327	U	N3-C4-O4	-8.90	113.17	119.40
80	B2	1596	C	C6-N1-C2	-8.90	116.74	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2372	A	N7-C8-N9	8.90	118.25	113.80
81	B5	1429	G	N1-C2-N2	-8.90	108.19	116.20
84	CN	2162	G	C2'-C3'-O3'	8.90	129.07	109.50
81	B5	2327	U	C2-N3-C4	-8.89	121.67	127.00
81	B5	420	G	C5-C6-N1	8.89	115.94	111.50
56	BV	48	ARG	NE-CZ-NH1	8.88	124.74	120.30
81	B5	887	G	C5-C6-N1	-8.88	107.06	111.50
81	B5	3127	A	N1-C6-N6	-8.88	113.27	118.60
81	B5	802	C	C4-C5-C6	8.88	121.84	117.40
81	B5	2808	A	C2-N3-C4	-8.88	106.16	110.60
81	B5	3382	U	C2-N1-C1'	8.88	128.35	117.70
81	B5	1450	G	C6-C5-N7	8.87	135.72	130.40
81	B5	2382	G	C5-C6-O6	8.87	133.92	128.60
80	B2	1455	G	N3-C2-N2	-8.86	113.70	119.90
80	B2	1761	U	C5-C4-O4	8.86	131.21	125.90
80	B2	1745	G	N3-C4-N9	8.86	131.31	126.00
81	B5	1226	G	C5-C6-O6	-8.85	123.29	128.60
81	B5	2719	U	C2-N1-C1'	-8.85	107.09	117.70
81	B5	2833	A	N1-C6-N6	-8.84	113.29	118.60
81	B5	2647	A	N9-C4-C5	8.84	109.34	105.80
81	B5	2881	C	C2-N3-C4	-8.84	115.48	119.90
80	B2	507	U	N1-C2-O2	8.84	128.98	122.80
86	CW	70	G	C5-C6-O6	-8.83	123.30	128.60
81	B5	3040	A	C8-N9-C4	8.82	109.33	105.80
81	B5	1931	U	C2-N1-C1'	-8.82	107.12	117.70
81	B5	1846	C	C2-N3-C4	-8.81	115.49	119.90
81	B5	437	G	C8-N9-C4	-8.81	102.88	106.40
81	B5	1264	G	N1-C6-O6	8.80	125.18	119.90
81	B5	1314	C	C2-N3-C4	-8.80	115.50	119.90
81	B5	947	G	C6-N1-C2	-8.80	119.82	125.10
80	B2	1654	G	C6-N1-C2	-8.80	119.82	125.10
86	CW	57	G	N1-C6-O6	8.79	125.18	119.90
81	B5	1311	G	C2-N3-C4	8.78	116.29	111.90
80	B2	1749	A	N1-C6-N6	8.77	123.86	118.60
81	B5	3047	U	C5-C6-N1	-8.77	118.32	122.70
81	B5	433	A	C2-N3-C4	-8.75	106.22	110.60
81	B5	2757	U	C4-C5-C6	8.75	124.95	119.70
86	CW	19	G	C5-C6-O6	-8.75	123.35	128.60
86	CW	44	G	O4'-C1'-N9	8.75	115.20	108.20
80	B2	992	A	N3-C4-C5	8.75	132.93	126.80
81	B5	2271	A	N7-C8-N9	-8.74	109.43	113.80
81	B5	1412	G	C8-N9-C4	-8.74	102.91	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2858	U	N3-C2-O2	-8.74	116.08	122.20
82	B7	48	U	C2-N3-C4	-8.73	121.76	127.00
81	B5	1161	G	C5-C6-N1	8.73	115.86	111.50
81	B5	2434	U	C5-C6-N1	-8.72	118.34	122.70
81	B5	1907	C	N3-C4-C5	-8.72	118.41	121.90
80	B2	453	U	C2-N1-C1'	8.72	128.16	117.70
81	B5	2416	U	C6-N1-C2	-8.71	115.77	121.00
86	CW	21	A	P-O3'-C3'	8.71	130.16	119.70
81	B5	1119	C	C2-N3-C4	-8.71	115.55	119.90
81	B5	2865	U	C5-C6-N1	8.71	127.06	122.70
81	B5	1327	C	N1-C2-O2	8.71	124.12	118.90
80	B2	1503	A	C2-N3-C4	-8.71	106.25	110.60
81	B5	1903	U	C4-C5-C6	8.70	124.92	119.70
81	B5	2832	C	C5-C6-N1	-8.70	116.65	121.00
81	B5	3123	A	C8-N9-C4	8.69	109.28	105.80
81	B5	2290	C	C2-N3-C4	-8.69	115.56	119.90
86	CW	33	U	C2-N1-C1'	8.68	128.12	117.70
81	B5	1840	U	N3-C2-O2	-8.68	116.12	122.20
81	B5	821	U	C5-C6-N1	-8.68	118.36	122.70
81	B5	2730	G	N1-C6-O6	8.68	125.11	119.90
80	B2	558	U	N1-C2-O2	8.67	128.87	122.80
80	B2	794	U	N3-C2-O2	-8.66	116.14	122.20
81	B5	796	U	N3-C2-O2	-8.65	116.14	122.20
81	B5	2961	G	C8-N9-C4	-8.65	102.94	106.40
81	B5	834	U	C4-C5-C6	-8.65	114.51	119.70
83	B8	17	A	N1-C6-N6	8.65	123.79	118.60
81	B5	2190	U	C5-C4-O4	8.64	131.08	125.90
81	B5	2392	C	C2-N3-C4	-8.64	115.58	119.90
81	B5	2409	G	C8-N9-C4	-8.64	102.94	106.40
51	BQ	151	ARG	NE-CZ-NH1	-8.64	115.98	120.30
81	B5	3143	C	N1-C2-O2	-8.63	113.72	118.90
81	B5	3374	U	N3-C4-C5	8.63	119.78	114.60
81	B5	726	G	C6-C5-N7	-8.63	125.22	130.40
80	B2	92	A	C8-N9-C4	-8.63	102.35	105.80
81	B5	2687	G	N1-C6-O6	-8.63	114.72	119.90
81	B5	2728	G	N3-C2-N2	-8.63	113.86	119.90
81	B5	3040	A	N7-C8-N9	-8.63	109.48	113.80
80	B2	17	C	C6-N1-C2	-8.63	116.85	120.30
81	B5	2292	U	N3-C2-O2	-8.63	116.16	122.20
82	B7	92	A	N1-C6-N6	8.62	123.77	118.60
81	B5	1244	A	N1-C6-N6	8.62	123.77	118.60
81	B5	1249	G	C5-C6-O6	-8.61	123.43	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2391	G	N1-C6-O6	-8.62	114.73	119.90
81	B5	2638	C	N1-C2-O2	-8.62	113.73	118.90
80	B2	7	G	N1-C6-O6	-8.61	114.73	119.90
81	B5	2434	U	N3-C4-O4	-8.61	113.37	119.40
81	B5	644	G	C5-C6-N1	8.60	115.80	111.50
80	B2	1291	G	N7-C8-N9	8.59	117.40	113.10
81	B5	66	A	C8-N9-C4	8.59	109.24	105.80
81	B5	1149	G	C2-N3-C4	8.59	116.19	111.90
81	B5	726	G	C5-C6-O6	-8.59	123.45	128.60
81	B5	339	C	C5-C4-N4	8.58	126.21	120.20
80	B2	647	G	N3-C4-N9	-8.58	120.85	126.00
81	B5	1134	G	C5-C6-O6	-8.58	123.45	128.60
81	B5	938	C	C2-N3-C4	-8.58	115.61	119.90
81	B5	2988	C	N3-C2-O2	-8.57	115.90	121.90
81	B5	3321	C	C5-C6-N1	-8.57	116.72	121.00
80	B2	1773	C	N3-C4-N4	8.57	124.00	118.00
81	B5	3010	U	N3-C2-O2	-8.56	116.20	122.20
81	B5	2385	G	N3-C4-C5	8.55	132.88	128.60
81	B5	2758	A	N1-C2-N3	-8.55	125.02	129.30
81	B5	2913	C	C4-C5-C6	8.55	121.68	117.40
81	B5	341	G	C5-C6-O6	-8.55	123.47	128.60
81	B5	326	U	C5-C4-O4	-8.55	120.77	125.90
80	B2	719	U	C2-N1-C1'	8.55	127.96	117.70
81	B5	345	G	C5-C6-N1	8.55	115.77	111.50
81	B5	2699	G	C5-C6-O6	-8.55	123.47	128.60
81	B5	946	U	N3-C2-O2	-8.54	116.22	122.20
81	B5	1050	U	N1-C2-O2	8.54	128.78	122.80
81	B5	1342	C	C5-C6-N1	-8.54	116.73	121.00
80	B2	1189	A	C8-N9-C4	8.53	109.21	105.80
81	B5	1284	C	C6-N1-C1'	-8.53	110.56	120.80
80	B2	1745	G	C5-C6-N1	8.52	115.76	111.50
81	B5	2524	A	C5-N7-C8	-8.52	99.64	103.90
81	B5	224	C	N1-C2-O2	8.51	124.00	118.90
81	B5	887	G	C5-C6-O6	8.50	133.70	128.60
81	B5	1156	C	C2-N3-C4	-8.50	115.65	119.90
80	B2	992	A	C5-C6-N1	-8.50	113.45	117.70
81	B5	2732	G	N1-C6-O6	-8.50	114.80	119.90
80	B2	992	A	N3-C4-N9	-8.49	120.61	127.40
81	B5	1237	G	C5-C6-O6	-8.49	123.51	128.60
81	B5	2301	U	C2-N3-C4	-8.49	121.91	127.00
81	B5	1085	A	N7-C8-N9	8.48	118.04	113.80
81	B5	2928	C	C4-C5-C6	8.48	121.64	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2988	C	C4-C5-C6	8.48	121.64	117.40
81	B5	2634	U	N1-C2-O2	-8.48	116.87	122.80
81	B5	2978	U	C5-C6-N1	-8.47	118.46	122.70
81	B5	3377	G	C5-C6-N1	8.47	115.74	111.50
81	B5	1942	U	N1-C2-O2	-8.47	116.87	122.80
81	B5	2952	G	N3-C2-N2	-8.47	113.97	119.90
85	CP	62	TYR	C-N-CA	8.47	142.87	121.70
80	B2	1387	G	N1-C6-O6	8.46	124.98	119.90
82	B7	48	U	C5-C4-O4	-8.46	120.82	125.90
83	B8	14	C	C5-C6-N1	-8.46	116.77	121.00
81	B5	999	G	N1-C6-O6	-8.46	114.83	119.90
81	B5	1143	A	C5-C6-N1	-8.45	113.47	117.70
80	B2	577	G	N7-C8-N9	8.45	117.33	113.10
86	CW	42	C	O4'-C1'-N1	8.45	114.96	108.20
81	B5	1402	C	N3-C2-O2	-8.45	115.99	121.90
81	B5	343	U	N3-C2-O2	-8.45	116.29	122.20
80	B2	1200	G	C6-C5-N7	-8.44	125.33	130.40
86	CW	75	C	O4'-C1'-N1	8.44	114.95	108.20
81	B5	1242	G	N1-C6-O6	8.44	124.96	119.90
81	B5	1409	G	N1-C6-O6	-8.43	114.84	119.90
81	B5	652	G	N3-C4-C5	-8.43	124.39	128.60
81	B5	2980	U	N1-C2-N3	8.43	119.96	114.90
81	B5	2683	U	N1-C2-O2	8.42	128.69	122.80
82	B7	96	U	C2-N3-C4	-8.42	121.95	127.00
81	B5	2345	A	N1-C6-N6	8.42	123.65	118.60
80	B2	1541	G	C5-C6-O6	8.41	133.65	128.60
86	CW	65	G	N1-C6-O6	8.41	124.95	119.90
81	B5	1064	A	C5-C6-N6	-8.41	116.97	123.70
83	B8	55	U	N1-C2-N3	8.41	119.95	114.90
80	B2	966	A	C8-N9-C4	8.41	109.16	105.80
80	B2	1486	G	C4-C5-N7	8.40	114.16	110.80
81	B5	817	A	C8-N9-C4	-8.40	102.44	105.80
81	B5	3050	U	C5-C4-O4	8.40	130.94	125.90
81	B5	1047	A	C2-N3-C4	8.39	114.80	110.60
81	B5	2307	G	N3-C4-C5	-8.39	124.41	128.60
81	B5	2913	C	C2-N3-C4	-8.39	115.71	119.90
81	B5	3102	G	N3-C2-N2	8.39	125.77	119.90
81	B5	986	U	C5-C4-O4	-8.38	120.87	125.90
81	B5	916	G	C5-C6-O6	8.38	133.63	128.60
86	CW	71	G	N1-C6-O6	8.38	124.93	119.90
81	B5	616	G	C5-C6-N1	8.38	115.69	111.50
81	B5	3137	C	N3-C4-C5	8.37	125.25	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	55	U	O4'-C1'-N1	8.37	114.90	108.20
80	B2	736	C	C2-N1-C1'	8.37	128.00	118.80
81	B5	2870	C	C6-N1-C2	-8.37	116.95	120.30
81	B5	811	U	C2-N3-C4	-8.36	121.98	127.00
81	B5	1480	G	N7-C8-N9	-8.36	108.92	113.10
81	B5	715	A	C2-N3-C4	8.36	114.78	110.60
81	B5	1898	G	C2-N3-C4	8.36	116.08	111.90
81	B5	580	C	C6-N1-C2	-8.35	116.96	120.30
43	BI	128	ARG	NE-CZ-NH2	-8.35	116.13	120.30
81	B5	1469	C	N3-C4-C5	-8.35	118.56	121.90
81	B5	3173	G	C5-C6-O6	-8.35	123.59	128.60
81	B5	1487	G	C5-C6-O6	8.35	133.61	128.60
81	B5	2320	A	C2-N3-C4	-8.35	106.43	110.60
86	CW	8	U	P-O3'-C3'	8.35	129.71	119.70
81	B5	926	A	C5-C6-N1	8.34	121.87	117.70
81	B5	2234	G	N9-C4-C5	-8.34	102.06	105.40
82	B7	96	U	N1-C2-N3	8.34	119.90	114.90
81	B5	945	C	N3-C4-C5	8.33	125.23	121.90
83	B8	80	A	N7-C8-N9	8.33	117.96	113.80
81	B5	1226	G	O4'-C4'-C3'	-8.32	95.68	104.00
80	B2	136	C	C2-N1-C1'	8.31	127.94	118.80
82	B7	93	C	C2-N3-C4	-8.31	115.74	119.90
80	B2	1387	G	C6-C5-N7	-8.31	125.42	130.40
49	BO	197[B]	PHE	C-N-CA	-8.31	104.86	122.30
81	B5	511	G	N1-C6-O6	-8.29	114.92	119.90
80	B2	1782	A	N1-C2-N3	8.29	133.44	129.30
86	CW	46	G	N1-C6-O6	8.28	124.87	119.90
81	B5	2371	G	N3-C2-N2	8.28	125.70	119.90
81	B5	1586	G	C5-C6-O6	-8.28	123.63	128.60
81	B5	2360	C	C4-C5-C6	8.27	121.54	117.40
81	B5	2683	U	N3-C2-O2	-8.27	116.41	122.20
86	CW	72	C	P-O3'-C3'	8.27	129.63	119.70
80	B2	1280	C	N1-C2-O2	-8.26	113.94	118.90
81	B5	1494	U	C6-N1-C2	8.26	125.95	121.00
80	B2	542	A	C4-N9-C1'	8.26	141.16	126.30
81	B5	708	G	C5-N7-C8	-8.26	100.17	104.30
81	B5	818	C	N1-C2-O2	-8.26	113.94	118.90
81	B5	1604	G	C8-N9-C1'	-8.26	116.27	127.00
81	B5	1015	U	C5-C6-N1	8.25	126.83	122.70
81	B5	2621	G	N1-C6-O6	8.25	124.85	119.90
81	B5	1404	G	C8-N9-C4	8.25	109.70	106.40
81	B5	591	G	N9-C4-C5	-8.24	102.10	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	55	U	C6-N1-C2	-8.24	116.05	121.00
80	B2	1096	C	N1-C2-O2	8.24	123.84	118.90
81	B5	2735	U	C5-C6-N1	8.24	126.82	122.70
81	B5	2820	A	C8-N9-C4	-8.23	102.51	105.80
81	B5	1110	U	N3-C4-C5	8.22	119.53	114.60
80	B2	319	U	N3-C2-O2	8.22	127.95	122.20
81	B5	922	U	C6-N1-C1'	8.22	132.71	121.20
81	B5	514	G	C5-C6-O6	-8.21	123.68	128.60
81	B5	715	A	N1-C6-N6	-8.20	113.68	118.60
81	B5	2859	U	N3-C4-O4	-8.20	113.66	119.40
80	B2	1129	U	N3-C4-C5	8.20	119.52	114.60
81	B5	1176	C	C5-C6-N1	-8.20	116.90	121.00
81	B5	1392	G	N7-C8-N9	-8.20	109.00	113.10
80	B2	1291	G	N1-C2-N3	8.20	128.82	123.90
81	B5	1178	G	C8-N9-C4	-8.20	103.12	106.40
86	CW	63	G	C5-C6-O6	-8.20	123.68	128.60
81	B5	2412	G	C8-N9-C4	-8.19	103.12	106.40
80	B2	1119	G	N1-C6-O6	-8.19	114.99	119.90
81	B5	280	U	C2-N3-C4	-8.19	122.09	127.00
81	B5	2665	U	N1-C2-N3	-8.19	109.99	114.90
81	B5	2190	U	N3-C4-O4	-8.18	113.67	119.40
81	B5	842	G	C5-C6-O6	-8.17	123.70	128.60
81	B5	1282	G	N1-C6-O6	8.17	124.80	119.90
53	BS	115	ARG	NE-CZ-NH1	8.17	124.38	120.30
81	B5	3317	U	C5-C4-O4	8.17	130.80	125.90
81	B5	2211	U	N3-C2-O2	-8.17	116.48	122.20
81	B5	2609	A	C5-N7-C8	8.17	107.98	103.90
82	B7	93	C	C5-C6-N1	-8.16	116.92	121.00
81	B5	343	U	N1-C2-O2	8.16	128.51	122.80
81	B5	435	C	C5-C4-N4	-8.16	114.49	120.20
81	B5	968	G	N9-C4-C5	-8.16	102.14	105.40
81	B5	1193	A	N1-C2-N3	8.16	133.38	129.30
81	B5	2970	C	C4-C5-C6	8.16	121.48	117.40
81	B5	1054	A	C8-N9-C4	8.16	109.06	105.80
81	B5	2246	G	N1-C6-O6	-8.16	115.00	119.90
81	B5	726	G	N1-C6-O6	8.15	124.79	119.90
80	B2	308	C	C5-C6-N1	-8.15	116.92	121.00
81	B5	1230	G	O4'-C1'-N9	8.15	114.72	108.20
81	B5	949	C	C4-C5-C6	8.15	121.48	117.40
81	B5	805	G	C8-N9-C4	8.15	109.66	106.40
81	B5	2838	A	C5-C6-N6	-8.15	117.18	123.70
85	CP	136	TYR	CB-CG-CD1	8.15	125.89	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2175	U	C5-C6-N1	-8.15	118.62	122.70
81	B5	435	C	N3-C4-C5	8.15	125.16	121.90
86	CW	1	G	N1-C6-O6	8.14	124.79	119.90
81	B5	290	G	C5-C6-O6	8.14	133.48	128.60
81	B5	926	A	C5-C6-N6	-8.14	117.19	123.70
81	B5	1516	C	C2-N3-C4	-8.14	115.83	119.90
80	B2	992	A	C5-N7-C8	-8.13	99.83	103.90
82	B7	69	C	C6-N1-C2	8.13	123.55	120.30
83	B8	2	A	C8-N9-C4	-8.13	102.55	105.80
81	B5	769	G	C8-N9-C4	8.13	109.65	106.40
81	B5	2695	A	C8-N9-C4	-8.12	102.55	105.80
81	B5	916	G	N1-C6-O6	-8.12	115.03	119.90
81	B5	1445	U	C5-C4-O4	-8.12	121.03	125.90
81	B5	2913	C	N1-C2-N3	8.12	124.89	119.20
81	B5	15	C	C5-C6-N1	8.12	125.06	121.00
81	B5	3215	A	C2-N3-C4	-8.12	106.54	110.60
81	B5	1879	A	C8-N9-C4	-8.11	102.56	105.80
81	B5	2302	G	C5-C6-O6	8.11	133.47	128.60
81	B5	2202	C	N3-C2-O2	8.11	127.58	121.90
81	B5	2182	A	N1-C6-N6	-8.10	113.74	118.60
80	B2	1131	A	C8-N9-C4	8.10	109.04	105.80
81	B5	1281	G	N1-C6-O6	8.10	124.76	119.90
83	B8	74	U	C5-C4-O4	-8.10	121.04	125.90
81	B5	2440	G	C8-N9-C4	-8.10	103.16	106.40
80	B2	1241	G	C5-N7-C8	-8.09	100.25	104.30
81	B5	3362	A	N1-C2-N3	8.09	133.35	129.30
86	CW	5	G	C5-C6-O6	-8.09	123.74	128.60
81	B5	359	U	C2-N3-C4	-8.09	122.15	127.00
81	B5	945	C	C2-N3-C4	-8.09	115.86	119.90
81	B5	2290	C	C4-C5-C6	8.09	121.44	117.40
83	B8	113	U	N3-C4-O4	8.09	125.06	119.40
81	B5	987	U	N1-C2-N3	8.09	119.75	114.90
81	B5	329	U	C5-C6-N1	-8.09	118.66	122.70
81	B5	1113	G	C8-N9-C4	8.09	109.64	106.40
81	B5	1512	U	N1-C2-N3	8.09	119.75	114.90
81	B5	2859	U	C5-C4-O4	8.09	130.75	125.90
81	B5	3215	A	N1-C6-N6	8.09	123.45	118.60
82	B7	81	U	N3-C4-C5	8.09	119.45	114.60
81	B5	637	C	N1-C2-O2	-8.08	114.05	118.90
81	B5	1449	A	C5-N7-C8	-8.08	99.86	103.90
83	B8	38	U	C5-C6-N1	-8.08	118.66	122.70
81	B5	3309	G	N3-C4-N9	8.08	130.85	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	112	G	N1-C6-O6	-8.08	115.05	119.90
81	B5	2634	U	N3-C4-C5	8.07	119.44	114.60
80	B2	1436	A	N1-C6-N6	8.06	123.44	118.60
80	B2	1773	C	C5-C6-N1	8.06	125.03	121.00
81	B5	1858	A	N3-C4-C5	-8.06	121.16	126.80
80	B2	1200	G	N1-C2-N2	8.06	123.45	116.20
80	B2	1662	G	N1-C6-O6	-8.05	115.07	119.90
81	B5	2278	C	C5-C4-N4	8.05	125.84	120.20
49	BO	3[B]	SER	O-C-N	8.05	135.58	122.70
81	B5	631	U	C2-N3-C4	-8.05	122.17	127.00
81	B5	824	C	C6-N1-C2	-8.05	117.08	120.30
81	B5	1239	C	N3-C4-N4	8.05	123.63	118.00
81	B5	2281	A	C8-N9-C4	8.05	109.02	105.80
81	B5	3110	C	C4-C5-C6	8.04	121.42	117.40
81	B5	1390	A	N9-C4-C5	8.04	109.02	105.80
81	B5	1085	A	C5-N7-C8	-8.04	99.88	103.90
40	BF	88	ARG	NE-CZ-NH2	-8.03	116.28	120.30
81	B5	345	G	N1-C6-O6	-8.03	115.08	119.90
76	Bq	12	PHE	CB-CG-CD1	8.03	126.42	120.80
81	B5	2278	C	C2-N3-C4	-8.03	115.89	119.90
81	B5	2288	G	C2-N3-C4	8.02	115.91	111.90
81	B5	41	G	C5-N7-C8	-8.02	100.29	104.30
81	B5	1317	A	N1-C6-N6	8.02	123.41	118.60
81	B5	3362	A	C8-N9-C4	-8.02	102.59	105.80
81	B5	2572	C	C2-N1-C1'	8.01	127.61	118.80
81	B5	3343	G	N3-C4-N9	8.01	130.81	126.00
81	B5	857	G	C5-C6-N1	8.01	115.50	111.50
86	CW	44	G	C5-C6-O6	-8.01	123.79	128.60
81	B5	278	U	C5-C6-N1	8.01	126.70	122.70
81	B5	413	U	C2-N3-C4	-8.01	122.20	127.00
81	B5	2189	U	N1-C2-N3	8.01	119.70	114.90
81	B5	817	A	C2-N3-C4	8.00	114.60	110.60
81	B5	3122	A	N9-C4-C5	8.00	109.00	105.80
81	B5	945	C	C6-N1-C2	8.00	123.50	120.30
81	B5	1148	G	C2-N3-C4	8.00	115.90	111.90
81	B5	1592	G	C5-C6-N1	8.00	115.50	111.50
62	Bb	39	PHE	N-CA-CB	7.99	124.99	110.60
81	B5	1297	C	C5-C6-N1	-7.99	117.01	121.00
81	B5	2317	A	C8-N9-C4	-7.98	102.61	105.80
81	B5	2777	G	C5-C6-O6	7.98	133.39	128.60
81	B5	1879	A	C6-C5-N7	-7.98	126.72	132.30
81	B5	355	A	C2-N3-C4	-7.98	106.61	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3343	G	N9-C4-C5	-7.97	102.21	105.40
80	B2	1432	U	C6-N1-C2	7.97	125.78	121.00
81	B5	2618	G	C5-C6-O6	-7.97	123.82	128.60
81	B5	3151	U	C6-N1-C2	7.97	125.78	121.00
80	B2	1490	C	C6-N1-C2	-7.96	117.11	120.30
81	B5	2366	C	N3-C4-N4	7.96	123.57	118.00
81	B5	1441	G	N1-C6-O6	-7.96	115.12	119.90
81	B5	2865	U	C5-C4-O4	-7.96	121.12	125.90
81	B5	2993	G	C5-C6-O6	-7.96	123.82	128.60
81	B5	784	A	N1-C6-N6	7.96	123.38	118.60
81	B5	2757	U	N3-C4-O4	7.96	124.97	119.40
81	B5	277	G	N1-C6-O6	-7.96	115.12	119.90
81	B5	2350	C	C5-C6-N1	-7.96	117.02	121.00
81	B5	3146	G	C5-C6-O6	7.96	133.37	128.60
81	B5	3377	G	N9-C4-C5	-7.96	102.22	105.40
81	B5	1939	G	C5-C6-O6	7.95	133.37	128.60
81	B5	2531	C	C2-N1-C1'	7.95	127.55	118.80
81	B5	2630	C	N3-C4-C5	7.95	125.08	121.90
80	B2	189	C	C2-N1-C1'	7.95	127.55	118.80
80	B2	316	A	C8-N9-C4	7.95	108.98	105.80
80	B2	349	U	N3-C2-O2	-7.95	116.64	122.20
81	B5	1261	G	N1-C6-O6	7.95	124.67	119.90
80	B2	1324	G	N3-C4-N9	-7.94	121.24	126.00
80	B2	145	A	C8-N9-C4	-7.93	102.63	105.80
81	B5	1481	A	N7-C8-N9	7.93	117.77	113.80
81	B5	2870	C	C6-N1-C1'	7.93	130.32	120.80
82	B7	85	G	N1-C6-O6	-7.93	115.14	119.90
40	BF	88	ARG	NE-CZ-NH1	7.92	124.26	120.30
81	B5	1845	G	C5-C6-N1	7.92	115.46	111.50
86	CW	69	G	N1-C6-O6	7.92	124.65	119.90
65	Be	43	ARG	NE-CZ-NH2	-7.91	116.34	120.30
49	BO	27[B]	VAL	O-C-N	-7.91	110.05	122.70
81	B5	629	U	N3-C4-C5	7.90	119.34	114.60
81	B5	1793	C	N3-C4-C5	-7.90	118.74	121.90
81	B5	2836	C	N1-C2-N3	7.90	124.73	119.20
81	B5	813	G	C8-N9-C4	-7.90	103.24	106.40
81	B5	2130	G	N3-C2-N2	7.90	125.43	119.90
81	B5	2550	U	N1-C2-N3	7.90	119.64	114.90
81	B5	3102	G	N1-C6-O6	-7.90	115.16	119.90
81	B5	1484	U	C6-N1-C2	7.88	125.73	121.00
81	B5	1311	G	C5-C6-N1	7.88	115.44	111.50
80	B2	1481	C	C6-N1-C2	-7.88	117.15	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	26	C	C4-C5-C6	7.88	121.34	117.40
81	B5	1480	G	C5-N7-C8	7.88	108.24	104.30
81	B5	3096	C	N1-C2-N3	7.87	124.71	119.20
81	B5	1237	G	N1-C6-O6	7.87	124.62	119.90
81	B5	1940	G	N3-C2-N2	7.87	125.41	119.90
81	B5	2891	U	C2-N3-C4	-7.87	122.28	127.00
81	B5	641	C	N1-C2-O2	-7.87	114.18	118.90
81	B5	960	U	C5-C6-N1	-7.87	118.77	122.70
81	B5	1227	C	N3-C4-N4	7.87	123.50	118.00
80	B2	581	U	C2-N1-C1'	7.86	127.13	117.70
81	B5	1834	U	C2-N1-C1'	-7.86	108.27	117.70
37	BC	339	LEU	CA-CB-CG	7.86	133.37	115.30
81	B5	2703	A	C8-N9-C4	-7.86	102.66	105.80
81	B5	851	C	C6-N1-C2	-7.86	117.16	120.30
81	B5	2913	C	C5-C6-N1	-7.86	117.07	121.00
81	B5	226	C	C6-N1-C2	7.85	123.44	120.30
81	B5	1236	G	N1-C6-O6	7.85	124.61	119.90
80	B2	1611	A	N7-C8-N9	7.85	117.72	113.80
81	B5	1243	G	N1-C6-O6	7.85	124.61	119.90
81	B5	2288	G	C6-N1-C2	-7.85	120.39	125.10
80	B2	864	U	N3-C2-O2	-7.85	116.71	122.20
81	B5	2366	C	C2-N1-C1'	7.84	127.43	118.80
81	B5	530	G	N1-C6-O6	-7.84	115.20	119.90
81	B5	2882	U	N1-C2-N3	7.84	119.60	114.90
81	B5	934	G	C5-C6-O6	-7.83	123.90	128.60
81	B5	1246	G	C5-C6-O6	-7.83	123.90	128.60
81	B5	2400	G	C2-N3-C4	-7.83	107.98	111.90
81	B5	3187	A	N1-C6-N6	-7.83	113.90	118.60
81	B5	216	G	N1-C6-O6	7.83	124.60	119.90
81	B5	1440	G	C5-C6-O6	7.83	133.30	128.60
81	B5	3130	A	N1-C2-N3	7.83	133.21	129.30
80	B2	142	G	N3-C4-N9	-7.82	121.31	126.00
81	B5	2512	C	C5-C6-N1	7.82	124.91	121.00
81	B5	630	A	N1-C2-N3	7.82	133.21	129.30
81	B5	2905	U	N3-C4-C5	7.82	119.29	114.60
80	B2	1560	U	N3-C4-O4	-7.82	113.93	119.40
81	B5	2807	U	C5-C4-O4	-7.82	121.21	125.90
81	B5	2705	A	C5-C6-N6	-7.81	117.45	123.70
81	B5	2919	A	N1-C6-N6	-7.81	113.91	118.60
81	B5	2303	A	N9-C4-C5	7.81	108.92	105.80
81	B5	1140	G	N1-C6-O6	-7.81	115.21	119.90
81	B5	1234	G	C5-C6-O6	-7.81	123.92	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	343	U	N3-C4-O4	-7.81	113.94	119.40
81	B5	2134	G	C5-C6-N1	7.80	115.40	111.50
81	B5	3187	A	C5-N7-C8	7.80	107.80	103.90
81	B5	2393	G	N1-C6-O6	7.80	124.58	119.90
86	CW	20	U	C2-N1-C1'	7.80	127.06	117.70
86	CW	65	G	C5-C6-O6	-7.80	123.92	128.60
81	B5	1150	A	C2-N3-C4	-7.79	106.70	110.60
80	B2	555	A	C8-N9-C4	-7.79	102.68	105.80
81	B5	1370	G	N1-C6-O6	-7.79	115.23	119.90
81	B5	2246	G	C5-C6-O6	7.79	133.27	128.60
81	B5	2395	G	C5-N7-C8	7.79	108.19	104.30
81	B5	1480	G	C8-N9-C4	7.79	109.52	106.40
80	B2	1751	C	N3-C4-C5	7.78	125.01	121.90
81	B5	1392	G	N3-C4-N9	7.78	130.67	126.00
86	CW	19	G	N1-C6-O6	7.78	124.57	119.90
81	B5	2381	G	C8-N9-C4	-7.78	103.29	106.40
81	B5	2975	U	N3-C4-C5	7.78	119.27	114.60
81	B5	708	G	C5-C6-O6	-7.78	123.93	128.60
81	B5	1364	C	N1-C2-O2	-7.78	114.23	118.90
80	B2	334	G	C2-N3-C4	-7.77	108.01	111.90
81	B5	974	G	N3-C4-C5	-7.77	124.71	128.60
81	B5	2550	U	N3-C4-O4	-7.77	113.96	119.40
81	B5	3266	G	N9-C4-C5	7.76	108.51	105.40
81	B5	3206	C	N3-C2-O2	-7.76	116.47	121.90
81	B5	990	U	N1-C2-O2	7.76	128.23	122.80
80	B2	992	A	C6-N1-C2	7.75	123.25	118.60
81	B5	904	A	N1-C6-N6	-7.75	113.95	118.60
81	B5	2899	C	N3-C4-N4	-7.75	112.58	118.00
81	B5	1233	G	N3-C2-N2	7.75	125.32	119.90
43	BI	167	LEU	CA-CB-CG	7.74	133.11	115.30
81	B5	376	G	C5-C6-N1	7.74	115.37	111.50
65	Be	45	ARG	NE-CZ-NH2	-7.74	116.43	120.30
81	B5	1792	C	N1-C2-O2	-7.74	114.26	118.90
81	B5	2315	G	C8-N9-C4	7.74	109.50	106.40
81	B5	1295	G	N1-C6-O6	-7.74	115.26	119.90
81	B5	2303	A	C8-N9-C4	-7.74	102.70	105.80
81	B5	2757	U	C2-N3-C4	-7.74	122.36	127.00
80	B2	1486	G	C8-N9-C4	-7.73	103.31	106.40
81	B5	276	U	C5-C6-N1	-7.72	118.84	122.70
81	B5	546	C	C6-N1-C1'	-7.72	111.53	120.80
81	B5	1391	C	N3-C2-O2	7.72	127.31	121.90
80	B2	704	C	N1-C2-O2	7.72	123.53	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2643	A	C2-N3-C4	7.72	114.46	110.60
81	B5	3050	U	N1-C2-O2	7.72	128.20	122.80
81	B5	2278	C	C6-N1-C1'	7.71	130.06	120.80
81	B5	2202	C	N3-C4-N4	7.71	123.40	118.00
86	CW	70	G	C5'-C4'-C3'	7.71	128.34	116.00
81	B5	3308	C	N1-C2-N3	7.71	124.59	119.20
81	B5	2634	U	C6-N1-C2	7.71	125.62	121.00
81	B5	1390	A	C8-N9-C4	-7.70	102.72	105.80
81	B5	2346	C	C2-N3-C4	-7.70	116.05	119.90
81	B5	3377	G	N3-C4-N9	7.70	130.62	126.00
80	B2	1455	G	C4-C5-N7	-7.70	107.72	110.80
81	B5	859	G	C8-N9-C4	-7.70	103.32	106.40
81	B5	1402	C	C5-C6-N1	-7.70	117.15	121.00
81	B5	2234	G	C8-N9-C4	7.68	109.47	106.40
81	B5	2584	G	C4-N9-C1'	7.68	136.49	126.50
80	B2	1305	U	C5-C4-O4	7.68	130.51	125.90
81	B5	1889	G	N1-C6-O6	-7.68	115.29	119.90
81	B5	1281	G	O4'-C1'-N9	7.68	114.34	108.20
81	B5	3065	G	N1-C6-O6	-7.68	115.30	119.90
81	B5	3185	U	C2-N3-C4	-7.68	122.39	127.00
81	B5	2433	U	C6-N1-C2	7.67	125.60	121.00
81	B5	2698	G	C8-N9-C4	7.67	109.47	106.40
81	B5	3055	U	N3-C2-O2	-7.67	116.83	122.20
81	B5	630	A	C2-N3-C4	-7.66	106.77	110.60
81	B5	753	C	C2-N3-C4	-7.66	116.07	119.90
81	B5	2271	A	C8-N9-C4	7.66	108.86	105.80
81	B5	594	U	C6-N1-C2	-7.65	116.41	121.00
80	B2	1291	G	C8-N9-C4	-7.65	103.34	106.40
81	B5	1124	U	N1-C2-N3	-7.65	110.31	114.90
81	B5	1285	G	C6-N1-C2	-7.65	120.51	125.10
81	B5	3006	A	C5-C6-N1	-7.65	113.87	117.70
83	B8	144	G	N1-C6-O6	7.65	124.49	119.90
80	B2	704	C	C2-N1-C1'	7.65	127.22	118.80
81	B5	1604	G	C4-N9-C1'	7.65	136.45	126.50
81	B5	1833	G	N1-C6-O6	-7.65	115.31	119.90
84	CN	2184	C	C2'-C3'-O3'	7.65	126.33	109.50
86	CW	46	G	O4'-C1'-N9	7.65	114.32	108.20
83	B8	2	A	N9-C4-C5	7.64	108.86	105.80
81	B5	2611	U	C5-C6-N1	-7.64	118.88	122.70
81	B5	2372	A	N9-C4-C5	7.64	108.86	105.80
81	B5	3330	A	C5-C6-N1	7.64	121.52	117.70
81	B5	3378	C	N3-C4-C5	7.64	124.96	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	11	C	N3-C2-O2	-7.64	116.56	121.90
81	B5	877	C	C4-C5-C6	-7.63	113.58	117.40
81	B5	2887	A	C5-C6-N1	-7.63	113.88	117.70
81	B5	2960	C	N3-C4-C5	7.63	124.95	121.90
46	BL	21	ARG	NE-CZ-NH1	-7.63	116.48	120.30
81	B5	1370	G	C5-C6-N1	7.62	115.31	111.50
81	B5	519	A	N1-C6-N6	7.62	123.17	118.60
81	B5	665	A	N1-C6-N6	7.62	123.17	118.60
81	B5	2838	A	N1-C6-N6	7.62	123.17	118.60
80	B2	647	G	N9-C4-C5	7.61	108.44	105.40
81	B5	633	C	N1-C2-O2	-7.61	114.34	118.90
80	B2	553	G	C4-C5-C6	7.60	123.36	118.80
82	B7	39	C	C6-N1-C2	-7.60	117.26	120.30
81	B5	419	G	C5-C6-O6	-7.60	124.04	128.60
81	B5	1130	A	C5-C6-N1	7.60	121.50	117.70
82	B7	67	G	N3-C2-N2	-7.60	114.58	119.90
81	B5	1390	A	N1-C6-N6	-7.59	114.04	118.60
81	B5	1515	A	C2-N3-C4	-7.59	106.80	110.60
81	B5	1014	U	C2-N1-C1'	7.59	126.81	117.70
81	B5	1163	A	C5-N7-C8	7.59	107.69	103.90
81	B5	1342	C	C2-N3-C4	-7.59	116.11	119.90
81	B5	3154	C	N1-C2-O2	7.59	123.45	118.90
83	B8	6	U	C2-N3-C4	-7.59	122.45	127.00
81	B5	1305	U	C5-C4-O4	-7.58	121.35	125.90
81	B5	2693	C	N3-C4-C5	7.58	124.93	121.90
81	B5	1516	C	N1-C2-O2	-7.58	114.35	118.90
80	B2	1291	G	C2-N3-C4	-7.58	108.11	111.90
81	B5	1890	U	C4-C5-C6	7.58	124.25	119.70
81	B5	3088	G	C4-C5-N7	7.58	113.83	110.80
81	B5	3138	U	C2-N3-C4	-7.58	122.45	127.00
81	B5	3245	A	C5-C6-N1	-7.58	113.91	117.70
81	B5	2237	C	N3-C4-N4	-7.58	112.69	118.00
80	B2	1758	U	N3-C2-O2	-7.58	116.89	122.20
81	B5	324	A	C8-N9-C4	-7.58	102.77	105.80
82	B7	49	G	C5-C6-O6	-7.58	124.05	128.60
80	B2	978	A	C8-N9-C4	7.58	108.83	105.80
81	B5	1251	A	C5-C6-N6	-7.58	117.64	123.70
81	B5	1381	A	C8-N9-C4	7.58	108.83	105.80
81	B5	1396	C	N3-C4-C5	7.58	124.93	121.90
83	B8	144	G	N3-C2-N2	-7.58	114.60	119.90
81	B5	641	C	N3-C4-N4	-7.57	112.70	118.00
81	B5	851	C	C5-C6-N1	7.57	124.79	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1163	A	N1-C6-N6	-7.57	114.06	118.60
86	CW	53	G	N1-C6-O6	7.57	124.44	119.90
86	CW	64	A	C4-C5-C6	7.57	120.78	117.00
81	B5	1848	G	C4-C5-N7	7.57	113.83	110.80
81	B5	3172	A	N7-C8-N9	-7.57	110.02	113.80
81	B5	1256	G	P-O5'-C5'	7.57	133.01	120.90
81	B5	2138	A	C8-N9-C4	-7.57	102.77	105.80
86	CW	1	G	C5-C6-O6	-7.57	124.06	128.60
81	B5	1910	A	C8-N9-C4	7.56	108.83	105.80
81	B5	2849	C	N3-C4-C5	-7.56	118.88	121.90
56	BV	45	ARG	NE-CZ-NH1	-7.55	116.52	120.30
80	B2	323	A	C8-N9-C4	-7.55	102.78	105.80
81	B5	81	C	N3-C4-C5	7.55	124.92	121.90
81	B5	400	G	C5-C6-O6	-7.55	124.07	128.60
81	B5	1057	A	C5-C6-N6	-7.55	117.66	123.70
81	B5	1260	A	C5-C6-N6	-7.55	117.66	123.70
81	B5	121	A	C8-N9-C4	7.55	108.82	105.80
81	B5	929	A	C8-N9-C4	7.54	108.82	105.80
81	B5	289	A	C6-N1-C2	-7.54	114.08	118.60
81	B5	2289	U	N1-C2-O2	7.54	128.08	122.80
81	B5	2524	A	N7-C8-N9	7.54	117.57	113.80
81	B5	3007	U	C2-N3-C4	-7.54	122.48	127.00
81	B5	971	G	C5-N7-C8	7.54	108.07	104.30
81	B5	2625	C	C2-N3-C4	-7.54	116.13	119.90
83	B8	12	A	C5-N7-C8	-7.53	100.14	103.90
81	B5	928	C	C4-C5-C6	7.53	121.16	117.40
82	B7	41	G	C8-N9-C4	7.53	109.41	106.40
81	B5	1216	C	N1-C2-O2	-7.52	114.39	118.90
81	B5	1459	C	N3-C4-C5	7.52	124.91	121.90
81	B5	1176	C	C2-N3-C4	-7.52	116.14	119.90
81	B5	1340	G	C8-N9-C4	7.52	109.41	106.40
81	B5	3140	G	C4-C5-N7	7.52	113.81	110.80
81	B5	3192	U	C5-C6-N1	-7.52	118.94	122.70
81	B5	924	G	N1-C2-N2	7.52	122.97	116.20
81	B5	971	G	N7-C8-N9	-7.52	109.34	113.10
81	B5	3167	A	C8-N9-C4	-7.52	102.79	105.80
80	B2	871	G	N3-C4-C5	-7.52	124.84	128.60
82	B7	11	A	C8-N9-C4	7.52	108.81	105.80
81	B5	622	A	N1-C6-N6	7.51	123.11	118.60
81	B5	2395	G	N7-C8-N9	-7.51	109.34	113.10
80	B2	758	U	N3-C2-O2	-7.51	116.94	122.20
81	B5	2718	U	N1-C2-N3	7.51	119.41	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	594	A	C2-N3-C4	7.51	114.35	110.60
81	B5	1407	A	C6-N1-C2	7.51	123.10	118.60
81	B5	971	G	C2-N3-C4	7.50	115.65	111.90
81	B5	2342	U	N3-C4-O4	-7.50	114.15	119.40
81	B5	426	G	C8-N9-C4	7.50	109.40	106.40
80	B2	507	U	C2-N1-C1'	7.50	126.70	117.70
80	B2	1432	U	C5-C6-N1	-7.50	118.95	122.70
81	B5	436	A	N1-C6-N6	7.50	123.10	118.60
86	CW	76	A	C4-C5-C6	7.50	120.75	117.00
81	B5	42	C	C4-C5-C6	-7.49	113.65	117.40
80	B2	1280	C	C6-N1-C2	-7.48	117.31	120.30
81	B5	150	A	N1-C6-N6	7.48	123.09	118.60
81	B5	2791	G	C5-C6-O6	-7.48	124.11	128.60
81	B5	3096	C	C5-C6-N1	-7.48	117.26	121.00
86	CW	76	A	C5-C6-N6	-7.48	117.72	123.70
81	B5	2234	G	C4-C5-N7	7.47	113.79	110.80
81	B5	3102	G	N1-C2-N2	-7.47	109.48	116.20
83	B8	144	G	C5-C6-O6	-7.47	124.12	128.60
81	B5	957	C	C2-N3-C4	-7.47	116.17	119.90
80	B2	1291	G	C5-N7-C8	-7.46	100.57	104.30
81	B5	2639	G	C5-C6-O6	-7.46	124.12	128.60
81	B5	2943	G	N3-C2-N2	7.46	125.12	119.90
81	B5	307	A	N1-C6-N6	-7.46	114.12	118.60
81	B5	1205	A	C8-N9-C4	-7.46	102.82	105.80
81	B5	2381	G	N9-C4-C5	7.46	108.38	105.40
81	B5	1372	C	N1-C2-O2	-7.46	114.42	118.90
83	B8	14	C	C4-C5-C6	7.45	121.13	117.40
81	B5	1227	C	C5-C6-N1	7.45	124.72	121.00
81	B5	1327	C	N3-C4-C5	7.45	124.88	121.90
81	B5	2743	A	C8-N9-C4	7.45	108.78	105.80
81	B5	3381	U	N3-C4-O4	-7.45	114.19	119.40
81	B5	2726	C	N3-C4-N4	-7.45	112.79	118.00
81	B5	3308	C	N1-C2-O2	-7.44	114.43	118.90
81	B5	2308	C	N3-C2-O2	7.44	127.11	121.90
81	B5	1879	A	N7-C8-N9	7.44	117.52	113.80
81	B5	2908	G	C8-N9-C4	-7.44	103.42	106.40
81	B5	645	A	C5-C6-N6	-7.44	117.75	123.70
81	B5	2996	U	N1-C2-O2	7.44	128.01	122.80
81	B5	2810	C	N3-C2-O2	-7.44	116.69	121.90
80	B2	583	C	C6-N1-C2	-7.44	117.33	120.30
80	B2	1012	U	C2-N3-C4	7.44	131.46	127.00
80	B2	608	U	C2-N3-C4	-7.43	122.54	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	74	G	N1-C6-O6	-7.43	115.44	119.90
86	CW	71	G	C5-C6-O6	-7.43	124.14	128.60
81	B5	1484	U	C2-N3-C4	-7.43	122.54	127.00
81	B5	1855	U	C2-N3-C4	-7.43	122.54	127.00
83	B8	2	A	N1-C6-N6	-7.43	114.14	118.60
81	B5	1389	G	N3-C2-N2	7.43	125.10	119.90
81	B5	2743	A	N7-C8-N9	-7.43	110.09	113.80
81	B5	1085	A	C2-N3-C4	-7.42	106.89	110.60
86	CW	56	C	O4'-C1'-N1	7.42	114.14	108.20
81	B5	2802	A	C2-N3-C4	7.42	114.31	110.60
81	B5	971	G	C4-C5-N7	-7.42	107.83	110.80
81	B5	3081	C	N3-C4-C5	7.42	124.87	121.90
86	CW	72	C	N3-C4-N4	7.42	123.19	118.00
81	B5	280	U	C5-C6-N1	-7.42	118.99	122.70
81	B5	2366	C	C5-C4-N4	-7.42	115.01	120.20
81	B5	2341	A	N7-C8-N9	-7.41	110.09	113.80
86	CW	2	C	O4'-C1'-N1	7.41	114.13	108.20
80	B2	89	G	C8-N9-C4	7.41	109.36	106.40
86	CW	15	G	N1-C6-O6	7.41	124.35	119.90
81	B5	2621	G	N3-C2-N2	-7.41	114.71	119.90
81	B5	1437	C	C5-C6-N1	7.41	124.70	121.00
81	B5	2630	C	C2-N3-C4	-7.41	116.20	119.90
81	B5	931	C	C5-C6-N1	-7.40	117.30	121.00
82	B7	96	U	N3-C2-O2	-7.40	117.02	122.20
81	B5	1586	G	N3-C4-N9	7.40	130.44	126.00
81	B5	2179	C	C6-N1-C2	7.40	123.26	120.30
81	B5	2541	U	C2-N1-C1'	7.40	126.58	117.70
81	B5	2245	C	C5-C6-N1	7.39	124.70	121.00
53	BS	40	ARG	NE-CZ-NH1	7.39	124.00	120.30
80	B2	1761	U	C6-N1-C2	-7.39	116.56	121.00
81	B5	1227	C	N1-C2-O2	-7.39	114.46	118.90
81	B5	2991	A	N1-C6-N6	-7.39	114.17	118.60
81	B5	3025	C	N3-C4-N4	-7.39	112.83	118.00
81	B5	3151	U	N1-C2-N3	-7.39	110.47	114.90
81	B5	1014	U	C5-C4-O4	-7.39	121.47	125.90
81	B5	1317	A	C2-N3-C4	7.39	114.30	110.60
81	B5	1887	A	N1-C6-N6	7.39	123.03	118.60
81	B5	1192	C	C4-C5-C6	7.39	121.09	117.40
81	B5	1604	G	N3-C4-N9	7.39	130.43	126.00
25	AQ	40	GLU	C-N-CD	-7.39	104.35	120.60
81	B5	1449	A	C4-C5-N7	7.39	114.39	110.70
80	B2	831	U	C5-C6-N1	7.38	126.39	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1228	C	N3-C4-C5	-7.38	118.95	121.90
81	B5	1506	A	C8-N9-C4	-7.38	102.85	105.80
81	B5	2142	A	C2-N3-C4	7.38	114.29	110.60
80	B2	1075	C	N1-C2-O2	-7.38	114.47	118.90
81	B5	931	C	N3-C4-C5	7.38	124.85	121.90
81	B5	3218	A	C4-C5-N7	7.38	114.39	110.70
81	B5	1268	G	P-O5'-C5'	7.38	132.71	120.90
81	B5	2311	G	C8-N9-C4	7.38	109.35	106.40
80	B2	142	G	N3-C4-C5	7.37	132.29	128.60
81	B5	1117	G	C5-C6-N1	7.37	115.19	111.50
81	B5	2370	G	C6-N1-C2	-7.37	120.68	125.10
81	B5	3382	U	N1-C2-O2	7.37	127.96	122.80
83	B8	99	C	C6-N1-C2	7.37	123.25	120.30
80	B2	1241	G	N7-C8-N9	7.37	116.78	113.10
80	B2	1389	C	N1-C2-O2	7.37	123.32	118.90
83	B8	2	A	C5-C6-N6	7.37	129.59	123.70
81	B5	1144	U	N1-C2-N3	7.37	119.32	114.90
81	B5	2736	A	N1-C6-N6	-7.37	114.18	118.60
81	B5	1538	G	C8-N9-C4	7.36	109.34	106.40
81	B5	2350	C	C4-C5-C6	7.36	121.08	117.40
81	B5	2572	C	N3-C2-O2	-7.36	116.75	121.90
80	B2	1762	A	N1-C6-N6	7.36	123.02	118.60
81	B5	2884	C	C2-N3-C4	-7.36	116.22	119.90
81	B5	2320	A	C5-C6-N1	-7.36	114.02	117.70
81	B5	1280	C	O4'-C1'-N1	7.36	114.08	108.20
86	CW	67	C	O4'-C1'-N1	7.35	114.08	108.20
76	Bq	12	PHE	CB-CG-CD2	-7.35	115.66	120.80
81	B5	2851	A	N1-C2-N3	7.35	132.97	129.30
81	B5	2621	G	C5-C6-N1	-7.35	107.83	111.50
81	B5	2385	G	C4-N9-C1'	-7.34	116.95	126.50
81	B5	2611	U	N3-C2-O2	-7.34	117.06	122.20
81	B5	2307	G	N3-C4-N9	7.34	130.40	126.00
81	B5	1124	U	C5-C6-N1	7.34	126.37	122.70
81	B5	65	A	C8-N9-C4	-7.34	102.87	105.80
81	B5	2954	U	C6-N1-C1'	-7.34	110.93	121.20
81	B5	2699	G	C2-N3-C4	7.33	115.57	111.90
81	B5	3289	G	C8-N9-C4	-7.33	103.47	106.40
81	B5	1426	C	N3-C4-C5	7.33	124.83	121.90
82	B7	41	G	N9-C4-C5	-7.33	102.47	105.40
81	B5	98	G	C5-C6-N1	7.33	115.16	111.50
81	B5	2531	C	N1-C2-O2	7.33	123.30	118.90
81	B5	795	G	N7-C8-N9	-7.32	109.44	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2234	G	N1-C6-O6	7.32	124.29	119.90
85	CP	210	TRP	CG-CD1-NE1	7.32	117.42	110.10
81	B5	580	C	C4-C5-C6	7.32	121.06	117.40
81	B5	3290	G	C8-N9-C4	-7.32	103.47	106.40
81	B5	804	C	C4-C5-C6	7.32	121.06	117.40
80	B2	377	G	N3-C2-N2	-7.31	114.78	119.90
80	B2	355	G	C5-C6-N1	7.31	115.15	111.50
81	B5	969	C	C2-N3-C4	-7.31	116.25	119.90
81	B5	1846	C	C4-C5-C6	7.31	121.05	117.40
81	B5	2815	G	C8-N9-C4	7.31	109.32	106.40
81	B5	3369	G	C5-C6-O6	-7.31	124.22	128.60
81	B5	2245	C	N3-C2-O2	-7.31	116.79	121.90
54	BT	130	ARG	NE-CZ-NH2	-7.30	116.65	120.30
81	B5	2288	G	N3-C4-N9	7.30	130.38	126.00
80	B2	1096	C	C6-N1-C1'	-7.30	112.04	120.80
81	B5	1014	U	C6-N1-C1'	-7.30	110.98	121.20
81	B5	2836	C	N3-C4-N4	-7.30	112.89	118.00
81	B5	1364	C	C2-N3-C4	-7.30	116.25	119.90
81	B5	924	G	N1-C6-O6	7.30	124.28	119.90
81	B5	1921	A	N1-C6-N6	7.30	122.98	118.60
81	B5	1506	A	N7-C8-N9	7.30	117.45	113.80
81	B5	2892	A	C5-C6-N6	7.30	129.54	123.70
66	Bf	18	ARG	NE-CZ-NH1	-7.29	116.65	120.30
81	B5	1660	C	C6-N1-C2	-7.29	117.38	120.30
81	B5	834	U	C6-N1-C2	7.29	125.38	121.00
81	B5	1133	A	C5-C6-N1	7.29	121.35	117.70
86	CW	31	A	C5-C6-N6	-7.29	117.87	123.70
81	B5	3255	U	C5-C4-O4	-7.29	121.53	125.90
81	B5	2662	G	C8-N9-C4	-7.29	103.49	106.40
81	B5	3131	U	N3-C4-C5	7.27	118.96	114.60
81	B5	2584	G	C6-C5-N7	-7.27	126.04	130.40
81	B5	39	A	C4-C5-C6	7.27	120.64	117.00
81	B5	2942	C	C4-C5-C6	7.27	121.03	117.40
82	B7	104	A	N1-C6-N6	7.27	122.96	118.60
81	B5	1430	U	C5-C6-N1	-7.27	119.06	122.70
81	B5	1283	C	N3-C4-C5	-7.27	118.99	121.90
81	B5	2616	C	C6-N1-C2	7.27	123.21	120.30
81	B5	639	G	N1-C6-O6	7.26	124.26	119.90
81	B5	643	U	N3-C4-C5	7.26	118.96	114.60
81	B5	2758	A	C8-N9-C4	-7.26	102.89	105.80
81	B5	1189	C	N1-C2-O2	-7.26	114.54	118.90
83	B8	54	A	C2-N3-C4	-7.26	106.97	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2620	G	C5-C6-N1	7.26	115.13	111.50
80	B2	728	U	C2-N1-C1'	7.26	126.41	117.70
80	B2	1642	G	C2-N3-C4	7.26	115.53	111.90
81	B5	2372	A	P-O3'-C3'	7.26	128.41	119.70
36	BB	266	ARG	NE-CZ-NH2	-7.25	116.67	120.30
81	B5	2911	A	C2-N3-C4	7.25	114.23	110.60
81	B5	1833	G	N3-C2-N2	7.25	124.97	119.90
80	B2	1745	G	C4-C5-N7	7.24	113.70	110.80
81	B5	643	U	C2-N3-C4	-7.24	122.65	127.00
81	B5	1227	C	C2-N1-C1'	7.24	126.77	118.80
80	B2	1654	G	C5-C6-O6	-7.24	124.25	128.60
81	B5	838	G	N1-C6-O6	-7.24	115.56	119.90
85	CP	63	GLU	N-CA-C	7.24	130.55	111.00
81	B5	1169	A	C5-C6-N1	-7.24	114.08	117.70
81	B5	1258	U	O4'-C4'-C3'	-7.24	96.76	104.00
80	B2	1329	A	N1-C6-N6	7.24	122.94	118.60
81	B5	578	A	N1-C6-N6	7.24	122.94	118.60
81	B5	2701	U	C5-C4-O4	-7.24	121.56	125.90
81	B5	3122	A	N7-C8-N9	7.23	117.42	113.80
81	B5	810	A	N1-C6-N6	-7.23	114.26	118.60
81	B5	2717	U	C5-C6-N1	-7.23	119.09	122.70
80	B2	1000	C	N3-C4-N4	-7.22	112.94	118.00
81	B5	1336	U	C5-C4-O4	-7.22	121.56	125.90
81	B5	1206	G	N9-C4-C5	7.22	108.29	105.40
82	B7	49	G	N3-C2-N2	-7.22	114.84	119.90
81	B5	46	U	N1-C2-O2	7.22	127.85	122.80
81	B5	283	G	C6-C5-N7	-7.22	126.07	130.40
81	B5	1724	U	C6-N1-C2	-7.22	116.67	121.00
81	B5	2370	G	C5-C6-O6	-7.22	124.27	128.60
81	B5	1140	G	N3-C2-N2	7.22	124.95	119.90
81	B5	1167	U	C5-C4-O4	-7.22	121.57	125.90
49	BO	16[B]	LEU	C-N-CA	7.21	137.45	122.30
81	B5	267	G	C8-N9-C4	7.21	109.29	106.40
81	B5	272	G	C8-N9-C4	7.21	109.29	106.40
81	B5	669	U	N1-C2-N3	7.21	119.23	114.90
81	B5	1049	C	N3-C4-C5	7.21	124.78	121.90
81	B5	1518	U	N3-C4-O4	-7.21	114.36	119.40
81	B5	652	G	N3-C2-N2	7.20	124.94	119.90
81	B5	1406	A	C6-N1-C2	-7.20	114.28	118.60
80	B2	1611	A	C2-N3-C4	-7.20	107.00	110.60
81	B5	3052	G	N1-C6-O6	-7.20	115.58	119.90
81	B5	514	G	C4-C5-N7	7.20	113.68	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	629	U	C2-N3-C4	-7.20	122.68	127.00
81	B5	1262	G	O4'-C1'-N9	7.20	113.96	108.20
81	B5	2363	A	C8-N9-C4	-7.20	102.92	105.80
81	B5	2754	G	N1-C2-N2	-7.20	109.72	116.20
81	B5	39	A	N1-C6-N6	7.20	122.92	118.60
81	B5	2410	U	C4-C5-C6	-7.20	115.38	119.70
81	B5	2964	G	C8-N9-C4	7.20	109.28	106.40
81	B5	37	U	C2-N3-C4	-7.19	122.68	127.00
81	B5	3060	C	N3-C2-O2	7.19	126.94	121.90
80	B2	1121	C	C4-C5-C6	7.19	121.00	117.40
81	B5	3245	A	N3-C4-C5	7.19	131.84	126.80
81	B5	2396	G	N9-C4-C5	7.19	108.28	105.40
81	B5	2305	G	N9-C4-C5	-7.19	102.53	105.40
81	B5	3040	A	C5-N7-C8	7.18	107.49	103.90
81	B5	577	C	C2-N3-C4	-7.18	116.31	119.90
81	B5	1902	G	C8-N9-C4	7.18	109.27	106.40
81	B5	2870	C	N3-C4-N4	-7.18	112.97	118.00
82	B7	44	C	N1-C2-O2	-7.18	114.59	118.90
81	B5	960	U	N1-C2-O2	7.18	127.83	122.80
81	B5	2908	G	N9-C4-C5	7.18	108.27	105.40
81	B5	2337	C	C6-N1-C2	7.18	123.17	120.30
81	B5	3379	C	C5-C6-N1	-7.18	117.41	121.00
81	B5	46	U	C5-C4-O4	7.17	130.21	125.90
81	B5	563	U	N1-C2-O2	7.17	127.82	122.80
81	B5	2148	U	C2-N3-C4	-7.17	122.69	127.00
81	B5	800	G	C8-N9-C4	7.17	109.27	106.40
81	B5	3005	A	N9-C4-C5	7.17	108.67	105.80
81	B5	1004	U	N3-C4-C5	7.17	118.90	114.60
81	B5	1158	A	C5-C6-N6	-7.17	117.97	123.70
81	B5	1887	A	C2-N3-C4	-7.17	107.02	110.60
81	B5	2631	U	N3-C4-C5	7.17	118.90	114.60
81	B5	2965	U	C4-C5-C6	7.17	124.00	119.70
83	B8	126	A	C8-N9-C4	-7.17	102.93	105.80
81	B5	2848	G	N3-C2-N2	-7.17	114.89	119.90
80	B2	1174	C	N1-C2-O2	7.16	123.20	118.90
81	B5	518	G	N9-C4-C5	-7.16	102.53	105.40
81	B5	327	A	N7-C8-N9	-7.16	110.22	113.80
81	B5	1434	G	C4-C5-C6	7.16	123.10	118.80
81	B5	2383	C	N1-C2-O2	-7.16	114.60	118.90
81	B5	801	A	C5-C6-N1	-7.16	114.12	117.70
81	B5	1328	C	C4-C5-C6	7.16	120.98	117.40
81	B5	2917	G	C6-C5-N7	-7.16	126.10	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	25	C	O4'-C1'-N1	7.16	113.93	108.20
81	B5	2169	G	C5-C6-N1	7.16	115.08	111.50
81	B5	2758	A	N9-C4-C5	7.16	108.66	105.80
83	B8	42	G	C8-N9-C4	7.16	109.26	106.40
81	B5	974	G	C4-N9-C1'	7.15	135.80	126.50
81	B5	434	U	N3-C4-C5	7.15	118.89	114.60
82	B7	11	A	N7-C8-N9	-7.15	110.22	113.80
81	B5	922	U	N3-C4-O4	-7.15	114.39	119.40
81	B5	1085	A	C8-N9-C4	-7.15	102.94	105.80
81	B5	1292	C	C6-N1-C2	7.15	123.16	120.30
81	B5	2824	G	N9-C4-C5	7.15	108.26	105.40
86	CW	11	C	O4'-C1'-N1	7.15	113.92	108.20
81	B5	1917	C	N1-C2-O2	-7.15	114.61	118.90
81	B5	594	U	N3-C2-O2	-7.14	117.20	122.20
81	B5	1226	G	O5'-C5'-C4'	7.14	125.27	111.70
81	B5	3192	U	N3-C4-O4	-7.14	114.40	119.40
86	CW	12	U	O4'-C1'-N1	7.14	113.92	108.20
81	B5	1144	U	C5-C6-N1	-7.14	119.13	122.70
81	B5	1591	G	N1-C6-O6	-7.14	115.61	119.90
81	B5	2993	G	C4-C5-N7	7.14	113.66	110.80
81	B5	1209	G	N3-C2-N2	-7.14	114.90	119.90
80	B2	992	A	C2-N3-C4	-7.14	107.03	110.60
81	B5	2732	G	C5-C6-O6	7.14	132.88	128.60
80	B2	1611	A	C5-N7-C8	-7.14	100.33	103.90
81	B5	2979	U	C6-N1-C2	7.14	125.28	121.00
81	B5	1118	C	N3-C4-C5	7.13	124.75	121.90
81	B5	2584	G	N3-C4-N9	7.13	130.28	126.00
81	B5	3076	C	N3-C4-C5	7.13	124.75	121.90
80	B2	577	G	N9-C4-C5	-7.13	102.55	105.40
81	B5	384	A	C8-N9-C4	7.13	108.65	105.80
86	CW	43	C	C2-N1-C1'	7.13	126.64	118.80
86	CW	10	G	N1-C6-O6	7.13	124.18	119.90
81	B5	1403	C	C5-C6-N1	-7.12	117.44	121.00
86	CW	3	C	O4'-C1'-N1	7.12	113.90	108.20
80	B2	783	G	C4-C5-N7	7.12	113.65	110.80
80	B2	61	A	N7-C8-N9	7.12	117.36	113.80
81	B5	2320	A	C4-C5-N7	-7.12	107.14	110.70
81	B5	3086	A	N7-C8-N9	-7.12	110.24	113.80
81	B5	1172	G	N1-C6-O6	-7.12	115.63	119.90
83	B8	139	U	N3-C4-O4	-7.12	114.42	119.40
81	B5	419	G	N9-C4-C5	-7.11	102.56	105.40
81	B5	3052	G	C5-C6-O6	7.11	132.87	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	437	G	N7-C8-N9	7.11	116.66	113.10
81	B5	3154	C	N3-C2-O2	-7.11	116.92	121.90
80	B2	1324	G	N3-C2-N2	-7.11	114.92	119.90
81	B5	1272	C	N3-C4-C5	-7.11	119.06	121.90
81	B5	1458	U	C2-N3-C4	-7.11	122.73	127.00
80	B2	1241	G	C4-C5-N7	7.11	113.64	110.80
81	B5	1264	G	C5-C6-O6	-7.11	124.34	128.60
81	B5	3214	U	N1-C2-N3	7.10	119.16	114.90
81	B5	511	G	C5-C6-O6	7.10	132.86	128.60
81	B5	1858	A	C2-N3-C4	7.10	114.15	110.60
81	B5	641	C	C6-N1-C1'	7.10	129.32	120.80
44	BJ	112	LEU	CA-CB-CG	7.10	131.62	115.30
81	B5	622	A	N9-C4-C5	-7.10	102.96	105.80
80	B2	108	A	N1-C2-N3	7.09	132.85	129.30
81	B5	2305	G	N3-C2-N2	7.09	124.87	119.90
81	B5	3110	C	N1-C2-N3	7.09	124.17	119.20
81	B5	708	G	N7-C8-N9	7.09	116.65	113.10
81	B5	2244	A	N1-C6-N6	-7.09	114.34	118.60
81	B5	2242	A	N1-C6-N6	-7.09	114.34	118.60
81	B5	24	G	N1-C6-O6	7.09	124.15	119.90
81	B5	1283	C	C6-N1-C2	-7.09	117.47	120.30
81	B5	1243	G	C5-C6-O6	-7.09	124.35	128.60
81	B5	2618	G	C6-N1-C2	-7.09	120.85	125.10
81	B5	2693	C	C2-N3-C4	-7.09	116.36	119.90
81	B5	2127	U	N1-C2-N3	7.08	119.15	114.90
50	BP	69	ARG	NE-CZ-NH2	-7.08	116.76	120.30
81	B5	928	C	N1-C2-N3	7.08	124.16	119.20
81	B5	1229	G	C5-C6-O6	-7.08	124.35	128.60
81	B5	804	C	N3-C4-C5	-7.08	119.07	121.90
81	B5	1407	A	C5-C6-N1	-7.08	114.16	117.70
81	B5	872	U	N3-C4-C5	7.07	118.84	114.60
80	B2	1462	G	C8-N9-C4	7.07	109.23	106.40
81	B5	546	C	C5-C6-N1	7.07	124.53	121.00
81	B5	2300	G	N3-C2-N2	7.07	124.85	119.90
81	B5	2169	G	C6-C5-N7	7.07	134.64	130.40
82	B7	101	G	C5-C6-O6	-7.07	124.36	128.60
81	B5	834	U	N3-C4-O4	-7.06	114.45	119.40
80	B2	1773	C	C2-N3-C4	7.06	123.43	119.90
81	B5	1340	G	N1-C2-N2	-7.06	109.84	116.20
81	B5	3317	U	C6-N1-C2	-7.06	116.76	121.00
81	B5	591	G	C4-C5-N7	7.06	113.62	110.80
80	B2	159	U	C6-N1-C2	7.06	125.23	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	54	U	O4'-C1'-N1	7.06	113.84	108.20
81	B5	945	C	C5-C6-N1	-7.05	117.47	121.00
81	B5	1278	A	P-O3'-C3'	7.05	128.16	119.70
81	B5	2618	G	N3-C4-N9	7.05	130.23	126.00
80	B2	74	U	O4'-C1'-N1	7.05	113.84	108.20
80	B2	1456	C	N3-C2-O2	-7.05	116.97	121.90
81	B5	1255	C	N3-C4-N4	7.05	122.93	118.00
81	B5	1548	C	C2-N3-C4	-7.05	116.38	119.90
81	B5	3006	A	N1-C2-N3	7.05	132.82	129.30
80	B2	628	G	C2-N3-C4	-7.05	108.38	111.90
81	B5	2327	U	C6-N1-C2	7.05	125.23	121.00
80	B2	1749	A	C2-N3-C4	-7.05	107.08	110.60
81	B5	2988	C	C5-C6-N1	-7.05	117.48	121.00
86	CW	33	U	C6-N1-C1'	-7.05	111.33	121.20
49	BO	4[B]	GLN	O-C-N	7.04	134.49	121.10
53	BS	115	ARG	NE-CZ-NH2	-7.04	116.78	120.30
81	B5	1232	C	C2'-C3'-O3'	7.04	125.00	109.50
81	B5	1370	G	N3-C2-N2	7.04	124.83	119.90
81	B5	2631	U	C5-C6-N1	-7.04	119.18	122.70
81	B5	1228	C	O4'-C1'-N1	7.04	113.83	108.20
80	B2	610	G	C8-N9-C1'	-7.04	117.85	127.00
81	B5	1229	G	C6-C5-N7	-7.04	126.17	130.40
81	B5	2344	U	C5-C6-N1	-7.04	119.18	122.70
81	B5	2942	C	N3-C4-C5	-7.04	119.08	121.90
86	CW	41	C	N3-C4-N4	7.04	122.93	118.00
81	B5	1314	C	C2-N1-C1'	7.04	126.54	118.80
83	B8	70	G	C8-N9-C4	7.04	109.22	106.40
81	B5	3182	G	N1-C6-O6	-7.04	115.68	119.90
83	B8	101	U	C6-N1-C2	-7.04	116.78	121.00
80	B2	1274	C	C5-C6-N1	-7.04	117.48	121.00
81	B5	3086	A	C5-N7-C8	7.04	107.42	103.90
81	B5	930	U	N3-C4-O4	-7.03	114.48	119.40
81	B5	2882	U	C2-N3-C4	-7.03	122.78	127.00
81	B5	1417	G	N1-C6-O6	-7.03	115.68	119.90
81	B5	1925	U	C2-N3-C4	-7.03	122.78	127.00
81	B5	1939	G	N3-C2-N2	7.03	124.82	119.90
81	B5	3218	A	C2-N3-C4	-7.03	107.08	110.60
81	B5	802	C	C2-N3-C4	-7.03	116.39	119.90
81	B5	2644	C	N1-C2-O2	-7.03	114.68	118.90
80	B2	1548	G	C2-N3-C4	7.03	115.41	111.90
81	B5	1110	U	C4-C5-C6	-7.03	115.48	119.70
81	B5	2943	G	N1-C6-O6	-7.03	115.68	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	46	G	C5-C6-O6	-7.03	124.39	128.60
80	B2	1533	C	C4-C5-C6	7.02	120.91	117.40
81	B5	1434	G	C4-C5-N7	-7.02	107.99	110.80
81	B5	2881	C	C5-C6-N1	-7.02	117.49	121.00
83	B8	139	U	C5-C6-N1	-7.02	119.19	122.70
81	B5	418	A	N1-C6-N6	7.02	122.81	118.60
81	B5	929	A	N7-C8-N9	-7.02	110.29	113.80
81	B5	2350	C	C2-N3-C4	-7.01	116.39	119.90
86	CW	45	U	C2-N1-C1'	7.01	126.12	117.70
81	B5	436	A	C6-C5-N7	-7.01	127.39	132.30
81	B5	2190	U	N1-C2-N3	7.01	119.11	114.90
86	CW	10	G	C5-C6-O6	-7.01	124.39	128.60
86	CW	1	G	O4'-C1'-N9	7.01	113.81	108.20
81	B5	3107	U	N3-C2-O2	-7.01	117.30	122.20
81	B5	3098	G	C5-C6-O6	7.00	132.80	128.60
81	B5	2293	C	N3-C4-C5	7.00	124.70	121.90
81	B5	2932	U	N1-C2-O2	7.00	127.70	122.80
80	B2	1654	G	N3-C4-C5	-7.00	125.10	128.60
81	B5	81	C	N3-C4-N4	-7.00	113.10	118.00
81	B5	2689	A	C6-N1-C2	-7.00	114.40	118.60
61	Ba	12	ARG	NE-CZ-NH2	-7.00	116.80	120.30
81	B5	32	U	N3-C4-C5	-7.00	110.40	114.60
81	B5	857	G	N9-C4-C5	-7.00	102.60	105.40
81	B5	1441	G	N7-C8-N9	-7.00	109.60	113.10
81	B5	2832	C	C2-N3-C4	-7.00	116.40	119.90
81	B5	343	U	C5-C4-O4	7.00	130.10	125.90
81	B5	2626	A	C5-C6-N6	7.00	129.30	123.70
81	B5	859	G	N1-C6-O6	-6.99	115.70	119.90
81	B5	1282	G	C5-C6-O6	-6.99	124.40	128.60
49	BO	104[B]	ILE	O-C-N	6.99	133.89	122.70
81	B5	1389	G	C5-C6-O6	-6.99	124.41	128.60
81	B5	2302	G	N1-C6-O6	-6.99	115.71	119.90
80	B2	321	C	C6-N1-C2	-6.99	117.51	120.30
80	B2	1600	A	C5-C6-N1	-6.99	114.21	117.70
81	B5	1673	G	N1-C6-O6	-6.98	115.71	119.90
81	B5	2189	U	C2-N3-C4	-6.98	122.81	127.00
81	B5	2149	A	C8-N9-C4	-6.98	103.01	105.80
81	B5	2167	A	C6-N1-C2	-6.98	114.41	118.60
81	B5	1592	G	C5-C6-O6	6.98	132.79	128.60
81	B5	2917	G	N3-C4-N9	6.98	130.19	126.00
86	CW	38	A	C4-C5-C6	6.98	120.49	117.00
81	B5	369	A	N7-C8-N9	6.98	117.29	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1236	G	O4'-C1'-N9	6.98	113.78	108.20
81	B5	2280	A	C2-N3-C4	-6.97	107.11	110.60
70	Bj	73	ARG	NE-CZ-NH2	-6.96	116.82	120.30
81	B5	1199	C	C4-C5-C6	6.96	120.88	117.40
81	B5	3020	U	N1-C2-O2	-6.96	117.93	122.80
22	AN	22	ALA	C-N-CD	-6.96	105.28	120.60
80	B2	1747	G	C2-N3-C4	-6.96	108.42	111.90
81	B5	1149	G	N9-C4-C5	6.96	108.19	105.40
86	CW	75	C	N3-C4-C5	-6.96	119.12	121.90
86	CW	22	G	N1-C6-O6	6.96	124.08	119.90
81	B5	2426	U	N1-C2-O2	6.96	127.67	122.80
81	B5	2249	G	C3'-C2'-C1'	-6.95	95.94	101.50
84	CN	2170	G	O5'-P-OP1	-6.95	99.44	105.70
80	B2	1057	U	C5-C6-N1	6.95	126.18	122.70
81	B5	2732	G	N3-C2-N2	6.95	124.77	119.90
81	B5	3099	C	C5-C6-N1	-6.95	117.53	121.00
81	B5	706	A	C8-N9-C4	6.95	108.58	105.80
81	B5	2362	C	N3-C4-C5	6.95	124.68	121.90
80	B2	360	A	N9-C4-C5	-6.95	103.02	105.80
81	B5	1879	A	C5-N7-C8	-6.94	100.43	103.90
81	B5	1513	G	N7-C8-N9	6.94	116.57	113.10
80	B2	1162	C	C6-N1-C2	-6.94	117.52	120.30
81	B5	857	G	C8-N9-C4	6.94	109.18	106.40
81	B5	2314	U	C5-C6-N1	6.94	126.17	122.70
81	B5	3362	A	C6-C5-N7	-6.94	127.44	132.30
81	B5	751	A	C2-N3-C4	-6.93	107.13	110.60
81	B5	784	A	C5-C6-N6	-6.93	118.15	123.70
81	B5	96	G	C5-C6-O6	6.93	132.76	128.60
81	B5	221	A	C8-N9-C4	6.93	108.57	105.80
81	B5	2917	G	C6-N1-C2	-6.93	120.94	125.10
81	B5	3321	C	C4-C5-C6	6.93	120.87	117.40
86	CW	38	A	C5-C6-N6	-6.93	118.16	123.70
80	B2	981	U	N3-C2-O2	-6.93	117.35	122.20
81	B5	1883	A	N1-C6-N6	-6.93	114.44	118.60
81	B5	3019	U	C2-N3-C4	-6.93	122.84	127.00
81	B5	3374	U	N3-C4-O4	-6.93	114.55	119.40
83	B8	112	U	C2-N1-C1'	-6.93	109.39	117.70
86	CW	14	A	C5-C6-N6	-6.93	118.16	123.70
81	B5	1834	U	N3-C4-O4	-6.93	114.55	119.40
81	B5	2290	C	C6-N1-C2	6.93	123.07	120.30
80	B2	1749	A	N9-C4-C5	-6.93	103.03	105.80
81	B5	1210	U	N3-C2-O2	-6.93	117.35	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	833	G	C6-N1-C2	-6.92	120.94	125.10
81	B5	2978	U	N3-C4-O4	-6.92	114.56	119.40
81	B5	1152	G	N1-C2-N3	6.92	128.05	123.90
80	B2	542	A	C8-N9-C1'	-6.92	115.25	127.70
80	B2	736	C	C6-N1-C1'	-6.92	112.50	120.80
81	B5	942	U	C5-C4-O4	-6.92	121.75	125.90
81	B5	2524	A	C3'-C2'-C1'	-6.92	95.97	101.50
81	B5	3308	C	C6-N1-C2	-6.92	117.53	120.30
81	B5	1875	G	N1-C6-O6	-6.92	115.75	119.90
80	B2	360	A	C8-N9-C4	6.92	108.57	105.80
81	B5	835	G	C5-C6-N1	6.91	114.96	111.50
81	B5	3362	A	C5-C6-N1	-6.91	114.25	117.70
81	B5	2207	A	N1-C6-N6	6.91	122.75	118.60
82	B7	74	C	N1-C2-O2	-6.91	114.75	118.90
49	BO	3[B]	SER	CA-C-N	-6.91	102.00	117.20
81	B5	1238	C	O4'-C1'-N1	6.91	113.72	108.20
81	B5	1263	A	C4-C5-C6	6.91	120.45	117.00
81	B5	1833	G	C8-N9-C4	6.91	109.16	106.40
86	CW	18	G	N1-C6-O6	6.91	124.04	119.90
81	B5	1370	G	N1-C2-N2	-6.90	109.99	116.20
86	CW	14	A	C4-C5-C6	6.90	120.45	117.00
44	BJ	9	MET	N-CA-C	-6.90	92.37	111.00
81	B5	3101	G	C5-C6-O6	6.90	132.74	128.60
81	B5	3176	G	N1-C2-N3	6.90	128.04	123.90
80	B2	607	G	N1-C6-O6	6.90	124.04	119.90
81	B5	3081	C	C4-C5-C6	-6.90	113.95	117.40
80	B2	1146	G	C8-N9-C4	-6.90	103.64	106.40
81	B5	2184	U	C2-N3-C4	-6.90	122.86	127.00
80	B2	92	A	N9-C4-C5	6.89	108.56	105.80
80	B2	313	U	N3-C4-O4	-6.89	114.58	119.40
65	Be	33	ARG	NE-CZ-NH1	6.89	123.75	120.30
81	B5	3070	A	C2-N3-C4	-6.89	107.16	110.60
81	B5	3333	G	C5-C6-O6	-6.89	124.47	128.60
81	B5	933	A	N1-C2-N3	6.88	132.74	129.30
81	B5	864	G	C6-N1-C2	-6.88	120.97	125.10
81	B5	1609	C	N3-C4-N4	6.88	122.82	118.00
81	B5	1941	C	N3-C4-C5	6.88	124.65	121.90
80	B2	453	U	N1-C2-O2	6.88	127.62	122.80
80	B2	1361	U	N1-C2-O2	6.88	127.61	122.80
80	B2	1611	A	N1-C2-N3	6.88	132.74	129.30
81	B5	652	G	C6-N1-C2	-6.88	120.97	125.10
81	B5	1275	C	N3-C4-N4	6.88	122.81	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1903	U	N3-C4-C5	-6.88	110.47	114.60
81	B5	2824	G	C4-C5-N7	-6.87	108.05	110.80
81	B5	2987	A	C5-N7-C8	6.87	107.33	103.90
86	CW	7	A	C4-C5-C6	6.86	120.43	117.00
81	B5	2382	G	N1-C6-O6	-6.86	115.78	119.90
80	B2	1782	A	N7-C8-N9	6.86	117.23	113.80
81	B5	1261	G	C5-C6-O6	-6.86	124.48	128.60
80	B2	305	C	C6-N1-C2	-6.86	117.56	120.30
81	B5	1589	A	C2-N3-C4	6.86	114.03	110.60
81	B5	815	G	C4-C5-N7	-6.86	108.06	110.80
81	B5	2524	A	C4-C5-N7	6.86	114.13	110.70
81	B5	2884	C	N1-C2-O2	-6.86	114.79	118.90
82	B7	112	G	C5-C6-O6	6.86	132.71	128.60
86	CW	40	C	N3-C4-N4	6.85	122.80	118.00
81	B5	693	A	N1-C6-N6	-6.85	114.49	118.60
81	B5	2412	G	N3-C4-C5	-6.85	125.17	128.60
84	CN	2192	A	C4'-C3'-O3'	-6.85	95.01	109.40
81	B5	2830	G	C4-C5-N7	-6.85	108.06	110.80
81	B5	3172	A	C5-N7-C8	6.85	107.33	103.90
81	B5	1327	C	N3-C2-O2	-6.85	117.11	121.90
81	B5	1685	C	N3-C2-O2	-6.85	117.11	121.90
81	B5	2237	C	N1-C2-O2	6.85	123.01	118.90
86	CW	57	G	C5-C6-O6	-6.85	124.49	128.60
37	BC	90	PHE	C-N-CA	-6.84	107.92	122.30
81	B5	1130	A	N1-C2-N3	-6.84	125.88	129.30
81	B5	1205	A	N7-C8-N9	6.84	117.22	113.80
81	B5	1940	G	N1-C6-O6	-6.84	115.79	119.90
80	B2	1318	G	N1-C6-O6	6.84	124.00	119.90
81	B5	327	A	C8-N9-C4	6.84	108.54	105.80
81	B5	2385	G	C2-N3-C4	-6.84	108.48	111.90
81	B5	1406	A	N1-C2-N3	6.84	132.72	129.30
81	B5	1868	G	C8-N9-C4	6.84	109.14	106.40
81	B5	3056	U	N1-C2-N3	6.84	119.00	114.90
81	B5	1481	A	P-O3'-C3'	6.83	127.90	119.70
80	B2	1206	U	N3-C4-O4	6.83	124.18	119.40
81	B5	1652	G	N7-C8-N9	-6.83	109.68	113.10
81	B5	3149	G	C2-N3-C4	-6.83	108.48	111.90
86	CW	74	C	C4'-C3'-C2'	-6.83	95.77	102.60
80	B2	1210	C	N3-C4-C5	-6.83	119.17	121.90
80	B2	934	C	C2-N1-C1'	6.83	126.31	118.80
81	B5	1124	U	N1-C2-O2	6.83	127.58	122.80
81	B5	2389	C	C2-N3-C4	-6.83	116.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2810	C	C4-C5-C6	6.83	120.81	117.40
80	B2	73	U	O4'-C1'-N1	6.83	113.66	108.20
81	B5	881	C	C2-N3-C4	6.83	123.31	119.90
81	B5	1245	A	C4-C5-C6	6.83	120.41	117.00
81	B5	1255	C	P-O5'-C5'	6.83	131.82	120.90
81	B5	838	G	C5-C6-O6	6.82	132.69	128.60
81	B5	2821	C	C6-N1-C2	-6.82	117.57	120.30
82	B7	49	G	C8-N9-C4	6.82	109.13	106.40
80	B2	1190	C	C6-N1-C2	6.82	123.03	120.30
81	B5	622	A	C5-C6-N6	-6.82	118.24	123.70
81	B5	1113	G	N3-C4-C5	6.82	132.01	128.60
81	B5	1369	A	C8-N9-C4	6.82	108.53	105.80
81	B5	2729	U	C5-C6-N1	6.82	126.11	122.70
81	B5	2619	G	C5-C6-O6	-6.82	124.51	128.60
81	B5	3376	A	N7-C8-N9	6.81	117.21	113.80
81	B5	2932	U	N3-C2-O2	-6.81	117.43	122.20
82	B7	50	U	C5-C6-N1	6.81	126.11	122.70
81	B5	1449	A	C6-C5-N7	-6.81	127.53	132.30
81	B5	1843	C	N3-C2-O2	-6.81	117.14	121.90
80	B2	1319	A	N1-C6-N6	6.80	122.68	118.60
81	B5	578	A	C5-C6-N6	-6.80	118.26	123.70
82	B7	11	A	C5-N7-C8	6.80	107.30	103.90
43	BI	48	LEU	CA-CB-CG	6.80	130.94	115.30
81	B5	48	A	C8-N9-C4	-6.80	103.08	105.80
81	B5	1902	G	C6-N1-C2	-6.80	121.02	125.10
81	B5	189	G	N1-C6-O6	-6.80	115.82	119.90
80	B2	1246	C	N3-C2-O2	-6.80	117.14	121.90
81	B5	419	G	N3-C4-N9	6.80	130.08	126.00
86	CW	32	U	O4'-C1'-N1	6.80	113.64	108.20
81	B5	749	C	C6-N1-C2	-6.79	117.58	120.30
81	B5	3105	U	N3-C2-O2	6.79	126.96	122.20
80	B2	240	U	C2-N1-C1'	6.79	125.85	117.70
81	B5	3088	G	N3-C2-N2	6.79	124.65	119.90
81	B5	887	G	C2-N3-C4	-6.79	108.50	111.90
81	B5	960	U	N3-C2-O2	-6.79	117.45	122.20
81	B5	1138	U	N3-C4-C5	6.79	118.67	114.60
81	B5	2692	A	N1-C6-N6	-6.79	114.53	118.60
81	B5	205	C	N3-C2-O2	-6.79	117.15	121.90
81	B5	2705	A	C2-N3-C4	6.79	113.99	110.60
80	B2	142	G	N1-C2-N2	6.79	122.31	116.20
81	B5	345	G	N1-C2-N2	-6.79	110.09	116.20
81	B5	2730	G	C2-N3-C4	-6.79	108.51	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	42	C	N3-C4-N4	6.79	122.75	118.00
81	B5	1417	G	C5-C6-N1	6.78	114.89	111.50
81	B5	1603	A	C8-N9-C4	-6.78	103.09	105.80
81	B5	3313	U	C5-C4-O4	6.78	129.97	125.90
81	B5	2401	A	C2-N3-C4	6.78	113.99	110.60
81	B5	888	A	C5-C6-N1	-6.78	114.31	117.70
86	CW	4	C	O4'-C1'-N1	6.78	113.62	108.20
81	B5	3050	U	N3-C4-O4	-6.78	114.66	119.40
81	B5	1297	C	N1-C2-O2	-6.78	114.83	118.90
81	B5	2246	G	C8-N9-C4	-6.78	103.69	106.40
81	B5	3076	C	C2-N3-C4	-6.78	116.51	119.90
80	B2	89	G	N7-C8-N9	-6.78	109.71	113.10
81	B5	1941	C	C2-N3-C4	-6.78	116.51	119.90
81	B5	3375	A	C2-N3-C4	6.78	113.99	110.60
81	B5	587	U	N3-C4-C5	6.77	118.66	114.60
81	B5	1253	U	O4'-C1'-N1	6.77	113.62	108.20
81	B5	2647	A	N1-C6-N6	-6.77	114.54	118.60
81	B5	1448	U	C2-N3-C4	-6.77	122.94	127.00
81	B5	2422	C	N1-C2-O2	6.77	122.96	118.90
81	B5	400	G	C4-C5-N7	6.77	113.51	110.80
81	B5	652	G	N1-C2-N3	6.77	127.96	123.90
81	B5	1197	A	N1-C2-N3	6.77	132.68	129.30
81	B5	41	G	C4-C5-N7	6.76	113.51	110.80
81	B5	146	U	C5-C4-O4	6.76	129.96	125.90
81	B5	2685	C	C2-N3-C4	-6.76	116.52	119.90
81	B5	2920	U	C2-N3-C4	-6.76	122.94	127.00
4	A3	36	LEU	CA-CB-CG	6.76	130.85	115.30
81	B5	95	A	C5-C6-N6	-6.76	118.29	123.70
81	B5	1556	C	C6-N1-C2	-6.76	117.60	120.30
83	B8	23	U	N1-C2-N3	6.76	118.95	114.90
81	B5	2693	C	N1-C2-O2	6.75	122.95	118.90
86	CW	59	U	O4'-C1'-N1	6.75	113.60	108.20
80	B2	1195	C	C6-N1-C2	-6.75	117.60	120.30
81	B5	644	G	N3-C4-C5	-6.75	125.22	128.60
81	B5	2317	A	N7-C8-N9	6.75	117.17	113.80
81	B5	2434	U	C5-C4-O4	6.75	129.95	125.90
86	CW	34	G	N1-C6-O6	6.75	123.95	119.90
80	B2	410	A	C8-N9-C4	6.75	108.50	105.80
81	B5	63	A	N1-C6-N6	6.75	122.65	118.60
81	B5	2359	C	C6-N1-C2	6.75	123.00	120.30
83	B8	38	U	C4-C5-C6	6.75	123.75	119.70
81	B5	776	U	N3-C4-O4	-6.75	114.68	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2135	U	C6-N1-C2	6.75	125.05	121.00
81	B5	2695	A	N7-C8-N9	6.75	117.17	113.80
81	B5	2400	G	N3-C4-C5	6.75	131.97	128.60
81	B5	1044	U	C5-C6-N1	-6.74	119.33	122.70
81	B5	1421	G	C2-N3-C4	-6.74	108.53	111.90
81	B5	1469	C	C6-N1-C2	-6.74	117.60	120.30
81	B5	1652	G	C5-N7-C8	6.74	107.67	104.30
80	B2	1521	G	N3-C4-C5	-6.74	125.23	128.60
81	B5	322	U	C5-C4-O4	-6.74	121.86	125.90
81	B5	564	G	C4-C5-N7	-6.74	108.10	110.80
81	B5	890	C	N3-C4-C5	6.74	124.59	121.90
81	B5	1056	U	N3-C4-O4	6.74	124.12	119.40
81	B5	2820	A	C6-N1-C2	-6.74	114.56	118.60
81	B5	3140	G	N1-C6-O6	6.74	123.94	119.90
81	B5	2584	G	C8-N9-C1'	-6.73	118.25	127.00
82	B7	22	A	N1-C6-N6	6.73	122.64	118.60
81	B5	215	G	C8-N9-C4	-6.73	103.71	106.40
81	B5	3309	G	C5-C6-O6	-6.73	124.56	128.60
86	CW	67	C	N3-C4-N4	6.73	122.71	118.00
81	B5	614	C	C6-N1-C2	6.73	122.99	120.30
81	B5	1389	G	C6-C5-N7	-6.73	126.36	130.40
80	B2	1006	C	C6-N1-C2	-6.73	117.61	120.30
81	B5	1134	G	C5-C6-N1	6.72	114.86	111.50
81	B5	3216	G	C6-C5-N7	-6.72	126.36	130.40
85	CP	244	GLY	N-CA-C	6.72	129.91	113.10
81	B5	1159	A	C4-C5-N7	6.72	114.06	110.70
80	B2	736	C	C5-C6-N1	6.72	124.36	121.00
81	B5	1375	G	C2-N3-C4	6.72	115.26	111.90
81	B5	3140	G	C5-C6-O6	-6.72	124.57	128.60
81	B5	615	U	C5-C4-O4	-6.72	121.87	125.90
81	B5	1274	A	C4-C5-C6	6.72	120.36	117.00
81	B5	1910	A	N7-C8-N9	-6.72	110.44	113.80
81	B5	2868	U	N3-C4-C5	6.72	118.63	114.60
81	B5	2899	C	C4-C5-C6	6.72	120.76	117.40
53	BS	40	ARG	CG-CD-NE	6.72	125.90	111.80
81	B5	2664	C	N3-C4-C5	6.72	124.59	121.90
81	B5	2743	A	C5-N7-C8	6.72	107.26	103.90
80	B2	539	G	N7-C8-N9	6.71	116.46	113.10
84	CN	2197	A	O5'-P-OP2	6.71	118.76	110.70
86	CW	35	A	C4-C5-C6	6.71	120.36	117.00
81	B5	2403	G	C5-N7-C8	6.71	107.66	104.30
83	B8	42	G	C4-N9-C1'	-6.71	117.77	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	553	G	N1-C2-N2	6.71	122.24	116.20
81	B5	908	G	C4-N9-C1'	6.71	135.23	126.50
81	B5	2279	A	N1-C2-N3	6.71	132.66	129.30
81	B5	2767	U	C5-C4-O4	6.71	129.93	125.90
81	B5	2892	A	N9-C4-C5	6.71	108.48	105.80
81	B5	2145	A	N1-C6-N6	-6.71	114.58	118.60
80	B2	1762	A	C8-N9-C4	6.71	108.48	105.80
81	B5	1312	C	C6-N1-C2	-6.71	117.62	120.30
81	B5	2929	C	N1-C2-O2	-6.71	114.88	118.90
86	CW	64	A	C5-C6-N6	-6.71	118.33	123.70
47	BM	72	LEU	CA-CB-CG	6.71	130.72	115.30
81	B5	1686	U	C5-C4-O4	-6.70	121.88	125.90
81	B5	2411	U	N3-C4-O4	-6.70	114.71	119.40
80	B2	1258	U	C5-C4-O4	6.70	129.92	125.90
81	B5	2341	A	N9-C4-C5	-6.70	103.12	105.80
81	B5	620	U	C5-C6-N1	6.70	126.05	122.70
81	B5	1392	G	N9-C4-C5	-6.70	102.72	105.40
81	B5	1911	A	C5-C6-N6	-6.70	118.34	123.70
86	CW	40	C	O4'-C1'-N1	6.70	113.56	108.20
81	B5	1496	C	C2-N1-C1'	6.70	126.17	118.80
80	B2	783	G	N9-C4-C5	-6.70	102.72	105.40
81	B5	1116	G	N9-C4-C5	6.70	108.08	105.40
81	B5	835	G	C6-N1-C2	-6.70	121.08	125.10
81	B5	1228	C	N3-C4-N4	6.70	122.69	118.00
81	B5	3336	A	N1-C2-N3	6.70	132.65	129.30
80	B2	192	U	C2-N1-C1'	6.69	125.73	117.70
81	B5	1159	A	N1-C2-N3	-6.69	125.95	129.30
83	B8	25	G	C5-C6-O6	6.69	132.62	128.60
81	B5	2201	G	N1-C6-O6	-6.69	115.89	119.90
81	B5	355	A	N1-C2-N3	6.69	132.64	129.30
81	B5	649	A	C8-N9-C4	-6.69	103.12	105.80
35	BA	246	LEU	CA-CB-CG	6.69	130.68	115.30
81	B5	518	G	C4-C5-N7	6.69	113.47	110.80
81	B5	2407	C	C5-C4-N4	-6.69	115.52	120.20
81	B5	1206	G	C8-N9-C4	-6.68	103.73	106.40
82	B7	25	G	N1-C6-O6	6.68	123.91	119.90
81	B5	1229	G	C5'-C4'-C3'	6.68	126.69	116.00
81	B5	2231	C	C4-C5-C6	6.68	120.74	117.40
81	B5	3049	A	C6-N1-C2	6.68	122.61	118.60
80	B2	838	G	C8-N9-C4	6.68	109.07	106.40
81	B5	3039	C	C6-N1-C2	-6.68	117.63	120.30
81	B5	669	U	C2-N3-C4	-6.68	122.99	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	413	U	C4-C5-C6	6.67	123.70	119.70
81	B5	2391	G	N7-C8-N9	6.67	116.44	113.10
46	BL	171	ARG	NE-CZ-NH2	-6.67	116.96	120.30
80	B2	266	A	N9-C4-C5	-6.67	103.13	105.80
81	B5	930	U	C4-C5-C6	-6.67	115.70	119.70
81	B5	376	G	C2-N3-C4	6.67	115.23	111.90
81	B5	2908	G	C5-C6-O6	6.67	132.60	128.60
80	B2	1679	G	N3-C4-C5	-6.67	125.27	128.60
81	B5	413	U	C5-C6-N1	-6.67	119.37	122.70
81	B5	1359	C	C5-C4-N4	-6.67	115.53	120.20
81	B5	1392	G	C5-N7-C8	6.67	107.63	104.30
85	CP	210	TRP	CE2-CD2-CG	-6.67	101.97	107.30
81	B5	3266	G	N1-C6-O6	-6.66	115.90	119.90
81	B5	600	G	N7-C8-N9	6.66	116.43	113.10
81	B5	1042	U	N1-C2-O2	6.66	127.46	122.80
81	B5	1057	A	N9-C4-C5	-6.66	103.14	105.80
81	B5	2717	U	N1-C2-N3	6.66	118.90	114.90
80	B2	340	U	N1-C2-O2	6.66	127.46	122.80
81	B5	1844	C	N1-C2-O2	-6.66	114.91	118.90
81	B5	3138	U	N1-C2-N3	6.66	118.89	114.90
81	B5	1232	C	C1'-O4'-C4'	-6.65	104.58	109.90
81	B5	2889	C	N3-C2-O2	-6.65	117.24	121.90
80	B2	608	U	N1-C2-N3	6.65	118.89	114.90
81	B5	966	U	C2-N3-C4	-6.65	123.01	127.00
81	B5	2357	A	N1-C6-N6	6.65	122.59	118.60
81	B5	2811	A	C6-N1-C2	-6.65	114.61	118.60
81	B5	1307	G	C2-N3-C4	6.65	115.22	111.90
81	B5	436	A	N7-C8-N9	6.65	117.12	113.80
81	B5	1042	U	C5-C4-O4	6.65	129.89	125.90
81	B5	2309	A	N1-C2-N3	-6.65	125.98	129.30
81	B5	1235	U	O4'-C1'-N1	6.65	113.52	108.20
80	B2	566	C	N1-C2-O2	6.64	122.89	118.90
80	B2	1297	G	C8-N9-C4	6.64	109.06	106.40
81	B5	1409	G	C5-C6-O6	6.64	132.59	128.60
81	B5	2961	G	C5-C6-O6	6.64	132.59	128.60
80	B2	687	G	N3-C2-N2	-6.64	115.25	119.90
81	B5	986	U	N3-C4-O4	6.64	124.05	119.40
81	B5	669	U	C4-C5-C6	6.64	123.68	119.70
81	B5	1342	C	C4-C5-C6	6.64	120.72	117.40
81	B5	2292	U	C2-N1-C1'	6.64	125.67	117.70
81	B5	625	G	N9-C4-C5	6.64	108.06	105.40
81	B5	990	U	N3-C2-O2	-6.64	117.55	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2392	C	N1-C2-O2	-6.64	114.92	118.90
81	B5	644	G	C8-N9-C4	-6.64	103.75	106.40
81	B5	1439	U	C2-N3-C4	-6.64	123.02	127.00
81	B5	3335	A	C2-N3-C4	-6.64	107.28	110.60
81	B5	1233	G	N1-C6-O6	6.63	123.88	119.90
81	B5	3214	U	N1-C2-O2	6.63	127.44	122.80
81	B5	1260	A	P-O3'-C3'	6.63	127.66	119.70
81	B5	1882	G	C4-C5-N7	-6.63	108.15	110.80
81	B5	2169	G	C2-N3-C4	6.63	115.22	111.90
86	CW	68	C	O4'-C1'-N1	6.63	113.50	108.20
81	B5	1754	G	N1-C6-O6	-6.63	115.92	119.90
81	B5	1848	G	C6-C5-N7	-6.63	126.42	130.40
81	B5	3128	G	C5-C6-O6	-6.63	124.62	128.60
86	CW	36	A	C4-C5-C6	6.63	120.31	117.00
81	B5	1146	C	N3-C2-O2	-6.63	117.26	121.90
81	B5	2347	U	N3-C4-O4	-6.63	114.76	119.40
81	B5	2377	G	C2-N3-C4	6.62	115.21	111.90
81	B5	1007	U	C5-C6-N1	-6.62	119.39	122.70
81	B5	3244	A	C2-N3-C4	-6.62	107.29	110.60
81	B5	1262	G	C6-C5-N7	-6.62	126.43	130.40
81	B5	1516	C	C5-C6-N1	-6.62	117.69	121.00
81	B5	1931	U	N3-C4-O4	-6.62	114.77	119.40
81	B5	2207	A	C6-C5-N7	-6.62	127.67	132.30
81	B5	267	G	N9-C4-C5	-6.62	102.75	105.40
81	B5	721	G	C5-C6-N1	6.62	114.81	111.50
80	B2	557	G	C4-N9-C1'	6.61	135.10	126.50
81	B5	145	G	N3-C4-N9	-6.61	122.03	126.00
81	B5	1049	C	C4-C5-C6	-6.61	114.09	117.40
81	B5	3007	U	N3-C4-C5	6.61	118.57	114.60
82	B7	57	G	C4-C5-N7	-6.61	108.16	110.80
81	B5	828	A	N3-C4-C5	-6.61	122.17	126.80
81	B5	3306	U	C5-C6-N1	-6.61	119.39	122.70
81	B5	2675	C	N1-C2-O2	-6.61	114.94	118.90
81	B5	361	A	N1-C6-N6	-6.61	114.64	118.60
81	B5	1890	U	C5-C6-N1	-6.61	119.40	122.70
81	B5	3185	U	C5-C6-N1	-6.61	119.40	122.70
81	B5	792	G	N1-C2-N3	6.60	127.86	123.90
81	B5	1236	G	C5-C6-O6	-6.60	124.64	128.60
81	B5	420	G	N3-C4-C5	-6.60	125.30	128.60
81	B5	934	G	C2-N3-C4	6.60	115.20	111.90
81	B5	2549	G	C6-C5-N7	-6.60	126.44	130.40
83	B8	24	G	N1-C6-O6	-6.60	115.94	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1722	U	N3-C2-O2	6.60	126.82	122.20
81	B5	1876	U	C5-C6-N1	6.60	126.00	122.70
81	B5	1448	U	N1-C2-O2	-6.60	118.18	122.80
81	B5	1245	A	C5-C6-N1	-6.60	114.40	117.70
85	CP	16	THR	N-CA-C	-6.60	93.19	111.00
86	CW	1	G	P-O3'-C3'	-6.60	111.78	119.70
83	B8	59	A	C2-N3-C4	6.60	113.90	110.60
37	BC	138	ARG	NE-CZ-NH2	-6.59	117.00	120.30
81	B5	1208	U	C5-C6-N1	-6.59	119.40	122.70
81	B5	1283	C	O4'-C1'-N1	6.59	113.47	108.20
81	B5	2851	A	C8-N9-C4	6.59	108.44	105.80
81	B5	3324	C	C6-N1-C2	6.59	122.94	120.30
81	B5	2719	U	C6-N1-C1'	6.59	130.43	121.20
81	B5	2954	U	C2-N1-C1'	6.59	125.61	117.70
81	B5	3153	U	N1-C2-O2	6.59	127.41	122.80
81	B5	880	G	C5-C6-O6	-6.59	124.65	128.60
81	B5	2617	U	N3-C4-O4	-6.59	114.79	119.40
81	B5	2984	C	C2-N3-C4	-6.59	116.61	119.90
81	B5	1242	G	C5-C6-O6	-6.59	124.65	128.60
17	AI	172	ARG	NE-CZ-NH1	6.58	123.59	120.30
81	B5	1225	A	C4-C5-C6	6.58	120.29	117.00
81	B5	1901	A	C4-C5-C6	6.58	120.29	117.00
81	B5	360	G	C8-N9-C4	6.58	109.03	106.40
81	B5	784	A	C6-C5-N7	-6.58	127.69	132.30
81	B5	1255	C	O4'-C1'-N1	6.58	113.47	108.20
81	B5	3303	G	N3-C2-N2	6.58	124.51	119.90
81	B5	3306	U	C6-N1-C2	6.58	124.95	121.00
86	CW	73	A	C4-C5-C6	6.58	120.29	117.00
81	B5	2114	C	C6-N1-C2	-6.58	117.67	120.30
81	B5	1229	G	N3-C2-N2	6.58	124.50	119.90
81	B5	3333	G	N1-C6-O6	6.58	123.85	119.90
80	B2	1462	G	N9-C4-C5	-6.58	102.77	105.40
81	B5	1151	U	C4-C5-C6	-6.58	115.75	119.70
81	B5	1365	G	C8-N9-C1'	-6.58	118.45	127.00
81	B5	2957	G	C8-N9-C4	6.58	109.03	106.40
81	B5	3025	C	C5-C4-N4	6.58	124.80	120.20
81	B5	640	U	N3-C2-O2	-6.57	117.60	122.20
82	B7	68	C	C2-N3-C4	-6.57	116.61	119.90
81	B5	2746	A	C8-N9-C4	6.57	108.43	105.80
81	B5	828	A	C2-N3-C4	6.57	113.89	110.60
81	B5	2147	A	N1-C6-N6	6.57	122.54	118.60
81	B5	1906	G	N1-C2-N3	6.57	127.84	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	859	G	N9-C4-C5	6.57	108.03	105.40
81	B5	3122	A	C4-C5-C6	6.57	120.28	117.00
81	B5	925	A	C4-C5-C6	6.56	120.28	117.00
81	B5	2124	G	C8-N9-C4	6.56	109.03	106.40
82	B7	92	A	C5-N7-C8	-6.56	100.62	103.90
36	BB	21	ARG	NE-CZ-NH1	6.56	123.58	120.30
81	B5	3263	G	N3-C2-N2	6.56	124.49	119.90
81	B5	424	G	N3-C2-N2	6.56	124.49	119.90
81	B5	3115	C	N1-C2-O2	-6.56	114.96	118.90
80	B2	557	G	C8-N9-C1'	-6.56	118.48	127.00
81	B5	2626	A	C4-C5-N7	-6.56	107.42	110.70
80	B2	131	C	C6-N1-C2	-6.56	117.68	120.30
81	B5	370	U	C6-N1-C2	-6.56	117.07	121.00
81	B5	1131	G	C2-N3-C4	-6.56	108.62	111.90
80	B2	1274	C	N3-C4-N4	-6.55	113.41	118.00
81	B5	345	G	N3-C2-N2	6.55	124.49	119.90
81	B5	369	A	N9-C4-C5	6.55	108.42	105.80
81	B5	2866	U	N1-C2-O2	-6.55	118.21	122.80
81	B5	386	A	C6-C5-N7	-6.55	127.71	132.30
80	B2	965	U	C5-C6-N1	6.55	125.98	122.70
81	B5	332	C	C4-C5-C6	6.55	120.67	117.40
81	B5	2904	U	C5-C6-N1	-6.55	119.42	122.70
81	B5	3376	A	N9-C4-C5	6.55	108.42	105.80
81	B5	675	C	N3-C4-N4	6.55	122.58	118.00
84	CN	2173	G	O5'-P-OP1	-6.55	99.81	105.70
81	B5	641	C	C2-N1-C1'	-6.55	111.60	118.80
81	B5	2258	U	N3-C2-O2	-6.55	117.62	122.20
81	B5	1408	G	N3-C4-N9	-6.55	122.07	126.00
81	B5	1518	U	N3-C4-C5	6.55	118.53	114.60
81	B5	3148	U	C5-C4-O4	-6.55	121.97	125.90
43	BI	10	ARG	NE-CZ-NH1	-6.54	117.03	120.30
81	B5	815	G	C5-C6-O6	6.54	132.53	128.60
81	B5	2626	A	C5-C6-N1	-6.54	114.43	117.70
81	B5	3270	U	N3-C4-O4	-6.54	114.82	119.40
80	B2	647	G	N3-C2-N2	-6.54	115.32	119.90
81	B5	1004	U	N3-C2-O2	-6.54	117.62	122.20
81	B5	1138	U	C2-N3-C4	-6.54	123.07	127.00
81	B5	1211	U	N3-C4-C5	6.54	118.53	114.60
81	B5	1259	A	C4-C5-C6	6.54	120.27	117.00
86	CW	61	C	O4'-C1'-N1	6.54	113.43	108.20
81	B5	226	C	N3-C4-C5	6.54	124.52	121.90
81	B5	1215	U	N3-C4-O4	6.54	123.98	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3310	A	N1-C6-N6	-6.54	114.68	118.60
80	B2	558	U	C2-N1-C1'	6.54	125.55	117.70
81	B5	692	A	N1-C2-N3	-6.54	126.03	129.30
66	Bf	49	ILE	CB-CA-C	-6.53	98.53	111.60
81	B5	1897	G	C5-C6-O6	-6.53	124.68	128.60
81	B5	3289	G	N7-C8-N9	6.53	116.37	113.10
43	BI	182	LEU	CA-CB-CG	-6.53	100.28	115.30
81	B5	2699	G	N1-C6-O6	6.53	123.82	119.90
81	B5	1240	A	C4-C5-C6	6.53	120.27	117.00
81	B5	2303	A	N3-C4-C5	-6.53	122.23	126.80
81	B5	2518	C	C5-C6-N1	-6.53	117.73	121.00
81	B5	783	A	N1-C6-N6	6.53	122.52	118.60
81	B5	217	U	C5-C6-N1	-6.53	119.44	122.70
81	B5	1151	U	N3-C4-C5	6.53	118.52	114.60
81	B5	2320	A	N1-C2-N3	6.53	132.56	129.30
81	B5	2884	C	N1-C2-N3	6.53	123.77	119.20
83	B8	54	A	C5-N7-C8	-6.53	100.64	103.90
81	B5	1284	C	C2'-C3'-O3'	6.52	124.14	113.70
80	B2	1282	U	C5-C4-O4	6.52	129.81	125.90
81	B5	2385	G	C8-N9-C4	6.52	109.01	106.40
81	B5	3190	C	C6-N1-C2	-6.52	117.69	120.30
81	B5	3341	U	C6-N1-C2	-6.52	117.09	121.00
81	B5	1408	G	N3-C4-C5	6.52	131.86	128.60
81	B5	2301	U	C5-C6-N1	-6.52	119.44	122.70
81	B5	299	G	C2-N3-C4	6.52	115.16	111.90
81	B5	584	G	C5-C6-O6	6.51	132.51	128.60
81	B5	1200	A	C4-C5-C6	6.51	120.26	117.00
80	B2	1473	U	N3-C2-O2	-6.51	117.64	122.20
83	B8	6	U	C5-C6-N1	-6.51	119.44	122.70
81	B5	2257	C	N3-C2-O2	-6.51	117.34	121.90
82	B7	20	A	C5-C6-N6	-6.51	118.50	123.70
80	B2	6	G	N1-C2-N3	6.50	127.80	123.90
81	B5	1256	G	N1-C6-O6	6.50	123.80	119.90
8	A7	134	ASP	OD1-CG-OD2	-6.50	110.94	123.30
81	B5	884	A	N3-C4-N9	-6.50	122.20	127.40
80	B2	136	C	N1-C2-O2	6.50	122.80	118.90
81	B5	3105	U	N1-C2-O2	-6.50	118.25	122.80
80	B2	355	G	C6-N1-C2	-6.50	121.20	125.10
81	B5	2336	U	N3-C4-O4	-6.50	114.85	119.40
82	B7	12	U	N3-C4-C5	6.50	118.50	114.60
81	B5	1256	G	C5-C6-O6	-6.50	124.70	128.60
86	CW	43	C	C6-N1-C1'	-6.50	113.00	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	132	U	C2-N1-C1'	-6.50	109.90	117.70
81	B5	429	U	N3-C4-C5	6.50	118.50	114.60
81	B5	2320	A	C5-N7-C8	6.50	107.15	103.90
81	B5	290	G	N3-C2-N2	6.49	124.45	119.90
81	B5	2351	U	N3-C4-O4	-6.49	114.86	119.40
83	B8	11	C	C4-C5-C6	6.49	120.65	117.40
81	B5	1259	A	O4'-C1'-N9	6.49	113.39	108.20
81	B5	2314	U	C2-N1-C1'	6.49	125.49	117.70
81	B5	2833	A	C8-N9-C4	6.49	108.40	105.80
80	B2	1422	A	C8-N9-C4	6.49	108.40	105.80
81	B5	393	U	N3-C2-O2	-6.49	117.66	122.20
81	B5	2440	G	N7-C8-N9	6.49	116.34	113.10
81	B5	2849	C	C5-C6-N1	6.49	124.24	121.00
81	B5	1231	A	C4-C5-C6	6.49	120.24	117.00
80	B2	1455	G	N1-C6-O6	6.49	123.79	119.90
81	B5	2647	A	C8-N9-C4	-6.49	103.21	105.80
81	B5	3330	A	N1-C6-N6	-6.49	114.71	118.60
80	B2	1503	A	N1-C2-N3	6.48	132.54	129.30
81	B5	1434	G	C8-N9-C4	6.48	108.99	106.40
81	B5	1788	C	N3-C4-C5	-6.48	119.31	121.90
81	B5	3043	C	N3-C4-C5	6.48	124.49	121.90
81	B5	343	U	C5-C6-N1	-6.48	119.46	122.70
81	B5	370	U	N3-C2-O2	-6.48	117.67	122.20
81	B5	518	G	N1-C6-O6	6.48	123.79	119.90
81	B5	894	G	C5-C6-O6	-6.48	124.71	128.60
81	B5	1215	U	C5-C4-O4	-6.48	122.01	125.90
48	BN	68	ARG	NE-CZ-NH1	6.48	123.54	120.30
8	A7	134	ASP	CB-CG-OD2	-6.47	112.47	118.30
64	Bd	90	PHE	CB-CA-C	-6.47	97.45	110.40
81	B5	1402	C	C4-C5-C6	6.47	120.64	117.40
81	B5	3126	C	N3-C4-C5	6.47	124.49	121.90
81	B5	3306	U	N3-C4-C5	6.47	118.48	114.60
81	B5	2837	A	C2-N3-C4	6.47	113.84	110.60
81	B5	3186	A	N9-C4-C5	6.47	108.39	105.80
81	B5	963	G	C5-C6-O6	-6.47	124.72	128.60
81	B5	3004	C	C5-C4-N4	-6.47	115.67	120.20
80	B2	1536	G	N3-C4-N9	6.47	129.88	126.00
81	B5	1190	A	C5-C6-N6	6.47	128.88	123.70
81	B5	3175	U	N3-C4-C5	-6.47	110.72	114.60
81	B5	2433	U	N3-C4-C5	6.47	118.48	114.60
81	B5	2993	G	N9-C4-C5	-6.47	102.81	105.40
49	BO	27[B]	VAL	C-N-CA	6.46	137.86	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	1024	U	N3-C2-O2	-6.46	117.68	122.20
81	B5	435	C	C2-N3-C4	-6.46	116.67	119.90
82	B7	1	G	C4-N9-C1'	6.46	134.90	126.50
86	CW	51	U	O4'-C1'-N1	6.46	113.37	108.20
81	B5	519	A	C5-C6-N6	-6.46	118.53	123.70
81	B5	2211	U	C5-C6-N1	-6.46	119.47	122.70
81	B5	1161	G	N7-C8-N9	-6.46	109.87	113.10
80	B2	1235	C	N1-C2-O2	-6.46	115.03	118.90
81	B5	651	G	C8-N9-C4	-6.46	103.82	106.40
81	B5	1392	G	C8-N9-C1'	-6.46	118.60	127.00
81	B5	2719	U	C5-C6-N1	-6.46	119.47	122.70
81	B5	950	G	N3-C2-N2	6.46	124.42	119.90
81	B5	916	G	C8-N9-C4	-6.46	103.82	106.40
81	B5	3167	A	N7-C8-N9	6.46	117.03	113.80
80	B2	554	C	C2-N1-C1'	6.45	125.90	118.80
81	B5	1215	U	N1-C2-O2	-6.45	118.28	122.80
80	B2	407	A	C4-C5-C6	6.45	120.22	117.00
80	B2	1169	G	N7-C8-N9	6.45	116.33	113.10
81	B5	2998	U	C5-C6-N1	-6.45	119.47	122.70
80	B2	830	U	N3-C2-O2	-6.45	117.69	122.20
81	B5	1399	A	C8-N9-C4	6.45	108.38	105.80
81	B5	940	G	C8-N9-C4	-6.45	103.82	106.40
81	B5	2146	C	C6-N1-C2	-6.45	117.72	120.30
81	B5	2891	U	C5-C6-N1	-6.44	119.48	122.70
81	B5	3006	A	N3-C4-N9	-6.44	122.25	127.40
81	B5	1283	C	C5'-C4'-C3'	6.44	126.31	116.00
81	B5	2345	A	C5-C6-N6	-6.44	118.55	123.70
81	B5	2375	G	C5-C6-N1	6.44	114.72	111.50
81	B5	2964	G	N7-C8-N9	-6.44	109.88	113.10
82	B7	38	U	C6-N1-C1'	-6.44	112.18	121.20
81	B5	1851	G	C4-C5-C6	6.44	122.66	118.80
81	B5	1298	C	N1-C2-O2	-6.44	115.04	118.90
81	B5	2817	A	C6-N1-C2	-6.44	114.74	118.60
80	B2	732	G	N9-C4-C5	-6.44	102.83	105.40
81	B5	2662	G	C3'-C2'-C1'	-6.44	96.35	101.50
81	B5	824	C	C4-C5-C6	6.43	120.62	117.40
81	B5	2431	C	N3-C4-C5	-6.43	119.33	121.90
85	CP	81	GLU	C-N-CA	6.43	137.79	121.70
80	B2	1200	G	C4-C5-C6	6.43	122.66	118.80
81	B5	947	G	N1-C6-O6	-6.43	116.04	119.90
81	B5	1496	C	C6-N1-C2	-6.43	117.73	120.30
81	B5	2246	G	N3-C4-C5	-6.43	125.38	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	28	C	N3-C4-C5	6.43	124.47	121.90
80	B2	266	A	C8-N9-C4	6.43	108.37	105.80
80	B2	628	G	N3-C2-N2	6.43	124.40	119.90
80	B2	1758	U	C6-N1-C2	-6.43	117.14	121.00
83	B8	111	A	C2-N3-C4	-6.43	107.39	110.60
81	B5	971	G	N1-C2-N2	6.43	121.98	116.20
81	B5	1271	A	C5-C6-N6	-6.43	118.56	123.70
81	B5	436	A	C4-N9-C1'	6.43	137.87	126.30
81	B5	2351	U	N3-C2-O2	-6.43	117.70	122.20
81	B5	2754	G	N3-C2-N2	6.43	124.40	119.90
80	B2	610	G	C4-N9-C1'	6.42	134.85	126.50
81	B5	1749	A	C8-N9-C4	6.42	108.37	105.80
81	B5	1843	C	C2-N1-C1'	6.42	125.87	118.80
80	B2	68	A	C8-N9-C4	-6.42	103.23	105.80
80	B2	1085	G	N3-C2-N2	6.42	124.39	119.90
81	B5	2288	G	N3-C4-C5	-6.42	125.39	128.60
86	CW	26	A	C5-C6-N6	-6.42	118.56	123.70
81	B5	1607	U	N1-C2-N3	6.42	118.75	114.90
81	B5	2800	G	N9-C4-C5	6.42	107.97	105.40
81	B5	2930	A	N1-C6-N6	-6.42	114.75	118.60
81	B5	1147	G	N7-C8-N9	-6.42	109.89	113.10
81	B5	2302	G	N1-C2-N2	-6.42	110.42	116.20
83	B8	29	U	C2-N3-C4	-6.42	123.15	127.00
81	B5	2894	C	N3-C4-C5	6.42	124.47	121.90
80	B2	404	G	C5-C6-O6	-6.41	124.75	128.60
81	B5	284	A	C2-N3-C4	6.41	113.81	110.60
81	B5	679	U	C5-C6-N1	-6.41	119.49	122.70
81	B5	1390	A	C5-C6-N6	6.41	128.83	123.70
81	B5	2288	G	C5-C6-O6	-6.41	124.75	128.60
86	CW	58	A	C4-C5-C6	6.41	120.21	117.00
80	B2	1027	A	N7-C8-N9	6.41	117.00	113.80
81	B5	833	G	N1-C2-N3	6.41	127.75	123.90
81	B5	1270	A	C4-C5-C6	6.41	120.21	117.00
81	B5	1907	C	N1-C2-O2	-6.41	115.05	118.90
81	B5	3187	A	C4-C5-N7	-6.41	107.50	110.70
80	B2	144	U	C6-N1-C2	-6.41	117.16	121.00
81	B5	3303	G	N1-C2-N2	-6.41	110.43	116.20
81	B5	1518	U	N1-C2-O2	6.41	127.28	122.80
80	B2	1185	U	C2-N1-C1'	6.40	125.39	117.70
81	B5	3354	U	N3-C2-O2	-6.40	117.72	122.20
38	BD	248	ARG	NE-CZ-NH2	-6.40	117.10	120.30
81	B5	1929	G	C8-N9-C4	6.40	108.96	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	943	U	C5-C6-N1	-6.40	119.50	122.70
81	B5	2396	G	N3-C4-C5	-6.40	125.40	128.60
81	B5	2857	C	C6-N1-C2	6.40	122.86	120.30
82	B7	40	C	N1-C2-O2	-6.40	115.06	118.90
81	B5	2817	A	N3-C4-C5	-6.40	122.32	126.80
81	B5	652	G	N3-C4-N9	6.40	129.84	126.00
81	B5	2123	G	C2-N3-C4	6.40	115.10	111.90
81	B5	667	C	N3-C4-C5	6.40	124.46	121.90
81	B5	1041	U	C6-N1-C2	6.40	124.84	121.00
81	B5	2631	U	N1-C2-N3	6.39	118.74	114.90
81	B5	2802	A	N1-C2-N3	-6.39	126.10	129.30
83	B8	19	C	C4-C5-C6	6.39	120.60	117.40
81	B5	2633	U	C5-C6-N1	-6.39	119.50	122.70
80	B2	1000	C	N1-C2-O2	6.39	122.73	118.90
81	B5	1902	G	N3-C4-N9	6.39	129.83	126.00
81	B5	2879	C	N1-C2-O2	6.39	122.73	118.90
86	CW	31	A	O4'-C1'-N9	6.39	113.31	108.20
81	B5	1321	G	C5-C6-N1	-6.39	108.31	111.50
32	AX	33	LEU	CA-CB-CG	-6.39	100.61	115.30
80	B2	1430	U	C5-C4-O4	6.39	129.73	125.90
81	B5	648	C	C6-N1-C2	-6.39	117.75	120.30
81	B5	2677	G	N3-C2-N2	-6.38	115.43	119.90
82	B7	93	C	C4-C5-C6	6.38	120.59	117.40
80	B2	1096	C	N3-C2-O2	-6.38	117.43	121.90
80	B2	75	U	N1-C2-O2	6.38	127.27	122.80
86	CW	74	C	P-O3'-C3'	6.38	127.36	119.70
80	B2	942	G	N1-C6-O6	-6.38	116.07	119.90
81	B5	1793	C	C2-N3-C4	6.38	123.09	119.90
81	B5	2305	G	C4-C5-N7	6.38	113.35	110.80
81	B5	3245	A	C5-C6-N6	-6.38	118.60	123.70
81	B5	1879	A	C4-C5-N7	6.38	113.89	110.70
81	B5	2340	U	C2-N3-C4	-6.38	123.17	127.00
81	B5	2365	C	C5-C4-N4	6.38	124.66	120.20
81	B5	2611	U	C4-C5-C6	6.38	123.53	119.70
81	B5	2625	C	N3-C2-O2	-6.38	117.44	121.90
83	B8	29	U	N1-C2-N3	6.38	118.72	114.90
65	Be	45	ARG	NE-CZ-NH1	6.37	123.49	120.30
81	B5	75	G	C5-C6-O6	-6.37	124.78	128.60
81	B5	600	G	C8-N9-C4	-6.37	103.85	106.40
81	B5	1451	C	C5-C6-N1	-6.37	117.81	121.00
81	B5	1894	U	C2-N3-C4	-6.37	123.18	127.00
81	B5	2130	G	N1-C6-O6	-6.37	116.08	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	92	A	C4-C5-N7	6.37	113.89	110.70
61	Ba	28	HIS	N-CA-C	6.37	128.19	111.00
81	B5	909	G	C4-C5-N7	-6.37	108.25	110.80
81	B5	2117	A	N1-C6-N6	-6.37	114.78	118.60
81	B5	2948	C	C5-C4-N4	6.37	124.66	120.20
82	B7	48	U	N3-C4-C5	6.37	118.42	114.60
81	B5	1840	U	C5-C6-N1	-6.37	119.52	122.70
81	B5	3189	G	N1-C2-N3	6.37	127.72	123.90
38	BD	152	ARG	NE-CZ-NH1	6.36	123.48	120.30
80	B2	1611	A	C8-N9-C4	-6.36	103.25	105.80
81	B5	676	G	C8-N9-C4	-6.36	103.86	106.40
81	B5	1413	G	N1-C6-O6	-6.36	116.08	119.90
81	B5	1858	A	N7-C8-N9	6.36	116.98	113.80
81	B5	2429	G	C8-N9-C4	-6.36	103.86	106.40
81	B5	3003	G	C5-C6-N1	6.36	114.68	111.50
49	BO	23[B]	ILE	O-C-N	6.36	132.88	122.70
81	B5	1115	G	C4-N9-C1'	6.36	134.77	126.50
80	B2	973	A	C2-N3-C4	-6.36	107.42	110.60
86	CW	2	C	N3-C4-N4	6.36	122.45	118.00
86	CW	75	C	N3-C4-N4	6.36	122.45	118.00
51	BQ	176	ARG	NE-CZ-NH2	-6.36	117.12	120.30
81	B5	1172	G	N3-C2-N2	6.36	124.35	119.90
81	B5	1300	G	C5-C6-O6	-6.36	124.78	128.60
81	B5	2408	U	N1-C2-N3	6.36	118.72	114.90
81	B5	2821	C	C5-C6-N1	6.36	124.18	121.00
80	B2	136	C	C6-N1-C1'	-6.36	113.17	120.80
81	B5	3309	G	C6-N1-C2	-6.36	121.29	125.10
81	B5	645	A	C5-C6-N1	6.35	120.88	117.70
81	B5	1403	C	N3-C4-N4	6.35	122.45	118.00
81	B5	1254	C	N3-C4-N4	6.35	122.45	118.00
81	B5	2416	U	C5-C6-N1	6.35	125.88	122.70
81	B5	2614	G	C8-N9-C1'	-6.35	118.74	127.00
80	B2	1745	G	N9-C4-C5	-6.35	102.86	105.40
83	B8	17	A	C4-C5-N7	6.35	113.88	110.70
81	B5	891	G	C5-C6-O6	6.35	132.41	128.60
81	B5	904	A	C8-N9-C4	-6.35	103.26	105.80
81	B5	1449	A	C5-C6-N1	-6.35	114.53	117.70
81	B5	1264	G	P-O3'-C3'	-6.34	112.09	119.70
81	B5	2777	G	C4-C5-N7	-6.34	108.26	110.80
81	B5	3174	A	C4-C5-N7	6.34	113.87	110.70
86	CW	49	C	O4'-C1'-N1	6.34	113.28	108.20
74	Bn	9	ARG	NE-CZ-NH2	-6.34	117.13	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	248	U	N1-C2-O2	6.34	127.24	122.80
81	B5	1306	G	C6-N1-C2	-6.34	121.30	125.10
81	B5	1833	G	N7-C8-N9	-6.34	109.93	113.10
86	CW	21	A	O4'-C1'-N9	6.34	113.27	108.20
81	B5	1211	U	N3-C4-O4	-6.34	114.96	119.40
81	B5	2303	A	N1-C6-N6	-6.34	114.80	118.60
81	B5	2352	A	N1-C2-N3	6.34	132.47	129.30
81	B5	2753	G	N3-C2-N2	-6.34	115.46	119.90
82	B7	48	U	N1-C2-O2	-6.34	118.36	122.80
81	B5	1832	C	C2-N3-C4	-6.33	116.73	119.90
81	B5	2231	C	N3-C4-C5	-6.33	119.37	121.90
81	B5	2349	U	N3-C4-C5	6.33	118.40	114.60
83	B8	52	A	C8-N9-C4	-6.33	103.27	105.80
81	B5	1403	C	C6-N1-C1'	-6.33	113.20	120.80
81	B5	2361	A	C8-N9-C4	-6.33	103.27	105.80
35	BA	204	MET	CG-SD-CE	-6.33	90.07	100.20
81	B5	1168	U	N3-C4-C5	6.33	118.40	114.60
86	CW	68	C	N3-C4-N4	6.33	122.43	118.00
81	B5	1297	C	C4-C5-C6	6.33	120.56	117.40
80	B2	159	U	C2-N1-C1'	-6.33	110.11	117.70
81	B5	1188	U	C5-C4-O4	-6.33	122.10	125.90
81	B5	1211	U	C4-C5-C6	-6.33	115.91	119.70
81	B5	2211	U	N3-C4-C5	-6.33	110.81	114.60
81	B5	2277	C	C6-N1-C2	6.33	122.83	120.30
80	B2	213	A	C8-N9-C4	6.32	108.33	105.80
81	B5	2996	U	C2-N1-C1'	6.32	125.29	117.70
37	BC	327	LEU	CA-CB-CG	6.32	129.84	115.30
80	B2	1246	C	C5-C4-N4	6.32	124.63	120.20
80	B2	1465	C	N3-C4-C5	-6.32	119.37	121.90
81	B5	65	A	N7-C8-N9	6.32	116.96	113.80
81	B5	3309	G	C4-N9-C1'	6.32	134.72	126.50
36	BB	10	ARG	NE-CZ-NH1	6.32	123.46	120.30
80	B2	523	G	N3-C4-C5	-6.32	125.44	128.60
81	B5	42	C	C5-C6-N1	6.32	124.16	121.00
81	B5	938	C	C6-N1-C2	6.32	122.83	120.30
81	B5	950	G	C8-N9-C4	6.32	108.93	106.40
81	B5	2363	A	C2-N3-C4	6.32	113.76	110.60
79	By	20	TYR	CB-CG-CD2	-6.32	117.21	121.00
81	B5	1277	C	N3-C4-N4	6.32	122.42	118.00
80	B2	377	G	N3-C4-C5	6.31	131.76	128.60
81	B5	793	C	N1-C2-O2	-6.31	115.11	118.90
81	B5	1496	C	C5-C6-N1	6.31	124.16	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1690	C	N1-C2-O2	-6.31	115.11	118.90
81	B5	2134	G	N3-C4-C5	-6.31	125.44	128.60
81	B5	2393	G	N9-C4-C5	-6.31	102.87	105.40
83	B8	84	C	C6-N1-C2	-6.31	117.77	120.30
46	BL	27	ASP	CB-CG-OD1	6.31	123.98	118.30
80	B2	557	G	C4-C5-C6	6.31	122.59	118.80
80	B2	1454	G	C5-C6-O6	6.31	132.39	128.60
81	B5	1416	C	N3-C2-O2	-6.31	117.48	121.90
81	B5	1468	A	C8-N9-C4	-6.31	103.28	105.80
81	B5	1753	G	N3-C4-C5	-6.31	125.44	128.60
81	B5	631	U	N3-C4-C5	6.31	118.39	114.60
81	B5	2728	G	C8-N9-C4	-6.31	103.88	106.40
81	B5	2886	U	N3-C2-O2	-6.31	117.78	122.20
81	B5	2261	G	C8-N9-C4	6.31	108.92	106.40
86	CW	66	U	O4'-C1'-N1	6.31	113.25	108.20
80	B2	1456	C	C6-N1-C2	-6.31	117.78	120.30
81	B5	3011	A	N1-C2-N3	-6.30	126.15	129.30
82	B7	46	A	C8-N9-C4	-6.30	103.28	105.80
81	B5	1254	C	C6-N1-C2	-6.30	117.78	120.30
81	B5	1130	A	N3-C4-C5	-6.30	122.39	126.80
81	B5	779	G	C8-N9-C4	-6.30	103.88	106.40
81	B5	1314	C	C6-N1-C1'	-6.30	113.24	120.80
81	B5	1340	G	N3-C2-N2	6.30	124.31	119.90
80	B2	627	C	N3-C4-N4	6.30	122.41	118.00
80	B2	1515	A	C8-N9-C4	-6.30	103.28	105.80
81	B5	2364	G	C5-C6-O6	6.30	132.38	128.60
81	B5	1254	C	P-O5'-C5'	6.30	130.97	120.90
81	B5	3218	A	N3-C4-C5	6.30	131.21	126.80
81	B5	32	U	N1-C2-O2	-6.29	118.39	122.80
81	B5	2808	A	N1-C2-N3	6.29	132.45	129.30
81	B5	3270	U	C5-C6-N1	-6.29	119.55	122.70
81	B5	903	U	N3-C2-O2	-6.29	117.80	122.20
81	B5	1511	U	C5-C6-N1	-6.29	119.55	122.70
82	B7	92	A	C6-C5-N7	-6.29	127.89	132.30
81	B5	582	G	C5-C6-O6	6.29	132.38	128.60
81	B5	1733	G	N1-C6-O6	6.29	123.67	119.90
81	B5	3317	U	C5-C6-N1	6.29	125.85	122.70
81	B5	3360	C	C6-N1-C2	-6.29	117.78	120.30
81	B5	1064	A	C4-C5-N7	6.29	113.84	110.70
81	B5	1449	A	N3-C4-C5	6.29	131.20	126.80
80	B2	494	U	N1-C2-O2	6.29	127.20	122.80
81	B5	2833	A	N7-C8-N9	-6.29	110.66	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	15	C	N3-C4-C5	6.29	124.42	121.90
81	B5	656	A	C8-N9-C4	6.29	108.31	105.80
81	B5	624	G	C8-N9-C4	6.29	108.91	106.40
81	B5	3174	A	C5-N7-C8	-6.29	100.76	103.90
80	B2	1329	A	C5-C6-N6	-6.28	118.67	123.70
83	B8	38	U	C5-C4-O4	6.28	129.67	125.90
80	B2	590	C	C2-N1-C1'	6.28	125.71	118.80
80	B2	868	G	N1-C6-O6	6.28	123.67	119.90
81	B5	637	C	C2-N1-C1'	-6.28	111.89	118.80
81	B5	947	G	N3-C4-N9	6.28	129.77	126.00
81	B5	3266	G	C8-N9-C4	-6.28	103.89	106.40
81	B5	1148	G	C5-C6-O6	-6.28	124.83	128.60
81	B5	1200	A	N1-C2-N3	6.28	132.44	129.30
81	B5	1233	G	C5-C6-O6	-6.28	124.83	128.60
81	B5	3258	U	C6-N1-C2	6.28	124.77	121.00
81	B5	1407	A	C8-N9-C4	6.28	108.31	105.80
81	B5	2616	C	C5-C4-N4	-6.28	115.81	120.20
81	B5	625	G	C5-C6-O6	6.28	132.37	128.60
81	B5	1273	A	C4-C5-C6	6.28	120.14	117.00
81	B5	2420	C	C5-C4-N4	-6.28	115.81	120.20
81	B5	1254	C	O4'-C1'-N1	6.28	113.22	108.20
81	B5	2552	C	N3-C2-O2	-6.28	117.51	121.90
65	Be	47	ARG	NE-CZ-NH2	-6.27	117.16	120.30
81	B5	510	G	C5-C6-N1	6.27	114.64	111.50
81	B5	1123	U	C5-C6-N1	-6.27	119.56	122.70
81	B5	1260	A	P-O5'-C5'	-6.27	110.86	120.90
82	B7	25	G	N3-C2-N2	-6.27	115.51	119.90
80	B2	75	U	N3-C2-O2	-6.27	117.81	122.20
80	B2	189	C	N1-C2-O2	6.27	122.66	118.90
81	B5	276	U	C2-N3-C4	-6.27	123.24	127.00
81	B5	819	U	C6-N1-C2	6.27	124.76	121.00
81	B5	1227	C	N1-C1'-C2'	6.27	122.15	114.00
81	B5	1229	G	C8-N9-C4	-6.27	103.89	106.40
81	B5	2139	A	C5-N7-C8	6.27	107.03	103.90
81	B5	2572	C	C6-N1-C2	-6.27	117.79	120.30
81	B5	1888	U	C2-N3-C4	-6.27	123.24	127.00
81	B5	1940	G	N1-C2-N2	-6.27	110.56	116.20
81	B5	1500	G	C8-N9-C4	6.26	108.91	106.40
81	B5	2952	G	N1-C6-O6	6.26	123.66	119.90
80	B2	1363	U	N1-C2-O2	6.26	127.18	122.80
81	B5	1408	G	C2-N3-C4	-6.26	108.77	111.90
81	B5	1883	A	N9-C4-C5	6.26	108.30	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2164	A	C8-N9-C4	-6.26	103.30	105.80
81	B5	2133	U	N3-C4-C5	6.26	118.36	114.60
81	B5	2389	C	C5-C6-N1	-6.26	117.87	121.00
80	B2	404	G	C8-N9-C4	6.26	108.90	106.40
81	B5	904	A	N9-C4-C5	6.26	108.30	105.80
81	B5	1056	U	N3-C4-C5	-6.26	110.85	114.60
81	B5	1252	A	C5-C6-N6	-6.26	118.69	123.70
81	B5	1307	G	C8-N9-C4	-6.26	103.90	106.40
81	B5	2389	C	N3-C4-C5	6.26	124.40	121.90
81	B5	2524	A	C6-N1-C2	6.25	122.35	118.60
81	B5	3317	U	N3-C4-O4	-6.25	115.02	119.40
81	B5	146	U	N3-C4-O4	-6.25	115.02	119.40
81	B5	665	A	C2-N3-C4	-6.25	107.47	110.60
81	B5	1035	G	N3-C4-N9	6.25	129.75	126.00
81	B5	1931	U	C5-C6-N1	-6.25	119.57	122.70
85	CP	210	TRP	NE1-CE2-CZ2	6.25	137.28	130.40
80	B2	377	G	C5-C6-O6	-6.25	124.85	128.60
80	B2	543	C	N3-C2-O2	-6.25	117.53	121.90
80	B2	1198	G	N9-C4-C5	6.25	107.90	105.40
81	B5	1042	U	C5-C6-N1	-6.25	119.58	122.70
81	B5	1300	G	C4-C5-N7	6.25	113.30	110.80
81	B5	2516	U	C2-N3-C4	-6.25	123.25	127.00
81	B5	2735	U	C6-N1-C2	-6.25	117.25	121.00
80	B2	933	A	C8-N9-C4	-6.25	103.30	105.80
81	B5	892	U	N3-C4-C5	6.25	118.35	114.60
81	B5	974	G	N3-C4-N9	6.25	129.75	126.00
81	B5	1389	G	C5-N7-C8	-6.25	101.18	104.30
81	B5	2930	A	C8-N9-C4	-6.25	103.30	105.80
81	B5	112	U	C5-C4-O4	-6.24	122.15	125.90
81	B5	644	G	N1-C6-O6	-6.24	116.15	119.90
81	B5	2754	G	N1-C6-O6	-6.24	116.15	119.90
81	B5	1911	A	N7-C8-N9	-6.24	110.68	113.80
81	B5	691	A	C2-N3-C4	-6.24	107.48	110.60
83	B8	53	A	C2-N3-C4	6.24	113.72	110.60
81	B5	1115	G	N3-C4-C5	-6.24	125.48	128.60
81	B5	1149	G	N1-C2-N3	-6.24	120.16	123.90
19	AK	76	LEU	CA-CB-CG	6.24	129.65	115.30
80	B2	189	C	C6-N1-C1'	-6.24	113.31	120.80
81	B5	83	U	C5-C4-O4	-6.24	122.16	125.90
81	B5	590	G	C5-C6-N1	6.24	114.62	111.50
81	B5	1134	G	C6-N1-C2	-6.24	121.36	125.10
81	B5	1425	U	N3-C4-O4	-6.24	115.03	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2289	U	N3-C4-O4	-6.24	115.03	119.40
80	B2	810	G	C6-C5-N7	-6.23	126.66	130.40
80	B2	1670	G	C8-N9-C1'	-6.23	118.90	127.00
52	BR	88	ARG	NE-CZ-NH1	-6.23	117.18	120.30
80	B2	1297	G	N7-C8-N9	-6.23	109.98	113.10
81	B5	1383	G	N1-C6-O6	-6.23	116.16	119.90
81	B5	1506	A	C5-N7-C8	-6.23	100.78	103.90
80	B2	1000	C	C5-C6-N1	-6.23	117.88	121.00
81	B5	2133	U	N3-C4-O4	-6.23	115.04	119.40
86	CW	27	G	C5'-C4'-C3'	-6.23	106.03	116.00
81	B5	2169	G	N1-C6-O6	-6.23	116.16	119.90
81	B5	586	C	N3-C4-C5	6.23	124.39	121.90
81	B5	734	C	N1-C2-O2	6.23	122.64	118.90
80	B2	1258	U	C4-C5-C6	6.23	123.44	119.70
81	B5	436	A	C5-N7-C8	-6.23	100.79	103.90
81	B5	2117	A	C6-N1-C2	-6.23	114.86	118.60
86	CW	26	A	C4-C5-C6	6.23	120.11	117.00
80	B2	852	C	C5-C6-N1	6.22	124.11	121.00
80	B2	1747	G	C8-N9-C4	6.22	108.89	106.40
81	B5	511	G	N3-C2-N2	6.22	124.26	119.90
80	B2	1746	A	C8-N9-C4	6.22	108.29	105.80
81	B5	726	G	C5-N7-C8	-6.22	101.19	104.30
81	B5	753	C	C5-C4-N4	-6.22	115.84	120.20
81	B5	1119	C	C5-C4-N4	-6.22	115.84	120.20
81	B5	2777	G	N9-C4-C5	6.22	107.89	105.40
81	B5	2978	U	C2-N3-C4	-6.22	123.27	127.00
81	B5	87	U	N3-C4-O4	-6.22	115.05	119.40
81	B5	670	C	N3-C4-C5	6.22	124.39	121.90
86	CW	37	A	C4-C5-C6	6.22	120.11	117.00
81	B5	425	G	N7-C8-N9	-6.22	109.99	113.10
81	B5	787	G	C2-N3-C4	-6.22	108.79	111.90
81	B5	1272	C	O4'-C1'-N1	6.22	113.17	108.20
82	B7	44	C	N3-C4-C5	-6.22	119.41	121.90
81	B5	1688	U	N1-C2-O2	6.21	127.15	122.80
81	B5	437	G	N3-C2-N2	-6.21	115.55	119.90
81	B5	911	C	N1-C2-O2	-6.21	115.17	118.90
81	B5	2228	A	C8-N9-C4	-6.21	103.31	105.80
80	B2	1654	G	C8-N9-C4	-6.21	103.92	106.40
81	B5	35	A	C2-N3-C4	-6.21	107.50	110.60
80	B2	736	C	N1-C2-O2	6.21	122.62	118.90
81	B5	822	G	N3-C4-N9	-6.21	122.28	126.00
81	B5	891	G	C8-N9-C4	6.21	108.88	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	326	U	N3-C4-C5	6.21	118.32	114.60
81	B5	2808	A	N1-C6-N6	6.21	122.32	118.60
80	B2	942	G	C8-N9-C4	-6.20	103.92	106.40
81	B5	408	A	N1-C2-N3	6.20	132.40	129.30
81	B5	514	G	N1-C6-O6	6.20	123.62	119.90
81	B5	2392	C	N3-C4-C5	6.20	124.38	121.90
81	B5	2396	G	C8-N9-C4	-6.20	103.92	106.40
81	B5	3330	A	C2-N3-C4	6.20	113.70	110.60
86	CW	65	G	O4'-C1'-N9	6.20	113.16	108.20
49	BO	117[A]	ARG	NE-CZ-NH2	-6.20	117.20	120.30
49	BO	117[B]	ARG	NE-CZ-NH2	-6.20	117.20	120.30
80	B2	704	C	C6-N1-C1'	-6.20	113.36	120.80
80	B2	767	U	N3-C4-O4	-6.20	115.06	119.40
80	B2	1305	U	N1-C2-N3	6.20	118.62	114.90
81	B5	314	U	C5-C4-O4	6.20	129.62	125.90
81	B5	1283	C	N3-C4-N4	6.20	122.34	118.00
80	B2	1560	U	N1-C2-N3	6.20	118.62	114.90
81	B5	674	G	C8-N9-C4	-6.20	103.92	106.40
81	B5	1381	A	C2-N3-C4	-6.20	107.50	110.60
81	B5	2716	U	C6-N1-C2	-6.20	117.28	121.00
81	B5	3065	G	C5-C6-O6	6.20	132.32	128.60
81	B5	3298	C	N1-C2-O2	-6.20	115.18	118.90
80	B2	1595	U	C5-C4-O4	-6.20	122.18	125.90
49	BO	3[B]	SER	C-N-CA	-6.20	106.21	121.70
80	B2	1766	A	C8-N9-C4	6.20	108.28	105.80
81	B5	150	A	C5-C6-N6	-6.20	118.74	123.70
81	B5	1115	G	C8-N9-C4	-6.20	103.92	106.40
81	B5	1844	C	C2-N3-C4	-6.20	116.80	119.90
81	B5	3101	G	N1-C6-O6	-6.20	116.18	119.90
81	B5	600	G	C6-C5-N7	-6.19	126.68	130.40
81	B5	1162	U	C2-N3-C4	-6.19	123.28	127.00
81	B5	823	C	N3-C4-C5	6.19	124.38	121.90
81	B5	1064	A	C8-N9-C4	6.19	108.28	105.80
65	Be	4	LEU	C-N-CD	6.19	141.40	128.40
80	B2	186	C	C5-C6-N1	6.19	124.10	121.00
80	B2	719	U	C5-C6-N1	6.19	125.80	122.70
81	B5	436	A	C8-N9-C1'	-6.19	116.56	127.70
81	B5	2846	U	N1-C2-O2	-6.19	118.47	122.80
81	B5	3228	C	N3-C2-O2	-6.19	117.57	121.90
81	B5	3330	A	C6-N1-C2	-6.19	114.89	118.60
81	B5	42	C	C2-N3-C4	6.19	122.99	119.90
81	B5	2830	G	C6-N1-C2	-6.19	121.39	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1411	C	N1-C2-O2	-6.19	115.19	118.90
81	B5	2858	U	N1-C2-N3	6.18	118.61	114.90
81	B5	1009	A	C8-N9-C4	-6.18	103.33	105.80
81	B5	1114	U	N3-C4-C5	6.18	118.31	114.60
81	B5	3365	U	N1-C2-N3	6.18	118.61	114.90
31	AW	65	LEU	CA-CB-CG	6.18	129.51	115.30
81	B5	1206	G	N3-C4-C5	-6.18	125.51	128.60
81	B5	2645	G	C6-N1-C2	-6.18	121.39	125.10
86	CW	53	G	C5-C6-O6	-6.18	124.89	128.60
81	B5	1525	G	C4-N9-C1'	6.18	134.53	126.50
81	B5	2128	C	N3-C2-O2	-6.18	117.58	121.90
81	B5	2775	U	C5-C4-O4	6.18	129.61	125.90
81	B5	1143	A	C6-N1-C2	6.17	122.31	118.60
81	B5	1303	A	C2-N3-C4	6.17	113.69	110.60
81	B5	2928	C	C6-N1-C2	-6.17	117.83	120.30
80	B2	340	U	N3-C2-O2	-6.17	117.88	122.20
80	B2	1670	G	C4-N9-C1'	6.17	134.53	126.50
81	B5	924	G	N3-C2-N2	-6.17	115.58	119.90
81	B5	1301	A	C5-C6-N6	-6.17	118.76	123.70
80	B2	61	A	C8-N9-C4	-6.17	103.33	105.80
80	B2	1436	A	N9-C4-C5	-6.17	103.33	105.80
81	B5	351	A	C5-C6-N6	-6.17	118.76	123.70
81	B5	494	G	N3-C4-C5	-6.17	125.52	128.60
81	B5	2824	G	N3-C4-C5	-6.17	125.52	128.60
81	B5	3216	G	C6-N1-C2	-6.17	121.40	125.10
80	B2	1218	G	N1-C6-O6	6.17	123.60	119.90
81	B5	1430	U	C6-N1-C2	6.17	124.70	121.00
81	B5	2930	A	N9-C4-C5	6.17	108.27	105.80
81	B5	3358	U	N3-C2-O2	-6.17	117.88	122.20
80	B2	1633	A	N9-C4-C5	6.17	108.27	105.80
81	B5	370	U	N1-C2-N3	6.17	118.60	114.90
81	B5	1228	C	C6-N1-C1'	-6.17	113.40	120.80
80	B2	621	A	C8-N9-C4	6.17	108.27	105.80
81	B5	424	G	N1-C6-O6	-6.16	116.20	119.90
81	B5	1161	G	C2-N3-C4	6.16	114.98	111.90
81	B5	1346	G	N3-C4-C5	6.16	131.68	128.60
81	B5	2301	U	N3-C4-C5	6.16	118.30	114.60
81	B5	994	G	N3-C2-N2	6.16	124.21	119.90
81	B5	1148	G	C5-C6-N1	6.16	114.58	111.50
81	B5	2615	G	C5-C6-O6	-6.16	124.90	128.60
81	B5	2650	U	N3-C4-O4	-6.16	115.09	119.40
81	B5	2757	U	N1-C2-O2	-6.16	118.49	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2198	A	C2-N3-C4	-6.16	107.52	110.60
81	B5	3052	G	N7-C8-N9	-6.16	110.02	113.10
80	B2	1628	U	N3-C2-O2	-6.16	117.89	122.20
81	B5	1810	A	C8-N9-C4	6.16	108.26	105.80
80	B2	1781	A	C5-C6-N6	6.16	128.63	123.70
81	B5	880	G	C5-C6-N1	6.16	114.58	111.50
80	B2	1514	U	N3-C2-O2	-6.16	117.89	122.20
81	B5	311	C	N3-C4-C5	6.16	124.36	121.90
81	B5	1872	C	C4-C5-C6	6.16	120.48	117.40
81	B5	3068	U	N1-C2-N3	6.16	118.59	114.90
80	B2	538	A	N1-C2-N3	-6.15	126.22	129.30
80	B2	932	U	C5-C4-O4	6.15	129.59	125.90
81	B5	3245	A	N9-C4-C5	-6.15	103.34	105.80
81	B5	1007	U	C2-N3-C4	-6.15	123.31	127.00
81	B5	2242	A	C5-C6-N6	6.15	128.62	123.70
81	B5	2381	G	N1-C6-O6	-6.15	116.21	119.90
81	B5	2939	G	N7-C8-N9	-6.15	110.02	113.10
80	B2	192	U	N3-C2-O2	-6.15	117.89	122.20
81	B5	933	A	C6-N1-C2	-6.15	114.91	118.60
81	B5	2603	G	C5-N7-C8	-6.15	101.22	104.30
81	B5	3308	C	C5-C6-N1	-6.15	117.92	121.00
81	B5	2399	A	C8-N9-C4	6.15	108.26	105.80
81	B5	3098	G	N1-C6-O6	-6.15	116.21	119.90
81	B5	909	G	C5-N7-C8	6.14	107.37	104.30
81	B5	3345	G	N3-C2-N2	-6.14	115.60	119.90
81	B5	359	U	C5-C4-O4	-6.14	122.22	125.90
81	B5	1270	A	O4'-C1'-N9	6.14	113.11	108.20
81	B5	1226	G	P-O5'-C5'	-6.14	111.08	120.90
84	CN	2201	U	N1-C1'-C2'	6.14	121.98	114.00
80	B2	1490	C	C2-N1-C1'	6.14	125.55	118.80
80	B2	1121	C	C5-C6-N1	-6.14	117.93	121.00
81	B5	125	C	N3-C4-N4	-6.14	113.70	118.00
81	B5	785	G	C2-N3-C4	6.14	114.97	111.90
81	B5	1262	G	C8-N9-C4	-6.14	103.94	106.40
81	B5	3014	U	C5-C4-O4	-6.14	122.22	125.90
81	B5	3266	G	C4-C5-N7	-6.14	108.35	110.80
80	B2	874	C	C5-C6-N1	6.13	124.07	121.00
81	B5	102	C	N3-C4-N4	6.13	122.29	118.00
81	B5	2764	C	N3-C4-C5	6.13	124.35	121.90
81	B5	3150	A	C2-N3-C4	-6.13	107.53	110.60
81	B5	3334	U	N3-C2-O2	-6.13	117.91	122.20
80	B2	36	C	N3-C4-N4	6.13	122.29	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	79	A	N9-C4-C5	-6.13	103.35	105.80
80	B2	734	A	N1-C6-N6	6.13	122.28	118.60
81	B5	386	A	C4-C5-N7	6.13	113.77	110.70
81	B5	722	G	N9-C4-C5	6.13	107.85	105.40
81	B5	1124	U	N3-C4-C5	6.13	118.28	114.60
81	B5	1591	G	C5-C6-N1	6.13	114.56	111.50
81	B5	2415	C	N3-C4-C5	6.13	124.35	121.90
80	B2	781	U	C2-N1-C1'	6.12	125.05	117.70
81	B5	949	C	C5-C6-N1	-6.12	117.94	121.00
81	B5	2347	U	N3-C4-C5	6.12	118.28	114.60
81	B5	2353	G	C6-C5-N7	-6.12	126.72	130.40
81	B5	1772	U	N3-C2-O2	-6.12	117.91	122.20
84	CN	2150	C	O5'-P-OP2	6.12	118.05	110.70
81	B5	1929	G	N9-C4-C5	-6.12	102.95	105.40
81	B5	3138	U	C5-C4-O4	-6.12	122.23	125.90
81	B5	2865	U	N1-C2-N3	-6.12	111.23	114.90
81	B5	294	U	C5-C4-O4	-6.12	122.23	125.90
81	B5	3175	U	C6-N1-C2	-6.12	117.33	121.00
81	B5	2207	A	C5-N7-C8	-6.12	100.84	103.90
81	B5	2646	C	N1-C2-O2	-6.12	115.23	118.90
86	CW	7	A	C5-C6-N6	-6.12	118.81	123.70
81	B5	32	U	C6-N1-C2	-6.12	117.33	121.00
81	B5	1666	G	C5-C6-O6	6.12	132.27	128.60
81	B5	2620	G	N1-C6-O6	-6.12	116.23	119.90
80	B2	335	U	N1-C2-O2	-6.11	118.52	122.80
81	B5	1389	G	N3-C4-N9	6.11	129.67	126.00
81	B5	2353	G	N3-C4-N9	6.11	129.67	126.00
81	B5	2368	A	N1-C6-N6	-6.11	114.93	118.60
81	B5	2930	A	C8-N9-C1'	6.11	138.70	127.70
86	CW	73	A	P-O3'-C3'	6.11	127.03	119.70
81	B5	2728	G	C6-N1-C2	-6.11	121.44	125.10
81	B5	976	U	N3-C2-O2	-6.11	117.92	122.20
81	B5	1232	C	N3-C4-N4	6.11	122.28	118.00
81	B5	2954	U	C5-C4-O4	-6.11	122.24	125.90
80	B2	1387	G	C5-C6-O6	-6.10	124.94	128.60
81	B5	3148	U	N3-C4-C5	6.10	118.26	114.60
50	BP	127	ARG	NE-CZ-NH1	6.10	123.35	120.30
81	B5	1168	U	N3-C4-O4	-6.10	115.13	119.40
81	B5	1233	G	O4'-C1'-N9	6.10	113.08	108.20
81	B5	2176	U	N1-C2-N3	6.10	118.56	114.90
83	B8	14	C	C2-N3-C4	-6.10	116.85	119.90
81	B5	999	G	C2-N3-C4	6.10	114.95	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	23	A	C5-C6-N6	-6.10	118.82	123.70
80	B2	865	A	N1-C6-N6	-6.10	114.94	118.60
81	B5	927	C	N3-C4-C5	6.10	124.34	121.90
81	B5	1719	G	N1-C6-O6	6.10	123.56	119.90
81	B5	2865	U	C2-N1-C1'	6.10	125.02	117.70
81	B5	2920	U	N1-C2-N3	6.10	118.56	114.90
86	CW	27	G	C5'-C4'-O4'	6.10	116.42	109.10
81	B5	1119	C	N1-C2-O2	-6.10	115.24	118.90
81	B5	673	U	C2-N3-C4	-6.09	123.34	127.00
86	CW	35	A	C5-C6-N6	-6.09	118.83	123.70
81	B5	1582	C	C6-N1-C2	-6.09	117.86	120.30
36	BB	205	VAL	CB-CA-C	-6.09	99.83	111.40
48	BN	96	ARG	NE-CZ-NH1	6.09	123.34	120.30
81	B5	1147	G	C6-C5-N7	6.09	134.05	130.40
81	B5	3382	U	N3-C2-O2	-6.09	117.94	122.20
80	B2	1596	C	C2-N1-C1'	6.09	125.50	118.80
81	B5	917	A	C8-N9-C4	-6.09	103.36	105.80
80	B2	627	C	C5-C4-N4	-6.09	115.94	120.20
81	B5	2386	A	C5-C6-N6	-6.09	118.83	123.70
81	B5	3086	A	C8-N9-C4	6.09	108.23	105.80
81	B5	367	A	N3-C4-N9	-6.08	122.53	127.40
81	B5	1044	U	N3-C4-C5	6.08	118.25	114.60
80	B2	144	U	N1-C2-N3	6.08	118.55	114.90
81	B5	2361	A	C5-N7-C8	6.08	106.94	103.90
81	B5	2730	G	N3-C4-N9	-6.08	122.35	126.00
81	B5	3000	A	C8-N9-C4	6.08	108.23	105.80
81	B5	1161	G	C8-N9-C4	6.08	108.83	106.40
81	B5	2911	A	N1-C2-N3	-6.08	126.26	129.30
81	B5	1184	A	C2-N3-C4	-6.08	107.56	110.60
81	B5	3110	C	C2-N3-C4	-6.08	116.86	119.90
81	B5	595	G	N1-C6-O6	-6.08	116.25	119.90
81	B5	1136	A	N1-C2-N3	-6.08	126.26	129.30
81	B5	1518	U	N3-C2-O2	-6.08	117.95	122.20
81	B5	3182	G	C5-C6-O6	6.08	132.25	128.60
81	B5	2371	G	C8-N9-C4	6.08	108.83	106.40
81	B5	1042	U	N3-C2-O2	-6.07	117.95	122.20
81	B5	2134	G	C2-N3-C4	6.07	114.94	111.90
80	B2	1346	A	N7-C8-N9	6.07	116.83	113.80
81	B5	818	C	N3-C4-C5	-6.07	119.47	121.90
81	B5	3120	C	N3-C4-C5	-6.07	119.47	121.90
81	B5	3216	G	C4-C5-C6	6.07	122.44	118.80
81	B5	2844	C	N1-C2-O2	6.07	122.54	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	33	G	C6-N1-C2	-6.07	121.46	125.10
81	B5	933	A	C2-N3-C4	-6.07	107.57	110.60
81	B5	2980	U	C6-N1-C2	-6.07	117.36	121.00
49	BO	117[A]	ARG	CG-CD-NE	-6.07	99.06	111.80
49	BO	117[B]	ARG	CG-CD-NE	-6.07	99.06	111.80
81	B5	1902	G	N7-C8-N9	-6.07	110.07	113.10
81	B5	2128	C	C2-N3-C4	-6.07	116.87	119.90
81	B5	2791	G	N1-C6-O6	6.07	123.54	119.90
80	B2	377	G	N3-C4-N9	-6.06	122.36	126.00
82	B7	40	C	C4-C5-C6	6.06	120.43	117.40
81	B5	66	A	N9-C4-C5	-6.06	103.38	105.80
81	B5	216	G	C6-C5-N7	-6.06	126.76	130.40
81	B5	1284	C	N3-C4-N4	6.06	122.24	118.00
81	B5	1285	G	O4'-C1'-N9	6.06	113.05	108.20
81	B5	3140	G	C5-N7-C8	-6.06	101.27	104.30
83	B8	42	G	N7-C8-N9	-6.06	110.07	113.10
81	B5	1897	G	C5-C6-N1	6.06	114.53	111.50
81	B5	935	U	C5-C4-O4	-6.05	122.27	125.90
81	B5	1323	G	C8-N9-C4	-6.05	103.98	106.40
81	B5	1340	G	N7-C8-N9	-6.05	110.07	113.10
81	B5	1438	U	C2-N1-C1'	6.05	124.96	117.70
81	B5	2749	G	N1-C2-N3	-6.05	120.27	123.90
81	B5	3272	C	C6-N1-C2	6.05	122.72	120.30
81	B5	3382	U	C6-N1-C1'	-6.05	112.72	121.20
80	B2	1246	C	N3-C4-N4	-6.05	113.76	118.00
81	B5	1858	A	C4-C5-C6	6.05	120.03	117.00
81	B5	3020	U	C5-C4-O4	-6.05	122.27	125.90
85	CP	83	PHE	CB-CG-CD2	-6.05	116.56	120.80
80	B2	1473	U	C5-C4-O4	6.05	129.53	125.90
83	B8	15	G	C5-C6-N1	6.05	114.52	111.50
80	B2	557	G	C6-C5-N7	-6.05	126.77	130.40
81	B5	80	G	N1-C6-O6	-6.05	116.27	119.90
81	B5	1909	A	N1-C2-N3	-6.05	126.28	129.30
81	B5	3075	G	C4-C5-N7	-6.05	108.38	110.80
86	CW	18	G	C5-C6-O6	-6.04	124.97	128.60
81	B5	655	C	C6-N1-C2	-6.04	117.88	120.30
81	B5	1371	G	C6-N1-C2	-6.04	121.47	125.10
85	CP	18	LYS	N-CA-C	-6.04	94.69	111.00
81	B5	1271	A	C4-C5-C6	6.04	120.02	117.00
81	B5	1278	A	C4-C5-C6	6.04	120.02	117.00
86	CW	37	A	C5-C6-N1	-6.04	114.68	117.70
81	B5	386	A	N9-C4-C5	-6.04	103.38	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	920	A	N7-C8-N9	-6.04	110.78	113.80
81	B5	1869	C	C2-N3-C4	-6.04	116.88	119.90
81	B5	2939	G	C5-N7-C8	6.04	107.32	104.30
79	CL	27	HIS	N-CA-CB	6.04	121.47	110.60
81	B5	2346	C	N1-C2-O2	-6.04	115.28	118.90
81	B5	2359	C	C5-C6-N1	-6.04	117.98	121.00
80	B2	75	U	C2-N1-C1'	6.04	124.94	117.70
81	B5	341	G	N1-C6-O6	6.04	123.52	119.90
81	B5	641	C	C5-C4-N4	6.04	124.42	120.20
81	B5	2116	G	C6-C5-N7	-6.04	126.78	130.40
80	B2	1000	C	C5-C4-N4	6.03	124.42	120.20
81	B5	2632	G	N9-C4-C5	6.03	107.81	105.40
81	B5	2911	A	C8-N9-C4	-6.03	103.39	105.80
80	B2	1099	U	C5-C6-N1	6.03	125.72	122.70
81	B5	1110	U	N3-C4-O4	-6.03	115.18	119.40
81	B5	1117	G	C5-C6-O6	-6.03	124.98	128.60
81	B5	1368	U	C6-N1-C2	6.03	124.62	121.00
81	B5	2358	A	C8-N9-C4	6.03	108.21	105.80
81	B5	3318	G	N1-C6-O6	-6.03	116.28	119.90
80	B2	349	U	C4-C5-C6	6.03	123.32	119.70
81	B5	1047	A	C5-C6-N1	6.03	120.72	117.70
81	B5	1165	A	C8-N9-C4	6.03	108.21	105.80
81	B5	2364	G	N3-C4-C5	-6.03	125.58	128.60
81	B5	1910	A	C5-C6-N1	6.03	120.71	117.70
81	B5	2952	G	C6-N1-C2	-6.03	121.48	125.10
36	BB	232	ARG	NE-CZ-NH2	-6.02	117.29	120.30
80	B2	266	A	N1-C6-N6	6.02	122.22	118.60
80	B2	1450	U	C5-C4-O4	6.02	129.51	125.90
81	B5	282	G	N9-C4-C5	6.02	107.81	105.40
81	B5	3309	G	C5-C6-N1	6.02	114.51	111.50
80	B2	308	C	C2-N3-C4	-6.02	116.89	119.90
81	B5	2318	U	N3-C4-O4	-6.02	115.18	119.40
81	B5	2730	G	C5-N7-C8	-6.02	101.29	104.30
81	B5	2830	G	N3-C2-N2	-6.02	115.68	119.90
43	BI	7	ARG	NE-CZ-NH1	-6.02	117.29	120.30
80	B2	404	G	N9-C4-C5	-6.02	102.99	105.40
80	B2	1192	C	N3-C2-O2	6.02	126.11	121.90
80	B2	1749	A	C8-N9-C4	6.02	108.21	105.80
48	BN	172	ARG	NE-CZ-NH2	6.02	123.31	120.30
80	B2	397	A	N1-C6-N6	-6.02	114.99	118.60
80	B2	538	A	C4-C5-C6	-6.02	113.99	117.00
81	B5	555	U	N3-C4-O4	6.02	123.61	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	594	U	C5-C6-N1	6.02	125.71	122.70
86	CW	43	C	C6-N1-C2	-6.02	117.89	120.30
81	B5	1652	G	C8-N9-C4	6.02	108.81	106.40
81	B5	2395	G	C4-C5-N7	-6.02	108.39	110.80
81	B5	2993	G	N3-C4-N9	6.02	129.61	126.00
81	B5	3222	U	N3-C2-O2	-6.02	117.99	122.20
80	B2	1057	U	C2-N1-C1'	6.01	124.92	117.70
80	B2	1119	G	C5-C6-O6	6.01	132.21	128.60
81	B5	1808	G	N1-C6-O6	6.01	123.51	119.90
81	B5	1227	C	P-O5'-C5'	-6.01	111.28	120.90
81	B5	2167	A	N9-C4-C5	6.01	108.20	105.80
38	BD	248	ARG	NE-CZ-NH1	6.01	123.31	120.30
80	B2	781	U	N1-C2-O2	6.01	127.01	122.80
81	B5	822	G	N3-C2-N2	-6.01	115.69	119.90
81	B5	795	G	C2-N3-C4	6.01	114.91	111.90
81	B5	1000	C	C6-N1-C2	-6.01	117.90	120.30
81	B5	2837	A	N7-C8-N9	-6.01	110.80	113.80
81	B5	2917	G	N1-C6-O6	6.01	123.50	119.90
81	B5	3343	G	N1-C2-N2	-6.01	110.79	116.20
80	B2	1796	C	C4-C5-C6	6.01	120.40	117.40
81	B5	517	G	N1-C2-N3	6.00	127.50	123.90
81	B5	1190	A	N1-C6-N6	-6.00	115.00	118.60
81	B5	2108	C	N3-C4-N4	-6.00	113.80	118.00
81	B5	2421	U	N1-C2-N3	6.00	118.50	114.90
81	B5	3211	C	C4-C5-C6	6.00	120.40	117.40
80	B2	274	G	C4-N9-C1'	6.00	134.30	126.50
80	B2	445	A	C2-N3-C4	6.00	113.60	110.60
86	CW	41	C	O4'-C1'-N1	6.00	113.00	108.20
80	B2	1643	U	C5-C6-N1	-6.00	119.70	122.70
81	B5	811	U	C4-C5-C6	6.00	123.30	119.70
81	B5	1739	U	C5-C4-O4	6.00	129.50	125.90
49	BO	13[B]	ASP	C-N-CA	6.00	136.69	121.70
80	B2	106	U	C6-N1-C2	-6.00	117.40	121.00
80	B2	377	G	N1-C6-O6	6.00	123.50	119.90
81	B5	994	G	C8-N9-C4	6.00	108.80	106.40
43	BI	83	ASP	CB-CG-OD1	-6.00	112.90	118.30
80	B2	557	G	N3-C4-N9	6.00	129.60	126.00
81	B5	679	U	C5-C4-O4	6.00	129.50	125.90
81	B5	968	G	C4-C5-N7	6.00	113.20	110.80
81	B5	1192	C	C2-N3-C4	-6.00	116.90	119.90
81	B5	2887	A	C6-N1-C2	6.00	122.20	118.60
81	B5	516	A	N1-C6-N6	6.00	122.20	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1469	C	C4-C5-C6	6.00	120.40	117.40
81	B5	3187	A	N7-C8-N9	-6.00	110.80	113.80
80	B2	151	G	N1-C6-O6	-5.99	116.30	119.90
81	B5	351	A	N1-C6-N6	5.99	122.19	118.60
81	B5	813	G	N9-C4-C5	5.99	107.80	105.40
81	B5	1301	A	N9-C4-C5	-5.99	103.40	105.80
81	B5	1438	U	N3-C2-O2	-5.99	118.01	122.20
81	B5	2617	U	N3-C4-C5	5.99	118.19	114.60
81	B5	3095	U	N3-C4-C5	5.99	118.19	114.60
81	B5	2526	C	N1-C2-O2	5.99	122.50	118.90
81	B5	341	G	N1-C2-N2	5.99	121.59	116.20
81	B5	1378	U	C6-N1-C2	5.99	124.59	121.00
81	B5	1548	C	N1-C2-O2	-5.99	115.31	118.90
81	B5	3192	U	C2-N3-C4	-5.99	123.41	127.00
81	B5	2381	G	C5-C6-O6	5.99	132.19	128.60
81	B5	1882	G	N9-C4-C5	5.98	107.79	105.40
43	BI	57	LEU	CA-CB-CG	5.98	129.06	115.30
80	B2	1521	G	N3-C4-N9	5.98	129.59	126.00
80	B2	1745	G	C6-N1-C2	-5.98	121.51	125.10
81	B5	3343	G	N3-C2-N2	5.98	124.09	119.90
80	B2	1188	G	C5-C6-O6	-5.98	125.01	128.60
79	CL	6	ARG	NE-CZ-NH1	5.98	123.29	120.30
37	BC	84	ARG	NE-CZ-NH2	-5.98	117.31	120.30
81	B5	283	G	N1-C6-O6	5.98	123.49	119.90
81	B5	2166	A	N1-C6-N6	5.98	122.19	118.60
82	B7	96	U	C2-N1-C1'	5.98	124.87	117.70
81	B5	392	G	C5-C6-O6	-5.98	125.01	128.60
81	B5	416	A	N9-C4-C5	5.98	108.19	105.80
81	B5	847	A	N7-C8-N9	-5.98	110.81	113.80
81	B5	912	G	N3-C4-N9	5.98	129.59	126.00
81	B5	3055	U	N1-C2-O2	5.98	126.98	122.80
83	B8	47	C	N1-C2-O2	5.98	122.49	118.90
80	B2	1121	C	N3-C4-C5	-5.98	119.51	121.90
80	B2	1600	A	C5-N7-C8	-5.98	100.91	103.90
80	B2	831	U	C6-N1-C2	-5.97	117.42	121.00
81	B5	701	G	C4-C5-N7	-5.97	108.41	110.80
81	B5	3298	C	C4-C5-C6	5.97	120.39	117.40
80	B2	1417	A	N1-C6-N6	5.97	122.18	118.60
81	B5	1305	U	N3-C4-O4	5.97	123.58	119.40
81	B5	1307	G	P-O3'-C3'	5.97	126.87	119.70
81	B5	2113	A	C8-N9-C4	5.97	108.19	105.80
81	B5	2130	G	N1-C2-N2	-5.97	110.83	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3112	G	N1-C6-O6	5.97	123.48	119.90
81	B5	226	C	C5-C4-N4	-5.97	116.02	120.20
81	B5	3003	G	C4-C5-C6	-5.97	115.22	118.80
81	B5	971	G	N1-C2-N3	-5.97	120.32	123.90
81	B5	3028	G	N3-C4-N9	5.97	129.58	126.00
81	B5	3341	U	C5-C6-N1	5.97	125.69	122.70
47	BM	135	LEU	CA-CB-CG	5.97	129.03	115.30
73	Bm	97	ARG	NE-CZ-NH2	-5.97	117.32	120.30
81	B5	2365	C	C5-C6-N1	-5.97	118.02	121.00
84	CN	2135	A	O5'-P-OP2	5.97	117.86	110.70
80	B2	542	A	C6-C5-N7	-5.97	128.12	132.30
80	B2	1455	G	N9-C4-C5	5.97	107.79	105.40
81	B5	359	U	C6-N1-C2	5.97	124.58	121.00
81	B5	619	A	N1-C6-N6	-5.97	115.02	118.60
81	B5	965	A	N3-C4-C5	-5.97	122.62	126.80
81	B5	1206	G	C4-C5-N7	-5.97	108.41	110.80
81	B5	1725	C	C5-C4-N4	5.97	124.38	120.20
81	B5	2833	A	C5-C6-N1	5.97	120.68	117.70
83	B8	63	G	N1-C6-O6	-5.97	116.32	119.90
81	B5	2915	U	N3-C2-O2	-5.96	118.03	122.20
80	B2	1753	A	C8-N9-C4	5.96	108.18	105.80
81	B5	2405	C	N3-C2-O2	-5.96	117.73	121.90
70	Bj	21	ARG	NE-CZ-NH2	-5.96	117.32	120.30
80	B2	719	U	N1-C2-O2	5.96	126.97	122.80
81	B5	667	C	C2-N1-C1'	-5.96	112.25	118.80
81	B5	884	A	C4-C5-C6	-5.96	114.02	117.00
81	B5	1280	C	N3-C4-N4	5.96	122.17	118.00
81	B5	2250	G	N1-C6-O6	-5.96	116.32	119.90
86	CW	36	A	C5-C6-N6	-5.96	118.93	123.70
79	By	20	TYR	CB-CG-CD1	5.96	124.57	121.00
81	B5	2349	U	C4-C5-C6	-5.96	116.13	119.70
80	B2	360	A	N1-C6-N6	5.96	122.17	118.60
81	B5	2908	G	C5-C6-N1	-5.95	108.52	111.50
81	B5	1907	C	C5-C6-N1	5.95	123.98	121.00
83	B8	100	U	C5-C4-O4	-5.95	122.33	125.90
80	B2	416	A	C8-N9-C4	5.95	108.18	105.80
81	B5	83	U	C2-N1-C1'	5.95	124.84	117.70
81	B5	903	U	C5-C6-N1	-5.95	119.72	122.70
81	B5	987	U	N3-C2-O2	-5.95	118.03	122.20
81	B5	2792	A	C8-N9-C4	-5.95	103.42	105.80
86	CW	7	A	O4'-C1'-N9	5.95	112.96	108.20
80	B2	13	C	N3-C4-C5	5.95	124.28	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	628	G	C5-C6-O6	5.95	132.17	128.60
80	B2	1387	G	C4-C5-N7	5.95	113.18	110.80
80	B2	1768	G	C4-N9-C1'	-5.95	118.77	126.50
81	B5	546	C	N3-C2-O2	-5.95	117.74	121.90
81	B5	2724	U	C5-C4-O4	5.95	129.47	125.90
81	B5	3240	C	N3-C4-N4	-5.95	113.84	118.00
81	B5	386	A	C5-C6-N6	-5.95	118.94	123.70
80	B2	382	C	C2-N3-C4	-5.95	116.93	119.90
81	B5	520	U	N1-C2-N3	5.95	118.47	114.90
81	B5	873	C	P-O3'-C3'	5.95	126.83	119.70
81	B5	1171	G	N7-C8-N9	5.95	116.07	113.10
81	B5	1753	G	C2-N3-C4	5.95	114.87	111.90
81	B5	2370	G	C5-C6-N1	5.95	114.47	111.50
81	B5	2753	G	N7-C8-N9	5.95	116.07	113.10
81	B5	2976	A	N7-C8-N9	-5.95	110.83	113.80
81	B5	3088	G	C5-N7-C8	-5.95	101.33	104.30
81	B5	3369	G	C6-N1-C2	-5.95	121.53	125.10
86	CW	56	C	N3-C4-N4	5.95	122.16	118.00
81	B5	2184	U	N3-C2-O2	-5.94	118.04	122.20
80	B2	1000	C	N3-C2-O2	-5.94	117.74	121.90
80	B2	1097	U	C2-N1-C1'	5.94	124.83	117.70
80	B2	1582	U	C6-N1-C2	5.94	124.57	121.00
81	B5	1678	G	C5-C6-N1	5.94	114.47	111.50
81	B5	2426	U	N3-C4-O4	-5.94	115.24	119.40
81	B5	2584	G	C4-C5-N7	5.94	113.18	110.80
81	B5	2617	U	C6-N1-C2	5.94	124.57	121.00
83	B8	12	A	N7-C8-N9	5.94	116.77	113.80
83	B8	24	G	N3-C2-N2	5.94	124.06	119.90
47	BM	106	ARG	NE-CZ-NH2	-5.94	117.33	120.30
81	B5	1122	U	N3-C2-O2	-5.94	118.04	122.20
81	B5	1311	G	N1-C2-N3	-5.94	120.34	123.90
81	B5	2167	A	N1-C6-N6	-5.94	115.03	118.60
81	B5	2409	G	N7-C8-N9	5.94	116.07	113.10
80	B2	192	U	N1-C2-O2	5.94	126.96	122.80
81	B5	883	A	N7-C8-N9	-5.94	110.83	113.80
81	B5	974	G	C8-N9-C1'	-5.94	119.28	127.00
81	B5	1181	U	C6-N1-C2	5.94	124.56	121.00
81	B5	2114	C	N1-C2-N3	5.94	123.36	119.20
81	B5	2730	G	N3-C4-C5	5.94	131.57	128.60
80	B2	794	U	C2-N1-C1'	5.94	124.82	117.70
81	B5	39	A	N3-C4-N9	5.94	132.15	127.40
33	AY	44	LEU	CA-CB-CG	5.93	128.94	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	365	A	C5-C6-N6	-5.93	118.95	123.70
81	B5	749	C	N3-C4-C5	-5.93	119.53	121.90
81	B5	1035	G	C4-N9-C1'	5.93	134.21	126.50
51	BQ	99	THR	N-CA-C	5.93	127.01	111.00
81	B5	509	U	N1-C2-N3	5.93	118.46	114.90
81	B5	1495	U	N3-C4-C5	-5.93	111.04	114.60
86	CW	43	C	N3-C4-C5	-5.93	119.53	121.90
40	BF	191	VAL	C-N-CA	-5.93	109.85	122.30
80	B2	393	C	N3-C4-C5	5.93	124.27	121.90
81	B5	708	G	C8-N9-C4	-5.93	104.03	106.40
81	B5	1128	U	C5-C6-N1	-5.93	119.73	122.70
81	B5	2943	G	N1-C2-N2	-5.93	110.86	116.20
81	B5	216	G	C5-C6-O6	-5.93	125.04	128.60
81	B5	337	G	N1-C6-O6	-5.93	116.34	119.90
81	B5	2411	U	N3-C4-C5	5.93	118.16	114.60
80	B2	1479	A	N1-C6-N6	5.93	122.16	118.60
80	B2	1542	G	C5-C6-O6	5.93	132.16	128.60
81	B5	2329	C	N3-C4-N4	-5.93	113.85	118.00
81	B5	2552	C	C5-C4-N4	5.93	124.35	120.20
36	BB	114	VAL	CB-CA-C	-5.92	100.14	111.40
80	B2	1314	U	N3-C2-O2	-5.92	118.05	122.20
81	B5	201	A	C2-N3-C4	-5.92	107.64	110.60
81	B5	283	G	C4-C5-N7	5.92	113.17	110.80
81	B5	2421	U	N1-C2-O2	-5.92	118.65	122.80
81	B5	2687	G	C5-C6-N1	5.92	114.46	111.50
80	B2	1157	A	C8-N9-C4	-5.92	103.43	105.80
80	B2	1274	C	C4-C5-C6	5.92	120.36	117.40
84	CN	2192	A	P-O5'-C5'	-5.92	111.43	120.90
81	B5	994	G	C6-N1-C2	-5.92	121.55	125.10
80	B2	389	G	N3-C4-C5	-5.92	125.64	128.60
81	B5	874	U	N3-C4-O4	-5.92	115.26	119.40
81	B5	2323	G	N1-C6-O6	-5.92	116.35	119.90
81	B5	2643	A	N1-C2-N3	-5.92	126.34	129.30
86	CW	20	U	C6-N1-C1'	-5.92	112.91	121.20
81	B5	1227	C	C5-C4-N4	-5.92	116.06	120.20
81	B5	1231	A	C5-C6-N1	-5.92	114.74	117.70
81	B5	3296	A	C8-N9-C4	5.92	108.17	105.80
82	B7	25	G	C5-C6-O6	-5.92	125.05	128.60
81	B5	1699	A	N1-C6-N6	5.92	122.15	118.60
80	B2	703	G	C8-N9-C4	-5.91	104.03	106.40
81	B5	3351	U	N3-C2-O2	-5.91	118.06	122.20
81	B5	590	G	C5-C6-O6	-5.91	125.05	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1772	U	C5-C4-O4	5.91	129.45	125.90
81	B5	2424	A	C5-C6-N6	-5.91	118.97	123.70
81	B5	2917	G	N3-C4-C5	-5.91	125.64	128.60
81	B5	3269	U	N3-C2-O2	-5.91	118.06	122.20
81	B5	2416	U	N3-C2-O2	-5.91	118.06	122.20
81	B5	2607	G	N1-C6-O6	-5.91	116.36	119.90
80	B2	554	C	N1-C2-O2	5.91	122.44	118.90
80	B2	1537	C	C5-C6-N1	5.91	123.95	121.00
81	B5	1043	C	C5-C6-N1	-5.91	118.05	121.00
81	B5	2347	U	C2-N3-C4	-5.91	123.46	127.00
81	B5	892	U	C2-N3-C4	-5.90	123.46	127.00
81	B5	1808	G	C8-N9-C4	5.90	108.76	106.40
81	B5	3075	G	C4-C5-C6	5.90	122.34	118.80
82	B7	92	A	N9-C4-C5	-5.90	103.44	105.80
81	B5	153	U	C5-C4-O4	5.90	129.44	125.90
81	B5	3075	G	C5-C6-N1	-5.90	108.55	111.50
80	B2	829	A	C8-N9-C4	-5.90	103.44	105.80
80	B2	1776	A	N9-C4-C5	5.90	108.16	105.80
81	B5	2148	U	N3-C2-O2	5.90	126.33	122.20
81	B5	2639	G	C6-C5-N7	-5.90	126.86	130.40
81	B5	3019	U	N3-C4-C5	5.90	118.14	114.60
83	B8	99	C	N3-C4-C5	5.90	124.26	121.90
81	B5	1178	G	C5-N7-C8	-5.89	101.35	104.30
81	B5	2931	C	C2-N3-C4	-5.89	116.95	119.90
81	B5	3013	U	N3-C2-O2	-5.89	118.07	122.20
83	B8	55	U	N3-C4-C5	-5.89	111.06	114.60
56	BV	33	ASN	CB-CA-C	-5.89	98.61	110.40
81	B5	345	G	C6-N1-C2	-5.89	121.56	125.10
81	B5	1834	U	C6-N1-C2	5.89	124.53	121.00
81	B5	3277	U	C6-N1-C2	-5.89	117.47	121.00
81	B5	3395	G	N3-C4-C5	5.89	131.55	128.60
82	B7	12	U	C5-C4-O4	-5.89	122.36	125.90
81	B5	2410	U	N3-C4-O4	-5.89	115.28	119.40
80	B2	1241	G	C8-N9-C4	-5.89	104.04	106.40
81	B5	419	G	C8-N9-C4	5.89	108.76	106.40
81	B5	2910	A	N1-C6-N6	-5.89	115.07	118.60
86	CW	74	C	N3-C4-C5	-5.89	119.54	121.90
81	B5	2851	A	N7-C8-N9	-5.89	110.86	113.80
81	B5	680	G	N3-C2-N2	5.89	124.02	119.90
81	B5	1127	G	C5-C6-N1	5.89	114.44	111.50
81	B5	2744	U	C5-C6-N1	-5.89	119.76	122.70
80	B2	279	G	C8-N9-C4	-5.88	104.05	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	344	A	N1-C6-N6	-5.88	115.07	118.60
80	B2	1601	G	C5-C6-N1	5.88	114.44	111.50
81	B5	1279	C	N3-C4-N4	5.88	122.12	118.00
81	B5	2792	A	C2-N3-C4	5.88	113.54	110.60
86	CW	21	A	C5-C6-N6	-5.88	118.99	123.70
81	B5	1866	C	N3-C2-O2	5.88	126.02	121.90
80	B2	1027	A	C8-N9-C4	-5.88	103.45	105.80
81	B5	1226	G	N3-C4-C5	5.88	131.54	128.60
81	B5	1477	A	N1-C2-N3	5.88	132.24	129.30
81	B5	2893	C	C4-C5-C6	5.88	120.34	117.40
81	B5	1086	C	N1-C2-O2	5.88	122.43	118.90
81	B5	741	U	C2-N3-C4	5.88	130.53	127.00
81	B5	2965	U	N1-C2-O2	-5.88	118.69	122.80
81	B5	2988	C	N1-C2-N3	5.88	123.31	119.20
80	B2	1503	A	C5-N7-C8	-5.88	100.96	103.90
81	B5	416	A	C8-N9-C4	-5.88	103.45	105.80
81	B5	2366	C	C6-N1-C1'	-5.88	113.75	120.80
81	B5	2531	C	C6-N1-C1'	-5.88	113.75	120.80
81	B5	365	A	N1-C6-N6	5.87	122.12	118.60
81	B5	795	G	N1-C2-N3	-5.87	120.38	123.90
81	B5	3113	A	C5-C6-N1	5.87	120.64	117.70
80	B2	810	G	N1-C6-O6	5.87	123.42	119.90
81	B5	1369	A	N1-C6-N6	5.87	122.12	118.60
81	B5	2118	C	N1-C2-O2	5.87	122.42	118.90
81	B5	2849	C	C6-N1-C2	-5.87	117.95	120.30
81	B5	2992	U	N3-C2-O2	-5.87	118.09	122.20
80	B2	1291	G	N3-C2-N2	-5.87	115.79	119.90
81	B5	2961	G	N7-C8-N9	5.87	116.03	113.10
81	B5	426	G	N7-C8-N9	-5.87	110.17	113.10
81	B5	2770	G	C2-N3-C4	5.87	114.83	111.90
46	BL	46	ILE	CG1-CB-CG2	-5.87	98.49	111.40
81	B5	874	U	C5-C6-N1	-5.87	119.77	122.70
81	B5	1838	G	N7-C8-N9	-5.87	110.17	113.10
81	B5	2758	A	N3-C4-C5	-5.87	122.69	126.80
86	CW	23	A	O4'-C1'-N9	5.87	112.89	108.20
80	B2	169	A	C8-N9-C4	5.87	108.15	105.80
81	B5	795	G	C5-N7-C8	5.87	107.23	104.30
80	B2	542	A	C4-C5-N7	5.86	113.63	110.70
81	B5	593	C	C2-N1-C1'	5.86	125.25	118.80
81	B5	2320	A	N1-C6-N6	-5.86	115.08	118.60
81	B5	2711	C	C4-C5-C6	5.86	120.33	117.40
81	B5	2745	G	C5-C6-O6	-5.86	125.08	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3064	U	N3-C2-O2	-5.86	118.10	122.20
81	B5	1181	U	C2-N3-C4	-5.86	123.48	127.00
81	B5	1512	U	C5-C6-N1	-5.86	119.77	122.70
81	B5	3340	G	N1-C6-O6	-5.86	116.38	119.90
82	B7	5	G	C8-N9-C4	5.86	108.74	106.40
81	B5	1116	G	C5-C6-O6	5.86	132.12	128.60
81	B5	2192	C	C4-C5-C6	5.86	120.33	117.40
80	B2	1536	G	C4-N9-C1'	5.86	134.11	126.50
81	B5	1175	C	N3-C4-C5	5.86	124.24	121.90
81	B5	1251	A	N9-C1'-C2'	-5.86	105.56	112.00
81	B5	1481	A	N3-C4-C5	-5.86	122.70	126.80
81	B5	2843	U	C2-N1-C1'	5.86	124.73	117.70
80	B2	1745	G	C6-C5-N7	-5.86	126.89	130.40
81	B5	908	G	C8-N9-C1'	-5.86	119.39	127.00
81	B5	1189	C	C6-N1-C2	5.86	122.64	120.30
81	B5	1278	A	C5-C6-N6	-5.86	119.02	123.70
81	B5	1317	A	N3-C4-N9	5.86	132.09	127.40
81	B5	1456	A	C8-N9-C4	5.86	108.14	105.80
80	B2	997	G	N9-C4-C5	-5.85	103.06	105.40
81	B5	1889	G	N3-C4-C5	-5.85	125.67	128.60
81	B5	2305	G	N1-C2-N2	-5.85	110.93	116.20
81	B5	3212	C	C5-C6-N1	-5.85	118.07	121.00
83	B8	33	A	C8-N9-C4	5.85	108.14	105.80
81	B5	2799	A	C2-N3-C4	-5.85	107.67	110.60
81	B5	3226	A	N1-C2-N3	-5.85	126.37	129.30
81	B5	3373	U	C5-C6-N1	-5.85	119.77	122.70
81	B5	432	G	C4-C5-N7	5.85	113.14	110.80
81	B5	2314	U	C6-N1-C1'	-5.85	113.01	121.20
83	B8	16	G	N1-C2-N3	5.85	127.41	123.90
80	B2	628	G	N1-C2-N2	-5.85	110.94	116.20
81	B5	376	G	N1-C6-O6	-5.85	116.39	119.90
81	B5	966	U	C2-N1-C1'	5.85	124.72	117.70
81	B5	1485	G	N3-C4-C5	-5.85	125.68	128.60
81	B5	3267	A	N1-C2-N3	5.85	132.22	129.30
81	B5	3326	G	N1-C6-O6	-5.85	116.39	119.90
81	B5	587	U	C5-C6-N1	-5.85	119.78	122.70
81	B5	2549	G	C4-N9-C1'	5.85	134.10	126.50
81	B5	3218	A	N7-C8-N9	5.85	116.72	113.80
81	B5	1158	A	C4-C5-N7	5.84	113.62	110.70
81	B5	2518	C	C2-N3-C4	-5.84	116.98	119.90
81	B5	3241	G	C4-C5-N7	5.84	113.14	110.80
80	B2	1798	U	C2-N1-C1'	5.84	124.71	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1437	C	C2-N1-C1'	5.84	125.23	118.80
81	B5	1586	G	N3-C4-C5	-5.84	125.68	128.60
81	B5	1892	G	N3-C2-N2	-5.84	115.81	119.90
81	B5	2706	G	C2-N3-C4	5.84	114.82	111.90
81	B5	182	U	C5-C6-N1	5.84	125.62	122.70
81	B5	591	G	N3-C4-N9	5.84	129.50	126.00
81	B5	1193	A	C2-N3-C4	-5.84	107.68	110.60
81	B5	1322	U	N3-C4-C5	5.84	118.11	114.60
81	B5	1323	G	N9-C4-C5	5.84	107.74	105.40
81	B5	2410	U	N3-C4-C5	5.84	118.11	114.60
81	B5	2835	U	N1-C2-N3	5.84	118.40	114.90
86	CW	60	U	O4'-C1'-N1	5.84	112.87	108.20
81	B5	25	U	N1-C2-O2	-5.84	118.71	122.80
81	B5	1136	A	C2-N3-C4	5.84	113.52	110.60
81	B5	1239	C	N3-C4-C5	-5.84	119.56	121.90
81	B5	2692	A	C5-C6-N6	5.84	128.37	123.70
80	B2	1633	A	N3-C4-C5	-5.84	122.71	126.80
80	B2	1370	U	N3-C2-O2	-5.84	118.11	122.20
80	B2	1666	U	C6-N1-C2	-5.84	117.50	121.00
81	B5	289	A	C5-C6-N1	5.84	120.62	117.70
81	B5	1225	A	C5-C6-N6	-5.83	119.03	123.70
81	B5	2381	G	C2-N3-C4	5.83	114.82	111.90
81	B5	2920	U	N1-C2-O2	-5.83	118.72	122.80
81	B5	3224	G	N1-C6-O6	-5.83	116.40	119.90
81	B5	1429	G	C2-N3-C4	-5.83	108.98	111.90
81	B5	3333	G	N9-C4-C5	-5.83	103.07	105.40
80	B2	294	C	C6-N1-C2	5.83	122.63	120.30
81	B5	432	G	C2-N3-C4	-5.83	108.98	111.90
81	B5	801	A	C6-N1-C2	5.83	122.10	118.60
81	B5	815	G	N9-C4-C5	5.83	107.73	105.40
81	B5	993	G	C8-N9-C4	-5.83	104.07	106.40
81	B5	2188	A	N7-C8-N9	-5.83	110.88	113.80
81	B5	894	G	N3-C4-N9	5.83	129.50	126.00
81	B5	2510	U	C2-N1-C1'	-5.83	110.70	117.70
81	B5	159	A	C8-N9-C4	5.83	108.13	105.80
81	B5	971	G	N9-C4-C5	5.83	107.73	105.40
81	B5	1939	G	N1-C2-N2	-5.83	110.95	116.20
81	B5	2248	C	C5-C6-N1	-5.83	118.09	121.00
81	B5	3095	U	C2-N3-C4	-5.83	123.50	127.00
81	B5	3388	C	N3-C2-O2	-5.83	117.82	121.90
81	B5	1846	C	N3-C2-O2	-5.83	117.82	121.90
80	B2	1416	G	C8-N9-C4	-5.83	104.07	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1369	A	N9-C4-C5	-5.83	103.47	105.80
81	B5	1902	G	C5-C6-N1	5.83	114.41	111.50
86	CW	25	C	N3-C4-N4	5.83	122.08	118.00
86	CW	62	C	O4'-C1'-N1	5.83	112.86	108.20
80	B2	1129	U	N3-C4-O4	-5.82	115.32	119.40
81	B5	2271	A	N1-C6-N6	-5.82	115.11	118.60
81	B5	3216	G	N1-C2-N3	5.82	127.39	123.90
81	B5	96	G	N1-C2-N3	5.82	127.39	123.90
81	B5	1512	U	C4-C5-C6	5.82	123.19	119.70
84	CN	2203	G	C2'-C3'-O3'	5.82	123.01	113.70
81	B5	2335	G	N9-C4-C5	5.82	107.73	105.40
81	B5	2292	U	C2-N3-C4	-5.82	123.51	127.00
46	BL	76	THR	N-CA-CB	5.81	121.34	110.30
80	B2	1614	A	C4-C5-C6	5.81	119.91	117.00
81	B5	518	G	C8-N9-C4	5.81	108.72	106.40
81	B5	1280	C	N3-C4-C5	-5.81	119.58	121.90
81	B5	2145	A	C5-C6-N1	5.81	120.61	117.70
80	B2	21	U	N3-C2-O2	-5.81	118.13	122.20
81	B5	706	A	C5-C6-N6	-5.81	119.05	123.70
81	B5	2346	C	C5-C4-N4	-5.81	116.13	120.20
81	B5	2426	U	N3-C2-O2	-5.81	118.13	122.20
81	B5	3112	G	C5-C6-O6	-5.81	125.11	128.60
81	B5	35	A	C8-N9-C4	5.81	108.12	105.80
81	B5	689	U	N3-C4-O4	-5.81	115.33	119.40
81	B5	968	G	C8-N9-C4	5.81	108.72	106.40
81	B5	1639	C	C6-N1-C2	-5.81	117.98	120.30
81	B5	2709	C	N3-C4-C5	5.81	124.22	121.90
81	B5	2838	A	C6-N1-C2	-5.81	115.11	118.60
81	B5	3141	A	C4-C5-C6	5.81	119.91	117.00
81	B5	1495	U	C2-N1-C1'	5.81	124.67	117.70
81	B5	3152	U	C6-N1-C2	5.81	124.48	121.00
82	B7	8	G	C8-N9-C4	-5.81	104.08	106.40
83	B8	104	A	N1-C6-N6	5.81	122.08	118.60
80	B2	581	U	C6-N1-C1'	-5.81	113.07	121.20
81	B5	1607	U	P-O3'-C3'	5.81	126.67	119.70
80	B2	142	G	N1-C6-O6	5.80	123.38	119.90
80	B2	611	U	N1-C2-O2	-5.80	118.74	122.80
80	B2	1324	G	C8-N9-C1'	5.80	134.55	127.00
80	B2	1340	U	C5-C4-O4	5.80	129.38	125.90
81	B5	2306	C	C2-N1-C1'	5.80	125.19	118.80
81	B5	3076	C	N3-C2-O2	-5.80	117.84	121.90
81	B5	3215	A	C8-N9-C4	5.80	108.12	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	49	C	N3-C4-N4	5.80	122.06	118.00
80	B2	460	A	N1-C6-N6	-5.80	115.12	118.60
81	B5	666	A	C2-N3-C4	-5.80	107.70	110.60
81	B5	1669	C	C6-N1-C2	5.80	122.62	120.30
81	B5	1607	U	C2-N3-C4	-5.80	123.52	127.00
81	B5	2207	A	N7-C8-N9	5.80	116.70	113.80
81	B5	2804	A	C8-N9-C4	5.80	108.12	105.80
81	B5	2827	U	N3-C2-O2	-5.80	118.14	122.20
81	B5	3100	U	N1-C2-O2	5.80	126.86	122.80
81	B5	3301	U	C6-N1-C2	5.80	124.48	121.00
79	CL	104	LEU	CA-CB-CG	5.80	128.63	115.30
80	B2	1274	C	C5-C4-N4	5.80	124.26	120.20
81	B5	1159	A	C6-N1-C2	5.80	122.08	118.60
81	B5	1438	U	C6-N1-C2	-5.80	117.52	121.00
83	B8	31	G	N7-C8-N9	-5.80	110.20	113.10
81	B5	1206	G	C2-N3-C4	5.79	114.80	111.90
36	BB	19	ARG	NE-CZ-NH2	-5.79	117.40	120.30
81	B5	1133	A	N1-C2-N3	-5.79	126.40	129.30
86	CW	4	C	N3-C4-C5	-5.79	119.58	121.90
81	B5	224	C	N3-C2-O2	-5.79	117.85	121.90
81	B5	920	A	C8-N9-C4	5.79	108.12	105.80
81	B5	1129	A	C2-N3-C4	5.79	113.50	110.60
81	B5	1888	U	N1-C2-N3	5.79	118.38	114.90
81	B5	2370	G	N1-C2-N3	5.79	127.38	123.90
81	B5	2665	U	C2-N3-C4	5.79	130.47	127.00
53	BS	155	ARG	CG-CD-NE	5.79	123.96	111.80
80	B2	1602	C	C6-N1-C2	5.79	122.62	120.30
81	B5	979	U	N1-C2-O2	5.79	126.85	122.80
81	B5	1044	U	C2-N3-C4	-5.79	123.53	127.00
81	B5	1126	G	C2-N3-C4	-5.79	109.00	111.90
81	B5	1128	U	N1-C2-N3	5.79	118.37	114.90
81	B5	590	G	C5-N7-C8	-5.79	101.41	104.30
81	B5	1159	A	N3-C4-C5	5.79	130.85	126.80
81	B5	2147	A	C5-C6-N6	-5.79	119.07	123.70
81	B5	666	A	C8-N9-C4	5.79	108.11	105.80
86	CW	13	C	O4'-C1'-N1	5.79	112.83	108.20
86	CW	55	U	C2-N1-C1'	5.79	124.64	117.70
80	B2	92	A	N1-C6-N6	-5.78	115.13	118.60
80	B2	339	C	N1-C2-O2	-5.78	115.43	118.90
81	B5	1856	C	C6-N1-C2	-5.78	117.99	120.30
81	B5	2906	C	N3-C4-C5	-5.78	119.59	121.90
82	B7	106	U	C5-C6-N1	-5.78	119.81	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	934	C	C6-N1-C1'	-5.78	113.86	120.80
81	B5	2736	A	C5-C6-N6	5.78	128.32	123.70
81	B5	2978	U	N1-C2-N3	5.78	118.37	114.90
72	B1	45	ARG	NE-CZ-NH2	-5.78	117.41	120.30
81	B5	861	C	N1-C2-O2	-5.78	115.43	118.90
81	B5	1127	G	N9-C4-C5	-5.78	103.09	105.40
81	B5	2141	U	N3-C2-O2	-5.78	118.15	122.20
81	B5	2747	A	N9-C4-C5	5.78	108.11	105.80
81	B5	3130	A	C6-N1-C2	-5.78	115.13	118.60
81	B5	201	A	C5-C6-N1	-5.78	114.81	117.70
81	B5	1113	G	N7-C8-N9	-5.78	110.21	113.10
81	B5	1494	U	N3-C2-O2	5.78	126.25	122.20
81	B5	2361	A	N3-C4-N9	5.78	132.02	127.40
81	B5	2846	U	C5-C6-N1	-5.78	119.81	122.70
43	BI	21	ARG	NE-CZ-NH1	5.78	123.19	120.30
81	B5	1045	C	N1-C2-N3	5.78	123.25	119.20
81	B5	1210	U	N3-C4-O4	-5.78	115.36	119.40
49	BO	197[B]	PHE	O-C-N	5.78	133.02	123.20
81	B5	272	G	C2-N3-C4	-5.78	109.01	111.90
81	B5	524	U	N1-C2-O2	-5.78	118.76	122.80
81	B5	798	G	C5-C6-N1	5.78	114.39	111.50
81	B5	1490	A	C2-N3-C4	-5.78	107.71	110.60
81	B5	2129	U	N3-C4-C5	5.78	118.06	114.60
81	B5	2335	G	N1-C6-O6	-5.78	116.44	119.90
81	B5	2641	U	N1-C2-O2	-5.78	118.76	122.80
81	B5	3000	A	C5-C6-N6	-5.78	119.08	123.70
81	B5	3285	C	C2-N1-C1'	5.78	125.15	118.80
81	B5	1911	A	C2-N3-C4	-5.77	107.71	110.60
81	B5	2320	A	N3-C4-N9	-5.77	122.78	127.40
81	B5	3339	A	C5-C6-N6	-5.77	119.08	123.70
80	B2	1198	G	N7-C8-N9	5.77	115.99	113.10
80	B2	1291	G	N3-C4-N9	-5.77	122.54	126.00
81	B5	2971	A	C2-N3-C4	5.77	113.49	110.60
81	B5	1238	C	N3-C4-N4	5.77	122.04	118.00
81	B5	916	G	N3-C4-N9	-5.77	122.54	126.00
81	B5	1553	U	N3-C2-O2	5.77	126.24	122.20
81	B5	3088	G	N7-C8-N9	5.77	115.98	113.10
81	B5	526	C	C5-C4-N4	-5.77	116.16	120.20
81	B5	3212	C	N1-C2-O2	-5.76	115.44	118.90
81	B5	332	C	C5-C6-N1	-5.76	118.12	121.00
81	B5	3197	G	N3-C4-N9	-5.76	122.54	126.00
81	B5	180	C	C6-N1-C2	-5.76	118.00	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	798	G	C5-C6-O6	-5.76	125.14	128.60
81	B5	2329	C	C5-C4-N4	5.76	124.23	120.20
81	B5	2342	U	N3-C2-O2	-5.76	118.17	122.20
81	B5	2412	G	N9-C4-C5	5.76	107.70	105.40
80	B2	971	A	C5-C6-N1	-5.76	114.82	117.70
81	B5	404	G	N3-C2-N2	-5.76	115.87	119.90
81	B5	911	C	C2-N3-C4	-5.76	117.02	119.90
81	B5	2516	U	C5-C4-O4	-5.76	122.44	125.90
81	B5	2920	U	C4-C5-C6	5.76	123.16	119.70
83	B8	17	A	C5-C6-N6	-5.76	119.09	123.70
81	B5	2692	A	C5-N7-C8	5.76	106.78	103.90
80	B2	864	U	N1-C2-N3	5.76	118.35	114.90
81	B5	1116	G	C4-C5-C6	5.76	122.25	118.80
81	B5	2817	A	C2-N3-C4	5.76	113.48	110.60
81	B5	2832	C	C6-N1-C2	5.76	122.60	120.30
81	B5	3375	A	N1-C2-N3	-5.76	126.42	129.30
81	B5	2338	C	N3-C4-C5	-5.75	119.60	121.90
81	B5	3099	C	C4-C5-C6	5.75	120.28	117.40
36	BB	266	ARG	NE-CZ-NH1	5.75	123.17	120.30
80	B2	377	G	N1-C2-N2	5.75	121.38	116.20
80	B2	1282	U	N1-C2-N3	5.75	118.35	114.90
81	B5	2305	G	C6-C5-N7	-5.75	126.95	130.40
81	B5	2733	A	C2-N3-C4	-5.75	107.72	110.60
86	CW	73	A	C5-C6-N6	-5.75	119.10	123.70
81	B5	3131	U	C5-C4-O4	-5.75	122.45	125.90
81	B5	523	A	C5-C6-N6	5.75	128.30	123.70
81	B5	2142	A	N3-C4-N9	5.75	132.00	127.40
36	BB	21	ARG	NE-CZ-NH2	-5.75	117.43	120.30
80	B2	639	U	N3-C4-O4	-5.75	115.38	119.40
80	B2	1169	G	N3-C4-C5	-5.75	125.73	128.60
81	B5	2327	U	N3-C4-C5	5.75	118.05	114.60
81	B5	2337	C	C2-N3-C4	-5.75	117.03	119.90
81	B5	2899	C	C5-C6-N1	-5.75	118.13	121.00
86	CW	9	A	C4-C5-C6	5.75	119.87	117.00
81	B5	824	C	N3-C4-C5	-5.75	119.60	121.90
81	B5	1159	A	C5-N7-C8	-5.75	101.03	103.90
81	B5	88	A	C5-C6-N1	-5.74	114.83	117.70
81	B5	382	U	N1-C2-N3	5.74	118.35	114.90
81	B5	427	C	C2-N3-C4	-5.74	117.03	119.90
81	B5	591	G	C8-N9-C4	5.74	108.70	106.40
83	B8	106	C	N3-C4-C5	5.74	124.20	121.90
81	B5	359	U	C5-C6-N1	-5.74	119.83	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	760	G	C5-C6-O6	-5.74	125.16	128.60
81	B5	580	C	N3-C4-C5	-5.74	119.60	121.90
81	B5	2926	A	C2-N3-C4	5.74	113.47	110.60
86	CW	62	C	N3-C4-N4	5.74	122.02	118.00
80	B2	144	U	N1-C2-O2	5.74	126.82	122.80
81	B5	1035	G	C8-N9-C1'	-5.74	119.54	127.00
81	B5	2422	C	N3-C2-O2	-5.74	117.88	121.90
81	B5	2866	U	C2-N3-C4	-5.74	123.56	127.00
34	AZ	95	HIS	N-CA-C	5.74	126.49	111.00
80	B2	811	A	C8-N9-C4	-5.74	103.51	105.80
81	B5	326	U	C4-C5-C6	-5.74	116.26	119.70
81	B5	1208	U	N1-C2-N3	5.74	118.34	114.90
81	B5	1254	C	N3-C4-C5	-5.74	119.61	121.90
81	B5	1917	C	C2-N3-C4	-5.74	117.03	119.90
81	B5	2361	A	C5-C6-N1	5.74	120.57	117.70
81	B5	672	A	N1-C6-N6	5.73	122.04	118.60
81	B5	1116	G	N3-C4-C5	-5.73	125.73	128.60
81	B5	1652	G	C4-C5-N7	-5.73	108.51	110.80
86	CW	9	A	C5-C6-N1	-5.73	114.83	117.70
81	B5	3006	A	N9-C4-C5	5.73	108.09	105.80
81	B5	3241	G	C5-C6-O6	-5.73	125.16	128.60
81	B5	1045	C	N1-C2-O2	-5.73	115.46	118.90
81	B5	2123	G	C5-C6-N1	5.73	114.36	111.50
81	B5	2619	G	C5-C6-N1	5.73	114.36	111.50
80	B2	1131	A	N7-C8-N9	-5.73	110.94	113.80
80	B2	1776	A	N1-C6-N6	-5.73	115.16	118.60
81	B5	665	A	N9-C4-C5	-5.73	103.51	105.80
81	B5	1443	G	C5-C6-N1	-5.73	108.64	111.50
81	B5	1883	A	C8-N9-C4	-5.73	103.51	105.80
81	B5	363	G	N9-C4-C5	5.73	107.69	105.40
81	B5	1849	C	N3-C2-O2	-5.73	117.89	121.90
81	B5	1904	C	N1-C2-O2	5.73	122.34	118.90
81	B5	2549	G	N1-C6-O6	5.73	123.33	119.90
81	B5	1060	U	C2-N3-C4	-5.72	123.56	127.00
81	B5	1297	C	C5-C4-N4	-5.72	116.19	120.20
85	CP	325	GLY	N-CA-C	-5.72	98.79	113.10
80	B2	494	U	N3-C2-O2	-5.72	118.19	122.20
80	B2	732	G	C4-C5-N7	5.72	113.09	110.80
80	B2	1112	G	C6-N1-C2	-5.72	121.67	125.10
81	B5	1159	A	N9-C4-C5	-5.72	103.51	105.80
81	B5	2976	A	C8-N9-C4	5.72	108.09	105.80
81	B5	1931	U	C6-N1-C1'	5.72	129.21	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2892	A	N1-C6-N6	-5.72	115.17	118.60
86	CW	36	A	C5-C6-N1	-5.72	114.84	117.70
51	BQ	50	LYS	CD-CE-NZ	5.72	124.85	111.70
80	B2	1489	U	N3-C2-O2	-5.72	118.20	122.20
81	B5	2197	C	C2-N1-C1'	-5.72	112.51	118.80
81	B5	2836	C	C5-C4-N4	5.72	124.20	120.20
81	B5	3047	U	C2-N3-C4	-5.72	123.57	127.00
81	B5	706	A	N1-C2-N3	-5.71	126.44	129.30
82	B7	46	A	N9-C4-C5	5.71	108.09	105.80
81	B5	1724	U	C2-N1-C1'	5.71	124.56	117.70
81	B5	3200	G	N3-C2-N2	-5.71	115.90	119.90
80	B2	527	A	C8-N9-C4	-5.71	103.52	105.80
81	B5	270	U	N3-C2-O2	-5.71	118.20	122.20
81	B5	880	G	C2-N3-C4	5.71	114.76	111.90
83	B8	26	U	C2-N1-C1'	5.71	124.55	117.70
85	CP	57	LYS	N-CA-C	-5.71	95.58	111.00
81	B5	2730	G	N3-C2-N2	-5.71	115.90	119.90
81	B5	925	A	N1-C6-N6	5.71	122.03	118.60
81	B5	1268	G	N7-C8-N9	5.71	115.95	113.10
81	B5	2630	C	N1-C2-O2	-5.71	115.47	118.90
81	B5	2774	C	N1-C2-O2	-5.71	115.47	118.90
81	B5	2988	C	N3-C4-C5	-5.71	119.62	121.90
49	BO	163[B]	ARG	NE-CZ-NH2	-5.71	117.45	120.30
81	B5	2108	C	N3-C4-C5	5.71	124.18	121.90
81	B5	2188	A	N1-C2-N3	5.71	132.15	129.30
81	B5	1251	A	C4-C5-C6	5.71	119.85	117.00
80	B2	612	U	N3-C4-O4	-5.70	115.41	119.40
81	B5	2717	U	C2-N3-C4	-5.70	123.58	127.00
81	B5	2951	G	C5-C6-N1	5.70	114.35	111.50
81	B5	1143	A	C5-N7-C8	-5.70	101.05	103.90
81	B5	1282	G	N3-C2-N2	5.70	123.89	119.90
81	B5	2979	U	N3-C2-O2	5.70	126.19	122.20
80	B2	92	A	N3-C4-C5	-5.70	122.81	126.80
80	B2	831	U	C2-N1-C1'	5.70	124.54	117.70
80	B2	1324	G	N9-C4-C5	5.70	107.68	105.40
81	B5	411	U	N1-C2-N3	5.70	118.32	114.90
81	B5	2237	C	N3-C2-O2	-5.70	117.91	121.90
81	B5	2846	U	C2-N3-C4	-5.70	123.58	127.00
80	B2	92	A	C6-N1-C2	-5.70	115.18	118.60
81	B5	1445	U	C2-N3-C4	-5.70	123.58	127.00
81	B5	1448	U	C4-C5-C6	5.70	123.12	119.70
81	B5	1524	A	N1-C2-N3	5.70	132.15	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	7	U	C5-C6-N1	-5.70	119.85	122.70
86	CW	45	U	C6-N1-C1'	-5.70	113.22	121.20
42	BH	151	VAL	CB-CA-C	-5.70	100.58	111.40
51	BQ	127	LEU	CA-CB-CG	5.70	128.40	115.30
81	B5	79	U	C5-C4-O4	-5.70	122.48	125.90
81	B5	355	A	N1-C6-N6	5.70	122.02	118.60
81	B5	637	C	C5-C6-N1	-5.70	118.15	121.00
81	B5	958	C	N3-C4-C5	5.70	124.18	121.90
85	CP	83	PHE	CB-CG-CD1	5.70	124.79	120.80
80	B2	1339	C	C6-N1-C2	-5.69	118.02	120.30
81	B5	563	U	N3-C2-O2	-5.69	118.21	122.20
81	B5	3020	U	N3-C2-O2	5.69	126.19	122.20
82	B7	38	U	C2-N1-C1'	5.69	124.53	117.70
80	B2	158	U	N3-C2-O2	-5.69	118.22	122.20
80	B2	1749	A	C4-C5-N7	5.69	113.55	110.70
81	B5	953	G	N3-C4-N9	-5.69	122.58	126.00
80	B2	355	G	N3-C4-C5	-5.69	125.75	128.60
80	B2	570	A	N3-C4-C5	-5.69	122.82	126.80
80	B2	741	C	N1-C2-O2	-5.69	115.49	118.90
80	B2	1781	A	C5-C6-N1	-5.69	114.85	117.70
81	B5	276	U	C4-C5-C6	5.69	123.11	119.70
81	B5	948	C	N3-C4-N4	5.69	121.98	118.00
81	B5	2363	A	N7-C8-N9	5.69	116.64	113.80
81	B5	3259	U	C5-C6-N1	5.69	125.55	122.70
83	B8	95	G	C4-N9-C1'	-5.69	119.10	126.50
81	B5	1840	U	N1-C2-O2	5.69	126.78	122.80
81	B5	2552	C	N3-C4-N4	-5.69	114.02	118.00
50	BP	24	VAL	CB-CA-C	-5.69	100.59	111.40
80	B2	1644	C	N1-C2-O2	-5.69	115.49	118.90
81	B5	2748	A	C5-C6-N6	-5.69	119.15	123.70
80	B2	507	U	C6-N1-C2	-5.69	117.59	121.00
80	B2	1361	U	N3-C2-O2	-5.69	118.22	122.20
81	B5	884	A	N1-C6-N6	-5.69	115.19	118.60
49	BO	23[B]	ILE	C-N-CA	-5.68	107.49	121.70
81	B5	1940	G	C8-N9-C4	5.68	108.67	106.40
81	B5	3102	G	C5-C6-O6	5.68	132.01	128.60
82	B7	103	A	C5-C6-N6	-5.68	119.15	123.70
84	CN	2195	C	O5'-P-OP2	-5.68	100.58	105.70
81	B5	670	C	C2-N3-C4	-5.68	117.06	119.90
81	B5	769	G	N7-C8-N9	-5.68	110.26	113.10
80	B2	1052	U	N3-C2-O2	-5.68	118.22	122.20
81	B5	334	A	C2-N3-C4	5.68	113.44	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1163	A	C4-C5-N7	-5.68	107.86	110.70
81	B5	1512	U	C2-N3-C4	-5.68	123.59	127.00
81	B5	65	A	P-O3'-C3'	5.68	126.51	119.70
81	B5	413	U	N1-C2-N3	5.68	118.31	114.90
81	B5	613	G	N1-C6-O6	-5.68	116.49	119.90
81	B5	1466	G	N3-C4-N9	-5.68	122.59	126.00
82	B7	47	C	C2-N3-C4	-5.68	117.06	119.90
81	B5	1371	G	N7-C8-N9	-5.67	110.26	113.10
81	B5	1726	C	C5-C6-N1	-5.67	118.16	121.00
81	B5	1832	C	C5-C4-N4	-5.67	116.23	120.20
81	B5	1845	G	N7-C8-N9	-5.67	110.26	113.10
81	B5	3290	G	N7-C8-N9	5.67	115.94	113.10
81	B5	3316	A	N1-C6-N6	5.67	122.00	118.60
83	B8	28	C	C4-C5-C6	-5.67	114.56	117.40
85	CP	255	TYR	N-CA-C	-5.67	95.68	111.00
81	B5	1458	U	N3-C4-C5	5.67	118.00	114.60
37	BC	136	LEU	CA-CB-CG	5.67	128.35	115.30
80	B2	539	G	C5-N7-C8	-5.67	101.46	104.30
81	B5	2320	A	N9-C4-C5	5.67	108.07	105.80
81	B5	2400	G	N1-C6-O6	5.67	123.30	119.90
83	B8	109	A	C8-N9-C4	-5.67	103.53	105.80
80	B2	498	G	N3-C4-C5	-5.67	125.77	128.60
80	B2	1354	G	N3-C4-C5	-5.67	125.77	128.60
81	B5	2744	U	C5-C4-O4	5.67	129.30	125.90
81	B5	842	G	N1-C6-O6	5.67	123.30	119.90
80	B2	323	A	N9-C4-C5	5.67	108.07	105.80
80	B2	1119	G	N9-C4-C5	5.67	107.67	105.40
80	B2	1761	U	N3-C4-C5	-5.67	111.20	114.60
81	B5	3010	U	N3-C4-O4	-5.67	115.44	119.40
81	B5	3298	C	C2-N3-C4	-5.66	117.07	119.90
81	B5	636	C	C2-N3-C4	-5.66	117.07	119.90
81	B5	2392	C	C5-C6-N1	-5.66	118.17	121.00
80	B2	627	C	N1-C2-O2	-5.66	115.50	118.90
81	B5	825	U	N3-C4-O4	-5.66	115.44	119.40
81	B5	1525	G	C8-N9-C1'	-5.66	119.64	127.00
81	B5	1942	U	N1-C2-N3	5.66	118.30	114.90
82	B7	80	G	N3-C4-N9	5.66	129.40	126.00
83	B8	20	U	C5-C6-N1	-5.66	119.87	122.70
80	B2	1421	A	C8-N9-C4	5.66	108.06	105.80
81	B5	248	U	C2-N1-C1'	5.66	124.49	117.70
81	B5	1254	C	O5'-C5'-C4'	-5.66	100.95	111.70
81	B5	1307	G	N1-C6-O6	-5.66	116.50	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1364	C	C5-C6-N1	-5.66	118.17	121.00
81	B5	1371	G	C5-N7-C8	5.66	107.13	104.30
81	B5	1942	U	N3-C4-O4	5.66	123.36	119.40
80	B2	1458	G	C4-N9-C1'	5.66	133.85	126.50
81	B5	1485	G	C4-C5-N7	-5.66	108.54	110.80
85	CP	93	LEU	C-N-CA	5.66	135.84	121.70
80	B2	1075	C	N3-C2-O2	5.66	125.86	121.90
80	B2	1782	A	C4-C5-N7	-5.66	107.87	110.70
81	B5	53	G	N3-C2-N2	5.66	123.86	119.90
81	B5	905	U	N3-C4-O4	5.66	123.36	119.40
81	B5	3006	A	C8-N9-C4	-5.66	103.54	105.80
86	CW	72	C	O4'-C1'-N1	5.66	112.72	108.20
81	B5	1321	G	N1-C6-O6	5.65	123.29	119.90
81	B5	2148	U	C5-C4-O4	-5.65	122.51	125.90
81	B5	2616	C	N3-C4-C5	5.65	124.16	121.90
61	Ba	46	ASP	N-CA-C	-5.65	95.74	111.00
81	B5	1163	A	C5-C6-N1	5.65	120.53	117.70
81	B5	1331	U	C5-C4-O4	-5.65	122.51	125.90
81	B5	2293	C	N1-C2-O2	5.65	122.29	118.90
81	B5	2848	G	C4-C5-C6	5.65	122.19	118.80
81	B5	2955	U	N1-C2-N3	5.65	118.29	114.90
81	B5	998	A	N1-C2-N3	5.65	132.12	129.30
81	B5	1272	C	P-O5'-C5'	-5.65	111.86	120.90
81	B5	1415	U	C5-C6-N1	-5.65	119.88	122.70
81	B5	2293	C	C2-N1-C1'	5.65	125.02	118.80
82	B7	25	G	N1-C2-N2	5.65	121.28	116.20
83	B8	95	G	C8-N9-C1'	5.65	134.34	127.00
81	B5	1210	U	N1-C2-O2	5.65	126.75	122.80
82	B7	101	G	N9-C4-C5	-5.65	103.14	105.40
83	B8	113	U	C6-N1-C1'	-5.65	113.30	121.20
80	B2	712	G	C8-N9-C4	-5.65	104.14	106.40
81	B5	217	U	C2-N3-C4	-5.65	123.61	127.00
81	B5	1183	C	N3-C4-C5	5.64	124.16	121.90
81	B5	2654	C	C2-N3-C4	-5.64	117.08	119.90
81	B5	3313	U	N3-C4-O4	-5.64	115.45	119.40
83	B8	34	U	C5-C6-N1	-5.64	119.88	122.70
81	B5	2865	U	N1-C2-O2	5.64	126.75	122.80
81	B5	3123	A	N9-C4-C5	-5.64	103.54	105.80
81	B5	3197	G	N3-C2-N2	-5.64	115.95	119.90
81	B5	3200	G	C5-C6-O6	-5.64	125.22	128.60
81	B5	106	A	C8-N9-C4	5.64	108.06	105.80
81	B5	1244	A	O4'-C1'-N9	5.64	112.71	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2217	U	N3-C2-O2	-5.64	118.25	122.20
81	B5	2979	U	C5-C6-N1	-5.64	119.88	122.70
43	BI	139	ARG	NE-CZ-NH1	5.64	123.12	120.30
81	B5	1797	A	C4-C5-N7	-5.64	107.88	110.70
81	B5	2658	G	N7-C8-N9	-5.64	110.28	113.10
83	B8	100	U	C2-N1-C1'	5.64	124.47	117.70
81	B5	634	C	C2-N3-C4	-5.64	117.08	119.90
81	B5	950	G	N9-C4-C5	-5.64	103.14	105.40
81	B5	1909	A	C4-C5-C6	-5.64	114.18	117.00
81	B5	2116	G	C4-C5-C6	5.64	122.18	118.80
81	B5	2706	G	N3-C4-C5	-5.64	125.78	128.60
80	B2	1052	U	N1-C2-O2	5.64	126.75	122.80
80	B2	1445	G	N1-C6-O6	5.64	123.28	119.90
81	B5	114	A	N1-C6-N6	5.64	121.98	118.60
81	B5	3365	U	C6-N1-C2	-5.64	117.62	121.00
80	B2	966	A	N9-C4-C5	-5.63	103.55	105.80
81	B5	2830	G	N1-C6-O6	-5.63	116.52	119.90
81	B5	2870	C	C5-C4-N4	5.63	124.14	120.20
84	CN	2134	U	C2'-C3'-O3'	5.63	122.72	113.70
86	CW	39	U	O4'-C1'-N1	5.63	112.71	108.20
81	B5	1146	C	C2-N3-C4	-5.63	117.08	119.90
81	B5	1300	G	C6-C5-N7	-5.63	127.02	130.40
81	B5	2180	G	N3-C2-N2	5.63	123.84	119.90
81	B5	3336	A	C4-C5-C6	5.63	119.82	117.00
81	B5	347	G	C8-N9-C4	5.63	108.65	106.40
81	B5	2277	C	N1-C2-O2	5.63	122.28	118.90
84	CN	2192	A	N9-C1'-C2'	5.63	121.32	114.00
81	B5	3350	C	C6-N1-C2	-5.63	118.05	120.30
39	BE	31	ARG	NE-CZ-NH2	-5.63	117.49	120.30
81	B5	946	U	N1-C2-O2	5.63	126.74	122.80
81	B5	1405	U	C2-N3-C4	-5.63	123.62	127.00
81	B5	1429	G	C6-C5-N7	-5.63	127.02	130.40
81	B5	1914	G	N1-C6-O6	-5.63	116.52	119.90
81	B5	2415	C	C6-N1-C2	5.63	122.55	120.30
81	B5	2719	U	N1-C2-O2	-5.63	118.86	122.80
86	CW	31	A	C5'-C4'-C3'	5.63	125.00	116.00
40	BF	229	PHE	CB-CG-CD1	5.63	124.74	120.80
80	B2	402	C	C2-N1-C1'	-5.63	112.61	118.80
80	B2	613	G	N1-C6-O6	-5.63	116.52	119.90
81	B5	335	G	N1-C6-O6	-5.63	116.52	119.90
81	B5	1773	C	C5-C6-N1	-5.63	118.19	121.00
81	B5	2828	G	N1-C6-O6	-5.63	116.52	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	38	U	N3-C4-C5	5.63	117.98	114.60
80	B2	334	G	N3-C4-C5	5.62	131.41	128.60
80	B2	1642	G	N3-C4-C5	-5.62	125.79	128.60
81	B5	966	U	N3-C4-C5	5.62	117.97	114.60
81	B5	1226	G	N9-C1'-C2'	-5.62	105.81	112.00
81	B5	1843	C	C5-C6-N1	5.62	123.81	121.00
81	B5	2816	G	C4-N9-C1'	-5.62	119.19	126.50
82	B7	5	G	C5-C6-N1	-5.62	108.69	111.50
83	B8	15	G	C5-C6-O6	-5.62	125.23	128.60
81	B5	216	G	C4-C5-N7	5.62	113.05	110.80
81	B5	658	G	N1-C6-O6	5.62	123.27	119.90
81	B5	1434	G	C1'-O4'-C4'	-5.62	105.40	109.90
81	B5	1589	A	C5-C6-N1	5.62	120.51	117.70
81	B5	1744	G	C5-C6-N1	5.62	114.31	111.50
81	B5	1926	C	N1-C2-O2	-5.62	115.53	118.90
81	B5	3054	U	N3-C4-C5	-5.62	111.23	114.60
80	B2	852	C	C4-C5-C6	-5.62	114.59	117.40
80	B2	1277	G	N3-C4-N9	-5.62	122.63	126.00
81	B5	42	C	N1-C2-O2	5.62	122.27	118.90
81	B5	582	G	N1-C6-O6	-5.62	116.53	119.90
81	B5	911	C	C5-C6-N1	-5.62	118.19	121.00
81	B5	2249	G	C8-N9-C4	-5.62	104.15	106.40
81	B5	3140	G	C6-C5-N7	-5.62	127.03	130.40
81	B5	3285	C	N1-C2-O2	5.62	122.27	118.90
80	B2	951	A	C8-N9-C4	5.62	108.05	105.80
81	B5	1314	C	N3-C4-C5	5.62	124.15	121.90
86	CW	76	A	C5-C6-N1	-5.62	114.89	117.70
80	B2	1153	G	N1-C6-O6	-5.62	116.53	119.90
81	B5	1510	G	N1-C2-N3	5.62	127.27	123.90
81	B5	145	G	N9-C4-C5	5.62	107.65	105.40
81	B5	1365	G	N1-C2-N3	5.62	127.27	123.90
81	B5	2341	A	C5-N7-C8	5.62	106.71	103.90
81	B5	3059	G	C8-N9-C4	5.62	108.65	106.40
81	B5	280	U	N3-C4-C5	5.61	117.97	114.60
81	B5	666	A	N7-C8-N9	-5.61	110.99	113.80
81	B5	935	U	C2-N3-C4	-5.61	123.63	127.00
81	B5	1207	G	N1-C6-O6	-5.61	116.53	119.90
81	B5	1380	G	C8-N9-C4	5.61	108.64	106.40
81	B5	1441	G	C5-C6-N1	5.61	114.31	111.50
81	B5	2326	A	C2-N3-C4	5.61	113.41	110.60
83	B8	12	A	C4-C5-C6	-5.61	114.19	117.00
80	B2	1600	A	C4-C5-N7	5.61	113.50	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	282	G	C2'-C3'-O3'	5.61	122.68	113.70
81	B5	1603	A	N9-C4-C5	5.61	108.05	105.80
81	B5	1847	A	C2-N3-C4	-5.61	107.80	110.60
81	B5	2330	C	C4-C5-C6	5.61	120.21	117.40
81	B5	3350	C	C5-C6-N1	5.61	123.81	121.00
81	B5	2683	U	C2-N1-C1'	5.61	124.43	117.70
86	CW	43	C	N3-C4-N4	5.61	121.92	118.00
80	B2	1650	U	C5-C6-N1	-5.61	119.90	122.70
81	B5	625	G	C8-N9-C4	-5.61	104.16	106.40
81	B5	1206	G	C5-C6-O6	5.61	131.96	128.60
80	B2	74	U	C3'-C2'-C1'	-5.60	97.02	101.50
80	B2	144	U	C5-C4-O4	5.60	129.26	125.90
80	B2	453	U	C5-C4-O4	5.60	129.26	125.90
81	B5	546	C	C6-N1-C2	-5.60	118.06	120.30
81	B5	2642	A	C8-N9-C4	5.60	108.04	105.80
81	B5	2974	U	C5-C4-O4	5.60	129.26	125.90
81	B5	369	A	N1-C6-N6	-5.60	115.24	118.60
80	B2	115	G	N1-C6-O6	5.60	123.26	119.90
80	B2	1749	A	N3-C4-C5	5.60	130.72	126.80
81	B5	2182	A	C4-C5-C6	-5.60	114.20	117.00
84	CN	2149	C	O5'-P-OP2	-5.60	100.66	105.70
80	B2	1280	C	C4-C5-C6	5.60	120.20	117.40
80	B2	1633	A	C4-C5-N7	-5.60	107.90	110.70
81	B5	24	G	C5-C6-O6	-5.60	125.24	128.60
81	B5	98	G	C8-N9-C4	5.60	108.64	106.40
81	B5	1229	G	O4'-C4'-C3'	-5.60	98.40	104.00
81	B5	1263	A	O4'-C1'-N9	5.60	112.68	108.20
83	B8	23	U	C4-C5-C6	5.60	123.06	119.70
83	B8	43	A	C8-N9-C4	-5.60	103.56	105.80
41	BG	69	LEU	CA-CB-CG	5.60	128.17	115.30
81	B5	909	G	N1-C6-O6	-5.60	116.54	119.90
81	B5	1360	C	C2-N3-C4	-5.60	117.10	119.90
81	B5	2584	G	C5-C6-O6	-5.60	125.24	128.60
81	B5	2975	U	N3-C4-O4	-5.60	115.48	119.40
80	B2	453	U	C6-N1-C1'	-5.59	113.37	121.20
81	B5	916	G	N9-C4-C5	5.59	107.64	105.40
81	B5	1365	G	C4-N9-C1'	5.59	133.77	126.50
81	B5	1370	G	N3-C4-N9	5.59	129.36	126.00
81	B5	2343	C	C5-C4-N4	-5.59	116.28	120.20
81	B5	395	A	N7-C8-N9	5.59	116.60	113.80
47	BM	77	ARG	NE-CZ-NH1	-5.59	117.50	120.30
60	BZ	135	ARG	NE-CZ-NH1	5.59	123.09	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	444	C	C2-N3-C4	5.59	122.69	119.90
80	B2	1536	G	C8-N9-C1'	-5.59	119.73	127.00
81	B5	347	G	N7-C8-N9	-5.59	110.31	113.10
81	B5	1245	A	C5-C6-N6	-5.59	119.23	123.70
81	B5	2904	U	C2-N3-C4	-5.59	123.65	127.00
81	B5	3003	G	C5-N7-C8	-5.59	101.51	104.30
65	Be	4	LEU	C-N-CA	-5.59	98.54	122.00
80	B2	279	G	N7-C8-N9	5.59	115.89	113.10
80	B2	810	G	C4-C5-N7	5.59	113.03	110.80
81	B5	405	U	C5-C4-O4	-5.59	122.55	125.90
81	B5	2191	U	C5-C6-N1	-5.59	119.91	122.70
81	B5	2307	G	N3-C2-N2	5.59	123.81	119.90
81	B5	3219	G	N3-C2-N2	5.59	123.81	119.90
80	B2	1129	U	C2-N3-C4	-5.58	123.65	127.00
80	B2	1279	C	C6-N1-C2	-5.58	118.07	120.30
81	B5	1171	G	C8-N9-C4	-5.58	104.17	106.40
81	B5	1192	C	C5-C6-N1	-5.58	118.21	121.00
81	B5	1869	C	C6-N1-C2	5.58	122.53	120.30
80	B2	542	A	C8-N9-C4	-5.58	103.57	105.80
80	B2	829	A	C2-N3-C4	5.58	113.39	110.60
81	B5	517	G	C4-C5-C6	5.58	122.15	118.80
81	B5	635	G	N1-C2-N2	5.58	121.22	116.20
81	B5	1315	U	C6-N1-C1'	-5.58	113.38	121.20
81	B5	2606	G	C4-C5-C6	5.58	122.15	118.80
81	B5	2631	U	N1-C2-O2	-5.58	118.89	122.80
81	B5	1338	C	C4-C5-C6	5.58	120.19	117.40
81	B5	1832	C	C6-N1-C2	5.58	122.53	120.30
81	B5	574	U	C5-C4-O4	-5.58	122.55	125.90
82	B7	79	A	N7-C8-N9	5.58	116.59	113.80
80	B2	1614	A	C6-C5-N7	-5.58	128.40	132.30
81	B5	1049	C	C5-C6-N1	5.58	123.79	121.00
81	B5	1271	A	C5-C6-N1	-5.58	114.91	117.70
81	B5	2434	U	C2-N3-C4	-5.58	123.65	127.00
81	B5	2889	C	N3-C4-N4	-5.58	114.10	118.00
81	B5	1381	A	N9-C4-C5	-5.58	103.57	105.80
81	B5	3287	U	N3-C2-O2	-5.58	118.30	122.20
83	B8	147	U	N3-C4-C5	5.58	117.95	114.60
25	AQ	69	VAL	CB-CA-C	-5.58	100.81	111.40
81	B5	819	U	N3-C4-O4	5.58	123.30	119.40
81	B5	873	C	C4-C5-C6	5.58	120.19	117.40
81	B5	2975	U	C4-C5-C6	-5.58	116.36	119.70
81	B5	3252	G	C8-N9-C4	5.58	108.63	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	401	A	N1-C6-N6	5.57	121.94	118.60
80	B2	1560	U	N1-C2-O2	5.57	126.70	122.80
80	B2	1636	C	N3-C4-N4	5.57	121.90	118.00
81	B5	340	C	N1-C2-N3	5.57	123.10	119.20
81	B5	911	C	C4-C5-C6	5.57	120.19	117.40
81	B5	1670	C	C5-C4-N4	-5.57	116.30	120.20
81	B5	2999	U	C5-C6-N1	-5.57	119.91	122.70
81	B5	903	U	N1-C2-O2	5.57	126.70	122.80
81	B5	957	C	C5-C6-N1	-5.57	118.22	121.00
81	B5	2309	A	C8-N9-C4	5.57	108.03	105.80
80	B2	1145	U	N1-C2-O2	-5.57	118.90	122.80
81	B5	666	A	N1-C2-N3	5.57	132.08	129.30
81	B5	2958	A	N1-C6-N6	-5.57	115.26	118.60
81	B5	3043	C	N3-C4-N4	-5.57	114.10	118.00
80	B2	696	C	C6-N1-C2	-5.57	118.07	120.30
80	B2	1462	G	C5-C6-O6	-5.57	125.26	128.60
81	B5	1906	G	C2-N3-C4	-5.57	109.12	111.90
81	B5	3173	G	C5-C6-N1	5.57	114.28	111.50
81	B5	3395	G	N1-C6-O6	5.57	123.24	119.90
83	B8	37	A	N1-C6-N6	-5.57	115.26	118.60
81	B5	2389	C	C5-C4-N4	-5.56	116.31	120.20
82	B7	1	G	C6-C5-N7	-5.56	127.06	130.40
83	B8	13	A	C5-N7-C8	-5.56	101.12	103.90
80	B2	397	A	C5-C6-N6	5.56	128.15	123.70
80	B2	972	G	C4-C5-N7	-5.56	108.58	110.80
81	B5	1086	C	C5-C6-N1	5.56	123.78	121.00
80	B2	380	U	N1-C2-O2	5.56	126.69	122.80
81	B5	1441	G	C5-N7-C8	5.56	107.08	104.30
81	B5	2257	C	N1-C2-O2	5.56	122.24	118.90
81	B5	2742	C	N3-C4-C5	5.56	124.12	121.90
81	B5	234	G	N1-C6-O6	5.56	123.24	119.90
81	B5	1183	C	C5-C6-N1	-5.56	118.22	121.00
81	B5	1403	C	C2-N3-C4	-5.56	117.12	119.90
80	B2	1027	A	C5-N7-C8	-5.56	101.12	103.90
81	B5	39	A	C5-N7-C8	5.56	106.68	103.90
81	B5	1256	G	OP2-P-O3'	5.56	117.43	105.20
61	Ba	17	ALA	C-N-CA	-5.56	110.63	122.30
81	B5	419	G	C4-C5-N7	5.56	113.02	110.80
81	B5	1115	G	C6-N1-C2	-5.56	121.77	125.10
80	B2	1127	G	N9-C4-C5	5.55	107.62	105.40
80	B2	1745	G	N3-C4-C5	-5.55	125.82	128.60
81	B5	1125	U	N3-C4-O4	-5.55	115.51	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1176	C	C4-C5-C6	5.55	120.18	117.40
80	B2	1456	C	N1-C2-N3	5.55	123.09	119.20
81	B5	39	A	C2-N3-C4	5.55	113.38	110.60
81	B5	728	G	N7-C8-N9	-5.55	110.32	113.10
86	CW	46	G	P-O3'-C3'	5.55	126.36	119.70
80	B2	1024	U	N1-C2-O2	5.55	126.69	122.80
81	B5	953	G	N3-C4-C5	5.55	131.38	128.60
81	B5	1284	C	N3-C2-O2	5.55	125.79	121.90
81	B5	1724	U	N3-C2-O2	-5.55	118.31	122.20
86	CW	18	G	O4'-C1'-N9	5.55	112.64	108.20
81	B5	367	A	N3-C4-C5	5.55	130.69	126.80
81	B5	1905	G	N1-C6-O6	-5.55	116.57	119.90
81	B5	390	G	N9-C4-C5	-5.55	103.18	105.40
81	B5	1938	U	C5-C6-N1	-5.55	119.93	122.70
80	B2	42	G	C8-N9-C4	5.55	108.62	106.40
81	B5	1239	C	O4'-C1'-N1	5.55	112.64	108.20
81	B5	3055	U	C2-N1-C1'	5.55	124.36	117.70
86	CW	15	G	N3-C2-N2	5.55	123.78	119.90
86	CW	37	A	O4'-C1'-N9	5.55	112.64	108.20
49	BO	23[B]	ILE	CA-C-N	-5.54	105.00	117.20
80	B2	382	C	N3-C4-C5	5.54	124.12	121.90
81	B5	367	A	C5-C6-N6	5.54	128.14	123.70
81	B5	1601	U	N1-C2-N3	-5.54	111.57	114.90
81	B5	1754	G	N1-C2-N2	-5.54	111.21	116.20
81	B5	2607	G	C8-N9-C4	-5.54	104.18	106.40
81	B5	33	G	C5-C6-N1	5.54	114.27	111.50
81	B5	1872	C	N3-C2-O2	-5.54	118.02	121.90
81	B5	2522	G	N9-C4-C5	-5.54	103.18	105.40
75	Bo	41	ARG	NE-CZ-NH2	-5.54	117.53	120.30
81	B5	431	U	C2-N3-C4	-5.54	123.67	127.00
81	B5	648	C	C2-N1-C1'	5.54	124.89	118.80
81	B5	2320	A	N7-C8-N9	-5.54	111.03	113.80
81	B5	2400	G	C4-C5-N7	5.54	113.02	110.80
81	B5	2699	G	N3-C4-N9	5.54	129.32	126.00
81	B5	954	U	C6-N1-C2	-5.54	117.68	121.00
81	B5	1144	U	C2-N3-C4	-5.54	123.68	127.00
81	B5	796	U	N1-C2-O2	5.54	126.68	122.80
81	B5	1140	G	C5-C6-N1	5.54	114.27	111.50
81	B5	1773	C	C4-C5-C6	5.54	120.17	117.40
82	B7	69	C	N3-C4-C5	5.54	124.12	121.90
81	B5	21	G	N3-C4-C5	5.54	131.37	128.60
81	B5	25	U	N1-C2-N3	5.54	118.22	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2139	A	C5-C6-N6	5.54	128.13	123.70
83	B8	87	G	C5-C6-O6	-5.54	125.28	128.60
81	B5	1007	U	C6-N1-C2	5.53	124.32	121.00
81	B5	1189	C	N3-C2-O2	5.53	125.77	121.90
81	B5	1901	A	C6-C5-N7	-5.53	128.43	132.30
81	B5	1909	A	N1-C6-N6	-5.53	115.28	118.60
81	B5	2327	U	C2-N1-C1'	-5.53	111.06	117.70
86	CW	38	A	C5-C6-N1	-5.53	114.93	117.70
81	B5	46	U	C2-N3-C4	5.53	130.32	127.00
81	B5	1305	U	C6-N1-C2	5.53	124.32	121.00
81	B5	1380	G	C2-N3-C4	-5.53	109.13	111.90
81	B5	3052	G	C4-N9-C1'	-5.53	119.31	126.50
83	B8	112	U	C6-N1-C1'	5.53	128.94	121.20
80	B2	109	G	C5-C6-O6	-5.53	125.28	128.60
81	B5	745	C	N1-C2-O2	-5.53	115.58	118.90
81	B5	2658	G	N3-C2-N2	-5.53	116.03	119.90
81	B5	2870	C	C2-N1-C1'	-5.53	112.72	118.80
81	B5	3064	U	N1-C2-N3	5.53	118.22	114.90
81	B5	1041	U	C5-C6-N1	-5.53	119.94	122.70
81	B5	1658	G	N1-C6-O6	-5.53	116.58	119.90
81	B5	2717	U	N3-C2-O2	-5.53	118.33	122.20
80	B2	131	C	C5-C6-N1	5.53	123.76	121.00
81	B5	359	U	N3-C4-C5	5.53	117.92	114.60
81	B5	1306	G	C5-C6-N1	5.53	114.26	111.50
81	B5	1878	G	C4-N9-C1'	5.53	133.69	126.50
81	B5	3007	U	C5-C4-O4	-5.53	122.58	125.90
84	CN	2143	U	C4'-C3'-O3'	-5.53	97.79	109.40
81	B5	2287	C	C6-N1-C2	-5.53	118.09	120.30
81	B5	2665	U	N1-C2-O2	5.53	126.67	122.80
81	B5	2777	G	C8-N9-C4	-5.53	104.19	106.40
81	B5	2996	U	C6-N1-C1'	-5.53	113.46	121.20
82	B7	100	C	N3-C4-C5	5.53	124.11	121.90
83	B8	104	A	N1-C2-N3	-5.53	126.54	129.30
81	B5	1305	U	C6-N1-C1'	-5.52	113.47	121.20
80	B2	36	C	C5-C4-N4	-5.52	116.33	120.20
80	B2	145	A	N9-C4-C5	5.52	108.01	105.80
81	B5	934	G	N1-C2-N2	5.52	121.17	116.20
81	B5	960	U	C4-C5-C6	5.52	123.01	119.70
81	B5	1797	A	C8-N9-C4	5.52	108.01	105.80
81	B5	1844	C	N1-C2-N3	5.52	123.07	119.20
86	CW	74	C	N3-C4-N4	5.52	121.87	118.00
81	B5	3336	A	C5-C6-N1	-5.52	114.94	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1178	G	N7-C8-N9	5.52	115.86	113.10
86	CW	69	G	C5-C6-O6	-5.52	125.29	128.60
80	B2	1796	C	C6-N1-C2	-5.52	118.09	120.30
81	B5	1444	G	C8-N9-C4	5.52	108.61	106.40
81	B5	1586	G	C6-N1-C2	-5.52	121.79	125.10
81	B5	2293	C	C5-C4-N4	-5.52	116.34	120.20
81	B5	2344	U	C2-N3-C4	-5.52	123.69	127.00
81	B5	2914	G	N1-C6-O6	-5.52	116.59	119.90
81	B5	3103	A	C5-C6-N1	5.52	120.46	117.70
81	B5	3318	G	C4-C5-N7	-5.52	108.59	110.80
82	B7	1	G	N3-C4-N9	5.52	129.31	126.00
80	B2	1455	G	C4-C5-C6	5.52	122.11	118.80
81	B5	2289	U	C5-C4-O4	5.52	129.21	125.90
80	B2	380	U	N3-C2-O2	-5.51	118.34	122.20
79	By	77	ILE	N-CA-C	-5.51	96.12	111.00
65	Be	105	ARG	NE-CZ-NH2	-5.51	117.54	120.30
81	B5	814	U	N1-C2-N3	-5.51	111.59	114.90
81	B5	1887	A	N9-C4-C5	-5.51	103.59	105.80
81	B5	2729	U	C4-C5-C6	-5.51	116.39	119.70
81	B5	3326	G	C5-C6-O6	5.51	131.91	128.60
83	B8	19	C	N3-C4-C5	-5.51	119.70	121.90
61	Ba	9	ARG	NE-CZ-NH1	-5.51	117.55	120.30
80	B2	74	U	C1'-O4'-C4'	-5.51	105.49	109.90
81	B5	1491	A	C4-C5-C6	5.51	119.75	117.00
81	B5	3010	U	C5-C4-O4	5.51	129.21	125.90
81	B5	3387	U	N1-C2-O2	5.51	126.66	122.80
81	B5	1365	G	N1-C2-N2	-5.51	111.24	116.20
81	B5	1841	A	C8-N9-C4	-5.51	103.60	105.80
81	B5	2346	C	N3-C4-C5	5.51	124.10	121.90
80	B2	258	C	N3-C4-C5	5.51	124.10	121.90
80	B2	639	U	N3-C4-C5	5.51	117.90	114.60
81	B5	1447	G	N7-C8-N9	5.51	115.85	113.10
81	B5	3179	U	N3-C4-C5	5.51	117.90	114.60
82	B7	19	C	N3-C4-C5	5.51	124.10	121.90
80	B2	435	C	C2-N3-C4	5.50	122.65	119.90
80	B2	566	C	N3-C2-O2	-5.50	118.05	121.90
81	B5	2335	G	C6-N1-C2	-5.50	121.80	125.10
81	B5	363	G	C4-C5-N7	-5.50	108.60	110.80
81	B5	620	U	C2-N1-C1'	5.50	124.31	117.70
81	B5	715	A	C5-C6-N1	5.50	120.45	117.70
81	B5	2396	G	N1-C6-O6	-5.50	116.60	119.90
81	B5	2728	G	N1-C2-N2	5.50	121.15	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	42	G	N7-C8-N9	-5.50	110.35	113.10
81	B5	1670	C	C6-N1-C2	5.50	122.50	120.30
81	B5	1937	U	C5-C6-N1	-5.50	119.95	122.70
80	B2	703	G	N7-C8-N9	5.50	115.85	113.10
81	B5	54	C	N3-C4-N4	-5.50	114.15	118.00
81	B5	2605	G	C2-N3-C4	5.50	114.65	111.90
81	B5	3347	A	C8-N9-C4	5.50	108.00	105.80
81	B5	2119	A	C6-N1-C2	-5.50	115.30	118.60
81	B5	2430	A	N1-C2-N3	5.50	132.05	129.30
81	B5	3042	U	N1-C2-N3	5.50	118.20	114.90
80	B2	386	G	C4-C5-N7	-5.50	108.60	110.80
81	B5	1045	C	C2-N3-C4	-5.50	117.15	119.90
81	B5	2635	A	N1-C6-N6	-5.50	115.30	118.60
81	B5	3152	U	C5-C6-N1	-5.50	119.95	122.70
80	B2	1270	G	C2-N3-C4	5.49	114.65	111.90
80	B2	1503	A	N7-C8-N9	5.49	116.55	113.80
81	B5	266	A	N1-C2-N3	5.49	132.05	129.30
81	B5	1508	C	N1-C2-O2	5.49	122.20	118.90
81	B5	3341	U	N3-C2-O2	-5.49	118.36	122.20
83	B8	17	A	C5-N7-C8	-5.49	101.15	103.90
81	B5	631	U	N1-C2-O2	5.49	126.64	122.80
81	B5	1215	U	N3-C2-O2	5.49	126.04	122.20
81	B5	1660	C	N1-C2-O2	-5.49	115.61	118.90
81	B5	2549	G	C5-C6-N1	-5.49	108.75	111.50
81	B5	3008	A	C8-N9-C4	5.49	108.00	105.80
80	B2	264	G	N3-C4-N9	-5.49	122.71	126.00
81	B5	414	U	N3-C4-O4	5.49	123.24	119.40
81	B5	1343	A	C8-N9-C4	-5.49	103.60	105.80
81	B5	1505	C	C4-C5-C6	5.49	120.14	117.40
80	B2	377	G	C4-N9-C1'	-5.49	119.36	126.50
80	B2	1207	C	C6-N1-C2	5.49	122.50	120.30
81	B5	436	A	C4-C5-N7	5.49	113.44	110.70
81	B5	590	G	C8-N9-C4	-5.49	104.20	106.40
81	B5	1427	U	N3-C4-O4	-5.49	115.56	119.40
81	B5	3112	G	C8-N9-C4	5.49	108.59	106.40
80	B2	342	C	C6-N1-C2	5.49	122.50	120.30
81	B5	844	G	N7-C8-N9	-5.49	110.36	113.10
81	B5	2665	U	C4-C5-C6	-5.49	116.41	119.70
81	B5	2966	G	C5-C6-N1	5.49	114.24	111.50
80	B2	42	G	N1-C6-O6	-5.49	116.61	119.90
81	B5	743	C	C6-N1-C2	-5.49	118.11	120.30
81	B5	996	A	C5-C6-N1	5.49	120.44	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1127	G	N3-C4-N9	5.49	129.29	126.00
81	B5	2757	U	C5-C4-O4	-5.49	122.61	125.90
80	B2	1662	G	C8-N9-C4	-5.48	104.21	106.40
81	B5	1269	U	O4'-C1'-N1	5.48	112.59	108.20
81	B5	1451	C	C2-N3-C4	-5.48	117.16	119.90
81	B5	2904	U	N1-C2-N3	5.48	118.19	114.90
82	B7	8	G	N3-C2-N2	5.48	123.74	119.90
80	B2	938	G	N1-C2-N2	-5.48	111.27	116.20
81	B5	1263	A	C5-C6-N6	-5.48	119.31	123.70
81	B5	1828	A	C8-N9-C4	-5.48	103.61	105.80
81	B5	1869	C	N3-C4-C5	5.48	124.09	121.90
81	B5	2112	U	C6-N1-C2	-5.48	117.71	121.00
81	B5	3243	A	C4-C5-C6	5.48	119.74	117.00
82	B7	61	G	C8-N9-C4	5.48	108.59	106.40
81	B5	1283	C	O3'-P-O5'	5.48	114.41	104.00
81	B5	3302	U	N3-C4-C5	5.48	117.89	114.60
80	B2	838	G	N7-C8-N9	-5.48	110.36	113.10
81	B5	39	A	N7-C8-N9	-5.48	111.06	113.80
81	B5	422	A	C8-N9-C4	5.48	107.99	105.80
81	B5	519	A	C6-C5-N7	-5.48	128.47	132.30
81	B5	2172	A	N1-C6-N6	5.48	121.89	118.60
85	CP	136	TYR	CA-CB-CG	5.48	123.81	113.40
49	BO	197[B]	PHE	CA-C-N	-5.47	105.25	116.20
66	Bf	91	ALA	N-CA-CB	5.47	117.76	110.10
80	B2	393	C	C2-N3-C4	-5.47	117.16	119.90
81	B5	282	G	N7-C8-N9	5.47	115.84	113.10
81	B5	1191	U	C5-C6-N1	-5.47	119.96	122.70
81	B5	1295	G	C5-C6-O6	5.47	131.88	128.60
81	B5	2109	U	N3-C4-O4	-5.47	115.57	119.40
81	B5	2134	G	N3-C4-N9	5.47	129.28	126.00
81	B5	2257	C	C5-C6-N1	5.47	123.74	121.00
81	B5	2369	G	C8-N9-C4	5.47	108.59	106.40
81	B5	2948	C	N3-C4-C5	5.47	124.09	121.90
81	B5	3028	G	N3-C2-N2	5.47	123.73	119.90
81	B5	3215	A	C5-C6-N1	-5.47	114.96	117.70
81	B5	2177	G	C8-N9-C4	-5.47	104.21	106.40
81	B5	930	U	N1-C2-O2	5.47	126.63	122.80
80	B2	1486	G	C6-C5-N7	-5.47	127.12	130.40
81	B5	1152	G	N9-C4-C5	5.47	107.59	105.40
81	B5	1165	A	N7-C8-N9	-5.47	111.06	113.80
81	B5	2158	A	C6-N1-C2	-5.47	115.32	118.60
81	B5	2433	U	C5-C6-N1	-5.47	119.97	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	CW	4	C	N3-C4-N4	5.47	121.83	118.00
46	BL	47	ALA	C-N-CD	5.47	139.88	128.40
81	B5	810	A	C5-C6-N6	5.47	128.07	123.70
81	B5	1190	A	C5-N7-C8	5.47	106.63	103.90
81	B5	1538	G	N9-C4-C5	-5.47	103.21	105.40
81	B5	1792	C	C4-C5-C6	5.47	120.13	117.40
81	B5	2197	C	C6-N1-C1'	5.47	127.36	120.80
81	B5	2239	G	N3-C2-N2	5.47	123.73	119.90
81	B5	3346	U	C5-C6-N1	-5.47	119.97	122.70
80	B2	1097	U	C6-N1-C1'	-5.46	113.55	121.20
81	B5	2321	A	C5-C6-N1	5.46	120.43	117.70
81	B5	2549	G	N7-C8-N9	5.46	115.83	113.10
82	B7	33	U	N1-C2-O2	5.46	126.63	122.80
80	B2	268	C	C6-N1-C2	-5.46	118.11	120.30
80	B2	1666	U	C5-C6-N1	5.46	125.43	122.70
81	B5	909	G	N7-C8-N9	-5.46	110.37	113.10
81	B5	1399	A	N9-C4-C5	-5.46	103.61	105.80
86	CW	21	A	C5-C6-N1	-5.46	114.97	117.70
81	B5	997	A	N7-C8-N9	5.46	116.53	113.80
81	B5	1931	U	C5-C4-O4	5.46	129.18	125.90
81	B5	3394	U	N3-C4-O4	-5.46	115.58	119.40
80	B2	790	U	N1-C2-N3	5.46	118.18	114.90
82	B7	8	G	N1-C2-N2	-5.46	111.29	116.20
81	B5	96	G	C4-C5-N7	-5.46	108.62	110.80
81	B5	408	A	C2-N3-C4	-5.46	107.87	110.60
81	B5	809	G	C5-N7-C8	5.46	107.03	104.30
81	B5	965	A	N1-C2-N3	-5.46	126.57	129.30
80	B2	599	A	C5-N7-C8	5.46	106.63	103.90
80	B2	1458	G	C8-N9-C1'	-5.46	119.91	127.00
81	B5	1170	A	C8-N9-C4	5.46	107.98	105.80
82	B7	37	G	N9-C4-C5	-5.46	103.22	105.40
81	B5	1240	A	C5-C6-N1	-5.46	114.97	117.70
81	B5	277	G	C5-C6-O6	5.45	131.87	128.60
81	B5	828	A	N1-C6-N6	-5.45	115.33	118.60
82	B7	1	G	C8-N9-C1'	-5.45	119.91	127.00
81	B5	1176	C	C6-N1-C2	5.45	122.48	120.30
37	BC	73	ARG	CB-CG-CD	-5.45	97.43	111.60
80	B2	42	G	C5-C6-N1	5.45	114.22	111.50
80	B2	1491	U	N3-C2-O2	-5.45	118.38	122.20
81	B5	1159	A	C4-C5-C6	-5.45	114.28	117.00
81	B5	1858	A	C4-N9-C1'	5.45	136.11	126.30
81	B5	2843	U	N3-C2-O2	-5.45	118.39	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3049	A	C8-N9-C4	5.45	107.98	105.80
81	B5	1925	U	N1-C2-N3	5.45	118.17	114.90
81	B5	2608	G	N1-C6-O6	-5.45	116.63	119.90
81	B5	859	G	N3-C4-C5	-5.45	125.88	128.60
81	B5	1270	A	C3'-C2'-C1'	-5.45	97.14	101.50
81	B5	3083	G	N1-C2-N3	5.45	127.17	123.90
81	B5	2800	G	C4-C5-N7	-5.44	108.62	110.80
81	B5	2810	C	C6-N1-C2	-5.44	118.12	120.30
81	B5	3035	A	C8-N9-C4	5.44	107.98	105.80
86	CW	31	A	C4-C5-C6	5.44	119.72	117.00
80	B2	426	G	C4-N9-C1'	5.44	133.57	126.50
80	B2	1185	U	C6-N1-C1'	-5.44	113.58	121.20
81	B5	3115	C	N1-C2-N3	5.44	123.01	119.20
82	B7	90	U	C6-N1-C2	5.44	124.27	121.00
81	B5	285	A	C8-N9-C4	-5.44	103.62	105.80
81	B5	969	C	C5-C6-N1	-5.44	118.28	121.00
81	B5	1007	U	C5-C4-O4	-5.44	122.64	125.90
81	B5	2374	C	N3-C4-N4	-5.44	114.19	118.00
81	B5	2655	U	N3-C4-C5	5.44	117.86	114.60
81	B5	2998	U	C2-N3-C4	-5.44	123.74	127.00
53	BS	167	ARG	NE-CZ-NH2	-5.44	117.58	120.30
80	B2	396	G	C5-C6-O6	-5.44	125.34	128.60
80	B2	966	A	N7-C8-N9	-5.44	111.08	113.80
80	B2	1646	C	C6-N1-C2	-5.44	118.12	120.30
81	B5	1838	G	C4-C5-N7	-5.44	108.62	110.80
81	B5	1229	G	C4-C5-C6	5.44	122.06	118.80
61	Ba	28	HIS	CB-CA-C	-5.43	99.53	110.40
81	B5	41	G	C6-C5-N7	-5.43	127.14	130.40
81	B5	388	G	N3-C2-N2	-5.43	116.10	119.90
81	B5	2361	A	N9-C4-C5	5.43	107.97	105.80
81	B5	2754	G	N3-C4-N9	5.43	129.26	126.00
81	B5	3362	A	C4-C5-N7	5.43	113.42	110.70
83	B8	103	G	C5-C6-N1	5.43	114.22	111.50
81	B5	2174	G	N1-C2-N3	5.43	127.16	123.90
81	B5	2524	A	N3-C4-C5	5.43	130.60	126.80
81	B5	2744	U	N3-C4-O4	-5.43	115.60	119.40
81	B5	2894	C	C2-N3-C4	-5.43	117.18	119.90
81	B5	3113	A	C6-N1-C2	-5.43	115.34	118.60
80	B2	1754	A	N3-C4-C5	5.43	130.60	126.80
81	B5	590	G	C2-N3-C4	5.43	114.61	111.90
81	B5	646	A	N1-C2-N3	5.43	132.01	129.30
61	Ba	4	ARG	NE-CZ-NH1	-5.43	117.59	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1285	G	C4'-C3'-C2'	-5.43	97.17	102.60
81	B5	2242	A	N9-C4-C5	5.43	107.97	105.80
81	B5	1244	A	P-O3'-C3'	5.43	126.21	119.70
81	B5	2319	U	C5-C6-N1	-5.43	119.99	122.70
81	B5	2379	U	N1-C2-N3	5.43	118.16	114.90
82	B7	105	C	C2-N3-C4	5.43	122.61	119.90
85	CP	60	ALA	N-CA-C	-5.43	96.35	111.00
80	B2	557	G	N1-C2-N2	-5.42	111.32	116.20
81	B5	322	U	C2-N3-C4	-5.42	123.75	127.00
81	B5	675	C	N1-C2-O2	-5.42	115.64	118.90
81	B5	1191	U	C4-C5-C6	5.42	122.95	119.70
81	B5	1273	A	C5-C6-N6	-5.42	119.36	123.70
81	B5	1433	A	C6-N1-C2	5.42	121.86	118.60
81	B5	3143	C	N3-C2-O2	5.42	125.70	121.90
80	B2	1170	G	C6-C5-N7	-5.42	127.15	130.40
80	B2	1330	G	C4-N9-C1'	-5.42	119.45	126.50
81	B5	283	G	C5-C6-O6	-5.42	125.35	128.60
81	B5	1164	G	C2-N3-C4	-5.42	109.19	111.90
81	B5	229	G	N1-C6-O6	5.42	123.15	119.90
81	B5	341	G	C5-N7-C8	-5.42	101.59	104.30
81	B5	600	G	C4-N9-C1'	5.42	133.55	126.50
81	B5	1268	G	C6-C5-N7	-5.42	127.15	130.40
81	B5	2891	U	N1-C2-N3	5.42	118.15	114.90
81	B5	3064	U	C2-N3-C4	-5.42	123.75	127.00
86	CW	69	G	O4'-C1'-N9	5.42	112.54	108.20
81	B5	498	A	N1-C6-N6	-5.42	115.35	118.60
81	B5	2808	A	C6-C5-N7	-5.42	128.51	132.30
36	BB	4	ARG	NE-CZ-NH2	-5.42	117.59	120.30
80	B2	1146	G	C4-N9-C1'	5.42	133.54	126.50
81	B5	266	A	C4-C5-C6	5.42	119.71	117.00
81	B5	514	G	N9-C4-C5	-5.42	103.23	105.40
81	B5	844	G	C8-N9-C4	5.42	108.57	106.40
81	B5	1209	G	N1-C2-N2	5.42	121.08	116.20
81	B5	2980	U	N3-C2-O2	-5.42	118.41	122.20
59	BY	14	LYS	CD-CE-NZ	5.42	124.16	111.70
80	B2	995	A	C8-N9-C4	5.42	107.97	105.80
80	B2	1642	G	N3-C4-N9	5.42	129.25	126.00
81	B5	1129	A	C5-C6-N1	5.42	120.41	117.70
81	B5	1187	C	N3-C4-N4	-5.42	114.21	118.00
81	B5	1227	C	C5'-C4'-C3'	-5.42	107.33	116.00
83	B8	126	A	N7-C8-N9	5.42	116.51	113.80
81	B5	3193	C	C4-C5-C6	5.42	120.11	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	90	C	C6-N1-C2	-5.41	118.13	120.30
81	B5	706	A	N9-C4-C5	-5.41	103.64	105.80
81	B5	914	A	N1-C2-N3	5.41	132.01	129.30
81	B5	2385	G	C8-N9-C1'	5.41	134.04	127.00
81	B5	3015	G	N1-C6-O6	-5.41	116.65	119.90
80	B2	1679	G	C2-N3-C4	5.41	114.61	111.90
81	B5	879	U	C6-N1-C1'	-5.41	113.63	121.20
81	B5	1359	C	N3-C4-N4	5.41	121.79	118.00
81	B5	2377	G	N3-C4-C5	-5.41	125.89	128.60
81	B5	2393	G	C8-N9-C1'	-5.41	119.97	127.00
81	B5	3263	G	N1-C6-O6	-5.41	116.65	119.90
82	B7	82	G	N9-C4-C5	5.41	107.56	105.40
80	B2	992	A	C4-C5-N7	5.41	113.40	110.70
80	B2	1386	G	C4-C5-N7	-5.41	108.64	110.80
81	B5	591	G	C6-C5-N7	-5.41	127.16	130.40
81	B5	688	G	N3-C4-N9	-5.41	122.75	126.00
81	B5	1495	U	C6-N1-C2	-5.41	117.75	121.00
81	B5	3247	G	C5-C6-O6	5.41	131.85	128.60
81	B5	3323	A	N1-C2-N3	5.41	132.00	129.30
86	CW	74	C	C5'-C4'-C3'	5.41	124.66	116.00
81	B5	799	G	C6-N1-C2	-5.41	121.86	125.10
80	B2	767	U	N3-C2-O2	-5.41	118.42	122.20
81	B5	961	C	C4-C5-C6	5.41	120.10	117.40
81	B5	2376	G	C8-N9-C1'	-5.41	119.97	127.00
80	B2	307	G	C8-N9-C4	5.40	108.56	106.40
80	B2	1504	G	C5-C6-O6	5.40	131.84	128.60
80	B2	1560	U	C6-N1-C2	-5.40	117.76	121.00
81	B5	1128	U	C2-N3-C4	-5.40	123.76	127.00
81	B5	2145	A	C6-N1-C2	-5.40	115.36	118.60
81	B5	3003	G	N3-C4-N9	-5.40	122.76	126.00
81	B5	3021	A	N1-C6-N6	-5.40	115.36	118.60
86	CW	76	A	O4'-C1'-N9	5.40	112.52	108.20
80	B2	529	A	C8-N9-C4	5.40	107.96	105.80
80	B2	864	U	C2-N1-C1'	5.40	124.18	117.70
80	B2	1389	C	N3-C2-O2	-5.40	118.12	121.90
81	B5	648	C	C4-C5-C6	5.40	120.10	117.40
81	B5	1396	C	C6-N1-C2	5.40	122.46	120.30
81	B5	1838	G	C6-N1-C2	-5.40	121.86	125.10
81	B5	2634	U	N3-C2-O2	5.40	125.98	122.20
83	B8	156	U	C5-C6-N1	5.40	125.40	122.70
81	B5	516	A	C5-C6-N6	-5.40	119.38	123.70
81	B5	588	G	C5-C6-N1	5.40	114.20	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1257	C	N3-C4-C5	-5.40	119.74	121.90
81	B5	1534	A	C6-N1-C2	-5.40	115.36	118.60
81	B5	2123	G	N3-C4-C5	-5.40	125.90	128.60
81	B5	2955	U	C6-N1-C2	-5.40	117.76	121.00
83	B8	29	U	C5-C6-N1	-5.40	120.00	122.70
86	CW	35	A	C5-C6-N1	-5.40	115.00	117.70
81	B5	2134	G	N3-C2-N2	5.40	123.68	119.90
81	B5	288	C	C6-N1-C2	5.40	122.46	120.30
81	B5	923	C	C5-C6-N1	-5.40	118.30	121.00
81	B5	1131	G	N1-C2-N3	5.40	127.14	123.90
81	B5	2355	G	C5-C6-O6	-5.40	125.36	128.60
81	B5	2928	C	N3-C4-C5	-5.40	119.74	121.90
81	B5	2429	G	N9-C4-C5	5.40	107.56	105.40
19	AK	63	TYR	N-CA-C	5.39	125.56	111.00
35	BA	207	VAL	CB-CA-C	-5.39	101.15	111.40
80	B2	396	G	N1-C6-O6	5.39	123.14	119.90
80	B2	407	A	C5-N7-C8	5.39	106.60	103.90
81	B5	98	G	N9-C4-C5	-5.39	103.24	105.40
81	B5	1017	C	C2-N1-C1'	5.39	124.73	118.80
81	B5	1889	G	C4-C5-N7	-5.39	108.64	110.80
81	B5	3366	G	N1-C6-O6	-5.39	116.66	119.90
80	B2	523	G	N1-C6-O6	-5.39	116.66	119.90
80	B2	1768	G	C8-N9-C1'	5.39	134.01	127.00
81	B5	1907	C	C6-N1-C1'	5.39	127.27	120.80
81	B5	2181	C	C6-N1-C2	-5.39	118.14	120.30
25	AQ	40	GLU	C-N-CA	5.39	144.64	122.00
81	B5	411	U	C2-N3-C4	-5.39	123.77	127.00
81	B5	616	G	C2-N3-C4	5.39	114.59	111.90
81	B5	1143	A	C2-N3-C4	-5.39	107.91	110.60
81	B5	1335	C	C6-N1-C2	-5.39	118.14	120.30
81	B5	2149	A	N9-C4-C5	5.39	107.96	105.80
81	B5	2386	A	C5-N7-C8	-5.39	101.20	103.90
81	B5	3374	U	C6-N1-C2	5.39	124.23	121.00
80	B2	1361	U	C2-N1-C1'	5.39	124.17	117.70
81	B5	811	U	N1-C2-N3	5.39	118.13	114.90
81	B5	2375	G	C4-C5-N7	5.39	112.96	110.80
80	B2	1524	A	N1-C2-N3	5.39	131.99	129.30
81	B5	227	G	C5-C6-O6	-5.39	125.37	128.60
81	B5	339	C	C6-N1-C2	-5.39	118.14	120.30
81	B5	1722	U	N1-C2-O2	-5.39	119.03	122.80
81	B5	555	U	N1-C2-O2	-5.39	119.03	122.80
81	B5	1126	G	C5-C6-N1	-5.39	108.81	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1178	G	C6-N1-C2	-5.39	121.87	125.10
81	B5	3350	C	N1-C2-O2	5.39	122.13	118.90
81	B5	852	U	N1-C2-N3	5.38	118.13	114.90
81	B5	2231	C	C2-N1-C1'	5.38	124.72	118.80
81	B5	3189	G	C6-N1-C2	-5.38	121.87	125.10
81	B5	3377	G	C6-N1-C2	-5.38	121.87	125.10
80	B2	1334	U	N1-C2-N3	5.38	118.13	114.90
81	B5	641	C	C6-N1-C2	-5.38	118.15	120.30
81	B5	1409	G	N9-C4-C5	5.38	107.55	105.40
81	B5	2434	U	N3-C2-O2	-5.38	118.43	122.20
82	B7	93	C	N3-C4-C5	5.38	124.05	121.90
80	B2	720	G	P-O3'-C3'	5.38	126.16	119.70
81	B5	1724	U	N1-C2-N3	5.38	118.13	114.90
81	B5	1870	C	N1-C2-O2	-5.38	115.67	118.90
81	B5	2524	A	C5-C6-N1	-5.38	115.01	117.70
81	B5	2632	G	N1-C2-N3	-5.38	120.67	123.90
81	B5	2767	U	N3-C4-O4	-5.38	115.63	119.40
81	B5	3047	U	N3-C2-O2	-5.38	118.43	122.20
80	B2	336	G	C6-C5-N7	-5.38	127.17	130.40
81	B5	1081	U	C5-C6-N1	5.38	125.39	122.70
39	BE	173	MET	CB-CG-SD	-5.38	96.26	112.40
81	B5	2794	G	C5-C6-O6	-5.38	125.37	128.60
81	B5	3048	A	C6-N1-C2	-5.38	115.37	118.60
86	CW	3	C	N3-C4-N4	5.38	121.77	118.00
80	B2	1315	U	C5-C4-O4	-5.38	122.67	125.90
81	B5	14	U	N3-C4-C5	5.38	117.83	114.60
81	B5	806	A	C8-N9-C4	5.38	107.95	105.80
81	B5	1905	G	N9-C4-C5	5.38	107.55	105.40
81	B5	2614	G	C4-N9-C1'	5.38	133.49	126.50
81	B5	2399	A	C5-C6-N6	-5.38	119.40	123.70
81	B5	3055	U	C6-N1-C1'	-5.38	113.67	121.20
80	B2	469	C	N3-C2-O2	5.37	125.66	121.90
81	B5	1150	A	C5-N7-C8	-5.37	101.21	103.90
81	B5	1243	G	O4'-C1'-N9	5.37	112.50	108.20
81	B5	1248	C	N3-C4-C5	-5.37	119.75	121.90
81	B5	3028	G	C8-N9-C1'	-5.37	120.02	127.00
81	B5	51	A	N1-C6-N6	5.37	121.82	118.60
81	B5	356	C	C5-C6-N1	-5.37	118.31	121.00
81	B5	2148	U	N3-C4-C5	5.37	117.82	114.60
81	B5	2755	C	N1-C2-O2	-5.37	115.68	118.90
81	B5	2763	U	C5-C4-O4	-5.37	122.68	125.90
81	B5	3052	G	C6-C5-N7	5.37	133.62	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3078	U	C2-N1-C1'	5.37	124.14	117.70
80	B2	393	C	C5-C6-N1	-5.37	118.31	121.00
81	B5	63	A	N9-C4-C5	-5.37	103.65	105.80
81	B5	2639	G	C6-N1-C2	-5.37	121.88	125.10
81	B5	2956	A	C5-C6-N1	-5.37	115.02	117.70
82	B7	105	C	N3-C4-C5	-5.37	119.75	121.90
80	B2	1422	A	N7-C8-N9	-5.37	111.12	113.80
81	B5	972	A	C4-C5-C6	5.37	119.68	117.00
81	B5	1312	C	C5-C4-N4	5.37	123.96	120.20
81	B5	1906	G	C6-N1-C2	-5.37	121.88	125.10
83	B8	3	A	C5-C6-N1	5.37	120.38	117.70
86	CW	72	C	C2'-C3'-O3'	5.37	122.29	113.70
80	B2	1324	G	N1-C2-N2	5.37	121.03	116.20
81	B5	536	U	N3-C4-O4	-5.37	115.64	119.40
81	B5	848	A	N1-C2-N3	5.37	131.98	129.30
81	B5	3101	G	N1-C2-N2	-5.37	111.37	116.20
81	B5	365	A	C4-C5-N7	5.37	113.38	110.70
81	B5	2820	A	N9-C4-C5	5.37	107.95	105.80
82	B7	115	G	C8-N9-C4	-5.37	104.25	106.40
80	B2	719	U	C6-N1-C1'	-5.36	113.69	121.20
81	B5	1279	C	N3-C4-C5	-5.36	119.75	121.90
81	B5	2639	G	N1-C6-O6	5.36	123.12	119.90
80	B2	1679	G	N1-C6-O6	-5.36	116.68	119.90
81	B5	1161	G	C6-C5-N7	5.36	133.62	130.40
81	B5	1170	A	N9-C4-C5	-5.36	103.66	105.80
81	B5	2904	U	N3-C2-O2	-5.36	118.45	122.20
81	B5	3179	U	N1-C2-O2	5.36	126.55	122.80
80	B2	628	G	N3-C4-C5	5.36	131.28	128.60
80	B2	1192	C	N1-C2-O2	-5.36	115.68	118.90
81	B5	1110	U	N1-C2-N3	-5.36	111.68	114.90
81	B5	1846	C	C6-N1-C2	5.36	122.44	120.30
81	B5	2621	G	N1-C2-N2	5.36	121.03	116.20
81	B5	2915	U	N3-C4-O4	-5.36	115.65	119.40
82	B7	48	U	C5-C6-N1	-5.36	120.02	122.70
80	B2	1769	U	C5-C4-O4	5.36	129.12	125.90
81	B5	1374	G	N1-C2-N2	-5.36	111.38	116.20
81	B5	587	U	N3-C4-O4	-5.36	115.65	119.40
81	B5	905	U	C2-N3-C4	-5.36	123.79	127.00
81	B5	2837	A	C8-N9-C4	5.36	107.94	105.80
17	AI	29	LEU	CA-CB-CG	5.36	127.62	115.30
80	B2	1524	A	N1-C6-N6	-5.36	115.39	118.60
80	B2	1762	A	N9-C4-C5	-5.36	103.66	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	696	C	C2-N1-C1'	5.36	124.69	118.80
81	B5	2525	G	C8-N9-C4	5.36	108.54	106.40
80	B2	151	G	C5-C6-N1	5.35	114.18	111.50
81	B5	1300	G	N1-C6-O6	5.35	123.11	119.90
81	B5	1319	G	N1-C2-N2	-5.35	111.38	116.20
76	Bq	22	TYR	CB-CG-CD1	-5.35	117.79	121.00
80	B2	12	U	N3-C2-O2	-5.35	118.45	122.20
80	B2	932	U	C6-N1-C1'	5.35	128.69	121.20
81	B5	339	C	C6-N1-C1'	5.35	127.22	120.80
81	B5	1510	G	C2-N3-C4	-5.35	109.22	111.90
81	B5	2987	A	N7-C8-N9	-5.35	111.12	113.80
84	CN	2206	C	O5'-P-OP1	5.35	117.12	110.70
80	B2	393	C	C2-N1-C1'	-5.35	112.91	118.80
81	B5	1844	C	C6-N1-C2	-5.35	118.16	120.30
81	B5	91	G	N9-C4-C5	5.35	107.54	105.40
81	B5	363	G	C5-N7-C8	5.35	106.97	104.30
81	B5	1144	U	C4-C5-C6	5.35	122.91	119.70
81	B5	3019	U	C6-N1-C2	5.35	124.21	121.00
80	B2	1537	C	C5-C4-N4	-5.35	116.46	120.20
81	B5	372	A	N1-C6-N6	5.35	121.81	118.60
81	B5	404	G	C4-C5-N7	-5.35	108.66	110.80
81	B5	1321	G	C8-N9-C4	5.35	108.54	106.40
81	B5	2184	U	N3-C4-C5	5.35	117.81	114.60
81	B5	3005	A	C8-N9-C4	-5.35	103.66	105.80
81	B5	3043	C	N1-C2-O2	5.35	122.11	118.90
81	B5	3046	A	N1-C6-N6	-5.35	115.39	118.60
24	AP	60	LEU	CA-CB-CG	5.35	127.59	115.30
80	B2	1086	A	C5-C6-N1	5.35	120.37	117.70
81	B5	509	U	N3-C4-C5	5.35	117.81	114.60
86	CW	13	C	N3-C4-C5	-5.35	119.76	121.90
86	CW	44	G	C6-C5-N7	-5.35	127.19	130.40
81	B5	987	U	C5-C4-O4	5.34	129.11	125.90
81	B5	1846	C	N1-C2-N3	5.34	122.94	119.20
81	B5	3025	C	N3-C2-O2	-5.34	118.16	121.90
86	CW	38	A	C5'-C4'-O4'	5.34	115.51	109.10
81	B5	76	G	N1-C6-O6	5.34	123.11	119.90
81	B5	141	C	C6-N1-C2	-5.34	118.16	120.30
81	B5	419	G	C5-C6-N1	5.34	114.17	111.50
81	B5	706	A	N1-C6-N6	5.34	121.81	118.60
81	B5	1011	A	C2-N3-C4	-5.34	107.93	110.60
81	B5	3141	A	N1-C2-N3	5.34	131.97	129.30
81	B5	2300	G	C5-C6-N1	5.34	114.17	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2629	U	C2-N3-C4	-5.34	123.80	127.00
82	B7	35	C	N1-C2-O2	-5.34	115.70	118.90
81	B5	2636	A	N1-C6-N6	-5.34	115.40	118.60
83	B8	6	U	C5-C4-O4	-5.34	122.70	125.90
81	B5	1369	A	N1-C2-N3	-5.34	126.63	129.30
81	B5	1885	U	N1-C2-O2	-5.34	119.06	122.80
81	B5	2279	A	C2-N3-C4	-5.34	107.93	110.60
81	B5	2755	C	C4-C5-C6	5.34	120.07	117.40
81	B5	3368	U	C2-N1-C1'	-5.34	111.30	117.70
81	B5	3227	A	C2-N3-C4	-5.33	107.93	110.60
2	A1	29	ARG	NE-CZ-NH1	5.33	122.97	120.30
80	B2	1145	U	N3-C2-O2	5.33	125.93	122.20
81	B5	564	G	C5-N7-C8	5.33	106.97	104.30
81	B5	924	G	C5-C6-O6	-5.33	125.40	128.60
81	B5	972	A	C5-N7-C8	5.33	106.57	103.90
81	B5	1378	U	N3-C4-C5	5.33	117.80	114.60
81	B5	1804	A	C8-N9-C4	5.33	107.93	105.80
81	B5	3031	G	C5-C6-O6	-5.33	125.40	128.60
81	B5	3336	A	C2-N3-C4	-5.33	107.93	110.60
83	B8	11	C	N1-C2-O2	5.33	122.10	118.90
85	CP	72	LEU	C-N-CA	5.33	135.03	121.70
81	B5	806	A	C6-N1-C2	5.33	121.80	118.60
81	B5	3173	G	C4-C5-N7	5.33	112.93	110.80
80	B2	554	C	C6-N1-C1'	-5.33	114.40	120.80
81	B5	494	G	N1-C6-O6	-5.33	116.70	119.90
81	B5	1203	A	N1-C6-N6	5.33	121.80	118.60
80	B2	214	G	C8-N9-C1'	5.33	133.93	127.00
80	B2	350	U	C5-C6-N1	-5.33	120.04	122.70
81	B5	327	A	N1-C2-N3	-5.33	126.64	129.30
82	B7	83	U	N3-C4-O4	-5.33	115.67	119.40
80	B2	1370	U	C2-N1-C1'	5.33	124.09	117.70
81	B5	413	U	C5-C4-O4	-5.33	122.70	125.90
86	CW	48	C	N3-C4-C5	-5.33	119.77	121.90
80	B2	392	G	C5-C6-O6	-5.33	125.41	128.60
80	B2	1481	C	C5-C6-N1	5.33	123.66	121.00
81	B5	496	C	N3-C2-O2	-5.33	118.17	121.90
81	B5	1808	G	C5-C6-O6	-5.33	125.41	128.60
81	B5	3138	U	N3-C2-O2	5.33	125.93	122.20
80	B2	313	U	C5-C4-O4	5.32	129.09	125.90
81	B5	800	G	N9-C4-C5	-5.32	103.27	105.40
81	B5	1192	C	N1-C2-N3	5.32	122.93	119.20
81	B5	1389	G	C8-N9-C4	5.32	108.53	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3246	G	N1-C6-O6	5.32	123.09	119.90
86	CW	58	A	C5-C6-N6	-5.32	119.44	123.70
80	B2	1520	U	C5-C6-N1	-5.32	120.04	122.70
81	B5	1490	A	C6-C5-N7	-5.32	128.57	132.30
81	B5	1917	C	C4-C5-C6	5.32	120.06	117.40
80	B2	274	G	C8-N9-C4	-5.32	104.27	106.40
80	B2	811	A	C4-N9-C1'	5.32	135.88	126.30
80	B2	1052	U	C2-N1-C1'	5.32	124.08	117.70
80	B2	1778	G	N1-C6-O6	-5.32	116.71	119.90
81	B5	887	G	C4-C5-C6	5.32	121.99	118.80
83	B8	87	G	C4-C5-N7	5.32	112.93	110.80
81	B5	282	G	C5-C6-N1	-5.32	108.84	111.50
81	B5	1447	G	N9-C4-C5	5.32	107.53	105.40
80	B2	1119	G	N3-C4-C5	-5.32	125.94	128.60
81	B5	1283	C	P-O5'-C5'	-5.32	112.39	120.90
81	B5	1939	G	C8-N9-C1'	-5.32	120.09	127.00
81	B5	799	G	C5-C6-N1	5.32	114.16	111.50
81	B5	810	A	C4-C5-N7	-5.32	108.04	110.70
81	B5	1116	G	C5-C6-N1	-5.31	108.84	111.50
81	B5	1140	G	N3-C4-N9	5.31	129.19	126.00
81	B5	2342	U	N3-C4-C5	5.31	117.79	114.60
80	B2	319	U	N1-C2-N3	-5.31	111.71	114.90
80	B2	583	C	C2-N1-C1'	5.31	124.64	118.80
81	B5	831	G	C5-C6-O6	-5.31	125.41	128.60
81	B5	1929	G	C2-N3-C4	-5.31	109.24	111.90
81	B5	2323	G	C8-N9-C4	-5.31	104.28	106.40
81	B5	3045	G	N3-C4-C5	-5.31	125.94	128.60
83	B8	79	A	C4-C5-N7	5.31	113.36	110.70
83	B8	135	G	C4-C5-N7	-5.31	108.67	110.80
81	B5	2632	G	N3-C2-N2	5.31	123.62	119.90
80	B2	1542	G	N1-C6-O6	-5.31	116.72	119.90
81	B5	524	U	C2-N1-C1'	-5.31	111.33	117.70
81	B5	3245	A	C4-C5-C6	5.31	119.65	117.00
83	B8	95	G	N3-C4-N9	-5.31	122.81	126.00
59	BY	103	LYS	CD-CE-NZ	-5.31	99.49	111.70
80	B2	1736	G	C8-N9-C4	5.31	108.52	106.40
81	B5	496	C	N1-C2-O2	5.31	122.08	118.90
81	B5	802	C	N3-C2-O2	-5.31	118.18	121.90
81	B5	1167	U	N3-C2-O2	5.31	125.92	122.20
81	B5	1376	C	C6-N1-C2	5.31	122.42	120.30
81	B5	1458	U	C5-C4-O4	-5.31	122.72	125.90
81	B5	1483	G	N1-C6-O6	-5.31	116.72	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2369	G	N3-C2-N2	5.31	123.61	119.90
81	B5	3171	U	C6-N1-C2	5.31	124.19	121.00
80	B2	323	A	N7-C8-N9	5.31	116.45	113.80
80	B2	1148	C	C6-N1-C2	5.31	122.42	120.30
80	B2	460	A	C4-C5-C6	-5.30	114.35	117.00
80	B2	1461	C	C6-N1-C2	5.30	122.42	120.30
81	B5	1054	A	N9-C4-C5	-5.30	103.68	105.80
81	B5	2836	C	N1-C2-O2	-5.30	115.72	118.90
80	B2	343	C	C6-N1-C2	-5.30	118.18	120.30
81	B5	1442	U	C2-N3-C4	-5.30	123.82	127.00
81	B5	2175	U	C2-N1-C1'	-5.30	111.34	117.70
81	B5	3112	G	N7-C8-N9	-5.30	110.45	113.10
48	BN	174	ILE	CG1-CB-CG2	-5.30	99.74	111.40
48	BN	201	ARG	NE-CZ-NH1	5.30	122.95	120.30
81	B5	35	A	N1-C2-N3	5.30	131.95	129.30
81	B5	568	G	N1-C6-O6	-5.30	116.72	119.90
81	B5	815	G	N3-C4-C5	-5.30	125.95	128.60
81	B5	881	C	C5-C6-N1	5.30	123.65	121.00
81	B5	1137	C	N3-C4-C5	-5.30	119.78	121.90
81	B5	1307	G	N3-C2-N2	5.30	123.61	119.90
80	B2	68	A	N7-C8-N9	5.30	116.45	113.80
80	B2	1454	G	C4-C5-N7	-5.30	108.68	110.80
80	B2	1600	A	N1-C2-N3	5.30	131.95	129.30
81	B5	948	C	C4-C5-C6	5.30	120.05	117.40
81	B5	1325	U	N1-C2-N3	5.30	118.08	114.90
81	B5	1856	C	N3-C2-O2	-5.30	118.19	121.90
81	B5	2897	A	C5-N7-C8	5.30	106.55	103.90
81	B5	3294	A	N1-C2-N3	5.30	131.95	129.30
82	B7	100	C	C2-N3-C4	-5.30	117.25	119.90
81	B5	1586	G	C6-C5-N7	-5.29	127.22	130.40
81	B5	1741	A	N1-C2-N3	5.29	131.95	129.30
81	B5	2942	C	N1-C2-O2	-5.29	115.72	118.90
31	AW	93	LEU	CA-CB-CG	5.29	127.47	115.30
50	BP	127	ARG	NE-CZ-NH2	-5.29	117.65	120.30
80	B2	557	G	N3-C4-C5	-5.29	125.95	128.60
81	B5	632	G	C5-C6-N1	5.29	114.15	111.50
81	B5	2422	C	N3-C4-C5	5.29	124.02	121.90
82	B7	11	A	C5-C6-N1	-5.29	115.05	117.70
86	CW	15	G	C5-C6-O6	-5.29	125.42	128.60
48	BN	172	ARG	NE-CZ-NH1	-5.29	117.65	120.30
81	B5	186	U	N1-C2-O2	5.29	126.50	122.80
81	B5	637	C	C6-N1-C1'	5.29	127.15	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1080	A	N1-C2-N3	5.29	131.95	129.30
81	B5	1315	U	C6-N1-C2	5.29	124.17	121.00
81	B5	2303	A	C5-C6-N1	5.29	120.34	117.70
81	B5	2344	U	N1-C2-N3	5.29	118.08	114.90
81	B5	2893	C	N3-C2-O2	5.29	125.60	121.90
81	B5	2928	C	C2-N1-C1'	5.29	124.62	118.80
81	B5	2930	A	C5-C6-N1	5.29	120.34	117.70
82	B7	14	U	N1-C2-N3	5.29	118.07	114.90
80	B2	380	U	C6-N1-C2	-5.29	117.83	121.00
81	B5	2609	A	N7-C8-N9	-5.29	111.16	113.80
80	B2	137	U	N3-C2-O2	-5.29	118.50	122.20
81	B5	960	U	C6-N1-C1'	-5.29	113.80	121.20
81	B5	1007	U	N3-C4-C5	5.29	117.77	114.60
81	B5	1869	C	C5-C6-N1	-5.29	118.36	121.00
81	B5	2921	U	N1-C2-N3	5.29	118.07	114.90
81	B5	719	U	N3-C2-O2	-5.29	118.50	122.20
81	B5	998	A	C5-N7-C8	5.29	106.54	103.90
81	B5	1264	G	C5'-C4'-O4'	5.29	115.44	109.10
81	B5	1272	C	N3-C4-N4	5.29	121.70	118.00
81	B5	1274	A	C6-C5-N7	-5.29	128.60	132.30
81	B5	1375	G	C8-N9-C4	-5.29	104.29	106.40
81	B5	2163	C	N3-C4-C5	5.29	124.02	121.90
86	CW	73	A	C5-C6-N1	-5.29	115.06	117.70
81	B5	1281	G	C5-C6-O6	-5.28	125.43	128.60
81	B5	2572	C	C6-N1-C1'	-5.28	114.46	120.80
81	B5	2664	C	C4-C5-C6	-5.28	114.76	117.40
81	B5	3307	A	C6-N1-C2	5.28	121.77	118.60
86	CW	22	G	C5'-C4'-C3'	5.28	124.45	116.00
39	BE	26	ARG	NE-CZ-NH2	-5.28	117.66	120.30
80	B2	308	C	C6-N1-C2	5.28	122.41	120.30
81	B5	432	G	N3-C2-N2	5.28	123.60	119.90
81	B5	1114	U	C2-N3-C4	-5.28	123.83	127.00
81	B5	1220	U	C5-C6-N1	-5.28	120.06	122.70
81	B5	2167	A	C5-C6-N1	5.28	120.34	117.70
81	B5	2261	G	N7-C8-N9	-5.28	110.46	113.10
81	B5	3315	G	C4-C5-N7	-5.28	108.69	110.80
81	B5	975	C	N1-C2-N3	5.28	122.89	119.20
81	B5	1085	A	C4-C5-N7	5.28	113.34	110.70
81	B5	1283	C	C3'-C2'-C1'	5.28	105.72	101.50
81	B5	2359	C	N3-C4-N4	-5.28	114.30	118.00
81	B5	2549	G	C5-N7-C8	-5.28	101.66	104.30
83	B8	99	C	C5-C6-N1	-5.28	118.36	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	637	C	C2-N3-C4	-5.28	117.26	119.90
81	B5	1628	C	C6-N1-C2	-5.28	118.19	120.30
81	B5	2625	C	N3-C4-C5	5.28	124.01	121.90
81	B5	147	U	C5-C4-O4	5.28	129.06	125.90
81	B5	354	U	C5-C6-N1	-5.28	120.06	122.70
81	B5	1788	C	C4-C5-C6	5.28	120.04	117.40
81	B5	2976	A	C5-C6-N1	5.28	120.34	117.70
85	CP	23	ASP	CB-CG-OD1	5.28	123.05	118.30
86	CW	48	C	O4'-C1'-N1	5.28	112.42	108.20
81	B5	689	U	N3-C4-C5	5.27	117.76	114.60
81	B5	1445	U	N1-C2-O2	-5.27	119.11	122.80
81	B5	2852	C	N1-C2-O2	-5.27	115.74	118.90
80	B2	1093	A	C8-N9-C4	5.27	107.91	105.80
81	B5	979	U	C2-N1-C1'	5.27	124.03	117.70
37	BC	98	ARG	NE-CZ-NH2	-5.27	117.66	120.30
81	B5	376	G	N3-C4-C5	-5.27	125.97	128.60
81	B5	1276	U	C2-N1-C1'	5.27	124.03	117.70
81	B5	2732	G	C5-N7-C8	5.27	106.94	104.30
81	B5	421	G	C5-C6-N1	5.27	114.14	111.50
81	B5	656	A	C5-N7-C8	5.27	106.53	103.90
81	B5	2658	G	C8-N9-C4	5.27	108.51	106.40
81	B5	2721	A	N3-C4-C5	-5.27	123.11	126.80
81	B5	2798	C	N3-C4-C5	-5.27	119.79	121.90
86	CW	14	A	C6-C5-N7	-5.27	128.61	132.30
23	AO	107	ARG	NE-CZ-NH1	5.27	122.93	120.30
81	B5	1249	G	P-O5'-C5'	5.27	129.33	120.90
81	B5	1346	G	C8-N9-C4	5.27	108.51	106.40
81	B5	1786	G	N3-C4-C5	-5.27	125.97	128.60
81	B5	1833	G	N1-C2-N2	-5.27	111.46	116.20
81	B5	2211	U	C6-N1-C2	-5.27	117.84	121.00
81	B5	2403	G	N3-C4-N9	5.27	129.16	126.00
81	B5	2882	U	N3-C4-O4	-5.27	115.71	119.40
81	B5	2979	U	N1-C2-N3	-5.27	111.74	114.90
81	B5	3045	G	C4-C5-N7	-5.27	108.69	110.80
81	B5	3247	G	C4-C5-N7	-5.27	108.69	110.80
22	AN	22	ALA	C-N-CA	5.27	144.12	122.00
80	B2	190	C	C6-N1-C2	5.27	122.41	120.30
82	B7	50	U	C6-N1-C2	-5.27	117.84	121.00
80	B2	647	G	C8-N9-C4	-5.26	104.29	106.40
80	B2	1297	G	C4-N9-C1'	-5.26	119.66	126.50
81	B5	98	G	C4-C5-N7	5.26	112.91	110.80
81	B5	784	A	C4-C5-N7	5.26	113.33	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	929	A	C5-N7-C8	5.26	106.53	103.90
81	B5	1229	G	C4-N9-C1'	5.26	133.34	126.50
81	B5	1939	G	C4-N9-C1'	5.26	133.34	126.50
81	B5	2884	C	C5-C4-N4	-5.26	116.52	120.20
81	B5	2930	A	N1-C2-N3	-5.26	126.67	129.30
81	B5	2965	U	N3-C4-O4	5.26	123.08	119.40
81	B5	1180	A	C2-N3-C4	-5.26	107.97	110.60
81	B5	1432	C	C2-N1-C1'	5.26	124.59	118.80
81	B5	2851	A	C2-N3-C4	-5.26	107.97	110.60
80	B2	527	A	N7-C8-N9	5.26	116.43	113.80
80	B2	1195	C	P-O3'-C3'	5.26	126.01	119.70
80	B2	1454	G	C5-N7-C8	5.26	106.93	104.30
80	B2	1541	G	N3-C4-C5	-5.26	125.97	128.60
80	B2	1761	U	N1-C2-N3	5.26	118.06	114.90
81	B5	323	A	N1-C2-N3	5.26	131.93	129.30
81	B5	582	G	C4-C5-N7	-5.26	108.69	110.80
81	B5	693	A	C5-C6-N6	5.26	127.91	123.70
81	B5	329	U	C6-N1-C2	5.26	124.16	121.00
81	B5	1050	U	C5-C4-O4	5.26	129.06	125.90
81	B5	1506	A	N9-C4-C5	5.26	107.90	105.80
81	B5	3309	G	C2-N3-C4	5.26	114.53	111.90
84	CN	2123	U	C2'-C3'-O3'	5.26	122.11	113.70
80	B2	605	A	C8-N9-C4	5.26	107.90	105.80
80	B2	1245	G	N3-C4-N9	-5.26	122.84	126.00
81	B5	3369	G	C5-C6-N1	5.26	114.13	111.50
80	B2	1600	A	N3-C4-C5	5.26	130.48	126.80
81	B5	218	G	N1-C6-O6	-5.26	116.75	119.90
81	B5	410	U	C5-C6-N1	-5.26	120.07	122.70
81	B5	2213	A	N7-C8-N9	-5.26	111.17	113.80
81	B5	2391	G	C5-C6-O6	5.26	131.75	128.60
82	B7	41	G	C5-C6-N1	5.26	114.13	111.50
83	B8	77	A	C2-N3-C4	-5.26	107.97	110.60
83	B8	121	U	N3-C2-O2	-5.26	118.52	122.20
81	B5	406	G	O4'-C1'-N9	5.25	112.40	108.20
81	B5	1153	A	C5-C6-N6	-5.25	119.50	123.70
81	B5	1901	A	C8-N9-C1'	-5.25	118.24	127.70
81	B5	2665	U	C5-C6-N1	5.25	125.33	122.70
81	B5	2279	A	N1-C6-N6	5.25	121.75	118.60
81	B5	2370	G	N3-C4-N9	5.25	129.15	126.00
81	B5	3048	A	C5-C6-N1	5.25	120.33	117.70
83	B8	147	U	C2-N3-C4	-5.25	123.85	127.00
44	BJ	10	ARG	NE-CZ-NH2	-5.25	117.67	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	BO	182[B]	SER	CA-C-N	5.25	128.75	117.20
80	B2	1614	A	N1-C6-N6	5.25	121.75	118.60
81	B5	333	G	C2-N3-C4	-5.25	109.27	111.90
81	B5	2721	A	C5-C6-N1	5.25	120.33	117.70
81	B5	3321	C	C6-N1-C2	5.25	122.40	120.30
86	CW	47	U	O4'-C1'-N1	5.25	112.40	108.20
81	B5	985	U	C6-N1-C2	5.25	124.15	121.00
81	B5	2772	C	P-O3'-C3'	5.25	126.00	119.70
81	B5	3177	G	C2-N3-C4	-5.25	109.28	111.90
81	B5	3385	U	C5-C6-N1	-5.25	120.08	122.70
37	BC	190	GLY	N-CA-C	5.25	126.22	113.10
80	B2	687	G	N3-C4-N9	-5.25	122.85	126.00
80	B2	969	C	N3-C4-C5	5.25	124.00	121.90
81	B5	1190	A	C4-N9-C1'	5.25	135.75	126.30
81	B5	2606	G	C6-C5-N7	-5.25	127.25	130.40
81	B5	3202	G	C5-C6-O6	5.25	131.75	128.60
80	B2	240	U	N1-C2-O2	5.25	126.47	122.80
80	B2	1086	A	N1-C6-N6	-5.25	115.45	118.60
81	B5	559	A	C8-N9-C4	-5.25	103.70	105.80
81	B5	1100	U	N3-C4-C5	5.25	117.75	114.60
81	B5	1516	C	C4-C5-C6	5.25	120.02	117.40
81	B5	1828	A	N7-C8-N9	5.25	116.42	113.80
81	B5	2374	C	C5-C4-N4	5.25	123.87	120.20
83	B8	12	A	C8-N9-C4	-5.25	103.70	105.80
81	B5	1604	G	N3-C4-C5	-5.25	125.98	128.60
81	B5	2524	A	C2-N3-C4	-5.25	107.98	110.60
81	B5	3028	G	N1-C2-N2	-5.25	111.48	116.20
82	B7	37	G	C8-N9-C4	5.25	108.50	106.40
80	B2	149	C	C6-N1-C2	5.24	122.40	120.30
80	B2	972	G	N1-C6-O6	-5.24	116.75	119.90
80	B2	1258	U	C5-C6-N1	-5.24	120.08	122.70
80	B2	1754	A	C4-C5-C6	-5.24	114.38	117.00
81	B5	911	C	C5-C4-N4	-5.24	116.53	120.20
81	B5	1158	A	N9-C4-C5	-5.24	103.70	105.80
81	B5	1178	G	C5-C6-O6	-5.24	125.45	128.60
81	B5	1724	U	P-O3'-C3'	5.24	125.99	119.70
82	B7	1	G	C4-C5-N7	5.24	112.90	110.80
81	B5	1243	G	N3-C2-N2	5.24	123.57	119.90
81	B5	2724	U	N3-C4-O4	-5.24	115.73	119.40
81	B5	3107	U	N3-C4-O4	-5.24	115.73	119.40
81	B5	3174	A	N1-C6-N6	5.24	121.75	118.60
81	B5	318	A	N1-C2-N3	-5.24	126.68	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1500	G	N7-C8-N9	-5.24	110.48	113.10
81	B5	2648	G	N9-C4-C5	-5.24	103.30	105.40
86	CW	35	A	O4'-C1'-N9	5.24	112.39	108.20
43	BI	99	ILE	CB-CA-C	-5.24	101.12	111.60
80	B2	608	U	C5-C6-N1	-5.24	120.08	122.70
81	B5	804	C	C2-N1-C1'	-5.24	113.04	118.80
81	B5	2321	A	C8-N9-C4	5.24	107.89	105.80
81	B5	2897	A	N7-C8-N9	-5.24	111.18	113.80
86	CW	61	C	N3-C4-N4	5.24	121.67	118.00
80	B2	582	U	C5-C6-N1	5.24	125.32	122.70
81	B5	1421	G	N3-C4-C5	5.24	131.22	128.60
81	B5	1833	G	C5-C6-O6	5.24	131.74	128.60
81	B5	2191	U	C4-C5-C6	5.24	122.84	119.70
80	B2	749	U	C5-C6-N1	5.24	125.32	122.70
81	B5	1324	U	N3-C2-O2	-5.24	118.53	122.20
81	B5	1693	C	N1-C2-O2	-5.24	115.76	118.90
81	B5	1834	U	C5-C6-N1	-5.24	120.08	122.70
81	B5	1876	U	C6-N1-C2	-5.24	117.86	121.00
81	B5	1925	U	N3-C4-C5	5.24	117.74	114.60
83	B8	34	U	C2-N3-C4	-5.24	123.86	127.00
80	B2	938	G	N3-C2-N2	5.23	123.56	119.90
80	B2	1796	C	C5-C4-N4	5.23	123.86	120.20
81	B5	1226	G	C5-C6-N1	-5.23	108.88	111.50
80	B2	1648	A	C5-C6-N1	5.23	120.32	117.70
81	B5	381	U	C5-C6-N1	-5.23	120.08	122.70
81	B5	682	U	C2-N3-C4	-5.23	123.86	127.00
81	B5	961	C	C5-C6-N1	-5.23	118.38	121.00
81	B5	1252	A	C4-C5-C6	5.23	119.62	117.00
81	B5	1265	U	N1-C2-N3	-5.23	111.76	114.90
81	B5	1927	G	C8-N9-C4	-5.23	104.31	106.40
81	B5	2349	U	N1-C2-O2	5.23	126.46	122.80
81	B5	3381	U	C5-C6-N1	-5.23	120.08	122.70
82	B7	88	G	N1-C6-O6	-5.23	116.76	119.90
79	By	6	ARG	NE-CZ-NH1	5.23	122.92	120.30
80	B2	337	G	N3-C4-C5	-5.23	125.98	128.60
80	B2	1600	A	C6-C5-N7	-5.23	128.64	132.30
80	B2	1763	A	C5-N7-C8	-5.23	101.28	103.90
81	B5	227	G	N1-C6-O6	5.23	123.04	119.90
81	B5	299	G	C5-C6-N1	5.23	114.11	111.50
81	B5	661	G	C5-C6-O6	5.23	131.74	128.60
81	B5	857	G	N1-C2-N2	-5.23	111.49	116.20
81	B5	1545	A	C8-N9-C4	5.23	107.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2279	A	C5-N7-C8	-5.23	101.28	103.90
81	B5	2364	G	C4-C5-N7	-5.23	108.71	110.80
81	B5	2366	C	C2-N3-C4	5.23	122.52	119.90
81	B5	3075	G	C5-N7-C8	5.23	106.92	104.30
80	B2	6	G	N3-C4-N9	5.23	129.14	126.00
80	B2	63	G	C5-C6-O6	5.23	131.74	128.60
80	B2	440	U	N1-C2-O2	5.23	126.46	122.80
80	B2	1648	A	N1-C6-N6	-5.23	115.46	118.60
81	B5	813	G	N3-C4-C5	-5.23	125.99	128.60
81	B5	1107	C	N3-C4-C5	5.23	123.99	121.90
81	B5	1317	A	N9-C4-C5	-5.23	103.71	105.80
82	B7	41	G	C4-C5-N7	5.23	112.89	110.80
86	CW	5	G	C5'-C4'-O4'	5.23	115.37	109.10
51	BQ	178	ARG	NE-CZ-NH2	-5.22	117.69	120.30
80	B2	7	G	C5-C6-O6	5.22	131.74	128.60
81	B5	1403	C	N3-C4-C5	5.22	123.99	121.90
81	B5	1603	A	C5-C6-N1	-5.22	115.09	117.70
81	B5	2207	A	C4-C5-N7	5.22	113.31	110.70
80	B2	971	A	C2-N3-C4	-5.22	107.99	110.60
80	B2	1258	U	N1-C2-N3	5.22	118.03	114.90
80	B2	1293	U	N3-C2-O2	-5.22	118.54	122.20
81	B5	861	C	N3-C4-N4	5.22	121.66	118.00
81	B5	928	C	C6-N1-C2	-5.22	118.21	120.30
81	B5	1013	G	C4-N9-C1'	5.22	133.29	126.50
81	B5	1714	A	C2-N3-C4	-5.22	107.99	110.60
81	B5	2144	A	N1-C6-N6	5.22	121.73	118.60
81	B5	2193	U	N1-C2-N3	5.22	118.03	114.90
81	B5	2716	U	C5-C4-O4	5.22	129.03	125.90
80	B2	542	A	C5-C6-N1	-5.22	115.09	117.70
81	B5	595	G	C5-C6-O6	5.22	131.73	128.60
81	B5	2416	U	N1-C2-N3	5.22	118.03	114.90
81	B5	2506	U	C5-C6-N1	5.22	125.31	122.70
80	B2	1448	G	N1-C6-O6	-5.22	116.77	119.90
81	B5	1120	A	N1-C6-N6	-5.22	115.47	118.60
81	B5	1305	U	C5-C6-N1	-5.22	120.09	122.70
81	B5	3106	A	C8-N9-C4	-5.22	103.71	105.80
81	B5	1597	C	N3-C4-C5	-5.22	119.81	121.90
81	B5	1828	A	C2-N3-C4	-5.22	107.99	110.60
81	B5	2112	U	N1-C2-N3	5.22	118.03	114.90
81	B5	3259	U	C6-N1-C2	-5.22	117.87	121.00
82	B7	48	U	N3-C2-O2	5.22	125.85	122.20
81	B5	999	G	C5-C6-N1	5.22	114.11	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1149	G	C4-C5-N7	-5.22	108.71	110.80
81	B5	1485	G	N9-C4-C5	5.22	107.49	105.40
81	B5	1527	C	N1-C2-O2	5.22	122.03	118.90
86	CW	48	C	N3-C4-N4	5.22	121.65	118.00
61	Ba	15	VAL	N-CA-C	-5.21	96.92	111.00
80	B2	139	C	C4-C5-C6	5.21	120.01	117.40
80	B2	1170	G	C5-C6-O6	-5.21	125.47	128.60
80	B2	1611	A	C6-C5-N7	-5.21	128.65	132.30
81	B5	1872	C	N1-C2-N3	5.21	122.85	119.20
81	B5	2122	G	N7-C8-N9	-5.21	110.49	113.10
81	B5	3373	U	C2-N3-C4	-5.21	123.87	127.00
85	CP	60	ALA	N-CA-CB	5.21	117.40	110.10
81	B5	75	G	C5-C6-N1	5.21	114.11	111.50
81	B5	1312	C	C6-N1-C1'	5.21	127.06	120.80
81	B5	1845	G	C8-N9-C4	5.21	108.48	106.40
81	B5	2164	A	C4-C5-C6	5.21	119.61	117.00
81	B5	2693	C	N3-C4-N4	-5.21	114.35	118.00
81	B5	3339	A	N1-C6-N6	5.21	121.73	118.60
80	B2	387	A	N1-C6-N6	-5.21	115.47	118.60
80	B2	944	A	C2-N3-C4	-5.21	107.99	110.60
80	B2	1015	U	N1-C2-O2	5.21	126.45	122.80
81	B5	146	U	C5-C6-N1	-5.21	120.09	122.70
81	B5	284	A	C8-N9-C4	-5.21	103.72	105.80
81	B5	424	G	C5-C6-N1	5.21	114.11	111.50
81	B5	735	A	N7-C8-N9	5.21	116.41	113.80
81	B5	1792	C	C5-C6-N1	-5.21	118.39	121.00
84	CN	2145	G	O5'-P-OP1	-5.21	101.01	105.70
81	B5	992	A	C8-N9-C4	5.21	107.88	105.80
81	B5	2804	A	C2-N3-C4	-5.21	108.00	110.60
81	B5	2877	G	C5-C6-O6	5.21	131.73	128.60
81	B5	3103	A	C6-N1-C2	-5.21	115.47	118.60
83	B8	113	U	C5-C4-O4	-5.21	122.77	125.90
81	B5	1208	U	N1-C2-O2	5.21	126.45	122.80
81	B5	1543	G	N1-C6-O6	-5.21	116.78	119.90
80	B2	445	A	N1-C2-N3	-5.21	126.70	129.30
81	B5	2686	A	N1-C6-N6	5.21	121.72	118.60
81	B5	3110	C	C5-C6-N1	-5.21	118.40	121.00
80	B2	266	A	C2-N3-C4	-5.21	108.00	110.60
35	BA	242	ARG	NE-CZ-NH2	-5.20	117.70	120.30
80	B2	192	U	C5-C6-N1	5.20	125.30	122.70
80	B2	1330	G	C8-N9-C1'	5.20	133.76	127.00
81	B5	267	G	N7-C8-N9	-5.20	110.50	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1263	A	C5-C6-N1	-5.20	115.10	117.70
81	B5	1277	C	P-O3'-C3'	5.20	125.94	119.70
81	B5	1327	C	C5-C4-N4	5.20	123.84	120.20
81	B5	1468	A	N7-C8-N9	5.20	116.40	113.80
81	B5	2550	U	N3-C2-O2	-5.20	118.56	122.20
81	B5	702	C	N3-C4-C5	5.20	123.98	121.90
81	B5	943	U	C5-C4-O4	-5.20	122.78	125.90
80	B2	1672	G	N3-C4-C5	-5.20	126.00	128.60
81	B5	83	U	C6-N1-C1'	-5.20	113.92	121.20
81	B5	197	G	C4-N9-C1'	5.20	133.26	126.50
81	B5	997	A	C8-N9-C4	-5.20	103.72	105.80
81	B5	2271	A	C6-C5-N7	5.20	135.94	132.30
81	B5	2724	U	N3-C2-O2	-5.20	118.56	122.20
81	B5	2942	C	C5-C4-N4	-5.20	116.56	120.20
86	CW	9	A	P-O5'-C5'	5.20	129.22	120.90
81	B5	28	C	C6-N1-C2	5.20	122.38	120.30
81	B5	102	C	C4-C5-C6	5.20	120.00	117.40
81	B5	1513	G	N1-C6-O6	-5.20	116.78	119.90
81	B5	1733	G	C6-C5-N7	-5.20	127.28	130.40
81	B5	2526	C	C6-N1-C1'	-5.20	114.56	120.80
81	B5	2634	U	N3-C4-O4	5.20	123.04	119.40
82	B7	40	C	C2-N3-C4	-5.20	117.30	119.90
79	By	6	ARG	NE-CZ-NH2	-5.20	117.70	120.30
80	B2	1376	C	C6-N1-C2	5.20	122.38	120.30
81	B5	576	C	C2-N3-C4	-5.20	117.30	119.90
81	B5	610	G	C5-C6-N1	5.20	114.10	111.50
81	B5	1271	A	O4'-C1'-N9	5.20	112.36	108.20
81	B5	3387	U	N3-C2-O2	-5.20	118.56	122.20
83	B8	14	C	N1-C2-O2	-5.20	115.78	118.90
81	B5	307	A	N9-C4-C5	5.19	107.88	105.80
81	B5	580	C	N1-C2-N3	5.19	122.84	119.20
81	B5	1183	C	N3-C4-N4	-5.19	114.36	118.00
81	B5	3255	U	N3-C4-C5	5.19	117.72	114.60
81	B5	3302	U	C5-C6-N1	-5.19	120.10	122.70
49	BO	16[B]	LEU	O-C-N	-5.19	114.37	123.20
50	BP	23	ARG	NE-CZ-NH1	5.19	122.90	120.30
80	B2	987	G	C8-N9-C4	5.19	108.48	106.40
81	B5	1404	G	N1-C2-N2	-5.19	111.53	116.20
81	B5	2379	U	C5-C6-N1	-5.19	120.10	122.70
80	B2	139	C	P-O3'-C3'	5.19	125.93	119.70
80	B2	971	A	N1-C2-N3	5.19	131.90	129.30
80	B2	1462	G	N3-C4-N9	5.19	129.12	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	1503	A	C5-C6-N1	-5.19	115.10	117.70
81	B5	84	U	N3-C4-O4	5.19	123.03	119.40
81	B5	515	C	C5-C4-N4	-5.19	116.57	120.20
81	B5	613	G	C4-C5-N7	-5.19	108.72	110.80
81	B5	2406	C	C4-C5-C6	5.19	120.00	117.40
83	B8	95	G	N3-C4-C5	5.19	131.19	128.60
80	B2	1116	A	N1-C6-N6	5.19	121.71	118.60
83	B8	32	C	N3-C2-O2	5.19	125.53	121.90
80	B2	361	C	C5-C6-N1	5.19	123.59	121.00
80	B2	1033	C	N3-C2-O2	-5.19	118.27	121.90
81	B5	102	C	N1-C2-O2	-5.19	115.79	118.90
81	B5	2228	A	N7-C8-N9	5.19	116.39	113.80
81	B5	2344	U	N1-C2-O2	-5.19	119.17	122.80
81	B5	2386	A	C4-C5-N7	5.19	113.29	110.70
81	B5	2830	G	C8-N9-C4	-5.19	104.33	106.40
80	B2	1148	C	N3-C4-C5	5.19	123.97	121.90
81	B5	1633	C	N3-C4-C5	-5.19	119.83	121.90
81	B5	2213	A	C5-N7-C8	5.19	106.49	103.90
49	BO	27[B]	VAL	CA-C-N	5.18	128.61	117.20
81	B5	340	C	N3-C2-O2	-5.18	118.27	121.90
81	B5	863	C	C5-C4-N4	5.18	123.83	120.20
81	B5	996	A	N7-C8-N9	-5.18	111.21	113.80
81	B5	1402	C	N1-C2-O2	5.18	122.01	118.90
81	B5	2148	U	N1-C2-N3	5.18	118.01	114.90
81	B5	2584	G	N7-C8-N9	5.18	115.69	113.10
83	B8	109	A	C5-C6-N1	5.18	120.29	117.70
80	B2	1188	G	C8-N9-C4	5.18	108.47	106.40
81	B5	46	U	N1-C2-N3	-5.18	111.79	114.90
81	B5	808	A	C6-N1-C2	5.18	121.71	118.60
81	B5	2340	U	N3-C2-O2	-5.18	118.57	122.20
81	B5	2351	U	N1-C2-O2	5.18	126.43	122.80
81	B5	3052	G	C5-N7-C8	5.18	106.89	104.30
37	BC	230	VAL	CB-CA-C	-5.18	101.56	111.40
81	B5	625	G	N3-C4-N9	-5.18	122.89	126.00
81	B5	943	U	C6-N1-C2	5.18	124.11	121.00
86	CW	33	U	P-O3'-C3'	5.18	125.92	119.70
80	B2	712	G	N7-C8-N9	5.18	115.69	113.10
80	B2	1270	G	N1-C6-O6	-5.18	116.79	119.90
81	B5	1205	A	C2-N3-C4	5.18	113.19	110.60
81	B5	1603	A	C4-C5-C6	5.18	119.59	117.00
81	B5	2135	U	N3-C4-C5	5.18	117.71	114.60
81	B5	3098	G	N3-C2-N2	5.18	123.53	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3386	G	N1-C2-N3	5.18	127.01	123.90
81	B5	1655	G	C5-N7-C8	-5.18	101.71	104.30
81	B5	2353	G	C4-C5-N7	5.18	112.87	110.80
49	BO	104[B]	ILE	CA-C-N	-5.18	105.81	117.20
80	B2	139	C	N1-C2-N3	5.18	122.82	119.20
80	B2	432	G	C5-C6-N1	5.18	114.09	111.50
80	B2	811	A	N3-C4-C5	-5.18	123.18	126.80
80	B2	1200	G	N7-C8-N9	5.18	115.69	113.10
81	B5	110	G	C5-C6-N1	5.18	114.09	111.50
81	B5	340	C	C4-C5-C6	5.18	119.99	117.40
81	B5	1476	G	N7-C8-N9	-5.18	110.51	113.10
81	B5	1704	A	C8-N9-C4	5.18	107.87	105.80
81	B5	2158	A	C5-C6-N1	5.18	120.29	117.70
81	B5	2833	A	C6-C5-N7	5.18	135.92	132.30
82	B7	90	U	C2-N3-C4	-5.18	123.89	127.00
80	B2	378	A	C4-C5-N7	5.17	113.29	110.70
81	B5	112	U	N3-C4-O4	5.17	123.02	119.40
81	B5	2280	A	C8-N9-C4	5.17	107.87	105.80
81	B5	2635	A	C8-N9-C4	-5.17	103.73	105.80
81	B5	2692	A	C4-C5-N7	-5.17	108.11	110.70
81	B5	437	G	C5-C6-O6	-5.17	125.50	128.60
81	B5	802	C	N1-C2-N3	5.17	122.82	119.20
81	B5	817	A	N9-C4-C5	5.17	107.87	105.80
81	B5	1805	C	C6-N1-C2	5.17	122.37	120.30
81	B5	3218	A	N3-C4-N9	-5.17	123.26	127.40
83	B8	24	G	C5-C6-O6	5.17	131.70	128.60
80	B2	49	C	C6-N1-C2	-5.17	118.23	120.30
80	B2	391	A	C4-C5-C6	-5.17	114.42	117.00
80	B2	783	G	C8-N9-C1'	-5.17	120.28	127.00
80	B2	994	G	C4-C5-N7	-5.17	108.73	110.80
80	B2	1781	A	C4-C5-N7	-5.17	108.11	110.70
81	B5	902	G	N7-C8-N9	-5.17	110.52	113.10
81	B5	1087	G	N1-C6-O6	5.17	123.00	119.90
81	B5	2604	U	N3-C4-C5	-5.17	111.50	114.60
81	B5	2706	G	N1-C6-O6	-5.17	116.80	119.90
81	B5	2790	A	C5-C6-N1	5.17	120.29	117.70
61	Ba	14	HIS	N-CA-C	-5.17	97.04	111.00
40	BF	232	ARG	NE-CZ-NH1	-5.17	117.72	120.30
80	B2	1363	U	N3-C2-O2	-5.17	118.58	122.20
81	B5	969	C	C6-N1-C2	5.17	122.37	120.30
81	B5	1316	C	C5-C6-N1	5.17	123.58	121.00
81	B5	2565	U	C6-N1-C2	-5.17	117.90	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3333	G	C4-C5-N7	5.17	112.87	110.80
83	B8	8	C	N1-C2-N3	5.17	122.82	119.20
81	B5	39	A	N3-C4-C5	-5.17	123.18	126.80
81	B5	234	G	C5-C6-O6	-5.17	125.50	128.60
81	B5	852	U	N3-C2-O2	-5.17	118.58	122.20
81	B5	1004	U	N1-C2-N3	-5.17	111.80	114.90
81	B5	1226	G	C6-C5-N7	-5.17	127.30	130.40
81	B5	1257	C	C6-N1-C2	-5.17	118.23	120.30
81	B5	2145	A	N3-C4-C5	-5.17	123.18	126.80
79	By	192	PHE	CB-CG-CD1	5.17	124.42	120.80
80	B2	782	U	P-O3'-C3'	5.17	125.90	119.70
80	B2	815	G	C8-N9-C1'	5.17	133.71	127.00
80	B2	1784	C	N3-C4-C5	5.17	123.97	121.90
81	B5	2881	C	N1-C2-N3	5.17	122.82	119.20
81	B5	3094	A	C5-N7-C8	5.17	106.48	103.90
80	B2	1051	G	C8-N9-C1'	-5.16	120.29	127.00
80	B2	1354	G	C8-N9-C4	-5.16	104.33	106.40
80	B2	1431	C	C6-N1-C2	5.16	122.36	120.30
81	B5	926	A	C4-C5-C6	-5.16	114.42	117.00
81	B5	3318	G	C5-C6-O6	5.16	131.70	128.60
82	B7	120	C	C5-C6-N1	-5.16	118.42	121.00
83	B8	31	G	C5-N7-C8	5.16	106.88	104.30
81	B5	3335	A	C5-N7-C8	-5.16	101.32	103.90
80	B2	142	G	C5-C6-N1	-5.16	108.92	111.50
81	B5	341	G	C4-C5-N7	5.16	112.86	110.80
81	B5	1445	U	C6-N1-C2	5.16	124.10	121.00
81	B5	2290	C	N1-C2-O2	-5.16	115.80	118.90
81	B5	2810	C	C2-N3-C4	-5.16	117.32	119.90
81	B5	2858	U	C2-N1-C1'	5.16	123.89	117.70
81	B5	2941	A	C8-N9-C4	5.16	107.86	105.80
86	CW	58	A	O4'-C1'-N9	5.16	112.33	108.20
80	B2	7	G	N9-C4-C5	5.16	107.46	105.40
81	B5	3107	U	N1-C2-O2	5.16	126.41	122.80
83	B8	45	C	C4-C5-C6	5.16	119.98	117.40
80	B2	1761	U	N3-C2-O2	-5.16	118.59	122.20
81	B5	1137	C	N3-C4-N4	5.16	121.61	118.00
81	B5	1637	A	N1-C6-N6	-5.16	115.51	118.60
81	B5	1832	C	C5-C6-N1	-5.16	118.42	121.00
81	B5	1938	U	C6-N1-C2	5.16	124.09	121.00
81	B5	583	G	C8-N9-C4	5.16	108.46	106.40
81	B5	635	G	N3-C4-C5	5.16	131.18	128.60
81	B5	1238	C	C4'-C3'-C2'	-5.16	97.44	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	572	C	N3-C2-O2	-5.15	118.29	121.90
81	B5	2614	G	C2-N3-C4	-5.15	109.32	111.90
79	CL	6	ARG	NE-CZ-NH2	-5.15	117.72	120.30
86	CW	9	A	C5-C6-N6	-5.15	119.58	123.70
76	Bq	87	VAL	N-CA-C	-5.15	97.09	111.00
81	B5	726	G	N7-C8-N9	5.15	115.68	113.10
81	B5	893	C	N3-C2-O2	5.15	125.51	121.90
81	B5	903	U	N3-C4-C5	5.15	117.69	114.60
81	B5	1231	A	C5-C6-N6	-5.15	119.58	123.70
81	B5	2142	A	C5-C6-N6	-5.15	119.58	123.70
81	B5	2600	C	C2-N1-C1'	5.15	124.47	118.80
81	B5	2960	C	C2-N3-C4	-5.15	117.32	119.90
80	B2	766	U	N1-C2-O2	5.15	126.41	122.80
81	B5	1205	A	C5-N7-C8	-5.15	101.32	103.90
81	B5	1695	U	N3-C2-O2	-5.15	118.59	122.20
81	B5	2139	A	N1-C6-N6	-5.15	115.51	118.60
81	B5	2899	C	C2-N3-C4	-5.15	117.33	119.90
82	B7	79	A	C8-N9-C4	-5.15	103.74	105.80
82	B7	89	G	C5-C6-N1	5.15	114.08	111.50
81	B5	66	A	N7-C8-N9	-5.15	111.23	113.80
81	B5	1272	C	C2-N3-C4	5.15	122.47	119.90
81	B5	2831	G	C2-N3-C4	5.15	114.47	111.90
81	B5	2841	G	N3-C2-N2	5.15	123.50	119.90
81	B5	3130	A	C4-C5-C6	5.15	119.57	117.00
52	BR	42	ARG	NE-CZ-NH2	-5.15	117.73	120.30
81	B5	1138	U	N3-C4-O4	-5.15	115.80	119.40
81	B5	2375	G	C5-N7-C8	-5.15	101.73	104.30
81	B5	2934	A	N1-C6-N6	-5.15	115.51	118.60
81	B5	3180	A	C6-N1-C2	-5.15	115.51	118.60
80	B2	140	A	C4-N9-C1'	5.15	135.56	126.30
81	B5	3241	G	N1-C6-O6	5.15	122.99	119.90
82	B7	75	G	N3-C2-N2	-5.15	116.30	119.90
80	B2	1245	G	C4-N9-C1'	-5.14	119.81	126.50
81	B5	860	G	N3-C4-C5	-5.14	126.03	128.60
81	B5	979	U	N1-C2-N3	-5.14	111.81	114.90
81	B5	1658	G	C5-C6-O6	5.14	131.69	128.60
81	B5	2549	G	C8-N9-C1'	-5.14	120.31	127.00
81	B5	3019	U	C5-C6-N1	-5.14	120.13	122.70
80	B2	564	G	C5-C6-O6	5.14	131.69	128.60
80	B2	1536	G	N3-C4-C5	-5.14	126.03	128.60
81	B5	80	G	C5-C6-O6	5.14	131.69	128.60
81	B5	367	A	C2-N3-C4	-5.14	108.03	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	809	G	C8-N9-C4	5.14	108.46	106.40
81	B5	1278	A	C5-C6-N1	-5.14	115.13	117.70
81	B5	1466	G	N1-C6-O6	-5.14	116.81	119.90
81	B5	1822	C	C6-N1-C2	5.14	122.36	120.30
81	B5	2169	G	N9-C4-C5	5.14	107.46	105.40
81	B5	3100	U	N3-C2-O2	-5.14	118.60	122.20
80	B2	26	A	C8-N9-C4	-5.14	103.74	105.80
81	B5	1259	A	C5-C6-N1	-5.14	115.13	117.70
82	B7	77	G	C6-C5-N7	-5.14	127.31	130.40
83	B8	51	G	N3-C2-N2	-5.14	116.30	119.90
80	B2	422	G	C8-N9-C4	-5.14	104.34	106.40
81	B5	2352	A	C5-N7-C8	5.14	106.47	103.90
81	B5	3101	G	N3-C2-N2	5.14	123.50	119.90
80	B2	638	U	C2-N3-C4	-5.14	123.92	127.00
81	B5	434	U	N1-C2-O2	5.14	126.40	122.80
84	CN	2143	U	O5'-P-OP1	-5.14	101.08	105.70
80	B2	992	A	N7-C8-N9	5.14	116.37	113.80
80	B2	1200	G	C8-N9-C4	-5.14	104.34	106.40
80	B2	1751	C	C2-N3-C4	-5.14	117.33	119.90
81	B5	433	A	C8-N9-C4	5.14	107.86	105.80
81	B5	436	A	N1-C2-N3	5.14	131.87	129.30
81	B5	1114	U	C5-C4-O4	-5.14	122.82	125.90
81	B5	1142	G	N3-C2-N2	5.14	123.50	119.90
81	B5	1310	G	C5-C6-N1	5.14	114.07	111.50
81	B5	1377	G	C8-N9-C4	-5.14	104.34	106.40
81	B5	3294	A	C5-C6-N6	5.14	127.81	123.70
80	B2	312	A	C8-N9-C4	-5.13	103.75	105.80
80	B2	502	U	C5-C6-N1	5.13	125.27	122.70
80	B2	577	G	C2-N3-C4	-5.13	109.33	111.90
81	B5	1851	G	C4-N9-C1'	5.13	133.18	126.50
81	B5	2118	C	C5-C4-N4	5.13	123.79	120.20
81	B5	2848	G	C4-N9-C1'	5.13	133.18	126.50
81	B5	928	C	C2-N3-C4	-5.13	117.33	119.90
81	B5	2737	C	N1-C2-O2	-5.13	115.82	118.90
80	B2	555	A	N9-C4-C5	5.13	107.85	105.80
80	B2	1000	C	C6-N1-C2	5.13	122.35	120.30
81	B5	894	G	C4-C5-N7	5.13	112.85	110.80
81	B5	1445	U	N3-C2-O2	5.13	125.79	122.20
81	B5	1813	A	C8-N9-C4	-5.13	103.75	105.80
81	B5	2309	A	N1-C6-N6	5.13	121.68	118.60
81	B5	2855	U	N3-C4-C5	5.13	117.68	114.60
60	BZ	121	ARG	NE-CZ-NH1	5.13	122.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	20	G	N1-C2-N2	-5.13	111.58	116.20
80	B2	294	C	N1-C2-N3	-5.13	115.61	119.20
80	B2	1189	A	N7-C8-N9	-5.13	111.23	113.80
81	B5	2272	G	O4'-C1'-N9	5.13	112.30	108.20
82	B7	35	C	N3-C4-C5	5.13	123.95	121.90
80	B2	886	U	N3-C2-O2	-5.13	118.61	122.20
81	B5	1412	G	N3-C2-N2	-5.13	116.31	119.90
81	B5	1726	C	C6-N1-C2	5.13	122.35	120.30
81	B5	2246	G	C6-C5-N7	5.13	133.48	130.40
80	B2	810	G	C4-N9-C1'	5.13	133.16	126.50
80	B2	927	C	C6-N1-C2	-5.13	118.25	120.30
80	B2	1245	G	N3-C4-C5	5.13	131.16	128.60
80	B2	1441	C	C6-N1-C2	5.13	122.35	120.30
81	B5	149	U	N3-C2-O2	-5.13	118.61	122.20
81	B5	2245	C	N1-C2-N3	5.13	122.79	119.20
81	B5	968	G	C6-N1-C2	5.12	128.18	125.10
81	B5	2866	U	N1-C2-N3	5.12	117.97	114.90
80	B2	1187	U	N3-C2-O2	-5.12	118.61	122.20
81	B5	1250	G	O4'-C1'-N9	5.12	112.30	108.20
81	B5	2518	C	C4-C5-C6	5.12	119.96	117.40
81	B5	2731	U	N1-C2-N3	5.12	117.97	114.90
81	B5	2988	C	C5-C4-N4	5.12	123.79	120.20
81	B5	3074	G	N1-C2-N2	-5.12	111.59	116.20
81	B5	3186	A	N7-C8-N9	5.12	116.36	113.80
80	B2	586	G	N1-C6-O6	-5.12	116.83	119.90
80	B2	866	G	C8-N9-C4	5.12	108.45	106.40
80	B2	1782	A	C5-C6-N1	-5.12	115.14	117.70
81	B5	114	A	C5-C6-N1	-5.12	115.14	117.70
81	B5	672	A	C5-C6-N6	-5.12	119.60	123.70
81	B5	2280	A	C5-N7-C8	-5.12	101.34	103.90
81	B5	284	A	N1-C6-N6	-5.12	115.53	118.60
81	B5	872	U	N3-C4-O4	-5.12	115.82	119.40
81	B5	1607	U	N3-C4-O4	-5.12	115.82	119.40
81	B5	2124	G	N7-C8-N9	-5.12	110.54	113.10
81	B5	2167	A	N3-C4-C5	-5.12	123.22	126.80
81	B5	3215	A	N9-C4-C5	-5.12	103.75	105.80
81	B5	1270	A	C5-C6-N6	-5.12	119.61	123.70
37	BC	60	THR	CB-CA-C	-5.12	97.79	111.60
80	B2	1321	A	N1-C6-N6	-5.12	115.53	118.60
81	B5	2128	C	C6-N1-C2	-5.12	118.25	120.30
83	B8	40	A	N7-C8-N9	5.12	116.36	113.80
80	B2	494	U	C2-N1-C1'	5.11	123.84	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	919	U	C5-C4-O4	-5.11	122.83	125.90
81	B5	934	G	C8-N9-C1'	-5.11	120.35	127.00
81	B5	2138	A	C5-C6-N1	-5.11	115.14	117.70
81	B5	2820	A	N3-C4-C5	-5.11	123.22	126.80
81	B5	2731	U	C5-C6-N1	-5.11	120.14	122.70
86	CW	64	A	C5'-C4'-O4'	5.11	115.23	109.10
80	B2	359	A	C4-C5-C6	-5.11	114.44	117.00
80	B2	972	G	C5-N7-C8	5.11	106.86	104.30
81	B5	183	G	C3'-C2'-C1'	-5.11	97.41	101.50
81	B5	1482	A	C8-N9-C4	-5.11	103.76	105.80
81	B5	1942	U	C4-C5-C6	5.11	122.77	119.70
81	B5	2884	C	N3-C4-N4	5.11	121.58	118.00
81	B5	2965	U	C5-C6-N1	-5.11	120.14	122.70
56	BV	87	ARG	NE-CZ-NH2	-5.11	117.75	120.30
80	B2	173	A	C2-N3-C4	-5.11	108.05	110.60
80	B2	1096	C	C6-N1-C2	-5.11	118.26	120.30
81	B5	418	A	C4-C5-C6	5.11	119.55	117.00
81	B5	523	A	N1-C6-N6	-5.11	115.53	118.60
81	B5	1100	U	C5-C4-O4	-5.11	122.83	125.90
81	B5	2978	U	C5-C4-O4	5.11	128.97	125.90
80	B2	1171	A	N1-C6-N6	-5.11	115.54	118.60
81	B5	887	G	N1-C2-N2	-5.11	111.60	116.20
81	B5	943	U	C2-N3-C4	-5.11	123.94	127.00
81	B5	3310	A	C5-N7-C8	5.11	106.45	103.90
81	B5	341	G	N3-C2-N2	-5.11	116.33	119.90
81	B5	1261	G	P-O3'-C3'	-5.11	113.57	119.70
81	B5	2392	C	C2-N1-C1'	-5.11	113.18	118.80
82	B7	51	A	C2-N3-C4	5.11	113.15	110.60
81	B5	1227	C	C2'-C3'-O3'	5.10	121.87	113.70
81	B5	1518	U	C4-C5-C6	-5.10	116.64	119.70
81	B5	3124	G	C4-C5-N7	-5.10	108.76	110.80
80	B2	704	C	C5-C6-N1	5.10	123.55	121.00
81	B5	884	A	C8-N9-C1'	5.10	136.88	127.70
81	B5	1872	C	C2-N3-C4	-5.10	117.35	119.90
81	B5	3056	U	N1-C2-O2	-5.10	119.23	122.80
81	B5	813	G	C4-N9-C1'	5.10	133.13	126.50
81	B5	2278	C	P-O3'-C3'	5.10	125.82	119.70
81	B5	2745	G	C5-C6-N1	5.10	114.05	111.50
57	BW	39	LEU	CA-CB-CG	5.10	127.03	115.30
81	B5	868	C	C6-N1-C2	5.10	122.34	120.30
81	B5	880	G	C6-N1-C2	-5.10	122.04	125.10
81	B5	1147	G	C5-C6-O6	5.10	131.66	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	2136	C	C2-N3-C4	-5.10	117.35	119.90
81	B5	2271	A	C5-C6-N6	5.10	127.78	123.70
81	B5	2378	C	C2-N3-C4	5.10	122.45	119.90
81	B5	2393	G	N7-C8-N9	-5.10	110.55	113.10
81	B5	2560	C	N1-C2-O2	5.10	121.96	118.90
83	B8	109	A	C5-N7-C8	-5.10	101.35	103.90
79	By	32	LEU	CB-CA-C	-5.10	100.51	110.20
80	B2	111	U	C6-N1-C2	-5.10	117.94	121.00
80	B2	719	U	N3-C2-O2	-5.10	118.63	122.20
80	B2	871	G	N3-C4-N9	5.10	129.06	126.00
80	B2	1643	U	C2-N3-C4	-5.10	123.94	127.00
81	B5	95	A	C5-C6-N1	5.10	120.25	117.70
81	B5	2317	A	C5-N7-C8	-5.10	101.35	103.90
81	B5	3173	G	C6-N1-C2	-5.10	122.04	125.10
82	B7	41	G	C5-C6-O6	-5.10	125.54	128.60
86	CW	9	A	O4'-C1'-N9	5.10	112.28	108.20
81	B5	1412	G	N9-C4-C5	5.10	107.44	105.40
81	B5	1932	A	N1-C2-N3	5.10	131.85	129.30
83	B8	100	U	C6-N1-C1'	-5.10	114.07	121.20
86	CW	34	G	C4-N9-C1'	5.10	133.12	126.50
65	Be	33	ARG	NE-CZ-NH2	-5.09	117.75	120.30
81	B5	1902	G	N9-C4-C5	-5.09	103.36	105.40
82	B7	13	A	C8-N9-C4	-5.09	103.76	105.80
84	CN	2187	G	O5'-P-OP1	-5.09	101.11	105.70
86	CW	64	A	C8-N9-C4	-5.09	103.76	105.80
31	AW	104	LEU	CA-CB-CG	5.09	127.01	115.30
81	B5	530	G	N9-C4-C5	5.09	107.44	105.40
81	B5	2848	G	C8-N9-C4	-5.09	104.36	106.40
81	B5	1261	G	O4'-C1'-N9	5.09	112.27	108.20
81	B5	2639	G	C4-C5-C6	5.09	121.86	118.80
81	B5	2695	A	C5-N7-C8	-5.09	101.36	103.90
81	B5	3378	C	N3-C4-N4	-5.09	114.44	118.00
81	B5	2593	A	P-O3'-C3'	5.09	125.81	119.70
81	B5	2691	A	N1-C2-N3	5.09	131.84	129.30
81	B5	3309	G	C8-N9-C4	-5.09	104.36	106.40
80	B2	278	U	C6-N1-C2	-5.09	117.95	121.00
81	B5	1851	G	C8-N9-C1'	-5.09	120.39	127.00
81	B5	3173	G	N3-C4-N9	5.09	129.05	126.00
81	B5	1509	A	N9-C4-C5	-5.09	103.77	105.80
81	B5	2396	G	C4-C5-N7	-5.09	108.77	110.80
81	B5	2633	U	C2-N3-C4	-5.09	123.95	127.00
81	B5	2716	U	N1-C2-N3	5.09	117.95	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3010	U	N1-C2-O2	5.09	126.36	122.80
81	B5	3127	A	C5-C6-N6	5.09	127.77	123.70
80	B2	324	U	N1-C2-N3	5.08	117.95	114.90
80	B2	760	A	N1-C6-N6	5.08	121.65	118.60
81	B5	1077	U	N1-C2-O2	-5.08	119.24	122.80
81	B5	1838	G	C5-N7-C8	5.08	106.84	104.30
80	B2	557	G	C5-C6-N1	-5.08	108.96	111.50
80	B2	597	G	C8-N9-C4	-5.08	104.37	106.40
81	B5	2207	A	C5-C6-N1	-5.08	115.16	117.70
81	B5	2606	G	N1-C2-N2	-5.08	111.63	116.20
81	B5	2913	C	N3-C2-O2	-5.08	118.34	121.90
81	B5	3132	C	C6-N1-C2	5.08	122.33	120.30
83	B8	26	U	C4-C5-C6	5.08	122.75	119.70
43	BI	69	ARG	NE-CZ-NH2	5.08	122.84	120.30
81	B5	2805	G	C5-C6-N1	5.08	114.04	111.50
81	B5	3313	U	N1-C2-N3	5.08	117.95	114.90
81	B5	2696	A	C5-C6-N6	5.08	127.76	123.70
81	B5	3259	U	N1-C2-N3	5.08	117.95	114.90
80	B2	1542	G	N9-C4-C5	5.08	107.43	105.40
81	B5	216	G	N9-C4-C5	-5.08	103.37	105.40
81	B5	1524	A	C4-C5-C6	5.08	119.54	117.00
81	B5	2364	G	C6-N1-C2	-5.08	122.05	125.10
81	B5	2407	C	N3-C2-O2	5.08	125.45	121.90
22	AN	114	ARG	NE-CZ-NH1	5.08	122.84	120.30
80	B2	270	C	C5-C6-N1	5.08	123.54	121.00
81	B5	1463	U	C5-C4-O4	-5.08	122.85	125.90
81	B5	2190	U	N3-C2-O2	-5.08	118.65	122.20
81	B5	2263	C	N3-C2-O2	-5.08	118.35	121.90
80	B2	1220	C	C6-N1-C2	5.08	122.33	120.30
81	B5	2945	G	C5-C6-O6	-5.08	125.56	128.60
81	B5	3049	A	N1-C6-N6	5.08	121.65	118.60
86	CW	21	A	C4-C5-C6	5.08	119.54	117.00
80	B2	1605	G	N1-C2-N2	-5.07	111.63	116.20
81	B5	1144	U	N3-C2-O2	-5.07	118.65	122.20
81	B5	1660	C	C2-N3-C4	-5.07	117.36	119.90
81	B5	3199	G	C8-N9-C4	-5.07	104.37	106.40
81	B5	2647	A	N1-C2-N3	5.07	131.84	129.30
82	B7	83	U	C5-C4-O4	5.07	128.94	125.90
81	B5	356	C	C2-N3-C4	-5.07	117.36	119.90
81	B5	584	G	N1-C6-O6	-5.07	116.86	119.90
81	B5	958	C	C6-N1-C2	5.07	122.33	120.30
81	B5	2531	C	N3-C2-O2	-5.07	118.35	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B7	1	G	N7-C8-N9	5.07	115.64	113.10
82	B7	57	G	C5-C6-O6	5.07	131.64	128.60
83	B8	23	U	N3-C2-O2	-5.07	118.65	122.20
80	B2	498	G	C4-N9-C1'	5.07	133.09	126.50
80	B2	1037	C	C6-N1-C2	-5.07	118.27	120.30
81	B5	270	U	N1-C2-O2	5.07	126.35	122.80
81	B5	2283	G	C8-N9-C4	5.07	108.43	106.40
81	B5	2326	A	C5-C6-N1	5.07	120.23	117.70
82	B7	20	A	N1-C6-N6	5.07	121.64	118.60
80	B2	647	G	C8-N9-C1'	5.07	133.59	127.00
80	B2	1215	C	N3-C2-O2	-5.07	118.36	121.90
81	B5	874	U	C2-N1-C1'	-5.07	111.62	117.70
81	B5	1178	G	N3-C2-N2	-5.07	116.35	119.90
81	B5	1257	C	N1-C1'-C2'	-5.07	106.43	112.00
81	B5	1938	U	C2-N3-C4	-5.07	123.96	127.00
81	B5	2305	G	N3-C4-N9	5.07	129.04	126.00
81	B5	2386	A	N1-C6-N6	5.07	121.64	118.60
81	B5	2632	G	C6-N1-C2	5.07	128.14	125.10
81	B5	973	A	C6-N1-C2	-5.06	115.56	118.60
81	B5	3048	A	C5-C6-N6	-5.06	119.65	123.70
80	B2	6	G	N1-C2-N2	-5.06	111.64	116.20
80	B2	349	U	N1-C2-N3	5.06	117.94	114.90
80	B2	1734	U	C5-C4-O4	5.06	128.94	125.90
81	B5	1439	U	C5-C4-O4	-5.06	122.86	125.90
81	B5	1906	G	C5-C6-O6	-5.06	125.56	128.60
81	B5	2293	C	N3-C2-O2	-5.06	118.36	121.90
81	B5	3217	C	C2-N1-C1'	-5.06	113.23	118.80
82	B7	83	U	C6-N1-C1'	5.06	128.29	121.20
81	B5	916	G	C6-N1-C2	5.06	128.14	125.10
81	B5	1480	G	N3-C4-N9	5.06	129.04	126.00
81	B5	1938	U	N3-C4-C5	5.06	117.64	114.60
81	B5	2272	G	N7-C8-N9	-5.06	110.57	113.10
81	B5	2754	G	N3-C4-C5	-5.06	126.07	128.60
80	B2	132	U	C6-N1-C1'	5.06	128.28	121.20
81	B5	880	G	C8-N9-C4	5.06	108.42	106.40
81	B5	1049	C	C6-N1-C2	-5.06	118.28	120.30
81	B5	1343	A	N1-C2-N3	5.06	131.83	129.30
81	B5	1481	A	C4-C5-C6	5.06	119.53	117.00
81	B5	1660	C	N1-C2-N3	5.06	122.74	119.20
80	B2	902	G	N1-C6-O6	5.06	122.94	119.90
80	B2	1780	G	N1-C6-O6	5.06	122.94	119.90
81	B5	2931	C	N1-C2-O2	-5.06	115.86	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	3377	G	C6-C5-N7	-5.06	127.37	130.40
86	CW	42	C	N3-C4-C5	-5.06	119.88	121.90
44	BJ	92	ARG	NE-CZ-NH1	5.06	122.83	120.30
80	B2	335	U	N3-C2-O2	5.06	125.74	122.20
80	B2	1796	C	N3-C4-C5	-5.06	119.88	121.90
80	B2	1258	U	N1-C2-O2	5.05	126.34	122.80
80	B2	1268	G	N1-C6-O6	-5.05	116.87	119.90
81	B5	2364	G	C8-N9-C4	-5.05	104.38	106.40
81	B5	3066	U	N1-C2-O2	5.05	126.34	122.80
83	B8	4	C	C6-N1-C2	-5.05	118.28	120.30
80	B2	270	C	C2-N1-C1'	5.05	124.36	118.80
80	B2	1148	C	N1-C2-O2	5.05	121.93	118.90
81	B5	1004	U	C5-C4-O4	5.05	128.93	125.90
81	B5	2371	G	N7-C8-N9	-5.05	110.57	113.10
81	B5	3018	C	C6-N1-C2	-5.05	118.28	120.30
40	BF	177	GLY	N-CA-C	-5.05	100.47	113.10
81	B5	420	G	C6-C5-N7	-5.05	127.37	130.40
81	B5	622	A	C4-C5-N7	5.05	113.23	110.70
81	B5	635	G	N3-C4-N9	-5.05	122.97	126.00
81	B5	820	A	N1-C2-N3	5.05	131.82	129.30
81	B5	1301	A	C6-C5-N7	-5.05	128.76	132.30
81	B5	1901	A	N1-C6-N6	5.05	121.63	118.60
81	B5	2162	U	C5-C6-N1	-5.05	120.17	122.70
81	B5	3137	C	N3-C4-N4	-5.05	114.46	118.00
81	B5	3143	C	N3-C4-C5	-5.05	119.88	121.90
81	B5	3323	A	C2-N3-C4	-5.05	108.08	110.60
17	AI	172	ARG	NE-CZ-NH2	-5.05	117.78	120.30
51	BQ	38	ARG	NE-CZ-NH2	-5.05	117.78	120.30
53	BS	167	ARG	NE-CZ-NH1	5.05	122.82	120.30
80	B2	885	G	N1-C6-O6	5.05	122.93	119.90
81	B5	1432	C	N3-C2-O2	-5.05	118.37	121.90
81	B5	1887	A	C6-C5-N7	-5.05	128.76	132.30
81	B5	2303	A	N1-C2-N3	-5.05	126.78	129.30
81	B5	2525	G	N9-C4-C5	-5.05	103.38	105.40
81	B5	2774	C	N3-C4-N4	5.05	121.53	118.00
81	B5	2919	A	C5-C6-N6	5.05	127.74	123.70
81	B5	524	U	C2-N3-C4	-5.05	123.97	127.00
70	Bj	5	THR	C-N-CD	5.05	139.00	128.40
80	B2	570	A	C2-N3-C4	5.05	113.12	110.60
81	B5	16	A	C5-C6-N1	5.05	120.22	117.70
81	B5	282	G	P-O3'-C3'	5.05	125.76	119.70
81	B5	432	G	N1-C2-N2	-5.05	111.66	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	667	C	C5-C6-N1	-5.05	118.48	121.00
81	B5	1451	C	C6-N1-C2	5.05	122.32	120.30
80	B2	158	U	N1-C2-O2	5.04	126.33	122.80
80	B2	1600	A	N1-C6-N6	5.04	121.63	118.60
81	B5	979	U	C5-C6-N1	5.04	125.22	122.70
81	B5	1338	C	N1-C2-O2	-5.04	115.87	118.90
81	B5	1462	A	C5-N7-C8	-5.04	101.38	103.90
81	B5	2748	A	C5-C6-N1	5.04	120.22	117.70
81	B5	3209	A	O4'-C1'-N9	5.04	112.24	108.20
83	B8	47	C	N3-C2-O2	-5.04	118.37	121.90
24	AP	42	ARG	NE-CZ-NH1	5.04	122.82	120.30
80	B2	73	U	C1'-O4'-C4'	-5.04	105.86	109.90
81	B5	356	C	C6-N1-C2	5.04	122.32	120.30
81	B5	2337	C	C5-C6-N1	-5.04	118.48	121.00
81	B5	2352	A	C4-C5-C6	5.04	119.52	117.00
82	B7	14	U	C2-N3-C4	-5.04	123.97	127.00
51	BQ	3	ILE	CB-CA-C	-5.04	101.52	111.60
80	B2	1600	A	C3'-C2'-C1'	-5.04	97.47	101.50
81	B5	1015	U	C2-N3-C4	5.04	130.03	127.00
81	B5	2639	G	N3-C4-N9	5.04	129.03	126.00
81	B5	3195	U	N1-C2-O2	5.04	126.33	122.80
81	B5	3200	G	N1-C6-O6	5.04	122.92	119.90
81	B5	141	C	C5-C6-N1	5.04	123.52	121.00
81	B5	2361	A	N1-C6-N6	-5.04	115.58	118.60
81	B5	2430	A	C4-C5-C6	5.04	119.52	117.00
81	B5	888	A	C2-N3-C4	-5.04	108.08	110.60
81	B5	1013	G	N3-C4-C5	-5.04	126.08	128.60
81	B5	1314	C	C4-C5-C6	5.04	119.92	117.40
81	B5	2215	A	N1-C6-N6	5.04	121.62	118.60
81	B5	2343	C	N1-C2-O2	-5.04	115.88	118.90
81	B5	2371	G	N1-C2-N2	-5.04	111.67	116.20
81	B5	3154	C	C6-N1-C2	-5.04	118.28	120.30
81	B5	3212	C	N1-C2-N3	5.04	122.73	119.20
81	B5	3266	G	N3-C4-N9	-5.04	122.98	126.00
81	B5	3273	A	C5-N7-C8	-5.04	101.38	103.90
81	B5	1240	A	C5-C6-N6	-5.04	119.67	123.70
80	B2	802	G	N3-C4-C5	-5.04	126.08	128.60
80	B2	1596	C	N1-C2-O2	5.04	121.92	118.90
81	B5	1804	A	N1-C6-N6	5.04	121.62	118.60
81	B5	2935	U	N1-C2-O2	5.04	126.33	122.80
81	B5	3039	C	C5-C6-N1	5.04	123.52	121.00
85	CP	191	TYR	CB-CG-CD1	5.04	124.02	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B2	704	C	N3-C2-O2	-5.03	118.38	121.90
81	B5	840	C	C4-C5-C6	5.03	119.92	117.40
81	B5	1887	A	C4-C5-N7	5.03	113.22	110.70
81	B5	3183	A	N1-C6-N6	5.03	121.62	118.60
81	B5	3191	G	N7-C8-N9	-5.03	110.58	113.10
81	B5	3197	G	N3-C4-C5	5.03	131.12	128.60
80	B2	1629	G	N1-C2-N2	-5.03	111.67	116.20
81	B5	2572	C	C5-C6-N1	5.03	123.52	121.00
81	B5	2893	C	C5-C6-N1	-5.03	118.48	121.00
80	B2	270	C	C6-N1-C2	-5.03	118.29	120.30
81	B5	1100	U	C6-N1-C2	5.03	124.02	121.00
81	B5	2541	U	N1-C2-O2	5.03	126.32	122.80
81	B5	2857	C	C2-N3-C4	-5.03	117.39	119.90
81	B5	3249	C	C6-N1-C2	-5.03	118.29	120.30
83	B8	17	A	C6-C5-N7	-5.03	128.78	132.30
6	A5	106	TYR	N-CA-C	-5.03	97.42	111.00
13	AE	164	LEU	CA-CB-CG	5.03	126.87	115.30
81	B5	2361	A	C4-C5-N7	-5.03	108.19	110.70
81	B5	2733	A	N1-C2-N3	5.03	131.81	129.30
81	B5	2808	A	C8-N9-C1'	-5.03	118.65	127.70
81	B5	3087	A	C8-N9-C4	-5.03	103.79	105.80
81	B5	3211	C	C6-N1-C2	5.03	122.31	120.30
80	B2	819	G	P-O3'-C3'	5.03	125.73	119.70
80	B2	1441	C	C5-C6-N1	-5.03	118.49	121.00
80	B2	1568	C	P-O3'-C3'	5.03	125.73	119.70
81	B5	1529	A	C2-N3-C4	5.03	113.11	110.60
84	CN	2160	C	C4'-C3'-O3'	5.03	123.06	113.00
32	AX	111	GLY	N-CA-C	-5.03	100.54	113.10
80	B2	570	A	C4-C5-C6	5.03	119.51	117.00
80	B2	1311	U	C6-N1-C2	5.03	124.02	121.00
81	B5	587	U	C6-N1-C2	5.03	124.02	121.00
81	B5	982	C	C4-C5-C6	-5.03	114.89	117.40
81	B5	2603	G	N7-C8-N9	5.03	115.61	113.10
81	B5	2994	A	N1-C2-N3	5.03	131.81	129.30
86	CW	23	A	C4-C5-C6	5.03	119.51	117.00
80	B2	613	G	N3-C2-N2	5.02	123.42	119.90
81	B5	2847	A	C5-C6-N6	5.02	127.72	123.70
57	BW	23	ARG	NE-CZ-NH1	-5.02	117.79	120.30
81	B5	191	U	C2-N1-C1'	-5.02	111.67	117.70
81	B5	578	A	C2-N3-C4	5.02	113.11	110.60
81	B5	1414	G	C2-N3-C4	-5.02	109.39	111.90
81	B5	1461	A	C8-N9-C4	5.02	107.81	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B5	1788	C	C6-N1-C2	-5.02	118.29	120.30
82	B7	116	C	C6-N1-C2	5.02	122.31	120.30
86	CW	10	G	O4'-C1'-N9	5.02	112.22	108.20
80	B2	553	G	C2-N3-C4	-5.02	109.39	111.90
81	B5	965	A	C5-C6-N1	5.02	120.21	117.70
81	B5	1237	G	P-O3'-C3'	-5.02	113.68	119.70
81	B5	1255	C	C5-C6-N1	5.02	123.51	121.00
81	B5	2813	A	C5-C6-N6	5.02	127.72	123.70
81	B5	3372	A	C8-N9-C4	-5.02	103.79	105.80
80	B2	432	G	C2-N3-C4	5.02	114.41	111.90
81	B5	1473	G	C8-N9-C4	5.02	108.41	106.40
81	B5	2271	A	C5-N7-C8	5.02	106.41	103.90
81	B5	2705	A	C6-N1-C2	-5.02	115.59	118.60
81	B5	2821	C	N1-C2-O2	-5.02	115.89	118.90
81	B5	2878	G	C5-C6-N1	5.02	114.01	111.50
24	AP	42	ARG	NE-CZ-NH2	-5.01	117.79	120.30
80	B2	1791	A	C5-C6-N1	5.01	120.21	117.70
81	B5	391	A	C8-N9-C4	5.01	107.81	105.80
81	B5	1303	A	C8-N9-C4	5.01	107.81	105.80
81	B5	2280	A	N3-C4-C5	5.01	130.31	126.80
81	B5	2306	C	C5-C6-N1	5.01	123.51	121.00
81	B5	2399	A	N1-C6-N6	5.01	121.61	118.60
81	B5	2618	G	N1-C6-O6	5.01	122.91	119.90
81	B5	2958	A	C4-N9-C1'	-5.01	117.28	126.30
80	B2	63	G	N1-C6-O6	-5.01	116.89	119.90
80	B2	345	U	N1-C2-N3	5.01	117.91	114.90
81	B5	1270	A	C5-C6-N1	-5.01	115.19	117.70
81	B5	2857	C	C5-C6-N1	-5.01	118.49	121.00
81	B5	3145	C	C5-C4-N4	-5.01	116.69	120.20
80	B2	914	G	C4-N9-C1'	5.01	133.01	126.50
80	B2	1649	G	N1-C2-N3	5.01	126.91	123.90
81	B5	2323	G	C5-C6-O6	5.01	131.61	128.60
81	B5	2974	U	C5-C6-N1	-5.01	120.19	122.70
65	Be	111	ARG	NE-CZ-NH2	-5.01	117.80	120.30
80	B2	853	G	C4-C5-N7	5.01	112.80	110.80
80	B2	992	A	C4-C5-C6	-5.01	114.50	117.00
80	B2	1679	G	N3-C2-N2	5.01	123.41	119.90
81	B5	701	G	C5-N7-C8	5.01	106.81	104.30
81	B5	1267	U	O4'-C1'-N1	5.01	112.21	108.20
81	B5	2122	G	N1-C6-O6	-5.01	116.89	119.90
82	B7	35	C	C2-N3-C4	-5.01	117.39	119.90
81	B5	2951	G	C8-N9-C4	5.01	108.40	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	B8	102	U	N1-C2-N3	5.01	117.91	114.90
79	By	170	ALA	N-CA-CB	5.01	117.11	110.10
80	B2	965	U	C4-C5-C6	-5.01	116.70	119.70
81	B5	582	G	N9-C4-C5	5.01	107.40	105.40
81	B5	654	C	N1-C2-O2	-5.01	115.90	118.90
86	CW	72	C	P-O5'-C5'	5.01	128.91	120.90
80	B2	902	G	C6-C5-N7	-5.00	127.40	130.40
81	B5	2375	G	N3-C2-N2	5.00	123.40	119.90
81	B5	2434	U	N1-C2-N3	5.00	117.90	114.90
81	B5	3094	A	N7-C8-N9	-5.00	111.30	113.80
81	B5	822	G	N9-C4-C5	5.00	107.40	105.40
81	B5	1232	C	N3-C4-C5	-5.00	119.90	121.90
82	B7	88	G	N9-C4-C5	5.00	107.40	105.40
80	B2	334	G	N3-C4-N9	-5.00	123.00	126.00
80	B2	388	G	C2-N3-C4	5.00	114.40	111.90
80	B2	622	A	N9-C4-C5	5.00	107.80	105.80
80	B2	984	G	N3-C4-C5	5.00	131.10	128.60
80	B2	1051	G	C4-N9-C1'	5.00	133.00	126.50
81	B5	866	A	N1-C2-N3	-5.00	126.80	129.30
81	B5	2421	U	C2-N3-C4	-5.00	124.00	127.00
81	B5	2620	G	C4-C5-C6	-5.00	115.80	118.80
81	B5	3030	G	C5-C6-N1	-5.00	109.00	111.50
81	B5	3285	C	C6-N1-C2	-5.00	118.30	120.30

