



# Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Dec 2, 2019 – 10:10 PM EST

PDB ID : 4V8Z  
EMDB ID: : EMD-2422  
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 : 2013-07-20  
Resolution : 6.60 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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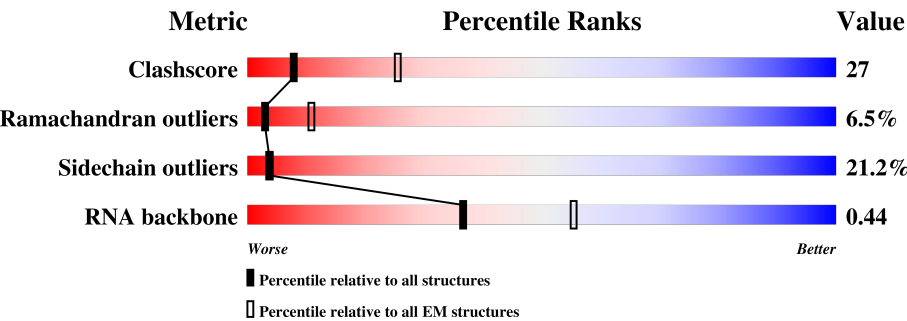
MolProbity : 4.02b-467  
Mogul : 1.8.0 (224370), CSD as540be (2019)  
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.4

# 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 6.60 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.



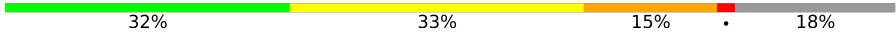


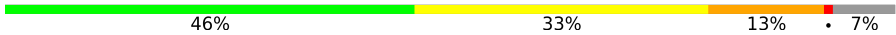
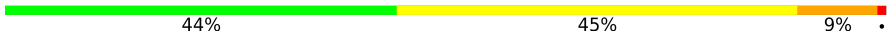
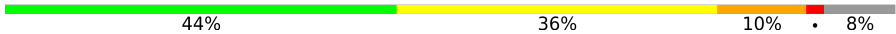
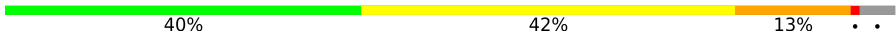
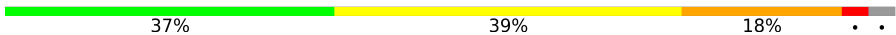
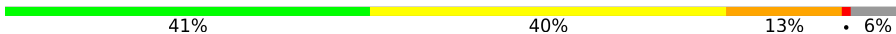
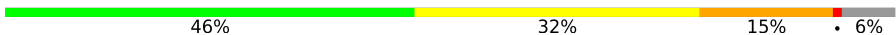
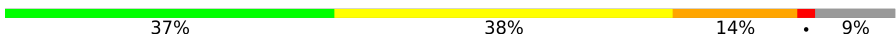
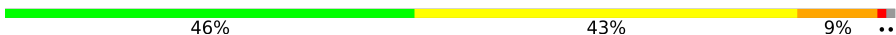
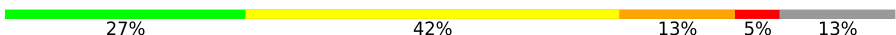







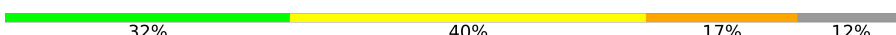




Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	136327	1886
Ramachandran outliers	132723	1663
Sidechain outliers	132532	1531
RNA backbone	3747	458

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  $\geq 3$ , 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	34% 15% 7% . 42%









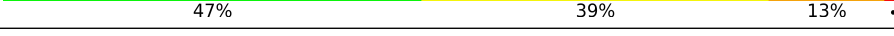

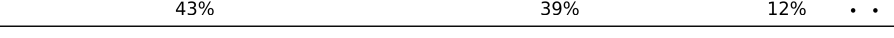
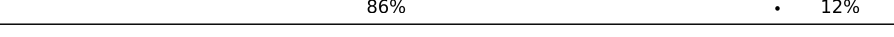

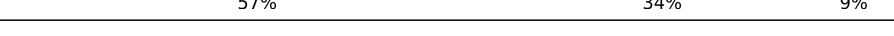


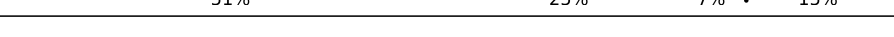

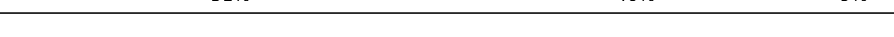






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Mol	Chain	Length	Quality of chain
9	AA	252	
10	AB	255	
11	AC	254	
12	AD	240	
13	AE	261	
14	AF	225	
15	AG	236	
16	AH	190	
17	AI	200	
18	AJ	197	
19	AK	105	
20	AL	156	
21	AM	143	
22	AN	151	
23	AO	137	
24	AP	142	
25	AQ	143	
26	AR	136	
27	AS	146	
28	AT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


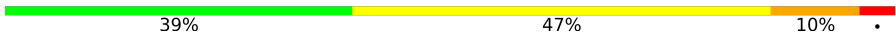









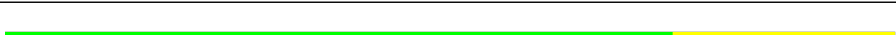

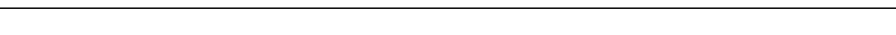
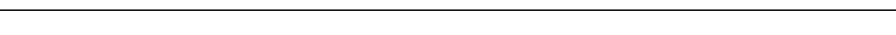
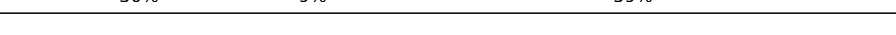

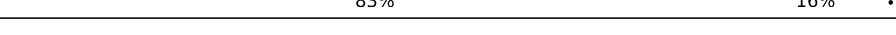

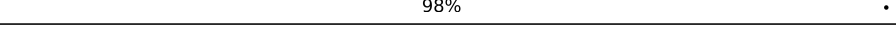
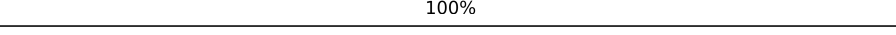
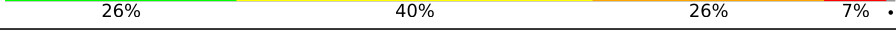


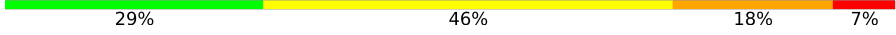
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Mol	Chain	Length	Quality of chain
34	AZ	108	
35	BA	253	
36	BB	386	
37	BC	361	
38	BD	296	
39	BE	175	
40	BF	243	
41	BG	255	
42	BH	191	
43	BI	220	
44	BJ	173	
45	BK	174	
46	BL	198	
47	BM	137	
48	BN	203	
49	BO	218	
50	BP	183	
51	BQ	185	
52	BR	188	
53	BS	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	B2	1800	
80	B5	3396	
81	B7	121	
82	B8	158	
83	CV	586	

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Mol	Chain	Length	Quality of chain
84	CW	76	
85	CX	3	

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
88	OHX	A3	102	-	-	X	-
88	OHX	AC	301	-	-	X	-
88	OHX	AL	201	-	-	X	-
88	OHX	B2	1907	-	-	X	-
88	OHX	B2	1915	-	-	X	-
88	OHX	B2	1918	-	-	X	-
88	OHX	B2	1921	-	-	X	-
88	OHX	B2	1922	-	-	X	-
88	OHX	B2	1939	-	-	X	-
88	OHX	B2	1953	-	-	X	-
88	OHX	B2	1960	-	-	X	-
88	OHX	B2	1962	-	-	X	-
88	OHX	B2	1963	-	-	X	-
88	OHX	B2	1967	-	-	X	-
88	OHX	B2	1968	-	-	X	-
88	OHX	B2	1973	-	-	X	-
88	OHX	B2	1976	-	-	X	-
88	OHX	B2	1981	-	-	X	-
88	OHX	B2	1987	-	-	X	-
88	OHX	B2	1995	-	-	X	-
88	OHX	B2	2011	-	-	X	-
88	OHX	B2	2014	-	-	X	-
88	OHX	B2	2025	-	-	X	-
88	OHX	B2	2044	-	-	X	-
88	OHX	B2	2048	-	-	X	-
88	OHX	B2	2062	-	-	X	-
88	OHX	B2	2066	-	-	X	-
88	OHX	B2	2069	-	-	X	-
88	OHX	B2	2071	-	-	X	-
88	OHX	B2	2077	-	-	X	-
88	OHX	B2	2081	-	-	X	-
88	OHX	B7	203	-	-	X	-
88	OHX	B7	219	-	-	X	-

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
88	OHX	BR	201	-	-	X	-
88	OHX	CV	601	-	-	X	-
89	GCP	CV	602	-	-	X	-

## 2 Entry composition

There are 89 unique types of molecules in this entry. The entry contains 219371 atoms, of which 8407 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	153	Total	C	H	N	O	0	3
			1509	450	756	153	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	145	Total	C	H	N	O	S	0	2
			2185	683	1110	194	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 RNA chain called 18S RIBOSOMAL RNA.

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

- Molecule 80 is a RNA chain called 25S RIBOSOMAL RNA.

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

- Molecule 81 is a RNA chain called 5S RIBOSOMAL RNA.

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

- Molecule 82 is a RNA chain called 5.8S RIBOSOMAL RNA.

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

- Molecule 83 is a protein called EUKARYOTIC TRANSLATION INITIATION FACTOR 5B, PROBABLE TRANSLATION INITIATION FACTOR IF-2.

Mol	Chain	Residues	Atoms					AltConf	Trace	
83	CV	570	Total	C	H	N	O	S	0	2
			9036	2819	4585	766	847	19		

There are 11 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
CV	340	ASP	-	linker	UNP P39730
CV	341	LEU	-	linker	UNP P39730
CV	342	THR	-	linker	UNP P39730
CV	343	GLY	-	linker	UNP P39730
CV	344	LEU	-	linker	UNP P39730
CV	345	LEU	-	linker	UNP P39730
CV	346	ASP	-	linker	UNP P39730
CV	347	SER	-	linker	UNP P39730
CV	348	VAL	-	linker	UNP P39730
CV	349	ASP	-	linker	UNP P39730
CV	350	THR	-	linker	UNP P39730

- Molecule 84 is a RNA chain called EUKARYOTIC RIBOSOMAL PI TRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
84	CW	76	Total	C	H	N	O	P	0	0
			2403	721	789	285	533	75		

- Molecule 85 is a RNA chain called 5'-R(\*AP\*UP\*GP)-3'.

Mol	Chain	Residues	Atoms						AltConf	Trace
85	CX	3	Total	C	H	N	O	P	0	0
			96	29	34	12	19	2		

- Molecule 86 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
86	A0	1	Total	Zn	0
			1	1	

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

- Molecule 87 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

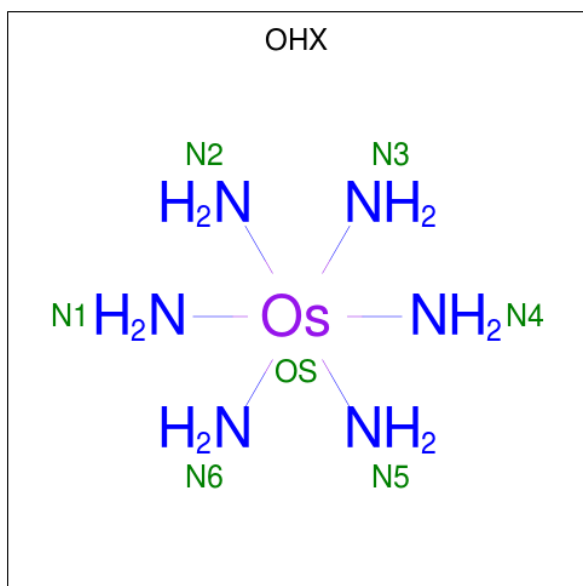
Mol	Chain	Residues	Atoms		AltConf
87	A0	2	Total 2	Mg 2	0
87	AG	1	Total 1	Mg 1	0
87	AJ	1	Total 1	Mg 1	0
87	B7	27	Total 27	Mg 27	0
87	BF	1	Total 1	Mg 1	0
87	AE	1	Total 1	Mg 1	0
87	AB	1	Total 1	Mg 1	0
87	AI	1	Total 1	Mg 1	0
87	AC	2	Total 2	Mg 2	0
87	BS	3	Total 3	Mg 3	0
87	AS	1	Total 1	Mg 1	0
87	B2	168	Total 168	Mg 168	0
87	BD	4	Total 4	Mg 4	0
87	AU	1	Total 1	Mg 1	0

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Mol	Chain	Residues	Atoms		AltConf
87	AN	1	Total	Mg	0
			1	1	
87	A5	1	Total	Mg	0
			1	1	
87	B5	3	Total	Mg	0
			3	3	
87	CW	1	Total	Mg	0
			1	1	
87	AL	2	Total	Mg	0
			2	2	
87	A3	3	Total	Mg	0
			3	3	
87	AP	1	Total	Mg	0
			1	1	

- Molecule 88 is osmium (III) hexammine (three-letter code: OHX) (formula:  $\text{H}_{12}\text{N}_6\text{Os}$ ).



Mol	Chain	Residues	Atoms			AltConf
88	A3	1	Total	N	Os	0
			7	6	1	
88	A6	1	Total	N	Os	0
			7	6	1	
88	AC	1	Total	N	Os	0
			7	6	1	
88	AI	1	Total	N	Os	0
			14	12	2	

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Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	

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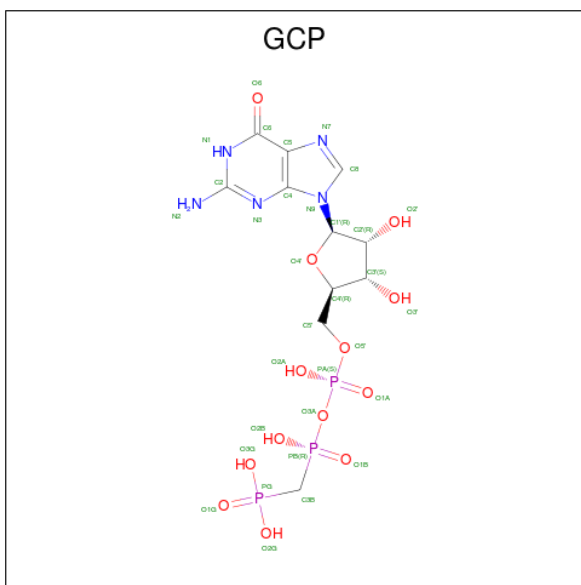
Mol	Chain	Residues	Atoms			AltConf
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B2	1	Total	N	Os	0
			1274	1092	182	
88	B5	1	Total	N	Os	0
			21	18	3	

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Mol	Chain	Residues	Atoms			AltConf
88	B5	1	Total	N	Os	0
			21	18	3	
88	B5	1	Total	N	Os	0
			21	18	3	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	B7	1	Total	N	Os	0
			91	78	13	
88	CV	1	Total	N	Os	0
			7	6	1	
88	CX	1	Total	N	Os	0
			7	6	1	

- Molecule 89 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: GCP) (formula: C<sub>11</sub>H<sub>18</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub>).

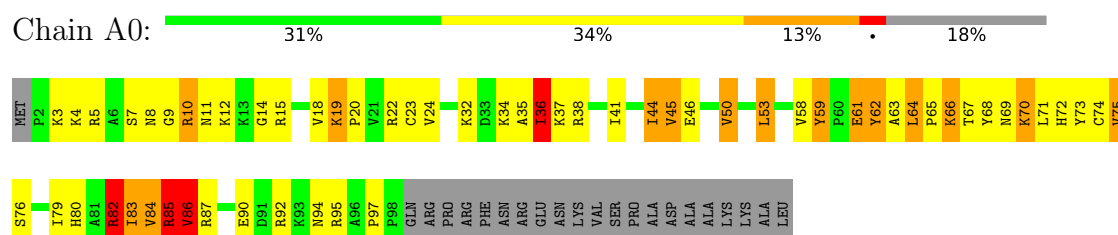


Mol	Chain	Residues	Atoms					AltConf
89	CV	1	Total	C	N	O	P	0
			32	11	5	13	3	

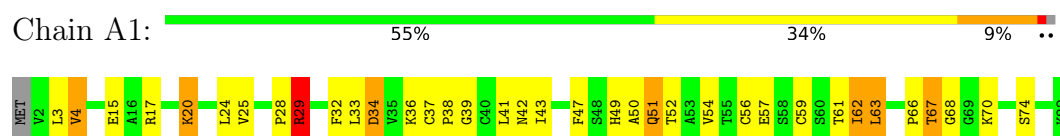
### 3 Residue-property plots

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

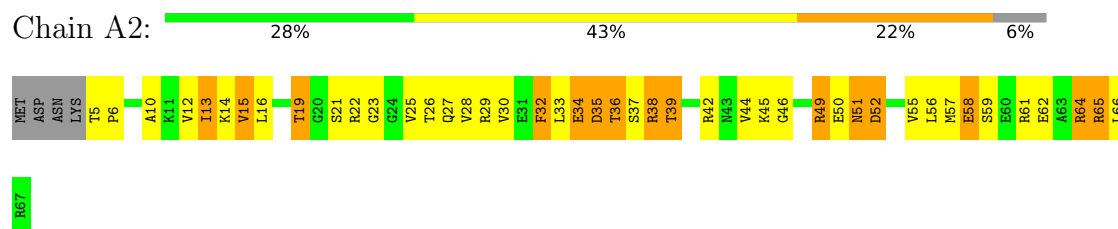
- Molecule 1: 40S RIBOSOMAL PROTEIN S26-A



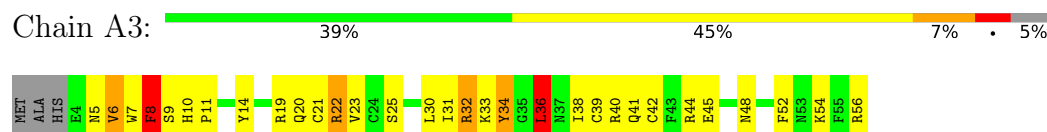
- Molecule 2: 40S RIBOSOMAL PROTEIN S27-A



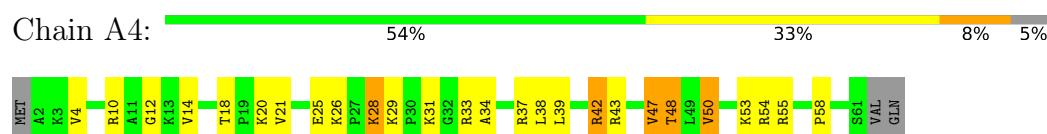
- Molecule 3: 40S RIBOSOMAL PROTEIN S28-A



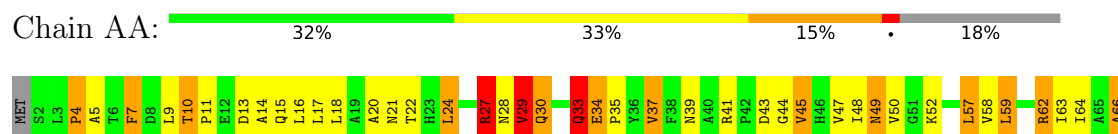
- Molecule 4: 40S RIBOSOMAL PROTEIN S29-A

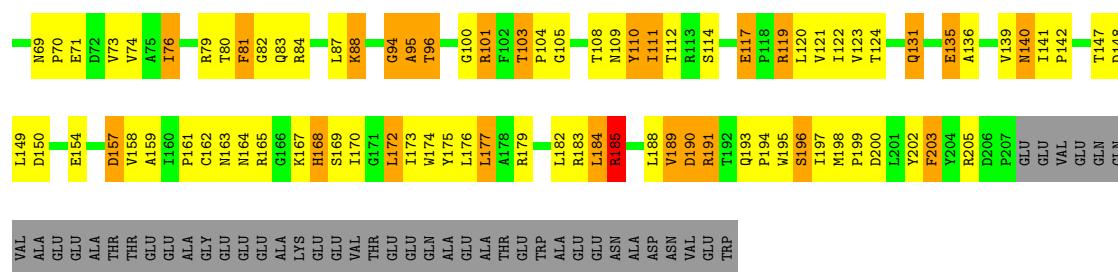


- Molecule 5: 40S RIBOSOMAL PROTEIN S30-A



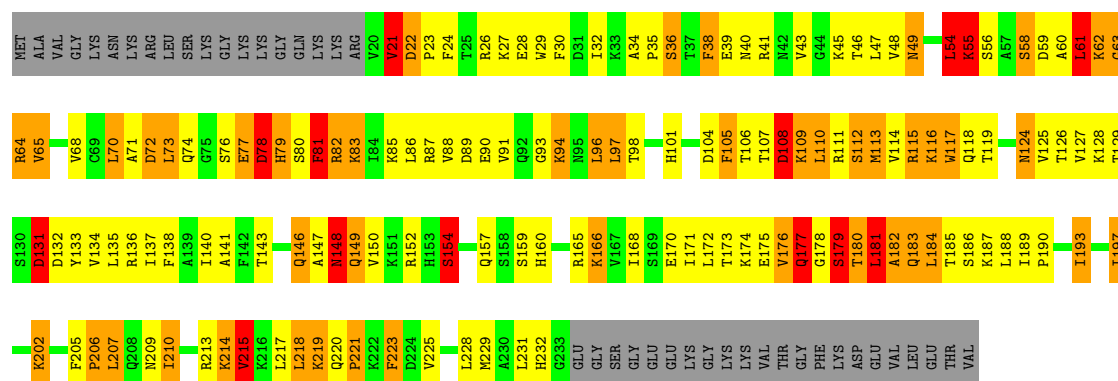
- Molecule 6: UBIQUITIN-40S RIBOSOMAL PROTEIN S31





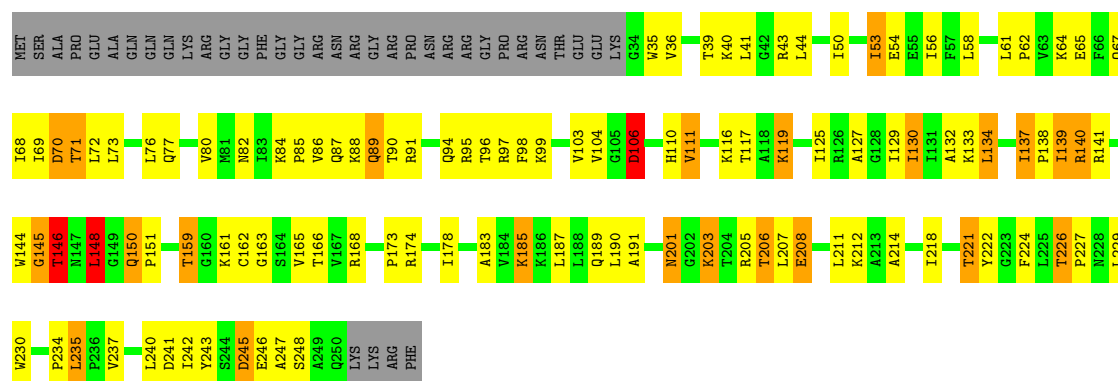
• Molecule 10: 40S RIBOSOMAL PROTEIN S1-A

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



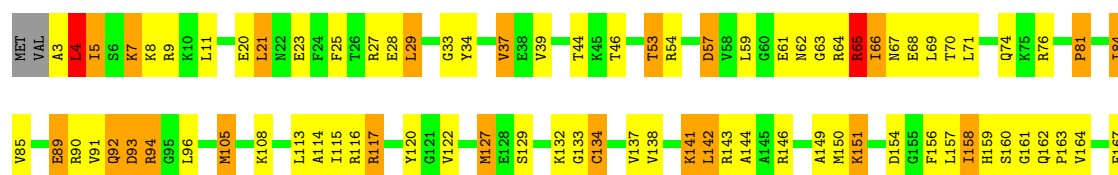
• Molecule 11: 40S RIBOSOMAL PROTEIN S2

Chain AC: 42% 33% 9% 15%



• Molecule 12: 40S RIBOSOMAL PROTEIN S3

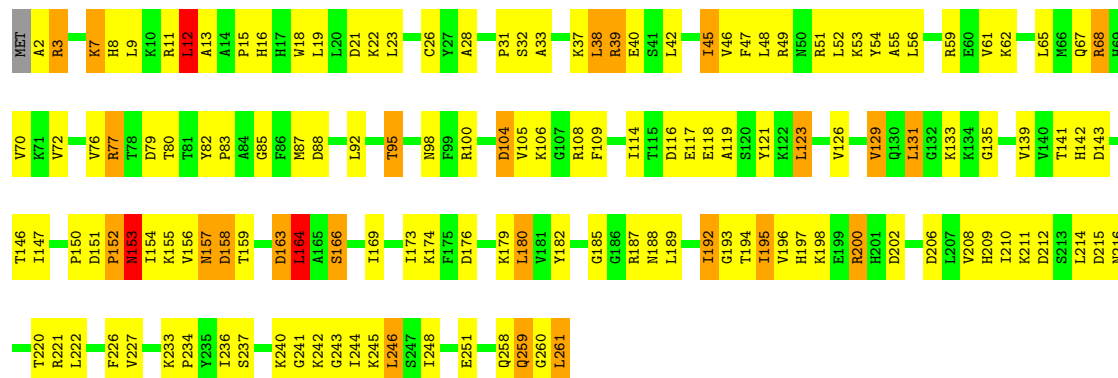
Chain AD: 46% 33% 13% 7%





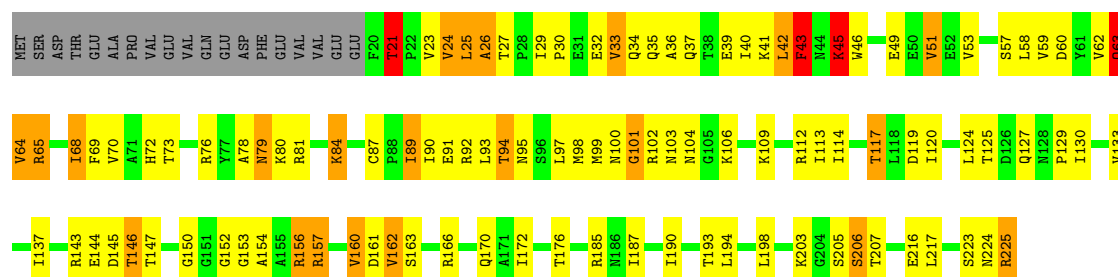
• Molecule 13: 40S RIBOSOMAL PROTEIN S4-A

Chain AE: 44% 45% 9%



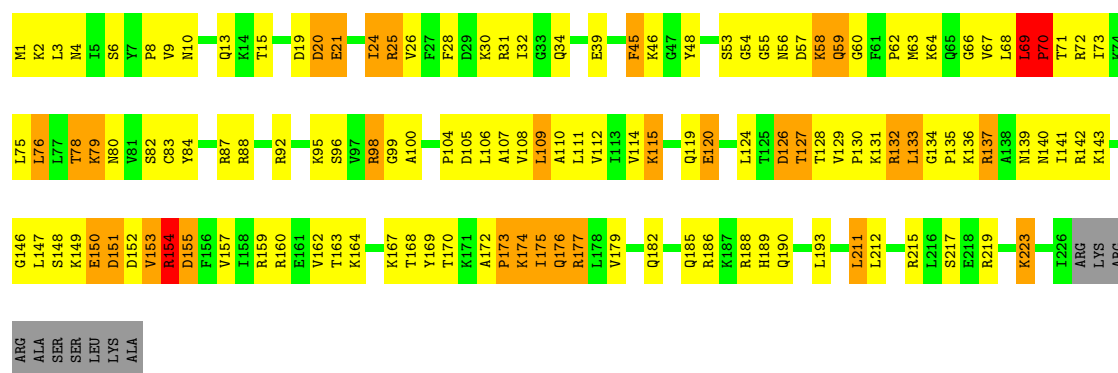
• Molecule 14: 40S RIBOSOMAL PROTEIN S5

Chain AF: 44% 36% 10% 8%



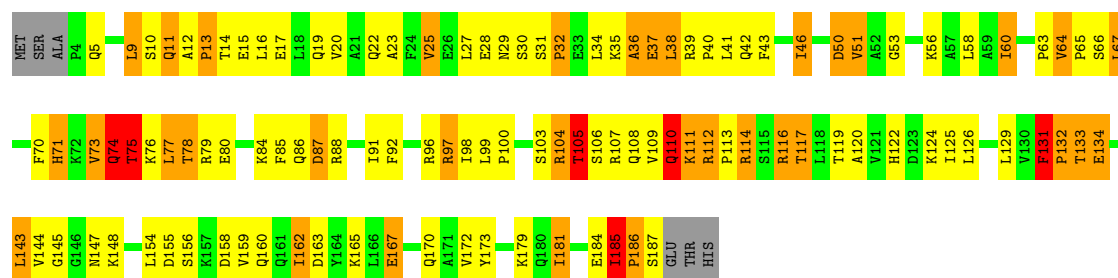
• Molecule 15: 40S RIBOSOMAL PROTEIN S6-A

Chain AG: 40% 42% 13%



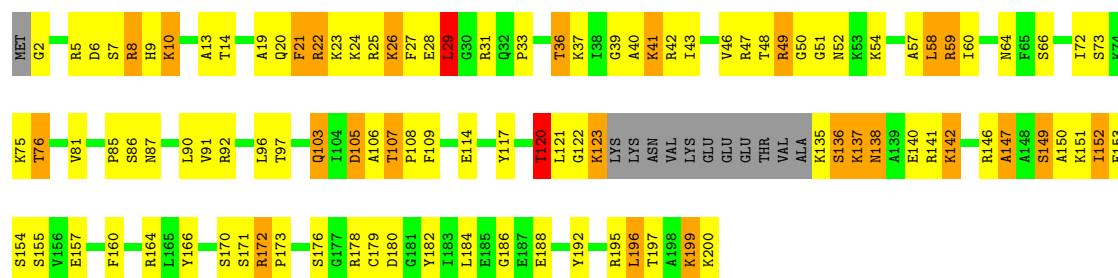
• Molecule 16: 40S RIBOSOMAL PROTEIN S7-A

Chain AH: 37% 39% 18%



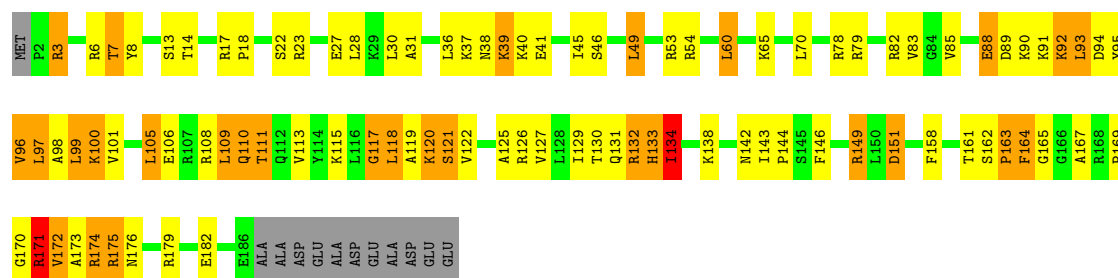
• Molecule 17: 40S RIBOSOMAL PROTEIN S8-A

Chain AI: 41% 40% 13% 6%



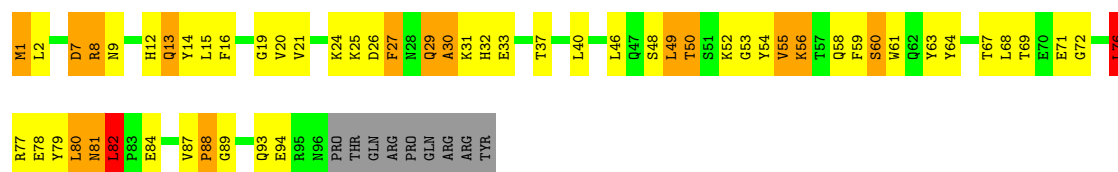
• Molecule 18: 40S RIBOSOMAL PROTEIN S9-A

Chain AJ: 46% 32% 15% 6%



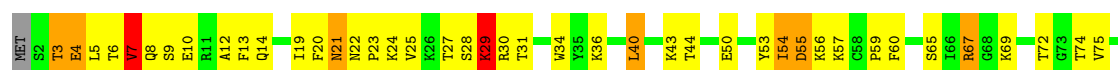
• Molecule 19: 40S RIBOSOMAL PROTEIN S10-A

Chain AK: 37% 38% 14% 9%



• Molecule 20: 40S RIBOSOMAL PROTEIN S11-A

Chain AL: 46% 43% 9% ..

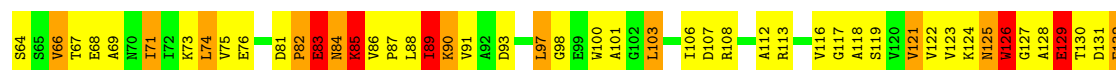






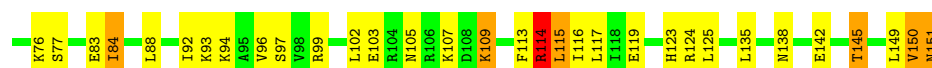
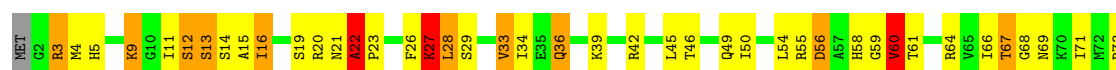
• Molecule 21: 40S RIBOSOMAL PROTEIN S12

Chain AM: 27% 42% 13% 5% 13%



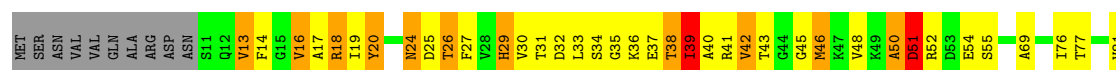
• Molecule 22: 40S RIBOSOMAL PROTEIN S13

Chain AN: 50% 36% 11% ..



• Molecule 23: 40S RIBOSOMAL PROTEIN S14-A

Chain AO: 39% 38% 12% . 7%



• Molecule 24: 40S RIBOSOMAL PROTEIN S15

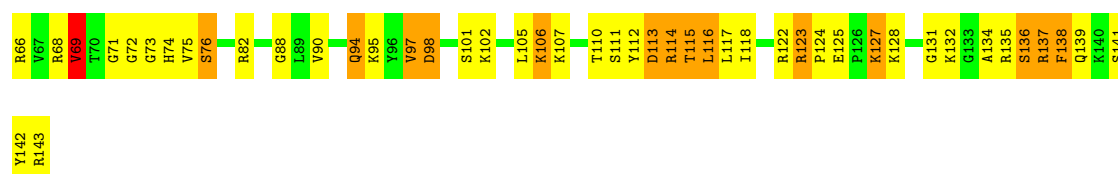
Chain AP: 39% 36% 8% . 13%



• Molecule 25: 40S RIBOSOMAL PROTEIN S16-A

Chain AQ: 36% 45% 15% ..





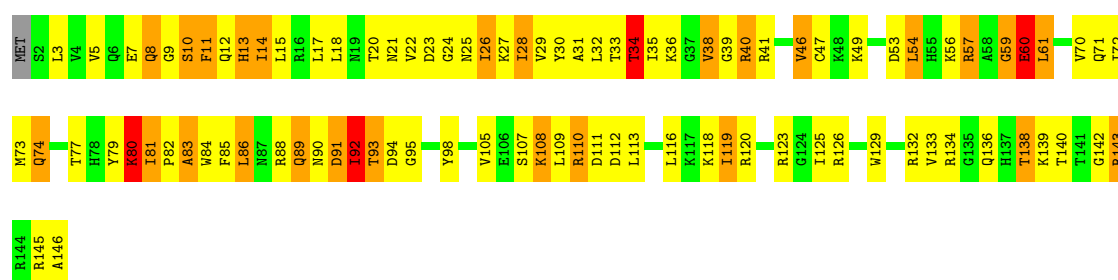
• Molecule 26: 40S RIBOSOMAL PROTEIN S17-A

Chain AR: 35% 40% 10% 12%



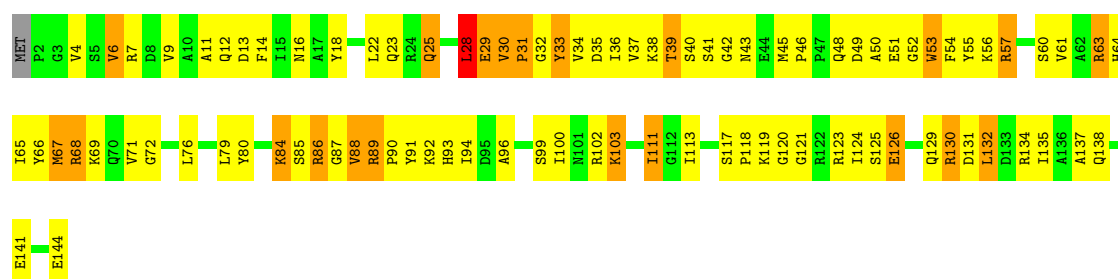
• Molecule 27: 40S RIBOSOMAL PROTEIN S18-A

Chain AS: 35% 44% 18%



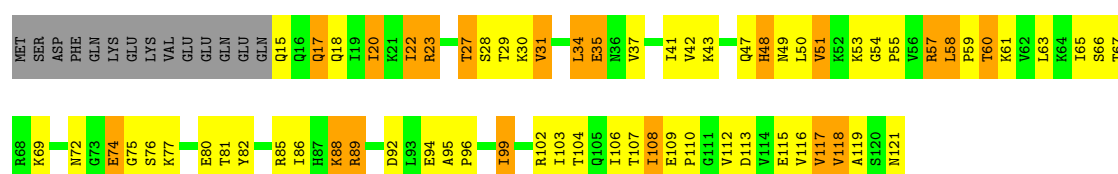
• Molecule 28: 40S RIBOSOMAL PROTEIN S19-A

Chain AT: 35% 49% 15%

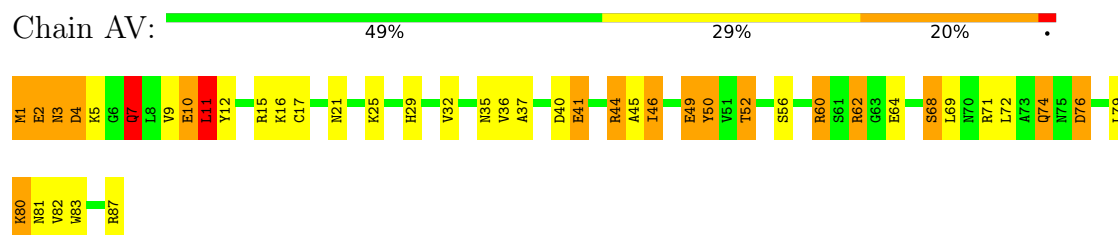


• Molecule 29: 40S RIBOSOMAL PROTEIN S20

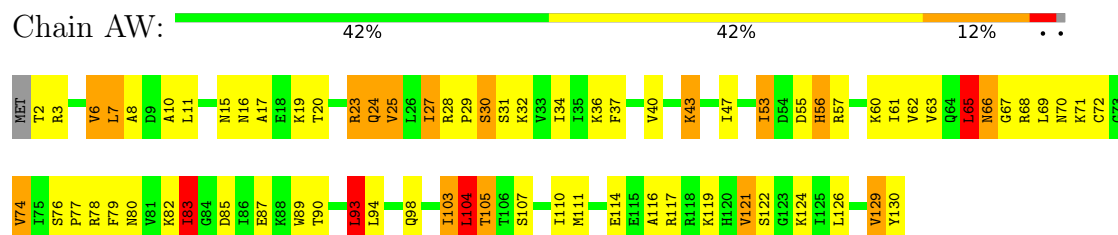
Chain AU: 32% 40% 17% 12%



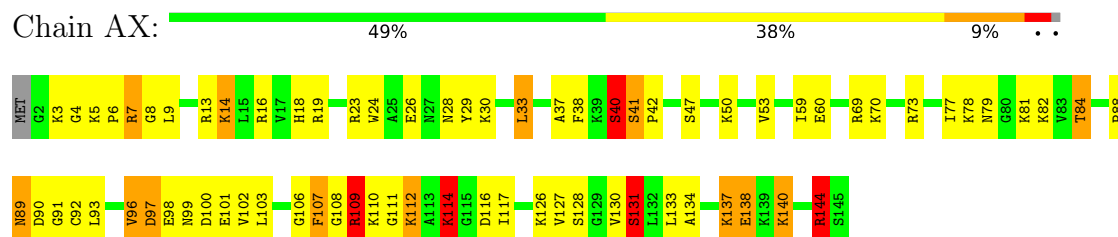
- Molecule 30: 40S RIBOSOMAL PROTEIN S21-A



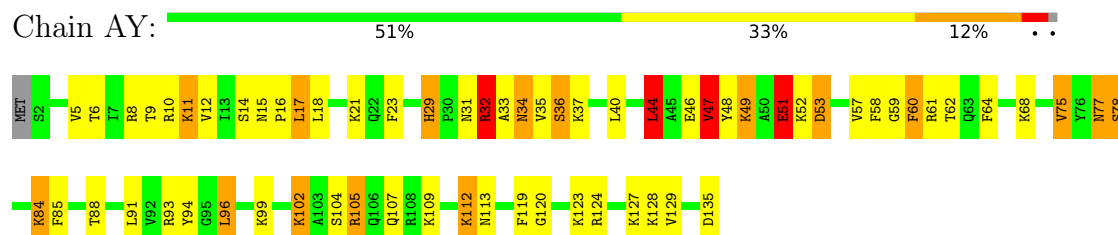
- Molecule 31: 40S RIBOSOMAL PROTEIN S22-A



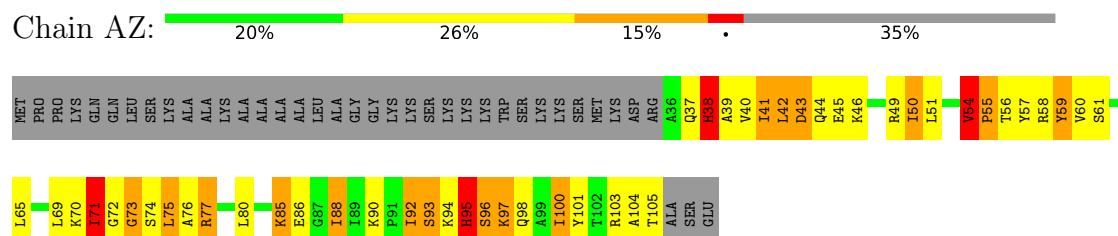
- Molecule 32: 40S RIBOSOMAL PROTEIN S23-A



- Molecule 33: 40S RIBOSOMAL PROTEIN S24-A

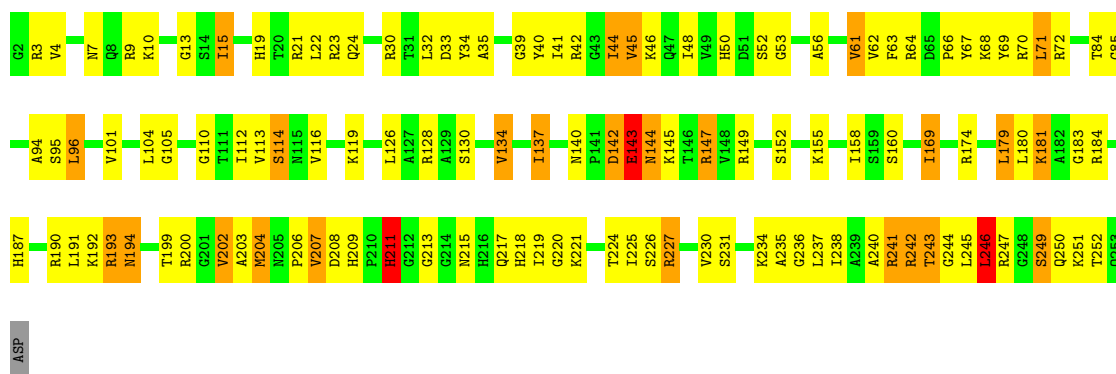


- Molecule 34: 40S RIBOSOMAL PROTEIN S25-A

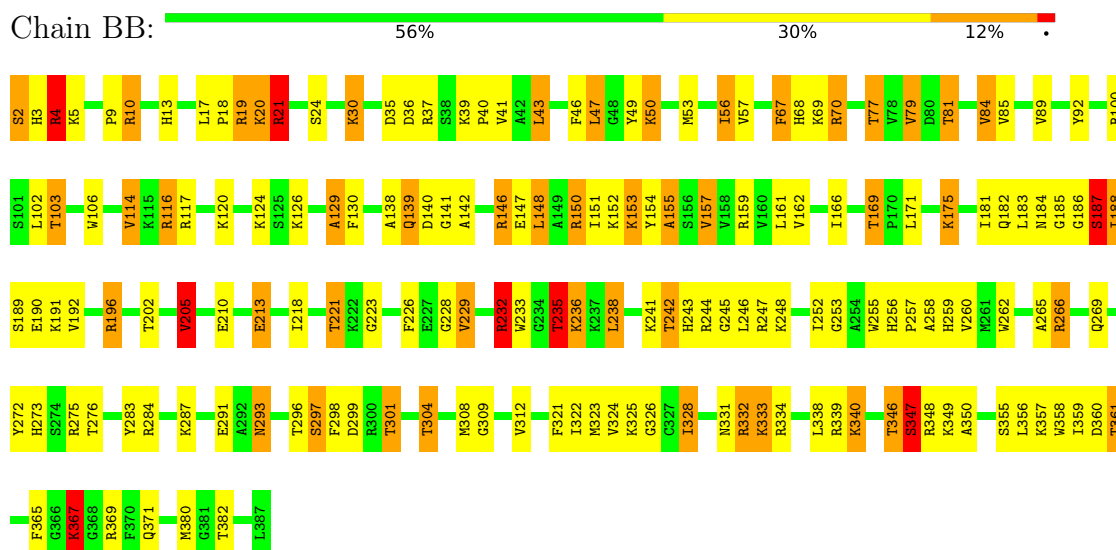


- Molecule 35: 60S RIBOSOMAL PROTEIN L2-B

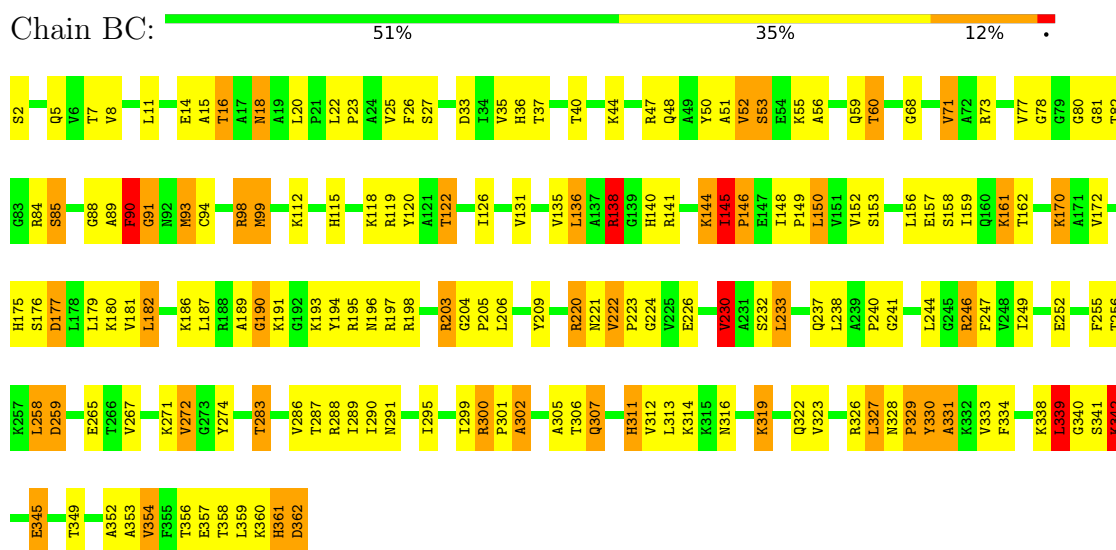




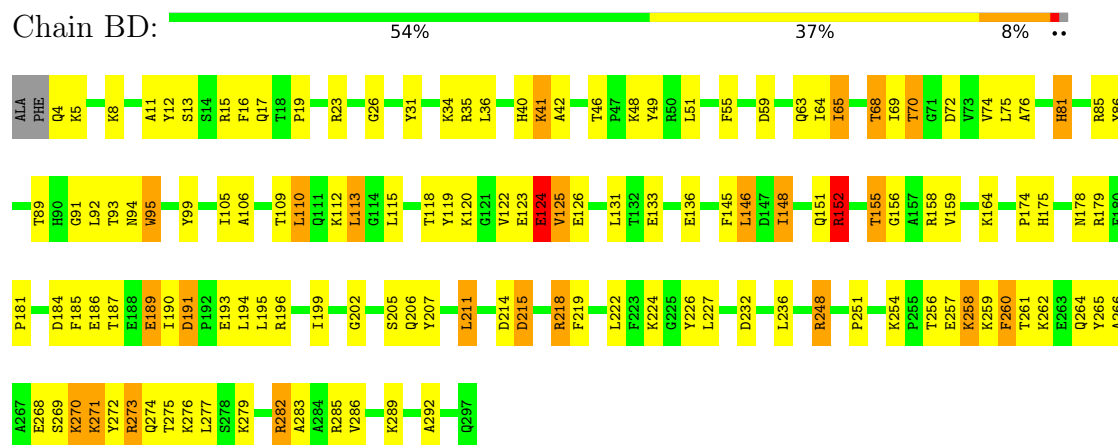
• Molecule 36: 60S RIBOSOMAL PROTEIN L3



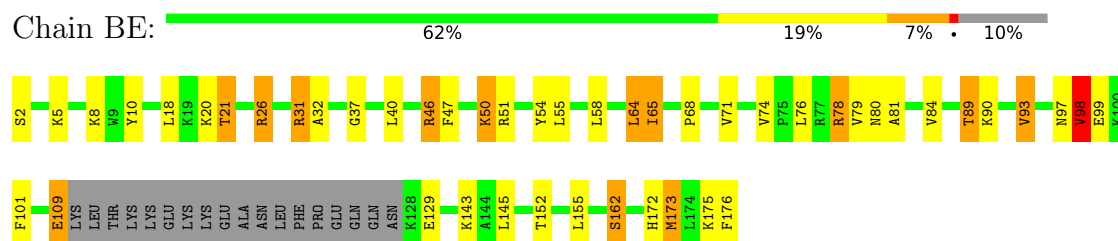
• Molecule 37: 60S RIBOSOMAL PROTEIN L4-A



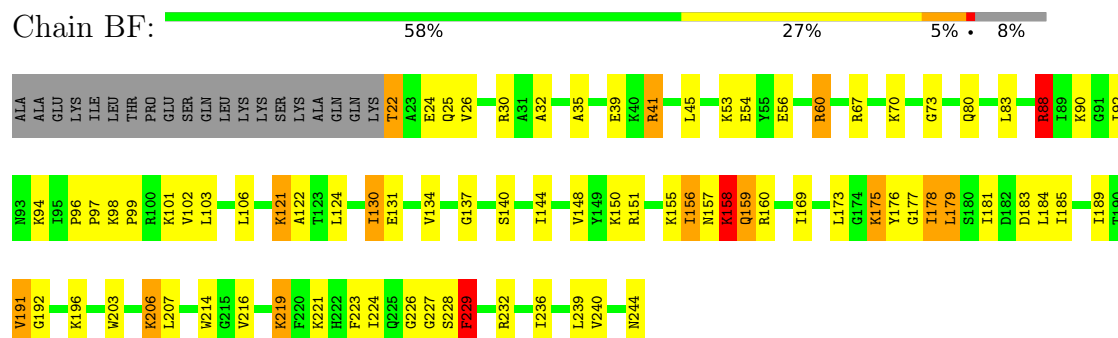
• Molecule 38: 60S RIBOSOMAL PROTEIN L5



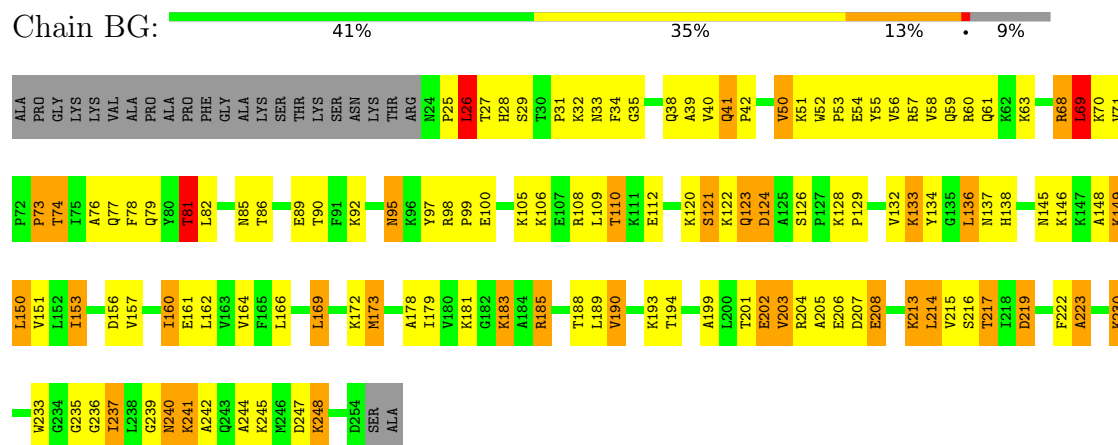
• Molecule 39: 60S RIBOSOMAL PROTEIN L6-A



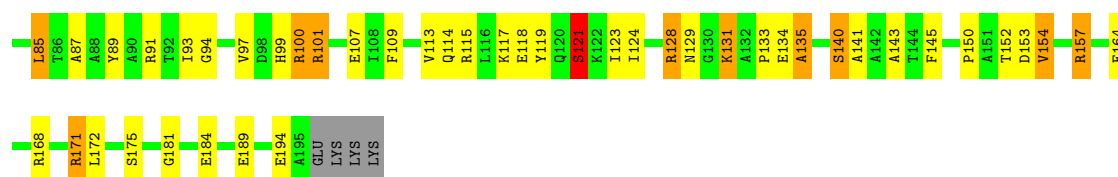
• Molecule 40: 60S RIBOSOMAL PROTEIN L7-A



• Molecule 41: 60S RIBOSOMAL PROTEIN L8-A

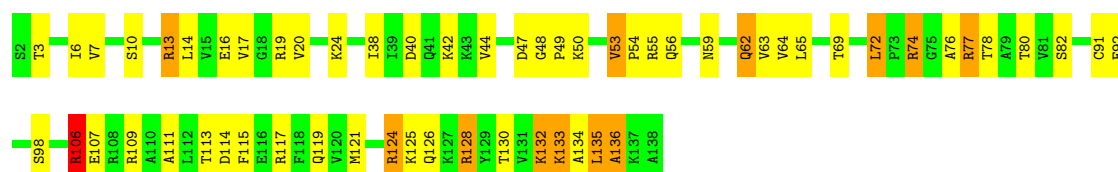






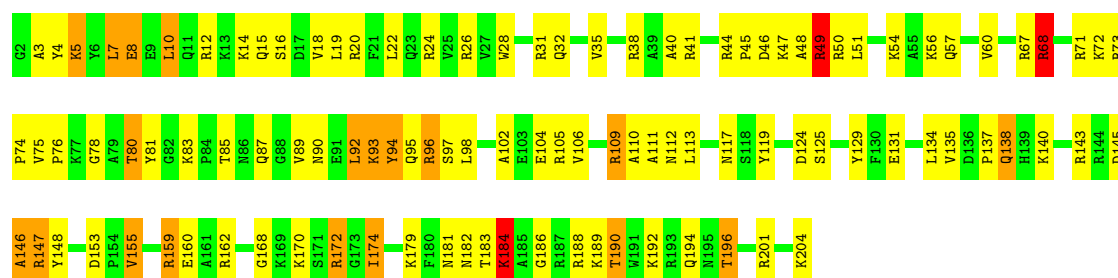
• Molecule 47: 60S RIBOSOMAL PROTEIN L14-B

Chain BM: 57% 34% 9% .



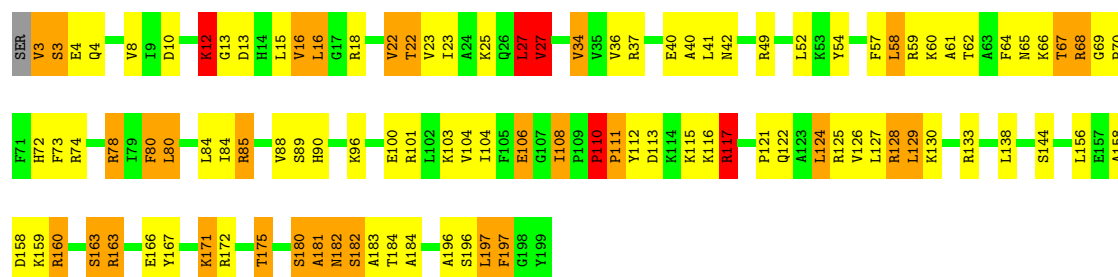
• Molecule 48: 60S RIBOSOMAL PROTEIN L15-A

Chain BN: 48% 41% 9% .



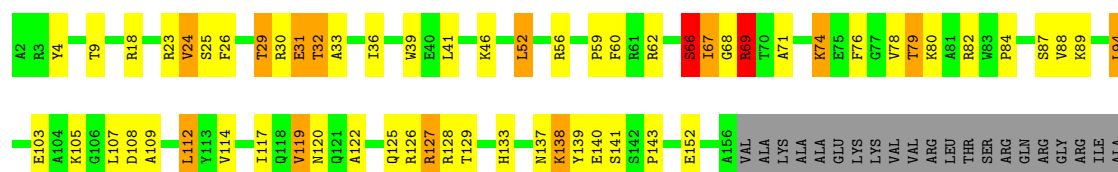
• Molecule 49: 60S RIBOSOMAL PROTEIN L16-A

Chain BO: 51% 32% 14% .



• Molecule 50: 60S RIBOSOMAL PROTEIN L17-A

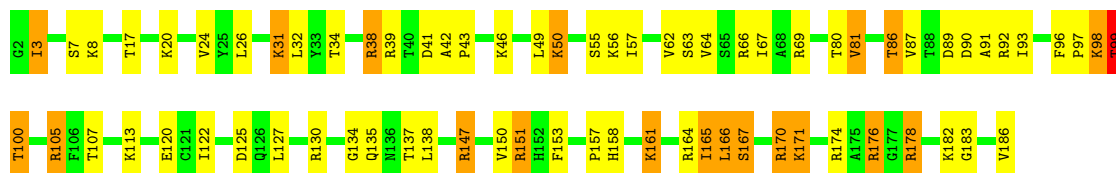
Chain BP: 51% 25% 7% 15% .



ALA  
GLN  
LYS  
ARG  
ILE  
ALA  
ALA

• Molecule 51: 60S RIBOSOMAL PROTEIN L18-A

Chain BQ: 61% 28% 10%



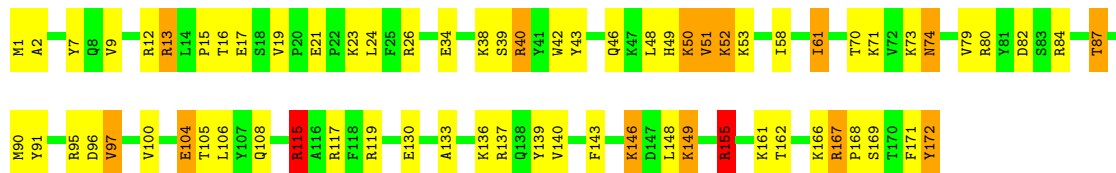
• Molecule 52: 60S RIBOSOMAL PROTEIN L19-B

Chain BR: 51% 40% 9%



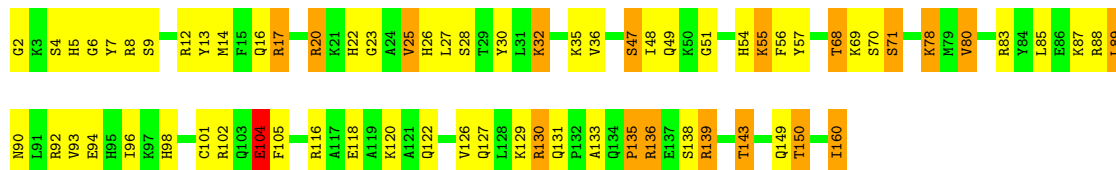
• Molecule 53: 60S RIBOSOMAL PROTEIN L20-B

Chain BS: 59% 31% 8%



• Molecule 54: 60S RIBOSOMAL PROTEIN L21-A

Chain BT: 56% 32% 11%

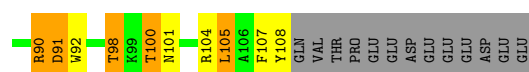


• Molecule 55: 60S RIBOSOMAL PROTEIN L22-A

Chain BU: 44% 26% 12% 18%

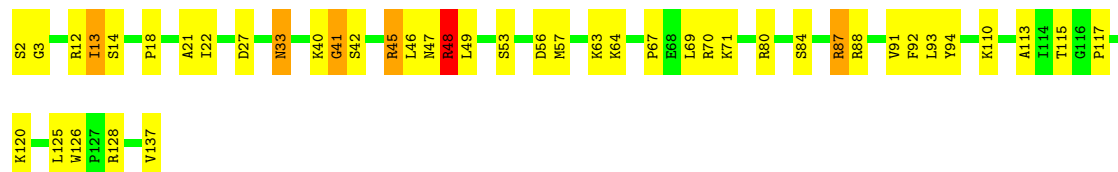






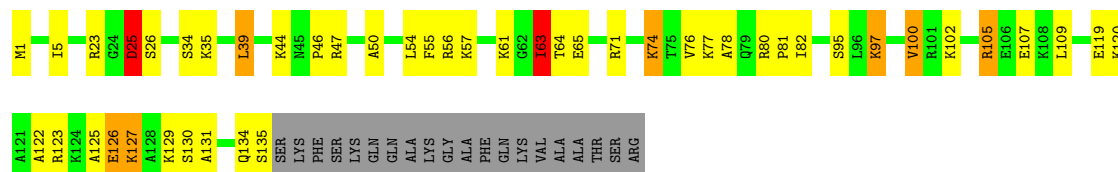
• Molecule 56: 60S RIBOSOMAL PROTEIN L23-A

Chain BV: 68% 28%



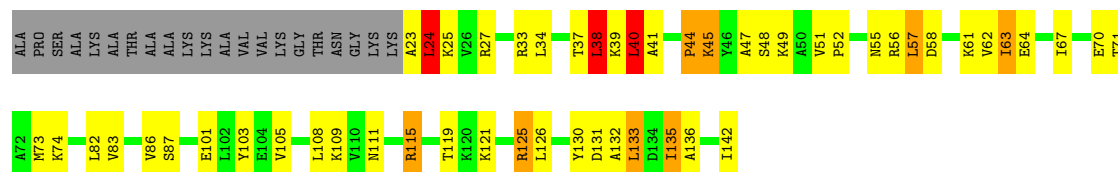
• Molecule 57: 60S RIBOSOMAL PROTEIN L24-A

Chain BW: 57% 25% 5% 13%



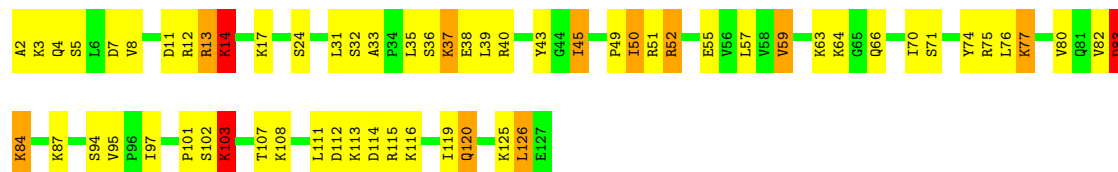
• Molecule 58: 60S RIBOSOMAL PROTEIN L25

Chain BX: 48% 30% 6% 15%



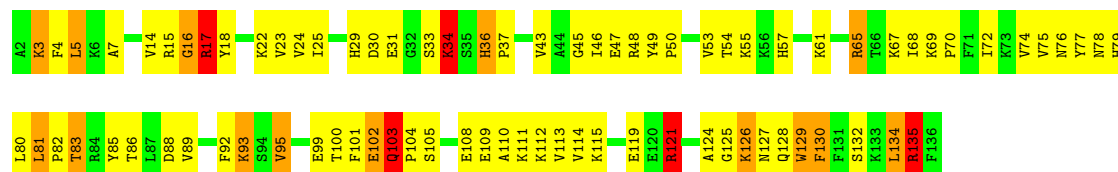
• Molecule 59: 60S RIBOSOMAL PROTEIN L26-A

Chain BY: 51% 39% 8%

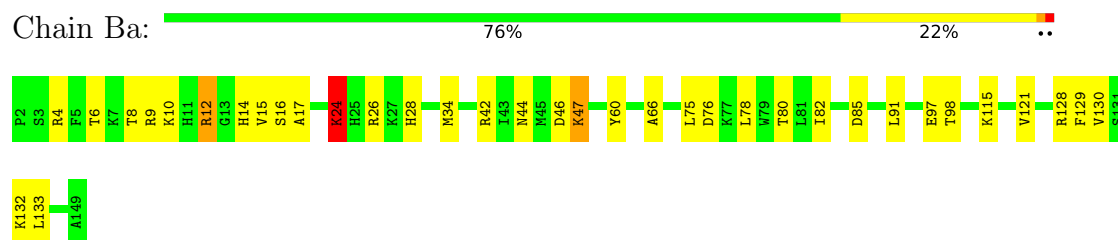


• Molecule 60: 60S RIBOSOMAL PROTEIN L27-A

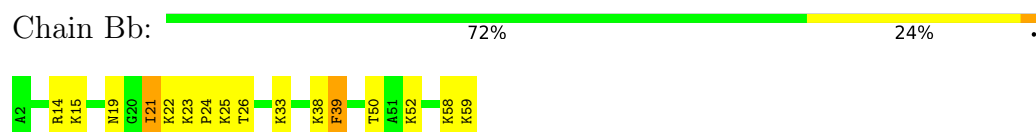
Chain BZ: 39% 47% 10%



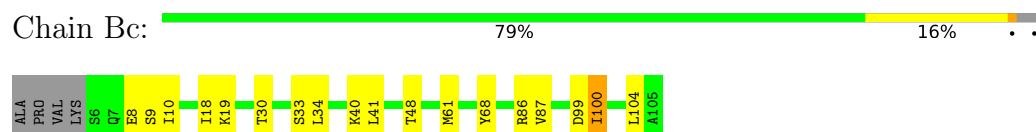
- Molecule 61: 60S RIBOSOMAL PROTEIN L28



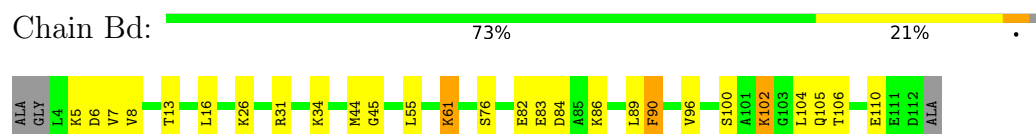
- Molecule 62: 60S RIBOSOMAL PROTEIN L29



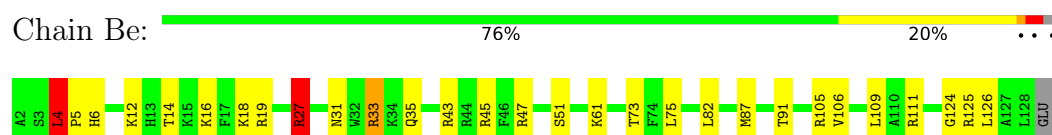
- Molecule 63: 60S RIBOSOMAL PROTEIN L30



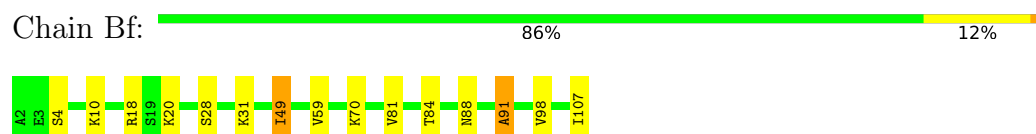
- Molecule 64: 60S RIBOSOMAL PROTEIN L31-A



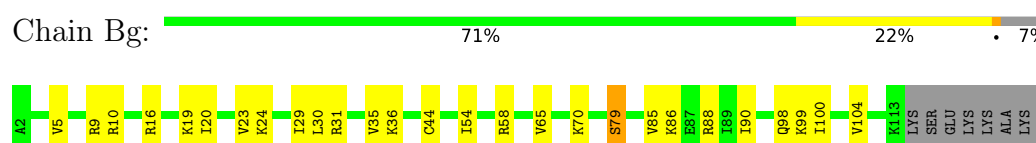
- Molecule 65: 60S RIBOSOMAL PROTEIN L32



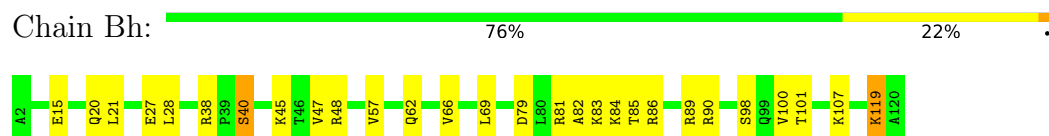
- Molecule 66: 60S RIBOSOMAL PROTEIN L33-A



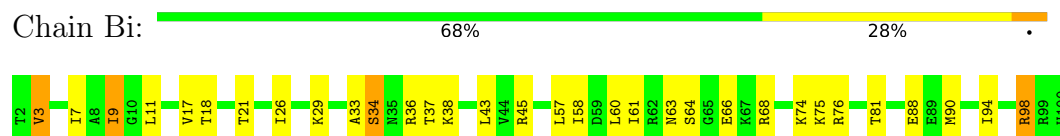
- Molecule 67: 60S RIBOSOMAL PROTEIN L34-A



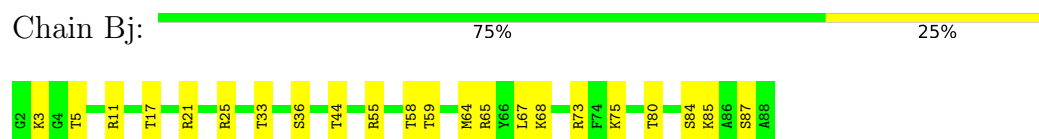
- Molecule 68: 60S RIBOSOMAL PROTEIN L35-B



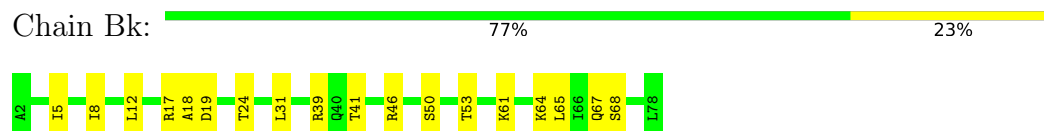
- Molecule 69: 60S RIBOSOMAL PROTEIN L36-A



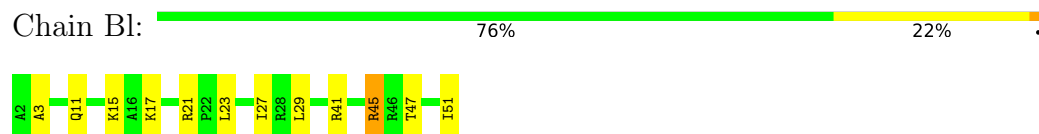
- Molecule 70: 60S RIBOSOMAL PROTEIN L37-A



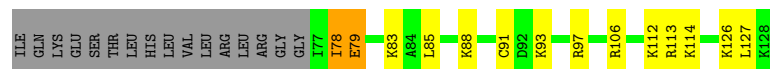
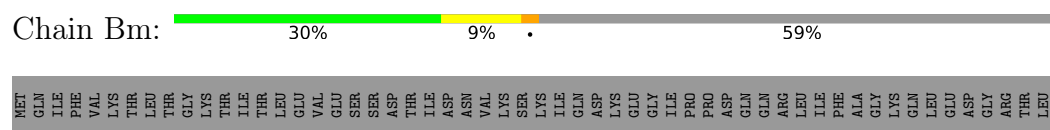
- Molecule 71: 60S RIBOSOMAL PROTEIN L38



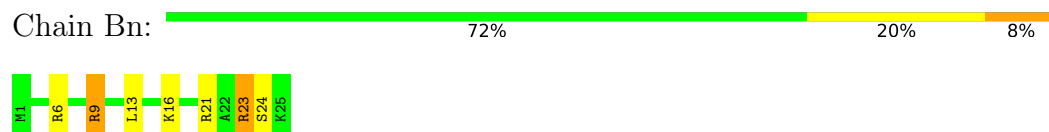
- Molecule 72: 60S RIBOSOMAL PROTEIN L39



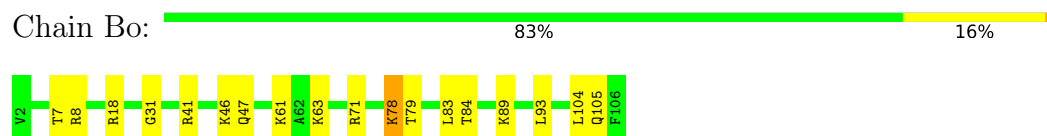
- Molecule 73: UBIQUITIN-60S RIBOSOMAL PROTEIN L40



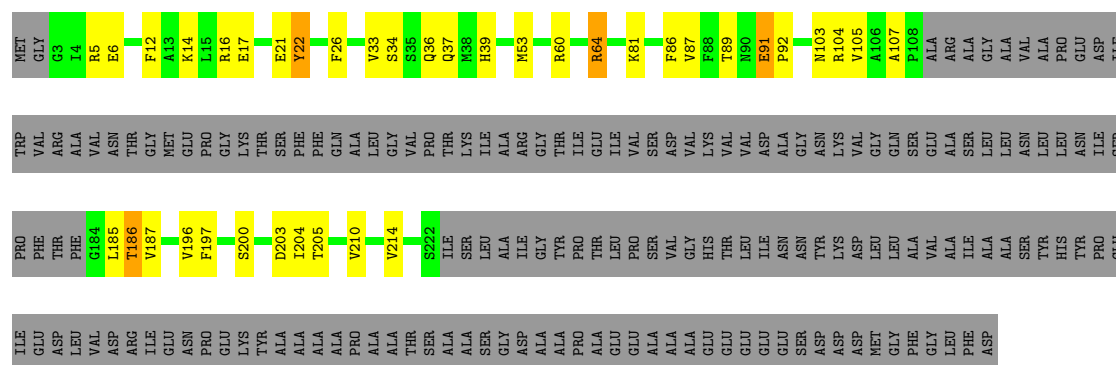
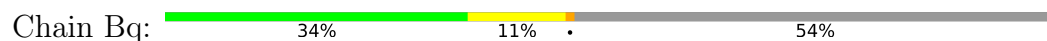
- Molecule 74: 60S RIBOSOMAL PROTEIN L41-B



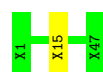
- Molecule 75: 60S RIBOSOMAL PROTEIN L42-A



• Molecule 76: 60S ACIDIC RIBOSOMAL PROTEIN P0



• Molecule 77: 60S ACIDIC RIBOSOMAL PROTEIN P1

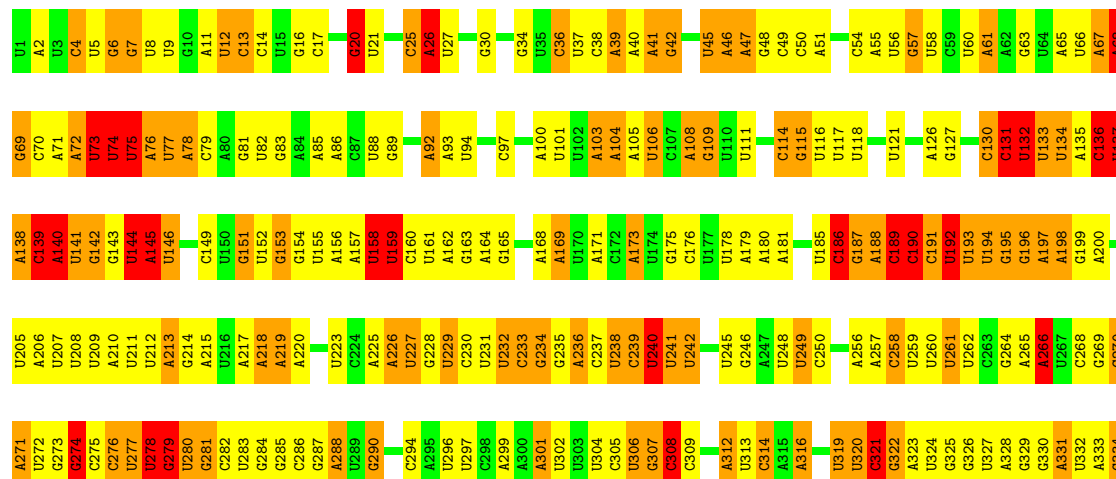


• Molecule 78: 60S ACIDIC RIBOSOMAL PROTEIN P2

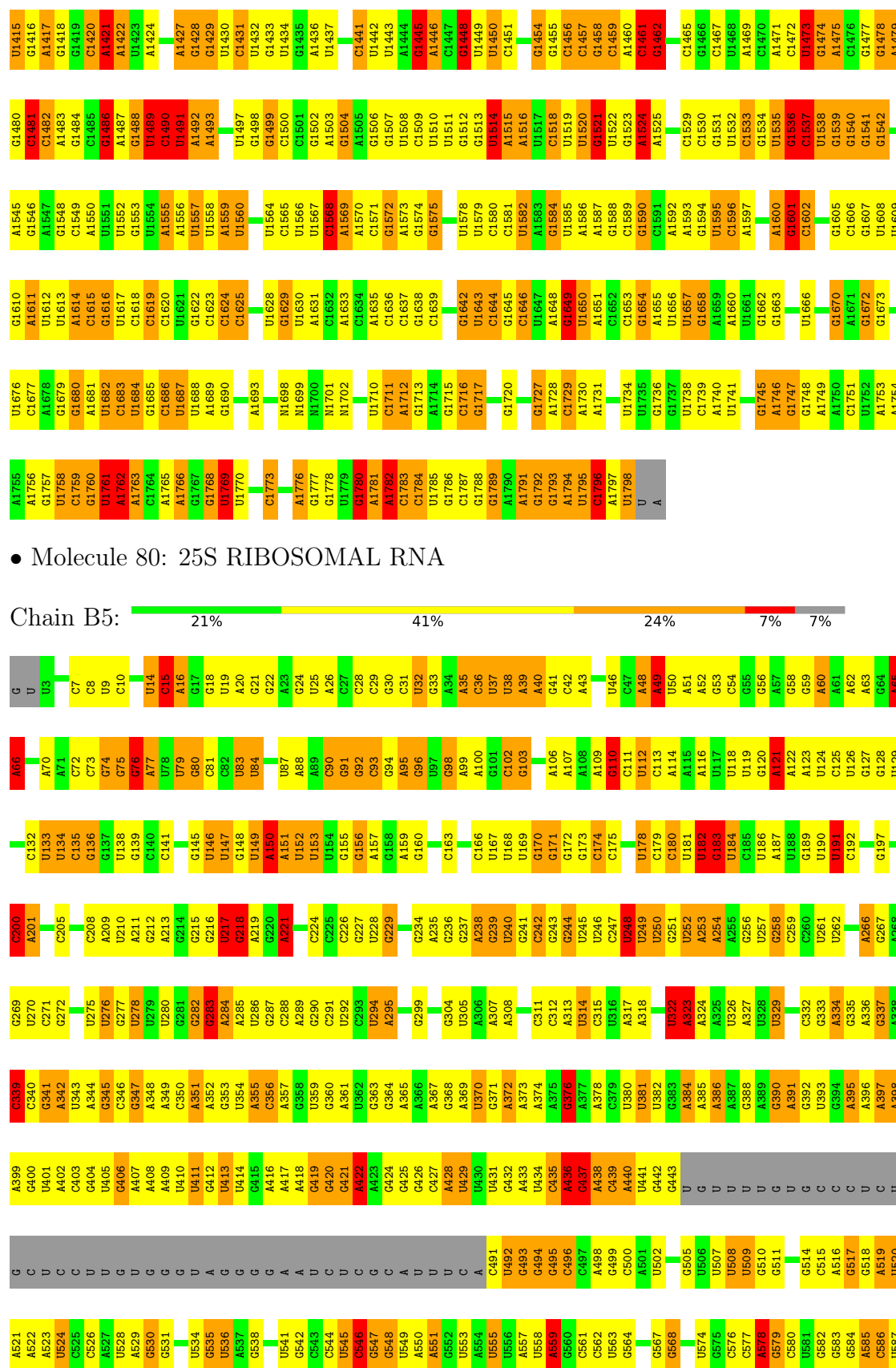


There are no outlier residues recorded for this chain.