There are no chirality outliers.

All (107) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A1	42	ASN	Peptide
6	A5	105	TYR	Peptide
6	A5	138	ARG	Peptide
8	A7	134	ASP	Sidechain
10	AB	131	ASP	Peptide
16	AH	131	PHE	Peptide
20	AL	127	GLN	Peptide
23	AO	124	ASP	Peptide
26	AR	22	PRO	Peptide
26	AR	85	VAL	Peptide
34	AZ	54	VAL	Peptide
34	AZ	93	SER	Peptide
34	AZ	96	SER	Peptide
81	B5	1226	G	Sidechain

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Mol	Chain	Res	Type	Group
81	B5	1228	C	Sidechain
81	B5	1229	G	Sidechain
81	B5	1230	G	Sidechain
81	B5	1231	A	Sidechain
81	B5	1235	U	Sidechain
81	B5	1238	C	Sidechain
81	B5	1239	C	Sidechain
81	B5	1244	A	Sidechain
81	B5	1246	G	Sidechain
81	B5	1249	G	Sidechain
81	B5	1254	C	Sidechain
81	B5	1255	C	Sidechain
81	B5	1256	G	Sidechain
81	B5	1257	C	Sidechain
81	B5	1259	A	Sidechain
81	B5	1260	A	Sidechain
81	B5	1262	G	Sidechain
81	B5	1264	G	Sidechain
81	B5	1265	U	Sidechain
81	B5	1266	G	Sidechain
81	B5	1267	U	Sidechain
81	B5	1268	G	Sidechain
81	B5	1269	U	Sidechain
81	B5	1271	A	Sidechain
81	B5	1274	A	Sidechain
81	B5	1276	U	Sidechain
81	B5	1278	A	Sidechain
81	B5	1279	C	Sidechain
81	B5	1281	G	Sidechain
81	B5	1282	G	Sidechain
81	B5	1283	C	Sidechain
81	B5	1284	C	Sidechain
81	B5	1285	G	Sidechain
81	B5	2898	G	Sidechain
35	BA	143	GLU	Peptide
35	BA	211	HIS	Peptide
37	BC	91	GLY	Peptide
38	BD	271	LYS	Peptide
39	BE	129	GLU	Peptide
40	BF	192	GLY	Peptide
40	BF	226	GLY	Peptide
49	BO	110[A]	PRO	Peptide

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Mol	Chain	Res	Type	Group
49	BO	68[B]	ARG	Peptide
53	BS	133	ALA	Peptide
56	BV	41	GLY	Peptide
59	BY	111	LEU	Peptide
60	BZ	101	PHE	Peptide
61	Ba	26	ARG	Peptide
61	Ba	66	ALA	Peptide
61	Ba	75	LEU	Peptide
62	Bb	19	ASN	Peptide
76	Bq	16	ARG	Sidechain
76	Bq	185	LEU	Peptide
76	Bq	22	TYR	Sidechain
76	Bq	5	ARG	Sidechain
76	Bq	64	ARG	Sidechain
76	Bq	86	PHE	Sidechain
76	Bq	91	GLU	Peptide
77	Br	15	UNK	Peptide
79	By	104	LEU	Peptide
79	By	143	GLY	Peptide
79	By	70	LYS	Peptide
79	By	93	TYR	Sidechain
79	CL	105	ASP	Peptide
79	CL	143	GLY	Peptide
79	CL	70	LYS	Peptide
85	CP	165	TYR	Sidechain
85	CP	2	ASP	Mainchain
85	CP	219	ARG	Sidechain
85	CP	227	LEU	Peptide
85	CP	320	ARG	Sidechain
85	CP	4	ARG	Sidechain
85	CP	47	PHE	Peptide
85	CP	62	TYR	Sidechain
86	CW	14	A	Sidechain
86	CW	15	G	Sidechain
86	CW	18	G	Sidechain
86	CW	19	G	Sidechain
86	CW	21	A	Sidechain
86	CW	27	G	Sidechain
86	CW	28	G	Sidechain
86	CW	29	G	Sidechain
86	CW	39	U	Sidechain
86	CW	43	C	Sidechain

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Mol	Chain	Res	Type	Group
86	CW	44	G	Sidechain
86	CW	51	U	Sidechain
86	CW	55	U	Sidechain
86	CW	56	C	Sidechain
86	CW	6	G	Sidechain
86	CW	73	A	Sidechain
86	CW	74	C	Sidechain
86	CW	75	C	Sidechain
86	CW	8	U	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A0	769	0	814	117	0
2	A1	610	0	630	53	0
3	A2	497	0	535	32	0
4	A3	442	0	428	57	0
5	A4	475	0	525	21	0
6	A5	516	0	517	41	0
7	A6	2437	0	2386	84	0
8	A7	1105	0	959	200	0
9	AA	1577	0	1567	101	0
10	AB	1709	0	1784	197	0
11	AC	1635	0	1723	80	0
12	AD	1734	0	1817	121	0
13	AE	2068	0	2154	95	0
14	AF	1609	0	1675	114	0
15	AG	1799	0	1874	441	0
16	AH	1481	0	1572	83	0
17	AI	1489	0	1523	192	0
18	AJ	1494	0	1573	96	0
19	AK	772	0	727	45	0
20	AL	1213	0	1257	107	0
21	AM	890	0	887	48	0
22	AN	1192	0	1252	62	0
23	AO	891	0	880	295	0
24	AP	977	0	1002	71	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	AQ	1105	0	1166	139	0
26	AR	926	0	930	134	0
27	AS	1192	0	1220	112	0
28	AT	1112	0	1123	107	0
29	AU	855	0	917	117	0
30	AV	684	0	672	42	0
31	AW	1021	0	1060	70	0
32	AX	1121	0	1196	73	0
33	AY	1073	0	1132	113	0
34	AZ	563	0	602	52	0
35	BA	1912	0	1973	290	0
36	BB	3075	0	3142	147	0
37	BC	2748	0	2859	139	0
38	BD	2359	0	2311	266	0
39	BE	1248	0	1339	38	0
40	BF	1791	0	1869	56	0
41	BG	1763	0	1819	154	0
42	BH	1518	0	1587	82	0
43	BI	1722	0	1755	102	0
44	BJ	1353	0	1380	116	0
45	BK	751	756	195	2	0
46	BL	1548	0	1613	90	0
47	BM	1059	0	1154	51	0
48	BN	1720	0	1779	136	0
49	BO	3119	0	3302	97	0
50	BP	1227	0	1236	41	0
51	BQ	1441	0	1543	68	0
52	BR	1521	0	1605	197	0
53	BS	1445	0	1487	63	0
54	BT	1276	0	1323	137	0
55	BU	778	0	791	23	0
56	BV	1003	0	1048	49	0
57	BW	1038	0	1071	43	0
58	BX	959	0	1023	37	0
59	BY	993	0	1081	155	0
60	BZ	1092	0	1154	111	0
61	Ba	1173	0	1215	0	0
62	Bb	462	0	491	0	0
63	Bc	767	0	816	0	0
64	Bd	883	0	918	0	0
65	Be	1020	0	1090	0	0
66	Bf	850	0	880	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
67	Bg	880	0	944	0	0
68	Bh	965	0	1067	0	0
69	Bi	770	0	846	0	0
70	Bj	681	0	683	0	0
71	Bk	608	0	671	0	0
72	Bl	436	0	475	0	0
73	Bm	417	0	455	0	0
74	Bn	233	0	271	0	0
75	Bo	847	0	916	0	0
76	Bq	1077	1110	1041	0	0
77	Br	236	237	65	0	0
78	Bs	231	232	67	0	0
79	By	1719	1773	1619	0	0
79	CL	1719	0	1649	135	0
80	B2	37835	0	19048	2999	0
81	B5	67308	664	33793	2335	0
82	B7	2579	0	1303	188	0
83	B8	3353	0	1695	115	0
84	CN	1875	0	926	151	0
85	CP	2655	2725	2710	242	0
86	CW	1576	803	797	72	0
87	A0	1	0	0	0	0
87	A1	1	0	0	0	0
87	A3	1	0	0	0	0
87	A5	1	0	0	0	0
87	Bj	1	0	0	0	0
87	Bm	1	0	0	0	0
88	A0	2	0	0	0	0
88	A3	3	0	0	0	0
88	A5	1	0	0	0	0
88	AB	1	0	0	0	0
88	AC	2	0	0	0	0
88	AE	1	0	0	0	0
88	AG	1	0	0	0	0
88	AI	1	0	0	0	0
88	AJ	1	0	0	0	0
88	AL	2	0	0	0	0
88	AN	1	0	0	0	0
88	AP	1	0	0	0	0
88	AS	1	0	0	0	0
88	AU	1	0	0	0	0
88	B2	169	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
88	B5	3	0	0	0	0
89	A3	7	0	0	4	0
89	A6	7	0	0	2	0
89	AC	7	0	0	5	0
89	AI	14	0	0	2	0
89	AL	7	0	0	8	0
89	AN	7	0	0	2	0
89	AP	7	0	0	3	0
89	B2	1288	0	0	232	0
89	B5	21	0	0	4	0
89	BR	7	0	0	9	0
89	Bn	7	0	0	0	0
90	CP	32	0	7	63	0
All	All	214255	8300	157976	8602	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 35.