• Molecule 79: 18S RIBOSOMAL RNA



G1352	U1286	U1214	G1149	G1074	A1005	U935	G867	A803	G738	G676	U609	A541	A477	G409	U335
U1353	A1287	C1215	G1150	C1075	C1006	G836	G868	A804	G739	G677	G610	A542	A478	A410	G336
C1355	A1152	C1216	A1151	U1079	G1007	C937	A869	U805	A740	A678	U612	C543	C480	C411	C337
U1356	U1290	A1217	G1153	U1081	U1009	G842	G871	G810	U743	U681	G614	A545	C484	U414	C339
A1357	G1291	G1218	G1154	C1082	G1011	C943	U873	A811	U744	G682	A615	U647	A485	C415	A341
G1358	C1292	A1219	G1155	G1083	U1012	A944	C874	A812	U745	C683	G616	G548	G487	A416	C342
C1359	C1156	C1220	A1157	G1084	A1013	U945	G875	U813	U746	A684	U619	G553	G488	G418	C343
A1360	A1221	U1225	G1158	G1085	G1014	U946	G876	A814	U747	A685	A620	C554	C489	G419	A344
U1361	U1226	C1159	C1159	A1087	U1015	U947	G877	G815	U748	C686	A621	A555	C490	A420	U345
U1362	A1160	G1159	G948	U1016	U1016	G949	A881	A816	U749	G687	A622	A556	C491	A421	U348
U1363	C1161	C1162	C1162	U1017	U1017	C950	U882	A817	U750	G688	A623	G557	A492	G422	U349
C1365	A1163	G1228	C1163	U1018	U1018	A951	C883	C818	U751	U692	G624	U558	U493	G423	U350
U1366	A1164	G1229	A1164	A1019	A1019	A951	A884	G819	A753	C692	C625	U559	U494	C424	C351
G1367	G1170	A1230	G1165	A1020	A1020	U958	G885	U820	A754	U693	G626	C560	C352	G425	A352
U1368	U1231	U1231	G1166	G1094	C1021	U959	U886	U821	A755	U694	U626	U560	U495	A426	U358
U1369	U1095	U1232	A1167	U1095	U1024	U960	A887	U822	A756	U695	G627	G561	G496	A427	U359
U1370	G1233	G1233	G1167	C1096	A1025	U961	U888	G823	A757	C696	U628	G562	G497	C427	C360
A1371	U1234	C1234	U1168	U1097	A1026	U961	U889	G824	U758	C697	U629	U563	G498	A428	C361
U1372	C1235	C1235	G1169	U1098	A1027	U964	A892	C827	U759	U698	A630	G564	U499	G429	G372
U1373	G1236	G1236	G1170	U1099	A1027	U965	U893	U828	A760	U699	U633	C565	U499	G429	G373
C1374	A1237	A1237	A1171	G1100	C1028	U966	U894	U829	A761	U700	U634	C566	U501	G430	C377
U1375	U1238	A1238	G1172	G1101	U1029	A966	G895	A829	G763	G701	G635	A567	U502	C431	A380
U1376	G1241	G1241	C1173	U1102	A1030	A967	U896	U830	G764	G702	A636	G568	G503	G432	C382
U1377	G1242	G1242	C1174	U1103	U1031	U968	C897	U831	G765	G703	A637	C569	U504	C433	C383
G1378	G1243	G1243	G1178	C1104	G1032	A970	A898	U832	U766	C704	C637	A570	U505	G434	A385
C1379	A1244	A1244	C1179	U1105	C1033	A971	G899	U833	U767	C705	U638	C572	U506	C435	G386
A1380	G1245	G1245	C1180	U1106	C1034	G972	A900	U834	C768	U706	U640	C573	U507	A437	A387
U1381	U1185	U1185	G1181	G1112	G1037	G973	G901	U836	A769	C708	U641	C574	U508	U439	C377
A1382	U1186	U1186	C1182	A1113	U1038	A974	G902	G837	A770	C709	G647	C575	G509	U440	U378
U1383	U1246	U1246	U1183	U1114	A1039	C975	A905	G838	A771	U710	G648	C576	G510	C443	U380
A1384	C1247	C1247	U1184	U1115	G1040	G976	A906	U840	C772	U711	U649	C577	G511	C444	C381
G1385	U1248	U1248	A1184	U1116	G1041	A977	U909	U841	A774	G712	U650	C578	G512	C445	C382
U1386	U1250	U1250	G1185	U1117	G1042	A978	U910	C842	G775	A713	G651	C579	G513	A446	C383
C1387	C1251	C1251	U1187	G1119	A1043	A979	C910	U843	G776	G714	G652	C580	G514	A447	G384
U1388	U1252	U1252	U1188	U1120	G1043	G980	U911	A844	C777	U715	C653	C582	G515	U448	A385
U1389	U1253	U1253	G1189	C1121	U1049	U981	U912	G845	G778	C716	C654	C583	G516	C448	G386
A1390	G1254	G1254	A1189	G1127	G1050	U982	U913	G846	U779	C717	C655	C584	G517	C449	G387
C1391	A1255	A1255	C1190	U1128	G1051	U983	G914	A847	A780	U718	U656	C585	G518	U450	C388
U1392	U1256	U1256	U1191	C1129	U1052	G984	A915	C848	U781	U719	G657	C586	G519	A451	G389
C1393	C1257	C1257	A1193	U1129	G1053	G987	U916	C849	U782	G720	C658	C590	G520	U452	C390
U1394	U1258	U1258	U1194	U1130	G1063	U988	U917	A850	G783	U721	U521	C591	G521	U453	A391
U1395	U1259	U1259	C1195	A1131	U1057	A988	U918	U851	C784	G722	G523	A591	G523	U454	G392
C1396	U1260	U1260	A1196	U1132	U1058	U989	U919	C852	U785	G723	U524	A592	G524	G458	C393
A1400	G1267	G1267	C1197	A1133	U1059	U990	U920	G853	C786	C724	A525	U593	G525	G459	C394
U1401	U1268	U1268	G1198	C1134	U1060	G991	U921	U854	G787	U725	U526	A594	A526	A460	U395
G1402	U1269	U1269	G1199	U1135	A1061	A992	U922	A855	A788	C726	A527	G595	A527	G461	G396
C1403	G1270	G1270	U1200	A1137	A1062	A993	A924	A856	A789	U727	U528	C596	U528	A397	A397
U1404	C1271	C1271	G1201	U1138	U1063	G994	G925	U857	U790	U728	A529	G597	A529	G467	G398
A1405	A1272	A1272	A1202	A1139	G1064	A995	A926	G858	C789	G729	U530	U598	U530	A468	C399
G1406	U1273	U1273	U1203	U1140	A1065	U996	C927	A859	A793	G730	U532	A599	U532	C469	A400
U1407	C1274	C1274	A1204	A1142	C1066	G997	U928	U860	U794	C731	U533	U600	U533	A470	A401
A1408	U1275	U1275	U1206	U1143	C1067	U998	A929	U861	U795	G732	U534	A604	A534	A471	C402
G1409	G1276	G1276	U1207	U1144	U1070	A1001	A930	A862	U796	A733	A535	A605	A535	U472	C403
U1410	C1277	C1277	C1207	U1145	U1071	A1002	A931	A863	U797	A734	A536	A606	A536	A473	G404
A1411	U1278	U1278	U1208	U1146	U1072	G1003	C932	U864	U801	C735	A537	A607	A537	A474	A407
G1412	C1279	C1279	A1208	G1147	C1073	A1004	U933	A865	G802	G736	A538	A608	A538	A475	C408
U1413	U1280	U1280	C1209	U1148	G1073	U1004	C934	G866						U476	

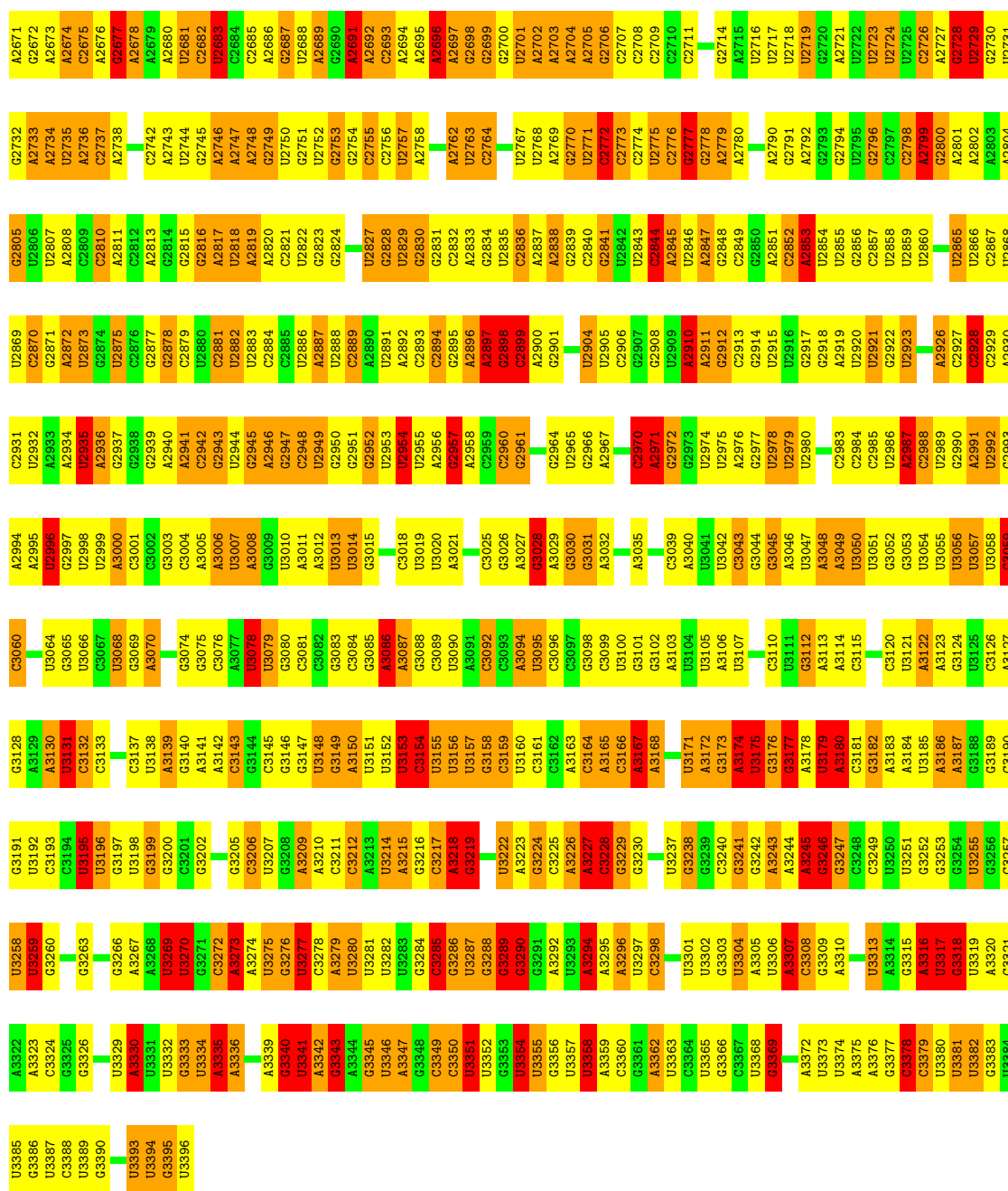


G1565	U1494	G1429	G1365	U1305	A1294	U1181	U1121	A1048	G984	U922	G860	G795	A720	G652	G658
A1566	U1495	U1430	A1366	G1306	A1245	A1182	U1122	C1049	U985	C923	C861	U796	G721	A653	A589
U1567	C1496	G1431	G1367	G1307	G1246	C1183	U1123	U1050	U986	G924	U862	U797	G722	C654	G590
G1497	C1497	A1432	U1368	A1308	U1247	A1184	U1124	U1051	U987	A925	C863	G798		G591	G591
U1569	A1498	A1433	A1369	U1309	G1248		U1125	A1054		A926	G864	G799	G725	A656	A592
U1570	C1499	G1434	G1370	G1310	G1249	C1187	G1126	A1055	U990	C927	U865	G800	G726	A657	C593
A1571	G1500		G1371	G1311	G1250	U1183	G1127	U1056	G981	C928	A866	A801	G727	G658	U584
U1572	U1501	C1437	C1372	G1312	A1251	U1189	U1128	A1057	A992	A929	G867	C802	G728	G659	U594
G1573	C1502	U1438	A1373	G1313	A1252	C1189	U1129	U1058	G993	U930	C968	C803	G729	A660	C599
C1574	A1503	G1439	G1374	C1314	U1253	U1191	A1130	U1060	G994	C931	U871	G804	U731	G661	G600
A1575	U1504	G1440	G1375	U1315	C1254	C1192	G1131	A1061	U995	U932	A876	C805	U730	U662	G600
G1576	A1505	A1441	C1376	G1316	C1255	U1193	G1132	A1062	A996	A933	C873	A806	U732	C663	U601
G1577	U1506	U1442	G1377	A1317	G1256	G1194	A1133	U1063	A997	G934	U872	A807	G733	U664	
C1578	G1507	G1443	U1378	A1318	C1257	A1195	G1134	A1064	A998	U935	C874	A808	G734	A665	
C1579	U1508	U1444	G1379	G1319	U1258	C1196	A1135	A1065	G999	A936	G875	G809	C735	A666	
A1580	A1509	U1445	G1380	C1320	A1259	A1197	A1136	A1066	C1000	A937	A876	A810	A736	C667	
C1581	G1510	A1446	A1381	G1321	A1260	C1198	G1137	A1067	G1001	C938	C877	U811	G737	G668	A608
C1582	U1511	G1447	G1382	U1322	G1261	C1199	U1138	U1071	A1002	U939	G878	G812		U669	G609
A1583	U1512	U1448	G1383	G1323	G1262	A1200	G1139	G1072	A1003	G940	U879	G813	U741	C670	G610
	G1513	A1449	U1384	U1324	A1263	C1201	G1140	U1073	U1004	G941	C880	U814	G742	U671	A611
G1586	G1514	C1451	U1385	U1325	G1264	C1202	C1141	U1077	U1007	C947	G887	A820	C749	A677	G617
A1587	C1515		A1386	A1326	U1265	A1203	G1142	U1078	U1008	U943	A882	U821	G750	G678	C618
A1588	C1516		G1387	C1327	G1266	A1204	A1143	A1079	C949	C944	A883	G822	A751	U679	A619
A1589	G1517	A1454	U1388	U1328	U1267	A1205	U1144	A1080	A1009	C945	A884	C818	C745	G674	G620
G1590	U1518	U1455	G1389	U1329	G1268	G1206	G1145	A1081	U1010	U946		U819	U748	G676	G616
C1591		A1456	A1390	A1330	U1269	G1207	C1146	U1082	A1011	C947	G887	A820	C749	A677	
G1592	U1523	U1457	C1391	U1331	A1270	U1208	G1147	U1083	U1012	C948	A888	U821	G750	G678	
A1593	A1524	U1458	G1392	A1332	A1271	G1209	G1148	G1083	G1013	C949	U889	G822	A751	U679	
A1594	G1525	A1459	C1393	C1333	C1272	U1210	G1149	A1084	C823	C950	A883	G823	C752	G680	
U1595	U1526	A1460	U1334	U1334	A1273	U1211	U1015	A1085	U1015	C824	G891	C824	C753	G681	A621
C1596	G1527	A1461	C1335	C1335	A1274	U1151	C1086	G1086	C1016	U954	C893	U825	G754	U682	A622
C1597	G1528	U1462	U1336	U1336	C1275	G1213	U1152	U1087	C1017	U955	C893	A828	A755	U623	
	U1529	U1463	A1337	A1337	U1276	U1214	A1153	U1018	G1018	U956	A895	U829	C758	U687	G624
A1534		A1464	A1401	C1338	C1277	U1215	A1154	A1093	G1019	U956	A896	U829	C759	G688	G625
G1538	G1538	A1466	C1403	C1339	C1278	C1155	C1156	U1095	G1020	C957	A896	U831	U759	U689	U626
		A1467	G1404	G1340	C1279	C1156	G1157	U1096	U1021	C958	U897	G831	G760	A690	U627
A1605	U1405	U1468	U1405	C1342	G1280	A1158	G1157	U1097	C1023	C959	U898	G832	C765	A691	A628
U1606	C1469	C1469	A1406	A1343	G1281	A1159	A1158	A1098	G1024	U960	U899	G833	C765	A692	U629
G1541	G1542	U1470	U1407	G1344	C1282	G	C1160	A1099	A1025	C961	G900	U834	U766	A693	A630
C1542	G1543	U1471	G1408	G1345	C1283	A	G1161	U1100	A1026	A962	C901	U835	U767	C694	U631
G1544	U1472	G1409	G1409	G1346	C1285	C	U1162	U1101	A1027	G963	G902		C768	C695	G632
A1545	U1473	G1473	U1347	U1347	A1286	A1225	U1163	A1102	U1028	A965	A904	G838	C769	C633	C633
			U1348	U1348	U1287	G1227	G1164	A1103	G1029	U966	U905	C839		C634	
C1614	G1476	G1476	G1412	G1349	U1288	C1227	A1165	U1104		U967	A906	C840	U776	G635	C635
C1615	A1477		G1413	A1350	U1289	C1228	A1166	G1104		G968	G907	A841	U777	C701	C636
U1616			G1414	C1351	G1289	G1229	G1166		C1032	C969	G908	G842	U778	C702	C636
			U1415	A1352		G1230	U1167		U1033	U970	G909	A843	U779	G703	C637
U1620	U1553	A1481	C1416	U1353	U1293	A1231	U1168	U1108	U1034	A970	G910	G844	A780	A638	G639
A1621	U1554	A1482	G1417	G1354	U1294	C1232	A1169	U1109	G1035	G971	G910	G845	A781	A705	G639
U1622	U1555	G1483	A1418	A1355	A1295	G1233	A1170	U1110	A1036	A972	G911	A846	U782	U706	U640
G1623	U1556	U1484	U1356	U1356	G1296	G1234	G1171	U1111	C1037	A973	G912	A847	U783	U707	C641
	A1557	G1485	C1357	C1358	C1297	U1235	G1172	A1112		G974	A913	A848	A783	G708	U642
C1628	U1558	G1486	G1421	C1358	C1298	G1237	U1173	U1113	A1040	C975	A914	A849	A786	A709	U643
U1629	U1559	G1487	C1360	C1359	U1299	G1238	C1175	U1114	U1041	U976	A915	C851	A786	A710	G644
U1630	G1560		U1361	U1361	C1300	C1239	C1176	G1116	U1042	U977	G916	U852	A787	G712	A646
C1631	G1561	A1490	U1362	A1301	A1301	A1240	G1177	G1117	U1044	C979	A917	U852	C788	A647	
A1632	C1562	A1491	C1362	A1302	A1302	U1241	G1178	G1118	U1045	A980	G918	G856	A715	C648	
C1633	U1563	G1492	A1363	A1303	A1303	G1242	G1179	C1119	C1045	U981	U919	G857	C792	A716	A649
G1634	U1564	G1493	C1364	C1364	A1304	G1243	A1180	A1120	A1047	A983	A921	G859	U794	U719	G651


**WORLDWIDE PDB**  
 PROTEIN DATA BANK  

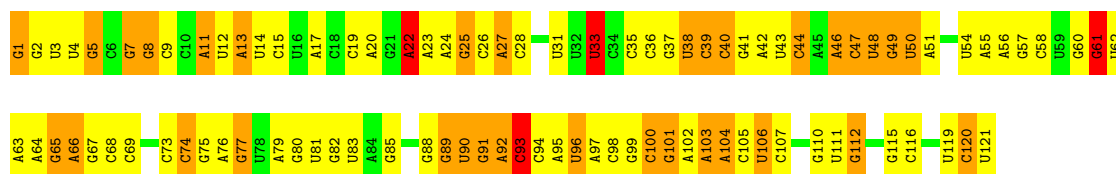
**EMDataBank**  
 Unified Data Resource for 3DEM





# Molecule 81: 5S RIBOSOMAL RNA

Chain B7: 21% 48% 27%



# Molecule 82: 5.8S RIBOSOMAL RNA

Chain B8: 29% 46% 18% 7%



## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	5143	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	1.09	0/1090	1.31	4/1474 (0.3%)
79	B2	0.92	33/42128 (0.1%)	1.49	828/65642 (1.3%)
8	A7	0.86	2/925 (0.2%)	0.87	2/1240 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
80	B5	1.49	661/75336 (0.9%)	1.92	3722/117449 (3.2%)
81	B7	1.38	12/2883 (0.4%)	1.80	119/4491 (2.6%)
82	B8	1.16	4/3746 (0.1%)	1.70	128/5832 (2.2%)
83	CV	1.87	8/4407 (0.2%)	1.47	47/5931 (0.8%)
84	CW	2.08	51/1801 (2.8%)	3.23	250/2803 (8.9%)
85	CX	2.12	4/69 (5.8%)	3.20	11/106 (10.4%)
9	AA	0.54	0/1617	0.80	0/2215
All	All	1.14	811/222414 (0.4%)	1.53	5304/325931 (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
8	A7	0	1
80	B5	0	35
83	CV	0	18
84	CW	0	32
85	CX	0	2
All	All	0	125

All (811) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	CV	63	GLU	N-CA	69.03	2.84	1.46
83	CV	210	TRP	CD2-CE3	34.76	1.92	1.40
83	CV	210	TRP	CD2-CE2	33.01	1.80	1.41
83	CV	210	TRP	CE2-CZ2	31.95	1.94	1.39
83	CV	210	TRP	CE3-CZ3	26.33	1.83	1.38
83	CV	210	TRP	CZ3-CH2	24.12	1.78	1.40
83	CV	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
80	B5	1152	G	N9-C8	15.03	1.48	1.37
80	B5	1152	G	N9-C4	-14.81	1.26	1.38
8	A7	134	ASP	CG-OD1	13.93	1.57	1.25
80	B5	1226	G	N9-C4	-13.53	1.27	1.38
80	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
84	CW	19	G	P-O5'	-10.32	1.49	1.59
84	CW	38	A	N7-C5	-10.09	1.33	1.39
49	BO	3[B]	SER	C-N	9.61	1.56	1.34
80	B5	3216	G	N7-C5	-9.39	1.33	1.39
80	B5	1434	G	N7-C5	-9.19	1.33	1.39
80	B5	1254	C	P-O5'	-9.11	1.50	1.59
80	B5	2941	A	N9-C4	-9.06	1.32	1.37
80	B5	2914	G	P-OP2	-9.05	1.33	1.49
80	B5	1449	A	N9-C4	-8.94	1.32	1.37
80	B5	652	G	N1-C2	-8.82	1.30	1.37
80	B5	953	G	C5-C4	-8.76	1.32	1.38
80	B5	367	A	N9-C4	-8.68	1.32	1.37
80	B5	1227	C	C2-N3	8.65	1.42	1.35
80	B5	1450	G	C8-N7	-8.62	1.25	1.30
49	BO	80[B]	LEU	C-N	8.56	1.53	1.34
80	B5	3088	G	C6-O6	-8.41	1.16	1.24
80	B5	2278	C	C2-O2	-8.28	1.17	1.24
80	B5	2899	C	N3-C4	-8.24	1.28	1.33
80	B5	1227	C	C1'-N1	8.21	1.61	1.48
80	B5	1887	A	N9-C4	-8.21	1.32	1.37
80	B5	2191	U	C4-C5	-8.20	1.36	1.43
79	B2	553	G	C6-N1	8.16	1.45	1.39
80	B5	1178	G	P-OP2	-8.14	1.35	1.49
80	B5	2726	C	N3-C4	-8.10	1.28	1.33
80	B5	2393	G	C8-N7	-8.08	1.26	1.30
80	B5	3216	G	N9-C8	-8.03	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1152	G	C5-C6	-8.03	1.34	1.42
80	B5	2817	A	P-OP1	-8.01	1.35	1.49
80	B5	1229	G	N7-C5	-7.99	1.34	1.39
35	BA	211	HIS	C-O	7.98	1.38	1.23
80	B5	2280	A	N9-C4	-7.96	1.33	1.37
80	B5	2314	U	N3-C4	7.95	1.45	1.38
80	B5	1152	G	N3-C4	-7.92	1.29	1.35
80	B5	1849	C	N3-C4	-7.91	1.28	1.33
80	B5	953	G	N7-C5	-7.87	1.34	1.39
80	B5	1311	G	C5-C4	-7.87	1.32	1.38
80	B5	917	A	N7-C5	-7.86	1.34	1.39
80	B5	2830	G	C6-N1	-7.86	1.34	1.39
80	B5	3245	A	N9-C4	-7.85	1.33	1.37
80	B5	3114	A	N9-C4	-7.83	1.33	1.37
80	B5	519	A	N7-C5	-7.79	1.34	1.39
80	B5	2945	G	P-O5'	-7.77	1.51	1.59
80	B5	2703	A	N7-C5	-7.72	1.34	1.39
80	B5	631	U	C2-N3	-7.69	1.32	1.37
84	CW	64	A	N7-C5	-7.67	1.34	1.39
80	B5	1902	G	C5-C4	-7.67	1.32	1.38
80	B5	2804	A	N9-C4	-7.65	1.33	1.37
80	B5	1434	G	N9-C8	-7.65	1.32	1.37
54	BT	104	GLU	CB-CG	7.64	1.66	1.52
84	CW	14	A	N7-C5	-7.64	1.34	1.39
80	B5	1301	A	N7-C5	-7.60	1.34	1.39
80	B5	41	G	P-OP1	-7.60	1.36	1.49
80	B5	1285	G	C6-N1	7.58	1.44	1.39
80	B5	345	G	N1-C2	-7.57	1.31	1.37
80	B5	3006	A	N3-C4	-7.57	1.30	1.34
49	BO	84[B]	ILE	C-N	7.55	1.51	1.34
80	B5	970	A	N9-C4	-7.54	1.33	1.37
80	B5	1276	U	C2-N3	7.54	1.43	1.37
80	B5	2314	U	C2-N3	7.52	1.43	1.37
80	B5	2272	G	C5-C4	-7.49	1.33	1.38
80	B5	1307	G	P-O5'	-7.49	1.52	1.59
51	BQ	171	LYS	CE-NZ	7.47	1.67	1.49
80	B5	2385	G	N9-C4	-7.43	1.32	1.38
80	B5	2335	G	N3-C4	-7.43	1.30	1.35
80	B5	2134	G	N1-C2	-7.42	1.31	1.37
80	B5	934	G	P-OP1	-7.40	1.36	1.49
80	B5	2948	C	N3-C4	-7.40	1.28	1.33
80	B5	2191	U	C4-O4	-7.39	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1902	G	P-OP1	-7.39	1.36	1.49
80	B5	960	U	N1-C2	7.35	1.45	1.38
80	B5	953	G	N9-C8	-7.34	1.32	1.37
84	CW	15	G	N9-C4	-7.34	1.32	1.38
80	B5	1303	A	C5-C4	-7.32	1.33	1.38
80	B5	2943	G	N7-C5	-7.30	1.34	1.39
80	B5	3122	A	N3-C4	-7.30	1.30	1.34
80	B5	3245	A	C5-C6	-7.29	1.34	1.41
80	B5	1374	G	N1-C2	-7.27	1.31	1.37
80	B5	345	G	C6-N1	-7.27	1.34	1.39
80	B5	1515	A	C5-C6	-7.26	1.34	1.41
80	B5	1443	G	C2-N3	-7.24	1.26	1.32
80	B5	2919	A	C6-N1	-7.21	1.30	1.35
84	CW	42	C	O3'-P	-7.21	1.52	1.61
80	B5	644	G	N7-C5	-7.21	1.34	1.39
80	B5	2141	U	P-OP2	-7.19	1.36	1.49
81	B7	85	G	N1-C2	-7.19	1.31	1.37
80	B5	1849	C	C2-N3	-7.17	1.30	1.35
80	B5	2364	G	C6-N1	-7.16	1.34	1.39
80	B5	2689	A	N3-C4	-7.16	1.30	1.34
80	B5	2949	U	P-OP1	-7.16	1.36	1.49
80	B5	2364	G	N3-C4	-7.14	1.30	1.35
80	B5	1200	A	N3-C4	-7.12	1.30	1.34
80	B5	1430	U	P-OP1	-7.10	1.36	1.49
80	B5	2837	A	C5-C4	-7.10	1.33	1.38
84	CW	12	U	C2'-C1'	-7.10	1.45	1.53
79	B2	377	G	N9-C4	-7.09	1.32	1.38
81	B7	96	U	C2-O2	-7.07	1.16	1.22
80	B5	726	G	C5-C6	-7.03	1.35	1.42
82	B8	20	U	C4-O4	-7.03	1.18	1.23
80	B5	1233	G	C2'-C1'	-7.03	1.45	1.53
80	B5	1112	A	N7-C5	-7.01	1.35	1.39
80	B5	1887	A	N7-C5	-7.00	1.35	1.39
80	B5	2434	U	N3-C4	-6.99	1.32	1.38
80	B5	971	G	C5-C4	-6.98	1.33	1.38
84	CW	19	G	C6-N1	6.97	1.44	1.39
80	B5	420	G	N7-C5	-6.96	1.35	1.39
80	B5	2887	A	P-OP2	-6.96	1.37	1.49
80	B5	1042	U	C2-N3	-6.96	1.32	1.37
80	B5	2335	G	C6-N1	-6.94	1.34	1.39
80	B5	1159	A	N9-C4	-6.94	1.33	1.37
84	CW	72	C	C4'-C3'	6.94	1.60	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	3180	A	N3-C4	-6.91	1.30	1.34
80	B5	1110	U	C4-O4	-6.90	1.18	1.23
84	CW	67	C	C3'-O3'	6.90	1.51	1.42
80	B5	2361	A	N9-C4	6.90	1.42	1.37
79	B2	1456	C	N3-C4	-6.90	1.29	1.33
80	B5	2399	A	N9-C4	-6.88	1.33	1.37
80	B5	340	C	P-OP1	-6.86	1.37	1.49
80	B5	2336	U	C2-N3	-6.86	1.32	1.37
80	B5	2395	G	C5-C4	-6.84	1.33	1.38
80	B5	1184	A	N9-C4	-6.82	1.33	1.37
80	B5	1592	G	N1-C2	-6.79	1.32	1.37
80	B5	1901	A	N7-C5	-6.79	1.35	1.39
80	B5	2836	C	C4-C5	6.78	1.48	1.43
80	B5	1319	G	N7-C5	-6.77	1.35	1.39
80	B5	986	U	C4-C5	-6.76	1.37	1.43
80	B5	1178	G	C2-N3	-6.75	1.27	1.32
80	B5	1592	G	C6-N1	-6.75	1.34	1.39
80	B5	2636	A	C6-N1	-6.75	1.30	1.35
80	B5	334	A	C5-C4	-6.74	1.34	1.38
84	CW	16	U	P-O5'	-6.74	1.53	1.59
80	B5	429	U	C2-N3	-6.74	1.33	1.37
84	CW	5	G	C2-N3	6.73	1.38	1.32
80	B5	930	U	C4-O4	-6.73	1.18	1.23
80	B5	2138	A	N7-C5	-6.73	1.35	1.39
80	B5	1449	A	P-OP2	-6.73	1.37	1.49
79	B2	1455	G	C6-O6	6.72	1.30	1.24
80	B5	3316	A	N9-C4	-6.71	1.33	1.37
84	CW	37	A	C2'-C1'	-6.71	1.46	1.53
80	B5	1227	C	N3-C4	6.70	1.38	1.33
80	B5	847	A	N9-C4	-6.70	1.33	1.37
80	B5	2912	G	N7-C5	-6.69	1.35	1.39
80	B5	2853	A	N9-C4	-6.69	1.33	1.37
79	B2	992	A	C2-N3	-6.69	1.27	1.33
81	B7	85	G	C6-N1	-6.68	1.34	1.39
79	B2	553	G	C6-O6	6.66	1.30	1.24
80	B5	3006	A	N9-C4	-6.64	1.33	1.37
81	B7	81	U	C4-O4	-6.63	1.18	1.23
80	B5	1301	A	C5-C6	-6.62	1.35	1.41
80	B5	2918	G	N7-C5	-6.61	1.35	1.39
80	B5	2911	A	N7-C5	-6.61	1.35	1.39
80	B5	2693	C	C2-N3	-6.61	1.30	1.35
84	CW	7	A	O3'-P	-6.60	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
79	B2	1200	G	C6-N1	6.59	1.44	1.39
80	B5	1371	G	C6-N1	-6.58	1.34	1.39
80	B5	3137	C	N1-C6	6.58	1.41	1.37
49	BO	22[B]	THR	C-N	6.57	1.49	1.34
80	B5	1515	A	C6-N1	-6.57	1.30	1.35
85	CX	3	G	P-O5'	-6.56	1.53	1.59
49	BO	158[B]	ASP	C-N	6.56	1.49	1.34
80	B5	267	G	C8-N7	-6.56	1.27	1.30
80	B5	91	G	N3-C4	-6.56	1.30	1.35
80	B5	1429	G	C6-N1	-6.55	1.34	1.39
80	B5	3362	A	N3-C4	-6.55	1.30	1.34
80	B5	859	G	N1-C2	-6.53	1.32	1.37
80	B5	1833	G	N1-C2	-6.53	1.32	1.37
80	B5	1841	A	N7-C5	-6.53	1.35	1.39
80	B5	1849	C	N1-C6	-6.52	1.33	1.37
80	B5	1142	G	N7-C5	-6.52	1.35	1.39
80	B5	3106	A	N7-C5	-6.51	1.35	1.39
80	B5	1307	G	C3'-O3'	6.51	1.51	1.42
80	B5	3209	A	C5-C4	6.50	1.43	1.38
80	B5	942	U	P-OP1	-6.50	1.38	1.49
80	B5	813	G	N7-C5	-6.48	1.35	1.39
80	B5	1406	A	N3-C4	-6.46	1.30	1.34
80	B5	642	U	N3-C4	-6.44	1.32	1.38
80	B5	2323	G	C6-N1	-6.44	1.35	1.39
80	B5	1487	G	N1-C2	-6.43	1.32	1.37
80	B5	637	C	C2-O2	-6.43	1.18	1.24
80	B5	1117	G	C5-C4	-6.43	1.33	1.38
80	B5	2816	G	C5-C4	-6.43	1.33	1.38
80	B5	2147	A	C5-C6	-6.42	1.35	1.41
80	B5	2987	A	N7-C5	-6.41	1.35	1.39
79	B2	992	A	N9-C4	-6.40	1.34	1.37
80	B5	1490	A	N7-C5	-6.40	1.35	1.39
80	B5	1370	G	N1-C2	-6.40	1.32	1.37
79	B2	1754	A	N9-C4	-6.39	1.34	1.37
84	CW	58	A	N7-C5	-6.39	1.35	1.39
80	B5	3102	G	C6-N1	-6.38	1.35	1.39
80	B5	2123	G	C5-C4	-6.37	1.33	1.38
80	B5	2937	G	N9-C8	-6.37	1.33	1.37
84	CW	37	A	N7-C5	-6.36	1.35	1.39
80	B5	802	C	N1-C6	-6.36	1.33	1.37
84	CW	59	U	C2'-C1'	-6.35	1.46	1.53
80	B5	1143	A	N9-C4	-6.31	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2905	U	C2-N3	-6.31	1.33	1.37
84	CW	67	C	C1'-N1	6.30	1.58	1.48
80	B5	2291	A	N3-C4	-6.29	1.31	1.34
80	B5	1902	G	N9-C8	-6.29	1.33	1.37
80	B5	2314	U	C4-O4	6.29	1.28	1.23
79	B2	1241	G	N9-C8	6.28	1.42	1.37
80	B5	2856	G	N9-C8	-6.28	1.33	1.37
80	B5	342	A	N9-C4	-6.28	1.34	1.37
80	B5	420	G	C5-C4	-6.28	1.33	1.38
80	B5	1259	A	N7-C5	-6.27	1.35	1.39
80	B5	1913	A	C5-C6	-6.26	1.35	1.41
80	B5	1258	U	P-O5'	-6.26	1.53	1.59
80	B5	3182	G	C6-N1	-6.26	1.35	1.39
80	B5	2754	G	P-OP1	-6.25	1.38	1.49
54	BT	32	LYS	CD-CE	6.25	1.66	1.51
80	B5	1487	G	C6-N1	-6.25	1.35	1.39
80	B5	1449	A	C5-C6	-6.23	1.35	1.41
80	B5	1226	G	N7-C5	-6.23	1.35	1.39
80	B5	872	U	C4-O4	-6.21	1.18	1.23
80	B5	1851	G	N9-C8	-6.21	1.33	1.37
80	B5	2194	G	C5-C4	-6.21	1.34	1.38
84	CW	6	G	N7-C5	-6.21	1.35	1.39
79	B2	49	C	P-OP2	-6.21	1.38	1.49
80	B5	953	G	N9-C4	-6.21	1.32	1.38
50	BP	66	SER	C-O	6.20	1.35	1.23
80	B5	434	U	C2-N3	-6.19	1.33	1.37
84	CW	11	C	P-O5'	-6.19	1.53	1.59
80	B5	1835	A	P-OP1	-6.19	1.38	1.49
80	B5	2881	C	C2-O2	-6.19	1.18	1.24
80	B5	1797	A	N7-C5	-6.18	1.35	1.39
80	B5	2858	U	N3-C4	-6.18	1.32	1.38
80	B5	1229	G	C5'-C4'	6.18	1.58	1.51
80	B5	884	A	C8-N7	6.18	1.35	1.31
80	B5	2128	C	N1-C6	-6.18	1.33	1.37
80	B5	363	G	C5-C4	-6.17	1.34	1.38
80	B5	795	G	C5-C4	-6.16	1.34	1.38
80	B5	421	G	C6-N1	-6.16	1.35	1.39
80	B5	1369	A	P-OP2	-6.16	1.38	1.49
81	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
80	B5	1847	A	N9-C4	-6.15	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2848	G	N7-C5	-6.15	1.35	1.39
80	B5	2737	C	N1-C6	-6.14	1.33	1.37
80	B5	3008	A	N9-C4	-6.14	1.34	1.37
80	B5	218	G	P-O5'	-6.14	1.53	1.59
80	B5	2823	G	N7-C5	-6.14	1.35	1.39
80	B5	876	A	N3-C4	-6.13	1.31	1.34
80	B5	1279	C	C2'-C1'	-6.13	1.46	1.53
80	B5	649	A	C5-C6	-6.13	1.35	1.41
80	B5	3308	C	N3-C4	-6.13	1.29	1.33
39	BE	90	LYS	CD-CE	6.12	1.66	1.51
80	B5	659	G	N7-C5	-6.12	1.35	1.39
80	B5	1169	A	N9-C4	-6.12	1.34	1.37
80	B5	2830	G	N3-C4	-6.11	1.31	1.35
80	B5	3172	A	C8-N7	-6.11	1.27	1.31
80	B5	2377	G	N9-C8	-6.11	1.33	1.37
80	B5	1268	G	N7-C5	-6.10	1.35	1.39
81	B7	96	U	C4-O4	-6.10	1.18	1.23
80	B5	2975	U	C4-O4	-6.09	1.18	1.23
84	CW	28	G	C2'-C1'	-6.09	1.46	1.53
80	B5	1490	A	C5-C6	-6.08	1.35	1.41
80	B5	2980	U	C2-O2	-6.06	1.16	1.22
80	B5	2915	U	C2-O2	-6.06	1.16	1.22
80	B5	2733	A	N9-C4	-6.05	1.34	1.37
80	B5	1152	G	C8-N7	6.04	1.34	1.30
80	B5	3102	G	N1-C2	-6.04	1.32	1.37
84	CW	25	C	C2'-C1'	-6.04	1.46	1.53
80	B5	2341	A	N3-C4	6.04	1.38	1.34
80	B5	859	G	C6-N1	-6.03	1.35	1.39
80	B5	3005	A	C6-N1	-6.03	1.31	1.35
84	CW	38	A	C8-N7	-6.03	1.27	1.31
80	B5	1454	A	C6-N6	-6.03	1.29	1.33
80	B5	2524	A	C5-C4	6.03	1.43	1.38
80	B5	2857	C	C4-N4	-6.02	1.28	1.33
80	B5	1149	G	C5-C4	-6.01	1.34	1.38
80	B5	3335	A	N9-C4	-6.01	1.34	1.37
36	BB	262	TRP	CB-CG	-6.01	1.39	1.50
80	B5	3006	A	N7-C5	-6.00	1.35	1.39
79	B2	1782	A	C6-N1	-6.00	1.31	1.35
80	B5	1256	G	O3'-P	-6.00	1.53	1.61
83	CV	63	GLU	CA-CB	6.00	1.67	1.53
80	B5	2372	A	N3-C4	-5.99	1.31	1.34
80	B5	2948	C	C4-N4	-5.98	1.28	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1837	U	P-OP2	-5.98	1.38	1.49
80	B5	647	A	N3-C4	-5.97	1.31	1.34
80	B5	2214	A	P-OP2	-5.97	1.38	1.49
80	B5	1504	A	C6-N1	-5.97	1.31	1.35
81	B7	89	G	C5-C4	-5.97	1.34	1.38
80	B5	2730	G	N9-C4	-5.94	1.33	1.38
82	B8	111	A	N9-C4	-5.94	1.34	1.37
84	CW	45	U	P-O5'	-5.94	1.53	1.59
80	B5	1152	G	N1-C2	5.93	1.42	1.37
80	B5	1274	A	N7-C5	-5.92	1.35	1.39
80	B5	348	A	P-OP1	-5.92	1.38	1.49
80	B5	1233	G	C5'-C4'	5.92	1.58	1.51
80	B5	1174	G	C5-C4	-5.91	1.34	1.38
80	B5	744	A	N9-C4	-5.91	1.34	1.37
80	B5	2946	A	C6-N1	-5.90	1.31	1.35
80	B5	1138	U	C4-O4	-5.89	1.19	1.23
80	B5	1203	A	C5-C6	-5.89	1.35	1.41
80	B5	2704	A	N7-C5	-5.88	1.35	1.39
80	B5	857	G	C6-O6	-5.88	1.18	1.24
80	B5	931	C	C4-N4	-5.88	1.28	1.33
80	B5	345	G	C5-C4	-5.87	1.34	1.38
80	B5	1449	A	N7-C5	-5.87	1.35	1.39
80	B5	2706	G	C5-C4	-5.87	1.34	1.38
80	B5	784	A	C5-C6	-5.87	1.35	1.41
80	B5	416	A	N7-C5	-5.87	1.35	1.39
80	B5	2971	A	N9-C4	5.87	1.41	1.37
80	B5	3005	A	N7-C5	-5.86	1.35	1.39
80	B5	1332	A	C6-N1	-5.86	1.31	1.35
80	B5	2335	G	C5-C4	-5.86	1.34	1.38
80	B5	922	U	P-OP2	-5.86	1.39	1.49
80	B5	1429	G	N9-C8	-5.85	1.33	1.37
80	B5	2884	C	C2-O2	-5.84	1.19	1.24
80	B5	3095	U	C4-O4	-5.84	1.19	1.23
80	B5	1332	A	C5-C4	-5.84	1.34	1.38
80	B5	1266	G	C6-N1	5.84	1.43	1.39
80	B5	2960	C	C4-N4	-5.84	1.28	1.33
80	B5	2977	G	C6-N1	-5.84	1.35	1.39
80	B5	3000	A	N9-C4	-5.84	1.34	1.37
80	B5	3227	A	N3-C4	-5.84	1.31	1.34
80	B5	3010	U	C2-N3	-5.83	1.33	1.37
80	B5	1172	G	N1-C2	-5.82	1.33	1.37
80	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)
80	B5	518	G	C5-C4	-5.82	1.34	1.38
79	B2	992	A	N9-C8	5.81	1.42	1.37
80	B5	2278	C	N1-C6	5.81	1.40	1.37
80	B5	1462	A	N9-C4	-5.80	1.34	1.37
80	B5	1156	C	C4-N4	-5.80	1.28	1.33
80	B5	1149	G	N9-C8	-5.79	1.33	1.37
80	B5	2367	A	N9-C4	5.79	1.41	1.37
80	B5	1281	G	O3'-P	-5.79	1.54	1.61
79	B2	1291	G	N3-C4	-5.79	1.31	1.35
80	B5	2915	U	C2-N3	-5.79	1.33	1.37
80	B5	1208	U	N3-C4	-5.78	1.33	1.38
80	B5	1213	G	N1-C2	-5.78	1.33	1.37
80	B5	1477	A	N3-C4	-5.78	1.31	1.34
80	B5	2401	A	N9-C4	5.78	1.41	1.37
84	CW	26	A	C2'-C1'	-5.78	1.47	1.53
80	B5	1273	A	N7-C5	-5.77	1.35	1.39
80	B5	805	G	N7-C5	5.77	1.42	1.39
80	B5	3245	A	N7-C5	-5.77	1.35	1.39
82	B8	54	A	N9-C4	-5.77	1.34	1.37
80	B5	1305	U	N1-C6	-5.77	1.32	1.38
80	B5	1308	A	N9-C8	-5.77	1.33	1.37
80	B5	3047	U	C2-N3	-5.77	1.33	1.37
80	B5	984	G	N7-C5	-5.77	1.35	1.39
80	B5	883	A	P-OP1	5.76	1.58	1.49
80	B5	2612	U	C2-N3	-5.76	1.33	1.37
79	B2	993	A	N7-C5	-5.76	1.35	1.39
80	B5	868	C	N1-C6	-5.76	1.33	1.37
80	B5	2732	G	C6-N1	-5.76	1.35	1.39
80	B5	369	A	C6-N6	-5.75	1.29	1.33
80	B5	1849	C	C4-C5	-5.75	1.38	1.43
80	B5	2646	C	N1-C6	-5.75	1.33	1.37
80	B5	577	C	N1-C6	-5.75	1.33	1.37
80	B5	100	A	N9-C4	-5.74	1.34	1.37
80	B5	1898	G	C5-C4	-5.74	1.34	1.38
80	B5	1365	G	C6-N1	-5.73	1.35	1.39
80	B5	2888	U	C4-C5	-5.73	1.38	1.43
80	B5	1903	U	C4-O4	5.73	1.28	1.23
80	B5	1127	G	C5-C4	-5.73	1.34	1.38
80	B5	2858	U	C2-N3	-5.72	1.33	1.37
80	B5	953	G	N3-C4	-5.72	1.31	1.35
79	B2	1560	U	N3-C4	-5.72	1.33	1.38
49	BO	40[B]	ALA	C-N	-5.72	1.20	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1112	A	C6-N1	-5.72	1.31	1.35
80	B5	339	C	N3-C4	-5.71	1.29	1.33
80	B5	1450	G	C5-C4	-5.71	1.34	1.38
80	B5	2375	G	C6-N1	-5.71	1.35	1.39
80	B5	1230	G	C2'-C1'	-5.71	1.47	1.53
80	B5	2860	U	C4-O4	5.71	1.28	1.23
80	B5	2888	U	C2-N3	-5.71	1.33	1.37
80	B5	428	A	N7-C5	-5.71	1.35	1.39
80	B5	1145	G	N3-C4	-5.70	1.31	1.35
80	B5	1309	U	N1-C2	-5.70	1.33	1.38
80	B5	3013	U	C2-N3	-5.70	1.33	1.37
80	B5	326	U	C4-O4	-5.69	1.19	1.23
80	B5	3039	C	N1-C6	-5.69	1.33	1.37
84	CW	10	G	N7-C5	-5.69	1.35	1.39
80	B5	2892	A	C6-N1	-5.69	1.31	1.35
80	B5	2921	U	C4-O4	-5.69	1.19	1.23
80	B5	876	A	N1-C2	-5.68	1.29	1.34
80	B5	2957	G	C8-N7	-5.68	1.27	1.30
80	B5	2419	A	C6-N1	-5.68	1.31	1.35
84	CW	19	G	C2-N3	5.67	1.37	1.32
80	B5	1189	C	N1-C6	-5.66	1.33	1.37
81	B7	39	C	N3-C4	-5.66	1.29	1.33
80	B5	924	G	C2-N3	-5.66	1.28	1.32
80	B5	2412	G	N1-C2	-5.66	1.33	1.37
80	B5	1370	G	C6-N1	-5.66	1.35	1.39
79	B2	1746	A	N9-C4	-5.66	1.34	1.37
80	B5	2340	U	C4-O4	-5.66	1.19	1.23
80	B5	1284	C	N1-C2	-5.65	1.34	1.40
80	B5	2350	C	N1-C6	-5.65	1.33	1.37
84	CW	40	C	P-O5'	-5.65	1.54	1.59
80	B5	949	C	N3-C4	-5.64	1.29	1.33
80	B5	1910	A	C5-C4	-5.64	1.34	1.38
84	CW	48	C	O3'-P	-5.64	1.54	1.61
80	B5	652	G	C5-C4	-5.64	1.34	1.38
80	B5	2302	G	N1-C2	-5.63	1.33	1.37
80	B5	1043	C	N3-C4	-5.63	1.30	1.33
59	BY	38	GLU	CG-CD	5.62	1.60	1.51
80	B5	1338	C	N1-C6	-5.62	1.33	1.37
80	B5	1370	G	N9-C8	-5.62	1.33	1.37
80	B5	1413	G	C6-N1	-5.62	1.35	1.39
84	CW	23	A	N7-C5	-5.62	1.35	1.39
80	B5	2382	G	N7-C5	-5.62	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	200	C	N3-C4	-5.61	1.30	1.33
80	B5	657	A	N3-C4	-5.61	1.31	1.34
84	CW	41	C	P-O5'	-5.61	1.54	1.59
80	B5	2148	U	C4-O4	-5.60	1.19	1.23
80	B5	3088	G	C5-C6	-5.60	1.36	1.42
79	B2	1555	A	N3-C4	-5.60	1.31	1.34
80	B5	2391	G	C6-O6	-5.60	1.19	1.24
80	B5	2810	C	N1-C6	-5.60	1.33	1.37
80	B5	2904	U	C2-N3	-5.60	1.33	1.37
80	B5	2361	A	N7-C5	-5.60	1.35	1.39
80	B5	1320	C	C4-C5	-5.59	1.38	1.43
80	B5	2164	A	N7-C5	-5.59	1.35	1.39
80	B5	817	A	C4'-C3'	-5.59	1.47	1.52
80	B5	640	U	C2-N3	-5.59	1.33	1.37
84	CW	21	A	C2'-C1'	-5.59	1.47	1.53
80	B5	39	A	N3-C4	-5.58	1.31	1.34
80	B5	2134	G	C6-N1	-5.58	1.35	1.39
80	B5	2626	A	N9-C8	-5.58	1.33	1.37
80	B5	2323	G	N1-C2	-5.58	1.33	1.37
80	B5	2147	A	N7-C5	-5.58	1.35	1.39
49	BO	4[B]	GLN	C-N	-5.58	1.23	1.34
79	B2	577	G	C5-C6	-5.58	1.36	1.42
80	B5	1099	A	C6-N1	-5.57	1.31	1.35
80	B5	2823	G	C5-C4	-5.57	1.34	1.38
80	B5	987	U	C2-O2	-5.57	1.17	1.22
80	B5	3374	U	C4-O4	-5.57	1.19	1.23
80	B5	706	A	C5-C4	-5.56	1.34	1.38
84	CW	31	A	N7-C5	-5.56	1.35	1.39
80	B5	2941	A	N9-C8	-5.56	1.33	1.37
80	B5	3218	A	N9-C4	-5.56	1.34	1.37
80	B5	1433	A	N7-C5	-5.56	1.35	1.39
80	B5	657	A	N9-C4	-5.55	1.34	1.37
79	B2	865	A	C6-N1	-5.55	1.31	1.35
80	B5	1434	G	C5-C4	-5.55	1.34	1.38
80	B5	2647	A	N3-C4	-5.55	1.31	1.34
80	B5	1233	G	C2-N3	5.54	1.37	1.32
80	B5	2419	A	P-O5'	5.54	1.65	1.59
80	B5	2860	U	P-OP2	-5.54	1.39	1.49
80	B5	2987	A	C6-N1	-5.54	1.31	1.35
80	B5	3184	A	N9-C4	-5.54	1.34	1.37
80	B5	824	C	N3-C4	-5.54	1.30	1.33
80	B5	344	A	N9-C8	-5.54	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1174	G	C8-N7	-5.54	1.27	1.30
80	B5	1195	A	N1-C2	-5.54	1.29	1.34
80	B5	2920	U	P-OP1	-5.53	1.39	1.49
80	B5	559	A	N7-C5	-5.53	1.35	1.39
80	B5	2301	U	C2-O2	-5.53	1.17	1.22
80	B5	49	A	C5-C4	-5.53	1.34	1.38
80	B5	2336	U	N3-C4	-5.53	1.33	1.38
80	B5	1911	A	C5-C6	-5.52	1.36	1.41
80	B5	2609	A	C5-C4	-5.52	1.34	1.38
80	B5	900	G	C6-N1	-5.52	1.35	1.39
80	B5	891	G	N9-C4	-5.51	1.33	1.38
80	B5	1432	C	N1-C6	-5.51	1.33	1.37
80	B5	2336	U	C2-O2	-5.51	1.17	1.22
84	CW	36	U	C1'-N1	5.51	1.57	1.48
80	B5	1226	G	N3-C4	-5.51	1.31	1.35
79	B2	553	G	N1-C2	5.50	1.42	1.37
85	CX	2	U	O3'-P	-5.50	1.54	1.61
80	B5	2122	G	C5-C4	-5.50	1.34	1.38
79	B2	1084	A	N3-C4	-5.50	1.31	1.34
36	BB	349	LYS	CD-CE	5.49	1.65	1.51
80	B5	1301	A	N9-C8	-5.49	1.33	1.37
80	B5	2932	U	C2-N3	-5.49	1.33	1.37
80	B5	1264	G	C6-N1	5.49	1.43	1.39
80	B5	420	G	N9-C8	-5.48	1.34	1.37
79	B2	377	G	C6-N1	5.48	1.43	1.39
80	B5	635	G	P-OP2	-5.48	1.39	1.49
80	B5	2908	G	C2-N3	-5.48	1.28	1.32
80	B5	3107	U	C2-N3	-5.48	1.33	1.37
80	B5	1285	G	N1-C2	5.47	1.42	1.37
80	B5	1320	C	C4-N4	-5.47	1.29	1.33
80	B5	3088	G	N7-C5	-5.47	1.35	1.39
80	B5	421	G	N1-C2	-5.47	1.33	1.37
80	B5	365	A	N7-C5	-5.47	1.35	1.39
84	CW	42	C	C2'-C1'	-5.47	1.47	1.53
80	B5	755	A	C6-N1	-5.46	1.31	1.35
80	B5	1319	G	N9-C8	-5.46	1.34	1.37
80	B5	2775	U	C2-N3	-5.46	1.33	1.37
80	B5	2912	G	N9-C8	-5.46	1.34	1.37
82	B8	25	G	N1-C2	-5.46	1.33	1.37
80	B5	3052	G	N1-C2	-5.46	1.33	1.37
80	B5	360	G	N9-C8	-5.46	1.34	1.37
80	B5	1443	G	N3-C4	-5.45	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	CW	5	G	N9-C4	5.45	1.42	1.38
84	CW	5	G	C6-N1	5.45	1.43	1.39
80	B5	1414	G	C6-N1	-5.45	1.35	1.39
80	B5	1901	A	N9-C8	-5.45	1.33	1.37
80	B5	2744	U	C2-N3	-5.45	1.33	1.37
80	B5	1147	G	N9-C8	-5.44	1.34	1.37
81	B7	88	G	N1-C2	-5.44	1.33	1.37
80	B5	1324	U	C2-N3	-5.44	1.33	1.37
80	B5	834	U	C4-O4	-5.43	1.19	1.23
80	B5	39	A	C5-C4	-5.43	1.34	1.38
80	B5	1492	G	C2-N3	5.43	1.37	1.32
80	B5	2824	G	N7-C5	-5.43	1.35	1.39
81	B7	5	G	N9-C8	-5.43	1.34	1.37
80	B5	95	A	C5-C4	-5.43	1.34	1.38
79	B2	542	A	N9-C4	-5.42	1.34	1.37
80	B5	899	U	C4-O4	-5.42	1.19	1.23
80	B5	3096	C	N1-C6	-5.42	1.33	1.37
80	B5	1177	G	N7-C5	-5.41	1.36	1.39
80	B5	2417	U	C4-O4	5.41	1.27	1.23
80	B5	3216	G	C5-C4	-5.41	1.34	1.38
80	B5	522	A	P-O5'	-5.41	1.54	1.59
80	B5	354	U	C2-N3	-5.41	1.33	1.37
80	B5	2198	A	N9-C4	-5.41	1.34	1.37
84	CW	21	A	N7-C5	-5.41	1.36	1.39
80	B5	1875	G	C6-N1	-5.40	1.35	1.39
80	B5	2611	U	P-OP1	-5.40	1.39	1.49
80	B5	3114	A	N3-C4	-5.40	1.31	1.34
80	B5	784	A	N7-C5	-5.40	1.36	1.39
80	B5	1135	A	N9-C8	-5.40	1.33	1.37
80	B5	1327	C	N3-C4	-5.40	1.30	1.33
80	B5	363	G	N3-C4	-5.39	1.31	1.35
80	B5	3307	A	C2-N3	-5.39	1.28	1.33
80	B5	889	U	C4-O4	-5.39	1.19	1.23
80	B5	1330	A	N3-C4	-5.39	1.31	1.34
80	B5	36	C	N1-C2	-5.39	1.34	1.40
79	B2	555	A	N9-C4	5.39	1.41	1.37
80	B5	1190	A	C6-N1	-5.39	1.31	1.35
80	B5	895	A	N3-C4	-5.38	1.31	1.34
84	CW	4	C	P-O5'	-5.38	1.54	1.59
80	B5	2342	U	C2-N3	-5.38	1.33	1.37
80	B5	2365	C	N3-C4	-5.38	1.30	1.33
80	B5	831	G	N7-C5	-5.38	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2434	U	C2-N3	-5.38	1.33	1.37
79	B2	331	A	N9-C4	-5.37	1.34	1.37
80	B5	864	G	C5-C4	-5.37	1.34	1.38
80	B5	1338	C	C4-C5	-5.37	1.38	1.43
80	B5	2128	C	C4-N4	-5.37	1.29	1.33
80	B5	2395	G	C6-N1	-5.37	1.35	1.39
85	CX	3	G	C2-N3	5.37	1.37	1.32
80	B5	925	A	N7-C5	-5.37	1.36	1.39
80	B5	1908	A	C6-N1	-5.37	1.31	1.35
80	B5	1226	G	C5'-C4'	5.37	1.57	1.51
80	B5	1262	G	C2-N3	5.37	1.37	1.32
81	B7	66	A	P-OP2	-5.37	1.39	1.49
80	B5	417	A	N7-C5	-5.36	1.36	1.39
80	B5	2397	A	C5-C6	5.36	1.45	1.41
80	B5	52	A	N7-C5	-5.36	1.36	1.39
80	B5	2834	G	C2-N3	-5.36	1.28	1.32
80	B5	2376	G	C6-O6	-5.35	1.19	1.24
80	B5	3112	G	C5-C4	-5.35	1.34	1.38
80	B5	1130	A	N1-C2	-5.35	1.29	1.34
80	B5	1296	C	N3-C4	-5.35	1.30	1.33
80	B5	2717	U	C2-N3	-5.35	1.34	1.37
80	B5	2693	C	N1-C6	-5.35	1.33	1.37
80	B5	631	U	N3-C4	-5.35	1.33	1.38
80	B5	284	A	N9-C4	5.34	1.41	1.37
80	B5	2204	C	N3-C4	-5.34	1.30	1.33
80	B5	3273	A	N9-C4	-5.34	1.34	1.37
80	B5	3039	C	C4-C5	-5.34	1.38	1.43
80	B5	2937	G	C5-C4	-5.34	1.34	1.38
84	CW	72	C	C5'-C4'	5.34	1.57	1.51
80	B5	41	G	N9-C4	-5.34	1.33	1.38
80	B5	903	U	C2-N3	-5.33	1.34	1.37
80	B5	1895	A	N3-C4	-5.33	1.31	1.34
80	B5	508	U	C5-C6	-5.33	1.29	1.34
36	BB	287	LYS	CD-CE	5.33	1.64	1.51
80	B5	666	A	N3-C4	-5.33	1.31	1.34
80	B5	806	A	P-OP2	-5.32	1.40	1.49
80	B5	1845	G	C5-C4	-5.32	1.34	1.38
80	B5	2734	A	N3-C4	-5.32	1.31	1.34
80	B5	433	A	N9-C4	-5.31	1.34	1.37
80	B5	1404	G	N9-C8	-5.31	1.34	1.37
80	B5	2643	A	C6-N1	5.31	1.39	1.35
80	B5	1170	A	C8-N7	-5.31	1.27	1.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	BO	196[B]	SER	C-N	-5.31	1.21	1.34
80	B5	2632	G	C8-N7	5.31	1.34	1.30
80	B5	1443	G	N1-C2	-5.31	1.33	1.37
84	CW	6	G	N9-C4	-5.30	1.33	1.38
80	B5	994	G	C5-C4	-5.30	1.34	1.38
80	B5	1262	G	C2'-C1'	-5.30	1.47	1.53
80	B5	1415	U	C2-O2	-5.30	1.17	1.22
80	B5	818	C	P-OP1	-5.30	1.40	1.49
80	B5	2974	U	C2-N3	-5.30	1.34	1.37
43	BI	96	VAL	CB-CG2	-5.29	1.41	1.52
80	B5	505	G	N3-C4	-5.29	1.31	1.35
84	CW	59	U	C3'-C2'	-5.29	1.47	1.52
80	B5	290	G	C6-N1	-5.29	1.35	1.39
80	B5	2706	G	C8-N7	-5.29	1.27	1.30
80	B5	2697	A	N9-C4	5.29	1.41	1.37
80	B5	2730	G	N7-C5	-5.29	1.36	1.39
80	B5	934	G	C5-C4	-5.28	1.34	1.38
80	B5	1115	G	N7-C5	-5.28	1.36	1.39
80	B5	1116	G	N9-C8	-5.28	1.34	1.37
80	B5	1833	G	C6-N1	-5.28	1.35	1.39
80	B5	990	U	C2-N3	-5.28	1.34	1.37
80	B5	1362	G	C6-N1	-5.28	1.35	1.39
80	B5	1151	U	C4-O4	-5.28	1.19	1.23
80	B5	1888	U	N1-C6	-5.28	1.33	1.38
80	B5	1477	A	C6-N1	-5.28	1.31	1.35
80	B5	2163	C	N3-C4	-5.28	1.30	1.33
80	B5	2692	A	N7-C5	-5.28	1.36	1.39
84	CW	62	C	O3'-P	-5.28	1.54	1.61
80	B5	1266	G	C2-N3	5.27	1.36	1.32
61	Ba	15	VAL	C-O	5.27	1.33	1.23
80	B5	1131	G	N7-C5	-5.27	1.36	1.39
84	CW	33	U	P-O5'	-5.27	1.54	1.59
80	B5	2666	C	N1-C6	-5.27	1.33	1.37
80	B5	1278	A	C5'-C4'	5.27	1.57	1.51
80	B5	956	U	N3-C4	-5.26	1.33	1.38
80	B5	2619	G	C6-O6	-5.26	1.19	1.24
84	CW	50	U	P-O5'	-5.26	1.54	1.59
80	B5	2341	A	N9-C8	-5.26	1.33	1.37
79	B2	582	U	P-O5'	-5.26	1.54	1.59
80	B5	912	G	N3-C4	5.26	1.39	1.35
80	B5	1326	A	C5-C4	-5.26	1.35	1.38
80	B5	1086	C	C4-C5	-5.25	1.38	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2172	A	N9-C4	-5.25	1.34	1.37
80	B5	1226	G	C5-C6	-5.25	1.37	1.42
80	B5	1840	U	C2-N3	-5.25	1.34	1.37
80	B5	2191	U	N3-C4	-5.25	1.33	1.38
80	B5	3032	A	N7-C5	-5.25	1.36	1.39
40	BF	131	GLU	CD-OE2	5.25	1.31	1.25
80	B5	1425	U	C2-N3	-5.25	1.34	1.37
80	B5	436	A	C5-C4	5.25	1.42	1.38
80	B5	1171	G	N7-C5	-5.24	1.36	1.39
79	B2	538	A	N3-C4	5.24	1.38	1.34
80	B5	2214	A	N9-C4	-5.24	1.34	1.37
79	B2	973	A	N7-C5	-5.24	1.36	1.39
80	B5	658	G	N3-C4	-5.24	1.31	1.35
80	B5	3070	A	C6-N1	-5.23	1.31	1.35
80	B5	1282	G	C2-N3	5.23	1.36	1.32
80	B5	1250	G	N1-C2	5.23	1.42	1.37
80	B5	1250	G	C6-N1	5.23	1.43	1.39
80	B5	798	G	C6-O6	-5.23	1.19	1.24
80	B5	1468	A	N7-C5	-5.22	1.36	1.39
80	B5	1902	G	C6-N1	-5.22	1.35	1.39
80	B5	2734	A	N9-C4	-5.22	1.34	1.37
80	B5	2318	U	N3-C4	-5.22	1.33	1.38
80	B5	3065	G	C6-N1	-5.21	1.35	1.39
80	B5	70	A	N7-C5	-5.21	1.36	1.39
80	B5	2617	U	C4-O4	-5.21	1.19	1.23
73	Bm	79	GLU	CD-OE1	5.21	1.31	1.25
80	B5	1851	G	C8-N7	-5.21	1.27	1.30
80	B5	693	A	N9-C4	-5.21	1.34	1.37
80	B5	3316	A	N3-C4	-5.21	1.31	1.34
80	B5	835	G	C5-C4	-5.21	1.34	1.38
84	CW	51	U	P-O5'	-5.21	1.54	1.59
85	CX	1	A	C2'-C1'	-5.21	1.47	1.53
80	B5	3000	A	C5-C4	-5.20	1.35	1.38
80	B5	1262	G	N7-C5	-5.20	1.36	1.39
80	B5	1338	C	C4-N4	-5.20	1.29	1.33
80	B5	1832	C	N1-C6	-5.20	1.34	1.37
80	B5	2375	G	P-OP2	-5.20	1.40	1.49
80	B5	1607	U	C3'-O3'	5.20	1.49	1.42
80	B5	2837	A	N3-C4	-5.20	1.31	1.34
80	B5	2922	G	C6-O6	-5.20	1.19	1.24
80	B5	1117	G	N7-C5	-5.19	1.36	1.39
80	B5	884	A	C5-C6	-5.19	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	1143	A	N3-C4	-5.19	1.31	1.34
80	B5	1209	G	C2-N3	-5.19	1.28	1.32
80	B5	1409	G	C6-N1	-5.19	1.35	1.39
80	B5	2272	G	C6-N1	-5.19	1.35	1.39
80	B5	652	G	N7-C5	-5.18	1.36	1.39
80	B5	2634	U	N3-C4	5.18	1.43	1.38
80	B5	3372	A	N9-C4	5.18	1.41	1.37
80	B5	999	G	C5-C4	-5.18	1.34	1.38
80	B5	282	G	C2-N3	-5.18	1.28	1.32
80	B5	1151	U	C2-N3	-5.18	1.34	1.37
80	B5	1208	U	C2-N3	-5.18	1.34	1.37
80	B5	1515	A	N7-C5	-5.18	1.36	1.39
80	B5	2620	G	N1-C2	-5.18	1.33	1.37
80	B5	3179	U	C4-O4	-5.17	1.19	1.23
80	B5	345	G	C6-O6	-5.17	1.19	1.24
80	B5	1228	C	P-O5'	-5.17	1.54	1.59
80	B5	917	A	N3-C4	-5.17	1.31	1.34
80	B5	645	A	C8-N7	-5.17	1.27	1.31
80	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
80	B5	2859	U	N3-C4	-5.16	1.33	1.38
84	CW	70	G	N7-C5	-5.16	1.36	1.39
79	B2	352	A	N9-C8	-5.16	1.33	1.37
80	B5	404	G	N9-C8	-5.15	1.34	1.37
80	B5	3115	C	N3-C4	-5.15	1.30	1.33
80	B5	2858	U	C2-O2	-5.15	1.17	1.22
80	B5	658	G	N9-C4	-5.15	1.33	1.38
80	B5	2993	G	N7-C5	-5.15	1.36	1.39
80	B5	1838	G	C5-C4	-5.14	1.34	1.38
80	B5	2659	G	N1-C2	-5.14	1.33	1.37
80	B5	859	G	C2-N3	-5.14	1.28	1.32
80	B5	2936	A	C4'-C3'	-5.14	1.47	1.52
80	B5	649	A	N7-C5	-5.14	1.36	1.39
80	B5	1311	G	N7-C5	-5.14	1.36	1.39
79	B2	474	A	N9-C4	-5.13	1.34	1.37
80	B5	2327	U	N3-C4	-5.13	1.33	1.38
84	CW	53	G	C2'-C1'	-5.13	1.47	1.53
80	B5	1898	G	N9-C8	-5.13	1.34	1.37
80	B5	1056	U	C2-N3	5.13	1.41	1.37
42	BH	82	VAL	CB-CG2	-5.12	1.42	1.52
80	B5	1886	A	N3-C4	-5.12	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
73	Bm	79	GLU	CD-OE2	5.11	1.31	1.25
80	B5	2372	A	C6-N1	-5.11	1.31	1.35
80	B5	49	A	N3-C4	-5.11	1.31	1.34
80	B5	1902	G	C8-N7	-5.11	1.27	1.30
84	CW	9	A	N7-C5	-5.11	1.36	1.39
80	B5	627	U	C2-N3	-5.11	1.34	1.37
80	B5	1188	U	C5-C6	-5.11	1.29	1.34
80	B5	984	G	C6-N1	-5.11	1.35	1.39
80	B5	1117	G	C6-O6	-5.11	1.19	1.24
80	B5	2928	C	C4'-C3'	-5.11	1.47	1.52
80	B5	333	G	C6-N1	-5.10	1.35	1.39
80	B5	2993	G	N1-C2	-5.10	1.33	1.37
80	B5	1299	U	C4-O4	-5.10	1.19	1.23
80	B5	2291	A	N9-C4	-5.10	1.34	1.37
80	B5	2912	G	C5-C4	-5.10	1.34	1.38
80	B5	877	C	C4-N4	-5.09	1.29	1.33
80	B5	609	G	N3-C4	-5.09	1.31	1.35
80	B5	1049	C	C4-N4	-5.09	1.29	1.33
80	B5	585	A	N3-C4	-5.09	1.31	1.34
80	B5	1114	U	C2-N3	-5.09	1.34	1.37
64	Bd	61	LYS	CD-CE	5.09	1.64	1.51
79	B2	142	G	N9-C4	-5.09	1.33	1.38
80	B5	1244	A	N7-C5	-5.09	1.36	1.39
80	B5	867	G	C2-N3	-5.08	1.28	1.32
80	B5	1237	G	C2-N3	5.08	1.36	1.32
80	B5	2934	A	C6-N1	-5.08	1.31	1.35
80	B5	38	U	O3'-P	-5.08	1.55	1.61
80	B5	2243	A	N3-C4	-5.08	1.31	1.34
80	B5	3122	A	N7-C5	-5.08	1.36	1.39
80	B5	397	A	N3-C4	-5.08	1.31	1.34
80	B5	1238	C	N3-C4	5.08	1.37	1.33
80	B5	2372	A	C3'-O3'	5.08	1.49	1.42
80	B5	656	A	O3'-P	-5.08	1.55	1.61
80	B5	1150	A	C6-N1	-5.08	1.31	1.35
80	B5	2329	C	N3-C4	-5.08	1.30	1.33
80	B5	2717	U	C2-O2	-5.08	1.17	1.22
80	B5	1188	U	C2-N3	-5.08	1.34	1.37
80	B5	2414	G	C5-C4	-5.08	1.34	1.38
80	B5	2640	A	N3-C4	-5.08	1.31	1.34
80	B5	2743	A	C6-N6	-5.08	1.29	1.33
80	B5	103	G	C8-N7	5.07	1.33	1.30
80	B5	1179	A	P-OP2	-5.07	1.40	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2302	G	C6-N1	-5.07	1.36	1.39
80	B5	1332	A	N3-C4	-5.07	1.31	1.34
80	B5	2652	U	N1-C2	-5.07	1.33	1.38
84	CW	15	G	N7-C5	-5.06	1.36	1.39
80	B5	891	G	N3-C4	-5.06	1.31	1.35
80	B5	1157	G	N9-C8	-5.06	1.34	1.37
80	B5	2141	U	P-OP1	-5.06	1.40	1.49
52	BR	72	GLU	CG-CD	5.06	1.59	1.51
80	B5	332	C	N1-C6	-5.06	1.34	1.37
80	B5	1265	U	P-O5'	-5.06	1.54	1.59
80	B5	2958	A	N9-C4	-5.06	1.34	1.37
80	B5	2620	G	C5-C4	-5.06	1.34	1.38
80	B5	1308	A	N7-C5	-5.05	1.36	1.39
80	B5	1371	G	C5-C4	-5.05	1.34	1.38
84	CW	3	C	C2'-C1'	-5.05	1.47	1.53
80	B5	1863	G	N1-C2	-5.04	1.33	1.37
80	B5	1145	G	C2-N3	-5.04	1.28	1.32
80	B5	2323	G	N3-C4	-5.04	1.31	1.35
80	B5	1295	G	C6-N1	-5.04	1.36	1.39
80	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
80	B5	2359	C	C2-N3	-5.04	1.31	1.35
79	B2	387	A	N7-C5	5.04	1.42	1.39
80	B5	755	A	N3-C4	-5.04	1.31	1.34
80	B5	1231	A	N7-C5	-5.03	1.36	1.39
81	B7	94	C	C4-C5	-5.03	1.39	1.43
80	B5	3245	A	N1-C2	5.03	1.38	1.34
80	B5	987	U	C4-C5	5.03	1.48	1.43
80	B5	1910	A	C6-N6	-5.03	1.29	1.33
80	B5	2147	A	C5-C4	-5.03	1.35	1.38
80	B5	2922	G	C5-C6	-5.03	1.37	1.42
80	B5	1123	U	N3-C4	-5.03	1.33	1.38
80	B5	2190	U	C2-O2	-5.02	1.17	1.22
80	B5	2371	G	N1-C2	-5.02	1.33	1.37
80	B5	2921	U	N3-C4	-5.02	1.33	1.38
80	B5	1791	C	N1-C6	-5.02	1.34	1.37
80	B5	1797	A	C5-C4	-5.02	1.35	1.38
80	B5	1851	G	C5-C4	-5.02	1.34	1.38
80	B5	2977	G	N1-C2	-5.02	1.33	1.37
80	B5	282	G	N3-C4	-5.02	1.31	1.35
80	B5	984	G	N9-C8	-5.01	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
80	B5	2865	U	N1-C2	5.01	1.43	1.38
64	Bd	102	LYS	CD-CE	5.01	1.63	1.51
80	B5	1117	G	C8-N7	-5.01	1.27	1.30
80	B5	2303	A	N3-C4	-5.01	1.31	1.34
80	B5	2693	C	N3-C4	-5.01	1.30	1.33
80	B5	106	A	N9-C4	-5.01	1.34	1.37
80	B5	1427	U	C2-N3	-5.01	1.34	1.37
80	B5	2315	G	N9-C4	-5.01	1.33	1.38
80	B5	2327	U	C4-O4	-5.01	1.19	1.23
80	B5	2702	A	N7-C5	-5.01	1.36	1.39
80	B5	2882	U	C2-O2	-5.01	1.17	1.22
80	B5	726	G	N7-C5	-5.00	1.36	1.39
80	B5	875	G	P-OP1	-5.00	1.40	1.49

All (5304) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	36	U	P-O3'-C3'	-59.91	47.81	119.70
80	B5	1152	G	N3-C4-C5	33.59	145.40	128.60
80	B5	1256	G	P-O3'-C3'	32.78	159.04	119.70
80	B5	1152	G	N3-C4-N9	-31.65	107.01	126.00
80	B5	1152	G	N3-C2-N2	-26.89	101.08	119.90
80	B5	1152	G	C2-N3-C4	-23.94	99.93	111.90
84	CW	36	U	OP1-P-O3'	-22.58	55.52	105.20
80	B5	1238	C	P-O3'-C3'	22.24	146.38	119.70
80	B5	922	U	C5-C6-N1	-22.07	111.67	122.70
80	B5	922	U	C2-N3-C4	-21.57	114.06	127.00
80	B5	1152	G	C5-N7-C8	-19.99	94.31	104.30
80	B5	922	U	N1-C2-N3	19.42	126.55	114.90
80	B5	3245	A	C2-N3-C4	-18.99	101.10	110.60
80	B5	1152	G	C8-N9-C1'	18.97	151.67	127.00
84	CW	36	U	OP2-P-O3'	-18.96	63.48	105.20
80	B5	3245	A	C5-N7-C8	-18.62	94.59	103.90
79	B2	553	G	N1-C6-O6	18.57	131.04	119.90
79	B2	1200	G	N1-C6-O6	17.86	130.62	119.90
80	B5	1152	G	N1-C6-O6	17.22	130.23	119.90
84	CW	36	U	O3'-P-O5'	17.02	136.34	104.00
80	B5	1284	C	C6-N1-C2	-16.95	113.52	120.30
84	CW	5	G	C5-C6-O6	-16.95	118.43	128.60
80	B5	1152	G	C4-N9-C1'	-16.82	104.64	126.50
80	B5	1152	G	C4-C5-N7	16.65	117.46	110.80
84	CW	7	A	P-O3'-C3'	16.47	139.46	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1152	G	N1-C2-N2	16.24	130.82	116.20
80	B5	922	U	N1-C2-O2	-16.08	111.54	122.80
80	B5	3245	A	N7-C8-N9	15.79	121.70	113.80
80	B5	1226	G	C5'-C4'-C3'	15.75	141.20	116.00
80	B5	776	U	C5-C6-N1	-15.52	114.94	122.70
80	B5	2726	C	C6-N1-C2	-15.41	114.14	120.30
80	B5	1450	G	C5-N7-C8	15.27	111.94	104.30
80	B5	1274	A	N1-C6-N6	15.11	127.67	118.60
80	B5	3245	A	C4-C5-N7	15.02	118.21	110.70
79	B2	577	G	C4-C5-N7	15.00	116.80	110.80
84	CW	17	C	P-O3'-C3'	14.98	137.68	119.70
84	CW	21	A	N1-C6-N6	14.96	127.58	118.60
84	CW	19	G	P-O5'-C5'	14.92	144.78	120.90
80	B5	3245	A	N1-C6-N6	14.81	127.49	118.60
80	B5	3245	A	C6-C5-N7	-14.53	122.13	132.30
80	B5	1152	G	C5-C6-O6	-14.41	119.95	128.60
79	B2	1773	C	N3-C4-C5	-14.32	116.17	121.90
79	B2	1200	G	C5-C6-O6	-14.21	120.07	128.60
80	B5	2353	G	C5-C6-O6	-14.08	120.15	128.60
80	B5	2634	U	C5-C4-O4	-13.98	117.51	125.90
80	B5	2726	C	C5-C4-N4	13.97	129.98	120.20
80	B5	2634	U	C2-N3-C4	-13.96	118.63	127.00
85	CX	2	U	P-O3'-C3'	13.95	136.44	119.70
84	CW	76	A	N1-C6-N6	13.86	126.92	118.60
84	CW	5	G	N1-C6-O6	13.85	128.21	119.90
80	B5	776	U	N1-C2-N3	13.84	123.21	114.90
80	B5	1592	G	N1-C6-O6	-13.84	111.60	119.90
80	B5	1260	A	N1-C6-N6	13.69	126.81	118.60
84	CW	68	C	C5'-C4'-C3'	13.50	137.60	116.00
84	CW	38	A	N1-C6-N6	13.48	126.69	118.60
80	B5	776	U	C4-C5-C6	13.44	127.76	119.70
80	B5	1450	G	N7-C8-N9	-13.39	106.40	113.10
80	B5	1266	G	N1-C6-O6	13.39	127.93	119.90
79	B2	1560	U	C5-C4-O4	13.35	133.91	125.90
80	B5	2245	C	C6-N1-C2	-13.34	114.96	120.30
80	B5	2372	A	C8-N9-C4	-13.29	100.48	105.80
79	B2	1773	C	C6-N1-C2	-13.28	114.99	120.30
80	B5	922	U	C4-C5-C6	13.23	127.64	119.70
80	B5	1271	A	N1-C6-N6	13.20	126.52	118.60
80	B5	631	U	N3-C2-O2	-13.11	113.02	122.20
80	B5	1258	U	P-O5'-C5'	13.10	141.87	120.90
80	B5	2278	C	N1-C2-O2	-13.06	111.07	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1226	G	N1-C6-O6	13.04	127.72	119.90
80	B5	2303	A	C2-N3-C4	13.04	117.12	110.60
80	B5	1245	A	N1-C6-N6	12.95	126.37	118.60
80	B5	3214	U	C5-C4-O4	12.94	133.66	125.90
80	B5	2361	A	C2-N3-C4	12.88	117.04	110.60
85	CX	1	A	N1-C6-N6	12.86	126.31	118.60
80	B5	2726	C	N1-C2-N3	12.84	128.19	119.20
80	B5	1208	U	N3-C4-O4	-12.76	110.47	119.40
80	B5	2308	C	N1-C2-O2	-12.71	111.27	118.90
80	B5	1266	G	C5-C6-O6	-12.68	120.99	128.60
79	B2	577	G	C5-N7-C8	-12.67	97.97	104.30
80	B5	1208	U	C5-C4-O4	12.66	133.50	125.90
80	B5	3214	U	N3-C2-O2	-12.66	113.34	122.20
80	B5	2327	U	C5-C6-N1	-12.64	116.38	122.70
80	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
80	B5	1251	A	N1-C6-N6	12.60	126.16	118.60
80	B5	1258	U	P-O3'-C3'	12.58	134.79	119.70
84	CW	64	A	N1-C6-N6	12.56	126.14	118.60
79	B2	1541	G	N1-C6-O6	-12.56	112.37	119.90
84	CW	58	A	N1-C6-N6	12.56	126.13	118.60
80	B5	1371	G	N1-C6-O6	-12.54	112.38	119.90
80	B5	2758	A	C2-N3-C4	12.49	116.84	110.60
80	B5	1846	C	C5-C6-N1	-12.46	114.77	121.00
80	B5	1434	G	C5-N7-C8	12.35	110.48	104.30
80	B5	776	U	N3-C2-O2	-12.35	113.55	122.20
80	B5	1450	G	C4-C5-N7	-12.29	105.88	110.80
81	B7	120	C	C6-N1-C2	12.29	125.22	120.30
80	B5	1233	G	C5'-C4'-C3'	12.26	135.61	116.00
80	B5	591	G	C5-C6-O6	-12.25	121.25	128.60
80	B5	3245	A	N1-C2-N3	12.11	135.35	129.30
84	CW	48	C	O4'-C1'-N1	12.10	117.88	108.20
80	B5	1278	A	N1-C6-N6	12.06	125.83	118.60
80	B5	2340	U	N3-C4-O4	-11.99	111.00	119.40
80	B5	1268	G	N1-C6-O6	11.96	127.07	119.90
80	B5	2726	C	C4-C5-C6	11.96	123.38	117.40
80	B5	1285	G	N1-C6-O6	11.92	127.05	119.90
80	B5	1308	A	N7-C8-N9	11.92	119.76	113.80
80	B5	1252	A	N1-C6-N6	11.91	125.75	118.60
79	B2	1200	G	N3-C2-N2	-11.91	111.57	119.90
80	B5	1056	U	C4-C5-C6	11.90	126.84	119.70
80	B5	1225	A	N1-C6-N6	11.86	125.71	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	667	C	C6-N1-C2	11.84	125.04	120.30
80	B5	290	G	N1-C6-O6	-11.80	112.82	119.90
80	B5	966	U	N3-C2-O2	-11.76	113.97	122.20
80	B5	1231	A	N1-C6-N6	11.76	125.65	118.60
80	B5	2278	C	N1-C2-N3	11.73	127.41	119.20
84	CW	60	U	O4'-C1'-N1	11.69	117.55	108.20
79	B2	577	G	C5-C6-O6	-11.67	121.60	128.60
80	B5	2726	C	N3-C4-C5	-11.66	117.23	121.90
80	B5	2808	A	N9-C4-C5	-11.66	101.14	105.80
80	B5	1263	A	N1-C6-N6	11.64	125.59	118.60
84	CW	26	A	N1-C6-N6	11.61	125.57	118.60
84	CW	6	G	N1-C6-O6	11.61	126.86	119.90
84	CW	74	C	P-O3'-C3'	11.53	133.53	119.70
80	B5	1130	A	C2-N3-C4	11.52	116.36	110.60
80	B5	1389	G	C4-C5-N7	11.52	115.41	110.80
84	CW	53	G	C5-C6-O6	-11.45	121.73	128.60
79	B2	1782	A	N9-C4-C5	11.44	110.38	105.80
84	CW	37	A	N1-C6-N6	11.44	125.46	118.60
80	B5	1592	G	N3-C2-N2	11.42	127.90	119.90
80	B5	1226	G	O4'-C1'-N9	11.41	117.33	108.20
80	B5	1797	A	C5-N7-C8	11.41	109.60	103.90
80	B5	1232	C	O4'-C1'-N1	11.37	117.30	108.20
80	B5	2899	C	N3-C2-O2	-11.36	113.95	121.90
84	CW	67	C	P-O3'-C3'	-11.35	106.08	119.70
80	B5	2142	A	C5-C6-N1	11.34	123.37	117.70
79	B2	553	G	N3-C2-N2	-11.29	112.00	119.90
84	CW	58	A	P-O3'-C3'	-11.29	106.15	119.70
79	B2	1280	C	N3-C4-C5	-11.27	117.39	121.90
79	B2	393	C	C6-N1-C2	11.26	124.80	120.30
80	B5	414	U	C4-C5-C6	11.26	126.46	119.70
80	B5	1240	A	N1-C6-N6	11.26	125.36	118.60
79	B2	1600	A	C2-N3-C4	-11.25	104.98	110.60
80	B5	1273	A	N1-C6-N6	11.24	125.34	118.60
84	CW	31	A	N1-C6-N6	11.23	125.34	118.60
79	B2	639	U	N3-C2-O2	-11.22	114.35	122.20
80	B5	1229	G	O4'-C1'-N9	11.21	117.17	108.20
83	CV	63	GLU	CB-CA-C	-11.20	88.00	110.40
80	B5	1227	C	C6-N1-C2	-11.20	115.82	120.30
80	B5	1257	C	O4'-C1'-N1	11.19	117.15	108.20
80	B5	3377	G	C5-C6-O6	-11.18	121.89	128.60
80	B5	2744	U	N3-C2-O2	-11.17	114.38	122.20
80	B5	1249	G	N1-C6-O6	11.12	126.57	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1004	U	N1-C2-O2	11.11	130.58	122.80
79	B2	577	G	N1-C6-O6	11.08	126.55	119.90
80	B5	2278	C	N3-C4-N4	-11.06	110.26	118.00
80	B5	2836	C	C2-N3-C4	-11.06	114.37	119.90
80	B5	15	C	C6-N1-C2	-11.04	115.88	120.30
84	CW	47	U	P-O3'-C3'	11.03	132.94	119.70
80	B5	1270	A	N1-C6-N6	11.00	125.20	118.60
80	B5	3060	C	N1-C2-O2	-10.99	112.31	118.90
80	B5	776	U	C5-C4-O4	10.93	132.46	125.90
80	B5	3138	U	N1-C2-O2	-10.92	115.15	122.80
80	B5	41	G	N1-C6-O6	10.88	126.43	119.90
80	B5	947	G	N3-C4-C5	-10.88	123.16	128.60
80	B5	420	G	C6-N1-C2	-10.87	118.58	125.10
84	CW	73	A	N1-C6-N6	10.86	125.11	118.60
80	B5	931	C	C2-N3-C4	-10.85	114.47	119.90
80	B5	1119	C	N3-C4-C5	10.85	126.24	121.90
80	B5	2632	G	N1-C6-O6	-10.85	113.39	119.90
80	B5	41	G	C5-C6-O6	-10.83	122.10	128.60
80	B5	1403	C	C6-N1-C2	10.82	124.63	120.30
83	CV	63	GLU	N-CA-CB	10.82	130.08	110.60
80	B5	1259	A	N1-C6-N6	10.81	125.09	118.60
79	B2	144	U	N3-C2-O2	-10.81	114.63	122.20
79	B2	1782	A	C8-N9-C4	-10.79	101.48	105.80
80	B5	2726	C	N3-C2-O2	-10.79	114.34	121.90
80	B5	922	U	C2-N1-C1'	-10.78	104.77	117.70
80	B5	2343	C	N3-C4-C5	10.76	126.21	121.90
84	CW	53	G	N1-C6-O6	10.76	126.36	119.90
79	B2	1560	U	N3-C2-O2	-10.74	114.68	122.20
80	B5	2634	U	C5-C6-N1	-10.74	117.33	122.70
80	B5	2341	A	C8-N9-C4	10.74	110.09	105.80
79	B2	1455	G	C5-C6-N1	-10.73	106.14	111.50
84	CW	14	A	N1-C6-N6	10.72	125.03	118.60
80	B5	1147	G	C4-C5-N7	-10.68	106.53	110.80
80	B5	1228	C	C6-N1-C2	-10.67	116.03	120.30
80	B5	2288	G	C5-C6-N1	10.67	116.83	111.50
80	B5	2353	G	N1-C6-O6	10.67	126.30	119.90
80	B5	1434	G	N7-C8-N9	-10.65	107.77	113.10
80	B5	2290	C	C5-C6-N1	-10.65	115.68	121.00
80	B5	957	C	N3-C4-C5	10.64	126.16	121.90
80	B5	2631	U	C2-N3-C4	-10.64	120.62	127.00
80	B5	2899	C	N1-C2-N3	10.63	126.64	119.20
84	CW	16	U	C6-N1-C2	-10.61	114.63	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	52	G	N1-C6-O6	10.59	126.25	119.90
80	B5	2905	U	C5-C6-N1	-10.59	117.41	122.70
84	CW	9	A	N1-C6-N6	10.58	124.95	118.60
80	B5	2234	G	C5-C6-O6	-10.57	122.26	128.60
84	CW	28	G	N1-C6-O6	10.55	126.23	119.90
79	B2	553	G	C5-C6-N1	-10.52	106.24	111.50
80	B5	546	C	C2-N1-C1'	10.52	130.37	118.80
80	B5	1592	G	N1-C2-N2	-10.52	106.73	116.20
80	B5	1907	C	C6-N1-C2	-10.51	116.09	120.30
80	B5	2314	U	C5-C4-O4	-10.51	119.59	125.90
80	B5	3172	A	C8-N9-C4	10.51	110.00	105.80
80	B5	1848	G	C5-C6-O6	-10.50	122.30	128.60
79	B2	577	G	C6-C5-N7	-10.50	124.10	130.40
80	B5	1911	A	C8-N9-C4	10.46	109.98	105.80
80	B5	2836	C	C5-C6-N1	-10.45	115.78	121.00
80	B5	965	A	C2-N3-C4	10.44	115.82	110.60
80	B5	2314	U	N3-C4-O4	10.43	126.70	119.40
80	B5	2512	C	C6-N1-C2	-10.42	116.13	120.30
79	B2	639	U	N1-C2-O2	10.41	130.09	122.80
80	B5	2211	U	C4-C5-C6	10.41	125.95	119.70
80	B5	930	U	N3-C4-C5	10.40	120.84	114.60
80	B5	819	U	C5-C6-N1	-10.39	117.50	122.70
84	CW	43	C	C5'-C4'-C3'	-10.39	99.37	116.00
79	B2	1782	A	C5-C6-N6	10.38	132.00	123.70
80	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
80	B5	1301	A	N1-C6-N6	10.34	124.80	118.60
80	B5	1241	U	P-O3'-C3'	10.34	132.10	119.70
80	B5	1004	U	N3-C4-O4	-10.33	112.17	119.40
80	B5	1303	A	N1-C2-N3	-10.31	124.14	129.30
80	B5	2364	G	N1-C6-O6	-10.31	113.71	119.90
80	B5	1297	C	C2-N3-C4	-10.29	114.75	119.90
80	B5	2257	C	C6-N1-C2	-10.28	116.19	120.30
80	B5	1262	G	N1-C6-O6	10.28	126.07	119.90
80	B5	1429	G	N3-C2-N2	10.28	127.09	119.90
84	CW	75	C	O4'-C1'-N1	10.27	116.42	108.20
80	B5	1797	A	N7-C8-N9	-10.27	108.66	113.80
80	B5	2211	U	C5-C4-O4	10.26	132.05	125.90
80	B5	1391	C	N1-C2-O2	-10.25	112.75	118.90
84	CW	28	G	C5-C6-O6	-10.25	122.45	128.60
80	B5	847	A	C8-N9-C4	10.23	109.89	105.80
80	B5	1903	U	N3-C4-O4	10.21	126.55	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2148	U	N1-C2-O2	-10.20	115.66	122.80
80	B5	414	U	C5-C6-N1	-10.19	117.61	122.70
82	B8	8	C	C6-N1-C2	-10.19	116.23	120.30
84	CW	23	A	N1-C6-N6	10.18	124.71	118.60
80	B5	1513	G	C8-N9-C4	-10.18	102.33	106.40
80	B5	1240	A	P-O3'-C3'	10.15	131.89	119.70
80	B5	1284	C	C4'-C3'-C2'	10.14	112.74	102.60
80	B5	1481	A	C8-N9-C4	-10.13	101.75	105.80
80	B5	652	G	N1-C2-N2	-10.12	107.09	116.20
80	B5	1056	U	C6-N1-C2	-10.11	114.93	121.00
80	B5	1226	G	P-O3'-C3'	10.10	131.82	119.70
79	B2	507	U	N3-C2-O2	-10.10	115.13	122.20
80	B5	1285	G	C5-C6-O6	-10.09	122.54	128.60
80	B5	1440	G	N1-C6-O6	-10.09	113.85	119.90
84	CW	22	G	N1-C6-O6	10.08	125.95	119.90
80	B5	2632	G	C5-C6-O6	10.07	134.64	128.60
80	B5	3096	C	C4-C5-C6	10.06	122.43	117.40
80	B5	2343	C	C2-N3-C4	-10.04	114.88	119.90
80	B5	1124	U	C4-C5-C6	-10.03	113.68	119.70
83	CV	435	TYR	CA-CB-CG	10.03	132.45	113.40
84	CW	69	G	N1-C6-O6	10.02	125.91	119.90
80	B5	3006	A	C2-N3-C4	-10.02	105.59	110.60
82	B8	25	G	N1-C6-O6	-10.00	113.90	119.90
79	B2	542	A	N7-C8-N9	9.99	118.80	113.80
80	B5	1208	U	N3-C2-O2	-9.99	115.21	122.20
80	B5	1308	A	C8-N9-C4	-9.98	101.81	105.80
84	CW	17	C	O4'-C1'-N1	9.97	116.17	108.20
80	B5	420	G	C5-C6-O6	-9.95	122.63	128.60
80	B5	2905	U	C2-N3-C4	-9.95	121.03	127.00
80	B5	2366	C	C5-C6-N1	9.95	125.98	121.00
80	B5	2952	G	C5-C6-O6	-9.95	122.63	128.60
80	B5	2808	A	C8-N9-C4	9.94	109.78	105.80
80	B5	340	C	C2-N3-C4	-9.94	114.93	119.90
80	B5	2824	G	N3-C2-N2	-9.94	112.94	119.90
82	B8	32	C	N1-C2-O2	-9.94	112.94	118.90
80	B5	877	C	N3-C4-C5	9.93	125.87	121.90
80	B5	1484	U	C5-C6-N1	-9.93	117.74	122.70
80	B5	3362	A	C2-N3-C4	-9.91	105.64	110.60
79	B2	1096	C	C2-N1-C1'	9.90	129.69	118.80
80	B5	1246	G	P-O3'-C3'	9.89	131.57	119.70
80	B5	1284	C	O4'-C1'-N1	9.89	116.11	108.20
80	B5	1389	G	N9-C4-C5	-9.89	101.44	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	1486	G	C5-N7-C8	-9.89	99.36	104.30
80	B5	1655	G	C8-N9-C4	-9.89	102.44	106.40
80	B5	339	C	N3-C4-N4	-9.86	111.10	118.00
79	B2	1198	G	C8-N9-C4	-9.86	102.46	106.40
79	B2	1745	G	C5-C6-O6	-9.85	122.69	128.60
84	CW	44	G	N1-C6-O6	9.85	125.81	119.90
80	B5	1152	G	N7-C8-N9	9.84	118.02	113.10
80	B5	1655	G	N7-C8-N9	9.84	118.02	113.10
80	B5	2118	C	N3-C2-O2	-9.83	115.02	121.90
80	B5	1258	U	O4'-C1'-N1	9.82	116.06	108.20
79	B2	553	G	C5-C6-O6	-9.82	122.71	128.60
79	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
80	B5	947	G	C5-C6-N1	9.77	116.38	111.50
80	B5	1248	C	O4'-C1'-N1	9.76	116.01	108.20
80	B5	835	G	C5-C6-O6	-9.76	122.74	128.60
80	B5	1392	G	C8-N9-C4	9.76	110.30	106.40
80	B5	2134	G	N1-C6-O6	-9.76	114.05	119.90
80	B5	3096	C	C2-N3-C4	-9.76	115.02	119.90
80	B5	1064	A	N1-C6-N6	9.74	124.44	118.60
80	B5	1057	A	N1-C6-N6	9.74	124.44	118.60
80	B5	1147	G	C5-N7-C8	9.73	109.17	104.30
84	CW	52	G	C5-C6-O6	-9.73	122.76	128.60
80	B5	2948	C	N3-C4-N4	-9.73	111.19	118.00
80	B5	2917	G	C5-C6-O6	-9.73	122.76	128.60
80	B5	2278	C	C6-N1-C2	-9.72	116.41	120.30
84	CW	44	G	C5-C6-O6	-9.72	122.77	128.60
80	B5	815	G	N1-C6-O6	-9.71	114.07	119.90
80	B5	1260	A	O4'-C1'-N9	9.71	115.97	108.20
80	B5	645	A	C6-N1-C2	-9.71	112.77	118.60
80	B5	1448	U	C5-C6-N1	-9.71	117.84	122.70
80	B5	2361	A	N3-C4-C5	-9.71	120.00	126.80
80	B5	1152	G	C8-N9-C4	-9.71	102.52	106.40
80	B5	1888	U	C5-C6-N1	-9.70	117.85	122.70
80	B5	1229	G	N1-C6-O6	9.68	125.71	119.90
80	B5	1250	G	C5-C6-O6	-9.68	122.79	128.60
80	B5	3060	C	N3-C4-N4	9.68	124.77	118.00
80	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
84	CW	69	G	C5-C6-O6	-9.65	122.81	128.60
79	B2	553	G	C6-C5-N7	-9.64	124.61	130.40
79	B2	1280	C	N3-C4-N4	9.64	124.75	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1262	G	C5-C6-O6	-9.64	122.82	128.60
80	B5	1127	G	C5-C6-O6	-9.63	122.82	128.60
80	B5	2246	G	N9-C4-C5	9.63	109.25	105.40
80	B5	2211	U	N1-C2-N3	9.63	120.68	114.90
80	B5	591	G	N1-C6-O6	9.62	125.67	119.90
80	B5	1327	C	N3-C4-N4	-9.61	111.27	118.00
83	CV	495	TYR	CB-CG-CD2	-9.61	115.23	121.00
80	B5	2391	G	C8-N9-C4	-9.60	102.56	106.40
79	B2	1782	A	N1-C6-N6	-9.60	112.84	118.60
81	B7	49	G	N1-C6-O6	9.58	125.65	119.90
80	B5	518	G	C5-C6-O6	-9.57	122.86	128.60
80	B5	340	C	C5-C6-N1	-9.57	116.21	121.00
80	B5	2899	C	C5-C4-N4	9.56	126.89	120.20
80	B5	2424	A	N1-C6-N6	9.56	124.33	118.60
80	B5	776	U	C2-N3-C4	-9.55	121.27	127.00
84	CW	67	C	O3'-P-O5'	-9.54	85.88	104.00
80	B5	1056	U	N1-C2-N3	9.53	120.62	114.90
80	B5	2572	C	N1-C2-O2	9.53	124.62	118.90
80	B5	905	U	C5-C4-O4	-9.52	120.19	125.90
80	B5	1042	U	N3-C4-O4	-9.52	112.74	119.40
80	B5	1403	C	C5-C4-N4	-9.51	113.55	120.20
80	B5	2705	A	C5-C6-N1	9.51	122.45	117.70
80	B5	1848	G	N1-C6-O6	9.50	125.60	119.90
80	B5	1888	U	C4-C5-C6	9.49	125.39	119.70
84	CW	15	G	N1-C6-O6	9.49	125.59	119.90
83	CV	435	TYR	CB-CG-CD1	9.48	126.69	121.00
80	B5	708	G	C4-C5-N7	9.48	114.59	110.80
79	B2	1486	G	N7-C8-N9	9.48	117.84	113.10
82	B8	113	U	C5-C6-N1	9.48	127.44	122.70
80	B5	2202	C	C5-C4-N4	-9.46	113.58	120.20
84	CW	7	A	N1-C6-N6	9.46	124.27	118.60
80	B5	3362	A	N7-C8-N9	9.45	118.53	113.80
79	B2	139	C	C6-N1-C2	-9.45	116.52	120.30
80	B5	1858	A	C8-N9-C4	-9.45	102.02	105.80
79	B2	453	U	N3-C2-O2	-9.45	115.59	122.20
79	B2	1456	C	C5-C4-N4	9.45	126.81	120.20
80	B5	2978	U	N3-C2-O2	-9.44	115.59	122.20
80	B5	644	G	C2-N3-C4	9.44	116.62	111.90
80	B5	386	A	N1-C6-N6	9.42	124.25	118.60
80	B5	1902	G	C5-C6-O6	-9.42	122.95	128.60
80	B5	40	A	N1-C2-N3	9.42	134.01	129.30
80	B5	2830	G	N9-C4-C5	9.42	109.17	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1210	U	C5-C4-O4	9.41	131.55	125.90
79	B2	1282	U	N3-C2-O2	-9.41	115.61	122.20
80	B5	1449	A	C2-N3-C4	-9.41	105.89	110.60
80	B5	947	G	C2-N3-C4	9.41	116.61	111.90
80	B5	546	C	N1-C2-O2	9.41	124.55	118.90
79	B2	1258	U	N3-C2-O2	-9.39	115.62	122.20
80	B5	966	U	N1-C2-O2	9.39	129.37	122.80
80	B5	1447	G	C8-N9-C4	-9.39	102.64	106.40
80	B5	3218	A	C5-N7-C8	-9.38	99.21	103.90
80	B5	1437	C	C6-N1-C2	-9.38	116.55	120.30
80	B5	994	G	C5-C6-N1	9.37	116.18	111.50
80	B5	2899	C	C6-N1-C2	-9.37	116.55	120.30
79	B2	1654	G	C5-C6-N1	9.36	116.18	111.50
80	B5	282	G	C8-N9-C4	-9.36	102.66	106.40
80	B5	21	G	C2-N3-C4	-9.34	107.23	111.90
80	B5	1849	C	N1-C2-O2	9.34	124.50	118.90
80	B5	811	U	C5-C6-N1	-9.33	118.03	122.70
80	B5	1274	A	C5-C6-N6	-9.32	116.25	123.70
80	B5	3214	U	N3-C4-O4	-9.32	112.88	119.40
80	B5	3309	G	N3-C4-C5	-9.31	123.95	128.60
79	B2	1169	G	C8-N9-C4	-9.30	102.68	106.40
80	B5	1246	G	N1-C6-O6	9.28	125.47	119.90
80	B5	1284	C	N3-C4-C5	-9.28	118.19	121.90
80	B5	1879	A	N1-C6-N6	9.27	124.16	118.60
80	B5	2364	G	N9-C4-C5	9.27	109.11	105.40
82	B8	80	A	C8-N9-C4	-9.27	102.09	105.80
80	B5	3050	U	N3-C2-O2	-9.26	115.72	122.20
80	B5	3060	C	C5-C4-N4	-9.26	113.72	120.20
80	B5	3376	A	C8-N9-C4	-9.26	102.09	105.80
80	B5	721	G	N1-C6-O6	-9.26	114.34	119.90
80	B5	1371	G	C5-C6-N1	9.26	116.13	111.50
80	B5	1151	U	N3-C4-O4	-9.26	112.92	119.40
80	B5	1449	A	N1-C6-N6	9.25	124.15	118.60
84	CW	19	G	C5-C6-O6	-9.24	123.05	128.60
80	B5	2550	U	C5-C4-O4	9.23	131.44	125.90
80	B5	968	G	N3-C2-N2	9.23	126.36	119.90
36	BB	4	ARG	NE-CZ-NH1	9.22	124.91	120.30
80	B5	3377	G	C4-C5-N7	9.22	114.49	110.80
80	B5	2340	U	N3-C4-C5	9.22	120.13	114.60
80	B5	2693	C	N3-C2-O2	-9.21	115.45	121.90
80	B5	2142	A	C6-N1-C2	-9.20	113.08	118.60
80	B5	3186	A	C8-N9-C4	-9.19	102.12	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1156	C	N3-C4-C5	9.19	125.58	121.90
36	BB	2	SER	N-CA-C	-9.17	86.24	111.00
80	B5	1050	U	N3-C2-O2	-9.17	115.78	122.20
80	B5	1843	C	C6-N1-C2	-9.16	116.64	120.30
80	B5	1450	G	C8-N9-C4	9.15	110.06	106.40
80	B5	2354	C	N1-C2-O2	-9.15	113.41	118.90
84	CW	68	C	N3-C4-N4	9.15	124.40	118.00
80	B5	2246	G	C4-C5-N7	-9.14	107.14	110.80
80	B5	1064	A	N9-C4-C5	-9.14	102.14	105.80
80	B5	834	U	N3-C4-C5	9.13	120.08	114.60
80	B5	1101	G	N3-C2-N2	9.13	126.29	119.90
79	B2	142	G	N3-C2-N2	-9.12	113.52	119.90
80	B5	3362	A	C5-N7-C8	-9.12	99.34	103.90
80	B5	2365	C	N3-C4-N4	-9.12	111.62	118.00
80	B5	3266	G	C5-C6-O6	9.11	134.07	128.60
79	B2	558	U	N3-C2-O2	-9.11	115.82	122.20
80	B5	1133	A	C2-N3-C4	9.11	115.15	110.60
80	B5	3245	A	C8-N9-C4	-9.11	102.16	105.80
84	CW	75	C	C2-N1-C1'	9.10	128.81	118.80
79	B2	402	C	C6-N1-C2	9.09	123.94	120.30
80	B5	3308	C	C4-C5-C6	9.09	121.95	117.40
84	CW	46	G	N1-C6-O6	9.09	125.36	119.90
51	BQ	66	ARG	NE-CZ-NH2	-9.07	115.76	120.30
80	B5	2744	U	N1-C2-O2	9.07	129.15	122.80
80	B5	2942	C	N3-C4-N4	9.07	124.35	118.00
80	B5	1911	A	N9-C4-C5	-9.06	102.17	105.80
79	B2	794	U	N1-C2-O2	9.06	129.14	122.80
80	B5	1181	U	C5-C6-N1	-9.05	118.17	122.70
80	B5	2176	U	N3-C2-O2	-9.05	115.86	122.20
80	B5	369	A	C8-N9-C4	-9.04	102.19	105.80
79	B2	1596	C	N3-C2-O2	-9.03	115.58	121.90
80	B5	1234	G	N1-C6-O6	9.03	125.32	119.90
80	B5	1317	A	C5-C6-N6	-9.02	116.48	123.70
80	B5	1911	A	N1-C6-N6	9.02	124.01	118.60
79	B2	542	A	C5-N7-C8	-9.01	99.39	103.90
80	B5	1250	G	N1-C6-O6	9.01	125.31	119.90
80	B5	2830	G	N1-C2-N3	9.01	129.30	123.90
80	B5	2836	C	C4-C5-C6	9.01	121.90	117.40
80	B5	631	U	N1-C2-N3	9.00	120.30	114.90
80	B5	2728	G	N9-C4-C5	8.99	109.00	105.40
80	B5	2320	A	C5-C6-N6	8.98	130.88	123.70
80	B5	3212	C	C2-N3-C4	-8.97	115.42	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	802	C	C5-C6-N1	-8.96	116.52	121.00
82	B8	113	U	C2-N1-C1'	8.96	128.46	117.70
80	B5	2202	C	N1-C2-O2	-8.96	113.52	118.90
79	B2	969	C	C6-N1-C2	8.96	123.88	120.30
80	B5	3049	A	C5-C6-N1	-8.96	113.22	117.70
80	B5	1268	G	C5-C6-O6	-8.95	123.23	128.60
80	B5	881	C	N1-C2-O2	8.94	124.27	118.90
80	B5	726	G	C4-C5-N7	8.94	114.38	110.80
84	CW	70	G	N1-C6-O6	8.94	125.26	119.90
80	B5	2857	C	N3-C4-C5	8.93	125.47	121.90
80	B5	1113	G	C2-N3-C4	-8.93	107.43	111.90
80	B5	2393	G	C8-N9-C4	8.93	109.97	106.40
80	B5	2905	U	N3-C4-O4	-8.93	113.15	119.40
80	B5	1044	U	N3-C4-O4	-8.93	113.15	119.40
80	B5	2824	G	C6-N1-C2	-8.93	119.75	125.10
81	B7	101	G	N1-C6-O6	8.93	125.25	119.90
80	B5	1242	G	O4'-C1'-N9	8.92	115.34	108.20
80	B5	1487	G	N1-C6-O6	-8.92	114.55	119.90
80	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
80	B5	1158	A	N1-C6-N6	8.92	123.95	118.60
80	B5	631	U	N3-C4-O4	-8.91	113.17	119.40
80	B5	1116	G	C4-C5-N7	-8.91	107.24	110.80
80	B5	2327	U	N3-C4-O4	-8.90	113.17	119.40
79	B2	1596	C	C6-N1-C2	-8.90	116.74	120.30
80	B5	2372	A	N7-C8-N9	8.90	118.25	113.80
80	B5	1429	G	N1-C2-N2	-8.90	108.19	116.20
80	B5	2327	U	C2-N3-C4	-8.89	121.67	127.00
80	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
80	B5	887	G	C5-C6-N1	-8.88	107.06	111.50
80	B5	3127	A	N1-C6-N6	-8.88	113.27	118.60
80	B5	802	C	C4-C5-C6	8.88	121.84	117.40
84	CW	19	G	N1-C6-O6	8.88	125.23	119.90
80	B5	2808	A	C2-N3-C4	-8.88	106.16	110.60
84	CW	65	G	N1-C6-O6	8.88	125.23	119.90
80	B5	3382	U	C2-N1-C1'	8.88	128.35	117.70
80	B5	1450	G	C6-C5-N7	8.87	135.72	130.40
80	B5	2382	G	C5-C6-O6	8.87	133.92	128.60
79	B2	1455	G	N3-C2-N2	-8.86	113.70	119.90
79	B2	1761	U	C5-C4-O4	8.86	131.21	125.90
79	B2	1745	G	N3-C4-N9	8.86	131.31	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	57	G	N1-C6-O6	8.85	125.21	119.90
84	CW	71	G	N1-C6-O6	8.85	125.21	119.90
80	B5	1226	G	C5-C6-O6	-8.85	123.29	128.60
80	B5	2719	U	C2-N1-C1'	-8.85	107.09	117.70
84	CW	25	C	O4'-C1'-N1	8.85	115.28	108.20
80	B5	2833	A	N1-C6-N6	-8.84	113.29	118.60
80	B5	2647	A	N9-C4-C5	8.84	109.34	105.80
80	B5	2881	C	C2-N3-C4	-8.84	115.48	119.90
79	B2	507	U	N1-C2-O2	8.84	128.98	122.80
80	B5	3040	A	C8-N9-C4	8.82	109.33	105.80
80	B5	1931	U	C2-N1-C1'	-8.82	107.12	117.70
80	B5	1846	C	C2-N3-C4	-8.81	115.49	119.90
80	B5	437	G	C8-N9-C4	-8.81	102.88	106.40
80	B5	1264	G	N1-C6-O6	8.80	125.18	119.90
80	B5	1314	C	C2-N3-C4	-8.80	115.50	119.90
80	B5	947	G	C6-N1-C2	-8.80	119.82	125.10
79	B2	1654	G	C6-N1-C2	-8.80	119.82	125.10
83	CV	495	TYR	CB-CG-CD1	8.79	126.27	121.00
84	CW	42	C	C5'-C4'-C3'	-8.78	101.95	116.00
80	B5	1311	G	C2-N3-C4	8.78	116.29	111.90
84	CW	18	G	C5-C6-O6	-8.78	123.33	128.60
79	B2	1749	A	N1-C6-N6	8.77	123.86	118.60
80	B5	3047	U	C5-C6-N1	-8.77	118.32	122.70
80	B5	433	A	C2-N3-C4	-8.75	106.22	110.60
80	B5	2757	U	C4-C5-C6	8.75	124.95	119.70
79	B2	992	A	N3-C4-C5	8.75	132.93	126.80
80	B5	2271	A	N7-C8-N9	-8.74	109.43	113.80
80	B5	1412	G	C8-N9-C4	-8.74	102.91	106.40
80	B5	2858	U	N3-C2-O2	-8.74	116.08	122.20
81	B7	48	U	C2-N3-C4	-8.73	121.76	127.00
80	B5	1161	G	C5-C6-N1	8.73	115.86	111.50
80	B5	2434	U	C5-C6-N1	-8.72	118.34	122.70
80	B5	1907	C	N3-C4-C5	-8.72	118.41	121.90
79	B2	453	U	C2-N1-C1'	8.72	128.16	117.70
80	B5	2416	U	C6-N1-C2	-8.71	115.77	121.00
80	B5	1119	C	C2-N3-C4	-8.71	115.55	119.90
80	B5	2865	U	C5-C6-N1	8.71	127.06	122.70
80	B5	1327	C	N1-C2-O2	8.71	124.12	118.90
79	B2	1503	A	C2-N3-C4	-8.71	106.25	110.60
80	B5	1903	U	C4-C5-C6	8.70	124.92	119.70
80	B5	2832	C	C5-C6-N1	-8.70	116.65	121.00
80	B5	3123	A	C8-N9-C4	8.69	109.28	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2290	C	C2-N3-C4	-8.69	115.56	119.90
80	B5	1840	U	N3-C2-O2	-8.68	116.12	122.20
80	B5	821	U	C5-C6-N1	-8.68	118.36	122.70
80	B5	2730	G	N1-C6-O6	8.68	125.11	119.90
79	B2	558	U	N1-C2-O2	8.67	128.87	122.80
79	B2	794	U	N3-C2-O2	-8.66	116.14	122.20
80	B5	796	U	N3-C2-O2	-8.65	116.14	122.20
80	B5	2961	G	C8-N9-C4	-8.65	102.94	106.40
85	CX	1	A	O4'-C1'-N9	8.65	115.12	108.20
80	B5	834	U	C4-C5-C6	-8.65	114.51	119.70
82	B8	17	A	N1-C6-N6	8.65	123.79	118.60
80	B5	2190	U	C5-C4-O4	8.64	131.08	125.90
80	B5	2392	C	C2-N3-C4	-8.64	115.58	119.90
80	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
80	B5	3143	C	N1-C2-O2	-8.63	113.72	118.90
80	B5	3374	U	N3-C4-C5	8.63	119.78	114.60
80	B5	726	G	C6-C5-N7	-8.63	125.22	130.40
79	B2	92	A	C8-N9-C4	-8.63	102.35	105.80
80	B5	2687	G	N1-C6-O6	-8.63	114.72	119.90
80	B5	2728	G	N3-C2-N2	-8.63	113.86	119.90
80	B5	3040	A	N7-C8-N9	-8.63	109.48	113.80
79	B2	17	C	C6-N1-C2	-8.63	116.85	120.30
80	B5	2292	U	N3-C2-O2	-8.63	116.16	122.20
81	B7	92	A	N1-C6-N6	8.62	123.77	118.60
80	B5	1244	A	N1-C6-N6	8.62	123.77	118.60
80	B5	1249	G	C5-C6-O6	-8.61	123.43	128.60
80	B5	2391	G	N1-C6-O6	-8.62	114.73	119.90
80	B5	2638	C	N1-C2-O2	-8.62	113.73	118.90
79	B2	7	G	N1-C6-O6	-8.61	114.73	119.90
80	B5	2434	U	N3-C4-O4	-8.61	113.37	119.40
80	B5	644	G	C5-C6-N1	8.60	115.80	111.50
79	B2	1291	G	N7-C8-N9	8.59	117.40	113.10
80	B5	66	A	C8-N9-C4	8.59	109.24	105.80
80	B5	1149	G	C2-N3-C4	8.59	116.19	111.90
84	CW	19	G	O5'-C5'-C4'	-8.59	95.38	111.70
80	B5	726	G	C5-C6-O6	-8.59	123.45	128.60
80	B5	339	C	C5-C4-N4	8.58	126.21	120.20
79	B2	647	G	N3-C4-N9	-8.58	120.85	126.00
80	B5	1134	G	C5-C6-O6	-8.58	123.45	128.60
80	B5	938	C	C2-N3-C4	-8.58	115.61	119.90
80	B5	2988	C	N3-C2-O2	-8.57	115.90	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3321	C	C5-C6-N1	-8.57	116.72	121.00
79	B2	1773	C	N3-C4-N4	8.57	124.00	118.00
80	B5	3010	U	N3-C2-O2	-8.56	116.20	122.20
80	B5	2385	G	N3-C4-C5	8.55	132.88	128.60
80	B5	2758	A	N1-C2-N3	-8.55	125.02	129.30
80	B5	2913	C	C4-C5-C6	8.55	121.68	117.40
80	B5	341	G	C5-C6-O6	-8.55	123.47	128.60
80	B5	326	U	C5-C4-O4	-8.55	120.77	125.90
79	B2	719	U	C2-N1-C1'	8.55	127.96	117.70
80	B5	345	G	C5-C6-N1	8.55	115.77	111.50
80	B5	2699	G	C5-C6-O6	-8.55	123.47	128.60
80	B5	946	U	N3-C2-O2	-8.54	116.22	122.20
80	B5	1050	U	N1-C2-O2	8.54	128.78	122.80
80	B5	1342	C	C5-C6-N1	-8.54	116.73	121.00
79	B2	1189	A	C8-N9-C4	8.53	109.21	105.80
80	B5	1284	C	C6-N1-C1'	-8.53	110.56	120.80
79	B2	1745	G	C5-C6-N1	8.52	115.76	111.50
80	B5	2524	A	C5-N7-C8	-8.52	99.64	103.90
80	B5	224	C	N1-C2-O2	8.51	124.00	118.90
80	B5	887	G	C5-C6-O6	8.50	133.70	128.60
80	B5	1156	C	C2-N3-C4	-8.50	115.65	119.90
79	B2	992	A	C5-C6-N1	-8.50	113.45	117.70
80	B5	2732	G	N1-C6-O6	-8.50	114.80	119.90
84	CW	10	G	N1-C6-O6	8.50	125.00	119.90
79	B2	992	A	N3-C4-N9	-8.49	120.61	127.40
80	B5	1237	G	C5-C6-O6	-8.49	123.51	128.60
80	B5	2301	U	C2-N3-C4	-8.49	121.91	127.00
80	B5	1085	A	N7-C8-N9	8.48	118.04	113.80
80	B5	2928	C	C4-C5-C6	8.48	121.64	117.40
80	B5	2988	C	C4-C5-C6	8.48	121.64	117.40
80	B5	2634	U	N1-C2-O2	-8.48	116.87	122.80
80	B5	2978	U	C5-C6-N1	-8.47	118.46	122.70
80	B5	3377	G	C5-C6-N1	8.47	115.74	111.50
80	B5	1942	U	N1-C2-O2	-8.47	116.87	122.80
80	B5	2952	G	N3-C2-N2	-8.47	113.97	119.90
83	CV	62	TYR	C-N-CA	8.47	142.87	121.70
79	B2	1387	G	N1-C6-O6	8.46	124.98	119.90
81	B7	48	U	C5-C4-O4	-8.46	120.82	125.90
82	B8	14	C	C5-C6-N1	-8.46	116.77	121.00
80	B5	999	G	N1-C6-O6	-8.46	114.83	119.90
80	B5	1143	A	C5-C6-N1	-8.45	113.47	117.70
79	B2	577	G	N7-C8-N9	8.45	117.33	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1402	C	N3-C2-O2	-8.45	115.99	121.90
80	B5	343	U	N3-C2-O2	-8.45	116.29	122.20
79	B2	1200	G	C6-C5-N7	-8.44	125.33	130.40
80	B5	1242	G	N1-C6-O6	8.44	124.96	119.90
80	B5	1409	G	N1-C6-O6	-8.43	114.84	119.90
80	B5	652	G	N3-C4-C5	-8.43	124.39	128.60
80	B5	2980	U	N1-C2-N3	8.43	119.96	114.90
80	B5	2683	U	N1-C2-O2	8.42	128.69	122.80
81	B7	96	U	C2-N3-C4	-8.42	121.95	127.00
80	B5	2345	A	N1-C6-N6	8.42	123.65	118.60
79	B2	1541	G	C5-C6-O6	8.41	133.65	128.60
80	B5	1064	A	C5-C6-N6	-8.41	116.97	123.70
82	B8	55	U	N1-C2-N3	8.41	119.95	114.90
79	B2	966	A	C8-N9-C4	8.41	109.16	105.80
84	CW	56	C	O4'-C1'-N1	8.40	114.92	108.20
84	CW	18	G	N1-C6-O6	8.40	124.94	119.90
79	B2	1486	G	C4-C5-N7	8.40	114.16	110.80
80	B5	817	A	C8-N9-C4	-8.40	102.44	105.80
80	B5	3050	U	C5-C4-O4	8.40	130.94	125.90
80	B5	1047	A	C2-N3-C4	8.39	114.80	110.60
80	B5	2307	G	N3-C4-C5	-8.39	124.41	128.60
80	B5	2913	C	C2-N3-C4	-8.39	115.71	119.90
80	B5	3102	G	N3-C2-N2	8.39	125.77	119.90
80	B5	986	U	C5-C4-O4	-8.38	120.87	125.90
80	B5	916	G	C5-C6-O6	8.38	133.63	128.60
84	CW	75	C	P-O3'-C3'	8.38	129.76	119.70
80	B5	616	G	C5-C6-N1	8.38	115.69	111.50
80	B5	3137	C	N3-C4-C5	8.37	125.25	121.90
79	B2	736	C	C2-N1-C1'	8.37	128.00	118.80
80	B5	2870	C	C6-N1-C2	-8.37	116.95	120.30
80	B5	811	U	C2-N3-C4	-8.36	121.98	127.00
80	B5	1480	G	N7-C8-N9	-8.36	108.92	113.10
80	B5	715	A	C2-N3-C4	8.36	114.78	110.60
80	B5	1898	G	C2-N3-C4	8.36	116.08	111.90
80	B5	580	C	C6-N1-C2	-8.35	116.96	120.30
84	CW	13	C	C5'-C4'-C3'	-8.35	102.64	116.00
84	CW	30	G	N1-C6-O6	8.35	124.91	119.90
43	BI	128	ARG	NE-CZ-NH2	-8.35	116.13	120.30
80	B5	1469	C	N3-C4-C5	-8.35	118.56	121.90
80	B5	3173	G	C5-C6-O6	-8.35	123.59	128.60
80	B5	1487	G	C5-C6-O6	8.35	133.61	128.60
80	B5	2320	A	C2-N3-C4	-8.35	106.43	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	926	A	C5-C6-N1	8.34	121.87	117.70
80	B5	2234	G	N9-C4-C5	-8.34	102.06	105.40
81	B7	96	U	N1-C2-N3	8.34	119.90	114.90
84	CW	38	A	C4-C5-C6	8.33	121.17	117.00
80	B5	945	C	N3-C4-C5	8.33	125.23	121.90
82	B8	80	A	N7-C8-N9	8.33	117.96	113.80
80	B5	1226	G	O4'-C4'-C3'	-8.32	95.68	104.00
79	B2	136	C	C2-N1-C1'	8.31	127.94	118.80
81	B7	93	C	C2-N3-C4	-8.31	115.74	119.90
79	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
80	B5	511	G	N1-C6-O6	-8.29	114.92	119.90
79	B2	1782	A	N1-C2-N3	8.29	133.44	129.30
80	B5	2371	G	N3-C2-N2	8.28	125.70	119.90
80	B5	1586	G	C5-C6-O6	-8.28	123.63	128.60
80	B5	2360	C	C4-C5-C6	8.27	121.54	117.40
80	B5	2683	U	N3-C2-O2	-8.27	116.41	122.20
84	CW	15	G	P-O5'-C5'	-8.26	107.68	120.90
79	B2	1280	C	N1-C2-O2	-8.26	113.94	118.90
80	B5	1494	U	C6-N1-C2	8.26	125.95	121.00
79	B2	542	A	C4-N9-C1'	8.26	141.16	126.30
80	B5	708	G	C5-N7-C8	-8.26	100.17	104.30
80	B5	818	C	N1-C2-O2	-8.26	113.94	118.90
80	B5	1604	G	C8-N9-C1'	-8.26	116.27	127.00
80	B5	1015	U	C5-C6-N1	8.25	126.83	122.70
80	B5	2621	G	N1-C6-O6	8.25	124.85	119.90
84	CW	51	U	P-O3'-C3'	-8.25	109.80	119.70
80	B5	1404	G	C8-N9-C4	8.25	109.70	106.40
80	B5	591	G	N9-C4-C5	-8.24	102.10	105.40
82	B8	55	U	C6-N1-C2	-8.24	116.05	121.00
79	B2	1096	C	N1-C2-O2	8.24	123.84	118.90
80	B5	2735	U	C5-C6-N1	8.24	126.82	122.70
80	B5	2820	A	C8-N9-C4	-8.23	102.51	105.80
80	B5	1110	U	N3-C4-C5	8.22	119.53	114.60
79	B2	319	U	N3-C2-O2	8.22	127.95	122.20
80	B5	922	U	C6-N1-C1'	8.22	132.71	121.20
80	B5	514	G	C5-C6-O6	-8.21	123.68	128.60
80	B5	715	A	N1-C6-N6	-8.20	113.68	118.60
80	B5	2859	U	N3-C4-O4	-8.20	113.66	119.40
79	B2	1129	U	N3-C4-C5	8.20	119.52	114.60
80	B5	1176	C	C5-C6-N1	-8.20	116.90	121.00
80	B5	1392	G	N7-C8-N9	-8.20	109.00	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	1291	G	N1-C2-N3	8.20	128.82	123.90
80	B5	1178	G	C8-N9-C4	-8.20	103.12	106.40
84	CW	24	G	N1-C6-O6	8.20	124.82	119.90
80	B5	2412	G	C8-N9-C4	-8.19	103.12	106.40
79	B2	1119	G	N1-C6-O6	-8.19	114.99	119.90
80	B5	280	U	C2-N3-C4	-8.19	122.09	127.00
80	B5	2665	U	N1-C2-N3	-8.19	109.99	114.90
80	B5	2190	U	N3-C4-O4	-8.18	113.67	119.40
80	B5	842	G	C5-C6-O6	-8.17	123.70	128.60
80	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
80	B5	3317	U	C5-C4-O4	8.17	130.80	125.90
80	B5	2211	U	N3-C2-O2	-8.17	116.48	122.20
80	B5	2609	A	C5-N7-C8	8.17	107.98	103.90
81	B7	93	C	C5-C6-N1	-8.16	116.92	121.00
84	CW	24	G	C5-C6-O6	-8.16	123.70	128.60
80	B5	343	U	N1-C2-O2	8.16	128.51	122.80
80	B5	435	C	C5-C4-N4	-8.16	114.49	120.20
80	B5	968	G	N9-C4-C5	-8.16	102.14	105.40
80	B5	1193	A	N1-C2-N3	8.16	133.38	129.30
80	B5	2970	C	C4-C5-C6	8.16	121.48	117.40
80	B5	1054	A	C8-N9-C4	8.16	109.06	105.80
80	B5	2246	G	N1-C6-O6	-8.16	115.00	119.90
80	B5	726	G	N1-C6-O6	8.15	124.79	119.90
79	B2	308	C	C5-C6-N1	-8.15	116.92	121.00
80	B5	1230	G	O4'-C1'-N9	8.15	114.72	108.20
80	B5	949	C	C4-C5-C6	8.15	121.48	117.40
80	B5	805	G	C8-N9-C4	8.15	109.66	106.40
80	B5	2838	A	C5-C6-N6	-8.15	117.18	123.70
83	CV	136	TYR	CB-CG-CD1	8.15	125.89	121.00
80	B5	2175	U	C5-C6-N1	-8.15	118.62	122.70
80	B5	435	C	N3-C4-C5	8.15	125.16	121.90
80	B5	290	G	C5-C6-O6	8.14	133.48	128.60
80	B5	926	A	C5-C6-N6	-8.14	117.19	123.70
80	B5	1516	C	C2-N3-C4	-8.14	115.83	119.90
79	B2	992	A	C5-N7-C8	-8.13	99.83	103.90
81	B7	69	C	C6-N1-C2	8.13	123.55	120.30
82	B8	2	A	C8-N9-C4	-8.13	102.55	105.80
80	B5	769	G	C8-N9-C4	8.13	109.65	106.40
80	B5	2695	A	C8-N9-C4	-8.12	102.55	105.80
80	B5	916	G	N1-C6-O6	-8.12	115.03	119.90
80	B5	1445	U	C5-C4-O4	-8.12	121.03	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2913	C	N1-C2-N3	8.12	124.89	119.20
80	B5	15	C	C5-C6-N1	8.12	125.06	121.00
80	B5	3215	A	C2-N3-C4	-8.12	106.54	110.60
80	B5	1879	A	C8-N9-C4	-8.11	102.56	105.80
80	B5	2302	G	C5-C6-O6	8.11	133.47	128.60
80	B5	2202	C	N3-C2-O2	8.11	127.58	121.90
80	B5	2182	A	N1-C6-N6	-8.10	113.74	118.60
79	B2	1131	A	C8-N9-C4	8.10	109.04	105.80
80	B5	1281	G	N1-C6-O6	8.10	124.76	119.90
82	B8	74	U	C5-C4-O4	-8.10	121.04	125.90
80	B5	2440	G	C8-N9-C4	-8.10	103.16	106.40
84	CW	59	U	C4'-C3'-C2'	8.10	110.69	102.60
79	B2	1241	G	C5-N7-C8	-8.09	100.25	104.30
80	B5	3362	A	N1-C2-N3	8.09	133.35	129.30
80	B5	359	U	C2-N3-C4	-8.09	122.15	127.00
80	B5	945	C	C2-N3-C4	-8.09	115.86	119.90
80	B5	2290	C	C4-C5-C6	8.09	121.44	117.40
82	B8	113	U	N3-C4-O4	8.09	125.06	119.40
84	CW	67	C	C5'-C4'-C3'	8.09	128.94	116.00
80	B5	987	U	N1-C2-N3	8.09	119.75	114.90
80	B5	329	U	C5-C6-N1	-8.09	118.66	122.70
80	B5	1113	G	C8-N9-C4	8.09	109.64	106.40
80	B5	1512	U	N1-C2-N3	8.09	119.75	114.90
80	B5	2859	U	C5-C4-O4	8.09	130.75	125.90
80	B5	3215	A	N1-C6-N6	8.09	123.45	118.60
81	B7	81	U	N3-C4-C5	8.09	119.45	114.60
80	B5	637	C	N1-C2-O2	-8.08	114.05	118.90
80	B5	1449	A	C5-N7-C8	-8.08	99.86	103.90
82	B8	38	U	C5-C6-N1	-8.08	118.66	122.70
80	B5	3309	G	N3-C4-N9	8.08	130.85	126.00
81	B7	112	G	N1-C6-O6	-8.08	115.05	119.90
80	B5	2634	U	N3-C4-C5	8.07	119.44	114.60
79	B2	1436	A	N1-C6-N6	8.06	123.44	118.60
79	B2	1773	C	C5-C6-N1	8.06	125.03	121.00
80	B5	1858	A	N3-C4-C5	-8.06	121.16	126.80
79	B2	1200	G	N1-C2-N2	8.06	123.45	116.20
79	B2	1662	G	N1-C6-O6	-8.05	115.07	119.90
80	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
80	B5	631	U	C2-N3-C4	-8.05	122.17	127.00
80	B5	824	C	C6-N1-C2	-8.05	117.08	120.30
80	B5	1239	C	N3-C4-N4	8.05	123.63	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2281	A	C8-N9-C4	8.05	109.02	105.80
80	B5	3110	C	C4-C5-C6	8.04	121.42	117.40
80	B5	1390	A	N9-C4-C5	8.04	109.02	105.80
80	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
84	CW	16	U	C2'-C3'-O3'	8.03	127.17	109.50
80	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
80	B5	2278	C	C2-N3-C4	-8.03	115.89	119.90
80	B5	2288	G	C2-N3-C4	8.02	115.91	111.90
80	B5	41	G	C5-N7-C8	-8.02	100.29	104.30
80	B5	1317	A	N1-C6-N6	8.02	123.41	118.60
80	B5	3362	A	C8-N9-C4	-8.02	102.59	105.80
80	B5	2572	C	C2-N1-C1'	8.01	127.61	118.80
80	B5	3343	G	N3-C4-N9	8.01	130.81	126.00
80	B5	857	G	C5-C6-N1	8.01	115.50	111.50
80	B5	278	U	C5-C6-N1	8.01	126.70	122.70
80	B5	413	U	C2-N3-C4	-8.01	122.20	127.00
80	B5	2189	U	N1-C2-N3	8.01	119.70	114.90
80	B5	817	A	C2-N3-C4	8.00	114.60	110.60
80	B5	3122	A	N9-C4-C5	8.00	109.00	105.80
80	B5	945	C	C6-N1-C2	8.00	123.50	120.30
80	B5	1148	G	C2-N3-C4	8.00	115.90	111.90
80	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
80	B5	1297	C	C5-C6-N1	-7.99	117.01	121.00
84	CW	22	G	C5-C6-O6	-7.98	123.81	128.60
80	B5	2317	A	C8-N9-C4	-7.98	102.61	105.80
80	B5	2777	G	C5-C6-O6	7.98	133.39	128.60
80	B5	1879	A	C6-C5-N7	-7.98	126.72	132.30
80	B5	355	A	C2-N3-C4	-7.98	106.61	110.60
80	B5	3343	G	N9-C4-C5	-7.97	102.21	105.40
79	B2	1432	U	C6-N1-C2	7.97	125.78	121.00
80	B5	2618	G	C5-C6-O6	-7.97	123.82	128.60
84	CW	12	U	O4'-C1'-N1	7.97	114.58	108.20
80	B5	3151	U	C6-N1-C2	7.97	125.78	121.00
79	B2	1490	C	C6-N1-C2	-7.96	117.11	120.30
80	B5	2366	C	N3-C4-N4	7.96	123.57	118.00
80	B5	1441	G	N1-C6-O6	-7.96	115.12	119.90
80	B5	2865	U	C5-C4-O4	-7.96	121.12	125.90
80	B5	2993	G	C5-C6-O6	-7.96	123.82	128.60
80	B5	784	A	N1-C6-N6	7.96	123.38	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2757	U	N3-C4-O4	7.96	124.97	119.40
80	B5	277	G	N1-C6-O6	-7.96	115.12	119.90
80	B5	2350	C	C5-C6-N1	-7.96	117.02	121.00
80	B5	3146	G	C5-C6-O6	7.96	133.37	128.60
80	B5	3377	G	N9-C4-C5	-7.96	102.22	105.40
80	B5	1939	G	C5-C6-O6	7.95	133.37	128.60
80	B5	2531	C	C2-N1-C1'	7.95	127.55	118.80
80	B5	2630	C	N3-C4-C5	7.95	125.08	121.90
79	B2	189	C	C2-N1-C1'	7.95	127.55	118.80
79	B2	316	A	C8-N9-C4	7.95	108.98	105.80
79	B2	349	U	N3-C2-O2	-7.95	116.64	122.20
80	B5	1261	G	N1-C6-O6	7.95	124.67	119.90
79	B2	1324	G	N3-C4-N9	-7.94	121.24	126.00
79	B2	145	A	C8-N9-C4	-7.93	102.63	105.80
80	B5	1481	A	N7-C8-N9	7.93	117.77	113.80
80	B5	2870	C	C6-N1-C1'	7.93	130.32	120.80
81	B7	85	G	N1-C6-O6	-7.93	115.14	119.90
84	CW	27	G	C5-C6-O6	-7.93	123.84	128.60
40	BF	88	ARG	NE-CZ-NH1	7.92	124.26	120.30
80	B5	1845	G	C5-C6-N1	7.92	115.46	111.50
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
80	B5	629	U	N3-C4-C5	7.90	119.34	114.60
80	B5	1793	C	N3-C4-C5	-7.90	118.74	121.90
80	B5	2836	C	N1-C2-N3	7.90	124.73	119.20
80	B5	813	G	C8-N9-C4	-7.90	103.24	106.40
80	B5	2130	G	N3-C2-N2	7.90	125.43	119.90
80	B5	2550	U	N1-C2-N3	7.90	119.64	114.90
80	B5	3102	G	N1-C6-O6	-7.90	115.16	119.90
84	CW	54	U	O4'-C1'-N1	7.89	114.51	108.20
80	B5	1484	U	C6-N1-C2	7.88	125.73	121.00
80	B5	1311	G	C5-C6-N1	7.88	115.44	111.50
79	B2	1481	C	C6-N1-C2	-7.88	117.15	120.30
81	B7	26	C	C4-C5-C6	7.88	121.34	117.40
80	B5	1480	G	C5-N7-C8	7.88	108.24	104.30
80	B5	3096	C	N1-C2-N3	7.87	124.71	119.20
80	B5	1237	G	N1-C6-O6	7.87	124.62	119.90
80	B5	1940	G	N3-C2-N2	7.87	125.41	119.90
80	B5	2891	U	C2-N3-C4	-7.87	122.28	127.00
80	B5	641	C	N1-C2-O2	-7.87	114.18	118.90
80	B5	960	U	C5-C6-N1	-7.87	118.77	122.70
80	B5	1227	C	N3-C4-N4	7.87	123.50	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	581	U	C2-N1-C1'	7.86	127.13	117.70
80	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
80	B5	2703	A	C8-N9-C4	-7.86	102.66	105.80
80	B5	851	C	C6-N1-C2	-7.86	117.16	120.30
80	B5	2913	C	C5-C6-N1	-7.86	117.07	121.00
80	B5	226	C	C6-N1-C2	7.85	123.44	120.30
80	B5	1236	G	N1-C6-O6	7.85	124.61	119.90
79	B2	1611	A	N7-C8-N9	7.85	117.72	113.80
80	B5	1243	G	N1-C6-O6	7.85	124.61	119.90
80	B5	2288	G	C6-N1-C2	-7.85	120.39	125.10
84	CW	1	G	O4'-C1'-N9	7.85	114.48	108.20
79	B2	864	U	N3-C2-O2	-7.85	116.71	122.20
80	B5	2366	C	C2-N1-C1'	7.84	127.43	118.80
80	B5	530	G	N1-C6-O6	-7.84	115.20	119.90
80	B5	2882	U	N1-C2-N3	7.84	119.60	114.90
84	CW	48	C	O4'-C1'-C2'	-7.84	97.96	105.80
80	B5	934	G	C5-C6-O6	-7.83	123.90	128.60
80	B5	1246	G	C5-C6-O6	-7.83	123.90	128.60
80	B5	2400	G	C2-N3-C4	-7.83	107.98	111.90
80	B5	3187	A	N1-C6-N6	-7.83	113.90	118.60
80	B5	216	G	N1-C6-O6	7.83	124.60	119.90
80	B5	1440	G	C5-C6-O6	7.83	133.30	128.60
80	B5	3130	A	N1-C2-N3	7.83	133.21	129.30
79	B2	142	G	N3-C4-N9	-7.82	121.31	126.00
80	B5	2512	C	C5-C6-N1	7.82	124.91	121.00
84	CW	73	A	O4'-C1'-N9	7.82	114.46	108.20
80	B5	630	A	N1-C2-N3	7.82	133.21	129.30
80	B5	2905	U	N3-C4-C5	7.82	119.29	114.60
79	B2	1560	U	N3-C4-O4	-7.82	113.93	119.40
80	B5	2807	U	C5-C4-O4	-7.82	121.21	125.90
80	B5	2705	A	C5-C6-N6	-7.81	117.45	123.70
80	B5	2919	A	N1-C6-N6	-7.81	113.91	118.60
80	B5	2303	A	N9-C4-C5	7.81	108.92	105.80
84	CW	21	A	C5-C6-N6	-7.81	117.45	123.70
84	CW	69	G	O4'-C1'-N9	7.81	114.45	108.20
80	B5	1140	G	N1-C6-O6	-7.81	115.21	119.90
80	B5	1234	G	C5-C6-O6	-7.81	123.92	128.60
80	B5	343	U	N3-C4-O4	-7.81	113.94	119.40
80	B5	2134	G	C5-C6-N1	7.80	115.40	111.50
80	B5	3187	A	C5-N7-C8	7.80	107.80	103.90
84	CW	42	C	N3-C4-N4	7.80	123.46	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2393	G	N1-C6-O6	7.80	124.58	119.90
83	CV	435	TYR	CB-CG-CD2	-7.80	116.32	121.00
80	B5	1150	A	C2-N3-C4	-7.79	106.70	110.60
79	B2	555	A	C8-N9-C4	-7.79	102.68	105.80
80	B5	1370	G	N1-C6-O6	-7.79	115.23	119.90
80	B5	2246	G	C5-C6-O6	7.79	133.27	128.60
80	B5	2395	G	C5-N7-C8	7.79	108.19	104.30
80	B5	1480	G	C8-N9-C4	7.79	109.52	106.40
79	B2	1751	C	N3-C4-C5	7.78	125.01	121.90
80	B5	1392	G	N3-C4-N9	7.78	130.67	126.00
80	B5	2381	G	C8-N9-C4	-7.78	103.29	106.40
80	B5	2975	U	N3-C4-C5	7.78	119.27	114.60
80	B5	708	G	C5-C6-O6	-7.78	123.93	128.60
80	B5	1364	C	N1-C2-O2	-7.78	114.23	118.90
79	B2	334	G	C2-N3-C4	-7.77	108.01	111.90
80	B5	974	G	N3-C4-C5	-7.77	124.71	128.60
80	B5	2550	U	N3-C4-O4	-7.77	113.96	119.40
84	CW	29	G	N1-C6-O6	7.77	124.56	119.90
80	B5	3266	G	N9-C4-C5	7.76	108.51	105.40
80	B5	3206	C	N3-C2-O2	-7.76	116.47	121.90
80	B5	990	U	N1-C2-O2	7.76	128.23	122.80
83	CV	474	PHE	N-CA-C	7.76	131.94	111.00
79	B2	992	A	C6-N1-C2	7.75	123.25	118.60
80	B5	904	A	N1-C6-N6	-7.75	113.95	118.60
80	B5	2899	C	N3-C4-N4	-7.75	112.58	118.00
84	CW	67	C	O4'-C1'-N1	7.75	114.40	108.20
80	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
80	B5	376	G	C5-C6-N1	7.74	115.37	111.50
84	CW	59	U	O4'-C1'-N1	7.74	114.39	108.20
65	Be	45	ARG	NE-CZ-NH2	-7.74	116.43	120.30
80	B5	1792	C	N1-C2-O2	-7.74	114.26	118.90
80	B5	2315	G	C8-N9-C4	7.74	109.50	106.40
80	B5	1295	G	N1-C6-O6	-7.74	115.26	119.90
80	B5	2303	A	C8-N9-C4	-7.74	102.70	105.80
80	B5	2757	U	C2-N3-C4	-7.74	122.36	127.00
79	B2	1486	G	C8-N9-C4	-7.73	103.31	106.40
80	B5	276	U	C5-C6-N1	-7.72	118.84	122.70
80	B5	546	C	C6-N1-C1'	-7.72	111.53	120.80
80	B5	1391	C	N3-C2-O2	7.72	127.31	121.90
79	B2	704	C	N1-C2-O2	7.72	123.53	118.90
80	B5	2643	A	C2-N3-C4	7.72	114.46	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3050	U	N1-C2-O2	7.72	128.20	122.80
80	B5	2278	C	C6-N1-C1'	7.71	130.06	120.80
84	CW	72	C	O4'-C1'-N1	7.71	114.37	108.20
80	B5	2202	C	N3-C4-N4	7.71	123.40	118.00
80	B5	3308	C	N1-C2-N3	7.71	124.59	119.20
80	B5	2634	U	C6-N1-C2	7.71	125.62	121.00
80	B5	1390	A	C8-N9-C4	-7.70	102.72	105.80
80	B5	2346	C	C2-N3-C4	-7.70	116.05	119.90
80	B5	3377	G	N3-C4-N9	7.70	130.62	126.00
79	B2	1455	G	C4-C5-N7	-7.70	107.72	110.80
80	B5	859	G	C8-N9-C4	-7.70	103.32	106.40
80	B5	1402	C	C5-C6-N1	-7.70	117.15	121.00
84	CW	11	C	O4'-C1'-N1	7.70	114.36	108.20
80	B5	2234	G	C8-N9-C4	7.68	109.47	106.40
80	B5	2584	G	C4-N9-C1'	7.68	136.49	126.50
79	B2	1305	U	C5-C4-O4	7.68	130.51	125.90
80	B5	1889	G	N1-C6-O6	-7.68	115.29	119.90
80	B5	1281	G	O4'-C1'-N9	7.68	114.34	108.20
80	B5	3065	G	N1-C6-O6	-7.68	115.30	119.90
80	B5	3185	U	C2-N3-C4	-7.68	122.39	127.00
80	B5	2433	U	C6-N1-C2	7.67	125.60	121.00
80	B5	2698	G	C8-N9-C4	7.67	109.47	106.40
80	B5	3055	U	N3-C2-O2	-7.67	116.83	122.20
80	B5	630	A	C2-N3-C4	-7.66	106.77	110.60
80	B5	753	C	C2-N3-C4	-7.66	116.07	119.90
80	B5	2271	A	C8-N9-C4	7.66	108.86	105.80
80	B5	594	U	C6-N1-C2	-7.65	116.41	121.00
79	B2	1291	G	C8-N9-C4	-7.65	103.34	106.40
80	B5	1124	U	N1-C2-N3	-7.65	110.31	114.90
80	B5	1285	G	C6-N1-C2	-7.65	120.51	125.10
80	B5	3006	A	C5-C6-N1	-7.65	113.87	117.70
82	B8	144	G	N1-C6-O6	7.65	124.49	119.90
79	B2	704	C	C2-N1-C1'	7.65	127.22	118.80
80	B5	1604	G	C4-N9-C1'	7.65	136.45	126.50
80	B5	1833	G	N1-C6-O6	-7.65	115.31	119.90
82	B8	2	A	N9-C4-C5	7.64	108.86	105.80
80	B5	2611	U	C5-C6-N1	-7.64	118.88	122.70
80	B5	2372	A	N9-C4-C5	7.64	108.86	105.80
80	B5	3330	A	C5-C6-N1	7.64	121.52	117.70
80	B5	3378	C	N3-C4-C5	7.64	124.96	121.90
82	B8	11	C	N3-C2-O2	-7.64	116.56	121.90
80	B5	877	C	C4-C5-C6	-7.63	113.58	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2887	A	C5-C6-N1	-7.63	113.88	117.70
80	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
80	B5	1370	G	C5-C6-N1	7.62	115.31	111.50
84	CW	10	G	C5-C6-O6	-7.62	124.03	128.60
80	B5	519	A	N1-C6-N6	7.62	123.17	118.60
80	B5	665	A	N1-C6-N6	7.62	123.17	118.60
80	B5	2838	A	N1-C6-N6	7.62	123.17	118.60
79	B2	647	G	N9-C4-C5	7.61	108.44	105.40
80	B5	633	C	N1-C2-O2	-7.61	114.34	118.90
79	B2	553	G	C4-C5-C6	7.60	123.36	118.80
81	B7	39	C	C6-N1-C2	-7.60	117.26	120.30
80	B5	419	G	C5-C6-O6	-7.60	124.04	128.60
80	B5	1130	A	C5-C6-N1	7.60	121.50	117.70
81	B7	67	G	N3-C2-N2	-7.60	114.58	119.90
80	B5	1390	A	N1-C6-N6	-7.59	114.04	118.60
80	B5	1515	A	C2-N3-C4	-7.59	106.80	110.60
80	B5	1014	U	C2-N1-C1'	7.59	126.81	117.70
80	B5	1163	A	C5-N7-C8	7.59	107.69	103.90
80	B5	1342	C	C2-N3-C4	-7.59	116.11	119.90
80	B5	3154	C	N1-C2-O2	7.59	123.45	118.90
82	B8	6	U	C2-N3-C4	-7.59	122.45	127.00
80	B5	1305	U	C5-C4-O4	-7.58	121.35	125.90
80	B5	2693	C	N3-C4-C5	7.58	124.93	121.90
80	B5	1516	C	N1-C2-O2	-7.58	114.35	118.90
79	B2	1291	G	C2-N3-C4	-7.58	108.11	111.90
80	B5	1890	U	C4-C5-C6	7.58	124.25	119.70
80	B5	3088	G	C4-C5-N7	7.58	113.83	110.80
80	B5	3138	U	C2-N3-C4	-7.58	122.45	127.00
80	B5	3245	A	C5-C6-N1	-7.58	113.91	117.70
80	B5	2237	C	N3-C4-N4	-7.58	112.69	118.00
79	B2	1758	U	N3-C2-O2	-7.58	116.89	122.20
80	B5	324	A	C8-N9-C4	-7.58	102.77	105.80
81	B7	49	G	C5-C6-O6	-7.58	124.05	128.60
79	B2	978	A	C8-N9-C4	7.58	108.83	105.80
80	B5	1251	A	C5-C6-N6	-7.58	117.64	123.70
80	B5	1381	A	C8-N9-C4	7.58	108.83	105.80
80	B5	1396	C	N3-C4-C5	7.58	124.93	121.90
82	B8	144	G	N3-C2-N2	-7.58	114.60	119.90
80	B5	641	C	N3-C4-N4	-7.57	112.70	118.00
80	B5	851	C	C5-C6-N1	7.57	124.79	121.00
80	B5	1163	A	N1-C6-N6	-7.57	114.06	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1848	G	C4-C5-N7	7.57	113.83	110.80
80	B5	3172	A	N7-C8-N9	-7.57	110.02	113.80
80	B5	1256	G	P-O5'-C5'	7.57	133.01	120.90
80	B5	2138	A	C8-N9-C4	-7.57	102.77	105.80
80	B5	1910	A	C8-N9-C4	7.56	108.83	105.80
84	CW	65	G	C5-C6-O6	-7.56	124.06	128.60
80	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
79	B2	323	A	C8-N9-C4	-7.55	102.78	105.80
80	B5	81	C	N3-C4-C5	7.55	124.92	121.90
80	B5	400	G	C5-C6-O6	-7.55	124.07	128.60
80	B5	1057	A	C5-C6-N6	-7.55	117.66	123.70
80	B5	1260	A	C5-C6-N6	-7.55	117.66	123.70
80	B5	121	A	C8-N9-C4	7.55	108.82	105.80
80	B5	929	A	C8-N9-C4	7.54	108.82	105.80
80	B5	289	A	C6-N1-C2	-7.54	114.08	118.60
80	B5	2289	U	N1-C2-O2	7.54	128.08	122.80
80	B5	2524	A	N7-C8-N9	7.54	117.57	113.80
80	B5	3007	U	C2-N3-C4	-7.54	122.48	127.00
80	B5	971	G	C5-N7-C8	7.54	108.07	104.30
80	B5	2625	C	C2-N3-C4	-7.54	116.13	119.90
82	B8	12	A	C5-N7-C8	-7.53	100.14	103.90
80	B5	928	C	C4-C5-C6	7.53	121.16	117.40
81	B7	41	G	C8-N9-C4	7.53	109.41	106.40
80	B5	1216	C	N1-C2-O2	-7.52	114.39	118.90
80	B5	1459	C	N3-C4-C5	7.52	124.91	121.90
80	B5	1176	C	C2-N3-C4	-7.52	116.14	119.90
80	B5	1340	G	C8-N9-C4	7.52	109.41	106.40
80	B5	3140	G	C4-C5-N7	7.52	113.81	110.80
80	B5	3192	U	C5-C6-N1	-7.52	118.94	122.70
80	B5	924	G	N1-C2-N2	7.52	122.97	116.20
80	B5	971	G	N7-C8-N9	-7.52	109.34	113.10
80	B5	3167	A	C8-N9-C4	-7.52	102.79	105.80
79	B2	871	G	N3-C4-C5	-7.52	124.84	128.60
81	B7	11	A	C8-N9-C4	7.52	108.81	105.80
80	B5	622	A	N1-C6-N6	7.51	123.11	118.60
80	B5	2395	G	N7-C8-N9	-7.51	109.34	113.10
79	B2	758	U	N3-C2-O2	-7.51	116.94	122.20
80	B5	2718	U	N1-C2-N3	7.51	119.41	114.90
84	CW	71	G	C5-C6-O6	-7.51	124.09	128.60
84	CW	1	G	N1-C6-O6	7.51	124.41	119.90
79	B2	594	A	C2-N3-C4	7.51	114.35	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1407	A	C6-N1-C2	7.51	123.10	118.60
80	B5	971	G	C2-N3-C4	7.50	115.65	111.90
80	B5	2342	U	N3-C4-O4	-7.50	114.15	119.40
80	B5	426	G	C8-N9-C4	7.50	109.40	106.40
79	B2	507	U	C2-N1-C1'	7.50	126.70	117.70
79	B2	1432	U	C5-C6-N1	-7.50	118.95	122.70
80	B5	436	A	N1-C6-N6	7.50	123.10	118.60
80	B5	42	C	C4-C5-C6	-7.49	113.65	117.40
79	B2	1280	C	C6-N1-C2	-7.48	117.31	120.30
80	B5	150	A	N1-C6-N6	7.48	123.09	118.60
80	B5	2791	G	C5-C6-O6	-7.48	124.11	128.60
80	B5	3096	C	C5-C6-N1	-7.48	117.26	121.00
80	B5	2234	G	C4-C5-N7	7.47	113.79	110.80
80	B5	3102	G	N1-C2-N2	-7.47	109.48	116.20
82	B8	144	G	C5-C6-O6	-7.47	124.12	128.60
80	B5	957	C	C2-N3-C4	-7.47	116.17	119.90
79	B2	1291	G	C5-N7-C8	-7.46	100.57	104.30
80	B5	2639	G	C5-C6-O6	-7.46	124.12	128.60
80	B5	2943	G	N3-C2-N2	7.46	125.12	119.90
80	B5	307	A	N1-C6-N6	-7.46	114.12	118.60
80	B5	1205	A	C8-N9-C4	-7.46	102.82	105.80
80	B5	2381	G	N9-C4-C5	7.46	108.38	105.40
80	B5	1372	C	N1-C2-O2	-7.46	114.42	118.90
82	B8	14	C	C4-C5-C6	7.45	121.13	117.40
80	B5	1227	C	C5-C6-N1	7.45	124.72	121.00
80	B5	1327	C	N3-C4-C5	7.45	124.88	121.90
80	B5	2743	A	C8-N9-C4	7.45	108.78	105.80
80	B5	3381	U	N3-C4-O4	-7.45	114.19	119.40
80	B5	2726	C	N3-C4-N4	-7.45	112.79	118.00
84	CW	49	C	O4'-C1'-N1	7.45	114.16	108.20
80	B5	3308	C	N1-C2-O2	-7.44	114.43	118.90
80	B5	2308	C	N3-C2-O2	7.44	127.11	121.90
80	B5	1879	A	N7-C8-N9	7.44	117.52	113.80
80	B5	2908	G	C8-N9-C4	-7.44	103.42	106.40
80	B5	645	A	C5-C6-N6	-7.44	117.75	123.70
80	B5	2996	U	N1-C2-O2	7.44	128.01	122.80
84	CW	64	A	C8-N9-C4	-7.44	102.82	105.80
80	B5	2810	C	N3-C2-O2	-7.44	116.69	121.90
79	B2	583	C	C6-N1-C2	-7.44	117.33	120.30
79	B2	1012	U	C2-N3-C4	7.44	131.46	127.00
79	B2	608	U	C2-N3-C4	-7.43	122.54	127.00
80	B5	74	G	N1-C6-O6	-7.43	115.44	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1484	U	C2-N3-C4	-7.43	122.54	127.00
80	B5	1855	U	C2-N3-C4	-7.43	122.54	127.00
82	B8	2	A	N1-C6-N6	-7.43	114.14	118.60
80	B5	1389	G	N3-C2-N2	7.43	125.10	119.90
80	B5	2743	A	N7-C8-N9	-7.43	110.09	113.80
84	CW	6	G	C5-C6-O6	-7.43	124.14	128.60
84	CW	40	C	O4'-C1'-N1	7.43	114.14	108.20
80	B5	1085	A	C2-N3-C4	-7.42	106.89	110.60
80	B5	2802	A	C2-N3-C4	7.42	114.31	110.60
84	CW	27	G	N1-C6-O6	7.42	124.35	119.90
80	B5	971	G	C4-C5-N7	-7.42	107.83	110.80
80	B5	3081	C	N3-C4-C5	7.42	124.87	121.90
80	B5	280	U	C5-C6-N1	-7.42	118.99	122.70
80	B5	2366	C	C5-C4-N4	-7.42	115.01	120.20
80	B5	2341	A	N7-C8-N9	-7.41	110.09	113.80
79	B2	89	G	C8-N9-C4	7.41	109.36	106.40
80	B5	2621	G	N3-C2-N2	-7.41	114.71	119.90
80	B5	1437	C	C5-C6-N1	7.41	124.70	121.00
80	B5	2630	C	C2-N3-C4	-7.41	116.20	119.90
80	B5	931	C	C5-C6-N1	-7.40	117.30	121.00
81	B7	96	U	N3-C2-O2	-7.40	117.02	122.20
80	B5	1586	G	N3-C4-N9	7.40	130.44	126.00
80	B5	2179	C	C6-N1-C2	7.40	123.26	120.30
80	B5	2541	U	C2-N1-C1'	7.40	126.58	117.70
84	CW	57	G	C5-C6-O6	-7.40	124.16	128.60
80	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
79	B2	1761	U	C6-N1-C2	-7.39	116.56	121.00
80	B5	1227	C	N1-C2-O2	-7.39	114.46	118.90
80	B5	2991	A	N1-C6-N6	-7.39	114.17	118.60
80	B5	3025	C	N3-C4-N4	-7.39	112.83	118.00
80	B5	3151	U	N1-C2-N3	-7.39	110.47	114.90
80	B5	1014	U	C5-C4-O4	-7.39	121.47	125.90
80	B5	1317	A	C2-N3-C4	7.39	114.30	110.60
80	B5	1887	A	N1-C6-N6	7.39	123.03	118.60
80	B5	1192	C	C4-C5-C6	7.39	121.09	117.40
80	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
80	B5	1449	A	C4-C5-N7	7.39	114.39	110.70
79	B2	831	U	C5-C6-N1	7.38	126.39	122.70
80	B5	1228	C	N3-C4-C5	-7.38	118.95	121.90
80	B5	1506	A	C8-N9-C4	-7.38	102.85	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	42	C	C6-N1-C2	-7.38	117.35	120.30
80	B5	2142	A	C2-N3-C4	7.38	114.29	110.60
79	B2	1075	C	N1-C2-O2	-7.38	114.47	118.90
80	B5	931	C	N3-C4-C5	7.38	124.85	121.90
80	B5	3218	A	C4-C5-N7	7.38	114.39	110.70
84	CW	55	U	P-O3'-C3'	7.38	128.56	119.70
80	B5	1268	G	P-O5'-C5'	7.38	132.71	120.90
80	B5	2311	G	C8-N9-C4	7.38	109.35	106.40
79	B2	142	G	N3-C4-C5	7.37	132.29	128.60
80	B5	1117	G	C5-C6-N1	7.37	115.19	111.50
80	B5	2370	G	C6-N1-C2	-7.37	120.68	125.10
80	B5	3382	U	N1-C2-O2	7.37	127.96	122.80
82	B8	99	C	C6-N1-C2	7.37	123.25	120.30
79	B2	1241	G	N7-C8-N9	7.37	116.78	113.10
79	B2	1389	C	N1-C2-O2	7.37	123.32	118.90
82	B8	2	A	C5-C6-N6	7.37	129.59	123.70
80	B5	1144	U	N1-C2-N3	7.37	119.32	114.90
80	B5	2736	A	N1-C6-N6	-7.37	114.18	118.60
80	B5	1538	G	C8-N9-C4	7.36	109.34	106.40
80	B5	2350	C	C4-C5-C6	7.36	121.08	117.40
80	B5	2572	C	N3-C2-O2	-7.36	116.75	121.90
79	B2	1762	A	N1-C6-N6	7.36	123.02	118.60
80	B5	2884	C	C2-N3-C4	-7.36	116.22	119.90
80	B5	2320	A	C5-C6-N1	-7.36	114.02	117.70
80	B5	1280	C	O4'-C1'-N1	7.36	114.08	108.20
76	Bq	12	PHE	CB-CG-CD2	-7.35	115.66	120.80
80	B5	2851	A	N1-C2-N3	7.35	132.97	129.30
80	B5	2621	G	C5-C6-N1	-7.35	107.83	111.50
80	B5	2385	G	C4-N9-C1'	-7.34	116.95	126.50
80	B5	2611	U	N3-C2-O2	-7.34	117.06	122.20
80	B5	2307	G	N3-C4-N9	7.34	130.40	126.00
80	B5	1124	U	C5-C6-N1	7.34	126.37	122.70
80	B5	65	A	C8-N9-C4	-7.34	102.87	105.80
80	B5	2954	U	C6-N1-C1'	-7.34	110.93	121.20
80	B5	2699	G	C2-N3-C4	7.33	115.57	111.90
80	B5	3289	G	C8-N9-C4	-7.33	103.47	106.40
80	B5	1426	C	N3-C4-C5	7.33	124.83	121.90
81	B7	41	G	N9-C4-C5	-7.33	102.47	105.40
80	B5	98	G	C5-C6-N1	7.33	115.16	111.50
80	B5	2531	C	N1-C2-O2	7.33	123.30	118.90
80	B5	795	G	N7-C8-N9	-7.32	109.44	113.10
80	B5	2234	G	N1-C6-O6	7.32	124.29	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	CV	210	TRP	CG-CD1-NE1	7.32	117.42	110.10
80	B5	580	C	C4-C5-C6	7.32	121.06	117.40
80	B5	3290	G	C8-N9-C4	-7.32	103.47	106.40
80	B5	804	C	C4-C5-C6	7.32	121.06	117.40
79	B2	377	G	N3-C2-N2	-7.31	114.78	119.90
79	B2	355	G	C5-C6-N1	7.31	115.15	111.50
80	B5	969	C	C2-N3-C4	-7.31	116.25	119.90
80	B5	1846	C	C4-C5-C6	7.31	121.05	117.40
80	B5	2815	G	C8-N9-C4	7.31	109.32	106.40
80	B5	3369	G	C5-C6-O6	-7.31	124.22	128.60
80	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
80	B5	2288	G	N3-C4-N9	7.30	130.38	126.00
79	B2	1096	C	C6-N1-C1'	-7.30	112.04	120.80
80	B5	1014	U	C6-N1-C1'	-7.30	110.98	121.20
80	B5	2836	C	N3-C4-N4	-7.30	112.89	118.00
80	B5	1364	C	C2-N3-C4	-7.30	116.25	119.90
80	B5	924	G	N1-C6-O6	7.30	124.28	119.90
80	B5	1921	A	N1-C6-N6	7.30	122.98	118.60
80	B5	1506	A	N7-C8-N9	7.30	117.45	113.80
80	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
80	B5	1660	C	C6-N1-C2	-7.29	117.38	120.30
80	B5	834	U	C6-N1-C2	7.29	125.38	121.00
80	B5	1133	A	C5-C6-N1	7.29	121.35	117.70
83	CV	534	ALA	N-CA-CB	7.29	120.31	110.10
84	CW	70	G	C5-C6-O6	-7.29	124.22	128.60
80	B5	3255	U	C5-C4-O4	-7.29	121.53	125.90
80	B5	2662	G	C8-N9-C4	-7.29	103.49	106.40
85	CX	1	A	C5-C6-N6	-7.29	117.87	123.70
80	B5	3131	U	N3-C4-C5	7.27	118.96	114.60
80	B5	2584	G	C6-C5-N7	-7.27	126.04	130.40
84	CW	76	A	C5-C6-N6	-7.27	117.88	123.70
80	B5	39	A	C4-C5-C6	7.27	120.64	117.00
80	B5	2942	C	C4-C5-C6	7.27	121.03	117.40
81	B7	104	A	N1-C6-N6	7.27	122.96	118.60
80	B5	1430	U	C5-C6-N1	-7.27	119.06	122.70
80	B5	1283	C	N3-C4-C5	-7.27	118.99	121.90
80	B5	2616	C	C6-N1-C2	7.27	123.21	120.30
80	B5	639	G	N1-C6-O6	7.26	124.26	119.90
84	CW	21	A	P-O5'-C5'	7.26	132.52	120.90
80	B5	643	U	N3-C4-C5	7.26	118.96	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2758	A	C8-N9-C4	-7.26	102.89	105.80
80	B5	1189	C	N1-C2-O2	-7.26	114.54	118.90
82	B8	54	A	C2-N3-C4	-7.26	106.97	110.60
80	B5	2620	G	C5-C6-N1	7.26	115.13	111.50
79	B2	728	U	C2-N1-C1'	7.26	126.41	117.70
79	B2	1642	G	C2-N3-C4	7.26	115.53	111.90
80	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
84	CW	46	G	C5-C6-O6	-7.25	124.25	128.60
80	B5	2911	A	C2-N3-C4	7.25	114.23	110.60
84	CW	14	A	C4-C5-C6	7.25	120.63	117.00
80	B5	1833	G	N3-C2-N2	7.25	124.97	119.90
79	B2	1745	G	C4-C5-N7	7.24	113.70	110.80
80	B5	643	U	C2-N3-C4	-7.24	122.65	127.00
80	B5	1227	C	C2-N1-C1'	7.24	126.77	118.80
79	B2	1654	G	C5-C6-O6	-7.24	124.25	128.60
80	B5	838	G	N1-C6-O6	-7.24	115.56	119.90
83	CV	63	GLU	N-CA-C	7.24	130.55	111.00
80	B5	1169	A	C5-C6-N1	-7.24	114.08	117.70
80	B5	1258	U	O4'-C4'-C3'	-7.24	96.76	104.00
79	B2	1329	A	N1-C6-N6	7.24	122.94	118.60
80	B5	578	A	N1-C6-N6	7.24	122.94	118.60
80	B5	2701	U	C5-C4-O4	-7.24	121.56	125.90
80	B5	3122	A	N7-C8-N9	7.23	117.42	113.80
80	B5	810	A	N1-C6-N6	-7.23	114.26	118.60
80	B5	2717	U	C5-C6-N1	-7.23	119.09	122.70
79	B2	1000	C	N3-C4-N4	-7.22	112.94	118.00
80	B5	1336	U	C5-C4-O4	-7.22	121.56	125.90
80	B5	1206	G	N9-C4-C5	7.22	108.29	105.40
81	B7	49	G	N3-C2-N2	-7.22	114.84	119.90
80	B5	46	U	N1-C2-O2	7.22	127.85	122.80
80	B5	283	G	C6-C5-N7	-7.22	126.07	130.40
80	B5	1724	U	C6-N1-C2	-7.22	116.67	121.00
80	B5	2370	G	C5-C6-O6	-7.22	124.27	128.60
80	B5	1140	G	N3-C2-N2	7.22	124.95	119.90
80	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
80	B5	267	G	C8-N9-C4	7.21	109.29	106.40
80	B5	272	G	C8-N9-C4	7.21	109.29	106.40
80	B5	669	U	N1-C2-N3	7.21	119.23	114.90
80	B5	1049	C	N3-C4-C5	7.21	124.78	121.90
80	B5	1518	U	N3-C4-O4	-7.21	114.36	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	652	G	N3-C2-N2	7.20	124.94	119.90
80	B5	1406	A	C6-N1-C2	-7.20	114.28	118.60
79	B2	1611	A	C2-N3-C4	-7.20	107.00	110.60
80	B5	3052	G	N1-C6-O6	-7.20	115.58	119.90
80	B5	514	G	C4-C5-N7	7.20	113.68	110.80
80	B5	629	U	C2-N3-C4	-7.20	122.68	127.00
80	B5	1262	G	O4'-C1'-N9	7.20	113.96	108.20
80	B5	2363	A	C8-N9-C4	-7.20	102.92	105.80
80	B5	2754	G	N1-C2-N2	-7.20	109.72	116.20
80	B5	39	A	N1-C6-N6	7.20	122.92	118.60
80	B5	2410	U	C4-C5-C6	-7.20	115.38	119.70
80	B5	2964	G	C8-N9-C4	7.20	109.28	106.40
80	B5	37	U	C2-N3-C4	-7.19	122.68	127.00
80	B5	3060	C	N3-C2-O2	7.19	126.94	121.90
79	B2	1121	C	C4-C5-C6	7.19	121.00	117.40
80	B5	3245	A	N3-C4-C5	7.19	131.84	126.80
80	B5	2396	G	N9-C4-C5	7.19	108.28	105.40
80	B5	2305	G	N9-C4-C5	-7.19	102.53	105.40
80	B5	3040	A	C5-N7-C8	7.18	107.49	103.90
80	B5	577	C	C2-N3-C4	-7.18	116.31	119.90
80	B5	1902	G	C8-N9-C4	7.18	109.27	106.40
80	B5	2870	C	N3-C4-N4	-7.18	112.97	118.00
81	B7	44	C	N1-C2-O2	-7.18	114.59	118.90
80	B5	960	U	N1-C2-O2	7.18	127.83	122.80
80	B5	2908	G	N9-C4-C5	7.18	108.27	105.40
80	B5	2337	C	C6-N1-C2	7.18	123.17	120.30
80	B5	3379	C	C5-C6-N1	-7.18	117.41	121.00
80	B5	46	U	C5-C4-O4	7.17	130.21	125.90
80	B5	563	U	N1-C2-O2	7.17	127.82	122.80
80	B5	2148	U	C2-N3-C4	-7.17	122.69	127.00
80	B5	800	G	C8-N9-C4	7.17	109.27	106.40
84	CW	76	A	O4'-C1'-N9	7.17	113.94	108.20
80	B5	3005	A	N9-C4-C5	7.17	108.67	105.80
80	B5	1004	U	N3-C4-C5	7.17	118.90	114.60
80	B5	1158	A	C5-C6-N6	-7.17	117.97	123.70
80	B5	1887	A	C2-N3-C4	-7.17	107.02	110.60
80	B5	2631	U	N3-C4-C5	7.17	118.90	114.60
80	B5	2965	U	C4-C5-C6	7.17	124.00	119.70
82	B8	126	A	C8-N9-C4	-7.17	102.93	105.80
80	B5	2848	G	N3-C2-N2	-7.17	114.89	119.90
79	B2	1174	C	N1-C2-O2	7.16	123.20	118.90
80	B5	518	G	N9-C4-C5	-7.16	102.53	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	327	A	N7-C8-N9	-7.16	110.22	113.80
80	B5	1434	G	C4-C5-C6	7.16	123.10	118.80
80	B5	2383	C	N1-C2-O2	-7.16	114.60	118.90
80	B5	801	A	C5-C6-N1	-7.16	114.12	117.70
80	B5	1328	C	C4-C5-C6	7.16	120.98	117.40
80	B5	2917	G	C6-C5-N7	-7.16	126.10	130.40
80	B5	2169	G	C5-C6-N1	7.16	115.08	111.50
80	B5	2758	A	N9-C4-C5	7.16	108.66	105.80
82	B8	42	G	C8-N9-C4	7.16	109.26	106.40
80	B5	974	G	C4-N9-C1'	7.15	135.80	126.50
80	B5	434	U	N3-C4-C5	7.15	118.89	114.60
81	B7	11	A	N7-C8-N9	-7.15	110.22	113.80
80	B5	922	U	N3-C4-O4	-7.15	114.39	119.40
80	B5	1085	A	C8-N9-C4	-7.15	102.94	105.80
80	B5	1292	C	C6-N1-C2	7.15	123.16	120.30
80	B5	2824	G	N9-C4-C5	7.15	108.26	105.40
80	B5	1917	C	N1-C2-O2	-7.15	114.61	118.90
80	B5	594	U	N3-C2-O2	-7.14	117.20	122.20
80	B5	1226	G	O5'-C5'-C4'	7.14	125.27	111.70
80	B5	3192	U	N3-C4-O4	-7.14	114.40	119.40
80	B5	1144	U	C5-C6-N1	-7.14	119.13	122.70
80	B5	1591	G	N1-C6-O6	-7.14	115.61	119.90
80	B5	2993	G	C4-C5-N7	7.14	113.66	110.80
80	B5	1209	G	N3-C2-N2	-7.14	114.90	119.90
79	B2	992	A	C2-N3-C4	-7.14	107.03	110.60
80	B5	2732	G	C5-C6-O6	7.14	132.88	128.60
79	B2	1611	A	C5-N7-C8	-7.14	100.33	103.90
80	B5	2979	U	C6-N1-C2	7.14	125.28	121.00
80	B5	1118	C	N3-C4-C5	7.13	124.75	121.90
80	B5	2584	G	N3-C4-N9	7.13	130.28	126.00
80	B5	3076	C	N3-C4-C5	7.13	124.75	121.90
79	B2	577	G	N9-C4-C5	-7.13	102.55	105.40
80	B5	384	A	C8-N9-C4	7.13	108.65	105.80
80	B5	1403	C	C5-C6-N1	-7.12	117.44	121.00
79	B2	783	G	C4-C5-N7	7.12	113.65	110.80
84	CW	45	U	P-O5'-C5'	7.12	132.29	120.90
79	B2	61	A	N7-C8-N9	7.12	117.36	113.80
80	B5	2320	A	C4-C5-N7	-7.12	107.14	110.70
80	B5	3086	A	N7-C8-N9	-7.12	110.24	113.80
80	B5	1172	G	N1-C6-O6	-7.12	115.63	119.90
82	B8	139	U	N3-C4-O4	-7.12	114.42	119.40
80	B5	419	G	N9-C4-C5	-7.11	102.56	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3052	G	C5-C6-O6	7.11	132.87	128.60
84	CW	66	U	O4'-C1'-N1	7.11	113.89	108.20
80	B5	437	G	N7-C8-N9	7.11	116.66	113.10
80	B5	3154	C	N3-C2-O2	-7.11	116.92	121.90
79	B2	1324	G	N3-C2-N2	-7.11	114.92	119.90
80	B5	1272	C	N3-C4-C5	-7.11	119.06	121.90
80	B5	1458	U	C2-N3-C4	-7.11	122.73	127.00
79	B2	1241	G	C4-C5-N7	7.11	113.64	110.80
80	B5	1264	G	C5-C6-O6	-7.11	124.34	128.60
80	B5	3214	U	N1-C2-N3	7.10	119.16	114.90
84	CW	75	C	C6-N1-C2	-7.10	117.46	120.30
80	B5	511	G	C5-C6-O6	7.10	132.86	128.60
80	B5	1858	A	C2-N3-C4	7.10	114.15	110.60
80	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
80	B5	622	A	N9-C4-C5	-7.10	102.96	105.80
79	B2	108	A	N1-C2-N3	7.09	132.85	129.30
80	B5	2305	G	N3-C2-N2	7.09	124.87	119.90
80	B5	3110	C	N1-C2-N3	7.09	124.17	119.20
80	B5	708	G	N7-C8-N9	7.09	116.65	113.10
80	B5	2244	A	N1-C6-N6	-7.09	114.34	118.60
80	B5	2242	A	N1-C6-N6	-7.09	114.34	118.60
80	B5	24	G	N1-C6-O6	7.09	124.15	119.90
80	B5	1283	C	C6-N1-C2	-7.09	117.47	120.30
80	B5	1243	G	C5-C6-O6	-7.09	124.35	128.60
80	B5	2618	G	C6-N1-C2	-7.09	120.85	125.10
80	B5	2693	C	C2-N3-C4	-7.09	116.36	119.90
80	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
80	B5	928	C	N1-C2-N3	7.08	124.16	119.20
80	B5	1229	G	C5-C6-O6	-7.08	124.35	128.60
80	B5	804	C	N3-C4-C5	-7.08	119.07	121.90
80	B5	1407	A	C5-C6-N1	-7.08	114.16	117.70
80	B5	872	U	N3-C4-C5	7.07	118.84	114.60
79	B2	1462	G	C8-N9-C4	7.07	109.23	106.40
80	B5	546	C	C5-C6-N1	7.07	124.53	121.00
80	B5	2300	G	N3-C2-N2	7.07	124.85	119.90
84	CW	16	U	C1'-O4'-C4'	7.07	115.55	109.90
80	B5	2169	G	C6-C5-N7	7.07	134.64	130.40
81	B7	101	G	C5-C6-O6	-7.07	124.36	128.60
80	B5	834	U	N3-C4-O4	-7.06	114.45	119.40
79	B2	1773	C	C2-N3-C4	7.06	123.43	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1340	G	N1-C2-N2	-7.06	109.84	116.20
80	B5	3317	U	C6-N1-C2	-7.06	116.76	121.00
80	B5	591	G	C4-C5-N7	7.06	113.62	110.80
79	B2	159	U	C6-N1-C2	7.06	125.23	121.00
84	CW	61	C	O4'-C1'-N1	7.06	113.84	108.20
80	B5	945	C	C5-C6-N1	-7.05	117.47	121.00
80	B5	1278	A	P-O3'-C3'	7.05	128.16	119.70
80	B5	2618	G	N3-C4-N9	7.05	130.23	126.00
79	B2	74	U	O4'-C1'-N1	7.05	113.84	108.20
79	B2	1456	C	N3-C2-O2	-7.05	116.97	121.90
80	B5	1255	C	N3-C4-N4	7.05	122.93	118.00
80	B5	1548	C	C2-N3-C4	-7.05	116.38	119.90
80	B5	3006	A	N1-C2-N3	7.05	132.82	129.30
79	B2	628	G	C2-N3-C4	-7.05	108.38	111.90
80	B5	2327	U	C6-N1-C2	7.05	125.23	121.00
79	B2	1749	A	C2-N3-C4	-7.05	107.08	110.60
80	B5	2988	C	C5-C6-N1	-7.05	117.48	121.00
84	CW	16	U	P-O3'-C3'	7.05	128.16	119.70
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
80	B5	1232	C	C2'-C3'-O3'	7.04	125.00	109.50
80	B5	1370	G	N3-C2-N2	7.04	124.83	119.90
80	B5	2631	U	C5-C6-N1	-7.04	119.18	122.70
80	B5	1228	C	O4'-C1'-N1	7.04	113.83	108.20
79	B2	610	G	C8-N9-C1'	-7.04	117.85	127.00
80	B5	1229	G	C6-C5-N7	-7.04	126.17	130.40
80	B5	2344	U	C5-C6-N1	-7.04	119.18	122.70
80	B5	2942	C	N3-C4-C5	-7.04	119.08	121.90
80	B5	1314	C	C2-N1-C1'	7.04	126.54	118.80
82	B8	70	G	C8-N9-C4	7.04	109.22	106.40
80	B5	3182	G	N1-C6-O6	-7.04	115.68	119.90
82	B8	101	U	C6-N1-C2	-7.04	116.78	121.00
83	CV	478	LYS	CB-CA-C	7.04	124.48	110.40
79	B2	1274	C	C5-C6-N1	-7.04	117.48	121.00
80	B5	3086	A	C5-N7-C8	7.04	107.42	103.90
80	B5	930	U	N3-C4-O4	-7.03	114.48	119.40
80	B5	2882	U	C2-N3-C4	-7.03	122.78	127.00
83	CV	476	GLN	CA-CB-CG	7.03	128.87	113.40
80	B5	1417	G	N1-C6-O6	-7.03	115.68	119.90
80	B5	1925	U	C2-N3-C4	-7.03	122.78	127.00
80	B5	1939	G	N3-C2-N2	7.03	124.82	119.90
80	B5	3218	A	C2-N3-C4	-7.03	107.08	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	802	C	C2-N3-C4	-7.03	116.39	119.90
80	B5	2644	C	N1-C2-O2	-7.03	114.68	118.90
79	B2	1548	G	C2-N3-C4	7.03	115.41	111.90
80	B5	1110	U	C4-C5-C6	-7.03	115.48	119.70
80	B5	2943	G	N1-C6-O6	-7.03	115.68	119.90
79	B2	1533	C	C4-C5-C6	7.02	120.91	117.40
80	B5	1434	G	C4-C5-N7	-7.02	107.99	110.80
80	B5	2881	C	C5-C6-N1	-7.02	117.49	121.00
82	B8	139	U	C5-C6-N1	-7.02	119.19	122.70
80	B5	418	A	N1-C6-N6	7.02	122.81	118.60
80	B5	929	A	N7-C8-N9	-7.02	110.29	113.80
80	B5	2350	C	C2-N3-C4	-7.01	116.39	119.90
84	CW	61	C	N3-C4-N4	7.01	122.91	118.00
80	B5	436	A	C6-C5-N7	-7.01	127.39	132.30
80	B5	2190	U	N1-C2-N3	7.01	119.11	114.90
84	CW	62	C	N3-C4-N4	7.01	122.91	118.00
80	B5	3107	U	N3-C2-O2	-7.01	117.30	122.20
80	B5	3098	G	C5-C6-O6	7.00	132.80	128.60
80	B5	2293	C	N3-C4-C5	7.00	124.70	121.90
80	B5	2932	U	N1-C2-O2	7.00	127.70	122.80
79	B2	1654	G	N3-C4-C5	-7.00	125.10	128.60
80	B5	81	C	N3-C4-N4	-7.00	113.10	118.00
80	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
80	B5	32	U	N3-C4-C5	-7.00	110.40	114.60
80	B5	857	G	N9-C4-C5	-7.00	102.60	105.40
80	B5	1441	G	N7-C8-N9	-7.00	109.60	113.10
80	B5	2832	C	C2-N3-C4	-7.00	116.40	119.90
80	B5	343	U	C5-C4-O4	7.00	130.10	125.90
80	B5	2626	A	C5-C6-N6	7.00	129.30	123.70
80	B5	859	G	N1-C6-O6	-6.99	115.70	119.90
80	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
80	B5	1389	G	C5-C6-O6	-6.99	124.41	128.60
80	B5	2302	G	N1-C6-O6	-6.99	115.71	119.90
79	B2	321	C	C6-N1-C2	-6.99	117.51	120.30
79	B2	1600	A	C5-C6-N1	-6.99	114.21	117.70
80	B5	1673	G	N1-C6-O6	-6.98	115.71	119.90
80	B5	2189	U	C2-N3-C4	-6.98	122.81	127.00
80	B5	2149	A	C8-N9-C4	-6.98	103.01	105.80
80	B5	2167	A	C6-N1-C2	-6.98	114.41	118.60
80	B5	1592	G	C5-C6-O6	6.98	132.79	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2917	G	N3-C4-N9	6.98	130.19	126.00
80	B5	369	A	N7-C8-N9	6.98	117.29	113.80
80	B5	1236	G	O4'-C1'-N9	6.98	113.78	108.20
80	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
80	B5	1199	C	C4-C5-C6	6.96	120.88	117.40
80	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
79	B2	1747	G	C2-N3-C4	-6.96	108.42	111.90
80	B5	1149	G	N9-C4-C5	6.96	108.19	105.40
84	CW	10	G	O4'-C1'-N9	6.96	113.77	108.20
80	B5	2426	U	N1-C2-O2	6.96	127.67	122.80
80	B5	2249	G	C3'-C2'-C1'	-6.95	95.94	101.50
79	B2	1057	U	C5-C6-N1	6.95	126.18	122.70
80	B5	2732	G	N3-C2-N2	6.95	124.77	119.90
80	B5	3099	C	C5-C6-N1	-6.95	117.53	121.00
80	B5	706	A	C8-N9-C4	6.95	108.58	105.80
80	B5	2362	C	N3-C4-C5	6.95	124.68	121.90
79	B2	360	A	N9-C4-C5	-6.95	103.02	105.80
80	B5	1879	A	C5-N7-C8	-6.94	100.43	103.90
80	B5	1513	G	N7-C8-N9	6.94	116.57	113.10
79	B2	1162	C	C6-N1-C2	-6.94	117.52	120.30
80	B5	857	G	C8-N9-C4	6.94	109.18	106.40
80	B5	2314	U	C5-C6-N1	6.94	126.17	122.70
80	B5	3362	A	C6-C5-N7	-6.94	127.44	132.30
80	B5	751	A	C2-N3-C4	-6.93	107.13	110.60
80	B5	784	A	C5-C6-N6	-6.93	118.15	123.70
80	B5	96	G	C5-C6-O6	6.93	132.76	128.60
80	B5	221	A	C8-N9-C4	6.93	108.57	105.80
80	B5	2917	G	C6-N1-C2	-6.93	120.94	125.10
80	B5	3321	C	C4-C5-C6	6.93	120.87	117.40
79	B2	981	U	N3-C2-O2	-6.93	117.35	122.20
80	B5	1883	A	N1-C6-N6	-6.93	114.44	118.60
80	B5	3019	U	C2-N3-C4	-6.93	122.84	127.00
80	B5	3374	U	N3-C4-O4	-6.93	114.55	119.40
82	B8	112	U	C2-N1-C1'	-6.93	109.39	117.70
80	B5	1834	U	N3-C4-O4	-6.93	114.55	119.40
80	B5	2290	C	C6-N1-C2	6.93	123.07	120.30
79	B2	1749	A	N9-C4-C5	-6.93	103.03	105.80
80	B5	1210	U	N3-C2-O2	-6.93	117.35	122.20
80	B5	833	G	C6-N1-C2	-6.92	120.94	125.10
80	B5	2978	U	N3-C4-O4	-6.92	114.56	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1152	G	N1-C2-N3	6.92	128.05	123.90
79	B2	542	A	C8-N9-C1'	-6.92	115.25	127.70
79	B2	736	C	C6-N1-C1'	-6.92	112.50	120.80
80	B5	942	U	C5-C4-O4	-6.92	121.75	125.90
80	B5	2524	A	C3'-C2'-C1'	-6.92	95.97	101.50
80	B5	3308	C	C6-N1-C2	-6.92	117.53	120.30
80	B5	1875	G	N1-C6-O6	-6.92	115.75	119.90
79	B2	360	A	C8-N9-C4	6.92	108.57	105.80
80	B5	835	G	C5-C6-N1	6.91	114.96	111.50
80	B5	3362	A	C5-C6-N1	-6.91	114.25	117.70
80	B5	2207	A	N1-C6-N6	6.91	122.75	118.60
81	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
80	B5	1238	C	O4'-C1'-N1	6.91	113.72	108.20
80	B5	1263	A	C4-C5-C6	6.91	120.45	117.00
80	B5	1833	G	C8-N9-C4	6.91	109.16	106.40
80	B5	1370	G	N1-C2-N2	-6.90	109.99	116.20
44	BJ	9	MET	N-CA-C	-6.90	92.37	111.00
80	B5	3101	G	C5-C6-O6	6.90	132.74	128.60
80	B5	3176	G	N1-C2-N3	6.90	128.04	123.90
79	B2	607	G	N1-C6-O6	6.90	124.04	119.90
80	B5	3081	C	C4-C5-C6	-6.90	113.95	117.40
79	B2	1146	G	C8-N9-C4	-6.90	103.64	106.40
80	B5	2184	U	C2-N3-C4	-6.90	122.86	127.00
79	B2	92	A	N9-C4-C5	6.89	108.56	105.80
79	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
80	B5	3070	A	C2-N3-C4	-6.89	107.16	110.60
80	B5	3333	G	C5-C6-O6	-6.89	124.47	128.60
80	B5	933	A	N1-C2-N3	6.88	132.74	129.30
80	B5	864	G	C6-N1-C2	-6.88	120.97	125.10
80	B5	1609	C	N3-C4-N4	6.88	122.82	118.00
80	B5	1941	C	N3-C4-C5	6.88	124.65	121.90
79	B2	453	U	N1-C2-O2	6.88	127.62	122.80
79	B2	1361	U	N1-C2-O2	6.88	127.61	122.80
79	B2	1611	A	N1-C2-N3	6.88	132.74	129.30
80	B5	652	G	C6-N1-C2	-6.88	120.97	125.10
80	B5	1275	C	N3-C4-N4	6.88	122.81	118.00
80	B5	1903	U	N3-C4-C5	-6.88	110.47	114.60
80	B5	2824	G	C4-C5-N7	-6.87	108.05	110.80
80	B5	2987	A	C5-N7-C8	6.87	107.33	103.90
84	CW	20	U	O4'-C1'-N1	6.86	113.69	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2382	G	N1-C6-O6	-6.86	115.78	119.90
79	B2	1782	A	N7-C8-N9	6.86	117.23	113.80
80	B5	1261	G	C5-C6-O6	-6.86	124.48	128.60
84	CW	6	G	C6-C5-N7	-6.86	126.28	130.40
79	B2	305	C	C6-N1-C2	-6.86	117.56	120.30
80	B5	1589	A	C2-N3-C4	6.86	114.03	110.60
84	CW	75	C	C6-N1-C1'	-6.86	112.57	120.80
80	B5	815	G	C4-C5-N7	-6.86	108.06	110.80
80	B5	2524	A	C4-C5-N7	6.86	114.13	110.70
80	B5	2884	C	N1-C2-O2	-6.86	114.79	118.90
81	B7	112	G	C5-C6-O6	6.86	132.71	128.60
80	B5	693	A	N1-C6-N6	-6.85	114.49	118.60
80	B5	2412	G	N3-C4-C5	-6.85	125.17	128.60
80	B5	2830	G	C4-C5-N7	-6.85	108.06	110.80
80	B5	3172	A	C5-N7-C8	6.85	107.33	103.90
80	B5	1327	C	N3-C2-O2	-6.85	117.11	121.90
80	B5	1685	C	N3-C2-O2	-6.85	117.11	121.90
80	B5	2237	C	N1-C2-O2	6.85	123.01	118.90
37	BC	90	PHE	C-N-CA	-6.84	107.92	122.30
80	B5	1130	A	N1-C2-N3	-6.84	125.88	129.30
80	B5	1205	A	N7-C8-N9	6.84	117.22	113.80
84	CW	55	U	C2-N1-C1'	-6.84	109.49	117.70
80	B5	1940	G	N1-C6-O6	-6.84	115.79	119.90
79	B2	1318	G	N1-C6-O6	6.84	124.00	119.90
80	B5	327	A	C8-N9-C4	6.84	108.54	105.80
80	B5	2385	G	C2-N3-C4	-6.84	108.48	111.90
80	B5	1406	A	N1-C2-N3	6.84	132.72	129.30
80	B5	1868	G	C8-N9-C4	6.84	109.14	106.40
80	B5	3056	U	N1-C2-N3	6.84	119.00	114.90
80	B5	1481	A	P-O3'-C3'	6.83	127.90	119.70
79	B2	1206	U	N3-C4-O4	6.83	124.18	119.40
80	B5	1652	G	N7-C8-N9	-6.83	109.68	113.10
80	B5	3149	G	C2-N3-C4	-6.83	108.48	111.90
79	B2	1210	C	N3-C4-C5	-6.83	119.17	121.90
79	B2	934	C	C2-N1-C1'	6.83	126.31	118.80
80	B5	1124	U	N1-C2-O2	6.83	127.58	122.80
80	B5	2389	C	C2-N3-C4	-6.83	116.49	119.90
80	B5	2810	C	C4-C5-C6	6.83	120.81	117.40
79	B2	73	U	O4'-C1'-N1	6.83	113.66	108.20
80	B5	881	C	C2-N3-C4	6.83	123.31	119.90
80	B5	1245	A	C4-C5-C6	6.83	120.41	117.00
80	B5	1255	C	P-O5'-C5'	6.83	131.82	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	838	G	C5-C6-O6	6.82	132.69	128.60
80	B5	2821	C	C6-N1-C2	-6.82	117.57	120.30
81	B7	49	G	C8-N9-C4	6.82	109.13	106.40
79	B2	1190	C	C6-N1-C2	6.82	123.03	120.30
80	B5	622	A	C5-C6-N6	-6.82	118.24	123.70
80	B5	1113	G	N3-C4-C5	6.82	132.01	128.60
80	B5	1369	A	C8-N9-C4	6.82	108.53	105.80
80	B5	2729	U	C5-C6-N1	6.82	126.11	122.70
80	B5	2619	G	C5-C6-O6	-6.82	124.51	128.60
80	B5	3376	A	N7-C8-N9	6.81	117.21	113.80
80	B5	2932	U	N3-C2-O2	-6.81	117.43	122.20
81	B7	50	U	C5-C6-N1	6.81	126.11	122.70
80	B5	1449	A	C6-C5-N7	-6.81	127.53	132.30
80	B5	1843	C	N3-C2-O2	-6.81	117.14	121.90
79	B2	1319	A	N1-C6-N6	6.80	122.68	118.60
84	CW	2	C	N3-C4-C5	-6.80	119.18	121.90
80	B5	578	A	C5-C6-N6	-6.80	118.26	123.70
81	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
80	B5	48	A	C8-N9-C4	-6.80	103.08	105.80
80	B5	1902	G	C6-N1-C2	-6.80	121.02	125.10
80	B5	189	G	N1-C6-O6	-6.80	115.82	119.90
79	B2	1246	C	N3-C2-O2	-6.80	117.14	121.90
80	B5	419	G	N3-C4-N9	6.80	130.08	126.00
80	B5	749	C	C6-N1-C2	-6.79	117.58	120.30
80	B5	3105	U	N3-C2-O2	6.79	126.96	122.20
79	B2	240	U	C2-N1-C1'	6.79	125.85	117.70
80	B5	3088	G	N3-C2-N2	6.79	124.65	119.90
84	CW	64	A	C4-C5-C6	6.79	120.40	117.00
80	B5	887	G	C2-N3-C4	-6.79	108.50	111.90
80	B5	960	U	N3-C2-O2	-6.79	117.45	122.20
80	B5	1138	U	N3-C4-C5	6.79	118.67	114.60
80	B5	2692	A	N1-C6-N6	-6.79	114.53	118.60
80	B5	205	C	N3-C2-O2	-6.79	117.15	121.90
80	B5	2705	A	C2-N3-C4	6.79	113.99	110.60
79	B2	142	G	N1-C2-N2	6.79	122.31	116.20
80	B5	345	G	N1-C2-N2	-6.79	110.09	116.20
80	B5	2730	G	C2-N3-C4	-6.79	108.51	111.90
80	B5	1417	G	C5-C6-N1	6.78	114.89	111.50
80	B5	1603	A	C8-N9-C4	-6.78	103.09	105.80
80	B5	3313	U	C5-C4-O4	6.78	129.97	125.90
84	CW	18	G	C5'-C4'-C3'	-6.78	105.15	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2401	A	C2-N3-C4	6.78	113.99	110.60
80	B5	888	A	C5-C6-N1	-6.78	114.31	117.70
80	B5	3050	U	N3-C4-O4	-6.78	114.66	119.40
80	B5	1297	C	N1-C2-O2	-6.78	114.83	118.90
80	B5	2246	G	C8-N9-C4	-6.78	103.69	106.40
80	B5	3076	C	C2-N3-C4	-6.78	116.51	119.90
79	B2	89	G	N7-C8-N9	-6.78	109.71	113.10
80	B5	1941	C	C2-N3-C4	-6.78	116.51	119.90
80	B5	3375	A	C2-N3-C4	6.78	113.99	110.60
80	B5	587	U	N3-C4-C5	6.77	118.66	114.60
80	B5	1253	U	O4'-C1'-N1	6.77	113.62	108.20
80	B5	2647	A	N1-C6-N6	-6.77	114.54	118.60
80	B5	1448	U	C2-N3-C4	-6.77	122.94	127.00
80	B5	2422	C	N1-C2-O2	6.77	122.96	118.90
80	B5	400	G	C4-C5-N7	6.77	113.51	110.80
80	B5	652	G	N1-C2-N3	6.77	127.96	123.90
80	B5	1197	A	N1-C2-N3	6.77	132.68	129.30
80	B5	41	G	C4-C5-N7	6.76	113.51	110.80
80	B5	146	U	C5-C4-O4	6.76	129.96	125.90
80	B5	2685	C	C2-N3-C4	-6.76	116.52	119.90
80	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
84	CW	29	G	C5-C6-O6	-6.76	124.54	128.60
80	B5	95	A	C5-C6-N6	-6.76	118.29	123.70
80	B5	1556	C	C6-N1-C2	-6.76	117.60	120.30
82	B8	23	U	N1-C2-N3	6.76	118.95	114.90
80	B5	2693	C	N1-C2-O2	6.75	122.95	118.90
79	B2	1195	C	C6-N1-C2	-6.75	117.60	120.30
80	B5	644	G	N3-C4-C5	-6.75	125.22	128.60
80	B5	2317	A	N7-C8-N9	6.75	117.17	113.80
80	B5	2434	U	C5-C4-O4	6.75	129.95	125.90
79	B2	410	A	C8-N9-C4	6.75	108.50	105.80
80	B5	63	A	N1-C6-N6	6.75	122.65	118.60
80	B5	2359	C	C6-N1-C2	6.75	123.00	120.30
82	B8	38	U	C4-C5-C6	6.75	123.75	119.70
80	B5	776	U	N3-C4-O4	-6.75	114.68	119.40
80	B5	2135	U	C6-N1-C2	6.75	125.05	121.00
80	B5	2695	A	N7-C8-N9	6.75	117.17	113.80
80	B5	2400	G	N3-C4-C5	6.75	131.97	128.60
84	CW	76	A	C4-C5-C6	6.75	120.37	117.00
80	B5	1044	U	C5-C6-N1	-6.74	119.33	122.70
80	B5	1421	G	C2-N3-C4	-6.74	108.53	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1469	C	C6-N1-C2	-6.74	117.60	120.30
80	B5	1652	G	C5-N7-C8	6.74	107.67	104.30
79	B2	1521	G	N3-C4-C5	-6.74	125.23	128.60
80	B5	322	U	C5-C4-O4	-6.74	121.86	125.90
80	B5	564	G	C4-C5-N7	-6.74	108.10	110.80
80	B5	890	C	N3-C4-C5	6.74	124.59	121.90
80	B5	1056	U	N3-C4-O4	6.74	124.12	119.40
80	B5	2820	A	C6-N1-C2	-6.74	114.56	118.60
80	B5	3140	G	N1-C6-O6	6.74	123.94	119.90
80	B5	2584	G	C8-N9-C1'	-6.73	118.25	127.00
81	B7	22	A	N1-C6-N6	6.73	122.64	118.60
80	B5	215	G	C8-N9-C4	-6.73	103.71	106.40
80	B5	3309	G	C5-C6-O6	-6.73	124.56	128.60
80	B5	614	C	C6-N1-C2	6.73	122.99	120.30
80	B5	1389	G	C6-C5-N7	-6.73	126.36	130.40
79	B2	1006	C	C6-N1-C2	-6.73	117.61	120.30
80	B5	1134	G	C5-C6-N1	6.72	114.86	111.50
80	B5	3216	G	C6-C5-N7	-6.72	126.36	130.40
83	CV	244	GLY	N-CA-C	6.72	129.91	113.10
80	B5	1159	A	C4-C5-N7	6.72	114.06	110.70
79	B2	736	C	C5-C6-N1	6.72	124.36	121.00
80	B5	1375	G	C2-N3-C4	6.72	115.26	111.90
80	B5	3140	G	C5-C6-O6	-6.72	124.57	128.60
80	B5	615	U	C5-C4-O4	-6.72	121.87	125.90
80	B5	1274	A	C4-C5-C6	6.72	120.36	117.00
80	B5	1910	A	N7-C8-N9	-6.72	110.44	113.80
80	B5	2868	U	N3-C4-C5	6.72	118.63	114.60
80	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
80	B5	2664	C	N3-C4-C5	6.72	124.59	121.90
80	B5	2743	A	C5-N7-C8	6.72	107.26	103.90
79	B2	539	G	N7-C8-N9	6.71	116.46	113.10
84	CW	60	U	C1'-O4'-C4'	-6.71	104.53	109.90
80	B5	2403	G	C5-N7-C8	6.71	107.66	104.30
82	B8	42	G	C4-N9-C1'	-6.71	117.77	126.50
79	B2	553	G	N1-C2-N2	6.71	122.24	116.20
80	B5	908	G	C4-N9-C1'	6.71	135.23	126.50
80	B5	2279	A	N1-C2-N3	6.71	132.66	129.30
80	B5	2767	U	C5-C4-O4	6.71	129.93	125.90
80	B5	2892	A	N9-C4-C5	6.71	108.48	105.80
80	B5	2145	A	N1-C6-N6	-6.71	114.58	118.60
79	B2	1762	A	C8-N9-C4	6.71	108.48	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1312	C	C6-N1-C2	-6.71	117.62	120.30
80	B5	2929	C	N1-C2-O2	-6.71	114.88	118.90
84	CW	53	G	P-O5'-C5'	-6.71	110.17	120.90
84	CW	60	U	P-O3'-C3'	-6.71	111.65	119.70
47	BM	72	LEU	CA-CB-CG	6.71	130.72	115.30
80	B5	1686	U	C5-C4-O4	-6.70	121.88	125.90
80	B5	2411	U	N3-C4-O4	-6.70	114.71	119.40
79	B2	1258	U	C5-C4-O4	6.70	129.92	125.90
80	B5	2341	A	N9-C4-C5	-6.70	103.12	105.80
80	B5	620	U	C5-C6-N1	6.70	126.05	122.70
80	B5	1392	G	N9-C4-C5	-6.70	102.72	105.40
80	B5	1911	A	C5-C6-N6	-6.70	118.34	123.70
80	B5	1496	C	C2-N1-C1'	6.70	126.17	118.80
84	CW	21	A	O4'-C1'-N9	6.70	113.56	108.20
79	B2	783	G	N9-C4-C5	-6.70	102.72	105.40
80	B5	1116	G	N9-C4-C5	6.70	108.08	105.40
80	B5	835	G	C6-N1-C2	-6.70	121.08	125.10
80	B5	1228	C	N3-C4-N4	6.70	122.69	118.00
80	B5	3336	A	N1-C2-N3	6.70	132.65	129.30
79	B2	192	U	C2-N1-C1'	6.69	125.73	117.70
80	B5	1159	A	N1-C2-N3	-6.69	125.95	129.30
82	B8	25	G	C5-C6-O6	6.69	132.62	128.60
84	CW	48	C	P-O3'-C3'	6.69	127.73	119.70
80	B5	2201	G	N1-C6-O6	-6.69	115.89	119.90
80	B5	355	A	N1-C2-N3	6.69	132.64	129.30
80	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
80	B5	518	G	C4-C5-N7	6.69	113.47	110.80
80	B5	2407	C	C5-C4-N4	-6.69	115.52	120.20
80	B5	1206	G	C8-N9-C4	-6.68	103.73	106.40
81	B7	25	G	N1-C6-O6	6.68	123.91	119.90
80	B5	1229	G	C5'-C4'-C3'	6.68	126.69	116.00
80	B5	2231	C	C4-C5-C6	6.68	120.74	117.40
80	B5	3049	A	C6-N1-C2	6.68	122.61	118.60
79	B2	838	G	C8-N9-C4	6.68	109.07	106.40
80	B5	3039	C	C6-N1-C2	-6.68	117.63	120.30
80	B5	669	U	C2-N3-C4	-6.68	122.99	127.00
80	B5	413	U	C4-C5-C6	6.67	123.70	119.70
80	B5	2391	G	N7-C8-N9	6.67	116.44	113.10
83	CV	373	MET	CG-SD-CE	-6.67	89.52	100.20
46	BL	171	ARG	NE-CZ-NH2	-6.67	116.96	120.30
79	B2	266	A	N9-C4-C5	-6.67	103.13	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	930	U	C4-C5-C6	-6.67	115.70	119.70
80	B5	376	G	C2-N3-C4	6.67	115.23	111.90
80	B5	2908	G	C5-C6-O6	6.67	132.60	128.60
79	B2	1679	G	N3-C4-C5	-6.67	125.27	128.60
80	B5	413	U	C5-C6-N1	-6.67	119.37	122.70
80	B5	1359	C	C5-C4-N4	-6.67	115.53	120.20
80	B5	1392	G	C5-N7-C8	6.67	107.63	104.30
83	CV	210	TRP	CE2-CD2-CG	-6.67	101.97	107.30
80	B5	3266	G	N1-C6-O6	-6.66	115.90	119.90
80	B5	600	G	N7-C8-N9	6.66	116.43	113.10
80	B5	1042	U	N1-C2-O2	6.66	127.46	122.80
80	B5	1057	A	N9-C4-C5	-6.66	103.14	105.80
80	B5	2717	U	N1-C2-N3	6.66	118.90	114.90
79	B2	340	U	N1-C2-O2	6.66	127.46	122.80
80	B5	1844	C	N1-C2-O2	-6.66	114.91	118.90
80	B5	3138	U	N1-C2-N3	6.66	118.89	114.90
80	B5	1232	C	C1'-O4'-C4'	-6.65	104.58	109.90
80	B5	2889	C	N3-C2-O2	-6.65	117.24	121.90
79	B2	608	U	N1-C2-N3	6.65	118.89	114.90
80	B5	966	U	C2-N3-C4	-6.65	123.01	127.00
80	B5	2357	A	N1-C6-N6	6.65	122.59	118.60
80	B5	2811	A	C6-N1-C2	-6.65	114.61	118.60
80	B5	1307	G	C2-N3-C4	6.65	115.22	111.90
80	B5	436	A	N7-C8-N9	6.65	117.12	113.80
80	B5	1042	U	C5-C4-O4	6.65	129.89	125.90
80	B5	2309	A	N1-C2-N3	-6.65	125.98	129.30
80	B5	1235	U	O4'-C1'-N1	6.65	113.52	108.20
79	B2	566	C	N1-C2-O2	6.64	122.89	118.90
79	B2	1297	G	C8-N9-C4	6.64	109.06	106.40
80	B5	1409	G	C5-C6-O6	6.64	132.59	128.60
80	B5	2961	G	C5-C6-O6	6.64	132.59	128.60
79	B2	687	G	N3-C2-N2	-6.64	115.25	119.90
80	B5	986	U	N3-C4-O4	6.64	124.05	119.40
84	CW	15	G	P-O3'-C3'	6.64	127.67	119.70
80	B5	669	U	C4-C5-C6	6.64	123.68	119.70
80	B5	1342	C	C4-C5-C6	6.64	120.72	117.40
80	B5	2292	U	C2-N1-C1'	6.64	125.67	117.70
84	CW	21	A	C5'-C4'-C3'	6.64	126.62	116.00
80	B5	625	G	N9-C4-C5	6.64	108.06	105.40
80	B5	990	U	N3-C2-O2	-6.64	117.55	122.20
80	B5	2392	C	N1-C2-O2	-6.64	114.92	118.90
80	B5	644	G	C8-N9-C4	-6.64	103.75	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1439	U	C2-N3-C4	-6.64	123.02	127.00
80	B5	3335	A	C2-N3-C4	-6.64	107.28	110.60
80	B5	1233	G	N1-C6-O6	6.63	123.88	119.90
80	B5	3214	U	N1-C2-O2	6.63	127.44	122.80
80	B5	1260	A	P-O3'-C3'	6.63	127.66	119.70
80	B5	1882	G	C4-C5-N7	-6.63	108.15	110.80
80	B5	2169	G	C2-N3-C4	6.63	115.22	111.90
80	B5	1754	G	N1-C6-O6	-6.63	115.92	119.90
80	B5	1848	G	C6-C5-N7	-6.63	126.42	130.40
80	B5	3128	G	C5-C6-O6	-6.63	124.62	128.60
80	B5	1146	C	N3-C2-O2	-6.63	117.26	121.90
80	B5	2347	U	N3-C4-O4	-6.63	114.76	119.40
80	B5	2377	G	C2-N3-C4	6.62	115.21	111.90
80	B5	1007	U	C5-C6-N1	-6.62	119.39	122.70
80	B5	3244	A	C2-N3-C4	-6.62	107.29	110.60
80	B5	1262	G	C6-C5-N7	-6.62	126.43	130.40
80	B5	1516	C	C5-C6-N1	-6.62	117.69	121.00
80	B5	1931	U	N3-C4-O4	-6.62	114.77	119.40
84	CW	14	A	O4'-C1'-N9	6.62	113.50	108.20
84	CW	68	C	C5-C4-N4	-6.62	115.57	120.20
80	B5	2207	A	C6-C5-N7	-6.62	127.67	132.30
80	B5	267	G	N9-C4-C5	-6.62	102.75	105.40
80	B5	721	G	C5-C6-N1	6.62	114.81	111.50
79	B2	557	G	C4-N9-C1'	6.61	135.10	126.50
80	B5	145	G	N3-C4-N9	-6.61	122.03	126.00
80	B5	1049	C	C4-C5-C6	-6.61	114.09	117.40
80	B5	3007	U	N3-C4-C5	6.61	118.57	114.60
81	B7	57	G	C4-C5-N7	-6.61	108.16	110.80
80	B5	828	A	N3-C4-C5	-6.61	122.17	126.80
80	B5	3306	U	C5-C6-N1	-6.61	119.39	122.70
80	B5	2675	C	N1-C2-O2	-6.61	114.94	118.90
80	B5	361	A	N1-C6-N6	-6.61	114.64	118.60
80	B5	1890	U	C5-C6-N1	-6.61	119.40	122.70
80	B5	3185	U	C5-C6-N1	-6.61	119.40	122.70
80	B5	792	G	N1-C2-N3	6.60	127.86	123.90
80	B5	1236	G	C5-C6-O6	-6.60	124.64	128.60
80	B5	420	G	N3-C4-C5	-6.60	125.30	128.60
80	B5	934	G	C2-N3-C4	6.60	115.20	111.90
80	B5	2549	G	C6-C5-N7	-6.60	126.44	130.40
82	B8	24	G	N1-C6-O6	-6.60	115.94	119.90
80	B5	1722	U	N3-C2-O2	6.60	126.82	122.20
80	B5	1876	U	C5-C6-N1	6.60	126.00	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1448	U	N1-C2-O2	-6.60	118.18	122.80
80	B5	1245	A	C5-C6-N1	-6.60	114.40	117.70
83	CV	16	THR	N-CA-C	-6.60	93.19	111.00
82	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
80	B5	1208	U	C5-C6-N1	-6.59	119.40	122.70
80	B5	1283	C	O4'-C1'-N1	6.59	113.47	108.20
80	B5	2851	A	C8-N9-C4	6.59	108.44	105.80
80	B5	3324	C	C6-N1-C2	6.59	122.94	120.30
80	B5	2719	U	C6-N1-C1'	6.59	130.43	121.20
80	B5	2954	U	C2-N1-C1'	6.59	125.61	117.70
80	B5	3153	U	N1-C2-O2	6.59	127.41	122.80
80	B5	880	G	C5-C6-O6	-6.59	124.65	128.60
80	B5	2617	U	N3-C4-O4	-6.59	114.79	119.40
80	B5	2984	C	C2-N3-C4	-6.59	116.61	119.90
80	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
80	B5	1225	A	C4-C5-C6	6.58	120.29	117.00
80	B5	1901	A	C4-C5-C6	6.58	120.29	117.00
80	B5	360	G	C8-N9-C4	6.58	109.03	106.40
80	B5	784	A	C6-C5-N7	-6.58	127.69	132.30
80	B5	1255	C	O4'-C1'-N1	6.58	113.47	108.20
80	B5	3303	G	N3-C2-N2	6.58	124.51	119.90
80	B5	3306	U	C6-N1-C2	6.58	124.95	121.00
80	B5	2114	C	C6-N1-C2	-6.58	117.67	120.30
80	B5	1229	G	N3-C2-N2	6.58	124.50	119.90
80	B5	3333	G	N1-C6-O6	6.58	123.85	119.90
79	B2	1462	G	N9-C4-C5	-6.58	102.77	105.40
80	B5	1151	U	C4-C5-C6	-6.58	115.75	119.70
80	B5	1365	G	C8-N9-C1'	-6.58	118.45	127.00
80	B5	2957	G	C8-N9-C4	6.58	109.03	106.40
80	B5	3025	C	C5-C4-N4	6.58	124.80	120.20
80	B5	640	U	N3-C2-O2	-6.57	117.60	122.20
81	B7	68	C	C2-N3-C4	-6.57	116.61	119.90
80	B5	2746	A	C8-N9-C4	6.57	108.43	105.80
80	B5	828	A	C2-N3-C4	6.57	113.89	110.60
80	B5	2147	A	N1-C6-N6	6.57	122.54	118.60
80	B5	1906	G	N1-C2-N3	6.57	127.84	123.90
80	B5	859	G	N9-C4-C5	6.57	108.03	105.40
80	B5	3122	A	C4-C5-C6	6.57	120.28	117.00
80	B5	925	A	C4-C5-C6	6.56	120.28	117.00
80	B5	2124	G	C8-N9-C4	6.56	109.03	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	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
80	B5	3263	G	N3-C2-N2	6.56	124.49	119.90
80	B5	424	G	N3-C2-N2	6.56	124.49	119.90
80	B5	3115	C	N1-C2-O2	-6.56	114.96	118.90
79	B2	557	G	C8-N9-C1'	-6.56	118.48	127.00
80	B5	2626	A	C4-C5-N7	-6.56	107.42	110.70
79	B2	131	C	C6-N1-C2	-6.56	117.68	120.30
80	B5	370	U	C6-N1-C2	-6.56	117.07	121.00
80	B5	1131	G	C2-N3-C4	-6.56	108.62	111.90
79	B2	1274	C	N3-C4-N4	-6.55	113.41	118.00
80	B5	345	G	N3-C2-N2	6.55	124.49	119.90
80	B5	369	A	N9-C4-C5	6.55	108.42	105.80
80	B5	2866	U	N1-C2-O2	-6.55	118.21	122.80
80	B5	386	A	C6-C5-N7	-6.55	127.71	132.30
79	B2	965	U	C5-C6-N1	6.55	125.98	122.70
80	B5	332	C	C4-C5-C6	6.55	120.67	117.40
80	B5	2904	U	C5-C6-N1	-6.55	119.42	122.70
80	B5	3376	A	N9-C4-C5	6.55	108.42	105.80
80	B5	675	C	N3-C4-N4	6.55	122.58	118.00
80	B5	641	C	C2-N1-C1'	-6.55	111.60	118.80
80	B5	2258	U	N3-C2-O2	-6.55	117.62	122.20
80	B5	1408	G	N3-C4-N9	-6.55	122.07	126.00
80	B5	1518	U	N3-C4-C5	6.55	118.53	114.60
80	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
80	B5	815	G	C5-C6-O6	6.54	132.53	128.60
80	B5	2626	A	C5-C6-N1	-6.54	114.43	117.70
80	B5	3270	U	N3-C4-O4	-6.54	114.82	119.40
79	B2	647	G	N3-C2-N2	-6.54	115.32	119.90
80	B5	1004	U	N3-C2-O2	-6.54	117.62	122.20
80	B5	1138	U	C2-N3-C4	-6.54	123.07	127.00
80	B5	1211	U	N3-C4-C5	6.54	118.53	114.60
80	B5	1259	A	C4-C5-C6	6.54	120.27	117.00
80	B5	226	C	N3-C4-C5	6.54	124.52	121.90
80	B5	1215	U	N3-C4-O4	6.54	123.98	119.40
80	B5	3310	A	N1-C6-N6	-6.54	114.68	118.60
79	B2	558	U	C2-N1-C1'	6.54	125.55	117.70
80	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
80	B5	1897	G	C5-C6-O6	-6.53	124.68	128.60
80	B5	3289	G	N7-C8-N9	6.53	116.37	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	BI	182	LEU	CA-CB-CG	-6.53	100.28	115.30
80	B5	2699	G	N1-C6-O6	6.53	123.82	119.90
80	B5	1240	A	C4-C5-C6	6.53	120.27	117.00
80	B5	2303	A	N3-C4-C5	-6.53	122.23	126.80
80	B5	2518	C	C5-C6-N1	-6.53	117.73	121.00
80	B5	783	A	N1-C6-N6	6.53	122.52	118.60
80	B5	217	U	C5-C6-N1	-6.53	119.44	122.70
80	B5	1151	U	N3-C4-C5	6.53	118.52	114.60
80	B5	2320	A	N1-C2-N3	6.53	132.56	129.30
80	B5	2884	C	N1-C2-N3	6.53	123.77	119.20
82	B8	54	A	C5-N7-C8	-6.53	100.64	103.90
80	B5	1284	C	C2'-C3'-O3'	6.52	124.14	113.70
79	B2	1282	U	C5-C4-O4	6.52	129.81	125.90
80	B5	2385	G	C8-N9-C4	6.52	109.01	106.40
80	B5	3190	C	C6-N1-C2	-6.52	117.69	120.30
80	B5	3341	U	C6-N1-C2	-6.52	117.09	121.00
80	B5	1408	G	N3-C4-C5	6.52	131.86	128.60
80	B5	2301	U	C5-C6-N1	-6.52	119.44	122.70
84	CW	50	U	O4'-C1'-N1	6.52	113.42	108.20
80	B5	299	G	C2-N3-C4	6.52	115.16	111.90
80	B5	584	G	C5-C6-O6	6.51	132.51	128.60
80	B5	1200	A	C4-C5-C6	6.51	120.26	117.00
79	B2	1473	U	N3-C2-O2	-6.51	117.64	122.20
82	B8	6	U	C5-C6-N1	-6.51	119.44	122.70
80	B5	2257	C	N3-C2-O2	-6.51	117.34	121.90
81	B7	20	A	C5-C6-N6	-6.51	118.50	123.70
79	B2	6	G	N1-C2-N3	6.50	127.80	123.90
80	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
80	B5	884	A	N3-C4-N9	-6.50	122.20	127.40
79	B2	136	C	N1-C2-O2	6.50	122.80	118.90
80	B5	3105	U	N1-C2-O2	-6.50	118.25	122.80
79	B2	355	G	C6-N1-C2	-6.50	121.20	125.10
80	B5	2336	U	N3-C4-O4	-6.50	114.85	119.40
81	B7	12	U	N3-C4-C5	6.50	118.50	114.60
80	B5	1256	G	C5-C6-O6	-6.50	124.70	128.60
84	CW	18	G	O3'-P-O5'	-6.50	91.65	104.00
79	B2	132	U	C2-N1-C1'	-6.50	109.90	117.70
80	B5	429	U	N3-C4-C5	6.50	118.50	114.60
80	B5	2320	A	C5-N7-C8	6.50	107.15	103.90
80	B5	290	G	N3-C2-N2	6.49	124.45	119.90
84	CW	75	C	N3-C4-N4	6.49	122.55	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2351	U	N3-C4-O4	-6.49	114.86	119.40
82	B8	11	C	C4-C5-C6	6.49	120.65	117.40
80	B5	1259	A	O4'-C1'-N9	6.49	113.39	108.20
80	B5	2314	U	C2-N1-C1'	6.49	125.49	117.70
80	B5	2833	A	C8-N9-C4	6.49	108.40	105.80
79	B2	1422	A	C8-N9-C4	6.49	108.40	105.80
80	B5	393	U	N3-C2-O2	-6.49	117.66	122.20
80	B5	2440	G	N7-C8-N9	6.49	116.34	113.10
80	B5	2849	C	C5-C6-N1	6.49	124.24	121.00
80	B5	1231	A	C4-C5-C6	6.49	120.24	117.00
79	B2	1455	G	N1-C6-O6	6.49	123.79	119.90
80	B5	2647	A	C8-N9-C4	-6.49	103.21	105.80
80	B5	3330	A	N1-C6-N6	-6.49	114.71	118.60
84	CW	5	G	C6-N1-C2	-6.49	121.21	125.10
84	CW	30	G	C5-C6-O6	-6.49	124.71	128.60
79	B2	1503	A	N1-C2-N3	6.48	132.54	129.30
80	B5	1434	G	C8-N9-C4	6.48	108.99	106.40
80	B5	1788	C	N3-C4-C5	-6.48	119.31	121.90
80	B5	3043	C	N3-C4-C5	6.48	124.49	121.90
80	B5	343	U	C5-C6-N1	-6.48	119.46	122.70
80	B5	370	U	N3-C2-O2	-6.48	117.67	122.20
80	B5	518	G	N1-C6-O6	6.48	123.79	119.90
80	B5	894	G	C5-C6-O6	-6.48	124.71	128.60
80	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
80	B5	1402	C	C4-C5-C6	6.47	120.64	117.40
80	B5	3126	C	N3-C4-C5	6.47	124.49	121.90
80	B5	3306	U	N3-C4-C5	6.47	118.48	114.60
80	B5	2837	A	C2-N3-C4	6.47	113.84	110.60
80	B5	3186	A	N9-C4-C5	6.47	108.39	105.80
80	B5	963	G	C5-C6-O6	-6.47	124.72	128.60
80	B5	3004	C	C5-C4-N4	-6.47	115.67	120.20
79	B2	1536	G	N3-C4-N9	6.47	129.88	126.00
80	B5	1190	A	C5-C6-N6	6.47	128.88	123.70
80	B5	3175	U	N3-C4-C5	-6.47	110.72	114.60
80	B5	2433	U	N3-C4-C5	6.47	118.48	114.60
80	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
79	B2	1024	U	N3-C2-O2	-6.46	117.68	122.20
80	B5	435	C	C2-N3-C4	-6.46	116.67	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	B7	1	G	C4-N9-C1'	6.46	134.90	126.50
80	B5	519	A	C5-C6-N6	-6.46	118.53	123.70
80	B5	2211	U	C5-C6-N1	-6.46	119.47	122.70
84	CW	67	C	C6-N1-C1'	-6.46	113.05	120.80
80	B5	1161	G	N7-C8-N9	-6.46	109.87	113.10
79	B2	1235	C	N1-C2-O2	-6.46	115.03	118.90
80	B5	651	G	C8-N9-C4	-6.46	103.82	106.40
80	B5	1392	G	C8-N9-C1'	-6.46	118.60	127.00
80	B5	2719	U	C5-C6-N1	-6.46	119.47	122.70
80	B5	950	G	N3-C2-N2	6.46	124.42	119.90
80	B5	916	G	C8-N9-C4	-6.46	103.82	106.40
80	B5	3167	A	N7-C8-N9	6.46	117.03	113.80
79	B2	554	C	C2-N1-C1'	6.45	125.90	118.80
80	B5	1215	U	N1-C2-O2	-6.45	118.28	122.80
79	B2	407	A	C4-C5-C6	6.45	120.22	117.00
79	B2	1169	G	N7-C8-N9	6.45	116.33	113.10
80	B5	2998	U	C5-C6-N1	-6.45	119.47	122.70
79	B2	830	U	N3-C2-O2	-6.45	117.69	122.20
80	B5	1399	A	C8-N9-C4	6.45	108.38	105.80
80	B5	940	G	C8-N9-C4	-6.45	103.82	106.40
80	B5	2146	C	C6-N1-C2	-6.45	117.72	120.30
80	B5	2891	U	C5-C6-N1	-6.44	119.48	122.70
80	B5	3006	A	N3-C4-N9	-6.44	122.25	127.40
83	CV	469	ILE	CB-CA-C	-6.44	98.71	111.60
80	B5	1283	C	C5'-C4'-C3'	6.44	126.31	116.00
80	B5	2345	A	C5-C6-N6	-6.44	118.55	123.70
80	B5	2375	G	C5-C6-N1	6.44	114.72	111.50
80	B5	2964	G	N7-C8-N9	-6.44	109.88	113.10
81	B7	38	U	C6-N1-C1'	-6.44	112.18	121.20
80	B5	1851	G	C4-C5-C6	6.44	122.66	118.80
80	B5	1298	C	N1-C2-O2	-6.44	115.04	118.90
80	B5	2817	A	C6-N1-C2	-6.44	114.74	118.60
79	B2	732	G	N9-C4-C5	-6.44	102.83	105.40
80	B5	2662	G	C3'-C2'-C1'	-6.44	96.35	101.50
80	B5	824	C	C4-C5-C6	6.43	120.62	117.40
80	B5	2431	C	N3-C4-C5	-6.43	119.33	121.90
83	CV	81	GLU	C-N-CA	6.43	137.79	121.70
79	B2	1200	G	C4-C5-C6	6.43	122.66	118.80
80	B5	947	G	N1-C6-O6	-6.43	116.04	119.90
80	B5	1496	C	C6-N1-C2	-6.43	117.73	120.30
80	B5	2246	G	N3-C4-C5	-6.43	125.38	128.60
82	B8	28	C	N3-C4-C5	6.43	124.47	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	266	A	C8-N9-C4	6.43	108.37	105.80
79	B2	628	G	N3-C2-N2	6.43	124.40	119.90
79	B2	1758	U	C6-N1-C2	-6.43	117.14	121.00
82	B8	111	A	C2-N3-C4	-6.43	107.39	110.60
80	B5	971	G	N1-C2-N2	6.43	121.98	116.20
80	B5	1271	A	C5-C6-N6	-6.43	118.56	123.70
80	B5	436	A	C4-N9-C1'	6.43	137.87	126.30
80	B5	2351	U	N3-C2-O2	-6.43	117.70	122.20
80	B5	2754	G	N3-C2-N2	6.43	124.40	119.90
79	B2	610	G	C4-N9-C1'	6.42	134.85	126.50
80	B5	1749	A	C8-N9-C4	6.42	108.37	105.80
80	B5	1843	C	C2-N1-C1'	6.42	125.87	118.80
79	B2	68	A	C8-N9-C4	-6.42	103.23	105.80
79	B2	1085	G	N3-C2-N2	6.42	124.39	119.90
80	B5	2288	G	N3-C4-C5	-6.42	125.39	128.60
84	CW	17	C	N3-C4-C5	-6.42	119.33	121.90
80	B5	1607	U	N1-C2-N3	6.42	118.75	114.90
80	B5	2800	G	N9-C4-C5	6.42	107.97	105.40
80	B5	2930	A	N1-C6-N6	-6.42	114.75	118.60
80	B5	1147	G	N7-C8-N9	-6.42	109.89	113.10
80	B5	2302	G	N1-C2-N2	-6.42	110.42	116.20
82	B8	29	U	C2-N3-C4	-6.42	123.15	127.00
84	CW	60	U	O4'-C1'-C2'	-6.42	99.38	105.80
80	B5	2894	C	N3-C4-C5	6.42	124.47	121.90
79	B2	404	G	C5-C6-O6	-6.41	124.75	128.60
80	B5	284	A	C2-N3-C4	6.41	113.81	110.60
80	B5	679	U	C5-C6-N1	-6.41	119.49	122.70
80	B5	1390	A	C5-C6-N6	6.41	128.83	123.70
80	B5	2288	G	C5-C6-O6	-6.41	124.75	128.60
79	B2	1027	A	N7-C8-N9	6.41	117.00	113.80
80	B5	833	G	N1-C2-N3	6.41	127.75	123.90
80	B5	1270	A	C4-C5-C6	6.41	120.21	117.00
80	B5	1907	C	N1-C2-O2	-6.41	115.05	118.90
80	B5	3187	A	C4-C5-N7	-6.41	107.50	110.70
79	B2	144	U	C6-N1-C2	-6.41	117.16	121.00
80	B5	3303	G	N1-C2-N2	-6.41	110.43	116.20
80	B5	1518	U	N1-C2-O2	6.41	127.28	122.80
84	CW	2	C	N3-C4-N4	6.41	122.48	118.00
79	B2	1185	U	C2-N1-C1'	6.40	125.39	117.70
80	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
80	B5	1929	G	C8-N9-C4	6.40	108.96	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	943	U	C5-C6-N1	-6.40	119.50	122.70
80	B5	2396	G	N3-C4-C5	-6.40	125.40	128.60
80	B5	2857	C	C6-N1-C2	6.40	122.86	120.30
81	B7	40	C	N1-C2-O2	-6.40	115.06	118.90
80	B5	2817	A	N3-C4-C5	-6.40	122.32	126.80
80	B5	652	G	N3-C4-N9	6.40	129.84	126.00
80	B5	2123	G	C2-N3-C4	6.40	115.10	111.90
80	B5	667	C	N3-C4-C5	6.40	124.46	121.90
80	B5	1041	U	C6-N1-C2	6.40	124.84	121.00
80	B5	2631	U	N1-C2-N3	6.39	118.74	114.90
80	B5	2802	A	N1-C2-N3	-6.39	126.10	129.30
82	B8	19	C	C4-C5-C6	6.39	120.60	117.40
80	B5	2633	U	C5-C6-N1	-6.39	119.50	122.70
79	B2	1000	C	N1-C2-O2	6.39	122.73	118.90
80	B5	1902	G	N3-C4-N9	6.39	129.83	126.00
80	B5	2879	C	N1-C2-O2	6.39	122.73	118.90
80	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
79	B2	1430	U	C5-C4-O4	6.39	129.73	125.90
80	B5	648	C	C6-N1-C2	-6.39	117.75	120.30
80	B5	2677	G	N3-C2-N2	-6.38	115.43	119.90
81	B7	93	C	C4-C5-C6	6.38	120.59	117.40
79	B2	1096	C	N3-C2-O2	-6.38	117.43	121.90
79	B2	75	U	N1-C2-O2	6.38	127.27	122.80
79	B2	942	G	N1-C6-O6	-6.38	116.07	119.90
80	B5	1793	C	C2-N3-C4	6.38	123.09	119.90
80	B5	2305	G	C4-C5-N7	6.38	113.35	110.80
80	B5	3245	A	C5-C6-N6	-6.38	118.60	123.70
84	CW	25	C	P-O3'-C3'	-6.38	112.05	119.70
80	B5	1879	A	C4-C5-N7	6.38	113.89	110.70
80	B5	2340	U	C2-N3-C4	-6.38	123.17	127.00
80	B5	2365	C	C5-C4-N4	6.38	124.66	120.20
80	B5	2611	U	C4-C5-C6	6.38	123.53	119.70
80	B5	2625	C	N3-C2-O2	-6.38	117.44	121.90
82	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
80	B5	75	G	C5-C6-O6	-6.37	124.78	128.60
80	B5	600	G	C8-N9-C4	-6.37	103.85	106.40
80	B5	1451	C	C5-C6-N1	-6.37	117.81	121.00
80	B5	1894	U	C2-N3-C4	-6.37	123.18	127.00
80	B5	2130	G	N1-C6-O6	-6.37	116.08	119.90
81	B7	92	A	C4-C5-N7	6.37	113.89	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	Ba	28	HIS	N-CA-C	6.37	128.19	111.00
80	B5	909	G	C4-C5-N7	-6.37	108.25	110.80
80	B5	2117	A	N1-C6-N6	-6.37	114.78	118.60
80	B5	2948	C	C5-C4-N4	6.37	124.66	120.20
81	B7	48	U	N3-C4-C5	6.37	118.42	114.60
80	B5	1840	U	C5-C6-N1	-6.37	119.52	122.70
80	B5	3189	G	N1-C2-N3	6.37	127.72	123.90
84	CW	26	A	C5-C6-N6	-6.37	118.61	123.70
84	CW	40	C	N3-C4-C5	-6.37	119.35	121.90
38	BD	152	ARG	NE-CZ-NH1	6.36	123.48	120.30
79	B2	1611	A	C8-N9-C4	-6.36	103.25	105.80
80	B5	676	G	C8-N9-C4	-6.36	103.86	106.40
80	B5	1413	G	N1-C6-O6	-6.36	116.08	119.90
80	B5	1858	A	N7-C8-N9	6.36	116.98	113.80
80	B5	2429	G	C8-N9-C4	-6.36	103.86	106.40
80	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
80	B5	1115	G	C4-N9-C1'	6.36	134.77	126.50
79	B2	973	A	C2-N3-C4	-6.36	107.42	110.60
51	BQ	176	ARG	NE-CZ-NH2	-6.36	117.12	120.30
80	B5	1172	G	N3-C2-N2	6.36	124.35	119.90
80	B5	1300	G	C5-C6-O6	-6.36	124.78	128.60
80	B5	2408	U	N1-C2-N3	6.36	118.72	114.90
80	B5	2821	C	C5-C6-N1	6.36	124.18	121.00
79	B2	136	C	C6-N1-C1'	-6.36	113.17	120.80
80	B5	3309	G	C6-N1-C2	-6.36	121.29	125.10
80	B5	645	A	C5-C6-N1	6.35	120.88	117.70
80	B5	1403	C	N3-C4-N4	6.35	122.45	118.00
80	B5	1254	C	N3-C4-N4	6.35	122.45	118.00
80	B5	2416	U	C5-C6-N1	6.35	125.88	122.70
80	B5	2614	G	C8-N9-C1'	-6.35	118.74	127.00
79	B2	1745	G	N9-C4-C5	-6.35	102.86	105.40
82	B8	17	A	C4-C5-N7	6.35	113.88	110.70
80	B5	891	G	C5-C6-O6	6.35	132.41	128.60
80	B5	904	A	C8-N9-C4	-6.35	103.26	105.80
80	B5	1449	A	C5-C6-N1	-6.35	114.53	117.70
80	B5	1264	G	P-O3'-C3'	-6.34	112.09	119.70
80	B5	2777	G	C4-C5-N7	-6.34	108.26	110.80
80	B5	3174	A	C4-C5-N7	6.34	113.87	110.70
74	Bn	9	ARG	NE-CZ-NH2	-6.34	117.13	120.30
80	B5	248	U	N1-C2-O2	6.34	127.24	122.80
80	B5	1306	G	C6-N1-C2	-6.34	121.30	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1833	G	N7-C8-N9	-6.34	109.93	113.10
80	B5	1211	U	N3-C4-O4	-6.34	114.96	119.40
80	B5	2303	A	N1-C6-N6	-6.34	114.80	118.60
80	B5	2352	A	N1-C2-N3	6.34	132.47	129.30
80	B5	2753	G	N3-C2-N2	-6.34	115.46	119.90
81	B7	48	U	N1-C2-O2	-6.34	118.36	122.80
84	CW	51	U	O4'-C1'-N1	6.34	113.27	108.20
80	B5	1832	C	C2-N3-C4	-6.33	116.73	119.90
80	B5	2231	C	N3-C4-C5	-6.33	119.37	121.90
80	B5	2349	U	N3-C4-C5	6.33	118.40	114.60
82	B8	52	A	C8-N9-C4	-6.33	103.27	105.80
80	B5	1403	C	C6-N1-C1'	-6.33	113.20	120.80
80	B5	2361	A	C8-N9-C4	-6.33	103.27	105.80
84	CW	38	A	C5-C6-N6	-6.33	118.64	123.70
35	BA	204	MET	CG-SD-CE	-6.33	90.07	100.20
80	B5	1168	U	N3-C4-C5	6.33	118.40	114.60
84	CW	42	C	N3-C4-C5	-6.33	119.37	121.90
80	B5	1297	C	C4-C5-C6	6.33	120.56	117.40
79	B2	159	U	C2-N1-C1'	-6.33	110.11	117.70
80	B5	1188	U	C5-C4-O4	-6.33	122.10	125.90
80	B5	1211	U	C4-C5-C6	-6.33	115.91	119.70
80	B5	2211	U	N3-C4-C5	-6.33	110.81	114.60
80	B5	2277	C	C6-N1-C2	6.33	122.83	120.30
79	B2	213	A	C8-N9-C4	6.32	108.33	105.80
80	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
79	B2	1246	C	C5-C4-N4	6.32	124.63	120.20
79	B2	1465	C	N3-C4-C5	-6.32	119.37	121.90
80	B5	65	A	N7-C8-N9	6.32	116.96	113.80
80	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
79	B2	523	G	N3-C4-C5	-6.32	125.44	128.60
80	B5	42	C	C5-C6-N1	6.32	124.16	121.00
80	B5	938	C	C6-N1-C2	6.32	122.83	120.30
80	B5	950	G	C8-N9-C4	6.32	108.93	106.40
80	B5	2363	A	C2-N3-C4	6.32	113.76	110.60
80	B5	1277	C	N3-C4-N4	6.32	122.42	118.00
84	CW	42	C	C1'-O4'-C4'	-6.32	104.85	109.90
79	B2	377	G	N3-C4-C5	6.31	131.76	128.60
80	B5	793	C	N1-C2-O2	-6.31	115.11	118.90
80	B5	1496	C	C5-C6-N1	6.31	124.16	121.00
80	B5	1690	C	N1-C2-O2	-6.31	115.11	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2134	G	N3-C4-C5	-6.31	125.44	128.60
80	B5	2393	G	N9-C4-C5	-6.31	102.87	105.40
82	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
79	B2	557	G	C4-C5-C6	6.31	122.59	118.80
79	B2	1454	G	C5-C6-O6	6.31	132.39	128.60
80	B5	1416	C	N3-C2-O2	-6.31	117.48	121.90
80	B5	1468	A	C8-N9-C4	-6.31	103.28	105.80
80	B5	1753	G	N3-C4-C5	-6.31	125.44	128.60
80	B5	631	U	N3-C4-C5	6.31	118.39	114.60
80	B5	2728	G	C8-N9-C4	-6.31	103.88	106.40
80	B5	2886	U	N3-C2-O2	-6.31	117.78	122.20
80	B5	2261	G	C8-N9-C4	6.31	108.92	106.40
79	B2	1456	C	C6-N1-C2	-6.31	117.78	120.30
80	B5	3011	A	N1-C2-N3	-6.30	126.15	129.30
81	B7	46	A	C8-N9-C4	-6.30	103.28	105.80
80	B5	1254	C	C6-N1-C2	-6.30	117.78	120.30
80	B5	1130	A	N3-C4-C5	-6.30	122.39	126.80
80	B5	779	G	C8-N9-C4	-6.30	103.88	106.40
80	B5	1314	C	C6-N1-C1'	-6.30	113.24	120.80
80	B5	1340	G	N3-C2-N2	6.30	124.31	119.90
79	B2	627	C	N3-C4-N4	6.30	122.41	118.00
79	B2	1515	A	C8-N9-C4	-6.30	103.28	105.80
80	B5	2364	G	C5-C6-O6	6.30	132.38	128.60
80	B5	1254	C	P-O5'-C5'	6.30	130.97	120.90
80	B5	3218	A	N3-C4-C5	6.30	131.21	126.80
80	B5	32	U	N1-C2-O2	-6.29	118.39	122.80
80	B5	2808	A	N1-C2-N3	6.29	132.45	129.30
80	B5	3270	U	C5-C6-N1	-6.29	119.55	122.70
80	B5	903	U	N3-C2-O2	-6.29	117.80	122.20
80	B5	1511	U	C5-C6-N1	-6.29	119.55	122.70
81	B7	92	A	C6-C5-N7	-6.29	127.89	132.30
80	B5	582	G	C5-C6-O6	6.29	132.38	128.60
80	B5	1733	G	N1-C6-O6	6.29	123.67	119.90
80	B5	3317	U	C5-C6-N1	6.29	125.85	122.70
80	B5	3360	C	C6-N1-C2	-6.29	117.78	120.30
80	B5	1064	A	C4-C5-N7	6.29	113.84	110.70
80	B5	1449	A	N3-C4-C5	6.29	131.20	126.80
79	B2	494	U	N1-C2-O2	6.29	127.20	122.80
80	B5	2833	A	N7-C8-N9	-6.29	110.66	113.80
81	B7	15	C	N3-C4-C5	6.29	124.42	121.90
80	B5	656	A	C8-N9-C4	6.29	108.31	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	624	G	C8-N9-C4	6.29	108.91	106.40
80	B5	3174	A	C5-N7-C8	-6.29	100.76	103.90
84	CW	15	G	C5-C6-O6	-6.29	124.83	128.60
79	B2	1329	A	C5-C6-N6	-6.28	118.67	123.70
82	B8	38	U	C5-C4-O4	6.28	129.67	125.90
79	B2	590	C	C2-N1-C1'	6.28	125.71	118.80
79	B2	868	G	N1-C6-O6	6.28	123.67	119.90
80	B5	637	C	C2-N1-C1'	-6.28	111.89	118.80
80	B5	947	G	N3-C4-N9	6.28	129.77	126.00
80	B5	3266	G	C8-N9-C4	-6.28	103.89	106.40
80	B5	1148	G	C5-C6-O6	-6.28	124.83	128.60
80	B5	1200	A	N1-C2-N3	6.28	132.44	129.30
80	B5	1233	G	C5-C6-O6	-6.28	124.83	128.60
80	B5	3258	U	C6-N1-C2	6.28	124.77	121.00
80	B5	1407	A	C8-N9-C4	6.28	108.31	105.80
80	B5	2616	C	C5-C4-N4	-6.28	115.81	120.20
80	B5	625	G	C5-C6-O6	6.28	132.37	128.60
80	B5	1273	A	C4-C5-C6	6.28	120.14	117.00
80	B5	2420	C	C5-C4-N4	-6.28	115.81	120.20
80	B5	1254	C	O4'-C1'-N1	6.28	113.22	108.20
80	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
80	B5	510	G	C5-C6-N1	6.27	114.64	111.50
80	B5	1123	U	C5-C6-N1	-6.27	119.56	122.70
80	B5	1260	A	P-O5'-C5'	-6.27	110.86	120.90
81	B7	25	G	N3-C2-N2	-6.27	115.51	119.90
79	B2	75	U	N3-C2-O2	-6.27	117.81	122.20
79	B2	189	C	N1-C2-O2	6.27	122.66	118.90
80	B5	276	U	C2-N3-C4	-6.27	123.24	127.00
80	B5	819	U	C6-N1-C2	6.27	124.76	121.00
84	CW	13	C	O4'-C1'-N1	6.27	113.22	108.20
80	B5	1227	C	N1-C1'-C2'	6.27	122.15	114.00
80	B5	1229	G	C8-N9-C4	-6.27	103.89	106.40
80	B5	2139	A	C5-N7-C8	6.27	107.03	103.90
80	B5	2572	C	C6-N1-C2	-6.27	117.79	120.30
80	B5	1888	U	C2-N3-C4	-6.27	123.24	127.00
80	B5	1940	G	N1-C2-N2	-6.27	110.56	116.20
80	B5	1500	G	C8-N9-C4	6.26	108.91	106.40
80	B5	2952	G	N1-C6-O6	6.26	123.66	119.90
84	CW	3	C	O4'-C1'-N1	6.26	113.21	108.20
79	B2	1363	U	N1-C2-O2	6.26	127.18	122.80
80	B5	1408	G	C2-N3-C4	-6.26	108.77	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1883	A	N9-C4-C5	6.26	108.30	105.80
80	B5	2164	A	C8-N9-C4	-6.26	103.30	105.80
80	B5	2133	U	N3-C4-C5	6.26	118.36	114.60
80	B5	2389	C	C5-C6-N1	-6.26	117.87	121.00
79	B2	404	G	C8-N9-C4	6.26	108.90	106.40
80	B5	904	A	N9-C4-C5	6.26	108.30	105.80
80	B5	1056	U	N3-C4-C5	-6.26	110.85	114.60
80	B5	1252	A	C5-C6-N6	-6.26	118.69	123.70
80	B5	1307	G	C8-N9-C4	-6.26	103.90	106.40
80	B5	2389	C	N3-C4-C5	6.26	124.40	121.90
80	B5	2524	A	C6-N1-C2	6.25	122.35	118.60
80	B5	3317	U	N3-C4-O4	-6.25	115.02	119.40
80	B5	146	U	N3-C4-O4	-6.25	115.02	119.40
80	B5	665	A	C2-N3-C4	-6.25	107.47	110.60
80	B5	1035	G	N3-C4-N9	6.25	129.75	126.00
80	B5	1931	U	C5-C6-N1	-6.25	119.57	122.70
83	CV	210	TRP	NE1-CE2-CZ2	6.25	137.28	130.40
79	B2	377	G	C5-C6-O6	-6.25	124.85	128.60
79	B2	543	C	N3-C2-O2	-6.25	117.53	121.90
79	B2	1198	G	N9-C4-C5	6.25	107.90	105.40
80	B5	1042	U	C5-C6-N1	-6.25	119.58	122.70
80	B5	1300	G	C4-C5-N7	6.25	113.30	110.80
80	B5	2516	U	C2-N3-C4	-6.25	123.25	127.00
80	B5	2735	U	C6-N1-C2	-6.25	117.25	121.00
79	B2	933	A	C8-N9-C4	-6.25	103.30	105.80
80	B5	892	U	N3-C4-C5	6.25	118.35	114.60
80	B5	974	G	N3-C4-N9	6.25	129.75	126.00
80	B5	1389	G	C5-N7-C8	-6.25	101.18	104.30
80	B5	2930	A	C8-N9-C4	-6.25	103.30	105.80
80	B5	112	U	C5-C4-O4	-6.24	122.15	125.90
80	B5	644	G	N1-C6-O6	-6.24	116.15	119.90
80	B5	2754	G	N1-C6-O6	-6.24	116.15	119.90
80	B5	1911	A	N7-C8-N9	-6.24	110.68	113.80
80	B5	691	A	C2-N3-C4	-6.24	107.48	110.60
82	B8	53	A	C2-N3-C4	6.24	113.72	110.60
80	B5	1115	G	N3-C4-C5	-6.24	125.48	128.60
80	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
79	B2	189	C	C6-N1-C1'	-6.24	113.31	120.80
80	B5	83	U	C5-C4-O4	-6.24	122.16	125.90
80	B5	590	G	C5-C6-N1	6.24	114.62	111.50
80	B5	1134	G	C6-N1-C2	-6.24	121.36	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1425	U	N3-C4-O4	-6.24	115.03	119.40
80	B5	2289	U	N3-C4-O4	-6.24	115.03	119.40
79	B2	810	G	C6-C5-N7	-6.23	126.66	130.40
79	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
79	B2	1297	G	N7-C8-N9	-6.23	109.98	113.10
80	B5	1383	G	N1-C6-O6	-6.23	116.16	119.90
80	B5	1506	A	C5-N7-C8	-6.23	100.78	103.90
79	B2	1000	C	C5-C6-N1	-6.23	117.88	121.00
80	B5	2133	U	N3-C4-O4	-6.23	115.04	119.40
80	B5	2169	G	N1-C6-O6	-6.23	116.16	119.90
80	B5	586	C	N3-C4-C5	6.23	124.39	121.90
80	B5	734	C	N1-C2-O2	6.23	122.64	118.90
84	CW	64	A	C5-C6-N6	-6.23	118.72	123.70
79	B2	1258	U	C4-C5-C6	6.23	123.44	119.70
80	B5	436	A	C5-N7-C8	-6.23	100.79	103.90
80	B5	2117	A	C6-N1-C2	-6.23	114.86	118.60
79	B2	852	C	C5-C6-N1	6.22	124.11	121.00
79	B2	1747	G	C8-N9-C4	6.22	108.89	106.40
80	B5	511	G	N3-C2-N2	6.22	124.26	119.90
79	B2	1746	A	C8-N9-C4	6.22	108.29	105.80
80	B5	726	G	C5-N7-C8	-6.22	101.19	104.30
80	B5	753	C	C5-C4-N4	-6.22	115.84	120.20
80	B5	1119	C	C5-C4-N4	-6.22	115.84	120.20
80	B5	2777	G	N9-C4-C5	6.22	107.89	105.40
80	B5	2978	U	C2-N3-C4	-6.22	123.27	127.00
80	B5	87	U	N3-C4-O4	-6.22	115.05	119.40
80	B5	670	C	N3-C4-C5	6.22	124.39	121.90
80	B5	425	G	N7-C8-N9	-6.22	109.99	113.10
80	B5	787	G	C2-N3-C4	-6.22	108.79	111.90
80	B5	1272	C	O4'-C1'-N1	6.22	113.17	108.20
81	B7	44	C	N3-C4-C5	-6.22	119.41	121.90
80	B5	1688	U	N1-C2-O2	6.21	127.15	122.80
80	B5	437	G	N3-C2-N2	-6.21	115.55	119.90
80	B5	911	C	N1-C2-O2	-6.21	115.17	118.90
80	B5	2228	A	C8-N9-C4	-6.21	103.31	105.80
79	B2	1654	G	C8-N9-C4	-6.21	103.92	106.40
80	B5	35	A	C2-N3-C4	-6.21	107.50	110.60
79	B2	736	C	N1-C2-O2	6.21	122.62	118.90
80	B5	822	G	N3-C4-N9	-6.21	122.28	126.00
80	B5	891	G	C8-N9-C4	6.21	108.88	106.40
80	B5	326	U	N3-C4-C5	6.21	118.32	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2808	A	N1-C6-N6	6.21	122.32	118.60
79	B2	942	G	C8-N9-C4	-6.20	103.92	106.40
80	B5	408	A	N1-C2-N3	6.20	132.40	129.30
80	B5	514	G	N1-C6-O6	6.20	123.62	119.90
80	B5	2392	C	N3-C4-C5	6.20	124.38	121.90
80	B5	2396	G	C8-N9-C4	-6.20	103.92	106.40
80	B5	3330	A	C2-N3-C4	6.20	113.70	110.60
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
79	B2	704	C	C6-N1-C1'	-6.20	113.36	120.80
79	B2	767	U	N3-C4-O4	-6.20	115.06	119.40
79	B2	1305	U	N1-C2-N3	6.20	118.62	114.90
80	B5	314	U	C5-C4-O4	6.20	129.62	125.90
80	B5	1283	C	N3-C4-N4	6.20	122.34	118.00
79	B2	1560	U	N1-C2-N3	6.20	118.62	114.90
80	B5	674	G	C8-N9-C4	-6.20	103.92	106.40
80	B5	1381	A	C2-N3-C4	-6.20	107.50	110.60
80	B5	2716	U	C6-N1-C2	-6.20	117.28	121.00
80	B5	3065	G	C5-C6-O6	6.20	132.32	128.60
80	B5	3298	C	N1-C2-O2	-6.20	115.18	118.90
79	B2	1595	U	C5-C4-O4	-6.20	122.18	125.90
84	CW	49	C	N3-C4-N4	6.20	122.34	118.00
84	CW	74	C	O4'-C1'-N1	6.20	113.16	108.20
49	BO	3[B]	SER	C-N-CA	-6.20	106.21	121.70
79	B2	1766	A	C8-N9-C4	6.20	108.28	105.80
80	B5	150	A	C5-C6-N6	-6.20	118.74	123.70
80	B5	1115	G	C8-N9-C4	-6.20	103.92	106.40
80	B5	1844	C	C2-N3-C4	-6.20	116.80	119.90
80	B5	3101	G	N1-C6-O6	-6.20	116.18	119.90
80	B5	600	G	C6-C5-N7	-6.19	126.68	130.40
80	B5	1162	U	C2-N3-C4	-6.19	123.28	127.00
80	B5	823	C	N3-C4-C5	6.19	124.38	121.90
80	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
79	B2	186	C	C5-C6-N1	6.19	124.10	121.00
79	B2	719	U	C5-C6-N1	6.19	125.80	122.70
80	B5	436	A	C8-N9-C1'	-6.19	116.56	127.70
80	B5	2846	U	N1-C2-O2	-6.19	118.47	122.80
80	B5	3228	C	N3-C2-O2	-6.19	117.57	121.90
80	B5	3330	A	C6-N1-C2	-6.19	114.89	118.60
80	B5	42	C	C2-N3-C4	6.19	122.99	119.90
80	B5	2830	G	C6-N1-C2	-6.19	121.39	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	27	G	O4'-C1'-N9	6.19	113.15	108.20
80	B5	1411	C	N1-C2-O2	-6.19	115.19	118.90
80	B5	2858	U	N1-C2-N3	6.18	118.61	114.90
80	B5	1009	A	C8-N9-C4	-6.18	103.33	105.80
80	B5	1114	U	N3-C4-C5	6.18	118.31	114.60
80	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
80	B5	1206	G	N3-C4-C5	-6.18	125.51	128.60
80	B5	2645	G	C6-N1-C2	-6.18	121.39	125.10
80	B5	1525	G	C4-N9-C1'	6.18	134.53	126.50
80	B5	2128	C	N3-C2-O2	-6.18	117.58	121.90
80	B5	2775	U	C5-C4-O4	6.18	129.61	125.90
80	B5	1143	A	C6-N1-C2	6.17	122.31	118.60
80	B5	1303	A	C2-N3-C4	6.17	113.69	110.60
80	B5	2928	C	C6-N1-C2	-6.17	117.83	120.30
79	B2	340	U	N3-C2-O2	-6.17	117.88	122.20
79	B2	1670	G	C4-N9-C1'	6.17	134.53	126.50
80	B5	924	G	N3-C2-N2	-6.17	115.58	119.90
80	B5	1301	A	C5-C6-N6	-6.17	118.76	123.70
79	B2	61	A	C8-N9-C4	-6.17	103.33	105.80
79	B2	1436	A	N9-C4-C5	-6.17	103.33	105.80
80	B5	351	A	C5-C6-N6	-6.17	118.76	123.70
80	B5	494	G	N3-C4-C5	-6.17	125.52	128.60
80	B5	2824	G	N3-C4-C5	-6.17	125.52	128.60
80	B5	3216	G	C6-N1-C2	-6.17	121.40	125.10
79	B2	1218	G	N1-C6-O6	6.17	123.60	119.90
80	B5	1430	U	C6-N1-C2	6.17	124.70	121.00
80	B5	2930	A	N9-C4-C5	6.17	108.27	105.80
80	B5	3358	U	N3-C2-O2	-6.17	117.88	122.20
79	B2	1633	A	N9-C4-C5	6.17	108.27	105.80
80	B5	370	U	N1-C2-N3	6.17	118.60	114.90
80	B5	1228	C	C6-N1-C1'	-6.17	113.40	120.80
79	B2	621	A	C8-N9-C4	6.17	108.27	105.80
80	B5	424	G	N1-C6-O6	-6.16	116.20	119.90
80	B5	1161	G	C2-N3-C4	6.16	114.98	111.90
80	B5	1346	G	N3-C4-C5	6.16	131.68	128.60
80	B5	2301	U	N3-C4-C5	6.16	118.30	114.60
80	B5	994	G	N3-C2-N2	6.16	124.21	119.90
80	B5	1148	G	C5-C6-N1	6.16	114.58	111.50
80	B5	2615	G	C5-C6-O6	-6.16	124.90	128.60
80	B5	2650	U	N3-C4-O4	-6.16	115.09	119.40
80	B5	2757	U	N1-C2-O2	-6.16	118.49	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2198	A	C2-N3-C4	-6.16	107.52	110.60
80	B5	3052	G	N7-C8-N9	-6.16	110.02	113.10
84	CW	43	C	N3-C4-N4	6.16	122.31	118.00
79	B2	1628	U	N3-C2-O2	-6.16	117.89	122.20
80	B5	1810	A	C8-N9-C4	6.16	108.26	105.80
79	B2	1781	A	C5-C6-N6	6.16	128.63	123.70
80	B5	880	G	C5-C6-N1	6.16	114.58	111.50
79	B2	1514	U	N3-C2-O2	-6.16	117.89	122.20
80	B5	311	C	N3-C4-C5	6.16	124.36	121.90
80	B5	1872	C	C4-C5-C6	6.16	120.48	117.40
80	B5	3068	U	N1-C2-N3	6.16	118.59	114.90
79	B2	538	A	N1-C2-N3	-6.15	126.22	129.30
79	B2	932	U	C5-C4-O4	6.15	129.59	125.90
80	B5	3245	A	N9-C4-C5	-6.15	103.34	105.80
80	B5	1007	U	C2-N3-C4	-6.15	123.31	127.00
80	B5	2242	A	C5-C6-N6	6.15	128.62	123.70
80	B5	2381	G	N1-C6-O6	-6.15	116.21	119.90
80	B5	2939	G	N7-C8-N9	-6.15	110.02	113.10
83	CV	385	VAL	C-N-CA	6.15	137.08	121.70
84	CW	53	G	O4'-C1'-N9	6.15	113.12	108.20
79	B2	192	U	N3-C2-O2	-6.15	117.89	122.20
80	B5	933	A	C6-N1-C2	-6.15	114.91	118.60
80	B5	2603	G	C5-N7-C8	-6.15	101.22	104.30
80	B5	3308	C	C5-C6-N1	-6.15	117.92	121.00
84	CW	70	G	P-O3'-C3'	6.15	127.08	119.70
80	B5	2399	A	C8-N9-C4	6.15	108.26	105.80
84	CW	58	A	C5-C6-N6	-6.15	118.78	123.70
80	B5	3098	G	N1-C6-O6	-6.15	116.21	119.90
80	B5	909	G	C5-N7-C8	6.14	107.37	104.30
80	B5	3345	G	N3-C2-N2	-6.14	115.60	119.90
80	B5	359	U	C5-C4-O4	-6.14	122.22	125.90
80	B5	1270	A	O4'-C1'-N9	6.14	113.11	108.20
80	B5	1226	G	P-O5'-C5'	-6.14	111.08	120.90
79	B2	1490	C	C2-N1-C1'	6.14	125.55	118.80
79	B2	1121	C	C5-C6-N1	-6.14	117.93	121.00
80	B5	125	C	N3-C4-N4	-6.14	113.70	118.00
80	B5	785	G	C2-N3-C4	6.14	114.97	111.90
80	B5	1262	G	C8-N9-C4	-6.14	103.94	106.40
80	B5	3014	U	C5-C4-O4	-6.14	122.22	125.90
80	B5	3266	G	C4-C5-N7	-6.14	108.35	110.80
84	CW	63	G	N1-C6-O6	6.14	123.58	119.90
79	B2	874	C	C5-C6-N1	6.13	124.07	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	102	C	N3-C4-N4	6.13	122.29	118.00
80	B5	2764	C	N3-C4-C5	6.13	124.35	121.90
80	B5	3150	A	C2-N3-C4	-6.13	107.53	110.60
80	B5	3334	U	N3-C2-O2	-6.13	117.91	122.20
79	B2	36	C	N3-C4-N4	6.13	122.29	118.00
82	B8	79	A	N9-C4-C5	-6.13	103.35	105.80
84	CW	73	A	C4-C5-C6	6.13	120.07	117.00
79	B2	734	A	N1-C6-N6	6.13	122.28	118.60
80	B5	386	A	C4-C5-N7	6.13	113.77	110.70
80	B5	722	G	N9-C4-C5	6.13	107.85	105.40
80	B5	1124	U	N3-C4-C5	6.13	118.28	114.60
80	B5	1591	G	C5-C6-N1	6.13	114.56	111.50
80	B5	2415	C	N3-C4-C5	6.13	124.35	121.90
79	B2	781	U	C2-N1-C1'	6.12	125.05	117.70
80	B5	949	C	C5-C6-N1	-6.12	117.94	121.00
80	B5	2347	U	N3-C4-C5	6.12	118.28	114.60
80	B5	2353	G	C6-C5-N7	-6.12	126.72	130.40
80	B5	1772	U	N3-C2-O2	-6.12	117.91	122.20
80	B5	1929	G	N9-C4-C5	-6.12	102.95	105.40
80	B5	3138	U	C5-C4-O4	-6.12	122.23	125.90
84	CW	9	A	C4-C5-C6	6.12	120.06	117.00
80	B5	2865	U	N1-C2-N3	-6.12	111.23	114.90
80	B5	294	U	C5-C4-O4	-6.12	122.23	125.90
80	B5	3175	U	C6-N1-C2	-6.12	117.33	121.00
80	B5	2207	A	C5-N7-C8	-6.12	100.84	103.90
80	B5	2646	C	N1-C2-O2	-6.12	115.23	118.90
80	B5	32	U	C6-N1-C2	-6.12	117.33	121.00
80	B5	1666	G	C5-C6-O6	6.12	132.27	128.60
80	B5	2620	G	N1-C6-O6	-6.12	116.23	119.90
79	B2	335	U	N1-C2-O2	-6.11	118.52	122.80
80	B5	1389	G	N3-C4-N9	6.11	129.67	126.00
80	B5	2353	G	N3-C4-N9	6.11	129.67	126.00
80	B5	2368	A	N1-C6-N6	-6.11	114.93	118.60
80	B5	2930	A	C8-N9-C1'	6.11	138.70	127.70
80	B5	2728	G	C6-N1-C2	-6.11	121.44	125.10
80	B5	976	U	N3-C2-O2	-6.11	117.92	122.20
80	B5	1232	C	N3-C4-N4	6.11	122.28	118.00
80	B5	2954	U	C5-C4-O4	-6.11	122.24	125.90
84	CW	7	A	C4-C5-C6	6.11	120.05	117.00
79	B2	1387	G	C5-C6-O6	-6.10	124.94	128.60
80	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