All (8602) 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)
15:AG:175:ILE:HG12	80:B2:78:A:C4	1.29	1.65
85:CP:210:TRP:CH2	85:CP:210:TRP:CZ3	1.78	1.63
81:B5:2443:A:C6	84:CN:2208:G:H5'	1.32	1.61
85:CP:210:TRP:CZ3	85:CP:210:TRP:CE3	1.83	1.61
85:CP:210:TRP:CH2	85:CP:210:TRP:CZ2	1.82	1.59
15:AG:175:ILE:HD11	80:B2:78:A:C1'	1.25	1.59
59:BY:88:GLU:HA	79:CL:92:ASP:CA	175.01	1.59
59:BY:21:THR:CG2	79:CL:24:GLU:HB2	122.48	1.58
51:BQ:171:LYS:CE	51:BQ:171:LYS:NZ	1.67	1.55
8:A7:81:THR:HG21	86:CW:29:G:C5'	1.36	1.55
8:A7:28:SER:HB3	81:B5:2708:C:C4'	1.30	1.55
80:B2:51:A:C1'	85:CP:242:GLY:CA	1.76	1.54
80:B2:415:C:C5	85:CP:288:ARG:HB3	1.39	1.54
85:CP:210:TRP:CD2	85:CP:210:TRP:CE3	1.92	1.54
8:A7:81:THR:CB	86:CW:29:G:H5'	1.30	1.53
15:AG:133:LEU:HD12	80:B2:66:U:C2	1.42	1.53
80:B2:415:C:C4	85:CP:288:ARG:HD3	1.43	1.53
44:BJ:8:PRO:CB	44:BJ:8:PRO:CG	1.75	1.51
85:CP:210:TRP:CE2	85:CP:210:TRP:CZ2	1.94	1.51
15:AG:132:ARG:NH2	80:B2:68:A:C8	1.79	1.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:21:THR:CG2	79:CL:24:GLU:CB	123.34	1.51
8:A7:81:THR:CG2	86:CW:29:G:H5'	1.39	1.51
85:CP:210:TRP:CE2	85:CP:210:TRP:CD2	1.81	1.50
33:AY:119:PHE:CZ	80:B2:86:A:H5''	1.48	1.49
8:A7:28:SER:CB	81:B5:2708:C:H4'	1.42	1.49
85:CP:63:GLU:HA	85:CP:210:TRP:CE2	1.48	1.48
32:AX:144:ARG:HH22	85:CP:314:LYS:CD	1.24	1.48
15:AG:164:LYS:NZ	80:B2:72:A:H5''	1.25	1.48
15:AG:175:ILE:CD1	80:B2:78:A:H1'	1.03	1.48
81:B5:2443:A:C5'	84:CN:2122:G:H1	1.20	1.48
52:BR:163:ARG:C	80:B2:850:A:C5'	1.75	1.46
15:AG:132:ARG:HG3	80:B2:68:A:N6	1.25	1.46
33:AY:119:PHE:CE1	80:B2:86:A:H5''	1.49	1.45
15:AG:59:GLN:N	80:B2:155:U:H4'	1.25	1.45
32:AX:144:ARG:NH2	85:CP:314:LYS:HD2	1.29	1.44
23:AO:123:SER:HB2	80:B2:885:G:N2	1.25	1.44
15:AG:174:LYS:HA	80:B2:79:C:C1'	1.45	1.43
15:AG:174:LYS:HB2	80:B2:79:C:C2'	1.46	1.43
8:A7:81:THR:CG2	86:CW:29:G:C5'	1.89	1.43
52:BR:165:LYS:CD	80:B2:849:C:O2	1.67	1.43
26:AR:60:ARG:CZ	80:B2:1400:A:H5'	1.47	1.42
15:AG:174:LYS:CA	80:B2:79:C:O4'	1.66	1.42
80:B2:51:A:C1'	85:CP:241:GLU:O	1.68	1.42
80:B2:1645:G:C4'	81:B5:2259:A:N1	1.81	1.42
15:AG:128:THR:HG23	57:BW:81:PRO:CG	1.37	1.42
8:A7:51:ARG:CZ	81:B5:2677:G:H1'	1.48	1.41
80:B2:1645:G:H4'	81:B5:2259:A:N1	1.12	1.41
80:B2:1645:G:H4'	81:B5:2259:A:C2	1.53	1.41
80:B2:51:A:N9	85:CP:242:GLY:N	1.60	1.41
80:B2:414:C:O2	85:CP:289:LEU:CD1	1.70	1.39
23:AO:18:ARG:NH1	80:B2:919:A:H5'	1.13	1.39
85:CP:131:LYS:HG2	90:CP:401:GCP:C6	1.53	1.39
15:AG:159:ARG:CD	80:B2:77:U:C2	2.05	1.39
15:AG:175:ILE:CG1	80:B2:78:A:N3	1.84	1.38
59:BY:29:VAL:N	79:CL:32:LEU:CG	141.26	1.38
60:BZ:48:ARG:NH2	81:B5:1631:C:OP2	1.57	1.38
81:B5:3027:A:C8	85:CP:109:GLN:NE2	1.92	1.38
15:AG:175:ILE:HG12	80:B2:78:A:N3	1.09	1.37
52:BR:166:ASN:ND2	89:BR:201:OHX:N4	1.72	1.37
59:BY:104:LEU:N	79:CL:104:LEU:O	165.36	1.37
52:BR:175:GLN:H	80:B2:852:C:C4'	1.30	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:51:A:C8	85:CP:242:GLY:HA2	1.25	1.36
15:AG:134:GLY:CA	80:B2:66:U:O4	1.74	1.36
85:CP:199:ALA:CA	90:CP:401:GCP:O6	1.73	1.35
37:BC:60:THR:HG23	81:B5:364:G:OP1	1.26	1.35
52:BR:163:ARG:O	80:B2:850:A:C5'	1.70	1.35
84:CN:2132:C:N3	84:CN:2168:G:N2	1.73	1.34
80:B2:913:G:O6	81:B5:2206:G:C4'	1.76	1.34
25:AQ:13:LYS:CE	80:B2:1584:G:O6	1.71	1.34
17:AI:141:ARG:NH2	80:B2:196:G:N7	1.71	1.34
81:B5:2443:A:H5''	84:CN:2122:G:N1	1.43	1.34
80:B2:1758:U:O2	81:B5:2255:A:N3	1.58	1.33
17:AI:10:LYS:NZ	80:B2:339:C:OP2	1.59	1.33
23:AO:41:ARG:NH2	80:B2:916:U:H3	1.25	1.33
44:BJ:137:ARG:NH2	82:B7:44:C:OP2	1.58	1.32
81:B5:2443:A:C5	84:CN:2208:G:H5'	1.63	1.32
23:AO:45:GLY:HA3	80:B2:900:A:P	1.66	1.32
23:AO:27:PHE:CZ	80:B2:916:U:O2'	1.70	1.32
15:AG:83:CYS:N	80:B2:162:A:OP1	1.60	1.32
23:AO:18:ARG:NH1	80:B2:918:U:O3'	1.56	1.32
41:BG:240:ASN:ND2	81:B5:2584:G:N3	1.76	1.32
80:B2:415:C:C5	85:CP:288:ARG:CB	2.13	1.32
15:AG:108:VAL:HG21	80:B2:153:G:O2'	1.30	1.31
35:BA:249:SER:O	80:B2:987:G:N7	1.61	1.31
52:BR:169:ALA:HB2	80:B2:850:A:C2	1.64	1.30
23:AO:25:ASP:HB2	80:B2:901:G:OP2	1.18	1.30
8:A7:34:LYS:NZ	81:B5:2693:C:H5'	1.46	1.30
52:BR:165:LYS:HE3	80:B2:824:G:N3	1.41	1.30
23:AO:18:ARG:CZ	80:B2:919:A:H5'	1.61	1.30
15:AG:174:LYS:CB	80:B2:79:C:O2'	1.80	1.30
23:AO:136:ARG:NH2	80:B2:1786:G:OP1	1.65	1.30
25:AQ:123:ARG:O	80:B2:1584:G:H3'	1.22	1.30
33:AY:21:LYS:HG2	80:B2:782:U:O2	1.19	1.30
52:BR:104:ARG:NH1	81:B5:1949:G:H5''	1.45	1.29
12:AD:204:ASP:OD1	80:B2:1330:G:N1	1.65	1.29
52:BR:163:ARG:C	80:B2:850:A:H5'	1.23	1.29
80:B2:1644:C:H1'	81:B5:2255:A:N1	1.46	1.29
23:AO:18:ARG:HH12	80:B2:919:A:C5'	1.43	1.29
15:AG:53:SER:HB2	80:B2:163:G:O3'	1.11	1.29
29:AU:54:GLY:N	80:B2:1345:A:OP1	1.67	1.28
80:B2:1759:C:H1'	81:B5:2262:A:C2	1.68	1.28
14:AF:101:GLY:HA3	80:B2:1167:G:OP1	1.25	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:101:ARG:NH2	80:B2:1321:A:OP2	1.64	1.28
59:BY:88:GLU:CA	79:CL:92:ASP:C	175.72	1.28
11:AC:91:ARG:NH1	80:B2:1625:C:OP1	1.67	1.28
81:B5:1225:A:C8	81:B5:1287:A:O2'	1.87	1.28
26:AR:28:PHE:CE2	80:B2:1389:C:H6	1.50	1.27
15:AG:175:ILE:CG1	80:B2:78:A:C4	2.11	1.27
35:BA:241:ARG:NH2	81:B5:2156:C:OP2	1.67	1.27
10:AB:165:ARG:NH1	80:B2:946:U:H5''	1.48	1.27
85:CP:63:GLU:HA	85:CP:210:TRP:CZ2	1.67	1.27
32:AX:144:ARG:NH2	85:CP:314:LYS:CD	1.87	1.27
25:AQ:13:LYS:HE3	80:B2:1584:G:O6	1.10	1.27
8:A7:31:SER:O	81:B5:2707:C:H4'	1.27	1.27
23:AO:46:MET:CG	80:B2:899:G:H4'	1.62	1.27
33:AY:10:ARG:CZ	80:B2:778:G:H22	1.46	1.27
80:B2:51:A:H1'	85:CP:241:GLU:C	1.55	1.27
23:AO:45:GLY:HA3	80:B2:900:A:OP2	1.29	1.27
10:AB:101:HIS:HE1	80:B2:921:U:OP1	1.15	1.26
38:BD:207:TYR:CD1	82:B7:33:U:H1'	1.70	1.26
48:BN:49:ARG:NH2	81:B5:149:U:OP2	1.64	1.26
8:A7:81:THR:OG1	86:CW:29:G:H5'	1.26	1.26
26:AR:10:LYS:HE3	80:B2:1316:G:O2'	1.25	1.26
26:AR:28:PHE:CE2	80:B2:1389:C:C6	2.22	1.26
85:CP:199:ALA:C	90:CP:401:GCP:O6	1.74	1.26
14:AF:109:LYS:HE2	80:B2:1473:U:O3'	1.09	1.26
15:AG:137:ARG:NH1	80:B2:169:A:OP1	1.69	1.26
15:AG:60:GLY:O	80:B2:154:G:N2	1.66	1.26
81:B5:1226:G:O4'	81:B5:1288:U:H4'	1.32	1.25
80:B2:415:C:C4	85:CP:288:ARG:CD	2.18	1.25
15:AG:157:VAL:CG1	80:B2:78:A:H4'	1.64	1.25
15:AG:160:ARG:NH1	80:B2:68:A:OP1	1.67	1.25
25:AQ:76:SER:HB2	80:B2:1609:U:OP1	1.34	1.25
59:BY:21:THR:CB	79:CL:24:GLU:CB	123.55	1.25
23:AO:25:ASP:CB	80:B2:901:G:OP2	1.84	1.25
15:AG:83:CYS:HA	80:B2:161:U:O3'	1.11	1.25
25:AQ:123:ARG:O	80:B2:1584:G:C3'	1.85	1.25
59:BY:88:GLU:CA	79:CL:92:ASP:CA	175.18	1.25
85:CP:199:ALA:CB	90:CP:401:GCP:O6	1.85	1.25
52:BR:121:HIS:ND1	81:B5:1719:G:OP2	1.69	1.25
15:AG:128:THR:CG2	57:BW:81:PRO:CG	2.09	1.24
44:BJ:142:LYS:HE3	81:B5:2664:C:OP2	1.31	1.24
17:AI:138:ASN:ND2	80:B2:197:A:N1	1.84	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:158:ARG:HD3	82:B7:46:A:OP1	1.20	1.24
33:AY:10:ARG:HA	80:B2:778:G:O6	1.37	1.24
80:B2:440:U:OP1	85:CP:274:ASN:ND2	1.71	1.24
59:BY:46:LYS:CG	79:CL:46:LYS:HG2	133.88	1.24
15:AG:59:GLN:N	80:B2:155:U:C4'	1.99	1.24
35:BA:242:ARG:O	81:B5:2154:U:H5''	1.29	1.24
23:AO:126:THR:HG22	80:B2:988:A:C2	1.72	1.23
80:B2:1780:G:O2'	81:B5:2262:A:H4'	1.06	1.23
15:AG:154:ARG:CB	80:B2:78:A:OP2	1.84	1.23
15:AG:175:ILE:CG1	80:B2:78:A:H1'	1.68	1.23
20:AL:10:GLU:HG2	80:B2:327:U:O2'	1.30	1.23
80:B2:414:C:O2	85:CP:289:LEU:CG	1.78	1.23
33:AY:8:ARG:HB3	80:B2:780:A:C8	1.72	1.23
52:BR:165:LYS:HD2	80:B2:849:C:O2	1.22	1.23
33:AY:119:PHE:CZ	80:B2:86:A:C5'	2.21	1.23
26:AR:49:LYS:HD2	80:B2:1390:U:OP2	1.34	1.23
15:AG:164:LYS:NZ	80:B2:72:A:C5'	2.02	1.23
15:AG:159:ARG:HD2	80:B2:77:U:O2	1.28	1.22
80:B2:1655:A:H1'	81:B5:2302:G:C1'	1.68	1.22
35:BA:95:SER:N	81:B5:2551:U:O4	1.73	1.22
80:B2:414:C:C2	85:CP:289:LEU:CD2	2.10	1.22
41:BG:248:LYS:HE2	81:B5:2529:A:OP1	1.33	1.22
59:BY:46:LYS:HG3	79:CL:46:LYS:CG	134.92	1.22
38:BD:94:ASN:HB2	82:B7:47:C:OP1	1.38	1.22
59:BY:46:LYS:NZ	84:CN:2200:C:P	136.18	1.22
38:BD:260:PHE:CE2	82:B7:121:U:H5'	1.74	1.21
59:BY:88:GLU:CG	79:CL:92:ASP:O	178.99	1.21
35:BA:208:ASP:OD1	81:B5:912:G:N1	1.71	1.21
15:AG:174:LYS:HB2	80:B2:79:C:O2'	1.09	1.21
59:BY:88:GLU:HG2	79:CL:92:ASP:O	179.95	1.21
38:BD:218:ARG:NH1	82:B7:31:U:H4'	1.53	1.21
80:B2:1646:C:O2'	81:B5:2257:C:N4	1.74	1.21
26:AR:60:ARG:NH2	80:B2:1400:A:C5'	2.03	1.21
30:AV:62:ARG:NH2	80:B2:1039:A:H5''	1.55	1.20
15:AG:174:LYS:CB	80:B2:79:C:C1'	2.18	1.20
26:AR:53:TYR:OH	80:B2:1401:A:H5''	1.40	1.20
80:B2:1758:U:O2'	81:B5:2255:A:C5'	1.88	1.20
81:B5:2443:A:C6	84:CN:2208:G:C5'	2.23	1.20
35:BA:152:SER:HB3	81:B5:2157:G:O6	1.41	1.20
28:AT:12:GLN:NE2	80:B2:1530:C:O4'	1.72	1.20
15:AG:53:SER:O	80:B2:163:G:H5''	1.37	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:10:ARG:NH1	80:B2:778:G:H22	1.40	1.20
81:B5:2219:A:O2'	79:CL:205:LYS:HD3	1.41	1.20
85:CP:131:LYS:HD3	90:CP:401:GCP:C4	1.71	1.19
4:A3:31:ILE:HD11	80:B2:1199:G:O6	1.39	1.19
85:CP:131:LYS:CG	90:CP:401:GCP:C6	2.20	1.19
84:CN:2190:A:O4'	86:CW:56:C:C1'	1.90	1.19
15:AG:108:VAL:CG2	80:B2:154:G:H5'	1.73	1.19
80:B2:414:C:C2	85:CP:289:LEU:HD21	1.69	1.19
80:B2:420:A:C5	85:CP:288:ARG:NH2	2.10	1.19
14:AF:104:ASN:HD21	80:B2:1166:A:C5'	1.54	1.18
15:AG:15:THR:HG23	80:B2:152:U:O3'	1.42	1.18
15:AG:53:SER:C	80:B2:163:G:H4'	1.60	1.18
23:AO:18:ARG:NH1	80:B2:919:A:C5'	1.99	1.18
8:A7:81:THR:OG1	86:CW:29:G:C5'	1.91	1.18
80:B2:1002:G:H4'	81:B5:2265:C:OP1	1.43	1.18
52:BR:169:ALA:O	80:B2:852:C:C6	1.97	1.18
15:AG:174:LYS:HB2	80:B2:79:C:C1'	1.73	1.18
35:BA:247:ARG:NH2	80:B2:1013:A:H4'	1.58	1.18
23:AO:123:SER:HB2	80:B2:885:G:C2	1.77	1.18
26:AR:60:ARG:NH2	80:B2:1400:A:O5'	1.77	1.18
59:BY:29:VAL:N	79:CL:32:LEU:HG	141.39	1.18
12:AD:9:ARG:NH1	80:B2:1489:U:OP2	1.74	1.18
29:AU:57:ARG:NH2	80:B2:1382:A:C2	2.11	1.18
80:B2:995:A:H5''	81:B5:2196:C:OP1	1.40	1.18
52:BR:166:ASN:ND2	89:BR:201:OHX:N2	1.91	1.18
59:BY:33:ALA:O	79:CL:36:LYS:HG3	162.79	1.18
52:BR:165:LYS:HE3	80:B2:824:G:C2	1.78	1.18
15:AG:133:LEU:CD1	80:B2:66:U:C2	2.26	1.17
80:B2:51:A:C8	85:CP:242:GLY:CA	1.89	1.17
35:BA:3:ARG:HD3	81:B5:911:C:N4	1.58	1.17
59:BY:21:THR:HG22	79:CL:24:GLU:CB	123.95	1.17
15:AG:174:LYS:CA	80:B2:79:C:C1'	2.16	1.17
59:BY:21:THR:HB	79:CL:24:GLU:CB	123.39	1.17
35:BA:249:SER:O	80:B2:987:G:C5	1.80	1.17
15:AG:154:ARG:O	80:B2:78:A:H5'	1.02	1.17
23:AO:46:MET:HA	80:B2:899:G:C5'	1.72	1.17
26:AR:10:LYS:NZ	80:B2:1401:A:O3'	1.77	1.17
38:BD:207:TYR:CD1	82:B7:33:U:C1'	2.26	1.17
17:AI:73:SER:OG	80:B2:256:A:N3	1.73	1.17
15:AG:174:LYS:HD3	80:B2:79:C:O2	1.43	1.17
23:AO:123:SER:CB	80:B2:885:G:H21	1.58	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1646:C:H4'	81:B5:2257:C:N4	1.59	1.17
29:AU:57:ARG:NH2	80:B2:1382:A:H2	1.42	1.17
80:B2:51:A:C1'	85:CP:242:GLY:HA3	1.52	1.17
18:AJ:169:PRO:O	80:B2:512:A:OP1	1.61	1.16
80:B2:1757:G:H2'	81:B5:2255:A:O2'	1.44	1.16
38:BD:146:LEU:HB3	81:B5:2746:A:C2	1.79	1.16
11:AC:119:LYS:HE2	80:B2:1291:G:H5'	1.26	1.16
59:BY:21:THR:CB	79:CL:24:GLU:HB3	123.79	1.16
23:AO:38:THR:HB	80:B2:895:G:H2'	1.25	1.16
54:BT:129:LYS:HB3	81:B5:1097:G:H4'	1.22	1.16
15:AG:154:ARG:O	80:B2:78:A:C5'	1.94	1.16
25:AQ:15:SER:OG	80:B2:1608:U:OP1	1.60	1.16
81:B5:2766:U:N3	86:CW:76:A:C8	2.14	1.15
85:CP:63:GLU:CA	85:CP:210:TRP:CE2	2.29	1.15
52:BR:143:ILE:CG1	81:B5:2093:A:H5''	1.74	1.15
24:AP:12:PHE:HB2	44:BJ:85:LYS:HG3	1.26	1.15
17:AI:138:ASN:ND2	80:B2:197:A:C6	2.14	1.15
85:CP:199:ALA:HB3	90:CP:401:GCP:O6	1.43	1.15
60:BZ:17:ARG:HG3	81:B5:1634:G:O6	1.46	1.15
85:CP:19:THR:C	90:CP:401:GCP:O2A	1.84	1.15
15:AG:132:ARG:HG3	80:B2:68:A:C6	1.80	1.15
80:B2:415:C:C5	85:CP:288:ARG:CD	2.30	1.15
85:CP:20:LYS:CB	90:CP:401:GCP:C8	2.21	1.15
14:AF:104:ASN:ND2	80:B2:1166:A:H5'	1.62	1.14
8:A7:48:ARG:CD	81:B5:2678:A:OP2	1.94	1.14
8:A7:81:THR:CG2	86:CW:29:G:O5'	1.84	1.14
15:AG:110:ALA:CB	80:B2:163:G:H1'	1.77	1.14
15:AG:132:ARG:CZ	80:B2:68:A:C5	2.30	1.14
23:AO:129:LYS:HE3	89:B2:2013:OHX:N1	1.62	1.14
34:AZ:77:ARG:NH2	80:B2:1534:G:N7	1.92	1.14
59:BY:88:GLU:HA	79:CL:92:ASP:C	175.55	1.14
23:AO:121:VAL:O	80:B2:886:U:O2'	1.62	1.14
21:AM:46:ARG:NH1	80:B2:1254:U:OP2	1.81	1.14
80:B2:913:G:O6	81:B5:2206:G:H4'	1.00	1.14
15:AG:159:ARG:HD2	80:B2:77:U:C2	1.73	1.14
85:CP:63:GLU:CA	85:CP:210:TRP:CD2	2.31	1.14
48:BN:49:ARG:NH2	81:B5:149:U:P	2.20	1.14
84:CN:2190:A:C1'	86:CW:56:C:O4'	1.94	1.14
4:A3:56:ARG:O	80:B2:1418:G:O2'	1.65	1.14
15:AG:112:VAL:HG22	80:B2:164:A:H4'	1.24	1.13
80:B2:1645:G:O3'	81:B5:2259:A:C2	2.00	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:48:LYS:NZ	81:B5:2749:G:P	2.20	1.13
35:BA:247:ARG:CZ	80:B2:1013:A:H4'	1.78	1.13
52:BR:169:ALA:O	80:B2:852:C:C5	1.87	1.13
15:AG:175:ILE:N	80:B2:78:A:N3	1.97	1.13
44:BJ:72:ARG:NE	82:B7:40:C:O2	1.81	1.13
81:B5:2443:A:O5'	84:CN:2208:G:O6	1.62	1.13
17:AI:42:ARG:HA	80:B2:260:U:O4	1.45	1.13
35:BA:40:TYR:OH	81:B5:2550:U:H2'	1.48	1.13
18:AJ:172:VAL:HG13	80:B2:512:A:OP2	1.46	1.13
15:AG:83:CYS:SG	80:B2:162:A:C5'	2.36	1.13
14:AF:109:LYS:CE	80:B2:1473:U:O3'	1.95	1.13
15:AG:56:ASN:CB	80:B2:154:G:H1'	1.77	1.13
15:AG:188:ARG:HG2	80:B2:284:G:OP2	1.49	1.13
23:AO:35:GLY:HA3	80:B2:919:A:C4'	1.79	1.13
29:AU:53:LYS:HB3	80:B2:1345:A:C5'	1.78	1.13
80:B2:1686:C:H2'	80:B2:1687:U:H6	1.07	1.13
52:BR:175:GLN:N	80:B2:852:C:H4'	1.47	1.13
35:BA:236:GLY:N	81:B5:2183:A:O2'	1.80	1.13
80:B2:1646:C:C4'	81:B5:2257:C:N4	2.11	1.12
81:B5:1225:A:C4	81:B5:1287:A:O2'	2.02	1.12
15:AG:59:GLN:H	80:B2:155:U:C4'	1.57	1.12
80:B2:1644:C:O2	81:B5:2255:A:C2	2.01	1.12
35:BA:240:ALA:HA	81:B5:2154:U:O3'	1.48	1.12
29:AU:75:GLY:N	80:B2:1194:A:OP2	1.82	1.12
80:B2:1747:G:O2'	81:B5:2304:C:H5'	1.50	1.12
80:B2:415:C:OP2	85:CP:288:ARG:HA	1.49	1.12
59:BY:33:ALA:O	79:CL:36:LYS:N	161.04	1.12
15:AG:174:LYS:HA	80:B2:79:C:O4'	0.96	1.12
44:BJ:142:LYS:CE	81:B5:2664:C:OP2	1.97	1.12
20:AL:19:ILE:HD13	89:AL:201:OHX:N6	1.64	1.12
26:AR:7:LYS:CG	80:B2:1316:G:OP1	1.98	1.12
48:BN:49:ARG:HH21	81:B5:149:U:P	1.73	1.12
1:A0:70:LYS:HE2	80:B2:930:A:H5''	1.15	1.12
8:A7:47:ALA:HA	81:B5:2678:A:O4'	1.49	1.12
81:B5:3027:A:O2'	85:CP:83:PHE:HE2	1.33	1.12
10:AB:101:HIS:CE1	80:B2:921:U:OP1	2.01	1.12
80:B2:1655:A:H1'	81:B5:2302:G:H1'	1.22	1.11
81:B5:2444:C:OP1	84:CN:2124:C:C2	2.03	1.11
15:AG:107:ALA:CB	80:B2:154:G:H4'	1.80	1.11
80:B2:414:C:O2	85:CP:289:LEU:HD11	1.35	1.11
38:BD:274:GLN:OE1	82:B7:60:G:N2	1.82	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:81:THR:HG21	86:CW:29:G:P	1.89	1.11
28:AT:60:SER:HB2	80:B2:1479:A:H5''	1.25	1.11
17:AI:64:ASN:ND2	80:B2:257:A:O2'	1.82	1.11
80:B2:415:C:C5	85:CP:288:ARG:HD3	1.85	1.11
23:AO:41:ARG:CZ	80:B2:916:U:H3	1.64	1.11
54:BT:49:GLN:HG2	81:B5:2756:C:O4'	1.49	1.11
52:BR:143:ILE:HG13	81:B5:2093:A:H5''	1.25	1.11
15:AG:53:SER:O	80:B2:163:G:C5'	1.98	1.11
25:AQ:76:SER:HB2	80:B2:1609:U:P	1.91	1.11
48:BN:109:ARG:NH1	83:B8:141:C:OP1	1.83	1.11
59:BY:21:THR:HB	79:CL:24:GLU:HB3	123.62	1.11
29:AU:57:ARG:O	80:B2:1381:U:O2'	1.68	1.11
81:B5:2443:A:C2	84:CN:2208:G:O3'	1.98	1.11
8:A7:48:ARG:HD3	81:B5:2678:A:OP2	1.49	1.11
27:AS:126:ARG:NH2	80:B2:1459:C:OP1	1.83	1.10
80:B2:429:G:H4'	85:CP:276:ARG:HD2	1.33	1.10
23:AO:38:THR:HG22	80:B2:895:G:O3'	1.48	1.10
15:AG:128:THR:CG2	57:BW:81:PRO:HG3	1.76	1.10
17:AI:122:GLY:O	89:AI:302:OHX:N5	1.84	1.10
23:AO:136:ARG:HH22	80:B2:1786:G:P	1.74	1.10
59:BY:46:LYS:HZ1	84:CN:2200:C:P	136.91	1.10
10:AB:150:VAL:HG23	80:B2:1067:C:H5''	1.21	1.10
15:AG:131:LYS:N	57:BW:82:ILE:HG23	1.67	1.10
26:AR:2:GLY:HA3	80:B2:1311:U:O3'	1.48	1.10
15:AG:107:ALA:HB3	80:B2:154:G:H4'	1.19	1.10
85:CP:199:ALA:C	90:CP:401:GCP:C6	2.19	1.10
10:AB:150:VAL:CG2	80:B2:1067:C:H5''	1.80	1.10
15:AG:174:LYS:CD	80:B2:79:C:H1'	1.80	1.10
80:B2:416:A:OP2	85:CP:287:LEU:CD2	1.83	1.10
60:BZ:67:LYS:NZ	81:B5:1630:U:OP1	1.83	1.10
26:AR:49:LYS:HG3	80:B2:1390:U:P	1.92	1.10
33:AY:10:ARG:NH1	80:B2:778:G:N2	1.98	1.10
41:BG:185:ARG:HD2	83:B8:155:A:H4'	1.34	1.10
38:BD:285:ARG:NH1	82:B7:62:U:O3'	1.84	1.10
26:AR:7:LYS:HG2	80:B2:1316:G:OP1	1.47	1.09
15:AG:132:ARG:NH2	80:B2:68:A:N9	1.97	1.09
38:BD:48:LYS:HZ3	81:B5:2749:G:P	1.74	1.09
59:BY:88:GLU:CA	79:CL:92:ASP:HA	175.75	1.09
85:CP:131:LYS:CD	90:CP:401:GCP:C2	2.31	1.09
15:AG:53:SER:CB	80:B2:163:G:O3'	1.99	1.09
59:BY:88:GLU:HA	79:CL:92:ASP:O	176.76	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:130:GLY:N	80:B2:991:G:OP1	1.86	1.09
1:A0:97:PRO:O	80:B2:1798:U:C5	2.04	1.09
8:A7:81:THR:CG2	86:CW:29:G:P	2.40	1.09
81:B5:2766:U:C4	86:CW:76:A:H8	1.69	1.09
15:AG:174:LYS:HD3	80:B2:79:C:H1'	1.20	1.09
80:B2:415:C:C6	85:CP:288:ARG:HB3	1.88	1.09
8:A7:81:THR:CB	86:CW:29:G:C5'	2.20	1.09
23:AO:46:MET:HA	80:B2:899:G:H5'	1.14	1.09
26:AR:48:ASN:HB3	80:B2:1389:C:O4'	1.52	1.09
28:AT:60:SER:CB	80:B2:1479:A:H5''	1.81	1.09
23:AO:132:ARG:H	80:B2:1787:C:P	1.75	1.09
46:BL:5:LYS:O	81:B5:1833:G:H4'	83.80	1.09
52:BR:161:ALA:O	80:B2:849:C:O2'	1.71	1.08
35:BA:21:ARG:NH2	81:B5:640:U:OP1	81.07	1.08
38:BD:207:TYR:CG	82:B7:33:U:C2	2.40	1.08
81:B5:2443:A:N6	84:CN:2208:G:H5'	1.67	1.08
17:AI:64:ASN:OD1	80:B2:257:A:N3	1.85	1.08
80:B2:1780:G:O2'	81:B5:2262:A:C4'	2.00	1.08
85:CP:20:LYS:HB2	90:CP:401:GCP:C8	1.80	1.08
33:AY:10:ARG:HG2	80:B2:778:G:N1	1.68	1.08
59:BY:52:ARG:O	79:CL:50:ASP:OD1	134.11	1.08
17:AI:138:ASN:ND2	80:B2:197:A:N6	2.02	1.08
60:BZ:135:ARG:NH2	81:B5:1807:G:C5'	2.16	1.08
85:CP:63:GLU:CA	85:CP:210:TRP:CZ2	2.37	1.08
23:AO:41:ARG:NH2	80:B2:916:U:N3	2.00	1.08
43:BI:158:LYS:NZ	81:B5:2852:C:N3	1.99	1.08
7:A6:285:ALA:CB	80:B2:1394:G:OP1	2.01	1.08
35:BA:231:SER:HB2	81:B5:2163:C:H5''	1.33	1.08
10:AB:117:TRP:N	80:B2:932:U:OP2	1.85	1.08
23:AO:126:THR:HG22	80:B2:988:A:H2	1.04	1.08
8:A7:28:SER:CB	81:B5:2708:C:C4'	2.07	1.08
26:AR:60:ARG:NH2	80:B2:1400:A:H5'	1.67	1.08
23:AO:125:SER:HB2	80:B2:927:C:H1'	1.26	1.08
85:CP:131:LYS:HD2	90:CP:401:GCP:C2	1.83	1.08
15:AG:175:ILE:O	80:B2:78:A:H2	1.37	1.08
15:AG:133:LEU:C	80:B2:66:U:O4	1.92	1.08
59:BY:21:THR:HG21	79:CL:24:GLU:CG	122.28	1.08
80:B2:414:C:C6	85:CP:288:ARG:CB	2.36	1.08
26:AR:60:ARG:CZ	80:B2:1400:A:C5'	2.31	1.07
29:AU:89:ARG:NH1	80:B2:1383:G:OP1	1.85	1.07
38:BD:158:ARG:CD	82:B7:46:A:OP1	2.01	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:157:VAL:HG11	80:B2:78:A:C4'	1.83	1.07
15:AG:83:CYS:SG	80:B2:162:A:H5''	1.94	1.07
60:BZ:69:LYS:NZ	81:B5:1633:C:P	2.27	1.07
80:B2:415:C:C5	85:CP:288:ARG:CG	2.37	1.07
52:BR:165:LYS:CE	80:B2:824:G:N3	2.17	1.07
85:CP:131:LYS:HG2	90:CP:401:GCP:N1	1.69	1.07
20:AL:36:LYS:HD3	80:B2:248:U:H4'	1.34	1.07
81:B5:1225:A:N9	81:B5:1287:A:O2'	1.84	1.07
41:BG:60:ARG:HH21	81:B5:1616:U:C5'	51.36	1.07
84:CN:2190:A:O4'	86:CW:56:C:H1'	1.47	1.07
15:AG:164:LYS:HZ1	80:B2:72:A:C5'	1.63	1.07
15:AG:154:ARG:HG3	80:B2:78:A:C8	1.89	1.07
80:B2:913:G:C6	81:B5:2206:G:H5''	1.88	1.07
25:AQ:123:ARG:H	80:B2:1584:G:H5'	0.90	1.07
18:AJ:3:ARG:NH2	80:B2:40:A:OP1	1.87	1.07
48:BN:35:VAL:HG23	81:B5:1543:G:OP1	1.52	1.07
23:AO:46:MET:HG3	80:B2:899:G:H4'	1.26	1.07
81:B5:2793:G:H2'	86:CW:76:A:N1	1.69	1.07
85:CP:63:GLU:CA	85:CP:210:TRP:CE3	2.38	1.07
15:AG:154:ARG:HB3	80:B2:78:A:OP2	0.91	1.07
80:B2:1758:U:O2	81:B5:2255:A:C2	2.07	1.07
80:B2:51:A:H1'	85:CP:241:GLU:O	0.90	1.07
41:BG:60:ARG:HH21	81:B5:1616:U:H5''	50.58	1.06
59:BY:58:VAL:HG21	79:CL:57:ASN:O	140.91	1.06
38:BD:266:ALA:HA	82:B7:1:G:C4	1.89	1.06
15:AG:175:ILE:CB	80:B2:78:A:N3	2.18	1.06
8:A7:51:ARG:NE	81:B5:2677:G:H1'	1.71	1.06
80:B2:1758:U:O2'	81:B5:2255:A:H5''	1.53	1.06
23:AO:122:PRO:CB	80:B2:887:A:H1'	1.84	1.06
17:AI:73:SER:HB2	80:B2:257:A:H1'	1.27	1.06
23:AO:122:PRO:HB3	80:B2:887:A:H1'	1.12	1.06
36:BB:296:THR:HG22	36:BB:298:PHE:H	1.18	1.06
26:AR:28:PHE:CZ	80:B2:1389:C:H6	1.71	1.06
8:A7:47:ALA:H	81:B5:2678:A:C1'	1.69	1.06
15:AG:13:GLN:HG3	80:B2:151:G:O2'	1.54	1.06
80:B2:1759:C:H1'	81:B5:2262:A:N1	1.69	1.06
18:AJ:172:VAL:HG22	80:B2:511:A:H5''	1.32	1.05
15:AG:159:ARG:HD3	80:B2:77:U:C2	1.83	1.05
15:AG:172:ALA:O	80:B2:79:C:H5''	1.56	1.05
8:A7:33:LYS:NZ	81:B5:2691:A:O3'	1.88	1.05
8:A7:34:LYS:HE3	81:B5:2693:C:P	1.94	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:51:ARG:HD3	81:B5:2677:G:O3'	1.57	1.05
81:B5:2443:A:C5'	84:CN:2122:G:N1	2.06	1.05
8:A7:81:THR:HG21	86:CW:29:G:O5'	0.88	1.05
28:AT:90:PRO:HD3	80:B2:1467:C:O2'	1.55	1.05
15:AG:131:LYS:H	57:BW:82:ILE:HG23	1.20	1.05
81:B5:3027:A:O2'	85:CP:109:GLN:HB2	1.55	1.05
15:AG:62:PRO:HG3	80:B2:161:U:O2'	1.55	1.05
35:BA:240:ALA:CB	81:B5:2154:U:H4'	1.85	1.05
27:AS:40:ARG:NH1	80:B2:1539:G:O4'	1.89	1.05
85:CP:63:GLU:N	85:CP:210:TRP:CD2	2.24	1.05
22:AN:3:ARG:NH1	80:B2:867:G:OP2	1.89	1.05
10:AB:165:ARG:NH2	80:B2:947:U:OP2	1.89	1.05
15:AG:159:ARG:CD	80:B2:77:U:O2	1.95	1.05
59:BY:21:THR:CG2	79:CL:24:GLU:CG	123.19	1.05
15:AG:83:CYS:CA	80:B2:161:U:O3'	2.05	1.05
52:BR:101:VAL:HG22	81:B5:1948:G:O3'	1.55	1.05
8:A7:51:ARG:CZ	81:B5:2677:G:C1'	2.34	1.05
23:AO:120:PRO:CB	80:B2:887:A:H5''	1.85	1.05
32:AX:144:ARG:HH12	85:CP:314:LYS:HD3	1.19	1.04
28:AT:12:GLN:OE1	80:B2:1529:C:O2'	1.75	1.04
81:B5:1226:G:OP2	81:B5:1289:G:H8	1.40	1.04
41:BG:137:ASN:ND2	81:B5:148:G:N7	2.05	1.04
52:BR:74:ARG:NH1	81:B5:1942:U:OP2	1.88	1.04
54:BT:92:ARG:NH1	81:B5:2736:A:OP1	1.89	1.04
59:BY:21:THR:O	79:CL:20:TYR:CD2	124.95	1.04
52:BR:170:ARG:O	80:B2:852:C:C6	1.91	1.04
23:AO:46:MET:HG2	80:B2:899:G:H4'	1.36	1.04
80:B2:1620:C:OP2	89:B2:2073:OHX:N6	1.90	1.04
38:BD:146:LEU:HB3	81:B5:2746:A:H2	0.91	1.04
59:BY:46:LYS:HB2	84:CN:2199:C:O5'	136.63	1.04
23:AO:38:THR:HB	80:B2:895:G:C2'	1.85	1.04
29:AU:53:LYS:HD2	80:B2:1345:A:H5'	1.37	1.04
15:AG:174:LYS:CB	80:B2:79:C:H1'	1.79	1.04
15:AG:175:ILE:CD1	80:B2:78:A:C1'	1.99	1.04
80:B2:51:A:C1'	85:CP:241:GLU:C	2.16	1.04
8:A7:51:ARG:NH1	81:B5:2677:G:C1'	2.21	1.04
80:B2:1646:C:C2'	81:B5:2257:C:H41	1.71	1.04
10:AB:148:ASN:OD1	80:B2:1066:C:O2'	1.75	1.04
25:AQ:75:VAL:HG11	80:B2:1610:G:OP1	1.55	1.04
33:AY:119:PHE:CE1	80:B2:86:A:C5'	2.37	1.04
15:AG:112:VAL:CG2	80:B2:164:A:H4'	1.87	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:CP:16:THR:HB	90:CP:401:GCP:O3A	1.58	1.04
80:B2:414:C:C5	85:CP:288:ARG:CG	2.39	1.04
60:BZ:17:ARG:HB2	81:B5:1635:G:O6	1.57	1.04
85:CP:63:GLU:N	85:CP:210:TRP:CE2	2.25	1.04
15:AG:83:CYS:SG	80:B2:162:A:H5'	1.96	1.03
23:AO:123:SER:CB	80:B2:885:G:N2	2.17	1.03
84:CN:2190:A:H1'	86:CW:56:C:O4'	1.54	1.03
80:B2:1645:G:C4'	81:B5:2259:A:C2	2.25	1.03
25:AQ:123:ARG:H	80:B2:1584:G:C5'	1.70	1.03
10:AB:116:LYS:CE	80:B2:933:A:OP1	2.06	1.03
47:BM:128:ARG:NH2	81:B5:3214:U:OP2	1.91	1.03
15:AG:182:GLN:NE2	80:B2:271:A:N6	2.06	1.03
10:AB:165:ARG:CZ	80:B2:946:U:H5''	1.87	1.03
15:AG:174:LYS:CD	80:B2:79:C:O2	2.06	1.03
23:AO:38:THR:HG21	80:B2:896:U:O4'	1.58	1.03
28:AT:88:VAL:HG22	80:B2:1172:G:H21	1.19	1.03
15:AG:110:ALA:HB1	80:B2:163:G:H1'	1.08	1.03
42:BH:44:THR:HG22	81:B5:3186:A:N3	1.73	1.03
48:BN:4:TYR:OH	81:B5:148:G:OP2	1.76	1.03
53:BS:108:GLN:NE2	81:B5:1322:U:O2	1.89	1.03
80:B2:1758:U:C2	81:B5:2255:A:N3	2.27	1.03
52:BR:169:ALA:CB	80:B2:850:A:C2	2.40	1.03
80:B2:1780:G:H2'	81:B5:2262:A:O2'	1.59	1.03
81:B5:2443:A:N6	84:CN:2208:G:C5'	2.21	1.03
24:AP:12:PHE:HB2	44:BJ:85:LYS:CG	1.87	1.03
15:AG:108:VAL:HG23	80:B2:154:G:H5'	1.35	1.02
15:AG:172:ALA:HB3	80:B2:79:C:OP1	1.57	1.02
23:AO:35:GLY:HA3	80:B2:919:A:H4'	1.03	1.02
15:AG:56:ASN:OD1	80:B2:153:G:N2	1.91	1.02
15:AG:96:SER:OG	80:B2:420:A:OP1	1.77	1.02
58:BX:49:LYS:HE3	83:B8:135:G:OP1	1.59	1.02
10:AB:65:VAL:HG22	80:B2:920:U:H5''	1.40	1.02
15:AG:185:GLN:HG3	80:B2:284:G:C6	1.92	1.02
59:BY:21:THR:HG21	79:CL:24:GLU:CB	122.42	1.02
81:B5:2793:G:C2'	86:CW:76:A:N1	2.18	1.02
52:BR:80:LYS:HE2	81:B5:1940:G:OP1	1.59	1.02
23:AO:18:ARG:NH2	80:B2:919:A:C5'	2.23	1.02
8:A7:48:ARG:HD3	81:B5:2678:A:P	1.98	1.02
85:CP:63:GLU:CA	85:CP:210:TRP:CZ3	2.42	1.02
38:BD:272:TYR:CZ	82:B7:22:A:H1'	1.95	1.02
80:B2:1715:G:O6	80:B2:1716:C:N4	1.93	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:166:ASN:CB	80:B2:850:A:H5''	1.90	1.01
38:BD:207:TYR:CE1	82:B7:33:U:C6	2.48	1.01
8:A7:32:SER:HA	81:B5:2707:C:H5'	1.38	1.01
80:B2:1645:G:O2'	81:B5:2259:A:N1	1.91	1.01
15:AG:132:ARG:CG	80:B2:68:A:N6	2.22	1.01
15:AG:159:ARG:HD3	80:B2:77:U:N3	1.73	1.01
23:AO:41:ARG:NH2	80:B2:915:A:N6	2.09	1.01
54:BT:130:ARG:N	81:B5:1098:A:OP2	1.92	1.01
80:B2:994:G:H4'	81:B5:2195:C:OP1	1.59	1.01
8:A7:51:ARG:HD2	81:B5:2677:G:C4'	1.89	1.01
54:BT:71:SER:OG	81:B5:2736:A:H4'	1.60	1.01
60:BZ:115:LYS:HE3	81:B5:1629:U:O3'	1.59	1.01
15:AG:56:ASN:HB2	80:B2:154:G:H1'	1.39	1.01
33:AY:10:ARG:HG2	80:B2:778:G:H1	0.85	1.01
52:BR:173:ARG:CD	80:B2:853:G:N3	2.08	1.01
85:CP:63:GLU:CA	85:CP:210:TRP:CH2	2.43	1.01
41:BG:54:GLU:HG3	81:B5:1558:A:OP2	1.59	1.01
35:BA:40:TYR:O	81:B5:2550:U:H5	1.43	1.01
38:BD:207:TYR:HB2	82:B7:33:U:O2	1.61	1.01
80:B2:1492:A:HO2'	80:B2:1493:A:H8	1.03	1.00
33:AY:119:PHE:CD1	80:B2:86:A:OP1	2.13	1.00
35:BA:15:ILE:HD11	81:B5:822:G:C4	1.96	1.00
42:BH:166:ARG:HH11	42:BH:168:ARG:HH22	1.08	1.00
52:BR:104:ARG:NH1	81:B5:1949:G:C5'	2.24	1.00
29:AU:54:GLY:H	80:B2:1345:A:P	1.82	1.00
35:BA:200:ARG:NH2	81:B5:2147:A:OP2	1.94	1.00
1:A0:92:ARG:HD3	80:B2:1796:C:OP2	1.61	1.00
2:A1:28:PRO:HB3	80:B2:959:U:H5'	1.41	1.00
33:AY:37:LYS:NZ	80:B2:523:G:OP2	1.94	1.00
10:AB:116:LYS:HE2	80:B2:932:U:H3'	1.43	1.00
41:BG:137:ASN:ND2	81:B5:148:G:C8	2.28	1.00
16:AH:9:LEU:HD21	16:AH:17:GLU:HB3	1.43	1.00
38:BD:15:ARG:CZ	81:B5:1003:A:H1'	1.91	1.00
52:BR:173:ARG:HD3	80:B2:853:G:N3	1.11	1.00
59:BY:124:GLY:N	79:CL:123:VAL:O	154.95	1.00
59:BY:58:VAL:CG2	79:CL:57:ASN:O	140.83	1.00
23:AO:38:THR:CB	80:B2:895:G:C2'	2.36	1.00
26:AR:48:ASN:HD22	80:B2:1389:C:P	1.85	1.00
47:BM:19:ARG:HA	47:BM:69:THR:HG22	1.41	1.00
54:BT:57:TYR:OH	81:B5:2724:U:OP1	1.79	1.00
15:AG:174:LYS:HD3	80:B2:79:C:C1'	1.91	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:144:ARG:NH1	85:CP:314:LYS:HD3	1.75	1.00
23:AO:27:PHE:CZ	80:B2:916:U:C2'	2.43	1.00
23:AO:27:PHE:HE2	80:B2:916:U:O2	1.43	1.00
8:A7:28:SER:CA	81:B5:2708:C:H4'	1.92	0.99
80:B2:430:G:H4'	85:CP:244:GLY:HA3	1.41	0.99
23:AO:18:ARG:HH22	80:B2:919:A:C5'	1.75	0.99
60:BZ:78:ASN:ND2	81:B5:1711:C:OP1	1.94	0.99
36:BB:41:VAL:HA	36:BB:185:GLY:HA3	1.39	0.99
15:AG:15:THR:HG21	80:B2:153:G:O5'	1.62	0.99
15:AG:133:LEU:HA	80:B2:66:U:N3	1.78	0.99
15:AG:59:GLN:CA	80:B2:155:U:H4'	1.93	0.99
25:AQ:123:ARG:N	80:B2:1584:G:H5'	1.76	0.99
81:B5:1226:G:O4'	81:B5:1288:U:C4'	2.11	0.99
8:A7:32:SER:HB2	81:B5:2692:A:H1'	1.44	0.99
35:BA:194:ASN:ND2	81:B5:822:G:C4'	2.24	0.99
15:AG:157:VAL:HG21	80:B2:78:A:O2'	1.62	0.99
15:AG:175:ILE:HG12	80:B2:78:A:N9	1.77	0.99
37:BC:193:LYS:NZ	83:B8:21:C:OP1	1.93	0.99
23:AO:18:ARG:CZ	80:B2:919:A:C5'	2.37	0.99
17:AI:24:LYS:O	80:B2:400:A:H5''	1.62	0.99
33:AY:105:ARG:HB3	80:B2:443:C:OP2	1.60	0.99
38:BD:207:TYR:CZ	82:B7:33:U:C6	2.50	0.99
60:BZ:135:ARG:NH2	81:B5:1807:G:H5''	1.78	0.99
59:BY:33:ALA:O	79:CL:36:LYS:CG	163.65	0.99
80:B2:913:G:C6	81:B5:2206:G:H4'	1.97	0.99
41:BG:162:LEU:CD1	81:B5:147:U:C2	2.46	0.99
80:B2:1645:G:O2'	81:B5:2259:A:C6	2.15	0.98
80:B2:1686:C:H2'	80:B2:1687:U:C6	1.98	0.98
33:AY:12:VAL:N	80:B2:783:G:N7	2.10	0.98
54:BT:23:GLY:N	81:B5:2701:U:OP1	1.95	0.98
27:AS:118:LYS:CE	44:BJ:108:GLU:OE2	2.10	0.98
59:BY:88:GLU:CA	79:CL:92:ASP:O	176.92	0.98
59:BY:84:LYS:HG3	79:CL:87:GLU:HB3	177.83	0.98
81:B5:1225:A:C5	81:B5:1287:A:O2'	2.16	0.98
43:BI:82:ARG:NH2	81:B5:271:C:O2	130.45	0.98
10:AB:124:ASN:ND2	80:B2:884:A:H4'	1.79	0.98
46:BL:65:TYR:HD2	81:B5:102:C:HO2'	1.09	0.98
8:A7:31:SER:O	81:B5:2707:C:C4'	2.10	0.98
59:BY:88:GLU:HA	79:CL:92:ASP:HA	175.58	0.98
15:AG:182:GLN:HE22	80:B2:271:A:N6	1.59	0.98
33:AY:8:ARG:HA	80:B2:780:A:O2'	1.62	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:125:LYS:NZ	81:B5:1720:U:O4	1.97	0.98
8:A7:34:LYS:HG3	81:B5:2693:C:OP1	1.63	0.98
28:AT:57:ARG:HH11	28:AT:57:ARG:HG3	1.26	0.98
80:B2:1645:G:C3'	81:B5:2259:A:C2	2.46	0.98
52:BR:163:ARG:O	80:B2:850:A:H5'	0.80	0.98
35:BA:50:HIS:CD2	81:B5:1795:U:H2'	1.97	0.98
80:B2:51:A:C2'	85:CP:242:GLY:HA3	1.94	0.98
8:A7:47:ALA:CA	81:B5:2678:A:O4'	2.12	0.98
59:BY:21:THR:HG21	79:CL:24:GLU:HB2	121.57	0.98
85:CP:78:PRO:O	90:CP:401:GCP:O2G	1.81	0.98
29:AU:57:ARG:HG2	80:B2:1382:A:O4'	1.64	0.97
15:AG:108:VAL:CG2	80:B2:153:G:O2'	2.10	0.97
85:CP:19:THR:CA	90:CP:401:GCP:O2A	2.07	0.97
9:AA:101:ARG:NH2	80:B2:1320:U:H3'	1.79	0.97
25:AQ:13:LYS:HE3	80:B2:1584:G:C6	1.98	0.97
85:CP:199:ALA:HB3	90:CP:401:GCP:C6	1.94	0.97
8:A7:47:ALA:H	81:B5:2678:A:H1'	1.24	0.97
41:BG:138:HIS:N	81:B5:148:G:O6	1.97	0.97
15:AG:58:LYS:HA	80:B2:155:U:H5'	1.46	0.97
29:AU:89:ARG:HH12	80:B2:1383:G:P	1.86	0.97
8:A7:48:ARG:HD2	81:B5:2678:A:OP2	1.64	0.97
52:BR:165:LYS:HD3	80:B2:849:C:O2	1.62	0.97
54:BT:49:GLN:HB3	81:B5:2756:C:H4'	1.42	0.97
85:CP:63:GLU:N	85:CP:210:TRP:CE3	2.31	0.97
81:B5:2802:A:O4'	86:CW:75:C:N4	1.95	0.97
1:A0:14:GLY:O	80:B2:937:C:N4	1.96	0.97
10:AB:116:LYS:NZ	80:B2:933:A:O5'	1.97	0.97
85:CP:131:LYS:HD3	90:CP:401:GCP:C5	1.93	0.97
23:AO:27:PHE:HZ	80:B2:916:U:O2'	1.35	0.97
52:BR:171:ASP:OD1	80:B2:852:C:OP2	1.83	0.97
43:BI:193:ASP:OD2	81:B5:1010:G:N2	1.97	0.97
35:BA:240:ALA:HB1	81:B5:2154:U:H4'	1.41	0.97
8:A7:51:ARG:HD2	81:B5:2677:G:H4'	1.45	0.97
23:AO:38:THR:CG2	80:B2:895:G:C2'	2.42	0.97
15:AG:132:ARG:NH2	80:B2:68:A:C4	2.32	0.97
81:B5:437:G:H22	81:B5:622:A:H61	1.01	0.97
84:CN:2190:A:O4'	86:CW:56:C:O4'	1.81	0.97
15:AG:60:GLY:O	80:B2:154:G:C2	2.18	0.96
60:BZ:135:ARG:NH2	81:B5:1807:G:H5'	1.78	0.96
10:AB:116:LYS:NZ	80:B2:933:A:P	2.39	0.96
25:AQ:76:SER:CB	80:B2:1609:U:OP1	2.13	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:132:ARG:CZ	80:B2:1788:G:C8	2.48	0.96
35:BA:241:ARG:HH22	81:B5:2156:C:P	1.88	0.96
38:BD:23:ARG:NE	81:B5:2703:A:OP2	1.98	0.96
15:AG:175:ILE:CG1	80:B2:78:A:C1'	2.35	0.96
52:BR:170:ARG:NH2	89:BR:201:OHX:N1	2.11	0.96
23:AO:38:THR:HG22	80:B2:895:G:C2'	1.95	0.96
54:BT:8:ARG:HD3	81:B5:2757:U:O4'	1.65	0.96
1:A0:87:ARG:HD2	80:B2:1797:A:N6	1.80	0.96
85:CP:63:GLU:N	85:CP:210:TRP:CZ3	2.34	0.96
22:AN:73:ARG:HD3	80:B2:859:A:C6	1.99	0.96
52:BR:161:ALA:C	80:B2:849:C:O2'	1.90	0.96
81:B5:3027:A:H8	85:CP:109:GLN:NE2	1.49	0.96
59:BY:46:LYS:HD3	84:CN:2199:C:O3'	135.24	0.96
84:CN:2160:C:O2'	84:CN:2161:C:OP2	1.83	0.96
26:AR:48:ASN:ND2	80:B2:1389:C:OP1	1.98	0.96
10:AB:116:LYS:NZ	80:B2:933:A:OP1	1.97	0.96
35:BA:241:ARG:NH2	81:B5:2156:C:P	2.37	0.96
35:BA:84:THR:HB	81:B5:2554:A:N1	1.80	0.96
38:BD:274:GLN:CD	82:B7:60:G:H21	1.68	0.96
8:A7:81:THR:OG1	86:CW:30:G:P	2.23	0.96
18:AJ:60:LEU:HD21	18:AJ:93:LEU:HD21	1.45	0.96
17:AI:64:ASN:HD21	80:B2:257:A:C2'	1.79	0.96
80:B2:414:C:C5	85:CP:288:ARG:HB2	2.01	0.96
59:BY:46:LYS:HE2	84:CN:2200:C:OP2	134.83	0.96
38:BD:260:PHE:CE2	82:B7:121:U:C5'	2.48	0.96
54:BT:28:SER:OG	82:B7:9:C:OP1	1.83	0.96
80:B2:1585:U:H3	80:B2:1611:A:H2	0.96	0.95
38:BD:207:TYR:CD1	82:B7:33:U:N1	2.34	0.95
59:BY:21:THR:HG21	79:CL:24:GLU:HG3	121.52	0.95
85:CP:63:GLU:N	85:CP:210:TRP:CZ2	2.33	0.95
14:AF:117:THR:HG21	14:AF:194:LEU:HD12	1.47	0.95
23:AO:45:GLY:CA	80:B2:900:A:OP2	2.13	0.95
80:B2:415:C:N3	85:CP:288:ARG:HD3	1.79	0.95
23:AO:46:MET:CA	80:B2:899:G:H5'	1.95	0.95
80:B2:1010:C:OP2	89:B2:2013:OHX:N6	1.99	0.95
13:AE:108:ARG:NH2	80:B2:788:A:OP2	1.99	0.95
60:BZ:69:LYS:HZ3	81:B5:1633:C:P	1.85	0.95
23:AO:88:GLY:CA	80:B2:888:U:H5'	1.96	0.95
81:B5:2443:A:P	84:CN:2208:G:O6	2.24	0.95
32:AX:144:ARG:CZ	85:CP:314:LYS:CD	2.43	0.95
15:AG:159:ARG:NH1	80:B2:77:U:O4'	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:122:PRO:HB3	80:B2:887:A:C1'	1.97	0.95
85:CP:131:LYS:CD	90:CP:401:GCP:N1	2.29	0.95
17:AI:51:GLY:H	80:B2:397:A:H5''	1.29	0.95
23:AO:132:ARG:NE	80:B2:1788:G:N7	2.15	0.95
23:AO:29:HIS:HE1	80:B2:918:U:H4'	1.32	0.95
8:A7:28:SER:HB3	81:B5:2708:C:C3'	1.80	0.95
12:AD:8:LYS:NZ	80:B2:1487:A:OP2	1.98	0.95
15:AG:133:LEU:HD11	80:B2:66:U:O2'	1.66	0.95
28:AT:12:GLN:OE1	80:B2:1529:C:C2'	2.14	0.95
23:AO:29:HIS:CE1	80:B2:918:U:C4'	2.50	0.95
38:BD:48:LYS:NZ	81:B5:2749:G:O5'	2.00	0.95
15:AG:136:LYS:HD2	80:B2:66:U:OP1	1.66	0.95
15:AG:159:ARG:NH1	80:B2:77:U:C1'	2.29	0.95
17:AI:170:SER:O	80:B2:209:U:H5''	1.65	0.95
17:AI:75:LYS:NZ	80:B2:259:U:OP1	2.00	0.95
1:A0:15:ARG:NH1	80:B2:936:G:N7	2.15	0.95
8:A7:30:THR:HA	81:B5:2707:C:O2'	1.67	0.95
59:BY:21:THR:HG23	79:CL:21:THR:N	120.44	0.95
85:CP:131:LYS:HG2	90:CP:401:GCP:O6	1.66	0.95
10:AB:165:ARG:HE	80:B2:947:U:P	1.90	0.95
60:BZ:15:ARG:HD3	81:B5:1637:A:H4'	1.45	0.95
59:BY:46:LYS:O	79:CL:46:LYS:O	134.33	0.95
85:CP:63:GLU:N	85:CP:210:TRP:CH2	2.34	0.95
23:AO:135:ARG:HE	80:B2:1008:G:P	1.88	0.94
29:AU:53:LYS:HB3	80:B2:1345:A:H4'	1.49	0.94
26:AR:60:ARG:HH21	80:B2:1400:A:P	1.90	0.94
20:AL:36:LYS:HD3	80:B2:248:U:C4'	1.97	0.94
80:B2:415:C:H5	85:CP:288:ARG:CB	1.65	0.94
80:B2:1645:G:C3'	81:B5:2259:A:N1	2.29	0.94
35:BA:194:ASN:ND2	81:B5:822:G:H4'	1.81	0.94
37:BC:88:GLY:N	81:B5:1729:A:OP1	101.41	0.94
84:CN:2158:C:H3'	84:CN:2158:C:O2	1.65	0.94
23:AO:20:TYR:HD2	80:B2:917:U:H5''	1.32	0.94
41:BG:63:LYS:HE2	83:B8:153:U:OP1	1.66	0.94
26:AR:49:LYS:CD	80:B2:1390:U:OP2	2.15	0.94
10:AB:150:VAL:HG23	80:B2:1067:C:C5'	1.96	0.94
80:B2:1588:G:H1	80:B2:1608:U:H3	1.13	0.94
22:AN:3:ARG:NH1	80:B2:867:G:P	2.41	0.94
81:B5:1226:G:OP2	81:B5:1289:G:C8	2.19	0.94
15:AG:108:VAL:HG23	80:B2:154:G:C5'	1.97	0.94
23:AO:123:SER:N	80:B2:886:U:O2	1.99	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1646:C:C2'	81:B5:2257:C:N4	2.30	0.94
23:AO:18:ARG:NH2	80:B2:919:A:H5''	1.82	0.94
15:AG:112:VAL:HG21	80:B2:164:A:C5'	1.97	0.94
38:BD:269:SER:CB	82:B7:1:G:H21	1.79	0.94
23:AO:123:SER:CB	80:B2:885:G:N3	2.31	0.94
23:AO:38:THR:CB	80:B2:895:G:H2'	1.97	0.94
29:AU:53:LYS:HA	80:B2:1345:A:P	2.08	0.94
80:B2:701:U:H3	80:B2:737:A:H61	1.06	0.94
52:BR:124:TYR:OH	81:B5:1721:U:OP2	1.86	0.94
81:B5:1877:U:H5''	81:B5:1878:G:H5'	1.50	0.94
8:A7:34:LYS:CG	81:B5:2693:C:OP1	2.16	0.94
52:BR:168:ALA:HB3	80:B2:850:A:C2'	1.98	0.94
58:BX:111:ASN:ND2	81:B5:1608:C:H5''	1.82	0.94
23:AO:38:THR:HG22	80:B2:895:G:C3'	1.98	0.93
38:BD:94:ASN:CB	82:B7:47:C:OP1	2.16	0.93
8:A7:48:ARG:HB2	81:B5:2678:A:OP1	1.66	0.93
14:AF:109:LYS:HE2	80:B2:1474:G:P	2.08	0.93
52:BR:168:ALA:HB3	80:B2:850:A:O2'	1.66	0.93
52:BR:169:ALA:O	80:B2:852:C:C4	2.21	0.93
44:BJ:105:GLY:HA3	81:B5:2674:A:O4'	1.68	0.93
28:AT:57:ARG:HG3	80:B2:1479:A:OP1	1.68	0.93
33:AY:21:LYS:CG	80:B2:782:U:O2	2.14	0.93
15:AG:174:LYS:CA	80:B2:79:C:C4'	2.47	0.93
8:A7:33:LYS:HD2	81:B5:2692:A:H5'	1.49	0.93
15:AG:54:GLY:HA3	80:B2:163:G:H5'	1.51	0.93
20:AL:130:PRO:O	80:B2:335:U:O2'	1.83	0.93
32:AX:144:ARG:HH22	85:CP:314:LYS:HD3	1.34	0.93
52:BR:104:ARG:HH11	81:B5:1949:G:H5''	1.29	0.93
35:BA:241:ARG:HG2	81:B5:2155:G:OP1	1.68	0.93
81:B5:2836:C:H5	81:B5:2852:C:H42	1.07	0.93
25:AQ:40:GLU:OE2	80:B2:1529:C:H4'	1.67	0.93
35:BA:9:ARG:NH2	81:B5:912:G:OP2	2.01	0.93
15:AG:132:ARG:O	80:B2:68:A:N6	2.00	0.93
59:BY:46:LYS:HD3	84:CN:2199:C:H4'	135.74	0.93
17:AI:138:ASN:ND2	80:B2:197:A:H61	1.59	0.93
28:AT:102:ARG:NH2	80:B2:1502:G:O6	2.01	0.93
89:B2:1918:OHX:N4	89:B2:2064:OHX:N6	2.16	0.93
44:BJ:103:GLY:C	81:B5:2673:A:H4'	1.89	0.93
44:BJ:142:LYS:HE3	81:B5:2664:C:P	2.08	0.93
15:AG:10:ASN:HA	57:BW:80:ARG:CB	1.98	0.93
85:CP:20:LYS:NZ	90:CP:401:GCP:N3	2.16	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:104:ASN:HD21	80:B2:1166:A:H5'	0.77	0.92
52:BR:164:LEU:N	80:B2:850:A:C5'	2.26	0.92
43:BI:82:ARG:NH1	81:B5:271:C:N3	127.89	0.92
59:BY:29:VAL:HG22	79:CL:32:LEU:O	143.61	0.92
14:AF:78:ALA:O	80:B2:1615:C:N4	2.02	0.92
26:AR:53:TYR:HH	80:B2:1401:A:H5''	1.15	0.92
33:AY:120:GLY:C	80:B2:85:A:H4'	1.90	0.92
38:BD:265:TYR:CE1	82:B7:120:C:H2'	2.03	0.92
48:BN:31:ARG:NH1	48:BN:124:ASP:OD2	2.03	0.92
10:AB:97:LEU:HD13	10:AB:98:THR:H	1.34	0.92
11:AC:162:CYS:HA	89:AC:301:OHX:N5	1.84	0.92
12:AD:159:HIS:N	80:B2:1328:G:OP1	2.01	0.92
28:AT:91:TYR:HE1	80:B2:1469:A:OP1	1.51	0.92
80:B2:279:G:H3'	80:B2:280:U:H5''	1.50	0.92
84:CN:2132:C:C2	84:CN:2168:G:N2	2.38	0.92
80:B2:415:C:C6	85:CP:288:ARG:CB	2.50	0.92
1:A0:15:ARG:HG2	80:B2:943:C:N4	1.84	0.92
8:A7:34:LYS:CE	81:B5:2693:C:H5'	1.99	0.92
80:B2:732:G:O6	89:B2:2011:OHX:N5	2.03	0.92
20:AL:80:MET:HE2	80:B2:325:G:H4'	1.51	0.92
35:BA:200:ARG:HG3	81:B5:2147:A:OP1	1.70	0.92
23:AO:45:GLY:CA	80:B2:900:A:P	2.57	0.92
54:BT:78:LYS:HE3	81:B5:2728:G:O6	1.68	0.92
80:B2:414:C:C6	85:CP:289:LEU:HD23	2.00	0.92
15:AG:176:GLN:NE2	80:B2:65:A:OP1	2.02	0.92
15:AG:185:GLN:HG3	80:B2:284:G:C5	2.05	0.92
1:A0:70:LYS:HE2	80:B2:930:A:C5'	1.99	0.92
15:AG:175:ILE:CG1	80:B2:78:A:N9	2.32	0.92
8:A7:72:ARG:NH1	80:B2:1460:A:O2'	2.02	0.92
28:AT:87:GLY:C	80:B2:1542:G:H5''	1.90	0.92
15:AG:108:VAL:HG21	80:B2:154:G:H5'	1.50	0.92
80:B2:1646:C:C1'	81:B5:2257:C:H41	1.82	0.92
80:B2:839:U:O4	89:B2:2071:OHX:N3	2.03	0.92
46:BL:73:ARG:NH1	81:B5:110:G:OP2	2.03	0.92
10:AB:54:LEU:HD11	81:B5:2438:A:H2	1.35	0.92
59:BY:46:LYS:CE	84:CN:2200:C:OP2	135.11	0.92
10:AB:165:ARG:NE	80:B2:946:U:O3'	2.03	0.92
60:BZ:115:LYS:HD3	81:B5:1629:U:O4'	1.70	0.92
44:BJ:95:ASN:N	81:B5:2673:A:OP1	2.03	0.92
47:BM:55:ARG:NH2	47:BM:76:ALA:O	2.03	0.92
6:A5:86:UNK:O	6:A5:87:UNK:HG3	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:18:ARG:NH1	80:B2:919:A:P	2.43	0.92
15:AG:95:LYS:HE2	80:B2:161:U:OP1	1.69	0.91
80:B2:1644:C:C1'	81:B5:2255:A:N1	2.33	0.91
35:BA:3:ARG:HD3	81:B5:911:C:H42	1.25	0.91
23:AO:38:THR:CG2	80:B2:895:G:O3'	2.18	0.91
24:AP:12:PHE:CD1	44:BJ:85:LYS:HE2	2.05	0.91
81:B5:3343:G:H21	81:B5:3362:A:H2	1.17	0.91
81:B5:2443:A:H5''	84:CN:2122:G:C2	2.04	0.91
8:A7:34:LYS:NZ	81:B5:2707:C:OP1	2.03	0.91
80:B2:51:A:N1	85:CP:243:PHE:CB	2.16	0.91
15:AG:132:ARG:NH2	80:B2:68:A:N7	2.18	0.91
23:AO:38:THR:HG22	80:B2:895:G:O2'	1.67	0.91
26:AR:4:VAL:HG11	80:B2:1315:U:O2	1.69	0.91
33:AY:10:ARG:CZ	80:B2:778:G:N2	2.32	0.91
33:AY:120:GLY:HA2	80:B2:85:A:O2'	1.69	0.91
23:AO:120:PRO:HB2	80:B2:887:A:O3'	1.70	0.91
38:BD:207:TYR:HD1	82:B7:33:U:H1'	1.25	0.91
54:BT:49:GLN:HB3	81:B5:2756:C:C4'	2.01	0.91
59:BY:21:THR:CB	79:CL:24:GLU:CG	123.39	0.91
15:AG:174:LYS:HA	80:B2:79:C:H1'	1.50	0.91
15:AG:88:ARG:NE	80:B2:92:A:C2	2.38	0.91
23:AO:136:ARG:NH2	80:B2:1786:G:P	2.36	0.91
23:AO:29:HIS:CE1	80:B2:918:U:H4'	2.05	0.91
24:AP:47:ARG:NH1	80:B2:1555:A:OP2	2.03	0.91
29:AU:23:ARG:HH22	80:B2:1347:U:P	1.93	0.91
27:AS:143:ARG:NH1	80:B2:1461:C:C5	2.39	0.91
6:A5:101:UNK:HA	80:B2:1229:G:OP2	1.71	0.91
80:B2:51:A:C1'	85:CP:242:GLY:N	2.16	0.91
8:A7:51:ARG:NH2	81:B5:2677:G:H8	1.68	0.91
48:BN:8:GLU:HG3	48:BN:50:ARG:HH12	1.35	0.91
28:AT:88:VAL:CG2	80:B2:1172:G:H21	1.83	0.91
80:B2:1716:C:HO2'	80:B2:1717:G:H8	0.92	0.91
48:BN:76:PRO:O	81:B5:2166:A:OP2	1.87	0.91
81:B5:3027:A:O5'	85:CP:109:GLN:NE2	1.97	0.91
15:AG:13:GLN:CG	80:B2:151:G:O2'	2.18	0.91
7:A6:285:ALA:HB2	80:B2:1394:G:OP1	1.68	0.91
35:BA:203:ALA:O	81:B5:914:A:O2'	1.89	0.91
85:CP:131:LYS:CG	90:CP:401:GCP:N1	2.32	0.91
10:AB:114:VAL:HG21	80:B2:930:A:C2	2.05	0.90
81:B5:2219:A:HO2'	79:CL:205:LYS:HD3	1.36	0.90
8:A7:81:THR:CG2	86:CW:29:G:OP1	2.19	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:132:ARG:CZ	80:B2:68:A:N7	2.34	0.90
26:AR:60:ARG:NH2	80:B2:1400:A:P	2.44	0.90
80:B2:623:A:OP1	89:B2:2053:OHX:N1	2.04	0.90
10:AB:165:ARG:HH21	80:B2:947:U:P	1.94	0.90
52:BR:177:VAL:HG11	80:B2:853:G:O3'	1.70	0.90
10:AB:129:THR:HB	10:AB:180:THR:HA	1.51	0.90
15:AG:110:ALA:HB1	80:B2:163:G:C1'	1.99	0.90
59:BY:29:VAL:H	79:CL:32:LEU:HG	140.79	0.90
15:AG:4:ASN:ND2	80:B2:152:U:O2	2.04	0.90
26:AR:10:LYS:NZ	80:B2:1402:G:P	2.43	0.90
29:AU:60:THR:O	89:B2:1978:OHX:N1	2.03	0.90
2:A1:28:PRO:HB3	80:B2:959:U:C5'	2.01	0.90
38:BD:218:ARG:HH12	82:B7:31:U:H4'	1.31	0.90
38:BD:145:PHE:CD1	81:B5:2748:A:H5'	2.07	0.90
15:AG:174:LYS:HB2	80:B2:79:C:HO2'	1.32	0.90
17:AI:170:SER:HB2	80:B2:209:U:O3'	1.70	0.90
81:B5:2766:U:C4	86:CW:76:A:C8	2.58	0.90
81:B5:2818:U:H6	81:B5:2818:U:H5'	1.37	0.90
42:BH:116:ASN:ND2	85:CP:136:TYR:CD1	2.39	0.90
8:A7:33:LYS:NZ	81:B5:2692:A:P	2.45	0.90
80:B2:1715:G:C6	80:B2:1716:C:C4	2.60	0.90
41:BG:162:LEU:HD11	81:B5:147:U:C2	2.05	0.90
80:B2:429:G:H4'	85:CP:276:ARG:CD	2.01	0.90
15:AG:132:ARG:NE	80:B2:68:A:C5	2.38	0.90
48:BN:35:VAL:HG23	81:B5:1543:G:P	2.12	0.90
48:BN:188:ARG:NH2	81:B5:31:C:OP2	2.05	0.90
8:A7:47:ALA:N	81:B5:2678:A:O4'	2.03	0.89
29:AU:53:LYS:HB3	80:B2:1345:A:C4'	2.01	0.89
89:B2:1918:OHX:N2	89:B2:2064:OHX:N6	2.19	0.89
54:BT:130:ARG:O	81:B5:1098:A:O2'	1.87	0.89
80:B2:1780:G:C2'	81:B5:2262:A:H4'	2.01	0.89
81:B5:2443:A:H3'	84:CN:2208:G:C5	1.98	0.89
48:BN:109:ARG:HH11	83:B8:141:C:P	1.94	0.89
80:B2:1780:G:HO2'	81:B5:2262:A:H4'	1.11	0.89
26:AR:2:GLY:N	80:B2:1312:A:OP1	2.05	0.89
26:AR:33:ARG:NH2	80:B2:1387:G:OP1	2.06	0.89
10:AB:118:GLN:O	80:B2:931:C:O2'	1.88	0.89
48:BN:146:ALA:O	48:BN:148:TYR:N	2.05	0.89
23:AO:29:HIS:CE1	80:B2:918:U:H5'	2.07	0.89
80:B2:1653:C:OP2	89:B2:1965:OHX:N4	2.05	0.89
8:A7:51:ARG:HH22	81:B5:2677:G:H8	1.20	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:132:ARG:C	80:B2:68:A:H61	1.74	0.89
17:AI:64:ASN:HB2	80:B2:258:C:C4'	2.03	0.89
23:AO:85:ALA:H	23:AO:119:THR:HG22	1.36	0.89
38:BD:265:TYR:CD2	82:B7:120:C:C4	2.60	0.89
33:AY:10:ARG:CG	80:B2:778:G:H1	1.81	0.89
8:A7:48:ARG:HG2	81:B5:1018:G:OP1	1.73	0.89
81:B5:2443:A:C5	84:CN:2208:G:C5'	2.51	0.89
81:B5:3027:A:O2'	85:CP:109:GLN:CB	2.19	0.89
81:B5:2792:A:N1	86:CW:76:A:N7	2.20	0.89
35:BA:247:ARG:CZ	80:B2:1013:A:C4'	2.51	0.89
4:A3:32:ARG:N	80:B2:1595:U:OP1	2.04	0.89
23:AO:130:GLY:H	80:B2:991:G:P	1.94	0.89
37:BC:60:THR:CG2	81:B5:364:G:OP1	2.18	0.89
15:AG:59:GLN:CA	80:B2:155:U:C4'	2.50	0.89
80:B2:1645:G:O3'	81:B5:2259:A:H2	1.51	0.89
17:AI:138:ASN:HD22	80:B2:197:A:N6	1.68	0.89
80:B2:651:G:N7	89:B2:1982:OHX:N6	2.21	0.89
15:AG:128:THR:HG23	57:BW:81:PRO:HG3	0.89	0.89
85:CP:131:LYS:HD3	90:CP:401:GCP:N3	1.87	0.89
10:AB:54:LEU:HD11	81:B5:2438:A:C2	2.07	0.88
28:AT:39:THR:OG1	80:B2:1478:G:OP1	1.91	0.88
15:AG:15:THR:CG2	80:B2:152:U:O3'	2.20	0.88
15:AG:160:ARG:CZ	80:B2:68:A:OP1	2.21	0.88
15:AG:174:LYS:CA	80:B2:79:C:H1'	1.93	0.88
44:BJ:94:ARG:O	44:BJ:96:PHE:N	2.05	0.88
52:BR:101:VAL:CG2	81:B5:1948:G:O3'	2.21	0.88
52:BR:170:ARG:NH1	89:BR:201:OHX:N4	2.21	0.88
59:BY:46:LYS:HZ3	84:CN:2200:C:P	135.79	0.88
80:B2:912:U:H4'	80:B2:913:G:H3'	1.52	0.88
50:BP:138:LYS:NZ	81:B5:2356:A:OP1	2.04	0.88
52:BR:143:ILE:CG1	81:B5:2093:A:C5'	2.51	0.88
15:AG:133:LEU:HD12	80:B2:66:U:N3	1.88	0.88
23:AO:123:SER:CB	80:B2:885:G:C2	2.54	0.88
14:AF:104:ASN:ND2	80:B2:1166:A:C5'	2.26	0.88
15:AG:175:ILE:O	80:B2:78:A:C2	2.26	0.88
60:BZ:115:LYS:HD3	81:B5:1629:U:C4'	2.03	0.88
52:BR:166:ASN:CG	89:BR:201:OHX:N4	2.25	0.88
81:B5:3027:A:N9	85:CP:109:GLN:NE2	2.21	0.88
8:A7:34:LYS:HZ2	81:B5:2693:C:H5'	1.22	0.88
8:A7:32:SER:HB3	81:B5:2706:G:O2'	1.74	0.88
40:BF:70:LYS:NZ	81:B5:519:A:OP2	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:118:LYS:CD	44:BJ:108:GLU:OE2	2.22	0.88
23:AO:122:PRO:HA	80:B2:886:U:O2	1.73	0.88
41:BG:129:PRO:HG3	81:B5:121:A:C2	2.08	0.88
81:B5:1759:C:N4	81:B5:1766:G:O6	2.06	0.88
81:B5:2443:A:N6	84:CN:2208:G:O5'	2.07	0.88
35:BA:242:ARG:O	81:B5:2154:U:C5'	2.20	0.88
41:BG:157:VAL:HG13	81:B5:147:U:C4	2.09	0.88
32:AX:144:ARG:NH2	85:CP:314:LYS:HD3	1.85	0.88
54:BT:129:LYS:HB2	81:B5:1098:A:O5'	1.72	0.88
10:AB:32:ILE:HD11	10:AB:46:THR:HG23	1.55	0.88
38:BD:266:ALA:HA	82:B7:1:G:N9	1.89	0.88
50:BP:74:LYS:NZ	81:B5:3298:C:OP1	2.07	0.88
23:AO:132:ARG:N	80:B2:1787:C:OP2	2.07	0.88
80:B2:991:G:OP2	89:B2:2013:OHX:N1	2.07	0.88
8:A7:51:ARG:NH1	81:B5:2677:G:H1'	1.83	0.88
43:BI:160:PRO:HD3	81:B5:2854:U:H5''	1.56	0.88
59:BY:29:VAL:HG11	79:CL:29:VAL:HG22	137.94	0.88
37:BC:48:GLN:NE2	81:B5:336:A:O2'	2.08	0.87
60:BZ:115:LYS:CD	81:B5:1629:U:O4'	2.23	0.87
15:AG:107:ALA:HB3	80:B2:154:G:C4'	2.03	0.87
27:AS:40:ARG:NH1	80:B2:1539:G:C4'	2.36	0.87
8:A7:33:LYS:HE3	81:B5:2692:A:OP1	1.74	0.87
80:B2:440:U:C5	85:CP:277:ALA:HB2	2.09	0.87
29:AU:57:ARG:HG2	80:B2:1382:A:C4'	2.04	0.87
33:AY:10:ARG:HG3	80:B2:780:A:C8	2.07	0.87
23:AO:135:ARG:NE	80:B2:1008:G:OP1	2.06	0.87
8:A7:33:LYS:CE	81:B5:2692:A:OP1	2.22	0.87
81:B5:2443:A:H5''	84:CN:2122:G:H1	0.73	0.87
26:AR:28:PHE:CD2	80:B2:1389:C:C6	2.62	0.87
80:B2:415:C:C6	85:CP:288:ARG:CG	2.58	0.87
36:BB:247:ARG:HD3	81:B5:1888:U:OP1	1.73	0.87
48:BN:76:PRO:HA	81:B5:2166:A:OP1	1.74	0.87
43:BI:63:GLU:HB2	81:B5:2853:A:H5'	1.55	0.87
36:BB:255:TRP:CD1	81:B5:2395:G:H5''	2.09	0.87
8:A7:58:GLU:OE1	27:AS:120:ARG:NH1	2.08	0.87
15:AG:59:GLN:C	80:B2:155:U:H1'	1.94	0.87
18:AJ:110:GLN:HE22	18:AJ:126:ARG:HG2	1.39	0.87
15:AG:174:LYS:CG	80:B2:79:C:O2'	2.23	0.87
81:B5:2512:C:H5'	81:B5:2512:C:H6	1.38	0.87
26:AR:25:THR:O	26:AR:27:ASP:N	2.07	0.87
20:AL:67:ARG:NH1	80:B2:115:G:OP1	2.07	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:174:HIS:HE1	80:B2:1278:G:O4'	1.58	0.87
25:AQ:58:ASP:O	25:AQ:60:PHE:N	2.07	0.87
14:AF:102:ARG:NH2	80:B2:1472:C:OP1	2.08	0.87
15:AG:134:GLY:N	80:B2:66:U:O4	0.73	0.87
22:AN:3:ARG:HH12	80:B2:867:G:P	1.98	0.87
26:AR:43:SER:CB	80:B2:1332:C:OP1	2.23	0.87
24:AP:12:PHE:HD1	44:BJ:85:LYS:HE2	1.38	0.87
17:AI:75:LYS:HB2	80:B2:258:C:C5'	2.04	0.87
20:AL:133:LYS:N	80:B2:336:G:O2'	2.07	0.87
8:A7:32:SER:HB2	81:B5:2692:A:C1'	2.04	0.87
80:B2:414:C:C5	85:CP:288:ARG:CB	2.57	0.87
23:AO:46:MET:CG	80:B2:899:G:C4'	2.52	0.86
30:AV:62:ARG:HH21	80:B2:1039:A:H5''	1.34	0.86
80:B2:301:A:OP2	89:B2:1942:OHX:N2	2.08	0.86
23:AO:18:ARG:NH2	80:B2:919:A:H5'	1.84	0.86
43:BI:115:MET:HB2	81:B5:2865:U:OP1	1.75	0.86
32:AX:144:ARG:CZ	85:CP:314:LYS:HD3	2.05	0.86
15:AG:134:GLY:N	80:B2:66:U:C4	1.78	0.86
80:B2:679:U:OP2	89:B2:2079:OHX:N1	2.08	0.86
15:AG:154:ARG:C	80:B2:78:A:H5'	1.93	0.86
43:BI:175:ASN:OD1	43:BI:176:LEU:N	2.08	0.86
15:AG:8:PRO:CB	80:B2:165:G:H5''	2.05	0.86
4:A3:14:TYR:CD2	80:B2:1597:A:C8	2.63	0.86
15:AG:172:ALA:HB3	80:B2:79:C:P	2.13	0.86
26:AR:28:PHE:CE2	80:B2:1389:C:C5	2.64	0.86
23:AO:88:GLY:HA2	80:B2:888:U:H5'	1.57	0.86
85:CP:199:ALA:N	90:CP:401:GCP:O6	2.07	0.86
17:AI:22:ARG:HB3	80:B2:385:A:H5''	1.58	0.86
23:AO:29:HIS:HE1	80:B2:918:U:C4'	1.86	0.86
80:B2:1758:U:O2'	81:B5:2255:A:H5'	1.75	0.86
80:B2:1680:G:O6	89:B2:1989:OHX:N5	2.09	0.86
54:BT:135:PRO:O	54:BT:136:ARG:HB2	1.73	0.86
14:AF:73:THR:HG23	25:AQ:114:ARG:HD3	1.58	0.86
32:AX:144:ARG:HH22	85:CP:314:LYS:HD2	0.70	0.86
80:B2:1202:A:OP1	89:B2:1991:OHX:N1	2.09	0.86
81:B5:2766:U:C2	86:CW:76:A:C8	2.63	0.86
42:BH:70:THR:HG21	81:B5:3122:A:N1	1.90	0.86
11:AC:140:ARG:NH1	30:AV:1:MET:SD	2.49	0.86
15:AG:56:ASN:HB2	80:B2:154:G:C1'	2.06	0.86
38:BD:266:ALA:HB2	82:B7:1:G:C8	2.10	0.86
38:BD:16:PHE:CZ	81:B5:2688:U:C4	2.63	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:51:LYS:HD3	81:B5:2523:A:OP2	1.75	0.86
52:BR:143:ILE:HG13	81:B5:2093:A:C5'	2.05	0.86
9:AA:24:LEU:O	9:AA:163:ASN:ND2	2.09	0.86
15:AG:188:ARG:HD2	80:B2:284:G:C8	2.11	0.86
41:BG:181:LYS:CG	83:B8:154:C:H5''	2.04	0.86
48:BN:3:ALA:N	80:B2:1773:C:OP1	118.05	0.86
1:A0:92:ARG:HB3	80:B2:1796:C:O2	1.76	0.86
15:AG:164:LYS:HZ3	80:B2:72:A:C5'	1.77	0.86
15:AG:59:GLN:C	80:B2:155:U:C1'	2.44	0.86
80:B2:1746:A:C2	81:B5:2303:A:H1'	2.11	0.86
81:B5:1555:U:O4	81:B5:1557:A:N6	2.09	0.86
44:BJ:72:ARG:CZ	82:B7:40:C:O2	2.24	0.86
85:CP:131:LYS:HD3	90:CP:401:GCP:C2	2.02	0.86
8:A7:81:THR:OG1	86:CW:29:G:C4'	2.24	0.86
25:AQ:135:ARG:O	80:B2:1581:C:H5'	1.75	0.85
26:AR:10:LYS:CE	80:B2:1316:G:O2'	2.19	0.85
80:B2:414:C:C6	85:CP:288:ARG:HB2	2.11	0.85
38:BD:152:ARG:HD3	81:B5:2663:G:H5'	1.58	0.85
44:BJ:97:SER:HB2	81:B5:2672:G:H1'	1.58	0.85
85:CP:16:THR:CB	90:CP:401:GCP:O3A	2.24	0.85
2:A1:29:ARG:HH11	2:A1:29:ARG:HG3	1.41	0.85
81:B5:726:G:H8	81:B5:726:G:H5'	1.41	0.85
23:AO:52:ARG:HB2	80:B2:906:A:P	2.16	0.85
36:BB:129:ALA:O	81:B5:3150:A:H5'	1.75	0.85
56:BV:47:ASN:O	81:B5:2338:C:H4'	1.75	0.85
17:AI:73:SER:N	80:B2:256:A:O2'	2.08	0.85
26:AR:28:PHE:CZ	80:B2:1389:C:C6	2.55	0.85
29:AU:53:LYS:CD	80:B2:1345:A:H5'	2.06	0.85
25:AQ:123:ARG:O	80:B2:1584:G:C2'	2.23	0.85
18:AJ:176:ASN:ND2	80:B2:511:A:OP2	2.10	0.85
25:AQ:124:PRO:HA	80:B2:1585:U:OP1	1.74	0.85
24:AP:42:ARG:NH2	80:B2:1550:A:OP2	2.09	0.85
1:A0:87:ARG:HD2	80:B2:1797:A:C6	2.11	0.85
80:B2:1655:A:H2	81:B5:2291:A:N3	1.74	0.85
41:BG:59:GLN:NE2	83:B8:150:G:H1'	1.91	0.85
23:AO:18:ARG:HH22	80:B2:919:A:H5''	1.36	0.85
60:BZ:76:ASN:HB2	81:B5:1636:U:H1'	1.58	0.85
35:BA:204:MET:HE2	35:BA:209:HIS:HB2	1.59	0.85
59:BY:21:THR:CG2	79:CL:21:THR:H	121.11	0.85
15:AG:53:SER:HB2	80:B2:163:G:C3'	2.06	0.85
34:AZ:77:ARG:HH21	80:B2:1533:C:H5	1.25	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:248:LYS:CE	81:B5:2529:A:OP1	2.24	0.85
41:BG:59:GLN:HE22	83:B8:150:G:H1'	1.42	0.85
59:BY:21:THR:CG2	79:CL:21:THR:N	120.27	0.85
35:BA:236:GLY:HA2	81:B5:2184:U:O4'	1.76	0.85
35:BA:247:ARG:NH2	80:B2:1013:A:C4'	2.38	0.85
15:AG:60:GLY:N	80:B2:155:U:O4'	2.10	0.85
52:BR:171:ASP:CG	80:B2:852:C:OP2	2.07	0.85
23:AO:46:MET:HG3	80:B2:899:G:C4'	2.07	0.85
28:AT:57:ARG:NH1	80:B2:1479:A:OP2	2.10	0.85
23:AO:35:GLY:CA	80:B2:919:A:H4'	1.99	0.85
35:BA:50:HIS:CD2	81:B5:1795:U:C2'	2.60	0.85
59:BY:46:LYS:HD3	84:CN:2199:C:C4'	136.58	0.85
85:CP:20:LYS:HB2	90:CP:401:GCP:N7	1.90	0.85
1:A0:68:TYR:HB2	10:AB:111:ARG:HG3	1.59	0.84
15:AG:169:TYR:HH	80:B2:73:U:H5	1.25	0.84
17:AI:50:GLY:HA2	80:B2:397:A:H4'	1.57	0.84
80:B2:913:G:C6	81:B5:2206:G:C5'	2.59	0.84
58:BX:33:ARG:NE	81:B5:1580:A:N6	2.25	0.84
15:AG:56:ASN:CG	80:B2:153:G:H21	1.81	0.84
80:B2:1002:G:C4'	81:B5:2265:C:OP1	2.25	0.84
60:BZ:15:ARG:CD	81:B5:1637:A:H4'	2.07	0.84
81:B5:2766:U:N3	86:CW:76:A:H8	1.64	0.84
1:A0:70:LYS:CE	80:B2:930:A:H5''	2.04	0.84
54:BT:129:LYS:HE3	81:B5:1097:G:H5'	1.58	0.84
1:A0:92:ARG:O	80:B2:1796:C:H5''	1.77	0.84
9:AA:49:ASN:HB3	9:AA:52:LYS:HG3	1.56	0.84
23:AO:125:SER:HB2	80:B2:927:C:C1'	2.08	0.84
23:AO:52:ARG:HB3	80:B2:906:A:OP1	1.77	0.84
43:BI:82:ARG:HD3	81:B5:295:A:H1'	131.13	0.84
15:AG:112:VAL:CG2	80:B2:164:A:H5'	2.08	0.84
17:AI:170:SER:OG	80:B2:209:U:H4'	1.77	0.84
80:B2:132:U:H1'	80:B2:133:U:OP2	1.77	0.84
15:AG:157:VAL:HG11	80:B2:78:A:H4'	0.88	0.84
44:BJ:72:ARG:NH2	82:B7:40:C:O2	2.11	0.84
15:AG:108:VAL:HG11	80:B2:153:G:O2'	1.77	0.84
19:AK:27:PHE:HB3	19:AK:40:LEU:HD23	1.58	0.84
25:AQ:135:ARG:NH1	80:B2:1582:U:OP1	2.10	0.84
5:A4:18:THR:HG21	80:B2:584:C:H1'	1.59	0.84
15:AG:175:ILE:N	80:B2:78:A:C2	2.45	0.84
80:B2:1645:G:C2'	81:B5:2259:A:N1	2.41	0.84
59:BY:4:GLN:HB2	81:B5:229:G:H5''	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:127:VAL:HG21	80:B2:478:A:C4'	2.08	0.84
15:AG:132:ARG:NH2	80:B2:68:A:C5	2.41	0.84
46:BL:58:VAL:HG13	81:B5:75:G:H5''	1.58	0.84
46:BL:70:ARG:NH1	81:B5:76:G:OP1	2.10	0.84
52:BR:174:ALA:O	80:B2:853:G:OP1	1.88	0.84
80:B2:416:A:OP2	85:CP:287:LEU:HD21	1.78	0.84
15:AG:59:GLN:H	80:B2:155:U:H4'	0.72	0.84
18:AJ:93:LEU:HA	18:AJ:96:VAL:HG13	1.59	0.84
80:B2:51:A:C8	85:CP:242:GLY:N	2.25	0.84
23:AO:88:GLY:HA3	80:B2:888:U:C5'	2.08	0.84
41:BG:60:ARG:NH2	81:B5:1616:U:C5'	51.15	0.84
13:AE:139:VAL:HG13	13:AE:150:PRO:HG3	1.58	0.84
23:AO:129:LYS:CE	89:B2:2013:OHX:N1	2.40	0.84
32:AX:79:ASN:HB3	32:AX:81:LYS:H	1.40	0.84
38:BD:17:GLN:O	81:B5:2688:U:N3	2.09	0.84
15:AG:128:THR:O	57:BW:81:PRO:HG2	1.78	0.84
80:B2:440:U:P	85:CP:274:ASN:ND2	2.50	0.84
5:A4:28:LYS:NZ	80:B2:477:A:OP1	2.11	0.84
8:A7:28:SER:HB3	81:B5:2708:C:H4'	0.85	0.84
80:B2:1353:U:O4	89:B2:2026:OHX:N3	2.11	0.84
80:B2:1508:U:O4	89:B2:1909:OHX:N5	2.11	0.83
43:BI:84:ALA:O	43:BI:140:THR:HG22	1.77	0.83
15:AG:188:ARG:CG	80:B2:284:G:OP2	2.26	0.83
8:A7:29:ASN:H	81:B5:2708:C:H5'	1.40	0.83
53:BS:50:LYS:NZ	82:B7:76:A:O2'	2.10	0.83
35:BA:69:TYR:CE2	81:B5:2558:U:C4	2.66	0.83
41:BG:60:ARG:NH2	81:B5:1616:U:H4'	50.10	0.83
59:BY:46:LYS:NZ	84:CN:2200:C:OP2	134.73	0.83
17:AI:176:SER:HB2	80:B2:208:U:H5'	1.60	0.83
29:AU:53:LYS:HB3	80:B2:1345:A:H5'	1.60	0.83
26:AR:45:ARG:NH1	80:B2:1415:U:OP1	2.11	0.83
60:BZ:111:LYS:HD3	81:B5:1629:U:O4	1.79	0.83
81:B5:3278:C:O2'	81:B5:3279:A:OP2	1.95	0.83
85:CP:79:GLY:HA2	90:CP:401:GCP:O2G	1.79	0.83
80:B2:142:G:H22	80:B2:173:A:H2	1.23	0.83
81:B5:2444:C:OP1	84:CN:2124:C:O2	1.97	0.83
48:BN:189:LYS:HB2	81:B5:29:C:OP1	1.79	0.83
81:B5:3027:A:H8	85:CP:109:GLN:HE21	1.15	0.83
35:BA:244:GLY:O	81:B5:2153:U:C5'	2.26	0.83
38:BD:95:TRP:CH2	38:BD:181:PRO:HD3	2.13	0.83
15:AG:57:ASP:HA	15:AG:106:LEU:HA	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:174:LYS:CG	80:B2:79:C:H1'	2.08	0.83
52:BR:165:LYS:HE3	80:B2:824:G:N2	1.93	0.83
85:CP:131:LYS:CD	90:CP:401:GCP:C6	2.56	0.83
8:A7:81:THR:HG1	86:CW:29:G:H5'	1.40	0.83
12:AD:159:HIS:O	80:B2:1421:A:H4'	1.77	0.83
17:AI:10:LYS:HD3	80:B2:338:C:H5''	1.60	0.83
27:AS:134:ARG:HG3	80:B2:1545:A:OP2	1.78	0.83
15:AG:112:VAL:CG2	80:B2:164:A:C5'	2.55	0.83
15:AG:133:LEU:HD12	80:B2:66:U:O2	1.77	0.83
11:AC:119:LYS:CE	80:B2:1291:G:H5'	2.07	0.83
80:B2:1542:G:N2	80:B2:1569:A:OP2	2.12	0.83
80:B2:1646:C:H4'	81:B5:2257:C:H42	1.41	0.83
80:B2:320:U:H2'	80:B2:321:C:H2'	1.58	0.83
52:BR:173:ARG:HG2	80:B2:853:G:C4	2.12	0.83
60:BZ:69:LYS:HZ1	81:B5:1633:C:P	1.97	0.83
35:BA:227:ARG:NH2	81:B5:2155:G:O2'	2.09	0.83
38:BD:207:TYR:CZ	82:B7:33:U:C5	2.67	0.83
80:B2:51:A:C1'	85:CP:242:GLY:HA2	1.70	0.83
12:AD:163:PRO:HG2	80:B2:1331:A:N1	1.93	0.83
33:AY:11:LYS:N	80:B2:783:G:O6	2.11	0.83
25:AQ:125:GLU:N	80:B2:1585:U:OP1	2.11	0.83
15:AG:8:PRO:HB2	80:B2:165:G:H5''	1.61	0.83
8:A7:34:LYS:HE3	81:B5:2693:C:OP1	1.78	0.83
43:BI:4:ARG:NH2	81:B5:2828:G:O2'	2.10	0.83
25:AQ:74:HIS:HE1	80:B2:1480:G:N2	1.77	0.83
81:B5:2264:U:OP2	89:B5:3402:OHX:N3	2.12	0.83
15:AG:174:LYS:HD3	80:B2:79:C:C2	2.14	0.82
80:B2:1291:G:N2	80:B2:1324:G:H22	1.76	0.82
80:B2:1759:C:H1'	81:B5:2262:A:H2	1.41	0.82
81:B5:1225:A:N7	81:B5:1287:A:O2'	2.11	0.82
81:B5:851:C:H6	81:B5:851:C:H5''	1.44	0.82
37:BC:204:GLY:O	37:BC:246:ARG:NH1	2.12	0.82
29:AU:27:THR:HG23	29:AU:113:ASP:HB3	1.62	0.82
20:AL:25:VAL:HG11	80:B2:837:G:O2'	1.80	0.82
59:BY:21:THR:CG2	79:CL:21:THR:OG1	120.74	0.82
15:AG:173:PRO:HA	80:B2:66:U:H5'	1.61	0.82
22:AN:151:ASN:O	89:AN:201:OHX:N6	2.12	0.82
24:AP:126:VAL:HG13	24:AP:127:ARG:H	1.41	0.82
25:AQ:14:LYS:NZ	80:B2:1610:G:N7	2.28	0.82
38:BD:145:PHE:CD1	81:B5:2748:A:C5'	2.62	0.82
46:BL:99:HIS:CG	81:B5:156:G:C4	2.68	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:146:GLN:HE22	80:B2:1065:A:H1'	1.44	0.82
80:B2:1041:G:OP1	89:B2:2038:OHX:N5	2.12	0.82
15:AG:175:ILE:CA	80:B2:78:A:N3	2.42	0.82
35:BA:152:SER:CB	81:B5:2157:G:O6	2.27	0.82
81:B5:2793:G:H2'	86:CW:76:A:C2	2.14	0.82
52:BR:83:GLY:N	81:B5:1864:A:OP1	2.12	0.82
80:B2:1646:C:C3'	81:B5:2257:C:N4	2.41	0.82
44:BJ:98:ALA:N	81:B5:2671:A:O2'	2.13	0.82
80:B2:414:C:O5'	85:CP:288:ARG:O	1.94	0.82
8:A7:47:ALA:N	81:B5:2678:A:C1'	2.41	0.82
11:AC:161:LYS:O	89:AC:301:OHX:N1	2.13	0.82
26:AR:10:LYS:NZ	80:B2:1402:G:OP1	2.13	0.82
23:AO:129:LYS:CA	80:B2:990:C:H5''	2.10	0.82
35:BA:35:ALA:HB2	81:B5:39:A:H5''	87.75	0.82
59:BY:21:THR:O	79:CL:20:TYR:HD2	125.29	0.82
17:AI:73:SER:HB2	80:B2:257:A:C1'	2.09	0.82
27:AS:118:LYS:HE2	44:BJ:108:GLU:OE2	1.79	0.82
80:B2:1759:C:C1'	81:B5:2262:A:N1	2.43	0.82
35:BA:187:HIS:CE1	81:B5:1794:G:C2	2.68	0.82
52:BR:171:ASP:HB2	80:B2:851:U:O3'	1.44	0.82
8:A7:33:LYS:NZ	81:B5:2692:A:OP1	2.13	0.82
12:AD:108:LYS:HG2	12:AD:113:LEU:HD12	1.61	0.82
52:BR:175:GLN:H	80:B2:852:C:H4'	0.65	0.82
11:AC:91:ARG:NH1	80:B2:1625:C:P	2.52	0.82
81:B5:1225:A:O4'	81:B5:1287:A:H2'	1.79	0.82
1:A0:15:ARG:HG2	80:B2:943:C:H42	1.45	0.81
14:AF:101:GLY:CA	80:B2:1167:G:OP1	2.20	0.81
26:AR:60:ARG:HH12	80:B2:1400:A:H4'	1.43	0.81
15:AG:59:GLN:C	80:B2:155:U:O4'	2.18	0.81
15:AG:169:TYR:OH	80:B2:73:U:H5	1.62	0.81
52:BR:143:ILE:HG12	81:B5:2093:A:H5''	1.61	0.81
59:BY:46:LYS:N	79:CL:46:LYS:CB	134.92	0.81
8:A7:47:ALA:CB	81:B5:2678:A:C8	2.63	0.81
33:AY:8:ARG:CB	80:B2:780:A:C8	2.62	0.81
81:B5:3027:A:C1'	85:CP:109:GLN:NE2	2.23	0.81
15:AG:182:GLN:NE2	80:B2:271:A:H61	1.76	0.81
25:AQ:15:SER:CB	80:B2:1608:U:OP1	2.28	0.81
81:B5:1025:A:H3'	81:B5:1026:A:H4'	1.60	0.81
35:BA:211:HIS:ND1	81:B5:2185:G:OP1	2.10	0.81
81:B5:2443:A:OP1	84:CN:2123:U:O4	1.96	0.81
36:BB:36:ASP:OD1	81:B5:2738:A:H5'	141.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BP:25:SER:O	50:BP:29:THR:HG23	1.80	0.81
52:BR:62:ARG:NH2	81:B5:3068:U:OP2	2.13	0.81
20:AL:19:ILE:CD1	89:AL:201:OHX:N6	2.42	0.81
28:AT:57:ARG:NH1	80:B2:1479:A:P	2.53	0.81
23:AO:132:ARG:HB3	80:B2:1787:C:OP2	1.80	0.81
80:B2:1686:C:C2'	80:B2:1687:U:H6	1.91	0.81
80:B2:829:A:O2'	80:B2:830:U:OP2	1.97	0.81
23:AO:129:LYS:CB	80:B2:990:C:H5''	2.10	0.81
35:BA:15:ILE:CD1	81:B5:822:G:C4	2.63	0.81
23:AO:20:TYR:CD2	80:B2:917:U:H5''	2.16	0.81
80:B2:1229:G:O2'	80:B2:1255:G:N2	2.14	0.81
54:BT:68:THR:HG23	81:B5:2737:C:P	2.21	0.81
48:BN:109:ARG:NH1	83:B8:141:C:P	2.52	0.81
35:BA:244:GLY:O	81:B5:2153:U:H5''	1.81	0.81
52:BR:170:ARG:CZ	89:BR:201:OHX:N4	2.43	0.81
79:CL:131:LEU:HB3	79:CL:137:LEU:HD23	1.63	0.81
81:B5:1815:U:O2'	81:B5:1816:A:OP2	1.98	0.81
38:BD:158:ARG:HD3	82:B7:46:A:P	2.21	0.81
59:BY:88:GLU:C	79:CL:92:ASP:HA	175.35	0.81
32:AX:144:ARG:NH1	85:CP:314:LYS:CD	2.44	0.81
15:AG:53:SER:C	80:B2:163:G:C4'	2.48	0.81
23:AO:107:ARG:HG3	23:AO:107:ARG:HH11	1.45	0.81
20:AL:99:ARG:NH1	32:AX:7:ARG:O	2.14	0.81
81:B5:1015:U:O2'	81:B5:1017:C:OP1	1.99	0.81
38:BD:207:TYR:CD2	82:B7:33:U:C2	2.68	0.81
41:BG:55:TYR:OH	83:B8:149:A:O2'	1.96	0.81
48:BN:72:LYS:HD3	81:B5:2166:A:O3'	1.81	0.81
8:A7:68:ARG:NH2	27:AS:145:ARG:HB3	1.96	0.81
4:A3:31:ILE:HD11	80:B2:1199:G:C6	2.16	0.81
37:BC:195:ARG:NH2	81:B5:341:G:N7	2.26	0.81
44:BJ:55:ARG:HD3	81:B5:353:G:N7	106.92	0.81
38:BD:266:ALA:CA	82:B7:1:G:C4	2.64	0.81
47:BM:106:ARG:HB2	47:BM:106:ARG:HH11	4.36	0.81
15:AG:175:ILE:CB	80:B2:78:A:C2	2.64	0.81
33:AY:120:GLY:HA2	80:B2:85:A:O3'	1.81	0.81
10:AB:148:ASN:CG	80:B2:1066:C:HO2'	1.83	0.81
1:A0:97:PRO:O	80:B2:1798:U:H5	1.58	0.81
81:B5:1804:A:H2'	81:B5:1805:C:C6	2.16	0.81
58:BX:115:ARG:NH1	58:BX:119:THR:OG1	2.14	0.81
14:AF:37:GLN:HG2	25:AQ:53:LEU:HD13	1.60	0.80
80:B2:280:U:O2'	80:B2:281:G:OP2	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2792:A:C2	86:CW:76:A:N6	2.48	0.80
81:B5:3027:A:O2'	85:CP:83:PHE:CE2	2.25	0.80
37:BC:300:ARG:O	51:BQ:39:ARG:NH1	2.13	0.80
60:BZ:67:LYS:CE	81:B5:1630:U:OP1	2.29	0.80
8:A7:48:ARG:CD	81:B5:2678:A:P	2.64	0.80
11:AC:99:LYS:NZ	80:B2:1299:G:O3'	2.13	0.80
54:BT:49:GLN:NE2	81:B5:2755:C:O2'	2.14	0.80
81:B5:776:U:H5	81:B5:2719:U:O2	1.64	0.80
60:BZ:15:ARG:HD3	81:B5:1637:A:O3'	1.82	0.80
59:BY:46:LYS:CD	84:CN:2199:C:O3'	136.19	0.80
85:CP:20:LYS:N	90:CP:401:GCP:O2A	2.15	0.80
16:AH:131:PHE:O	16:AH:133:THR:N	2.14	0.80
8:A7:51:ARG:NH1	81:B5:2677:G:C8	2.49	0.80
8:A7:34:LYS:HZ1	81:B5:2693:C:H5'	1.45	0.80
35:BA:219:ILE:HD11	81:B5:2185:G:H5'	1.61	0.80
42:BH:98:PRO:O	85:CP:136:TYR:CD2	2.24	0.80
43:BI:154:ARG:NH1	81:B5:2838:A:OP1	2.14	0.80
59:BY:113:LYS:HB2	83:B8:84:C:H1'	1.62	0.80
59:BY:46:LYS:N	79:CL:46:LYS:N	135.79	0.80
9:AA:179:ARG:HD3	9:AA:183:ARG:HH11	1.46	0.80
17:AI:64:ASN:HB2	80:B2:258:C:O4'	1.81	0.80
49:BO:72[A]:HIS:HD2	81:B5:3008:A:OP1	1.64	0.80
10:AB:165:ARG:NE	80:B2:947:U:P	2.54	0.80
52:BR:165:LYS:O	80:B2:850:A:C4	2.08	0.80
23:AO:52:ARG:CB	80:B2:906:A:P	2.70	0.80
81:B5:1225:A:O4'	81:B5:1287:A:C2'	2.28	0.80
52:BR:143:ILE:HG12	81:B5:2093:A:C5'	2.12	0.80
54:BT:8:ARG:HG3	81:B5:2757:U:H4'	1.62	0.80
43:BI:7:ARG:NH1	81:B5:2828:G:OP2	2.15	0.80
52:BR:83:GLY:H	81:B5:1864:A:P	2.04	0.80
26:AR:3:ARG:N	80:B2:1403:C:OP1	2.14	0.80
29:AU:58:LEU:HD23	80:B2:1516:A:C8	2.17	0.80
15:AG:164:LYS:HZ3	80:B2:72:A:H5''	0.82	0.80
81:B5:437:G:N2	81:B5:622:A:H61	1.80	0.80
15:AG:13:GLN:NE2	80:B2:151:G:H1'	1.96	0.80
33:AY:10:ARG:HH12	80:B2:778:G:N2	1.78	0.80
15:AG:132:ARG:CG	80:B2:68:A:C6	2.62	0.80
13:AE:21:ASP:HB2	80:B2:773:C:H5''	1.62	0.80
54:BT:68:THR:HG21	81:B5:2736:A:O2'	1.81	0.80
10:AB:39:GLU:HG3	10:AB:40:ASN:H	1.47	0.80
15:AG:88:ARG:HG3	80:B2:92:A:N1	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:80:MET:HE2	80:B2:325:G:C4'	2.10	0.80
23:AO:38:THR:CG2	80:B2:896:U:O4'	2.29	0.80
85:CP:200:VAL:N	90:CP:401:GCP:C6	2.44	0.80
11:AC:56:ILE:HG23	11:AC:61:LEU:HB2	1.63	0.80
15:AG:175:ILE:HB	80:B2:78:A:C2	2.17	0.80
20:AL:80:MET:CE	80:B2:325:G:H5'	2.12	0.80
29:AU:53:LYS:CA	80:B2:1345:A:O5'	2.29	0.80
26:AR:49:LYS:HA	80:B2:1389:C:O3'	1.81	0.80
80:B2:1758:U:H5'	81:B5:2255:A:O3'	1.80	0.80
18:AJ:127:VAL:HG21	80:B2:478:A:H4'	1.62	0.80
26:AR:60:ARG:NH1	80:B2:1400:A:H5'	1.96	0.80
33:AY:11:LYS:HG2	80:B2:784:C:H42	1.46	0.80
35:BA:39:GLY:HA3	81:B5:2550:U:O4	1.82	0.80
49:BO:110[B]:PRO:O	49:BO:112[B]:TYR:N	2.15	0.80
23:AO:25:ASP:OD2	80:B2:900:A:H5''	1.82	0.79
80:B2:136:C:H4'	80:B2:137:U:OP1	1.83	0.79
48:BN:172:ARG:NH1	81:B5:29:C:O2'	2.14	0.79
85:CP:200:VAL:N	90:CP:401:GCP:O6	2.14	0.79
15:AG:95:LYS:NZ	80:B2:160:C:O3'	2.15	0.79
15:AG:15:THR:CG2	80:B2:153:G:P	2.71	0.79
23:AO:50:ALA:O	23:AO:52:ARG:N	2.14	0.79
81:B5:2440:G:H8	81:B5:2440:G:H5'	1.46	0.79
38:BD:207:TYR:CE1	82:B7:33:U:N1	2.50	0.79
37:BC:329:PRO:O	37:BC:331:ALA:N	2.14	0.79
10:AB:65:VAL:CG2	80:B2:920:U:H5''	2.12	0.79
24:AP:69:GLU:OE1	89:AP:201:OHX:N2	2.16	0.79
80:B2:1686:C:C2'	80:B2:1687:U:O5'	2.30	0.79
35:BA:40:TYR:N	81:B5:2550:U:O4	2.15	0.79
38:BD:207:TYR:CE1	82:B7:33:U:C1'	2.65	0.79
59:BY:52:ARG:NH1	84:CN:2201:U:OP1	135.40	0.79
18:AJ:109:LEU:HB2	18:AJ:146:PHE:HB3	1.62	0.79
28:AT:93:HIS:ND1	80:B2:1525:A:OP1	2.14	0.79
8:A7:33:LYS:HZ1	81:B5:2692:A:P	2.04	0.79
80:B2:187:G:H4'	80:B2:188:A:OP1	1.83	0.79
15:AG:132:ARG:CZ	80:B2:68:A:C8	2.66	0.79
38:BD:265:TYR:OH	82:B7:121:U:OP2	1.99	0.79
38:BD:274:GLN:OE1	82:B7:60:G:C2	2.34	0.79
41:BG:242:ALA:HB2	81:B5:2586:G:O6	1.82	0.79
33:AY:11:LYS:HG2	80:B2:784:C:N4	1.98	0.79
36:BB:169:THR:HG22	36:BB:171:LEU:H	1.45	0.79
44:BJ:11:ASP:O	44:BJ:12:LEU:HB2	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:129:LYS:NZ	81:B5:1097:G:OP1	2.15	0.79
20:AL:133:LYS:HD2	80:B2:338:C:P	2.23	0.79
80:B2:494:U:O2'	80:B2:495:C:O5'	2.01	0.79
81:B5:2255:A:H5'	81:B5:2261:G:H22	1.47	0.79
59:BY:88:GLU:CB	79:CL:92:ASP:O	178.42	0.79
15:AG:185:GLN:CG	80:B2:284:G:C6	2.65	0.79
15:AG:56:ASN:HB3	80:B2:154:G:H1'	1.63	0.79
27:AS:143:ARG:NH2	80:B2:1462:G:N7	2.30	0.79
14:AF:112:ARG:NH1	80:B2:1529:C:OP1	2.16	0.79
80:B2:1064:G:O6	89:B2:2077:OHX:N6	2.15	0.79
41:BG:185:ARG:HD2	83:B8:155:A:C4'	2.12	0.79
38:BD:120:LYS:O	38:BD:248:ARG:NH2	2.16	0.79
53:BS:90:MET:HG2	81:B5:1213:G:H4'	1.65	0.79
81:B5:2443:A:C4	84:CN:2208:G:H3'	2.18	0.79
80:B2:1757:G:O2'	81:B5:2256:A:H2'	1.82	0.78
53:BS:43:TYR:OH	82:B7:96:U:OP1	1.99	0.78
35:BA:204:MET:HG2	81:B5:914:A:N3	1.97	0.78
41:BG:242:ALA:CB	81:B5:2586:G:O6	2.31	0.78
15:AG:108:VAL:HG21	80:B2:153:G:HO2'	1.45	0.78
23:AO:29:HIS:CD2	80:B2:917:U:O2	2.35	0.78
24:AP:115:TYR:CE2	80:B2:1557:U:H5'	2.18	0.78
23:AO:129:LYS:HA	80:B2:990:C:C4'	2.13	0.78
80:B2:1759:C:C1'	81:B5:2262:A:C2	2.60	0.78
35:BA:15:ILE:HG13	81:B5:822:G:C1'	2.14	0.78
8:A7:30:THR:CA	81:B5:2707:C:O2'	2.30	0.78
15:AG:95:LYS:HE2	80:B2:161:U:P	2.23	0.78
23:AO:45:GLY:HA3	80:B2:900:A:OP1	1.83	0.78
31:AW:27:ILE:HD11	31:AW:61:ILE:HD12	1.65	0.78
80:B2:839:U:O4	89:B2:2071:OHX:N4	2.16	0.78
20:AL:36:LYS:HD3	80:B2:248:U:C5'	2.14	0.78
80:B2:51:A:N1	85:CP:243:PHE:CG	2.51	0.78
33:AY:9:THR:HG23	80:B2:781:U:OP2	1.82	0.78
15:AG:175:ILE:CA	80:B2:78:A:C2	2.66	0.78
60:BZ:15:ARG:HD3	81:B5:1637:A:C4'	2.13	0.78
15:AG:153:VAL:O	15:AG:155:ASP:N	2.16	0.78
25:AQ:123:ARG:C	80:B2:1584:G:H2'	2.03	0.78
89:B2:1930:OHX:N2	81:B5:2275:A:OP1	2.17	0.78
10:AB:116:LYS:HE2	80:B2:933:A:OP1	1.82	0.78
42:BH:28:VAL:HG22	42:BH:33:THR:HB	1.64	0.78
10:AB:148:ASN:CG	80:B2:1066:C:O2'	2.20	0.78
15:AG:54:GLY:N	80:B2:163:G:H4'	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1686:C:H2'	80:B2:1687:U:O5'	1.83	0.78
23:AO:29:HIS:HE1	80:B2:918:U:C5'	1.97	0.78
81:B5:15:C:H5'	81:B5:15:C:H6	1.49	0.78
54:BT:71:SER:CB	81:B5:2736:A:H4'	2.14	0.78
8:A7:168:UNK:HA	21:AM:125:ASN:HD21	1.46	0.78
15:AG:112:VAL:CG2	80:B2:164:A:C4'	2.61	0.78
15:AG:60:GLY:O	80:B2:154:G:N3	2.15	0.78
23:AO:120:PRO:CA	80:B2:887:A:H5''	2.14	0.78
29:AU:57:ARG:CG	80:B2:1382:A:O4'	2.31	0.78
10:AB:165:ARG:NH2	80:B2:947:U:P	2.55	0.78
22:AN:114:ARG:HH11	22:AN:114:ARG:HG2	1.49	0.78
23:AO:29:HIS:CE1	80:B2:918:U:C5'	2.65	0.78
23:AO:54:GLU:CD	80:B2:901:G:H1	1.84	0.78
80:B2:1681:A:H2'	80:B2:1682:U:H5'	1.65	0.78
8:A7:51:ARG:NH2	81:B5:2677:G:C8	2.52	0.78
81:B5:766:U:H4'	81:B5:767:U:O5'	1.81	0.78
38:BD:145:PHE:CG	81:B5:2748:A:H4'	2.18	0.78
4:A3:33:LYS:HE3	80:B2:1593:A:O2'	1.83	0.78
14:AF:109:LYS:CD	80:B2:1473:U:H1'	2.14	0.78
80:B2:1073:G:H2'	80:B2:1074:G:H5''	1.66	0.78
80:B2:1758:U:O3'	81:B5:2255:A:H5''	1.84	0.78
23:AO:45:GLY:N	80:B2:900:A:OP1	2.16	0.78
54:BT:129:LYS:CE	81:B5:1097:G:H5'	2.13	0.78
81:B5:2444:C:H42	81:B5:2503:G:H1	1.31	0.78
36:BB:37:ARG:HG2	36:BB:187:SER:H	1.49	0.78
60:BZ:135:ARG:HH21	81:B5:1807:G:C5'	1.97	0.78
14:AF:62:VAL:HG13	14:AF:89:ILE:HG21	1.64	0.78
80:B2:734:A:H5''	80:B2:735:C:OP1	1.83	0.78
80:B2:1643:U:O2	81:B5:2262:A:H1'	1.84	0.78
54:BT:71:SER:OG	81:B5:2736:A:C4'	2.31	0.78
8:A7:51:ARG:HD3	81:B5:2678:A:P	2.22	0.78
17:AI:170:SER:CB	80:B2:209:U:O3'	2.32	0.78
52:BR:173:ARG:NH1	80:B2:819:G:N2	2.32	0.78
38:BD:175:HIS:HA	81:B5:2747:A:H5'	1.64	0.78
52:BR:165:LYS:CE	80:B2:824:G:C2	2.62	0.78
59:BY:46:LYS:CD	84:CN:2199:C:H4'	136.69	0.78
32:AX:73:ARG:HE	32:AX:84:THR:HG22	1.49	0.77
80:B2:838:G:N7	89:B2:2071:OHX:N2	2.32	0.77
52:BR:64:ARG:NH1	81:B5:1689:U:OP1	2.17	0.77
35:BA:187:HIS:ND1	81:B5:1794:G:C2	2.51	0.77
52:BR:173:ARG:NH1	80:B2:819:G:H22	1.81	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AM:76:GLU:OE2	21:AM:90:LYS:NZ	2.17	0.77
29:AU:85:ARG:HH22	80:B2:1335:U:H5'	1.49	0.77
80:B2:1291:G:O5'	80:B2:1291:G:H8	1.66	0.77
14:AF:80:LYS:HE3	80:B2:1405:G:OP1	1.83	0.77
25:AQ:13:LYS:HE2	80:B2:1584:G:O6	1.83	0.77
33:AY:10:ARG:NH2	80:B2:778:G:H22	1.83	0.77
81:B5:1225:A:N9	81:B5:1287:A:C2'	2.47	0.77
81:B5:1952:G:H1	81:B5:2094:C:H42	1.32	0.77
52:BR:173:ARG:HG2	80:B2:853:G:C5	2.19	0.77
59:BY:88:GLU:C	79:CL:92:ASP:CA	174.78	0.77
81:B5:3027:A:HO2'	85:CP:83:PHE:HE2	0.80	0.77
23:AO:132:ARG:NE	80:B2:1788:G:C8	2.52	0.77
32:AX:78:LYS:HB3	80:B2:434:G:H5'	1.66	0.77
14:AF:185:ARG:NH1	80:B2:1572:G:C8	2.52	0.77
80:B2:452:A:OP2	89:B2:1916:OHX:N5	2.18	0.77
81:B5:1225:A:C8	81:B5:1287:A:C2'	2.68	0.77
41:BG:162:LEU:HD11	81:B5:147:U:O2	1.83	0.77
38:BD:40:HIS:HD2	38:BD:42:ALA:H	1.32	0.77
42:BH:77:ASN:HA	42:BH:80:THR:HG23	1.66	0.77
17:AI:42:ARG:HA	80:B2:260:U:C4	2.19	0.77
36:BB:188:ILE:HD12	36:BB:188:ILE:H	1.50	0.77
15:AG:154:ARG:HG3	80:B2:78:A:H8	1.47	0.77
46:BL:5:LYS:HD2	81:B5:1834:U:OP1	81.63	0.77
59:BY:24:SER:OG	83:B8:73:U:OP1	2.02	0.77
85:CP:199:ALA:CB	90:CP:401:GCP:C6	2.56	0.77
1:A0:87:ARG:HH12	80:B2:1796:C:H5'	1.49	0.77
7:A6:284:ALA:HB2	26:AR:63:LYS:HE2	1.64	0.77
15:AG:56:ASN:ND2	80:B2:153:G:N2	2.32	0.77
17:AI:64:ASN:ND2	80:B2:257:A:C2'	2.41	0.77
27:AS:83:ALA:HA	27:AS:86:LEU:HD22	1.65	0.77
33:AY:105:ARG:CB	80:B2:443:C:P	2.72	0.77
25:AQ:125:GLU:HB3	80:B2:1585:U:H5''	1.65	0.77
80:B2:1686:C:C2	80:B2:1687:U:C6	2.72	0.77
80:B2:484:C:H42	80:B2:503:G:H22	1.33	0.77
14:AF:109:LYS:HD2	80:B2:1473:U:H1'	1.65	0.77
35:BA:68:LYS:NZ	81:B5:1579:C:H5''	2.00	0.77
35:BA:217:GLN:NE2	81:B5:2146:C:OP1	2.15	0.77
35:BA:34:TYR:CD2	81:B5:2525:G:C6	2.72	0.77
38:BD:272:TYR:CD2	82:B7:22:A:C8	2.73	0.77
38:BD:276:LYS:HB3	82:B7:61:G:H5''	1.67	0.77
54:BT:68:THR:HG23	81:B5:2737:C:O5'	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:68:THR:OG1	81:B5:2737:C:H4'	1.84	0.77
57:BW:46:PRO:HB2	57:BW:54:LEU:HD23	1.64	0.77
59:BY:46:LYS:CE	84:CN:2199:C:O3'	136.88	0.77
32:AX:144:ARG:CZ	85:CP:314:LYS:HE3	2.15	0.77
3:A2:12:VAL:HG22	3:A2:28:VAL:HG11	1.66	0.77
17:AI:86:SER:OG	80:B2:329:G:O4'	2.03	0.77
80:B2:1370:U:O4	89:B2:2001:OHX:N1	2.17	0.77
38:BD:260:PHE:CD2	82:B7:121:U:H5'	2.19	0.77
52:BR:134:HIS:CD2	81:B5:1947:G:H5'	2.20	0.77
1:A0:3:LYS:HA	80:B2:1792:G:H5''	1.66	0.77
25:AQ:14:LYS:CE	80:B2:1610:G:N7	2.48	0.77
15:AG:62:PRO:HB2	80:B2:162:A:C4'	2.15	0.77
80:B2:420:A:C6	85:CP:288:ARG:NH2	2.53	0.77
35:BA:194:ASN:HD21	81:B5:822:G:H5'	1.50	0.77
1:A0:35:ALA:HB3	1:A0:37:LYS:HE3	1.67	0.77
26:AR:2:GLY:HA3	80:B2:1312:A:P	2.25	0.77
30:AV:74:GLN:NE2	30:AV:81:ASN:O	2.18	0.77
34:AZ:77:ARG:NH2	80:B2:1533:C:C5	2.53	0.77
28:AT:89:ARG:HD2	80:B2:1601:G:C6	2.20	0.77
81:B5:2227:C:H2'	81:B5:2228:A:H5''	1.65	0.77
38:BD:266:ALA:CB	82:B7:1:G:C8	2.68	0.77
26:AR:48:ASN:CB	80:B2:1389:C:C4'	2.64	0.76
27:AS:84:TRP:HA	27:AS:89:GLN:HE22	1.50	0.76
14:AF:185:ARG:NH2	80:B2:1572:G:O2'	2.18	0.76
80:B2:276:C:O2'	80:B2:277:U:H5''	1.84	0.76
60:BZ:69:LYS:NZ	81:B5:1633:C:OP2	2.15	0.76
81:B5:2511:A:H2'	81:B5:2512:C:H5''	1.66	0.76
38:BD:69:ILE:O	82:B7:8:G:H4'	1.86	0.76
52:BR:43:LYS:HG2	81:B5:1764:U:OP2	1.85	0.76
59:BY:45:ILE:HD12	59:BY:119:ILE:HG23	1.66	0.76
10:AB:165:ARG:NH1	80:B2:946:U:C5'	2.41	0.76
12:AD:174:HIS:HE1	80:B2:1278:G:C4'	1.97	0.76
81:B5:150:A:H2'	81:B5:151:A:H5'	1.66	0.76
80:B2:1780:G:C2'	81:B5:2262:A:O2'	2.33	0.76
35:BA:69:TYR:CD2	81:B5:2558:U:C2	2.74	0.76
40:BF:216:VAL:HG11	40:BF:227:GLY:HA3	1.67	0.76
85:CP:78:PRO:O	90:CP:401:GCP:PG	2.44	0.76
6:A5:138:ARG:NH2	80:B2:1236:A:O4'	2.19	0.76
17:AI:42:ARG:CA	80:B2:260:U:O4	2.32	0.76
80:B2:488:G:H4'	80:B2:488:G:OP1	1.86	0.76
80:B2:1655:A:O2'	81:B5:2302:G:O4'	2.03	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2509:U:H2'	81:B5:2510:U:H5''	1.68	0.76
8:A7:47:ALA:HB2	81:B5:2678:A:C8	2.19	0.76
37:BC:51:ALA:O	83:B8:26:U:O2'	2.03	0.76
15:AG:132:ARG:NE	80:B2:68:A:C6	2.52	0.76
10:AB:116:LYS:HZ1	80:B2:933:A:P	2.07	0.76
80:B2:1758:U:HO2'	81:B5:2255:A:H5''	1.48	0.76
35:BA:219:ILE:HD11	81:B5:2185:G:C5'	2.16	0.76
38:BD:94:ASN:HA	82:B7:47:C:OP2	1.84	0.76
52:BR:166:ASN:HB3	80:B2:850:A:H5''	1.66	0.76
4:A3:14:TYR:HD2	80:B2:1597:A:C8	2.01	0.76
10:AB:62:LYS:O	10:AB:64:ARG:N	2.18	0.76
20:AL:130:PRO:HG2	80:B2:115:G:C6	2.21	0.76
80:B2:1757:G:H2'	81:B5:2255:A:HO2'	1.49	0.76
35:BA:240:ALA:HB2	81:B5:2154:U:H4'	1.65	0.76
38:BD:218:ARG:HH12	82:B7:31:U:C4'	1.98	0.76
15:AG:56:ASN:HD21	80:B2:153:G:N2	1.82	0.76
15:AG:169:TYR:OH	80:B2:73:U:C5	2.34	0.76
35:BA:95:SER:OG	81:B5:2551:U:N3	2.17	0.76
10:AB:65:VAL:HG22	80:B2:920:U:C5'	2.14	0.76
28:AT:12:GLN:NE2	80:B2:1530:C:C1'	2.49	0.76
29:AU:53:LYS:HA	80:B2:1345:A:O5'	1.85	0.76
80:B2:1646:C:C4'	81:B5:2257:C:H41	1.97	0.76
80:B2:1715:G:C6	80:B2:1716:C:N4	2.54	0.76
13:AE:19:LEU:HD13	80:B2:788:A:C4	2.20	0.76
23:AO:46:MET:HA	80:B2:899:G:O5'	1.85	0.76
59:BY:46:LYS:CE	84:CN:2200:C:P	136.56	0.76
59:BY:84:LYS:CG	79:CL:87:GLU:HB3	177.85	0.76
59:BY:46:LYS:NZ	84:CN:2199:C:O3'	136.48	0.76
15:AG:59:GLN:O	80:B2:155:U:H1'	1.86	0.76
26:AR:88:VAL:HG22	26:AR:89:SER:H	1.47	0.76
8:A7:32:SER:CB	81:B5:2706:G:O2'	2.34	0.76
1:A0:3:LYS:HA	80:B2:1792:G:C5'	2.15	0.76
10:AB:181:LEU:O	10:AB:184:LEU:N	2.18	0.76
15:AG:186:ARG:NH2	80:B2:269:G:N7	2.33	0.76
16:AH:35:LYS:O	16:AH:37:GLU:N	2.18	0.76
23:AO:46:MET:HG2	80:B2:899:G:C4'	2.12	0.76
31:AW:30:SER:HA	31:AW:34:ILE:HD12	1.67	0.76
60:BZ:83:THR:HG23	60:BZ:85:TYR:H	1.50	0.76
2:A1:67:THR:HG22	80:B2:872:G:H4'	1.68	0.76
8:A7:33:LYS:CD	81:B5:2692:A:H5'	2.15	0.76
12:AD:161:GLY:HA2	80:B2:1420:C:O2	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:159:ARG:NE	80:B2:77:U:C2	2.52	0.76
80:B2:1716:C:O2'	80:B2:1717:G:H8	1.67	0.76
54:BT:70:SER:N	81:B5:2737:C:OP1	2.19	0.76
48:BN:162:ARG:CG	81:B5:56:G:H1'	2.16	0.76
57:BW:44:LYS:HE3	81:B5:2111:G:N3	2.01	0.76
1:A0:15:ARG:O	80:B2:942:G:N7	2.20	0.75
9:AA:104:PRO:HG2	80:B2:1321:A:O5'	1.86	0.75
10:AB:117:TRP:CA	80:B2:932:U:OP2	2.35	0.75
25:AQ:40:GLU:HA	25:AQ:42:GLU:N	2.01	0.75
29:AU:57:ARG:HG2	80:B2:1382:A:C1'	2.17	0.75
81:B5:3028:G:OP1	85:CP:14:VAL:HG21	1.85	0.75
81:B5:437:G:H22	81:B5:622:A:N6	1.81	0.75
52:BR:173:ARG:CG	80:B2:853:G:C4	2.47	0.75
4:A3:31:ILE:HD13	80:B2:1199:G:H1	1.50	0.75
26:AR:28:PHE:CD2	80:B2:1389:C:C5	2.74	0.75
34:AZ:77:ARG:NH2	80:B2:1533:C:H5	1.84	0.75
52:BR:175:GLN:N	80:B2:852:C:C4'	2.12	0.75
80:B2:1645:G:O2'	81:B5:2258:U:O4	2.02	0.75
10:AB:54:LEU:CD1	81:B5:2438:A:H2	1.98	0.75
54:BT:49:GLN:CG	81:B5:2756:C:O4'	2.32	0.75
49:BO:72[A]:HIS:CD2	81:B5:3008:A:OP1	2.39	0.75
15:AG:62:PRO:HB3	80:B2:162:A:O4'	1.85	0.75
10:AB:146:GLN:NE2	80:B2:1065:A:H1'	2.00	0.75
33:AY:120:GLY:HA2	80:B2:85:A:C3'	2.16	0.75
81:B5:3049:A:H5'	81:B5:3049:A:H8	1.50	0.75
38:BD:174:PRO:O	81:B5:2747:A:H4'	1.87	0.75
85:CP:63:GLU:CB	85:CP:210:TRP:CD2	2.69	0.75
28:AT:91:TYR:CE1	80:B2:1469:A:OP1	2.38	0.75
29:AU:23:ARG:NH1	80:B2:1347:U:OP1	2.19	0.75
80:B2:1229:G:HO2'	80:B2:1255:G:N2	1.82	0.75
8:A7:51:ARG:CD	81:B5:2677:G:O3'	2.34	0.75
37:BC:93:MET:HB2	81:B5:658:G:N2	2.01	0.75
59:BY:46:LYS:HG3	79:CL:46:LYS:HG2	134.84	0.75
10:AB:116:LYS:HA	80:B2:931:C:C4'	2.16	0.75
17:AI:36:THR:HB	17:AI:57:ALA:O	1.85	0.75
25:AQ:72:GLY:HA2	80:B2:1608:U:H5''	1.66	0.75
37:BC:307:GLN:OE1	81:B5:1345:G:N2	2.19	0.75
48:BN:67:ARG:HG3	81:B5:1544:G:H5'	1.67	0.75
8:A7:51:ARG:CD	81:B5:2677:G:H4'	2.17	0.75
42:BH:20:ILE:HD13	42:BH:25:VAL:HG22	1.65	0.75
54:BT:129:LYS:CB	81:B5:1098:A:O5'	2.34	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:CP:78:PRO:C	90:CP:401:GCP:O2G	2.25	0.75
80:B2:1057:U:O2'	80:B2:1058:U:OP2	2.02	0.75
27:AS:143:ARG:HB3	80:B2:1461:C:P	2.27	0.75
38:BD:15:ARG:NE	81:B5:1003:A:H1'	2.02	0.75
38:BD:218:ARG:NH1	82:B7:31:U:C4'	2.42	0.75
40:BF:158:LYS:HD2	40:BF:159:GLN:HA	1.66	0.75
7:A6:89:LEU:HB2	7:A6:103:PHE:HB2	1.68	0.75
18:AJ:175:ARG:HG3	18:AJ:175:ARG:HH11	1.51	0.75
17:AI:51:GLY:N	80:B2:397:A:H5''	2.00	0.75
23:AO:126:THR:CG2	80:B2:988:A:H2	1.94	0.75
44:BJ:92:ARG:HG2	44:BJ:92:ARG:HH11	1.51	0.75
80:B2:514:G:H1	80:B2:543:C:H5	1.33	0.75
35:BA:211:HIS:HD1	81:B5:2185:G:P	2.10	0.75
38:BD:226:TYR:HE2	38:BD:236:LEU:HD11	1.51	0.75
12:AD:159:HIS:CG	80:B2:1422:A:H4'	2.21	0.75
23:AO:41:ARG:HH22	80:B2:915:A:N6	1.82	0.75
13:AE:19:LEU:HD22	80:B2:788:A:H2'	1.68	0.75
35:BA:114:SER:HB2	35:BA:169:ILE:HD12	1.67	0.75
52:BR:8:LYS:NZ	81:B5:1473:G:OP2	2.20	0.75
6:A5:138:ARG:NH2	80:B2:1235:C:H2'	2.01	0.74
29:AU:57:ARG:HB3	80:B2:1382:A:O4'	1.87	0.74
33:AY:10:ARG:CA	80:B2:778:G:O6	2.28	0.74
50:BP:127:ARG:HD2	81:B5:1505:C:OP1	1.86	0.74
35:BA:194:ASN:ND2	81:B5:822:G:C5'	2.50	0.74
36:BB:347:SER:HB3	36:BB:350:ALA:H	1.52	0.74
22:AN:12:SER:O	89:B2:1910:OHX:N3	2.20	0.74
17:AI:141:ARG:CZ	80:B2:196:G:N7	2.50	0.74
20:AL:133:LYS:HD2	80:B2:338:C:OP2	1.85	0.74
81:B5:1308:A:C8	81:B5:1308:A:OP2	2.40	0.74
35:BA:211:HIS:CE1	81:B5:2184:U:O3'	2.40	0.74
38:BD:17:GLN:N	81:B5:2688:U:O2	2.19	0.74
41:BG:185:ARG:CD	83:B8:155:A:H4'	2.16	0.74
44:BJ:109:HIS:HD2	44:BJ:123:PHE:H	1.32	0.74
56:BV:2:SER:HA	56:BV:56:ASP:HA	1.69	0.74
14:AF:57:SER:O	14:AF:59:VAL:N	2.20	0.74
16:AH:107:ARG:NH2	80:B2:741:C:O2	2.20	0.74
27:AS:26:ILE:HD11	27:AS:31:ALA:N	2.02	0.74
28:AT:93:HIS:HB2	80:B2:1525:A:H5'	1.68	0.74
89:B2:1918:OHX:N1	89:B2:2064:OHX:N3	2.35	0.74
80:B2:706:A:N1	80:B2:734:A:N6	2.34	0.74
23:AO:18:ARG:NH1	80:B2:918:U:O2'	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:125:SER:CB	80:B2:927:C:H1'	2.13	0.74
23:AO:129:LYS:HA	80:B2:990:C:O3'	1.87	0.74
44:BJ:137:ARG:NE	82:B7:43:U:OP1	2.18	0.74
39:BE:21:THR:HB	81:B5:612:U:OP1	1.87	0.74
51:BQ:38:ARG:NH2	81:B5:1348:U:OP2	2.20	0.74
59:BY:29:VAL:CG1	79:CL:32:LEU:H	141.29	0.74
15:AG:182:GLN:CD	80:B2:271:A:H62	1.91	0.74
81:B5:595:G:H1	81:B5:609:G:H5''	1.53	0.74
85:CP:131:LYS:HD3	90:CP:401:GCP:C6	2.17	0.74
7:A6:102:ARG:NH2	80:B2:1341:A:O2'	2.20	0.74
15:AG:133:LEU:HA	80:B2:66:U:C4	2.22	0.74
18:AJ:149:ARG:NH1	80:B2:765:G:C2	2.56	0.74
10:AB:83:LYS:NZ	23:AO:116:GLU:OE2	2.18	0.74
23:AO:52:ARG:HB2	80:B2:906:A:OP2	1.88	0.74
27:AS:138:THR:OG1	80:B2:1459:C:OP2	2.05	0.74
52:BR:101:VAL:HG22	81:B5:1949:G:P	2.27	0.74
56:BV:48:ARG:HA	81:B5:2338:C:O3'	1.87	0.74
10:AB:109:LYS:HG3	10:AB:113:MET:HE3	1.68	0.74
15:AG:175:ILE:HD11	80:B2:78:A:C2'	2.17	0.74
15:AG:56:ASN:CG	80:B2:153:G:N2	2.38	0.74
12:AD:161:GLY:N	80:B2:1420:C:O2	2.20	0.74
33:AY:105:ARG:HB3	80:B2:443:C:P	2.26	0.74
59:BY:21:THR:HG22	79:CL:21:THR:H	121.71	0.74
81:B5:2802:A:C1'	86:CW:75:C:H42	2.00	0.74
14:AF:144:GLU:OE2	14:AF:225:ARG:NH2	2.21	0.74
23:AO:18:ARG:NH1	80:B2:918:U:C3'	2.51	0.74
17:AI:64:ASN:CG	80:B2:258:C:O4'	2.26	0.74
48:BN:72:LYS:NZ	81:B5:2166:A:O3'	2.19	0.74
17:AI:33:PRO:HA	80:B2:331:A:H5'	1.70	0.74
23:AO:128:LYS:O	80:B2:990:C:H4'	1.87	0.74
27:AS:143:ARG:HA	80:B2:1461:C:OP1	1.88	0.74
80:B2:1002:G:H4'	81:B5:2265:C:P	2.28	0.74
80:B2:355:G:OP2	89:B2:1914:OHX:N4	2.19	0.74
89:B2:1921:OHX:N5	89:B2:2050:OHX:N3	2.36	0.74
60:BZ:48:ARG:NH1	81:B5:1632:A:OP1	2.20	0.74
60:BZ:15:ARG:HB3	81:B5:1637:A:H5''	1.70	0.74
8:A7:46:LYS:HG3	81:B5:2678:A:H4'	1.68	0.74
10:AB:157:GLN:O	10:AB:159:SER:N	2.20	0.74
16:AH:50:ASP:N	16:AH:50:ASP:OD1	2.21	0.74
32:AX:144:ARG:HH12	85:CP:314:LYS:CD	1.99	0.74
15:AG:174:LYS:CE	80:B2:79:C:O2	2.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:913:G:O6	81:B5:2206:G:C3'	2.34	0.74
40:BF:88:ARG:HD2	40:BF:90:LYS:O	1.86	0.74
84:CN:2188:U:H3	84:CN:2192:A:H2	1.34	0.74
10:AB:116:LYS:HA	80:B2:931:C:O3'	1.86	0.74
17:AI:25:ARG:HA	80:B2:400:A:H5''	1.69	0.74
24:AP:42:ARG:NH1	80:B2:1549:C:OP1	2.20	0.74
15:AG:83:CYS:N	80:B2:162:A:P	2.60	0.74
46:BL:99:HIS:NE2	81:B5:156:G:C6	2.55	0.74
81:B5:2444:C:C4'	84:CN:2208:G:C1'	2.42	0.74
35:BA:194:ASN:ND2	81:B5:822:G:H5'	2.03	0.74
48:BN:73:ARG:HG2	48:BN:75:VAL:HG13	1.70	0.74
12:AD:159:HIS:HB3	80:B2:1422:A:H5'	1.70	0.73
15:AG:58:LYS:HA	80:B2:155:U:C5'	2.18	0.73
25:AQ:5:PRO:HG2	25:AQ:24:ALA:HB2	1.69	0.73
26:AR:82:ASP:O	26:AR:83:GLN:NE2	2.20	0.73
29:AU:57:ARG:CB	80:B2:1382:A:O4'	2.36	0.73
29:AU:57:ARG:CG	80:B2:1382:A:C4'	2.66	0.73
25:AQ:75:VAL:CG1	80:B2:1610:G:OP1	2.34	0.73
81:B5:2818:U:C6	81:B5:2818:U:H5'	2.23	0.73
43:BI:15:LYS:N	81:B5:73:C:OP1	94.88	0.73
38:BD:272:TYR:OH	82:B7:22:A:H1'	1.87	0.73
35:BA:200:ARG:HD3	81:B5:2187:G:O6	1.88	0.73
54:BT:68:THR:HG21	81:B5:2736:A:O3'	1.87	0.73
54:BT:68:THR:HG22	54:BT:71:SER:H	1.51	0.73
59:BY:29:VAL:HG22	79:CL:32:LEU:C	143.47	0.73
12:AD:7:LYS:NZ	29:AU:115:GLU:OE2	2.21	0.73
15:AG:83:CYS:HA	80:B2:162:A:P	2.28	0.73
26:AR:28:PHE:CE1	80:B2:1389:C:H1'	2.23	0.73
80:B2:108:A:H2'	80:B2:109:G:C8	2.23	0.73
23:AO:41:ARG:HH22	80:B2:915:A:H62	1.36	0.73
35:BA:187:HIS:CD2	81:B5:1794:G:C6	2.76	0.73
49:BO:160[A]:ARG:NH2	81:B5:3182:G:OP1	2.22	0.73
59:BY:114:ASP:CG	83:B8:85:G:O6	2.26	0.73
15:AG:115:LYS:NZ	57:BW:74:LYS:O	2.21	0.73
81:B5:2443:A:O5'	84:CN:2208:G:C6	2.41	0.73
25:AQ:74:HIS:HE1	80:B2:1480:G:H22	1.36	0.73
27:AS:123:ARG:HG3	27:AS:133:VAL:HG21	1.69	0.73
28:AT:60:SER:HB2	80:B2:1479:A:C5'	2.13	0.73
29:AU:85:ARG:NH2	80:B2:1335:U:H5'	2.02	0.73
17:AI:97:THR:HB	80:B2:330:G:OP1	1.88	0.73
15:AG:164:LYS:CE	80:B2:72:A:H5''	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2211:U:H5	81:B5:2234:G:O6	1.71	0.73
48:BN:125:SER:HB3	81:B5:2433:U:H1'	1.70	0.73
52:BR:170:ARG:N	80:B2:851:U:H3'	2.03	0.73
84:CN:2160:C:O2'	84:CN:2161:C:P	2.46	0.73
15:AG:107:ALA:CB	80:B2:154:G:O3'	2.37	0.73
17:AI:2:GLY:N	80:B2:393:C:OP2	2.21	0.73
15:AG:174:LYS:N	80:B2:79:C:O4'	2.20	0.73
81:B5:2372:A:H5''	81:B5:2373:A:H5'	1.70	0.73
51:BQ:43:PRO:CB	81:B5:728:G:H5''	2.18	0.73
26:AR:7:LYS:CB	80:B2:1316:G:OP1	2.35	0.73
17:AI:64:ASN:CB	80:B2:258:C:O4'	2.37	0.73
80:B2:582:U:C6	80:B2:582:U:H5''	2.24	0.73
15:AG:133:LEU:HD11	80:B2:66:U:HO2'	1.50	0.73
80:B2:818:C:N4	80:B2:819:G:O6	2.21	0.73
81:B5:3289:G:H2'	81:B5:3290:G:C8	2.23	0.73
48:BN:172:ARG:HB3	48:BN:174:ILE:HD13	1.70	0.73
52:BR:169:ALA:HB2	80:B2:850:A:N3	2.04	0.73
85:CP:63:GLU:HB2	85:CP:210:TRP:CD2	2.23	0.73
80:B2:440:U:P	85:CP:274:ASN:HD21	2.08	0.73
80:B2:1655:A:C4'	81:B5:2302:G:H4'	2.18	0.73
80:B2:51:A:H1'	85:CP:242:GLY:N	1.95	0.73
81:B5:2397:A:OP1	81:B5:2398:A:H5''	1.88	0.73
54:BT:89:LEU:HD12	81:B5:2723:U:H5'	1.69	0.73
80:B2:51:A:C2'	85:CP:242:GLY:CA	2.62	0.73
11:AC:206:THR:HG21	80:B2:14:C:OP2	1.89	0.73
21:AM:89:ILE:HG23	21:AM:90:LYS:H	1.52	0.73
32:AX:144:ARG:CZ	85:CP:314:LYS:CE	2.66	0.73
80:B2:471:A:OP2	89:B2:1955:OHX:N4	2.21	0.73
17:AI:92:ARG:NH1	81:B5:2107:A:O2'	2.22	0.73
54:BT:6:GLY:HA2	81:B5:2630:C:OP1	1.89	0.73
38:BD:272:TYR:CE2	82:B7:22:A:H1'	2.24	0.73
38:BD:224:LYS:HD2	82:B7:50:U:O2'	1.88	0.73
9:AA:4:PRO:HB2	9:AA:7:PHE:HB2	1.70	0.73
12:AD:203:PRO:HB3	80:B2:1332:C:H5'	1.69	0.73
12:AD:64:ARG:O	12:AD:67:ASN:N	2.20	0.73
20:AL:80:MET:CE	80:B2:325:G:C4'	2.67	0.73
80:B2:1686:C:O2'	80:B2:1687:U:C5'	2.37	0.73
42:BH:171:ASP:OD1	42:BH:173:ARG:HD3	1.89	0.73
23:AO:123:SER:HB2	80:B2:885:G:H21	0.92	0.73
29:AU:53:LYS:CB	80:B2:1345:A:C5'	2.62	0.73
14:AF:97:LEU:O	80:B2:1473:U:O4	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:28:SER:OG	80:B2:839:U:H5''	1.89	0.73
23:AO:120:PRO:HB2	80:B2:887:A:H5''	1.71	0.73
35:BA:71:LEU:HB2	81:B5:1651:U:H5''	1.71	0.73
38:BD:158:ARG:CD	82:B7:46:A:P	2.76	0.73
41:BG:68:ARG:O	41:BG:69:LEU:HB2	1.89	0.73
84:CN:2201:U:C6	84:CN:2201:U:C5'	2.72	0.73
12:AD:65:ARG:HA	12:AD:68:GLU:HG3	1.70	0.73
18:AJ:149:ARG:NH1	80:B2:765:G:N3	2.37	0.73
20:AL:40:LEU:HD13	80:B2:246:G:H1'	1.71	0.73
24:AP:47:ARG:HH11	80:B2:1555:A:P	2.11	0.73
25:AQ:18:ALA:HB2	25:AQ:69:VAL:HG13	1.71	0.73
26:AR:49:LYS:N	80:B2:1389:C:H4'	2.04	0.73
80:B2:1428:G:H5'	80:B2:1428:G:H8	1.53	0.73
81:B5:1781:C:H2'	81:B5:1782:U:H6	1.54	0.73
81:B5:3027:A:C2'	85:CP:109:GLN:CB	2.63	0.73
42:BH:70:THR:HB	81:B5:3112:G:O2'	1.88	0.73
7:A6:170:ILE:HG21	7:A6:211:ILE:HD11	1.70	0.72
22:AN:14:SER:OG	80:B2:960:U:H5	1.72	0.72
12:AD:4:LEU:O	80:B2:1514:U:C6	2.42	0.72
8:A7:51:ARG:CZ	81:B5:2677:G:C8	2.71	0.72
36:BB:53:MET:HE1	81:B5:3048:A:H5'	1.71	0.72
17:AI:25:ARG:HA	80:B2:400:A:C5'	2.18	0.72
23:AO:88:GLY:CA	80:B2:888:U:C5'	2.66	0.72
27:AS:143:ARG:HB3	80:B2:1461:C:O5'	1.88	0.72
28:AT:43:ASN:HB3	80:B2:1477:G:OP1	1.88	0.72
80:B2:1062:A:OP2	89:B2:2077:OHX:N4	2.22	0.72
80:B2:1655:A:C2	81:B5:2291:A:N3	2.56	0.72
23:AO:132:ARG:N	80:B2:1787:C:P	2.58	0.72
80:B2:74:U:O2'	80:B2:75:U:OP2	2.06	0.72
81:B5:1226:G:C1'	81:B5:1288:U:H4'	2.18	0.72
48:BN:4:TYR:CZ	81:B5:148:G:OP2	2.42	0.72
80:B2:1757:G:C2'	81:B5:2255:A:O2'	2.33	0.72
8:A7:33:LYS:HE3	81:B5:2692:A:C5'	2.19	0.72
38:BD:207:TYR:CD1	82:B7:33:U:C2	2.77	0.72
39:BE:78:ARG:HH11	39:BE:78:ARG:HG3	1.54	0.72
52:BR:165:LYS:CB	80:B2:849:C:O2	2.37	0.72
15:AG:128:THR:OG1	57:BW:80:ARG:CB	2.37	0.72
17:AI:10:LYS:NZ	80:B2:339:C:P	2.61	0.72
80:B2:649:U:O2'	80:B2:650:U:O5'	2.07	0.72
52:BR:166:ASN:N	80:B2:850:A:C8	2.46	0.72
81:B5:2434:U:H4'	81:B5:2435:G:H5''	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CN:2186:G:H2'	84:CN:2187:G:H5''	1.70	0.72
23:AO:37:GLU:HA	80:B2:895:G:H4'	1.72	0.72
26:AR:48:ASN:HB2	80:B2:1389:C:O5'	1.89	0.72
80:B2:1542:G:N2	80:B2:1568:C:H1'	2.04	0.72
15:AG:185:GLN:NE2	80:B2:284:G:C2	2.57	0.72
1:A0:3:LYS:HE3	80:B2:1030:A:OP1	1.90	0.72
89:B2:1921:OHX:N5	89:B2:2050:OHX:N6	2.38	0.72
89:B2:1918:OHX:N4	89:B2:2064:OHX:N3	2.37	0.72
80:B2:759:U:OP1	89:B2:2059:OHX:N1	2.22	0.72
35:BA:68:LYS:HZ3	81:B5:1579:C:H5''	1.52	0.72
81:B5:1724:U:H4'	81:B5:1725:C:OP1	1.87	0.72
50:BP:138:LYS:HG3	50:BP:140:GLU:HG3	1.72	0.72
55:BU:98:THR:HG23	55:BU:104:ARG:HH21	1.55	0.72
15:AG:188:ARG:HD2	80:B2:284:G:N7	2.05	0.72
23:AO:129:LYS:NZ	89:B2:2013:OHX:N3	2.37	0.72
31:AW:2:THR:N	80:B2:1034:C:HO2'	1.87	0.72
89:B2:1921:OHX:N2	89:B2:2050:OHX:N4	2.36	0.72
23:AO:45:GLY:CA	80:B2:900:A:OP1	2.35	0.72
35:BA:204:MET:HG2	81:B5:914:A:C2	2.25	0.72
37:BC:80:GLY:O	81:B5:357:A:H1'	1.89	0.72
51:BQ:170:ARG:HA	51:BQ:174:ARG:HD2	1.71	0.72
56:BV:18:PRO:HG2	81:B5:1898:G:H1'	1.71	0.72
80:B2:415:C:H6	85:CP:287:LEU:C	1.92	0.72
8:A7:68:ARG:HH22	27:AS:145:ARG:HB3	1.54	0.72
80:B2:1600:A:H4'	80:B2:1601:G:OP1	1.90	0.72
80:B2:1683:C:O2'	80:B2:1684:U:O5'	2.07	0.72
52:BR:165:LYS:O	80:B2:850:A:N3	2.22	0.72
48:BN:67:ARG:NE	81:B5:1544:G:OP1	2.19	0.72
8:A7:48:ARG:CB	81:B5:2678:A:OP1	2.38	0.72
20:AL:130:PRO:HD2	80:B2:115:G:C5	2.24	0.72
23:AO:102:LEU:HD22	23:AO:105:LEU:HD11	1.71	0.72
25:AQ:12:LYS:HD3	25:AQ:17:THR:HB	1.70	0.72
15:AG:174:LYS:CB	80:B2:79:C:HO2'	1.93	0.72
23:AO:125:SER:HG	80:B2:927:C:C4'	2.01	0.72
80:B2:1160:A:H2'	80:B2:1161:C:C6	2.25	0.72
28:AT:43:ASN:CB	80:B2:1477:G:OP1	2.38	0.72
17:AI:64:ASN:OD1	80:B2:257:A:C2	2.43	0.72
15:AG:132:ARG:CZ	80:B2:68:A:C4	2.71	0.72
23:AO:88:GLY:HA3	80:B2:888:U:H5''	1.72	0.72
81:B5:2443:A:OP1	84:CN:2123:U:C4	2.43	0.72
36:BB:103:THR:HG21	36:BB:147:GLU:OE1	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:194:GLY:HA3	81:B5:1010:G:H2'	1.72	0.72
51:BQ:158:HIS:H	51:BQ:186:VAL:HG12	1.55	0.72
26:AR:28:PHE:CD2	80:B2:1389:C:H6	2.00	0.72
89:B2:1921:OHX:N1	89:B2:2050:OHX:N4	2.38	0.72
17:AI:64:ASN:HB2	80:B2:258:C:H4'	1.71	0.72
38:BD:36:LEU:HG	81:B5:2748:A:C2	2.25	0.72
81:B5:2875:U:H3	81:B5:2952:G:H1	1.35	0.72
48:BN:81:TYR:OH	81:B5:908:G:H3'	1.89	0.72
1:A0:79:ILE:HG21	80:B2:1794:A:N3	2.05	0.71
6:A5:102:VAL:O	6:A5:104:SER:N	2.23	0.71
10:AB:202:LYS:O	10:AB:202:LYS:NZ	2.23	0.71
23:AO:29:HIS:HB3	23:AO:41:ARG:HG3	1.72	0.71
25:AQ:122:ARG:HA	80:B2:1584:G:H5''	1.70	0.71
81:B5:2439:A:H2'	81:B5:2440:G:H5''	1.72	0.71
35:BA:13:GLY:HA2	81:B5:943:U:H3'	71.49	0.71
8:A7:81:THR:OG1	86:CW:29:G:O3'	2.08	0.71
12:AD:9:ARG:NH1	80:B2:1489:U:P	2.63	0.71
31:AW:57:ARG:NE	80:B2:863:A:OP1	2.22	0.71
53:BS:91:TYR:HB3	81:B5:1214:U:OP1	1.90	0.71
81:B5:2437:G:H5'	81:B5:2437:G:H8	1.55	0.71
41:BG:193:LYS:HB3	81:B5:7:C:H5''	1.72	0.71
35:BA:3:ARG:HD3	81:B5:911:C:H41	1.52	0.71
41:BG:181:LYS:HD2	83:B8:155:A:P	2.30	0.71
50:BP:69:ARG:HG2	50:BP:79:THR:HG23	1.71	0.71
23:AO:46:MET:CA	80:B2:899:G:C5'	2.59	0.71
52:BR:164:LEU:N	80:B2:850:A:O5'	2.05	0.71
35:BA:234:LYS:NZ	81:B5:2162:U:OP1	2.22	0.71
43:BI:115:MET:CB	81:B5:2865:U:OP1	2.39	0.71
37:BC:52:VAL:HG22	81:B5:346:C:P	2.30	0.71
52:BR:46:LYS:HZ1	81:B5:1766:G:H8	1.31	0.71
53:BS:13:ARG:HG3	53:BS:13:ARG:HH11	1.55	0.71
59:BY:36:SER:HB2	59:BY:37:LYS:HE2	1.70	0.71
56:BV:67:PRO:HG3	80:B2:1660:A:OP1	1.90	0.71
41:BG:95:ASN:OD1	41:BG:98:ARG:NH1	2.23	0.71
85:CP:63:GLU:HA	85:CP:210:TRP:CD2	2.21	0.71
10:AB:173:THR:O	10:AB:177:GLN:NE2	2.23	0.71
12:AD:179:GLN:NE2	12:AD:179:GLN:O	2.24	0.71
20:AL:132:SER:HA	80:B2:336:G:H4'	1.69	0.71
25:AQ:75:VAL:HB	80:B2:1610:G:P	2.29	0.71
80:B2:717:C:H42	80:B2:720:G:H22	1.37	0.71
35:BA:69:TYR:HB2	81:B5:2558:U:O4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:52:VAL:HG22	81:B5:346:C:OP1	1.89	0.71
44:BJ:124:GLY:HA3	81:B5:2674:A:C2	2.25	0.71
50:BP:29:THR:HG22	50:BP:87:SER:OG	1.90	0.71
25:AQ:135:ARG:O	80:B2:1581:C:C5'	2.38	0.71
28:AT:57:ARG:HG3	28:AT:57:ARG:NH1	2.03	0.71
1:A0:15:ARG:HA	80:B2:942:G:O6	1.90	0.71
37:BC:115:HIS:HB2	81:B5:681:U:C6	2.26	0.71
49:BO:110[A]:PRO:O	49:BO:113[A]:ASP:N	2.20	0.71
8:A7:33:LYS:HE3	81:B5:2692:A:H5''	1.73	0.71
15:AG:24:ILE:O	15:AG:26:VAL:N	2.23	0.71
15:AG:107:ALA:CB	80:B2:154:G:C4'	2.63	0.71
22:AN:73:ARG:HD3	80:B2:859:A:N6	2.05	0.71
8:A7:34:LYS:HE3	81:B5:2692:A:O3'	1.90	0.71
35:BA:3:ARG:CD	81:B5:911:C:H42	2.01	0.71
11:AC:203:LYS:O	11:AC:206:THR:HG23	1.91	0.71
26:AR:20:TYR:CE2	26:AR:38:ILE:HD11	2.26	0.71
28:AT:41:SER:HA	80:B2:1564:U:OP1	1.90	0.71
33:AY:112:LYS:NZ	80:B2:55:A:OP1	2.24	0.71
81:B5:1024:G:H2'	81:B5:1026:A:H8	1.56	0.71
52:BR:114:LYS:HD3	81:B5:2093:A:N6	2.05	0.71
51:BQ:147:ARG:NH2	81:B5:670:C:OP1	2.24	0.71
18:AJ:110:GLN:NE2	18:AJ:126:ARG:HG2	2.04	0.71
23:AO:29:HIS:O	23:AO:29:HIS:ND1	2.24	0.71
17:AI:50:GLY:HA2	80:B2:397:A:O3'	1.89	0.71
13:AE:3:ARG:HB3	80:B2:93:A:H1'	1.73	0.71
54:BT:2:GLY:N	81:B5:2626:A:O5'	2.24	0.71
38:BD:145:PHE:CD2	81:B5:2748:A:H4'	2.26	0.71
38:BD:270:LYS:HG2	82:B7:2:G:H5'	1.71	0.71
38:BD:207:TYR:CB	82:B7:33:U:O2	2.36	0.71
37:BC:60:THR:HG21	37:BC:77:VAL:HG22	1.71	0.71
44:BJ:59:ILE:HD12	44:BJ:65:ILE:HD11	1.72	0.71
47:BM:125:LYS:HD2	81:B5:2897:A:H5''	93.51	0.71
49:BO:68[B]:ARG:NH1	81:B5:2988:C:P	2.64	0.71
79:CL:42:GLU:CG	79:CL:215:THR:HG23	2.21	0.71
8:A7:78:ASP:OD2	86:CW:29:G:P	2.49	0.71
8:A7:32:SER:HA	81:B5:2707:C:C5'	2.20	0.71
14:AF:40:ILE:HG23	14:AF:42:LEU:HD22	1.70	0.71
15:AG:133:LEU:HA	80:B2:66:U:H3	1.55	0.71
9:AA:185:ARG:HB2	30:AV:45:ALA:HB3	1.72	0.71
80:B2:1290:U:H2'	80:B2:1291:G:C8	2.25	0.71
28:AT:48:GLN:OE1	80:B2:1532:U:H1'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:415:C:C4	85:CP:288:ARG:HD2	2.22	0.71
60:BZ:17:ARG:NH2	81:B5:1634:G:N7	2.38	0.71
80:B2:913:G:C6	81:B5:2206:G:C4'	2.65	0.71
80:B2:1758:U:C5'	81:B5:2255:A:O3'	2.36	0.71
35:BA:40:TYR:O	81:B5:2550:U:C5	2.35	0.71
52:BR:165:LYS:NZ	80:B2:824:G:H1'	2.05	0.71
11:AC:69:ILE:HD11	11:AC:133:LYS:HB3	1.73	0.70
14:AF:113:ILE:O	14:AF:117:THR:OG1	2.07	0.70
15:AG:149:LYS:HD2	80:B2:141:U:OP2	1.91	0.70
17:AI:41:LYS:HE2	80:B2:260:U:OP2	1.91	0.70
6:A5:140:TYR:OH	80:B2:1234:A:H1'	1.91	0.70
26:AR:48:ASN:HB2	80:B2:1389:C:C4'	2.21	0.70
14:AF:109:LYS:CE	80:B2:1474:G:P	2.77	0.70
8:A7:28:SER:HB2	81:B5:2708:C:C4'	2.18	0.70
48:BN:109:ARG:NH1	83:B8:140:G:O3'	2.23	0.70
38:BD:146:LEU:HD13	81:B5:2746:A:C2	2.26	0.70
59:BY:33:ALA:O	79:CL:36:LYS:CB	163.44	0.70
1:A0:95:ARG:HA	80:B2:1797:A:O4'	1.91	0.70
7:A6:76:ASP:OD1	7:A6:76:ASP:N	2.18	0.70
28:AT:126:GLU:HA	28:AT:129:GLN:HG3	1.73	0.70
54:BT:87:LYS:NZ	81:B5:2728:G:N7	2.39	0.70
59:BY:33:ALA:O	79:CL:36:LYS:CA	162.12	0.70
29:AU:106:ILE:HG13	29:AU:107:THR:H	1.53	0.70
24:AP:59:LYS:NZ	80:B2:1242:A:OP1	2.23	0.70
80:B2:1564:U:H2'	80:B2:1565:C:C6	2.26	0.70
80:B2:416:A:OP2	85:CP:287:LEU:HD22	1.85	0.70
37:BC:88:GLY:H	81:B5:1729:A:P	102.26	0.70
81:B5:2407:C:H2'	81:B5:2408:U:H6	1.56	0.70
52:BR:104:ARG:HH12	81:B5:1949:G:C5'	2.03	0.70
59:BY:3:LYS:HD2	59:BY:8:VAL:HG23	1.72	0.70
9:AA:167:LYS:HB3	9:AA:168:HIS:CD2	2.26	0.70
29:AU:69:LYS:HD2	80:B2:1281:G:OP1	1.92	0.70
80:B2:992:A:H2	80:B2:1012:U:H3	1.38	0.70
20:AL:65:SER:HG	80:B2:114:C:HO2'	0.73	0.70
81:B5:2836:C:H5	81:B5:2852:C:N4	1.86	0.70
84:CN:2158:C:C3'	84:CN:2158:C:O2	2.37	0.70
8:A7:31:SER:O	81:B5:2707:C:C5'	2.40	0.70
9:AA:157:ASP:OD1	30:AV:60:ARG:NH1	2.25	0.70
14:AF:99:MET:HB2	80:B2:1166:A:OP1	1.90	0.70
21:AM:54:ARG:O	21:AM:56:GLU:N	2.23	0.70
28:AT:63:ARG:HG3	28:AT:67:MET:HE3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:88:VAL:HG22	80:B2:1172:G:N2	2.00	0.70
33:AY:105:ARG:HB2	80:B2:443:C:P	2.31	0.70
81:B5:1631:C:H5''	81:B5:1632:A:H5''	1.73	0.70
52:BR:74:ARG:HD2	81:B5:1942:U:OP2	1.92	0.70
81:B5:2667:A:H8	81:B5:2667:A:H5'	1.56	0.70
41:BG:240:ASN:ND2	81:B5:2584:G:C4	2.60	0.70
15:AG:110:ALA:CB	80:B2:163:G:C1'	2.63	0.70
23:AO:41:ARG:CZ	80:B2:916:U:N3	2.47	0.70
80:B2:1448:G:O6	89:B2:2083:OHX:N1	2.25	0.70
80:B2:1746:A:H4'	81:B5:2290:C:O2'	1.92	0.70
40:BF:151:ARG:NH2	81:B5:1334:U:O2'	2.24	0.70
38:BD:207:TYR:CE2	82:B7:33:U:C4	2.79	0.70
42:BH:166:ARG:NH1	42:BH:168:ARG:HH22	1.85	0.70
47:BM:17:VAL:HG21	47:BM:74:ARG:HB2	1.72	0.70
54:BT:54:HIS:CD2	81:B5:2724:U:H4'	2.26	0.70
59:BY:21:THR:HG22	79:CL:24:GLU:HB2	123.09	0.70
15:AG:9:VAL:HG13	57:BW:78:ALA:O	1.91	0.70
23:AO:27:PHE:CE1	80:B2:916:U:O2'	2.19	0.70
25:AQ:97:VAL:HG12	25:AQ:98:ASP:H	1.57	0.70
28:AT:86:ARG:HH11	28:AT:86:ARG:HG3	1.55	0.70
80:B2:226:A:H2'	80:B2:227:U:H5'	1.73	0.70
80:B2:653:C:H2'	80:B2:654:C:O4'	1.92	0.70
46:BL:99:HIS:CD2	81:B5:156:G:C2	2.78	0.70
52:BR:170:ARG:NH2	89:BR:201:OHX:N4	2.38	0.70
8:A7:51:ARG:CD	81:B5:2677:G:C4'	2.68	0.70
15:AG:174:LYS:HE2	80:B2:79:C:O2	1.92	0.70
15:AG:58:LYS:CA	80:B2:155:U:H5'	2.21	0.70
15:AG:62:PRO:HB2	80:B2:162:A:H5'	1.74	0.70
18:AJ:117:GLY:O	18:AJ:119:ALA:N	2.24	0.70
17:AI:138:ASN:CG	80:B2:197:A:N1	2.44	0.70
80:B2:1769:U:OP2	89:B2:2030:OHX:N1	2.25	0.70
17:AI:31:ARG:NH2	80:B2:333:A:OP1	2.25	0.70
80:B2:1780:G:O6	81:B5:2263:C:H4'	1.46	0.70
81:B5:595:G:N1	81:B5:609:G:H5''	2.06	0.70
38:BD:23:ARG:NH2	81:B5:2703:A:OP2	2.23	0.70
38:BD:260:PHE:CD2	82:B7:121:U:C5'	2.73	0.70
13:AE:22:LYS:NZ	80:B2:772:G:OP1	2.21	0.70
43:BI:194:GLY:H	81:B5:1010:G:H21	1.40	0.70
81:B5:1765:U:H4'	81:B5:1765:U:OP1	1.91	0.70
53:BS:39:SER:OG	82:B7:98:C:OP1	2.08	0.70
35:BA:199:THR:HG21	81:B5:914:A:C8	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:128:ARG:NH2	81:B5:170:G:OP1	2.24	0.70
48:BN:140:LYS:HG3	81:B5:127:G:OP1	1.91	0.70
52:BR:43:LYS:O	52:BR:47:ASN:HB2	1.92	0.70
81:B5:2443:A:H5''	84:CN:2122:G:N2	2.07	0.70
1:A0:92:ARG:HG2	80:B2:1796:C:OP1	1.92	0.70
12:AD:29:LEU:HD21	12:AD:69:LEU:HD11	1.73	0.70
23:AO:123:SER:OG	80:B2:885:G:N3	2.24	0.70
28:AT:49:ASP:HB3	28:AT:53:TRP:HB3	1.73	0.70
6:A5:146:SER:HB3	80:B2:1234:A:O2'	1.91	0.70
24:AP:115:TYR:HE2	80:B2:1557:U:H5'	1.54	0.70
89:B2:1915:OHX:N2	89:B2:2071:OHX:N2	2.40	0.70
80:B2:434:G:N7	89:B2:1926:OHX:N4	2.40	0.70
48:BN:112:ASN:OD1	83:B8:141:C:H1'	1.92	0.70
59:BY:46:LYS:HD3	84:CN:2199:C:C3'	136.54	0.70
12:AD:161:GLY:CA	80:B2:1420:C:O2	2.40	0.69
17:AI:51:GLY:N	80:B2:397:A:C5'	2.55	0.69
26:AR:43:SER:HB2	80:B2:1332:C:OP1	1.91	0.69
29:AU:59:PRO:HG3	80:B2:1381:U:H4'	1.74	0.69
9:AA:52:LYS:HD2	30:AV:82:VAL:HA	1.72	0.69
32:AX:91:GLY:O	32:AX:93:LEU:N	2.25	0.69
33:AY:8:ARG:HB3	80:B2:780:A:H8	1.55	0.69
29:AU:75:GLY:CA	80:B2:1194:A:OP2	2.40	0.69
27:AS:40:ARG:CZ	80:B2:1539:G:H4'	2.22	0.69
23:AO:51:ASP:CG	80:B2:902:G:H1	1.96	0.69
81:B5:155:G:H5''	81:B5:156:G:C8	2.27	0.69
81:B5:439:C:H4'	81:B5:440:A:H5'	1.74	0.69
38:BD:270:LYS:HB2	82:B7:2:G:H4'	1.72	0.69
37:BC:51:ALA:HB3	83:B8:27:U:H4'	1.74	0.69
43:BI:76:MET:HE1	43:BI:148:VAL:HA	1.72	0.69
52:BR:166:ASN:OD1	89:BR:201:OHX:N4	2.25	0.69
28:AT:28:LEU:HD13	28:AT:29:GLU:H	1.56	0.69
33:AY:119:PHE:CZ	80:B2:86:A:H5'	2.27	0.69
23:AO:88:GLY:HA3	80:B2:888:U:H5'	1.67	0.69
35:BA:69:TYR:O	81:B5:1650:G:H4'	1.92	0.69
80:B2:995:A:C5'	81:B5:2196:C:OP1	2.32	0.69
38:BD:269:SER:HA	82:B7:22:A:N1	2.07	0.69
42:BH:166:ARG:HH11	42:BH:168:ARG:NH2	1.87	0.69
54:BT:78:LYS:CE	81:B5:2728:G:O6	2.40	0.69
10:AB:176:VAL:O	10:AB:178:GLY:N	2.25	0.69
15:AG:175:ILE:HG12	80:B2:78:A:C1'	2.14	0.69
23:AO:125:SER:OG	80:B2:927:C:C4'	2.39	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:185:ARG:HH22	80:B2:1572:G:C2'	2.05	0.69
14:AF:185:ARG:NH1	80:B2:1572:G:H1'	2.06	0.69
80:B2:565:C:O2	89:B2:1917:OHX:N5	2.25	0.69
80:B2:582:U:H6	80:B2:582:U:H5''	1.57	0.69
53:BS:84:ARG:HD3	82:B7:89:G:H4'	1.74	0.69
20:AL:78:THR:HG22	20:AL:84:ILE:HG22	1.72	0.69
21:AM:61:VAL:HG13	21:AM:121:VAL:HG23	1.75	0.69
27:AS:134:ARG:NE	80:B2:1546:G:OP2	2.23	0.69
80:B2:838:G:N7	89:B2:2071:OHX:N6	2.40	0.69
53:BS:137:ARG:HD3	81:B5:1213:G:OP1	1.91	0.69
81:B5:173:G:HO2'	81:B5:174:C:H6	1.40	0.69
54:BT:8:ARG:HD3	81:B5:2757:U:C4'	2.22	0.69
38:BD:12:TYR:OH	81:B5:2688:U:OP1	2.10	0.69
44:BJ:23:VAL:HG12	44:BJ:25:GLU:H	1.56	0.69
52:BR:165:LYS:NZ	80:B2:824:G:N3	2.40	0.69
53:BS:9:VAL:HG22	53:BS:61:ILE:HD13	1.74	0.69
13:AE:79:ASP:HB3	13:AE:82:TYR:HB2	1.73	0.69
19:AK:68:LEU:HD11	19:AK:76:LEU:HD21	1.73	0.69
25:AQ:136:SER:HA	80:B2:1580:C:O2'	1.92	0.69
80:B2:1711:C:H2'	80:B2:1712:A:H5''	1.74	0.69
80:B2:437:A:OP1	89:B2:2049:OHX:N3	2.26	0.69
80:B2:591:A:H2'	80:B2:592:A:C8	2.27	0.69
81:B5:549:U:H2'	81:B5:550:A:C8	2.27	0.69
36:BB:56:ILE:HD11	36:BB:359:ILE:HG12	1.74	0.69
46:BL:100:ARG:NE	81:B5:66:A:OP2	2.26	0.69
48:BN:38:ARG:NH2	83:B8:143:U:OP1	2.25	0.69
52:BR:103:ARG:NH1	81:B5:1722:U:OP2	2.24	0.69
58:BX:49:LYS:CE	83:B8:135:G:OP1	2.38	0.69
60:BZ:15:ARG:HD3	81:B5:1637:A:C3'	2.23	0.69
60:BZ:5:LEU:HD22	60:BZ:77:TYR:CE1	2.27	0.69
17:AI:171:SER:CA	80:B2:209:U:H5'	2.23	0.69
29:AU:23:ARG:NH2	80:B2:1347:U:H6	1.90	0.69
17:AI:49:ARG:HG2	80:B2:117:U:O2'	1.92	0.69
52:BR:165:LYS:CG	80:B2:849:C:O2	2.39	0.69
35:BA:204:MET:HG2	81:B5:914:A:C4	2.28	0.69
52:BR:168:ALA:HB3	80:B2:850:A:H2'	1.74	0.69
56:BV:12:ARG:NH2	81:B5:3092:C:O2'	2.26	0.69
60:BZ:16:GLY:O	60:BZ:18:TYR:N	2.25	0.69
84:CN:2184:C:O2	84:CN:2184:C:O4'	2.09	0.69
26:AR:50:ILE:O	26:AR:54:THR:HG23	1.92	0.69
17:AI:47:ARG:HH21	80:B2:397:A:P	2.15	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:137:ASN:HB2	81:B5:148:G:C6	2.27	0.69
81:B5:1875:G:H2'	81:B5:1876:U:H5''	1.73	0.69
35:BA:85:GLY:CA	81:B5:2554:A:C4	2.76	0.69
8:A7:48:ARG:HG3	81:B5:2678:A:H5'	1.74	0.69
38:BD:48:LYS:NZ	81:B5:2749:G:OP1	2.17	0.69
35:BA:35:ALA:CB	81:B5:39:A:H5''	87.39	0.69
36:BB:41:VAL:CA	36:BB:185:GLY:HA3	2.19	0.69
79:CL:185:LEU:O	79:CL:188:ASN:N	2.24	0.69
9:AA:193:GLN:O	9:AA:195:TRP:N	2.26	0.69
80:B2:1533:C:H4'	80:B2:1539:G:N1	2.06	0.69
89:B2:1921:OHX:N1	89:B2:2050:OHX:N3	2.40	0.69
15:AG:182:GLN:CD	80:B2:271:A:N6	2.46	0.69
81:B5:1781:C:H2'	81:B5:1782:U:C6	2.26	0.69
35:BA:187:HIS:CE1	81:B5:1794:G:N1	2.61	0.69
44:BJ:142:LYS:NZ	81:B5:2664:C:OP2	2.25	0.69
49:BO:110[A]:PRO:O	49:BO:112[A]:TYR:N	2.26	0.69
50:BP:33:ALA:HB1	50:BP:117:ILE:HG12	1.74	0.69
18:AJ:163:PRO:O	18:AJ:165:GLY:N	2.26	0.69
80:B2:131:C:OP1	89:B2:1952:OHX:N4	2.26	0.69
15:AG:62:PRO:CG	80:B2:161:U:O2'	2.38	0.69
80:B2:440:U:O5'	85:CP:276:ARG:HG3	1.93	0.69
15:AG:133:LEU:CA	80:B2:66:U:C4	2.75	0.69
52:BR:165:LYS:HB2	80:B2:849:C:H2'	1.75	0.69
54:BT:5:HIS:N	81:B5:2630:C:OP2	2.24	0.69
38:BD:270:LYS:HB2	82:B7:2:G:C4'	2.21	0.69
35:BA:237:LEU:HD23	81:B5:2183:A:H2	1.56	0.69
49:BO:62[A]:THR:H	49:BO:69[A]:GLY:HA3	1.57	0.69
1:A0:3:LYS:HA	80:B2:1792:G:O5'	1.93	0.69
8:A7:81:THR:HG23	86:CW:29:G:P	2.33	0.69
18:AJ:109:LEU:HD13	18:AJ:129:ILE:HD13	1.75	0.69
15:AG:60:GLY:C	80:B2:154:G:H21	1.91	0.69
80:B2:1738:U:O4	89:B2:1919:OHX:N4	2.26	0.69
15:AG:175:ILE:HG13	80:B2:78:A:C4	2.23	0.69
80:B2:1655:A:H4'	81:B5:2302:G:H4'	1.73	0.69
37:BC:334:PHE:CD2	81:B5:578:A:C6	2.81	0.69
38:BD:272:TYR:CE2	82:B7:22:A:C1'	2.76	0.69
49:BO:68[A]:ARG:NH1	81:B5:2988:C:P	2.65	0.69
15:AG:132:ARG:HG3	80:B2:68:A:H61	1.47	0.69
22:AN:55:ARG:NH1	22:AN:56:ASP:OD2	2.26	0.69
17:AI:75:LYS:HB2	80:B2:258:C:H5''	1.74	0.69
15:AG:159:ARG:HD3	80:B2:77:U:H3	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:1355:A:H4'	81:B5:1356:U:O5'	1.93	0.69
58:BX:111:ASN:HD21	81:B5:1608:C:H5''	1.55	0.69
81:B5:2403:G:N2	81:B5:2404:A:H62	1.91	0.69
35:BA:209:HIS:HE1	81:B5:2184:U:OP1	1.76	0.69
35:BA:236:GLY:H	81:B5:2183:A:C2'	2.05	0.69
49:BO:60[B]:LYS:NZ	81:B5:1307:G:H5''	2.08	0.69
81:B5:2443:A:H5'	84:CN:2122:G:H1	1.48	0.69
85:CP:199:ALA:HB1	90:CP:401:GCP:N7	2.08	0.69
2:A1:67:THR:O	80:B2:871:G:O2'	2.11	0.68
4:A3:32:ARG:NH2	80:B2:1597:A:OP2	2.26	0.68
80:B2:1646:C:C3'	81:B5:2257:C:H42	2.05	0.68
41:BG:38:GLN:HA	81:B5:2557:A:C2	2.29	0.68
8:A7:32:SER:CB	81:B5:2692:A:H1'	2.22	0.68
36:BB:126:LYS:NZ	81:B5:3294:A:OP2	2.26	0.68
35:BA:199:THR:OG1	81:B5:913:A:C5'	2.41	0.68
52:BR:168:ALA:CB	80:B2:850:A:O2'	2.40	0.68
22:AN:84:ILE:HG22	22:AN:135:LEU:HD21	1.73	0.68
80:B2:176:C:OP1	89:B2:1952:OHX:N3	2.26	0.68
35:BA:231:SER:OG	81:B5:2164:A:OP2	2.10	0.68
46:BL:61:PRO:HD3	81:B5:75:G:H4'	1.74	0.68
38:BD:272:TYR:CZ	82:B7:22:A:C1'	2.75	0.68
35:BA:21:ARG:HD2	81:B5:825:U:OP1	1.93	0.68
36:BB:41:VAL:HA	36:BB:185:GLY:CA	2.22	0.68
41:BG:90:THR:HA	41:BG:214:LEU:HD21	1.75	0.68
43:BI:99:ILE:HG13	43:BI:123:HIS:HB2	1.76	0.68
80:B2:415:C:C6	85:CP:288:ARG:HG2	2.29	0.68
15:AG:174:LYS:CB	80:B2:79:C:C4'	2.71	0.68
31:AW:15:ASN:HD21	31:AW:71:LYS:HA	1.58	0.68
29:AU:53:LYS:CB	80:B2:1345:A:H5'	2.24	0.68
15:AG:87:ARG:NH1	80:B2:159:U:O2	2.26	0.68
23:AO:29:HIS:NE2	80:B2:918:U:O4'	2.25	0.68
36:BB:246:LEU:N	81:B5:1889:G:OP1	2.25	0.68
8:A7:51:ARG:NH1	81:B5:2677:G:N9	2.41	0.68
81:B5:3289:G:H2'	81:B5:3290:G:H8	1.59	0.68
23:AO:20:TYR:HE2	80:B2:917:U:OP1	1.75	0.68
28:AT:12:GLN:OE1	80:B2:1529:C:C1'	2.41	0.68
32:AX:144:ARG:NH1	85:CP:314:LYS:CE	2.57	0.68
81:B5:3317:U:H4'	81:B5:3318:G:O5'	1.92	0.68
46:BL:99:HIS:CD2	81:B5:156:G:C6	2.81	0.68
52:BR:8:LYS:NZ	81:B5:1473:G:P	2.67	0.68
53:BS:50:LYS:CE	82:B7:76:A:N3	2.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:131:C:O2'	80:B2:132:U:OP1	2.11	0.68
28:AT:12:GLN:OE1	80:B2:1529:C:H1'	1.92	0.68
17:AI:50:GLY:HA2	80:B2:397:A:C4'	2.23	0.68
80:B2:839:U:H2'	80:B2:840:U:H5'	1.76	0.68
17:AI:92:ARG:NH2	81:B5:2107:A:H4'	2.07	0.68
51:BQ:20:LYS:HD3	81:B5:671:U:O2'	1.93	0.68
51:BQ:63:SER:HB2	81:B5:785:G:N2	2.09	0.68
38:BD:207:TYR:CE2	82:B7:33:U:C5	2.81	0.68
38:BD:105:ILE:O	38:BD:109:THR:HG23	1.92	0.68
85:CP:20:LYS:CB	90:CP:401:GCP:H8	2.00	0.68
13:AE:22:LYS:N	80:B2:773:C:OP1	2.26	0.68
26:AR:48:ASN:ND2	80:B2:1389:C:P	2.62	0.68
4:A3:31:ILE:CD1	80:B2:1199:G:H1	2.07	0.68
80:B2:701:U:H3	80:B2:737:A:N6	1.87	0.68
81:B5:1013:G:H2'	81:B5:1014:U:O4'	1.94	0.68
8:A7:46:LYS:HG3	81:B5:2678:A:C4'	2.23	0.68
39:BE:26:ARG:NH2	81:B5:607:A:OP1	2.26	0.68
40:BF:134:VAL:O	40:BF:229:PHE:HA	1.94	0.68
54:BT:127:GLN:HG3	81:B5:1095:U:N3	2.09	0.68
60:BZ:69:LYS:NZ	81:B5:1633:C:OP1	2.25	0.68