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1168	U	N3-C4-O4	-6.10	115.13	119.40
80	B5	1233	G	O4'-C1'-N9	6.10	113.08	108.20
80	B5	2176	U	N1-C2-N3	6.10	118.56	114.90
82	B8	14	C	C2-N3-C4	-6.10	116.85	119.90
83	CV	400	ASP	N-CA-CB	6.10	121.58	110.60
80	B5	999	G	C2-N3-C4	6.10	114.95	111.90
79	B2	865	A	N1-C6-N6	-6.10	114.94	118.60
80	B5	927	C	N3-C4-C5	6.10	124.34	121.90
80	B5	1719	G	N1-C6-O6	6.10	123.56	119.90
80	B5	2865	U	C2-N1-C1'	6.10	125.02	117.70
80	B5	2920	U	N1-C2-N3	6.10	118.56	114.90
83	CV	385	VAL	N-CA-C	6.10	127.47	111.00
84	CW	67	C	C4'-C3'-C2'	6.10	108.70	102.60
80	B5	1119	C	N1-C2-O2	-6.10	115.24	118.90
80	B5	673	U	C2-N3-C4	-6.09	123.34	127.00
80	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
80	B5	1147	G	C6-C5-N7	6.09	134.05	130.40
80	B5	3382	U	N3-C2-O2	-6.09	117.94	122.20
79	B2	1596	C	C2-N1-C1'	6.09	125.50	118.80
80	B5	917	A	C8-N9-C4	-6.09	103.36	105.80
79	B2	627	C	C5-C4-N4	-6.09	115.94	120.20
80	B5	2386	A	C5-C6-N6	-6.09	118.83	123.70
80	B5	3086	A	C8-N9-C4	6.09	108.23	105.80
84	CW	6	G	C5-C6-N1	-6.09	108.46	111.50
80	B5	367	A	N3-C4-N9	-6.08	122.53	127.40
80	B5	1044	U	N3-C4-C5	6.08	118.25	114.60
79	B2	144	U	N1-C2-N3	6.08	118.55	114.90
80	B5	2361	A	C5-N7-C8	6.08	106.94	103.90
80	B5	2730	G	N3-C4-N9	-6.08	122.35	126.00
80	B5	3000	A	C8-N9-C4	6.08	108.23	105.80
80	B5	1161	G	C8-N9-C4	6.08	108.83	106.40
80	B5	2911	A	N1-C2-N3	-6.08	126.26	129.30
80	B5	1184	A	C2-N3-C4	-6.08	107.56	110.60
80	B5	3110	C	C2-N3-C4	-6.08	116.86	119.90
80	B5	595	G	N1-C6-O6	-6.08	116.25	119.90
80	B5	1136	A	N1-C2-N3	-6.08	126.26	129.30
80	B5	1518	U	N3-C2-O2	-6.08	117.95	122.20
80	B5	3182	G	C5-C6-O6	6.08	132.25	128.60
80	B5	2371	G	C8-N9-C4	6.08	108.83	106.40
80	B5	1042	U	N3-C2-O2	-6.07	117.95	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2134	G	C2-N3-C4	6.07	114.94	111.90
79	B2	1346	A	N7-C8-N9	6.07	116.83	113.80
80	B5	818	C	N3-C4-C5	-6.07	119.47	121.90
80	B5	3120	C	N3-C4-C5	-6.07	119.47	121.90
80	B5	3216	G	C4-C5-C6	6.07	122.44	118.80
80	B5	2844	C	N1-C2-O2	6.07	122.54	118.90
80	B5	33	G	C6-N1-C2	-6.07	121.46	125.10
80	B5	933	A	C2-N3-C4	-6.07	107.57	110.60
80	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
80	B5	1902	G	N7-C8-N9	-6.07	110.07	113.10
80	B5	2128	C	C2-N3-C4	-6.07	116.87	119.90
80	B5	2791	G	N1-C6-O6	6.07	123.54	119.90
79	B2	377	G	N3-C4-N9	-6.06	122.36	126.00
81	B7	40	C	C4-C5-C6	6.06	120.43	117.40
84	CW	31	A	C5-C6-N6	-6.06	118.85	123.70
80	B5	66	A	N9-C4-C5	-6.06	103.38	105.80
80	B5	216	G	C6-C5-N7	-6.06	126.76	130.40
84	CW	67	C	C1'-O4'-C4'	6.06	114.75	109.90
80	B5	1284	C	N3-C4-N4	6.06	122.24	118.00
80	B5	1285	G	O4'-C1'-N9	6.06	113.05	108.20
80	B5	3140	G	C5-N7-C8	-6.06	101.27	104.30
82	B8	42	G	N7-C8-N9	-6.06	110.07	113.10
80	B5	1897	G	C5-C6-N1	6.06	114.53	111.50
80	B5	935	U	C5-C4-O4	-6.05	122.27	125.90
80	B5	1323	G	C8-N9-C4	-6.05	103.98	106.40
80	B5	1340	G	N7-C8-N9	-6.05	110.07	113.10
80	B5	1438	U	C2-N1-C1'	6.05	124.96	117.70
80	B5	2749	G	N1-C2-N3	-6.05	120.27	123.90
80	B5	3272	C	C6-N1-C2	6.05	122.72	120.30
80	B5	3382	U	C6-N1-C1'	-6.05	112.72	121.20
84	CW	38	A	C5-C6-N1	-6.05	114.67	117.70
79	B2	1246	C	N3-C4-N4	-6.05	113.76	118.00
80	B5	1858	A	C4-C5-C6	6.05	120.03	117.00
80	B5	3020	U	C5-C4-O4	-6.05	122.27	125.90
83	CV	83	PHE	CB-CG-CD2	-6.05	116.56	120.80
84	CW	74	C	C3'-C2'-C1'	6.05	106.34	101.50
79	B2	1473	U	C5-C4-O4	6.05	129.53	125.90
82	B8	15	G	C5-C6-N1	6.05	114.52	111.50
79	B2	557	G	C6-C5-N7	-6.05	126.77	130.40
80	B5	80	G	N1-C6-O6	-6.05	116.27	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1909	A	N1-C2-N3	-6.05	126.28	129.30
80	B5	3075	G	C4-C5-N7	-6.05	108.38	110.80
84	CW	58	A	C4-C5-C6	6.05	120.02	117.00
80	B5	655	C	C6-N1-C2	-6.04	117.88	120.30
80	B5	1371	G	C6-N1-C2	-6.04	121.47	125.10
83	CV	18	LYS	N-CA-C	-6.04	94.69	111.00
80	B5	1271	A	C4-C5-C6	6.04	120.02	117.00
80	B5	1278	A	C4-C5-C6	6.04	120.02	117.00
80	B5	386	A	N9-C4-C5	-6.04	103.38	105.80
80	B5	920	A	N7-C8-N9	-6.04	110.78	113.80
80	B5	1869	C	C2-N3-C4	-6.04	116.88	119.90
80	B5	2939	G	C5-N7-C8	6.04	107.32	104.30
80	B5	2346	C	N1-C2-O2	-6.04	115.28	118.90
80	B5	2359	C	C5-C6-N1	-6.04	117.98	121.00
79	B2	75	U	C2-N1-C1'	6.04	124.94	117.70
80	B5	341	G	N1-C6-O6	6.04	123.52	119.90
80	B5	641	C	C5-C4-N4	6.04	124.42	120.20
80	B5	2116	G	C6-C5-N7	-6.04	126.78	130.40
83	CV	396	ALA	N-CA-C	6.04	127.30	111.00
79	B2	1000	C	C5-C4-N4	6.03	124.42	120.20
80	B5	2632	G	N9-C4-C5	6.03	107.81	105.40
80	B5	2911	A	C8-N9-C4	-6.03	103.39	105.80
79	B2	1099	U	C5-C6-N1	6.03	125.72	122.70
80	B5	1110	U	N3-C4-O4	-6.03	115.18	119.40
80	B5	1117	G	C5-C6-O6	-6.03	124.98	128.60
80	B5	1368	U	C6-N1-C2	6.03	124.62	121.00
80	B5	2358	A	C8-N9-C4	6.03	108.21	105.80
80	B5	3318	G	N1-C6-O6	-6.03	116.28	119.90
79	B2	349	U	C4-C5-C6	6.03	123.32	119.70
80	B5	1047	A	C5-C6-N1	6.03	120.72	117.70
80	B5	1165	A	C8-N9-C4	6.03	108.21	105.80
80	B5	2364	G	N3-C4-C5	-6.03	125.58	128.60
80	B5	1910	A	C5-C6-N1	6.03	120.71	117.70
80	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
79	B2	266	A	N1-C6-N6	6.02	122.22	118.60
79	B2	1450	U	C5-C4-O4	6.02	129.51	125.90
80	B5	282	G	N9-C4-C5	6.02	107.81	105.40
80	B5	3309	G	C5-C6-N1	6.02	114.51	111.50
79	B2	308	C	C2-N3-C4	-6.02	116.89	119.90
80	B5	2318	U	N3-C4-O4	-6.02	115.18	119.40
80	B5	2730	G	C5-N7-C8	-6.02	101.29	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	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
79	B2	404	G	N9-C4-C5	-6.02	102.99	105.40
79	B2	1192	C	N3-C2-O2	6.02	126.11	121.90
79	B2	1749	A	C8-N9-C4	6.02	108.21	105.80
84	CW	51	U	P-O5'-C5'	6.02	130.53	120.90
48	BN	172	ARG	NE-CZ-NH2	6.02	123.31	120.30
79	B2	397	A	N1-C6-N6	-6.02	114.99	118.60
79	B2	538	A	C4-C5-C6	-6.02	113.99	117.00
80	B5	555	U	N3-C4-O4	6.02	123.61	119.40
80	B5	594	U	C5-C6-N1	6.02	125.71	122.70
80	B5	1652	G	C8-N9-C4	6.02	108.81	106.40
80	B5	2395	G	C4-C5-N7	-6.02	108.39	110.80
80	B5	2993	G	N3-C4-N9	6.02	129.61	126.00
80	B5	3222	U	N3-C2-O2	-6.02	117.99	122.20
79	B2	1057	U	C2-N1-C1'	6.01	124.92	117.70
79	B2	1119	G	C5-C6-O6	6.01	132.21	128.60
80	B5	1808	G	N1-C6-O6	6.01	123.51	119.90
80	B5	1227	C	P-O5'-C5'	-6.01	111.28	120.90
80	B5	2167	A	N9-C4-C5	6.01	108.20	105.80
84	CW	4	C	C6-N1-C2	-6.01	117.89	120.30
38	BD	248	ARG	NE-CZ-NH1	6.01	123.31	120.30
79	B2	781	U	N1-C2-O2	6.01	127.01	122.80
80	B5	822	G	N3-C2-N2	-6.01	115.69	119.90
80	B5	795	G	C2-N3-C4	6.01	114.91	111.90
80	B5	1000	C	C6-N1-C2	-6.01	117.90	120.30
80	B5	2837	A	N7-C8-N9	-6.01	110.80	113.80
80	B5	2917	G	N1-C6-O6	6.01	123.50	119.90
80	B5	3343	G	N1-C2-N2	-6.01	110.79	116.20
84	CW	68	C	C6-N1-C1'	-6.01	113.59	120.80
79	B2	1796	C	C4-C5-C6	6.01	120.40	117.40
80	B5	517	G	N1-C2-N3	6.00	127.50	123.90
80	B5	1190	A	N1-C6-N6	-6.00	115.00	118.60
80	B5	2108	C	N3-C4-N4	-6.00	113.80	118.00
80	B5	2421	U	N1-C2-N3	6.00	118.50	114.90
80	B5	3211	C	C4-C5-C6	6.00	120.40	117.40
79	B2	274	G	C4-N9-C1'	6.00	134.30	126.50
79	B2	445	A	C2-N3-C4	6.00	113.60	110.60
79	B2	1643	U	C5-C6-N1	-6.00	119.70	122.70
80	B5	811	U	C4-C5-C6	6.00	123.30	119.70
80	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

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	106	U	C6-N1-C2	-6.00	117.40	121.00
79	B2	377	G	N1-C6-O6	6.00	123.50	119.90
80	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
79	B2	557	G	N3-C4-N9	6.00	129.60	126.00
80	B5	679	U	C5-C4-O4	6.00	129.50	125.90
80	B5	968	G	C4-C5-N7	6.00	113.20	110.80
80	B5	1192	C	C2-N3-C4	-6.00	116.90	119.90
80	B5	2887	A	C6-N1-C2	6.00	122.20	118.60
84	CW	2	C	O4'-C1'-N1	6.00	113.00	108.20
80	B5	516	A	N1-C6-N6	6.00	122.20	118.60
80	B5	1469	C	C4-C5-C6	6.00	120.40	117.40
80	B5	3187	A	N7-C8-N9	-6.00	110.80	113.80
79	B2	151	G	N1-C6-O6	-5.99	116.30	119.90
84	CW	41	C	O4'-C1'-N1	5.99	113.00	108.20
80	B5	351	A	N1-C6-N6	5.99	122.19	118.60
80	B5	813	G	N9-C4-C5	5.99	107.80	105.40
80	B5	1301	A	N9-C4-C5	-5.99	103.40	105.80
80	B5	1438	U	N3-C2-O2	-5.99	118.01	122.20
80	B5	2617	U	N3-C4-C5	5.99	118.19	114.60
80	B5	3095	U	N3-C4-C5	5.99	118.19	114.60
80	B5	2526	C	N1-C2-O2	5.99	122.50	118.90
80	B5	341	G	N1-C2-N2	5.99	121.59	116.20
80	B5	1378	U	C6-N1-C2	5.99	124.59	121.00
80	B5	1548	C	N1-C2-O2	-5.99	115.31	118.90
80	B5	3192	U	C2-N3-C4	-5.99	123.41	127.00
80	B5	2381	G	C5-C6-O6	5.99	132.19	128.60
80	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
79	B2	1521	G	N3-C4-N9	5.98	129.59	126.00
79	B2	1745	G	C6-N1-C2	-5.98	121.51	125.10
80	B5	3343	G	N3-C2-N2	5.98	124.09	119.90
79	B2	1188	G	C5-C6-O6	-5.98	125.01	128.60
37	BC	84	ARG	NE-CZ-NH2	-5.98	117.31	120.30
80	B5	283	G	N1-C6-O6	5.98	123.49	119.90
80	B5	2166	A	N1-C6-N6	5.98	122.19	118.60
81	B7	96	U	C2-N1-C1'	5.98	124.87	117.70
80	B5	392	G	C5-C6-O6	-5.98	125.01	128.60
80	B5	416	A	N9-C4-C5	5.98	108.19	105.80
80	B5	847	A	N7-C8-N9	-5.98	110.81	113.80
80	B5	912	G	N3-C4-N9	5.98	129.59	126.00
80	B5	3055	U	N1-C2-O2	5.98	126.98	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B8	47	C	N1-C2-O2	5.98	122.49	118.90
79	B2	1121	C	N3-C4-C5	-5.98	119.51	121.90
79	B2	1600	A	C5-N7-C8	-5.98	100.91	103.90
79	B2	831	U	C6-N1-C2	-5.97	117.42	121.00
80	B5	701	G	C4-C5-N7	-5.97	108.41	110.80
80	B5	3298	C	C4-C5-C6	5.97	120.39	117.40
79	B2	1417	A	N1-C6-N6	5.97	122.18	118.60
80	B5	1305	U	N3-C4-O4	5.97	123.58	119.40
80	B5	1307	G	P-O3'-C3'	5.97	126.87	119.70
80	B5	2113	A	C8-N9-C4	5.97	108.19	105.80
80	B5	2130	G	N1-C2-N2	-5.97	110.83	116.20
80	B5	3112	G	N1-C6-O6	5.97	123.48	119.90
80	B5	226	C	C5-C4-N4	-5.97	116.02	120.20
80	B5	3003	G	C4-C5-C6	-5.97	115.22	118.80
80	B5	971	G	N1-C2-N3	-5.97	120.32	123.90
80	B5	3028	G	N3-C4-N9	5.97	129.58	126.00
80	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
80	B5	2365	C	C5-C6-N1	-5.97	118.02	121.00
79	B2	542	A	C6-C5-N7	-5.97	128.12	132.30
79	B2	1455	G	N9-C4-C5	5.97	107.79	105.40
80	B5	359	U	C6-N1-C2	5.97	124.58	121.00
80	B5	619	A	N1-C6-N6	-5.97	115.02	118.60
80	B5	965	A	N3-C4-C5	-5.97	122.62	126.80
80	B5	1206	G	C4-C5-N7	-5.97	108.41	110.80
80	B5	1725	C	C5-C4-N4	5.97	124.38	120.20
80	B5	2833	A	C5-C6-N1	5.97	120.68	117.70
82	B8	63	G	N1-C6-O6	-5.97	116.32	119.90
80	B5	2915	U	N3-C2-O2	-5.96	118.03	122.20
84	CW	18	G	P-O5'-C5'	-5.96	111.36	120.90
79	B2	1753	A	C8-N9-C4	5.96	108.18	105.80
80	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
79	B2	719	U	N1-C2-O2	5.96	126.97	122.80
80	B5	667	C	C2-N1-C1'	-5.96	112.25	118.80
80	B5	884	A	C4-C5-C6	-5.96	114.02	117.00
80	B5	1280	C	N3-C4-N4	5.96	122.17	118.00
80	B5	2250	G	N1-C6-O6	-5.96	116.32	119.90
80	B5	2349	U	C4-C5-C6	-5.96	116.13	119.70
79	B2	360	A	N1-C6-N6	5.96	122.17	118.60
80	B5	2908	G	C5-C6-N1	-5.95	108.52	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1907	C	C5-C6-N1	5.95	123.98	121.00
82	B8	100	U	C5-C4-O4	-5.95	122.33	125.90
79	B2	416	A	C8-N9-C4	5.95	108.18	105.80
80	B5	83	U	C2-N1-C1'	5.95	124.84	117.70
80	B5	903	U	C5-C6-N1	-5.95	119.72	122.70
80	B5	987	U	N3-C2-O2	-5.95	118.03	122.20
80	B5	2792	A	C8-N9-C4	-5.95	103.42	105.80
79	B2	13	C	N3-C4-C5	5.95	124.28	121.90
79	B2	628	G	C5-C6-O6	5.95	132.17	128.60
79	B2	1387	G	C4-C5-N7	5.95	113.18	110.80
79	B2	1768	G	C4-N9-C1'	-5.95	118.77	126.50
80	B5	546	C	N3-C2-O2	-5.95	117.74	121.90
80	B5	2724	U	C5-C4-O4	5.95	129.47	125.90
80	B5	3240	C	N3-C4-N4	-5.95	113.84	118.00
80	B5	386	A	C5-C6-N6	-5.95	118.94	123.70
79	B2	382	C	C2-N3-C4	-5.95	116.93	119.90
80	B5	520	U	N1-C2-N3	5.95	118.47	114.90
80	B5	873	C	P-O3'-C3'	5.95	126.83	119.70
80	B5	1171	G	N7-C8-N9	5.95	116.07	113.10
80	B5	1753	G	C2-N3-C4	5.95	114.87	111.90
80	B5	2370	G	C5-C6-N1	5.95	114.47	111.50
80	B5	2753	G	N7-C8-N9	5.95	116.07	113.10
80	B5	2976	A	N7-C8-N9	-5.95	110.83	113.80
80	B5	3088	G	C5-N7-C8	-5.95	101.33	104.30
80	B5	3369	G	C6-N1-C2	-5.95	121.53	125.10
84	CW	37	A	O4'-C1'-N9	5.95	112.96	108.20
80	B5	2184	U	N3-C2-O2	-5.94	118.04	122.20
79	B2	1000	C	N3-C2-O2	-5.94	117.74	121.90
79	B2	1097	U	C2-N1-C1'	5.94	124.83	117.70
79	B2	1582	U	C6-N1-C2	5.94	124.57	121.00
80	B5	1678	G	C5-C6-N1	5.94	114.47	111.50
80	B5	2426	U	N3-C4-O4	-5.94	115.24	119.40
80	B5	2584	G	C4-C5-N7	5.94	113.18	110.80
80	B5	2617	U	C6-N1-C2	5.94	124.57	121.00
82	B8	12	A	N7-C8-N9	5.94	116.77	113.80
82	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
80	B5	1122	U	N3-C2-O2	-5.94	118.04	122.20
80	B5	1311	G	N1-C2-N3	-5.94	120.34	123.90
80	B5	2167	A	N1-C6-N6	-5.94	115.03	118.60
80	B5	2409	G	N7-C8-N9	5.94	116.07	113.10
79	B2	192	U	N1-C2-O2	5.94	126.96	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	883	A	N7-C8-N9	-5.94	110.83	113.80
80	B5	974	G	C8-N9-C1'	-5.94	119.28	127.00
80	B5	1181	U	C6-N1-C2	5.94	124.56	121.00
80	B5	2114	C	N1-C2-N3	5.94	123.36	119.20
80	B5	2730	G	N3-C4-C5	5.94	131.57	128.60
79	B2	794	U	C2-N1-C1'	5.94	124.82	117.70
80	B5	39	A	N3-C4-N9	5.94	132.15	127.40
84	CW	37	A	C5-C6-N6	-5.93	118.95	123.70
33	AY	44	LEU	CA-CB-CG	5.93	128.94	115.30
80	B5	365	A	C5-C6-N6	-5.93	118.95	123.70
80	B5	749	C	N3-C4-C5	-5.93	119.53	121.90
80	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
80	B5	509	U	N1-C2-N3	5.93	118.46	114.90
80	B5	1495	U	N3-C4-C5	-5.93	111.04	114.60
40	BF	191	VAL	C-N-CA	-5.93	109.85	122.30
79	B2	393	C	N3-C4-C5	5.93	124.27	121.90
80	B5	708	G	C8-N9-C4	-5.93	104.03	106.40
80	B5	1128	U	C5-C6-N1	-5.93	119.73	122.70
80	B5	2943	G	N1-C2-N2	-5.93	110.86	116.20
80	B5	216	G	C5-C6-O6	-5.93	125.04	128.60
80	B5	337	G	N1-C6-O6	-5.93	116.34	119.90
80	B5	2411	U	N3-C4-C5	5.93	118.16	114.60
79	B2	1479	A	N1-C6-N6	5.93	122.16	118.60
79	B2	1542	G	C5-C6-O6	5.93	132.16	128.60
80	B5	2329	C	N3-C4-N4	-5.93	113.85	118.00
80	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
79	B2	1314	U	N3-C2-O2	-5.92	118.05	122.20
80	B5	201	A	C2-N3-C4	-5.92	107.64	110.60
80	B5	283	G	C4-C5-N7	5.92	113.17	110.80
80	B5	2421	U	N1-C2-O2	-5.92	118.65	122.80
80	B5	2687	G	C5-C6-N1	5.92	114.46	111.50
79	B2	1157	A	C8-N9-C4	-5.92	103.43	105.80
79	B2	1274	C	C4-C5-C6	5.92	120.36	117.40
80	B5	994	G	C6-N1-C2	-5.92	121.55	125.10
79	B2	389	G	N3-C4-C5	-5.92	125.64	128.60
80	B5	874	U	N3-C4-O4	-5.92	115.26	119.40
80	B5	2323	G	N1-C6-O6	-5.92	116.35	119.90
80	B5	2643	A	N1-C2-N3	-5.92	126.34	129.30
80	B5	1227	C	C5-C4-N4	-5.92	116.06	120.20
80	B5	1231	A	C5-C6-N1	-5.92	114.74	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3296	A	C8-N9-C4	5.92	108.17	105.80
81	B7	25	G	C5-C6-O6	-5.92	125.05	128.60
80	B5	1699	A	N1-C6-N6	5.92	122.15	118.60
79	B2	703	G	C8-N9-C4	-5.91	104.03	106.40
80	B5	3351	U	N3-C2-O2	-5.91	118.06	122.20
80	B5	590	G	C5-C6-O6	-5.91	125.05	128.60
80	B5	1772	U	C5-C4-O4	5.91	129.45	125.90
80	B5	2424	A	C5-C6-N6	-5.91	118.97	123.70
80	B5	2917	G	N3-C4-C5	-5.91	125.64	128.60
80	B5	3269	U	N3-C2-O2	-5.91	118.06	122.20
80	B5	2416	U	N3-C2-O2	-5.91	118.06	122.20
80	B5	2607	G	N1-C6-O6	-5.91	116.36	119.90
79	B2	554	C	N1-C2-O2	5.91	122.44	118.90
79	B2	1537	C	C5-C6-N1	5.91	123.95	121.00
80	B5	1043	C	C5-C6-N1	-5.91	118.05	121.00
80	B5	2347	U	C2-N3-C4	-5.91	123.46	127.00
80	B5	892	U	C2-N3-C4	-5.90	123.46	127.00
80	B5	1808	G	C8-N9-C4	5.90	108.76	106.40
80	B5	3075	G	C4-C5-C6	5.90	122.34	118.80
81	B7	92	A	N9-C4-C5	-5.90	103.44	105.80
85	CX	3	G	N1-C6-O6	5.90	123.44	119.90
80	B5	153	U	C5-C4-O4	5.90	129.44	125.90
80	B5	3075	G	C5-C6-N1	-5.90	108.55	111.50
79	B2	829	A	C8-N9-C4	-5.90	103.44	105.80
79	B2	1776	A	N9-C4-C5	5.90	108.16	105.80
80	B5	2148	U	N3-C2-O2	5.90	126.33	122.20
80	B5	2639	G	C6-C5-N7	-5.90	126.86	130.40
80	B5	3019	U	N3-C4-C5	5.90	118.14	114.60
82	B8	99	C	N3-C4-C5	5.90	124.26	121.90
80	B5	1178	G	C5-N7-C8	-5.89	101.35	104.30
80	B5	2931	C	C2-N3-C4	-5.89	116.95	119.90
80	B5	3013	U	N3-C2-O2	-5.89	118.07	122.20
82	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
80	B5	345	G	C6-N1-C2	-5.89	121.56	125.10
80	B5	1834	U	C6-N1-C2	5.89	124.53	121.00
80	B5	3277	U	C6-N1-C2	-5.89	117.47	121.00
80	B5	3395	G	N3-C4-C5	5.89	131.55	128.60
81	B7	12	U	C5-C4-O4	-5.89	122.36	125.90
80	B5	2410	U	N3-C4-O4	-5.89	115.28	119.40
79	B2	1241	G	C8-N9-C4	-5.89	104.04	106.40
80	B5	419	G	C8-N9-C4	5.89	108.76	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2910	A	N1-C6-N6	-5.89	115.07	118.60
80	B5	2851	A	N7-C8-N9	-5.89	110.86	113.80
80	B5	680	G	N3-C2-N2	5.89	124.02	119.90
80	B5	1127	G	C5-C6-N1	5.89	114.44	111.50
80	B5	2744	U	C5-C6-N1	-5.89	119.76	122.70
79	B2	279	G	C8-N9-C4	-5.88	104.05	106.40
79	B2	344	A	N1-C6-N6	-5.88	115.07	118.60
79	B2	1601	G	C5-C6-N1	5.88	114.44	111.50
80	B5	1279	C	N3-C4-N4	5.88	122.12	118.00
80	B5	2792	A	C2-N3-C4	5.88	113.54	110.60
80	B5	1866	C	N3-C2-O2	5.88	126.02	121.90
79	B2	1027	A	C8-N9-C4	-5.88	103.45	105.80
80	B5	1226	G	N3-C4-C5	5.88	131.54	128.60
80	B5	1477	A	N1-C2-N3	5.88	132.24	129.30
80	B5	2893	C	C4-C5-C6	5.88	120.34	117.40
80	B5	1086	C	N1-C2-O2	5.88	122.43	118.90
80	B5	741	U	C2-N3-C4	5.88	130.53	127.00
80	B5	2965	U	N1-C2-O2	-5.88	118.69	122.80
80	B5	2988	C	N1-C2-N3	5.88	123.31	119.20
79	B2	1503	A	C5-N7-C8	-5.88	100.96	103.90
80	B5	416	A	C8-N9-C4	-5.88	103.45	105.80
80	B5	2366	C	C6-N1-C1'	-5.88	113.75	120.80
80	B5	2531	C	C6-N1-C1'	-5.88	113.75	120.80
80	B5	365	A	N1-C6-N6	5.87	122.12	118.60
80	B5	795	G	N1-C2-N3	-5.87	120.38	123.90
80	B5	3113	A	C5-C6-N1	5.87	120.64	117.70
79	B2	810	G	N1-C6-O6	5.87	123.42	119.90
80	B5	1369	A	N1-C6-N6	5.87	122.12	118.60
80	B5	2118	C	N1-C2-O2	5.87	122.42	118.90
80	B5	2849	C	C6-N1-C2	-5.87	117.95	120.30
80	B5	2992	U	N3-C2-O2	-5.87	118.09	122.20
79	B2	1291	G	N3-C2-N2	-5.87	115.79	119.90
80	B5	2961	G	N7-C8-N9	5.87	116.03	113.10
80	B5	426	G	N7-C8-N9	-5.87	110.17	113.10
80	B5	2770	G	C2-N3-C4	5.87	114.83	111.90
84	CW	23	A	C4-C5-C6	5.87	119.93	117.00
46	BL	46	ILE	CG1-CB-CG2	-5.87	98.49	111.40
80	B5	874	U	C5-C6-N1	-5.87	119.77	122.70
80	B5	1838	G	N7-C8-N9	-5.87	110.17	113.10
80	B5	2758	A	N3-C4-C5	-5.87	122.69	126.80
79	B2	169	A	C8-N9-C4	5.87	108.15	105.80
80	B5	795	G	C5-N7-C8	5.87	107.23	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	542	A	C4-C5-N7	5.86	113.63	110.70
80	B5	593	C	C2-N1-C1'	5.86	125.25	118.80
80	B5	2320	A	N1-C6-N6	-5.86	115.08	118.60
80	B5	2711	C	C4-C5-C6	5.86	120.33	117.40
80	B5	2745	G	C5-C6-O6	-5.86	125.08	128.60
80	B5	3064	U	N3-C2-O2	-5.86	118.10	122.20
84	CW	43	C	C5'-C4'-O4'	5.86	116.13	109.10
80	B5	1181	U	C2-N3-C4	-5.86	123.48	127.00
80	B5	1512	U	C5-C6-N1	-5.86	119.77	122.70
80	B5	3340	G	N1-C6-O6	-5.86	116.38	119.90
81	B7	5	G	C8-N9-C4	5.86	108.74	106.40
84	CW	18	G	C8-N9-C4	-5.86	104.06	106.40
80	B5	1116	G	C5-C6-O6	5.86	132.12	128.60
80	B5	2192	C	C4-C5-C6	5.86	120.33	117.40
79	B2	1536	G	C4-N9-C1'	5.86	134.11	126.50
80	B5	1175	C	N3-C4-C5	5.86	124.24	121.90
80	B5	1251	A	N9-C1'-C2'	-5.86	105.56	112.00
80	B5	1481	A	N3-C4-C5	-5.86	122.70	126.80
80	B5	2843	U	C2-N1-C1'	5.86	124.73	117.70
79	B2	1745	G	C6-C5-N7	-5.86	126.89	130.40
80	B5	908	G	C8-N9-C1'	-5.86	119.39	127.00
80	B5	1189	C	C6-N1-C2	5.86	122.64	120.30
80	B5	1278	A	C5-C6-N6	-5.86	119.02	123.70
80	B5	1317	A	N3-C4-N9	5.86	132.09	127.40
80	B5	1456	A	C8-N9-C4	5.86	108.14	105.80
79	B2	997	G	N9-C4-C5	-5.85	103.06	105.40
80	B5	1889	G	N3-C4-C5	-5.85	125.67	128.60
80	B5	2305	G	N1-C2-N2	-5.85	110.93	116.20
80	B5	3212	C	C5-C6-N1	-5.85	118.07	121.00
82	B8	33	A	C8-N9-C4	5.85	108.14	105.80
84	CW	18	G	N3-C2-N2	5.85	124.00	119.90
80	B5	2799	A	C2-N3-C4	-5.85	107.67	110.60
80	B5	3226	A	N1-C2-N3	-5.85	126.37	129.30
80	B5	3373	U	C5-C6-N1	-5.85	119.77	122.70
84	CW	62	C	O4'-C1'-N1	5.85	112.88	108.20
80	B5	432	G	C4-C5-N7	5.85	113.14	110.80
80	B5	2314	U	C6-N1-C1'	-5.85	113.01	121.20
82	B8	16	G	N1-C2-N3	5.85	127.41	123.90
84	CW	5	G	O4'-C1'-N9	5.85	112.88	108.20
79	B2	628	G	N1-C2-N2	-5.85	110.94	116.20
80	B5	376	G	N1-C6-O6	-5.85	116.39	119.90
80	B5	966	U	C2-N1-C1'	5.85	124.72	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1485	G	N3-C4-C5	-5.85	125.68	128.60
80	B5	3267	A	N1-C2-N3	5.85	132.22	129.30
80	B5	3326	G	N1-C6-O6	-5.85	116.39	119.90
80	B5	587	U	C5-C6-N1	-5.85	119.78	122.70
80	B5	2549	G	C4-N9-C1'	5.85	134.10	126.50
80	B5	3218	A	N7-C8-N9	5.85	116.72	113.80
80	B5	1158	A	C4-C5-N7	5.84	113.62	110.70
80	B5	2518	C	C2-N3-C4	-5.84	116.98	119.90
80	B5	3241	G	C4-C5-N7	5.84	113.14	110.80
79	B2	1798	U	C2-N1-C1'	5.84	124.71	117.70
80	B5	1437	C	C2-N1-C1'	5.84	125.23	118.80
80	B5	1586	G	N3-C4-C5	-5.84	125.68	128.60
80	B5	1892	G	N3-C2-N2	-5.84	115.81	119.90
80	B5	2706	G	C2-N3-C4	5.84	114.82	111.90
80	B5	182	U	C5-C6-N1	5.84	125.62	122.70
80	B5	591	G	N3-C4-N9	5.84	129.50	126.00
80	B5	1193	A	C2-N3-C4	-5.84	107.68	110.60
80	B5	1322	U	N3-C4-C5	5.84	118.11	114.60
80	B5	1323	G	N9-C4-C5	5.84	107.74	105.40
80	B5	2410	U	N3-C4-C5	5.84	118.11	114.60
80	B5	2835	U	N1-C2-N3	5.84	118.40	114.90
80	B5	25	U	N1-C2-O2	-5.84	118.71	122.80
80	B5	1136	A	C2-N3-C4	5.84	113.52	110.60
80	B5	1239	C	N3-C4-C5	-5.84	119.56	121.90
80	B5	2692	A	C5-C6-N6	5.84	128.37	123.70
79	B2	1633	A	N3-C4-C5	-5.84	122.71	126.80
79	B2	1370	U	N3-C2-O2	-5.84	118.11	122.20
79	B2	1666	U	C6-N1-C2	-5.84	117.50	121.00
80	B5	289	A	C5-C6-N1	5.84	120.62	117.70
80	B5	1225	A	C5-C6-N6	-5.83	119.03	123.70
80	B5	2381	G	C2-N3-C4	5.83	114.82	111.90
80	B5	2920	U	N1-C2-O2	-5.83	118.72	122.80
80	B5	3224	G	N1-C6-O6	-5.83	116.40	119.90
80	B5	1429	G	C2-N3-C4	-5.83	108.98	111.90
80	B5	3333	G	N9-C4-C5	-5.83	103.07	105.40
79	B2	294	C	C6-N1-C2	5.83	122.63	120.30
80	B5	432	G	C2-N3-C4	-5.83	108.98	111.90
80	B5	801	A	C6-N1-C2	5.83	122.10	118.60
80	B5	815	G	N9-C4-C5	5.83	107.73	105.40
80	B5	993	G	C8-N9-C4	-5.83	104.07	106.40
80	B5	2188	A	N7-C8-N9	-5.83	110.88	113.80
80	B5	894	G	N3-C4-N9	5.83	129.50	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2510	U	C2-N1-C1'	-5.83	110.70	117.70
80	B5	159	A	C8-N9-C4	5.83	108.13	105.80
80	B5	971	G	N9-C4-C5	5.83	107.73	105.40
80	B5	1939	G	N1-C2-N2	-5.83	110.95	116.20
80	B5	2248	C	C5-C6-N1	-5.83	118.09	121.00
80	B5	3095	U	C2-N3-C4	-5.83	123.50	127.00
80	B5	3388	C	N3-C2-O2	-5.83	117.82	121.90
80	B5	1846	C	N3-C2-O2	-5.83	117.82	121.90
79	B2	1416	G	C8-N9-C4	-5.83	104.07	106.40
80	B5	1369	A	N9-C4-C5	-5.83	103.47	105.80
80	B5	1902	G	C5-C6-N1	5.83	114.41	111.50
79	B2	1129	U	N3-C4-O4	-5.82	115.32	119.40
80	B5	2271	A	N1-C6-N6	-5.82	115.11	118.60
80	B5	3216	G	N1-C2-N3	5.82	127.39	123.90
80	B5	96	G	N1-C2-N3	5.82	127.39	123.90
80	B5	1512	U	C4-C5-C6	5.82	123.19	119.70
80	B5	2335	G	N9-C4-C5	5.82	107.73	105.40
83	CV	386	SER	N-CA-C	-5.82	95.29	111.00
80	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
79	B2	1614	A	C4-C5-C6	5.81	119.91	117.00
80	B5	518	G	C8-N9-C4	5.81	108.72	106.40
80	B5	1280	C	N3-C4-C5	-5.81	119.58	121.90
80	B5	2145	A	C5-C6-N1	5.81	120.61	117.70
79	B2	21	U	N3-C2-O2	-5.81	118.13	122.20
80	B5	706	A	C5-C6-N6	-5.81	119.05	123.70
80	B5	2346	C	C5-C4-N4	-5.81	116.13	120.20
80	B5	2426	U	N3-C2-O2	-5.81	118.13	122.20
80	B5	3112	G	C5-C6-O6	-5.81	125.11	128.60
80	B5	35	A	C8-N9-C4	5.81	108.12	105.80
80	B5	689	U	N3-C4-O4	-5.81	115.33	119.40
80	B5	968	G	C8-N9-C4	5.81	108.72	106.40
80	B5	1639	C	C6-N1-C2	-5.81	117.98	120.30
80	B5	2709	C	N3-C4-C5	5.81	124.22	121.90
80	B5	2838	A	C6-N1-C2	-5.81	115.11	118.60
80	B5	3141	A	C4-C5-C6	5.81	119.91	117.00
80	B5	1495	U	C2-N1-C1'	5.81	124.67	117.70
80	B5	3152	U	C6-N1-C2	5.81	124.48	121.00
81	B7	8	G	C8-N9-C4	-5.81	104.08	106.40
82	B8	104	A	N1-C6-N6	5.81	122.08	118.60
79	B2	581	U	C6-N1-C1'	-5.81	113.07	121.20
80	B5	1607	U	P-O3'-C3'	5.81	126.67	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	142	G	N1-C6-O6	5.80	123.38	119.90
79	B2	611	U	N1-C2-O2	-5.80	118.74	122.80
79	B2	1324	G	C8-N9-C1'	5.80	134.55	127.00
79	B2	1340	U	C5-C4-O4	5.80	129.38	125.90
80	B5	2306	C	C2-N1-C1'	5.80	125.19	118.80
80	B5	3076	C	N3-C2-O2	-5.80	117.84	121.90
80	B5	3215	A	C8-N9-C4	5.80	108.12	105.80
79	B2	460	A	N1-C6-N6	-5.80	115.12	118.60
80	B5	666	A	C2-N3-C4	-5.80	107.70	110.60
80	B5	1669	C	C6-N1-C2	5.80	122.62	120.30
80	B5	1607	U	C2-N3-C4	-5.80	123.52	127.00
80	B5	2207	A	N7-C8-N9	5.80	116.70	113.80
80	B5	2804	A	C8-N9-C4	5.80	108.12	105.80
80	B5	2827	U	N3-C2-O2	-5.80	118.14	122.20
80	B5	3100	U	N1-C2-O2	5.80	126.86	122.80
80	B5	3301	U	C6-N1-C2	5.80	124.48	121.00
79	B2	1274	C	C5-C4-N4	5.80	124.26	120.20
80	B5	1159	A	C6-N1-C2	5.80	122.08	118.60
80	B5	1438	U	C6-N1-C2	-5.80	117.52	121.00
82	B8	31	G	N7-C8-N9	-5.80	110.20	113.10
84	CW	46	G	O4'-C1'-N9	5.80	112.84	108.20
80	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
80	B5	1133	A	N1-C2-N3	-5.79	126.40	129.30
80	B5	224	C	N3-C2-O2	-5.79	117.85	121.90
80	B5	920	A	C8-N9-C4	5.79	108.12	105.80
80	B5	1129	A	C2-N3-C4	5.79	113.50	110.60
80	B5	1888	U	N1-C2-N3	5.79	118.38	114.90
80	B5	2370	G	N1-C2-N3	5.79	127.38	123.90
80	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
79	B2	1602	C	C6-N1-C2	5.79	122.62	120.30
80	B5	979	U	N1-C2-O2	5.79	126.85	122.80
80	B5	1044	U	C2-N3-C4	-5.79	123.53	127.00
80	B5	1126	G	C2-N3-C4	-5.79	109.00	111.90
80	B5	1128	U	N1-C2-N3	5.79	118.37	114.90
80	B5	590	G	C5-N7-C8	-5.79	101.41	104.30
80	B5	1159	A	N3-C4-C5	5.79	130.85	126.80
80	B5	2147	A	C5-C6-N6	-5.79	119.07	123.70
80	B5	666	A	C8-N9-C4	5.79	108.11	105.80
79	B2	92	A	N1-C6-N6	-5.78	115.13	118.60
79	B2	339	C	N1-C2-O2	-5.78	115.43	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1856	C	C6-N1-C2	-5.78	117.99	120.30
80	B5	2906	C	N3-C4-C5	-5.78	119.59	121.90
81	B7	106	U	C5-C6-N1	-5.78	119.81	122.70
79	B2	934	C	C6-N1-C1'	-5.78	113.86	120.80
80	B5	2736	A	C5-C6-N6	5.78	128.32	123.70
80	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
80	B5	861	C	N1-C2-O2	-5.78	115.43	118.90
80	B5	1127	G	N9-C4-C5	-5.78	103.09	105.40
80	B5	2141	U	N3-C2-O2	-5.78	118.15	122.20
80	B5	2747	A	N9-C4-C5	5.78	108.11	105.80
80	B5	3130	A	C6-N1-C2	-5.78	115.13	118.60
80	B5	201	A	C5-C6-N1	-5.78	114.81	117.70
80	B5	1113	G	N7-C8-N9	-5.78	110.21	113.10
80	B5	1494	U	N3-C2-O2	5.78	126.25	122.20
80	B5	2361	A	N3-C4-N9	5.78	132.02	127.40
80	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
80	B5	1045	C	N1-C2-N3	5.78	123.25	119.20
80	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
80	B5	272	G	C2-N3-C4	-5.78	109.01	111.90
80	B5	524	U	N1-C2-O2	-5.78	118.76	122.80
80	B5	798	G	C5-C6-N1	5.78	114.39	111.50
80	B5	1490	A	C2-N3-C4	-5.78	107.71	110.60
80	B5	2129	U	N3-C4-C5	5.78	118.06	114.60
80	B5	2335	G	N1-C6-O6	-5.78	116.44	119.90
80	B5	2641	U	N1-C2-O2	-5.78	118.76	122.80
80	B5	3000	A	C5-C6-N6	-5.78	119.08	123.70
80	B5	3285	C	C2-N1-C1'	5.78	125.15	118.80
80	B5	1911	A	C2-N3-C4	-5.77	107.71	110.60
80	B5	2320	A	N3-C4-N9	-5.77	122.78	127.40
80	B5	3339	A	C5-C6-N6	-5.77	119.08	123.70
79	B2	1198	G	N7-C8-N9	5.77	115.99	113.10
79	B2	1291	G	N3-C4-N9	-5.77	122.54	126.00
80	B5	2971	A	C2-N3-C4	5.77	113.49	110.60
80	B5	1238	C	N3-C4-N4	5.77	122.04	118.00
80	B5	916	G	N3-C4-N9	-5.77	122.54	126.00
80	B5	1553	U	N3-C2-O2	5.77	126.24	122.20
80	B5	3088	G	N7-C8-N9	5.77	115.98	113.10
80	B5	526	C	C5-C4-N4	-5.77	116.16	120.20
80	B5	3212	C	N1-C2-O2	-5.76	115.44	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	332	C	C5-C6-N1	-5.76	118.12	121.00
80	B5	3197	G	N3-C4-N9	-5.76	122.54	126.00
80	B5	180	C	C6-N1-C2	-5.76	118.00	120.30
80	B5	798	G	C5-C6-O6	-5.76	125.14	128.60
80	B5	2329	C	C5-C4-N4	5.76	124.23	120.20
80	B5	2342	U	N3-C2-O2	-5.76	118.17	122.20
80	B5	2412	G	N9-C4-C5	5.76	107.70	105.40
84	CW	9	A	C5-C6-N1	-5.76	114.82	117.70
79	B2	971	A	C5-C6-N1	-5.76	114.82	117.70
80	B5	404	G	N3-C2-N2	-5.76	115.87	119.90
80	B5	911	C	C2-N3-C4	-5.76	117.02	119.90
80	B5	2516	U	C5-C4-O4	-5.76	122.44	125.90
80	B5	2920	U	C4-C5-C6	5.76	123.16	119.70
82	B8	17	A	C5-C6-N6	-5.76	119.09	123.70
80	B5	2692	A	C5-N7-C8	5.76	106.78	103.90
79	B2	864	U	N1-C2-N3	5.76	118.35	114.90
80	B5	1116	G	C4-C5-C6	5.76	122.25	118.80
80	B5	2817	A	C2-N3-C4	5.76	113.48	110.60
80	B5	2832	C	C6-N1-C2	5.76	122.60	120.30
80	B5	3375	A	N1-C2-N3	-5.76	126.42	129.30
84	CW	68	C	O4'-C1'-N1	5.76	112.81	108.20
80	B5	2338	C	N3-C4-C5	-5.75	119.60	121.90
80	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
79	B2	377	G	N1-C2-N2	5.75	121.38	116.20
79	B2	1282	U	N1-C2-N3	5.75	118.35	114.90
80	B5	2305	G	C6-C5-N7	-5.75	126.95	130.40
80	B5	2733	A	C2-N3-C4	-5.75	107.72	110.60
80	B5	3131	U	C5-C4-O4	-5.75	122.45	125.90
84	CW	14	A	C5'-C4'-C3'	-5.75	106.80	116.00
80	B5	523	A	C5-C6-N6	5.75	128.30	123.70
80	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
79	B2	639	U	N3-C4-O4	-5.75	115.38	119.40
79	B2	1169	G	N3-C4-C5	-5.75	125.73	128.60
80	B5	2327	U	N3-C4-C5	5.75	118.05	114.60
80	B5	2337	C	C2-N3-C4	-5.75	117.03	119.90
80	B5	2899	C	C5-C6-N1	-5.75	118.13	121.00
80	B5	824	C	N3-C4-C5	-5.75	119.60	121.90
80	B5	1159	A	C5-N7-C8	-5.75	101.03	103.90
80	B5	88	A	C5-C6-N1	-5.74	114.83	117.70
80	B5	382	U	N1-C2-N3	5.74	118.35	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	427	C	C2-N3-C4	-5.74	117.03	119.90
80	B5	591	G	C8-N9-C4	5.74	108.70	106.40
82	B8	106	C	N3-C4-C5	5.74	124.20	121.90
80	B5	359	U	C5-C6-N1	-5.74	119.83	122.70
80	B5	760	G	C5-C6-O6	-5.74	125.16	128.60
80	B5	580	C	N3-C4-C5	-5.74	119.60	121.90
80	B5	2926	A	C2-N3-C4	5.74	113.47	110.60
79	B2	144	U	N1-C2-O2	5.74	126.82	122.80
80	B5	1035	G	C8-N9-C1'	-5.74	119.54	127.00
80	B5	2422	C	N3-C2-O2	-5.74	117.88	121.90
80	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
79	B2	811	A	C8-N9-C4	-5.74	103.51	105.80
80	B5	326	U	C4-C5-C6	-5.74	116.26	119.70
80	B5	1208	U	N1-C2-N3	5.74	118.34	114.90
80	B5	1254	C	N3-C4-C5	-5.74	119.61	121.90
80	B5	1917	C	C2-N3-C4	-5.74	117.03	119.90
80	B5	2361	A	C5-C6-N1	5.74	120.57	117.70
80	B5	672	A	N1-C6-N6	5.73	122.04	118.60
80	B5	1116	G	N3-C4-C5	-5.73	125.73	128.60
80	B5	1652	G	C4-C5-N7	-5.73	108.51	110.80
80	B5	3006	A	N9-C4-C5	5.73	108.09	105.80
80	B5	3241	G	C5-C6-O6	-5.73	125.16	128.60
80	B5	1045	C	N1-C2-O2	-5.73	115.46	118.90
80	B5	2123	G	C5-C6-N1	5.73	114.36	111.50
80	B5	2619	G	C5-C6-N1	5.73	114.36	111.50
79	B2	1131	A	N7-C8-N9	-5.73	110.94	113.80
79	B2	1776	A	N1-C6-N6	-5.73	115.16	118.60
80	B5	665	A	N9-C4-C5	-5.73	103.51	105.80
80	B5	1443	G	C5-C6-N1	-5.73	108.64	111.50
80	B5	1883	A	C8-N9-C4	-5.73	103.51	105.80
80	B5	363	G	N9-C4-C5	5.73	107.69	105.40
80	B5	1849	C	N3-C2-O2	-5.73	117.89	121.90
80	B5	1904	C	N1-C2-O2	5.73	122.34	118.90
80	B5	2549	G	N1-C6-O6	5.73	123.33	119.90
80	B5	1060	U	C2-N3-C4	-5.72	123.56	127.00
80	B5	1297	C	C5-C4-N4	-5.72	116.19	120.20
83	CV	325	GLY	N-CA-C	-5.72	98.79	113.10
84	CW	53	G	N9-C1'-C2'	-5.72	105.70	112.00
79	B2	494	U	N3-C2-O2	-5.72	118.19	122.20
79	B2	732	G	C4-C5-N7	5.72	113.09	110.80
79	B2	1112	G	C6-N1-C2	-5.72	121.67	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1159	A	N9-C4-C5	-5.72	103.51	105.80
80	B5	2976	A	C8-N9-C4	5.72	108.09	105.80
80	B5	1931	U	C6-N1-C1'	5.72	129.21	121.20
80	B5	2892	A	N1-C6-N6	-5.72	115.17	118.60
51	BQ	50	LYS	CD-CE-NZ	5.72	124.85	111.70
79	B2	1489	U	N3-C2-O2	-5.72	118.20	122.20
80	B5	2197	C	C2-N1-C1'	-5.72	112.51	118.80
80	B5	2836	C	C5-C4-N4	5.72	124.20	120.20
80	B5	3047	U	C2-N3-C4	-5.72	123.57	127.00
80	B5	706	A	N1-C2-N3	-5.71	126.44	129.30
81	B7	46	A	N9-C4-C5	5.71	108.09	105.80
80	B5	1724	U	C2-N1-C1'	5.71	124.56	117.70
80	B5	3200	G	N3-C2-N2	-5.71	115.90	119.90
79	B2	527	A	C8-N9-C4	-5.71	103.52	105.80
80	B5	270	U	N3-C2-O2	-5.71	118.20	122.20
80	B5	880	G	C2-N3-C4	5.71	114.76	111.90
82	B8	26	U	C2-N1-C1'	5.71	124.55	117.70
83	CV	57	LYS	N-CA-C	-5.71	95.58	111.00
80	B5	2730	G	N3-C2-N2	-5.71	115.90	119.90
84	CW	75	C	N3-C4-C5	-5.71	119.62	121.90
80	B5	925	A	N1-C6-N6	5.71	122.03	118.60
80	B5	1268	G	N7-C8-N9	5.71	115.95	113.10
80	B5	2630	C	N1-C2-O2	-5.71	115.47	118.90
80	B5	2774	C	N1-C2-O2	-5.71	115.47	118.90
80	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
80	B5	2108	C	N3-C4-C5	5.71	124.18	121.90
80	B5	2188	A	N1-C2-N3	5.71	132.15	129.30
80	B5	1251	A	C4-C5-C6	5.71	119.85	117.00
79	B2	612	U	N3-C4-O4	-5.70	115.41	119.40
80	B5	2717	U	C2-N3-C4	-5.70	123.58	127.00
80	B5	2951	G	C5-C6-N1	5.70	114.35	111.50
80	B5	1143	A	C5-N7-C8	-5.70	101.05	103.90
80	B5	1282	G	N3-C2-N2	5.70	123.89	119.90
80	B5	2979	U	N3-C2-O2	5.70	126.19	122.20
79	B2	92	A	N3-C4-C5	-5.70	122.81	126.80
79	B2	831	U	C2-N1-C1'	5.70	124.54	117.70
79	B2	1324	G	N9-C4-C5	5.70	107.68	105.40
80	B5	411	U	N1-C2-N3	5.70	118.32	114.90
80	B5	2237	C	N3-C2-O2	-5.70	117.91	121.90
80	B5	2846	U	C2-N3-C4	-5.70	123.58	127.00
84	CW	68	C	P-O3'-C3'	-5.70	112.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	92	A	C6-N1-C2	-5.70	115.18	118.60
80	B5	1445	U	C2-N3-C4	-5.70	123.58	127.00
80	B5	1448	U	C4-C5-C6	5.70	123.12	119.70
80	B5	1524	A	N1-C2-N3	5.70	132.15	129.30
82	B8	7	U	C5-C6-N1	-5.70	119.85	122.70
84	CW	68	C	C6-N1-C2	-5.70	118.02	120.30
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
80	B5	79	U	C5-C4-O4	-5.70	122.48	125.90
80	B5	355	A	N1-C6-N6	5.70	122.02	118.60
80	B5	637	C	C5-C6-N1	-5.70	118.15	121.00
80	B5	958	C	N3-C4-C5	5.70	124.18	121.90
83	CV	83	PHE	CB-CG-CD1	5.70	124.79	120.80
79	B2	1339	C	C6-N1-C2	-5.69	118.02	120.30
80	B5	563	U	N3-C2-O2	-5.69	118.21	122.20
80	B5	3020	U	N3-C2-O2	5.69	126.19	122.20
81	B7	38	U	C2-N1-C1'	5.69	124.53	117.70
79	B2	158	U	N3-C2-O2	-5.69	118.22	122.20
79	B2	1749	A	C4-C5-N7	5.69	113.55	110.70
80	B5	953	G	N3-C4-N9	-5.69	122.58	126.00
79	B2	355	G	N3-C4-C5	-5.69	125.75	128.60
79	B2	570	A	N3-C4-C5	-5.69	122.82	126.80
79	B2	741	C	N1-C2-O2	-5.69	115.49	118.90
79	B2	1781	A	C5-C6-N1	-5.69	114.85	117.70
80	B5	276	U	C4-C5-C6	5.69	123.11	119.70
80	B5	948	C	N3-C4-N4	5.69	121.98	118.00
80	B5	2363	A	N7-C8-N9	5.69	116.64	113.80
80	B5	3259	U	C5-C6-N1	5.69	125.55	122.70
82	B8	95	G	C4-N9-C1'	-5.69	119.10	126.50
80	B5	1840	U	N1-C2-O2	5.69	126.78	122.80
80	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
79	B2	1644	C	N1-C2-O2	-5.69	115.49	118.90
80	B5	2748	A	C5-C6-N6	-5.69	119.15	123.70
79	B2	507	U	C6-N1-C2	-5.69	117.59	121.00
79	B2	1361	U	N3-C2-O2	-5.69	118.22	122.20
80	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
80	B5	1940	G	C8-N9-C4	5.68	108.67	106.40
80	B5	3102	G	C5-C6-O6	5.68	132.01	128.60
81	B7	103	A	C5-C6-N6	-5.68	119.15	123.70
80	B5	670	C	C2-N3-C4	-5.68	117.06	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	769	G	N7-C8-N9	-5.68	110.26	113.10
79	B2	1052	U	N3-C2-O2	-5.68	118.22	122.20
80	B5	334	A	C2-N3-C4	5.68	113.44	110.60
80	B5	1163	A	C4-C5-N7	-5.68	107.86	110.70
80	B5	1512	U	C2-N3-C4	-5.68	123.59	127.00
80	B5	65	A	P-O3'-C3'	5.68	126.51	119.70
80	B5	413	U	N1-C2-N3	5.68	118.31	114.90
80	B5	613	G	N1-C6-O6	-5.68	116.49	119.90
80	B5	1466	G	N3-C4-N9	-5.68	122.59	126.00
81	B7	47	C	C2-N3-C4	-5.68	117.06	119.90
80	B5	1371	G	N7-C8-N9	-5.67	110.26	113.10
80	B5	1726	C	C5-C6-N1	-5.67	118.16	121.00
80	B5	1832	C	C5-C4-N4	-5.67	116.23	120.20
80	B5	1845	G	N7-C8-N9	-5.67	110.26	113.10
80	B5	3290	G	N7-C8-N9	5.67	115.94	113.10
80	B5	3316	A	N1-C6-N6	5.67	122.00	118.60
82	B8	28	C	C4-C5-C6	-5.67	114.56	117.40
83	CV	255	TYR	N-CA-C	-5.67	95.68	111.00
80	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
79	B2	539	G	C5-N7-C8	-5.67	101.46	104.30
80	B5	2320	A	N9-C4-C5	5.67	108.07	105.80
80	B5	2400	G	N1-C6-O6	5.67	123.30	119.90
85	CX	1	A	O4'-C4'-C3'	-5.67	98.33	104.00
82	B8	109	A	C8-N9-C4	-5.67	103.53	105.80
84	CW	26	A	C4-C5-C6	5.67	119.83	117.00
79	B2	498	G	N3-C4-C5	-5.67	125.77	128.60
79	B2	1354	G	N3-C4-C5	-5.67	125.77	128.60
80	B5	2744	U	C5-C4-O4	5.67	129.30	125.90
80	B5	842	G	N1-C6-O6	5.67	123.30	119.90
79	B2	323	A	N9-C4-C5	5.67	108.07	105.80
79	B2	1119	G	N9-C4-C5	5.67	107.67	105.40
79	B2	1761	U	N3-C4-C5	-5.67	111.20	114.60
80	B5	3010	U	N3-C4-O4	-5.67	115.44	119.40
80	B5	3298	C	C2-N3-C4	-5.66	117.07	119.90
84	CW	13	C	N3-C4-C5	-5.66	119.64	121.90
84	CW	14	A	P-O3'-C3'	-5.66	112.91	119.70
80	B5	636	C	C2-N3-C4	-5.66	117.07	119.90
80	B5	2392	C	C5-C6-N1	-5.66	118.17	121.00
79	B2	627	C	N1-C2-O2	-5.66	115.50	118.90
80	B5	825	U	N3-C4-O4	-5.66	115.44	119.40
80	B5	1525	G	C8-N9-C1'	-5.66	119.64	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1942	U	N1-C2-N3	5.66	118.30	114.90
81	B7	80	G	N3-C4-N9	5.66	129.40	126.00
82	B8	20	U	C5-C6-N1	-5.66	119.87	122.70
79	B2	1421	A	C8-N9-C4	5.66	108.06	105.80
80	B5	248	U	C2-N1-C1'	5.66	124.49	117.70
80	B5	1254	C	O5'-C5'-C4'	-5.66	100.95	111.70
80	B5	1307	G	N1-C6-O6	-5.66	116.50	119.90
80	B5	1364	C	C5-C6-N1	-5.66	118.17	121.00
80	B5	1371	G	C5-N7-C8	5.66	107.13	104.30
80	B5	1942	U	N3-C4-O4	5.66	123.36	119.40
79	B2	1458	G	C4-N9-C1'	5.66	133.85	126.50
80	B5	1485	G	C4-C5-N7	-5.66	108.54	110.80
83	CV	93	LEU	C-N-CA	5.66	135.84	121.70
79	B2	1075	C	N3-C2-O2	5.66	125.86	121.90
79	B2	1782	A	C4-C5-N7	-5.66	107.87	110.70
80	B5	53	G	N3-C2-N2	5.66	123.86	119.90
80	B5	905	U	N3-C4-O4	5.66	123.36	119.40
80	B5	3006	A	C8-N9-C4	-5.66	103.54	105.80
80	B5	1321	G	N1-C6-O6	5.65	123.29	119.90
80	B5	2148	U	C5-C4-O4	-5.65	122.51	125.90
80	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
80	B5	1163	A	C5-C6-N1	5.65	120.53	117.70
80	B5	1331	U	C5-C4-O4	-5.65	122.51	125.90
80	B5	2293	C	N1-C2-O2	5.65	122.29	118.90
80	B5	2848	G	C4-C5-C6	5.65	122.19	118.80
80	B5	2955	U	N1-C2-N3	5.65	118.29	114.90
80	B5	998	A	N1-C2-N3	5.65	132.12	129.30
80	B5	1272	C	P-O5'-C5'	-5.65	111.86	120.90
80	B5	1415	U	C5-C6-N1	-5.65	119.88	122.70
80	B5	2293	C	C2-N1-C1'	5.65	125.02	118.80
81	B7	25	G	N1-C2-N2	5.65	121.28	116.20
82	B8	95	G	C8-N9-C1'	5.65	134.34	127.00
80	B5	1210	U	N1-C2-O2	5.65	126.75	122.80
81	B7	101	G	N9-C4-C5	-5.65	103.14	105.40
82	B8	113	U	C6-N1-C1'	-5.65	113.30	121.20
83	CV	478	LYS	CA-C-N	5.65	132.91	117.10
84	CW	14	A	C5-C6-N6	-5.65	119.18	123.70
79	B2	712	G	C8-N9-C4	-5.65	104.14	106.40
80	B5	217	U	C2-N3-C4	-5.65	123.61	127.00
80	B5	1183	C	N3-C4-C5	5.64	124.16	121.90
80	B5	2654	C	C2-N3-C4	-5.64	117.08	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3313	U	N3-C4-O4	-5.64	115.45	119.40
82	B8	34	U	C5-C6-N1	-5.64	119.88	122.70
80	B5	2865	U	N1-C2-O2	5.64	126.75	122.80
80	B5	3123	A	N9-C4-C5	-5.64	103.54	105.80
80	B5	3197	G	N3-C2-N2	-5.64	115.95	119.90
80	B5	3200	G	C5-C6-O6	-5.64	125.22	128.60
80	B5	106	A	C8-N9-C4	5.64	108.06	105.80
80	B5	1244	A	O4'-C1'-N9	5.64	112.71	108.20
80	B5	2217	U	N3-C2-O2	-5.64	118.25	122.20
80	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
80	B5	1797	A	C4-C5-N7	-5.64	107.88	110.70
80	B5	2658	G	N7-C8-N9	-5.64	110.28	113.10
82	B8	100	U	C2-N1-C1'	5.64	124.47	117.70
80	B5	634	C	C2-N3-C4	-5.64	117.08	119.90
80	B5	950	G	N9-C4-C5	-5.64	103.14	105.40
80	B5	1909	A	C4-C5-C6	-5.64	114.18	117.00
80	B5	2116	G	C4-C5-C6	5.64	122.18	118.80
80	B5	2706	G	N3-C4-C5	-5.64	125.78	128.60
79	B2	1052	U	N1-C2-O2	5.64	126.75	122.80
79	B2	1445	G	N1-C6-O6	5.64	123.28	119.90
80	B5	114	A	N1-C6-N6	5.64	121.98	118.60
80	B5	3365	U	C6-N1-C2	-5.64	117.62	121.00
79	B2	966	A	N9-C4-C5	-5.63	103.55	105.80
80	B5	2830	G	N1-C6-O6	-5.63	116.52	119.90
80	B5	2870	C	C5-C4-N4	5.63	124.14	120.20
84	CW	67	C	O4'-C4'-C3'	-5.63	98.37	104.00
80	B5	1146	C	C2-N3-C4	-5.63	117.08	119.90
80	B5	1300	G	C6-C5-N7	-5.63	127.02	130.40
80	B5	2180	G	N3-C2-N2	5.63	123.84	119.90
80	B5	3336	A	C4-C5-C6	5.63	119.82	117.00
80	B5	347	G	C8-N9-C4	5.63	108.65	106.40
80	B5	2277	C	N1-C2-O2	5.63	122.28	118.90
80	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
80	B5	946	U	N1-C2-O2	5.63	126.74	122.80
80	B5	1405	U	C2-N3-C4	-5.63	123.62	127.00
80	B5	1429	G	C6-C5-N7	-5.63	127.02	130.40
80	B5	1914	G	N1-C6-O6	-5.63	116.52	119.90
80	B5	2415	C	C6-N1-C2	5.63	122.55	120.30
80	B5	2719	U	N1-C2-O2	-5.63	118.86	122.80
40	BF	229	PHE	CB-CG-CD1	5.63	124.74	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	402	C	C2-N1-C1'	-5.63	112.61	118.80
79	B2	613	G	N1-C6-O6	-5.63	116.52	119.90
80	B5	335	G	N1-C6-O6	-5.63	116.52	119.90
80	B5	1773	C	C5-C6-N1	-5.63	118.19	121.00
80	B5	2828	G	N1-C6-O6	-5.63	116.52	119.90
81	B7	38	U	N3-C4-C5	5.63	117.98	114.60
79	B2	334	G	N3-C4-C5	5.62	131.41	128.60
79	B2	1642	G	N3-C4-C5	-5.62	125.79	128.60
80	B5	966	U	N3-C4-C5	5.62	117.97	114.60
80	B5	1226	G	N9-C1'-C2'	-5.62	105.81	112.00
80	B5	1843	C	C5-C6-N1	5.62	123.81	121.00
80	B5	2816	G	C4-N9-C1'	-5.62	119.19	126.50
81	B7	5	G	C5-C6-N1	-5.62	108.69	111.50
82	B8	15	G	C5-C6-O6	-5.62	125.23	128.60
80	B5	216	G	C4-C5-N7	5.62	113.05	110.80
80	B5	658	G	N1-C6-O6	5.62	123.27	119.90
80	B5	1434	G	C1'-O4'-C4'	-5.62	105.40	109.90
80	B5	1589	A	C5-C6-N1	5.62	120.51	117.70
80	B5	1744	G	C5-C6-N1	5.62	114.31	111.50
80	B5	1926	C	N1-C2-O2	-5.62	115.53	118.90
80	B5	3054	U	N3-C4-C5	-5.62	111.23	114.60
79	B2	852	C	C4-C5-C6	-5.62	114.59	117.40
79	B2	1277	G	N3-C4-N9	-5.62	122.63	126.00
80	B5	42	C	N1-C2-O2	5.62	122.27	118.90
80	B5	582	G	N1-C6-O6	-5.62	116.53	119.90
80	B5	911	C	C5-C6-N1	-5.62	118.19	121.00
80	B5	2249	G	C8-N9-C4	-5.62	104.15	106.40
80	B5	3140	G	C6-C5-N7	-5.62	127.03	130.40
80	B5	3285	C	N1-C2-O2	5.62	122.27	118.90
79	B2	951	A	C8-N9-C4	5.62	108.05	105.80
80	B5	1314	C	N3-C4-C5	5.62	124.15	121.90
79	B2	1153	G	N1-C6-O6	-5.62	116.53	119.90
80	B5	1510	G	N1-C2-N3	5.62	127.27	123.90
80	B5	145	G	N9-C4-C5	5.62	107.65	105.40
80	B5	1365	G	N1-C2-N3	5.62	127.27	123.90
80	B5	2341	A	C5-N7-C8	5.62	106.71	103.90
80	B5	3059	G	C8-N9-C4	5.62	108.65	106.40
80	B5	280	U	N3-C4-C5	5.61	117.97	114.60
80	B5	666	A	N7-C8-N9	-5.61	110.99	113.80
80	B5	935	U	C2-N3-C4	-5.61	123.63	127.00
80	B5	1207	G	N1-C6-O6	-5.61	116.53	119.90
80	B5	1380	G	C8-N9-C4	5.61	108.64	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1441	G	C5-C6-N1	5.61	114.31	111.50
80	B5	2326	A	C2-N3-C4	5.61	113.41	110.60
82	B8	12	A	C4-C5-C6	-5.61	114.19	117.00
79	B2	1600	A	C4-C5-N7	5.61	113.50	110.70
80	B5	282	G	C2'-C3'-O3'	5.61	122.68	113.70
80	B5	1603	A	N9-C4-C5	5.61	108.05	105.80
80	B5	1847	A	C2-N3-C4	-5.61	107.80	110.60
80	B5	2330	C	C4-C5-C6	5.61	120.21	117.40
80	B5	3350	C	C5-C6-N1	5.61	123.81	121.00
80	B5	2683	U	C2-N1-C1'	5.61	124.43	117.70
84	CW	40	C	P-O3'-C3'	-5.61	112.97	119.70
79	B2	1650	U	C5-C6-N1	-5.61	119.90	122.70
80	B5	625	G	C8-N9-C4	-5.61	104.16	106.40
80	B5	1206	G	C5-C6-O6	5.61	131.96	128.60
79	B2	74	U	C3'-C2'-C1'	-5.60	97.02	101.50
79	B2	144	U	C5-C4-O4	5.60	129.26	125.90
79	B2	453	U	C5-C4-O4	5.60	129.26	125.90
80	B5	546	C	C6-N1-C2	-5.60	118.06	120.30
80	B5	2642	A	C8-N9-C4	5.60	108.04	105.80
80	B5	2974	U	C5-C4-O4	5.60	129.26	125.90
80	B5	369	A	N1-C6-N6	-5.60	115.24	118.60
79	B2	115	G	N1-C6-O6	5.60	123.26	119.90
79	B2	1749	A	N3-C4-C5	5.60	130.72	126.80
80	B5	2182	A	C4-C5-C6	-5.60	114.20	117.00
79	B2	1280	C	C4-C5-C6	5.60	120.20	117.40
79	B2	1633	A	C4-C5-N7	-5.60	107.90	110.70
80	B5	24	G	C5-C6-O6	-5.60	125.24	128.60
80	B5	98	G	C8-N9-C4	5.60	108.64	106.40
80	B5	1229	G	O4'-C4'-C3'	-5.60	98.40	104.00
80	B5	1263	A	O4'-C1'-N9	5.60	112.68	108.20
82	B8	23	U	C4-C5-C6	5.60	123.06	119.70
82	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
80	B5	909	G	N1-C6-O6	-5.60	116.54	119.90
80	B5	1360	C	C2-N3-C4	-5.60	117.10	119.90
80	B5	2584	G	C5-C6-O6	-5.60	125.24	128.60
80	B5	2975	U	N3-C4-O4	-5.60	115.48	119.40
79	B2	453	U	C6-N1-C1'	-5.59	113.37	121.20
80	B5	916	G	N9-C4-C5	5.59	107.64	105.40
80	B5	1365	G	C4-N9-C1'	5.59	133.77	126.50
80	B5	1370	G	N3-C4-N9	5.59	129.36	126.00
80	B5	2343	C	C5-C4-N4	-5.59	116.28	120.20