10:AB:115:ARG:O	80:B2:931:C:H4'	1.94	0.68
11:AC:116:LYS:HG2	11:AC:127:ALA:HB3	1.75	0.68
15:AG:160:ARG:NH2	80:B2:68:A:OP1	2.27	0.68
15:AG:164:LYS:HB3	15:AG:167:LYS:HB3	1.75	0.68
15:AG:59:GLN:N	80:B2:155:U:C5'	2.56	0.68
16:AH:133:THR:HG22	16:AH:159:VAL:HG12	1.73	0.68
17:AI:114:GLU:HG2	17:AI:120:THR:HA	1.75	0.68
26:AR:4:VAL:HG22	80:B2:1402:G:H4'	1.74	0.68
80:B2:1656:U:O2'	81:B5:2292:U:O2'	1.69	0.68
36:BB:117:ARG:CZ	36:BB:175:LYS:HD2	2.23	0.68
38:BD:207:TYR:CD2	82:B7:33:U:N3	2.62	0.68
42:BH:188:THR:HG22	42:BH:189:GLU:HG2	1.75	0.68
85:CP:199:ALA:HB3	90:CP:401:GCP:C5	2.24	0.68
85:CP:200:VAL:CA	90:CP:401:GCP:N1	2.57	0.68
8:A7:28:SER:CB	81:B5:2708:C:O4'	2.42	0.68
13:AE:85:GLY:N	13:AE:88:ASP:OD2	2.27	0.68
14:AF:185:ARG:NH1	80:B2:1572:G:H8	1.91	0.68
80:B2:1644:C:O2	81:B5:2255:A:N1	2.26	0.68
81:B5:2507:C:O2'	81:B5:2508:U:OP1	2.10	0.68
81:B5:3330:A:H5''	81:B5:3330:A:H8	1.59	0.68
8:A7:47:ALA:HA	81:B5:2678:A:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:48:ASN:HB3	80:B2:1389:C:C4'	2.23	0.68
80:B2:1449:U:H2'	80:B2:1450:U:C6	2.28	0.68
81:B5:3228:C:O2'	81:B5:3229:G:OP2	2.11	0.68
36:BB:150:ARG:HH11	36:BB:150:ARG:HG2	1.58	0.68
9:AA:101:ARG:HH22	80:B2:1320:U:H3'	1.50	0.68
16:AH:107:ARG:NH1	80:B2:741:C:O2	2.27	0.68
16:AH:119:THR:HG23	80:B2:639:U:OP1	1.93	0.68
80:B2:1655:A:H1'	81:B5:2302:G:O4'	1.93	0.68
43:BI:194:GLY:HA3	81:B5:1010:G:N3	2.09	0.68
41:BG:136:LEU:HD12	81:B5:147:U:H5'	1.76	0.68
81:B5:2572:C:O2'	81:B5:2573:G:OP2	2.08	0.68
54:BT:6:GLY:CA	81:B5:2630:C:H5''	2.23	0.68
46:BL:19:GLN:NE2	83:B8:53:A:OP1	46.80	0.68
35:BA:15:ILE:HD12	81:B5:822:G:N3	2.09	0.68
51:BQ:69:ARG:HH22	81:B5:720:A:H2	1.39	0.68
55:BU:19:VAL:O	55:BU:23:THR:OG1	2.11	0.68
60:BZ:115:LYS:HD3	81:B5:1629:U:H4'	1.75	0.68
18:AJ:169:PRO:HD2	18:AJ:174:ARG:HD2	1.76	0.67
25:AQ:40:GLU:OE2	80:B2:1529:C:C4'	2.42	0.67
27:AS:118:LYS:HE2	44:BJ:108:GLU:CD	2.13	0.67
48:BN:38:ARG:HH22	83:B8:143:U:P	2.17	0.67
79:CL:70:LYS:HG2	79:CL:71:GLN:HE21	1.50	0.67
10:AB:70:LEU:O	10:AB:74:GLN:N	2.28	0.67
20:AL:4:GLU:HG3	20:AL:5:LEU:HG	1.74	0.67
31:AW:47:ILE:HG22	31:AW:65:LEU:HB3	1.76	0.67
80:B2:38:C:H2'	80:B2:39:A:H5'	1.76	0.67
23:AO:41:ARG:HH21	80:B2:915:A:N6	1.89	0.67
23:AO:128:LYS:C	80:B2:990:C:H4'	2.14	0.67
81:B5:2996:U:OP1	81:B5:2996:U:H4'	1.95	0.67
85:CP:63:GLU:C	85:CP:210:TRP:CH2	2.67	0.67
18:AJ:53:ARG:NH1	18:AJ:97:LEU:O	2.27	0.67
22:AN:107:LYS:HE3	80:B2:1019:A:OP2	1.94	0.67
80:B2:1339:C:O2'	80:B2:1340:U:OP1	2.12	0.67
15:AG:53:SER:O	80:B2:163:G:H4'	1.94	0.67
80:B2:1758:U:H5'	81:B5:2256:A:P	2.34	0.67
17:AI:178:ARG:NH2	80:B2:207:U:O2	2.27	0.67
81:B5:2957:G:H8	81:B5:2957:G:H5'	1.59	0.67
54:BT:51:GLY:HA3	54:BT:92:ARG:HG3	1.76	0.67
1:A0:87:ARG:CZ	80:B2:1797:A:C5	2.78	0.67
4:A3:33:LYS:O	4:A3:36:LEU:HD23	1.95	0.67
9:AA:185:ARG:HA	30:AV:44:ARG:HA	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AE:13:ALA:O	13:AE:39:ARG:NH2	2.27	0.67
15:AG:112:VAL:HG22	80:B2:164:A:C4'	2.12	0.67
16:AH:50:ASP:HA	16:AH:56:LYS:HA	1.76	0.67
80:B2:1619:C:OP2	89:B2:2073:OHX:N4	2.28	0.67
15:AG:8:PRO:HB3	80:B2:165:G:C5'	2.24	0.67
15:AG:175:ILE:C	80:B2:78:A:H2	1.97	0.67
22:AN:15:ALA:O	80:B2:959:U:H5'	1.94	0.67
36:BB:139:GLN:O	36:BB:141:GLY:N	2.27	0.67
38:BD:40:HIS:CD2	38:BD:42:ALA:H	2.11	0.67
41:BG:148:ALA:HA	41:BG:201:THR:HG22	1.76	0.67
46:BL:16:LYS:O	81:B5:48:A:OP2	2.12	0.67
46:BL:45:LYS:HE3	81:B5:241:G:H5'	1.76	0.67
25:AQ:122:ARG:CA	80:B2:1584:G:H5''	2.24	0.67
80:B2:1756[B]:A:O2'	80:B2:1757:G:H5'	1.95	0.67
60:BZ:135:ARG:CZ	81:B5:1807:G:H5''	2.23	0.67
81:B5:304:G:N3	81:B5:304:G:H5'	2.10	0.67
42:BH:44:THR:HG22	81:B5:3186:A:C2	2.28	0.67
81:B5:3295:A:H2'	81:B5:3296:A:C8	2.29	0.67
37:BC:93:MET:O	81:B5:1438:U:H1'	1.95	0.67
14:AF:94:THR:HB	14:AF:114:ILE:HG13	1.77	0.67
24:AP:12:PHE:HD1	44:BJ:85:LYS:CE	2.08	0.67
29:AU:23:ARG:NH2	80:B2:1347:U:C6	2.63	0.67
12:AD:204:ASP:CG	80:B2:1330:G:H1	1.90	0.67
80:B2:1747:G:O2'	81:B5:2304:C:C5'	2.34	0.67
80:B2:838:G:O6	89:B2:2071:OHX:N2	2.28	0.67
22:AN:3:ARG:NH1	80:B2:867:G:OP1	2.28	0.67
80:B2:913:G:O6	81:B5:2206:G:C5'	2.38	0.67
38:BD:274:GLN:OE1	82:B7:60:G:N3	2.27	0.67
9:AA:70:PRO:HB2	9:AA:94:GLY:HA3	1.77	0.67
32:AX:130:VAL:O	32:AX:131:SER:HB3	1.93	0.67
80:B2:1310:U:O4	89:B2:2080:OHX:N3	2.28	0.67
89:B2:1918:OHX:N2	89:B2:2064:OHX:N5	2.43	0.67
23:AO:120:PRO:HB3	80:B2:887:A:H5''	1.75	0.67
23:AO:38:THR:OG1	80:B2:896:U:H1'	1.93	0.67
81:B5:1560:G:O2'	81:B5:1561:G:OP1	2.12	0.67
49:BO:68[B]:ARG:NH1	81:B5:2988:C:OP1	2.27	0.67
37:BC:300:ARG:HH11	37:BC:300:ARG:HG2	1.58	0.67
52:BR:102:LEU:HD13	52:BR:127:SER:HB2	1.76	0.67
53:BS:50:LYS:HZ1	82:B7:76:A:H1'	1.59	0.67
7:A6:300:THR:HG23	7:A6:314:GLN:HG3	1.76	0.67
9:AA:71:GLU:O	9:AA:96:THR:HG22	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:174:LYS:HB2	80:B2:79:C:C3'	2.22	0.67
32:AX:96:VAL:HG23	32:AX:97:ASP:H	1.60	0.67
15:AG:174:LYS:CB	80:B2:79:C:C2'	2.38	0.67
38:BD:269:SER:O	82:B7:22:A:N6	2.27	0.67
36:BB:221:THR:HG22	36:BB:273:HIS:H	1.60	0.67
41:BG:129:PRO:CG	81:B5:121:A:C2	2.78	0.67
53:BS:13:ARG:HG3	53:BS:13:ARG:NH1	2.08	0.67
79:CL:42:GLU:HG2	79:CL:215:THR:HG23	1.77	0.67
3:A2:32:PHE:HE1	3:A2:38:ARG:HB3	1.58	0.67
80:B2:356:G:OP2	89:B2:1914:OHX:N6	2.28	0.67
48:BN:112:ASN:CG	83:B8:141:C:O2	2.33	0.67
37:BC:36:HIS:O	37:BC:40:THR:HG23	1.94	0.67
48:BN:4:TYR:CE1	81:B5:148:G:OP2	2.48	0.67
54:BT:2:GLY:CA	81:B5:2626:A:O5'	2.43	0.67
85:CP:78:PRO:O	90:CP:401:GCP:O3G	2.12	0.67
3:A2:52:ASP:OD1	3:A2:52:ASP:N	2.26	0.67
17:AI:51:GLY:H	80:B2:397:A:C5'	2.07	0.67
25:AQ:113:ASP:CG	25:AQ:114:ARG:H	1.98	0.67
11:AC:159:THR:HB	80:B2:1098:U:OP1	1.94	0.67
15:AG:108:VAL:CG1	80:B2:153:G:O2'	2.42	0.67
81:B5:1225:A:C1'	81:B5:1287:A:C2'	2.73	0.67
81:B5:420:G:O5'	81:B5:420:G:OP2	2.12	0.67
38:BD:187:THR:HG22	38:BD:189:GLU:HB2	1.76	0.67
38:BD:94:ASN:HA	82:B7:47:C:P	2.35	0.67
52:BR:169:ALA:HB3	80:B2:851:U:C4	1.72	0.67
59:BY:29:VAL:HG11	79:CL:29:VAL:CG2	136.97	0.67
10:AB:76:SER:OG	10:AB:78:ASP:OD1	2.12	0.66
13:AE:31:PRO:HG2	13:AE:38:LEU:HD13	1.76	0.66
22:AN:9:LYS:NZ	80:B2:1034:C:OP1	2.26	0.66
26:AR:49:LYS:CG	80:B2:1390:U:P	2.80	0.66
80:B2:1746:A:H2	81:B5:2302:G:N3	1.92	0.66
80:B2:730:G:O6	89:B2:2048:OHX:N4	2.28	0.66
81:B5:252:U:H4'	81:B5:253:A:C5'	2.25	0.66
48:BN:60:VAL:HG21	83:B8:142:C:H5''	1.77	0.66
37:BC:88:GLY:CA	81:B5:1729:A:OP1	101.95	0.66
26:AR:10:LYS:HE3	80:B2:1316:G:HO2'	1.51	0.66
32:AX:78:LYS:HB3	80:B2:434:G:C5'	2.25	0.66
14:AF:80:LYS:CE	80:B2:1405:G:OP1	2.43	0.66
80:B2:1537:C:N3	89:B2:2046:OHX:N3	2.43	0.66
20:AL:10:GLU:CG	80:B2:327:U:O2'	2.25	0.66
80:B2:995:A:H5''	81:B5:2196:C:P	2.36	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2872:A:OP1	81:B5:2872:A:H4'	1.93	0.66
41:BG:129:PRO:HB3	81:B5:121:A:C2	2.30	0.66
41:BG:86:THR:O	41:BG:90:THR:HG23	1.94	0.66
57:BW:44:LYS:HD2	81:B5:2111:G:H1'	1.75	0.66
15:AG:13:GLN:HE21	80:B2:151:G:H1'	1.60	0.66
23:AO:25:ASP:CB	80:B2:901:G:P	2.83	0.66
80:B2:740:A:H2'	80:B2:741:C:H5''	1.77	0.66
81:B5:2204:C:H4'	81:B5:2205:U:OP1	1.95	0.66
35:BA:64:ARG:HD2	81:B5:2557:A:N7	2.11	0.66
43:BI:82:ARG:CD	81:B5:295:A:H1'	130.61	0.66
40:BF:178:ILE:HA	40:BF:183:ASP:HB3	1.77	0.66
59:BY:2:ALA:N	81:B5:212:G:OP2	2.28	0.66
80:B2:415:C:H5	85:CP:288:ARG:HB3	0.87	0.66
85:CP:199:ALA:CB	90:CP:401:GCP:N7	2.58	0.66
15:AG:174:LYS:HB2	80:B2:79:C:C4'	2.24	0.66
80:B2:1507:G:O6	89:B2:2031:OHX:N5	2.28	0.66
17:AI:138:ASN:HD22	80:B2:197:A:H61	1.27	0.66
23:AO:27:PHE:CE2	80:B2:916:U:O2	2.35	0.66
41:BG:60:ARG:HH22	81:B5:1616:U:H4'	49.54	0.66
81:B5:1655:G:C5'	81:B5:1655:G:H8	2.08	0.66
80:B2:1646:C:H5'	81:B5:2258:U:O4	1.96	0.66
80:B2:1780:G:H1'	81:B5:2262:A:C4'	1.82	0.66
81:B5:3155:U:H4'	81:B5:3156:U:OP2	1.93	0.66
36:BB:299:ASP:OD1	36:BB:301:THR:HG23	1.94	0.66
37:BC:20:LEU:HD13	37:BC:256:THR:HG23	1.76	0.66
8:A7:81:THR:HG23	86:CW:29:G:H5'	1.70	0.66
17:AI:176:SER:CB	80:B2:208:U:H5'	2.26	0.66
20:AL:10:GLU:HG2	80:B2:327:U:HO2'	1.55	0.66
25:AQ:137:ARG:HB2	80:B2:1580:C:O3'	1.96	0.66
80:B2:1267:G:H21	80:B2:1448:G:H5''	1.59	0.66
80:B2:1758:U:C5'	81:B5:2255:A:O2'	2.42	0.66
35:BA:116:VAL:HG13	35:BA:126:LEU:HB2	1.76	0.66
48:BN:182:ASN:O	48:BN:183:THR:HG22	1.96	0.66
53:BS:137:ARG:HG2	53:BS:139:TYR:CE2	2.30	0.66
59:BY:52:ARG:HA	59:BY:70:ILE:HG22	1.77	0.66
10:AB:154:SER:O	10:AB:154:SER:OG	2.09	0.66
15:AG:112:VAL:HG21	80:B2:164:A:H5'	1.71	0.66
15:AG:132:ARG:NE	80:B2:68:A:C4	2.64	0.66
15:AG:67:VAL:HG21	15:AG:99:GLY:HA2	1.76	0.66
18:AJ:60:LEU:CD2	18:AJ:93:LEU:HD21	2.22	0.66
31:AW:27:ILE:HG12	31:AW:61:ILE:HB	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:157:LEU:O	80:B2:1327:C:H4'	1.96	0.66
89:B2:1915:OHX:N4	89:B2:2071:OHX:N1	2.42	0.66
23:AO:25:ASP:CG	80:B2:901:G:OP2	2.33	0.66
23:AO:125:SER:OG	80:B2:927:C:H4'	1.96	0.66
60:BZ:67:LYS:HE2	81:B5:1630:U:OP1	1.94	0.66
49:BO:121[B]:PRO:HA	49:BO:124[B]:LEU:HD22	1.76	0.66
3:A2:36:THR:OG1	3:A2:37:SER:N	2.28	0.66
8:A7:33:LYS:HD2	81:B5:2692:A:C5'	2.24	0.66
20:AL:65:SER:HB3	80:B2:114:C:H1'	1.76	0.66
24:AP:12:PHE:HA	44:BJ:85:LYS:HD2	1.77	0.66
29:AU:57:ARG:CG	80:B2:1382:A:H4'	2.26	0.66
23:AO:123:SER:O	80:B2:885:G:N2	2.28	0.66
46:BL:99:HIS:CD2	81:B5:156:G:N1	2.63	0.66
47:BM:48:GLY:HA3	47:BM:53:VAL:HG13	1.78	0.66
48:BN:72:LYS:NZ	81:B5:2167:A:P	2.68	0.66
53:BS:46:GLN:O	82:B7:77:G:H3'	1.96	0.66
84:CN:2159:C:H6	84:CN:2159:C:C5'	2.09	0.66
8:A7:81:THR:OG1	86:CW:29:G:C3'	2.43	0.66
15:AG:128:THR:C	57:BW:81:PRO:HG2	2.16	0.66
80:B2:1316:G:HO2'	80:B2:1401:A:HO2'	1.43	0.66
38:BD:36:LEU:HG	81:B5:2748:A:N3	2.11	0.66
54:BT:68:THR:CG2	81:B5:2737:C:P	2.84	0.66
85:CP:63:GLU:CB	85:CP:210:TRP:CE3	2.79	0.66
81:B5:2766:U:N3	86:CW:76:A:N7	2.44	0.66
8:A7:23:LYS:HD2	8:A7:23:LYS:H	1.58	0.66
16:AH:50:ASP:HB3	16:AH:56:LYS:HG2	1.75	0.66
23:AO:81:VAL:H	23:AO:115:ILE:HG22	1.61	0.66
28:AT:30:VAL:O	28:AT:32:GLY:N	2.29	0.66
29:AU:88:LYS:NZ	80:B2:1516:A:OP1	2.27	0.66
80:B2:1688:U:H2'	80:B2:1689:A:C8	2.31	0.66
2:A1:68:GLY:N	80:B2:872:G:H1'	2.11	0.66
43:BI:15:LYS:HB3	81:B5:73:C:O4'	97.58	0.66
82:B7:91:G:H2'	82:B7:92:A:C8	2.30	0.66
38:BD:76:ALA:HB3	38:BD:109:THR:HG22	1.76	0.66
43:BI:86:HIS:HB3	43:BI:139:ARG:HG2	1.78	0.66
60:BZ:102:GLU:OE1	60:BZ:103:GLN:N	2.25	0.66
9:AA:10:THR:OG1	9:AA:13:ASP:OD2	2.13	0.66
19:AK:56:LYS:HG3	19:AK:67:THR:HB	1.78	0.66
23:AO:125:SER:OG	80:B2:927:C:O4'	2.12	0.66
29:AU:57:ARG:NH2	80:B2:1382:A:N3	2.43	0.66
22:AN:107:LYS:NZ	80:B2:1019:A:OP2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:843:U:H2'	80:B2:844:A:C8	2.31	0.66
23:AO:46:MET:HG2	80:B2:899:G:O5'	1.95	0.66
60:BZ:69:LYS:CE	81:B5:1633:C:OP1	2.44	0.66
80:B2:1759:C:O2'	81:B5:2263:C:H1'	1.96	0.66
8:A7:32:SER:OG	81:B5:2692:A:O4'	2.07	0.66
52:BR:84:THR:O	52:BR:88:ARG:HG2	1.96	0.66
80:B2:1041:G:H2'	80:B2:1042:G:C8	2.30	0.65
80:B2:422:G:N7	89:B2:1986:OHX:N5	2.44	0.65
80:B2:205:U:O4	89:B2:1946:OHX:N3	2.29	0.65
31:AW:119:LYS:HG2	80:B2:687:G:H5'	1.77	0.65
23:AO:38:THR:CG2	80:B2:895:G:O2'	2.12	0.65
81:B5:1481:A:O4'	81:B5:1481:A:OP1	2.13	0.65
37:BC:339:LEU:HA	37:BC:342:LYS:HB3	1.79	0.65
28:AT:117:SER:HB2	28:AT:123:ARG:HB2	1.77	0.65
11:AC:89:GLN:HB3	80:B2:1146:G:C1'	2.27	0.65
26:AR:7:LYS:N	80:B2:1316:G:OP1	2.27	0.65
80:B2:1446:A:P	89:B2:2083:OHX:N2	2.70	0.65
25:AQ:139:GLN:HA	80:B2:1579:U:O2'	1.95	0.65
80:B2:1592:A:H2'	80:B2:1593:A:H8	1.61	0.65
80:B2:1606:C:H2'	80:B2:1607:G:C8	2.31	0.65
52:BR:46:LYS:NZ	81:B5:1766:G:C8	2.60	0.65
81:B5:2667:A:C8	81:B5:2667:A:H5'	2.30	0.65
46:BL:11:LYS:HE2	81:B5:98:G:O6	1.95	0.65
10:AB:206:PRO:O	10:AB:207:LEU:HB2	1.95	0.65
12:AD:162:GLN:HG2	80:B2:1333:C:C4'	2.26	0.65
16:AH:38:LEU:HD23	16:AH:41:LEU:HD12	1.76	0.65
26:AR:47:ARG:NH1	26:AR:48:ASN:OD1	2.29	0.65
11:AC:201:ASN:ND2	80:B2:1097:U:O4	2.29	0.65
80:B2:118:U:O4	89:B2:2045:OHX:N5	2.29	0.65
7:A6:285:ALA:HB3	80:B2:1394:G:OP1	1.92	0.65
80:B2:1686:C:C2'	80:B2:1687:U:O4'	2.45	0.65
81:B5:2103:U:H2'	81:B5:2104:A:C8	2.31	0.65
43:BI:22:TYR:HB3	81:B5:2647:A:H4'	1.78	0.65
81:B5:2777:G:H5''	81:B5:2777:G:C8	2.31	0.65
37:BC:221:ASN:HD21	81:B5:211:A:H3'	1.61	0.65
37:BC:20:LEU:HD11	37:BC:252:GLU:HG3	1.78	0.65
43:BI:194:GLY:CA	81:B5:1010:G:H2'	2.27	0.65
43:BI:67:ALA:HB2	81:B5:2852:C:H2'	1.77	0.65
52:BR:173:ARG:O	80:B2:853:G:H5'	1.96	0.65
14:AF:103:ASN:ND2	80:B2:1473:U:O2'	2.30	0.65
25:AQ:50:GLU:OE1	25:AQ:82:ARG:NH2	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:3:ARG:HG2	80:B2:1390:U:C6	2.32	0.65
29:AU:23:ARG:HH21	80:B2:1347:U:H6	1.38	0.65
15:AG:107:ALA:HB1	80:B2:154:G:H4'	1.78	0.65
25:AQ:135:ARG:HB3	80:B2:1581:C:H4'	1.79	0.65
10:AB:116:LYS:HA	80:B2:931:C:H5''	1.77	0.65
80:B2:1780:G:C2'	81:B5:2262:A:C4'	2.68	0.65
81:B5:249:U:O2'	81:B5:250:U:H5''	1.95	0.65
81:B5:892:U:C2'	81:B5:893:C:H5'	2.26	0.65
54:BT:68:THR:CG2	81:B5:2736:A:O3'	2.45	0.65
23:AO:132:ARG:CB	80:B2:1787:C:OP2	2.44	0.65
27:AS:118:LYS:CE	44:BJ:108:GLU:CD	2.65	0.65
80:B2:1644:C:H1'	81:B5:2255:A:C2	2.26	0.65
15:AG:133:LEU:C	80:B2:66:U:C4	2.61	0.65
33:AY:9:THR:CG2	80:B2:781:U:OP2	2.45	0.65
15:AG:172:ALA:HB3	80:B2:78:A:O3'	1.96	0.65
60:BZ:135:ARG:HH21	81:B5:1807:G:H5''	1.55	0.65
48:BN:75:VAL:O	81:B5:2166:A:H5'	1.96	0.65
83:B8:79:A:H3'	83:B8:80:A:C8	2.31	0.65
36:BB:9:PRO:HG2	81:B5:3043:C:H5'	1.79	0.65
44:BJ:9:MET:O	44:BJ:11:ASP:N	2.29	0.65
49:BO:88[A]:VAL:O	49:BO:90[A]:HIS:N	2.30	0.65
49:BO:12[B]:LYS:O	53:BS:167:ARG:NH2	2.28	0.65
60:BZ:25:ILE:HA	60:BZ:43:VAL:HG12	1.78	0.65
81:B5:2444:C:P	84:CN:2124:C:O2	2.55	0.65
42:BH:116:ASN:ND2	85:CP:136:TYR:CG	2.63	0.65
1:A0:97:PRO:C	80:B2:1798:U:C5	2.70	0.65
4:A3:54:LYS:CE	80:B2:1420:C:OP1	2.44	0.65
15:AG:172:ALA:O	80:B2:79:C:C5'	2.39	0.65
34:AZ:41:ILE:HG23	34:AZ:42:LEU:H	1.59	0.65
80:B2:1339:C:O2'	80:B2:1341:A:N7	2.30	0.65
26:AR:60:ARG:HH22	80:B2:1400:A:C5'	1.98	0.65
28:AT:90:PRO:CD	80:B2:1467:C:O2'	2.40	0.65
28:AT:43:ASN:CG	80:B2:1477:G:OP1	2.34	0.65
80:B2:1536:G:C5	80:B2:1538:U:H1'	2.32	0.65
80:B2:1686:C:H2'	80:B2:1687:U:O4'	1.96	0.65
8:A7:34:LYS:HE3	81:B5:2693:C:H5'	1.79	0.65
81:B5:2403:G:N7	81:B5:2870:C:H4'	2.12	0.65
41:BG:181:LYS:HG2	83:B8:154:C:H5''	1.77	0.65
83:B8:77:A:H2'	83:B8:78:G:O4'	1.96	0.65
41:BG:100:GLU:OE2	41:BG:108:ARG:NH1	2.30	0.65
49:BO:180[B]:SER:OG	49:BO:181[B]:ALA:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:151:ASP:OD1	57:BW:105:ARG:CZ	2.44	0.65
22:AN:27:LYS:H	22:AN:27:LYS:HE2	1.60	0.65
27:AS:11:PHE:CE1	27:AS:59:GLY:HA2	2.32	0.65
80:B2:1191:U:O4'	86:CW:35:A:OP1	2.15	0.65
80:B2:1780:G:C2'	81:B5:2262:A:C3'	2.58	0.65
53:BS:50:LYS:HE3	82:B7:76:A:C2	2.31	0.65
38:BD:158:ARG:HD2	82:B7:46:A:O5'	1.96	0.65
38:BD:15:ARG:NE	81:B5:1003:A:C1'	2.60	0.65
1:A0:86:VAL:CG2	80:B2:1795:U:OP1	2.45	0.65
1:A0:87:ARG:CD	80:B2:1797:A:C6	2.80	0.65
80:B2:819:G:O2'	80:B2:820:U:H5'	1.96	0.65
81:B5:2569:A:H4'	81:B5:2570:U:H5'	1.78	0.65
8:A7:33:LYS:CE	81:B5:2692:A:H5'	2.26	0.65
38:BD:23:ARG:CZ	81:B5:2703:A:OP2	2.44	0.65
51:BQ:89:ASP:HB3	81:B5:677:A:OP1	1.96	0.65
38:BD:270:LYS:O	38:BD:273:ARG:HB3	1.96	0.65
46:BL:5:LYS:O	81:B5:1833:G:C4'	84.68	0.65
10:AB:114:VAL:HG21	80:B2:930:A:H2	1.62	0.65
14:AF:152:GLY:O	14:AF:154:ALA:N	2.30	0.65
15:AG:53:SER:CB	80:B2:163:G:C3'	2.67	0.65
33:AY:120:GLY:CA	80:B2:85:A:O3'	2.45	0.65
80:B2:1645:G:C4'	81:B5:2259:A:H2	2.01	0.65
81:B5:1818:U:H2'	81:B5:1819:U:H6	1.62	0.65
24:AP:12:PHE:CA	44:BJ:85:LYS:HD2	2.26	0.65
54:BT:8:ARG:HB2	81:B5:2757:U:O2'	1.97	0.65
6:A5:126:CYS:O	6:A5:128:ALA:N	2.28	0.65
13:AE:212:ASP:OD2	13:AE:216:ASN:HB2	1.97	0.65
20:AL:6:THR:O	20:AL:8:GLN:N	2.30	0.65
35:BA:247:ARG:HH21	80:B2:1013:A:H4'	1.61	0.65
80:B2:1462:G:O2'	86:CW:30:G:OP1	2.15	0.65
38:BD:285:ARG:HD3	82:B7:63:A:OP1	1.97	0.65
37:BC:162:THR:OG1	81:B5:209:A:H2'	1.95	0.65
59:BY:35:LEU:HD13	59:BY:39:LEU:HB3	1.77	0.65
60:BZ:67:LYS:HZ3	81:B5:1630:U:P	2.19	0.65
2:A1:29:ARG:NH1	2:A1:29:ARG:HG3	2.09	0.64
15:AG:59:GLN:H	80:B2:155:U:C5'	2.10	0.64
18:AJ:96:VAL:HA	18:AJ:99:LEU:HD22	1.78	0.64
15:AG:59:GLN:CA	80:B2:155:U:O4'	2.45	0.64
15:AG:53:SER:O	80:B2:163:G:C4'	2.44	0.64
80:B2:647:G:N2	80:B2:687:G:H22	1.95	0.64
80:B2:895:G:H1	80:B2:917:U:H3	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:129:LYS:HA	80:B2:990:C:H4'	1.77	0.64
81:B5:2549:G:H5'	81:B5:2549:G:C8	2.31	0.64
44:BJ:95:ASN:HA	81:B5:2673:A:OP1	1.98	0.64
81:B5:618:C:H2'	81:B5:619:A:C8	2.31	0.64
39:BE:78:ARG:NH1	81:B5:3272:C:OP2	2.30	0.64
40:BF:122:ALA:HB1	81:B5:986:U:O2	1.96	0.64
48:BN:80:THR:HG21	48:BN:87:GLN:HA	1.78	0.64
7:A6:59:ARG:NH2	25:AQ:95:LYS:O	2.30	0.64
30:AV:62:ARG:NH2	80:B2:1039:A:C5'	2.48	0.64
80:B2:1789:G:H8	80:B2:1789:G:H5''	1.60	0.64
81:B5:1085:A:C5'	81:B5:1085:A:H8	2.10	0.64
40:BF:92:ILE:HD11	81:B5:1159:A:C2	2.33	0.64
53:BS:90:MET:CG	81:B5:1213:G:H4'	2.26	0.64
81:B5:15:C:H5'	81:B5:15:C:C6	2.31	0.64
51:BQ:43:PRO:HB3	81:B5:728:G:H5''	1.78	0.64
56:BV:33:ASN:HD22	56:BV:63:LYS:HB2	1.63	0.64
9:AA:168:HIS:HB3	9:AA:203:PHE:CZ	2.32	0.64
11:AC:86:VAL:HG11	80:B2:1300:A:H5''	1.79	0.64
17:AI:64:ASN:HB2	80:B2:258:C:C1'	2.27	0.64
17:AI:75:LYS:HB2	80:B2:258:C:H5'	1.79	0.64
23:AO:122:PRO:CA	80:B2:886:U:O2	2.43	0.64
23:AO:126:THR:HG22	80:B2:988:A:N3	2.08	0.64
23:AO:41:ARG:HH21	80:B2:916:U:H3	1.37	0.64
81:B5:118:U:O2	81:B5:121:A:H5'	1.97	0.64
44:BJ:87:LYS:HD2	44:BJ:104:PHE:CD2	2.32	0.64
54:BT:127:GLN:CG	81:B5:1095:U:H3	2.09	0.64
60:BZ:70:PRO:HD2	81:B5:1629:U:O2	1.96	0.64
59:BY:46:LYS:CB	79:CL:46:LYS:CB	134.20	0.64
84:CN:2186:G:C2'	84:CN:2187:G:H5''	2.26	0.64
5:A4:14:VAL:O	5:A4:18:THR:HG23	1.97	0.64
80:B2:1015:U:H5''	80:B2:1016:C:OP2	1.97	0.64
11:AC:89:GLN:HB3	80:B2:1146:G:O4'	1.97	0.64
4:A3:33:LYS:HE3	80:B2:1594:G:H5'	1.80	0.64
80:B2:158:U:O2'	80:B2:159:U:H3'	1.98	0.64
18:AJ:172:VAL:CG2	80:B2:511:A:H5''	2.18	0.64
49:BO:159[A]:LYS:NZ	81:B5:3243:A:OP1	2.31	0.64
38:BD:277:LEU:HG	82:B7:62:U:OP1	1.98	0.64
42:BH:12:VAL:HG13	42:BH:16:VAL:HG22	1.79	0.64
52:BR:35:ALA:O	52:BR:36:ASN:ND2	2.29	0.64
54:BT:49:GLN:HG2	81:B5:2756:C:C1'	2.28	0.64
7:A6:195:HIS:CD2	7:A6:199:ILE:HD13	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:7:LYS:CD	80:B2:1316:G:OP1	2.46	0.64
34:AZ:59:TYR:HE1	34:AZ:61:SER:HB3	1.61	0.64
23:AO:129:LYS:HA	80:B2:990:C:H5''	1.80	0.64
38:BD:269:SER:HA	82:B7:22:A:C2	2.32	0.64
80:B2:420:A:C4	85:CP:288:ARG:NH2	2.45	0.64
80:B2:1518:C:OP1	89:B2:2001:OHX:N5	2.29	0.64
20:AL:36:LYS:HD3	80:B2:248:U:H5'	1.80	0.64
80:B2:497:G:H4'	80:B2:498:G:OP1	1.97	0.64
80:B2:562:G:OP2	89:B2:2025:OHX:N5	2.31	0.64
80:B2:711:U:H1'	80:B2:712:G:H5'	1.78	0.64
39:BE:37:GLY:HA3	81:B5:639:G:P	77.35	0.64
35:BA:181:LYS:NZ	81:B5:860:G:O5'	2.17	0.64
36:BB:241:LYS:HE2	81:B5:874:U:P	2.37	0.64
48:BN:183:THR:O	48:BN:184:LYS:HB3	1.98	0.64
51:BQ:55:SER:HA	81:B5:672:A:OP1	1.97	0.64
54:BT:57:TYR:OH	81:B5:2724:U:P	2.56	0.64
7:A6:136:ILE:H	7:A6:136:ILE:HD13	1.63	0.64
8:A7:33:LYS:CE	81:B5:2692:A:C5'	2.76	0.64
15:AG:108:VAL:HG21	80:B2:153:G:C2'	2.27	0.64
13:AE:221:ARG:HG3	80:B2:753:A:H5'	1.80	0.64
50:BP:129:THR:OG1	81:B5:1507:G:N7	2.23	0.64
8:A7:28:SER:HB2	81:B5:2708:C:O4'	1.95	0.64
54:BT:101:CYS:HB3	81:B5:990:U:H1'	1.80	0.64
38:BD:266:ALA:CA	82:B7:1:G:N9	2.59	0.64
38:BD:16:PHE:CZ	81:B5:2688:U:N3	2.66	0.64
8:A7:81:THR:HG23	86:CW:29:G:OP1	1.98	0.64
11:AC:103:VAL:HG12	11:AC:190:LEU:HD12	1.80	0.64
26:AR:49:LYS:HG3	80:B2:1390:U:OP1	1.98	0.64
27:AS:143:ARG:CA	80:B2:1461:C:OP1	2.46	0.64
15:AG:62:PRO:HB2	80:B2:162:A:C5'	2.28	0.64
80:B2:1716:C:O2'	80:B2:1717:G:C8	2.47	0.64
52:BR:101:VAL:HG21	81:B5:1948:G:H4'	1.80	0.64
35:BA:245:LEU:HD12	81:B5:2152:A:O3'	1.97	0.64
80:B2:1758:U:H5'	81:B5:2255:A:O2'	1.96	0.64
81:B5:2436:U:H3	81:B5:2511:A:H62	1.45	0.64
36:BB:117:ARG:HA	36:BB:175:LYS:HD3	1.78	0.64
41:BG:121:SER:O	41:BG:123:GLN:N	2.31	0.64
27:AS:110:ARG:HD2	44:BJ:118:PRO:HB3	1.80	0.64
48:BN:72:LYS:NZ	81:B5:2167:A:OP1	2.31	0.64
7:A6:216:LYS:HA	7:A6:239:GLU:HG3	1.80	0.64
19:AK:1:MET:HG3	80:B2:1217:A:H5''	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AN:54:LEU:HB3	22:AN:60:VAL:HG21	1.79	0.64
23:AO:127:ARG:HH22	80:B2:1788:G:P	2.21	0.64
28:AT:57:ARG:HH12	80:B2:1479:A:P	2.18	0.64
29:AU:118:VAL:HG22	29:AU:119:ALA:H	1.63	0.64
80:B2:836:U:OP1	89:B2:2076:OHX:N2	2.30	0.64
15:AG:133:LEU:HD11	80:B2:66:U:C2'	2.27	0.64
23:AO:38:THR:OG1	80:B2:896:U:C1'	2.45	0.64
35:BA:200:ARG:CZ	81:B5:2147:A:OP2	2.46	0.64
59:BY:13:ARG:NH1	83:B8:24:G:OP2	2.24	0.64
43:BI:174:THR:HG23	43:BI:175:ASN:H	1.63	0.64
60:BZ:3:LYS:HE3	60:BZ:5:LEU:HD12	1.78	0.64
3:A2:10:ALA:HA	3:A2:32:PHE:HA	1.78	0.64
10:AB:28:GLU:OE2	10:AB:94:LYS:NZ	2.19	0.64
28:AT:86:ARG:NH1	28:AT:90:PRO:O	2.32	0.64
28:AT:90:PRO:HD3	80:B2:1467:C:HO2'	1.63	0.64
29:AU:54:GLY:O	80:B2:1344:A:O2'	2.14	0.64
26:AR:48:ASN:CB	80:B2:1389:C:O4'	2.37	0.64
27:AS:126:ARG:CZ	80:B2:1459:C:OP1	2.46	0.64
80:B2:1701:N:H3'	80:B2:1702:N:H5''	1.80	0.64
80:B2:140:A:N6	80:B2:281:G:OP1	2.21	0.64
33:AY:105:ARG:N	80:B2:443:C:OP1	2.26	0.64
35:BA:3:ARG:NH2	81:B5:917:A:H62	1.95	0.64
44:BJ:95:ASN:CA	81:B5:2673:A:OP1	2.46	0.64
52:BR:171:ASP:CG	80:B2:852:C:P	2.11	0.64
80:B2:51:A:O4'	85:CP:241:GLU:O	2.13	0.64
8:A7:71:ASN:OD1	24:AP:130:ARG:NH1	2.32	0.63
18:AJ:176:ASN:HB2	80:B2:511:A:OP2	1.96	0.63
19:AK:8:ARG:HD2	19:AK:12:HIS:CE1	2.33	0.63
25:AQ:34:SER:HB3	25:AQ:38:LEU:HD12	1.80	0.63
80:B2:1498:G:C2'	80:B2:1499:G:H5'	2.28	0.63
80:B2:1657:U:O4	89:B2:1968:OHX:N4	2.31	0.63
17:AI:73:SER:CB	80:B2:257:A:H1'	2.17	0.63
80:B2:470:A:H5''	80:B2:470:A:C8	2.33	0.63
1:A0:70:LYS:NZ	80:B2:931:C:OP2	2.27	0.63
81:B5:1659:U:H2'	81:B5:1660:C:C6	2.32	0.63
81:B5:2436:U:H3	81:B5:2511:A:N6	1.95	0.63
35:BA:34:TYR:CD2	81:B5:2525:G:O6	2.51	0.63
46:BL:181:GLY:HA3	81:B5:2780:A:O2'	1.97	0.63
81:B5:830:A:O2'	81:B5:1866:C:H2'	1.98	0.63
81:B5:900:G:H1'	81:B5:1589:A:N6	2.12	0.63
42:BH:90:MET:HB2	42:BH:144:ILE:HG22	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:8:ARG:CG	81:B5:2757:U:H4'	2.28	0.63
59:BY:112:ASP:HB3	59:BY:115:ARG:HB2	1.80	0.63
81:B5:2443:A:OP1	84:CN:2123:U:N3	2.31	0.63
1:A0:37:LYS:O	1:A0:38:ARG:HD2	1.98	0.63
9:AA:183:ARG:NH2	9:AA:191:ARG:O	2.31	0.63
10:AB:105:PHE:N	10:AB:214:LYS:HZ1	1.96	0.63
13:AE:259:GLN:O	13:AE:261:LEU:N	2.31	0.63
32:AX:38:PHE:HB3	80:B2:359:A:C2	2.33	0.63
29:AU:53:LYS:CA	80:B2:1345:A:P	2.86	0.63
13:AE:28:ALA:HA	80:B2:448:C:OP1	1.98	0.63
10:AB:138:PHE:HZ	80:B2:885:G:OP1	1.82	0.63
36:BB:293:ASN:HB2	36:BB:304:THR:HA	1.80	0.63
50:BP:31:GLU:HG3	50:BP:60:PHE:HA	1.80	0.63
51:BQ:43:PRO:HB2	81:B5:728:G:H5''	1.79	0.63
54:BT:14:MET:HE2	54:BT:55:LYS:HB2	1.80	0.63
56:BV:67:PRO:CG	80:B2:1660:A:OP1	2.46	0.63
14:AF:185:ARG:HH12	80:B2:1572:G:H1'	1.64	0.63
14:AF:81:ARG:HE	80:B2:1615:C:P	2.21	0.63
18:AJ:172:VAL:HG13	80:B2:512:A:P	2.39	0.63
80:B2:1202:A:N6	80:B2:1457:C:H5''	2.13	0.63
26:AR:60:ARG:NH1	80:B2:1400:A:H4'	2.11	0.63
12:AD:4:LEU:CD1	80:B2:1514:U:C2	2.82	0.63
15:AG:112:VAL:HG21	80:B2:164:A:H5''	1.78	0.63
81:B5:1566:A:H2'	81:B5:1567:U:H5'	1.81	0.63
43:BI:30:LYS:HE2	81:B5:266:A:H2'	117.82	0.63
46:BL:56:PRO:HG3	46:BL:74:GLY:O	1.98	0.63
85:CP:200:VAL:N	90:CP:401:GCP:N1	2.47	0.63
7:A6:90:ARG:NH1	7:A6:99:THR:OG1	2.31	0.63
27:AS:94:ASP:OD2	27:AS:98:TYR:OH	2.17	0.63
25:AQ:123:ARG:O	80:B2:1584:G:H2'	1.98	0.63
25:AQ:75:VAL:HG21	80:B2:1610:G:OP1	1.98	0.63
23:AO:52:ARG:HD3	80:B2:905:A:H5''	1.81	0.63
81:B5:1564:U:H2'	81:B5:1565:G:C8	2.34	0.63
51:BQ:89:ASP:N	81:B5:677:A:OP2	2.24	0.63
36:BB:245:GLY:HA2	81:B5:1889:G:H5'	1.81	0.63
46:BL:93:ILE:HG22	46:BL:94:GLY:H	1.64	0.63
51:BQ:89:ASP:H	81:B5:677:A:P	2.21	0.63
15:AG:115:LYS:HE3	57:BW:74:LYS:CB	2.28	0.63
59:BY:84:LYS:HG3	79:CL:87:GLU:CB	176.99	0.63
85:CP:59:MET:HB3	85:CP:62:TYR:H	1.64	0.63
1:A0:92:ARG:HA	80:B2:1796:C:OP1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:50:GLY:CA	80:B2:397:A:H4'	2.28	0.63
80:B2:1689:A:H2'	80:B2:1690:G:H8	1.64	0.63
81:B5:1227:C:N3	81:B5:1284:C:N3	2.46	0.63
47:BM:106:ARG:HD2	81:B5:3209:A:C5	2.34	0.63
81:B5:528:U:H2'	81:B5:529:A:C8	2.33	0.63
81:B5:979:U:H1'	81:B5:980:A:C4	2.34	0.63
35:BA:15:ILE:HG13	81:B5:822:G:O4'	1.98	0.63
53:BS:137:ARG:HG2	53:BS:139:TYR:CZ	2.32	0.63
53:BS:26:ARG:HH11	54:BT:150:THR:HG21	1.61	0.63
60:BZ:50:PRO:HD3	60:BZ:68:ILE:HG12	1.81	0.63
8:A7:81:THR:HG22	86:CW:29:G:OP1	1.99	0.63
10:AB:171:ILE:HA	10:AB:174:LYS:HE3	1.81	0.63
10:AB:134:VAL:HB	10:AB:219:LYS:HB2	1.80	0.63
12:AD:114:ALA:HB3	12:AD:117:ARG:HB2	1.80	0.63
13:AE:3:ARG:HB2	80:B2:94:U:OP1	1.99	0.63
23:AO:41:ARG:HD2	80:B2:917:U:H1'	1.80	0.63
25:AQ:115:THR:O	25:AQ:117:LEU:N	2.31	0.63
28:AT:87:GLY:HA3	80:B2:1542:G:H3'	1.80	0.63
80:B2:1592:A:H2'	80:B2:1593:A:C8	2.34	0.63
80:B2:1657:U:H4'	80:B2:1658:G:O5'	1.99	0.63
12:AD:143:ARG:NH2	80:B2:581:U:OP2	2.31	0.63
23:AO:125:SER:CB	80:B2:927:C:C1'	2.75	0.63
81:B5:1818:U:H2'	81:B5:1819:U:C6	2.32	0.63
35:BA:235:ALA:HB1	81:B5:2184:U:P	2.37	0.63
81:B5:2818:U:C5'	81:B5:2818:U:H6	2.10	0.63
81:B5:3049:A:H5'	81:B5:3049:A:C8	2.34	0.63
81:B5:734:C:H2'	81:B5:735:A:H5''	1.81	0.63
81:B5:817:A:OP2	81:B5:817:A:H4'	1.98	0.63
41:BG:60:ARG:NH2	81:B5:1616:U:C4'	50.75	0.63
84:CN:2132:C:H42	84:CN:2168:G:H1	1.45	0.63
80:B2:51:A:H2'	85:CP:242:GLY:HA3	1.79	0.63
85:CP:131:LYS:CD	90:CP:401:GCP:C5	2.74	0.63
10:AB:112:SER:O	10:AB:114:VAL:N	2.32	0.63
18:AJ:99:LEU:O	18:AJ:100:LYS:HB3	1.96	0.63
19:AK:8:ARG:HD2	19:AK:12:HIS:HE1	1.63	0.63
25:AQ:42:GLU:OE1	80:B2:1529:C:H5''	1.98	0.63
80:B2:1291:G:N2	80:B2:1324:G:N2	2.45	0.63
14:AF:109:LYS:NZ	80:B2:1474:G:OP2	2.29	0.63
80:B2:9:U:O4	89:B2:2047:OHX:N6	2.31	0.63
38:BD:106:ALA:O	38:BD:110:LEU:HD22	1.97	0.63
59:BY:52:ARG:NH2	84:CN:2201:U:C6	141.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:CP:131:LYS:CD	90:CP:401:GCP:N3	2.55	0.63
23:AO:130:GLY:CA	80:B2:991:G:OP1	2.46	0.63
14:AF:37:GLN:HB3	25:AQ:53:LEU:HB3	1.80	0.63
33:AY:11:LYS:HE2	80:B2:776:G:O6	1.99	0.63
1:A0:4:LYS:H	80:B2:1792:G:P	2.22	0.63
17:AI:23:LYS:HE2	80:B2:386:G:H5''	1.80	0.63
31:AW:80:ASN:ND2	80:B2:747:C:O2'	2.32	0.63
81:B5:1804:A:H2'	81:B5:1805:C:H6	1.63	0.63
54:BT:17:ARG:N	81:B5:2700:G:OP1	2.21	0.63
54:BT:68:THR:CG2	81:B5:2737:C:O5'	2.47	0.63
38:BD:145:PHE:CE1	81:B5:2748:A:H5''	2.33	0.63
37:BC:93:MET:HB2	81:B5:658:G:H21	1.63	0.63
46:BL:61:PRO:HD3	81:B5:75:G:C4'	2.28	0.63
35:BA:191:LEU:HG	81:B5:1795:U:P	2.39	0.63
38:BD:265:TYR:CG	82:B7:120:C:N3	2.67	0.63
51:BQ:134:GLY:O	51:BQ:137:THR:OG1	2.11	0.63
15:AG:114:VAL:HG12	15:AG:115:LYS:HD3	1.81	0.63
17:AI:137:LYS:HE3	80:B2:189:C:OP2	1.98	0.63
23:AO:52:ARG:HB3	80:B2:906:A:P	2.37	0.63
27:AS:138:THR:HB	80:B2:1459:C:H2'	1.80	0.63
31:AW:105:THR:HG23	31:AW:110:ILE:HG12	1.81	0.63
33:AY:120:GLY:O	80:B2:85:A:H4'	1.98	0.63
28:AT:102:ARG:NH2	80:B2:1502:G:C6	2.67	0.63
15:AG:108:VAL:CB	80:B2:153:G:O2'	2.47	0.63
80:B2:1748:G:H5'	81:B5:2304:C:H5''	1.81	0.63
33:AY:113:ASN:ND2	80:B2:54:C:H5''	2.13	0.63
81:B5:1816:A:O2'	81:B5:1817:G:OP1	2.15	0.63
36:BB:53:MET:CE	81:B5:3048:A:H5'	2.29	0.63
47:BM:77:ARG:NH2	81:B5:524:U:OP1	2.31	0.63
38:BD:146:LEU:HD13	81:B5:2746:A:N3	2.13	0.63
48:BN:68:ARG:HA	48:BN:98:LEU:HD21	1.80	0.63
59:BY:21:THR:HG23	79:CL:21:THR:HG23	119.05	0.63
81:B5:3029:A:C5'	85:CP:81:GLU:OE1	2.32	0.63
79:CL:129:ARG:NH2	86:CW:56:C:H4'	2.03	0.63
2:A1:62:ILE:HG13	2:A1:63:LEU:H	1.62	0.62
5:A4:33:ARG:HB2	18:AJ:37:LYS:HB3	1.81	0.62
14:AF:101:GLY:HA3	80:B2:1167:G:P	2.37	0.62
19:AK:14:TYR:HE1	19:AK:21:VAL:HG22	1.64	0.62
19:AK:56:LYS:HE3	19:AK:58:GLN:HG2	1.80	0.62
33:AY:91:LEU:HA	33:AY:96:LEU:HD12	1.80	0.62
80:B2:1758:U:H5'	81:B5:2256:A:OP2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:213:A:OP2	89:B2:1996:OHX:N2	2.32	0.62
15:AG:133:LEU:CD1	80:B2:66:U:N1	2.62	0.62
22:AN:73:ARG:CD	80:B2:859:A:C6	2.79	0.62
81:B5:1094:U:O2'	81:B5:1095:U:H3'	1.99	0.62
81:B5:247:C:C2	81:B5:248:U:H1'	2.33	0.62
81:B5:3174:A:N6	81:B5:3278:C:N3	2.46	0.62
48:BN:60:VAL:HG21	83:B8:142:C:H4'	1.80	0.62
49:BO:25[A]:LYS:HE3	81:B5:1176:C:OP1	1.98	0.62
54:BT:127:GLN:HA	81:B5:1095:U:O2	1.99	0.62
55:BU:47:VAL:O	55:BU:49:ASN:N	2.29	0.62
11:AC:144:TRP:CE2	11:AC:173:PRO:HG3	2.34	0.62
15:AG:128:THR:HG23	57:BW:81:PRO:HG2	1.64	0.62
24:AP:44:ARG:HG2	80:B2:1556:A:OP1	1.99	0.62
26:AR:53:TYR:HH	80:B2:1401:A:C5'	2.03	0.62
29:AU:58:LEU:HD23	80:B2:1516:A:H8	1.63	0.62
33:AY:10:ARG:CG	80:B2:780:A:C8	2.81	0.62
80:B2:1031:U:H4'	80:B2:1032:G:OP2	1.99	0.62
80:B2:1214:U:OP1	80:B2:1246:C:H1'	1.99	0.62
29:AU:54:GLY:N	80:B2:1345:A:P	2.56	0.62
35:BA:7:ASN:HB2	81:B5:2183:A:OP1	2.00	0.62
81:B5:541:U:H2'	81:B5:542:G:C8	2.34	0.62
35:BA:199:THR:OG1	81:B5:913:A:H5'	1.99	0.62
43:BI:8:CYS:SG	81:B5:2828:G:H5''	2.39	0.62
8:A7:32:SER:CB	81:B5:2692:A:C1'	2.76	0.62
15:AG:15:THR:HG23	80:B2:152:U:C3'	2.29	0.62
11:AC:91:ARG:CZ	80:B2:1625:C:OP1	2.44	0.62
80:B2:245:U:O4	89:B2:1972:OHX:N5	2.32	0.62
33:AY:120:GLY:CA	80:B2:85:A:O2'	2.47	0.62
54:BT:129:LYS:CB	81:B5:1097:G:H4'	2.15	0.62
81:B5:2561:A:HO2'	81:B5:2562:A:H8	1.46	0.62
54:BT:12:ARG:HB2	81:B5:2632:G:H5''	1.80	0.62
35:BA:15:ILE:CD1	81:B5:822:G:N3	2.62	0.62
35:BA:234:LYS:HD2	81:B5:2163:C:P	2.38	0.62
41:BG:161:GLU:HA	41:BG:164:VAL:HG22	1.80	0.62
41:BG:55:TYR:CE1	81:B5:1558:A:C6	2.88	0.62
30:AV:62:ARG:HH21	80:B2:1039:A:C5'	2.08	0.62
80:B2:1623:C:H2'	80:B2:1624:C:C6	2.34	0.62
80:B2:702:G:O2'	80:B2:703:G:H8	1.82	0.62
80:B2:823:G:O2'	80:B2:824:G:P	2.57	0.62
23:AO:38:THR:HG1	80:B2:896:U:C1'	2.12	0.62
80:B2:915:A:OP1	89:B2:1973:OHX:N3	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:1023:C:H5''	81:B5:1024:G:OP2	1.99	0.62
81:B5:1282:G:H3'	81:B5:1283:C:C5'	2.29	0.62
80:B2:1002:G:C5'	81:B5:2265:C:OP1	2.47	0.62
38:BD:266:ALA:CB	82:B7:1:G:N9	2.62	0.62
41:BG:33:ASN:O	41:BG:35:GLY:N	2.33	0.62
51:BQ:165:ILE:HD12	51:BQ:167:SER:O	1.99	0.62
51:BQ:69:ARG:NH2	81:B5:720:A:C2	2.62	0.62
54:BT:129:LYS:HB3	81:B5:1097:G:C4'	2.14	0.62
1:A0:3:LYS:HE2	80:B2:1030:A:OP2	2.00	0.62
8:A7:116:GLU:HG3	11:AC:98:PHE:CZ	2.34	0.62
13:AE:185:GLY:N	13:AE:189:LEU:HD13	2.14	0.62
33:AY:105:ARG:HD2	80:B2:443:C:H3'	1.82	0.62
32:AX:7:ARG:NH1	80:B2:1102:G:OP2	2.33	0.62
80:B2:1524:A:H2'	80:B2:1525:A:C8	2.34	0.62
80:B2:1762:A:H1'	80:B2:1783:C:H5'	1.80	0.62
32:AX:69:ARG:HH12	80:B2:569:C:H41	1.45	0.62
35:BA:71:LEU:N	81:B5:1651:U:OP1	2.30	0.62
48:BN:72:LYS:CD	81:B5:2166:A:O3'	2.46	0.62
15:AG:128:THR:OG1	57:BW:80:ARG:CA	2.45	0.62
84:CN:2161:C:O4'	84:CN:2161:C:O2	2.16	0.62
7:A6:150:TRP:HE1	26:AR:37:GLU:HG3	1.64	0.62
15:AG:159:ARG:NH1	80:B2:77:U:H1'	2.13	0.62
16:AH:13:PRO:HB3	16:AH:14:THR:HB	1.82	0.62
30:AV:41:GLU:CD	30:AV:41:GLU:H	2.00	0.62
13:AE:33:ALA:HB3	80:B2:121:U:H1'	1.81	0.62
80:B2:1612:U:H2'	80:B2:1613:U:H5'	1.79	0.62
80:B2:497:G:O2'	80:B2:498:G:O5'	2.17	0.62
81:B5:2407:C:H2'	81:B5:2408:U:C6	2.35	0.62
81:B5:3195:U:O2'	81:B5:3196:U:H5'	1.99	0.62
58:BX:57:LEU:HD23	58:BX:61:LYS:HG2	1.82	0.62
85:CP:79:GLY:CA	90:CP:401:GCP:O2G	2.46	0.62
1:A0:79:ILE:CG2	80:B2:1794:A:N3	2.62	0.62
10:AB:110:LEU:HD12	10:AB:110:LEU:H	1.63	0.62
1:A0:59:TYR:HE2	23:AO:113:GLY:HA2	1.64	0.62
26:AR:76:GLU:HA	26:AR:79:GLU:HB2	1.81	0.62
28:AT:52:GLY:O	28:AT:54:PHE:N	2.25	0.62
29:AU:53:LYS:HB3	80:B2:1345:A:O5'	1.98	0.62
81:B5:2440:G:H2'	81:B5:2441:A:C8	2.34	0.62
52:BR:62:ARG:NE	81:B5:3070:A:OP1	2.26	0.62
36:BB:245:GLY:HA3	81:B5:1889:G:O5'	2.00	0.62
42:BH:96:HIS:HA	85:CP:164:ARG:HH22	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:68[A]:ARG:NH1	81:B5:2988:C:OP1	2.32	0.62
53:BS:73:LYS:NZ	53:BS:97:VAL:O	2.32	0.62
11:AC:145:GLY:O	11:AC:146:THR:HB	1.98	0.62
12:AD:158:ILE:HB	80:B2:1328:G:OP1	1.99	0.62
12:AD:191:ASP:HB3	12:AD:194:LYS:HG3	1.82	0.62
16:AH:74:GLN:HE22	16:AH:92:PHE:HB2	1.65	0.62
20:AL:36:LYS:CD	80:B2:248:U:H5'	2.30	0.62
28:AT:12:GLN:HE22	80:B2:1530:C:C1'	2.08	0.62
32:AX:109:ARG:HB3	32:AX:112:LYS:HB2	1.81	0.62
27:AS:139:LYS:HG2	80:B2:1461:C:N4	2.15	0.62
80:B2:1490:C:H4'	80:B2:1491:U:OP1	1.99	0.62
80:B2:38:C:C2'	80:B2:39:A:H5'	2.29	0.62
81:B5:725:G:H2'	81:B5:726:G:H5''	1.81	0.62
38:BD:265:TYR:CE2	82:B7:120:C:C5	2.88	0.62
36:BB:221:THR:HB	36:BB:273:HIS:O	2.00	0.62
38:BD:211:LEU:HD13	38:BD:219:PHE:HA	1.81	0.62
41:BG:151:VAL:HG22	41:BG:199:ALA:HB1	1.81	0.62
43:BI:61:SER:HB2	43:BI:63:GLU:HG2	1.82	0.62
51:BQ:86:THR:HB	51:BQ:105:ARG:HB3	1.81	0.62
8:A7:81:THR:HG23	86:CW:29:G:C5'	2.16	0.62
3:A2:42:ARG:HH11	3:A2:56:LEU:HD22	1.63	0.62
11:AC:129:ILE:O	11:AC:133:LYS:HG2	1.99	0.62
15:AG:56:ASN:HD21	80:B2:153:G:H22	1.45	0.62
16:AH:145:GLY:O	16:AH:147:ASN:ND2	2.31	0.62
29:AU:89:ARG:CZ	80:B2:1383:G:OP1	2.47	0.62
80:B2:1168:U:H2'	80:B2:1169:G:H5'	1.82	0.62
80:B2:498:G:O2'	80:B2:499:U:O5'	2.17	0.62
8:A7:28:SER:HA	81:B5:2708:C:H4'	1.82	0.62
35:BA:194:ASN:HD22	81:B5:822:G:C4'	2.13	0.62
37:BC:144:LYS:HG2	37:BC:145:ILE:H	1.65	0.62
24:AP:65:LEU:O	89:AP:201:OHX:N1	2.33	0.62
80:B2:1081:A:H5''	80:B2:1082:C:OP1	1.99	0.62
80:B2:1615:C:H4'	80:B2:1616:G:O5'	2.00	0.62
16:AH:110:GLN:OE1	80:B2:817:A:H1'	2.00	0.62
10:AB:116:LYS:HA	80:B2:931:C:H4'	1.80	0.62
81:B5:1605:A:O2'	81:B5:1607:U:OP2	2.12	0.62
52:BR:121:HIS:CE1	81:B5:1719:G:OP2	2.51	0.62
59:BY:75:ARG:HB2	83:B8:73:U:OP2	1.99	0.62
36:BB:296:THR:HG22	36:BB:298:PHE:N	2.03	0.62
38:BD:146:LEU:CD1	81:B5:2746:A:N3	2.63	0.62
59:BY:46:LYS:HB3	79:CL:46:LYS:CB	133.38	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:46:LYS:NZ	84:CN:2200:C:OP1	136.73	0.62
1:A0:35:ALA:O	1:A0:36:ILE:HG22	2.00	0.61
3:A2:10:ALA:HB1	3:A2:30:VAL:HB	1.81	0.61
8:A7:47:ALA:CA	81:B5:2678:A:C1'	2.76	0.61
13:AE:11:ARG:O	13:AE:12:LEU:HB2	1.99	0.61
28:AT:61:VAL:O	28:AT:65:ILE:HG13	2.00	0.61
1:A0:5:ARG:NH2	80:B2:1793:G:O2'	2.33	0.61
20:AL:80:MET:CE	80:B2:325:G:C5'	2.77	0.61
80:B2:656:G:O2'	80:B2:657:U:O4'	2.16	0.61
8:A7:51:ARG:HD2	81:B5:2677:G:O4'	1.99	0.61
84:CN:2201:U:C6	84:CN:2201:U:H5'	2.34	0.61
85:CP:18:LYS:HB3	90:CP:401:GCP:O1A	1.99	0.61
23:AO:51:ASP:OD1	80:B2:902:G:N1	2.33	0.61
80:B2:677:G:H2'	80:B2:678:A:C8	2.36	0.61
49:BO:60[A]:LYS:NZ	81:B5:1307:G:H5''	2.15	0.61
35:BA:68:LYS:CE	81:B5:1650:G:OP1	2.49	0.61
56:BV:48:ARG:HG2	81:B5:2339:C:P	2.40	0.61
81:B5:3165:A:H2'	81:B5:3166:C:H6	1.65	0.61
35:BA:15:ILE:HA	81:B5:822:G:H1'	1.81	0.61
38:BD:145:PHE:CE1	81:B5:2748:A:C5'	2.83	0.61
41:BG:194:THR:HG23	81:B5:7:C:H4'	1.80	0.61
42:BH:168:ARG:HD2	81:B5:2894:C:OP1	2.01	0.61
52:BR:104:ARG:NH1	81:B5:1949:G:OP1	2.33	0.61
85:CP:62:TYR:C	85:CP:210:TRP:CE2	2.73	0.61
10:AB:77:GLU:OE2	23:AO:114:ARG:NH2	2.30	0.61
14:AF:73:THR:HG23	25:AQ:114:ARG:CD	2.30	0.61
27:AS:118:LYS:NZ	44:BJ:108:GLU:CD	2.54	0.61
26:AR:60:ARG:NH1	80:B2:1400:A:C4'	2.64	0.61
15:AG:59:GLN:HA	80:B2:155:U:C4'	2.28	0.61
17:AI:23:LYS:HG3	80:B2:386:G:OP1	2.01	0.61
33:AY:64:PHE:CE2	80:B2:767:U:C5	2.89	0.61
46:BL:99:HIS:CE1	81:B5:156:G:C5	2.89	0.61
35:BA:40:TYR:OH	81:B5:2550:U:C2'	2.36	0.61
36:BB:238:LEU:HB3	36:BB:242:THR:HG21	1.81	0.61
38:BD:265:TYR:HB3	82:B7:1:G:C2	2.34	0.61
48:BN:179:LYS:CE	81:B5:287:G:OP1	2.48	0.61
15:AG:83:CYS:HA	80:B2:161:U:C3'	2.24	0.61
16:AH:11:GLN:HG3	16:AH:13:PRO:HD2	1.80	0.61
31:AW:80:ASN:HD22	31:AW:124:LYS:HG2	1.65	0.61
80:B2:1428:G:H5'	80:B2:1428:G:C8	2.35	0.61
33:AY:8:ARG:CA	80:B2:780:A:O2'	2.43	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:67:ARG:CG	81:B5:1544:G:H5'	2.29	0.61
42:BH:171:ASP:OD2	81:B5:2899:C:H2'	2.00	0.61
38:BD:266:ALA:HA	82:B7:1:G:N3	2.15	0.61
48:BN:35:VAL:CG2	81:B5:1543:G:P	2.86	0.61
85:CP:16:THR:HB	90:CP:401:GCP:PB	2.39	0.61
8:A7:47:ALA:CA	81:B5:2678:A:C8	2.84	0.61
10:AB:166:LYS:NZ	80:B2:948:G:OP1	2.32	0.61
34:AZ:43:ASP:O	34:AZ:45:GLU:N	2.34	0.61
6:A5:138:ARG:NE	80:B2:1235:C:O2	2.33	0.61
29:AU:72:ASN:ND2	80:B2:1429:G:O2'	2.34	0.61
80:B2:1571:C:OP2	89:B2:2046:OHX:N1	2.33	0.61
17:AI:72:ILE:HA	80:B2:256:A:H1'	1.83	0.61
17:AI:75:LYS:CB	80:B2:258:C:C5'	2.77	0.61
15:AG:182:GLN:OE1	80:B2:270:C:N4	2.33	0.61
35:BA:237:LEU:HD23	81:B5:2183:A:C2	2.35	0.61
50:BP:69:ARG:NH2	81:B5:2992:U:H1'	2.14	0.61
38:BD:207:TYR:CG	82:B7:33:U:O2	2.53	0.61
50:BP:59:PRO:HG3	50:BP:76:PHE:CD2	2.35	0.61
8:A7:78:ASP:OD2	86:CW:28:G:O3'	2.18	0.61
8:A7:81:THR:HG1	86:CW:29:G:C5'	1.98	0.61
11:AC:89:GLN:O	80:B2:1145:U:O2'	2.19	0.61
29:AU:48:HIS:O	29:AU:48:HIS:ND1	2.34	0.61
31:AW:70:ASN:ND2	31:AW:130:TYR:O	2.29	0.61
17:AI:47:ARG:NH2	80:B2:397:A:OP2	2.24	0.61
38:BD:226:TYR:CE2	38:BD:236:LEU:HD11	2.35	0.61
60:BZ:67:LYS:NZ	81:B5:1630:U:P	2.73	0.61
79:CL:58:VAL:HG13	79:CL:199:HIS:HB3	1.82	0.61
84:CN:2201:U:C6	84:CN:2201:U:H5''	2.35	0.61
8:A7:34:LYS:HE3	81:B5:2693:C:C5'	2.30	0.61
25:AQ:123:ARG:C	80:B2:1584:G:C2'	2.67	0.61
26:AR:10:LYS:HZ1	80:B2:1402:G:P	2.23	0.61
31:AW:11:LEU:HD12	31:AW:74:VAL:HB	1.82	0.61
33:AY:120:GLY:CA	80:B2:85:A:H4'	2.31	0.61
20:AL:130:PRO:HG2	80:B2:115:G:O6	1.99	0.61
80:B2:145:A:O2'	80:B2:146:U:O5'	2.16	0.61
81:B5:2970:C:O2'	81:B5:2971:A:OP2	2.16	0.61
83:B8:156:U:O2'	83:B8:157:U:OP1	2.17	0.61
60:BZ:79:HIS:HD1	81:B5:1636:U:C2'	2.07	0.61
1:A0:44:ILE:H	1:A0:44:ILE:HD12	1.65	0.61
4:A3:14:TYR:CD2	80:B2:1597:A:N7	2.69	0.61
6:A5:100:UNK:C	6:A5:102:VAL:H	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:28:SER:CB	81:B5:2708:C:C1'	2.79	0.61
10:AB:117:TRP:H	80:B2:932:U:P	2.24	0.61
10:AB:137:ILE:HD11	10:AB:172:LEU:HB3	1.83	0.61
14:AF:109:LYS:CD	80:B2:1473:U:C1'	2.79	0.61
14:AF:109:LYS:HD3	80:B2:1473:U:C1'	2.31	0.61
31:AW:104:LEU:HB2	31:AW:124:LYS:O	2.01	0.61
32:AX:126:LYS:NZ	80:B2:30:G:OP1	2.33	0.61
35:BA:247:ARG:NE	80:B2:1013:A:H4'	2.15	0.61
23:AO:125:SER:HB3	80:B2:926:A:C2	2.36	0.61
58:BX:111:ASN:HD22	81:B5:1608:C:H5''	1.66	0.61
51:BQ:183:GLY:HA2	81:B5:2762:A:O3'	2.01	0.61
81:B5:3195:U:H1'	81:B5:3196:U:OP1	2.01	0.61
47:BM:121:MET:HE1	81:B5:3215:A:O5'	2.00	0.61
37:BC:312:VAL:HG21	81:B5:610:G:C8	2.35	0.61
41:BG:27:THR:O	41:BG:28:HIS:ND1	2.34	0.61
44:BJ:109:HIS:CD2	44:BJ:123:PHE:H	2.15	0.61
49:BO:72[B]:HIS:CD2	81:B5:3008:A:OP1	2.54	0.61
53:BS:49:HIS:O	82:B7:77:G:H5''	2.01	0.61
54:BT:12:ARG:HG3	81:B5:2698:G:O2'	2.00	0.61
59:BY:21:THR:HG21	79:CL:21:THR:OG1	119.83	0.61
1:A0:87:ARG:NH1	80:B2:1796:C:OP1	2.33	0.61
8:A7:44:PRO:HA	81:B5:2678:A:C2	2.36	0.61
26:AR:48:ASN:CB	80:B2:1389:C:O5'	2.49	0.61
27:AS:26:ILE:HD12	27:AS:27:LYS:N	2.16	0.61
32:AX:24:TRP:HE3	32:AX:30:LYS:HD3	1.66	0.61
25:AQ:74:HIS:CE1	80:B2:1480:G:N2	2.65	0.61
80:B2:843:U:H2'	80:B2:844:A:H8	1.64	0.61
10:AB:165:ARG:CZ	80:B2:947:U:P	2.88	0.61
80:B2:992:A:C2	80:B2:1012:U:N3	2.65	0.61
81:B5:150:A:C2'	81:B5:151:A:H5'	2.29	0.61
81:B5:2537:U:O2'	81:B5:2538:U:P	2.59	0.61
81:B5:2895:G:H2'	81:B5:2896:A:H5''	1.82	0.61
36:BB:147:GLU:OE2	36:BB:150:ARG:NH2	2.34	0.61
36:BB:151:ILE:O	36:BB:155:ALA:HB3	2.01	0.61
37:BC:330:TYR:O	37:BC:334:PHE:N	2.31	0.61
49:BO:68[A]:ARG:HH12	81:B5:2987:A:H5''	1.66	0.61
18:AJ:146:PHE:CE2	18:AJ:149:ARG:HD3	2.36	0.61
2:A1:51:GLN:HB3	80:B2:870:C:O2'	2.01	0.61
81:B5:132:C:H2'	81:B5:133:U:H5''	1.82	0.61
43:BI:15:LYS:HG2	81:B5:73:C:C2	96.73	0.61
81:B5:920:A:OP1	81:B5:922:U:H5	1.84	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:323:MET:HE2	36:BB:356:LEU:HD11	1.81	0.61
37:BC:221:ASN:ND2	81:B5:211:A:H3'	2.16	0.61
37:BC:232:SER:O	37:BC:233:LEU:HB2	2.01	0.61
47:BM:124:ARG:NH2	81:B5:3212:C:OP2	2.34	0.61
56:BV:22:ILE:N	81:B5:1899:G:OP1	2.32	0.61
81:B5:2443:A:H5''	84:CN:2122:G:H22	1.66	0.61
12:AD:127:MET:HE1	12:AD:133:GLY:HA2	1.83	0.60
15:AG:62:PRO:CB	80:B2:162:A:O4'	2.49	0.60
22:AN:16:ILE:HG22	31:AW:57:ARG:NH2	2.15	0.60
22:AN:107:LYS:CE	80:B2:1019:A:OP2	2.49	0.60
23:AO:120:PRO:HB2	80:B2:887:A:C3'	2.30	0.60
23:AO:25:ASP:OD2	80:B2:901:G:OP2	2.19	0.60
81:B5:3358:U:H2'	81:B5:3359:A:H8	1.65	0.60
36:BB:334:ARG:NH2	81:B5:3304:U:O2'	2.30	0.60
48:BN:72:LYS:HZ3	81:B5:2167:A:P	2.24	0.60
60:BZ:15:ARG:HB3	81:B5:1637:A:H4'	1.81	0.60
60:BZ:83:THR:HG23	60:BZ:85:TYR:N	2.15	0.60
9:AA:110:TYR:HD1	9:AA:110:TYR:H	1.46	0.60
14:AF:109:LYS:CD	80:B2:1473:U:O3'	2.49	0.60
34:AZ:54:VAL:O	34:AZ:88:ILE:HG21	2.01	0.60
4:A3:32:ARG:HH21	80:B2:1596:C:H3'	1.66	0.60
8:A7:93:ARG:N	80:B2:1637:C:O2	2.21	0.60
89:B2:1915:OHX:N4	89:B2:2071:OHX:N5	2.48	0.60
80:B2:702:G:O6	80:B2:736:C:N4	2.19	0.60
80:B2:732:G:O2'	80:B2:733:A:O4'	2.19	0.60
35:BA:174:ARG:HG3	81:B5:1793:C:O4'	2.02	0.60
51:BQ:69:ARG:NH2	81:B5:720:A:N3	2.48	0.60
38:BD:270:LYS:CG	82:B7:2:G:H4'	2.31	0.60
35:BA:105:GLY:HA3	35:BA:160:SER:HB3	1.83	0.60
35:BA:209:HIS:HD2	35:BA:211:HIS:H	1.47	0.60
41:BG:129:PRO:CB	81:B5:121:A:C2	2.85	0.60
49:BO:68[B]:ARG:NH1	81:B5:2988:C:OP2	2.34	0.60
85:CP:16:THR:CA	90:CP:401:GCP:O3A	2.48	0.60
10:AB:116:LYS:HA	80:B2:931:C:C5'	2.31	0.60
15:AG:157:VAL:HG21	80:B2:78:A:HO2'	1.66	0.60
26:AR:48:ASN:HB2	80:B2:1389:C:H4'	1.82	0.60
8:A7:68:ARG:CZ	27:AS:145:ARG:HD3	2.31	0.60
80:B2:1370:U:H4'	80:B2:1371:A:C5'	2.31	0.60
15:AG:83:CYS:CA	80:B2:162:A:P	2.89	0.60
80:B2:693:U:H5'	80:B2:694:U:H5'	1.83	0.60
80:B2:820:U:H2'	80:B2:821:U:H4'	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:129:LYS:HA	80:B2:990:C:C5'	2.31	0.60
81:B5:3341:U:H5''	81:B5:3342:A:OP2	2.02	0.60
35:BA:204:MET:CE	35:BA:209:HIS:HB2	2.29	0.60
38:BD:152:ARG:HG3	38:BD:152:ARG:HH11	1.66	0.60
43:BI:76:MET:CE	43:BI:148:VAL:HA	2.30	0.60
44:BJ:166:LYS:O	44:BJ:168:ASP:N	2.35	0.60
48:BN:57:GLN:HG2	83:B8:143:U:O3'	2.00	0.60
48:BN:90:ASN:ND2	81:B5:2425:G:OP2	2.32	0.60
58:BX:33:ARG:CZ	81:B5:1580:A:N6	2.64	0.60
3:A2:45:LYS:HG3	14:AF:166:ARG:HD3	1.83	0.60
22:AN:5:HIS:HB3	22:AN:117:LEU:HD13	1.84	0.60
31:AW:20:THR:HG21	80:B2:1038:U:O3'	2.01	0.60
80:B2:1686:C:N1	80:B2:1687:U:C6	2.69	0.60
80:B2:839:U:C4	89:B2:2071:OHX:N4	2.69	0.60
17:AI:64:ASN:ND2	80:B2:257:A:H2'	2.16	0.60
80:B2:538:A:H8	80:B2:543:C:C4	2.19	0.60
23:AO:120:PRO:CG	80:B2:888:U:OP1	2.50	0.60
81:B5:1500:G:H2'	81:B5:1501:U:O4'	2.02	0.60
35:BA:231:SER:CB	81:B5:2163:C:H5''	2.20	0.60
81:B5:3269:U:H4'	81:B5:3270:U:O5'	2.00	0.60
41:BG:132:VAL:HG21	41:BG:190:VAL:HG22	1.83	0.60
60:BZ:115:LYS:CD	81:B5:1629:U:C4'	2.78	0.60
79:CL:53:ARG:O	79:CL:55:ASP:N	2.34	0.60
13:AE:7:LYS:CG	80:B2:450:U:OP1	2.49	0.60
32:AX:144:ARG:NH2	85:CP:314:LYS:CE	2.60	0.60
12:AD:163:PRO:HD3	80:B2:1332:C:H1'	1.83	0.60
80:B2:1358:G:H2'	80:B2:1359:C:C6	2.35	0.60
1:A0:87:ARG:NH1	80:B2:1797:A:C5	2.69	0.60
80:B2:218:A:O2'	80:B2:219:A:OP1	2.15	0.60
48:BN:72:LYS:HD3	81:B5:2166:A:O2'	2.02	0.60
81:B5:22:G:H1'	83:B8:104:A:N3	2.16	0.60
48:BN:179:LYS:NZ	81:B5:287:G:OP1	2.35	0.60
38:BD:270:LYS:CB	82:B7:2:G:H4'	2.31	0.60
83:B8:78:G:H2'	83:B8:79:A:O4'	2.02	0.60
41:BG:194:THR:HG23	81:B5:7:C:O3'	2.00	0.60
49:BO:85[A]:ARG:HD3	49:BO:90[A]:HIS:CG	2.36	0.60
54:BT:2:GLY:N	81:B5:2626:A:OP1	2.34	0.60
79:CL:113:VAL:HG21	79:CL:131:LEU:HD11	1.84	0.60
1:A0:84:VAL:O	1:A0:86:VAL:N	2.29	0.60
8:A7:47:ALA:HB2	81:B5:2678:A:N9	2.16	0.60
13:AE:37:LYS:HB2	13:AE:40:GLU:HG2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:19:ILE:HB	23:AO:83:ILE:HD12	1.84	0.60
26:AR:20:TYR:CD2	26:AR:38:ILE:HD11	2.36	0.60
80:B2:470:A:H5''	80:B2:470:A:H8	1.67	0.60
33:AY:10:ARG:NH1	80:B2:778:G:C2	2.68	0.60
81:B5:1567:U:H1'	81:B5:1570:U:H5	1.66	0.60
60:BZ:115:LYS:HD2	81:B5:1629:U:C1'	2.31	0.60
81:B5:385:A:H2'	81:B5:386:A:C8	2.36	0.60
35:BA:194:ASN:CG	81:B5:822:G:H4'	2.21	0.60
38:BD:41:LYS:HB2	54:BT:68:THR:O	2.01	0.60
39:BE:40:LEU:HB3	39:BE:84:VAL:HG13	1.82	0.60
52:BR:134:HIS:HB2	81:B5:1947:G:H5''	1.84	0.60
60:BZ:33:SER:HB3	60:BZ:36:HIS:HB2	1.83	0.60
59:BY:21:THR:C	79:CL:24:GLU:HB3	125.38	0.60
12:AD:174:HIS:CE1	80:B2:1278:G:C4'	2.81	0.60
15:AG:8:PRO:CB	80:B2:165:G:C5'	2.76	0.60
12:AD:27:ARG:HD2	19:AK:60:SER:HB2	1.83	0.60
20:AL:3:THR:OG1	20:AL:82:ARG:NE	2.34	0.60
29:AU:35:GLU:HG2	80:B2:1383:G:H4'	1.82	0.60
10:AB:116:LYS:CA	80:B2:931:C:H5''	2.30	0.60
81:B5:2372:A:H4'	81:B5:2373:A:OP2	2.01	0.60
35:BA:187:HIS:HB3	81:B5:1794:G:C4	2.37	0.60
37:BC:81:GLY:O	81:B5:356:C:O2'	2.11	0.60
38:BD:282:ARG:HD3	82:B7:63:A:OP2	2.02	0.60
53:BS:52:LYS:NZ	82:B7:100:C:O5'	2.33	0.60
54:BT:6:GLY:HA3	81:B5:2630:C:H5''	1.84	0.60
84:CN:2189:G:H22	84:CN:2192:A:H5'	1.66	0.60
80:B2:415:C:N4	85:CP:288:ARG:HD2	2.17	0.60
1:A0:87:ARG:NH2	1:A0:94:ASN:O	2.34	0.60
7:A6:93:ASP:HB2	7:A6:100:TYR:HE2	1.67	0.60
12:AD:53:THR:OG1	12:AD:53:THR:O	2.08	0.60
17:AI:64:ASN:CB	80:B2:258:C:C1'	2.79	0.60
25:AQ:40:GLU:HG3	25:AQ:42:GLU:HB2	1.84	0.60
12:AD:160:SER:OG	80:B2:1329:A:OP2	2.20	0.60
15:AG:59:GLN:HA	80:B2:155:U:H4'	1.81	0.60
80:B2:1672:G:H2'	80:B2:1673:G:C8	2.37	0.60
80:B2:415:C:OP2	85:CP:288:ARG:CA	2.25	0.60
31:AW:57:ARG:NH2	80:B2:863:A:OP1	2.33	0.60
60:BZ:115:LYS:HD2	81:B5:1629:U:O4'	2.00	0.60
17:AI:92:ARG:CZ	81:B5:2107:A:H4'	2.32	0.60
80:B2:1757:G:O2'	81:B5:2256:A:H8	1.83	0.60
38:BD:145:PHE:CD1	81:B5:2748:A:H4'	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:118:LYS:HD3	44:BJ:108:GLU:OE2	2.02	0.60
47:BM:113:THR:HG22	47:BM:115:PHE:H	1.66	0.60
2:A1:68:GLY:O	80:B2:871:G:N2	2.33	0.60
7:A6:93:ASP:HB2	7:A6:100:TYR:CE2	2.37	0.60
10:AB:147:ALA:O	10:AB:148:ASN:ND2	2.28	0.60
10:AB:181:LEU:HD13	10:AB:181:LEU:H	1.66	0.60
11:AC:245:ASP:N	11:AC:245:ASP:OD1	2.34	0.60
15:AG:8:PRO:HB3	80:B2:165:G:H5'	1.83	0.60
26:AR:48:ASN:ND2	80:B2:1389:C:O5'	2.34	0.60
29:AU:59:PRO:HA	80:B2:1381:U:O3'	2.02	0.60
80:B2:703:G:H2'	80:B2:704:C:H5'	1.83	0.60
80:B2:794:U:O2	80:B2:794:U:H2'	2.00	0.60
52:BR:80:LYS:CE	81:B5:1940:G:OP1	2.43	0.60
42:BH:70:THR:HG21	81:B5:3122:A:C2	2.37	0.60
38:BD:184:ASP:HB3	38:BD:187:THR:HB	1.84	0.60
41:BG:213:LYS:O	41:BG:217:THR:HG22	2.02	0.60
43:BI:177:ASP:N	43:BI:177:ASP:OD1	2.35	0.60
60:BZ:115:LYS:NZ	60:BZ:119:GLU:OE1	2.32	0.60
20:AL:130:PRO:CG	80:B2:115:G:O6	2.50	0.60
20:AL:80:MET:HE3	80:B2:325:G:O4'	2.01	0.60
27:AS:41:ARG:HB2	80:B2:1566:U:OP1	2.02	0.60
27:AS:54:LEU:HD22	27:AS:54:LEU:H	1.66	0.60
28:AT:111:ILE:HG23	28:AT:113:ILE:HG13	1.84	0.60
30:AV:17:CYS:HB2	30:AV:56:SER:HB3	1.84	0.60
80:B2:498:G:O2'	80:B2:499:U:P	2.60	0.60
15:AG:154:ARG:HA	80:B2:78:A:O4'	2.01	0.60
41:BG:157:VAL:HG13	81:B5:147:U:C5	2.37	0.60
60:BZ:79:HIS:CE1	81:B5:1636:U:H2'	2.37	0.60
60:BZ:79:HIS:CE1	81:B5:1636:U:HO2'	2.03	0.60
35:BA:191:LEU:HD11	81:B5:1795:U:OP1	2.02	0.60
81:B5:726:G:H5'	81:B5:726:G:C8	2.31	0.60
38:BD:256:THR:N	82:B7:119:U:OP1	2.27	0.60
38:BD:274:GLN:NE2	82:B7:60:G:H21	1.99	0.60
37:BC:68:GLY:O	81:B5:2401:A:N3	2.35	0.60
38:BD:64:ILE:HG13	38:BD:109:THR:HG21	1.84	0.60
80:B2:415:C:C2	85:CP:288:ARG:HD3	2.37	0.60
1:A0:75:VAL:O	1:A0:79:ILE:N	2.26	0.59
6:A5:131:PHE:HD2	80:B2:1253:U:OP1	1.84	0.59
15:AG:135:PRO:HB2	15:AG:141:ILE:HG12	1.84	0.59
15:AG:219:ARG:O	15:AG:223:LYS:HB2	2.01	0.59
25:AQ:49:TYR:HB3	25:AQ:53:LEU:HD11	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:60:VAL:HG22	34:AZ:101:TYR:HB2	1.83	0.59
80:B2:1474:G:H2'	80:B2:1475:A:C8	2.36	0.59
1:A0:87:ARG:NH1	80:B2:1796:C:H5'	2.16	0.59
17:AI:138:ASN:CG	80:B2:197:A:H61	2.05	0.59
81:B5:1081:U:HO2'	81:B5:1082:U:C5'	2.14	0.59
60:BZ:48:ARG:CZ	81:B5:1631:C:OP2	2.44	0.59
81:B5:1879:A:H4'	81:B5:1880:U:OP2	2.02	0.59
43:BI:14:ASN:O	43:BI:128:ARG:NH2	2.33	0.59
56:BV:92:PHE:CE2	81:B5:3051:U:H1'	2.36	0.59
60:BZ:16:GLY:HA2	81:B5:1638:A:OP2	2.01	0.59
80:B2:440:U:O4'	85:CP:276:ARG:HG3	2.02	0.59
13:AE:179:LYS:N	13:AE:194:THR:O	2.36	0.59
15:AG:175:ILE:C	80:B2:78:A:C2	2.75	0.59
16:AH:185:ILE:HG22	16:AH:186:PRO:HD3	1.82	0.59
17:AI:39:GLY:O	17:AI:59:ARG:HB3	2.02	0.59
23:AO:37:GLU:HA	80:B2:895:G:C4'	2.31	0.59
80:B2:1381:U:H1'	80:B2:1516:A:N6	2.17	0.59
15:AG:185:GLN:CD	80:B2:284:G:N1	2.55	0.59
81:B5:1225:A:H8	81:B5:1288:U:C4'	2.13	0.59
35:BA:243:THR:OG1	81:B5:2244:A:OP1	2.18	0.59
44:BJ:55:ARG:NH1	81:B5:353:G:N7	104.91	0.59
81:B5:955:U:H2'	81:B5:956:U:C6	2.37	0.59
35:BA:234:LYS:HZ3	81:B5:2162:U:P	2.25	0.59
43:BI:72:ALA:O	43:BI:76:MET:HG2	2.02	0.59
46:BL:93:ILE:HG22	46:BL:94:GLY:N	2.18	0.59
52:BR:143:ILE:HG12	81:B5:2093:A:H5'	1.84	0.59
59:BY:82:VAL:O	59:BY:84:LYS:N	2.35	0.59
12:AD:203:PRO:HB2	80:B2:1331:A:N3	2.16	0.59
12:AD:28:GLU:OE1	19:AK:56:LYS:NZ	2.29	0.59
27:AS:46:VAL:HG22	27:AS:72:ILE:HG22	1.83	0.59
34:AZ:42:LEU:HD12	34:AZ:43:ASP:N	2.17	0.59
12:AD:174:HIS:CE1	80:B2:1278:G:O4'	2.48	0.59
25:AQ:14:LYS:HE3	80:B2:1610:G:N7	2.16	0.59
80:B2:497:G:H2'	80:B2:498:G:C8	2.36	0.59
15:AG:159:ARG:CD	80:B2:77:U:N3	2.43	0.59
80:B2:822:U:H2'	80:B2:823:G:H5''	1.83	0.59
81:B5:1764:U:H3'	81:B5:1765:U:H5''	1.84	0.59
81:B5:171:G:N2	81:B5:248:U:O2	2.35	0.59
81:B5:2537:U:H2'	81:B5:2538:U:O4'	2.02	0.59
8:A7:51:ARG:CD	81:B5:2677:G:H1'	2.33	0.59
44:BJ:24:GLY:HA2	81:B5:2680:A:C2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:19:HIS:NE2	81:B5:823:C:H5'	2.16	0.59
37:BC:300:ARG:HH11	37:BC:300:ARG:CG	2.15	0.59
38:BD:158:ARG:HB2	82:B7:46:A:OP1	2.00	0.59
41:BG:136:LEU:HB2	81:B5:147:U:OP2	2.01	0.59
46:BL:13:HIS:HD2	81:B5:98:G:OP2	1.85	0.59
50:BP:125:GLN:HB2	50:BP:141:SER:HB2	1.83	0.59
54:BT:17:ARG:NH1	54:BT:17:ARG:HG2	2.17	0.59
8:A7:29:ASN:H	81:B5:2708:C:C5'	2.15	0.59
10:AB:70:LEU:HD21	10:AB:79:HIS:CD2	2.36	0.59
15:AG:8:PRO:HG3	15:AG:112:VAL:HG13	1.84	0.59
17:AI:43:ILE:HB	80:B2:260:U:H5	1.68	0.59
25:AQ:75:VAL:HG11	80:B2:1610:G:P	2.41	0.59
27:AS:26:ILE:HD11	27:AS:31:ALA:H	1.68	0.59
27:AS:91:ASP:O	27:AS:92:ILE:HB	2.03	0.59
4:A3:54:LYS:HE3	80:B2:1420:C:OP1	2.02	0.59
80:B2:1492:A:O2'	80:B2:1493:A:H8	1.80	0.59
25:AQ:125:GLU:CB	80:B2:1585:U:H5''	2.33	0.59
15:AG:62:PRO:CB	80:B2:162:A:H5'	2.31	0.59
80:B2:1657:U:H1'	80:B2:1658:G:OP2	2.02	0.59
60:BZ:135:ARG:HH22	81:B5:1807:G:H5'	1.65	0.59
81:B5:1949:G:H1	81:B5:2097:U:H3	1.50	0.59
35:BA:235:ALA:HB1	81:B5:2184:U:O5'	2.02	0.59
38:BD:16:PHE:CE1	81:B5:2688:U:C2	2.90	0.59
81:B5:2897:A:H2'	81:B5:2899:C:C5'	2.32	0.59
81:B5:3227:A:H2'	81:B5:3228:C:H5'	1.82	0.59
35:BA:206:PRO:HD3	35:BA:213:GLY:HA2	1.84	0.59
38:BD:85:ARG:HD3	38:BD:86:TYR:CE1	2.38	0.59
59:BY:120:GLN:NE2	59:BY:126:LEU:HA	2.17	0.59
79:CL:53:ARG:O	79:CL:54:SER:C	2.39	0.59
85:CP:20:LYS:H	90:CP:401:GCP:H8	1.67	0.59
9:AA:66:ALA:HB2	30:AV:37:ALA:HB2	1.85	0.59
15:AG:175:ILE:HD11	80:B2:78:A:O4'	1.96	0.59
80:B2:543:C:O2	80:B2:543:C:H5'	2.02	0.59
52:BR:170:ARG:N	80:B2:851:U:C3'	2.65	0.59
35:BA:237:LEU:CD2	81:B5:2183:A:H2	2.16	0.59
52:BR:61:SER:OG	81:B5:3069:G:O2'	2.02	0.59
81:B5:3228:C:H4'	81:B5:3229:G:O5'	2.03	0.59
46:BL:42:ARG:HH22	81:B5:1494:U:P	74.32	0.59
46:BL:99:HIS:CG	81:B5:156:G:C5	2.90	0.59
43:BI:168:SER:HB2	54:BT:160:ILE:O	2.03	0.59
79:CL:119:VAL:O	79:CL:121:GLY:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:25:VAL:HG11	3:A2:66:LEU:HD12	1.85	0.59
10:AB:193:ILE:O	10:AB:197:ILE:HG12	2.03	0.59
21:AM:28:LEU:HD13	21:AM:32:LEU:HD11	1.84	0.59
80:B2:514:G:N1	80:B2:543:C:H5	2.00	0.59
18:AJ:7:THR:O	80:B2:771:A:H4'	2.01	0.59
22:AN:14:SER:OG	80:B2:960:U:C5	2.50	0.59
81:B5:1329:U:H4'	81:B5:1330:A:OP1	2.02	0.59
60:BZ:15:ARG:HB3	81:B5:1637:A:C5'	2.32	0.59
56:BV:71:LYS:NZ	81:B5:2294:U:OP2	2.21	0.59
36:BB:152:LYS:HD3	36:BB:189:SER:HA	1.83	0.59
37:BC:138:ARG:NH2	37:BC:240:PRO:HB2	2.18	0.59
38:BD:261:THR:OG1	38:BD:264:GLN:HG3	2.02	0.59
79:CL:180:PHE:C	79:CL:181:PRO:O	2.41	0.59
9:AA:169:SER:O	9:AA:173:ILE:HG12	2.03	0.59
15:AG:142:ARG:HA	15:AG:147:LEU:HD12	1.85	0.59
17:AI:25:ARG:HD3	80:B2:400:A:P	2.42	0.59
23:AO:129:LYS:CA	80:B2:990:C:C5'	2.81	0.59
25:AQ:75:VAL:CB	80:B2:1610:G:P	2.90	0.59
34:AZ:92:ILE:HG12	34:AZ:100:ILE:HG22	1.84	0.59
1:A0:3:LYS:CE	80:B2:1030:A:OP1	2.51	0.59
80:B2:1585:U:N3	80:B2:1611:A:H2	1.81	0.59
80:B2:1746:A:C2	81:B5:2303:A:C1'	2.86	0.59
11:AC:88:LYS:NZ	89:B2:2050:OHX:N2	2.51	0.59
20:AL:80:MET:HE1	80:B2:325:G:H5'	1.84	0.59
5:A4:58:PRO:HA	80:B2:558:U:OP1	2.02	0.59
81:B5:208:C:C2'	81:B5:209:A:H5'	2.33	0.59
35:BA:39:GLY:CA	81:B5:2550:U:O4	2.50	0.59
37:BC:119:ARG:NE	81:B5:695:C:OP1	2.31	0.59
42:BH:26:LYS:HG3	42:BH:35:THR:HG22	1.85	0.59
48:BN:162:ARG:HG2	81:B5:56:G:H1'	1.84	0.59
59:BY:37:LYS:H	59:BY:37:LYS:CD	2.13	0.59
60:BZ:46:ILE:HG12	60:BZ:49:TYR:CE1	2.37	0.59
79:CL:77:ILE:HG22	79:CL:119:VAL:HG21	1.84	0.59
10:AB:97:LEU:CD1	10:AB:98:THR:H	2.11	0.59
33:AY:120:GLY:HA2	80:B2:85:A:C2'	2.33	0.59
26:AR:5:ARG:HB2	80:B2:1402:G:OP1	2.03	0.59
4:A3:32:ARG:NE	80:B2:1596:C:OP2	2.32	0.59
80:B2:580:A:OP1	89:B2:2025:OHX:N4	2.36	0.59
13:AE:51:ARG:NH2	80:B2:788:A:N1	2.50	0.59
81:B5:1308:A:H8	81:B5:1308:A:OP2	1.85	0.59
46:BL:5:LYS:CD	81:B5:1834:U:OP1	82.26	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1655:A:C1'	81:B5:2302:G:O2'	2.51	0.59
36:BB:124:LYS:HB2	81:B5:3316:A:N1	2.17	0.59
37:BC:161:LYS:NZ	81:B5:209:A:OP1	2.35	0.59
58:BX:103:TYR:O	58:BX:105:VAL:HG23	2.03	0.59
79:CL:104:LEU:N	79:CL:105:ASP:HA	2.17	0.59
59:BY:29:VAL:HG12	79:CL:32:LEU:H	141.37	0.59
9:AA:121:VAL:HG23	9:AA:141:ILE:HG21	1.84	0.59
13:AE:16:HIS:HE1	80:B2:789:A:OP2	1.86	0.59
23:AO:38:THR:HG21	80:B2:896:U:C4'	2.32	0.59
29:AU:35:GLU:OE2	80:B2:1383:G:H4'	2.02	0.59
80:B2:1071:U:H2'	80:B2:1072:C:C6	2.38	0.59
4:A3:14:TYR:CE2	80:B2:1597:A:C5	2.90	0.59
89:B2:1922:OHX:N4	89:B2:1977:OHX:N3	2.50	0.59
80:B2:1644:C:O2	81:B5:2255:A:N3	2.35	0.59
35:BA:234:LYS:HD3	81:B5:2162:U:H5''	1.85	0.59
35:BA:244:GLY:N	81:B5:2153:U:H4'	2.17	0.59
41:BG:181:LYS:HD3	83:B8:154:C:H5''	1.84	0.59
41:BG:63:LYS:HE2	83:B8:153:U:P	2.42	0.59
56:BV:87:ARG:HH22	56:BV:137:VAL:HG22	1.68	0.59
60:BZ:79:HIS:ND1	81:B5:1636:U:C2'	2.64	0.59
80:B2:420:A:C2	85:CP:289:LEU:HD21	2.38	0.59
17:AI:10:LYS:HG2	20:AL:133:LYS:HE3	1.85	0.59
22:AN:114:ARG:HG2	22:AN:114:ARG:NH1	2.18	0.59
24:AP:42:ARG:HH22	80:B2:1550:A:P	2.26	0.59
26:AR:60:ARG:NH1	80:B2:1400:A:C5'	2.63	0.59
27:AS:30:TYR:O	27:AS:33:THR:OG1	2.15	0.59
80:B2:1738:U:H2'	80:B2:1739:C:C6	2.37	0.59
80:B2:407:A:H2'	80:B2:408:C:C6	2.38	0.59
52:BR:177:VAL:H	80:B2:853:G:H5'	1.68	0.59
41:BG:162:LEU:HD13	81:B5:147:U:N1	2.17	0.59
81:B5:2511:A:C2'	81:B5:2512:C:H5''	2.32	0.59
41:BG:55:TYR:OH	83:B8:149:A:C2'	2.50	0.59
46:BL:153:ASP:OD2	46:BL:157:ARG:NH1	2.36	0.59
50:BP:30:ARG:HA	50:BP:119:VAL:CG1	2.33	0.59
8:A7:53:ARG:HE	8:A7:53:ARG:HA	1.67	0.58
25:AQ:55:VAL:HG21	25:AQ:105:LEU:HG	1.85	0.58
25:AQ:135:ARG:HB3	80:B2:1581:C:O3'	2.03	0.58
26:AR:17:ILE:HG23	26:AR:58:MET:HE1	1.83	0.58
80:B2:1385:G:N7	89:B2:2015:OHX:N3	2.51	0.58
80:B2:1488:G:H3'	80:B2:1515:A:H61	1.68	0.58
80:B2:702:G:C6	80:B2:737:A:N6	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:105:PHE:CE1	81:B5:1062:A:H4'	2.38	0.58
81:B5:2103:U:H2'	81:B5:2104:A:H8	1.66	0.58
80:B2:913:G:N1	81:B5:2206:G:H5''	2.18	0.58
53:BS:146:LYS:HD3	81:B5:534:U:H1'	1.84	0.58
41:BG:181:LYS:CD	83:B8:154:C:H5''	2.32	0.58
37:BC:259:ASP:N	37:BC:259:ASP:OD1	2.35	0.58
40:BF:207:LEU:O	81:B5:1334:U:H5'	2.02	0.58
52:BR:166:ASN:CA	80:B2:850:A:C8	2.86	0.58
54:BT:2:GLY:N	81:B5:2626:A:P	2.76	0.58
8:A7:34:LYS:CE	81:B5:2693:C:C5'	2.79	0.58
9:AA:198:MET:SD	26:AR:85:VAL:HG11	2.44	0.58
15:AG:62:PRO:HB2	80:B2:162:A:H4'	1.85	0.58
16:AH:143:LEU:HB2	16:AH:147:ASN:HB2	1.85	0.58
80:B2:1442:U:H2'	80:B2:1443:U:C6	2.37	0.58
15:AG:174:LYS:HG2	80:B2:79:C:O2'	2.03	0.58
2:A1:68:GLY:CA	80:B2:872:G:H1'	2.33	0.58
81:B5:1226:G:H2'	81:B5:1227:C:C6	2.38	0.58
81:B5:1225:A:C8	81:B5:1288:U:C4'	2.72	0.58
81:B5:1815:U:HO2'	81:B5:1816:A:P	2.25	0.58
81:B5:2434:U:C4'	81:B5:2435:G:H5''	2.34	0.58
81:B5:438:A:H2'	81:B5:494:G:H21	1.68	0.58
46:BL:16:LYS:HG3	81:B5:48:A:P	2.43	0.58
46:BL:73:ARG:NH2	81:B5:77:A:N7	2.51	0.58
52:BR:134:HIS:CG	81:B5:1947:G:H5'	2.38	0.58
54:BT:12:ARG:HD3	54:BT:13:TYR:CZ	2.38	0.58
8:A7:47:ALA:HA	81:B5:2678:A:C1'	2.32	0.58
9:AA:150:ASP:OD2	9:AA:165:ARG:NH2	2.36	0.58
12:AD:177:MET:SD	12:AD:182:LEU:HD11	2.43	0.58
25:AQ:135:ARG:CB	80:B2:1581:C:H4'	2.33	0.58
80:B2:279:G:C3'	80:B2:280:U:H5''	2.28	0.58
80:B2:702:G:O2'	80:B2:703:G:O4'	2.21	0.58
80:B2:833:U:OP2	89:B2:2024:OHX:N4	2.36	0.58
81:B5:1282:G:H3'	81:B5:1283:C:H5''	1.84	0.58
81:B5:1481:A:O2'	81:B5:1858:A:C2	2.56	0.58
35:BA:152:SER:HA	81:B5:2178:A:O2'	2.03	0.58
35:BA:235:ALA:HB1	81:B5:2184:U:OP1	2.03	0.58
81:B5:243:G:H2'	81:B5:244:G:C8	2.39	0.58
81:B5:2440:G:HO2'	81:B5:2441:A:P	2.26	0.58
81:B5:2510:U:O2'	81:B5:2511:A:H5''	2.03	0.58
43:BI:160:PRO:HD3	81:B5:2854:U:C5'	2.31	0.58
46:BL:70:ARG:HH12	81:B5:76:G:P	2.26	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:109:ARG:CD	83:B8:140:G:O2'	2.51	0.58
36:BB:188:ILE:CD1	36:BB:188:ILE:H	2.14	0.58
42:BH:86:TYR:CE2	42:BH:151:VAL:HG22	2.39	0.58
43:BI:24:ARG:NH2	81:B5:2648:G:OP1	2.36	0.58
59:BY:29:VAL:HG13	79:CL:33:ALA:N	143.91	0.58
7:A6:36:ALA:HB2	7:A6:71:CYS:HB3	1.85	0.58
13:AE:200:ARG:NH1	13:AE:202:ASP:OD2	2.36	0.58
16:AH:96:ARG:HB3	80:B2:856:A:N6	2.18	0.58
23:AO:36:LYS:O	80:B2:894:U:O2'	2.12	0.58
24:AP:28:MET:O	24:AP:29:SER:HB3	2.02	0.58
27:AS:41:ARG:NH1	80:B2:1565:C:OP1	2.35	0.58
80:B2:1542:G:H22	80:B2:1568:C:H1'	1.67	0.58
1:A0:87:ARG:CD	80:B2:1797:A:N6	2.63	0.58
43:BI:22:TYR:HB3	81:B5:2647:A:C4'	2.33	0.58
50:BP:74:LYS:HE2	81:B5:3297:U:O3'	2.03	0.58
38:BD:270:LYS:HG2	82:B7:2:G:C5'	2.33	0.58
44:BJ:70:THR:HB	82:B7:39:C:O2	2.04	0.58
35:BA:13:GLY:CA	81:B5:943:U:H3'	70.62	0.58
1:A0:95:ARG:HA	80:B2:1797:A:C4'	2.34	0.58
6:A5:144:CYS:HB3	6:A5:147:VAL:HG13	1.85	0.58
10:AB:39:GLU:HB3	10:AB:73:LEU:O	2.04	0.58
15:AG:132:ARG:CD	80:B2:68:A:C6	2.86	0.58
16:AH:51:VAL:HG23	16:AH:53:GLY:H	1.67	0.58
17:AI:170:SER:C	80:B2:209:U:H5''	2.24	0.58
17:AI:37:LYS:H	17:AI:59:ARG:H	1.51	0.58
17:AI:171:SER:HA	80:B2:209:U:H5'	1.85	0.58
80:B2:429:G:HO2'	85:CP:243:PHE:HD1	1.51	0.58
33:AY:10:ARG:NH2	80:B2:778:G:N2	2.48	0.58
35:BA:50:HIS:NE2	81:B5:1795:U:H2'	2.18	0.58
81:B5:2439:A:N6	81:B5:2508:U:H3	2.01	0.58
37:BC:88:GLY:HA3	81:B5:1729:A:OP1	102.83	0.58
38:BD:266:ALA:HA	82:B7:1:G:C1'	2.32	0.58
48:BN:4:TYR:OH	81:B5:148:G:P	2.62	0.58
50:BP:67:ILE:HD12	50:BP:82:ARG:CZ	2.34	0.58
9:AA:179:ARG:HD3	9:AA:183:ARG:NH1	2.17	0.58
13:AE:49:ARG:HB2	13:AE:55:ALA:HB3	1.85	0.58
15:AG:188:ARG:HD3	80:B2:283:U:H3'	1.86	0.58
17:AI:5:ARG:HD3	17:AI:29:LEU:O	2.02	0.58
23:AO:38:THR:OG1	23:AO:39:ILE:N	2.36	0.58
24:AP:52:LYS:HG3	24:AP:53:PRO:HD3	1.85	0.58
80:B2:913:G:O6	81:B5:2206:G:O3'	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:95:ASN:HA	81:B5:2673:A:C5'	2.34	0.58
38:BD:260:PHE:HE2	82:B7:121:U:C5'	2.11	0.58
35:BA:200:ARG:NE	81:B5:2147:A:OP2	2.36	0.58
38:BD:207:TYR:CE1	82:B7:33:U:O4'	2.56	0.58
48:BN:60:VAL:HG21	83:B8:142:C:C4'	2.33	0.58
52:BR:85:ARG:NH1	81:B5:2103:U:O3'	2.37	0.58
10:AB:141:ALA:HB1	10:AB:207:LEU:HD23	1.84	0.58
89:AC:301:OHX:N6	89:B2:1906:OHX:N5	2.52	0.58
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:HH11	1.52	0.58
80:B2:241:U:H5'	80:B2:242:U:OP2	2.04	0.58
46:BL:65:TYR:CD2	81:B5:103:G:H5'	2.39	0.58
81:B5:1064:A:H4'	81:B5:1065:A:O5'	2.04	0.58
80:B2:1645:G:H5'	81:B5:2260:U:O2	2.04	0.58
81:B5:3155:U:H3'	81:B5:3156:U:H5''	1.85	0.58
54:BT:127:GLN:CG	81:B5:1095:U:N3	2.67	0.58
85:CP:199:ALA:CB	90:CP:401:GCP:C5	2.81	0.58
2:A1:50:ALA:O	2:A1:52:THR:N	2.35	0.58
13:AE:104:ASP:HB3	13:AE:106:LYS:H	1.69	0.58
34:AZ:88:ILE:HA	34:AZ:104:ALA:HB2	1.85	0.58
80:B2:1178:G:H2'	80:B2:1179:G:O4'	2.04	0.58
80:B2:1338:C:H1'	80:B2:1410:A:C4	2.39	0.58
1:A0:92:ARG:CD	80:B2:1796:C:OP2	2.47	0.58
13:AE:7:LYS:HG3	80:B2:450:U:OP1	2.04	0.58
32:AX:5:LYS:HE2	80:B2:611:U:OP2	2.04	0.58
37:BC:334:PHE:CE2	81:B5:578:A:C6	2.91	0.58
81:B5:979:U:H4'	81:B5:980:A:OP1	2.04	0.58
37:BC:361:HIS:CG	37:BC:362:ASP:H	2.21	0.58
49:BO:110[A]:PRO:O	49:BO:111[A]:PRO:C	2.41	0.58
51:BQ:100:THR:HG22	51:BQ:120:GLU:HB3	1.86	0.58
79:CL:42:GLU:HG3	79:CL:215:THR:HG23	1.85	0.58
15:AG:186:ARG:O	15:AG:190:GLN:HG2	2.04	0.58
26:AR:48:ASN:C	80:B2:1389:C:H4'	2.23	0.58
6:A5:91:UNK:HG2	80:B2:1445:G:C4	2.38	0.58
80:B2:1498:G:H2'	80:B2:1499:G:H5'	1.85	0.58
27:AS:40:ARG:HD2	80:B2:1539:G:H5''	1.86	0.58
80:B2:373:G:N7	89:B2:2058:OHX:N6	2.51	0.58
17:AI:25:ARG:HA	80:B2:400:A:O5'	2.02	0.58
81:B5:1579:C:H2'	81:B5:1580:A:H5'	1.86	0.58
35:BA:69:TYR:CD2	81:B5:2558:U:N3	2.72	0.58
55:BU:19:VAL:HG12	55:BU:105:LEU:HD22	1.85	0.58
56:BV:92:PHE:CZ	81:B5:3051:U:H1'	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BW:120:LYS:HA	57:BW:123:ARG:HH11	1.69	0.58
21:AM:56:GLU:HB3	21:AM:124:LYS:HG2	1.84	0.58
28:AT:16:ASN:OD1	28:AT:56:LYS:NZ	2.35	0.58
33:AY:11:LYS:CE	80:B2:776:G:O6	2.52	0.58
11:AC:91:ARG:HD2	80:B2:1625:C:OP1	2.03	0.58
80:B2:1715:G:H2'	80:B2:1716:C:H5'	1.85	0.58
80:B2:190:C:N4	80:B2:196:G:O6	2.37	0.58
52:BR:175:GLN:CA	80:B2:852:C:H4'	2.29	0.58
23:AO:27:PHE:CE2	80:B2:916:U:C2'	2.87	0.58
56:BV:48:ARG:HG3	81:B5:2339:C:OP2	2.04	0.58
42:BH:174:LYS:HG2	81:B5:2900:A:O2'	2.04	0.58
81:B5:2946:A:H5''	81:B5:2947:G:H5'	1.86	0.58
44:BJ:55:ARG:HD3	81:B5:353:G:C8	108.00	0.58
37:BC:16:THR:HG23	37:BC:18:ASN:H	1.68	0.58
43:BI:86:HIS:HB3	43:BI:139:ARG:CG	2.34	0.58
49:BO:10[A]:ASP:OD2	49:BO:37[A]:ARG:NH2	2.31	0.58
49:BO:15[A]:LEU:HD21	49:BO:125[A]:ARG:HG3	1.86	0.58
52:BR:165:LYS:HZ1	80:B2:824:G:H1'	1.67	0.58
14:AF:145:ASP:OD1	14:AF:146:THR:N	2.36	0.57
14:AF:72:HIS:O	25:AQ:47:LYS:HE2	2.04	0.57
15:AG:15:THR:HG21	80:B2:153:G:P	2.40	0.57
17:AI:25:ARG:NH2	80:B2:386:G:OP2	2.38	0.57
17:AI:31:ARG:HB2	80:B2:332:U:OP1	2.04	0.57
23:AO:107:ARG:HG3	23:AO:107:ARG:NH1	2.15	0.57
33:AY:104:SER:HB3	33:AY:107:GLN:HB2	1.85	0.57
20:AL:130:PRO:CG	80:B2:115:G:C6	2.87	0.57
80:B2:1483:A:H2'	80:B2:1484:G:C8	2.39	0.57
1:A0:87:ARG:NH1	80:B2:1797:A:N7	2.52	0.57
81:B5:1581:C:OP2	81:B5:1581:C:H4'	2.03	0.57
38:BD:258:LYS:HG2	38:BD:258:LYS:O	2.02	0.57
41:BG:129:PRO:HB3	81:B5:121:A:H2	1.68	0.57
48:BN:168:GLY:O	48:BN:172:ARG:HB2	2.04	0.57
53:BS:50:LYS:CE	82:B7:76:A:C2	2.87	0.57
84:CN:2157:C:C2	84:CN:2158:C:C5	2.91	0.57
2:A1:51:GLN:OE1	80:B2:870:C:O2'	2.21	0.57
3:A2:32:PHE:CE1	3:A2:38:ARG:HB3	2.38	0.57
8:A7:79:SER:O	8:A7:82:THR:OG1	2.21	0.57
17:AI:75:LYS:CB	80:B2:258:C:H5''	2.34	0.57
18:AJ:176:ASN:HD22	80:B2:511:A:P	2.26	0.57
23:AO:20:TYR:HD2	80:B2:917:U:C5'	2.13	0.57
24:AP:70:ASN:ND2	44:BJ:172:LEU:CD2	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AP:99:GLY:O	80:B2:1211:A:H1'	2.04	0.57
14:AF:109:LYS:HD3	80:B2:1473:U:H1'	1.84	0.57
80:B2:1015:U:OP1	89:B2:1923:OHX:N6	2.38	0.57
80:B2:625:C:H2'	80:B2:626:U:C6	2.39	0.57
81:B5:2264:U:P	89:B5:3402:OHX:N3	2.77	0.57
80:B2:1747:G:HO2'	81:B5:2304:C:H5'	1.64	0.57
81:B5:547:G:H2'	81:B5:548:G:O4'	2.03	0.57
35:BA:85:GLY:HA2	81:B5:2554:A:C4	2.39	0.57
39:BE:78:ARG:NH1	39:BE:78:ARG:HG3	2.19	0.57
42:BH:91:ARG:NH2	42:BH:141:LYS:O	2.36	0.57
53:BS:155:ARG:HD3	53:BS:172:TYR:CG	2.39	0.57
54:BT:56:PHE:CZ	54:BT:78:LYS:HD3	2.39	0.57
2:A1:28:PRO:HB3	80:B2:959:U:O5'	2.03	0.57
22:AN:123:HIS:NE2	81:B5:847:A:H4'	2.19	0.57
32:AX:144:ARG:NE	85:CP:268:ASN:OD1	2.37	0.57
80:B2:104:A:OP2	80:B2:308:C:N4	2.37	0.57
15:AG:62:PRO:CB	80:B2:162:A:C4'	2.82	0.57
23:AO:52:ARG:CB	80:B2:906:A:OP2	2.51	0.57
1:A0:95:ARG:NH1	80:B2:934:C:C6	2.73	0.57
80:B2:990:C:H2'	80:B2:991:G:O4'	2.04	0.57
81:B5:252:U:H4'	81:B5:253:A:H5''	1.86	0.57
81:B5:2546:C:H2'	81:B5:2547:A:H8	1.68	0.57
44:BJ:103:GLY:O	81:B5:2673:A:H4'	2.03	0.57
37:BC:170:LYS:HG3	37:BC:175:HIS:HB2	1.86	0.57
37:BC:59:GLN:OE1	44:BJ:55:ARG:NH2	102.23	0.57
42:BH:120:ASP:OD2	42:BH:124:ARG:NH2	2.37	0.57
39:BE:176:PHE:H	47:BM:117:ARG:HH22	1.51	0.57
52:BR:93:VAL:HG21	81:B5:1779:C:H1'	1.85	0.57
60:BZ:54:THR:H	60:BZ:57:HIS:CD2	2.20	0.57
1:A0:86:VAL:HA	80:B2:1795:U:H5'	1.86	0.57
5:A4:4:VAL:HG22	32:AX:59:ILE:HD12	1.85	0.57
32:AX:24:TRP:CE3	32:AX:30:LYS:HD3	2.39	0.57
20:AL:130:PRO:CD	80:B2:115:G:C6	2.87	0.57
28:AT:93:HIS:CE1	80:B2:1525:A:OP1	2.57	0.57
80:B2:1711:C:O2'	80:B2:1712:A:OP1	2.14	0.57
89:B2:1922:OHX:N4	89:B2:1977:OHX:N6	2.52	0.57
80:B2:45:U:O2'	80:B2:46:A:H2'	2.02	0.57
33:AY:11:LYS:NZ	80:B2:775:G:O6	2.37	0.57
81:B5:1574:C:O2'	81:B5:1575:A:OP1	2.22	0.57
80:B2:1746:A:C2	81:B5:2302:G:N3	2.71	0.57
81:B5:3078:U:H4'	81:B5:3079:U:O5'	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:3358:U:H2'	81:B5:3359:A:C8	2.39	0.57
83:B8:126:A:O2'	83:B8:128:U:OP2	2.16	0.57
80:B2:415:C:N4	85:CP:288:ARG:CD	2.65	0.57
7:A6:17:ASN:HD21	80:B2:1408:G:H4'	1.68	0.57
10:AB:117:TRP:HA	80:B2:932:U:OP2	2.04	0.57
17:AI:48:THR:HG21	17:AI:54:LYS:HB2	1.87	0.57
31:AW:103:ILE:HD11	31:AW:126:LEU:HD12	1.86	0.57
34:AZ:43:ASP:O	34:AZ:46:LYS:N	2.27	0.57
14:AF:185:ARG:CZ	80:B2:1572:G:H1'	2.35	0.57
80:B2:1595:U:N3	80:B2:1600:A:H2	2.02	0.57
80:B2:67:A:O3'	80:B2:68:A:H3'	2.03	0.57
80:B2:704:C:H3'	80:B2:704:C:OP2	2.04	0.57
81:B5:2440:G:O2'	81:B5:2441:A:OP1	2.18	0.57
38:BD:146:LEU:CB	81:B5:2746:A:C2	2.73	0.57
81:B5:2897:A:H2'	81:B5:2899:C:H5''	1.86	0.57
81:B5:3280:U:O2'	81:B5:3281:U:H5''	2.03	0.57
36:BB:2:SER:HA	81:B5:2940:A:N7	2.19	0.57
39:BE:109:GLU:CD	39:BE:109:GLU:H	2.07	0.57
41:BG:157:VAL:CG1	81:B5:147:U:C4	2.85	0.57
42:BH:86:TYR:CD1	42:BH:151:VAL:HG13	2.40	0.57
49:BO:36[B]:VAL:HB	49:BO:108[B]:ILE:HB	1.85	0.57
57:BW:25:ASP:N	57:BW:25:ASP:OD1	2.36	0.57
84:CN:2172:G:H8	84:CN:2172:G:H5''	1.69	0.57
80:B2:429:G:O2'	85:CP:243:PHE:HD1	1.88	0.57
7:A6:160:GLU:O	7:A6:162:ALA:N	2.35	0.57
19:AK:15:LEU:HD13	19:AK:21:VAL:HG23	1.87	0.57
20:AL:80:MET:HB2	20:AL:83:THR:HG23	1.86	0.57
22:AN:67:THR:O	22:AN:69:ASN:N	2.36	0.57
23:AO:32:ASP:O	23:AO:35:GLY:N	2.33	0.57
80:B2:1207:C:H42	80:B2:1456:C:H5	1.53	0.57
80:B2:143:G:H2'	80:B2:144:U:H5''	1.85	0.57
53:BS:137:ARG:NH1	81:B5:1213:G:H5''	2.19	0.57
53:BS:115:ARG:NH1	81:B5:1296:C:H5'	2.20	0.57
37:BC:162:THR:HG21	81:B5:209:A:C4	2.40	0.57
81:B5:2112:U:H4'	81:B5:2113:A:H5'	1.86	0.57
81:B5:892:U:O2'	81:B5:893:C:H5'	2.04	0.57
36:BB:166:ILE:O	36:BB:169:THR:HB	2.05	0.57
37:BC:283:THR:HG21	37:BC:288:ARG:HH22	1.69	0.57
41:BG:137:ASN:HB2	81:B5:148:G:C5	2.40	0.57
42:BH:20:ILE:HG23	42:BH:25:VAL:HG22	1.87	0.57
42:BH:22:SER:HB2	42:BH:39:LYS:NZ	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:51:ARG:HG2	59:BY:115:ARG:NH2	2.20	0.57
7:A6:214:ALA:HB2	7:A6:220:ILE:HA	1.85	0.57
20:AL:136:ARG:HD3	80:B2:304:U:OP1	2.04	0.57
23:AO:81:VAL:HG13	23:AO:115:ILE:HG21	1.86	0.57
23:AO:120:PRO:CB	80:B2:887:A:C5'	2.75	0.57
23:AO:129:LYS:HA	80:B2:990:C:C3'	2.34	0.57
29:AU:28:SER:OG	29:AU:29:THR:N	2.38	0.57
26:AR:48:ASN:CB	80:B2:1389:C:H4'	2.34	0.57
20:AL:34:TRP:NE1	80:B2:249:U:OP1	2.32	0.57
33:AY:64:PHE:CE2	80:B2:767:U:C6	2.93	0.57
80:B2:1759:C:O2	81:B5:2262:A:H2	1.88	0.57
81:B5:2530:G:H2'	81:B5:2531:C:H5'	1.87	0.57
81:B5:2726:C:O2'	81:B5:2727:A:H2'	2.04	0.57
43:BI:7:ARG:HH11	81:B5:2828:G:P	2.27	0.57
35:BA:183:GLY:HA3	81:B5:896:A:OP1	2.04	0.57
35:BA:52:SER:HB3	35:BA:191:LEU:HD12	1.85	0.57
36:BB:187:SER:HB3	36:BB:190:GLU:OE1	2.04	0.57
80:B2:414:C:N3	85:CP:289:LEU:HD21	2.17	0.57
1:A0:24:VAL:HG11	1:A0:71:LEU:HD12	1.85	0.57
7:A6:74:THR:HG23	7:A6:79:TYR:HB2	1.85	0.57
7:A6:64:HIS:ND1	7:A6:86:ASP:OD2	2.35	0.57
12:AD:115:ILE:HG23	12:AD:116:ARG:HG3	1.87	0.57
13:AE:151:ASP:HB3	13:AE:154:ILE:HG13	1.87	0.57
15:AG:189:HIS:CD2	80:B2:285:G:OP2	2.58	0.57
15:AG:3:LEU:HD13	15:AG:111:LEU:HD11	1.85	0.57
19:AK:1:MET:HG3	80:B2:1217:A:C5'	2.34	0.57
21:AM:30:VAL:HB	21:AM:132:GLU:HG3	1.86	0.57
24:AP:47:ARG:NH1	80:B2:1555:A:P	2.73	0.57
26:AR:5:ARG:O	26:AR:10:LYS:HE2	2.05	0.57
26:AR:5:ARG:NH2	80:B2:1402:G:OP2	2.38	0.57
27:AS:70:VAL:HG12	27:AS:74:GLN:OE1	2.05	0.57
4:A3:44:ARG:NH2	80:B2:1280:C:H5'	2.19	0.57
80:B2:1130:G:OP2	89:B2:1953:OHX:N2	2.38	0.57
80:B2:542:A:H2'	80:B2:543:C:H3'	1.86	0.57
80:B2:735:C:OP2	80:B2:735:C:H2'	2.05	0.57
52:BR:171:ASP:OD1	80:B2:852:C:P	2.56	0.57
81:B5:1573:G:C6	81:B5:1574:C:H1'	2.40	0.57
81:B5:2659:G:H4'	81:B5:2751:G:O2'	2.05	0.57
38:BD:31:TYR:HE2	81:B5:2705:A:OP1	1.88	0.57
81:B5:2971:A:OP2	81:B5:2971:A:H3'	2.04	0.57
38:BD:152:ARG:HG3	38:BD:152:ARG:NH1	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:90:THR:HG22	41:BG:214:LEU:HG	1.87	0.57
80:B2:1226:A:O2'	80:B2:1227:A:OP1	2.23	0.57
26:AR:49:LYS:CG	80:B2:1390:U:OP2	2.52	0.57
80:B2:238:U:O2'	80:B2:239:C:H5'	2.05	0.57
80:B2:639:U:H4'	80:B2:639:U:OP2	2.04	0.57
15:AG:88:ARG:CZ	80:B2:92:A:C2	2.88	0.57
81:B5:708:G:H8	81:B5:708:G:H5''	1.70	0.57
35:BA:21:ARG:HD2	81:B5:1797:A:H1'	1.85	0.57
35:BA:4:VAL:HB	81:B5:910:G:OP2	2.03	0.57
41:BG:133:LYS:HB2	41:BG:199:ALA:O	2.04	0.57
41:BG:151:VAL:HG13	41:BG:199:ALA:HB2	1.87	0.57
46:BL:5:LYS:HG2	81:B5:1833:G:O3'	84.62	0.57
49:BO:65[A]:ASN:OD1	49:BO:67[A]:THR:HB	2.04	0.57
60:BZ:15:ARG:HB3	81:B5:1637:A:C4'	2.35	0.57
79:CL:39:GLU:OE1	79:CL:216:THR:HB	2.04	0.57
12:AD:162:GLN:HB3	80:B2:1332:C:C2'	2.35	0.57
15:AG:109:LEU:HD13	15:AG:111:LEU:HD21	1.87	0.57
15:AG:78:THR:HG23	15:AG:92:ARG:HG2	1.86	0.57
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:HD2	1.70	0.57
27:AS:85:PHE:O	80:B2:1565:C:O2'	2.23	0.57
12:AD:159:HIS:CB	80:B2:1422:A:H5'	2.35	0.57
80:B2:312:A:C2	80:B2:314:C:H2'	2.40	0.57
80:B2:885:G:H2'	80:B2:886:U:C6	2.40	0.57
51:BQ:56:LYS:NZ	81:B5:674:G:O6	2.38	0.57
48:BN:60:VAL:HG21	83:B8:142:C:C5'	2.35	0.57
40:BF:206:LYS:HB3	81:B5:1334:U:OP1	2.05	0.57
9:AA:27:ARG:HG3	9:AA:44:GLY:O	2.04	0.56
10:AB:117:TRP:HE1	10:AB:152:ARG:CZ	2.18	0.56
14:AF:42:LEU:HB2	14:AF:46:TRP:O	2.04	0.56
26:AR:48:ASN:HB2	80:B2:1389:C:C5'	2.35	0.56
28:AT:14:PHE:HZ	28:AT:132:LEU:HD23	1.69	0.56
34:AZ:94:LYS:HE2	80:B2:1530:C:OP1	2.05	0.56
17:AI:33:PRO:HA	80:B2:331:A:C5'	2.35	0.56
80:B2:495:C:H3'	80:B2:496:G:O4'	2.04	0.56
80:B2:717:C:N3	80:B2:720:G:N1	2.48	0.56
31:AW:57:ARG:HG2	80:B2:863:A:O5'	2.05	0.56
81:B5:1085:A:C5'	81:B5:1085:A:C8	2.88	0.56
80:B2:1780:G:C1'	81:B5:2262:A:H4'	2.31	0.56
81:B5:2440:G:C8	81:B5:2440:G:H5'	2.35	0.56
81:B5:550:A:H2'	81:B5:551:A:C8	2.40	0.56
53:BS:53:LYS:HD3	82:B7:99:G:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:151:ARG:HD2	40:BF:244:ASN:OD1	2.04	0.56
54:BT:7:TYR:OH	54:BT:54:HIS:HB2	2.04	0.56
59:BY:55:GLU:HB2	59:BY:108:LYS:HB2	1.87	0.56
7:A6:16:HIS:CE1	7:A6:43:ILE:HG12	2.40	0.56
7:A6:255:ALA:HB2	7:A6:292:LEU:HD22	1.86	0.56
8:A7:30:THR:HA	81:B5:2707:C:H1'	1.87	0.56
10:AB:34:ALA:N	10:AB:41:ARG:O	2.29	0.56
13:AE:194:THR:O	13:AE:195:ILE:HB	2.05	0.56
15:AG:132:ARG:CA	80:B2:68:A:H61	2.17	0.56
16:AH:74:GLN:NE2	16:AH:92:PHE:HB2	2.19	0.56
17:AI:192:TYR:O	17:AI:196:LEU:HB2	2.05	0.56
17:AI:8:ARG:O	17:AI:8:ARG:HG3	2.04	0.56
26:AR:26:LEU:HD23	26:AR:26:LEU:H	1.70	0.56
80:B2:1160:A:H2'	80:B2:1161:C:H6	1.69	0.56
80:B2:180:A:H2'	80:B2:181:A:O4'	2.05	0.56
17:AI:43:ILE:N	80:B2:260:U:O4	2.38	0.56
81:B5:1032:C:H5'	81:B5:1033:U:OP2	2.06	0.56
38:BD:145:PHE:CG	81:B5:2748:A:C4'	2.86	0.56
49:BO:72[B]:HIS:N	81:B5:3008:A:OP1	2.36	0.56
46:BL:60:ALA:H	81:B5:75:G:H5'	1.71	0.56
35:BA:15:ILE:HG12	81:B5:821:U:O2	2.05	0.56
2:A1:37:CYS:O	2:A1:39:GLY:N	2.38	0.56
18:AJ:17:ARG:O	18:AJ:23:ARG:NH2	2.38	0.56
23:AO:27:PHE:CE2	80:B2:916:U:H2'	2.40	0.56
33:AY:77:ASN:O	33:AY:78:SER:HB3	2.05	0.56
11:AC:212:LYS:NZ	80:B2:1298:U:O3'	2.38	0.56
80:B2:229:U:H3	80:B2:236:A:H61	1.51	0.56
80:B2:855:A:C2	80:B2:857:U:H1'	2.40	0.56
81:B5:1157:G:H2'	81:B5:1158:A:O4'	2.06	0.56
81:B5:2211:U:H5	81:B5:2234:G:C6	2.22	0.56
48:BN:109:ARG:HD3	83:B8:140:G:O2'	2.05	0.56
35:BA:69:TYR:CE2	81:B5:2558:U:N3	2.73	0.56
44:BJ:95:ASN:HA	81:B5:2673:A:P	2.46	0.56
56:BV:57:MET:HE3	56:BV:126:TRP:CH2	2.40	0.56
56:BV:3:GLY:HA2	56:BV:40:LYS:HB3	1.87	0.56
1:A0:24:VAL:HG12	1:A0:72:HIS:O	2.05	0.56
8:A7:116:GLU:HG3	11:AC:98:PHE:CE2	2.40	0.56
12:AD:141:LYS:HD2	12:AD:179:GLN:CG	2.36	0.56
30:AV:74:GLN:HB2	30:AV:79:LEU:HB2	1.86	0.56
38:BD:158:ARG:HD2	82:B7:46:A:P	2.43	0.56
38:BD:276:LYS:HD2	82:B7:61:G:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:200:ARG:CD	81:B5:2187:G:O6	2.52	0.56
35:BA:227:ARG:HH22	81:B5:2155:G:HO2'	1.45	0.56
53:BS:12:ARG:HB3	53:BS:24:LEU:HD23	1.87	0.56
11:AC:89:GLN:N	80:B2:1145:U:O2'	2.36	0.56
28:AT:6:VAL:HG13	28:AT:66:TYR:CE2	2.41	0.56
80:B2:1158:C:OP2	89:B2:2014:OHX:N5	2.38	0.56
80:B2:1511:U:H2'	80:B2:1512:G:C8	2.41	0.56
80:B2:83:G:OP2	89:B2:1945:OHX:N5	2.38	0.56
80:B2:1029:U:O4	89:B2:2034:OHX:N3	2.38	0.56
13:AE:21:ASP:CB	80:B2:773:C:H5''	2.31	0.56
80:B2:827:C:H2'	80:B2:828:U:C6	2.40	0.56
80:B2:918:U:H2'	80:B2:919:A:C8	2.39	0.56
81:B5:1688:U:H2'	81:B5:1689:U:C6	2.41	0.56
81:B5:1835:A:H5''	81:B5:1836:C:OP2	2.05	0.56
35:BA:240:ALA:CA	81:B5:2154:U:O3'	2.37	0.56
81:B5:2436:U:H2'	81:B5:2437:G:H5''	1.88	0.56
81:B5:3279:A:C2'	81:B5:3280:U:H5'	2.36	0.56
81:B5:701:G:H2'	81:B5:702:C:C6	2.40	0.56
81:B5:725:G:C3'	81:B5:726:G:H5''	2.36	0.56
36:BB:46:PHE:CE2	36:BB:205:VAL:HG13	2.39	0.56
51:BQ:182:LYS:HE2	81:B5:2764:C:OP1	2.06	0.56
59:BY:88:GLU:CA	79:CL:92:ASP:N	173.82	0.56
80:B2:415:C:C6	85:CP:288:ARG:HD3	2.38	0.56
24:AP:40:ARG:HD3	80:B2:1557:U:OP1	2.06	0.56
26:AR:5:ARG:N	80:B2:1402:G:OP1	2.33	0.56
4:A3:33:LYS:CE	80:B2:1593:A:O2'	2.52	0.56
5:A4:28:LYS:NZ	80:B2:477:A:P	2.79	0.56
80:B2:647:G:N2	80:B2:687:G:N2	2.54	0.56
41:BG:32:LYS:HB2	81:B5:2561:A:C2	2.40	0.56
81:B5:913:A:H2	81:B5:2134:G:N3	2.04	0.56
35:BA:45:VAL:HG22	35:BA:84:THR:HA	1.88	0.56
37:BC:144:LYS:CG	37:BC:145:ILE:H	2.17	0.56
37:BC:144:LYS:H	37:BC:144:LYS:NZ	2.03	0.56
39:BE:18:LEU:H	39:BE:18:LEU:HD12	1.71	0.56
47:BM:113:THR:HG22	47:BM:115:PHE:N	2.20	0.56
51:BQ:153:PHE:O	51:BQ:161:LYS:HG2	2.06	0.56
52:BR:90:PRO:HD2	81:B5:1779:C:N3	2.19	0.56
56:BV:47:ASN:O	81:B5:2338:C:C4'	2.51	0.56
36:BB:367:LYS:HZ1	57:BW:34:SER:H	1.53	0.56
84:CN:2172:G:H5''	84:CN:2172:G:C8	2.40	0.56
24:AP:96:ILE:HD11	24:AP:116:LEU:HD22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:86:VAL:HG11	80:B2:1300:A:C5'	2.36	0.56
29:AU:54:GLY:CA	80:B2:1344:A:O2'	2.54	0.56
80:B2:25:C:O2	89:B2:1962:OHX:N1	2.39	0.56
89:B2:1969:OHX:N3	89:B2:2013:OHX:N6	2.54	0.56
80:B2:717:C:N4	80:B2:720:G:H22	2.03	0.56
35:BA:236:GLY:HA2	81:B5:2184:U:C1'	2.36	0.56
81:B5:2537:U:O2'	81:B5:2538:U:O5'	2.22	0.56
54:BT:49:GLN:CB	81:B5:2756:C:C4'	2.80	0.56
48:BN:179:LYS:HE2	81:B5:287:G:OP1	2.06	0.56
38:BD:218:ARG:HH11	82:B7:31:U:H4'	1.63	0.56
48:BN:16:SER:O	48:BN:20:ARG:HG2	2.05	0.56
49:BO:64[A]:PHE:HE2	49:BO:68[A]:ARG:HH11	1.54	0.56
55:BU:42:LYS:HG2	55:BU:46:ALA:HA	1.88	0.56
18:AJ:38:ASN:HB2	18:AJ:41:GLU:HG3	1.87	0.56
25:AQ:116:LEU:HD22	25:AQ:116:LEU:H	1.70	0.56
80:B2:1446:A:O5'	89:B2:2083:OHX:N2	2.39	0.56
81:B5:420:G:OP1	81:B5:420:G:OP2	2.24	0.56
81:B5:541:U:H2'	81:B5:542:G:H8	1.70	0.56
36:BB:218:ILE:HG13	36:BB:276:THR:HG23	1.88	0.56
38:BD:191:ASP:OD1	38:BD:193:GLU:HB2	2.04	0.56
38:BD:270:LYS:HG3	38:BD:273:ARG:CB	2.36	0.56
52:BR:165:LYS:HB3	80:B2:849:C:O2	2.06	0.56
84:CN:2185:C:O2	84:CN:2185:C:O4'	2.23	0.56
5:A4:55:ARG:HB3	5:A4:58:PRO:HG3	1.87	0.56
15:AG:175:ILE:CD1	80:B2:78:A:C2'	2.80	0.56
28:AT:57:ARG:HH11	28:AT:57:ARG:CG	2.09	0.56
32:AX:108:GLY:HA2	80:B2:600:U:OP2	2.06	0.56
17:AI:2:GLY:N	80:B2:400:A:N6	2.54	0.56
81:B5:1093:A:H4'	81:B5:1093:A:OP1	2.05	0.56
35:BA:211:HIS:HE1	81:B5:2184:U:O3'	1.88	0.56
43:BI:8:CYS:SG	81:B5:2828:G:C5'	2.93	0.56
48:BN:46:ASP:OD1	48:BN:46:ASP:N	2.38	0.56
48:BN:67:ARG:O	48:BN:68:ARG:HB3	2.04	0.56
49:BO:180[B]:SER:O	49:BO:183[B]:ALA:N	2.39	0.56
79:CL:99:ILE:H	79:CL:99:ILE:HD13	1.70	0.56
85:CP:63:GLU:C	85:CP:210:TRP:CZ3	2.79	0.56
1:A0:75:VAL:HG11	80:B2:1793:G:N1	2.21	0.56
7:A6:93:ASP:OD1	7:A6:96:THR:HB	2.06	0.56
14:AF:91:GLU:HA	14:AF:94:THR:HG23	1.87	0.56
27:AS:40:ARG:CD	80:B2:1539:G:H5''	2.36	0.56
12:AD:174:HIS:CE1	80:B2:1277:G:HO2'	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:52:GLY:HA3	80:B2:1389:C:O2'	2.06	0.56
89:B2:1964:OHX:N1	89:B2:2027:OHX:N4	2.54	0.56
17:AI:23:LYS:HE3	80:B2:387:A:OP1	2.05	0.56
41:BG:105:LYS:NZ	81:B5:123:A:OP1	2.32	0.56
35:BA:191:LEU:CD1	81:B5:1795:U:OP1	2.54	0.56
81:B5:2442:G:H22	81:B5:2506:U:H3	1.53	0.56
46:BL:50:PRO:O	46:BL:51:LEU:HB2	2.06	0.56
79:CL:84:LYS:HA	79:CL:87:GLU:HG3	1.88	0.56
12:AD:29:LEU:HB2	12:AD:34:TYR:HB2	1.87	0.56
18:AJ:175:ARG:HD3	18:AJ:179:ARG:NH1	2.21	0.56
33:AY:8:ARG:HA	80:B2:780:A:HO2'	1.70	0.56
80:B2:1639:C:OP1	89:B2:2070:OHX:N4	2.39	0.56
20:AL:83:THR:HG21	80:B2:325:G:H4'	1.88	0.56
18:AJ:173:ALA:N	80:B2:512:A:OP2	2.32	0.56
81:B5:2207:A:H62	81:B5:2236:G:H1	1.52	0.56
54:BT:4:SER:CB	81:B5:2630:C:C5	2.89	0.56
54:BT:54:HIS:CE1	54:BT:55:LYS:HD3	2.41	0.56
54:BT:6:GLY:HA2	81:B5:2630:C:H5"	1.87	0.56
60:BZ:135:ARG:HB3	60:BZ:135:ARG:HH11	1.71	0.56
6:A5:135:HIS:HB2	6:A5:138:ARG:CB	2.36	0.55
13:AE:152:PRO:O	13:AE:154:ILE:N	2.39	0.55
15:AG:137:ARG:NH1	80:B2:169:A:P	2.79	0.55
17:AI:138:ASN:O	17:AI:141:ARG:HB2	2.06	0.55
23:AO:52:ARG:HH11	80:B2:905:A:H4'	1.71	0.55
26:AR:71:PHE:HE1	26:AR:73:LEU:HD22	1.71	0.55
80:B2:116:U:H2'	80:B2:117:U:C6	2.40	0.55
80:B2:540:G:O3'	80:B2:541:A:H3'	2.05	0.55
81:B5:1541:G:H2'	81:B5:1542:G:O5'	2.06	0.55
81:B5:173:G:H22	81:B5:246:U:H1'	1.71	0.55
35:BA:94:ALA:HA	81:B5:2551:U:O4	2.06	0.55
81:B5:2676:A:H4'	81:B5:2677:G:O5'	2.05	0.55
37:BC:48:GLN:HG3	81:B5:337:G:C4'	2.36	0.55
81:B5:599:C:H2'	81:B5:600:G:O4'	2.06	0.55
35:BA:187:HIS:CG	81:B5:1794:G:C5	2.95	0.55
36:BB:21:ARG:HD3	36:BB:269:GLN:OE1	2.06	0.55
37:BC:361:HIS:CG	37:BC:362:ASP:N	2.74	0.55
49:BO:160[B]:ARG:NH2	81:B5:3182:G:OP1	2.39	0.55
6:A5:135:HIS:ND1	6:A5:138:ARG:HD2	2.20	0.55
23:AO:46:MET:CG	80:B2:899:G:C5'	2.85	0.55
26:AR:60:ARG:HH12	80:B2:1400:A:C4'	2.17	0.55
80:B2:1757:G:O2'	81:B5:2256:A:C8	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:132:SER:CA	80:B2:336:G:H4'	2.36	0.55
80:B2:489:C:H42	80:B2:497:G:H22	1.53	0.55
80:B2:514:G:O2'	80:B2:515:A:H5'	2.06	0.55
81:B5:1110:U:H2'	81:B5:1111:U:C6	2.41	0.55
80:B2:1780:G:C1'	81:B5:2262:A:C4'	2.58	0.55
56:BV:47:ASN:O	81:B5:2338:C:C5'	2.54	0.55
81:B5:2792:A:N3	86:CW:76:A:N6	2.52	0.55
36:BB:223:GLY:N	81:B5:3305:A:OP1	2.34	0.55
81:B5:3343:G:N2	81:B5:3362:A:H2	1.97	0.55
38:BD:31:TYR:CE2	81:B5:2705:A:OP1	2.59	0.55
43:BI:210:ILE:HA	43:BI:217:PHE:CE1	2.41	0.55
48:BN:179:LYS:HB3	81:B5:287:G:H5'	1.89	0.55
4:A3:7:TRP:O	4:A3:8:PHE:HB2	2.06	0.55
10:AB:61:LEU:HD23	10:AB:62:LYS:H	1.72	0.55
15:AG:132:ARG:HH21	80:B2:68:A:C1'	2.17	0.55
21:AM:67:THR:O	21:AM:69:ALA:N	2.35	0.55
25:AQ:50:GLU:OE2	25:AQ:112:TYR:OH	2.24	0.55
33:AY:105:ARG:HE	80:B2:444:C:P	2.29	0.55
80:B2:1332:C:O5'	80:B2:1332:C:H6	1.89	0.55
12:AD:4:LEU:HD13	80:B2:1514:U:C6	2.42	0.55
52:BR:166:ASN:HB2	80:B2:850:A:H5''	1.85	0.55
80:B2:852:C:H6	80:B2:852:C:O5'	1.89	0.55
48:BN:112:ASN:ND2	83:B8:141:C:O2	2.39	0.55
38:BD:19:PRO:HD3	81:B5:2688:U:O4	2.06	0.55
39:BE:40:LEU:HD11	39:BE:54:TYR:HB2	1.87	0.55
43:BI:74:LYS:O	43:BI:78:THR:HG23	2.06	0.55
4:A3:54:LYS:NZ	80:B2:1420:C:OP1	2.40	0.55
8:A7:102:THR:O	8:A7:106:VAL:HG23	2.06	0.55
8:A7:51:ARG:NH1	81:B5:2677:G:O4'	2.38	0.55
15:AG:159:ARG:HH11	80:B2:77:U:H1'	1.72	0.55
17:AI:39:GLY:N	17:AI:60:ILE:O	2.30	0.55
23:AO:46:MET:HG2	80:B2:899:G:C5'	2.36	0.55
24:AP:18:ARG:NH1	27:AS:90:ASN:O	2.40	0.55
80:B2:1650:U:H2'	80:B2:1651:A:C8	2.42	0.55
1:A0:75:VAL:HG11	80:B2:1793:G:C6	2.42	0.55
81:B5:1716:U:H6	81:B5:1716:U:H5'	1.71	0.55
81:B5:209:A:H4'	81:B5:211:A:C8	2.42	0.55
80:B2:1759:C:C2	81:B5:2262:A:H2	2.24	0.55
37:BC:82:THR:OG1	81:B5:355:A:N1	2.23	0.55
35:BA:204:MET:HE3	35:BA:208:ASP:HB3	1.88	0.55
37:BC:305:ALA:H	81:B5:1347:U:H4'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:316:ASN:O	37:BC:319:LYS:O	2.24	0.55
38:BD:279:LYS:HD3	38:BD:282:ARG:NH2	2.22	0.55
44:BJ:155:THR:O	44:BJ:159:THR:HG23	2.07	0.55
60:BZ:36:HIS:CD2	60:BZ:74:VAL:HG11	2.41	0.55
9:AA:167:LYS:HB3	9:AA:168:HIS:HD2	1.72	0.55
16:AH:71:HIS:CG	16:AH:131:PHE:HZ	2.24	0.55
23:AO:27:PHE:CZ	80:B2:916:U:H2'	2.37	0.55
80:B2:1686:C:O2'	80:B2:1687:U:H5'	2.06	0.55
80:B2:749:U:H2'	80:B2:750:U:C6	2.41	0.55
81:B5:2512:C:C6	81:B5:2512:C:H5'	2.29	0.55
36:BB:2:SER:N	81:B5:2943:G:N7	2.55	0.55
81:B5:585:A:H2'	81:B5:586:C:C6	2.41	0.55
36:BB:253:GLY:O	81:B5:2394:G:H5'	2.07	0.55
41:BG:38:GLN:CB	81:B5:2557:A:H2	2.19	0.55
42:BH:88:TYR:CZ	42:BH:184:LYS:HD3	2.42	0.55
48:BN:162:ARG:HG3	81:B5:56:G:H1'	1.86	0.55
53:BS:115:ARG:NH2	81:B5:1320:C:O2	2.39	0.55
84:CN:2157:C:N3	84:CN:2158:C:H5	2.04	0.55
1:A0:9:GLY:HA3	1:A0:34:LYS:HE2	1.89	0.55
1:A0:97:PRO:O	80:B2:1798:U:C4	2.58	0.55
12:AD:162:GLN:HB3	80:B2:1332:C:O2'	2.06	0.55
13:AE:159:THR:HG23	13:AE:173:ILE:HD13	1.88	0.55
32:AX:102:VAL:HG12	32:AX:127:VAL:HG12	1.88	0.55
27:AS:134:ARG:NH2	80:B2:1545:A:C8	2.74	0.55
81:B5:1811:G:H2'	81:B5:1812:G:O4'	2.07	0.55
80:B2:1646:C:C4'	81:B5:2257:C:H42	1.98	0.55
81:B5:3288:G:C4	81:B5:3289:G:C8	2.95	0.55
46:BL:7:LEU:HD13	81:B5:796:U:H1'	1.87	0.55
35:BA:15:ILE:HD12	81:B5:822:G:H1'	1.89	0.55
37:BC:18:ASN:N	37:BC:18:ASN:OD1	2.37	0.55
43:BI:52:LEU:HD22	43:BI:163:GLN:HB2	1.88	0.55
48:BN:74:PRO:HA	81:B5:2166:A:O4'	2.07	0.55
10:AB:124:ASN:ND2	80:B2:884:A:C4'	2.63	0.55
24:AP:99:GLY:HA3	80:B2:1183:A:N1	2.21	0.55
31:AW:8:ALA:HA	31:AW:74:VAL:HG11	1.88	0.55
20:AL:101:GLU:OE1	32:AX:16:ARG:NH1	2.40	0.55
34:AZ:60:VAL:CG2	34:AZ:101:TYR:HB2	2.37	0.55
89:B2:1915:OHX:N6	89:B2:2071:OHX:N5	2.55	0.55
89:B2:1954:OHX:N6	89:B2:2068:OHX:N5	2.54	0.55
81:B5:59:G:H4'	81:B5:60:A:H4'	1.88	0.55
58:BX:48:SER:HB2	83:B8:136:G:OP1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BF:175:LYS:HD3	40:BF:176:TYR:CZ	2.42	0.55
12:AD:4:LEU:HD13	80:B2:1514:U:N1	2.22	0.55
13:AE:246:LEU:HD13	13:AE:251:GLU:HG2	1.88	0.55
18:AJ:125:ALA:O	18:AJ:129:ILE:HG13	2.07	0.55
20:AL:59:PRO:HG2	20:AL:60:PHE:CE2	2.41	0.55
22:AN:12:SER:O	22:AN:13:SER:HB3	2.06	0.55
23:AO:81:VAL:HG22	23:AO:115:ILE:HB	1.87	0.55
25:AQ:9:THR:HG21	25:AQ:88:GLY:HA2	1.88	0.55
29:AU:57:ARG:HG3	29:AU:89:ARG:CZ	2.36	0.55
80:B2:1002:G:H5'	81:B5:2265:C:OP1	2.05	0.55
23:AO:132:ARG:N	80:B2:1787:C:OP1	2.39	0.55
1:A0:95:ARG:NH2	80:B2:1797:A:OP1	2.40	0.55
80:B2:558:U:O2'	80:B2:559:C:O5'	2.24	0.55
23:AO:38:THR:CG2	80:B2:895:G:C3'	2.72	0.55
81:B5:2263:C:P	89:B5:3402:OHX:N1	2.80	0.55
35:BA:64:ARG:CD	81:B5:2557:A:C5	2.90	0.55
81:B5:3288:G:HO2'	81:B5:3289:G:H8	1.55	0.55
81:B5:8:C:H2'	81:B5:9:U:O4'	2.06	0.55
41:BG:161:GLU:OE1	48:BN:26:ARG:NH2	2.32	0.55
41:BG:162:LEU:CD1	81:B5:147:U:N1	2.69	0.55
43:BI:171:TRP:O	43:BI:174:THR:HG22	2.07	0.55
43:BI:7:ARG:NH1	81:B5:2828:G:P	2.80	0.55
48:BN:95:GLN:HG3	81:B5:32:U:OP2	2.07	0.55
49:BO:159[B]:LYS:NZ	81:B5:3243:A:OP1	2.39	0.55
2:A1:67:THR:HA	80:B2:872:G:C4'	2.36	0.55
17:AI:182:TYR:HB3	80:B2:210:A:H4'	1.89	0.55
17:AI:188:GLU:HG2	20:AL:13:PHE:CD2	2.42	0.55
27:AS:83:ALA:O	27:AS:89:GLN:NE2	2.39	0.55
28:AT:9:VAL:HG12	28:AT:14:PHE:HB2	1.88	0.55
80:B2:1291:G:C8	80:B2:1291:G:O5'	2.55	0.55
12:AD:162:GLN:HG2	80:B2:1333:C:O4'	2.07	0.55
80:B2:133:U:H4'	80:B2:134:U:OP2	2.07	0.55
80:B2:1413:U:H4'	80:B2:1414:U:OP2	2.06	0.55
34:AZ:77:ARG:CZ	80:B2:1534:G:N7	2.66	0.55
15:AG:59:GLN:CA	80:B2:155:U:C1'	2.85	0.55
80:B2:197:A:H2'	80:B2:198:A:C8	2.42	0.55
80:B2:499:U:O2'	80:B2:500:C:OP1	2.24	0.55
80:B2:652:G:H1	80:B2:682:C:N4	2.04	0.55
23:AO:54:GLU:OE2	80:B2:901:G:N1	2.40	0.55
81:B5:1568:U:H4'	81:B5:1569:U:OP1	2.06	0.55
38:BD:269:SER:OG	82:B7:1:G:N3	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:16:PHE:CD1	81:B5:2688:U:H2'	2.41	0.55
38:BD:16:PHE:HD1	81:B5:2688:U:H2'	1.72	0.55
38:BD:265:TYR:HB3	82:B7:1:G:N1	2.22	0.55
39:BE:50:LYS:HG2	39:BE:74:VAL:CG2	2.37	0.55
51:BQ:122:ILE:HD11	51:BQ:130:ARG:NH1	2.21	0.55
1:A0:32:LYS:NZ	80:B2:930:A:OP1	2.40	0.55
10:AB:48:VAL:HG13	10:AB:61:LEU:HD21	1.89	0.55
12:AD:64:ARG:O	12:AD:66:ILE:N	2.39	0.55
13:AE:104:ASP:HB2	13:AE:108:ARG:H	1.72	0.55
18:AJ:171:ARG:O	18:AJ:175:ARG:N	2.36	0.55
23:AO:13:VAL:HG22	23:AO:76:ILE:HA	1.87	0.55
12:AD:4:LEU:HD12	80:B2:1514:U:C4	2.41	0.55
8:A7:93:ARG:HG3	80:B2:1637:C:C2	2.42	0.55
80:B2:480:G:N2	80:B2:509:G:H1'	2.22	0.55
80:B2:872:G:O6	89:B2:2008:OHX:N3	2.40	0.55
81:B5:851:C:C6	81:B5:851:C:H5''	2.34	0.55
48:BN:110:ALA:HB1	83:B8:141:C:O2'	2.07	0.55
54:BT:4:SER:HB2	81:B5:2630:C:C4	2.42	0.55
56:BV:67:PRO:HG2	80:B2:1660:A:C5'	2.37	0.55
1:A0:23:CYS:HB2	1:A0:74:CYS:HB3	1.88	0.54
13:AE:42:LEU:HD12	13:AE:109:PHE:HB2	1.89	0.54
16:AH:167:GLU:O	16:AH:170:GLN:HB2	2.07	0.54
30:AV:64:GLU:O	30:AV:68:SER:HB2	2.07	0.54
15:AG:112:VAL:HG23	80:B2:164:A:H5'	1.88	0.54
80:B2:1776:A:H2'	80:B2:1777:G:C8	2.42	0.54
1:A0:86:VAL:HG22	80:B2:1795:U:OP1	2.07	0.54
38:BD:46:THR:HG23	81:B5:1078:U:H4'	1.89	0.54
35:BA:22:LEU:CD2	81:B5:1797:A:O5'	2.54	0.54
52:BR:79:GLY:N	81:B5:1939:G:OP1	2.35	0.54
81:B5:3334:U:H4'	81:B5:3335:A:H5''	1.88	0.54
37:BC:35:VAL:HG21	37:BC:244:LEU:HD21	1.89	0.54
43:BI:81:GLY:O	43:BI:83:ASP:N	2.36	0.54
39:BE:176:PHE:H	47:BM:117:ARG:NH2	2.04	0.54
47:BM:16:GLU:HB3	53:BS:149:LYS:HB3	1.89	0.54
1:A0:59:TYR:OH	10:AB:72:ASP:OD1	2.14	0.54
13:AE:8:HIS:CE1	80:B2:449:C:H4'	2.41	0.54
16:AH:35:LYS:HZ2	16:AH:39:ARG:HD2	1.72	0.54
23:AO:120:PRO:HB2	80:B2:887:A:C4'	2.37	0.54
29:AU:53:LYS:CB	80:B2:1345:A:O5'	2.53	0.54
80:B2:103:A:H4'	80:B2:104:A:OP2	2.07	0.54
11:AC:91:ARG:HA	80:B2:1147:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A3:45:GLU:OE1	80:B2:1433:G:N2	2.40	0.54
1:A0:97:PRO:HA	80:B2:1798:U:C6	2.42	0.54
15:AG:164:LYS:CE	80:B2:72:A:C5'	2.83	0.54
80:B2:832:U:H2'	80:B2:833:U:H5''	1.89	0.54
33:AY:120:GLY:N	80:B2:85:A:O3'	2.40	0.54
41:BG:241:LYS:HB2	81:B5:2586:G:N7	2.22	0.54
81:B5:2589:G:C2'	81:B5:2590:A:H5'	2.37	0.54
8:A7:48:ARG:HD3	81:B5:2678:A:OP1	2.07	0.54
38:BD:145:PHE:CD1	81:B5:2748:A:C4'	2.90	0.54
81:B5:2971:A:H5''	81:B5:2972:G:C5'	2.37	0.54
81:B5:495:G:H2'	81:B5:496:C:O4'	2.07	0.54
39:BE:50:LYS:HG2	39:BE:74:VAL:HG21	1.89	0.54
39:BE:31:ARG:NH2	39:BE:81:ALA:O	2.40	0.54
84:CN:2159:C:O2	84:CN:2175:G:C2	2.60	0.54
84:CN:2155:A:C2	84:CN:2179:A:C5	2.95	0.54
9:AA:13:ASP:HA	9:AA:16:LEU:HD12	1.88	0.54
10:AB:110:LEU:HD21	10:AB:213:ARG:HD2	1.89	0.54
15:AG:53:SER:CB	80:B2:163:G:H4'	2.36	0.54
16:AH:111:LYS:O	16:AH:112:ARG:HB2	2.07	0.54
16:AH:73:VAL:HG12	16:AH:77:LEU:HB2	1.90	0.54
27:AS:139:LYS:HD3	80:B2:1178:G:O6	2.07	0.54
33:AY:94:TYR:HD2	33:AY:96:LEU:HD11	1.72	0.54
80:B2:1655:A:H1'	81:B5:2302:G:C2'	2.35	0.54
80:B2:286:C:H2'	80:B2:287:G:H5'	1.89	0.54
80:B2:499:U:O2'	80:B2:500:C:O4'	2.15	0.54
5:A4:21:VAL:HG22	80:B2:586:G:H4'	1.88	0.54
81:B5:1579:C:C2'	81:B5:1580:A:H5'	2.37	0.54
81:B5:1724:U:H1'	81:B5:1725:C:C6	2.42	0.54
81:B5:2439:A:OP1	81:B5:2439:A:H4'	2.07	0.54
81:B5:600:G:H5''	81:B5:600:G:H8	1.72	0.54
41:BG:41:GLN:HG3	41:BG:42:PRO:HD2	1.90	0.54
48:BN:183:THR:HG23	48:BN:183:THR:O	2.07	0.54
49:BO:110[B]:PRO:O	49:BO:113[B]:ASP:N	2.27	0.54
49:BO:73[B]:PHE:HA	81:B5:3007:U:OP1	2.08	0.54
79:CL:53:ARG:O	79:CL:55:ASP:OD1	2.24	0.54
2:A1:36:LYS:HG2	2:A1:43:ILE:HG22	1.89	0.54
19:AK:9:ASN:O	19:AK:13:GLN:HB3	2.07	0.54
19:AK:14:TYR:CE1	19:AK:21:VAL:HG22	2.43	0.54
22:AN:113:PHE:HA	22:AN:116:ILE:HD12	1.90	0.54
23:AO:122:PRO:CA	80:B2:887:A:H1'	2.36	0.54
80:B2:1157:A:C8	80:B2:1157:A:H3'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:13:LYS:NZ	80:B2:1584:G:O6	2.38	0.54
22:AN:13:SER:HB3	89:B2:1910:OHX:N3	2.22	0.54
80:B2:348:U:O4	89:B2:2009:OHX:N5	2.40	0.54
17:AI:171:SER:CB	80:B2:209:U:H5'	2.37	0.54
13:AE:12:LEU:O	80:B2:756:A:H1'	2.08	0.54
82:B7:91:G:H2'	82:B7:92:A:H8	1.69	0.54
38:BD:269:SER:OG	82:B7:1:G:N2	2.40	0.54
44:BJ:90:GLN:HG2	44:BJ:170:ASP:HB2	1.88	0.54
53:BS:79:VAL:HG21	53:BS:106:LEU:HD21	1.90	0.54
55:BU:58:GLU:HB2	55:BU:63:VAL:HA	1.89	0.54
81:B5:3027:A:C3'	85:CP:109:GLN:CB	2.56	0.54
10:AB:117:TRP:N	80:B2:932:U:P	2.80	0.54
13:AE:192:ILE:HG13	13:AE:243:GLY:HA3	1.89	0.54
15:AG:136:LYS:CE	80:B2:65:A:OP1	2.55	0.54
17:AI:86:SER:OG	80:B2:329:G:C1'	2.56	0.54
18:AJ:65:LYS:HA	18:AJ:70:LEU:HD11	1.89	0.54
28:AT:57:ARG:HA	80:B2:1479:A:OP1	2.07	0.54
80:B2:1433:G:H2'	80:B2:1434:U:C6	2.42	0.54
4:A3:14:TYR:HD2	80:B2:1597:A:N7	2.05	0.54
89:B2:1954:OHX:N6	89:B2:2068:OHX:N2	2.56	0.54
52:BR:134:HIS:CB	81:B5:1947:G:C5'	2.85	0.54
81:B5:240:U:O2'	81:B5:241:G:O5'	2.19	0.54
43:BI:82:ARG:HG2	43:BI:82:ARG:O	2.07	0.54
46:BL:75:PHE:H	46:BL:97:VAL:HA	1.72	0.54
54:BT:12:ARG:HD3	54:BT:13:TYR:CE1	2.43	0.54
1:A0:92:ARG:C	80:B2:1796:C:O2	2.46	0.54
12:AD:203:PRO:HD2	80:B2:1331:A:C2	2.43	0.54
17:AI:8:ARG:HH11	17:AI:21:PHE:H	1.54	0.54
20:AL:133:LYS:HB2	80:B2:337:G:H3'	1.90	0.54
24:AP:12:PHE:HB2	44:BJ:85:LYS:CD	2.37	0.54
26:AR:20:TYR:CZ	26:AR:38:ILE:HD11	2.43	0.54
28:AT:121:GLY:HA2	80:B2:1499:G:OP1	2.07	0.54
29:AU:35:GLU:CG	80:B2:1383:G:O2'	2.55	0.54
80:B2:230:C:H2'	80:B2:231:U:H5''	1.90	0.54
80:B2:425:A:H5'	80:B2:425:A:H8	1.72	0.54
80:B2:839:U:C5	89:B2:2071:OHX:N6	2.76	0.54
46:BL:99:HIS:CE1	81:B5:156:G:C6	2.95	0.54
81:B5:1654:A:H2'	81:B5:1655:G:H5''	1.89	0.54
38:BD:16:PHE:HA	81:B5:2688:U:HO2'	1.73	0.54
81:B5:3273:A:C2'	81:B5:3274:A:H5'	2.38	0.54
81:B5:3285:C:H2'	81:B5:3286:G:H5''	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:419:G:O3'	81:B5:420:G:OP2	2.24	0.54
35:BA:244:GLY:H	81:B5:2153:U:H4'	1.73	0.54
41:BG:181:LYS:HD2	83:B8:155:A:OP1	2.08	0.54
49:BO:110[B]:PRO:O	49:BO:111[B]:PRO:C	2.44	0.54
1:A0:79:ILE:HG23	1:A0:84:VAL:HG21	1.89	0.54
9:AA:9:LEU:HD22	9:AA:10:THR:H	1.72	0.54
9:AA:58:VAL:O	9:AA:62:ARG:HB2	2.08	0.54
12:AD:211:PRO:O	12:AD:212:LYS:HB2	2.08	0.54
13:AE:158:ASP:OD2	13:AE:174:LYS:NZ	2.38	0.54
18:AJ:151:ASP:N	18:AJ:151:ASP:OD1	2.39	0.54
23:AO:107:ARG:CG	23:AO:107:ARG:HH11	2.19	0.54
12:AD:159:HIS:HB2	80:B2:1328:G:H5''	1.89	0.54
80:B2:1354:G:H5'	80:B2:1355:C:OP2	2.07	0.54
80:B2:1514:U:H5'	80:B2:1514:U:O2	2.07	0.54
15:AG:140:ASN:ND2	80:B2:168:A:OP1	2.38	0.54
80:B2:1783:C:H2'	80:B2:1784:C:H6	1.72	0.54
23:AO:131:GLY:HA2	80:B2:1787:C:OP1	2.08	0.54
80:B2:706:A:C6	80:B2:734:A:N6	2.75	0.54
15:AG:172:ALA:C	80:B2:79:C:H5''	2.28	0.54
52:BR:165:LYS:CE	80:B2:824:G:N2	2.69	0.54
80:B2:823:G:O2'	80:B2:824:G:O5'	2.23	0.54
2:A1:68:GLY:N	80:B2:872:G:C1'	2.71	0.54
81:B5:2425:G:H2'	81:B5:2426:U:O4'	2.08	0.54
43:BI:30:LYS:NZ	81:B5:317:A:OP2	114.96	0.54
81:B5:3198:U:H4'	81:B5:3199:G:OP2	2.08	0.54
42:BH:175:PHE:HE1	81:B5:2901:G:H5'	1.73	0.54
44:BJ:28:ASP:HA	44:BJ:31:THR:HG23	1.89	0.54
59:BY:13:ARG:HH11	83:B8:24:G:P	2.31	0.54
59:BY:52:ARG:C	79:CL:50:ASP:OD1	134.18	0.54
6:A5:130:VAL:HG11	6:A5:143:LYS:HG2	1.89	0.54
7:A6:33:LEU:HB3	7:A6:45:TRP:HB2	1.90	0.54
9:AA:147:THR:OG1	9:AA:159:ALA:HB1	2.07	0.54
10:AB:34:ALA:HB3	10:AB:41:ARG:HA	1.89	0.54
16:AH:16:LEU:HA	16:AH:19:GLN:HG3	1.90	0.54
17:AI:26:LYS:O	17:AI:29:LEU:HB3	2.07	0.54
23:AO:132:ARG:NH2	80:B2:1788:G:C8	2.76	0.54
80:B2:1157:A:H2'	80:B2:1160:A:N7	2.21	0.54
6:A5:138:ARG:CZ	80:B2:1235:C:C2	2.91	0.54
80:B2:1657:U:H5	81:B5:2125:A:O3'	1.90	0.54
80:B2:1758:U:O2'	81:B5:2255:A:C4'	2.39	0.54
80:B2:1760:G:H2'	80:B2:1761:U:H5'	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
89:B2:1907:OHX:N5	89:B2:2083:OHX:N6	2.56	0.54
80:B2:503:G:O2'	80:B2:504:U:P	2.65	0.54
80:B2:591:A:H2'	80:B2:592:A:H8	1.70	0.54
22:AN:5:HIS:HE2	80:B2:628:G:P	2.30	0.54
80:B2:989:U:H2'	80:B2:990:C:C6	2.42	0.54
52:BR:60:LYS:HB2	81:B5:1690:C:OP1	2.08	0.54
35:BA:193:ARG:NH2	81:B5:2181:C:OP1	2.41	0.54
80:B2:420:A:N7	85:CP:288:ARG:NH2	2.56	0.54
80:B2:1169:G:N1	80:B2:1575:G:OP2	2.37	0.54
89:B2:1954:OHX:N4	89:B2:2068:OHX:N1	2.56	0.54
20:AL:80:MET:HE2	80:B2:325:G:H5'	1.90	0.54
80:B2:420:A:H2'	80:B2:421:A:O4'	2.08	0.54
32:AX:78:LYS:CB	80:B2:434:G:H5'	2.36	0.54
80:B2:970:A:H5'	80:B2:971:A:OP2	2.07	0.54
38:BD:15:ARG:NH2	81:B5:1003:A:H1'	2.21	0.54
35:BA:235:ALA:HA	81:B5:2183:A:O3'	2.08	0.54
80:B2:1645:G:C3'	81:B5:2259:A:H2	2.07	0.54
80:B2:1759:C:O2'	81:B5:2263:C:C1'	2.56	0.54
81:B5:2970:C:HO2'	81:B5:2971:A:P	2.30	0.54
81:B5:595:G:C8	81:B5:609:G:C6	2.96	0.54
36:BB:50:LYS:HE2	36:BB:328:ILE:HG22	1.88	0.54
38:BD:91:GLY:HA3	82:B7:48:U:OP1	2.08	0.54
40:BF:158:LYS:HD2	40:BF:159:GLN:CA	2.36	0.54
42:BH:162:GLN:HB2	42:BH:179:ILE:O	2.08	0.54
44:BJ:92:ARG:O	44:BJ:95:ASN:HB2	2.07	0.54
47:BM:49:PRO:HG3	47:BM:78:THR:HG23	1.90	0.54
47:BM:55:ARG:HD3	53:BS:70:THR:OG1	2.08	0.54
79:CL:92:ASP:OD1	79:CL:92:ASP:N	2.41	0.54
31:AW:83:ILE:HD12	31:AW:122:SER:HB2	1.89	0.54
80:B2:1352:G:H2'	80:B2:1353:U:O4'	2.08	0.54
25:AQ:123:ARG:CA	80:B2:1584:G:H2'	2.38	0.54
17:AI:25:ARG:HD3	80:B2:400:A:O5'	2.07	0.54
80:B2:720:G:H1'	80:B2:721:U:H5''	1.90	0.54
81:B5:1192:C:H41	81:B5:1302:A:P	2.31	0.54
80:B2:1655:A:C1'	81:B5:2302:G:H1'	2.15	0.54
81:B5:3160:U:H2'	81:B5:3161:C:C6	2.42	0.54
47:BM:121:MET:HG3	81:B5:3214:U:C4	2.42	0.54
35:BA:245:LEU:HD13	81:B5:2152:A:H4'	1.89	0.54
43:BI:38:LYS:CG	43:BI:41:ALA:HB2	2.38	0.54
53:BS:50:LYS:HE3	82:B7:76:A:N3	2.22	0.54
56:BV:13:ILE:HD13	56:BV:53:SER:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BW:50:ALA:HA	57:BW:55:PHE:CG	2.43	0.54
85:CP:101:ILE:H	85:CP:129:LEU:HA	1.73	0.54
85:CP:62:TYR:C	85:CP:210:TRP:CZ2	2.81	0.54
3:A2:13:ILE:HG13	3:A2:29:ARG:O	2.08	0.53
12:AD:34:TYR:OH	12:AD:37:VAL:HG22	2.07	0.53
13:AE:19:LEU:HD13	80:B2:788:A:N9	2.23	0.53
23:AO:120:PRO:HG3	80:B2:888:U:OP1	2.08	0.53
25:AQ:22:VAL:HG22	25:AQ:65:ILE:HD13	1.89	0.53
29:AU:57:ARG:CZ	80:B2:1382:A:N3	2.71	0.53
6:A5:97:UNK:HG1	80:B2:1231:U:C5	2.43	0.53
80:B2:290:G:O6	89:B2:2043:OHX:N2	2.41	0.53
89:B2:1954:OHX:N3	89:B2:2068:OHX:N5	2.56	0.53
80:B2:237:C:H4'	80:B2:238:U:H5'	1.90	0.53
81:B5:252:U:H4'	81:B5:253:A:O5'	2.08	0.53
81:B5:2778:G:C2'	81:B5:2779:A:H5'	2.38	0.53
81:B5:2778:G:H2'	81:B5:2779:A:H5'	1.90	0.53
50:BP:133:HIS:NE2	81:B5:880:G:C6	2.76	0.53
81:B5:916:G:H5'	81:B5:917:A:OP1	2.08	0.53
35:BA:34:TYR:CG	81:B5:2525:G:C5	2.96	0.53
37:BC:326:ARG:O	40:BF:41:ARG:NH2	2.41	0.53
41:BG:78:PHE:CD2	41:BG:179:ILE:HD13	2.43	0.53
48:BN:8:GLU:HG3	48:BN:50:ARG:NH1	2.16	0.53
60:BZ:110:ALA:O	60:BZ:114:VAL:HG23	2.08	0.53
59:BY:29:VAL:CG2	79:CL:32:LEU:O	142.95	0.53
5:A4:12:GLY:HA2	32:AX:90:ASP:OD1	2.08	0.53
10:AB:180:THR:O	10:AB:184:LEU:HB2	2.08	0.53
12:AD:204:ASP:OD1	80:B2:1330:G:C6	2.56	0.53
14:AF:94:THR:O	14:AF:97:LEU:HB2	2.08	0.53
16:AH:30:SER:HB2	16:AH:34:LEU:HB2	1.90	0.53
17:AI:8:ARG:HH11	17:AI:21:PHE:N	2.07	0.53
20:AL:130:PRO:CD	80:B2:115:G:C5	2.91	0.53
8:A7:61:ILE:HG23	27:AS:125:ILE:HG12	1.90	0.53
33:AY:36:SER:O	33:AY:40:LEU:HG	2.08	0.53
17:AI:75:LYS:CB	80:B2:258:C:H5'	2.38	0.53
80:B2:577:G:H8	80:B2:577:G:H3'	1.72	0.53
81:B5:2844:C:H5''	81:B5:2845:A:OP2	2.09	0.53
81:B5:420:G:OP1	81:B5:420:G:O5'	2.26	0.53
35:BA:116:VAL:HG11	35:BA:134:VAL:HG11	1.89	0.53
39:BE:78:ARG:HH11	39:BE:78:ARG:CG	2.21	0.53
50:BP:108:ASP:N	50:BP:152:GLU:OE2	2.31	0.53
52:BR:105:LEU:HG	52:BR:138:LEU:HD12	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:414:C:O2	85:CP:289:LEU:HG	1.49	0.53
3:A2:32:PHE:HZ	3:A2:38:ARG:CZ	2.21	0.53
12:AD:176:LEU:H	12:AD:176:LEU:HD12	1.73	0.53
12:AD:3:ALA:O	12:AD:4:LEU:HB2	2.09	0.53
20:AL:34:TRP:HZ2	80:B2:248:U:O3'	1.92	0.53
25:AQ:15:SER:OG	80:B2:1608:U:P	2.65	0.53
27:AS:31:ALA:O	27:AS:34:THR:HG23	2.08	0.53
80:B2:1062:A:H2'	80:B2:1063:U:O4'	2.09	0.53
80:B2:93:A:H4'	80:B2:94:U:OP2	2.07	0.53
81:B5:1214:U:H2'	81:B5:1215:U:C6	2.43	0.53
37:BC:162:THR:HG21	81:B5:209:A:C5	2.43	0.53
81:B5:776:U:C5	81:B5:2719:U:O2	2.52	0.53
81:B5:2995:A:H5''	81:B5:2996:U:OP2	2.08	0.53
47:BM:98:SER:HB2	81:B5:3205:G:OP1	2.08	0.53
35:BA:149:ARG:NH2	35:BA:252:THR:O	2.42	0.53
38:BD:265:TYR:HE1	82:B7:121:U:H5''	1.74	0.53
38:BD:270:LYS:CB	82:B7:2:G:C4'	2.86	0.53
41:BG:108:ARG:O	41:BG:112:GLU:N	2.31	0.53
50:BP:139:TYR:CZ	81:B5:1507:G:H1'	2.43	0.53
53:BS:119:ARG:HD2	82:B7:95:A:N3	2.23	0.53
53:BS:155:ARG:HH11	53:BS:172:TYR:H	1.54	0.53
53:BS:155:ARG:NH1	53:BS:172:TYR:H	2.06	0.53
7:A6:192:PHE:HD2	7:A6:223:TRP:CE3	2.26	0.53
16:AH:122:HIS:HA	16:AH:125:ILE:HD12	1.89	0.53
16:AH:35:LYS:NZ	16:AH:39:ARG:HD2	2.23	0.53
16:AH:46:ILE:HG12	16:AH:60:ILE:HG23	1.90	0.53
17:AI:27:PHE:CZ	80:B2:301:A:H5''	2.44	0.53
20:AL:57:LYS:HB2	20:AL:110:HIS:NE2	2.24	0.53
20:AL:6:THR:CB	20:AL:9:SER:HB3	2.38	0.53
23:AO:18:ARG:NH1	80:B2:918:U:C2'	2.72	0.53
27:AS:40:ARG:CZ	80:B2:1539:G:C4'	2.84	0.53
28:AT:42:GLY:HA2	28:AT:84:LYS:HB2	1.89	0.53
34:AZ:85:LYS:HG3	34:AZ:86:GLU:N	2.22	0.53
80:B2:1756[B]:A:HO2'	80:B2:1757:G:H5'	1.74	0.53
89:B2:1969:OHX:N5	89:B2:2013:OHX:N6	2.55	0.53
52:BR:166:ASN:HA	80:B2:850:A:C8	2.43	0.53
80:B2:851:U:H2'	80:B2:852:C:C6	2.42	0.53
23:AO:18:ARG:HH12	80:B2:919:A:H5'	0.72	0.53
81:B5:112:U:O2'	81:B5:113:C:OP2	2.24	0.53
81:B5:2211:U:C5	81:B5:2234:G:O6	2.59	0.53
81:B5:3380:U:O2'	81:B5:3381:U:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:91:GLY:O	37:BC:94:CYS:HB2	2.09	0.53
42:BH:163:GLN:HB3	42:BH:166:ARG:HH21	1.74	0.53
42:BH:63:LYS:HD3	81:B5:3122:A:O2'	2.08	0.53
46:BL:61:PRO:HD2	46:BL:70:ARG:HH21	1.72	0.53
55:BU:54:VAL:HG13	55:BU:67:SER:HB2	1.90	0.53
84:CN:2155:A:C8	84:CN:2180:G:O2'	2.60	0.53
2:A1:17:ARG:HD3	80:B2:1070:C:O3'	2.08	0.53
17:AI:36:THR:HG21	17:AI:173:PRO:HB2	1.90	0.53
20:AL:55:ASP:OD2	20:AL:110:HIS:HE1	1.92	0.53
23:AO:120:PRO:HB2	80:B2:887:A:C5'	2.37	0.53
23:AO:13:VAL:N	23:AO:77:THR:OG1	2.38	0.53
26:AR:44:LYS:HG2	26:AR:48:ASN:HD21	1.74	0.53
80:B2:138:A:N6	80:B2:266:A:H61	2.06	0.53
80:B2:711:U:H4'	80:B2:712:G:OP1	2.07	0.53
33:AY:119:PHE:CE1	80:B2:86:A:OP1	2.61	0.53
10:AB:165:ARG:NE	80:B2:947:U:OP1	2.33	0.53
80:B2:981:U:H2'	80:B2:982:U:H5'	1.91	0.53
82:B7:49:G:H4'	82:B7:50:U:O5'	2.08	0.53
38:BD:202:GLY:O	38:BD:206:GLN:HG3	2.08	0.53
38:BD:271:LYS:HE2	82:B7:1:G:O2'	2.07	0.53
58:BX:105:VAL:HG11	58:BX:126:LEU:HD13	1.89	0.53
85:CP:20:LYS:HG3	90:CP:401:GCP:O5'	2.09	0.53
7:A6:136:ILE:N	7:A6:136:ILE:HD13	2.24	0.53
15:AG:56:ASN:OD1	80:B2:153:G:C2	2.59	0.53
29:AU:88:LYS:HE3	80:B2:1516:A:OP1	2.07	0.53
31:AW:72:CYS:HB3	31:AW:129:VAL:HG13	1.90	0.53
34:AZ:65:LEU:HB3	34:AZ:71:ILE:HD13	1.89	0.53
80:B2:1595:U:H3	80:B2:1600:A:H2	1.56	0.53
15:AG:84:TYR:HD1	80:B2:161:U:OP1	1.90	0.53
80:B2:1655:A:N1	81:B5:2291:A:O2'	2.32	0.53
80:B2:61:A:H8	80:B2:269:G:HO2'	1.52	0.53
18:AJ:17:ARG:NH2	80:B2:4:C:O2'	2.38	0.53
16:AH:107:ARG:CZ	80:B2:741:C:O2	2.57	0.53
10:AB:116:LYS:HA	80:B2:931:C:C3'	2.38	0.53
81:B5:1085:A:H5'	81:B5:1085:A:H8	1.72	0.53
40:BF:92:ILE:HD11	81:B5:1159:A:H2	1.73	0.53
81:B5:2209:U:H4'	81:B5:2210:G:OP1	2.08	0.53
81:B5:2733:A:H2'	81:B5:2734:A:O4'	2.09	0.53
81:B5:3242:G:H5''	81:B5:3245:A:H8	1.74	0.53
81:B5:1940:G:H21	81:B5:3362:A:H8	1.55	0.53
51:BQ:171:LYS:NZ	81:B5:90:C:H41	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:929:A:H2'	81:B5:930:U:C6	2.44	0.53
35:BA:143:GLU:O	35:BA:145:LYS:N	2.42	0.53
37:BC:191:LYS:HG3	37:BC:194:TYR:CZ	2.44	0.53
37:BC:311:HIS:NE2	37:BC:314:LYS:HA	2.24	0.53
52:BR:74:ARG:CD	81:B5:1942:U:OP2	2.57	0.53
52:BR:74:ARG:NH1	81:B5:1942:U:P	2.81	0.53
59:BY:52:ARG:HA	59:BY:70:ILE:CG2	2.39	0.53
84:CN:2157:C:N3	84:CN:2158:C:C5	2.77	0.53
84:CN:2200:C:O2'	84:CN:2201:U:OP2	2.23	0.53
9:AA:49:ASN:HB3	9:AA:52:LYS:CG	2.32	0.53
9:AA:59:LEU:HD11	30:AV:79:LEU:HD11	1.91	0.53
18:AJ:105:LEU:O	18:AJ:108:ARG:HG3	2.09	0.53
18:AJ:90:LYS:HB2	18:AJ:95:TYR:CD2	2.43	0.53
20:AL:133:LYS:HB2	80:B2:338:C:OP1	2.08	0.53
20:AL:80:MET:HE2	80:B2:325:G:C5'	2.37	0.53
24:AP:128:HIS:ND1	80:B2:1180:C:O2'	2.42	0.53
25:AQ:113:ASP:CG	25:AQ:115:THR:H	2.12	0.53
29:AU:23:ARG:HD3	29:AU:92:ASP:OD1	2.09	0.53
25:AQ:123:ARG:N	80:B2:1584:G:C5'	2.52	0.53
80:B2:226:A:C2'	80:B2:227:U:H5'	2.38	0.53
80:B2:542:A:O2'	80:B2:543:C:P	2.67	0.53
80:B2:542:A:H5"	80:B2:544:A:C8	2.43	0.53
80:B2:830:U:OP1	89:B2:2084:OHX:N3	2.41	0.53
23:AO:125:SER:HB3	80:B2:926:A:N3	2.23	0.53
81:B5:1283:C:O2'	81:B5:1284:C:H5'	2.08	0.53
52:BR:125:LYS:CE	81:B5:1720:U:O4	2.56	0.53
81:B5:2943:G:H2'	81:B5:2944:U:O4'	2.09	0.53
81:B5:3057:U:O2'	81:B5:3059:G:OP1	2.27	0.53
81:B5:644:G:H2'	81:B5:2372:A:N7	2.24	0.53
46:BL:63:VAL:HG13	81:B5:72:C:C5'	2.39	0.53
36:BB:332:ARG:NH1	36:BB:333:LYS:HD2	2.24	0.53
36:BB:53:MET:CE	81:B5:3048:A:C5'	2.86	0.53
42:BH:137:SER:HB2	42:BH:143:GLU:HB3	1.91	0.53
44:BJ:82:ARG:HD2	44:BJ:112:LEU:HB2	1.89	0.53
85:CP:79:GLY:HA2	90:CP:401:GCP:PG	2.48	0.53
1:A0:10:ARG:HB2	1:A0:34:LYS:HG3	1.90	0.53
4:A3:22:ARG:HD2	4:A3:38:ILE:HD11	1.91	0.53
5:A4:28:LYS:HZ1	80:B2:477:A:P	2.30	0.53
9:AA:109:ASN:O	9:AA:112:THR:HG22	2.08	0.53
9:AA:74:VAL:HG22	9:AA:96:THR:HG23	1.91	0.53
10:AB:133:TYR:CD1	10:AB:181:LEU:HD11	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:34:ALA:HB2	10:AB:43:VAL:HG23	1.89	0.53
15:AG:172:ALA:CB	80:B2:78:A:O3'	2.56	0.53
17:AI:105:ASP:OD2	17:AI:107:THR:HG23	2.09	0.53
19:AK:53:GLY:O	19:AK:55:VAL:N	2.39	0.53
23:AO:54:GLU:OE1	80:B2:902:G:O6	2.27	0.53
24:AP:115:TYR:CD2	80:B2:1557:U:O4'	2.62	0.53
25:AQ:35:PRO:HG2	25:AQ:38:LEU:HG	1.90	0.53
31:AW:37:PHE:CD2	31:AW:103:ILE:HD12	2.43	0.53
33:AY:119:PHE:CZ	80:B2:86:A:C4'	2.91	0.53
4:A3:32:ARG:HB2	80:B2:1595:U:OP1	2.09	0.53
89:B2:1922:OHX:N2	89:B2:1977:OHX:N6	2.56	0.53
17:AI:10:LYS:HZ1	80:B2:339:C:P	2.30	0.53
80:B2:872:G:H2'	80:B2:873:U:O4'	2.09	0.53
35:BA:70:ARG:HB3	81:B5:1650:G:H5''	1.90	0.53
81:B5:2403:G:H22	81:B5:2404:A:H62	1.55	0.53
41:BG:241:LYS:HG3	81:B5:2527:G:O4'	2.09	0.53