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

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	873	C	C4-C5-C6	5.58	120.19	117.40
80	B5	2975	U	C4-C5-C6	-5.58	116.36	119.70
80	B5	3252	G	C8-N9-C4	5.58	108.63	106.40
79	B2	401	A	N1-C6-N6	5.57	121.94	118.60
79	B2	1560	U	N1-C2-O2	5.57	126.70	122.80
79	B2	1636	C	N3-C4-N4	5.57	121.90	118.00
80	B5	340	C	N1-C2-N3	5.57	123.10	119.20
80	B5	911	C	C4-C5-C6	5.57	120.19	117.40
80	B5	1670	C	C5-C4-N4	-5.57	116.30	120.20
80	B5	2999	U	C5-C6-N1	-5.57	119.91	122.70
80	B5	903	U	N1-C2-O2	5.57	126.70	122.80
80	B5	957	C	C5-C6-N1	-5.57	118.22	121.00
80	B5	2309	A	C8-N9-C4	5.57	108.03	105.80
79	B2	1145	U	N1-C2-O2	-5.57	118.90	122.80
80	B5	666	A	N1-C2-N3	5.57	132.08	129.30
80	B5	2958	A	N1-C6-N6	-5.57	115.26	118.60
80	B5	3043	C	N3-C4-N4	-5.57	114.10	118.00
79	B2	696	C	C6-N1-C2	-5.57	118.07	120.30
79	B2	1462	G	C5-C6-O6	-5.57	125.26	128.60
80	B5	1906	G	C2-N3-C4	-5.57	109.12	111.90
80	B5	3173	G	C5-C6-N1	5.57	114.28	111.50
80	B5	3395	G	N1-C6-O6	5.57	123.24	119.90
82	B8	37	A	N1-C6-N6	-5.57	115.26	118.60
80	B5	2389	C	C5-C4-N4	-5.56	116.31	120.20
81	B7	1	G	C6-C5-N7	-5.56	127.06	130.40
82	B8	13	A	C5-N7-C8	-5.56	101.12	103.90
79	B2	397	A	C5-C6-N6	5.56	128.15	123.70
79	B2	972	G	C4-C5-N7	-5.56	108.58	110.80
80	B5	1086	C	C5-C6-N1	5.56	123.78	121.00
79	B2	380	U	N1-C2-O2	5.56	126.69	122.80
80	B5	1441	G	C5-N7-C8	5.56	107.08	104.30
80	B5	2257	C	N1-C2-O2	5.56	122.24	118.90
80	B5	2742	C	N3-C4-C5	5.56	124.12	121.90
80	B5	234	G	N1-C6-O6	5.56	123.24	119.90
80	B5	1183	C	C5-C6-N1	-5.56	118.22	121.00
80	B5	1403	C	C2-N3-C4	-5.56	117.12	119.90
79	B2	1027	A	C5-N7-C8	-5.56	101.12	103.90
80	B5	39	A	C5-N7-C8	5.56	106.68	103.90
80	B5	1256	G	OP2-P-O3'	5.56	117.43	105.20
84	CW	13	C	P-O3'-C3'	-5.56	113.03	119.70
61	Ba	17	ALA	C-N-CA	-5.56	110.63	122.30
80	B5	419	G	C4-C5-N7	5.56	113.02	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1115	G	C6-N1-C2	-5.56	121.77	125.10
79	B2	1127	G	N9-C4-C5	5.55	107.62	105.40
79	B2	1745	G	N3-C4-C5	-5.55	125.82	128.60
80	B5	1125	U	N3-C4-O4	-5.55	115.51	119.40
80	B5	1176	C	C4-C5-C6	5.55	120.18	117.40
79	B2	1456	C	N1-C2-N3	5.55	123.09	119.20
80	B5	39	A	C2-N3-C4	5.55	113.38	110.60
80	B5	728	G	N7-C8-N9	-5.55	110.32	113.10
79	B2	1024	U	N1-C2-O2	5.55	126.69	122.80
80	B5	953	G	N3-C4-C5	5.55	131.38	128.60
80	B5	1284	C	N3-C2-O2	5.55	125.79	121.90
80	B5	1724	U	N3-C2-O2	-5.55	118.31	122.20
80	B5	367	A	N3-C4-C5	5.55	130.69	126.80
80	B5	1905	G	N1-C6-O6	-5.55	116.57	119.90
80	B5	390	G	N9-C4-C5	-5.55	103.18	105.40
80	B5	1938	U	C5-C6-N1	-5.55	119.93	122.70
79	B2	42	G	C8-N9-C4	5.55	108.62	106.40
80	B5	1239	C	O4'-C1'-N1	5.55	112.64	108.20
80	B5	3055	U	C2-N1-C1'	5.55	124.36	117.70
49	BO	23[B]	ILE	CA-C-N	-5.54	105.00	117.20
79	B2	382	C	N3-C4-C5	5.54	124.12	121.90
80	B5	367	A	C5-C6-N6	5.54	128.14	123.70
80	B5	1601	U	N1-C2-N3	-5.54	111.57	114.90
80	B5	1754	G	N1-C2-N2	-5.54	111.21	116.20
80	B5	2607	G	C8-N9-C4	-5.54	104.18	106.40
80	B5	33	G	C5-C6-N1	5.54	114.27	111.50
80	B5	1872	C	N3-C2-O2	-5.54	118.02	121.90
80	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
80	B5	431	U	C2-N3-C4	-5.54	123.67	127.00
80	B5	648	C	C2-N1-C1'	5.54	124.89	118.80
80	B5	2320	A	N7-C8-N9	-5.54	111.03	113.80
80	B5	2400	G	C4-C5-N7	5.54	113.02	110.80
80	B5	2699	G	N3-C4-N9	5.54	129.32	126.00
80	B5	954	U	C6-N1-C2	-5.54	117.68	121.00
80	B5	1144	U	C2-N3-C4	-5.54	123.68	127.00
80	B5	796	U	N1-C2-O2	5.54	126.68	122.80
80	B5	1140	G	C5-C6-N1	5.54	114.27	111.50
80	B5	1773	C	C4-C5-C6	5.54	120.17	117.40
81	B7	69	C	N3-C4-C5	5.54	124.12	121.90
80	B5	21	G	N3-C4-C5	5.54	131.37	128.60
80	B5	25	U	N1-C2-N3	5.54	118.22	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2139	A	C5-C6-N6	5.54	128.13	123.70
82	B8	87	G	C5-C6-O6	-5.54	125.28	128.60
80	B5	1007	U	C6-N1-C2	5.53	124.32	121.00
80	B5	1189	C	N3-C2-O2	5.53	125.77	121.90
80	B5	1901	A	C6-C5-N7	-5.53	128.43	132.30
80	B5	1909	A	N1-C6-N6	-5.53	115.28	118.60
80	B5	2327	U	C2-N1-C1'	-5.53	111.06	117.70
84	CW	60	U	C5'-C4'-O4'	5.53	115.74	109.10
80	B5	46	U	C2-N3-C4	5.53	130.32	127.00
80	B5	1305	U	C6-N1-C2	5.53	124.32	121.00
80	B5	1380	G	C2-N3-C4	-5.53	109.13	111.90
80	B5	3052	G	C4-N9-C1'	-5.53	119.31	126.50
82	B8	112	U	C6-N1-C1'	5.53	128.94	121.20
79	B2	109	G	C5-C6-O6	-5.53	125.28	128.60
80	B5	745	C	N1-C2-O2	-5.53	115.58	118.90
80	B5	2658	G	N3-C2-N2	-5.53	116.03	119.90
80	B5	2870	C	C2-N1-C1'	-5.53	112.72	118.80
80	B5	3064	U	N1-C2-N3	5.53	118.22	114.90
84	CW	28	G	O4'-C1'-N9	5.53	112.62	108.20
80	B5	1041	U	C5-C6-N1	-5.53	119.94	122.70
80	B5	1658	G	N1-C6-O6	-5.53	116.58	119.90
80	B5	2717	U	N3-C2-O2	-5.53	118.33	122.20
79	B2	131	C	C5-C6-N1	5.53	123.76	121.00
80	B5	359	U	N3-C4-C5	5.53	117.92	114.60
80	B5	1306	G	C5-C6-N1	5.53	114.26	111.50
80	B5	1878	G	C4-N9-C1'	5.53	133.69	126.50
80	B5	3007	U	C5-C4-O4	-5.53	122.58	125.90
80	B5	2287	C	C6-N1-C2	-5.53	118.09	120.30
80	B5	2665	U	N1-C2-O2	5.53	126.67	122.80
80	B5	2777	G	C8-N9-C4	-5.53	104.19	106.40
80	B5	2996	U	C6-N1-C1'	-5.53	113.46	121.20
81	B7	100	C	N3-C4-C5	5.53	124.11	121.90
82	B8	104	A	N1-C2-N3	-5.53	126.54	129.30
80	B5	1305	U	C6-N1-C1'	-5.52	113.47	121.20
79	B2	36	C	C5-C4-N4	-5.52	116.33	120.20
79	B2	145	A	N9-C4-C5	5.52	108.01	105.80
80	B5	934	G	N1-C2-N2	5.52	121.17	116.20
80	B5	960	U	C4-C5-C6	5.52	123.01	119.70
80	B5	1797	A	C8-N9-C4	5.52	108.01	105.80
80	B5	1844	C	N1-C2-N3	5.52	123.07	119.20
80	B5	3336	A	C5-C6-N1	-5.52	114.94	117.70
80	B5	1178	G	N7-C8-N9	5.52	115.86	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	1796	C	C6-N1-C2	-5.52	118.09	120.30
80	B5	1444	G	C8-N9-C4	5.52	108.61	106.40
80	B5	1586	G	C6-N1-C2	-5.52	121.79	125.10
80	B5	2293	C	C5-C4-N4	-5.52	116.34	120.20
80	B5	2344	U	C2-N3-C4	-5.52	123.69	127.00
80	B5	2914	G	N1-C6-O6	-5.52	116.59	119.90
80	B5	3103	A	C5-C6-N1	5.52	120.46	117.70
80	B5	3318	G	C4-C5-N7	-5.52	108.59	110.80
81	B7	1	G	N3-C4-N9	5.52	129.31	126.00
79	B2	1455	G	C4-C5-C6	5.52	122.11	118.80
80	B5	2289	U	C5-C4-O4	5.52	129.21	125.90
79	B2	380	U	N3-C2-O2	-5.51	118.34	122.20
84	CW	21	A	C5-C6-N1	-5.51	114.94	117.70
65	Be	105	ARG	NE-CZ-NH2	-5.51	117.54	120.30
80	B5	814	U	N1-C2-N3	-5.51	111.59	114.90
80	B5	1887	A	N9-C4-C5	-5.51	103.59	105.80
80	B5	2729	U	C4-C5-C6	-5.51	116.39	119.70
80	B5	3326	G	C5-C6-O6	5.51	131.91	128.60
82	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
79	B2	74	U	C1'-O4'-C4'	-5.51	105.49	109.90
80	B5	1491	A	C4-C5-C6	5.51	119.75	117.00
80	B5	3010	U	C5-C4-O4	5.51	129.21	125.90
80	B5	3387	U	N1-C2-O2	5.51	126.66	122.80
84	CW	4	C	N3-C4-C5	-5.51	119.70	121.90
80	B5	1365	G	N1-C2-N2	-5.51	111.24	116.20
80	B5	1841	A	C8-N9-C4	-5.51	103.60	105.80
80	B5	2346	C	N3-C4-C5	5.51	124.10	121.90
83	CV	375	VAL	N-CA-C	-5.51	96.13	111.00
79	B2	258	C	N3-C4-C5	5.51	124.10	121.90
79	B2	639	U	N3-C4-C5	5.51	117.90	114.60
80	B5	1447	G	N7-C8-N9	5.51	115.85	113.10
80	B5	3179	U	N3-C4-C5	5.51	117.90	114.60
81	B7	19	C	N3-C4-C5	5.51	124.10	121.90
79	B2	435	C	C2-N3-C4	5.50	122.65	119.90
79	B2	566	C	N3-C2-O2	-5.50	118.05	121.90
80	B5	2335	G	C6-N1-C2	-5.50	121.80	125.10
80	B5	363	G	C4-C5-N7	-5.50	108.60	110.80
80	B5	620	U	C2-N1-C1'	5.50	124.31	117.70
80	B5	715	A	C5-C6-N1	5.50	120.45	117.70
80	B5	2396	G	N1-C6-O6	-5.50	116.60	119.90
80	B5	2728	G	N1-C2-N2	5.50	121.15	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	42	G	N7-C8-N9	-5.50	110.35	113.10
80	B5	1670	C	C6-N1-C2	5.50	122.50	120.30
80	B5	1937	U	C5-C6-N1	-5.50	119.95	122.70
79	B2	703	G	N7-C8-N9	5.50	115.85	113.10
80	B5	54	C	N3-C4-N4	-5.50	114.15	118.00
80	B5	2605	G	C2-N3-C4	5.50	114.65	111.90
80	B5	3347	A	C8-N9-C4	5.50	108.00	105.80
80	B5	2119	A	C6-N1-C2	-5.50	115.30	118.60
80	B5	2430	A	N1-C2-N3	5.50	132.05	129.30
80	B5	3042	U	N1-C2-N3	5.50	118.20	114.90
79	B2	386	G	C4-C5-N7	-5.50	108.60	110.80
80	B5	1045	C	C2-N3-C4	-5.50	117.15	119.90
80	B5	2635	A	N1-C6-N6	-5.50	115.30	118.60
80	B5	3152	U	C5-C6-N1	-5.50	119.95	122.70
84	CW	37	A	C4-C5-C6	5.50	119.75	117.00
79	B2	1270	G	C2-N3-C4	5.49	114.65	111.90
79	B2	1503	A	N7-C8-N9	5.49	116.55	113.80
80	B5	266	A	N1-C2-N3	5.49	132.05	129.30
80	B5	1508	C	N1-C2-O2	5.49	122.20	118.90
80	B5	3341	U	N3-C2-O2	-5.49	118.36	122.20
82	B8	17	A	C5-N7-C8	-5.49	101.15	103.90
80	B5	631	U	N1-C2-O2	5.49	126.64	122.80
80	B5	1215	U	N3-C2-O2	5.49	126.04	122.20
80	B5	1660	C	N1-C2-O2	-5.49	115.61	118.90
80	B5	2549	G	C5-C6-N1	-5.49	108.75	111.50
80	B5	3008	A	C8-N9-C4	5.49	108.00	105.80
79	B2	264	G	N3-C4-N9	-5.49	122.71	126.00
80	B5	414	U	N3-C4-O4	5.49	123.24	119.40
80	B5	1343	A	C8-N9-C4	-5.49	103.60	105.80
80	B5	1505	C	C4-C5-C6	5.49	120.14	117.40
84	CW	43	C	P-O3'-C3'	5.49	126.29	119.70
79	B2	377	G	C4-N9-C1'	-5.49	119.36	126.50
79	B2	1207	C	C6-N1-C2	5.49	122.50	120.30
80	B5	436	A	C4-C5-N7	5.49	113.44	110.70
80	B5	590	G	C8-N9-C4	-5.49	104.20	106.40
80	B5	1427	U	N3-C4-O4	-5.49	115.56	119.40
80	B5	3112	G	C8-N9-C4	5.49	108.59	106.40
79	B2	342	C	C6-N1-C2	5.49	122.50	120.30
80	B5	844	G	N7-C8-N9	-5.49	110.36	113.10
80	B5	2665	U	C4-C5-C6	-5.49	116.41	119.70
80	B5	2966	G	C5-C6-N1	5.49	114.24	111.50
79	B2	42	G	N1-C6-O6	-5.49	116.61	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	743	C	C6-N1-C2	-5.49	118.11	120.30
80	B5	996	A	C5-C6-N1	5.49	120.44	117.70
80	B5	1127	G	N3-C4-N9	5.49	129.29	126.00
80	B5	2757	U	C5-C4-O4	-5.49	122.61	125.90
79	B2	1662	G	C8-N9-C4	-5.48	104.21	106.40
80	B5	1269	U	O4'-C1'-N1	5.48	112.59	108.20
80	B5	1451	C	C2-N3-C4	-5.48	117.16	119.90
80	B5	2904	U	N1-C2-N3	5.48	118.19	114.90
81	B7	8	G	N3-C2-N2	5.48	123.74	119.90
79	B2	938	G	N1-C2-N2	-5.48	111.27	116.20
80	B5	1263	A	C5-C6-N6	-5.48	119.31	123.70
80	B5	1828	A	C8-N9-C4	-5.48	103.61	105.80
80	B5	1869	C	N3-C4-C5	5.48	124.09	121.90
80	B5	2112	U	C6-N1-C2	-5.48	117.71	121.00
80	B5	3243	A	C4-C5-C6	5.48	119.74	117.00
81	B7	61	G	C8-N9-C4	5.48	108.59	106.40
80	B5	1283	C	O3'-P-O5'	5.48	114.41	104.00
80	B5	3302	U	N3-C4-C5	5.48	117.89	114.60
79	B2	838	G	N7-C8-N9	-5.48	110.36	113.10
80	B5	39	A	N7-C8-N9	-5.48	111.06	113.80
80	B5	422	A	C8-N9-C4	5.48	107.99	105.80
80	B5	519	A	C6-C5-N7	-5.48	128.47	132.30
80	B5	2172	A	N1-C6-N6	5.48	121.89	118.60
83	CV	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
79	B2	393	C	C2-N3-C4	-5.47	117.16	119.90
80	B5	282	G	N7-C8-N9	5.47	115.84	113.10
80	B5	1191	U	C5-C6-N1	-5.47	119.96	122.70
80	B5	1295	G	C5-C6-O6	5.47	131.88	128.60
80	B5	2109	U	N3-C4-O4	-5.47	115.57	119.40
80	B5	2134	G	N3-C4-N9	5.47	129.28	126.00
80	B5	2257	C	C5-C6-N1	5.47	123.74	121.00
80	B5	2369	G	C8-N9-C4	5.47	108.59	106.40
80	B5	2948	C	N3-C4-C5	5.47	124.09	121.90
80	B5	3028	G	N3-C2-N2	5.47	123.73	119.90
80	B5	3215	A	C5-C6-N1	-5.47	114.96	117.70
80	B5	2177	G	C8-N9-C4	-5.47	104.21	106.40
80	B5	930	U	N1-C2-O2	5.47	126.63	122.80
79	B2	1486	G	C6-C5-N7	-5.47	127.12	130.40
80	B5	1152	G	N9-C4-C5	5.47	107.59	105.40
80	B5	1165	A	N7-C8-N9	-5.47	111.06	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2158	A	C6-N1-C2	-5.47	115.32	118.60
84	CW	17	C	N3-C4-N4	5.47	121.83	118.00
80	B5	2433	U	C5-C6-N1	-5.47	119.97	122.70
84	CW	13	C	N3-C4-N4	5.47	121.83	118.00
46	BL	47	ALA	C-N-CD	5.47	139.88	128.40
80	B5	810	A	C5-C6-N6	5.47	128.07	123.70
80	B5	1190	A	C5-N7-C8	5.47	106.63	103.90
80	B5	1538	G	N9-C4-C5	-5.47	103.21	105.40
80	B5	1792	C	C4-C5-C6	5.47	120.13	117.40
80	B5	2197	C	C6-N1-C1'	5.47	127.36	120.80
80	B5	2239	G	N3-C2-N2	5.47	123.73	119.90
80	B5	3346	U	C5-C6-N1	-5.47	119.97	122.70
79	B2	1097	U	C6-N1-C1'	-5.46	113.55	121.20
80	B5	2321	A	C5-C6-N1	5.46	120.43	117.70
80	B5	2549	G	N7-C8-N9	5.46	115.83	113.10
81	B7	33	U	N1-C2-O2	5.46	126.63	122.80
85	CX	2	U	O4'-C1'-N1	5.46	112.57	108.20
79	B2	268	C	C6-N1-C2	-5.46	118.11	120.30
79	B2	1666	U	C5-C6-N1	5.46	125.43	122.70
80	B5	909	G	N7-C8-N9	-5.46	110.37	113.10
80	B5	1399	A	N9-C4-C5	-5.46	103.61	105.80
80	B5	997	A	N7-C8-N9	5.46	116.53	113.80
80	B5	1931	U	C5-C4-O4	5.46	129.18	125.90
80	B5	3394	U	N3-C4-O4	-5.46	115.58	119.40
79	B2	790	U	N1-C2-N3	5.46	118.18	114.90
81	B7	8	G	N1-C2-N2	-5.46	111.29	116.20
80	B5	96	G	C4-C5-N7	-5.46	108.62	110.80
80	B5	408	A	C2-N3-C4	-5.46	107.87	110.60
80	B5	809	G	C5-N7-C8	5.46	107.03	104.30
80	B5	965	A	N1-C2-N3	-5.46	126.57	129.30
79	B2	599	A	C5-N7-C8	5.46	106.63	103.90
79	B2	1458	G	C8-N9-C1'	-5.46	119.91	127.00
80	B5	1170	A	C8-N9-C4	5.46	107.98	105.80
81	B7	37	G	N9-C4-C5	-5.46	103.22	105.40
80	B5	1240	A	C5-C6-N1	-5.46	114.97	117.70
80	B5	277	G	C5-C6-O6	5.45	131.87	128.60
80	B5	828	A	N1-C6-N6	-5.45	115.33	118.60
81	B7	1	G	C8-N9-C1'	-5.45	119.91	127.00
80	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
79	B2	42	G	C5-C6-N1	5.45	114.22	111.50
79	B2	1491	U	N3-C2-O2	-5.45	118.38	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1159	A	C4-C5-C6	-5.45	114.28	117.00
80	B5	1858	A	C4-N9-C1'	5.45	136.11	126.30
80	B5	2843	U	N3-C2-O2	-5.45	118.39	122.20
80	B5	3049	A	C8-N9-C4	5.45	107.98	105.80
80	B5	1925	U	N1-C2-N3	5.45	118.17	114.90
80	B5	2608	G	N1-C6-O6	-5.45	116.63	119.90
83	CV	509	GLU	N-CA-CB	5.45	120.41	110.60
80	B5	859	G	N3-C4-C5	-5.45	125.88	128.60
80	B5	1270	A	C3'-C2'-C1'	-5.45	97.14	101.50
80	B5	3083	G	N1-C2-N3	5.45	127.17	123.90
80	B5	2800	G	C4-C5-N7	-5.44	108.62	110.80
80	B5	2810	C	C6-N1-C2	-5.44	118.12	120.30
80	B5	3035	A	C8-N9-C4	5.44	107.98	105.80
79	B2	426	G	C4-N9-C1'	5.44	133.57	126.50
79	B2	1185	U	C6-N1-C1'	-5.44	113.58	121.20
80	B5	3115	C	N1-C2-N3	5.44	123.01	119.20
81	B7	90	U	C6-N1-C2	5.44	124.27	121.00
80	B5	285	A	C8-N9-C4	-5.44	103.62	105.80
80	B5	969	C	C5-C6-N1	-5.44	118.28	121.00
80	B5	1007	U	C5-C4-O4	-5.44	122.64	125.90
80	B5	2374	C	N3-C4-N4	-5.44	114.19	118.00
80	B5	2655	U	N3-C4-C5	5.44	117.86	114.60
80	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
79	B2	396	G	C5-C6-O6	-5.44	125.34	128.60
79	B2	966	A	N7-C8-N9	-5.44	111.08	113.80
79	B2	1646	C	C6-N1-C2	-5.44	118.12	120.30
80	B5	1838	G	C4-C5-N7	-5.44	108.62	110.80
80	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
80	B5	41	G	C6-C5-N7	-5.43	127.14	130.40
80	B5	388	G	N3-C2-N2	-5.43	116.10	119.90
80	B5	2361	A	N9-C4-C5	5.43	107.97	105.80
80	B5	2754	G	N3-C4-N9	5.43	129.26	126.00
80	B5	3362	A	C4-C5-N7	5.43	113.42	110.70
82	B8	103	G	C5-C6-N1	5.43	114.22	111.50
80	B5	2174	G	N1-C2-N3	5.43	127.16	123.90
80	B5	2524	A	N3-C4-C5	5.43	130.60	126.80
80	B5	2744	U	N3-C4-O4	-5.43	115.60	119.40
80	B5	2894	C	C2-N3-C4	-5.43	117.18	119.90
80	B5	3113	A	C6-N1-C2	-5.43	115.34	118.60
79	B2	1754	A	N3-C4-C5	5.43	130.60	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	590	G	C2-N3-C4	5.43	114.61	111.90
80	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
80	B5	1285	G	C4'-C3'-C2'	-5.43	97.17	102.60
80	B5	2242	A	N9-C4-C5	5.43	107.97	105.80
80	B5	1244	A	P-O3'-C3'	5.43	126.21	119.70
80	B5	2319	U	C5-C6-N1	-5.43	119.99	122.70
80	B5	2379	U	N1-C2-N3	5.43	118.16	114.90
81	B7	105	C	C2-N3-C4	5.43	122.61	119.90
83	CV	60	ALA	N-CA-C	-5.43	96.35	111.00
79	B2	557	G	N1-C2-N2	-5.42	111.32	116.20
80	B5	322	U	C2-N3-C4	-5.42	123.75	127.00
80	B5	675	C	N1-C2-O2	-5.42	115.64	118.90
80	B5	1191	U	C4-C5-C6	5.42	122.95	119.70
80	B5	1273	A	C5-C6-N6	-5.42	119.36	123.70
80	B5	1433	A	C6-N1-C2	5.42	121.86	118.60
80	B5	3143	C	N3-C2-O2	5.42	125.70	121.90
79	B2	1170	G	C6-C5-N7	-5.42	127.15	130.40
79	B2	1330	G	C4-N9-C1'	-5.42	119.45	126.50
80	B5	283	G	C5-C6-O6	-5.42	125.35	128.60
80	B5	1164	G	C2-N3-C4	-5.42	109.19	111.90
80	B5	229	G	N1-C6-O6	5.42	123.15	119.90
80	B5	341	G	C5-N7-C8	-5.42	101.59	104.30
80	B5	600	G	C4-N9-C1'	5.42	133.55	126.50
80	B5	1268	G	C6-C5-N7	-5.42	127.15	130.40
80	B5	2891	U	N1-C2-N3	5.42	118.15	114.90
80	B5	3064	U	C2-N3-C4	-5.42	123.75	127.00
80	B5	498	A	N1-C6-N6	-5.42	115.35	118.60
80	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
79	B2	1146	G	C4-N9-C1'	5.42	133.54	126.50
80	B5	266	A	C4-C5-C6	5.42	119.71	117.00
80	B5	514	G	N9-C4-C5	-5.42	103.23	105.40
80	B5	844	G	C8-N9-C4	5.42	108.57	106.40
80	B5	1209	G	N1-C2-N2	5.42	121.08	116.20
80	B5	2980	U	N3-C2-O2	-5.42	118.41	122.20
84	CW	7	A	P-O5'-C5'	-5.42	112.23	120.90
59	BY	14	LYS	CD-CE-NZ	5.42	124.16	111.70
79	B2	995	A	C8-N9-C4	5.42	107.97	105.80
79	B2	1642	G	N3-C4-N9	5.42	129.25	126.00
80	B5	1129	A	C5-C6-N1	5.42	120.41	117.70
80	B5	1187	C	N3-C4-N4	-5.42	114.21	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1227	C	C5'-C4'-C3'	-5.42	107.33	116.00
82	B8	126	A	N7-C8-N9	5.42	116.51	113.80
80	B5	3193	C	C4-C5-C6	5.42	120.11	117.40
80	B5	90	C	C6-N1-C2	-5.41	118.13	120.30
80	B5	706	A	N9-C4-C5	-5.41	103.64	105.80
80	B5	914	A	N1-C2-N3	5.41	132.01	129.30
80	B5	2385	G	C8-N9-C1'	5.41	134.04	127.00
80	B5	3015	G	N1-C6-O6	-5.41	116.65	119.90
79	B2	1679	G	C2-N3-C4	5.41	114.61	111.90
80	B5	879	U	C6-N1-C1'	-5.41	113.63	121.20
80	B5	1359	C	N3-C4-N4	5.41	121.79	118.00
80	B5	2377	G	N3-C4-C5	-5.41	125.89	128.60
80	B5	2393	G	C8-N9-C1'	-5.41	119.97	127.00
80	B5	3263	G	N1-C6-O6	-5.41	116.65	119.90
81	B7	82	G	N9-C4-C5	5.41	107.56	105.40
79	B2	992	A	C4-C5-N7	5.41	113.40	110.70
79	B2	1386	G	C4-C5-N7	-5.41	108.64	110.80
80	B5	591	G	C6-C5-N7	-5.41	127.16	130.40
80	B5	688	G	N3-C4-N9	-5.41	122.75	126.00
80	B5	1495	U	C6-N1-C2	-5.41	117.75	121.00
80	B5	3247	G	C5-C6-O6	5.41	131.85	128.60
80	B5	3323	A	N1-C2-N3	5.41	132.00	129.30
80	B5	799	G	C6-N1-C2	-5.41	121.86	125.10
79	B2	767	U	N3-C2-O2	-5.41	118.42	122.20
80	B5	961	C	C4-C5-C6	5.41	120.10	117.40
80	B5	2376	G	C8-N9-C1'	-5.41	119.97	127.00
79	B2	307	G	C8-N9-C4	5.40	108.56	106.40
79	B2	1504	G	C5-C6-O6	5.40	131.84	128.60
79	B2	1560	U	C6-N1-C2	-5.40	117.76	121.00
80	B5	1128	U	C2-N3-C4	-5.40	123.76	127.00
80	B5	2145	A	C6-N1-C2	-5.40	115.36	118.60
80	B5	3003	G	N3-C4-N9	-5.40	122.76	126.00
80	B5	3021	A	N1-C6-N6	-5.40	115.36	118.60
79	B2	529	A	C8-N9-C4	5.40	107.96	105.80
79	B2	864	U	C2-N1-C1'	5.40	124.18	117.70
79	B2	1389	C	N3-C2-O2	-5.40	118.12	121.90
80	B5	648	C	C4-C5-C6	5.40	120.10	117.40
80	B5	1396	C	C6-N1-C2	5.40	122.46	120.30
80	B5	1838	G	C6-N1-C2	-5.40	121.86	125.10
80	B5	2634	U	N3-C2-O2	5.40	125.98	122.20
82	B8	156	U	C5-C6-N1	5.40	125.40	122.70
80	B5	516	A	C5-C6-N6	-5.40	119.38	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	588	G	C5-C6-N1	5.40	114.20	111.50
80	B5	1257	C	N3-C4-C5	-5.40	119.74	121.90
80	B5	1534	A	C6-N1-C2	-5.40	115.36	118.60
80	B5	2123	G	N3-C4-C5	-5.40	125.90	128.60
80	B5	2955	U	C6-N1-C2	-5.40	117.76	121.00
82	B8	29	U	C5-C6-N1	-5.40	120.00	122.70
80	B5	2134	G	N3-C2-N2	5.40	123.68	119.90
80	B5	288	C	C6-N1-C2	5.40	122.46	120.30
80	B5	923	C	C5-C6-N1	-5.40	118.30	121.00
80	B5	1131	G	N1-C2-N3	5.40	127.14	123.90
80	B5	2355	G	C5-C6-O6	-5.40	125.36	128.60
80	B5	2928	C	N3-C4-C5	-5.40	119.74	121.90
80	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
79	B2	396	G	N1-C6-O6	5.39	123.14	119.90
79	B2	407	A	C5-N7-C8	5.39	106.60	103.90
80	B5	98	G	N9-C4-C5	-5.39	103.24	105.40
80	B5	1017	C	C2-N1-C1'	5.39	124.73	118.80
80	B5	1889	G	C4-C5-N7	-5.39	108.64	110.80
80	B5	3366	G	N1-C6-O6	-5.39	116.66	119.90
79	B2	523	G	N1-C6-O6	-5.39	116.66	119.90
79	B2	1768	G	C8-N9-C1'	5.39	134.01	127.00
80	B5	1907	C	C6-N1-C1'	5.39	127.27	120.80
80	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
80	B5	411	U	C2-N3-C4	-5.39	123.77	127.00
80	B5	616	G	C2-N3-C4	5.39	114.59	111.90
80	B5	1143	A	C2-N3-C4	-5.39	107.91	110.60
80	B5	1335	C	C6-N1-C2	-5.39	118.14	120.30
80	B5	2149	A	N9-C4-C5	5.39	107.96	105.80
80	B5	2386	A	C5-N7-C8	-5.39	101.20	103.90
80	B5	3374	U	C6-N1-C2	5.39	124.23	121.00
79	B2	1361	U	C2-N1-C1'	5.39	124.17	117.70
80	B5	811	U	N1-C2-N3	5.39	118.13	114.90
80	B5	2375	G	C4-C5-N7	5.39	112.96	110.80
79	B2	1524	A	N1-C2-N3	5.39	131.99	129.30
80	B5	227	G	C5-C6-O6	-5.39	125.37	128.60
80	B5	339	C	C6-N1-C2	-5.39	118.14	120.30
80	B5	1722	U	N1-C2-O2	-5.39	119.03	122.80
80	B5	555	U	N1-C2-O2	-5.39	119.03	122.80
80	B5	1126	G	C5-C6-N1	-5.39	108.81	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1178	G	C6-N1-C2	-5.39	121.87	125.10
80	B5	3350	C	N1-C2-O2	5.39	122.13	118.90
80	B5	852	U	N1-C2-N3	5.38	118.13	114.90
80	B5	2231	C	C2-N1-C1'	5.38	124.72	118.80
80	B5	3189	G	C6-N1-C2	-5.38	121.87	125.10
80	B5	3377	G	C6-N1-C2	-5.38	121.87	125.10
84	CW	41	C	C2-N1-C1'	5.38	124.72	118.80
79	B2	1334	U	N1-C2-N3	5.38	118.13	114.90
80	B5	641	C	C6-N1-C2	-5.38	118.15	120.30
80	B5	1409	G	N9-C4-C5	5.38	107.55	105.40
80	B5	2434	U	N3-C2-O2	-5.38	118.43	122.20
81	B7	93	C	N3-C4-C5	5.38	124.05	121.90
79	B2	720	G	P-O3'-C3'	5.38	126.16	119.70
80	B5	1724	U	N1-C2-N3	5.38	118.13	114.90
80	B5	1870	C	N1-C2-O2	-5.38	115.67	118.90
80	B5	2524	A	C5-C6-N1	-5.38	115.01	117.70
80	B5	2632	G	N1-C2-N3	-5.38	120.67	123.90
80	B5	2767	U	N3-C4-O4	-5.38	115.63	119.40
80	B5	3047	U	N3-C2-O2	-5.38	118.43	122.20
79	B2	336	G	C6-C5-N7	-5.38	127.17	130.40
80	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
80	B5	2794	G	C5-C6-O6	-5.38	125.37	128.60
80	B5	3048	A	C6-N1-C2	-5.38	115.37	118.60
84	CW	12	U	C5-C6-N1	5.38	125.39	122.70
79	B2	1315	U	C5-C4-O4	-5.38	122.67	125.90
80	B5	14	U	N3-C4-C5	5.38	117.83	114.60
80	B5	806	A	C8-N9-C4	5.38	107.95	105.80
80	B5	1905	G	N9-C4-C5	5.38	107.55	105.40
80	B5	2614	G	C4-N9-C1'	5.38	133.49	126.50
85	CX	3	G	C5-C6-O6	-5.38	125.37	128.60
80	B5	2399	A	C5-C6-N6	-5.38	119.40	123.70
80	B5	3055	U	C6-N1-C1'	-5.38	113.67	121.20
79	B2	469	C	N3-C2-O2	5.37	125.66	121.90
80	B5	1150	A	C5-N7-C8	-5.37	101.21	103.90
80	B5	1243	G	O4'-C1'-N9	5.37	112.50	108.20
80	B5	1248	C	N3-C4-C5	-5.37	119.75	121.90
80	B5	3028	G	C8-N9-C1'	-5.37	120.02	127.00
84	CW	74	C	N3-C4-N4	5.37	121.76	118.00
80	B5	51	A	N1-C6-N6	5.37	121.82	118.60
80	B5	356	C	C5-C6-N1	-5.37	118.31	121.00
80	B5	2148	U	N3-C4-C5	5.37	117.82	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2755	C	N1-C2-O2	-5.37	115.68	118.90
80	B5	2763	U	C5-C4-O4	-5.37	122.68	125.90
80	B5	3052	G	C6-C5-N7	5.37	133.62	130.40
80	B5	3078	U	C2-N1-C1'	5.37	124.14	117.70
79	B2	393	C	C5-C6-N1	-5.37	118.31	121.00
80	B5	63	A	N9-C4-C5	-5.37	103.65	105.80
80	B5	2639	G	C6-N1-C2	-5.37	121.88	125.10
80	B5	2956	A	C5-C6-N1	-5.37	115.02	117.70
81	B7	105	C	N3-C4-C5	-5.37	119.75	121.90
79	B2	1422	A	N7-C8-N9	-5.37	111.12	113.80
80	B5	972	A	C4-C5-C6	5.37	119.68	117.00
80	B5	1312	C	C5-C4-N4	5.37	123.96	120.20
80	B5	1906	G	C6-N1-C2	-5.37	121.88	125.10
82	B8	3	A	C5-C6-N1	5.37	120.38	117.70
79	B2	1324	G	N1-C2-N2	5.37	121.03	116.20
80	B5	536	U	N3-C4-O4	-5.37	115.64	119.40
80	B5	848	A	N1-C2-N3	5.37	131.98	129.30
80	B5	3101	G	N1-C2-N2	-5.37	111.37	116.20
80	B5	365	A	C4-C5-N7	5.37	113.38	110.70
80	B5	2820	A	N9-C4-C5	5.37	107.95	105.80
81	B7	115	G	C8-N9-C4	-5.37	104.25	106.40
79	B2	719	U	C6-N1-C1'	-5.36	113.69	121.20
80	B5	1279	C	N3-C4-C5	-5.36	119.75	121.90
80	B5	2639	G	N1-C6-O6	5.36	123.12	119.90
79	B2	1679	G	N1-C6-O6	-5.36	116.68	119.90
80	B5	1161	G	C6-C5-N7	5.36	133.62	130.40
80	B5	1170	A	N9-C4-C5	-5.36	103.66	105.80
80	B5	2904	U	N3-C2-O2	-5.36	118.45	122.20
80	B5	3179	U	N1-C2-O2	5.36	126.55	122.80
79	B2	628	G	N3-C4-C5	5.36	131.28	128.60
79	B2	1192	C	N1-C2-O2	-5.36	115.68	118.90
80	B5	1110	U	N1-C2-N3	-5.36	111.68	114.90
80	B5	1846	C	C6-N1-C2	5.36	122.44	120.30
80	B5	2621	G	N1-C2-N2	5.36	121.03	116.20
80	B5	2915	U	N3-C4-O4	-5.36	115.65	119.40
81	B7	48	U	C5-C6-N1	-5.36	120.02	122.70
79	B2	1769	U	C5-C4-O4	5.36	129.12	125.90
80	B5	1374	G	N1-C2-N2	-5.36	111.38	116.20
80	B5	587	U	N3-C4-O4	-5.36	115.65	119.40
80	B5	905	U	C2-N3-C4	-5.36	123.79	127.00
80	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