35:BA:247:ARG:O	80:B2:1013:A:OP1	2.26	0.53
37:BC:138:ARG:HH21	37:BC:240:PRO:HB2	1.72	0.53
52:BR:165:LYS:HZ2	80:B2:824:G:H1'	1.73	0.53
79:CL:28:LEU:O	79:CL:28:LEU:HD12	2.08	0.53
3:A2:45:LYS:HB3	14:AF:162:VAL:HB	1.90	0.53
9:AA:14:ALA:O	9:AA:18:LEU:HG	2.09	0.53
17:AI:5:ARG:NH1	80:B2:332:U:O2'	2.41	0.53
80:B2:133:U:H3'	80:B2:133:U:OP2	2.07	0.53
25:AQ:122:ARG:CB	80:B2:1584:G:H5''	2.39	0.53
89:B2:1954:OHX:N4	89:B2:2068:OHX:N2	2.57	0.53
80:B2:414:C:O3'	85:CP:286:GLU:C	2.46	0.53
80:B2:501:U:HO2'	80:B2:502:U:H6	1.56	0.53
52:BR:170:ARG:O	80:B2:852:C:H3'	2.09	0.53
81:B5:1554:U:H4'	81:B5:1555:U:OP1	2.08	0.53
81:B5:1878:G:O2'	81:B5:1879:A:OP1	2.25	0.53
81:B5:1915:A:H2'	81:B5:1916:U:C6	2.43	0.53
35:BA:34:TYR:CG	81:B5:2525:G:C6	2.96	0.53
81:B5:2541:U:H4'	81:B5:2542:U:OP1	2.09	0.53
81:B5:3153:U:H4'	81:B5:3154:C:H5'	1.90	0.53
81:B5:725:G:C2'	81:B5:726:G:H5''	2.39	0.53
81:B5:741:U:H2'	81:B5:742:G:O4'	2.09	0.53
47:BM:132:LYS:HD3	81:B5:3230:G:H4'	1.90	0.53
48:BN:73:ARG:O	48:BN:75:VAL:N	2.38	0.53
49:BO:172[A]:ARG:HA	49:BO:175[A]:THR:HG23	1.89	0.53
58:BX:44:PRO:O	58:BX:45:LYS:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:86:UNK:C	6:A5:87:UNK:HG3	2.38	0.53
7:A6:285:ALA:CB	80:B2:1394:G:P	2.97	0.53
7:A6:7:LEU:HD23	7:A6:315:VAL:HG22	1.90	0.53
15:AG:159:ARG:CZ	80:B2:77:U:N1	2.72	0.53
16:AH:63:PRO:C	16:AH:65:PRO:HD2	2.29	0.53
23:AO:117:ASP:OD1	23:AO:119:THR:HG23	2.08	0.53
23:AO:16:VAL:O	23:AO:30:VAL:HA	2.09	0.53
32:AX:107:PHE:CE2	32:AX:114:LYS:HB2	2.44	0.53
32:AX:6:PRO:HG3	32:AX:14:LYS:HG2	1.91	0.53
34:AZ:94:LYS:HD3	34:AZ:95:HIS:HB3	1.90	0.53
80:B2:1473:U:O2	80:B2:1473:U:H2'	2.08	0.53
80:B2:206:A:OP2	89:B2:1979:OHX:N5	2.41	0.53
89:B2:2016:OHX:N6	89:B2:2073:OHX:N2	2.57	0.53
41:BG:129:PRO:HG3	81:B5:121:A:N1	2.23	0.53
81:B5:1307:G:C2	81:B5:1308:A:C2	2.96	0.53
81:B5:2364:G:H22	81:B5:2396:G:H1'	1.74	0.53
41:BG:38:GLN:HA	81:B5:2557:A:H2	1.72	0.53
46:BL:5:LYS:NZ	81:B5:796:U:H5''	2.23	0.53
35:BA:15:ILE:CD1	81:B5:822:G:H1'	2.39	0.53
35:BA:21:ARG:HB3	81:B5:641:C:OP1	77.31	0.53
27:AS:118:LYS:CG	44:BJ:108:GLU:OE2	2.57	0.53
27:AS:118:LYS:HG3	44:BJ:108:GLU:OE2	2.09	0.53
48:BN:47:LYS:HE3	48:BN:51:LEU:HD11	1.91	0.53
49:BO:64[A]:PHE:HE2	49:BO:68[A]:ARG:NH1	2.05	0.53
51:BQ:107:THR:HG21	81:B5:676:G:H3'	1.91	0.53
85:CP:19:THR:OG1	90:CP:401:GCP:O1B	2.26	0.53
10:AB:157:GLN:H	10:AB:160:HIS:HB2	1.73	0.52
11:AC:205:ARG:NH1	80:B2:7:G:N7	2.53	0.52
11:AC:234:PRO:O	11:AC:235:LEU:HB2	2.09	0.52
12:AD:20:GLU:HG3	19:AK:61:TRP:CD2	2.45	0.52
13:AE:12:LEU:O	80:B2:756:A:O2'	2.22	0.52
19:AK:1:MET:HG2	19:AK:2:LEU:H	1.73	0.52
19:AK:12:HIS:NE2	19:AK:49:LEU:HD21	2.24	0.52
20:AL:84:ILE:HD12	20:AL:86:ILE:HG23	1.90	0.52
23:AO:38:THR:HG21	80:B2:896:U:C5'	2.38	0.52
12:AD:156:PHE:HE2	80:B2:1326:A:O3'	1.92	0.52
80:B2:1487:A:H2'	80:B2:1488:G:C8	2.44	0.52
80:B2:1760:G:C2'	80:B2:1761:U:H5'	2.39	0.52
23:AO:46:MET:CA	80:B2:899:G:O5'	2.56	0.52
48:BN:35:VAL:N	81:B5:1543:G:OP1	2.35	0.52
81:B5:2220:A:H4'	79:CL:205:LYS:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BT:4:SER:HB2	81:B5:2630:C:C5	2.43	0.52
36:BB:147:GLU:OE1	36:BB:150:ARG:NH2	2.42	0.52
36:BB:210:GLU:O	36:BB:213:GLU:HB2	2.09	0.52
53:BS:46:GLN:HG2	53:BS:51:VAL:O	2.09	0.52
6:A5:136:LYS:H	6:A5:138:ARG:HB2	1.73	0.52
10:AB:172:LEU:O	10:AB:176:VAL:HG23	2.08	0.52
15:AG:59:GLN:HA	80:B2:155:U:C1'	2.39	0.52
16:AH:96:ARG:CZ	16:AH:124:LYS:HB3	2.39	0.52
23:AO:129:LYS:HB3	80:B2:990:C:H5''	1.88	0.52
28:AT:57:ARG:NH2	28:AT:80:TYR:HB3	2.24	0.52
32:AX:23:ARG:HA	32:AX:26:GLU:OE2	2.10	0.52
80:B2:1320:U:O2	80:B2:1322:A:H5'	2.09	0.52
80:B2:1676:U:O2'	80:B2:1677:C:H5'	2.09	0.52
80:B2:520:A:H2'	80:B2:521:A:C8	2.44	0.52
80:B2:779:U:OP2	80:B2:780:A:H2	1.93	0.52
37:BC:241:GLY:HA3	81:B5:1383:G:O4'	2.10	0.52
81:B5:1560:G:HO2'	81:B5:1561:G:P	2.33	0.52
81:B5:1716:U:C6	81:B5:1716:U:H5'	2.44	0.52
36:BB:2:SER:HB3	81:B5:2943:G:C8	2.44	0.52
81:B5:3218:A:H5''	81:B5:3219:G:C5	2.44	0.52
36:BB:256:HIS:HA	36:BB:257:PRO:C	2.29	0.52
38:BD:94:ASN:CA	82:B7:47:C:OP1	2.57	0.52
40:BF:96:PRO:O	40:BF:99:PRO:HD2	2.09	0.52
57:BW:63:ILE:O	57:BW:65:GLU:N	2.36	0.52
10:AB:127:VAL:HG11	10:AB:176:VAL:HG21	1.91	0.52
10:AB:128:LYS:HE3	10:AB:132:ASP:HB3	1.90	0.52
10:AB:138:PHE:CE2	80:B2:885:G:H5'	2.43	0.52
10:AB:174:LYS:NZ	10:AB:174:LYS:HB2	2.25	0.52
15:AG:58:LYS:CA	80:B2:155:U:C5'	2.85	0.52
17:AI:76:THR:HG22	17:AI:108:PRO:HG2	1.91	0.52
20:AL:75:VAL:HG12	20:AL:119:VAL:HA	1.91	0.52
20:AL:14:GLN:HB3	20:AL:54:ILE:HG21	1.91	0.52
22:AN:92:ILE:O	22:AN:96:VAL:HG23	2.09	0.52
34:AZ:41:ILE:HG13	34:AZ:42:LEU:HG	1.91	0.52
80:B2:1334:U:H2'	80:B2:1335:U:C6	2.45	0.52
80:B2:1655:A:O4'	81:B5:2302:G:O2'	2.26	0.52
89:B2:1974:OHX:N3	89:B2:1988:OHX:N5	2.57	0.52
80:B2:513:U:H2'	80:B2:514:G:C8	2.44	0.52
80:B2:555:A:C8	80:B2:555:A:H3'	2.45	0.52
15:AG:134:GLY:HA3	80:B2:66:U:O4	1.94	0.52
81:B5:1566:A:C2'	81:B5:1567:U:H5'	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2523:A:H4'	81:B5:2524:A:OP2	2.10	0.52
38:BD:152:ARG:CD	81:B5:2663:G:H5'	2.35	0.52
81:B5:3354:U:H4'	81:B5:3355:U:H5''	1.91	0.52
83:B8:66:A:H2'	83:B8:67:U:C6	2.45	0.52
39:BE:37:GLY:HA3	81:B5:639:G:OP1	76.65	0.52
41:BG:105:LYS:HG3	41:BG:109:LEU:HD23	1.91	0.52
52:BR:163:ARG:O	52:BR:167:ARG:HG2	2.09	0.52
84:CN:2137:G:H3'	84:CN:2138:A:C8	2.43	0.52
84:CN:2162:G:H2'	84:CN:2163:C:C6	2.44	0.52
1:A0:22:ARG:HH12	23:AO:127:ARG:HG3	1.75	0.52
6:A5:138:ARG:HH21	80:B2:1235:C:H2'	1.71	0.52
9:AA:73:VAL:O	9:AA:95:ALA:HA	2.09	0.52
13:AE:241:GLY:O	13:AE:244:ILE:HG12	2.10	0.52
15:AG:54:GLY:HA3	80:B2:163:G:C5'	2.32	0.52
17:AI:117:TYR:CD1	17:AI:150:ALA:HB2	2.44	0.52
80:B2:1011:G:OP2	89:B2:1969:OHX:N6	2.42	0.52
4:A3:31:ILE:CD1	80:B2:1199:G:N1	2.72	0.52
25:AQ:76:SER:CB	80:B2:1609:U:P	2.83	0.52
25:AQ:75:VAL:CG1	80:B2:1610:G:P	2.98	0.52
89:B2:1964:OHX:N1	89:B2:2027:OHX:N3	2.58	0.52
80:B2:61:A:H8	80:B2:269:G:O2'	1.92	0.52
80:B2:287:G:O2'	80:B2:288:A:OP2	2.24	0.52
80:B2:542:A:O2'	80:B2:543:C:O5'	2.26	0.52
54:BT:129:LYS:HB2	81:B5:1098:A:C5'	2.40	0.52
35:BA:235:ALA:CB	81:B5:2184:U:OP1	2.58	0.52
81:B5:2438:A:C6	81:B5:2510:U:N3	2.77	0.52
43:BI:67:ALA:HB2	81:B5:2852:C:C2'	2.39	0.52
81:B5:374:A:N3	81:B5:376:G:H5''	2.25	0.52
37:BC:119:ARG:HA	37:BC:122:THR:HG23	1.91	0.52
42:BH:70:THR:HB	81:B5:3112:G:HO2'	1.74	0.52
46:BL:37:ASN:O	46:BL:41:THR:HG23	2.09	0.52
52:BR:166:ASN:HB2	80:B2:850:A:OP2	2.09	0.52
52:BR:169:ALA:O	80:B2:852:C:N1	2.41	0.52
4:A3:9:SER:HA	80:B2:1451:C:OP1	2.10	0.52
11:AC:185:LYS:O	11:AC:189:GLN:HG3	2.10	0.52
15:AG:139:ASN:HA	15:AG:142:ARG:HB2	1.91	0.52
15:AG:57:ASP:OD2	15:AG:72:ARG:NH1	2.43	0.52
15:AG:60:GLY:HA2	80:B2:154:G:C2'	2.40	0.52
18:AJ:88:GLU:HG3	18:AJ:91:LYS:HE3	1.90	0.52
25:AQ:76:SER:HB2	80:B2:1609:U:OP2	2.08	0.52
33:AY:49:LYS:N	33:AY:49:LYS:HD3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:71:ILE:HB	34:AZ:76:ALA:HB2	1.92	0.52
28:AT:60:SER:OG	80:B2:1479:A:H5''	2.08	0.52
89:B2:1921:OHX:N2	89:B2:2050:OHX:N6	2.58	0.52
80:B2:240:U:H1'	80:B2:241:U:P	2.49	0.52
15:AG:175:ILE:HD11	80:B2:78:A:H1'	0.52	0.52
52:BR:170:ARG:H	80:B2:851:U:H3'	1.74	0.52
80:B2:912:U:H4'	80:B2:913:G:O5'	2.10	0.52
10:AB:116:LYS:CA	80:B2:931:C:O3'	2.57	0.52
81:B5:2101:C:O2'	81:B5:2102:U:OP1	2.23	0.52
35:BA:203:ALA:CB	81:B5:2146:C:H5''	2.39	0.52
36:BB:265:ALA:C	36:BB:266:ARG:HG2	2.30	0.52
40:BF:224:ILE:CG2	82:B7:97:A:H4'	2.39	0.52
46:BL:64:LYS:HD3	46:BL:65:TYR:CE2	2.45	0.52
52:BR:166:ASN:CA	80:B2:850:A:H5''	2.13	0.52
4:A3:32:ARG:CB	80:B2:1595:U:OP1	2.58	0.52
27:AS:18:LEU:HD21	27:AS:70:VAL:HG13	1.92	0.52
80:B2:114:C:H6	80:B2:114:C:H5'	1.74	0.52
80:B2:487:G:H3'	80:B2:488:G:H5''	1.92	0.52
80:B2:20:G:H5'	80:B2:571:G:C5	2.43	0.52
33:AY:9:THR:H	80:B2:780:A:H1'	1.74	0.52
81:B5:1269:U:O5'	81:B5:1269:U:H6	1.93	0.52
48:BN:72:LYS:HD3	81:B5:2166:A:C3'	2.40	0.52
80:B2:1655:A:N3	81:B5:2302:G:H1'	2.24	0.52
81:B5:2590:A:H2'	81:B5:2591:A:O5'	2.09	0.52
8:A7:51:ARG:HD2	81:B5:2677:G:C1'	2.39	0.52
36:BB:84:VAL:HG13	36:BB:162:VAL:HB	1.91	0.52
37:BC:126:ILE:HG13	37:BC:238:LEU:HD13	1.92	0.52
43:BI:15:LYS:H	81:B5:73:C:P	94.11	0.52
48:BN:112:ASN:HA	81:B5:19:U:O2'	2.07	0.52
49:BO:110[B]:PRO:HB2	49:BO:111[B]:PRO:HD2	1.91	0.52
49:BO:15[A]:LEU:HD11	49:BO:129[A]:LEU:HD13	1.92	0.52
55:BU:90:ARG:O	55:BU:91:ASP:HB2	2.10	0.52
3:A2:15:VAL:HA	3:A2:28:VAL:HG22	1.92	0.52
4:A3:31:ILE:CD1	80:B2:1199:G:C6	2.90	0.52
10:AB:39:GLU:HG3	10:AB:40:ASN:N	2.21	0.52
11:AC:40:LYS:HA	11:AC:43:ARG:NH1	2.25	0.52
12:AD:159:HIS:O	80:B2:1421:A:C4'	2.55	0.52
15:AG:62:PRO:HG3	80:B2:161:U:HO2'	1.69	0.52
15:AG:6:SER:HB2	80:B2:164:A:O2'	2.10	0.52
16:AH:104:ARG:O	16:AH:106:SER:N	2.42	0.52
17:AI:50:GLY:HA2	80:B2:397:A:C3'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:50:GLU:OE2	80:B2:827:C:O2'	2.17	0.52
20:AL:5:LEU:O	20:AL:7:VAL:N	2.34	0.52
23:AO:125:SER:CB	80:B2:926:A:C2	2.93	0.52
30:AV:72:LEU:O	30:AV:76:ASP:HB2	2.09	0.52
33:AY:33:ALA:CB	80:B2:533:U:H4'	2.40	0.52
80:B2:1002:G:H2'	80:B2:1003:A:H5'	1.92	0.52
80:B2:515:A:OP2	89:B2:1949:OHX:N3	2.43	0.52
80:B2:838:G:C6	89:B2:2071:OHX:N2	2.78	0.52
80:B2:256:A:H2'	80:B2:257:A:O4'	2.09	0.52
23:AO:38:THR:HG21	80:B2:896:U:O5'	2.09	0.52
52:BR:9:ARG:NH2	81:B5:1602:A:O3'	2.43	0.52
48:BN:138:GLN:CD	81:B5:19:U:H4'	2.29	0.52
48:BN:172:ARG:NH1	81:B5:29:C:O3'	2.42	0.52
43:BI:15:LYS:HE2	81:B5:73:C:N3	93.48	0.52
81:B5:920:A:OP1	81:B5:922:U:C5	2.63	0.52
81:B5:996:A:H2'	81:B5:997:A:O4'	2.09	0.52
59:BY:116:LYS:HE3	83:B8:84:C:N3	2.24	0.52
35:BA:231:SER:HB2	81:B5:2163:C:C5'	2.23	0.52
35:BA:234:LYS:NZ	81:B5:2162:U:P	2.83	0.52
36:BB:159:ARG:HG2	36:BB:182:GLN:HA	1.91	0.52
10:AB:119:THR:HB	10:AB:143:THR:HG23	1.92	0.52
26:AR:17:ILE:HG12	26:AR:58:MET:HE2	1.92	0.52
29:AU:67:THR:HG23	80:B2:1199:G:N7	2.25	0.52
80:B2:1234:A:O2'	80:B2:1235:C:O5'	2.20	0.52
80:B2:1291:G:H22	80:B2:1324:G:N2	2.07	0.52
80:B2:144:U:O2'	80:B2:145:A:H5'	2.10	0.52
80:B2:142:G:N2	80:B2:173:A:H2	2.00	0.52
17:AI:146:ARG:NH2	80:B2:186:C:OP1	2.34	0.52
80:B2:710:U:H2'	80:B2:711:U:H5'	1.91	0.52
50:BP:139:TYR:CE2	81:B5:2355:G:H5'	2.45	0.52
8:A7:51:ARG:CD	81:B5:2677:G:C1'	2.88	0.52
37:BC:48:GLN:HG3	81:B5:337:G:O4'	2.10	0.52
46:BL:16:LYS:HE3	81:B5:49:A:OP1	2.10	0.52
35:BA:237:LEU:HD21	81:B5:2153:U:O2	2.10	0.52
36:BB:35:ASP:OD2	36:BB:37:ARG:HD2	2.09	0.52
48:BN:71:ARG:NH1	81:B5:1546:A:N7	2.58	0.52
52:BR:167:ARG:HB3	52:BR:167:ARG:HH11	1.75	0.52
81:B5:2444:C:P	84:CN:2124:C:C2	3.03	0.52
4:A3:56:ARG:HG3	80:B2:1418:G:H1'	1.92	0.52
8:A7:34:LYS:HZ2	81:B5:2693:C:C5'	2.08	0.52
10:AB:128:LYS:CE	10:AB:132:ASP:HB3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:205:SER:O	14:AF:207:THR:N	2.43	0.52
20:AL:6:THR:HB	20:AL:9:SER:HB3	1.92	0.52
26:AR:106:THR:O	26:AR:109:LEU:HB3	2.10	0.52
34:AZ:77:ARG:NH2	80:B2:1533:C:C6	2.76	0.52
80:B2:1535:U:O2'	80:B2:1536:G:N3	2.35	0.52
1:A0:86:VAL:HG23	80:B2:1795:U:OP1	2.09	0.52
80:B2:929:A:OP2	80:B2:931:C:N4	2.43	0.52
81:B5:1017:C:P	81:B5:1017:C:H2'	2.50	0.52
41:BG:137:ASN:HB2	81:B5:148:G:O6	2.10	0.52
81:B5:2568:C:N4	81:B5:2574:G:O6	2.42	0.52
41:BG:242:ALA:HB3	81:B5:2586:G:O6	2.09	0.52
81:B5:1831:U:O2'	83:B8:114:G:OP1	2.19	0.52
37:BC:181:VAL:HG21	37:BC:224:GLY:HA3	1.92	0.52
40:BF:151:ARG:NH1	40:BF:244:ASN:O	2.43	0.52
48:BN:184:LYS:C	48:BN:186:GLY:H	2.13	0.52
51:BQ:105:ARG:HH12	81:B5:674:G:P	2.33	0.52
52:BR:168:ALA:HB3	80:B2:850:A:HO2'	1.72	0.52
59:BY:21:THR:HB	79:CL:24:GLU:CG	123.22	0.52
9:AA:189:VAL:HG22	9:AA:190:ASP:H	1.75	0.52
10:AB:81:PHE:HA	10:AB:106:THR:HG23	1.92	0.52
12:AD:105:MET:HG2	12:AD:122:VAL:HG21	1.92	0.52
17:AI:58:LEU:O	17:AI:59:ARG:HB2	2.10	0.52
18:AJ:38:ASN:HB3	18:AJ:40:LYS:H	1.75	0.52
21:AM:60:VAL:HG13	21:AM:122:VAL:HG22	1.92	0.52
21:AM:52:LEU:HD13	21:AM:85:LYS:NZ	2.25	0.52
2:A1:4:VAL:HA	31:AW:24:GLN:NE2	2.24	0.52
80:B2:1191:U:C1'	86:CW:35:A:OP2	2.51	0.52
80:B2:1217:A:H5'	80:B2:1217:A:H8	1.73	0.52
80:B2:1149:G:H1'	80:B2:1765:A:C4	2.44	0.52
80:B2:1370:U:O4	89:B2:2001:OHX:N5	2.43	0.52
80:B2:539:G:OP2	80:B2:539:G:H8	1.93	0.52
80:B2:677:G:H2'	80:B2:678:A:H8	1.73	0.52
80:B2:651:G:C2	80:B2:684:A:C6	2.98	0.52
80:B2:717:C:H2'	80:B2:718:U:H5''	1.90	0.52
80:B2:749:U:H3	80:B2:800:U:H3	1.58	0.52
15:AG:88:ARG:CG	80:B2:92:A:N1	2.71	0.52
81:B5:1200:A:H5'	81:B5:1201:C:O5'	2.10	0.52
81:B5:1267:U:H3'	81:B5:1268:G:H8	1.75	0.52
81:B5:152:U:H5''	81:B5:153:U:OP2	2.09	0.52
52:BR:85:ARG:HH12	81:B5:2104:A:P	2.33	0.52
81:B5:2257:C:H2'	81:B5:2258:U:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2439:A:C2'	81:B5:2440:G:H5''	2.40	0.52
81:B5:3165:A:H2'	81:B5:3166:C:C6	2.43	0.52
46:BL:16:LYS:HG3	81:B5:48:A:O5'	2.09	0.52
35:BA:15:ILE:CG1	81:B5:822:G:C1'	2.88	0.52
38:BD:265:TYR:HE1	82:B7:120:C:H2'	1.66	0.52
44:BJ:166:LYS:C	44:BJ:168:ASP:H	2.13	0.52
48:BN:31:ARG:HG3	48:BN:129:TYR:OH	2.09	0.52
52:BR:128:LYS:O	52:BR:128:LYS:HG2	2.08	0.52
56:BV:2:SER:O	56:BV:57:MET:N	2.42	0.52
10:AB:116:LYS:CG	80:B2:931:C:H5''	2.41	0.51
11:AC:67:GLN:HA	11:AC:70:ASP:HB2	1.92	0.51
11:AC:91:ARG:HH11	80:B2:1625:C:P	2.22	0.51
15:AG:67:VAL:O	15:AG:68:LEU:HB2	2.10	0.51
21:AM:67:THR:C	21:AM:69:ALA:H	2.11	0.51
26:AR:49:LYS:HG3	80:B2:1389:C:O3'	2.09	0.51
29:AU:54:GLY:CA	80:B2:1345:A:OP1	2.53	0.51
14:AF:102:ARG:HH22	80:B2:1472:C:P	2.33	0.51
10:AB:116:LYS:HG3	80:B2:931:C:OP1	2.10	0.51
81:B5:409:A:H2	81:B5:1441:G:N3	2.08	0.51
81:B5:1876:U:H5''	81:B5:1876:U:H6	1.75	0.51
81:B5:209:A:H4'	81:B5:211:A:N7	2.26	0.51
81:B5:2444:C:C4'	84:CN:2208:G:H1'	2.25	0.51
81:B5:243:G:O2'	81:B5:244:G:H5'	2.10	0.51
81:B5:2682:C:O2'	81:B5:2683:U:OP1	2.15	0.51
81:B5:3330:A:C8	81:B5:3330:A:H5''	2.43	0.51
81:B5:385:A:O2'	81:B5:386:A:H5'	2.10	0.51
81:B5:558:U:H4'	81:B5:559:A:OP2	2.09	0.51
38:BD:265:TYR:OH	82:B7:120:C:H3'	2.10	0.51
48:BN:119:TYR:OH	48:BN:131:GLU:OE1	2.16	0.51
49:BO:36[A]:VAL:HB	49:BO:108[A]:ILE:HB	1.92	0.51
52:BR:74:ARG:HH11	81:B5:1942:U:P	2.26	0.51
52:BR:82:LYS:HB2	81:B5:1863:G:H4'	1.91	0.51
54:BT:104:GLU:HG3	54:BT:105:PHE:N	2.24	0.51
58:BX:132:ALA:O	58:BX:136:ALA:N	2.33	0.51
84:CN:2130:U:H1'	84:CN:2202:G:N2	2.25	0.51
84:CN:2161:C:H5	84:CN:2172:G:H1	1.56	0.51
80:B2:1191:U:O5'	86:CW:35:A:OP1	2.29	0.51
4:A3:14:TYR:HE2	80:B2:1597:A:C5	2.29	0.51
4:A3:34:TYR:CE1	80:B2:1487:A:OP1	2.63	0.51
16:AH:97:ARG:N	80:B2:856:A:N7	2.55	0.51
16:AH:99:LEU:HD12	16:AH:116:ARG:HG2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:A5:108:VAL:HG13	21:AM:73:LYS:NZ	2.26	0.51
23:AO:29:HIS:HB2	23:AO:41:ARG:HA	1.92	0.51
29:AU:102:ARG:O	29:AU:106:ILE:HG22	2.10	0.51
29:AU:53:LYS:HA	80:B2:1345:A:OP2	2.11	0.51
31:AW:107:SER:O	80:B2:803:A:H4'	2.10	0.51
29:AU:88:LYS:CE	80:B2:1516:A:OP1	2.57	0.51
80:B2:542:A:H5''	80:B2:544:A:N7	2.26	0.51
80:B2:710:U:HO2'	80:B2:729:G:H1	1.58	0.51
23:AO:18:ARG:HD3	80:B2:918:U:O3'	2.10	0.51
81:B5:1228:C:C2	81:B5:1283:C:C2	2.98	0.51
81:B5:1638:A:H5''	81:B5:1639:C:OP2	2.10	0.51
81:B5:1655:G:H8	81:B5:1655:G:H5''	1.73	0.51
81:B5:1481:A:O2'	81:B5:1858:A:N3	2.40	0.51
81:B5:2573:G:H2'	81:B5:2574:G:O4'	2.09	0.51
81:B5:428:A:H2'	81:B5:429:U:C6	2.45	0.51
48:BN:155:VAL:HG13	81:B5:58:G:H4'	1.91	0.51
81:B5:847:A:H2'	81:B5:848:A:C8	2.45	0.51
39:BE:68:PRO:HG2	39:BE:71:VAL:CG2	2.40	0.51
49:BO:61[A]:ALA:HB1	49:BO:66[A]:LYS:HG3	1.92	0.51
4:A3:21:CYS:SG	4:A3:23:VAL:HB	2.50	0.51
9:AA:81:PHE:HB3	9:AA:170:ILE:HD13	1.91	0.51
18:AJ:8:TYR:HB2	80:B2:770:A:O2'	2.10	0.51
21:AM:31:VAL:HG21	21:AM:136:ILE:HD13	1.92	0.51
22:AN:54:LEU:HB3	22:AN:60:VAL:CG2	2.40	0.51
27:AS:26:ILE:HD13	27:AS:30:TYR:HB2	1.91	0.51
80:B2:1655:A:O4'	81:B5:2302:G:H4'	2.10	0.51
10:AB:124:ASN:HD22	80:B2:884:A:H4'	1.71	0.51
37:BC:189:ALA:O	81:B5:1420:C:OP2	2.28	0.51
51:BQ:69:ARG:CZ	81:B5:784:A:C8	2.93	0.51
48:BN:113:LEU:HD11	83:B8:142:C:H4'	1.91	0.51
35:BA:140:ASN:OD1	35:BA:142:ASP:HB3	2.10	0.51
43:BI:50:VAL:HG13	43:BI:167:LEU:HA	1.92	0.51
46:BL:76:THR:O	46:BL:80:VAL:HG23	2.10	0.51
81:B5:2443:A:C3'	84:CN:2208:G:C5	2.83	0.51
6:A5:133:ALA:HB2	80:B2:1252:C:O4'	2.09	0.51
6:A5:138:ARG:CZ	80:B2:1235:C:O2	2.59	0.51
10:AB:134:VAL:O	10:AB:218:LEU:HD22	2.10	0.51
11:AC:178:ILE:HB	11:AC:185:LYS:HG3	1.93	0.51
17:AI:47:ARG:NH2	80:B2:397:A:H5''	2.25	0.51
22:AN:123:HIS:CE1	81:B5:847:A:H4'	2.46	0.51
24:AP:29:SER:OG	24:AP:31:GLU:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:77:ARG:NH2	80:B2:1534:G:C5	2.74	0.51
80:B2:1366:U:O4	89:B2:1988:OHX:N6	2.44	0.51
20:AL:20:PHE:HB2	80:B2:211:U:H5''	1.91	0.51
80:B2:838:G:C5	89:B2:2071:OHX:N2	2.78	0.51
52:BR:169:ALA:C	80:B2:852:C:C6	2.64	0.51
54:BT:130:ARG:HD3	81:B5:1098:A:OP2	2.09	0.51
81:B5:1819:U:H2'	81:B5:1820:U:H5'	1.93	0.51
81:B5:3058:U:H5'	81:B5:3059:G:OP1	2.09	0.51
35:BA:199:THR:OG1	81:B5:913:A:H4'	2.09	0.51
36:BB:153:LYS:HG2	36:BB:154:TYR:CZ	2.46	0.51
37:BC:81:GLY:HA3	81:B5:357:A:O4'	2.11	0.51
38:BD:72:ASP:N	82:B7:7:G:O2'	2.42	0.51
41:BG:156:ASP:OD1	41:BG:156:ASP:N	2.43	0.51
48:BN:190:THR:O	48:BN:194:GLN:HG2	2.10	0.51
48:BN:45:PRO:O	48:BN:49:ARG:HB2	2.09	0.51
49:BO:133[B]:ARG:CZ	81:B5:1189:C:C4	2.93	0.51
52:BR:82:LYS:HE3	81:B5:2115:G:O2'	2.09	0.51
7:A6:167:VAL:HG12	7:A6:183:LEU:HB2	1.92	0.51
7:A6:295:SER:HB2	7:A6:300:THR:HB	1.92	0.51
7:A6:286:GLU:HG2	89:A6:401:OHX:N5	2.25	0.51
10:AB:104:ASP:OD1	10:AB:214:LYS:NZ	2.43	0.51
17:AI:171:SER:HB3	80:B2:209:U:H5'	1.91	0.51
23:AO:38:THR:OG1	80:B2:896:U:O4'	2.28	0.51
26:AR:13:SER:HA	26:AR:54:THR:HG22	1.92	0.51
28:AT:137:ALA:O	28:AT:141:GLU:HG2	2.10	0.51
29:AU:117:VAL:HG22	29:AU:118:VAL:H	1.75	0.51
29:AU:51:VAL:HG13	29:AU:94:GLU:HB2	1.92	0.51
80:B2:1474:G:H2'	80:B2:1475:A:H8	1.73	0.51
80:B2:1535:U:OP1	80:B2:1535:U:H4'	2.10	0.51
14:AF:185:ARG:NH2	80:B2:1572:G:H1'	2.25	0.51
89:B2:1954:OHX:N3	89:B2:2068:OHX:N1	2.59	0.51
80:B2:698:U:O4	89:B2:1975:OHX:N3	2.44	0.51
80:B2:577:G:C8	80:B2:577:G:H3'	2.45	0.51
52:BR:175:GLN:CB	80:B2:852:C:H4'	2.40	0.51
81:B5:1229:G:C6	81:B5:1230:G:C2	2.99	0.51
81:B5:172:G:H2'	81:B5:173:G:H5''	1.91	0.51
35:BA:187:HIS:CE1	81:B5:1794:G:N2	2.78	0.51
81:B5:249:U:OP2	81:B5:249:U:H2'	2.11	0.51
81:B5:715:A:H4'	81:B5:716:A:OP1	2.10	0.51
82:B7:64:A:H5'	82:B7:65:G:H5''	1.91	0.51
35:BA:200:ARG:HE	81:B5:2147:A:P	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:64:ARG:HD2	81:B5:2557:A:C5	2.46	0.51
37:BC:271:LYS:HB2	37:BC:274:TYR:HB3	1.90	0.51
40:BF:80:GLN:HG3	54:BT:136:ARG:CB	2.41	0.51
38:BD:17:GLN:HB2	54:BT:20:ARG:HG2	1.93	0.51
59:BY:88:GLU:HG3	79:CL:92:ASP:O	178.60	0.51
86:CW:43:C:C5	86:CW:44:G:C5	2.99	0.51
3:A2:34:GLU:O	3:A2:35:ASP:HB2	2.09	0.51
7:A6:286:GLU:CG	89:A6:401:OHX:N5	2.73	0.51
14:AF:103:ASN:HA	14:AF:106:LYS:HD2	1.92	0.51
14:AF:43:PHE:HA	14:AF:68:ILE:O	2.11	0.51
18:AJ:106:GLU:OE2	18:AJ:115:LYS:HE2	2.11	0.51
20:AL:93:TYR:HB2	20:AL:100:TYR:CE2	2.45	0.51
34:AZ:37:GLN:O	34:AZ:38:HIS:HB3	2.10	0.51
12:AD:4:LEU:CD1	80:B2:1514:U:N1	2.74	0.51
89:B2:1964:OHX:N5	89:B2:2027:OHX:N6	2.59	0.51
80:B2:446:A:N6	80:B2:461:G:H21	2.08	0.51
23:AO:126:THR:CG2	80:B2:988:A:C2	2.67	0.51
37:BC:220:ARG:HG3	81:B5:211:A:OP1	2.10	0.51
81:B5:2896:A:H5'	81:B5:2896:A:H8	1.75	0.51
40:BF:70:LYS:NZ	81:B5:519:A:P	2.84	0.51
41:BG:215:VAL:O	41:BG:219:ASP:HB2	2.10	0.51
42:BH:48:VAL:HG21	42:BH:52:LEU:HD13	1.92	0.51
43:BI:60:LEU:HD11	43:BI:135:ILE:HD13	1.93	0.51
51:BQ:166:LEU:O	51:BQ:167:SER:HB2	2.11	0.51
56:BV:18:PRO:CG	81:B5:1898:G:H1'	2.40	0.51
60:BZ:80:LEU:O	60:BZ:82:PRO:HD3	2.11	0.51
2:A1:34:ASP:N	2:A1:34:ASP:OD1	2.43	0.51
4:A3:10:HIS:CG	4:A3:11:PRO:HD2	2.46	0.51
9:AA:27:ARG:HG2	9:AA:28:ASN:H	1.75	0.51
10:AB:186:SER:O	10:AB:190:PRO:HD2	2.10	0.51
14:AF:84:LYS:HE3	80:B2:1613:U:OP2	2.10	0.51
25:AQ:127:LYS:NZ	25:AQ:131:GLY:O	2.38	0.51
29:AU:104:THR:HG21	29:AU:116:VAL:HG21	1.93	0.51
30:AV:71:ARG:HG3	30:AV:83:TRP:CH2	2.46	0.51
26:AR:4:VAL:CG2	80:B2:1402:G:H4'	2.40	0.51
80:B2:1215:C:N4	89:B2:2083:OHX:N3	2.59	0.51
80:B2:229:U:H2'	80:B2:230:C:C6	2.46	0.51
80:B2:279:G:H8	80:B2:279:G:H3'	1.75	0.51
80:B2:927:C:H2'	80:B2:928:U:C6	2.46	0.51
81:B5:1176:C:H2'	81:B5:1177:G:N2	2.26	0.51
35:BA:187:HIS:CG	81:B5:1794:G:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1644:C:C2	81:B5:2255:A:C2	2.95	0.51
81:B5:308:A:H5'	81:B5:2223:A:O2'	2.11	0.51
81:B5:787:G:H2'	81:B5:788:C:C6	2.46	0.51
35:BA:220:GLY:O	35:BA:221:LYS:HG3	2.11	0.51
37:BC:157:GLU:HG2	37:BC:209:TYR:HB2	1.91	0.51
37:BC:300:ARG:HG2	37:BC:300:ARG:NH1	2.24	0.51
42:BH:1:MET:O	42:BH:2:LYS:HB2	2.11	0.51
49:BO:116[A]:LYS:HG3	49:BO:117[A]:ARG:N	2.26	0.51
53:BS:26:ARG:NH1	54:BT:150:THR:HG21	2.26	0.51
54:BT:32:LYS:HE3	54:BT:98:HIS:HD2	1.75	0.51
58:BX:82:LEU:HD11	58:BX:135:ILE:HD12	1.92	0.51
60:BZ:46:ILE:HD11	60:BZ:49:TYR:CD2	2.45	0.51
84:CN:2142:G:H2'	84:CN:2143:U:C6	2.46	0.51
81:B5:3027:A:C3'	85:CP:109:GLN:HB2	2.39	0.51
3:A2:50:GLU:O	3:A2:51:ASN:HB2	2.10	0.51
6:A5:135:HIS:HB2	6:A5:138:ARG:HB3	1.93	0.51
8:A7:78:ASP:OD2	86:CW:29:G:OP1	2.28	0.51
17:AI:138:ASN:HB3	80:B2:197:A:H61	1.76	0.51
20:AL:105:LYS:HD2	80:B2:306:U:P	2.50	0.51
20:AL:72:THR:O	20:AL:88:ARG:HD2	2.11	0.51
23:AO:122:PRO:CB	80:B2:887:A:C1'	2.74	0.51
24:AP:87:PRO:HD3	24:AP:112:LEU:HD22	1.91	0.51
25:AQ:7:VAL:HG22	25:AQ:22:VAL:HB	1.92	0.51
25:AQ:73:GLY:H	25:AQ:76:SER:HB3	1.76	0.51
33:AY:31:ASN:O	33:AY:32:ARG:HB2	2.11	0.51
80:B2:1081:A:H4'	80:B2:1082:C:O5'	2.10	0.51
80:B2:1410:A:H2'	80:B2:1411:A:O4'	2.11	0.51
89:B2:1915:OHX:N2	89:B2:2071:OHX:N5	2.58	0.51
89:B2:1907:OHX:N1	89:B2:2083:OHX:N4	2.58	0.51
36:BB:228:GLY:N	81:B5:1887:A:H4'	2.25	0.51
81:B5:3000:A:H2'	81:B5:3001:C:C6	2.45	0.51
36:BB:309:GLY:O	81:B5:3379:C:H1'	2.11	0.51
81:B5:435:C:H2'	81:B5:436:A:O4'	2.11	0.51
35:BA:204:MET:HE3	81:B5:914:A:C2	2.46	0.51
36:BB:116:ARG:HG2	36:BB:175:LYS:HA	1.92	0.51
36:BB:226:PHE:O	81:B5:1886:A:O2'	2.20	0.51
41:BG:59:GLN:NE2	83:B8:150:G:C1'	2.71	0.51
55:BU:47:VAL:C	55:BU:49:ASN:H	2.13	0.51
12:AD:156:PHE:CE2	80:B2:1327:C:H5'	2.45	0.51
15:AG:157:VAL:CG1	80:B2:78:A:C4'	2.60	0.51
15:AG:28:PHE:CE2	15:AG:104:PRO:HG3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AM:29:LYS:HE2	21:AM:100:TRP:NE1	2.26	0.51
27:AS:134:ARG:HG3	80:B2:1545:A:P	2.50	0.51
89:B2:1974:OHX:N4	89:B2:1988:OHX:N2	2.59	0.51
80:B2:56:U:H4'	80:B2:57:G:H5'	1.93	0.51
81:B5:2112:U:O2'	89:B5:3401:OHX:N1	2.44	0.51
38:BD:26:GLY:C	81:B5:2703:A:H61	2.15	0.51
35:BA:187:HIS:ND1	35:BA:190:ARG:NH1	2.58	0.51
35:BA:219:ILE:HD11	81:B5:2185:G:H4'	1.93	0.51
35:BA:240:ALA:HA	81:B5:2155:G:P	2.51	0.51
36:BB:53:MET:HB2	81:B5:3049:A:H5''	1.93	0.51
37:BC:286:VAL:HG11	51:BQ:31:LYS:HD2	1.93	0.51
38:BD:55:PHE:CZ	38:BD:158:ARG:HB3	2.45	0.51
43:BI:57:LEU:HD12	82:B7:93:C:H5'	1.91	0.51
44:BJ:54:VAL:HG23	44:BJ:57:PHE:HB2	1.93	0.51
60:BZ:4:PHE:O	60:BZ:5:LEU:HG	2.10	0.51
13:AE:163:ASP:O	13:AE:164:LEU:HB2	2.11	0.51
14:AF:37:GLN:CD	25:AQ:53:LEU:HD22	2.32	0.51
15:AG:70:PRO:C	15:AG:98:ARG:HH21	2.14	0.51
17:AI:123:LYS:O	89:AI:302:OHX:N6	2.44	0.51
17:AI:170:SER:OG	80:B2:209:U:C4'	2.55	0.51
25:AQ:114:ARG:O	25:AQ:115:THR:OG1	2.26	0.51
80:B2:1367:G:N7	89:B2:1988:OHX:N6	2.59	0.51
80:B2:1570:A:OP1	89:B2:2046:OHX:N5	2.43	0.51
80:B2:707:A:H2'	80:B2:708:C:H5''	1.92	0.51
80:B2:868:G:H1	80:B2:960:U:H3	1.59	0.51
41:BG:137:ASN:CG	81:B5:148:G:N7	2.63	0.51
81:B5:1567:U:H1'	81:B5:1570:U:C5	2.45	0.51
81:B5:200:C:H5'	81:B5:221:A:C2	2.46	0.51
81:B5:2249:G:H3'	81:B5:2249:G:C8	2.46	0.51
54:BT:2:GLY:HA3	81:B5:2626:A:O5'	2.11	0.51
44:BJ:130:VAL:CG1	81:B5:2683:U:O2'	2.59	0.51
47:BM:109:ARG:NH1	81:B5:3210:A:OP1	2.44	0.51
38:BD:266:ALA:HA	82:B7:1:G:H1'	1.92	0.51
35:BA:225:ILE:O	35:BA:238:ILE:O	2.29	0.51
41:BG:59:GLN:HE22	83:B8:150:G:C1'	2.20	0.51
42:BH:96:HIS:HA	85:CP:164:ARG:NH2	2.26	0.51
47:BM:134:ALA:O	47:BM:136:ALA:N	2.44	0.51
60:BZ:53:VAL:HA	60:BZ:57:HIS:HD2	1.76	0.51
86:CW:46:G:H3'	86:CW:47:U:C5'	2.41	0.51
10:AB:165:ARG:CZ	80:B2:946:U:O3'	2.60	0.50
12:AD:192:PRO:O	12:AD:195:SER:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:120:LYS:O	18:AJ:121:SER:HB2	2.12	0.50
20:AL:10:GLU:HG2	80:B2:327:U:C2'	2.35	0.50
23:AO:136:ARG:HH12	80:B2:1785:U:H5''	1.76	0.50
24:AP:85:ILE:HD11	24:AP:116:LEU:HD23	1.93	0.50
14:AF:69:PHE:HD2	25:AQ:50:GLU:HG2	1.75	0.50
27:AS:88:ARG:NH2	27:AS:112:ASP:OD1	2.45	0.50
80:B2:1061:A:H2'	80:B2:1062:A:H5'	1.92	0.50
80:B2:1202:A:H61	80:B2:1457:C:H5''	1.76	0.50
80:B2:1458:G:N3	80:B2:1458:G:H2'	2.26	0.50
80:B2:76:A:H5'	89:B2:2039:OHX:N1	2.25	0.50
80:B2:501:U:H4'	80:B2:502:U:OP1	2.11	0.50
80:B2:734:A:O2'	80:B2:735:C:H5'	2.12	0.50
80:B2:926:A:OP1	80:B2:1016:C:O2'	2.22	0.50
81:B5:1876:U:C5'	81:B5:1876:U:H6	2.24	0.50
81:B5:3167:A:O2'	81:B5:3168:A:OP1	2.27	0.50
81:B5:508:U:H2'	81:B5:509:U:C6	2.46	0.50
81:B5:621:A:H2'	81:B5:622:A:C8	2.46	0.50
39:BE:2:SER:N	81:B5:1387:G:HO2'	2.09	0.50
42:BH:12:VAL:N	42:BH:51:GLN:O	2.35	0.50
44:BJ:139:THR:HG22	44:BJ:146:GLY:O	2.12	0.50
52:BR:43:LYS:NZ	81:B5:1765:U:H5'	2.26	0.50
53:BS:38:LYS:HD2	53:BS:58:ILE:HD13	1.94	0.50
54:BT:89:LEU:HD12	81:B5:2723:U:C5'	2.39	0.50
57:BW:120:LYS:HA	57:BW:123:ARG:HD2	1.93	0.50
11:AC:88:LYS:HB2	80:B2:1301:U:OP1	2.11	0.50
15:AG:108:VAL:HG11	80:B2:153:G:HO2'	1.75	0.50
15:AG:59:GLN:HA	80:B2:155:U:O2'	2.11	0.50
31:AW:82:LYS:HB2	31:AW:85:ASP:OD2	2.12	0.50
89:AC:301:OHX:N3	89:B2:1906:OHX:N5	2.60	0.50
17:AI:171:SER:HB3	80:B2:208:U:O2'	2.11	0.50
80:B2:606:A:H4'	80:B2:607:G:H5''	1.93	0.50
80:B2:902:G:O5'	80:B2:902:G:H8	1.93	0.50
81:B5:1312:C:H5''	81:B5:1313:G:OP2	2.11	0.50
81:B5:839:C:H1'	81:B5:1724:U:OP1	2.11	0.50
81:B5:3241:G:H2'	81:B5:3245:A:H8	1.76	0.50
81:B5:65:A:H2'	81:B5:110:G:N7	2.25	0.50
81:B5:707:U:H2'	81:B5:708:G:H5''	1.93	0.50
38:BD:155:THR:O	82:B7:36:C:H5'	2.11	0.50
38:BD:277:LEU:HD11	82:B7:62:U:H5''	1.92	0.50
35:BA:243:THR:OG1	81:B5:2244:A:H5''	2.11	0.50
37:BC:283:THR:HG21	37:BC:288:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:13:LYS:HE2	44:BJ:132:ASN:HD21	1.76	0.50
50:BP:29:THR:HA	50:BP:32:THR:HG23	1.93	0.50
51:BQ:170:ARG:HG3	51:BQ:170:ARG:O	2.11	0.50
51:BQ:46:LYS:O	51:BQ:50:LYS:HG3	2.11	0.50
17:AI:136:SER:OG	17:AI:137:LYS:N	2.43	0.50
17:AI:76:THR:CG2	17:AI:108:PRO:HG2	2.41	0.50
25:AQ:106:LYS:O	25:AQ:110:THR:HB	2.10	0.50
26:AR:4:VAL:CG1	80:B2:1315:U:O2	2.53	0.50
80:B2:1686:C:C6	80:B2:1687:U:C5	2.99	0.50
89:B2:1964:OHX:N2	89:B2:2027:OHX:N4	2.59	0.50
80:B2:838:G:C5	89:B2:2071:OHX:N6	2.78	0.50
80:B2:647:G:H1	80:B2:687:G:H1	1.58	0.50
13:AE:3:ARG:HB3	80:B2:93:A:O3'	2.11	0.50
81:B5:1225:A:C8	81:B5:1287:A:H2'	2.46	0.50
81:B5:1267:U:H3'	81:B5:1268:G:C8	2.47	0.50
35:BA:85:GLY:HA3	81:B5:2554:A:C4	2.45	0.50
81:B5:2660:G:O3'	81:B5:2749:G:N2	2.44	0.50
47:BM:125:LYS:NZ	81:B5:2847:A:O4'	96.16	0.50
59:BY:114:ASP:CB	83:B8:85:G:O6	2.59	0.50
44:BJ:72:ARG:NH1	83:B8:95:G:OP2	151.50	0.50
35:BA:22:LEU:HD22	81:B5:1796:G:H5''	1.93	0.50
35:BA:35:ALA:HB2	81:B5:39:A:C5'	86.88	0.50
46:BL:121:SER:O	46:BL:121:SER:OG	2.30	0.50
46:BL:65:TYR:CZ	81:B5:103:G:O4'	2.65	0.50
49:BO:65[A]:ASN:HB3	49:BO:68[A]:ARG:HD2	1.94	0.50
49:BO:127[A]:LEU:HD11	53:BS:168:PRO:HG3	1.93	0.50
54:BT:17:ARG:HH11	54:BT:17:ARG:HG2	1.76	0.50
56:BV:48:ARG:NH2	81:B5:3043:C:OP2	2.44	0.50
59:BY:46:LYS:HB2	84:CN:2199:C:P	136.90	0.50
60:BZ:88:ASP:O	60:BZ:121:ARG:NH2	2.44	0.50
60:BZ:65:ARG:HH11	60:BZ:65:ARG:HG3	1.76	0.50
7:A6:29:GLN:HG3	7:A6:32:LEU:HB2	1.93	0.50
16:AH:28:GLU:O	16:AH:35:LYS:HB2	2.12	0.50
22:AN:3:ARG:HA	80:B2:867:G:OP1	2.11	0.50
28:AT:113:ILE:O	28:AT:124:ILE:HD12	2.11	0.50
11:AC:148:LEU:O	30:AV:4:ASP:HB2	2.12	0.50
80:B2:1168:U:C2'	80:B2:1169:G:H5'	2.41	0.50
6:A5:138:ARG:HH22	80:B2:1236:A:C1'	2.24	0.50
80:B2:1201:G:O2'	89:B2:1991:OHX:N1	2.45	0.50
89:B2:1964:OHX:N5	89:B2:2027:OHX:N3	2.60	0.50
80:B2:415:C:H6	85:CP:288:ARG:N	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:220:A:H5''	80:B2:832:U:H1'	1.93	0.50
52:BR:8:LYS:HZ2	81:B5:1473:G:P	2.32	0.50
81:B5:736:A:H2'	81:B5:737:G:O4'	2.12	0.50
35:BA:204:MET:CG	81:B5:914:A:C2	2.93	0.50
83:B8:156:U:HO2'	83:B8:157:U:P	2.35	0.50
36:BB:150:ARG:NH1	36:BB:150:ARG:HG2	2.26	0.50
36:BB:2:SER:HB3	81:B5:2943:G:H8	1.77	0.50
42:BH:162:GLN:HG3	42:BH:163:GLN:N	2.25	0.50
50:BP:71:ALA:O	50:BP:74:LYS:HB2	2.10	0.50
52:BR:151:ARG:O	52:BR:155:LEU:HG	2.11	0.50
59:BY:46:LYS:N	79:CL:46:LYS:HB3	134.52	0.50
3:A2:26:THR:H	3:A2:44:VAL:HG22	1.76	0.50
10:AB:126:THR:HG22	10:AB:136:ARG:HE	1.76	0.50
13:AE:15:PRO:HG2	13:AE:18:TRP:CE2	2.46	0.50
21:AM:123:VAL:HG11	21:AM:126:TRP:HB3	1.94	0.50
21:AM:98:GLY:C	21:AM:103:LEU:HD21	2.32	0.50
24:AP:110:GLU:HG3	27:AS:119:ILE:HD11	1.94	0.50
27:AS:91:ASP:HB3	27:AS:95:GLY:H	1.77	0.50
28:AT:40:SER:OG	28:AT:96:ALA:HA	2.11	0.50
31:AW:89:TRP:O	31:AW:93:LEU:HD22	2.11	0.50
8:A7:99:LYS:O	89:B2:1917:OHX:N3	2.44	0.50
80:B2:484:C:N4	80:B2:503:G:H22	2.05	0.50
33:AY:113:ASN:HD22	80:B2:54:C:H5''	1.76	0.50
80:B2:647:G:H22	80:B2:687:G:N2	2.09	0.50
80:B2:882:U:H2'	80:B2:883:C:C6	2.46	0.50
81:B5:1655:G:C5'	81:B5:1655:G:C8	2.91	0.50
81:B5:2555:G:H5'	81:B5:2556:C:OP2	2.10	0.50
83:B8:27:U:H6	83:B8:27:U:O5'	1.95	0.50
35:BA:209:HIS:CD2	35:BA:211:HIS:H	2.29	0.50
37:BC:302:ALA:HB2	51:BQ:39:ARG:NH1	2.26	0.50
39:BE:98:VAL:HA	39:BE:101:PHE:CD2	2.45	0.50
41:BG:204:ARG:O	41:BG:207:ASP:HB2	2.11	0.50
48:BN:138:GLN:OE1	81:B5:19:U:H4'	2.11	0.50
1:A0:23:CYS:SG	1:A0:74:CYS:HB3	2.52	0.50
7:A6:154:VAL:HG12	7:A6:171:SER:HB3	1.93	0.50
16:AH:10:SER:HB3	16:AH:43:PHE:O	2.11	0.50
19:AK:77:ARG:HD3	19:AK:84:GLU:HA	1.94	0.50
20:AL:97:TYR:O	20:AL:99:ARG:HG2	2.12	0.50
22:AN:117:LEU:CD2	80:B2:627:C:H4'	2.41	0.50
23:AO:29:HIS:NE2	80:B2:917:U:O2	2.45	0.50
23:AO:52:ARG:NH1	80:B2:905:A:H4'	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:97:ASP:HB2	32:AX:100:ASP:OD2	2.12	0.50
80:B2:1267:G:H21	80:B2:1448:G:C5'	2.23	0.50
89:B2:1974:OHX:N3	89:B2:1988:OHX:N1	2.60	0.50
17:AI:180:ASP:OD2	80:B2:208:U:O2	2.29	0.50
13:AE:22:LYS:HB2	80:B2:773:C:P	2.51	0.50
2:A1:67:THR:HA	80:B2:872:G:O4'	2.11	0.50
81:B5:1717:U:H2'	81:B5:1718:G:C8	2.47	0.50
49:BO:96[B]:LYS:HE2	81:B5:2384:A:N1	2.27	0.50
48:BN:93:LYS:NZ	81:B5:2600:C:OP1	2.44	0.50
47:BM:125:LYS:CD	81:B5:2897:A:H5''	93.34	0.50
49:BO:72[B]:HIS:HD2	81:B5:3008:A:OP1	1.93	0.50
83:B8:145:U:H2'	83:B8:146:U:C6	2.47	0.50
83:B8:26:U:H2'	83:B8:27:U:C6	2.47	0.50
35:BA:194:ASN:ND2	81:B5:822:G:O4'	2.44	0.50
36:BB:169:THR:CG2	36:BB:171:LEU:H	2.18	0.50
37:BC:305:ALA:HA	81:B5:1347:U:C1'	2.41	0.50
38:BD:146:LEU:CD1	81:B5:2746:A:C2	2.95	0.50
39:BE:40:LEU:HD13	39:BE:84:VAL:HG11	1.94	0.50
41:BG:29:SER:O	41:BG:31:PRO:HD3	2.12	0.50
43:BI:30:LYS:CE	81:B5:266:A:H2'	118.70	0.50
46:BL:131:LYS:H	46:BL:131:LYS:HD3	1.77	0.50
47:BM:13:ARG:NH1	47:BM:65:LEU:O	2.44	0.50
50:BP:109:ALA:HA	50:BP:112:LEU:HD22	1.94	0.50
84:CN:2124:C:C3'	84:CN:2125:G:H5''	2.42	0.50
81:B5:3027:A:C2'	85:CP:109:GLN:HB2	2.31	0.50
10:AB:109:LYS:HD2	10:AB:113:MET:HG3	1.93	0.50
10:AB:61:LEU:H	10:AB:61:LEU:HD13	1.77	0.50
11:AC:89:GLN:HB3	80:B2:1146:G:H1'	1.92	0.50
17:AI:146:ARG:HH22	80:B2:186:C:P	2.35	0.50
19:AK:19:GLY:HA2	19:AK:68:LEU:HD23	1.93	0.50
23:AO:25:ASP:HA	23:AO:54:GLU:O	2.12	0.50
25:AQ:25:GLY:H	25:AQ:63:ILE:HA	1.76	0.50
26:AR:82:ASP:O	26:AR:83:GLN:HB2	2.12	0.50
27:AS:126:ARG:NH1	80:B2:1459:C:OP1	2.45	0.50
27:AS:40:ARG:NH1	80:B2:1539:G:H4'	2.20	0.50
31:AW:77:PRO:HD2	31:AW:79:PHE:CE1	2.47	0.50
89:B2:1964:OHX:N2	89:B2:2027:OHX:N6	2.60	0.50
89:B2:1974:OHX:N4	89:B2:1988:OHX:N1	2.59	0.50
89:B2:1915:OHX:N2	89:B2:2071:OHX:N1	2.59	0.50
17:AI:73:SER:O	80:B2:257:A:H4'	2.11	0.50
17:AI:23:LYS:N	80:B2:386:G:OP1	2.38	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:702:G:O6	80:B2:737:A:N6	2.45	0.50
22:AN:124:ARG:NH2	80:B2:966:A:OP2	2.38	0.50
40:BF:97:PRO:HD3	81:B5:1138:U:O3'	2.11	0.50
80:B2:1655:A:C1'	81:B5:2302:G:C1'	2.64	0.50
81:B5:256:G:H2'	81:B5:257:U:C6	2.47	0.50
81:B5:3273:A:O2'	81:B5:3274:A:H5'	2.11	0.50
44:BJ:15:GLU:HB3	44:BJ:130:VAL:HG22	1.93	0.50
49:BO:171[A]:LYS:O	49:BO:175[A]:THR:HG22	2.12	0.50
51:BQ:176:ARG:HG3	81:B5:2763:U:H5'	1.94	0.50
59:BY:46:LYS:N	79:CL:46:LYS:H	135.74	0.50
85:CP:62:TYR:O	85:CP:210:TRP:CE2	2.64	0.50
14:AF:59:VAL:O	14:AF:60:ASP:HB2	2.12	0.50
80:B2:1154:G:N7	89:B2:2016:OHX:N1	2.60	0.50
80:B2:1156:C:OP1	89:B2:2078:OHX:N2	2.45	0.50
11:AC:99:LYS:NZ	80:B2:1300:A:P	2.85	0.50
26:AR:2:GLY:CA	80:B2:1312:A:OP1	2.60	0.50
80:B2:1622:G:H2'	80:B2:1623:C:C6	2.47	0.50
17:AI:72:ILE:HA	80:B2:256:A:C1'	2.42	0.50
81:B5:132:C:C4	81:B5:134:U:H5	2.30	0.50
81:B5:1576:G:H5'	81:B5:1577:G:OP2	2.12	0.50
81:B5:1810:A:H2'	81:B5:1811:G:C8	2.46	0.50
81:B5:94:G:H2'	81:B5:95:A:C8	2.47	0.50
82:B7:3:U:H2'	82:B7:4:U:H6	1.76	0.50
35:BA:15:ILE:CG1	81:B5:822:G:H1'	2.41	0.50
36:BB:361:THR:HG22	36:BB:371:GLN:HB3	1.94	0.50
40:BF:223:PHE:HA	40:BF:227:GLY:HA2	1.93	0.50
27:AS:118:LYS:NZ	44:BJ:108:GLU:OE2	2.45	0.50
44:BJ:104:PHE:O	44:BJ:127:PHE:HB2	2.11	0.50
46:BL:153:ASP:OD1	46:BL:157:ARG:HD3	2.12	0.50
51:BQ:122:ILE:HD11	51:BQ:130:ARG:CZ	2.41	0.50
60:BZ:79:HIS:CE1	81:B5:1637:A:O4'	2.64	0.50
9:AA:120:LEU:HD13	9:AA:142:PRO:HB2	1.94	0.50
9:AA:136:ALA:HB1	9:AA:141:ILE:HB	1.94	0.50
11:AC:139:ILE:CD1	11:AC:191:ALA:HB1	2.42	0.50
11:AC:89:GLN:OE1	11:AC:94:GLN:NE2	2.41	0.50
15:AG:58:LYS:C	15:AG:60:GLY:H	2.15	0.50
17:AI:2:GLY:N	80:B2:400:A:H62	2.09	0.50
18:AJ:95:TYR:O	18:AJ:99:LEU:N	2.45	0.50
23:AO:135:ARG:NH2	80:B2:1007:C:O3'	2.45	0.50
28:AT:31:PRO:HG3	28:AT:103:LYS:HG2	1.94	0.50
24:AP:115:TYR:CD2	80:B2:1557:U:H5'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:8:ASN:HB3	80:B2:1791:A:OP1	2.11	0.50
80:B2:190:C:O2'	80:B2:191:C:OP2	2.23	0.50
89:B2:1922:OHX:N2	89:B2:1977:OHX:N3	2.60	0.50
17:A1:43:ILE:N	80:B2:260:U:C5	2.80	0.50
80:B2:425:A:H5'	80:B2:425:A:C8	2.46	0.50
40:BF:97:PRO:HG3	81:B5:1139:G:OP1	2.11	0.50
81:B5:1295:G:H2'	81:B5:1296:C:C6	2.47	0.50
52:BR:46:LYS:NZ	81:B5:1766:G:H8	2.03	0.50
52:BR:101:VAL:HG22	81:B5:1949:G:OP1	2.11	0.50
81:B5:2927:C:H2'	81:B5:2928:C:C6	2.47	0.50
53:BS:146:LYS:HE2	81:B5:535:G:P	2.51	0.50
35:BA:15:ILE:HD11	81:B5:822:G:N9	2.25	0.50
35:BA:44:ILE:HD12	35:BA:44:ILE:H	1.76	0.50
36:BB:39:LYS:HB2	36:BB:40:PRO:CD	2.41	0.50
37:BC:237:GLN:O	37:BC:246:ARG:HG3	2.12	0.50
37:BC:56:ALA:HA	81:B5:347:G:OP1	2.11	0.50
39:BE:47:PHE:O	39:BE:50:LYS:HB2	2.11	0.50
43:BI:35:ASP:OD2	81:B5:1008:U:O2'	2.29	0.50
50:BP:122:ALA:HB3	50:BP:143:PRO:HB2	1.94	0.50
84:CN:2176:G:C6	84:CN:2177:G:C4	3.00	0.50
3:A2:22:ARG:HE	80:B2:1619:C:H1'	1.77	0.49
6:A5:86:UNK:O	6:A5:87:UNK:CG	2.51	0.49
10:AB:56:SER:OG	10:AB:59:ASP:OD1	2.29	0.49
10:AB:62:LYS:C	10:AB:64:ARG:H	2.12	0.49
13:AE:153:ASN:O	13:AE:174:LYS:NZ	2.40	0.49
15:AG:133:LEU:CD1	80:B2:66:U:O2	2.48	0.49
16:AH:110:GLN:OE1	80:B2:817:A:C1'	2.60	0.49
23:AO:25:ASP:N	23:AO:55:SER:HB3	2.26	0.49
26:AR:10:LYS:HE2	80:B2:1316:G:H4'	1.94	0.49
27:AS:27:LYS:O	27:AS:29:VAL:N	2.44	0.49
28:AT:48:GLN:OE1	80:B2:1531:G:N2	2.42	0.49
31:AW:16:ASN:HB2	80:B2:1037:C:O2'	2.12	0.49
12:AD:203:PRO:HB2	80:B2:1331:A:H2'	1.94	0.49
26:AR:32:LYS:NZ	80:B2:1388:A:OP1	2.44	0.49
80:B2:320:U:H3'	80:B2:321:C:H5''	1.94	0.49
80:B2:393:C:H4'	80:B2:1673:G:O2'	2.12	0.49
80:B2:498:G:H2'	80:B2:499:U:C5	2.47	0.49
81:B5:1097:G:H4'	81:B5:1098:A:O5'	2.12	0.49
81:B5:1875:G:C2'	81:B5:1876:U:H5''	2.40	0.49
81:B5:1131:G:C4	81:B5:2373:A:C2	3.00	0.49
81:B5:3227:A:C2'	81:B5:3228:C:H5'	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:48:GLN:HG3	81:B5:337:G:H4'	1.93	0.49
40:BF:157:ASN:O	40:BF:159:GLN:N	2.39	0.49
49:BO:68[A]:ARG:HH12	81:B5:2988:C:P	2.34	0.49
54:BT:14:MET:CE	54:BT:55:LYS:HB2	2.40	0.49
59:BY:32:SER:HA	59:BY:49:PRO:HA	1.93	0.49
60:BZ:124:ALA:O	60:BZ:126:LYS:N	2.45	0.49
85:CP:199:ALA:HB3	90:CP:401:GCP:N7	2.27	0.49
10:AB:61:LEU:HG	10:AB:64:ARG:HH21	1.77	0.49
12:AD:33:GLY:O	12:AD:53:THR:HG23	2.12	0.49
15:AG:185:GLN:CD	80:B2:284:G:C2	2.86	0.49
17:AI:24:LYS:O	80:B2:400:A:C5'	2.50	0.49
27:AS:22:VAL:CG1	27:AS:31:ALA:HB1	2.43	0.49
28:AT:117:SER:OG	28:AT:118:PRO:O	2.20	0.49
33:AY:9:THR:OG1	80:B2:781:U:P	2.69	0.49
26:AR:2:GLY:CA	80:B2:1312:A:P	3.00	0.49
15:AG:136:LYS:CD	80:B2:66:U:OP1	2.52	0.49
2:A1:51:GLN:HA	80:B2:871:G:H4'	1.93	0.49
23:AO:46:MET:N	80:B2:899:G:H5'	2.27	0.49
60:BZ:75:VAL:HA	81:B5:1636:U:H4'	1.94	0.49
36:BB:247:ARG:HB2	81:B5:1888:U:H5''	1.94	0.49
81:B5:1944:U:H2'	81:B5:1945:A:C8	2.47	0.49
35:BA:219:ILE:CD1	81:B5:2185:G:H5'	2.36	0.49
38:BD:36:LEU:CG	81:B5:2748:A:N3	2.75	0.49
38:BD:36:LEU:HD23	81:B5:2748:A:N3	2.27	0.49
49:BO:27[A]:LEU:O	49:BO:101[A]:ARG:NH1	2.45	0.49
56:BV:49:LEU:HG	81:B5:2338:C:H1'	1.94	0.49
84:CN:2201:U:OP2	84:CN:2201:U:H3'	2.12	0.49
81:B5:2443:A:C5	84:CN:2208:G:H3'	2.47	0.49
1:A0:3:LYS:HE2	80:B2:1030:A:P	2.52	0.49
1:A0:85:ARG:O	1:A0:86:VAL:HB	2.12	0.49
10:AB:131:ASP:CG	10:AB:180:THR:HG21	2.33	0.49
10:AB:70:LEU:HD11	10:AB:79:HIS:HB3	1.94	0.49
12:AD:116:ARG:O	12:AD:120:TYR:HB2	2.12	0.49
23:AO:133:ARG:HH22	80:B2:1785:U:P	2.36	0.49
24:AP:22:LEU:HD21	24:AP:109:PRO:HB3	1.94	0.49
80:B2:1686:C:O2'	80:B2:1687:U:O4'	2.30	0.49
37:BC:305:ALA:HA	81:B5:1347:U:H1'	1.95	0.49
81:B5:1595:U:C2	81:B5:1596:C:C5	2.99	0.49
81:B5:2622:C:H5''	81:B5:2623:G:OP2	2.10	0.49
39:BE:80:ASN:HB2	81:B5:3272:C:O2	2.12	0.49
81:B5:36:C:H2'	81:B5:37:U:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:B7:23:A:H2'	82:B7:24:A:C8	2.47	0.49
59:BY:13:ARG:HD3	83:B8:24:G:OP2	2.13	0.49
35:BA:15:ILE:HG13	81:B5:822:G:H1'	1.91	0.49
36:BB:18:PRO:HG2	36:BB:20:LYS:HD2	1.95	0.49
38:BD:270:LYS:HG2	82:B7:2:G:H4'	1.93	0.49
49:BO:108[A]:ILE:HD11	49:BO:113[A]:ASP:HA	1.94	0.49
49:BO:37[A]:ARG:HG3	49:BO:108[A]:ILE:HG22	1.94	0.49
57:BW:105:ARG:HG2	57:BW:109:LEU:HD11	1.94	0.49
85:CP:63:GLU:HB2	85:CP:210:TRP:CE3	2.48	0.49
1:A0:15:ARG:NH1	80:B2:936:G:C5	2.79	0.49
6:A5:87:UNK:HG2	6:A5:87:UNK:O	2.13	0.49
9:AA:29:VAL:HG13	9:AA:150:ASP:HB3	1.93	0.49
10:AB:125:VAL:HG21	10:AB:173:THR:HG22	1.94	0.49
10:AB:184:LEU:O	10:AB:188:LEU:HG	2.12	0.49
10:AB:86:LEU:HB3	10:AB:98:THR:OG1	2.11	0.49
16:AH:167:GLU:HG3	16:AH:170:GLN:OE1	2.11	0.49
19:AK:49:LEU:HB3	19:AK:55:VAL:CG1	2.42	0.49
23:AO:85:ALA:H	23:AO:119:THR:CG2	2.15	0.49
29:AU:20:ILE:HG13	29:AU:95:ALA:O	2.11	0.49
80:B2:1244:A:HO2'	80:B2:1245:G:P	2.35	0.49
80:B2:1716:C:O2'	80:B2:1717:G:O5'	2.30	0.49
80:B2:194:U:O2'	80:B2:195:G:O4'	2.30	0.49
80:B2:1352:G:O6	89:B2:2026:OHX:N1	2.45	0.49
15:AG:188:ARG:NH1	80:B2:283:U:C4	2.80	0.49
17:AI:2:GLY:CA	80:B2:393:C:OP2	2.60	0.49
80:B2:489:C:H2'	80:B2:490:C:C6	2.48	0.49
80:B2:498:G:C4	80:B2:499:U:N3	2.81	0.49
23:AO:38:THR:CB	80:B2:896:U:O4'	2.61	0.49
81:B5:1226:G:N1	81:B5:1285:G:C2	2.80	0.49
54:BT:4:SER:OG	81:B5:2630:C:C5	2.66	0.49
42:BH:174:LYS:NZ	81:B5:3026:G:OP1	2.41	0.49
47:BM:133:LYS:NZ	81:B5:3227:A:O2'	2.25	0.49
38:BD:266:ALA:O	82:B7:1:G:H1'	2.12	0.49
39:BE:55:LEU:HD12	39:BE:64:LEU:HD13	1.94	0.49
49:BO:62[B]:THR:HG21	49:BO:68[B]:ARG:HG3	1.95	0.49
81:B5:3029:A:H5'	85:CP:81:GLU:OE1	2.10	0.49
1:A0:79:ILE:HA	1:A0:84:VAL:HG21	1.93	0.49
10:AB:124:ASN:N	10:AB:124:ASN:OD1	2.44	0.49
10:AB:185:THR:O	10:AB:189:ILE:HG13	2.12	0.49
11:AC:183:ALA:HB1	11:AC:211:LEU:HD21	1.94	0.49
14:AF:124:LEU:O	14:AF:125:THR:OG1	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1156:C:C2'	80:B2:1157:A:H5'	2.43	0.49
29:AU:89:ARG:NH2	80:B2:1383:G:OP1	2.45	0.49
80:B2:1446:A:OP1	89:B2:2083:OHX:N2	2.46	0.49
4:A3:32:ARG:NH2	80:B2:1596:C:H3'	2.27	0.49
80:B2:487:G:H3'	80:B2:488:G:C5'	2.43	0.49
16:AH:64:VAL:HG11	80:B2:856:A:H1'	1.94	0.49
81:B5:2546:C:H2'	81:B5:2547:A:C8	2.46	0.49
36:BB:259:HIS:HB3	81:B5:2987:A:O2'	2.12	0.49
37:BC:98:ARG:HD2	37:BC:99:MET:O	2.13	0.49
41:BG:138:HIS:CE1	81:B5:119:U:C2	3.01	0.49
43:BI:115:MET:HB2	81:B5:2865:U:P	2.51	0.49
44:BJ:152:HIS:O	44:BJ:153:LYS:HB3	2.11	0.49
54:BT:23:GLY:H	81:B5:2701:U:P	2.27	0.49
56:BV:21:ALA:HA	81:B5:1898:G:O3'	2.12	0.49
11:AC:140:ARG:NH2	11:AC:226:THR:HG23	2.27	0.49
17:AI:136:SER:HG	17:AI:137:LYS:H	1.58	0.49
18:AJ:142:ASN:OD1	80:B2:767:U:H5	1.96	0.49
80:B2:1049:U:H2'	80:B2:1050:G:C8	2.47	0.49
31:AW:19:LYS:NZ	80:B2:1095:U:H4'	2.28	0.49
80:B2:1230:A:HO2'	80:B2:1258:U:H5	1.61	0.49
17:AI:170:SER:HB2	80:B2:210:A:P	2.53	0.49
15:AG:136:LYS:HE2	80:B2:65:A:O5'	2.13	0.49
80:B2:70:C:H2'	80:B2:71:A:O4'	2.12	0.49
80:B2:730:G:H21	80:B2:731:C:H5''	1.78	0.49
46:BL:99:HIS:ND1	81:B5:156:G:C5	2.80	0.49
81:B5:2263:C:C2'	81:B5:2264:U:H5'	2.42	0.49
81:B5:2568:C:O2'	81:B5:2569:A:O5'	2.28	0.49
44:BJ:105:GLY:CA	81:B5:2674:A:O4'	2.52	0.49
81:B5:3259:U:H5'	81:B5:3259:U:C6	2.47	0.49
81:B5:3346:U:H2'	81:B5:3347:A:O4'	2.13	0.49
81:B5:407:A:C2	83:B8:17:A:H1'	2.47	0.49
81:B5:439:C:H4'	81:B5:440:A:OP1	2.12	0.49
83:B8:79:A:H4'	83:B8:79:A:OP1	2.11	0.49
35:BA:15:ILE:HD13	81:B5:904:A:C2	2.48	0.49
37:BC:141:ARG:CZ	37:BC:180:LYS:HD3	2.43	0.49
52:BR:165:LYS:HE3	80:B2:824:G:H21	1.70	0.49
52:BR:177:VAL:HG11	80:B2:854:U:P	2.53	0.49
57:BW:82:ILE:O	57:BW:82:ILE:HG22	2.13	0.49
19:AK:80:LEU:O	19:AK:82:LEU:N	2.41	0.49
23:AO:124:ASP:O	23:AO:125:SER:HB2	2.13	0.49
26:AR:53:TYR:OH	80:B2:1401:A:C5'	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:22:ILE:HD12	29:AU:118:VAL:HA	1.93	0.49
31:AW:36:LYS:O	31:AW:40:VAL:HG23	2.13	0.49
31:AW:56:HIS:O	80:B2:861:U:O2'	2.09	0.49
33:AY:15:ASN:OD1	33:AY:17:LEU:HD12	2.12	0.49
89:B2:1922:OHX:N4	89:B2:1977:OHX:N4	2.61	0.49
17:AI:141:ARG:NH2	80:B2:196:G:C5	2.51	0.49
31:AW:78:ARG:NH1	80:B2:805:U:O2'	2.45	0.49
60:BZ:16:GLY:C	81:B5:1635:G:O6	2.51	0.49
81:B5:1643:A:H4'	81:B5:1822:C:H5'	1.95	0.49
41:BG:51:LYS:CD	81:B5:2523:A:OP2	2.54	0.49
81:B5:629:U:H2'	81:B5:630:A:C8	2.48	0.49
81:B5:662:U:H2'	81:B5:663:C:C6	2.47	0.49
81:B5:873:C:H4'	81:B5:874:U:OP2	2.12	0.49
38:BD:269:SER:CB	82:B7:1:G:N2	2.62	0.49
40:BF:155:LYS:C	40:BF:156:ILE:HG12	2.32	0.49
41:BG:150:LEU:HD22	41:BG:151:VAL:H	1.77	0.49
41:BG:97:TYR:O	41:BG:132:VAL:HG13	2.13	0.49
52:BR:3:ASN:OD1	81:B5:1471:U:H4'	2.13	0.49
56:BV:80:ARG:HD3	56:BV:117:PRO:O	2.13	0.49
79:CL:76:ALA:HB3	79:CL:94:VAL:HG22	1.94	0.49
7:A6:123:ILE:HG22	7:A6:133:VAL:HG22	1.95	0.49
7:A6:130:THR:HG22	7:A6:145:LEU:HD22	1.94	0.49
14:AF:185:ARG:HH12	80:B2:1572:G:C1'	2.25	0.49
16:AH:23:ALA:O	16:AH:27:LEU:HG	2.12	0.49
17:AI:8:ARG:NH1	17:AI:21:PHE:HB3	2.28	0.49
21:AM:132:GLU:O	21:AM:136:ILE:HG12	2.13	0.49
25:AQ:16:ALA:HB2	25:AQ:72:GLY:HA3	1.94	0.49
34:AZ:50:ILE:O	34:AZ:54:VAL:HG23	2.11	0.49
80:B2:1114:G:O6	89:B2:1953:OHX:N5	2.45	0.49
11:AC:208:GLU:OE1	80:B2:1299:G:H4'	2.12	0.49
28:AT:57:ARG:NH1	80:B2:1479:A:OP1	2.33	0.49
14:AF:98:MET:HE3	80:B2:1611:A:H1'	1.94	0.49
80:B2:1686:C:C5	80:B2:1687:U:C5	3.01	0.49
80:B2:1746:A:H2'	80:B2:1747:G:O4'	2.13	0.49
80:B2:1282:U:O4	89:B2:2027:OHX:N2	2.45	0.49
89:B2:1982:OHX:N2	89:B2:2079:OHX:N4	2.60	0.49
80:B2:1446:A:H2'	89:B2:2083:OHX:N2	2.28	0.49
80:B2:358:U:O2'	80:B2:360:A:H5''	2.13	0.49
80:B2:393:C:H2'	80:B2:394:C:C6	2.48	0.49
81:B5:996:A:C2	81:B5:1054:A:C4	3.01	0.49
35:BA:242:ARG:NH1	35:BA:246:LEU:HD12	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:44:LYS:HB3	37:BC:47:ARG:NH1	2.28	0.49
38:BD:40:HIS:HD2	38:BD:42:ALA:N	2.06	0.49
46:BL:154:VAL:HG23	46:BL:157:ARG:HG2	1.94	0.49
52:BR:61:SER:HB3	81:B5:1689:U:C5'	2.42	0.49
57:BW:35:LYS:O	57:BW:39:LEU:HD22	2.13	0.49
7:A6:153:GLN:HG2	7:A6:202:LEU:HD23	1.95	0.49
15:AG:126:ASP:OD1	15:AG:127:THR:HG22	2.13	0.49
17:AI:21:PHE:CE2	80:B2:385:A:H5'	2.48	0.49
17:AI:52:ASN:ND2	80:B2:118:U:OP1	2.45	0.49
17:AI:72:ILE:HB	80:B2:256:A:O2'	2.13	0.49
20:AL:65:SER:CB	80:B2:114:C:H1'	2.42	0.49
21:AM:29:LYS:HE2	21:AM:100:TRP:HE1	1.77	0.49
27:AS:32:LEU:O	27:AS:38:VAL:HG21	2.12	0.49
80:B2:1253:U:H2'	80:B2:1254:U:C6	2.48	0.49
80:B2:1686:C:O2'	80:B2:1687:U:O5'	2.30	0.49
80:B2:838:G:O6	89:B2:2071:OHX:N4	2.46	0.49
80:B2:61:A:C8	80:B2:269:G:O2'	2.65	0.49
15:AG:133:LEU:HG	80:B2:66:U:C6	2.47	0.49
80:B2:713:A:H61	80:B2:725:U:H3	1.58	0.49
80:B2:818:C:N4	80:B2:819:G:C6	2.80	0.49
46:BL:39:ARG:NH1	81:B5:107:A:OP1	2.42	0.49
81:B5:690:A:H4'	81:B5:691:A:OP1	2.13	0.49
81:B5:59:G:H2'	83:B8:33:A:O2'	2.12	0.49
38:BD:11:ALA:HB1	81:B5:1003:A:H5'	1.94	0.49
41:BG:57:ARG:O	41:BG:61:GLN:HG3	2.13	0.49
48:BN:138:GLN:HA	48:BN:143:ARG:HD2	1.95	0.49
52:BR:154:ALA:O	52:BR:158:GLU:HG2	2.13	0.49
58:BX:38:LEU:O	58:BX:39:LYS:HB2	2.11	0.49
79:CL:42:GLU:OE2	84:CN:2145:G:O2'	2.31	0.49
80:B2:51:A:H1'	85:CP:242:GLY:CA	2.02	0.49
85:CP:83:PHE:H	85:CP:84:SER:HA	1.78	0.49
1:A0:36:ILE:HG23	1:A0:73:TYR:HB2	1.95	0.49
8:A7:47:ALA:HB2	81:B5:2678:A:C4	2.48	0.49
10:AB:22:ASP:O	10:AB:24:PHE:N	2.46	0.49
14:AF:129:PRO:O	14:AF:133:VAL:HG23	2.13	0.49
15:AG:1:MET:HE2	15:AG:106:LEU:HB2	1.95	0.49
15:AG:70:PRO:O	15:AG:98:ARG:NH2	2.42	0.49
19:AK:33:GLU:CD	19:AK:33:GLU:H	2.16	0.49
21:AM:82:PRO:O	21:AM:83:GLU:HB2	2.13	0.49
23:AO:16:VAL:HG22	23:AO:33:LEU:HA	1.95	0.49
25:AQ:112:TYR:OH	25:AQ:114:ARG:NH2	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:4:LEU:CD1	80:B2:1514:U:C6	2.96	0.49
80:B2:1715:G:O6	80:B2:1716:C:C4	2.56	0.49
81:B5:1239:C:C4	81:B5:1250:G:C6	3.00	0.49
81:B5:2228:A:H5''	81:B5:2228:A:H8	1.78	0.49
52:BR:61:SER:CB	81:B5:3069:G:HO2'	2.24	0.49
81:B5:735:A:O2'	81:B5:736:A:OP1	2.30	0.49
35:BA:15:ILE:CD1	81:B5:822:G:N9	2.76	0.49
81:B5:959:C:OP2	81:B5:960:U:H5	1.96	0.49
83:B8:66:A:H2'	83:B8:67:U:H6	1.78	0.49
35:BA:202:VAL:HG23	35:BA:211:HIS:HB3	1.95	0.49
35:BA:71:LEU:HD22	81:B5:1651:U:H5''	1.95	0.49
36:BB:92:TYR:HB2	36:BB:157:VAL:HG22	1.95	0.49
40:BF:160:ARG:HD3	81:B5:1363:A:OP1	2.13	0.49
46:BL:16:LYS:O	46:BL:17:HIS:HB2	2.13	0.49
53:BS:155:ARG:NH1	53:BS:172:TYR:N	2.61	0.49
57:BW:127:LYS:O	57:BW:131:ALA:N	2.45	0.49
59:BY:46:LYS:CB	84:CN:2199:C:O5'	136.85	0.49
6:A5:120:GLU:HG3	6:A5:128:ALA:HB1	1.94	0.48
7:A6:112:SER:CB	7:A6:153:GLN:HA	2.43	0.48
8:A7:44:PRO:HA	81:B5:2678:A:N3	2.29	0.48
21:AM:33:ARG:O	21:AM:37:VAL:HG23	2.13	0.48
23:AO:120:PRO:CA	80:B2:887:A:C5'	2.89	0.48
26:AR:13:SER:OG	26:AR:54:THR:HG22	2.13	0.48
27:AS:24:GLY:O	27:AS:26:ILE:N	2.45	0.48
29:AU:106:ILE:HD12	29:AU:108:ILE:HD11	1.93	0.48
34:AZ:50:ILE:HG22	34:AZ:51:LEU:HD12	1.96	0.48
80:B2:1369:U:O4	89:B2:1974:OHX:N5	2.45	0.48
29:AU:74:GLU:HG2	80:B2:1429:G:C1'	2.43	0.48
80:B2:190:C:H1'	80:B2:191:C:H5'	1.93	0.48
80:B2:976:G:O6	89:B2:1928:OHX:N3	2.45	0.48
80:B2:233:C:HO2'	80:B2:234:G:P	2.36	0.48
33:AY:105:ARG:CD	80:B2:444:C:OP2	2.61	0.48
80:B2:929:A:N6	80:B2:930:A:C6	2.80	0.48
81:B5:1036:A:H2'	81:B5:1037:C:O4'	2.13	0.48
60:BZ:79:HIS:CE1	81:B5:1636:U:C2'	2.95	0.48
35:BA:227:ARG:NH2	81:B5:2161:G:O3'	2.38	0.48
81:B5:2403:G:N2	81:B5:2404:A:N7	2.55	0.48
44:BJ:55:ARG:NH1	81:B5:353:G:O6	102.85	0.48
35:BA:13:GLY:HA2	81:B5:943:U:O5'	69.55	0.48
81:B5:998:A:O2'	81:B5:999:G:H5'	2.12	0.48
38:BD:265:TYR:CD2	82:B7:120:C:N4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:100:ASN:O	43:BI:101:LYS:HB3	2.12	0.48
49:BO:61[A]:ALA:HA	49:BO:70[A]:PRO:HD2	1.94	0.48
40:BF:80:GLN:HG3	54:BT:136:ARG:HB3	1.95	0.48
57:BW:105:ARG:HG2	57:BW:105:ARG:HH11	1.78	0.48
60:BZ:115:LYS:CD	81:B5:1629:U:C1'	2.90	0.48
60:BZ:95:VAL:HG11	60:BZ:110:ALA:HA	1.93	0.48
79:CL:10:LEU:HD21	79:CL:34:THR:HG21	1.95	0.48
84:CN:2163:C:H5''	84:CN:2164:C:OP2	2.13	0.48
1:A0:84:VAL:HG13	1:A0:85:ARG:H	1.79	0.48
6:A5:149:LYS:HD3	80:B2:1235:C:O2'	2.12	0.48
10:AB:116:LYS:CE	80:B2:933:A:P	2.97	0.48
15:AG:67:VAL:HG23	15:AG:68:LEU:O	2.13	0.48
16:AH:119:THR:HG23	80:B2:639:U:P	2.53	0.48
21:AM:46:ARG:HD2	80:B2:1255:G:O6	2.13	0.48
22:AN:109:LYS:HE2	80:B2:975:C:H5''	1.94	0.48
24:AP:15:HIS:O	24:AP:21:ASP:HA	2.12	0.48
9:AA:185:ARG:N	30:AV:45:ALA:H	2.09	0.48
9:AA:108:THR:OG1	80:B2:1294:G:O2'	2.29	0.48
29:AU:89:ARG:NH1	80:B2:1383:G:P	2.69	0.48
80:B2:383:G:N7	89:B2:2012:OHX:N4	2.61	0.48
35:BA:234:LYS:HB2	81:B5:2163:C:OP1	2.13	0.48
35:BA:209:HIS:CE1	81:B5:2184:U:OP1	2.62	0.48
81:B5:653:A:H5'	81:B5:2361:A:H5''	1.95	0.48
41:BG:38:GLN:CA	81:B5:2557:A:H2	2.26	0.48
51:BQ:183:GLY:H	81:B5:2763:U:P	2.35	0.48
35:BA:200:ARG:NE	81:B5:2147:A:P	2.86	0.48
36:BB:37:ARG:HA	36:BB:186:GLY:HA2	1.94	0.48
36:BB:296:THR:HG21	36:BB:357:LYS:HA	1.95	0.48
36:BB:37:ARG:CG	36:BB:187:SER:H	2.19	0.48
38:BD:266:ALA:HB2	82:B7:1:G:N7	2.28	0.48
39:BE:89:THR:HG21	47:BM:115:PHE:HB2	1.94	0.48
41:BG:244:ALA:HA	41:BG:247:ASP:HB2	1.95	0.48
42:BH:19:SER:HB3	47:BM:6:ILE:H	1.78	0.48
46:BL:87:ALA:O	46:BL:91:ARG:HG3	2.14	0.48
50:BP:94:LEU:HD12	50:BP:94:LEU:HA	1.71	0.48
56:BV:13:ILE:CD1	56:BV:53:SER:HB2	2.42	0.48
59:BY:39:LEU:HD21	59:BY:107:THR:O	2.13	0.48
84:CN:2144:G:H2'	84:CN:2145:G:O4'	2.13	0.48
2:A1:54:VAL:O	2:A1:63:LEU:HB2	2.13	0.48
4:A3:40:ARG:HG2	4:A3:41:GLN:OE1	2.14	0.48
7:A6:273:ASP:CG	7:A6:275:ARG:HH22	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:110:TYR:CD1	9:AA:110:TYR:N	2.80	0.48
9:AA:69:ASN:HB3	9:AA:71:GLU:CD	2.34	0.48
12:AD:20:GLU:OE2	12:AD:76:ARG:NH2	2.44	0.48
14:AF:24:VAL:HG22	14:AF:25:LEU:H	1.78	0.48
22:AN:27:LYS:CE	22:AN:27:LYS:H	2.26	0.48
23:AO:25:ASP:OD2	80:B2:900:A:C5'	2.55	0.48
24:AP:70:ASN:ND2	44:BJ:172:LEU:HD23	2.28	0.48
27:AS:70:VAL:HA	27:AS:73:MET:HE2	1.94	0.48
4:A3:36:LEU:HD21	29:AU:65:ILE:HD11	1.95	0.48
15:AG:188:ARG:NH1	80:B2:284:G:O6	2.43	0.48
80:B2:497:G:O2'	80:B2:498:G:O4'	2.29	0.48
52:BR:165:LYS:HZ2	80:B2:824:G:C1'	2.25	0.48
80:B2:978:A:OP1	89:B2:2060:OHX:N5	2.45	0.48
80:B2:992:A:H2	80:B2:1012:U:N3	2.06	0.48
81:B5:1750:A:H4'	81:B5:1751:G:H5'	1.95	0.48
81:B5:3013:U:H2'	81:B5:3014:U:C6	2.48	0.48
38:BD:152:ARG:HH11	38:BD:152:ARG:CG	2.25	0.48
38:BD:15:ARG:NE	81:B5:1003:A:O4'	2.46	0.48
43:BI:9:TYR:CG	43:BI:97:LEU:HD13	2.48	0.48
54:BT:116:ARG:NH2	81:B5:1097:G:N7	2.61	0.48
60:BZ:54:THR:HG22	60:BZ:57:HIS:CE1	2.48	0.48
84:CN:2134:U:H5''	84:CN:2135:A:OP2	2.13	0.48
1:A0:38:ARG:HH21	1:A0:83:ILE:HG13	1.78	0.48
8:A7:34:LYS:CE	81:B5:2692:A:O3'	2.59	0.48
14:AF:120:ILE:O	14:AF:124:LEU:HD12	2.13	0.48
23:AO:122:PRO:HB3	80:B2:887:A:O2'	2.13	0.48
25:AQ:113:ASP:CG	25:AQ:114:ARG:N	2.66	0.48
30:AV:40:ASP:HB3	30:AV:46:ILE:HD11	1.94	0.48
33:AY:11:LYS:HG3	80:B2:777:C:N4	2.28	0.48
80:B2:1482:C:OP2	80:B2:1521:G:N2	2.46	0.48
80:B2:1639:C:O2	80:B2:1763:A:N1	2.46	0.48
89:B2:1969:OHX:N5	89:B2:2013:OHX:N2	2.61	0.48
80:B2:738:G:O6	89:B2:1975:OHX:N4	2.46	0.48
15:AG:188:ARG:HD3	80:B2:283:U:H5''	1.95	0.48
80:B2:350:U:O2	80:B2:352:A:C6	2.66	0.48
80:B2:495:C:H3'	80:B2:496:G:C4'	2.43	0.48
52:BR:134:HIS:CB	81:B5:1947:G:H5''	2.44	0.48
81:B5:3274:A:H3'	81:B5:3275:U:H5''	1.94	0.48
38:BD:272:TYR:CE2	82:B7:22:A:C8	3.02	0.48
36:BB:255:TRP:CD1	81:B5:2395:G:C5'	2.92	0.48
36:BB:339:ARG:HG2	36:BB:340:LYS:O	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:270:LYS:HG3	38:BD:273:ARG:HB2	1.96	0.48
40:BF:22:THR:HA	40:BF:25:GLN:HG2	1.94	0.48
44:BJ:10:ARG:HA	44:BJ:134:PRO:HD2	1.94	0.48
48:BN:109:ARG:HD2	83:B8:141:C:H5'	1.95	0.48
48:BN:76:PRO:O	81:B5:2166:A:P	2.71	0.48
52:BR:173:ARG:O	80:B2:853:G:C5'	2.61	0.48
54:BT:17:ARG:HD2	54:BT:47:SER:HB3	1.96	0.48
55:BU:92:TRP:O	55:BU:108:TYR:N	2.44	0.48
59:BY:21:THR:HG23	79:CL:21:THR:CB	119.66	0.48
59:BY:21:THR:CA	79:CL:24:GLU:HB3	125.23	0.48
79:CL:218:MET:H	84:CN:2196:C:H1'	1.78	0.48
85:CP:19:THR:HA	90:CP:401:GCP:O3A	2.10	0.48
10:AB:61:LEU:O	10:AB:63:GLY:N	2.47	0.48
9:AA:119:ARG:HD2	11:AC:241:ASP:OD1	2.12	0.48
15:AG:141:ILE:HG21	15:AG:153:VAL:HG13	1.94	0.48
16:AH:158:ASP:O	16:AH:160:GLN:N	2.46	0.48
17:AI:26:LYS:O	17:AI:26:LYS:HG3	2.12	0.48
19:AK:1:MET:CG	80:B2:1217:A:H5"	2.44	0.48
24:AP:19:GLY:N	27:AS:93:THR:O	2.47	0.48
9:AA:52:LYS:NZ	30:AV:82:VAL:O	2.35	0.48
34:AZ:46:LYS:HE2	34:AZ:70:LYS:HD2	1.94	0.48
19:AK:2:LEU:HD13	80:B2:1258:U:H4'	1.94	0.48
29:AU:57:ARG:HG3	80:B2:1382:A:H4'	1.96	0.48
80:B2:1780:G:N1	81:B5:2263:C:O4'	2.46	0.48
80:B2:1522:U:OP1	89:B2:1937:OHX:N3	2.46	0.48
80:B2:209:U:H2'	80:B2:210:A:C8	2.49	0.48
80:B2:526:A:H2'	80:B2:527:A:O4'	2.14	0.48
80:B2:680:U:H2'	80:B2:681:U:C6	2.49	0.48
80:B2:881:A:H2'	80:B2:882:U:O4'	2.13	0.48
81:B5:1018:G:H2'	81:B5:1019:G:O4'	2.13	0.48
81:B5:1085:A:H5"	81:B5:1085:A:C8	2.49	0.48
58:BX:33:ARG:HE	81:B5:1580:A:N6	2.09	0.48
36:BB:228:GLY:H	81:B5:1887:A:H4'	1.78	0.48
36:BB:255:TRP:NE1	81:B5:2395:G:H5"	2.26	0.48
81:B5:2960:C:H2'	81:B5:2961:G:C8	2.47	0.48
81:B5:3241:G:H2'	81:B5:3245:A:C8	2.49	0.48
46:BL:63:VAL:HG13	81:B5:72:C:H5"	1.94	0.48
35:BA:183:GLY:HA2	81:B5:896:A:H5'	1.94	0.48
35:BA:191:LEU:HG	81:B5:1795:U:OP1	2.13	0.48
46:BL:100:ARG:O	46:BL:101:ARG:HB3	2.14	0.48
56:BV:67:PRO:HG2	80:B2:1660:A:H5"	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:46:LYS:HE2	84:CN:2200:C:P	136.28	0.48
60:BZ:23:VAL:HG12	60:BZ:45:GLY:HA3	1.96	0.48
5:A4:53:LYS:HG3	5:A4:54:ARG:H	1.79	0.48
7:A6:221:MET:HG3	7:A6:233:THR:HG23	1.94	0.48
10:AB:146:GLN:H	10:AB:149:GLN:NE2	2.11	0.48
14:AF:109:LYS:NZ	80:B2:1474:G:P	2.87	0.48
14:AF:145:ASP:CG	14:AF:146:THR:H	2.17	0.48
17:AI:197:THR:HA	17:AI:200:LYS:HB2	1.96	0.48
17:AI:8:ARG:HD2	17:AI:21:PHE:HD1	1.79	0.48
17:AI:96:LEU:HD13	17:AI:179:CYS:SG	2.53	0.48
18:AJ:173:ALA:CA	80:B2:511:A:H5'	2.44	0.48
18:AJ:91:LYS:O	18:AJ:92:LYS:HG2	2.13	0.48
19:AK:55:VAL:HA	19:AK:69:THR:HG23	1.94	0.48
23:AO:18:ARG:NH1	80:B2:919:A:O5'	2.44	0.48
25:AQ:60:PHE:HA	25:AQ:63:ILE:HD11	1.96	0.48
28:AT:53:TRP:HA	28:AT:56:LYS:HB2	1.95	0.48
33:AY:33:ALA:HB2	80:B2:533:U:C5'	2.43	0.48
80:B2:11:A:C2'	80:B2:12:U:H5'	2.44	0.48
28:AT:79:LEU:HD11	80:B2:1481:C:C4	2.49	0.48
80:B2:545:A:H4'	80:B2:546:U:OP1	2.14	0.48
80:B2:694:U:H2'	80:B2:695:U:H5	1.78	0.48
33:AY:9:THR:OG1	80:B2:781:U:OP2	2.31	0.48
81:B5:1081:U:O2'	81:B5:1082:U:O5'	2.28	0.48
81:B5:1573:G:C5	81:B5:1574:C:H1'	2.48	0.48
35:BA:94:ALA:CA	81:B5:2551:U:O4	2.62	0.48
81:B5:3121:U:H1'	81:B5:3122:A:H5''	1.96	0.48
81:B5:3245:A:H2	81:B5:3246:G:N1	2.12	0.48
50:BP:62:ARG:NH1	81:B5:412:G:OP1	2.47	0.48
83:B8:82:U:H1'	83:B8:87:G:H5'	1.96	0.48
52:BR:167:ARG:HB3	52:BR:167:ARG:NH1	2.28	0.48
12:AD:46:THR:HB	12:AD:84:ILE:HG12	1.96	0.48
17:AI:138:ASN:CB	80:B2:197:A:H61	2.27	0.48
22:AN:73:ARG:HD3	80:B2:859:A:C5	2.46	0.48
26:AR:7:LYS:H	80:B2:1316:G:P	2.37	0.48
28:AT:126:GLU:CD	28:AT:126:GLU:H	2.17	0.48
34:AZ:92:ILE:HG12	34:AZ:100:ILE:CG2	2.44	0.48
80:B2:1203:A:OP2	89:B2:1991:OHX:N5	2.47	0.48
80:B2:1351:G:C2	80:B2:1375:A:C2	3.02	0.48
80:B2:1553:G:N2	80:B2:1555:A:H3'	2.28	0.48
24:AP:44:ARG:CG	80:B2:1556:A:OP1	2.62	0.48
80:B2:1196:A:H1'	80:B2:1602:C:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1729:C:H5''	80:B2:1730:A:OP2	2.12	0.48
17:AI:136:SER:OG	80:B2:188:A:OP2	2.28	0.48
80:B2:1670:G:N7	89:B2:2004:OHX:N5	2.62	0.48
17:AI:33:PRO:CA	80:B2:331:A:H5'	2.42	0.48
80:B2:507:U:H3'	80:B2:507:U:O2	2.13	0.48
80:B2:700:C:H42	80:B2:738:G:H1	1.62	0.48
80:B2:812:A:OP1	80:B2:858:G:N2	2.47	0.48
81:B5:1307:G:H1'	81:B5:1308:A:N7	2.28	0.48
81:B5:135:C:H4'	81:B5:136:G:OP2	2.12	0.48
59:BY:3:LYS:HA	81:B5:228:U:O3'	2.13	0.48
35:BA:95:SER:OG	81:B5:2551:U:C4	2.43	0.48
51:BQ:176:ARG:HG3	81:B5:2763:U:C5'	2.43	0.48
81:B5:677:A:H4'	81:B5:678:G:O5'	2.14	0.48
51:BQ:43:PRO:HD2	81:B5:729:C:OP1	2.14	0.48
46:BL:66:ASN:ND2	81:B5:72:C:O2'	2.40	0.48
38:BD:148:ILE:HD12	38:BD:148:ILE:HA	1.56	0.48
38:BD:148:ILE:HG13	38:BD:159:VAL:HG11	1.96	0.48
38:BD:265:TYR:O	38:BD:269:SER:HB3	2.13	0.48
38:BD:283:ALA:O	38:BD:286:VAL:HB	2.14	0.48
49:BO:34[B]:VAL:HB	49:BO:103[B]:LYS:HB2	1.96	0.48
49:BO:65[B]:ASN:O	49:BO:68[B]:ARG:HG2	2.14	0.48
51:BQ:96:PHE:CG	51:BQ:97:PRO:HD2	2.49	0.48
52:BR:169:ALA:CB	80:B2:850:A:N1	2.75	0.48
52:BR:169:ALA:O	80:B2:851:U:H2'	1.77	0.48
10:AB:181:LEU:O	10:AB:182:ALA:C	2.52	0.48
14:AF:172:ILE:O	14:AF:176:THR:HG23	2.14	0.48
14:AF:133:VAL:HG22	14:AF:198:LEU:HD13	1.96	0.48
15:AG:172:ALA:C	80:B2:79:C:C5'	2.82	0.48
16:AH:71:HIS:CG	16:AH:131:PHE:CZ	3.02	0.48
17:AI:87:ASN:O	17:AI:90:LEU:HB2	2.14	0.48
18:AJ:122:VAL:O	18:AJ:125:ALA:HB3	2.14	0.48
18:AJ:93:LEU:HA	18:AJ:96:VAL:CG1	2.38	0.48
19:AK:12:HIS:CD2	19:AK:79:TYR:CD2	3.02	0.48
24:AP:125:PRO:O	24:AP:126:VAL:HB	2.14	0.48
31:AW:32:LYS:HG3	80:B2:637:C:OP1	2.14	0.48
89:B2:1918:OHX:N4	89:B2:2064:OHX:N4	2.62	0.48
80:B2:711:U:C1'	80:B2:712:G:H5'	2.44	0.48
81:B5:2206:G:O2'	81:B5:2207:A:H5'	2.13	0.48
49:BO:171[B]:LYS:NZ	81:B5:3180:A:OP1	2.46	0.48
41:BG:194:THR:CG2	81:B5:7:C:O3'	2.61	0.48
38:BD:110:LEU:HA	38:BD:113:LEU:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:155:THR:O	82:B7:36:C:C5'	2.62	0.48
43:BI:38:LYS:HG3	43:BI:41:ALA:HB2	1.95	0.48
44:BJ:142:LYS:HD3	44:BJ:142:LYS:HA	1.67	0.48
57:BW:126:GLU:OE2	57:BW:129:LYS:NZ	2.47	0.48
81:B5:2443:A:O5'	84:CN:2122:G:N1	2.47	0.48
84:CN:2158:C:H5'	84:CN:2159:C:OP2	2.13	0.48
1:A0:7:SER:HB2	1:A0:11:ASN:H	1.78	0.48
7:A6:40:LYS:HG2	7:A6:66:HIS:O	2.14	0.48
10:AB:179:SER:HB3	10:AB:183:GLN:CD	2.34	0.48
15:AG:63:MET:HG2	15:AG:99:GLY:O	2.14	0.48
25:AQ:47:LYS:HZ2	25:AQ:114:ARG:HG2	1.79	0.48
26:AR:28:PHE:CD2	80:B2:1389:C:H5	2.30	0.48
34:AZ:72:GLY:O	34:AZ:74:SER:N	2.47	0.48
80:B2:130:C:O2'	80:B2:131:C:OP1	2.29	0.48
29:AU:35:GLU:OE2	80:B2:1383:G:C4'	2.62	0.48
24:AP:115:TYR:HD2	80:B2:1557:U:O4'	1.97	0.48
17:AI:141:ARG:NH2	80:B2:190:C:H42	2.12	0.48
89:B2:1969:OHX:N1	89:B2:2013:OHX:N4	2.62	0.48
80:B2:440:U:C5	85:CP:277:ALA:CB	2.92	0.48
80:B2:740:A:C2'	80:B2:741:C:H5"	2.43	0.48
81:B5:1280:C:C5	81:B5:1281:G:C2	3.02	0.48
35:BA:241:ARG:N	81:B5:2155:G:OP1	2.22	0.48
41:BG:38:GLN:HB3	81:B5:2557:A:H2	1.79	0.48
8:A7:62:ARG:HD2	81:B5:2675:C:O2'	2.12	0.48
54:BT:16:GLN:HA	81:B5:2699:G:O3'	2.14	0.48
38:BD:36:LEU:CD2	81:B5:2748:A:N3	2.77	0.48
41:BG:181:LYS:HG3	83:B8:154:C:H5"	1.94	0.48
43:BI:174:THR:O	43:BI:175:ASN:HB2	2.13	0.48
47:BM:54:PRO:O	47:BM:56:GLN:NE2	2.37	0.48
48:BN:4:TYR:HH	81:B5:148:G:P	2.34	0.48
52:BR:172:ARG:CZ	80:B2:851:U:H1'	2.43	0.48
55:BU:23:THR:HA	55:BU:28:PHE:HB3	1.95	0.48
58:BX:64:GLU:OE2	58:BX:87:SER:HA	2.14	0.48
2:A1:61:THR:HG23	2:A1:62:ILE:H	1.79	0.48
10:AB:62:LYS:HD2	10:AB:91:VAL:HB	1.94	0.48
11:AC:139:ILE:HD11	11:AC:191:ALA:HB1	1.95	0.48
12:AD:181:VAL:HG22	80:B2:1277:G:O4'	2.14	0.48
16:AH:30:SER:O	16:AH:32:PRO:HD2	2.14	0.48
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:NH1	2.10	0.48
32:AX:127:VAL:O	32:AX:130:VAL:HG22	2.14	0.48
80:B2:131:C:HO2'	80:B2:132:U:P	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:43:SER:OG	80:B2:1332:C:OP1	2.31	0.48
15:AG:53:SER:CA	80:B2:163:G:H4'	2.41	0.48
15:AG:137:ARG:HH12	80:B2:169:A:P	2.36	0.48
80:B2:1746:A:H4'	81:B5:2290:C:HO2'	1.79	0.48
1:A0:75:VAL:HG11	80:B2:1793:G:C2	2.49	0.48
80:B2:269:G:C6	80:B2:287:G:C6	3.02	0.48
20:AL:28:SER:OG	80:B2:839:U:OP1	2.27	0.48
2:A1:67:THR:C	80:B2:871:G:HO2'	2.15	0.48
80:B2:894:U:H2'	80:B2:895:G:C8	2.49	0.48
46:BL:99:HIS:CD2	81:B5:156:G:C5	3.02	0.48
35:BA:203:ALA:HB1	81:B5:2146:C:C5'	2.44	0.48
81:B5:2702:A:H5'	81:B5:2704:A:O4'	2.13	0.48
40:BF:60:ARG:HD2	81:B5:3275:U:C4	69.73	0.48
36:BB:283:TYR:HB3	36:BB:323:MET:HE2	1.96	0.48
37:BC:288:ARG:O	37:BC:291:ASN:N	2.31	0.48
41:BG:60:ARG:CZ	81:B5:1593:A:H1'	52.10	0.48
42:BH:103:ILE:HD11	42:BH:134:ILE:CG2	2.44	0.48
43:BI:3:ARG:CZ	43:BI:63:GLU:HG3	2.44	0.48
49:BO:156[B]:LEU:HB3	81:B5:3243:A:N7	2.29	0.48
59:BY:29:VAL:HG21	79:CL:216:THR:HG23	138.95	0.48
85:CP:20:LYS:HG3	90:CP:401:GCP:H8	1.09	0.48
6:A5:144:CYS:O	6:A5:146:SER:N	2.47	0.47
14:AF:133:VAL:O	14:AF:137:ILE:HG12	2.13	0.47
18:AJ:173:ALA:HA	80:B2:511:A:OP2	2.14	0.47
23:AO:41:ARG:NH2	80:B2:915:A:C6	2.80	0.47
27:AS:139:LYS:HE2	80:B2:1459:C:H42	1.79	0.47
27:AS:11:PHE:CD1	27:AS:59:GLY:HA2	2.49	0.47
27:AS:80:LYS:HA	27:AS:80:LYS:HD2	1.54	0.47
28:AT:52:GLY:HA2	28:AT:55:TYR:CD2	2.48	0.47
33:AY:102:LYS:HD2	33:AY:102:LYS:H	1.79	0.47
33:AY:59:GLY:O	33:AY:60:PHE:HB2	2.14	0.47
19:AK:1:MET:HG3	80:B2:1217:A:O5'	2.14	0.47
80:B2:1783:C:H2'	80:B2:1784:C:C6	2.49	0.47
80:B2:992:A:O2'	80:B2:1785:U:O2	2.31	0.47
80:B2:192:U:H2'	80:B2:192:U:O2	2.13	0.47
18:AJ:172:VAL:CG1	80:B2:512:A:OP2	2.39	0.47
80:B2:542:A:H8	80:B2:542:A:HO2'	1.62	0.47
23:AO:122:PRO:HA	80:B2:887:A:O4'	2.14	0.47
23:AO:25:ASP:HB3	80:B2:901:G:P	2.53	0.47
2:A1:28:PRO:CB	80:B2:959:U:H5'	2.27	0.47
81:B5:1470:U:H2'	81:B5:1471:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:1879:A:N3	81:B5:1879:A:H2'	2.29	0.47
81:B5:217:U:H2'	81:B5:218:G:OP1	2.13	0.47
81:B5:2263:C:H2'	81:B5:2264:U:H5'	1.96	0.47
41:BG:244:ALA:HB1	81:B5:2528:G:H4'	1.96	0.47
43:BI:30:LYS:HD2	81:B5:266:A:C4	122.50	0.47
54:BT:16:GLN:HG3	81:B5:2699:G:H5''	1.95	0.47
81:B5:2793:G:N2	86:CW:76:A:N3	2.19	0.47
39:BE:54:TYR:HA	39:BE:65:ILE:CD1	2.44	0.47
44:BJ:100:GLY:O	44:BJ:159:THR:HG21	2.13	0.47
50:BP:69:ARG:NH1	81:B5:3308:C:N3	2.62	0.47
55:BU:100:THR:O	55:BU:101:ASN:HB2	2.14	0.47
59:BY:21:THR:HG23	79:CL:21:THR:CG2	118.67	0.47
60:BZ:121:ARG:CG	60:BZ:121:ARG:HH11	2.27	0.47
1:A0:15:ARG:HD3	80:B2:936:G:O6	2.14	0.47
10:AB:30:PHE:CE1	10:AB:96:LEU:HB3	2.50	0.47
12:AD:159:HIS:CE1	80:B2:1327:C:HO2'	2.32	0.47
12:AD:203:PRO:CB	80:B2:1331:A:H2'	2.45	0.47
17:AI:66:SER:HB3	17:AI:73:SER:OG	2.14	0.47
18:AJ:175:ARG:HD3	18:AJ:179:ARG:HH11	1.78	0.47
27:AS:109:LEU:HG	27:AS:113:LEU:HD11	1.96	0.47
28:AT:99:SER:HB2	80:B2:1504:G:P	2.54	0.47
9:AA:184:LEU:HB3	30:AV:45:ALA:HB2	1.96	0.47
30:AV:62:ARG:HH22	80:B2:1039:A:H5''	1.67	0.47
80:B2:1250:U:HO2'	80:B2:1251:U:P	2.37	0.47
80:B2:1657:U:C4	89:B2:1968:OHX:N4	2.82	0.47
80:B2:190:C:O2'	80:B2:191:C:H5'	2.14	0.47
80:B2:190:C:N4	80:B2:196:G:C6	2.82	0.47
80:B2:196:G:O2'	80:B2:197:A:C8	2.65	0.47
89:B2:1974:OHX:N6	89:B2:1988:OHX:N2	2.62	0.47
89:B2:1974:OHX:N6	89:B2:1988:OHX:N5	2.61	0.47
89:B2:2016:OHX:N5	89:B2:2035:OHX:N3	2.62	0.47
80:B2:413:U:O2	85:CP:289:LEU:CD2	2.62	0.47
52:BR:172:ARG:H	80:B2:851:U:C2'	2.26	0.47
81:B5:1724:U:O2	81:B5:1725:C:C2	2.66	0.47
81:B5:191:U:H2'	81:B5:192:C:C6	2.49	0.47
81:B5:2641:U:H5''	81:B5:2642:A:OP1	2.13	0.47
35:BA:204:MET:HE3	35:BA:208:ASP:CB	2.43	0.47
35:BA:237:LEU:CD2	81:B5:2153:U:O2	2.62	0.47
38:BD:148:ILE:HG23	38:BD:151:GLN:HB3	1.96	0.47
48:BN:160:GLU:OE1	48:BN:160:GLU:N	2.41	0.47
51:BQ:100:THR:CG2	51:BQ:120:GLU:HB3	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:BQ:62:VAL:O	51:BQ:87:VAL:HA	2.14	0.47
86:CW:53:G:C5	86:CW:54:U:C5	3.02	0.47
7:A6:133:VAL:HB	7:A6:142:ALA:HB3	1.96	0.47
8:A7:68:ARG:NH1	27:AS:145:ARG:HD3	2.29	0.47
10:AB:63:GLY:HA2	10:AB:88:VAL:O	2.13	0.47
11:AC:214:ALA:O	11:AC:218:ILE:HG13	2.14	0.47
12:AD:183:GLY:HA3	80:B2:1277:G:O3'	2.15	0.47
12:AD:84:ILE:HD13	12:AD:85:VAL:H	1.79	0.47
25:AQ:112:TYR:CZ	25:AQ:114:ARG:NH2	2.82	0.47
31:AW:19:LYS:HZ2	80:B2:1095:U:H4'	1.80	0.47
33:AY:51:GLU:OE1	33:AY:53:ASP:N	2.34	0.47
33:AY:84:LYS:HD2	33:AY:85:PHE:CE1	2.50	0.47
34:AZ:94:LYS:CE	80:B2:1530:C:OP1	2.62	0.47
23:AO:135:ARG:CD	80:B2:1008:G:OP1	2.62	0.47
80:B2:1231:U:O5'	80:B2:1259:U:H1'	2.14	0.47
12:AD:159:HIS:CD2	80:B2:1422:A:H4'	2.48	0.47
80:B2:1644:C:C1'	81:B5:2255:A:C6	2.98	0.47
80:B2:1757:G:N2	81:B5:2255:A:C4	2.82	0.47
80:B2:1789:G:C8	80:B2:1789:G:H5''	2.46	0.47
17:AI:66:SER:OG	80:B2:210:A:H1'	2.13	0.47
17:AI:22:ARG:NH2	80:B2:302:U:OP1	2.47	0.47
80:B2:539:G:OP2	80:B2:539:G:C8	2.68	0.47
11:AC:205:ARG:NH2	80:B2:7:G:O6	2.47	0.47
80:B2:819:G:C6	80:B2:853:G:N1	2.83	0.47
80:B2:823:G:H2'	80:B2:824:G:C8	2.49	0.47
80:B2:823:G:H2'	80:B2:824:G:O4'	2.14	0.47
20:AL:25:VAL:CG1	80:B2:837:G:O2'	2.57	0.47
23:AO:46:MET:HG2	80:B2:898:A:H4'	1.95	0.47
35:BA:71:LEU:HD22	81:B5:1651:U:C5'	2.44	0.47
81:B5:1819:U:C2'	81:B5:1820:U:H5'	2.45	0.47
81:B5:3335:A:H5'	81:B5:3335:A:H8	1.78	0.47
37:BC:53:SER:N	81:B5:346:C:OP1	2.38	0.47
38:BD:260:PHE:HE2	82:B7:121:U:O5'	1.96	0.47
37:BC:334:PHE:CD2	81:B5:578:A:C5	3.02	0.47
43:BI:63:GLU:CB	81:B5:2853:A:OP1	2.61	0.47
44:BJ:16:LYS:HG3	44:BJ:130:VAL:HG13	1.96	0.47
46:BL:99:HIS:CB	81:B5:156:G:C4	2.97	0.47
50:BP:84:PRO:HB2	50:BP:87:SER:HB2	1.96	0.47
60:BZ:48:ARG:NH2	81:B5:1631:C:P	2.79	0.47
59:BY:29:VAL:CG2	79:CL:32:LEU:C	142.82	0.47
84:CN:2186:G:H2'	84:CN:2187:G:C5'	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:52:ARG:NH1	84:CN:2200:C:O3'	137.40	0.47
5:A4:21:VAL:HG22	80:B2:586:G:C4'	2.45	0.47
9:AA:124:THR:HG22	9:AA:174:TRP:CZ2	2.49	0.47
11:AC:150:GLN:HA	11:AC:151:PRO:HD3	1.79	0.47
16:AH:16:LEU:O	16:AH:20:VAL:HG23	2.14	0.47
20:AL:28:SER:CB	80:B2:839:U:H5''	2.43	0.47
23:AO:41:ARG:NH2	80:B2:916:U:C4	2.80	0.47
27:AS:143:ARG:NH1	80:B2:1461:C:C4	2.82	0.47
28:AT:60:SER:HG	80:B2:1480:G:P	2.36	0.47
29:AU:48:HIS:O	29:AU:48:HIS:CG	2.67	0.47
80:B2:1486:G:H1'	80:B2:1592:A:O2'	2.14	0.47
81:B5:1017:C:OP1	81:B5:1017:C:H2'	2.13	0.47
81:B5:1204:A:C2'	81:B5:1205:A:H5'	2.45	0.47
81:B5:1355:A:H1'	81:B5:1356:U:OP2	2.15	0.47
81:B5:1816:A:O2'	81:B5:1817:G:H5''	2.14	0.47
80:B2:1781:A:O4'	81:B5:2262:A:O2'	2.32	0.47
81:B5:2696:A:H2'	81:B5:2697:A:C8	2.50	0.47
81:B5:547:G:C5	81:B5:548:G:H1'	2.48	0.47
38:BD:269:SER:HB3	82:B7:1:G:H21	1.73	0.47
38:BD:289:LYS:O	38:BD:292:ALA:HB3	2.14	0.47
40:BF:214:TRP:CZ2	40:BF:219:LYS:HE3	2.49	0.47
42:BH:111:PHE:HE1	46:BL:89:TYR:HB2	176.13	0.47
46:BL:65:TYR:CE2	81:B5:103:G:O4'	2.67	0.47
48:BN:40:ALA:HB2	81:B5:10:C:OP2	2.15	0.47
49:BO:65[B]:ASN:HB3	49:BO:68[B]:ARG:HD3	1.97	0.47
54:BT:32:LYS:HE3	54:BT:98:HIS:CD2	2.49	0.47
84:CN:2146:G:H5''	84:CN:2147:A:OP1	2.15	0.47
81:B5:2444:C:C5	84:CN:2208:G:P	2.92	0.47
80:B2:51:A:N9	85:CP:242:GLY:CA	0.72	0.47
6:A5:127:GLY:O	6:A5:129:GLY:N	2.47	0.47
10:AB:62:LYS:O	10:AB:88:VAL:HB	2.15	0.47
19:AK:12:HIS:CD2	19:AK:79:TYR:HD2	2.33	0.47
20:AL:129:ARG:HB3	80:B2:115:G:OP2	2.14	0.47
89:AL:201:OHX:N3	89:B2:1996:OHX:N5	2.62	0.47
24:AP:81:ARG:HH12	24:AP:120:SER:HB3	1.78	0.47
25:AQ:75:VAL:CB	80:B2:1610:G:OP1	2.61	0.47
28:AT:52:GLY:C	28:AT:54:PHE:H	2.15	0.47
29:AU:35:GLU:HG2	80:B2:1383:G:O2'	2.14	0.47
30:AV:9:VAL:HG22	30:AV:10:GLU:H	1.79	0.47
31:AW:23:ARG:H	31:AW:24:GLN:NE2	2.13	0.47
12:AD:174:HIS:CE1	80:B2:1278:G:H4'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1317:C:H2'	80:B2:1318:G:O4'	2.14	0.47
26:AR:28:PHE:CZ	80:B2:1389:C:H1'	2.49	0.47
80:B2:1537:C:C4	89:B2:2046:OHX:N3	2.82	0.47
24:AP:43:ARG:NH1	80:B2:1553:G:O6	2.41	0.47
80:B2:499:U:O2'	80:B2:500:C:P	2.72	0.47
80:B2:503:G:O2'	80:B2:504:U:OP1	2.27	0.47
80:B2:717:C:O2	80:B2:722:G:N1	2.47	0.47
23:AO:120:PRO:HA	80:B2:887:A:H5''	1.91	0.47
81:B5:1565:G:N2	81:B5:1566:A:H1'	2.30	0.47
81:B5:1481:A:H2'	81:B5:1858:A:N3	2.30	0.47
81:B5:2257:C:H6	81:B5:2257:C:O5'	1.98	0.47
47:BM:13:ARG:NH2	81:B5:3206:C:N3	2.61	0.47
81:B5:687:U:O2'	81:B5:688:G:H5'	2.14	0.47
81:B5:731:U:H2'	81:B5:732:C:H6	1.79	0.47
38:BD:274:GLN:NE2	82:B7:60:G:N2	2.62	0.47
83:B8:130:C:H2'	83:B8:131:A:C8	2.49	0.47
59:BY:75:ARG:NH2	83:B8:72:A:H4'	2.30	0.47
35:BA:247:ARG:NH2	80:B2:1013:A:O2'	2.47	0.47
36:BB:153:LYS:HG2	36:BB:154:TYR:CE2	2.49	0.47
37:BC:33:ASP:O	37:BC:37:THR:HG23	2.14	0.47
38:BD:269:SER:CA	82:B7:22:A:N1	2.75	0.47
40:BF:158:LYS:HD2	40:BF:159:GLN:N	2.30	0.47
41:BG:169:LEU:HD22	41:BG:173:MET:HG2	1.97	0.47
43:BI:63:GLU:HB3	81:B5:2853:A:OP1	2.14	0.47
54:BT:7:TYR:CZ	54:BT:54:HIS:HB2	2.49	0.47
59:BY:52:ARG:NH2	84:CN:2201:U:C5	141.60	0.47
60:BZ:65:ARG:HH11	60:BZ:65:ARG:CG	2.27	0.47
79:CL:15:ASP:HB3	79:CL:18:LYS:HB3	1.96	0.47
8:A7:136:ALA:O	8:A7:140:ASP:N	2.31	0.47
13:AE:32:SER:HB2	13:AE:83:PRO:HD3	1.96	0.47
15:AG:45:PHE:HA	15:AG:48:TYR:HD2	1.79	0.47
17:AI:26:LYS:CE	80:B2:396:G:O6	2.62	0.47
1:A0:3:LYS:CE	80:B2:1030:A:P	3.02	0.47
80:B2:143:G:C2'	80:B2:144:U:H5''	2.44	0.47
80:B2:372:G:H1'	80:B2:612:U:O2	2.14	0.47
35:BA:70:ARG:HB2	81:B5:1650:G:O3'	2.14	0.47
81:B5:879:U:O2	81:B5:2357:A:H1'	2.14	0.47
81:B5:2520:A:H2'	81:B5:2521:U:C6	2.50	0.47
41:BG:55:TYR:HH	83:B8:149:A:HO2'	1.38	0.47
35:BA:244:GLY:N	81:B5:2244:A:OP1	2.47	0.47
38:BD:68:THR:HG22	38:BD:70:THR:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:10:LEU:HA	48:BN:10:LEU:HD23	1.72	0.47
49:BO:110[A]:PRO:HA	49:BO:113[A]:ASP:OD1	2.14	0.47
60:BZ:128:GLN:O	60:BZ:130:PHE:N	2.48	0.47
1:A0:19:LYS:HG3	1:A0:20:PRO:HD2	1.96	0.47
6:A5:147:VAL:O	6:A5:148:TYR:HB2	2.14	0.47
10:AB:61:LEU:CD2	10:AB:62:LYS:H	2.27	0.47
20:AL:22:ASN:OD1	20:AL:24:LYS:HB2	2.14	0.47
9:AA:140:ASN:HD21	30:AV:29:HIS:HA	1.80	0.47
32:AX:33:LEU:HD23	32:AX:33:LEU:HA	1.70	0.47
4:A3:8:PHE:HA	80:B2:1450:U:O2'	2.15	0.47
80:B2:1509:C:H2'	80:B2:1510:U:O4'	2.14	0.47
28:AT:87:GLY:CA	80:B2:1542:G:H3'	2.45	0.47
80:B2:1745:G:O6	89:B2:1965:OHX:N5	2.48	0.47
80:B2:279:G:C8	80:B2:279:G:H3'	2.48	0.47
80:B2:414:C:H2'	85:CP:288:ARG:HG2	1.97	0.47
33:AY:105:ARG:HD2	80:B2:444:C:OP2	2.13	0.47
13:AE:7:LYS:HG2	80:B2:450:U:OP1	2.13	0.47
18:AJ:176:ASN:CB	80:B2:511:A:OP2	2.62	0.47
80:B2:77:U:H4'	80:B2:78:A:O5'	2.14	0.47
81:B5:128:G:H2'	81:B5:129:U:O4'	2.14	0.47
37:BC:305:ALA:H	81:B5:1347:U:C4'	2.27	0.47
81:B5:1701:C:H2'	81:B5:1702:U:O4'	2.15	0.47
81:B5:253:A:O2'	81:B5:254:A:H8	1.97	0.47
36:BB:53:MET:HE1	81:B5:3048:A:C5'	2.41	0.47
51:BQ:63:SER:CB	81:B5:785:G:N2	2.77	0.47
81:B5:818:C:H2'	81:B5:819:U:O4'	2.14	0.47
58:BX:49:LYS:CD	83:B8:135:G:OP1	2.62	0.47
35:BA:203:ALA:HB2	81:B5:2146:C:H5''	1.97	0.47
35:BA:245:LEU:CD1	81:B5:2152:A:H4'	2.45	0.47
43:BI:3:ARG:NH2	81:B5:2854:U:OP2	2.48	0.47
52:BR:172:ARG:N	80:B2:851:U:C2'	2.77	0.47
54:BT:7:TYR:CE1	81:B5:2724:U:H1'	2.50	0.47
56:BV:49:LEU:HG	81:B5:2338:C:C1'	2.44	0.47
8:A7:81:THR:OG1	86:CW:30:G:OP2	2.23	0.47
2:A1:47:PHE:CD2	2:A1:49:HIS:O	2.68	0.47
7:A6:156:VAL:HG22	7:A6:169:ILE:HG22	1.95	0.47
8:A7:30:THR:HA	81:B5:2707:C:C2'	2.45	0.47
8:A7:101:ASP:OD2	12:AD:144:ALA:HB1	2.14	0.47
15:AG:107:ALA:HB2	80:B2:154:G:O3'	2.13	0.47
15:AG:13:GLN:NE2	80:B2:151:G:C1'	2.74	0.47
16:AH:96:ARG:HB3	80:B2:856:A:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:94:GLN:HB2	25:AQ:102:LYS:HD2	1.96	0.47
29:AU:74:GLU:HG2	80:B2:1429:G:H1'	1.96	0.47
31:AW:111:MET:HE1	31:AW:116:ALA:HA	1.97	0.47
31:AW:17:ALA:HB2	31:AW:25:VAL:HG13	1.97	0.47
28:AT:57:ARG:CG	80:B2:1479:A:OP1	2.52	0.47
80:B2:1480:G:H3'	80:B2:1481:C:C6	2.49	0.47
80:B2:349:U:O4	89:B2:2009:OHX:N3	2.47	0.47
80:B2:72:A:C3'	80:B2:73:U:H5''	2.44	0.47
18:AJ:143:ILE:HD13	80:B2:768:C:N1	2.30	0.47
15:AG:159:ARG:CZ	80:B2:77:U:O4'	2.62	0.47
81:B5:1228:C:N3	81:B5:1283:C:C2	2.82	0.47
81:B5:1541:G:C2'	81:B5:1542:G:O5'	2.63	0.47
81:B5:2514:U:OP1	81:B5:2514:U:C6	2.68	0.47
81:B5:2947:G:N2	81:B5:2948:C:C2	2.83	0.47
41:BG:194:THR:CG2	81:B5:7:C:O2'	2.63	0.47
41:BG:150:LEU:HD22	41:BG:151:VAL:N	2.29	0.47
44:BJ:81:GLU:HA	44:BJ:84:LEU:HD12	1.95	0.47
48:BN:14:LYS:HA	48:BN:19:LEU:HD23	1.97	0.47
48:BN:5:LYS:HD3	48:BN:5:LYS:HA	1.73	0.47
50:BP:30:ARG:HA	50:BP:119:VAL:HG11	1.95	0.47
52:BR:170:ARG:N	80:B2:851:U:C2'	2.60	0.47
52:BR:95:TRP:CZ2	52:BR:99:LEU:HG	2.49	0.47
58:BX:63:ILE:C	58:BX:63:ILE:HD13	2.34	0.47
79:CL:65:PRO:O	79:CL:188:ASN:OD1	2.32	0.47
2:A1:63:LEU:O	2:A1:74:SER:N	2.48	0.47
12:AD:133:GLY:HA3	12:AD:156:PHE:H	1.79	0.47
15:AG:60:GLY:CA	80:B2:154:G:N3	2.78	0.47
15:AG:87:ARG:NH1	80:B2:159:U:H1'	2.30	0.47
17:AI:172:ARG:NH2	80:B2:332:U:O4	2.48	0.47
17:AI:41:LYS:HD3	80:B2:260:U:O4'	2.14	0.47
18:AJ:149:ARG:HD2	80:B2:765:G:N1	2.30	0.47
2:A1:47:PHE:CD2	22:AN:55:ARG:HD2	2.49	0.47
28:AT:52:GLY:HA2	28:AT:55:TYR:HD2	1.80	0.47
32:AX:50:LYS:HD3	32:AX:101:GLU:HG2	1.97	0.47
23:AO:135:ARG:NE	80:B2:1007:C:O3'	2.48	0.47
80:B2:1450:U:H2'	80:B2:1451:C:C6	2.50	0.47
15:AG:15:THR:HG23	80:B2:152:U:O2'	2.15	0.47
80:B2:1617:U:O2'	80:B2:1618:C:H5'	2.14	0.47
80:B2:558:U:O2	80:B2:558:U:H2'	2.14	0.47
80:B2:840:U:O2'	80:B2:841:U:H5''	2.15	0.47
81:B5:1621:A:H2'	81:B5:1622:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:1765:U:H2'	81:B5:1766:G:O4'	2.15	0.47
81:B5:181:U:H2'	81:B5:182:U:O4'	2.14	0.47
43:BI:206:LEU:HD13	82:B7:64:A:C8	2.49	0.47
37:BC:152:VAL:HG22	37:BC:172:VAL:HG21	1.97	0.47
39:BE:58:LEU:HD12	39:BE:78:ARG:HD3	1.97	0.47
41:BG:74:THR:O	41:BG:77:GLN:HG3	2.15	0.47
48:BN:94:TYR:CE1	81:B5:1546:A:H1'	2.49	0.47
49:BO:42[B]:ASN:OD1	49:BO:125[B]:ARG:HD3	2.13	0.47
53:BS:137:ARG:HD3	81:B5:1213:G:P	2.53	0.47
57:BW:122:ALA:O	57:BW:125:ALA:HB3	2.15	0.47
2:A1:56:CYS:SG	2:A1:57:GLU:N	2.87	0.47
7:A6:13:LEU:HB2	7:A6:310:ILE:HB	1.97	0.47
12:AD:179:GLN:NE2	12:AD:179:GLN:C	2.68	0.47
19:AK:26:ASP:OD2	19:AK:29:GLN:HG3	2.14	0.47
20:AL:53:TYR:CD1	20:AL:113:PRO:HG2	2.50	0.47
27:AS:36:LYS:HB3	27:AS:105:VAL:HG11	1.96	0.47
29:AU:117:VAL:HG13	29:AU:118:VAL:N	2.30	0.47
80:B2:1646:C:H5'	81:B5:2258:U:C4	2.50	0.47
80:B2:417:A:H62	85:CP:287:LEU:HD21	1.80	0.47
81:B5:2102:U:H2'	81:B5:2103:U:C6	2.50	0.47
80:B2:1644:C:C2'	81:B5:2255:A:N1	2.77	0.47
81:B5:2397:A:OP1	81:B5:2398:A:C5'	2.60	0.47
81:B5:2440:G:O2'	81:B5:2441:A:P	2.73	0.47
8:A7:34:LYS:HG2	81:B5:2693:C:OP1	2.10	0.47
81:B5:3225:C:H2'	81:B5:3226:A:O4'	2.15	0.47
81:B5:663:C:H2'	81:B5:664:U:C6	2.50	0.47
38:BD:285:ARG:NH1	82:B7:62:U:C3'	2.76	0.47
41:BG:230:LYS:O	41:BG:230:LYS:HG3	2.14	0.47
42:BH:103:ILE:HD11	42:BH:134:ILE:HG21	1.97	0.47
43:BI:157:TYR:CB	81:B5:2836:C:H1'	2.44	0.47
43:BI:86:HIS:ND1	43:BI:139:ARG:NH1	2.57	0.47
49:BO:138[A]:LEU:HA	49:BO:138[A]:LEU:HD12	1.66	0.47
79:CL:131:LEU:CB	79:CL:137:LEU:HD23	2.39	0.47
7:A6:211:ILE:HG22	7:A6:223:TRP:CD1	2.50	0.47
9:AA:105:GLY:O	9:AA:108:THR:O	2.33	0.47
14:AF:36:ALA:HB3	14:AF:45:LYS:NZ	2.29	0.47
15:AG:173:PRO:HA	80:B2:66:U:C5'	2.40	0.47
16:AH:133:THR:HG21	16:AH:162:ILE:HD11	1.96	0.47
18:AJ:117:GLY:C	18:AJ:119:ALA:H	2.17	0.47
18:AJ:60:LEU:HA	18:AJ:60:LEU:HD22	1.49	0.47
21:AM:66:VAL:HG11	21:AM:71:ILE:HG21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AN:11:ILE:O	22:AN:11:ILE:HG13	2.15	0.47
23:AO:121:VAL:O	80:B2:886:U:C2'	2.59	0.47
24:AP:86:VAL:HG23	24:AP:87:PRO:HD2	1.96	0.47
25:AQ:53:LEU:HG	25:AQ:53:LEU:H	1.47	0.47
26:AR:115:LEU:HD13	26:AR:116:LYS:H	1.80	0.47
30:AV:80:LYS:HB3	30:AV:80:LYS:NZ	2.30	0.47
34:AZ:73:GLY:O	34:AZ:77:ARG:NH1	2.48	0.47
80:B2:1004:U:H4'	80:B2:1005:A:OP2	2.15	0.47
80:B2:1347:U:O2	80:B2:1516:A:H5'	2.14	0.47
80:B2:1450:U:OP2	89:B2:1940:OHX:N5	2.48	0.47
15:AG:188:ARG:CD	80:B2:283:U:H3'	2.44	0.47
80:B2:782:U:H4'	80:B2:783:G:OP2	2.14	0.47
81:B5:1655:G:H8	81:B5:1655:G:H5'	1.80	0.47
56:BV:48:ARG:CG	81:B5:2339:C:P	3.03	0.47
8:A7:28:SER:HB2	81:B5:2708:C:C1'	2.45	0.47
81:B5:322:U:H5''	81:B5:323:A:OP1	2.14	0.47
81:B5:380:U:H2'	81:B5:381:U:C6	2.50	0.47
83:B8:125:U:O2'	83:B8:126:A:H5'	2.15	0.47
48:BN:113:LEU:HD11	83:B8:142:C:C4'	2.45	0.47
35:BA:53:GLY:O	35:BA:192:LYS:HE3	2.15	0.47
36:BB:221:THR:CG2	36:BB:273:HIS:H	2.28	0.47
37:BC:295:ILE:O	37:BC:299:ILE:HG12	2.15	0.47
49:BO:124[B]:LEU:O	49:BO:128[B]:ARG:HB2	2.15	0.47
51:BQ:171:LYS:HZ1	81:B5:90:C:H41	1.61	0.47
53:BS:42:TRP:O	53:BS:46:GLN:HG3	2.15	0.47
54:BT:85:LEU:HA	54:BT:85:LEU:HD23	1.67	0.47
55:BU:12:ALA:HB2	55:BU:68:THR:HG23	1.97	0.47
60:BZ:67:LYS:HE2	60:BZ:115:LYS:HZ1	1.78	0.47
84:CN:2155:A:H8	84:CN:2180:G:O2'	1.97	0.47
7:A6:183:LEU:HA	7:A6:183:LEU:HD23	1.71	0.46
8:A7:168:UNK:HA	21:AM:125:ASN:ND2	2.22	0.46
9:AA:52:LYS:HB3	30:AV:82:VAL:HG22	1.97	0.46
9:AA:76:ILE:O	9:AA:124:THR:HG23	2.15	0.46
10:AB:105:PHE:H	10:AB:214:LYS:HZ1	1.62	0.46
11:AC:168:ARG:HG3	80:B2:1097:U:O2'	2.15	0.46
12:AD:21:LEU:HD22	12:AD:25:PHE:CE2	2.50	0.46
15:AG:63:MET:HE2	15:AG:106:LEU:HD22	1.97	0.46
18:AJ:163:PRO:C	18:AJ:165:GLY:H	2.14	0.46
20:AL:104:HIS:O	20:AL:105:LYS:HG2	2.15	0.46
21:AM:136:ILE:O	21:AM:140:PHE:HB2	2.14	0.46
22:AN:151:ASN:HA	89:AN:201:OHX:N3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:17:ALA:HB3	23:AO:81:VAL:HB	1.96	0.46
27:AS:35:ILE:HB	27:AS:38:VAL:HG21	1.96	0.46
32:AX:131:SER:HB2	80:B2:30:G:H4'	1.97	0.46
34:AZ:54:VAL:HG22	34:AZ:57:TYR:CE2	2.50	0.46
80:B2:1071:U:H2'	80:B2:1072:C:H6	1.79	0.46
80:B2:114:C:H5'	80:B2:114:C:C6	2.49	0.46
80:B2:1244:A:H3'	80:B2:1244:A:N3	2.29	0.46
26:AR:32:LYS:HZ2	80:B2:1388:A:P	2.37	0.46
80:B2:1585:U:N3	80:B2:1611:A:C2	2.67	0.46
80:B2:1715:G:C5	80:B2:1716:C:C5	3.03	0.46
80:B2:239:C:H3'	80:B2:240:U:O4'	2.15	0.46
80:B2:507:U:H2'	80:B2:508:U:O5'	2.16	0.46
33:AY:9:THR:N	80:B2:780:A:H1'	2.30	0.46
2:A1:67:THR:C	80:B2:871:G:O2'	2.54	0.46
2:A1:67:THR:C	80:B2:872:G:O4'	2.53	0.46
54:BT:130:ARG:NH1	81:B5:1062:A:N3	2.60	0.46
41:BG:136:LEU:N	81:B5:147:U:OP2	2.46	0.46
81:B5:1481:A:C2'	81:B5:1858:A:N3	2.78	0.46
81:B5:2897:A:H2'	81:B5:2899:C:H5'	1.97	0.46
81:B5:620:U:OP2	81:B5:620:U:H6	1.98	0.46
81:B5:736:A:C4	81:B5:737:G:H1'	2.50	0.46
81:B5:792:G:H2'	81:B5:793:C:C6	2.50	0.46
35:BA:15:ILE:CD1	81:B5:904:A:C2	2.98	0.46
36:BB:39:LYS:HB2	36:BB:40:PRO:HD2	1.96	0.46
37:BC:11:LEU:HD13	37:BC:159:ILE:HD11	1.97	0.46
37:BC:140:HIS:CG	37:BC:247:PHE:HB2	2.50	0.46
37:BC:150:LEU:HD13	37:BC:249:ILE:HG12	1.96	0.46
39:BE:51:ARG:NH1	47:BM:114:ASP:OD2	2.48	0.46
41:BG:71:VAL:HG13	41:BG:235:GLY:N	2.30	0.46
55:BU:56:VAL:HG22	55:BU:65:VAL:HG22	1.96	0.46
58:BX:49:LYS:HD2	83:B8:135:G:OP1	2.14	0.46
84:CN:2159:C:H6	84:CN:2159:C:H5''	1.79	0.46
85:CP:17:GLY:HA2	85:CP:79:GLY:HA2	1.95	0.46
1:A0:73:TYR:CZ	1:A0:82:ARG:HD2	2.50	0.46
6:A5:103:LEU:HD23	6:A5:103:LEU:HA	1.71	0.46
9:AA:140:ASN:ND2	30:AV:29:HIS:HA	2.30	0.46
10:AB:101:HIS:HD2	10:AB:217:LEU:HD22	1.80	0.46
12:AD:159:HIS:O	80:B2:1421:A:C5'	2.63	0.46
14:AF:187:ILE:H	14:AF:187:ILE:HD12	1.81	0.46
16:AH:108:GLN:HB2	80:B2:743:U:P	2.55	0.46
18:AJ:60:LEU:HD23	18:AJ:93:LEU:HD11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AL:129:ARG:HB2	80:B2:115:G:C8	2.49	0.46
20:AL:131:ILE:HA	20:AL:131:ILE:HD13	1.45	0.46
20:AL:81:HIS:CE1	80:B2:326:G:HO2'	2.34	0.46
23:AO:132:ARG:CZ	80:B2:1788:G:H8	2.22	0.46
31:AW:53:ILE:HG12	31:AW:60:LYS:HB2	1.96	0.46
34:AZ:59:TYR:HD1	34:AZ:60:VAL:N	2.13	0.46
80:B2:1064:G:H2'	80:B2:1065:A:C8	2.49	0.46
10:AB:150:VAL:HB	80:B2:1067:C:OP1	2.14	0.46
17:AI:138:ASN:ND2	80:B2:187:G:C4	2.83	0.46
89:AC:301:OHX:N3	89:B2:1906:OHX:N1	2.63	0.46
80:B2:702:G:C6	80:B2:737:A:C6	3.03	0.46
54:BT:129:LYS:HB3	81:B5:1098:A:O5'	2.15	0.46
81:B5:1118:C:H6	81:B5:1118:C:O5'	1.99	0.46
81:B5:1283:C:C5	81:B5:1284:C:C5	3.03	0.46
81:B5:1313:G:H2'	81:B5:1314:C:H6	1.80	0.46
81:B5:217:U:C2'	81:B5:218:G:OP1	2.62	0.46
50:BP:68:GLY:HA3	81:B5:2350:C:O3'	2.15	0.46
42:BH:175:PHE:CE1	81:B5:2901:G:H5'	2.50	0.46
81:B5:3242:G:H5''	81:B5:3245:A:C8	2.50	0.46
81:B5:3340:G:H4'	81:B5:3341:U:OP1	2.15	0.46
81:B5:546:C:H4'	81:B5:547:G:O5'	2.14	0.46
35:BA:34:TYR:CE2	81:B5:2525:G:C6	3.02	0.46
36:BB:35:ASP:OD1	36:BB:184:ASN:O	2.32	0.46
38:BD:122:VAL:HG23	38:BD:123:GLU:N	2.30	0.46
38:BD:273:ARG:HG2	38:BD:273:ARG:O	2.15	0.46
43:BI:169:LYS:O	43:BI:170:LYS:HD3	2.15	0.46
46:BL:89:TYR:CE2	46:BL:93:ILE:HD11	2.50	0.46
48:BN:145:ASP:OD1	48:BN:147:ARG:HB2	2.15	0.46
52:BR:165:LYS:HD3	80:B2:849:C:C2	2.43	0.46
53:BS:139:TYR:CD1	53:BS:140:VAL:HG23	2.51	0.46
59:BY:29:VAL:HB	79:CL:32:LEU:HD12	137.50	0.46
84:CN:2194:A:H5''	84:CN:2195:C:OP2	2.16	0.46
79:CL:7:TYR:OH	84:CN:2197:A:OP1	2.34	0.46
8:A7:78:ASP:CG	86:CW:29:G:OP1	2.53	0.46
10:AB:71:ALA:C	10:AB:73:LEU:H	2.19	0.46
15:AG:78:THR:HG22	15:AG:79:LYS:H	1.80	0.46
16:AH:14:THR:HG23	16:AH:15:GLU:H	1.80	0.46
17:AI:66:SER:HA	17:AI:73:SER:HA	1.98	0.46
18:AJ:174:ARG:HA	18:AJ:174:ARG:HE	1.81	0.46
21:AM:45:LEU:O	21:AM:49:THR:HG23	2.14	0.46
22:AN:115:LEU:O	22:AN:119:GLU:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:123:ARG:HG3	25:AQ:124:PRO:HD2	1.96	0.46
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:CD	2.29	0.46
27:AS:139:LYS:HG3	80:B2:1459:C:N4	2.30	0.46
8:A7:68:ARG:NH2	27:AS:146:ALA:H	2.14	0.46
29:AU:43:LYS:HD2	29:AU:43:LYS:HA	1.52	0.46
32:AX:41:SER:HA	32:AX:42:PRO:HD3	1.75	0.46
32:AX:69:ARG:NH1	80:B2:570:A:N6	2.63	0.46
80:B2:1039:A:O2'	80:B2:1040:G:P	2.74	0.46
31:AW:71:LYS:NZ	80:B2:1099:U:OP1	2.45	0.46
4:A3:40:ARG:HD2	80:B2:1199:G:C8	2.50	0.46
17:AI:170:SER:C	80:B2:209:U:C5'	2.84	0.46
80:B2:705:U:OP1	80:B2:705:U:H4'	2.14	0.46
81:B5:1464:G:N2	81:B5:1466:G:H3'	2.31	0.46
8:A7:34:LYS:CE	81:B5:2693:C:OP1	2.55	0.46
8:A7:30:THR:CA	81:B5:2707:C:H1'	2.46	0.46
81:B5:2816:G:C8	81:B5:2869:U:H3'	2.50	0.46
81:B5:3174:A:H2'	81:B5:3175:U:C5'	2.46	0.46
37:BC:118:LYS:HE2	81:B5:694:C:OP2	2.15	0.46
82:B7:106:U:H2'	82:B7:107:C:C6	2.50	0.46
82:B7:43:U:C4	82:B7:44:C:C4	3.03	0.46
39:BE:98:VAL:HA	39:BE:101:PHE:HD2	1.80	0.46
41:BG:149:LYS:HD3	41:BG:201:THR:O	2.16	0.46
41:BG:73:PRO:HD3	41:BG:233:TRP:CG	2.50	0.46
43:BI:19:LYS:HG3	43:BI:26:VAL:HG22	1.96	0.46
53:BS:46:GLN:O	82:B7:77:G:C3'	2.64	0.46
79:CL:84:LYS:O	79:CL:86:ALA:N	2.41	0.46
79:CL:217:THR:HG23	84:CN:2145:G:H2'	1.96	0.46
1:A0:87:ARG:HD2	80:B2:1797:A:H61	1.76	0.46
10:AB:117:TRP:NE1	10:AB:152:ARG:CZ	2.77	0.46
12:AD:203:PRO:HD2	80:B2:1331:A:H2	1.79	0.46
13:AE:104:ASP:OD2	13:AE:108:ARG:NE	2.41	0.46
14:AF:64:VAL:HG12	14:AF:65:ARG:HD3	1.97	0.46
16:AH:12:ALA:HB3	16:AH:13:PRO:HD3	1.98	0.46
17:AI:64:ASN:CB	80:B2:258:C:H1'	2.45	0.46
23:AO:132:ARG:CZ	80:B2:1788:G:N7	2.67	0.46
25:AQ:13:LYS:CE	80:B2:1584:G:C6	2.76	0.46
25:AQ:36:ILE:O	25:AQ:36:ILE:HG12	2.15	0.46
29:AU:106:ILE:C	29:AU:108:ILE:H	2.19	0.46
31:AW:37:PHE:CE2	31:AW:103:ILE:HD12	2.50	0.46
32:AX:134:ALA:HB1	32:AX:140:LYS:HB2	1.98	0.46
33:AY:33:ALA:HB2	80:B2:533:U:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:55:PRO:C	34:AZ:57:TYR:H	2.19	0.46
80:B2:1349:G:N2	80:B2:1350:U:C2	2.83	0.46
80:B2:58:U:O4	89:B2:1924:OHX:N1	2.49	0.46
80:B2:258:C:N4	80:B2:259:U:O4	2.48	0.46
18:AJ:127:VAL:CG2	80:B2:478:A:H4'	2.39	0.46
80:B2:494:U:HO2'	80:B2:495:C:P	2.34	0.46
80:B2:505:A:N3	80:B2:505:A:H2'	2.30	0.46
81:B5:1024:G:C2'	81:B5:1026:A:H8	2.26	0.46
81:B5:1085:A:H5''	81:B5:1085:A:H8	1.78	0.46
81:B5:1096:U:H4'	81:B5:1097:G:O5'	2.16	0.46
81:B5:2111:G:H4'	81:B5:2112:U:OP2	2.15	0.46
80:B2:1655:A:C1'	81:B5:2302:G:O4'	2.61	0.46
81:B5:2946:A:C5'	81:B5:2947:G:H5'	2.45	0.46
81:B5:2805:G:N3	81:B5:2967:A:H2	2.13	0.46
81:B5:3238:G:H8	81:B5:3238:G:C5'	2.29	0.46
81:B5:3288:G:O2'	81:B5:3289:G:H8	1.97	0.46
81:B5:508:U:H2'	81:B5:509:U:H6	1.78	0.46
38:BD:155:THR:O	82:B7:36:C:H4'	2.16	0.46
35:BA:244:GLY:O	81:B5:2153:U:H5'	2.12	0.46
37:BC:209:TYR:O	37:BC:230:VAL:HG22	2.16	0.46
38:BD:115:LEU:HD12	38:BD:119:TYR:HD2	1.80	0.46
42:BH:156:GLN:NE2	42:BH:160:ASP:OD1	2.46	0.46
48:BN:57:GLN:OE1	81:B5:126:U:H1'	2.15	0.46
51:BQ:67:ILE:HG23	51:BQ:81:VAL:HG11	1.97	0.46
53:BS:26:ARG:HB3	54:BT:150:THR:HG22	1.97	0.46
56:BV:46:LEU:HG	56:BV:47:ASN:OD1	2.15	0.46
3:A2:44:VAL:HA	14:AF:161:ASP:O	2.15	0.46
9:AA:71:GLU:OE1	9:AA:71:GLU:N	2.37	0.46
13:AE:98:ASN:HD22	13:AE:119:ALA:HB1	1.80	0.46
15:AG:107:ALA:CB	80:B2:154:G:C3'	2.94	0.46
16:AH:173:TYR:HE2	16:AH:179:LYS:HB2	1.80	0.46
25:AQ:122:ARG:HG2	80:B2:1584:G:OP2	2.14	0.46
27:AS:108:LYS:HE3	27:AS:111:ASP:OD2	2.15	0.46
27:AS:41:ARG:NH1	28:AT:38:LYS:HG3	2.31	0.46
31:AW:7:LEU:HD22	31:AW:11:LEU:HG	1.97	0.46
32:AX:144:ARG:NH2	85:CP:267:MET:SD	2.89	0.46
35:BA:247:ARG:HB3	80:B2:1013:A:OP1	2.16	0.46
80:B2:1194:A:H2'	80:B2:1195:C:H5'	1.98	0.46
80:B2:1589:C:OP1	89:B2:2063:OHX:N1	2.48	0.46
80:B2:417:A:H5'	80:B2:418:G:C5	2.50	0.46
80:B2:616:G:C2	80:B2:622:A:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AW:57:ARG:CZ	80:B2:863:A:OP1	2.63	0.46
80:B2:909:U:H2'	80:B2:910:C:H6	1.80	0.46
1:A0:15:ARG:CG	80:B2:943:C:H42	2.21	0.46
22:AN:14:SER:HG	80:B2:960:U:H5	1.40	0.46
81:B5:123:A:C6	81:B5:150:A:C5	3.04	0.46
81:B5:208:C:H2'	81:B5:209:A:H5'	1.97	0.46
35:BA:200:ARG:CG	81:B5:2147:A:OP1	2.52	0.46
38:BD:36:LEU:HD23	81:B5:2748:A:H1'	1.98	0.46
81:B5:528:U:H2'	81:B5:529:A:H8	1.78	0.46
38:BD:285:ARG:HH12	82:B7:62:U:C3'	2.28	0.46
36:BB:331:ASN:OD1	36:BB:331:ASN:N	2.49	0.46
37:BC:272:VAL:N	81:B5:696:C:OP1	2.48	0.46
41:BG:134:TYR:CG	41:BG:190:VAL:HG11	2.50	0.46
41:BG:136:LEU:CB	81:B5:147:U:OP2	2.63	0.46
44:BJ:106:ILE:CD1	44:BJ:125:MET:HG2	2.45	0.46
55:BU:27:VAL:HG21	55:BU:107:PHE:HE2	1.80	0.46
56:BV:71:LYS:HB3	56:BV:71:LYS:HE3	1.59	0.46
84:CN:2187:G:O2'	84:CN:2188:U:H5'	2.16	0.46
8:A7:172:UNK:O	21:AM:54:ARG:HB2	2.15	0.46
9:AA:108:THR:HG23	9:AA:135:GLU:OE2	2.16	0.46
9:AA:163:ASN:C	9:AA:165:ARG:H	2.18	0.46
10:AB:107:THR:OG1	10:AB:108:ASP:N	2.49	0.46
12:AD:168:ILE:O	12:AD:168:ILE:HD12	2.15	0.46
13:AE:42:LEU:HD23	13:AE:46:VAL:HB	1.97	0.46
16:AH:159:VAL:O	16:AH:162:ILE:HG13	2.16	0.46
18:AJ:85:VAL:HG12	18:AJ:99:LEU:HD11	1.98	0.46
20:AL:130:PRO:HD2	80:B2:115:G:N7	2.31	0.46
27:AS:22:VAL:HG13	27:AS:31:ALA:HB1	1.96	0.46
31:AW:10:ALA:HB1	31:AW:27:ILE:HD12	1.97	0.46
33:AY:10:ARG:HG2	80:B2:778:G:C6	2.48	0.46
80:B2:1200:G:H4'	80:B2:1201:G:C5'	2.45	0.46
29:AU:23:ARG:NH2	80:B2:1347:U:P	2.76	0.46
27:AS:139:LYS:HG3	80:B2:1459:C:C4	2.50	0.46
80:B2:1513:G:O2'	80:B2:1515:A:N3	2.38	0.46
15:AG:107:ALA:HB1	80:B2:154:G:C4'	2.42	0.46
1:A0:92:ARG:O	80:B2:1796:C:H2'	2.15	0.46
17:AI:142:LYS:HZ3	80:B2:186:C:H5'	1.79	0.46
80:B2:25:C:OP2	80:B2:26:A:H2'	2.15	0.46
17:AI:27:PHE:CE1	80:B2:301:A:H5''	2.51	0.46
80:B2:485:A:H2'	80:B2:486:G:O4'	2.15	0.46
18:AJ:7:THR:HG21	80:B2:758:U:OP1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:795:U:C5	80:B2:796:A:C8	3.04	0.46
81:B5:1025:A:H5'	81:B5:1026:A:OP2	2.16	0.46
35:BA:174:ARG:CD	81:B5:1793:C:O4'	2.63	0.46
35:BA:187:HIS:CB	81:B5:1794:G:C4	2.98	0.46
81:B5:2746:A:H2'	81:B5:2747:A:O4'	2.16	0.46
81:B5:65:A:C4	81:B5:110:G:N7	2.84	0.46
46:BL:100:ARG:NH2	81:B5:66:A:OP2	2.49	0.46
83:B8:155:A:H2'	83:B8:156:U:O4'	2.16	0.46
35:BA:240:ALA:CB	81:B5:2154:U:C4'	2.76	0.46
35:BA:33:ASP:N	35:BA:33:ASP:OD1	2.48	0.46
35:BA:66:PRO:HB2	35:BA:67:TYR:CE2	2.50	0.46
36:BB:347:SER:HB3	36:BB:350:ALA:N	2.26	0.46
37:BC:222:VAL:HA	37:BC:223:PRO:HD3	1.69	0.46
41:BG:156:ASP:OD2	41:BG:183:LYS:HG2	2.15	0.46
41:BG:205:ALA:C	41:BG:207:ASP:H	2.18	0.46
42:BH:93:VAL:O	42:BH:177:ASP:HA	2.16	0.46
46:BL:140:SER:HG	46:BL:143:ALA:H	1.61	0.46
49:BO:10[B]:ASP:HB2	49:BO:117[B]:ARG:HG3	1.97	0.46
52:BR:104:ARG:HH12	81:B5:1949:G:H5'	1.79	0.46
53:BS:53:LYS:HD3	82:B7:99:G:P	2.55	0.46
59:BY:2:ALA:HA	81:B5:213:A:O4'	2.15	0.46
1:A0:18:VAL:O	1:A0:19:LYS:HB2	2.16	0.46
10:AB:110:LEU:HA	10:AB:113:MET:HB2	1.98	0.46
10:AB:179:SER:HB3	10:AB:183:GLN:NE2	2.30	0.46
10:AB:193:ILE:HG12	10:AB:193:ILE:H	1.40	0.46
15:AG:115:LYS:HZ2	57:BW:74:LYS:C	2.16	0.46
15:AG:153:VAL:HG12	15:AG:154:ARG:N	2.31	0.46
23:AO:20:TYR:CD2	80:B2:917:U:C5'	2.93	0.46
10:AB:65:VAL:O	23:AO:34:SER:HA	2.16	0.46
32:AX:69:ARG:HH11	80:B2:570:A:N6	2.14	0.46
29:AU:77:LYS:HE2	80:B2:1195:C:OP1	2.15	0.46
80:B2:1477:G:H2'	80:B2:1478:G:C8	2.50	0.46
89:B2:1969:OHX:N1	89:B2:2013:OHX:N2	2.64	0.46
20:AL:20:PHE:CG	80:B2:211:U:H5''	2.51	0.46
16:AH:113:PRO:HD3	80:B2:811:A:N6	2.29	0.46
81:B5:208:C:O2'	81:B5:209:A:H5'	2.16	0.46
80:B2:1759:C:C1'	81:B5:2262:A:H2	2.17	0.46
81:B5:2664:C:O2'	81:B5:2665:U:H5'	2.15	0.46
36:BB:20:LYS:HB2	81:B5:2991:A:OP1	2.16	0.46
81:B5:655:C:H2'	81:B5:656:A:C8	2.51	0.46
83:B8:9:A:H2'	83:B8:10:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:312:VAL:HA	81:B5:3378:C:O2'	2.16	0.46
41:BG:106:LYS:O	41:BG:110:THR:HG23	2.15	0.46
41:BG:160:ILE:HD12	41:BG:164:VAL:HG13	1.98	0.46
44:BJ:17:LEU:HD21	44:BJ:19:LEU:HD21	1.98	0.46
46:BL:168:ARG:O	46:BL:172:LEU:HG	2.15	0.46
50:BP:31:GLU:CG	50:BP:60:PHE:HA	2.46	0.46
86:CW:47:U:H3'	86:CW:48:C:H5''	1.98	0.46
2:A1:67:THR:CA	80:B2:871:G:O2'	2.64	0.46
4:A3:33:LYS:HG3	80:B2:1594:G:H5''	1.98	0.46
7:A6:285:ALA:HB2	80:B2:1394:G:P	2.54	0.46
7:A6:42:LEU:HB2	7:A6:61:PHE:HB2	1.98	0.46
8:A7:54:PRO:HB2	8:A7:59:GLY:HA2	1.98	0.46
8:A7:68:ARG:NE	27:AS:145:ARG:HH11	2.13	0.46
10:AB:180:THR:HB	10:AB:181:LEU:HD22	1.98	0.46
11:AC:84:LYS:HA	11:AC:85:PRO:HD3	1.79	0.46
19:AK:25:LYS:HD3	19:AK:59:PHE:CZ	2.50	0.46
28:AT:118:PRO:C	28:AT:120:GLY:H	2.18	0.46
28:AT:124:ILE:HG13	28:AT:125:SER:O	2.16	0.46
28:AT:49:ASP:OD2	28:AT:53:TRP:N	2.48	0.46
32:AX:107:PHE:CD2	32:AX:114:LYS:HB2	2.51	0.46
80:B2:1280:C:H2'	80:B2:1281:G:H8	1.80	0.46
80:B2:1558:U:H3'	80:B2:1559:A:H4'	1.98	0.46
80:B2:1053:G:N7	89:B2:2061:OHX:N5	2.63	0.46
80:B2:544:A:H5''	80:B2:545:A:OP2	2.15	0.46
15:AG:175:ILE:HG13	80:B2:78:A:N9	2.23	0.46
2:A1:28:PRO:HG3	80:B2:959:U:C2	2.50	0.46
36:BB:236:LYS:HD3	81:B5:2340:U:OP2	2.16	0.46
42:BH:26:LYS:HB2	81:B5:3198:U:C4	2.51	0.46
81:B5:491:C:H5''	81:B5:492:U:OP2	2.15	0.46
37:BC:331:ALA:HA	81:B5:578:A:N3	2.30	0.46
81:B5:725:G:H3'	81:B5:726:G:H5''	1.96	0.46
48:BN:109:ARG:HD2	83:B8:140:G:O2'	2.16	0.46
83:B8:83:C:H4'	83:B8:85:G:N3	2.31	0.46
35:BA:72:ARG:HH11	35:BA:72:ARG:HG3	1.80	0.46
35:BA:72:ARG:NH1	35:BA:72:ARG:HG3	2.31	0.46
38:BD:265:TYR:CD1	82:B7:120:C:C2	3.03	0.46
40:BF:219:LYS:HA	40:BF:228:SER:HB2	1.97	0.46
40:BF:221:LYS:O	40:BF:228:SER:O	2.34	0.46
41:BG:54:GLU:HG3	81:B5:1558:A:P	2.55	0.46
54:BT:127:GLN:HG2	81:B5:1095:U:H3	1.78	0.46
54:BT:129:LYS:CB	81:B5:1098:A:P	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:10:ARG:HB3	1:A0:34:LYS:HA	1.97	0.46
2:A1:51:GLN:CB	80:B2:870:C:O2'	2.63	0.46
9:AA:41:ARG:HE	9:AA:45:VAL:CG2	2.29	0.46
9:AA:71:GLU:HA	9:AA:95:ALA:N	2.31	0.46
10:AB:101:HIS:O	10:AB:217:LEU:HD13	2.16	0.46
15:AG:182:GLN:CD	80:B2:270:C:H41	2.19	0.46
22:AN:99:ARG:O	22:AN:103:GLU:HG2	2.16	0.46
25:AQ:107:LYS:O	25:AQ:111:SER:HB2	2.16	0.46
27:AS:139:LYS:HE2	80:B2:1459:C:N4	2.30	0.46
80:B2:1552:U:H2'	80:B2:1553:G:O4'	2.16	0.46
80:B2:1612:U:C2'	80:B2:1613:U:H5'	2.46	0.46
80:B2:1629:G:H2'	80:B2:1630:U:C6	2.51	0.46
80:B2:1655:A:H1'	81:B5:2302:G:O2'	2.15	0.46
80:B2:688:G:O6	89:B2:2040:OHX:N2	2.48	0.46
15:AG:172:ALA:CB	80:B2:79:C:OP1	2.46	0.46
81:B5:1227:C:N3	81:B5:1284:C:C2	2.83	0.46
37:BC:305:ALA:HA	81:B5:1347:U:O4'	2.16	0.46
81:B5:627:U:H4'	81:B5:1399:A:O2'	2.16	0.46
81:B5:2772:C:H1'	81:B5:2773:C:OP2	2.16	0.46
81:B5:2898:G:OP2	81:B5:2899:C:H5'	2.15	0.46
81:B5:3275:U:C6	81:B5:3275:U:OP1	2.69	0.46
81:B5:801:A:H4'	81:B5:802:C:O5'	2.15	0.46
36:BB:243:HIS:HD2	81:B5:876:A:OP1	1.99	0.46
38:BD:256:THR:CG2	82:B7:119:U:H5"	2.46	0.46
46:BL:21:ARG:NH2	83:B8:51:G:OP2	59.86	0.46
35:BA:130:SER:HA	35:BA:169:ILE:HG22	1.97	0.46
41:BG:202:GLU:O	41:BG:203:VAL:HB	2.15	0.46
46:BL:168:ARG:HH22	81:B5:769:G:H4'	1.81	0.46
47:BM:125:LYS:NZ	81:B5:3215:A:OP2	2.49	0.46
48:BN:67:ARG:HB2	81:B5:1545:A:OP2	2.16	0.46
52:BR:143:ILE:HG22	52:BR:144:GLN:N	2.31	0.46
58:BX:131:ASP:O	58:BX:135:ILE:HG22	2.15	0.46
58:BX:67:ILE:HB	58:BX:83:VAL:HG12	1.97	0.46
84:CN:2156:A:H2'	84:CN:2157:C:O4'	2.16	0.46
1:A0:84:VAL:HG13	1:A0:85:ARG:N	2.31	0.46
3:A2:12:VAL:HA	3:A2:30:VAL:HG12	1.97	0.46
10:AB:109:LYS:HD3	10:AB:109:LYS:HA	1.75	0.46
10:AB:81:PHE:HD1	10:AB:82:ARG:HG3	1.81	0.46
13:AE:3:ARG:NH2	80:B2:94:U:OP2	2.49	0.46
13:AE:42:LEU:HD22	13:AE:47:PHE:HB2	1.98	0.46
15:AG:163:THR:HA	15:AG:168:THR:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:27:PHE:CD1	80:B2:301:A:H4'	2.51	0.46
17:AI:9:HIS:O	17:AI:10:LYS:CB	2.64	0.46
14:AF:25:LEU:HB2	25:AQ:27:GLY:HA3	1.98	0.46
14:AF:109:LYS:HD3	80:B2:1473:U:O4'	2.16	0.46
1:A0:75:VAL:CG1	80:B2:1793:G:N1	2.79	0.46
80:B2:1657:U:C4	89:B2:1968:OHX:N2	2.84	0.46
80:B2:287:G:O2'	80:B2:288:A:P	2.74	0.46
31:AW:30:SER:O	80:B2:636:A:H4'	2.16	0.46
80:B2:920:U:H2'	80:B2:921:U:O4'	2.15	0.46
81:B5:1012:G:O2'	81:B5:1013:G:H5'	2.16	0.46
37:BC:197:ARG:NH1	81:B5:1381:A:OP1	2.49	0.46
81:B5:1614:C:H2'	81:B5:1615:C:H6	1.81	0.46
81:B5:1655:G:H5''	81:B5:1655:G:C8	2.51	0.46
81:B5:2437:G:H5'	81:B5:2437:G:C8	2.44	0.46
81:B5:3159:C:H4'	81:B5:3395:G:C5	2.51	0.46
83:B8:10:A:H2'	83:B8:11:C:C6	2.51	0.46
83:B8:84:C:H5'	83:B8:85:G:H5'	1.97	0.46
35:BA:208:ASP:OD1	81:B5:912:G:C2	2.58	0.46
35:BA:42:ARG:NH2	81:B5:2799:A:H1'	106.80	0.46
36:BB:68:HIS:CD2	36:BB:69:LYS:HG3	2.50	0.46
36:BB:53:MET:HG2	36:BB:77:THR:HB	1.97	0.46
36:BB:81:THR:CG2	36:BB:81:THR:O	2.64	0.46
38:BD:211:LEU:HD13	38:BD:219:PHE:CA	2.46	0.46
41:BG:60:ARG:HH21	81:B5:1616:U:C4'	50.94	0.46
43:BI:55:ASN:O	43:BI:131:ILE:HG12	2.16	0.46
37:BC:302:ALA:HB2	51:BQ:39:ARG:CZ	2.45	0.46
15:AG:10:ASN:CA	57:BW:80:ARG:CB	2.83	0.46
79:CL:91:ALA:HB2	79:CL:153:ILE:HD13	1.97	0.46
84:CN:2185:C:C4	84:CN:2186:G:C8	3.04	0.46
7:A6:201:THR:HG21	7:A6:242:SER:HA	1.98	0.45
7:A6:44:SER:OG	7:A6:59:ARG:HB2	2.16	0.45
13:AE:42:LEU:HD12	13:AE:109:PHE:CB	2.45	0.45
13:AE:163:ASP:HB3	13:AE:166:SER:O	2.16	0.45
14:AF:30:PRO:O	14:AF:33:VAL:HB	2.17	0.45
15:AG:132:ARG:C	80:B2:68:A:N6	2.56	0.45
20:AL:98:ASN:HD22	31:AW:79:PHE:HD2	1.59	0.45
23:AO:120:PRO:HG2	80:B2:888:U:OP1	2.17	0.45
23:AO:132:ARG:HG3	23:AO:132:ARG:HH11	1.81	0.45
27:AS:145:ARG:HB3	27:AS:146:ALA:H	1.58	0.45
34:AZ:42:LEU:O	34:AZ:46:LYS:HB2	2.16	0.45
11:AC:99:LYS:NZ	80:B2:1300:A:OP1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1541:G:C6	80:B2:1542:G:N1	2.84	0.45
1:A0:75:VAL:HG21	80:B2:1793:G:O6	2.16	0.45
80:B2:694:U:H2'	80:B2:695:U:C5	2.52	0.45
81:B5:1225:A:C4	81:B5:1287:A:O3'	2.67	0.45
81:B5:1352:A:H1'	81:B5:1353:U:H5'	1.97	0.45
81:B5:2180:G:H2'	81:B5:2181:C:C6	2.51	0.45
54:BT:90:ASN:O	81:B5:2735:U:O2'	2.33	0.45
42:BH:168:ARG:NH1	81:B5:2894:C:OP1	2.48	0.45
36:BB:120:LYS:NZ	81:B5:3001:C:OP1	2.49	0.45
81:B5:3177:G:O2'	81:B5:3179:U:OP1	2.22	0.45
81:B5:3287:U:N3	81:B5:3288:G:N7	2.64	0.45
81:B5:709:A:H2'	81:B5:710:A:O4'	2.16	0.45
39:BE:162:SER:HB2	81:B5:3219:G:H1	1.79	0.45
42:BH:75:VAL:HG22	42:BH:78:MET:CE	2.46	0.45
44:BJ:13:LYS:HE2	44:BJ:132:ASN:ND2	2.31	0.45
50:BP:133:HIS:CD2	81:B5:880:G:O6	2.68	0.45
60:BZ:46:ILE:HD11	60:BZ:49:TYR:CE2	2.51	0.45
79:CL:17:ASN:O	79:CL:18:LYS:C	2.54	0.45
1:A0:50:VAL:O	1:A0:53:LEU:HB3	2.16	0.45
3:A2:46:GLY:HA3	14:AF:166:ARG:HB2	1.98	0.45
7:A6:16:HIS:CD2	7:A6:20:VAL:HG22	2.52	0.45
8:A7:40:PRO:HD2	81:B5:2668:U:OP1	2.16	0.45
14:AF:100:ASN:O	14:AF:102:ARG:N	2.49	0.45
15:AG:137:ARG:HD3	15:AG:177:ARG:HE	1.80	0.45
15:AG:215:ARG:HA	15:AG:215:ARG:HD3	1.57	0.45
18:AJ:109:LEU:HD22	18:AJ:113:VAL:HG23	1.98	0.45
33:AY:120:GLY:HA2	80:B2:85:A:C4'	2.46	0.45
80:B2:1111:G:C2'	80:B2:1112:G:H5'	2.46	0.45
80:B2:1138:A:H2'	80:B2:1139:A:C8	2.51	0.45
80:B2:1519:U:H2'	80:B2:1520:U:C5	2.51	0.45
15:AG:2:LYS:NZ	80:B2:153:G:O3'	2.46	0.45
25:AQ:72:GLY:CA	80:B2:1608:U:H5''	2.43	0.45
80:B2:1698:N:O2'	80:B2:1699:N:P	2.74	0.45
89:B2:2016:OHX:N6	89:B2:2073:OHX:N5	2.64	0.45
20:AL:133:LYS:CD	80:B2:338:C:OP2	2.61	0.45
80:B2:381:C:H1'	80:B2:756:A:C2	2.51	0.45
80:B2:491:C:H42	80:B2:496:G:H1	1.63	0.45
5:A4:10:ARG:HH21	80:B2:567:A:P	2.39	0.45
15:AG:133:LEU:HD11	80:B2:66:U:C1'	2.46	0.45
15:AG:169:TYR:CZ	80:B2:73:U:H5	2.34	0.45
81:B5:1354:G:C6	81:B5:1358:C:H5'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:174:C:H2'	81:B5:175:C:C6	2.51	0.45
81:B5:2298:U:O4	81:B5:2923:U:H5	2.00	0.45
81:B5:244:G:C6	81:B5:245:U:C4	3.04	0.45
8:A7:51:ARG:CD	81:B5:2677:G:C3'	2.95	0.45
81:B5:90:C:C2'	81:B5:91:G:H5'	2.47	0.45
82:B7:3:U:H2'	82:B7:4:U:C6	2.51	0.45
36:BB:130:PHE:CE2	81:B5:3149:G:H4'	2.51	0.45
36:BB:244:ARG:HH11	36:BB:244:ARG:HG2	1.81	0.45
47:BM:55:ARG:NH2	47:BM:77:ARG:HA	2.31	0.45
54:BT:48:ILE:HG13	54:BT:94:GLU:HG2	1.97	0.45
86:CW:47:U:H3'	86:CW:48:C:C5'	2.46	0.45
1:A0:97:PRO:HA	80:B2:1798:U:C5	2.51	0.45
9:AA:88:LYS:HA	9:AA:88:LYS:HE2	1.97	0.45
15:AG:64:LYS:O	15:AG:67:VAL:HG22	2.17	0.45
24:AP:126:VAL:CG1	24:AP:127:ARG:H	2.19	0.45
30:AV:50:TYR:HB2	30:AV:52:THR:HG22	1.99	0.45
31:AW:25:VAL:O	31:AW:62:VAL:HA	2.16	0.45
80:B2:1217:A:C8	80:B2:1217:A:H5'	2.51	0.45
80:B2:192:U:O2'	80:B2:193:U:O4'	2.33	0.45
80:B2:260:U:H5'	80:B2:261:U:H5''	1.98	0.45
80:B2:730:G:H2'	80:B2:730:G:N3	2.31	0.45
80:B2:707:A:H2	80:B2:731:C:H2'	1.81	0.45
35:BA:68:LYS:HE2	81:B5:1650:G:OP1	2.17	0.45
81:B5:1710:C:H2'	81:B5:1711:C:H6	1.81	0.45
81:B5:1801:U:H2'	81:B5:1802:C:C6	2.52	0.45
81:B5:1816:A:C2'	81:B5:1817:G:H5''	2.46	0.45
81:B5:2304:C:C5	81:B5:2305:G:C6	3.04	0.45
81:B5:3163:A:O2'	81:B5:3164:C:H5'	2.16	0.45
35:BA:19:HIS:CE1	81:B5:823:C:OP1	2.69	0.45
82:B7:22:A:C6	82:B7:23:A:C6	3.04	0.45
35:BA:137:ILE:HG12	35:BA:147:ARG:HG3	1.98	0.45
35:BA:69:TYR:O	81:B5:1650:G:H5'	2.16	0.45
37:BC:78:GLY:O	37:BC:85:SER:HB3	2.15	0.45
41:BG:99:PRO:HG2	41:BG:190:VAL:HG13	1.99	0.45
41:BG:219:ASP:O	41:BG:223:ALA:HB3	2.16	0.45
42:BH:139:ASN:N	42:BH:139:ASN:OD1	2.47	0.45
49:BO:128[A]:ARG:HD3	49:BO:128[A]:ARG:HA	1.50	0.45
50:BP:105:LYS:HB3	50:BP:107:LEU:HD13	1.97	0.45
51:BQ:8:LYS:HE3	51:BQ:8:LYS:HB2	1.53	0.45
60:BZ:46:ILE:HD13	60:BZ:49:TYR:N	2.32	0.45
60:BZ:54:THR:HG22	60:BZ:57:HIS:NE2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CN:2172:G:C6	84:CN:2173:G:C5	3.04	0.45
2:A1:36:LYS:HE2	2:A1:43:ILE:HG21	1.99	0.45
7:A6:149:ASP:HB2	7:A6:175:ASP:HB3	1.97	0.45
8:A7:81:THR:CB	86:CW:29:G:C4'	2.90	0.45
12:AD:57:ASP:OD1	12:AD:57:ASP:N	2.50	0.45
15:AG:4:ASN:HA	15:AG:15:THR:HG22	1.98	0.45
16:AH:76:LYS:HE2	16:AH:76:LYS:HB3	1.86	0.45
17:AI:66:SER:HB3	17:AI:73:SER:CB	2.46	0.45
8:A7:167:UNK:O	21:AM:127:GLY:HA2	2.16	0.45
22:AN:142:GLU:HG3	22:AN:145:THR:HG23	1.98	0.45
23:AO:25:ASP:OD1	23:AO:26:THR:N	2.44	0.45
26:AR:106:THR:O	26:AR:110:VAL:HG23	2.17	0.45
30:AV:71:ARG:HG3	30:AV:83:TRP:CZ2	2.52	0.45
31:AW:90:THR:HB	31:AW:94:LEU:HD12	1.98	0.45
32:AX:108:GLY:O	32:AX:109:ARG:HG2	2.16	0.45
34:AZ:54:VAL:HG13	34:AZ:57:TYR:HD2	1.81	0.45
80:B2:1281:G:H2'	80:B2:1282:U:H6	1.82	0.45
29:AU:53:LYS:CB	80:B2:1345:A:H4'	2.34	0.45
80:B2:1686:C:C4	80:B2:1687:U:C4	3.05	0.45
80:B2:1649:G:N7	89:B2:1929:OHX:N1	2.64	0.45
80:B2:1417:A:OP1	89:B2:1950:OHX:N5	2.49	0.45
80:B2:196:G:O2'	80:B2:197:A:OP2	2.34	0.45
81:B5:398:A:O2'	81:B5:1416:C:OP1	2.20	0.45
81:B5:1876:U:C5'	81:B5:1876:U:C6	2.99	0.45
81:B5:2514:U:OP1	81:B5:2514:U:H6	1.99	0.45
35:BA:85:GLY:HA3	81:B5:2554:A:C8	2.51	0.45
36:BB:20:LYS:HB2	81:B5:2991:A:P	2.56	0.45
81:B5:3242:G:N2	81:B5:3245:A:H5''	2.30	0.45
81:B5:578:A:H5''	81:B5:579:G:O5'	2.15	0.45
81:B5:611:A:OP2	81:B5:611:A:H4'	2.16	0.45
81:B5:92:G:H5''	81:B5:94:G:N7	2.32	0.45
41:BG:56:VAL:HG13	83:B8:150:G:H4'	1.98	0.45
48:BN:140:LYS:HB2	81:B5:126:U:O3'	2.17	0.45
48:BN:192:LYS:O	48:BN:196:THR:OG1	2.35	0.45
50:BP:26:PHE:HE1	50:BP:120:ASN:HA	1.81	0.45
84:CN:2135:A:H2'	84:CN:2188:U:O2'	2.17	0.45
3:A2:49:ARG:HG2	3:A2:52:ASP:OD1	2.16	0.45
5:A4:18:THR:HG21	80:B2:584:C:C1'	2.41	0.45
6:A5:108:VAL:HB	6:A5:114:VAL:HG22	1.98	0.45
8:A7:102:THR:HG23	8:A7:105:LYS:HB2	1.98	0.45
8:A7:87:THR:O	8:A7:88:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:140:ARG:NH2	11:AC:229:LEU:HD22	2.32	0.45
15:AG:53:SER:CB	80:B2:163:G:C4'	2.94	0.45
15:AG:72:ARG:HG2	15:AG:98:ARG:HA	1.99	0.45
16:AH:16:LEU:HD22	16:AH:58:LEU:HD21	1.99	0.45
17:AI:29:LEU:HD23	17:AI:29:LEU:C	2.36	0.45
18:AJ:118:LEU:HG	18:AJ:158:PHE:CZ	2.51	0.45
23:AO:24:ASN:HB3	80:B2:902:G:N7	2.32	0.45
80:B2:1363:U:O2	80:B2:1363:U:H2'	2.16	0.45
28:AT:43:ASN:OD1	80:B2:1477:G:OP1	2.34	0.45
89:A3:102:OHX:N6	89:B2:1940:OHX:N4	2.65	0.45
89:AL:201:OHX:N3	89:B2:1996:OHX:N6	2.64	0.45
80:B2:231:U:O2'	80:B2:232:U:H5''	2.17	0.45
80:B2:702:G:H4'	80:B2:702:G:OP1	2.17	0.45
80:B2:915:A:H5'	80:B2:916:U:OP2	2.17	0.45
80:B2:918:U:H2'	80:B2:919:A:H8	1.81	0.45
81:B5:1024:G:H5''	81:B5:1025:A:OP2	2.17	0.45
54:BT:129:LYS:NZ	81:B5:1097:G:H5'	2.31	0.45
80:B2:1646:C:H5'	81:B5:2258:U:H3	1.81	0.45
81:B5:2282:U:O2	81:B5:2310:U:H4'	2.16	0.45
81:B5:3195:U:C1'	81:B5:3196:U:OP1	2.65	0.45
38:BD:274:GLN:HB3	82:B7:61:G:O4'	2.16	0.45
38:BD:126:GLU:HA	38:BD:196:ARG:HD2	1.97	0.45
43:BI:178:ARG:HG2	43:BI:178:ARG:H	1.51	0.45
43:BI:210:ILE:HA	43:BI:217:PHE:HE1	1.79	0.45
47:BM:47:ASP:C	47:BM:49:PRO:HD3	2.36	0.45
52:BR:114:LYS:HD3	81:B5:2093:A:H61	1.77	0.45
79:CL:45:ALA:HB3	79:CL:171:ILE:HG22	1.99	0.45
2:A1:20:LYS:CE	80:B2:958:U:OP2	2.65	0.45
2:A1:63:LEU:HA	2:A1:63:LEU:HD23	1.72	0.45
9:AA:120:LEU:HD12	9:AA:121:VAL:H	1.81	0.45
9:AA:124:THR:HG22	9:AA:174:TRP:HZ2	1.82	0.45
9:AA:33:GLN:C	9:AA:34:GLU:HG2	2.36	0.45
11:AC:53:ILE:HG23	11:AC:56:ILE:HD12	1.98	0.45
13:AE:212:ASP:OD1	13:AE:214:LEU:N	2.49	0.45
14:AF:198:LEU:HA	14:AF:198:LEU:HD23	1.69	0.45
18:AJ:108:ARG:HH11	18:AJ:110:GLN:HG2	1.82	0.45
18:AJ:163:PRO:HG2	18:AJ:164:PHE:CD2	2.51	0.45
19:AK:25:LYS:HD3	19:AK:59:PHE:HZ	1.80	0.45
27:AS:139:LYS:HG2	80:B2:1461:C:H41	1.81	0.45
31:AW:83:ILE:HG13	31:AW:117:ARG:HH12	1.80	0.45
80:B2:1294:G:O2'	80:B2:1321:A:N1	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:28:PHE:CE1	80:B2:1389:C:H6	2.28	0.45
80:B2:1780:G:HO2'	81:B5:2262:A:C4'	2.03	0.45
89:B2:1982:OHX:N5	89:B2:2079:OHX:N3	2.64	0.45
17:AI:170:SER:OG	80:B2:209:U:O3'	2.34	0.45
80:B2:489:C:O5'	80:B2:489:C:H6	1.99	0.45
35:BA:174:ARG:CG	81:B5:1793:C:O4'	2.64	0.45
81:B5:3163:A:C6	81:B5:3164:C:N4	2.85	0.45
81:B5:958:C:C4	81:B5:960:U:H1'	2.51	0.45
83:B8:62:C:H4'	83:B8:63:G:O5'	2.16	0.45
41:BG:26:LEU:HD23	41:BG:26:LEU:HA	1.84	0.45
44:BJ:107:ASP:O	44:BJ:108:GLU:HG2	2.17	0.45
47:BM:121:MET:HE1	81:B5:3214:U:H2'	1.98	0.45
57:BW:102:LYS:HG2	57:BW:105:ARG:NH2	2.32	0.45