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	1524	A	N1-C6-N6	-5.36	115.39	118.60
79	B2	1762	A	N9-C4-C5	-5.36	103.66	105.80
80	B5	696	C	C2-N1-C1'	5.36	124.69	118.80
80	B5	2525	G	C8-N9-C4	5.36	108.54	106.40
79	B2	151	G	C5-C6-N1	5.35	114.18	111.50
80	B5	1300	G	N1-C6-O6	5.35	123.11	119.90
80	B5	1319	G	N1-C2-N2	-5.35	111.38	116.20
84	CW	11	C	N3-C4-N4	5.35	121.75	118.00
76	Bq	22	TYR	CB-CG-CD1	-5.35	117.79	121.00
79	B2	12	U	N3-C2-O2	-5.35	118.45	122.20
79	B2	932	U	C6-N1-C1'	5.35	128.69	121.20
80	B5	339	C	C6-N1-C1'	5.35	127.22	120.80
80	B5	1510	G	C2-N3-C4	-5.35	109.22	111.90
80	B5	2987	A	N7-C8-N9	-5.35	111.12	113.80
79	B2	393	C	C2-N1-C1'	-5.35	112.91	118.80
80	B5	1844	C	C6-N1-C2	-5.35	118.16	120.30
80	B5	91	G	N9-C4-C5	5.35	107.54	105.40
80	B5	363	G	C5-N7-C8	5.35	106.97	104.30
80	B5	1144	U	C4-C5-C6	5.35	122.91	119.70
80	B5	3019	U	C6-N1-C2	5.35	124.21	121.00
79	B2	1537	C	C5-C4-N4	-5.35	116.46	120.20
80	B5	372	A	N1-C6-N6	5.35	121.81	118.60
80	B5	404	G	C4-C5-N7	-5.35	108.66	110.80
80	B5	1321	G	C8-N9-C4	5.35	108.54	106.40
80	B5	2184	U	N3-C4-C5	5.35	117.81	114.60
80	B5	3005	A	C8-N9-C4	-5.35	103.66	105.80
80	B5	3043	C	N1-C2-O2	5.35	122.11	118.90
80	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
79	B2	1086	A	C5-C6-N1	5.35	120.37	117.70
80	B5	509	U	N3-C4-C5	5.35	117.81	114.60
80	B5	987	U	C5-C4-O4	5.34	129.11	125.90
80	B5	1846	C	N1-C2-N3	5.34	122.94	119.20
80	B5	3025	C	N3-C2-O2	-5.34	118.16	121.90
80	B5	76	G	N1-C6-O6	5.34	123.11	119.90
80	B5	141	C	C6-N1-C2	-5.34	118.16	120.30
80	B5	419	G	C5-C6-N1	5.34	114.17	111.50
80	B5	706	A	N1-C6-N6	5.34	121.81	118.60
80	B5	1011	A	C2-N3-C4	-5.34	107.93	110.60
80	B5	3141	A	N1-C2-N3	5.34	131.97	129.30
84	CW	38	A	C6-C5-N7	-5.34	128.56	132.30
80	B5	2300	G	C5-C6-N1	5.34	114.17	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2629	U	C2-N3-C4	-5.34	123.80	127.00
81	B7	35	C	N1-C2-O2	-5.34	115.70	118.90
80	B5	2636	A	N1-C6-N6	-5.34	115.40	118.60
82	B8	6	U	C5-C4-O4	-5.34	122.70	125.90
80	B5	1369	A	N1-C2-N3	-5.34	126.63	129.30
80	B5	1885	U	N1-C2-O2	-5.34	119.06	122.80
80	B5	2279	A	C2-N3-C4	-5.34	107.93	110.60
80	B5	2755	C	C4-C5-C6	5.34	120.07	117.40
80	B5	3368	U	C2-N1-C1'	-5.34	111.30	117.70
80	B5	3227	A	C2-N3-C4	-5.33	107.93	110.60
84	CW	23	A	C5-C6-N1	-5.33	115.03	117.70
2	A1	29	ARG	NE-CZ-NH1	5.33	122.97	120.30
79	B2	1145	U	N3-C2-O2	5.33	125.93	122.20
80	B5	564	G	C5-N7-C8	5.33	106.97	104.30
80	B5	924	G	C5-C6-O6	-5.33	125.40	128.60
80	B5	972	A	C5-N7-C8	5.33	106.57	103.90
80	B5	1378	U	N3-C4-C5	5.33	117.80	114.60
80	B5	1804	A	C8-N9-C4	5.33	107.93	105.80
80	B5	3031	G	C5-C6-O6	-5.33	125.40	128.60
80	B5	3336	A	C2-N3-C4	-5.33	107.93	110.60
82	B8	11	C	N1-C2-O2	5.33	122.10	118.90
83	CV	72	LEU	C-N-CA	5.33	135.03	121.70
80	B5	806	A	C6-N1-C2	5.33	121.80	118.60
80	B5	3173	G	C4-C5-N7	5.33	112.93	110.80
79	B2	554	C	C6-N1-C1'	-5.33	114.40	120.80
80	B5	494	G	N1-C6-O6	-5.33	116.70	119.90
80	B5	1203	A	N1-C6-N6	5.33	121.80	118.60
79	B2	214	G	C8-N9-C1'	5.33	133.93	127.00
79	B2	350	U	C5-C6-N1	-5.33	120.04	122.70
80	B5	327	A	N1-C2-N3	-5.33	126.64	129.30
81	B7	83	U	N3-C4-O4	-5.33	115.67	119.40
83	CV	507	THR	C-N-CA	5.33	135.02	121.70
79	B2	1370	U	C2-N1-C1'	5.33	124.09	117.70
80	B5	413	U	C5-C4-O4	-5.33	122.70	125.90
79	B2	392	G	C5-C6-O6	-5.33	125.41	128.60
79	B2	1481	C	C5-C6-N1	5.33	123.66	121.00
80	B5	496	C	N3-C2-O2	-5.33	118.17	121.90
80	B5	1808	G	C5-C6-O6	-5.33	125.41	128.60
80	B5	3138	U	N3-C2-O2	5.33	125.93	122.20
84	CW	4	C	N3-C4-N4	5.33	121.73	118.00
79	B2	313	U	C5-C4-O4	5.32	129.09	125.90
80	B5	800	G	N9-C4-C5	-5.32	103.27	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1192	C	N1-C2-N3	5.32	122.93	119.20
80	B5	1389	G	C8-N9-C4	5.32	108.53	106.40
80	B5	3246	G	N1-C6-O6	5.32	123.09	119.90
79	B2	1520	U	C5-C6-N1	-5.32	120.04	122.70
80	B5	1490	A	C6-C5-N7	-5.32	128.57	132.30
80	B5	1917	C	C4-C5-C6	5.32	120.06	117.40
79	B2	274	G	C8-N9-C4	-5.32	104.27	106.40
79	B2	811	A	C4-N9-C1'	5.32	135.88	126.30
79	B2	1052	U	C2-N1-C1'	5.32	124.08	117.70
79	B2	1778	G	N1-C6-O6	-5.32	116.71	119.90
80	B5	887	G	C4-C5-C6	5.32	121.99	118.80
82	B8	87	G	C4-C5-N7	5.32	112.93	110.80
80	B5	282	G	C5-C6-N1	-5.32	108.84	111.50
80	B5	1447	G	N9-C4-C5	5.32	107.53	105.40
79	B2	1119	G	N3-C4-C5	-5.32	125.94	128.60
80	B5	1283	C	P-O5'-C5'	-5.32	112.39	120.90
80	B5	1939	G	C8-N9-C1'	-5.32	120.09	127.00
80	B5	799	G	C5-C6-N1	5.32	114.16	111.50
80	B5	810	A	C4-C5-N7	-5.32	108.04	110.70
80	B5	1116	G	C5-C6-N1	-5.31	108.84	111.50
80	B5	1140	G	N3-C4-N9	5.31	129.19	126.00
80	B5	2342	U	N3-C4-C5	5.31	117.79	114.60
84	CW	29	G	O4'-C1'-N9	5.31	112.45	108.20
79	B2	319	U	N1-C2-N3	-5.31	111.71	114.90
79	B2	583	C	C2-N1-C1'	5.31	124.64	118.80
80	B5	831	G	C5-C6-O6	-5.31	125.41	128.60
80	B5	1929	G	C2-N3-C4	-5.31	109.24	111.90
80	B5	2323	G	C8-N9-C4	-5.31	104.28	106.40
80	B5	3045	G	N3-C4-C5	-5.31	125.94	128.60
82	B8	79	A	C4-C5-N7	5.31	113.36	110.70
82	B8	135	G	C4-C5-N7	-5.31	108.67	110.80
80	B5	2632	G	N3-C2-N2	5.31	123.62	119.90
79	B2	1542	G	N1-C6-O6	-5.31	116.72	119.90
80	B5	524	U	C2-N1-C1'	-5.31	111.33	117.70
80	B5	3245	A	C4-C5-C6	5.31	119.65	117.00
82	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
79	B2	1736	G	C8-N9-C4	5.31	108.52	106.40
80	B5	496	C	N1-C2-O2	5.31	122.08	118.90
80	B5	802	C	N3-C2-O2	-5.31	118.18	121.90
80	B5	1167	U	N3-C2-O2	5.31	125.92	122.20
80	B5	1376	C	C6-N1-C2	5.31	122.42	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1458	U	C5-C4-O4	-5.31	122.72	125.90
80	B5	1483	G	N1-C6-O6	-5.31	116.72	119.90
80	B5	2369	G	N3-C2-N2	5.31	123.61	119.90
80	B5	3171	U	C6-N1-C2	5.31	124.19	121.00
79	B2	323	A	N7-C8-N9	5.31	116.45	113.80
79	B2	1148	C	C6-N1-C2	5.31	122.42	120.30
84	CW	41	C	C6-N1-C2	-5.31	118.18	120.30
79	B2	460	A	C4-C5-C6	-5.30	114.35	117.00
79	B2	1461	C	C6-N1-C2	5.30	122.42	120.30
80	B5	1054	A	N9-C4-C5	-5.30	103.68	105.80
80	B5	2836	C	N1-C2-O2	-5.30	115.72	118.90
79	B2	343	C	C6-N1-C2	-5.30	118.18	120.30
80	B5	1442	U	C2-N3-C4	-5.30	123.82	127.00
80	B5	2175	U	C2-N1-C1'	-5.30	111.34	117.70
80	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
80	B5	35	A	N1-C2-N3	5.30	131.95	129.30
84	CW	58	A	C5-C6-N1	-5.30	115.05	117.70
80	B5	568	G	N1-C6-O6	-5.30	116.72	119.90
80	B5	815	G	N3-C4-C5	-5.30	125.95	128.60
80	B5	881	C	C5-C6-N1	5.30	123.65	121.00
80	B5	1137	C	N3-C4-C5	-5.30	119.78	121.90
80	B5	1307	G	N3-C2-N2	5.30	123.61	119.90
79	B2	68	A	N7-C8-N9	5.30	116.45	113.80
79	B2	1454	G	C4-C5-N7	-5.30	108.68	110.80
79	B2	1600	A	N1-C2-N3	5.30	131.95	129.30
80	B5	948	C	C4-C5-C6	5.30	120.05	117.40
80	B5	1325	U	N1-C2-N3	5.30	118.08	114.90
80	B5	1856	C	N3-C2-O2	-5.30	118.19	121.90
80	B5	2897	A	C5-N7-C8	5.30	106.55	103.90
80	B5	3294	A	N1-C2-N3	5.30	131.95	129.30
81	B7	100	C	C2-N3-C4	-5.30	117.25	119.90
80	B5	1586	G	C6-C5-N7	-5.29	127.22	130.40
80	B5	1741	A	N1-C2-N3	5.29	131.95	129.30
80	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
79	B2	557	G	N3-C4-C5	-5.29	125.95	128.60
80	B5	632	G	C5-C6-N1	5.29	114.15	111.50
80	B5	2422	C	N3-C4-C5	5.29	124.02	121.90
81	B7	11	A	C5-C6-N1	-5.29	115.05	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	BN	172	ARG	NE-CZ-NH1	-5.29	117.65	120.30
80	B5	186	U	N1-C2-O2	5.29	126.50	122.80
80	B5	637	C	C6-N1-C1'	5.29	127.15	120.80
80	B5	1080	A	N1-C2-N3	5.29	131.95	129.30
80	B5	1315	U	C6-N1-C2	5.29	124.17	121.00
80	B5	2303	A	C5-C6-N1	5.29	120.34	117.70
80	B5	2344	U	N1-C2-N3	5.29	118.08	114.90
80	B5	2893	C	N3-C2-O2	5.29	125.60	121.90
80	B5	2928	C	C2-N1-C1'	5.29	124.62	118.80
80	B5	2930	A	C5-C6-N1	5.29	120.34	117.70
81	B7	14	U	N1-C2-N3	5.29	118.07	114.90
79	B2	380	U	C6-N1-C2	-5.29	117.83	121.00
80	B5	2609	A	N7-C8-N9	-5.29	111.16	113.80
79	B2	137	U	N3-C2-O2	-5.29	118.50	122.20
80	B5	960	U	C6-N1-C1'	-5.29	113.80	121.20
80	B5	1007	U	N3-C4-C5	5.29	117.77	114.60
80	B5	1869	C	C5-C6-N1	-5.29	118.36	121.00
80	B5	2921	U	N1-C2-N3	5.29	118.07	114.90
80	B5	719	U	N3-C2-O2	-5.29	118.50	122.20
80	B5	998	A	C5-N7-C8	5.29	106.54	103.90
80	B5	1264	G	C5'-C4'-O4'	5.29	115.44	109.10
80	B5	1272	C	N3-C4-N4	5.29	121.70	118.00
80	B5	1274	A	C6-C5-N7	-5.29	128.60	132.30
80	B5	1375	G	C8-N9-C4	-5.29	104.29	106.40
80	B5	2163	C	N3-C4-C5	5.29	124.02	121.90
80	B5	1281	G	C5-C6-O6	-5.28	125.43	128.60
80	B5	2572	C	C6-N1-C1'	-5.28	114.46	120.80
80	B5	2664	C	C4-C5-C6	-5.28	114.76	117.40
80	B5	3307	A	C6-N1-C2	5.28	121.77	118.60
39	BE	26	ARG	NE-CZ-NH2	-5.28	117.66	120.30
79	B2	308	C	C6-N1-C2	5.28	122.41	120.30
80	B5	432	G	N3-C2-N2	5.28	123.60	119.90
80	B5	1114	U	C2-N3-C4	-5.28	123.83	127.00
80	B5	1220	U	C5-C6-N1	-5.28	120.06	122.70
80	B5	2167	A	C5-C6-N1	5.28	120.34	117.70
80	B5	2261	G	N7-C8-N9	-5.28	110.46	113.10
80	B5	3315	G	C4-C5-N7	-5.28	108.69	110.80
80	B5	975	C	N1-C2-N3	5.28	122.89	119.20
80	B5	1085	A	C4-C5-N7	5.28	113.34	110.70
80	B5	1283	C	C3'-C2'-C1'	5.28	105.72	101.50
80	B5	2359	C	N3-C4-N4	-5.28	114.30	118.00
80	B5	2549	G	C5-N7-C8	-5.28	101.66	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	B8	99	C	C5-C6-N1	-5.28	118.36	121.00
80	B5	637	C	C2-N3-C4	-5.28	117.26	119.90
80	B5	1628	C	C6-N1-C2	-5.28	118.19	120.30
80	B5	2625	C	N3-C4-C5	5.28	124.01	121.90
80	B5	147	U	C5-C4-O4	5.28	129.06	125.90
80	B5	354	U	C5-C6-N1	-5.28	120.06	122.70
80	B5	1788	C	C4-C5-C6	5.28	120.04	117.40
80	B5	2976	A	C5-C6-N1	5.28	120.34	117.70
83	CV	23	ASP	CB-CG-OD1	5.28	123.05	118.30
80	B5	689	U	N3-C4-C5	5.27	117.76	114.60
80	B5	1445	U	N1-C2-O2	-5.27	119.11	122.80
80	B5	2852	C	N1-C2-O2	-5.27	115.74	118.90
79	B2	1093	A	C8-N9-C4	5.27	107.91	105.80
80	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
80	B5	376	G	N3-C4-C5	-5.27	125.97	128.60
80	B5	1276	U	C2-N1-C1'	5.27	124.03	117.70
80	B5	2732	G	C5-N7-C8	5.27	106.94	104.30
80	B5	421	G	C5-C6-N1	5.27	114.14	111.50
80	B5	656	A	C5-N7-C8	5.27	106.53	103.90
80	B5	2658	G	C8-N9-C4	5.27	108.51	106.40
80	B5	2721	A	N3-C4-C5	-5.27	123.11	126.80
80	B5	2798	C	N3-C4-C5	-5.27	119.79	121.90
23	AO	107	ARG	NE-CZ-NH1	5.27	122.93	120.30
80	B5	1249	G	P-O5'-C5'	5.27	129.33	120.90
80	B5	1346	G	C8-N9-C4	5.27	108.51	106.40
80	B5	1786	G	N3-C4-C5	-5.27	125.97	128.60
80	B5	1833	G	N1-C2-N2	-5.27	111.46	116.20
80	B5	2211	U	C6-N1-C2	-5.27	117.84	121.00
80	B5	2403	G	N3-C4-N9	5.27	129.16	126.00
80	B5	2882	U	N3-C4-O4	-5.27	115.71	119.40
80	B5	2979	U	N1-C2-N3	-5.27	111.74	114.90
80	B5	3045	G	C4-C5-N7	-5.27	108.69	110.80
80	B5	3247	G	C4-C5-N7	-5.27	108.69	110.80
84	CW	39	U	O4'-C1'-N1	5.27	112.41	108.20
22	AN	22	ALA	C-N-CA	5.27	144.12	122.00
79	B2	190	C	C6-N1-C2	5.27	122.41	120.30
81	B7	50	U	C6-N1-C2	-5.27	117.84	121.00
79	B2	647	G	C8-N9-C4	-5.26	104.29	106.40
79	B2	1297	G	C4-N9-C1'	-5.26	119.66	126.50
80	B5	98	G	C4-C5-N7	5.26	112.91	110.80
80	B5	784	A	C4-C5-N7	5.26	113.33	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	929	A	C5-N7-C8	5.26	106.53	103.90
80	B5	1229	G	C4-N9-C1'	5.26	133.34	126.50
80	B5	1939	G	C4-N9-C1'	5.26	133.34	126.50
80	B5	2884	C	C5-C4-N4	-5.26	116.52	120.20
80	B5	2930	A	N1-C2-N3	-5.26	126.67	129.30
80	B5	2965	U	N3-C4-O4	5.26	123.08	119.40
84	CW	55	U	C5'-C4'-C3'	5.26	124.42	116.00
80	B5	1180	A	C2-N3-C4	-5.26	107.97	110.60
80	B5	1432	C	C2-N1-C1'	5.26	124.59	118.80
80	B5	2851	A	C2-N3-C4	-5.26	107.97	110.60
79	B2	527	A	N7-C8-N9	5.26	116.43	113.80
79	B2	1195	C	P-O3'-C3'	5.26	126.01	119.70
79	B2	1454	G	C5-N7-C8	5.26	106.93	104.30
79	B2	1541	G	N3-C4-C5	-5.26	125.97	128.60
79	B2	1761	U	N1-C2-N3	5.26	118.06	114.90
80	B5	323	A	N1-C2-N3	5.26	131.93	129.30
80	B5	582	G	C4-C5-N7	-5.26	108.69	110.80
80	B5	693	A	C5-C6-N6	5.26	127.91	123.70
80	B5	329	U	C6-N1-C2	5.26	124.16	121.00
80	B5	1050	U	C5-C4-O4	5.26	129.06	125.90
80	B5	1506	A	N9-C4-C5	5.26	107.90	105.80
80	B5	3309	G	C2-N3-C4	5.26	114.53	111.90
79	B2	605	A	C8-N9-C4	5.26	107.90	105.80
79	B2	1245	G	N3-C4-N9	-5.26	122.84	126.00
80	B5	3369	G	C5-C6-N1	5.26	114.13	111.50
79	B2	1600	A	N3-C4-C5	5.26	130.48	126.80
80	B5	218	G	N1-C6-O6	-5.26	116.75	119.90
80	B5	410	U	C5-C6-N1	-5.26	120.07	122.70
80	B5	2213	A	N7-C8-N9	-5.26	111.17	113.80
80	B5	2391	G	C5-C6-O6	5.26	131.75	128.60
81	B7	41	G	C5-C6-N1	5.26	114.13	111.50
82	B8	77	A	C2-N3-C4	-5.26	107.97	110.60
82	B8	121	U	N3-C2-O2	-5.26	118.52	122.20
80	B5	406	G	O4'-C1'-N9	5.25	112.40	108.20
80	B5	1153	A	C5-C6-N6	-5.25	119.50	123.70
80	B5	1901	A	C8-N9-C1'	-5.25	118.24	127.70
80	B5	2665	U	C5-C6-N1	5.25	125.33	122.70
80	B5	2279	A	N1-C6-N6	5.25	121.75	118.60
80	B5	2370	G	N3-C4-N9	5.25	129.15	126.00
80	B5	3048	A	C5-C6-N1	5.25	120.33	117.70
82	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
79	B2	1614	A	N1-C6-N6	5.25	121.75	118.60
80	B5	333	G	C2-N3-C4	-5.25	109.27	111.90
80	B5	2721	A	C5-C6-N1	5.25	120.33	117.70
80	B5	3321	C	C6-N1-C2	5.25	122.40	120.30
84	CW	42	C	C3'-C2'-C1'	-5.25	97.30	101.50
80	B5	985	U	C6-N1-C2	5.25	124.15	121.00
80	B5	2772	C	P-O3'-C3'	5.25	126.00	119.70
80	B5	3177	G	C2-N3-C4	-5.25	109.28	111.90
80	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
79	B2	687	G	N3-C4-N9	-5.25	122.85	126.00
79	B2	969	C	N3-C4-C5	5.25	124.00	121.90
80	B5	1190	A	C4-N9-C1'	5.25	135.75	126.30
80	B5	2606	G	C6-C5-N7	-5.25	127.25	130.40
80	B5	3202	G	C5-C6-O6	5.25	131.75	128.60
79	B2	240	U	N1-C2-O2	5.25	126.47	122.80
79	B2	1086	A	N1-C6-N6	-5.25	115.45	118.60
80	B5	559	A	C8-N9-C4	-5.25	103.70	105.80
80	B5	1100	U	N3-C4-C5	5.25	117.75	114.60
80	B5	1516	C	C4-C5-C6	5.25	120.02	117.40
80	B5	1828	A	N7-C8-N9	5.25	116.42	113.80
80	B5	2374	C	C5-C4-N4	5.25	123.87	120.20
82	B8	12	A	C8-N9-C4	-5.25	103.70	105.80
80	B5	1604	G	N3-C4-C5	-5.25	125.98	128.60
80	B5	2524	A	C2-N3-C4	-5.25	107.98	110.60
80	B5	3028	G	N1-C2-N2	-5.25	111.48	116.20
81	B7	37	G	C8-N9-C4	5.25	108.50	106.40
79	B2	149	C	C6-N1-C2	5.24	122.40	120.30
79	B2	972	G	N1-C6-O6	-5.24	116.75	119.90
79	B2	1258	U	C5-C6-N1	-5.24	120.08	122.70
79	B2	1754	A	C4-C5-C6	-5.24	114.38	117.00
80	B5	911	C	C5-C4-N4	-5.24	116.53	120.20
80	B5	1158	A	N9-C4-C5	-5.24	103.70	105.80
80	B5	1178	G	C5-C6-O6	-5.24	125.45	128.60
80	B5	1724	U	P-O3'-C3'	5.24	125.99	119.70
81	B7	1	G	C4-C5-N7	5.24	112.90	110.80
80	B5	1243	G	N3-C2-N2	5.24	123.57	119.90
80	B5	2724	U	N3-C4-O4	-5.24	115.73	119.40
80	B5	3107	U	N3-C4-O4	-5.24	115.73	119.40
80	B5	3174	A	N1-C6-N6	5.24	121.75	118.60
80	B5	318	A	N1-C2-N3	-5.24	126.68	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1500	G	N7-C8-N9	-5.24	110.48	113.10
80	B5	2648	G	N9-C4-C5	-5.24	103.30	105.40
43	BI	99	ILE	CB-CA-C	-5.24	101.12	111.60
79	B2	608	U	C5-C6-N1	-5.24	120.08	122.70
80	B5	804	C	C2-N1-C1'	-5.24	113.04	118.80
80	B5	2321	A	C8-N9-C4	5.24	107.89	105.80
80	B5	2897	A	N7-C8-N9	-5.24	111.18	113.80
79	B2	582	U	C5-C6-N1	5.24	125.32	122.70
80	B5	1421	G	N3-C4-C5	5.24	131.22	128.60
80	B5	1833	G	C5-C6-O6	5.24	131.74	128.60
80	B5	2191	U	C4-C5-C6	5.24	122.84	119.70
79	B2	749	U	C5-C6-N1	5.24	125.32	122.70
80	B5	1324	U	N3-C2-O2	-5.24	118.53	122.20
80	B5	1693	C	N1-C2-O2	-5.24	115.76	118.90
80	B5	1834	U	C5-C6-N1	-5.24	120.08	122.70
80	B5	1876	U	C6-N1-C2	-5.24	117.86	121.00
80	B5	1925	U	N3-C4-C5	5.24	117.74	114.60
82	B8	34	U	C2-N3-C4	-5.24	123.86	127.00
79	B2	938	G	N3-C2-N2	5.23	123.56	119.90
79	B2	1796	C	C5-C4-N4	5.23	123.86	120.20
80	B5	1226	G	C5-C6-N1	-5.23	108.88	111.50
79	B2	1648	A	C5-C6-N1	5.23	120.32	117.70
80	B5	381	U	C5-C6-N1	-5.23	120.08	122.70
80	B5	682	U	C2-N3-C4	-5.23	123.86	127.00
80	B5	961	C	C5-C6-N1	-5.23	118.38	121.00
80	B5	1252	A	C4-C5-C6	5.23	119.62	117.00
80	B5	1265	U	N1-C2-N3	-5.23	111.76	114.90
80	B5	1927	G	C8-N9-C4	-5.23	104.31	106.40
80	B5	2349	U	N1-C2-O2	5.23	126.46	122.80
80	B5	3381	U	C5-C6-N1	-5.23	120.08	122.70
81	B7	88	G	N1-C6-O6	-5.23	116.76	119.90
79	B2	337	G	N3-C4-C5	-5.23	125.98	128.60
79	B2	1600	A	C6-C5-N7	-5.23	128.64	132.30
79	B2	1763	A	C5-N7-C8	-5.23	101.28	103.90
80	B5	227	G	N1-C6-O6	5.23	123.04	119.90
80	B5	299	G	C5-C6-N1	5.23	114.11	111.50
80	B5	661	G	C5-C6-O6	5.23	131.74	128.60
80	B5	857	G	N1-C2-N2	-5.23	111.49	116.20
80	B5	1545	A	C8-N9-C4	5.23	107.89	105.80
80	B5	2279	A	C5-N7-C8	-5.23	101.28	103.90
80	B5	2364	G	C4-C5-N7	-5.23	108.71	110.80
80	B5	2366	C	C2-N3-C4	5.23	122.52	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3075	G	C5-N7-C8	5.23	106.92	104.30
79	B2	6	G	N3-C4-N9	5.23	129.14	126.00
79	B2	63	G	C5-C6-O6	5.23	131.74	128.60
79	B2	440	U	N1-C2-O2	5.23	126.46	122.80
79	B2	1648	A	N1-C6-N6	-5.23	115.46	118.60
80	B5	813	G	N3-C4-C5	-5.23	125.99	128.60
80	B5	1107	C	N3-C4-C5	5.23	123.99	121.90
80	B5	1317	A	N9-C4-C5	-5.23	103.71	105.80
84	CW	1	G	C1'-O4'-C4'	-5.23	105.72	109.90
81	B7	41	G	C4-C5-N7	5.23	112.89	110.80
51	BQ	178	ARG	NE-CZ-NH2	-5.22	117.69	120.30
79	B2	7	G	C5-C6-O6	5.22	131.74	128.60
80	B5	1403	C	N3-C4-C5	5.22	123.99	121.90
80	B5	1603	A	C5-C6-N1	-5.22	115.09	117.70
80	B5	2207	A	C4-C5-N7	5.22	113.31	110.70
84	CW	49	C	N3-C4-C5	-5.22	119.81	121.90
79	B2	971	A	C2-N3-C4	-5.22	107.99	110.60
79	B2	1258	U	N1-C2-N3	5.22	118.03	114.90
79	B2	1293	U	N3-C2-O2	-5.22	118.54	122.20
80	B5	861	C	N3-C4-N4	5.22	121.66	118.00
80	B5	928	C	C6-N1-C2	-5.22	118.21	120.30
80	B5	1013	G	C4-N9-C1'	5.22	133.29	126.50
80	B5	1714	A	C2-N3-C4	-5.22	107.99	110.60
80	B5	2144	A	N1-C6-N6	5.22	121.73	118.60
80	B5	2193	U	N1-C2-N3	5.22	118.03	114.90
80	B5	2716	U	C5-C4-O4	5.22	129.03	125.90
84	CW	73	A	C5-C6-N6	-5.22	119.52	123.70
79	B2	542	A	C5-C6-N1	-5.22	115.09	117.70
80	B5	595	G	C5-C6-O6	5.22	131.73	128.60
80	B5	2416	U	N1-C2-N3	5.22	118.03	114.90
80	B5	2506	U	C5-C6-N1	5.22	125.31	122.70
79	B2	1448	G	N1-C6-O6	-5.22	116.77	119.90
80	B5	1120	A	N1-C6-N6	-5.22	115.47	118.60
80	B5	1305	U	C5-C6-N1	-5.22	120.09	122.70
80	B5	3106	A	C8-N9-C4	-5.22	103.71	105.80
80	B5	1597	C	N3-C4-C5	-5.22	119.81	121.90
80	B5	1828	A	C2-N3-C4	-5.22	107.99	110.60
80	B5	2112	U	N1-C2-N3	5.22	118.03	114.90
80	B5	3259	U	C6-N1-C2	-5.22	117.87	121.00
81	B7	48	U	N3-C2-O2	5.22	125.85	122.20
80	B5	999	G	C5-C6-N1	5.22	114.11	111.50
80	B5	1149	G	C4-C5-N7	-5.22	108.71	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1485	G	N9-C4-C5	5.22	107.49	105.40
80	B5	1527	C	N1-C2-O2	5.22	122.03	118.90
84	CW	54	U	C5'-C4'-C3'	-5.22	107.65	116.00
61	Ba	15	VAL	N-CA-C	-5.21	96.92	111.00
79	B2	139	C	C4-C5-C6	5.21	120.01	117.40
79	B2	1170	G	C5-C6-O6	-5.21	125.47	128.60
79	B2	1611	A	C6-C5-N7	-5.21	128.65	132.30
80	B5	1872	C	N1-C2-N3	5.21	122.85	119.20
80	B5	2122	G	N7-C8-N9	-5.21	110.49	113.10
80	B5	3373	U	C2-N3-C4	-5.21	123.87	127.00
83	CV	60	ALA	N-CA-CB	5.21	117.40	110.10
80	B5	75	G	C5-C6-N1	5.21	114.11	111.50
80	B5	1312	C	C6-N1-C1'	5.21	127.06	120.80
80	B5	1845	G	C8-N9-C4	5.21	108.48	106.40
80	B5	2164	A	C4-C5-C6	5.21	119.61	117.00
80	B5	2693	C	N3-C4-N4	-5.21	114.35	118.00
80	B5	3339	A	N1-C6-N6	5.21	121.73	118.60
79	B2	387	A	N1-C6-N6	-5.21	115.47	118.60
79	B2	944	A	C2-N3-C4	-5.21	107.99	110.60
79	B2	1015	U	N1-C2-O2	5.21	126.45	122.80
80	B5	146	U	C5-C6-N1	-5.21	120.09	122.70
80	B5	284	A	C8-N9-C4	-5.21	103.72	105.80
80	B5	424	G	C5-C6-N1	5.21	114.11	111.50
80	B5	735	A	N7-C8-N9	5.21	116.41	113.80
80	B5	1792	C	C5-C6-N1	-5.21	118.39	121.00
80	B5	992	A	C8-N9-C4	5.21	107.88	105.80
80	B5	2804	A	C2-N3-C4	-5.21	108.00	110.60
80	B5	2877	G	C5-C6-O6	5.21	131.73	128.60
80	B5	3103	A	C6-N1-C2	-5.21	115.47	118.60
82	B8	113	U	C5-C4-O4	-5.21	122.77	125.90
80	B5	1208	U	N1-C2-O2	5.21	126.45	122.80
80	B5	1543	G	N1-C6-O6	-5.21	116.78	119.90
79	B2	445	A	N1-C2-N3	-5.21	126.70	129.30
80	B5	2686	A	N1-C6-N6	5.21	121.72	118.60
80	B5	3110	C	C5-C6-N1	-5.21	118.40	121.00
79	B2	266	A	C2-N3-C4	-5.21	108.00	110.60
84	CW	65	G	O4'-C1'-N9	5.21	112.36	108.20
35	BA	242	ARG	NE-CZ-NH2	-5.20	117.70	120.30
79	B2	192	U	C5-C6-N1	5.20	125.30	122.70
79	B2	1330	G	C8-N9-C1'	5.20	133.76	127.00
80	B5	267	G	N7-C8-N9	-5.20	110.50	113.10
80	B5	1263	A	C5-C6-N1	-5.20	115.10	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1277	C	P-O3'-C3'	5.20	125.94	119.70
80	B5	1327	C	C5-C4-N4	5.20	123.84	120.20
80	B5	1468	A	N7-C8-N9	5.20	116.40	113.80
80	B5	2550	U	N3-C2-O2	-5.20	118.56	122.20
80	B5	702	C	N3-C4-C5	5.20	123.98	121.90
80	B5	943	U	C5-C4-O4	-5.20	122.78	125.90
79	B2	1672	G	N3-C4-C5	-5.20	126.00	128.60
80	B5	83	U	C6-N1-C1'	-5.20	113.92	121.20
80	B5	197	G	C4-N9-C1'	5.20	133.26	126.50
80	B5	997	A	C8-N9-C4	-5.20	103.72	105.80
80	B5	2271	A	C6-C5-N7	5.20	135.94	132.30
80	B5	2724	U	N3-C2-O2	-5.20	118.56	122.20
80	B5	2942	C	C5-C4-N4	-5.20	116.56	120.20
80	B5	28	C	C6-N1-C2	5.20	122.38	120.30
80	B5	102	C	C4-C5-C6	5.20	120.00	117.40
80	B5	1513	G	N1-C6-O6	-5.20	116.78	119.90
80	B5	1733	G	C6-C5-N7	-5.20	127.28	130.40
80	B5	2526	C	C6-N1-C1'	-5.20	114.56	120.80
80	B5	2634	U	N3-C4-O4	5.20	123.04	119.40
81	B7	40	C	C2-N3-C4	-5.20	117.30	119.90
79	B2	1376	C	C6-N1-C2	5.20	122.38	120.30
80	B5	576	C	C2-N3-C4	-5.20	117.30	119.90
80	B5	610	G	C5-C6-N1	5.20	114.10	111.50
80	B5	1271	A	O4'-C1'-N9	5.20	112.36	108.20
80	B5	3387	U	N3-C2-O2	-5.20	118.56	122.20
82	B8	14	C	N1-C2-O2	-5.20	115.78	118.90
84	CW	31	A	C4-C5-C6	5.20	119.60	117.00
80	B5	307	A	N9-C4-C5	5.19	107.88	105.80
80	B5	580	C	N1-C2-N3	5.19	122.84	119.20
80	B5	1183	C	N3-C4-N4	-5.19	114.36	118.00
80	B5	3255	U	N3-C4-C5	5.19	117.72	114.60
80	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
79	B2	987	G	C8-N9-C4	5.19	108.48	106.40
80	B5	1404	G	N1-C2-N2	-5.19	111.53	116.20
80	B5	2379	U	C5-C6-N1	-5.19	120.10	122.70
79	B2	139	C	P-O3'-C3'	5.19	125.93	119.70
79	B2	971	A	N1-C2-N3	5.19	131.90	129.30
79	B2	1462	G	N3-C4-N9	5.19	129.12	126.00
79	B2	1503	A	C5-C6-N1	-5.19	115.10	117.70
80	B5	84	U	N3-C4-O4	5.19	123.03	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	515	C	C5-C4-N4	-5.19	116.57	120.20
80	B5	613	G	C4-C5-N7	-5.19	108.72	110.80
80	B5	2406	C	C4-C5-C6	5.19	120.00	117.40
82	B8	95	G	N3-C4-C5	5.19	131.19	128.60
84	CW	19	G	C8-N9-C1'	5.19	133.75	127.00
79	B2	1116	A	N1-C6-N6	5.19	121.71	118.60
82	B8	32	C	N3-C2-O2	5.19	125.53	121.90
79	B2	361	C	C5-C6-N1	5.19	123.59	121.00
79	B2	1033	C	N3-C2-O2	-5.19	118.27	121.90
80	B5	102	C	N1-C2-O2	-5.19	115.79	118.90
80	B5	2228	A	N7-C8-N9	5.19	116.39	113.80
80	B5	2344	U	N1-C2-O2	-5.19	119.17	122.80
80	B5	2386	A	C4-C5-N7	5.19	113.29	110.70
80	B5	2830	G	C8-N9-C4	-5.19	104.33	106.40
79	B2	1148	C	N3-C4-C5	5.19	123.97	121.90
80	B5	1633	C	N3-C4-C5	-5.19	119.83	121.90
80	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
80	B5	340	C	N3-C2-O2	-5.18	118.27	121.90
80	B5	863	C	C5-C4-N4	5.18	123.83	120.20
80	B5	996	A	N7-C8-N9	-5.18	111.21	113.80
80	B5	1402	C	N1-C2-O2	5.18	122.01	118.90
80	B5	2148	U	N1-C2-N3	5.18	118.01	114.90
80	B5	2584	G	N7-C8-N9	5.18	115.69	113.10
82	B8	109	A	C5-C6-N1	5.18	120.29	117.70
79	B2	1188	G	C8-N9-C4	5.18	108.47	106.40
80	B5	46	U	N1-C2-N3	-5.18	111.79	114.90
80	B5	808	A	C6-N1-C2	5.18	121.71	118.60
80	B5	2340	U	N3-C2-O2	-5.18	118.57	122.20
80	B5	2351	U	N1-C2-O2	5.18	126.43	122.80
80	B5	3052	G	C5-N7-C8	5.18	106.89	104.30
84	CW	55	U	O4'-C1'-N1	5.18	112.35	108.20
37	BC	230	VAL	CB-CA-C	-5.18	101.56	111.40
80	B5	625	G	N3-C4-N9	-5.18	122.89	126.00
80	B5	943	U	C6-N1-C2	5.18	124.11	121.00
79	B2	712	G	N7-C8-N9	5.18	115.69	113.10
79	B2	1270	G	N1-C6-O6	-5.18	116.79	119.90
80	B5	1205	A	C2-N3-C4	5.18	113.19	110.60
80	B5	1603	A	C4-C5-C6	5.18	119.59	117.00
80	B5	2135	U	N3-C4-C5	5.18	117.71	114.60
80	B5	3098	G	N3-C2-N2	5.18	123.53	119.90
80	B5	3386	G	N1-C2-N3	5.18	127.01	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	CW	66	U	P-O5'-C5'	5.18	129.19	120.90
80	B5	1655	G	C5-N7-C8	-5.18	101.71	104.30
80	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
79	B2	139	C	N1-C2-N3	5.18	122.82	119.20
79	B2	432	G	C5-C6-N1	5.18	114.09	111.50
79	B2	811	A	N3-C4-C5	-5.18	123.18	126.80
79	B2	1200	G	N7-C8-N9	5.18	115.69	113.10
80	B5	110	G	C5-C6-N1	5.18	114.09	111.50
80	B5	340	C	C4-C5-C6	5.18	119.99	117.40
80	B5	1476	G	N7-C8-N9	-5.18	110.51	113.10
80	B5	1704	A	C8-N9-C4	5.18	107.87	105.80
80	B5	2158	A	C5-C6-N1	5.18	120.29	117.70
80	B5	2833	A	C6-C5-N7	5.18	135.92	132.30
81	B7	90	U	C2-N3-C4	-5.18	123.89	127.00
79	B2	378	A	C4-C5-N7	5.17	113.29	110.70
80	B5	112	U	N3-C4-O4	5.17	123.02	119.40
80	B5	2280	A	C8-N9-C4	5.17	107.87	105.80
80	B5	2635	A	C8-N9-C4	-5.17	103.73	105.80
80	B5	2692	A	C4-C5-N7	-5.17	108.11	110.70
80	B5	437	G	C5-C6-O6	-5.17	125.50	128.60
80	B5	802	C	N1-C2-N3	5.17	122.82	119.20
80	B5	817	A	N9-C4-C5	5.17	107.87	105.80
80	B5	1805	C	C6-N1-C2	5.17	122.37	120.30
80	B5	3218	A	N3-C4-N9	-5.17	123.26	127.40
82	B8	24	G	C5-C6-O6	5.17	131.70	128.60
84	CW	14	A	C5-N7-C8	5.17	106.49	103.90
79	B2	49	C	C6-N1-C2	-5.17	118.23	120.30
79	B2	391	A	C4-C5-C6	-5.17	114.42	117.00
79	B2	783	G	C8-N9-C1'	-5.17	120.28	127.00
79	B2	994	G	C4-C5-N7	-5.17	108.73	110.80
79	B2	1781	A	C4-C5-N7	-5.17	108.11	110.70
80	B5	902	G	N7-C8-N9	-5.17	110.52	113.10
80	B5	1087	G	N1-C6-O6	5.17	123.00	119.90
80	B5	2604	U	N3-C4-C5	-5.17	111.50	114.60
80	B5	2706	G	N1-C6-O6	-5.17	116.80	119.90
80	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
79	B2	1363	U	N3-C2-O2	-5.17	118.58	122.20
80	B5	969	C	C6-N1-C2	5.17	122.37	120.30
80	B5	1316	C	C5-C6-N1	5.17	123.58	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2565	U	C6-N1-C2	-5.17	117.90	121.00
80	B5	3333	G	C4-C5-N7	5.17	112.87	110.80
82	B8	8	C	N1-C2-N3	5.17	122.82	119.20
84	CW	2	C	C3'-C2'-C1'	5.17	105.63	101.50
80	B5	39	A	N3-C4-C5	-5.17	123.18	126.80
80	B5	234	G	C5-C6-O6	-5.17	125.50	128.60
80	B5	852	U	N3-C2-O2	-5.17	118.58	122.20
80	B5	1004	U	N1-C2-N3	-5.17	111.80	114.90
80	B5	1226	G	C6-C5-N7	-5.17	127.30	130.40
80	B5	1257	C	C6-N1-C2	-5.17	118.23	120.30
80	B5	2145	A	N3-C4-C5	-5.17	123.18	126.80
84	CW	63	G	C3'-C2'-C1'	-5.17	97.37	101.50
79	B2	782	U	P-O3'-C3'	5.17	125.90	119.70
79	B2	815	G	C8-N9-C1'	5.17	133.71	127.00
79	B2	1784	C	N3-C4-C5	5.17	123.97	121.90
80	B5	2881	C	N1-C2-N3	5.17	122.82	119.20
80	B5	3094	A	C5-N7-C8	5.17	106.48	103.90
79	B2	1051	G	C8-N9-C1'	-5.16	120.29	127.00
79	B2	1354	G	C8-N9-C4	-5.16	104.33	106.40
79	B2	1431	C	C6-N1-C2	5.16	122.36	120.30
80	B5	926	A	C4-C5-C6	-5.16	114.42	117.00
80	B5	3318	G	C5-C6-O6	5.16	131.70	128.60
81	B7	120	C	C5-C6-N1	-5.16	118.42	121.00
82	B8	31	G	C5-N7-C8	5.16	106.88	104.30
80	B5	3335	A	C5-N7-C8	-5.16	101.32	103.90
79	B2	142	G	C5-C6-N1	-5.16	108.92	111.50
80	B5	341	G	C4-C5-N7	5.16	112.86	110.80
80	B5	1445	U	C6-N1-C2	5.16	124.10	121.00
80	B5	2290	C	N1-C2-O2	-5.16	115.80	118.90
80	B5	2810	C	C2-N3-C4	-5.16	117.32	119.90
80	B5	2858	U	C2-N1-C1'	5.16	123.89	117.70
80	B5	2941	A	C8-N9-C4	5.16	107.86	105.80
84	CW	15	G	O4'-C1'-N9	5.16	112.33	108.20
79	B2	7	G	N9-C4-C5	5.16	107.46	105.40
80	B5	3107	U	N1-C2-O2	5.16	126.41	122.80
82	B8	45	C	C4-C5-C6	5.16	119.98	117.40
79	B2	1761	U	N3-C2-O2	-5.16	118.59	122.20
80	B5	1137	C	N3-C4-N4	5.16	121.61	118.00
80	B5	1637	A	N1-C6-N6	-5.16	115.51	118.60
80	B5	1832	C	C5-C6-N1	-5.16	118.42	121.00
80	B5	1938	U	C6-N1-C2	5.16	124.09	121.00
80	B5	583	G	C8-N9-C4	5.16	108.46	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	635	G	N3-C4-C5	5.16	131.18	128.60
80	B5	1238	C	C4'-C3'-C2'	-5.16	97.44	102.60
79	B2	572	C	N3-C2-O2	-5.15	118.29	121.90
80	B5	2614	G	C2-N3-C4	-5.15	109.32	111.90
84	CW	4	C	O4'-C1'-N1	5.15	112.32	108.20
76	Bq	87	VAL	N-CA-C	-5.15	97.09	111.00
80	B5	726	G	N7-C8-N9	5.15	115.68	113.10
80	B5	893	C	N3-C2-O2	5.15	125.51	121.90
80	B5	903	U	N3-C4-C5	5.15	117.69	114.60
80	B5	1231	A	C5-C6-N6	-5.15	119.58	123.70
80	B5	2142	A	C5-C6-N6	-5.15	119.58	123.70
80	B5	2600	C	C2-N1-C1'	5.15	124.47	118.80
80	B5	2960	C	C2-N3-C4	-5.15	117.32	119.90
79	B2	766	U	N1-C2-O2	5.15	126.41	122.80
80	B5	1205	A	C5-N7-C8	-5.15	101.32	103.90
80	B5	1695	U	N3-C2-O2	-5.15	118.59	122.20
80	B5	2139	A	N1-C6-N6	-5.15	115.51	118.60
80	B5	2899	C	C2-N3-C4	-5.15	117.33	119.90
81	B7	79	A	C8-N9-C4	-5.15	103.74	105.80
81	B7	89	G	C5-C6-N1	5.15	114.08	111.50
80	B5	66	A	N7-C8-N9	-5.15	111.23	113.80
80	B5	1272	C	C2-N3-C4	5.15	122.47	119.90
80	B5	2831	G	C2-N3-C4	5.15	114.47	111.90
80	B5	2841	G	N3-C2-N2	5.15	123.50	119.90
80	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
80	B5	1138	U	N3-C4-O4	-5.15	115.80	119.40
80	B5	2375	G	C5-N7-C8	-5.15	101.73	104.30
80	B5	2934	A	N1-C6-N6	-5.15	115.51	118.60
80	B5	3180	A	C6-N1-C2	-5.15	115.51	118.60
85	CX	2	U	C2-N3-C4	-5.15	123.91	127.00
79	B2	140	A	C4-N9-C1'	5.15	135.56	126.30
80	B5	3241	G	N1-C6-O6	5.15	122.99	119.90
81	B7	75	G	N3-C2-N2	-5.15	116.30	119.90
79	B2	1245	G	C4-N9-C1'	-5.14	119.81	126.50
80	B5	860	G	N3-C4-C5	-5.14	126.03	128.60
80	B5	979	U	N1-C2-N3	-5.14	111.81	114.90
80	B5	1658	G	C5-C6-O6	5.14	131.69	128.60
80	B5	2549	G	C8-N9-C1'	-5.14	120.31	127.00
80	B5	3019	U	C5-C6-N1	-5.14	120.13	122.70
79	B2	564	G	C5-C6-O6	5.14	131.69	128.60
79	B2	1536	G	N3-C4-C5	-5.14	126.03	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	80	G	C5-C6-O6	5.14	131.69	128.60
80	B5	367	A	C2-N3-C4	-5.14	108.03	110.60
80	B5	809	G	C8-N9-C4	5.14	108.46	106.40
80	B5	1278	A	C5-C6-N1	-5.14	115.13	117.70
80	B5	1466	G	N1-C6-O6	-5.14	116.81	119.90
80	B5	1822	C	C6-N1-C2	5.14	122.36	120.30
80	B5	2169	G	N9-C4-C5	5.14	107.46	105.40
80	B5	3100	U	N3-C2-O2	-5.14	118.60	122.20
85	CX	1	A	C4-C5-C6	5.14	119.57	117.00
79	B2	26	A	C8-N9-C4	-5.14	103.74	105.80
80	B5	1259	A	C5-C6-N1	-5.14	115.13	117.70
81	B7	77	G	C6-C5-N7	-5.14	127.31	130.40
82	B8	51	G	N3-C2-N2	-5.14	116.30	119.90
79	B2	422	G	C8-N9-C4	-5.14	104.34	106.40
80	B5	2352	A	C5-N7-C8	5.14	106.47	103.90
80	B5	3101	G	N3-C2-N2	5.14	123.50	119.90
79	B2	638	U	C2-N3-C4	-5.14	123.92	127.00
80	B5	434	U	N1-C2-O2	5.14	126.40	122.80
79	B2	992	A	N7-C8-N9	5.14	116.37	113.80
79	B2	1200	G	C8-N9-C4	-5.14	104.34	106.40
79	B2	1751	C	C2-N3-C4	-5.14	117.33	119.90
80	B5	433	A	C8-N9-C4	5.14	107.86	105.80
80	B5	436	A	N1-C2-N3	5.14	131.87	129.30
80	B5	1114	U	C5-C4-O4	-5.14	122.82	125.90
80	B5	1142	G	N3-C2-N2	5.14	123.50	119.90
80	B5	1310	G	C5-C6-N1	5.14	114.07	111.50
80	B5	1377	G	C8-N9-C4	-5.14	104.34	106.40
80	B5	3294	A	C5-C6-N6	5.14	127.81	123.70
79	B2	312	A	C8-N9-C4	-5.13	103.75	105.80
79	B2	502	U	C5-C6-N1	5.13	125.27	122.70
79	B2	577	G	C2-N3-C4	-5.13	109.33	111.90
80	B5	1851	G	C4-N9-C1'	5.13	133.18	126.50
80	B5	2118	C	C5-C4-N4	5.13	123.79	120.20
80	B5	2848	G	C4-N9-C1'	5.13	133.18	126.50
80	B5	928	C	C2-N3-C4	-5.13	117.33	119.90
80	B5	2737	C	N1-C2-O2	-5.13	115.82	118.90
79	B2	555	A	N9-C4-C5	5.13	107.85	105.80
79	B2	1000	C	C6-N1-C2	5.13	122.35	120.30
80	B5	894	G	C4-C5-N7	5.13	112.85	110.80
80	B5	1445	U	N3-C2-O2	5.13	125.79	122.20
80	B5	1813	A	C8-N9-C4	-5.13	103.75	105.80
80	B5	2309	A	N1-C6-N6	5.13	121.68	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	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
79	B2	20	G	N1-C2-N2	-5.13	111.58	116.20
79	B2	294	C	N1-C2-N3	-5.13	115.61	119.20
79	B2	1189	A	N7-C8-N9	-5.13	111.23	113.80
80	B5	2272	G	O4'-C1'-N9	5.13	112.30	108.20
81	B7	35	C	N3-C4-C5	5.13	123.95	121.90
79	B2	886	U	N3-C2-O2	-5.13	118.61	122.20
80	B5	1412	G	N3-C2-N2	-5.13	116.31	119.90
80	B5	1726	C	C6-N1-C2	5.13	122.35	120.30
80	B5	2246	G	C6-C5-N7	5.13	133.48	130.40
79	B2	810	G	C4-N9-C1'	5.13	133.16	126.50
79	B2	927	C	C6-N1-C2	-5.13	118.25	120.30
79	B2	1245	G	N3-C4-C5	5.13	131.16	128.60
79	B2	1441	C	C6-N1-C2	5.13	122.35	120.30
80	B5	149	U	N3-C2-O2	-5.13	118.61	122.20
80	B5	2245	C	N1-C2-N3	5.13	122.79	119.20
80	B5	968	G	C6-N1-C2	5.12	128.18	125.10
80	B5	2866	U	N1-C2-N3	5.12	117.97	114.90
79	B2	1187	U	N3-C2-O2	-5.12	118.61	122.20
80	B5	1250	G	O4'-C1'-N9	5.12	112.30	108.20
80	B5	2518	C	C4-C5-C6	5.12	119.96	117.40
80	B5	2731	U	N1-C2-N3	5.12	117.97	114.90
80	B5	2988	C	C5-C4-N4	5.12	123.79	120.20
80	B5	3074	G	N1-C2-N2	-5.12	111.59	116.20
80	B5	3186	A	N7-C8-N9	5.12	116.36	113.80
84	CW	25	C	N3-C4-N4	5.12	121.59	118.00
84	CW	64	A	C5-C6-N1	-5.12	115.14	117.70
79	B2	586	G	N1-C6-O6	-5.12	116.83	119.90
79	B2	866	G	C8-N9-C4	5.12	108.45	106.40
79	B2	1782	A	C5-C6-N1	-5.12	115.14	117.70
80	B5	114	A	C5-C6-N1	-5.12	115.14	117.70
80	B5	672	A	C5-C6-N6	-5.12	119.60	123.70
80	B5	2280	A	C5-N7-C8	-5.12	101.34	103.90
80	B5	284	A	N1-C6-N6	-5.12	115.53	118.60
80	B5	872	U	N3-C4-O4	-5.12	115.82	119.40
80	B5	1607	U	N3-C4-O4	-5.12	115.82	119.40
80	B5	2124	G	N7-C8-N9	-5.12	110.54	113.10
80	B5	2167	A	N3-C4-C5	-5.12	123.22	126.80
80	B5	3215	A	N9-C4-C5	-5.12	103.75	105.80
80	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

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	1321	A	N1-C6-N6	-5.12	115.53	118.60
80	B5	2128	C	C6-N1-C2	-5.12	118.25	120.30
82	B8	40	A	N7-C8-N9	5.12	116.36	113.80
79	B2	494	U	C2-N1-C1'	5.11	123.84	117.70
80	B5	919	U	C5-C4-O4	-5.11	122.83	125.90
80	B5	934	G	C8-N9-C1'	-5.11	120.35	127.00
80	B5	2138	A	C5-C6-N1	-5.11	115.14	117.70
80	B5	2820	A	N3-C4-C5	-5.11	123.22	126.80
80	B5	2731	U	C5-C6-N1	-5.11	120.14	122.70
84	CW	40	C	N3-C4-N4	5.11	121.58	118.00
79	B2	359	A	C4-C5-C6	-5.11	114.44	117.00
79	B2	972	G	C5-N7-C8	5.11	106.86	104.30
80	B5	183	G	C3'-C2'-C1'	-5.11	97.41	101.50
80	B5	1482	A	C8-N9-C4	-5.11	103.76	105.80
80	B5	1942	U	C4-C5-C6	5.11	122.77	119.70
80	B5	2884	C	N3-C4-N4	5.11	121.58	118.00
80	B5	2965	U	C5-C6-N1	-5.11	120.14	122.70
84	CW	6	G	C4-N9-C1'	5.11	133.14	126.50
56	BV	87	ARG	NE-CZ-NH2	-5.11	117.75	120.30
79	B2	173	A	C2-N3-C4	-5.11	108.05	110.60
79	B2	1096	C	C6-N1-C2	-5.11	118.26	120.30
80	B5	418	A	C4-C5-C6	5.11	119.55	117.00
80	B5	523	A	N1-C6-N6	-5.11	115.53	118.60
80	B5	1100	U	C5-C4-O4	-5.11	122.83	125.90
80	B5	2978	U	C5-C4-O4	5.11	128.97	125.90
79	B2	1171	A	N1-C6-N6	-5.11	115.54	118.60
80	B5	887	G	N1-C2-N2	-5.11	111.60	116.20
80	B5	943	U	C2-N3-C4	-5.11	123.94	127.00
80	B5	3310	A	C5-N7-C8	5.11	106.45	103.90
80	B5	341	G	N3-C2-N2	-5.11	116.33	119.90
80	B5	1261	G	P-O3'-C3'	-5.11	113.57	119.70
80	B5	2392	C	C2-N1-C1'	-5.11	113.18	118.80
81	B7	51	A	C2-N3-C4	5.11	113.15	110.60
80	B5	1227	C	C2'-C3'-O3'	5.10	121.87	113.70
80	B5	1518	U	C4-C5-C6	-5.10	116.64	119.70
80	B5	3124	G	C4-C5-N7	-5.10	108.76	110.80
79	B2	704	C	C5-C6-N1	5.10	123.55	121.00
80	B5	884	A	C8-N9-C1'	5.10	136.88	127.70
80	B5	1872	C	C2-N3-C4	-5.10	117.35	119.90
80	B5	3056	U	N1-C2-O2	-5.10	119.23	122.80
80	B5	813	G	C4-N9-C1'	5.10	133.13	126.50
80	B5	2278	C	P-O3'-C3'	5.10	125.82	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	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
80	B5	868	C	C6-N1-C2	5.10	122.34	120.30
80	B5	880	G	C6-N1-C2	-5.10	122.04	125.10
80	B5	1147	G	C5-C6-O6	5.10	131.66	128.60
80	B5	2136	C	C2-N3-C4	-5.10	117.35	119.90
80	B5	2271	A	C5-C6-N6	5.10	127.78	123.70
80	B5	2378	C	C2-N3-C4	5.10	122.45	119.90
80	B5	2393	G	N7-C8-N9	-5.10	110.55	113.10
80	B5	2560	C	N1-C2-O2	5.10	121.96	118.90
82	B8	109	A	C5-N7-C8	-5.10	101.35	103.90
83	CV	468	LEU	N-CA-C	5.10	124.77	111.00
79	B2	111	U	C6-N1-C2	-5.10	117.94	121.00
79	B2	719	U	N3-C2-O2	-5.10	118.63	122.20
79	B2	871	G	N3-C4-N9	5.10	129.06	126.00
79	B2	1643	U	C2-N3-C4	-5.10	123.94	127.00
80	B5	95	A	C5-C6-N1	5.10	120.25	117.70
80	B5	2317	A	C5-N7-C8	-5.10	101.35	103.90
80	B5	3173	G	C6-N1-C2	-5.10	122.04	125.10
81	B7	41	G	C5-C6-O6	-5.10	125.54	128.60
83	CV	434	ILE	N-CA-C	5.10	124.77	111.00
80	B5	1412	G	N9-C4-C5	5.10	107.44	105.40
80	B5	1932	A	N1-C2-N3	5.10	131.85	129.30
82	B8	100	U	C6-N1-C1'	-5.10	114.07	121.20
65	Be	33	ARG	NE-CZ-NH2	-5.09	117.75	120.30
80	B5	1902	G	N9-C4-C5	-5.09	103.36	105.40
81	B7	13	A	C8-N9-C4	-5.09	103.76	105.80
31	AW	104	LEU	CA-CB-CG	5.09	127.01	115.30
80	B5	530	G	N9-C4-C5	5.09	107.44	105.40
80	B5	2848	G	C8-N9-C4	-5.09	104.36	106.40
80	B5	1261	G	O4'-C1'-N9	5.09	112.27	108.20
80	B5	2639	G	C4-C5-C6	5.09	121.86	118.80
80	B5	2695	A	C5-N7-C8	-5.09	101.36	103.90
80	B5	3378	C	N3-C4-N4	-5.09	114.44	118.00
80	B5	2593	A	P-O3'-C3'	5.09	125.81	119.70
80	B5	2691	A	N1-C2-N3	5.09	131.84	129.30
80	B5	3309	G	C8-N9-C4	-5.09	104.36	106.40
84	CW	29	G	C8-N9-C1'	5.09	133.62	127.00
79	B2	278	U	C6-N1-C2	-5.09	117.95	121.00
80	B5	1851	G	C8-N9-C1'	-5.09	120.39	127.00
80	B5	3173	G	N3-C4-N9	5.09	129.05	126.00
80	B5	1509	A	N9-C4-C5	-5.09	103.77	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2396	G	C4-C5-N7	-5.09	108.77	110.80
80	B5	2633	U	C2-N3-C4	-5.09	123.95	127.00
80	B5	2716	U	N1-C2-N3	5.09	117.95	114.90
80	B5	3010	U	N1-C2-O2	5.09	126.36	122.80
80	B5	3127	A	C5-C6-N6	5.09	127.77	123.70
79	B2	324	U	N1-C2-N3	5.08	117.95	114.90
79	B2	760	A	N1-C6-N6	5.08	121.65	118.60
80	B5	1077	U	N1-C2-O2	-5.08	119.24	122.80
80	B5	1838	G	C5-N7-C8	5.08	106.84	104.30
79	B2	557	G	C5-C6-N1	-5.08	108.96	111.50
79	B2	597	G	C8-N9-C4	-5.08	104.37	106.40
80	B5	2207	A	C5-C6-N1	-5.08	115.16	117.70
80	B5	2606	G	N1-C2-N2	-5.08	111.63	116.20
80	B5	2913	C	N3-C2-O2	-5.08	118.34	121.90
80	B5	3132	C	C6-N1-C2	5.08	122.33	120.30
82	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
80	B5	2805	G	C5-C6-N1	5.08	114.04	111.50
80	B5	3313	U	N1-C2-N3	5.08	117.95	114.90
80	B5	2696	A	C5-C6-N6	5.08	127.76	123.70
80	B5	3259	U	N1-C2-N3	5.08	117.95	114.90
79	B2	1542	G	N9-C4-C5	5.08	107.43	105.40
80	B5	216	G	N9-C4-C5	-5.08	103.37	105.40
80	B5	1524	A	C4-C5-C6	5.08	119.54	117.00
80	B5	2364	G	C6-N1-C2	-5.08	122.05	125.10
80	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
79	B2	270	C	C5-C6-N1	5.08	123.54	121.00
80	B5	1463	U	C5-C4-O4	-5.08	122.85	125.90
80	B5	2190	U	N3-C2-O2	-5.08	118.65	122.20
80	B5	2263	C	N3-C2-O2	-5.08	118.35	121.90
79	B2	1220	C	C6-N1-C2	5.08	122.33	120.30
80	B5	2945	G	C5-C6-O6	-5.08	125.56	128.60
80	B5	3049	A	N1-C6-N6	5.08	121.65	118.60
83	CV	490	VAL	N-CA-C	-5.08	97.30	111.00
79	B2	1605	G	N1-C2-N2	-5.07	111.63	116.20
80	B5	1144	U	N3-C2-O2	-5.07	118.65	122.20
80	B5	1660	C	C2-N3-C4	-5.07	117.36	119.90
80	B5	3199	G	C8-N9-C4	-5.07	104.37	106.40
85	CX	1	A	N9-C1'-C2'	-5.07	106.42	112.00
80	B5	2647	A	N1-C2-N3	5.07	131.84	129.30
81	B7	83	U	C5-C4-O4	5.07	128.94	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	356	C	C2-N3-C4	-5.07	117.36	119.90
80	B5	584	G	N1-C6-O6	-5.07	116.86	119.90
80	B5	958	C	C6-N1-C2	5.07	122.33	120.30
80	B5	2531	C	N3-C2-O2	-5.07	118.35	121.90
81	B7	1	G	N7-C8-N9	5.07	115.64	113.10
81	B7	57	G	C5-C6-O6	5.07	131.64	128.60
82	B8	23	U	N3-C2-O2	-5.07	118.65	122.20
84	CW	44	G	O4'-C1'-N9	5.07	112.26	108.20
79	B2	498	G	C4-N9-C1'	5.07	133.09	126.50
84	CW	75	C	C3'-C2'-C1'	5.07	105.56	101.50
79	B2	1037	C	C6-N1-C2	-5.07	118.27	120.30
80	B5	270	U	N1-C2-O2	5.07	126.35	122.80
80	B5	2283	G	C8-N9-C4	5.07	108.43	106.40
80	B5	2326	A	C5-C6-N1	5.07	120.23	117.70
81	B7	20	A	N1-C6-N6	5.07	121.64	118.60
79	B2	647	G	C8-N9-C1'	5.07	133.59	127.00
79	B2	1215	C	N3-C2-O2	-5.07	118.36	121.90
80	B5	874	U	C2-N1-C1'	-5.07	111.62	117.70
80	B5	1178	G	N3-C2-N2	-5.07	116.35	119.90
80	B5	1257	C	N1-C1'-C2'	-5.07	106.43	112.00
80	B5	1938	U	C2-N3-C4	-5.07	123.96	127.00
80	B5	2305	G	N3-C4-N9	5.07	129.04	126.00
80	B5	2386	A	N1-C6-N6	5.07	121.64	118.60
80	B5	2632	G	C6-N1-C2	5.07	128.14	125.10
80	B5	973	A	C6-N1-C2	-5.06	115.56	118.60
80	B5	3048	A	C5-C6-N6	-5.06	119.65	123.70
79	B2	6	G	N1-C2-N2	-5.06	111.64	116.20
79	B2	349	U	N1-C2-N3	5.06	117.94	114.90
79	B2	1734	U	C5-C4-O4	5.06	128.94	125.90
80	B5	1439	U	C5-C4-O4	-5.06	122.86	125.90
80	B5	1906	G	C5-C6-O6	-5.06	125.56	128.60
80	B5	2293	C	N3-C2-O2	-5.06	118.36	121.90
80	B5	3217	C	C2-N1-C1'	-5.06	113.23	118.80
81	B7	83	U	C6-N1-C1'	5.06	128.29	121.20
80	B5	916	G	C6-N1-C2	5.06	128.14	125.10
80	B5	1480	G	N3-C4-N9	5.06	129.04	126.00
80	B5	1938	U	N3-C4-C5	5.06	117.64	114.60
80	B5	2272	G	N7-C8-N9	-5.06	110.57	113.10
80	B5	2754	G	N3-C4-C5	-5.06	126.07	128.60
79	B2	132	U	C6-N1-C1'	5.06	128.28	121.20
80	B5	880	G	C8-N9-C4	5.06	108.42	106.40
80	B5	1049	C	C6-N1-C2	-5.06	118.28	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	1343	A	N1-C2-N3	5.06	131.83	129.30
80	B5	1481	A	C4-C5-C6	5.06	119.53	117.00
80	B5	1660	C	N1-C2-N3	5.06	122.74	119.20
79	B2	902	G	N1-C6-O6	5.06	122.94	119.90
79	B2	1780	G	N1-C6-O6	5.06	122.94	119.90
80	B5	2931	C	N1-C2-O2	-5.06	115.86	118.90
80	B5	3377	G	C6-C5-N7	-5.06	127.37	130.40
84	CW	61	C	C5-C4-N4	-5.06	116.66	120.20
44	BJ	92	ARG	NE-CZ-NH1	5.06	122.83	120.30
79	B2	335	U	N3-C2-O2	5.06	125.74	122.20
79	B2	1796	C	N3-C4-C5	-5.06	119.88	121.90
79	B2	1258	U	N1-C2-O2	5.05	126.34	122.80
79	B2	1268	G	N1-C6-O6	-5.05	116.87	119.90
80	B5	2364	G	C8-N9-C4	-5.05	104.38	106.40
80	B5	3066	U	N1-C2-O2	5.05	126.34	122.80
82	B8	4	C	C6-N1-C2	-5.05	118.28	120.30
79	B2	270	C	C2-N1-C1'	5.05	124.36	118.80
79	B2	1148	C	N1-C2-O2	5.05	121.93	118.90
80	B5	1004	U	C5-C4-O4	5.05	128.93	125.90
80	B5	2371	G	N7-C8-N9	-5.05	110.57	113.10
80	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
80	B5	420	G	C6-C5-N7	-5.05	127.37	130.40
80	B5	622	A	C4-C5-N7	5.05	113.23	110.70
80	B5	635	G	N3-C4-N9	-5.05	122.97	126.00
80	B5	820	A	N1-C2-N3	5.05	131.82	129.30
80	B5	1301	A	C6-C5-N7	-5.05	128.76	132.30
80	B5	1901	A	N1-C6-N6	5.05	121.63	118.60
80	B5	2162	U	C5-C6-N1	-5.05	120.17	122.70
80	B5	3137	C	N3-C4-N4	-5.05	114.46	118.00
80	B5	3143	C	N3-C4-C5	-5.05	119.88	121.90
80	B5	3323	A	C2-N3-C4	-5.05	108.08	110.60
84	CW	76	A	C1'-O4'-C4'	-5.05	105.86	109.90
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
79	B2	885	G	N1-C6-O6	5.05	122.93	119.90
80	B5	1432	C	N3-C2-O2	-5.05	118.37	121.90
80	B5	1887	A	C6-C5-N7	-5.05	128.76	132.30
80	B5	2303	A	N1-C2-N3	-5.05	126.78	129.30
80	B5	2525	G	N9-C4-C5	-5.05	103.38	105.40
80	B5	2774	C	N3-C4-N4	5.05	121.53	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	2919	A	C5-C6-N6	5.05	127.74	123.70
80	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
79	B2	570	A	C2-N3-C4	5.05	113.12	110.60
80	B5	16	A	C5-C6-N1	5.05	120.22	117.70
80	B5	282	G	P-O3'-C3'	5.05	125.76	119.70
80	B5	432	G	N1-C2-N2	-5.05	111.66	116.20
80	B5	667	C	C5-C6-N1	-5.05	118.48	121.00
80	B5	1451	C	C6-N1-C2	5.05	122.32	120.30
84	CW	76	A	C5-C6-N1	-5.05	115.18	117.70
79	B2	158	U	N1-C2-O2	5.04	126.33	122.80
79	B2	1600	A	N1-C6-N6	5.04	121.63	118.60
80	B5	979	U	C5-C6-N1	5.04	125.22	122.70
80	B5	1338	C	N1-C2-O2	-5.04	115.87	118.90
80	B5	1462	A	C5-N7-C8	-5.04	101.38	103.90
80	B5	2748	A	C5-C6-N1	5.04	120.22	117.70
80	B5	3209	A	O4'-C1'-N9	5.04	112.24	108.20
82	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
79	B2	73	U	C1'-O4'-C4'	-5.04	105.86	109.90
80	B5	356	C	C6-N1-C2	5.04	122.32	120.30
80	B5	2337	C	C5-C6-N1	-5.04	118.48	121.00
80	B5	2352	A	C4-C5-C6	5.04	119.52	117.00
81	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
79	B2	1600	A	C3'-C2'-C1'	-5.04	97.47	101.50
80	B5	1015	U	C2-N3-C4	5.04	130.03	127.00
80	B5	2639	G	N3-C4-N9	5.04	129.03	126.00
80	B5	3195	U	N1-C2-O2	5.04	126.33	122.80
80	B5	3200	G	N1-C6-O6	5.04	122.92	119.90
80	B5	141	C	C5-C6-N1	5.04	123.52	121.00
80	B5	2361	A	N1-C6-N6	-5.04	115.58	118.60
80	B5	2430	A	C4-C5-C6	5.04	119.52	117.00
80	B5	888	A	C2-N3-C4	-5.04	108.08	110.60
80	B5	1013	G	N3-C4-C5	-5.04	126.08	128.60
80	B5	1314	C	C4-C5-C6	5.04	119.92	117.40
80	B5	2215	A	N1-C6-N6	5.04	121.62	118.60
80	B5	2343	C	N1-C2-O2	-5.04	115.88	118.90
80	B5	2371	G	N1-C2-N2	-5.04	111.67	116.20
80	B5	3154	C	C6-N1-C2	-5.04	118.28	120.30
80	B5	3212	C	N1-C2-N3	5.04	122.73	119.20
80	B5	3266	G	N3-C4-N9	-5.04	122.98	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
80	B5	3273	A	C5-N7-C8	-5.04	101.38	103.90
80	B5	1240	A	C5-C6-N6	-5.04	119.67	123.70
79	B2	802	G	N3-C4-C5	-5.04	126.08	128.60
79	B2	1596	C	N1-C2-O2	5.04	121.92	118.90
80	B5	1804	A	N1-C6-N6	5.04	121.62	118.60
80	B5	2935	U	N1-C2-O2	5.04	126.33	122.80
80	B5	3039	C	C5-C6-N1	5.04	123.52	121.00
83	CV	191	TYR	CB-CG-CD1	5.04	124.02	121.00
79	B2	704	C	N3-C2-O2	-5.03	118.38	121.90
80	B5	840	C	C4-C5-C6	5.03	119.92	117.40
80	B5	1887	A	C4-C5-N7	5.03	113.22	110.70
80	B5	3183	A	N1-C6-N6	5.03	121.62	118.60
80	B5	3191	G	N7-C8-N9	-5.03	110.58	113.10
80	B5	3197	G	N3-C4-C5	5.03	131.12	128.60
79	B2	1629	G	N1-C2-N2	-5.03	111.67	116.20
80	B5	2572	C	C5-C6-N1	5.03	123.52	121.00
80	B5	2893	C	C5-C6-N1	-5.03	118.48	121.00
79	B2	270	C	C6-N1-C2	-5.03	118.29	120.30
80	B5	1100	U	C6-N1-C2	5.03	124.02	121.00
80	B5	2541	U	N1-C2-O2	5.03	126.32	122.80
80	B5	2857	C	C2-N3-C4	-5.03	117.39	119.90
80	B5	3249	C	C6-N1-C2	-5.03	118.29	120.30
82	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
80	B5	2361	A	C4-C5-N7	-5.03	108.19	110.70
80	B5	2733	A	N1-C2-N3	5.03	131.81	129.30
80	B5	2808	A	C8-N9-C1'	-5.03	118.65	127.70
80	B5	3087	A	C8-N9-C4	-5.03	103.79	105.80
80	B5	3211	C	C6-N1-C2	5.03	122.31	120.30
79	B2	819	G	P-O3'-C3'	5.03	125.73	119.70
79	B2	1441	C	C5-C6-N1	-5.03	118.49	121.00
79	B2	1568	C	P-O3'-C3'	5.03	125.73	119.70
80	B5	1529	A	C2-N3-C4	5.03	113.11	110.60
32	AX	111	GLY	N-CA-C	-5.03	100.54	113.10
79	B2	570	A	C4-C5-C6	5.03	119.51	117.00
79	B2	1311	U	C6-N1-C2	5.03	124.02	121.00
80	B5	587	U	C6-N1-C2	5.03	124.02	121.00
80	B5	982	C	C4-C5-C6	-5.03	114.89	117.40
80	B5	2603	G	N7-C8-N9	5.03	115.61	113.10
80	B5	2994	A	N1-C2-N3	5.03	131.81	129.30
84	CW	68	C	N3-C4-C5	-5.03	119.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	613	G	N3-C2-N2	5.02	123.42	119.90
80	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
80	B5	191	U	C2-N1-C1'	-5.02	111.67	117.70
80	B5	578	A	C2-N3-C4	5.02	113.11	110.60
80	B5	1414	G	C2-N3-C4	-5.02	109.39	111.90
80	B5	1461	A	C8-N9-C4	5.02	107.81	105.80
80	B5	1788	C	C6-N1-C2	-5.02	118.29	120.30
81	B7	116	C	C6-N1-C2	5.02	122.31	120.30
79	B2	553	G	C2-N3-C4	-5.02	109.39	111.90
80	B5	965	A	C5-C6-N1	5.02	120.21	117.70
80	B5	1237	G	P-O3'-C3'	-5.02	113.68	119.70
80	B5	1255	C	C5-C6-N1	5.02	123.51	121.00
80	B5	2813	A	C5-C6-N6	5.02	127.72	123.70
80	B5	3372	A	C8-N9-C4	-5.02	103.79	105.80
79	B2	432	G	C2-N3-C4	5.02	114.41	111.90
80	B5	1473	G	C8-N9-C4	5.02	108.41	106.40
80	B5	2271	A	C5-N7-C8	5.02	106.41	103.90
80	B5	2705	A	C6-N1-C2	-5.02	115.59	118.60
80	B5	2821	C	N1-C2-O2	-5.02	115.89	118.90
80	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
79	B2	1791	A	C5-C6-N1	5.01	120.21	117.70
80	B5	391	A	C8-N9-C4	5.01	107.81	105.80
80	B5	1303	A	C8-N9-C4	5.01	107.81	105.80
80	B5	2280	A	N3-C4-C5	5.01	130.31	126.80
80	B5	2306	C	C5-C6-N1	5.01	123.51	121.00
80	B5	2399	A	N1-C6-N6	5.01	121.61	118.60
80	B5	2618	G	N1-C6-O6	5.01	122.91	119.90
80	B5	2958	A	C4-N9-C1'	-5.01	117.28	126.30
79	B2	63	G	N1-C6-O6	-5.01	116.89	119.90
79	B2	345	U	N1-C2-N3	5.01	117.91	114.90
80	B5	1270	A	C5-C6-N1	-5.01	115.19	117.70
80	B5	2857	C	C5-C6-N1	-5.01	118.49	121.00
80	B5	3145	C	C5-C4-N4	-5.01	116.69	120.20
79	B2	914	G	C4-N9-C1'	5.01	133.01	126.50
79	B2	1649	G	N1-C2-N3	5.01	126.91	123.90
80	B5	2323	G	C5-C6-O6	5.01	131.61	128.60
80	B5	2974	U	C5-C6-N1	-5.01	120.19	122.70
84	CW	63	G	C5-C6-O6	-5.01	125.59	128.60
65	Be	111	ARG	NE-CZ-NH2	-5.01	117.80	120.30
79	B2	853	G	C4-C5-N7	5.01	112.80	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
79	B2	992	A	C4-C5-C6	-5.01	114.50	117.00
79	B2	1679	G	N3-C2-N2	5.01	123.41	119.90
80	B5	701	G	C5-N7-C8	5.01	106.81	104.30
80	B5	1267	U	O4'-C1'-N1	5.01	112.21	108.20
80	B5	2122	G	N1-C6-O6	-5.01	116.89	119.90
81	B7	35	C	C2-N3-C4	-5.01	117.39	119.90
80	B5	2951	G	C8-N9-C4	5.01	108.40	106.40
82	B8	102	U	N1-C2-N3	5.01	117.91	114.90
79	B2	965	U	C4-C5-C6	-5.01	116.70	119.70
80	B5	582	G	N9-C4-C5	5.01	107.40	105.40
80	B5	654	C	N1-C2-O2	-5.01	115.90	118.90
84	CW	3	C	N3-C4-N4	5.01	121.50	118.00
79	B2	902	G	C6-C5-N7	-5.00	127.40	130.40
80	B5	2375	G	N3-C2-N2	5.00	123.40	119.90
80	B5	2434	U	N1-C2-N3	5.00	117.90	114.90
80	B5	3094	A	N7-C8-N9	-5.00	111.30	113.80
80	B5	822	G	N9-C4-C5	5.00	107.40	105.40
80	B5	1232	C	N3-C4-C5	-5.00	119.90	121.90
81	B7	88	G	N9-C4-C5	5.00	107.40	105.40
79	B2	334	G	N3-C4-N9	-5.00	123.00	126.00
79	B2	388	G	C2-N3-C4	5.00	114.40	111.90
79	B2	622	A	N9-C4-C5	5.00	107.80	105.80
79	B2	984	G	N3-C4-C5	5.00	131.10	128.60
79	B2	1051	G	C4-N9-C1'	5.00	133.00	126.50
80	B5	866	A	N1-C2-N3	-5.00	126.80	129.30
80	B5	2421	U	C2-N3-C4	-5.00	124.00	127.00
80	B5	2620	G	C4-C5-C6	-5.00	115.80	118.80
80	B5	3030	G	C5-C6-N1	-5.00	109.00	111.50
80	B5	3285	C	C6-N1-C2	-5.00	118.30	120.30

There are no chirality outliers.

All (125) 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

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Mol	Chain	Res	Type	Group
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
80	B5	1226	G	Sidechain
80	B5	1228	C	Sidechain
80	B5	1229	G	Sidechain
80	B5	1230	G	Sidechain
80	B5	1231	A	Sidechain
80	B5	1235	U	Sidechain
80	B5	1238	C	Sidechain
80	B5	1239	C	Sidechain
80	B5	1244	A	Sidechain
80	B5	1246	G	Sidechain
80	B5	1249	G	Sidechain
80	B5	1254	C	Sidechain
80	B5	1255	C	Sidechain
80	B5	1256	G	Sidechain
80	B5	1257	C	Sidechain
80	B5	1259	A	Sidechain
80	B5	1260	A	Sidechain
80	B5	1262	G	Sidechain
80	B5	1264	G	Sidechain
80	B5	1265	U	Sidechain
80	B5	1266	G	Sidechain
80	B5	1267	U	Sidechain
80	B5	1268	G	Sidechain
80	B5	1269	U	Sidechain
80	B5	1271	A	Sidechain
80	B5	1274	A	Sidechain
80	B5	1276	U	Sidechain
80	B5	1278	A	Sidechain
80	B5	1279	C	Sidechain
80	B5	1281	G	Sidechain
80	B5	1282	G	Sidechain
80	B5	1283	C	Sidechain
80	B5	1284	C	Sidechain
80	B5	1285	G	Sidechain
80	B5	2898	G	Sidechain
35	BA	143	GLU	Peptide
35	BA	211	HIS	Peptide

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Mol	Chain	Res	Type	Group
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
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
83	CV	165	TYR	Sidechain
83	CV	2	ASP	Mainchain
83	CV	219	ARG	Sidechain
83	CV	227	LEU	Peptide
83	CV	320	ARG	Sidechain
83	CV	374	TYR	Sidechain
83	CV	375	VAL	Mainchain
83	CV	395	ILE	Mainchain
83	CV	4	ARG	Sidechain
83	CV	403	TYR	Sidechain
83	CV	465	SER	Mainchain
83	CV	47	PHE	Peptide
83	CV	523	ARG	Sidechain
83	CV	536	TYR	Sidechain
83	CV	547	TYR	Sidechain
83	CV	550	ILE	Peptide
83	CV	555	TYR	Sidechain
83	CV	62	TYR	Sidechain
84	CW	12	U	Sidechain

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Mol	Chain	Res	Type	Group
84	CW	14	A	Sidechain
84	CW	15	G	Sidechain
84	CW	16	U	Sidechain
84	CW	18	G	Sidechain
84	CW	19	G	Sidechain
84	CW	21	A	Sidechain
84	CW	26	A	Sidechain
84	CW	28	G	Sidechain
84	CW	30	G	Sidechain
84	CW	31	A	Sidechain
84	CW	33	U	Sidechain
84	CW	4	C	Sidechain
84	CW	40	C	Sidechain
84	CW	44	G	Sidechain
84	CW	45	U	Sidechain
84	CW	47	U	Sidechain
84	CW	48	C	Sidechain
84	CW	55	U	Sidechain
84	CW	6	G	Sidechain
84	CW	60	U	Sidechain
84	CW	63	G	Sidechain
84	CW	65	G	Sidechain
84	CW	66	U	Sidechain
84	CW	67	C	Sidechain
84	CW	68	C	Sidechain
84	CW	7	A	Sidechain
84	CW	70	G	Sidechain
84	CW	71	G	Sidechain
84	CW	74	C	Sidechain
84	CW	75	C	Sidechain
84	CW	8	U	Sidechain
85	CX	2	U	Sidechain
85	CX	3	G	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	933	449	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	76	0
25	AQ	1105	0	1164	144	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	1195	88	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	1754	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BJ	1353	0	1380	125	0
45	BK	753	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	44	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
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	918	0	0
76	Bq	1075	1110	1021	0	0
77	Br	236	237	65	0	0
78	Bs	231	232	67	0	0
79	B2	37835	0	19045	3138	0
80	B5	67308	664	33785	2411	0
81	B7	2579	0	1303	190	0
82	B8	3353	0	1695	115	0
83	CV	4451	4585	4534	558	0
84	CW	1614	789	802	457	0
85	CX	62	34	34	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
86	A0	1	0	0	0	0
86	A1	1	0	0	0	0
86	A3	1	0	0	0	0
86	A5	1	0	0	0	0
86	Bj	1	0	0	0	0
86	Bm	1	0	0	0	0
87	A0	2	0	0	0	0
87	A3	3	0	0	0	0
87	A5	1	0	0	0	0
87	AB	1	0	0	0	0
87	AC	2	0	0	0	0
87	AE	1	0	0	0	0
87	AG	1	0	0	0	0
87	AI	1	0	0	0	0
87	AJ	1	0	0	0	0
87	AL	2	0	0	0	0
87	AN	1	0	0	0	0
87	AP	1	0	0	0	0
87	AS	1	0	0	0	0
87	AU	1	0	0	0	0
87	B2	168	0	0	0	0
87	B5	3	0	0	0	0
87	B7	27	0	0	0	0
87	BD	4	0	0	0	0
87	BF	1	0	0	0	0
87	BS	3	0	0	0	0
87	CW	1	0	0	0	0
88	A3	7	0	0	4	0
88	A6	7	0	0	2	0
88	AC	7	0	0	5	0
88	AI	14	0	0	2	0
88	AL	7	0	0	8	0
88	AN	7	0	0	2	0
88	AP	7	0	0	3	0
88	B2	1274	0	0	231	0
88	B5	21	0	0	4	0
88	B7	91	0	0	9	0
88	BR	7	0	0	9	0
88	Bn	7	0	0	0	0
88	CV	7	0	0	10	0
88	CX	7	0	0	2	0
89	CV	32	0	7	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	210964	8407	155586	9058	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 27.