59:BY:46:LYS:HB3	79:CL:46:LYS:HB3	133.00	0.45
85:CP:77:THR:H	85:CP:78:PRO:CD	2.29	0.45
12:AD:92:GLN:O	12:AD:92:GLN:NE2	2.46	0.45
23:AO:120:PRO:HB2	80:B2:888:U:P	2.57	0.45
27:AS:11:PHE:C	27:AS:11:PHE:CD1	2.90	0.45
32:AX:73:ARG:NE	32:AX:84:THR:HG22	2.27	0.45
33:AY:105:ARG:NE	80:B2:444:C:OP2	2.50	0.45
80:B2:1051:G:O2'	80:B2:1052:U:P	2.75	0.45
29:AU:74:GLU:HG2	80:B2:1429:G:O4'	2.17	0.45
80:B2:1686:C:C2'	80:B2:1687:U:C6	2.79	0.45
80:B2:1727:G:H2'	80:B2:1728:A:C8	2.51	0.45
80:B2:240:U:OP1	80:B2:240:U:H4'	2.16	0.45
80:B2:68:A:O2'	80:B2:69:G:OP2	2.25	0.45
80:B2:819:G:HO2'	80:B2:820:U:H5'	1.81	0.45
22:AN:71:ILE:HD13	80:B2:961:U:H5''	1.99	0.45
81:B5:1109:U:H2'	81:B5:1110:U:O4'	2.17	0.45
50:BP:66:SER:HB2	81:B5:1448:U:H5''	1.98	0.45
81:B5:1567:U:H2'	81:B5:1568:U:C4'	2.47	0.45
81:B5:1658:G:H2'	81:B5:1659:U:C6	2.50	0.45
81:B5:173:G:O2'	81:B5:174:C:H6	1.96	0.45
81:B5:183:G:H2'	81:B5:184:U:O4'	2.17	0.45
81:B5:247:C:N3	81:B5:248:U:H1'	2.32	0.45
81:B5:2567:C:H42	81:B5:2568:C:H41	1.64	0.45
81:B5:2770:G:H2'	81:B5:2771:U:H5'	1.99	0.45
43:BI:158:LYS:O	81:B5:2854:U:H5'	2.17	0.45
36:BB:30:LYS:NZ	81:B5:3139:A:OP2	2.40	0.45
81:B5:312:C:O2'	81:B5:313:A:H5'	2.16	0.45
38:BD:63:GLN:NE2	82:B7:5:G:O2'	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:236:GLY:HA2	81:B5:2184:U:C4'	2.47	0.45
36:BB:229:VAL:HG13	36:BB:235:THR:HG21	1.98	0.45
37:BC:148:ILE:HA	37:BC:149:PRO:C	2.37	0.45
38:BD:265:TYR:CD2	82:B7:120:C:N3	2.85	0.45
41:BG:136:LEU:HB2	81:B5:147:U:C5'	2.46	0.45
43:BI:24:ARG:HG3	43:BI:24:ARG:H	1.43	0.45
47:BM:133:LYS:HZ2	81:B5:3227:A:HO2'	1.57	0.45
49:BO:25[B]:LYS:HG3	81:B5:1175:C:H5''	1.99	0.45
51:BQ:151:ARG:HD2	51:BQ:151:ARG:HH11	1.57	0.45
54:BT:68:THR:HG22	54:BT:71:SER:N	2.27	0.45
59:BY:83:ASP:O	59:BY:84:LYS:HB2	2.17	0.45
80:B2:51:A:H1'	85:CP:242:GLY:HA3	1.66	0.45
80:B2:414:C:C2	85:CP:289:LEU:CD1	2.69	0.45
85:CP:19:THR:CA	90:CP:401:GCP:O3A	2.59	0.45
4:A3:42:CYS:O	4:A3:45:GLU:N	2.49	0.45
12:AD:203:PRO:HB3	80:B2:1332:C:C5'	2.43	0.45
15:AG:211:LEU:O	15:AG:215:ARG:HB2	2.16	0.45
22:AN:15:ALA:O	80:B2:959:U:C5'	2.63	0.45
4:A3:52:PHE:HB3	29:AU:82:TYR:HB3	1.99	0.45
32:AX:88:PRO:O	32:AX:89:ASN:HB2	2.17	0.45
33:AY:35:VAL:O	33:AY:36:SER:HB3	2.16	0.45
80:B2:1082:C:H2'	80:B2:1083:G:H5'	1.98	0.45
80:B2:1396:U:H2'	80:B2:1397:U:C6	2.51	0.45
80:B2:1537:C:N4	89:B2:2046:OHX:N6	2.64	0.45
80:B2:1578:U:O2'	80:B2:1579:U:H5'	2.17	0.45
15:AG:53:SER:C	80:B2:163:G:C5'	2.71	0.45
80:B2:1686:C:C2	80:B2:1687:U:N1	2.85	0.45
33:AY:105:ARG:HB2	80:B2:443:C:OP1	2.16	0.45
18:AJ:176:ASN:ND2	80:B2:511:A:P	2.88	0.45
80:B2:72:A:C2	80:B2:73:U:C4	3.05	0.45
80:B2:782:U:C4'	80:B2:783:G:OP2	2.64	0.45
80:B2:960:U:H2'	80:B2:961:U:H6	1.81	0.45
81:B5:1103:A:H3'	81:B5:1104:G:H5'	1.99	0.45
81:B5:1204:A:H2'	81:B5:1205:A:H5'	1.98	0.45
81:B5:1229:G:O6	81:B5:1230:G:C5	2.70	0.45
81:B5:138:U:H2'	81:B5:139:G:C8	2.52	0.45
60:BZ:115:LYS:HD2	81:B5:1629:U:H1'	1.98	0.45
81:B5:1686:U:O2	81:B5:1688:U:H1'	2.17	0.45
81:B5:181:U:O5'	81:B5:181:U:H6	2.00	0.45
81:B5:3276:G:H4'	81:B5:3277:U:OP1	2.17	0.45
81:B5:406:G:H1'	83:B8:16:G:N2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:325:LYS:HG2	36:BB:326:GLY:N	2.32	0.45
42:BH:92:TYR:N	42:BH:92:TYR:CD1	2.84	0.45
46:BL:26:PHE:HB2	83:B8:28:C:O3'	2.17	0.45
55:BU:29:ASP:O	55:BU:32:SER:N	2.50	0.45
1:A0:38:ARG:NH2	1:A0:83:ILE:HG21	2.32	0.45
2:A1:51:GLN:HA	80:B2:871:G:C4'	2.47	0.45
7:A6:43:ILE:HD13	7:A6:60:SER:HA	1.98	0.45
8:A7:26:VAL:HG11	44:BJ:49:LYS:NZ	2.32	0.45
8:A7:84:LYS:HD3	8:A7:86:ASN:HB2	1.98	0.45
10:AB:165:ARG:CZ	80:B2:946:U:C5'	2.77	0.45
10:AB:55:LYS:HA	10:AB:55:LYS:HD3	1.67	0.45
12:AD:216:PRO:HB2	12:AD:217:ILE:H	1.58	0.45
15:AG:73:ILE:HD12	15:AG:75:LEU:HD21	1.98	0.45
18:AJ:132:ARG:HG3	18:AJ:132:ARG:HH11	1.82	0.45
28:AT:65:ILE:HG23	28:AT:71:VAL:HG22	1.99	0.45
31:AW:105:THR:HG23	31:AW:110:ILE:CG1	2.44	0.45
80:B2:1111:G:H2'	80:B2:1112:G:H5'	1.99	0.45
80:B2:1166:A:H2'	80:B2:1167:G:O4'	2.17	0.45
80:B2:1277:G:H2'	80:B2:1278:G:O4'	2.17	0.45
80:B2:1629:G:H2'	80:B2:1630:U:H6	1.80	0.45
17:AI:142:LYS:NZ	80:B2:187:G:N7	2.57	0.45
20:AL:40:LEU:HD22	80:B2:246:G:C2	2.52	0.45
17:AI:43:ILE:CB	80:B2:260:U:H5	2.29	0.45
80:B2:417:A:H4'	80:B2:418:G:O5'	2.17	0.45
80:B2:595:G:H2'	80:B2:596:C:C6	2.52	0.45
80:B2:725:U:H2'	80:B2:726:C:O4'	2.16	0.45
80:B2:861:U:H5'	80:B2:862:A:OP2	2.16	0.45
35:BA:9:ARG:NH2	81:B5:1430:U:H2'	66.35	0.45
81:B5:1564:U:H2'	81:B5:1565:G:H8	1.80	0.45
81:B5:1565:G:C2	81:B5:1566:A:H1'	2.51	0.45
81:B5:173:G:H1'	81:B5:174:C:H5'	1.98	0.45
81:B5:182:U:OP1	81:B5:182:U:H4'	2.16	0.45
81:B5:2681:U:O2'	81:B5:2682:C:H5'	2.16	0.45
81:B5:2949:U:C5	81:B5:2950:G:C6	3.05	0.45
51:BQ:147:ARG:HH21	81:B5:670:C:P	2.40	0.45
81:B5:92:G:H5'	81:B5:93:C:H5''	1.98	0.45
38:BD:272:TYR:CE2	82:B7:22:A:N9	2.85	0.45
58:BX:48:SER:CB	83:B8:136:G:OP1	2.65	0.45
83:B8:154:C:H2'	83:B8:155:A:O4'	2.16	0.45
36:BB:188:ILE:HA	36:BB:191:LYS:HD2	1.98	0.45
37:BC:182:LEU:HA	37:BC:182:LEU:HD13	1.71	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:95:TRP:HZ3	38:BD:156:GLY:O	2.00	0.45
40:BF:179:LEU:HD22	40:BF:183:ASP:OD2	2.17	0.45
42:BH:94:TYR:CD2	42:BH:98:PRO:HA	2.52	0.45
43:BI:170:LYS:HG3	43:BI:175:ASN:HA	1.98	0.45
47:BM:50:LYS:HD3	47:BM:91:CYS:SG	2.56	0.45
48:BN:109:ARG:O	83:B8:140:G:O2'	2.25	0.45
51:BQ:55:SER:CB	81:B5:671:U:H5''	2.47	0.45
56:BV:120:LYS:H	56:BV:137:VAL:HG23	1.81	0.45
56:BV:27:ASP:HA	56:BV:113:ALA:O	2.17	0.45
84:CN:2158:C:N4	84:CN:2175:G:O6	2.50	0.45
5:A4:47:VAL:HG22	5:A4:48:THR:H	1.82	0.45
7:A6:147:HIS:CE1	7:A6:179:LYS:HD2	2.52	0.45
7:A6:43:ILE:HA	7:A6:59:ARG:O	2.16	0.45
9:AA:48:ILE:HG21	9:AA:161:PRO:HB2	1.98	0.45
10:AB:110:LEU:CD2	10:AB:213:ARG:HD2	2.46	0.45
14:AF:166:ARG:HH12	14:AF:170:GLN:HE22	1.64	0.45
15:AG:108:VAL:HG23	80:B2:154:G:C4'	2.47	0.45
16:AH:22:GLN:HA	16:AH:25:VAL:HG23	1.99	0.45
24:AP:20:VAL:HG13	24:AP:24:LYS:HD2	1.98	0.45
26:AR:81:LYS:HB2	26:AR:81:LYS:HE3	1.72	0.45
80:B2:1060:U:H5''	80:B2:1061:A:OP2	2.16	0.45
80:B2:1316:G:H2'	80:B2:1317:C:H6	1.81	0.45
80:B2:139:C:H4'	80:B2:140:A:O5'	2.17	0.45
25:AQ:124:PRO:CA	80:B2:1585:U:OP1	2.56	0.45
80:B2:47:A:N1	80:B2:386:G:H1'	2.32	0.45
80:B2:501:U:H2'	80:B2:502:U:C6	2.51	0.45
80:B2:779:U:O2'	80:B2:780:A:H5''	2.16	0.45
10:AB:138:PHE:HE2	80:B2:885:G:H5'	1.82	0.45
81:B5:1494:U:H4'	81:B5:1495:U:O5'	2.16	0.45
81:B5:1813:A:O2'	81:B5:1816:A:N3	2.47	0.45
81:B5:183:G:H3'	81:B5:183:G:C8	2.52	0.45
46:BL:45:LYS:HA	81:B5:241:G:O2'	2.17	0.45
81:B5:3228:C:HO2'	81:B5:3229:G:P	2.40	0.45
81:B5:3245:A:H2	81:B5:3246:G:C2	2.35	0.45
81:B5:3330:A:C8	81:B5:3330:A:C5'	3.00	0.45
81:B5:3330:A:C5'	81:B5:3330:A:H8	2.29	0.45
81:B5:412:G:H2'	81:B5:413:U:C6	2.53	0.45
81:B5:642:U:H6	81:B5:642:U:O5'	1.99	0.45
51:BQ:55:SER:HB2	81:B5:672:A:OP2	2.17	0.45
44:BJ:70:THR:OG1	82:B7:39:C:N3	2.37	0.45
41:BG:236:GLY:O	41:BG:237:ILE:HB	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:20:ASN:HB3	44:BJ:126:ASP:HB2	1.98	0.45
44:BJ:171:VAL:HG13	44:BJ:172:LEU:N	2.31	0.45
48:BN:111:ALA:HB3	81:B5:20:A:H1'	1.98	0.45
52:BR:101:VAL:HG21	81:B5:1948:G:C4'	2.45	0.45
60:BZ:46:ILE:HD12	60:BZ:47:GLU:N	2.32	0.45
79:CL:149:ILE:O	79:CL:153:ILE:HG13	2.17	0.45
85:CP:138:TRP:CD2	85:CP:153:GLN:OE1	2.70	0.45
2:A1:25:VAL:HG13	31:AW:55:ASP:HA	1.99	0.44
9:AA:202:TYR:O	9:AA:203:PHE:CG	2.70	0.44
12:AD:11:LEU:HD12	29:AU:86:ILE:HG12	1.99	0.44
12:AD:176:LEU:HD23	80:B2:1437:U:H5'	1.98	0.44
13:AE:22:LYS:HB2	80:B2:773:C:OP1	2.17	0.44
14:AF:25:LEU:HB2	14:AF:26:ALA:H	1.68	0.44
16:AH:39:ARG:N	16:AH:40:PRO:HD2	2.32	0.44
17:AI:8:ARG:C	17:AI:9:HIS:O	2.53	0.44
22:AN:22:ALA:HB1	22:AN:23:PRO:C	2.38	0.44
26:AR:59:LYS:HE2	80:B2:1393:C:OP2	2.17	0.44
29:AU:35:GLU:HG3	80:B2:1383:G:O2'	2.17	0.44
30:AV:11:LEU:HG	30:AV:11:LEU:H	1.34	0.44
80:B2:1238:A:OP2	89:B2:1925:OHX:N2	2.50	0.44
9:AA:109:ASN:HB2	80:B2:1294:G:O2'	2.17	0.44
89:B2:1918:OHX:N3	89:B2:2049:OHX:N1	2.65	0.44
89:A3:102:OHX:N5	89:B2:1940:OHX:N3	2.65	0.44
80:B2:492:A:H2'	80:B2:494:U:H5''	1.98	0.44
81:B5:1229:G:C5	81:B5:1230:G:C2	3.05	0.44
81:B5:1256:G:O2'	81:B5:1257:C:H5'	2.18	0.44
81:B5:163:C:H42	81:B5:258:G:H1	1.65	0.44
35:BA:187:HIS:CG	81:B5:1794:G:C6	3.05	0.44
56:BV:48:ARG:HG2	81:B5:2339:C:OP1	2.17	0.44
81:B5:2443:A:C2	84:CN:2208:G:C3'	2.98	0.44
81:B5:2768:U:H2'	81:B5:2769:A:C8	2.52	0.44
81:B5:2836:C:C5	81:B5:2852:C:N4	2.71	0.44
36:BB:53:MET:HE3	81:B5:3048:A:C5'	2.47	0.44
81:B5:620:U:H5''	81:B5:621:A:O5'	2.16	0.44
81:B5:731:U:H2'	81:B5:732:C:C6	2.52	0.44
41:BG:59:GLN:NE2	83:B8:150:G:O2'	2.48	0.44
35:BA:50:HIS:CD2	81:B5:1795:U:O2'	2.70	0.44
37:BC:322:GLN:CB	81:B5:608:A:H5'	2.47	0.44
40:BF:158:LYS:O	40:BF:203:TRP:HZ3	1.99	0.44
40:BF:229:PHE:C	40:BF:229:PHE:CD1	2.91	0.44
46:BL:80:VAL:HG12	46:BL:85:LEU:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BM:106:ARG:NH1	47:BM:106:ARG:HB2	4.44	0.44
52:BR:162:ARG:HH22	80:B2:848:C:H4'	0.81	0.44
57:BW:119:GLU:O	57:BW:122:ALA:HB3	2.17	0.44
59:BY:21:THR:CG2	79:CL:21:THR:CB	119.50	0.44
60:BZ:36:HIS:H	60:BZ:37:PRO:HD3	1.82	0.44
84:CN:2160:C:C2'	84:CN:2161:C:OP2	2.63	0.44
3:A2:16:LEU:HB2	3:A2:27:GLN:HB2	1.99	0.44
7:A6:211:ILE:HG22	7:A6:223:TRP:HD1	1.83	0.44
14:AF:109:LYS:HD2	80:B2:1473:U:C1'	2.41	0.44
15:AG:132:ARG:NH2	80:B2:68:A:H2'	2.32	0.44
15:AG:211:LEU:HD11	15:AG:215:ARG:NH2	2.32	0.44
17:AI:8:ARG:NH1	17:AI:19:ALA:O	2.49	0.44
24:AP:34:VAL:HG21	24:AP:45:PHE:HB2	1.99	0.44
25:AQ:47:LYS:NZ	25:AQ:114:ARG:HG2	2.33	0.44
26:AR:24:LEU:O	26:AR:25:THR:HG23	2.18	0.44
28:AT:135:ILE:HA	28:AT:138:GLN:HG3	1.99	0.44
30:AV:71:ARG:HB2	30:AV:83:TRP:CE2	2.51	0.44
80:B2:1253:U:H2'	80:B2:1254:U:H6	1.82	0.44
80:B2:1256:A:H4'	80:B2:1257:U:O5'	2.17	0.44
80:B2:1287:A:N6	80:B2:1329:A:H5'	2.32	0.44
80:B2:1480:G:H3'	80:B2:1481:C:H6	1.82	0.44
80:B2:156:A:H2'	80:B2:157:A:O4'	2.17	0.44
89:B2:1961:OHX:N3	89:B2:1963:OHX:N5	2.65	0.44
80:B2:416:A:H4'	80:B2:417:A:OP2	2.17	0.44
81:B5:1807:G:C6	81:B5:1808:G:N1	2.85	0.44
81:B5:1838:G:H4'	81:B5:1839:A:N3	2.32	0.44
81:B5:2174:G:H4'	81:B5:2175:U:O5'	2.17	0.44
80:B2:1758:U:H1'	81:B5:2255:A:N3	2.26	0.44
8:A7:32:SER:CB	81:B5:2692:A:O4'	2.64	0.44
81:B5:2872:A:O2'	81:B5:2873:U:OP1	2.35	0.44
81:B5:3279:A:H2'	81:B5:3280:U:H5'	1.99	0.44
51:BQ:43:PRO:HG2	81:B5:729:C:OP2	2.16	0.44
36:BB:232:ARG:NH2	81:B5:2989:U:O2'	2.51	0.44
38:BD:125:VAL:O	38:BD:125:VAL:HG12	2.17	0.44
38:BD:222:LEU:HD23	38:BD:222:LEU:HA	1.77	0.44
38:BD:91:GLY:CA	82:B7:48:U:OP1	2.64	0.44
40:BF:150:LYS:HE2	40:BF:151:ARG:NH1	2.33	0.44
44:BJ:137:ARG:NH2	82:B7:44:C:P	2.80	0.44
47:BM:40:ASP:HA	53:BS:143:PHE:CE2	2.52	0.44
80:B2:429:G:O2'	85:CP:243:PHE:CD1	2.63	0.44
9:AA:120:LEU:HD12	9:AA:142:PRO:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:9:ARG:CZ	80:B2:1489:U:P	3.05	0.44
15:AG:31:ARG:H	15:AG:34:GLN:HG3	1.82	0.44
18:AJ:83:VAL:HG23	18:AJ:85:VAL:HG23	1.99	0.44
21:AM:41:LEU:HD23	21:AM:41:LEU:HA	1.76	0.44
21:AM:84:ASN:O	21:AM:86:VAL:HG22	2.17	0.44
24:AP:22:LEU:HD13	24:AP:26:LEU:HD11	1.99	0.44
25:AQ:14:LYS:HE2	80:B2:1584:G:C5	2.52	0.44
14:AF:37:GLN:CG	25:AQ:53:LEU:HD13	2.41	0.44
33:AY:29:HIS:CE1	33:AY:68:LYS:N	2.85	0.44
80:B2:1057:U:H1'	80:B2:1058:U:H2'	1.99	0.44
80:B2:1231:U:C4	80:B2:1255:G:N2	2.85	0.44
80:B2:1393:C:H2'	80:B2:1394:G:O4'	2.18	0.44
80:B2:1683:C:HO2'	80:B2:1684:U:P	2.38	0.44
35:BA:211:HIS:ND1	81:B5:2185:G:P	2.86	0.44
81:B5:2224:A:H5''	81:B5:2225:U:OP2	2.17	0.44
81:B5:3085:G:H5''	81:B5:3086:A:OP1	2.17	0.44
35:BA:21:ARG:CD	81:B5:825:U:OP1	2.63	0.44
36:BB:243:HIS:CD2	81:B5:876:A:OP1	2.70	0.44
36:BB:296:THR:HG22	36:BB:297:SER:N	2.33	0.44
37:BC:131:VAL:O	37:BC:135:VAL:HG23	2.18	0.44
38:BD:94:ASN:CB	82:B7:47:C:P	3.05	0.44
42:BH:4:ILE:HD13	42:BH:4:ILE:HG21	1.66	0.44
42:BH:7:GLU:HA	42:BH:68:LEU:HD11	2.00	0.44
43:BI:82:ARG:CZ	81:B5:295:A:N3	132.07	0.44
48:BN:112:ASN:ND2	81:B5:18:G:N2	2.65	0.44
53:BS:155:ARG:HD3	53:BS:172:TYR:CD2	2.52	0.44
85:CP:310:ASN:HD22	85:CP:310:ASN:H	1.64	0.44
3:A2:19:THR:O	3:A2:23:GLY:HA2	2.17	0.44
8:A7:32:SER:HB3	81:B5:2706:G:HO2'	1.78	0.44
12:AD:84:ILE:HD13	12:AD:85:VAL:N	2.32	0.44
16:AH:181:ILE:HD12	16:AH:181:ILE:HA	1.72	0.44
16:AH:46:ILE:HD11	16:AH:60:ILE:HG12	1.98	0.44
17:AI:81:VAL:HG12	17:AI:91:VAL:HG22	1.98	0.44
20:AL:20:PHE:CB	80:B2:211:U:H5''	2.48	0.44
20:AL:78:THR:HG22	20:AL:84:ILE:CG2	2.46	0.44
25:AQ:135:ARG:HB3	80:B2:1581:C:C4'	2.44	0.44
31:AW:78:ARG:CD	31:AW:126:LEU:HD23	2.47	0.44
10:AB:149:GLN:NE2	80:B2:1066:C:H4'	2.32	0.44
80:B2:1225:U:O2	80:B2:1230:A:H4'	2.16	0.44
34:AZ:94:LYS:NZ	80:B2:1530:C:OP1	2.48	0.44
89:B2:1922:OHX:N1	89:B2:1977:OHX:N3	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:277:U:H2'	80:B2:278:U:OP1	2.17	0.44
13:AE:8:HIS:CE1	80:B2:449:C:C4'	3.00	0.44
13:AE:19:LEU:CD2	80:B2:788:A:H2'	2.44	0.44
23:AO:37:GLU:CA	80:B2:895:G:H4'	2.44	0.44
10:AB:115:ARG:C	80:B2:931:C:H4'	2.37	0.44
81:B5:1456:A:H4'	81:B5:1457:U:O5'	2.17	0.44
81:B5:1815:U:O2'	81:B5:1816:A:P	2.72	0.44
38:BD:146:LEU:HD12	81:B5:2746:A:N3	2.32	0.44
40:BF:67:ARG:NH2	81:B5:517:G:H5''	2.32	0.44
81:B5:622:A:H2'	81:B5:623:U:O4'	2.17	0.44
38:BD:270:LYS:CG	82:B7:2:G:H5'	2.42	0.44
46:BL:26:PHE:HB2	83:B8:29:U:P	2.58	0.44
43:BI:174:THR:OG1	43:BI:175:ASN:N	2.48	0.44
43:BI:98:ARG:HH21	81:B5:1127:G:P	2.40	0.44
79:CL:96:GLY:O	79:CL:97:GLU:HG3	2.18	0.44
84:CN:2202:G:H2'	84:CN:2203:G:O5'	2.17	0.44
86:CW:55:U:C6	86:CW:57:G:N7	2.85	0.44
1:A0:75:VAL:HG21	80:B2:1793:G:C6	2.53	0.44
1:A0:87:ARG:HH12	80:B2:1796:C:C5'	2.27	0.44
6:A5:83:UNK:O	6:A5:84:UNK:HG3	2.18	0.44
10:AB:183:GLN:O	10:AB:187:LYS:HG3	2.17	0.44
10:AB:229:MET:HA	10:AB:232:HIS:CE1	2.52	0.44
14:AF:25:LEU:H	14:AF:25:LEU:HD22	1.82	0.44
14:AF:63:GLN:HB3	14:AF:64:VAL:H	1.70	0.44
15:AG:63:MET:O	80:B2:162:A:H4'	2.18	0.44
15:AG:67:VAL:HG23	15:AG:100:ALA:H	1.83	0.44
16:AH:91:ILE:HD12	16:AH:91:ILE:HA	1.88	0.44
19:AK:29:GLN:O	19:AK:30:ALA:HB3	2.18	0.44
24:AP:125:PRO:HG3	27:AS:129:TRP:CH2	2.53	0.44
28:AT:14:PHE:CZ	28:AT:132:LEU:HD23	2.50	0.44
29:AU:27:THR:HB	29:AU:88:LYS:CG	2.47	0.44
29:AU:50:LEU:CD2	29:AU:95:ALA:HB2	2.47	0.44
80:B2:105:A:H2'	80:B2:106:U:O4'	2.17	0.44
80:B2:1248:C:H2'	80:B2:1249:U:C6	2.52	0.44
80:B2:1617:U:H2'	80:B2:1618:C:C6	2.52	0.44
8:A7:94:HIS:NE2	80:B2:1638:G:OP1	2.44	0.44
80:B2:273:G:H1	80:B2:283:U:H3	1.65	0.44
80:B2:413:U:H2'	80:B2:414:C:C6	2.52	0.44
80:B2:489:C:N4	80:B2:497:G:H22	2.15	0.44
33:AY:33:ALA:CB	80:B2:533:U:H5'	2.47	0.44
80:B2:71:A:O3'	80:B2:72:A:H4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:11:LYS:NZ	80:B2:775:G:C6	2.85	0.44
33:AY:11:LYS:NZ	80:B2:776:G:O6	2.48	0.44
80:B2:960:U:H2'	80:B2:961:U:C6	2.53	0.44
49:BO:18[B]:ARG:NH1	81:B5:1314:C:O3'	2.51	0.44
81:B5:1783:U:H2'	81:B5:1784:G:C8	2.53	0.44
81:B5:1942:U:H2'	81:B5:1943:C:O4'	2.18	0.44
81:B5:2209:U:H1'	81:B5:2210:G:H5''	1.99	0.44
81:B5:3362:A:C2	81:B5:3363:U:C2	3.06	0.44
81:B5:29:C:H4'	81:B5:62:A:H4'	2.00	0.44
38:BD:277:LEU:CD1	82:B7:62:U:H5''	2.48	0.44
35:BA:246:LEU:HD13	81:B5:2153:U:OP1	2.17	0.44
36:BB:106:TRP:CH2	36:BB:161:LEU:HD13	2.52	0.44
42:BH:90:MET:O	42:BH:143:GLU:O	2.34	0.44
42:BH:161:LEU:O	42:BH:164:ILE:HG22	2.18	0.44
44:BJ:92:ARG:NH1	44:BJ:92:ARG:HG2	2.26	0.44
46:BL:119:TYR:HD1	46:BL:145:PHE:CE2	2.35	0.44
48:BN:113:LEU:HD11	83:B8:142:C:H5'	1.99	0.44
52:BR:170:ARG:NH2	89:BR:201:OHX:N3	2.58	0.44
52:BR:90:PRO:CD	81:B5:1779:C:N3	2.81	0.44
84:CN:2129:C:H6	84:CN:2129:C:H5''	1.82	0.44
85:CP:26:ARG:HH21	85:CP:45:THR:HG23	1.82	0.44
5:A4:39:LEU:HD12	5:A4:43:ARG:NH2	2.33	0.44
9:AA:11:PRO:O	9:AA:15:GLN:HG3	2.18	0.44
10:AB:205:PHE:HA	10:AB:206:PRO:HD2	1.71	0.44
11:AC:165:VAL:HA	11:AC:201:ASN:O	2.17	0.44
20:AL:91:LEU:HA	20:AL:91:LEU:HD23	1.79	0.44
23:AO:85:ALA:N	23:AO:119:THR:HG22	2.18	0.44
24:AP:12:PHE:CD1	44:BJ:85:LYS:CE	2.88	0.44
24:AP:82:ASN:CB	80:B2:1557:U:O4	2.66	0.44
28:AT:118:PRO:O	28:AT:119:LYS:HB2	2.18	0.44
29:AU:57:ARG:HB3	80:B2:1382:A:C4'	2.48	0.44
31:AW:103:ILE:HD13	31:AW:126:LEU:HB2	2.00	0.44
33:AY:47:VAL:O	33:AY:49:LYS:NZ	2.49	0.44
80:B2:1346:A:C8	80:B2:1370:U:O2	2.71	0.44
80:B2:443:C:H2'	80:B2:444:C:O4'	2.18	0.44
80:B2:823:G:O2'	80:B2:824:G:OP1	2.36	0.44
38:BD:145:PHE:CE2	81:B5:2748:A:H4'	2.52	0.44
51:BQ:176:ARG:HB2	81:B5:2763:U:H4'	2.00	0.44
36:BB:13:HIS:HB2	81:B5:3044:G:O3'	2.18	0.44
81:B5:422:A:C2	81:B5:2363:A:H4'	2.52	0.44
81:B5:499:G:H2'	81:B5:500:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:266:ALA:CA	82:B7:1:G:H1'	2.47	0.44
36:BB:53:MET:HE3	81:B5:3048:A:H5''	1.98	0.44
43:BI:171:TRP:HE3	43:BI:178:ARG:HB3	1.82	0.44
48:BN:56:LYS:NZ	48:BN:145:ASP:OD2	2.50	0.44
52:BR:61:SER:CB	81:B5:3069:G:O2'	2.65	0.44
84:CN:2176:G:H2'	84:CN:2177:G:O5'	2.18	0.44
9:AA:175:TYR:CD2	9:AA:199:PRO:HA	2.53	0.44
13:AE:8:HIS:ND1	80:B2:449:C:H4'	2.33	0.44
14:AF:21:THR:OG1	14:AF:21:THR:O	2.31	0.44
23:AO:29:HIS:CB	23:AO:41:ARG:HA	2.48	0.44
23:AO:30:VAL:HG13	23:AO:39:ILE:O	2.18	0.44
27:AS:26:ILE:CD1	27:AS:30:TYR:HB2	2.48	0.44
27:AS:49:LYS:NZ	27:AS:79:TYR:O	2.51	0.44
28:AT:28:LEU:O	28:AT:29:GLU:HB2	2.17	0.44
29:AU:58:LEU:HD12	29:AU:88:LYS:C	2.38	0.44
9:AA:142:PRO:HG3	30:AV:32:VAL:HG13	1.99	0.44
31:AW:24:GLN:HA	31:AW:63:VAL:O	2.18	0.44
34:AZ:56:THR:HA	34:AZ:103:ARG:HH21	1.83	0.44
80:B2:1171:A:H2'	80:B2:1172:G:C8	2.52	0.44
80:B2:1584:G:O2'	80:B2:1610:G:O6	2.29	0.44
80:B2:186:C:H3'	80:B2:187:G:H8	1.83	0.44
31:AW:107:SER:HB3	80:B2:802:G:H21	1.83	0.44
10:AB:157:GLN:OE1	80:B2:874:C:H5''	2.18	0.44
81:B5:1128:U:H2'	81:B5:1129:A:O4'	2.18	0.44
81:B5:1510:G:H8	81:B5:1510:G:O5'	2.00	0.44
81:B5:1523:U:H3'	81:B5:1607:U:O2	2.18	0.44
81:B5:1802:C:H2'	81:B5:1803:C:C6	2.53	0.44
81:B5:1819:U:O2'	81:B5:1820:U:OP1	2.26	0.44
81:B5:1864:A:H2'	81:B5:1865:A:C8	2.53	0.44
80:B2:1645:G:C1'	81:B5:2259:A:N1	2.81	0.44
81:B5:2437:G:H2'	81:B5:2438:A:O4'	2.18	0.44
81:B5:2596:U:H2'	81:B5:2597:U:C6	2.53	0.44
46:BL:181:GLY:CA	81:B5:2780:A:O2'	2.65	0.44
48:BN:186:GLY:HA2	81:B5:30:G:OP1	2.18	0.44
81:B5:892:U:H2'	81:B5:893:C:H5'	1.99	0.44
35:BA:105:GLY:CA	35:BA:160:SER:HB3	2.47	0.44
36:BB:365:PHE:CE1	81:B5:3378:C:H1'	2.52	0.44
38:BD:257:GLU:O	38:BD:258:LYS:HD3	2.18	0.44
38:BD:269:SER:O	82:B7:22:A:C6	2.70	0.44
43:BI:4:ARG:HA	81:B5:2829:U:OP1	2.17	0.44
46:BL:27:ASP:CG	46:BL:31:LYS:HD2	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:90:PRO:HG2	52:BR:93:VAL:CG2	2.47	0.44
53:BS:171:PHE:O	53:BS:172:TYR:C	2.56	0.44
59:BY:114:ASP:OD2	83:B8:85:G:C6	2.71	0.44
2:A1:51:GLN:CD	80:B2:870:C:O2'	2.56	0.44
7:A6:40:LYS:HA	7:A6:68:VAL:HG23	1.98	0.44
9:AA:172:LEU:O	9:AA:176:LEU:HG	2.17	0.44
9:AA:20:ALA:HB3	9:AA:22:THR:HG23	2.00	0.44
10:AB:27:LYS:HE3	80:B2:896:U:OP1	2.18	0.44
12:AD:4:LEU:HD12	80:B2:1514:U:C5	2.53	0.44
13:AE:180:LEU:HD22	13:AE:192:ILE:HG22	1.99	0.44
15:AG:2:LYS:HB3	15:AG:108:VAL:HG22	1.99	0.44
15:AG:98:ARG:HD3	15:AG:99:GLY:O	2.17	0.44
21:AM:74:LEU:HA	21:AM:74:LEU:HD23	1.85	0.44
26:AR:113:LEU:HG	26:AR:114:GLY:N	2.31	0.44
28:AT:64:HIS:CE1	28:AT:68:ARG:CZ	3.01	0.44
80:B2:1334:U:H2'	80:B2:1335:U:H6	1.83	0.44
80:B2:1536:G:C6	80:B2:1538:U:H1'	2.53	0.44
1:A0:3:LYS:CA	80:B2:1792:G:H5''	2.41	0.44
80:B2:1657:U:N3	89:B2:1968:OHX:N2	2.65	0.44
80:B2:281:G:H2'	80:B2:282:C:C6	2.52	0.44
15:AG:188:ARG:CZ	80:B2:283:U:C5	3.01	0.44
80:B2:296:U:H2'	80:B2:297:U:C6	2.52	0.44
80:B2:538:A:C8	80:B2:543:C:C4	3.03	0.44
80:B2:560:U:H2'	80:B2:561:G:H8	1.83	0.44
81:B5:1753:G:H2'	81:B5:1754:G:O5'	2.17	0.44
81:B5:2427:U:H2'	81:B5:2428:U:C6	2.53	0.44
8:A7:32:SER:HB2	81:B5:2706:G:O2'	2.13	0.44
81:B5:439:C:H4'	81:B5:440:A:C5'	2.46	0.44
35:BA:85:GLY:HA3	81:B5:2554:A:C5	2.52	0.44
38:BD:260:PHE:CD2	82:B7:121:U:H5''	2.53	0.44
41:BG:153:ILE:HD13	41:BG:166:LEU:HB3	2.00	0.44
41:BG:190:VAL:HG12	41:BG:190:VAL:O	2.18	0.44
44:BJ:85:LYS:NZ	83:B8:86:U:O2	188.40	0.44
53:BS:48:LEU:O	53:BS:49:HIS:ND1	2.48	0.44
56:BV:45:ARG:O	56:BV:46:LEU:C	2.55	0.44
58:BX:58:ASP:O	58:BX:62:VAL:HG23	2.18	0.44
79:CL:129:ARG:HH22	86:CW:56:C:H4'	1.69	0.44
81:B5:2792:A:C2	86:CW:76:A:N7	2.83	0.44
4:A3:6:VAL:HG23	4:A3:7:TRP:CZ3	2.53	0.44
7:A6:16:HIS:NE2	7:A6:35:SER:OG	2.45	0.44
9:AA:131:GLN:O	9:AA:135:GLU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AA:167:LYS:HB3	9:AA:168:HIS:H	1.50	0.44
9:AA:17:LEU:HD23	9:AA:172:LEU:HD13	1.99	0.44
11:AC:65:GLU:O	11:AC:68:ILE:HB	2.18	0.44
3:A2:58:GLU:HG2	14:AF:225:ARG:CZ	2.48	0.44
20:AL:21:ASN:HD22	20:AL:31:THR:HA	1.82	0.44
22:AN:34:ILE:HD11	22:AN:67:THR:HG21	2.00	0.44
80:B2:1196:A:OP1	80:B2:1196:A:H3'	2.17	0.44
14:AF:84:LYS:NZ	80:B2:1614:A:OP2	2.36	0.44
80:B2:1002:G:N1	80:B2:1761:U:OP1	2.43	0.44
15:AG:182:GLN:CD	80:B2:270:C:N4	2.72	0.44
80:B2:501:U:H2'	80:B2:502:U:C5	2.53	0.44
80:B2:542:A:H8	80:B2:542:A:O2'	2.01	0.44
43:BI:196:PHE:CD2	81:B5:1042:U:H4'	2.53	0.44
81:B5:1151:U:H3'	81:B5:1152:G:C8	2.53	0.44
81:B5:1565:G:H1'	81:B5:1575:A:C2	2.52	0.44
81:B5:238:A:HO2'	81:B5:239:G:P	2.41	0.44
81:B5:238:A:H2'	81:B5:239:G:O4'	2.17	0.44
81:B5:2540:A:O2'	81:B5:2541:U:H2'	2.18	0.44
81:B5:2726:C:O5'	81:B5:2726:C:O2	2.36	0.44
81:B5:3060:C:H1'	81:B5:3332:U:H1'	1.99	0.44
81:B5:702:C:O2	81:B5:788:C:H4'	2.18	0.44
41:BG:181:LYS:CD	83:B8:155:A:P	3.03	0.44
83:B8:47:C:H1'	83:B8:61:A:H2'	2.00	0.44
35:BA:68:LYS:HD3	35:BA:70:ARG:HH21	1.83	0.44
36:BB:218:ILE:CG1	36:BB:276:THR:HG23	2.48	0.44
38:BD:181:PRO:HD2	38:BD:195:LEU:HD13	2.00	0.44
38:BD:272:TYR:CE1	82:B7:22:A:C4	3.06	0.44
43:BI:36:LEU:N	43:BI:36:LEU:HD12	2.33	0.44
56:BV:71:LYS:HA	81:B5:2295:A:OP2	2.18	0.44
58:BX:125:ARG:HH22	81:B5:1610:G:P	2.41	0.44
84:CN:2160:C:O2'	84:CN:2161:C:O2	2.36	0.44
2:A1:59:CYS:O	2:A1:61:THR:HG22	2.17	0.43
4:A3:33:LYS:HD3	4:A3:34:TYR:CE2	2.53	0.43
8:A7:26:VAL:HG11	44:BJ:49:LYS:HZ1	1.84	0.43
9:AA:57:LEU:HD23	9:AA:177:LEU:HD23	2.00	0.43
13:AE:196:VAL:N	13:AE:209:HIS:O	2.43	0.43
15:AG:132:ARG:HG2	15:AG:132:ARG:HH11	1.83	0.43
22:AN:26:PHE:HE2	22:AN:59:GLY:O	2.01	0.43
23:AO:129:LYS:NZ	89:B2:2013:OHX:N1	2.65	0.43
23:AO:136:ARG:NH2	80:B2:1786:G:OP2	2.51	0.43
25:AQ:75:VAL:HB	80:B2:1610:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:138:GLN:HB3	28:AT:138:GLN:HE21	1.68	0.43
28:AT:65:ILE:HG12	28:AT:71:VAL:HG21	2.00	0.43
31:AW:55:ASP:C	31:AW:57:ARG:H	2.20	0.43
32:AX:79:ASN:HD22	32:AX:81:LYS:HB2	1.83	0.43
80:B2:1165:G:C6	80:B2:1166:A:C6	3.06	0.43
26:AR:45:ARG:HA	80:B2:1389:C:P	2.58	0.43
26:AR:5:ARG:CZ	80:B2:1402:G:OP2	2.66	0.43
28:AT:79:LEU:HD11	80:B2:1481:C:N4	2.32	0.43
80:B2:1586:A:H1'	80:B2:1611:A:N6	2.32	0.43
89:B2:1933:OHX:N4	89:B2:2082:OHX:N3	2.66	0.43
23:AO:122:PRO:C	80:B2:886:U:O2	2.55	0.43
81:B5:1230:G:H2'	81:B5:1231:A:H62	1.82	0.43
81:B5:1817:G:O2'	81:B5:1818:U:P	2.76	0.43
80:B2:1747:G:H1'	81:B5:2303:A:O2'	2.18	0.43
81:B5:2358:A:H2'	81:B5:2359:C:O4'	2.18	0.43
81:B5:261:U:H2'	81:B5:262:U:C6	2.53	0.43
38:BD:16:PHE:HZ	81:B5:2688:U:C4	2.31	0.43
81:B5:3287:U:H2'	81:B5:3288:G:H5'	2.00	0.43
81:B5:625:G:H2'	81:B5:626:U:O4'	2.18	0.43
59:BY:75:ARG:CZ	83:B8:72:A:H4'	2.48	0.43
36:BB:148:LEU:HD21	36:BB:196:ARG:HD3	1.98	0.43
36:BB:260:VAL:HB	81:B5:2988:C:H1'	2.00	0.43
38:BD:269:SER:OG	82:B7:1:G:C2	2.69	0.43
38:BD:59:ASP:OD2	38:BD:81:HIS:CD2	2.71	0.43
51:BQ:125:ASP:N	51:BQ:125:ASP:OD1	2.49	0.43
51:BQ:158:HIS:H	51:BQ:186:VAL:CG1	2.28	0.43
52:BR:165:LYS:CD	80:B2:849:C:C2	2.78	0.43
79:CL:190:ARG:NH2	79:CL:228:SER:O	2.45	0.43
59:BY:46:LYS:HA	79:CL:46:LYS:HD3	136.66	0.43
7:A6:159:ASN:ND2	7:A6:166:SER:O	2.51	0.43
8:A7:88:ARG:HG2	8:A7:91:THR:OG1	2.17	0.43
10:AB:105:PHE:CE1	10:AB:213:ARG:HA	2.53	0.43
12:AD:132:LYS:HB3	12:AD:189:MET:HG3	1.99	0.43
17:AI:176:SER:CB	80:B2:208:U:C5'	2.95	0.43
23:AO:122:PRO:C	23:AO:124:ASP:N	2.71	0.43
25:AQ:6:SER:HA	25:AQ:23:LYS:HA	2.00	0.43
26:AR:23:LYS:HB3	26:AR:34:LEU:HD11	1.99	0.43
29:AU:20:ILE:HD13	29:AU:22:ILE:HD13	1.99	0.43
31:AW:43:LYS:O	31:AW:43:LYS:HG3	2.18	0.43
31:AW:82:LYS:O	31:AW:83:ILE:HG22	2.18	0.43
80:B2:1142:A:H2'	80:B2:1143:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1149:G:H5''	80:B2:1150:G:OP1	2.18	0.43
4:A3:34:TYR:HE1	80:B2:1487:A:OP1	1.99	0.43
25:AQ:136:SER:OG	80:B2:1587:A:OP1	2.32	0.43
1:A0:92:ARG:HG2	80:B2:1796:C:P	2.58	0.43
80:B2:187:G:C4'	80:B2:188:A:OP1	2.61	0.43
80:B2:512:A:HO2'	80:B2:513:U:P	2.42	0.43
80:B2:604:A:OP2	89:B2:1990:OHX:N5	2.51	0.43
80:B2:981:U:C2'	80:B2:982:U:H5'	2.47	0.43
81:B5:1226:G:O4'	81:B5:1288:U:C5'	2.66	0.43
81:B5:1313:G:H2'	81:B5:1314:C:C6	2.53	0.43
81:B5:1952:G:H1	81:B5:2094:C:N4	2.09	0.43
81:B5:278:U:H6	81:B5:278:U:O5'	2.00	0.43
43:BI:61:SER:OG	81:B5:2854:U:OP1	2.36	0.43
81:B5:2140:U:O2'	81:B5:2978:U:H5'	2.18	0.43
49:BO:115[B]:LYS:HG2	81:B5:3178:A:C2	2.53	0.43
81:B5:3287:U:N3	81:B5:3288:G:C8	2.87	0.43
81:B5:507:U:H2'	81:B5:508:U:C6	2.53	0.43
47:BM:77:ARG:NH1	81:B5:562:C:OP2	2.49	0.43
81:B5:736:A:C5	81:B5:737:G:H1'	2.52	0.43
35:BA:219:ILE:HD11	81:B5:2185:G:C4'	2.48	0.43
37:BC:177:ASP:O	37:BC:180:LYS:HB3	2.18	0.43
37:BC:220:ARG:HD2	81:B5:211:A:OP1	2.18	0.43
37:BC:338:LYS:O	37:BC:340:GLY:N	2.50	0.43
37:BC:89:ALA:O	37:BC:90:PHE:O	2.36	0.43
40:BF:30:ARG:NH2	81:B5:595:G:OP2	2.51	0.43
44:BJ:8:PRO:HD2	44:BJ:10:ARG:HG2	1.99	0.43
46:BL:45:LYS:HB2	81:B5:241:G:H1'	1.98	0.43
47:BM:125:LYS:HD2	81:B5:2897:A:C5'	93.07	0.43
52:BR:28:GLU:O	52:BR:32:ILE:HG13	2.18	0.43
54:BT:129:LYS:HB2	81:B5:1098:A:P	2.57	0.43
60:BZ:135:ARG:CB	60:BZ:135:ARG:HH11	2.31	0.43
84:CN:2133:G:O6	86:CW:56:C:N3	2.52	0.43
84:CN:2161:C:H5	84:CN:2172:G:N1	2.16	0.43
10:AB:116:LYS:HE2	80:B2:933:A:P	2.59	0.43
11:AC:140:ARG:HB3	11:AC:221:THR:HB	1.99	0.43
15:AG:174:LYS:CB	80:B2:79:C:H4'	2.45	0.43
16:AH:86:GLN:CG	16:AH:87:ASP:H	2.31	0.43
18:AJ:129:ILE:HG12	18:AJ:134:ILE:HD12	2.00	0.43
18:AJ:31:ALA:HA	18:AJ:36:LEU:HD12	2.00	0.43
5:A4:33:ARG:HG3	18:AJ:36:LEU:O	2.18	0.43
28:AT:9:VAL:CG1	28:AT:14:PHE:HB2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:87:GLY:O	80:B2:1542:G:H5''	2.18	0.43
28:AT:88:VAL:N	80:B2:1542:G:H5''	2.33	0.43
15:AG:95:LYS:CE	80:B2:160:C:O3'	2.66	0.43
15:AG:83:CYS:HG	80:B2:162:A:H5''	1.79	0.43
17:AI:49:ARG:NH2	80:B2:398:G:H4'	2.32	0.43
10:AB:138:PHE:CZ	80:B2:885:G:OP1	2.68	0.43
80:B2:886:U:H2'	80:B2:887:A:O4'	2.18	0.43
43:BI:198:LYS:NZ	81:B5:1040:A:N3	2.57	0.43
81:B5:1093:A:H2	81:B5:1096:U:O2	2.01	0.43
81:B5:1155:C:O2'	81:B5:1197:A:N1	2.44	0.43
81:B5:1225:A:H8	81:B5:1288:U:O4'	2.01	0.43
41:BG:55:TYR:CE1	81:B5:1558:A:C5	3.07	0.43
81:B5:174:C:H2'	81:B5:175:C:H6	1.84	0.43
81:B5:248:U:C3'	81:B5:249:U:H5'	2.48	0.43
81:B5:3094:A:H2'	81:B5:3095:U:C6	2.54	0.43
81:B5:3350:C:H2'	81:B5:3351:U:C2	2.54	0.43
81:B5:378:A:N7	81:B5:391:A:H2	2.16	0.43
81:B5:437:G:H5''	81:B5:438:A:OP2	2.18	0.43
37:BC:145:ILE:HA	37:BC:146:PRO:HD3	1.87	0.43
38:BD:99:TYR:CD1	38:BD:199:ILE:HG12	2.54	0.43
41:BG:185:ARG:HD2	83:B8:155:A:C5'	2.46	0.43
41:BG:81:THR:OG1	41:BG:82:LEU:N	2.51	0.43
42:BH:13:PRO:HG2	42:BH:16:VAL:CG1	2.49	0.43
27:AS:110:ARG:HH22	44:BJ:122:ILE:HG12	1.84	0.43
50:BP:4:TYR:CZ	50:BP:18:ARG:HG3	2.53	0.43
54:BT:80:VAL:HG11	54:BT:85:LEU:HD12	1.99	0.43
56:BV:33:ASN:ND2	56:BV:64:LYS:HB2	2.33	0.43
59:BY:120:GLN:OE1	59:BY:126:LEU:HD23	2.17	0.43
60:BZ:129:TRP:O	60:BZ:132:SER:OG	2.36	0.43
60:BZ:34:LYS:HD2	60:BZ:34:LYS:HA	1.67	0.43
79:CL:46:LYS:NZ	79:CL:168:THR:O	2.52	0.43
84:CN:2165:U:O2	84:CN:2168:G:O6	2.37	0.43
85:CP:83:PHE:CD1	85:CP:110:GLN:HB3	2.54	0.43
86:CW:59:U:C4	86:CW:60:U:C4	3.06	0.43
7:A6:17:ASN:HD21	80:B2:1408:G:C4'	2.30	0.43
9:AA:182:LEU:HB3	9:AA:188:LEU:HD23	2.00	0.43
14:AF:109:LYS:O	14:AF:113:ILE:HG13	2.17	0.43
14:AF:87:CYS:SG	14:AF:92:ARG:HG3	2.59	0.43
18:AJ:143:ILE:HA	18:AJ:144:PRO:HD3	1.84	0.43
18:AJ:170:GLY:HA2	18:AJ:171:ARG:HH21	1.83	0.43
19:AK:33:GLU:N	19:AK:33:GLU:OE1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AM:29:LYS:HA	21:AM:32:LEU:HD12	2.01	0.43
23:AO:24:ASN:O	23:AO:25:ASP:HB2	2.19	0.43
80:B2:1002:G:C2'	80:B2:1003:A:H5'	2.48	0.43
80:B2:1497:U:OP2	89:B2:1909:OHX:N1	2.52	0.43
25:AQ:132:LYS:NZ	80:B2:1587:A:OP1	2.52	0.43
80:B2:273:G:H2'	80:B2:274:G:O4'	2.18	0.43
17:AI:85:PRO:HG2	80:B2:328:A:O2'	2.19	0.43
80:B2:477:A:N7	80:B2:538:A:N1	2.66	0.43
80:B2:560:U:H2'	80:B2:561:G:C8	2.54	0.43
81:B5:1614:C:H2'	81:B5:1615:C:C6	2.53	0.43
36:BB:228:GLY:HA3	81:B5:1887:A:O3'	2.18	0.43
81:B5:2818:U:C5'	81:B5:2818:U:C6	2.95	0.43
81:B5:2836:C:O2	81:B5:2836:C:O4'	2.33	0.43
81:B5:32:U:H6	81:B5:32:U:O5'	2.00	0.43
37:BC:8:VAL:O	37:BC:16:THR:HB	2.18	0.43
37:BC:205:PRO:HB3	37:BC:247:PHE:CD2	2.53	0.43
42:BH:117:PHE:CE1	42:BH:165:CYS:HB3	2.53	0.43
24:AP:70:ASN:CG	44:BJ:172:LEU:CD2	2.87	0.43
44:BJ:95:ASN:HA	81:B5:2673:A:H5'	2.00	0.43
49:BO:10[B]:ASP:OD2	49:BO:37[B]:ARG:NH2	2.35	0.43
49:BO:8[B]:VAL:HG12	49:BO:117[B]:ARG:HB3	1.99	0.43
52:BR:99:LEU:O	52:BR:103:ARG:HG3	2.18	0.43
56:BV:84:SER:HA	56:BV:94:TYR:HB3	2.00	0.43
58:BX:105:VAL:HG13	58:BX:130:TYR:CD2	2.53	0.43
59:BY:103:LYS:HA	59:BY:103:LYS:HD3	1.45	0.43
2:A1:51:GLN:CG	80:B2:870:C:O2'	2.66	0.43
3:A2:26:THR:O	3:A2:44:VAL:HG13	2.18	0.43
7:A6:286:GLU:HA	7:A6:287:PRO:HD3	1.62	0.43
10:AB:87:ARG:HB3	10:AB:87:ARG:HE	1.49	0.43
11:AC:99:LYS:HZ2	80:B2:1300:A:P	2.41	0.43
15:AG:188:ARG:HD2	80:B2:284:G:H8	1.76	0.43
18:AJ:149:ARG:CZ	80:B2:765:G:C4	3.01	0.43
19:AK:7:ASP:HB3	19:AK:37:THR:HG21	2.01	0.43
21:AM:63:VAL:HB	21:AM:64:SER:H	1.54	0.43
22:AN:114:ARG:HA	22:AN:114:ARG:HD3	1.69	0.43
22:AN:28:LEU:HB3	22:AN:29:SER:H	1.67	0.43
24:AP:69:GLU:OE1	89:AP:201:OHX:N4	2.51	0.43
33:AY:37:LYS:HZ1	80:B2:522:U:P	2.42	0.43
34:AZ:40:VAL:C	34:AZ:75:LEU:HD11	2.38	0.43
34:AZ:40:VAL:HA	34:AZ:75:LEU:HD11	2.01	0.43
6:A5:131:PHE:CD2	80:B2:1253:U:OP1	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1796:C:H4'	80:B2:1797:A:OP2	2.18	0.43
33:AY:33:ALA:HB2	80:B2:533:U:H4'	2.01	0.43
32:AX:5:LYS:NZ	80:B2:614:C:OP2	2.47	0.43
80:B2:72:A:O2'	80:B2:73:U:H5''	2.18	0.43
23:AO:125:SER:CB	80:B2:927:C:O4'	2.67	0.43
80:B2:924:A:O2'	80:B2:987:G:OP1	2.36	0.43
43:BI:193:ASP:CG	81:B5:1010:G:N2	2.69	0.43
81:B5:1152:G:H8	81:B5:1152:G:OP2	2.01	0.43
81:B5:1165:A:H2'	81:B5:1166:G:O4'	2.19	0.43
81:B5:1480:G:N2	81:B5:1872:C:C5	2.87	0.43
81:B5:1498:A:H2'	81:B5:1499:C:C6	2.54	0.43
81:B5:1753:G:C2'	81:B5:1754:G:O5'	2.66	0.43
81:B5:1758:G:H5''	81:B5:1759:C:OP2	2.18	0.43
81:B5:1764:U:H3'	81:B5:1765:U:C5'	2.47	0.43
36:BB:245:GLY:CA	81:B5:1889:G:O5'	2.67	0.43
81:B5:1895:A:O2'	81:B5:3053:G:H4'	2.18	0.43
81:B5:242:C:H2'	81:B5:243:G:H8	1.83	0.43
38:BD:214:ASP:O	38:BD:215:ASP:HB2	2.18	0.43
38:BD:68:THR:CG2	38:BD:70:THR:H	2.31	0.43
47:BM:14:LEU:H	47:BM:19:ARG:NH2	2.16	0.43
48:BN:153:ASP:OD1	48:BN:155:VAL:HG22	2.18	0.43
48:BN:73:ARG:HB2	48:BN:92:LEU:HD23	2.00	0.43
41:BG:162:LEU:HD23	48:BN:7:LEU:HD21	1.99	0.43
56:BV:93:LEU:HD23	56:BV:93:LEU:H	1.83	0.43
58:BX:135:ILE:C	58:BX:135:ILE:HD13	2.39	0.43
59:BY:59:VAL:O	59:BY:64:LYS:HD2	2.18	0.43
60:BZ:53:VAL:HA	60:BZ:57:HIS:CD2	2.54	0.43
1:A0:62:TYR:CZ	23:AO:114:ARG:HA	2.54	0.43
8:A7:110:TRP:HB3	12:AD:150:MET:CE	2.48	0.43
11:AC:227:PRO:HA	11:AC:230:TRP:CD1	2.54	0.43
12:AD:94:ARG:H	12:AD:94:ARG:HG3	1.51	0.43
15:AG:182:GLN:OE1	80:B2:271:A:N6	2.44	0.43
18:AJ:173:ALA:HA	80:B2:511:A:H5'	1.99	0.43
18:AJ:175:ARG:HD2	18:AJ:176:ASN:N	2.34	0.43
18:AJ:39:LYS:HG2	80:B2:592:A:OP1	2.19	0.43
20:AL:28:SER:OG	80:B2:839:U:C5'	2.64	0.43
25:AQ:143:ARG:HB2	25:AQ:143:ARG:HE	1.58	0.43
27:AS:56:LYS:HD3	27:AS:60:GLU:HG3	2.00	0.43
28:AT:33:TYR:HD1	28:AT:33:TYR:C	2.21	0.43
31:AW:111:MET:HE1	31:AW:121:VAL:HG23	1.99	0.43
14:AF:101:GLY:HA2	80:B2:1166:A:H5''	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1487:A:H2'	80:B2:1488:G:H8	1.83	0.43
80:B2:1600:A:O2'	80:B2:1602:C:N4	2.52	0.43
80:B2:88:U:H4'	80:B2:171:A:O4'	2.19	0.43
80:B2:517:U:H3	80:B2:535:A:H61	1.65	0.43
80:B2:729:G:H2'	80:B2:729:G:N3	2.33	0.43
40:BF:94:LYS:HA	81:B5:1139:G:O3'	2.19	0.43
49:BO:18[A]:ARG:NH1	81:B5:1315:U:OP1	2.49	0.43
81:B5:1563:C:N3	81:B5:1576:G:O6	2.51	0.43
81:B5:2101:C:HO2'	81:B5:2102:U:P	2.39	0.43
80:B2:1780:G:C2	81:B5:2263:C:O4'	2.72	0.43
44:BJ:124:GLY:C	81:B5:2674:A:C6	2.92	0.43
81:B5:48:A:O4'	81:B5:50:U:C6	2.71	0.43
38:BD:207:TYR:CE2	82:B7:33:U:C6	3.04	0.43
40:BF:224:ILE:HG21	82:B7:97:A:H4'	2.00	0.43
83:B8:121:U:O2'	83:B8:122:U:H5'	2.19	0.43
35:BA:116:VAL:CG1	35:BA:134:VAL:HG11	2.48	0.43
37:BC:193:LYS:HE3	37:BC:193:LYS:HB2	1.66	0.43
37:BC:23:PRO:HD2	37:BC:26:PHE:CD2	2.54	0.43
42:BH:17:THR:O	42:BH:17:THR:OG1	2.30	0.43
48:BN:179:LYS:O	81:B5:287:G:H5'	2.19	0.43
79:CL:193:ILE:HG23	79:CL:209:LEU:HD11	2.00	0.43
7:A6:201:THR:CB	7:A6:242:SER:HA	2.49	0.43
7:A6:282:SER:H	7:A6:285:ALA:HB3	1.84	0.43
8:A7:114:LYS:HE3	8:A7:114:LYS:HB2	1.84	0.43
9:AA:200:ASP:HA	9:AA:203:PHE:CE2	2.54	0.43
9:AA:20:ALA:O	9:AA:21:ASN:HB2	2.19	0.43
9:AA:69:ASN:HB3	9:AA:71:GLU:OE1	2.18	0.43
12:AD:137:VAL:HG22	12:AD:151:LYS:HG3	1.99	0.43
13:AE:19:LEU:HD11	13:AE:108:ARG:HD2	1.99	0.43
13:AE:61:VAL:HG12	13:AE:65:LEU:HD12	2.00	0.43
15:AG:63:MET:HA	15:AG:98:ARG:O	2.18	0.43
17:AI:48:THR:HG21	17:AI:54:LYS:HE3	2.00	0.43
29:AU:20:ILE:N	29:AU:95:ALA:O	2.50	0.43
32:AX:40:SER:O	32:AX:41:SER:O	2.36	0.43
11:AC:203:LYS:HD2	80:B2:14:C:H5"	2.00	0.43
80:B2:1720:G:O6	89:B2:1960:OHX:N5	2.52	0.43
80:B2:473:A:C2'	80:B2:474:A:H5'	2.49	0.43
80:B2:51:A:H2	85:CP:243:PHE:HB2	1.53	0.43
80:B2:719:U:O2	80:B2:719:U:H2'	2.18	0.43
80:B2:839:U:O4	80:B2:840:U:C4	2.71	0.43
81:B5:1237:G:C5	81:B5:1238:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:1390:A:N3	81:B5:1390:A:H5'	2.33	0.43
81:B5:1580:A:O2'	81:B5:1581:C:OP2	2.30	0.43
60:BZ:16:GLY:CA	81:B5:1638:A:OP2	2.66	0.43
81:B5:1715:A:H4'	81:B5:1716:U:OP1	2.18	0.43
52:BR:104:ARG:HD3	81:B5:1950:U:OP1	2.18	0.43
81:B5:2147:A:H2'	81:B5:2148:U:O4'	2.19	0.43
81:B5:3238:G:H8	81:B5:3238:G:H5''	1.84	0.43
81:B5:342:A:C2	81:B5:368:G:C8	3.06	0.43
81:B5:911:C:O2	81:B5:917:A:N1	2.51	0.43
35:BA:70:ARG:HA	81:B5:1650:G:O3'	2.18	0.43
38:BD:91:GLY:HA2	82:B7:48:U:P	2.59	0.43
43:BI:171:TRP:O	43:BI:174:THR:CG2	2.66	0.43
49:BO:15[B]:LEU:HD21	49:BO:125[B]:ARG:HG3	2.00	0.43
50:BP:52:LEU:HD13	50:BP:88:VAL:HG11	2.00	0.43
53:BS:104:GLU:O	53:BS:104:GLU:HG3	2.14	0.43
81:B5:2802:A:C1'	86:CW:75:C:N4	2.72	0.43
1:A0:87:ARG:HD3	80:B2:1796:C:OP1	2.19	0.43
6:A5:109:ASP:HB2	6:A5:113:LYS:HG2	2.00	0.43
7:A6:198:ASN:O	7:A6:215:GLY:HA3	2.19	0.43
7:A6:38:ARG:HG2	7:A6:67:ILE:CG2	2.48	0.43
8:A7:51:ARG:CZ	81:B5:2677:G:N9	2.77	0.43
12:AD:127:MET:HG2	12:AD:154:ASP:OD2	2.19	0.43
13:AE:147:ILE:HD13	13:AE:169:ILE:HG13	2.00	0.43
14:AF:144:GLU:HB2	14:AF:160:VAL:O	2.19	0.43
20:AL:20:PHE:CD2	80:B2:211:U:H5''	2.54	0.43
23:AO:122:PRO:CA	80:B2:887:A:C1'	2.97	0.43
25:AQ:9:THR:OG1	25:AQ:20:ALA:HB3	2.19	0.43
80:B2:1321:A:H4'	80:B2:1322:A:O5'	2.19	0.43
29:AU:85:ARG:NH2	80:B2:1334:U:O2'	2.51	0.43
80:B2:1402:G:H2'	80:B2:1403:C:C6	2.54	0.43
80:B2:1535:U:H2'	80:B2:1535:U:H6	1.60	0.43
80:B2:1681:A:H2	80:B2:1720:G:H21	1.64	0.43
80:B2:237:C:C4'	80:B2:238:U:H5'	2.49	0.43
80:B2:498:G:H2'	80:B2:499:U:C4	2.54	0.43
80:B2:712:G:H3'	80:B2:712:G:C8	2.53	0.43
23:AO:46:MET:CG	80:B2:899:G:O5'	2.65	0.43
81:B5:123:A:H5'	81:B5:124:U:OP2	2.18	0.43
81:B5:1262:G:C8	81:B5:1262:G:H3'	2.53	0.43
81:B5:1763:U:H3'	81:B5:1764:U:C5	2.54	0.43
81:B5:2192:C:H2'	81:B5:2193:U:O4'	2.18	0.43
81:B5:2796:G:H5''	81:B5:2798:C:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2802:A:N9	86:CW:75:C:N4	2.66	0.43
57:BW:61:LYS:HE3	81:B5:3369:G:OP2	2.18	0.43
81:B5:492:U:C2'	81:B5:493:G:H5'	2.49	0.43
51:BQ:107:THR:HB	81:B5:676:G:O5'	2.18	0.43
82:B7:106:U:H2'	82:B7:107:C:O4'	2.19	0.43
82:B7:11:A:O2'	82:B7:13:A:H2'	2.19	0.43
35:BA:250:GLN:HG2	35:BA:251:LYS:H	1.84	0.43
36:BB:186:GLY:O	36:BB:190:GLU:HB2	2.19	0.43
46:BL:59:ARG:HG3	46:BL:59:ARG:O	2.18	0.43
54:BT:17:ARG:HH11	54:BT:17:ARG:CG	2.31	0.43
56:BV:120:LYS:H	56:BV:137:VAL:CG2	2.30	0.43
85:CP:131:LYS:HD2	90:CP:401:GCP:N2	2.29	0.43
4:A3:19:ARG:HD2	4:A3:32:ARG:HD2	1.99	0.43
7:A6:195:HIS:HD2	7:A6:199:ILE:HD13	1.81	0.43
8:A7:100:THR:O	80:B2:577:G:O6	2.36	0.43
10:AB:70:LEU:HD12	10:AB:82:ARG:O	2.18	0.43
12:AD:134:CYS:N	12:AD:157:LEU:HD11	2.34	0.43
15:AG:63:MET:HE2	15:AG:106:LEU:CD2	2.49	0.43
15:AG:69:LEU:HA	15:AG:69:LEU:HD12	1.82	0.43
19:AK:24:LYS:HB3	19:AK:24:LYS:HE2	1.74	0.43
23:AO:126:THR:C	80:B2:989:U:O2'	2.57	0.43
23:AO:38:THR:CG2	80:B2:895:G:H2'	2.29	0.43
26:AR:34:LEU:O	26:AR:38:ILE:HG22	2.18	0.43
26:AR:66:VAL:O	26:AR:69:ILE:HG12	2.19	0.43
9:AA:88:LYS:HE3	26:AR:82:ASP:OD2	2.19	0.43
27:AS:143:ARG:HB3	80:B2:1461:C:OP1	2.18	0.43
32:AX:106:GLY:O	80:B2:599:A:H4'	2.19	0.43
32:AX:29:TYR:CZ	32:AX:33:LEU:HD12	2.54	0.43
34:AZ:70:LYS:HA	34:AZ:70:LYS:HD3	1.69	0.43
80:B2:1491:U:O2	80:B2:1491:U:H5''	2.19	0.43
80:B2:1781:A:H2'	80:B2:1782:A:O4'	2.18	0.43
80:B2:609:U:H4'	80:B2:610:G:O5'	2.18	0.43
80:B2:685:A:O2'	80:B2:686:C:H5'	2.19	0.43
2:A1:66:PRO:HB2	80:B2:871:G:H4'	2.00	0.43
81:B5:1237:G:C6	81:B5:1238:C:C4	3.07	0.43
81:B5:1239:C:C6	81:B5:1239:C:C5'	3.02	0.43
81:B5:237:G:C2	81:B5:238:A:C8	3.06	0.43
81:B5:2406:C:H2'	81:B5:2407:C:C6	2.53	0.43
81:B5:2213:A:H61	81:B5:2429:G:H1'	1.84	0.43
81:B5:2442:G:N2	81:B5:2506:U:H3	2.17	0.43
81:B5:2585:G:N3	81:B5:2585:G:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2882:U:H2'	81:B5:2883:U:C6	2.54	0.43
81:B5:3164:C:O2'	81:B5:3165:A:P	2.77	0.43
39:BE:26:ARG:O	81:B5:502:U:H4'	2.19	0.43
81:B5:726:G:H1'	81:B5:744:A:N6	2.33	0.43
83:B8:157:U:O2'	83:B8:158:U:H5'	2.19	0.43
35:BA:15:ILE:CD1	81:B5:822:G:C1'	2.97	0.43
38:BD:113:LEU:HA	38:BD:113:LEU:HD12	1.68	0.43
51:BQ:99:THR:HB	51:BQ:100:THR:H	1.55	0.43
55:BU:36:TYR:O	55:BU:40:HIS:HD2	2.01	0.43
58:BX:133:LEU:HD23	58:BX:133:LEU:HA	1.90	0.43
60:BZ:135:ARG:CG	60:BZ:135:ARG:HH11	2.32	0.43
1:A0:61:GLU:O	1:A0:62:TYR:HB3	2.18	0.43
1:A0:87:ARG:NE	80:B2:1797:A:C6	2.87	0.43
3:A2:32:PHE:N	3:A2:32:PHE:CD1	2.87	0.43
6:A5:144:CYS:CB	6:A5:147:VAL:HG13	2.49	0.43
9:AA:64:ILE:HG12	9:AA:122:ILE:HD11	2.01	0.43
10:AB:116:LYS:HD3	10:AB:117:TRP:CZ3	2.53	0.43
10:AB:146:GLN:CB	10:AB:149:GLN:HE22	2.32	0.43
10:AB:97:LEU:HD22	10:AB:97:LEU:HA	1.65	0.43
13:AE:131:LEU:HD13	13:AE:135:GLY:HA2	2.01	0.43
14:AF:45:LYS:HA	14:AF:45:LYS:HD3	1.45	0.43
16:AH:131:PHE:CD1	16:AH:132:PRO:N	2.87	0.43
22:AN:46:THR:HG23	22:AN:49:GLN:OE1	2.17	0.43
23:AO:38:THR:O	23:AO:39:ILE:HG23	2.19	0.43
27:AS:134:ARG:CG	80:B2:1545:A:P	3.07	0.43
28:AT:89:ARG:HD2	80:B2:1601:G:C5	2.52	0.43
4:A3:34:TYR:CE1	29:AU:63:LEU:HD22	2.53	0.43
32:AX:69:ARG:NH1	32:AX:116:ASP:OD2	2.52	0.43
34:AZ:75:LEU:H	34:AZ:75:LEU:HG	1.46	0.43
34:AZ:77:ARG:HH22	80:B2:1533:C:H6	1.67	0.43
80:B2:1710:U:H2'	80:B2:1711:C:C5	2.54	0.43
80:B2:480:G:H22	80:B2:509:G:H1'	1.84	0.43
80:B2:542:A:H8	80:B2:543:C:H2'	1.84	0.43
80:B2:763:G:C6	80:B2:764:U:C4	3.07	0.43
35:BA:10:LYS:HE3	81:B5:1375:G:O6	80.27	0.43
37:BC:141:ARG:NH1	81:B5:1385:C:OP1	2.51	0.43
81:B5:1597:C:H5'	81:B5:1696:A:H1'	2.01	0.43
81:B5:178:U:H2'	81:B5:179:C:O4'	2.18	0.43
81:B5:2257:C:O2'	81:B5:2258:U:OP1	2.34	0.43
50:BP:137:ASN:HB3	81:B5:2356:A:O2'	2.18	0.43
81:B5:2436:U:C2'	81:B5:2437:G:H5''	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:243:G:H2'	81:B5:244:G:H8	1.83	0.43
81:B5:2957:G:H5'	81:B5:2957:G:C8	2.45	0.43
81:B5:3027:A:H2'	81:B5:3028:G:O4'	2.19	0.43
36:BB:275:ARG:NH1	81:B5:3045:G:O3'	2.52	0.43
35:BA:15:ILE:HD12	35:BA:15:ILE:HA	1.66	0.43
35:BA:199:THR:HG21	81:B5:914:A:N7	2.34	0.43
41:BG:134:TYR:CD1	41:BG:190:VAL:HG11	2.54	0.43
44:BJ:13:LYS:CE	44:BJ:132:ASN:HD21	2.32	0.43
44:BJ:21:ILE:HG13	44:BJ:37:LEU:HD11	2.01	0.43
44:BJ:96:PHE:CD2	44:BJ:160:VAL:HG23	2.54	0.43
47:BM:115:PHE:O	47:BM:119:GLN:HG3	2.19	0.43
49:BO:106[A]:GLU:HG2	49:BO:106[A]:GLU:H	1.57	0.43
49:BO:65[A]:ASN:C	49:BO:67[A]:THR:H	2.21	0.43
54:BT:101:CYS:HB3	81:B5:990:U:C1'	2.49	0.43
79:CL:84:LYS:C	79:CL:86:ALA:N	2.72	0.43
11:AC:61:LEU:HA	11:AC:62:PRO:HD2	1.80	0.42
13:AE:95:THR:HG22	33:AY:16:PRO:HG2	2.00	0.42
20:AL:127:GLN:HG3	20:AL:137:PHE:CZ	2.54	0.42
20:AL:3:THR:CG2	20:AL:82:ARG:HH21	2.32	0.42
21:AM:129:GLU:O	21:AM:133:LEU:HD13	2.18	0.42
24:AP:78:THR:OG1	24:AP:79:HIS:N	2.52	0.42
29:AU:31:VAL:O	29:AU:35:GLU:HB2	2.18	0.42
29:AU:54:GLY:N	80:B2:1344:A:O2'	2.52	0.42
80:B2:12:U:H2'	80:B2:13:C:C6	2.54	0.42
15:AG:149:LYS:CD	80:B2:141:U:OP2	2.65	0.42
25:AQ:73:GLY:HA3	80:B2:1608:U:O3'	2.19	0.42
89:B2:2016:OHX:N2	89:B2:2035:OHX:N4	2.67	0.42
17:AI:73:SER:O	80:B2:257:A:C4'	2.67	0.42
32:AX:78:LYS:HA	80:B2:434:G:OP1	2.19	0.42
80:B2:479:C:O2	80:B2:510:G:N2	2.52	0.42
80:B2:577:G:C8	80:B2:577:G:C3'	3.01	0.42
10:AB:116:LYS:CA	80:B2:931:C:H4'	2.49	0.42
80:B2:978:A:H2'	80:B2:979:A:O4'	2.19	0.42
81:B5:1084:A:H2'	81:B5:1085:A:H5''	2.00	0.42
81:B5:1307:G:H1'	81:B5:1308:A:C8	2.54	0.42
81:B5:1620:U:H2'	81:B5:1621:A:C8	2.54	0.42
81:B5:1638:A:H2	81:B5:1736:G:N3	2.16	0.42
81:B5:1770:G:H5'	81:B5:1771:C:OP2	2.18	0.42
81:B5:958:C:OP1	81:B5:2799:A:H3'	2.19	0.42
81:B5:735:A:H5''	81:B5:735:A:H8	1.84	0.42
38:BD:277:LEU:N	82:B7:62:U:OP1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:211:LEU:HD23	38:BD:211:LEU:HA	1.71	0.42
38:BD:279:LYS:HD3	38:BD:282:ARG:CZ	2.48	0.42
40:BF:137:GLY:HA3	40:BF:236:ILE:HB	2.01	0.42
40:BF:148:VAL:HG12	40:BF:181:ILE:HD11	2.01	0.42
41:BG:50:VAL:HG22	41:BG:52:TRP:CE2	2.54	0.42
42:BH:87:LYS:NZ	42:BH:191:LEU:HD21	2.34	0.42
51:BQ:176:ARG:HA	51:BQ:182:LYS:HB3	2.00	0.42
52:BR:5:ARG:HB2	52:BR:5:ARG:CZ	2.49	0.42
57:BW:97:LYS:O	57:BW:100:VAL:HG23	2.18	0.42
57:BW:63:ILE:HB	57:BW:64:THR:H	1.52	0.42
59:BY:29:VAL:HG21	79:CL:216:THR:CG2	139.81	0.42
79:CL:5:LYS:HB3	84:CN:2151:U:OP1	2.19	0.42
1:A0:37:LYS:C	1:A0:38:ARG:HD2	2.38	0.42
2:A1:61:THR:HG23	2:A1:62:ILE:O	2.19	0.42
3:A2:55:VAL:HG11	14:AF:143:ARG:HD3	1.99	0.42
10:AB:105:PHE:HE2	10:AB:113:MET:HE1	1.84	0.42
10:AB:231:LEU:C	10:AB:232:HIS:CD2	2.93	0.42
11:AC:111:VAL:HG21	11:AC:218:ILE:HD13	2.01	0.42
11:AC:67:GLN:O	11:AC:71:THR:HG23	2.19	0.42
14:AF:43:PHE:CZ	14:AF:90:ILE:HG21	2.54	0.42
16:AH:114:ARG:C	16:AH:116:ARG:H	2.22	0.42
16:AH:74:GLN:O	16:AH:78:THR:HG23	2.19	0.42
20:AL:57:LYS:HB2	20:AL:110:HIS:CE1	2.54	0.42
20:AL:6:THR:OG1	20:AL:7:VAL:N	2.52	0.42
21:AM:125:ASN:O	21:AM:126:TRP:CD1	2.72	0.42
21:AM:129:GLU:HA	21:AM:133:LEU:HD22	2.00	0.42
24:AP:108:ARG:HD2	24:AP:110:GLU:OE2	2.19	0.42
24:AP:57:MET:O	24:AP:60:LEU:HB3	2.19	0.42
14:AF:29:ILE:HG21	25:AQ:57:LEU:HD11	2.00	0.42
25:AQ:27:GLY:HA2	25:AQ:63:ILE:O	2.19	0.42
25:AQ:18:ALA:CB	25:AQ:69:VAL:HG13	2.46	0.42
9:AA:185:ARG:CA	30:AV:44:ARG:HA	2.49	0.42
9:AA:35:PRO:HG3	30:AV:87:ARG:HH21	1.84	0.42
31:AW:2:THR:HG21	80:B2:966:A:O2'	2.18	0.42
34:AZ:71:ILE:HG22	34:AZ:75:LEU:HD12	2.02	0.42
20:AL:65:SER:HB3	80:B2:114:C:O2	2.20	0.42
80:B2:1150:G:O2'	80:B2:1151:A:OP2	2.33	0.42
28:AT:99:SER:N	80:B2:1504:G:OP1	2.51	0.42
89:A3:102:OHX:N2	89:B2:1940:OHX:N1	2.67	0.42
89:B2:1986:OHX:N4	89:B2:2065:OHX:N6	2.67	0.42
80:B2:538:A:H8	80:B2:543:C:N4	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:781:U:O2'	80:B2:782:U:H6	2.02	0.42
80:B2:839:U:C2'	80:B2:840:U:H5'	2.47	0.42
81:B5:1014:U:H2'	81:B5:1015:U:H5''	2.00	0.42
81:B5:1471:U:H2'	81:B5:1472:U:C6	2.54	0.42
81:B5:1525:G:C6	81:B5:1526:U:O4	2.72	0.42
81:B5:1661:G:H2'	81:B5:1662:G:C8	2.53	0.42
81:B5:1668:G:H2'	81:B5:1669:C:O4'	2.19	0.42
81:B5:1912:U:N3	81:B5:2122:G:OP2	2.46	0.42
35:BA:234:LYS:HD2	81:B5:2163:C:OP1	2.18	0.42
81:B5:2289:U:H2'	81:B5:2290:C:C6	2.55	0.42
81:B5:3174:A:H2'	81:B5:3175:U:H5'	2.01	0.42
81:B5:1940:G:N2	81:B5:3362:A:H8	2.17	0.42
81:B5:630:A:H2'	81:B5:631:U:C6	2.54	0.42
81:B5:83:U:H2'	81:B5:84:U:O4'	2.18	0.42
81:B5:999:G:C6	81:B5:1000:C:N4	2.87	0.42
35:BA:217:GLN:O	35:BA:218:HIS:HB3	2.18	0.42
37:BC:141:ARG:NH1	37:BC:180:LYS:HD3	2.33	0.42
37:BC:52:VAL:HG13	37:BC:53:SER:O	2.19	0.42
38:BD:16:PHE:CD1	81:B5:2688:U:C2	3.07	0.42
40:BF:140:SER:O	40:BF:144:ILE:HG13	2.18	0.42
40:BF:185:ILE:O	40:BF:189:ILE:HG22	2.19	0.42
49:BO:127[B]:LEU:HD11	53:BS:168:PRO:HG3	2.00	0.42
52:BR:110:ARG:HG2	52:BR:110:ARG:O	2.19	0.42
55:BU:36:TYR:O	55:BU:40:HIS:CD2	2.72	0.42
60:BZ:121:ARG:HH11	60:BZ:121:ARG:HG3	1.85	0.42
60:BZ:61:LYS:O	60:BZ:65:ARG:HG2	2.19	0.42
1:A0:70:LYS:HZ1	80:B2:931:C:P	2.39	0.42
7:A6:266:ASP:HA	7:A6:267:PRO:HA	1.89	0.42
7:A6:98:GLU:HG3	7:A6:99:THR:O	2.19	0.42
10:AB:77:GLU:C	10:AB:79:HIS:H	2.21	0.42
12:AD:151:LYS:HD2	80:B2:1424:A:OP1	2.19	0.42
12:AD:61:GLU:O	12:AD:63:GLY:N	2.52	0.42
14:AF:94:THR:CB	14:AF:114:ILE:HG13	2.48	0.42
15:AG:55:GLY:C	15:AG:63:MET:HE3	2.39	0.42
15:AG:66:GLY:CA	80:B2:1681:A:H8	2.31	0.42
20:AL:87:ARG:HH21	20:AL:104:HIS:CE1	2.38	0.42
20:AL:132:SER:O	20:AL:134:THR:N	2.52	0.42
23:AO:125:SER:HB3	23:AO:126:THR:H	1.45	0.42
23:AO:84:ARG:HG3	23:AO:119:THR:HA	2.01	0.42
27:AS:27:LYS:N	27:AS:57:ARG:HH21	2.16	0.42
32:AX:23:ARG:HD2	32:AX:26:GLU:OE2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:5:LYS:HA	32:AX:6:PRO:HD2	1.81	0.42
80:B2:1151:A:H2'	80:B2:1152:A:C8	2.54	0.42
80:B2:1318:G:O2'	80:B2:1319:A:H5'	2.19	0.42
80:B2:1370:U:O2'	80:B2:1371:A:OP2	2.20	0.42
80:B2:1645:G:H1'	81:B5:2259:A:H61	1.84	0.42
80:B2:233:C:O2'	80:B2:234:G:P	2.76	0.42
17:AI:43:ILE:HD13	80:B2:260:U:OP1	2.19	0.42
80:B2:506:A:H3'	80:B2:506:A:OP1	2.18	0.42
33:AY:37:LYS:NZ	80:B2:522:U:OP1	2.50	0.42
18:AJ:143:ILE:HG21	80:B2:768:C:H1'	2.01	0.42
80:B2:794:U:H3'	80:B2:794:U:OP2	2.20	0.42
33:AY:120:GLY:HA2	80:B2:85:A:H4'	2.00	0.42
23:AO:125:SER:CB	80:B2:926:A:H2	2.31	0.42
49:BO:122[B]:GLN:NE2	81:B5:1181:U:H2'	2.34	0.42
81:B5:2511:A:C3'	81:B5:2512:C:H5''	2.49	0.42
81:B5:2590:A:C2'	81:B5:2591:A:O5'	2.67	0.42
81:B5:2373:A:N7	81:B5:2867:C:H1'	2.34	0.42
46:BL:5:LYS:HZ3	81:B5:796:U:H5''	1.84	0.42
81:B5:79:U:H2'	81:B5:80:G:C8	2.54	0.42
35:BA:199:THR:HG1	81:B5:913:A:H5'	1.82	0.42
83:B8:59:A:H3'	83:B8:59:A:OP2	2.19	0.42
36:BB:169:THR:CG2	36:BB:171:LEU:HG	2.49	0.42
36:BB:81:THR:HB	36:BB:321:PHE:HA	2.01	0.42
37:BC:258:LEU:HA	37:BC:258:LEU:HD12	1.91	0.42
39:BE:145:LEU:HD23	39:BE:145:LEU:HA	1.71	0.42
39:BE:175:LYS:HD2	47:BM:111:ALA:HA	2.00	0.42
41:BG:136:LEU:HD23	41:BG:136:LEU:HA	1.72	0.42
60:BZ:36:HIS:N	60:BZ:37:PRO:HD3	2.33	0.42
60:BZ:81:LEU:HD22	60:BZ:81:LEU:HA	1.48	0.42
8:A7:31:SER:OG	8:A7:33:LYS:HB2	2.19	0.42
11:AC:130:ILE:O	11:AC:134:LEU:HD22	2.19	0.42
13:AE:141:THR:O	13:AE:143:ASP:N	2.53	0.42
14:AF:157:ARG:HB2	14:AF:224:ASN:OD1	2.19	0.42
15:AG:15:THR:HG23	80:B2:152:U:C2'	2.49	0.42
17:AI:147:ALA:H	17:AI:149:SER:HB3	1.84	0.42
17:AI:195:ARG:HA	17:AI:195:ARG:HD3	1.85	0.42
18:AJ:134:ILE:HA	18:AJ:158:PHE:HA	2.00	0.42
80:B2:1560:U:O2	80:B2:1560:U:O4'	2.37	0.42
80:B2:993:A:H4'	80:B2:1777:G:O2'	2.19	0.42
89:B2:1907:OHX:N5	89:B2:2083:OHX:N4	2.67	0.42
80:B2:328:A:H2'	80:B2:329:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:40:A:H2'	80:B2:41:A:O4'	2.19	0.42
80:B2:68:A:H8	80:B2:68:A:H3'	1.85	0.42
81:B5:1243:G:C6	81:B5:1244:A:C2	3.07	0.42
81:B5:2207:A:H2'	81:B5:2208:A:O4'	2.18	0.42
59:BY:4:GLN:N	81:B5:229:G:OP1	2.32	0.42
81:B5:2509:U:H2'	81:B5:2510:U:C5'	2.45	0.42
81:B5:3006:A:H2'	81:B5:3007:U:O4'	2.19	0.42
37:BC:50:TYR:HB3	81:B5:337:G:H21	1.84	0.42
81:B5:536:U:H1'	81:B5:559:A:C8	2.55	0.42
82:B7:55:A:H2'	82:B7:56:A:O4'	2.20	0.42
83:B8:126:A:OP2	83:B8:126:A:H8	2.02	0.42
35:BA:116:VAL:CG1	35:BA:126:LEU:HB2	2.47	0.42
36:BB:4:ARG:HG3	36:BB:4:ARG:HH11	1.85	0.42
38:BD:187:THR:CG2	38:BD:189:GLU:HB2	2.45	0.42
38:BD:63:GLN:HB3	38:BD:65:ILE:HD11	2.01	0.42
48:BN:20:ARG:HG2	48:BN:20:ARG:H	1.67	0.42
48:BN:49:ARG:HB3	48:BN:50:ARG:H	1.68	0.42
49:BO:60[B]:LYS:HG2	49:BO:60[B]:LYS:H	1.58	0.42
52:BR:138:LEU:O	52:BR:142:ILE:HG13	2.19	0.42
54:BT:120:LYS:C	54:BT:122:GLN:H	2.22	0.42
54:BT:49:GLN:HE21	81:B5:2755:C:C2'	2.28	0.42
1:A0:87:ARG:CZ	80:B2:1797:A:C4	3.02	0.42
7:A6:42:LEU:O	7:A6:61:PHE:HD1	2.03	0.42
8:A7:84:LYS:HD2	8:A7:85:SER:N	2.35	0.42
10:AB:140:ILE:O	10:AB:210:ILE:HA	2.20	0.42
16:AH:131:PHE:HB3	16:AH:132:PRO:HD3	2.01	0.42
20:AL:28:SER:O	20:AL:29:LYS:HB3	2.19	0.42
23:AO:84:ARG:HA	23:AO:119:THR:HG22	2.00	0.42
26:AR:57:LEU:O	26:AR:61:ILE:HG13	2.19	0.42
28:AT:33:TYR:C	28:AT:33:TYR:CD1	2.93	0.42
30:AV:21:ASN:OD1	31:AW:23:ARG:NH2	2.53	0.42
26:AR:6:THR:HA	80:B2:1315:U:O2'	2.20	0.42
80:B2:1340:U:N3	80:B2:1378:U:H4'	2.34	0.42
80:B2:1370:U:H4'	80:B2:1371:A:H5'	2.01	0.42
80:B2:1511:U:H2'	80:B2:1512:G:H8	1.83	0.42
89:B2:1907:OHX:N2	89:B2:2083:OHX:N4	2.66	0.42
89:B2:1907:OHX:N2	89:B2:2083:OHX:N6	2.68	0.42
89:B2:1961:OHX:N4	89:B2:1963:OHX:N1	2.67	0.42
89:B2:1961:OHX:N6	89:B2:1963:OHX:N5	2.67	0.42
80:B2:460:A:H3'	80:B2:461:G:H8	1.85	0.42
80:B2:67:A:C2	80:B2:69:G:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:648:G:C4	80:B2:687:G:N2	2.88	0.42
80:B2:720:G:O2'	80:B2:721:U:H5'	2.18	0.42
23:AO:129:LYS:CA	80:B2:990:C:H4'	2.45	0.42
81:B5:1014:U:H3'	81:B5:1015:U:H5'	2.01	0.42
48:BN:49:ARG:NH2	81:B5:149:U:OP1	2.22	0.42
81:B5:1553:U:H1'	81:B5:1554:U:H5	1.84	0.42
81:B5:1561:G:O2'	81:B5:1562:C:OP2	2.26	0.42
81:B5:1880:U:H2'	81:B5:1881:A:O4'	2.19	0.42
35:BA:200:ARG:NE	81:B5:2187:G:O6	2.52	0.42
81:B5:2518:C:C2	81:B5:2590:A:C2	3.06	0.42
81:B5:2534:G:H8	81:B5:2534:G:OP2	2.03	0.42
81:B5:2537:U:HO2'	81:B5:2538:U:P	2.38	0.42
81:B5:2667:A:H8	81:B5:2667:A:C5'	2.28	0.42
81:B5:2953:U:H5''	81:B5:2954:U:OP2	2.20	0.42
51:BQ:90:ASP:OD1	81:B5:785:G:C6	2.72	0.42
35:BA:211:HIS:ND1	81:B5:2184:U:O3'	2.52	0.42
36:BB:67:PHE:O	36:BB:70:ARG:HB2	2.19	0.42
40:BF:32:ALA:O	40:BF:35:ALA:HB3	2.19	0.42
43:BI:47:PRO:HB3	43:BI:171:TRP:CZ2	2.55	0.42
46:BL:133:PRO:O	46:BL:135:ALA:N	2.52	0.42
49:BO:156[A]:LEU:HB3	81:B5:3243:A:N7	2.34	0.42
55:BU:17:VAL:HB	55:BU:63:VAL:HG23	2.01	0.42
56:BV:67:PRO:C	56:BV:69:LEU:H	2.22	0.42
81:B5:2443:A:H62	84:CN:2208:G:C5'	2.25	0.42
85:CP:322:LEU:HD21	85:CP:333:LEU:HD11	2.02	0.42
2:A1:20:LYS:HE3	80:B2:958:U:OP2	2.19	0.42
4:A3:54:LYS:HZ3	29:AU:80:GLU:HG3	1.84	0.42
9:AA:35:PRO:C	9:AA:37:VAL:H	2.22	0.42
10:AB:97:LEU:HD12	10:AB:232:HIS:NE2	2.35	0.42
11:AC:137:ILE:HG12	11:AC:138:PRO:HD2	2.01	0.42
12:AD:142:LEU:O	12:AD:144:ALA:N	2.44	0.42
16:AH:131:PHE:O	16:AH:133:THR:OG1	2.27	0.42
16:AH:133:THR:O	16:AH:134:GLU:HB2	2.19	0.42
17:AI:157:GLU:O	17:AI:160:PHE:HB2	2.19	0.42
18:AJ:49:LEU:HD22	18:AJ:53:ARG:HG3	2.01	0.42
20:AL:130:PRO:HD2	80:B2:115:G:C6	2.53	0.42
24:AP:108:ARG:HG2	24:AP:109:PRO:HD2	2.00	0.42
25:AQ:53:LEU:HD23	25:AQ:53:LEU:N	2.35	0.42
26:AR:5:ARG:HD3	26:AR:5:ARG:N	2.35	0.42
29:AU:28:SER:HB2	29:AU:112:VAL:HA	2.02	0.42
29:AU:77:LYS:H	29:AU:77:LYS:HG2	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AW:80:ASN:ND2	31:AW:124:LYS:HG2	2.34	0.42
32:AX:144:ARG:HG3	32:AX:144:ARG:H	1.66	0.42
80:B2:1489:U:H2'	80:B2:1490:C:OP1	2.19	0.42
25:AQ:139:GLN:OE1	80:B2:1579:U:H1'	2.20	0.42
80:B2:1590:G:OP2	89:B2:2022:OHX:N3	2.52	0.42
80:B2:1644:C:O2	81:B5:2255:A:C6	2.72	0.42
17:AI:26:LYS:HE2	80:B2:396:G:O6	2.19	0.42
5:A4:31:LYS:HG2	80:B2:477:A:OP1	2.19	0.42
81:B5:1867:A:H2'	81:B5:1868:G:C8	2.54	0.42
36:BB:236:LYS:HD3	81:B5:2340:U:P	2.59	0.42
81:B5:2656:A:C8	81:B5:2658:G:C8	3.07	0.42
81:B5:2910:A:H8	81:B5:2910:A:H5''	1.85	0.42
81:B5:2935:U:O2	81:B5:2935:U:H2'	2.19	0.42
49:BO:65[A]:ASN:ND2	81:B5:2988:C:OP1	2.35	0.42
81:B5:3158:G:C5	81:B5:3159:C:C5	3.08	0.42
81:B5:3294:A:H2'	81:B5:3295:A:O4'	2.19	0.42
81:B5:339:C:OP1	81:B5:1380:G:O2'	2.30	0.42
81:B5:567:G:H2'	81:B5:568:G:C8	2.55	0.42
81:B5:926:A:H2'	81:B5:927:C:C6	2.55	0.42
35:BA:61:VAL:HG22	35:BA:63:PHE:CE1	2.55	0.42
36:BB:37:ARG:O	36:BB:186:GLY:HA3	2.20	0.42
36:BB:49:TYR:O	36:BB:79:VAL:HG23	2.19	0.42
38:BD:270:LYS:O	38:BD:271:LYS:HD3	2.20	0.42
41:BG:239:GLY:O	41:BG:240:ASN:C	2.58	0.42
41:BG:54:GLU:O	41:BG:58:VAL:HG23	2.19	0.42
44:BJ:128:TYR:CZ	81:B5:2672:G:N3	2.87	0.42
44:BJ:92:ARG:HH11	44:BJ:92:ARG:CG	2.25	0.42
48:BN:44:ARG:HB3	48:BN:47:LYS:HB3	2.02	0.42
52:BR:165:LYS:CD	80:B2:824:G:N2	2.83	0.42
54:BT:54:HIS:CG	54:BT:55:LYS:N	2.87	0.42
54:BT:93:VAL:HG22	54:BT:93:VAL:H	1.55	0.42
15:AG:130:PRO:C	57:BW:82:ILE:HG23	2.33	0.42
84:CN:2136:G:H2'	84:CN:2138:A:N7	2.34	0.42
86:CW:1:G:C5	86:CW:2:C:C5	3.08	0.42
8:A7:61:ILE:HD12	8:A7:62:ARG:N	2.35	0.42
8:A7:89:ARG:C	8:A7:91:THR:H	2.23	0.42
10:AB:90:GLU:HG2	10:AB:223:PHE:HZ	1.84	0.42
12:AD:179:GLN:HE21	12:AD:179:GLN:C	2.23	0.42
12:AD:28:GLU:HA	12:AD:28:GLU:OE1	2.18	0.42
13:AE:22:LYS:NZ	80:B2:772:G:P	2.93	0.42
14:AF:95:ASN:O	14:AF:98:MET:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:76:LEU:HD22	15:AG:92:ARG:HB3	2.01	0.42
15:AG:79:LYS:O	15:AG:80:ASN:HB2	2.19	0.42
16:AH:117:THR:HG23	16:AH:120:ALA:H	1.85	0.42
16:AH:159:VAL:HG23	16:AH:163:ASP:OD1	2.20	0.42
19:AK:16:PHE:HD2	19:AK:76:LEU:HD23	1.84	0.42
19:AK:54:TYR:CD1	19:AK:54:TYR:N	2.86	0.42
20:AL:103:ARG:NH1	80:B2:307:G:H5''	2.35	0.42
24:AP:40:ARG:CZ	80:B2:1556:A:H2'	2.50	0.42
33:AY:105:ARG:CB	80:B2:443:C:OP1	2.68	0.42
33:AY:35:VAL:HG11	33:AY:40:LEU:HD11	2.01	0.42
80:B2:1201:G:H22	80:B2:1600:A:H5'	1.85	0.42
80:B2:1244:A:O2'	80:B2:1245:G:OP1	2.29	0.42
80:B2:1456:C:O4'	80:B2:1456:C:O2	2.38	0.42
80:B2:1595:U:H5	80:B2:1596:C:C5	2.37	0.42
80:B2:36:C:H2'	80:B2:37:U:O4'	2.20	0.42
80:B2:505:A:H2'	80:B2:506:A:OP1	2.19	0.42
80:B2:681:U:O4	80:B2:682:C:N4	2.52	0.42
80:B2:778:G:C5	80:B2:783:G:N1	2.88	0.42
80:B2:805:U:H2'	80:B2:806:A:H5''	2.02	0.42
81:B5:1483:G:C8	81:B5:1485:G:C8	3.07	0.42
35:BA:191:LEU:CG	81:B5:1795:U:OP1	2.68	0.42
81:B5:1815:U:H1'	81:B5:1816:A:O5'	2.19	0.42
81:B5:2443:A:C5'	84:CN:2122:G:C6	2.95	0.42
54:BT:92:ARG:HD2	81:B5:2736:A:OP1	2.19	0.42
81:B5:2985:C:H2'	81:B5:2986:U:C6	2.55	0.42
81:B5:3227:A:N3	81:B5:3227:A:O4'	2.51	0.42
81:B5:3329:U:H2'	81:B5:3330:A:H5''	2.00	0.42
81:B5:3393:U:H2'	81:B5:3394:U:O4'	2.20	0.42
81:B5:806:A:H5''	81:B5:936:A:H61	1.85	0.42
81:B5:863:C:H2'	81:B5:864:G:O4'	2.18	0.42
83:B8:92:A:H2'	83:B8:93:U:O4'	2.19	0.42
44:BJ:72:ARG:HD2	83:B8:94:C:H3'	154.30	0.42
35:BA:84:THR:HB	81:B5:2554:A:C2	2.53	0.42
38:BD:265:TYR:CE1	82:B7:120:C:C2'	2.91	0.42
40:BF:169:ILE:HD13	40:BF:181:ILE:HA	2.01	0.42
41:BG:241:LYS:HD3	81:B5:2584:G:H21	1.84	0.42
42:BH:166:ARG:O	42:BH:167:VAL:HB	2.20	0.42
42:BH:161:LEU:HD13	42:BH:179:ILE:HG21	2.02	0.42
42:BH:191:LEU:HA	42:BH:191:LEU:HD13	1.89	0.42
42:BH:31:ARG:HB2	42:BH:82:VAL:HA	2.02	0.42
49:BO:61[A]:ALA:CB	49:BO:66[A]:LYS:HG3	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:85[B]:ARG:HD3	49:BO:90[B]:HIS:ND1	2.33	0.42
59:BY:50:ILE:HD12	59:BY:70:ILE:HG12	2.02	0.42
84:CN:2172:G:C2	84:CN:2173:G:C4	3.07	0.42
80:B2:429:G:C4'	85:CP:276:ARG:HD2	2.24	0.42
80:B2:429:G:O2'	85:CP:276:ARG:NE	2.52	0.42
9:AA:69:ASN:HB3	9:AA:71:GLU:OE2	2.19	0.42
10:AB:132:ASP:HB2	10:AB:221:PRO:HB3	2.02	0.42
12:AD:195:SER:O	12:AD:196:ARG:HB3	2.20	0.42
13:AE:3:ARG:NH1	80:B2:93:A:O4'	2.52	0.42
15:AG:119:GLN:HG3	15:AG:120:GLU:N	2.35	0.42
19:AK:81:ASN:HB3	21:AM:37:VAL:HG11	2.00	0.42
24:AP:18:ARG:O	27:AS:95:GLY:HA3	2.20	0.42
25:AQ:127:LYS:HA	25:AQ:134:ALA:HA	2.02	0.42
26:AR:107:SER:HA	26:AR:110:VAL:HG23	2.01	0.42
29:AU:109:GLU:HA	29:AU:110:PRO:HD2	1.78	0.42
31:AW:105:THR:CG2	80:B2:804:A:O2'	2.68	0.42
32:AX:13:ARG:HA	32:AX:16:ARG:HD3	2.01	0.42
80:B2:1151:A:H2'	80:B2:1152:A:H8	1.85	0.42
80:B2:1686:C:C4	80:B2:1687:U:C5	3.08	0.42
89:B2:2016:OHX:N4	89:B2:2073:OHX:N1	2.68	0.42
89:B2:1943:OHX:N1	89:B2:2080:OHX:N5	2.68	0.42
80:B2:812:A:OP1	80:B2:814:A:C8	2.73	0.42
23:AO:124:ASP:O	80:B2:927:C:H1'	2.19	0.42
81:B5:124:U:O2	81:B5:149:U:O2'	2.32	0.42
81:B5:2294:U:C2	81:B5:2297:U:C5	3.07	0.42
81:B5:815:G:C6	81:B5:906:A:C4	3.08	0.42
38:BD:269:SER:O	82:B7:22:A:N1	2.52	0.42
35:BA:110:GLY:O	35:BA:128:ARG:O	18.29	0.42
36:BB:346:THR:O	36:BB:348:ARG:N	2.53	0.42
37:BC:93:MET:H	37:BC:93:MET:HE2	1.85	0.42
40:BF:106:LEU:HA	40:BF:106:LEU:HD23	1.84	0.42
40:BF:102:VAL:HG12	40:BF:130:ILE:CD1	2.50	0.42
53:BS:50:LYS:HE3	82:B7:76:A:H2	1.82	0.42
56:BV:18:PRO:CD	81:B5:1898:G:H1'	2.50	0.42
57:BW:127:LYS:HA	57:BW:130:SER:OG	2.20	0.42
79:CL:84:LYS:C	79:CL:86:ALA:H	2.21	0.42
84:CN:2186:G:C5	84:CN:2187:G:C6	3.06	0.42
85:CP:131:LYS:CG	90:CP:401:GCP:O6	2.46	0.42
1:A0:76:SER:O	1:A0:80:HIS:N	2.53	0.42
15:AG:136:LYS:HZ2	80:B2:66:U:P	2.42	0.42
16:AH:75:THR:OG1	16:AH:76:LYS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:127:VAL:HG12	18:AJ:131:GLN:NE2	2.35	0.42
18:AJ:30:LEU:HD23	18:AJ:30:LEU:HA	1.80	0.42
18:AJ:92:LYS:HE3	18:AJ:92:LYS:HA	2.01	0.42
25:AQ:82:ARG:HH12	25:AQ:114:ARG:HB3	1.84	0.42
14:AF:69:PHE:CD2	25:AQ:50:GLU:HG2	2.54	0.42
32:AX:23:ARG:HH11	32:AX:23:ARG:HG3	1.85	0.42
34:AZ:59:TYR:HE1	34:AZ:61:SER:CB	2.31	0.42
80:B2:1570:A:H2'	80:B2:1571:C:O4'	2.20	0.42
80:B2:1586:A:H2'	80:B2:1587:A:C8	2.54	0.42
80:B2:1642:G:O6	89:B2:1901:OHX:N6	2.53	0.42
80:B2:1740:A:O2'	80:B2:1741:U:H5'	2.19	0.42
32:AX:50:LYS:HB2	80:B2:435:C:H5'	2.02	0.42
80:B2:568:G:O2'	80:B2:569:C:H5'	2.20	0.42
80:B2:71:A:C2	80:B2:72:A:C2	3.08	0.42
80:B2:709:C:N4	80:B2:730:G:C4	2.87	0.42
23:AO:20:TYR:CE2	80:B2:917:U:OP1	2.64	0.42
41:BG:136:LEU:HB2	81:B5:147:U:H5''	2.01	0.42
81:B5:1565:G:N1	81:B5:1574:C:C2	2.83	0.42
54:BT:54:HIS:NE2	81:B5:2724:U:H4'	2.34	0.42
81:B5:283:G:O6	81:B5:304:G:H1'	2.20	0.42
81:B5:748:U:H2'	81:B5:749:C:C6	2.55	0.42
81:B5:806:A:O2'	81:B5:807:A:H5'	2.19	0.42
35:BA:242:ARG:HG3	35:BA:242:ARG:HH11	1.84	0.42
35:BA:30:ARG:NH2	35:BA:33:ASP:OD1	2.51	0.42
36:BB:147:GLU:CD	36:BB:150:ARG:NH2	2.73	0.42
36:BB:361:THR:HG23	36:BB:371:GLN:O	2.20	0.42
37:BC:22:LEU:HA	37:BC:23:PRO:HD3	1.68	0.42
38:BD:124:GLU:O	38:BD:125:VAL:HB	2.20	0.42
38:BD:68:THR:HG22	38:BD:70:THR:H	1.85	0.42
38:BD:92:LEU:HA	38:BD:92:LEU:HD23	1.68	0.42
40:BF:103:LEU:HA	40:BF:103:LEU:HD23	1.66	0.42
44:BJ:132:ASN:HD22	44:BJ:132:ASN:H	1.65	0.42
44:BJ:132:ASN:HD22	44:BJ:132:ASN:N	2.16	0.42
46:BL:46:ILE:HD13	46:BL:46:ILE:HA	1.45	0.42
46:BL:99:HIS:HB2	81:B5:156:G:C1'	2.49	0.42
49:BO:128[B]:ARG:HA	49:BO:128[B]:ARG:HD3	1.75	0.42
53:BS:34:GLU:O	53:BS:38:LYS:HG3	2.20	0.42
79:CL:99:ILE:O	79:CL:103:ILE:N	2.50	0.42
84:CN:2156:A:H4'	84:CN:2181:G:H4'	2.02	0.42
7:A6:123:ILE:HD11	7:A6:156:VAL:HG23	2.01	0.42
7:A6:222:LEU:HD23	7:A6:234:LEU:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A6:29:GLN:C	7:A6:31:ASN:H	2.23	0.42
8:A7:33:LYS:HE3	81:B5:2692:A:P	2.60	0.42
9:AA:30:GLN:NE2	9:AA:149:LEU:HD13	2.35	0.42
11:AC:125:ILE:O	11:AC:129:ILE:HG13	2.19	0.42
12:AD:5:ILE:CG2	12:AD:9:ARG:HB3	2.50	0.42
15:AG:32:ILE:HD12	15:AG:100:ALA:HB1	2.02	0.42
15:AG:148:SER:C	15:AG:150:GLU:H	2.22	0.42
17:AI:37:LYS:O	17:AI:59:ARG:HA	2.20	0.42
20:AL:118:GLN:HG3	20:AL:119:VAL:N	2.35	0.42
23:AO:81:VAL:HG13	23:AO:115:ILE:CG2	2.50	0.42
25:AQ:58:ASP:OD1	25:AQ:59:LYS:N	2.53	0.42
27:AS:10:SER:OG	27:AS:11:PHE:N	2.52	0.42
29:AU:96:PRO:HG2	29:AU:99:ILE:HG22	2.02	0.42
33:AY:105:ARG:O	33:AY:109:LYS:HG3	2.20	0.42
34:AZ:65:LEU:HB3	34:AZ:71:ILE:CD1	2.50	0.42
26:AR:8:THR:HG21	80:B2:1330:G:N2	2.35	0.42
80:B2:1337:A:H5'	80:B2:1338:C:OP2	2.20	0.42
25:AQ:75:VAL:CG2	80:B2:1610:G:OP1	2.65	0.42
80:B2:717:C:H42	80:B2:720:G:N2	2.09	0.42
80:B2:814:A:C5	80:B2:816:G:C8	3.07	0.42
81:B5:1049:C:H2'	81:B5:1050:U:C6	2.55	0.42
81:B5:1190:A:C8	81:B5:1193:A:H1'	2.55	0.42
81:B5:1226:G:O4'	81:B5:1288:U:C3'	2.65	0.42
81:B5:1449:A:C2	81:B5:2356:A:C4	3.08	0.42
81:B5:2441:A:N1	81:B5:2507:C:C2	2.87	0.42
8:A7:46:LYS:CG	81:B5:2678:A:H4'	2.42	0.42
81:B5:275:U:H2'	81:B5:276:U:C6	2.54	0.42
81:B5:2827:U:O2	81:B5:2827:U:H2'	2.20	0.42
81:B5:2896:A:C5'	81:B5:2896:A:H8	2.32	0.42
49:BO:156[A]:LEU:HD13	81:B5:3243:A:C8	2.54	0.42
36:BB:226:PHE:HB2	81:B5:3307:A:OP1	2.20	0.42
81:B5:971:G:H2'	81:B5:972:A:O4'	2.20	0.42
36:BB:39:LYS:HE2	36:BB:39:LYS:HB3	1.69	0.42
37:BC:119:ARG:HH21	81:B5:695:C:P	2.43	0.42
40:BF:236:ILE:O	40:BF:240:VAL:HG23	2.20	0.42
41:BG:124:ASP:HA	81:B5:120:G:H22	1.85	0.42
41:BG:181:LYS:HG2	83:B8:154:C:C5'	2.46	0.42
42:BH:129:ARG:O	42:BH:132:VAL:HG13	2.20	0.42
42:BH:20:ILE:HG13	47:BM:7:VAL:HG22	2.01	0.42
46:BL:67:ARG:HG3	46:BL:67:ARG:H	1.40	0.42
47:BM:38:ILE:HA	47:BM:44:VAL:HG12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:43:LYS:CE	81:B5:1765:U:H5'	2.50	0.42
53:BS:16:THR:OG1	53:BS:19:VAL:N	2.52	0.42
54:BT:68:THR:HG21	81:B5:2736:A:C2'	2.49	0.42
84:CN:2173:G:H4'	84:CN:2173:G:OP1	2.19	0.42
80:B2:420:A:C2	85:CP:289:LEU:CD2	3.03	0.42
2:A1:66:PRO:CB	80:B2:871:G:H4'	2.49	0.41
3:A2:29:ARG:HG3	3:A2:39:THR:OG1	2.19	0.41
4:A3:41:GLN:N	4:A3:41:GLN:OE1	2.51	0.41
9:AA:172:LEU:HD13	9:AA:176:LEU:HD11	2.01	0.41
10:AB:168:ILE:O	10:AB:172:LEU:HG	2.19	0.41
12:AD:70:THR:OG1	12:AD:71:LEU:N	2.51	0.41
13:AE:108:ARG:HH12	80:B2:788:A:P	2.43	0.41
13:AE:114:ILE:HB	13:AE:118:GLU:OE1	2.20	0.41
16:AH:104:ARG:HB2	16:AH:105:THR:H	1.45	0.41
16:AH:129:LEU:HD21	16:AH:172:VAL:HG11	2.02	0.41
16:AH:17:GLU:HG2	16:AH:46:ILE:HB	2.01	0.41
17:AI:87:ASN:HB3	17:AI:90:LEU:HD12	2.02	0.41
19:AK:50:THR:HB	19:AK:55:VAL:O	2.19	0.41
19:AK:72:GLY:O	19:AK:76:LEU:HD22	2.20	0.41
27:AS:109:LEU:HG	27:AS:113:LEU:CD1	2.50	0.41
9:AA:63:ILE:HG12	30:AV:36:VAL:HG22	2.01	0.41
11:AC:230:TRP:CE2	31:AW:68:ARG:HB3	2.55	0.41
34:AZ:97:LYS:HG3	34:AZ:98:GLN:H	1.84	0.41
80:B2:1013:A:H2'	80:B2:1014:G:O4'	2.19	0.41
80:B2:143:G:C2	80:B2:173:A:N3	2.88	0.41
80:B2:1535:U:H1'	80:B2:1536:G:C2	2.55	0.41
25:AQ:73:GLY:N	80:B2:1608:U:O3'	2.52	0.41
15:AG:95:LYS:CE	80:B2:161:U:P	3.03	0.41
80:B2:1449:U:O4	89:B2:1907:OHX:N1	2.53	0.41
89:B2:1986:OHX:N1	89:B2:2065:OHX:N5	2.68	0.41
89:AL:201:OHX:N4	89:B2:1996:OHX:N2	2.68	0.41
80:B2:488:G:N7	80:B2:498:G:N2	2.68	0.41
80:B2:68:A:C8	80:B2:68:A:H3'	2.55	0.41
80:B2:992:A:N3	80:B2:992:A:O4'	2.53	0.41
81:B5:1560:G:O2'	81:B5:1561:G:P	2.76	0.41
46:BL:99:HIS:CD2	81:B5:156:G:C4	3.08	0.41
81:B5:1648:A:H2'	81:B5:1649:U:O4'	2.19	0.41
81:B5:1690:C:H2'	81:B5:1691:U:O4'	2.20	0.41
46:BL:45:LYS:HB2	81:B5:241:G:C1'	2.49	0.41
81:B5:2777:G:C5'	81:B5:2777:G:C8	3.02	0.41
81:B5:314:U:H2'	81:B5:315:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:3288:G:O2'	81:B5:3289:G:P	2.78	0.41
48:BN:60:VAL:CG2	83:B8:142:C:O3'	2.68	0.41
83:B8:6:U:H2'	83:B8:7:U:C6	2.54	0.41
42:BH:89:LYS:HG2	42:BH:145:VAL:HG22	2.02	0.41
43:BI:74:LYS:HD3	43:BI:74:LYS:HA	1.75	0.41
44:BJ:24:GLY:HA2	81:B5:2680:A:H2	1.81	0.41
48:BN:179:LYS:HB3	81:B5:287:G:C5'	2.49	0.41
51:BQ:161:LYS:HD2	51:BQ:161:LYS:N	2.35	0.41
51:BQ:90:ASP:O	51:BQ:92:ARG:N	2.53	0.41
56:BV:87:ARG:HH22	56:BV:137:VAL:CG2	2.31	0.41
60:BZ:103:GLN:HA	60:BZ:104:PRO:HD2	1.95	0.41
60:BZ:108:GLU:O	60:BZ:112:LYS:HG3	2.20	0.41
60:BZ:95:VAL:CG1	60:BZ:110:ALA:HA	2.50	0.41
4:A3:5:ASN:HB3	4:A3:7:TRP:NE1	2.35	0.41
7:A6:116:ASP:HB2	7:A6:117:LYS:HD2	2.01	0.41
8:A7:117:LEU:HD21	8:A7:121:LYS:HD2	2.03	0.41
11:AC:242:ILE:HG22	11:AC:243:TYR:CE2	2.55	0.41
12:AD:162:GLN:HG2	80:B2:1333:C:H4'	1.99	0.41
13:AE:106:LYS:HG3	13:AE:108:ARG:NH2	2.34	0.41
13:AE:22:LYS:HB2	80:B2:773:C:OP2	2.20	0.41
17:AI:106:ALA:O	17:AI:109:PHE:N	2.53	0.41
23:AO:25:ASP:HB2	80:B2:901:G:P	2.41	0.41
27:AS:47:CYS:HB3	27:AS:54:LEU:CD1	2.50	0.41
31:AW:111:MET:CE	31:AW:116:ALA:HA	2.50	0.41
31:AW:28:ARG:HA	31:AW:29:PRO:HA	1.73	0.41
31:AW:30:SER:HB2	31:AW:61:ILE:CD1	2.50	0.41
31:AW:6:VAL:HG13	31:AW:29:PRO:HD2	2.02	0.41
6:A5:140:TYR:HH	80:B2:1234:A:H1'	1.83	0.41
24:AP:47:ARG:HD3	80:B2:1555:A:OP1	2.19	0.41
15:AG:62:PRO:CB	80:B2:162:A:C5'	2.96	0.41
80:B2:1645:G:O2'	81:B5:2259:A:N6	2.52	0.41
80:B2:1780:G:C2'	81:B5:2262:A:C2'	2.98	0.41
89:B2:1943:OHX:N4	89:B2:2080:OHX:N6	2.68	0.41
80:B2:240:U:H4'	80:B2:241:U:OP2	2.20	0.41
80:B2:686:C:H2'	80:B2:687:G:C8	2.55	0.41
80:B2:73:U:C2	80:B2:74:U:O2	2.73	0.41
80:B2:81:G:C6	80:B2:82:U:N3	2.88	0.41
80:B2:901:G:C6	80:B2:902:G:C6	3.08	0.41
81:B5:1366:A:C2	81:B5:1367:G:C4	3.08	0.41
81:B5:2179:C:H4'	81:B5:2180:G:OP2	2.20	0.41
81:B5:173:G:N1	81:B5:246:U:C2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:69:TYR:CZ	81:B5:2558:U:C4	3.08	0.41
81:B5:726:G:C5'	81:B5:726:G:C8	3.01	0.41
81:B5:956:U:H2'	81:B5:957:C:C6	2.55	0.41
35:BA:187:HIS:HB3	81:B5:1794:G:N9	2.34	0.41
35:BA:247:ARG:NE	80:B2:1013:A:C5'	2.83	0.41
38:BD:122:VAL:O	38:BD:124:GLU:N	2.44	0.41
42:BH:13:PRO:HG2	42:BH:16:VAL:HG13	2.02	0.41
42:BH:29:GLY:HA3	42:BH:82:VAL:HG13	2.01	0.41
43:BI:81:GLY:C	43:BI:83:ASP:H	2.21	0.41
49:BO:54[B]:TYR:O	49:BO:57[B]:PHE:HB3	2.20	0.41
50:BP:32:THR:HG21	50:BP:87:SER:HB3	2.02	0.41
52:BR:146:LYS:O	52:BR:149:ALA:N	2.53	0.41
54:BT:138:SER:C	54:BT:139:ARG:HG3	2.38	0.41
56:BV:125:LEU:HA	56:BV:125:LEU:HD12	1.84	0.41
56:BV:125:LEU:HB3	56:BV:126:TRP:CD1	2.55	0.41
58:BX:40:LEU:HB3	58:BX:41:ALA:H	1.58	0.41
86:CW:9:A:C4	86:CW:45:U:C5	3.09	0.41
3:A2:64:ARG:HB3	3:A2:65:ARG:H	1.66	0.41
5:A4:34:ALA:O	5:A4:37:ARG:HB3	2.20	0.41
8:A7:32:SER:HB2	81:B5:2692:A:O2'	2.20	0.41
8:A7:93:ARG:HB3	8:A7:93:ARG:HE	1.80	0.41
9:AA:202:TYR:H	9:AA:202:TYR:HD1	1.68	0.41
10:AB:111:ARG:HD3	10:AB:111:ARG:HA	1.93	0.41
10:AB:137:ILE:HG22	10:AB:215:VAL:CG2	2.50	0.41
10:AB:29:TRP:CZ2	10:AB:45:LYS:HB3	2.55	0.41
10:AB:72:ASP:OD2	23:AO:114:ARG:HD2	2.20	0.41
12:AD:66:ILE:O	12:AD:70:THR:HG23	2.20	0.41
14:AF:104:ASN:ND2	80:B2:1166:A:C4'	2.83	0.41
15:AG:107:ALA:HB3	80:B2:154:G:C3'	2.51	0.41
16:AH:51:VAL:HG23	16:AH:53:GLY:N	2.34	0.41
21:AM:55:GLY:HA2	21:AM:85:LYS:CD	2.50	0.41
25:AQ:122:ARG:HA	80:B2:1584:G:C5'	2.45	0.41
28:AT:49:ASP:O	28:AT:51:GLU:N	2.54	0.41
29:AU:106:ILE:CG1	29:AU:107:THR:H	2.28	0.41
30:AV:16:LYS:HG2	30:AV:21:ASN:HA	2.03	0.41
32:AX:69:ARG:HH11	80:B2:570:A:H61	1.67	0.41
33:AY:18:LEU:HA	33:AY:18:LEU:HD23	1.90	0.41
33:AY:94:TYR:CD2	33:AY:96:LEU:HD11	2.55	0.41
34:AZ:54:VAL:HG13	34:AZ:57:TYR:CD2	2.55	0.41
80:B2:1042:G:C6	80:B2:1043:A:N7	2.88	0.41
80:B2:11:A:H2'	80:B2:12:U:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1250:U:O2'	80:B2:1251:U:OP1	2.31	0.41
80:B2:322:G:OP1	89:B2:1970:OHX:N4	2.53	0.41
80:B2:739:G:O6	89:B2:1975:OHX:N4	2.53	0.41
15:AG:159:ARG:HD3	80:B2:77:U:O2	1.89	0.41
81:B5:1932:A:H5'	81:B5:1933:A:OP2	2.19	0.41
57:BW:44:LYS:NZ	81:B5:2111:G:O2'	2.39	0.41
35:BA:236:GLY:CA	81:B5:2183:A:O2'	2.66	0.41
81:B5:2313:A:H4'	81:B5:2314:U:C5'	2.50	0.41
81:B5:171:G:H1	81:B5:247:C:H42	1.67	0.41
35:BA:85:GLY:HA2	81:B5:2554:A:N9	2.36	0.41
81:B5:2572:C:HO2'	81:B5:2573:G:P	2.39	0.41
54:BT:7:TYR:HE1	81:B5:2724:U:H1'	1.85	0.41
81:B5:2764:C:H42	86:CW:76:A:H3'	1.14	0.41
81:B5:291:C:H2'	81:B5:292:U:C6	2.56	0.41
81:B5:2298:U:C5	81:B5:2921:U:H1'	2.55	0.41
81:B5:2971:A:H4'	81:B5:2972:G:OP2	2.20	0.41
81:B5:3245:A:C2	81:B5:3246:G:C2	3.08	0.41
81:B5:3349:C:H2'	81:B5:3350:C:O4'	2.20	0.41
81:B5:438:A:H2'	81:B5:494:G:N2	2.33	0.41
38:BD:269:SER:C	82:B7:22:A:N1	2.74	0.41
82:B7:4:U:H2'	82:B7:5:G:H8	1.86	0.41
36:BB:5:LYS:HE3	81:B5:2878:G:OP1	2.20	0.41
39:BE:93:VAL:HG13	39:BE:93:VAL:O	2.19	0.41
51:BQ:178:ARG:HA	51:BQ:178:ARG:HD2	1.82	0.41
53:BS:82:ASP:OD1	53:BS:87:THR:HB	2.20	0.41
59:BY:102:SER:O	59:BY:103:LYS:HD3	2.20	0.41
84:CN:2191:A:C3'	84:CN:2192:A:H5''	2.51	0.41
1:A0:23:CYS:CB	1:A0:74:CYS:HB3	2.50	0.41
7:A6:38:ARG:HG2	7:A6:67:ILE:HG23	2.01	0.41
10:AB:81:PHE:HA	10:AB:106:THR:CG2	2.51	0.41
11:AC:104:VAL:HG22	11:AC:132:ALA:HB1	2.00	0.41
13:AE:87:MET:SD	13:AE:123:LEU:HB2	2.60	0.41
15:AG:21:GLU:H	15:AG:21:GLU:HG2	1.60	0.41
15:AG:59:GLN:HA	80:B2:155:U:C2'	2.50	0.41
16:AH:35:LYS:NZ	16:AH:36:ALA:H	2.17	0.41
17:AI:54:LYS:NZ	80:B2:333:A:H5''	2.36	0.41
21:AM:98:GLY:CA	21:AM:118:ALA:HB2	2.50	0.41
21:AM:131:ASP:OD1	21:AM:132:GLU:N	2.53	0.41
21:AM:67:THR:HB	80:B2:1228:G:H1	1.85	0.41
29:AU:57:ARG:HG2	80:B2:1382:A:H1'	1.99	0.41
80:B2:132:U:C1'	80:B2:133:U:OP2	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1540:G:C6	80:B2:1541:G:C4	3.07	0.41
24:AP:39:ALA:N	80:B2:1549:C:OP2	2.49	0.41
80:B2:1654:G:H2'	80:B2:1745:G:N2	2.35	0.41
89:B2:2022:OHX:N1	89:B2:2069:OHX:N4	2.68	0.41
80:B2:830:U:O2	80:B2:830:U:H2'	2.20	0.41
23:AO:130:GLY:N	80:B2:991:G:P	2.78	0.41
35:BA:68:LYS:NZ	81:B5:1650:G:OP1	2.53	0.41
81:B5:1760:A:H5'	81:B5:1761:C:OP2	2.19	0.41
81:B5:1939:G:C6	81:B5:2110:G:O6	2.74	0.41
35:BA:246:LEU:HD13	81:B5:2153:U:H5''	2.02	0.41
35:BA:94:ALA:C	81:B5:2551:U:O4	2.52	0.41
81:B5:2840:C:H2'	81:B5:2841:G:O4'	2.20	0.41
81:B5:3089:C:H2'	81:B5:3090:U:O4'	2.21	0.41
81:B5:544:C:HO2'	81:B5:545:U:H6	1.67	0.41
81:B5:594:U:C5'	81:B5:609:G:H1	2.34	0.41
81:B5:629:U:H2'	81:B5:630:A:H8	1.86	0.41
48:BN:113:LEU:HD11	83:B8:142:C:C5'	2.51	0.41
36:BB:120:LYS:HB2	81:B5:3296:A:OP1	2.20	0.41
37:BC:144:LYS:H	37:BC:144:LYS:HZ2	1.69	0.41
40:BF:102:VAL:HG12	40:BF:130:ILE:HD12	2.02	0.41
41:BG:71:VAL:CG2	41:BG:76:ALA:HB2	2.50	0.41
42:BH:91:ARG:HG2	42:BH:182:SER:HB3	2.02	0.41
43:BI:198:LYS:HE3	81:B5:1041:U:H1'	2.01	0.41
46:BL:109:PHE:O	46:BL:113:VAL:HG23	2.20	0.41
52:BR:58:HIS:O	81:B5:1690:C:H5''	2.20	0.41
53:BS:50:LYS:NZ	82:B7:76:A:N3	2.67	0.41
54:BT:9:SER:N	81:B5:2631:U:OP1	2.53	0.41
58:BX:105:VAL:HG13	58:BX:130:TYR:CG	2.56	0.41
84:CN:2124:C:H3'	84:CN:2125:G:H5''	2.01	0.41
84:CN:2158:C:H3'	84:CN:2159:C:H5''	2.02	0.41
85:CP:131:LYS:HD3	90:CP:401:GCP:N1	2.13	0.41
80:B2:420:A:H2	85:CP:289:LEU:CD2	2.32	0.41
7:A6:74:THR:CG2	7:A6:79:TYR:HB2	2.48	0.41
9:AA:198:MET:SD	9:AA:199:PRO:HD2	2.61	0.41
10:AB:115:ARG:HD3	10:AB:115:ARG:HA	1.73	0.41
11:AC:91:ARG:HA	80:B2:1147:A:P	2.60	0.41
13:AE:2:ALA:O	80:B2:94:U:OP1	2.37	0.41
13:AE:3:ARG:HB2	80:B2:94:U:P	2.60	0.41
16:AH:99:LEU:HD23	16:AH:100:PRO:HD2	2.02	0.41
20:AL:98:ASN:ND2	31:AW:79:PHE:HD2	2.19	0.41
22:AN:123:HIS:CD2	81:B5:847:A:H4'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:22:VAL:HG22	25:AQ:65:ILE:CD1	2.49	0.41
27:AS:30:TYR:HE2	80:B2:1539:G:H5'	1.86	0.41
27:AS:8:GLN:HB2	27:AS:9:GLY:H	1.56	0.41
32:AX:47:SER:HB3	80:B2:600:U:H1'	2.01	0.41
33:AY:44:LEU:HA	33:AY:47:VAL:HG22	2.03	0.41
80:B2:1344:A:H4'	80:B2:1345:A:OP1	2.19	0.41
80:B2:1346:A:H8	80:B2:1370:U:O2	2.03	0.41
26:AR:60:ARG:NH1	80:B2:1400:A:O3'	2.53	0.41
14:AF:185:ARG:NH2	80:B2:1572:G:O3'	2.53	0.41
80:B2:499:U:H2'	80:B2:500:C:C6	2.55	0.41
80:B2:74:U:H1'	80:B2:75:U:O5'	2.20	0.41
80:B2:948:G:H2'	80:B2:949:C:O4'	2.21	0.41
81:B5:1403:C:C2	81:B5:1409:G:C2	3.08	0.41
58:BX:125:ARG:NH2	81:B5:1610:G:OP1	2.49	0.41
60:BZ:70:PRO:CD	81:B5:1629:U:O2	2.67	0.41
81:B5:2191:U:H2'	81:B5:2192:C:O4'	2.20	0.41
81:B5:2222:A:O5'	81:B5:2222:A:H8	2.04	0.41
81:B5:2397:A:C2	81:B5:2873:U:H5'	2.55	0.41
81:B5:240:U:O2'	81:B5:241:G:H8	2.02	0.41
81:B5:2775:U:H2'	81:B5:2776:C:C6	2.56	0.41
36:BB:102:LEU:O	81:B5:3147:G:H4'	2.21	0.41
51:BQ:55:SER:HB3	81:B5:671:U:H5''	2.03	0.41
82:B7:110:G:C6	82:B7:111:U:C4	3.08	0.41
38:BD:266:ALA:CA	82:B7:1:G:C1'	2.99	0.41
37:BC:195:ARG:O	37:BC:196:ASN:HB2	2.21	0.41
40:BF:73:GLY:O	54:BT:143:THR:HB	2.20	0.41
43:BI:24:ARG:O	43:BI:25:ALA:HB3	2.21	0.41
44:BJ:97:SER:HB2	81:B5:2672:G:C1'	2.38	0.41
46:BL:65:TYR:CG	81:B5:103:G:H5'	2.55	0.41
55:BU:14:THR:HG23	55:BU:66:VAL:HG13	2.02	0.41
60:BZ:92:PHE:HA	60:BZ:95:VAL:HG23	2.01	0.41
84:CN:2175:G:C8	84:CN:2175:G:C5'	3.03	0.41
80:B2:51:A:N9	85:CP:242:GLY:HA2	0.45	0.41
3:A2:46:GLY:HA2	14:AF:166:ARG:HD2	2.02	0.41
4:A3:5:ASN:C	4:A3:7:TRP:H	2.23	0.41
9:AA:13:ASP:O	9:AA:16:LEU:HB2	2.21	0.41
9:AA:177:LEU:HA	9:AA:177:LEU:HD23	1.94	0.41
9:AA:83:GLN:HG2	9:AA:100:GLY:H	1.84	0.41
10:AB:96:LEU:O	10:AB:96:LEU:HD23	2.20	0.41
11:AC:106:ASP:N	11:AC:106:ASP:OD1	2.44	0.41
11:AC:168:ARG:HG3	80:B2:1097:U:HO2'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:159:HIS:CG	80:B2:1422:A:C4'	2.98	0.41
12:AD:167:PHE:HD1	12:AD:190:ARG:HD3	1.85	0.41
13:AE:121:TYR:HA	13:AE:163:ASP:O	2.21	0.41
15:AG:133:LEU:HG	80:B2:66:U:C5	2.55	0.41
16:AH:162:ILE:HA	16:AH:165:LYS:HG3	2.02	0.41
19:AK:14:TYR:C	19:AK:14:TYR:CD1	2.93	0.41
23:AO:105:LEU:HD12	23:AO:106:ALA:N	2.36	0.41
24:AP:12:PHE:CB	44:BJ:85:LYS:HD2	2.50	0.41
26:AR:24:LEU:HA	26:AR:31:ASN:OD1	2.21	0.41
28:AT:86:ARG:HG3	28:AT:86:ARG:NH1	2.31	0.41
33:AY:14:SER:HB3	33:AY:21:LYS:HE3	2.02	0.41
33:AY:47:VAL:HG23	33:AY:48:TYR:HD1	1.84	0.41
80:B2:1133:A:H2'	80:B2:1134:C:O4'	2.19	0.41
80:B2:1172:G:C5	80:B2:1173:C:C4	3.09	0.41
89:B2:1922:OHX:N6	89:B2:1977:OHX:N6	2.68	0.41
80:B2:570:A:H5''	80:B2:571:G:OP2	2.21	0.41
8:A7:104:LYS:HB3	80:B2:575:C:H5'	2.01	0.41
52:BR:162:ARG:HG2	80:B2:849:C:H6	1.85	0.41
2:A1:67:THR:CA	80:B2:872:G:O4'	2.68	0.41
81:B5:118:U:C5	81:B5:119:U:C4	3.09	0.41
80:B2:1655:A:C1'	81:B5:2302:G:C4'	2.99	0.41
81:B5:2558:U:O2'	81:B5:2559:U:H5'	2.21	0.41
81:B5:2572:C:O2'	81:B5:2573:G:P	2.79	0.41
41:BG:241:LYS:CD	81:B5:2584:G:N2	2.84	0.41
81:B5:2666:C:H2'	81:B5:2667:A:H5''	2.03	0.41
49:BO:156[B]:LEU:HD13	81:B5:3243:A:C8	2.56	0.41
81:B5:3242:G:C5'	81:B5:3245:A:C8	3.03	0.41
81:B5:372:A:C6	81:B5:373:A:C6	3.09	0.41
81:B5:600:G:H5'	81:B5:601:U:OP2	2.20	0.41
81:B5:916:G:C5'	81:B5:917:A:OP1	2.69	0.41
37:BC:118:LYS:O	37:BC:122:THR:HG22	2.20	0.41
37:BC:52:VAL:HB	37:BC:99:MET:CE	2.51	0.41
37:BC:80:GLY:HA2	37:BC:85:SER:OG	2.20	0.41
38:BD:49:TYR:CE1	38:BD:75:LEU:HD12	2.56	0.41
40:BF:121:LYS:HB2	54:BT:133:ALA:HB3	2.03	0.41
43:BI:168:SER:HB2	54:BT:160:ILE:C	2.41	0.41
43:BI:169:LYS:O	43:BI:170:LYS:HB2	2.21	0.41
43:BI:4:ARG:HB2	81:B5:2828:G:O3'	2.20	0.41
44:BJ:92:ARG:HH12	44:BJ:94:ARG:HH11	1.67	0.41
48:BN:194:GLN:HG2	48:BN:194:GLN:H	1.55	0.41
49:BO:88[B]:VAL:HG12	49:BO:89[B]:SER:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BP:46:LYS:HE3	50:BP:46:LYS:HB2	1.87	0.41
56:BV:87:ARG:HH12	56:BV:137:VAL:HG11	1.85	0.41
58:BX:51:VAL:HA	58:BX:52:PRO:HD3	1.95	0.41
60:BZ:65:ARG:HG3	60:BZ:65:ARG:NH1	2.34	0.41
79:CL:88:GLU:O	79:CL:89:ALA:CB	2.68	0.41
84:CN:2132:C:C5	84:CN:2139:U:C2	3.08	0.41
84:CN:2170:G:O4'	84:CN:2170:G:N3	2.52	0.41
85:CP:232:ALA:HB3	85:CP:321:LEU:HB3	2.02	0.41
1:A0:44:ILE:CD1	1:A0:44:ILE:H	2.24	0.41
2:A1:15:GLU:OE2	2:A1:24:LEU:N	2.50	0.41
10:AB:171:ILE:O	10:AB:175:GLU:HG2	2.21	0.41
10:AB:207:LEU:HB3	10:AB:210:ILE:HD11	2.02	0.41
12:AD:138:VAL:O	12:AD:149:ALA:HA	2.20	0.41
12:AD:204:ASP:OD1	80:B2:1330:G:C2	2.59	0.41
13:AE:104:ASP:HB3	13:AE:106:LYS:N	2.33	0.41
13:AE:180:LEU:HA	13:AE:180:LEU:HD23	1.81	0.41
14:AF:217:LEU:HA	14:AF:217:LEU:HD23	1.90	0.41
15:AG:173:PRO:HB2	15:AG:174:LYS:H	1.55	0.41
21:AM:125:ASN:C	21:AM:127:GLY:H	2.23	0.41
2:A1:32:PHE:CZ	22:AN:61:THR:HG22	2.56	0.41
26:AR:10:LYS:HG2	26:AR:53:TYR:CE2	2.56	0.41
27:AS:11:PHE:HE1	27:AS:13:HIS:HA	1.86	0.41
28:AT:130:ARG:HH11	28:AT:130:ARG:HG2	1.86	0.41
28:AT:45:MET:HB3	28:AT:45:MET:HE2	1.85	0.41
9:AA:63:ILE:HG23	30:AV:35:ASN:O	2.20	0.41
30:AV:3:ASN:OD1	30:AV:7:GLN:HB2	2.20	0.41
34:AZ:90:LYS:HB3	34:AZ:90:LYS:HE2	1.74	0.41
80:B2:1244:A:O2'	80:B2:1245:G:P	2.78	0.41
29:AU:53:LYS:C	80:B2:1345:A:O5'	2.58	0.41
12:AD:7:LYS:HB2	80:B2:1515:A:OP2	2.21	0.41
89:B2:1982:OHX:N5	89:B2:2079:OHX:N6	2.68	0.41
89:AL:201:OHX:N1	89:B2:1996:OHX:N2	2.68	0.41
89:B2:2022:OHX:N1	89:B2:2069:OHX:N3	2.69	0.41
80:B2:279:G:C3'	80:B2:279:G:C8	3.03	0.41
80:B2:732:G:N1	89:B2:2011:OHX:N3	2.68	0.41
80:B2:817:A:C6	80:B2:818:C:N4	2.89	0.41
80:B2:82:U:H2'	80:B2:83:G:O4'	2.21	0.41
45:BK:123:UNK:O	81:B5:1257:C:C6	2.73	0.41
81:B5:1283:C:C2'	81:B5:1284:C:H5'	2.51	0.41
81:B5:1596:C:H2'	81:B5:1597:C:C6	2.56	0.41
81:B5:1766:G:C2'	81:B5:1767:C:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:2101:C:O2'	81:B5:2102:U:P	2.78	0.41
81:B5:2504:U:O2'	81:B5:2505:U:OP1	2.35	0.41
81:B5:2660:G:H4'	81:B5:2750:U:O2	2.21	0.41
81:B5:2802:A:C4	86:CW:75:C:N4	2.88	0.41
81:B5:3155:U:C3'	81:B5:3156:U:H5''	2.49	0.41
81:B5:945:C:H2'	81:B5:946:U:C6	2.56	0.41
35:BA:152:SER:HB3	81:B5:2157:G:C6	2.39	0.41
37:BC:255:PHE:O	37:BC:258:LEU:HB2	2.21	0.41
37:BC:352:ALA:O	37:BC:354:VAL:N	2.52	0.41
37:BC:44:LYS:HB3	37:BC:47:ARG:HH11	1.84	0.41
39:BE:47:PHE:CD1	39:BE:74:VAL:HG22	2.56	0.41
48:BN:183:THR:CG2	48:BN:183:THR:O	2.68	0.41
49:BO:49[B]:ARG:O	49:BO:52[B]:LEU:HB2	2.21	0.41
52:BR:134:HIS:HB3	81:B5:1947:G:H4'	2.01	0.41
52:BR:167:ARG:O	80:B2:851:U:H3'	2.19	0.41
59:BY:37:LYS:H	59:BY:37:LYS:HE2	1.85	0.41
1:A0:3:LYS:HE3	80:B2:1030:A:P	2.61	0.41
1:A0:82:ARG:O	1:A0:84:VAL:HG12	2.20	0.41
1:A0:87:ARG:HH11	80:B2:1796:C:P	2.44	0.41
1:A0:95:ARG:O	80:B2:1797:A:H4'	2.21	0.41
4:A3:41:GLN:HG2	80:B2:1433:G:C8	2.56	0.41
6:A5:133:ALA:HB2	80:B2:1252:C:C1'	2.51	0.41
7:A6:222:LEU:HA	7:A6:222:LEU:HD13	1.78	0.41
7:A6:307:ASP:O	7:A6:309:VAL:HG23	2.21	0.41
7:A6:38:ARG:HG2	7:A6:67:ILE:HD13	2.03	0.41
10:AB:131:ASP:OD2	10:AB:180:THR:HG21	2.19	0.41
14:AF:49:GLU:O	14:AF:51:VAL:HG23	2.21	0.41
15:AG:87:ARG:HD2	80:B2:159:U:O2	2.21	0.41
16:AH:28:GLU:O	16:AH:30:SER:N	2.52	0.41
18:AJ:133:HIS:H	18:AJ:133:HIS:CD2	2.37	0.41
24:AP:128:HIS:O	24:AP:130:ARG:HG2	2.20	0.41
24:AP:42:ARG:NH1	80:B2:1549:C:P	2.93	0.41
25:AQ:59:LYS:HA	25:AQ:59:LYS:HD3	1.90	0.41
26:AR:23:LYS:O	26:AR:24:LEU:HB2	2.21	0.41
29:AU:34:LEU:HD23	29:AU:112:VAL:HG13	2.02	0.41
33:AY:11:LYS:HE2	80:B2:776:G:N7	2.36	0.41
33:AY:14:SER:CB	33:AY:21:LYS:HE3	2.49	0.41
34:AZ:54:VAL:HG22	34:AZ:57:TYR:HE2	1.85	0.41
80:B2:1162:C:H5''	80:B2:1163:A:OP2	2.20	0.41
80:B2:1274:C:H4'	80:B2:1275:A:O5'	2.21	0.41
80:B2:1301:U:H2'	80:B2:1302:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1748:G:O6	89:B2:1983:OHX:N4	2.54	0.41
89:B2:2016:OHX:N4	89:B2:2073:OHX:N2	2.69	0.41
80:B2:229:U:H2'	80:B2:230:C:H6	1.85	0.41
15:AG:133:LEU:HD11	80:B2:66:U:C2	2.40	0.41
80:B2:714:G:C6	80:B2:715:U:C2	3.08	0.41
15:AG:159:ARG:CZ	80:B2:77:U:C2	3.04	0.41
81:B5:1056:U:H2'	81:B5:1057:A:O5'	2.21	0.41
81:B5:1480:G:H4'	81:B5:1481:A:OP1	2.21	0.41
81:B5:1685:C:H2'	81:B5:1686:U:C6	2.56	0.41
81:B5:1821:U:H4'	81:B5:1822:C:OP2	2.21	0.41
81:B5:2405:C:O2	81:B5:2819:A:N1	2.53	0.41
81:B5:2442:G:C2	81:B5:2443:A:N7	2.89	0.41
38:BD:179:ARG:NE	81:B5:2746:A:OP1	2.51	0.41
43:BI:157:TYR:HB3	81:B5:2836:C:H1'	2.03	0.41
81:B5:2926:A:O2'	81:B5:2927:C:H5'	2.21	0.41
36:BB:245:GLY:HA2	81:B5:1889:G:C5'	2.47	0.41
36:BB:43:LEU:HG	36:BB:181:ILE:HG21	2.03	0.41
36:BB:57:VAL:HG23	36:BB:358:TRP:HE3	1.85	0.41
39:BE:18:LEU:O	81:B5:592:A:H4'	2.20	0.41
41:BG:230:LYS:HE3	41:BG:230:LYS:HB2	1.88	0.41
42:BH:117:PHE:CZ	42:BH:165:CYS:HB3	2.55	0.41
42:BH:37:ASN:OD1	42:BH:39:LYS:HB2	2.21	0.41
48:BN:28:TRP:O	48:BN:32:GLN:HG2	2.21	0.41
49:BO:108[A]:ILE:HD13	49:BO:160[A]:ARG:HD2	2.02	0.41
49:BO:121[A]:PRO:HA	49:BO:124[A]:LEU:HD22	2.02	0.41
52:BR:7:GLN:HG2	52:BR:7:GLN:H	1.41	0.41
53:BS:7:TYR:CE2	53:BS:34:GLU:HG2	2.56	0.41
54:BT:69:LYS:HB3	81:B5:2737:C:OP1	2.21	0.41
56:BV:128:ARG:HB3	56:BV:128:ARG:CZ	2.51	0.41
58:BX:40:LEU:HA	58:BX:40:LEU:HD13	1.82	0.41
60:BZ:68:ILE:O	60:BZ:115:LYS:HG3	2.21	0.41
84:CN:2155:A:C8	84:CN:2156:A:C8	3.07	0.41
84:CN:2157:C:H6	84:CN:2157:C:O5'	2.03	0.41
81:B5:2443:A:N3	84:CN:2208:G:O3'	2.41	0.41
4:A3:5:ASN:HB3	4:A3:7:TRP:CD1	2.56	0.41
5:A4:38:LEU:O	5:A4:42:ARG:HB2	2.21	0.41
10:AB:36:SER:HB2	10:AB:231:LEU:HB3	2.03	0.41
12:AD:53:THR:HG22	12:AD:91:VAL:HG11	2.03	0.41
13:AE:123:LEU:HD22	13:AE:236:ILE:HG23	2.03	0.41
13:AE:68:ARG:NH1	13:AE:76:VAL:HG21	2.35	0.41
16:AH:129:LEU:HD23	16:AH:129:LEU:HA	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:2:GLY:HA3	80:B2:400:A:N6	2.36	0.41
18:AJ:146:PHE:CZ	18:AJ:149:ARG:HD3	2.56	0.41
23:AO:129:LYS:HG3	23:AO:130:GLY:N	2.35	0.41
24:AP:96:ILE:CD1	24:AP:116:LEU:HD22	2.51	0.41
26:AR:88:VAL:CG2	26:AR:89:SER:H	2.26	0.41
23:AO:137:LEU:HB3	80:B2:1007:C:H5'	2.02	0.41
80:B2:1138:A:H2'	80:B2:1139:A:H8	1.86	0.41
80:B2:1413:U:O2	89:B2:1950:OHX:N4	2.54	0.41
80:B2:1686:C:HO2'	80:B2:1687:U:C4'	2.33	0.41
80:B2:1762:A:C1'	80:B2:1783:C:H5'	2.49	0.41
80:B2:190:C:C4	80:B2:196:G:C6	3.09	0.41
80:B2:5:U:H2'	80:B2:6:G:H8	1.86	0.41
80:B2:74:U:O2'	80:B2:75:U:H5'	2.20	0.41
22:AN:20:ARG:NE	80:B2:862:A:OP1	2.51	0.41
23:AO:51:ASP:CB	80:B2:902:G:H1	2.34	0.41
81:B5:1072:G:H2'	81:B5:1073:U:C6	2.56	0.41
54:BT:129:LYS:CA	81:B5:1098:A:OP2	2.69	0.41
81:B5:1116:G:H4'	81:B5:1117:G:OP2	2.20	0.41
81:B5:1284:C:H4'	81:B5:1285:G:OP1	2.21	0.41
37:BC:305:ALA:N	81:B5:1347:U:H4'	2.36	0.41
81:B5:1358:C:H2'	81:B5:1359:C:O4'	2.21	0.41
81:B5:2995:A:H8	81:B5:2995:A:O5'	2.03	0.41
81:B5:594:U:O2'	81:B5:595:G:H5'	2.21	0.41
81:B5:622:A:H8	81:B5:622:A:O5'	2.03	0.41
82:B7:24:A:H2'	82:B7:25:G:O4'	2.21	0.41
82:B7:90:U:H6	82:B7:90:U:O5'	2.04	0.41
36:BB:233:TRP:CD1	36:BB:265:ALA:HB1	2.56	0.41
36:BB:47:LEU:HD12	81:B5:749:C:O2'	138.31	0.41
37:BC:301:PRO:C	51:BQ:39:ARG:HH12	2.23	0.41
38:BD:155:THR:HG22	38:BD:179:ARG:NH1	2.36	0.41
41:BG:205:ALA:HA	41:BG:208:GLU:OE1	2.21	0.41
48:BN:102:ALA:O	48:BN:106:VAL:HG13	2.21	0.41
58:BX:33:ARG:CZ	81:B5:1580:A:H62	2.34	0.41
59:BY:46:LYS:HD2	84:CN:2199:C:H4'	136.81	0.41
42:BH:98:PRO:HB2	85:CP:136:TYR:HD2	1.11	0.41
85:CP:13:HSO:HD1	85:CP:14:VAL:H	1.68	0.41
80:B2:419:G:H22	85:CP:289:LEU:HD11	1.84	0.41
7:A6:37:SER:OG	7:A6:38:ARG:N	2.54	0.41
8:A7:64:LYS:O	8:A7:65:THR:HG23	2.20	0.41
10:AB:141:ALA:HB1	10:AB:207:LEU:CD2	2.49	0.41
13:AE:129:VAL:HB	13:AE:139:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AE:19:LEU:HD23	13:AE:19:LEU:HA	1.80	0.41
13:AE:3:ARG:CB	80:B2:93:A:O3'	2.69	0.41
14:AF:103:ASN:OD1	80:B2:1473:U:C2	2.74	0.41
22:AN:93:LYS:HG3	22:AN:150:VAL:HG11	2.03	0.41
22:AN:33:VAL:HA	22:AN:36:GLN:HB2	2.02	0.41
24:AP:68:PRO:HG2	24:AP:71:GLU:OE1	2.21	0.41
27:AS:27:LYS:HA	27:AS:57:ARG:HE	1.84	0.41
28:AT:72:GLY:O	28:AT:76:LEU:HG	2.21	0.41
29:AU:37:VAL:O	29:AU:41:ILE:HD13	2.21	0.41
33:AY:44:LEU:HA	33:AY:47:VAL:CG2	2.51	0.41
80:B2:1053:G:H5'	80:B2:1053:G:C8	2.56	0.41
80:B2:1281:G:C5	80:B2:1282:U:C5	3.09	0.41
80:B2:1340:U:C2	80:B2:1378:U:H4'	2.56	0.41
8:A7:68:ARG:HD3	80:B2:1460:A:OP2	2.21	0.41
80:B2:1490:C:O4'	80:B2:1490:C:P	2.78	0.41
80:B2:1756[A]:A:OP2	80:B2:1756[A]:A:H8	2.04	0.41
1:A0:92:ARG:CB	80:B2:1796:C:O2	2.60	0.41
80:B2:196:G:O2'	80:B2:197:A:H8	2.02	0.41
80:B2:458:G:H5''	80:B2:459:G:OP1	2.21	0.41
80:B2:473:A:H2'	80:B2:474:A:H5'	2.03	0.41
80:B2:487:G:C6	80:B2:488:G:C8	3.09	0.41
33:AY:47:VAL:HG12	80:B2:781:U:O2	2.20	0.41
23:AO:35:GLY:CA	80:B2:919:A:C4'	2.72	0.41
81:B5:1622:U:H2'	81:B5:1623:G:O4'	2.20	0.41
81:B5:2199:G:H2'	81:B5:2200:U:H6	1.86	0.41
81:B5:242:C:H2'	81:B5:243:G:C8	2.55	0.41
81:B5:248:U:O2	81:B5:248:U:H2'	2.20	0.41
81:B5:2561:A:O2'	81:B5:2562:A:H8	2.02	0.41
38:BD:16:PHE:HA	81:B5:2688:U:O2'	2.19	0.41
8:A7:29:ASN:N	81:B5:2708:C:H5'	2.22	0.41
54:BT:49:GLN:CB	81:B5:2756:C:O4'	2.69	0.41
81:B5:2911:A:H4'	81:B5:2912:G:C8	2.56	0.41
81:B5:3132:C:H2'	81:B5:3133:C:C6	2.56	0.41
81:B5:36:C:C2'	81:B5:37:U:H5'	2.51	0.41
81:B5:438:A:O2'	81:B5:439:C:P	2.79	0.41
83:B8:65:A:H2'	83:B8:66:A:O4'	2.21	0.41
35:BA:179:LEU:O	35:BA:184:ARG:HD2	2.21	0.41
38:BD:261:THR:H	38:BD:264:GLN:CD	2.24	0.41
40:BF:22:THR:HA	40:BF:25:GLN:OE1	2.20	0.41
42:BH:66:ALA:O	42:BH:70:THR:HG22	2.21	0.41
44:BJ:128:TYR:CD2	81:B5:2683:U:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:135:VAL:O	48:BN:137:PRO:HD3	2.21	0.41
48:BN:78:GLY:HA2	48:BN:89:VAL:HG21	2.02	0.41
49:BO:96[A]:LYS:HE2	81:B5:2384:A:N1	2.36	0.41
54:BT:85:LEU:HD13	81:B5:2728:G:C8	2.56	0.41
59:BY:11:ASP:HB3	59:BY:14:LYS:HG3	2.02	0.41
85:CP:63:GLU:N	85:CP:63:GLU:CA	2.84	0.41
1:A0:85:ARG:HD3	1:A0:85:ARG:HA	1.78	0.41
3:A2:21:SER:OG	3:A2:22:ARG:N	2.54	0.41
9:AA:59:LEU:O	9:AA:63:ILE:HG13	2.21	0.41
9:AA:80:THR:C	9:AA:82:GLY:H	2.25	0.41
11:AC:54:GLU:OE2	11:AC:110:HIS:NE2	2.53	0.41
12:AD:71:LEU:HA	12:AD:71:LEU:HD23	1.85	0.41
13:AE:208:VAL:HG12	13:AE:210:ILE:HD11	2.02	0.41
13:AE:52:LEU:O	13:AE:54:TYR:N	2.54	0.41
15:AG:1:MET:CE	15:AG:106:LEU:HB2	2.50	0.41
15:AG:39:GLU:HB2	15:AG:46:LYS:HG3	2.03	0.41
17:AI:103:GLN:NE2	17:AI:166:TYR:CE1	2.89	0.41
20:AL:22:ASN:HA	20:AL:23:PRO:HD3	1.78	0.41
21:AM:28:LEU:HD22	21:AM:32:LEU:HG	2.02	0.41
28:AT:135:ILE:H	28:AT:135:ILE:HG13	1.53	0.41
32:AX:126:LYS:HA	32:AX:131:SER:HA	2.01	0.41
80:B2:1360:A:H2'	80:B2:1361:U:C1'	2.51	0.41
12:AD:159:HIS:C	80:B2:1421:A:H4'	2.41	0.41
27:AS:39:GLY:CA	80:B2:1567:U:OP2	2.69	0.41
4:A3:14:TYR:CE2	80:B2:1597:A:N7	2.89	0.41
89:B2:1914:OHX:N3	89:B2:1938:OHX:N4	2.69	0.41
89:B2:1918:OHX:N5	89:B2:2049:OHX:N1	2.69	0.41
80:B2:1233:G:OP2	89:B2:2042:OHX:N1	2.54	0.41
15:AG:185:GLN:HB2	80:B2:284:G:O6	2.21	0.41
81:B5:1064:A:N6	81:B5:1096:U:H3	2.19	0.41
81:B5:167:U:H2'	81:B5:168:U:H6	1.86	0.41
81:B5:174:C:H2'	81:B5:175:C:O4'	2.21	0.41
36:BB:245:GLY:CA	81:B5:1889:G:C5'	2.99	0.41
48:BN:72:LYS:CD	81:B5:2166:A:O2'	2.68	0.41
81:B5:2537:U:O5'	81:B5:2537:U:H6	2.04	0.41
81:B5:2573:G:H3'	81:B5:2574:G:H5''	2.02	0.41
81:B5:3156:U:O2'	81:B5:3157:U:O2	2.35	0.41
81:B5:3237:U:H2'	81:B5:3238:G:H5''	2.03	0.41
81:B5:371:G:H4'	81:B5:396:A:N1	2.36	0.41
81:B5:411:U:H2'	81:B5:412:G:H8	1.86	0.41
81:B5:436:A:H8	81:B5:436:A:H5''	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:110:ALA:CB	83:B8:141:C:O2'	2.69	0.41
35:BA:240:ALA:HB2	81:B5:2154:U:O2'	2.21	0.41
36:BB:142:ALA:O	36:BB:146:ARG:N	2.54	0.41
37:BC:203:ARG:NH1	37:BC:226:GLU:OE2	2.54	0.41
41:BG:40:VAL:CG2	81:B5:2558:U:H5'	2.51	0.41
42:BH:90:MET:HA	42:BH:180:TYR:O	2.21	0.41
44:BJ:151:SER:O	44:BJ:152:HIS:CB	2.68	0.41
57:BW:120:LYS:O	57:BW:123:ARG:HB2	2.21	0.41
59:BY:33:ALA:HB2	59:BY:101:PRO:HB2	2.02	0.41
60:BZ:22:LYS:HE2	60:BZ:129:TRP:CH2	2.56	0.41
79:CL:21:THR:O	79:CL:23:ASP:N	2.54	0.41
59:BY:33:ALA:CB	79:CL:37:PHE:N	161.87	0.41
81:B5:2444:C:H2'	84:CN:2208:G:H1'	1.26	0.41
7:A6:10:ARG:HG2	7:A6:54:PHE:CE1	2.56	0.40
9:AA:148:ASP:OD1	9:AA:149:LEU:N	2.46	0.40
11:AC:44:LEU:HG	11:AC:247:ALA:HB2	2.02	0.40
11:AC:82:ASN:ND2	11:AC:207:LEU:HD12	2.37	0.40
12:AD:74:GLN:OE1	12:AD:81:PRO:HA	2.20	0.40
13:AE:100:ARG:NH2	13:AE:121:TYR:O	2.54	0.40
13:AE:156:VAL:O	13:AE:157:ASN:HB2	2.20	0.40
13:AE:98:ASN:HD22	13:AE:119:ALA:CB	2.35	0.40
14:AF:190:ILE:HD12	14:AF:190:ILE:HG23	1.73	0.40
14:AF:29:ILE:HG22	14:AF:34:GLN:CG	2.51	0.40
17:AI:21:PHE:O	17:AI:22:ARG:HG2	2.20	0.40
18:AJ:127:VAL:HG21	80:B2:478:A:O4'	2.19	0.40
19:AK:1:MET:CG	19:AK:2:LEU:H	2.35	0.40
21:AM:57:ALA:HB3	21:AM:85:LYS:NZ	2.36	0.40
22:AN:28:LEU:HA	22:AN:28:LEU:HD23	1.85	0.40
23:AO:120:PRO:CG	80:B2:888:U:P	3.10	0.40
25:AQ:71:GLY:HA2	80:B2:1483:A:H4'	2.02	0.40
27:AS:23:ASP:OD1	27:AS:24:GLY:N	2.54	0.40
34:AZ:41:ILE:O	34:AZ:75:LEU:HD13	2.21	0.40
80:B2:1096:C:O2	80:B2:1096:C:H2'	2.20	0.40
27:AS:143:ARG:CZ	80:B2:1461:C:C5	3.04	0.40
1:A0:97:PRO:CA	80:B2:1798:U:C6	3.04	0.40
80:B2:377:G:O6	89:B2:1957:OHX:N5	2.55	0.40
89:B2:1961:OHX:N3	89:B2:1963:OHX:N1	2.68	0.40
89:B2:1972:OHX:N4	89:B2:1987:OHX:N3	2.68	0.40
89:B2:2006:OHX:N6	89:B2:2044:OHX:N5	2.69	0.40
20:AL:12:ALA:CB	80:B2:328:A:H4'	2.51	0.40
13:AE:7:LYS:O	80:B2:449:C:H5"	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:74:U:O2'	80:B2:75:U:P	2.78	0.40
81:B5:1064:A:N6	81:B5:1096:U:N3	2.69	0.40
81:B5:1641:U:HO2'	81:B5:1642:A:H3'	1.86	0.40
81:B5:1763:U:H3'	81:B5:1764:U:C6	2.56	0.40
81:B5:2314:U:OP2	81:B5:2314:U:H4'	2.20	0.40
54:BT:22:HIS:ND1	81:B5:2701:U:OP2	2.54	0.40
81:B5:3028:G:H2'	81:B5:3029:A:C8	2.56	0.40
81:B5:3131:U:H2'	81:B5:3132:C:C6	2.56	0.40
36:BB:365:PHE:CE2	81:B5:3378:C:C2	3.09	0.40
81:B5:384:A:H1'	81:B5:1465:A:C8	2.56	0.40
81:B5:529:A:H2'	81:B5:530:G:O4'	2.20	0.40
81:B5:561:C:H2'	81:B5:562:C:H6	1.86	0.40
82:B7:27:A:H2'	82:B7:28:C:C6	2.56	0.40
35:BA:144:ASN:O	35:BA:160:SER:N	2.45	0.40
35:BA:68:LYS:HG3	35:BA:69:TYR:N	2.36	0.40
36:BB:247:ARG:HD3	81:B5:1888:U:P	2.58	0.40
38:BD:274:GLN:HE22	82:B7:60:G:N2	2.18	0.40
41:BG:53:PRO:HD2	41:BG:56:VAL:HG21	2.02	0.40
42:BH:23:ARG:HD2	42:BH:23:ARG:HH11	1.59	0.40
43:BI:156:ARG:C	43:BI:158:LYS:H	2.24	0.40
44:BJ:9:MET:HG3	44:BJ:10:ARG:H	1.85	0.40
44:BJ:155:THR:OG1	44:BJ:158:ASP:HB2	2.21	0.40
52:BR:38:ARG:O	52:BR:42:ARG:HG3	2.21	0.40
55:BU:90:ARG:H	55:BU:90:ARG:HG2	1.73	0.40
60:BZ:109:GLU:O	60:BZ:113:VAL:HG23	2.21	0.40
84:CN:2172:G:N1	84:CN:2173:G:C5	2.90	0.40
86:CW:46:G:H3'	86:CW:47:U:H5''	2.03	0.40
89:A3:102:OHX:N6	89:B2:1940:OHX:N3	2.69	0.40
8:A7:33:LYS:CE	81:B5:2692:A:P	3.02	0.40
14:AF:112:ARG:HD3	34:AZ:95:HIS:NE2	2.35	0.40
17:AI:21:PHE:CZ	17:AI:22:ARG:HD3	2.56	0.40
18:AJ:17:ARG:HA	18:AJ:18:PRO:HD3	1.96	0.40
18:AJ:45:ILE:HA	18:AJ:45:ILE:HD13	1.84	0.40
22:AN:27:LYS:HD2	22:AN:28:LEU:H	1.86	0.40
24:AP:75:PRO:HA	24:AP:93:VAL:HG12	2.03	0.40
27:AS:41:ARG:NE	28:AT:46:PRO:HD3	2.37	0.40
28:AT:89:ARG:HD2	80:B2:1601:G:O6	2.18	0.40
29:AU:50:LEU:HB3	29:AU:51:VAL:H	1.64	0.40
80:B2:1181:U:H2'	80:B2:1182:U:O4'	2.21	0.40
19:AK:48:SER:HA	80:B2:1219:A:O2'	2.20	0.40
80:B2:1280:C:H2'	80:B2:1281:G:C8	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:1361:U:H2'	80:B2:1361:U:O2	2.21	0.40
80:B2:142:G:C8	80:B2:266:A:N1	2.89	0.40
25:AQ:123:ARG:N	80:B2:1584:G:H2'	2.36	0.40
20:AL:103:ARG:NH1	80:B2:307:G:OP1	2.37	0.40
80:B2:734:A:H4'	80:B2:735:C:H5'	2.02	0.40
80:B2:830:U:O2'	80:B2:831:U:OP2	2.34	0.40
81:B5:1014:U:H3'	81:B5:1015:U:C5'	2.51	0.40
81:B5:1070:U:C2'	81:B5:1071:U:H5'	2.51	0.40
81:B5:1547:G:H2'	81:B5:1548:C:C6	2.56	0.40
35:BA:85:GLY:CA	81:B5:2554:A:N9	2.85	0.40
81:B5:2567:C:N4	81:B5:2568:C:H41	2.19	0.40
81:B5:2663:G:H2'	81:B5:2664:C:O4'	2.21	0.40
54:BT:8:ARG:CD	81:B5:2757:U:C4'	2.95	0.40
81:B5:2881:C:H2'	81:B5:2882:U:C6	2.57	0.40
81:B5:3084:C:H2'	81:B5:3085:G:O4'	2.21	0.40
81:B5:3205:G:H2'	81:B5:3206:C:C5	2.56	0.40
44:BJ:150:ASN:ND2	82:B7:17:A:OP1	2.52	0.40
38:BD:207:TYR:CD2	82:B7:33:U:C4	3.09	0.40
82:B7:4:U:H2'	82:B7:5:G:C8	2.56	0.40
38:BD:95:TRP:CZ2	38:BD:181:PRO:HD3	2.54	0.40
38:BD:270:LYS:HG3	38:BD:273:ARG:HB3	2.01	0.40
41:BG:82:LEU:HD13	41:BG:178:ALA:HB1	2.02	0.40
46:BL:59:ARG:O	46:BL:60:ALA:HB3	2.20	0.40
48:BN:159:ARG:HG2	48:BN:159:ARG:H	1.73	0.40
49:BO:133[B]:ARG:HD2	81:B5:1315:U:O2'	2.22	0.40
49:BO:60[B]:LYS:HE2	81:B5:1307:G:OP1	2.21	0.40
59:BY:75:ARG:O	59:BY:77:LYS:N	2.53	0.40
84:CN:2173:G:C8	84:CN:2173:G:C5'	3.05	0.40
2:A1:49:HIS:CE1	2:A1:70:LYS:HG2	2.57	0.40
4:A3:54:LYS:HZ1	80:B2:1420:C:P	2.44	0.40
8:A7:30:THR:O	81:B5:2707:C:O4'	2.39	0.40
10:AB:21:VAL:HG23	10:AB:22:ASP:H	1.86	0.40
10:AB:28:GLU:HB3	10:AB:49:ASN:H	1.87	0.40
13:AE:19:LEU:HD13	80:B2:788:A:H2'	2.03	0.40
22:AN:26:PHE:HA	22:AN:27:LYS:HE2	2.03	0.40
24:AP:85:ILE:HA	24:AP:89:MET:SD	2.62	0.40
25:AQ:82:ARG:NH2	25:AQ:114:ARG:HG2	2.36	0.40
28:AT:63:ARG:HG3	28:AT:67:MET:CE	2.45	0.40
80:B2:1182:U:O2	80:B2:1184:A:H8	2.04	0.40
80:B2:1191:U:C2	86:CW:35:A:OP2	2.64	0.40
23:AO:132:ARG:CB	80:B2:1787:C:P	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B2:205:U:H2'	80:B2:206:A:O4'	2.21	0.40
80:B2:330:G:H2'	80:B2:331:A:O4'	2.22	0.40
80:B2:827:C:H2'	80:B2:828:U:H6	1.84	0.40
10:AB:124:ASN:HD21	80:B2:884:A:H4'	1.79	0.40
81:B5:1046:A:H2'	81:B5:1049:C:C5	2.56	0.40
81:B5:1352:A:P	81:B5:1352:A:H3'	2.61	0.40
81:B5:1572:U:O2'	81:B5:1573:G:H8	2.04	0.40
81:B5:2166:A:H2'	81:B5:2167:A:C8	2.57	0.40
81:B5:2697:A:H2'	81:B5:2698:G:C8	2.56	0.40
54:BT:54:HIS:CG	81:B5:2724:U:H4'	2.57	0.40
81:B5:2872:A:O2'	81:B5:2873:U:P	2.79	0.40
81:B5:1886:A:O4'	81:B5:3307:A:H5'	2.21	0.40
48:BN:83:LYS:HB2	81:B5:35:A:OP1	2.22	0.40
81:B5:797:U:O2'	81:B5:798:G:H5'	2.21	0.40
35:BA:208:ASP:CB	81:B5:914:A:H2	2.34	0.40
48:BN:38:ARG:NH1	83:B8:142:C:OP1	2.47	0.40
36:BB:221:THR:HG22	36:BB:272:TYR:N	2.36	0.40
36:BB:360:ASP:OD1	36:BB:361:THR:N	2.52	0.40
37:BC:341:SER:O	37:BC:342:LYS:HB3	2.21	0.40
41:BG:157:VAL:HG13	81:B5:147:U:O4	2.18	0.40
42:BH:128:VAL:HG22	42:BH:134:ILE:HD13	2.03	0.40
45:BK:13:UNK:HA	45:BK:64:UNK:HA	2.03	0.40
46:BL:113:VAL:HG12	46:BL:117:LYS:HD2	2.03	0.40
47:BM:62:GLN:H	47:BM:62:GLN:HG2	1.78	0.40
49:BO:167[B]:TYR:C	49:BO:167[B]:TYR:CD1	2.92	0.40
50:BP:36:ILE:O	50:BP:39:TRP:HB2	2.21	0.40
51:BQ:157:PRO:CB	81:B5:2729:U:H4'	2.51	0.40
53:BS:74:ASN:OD1	53:BS:95:ARG:NH1	2.54	0.40
54:BT:25:VAL:HG22	54:BT:30:TYR:HE2	1.85	0.40
55:BU:90:ARG:HB3	55:BU:90:ARG:NH1	2.36	0.40
59:BY:5:SER:C	59:BY:7:ASP:H	2.24	0.40
59:BY:63:LYS:HD3	59:BY:63:LYS:HA	1.82	0.40
60:BZ:17:ARG:HG3	81:B5:1639:C:H42	1.86	0.40
84:CN:2162:G:N2	84:CN:2172:G:H1'	2.36	0.40
10:AB:70:LEU:CD1	10:AB:79:HIS:HB3	2.52	0.40
10:AB:78:ASP:O	10:AB:79:HIS:ND1	2.55	0.40
15:AG:19:ASP:O	15:AG:20:ASP:HB2	2.22	0.40
15:AG:28:PHE:CZ	15:AG:104:PRO:HG3	2.56	0.40
16:AH:56:LYS:O	16:AH:88:ARG:HA	2.22	0.40
18:AJ:110:GLN:HE22	18:AJ:126:ARG:CG	2.23	0.40
18:AJ:105:LEU:O	18:AJ:111:THR:HG21	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:27:GLU:HB3	18:AJ:39:LYS:HD2	2.03	0.40
19:AK:52:LYS:HG3	19:AK:54:TYR:CE2	2.57	0.40
20:AL:132:SER:OG	20:AL:132:SER:O	2.39	0.40
89:AL:201:OHX:N1	89:B2:1996:OHX:N5	2.69	0.40
89:AL:201:OHX:N2	80:B2:212:U:OP2	2.54	0.40
8:A7:68:ARG:CZ	27:AS:145:ARG:HH11	2.34	0.40
28:AT:85:SER:C	28:AT:87:GLY:H	2.24	0.40
30:AV:74:GLN:HE22	30:AV:83:TRP:H	1.69	0.40
33:AY:23:PHE:HE2	33:AY:75:VAL:HG12	1.87	0.40
80:B2:1018:U:H2'	80:B2:1019:A:C8	2.57	0.40
80:B2:1163:A:N6	80:B2:1164:G:C6	2.89	0.40
80:B2:1441:C:H2'	80:B2:1442:U:C6	2.57	0.40
80:B2:1644:C:O2	81:B5:2255:A:C4	2.74	0.40
17:AI:142:LYS:NZ	80:B2:186:C:H5'	2.36	0.40
89:B2:1948:OHX:N6	89:B2:2075:OHX:N5	2.69	0.40
80:B2:755:A:O2'	80:B2:756:A:OP1	2.36	0.40
80:B2:830:U:O2'	80:B2:831:U:P	2.80	0.40
2:A1:67:THR:HA	80:B2:872:G:H5'	2.03	0.40
80:B2:964:U:H4'	80:B2:965:U:O5'	2.21	0.40
81:B5:1077:U:H2'	81:B5:1078:U:C6	2.56	0.40
81:B5:1267:U:C5	81:B5:1268:G:C5	3.09	0.40
52:BR:61:SER:HB3	81:B5:1689:U:H5''	2.03	0.40
35:BA:22:LEU:HD21	81:B5:1797:A:O5'	2.22	0.40
81:B5:237:G:N2	81:B5:238:A:O4'	2.54	0.40
81:B5:2443:A:C4	84:CN:2208:G:C3'	2.98	0.40
38:BD:16:PHE:CE1	81:B5:2688:U:C4	3.06	0.40
47:BM:121:MET:CE	81:B5:3214:U:H2'	2.51	0.40
81:B5:3255:U:O5'	81:B5:3255:U:H6	2.04	0.40
51:BQ:164:ARG:CZ	81:B5:668:G:O2'	2.69	0.40
38:BD:155:THR:HB	38:BD:179:ARG:HD3	2.04	0.40
38:BD:8:LYS:CE	81:B5:2687:G:OP1	2.69	0.40
39:BE:172:HIS:CD2	39:BE:173:MET:HG2	2.56	0.40
39:BE:46:ARG:HG2	39:BE:47:PHE:CE2	2.57	0.40
42:BH:12:VAL:CG1	42:BH:16:VAL:HG22	2.49	0.40
42:BH:57:VAL:HG23	42:BH:68:LEU:HG	2.04	0.40
44:BJ:115:LYS:HB3	44:BJ:116:TYR:H	1.58	0.40
47:BM:59:ASN:O	47:BM:62:GLN:HG2	2.21	0.40
48:BN:184:LYS:C	48:BN:186:GLY:N	2.73	0.40
49:BO:58[A]:LEU:HA	49:BO:58[A]:LEU:HD12	1.82	0.40
49:BO:78[B]:ARG:HG3	49:BO:78[B]:ARG:NH1	2.36	0.40
52:BR:127:SER:HB3	52:BR:132:PHE:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:138:LEU:HD22	52:BR:138:LEU:O	2.22	0.40
54:BT:71:SER:OG	81:B5:2736:A:C5'	2.69	0.40
59:BY:31:LEU:HD23	59:BY:31:LEU:HA	1.85	0.40
85:CP:199:ALA:O	90:CP:401:GCP:C6	2.66	0.40
4:A3:20:GLN:HB2	4:A3:21:CYS:H	1.70	0.40
7:A6:22:SER:HB3	7:A6:36:ALA:HB3	2.03	0.40
12:AD:161:GLY:O	12:AD:164:VAL:HB	2.22	0.40
14:AF:29:ILE:HG22	14:AF:34:GLN:HG2	2.04	0.40
15:AG:193:LEU:HD23	15:AG:193:LEU:HA	1.85	0.40
15:AG:28:PHE:C	15:AG:30:LYS:H	2.25	0.40
15:AG:69:LEU:HA	15:AG:70:PRO:HD3	1.96	0.40
21:AM:48:SER:HB3	21:AM:122:VAL:HG23	2.04	0.40
21:AM:55:GLY:HA2	21:AM:85:LYS:HD2	2.02	0.40
21:AM:97:LEU:HA	21:AM:100:TRP:HE3	1.87	0.40
27:AS:108:LYS:HD2	27:AS:108:LYS:HA	1.63	0.40
27:AS:81:ILE:HG23	27:AS:82:PRO:HD2	2.03	0.40
29:AU:109:GLU:OE1	29:AU:110:PRO:HD2	2.20	0.40
29:AU:50:LEU:HD23	29:AU:95:ALA:HB2	2.04	0.40
32:AX:4:GLY:CA	80:B2:1105:C:H41	2.35	0.40
80:B2:1357:A:C6	80:B2:1358:G:C6	3.10	0.40
80:B2:1459:C:OP2	80:B2:1459:C:H6	2.04	0.40
80:B2:1490:C:H1'	80:B2:1491:U:O4'	2.22	0.40
80:B2:143:G:C2	80:B2:173:A:C2	3.10	0.40
80:B2:991:G:O6	89:B2:1969:OHX:N2	2.54	0.40
89:B2:1982:OHX:N2	89:B2:2079:OHX:N6	2.69	0.40
80:B2:333:A:C6	80:B2:334:G:C6	3.09	0.40
80:B2:414:C:C6	85:CP:289:LEU:CD2	2.70	0.40
80:B2:440:U:O4'	85:CP:276:ARG:CG	2.69	0.40
80:B2:633:U:H2'	80:B2:634:G:O4'	2.22	0.40
31:AW:31:SER:HB3	80:B2:636:A:H5''	2.03	0.40
80:B2:781:U:O2'	80:B2:782:U:O5'	2.38	0.40
58:BX:125:ARG:NH2	81:B5:1610:G:P	2.94	0.40
38:BD:16:PHE:CE1	81:B5:2688:U:N3	2.90	0.40
43:BI:64:ALA:HB2	81:B5:2853:A:O3'	2.22	0.40
81:B5:3164:C:C2	81:B5:3165:A:C8	3.10	0.40
81:B5:3257:C:H2'	81:B5:3258:U:O4'	2.20	0.40
81:B5:345:G:H2'	83:B8:25:G:O2'	2.22	0.40
81:B5:734:C:H6	81:B5:734:C:OP1	2.04	0.40
81:B5:703:G:O2'	81:B5:787:G:H4'	2.22	0.40
81:B5:856:G:C6	81:B5:857:G:N1	2.90	0.40
81:B5:953:G:H2'	81:B5:1117:G:H5''	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:B5:973:A:H5''	81:B5:974:G:OP2	2.21	0.40
35:BA:3:ARG:HG2	35:BA:4:VAL:N	2.37	0.40
36:BB:258:ALA:O	36:BB:259:HIS:CD2	2.75	0.40
41:BG:241:LYS:NZ	81:B5:2526:C:O2'	2.54	0.40
44:BJ:71:VAL:HG12	44:BJ:72:ARG:N	2.36	0.40
47:BM:133:LYS:HB2	47:BM:133:LYS:HE3	1.86	0.40
49:BO:64[A]:PHE:CE2	49:BO:68[A]:ARG:HD3	2.56	0.40
54:BT:129:LYS:H	54:BT:129:LYS:HG2	1.75	0.40
54:BT:68:THR:HG23	54:BT:69:LYS:N	2.35	0.40
55:BU:105:LEU:HD12	55:BU:105:LEU:HA	1.87	0.40
58:BX:23:ALA:O	58:BX:24:LEU:HB2	2.21	0.40
84:CN:2144:G:O6	84:CN:2196:C:N3	2.54	0.40
84:CN:2188:U:H2'	84:CN:2189:G:O4'	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A0	95/119 (80%)	57 (60%)	21 (22%)	17 (18%)	0	3
2	A1	79/82 (96%)	62 (78%)	13 (16%)	4 (5%)	2	27
3	A2	61/67 (91%)	47 (77%)	9 (15%)	5 (8%)	1	16
4	A3	51/56 (91%)	43 (84%)	6 (12%)	2 (4%)	3	33
5	A4	58/63 (92%)	49 (84%)	7 (12%)	2 (3%)	4	37
6	A5	50/152 (33%)	30 (60%)	9 (18%)	11 (22%)	0	1
7	A6	316/319 (99%)	273 (86%)	30 (10%)	13 (4%)	3	32
8	A7	120/273 (44%)	92 (77%)	17 (14%)	11 (9%)	1	15
9	AA	204/252 (81%)	143 (70%)	35 (17%)	26 (13%)	0	6
10	AB	212/255 (83%)	132 (62%)	42 (20%)	38 (18%)	0	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	AC	215/254 (85%)	187 (87%)	16 (7%)	12 (6%)	2	25
12	AD	221/240 (92%)	180 (81%)	27 (12%)	14 (6%)	1	23
13	AE	258/261 (99%)	201 (78%)	36 (14%)	21 (8%)	1	17
14	AF	204/225 (91%)	155 (76%)	30 (15%)	19 (9%)	1	14
15	AG	224/236 (95%)	190 (85%)	23 (10%)	11 (5%)	2	28
16	AH	182/190 (96%)	128 (70%)	27 (15%)	27 (15%)	0	4
17	AI	184/200 (92%)	155 (84%)	14 (8%)	15 (8%)	1	16
18	AJ	183/197 (93%)	153 (84%)	18 (10%)	12 (7%)	1	22
19	AK	94/105 (90%)	66 (70%)	18 (19%)	10 (11%)	0	10
20	AL	153/156 (98%)	125 (82%)	19 (12%)	9 (6%)	2	24
21	AM	122/143 (85%)	66 (54%)	23 (19%)	33 (27%)	0	1
22	AN	148/151 (98%)	125 (84%)	15 (10%)	8 (5%)	2	26
23	AO	125/137 (91%)	94 (75%)	16 (13%)	15 (12%)	0	7
24	AP	122/142 (86%)	92 (75%)	15 (12%)	15 (12%)	0	7
25	AQ	139/143 (97%)	114 (82%)	14 (10%)	11 (8%)	1	17
26	AR	116/136 (85%)	87 (75%)	17 (15%)	12 (10%)	0	11
27	AS	143/146 (98%)	110 (77%)	19 (13%)	14 (10%)	1	12
28	AT	141/144 (98%)	111 (79%)	18 (13%)	12 (8%)	1	16
29	AU	105/121 (87%)	87 (83%)	13 (12%)	5 (5%)	2	29
30	AV	85/87 (98%)	64 (75%)	11 (13%)	10 (12%)	0	8
31	AW	127/130 (98%)	114 (90%)	10 (8%)	3 (2%)	7	44
32	AX	142/145 (98%)	111 (78%)	13 (9%)	18 (13%)	0	6
33	AY	132/135 (98%)	106 (80%)	13 (10%)	13 (10%)	1	12
34	AZ	68/108 (63%)	46 (68%)	11 (16%)	11 (16%)	0	4
35	BA	250/253 (99%)	213 (85%)	30 (12%)	7 (3%)	6	41
36	BB	384/386 (100%)	341 (89%)	34 (9%)	9 (2%)	7	45
37	BC	359/361 (99%)	306 (85%)	32 (9%)	21 (6%)	2	25
38	BD	292/296 (99%)	267 (91%)	19 (6%)	6 (2%)	8	47
39	BE	153/175 (87%)	134 (88%)	15 (10%)	4 (3%)	6	42
40	BF	221/243 (91%)	201 (91%)	16 (7%)	4 (2%)	10	50
41	BG	229/255 (90%)	180 (79%)	28 (12%)	21 (9%)	1	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	BH	189/191 (99%)	172 (91%)	13 (7%)	4 (2%)	8	47
43	BI	209/220 (95%)	175 (84%)	22 (10%)	12 (6%)	2	25
44	BJ	167/173 (96%)	135 (81%)	19 (11%)	13 (8%)	1	18
46	BL	192/198 (97%)	161 (84%)	20 (10%)	11 (6%)	2	25
47	BM	135/137 (98%)	124 (92%)	10 (7%)	1 (1%)	25	68
48	BN	201/203 (99%)	182 (90%)	13 (6%)	6 (3%)	5	39
49	BO	352/218 (162%)	324 (92%)	18 (5%)	10 (3%)	6	41
50	BP	153/183 (84%)	142 (93%)	9 (6%)	2 (1%)	14	56
51	BQ	183/185 (99%)	168 (92%)	9 (5%)	6 (3%)	4	37
52	BR	186/188 (99%)	167 (90%)	16 (9%)	3 (2%)	11	53
53	BS	170/172 (99%)	163 (96%)	6 (4%)	1 (1%)	28	71
54	BT	157/159 (99%)	146 (93%)	9 (6%)	2 (1%)	14	56
55	BU	96/120 (80%)	80 (83%)	13 (14%)	3 (3%)	5	39
56	BV	134/136 (98%)	124 (92%)	8 (6%)	2 (2%)	12	54
57	BW	133/155 (86%)	106 (80%)	19 (14%)	8 (6%)	2	24
58	BX	118/141 (84%)	104 (88%)	6 (5%)	8 (7%)	1	21
59	BY	124/126 (98%)	107 (86%)	12 (10%)	5 (4%)	3	32
60	BZ	133/135 (98%)	107 (80%)	13 (10%)	13 (10%)	1	12
61	Ba	146/148 (99%)	123 (84%)	18 (12%)	5 (3%)	4	37
62	Bb	56/58 (97%)	44 (79%)	7 (12%)	5 (9%)	1	15
63	Bc	98/104 (94%)	87 (89%)	8 (8%)	3 (3%)	5	39
64	Bd	107/112 (96%)	88 (82%)	13 (12%)	6 (6%)	2	25
65	Be	125/129 (97%)	110 (88%)	9 (7%)	6 (5%)	2	29
66	Bf	104/106 (98%)	96 (92%)	5 (5%)	3 (3%)	5	40
67	Bg	110/120 (92%)	93 (84%)	13 (12%)	4 (4%)	4	35
68	Bh	117/119 (98%)	99 (85%)	14 (12%)	4 (3%)	4	37
69	Bi	97/99 (98%)	77 (79%)	13 (13%)	7 (7%)	1	20
70	Bj	85/87 (98%)	75 (88%)	8 (9%)	2 (2%)	7	44
71	Bk	75/77 (97%)	61 (81%)	10 (13%)	4 (5%)	2	27
72	Bl	48/50 (96%)	41 (85%)	6 (12%)	1 (2%)	8	47
73	Bm	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	9	48

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
74	Bn	23/25 (92%)	22 (96%)	0	1 (4%)	3	31
75	Bo	103/105 (98%)	90 (87%)	11 (11%)	2 (2%)	9	49
76	Bq	139/312 (45%)	104 (75%)	14 (10%)	21 (15%)	0	4
79	By	219/229 (96%)	178 (81%)	24 (11%)	17 (8%)	1	18
79	CL	219/229 (96%)	165 (75%)	35 (16%)	19 (9%)	1	15
85	CP	331/339 (98%)	276 (83%)	32 (10%)	23 (7%)	1	20
All	All	12051/13155 (92%)	10001 (83%)	1275 (11%)	775 (6%)	3	23

All (775) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A0	19	LYS
1	A0	45	VAL
1	A0	46	GLU
1	A0	62	TYR
1	A0	65	PRO
1	A0	82	ARG
1	A0	84	VAL
1	A0	85	ARG
2	A1	38	PRO
2	A1	62	ILE
3	A2	36	THR
3	A2	51	ASN
4	A3	8	PHE
5	A4	47	VAL
6	A5	102	VAL
6	A5	103	LEU
6	A5	106	TYR
6	A5	111	GLU
6	A5	128	ALA
6	A5	148	TYR
7	A6	51	ASP
7	A6	160	GLU
7	A6	318	ALA
8	A7	47	ALA
8	A7	52	PRO
8	A7	85	SER
8	A7	87	THR
9	AA	4	PRO
9	AA	29	VAL

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Mol	Chain	Res	Type
9	AA	30	GLN
9	AA	39	ASN
9	AA	66	ALA
9	AA	95	ALA
9	AA	111	ILE
9	AA	191	ARG
9	AA	203	PHE
9	AA	205	ARG
10	AB	21	VAL
10	AB	26	ARG
10	AB	49	ASN
10	AB	58	SER
10	AB	60	ALA
10	AB	63	GLY
10	AB	113	MET
10	AB	116	LYS
10	AB	176	VAL
10	AB	177	GLN
10	AB	179	SER
10	AB	182	ALA
10	AB	206	PRO
10	AB	221	PRO
11	AC	146	THR
11	AC	148	LEU
12	AD	4	LEU
12	AD	62	ASN
12	AD	65	ARG
12	AD	93	ASP
12	AD	211	PRO
12	AD	212	LYS
12	AD	216	PRO
12	AD	220	PRO
13	AE	104	ASP
13	AE	142	HIS
13	AE	153	ASN
13	AE	164	LEU
13	AE	260	GLY
14	AF	26	ALA
14	AF	39	GLU
14	AF	43	PHE
14	AF	58	LEU
14	AF	63	GLN

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Mol	Chain	Res	Type
14	AF	101	GLY
14	AF	153	GLY
14	AF	206	SER
15	AG	20	ASP
15	AG	25	ARG
15	AG	154	ARG
15	AG	173	PRO
15	AG	174	LYS
16	AH	31	SER
16	AH	36	ALA
16	AH	64	VAL
16	AH	67	LEU
16	AH	98	ILE
16	AH	105	THR
16	AH	111	LYS
16	AH	112	ARG
16	AH	131	PHE
16	AH	133	THR
16	AH	134	GLU
16	AH	155	ASP
17	AI	13	ALA
17	AI	22	ARG
17	AI	147	ALA
17	AI	149	SER
18	AJ	98	ALA
18	AJ	100	LYS
18	AJ	118	LEU
18	AJ	121	SER
18	AJ	164	PHE
19	AK	60	SER
19	AK	81	ASN
19	AK	87	VAL
19	AK	88	PRO
19	AK	93	GLN
20	AL	7	VAL
20	AL	29	LYS
20	AL	133	LYS
21	AM	21	GLU
21	AM	25	GLU
21	AM	45	LEU
21	AM	55	GLY
21	AM	83	GLU

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Mol	Chain	Res	Type
21	AM	87	PRO
21	AM	89	ILE
21	AM	90	LYS
21	AM	93	ASP
21	AM	126	TRP
22	AN	19	SER
22	AN	22	ALA
23	AO	38	THR
23	AO	39	ILE
23	AO	124	ASP
23	AO	125	SER
23	AO	126	THR
24	AP	29	SER
24	AP	54	ALA
24	AP	125	PRO
24	AP	126	VAL
25	AQ	41	PRO
25	AQ	58	ASP
25	AQ	59	LYS
25	AQ	114	ARG
25	AQ	116	LEU
25	AQ	138	PHE
26	AR	6	THR
26	AR	26	LEU
26	AR	85	VAL
26	AR	86	PRO
26	AR	88	VAL
26	AR	96	SER
26	AR	124	VAL
27	AS	14	ILE
27	AS	25	ASN
27	AS	28	ILE
27	AS	60	GLU
27	AS	91	ASP
27	AS	92	ILE
28	AT	31	PRO
28	AT	53	TRP
28	AT	69	LYS
29	AU	118	VAL
30	AV	4	ASP
30	AV	7	GLN
30	AV	11	LEU

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Mol	Chain	Res	Type
32	AX	3	LYS
32	AX	41	SER
32	AX	96	VAL
32	AX	114	LYS
32	AX	128	SER
32	AX	131	SER
32	AX	137	LYS
32	AX	138	GLU
32	AX	144	ARG
33	AY	32	ARG
33	AY	36	SER
33	AY	78	SER
34	AZ	38	HIS
34	AZ	39	ALA
34	AZ	43	ASP
34	AZ	44	GLN
34	AZ	54	VAL
34	AZ	71	ILE
34	AZ	88	ILE
35	BA	96	LEU
36	BB	129	ALA
36	BB	140	ASP
36	BB	347	SER
37	BC	14	GLU
37	BC	15	ALA
37	BC	90	PHE
37	BC	145	ILE
37	BC	302	ALA
37	BC	311	HIS
37	BC	329	PRO
37	BC	330	TYR
37	BC	361	HIS
38	BD	215	ASP
38	BD	260	PHE
39	BE	97	ASN
39	BE	98	VAL
40	BF	158	LYS
41	BG	25	PRO
41	BG	26	LEU
41	BG	34	PHE
41	BG	122	LYS
43	BI	25	ALA

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Mol	Chain	Res	Type
43	BI	82	ARG
43	BI	170	LYS
43	BI	175	ASN
43	BI	187	ALA
44	BJ	8	PRO
44	BJ	10	ARG
44	BJ	12	LEU
44	BJ	94	ARG
44	BJ	95	ASN
44	BJ	108	GLU
44	BJ	115	LYS
44	BJ	167	TYR
46	BL	47	ALA
46	BL	129	ASN
46	BL	134	GLU
46	BL	150	PRO
47	BM	136	ALA
48	BN	49	ARG
48	BN	146	ALA
48	BN	147	ARG
49	BO	110[A]	PRO
49	BO	110[B]	PRO
49	BO	111[A]	PRO
49	BO	111[B]	PRO
49	BO	180[A]	SER
49	BO	180[B]	SER
49	BO	181[A]	ALA
49	BO	181[B]	ALA
51	BQ	41	ASP
51	BQ	99	THR
52	BR	35	ALA
53	BS	2	ALA
54	BT	136	ARG
56	BV	42	SER
57	BW	26	SER
57	BW	71	ARG
57	BW	76	VAL
58	BX	24	LEU
58	BX	25	LYS
58	BX	40	LEU
58	BX	44	PRO
58	BX	45	LYS

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Mol	Chain	Res	Type
59	BY	77	LYS
59	BY	83	ASP
59	BY	84	LYS
59	BY	125	LYS
59	BY	126	LEU
60	BZ	5	LEU
60	BZ	125	GLY
60	BZ	129	TRP
61	Ba	76	ASP
62	Bb	21	ILE
62	Bb	23	LYS
62	Bb	25	LYS
62	Bb	39	PHE
63	Bc	100	ILE
63	Bc	104	LEU
64	Bd	7	VAL
64	Bd	45	GLY
64	Bd	84	ASP
65	Be	4	LEU
65	Be	5	PRO
65	Be	27	ARG
66	Bf	88	ASN
67	Bg	10	ARG
67	Bg	100	ILE
68	Bh	40	SER
68	Bh	82	ALA
69	Bi	33	ALA
69	Bi	63	ASN
69	Bi	64	SER
69	Bi	98	ARG
70	Bj	87	SER
71	Bk	17	ARG
71	Bk	18	ALA
72	Bl	3	ALA
75	Bo	78	LYS
76	Bq	36	GLN
76	Bq	37	GLN
76	Bq	91	GLU
76	Bq	105	VAL
76	Bq	186	THR
76	Bq	203	ASP
79	By	71	GLN

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Mol	Chain	Res	Type
79	By	83	ILE
79	By	89	ALA
79	By	109	ASP
79	By	170	ALA
79	By	186	ALA
79	CL	54	SER
79	CL	55	ASP
79	CL	80	GLY
79	CL	83	ILE
79	CL	85	GLU
79	CL	97	GLU
79	CL	109	ASP
79	CL	186	ALA
85	CP	60	ALA
85	CP	77	THR
85	CP	83	PHE
85	CP	187	ASN
85	CP	244	GLY
1	A0	36	ILE
1	A0	63	ALA
1	A0	75	VAL
1	A0	86	VAL
2	A1	63	LEU
3	A2	35	ASP
3	A2	61	ARG
4	A3	34	TYR
6	A5	118	ARG
6	A5	127	GLY
7	A6	3	SER
7	A6	28	GLY
7	A6	161	LYS
7	A6	217	ASP
8	A7	46	LYS
8	A7	82	THR
8	A7	89	ARG
8	A7	140	ASP
9	AA	5	ALA
9	AA	49	ASN
9	AA	81	PHE
9	AA	94	GLY
9	AA	190	ASP
9	AA	194	PRO

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Mol	Chain	Res	Type
9	AA	196	SER
10	AB	23	PRO
10	AB	55	LYS
10	AB	72	ASP
10	AB	79	HIS
10	AB	82	ARG
10	AB	93	GLY
10	AB	108	ASP
10	AB	148	ASN
10	AB	181	LEU
10	AB	207	LEU
11	AC	35	TRP
11	AC	203	LYS
11	AC	248	SER
12	AD	44	THR
12	AD	218	LEU
13	AE	12	LEU
13	AE	152	PRO
13	AE	157	ASN
13	AE	195	ILE
13	AE	245	LYS
14	AF	35	GLN
14	AF	45	LYS
14	AF	127	GLN
14	AF	150	GLY
14	AF	223	SER
15	AG	24	ILE
15	AG	146	GLY
15	AG	152	ASP
15	AG	153	VAL
16	AH	32	PRO
16	AH	104	ARG
16	AH	156	SER
16	AH	186	PRO
17	AI	40	ALA
17	AI	105	ASP
17	AI	120	THR
17	AI	199	LYS
18	AJ	134	ILE
18	AJ	167	ALA
18	AJ	171	ARG
19	AK	30	ALA

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Mol	Chain	Res	Type
19	AK	64	TYR
19	AK	82	LEU
21	AM	54	ARG
21	AM	63	VAL
21	AM	66	VAL
21	AM	84	ASN
21	AM	91	VAL
21	AM	113	ARG
21	AM	128	ALA
22	AN	13	SER
22	AN	28	LEU
22	AN	68	GLY
23	AO	40	ALA
23	AO	42	VAL
23	AO	46	MET
23	AO	50	ALA
23	AO	51	ASP
23	AO	114	ARG
24	AP	48	GLY
24	AP	51	SER
24	AP	101	ALA
25	AQ	40	GLU
25	AQ	113	ASP
26	AR	25	THR
27	AS	59	GLY
27	AS	61	LEU
27	AS	142	GLY
28	AT	11	ALA
28	AT	28	LEU
28	AT	50	ALA
29	AU	17	GLN
30	AV	12	TYR
31	AW	66	ASN
32	AX	8	GLY
32	AX	97	ASP
33	AY	5	VAL
33	AY	11	LYS
34	AZ	73	GLY
35	BA	24	GLN
35	BA	194	ASN
36	BB	235	THR
36	BB	293	ASN

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Mol	Chain	Res	Type
37	BC	71	VAL
37	BC	190	GLY
37	BC	272	VAL
37	BC	345	GLU
37	BC	353	ALA
38	BD	125	VAL
38	BD	178	ASN
41	BG	81	THR
41	BG	121	SER
41	BG	188	THR
41	BG	203	VAL
41	BG	223	ALA
41	BG	240	ASN
42	BH	144	ILE
42	BH	189	GLU
43	BI	220	GLN
44	BJ	55	ARG
46	BL	135	ALA
46	BL	141	ALA
48	BN	184	LYS
50	BP	66	SER
50	BP	67	ILE
51	BQ	91	ALA
51	BQ	167	SER
55	BU	49	ASN
55	BU	91	ASP
56	BV	41	GLY
57	BW	63	ILE
57	BW	77	LYS
60	BZ	17	ARG
60	BZ	93	LYS
60	BZ	130	PHE
60	BZ	134	LEU
61	Ba	24	LYS
63	Bc	10	ILE
64	Bd	83	GLU
65	Be	6	HIS
65	Be	12	LYS
65	Be	124	GLY
66	Bf	91	ALA
68	Bh	119	LYS
74	Bn	23	ARG

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Mol	Chain	Res	Type
76	Bq	33	VAL
76	Bq	92	PRO
76	Bq	104	ARG
76	Bq	204	ILE
76	Bq	205	THR
76	Bq	210	VAL
76	Bq	214	VAL
79	By	85	GLU
79	By	86	ALA
79	By	185	LEU
79	By	227	HIS
79	CL	86	ALA
79	CL	89	ALA
79	CL	185	LEU
85	CP	56	THR
85	CP	73	LEU
85	CP	94	CYS
85	CP	138	TRP
1	A0	66	LYS
6	A5	138	ARG
7	A6	15	GLY
7	A6	96	THR
7	A6	98	GLU
9	AA	27	ARG
9	AA	103	THR
10	AB	35	PRO
10	AB	38	PHE
10	AB	62	LYS
10	AB	209	ASN
11	AC	106	ASP
11	AC	150	GLN
11	AC	235	LEU
12	AD	54	ARG
13	AE	200	ARG
14	AF	33	VAL
14	AF	156	ARG
16	AH	5	GLN
16	AH	29	ASN
16	AH	74	GLN
16	AH	75	THR
16	AH	110	GLN
17	AI	41	LYS

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Mol	Chain	Res	Type
17	AI	136	SER
17	AI	153	GLU
18	AJ	163	PRO
20	AL	4	GLU
20	AL	55	ASP
20	AL	146	ALA
20	AL	153	PHE
20	AL	154	ALA
21	AM	22	VAL
21	AM	81	ASP
21	AM	82	PRO
21	AM	85	LYS
21	AM	112	ALA
21	AM	135	MET
22	AN	27	LYS
23	AO	18	ARG
23	AO	123	SER
24	AP	11	VAL
24	AP	22	LEU
24	AP	52	LYS
26	AR	83	GLN
26	AR	115	LEU
27	AS	10	SER
27	AS	80	LYS
27	AS	83	ALA
28	AT	25	GLN
29	AU	55	PRO
30	AV	2	GLU
30	AV	10	GLU
30	AV	15	ARG
32	AX	37	ALA
32	AX	40	SER
32	AX	89	ASN
33	AY	34	ASN
33	AY	51	GLU
33	AY	53	ASP
34	AZ	41	ILE
34	AZ	55	PRO
34	AZ	97	LYS
35	BA	56	ALA
35	BA	144	ASN
35	BA	249	SER

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Mol	Chain	Res	Type
36	BB	138	ALA
36	BB	155	ALA
37	BC	146	PRO
38	BD	270	LYS
39	BE	10	TYR
39	BE	32	ALA
41	BG	39	ALA
41	BG	123	GLN
41	BG	133	LYS
41	BG	237	ILE
43	BI	83	ASP
43	BI	101	LYS
43	BI	174	THR
43	BI	176	LEU
46	BL	101	ARG
46	BL	140	SER
48	BN	181	ASN
49	BO	12[A]	LYS
49	BO	12[B]	LYS
55	BU	48	GLY
57	BW	74	LYS
57	BW	134	GLN
58	BX	38	LEU
58	BX	47	ALA
58	BX	55	ASN
60	BZ	16	GLY
61	Ba	47	LYS
64	Bd	5	LYS
64	Bd	86	LYS
67	Bg	79	SER
69	Bi	34	SER
76	Bq	81	LYS
76	Bq	187	VAL
76	Bq	200	SER
79	By	106	GLY
79	CL	141	LYS
79	CL	181	PRO
85	CP	16	THR
85	CP	32	GLY
85	CP	41	GLN
85	CP	61	GLU
85	CP	79	GLY

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Mol	Chain	Res	Type
85	CP	109	GLN
85	CP	280	THR
85	CP	283	PRO
85	CP	286	GLU
85	CP	290	LYS
1	A0	64	LEU
3	A2	6	PRO
5	A4	50	VAL
6	A5	145	HIS
7	A6	136	ILE
7	A6	163	ASP
7	A6	237	GLN
9	AA	33	GLN
9	AA	158	VAL
9	AA	164	ASN
9	AA	185	ARG
9	AA	189	VAL
10	AB	54	LEU
10	AB	61	LEU
10	AB	81	PHE
10	AB	112	SER
10	AB	154	SER
10	AB	215	VAL
11	AC	39	THR
12	AD	217	ILE
13	AE	77	ARG
13	AE	80	THR
13	AE	163	ASP
13	AE	188	ASN
13	AE	193	GLY
14	AF	51	VAL
14	AF	79	ASN
15	AG	69	LEU
16	AH	13	PRO
16	AH	84	LYS
16	AH	132	PRO
17	AI	59	ARG
17	AI	152	ILE
19	AK	94	GLU
20	AL	145	ALA
21	AM	39	ASP
21	AM	68	GLU

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Mol	Chain	Res	Type
21	AM	106	ILE
21	AM	107	ASP
21	AM	108	ARG
21	AM	129	GLU
21	AM	130	THR
22	AN	138	ASN
23	AO	69	ALA
25	AQ	142	TYR
26	AR	23	LYS
26	AR	72	LYS
28	AT	7	ARG
28	AT	23	GLN
28	AT	39	THR
30	AV	44	ARG
32	AX	92	CYS
32	AX	109	ARG
32	AX	112	LYS
33	AY	60	PHE
35	BA	143	GLU
36	BB	333	LYS
37	BC	233	LEU
37	BC	306	THR
37	BC	331	ALA
37	BC	342	LYS
38	BD	124	GLU
40	BF	191	VAL
41	BG	206	GLU
42	BH	167	VAL
43	BI	207	GLU
46	BL	60	ALA
46	BL	76	THR
48	BN	48	ALA
52	BR	147	ALA
57	BW	25	ASP
60	BZ	34	LYS
60	BZ	36	HIS
61	Ba	121	VAL
67	Bg	99	LYS
70	Bj	85	LYS
71	Bk	8	ILE
76	Bq	21	GLU
76	Bq	34	SER

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Mol	Chain	Res	Type
79	CL	118	ASP
79	CL	140	PRO
85	CP	82	SER
2	A1	51	GLN
8	A7	53	ARG
8	A7	102	THR
10	AB	64	ARG
11	AC	36	VAL
12	AD	59	LEU
13	AE	233	LYS
14	AF	21	THR
14	AF	64	VAL
16	AH	73	VAL
16	AH	185	ILE
18	AJ	162	SER
21	AM	101	ALA
24	AP	38	PRO
28	AT	29	GLU
29	AU	49	ASN
30	AV	46	ILE
30	AV	49	GLU
31	AW	67	GLY
31	AW	83	ILE
32	AX	70	LYS
33	AY	6	THR
33	AY	47	VAL
37	BC	5	GLN
40	BF	229	PHE
41	BG	69	LEU
41	BG	120	LYS
41	BG	124	ASP
42	BH	110	LYS
44	BJ	111	ASP
44	BJ	153	LYS
46	BL	121	SER
51	BQ	98	LYS
52	BR	183	ALA
54	BT	20	ARG
60	BZ	7	ALA
61	Ba	129	PHE
62	Bb	24	PRO
69	Bi	9	ILE

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Mol	Chain	Res	Type
71	Bk	19	ASP
73	Bm	78	ILE
76	Bq	103	ASN
79	By	51	PRO
79	By	218	MET
79	CL	159	GLY
85	CP	154	SER
85	CP	267	MET
1	A0	10	ARG
8	A7	88	ARG
9	AA	139	VAL
10	AB	78	ASP
10	AB	210	ILE
12	AD	89	GLU
13	AE	3	ARG
13	AE	53	LYS
16	AH	11	GLN
17	AI	10	LYS
17	AI	186	GLY
18	AJ	132	ARG
22	AN	60	VAL
24	AP	10	ARG
24	AP	23	GLU
24	AP	69	GLU
24	AP	130	ARG
27	AS	7	GLU
27	AS	34	THR
29	AU	117	VAL
33	AY	58	PHE
33	AY	77	ASN
36	BB	187	SER
37	BC	328	ASN
41	BG	202	GLU
43	BI	204	GLY
44	BJ	114	ILE
60	BZ	29	HIS
68	Bh	83	LYS
79	By	132	GLY
79	By	210	ARG
79	CL	11	LEU
79	CL	96	GLY
85	CP	136	TYR

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Mol	Chain	Res	Type
13	AE	234	PRO
18	AJ	117	GLY
23	AO	48	VAL
25	AQ	97	VAL
40	BF	178	ILE
41	BG	190	VAL
76	Bq	196	VAL
1	A0	50	VAL
1	A0	59	TYR
9	AA	117	GLU
21	AM	40	GLY
60	BZ	103	GLN
69	Bi	3	VAL
75	Bo	31	GLY
76	Bq	197	PHE
6	A5	147	VAL
10	AB	197	ILE
11	AC	145	GLY
25	AQ	29	ILE
28	AT	100	ILE
41	BG	73	PRO
44	BJ	118	PRO
51	BQ	42	ALA
79	CL	103	ILE
11	AC	163	GLY
13	AE	45	ILE
15	AG	70	PRO
19	AK	89	GLY
21	AM	117	GLY
66	Bf	59	VAL
79	By	103	ILE
79	By	220	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A0	83/101 (82%)	65 (78%)	18 (22%)	1	8
2	A1	70/71 (99%)	62 (89%)	8 (11%)	7	31
3	A2	56/60 (93%)	38 (68%)	18 (32%)	0	2
4	A3	47/49 (96%)	38 (81%)	9 (19%)	2	12
5	A4	51/54 (94%)	43 (84%)	8 (16%)	3	21
6	A5	43/116 (37%)	32 (74%)	11 (26%)	0	6
7	A6	259/262 (99%)	221 (85%)	38 (15%)	3	23
8	A7	97/195 (50%)	74 (76%)	23 (24%)	1	6
9	AA	164/210 (78%)	122 (74%)	42 (26%)	0	6
10	AB	191/224 (85%)	137 (72%)	54 (28%)	0	3
11	AC	176/205 (86%)	130 (74%)	46 (26%)	0	5
12	AD	182/195 (93%)	138 (76%)	44 (24%)	1	6
13	AE	221/222 (100%)	166 (75%)	55 (25%)	1	6
14	AF	173/191 (91%)	137 (79%)	36 (21%)	1	9
15	AG	188/201 (94%)	149 (79%)	39 (21%)	1	9
16	AH	165/170 (97%)	124 (75%)	41 (25%)	1	6
17	AI	150/161 (93%)	118 (79%)	32 (21%)	1	9
18	AJ	158/166 (95%)	117 (74%)	41 (26%)	0	5
19	AK	77/98 (79%)	58 (75%)	19 (25%)	1	6
20	AL	129/137 (94%)	105 (81%)	24 (19%)	2	13
21	AM	88/119 (74%)	55 (62%)	33 (38%)	0	1
22	AN	127/128 (99%)	91 (72%)	36 (28%)	0	3
23	AO	81/105 (77%)	57 (70%)	24 (30%)	0	3
24	AP	101/118 (86%)	82 (81%)	19 (19%)	2	13
25	AQ	117/119 (98%)	83 (71%)	34 (29%)	0	3
26	AR	94/124 (76%)	70 (74%)	24 (26%)	0	6
27	AS	128/129 (99%)	87 (68%)	41 (32%)	0	2
28	AT	115/116 (99%)	84 (73%)	31 (27%)	0	4
29	AU	100/114 (88%)	71 (71%)	29 (29%)	0	3
30	AV	74/74 (100%)	56 (76%)	18 (24%)	1	6
31	AW	110/111 (99%)	84 (76%)	26 (24%)	1	6
32	AX	119/120 (99%)	97 (82%)	22 (18%)	2	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	AY	112/113 (99%)	84 (75%)	28 (25%)	1	6
34	AZ	61/89 (68%)	43 (70%)	18 (30%)	0	3
35	BA	192/195 (98%)	153 (80%)	39 (20%)	1	10
36	BB	320/322 (99%)	250 (78%)	70 (22%)	1	8
37	BC	288/288 (100%)	223 (77%)	65 (23%)	1	8
38	BD	243/244 (100%)	196 (81%)	47 (19%)	1	12
39	BE	135/152 (89%)	115 (85%)	20 (15%)	3	23
40	BF	187/204 (92%)	158 (84%)	29 (16%)	3	21
41	BG	177/207 (86%)	138 (78%)	39 (22%)	1	8
42	BH	171/171 (100%)	132 (77%)	39 (23%)	1	8
43	BI	179/186 (96%)	142 (79%)	37 (21%)	1	9
44	BJ	147/149 (99%)	114 (78%)	33 (22%)	1	8
46	BL	154/158 (98%)	124 (80%)	30 (20%)	1	12
47	BM	108/108 (100%)	84 (78%)	24 (22%)	1	8
48	BN	175/175 (100%)	143 (82%)	32 (18%)	2	14
49	BO	323/178 (182%)	267 (83%)	56 (17%)	2	16
50	BP	125/145 (86%)	103 (82%)	22 (18%)	2	16
51	BQ	150/150 (100%)	123 (82%)	27 (18%)	2	15
52	BR	153/153 (100%)	121 (79%)	32 (21%)	1	9
53	BS	156/156 (100%)	123 (79%)	33 (21%)	1	9
54	BT	136/136 (100%)	109 (80%)	27 (20%)	1	11
55	BU	85/106 (80%)	62 (73%)	23 (27%)	0	4
56	BV	104/104 (100%)	96 (92%)	8 (8%)	15	49
57	BW	100/129 (78%)	85 (85%)	15 (15%)	3	22
58	BX	104/117 (89%)	81 (78%)	23 (22%)	1	8
59	BY	109/109 (100%)	85 (78%)	24 (22%)	1	8
60	BZ	115/115 (100%)	89 (77%)	26 (23%)	1	8
61	Ba	118/118 (100%)	95 (80%)	23 (20%)	1	12
62	Bb	46/46 (100%)	35 (76%)	11 (24%)	1	6
63	Bc	84/87 (97%)	68 (81%)	16 (19%)	2	12
64	Bd	94/96 (98%)	73 (78%)	21 (22%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
65	Be	109/110 (99%)	89 (82%)	20 (18%)	2	14
66	Bf	90/90 (100%)	79 (88%)	11 (12%)	6	29
67	Bg	95/102 (93%)	71 (75%)	24 (25%)	0	6
68	Bh	103/104 (99%)	77 (75%)	26 (25%)	0	6
69	Bi	80/81 (99%)	51 (64%)	29 (36%)	0	1
70	Bj	70/70 (100%)	53 (76%)	17 (24%)	1	6
71	Bk	67/68 (98%)	53 (79%)	14 (21%)	1	9
72	Bl	45/45 (100%)	34 (76%)	11 (24%)	1	6
73	Bm	47/116 (40%)	34 (72%)	13 (28%)	0	4
74	Bn	23/23 (100%)	16 (70%)	7 (30%)	0	3
75	Bo	90/90 (100%)	74 (82%)	16 (18%)	2	15
76	Bq	105/254 (41%)	94 (90%)	11 (10%)	8	35
79	By	177/181 (98%)	171 (97%)	6 (3%)	42	71
79	CL	177/181 (98%)	153 (86%)	24 (14%)	4	26
85	CP	290/290 (100%)	275 (95%)	15 (5%)	27	61
All	All	10153/10976 (92%)	8029 (79%)	2124 (21%)	4	9

All (2124) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A0	12	LYS
1	A0	36	ILE
1	A0	41	ILE
1	A0	44	ILE
1	A0	45	VAL
1	A0	53	LEU
1	A0	58	VAL
1	A0	61	GLU
1	A0	64	LEU
1	A0	66	LYS
1	A0	67	THR
1	A0	69	ASN
1	A0	70	LYS
1	A0	82	ARG
1	A0	83	ILE
1	A0	85	ARG
1	A0	86	VAL

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Mol	Chain	Res	Type
1	A0	90	GLU
2	A1	3	LEU
2	A1	4	VAL
2	A1	20	LYS
2	A1	29	ARG
2	A1	33	LEU
2	A1	34	ASP
2	A1	41	LEU
2	A1	67	THR
3	A2	5	THR
3	A2	13	ILE
3	A2	14	LYS
3	A2	15	VAL
3	A2	19	THR
3	A2	32	PHE
3	A2	33	LEU
3	A2	34	GLU
3	A2	38	ARG
3	A2	39	THR
3	A2	49	ARG
3	A2	52	ASP
3	A2	57	MET
3	A2	58	GLU
3	A2	59	SER
3	A2	62	GLU
3	A2	64	ARG
3	A2	65	ARG
4	A3	6	VAL
4	A3	8	PHE
4	A3	22	ARG
4	A3	25	SER
4	A3	30	LEU
4	A3	32	ARG
4	A3	36	LEU
4	A3	39	CYS
4	A3	48	ASN
5	A4	20	LYS
5	A4	25	GLU
5	A4	26	LYS
5	A4	28	LYS
5	A4	29	LYS
5	A4	42	ARG

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Mol	Chain	Res	Type
5	A4	48	THR
5	A4	50	VAL
6	A5	102	VAL
6	A5	108	VAL
6	A5	120	GLU
6	A5	121	CYS
6	A5	125	THR
6	A5	130	VAL
6	A5	137	ASP
6	A5	140	TYR
6	A5	146	SER
6	A5	147	VAL
6	A5	151	ASN
7	A6	6	VAL
7	A6	7	LEU
7	A6	8	VAL
7	A6	46	LYS
7	A6	48	THR
7	A6	51	ASP
7	A6	52	GLN
7	A6	59	ARG
7	A6	71	CYS
7	A6	76	ASP
7	A6	87	LYS
7	A6	88	THR
7	A6	91	LEU
7	A6	94	VAL
7	A6	96	THR
7	A6	112	SER
7	A6	117	LYS
7	A6	118	LYS
7	A6	129	LYS
7	A6	134	TRP
7	A6	136	ILE
7	A6	137	LYS
7	A6	141	LEU
7	A6	149	ASP
7	A6	153	GLN
7	A6	165	ASP
7	A6	166	SER
7	A6	188	ILE
7	A6	199	ILE

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Mol	Chain	Res	Type
7	A6	207	ASP
7	A6	221	MET
7	A6	238	ASP
7	A6	250	TYR
7	A6	266	ASP
7	A6	268	GLN
7	A6	292	LEU
7	A6	300	THR
7	A6	317	THR
8	A7	28	SER
8	A7	34	LYS
8	A7	46	LYS
8	A7	51	ARG
8	A7	61	ILE
8	A7	64	LYS
8	A7	65	THR
8	A7	68	ARG
8	A7	75	ASP
8	A7	78	ASP
8	A7	82	THR
8	A7	84	LYS
8	A7	88	ARG
8	A7	89	ARG
8	A7	94	HIS
8	A7	96	ARG
8	A7	97	THR
8	A7	100	THR
8	A7	102	THR
8	A7	105	LYS
8	A7	112	ASP
8	A7	130	GLU
8	A7	139	GLU
9	AA	7	PHE
9	AA	10	THR
9	AA	24	LEU
9	AA	27	ARG
9	AA	29	VAL
9	AA	33	GLN
9	AA	34	GLU
9	AA	37	VAL
9	AA	43	ASP
9	AA	45	VAL

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Mol	Chain	Res	Type
9	AA	47	VAL
9	AA	50	VAL
9	AA	57	LEU
9	AA	59	LEU
9	AA	62	ARG
9	AA	76	ILE
9	AA	79	ARG
9	AA	84	ARG
9	AA	87	LEU
9	AA	88	LYS
9	AA	96	THR
9	AA	101	ARG
9	AA	103	THR
9	AA	110	TYR
9	AA	111	ILE
9	AA	114	SER
9	AA	117	GLU
9	AA	119	ARG
9	AA	123	VAL
9	AA	131	GLN
9	AA	135	GLU
9	AA	140	ASN
9	AA	154	GLU
9	AA	157	ASP
9	AA	162	CYS
9	AA	168	HIS
9	AA	172	LEU
9	AA	177	LEU
9	AA	184	LEU
9	AA	185	ARG
9	AA	196	SER
9	AA	197	ILE
10	AB	21	VAL
10	AB	22	ASP
10	AB	36	SER
10	AB	38	PHE
10	AB	47	LEU
10	AB	54	LEU
10	AB	55	LYS
10	AB	58	SER
10	AB	61	LEU
10	AB	65	VAL

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Mol	Chain	Res	Type
10	AB	68	VAL
10	AB	70	LEU
10	AB	73	LEU
10	AB	77	GLU
10	AB	78	ASP
10	AB	80	SER
10	AB	81	PHE
10	AB	83	LYS
10	AB	85	LYS
10	AB	89	ASP
10	AB	94	LYS
10	AB	96	LEU
10	AB	97	LEU
10	AB	105	PHE
10	AB	108	ASP
10	AB	109	LYS
10	AB	110	LEU
10	AB	115	ARG
10	AB	117	TRP
10	AB	124	ASN
10	AB	131	ASP
10	AB	135	LEU
10	AB	146	GLN
10	AB	148	ASN
10	AB	149	GLN
10	AB	154	SER
10	AB	166	LYS
10	AB	170	GLU
10	AB	177	GLN
10	AB	179	SER
10	AB	180	THR
10	AB	181	LEU
10	AB	183	GLN
10	AB	184	LEU
10	AB	193	ILE
10	AB	202	LYS
10	AB	214	LYS
10	AB	215	VAL
10	AB	218	LEU
10	AB	219	LYS
10	AB	220	GLN
10	AB	223	PHE

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Mol	Chain	Res	Type
10	AB	225	VAL
10	AB	228	LEU
11	AC	41	LEU
11	AC	50	ILE
11	AC	53	ILE
11	AC	58	LEU
11	AC	64	LYS
11	AC	70	ASP
11	AC	71	THR
11	AC	72	LEU
11	AC	73	LEU
11	AC	76	LEU
11	AC	77	GLN
11	AC	80	VAL
11	AC	87	GLN
11	AC	89	GLN
11	AC	90	THR
11	AC	95	ARG
11	AC	96	THR
11	AC	97	ARG
11	AC	106	ASP
11	AC	111	VAL
11	AC	117	THR
11	AC	119	LYS
11	AC	130	ILE
11	AC	134	LEU
11	AC	137	ILE
11	AC	139	ILE
11	AC	140	ARG
11	AC	141	ARG
11	AC	146	THR
11	AC	148	LEU
11	AC	159	THR
11	AC	166	THR
11	AC	174	ARG
11	AC	185	LYS
11	AC	187	LEU
11	AC	201	ASN
11	AC	206	THR
11	AC	208	GLU
11	AC	221	THR
11	AC	222	TYR

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Mol	Chain	Res	Type
11	AC	224	PHE
11	AC	226	THR
11	AC	237	VAL
11	AC	240	LEU
11	AC	245	ASP
11	AC	246	GLU
12	AD	4	LEU
12	AD	5	ILE
12	AD	7	LYS
12	AD	21	LEU
12	AD	23	GLU
12	AD	29	LEU
12	AD	37	VAL
12	AD	39	VAL
12	AD	53	THR
12	AD	57	ASP
12	AD	65	ARG
12	AD	66	ILE
12	AD	81	PRO
12	AD	84	ILE
12	AD	89	GLU
12	AD	90	ARG
12	AD	92	GLN
12	AD	93	ASP
12	AD	94	ARG
12	AD	96	LEU
12	AD	105	MET
12	AD	117	ARG
12	AD	127	MET
12	AD	129	SER
12	AD	134	CYS
12	AD	141	LYS
12	AD	142	LEU
12	AD	146	ARG
12	AD	151	LYS
12	AD	158	ILE
12	AD	170	THR
12	AD	172	THR
12	AD	176	LEU
12	AD	178	ARG
12	AD	181	VAL
12	AD	182	LEU

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Mol	Chain	Res	Type
12	AD	187	LYS
12	AD	190	ARG
12	AD	204	ASP
12	AD	210	GLU
12	AD	215	GLU
12	AD	220	PRO
12	AD	221	SER
12	AD	222	VAL
13	AE	7	LYS
13	AE	9	LEU
13	AE	12	LEU
13	AE	23	LEU
13	AE	26	CYS
13	AE	38	LEU
13	AE	39	ARG
13	AE	45	ILE
13	AE	48	LEU
13	AE	56	LEU
13	AE	59	ARG
13	AE	62	LYS
13	AE	67	GLN
13	AE	68	ARG
13	AE	70	VAL
13	AE	72	VAL
13	AE	77	ARG
13	AE	92	LEU
13	AE	95	THR
13	AE	105	VAL
13	AE	116	ASP
13	AE	117	GLU
13	AE	123	LEU
13	AE	126	VAL
13	AE	129	VAL
13	AE	131	LEU
13	AE	133	LYS
13	AE	146	THR
13	AE	153	ASN
13	AE	155	LYS
13	AE	158	ASP
13	AE	164	LEU
13	AE	166	SER
13	AE	176	ASP

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Mol	Chain	Res	Type
13	AE	180	LEU
13	AE	182	TYR
13	AE	187	ARG
13	AE	192	ILE
13	AE	197	HIS
13	AE	198	LYS
13	AE	206	ASP
13	AE	211	LYS
13	AE	215	ASP
13	AE	220	THR
13	AE	222	LEU
13	AE	226	PHE
13	AE	227	VAL
13	AE	237	SER
13	AE	240	LYS
13	AE	242	LYS
13	AE	246	LEU
13	AE	248	ILE
13	AE	258	GLN
13	AE	259	GLN
13	AE	261	LEU
14	AF	21	THR
14	AF	23	VAL
14	AF	24	VAL
14	AF	25	LEU
14	AF	27	THR
14	AF	32	GLU
14	AF	41	LYS
14	AF	42	LEU
14	AF	43	PHE
14	AF	45	LYS
14	AF	53	VAL
14	AF	63	GLN
14	AF	65	ARG
14	AF	68	ILE
14	AF	70	VAL
14	AF	76	ARG
14	AF	79	ASN
14	AF	84	LYS
14	AF	89	ILE
14	AF	93	LEU
14	AF	94	THR

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Mol	Chain	Res	Type
14	AF	117	THR
14	AF	119	ASP
14	AF	130	ILE
14	AF	146	THR
14	AF	147	THR
14	AF	156	ARG
14	AF	157	ARG
14	AF	160	VAL
14	AF	162	VAL
14	AF	163	SER
14	AF	193	THR
14	AF	203	LYS
14	AF	206	SER
14	AF	216	GLU
14	AF	225	ARG
15	AG	21	GLU
15	AG	25	ARG
15	AG	45	PHE
15	AG	58	LYS
15	AG	59	GLN
15	AG	69	LEU
15	AG	70	PRO
15	AG	71	THR
15	AG	76	LEU
15	AG	78	THR
15	AG	79	LYS
15	AG	82	SER
15	AG	98	ARG
15	AG	105	ASP
15	AG	109	LEU
15	AG	115	LYS
15	AG	120	GLU
15	AG	124	LEU
15	AG	126	ASP
15	AG	127	THR
15	AG	129	VAL
15	AG	132	ARG
15	AG	133	LEU
15	AG	137	ARG
15	AG	143	LYS
15	AG	150	GLU
15	AG	151	ASP

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Mol	Chain	Res	Type
15	AG	154	ARG
15	AG	155	ASP
15	AG	162	VAL
15	AG	170	THR
15	AG	175	ILE
15	AG	176	GLN
15	AG	177	ARG
15	AG	179	VAL
15	AG	211	LEU
15	AG	212	LEU
15	AG	217	SER
15	AG	223	LYS
16	AH	9	LEU
16	AH	25	VAL
16	AH	37	GLU
16	AH	38	LEU
16	AH	42	GLN
16	AH	46	ILE
16	AH	50	ASP
16	AH	51	VAL
16	AH	60	ILE
16	AH	66	SER
16	AH	67	LEU
16	AH	70	PHE
16	AH	71	HIS
16	AH	74	GLN
16	AH	75	THR
16	AH	77	LEU
16	AH	78	THR
16	AH	79	ARG
16	AH	80	GLU
16	AH	85	PHE
16	AH	87	ASP
16	AH	97	ARG
16	AH	103	SER
16	AH	105	THR
16	AH	109	VAL
16	AH	110	GLN
16	AH	114	ARG
16	AH	116	ARG
16	AH	117	THR
16	AH	126	LEU

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Mol	Chain	Res	Type
16	AH	131	PHE
16	AH	143	LEU
16	AH	144	VAL
16	AH	148	LYS
16	AH	154	LEU
16	AH	162	ILE
16	AH	167	GLU
16	AH	181	ILE
16	AH	184	GLU
16	AH	185	ILE
16	AH	187	SER
17	AI	6	ASP
17	AI	7	SER
17	AI	8	ARG
17	AI	14	THR
17	AI	20	GLN
17	AI	21	PHE
17	AI	26	LYS
17	AI	28	GLU
17	AI	29	LEU
17	AI	36	THR
17	AI	46	VAL
17	AI	49	ARG
17	AI	58	LEU
17	AI	76	THR
17	AI	103	GLN
17	AI	107	THR
17	AI	120	THR
17	AI	121	LEU
17	AI	123	LYS
17	AI	135	LYS
17	AI	137	LYS
17	AI	138	ASN
17	AI	140	GLU
17	AI	142	LYS
17	AI	151	LYS
17	AI	152	ILE
17	AI	154	SER
17	AI	155	SER
17	AI	164	ARG
17	AI	184	LEU
17	AI	196	LEU

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Mol	Chain	Res	Type
17	AI	199	LYS
18	AJ	3	ARG
18	AJ	6	ARG
18	AJ	7	THR
18	AJ	13	SER
18	AJ	14	THR
18	AJ	22	SER
18	AJ	28	LEU
18	AJ	39	LYS
18	AJ	46	SER
18	AJ	49	LEU
18	AJ	54	ARG
18	AJ	60	LEU
18	AJ	78	ARG
18	AJ	79	ARG
18	AJ	82	ARG
18	AJ	88	GLU
18	AJ	89	ASP
18	AJ	92	LYS
18	AJ	93	LEU
18	AJ	94	ASP
18	AJ	96	VAL
18	AJ	97	LEU
18	AJ	99	LEU
18	AJ	101	VAL
18	AJ	105	LEU
18	AJ	109	LEU
18	AJ	110	GLN
18	AJ	111	THR
18	AJ	120	LYS
18	AJ	130	THR
18	AJ	133	HIS
18	AJ	134	ILE
18	AJ	138	LYS
18	AJ	149	ARG
18	AJ	151	ASP
18	AJ	161	THR
18	AJ	171	ARG
18	AJ	172	VAL
18	AJ	174	ARG
18	AJ	175	ARG
18	AJ	182	GLU

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Mol	Chain	Res	Type
19	AK	1	MET
19	AK	7	ASP
19	AK	8	ARG
19	AK	13	GLN
19	AK	20	VAL
19	AK	27	PHE
19	AK	29	GLN
19	AK	31	LYS
19	AK	32	HIS
19	AK	46	LEU
19	AK	49	LEU
19	AK	50	THR
19	AK	55	VAL
19	AK	56	LYS
19	AK	71	GLU
19	AK	76	LEU
19	AK	78	GLU
19	AK	80	LEU
19	AK	82	LEU
20	AL	3	THR
20	AL	7	VAL
20	AL	21	ASN
20	AL	27	THR
20	AL	29	LYS
20	AL	30	ARG
20	AL	40	LEU
20	AL	43	LYS
20	AL	44	THR
20	AL	54	ILE
20	AL	56	LYS
20	AL	67	ARG
20	AL	69	LYS
20	AL	74	THR
20	AL	79	LYS
20	AL	80	MET
20	AL	83	THR
20	AL	99	ARG
20	AL	109	VAL
20	AL	123	VAL
20	AL	131	ILE
20	AL	136	ARG
20	AL	140	VAL

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Mol	Chain	Res	Type
20	AL	141	LYS
21	AM	25	GLU
21	AM	28	LEU
21	AM	33	ARG
21	AM	36	LEU
21	AM	43	ARG
21	AM	45	LEU
21	AM	50	LYS
21	AM	53	THR
21	AM	58	LEU
21	AM	59	LEU
21	AM	61	VAL
21	AM	62	LEU
21	AM	63	VAL
21	AM	71	ILE
21	AM	74	LEU
21	AM	75	VAL
21	AM	83	GLU
21	AM	85	LYS
21	AM	88	LEU
21	AM	89	ILE
21	AM	97	LEU
21	AM	103	LEU
21	AM	116	VAL
21	AM	119	SER
21	AM	121	VAL
21	AM	125	ASN
21	AM	126	TRP
21	AM	129	GLU
21	AM	132	GLU
21	AM	135	MET
21	AM	138	GLU
21	AM	139	HIS
21	AM	140	PHE
22	AN	3	ARG
22	AN	4	MET
22	AN	9	LYS
22	AN	12	SER
22	AN	16	ILE
22	AN	21	ASN
22	AN	27	LYS
22	AN	33	VAL

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Mol	Chain	Res	Type
22	AN	36	GLN
22	AN	39	LYS
22	AN	42	ARG
22	AN	45	LEU
22	AN	50	ILE
22	AN	56	ASP
22	AN	58	HIS
22	AN	60	VAL
22	AN	64	ARG
22	AN	66	ILE
22	AN	67	THR
22	AN	76	LYS
22	AN	77	SER
22	AN	83	GLU
22	AN	84	ILE
22	AN	88	LEU
22	AN	94	LYS
22	AN	97	SER
22	AN	102	LEU
22	AN	105	ASN
22	AN	109	LYS
22	AN	114	ARG
22	AN	115	LEU
22	AN	125	LEU
22	AN	145	THR
22	AN	149	LEU
22	AN	150	VAL
22	AN	151	ASN
23	AO	13	VAL
23	AO	14	PHE
23	AO	16	VAL
23	AO	20	TYR
23	AO	24	ASN
23	AO	26	THR
23	AO	29	HIS
23	AO	31	THR
23	AO	39	ILE
23	AO	42	VAL
23	AO	43	THR
23	AO	51	ASP
23	AO	92	LYS
23	AO	99	GLN

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Mol	Chain	Res	Type
23	AO	102	LEU
23	AO	103	ARG
23	AO	107	ARG
23	AO	108	SER
23	AO	118	VAL
23	AO	123	SER
23	AO	124	ASP
23	AO	125	SER
23	AO	133	ARG
23	AO	137	LEU
24	AP	14	THR
24	AP	22	LEU
24	AP	24	LYS
24	AP	26	LEU
24	AP	31	GLU
24	AP	35	LYS
24	AP	40	ARG
24	AP	44	ARG
24	AP	47	ARG
24	AP	50	THR
24	AP	52	LYS
24	AP	69	GLU
24	AP	86	VAL
24	AP	92	SER
24	AP	100	LYS
24	AP	110	GLU
24	AP	121	ILE
24	AP	125	PRO
24	AP	130	ARG
25	AQ	4	VAL
25	AQ	14	LYS
25	AQ	17	THR
25	AQ	23	LYS
25	AQ	26	LYS
25	AQ	28	LEU
25	AQ	36	ILE
25	AQ	44	LEU
25	AQ	45	ARG
25	AQ	52	LEU
25	AQ	53	LEU
25	AQ	54	LEU
25	AQ	57	LEU

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Mol	Chain	Res	Type
25	AQ	58	ASP
25	AQ	59	LYS
25	AQ	63	ILE
25	AQ	66	ARG
25	AQ	68	ARG
25	AQ	69	VAL
25	AQ	76	SER
25	AQ	90	VAL
25	AQ	94	GLN
25	AQ	98	ASP
25	AQ	101	SER
25	AQ	106	LYS
25	AQ	115	THR
25	AQ	118	ILE
25	AQ	123	ARG
25	AQ	127	LYS
25	AQ	128	LYS
25	AQ	136	SER
25	AQ	137	ARG
25	AQ	138	PHE
25	AQ	141	SER
26	AR	5	ARG
26	AR	25	THR
26	AR	26	LEU
26	AR	29	GLN
26	AR	30	THR
26	AR	34	LEU
26	AR	36	ASP
26	AR	38	ILE
26	AR	44	LYS
26	AR	46	LEU
26	AR	49	LYS
26	AR	54	THR
26	AR	69	ILE
26	AR	72	LYS
26	AR	73	LEU
26	AR	78	ARG
26	AR	83	GLN
26	AR	84	TYR
26	AR	87	GLU
26	AR	105	GLN
26	AR	107	SER

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Mol	Chain	Res	Type
26	AR	113	LEU
26	AR	115	LEU
26	AR	119	LEU
27	AS	3	LEU
27	AS	5	VAL
27	AS	8	GLN
27	AS	11	PHE
27	AS	12	GLN
27	AS	13	HIS
27	AS	14	ILE
27	AS	15	LEU
27	AS	17	LEU
27	AS	20	THR
27	AS	21	ASN
27	AS	26	ILE
27	AS	28	ILE
27	AS	34	THR
27	AS	38	VAL
27	AS	40	ARG
27	AS	46	VAL
27	AS	53	ASP
27	AS	54	LEU
27	AS	57	ARG
27	AS	60	GLU
27	AS	61	LEU
27	AS	71	GLN
27	AS	74	GLN
27	AS	77	THR
27	AS	80	LYS
27	AS	81	ILE
27	AS	86	LEU
27	AS	89	GLN
27	AS	92	ILE
27	AS	93	THR
27	AS	107	SER
27	AS	108	LYS
27	AS	110	ARG
27	AS	116	LEU
27	AS	119	ILE
27	AS	132	ARG
27	AS	136	GLN
27	AS	138	THR

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Mol	Chain	Res	Type
27	AS	140	THR
27	AS	143	ARG
28	AT	4	VAL
28	AT	6	VAL
28	AT	13	ASP
28	AT	18	TYR
28	AT	22	LEU
28	AT	25	GLN
28	AT	28	LEU
28	AT	30	VAL
28	AT	33	TYR
28	AT	34	VAL
28	AT	35	ASP
28	AT	36	ILE
28	AT	37	VAL
28	AT	57	ARG
28	AT	63	ARG
28	AT	67	MET
28	AT	68	ARG
28	AT	84	LYS
28	AT	86	ARG
28	AT	88	VAL
28	AT	89	ARG
28	AT	92	LYS
28	AT	94	ILE
28	AT	103	LYS
28	AT	111	ILE
28	AT	126	GLU
28	AT	130	ARG
28	AT	131	ASP
28	AT	132	LEU
28	AT	134	ARG
28	AT	144	GLU
29	AU	15	GLN
29	AU	17	GLN
29	AU	18	GLN
29	AU	20	ILE
29	AU	22	ILE
29	AU	23	ARG
29	AU	27	THR
29	AU	30	LYS
29	AU	31	VAL

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Mol	Chain	Res	Type
29	AU	34	LEU
29	AU	35	GLU
29	AU	42	VAL
29	AU	47	GLN
29	AU	48	HIS
29	AU	51	VAL
29	AU	57	ARG
29	AU	58	LEU
29	AU	60	THR
29	AU	61	LYS
29	AU	66	SER
29	AU	74	GLU
29	AU	76	SER
29	AU	81	THR
29	AU	88	LYS
29	AU	89	ARG
29	AU	99	ILE
29	AU	103	ILE
29	AU	108	ILE
29	AU	121	ASN
30	AV	1	MET
30	AV	2	GLU
30	AV	3	ASN
30	AV	5	LYS
30	AV	7	GLN
30	AV	11	LEU
30	AV	25	LYS
30	AV	41	GLU
30	AV	49	GLU
30	AV	50	TYR
30	AV	52	THR
30	AV	60	ARG
30	AV	62	ARG
30	AV	68	SER
30	AV	69	LEU
30	AV	74	GLN
30	AV	76	ASP
30	AV	80	LYS
31	AW	3	ARG
31	AW	6	VAL
31	AW	7	LEU
31	AW	23	ARG

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Mol	Chain	Res	Type
31	AW	24	GLN
31	AW	25	VAL
31	AW	27	ILE
31	AW	30	SER
31	AW	43	LYS
31	AW	53	ILE
31	AW	56	HIS
31	AW	65	LEU
31	AW	66	ASN
31	AW	69	LEU
31	AW	74	VAL
31	AW	76	SER
31	AW	83	ILE
31	AW	87	GLU
31	AW	93	LEU
31	AW	98	GLN
31	AW	103	ILE
31	AW	104	LEU
31	AW	105	THR
31	AW	114	GLU
31	AW	121	VAL
31	AW	129	VAL
32	AX	7	ARG
32	AX	9	LEU
32	AX	14	LYS
32	AX	18	HIS
32	AX	19	ARG
32	AX	28	ASN
32	AX	40	SER
32	AX	60	GLU
32	AX	82	LYS
32	AX	84	THR
32	AX	103	LEU
32	AX	107	PHE
32	AX	109	ARG
32	AX	110	LYS
32	AX	114	LYS
32	AX	117	ILE
32	AX	131	SER
32	AX	133	LEU
32	AX	137	LYS
32	AX	138	GLU

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Mol	Chain	Res	Type
32	AX	140	LYS
32	AX	144	ARG
33	AY	17	LEU
33	AY	29	HIS
33	AY	32	ARG
33	AY	34	ASN
33	AY	44	LEU
33	AY	46	GLU
33	AY	47	VAL
33	AY	49	LYS
33	AY	51	GLU
33	AY	52	LYS
33	AY	57	VAL
33	AY	61	ARG
33	AY	62	THR
33	AY	75	VAL
33	AY	84	LYS
33	AY	88	THR
33	AY	93	ARG
33	AY	96	LEU
33	AY	99	LYS
33	AY	102	LYS
33	AY	105	ARG
33	AY	112	LYS
33	AY	123	LYS
33	AY	124	ARG
33	AY	127	LYS
33	AY	128	LYS
33	AY	129	VAL
33	AY	135	ASP
34	AZ	38	HIS
34	AZ	42	LEU
34	AZ	49	ARG
34	AZ	50	ILE
34	AZ	58	ARG
34	AZ	59	TYR
34	AZ	69	LEU
34	AZ	71	ILE
34	AZ	75	LEU
34	AZ	77	ARG
34	AZ	80	LEU
34	AZ	85	LYS

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Mol	Chain	Res	Type
34	AZ	92	ILE
34	AZ	93	SER
34	AZ	95	HIS
34	AZ	96	SER
34	AZ	100	ILE
34	AZ	105	THR
35	BA	15	ILE
35	BA	23	ARG
35	BA	32	LEU
35	BA	41	ILE
35	BA	44	ILE
35	BA	45	VAL
35	BA	46	LYS
35	BA	48	ILE
35	BA	61	VAL
35	BA	62	VAL
35	BA	71	LEU
35	BA	96	LEU
35	BA	101	VAL
35	BA	104	LEU
35	BA	112	ILE
35	BA	113	VAL
35	BA	114	SER
35	BA	119	LYS
35	BA	134	VAL
35	BA	137	ILE
35	BA	142	ASP
35	BA	147	ARG
35	BA	155	LYS
35	BA	158	ILE
35	BA	169	ILE
35	BA	179	LEU
35	BA	180	LEU
35	BA	181	LYS
35	BA	193	ARG
35	BA	202	VAL
35	BA	207	VAL
35	BA	215	ASN
35	BA	224	THR
35	BA	226	SER
35	BA	227	ARG
35	BA	230	VAL

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Mol	Chain	Res	Type
35	BA	241	ARG
35	BA	243	THR
35	BA	246	LEU
36	BB	3	HIS
36	BB	4	ARG
36	BB	10	ARG
36	BB	17	LEU
36	BB	19	ARG
36	BB	20	LYS
36	BB	21	ARG
36	BB	24	SER
36	BB	30	LYS
36	BB	43	LEU
36	BB	47	LEU
36	BB	50	LYS
36	BB	56	ILE
36	BB	67	PHE
36	BB	70	ARG
36	BB	77	THR
36	BB	79	VAL
36	BB	81	THR
36	BB	84	VAL
36	BB	85	VAL
36	BB	89	VAL
36	BB	100	ARG
36	BB	103	THR
36	BB	114	VAL
36	BB	116	ARG
36	BB	139	GLN
36	BB	146	ARG
36	BB	148	LEU
36	BB	150	ARG
36	BB	153	LYS
36	BB	157	VAL
36	BB	169	THR
36	BB	175	LYS
36	BB	183	LEU
36	BB	187	SER
36	BB	188	ILE
36	BB	192	VAL
36	BB	196	ARG
36	BB	202	THR

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Mol	Chain	Res	Type
36	BB	205	VAL
36	BB	213	GLU
36	BB	221	THR
36	BB	229	VAL
36	BB	232	ARG
36	BB	235	THR
36	BB	236	LYS
36	BB	238	LEU
36	BB	242	THR
36	BB	248	LYS
36	BB	252	ILE
36	BB	284	ARG
36	BB	291	GLU
36	BB	297	SER
36	BB	301	THR
36	BB	304	THR
36	BB	308	MET
36	BB	322	ILE
36	BB	324	VAL
36	BB	328	ILE
36	BB	332	ARG
36	BB	338	LEU
36	BB	340	LYS
36	BB	346	THR
36	BB	347	SER
36	BB	355	SER
36	BB	361	THR
36	BB	367	LYS
36	BB	369	ARG
36	BB	380	MET
36	BB	382	THR
37	BC	2	SER
37	BC	7	THR
37	BC	16	THR
37	BC	18	ASN
37	BC	25	VAL
37	BC	27	SER
37	BC	52	VAL
37	BC	53	SER
37	BC	55	LYS
37	BC	71	VAL
37	BC	85	SER

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Mol	Chain	Res	Type
37	BC	93	MET
37	BC	99	MET
37	BC	112	LYS
37	BC	120	TYR
37	BC	122	THR
37	BC	136	LEU
37	BC	138	ARG
37	BC	144	LYS
37	BC	145	ILE
37	BC	150	LEU
37	BC	153	SER
37	BC	156	LEU
37	BC	158	SER
37	BC	161	LYS
37	BC	170	LYS
37	BC	176	SER
37	BC	177	ASP
37	BC	179	LEU
37	BC	182	LEU
37	BC	186	LYS
37	BC	187	LEU
37	BC	198	ARG
37	BC	203	ARG
37	BC	206	LEU
37	BC	220	ARG
37	BC	222	VAL
37	BC	230	VAL
37	BC	246	ARG
37	BC	258	LEU
37	BC	259	ASP
37	BC	265	GLU
37	BC	267	VAL
37	BC	283	THR
37	BC	287	THR
37	BC	289	ILE
37	BC	290	ILE
37	BC	300	ARG
37	BC	307	GLN
37	BC	313	LEU
37	BC	319	LYS
37	BC	323	VAL
37	BC	327	LEU

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Mol	Chain	Res	Type
37	BC	333	VAL
37	BC	339	LEU
37	BC	342	LYS
37	BC	345	GLU
37	BC	349	THR
37	BC	354	VAL
37	BC	356	THR
37	BC	357	GLU
37	BC	358	THR
37	BC	359	LEU
37	BC	360	LYS
37	BC	362	ASP
38	BD	4	GLN
38	BD	5	LYS
38	BD	13	SER
38	BD	34	LYS
38	BD	35	ARG
38	BD	41	LYS
38	BD	51	LEU
38	BD	65	ILE
38	BD	68	THR
38	BD	70	THR
38	BD	74	VAL
38	BD	81	HIS
38	BD	89	THR
38	BD	93	THR
38	BD	110	LEU
38	BD	112	LYS
38	BD	113	LEU
38	BD	118	THR
38	BD	124	GLU
38	BD	131	LEU
38	BD	133	GLU
38	BD	136	GLU
38	BD	146	LEU
38	BD	148	ILE
38	BD	152	ARG
38	BD	155	THR
38	BD	164	LYS
38	BD	185	PHE
38	BD	186	GLU
38	BD	189	GLU

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Mol	Chain	Res	Type
38	BD	190	ILE
38	BD	191	ASP
38	BD	194	LEU
38	BD	205	SER
38	BD	211	LEU
38	BD	218	ARG
38	BD	227	LEU
38	BD	232	ASP
38	BD	251	PRO
38	BD	254	LYS
38	BD	258	LYS
38	BD	259	LYS
38	BD	262	LYS
38	BD	268	GLU
38	BD	273	ARG
38	BD	275	THR
38	BD	282	ARG
39	BE	5	LYS
39	BE	8	LYS
39	BE	20	LYS
39	BE	21	THR
39	BE	46	ARG
39	BE	50	LYS
39	BE	64	LEU
39	BE	65	ILE
39	BE	76	LEU
39	BE	78	ARG
39	BE	79	VAL
39	BE	89	THR
39	BE	93	VAL
39	BE	98	VAL
39	BE	99	GLU
39	BE	109	GLU
39	BE	143	LYS
39	BE	152	THR
39	BE	155	LEU
39	BE	162	SER
40	BF	22	THR
40	BF	24	GLU
40	BF	26	VAL
40	BF	39	GLU
40	BF	41	ARG

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Mol	Chain	Res	Type
40	BF	45	LEU
40	BF	53	LYS
40	BF	54	GLU
40	BF	56	GLU
40	BF	60	ARG
40	BF	83	LEU
40	BF	88	ARG
40	BF	98	LYS
40	BF	101	LYS
40	BF	121	LYS
40	BF	124	LEU
40	BF	130	ILE
40	BF	156	ILE
40	BF	158	LYS
40	BF	159	GLN
40	BF	173	LEU
40	BF	175	LYS
40	BF	179	LEU
40	BF	184	LEU
40	BF	196	LYS
40	BF	206	LYS
40	BF	219	LYS
40	BF	229	PHE
40	BF	239	LEU
41	BG	26	LEU
41	BG	41	GLN
41	BG	50	VAL
41	BG	68	ARG
41	BG	70	LYS
41	BG	74	THR
41	BG	79	GLN
41	BG	81	THR
41	BG	85	ASN
41	BG	89	GLU
41	BG	92	LYS
41	BG	95	ASN
41	BG	110	THR
41	BG	126	SER
41	BG	128	LYS
41	BG	136	LEU
41	BG	145	ASN
41	BG	146	LYS

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Mol	Chain	Res	Type
41	BG	149	LYS
41	BG	150	LEU
41	BG	153	ILE
41	BG	160	ILE
41	BG	169	LEU
41	BG	172	LYS
41	BG	173	MET
41	BG	183	LYS
41	BG	185	ARG
41	BG	189	LEU
41	BG	208	GLU
41	BG	213	LYS
41	BG	214	LEU
41	BG	216	SER
41	BG	217	THR
41	BG	219	ASP
41	BG	222	PHE
41	BG	230	LYS
41	BG	241	LYS
41	BG	245	LYS
41	BG	248	LYS
42	BH	4	ILE
42	BH	5	GLN
42	BH	6	THR
42	BH	18	VAL
42	BH	19	SER
42	BH	20	ILE
42	BH	31	ARG
42	BH	33	THR
42	BH	43	VAL
42	BH	44	THR
42	BH	52	LEU
42	BH	55	VAL
42	BH	62	ARG
42	BH	63	LYS
42	BH	68	LEU
42	BH	69	ARG
42	BH	70	THR
42	BH	80	THR
42	BH	82	VAL
42	BH	92	TYR
42	BH	106	LYS

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Mol	Chain	Res	Type
42	BH	121	LYS
42	BH	123	ILE
42	BH	129	ARG
42	BH	130	ASP
42	BH	132	VAL
42	BH	133	THR
42	BH	134	ILE
42	BH	138	THR
42	BH	144	ILE
42	BH	151	VAL
42	BH	157	ASN
42	BH	161	LEU
42	BH	162	GLN
42	BH	164	ILE
42	BH	169	ASN
42	BH	177	ASP
42	BH	179	ILE
42	BH	191	LEU
43	BI	4	ARG
43	BI	24	ARG
43	BI	26	VAL
43	BI	36	LEU
43	BI	42	THR
43	BI	52	LEU
43	BI	57	LEU
43	BI	58	GLU
43	BI	63	GLU
43	BI	71	CYS
43	BI	74	LYS
43	BI	76	MET
43	BI	78	THR
43	BI	83	ASP
43	BI	87	LEU
43	BI	91	VAL
43	BI	99	ILE
43	BI	129	VAL
43	BI	139	ARG
43	BI	140	THR
43	BI	143	SER
43	BI	144	ASN
43	BI	145	LYS
43	BI	153	ARG

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Mol	Chain	Res	Type
43	BI	163	GLN
43	BI	167	LEU
43	BI	169	LYS
43	BI	174	THR
43	BI	177	ASP
43	BI	178	ARG
43	BI	185	ARG
43	BI	200	LEU
43	BI	206	LEU
43	BI	211	ARG
43	BI	212	GLU
43	BI	215	GLU
43	BI	217	PHE
44	BJ	10	ARG
44	BJ	12	LEU
44	BJ	13	LYS
44	BJ	16	LYS
44	BJ	22	SER
44	BJ	29	ARG
44	BJ	30	LEU
44	BJ	31	THR
44	BJ	34	SER
44	BJ	35	LYS
44	BJ	44	THR
44	BJ	46	VAL
44	BJ	80	LEU
44	BJ	87	LYS
44	BJ	92	ARG
44	BJ	94	ARG
44	BJ	106	ILE
44	BJ	107	ASP
44	BJ	112	LEU
44	BJ	114	ILE
44	BJ	129	VAL
44	BJ	130	VAL
44	BJ	132	ASN
44	BJ	137	ARG
44	BJ	138	VAL
44	BJ	140	ARG
44	BJ	142	LYS
44	BJ	147	THR
44	BJ	158	ASP

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Mol	Chain	Res	Type
44	BJ	159	THR
44	BJ	160	VAL
44	BJ	161	SER
44	BJ	165	GLN
46	BL	45	LYS
46	BL	46	ILE
46	BL	54	LEU
46	BL	55	ARG
46	BL	59	ARG
46	BL	63	VAL
46	BL	67	ARG
46	BL	68	LYS
46	BL	69	VAL
46	BL	73	ARG
46	BL	85	LEU
46	BL	100	ARG
46	BL	107	GLU
46	BL	114	GLN
46	BL	115	ARG
46	BL	118	GLU
46	BL	121	SER
46	BL	123	ILE
46	BL	124	ILE
46	BL	128	ARG
46	BL	131	LYS
46	BL	152	THR
46	BL	154	VAL
46	BL	157	ARG
46	BL	164	GLU
46	BL	171	ARG
46	BL	175	SER
46	BL	184	GLU
46	BL	189	GLU
46	BL	194	GLU
47	BM	3	THR
47	BM	10	SER
47	BM	13	ARG
47	BM	20	VAL
47	BM	24	LYS
47	BM	42	LYS
47	BM	53	VAL
47	BM	62	GLN

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Mol	Chain	Res	Type
47	BM	63	VAL
47	BM	64	VAL
47	BM	72	LEU
47	BM	74	ARG
47	BM	80	THR
47	BM	82	SER
47	BM	92	GLU
47	BM	106	ARG
47	BM	107	GLU
47	BM	124	ARG
47	BM	126	GLN
47	BM	128	ARG
47	BM	130	THR
47	BM	132	LYS
47	BM	133	LYS
47	BM	135	LEU
48	BN	5	LYS
48	BN	7	LEU
48	BN	8	GLU
48	BN	10	LEU
48	BN	12	ARG
48	BN	15	GLN
48	BN	18	VAL
48	BN	22	LEU
48	BN	24	ARG
48	BN	41	ARG
48	BN	49	ARG
48	BN	54	LYS
48	BN	68	ARG
48	BN	80	THR
48	BN	85	THR
48	BN	92	LEU
48	BN	93	LYS
48	BN	96	ARG
48	BN	97	SER
48	BN	104	GLU
48	BN	105	ARG
48	BN	109	ARG
48	BN	117	ASN
48	BN	134	LEU
48	BN	138	GLN
48	BN	155	VAL

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Mol	Chain	Res	Type
48	BN	159	ARG
48	BN	170	LYS
48	BN	184	LYS
48	BN	190	THR
48	BN	196	THR
48	BN	204	LYS
49	BO	3[A]	VAL
49	BO	3[B]	SER
49	BO	12[A]	LYS
49	BO	12[B]	LYS
49	BO	16[B]	LEU
49	BO	22[B]	THR
49	BO	27[B]	VAL
49	BO	34[A]	VAL
49	BO	34[B]	VAL
49	BO	41[A]	LEU
49	BO	41[B]	LEU
49	BO	58[A]	LEU
49	BO	58[B]	LEU
49	BO	59[A]	ARG
49	BO	59[B]	ARG
49	BO	67[A]	THR
49	BO	67[B]	THR
49	BO	74[A]	ARG
49	BO	74[B]	ARG
49	BO	78[A]	ARG
49	BO	78[B]	ARG
49	BO	80[B]	LEU
49	BO	85[A]	ARG
49	BO	85[B]	ARG
49	BO	100[A]	GLU
49	BO	100[B]	GLU
49	BO	106[A]	GLU
49	BO	106[B]	GLU
49	BO	108[A]	ILE
49	BO	108[B]	ILE
49	BO	117[A]	ARG
49	BO	117[B]	ARG
49	BO	124[A]	LEU
49	BO	124[B]	LEU
49	BO	126[A]	VAL
49	BO	126[B]	VAL

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Mol	Chain	Res	Type
49	BO	128[A]	ARG
49	BO	128[B]	ARG
49	BO	129[A]	LEU
49	BO	129[B]	LEU
49	BO	130[A]	LYS
49	BO	130[B]	LYS
49	BO	144[A]	SER
49	BO	144[B]	SER
49	BO	160[A]	ARG
49	BO	160[B]	ARG
49	BO	163[B]	ARG
49	BO	166[A]	GLU
49	BO	166[B]	GLU
49	BO	171[A]	LYS
49	BO	171[B]	LYS
49	BO	175[A]	THR
49	BO	175[B]	THR
49	BO	182[A]	ASN
49	BO	184[A]	THR
49	BO	197[A]	LEU
50	BP	9	THR
50	BP	24	VAL
50	BP	29	THR
50	BP	31	GLU
50	BP	32	THR
50	BP	41	LEU
50	BP	52	LEU
50	BP	56	ARG
50	BP	69	ARG
50	BP	74	LYS
50	BP	78	VAL
50	BP	79	THR
50	BP	80	LYS
50	BP	89	LYS
50	BP	94	LEU
50	BP	103	GLU
50	BP	112	LEU
50	BP	114	VAL
50	BP	119	VAL
50	BP	126	ARG
50	BP	128	ARG
50	BP	138	LYS

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Mol	Chain	Res	Type
51	BQ	3	ILE
51	BQ	7	SER
51	BQ	17	THR
51	BQ	24	VAL
51	BQ	26	LEU
51	BQ	31	LYS
51	BQ	32	LEU
51	BQ	34	THR
51	BQ	49	LEU
51	BQ	57	ILE
51	BQ	64	VAL
51	BQ	80	THR
51	BQ	81	VAL
51	BQ	86	THR
51	BQ	93	ILE
51	BQ	98	LYS
51	BQ	100	THR
51	BQ	105	ARG
51	BQ	113	LYS
51	BQ	135	GLN
51	BQ	138	LEU
51	BQ	147	ARG
51	BQ	150	VAL
51	BQ	161	LYS
51	BQ	165	ILE
51	BQ	166	LEU
51	BQ	170	ARG
52	BR	5	ARG
52	BR	7	GLN
52	BR	10	LEU
52	BR	17	VAL
52	BR	20	ARG
52	BR	27	ASN
52	BR	29	THR
52	BR	36	ASN
52	BR	39	ASN
52	BR	43	LYS
52	BR	49	THR
52	BR	55	VAL
52	BR	56	THR
52	BR	63	THR
52	BR	70	LYS

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Mol	Chain	Res	Type
52	BR	71	ARG
52	BR	74	ARG
52	BR	98	ARG
52	BR	99	LEU
52	BR	105	LEU
52	BR	106	LEU
52	BR	114	LYS
52	BR	126	GLU
52	BR	138	LEU
52	BR	152	GLU
52	BR	153	LYS
52	BR	158	GLU
52	BR	162	ARG
52	BR	164	LEU
52	BR	167	ARG
52	BR	173	ARG
52	BR	180	LYS
53	BS	1	MET
53	BS	13	ARG
53	BS	15	PRO
53	BS	17	GLU
53	BS	21	GLU
53	BS	23	LYS
53	BS	40	ARG
53	BS	50	LYS
53	BS	51	VAL
53	BS	52	LYS
53	BS	61	ILE
53	BS	71	LYS
53	BS	74	ASN
53	BS	80	ARG
53	BS	87	THR
53	BS	96	ASP
53	BS	97	VAL
53	BS	100	VAL
53	BS	104	GLU
53	BS	105	THR
53	BS	115	ARG
53	BS	117	ARG
53	BS	130	GLU
53	BS	136	LYS
53	BS	146	LYS

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Mol	Chain	Res	Type
53	BS	148	LEU
53	BS	149	LYS
53	BS	155	ARG
53	BS	161	LYS
53	BS	162	THR
53	BS	166	LYS
53	BS	169	SER
53	BS	172	TYR
54	BT	17	ARG
54	BT	25	VAL
54	BT	26	HIS
54	BT	27	LEU
54	BT	35	LYS
54	BT	36	VAL
54	BT	47	SER
54	BT	55	LYS
54	BT	68	THR
54	BT	71	SER
54	BT	78	LYS
54	BT	80	VAL
54	BT	83	ARG
54	BT	88	ARG
54	BT	89	LEU
54	BT	96	ILE
54	BT	102	ARG
54	BT	104	GLU
54	BT	118	GLU
54	BT	126	VAL
54	BT	131	GLN
54	BT	135	PRO
54	BT	139	ARG
54	BT	143	THR
54	BT	149	GLN
54	BT	150	THR
54	BT	160	ILE
55	BU	13	LYS
55	BU	14	THR
55	BU	16	THR
55	BU	21	SER
55	BU	23	THR
55	BU	27	VAL
55	BU	28	PHE

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Mol	Chain	Res	Type
55	BU	37	LEU
55	BU	39	ASP
55	BU	43	VAL
55	BU	50	LEU
55	BU	52	ASN
55	BU	54	VAL
55	BU	55	THR
55	BU	58	GLU
55	BU	61	THR
55	BU	62	VAL
55	BU	63	VAL
55	BU	68	THR
55	BU	90	ARG
55	BU	98	THR
55	BU	100	THR
55	BU	105	LEU
56	BV	13	ILE
56	BV	14	SER
56	BV	48	ARG
56	BV	70	ARG
56	BV	88	ARG
56	BV	91	VAL
56	BV	110	LYS
56	BV	115	THR
57	BW	1	MET
57	BW	5	ILE
57	BW	25	ASP
57	BW	47	ARG
57	BW	56	ARG
57	BW	57	LYS
57	BW	63	ILE
57	BW	95	SER
57	BW	97	LYS
57	BW	100	VAL
57	BW	105	ARG
57	BW	107	GLU
57	BW	126	GLU
57	BW	127	LYS
57	BW	135	SER
58	BX	24	LEU
58	BX	27	ARG
58	BX	34	LEU

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Mol	Chain	Res	Type
58	BX	37	THR
58	BX	38	LEU
58	BX	40	LEU
58	BX	56	ARG
58	BX	57	LEU
58	BX	63	ILE
58	BX	70	GLU
58	BX	71	THR
58	BX	73	MET
58	BX	74	LYS
58	BX	86	VAL
58	BX	101	GLU
58	BX	108	LEU
58	BX	109	LYS
58	BX	115	ARG
58	BX	121	LYS
58	BX	125	ARG
58	BX	133	LEU
58	BX	135	ILE
58	BX	142	ILE
59	BY	12	ARG
59	BY	13	ARG
59	BY	14	LYS
59	BY	17	LYS
59	BY	37	LYS
59	BY	40	ARG
59	BY	43	TYR
59	BY	45	ILE
59	BY	50	ILE
59	BY	52	ARG
59	BY	57	LEU
59	BY	59	VAL
59	BY	66	GLN
59	BY	71	SER
59	BY	74	TYR
59	BY	76	LEU
59	BY	80	VAL
59	BY	83	ASP
59	BY	87	LYS
59	BY	94	SER
59	BY	95	VAL
59	BY	97	ILE

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Mol	Chain	Res	Type
59	BY	103	LYS
59	BY	120	GLN
60	BZ	3	LYS
60	BZ	14	VAL
60	BZ	17	ARG
60	BZ	24	VAL
60	BZ	30	ASP
60	BZ	31	GLU
60	BZ	34	LYS
60	BZ	55	LYS
60	BZ	65	ARG
60	BZ	72	ILE
60	BZ	81	LEU
60	BZ	83	THR
60	BZ	86	THR
60	BZ	89	VAL
60	BZ	93	LYS
60	BZ	95	VAL
60	BZ	99	GLU
60	BZ	100	THR
60	BZ	102	GLU
60	BZ	103	GLN
60	BZ	105	SER
60	BZ	121	ARG
60	BZ	126	LYS
60	BZ	127	ASN
60	BZ	134	LEU
60	BZ	135	ARG
61	Ba	6	THR
61	Ba	8	THR
61	Ba	10	LYS
61	Ba	12	ARG
61	Ba	16	SER
61	Ba	24	LYS
61	Ba	34	MET
61	Ba	42	ARG
61	Ba	44	ASN
61	Ba	47	LYS
61	Ba	60	TYR
61	Ba	78	LEU
61	Ba	80	THR
61	Ba	82	ILE

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Mol	Chain	Res	Type
61	Ba	85	ASP
61	Ba	91	LEU
61	Ba	97	GLU
61	Ba	98	THR
61	Ba	115	LYS
61	Ba	128	ARG
61	Ba	130	VAL
61	Ba	132	LYS
61	Ba	133	LEU
62	Bb	14	ARG
62	Bb	15	LYS
62	Bb	21	ILE
62	Bb	22	LYS
62	Bb	26	THR
62	Bb	33	LYS
62	Bb	38	LYS
62	Bb	50	THR
62	Bb	52	LYS
62	Bb	58	LYS
62	Bb	59	LYS
63	Bc	8	GLU
63	Bc	9	SER
63	Bc	18	ILE
63	Bc	19	LYS
63	Bc	30	THR
63	Bc	33	SER
63	Bc	34	LEU
63	Bc	40	LYS
63	Bc	41	LEU
63	Bc	48	THR
63	Bc	61	MET
63	Bc	68	TYR
63	Bc	86	ARG
63	Bc	87	VAL
63	Bc	99	ASP
63	Bc	100	ILE
64	Bd	6	ASP
64	Bd	8	VAL
64	Bd	13	THR
64	Bd	16	LEU
64	Bd	26	LYS
64	Bd	31	ARG

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Mol	Chain	Res	Type
64	Bd	34	LYS
64	Bd	44	MET
64	Bd	55	LEU
64	Bd	61	LYS
64	Bd	76	SER
64	Bd	82	GLU
64	Bd	89	LEU
64	Bd	90	PHE
64	Bd	96	VAL
64	Bd	100	SER
64	Bd	102	LYS
64	Bd	104	LEU
64	Bd	105	GLN
64	Bd	106	THR
64	Bd	110	GLU
65	Be	4	LEU
65	Be	14	THR
65	Be	16	LYS
65	Be	18	LYS
65	Be	19	ARG
65	Be	27	ARG
65	Be	31	ASN
65	Be	33	ARG
65	Be	35	GLN
65	Be	51	SER
65	Be	61	LYS
65	Be	73	THR
65	Be	75	LEU
65	Be	82	LEU
65	Be	87	MET
65	Be	91	THR
65	Be	106	VAL
65	Be	109	LEU
65	Be	125	ARG
65	Be	126	LEU
66	Bf	4	SER
66	Bf	10	LYS
66	Bf	20	LYS
66	Bf	28	SER
66	Bf	31	LYS
66	Bf	49	ILE
66	Bf	70	LYS

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Mol	Chain	Res	Type
66	Bf	81	VAL
66	Bf	84	THR
66	Bf	98	VAL
66	Bf	107	ILE
67	Bg	5	VAL
67	Bg	9	ARG
67	Bg	16	ARG
67	Bg	19	LYS
67	Bg	20	ILE
67	Bg	23	VAL
67	Bg	24	LYS
67	Bg	29	ILE
67	Bg	30	LEU
67	Bg	31	ARG
67	Bg	35	VAL
67	Bg	36	LYS
67	Bg	44	CYS
67	Bg	54	ILE
67	Bg	58	ARG
67	Bg	65	VAL
67	Bg	70	LYS
67	Bg	79	SER
67	Bg	85	VAL
67	Bg	86	LYS
67	Bg	88	ARG
67	Bg	90	ILE
67	Bg	98	GLN
67	Bg	104	VAL
68	Bh	15	GLU
68	Bh	20	GLN
68	Bh	21	LEU
68	Bh	27	GLU
68	Bh	28	LEU
68	Bh	38	ARG
68	Bh	40	SER
68	Bh	45	LYS
68	Bh	47	VAL
68	Bh	48	ARG
68	Bh	57	VAL
68	Bh	62	GLN
68	Bh	66	VAL
68	Bh	69	LEU

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Mol	Chain	Res	Type
68	Bh	79	ASP
68	Bh	81	ARG
68	Bh	84	LYS
68	Bh	85	THR
68	Bh	86	ARG
68	Bh	89	ARG
68	Bh	90	ARG
68	Bh	98	SER
68	Bh	100	VAL
68	Bh	101	THR
68	Bh	107	LYS
68	Bh	119	LYS
69	Bi	3	VAL
69	Bi	7	ILE
69	Bi	9	ILE
69	Bi	11	LEU
69	Bi	17	VAL
69	Bi	18	THR
69	Bi	21	THR
69	Bi	26	ILE
69	Bi	29	LYS
69	Bi	34	SER
69	Bi	36	ARG
69	Bi	37	THR
69	Bi	38	LYS
69	Bi	43	LEU
69	Bi	45	ARG
69	Bi	57	LEU
69	Bi	58	ILE
69	Bi	60	LEU
69	Bi	61	ILE
69	Bi	66	GLU
69	Bi	68	ARG
69	Bi	74	LYS
69	Bi	75	LYS
69	Bi	76	ARG
69	Bi	81	THR
69	Bi	88	GLU
69	Bi	90	MET
69	Bi	94	ILE
69	Bi	98	ARG
70	Bj	3	LYS

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Mol	Chain	Res	Type
70	Bj	11	ARG
70	Bj	17	THR
70	Bj	25	ARG
70	Bj	33	THR
70	Bj	36	SER
70	Bj	44	THR
70	Bj	55	ARG
70	Bj	58	THR
70	Bj	59	THR
70	Bj	64	MET
70	Bj	65	ARG
70	Bj	67	LEU
70	Bj	68	LYS
70	Bj	75	LYS
70	Bj	80	THR
70	Bj	84	SER
71	Bk	5	ILE
71	Bk	12	LEU
71	Bk	24	THR
71	Bk	31	LEU
71	Bk	39	ARG
71	Bk	41	THR
71	Bk	46	ARG
71	Bk	50	SER
71	Bk	53	THR
71	Bk	61	LYS
71	Bk	64	LYS
71	Bk	65	LEU
71	Bk	67	GLN
71	Bk	68	SER
72	Bl	11	GLN
72	Bl	15	LYS
72	Bl	17	LYS
72	Bl	21	ARG
72	Bl	23	LEU
72	Bl	27	ILE
72	Bl	29	LEU
72	Bl	41	ARG
72	Bl	45	ARG
72	Bl	47	THR
72	Bl	51	ILE
73	Bm	78	ILE

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Mol	Chain	Res	Type
73	Bm	79	GLU
73	Bm	83	LYS
73	Bm	85	LEU
73	Bm	88	LYS
73	Bm	91	CYS
73	Bm	93	LYS
73	Bm	106	ARG
73	Bm	112	LYS
73	Bm	113	ARG
73	Bm	114	LYS
73	Bm	126	LYS
73	Bm	127	LEU
74	Bn	6	ARG
74	Bn	9	ARG
74	Bn	13	LEU
74	Bn	16	LYS
74	Bn	21	ARG
74	Bn	23	ARG
74	Bn	24	SER
75	Bo	7	THR
75	Bo	8	ARG
75	Bo	18	ARG
75	Bo	46	LYS
75	Bo	47	GLN
75	Bo	61	LYS
75	Bo	63	LYS
75	Bo	71	ARG
75	Bo	78	LYS
75	Bo	79	THR
75	Bo	83	LEU
75	Bo	84	THR
75	Bo	89	LYS
75	Bo	93	LEU
75	Bo	104	LEU
75	Bo	105	GLN
76	Bq	6	GLU
76	Bq	14	LYS
76	Bq	17	GLU
76	Bq	26	PHE
76	Bq	39	HIS
76	Bq	53	MET
76	Bq	60	ARG

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Mol	Chain	Res	Type
76	Bq	64	ARG
76	Bq	89	THR
76	Bq	96	ILE
76	Bq	186	THR
79	By	104	LEU
79	By	107	TRP
79	By	110	PHE
79	By	137	LEU
79	By	166	ASP
79	By	217	THR
79	CL	5	LYS
79	CL	23	ASP
79	CL	24	GLU
79	CL	30	LYS
79	CL	53	ARG
79	CL	63	SER
79	CL	68	LEU
79	CL	72	VAL
79	CL	73	ARG
79	CL	81	GLU
79	CL	84	LYS
79	CL	92	ASP
79	CL	98	GLU
79	CL	99	ILE
79	CL	104	LEU
79	CL	113	VAL
79	CL	130	ILE
79	CL	131	LEU
79	CL	141	LYS
79	CL	184	LYS
79	CL	215	THR
79	CL	217	THR
79	CL	223	ARG
79	CL	227	HIS
85	CP	16	THR
85	CP	23	ASP
85	CP	69	VAL
85	CP	110	GLN
85	CP	126	VAL
85	CP	133	ASP
85	CP	235	LEU
85	CP	243	PHE

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Mol	Chain	Res	Type
85	CP	251	LEU
85	CP	255	TYR
85	CP	267	MET
85	CP	294	VAL
85	CP	310	ASN
85	CP	322	LEU
85	CP	336	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (93) such sidechains are listed below:

Mol	Chain	Res	Type
4	A3	48	ASN
4	A3	53	ASN
7	A6	17	ASN
8	A7	108	GLN
9	AA	168	HIS
10	AB	101	HIS
10	AB	146	GLN
10	AB	149	GLN
10	AB	177	GLN
11	AC	89	GLN
11	AC	94	GLN
12	AD	179	GLN
13	AE	16	HIS
13	AE	98	ASN
14	AF	103	ASN
14	AF	104	ASN
14	AF	128	ASN
14	AF	170	GLN
15	AG	13	GLN
15	AG	22	HIS
15	AG	189	HIS
17	AI	44	HIS
17	AI	64	ASN
17	AI	103	GLN
18	AJ	110	GLN
18	AJ	131	GLN
18	AJ	133	HIS
20	AL	110	HIS
21	AM	125	ASN
25	AQ	74	HIS
27	AS	89	GLN

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Mol	Chain	Res	Type
27	AS	136	GLN
29	AU	18	GLN
29	AU	72	ASN
30	AV	74	GLN
31	AW	16	ASN
31	AW	24	GLN
31	AW	80	ASN
32	AX	48	HIS
34	AZ	95	HIS
35	BA	50	HIS
35	BA	194	ASN
35	BA	209	HIS
35	BA	215	ASN
36	BB	243	HIS
37	BC	48	GLN
37	BC	114	ASN
37	BC	221	ASN
38	BD	40	HIS
38	BD	63	GLN
38	BD	81	HIS
39	BE	167	ASN
41	BG	59	GLN
42	BH	58	HIS
44	BJ	101	ASN
44	BJ	109	HIS
44	BJ	132	ASN
48	BN	90	ASN
50	BP	55	GLN
51	BQ	158	HIS
52	BR	166	ASN
54	BT	26	HIS
54	BT	49	GLN
55	BU	40	HIS
56	BV	33	ASN
60	BZ	57	HIS
61	Ba	44	ASN
61	Ba	62	HIS
61	Ba	64	GLN
64	Bd	43	HIS
66	Bf	77	ASN
67	Bg	33	GLN
68	Bh	20	GLN

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Mol	Chain	Res	Type
70	Bj	79	GLN
72	Bl	4	GLN
72	Bl	19	GLN
76	Bq	39	HIS
76	Bq	56	ASN
76	Bq	103	ASN
79	By	3	HIS
79	By	44	HIS
79	By	165	ASN
79	By	227	HIS
79	CL	66	HIS
79	CL	71	GLN
79	CL	101	GLN
79	CL	188	ASN
85	CP	65	GLN
85	CP	95	ASN
85	CP	109	GLN
85	CP	153	GLN
85	CP	184	GLN
85	CP	310	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
80	B2	1764/1800 (98%)	545 (30%)	86 (4%)
81	B5	3140/3396 (92%)	741 (23%)	131 (4%)
82	B7	120/121 (99%)	18 (15%)	0
83	B8	157/158 (99%)	32 (20%)	3 (1%)
84	CN	86/87 (98%)	41 (47%)	8 (9%)
86	CW	73/76 (96%)	26 (35%)	7 (9%)
All	All	5340/5638 (94%)	1403 (26%)	235 (4%)

All (1403) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
80	B2	2	A
80	B2	4	C
80	B2	8	U
80	B2	16	G
80	B2	20	G
80	B2	25	C

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Mol	Chain	Res	Type
80	B2	26	A
80	B2	27	U
80	B2	34	G
80	B2	39	A
80	B2	41	A
80	B2	42	G
80	B2	45	U
80	B2	46	A
80	B2	47	A
80	B2	50	C
80	B2	57	G
80	B2	60	U
80	B2	67	A
80	B2	68	A
80	B2	69	G
80	B2	72	A
80	B2	73	U
80	B2	74	U
80	B2	75	U
80	B2	76	A
80	B2	77	U
80	B2	78	A
80	B2	97	C
80	B2	100	A
80	B2	101	U
80	B2	104	A
80	B2	114	C
80	B2	126	A
80	B2	127	G
80	B2	131	C
80	B2	132	U
80	B2	133	U
80	B2	134	U
80	B2	135	A
80	B2	136	C
80	B2	137	U
80	B2	138	A
80	B2	139	C
80	B2	140	A
80	B2	141	U
80	B2	144	U
80	B2	145	A

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Mol	Chain	Res	Type
80	B2	146	U
80	B2	153	G
80	B2	158	U
80	B2	159	U
80	B2	175	G
80	B2	178	U
80	B2	179	A
80	B2	185	U
80	B2	186	C
80	B2	187	G
80	B2	188	A
80	B2	189	C
80	B2	190	C
80	B2	191	C
80	B2	192	U
80	B2	193	U
80	B2	194	U
80	B2	195	G
80	B2	196	G
80	B2	197	A
80	B2	198	A
80	B2	199	G
80	B2	200	A
80	B2	215	A
80	B2	218	A
80	B2	219	A
80	B2	223	U
80	B2	225	A
80	B2	226	A
80	B2	227	U
80	B2	228	G
80	B2	229	U
80	B2	233	C
80	B2	234	G
80	B2	235	G
80	B2	236	A
80	B2	238	U
80	B2	239	C
80	B2	240	U
80	B2	241	U
80	B2	242	U
80	B2	249	U

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Mol	Chain	Res	Type
80	B2	250	C
80	B2	261	U
80	B2	262	U
80	B2	265	A
80	B2	266	A
80	B2	271	A
80	B2	272	U
80	B2	274	G
80	B2	275	C
80	B2	276	C
80	B2	277	U
80	B2	278	U
80	B2	279	G
80	B2	280	U
80	B2	281	G
80	B2	288	A
80	B2	290	G
80	B2	299	A
80	B2	301	A
80	B2	306	U
80	B2	308	C
80	B2	309	C
80	B2	314	C
80	B2	316	A
80	B2	319	U
80	B2	320	U
80	B2	321	C
80	B2	322	G
80	B2	337	G
80	B2	338	C
80	B2	341	A
80	B2	348	U
80	B2	352	A
80	B2	359	A
80	B2	360	A
80	B2	361	C
80	B2	399	A
80	B2	400	A
80	B2	401	A
80	B2	402	C
80	B2	403	G
80	B2	404	G

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Mol	Chain	Res	Type
80	B2	411	C
80	B2	416	A
80	B2	418	G
80	B2	423	G
80	B2	424	C
80	B2	425	A
80	B2	426	G
80	B2	428	A
80	B2	434	G
80	B2	439	U
80	B2	444	C
80	B2	445	A
80	B2	446	A
80	B2	448	C
80	B2	467	G
80	B2	468	A
80	B2	470	A
80	B2	475	A
80	B2	477	A
80	B2	484	C
80	B2	485	A
80	B2	486	G
80	B2	487	G
80	B2	488	G
80	B2	493	U
80	B2	494	U
80	B2	495	C
80	B2	496	G
80	B2	497	G
80	B2	498	G
80	B2	499	U
80	B2	500	C
80	B2	502	U
80	B2	503	G
80	B2	504	U
80	B2	505	A
80	B2	506	A
80	B2	507	U
80	B2	508	U
80	B2	510	G
80	B2	511	A
80	B2	512	A

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Mol	Chain	Res	Type
80	B2	513	U
80	B2	515	A
80	B2	516	G
80	B2	519	C
80	B2	525	A
80	B2	527	A
80	B2	532	U
80	B2	538	A
80	B2	539	G
80	B2	540	G
80	B2	541	A
80	B2	542	A
80	B2	543	C
80	B2	544	A
80	B2	545	A
80	B2	548	G
80	B2	555	A
80	B2	556	A
80	B2	557	G
80	B2	558	U
80	B2	559	C
80	B2	565	C
80	B2	570	A
80	B2	575	C
80	B2	579	A
80	B2	580	A
80	B2	582	U
80	B2	583	C
80	B2	585	A
80	B2	594	A
80	B2	595	G
80	B2	597	G
80	B2	605	A
80	B2	607	G
80	B2	611	U
80	B2	619	A
80	B2	620	A
80	B2	622	A
80	B2	623	A
80	B2	624	G
80	B2	630	A
80	B2	639	U

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Mol	Chain	Res	Type
80	B2	640	U
80	B2	650	U
80	B2	653	C
80	B2	655	G
80	B2	656	G
80	B2	657	U
80	B2	658	C
80	B2	677	G
80	B2	679	U
80	B2	680	U
80	B2	684	A
80	B2	685	A
80	B2	686	C
80	B2	692	C
80	B2	694	U
80	B2	696	C
80	B2	697	C
80	B2	699	U
80	B2	700	C
80	B2	701	U
80	B2	702	G
80	B2	703	G
80	B2	704	C
80	B2	705	U
80	B2	706	A
80	B2	707	A
80	B2	709	C
80	B2	710	U
80	B2	712	G
80	B2	713	A
80	B2	714	G
80	B2	717	C
80	B2	718	U
80	B2	719	U
80	B2	720	G
80	B2	721	U
80	B2	722	G
80	B2	723	G
80	B2	725	U
80	B2	727	U
80	B2	728	U
80	B2	729	G

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Mol	Chain	Res	Type
80	B2	730	G
80	B2	731	C
80	B2	732	G
80	B2	733	A
80	B2	734	A
80	B2	735	C
80	B2	736	C
80	B2	737	A
80	B2	738	G
80	B2	742	U
80	B2	743	U
80	B2	745	U
80	B2	754	A
80	B2	755	A
80	B2	756	A
80	B2	758	U
80	B2	765	G
80	B2	766	U
80	B2	771	A
80	B2	774	A
80	B2	775	G
80	B2	778	G
80	B2	779	U
80	B2	780	A
80	B2	781	U
80	B2	782	U
80	B2	783	G
80	B2	784	C
80	B2	785	U
80	B2	787	G
80	B2	789	A
80	B2	793	A
80	B2	794	U
80	B2	795	U
80	B2	806	A
80	B2	811	A
80	B2	812	A
80	B2	813	U
80	B2	815	G
80	B2	816	G
80	B2	818	C
80	B2	819	G

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Mol	Chain	Res	Type
80	B2	820	U
80	B2	821	U
80	B2	823	G
80	B2	824	G
80	B2	829	A
80	B2	830	U
80	B2	831	U
80	B2	832	U
80	B2	833	U
80	B2	837	G
80	B2	838	G
80	B2	840	U
80	B2	846	G
80	B2	848	C
80	B2	849	C
80	B2	854	U
80	B2	862	A
80	B2	863	A
80	B2	864	U
80	B2	873	U
80	B2	876	G
80	B2	892	A
80	B2	896	U
80	B2	898	A
80	B2	912	U
80	B2	913	G
80	B2	914	G
80	B2	921	U
80	B2	928	U
80	B2	933	A
80	B2	935	U
80	B2	942	G
80	B2	944	A
80	B2	951	A
80	B2	959	U
80	B2	960	U
80	B2	961	U
80	B2	966	A
80	B2	968	U
80	B2	982	U
80	B2	988	A
80	B2	992	A

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Mol	Chain	Res	Type
80	B2	993	A
80	B2	995	A
80	B2	997	G
80	B2	1003	A
80	B2	1004	U
80	B2	1005	A
80	B2	1020	A
80	B2	1021	C
80	B2	1026	A
80	B2	1028	C
80	B2	1031	U
80	B2	1039	A
80	B2	1040	G
80	B2	1052	U
80	B2	1053	G
80	B2	1058	U
80	B2	1059	U
80	B2	1060	U
80	B2	1061	A
80	B2	1064	G
80	B2	1073	G
80	B2	1074	G
80	B2	1079	U
80	B2	1080	U
80	B2	1082	C
80	B2	1083	G
80	B2	1084	A
80	B2	1086	A
80	B2	1087	A
80	B2	1091	A
80	B2	1092	A
80	B2	1093	A
80	B2	1096	C
80	B2	1097	U
80	B2	1100	G
80	B2	1104	U
80	B2	1111	G
80	B2	1138	A
80	B2	1139	A
80	B2	1146	G
80	B2	1149	G
80	B2	1151	A

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Mol	Chain	Res	Type
80	B2	1152	A
80	B2	1155	G
80	B2	1157	A
80	B2	1158	C
80	B2	1160	A
80	B2	1162	C
80	B2	1167	G
80	B2	1185	U
80	B2	1188	G
80	B2	1191	U
80	B2	1194	A
80	B2	1196	A
80	B2	1197	C
80	B2	1199	G
80	B2	1200	G
80	B2	1202	A
80	B2	1207	C
80	B2	1208	A
80	B2	1217	A
80	B2	1218	G
80	B2	1219	A
80	B2	1221	A
80	B2	1226	A
80	B2	1227	A
80	B2	1228	G
80	B2	1229	G
80	B2	1235	C
80	B2	1243	G
80	B2	1244	A
80	B2	1245	G
80	B2	1250	U
80	B2	1251	U
80	B2	1257	U
80	B2	1258	U
80	B2	1260	U
80	B2	1269	U
80	B2	1286	U
80	B2	1301	U
80	B2	1314	U
80	B2	1315	U
80	B2	1321	A
80	B2	1329	A

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Mol	Chain	Res	Type
80	B2	1337	A
80	B2	1339	C
80	B2	1340	U
80	B2	1341	A
80	B2	1344	A
80	B2	1345	A
80	B2	1349	G
80	B2	1354	G
80	B2	1361	U
80	B2	1363	U
80	B2	1364	G
80	B2	1370	U
80	B2	1371	A
80	B2	1372	U
80	B2	1379	C
80	B2	1382	A
80	B2	1383	G
80	B2	1388	A
80	B2	1390	U
80	B2	1398	U
80	B2	1399	C
80	B2	1400	A
80	B2	1412	G
80	B2	1413	U
80	B2	1414	U
80	B2	1415	U
80	B2	1420	C
80	B2	1421	A
80	B2	1427	A
80	B2	1428	G
80	B2	1429	G
80	B2	1431	C
80	B2	1445	G
80	B2	1446	A
80	B2	1448	G
80	B2	1454	G
80	B2	1457	C
80	B2	1459	C
80	B2	1461	C
80	B2	1462	G
80	B2	1471	A
80	B2	1473	U

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Mol	Chain	Res	Type
80	B2	1474	G
80	B2	1475	A
80	B2	1478	G
80	B2	1482	C
80	B2	1486	G
80	B2	1488	G
80	B2	1489	U
80	B2	1490	C
80	B2	1491	U
80	B2	1492	A
80	B2	1493	A
80	B2	1499	G
80	B2	1500	C
80	B2	1506	G
80	B2	1514	U
80	B2	1516	A
80	B2	1518	C
80	B2	1521	G
80	B2	1523	G
80	B2	1524	A
80	B2	1535	U
80	B2	1536	G
80	B2	1537	C
80	B2	1538	U
80	B2	1539	G
80	B2	1540	G
80	B2	1557	U
80	B2	1559	A
80	B2	1569	A
80	B2	1573	A
80	B2	1574	G
80	B2	1575	G
80	B2	1584	G
80	B2	1590	G
80	B2	1601	G
80	B2	1616	G
80	B2	1619	C
80	B2	1624	C
80	B2	1625	C
80	B2	1631	A
80	B2	1635	A
80	B2	1649	G

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Mol	Chain	Res	Type
80	B2	1657	U
80	B2	1658	G
80	B2	1663	G
80	B2	1680	G
80	B2	1682	U
80	B2	1683	C
80	B2	1684	U
80	B2	1685	G
80	B2	1686	C
80	B2	1687	U
80	B2	1693	A
80	B2	1712	A
80	B2	1713	G
80	B2	1716	C
80	B2	1717	G
80	B2	1727	G
80	B2	1729	C
80	B2	1731	A
80	B2	1759	C
80	B2	1760	G
80	B2	1761	U
80	B2	1762	A
80	B2	1766	A
80	B2	1768	G
80	B2	1769	U
80	B2	1770	U
80	B2	1780	G
80	B2	1782	A
80	B2	1783	C
80	B2	1789	G
80	B2	1792	G
80	B2	1793	G
80	B2	1794	A
80	B2	1795	U
80	B2	1796	C
81	B5	14	U
81	B5	15	C
81	B5	16	A
81	B5	26	A
81	B5	38	U
81	B5	40	A
81	B5	43	A

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Mol	Chain	Res	Type
81	B5	49	A
81	B5	60	A
81	B5	65	A
81	B5	66	A
81	B5	74	G
81	B5	76	G
81	B5	77	A
81	B5	92	G
81	B5	93	C
81	B5	96	G
81	B5	99	A
81	B5	109	A
81	B5	110	G
81	B5	111	C
81	B5	116	A
81	B5	121	A
81	B5	122	A
81	B5	133	U
81	B5	134	U
81	B5	135	C
81	B5	136	G
81	B5	146	U
81	B5	150	A
81	B5	152	U
81	B5	156	G
81	B5	157	A
81	B5	160	G
81	B5	166	C
81	B5	170	G
81	B5	171	G
81	B5	174	C
81	B5	178	U
81	B5	180	C
81	B5	182	U
81	B5	183	G
81	B5	184	U
81	B5	187	A
81	B5	190	U
81	B5	191	U
81	B5	200	C
81	B5	201	A
81	B5	210	U

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Mol	Chain	Res	Type
81	B5	218	G
81	B5	219	A
81	B5	221	A
81	B5	235	A
81	B5	236	G
81	B5	238	A
81	B5	239	G
81	B5	240	U
81	B5	242	C
81	B5	244	G
81	B5	248	U
81	B5	249	U
81	B5	250	U
81	B5	251	G
81	B5	252	U
81	B5	253	A
81	B5	254	A
81	B5	258	G
81	B5	259	C
81	B5	269	G
81	B5	283	G
81	B5	284	A
81	B5	286	U
81	B5	294	U
81	B5	295	A
81	B5	305	U
81	B5	322	U
81	B5	323	A
81	B5	329	U
81	B5	334	A
81	B5	339	C
81	B5	349	A
81	B5	350	C
81	B5	351	A
81	B5	352	A
81	B5	370	U
81	B5	376	G
81	B5	390	G
81	B5	395	A
81	B5	398	A
81	B5	399	A
81	B5	401	U

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Mol	Chain	Res	Type
81	B5	402	A
81	B5	403	C
81	B5	421	G
81	B5	422	A
81	B5	436	A
81	B5	437	G
81	B5	438	A
81	B5	439	C
81	B5	440	A
81	B5	441	U
81	B5	442	G
81	B5	443	G
81	B5	492	U
81	B5	493	G
81	B5	495	G
81	B5	520	U
81	B5	521	A
81	B5	531	G
81	B5	535	G
81	B5	538	G
81	B5	546	C
81	B5	547	G
81	B5	548	G
81	B5	551	A
81	B5	553	U
81	B5	555	U
81	B5	557	A
81	B5	559	A
81	B5	578	A
81	B5	579	G
81	B5	592	A
81	B5	594	U
81	B5	595	G
81	B5	600	G
81	B5	604	G
81	B5	609	G
81	B5	610	G
81	B5	611	A
81	B5	612	U
81	B5	619	A
81	B5	620	U
81	B5	621	A

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Mol	Chain	Res	Type
81	B5	630	A
81	B5	636	C
81	B5	649	A
81	B5	653	A
81	B5	656	A
81	B5	660	A
81	B5	675	C
81	B5	677	A
81	B5	681	U
81	B5	705	A
81	B5	708	G
81	B5	712	G
81	B5	715	A
81	B5	716	A
81	B5	719	U
81	B5	720	A
81	B5	725	G
81	B5	726	G
81	B5	735	A
81	B5	736	A
81	B5	750	G
81	B5	758	C
81	B5	766	U
81	B5	767	U
81	B5	768	C
81	B5	776	U
81	B5	777	U
81	B5	780	A
81	B5	781	G
81	B5	785	G
81	B5	786	A
81	B5	806	A
81	B5	809	G
81	B5	817	A
81	B5	830	A
81	B5	846	A
81	B5	851	C
81	B5	861	C
81	B5	862	U
81	B5	871	U
81	B5	874	U
81	B5	879	U

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Mol	Chain	Res	Type
81	B5	891	G
81	B5	893	C
81	B5	896	A
81	B5	897	U
81	B5	907	G
81	B5	908	G
81	B5	914	A
81	B5	916	G
81	B5	917	A
81	B5	921	A
81	B5	923	C
81	B5	924	G
81	B5	937	G
81	B5	944	C
81	B5	946	U
81	B5	947	G
81	B5	958	C
81	B5	959	C
81	B5	960	U
81	B5	974	G
81	B5	979	U
81	B5	980	A
81	B5	981	U
81	B5	983	A
81	B5	994	G
81	B5	1000	C
81	B5	1001	G
81	B5	1002	A
81	B5	1003	A
81	B5	1010	G
81	B5	1014	U
81	B5	1015	U
81	B5	1016	C
81	B5	1017	C
81	B5	1018	G
81	B5	1020	G
81	B5	1021	G
81	B5	1023	C
81	B5	1024	G
81	B5	1025	A
81	B5	1026	A
81	B5	1027	A

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Mol	Chain	Res	Type
81	B5	1028	U
81	B5	1029	G
81	B5	1032	C
81	B5	1034	U
81	B5	1035	G
81	B5	1047	A
81	B5	1049	C
81	B5	1057	A
81	B5	1064	A
81	B5	1065	A
81	B5	1071	U
81	B5	1072	G
81	B5	1081	U
81	B5	1082	U
81	B5	1085	A
81	B5	1093	A
81	B5	1094	U
81	B5	1095	U
81	B5	1096	U
81	B5	1097	G
81	B5	1098	A
81	B5	1103	A
81	B5	1104	G
81	B5	1117	G
81	B5	1131	G
81	B5	1153	A
81	B5	1159	A
81	B5	1160	C
81	B5	1174	G
81	B5	1178	G
81	B5	1179	A
81	B5	1180	A
81	B5	1181	U
81	B5	1182	A
81	B5	1191	U
81	B5	1192	C
81	B5	1193	A
81	B5	1201	C
81	B5	1209	G
81	B5	1213	G
81	B5	1229	G
81	B5	1230	G

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Mol	Chain	Res	Type
81	B5	1231	A
81	B5	1232	C
81	B5	1233	G
81	B5	1236	G
81	B5	1237	G
81	B5	1239	C
81	B5	1240	A
81	B5	1241	U
81	B5	1242	G
81	B5	1244	A
81	B5	1245	A
81	B5	1246	G
81	B5	1247	U
81	B5	1248	C
81	B5	1258	U
81	B5	1259	A
81	B5	1261	G
81	B5	1262	G
81	B5	1263	A
81	B5	1264	G
81	B5	1265	U
81	B5	1266	G
81	B5	1271	A
81	B5	1272	C
81	B5	1278	A
81	B5	1279	C
81	B5	1280	C
81	B5	1282	G
81	B5	1283	C
81	B5	1284	C
81	B5	1285	G
81	B5	1294	A
81	B5	1307	G
81	B5	1308	A
81	B5	1309	U
81	B5	1312	C
81	B5	1330	A
81	B5	1332	A
81	B5	1348	U
81	B5	1349	G
81	B5	1350	A
81	B5	1351	U

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Mol	Chain	Res	Type
81	B5	1352	A
81	B5	1353	U
81	B5	1354	G
81	B5	1355	A
81	B5	1356	U
81	B5	1357	G
81	B5	1366	A
81	B5	1385	C
81	B5	1386	A
81	B5	1387	G
81	B5	1399	A
81	B5	1400	G
81	B5	1403	C
81	B5	1419	A
81	B5	1422	G
81	B5	1428	A
81	B5	1434	G
81	B5	1437	C
81	B5	1440	G
81	B5	1446	A
81	B5	1450	G
81	B5	1460	A
81	B5	1481	A
81	B5	1482	A
81	B5	1490	A
81	B5	1495	U
81	B5	1502	C
81	B5	1503	A
81	B5	1508	C
81	B5	1527	C
81	B5	1541	G
81	B5	1542	G
81	B5	1549	U
81	B5	1554	U
81	B5	1555	U
81	B5	1556	C
81	B5	1557	A
81	B5	1560	G
81	B5	1561	G
81	B5	1562	C
81	B5	1563	C
81	B5	1565	G

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Mol	Chain	Res	Type
81	B5	1566	A
81	B5	1567	U
81	B5	1568	U
81	B5	1569	U
81	B5	1570	U
81	B5	1571	A
81	B5	1572	U
81	B5	1574	C
81	B5	1575	A
81	B5	1576	G
81	B5	1577	G
81	B5	1578	C
81	B5	1580	A
81	B5	1581	C
81	B5	1582	C
81	B5	1583	A
81	B5	1587	A
81	B5	1589	A
81	B5	1593	A
81	B5	1605	A
81	B5	1607	U
81	B5	1608	C
81	B5	1620	U
81	B5	1629	U
81	B5	1633	C
81	B5	1635	G
81	B5	1639	C
81	B5	1641	U
81	B5	1643	A
81	B5	1644	C
81	B5	1645	U
81	B5	1655	G
81	B5	1657	C
81	B5	1680	G
81	B5	1683	A
81	B5	1716	U
81	B5	1717	U
81	B5	1718	G
81	B5	1724	U
81	B5	1725	C
81	B5	1736	G
81	B5	1750	A

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Mol	Chain	Res	Type
81	B5	1751	G
81	B5	1754	G
81	B5	1758	G
81	B5	1760	A
81	B5	1762	C
81	B5	1764	U
81	B5	1765	U
81	B5	1766	G
81	B5	1767	C
81	B5	1770	G
81	B5	1778	G
81	B5	1780	G
81	B5	1783	U
81	B5	1797	A
81	B5	1810	A
81	B5	1812	G
81	B5	1814	A
81	B5	1815	U
81	B5	1816	A
81	B5	1817	G
81	B5	1818	U
81	B5	1820	U
81	B5	1821	U
81	B5	1835	A
81	B5	1841	A
81	B5	1842	A
81	B5	1846	C
81	B5	1849	C
81	B5	1850	A
81	B5	1855	U
81	B5	1871	U
81	B5	1876	U
81	B5	1878	G
81	B5	1879	A
81	B5	1880	U
81	B5	1905	G
81	B5	1906	G
81	B5	1909	A
81	B5	1918	C
81	B5	1927	G
81	B5	1940	G
81	B5	1953	G

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Mol	Chain	Res	Type
81	B5	2100	A
81	B5	2101	C
81	B5	2102	U
81	B5	2112	U
81	B5	2113	A
81	B5	2114	C
81	B5	2121	G
81	B5	2122	G
81	B5	2128	C
81	B5	2131	A
81	B5	2134	G
81	B5	2139	A
81	B5	2144	A
81	B5	2158	A
81	B5	2169	G
81	B5	2170	U
81	B5	2171	G
81	B5	2192	C
81	B5	2201	G
81	B5	2205	U
81	B5	2210	G
81	B5	2213	A
81	B5	2222	A
81	B5	2223	A
81	B5	2228	A
81	B5	2229	A
81	B5	2244	A
81	B5	2250	G
81	B5	2253	G
81	B5	2255	A
81	B5	2256	A
81	B5	2257	C
81	B5	2258	U
81	B5	2264	U
81	B5	2270	A
81	B5	2273	G
81	B5	2276	G
81	B5	2278	C
81	B5	2279	A
81	B5	2288	G
81	B5	2290	C
81	B5	2294	U

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Mol	Chain	Res	Type
81	B5	2298	U
81	B5	2307	G
81	B5	2310	U
81	B5	2313	A
81	B5	2315	G
81	B5	2324	A
81	B5	2329	C
81	B5	2334	U
81	B5	2335	G
81	B5	2336	U
81	B5	2373	A
81	B5	2374	C
81	B5	2375	G
81	B5	2377	G
81	B5	2385	G
81	B5	2388	U
81	B5	2393	G
81	B5	2394	G
81	B5	2396	G
81	B5	2397	A
81	B5	2398	A
81	B5	2400	G
81	B5	2401	A
81	B5	2402	A
81	B5	2403	G
81	B5	2404	A
81	B5	2405	C
81	B5	2406	C
81	B5	2411	U
81	B5	2418	G
81	B5	2435	G
81	B5	2436	U
81	B5	2437	G
81	B5	2438	A
81	B5	2439	A
81	B5	2440	G
81	B5	2441	A
81	B5	2443	A
81	B5	2504	U
81	B5	2505	U
81	B5	2506	U
81	B5	2507	C

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Mol	Chain	Res	Type
81	B5	2508	U
81	B5	2510	U
81	B5	2511	A
81	B5	2512	C
81	B5	2513	U
81	B5	2514	U
81	B5	2515	A
81	B5	2518	C
81	B5	2523	A
81	B5	2524	A
81	B5	2526	C
81	B5	2530	G
81	B5	2531	C
81	B5	2532	U
81	B5	2534	G
81	B5	2538	U
81	B5	2539	C
81	B5	2540	A
81	B5	2543	U
81	B5	2544	U
81	B5	2549	G
81	B5	2552	C
81	B5	2555	G
81	B5	2562	A
81	B5	2567	C
81	B5	2568	C
81	B5	2569	A
81	B5	2570	U
81	B5	2571	U
81	B5	2572	C
81	B5	2573	G
81	B5	2574	G
81	B5	2584	G
81	B5	2585	G
81	B5	2589	G
81	B5	2590	A
81	B5	2591	A
81	B5	2593	A
81	B5	2594	C
81	B5	2598	G
81	B5	2599	U
81	B5	2606	G

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Mol	Chain	Res	Type
81	B5	2607	G
81	B5	2610	G
81	B5	2614	G
81	B5	2615	G
81	B5	2622	C
81	B5	2637	A
81	B5	2639	G
81	B5	2652	U
81	B5	2656	A
81	B5	2662	G
81	B5	2663	G
81	B5	2667	A
81	B5	2674	A
81	B5	2677	G
81	B5	2678	A
81	B5	2681	U
81	B5	2683	U
81	B5	2689	A
81	B5	2691	A
81	B5	2694	A
81	B5	2696	A
81	B5	2714	G
81	B5	2723	U
81	B5	2728	G
81	B5	2729	U
81	B5	2752	U
81	B5	2753	G
81	B5	2762	A
81	B5	2771	U
81	B5	2772	C
81	B5	2773	C
81	B5	2776	C
81	B5	2777	G
81	B5	2778	G
81	B5	2779	A
81	B5	2796	G
81	B5	2799	A
81	B5	2800	G
81	B5	2801	A
81	B5	2810	C
81	B5	2817	A
81	B5	2818	U

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Mol	Chain	Res	Type
81	B5	2819	A
81	B5	2822	U
81	B5	2829	U
81	B5	2839	G
81	B5	2844	C
81	B5	2845	A
81	B5	2853	A
81	B5	2871	G
81	B5	2872	A
81	B5	2873	U
81	B5	2875	U
81	B5	2887	A
81	B5	2889	C
81	B5	2896	A
81	B5	2897	A
81	B5	2898	G
81	B5	2899	C
81	B5	2904	U
81	B5	2910	A
81	B5	2923	U
81	B5	2928	C
81	B5	2935	U
81	B5	2936	A
81	B5	2941	A
81	B5	2942	C
81	B5	2945	G
81	B5	2947	G
81	B5	2954	U
81	B5	2957	G
81	B5	2970	C
81	B5	2971	A
81	B5	2972	G
81	B5	2979	U
81	B5	2983	C
81	B5	2987	A
81	B5	2990	G
81	B5	2996	U
81	B5	2997	G
81	B5	3012	A
81	B5	3028	G
81	B5	3050	U
81	B5	3056	U

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Mol	Chain	Res	Type
81	B5	3057	U
81	B5	3059	G
81	B5	3078	U
81	B5	3079	U
81	B5	3080	G
81	B5	3086	A
81	B5	3087	A
81	B5	3092	C
81	B5	3130	A
81	B5	3131	U
81	B5	3139	A
81	B5	3142	A
81	B5	3143	C
81	B5	3148	U
81	B5	3153	U
81	B5	3154	C
81	B5	3155	U
81	B5	3156	U
81	B5	3157	U
81	B5	3158	G
81	B5	3159	C
81	B5	3164	C
81	B5	3165	A
81	B5	3166	C
81	B5	3168	A
81	B5	3171	U
81	B5	3172	A
81	B5	3173	G
81	B5	3174	A
81	B5	3175	U
81	B5	3176	G
81	B5	3177	G
81	B5	3179	U
81	B5	3180	A
81	B5	3181	C
81	B5	3187	A
81	B5	3195	U
81	B5	3196	U
81	B5	3207	U
81	B5	3217	C
81	B5	3218	A
81	B5	3219	G

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Mol	Chain	Res	Type
81	B5	3222	U
81	B5	3223	A
81	B5	3224	G
81	B5	3227	A
81	B5	3229	G
81	B5	3238	G
81	B5	3245	A
81	B5	3246	G
81	B5	3247	G
81	B5	3251	U
81	B5	3253	G
81	B5	3259	U
81	B5	3260	G
81	B5	3269	U
81	B5	3270	U
81	B5	3273	A
81	B5	3275	U
81	B5	3276	G
81	B5	3277	U
81	B5	3279	A
81	B5	3280	U
81	B5	3282	U
81	B5	3284	G
81	B5	3285	C
81	B5	3286	G
81	B5	3288	G
81	B5	3289	G
81	B5	3290	G
81	B5	3292	A
81	B5	3294	A
81	B5	3304	U
81	B5	3307	A
81	B5	3313	U
81	B5	3316	A
81	B5	3317	U
81	B5	3318	G
81	B5	3319	U
81	B5	3320	A
81	B5	3330	A
81	B5	3333	G
81	B5	3335	A
81	B5	3336	A

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Mol	Chain	Res	Type
81	B5	3341	U
81	B5	3342	A
81	B5	3343	G
81	B5	3345	G
81	B5	3349	C
81	B5	3351	U
81	B5	3352	U
81	B5	3354	U
81	B5	3355	U
81	B5	3356	G
81	B5	3357	U
81	B5	3358	U
81	B5	3369	G
81	B5	3378	C
81	B5	3382	U
81	B5	3383	G
81	B5	3389	U
81	B5	3390	G
81	B5	3393	U
81	B5	3396	U
82	B7	7	G
82	B7	22	A
82	B7	27	A
82	B7	33	U
82	B7	38	U
82	B7	42	A
82	B7	54	U
82	B7	61	G
82	B7	65	G
82	B7	66	A
82	B7	73	C
82	B7	74	C
82	B7	93	C
82	B7	101	G
82	B7	102	A
82	B7	103	A
82	B7	104	A
82	B7	112	G
83	B8	21	C
83	B8	34	U
83	B8	35	C
83	B8	48	A

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Mol	Chain	Res	Type
83	B8	52	A
83	B8	53	A
83	B8	59	A
83	B8	62	C
83	B8	63	G
83	B8	79	A
83	B8	80	A
83	B8	81	U
83	B8	83	C
83	B8	84	C
83	B8	86	U
83	B8	87	G
83	B8	90	U
83	B8	95	G
83	B8	104	A
83	B8	105	A
83	B8	106	C
83	B8	111	A
83	B8	113	U
83	B8	122	U
83	B8	125	U
83	B8	126	A
83	B8	127	U
83	B8	138	A
83	B8	152	G
83	B8	156	U
83	B8	157	U
83	B8	158	U
84	CN	2123	U
84	CN	2124	C
84	CN	2125	G
84	CN	2127	G
84	CN	2128	C
84	CN	2129	C
84	CN	2133	G
84	CN	2134	U
84	CN	2136	G
84	CN	2137	G
84	CN	2143	U
84	CN	2144	G
84	CN	2147	A
84	CN	2148	G

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Mol	Chain	Res	Type
84	CN	2152	G
84	CN	2158	C
84	CN	2159	C
84	CN	2161	C
84	CN	2162	G
84	CN	2163	C
84	CN	2166	C
84	CN	2167	C
84	CN	2168	G
84	CN	2169	G
84	CN	2172	G
84	CN	2173	G
84	CN	2174	G
84	CN	2175	G
84	CN	2177	G
84	CN	2179	A
84	CN	2180	G
84	CN	2184	C
84	CN	2193	U
84	CN	2194	A
84	CN	2199	C
84	CN	2200	C
84	CN	2201	U
84	CN	2203	G
84	CN	2204	C
84	CN	2207	G
84	CN	2208	G
86	CW	4	C
86	CW	13	C
86	CW	15	G
86	CW	19	G
86	CW	20	U
86	CW	21	A
86	CW	22	G
86	CW	23	A
86	CW	26	A
86	CW	27	G
86	CW	30	G
86	CW	36	A
86	CW	38	A
86	CW	44	G
86	CW	46	G

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Mol	Chain	Res	Type
86	CW	47	U
86	CW	48	C
86	CW	51	U
86	CW	52	G
86	CW	60	U
86	CW	61	C
86	CW	72	C
86	CW	73	A
86	CW	74	C
86	CW	75	C
86	CW	76	A

All (235) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
80	B2	2	A
80	B2	25	C
80	B2	45	U
80	B2	68	A
80	B2	73	U
80	B2	74	U
80	B2	76	A
80	B2	103	A
80	B2	114	C
80	B2	126	A
80	B2	130	C
80	B2	131	C
80	B2	132	U
80	B2	133	U
80	B2	136	C
80	B2	139	C
80	B2	144	U
80	B2	158	U
80	B2	187	G
80	B2	217	A
80	B2	218	A
80	B2	232	U
80	B2	239	C
80	B2	240	U
80	B2	278	U
80	B2	280	U
80	B2	320	U

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Mol	Chain	Res	Type
80	B2	400	A
80	B2	417	A
80	B2	484	C
80	B2	495	C
80	B2	497	G
80	B2	498	G
80	B2	499	U
80	B2	501	U
80	B2	503	G
80	B2	507	U
80	B2	512	A
80	B2	542	A
80	B2	543	C
80	B2	555	A
80	B2	558	U
80	B2	582	U
80	B2	685	A
80	B2	704	C
80	B2	720	G
80	B2	721	U
80	B2	734	A
80	B2	755	A
80	B2	781	U
80	B2	782	U
80	B2	794	U
80	B2	811	A
80	B2	815	G
80	B2	819	G
80	B2	823	G
80	B2	829	A
80	B2	913	G
80	B2	1051	G
80	B2	1058	U
80	B2	1081	A
80	B2	1137	A
80	B2	1157	A
80	B2	1187	U
80	B2	1195	C
80	B2	1196	A
80	B2	1207	C
80	B2	1226	A
80	B2	1234	A

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Mol	Chain	Res	Type
80	B2	1244	A
80	B2	1250	U
80	B2	1339	C
80	B2	1344	A
80	B2	1370	U
80	B2	1428	G
80	B2	1481	C
80	B2	1489	U
80	B2	1490	C
80	B2	1521	G
80	B2	1568	C
80	B2	1572	G
80	B2	1573	A
80	B2	1615	C
80	B2	1657	U
80	B2	1711	C
80	B2	1761	U
81	B5	43	A
81	B5	65	A
81	B5	93	C
81	B5	151	A
81	B5	169	U
81	B5	183	G
81	B5	217	U
81	B5	238	A
81	B5	282	G
81	B5	397	A
81	B5	436	A
81	B5	438	A
81	B5	439	C
81	B5	545	U
81	B5	546	C
81	B5	588	G
81	B5	611	A
81	B5	619	A
81	B5	647	A
81	B5	705	A
81	B5	715	A
81	B5	719	U
81	B5	726	G
81	B5	735	A
81	B5	765	C

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Mol	Chain	Res	Type
81	B5	786	A
81	B5	816	A
81	B5	873	C
81	B5	896	A
81	B5	908	G
81	B5	916	G
81	B5	937	G
81	B5	979	U
81	B5	993	G
81	B5	1027	A
81	B5	1033	U
81	B5	1064	A
81	B5	1081	U
81	B5	1085	A
81	B5	1094	U
81	B5	1152	G
81	B5	1181	U
81	B5	1192	C
81	B5	1230	G
81	B5	1231	A
81	B5	1236	G
81	B5	1238	C
81	B5	1241	U
81	B5	1256	G
81	B5	1258	U
81	B5	1284	C
81	B5	1307	G
81	B5	1317	A
81	B5	1329	U
81	B5	1331	U
81	B5	1352	A
81	B5	1355	A
81	B5	1434	G
81	B5	1481	A
81	B5	1507	G
81	B5	1514	G
81	B5	1554	U
81	B5	1560	G
81	B5	1568	U
81	B5	1574	C
81	B5	1580	A
81	B5	1589	A

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Mol	Chain	Res	Type
81	B5	1607	U
81	B5	1716	U
81	B5	1724	U
81	B5	1815	U
81	B5	1816	A
81	B5	1817	G
81	B5	1819	U
81	B5	1841	A
81	B5	1842	A
81	B5	1849	C
81	B5	1878	G
81	B5	1879	A
81	B5	2101	C
81	B5	2112	U
81	B5	2116	G
81	B5	2204	C
81	B5	2209	U
81	B5	2249	G
81	B5	2255	A
81	B5	2257	C
81	B5	2372	A
81	B5	2374	C
81	B5	2440	G
81	B5	2507	C
81	B5	2513	U
81	B5	2531	C
81	B5	2537	U
81	B5	2539	C
81	B5	2583	C
81	B5	2585	G
81	B5	2593	A
81	B5	2662	G
81	B5	2682	C
81	B5	2689	A
81	B5	2714	G
81	B5	2728	G
81	B5	2752	U
81	B5	2772	C
81	B5	2777	G
81	B5	2801	A
81	B5	2817	A
81	B5	2818	U

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Mol	Chain	Res	Type
81	B5	2887	A
81	B5	2896	A
81	B5	2970	C
81	B5	2971	A
81	B5	2996	U
81	B5	3056	U
81	B5	3078	U
81	B5	3154	C
81	B5	3155	U
81	B5	3167	A
81	B5	3195	U
81	B5	3218	A
81	B5	3228	C
81	B5	3259	U
81	B5	3269	U
81	B5	3275	U
81	B5	3289	G
81	B5	3317	U
81	B5	3330	A
81	B5	3340	G
81	B5	3341	U
81	B5	3357	U
83	B8	111	A
83	B8	126	A
83	B8	156	U
84	CN	2139	U
84	CN	2162	G
84	CN	2167	C
84	CN	2170	G
84	CN	2179	A
84	CN	2184	C
84	CN	2200	C
84	CN	2201	U
86	CW	7	A
86	CW	18	G
86	CW	28	G
86	CW	33	U
86	CW	43	C
86	CW	60	U
86	CW	72	C

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

6 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
85	HSO	CP	105	85	6,10,10	2.41	2 (33%)	4,12,12	1.81	2 (50%)
85	HSO	CP	13	85	6,10,10	2.26	1 (16%)	4,12,12	1.53	1 (25%)
85	HSO	CP	229	85	6,10,10	2.10	1 (16%)	4,12,12	1.73	1 (25%)
85	HSO	CP	295	85	6,10,10	2.21	1 (16%)	4,12,12	1.47	1 (25%)
85	HSO	CP	296	85	6,10,10	2.42	2 (33%)	4,12,12	2.18	2 (50%)
85	HSO	CP	80	85	6,10,10	2.54	3 (50%)	4,12,12	1.39	1 (25%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	HSO	CP	105	85	-	0/5/6/6	0/1/1/1
85	HSO	CP	13	85	-	0/5/6/6	0/1/1/1
85	HSO	CP	229	85	-	0/5/6/6	0/1/1/1
85	HSO	CP	295	85	-	0/5/6/6	0/1/1/1
85	HSO	CP	296	85	-	0/5/6/6	0/1/1/1
85	HSO	CP	80	85	-	0/5/6/6	0/1/1/1

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	CP	296	HSO	O-C	-4.65	1.22	1.42
85	CP	295	HSO	O-C	-4.62	1.22	1.42
85	CP	13	HSO	O-C	-4.59	1.23	1.42
85	CP	80	HSO	O-C	-4.58	1.23	1.42
85	CP	105	HSO	O-C	-4.58	1.23	1.42
85	CP	229	HSO	O-C	-4.54	1.23	1.42
85	CP	105	HSO	C-CA	-3.11	1.47	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	CP	296	HSO	C-CA	-2.94	1.48	1.52
85	CP	80	HSO	C-CA	-2.64	1.48	1.52
85	CP	80	HSO	CA-N	-2.11	1.41	1.47

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
85	CP	296	HSO	CB-CA-C	-3.40	105.49	112.16
85	CP	105	HSO	CB-CA-C	-2.41	107.44	112.16
85	CP	80	HSO	O-C-CA	2.12	119.21	111.47
85	CP	295	HSO	O-C-CA	2.21	119.56	111.47
85	CP	105	HSO	O-C-CA	2.43	120.36	111.47
85	CP	296	HSO	O-C-CA	2.59	120.95	111.47
85	CP	13	HSO	O-C-CA	2.64	121.14	111.47
85	CP	229	HSO	O-C-CA	2.85	121.91	111.47

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
85	CP	13	HSO	1	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 395 ligands modelled in this entry, 197 are monoatomic - leaving 198 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
89	OHX	A3	102	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	A6	401	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AC	301	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AI	301	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AI	302	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AL	201	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AN	201	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	AP	201	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1901	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1902	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1903	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1904	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1905	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1906	88	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1907	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1908	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1909	89	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1910	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1911	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1912	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1913	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1914	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1915	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1916	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1917	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1918	89	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1919	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1920	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1921	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1922	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1923	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1924	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1925	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1926	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1927	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1928	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1929	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1930	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1931	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1932	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1933	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1934	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1935	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
89	OHX	B2	1936	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1937	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1938	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1939	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1940	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1941	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1942	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1943	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1944	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1945	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1946	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1947	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1948	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1949	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1950	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1951	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1952	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1953	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1954	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1955	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1956	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1957	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1958	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1959	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1960	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1961	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1962	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1963	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1964	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1965	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1966	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1967	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1968	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1969	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1970	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1971	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1972	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1973	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1974	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1975	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1976	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1977	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1978	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
89	OHX	B2	1979	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1980	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1981	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1982	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1983	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1984	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1985	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1986	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1987	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1988	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1989	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1990	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1991	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1992	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1993	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1994	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1995	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1996	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1997	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1998	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	1999	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2000	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2001	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2002	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2003	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2004	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2005	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2006	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2007	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2008	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2009	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2010	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2011	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2012	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2013	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2014	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2015	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2016	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2017	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2018	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2019	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2020	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2021	-	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
89	OHX	B2	2022	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2023	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2024	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2025	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2026	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2027	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2028	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2029	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2030	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2031	89	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2032	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2033	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2034	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2035	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2036	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2037	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2038	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2039	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2040	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2041	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2042	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2043	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2044	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2045	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2046	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2047	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2048	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2049	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2050	88	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2051	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2052	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2053	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2054	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2055	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2056	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2057	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2058	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2059	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2060	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2061	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2062	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2063	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2064	88,89	0,6,6	0.00	-	0,15,15	0.00	-

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
89	OHX	B2	2065	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2066	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2067	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2068	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2069	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2070	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2071	80	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2072	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2073	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2074	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2075	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2076	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2077	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2078	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2079	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2080	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2081	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2082	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2083	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B2	2084	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B5	3401	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B5	3402	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	B5	3403	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	BR	201	-	0,6,6	0.00	-	0,15,15	0.00	-
89	OHX	Bn	101	-	0,6,6	0.00	-	0,15,15	0.00	-
90	GCP	CP	401	-	25,34,34	2.82	6 (24%)	28,54,54	2.11	5 (17%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	A3	102	-	-	0/0/0/0	0/0/0/0
89	OHX	A6	401	-	-	0/0/0/0	0/0/0/0
89	OHX	AC	301	-	-	0/0/0/0	0/0/0/0
89	OHX	AI	301	-	-	0/0/0/0	0/0/0/0
89	OHX	AI	302	-	-	0/0/0/0	0/0/0/0
89	OHX	AL	201	-	-	0/0/0/0	0/0/0/0
89	OHX	AN	201	-	-	0/0/0/0	0/0/0/0
89	OHX	AP	201	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1901	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	B2	1902	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1903	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1904	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1905	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1906	88	-	0/0/0/0	0/0/0/0
89	OHX	B2	1907	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1908	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1909	89	-	0/0/0/0	0/0/0/0
89	OHX	B2	1910	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1911	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1912	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1913	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1914	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1915	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1916	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1917	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1918	89	-	0/0/0/0	0/0/0/0
89	OHX	B2	1919	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1920	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1921	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1922	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1923	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1924	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1925	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1926	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1927	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1928	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1929	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1930	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1931	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1932	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1933	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1934	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1935	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1936	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1937	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1938	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1939	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1940	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1941	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1942	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1943	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	B2	1944	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1945	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1946	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1947	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1948	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1949	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1950	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1951	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1952	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1953	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1954	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1955	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1956	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1957	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1958	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1959	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1960	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1961	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1962	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1963	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1964	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1965	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1966	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1967	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1968	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1969	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1970	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1971	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1972	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1973	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1974	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1975	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1976	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1977	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1978	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1979	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1980	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1981	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1982	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1983	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1984	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1985	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	B2	1986	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1987	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1988	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1989	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1990	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1991	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1992	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1993	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1994	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1995	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1996	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1997	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1998	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	1999	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2000	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2001	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2002	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2003	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2004	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2005	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2006	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2007	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2008	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2009	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2010	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2011	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2012	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2013	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2014	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2015	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2016	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2017	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2018	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2019	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2020	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2021	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2022	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2023	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2024	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2025	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2026	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2027	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	B2	2028	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2029	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2030	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2031	89	-	0/0/0/0	0/0/0/0
89	OHX	B2	2032	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2033	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2034	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2035	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2036	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2037	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2038	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2039	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2040	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2041	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2042	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2043	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2044	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2045	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2046	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2047	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2048	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2049	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2050	88	-	0/0/0/0	0/0/0/0
89	OHX	B2	2051	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2052	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2053	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2054	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2055	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2056	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2057	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2058	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2059	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2060	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2061	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2062	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2063	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2064	88,89	-	0/0/0/0	0/0/0/0
89	OHX	B2	2065	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2066	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2067	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2068	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2069	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
89	OHX	B2	2070	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2071	80	-	0/0/0/0	0/0/0/0
89	OHX	B2	2072	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2073	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2074	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2075	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2076	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2077	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2078	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2079	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2080	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2081	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2082	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2083	-	-	0/0/0/0	0/0/0/0
89	OHX	B2	2084	-	-	0/0/0/0	0/0/0/0
89	OHX	B5	3401	-	-	0/0/0/0	0/0/0/0
89	OHX	B5	3402	-	-	0/0/0/0	0/0/0/0
89	OHX	B5	3403	-	-	0/0/0/0	0/0/0/0
89	OHX	BR	201	-	-	0/0/0/0	0/0/0/0
89	OHX	Bn	101	-	-	0/0/0/0	0/0/0/0
90	GCP	CP	401	-	-	0/18/38/38	0/3/3/3

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
90	CP	401	GCP	C4-N9	-9.57	1.35	1.47
90	CP	401	GCP	C5-C6	-4.99	1.44	1.53
90	CP	401	GCP	C8-N9	-3.56	1.36	1.46
90	CP	401	GCP	C2'-C1'	-3.04	1.43	1.53
90	CP	401	GCP	PB-O3A	-2.31	1.55	1.58
90	CP	401	GCP	C6-N1	5.49	1.42	1.33

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
90	CP	401	GCP	O3G-PG-C3B	-7.36	88.55	106.40
90	CP	401	GCP	O6-C6-N1	-2.64	119.18	122.70
90	CP	401	GCP	O2G-PG-O1G	2.69	119.54	112.32
90	CP	401	GCP	O1B-PB-C3B	3.13	116.72	108.97
90	CP	401	GCP	O6-C6-C5	3.84	127.03	119.69

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

126 monomers are involved in 322 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	A3	102	OHX	4	0
89	A6	401	OHX	2	0
89	AC	301	OHX	5	0
89	AI	302	OHX	2	0
89	AL	201	OHX	8	0
89	AN	201	OHX	2	0
89	AP	201	OHX	3	0
89	B2	1901	OHX	1	0
89	B2	1906	OHX	3	0
89	B2	1907	OHX	6	0
89	B2	1909	OHX	2	0
89	B2	1910	OHX	2	0
89	B2	1914	OHX	3	0
89	B2	1915	OHX	6	0
89	B2	1916	OHX	1	0
89	B2	1917	OHX	2	0
89	B2	1918	OHX	8	0
89	B2	1919	OHX	1	0
89	B2	1921	OHX	6	0
89	B2	1922	OHX	7	0
89	B2	1923	OHX	1	0
89	B2	1924	OHX	1	0
89	B2	1925	OHX	1	0
89	B2	1926	OHX	1	0
89	B2	1928	OHX	1	0
89	B2	1929	OHX	1	0
89	B2	1930	OHX	1	0
89	B2	1933	OHX	1	0
89	B2	1937	OHX	1	0
89	B2	1938	OHX	1	0
89	B2	1940	OHX	5	0
89	B2	1942	OHX	1	0
89	B2	1943	OHX	2	0
89	B2	1945	OHX	1	0
89	B2	1946	OHX	1	0
89	B2	1948	OHX	1	0
89	B2	1949	OHX	1	0
89	B2	1950	OHX	2	0
89	B2	1952	OHX	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	B2	1953	OHX	2	0
89	B2	1954	OHX	6	0
89	B2	1955	OHX	1	0
89	B2	1957	OHX	1	0
89	B2	1960	OHX	1	0
89	B2	1961	OHX	4	0
89	B2	1962	OHX	1	0
89	B2	1963	OHX	4	0
89	B2	1964	OHX	6	0
89	B2	1965	OHX	2	0
89	B2	1968	OHX	4	0
89	B2	1969	OHX	7	0
89	B2	1970	OHX	1	0
89	B2	1972	OHX	2	0
89	B2	1973	OHX	1	0
89	B2	1974	OHX	7	0
89	B2	1975	OHX	3	0
89	B2	1977	OHX	7	0
89	B2	1978	OHX	1	0
89	B2	1979	OHX	1	0
89	B2	1982	OHX	5	0
89	B2	1983	OHX	1	0
89	B2	1986	OHX	3	0
89	B2	1987	OHX	1	0
89	B2	1988	OHX	8	0
89	B2	1989	OHX	1	0
89	B2	1990	OHX	1	0
89	B2	1991	OHX	3	0
89	B2	1996	OHX	6	0
89	B2	2001	OHX	3	0
89	B2	2004	OHX	1	0
89	B2	2006	OHX	1	0
89	B2	2008	OHX	1	0
89	B2	2009	OHX	2	0
89	B2	2011	OHX	2	0
89	B2	2012	OHX	1	0
89	B2	2013	OHX	11	0
89	B2	2014	OHX	1	0
89	B2	2015	OHX	1	0
89	B2	2016	OHX	7	0
89	B2	2022	OHX	3	0
89	B2	2024	OHX	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	B2	2025	OHX	2	0
89	B2	2026	OHX	2	0
89	B2	2027	OHX	7	0
89	B2	2030	OHX	1	0
89	B2	2031	OHX	1	0
89	B2	2034	OHX	1	0
89	B2	2035	OHX	2	0
89	B2	2038	OHX	1	0
89	B2	2039	OHX	1	0
89	B2	2040	OHX	1	0
89	B2	2042	OHX	1	0
89	B2	2043	OHX	1	0
89	B2	2044	OHX	1	0
89	B2	2045	OHX	1	0
89	B2	2046	OHX	5	0
89	B2	2047	OHX	1	0
89	B2	2048	OHX	1	0
89	B2	2049	OHX	3	0
89	B2	2050	OHX	7	0
89	B2	2053	OHX	1	0
89	B2	2058	OHX	1	0
89	B2	2059	OHX	1	0
89	B2	2060	OHX	1	0
89	B2	2061	OHX	1	0
89	B2	2063	OHX	1	0
89	B2	2064	OHX	6	0
89	B2	2065	OHX	2	0
89	B2	2068	OHX	6	0
89	B2	2069	OHX	2	0
89	B2	2070	OHX	1	0
89	B2	2071	OHX	17	0
89	B2	2073	OHX	6	0
89	B2	2075	OHX	1	0
89	B2	2076	OHX	1	0
89	B2	2077	OHX	2	0
89	B2	2078	OHX	1	0
89	B2	2079	OHX	5	0
89	B2	2080	OHX	3	0
89	B2	2082	OHX	1	0
89	B2	2083	OHX	11	0
89	B2	2084	OHX	1	0
89	B5	3401	OHX	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	B5	3402	OHX	3	0
89	BR	201	OHX	9	0
90	CP	401	GCP	63	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
45	BK	2
81	B5	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BK	52:UNK	C	54:UNK	N	9.71
1	BK	23:UNK	C	28:UNK	N	8.84
1	B5	1285:G	O3'	1286:A	P	6.77