All (9058) 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)
80:B5:2621:G:C8	84:CW:75:C:C5	1.76	1.69
8:A7:85:SER:HB2	84:CW:30:G:C8	1.24	1.66
15:AG:175:ILE:HG12	79:B2:78:A:C4	1.29	1.65
83:CV:210:TRP:CZ3	83:CV:210:TRP:CH2	1.78	1.63
83:CV:210:TRP:CE3	83:CV:210:TRP:CZ3	1.83	1.61
8:A7:93:ARG:CA	85:CX:3:G:H22	0.98	1.61
83:CV:236:GLU:HG2	83:CV:361:GLY:CA	1.23	1.61
83:CV:210:TRP:CZ2	83:CV:210:TRP:CH2	1.82	1.59
15:AG:175:ILE:HD11	79:B2:78:A:C1'	1.25	1.59
8:A7:88:ARG:HD3	84:CW:35:A:C8	1.35	1.57
83:CV:236:GLU:CG	83:CV:361:GLY:HA2	1.09	1.57
8:A7:91:THR:CG2	84:CW:36:U:C2	1.79	1.56
51:BQ:171:LYS:CE	51:BQ:171:LYS:NZ	1.67	1.55
8:A7:85:SER:CA	84:CW:30:G:C5	1.87	1.55
8:A7:28:SER:HB3	80:B5:2708:C:C4'	1.30	1.55
79:B2:51:A:C1'	83:CV:242:GLY:CA	1.76	1.54
79:B2:415:C:C5	83:CV:288:ARG:HB3	1.39	1.54
83:CV:210:TRP:CE3	83:CV:210:TRP:CD2	1.92	1.54
8:A7:85:SER:N	84:CW:30:G:C4	1.73	1.54
15:AG:133:LEU:HD12	79:B2:66:U:C2	1.42	1.53
79:B2:415:C:C4	83:CV:288:ARG:HD3	1.43	1.53
80:B5:3030:G:H5'	83:CV:436:ARG:CD	1.36	1.52
44:BJ:8:PRO:CB	44:BJ:8:PRO:CG	1.75	1.51
83:CV:210:TRP:CZ2	83:CV:210:TRP:CE2	1.94	1.51
15:AG:132:ARG:NH2	79:B2:68:A:C8	1.79	1.51
83:CV:85:ASN:HD21	83:CV:368:LYS:CD	0.90	1.51
80:B5:2621:G:C8	84:CW:75:C:H5	1.06	1.51
83:CV:210:TRP:CD2	83:CV:210:TRP:CE2	1.81	1.50
8:A7:77:THR:HG23	84:CW:43:C:C2'	1.39	1.50
8:A7:82:THR:HB	84:CW:29:G:N2	1.17	1.49
33:AY:119:PHE:CZ	79:B2:86:A:H5''	1.48	1.49
8:A7:85:SER:N	84:CW:30:G:C5	1.79	1.49
8:A7:28:SER:CB	80:B5:2708:C:H4'	1.42	1.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:63:GLU:HA	83:CV:210:TRP:CE2	1.48	1.48
32:AX:144:ARG:HH22	83:CV:314:LYS:CD	1.24	1.48
15:AG:164:LYS:NZ	79:B2:72:A:H5''	1.25	1.48
15:AG:175:ILE:CD1	79:B2:78:A:H1'	1.03	1.48
8:A7:83:LYS:CB	84:CW:30:G:N2	1.72	1.47
8:A7:85:SER:HB2	84:CW:30:G:N7	1.27	1.46
52:BR:163:ARG:C	79:B2:850:A:C5'	1.75	1.46
15:AG:132:ARG:HG3	79:B2:68:A:N6	1.25	1.46
33:AY:119:PHE:CE1	79:B2:86:A:H5''	1.49	1.45
15:AG:59:GLN:N	79:B2:155:U:H4'	1.25	1.45
32:AX:144:ARG:NH2	83:CV:314:LYS:HD2	1.29	1.44
79:B2:1637:C:H4'	85:CX:2:U:C4	1.51	1.44
8:A7:85:SER:CB	84:CW:30:G:N7	1.76	1.44
23:AO:123:SER:HB2	79:B2:885:G:N2	1.25	1.44
15:AG:174:LYS:HA	79:B2:79:C:C1'	1.45	1.43
15:AG:174:LYS:HB2	79:B2:79:C:C2'	1.46	1.43
8:A7:83:LYS:HE3	84:CW:40:C:C2	1.53	1.43
8:A7:82:THR:CG2	84:CW:29:G:C2	2.02	1.43
52:BR:165:LYS:CD	79:B2:849:C:O2	1.67	1.43
15:AG:174:LYS:CA	79:B2:79:C:O4'	1.66	1.42
26:AR:60:ARG:CZ	79:B2:1400:A:H5'	1.47	1.42
79:B2:51:A:C1'	83:CV:241:GLU:O	1.68	1.42
79:B2:1645:G:C4'	80:B5:2259:A:N1	1.81	1.42
15:AG:128:THR:HG23	57:BW:81:PRO:CG	1.37	1.42
8:A7:83:LYS:HB3	84:CW:30:G:N2	1.11	1.41
8:A7:51:ARG:CZ	80:B5:2677:G:H1'	1.48	1.41
79:B2:1645:G:H4'	80:B5:2259:A:N1	1.12	1.41
79:B2:1645:G:H4'	80:B5:2259:A:C2	1.53	1.41
8:A7:88:ARG:CD	84:CW:35:A:C8	2.00	1.41
79:B2:51:A:N9	83:CV:242:GLY:N	1.60	1.41
79:B2:433:C:C5	83:CV:388:ARG:HB2	1.55	1.41
80:B5:2284:C:P	83:CV:477:SER:HB3	1.59	1.40
8:A7:88:ARG:CD	84:CW:35:A:N9	1.81	1.40
8:A7:85:SER:HA	84:CW:30:G:C6	1.56	1.40
44:BJ:55:ARG:CZ	84:CW:48:C:OP1	1.69	1.40
8:A7:88:ARG:HB2	84:CW:36:U:C4'	1.48	1.40
83:CV:388:ARG:NE	88:CV:601:OHX:N6	1.67	1.40
80:B5:2623:G:C6	84:CW:76:A:H5''	1.33	1.39
79:B2:414:C:O2	83:CV:289:LEU:CD1	1.70	1.39
23:AO:18:ARG:NH1	79:B2:919:A:H5'	1.13	1.39
8:A7:88:ARG:HG3	84:CW:35:A:C2'	1.27	1.39

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:131:LYS:HG2	89:CV:602:GCP:C6	1.53	1.39
15:AG:159:ARG:CD	79:B2:77:U:C2	2.05	1.39
15:AG:175:ILE:CG1	79:B2:78:A:N3	1.84	1.38
43:BI:112:GLN:CB	83:CV:471:LYS:HD3	1.51	1.38
60:BZ:48:ARG:NH2	80:B5:1631:C:OP2	1.57	1.38
80:B5:3027:A:C8	83:CV:109:GLN:NE2	1.92	1.38
80:B5:2284:C:C6	83:CV:477:SER:CB	2.07	1.38
15:AG:175:ILE:HG12	79:B2:78:A:N3	1.09	1.37
80:B5:2284:C:C6	83:CV:477:SER:CA	2.06	1.37
8:A7:82:THR:HG21	84:CW:29:G:C2	1.54	1.37
52:BR:166:ASN:ND2	88:BR:201:OHX:N4	1.72	1.37
52:BR:175:GLN:H	79:B2:852:C:C4'	1.30	1.36
79:B2:433:C:H6	83:CV:388:ARG:N	1.22	1.36
79:B2:51:A:C8	83:CV:242:GLY:HA2	1.25	1.36
15:AG:134:GLY:CA	79:B2:66:U:O4	1.74	1.36
8:A7:78:ASP:N	84:CW:44:G:N7	1.73	1.36
80:B5:2284:C:C6	83:CV:476:GLN:OE1	1.79	1.35
83:CV:199:ALA:CA	89:CV:602:GCP:O6	1.73	1.35
37:BC:60:THR:HG23	80:B5:364:G:OP1	1.26	1.35
52:BR:163:ARG:O	79:B2:850:A:C5'	1.70	1.35
80:B5:2623:G:C6	84:CW:76:A:C5'	2.10	1.34
8:A7:84:LYS:CA	84:CW:30:G:H2'	1.57	1.34
8:A7:83:LYS:H	84:CW:29:G:N2	1.22	1.34
79:B2:913:G:O6	80:B5:2206:G:C4'	1.76	1.34
25:AQ:13:LYS:CE	79:B2:1584:G:O6	1.71	1.34
79:B2:433:C:OP1	83:CV:391:VAL:N	1.56	1.34
17:AI:141:ARG:NH2	79:B2:196:G:N7	1.71	1.34
79:B2:1637:C:C4'	85:CX:2:U:O4	1.75	1.34
83:CV:388:ARG:CZ	88:CV:601:OHX:N6	1.88	1.33
17:AI:10:LYS:NZ	79:B2:339:C:OP2	1.59	1.33
23:AO:41:ARG:NH2	79:B2:916:U:H3	1.25	1.33
79:B2:1758:U:O2	80:B5:2255:A:N3	1.58	1.33
44:BJ:137:ARG:NH2	81:B7:44:C:OP2	1.58	1.32
23:AO:45:GLY:HA3	79:B2:900:A:P	1.66	1.32
80:B5:3030:G:C5'	83:CV:436:ARG:CD	2.08	1.32
15:AG:83:CYS:N	79:B2:162:A:OP1	1.60	1.32
23:AO:27:PHE:CZ	79:B2:916:U:O2'	1.70	1.32
8:A7:88:ARG:CG	84:CW:35:A:H2'	0.92	1.32
8:A7:88:ARG:HB2	84:CW:36:U:C5'	1.57	1.32
23:AO:18:ARG:NH1	79:B2:918:U:O3'	1.56	1.32
41:BG:240:ASN:ND2	80:B5:2584:G:N3	1.76	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:415:C:C5	83:CV:288:ARG:CB	2.13	1.32
8:A7:83:LYS:HE3	84:CW:40:C:O2	1.16	1.31
80:B5:3030:G:C5'	83:CV:436:ARG:NE	1.82	1.31
15:AG:108:VAL:HG21	79:B2:153:G:O2'	1.30	1.31
8:A7:84:LYS:C	84:CW:30:G:C4	1.85	1.31
35:BA:249:SER:O	79:B2:987:G:N7	1.61	1.31
8:A7:85:SER:HA	84:CW:30:G:C5	1.49	1.31
79:B2:1637:C:C2	84:CW:34:C:N4	1.99	1.31
52:BR:169:ALA:HB2	79:B2:850:A:C2	1.64	1.30
32:AX:53:VAL:O	83:CV:398:GLN:NE2	1.64	1.30
79:B2:1637:C:C5'	85:CX:2:U:O4	1.78	1.30
23:AO:25:ASP:HB2	79:B2:901:G:OP2	1.18	1.30
8:A7:34:LYS:NZ	80:B5:2693:C:H5'	1.46	1.30
8:A7:77:THR:O	84:CW:43:C:C3'	1.79	1.30
52:BR:165:LYS:HE3	79:B2:824:G:N3	1.41	1.30
23:AO:18:ARG:CZ	79:B2:919:A:H5'	1.61	1.30
15:AG:174:LYS:CB	79:B2:79:C:O2'	1.80	1.30
25:AQ:123:ARG:O	79:B2:1584:G:H3'	1.22	1.30
23:AO:136:ARG:NH2	79:B2:1786:G:OP1	1.65	1.30
33:AY:21:LYS:HG2	79:B2:782:U:O2	1.19	1.30
8:A7:91:THR:HG23	84:CW:36:U:N3	1.45	1.29
52:BR:104:ARG:NH1	80:B5:1949:G:H5''	1.45	1.29
12:AD:204:ASP:OD1	79:B2:1330:G:N1	1.65	1.29
52:BR:163:ARG:C	79:B2:850:A:H5'	1.23	1.29
80:B5:2284:C:O5'	83:CV:477:SER:HB3	1.26	1.29
8:A7:88:ARG:HB2	84:CW:36:U:O4'	1.21	1.29
79:B2:1644:C:H1'	80:B5:2255:A:N1	1.46	1.29
23:AO:18:ARG:HH12	79:B2:919:A:C5'	1.43	1.29
15:AG:53:SER:HB2	79:B2:163:G:O3'	1.11	1.29
8:A7:84:LYS:O	84:CW:30:G:C3'	1.78	1.29
29:AU:54:GLY:N	79:B2:1345:A:OP1	1.67	1.28
79:B2:1759:C:H1'	80:B5:2262:A:C2	1.68	1.28
8:A7:82:THR:CB	84:CW:29:G:N2	1.93	1.28
8:A7:77:THR:O	84:CW:43:C:H3'	1.16	1.28
14:AF:101:GLY:HA3	79:B2:1167:G:OP1	1.25	1.28
8:A7:84:LYS:NZ	84:CW:31:A:C2'	1.71	1.28
8:A7:88:ARG:CB	84:CW:36:U:C5'	2.12	1.28
79:B2:1190:C:O2	84:CW:31:A:H5''	1.16	1.28
9:AA:101:ARG:NH2	79:B2:1321:A:OP2	1.64	1.28
11:AC:91:ARG:NH1	79:B2:1625:C:OP1	1.67	1.28
80:B5:1225:A:C8	80:B5:1287:A:O2'	1.87	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:175:ILE:CG1	79:B2:78:A:C4	2.11	1.27
26:AR:28:PHE:CE2	79:B2:1389:C:H6	1.50	1.27
35:BA:241:ARG:NH2	80:B5:2156:C:OP2	1.67	1.27
83:CV:538:LYS:N	84:CW:73:A:C4	1.96	1.27
10:AB:165:ARG:NH1	79:B2:946:U:H5''	1.48	1.27
83:CV:63:GLU:HA	83:CV:210:TRP:CZ2	1.67	1.27
32:AX:144:ARG:NH2	83:CV:314:LYS:CD	1.87	1.27
25:AQ:13:LYS:HE3	79:B2:1584:G:O6	1.10	1.27
8:A7:31:SER:O	80:B5:2707:C:H4'	1.27	1.27
23:AO:46:MET:CG	79:B2:899:G:H4'	1.62	1.27
33:AY:10:ARG:CZ	79:B2:778:G:H22	1.46	1.27
8:A7:91:THR:HG23	84:CW:36:U:C2	1.51	1.27
79:B2:51:A:H1'	83:CV:241:GLU:C	1.55	1.27
23:AO:45:GLY:HA3	79:B2:900:A:OP2	1.29	1.27
10:AB:101:HIS:HE1	79:B2:921:U:OP1	1.15	1.26
38:BD:207:TYR:CD1	81:B7:33:U:H1'	1.70	1.26
83:CV:85:ASN:OD1	83:CV:368:LYS:HG2	1.31	1.26
8:A7:77:THR:C	84:CW:43:C:H3'	1.26	1.26
48:BN:49:ARG:NH2	80:B5:149:U:OP2	1.64	1.26
26:AR:10:LYS:HE3	79:B2:1316:G:O2'	1.25	1.26
26:AR:28:PHE:CE2	79:B2:1389:C:C6	2.22	1.26
83:CV:199:ALA:C	89:CV:602:GCP:O6	1.74	1.26
8:A7:84:LYS:HA	84:CW:30:G:C2'	1.65	1.26
14:AF:109:LYS:HE2	79:B2:1473:U:O3'	1.09	1.26
15:AG:60:GLY:O	79:B2:154:G:N2	1.66	1.26
15:AG:137:ARG:NH1	79:B2:169:A:OP1	1.69	1.26
8:A7:88:ARG:HD3	84:CW:35:A:C1'	1.59	1.25
79:B2:415:C:C4	83:CV:288:ARG:CD	2.18	1.25
80:B5:1226:G:O4'	80:B5:1288:U:H4'	1.32	1.25
15:AG:157:VAL:CG1	79:B2:78:A:H4'	1.64	1.25
15:AG:160:ARG:NH1	79:B2:68:A:OP1	1.67	1.25
25:AQ:76:SER:HB2	79:B2:1609:U:OP1	1.34	1.25
23:AO:25:ASP:CB	79:B2:901:G:OP2	1.84	1.25
15:AG:83:CYS:HA	79:B2:161:U:O3'	1.11	1.25
25:AQ:123:ARG:O	79:B2:1584:G:C3'	1.85	1.25
83:CV:199:ALA:CB	89:CV:602:GCP:O6	1.85	1.25
52:BR:121:HIS:ND1	80:B5:1719:G:OP2	1.69	1.25
80:B5:2621:G:N9	84:CW:75:C:C5	2.05	1.25
79:B2:1637:C:H4'	85:CX:2:U:O4	1.16	1.24
15:AG:128:THR:CG2	57:BW:81:PRO:CG	2.09	1.24
44:BJ:142:LYS:HE3	80:B5:2664:C:OP2	1.31	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2279:A:N7	83:CV:478:LYS:HD2	1.51	1.24
17:AI:138:ASN:ND2	79:B2:197:A:N1	1.84	1.24
80:B5:2285:C:N4	83:CV:478:LYS:HG3	1.49	1.24
38:BD:158:ARG:HD3	81:B7:46:A:OP1	1.20	1.24
33:AY:10:ARG:HA	79:B2:778:G:O6	1.37	1.24
79:B2:440:U:OP1	83:CV:274:ASN:ND2	1.71	1.24
15:AG:59:GLN:N	79:B2:155:U:C4'	1.99	1.24
35:BA:242:ARG:O	80:B5:2154:U:H5''	1.29	1.24
83:CV:248:ASP:N	83:CV:360:LEU:HD22	1.50	1.24
23:AO:126:THR:HG22	79:B2:988:A:C2	1.72	1.23
79:B2:1780:G:O2'	80:B5:2262:A:H4'	1.06	1.23
15:AG:154:ARG:CB	79:B2:78:A:OP2	1.84	1.23
83:CV:236:GLU:HG3	83:CV:364:GLU:OE1	1.15	1.23
15:AG:175:ILE:CG1	79:B2:78:A:H1'	1.68	1.23
79:B2:1427:A:H3'	84:CW:34:C:O4'	1.36	1.23
20:AL:10:GLU:HG2	79:B2:327:U:O2'	1.30	1.23
8:A7:83:LYS:N	84:CW:29:G:H22	1.36	1.23
79:B2:414:C:O2	83:CV:289:LEU:CG	1.78	1.23
33:AY:8:ARG:HB3	79:B2:780:A:C8	1.72	1.23
52:BR:165:LYS:HD2	79:B2:849:C:O2	1.22	1.23
33:AY:119:PHE:CZ	79:B2:86:A:C5'	2.21	1.23
26:AR:49:LYS:HD2	79:B2:1390:U:OP2	1.34	1.23
15:AG:164:LYS:NZ	79:B2:72:A:C5'	2.02	1.23
15:AG:159:ARG:HD2	79:B2:77:U:O2	1.28	1.22
79:B2:1655:A:H1'	80:B5:2302:G:C1'	1.68	1.22
35:BA:95:SER:N	80:B5:2551:U:O4	1.73	1.22
80:B5:2284:C:O5'	83:CV:477:SER:CB	1.86	1.22
79:B2:414:C:C2	83:CV:289:LEU:CD2	2.10	1.22
41:BG:248:LYS:HE2	80:B5:2529:A:OP1	1.33	1.22
38:BD:94:ASN:HB2	81:B7:47:C:OP1	1.38	1.22
38:BD:260:PHE:CE2	81:B7:121:U:H5'	1.74	1.21
35:BA:208:ASP:OD1	80:B5:912:G:N1	1.71	1.21
15:AG:174:LYS:HB2	79:B2:79:C:O2'	1.09	1.21
83:CV:388:ARG:NH2	88:CV:601:OHX:N6	1.86	1.21
80:B5:2286:U:C6	83:CV:479:PRO:CD	2.24	1.21
38:BD:218:ARG:NH1	81:B7:31:U:H4'	1.53	1.21
79:B2:1646:C:O2'	80:B5:2257:C:N4	1.74	1.21
80:B5:2623:G:O6	84:CW:76:A:H5''	1.38	1.21
26:AR:60:ARG:NH2	79:B2:1400:A:C5'	2.03	1.21
30:AV:62:ARG:NH2	79:B2:1039:A:H5''	1.55	1.20
15:AG:174:LYS:CB	79:B2:79:C:C1'	2.18	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:53:TYR:OH	79:B2:1401:A:H5''	1.40	1.20
79:B2:1758:U:O2'	80:B5:2255:A:C5'	1.88	1.20
35:BA:152:SER:HB3	80:B5:2157:G:O6	1.41	1.20
28:AT:12:GLN:NE2	79:B2:1530:C:O4'	1.72	1.20
15:AG:53:SER:O	79:B2:163:G:H5''	1.37	1.20
33:AY:10:ARG:NH1	79:B2:778:G:H22	1.40	1.20
79:B2:433:C:C5	83:CV:388:ARG:CB	2.25	1.20
8:A7:84:LYS:NZ	84:CW:31:A:H2'	1.27	1.20
8:A7:88:ARG:CB	84:CW:36:U:H5''	1.71	1.20
83:CV:131:LYS:HD3	89:CV:602:GCP:C4	1.71	1.19
4:A3:31:ILE:HD11	79:B2:1199:G:O6	1.39	1.19
83:CV:131:LYS:CG	89:CV:602:GCP:C6	2.20	1.19
8:A7:84:LYS:O	84:CW:30:G:H3'	1.03	1.19
15:AG:108:VAL:CG2	79:B2:154:G:H5'	1.73	1.19
79:B2:414:C:C2	83:CV:289:LEU:HD21	1.69	1.19
79:B2:420:A:C5	83:CV:288:ARG:NH2	2.10	1.19
79:B2:432:G:H5'	83:CV:385:VAL:HA	1.20	1.19
14:AF:104:ASN:HD21	79:B2:1166:A:C5'	1.54	1.18
15:AG:15:THR:HG23	79:B2:152:U:O3'	1.42	1.18
15:AG:53:SER:C	79:B2:163:G:H4'	1.60	1.18
23:AO:18:ARG:NH1	79:B2:919:A:C5'	1.99	1.18
79:B2:1002:G:H4'	80:B5:2265:C:OP1	1.43	1.18
52:BR:169:ALA:O	79:B2:852:C:C6	1.97	1.18
15:AG:174:LYS:HB2	79:B2:79:C:C1'	1.73	1.18
35:BA:247:ARG:NH2	79:B2:1013:A:H4'	1.58	1.18
79:B2:1637:C:O2	84:CW:34:C:N4	1.74	1.18
23:AO:123:SER:HB2	79:B2:885:G:C2	1.77	1.18
26:AR:60:ARG:NH2	79:B2:1400:A:O5'	1.77	1.18
12:AD:9:ARG:NH1	79:B2:1489:U:OP2	1.74	1.18
79:B2:433:C:C6	83:CV:388:ARG:N	2.11	1.18
83:CV:538:LYS:N	84:CW:73:A:C5	2.12	1.18
29:AU:57:ARG:NH2	79:B2:1382:A:C2	2.11	1.18
79:B2:995:A:H5''	80:B5:2196:C:OP1	1.40	1.18
52:BR:166:ASN:ND2	88:BR:201:OHX:N2	1.91	1.18
83:CV:85:ASN:ND2	83:CV:368:LYS:HD3	0.86	1.18
52:BR:165:LYS:HE3	79:B2:824:G:C2	1.78	1.18
15:AG:133:LEU:CD1	79:B2:66:U:C2	2.26	1.17
79:B2:51:A:C8	83:CV:242:GLY:CA	1.89	1.17
35:BA:3:ARG:HD3	80:B5:911:C:N4	1.58	1.17
15:AG:174:LYS:CA	79:B2:79:C:C1'	2.16	1.17
83:CV:236:GLU:HA	83:CV:364:GLU:CD	1.64	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:249:SER:O	79:B2:987:G:C5	1.80	1.17
8:A7:77:THR:HG23	84:CW:43:C:H2'	1.26	1.17
8:A7:84:LYS:HG3	84:CW:31:A:C3'	1.50	1.17
15:AG:154:ARG:O	79:B2:78:A:H5'	1.02	1.17
23:AO:46:MET:HA	79:B2:899:G:C5'	1.72	1.17
26:AR:10:LYS:NZ	79:B2:1401:A:O3'	1.77	1.17
38:BD:207:TYR:CD1	81:B7:33:U:C1'	2.26	1.17
83:CV:236:GLU:CG	83:CV:364:GLU:OE1	1.91	1.17
8:A7:88:ARG:HD3	84:CW:35:A:N9	0.86	1.17
8:A7:93:ARG:CG	84:CW:34:C:N4	2.04	1.17
17:AI:73:SER:OG	79:B2:256:A:N3	1.73	1.17
44:BJ:55:ARG:NH2	84:CW:48:C:OP1	1.77	1.17
23:AO:123:SER:CB	79:B2:885:G:H21	1.58	1.17
79:B2:1646:C:H4'	80:B5:2257:C:N4	1.59	1.17
15:AG:174:LYS:HD3	79:B2:79:C:O2	1.43	1.17
29:AU:57:ARG:NH2	79:B2:1382:A:H2	1.42	1.17
79:B2:51:A:C1'	83:CV:242:GLY:HA3	1.52	1.17
18:AJ:169:PRO:O	79:B2:512:A:OP1	1.61	1.16
79:B2:1757:G:H2'	80:B5:2255:A:O2'	1.44	1.16
80:B5:2286:U:C6	83:CV:479:PRO:HD3	1.77	1.16
38:BD:146:LEU:HB3	80:B5:2746:A:C2	1.79	1.16
11:AC:119:LYS:HE2	79:B2:1291:G:H5'	1.26	1.16
23:AO:38:THR:HB	79:B2:895:G:H2'	1.25	1.16
54:BT:129:LYS:HB3	80:B5:1097:G:H4'	1.22	1.16
8:A7:85:SER:CB	84:CW:30:G:C8	2.18	1.16
15:AG:154:ARG:O	79:B2:78:A:C5'	1.94	1.16
25:AQ:15:SER:OG	79:B2:1608:U:OP1	1.60	1.16
83:CV:63:GLU:CA	83:CV:210:TRP:CE2	2.29	1.15
8:A7:89:ARG:NH1	84:CW:33:U:H3	1.44	1.15
52:BR:143:ILE:CG1	80:B5:2093:A:H5''	1.74	1.15
17:AI:138:ASN:ND2	79:B2:197:A:C6	2.14	1.15
24:AP:12:PHE:HB2	44:BJ:85:LYS:HG3	1.26	1.15
83:CV:199:ALA:HB3	89:CV:602:GCP:O6	1.43	1.15
60:BZ:17:ARG:HG3	80:B5:1634:G:O6	1.46	1.15
80:B5:3030:G:C5'	83:CV:436:ARG:HD3	1.74	1.15
83:CV:19:THR:C	89:CV:602:GCP:O2A	1.84	1.15
15:AG:132:ARG:HG3	79:B2:68:A:C6	1.80	1.15
79:B2:415:C:C5	83:CV:288:ARG:CD	2.30	1.15
83:CV:20:LYS:CB	89:CV:602:GCP:C8	2.21	1.15
14:AF:104:ASN:ND2	79:B2:1166:A:H5'	1.62	1.14
8:A7:48:ARG:CD	80:B5:2678:A:OP2	1.94	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:110:ALA:CB	79:B2:163:G:H1'	1.77	1.14
15:AG:132:ARG:CZ	79:B2:68:A:C5	2.30	1.14
34:AZ:77:ARG:NH2	79:B2:1534:G:N7	1.92	1.14
23:AO:129:LYS:HE3	88:B2:2011:OHX:N1	1.62	1.14
23:AO:121:VAL:O	79:B2:886:U:O2'	1.62	1.14
21:AM:46:ARG:NH1	79:B2:1254:U:OP2	1.81	1.14
79:B2:913:G:O6	80:B5:2206:G:H4'	1.00	1.14
83:CV:236:GLU:HG2	83:CV:361:GLY:N	1.61	1.14
15:AG:159:ARG:HD2	79:B2:77:U:C2	1.73	1.14
80:B5:2625:C:N3	84:CW:76:A:C8	2.07	1.14
83:CV:63:GLU:CA	83:CV:210:TRP:CD2	2.31	1.14
8:A7:83:LYS:N	84:CW:29:G:N2	1.94	1.14
48:BN:49:ARG:NH2	80:B5:149:U:P	2.20	1.14
4:A3:56:ARG:O	79:B2:1418:G:O2'	1.65	1.14
79:B2:1190:C:C2	84:CW:31:A:H5''	1.81	1.13
79:B2:1645:G:O3'	80:B5:2259:A:C2	2.00	1.13
15:AG:112:VAL:HG22	79:B2:164:A:H4'	1.24	1.13
52:BR:169:ALA:O	79:B2:852:C:C5	1.87	1.13
35:BA:247:ARG:CZ	79:B2:1013:A:H4'	1.78	1.13
38:BD:48:LYS:NZ	80:B5:2749:G:P	2.20	1.13
80:B5:2285:C:C4	83:CV:478:LYS:CG	2.26	1.13
15:AG:175:ILE:N	79:B2:78:A:N3	1.97	1.13
80:B5:2286:U:C5	83:CV:478:LYS:CB	2.06	1.13
44:BJ:72:ARG:NE	81:B7:40:C:O2	1.81	1.13
17:AI:42:ARG:HA	79:B2:260:U:O4	1.45	1.13
35:BA:40:TYR:OH	80:B5:2550:U:H2'	1.48	1.13
15:AG:83:CYS:SG	79:B2:162:A:C5'	2.36	1.13
18:AJ:172:VAL:HG13	79:B2:512:A:OP2	1.46	1.13
14:AF:109:LYS:CE	79:B2:1473:U:O3'	1.95	1.13
79:B2:1428:G:C5'	84:CW:34:C:H5'	1.78	1.13
15:AG:188:ARG:HG2	79:B2:284:G:OP2	1.49	1.13
15:AG:56:ASN:CB	79:B2:154:G:H1'	1.77	1.13
23:AO:35:GLY:HA3	79:B2:919:A:C4'	1.79	1.13
29:AU:53:LYS:HB3	79:B2:1345:A:C5'	1.78	1.13
79:B2:1686:C:H2'	79:B2:1687:U:H6	1.07	1.13
52:BR:175:GLN:N	79:B2:852:C:H4'	1.47	1.13
35:BA:236:GLY:N	80:B5:2183:A:O2'	1.80	1.13
8:A7:88:ARG:CB	84:CW:36:U:O4'	1.95	1.13
8:A7:77:THR:CG2	84:CW:43:C:H2'	1.78	1.12
80:B5:1225:A:C4	80:B5:1287:A:O2'	2.02	1.12
79:B2:1646:C:C4'	80:B5:2257:C:N4	2.11	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:59:GLN:H	79:B2:155:U:C4'	1.57	1.12
79:B2:1644:C:O2	80:B5:2255:A:C2	2.01	1.12
35:BA:240:ALA:HA	80:B5:2154:U:O3'	1.48	1.12
29:AU:75:GLY:N	79:B2:1194:A:OP2	1.82	1.12
79:B2:1747:G:O2'	80:B5:2304:C:H5'	1.50	1.12
79:B2:415:C:OP2	83:CV:288:ARG:HA	1.49	1.12
8:A7:77:THR:CG2	84:CW:43:C:C2'	2.26	1.12
15:AG:174:LYS:HA	79:B2:79:C:O4'	0.96	1.12
44:BJ:142:LYS:CE	80:B5:2664:C:OP2	1.97	1.12
20:AL:19:ILE:HD13	88:AL:201:OHX:N6	1.64	1.12
26:AR:7:LYS:CG	79:B2:1316:G:OP1	1.98	1.12
48:BN:49:ARG:HH21	80:B5:149:U:P	1.73	1.12
1:A0:70:LYS:HE2	79:B2:930:A:H5''	1.15	1.12
8:A7:47:ALA:HA	80:B5:2678:A:O4'	1.49	1.12
80:B5:3027:A:O2'	83:CV:83:PHE:HE2	1.33	1.12
10:AB:101:HIS:CE1	79:B2:921:U:OP1	2.01	1.12
8:A7:77:THR:HG23	84:CW:43:C:C3'	1.79	1.11
8:A7:78:ASP:N	84:CW:44:G:C8	2.17	1.11
79:B2:1655:A:H1'	80:B5:2302:G:H1'	1.22	1.11
15:AG:107:ALA:CB	79:B2:154:G:H4'	1.80	1.11
8:A7:86:ASN:ND2	84:CW:33:U:C6	2.18	1.11
79:B2:414:C:O2	83:CV:289:LEU:HD11	1.35	1.11
38:BD:274:GLN:OE1	81:B7:60:G:N2	1.82	1.11
17:AI:64:ASN:ND2	79:B2:257:A:O2'	1.82	1.11
28:AT:60:SER:HB2	79:B2:1479:A:H5''	1.25	1.11
79:B2:415:C:C5	83:CV:288:ARG:HD3	1.85	1.11
23:AO:41:ARG:CZ	79:B2:916:U:H3	1.64	1.11
54:BT:49:GLN:HG2	80:B5:2756:C:O4'	1.49	1.11
52:BR:143:ILE:HG13	80:B5:2093:A:H5''	1.25	1.11
83:CV:236:GLU:CG	83:CV:361:GLY:CA	1.96	1.11
25:AQ:76:SER:HB2	79:B2:1609:U:P	1.91	1.11
15:AG:53:SER:O	79:B2:163:G:C5'	1.98	1.11
48:BN:109:ARG:NH1	82:B8:141:C:OP1	1.83	1.11
80:B5:2284:C:H6	83:CV:477:SER:HB2	1.13	1.11
8:A7:48:ARG:HD3	80:B5:2678:A:OP2	1.49	1.11
29:AU:57:ARG:O	79:B2:1381:U:O2'	1.68	1.11
27:AS:126:ARG:NH2	79:B2:1459:C:OP1	1.83	1.10
79:B2:429:G:H4'	83:CV:276:ARG:HD2	1.33	1.10
80:B5:3031:G:OP2	83:CV:436:ARG:NH2	1.84	1.10
23:AO:38:THR:HG22	79:B2:895:G:O3'	1.48	1.10
80:B5:2623:G:C2	84:CW:76:A:OP1	1.89	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3030:G:H5'	83:CV:436:ARG:NE	0.93	1.10
15:AG:128:THR:CG2	57:BW:81:PRO:HG3	1.76	1.10
17:AI:122:GLY:O	88:AI:302:OHX:N5	1.84	1.10
23:AO:136:ARG:HH22	79:B2:1786:G:P	1.74	1.10
10:AB:150:VAL:HG23	79:B2:1067:C:H5''	1.21	1.10
8:A7:77:THR:O	84:CW:43:C:C5'	1.99	1.10
15:AG:131:LYS:N	57:BW:82:ILE:HG23	1.67	1.10
8:A7:83:LYS:CB	84:CW:30:G:C2	2.34	1.10
15:AG:107:ALA:HB3	79:B2:154:G:H4'	1.19	1.10
26:AR:2:GLY:HA3	79:B2:1311:U:O3'	1.48	1.10
83:CV:237:VAL:O	83:CV:359:THR:O	1.69	1.10
83:CV:199:ALA:C	89:CV:602:GCP:C6	2.19	1.10
10:AB:150:VAL:CG2	79:B2:1067:C:H5''	1.80	1.10
15:AG:174:LYS:CD	79:B2:79:C:H1'	1.80	1.10
8:A7:87:THR:HG22	84:CW:37:A:OP1	1.51	1.10
79:B2:416:A:OP2	83:CV:287:LEU:CD2	1.83	1.10
60:BZ:67:LYS:NZ	80:B5:1630:U:OP1	1.83	1.10
33:AY:10:ARG:NH1	79:B2:778:G:N2	1.98	1.10
26:AR:49:LYS:HG3	79:B2:1390:U:P	1.92	1.10
41:BG:185:ARG:HD2	82:B8:155:A:H4'	1.34	1.10
80:B5:2284:C:P	83:CV:477:SER:CB	2.40	1.10
38:BD:285:ARG:NH1	81:B7:62:U:O3'	1.84	1.10
26:AR:7:LYS:HG2	79:B2:1316:G:OP1	1.47	1.09
83:CV:248:ASP:H	83:CV:360:LEU:CD2	1.62	1.09
15:AG:132:ARG:NH2	79:B2:68:A:N9	1.97	1.09
38:BD:48:LYS:HZ3	80:B5:2749:G:P	1.74	1.09
83:CV:131:LYS:CD	89:CV:602:GCP:C2	2.31	1.09
83:CV:248:ASP:HB2	83:CV:360:LEU:HD23	1.26	1.09
79:B2:1427:A:O5'	84:CW:34:C:C6	2.05	1.09
83:CV:537:GLY:C	84:CW:73:A:C4	2.25	1.09
15:AG:53:SER:CB	79:B2:163:G:O3'	1.99	1.09
80:B5:2279:A:C8	83:CV:478:LYS:HD2	1.86	1.09
79:B2:432:G:C3'	83:CV:388:ARG:N	2.05	1.09
1:A0:97:PRO:O	79:B2:1798:U:C5	2.04	1.09
23:AO:130:GLY:N	79:B2:991:G:OP1	1.86	1.09
15:AG:174:LYS:HD3	79:B2:79:C:H1'	1.20	1.09
79:B2:415:C:C6	83:CV:288:ARG:HB3	1.88	1.09
79:B2:1761:U:C2	85:CX:1:A:O5'	2.03	1.09
23:AO:46:MET:HA	79:B2:899:G:H5'	1.14	1.09
26:AR:48:ASN:HB3	79:B2:1389:C:O4'	1.52	1.09
28:AT:60:SER:CB	79:B2:1479:A:H5''	1.81	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:132:ARG:H	79:B2:1787:C:P	1.75	1.09
46:BL:5:LYS:O	80:B5:1833:G:H4'	83.80	1.09
52:BR:161:ALA:O	79:B2:849:C:O2'	1.71	1.08
35:BA:21:ARG:NH2	80:B5:640:U:OP1	81.07	1.08
38:BD:207:TYR:CG	81:B7:33:U:C2	2.40	1.08
80:B5:2283:G:O3'	83:CV:477:SER:CB	2.00	1.08
17:AI:64:ASN:OD1	79:B2:257:A:N3	1.85	1.08
79:B2:1780:G:O2'	80:B5:2262:A:C4'	2.00	1.08
83:CV:20:LYS:HB2	89:CV:602:GCP:C8	1.80	1.08
33:AY:10:ARG:HG2	79:B2:778:G:N1	1.68	1.08
80:B5:2623:G:O6	84:CW:76:A:C5'	1.97	1.08
17:AI:138:ASN:ND2	79:B2:197:A:N6	2.02	1.08
60:BZ:135:ARG:NH2	80:B5:1807:G:C5'	2.16	1.08
83:CV:63:GLU:CA	83:CV:210:TRP:CZ2	2.37	1.08
23:AO:41:ARG:NH2	79:B2:916:U:N3	2.00	1.08
43:BI:158:LYS:NZ	80:B5:2852:C:N3	1.99	1.08
7:A6:285:ALA:CB	79:B2:1394:G:OP1	2.01	1.08
79:B2:432:G:H3'	83:CV:388:ARG:N	1.62	1.08
35:BA:231:SER:HB2	80:B5:2163:C:H5''	1.33	1.08
10:AB:117:TRP:N	79:B2:932:U:OP2	1.85	1.08
23:AO:126:THR:HG22	79:B2:988:A:H2	1.04	1.08
8:A7:86:ASN:ND2	84:CW:33:U:H6	1.49	1.08
26:AR:60:ARG:NH2	79:B2:1400:A:H5'	1.67	1.08
23:AO:125:SER:HB2	79:B2:927:C:H1'	1.26	1.08
8:A7:28:SER:CB	80:B5:2708:C:C4'	2.07	1.08
83:CV:131:LYS:HD2	89:CV:602:GCP:C2	1.83	1.08
15:AG:133:LEU:C	79:B2:66:U:O4	1.92	1.08
15:AG:175:ILE:O	79:B2:78:A:H2	1.37	1.08
79:B2:414:C:C6	83:CV:288:ARG:CB	2.36	1.08
29:AU:89:ARG:NH1	79:B2:1383:G:OP1	1.85	1.07
26:AR:60:ARG:CZ	79:B2:1400:A:C5'	2.31	1.07
38:BD:158:ARG:CD	81:B7:46:A:OP1	2.01	1.07
83:CV:236:GLU:HA	83:CV:364:GLU:OE1	1.50	1.07
15:AG:157:VAL:HG11	79:B2:78:A:C4'	1.83	1.07
15:AG:83:CYS:SG	79:B2:162:A:H5''	1.94	1.07
60:BZ:69:LYS:NZ	80:B5:1633:C:P	2.27	1.07
79:B2:415:C:C5	83:CV:288:ARG:CG	2.37	1.07
80:B5:2286:U:H6	83:CV:479:PRO:CD	1.63	1.07
52:BR:165:LYS:CE	79:B2:824:G:N3	2.17	1.07
80:B5:2286:U:H6	83:CV:479:PRO:HD3	1.03	1.07
83:CV:131:LYS:HG2	89:CV:602:GCP:N1	1.69	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:79:SER:O	84:CW:42:C:O2	1.72	1.07
20:AL:36:LYS:HD3	79:B2:248:U:H4'	1.34	1.07
80:B5:1225:A:N9	80:B5:1287:A:O2'	1.84	1.07
41:BG:60:ARG:HH21	80:B5:1616:U:C5'	51.36	1.07
8:A7:83:LYS:CE	84:CW:41:C:O4'	1.79	1.07
15:AG:164:LYS:HZ1	79:B2:72:A:C5'	1.63	1.07
15:AG:154:ARG:HG3	79:B2:78:A:C8	1.89	1.07
79:B2:913:G:C6	80:B5:2206:G:H5''	1.88	1.07
8:A7:91:THR:HG21	84:CW:36:U:C2	1.63	1.07
25:AQ:123:ARG:H	79:B2:1584:G:H5'	0.90	1.07
18:AJ:3:ARG:NH2	79:B2:40:A:OP1	1.87	1.07
48:BN:35:VAL:HG23	80:B5:1543:G:OP1	1.52	1.07
23:AO:46:MET:HG3	79:B2:899:G:H4'	1.26	1.07
83:CV:63:GLU:CA	83:CV:210:TRP:CE3	2.38	1.07
8:A7:84:LYS:CG	84:CW:31:A:H3'	1.84	1.07
8:A7:77:THR:C	84:CW:43:C:C3'	2.17	1.07
79:B2:1758:U:O2	80:B5:2255:A:C2	2.07	1.07
15:AG:154:ARG:HB3	79:B2:78:A:OP2	0.91	1.07
79:B2:51:A:H1'	83:CV:241:GLU:O	0.90	1.07
80:B5:2615:G:H2'	84:CW:76:A:N1	1.62	1.07
41:BG:60:ARG:HH21	80:B5:1616:U:H5''	50.58	1.06
38:BD:266:ALA:HA	81:B7:1:G:C4	1.89	1.06
8:A7:83:LYS:CE	84:CW:40:C:O2	2.02	1.06
8:A7:83:LYS:HE2	84:CW:41:C:C6	1.87	1.06
15:AG:175:ILE:CB	79:B2:78:A:N3	2.18	1.06
23:AO:122:PRO:CB	79:B2:887:A:H1'	1.84	1.06
79:B2:1758:U:O2'	80:B5:2255:A:H5''	1.53	1.06
8:A7:51:ARG:NE	80:B5:2677:G:H1'	1.71	1.06
17:AI:73:SER:HB2	79:B2:257:A:H1'	1.27	1.06
23:AO:122:PRO:HB3	79: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	79:B2:1389:C:H6	1.71	1.06
8:A7:47:ALA:H	80:B5:2678:A:C1'	1.69	1.06
15:AG:13:GLN:HG3	79:B2:151:G:O2'	1.54	1.06
79:B2:1759:C:H1'	80:B5:2262:A:N1	1.69	1.06
15:AG:172:ALA:O	79:B2:79:C:H5''	1.56	1.05
18:AJ:172:VAL:HG22	79:B2:511:A:H5''	1.32	1.05
15:AG:159:ARG:HD3	79:B2:77:U:C2	1.83	1.05
80:B5:2284:C:N1	83:CV:476:GLN:OE1	1.89	1.05
8:A7:33:LYS:NZ	80:B5:2691:A:O3'	1.88	1.05
8:A7:34:LYS:HE3	80: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	80:B5:2677:G:O3'	1.57	1.05
80:B5:3030:G:C5'	83:CV:435:TYR:CE1	2.11	1.05
15:AG:131:LYS:H	57:BW:82:ILE:HG23	1.20	1.05
28:AT:90:PRO:HD3	79:B2:1467:C:O2'	1.55	1.05
80:B5:3027:A:O2'	83:CV:109:GLN:HB2	1.55	1.05
79:B2:433:C:H5	83:CV:388:ARG:CB	1.64	1.05
15:AG:62:PRO:HG3	79:B2:161:U:O2'	1.55	1.05
35:BA:240:ALA:CB	80:B5:2154:U:H4'	1.85	1.05
79:B2:1427:A:H2'	84:CW:34:C:H1'	1.35	1.05
27:AS:40:ARG:NH1	79:B2:1539:G:O4'	1.89	1.05
83:CV:63:GLU:N	83:CV:210:TRP:CD2	2.24	1.05
22:AN:3:ARG:NH1	79:B2:867:G:OP2	1.89	1.05
80:B5:3031:G:P	83:CV:436:ARG:NH2	2.29	1.05
8:A7:93:ARG:CG	84:CW:34:C:H41	1.67	1.05
8:A7:93:ARG:HG3	84:CW:34:C:H41	0.99	1.05
15:AG:159:ARG:CD	79:B2:77:U:O2	1.95	1.05
10:AB:165:ARG:NH2	79:B2:947:U:OP2	1.89	1.05
83:CV:236:GLU:CD	83:CV:361:GLY:HA2	1.75	1.05
15:AG:83:CYS:CA	79:B2:161:U:O3'	2.05	1.05
52:BR:101:VAL:HG22	80:B5:1948:G:O3'	1.55	1.05
8:A7:51:ARG:CZ	80:B5:2677:G:C1'	2.34	1.05
23:AO:120:PRO:CB	79:B2:887:A:H5''	1.85	1.05
32:AX:144:ARG:HH12	83:CV:314:LYS:HD3	1.19	1.04
79:B2:46:A:C2	83:CV:387:ARG:NH1	2.25	1.04
28:AT:12:GLN:OE1	79:B2:1529:C:O2'	1.75	1.04
80:B5:1226:G:OP2	80:B5:1289:G:H8	1.40	1.04
41:BG:137:ASN:ND2	80:B5:148:G:N7	2.05	1.04
52:BR:74:ARG:NH1	80:B5:1942:U:OP2	1.88	1.04
54:BT:92:ARG:NH1	80:B5:2736:A:OP1	1.89	1.04
52:BR:170:ARG:O	79:B2:852:C:C6	1.91	1.04
23:AO:46:MET:HG2	79:B2:899:G:H4'	1.36	1.04
79:B2:1620:C:OP2	88:B2:2071:OHX:N6	1.90	1.04
38:BD:146:LEU:HB3	80:B5:2746:A:H2	0.91	1.04
8:A7:87:THR:O	84:CW:36:U:OP2	1.74	1.04
29:AU:53:LYS:HD2	79:B2:1345:A:H5'	1.37	1.04
23:AO:38:THR:HB	79:B2:895:G:C2'	1.85	1.04
8:A7:89:ARG:NE	84:CW:33:U:H3'	1.72	1.04
79:B2:1637:C:O2'	85:CX:3:G:O6	1.74	1.04
15:AG:175:ILE:CD1	79:B2:78:A:C1'	1.99	1.04
15:AG:174:LYS:CB	79:B2:79:C:H1'	1.79	1.04
79:B2:51:A:C1'	83:CV:241:GLU:C	2.16	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1637:C:N3	84:CW:34:C:N4	2.06	1.04
79:B2:1646:C:C2'	80:B5:2257:C:H41	1.71	1.04
8:A7:51:ARG:NH1	80:B5:2677:G:C1'	2.21	1.04
33:AY:119:PHE:CE1	79:B2:86:A:C5'	2.37	1.04
10:AB:148:ASN:OD1	79:B2:1066:C:O2'	1.75	1.04
25:AQ:75:VAL:HG11	79:B2:1610:G:OP1	1.55	1.04
80:B5:2284:C:C6	83:CV:477:SER:HB2	1.84	1.04
15:AG:112:VAL:CG2	79:B2:164:A:H4'	1.87	1.04
83:CV:16:THR:HB	89:CV:602:GCP:O3A	1.58	1.04
79:B2:414:C:C5	83:CV:288:ARG:CG	2.39	1.04
60:BZ:17:ARG:HB2	80:B5:1635:G:O6	1.57	1.04
83:CV:63:GLU:N	83:CV:210:TRP:CE2	2.25	1.04
15:AG:83:CYS:SG	79:B2:162:A:H5'	1.96	1.03
23:AO:123:SER:CB	79:B2:885:G:N2	2.17	1.03
79:B2:1645:G:C4'	80:B5:2259:A:C2	2.25	1.03
80:B5:2279:A:N7	83:CV:478:LYS:CD	2.21	1.03
8:A7:83:LYS:HE2	84:CW:41:C:O4'	1.58	1.03
25:AQ:123:ARG:H	79:B2:1584:G:C5'	1.70	1.03
80:B5:2285:C:N4	83:CV:478:LYS:CG	2.19	1.03
83:CV:239:VAL:O	83:CV:359:THR:HG22	1.56	1.03
10:AB:116:LYS:CE	79:B2:933:A:OP1	2.06	1.03
47:BM:128:ARG:NH2	80:B5:3214:U:OP2	1.91	1.03
15:AG:182:GLN:NE2	79:B2:271:A:N6	2.06	1.03
43:BI:112:GLN:CB	83:CV:471:LYS:CD	2.35	1.03
79:B2:432:G:C5'	83:CV:385:VAL:HA	1.89	1.03
10:AB:165:ARG:CZ	79:B2:946:U:H5''	1.87	1.03
83:CV:239:VAL:O	83:CV:359:THR:CG2	2.06	1.03
8:A7:89:ARG:NH1	84:CW:33:U:N3	2.06	1.03
32:AX:98:GLU:O	83:CV:378:LYS:NZ	1.92	1.03
15:AG:174:LYS:CD	79:B2:79:C:O2	2.06	1.03
28:AT:88:VAL:HG22	79:B2:1172:G:H21	1.19	1.03
15:AG:110:ALA:HB1	79:B2:163:G:H1'	1.08	1.03
23:AO:38:THR:HG21	79:B2:896:U:O4'	1.58	1.03
42:BH:44:THR:HG22	80:B5:3186:A:N3	1.73	1.03
44:BJ:55:ARG:NH2	84:CW:48:C:P	2.32	1.03
48:BN:4:TYR:OH	80:B5:148:G:OP2	1.76	1.03
53:BS:108:GLN:NE2	80:B5:1322:U:O2	1.89	1.03
79:B2:1758:U:C2	80:B5:2255:A:N3	2.27	1.03
79:B2:1780:G:H2'	80:B5:2262:A:O2'	1.59	1.03
24:AP:12:PHE:HB2	44:BJ:85:LYS:CG	1.87	1.03
52:BR:169:ALA:CB	79:B2:850:A:C2	2.40	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:172:ALA:HB3	79:B2:79:C:OP1	1.57	1.02
15:AG:56:ASN:OD1	79:B2:153:G:N2	1.91	1.02
15:AG:96:SER:OG	79:B2:420:A:OP1	1.77	1.02
23:AO:35:GLY:HA3	79:B2:919:A:H4'	1.03	1.02
15:AG:108:VAL:HG23	79:B2:154:G:H5'	1.35	1.02
58:BX:49:LYS:HE3	82:B8:135:G:OP1	1.59	1.02
80:B5:3030:G:H5''	83:CV:435:TYR:CE1	1.38	1.02
10:AB:65:VAL:HG22	79:B2:920:U:H5''	1.40	1.02
15:AG:185:GLN:HG3	79:B2:284:G:C6	1.92	1.02
52:BR:80:LYS:HE2	80:B5:1940:G:OP1	1.59	1.02
23:AO:18:ARG:NH2	79:B2:919:A:C5'	2.23	1.02
8:A7:48:ARG:HD3	80:B5:2678:A:P	1.98	1.02
83:CV:63:GLU:CA	83:CV:210:TRP:CZ3	2.42	1.02
25:AQ:143:ARG:NH1	84:CW:32:U:O4'	1.90	1.02
38:BD:272:TYR:CZ	81:B7:22:A:H1'	1.95	1.02
8:A7:87:THR:C	84:CW:36:U:H5''	1.79	1.02
79:B2:1715:G:O6	79:B2:1716:C:N4	1.93	1.02
80:B5:2284:C:C5	83:CV:477:SER:OG	2.13	1.01
52:BR:166:ASN:CB	79:B2:850:A:H5''	1.90	1.01
38:BD:207:TYR:CE1	81:B7:33:U:C6	2.48	1.01
79:B2:1645:G:O2'	80:B5:2259:A:N1	1.91	1.01
15:AG:132:ARG:CG	79:B2:68:A:N6	2.22	1.01
15:AG:159:ARG:HD3	79:B2:77:U:N3	1.73	1.01
8:A7:32:SER:HA	80:B5:2707:C:H5'	1.38	1.01
8:A7:51:ARG:HD2	80:B5:2677:G:C4'	1.89	1.01
8:A7:83:LYS:O	84:CW:29:G:N2	1.93	1.01
23:AO:41:ARG:NH2	79:B2:915:A:N6	2.09	1.01
79:B2:994:G:H4'	80:B5:2195:C:OP1	1.59	1.01
54:BT:130:ARG:N	80:B5:1098:A:OP2	1.92	1.01
54:BT:71:SER:OG	80:B5:2736:A:H4'	1.60	1.01
60:BZ:115:LYS:HE3	80:B5:1629:U:O3'	1.59	1.01
8:A7:84:LYS:C	84:CW:30:G:N9	2.13	1.01
15:AG:56:ASN:HB2	79:B2:154:G:H1'	1.39	1.01
33:AY:10:ARG:HG2	79:B2:778:G:H1	0.85	1.01
52:BR:173:ARG:CD	79:B2:853:G:N3	2.08	1.01
83:CV:63:GLU:CA	83:CV:210:TRP:CH2	2.43	1.01
8:A7:92:ASP:HB2	84:CW:35:A:N7	1.74	1.01
35:BA:40:TYR:O	80:B5:2550:U:H5	1.43	1.01
41:BG:54:GLU:HG3	80:B5:1558:A:OP2	1.59	1.01
8:A7:93:ARG:HG3	84:CW:34:C:N4	1.69	1.01
38:BD:207:TYR:HB2	81:B7:33:U:O2	1.61	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3031:G:OP2	83:CV:436:ARG:CZ	2.06	1.01
85:CX:1:A:O2'	88:CX:101:OHX:N3	1.93	1.01
79:B2:1492:A:HO2'	79:B2:1493:A:H8	1.03	1.00
33:AY:119:PHE:CD1	79:B2:86:A:OP1	2.13	1.00
8:A7:88:ARG:HD3	84:CW:35:A:C4	1.95	1.00
8:A7:89:ARG:CZ	84:CW:33:U:N3	2.17	1.00
35:BA:15:ILE:HD11	80:B5:822:G:C4	1.96	1.00
52:BR:104:ARG:NH1	80:B5:1949:G:C5'	2.24	1.00
42:BH:166:ARG:HH11	42:BH:168:ARG:HH22	1.08	1.00
8:A7:84:LYS:CG	84:CW:31:A:C3'	2.20	1.00
29:AU:54:GLY:H	79:B2:1345:A:P	1.82	1.00
35:BA:200:ARG:NH2	80:B5:2147:A:OP2	1.94	1.00
33:AY:37:LYS:NZ	79:B2:523:G:OP2	1.94	1.00
1:A0:92:ARG:HD3	79:B2:1796:C:OP2	1.61	1.00
10:AB:116:LYS:HE2	79:B2:932:U:H3'	1.43	1.00
2:A1:28:PRO:HB3	79:B2:959:U:H5'	1.41	1.00
41:BG:137:ASN:ND2	80: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	80:B5:1003:A:H1'	1.91	1.00
52:BR:173:ARG:HD3	79:B2:853:G:N3	1.11	1.00
79:B2:1190:C:O2	84:CW:31:A:C5'	2.08	1.00
8:A7:84:LYS:HG3	84:CW:31:A:H3'	1.02	1.00
23:AO:38:THR:CB	79:B2:895:G:C2'	2.36	1.00
26:AR:48:ASN:HD22	79: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	80:B5:2724:U:OP1	1.79	1.00
83:CV:236:GLU:CD	83:CV:361:GLY:CA	2.29	1.00
15:AG:174:LYS:HD3	79:B2:79:C:C1'	1.91	1.00
23:AO:27:PHE:CZ	79:B2:916:U:C2'	2.43	1.00
32:AX:144:ARG:NH1	83:CV:314:LYS:HD3	1.75	1.00
23:AO:27:PHE:HE2	79:B2:916:U:O2	1.43	1.00
80:B5:2285:C:C4	83:CV:478:LYS:HG3	1.93	1.00
8:A7:28:SER:CA	80:B5:2708:C:H4'	1.92	0.99
23:AO:18:ARG:HH22	79:B2:919:A:C5'	1.75	0.99
60:BZ:78:ASN:ND2	80:B5:1711:C:OP1	1.94	0.99
79:B2:430:G:H4'	83:CV:244:GLY:HA3	1.41	0.99
8:A7:88:ARG:HB3	84:CW:36:U:OP2	1.61	0.99
36:BB:41:VAL:HA	36:BB:185:GLY:HA3	1.39	0.99
15:AG:15:THR:HG21	79:B2:153:G:O5'	1.62	0.99
83:CV:388:ARG:HD3	88:CV:601:OHX:N4	1.77	0.99
8:A7:88:ARG:HB3	84:CW:36:U:P	2.01	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:133:LEU:HA	79:B2:66:U:N3	1.78	0.99
15:AG:59:GLN:CA	79:B2:155:U:H4'	1.93	0.99
25:AQ:123:ARG:N	79:B2:1584:G:H5'	1.76	0.99
80:B5:1226:G:O4'	80:B5:1288:U:C4'	2.11	0.99
8:A7:32:SER:HB2	80:B5:2692:A:H1'	1.44	0.99
35:BA:194:ASN:ND2	80:B5:822:G:C4'	2.24	0.99
15:AG:175:ILE:HG12	79:B2:78:A:N9	1.77	0.99
15:AG:157:VAL:HG21	79:B2:78:A:O2'	1.62	0.99
37:BC:193:LYS:NZ	82:B8:21:C:OP1	1.93	0.99
8:A7:88:ARG:HD2	84:CW:35:A:C8	1.98	0.99
17:AI:24:LYS:O	79:B2:400:A:H5''	1.62	0.99
23:AO:18:ARG:CZ	79:B2:919:A:C5'	2.37	0.99
33:AY:105:ARG:HB3	79:B2:443:C:OP2	1.60	0.99
60:BZ:135:ARG:NH2	80:B5:1807:G:H5''	1.78	0.99
38:BD:207:TYR:CZ	81:B7:33:U:C6	2.50	0.99
8:A7:89:ARG:HE	84:CW:33:U:H3'	1.21	0.99
79:B2:913:G:C6	80:B5:2206:G:H4'	1.97	0.99
41:BG:162:LEU:CD1	80:B5:147:U:C2	2.46	0.99
79:B2:1645:G:O2'	80:B5:2259:A:C6	2.15	0.98
79:B2:1686:C:H2'	79:B2:1687:U:C6	1.98	0.98
33:AY:12:VAL:N	79:B2:783:G:N7	2.10	0.98
27:AS:118:LYS:CE	44:BJ:108:GLU:OE2	2.10	0.98
54:BT:23:GLY:N	80:B5:2701:U:OP1	1.95	0.98
80:B5:1225:A:C5	80:B5:1287:A:O2'	2.16	0.98
43:BI:82:ARG:NH2	80:B5:271:C:O2	130.45	0.98
10:AB:124:ASN:ND2	79:B2:884:A:H4'	1.79	0.98
46:BL:65:TYR:HD2	80:B5:102:C:HO2'	1.09	0.98
8:A7:31:SER:O	80:B5:2707:C:C4'	2.10	0.98
83:CV:248:ASP:HB2	83:CV:360:LEU:CD2	1.94	0.98
8:A7:83:LYS:CE	84:CW:40:C:C2	2.45	0.98
15:AG:182:GLN:HE22	79:B2:271:A:N6	1.59	0.98
33:AY:8:ARG:HA	79:B2:780:A:O2'	1.62	0.98
52:BR:125:LYS:NZ	80:B5:1720:U:O4	1.97	0.98
28:AT:57:ARG:HH11	28:AT:57:ARG:HG3	1.26	0.98
8:A7:34:LYS:HG3	80:B5:2693:C:OP1	1.63	0.98
52:BR:163:ARG:O	79:B2:850:A:H5'	0.80	0.98
79:B2:1645:G:C3'	80:B5:2259:A:C2	2.46	0.98
35:BA:50:HIS:CD2	80:B5:1795:U:H2'	1.97	0.98
8:A7:47:ALA:CA	80:B5:2678:A:O4'	2.12	0.98
79:B2:51:A:C2'	83:CV:242:GLY:HA3	1.94	0.98
8:A7:84:LYS:HD3	84:CW:32:U:C5	1.98	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:78:PRO:O	89:CV:602:GCP:O2G	1.81	0.98
29:AU:57:ARG:HG2	79:B2:1382:A:O4'	1.64	0.97
15:AG:108:VAL:CG2	79:B2:153:G:O2'	2.10	0.97
83:CV:19:THR:CA	89:CV:602:GCP:O2A	2.07	0.97
8:A7:85:SER:CA	84:CW:30:G:N7	2.11	0.97
25:AQ:13:LYS:HE3	79:B2:1584:G:C6	1.98	0.97
9:AA:101:ARG:NH2	79:B2:1320:U:H3'	1.79	0.97
83:CV:199:ALA:HB3	89:CV:602:GCP:C6	1.94	0.97
8:A7:47:ALA:H	80:B5:2678:A:H1'	1.24	0.97
41:BG:138:HIS:N	80:B5:148:G:O6	1.97	0.97
8:A7:93:ARG:HB2	85:CX:3:G:H1	1.30	0.97
8:A7:48:ARG:HD2	80:B5:2678:A:OP2	1.64	0.97
29:AU:89:ARG:HH12	79:B2:1383:G:P	1.86	0.97
15:AG:58:LYS:HA	79:B2:155:U:H5'	1.46	0.97
52:BR:165:LYS:HD3	79:B2:849:C:O2	1.62	0.97
54:BT:49:GLN:HB3	80:B5:2756:C:H4'	1.42	0.97
83:CV:63:GLU:N	83:CV:210:TRP:CE3	2.31	0.97
1:A0:14:GLY:O	79:B2:937:C:N4	1.96	0.97
10:AB:116:LYS:NZ	79:B2:933:A:O5'	1.97	0.97
83:CV:131:LYS:HD3	89:CV:602:GCP:C5	1.93	0.97
23:AO:27:PHE:HZ	79:B2:916:U:O2'	1.35	0.97
43:BI:193:ASP:OD2	80:B5:1010:G:N2	1.97	0.97
35:BA:240:ALA:HB1	80:B5:2154:U:H4'	1.41	0.97
52:BR:171:ASP:OD1	79:B2:852:C:OP2	1.83	0.97
8:A7:51:ARG:HD2	80:B5:2677:G:H4'	1.45	0.97
43:BI:102:MET:HB3	83:CV:471:LYS:NZ	1.80	0.97
23:AO:38:THR:CG2	79:B2:895:G:C2'	2.42	0.97
15:AG:132:ARG:NH2	79:B2:68:A:C4	2.32	0.97
80:B5:437:G:H22	80:B5:622:A:H61	1.01	0.97
15:AG:60:GLY:O	79:B2:154:G:C2	2.18	0.96
60:BZ:135:ARG:NH2	80:B5:1807:G:H5'	1.78	0.96
8:A7:91:THR:HG23	84:CW:36:U:C4	2.00	0.96
25:AQ:76:SER:CB	79:B2:1609:U:OP1	2.13	0.96
23:AO:132:ARG:CZ	79:B2:1788:G:C8	2.48	0.96
10:AB:116:LYS:NZ	79:B2:933:A:P	2.39	0.96
35:BA:241:ARG:HH22	80:B5:2156:C:P	1.88	0.96
38:BD:23:ARG:NE	80:B5:2703:A:OP2	1.98	0.96
83:CV:388:ARG:CD	88:CV:601:OHX:N4	2.27	0.96
15:AG:175:ILE:CG1	79:B2:78:A:C1'	2.35	0.96
79:B2:433:C:C6	83:CV:388:ARG:HB2	2.00	0.96
52:BR:170:ARG:NH2	88:BR:201:OHX:N1	2.11	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:92:ASP:HB3	84:CW:34:C:C5	1.64	0.96
8:A7:83:LYS:HB3	84:CW:30:G:H22	1.23	0.96
23:AO:38:THR:HG22	79:B2:895:G:C2'	1.95	0.96
54:BT:8:ARG:HD3	80:B5:2757:U:O4'	1.65	0.96
83:CV:236:GLU:N	83:CV:360:LEU:HD21	1.79	0.96
1:A0:87:ARG:HD2	79:B2:1797:A:N6	1.80	0.96
83:CV:63:GLU:N	83:CV:210:TRP:CZ3	2.34	0.96
8:A7:88:ARG:CB	84:CW:35:A:H2'	1.96	0.96
22:AN:73:ARG:HD3	79:B2:859:A:C6	1.99	0.96
80:B5:3027:A:H8	83:CV:109:GLN:NE2	1.49	0.96
52:BR:161:ALA:C	79:B2:849:C:O2'	1.90	0.96
79:B2:431:C:O2'	83:CV:384:ASP:O	1.83	0.96
26:AR:48:ASN:ND2	79:B2:1389:C:OP1	1.98	0.96
10:AB:116:LYS:NZ	79:B2:933:A:OP1	1.97	0.96
35:BA:241:ARG:NH2	80:B5:2156:C:P	2.37	0.96
35:BA:84:THR:HB	80:B5:2554:A:N1	1.80	0.96
38:BD:274:GLN:CD	81:B7:60:G:H21	1.68	0.96
8:A7:83:LYS:HE2	84:CW:41:C:H6	1.29	0.96
17:AI:64:ASN:HD21	79:B2:257:A:C2'	1.79	0.96
18:AJ:60:LEU:HD21	18:AJ:93:LEU:HD21	1.45	0.96
79:B2:414:C:C5	83:CV:288:ARG:HB2	2.01	0.96
80:B5:3030:G:O5'	83:CV:436:ARG:HD3	1.66	0.96
8:A7:84:LYS:O	84:CW:30:G:C2'	2.14	0.96
79:B2:1428:G:H5''	84:CW:34:C:H5'	1.48	0.96
38:BD:260:PHE:CE2	81:B7:121:U:C5'	2.48	0.96
54:BT:28:SER:OG	81:B7:9:C:OP1	1.83	0.96
79:B2:1585:U:H3	79:B2:1611:A:H2	0.96	0.95
38:BD:207:TYR:CD1	81:B7:33:U:N1	2.34	0.95
83:CV:63:GLU:N	83:CV: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	79:B2:900:A:OP2	2.13	0.95
83:CV:388:ARG:HG2	88:CV:601:OHX:N2	1.79	0.95
80:B5:2284:C:C6	83:CV:477:SER:HA	1.59	0.95
79:B2:415:C:N3	83:CV:288:ARG:HD3	1.79	0.95
23:AO:46:MET:CA	79:B2:899:G:H5'	1.95	0.95
79:B2:1010:C:OP2	88:B2:2011:OHX:N6	1.99	0.95
13:AE:108:ARG:NH2	79:B2:788:A:OP2	1.99	0.95
60:BZ:69:LYS:HZ3	80:B5:1633:C:P	1.85	0.95
83:CV:236:GLU:H	83:CV:360:LEU:HD21	1.26	0.95
32:AX:144:ARG:CZ	83:CV:314:LYS:CD	2.43	0.95
23:AO:88:GLY:CA	79:B2:888:U:H5'	1.96	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:159:ARG:NH1	79:B2:77:U:O4'	2.00	0.95
23:AO:122:PRO:HB3	79:B2:887:A:C1'	1.97	0.95
79:B2:46:A:N1	83:CV:387:ARG:HA	1.81	0.95
83:CV:131:LYS:CD	89:CV:602:GCP:N1	2.29	0.95
17:AI:51:GLY:H	79:B2:397:A:H5''	1.29	0.95
23:AO:132:ARG:NE	79:B2:1788:G:N7	2.15	0.95
23:AO:29:HIS:HE1	79:B2:918:U:H4'	1.32	0.95
12:AD:8:LYS:NZ	79:B2:1487:A:OP2	1.98	0.95
15:AG:133:LEU:HD11	79:B2:66:U:O2'	1.66	0.95
23:AO:29:HIS:CE1	79:B2:918:U:C4'	2.50	0.95
28:AT:12:GLN:OE1	79:B2:1529:C:C2'	2.14	0.95
8:A7:28:SER:HB3	80:B5:2708:C:C3'	1.80	0.95
38:BD:48:LYS:NZ	80:B5:2749:G:O5'	2.00	0.95
8:A7:30:THR:HA	80:B5:2707:C:O2'	1.67	0.95
15:AG:136:LYS:HD2	79:B2:66:U:OP1	1.66	0.95
15:AG:159:ARG:NH1	79:B2:77:U:C1'	2.29	0.95
17:AI:170:SER:O	79:B2:209:U:H5''	1.65	0.95
17:AI:75:LYS:NZ	79:B2:259:U:OP1	2.00	0.95
1:A0:15:ARG:NH1	79:B2:936:G:N7	2.15	0.95
83:CV:131:LYS:HG2	89:CV:602:GCP:O6	1.66	0.95
83:CV:236:GLU:HA	83:CV:364:GLU:OE2	1.65	0.95
8:A7:82:THR:HG21	84:CW:29:G:N3	1.82	0.95
10:AB:165:ARG:HE	79:B2:947:U:P	1.90	0.95
60:BZ:15:ARG:HD3	80:B5:1637:A:H4'	1.45	0.95
83:CV:63:GLU:N	83:CV:210:TRP:CH2	2.34	0.95
8:A7:82:THR:CB	84:CW:29:G:C2	2.44	0.94
20:AL:36:LYS:HD3	79:B2:248:U:C4'	1.97	0.94
23:AO:135:ARG:HE	79:B2:1008:G:P	1.88	0.94
29:AU:53:LYS:HB3	79:B2:1345:A:H4'	1.49	0.94
26:AR:60:ARG:HH21	79:B2:1400:A:P	1.90	0.94
79:B2:1645:G:C3'	80:B5:2259:A:N1	2.29	0.94
79:B2:415:C:H5	83:CV:288:ARG:CB	1.65	0.94
35:BA:194:ASN:ND2	80:B5:822:G:H4'	1.81	0.94
37:BC:88:GLY:N	80:B5:1729:A:OP1	101.41	0.94
23:AO:20:TYR:HD2	79:B2:917:U:H5''	1.32	0.94
80:B5:2285:C:N4	83:CV:477:SER:OG	1.99	0.94
80:B5:2286:U:C6	83:CV:479:PRO:HD2	1.98	0.94
80:B5:2286:U:H2'	83:CV:479:PRO:HD2	1.49	0.94
41:BG:63:LYS:HE2	82:B8:153:U:OP1	1.66	0.94
32:AX:99:ASN:CB	83:CV:378:LYS:HZ3	1.80	0.94
8:A7:84:LYS:HD3	84:CW:32:U:C6	2.02	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:49:LYS:CD	79:B2:1390:U:OP2	2.15	0.94
10:AB:150:VAL:HG23	79:B2:1067:C:C5'	1.96	0.94
79:B2:1588:G:H1	79:B2:1608:U:H3	1.13	0.94
22:AN:3:ARG:NH1	79:B2:867:G:P	2.41	0.94
80:B5:1226:G:OP2	80:B5:1289:G:C8	2.19	0.94
15:AG:108:VAL:HG23	79:B2:154:G:C5'	1.97	0.94
23:AO:123:SER:N	79:B2:886:U:O2	1.99	0.94
8:A7:77:THR:O	84:CW:43:C:H5''	1.65	0.94
23:AO:18:ARG:NH2	79:B2:919:A:H5''	1.82	0.94
79:B2:1646:C:C2'	80:B5:2257:C:N4	2.30	0.94
15:AG:112:VAL:HG21	79:B2:164:A:C5'	1.97	0.94
38:BD:269:SER:CB	81:B7:1:G:H21	1.79	0.94
29:AU:53:LYS:HA	79:B2:1345:A:P	2.08	0.94
79:B2:701:U:H3	79:B2:737:A:H61	1.06	0.94
23:AO:123:SER:CB	79:B2:885:G:N3	2.31	0.94
23:AO:38:THR:CB	79:B2:895:G:H2'	1.97	0.94
52:BR:124:TYR:OH	80:B5:1721:U:OP2	1.86	0.94
80:B5:1877:U:H5''	80:B5:1878:G:H5'	1.50	0.94
8:A7:88:ARG:HB3	84:CW:36:U:C5'	1.93	0.94
8:A7:83:LYS:CE	84:CW:41:C:C6	2.49	0.94
52:BR:168:ALA:HB3	79:B2:850:A:C2'	1.98	0.94
58:BX:111:ASN:ND2	80:B5:1608:C:H5''	1.82	0.94
8:A7:34:LYS:CG	80:B5:2693:C:OP1	2.16	0.94
80:B5:2622:C:C2	84:CW:75:C:O4'	1.89	0.94
23:AO:38:THR:HG22	79:B2:895:G:C3'	1.98	0.93
38:BD:94:ASN:CB	81:B7:47:C:OP1	2.16	0.93
8:A7:48:ARG:HB2	80:B5:2678:A:OP1	1.66	0.93
14:AF:109:LYS:HE2	79:B2:1474:G:P	2.08	0.93
44:BJ:105:GLY:HA3	80:B5:2674:A:O4'	1.68	0.93
52:BR:168:ALA:HB3	79:B2:850:A:O2'	1.66	0.93
52:BR:169:ALA:O	79:B2:852:C:C4	2.21	0.93
8:A7:33:LYS:HD2	80:B5:2692:A:H5'	1.49	0.93
8:A7:85:SER:CA	84:CW:30:G:C6	2.33	0.93
28:AT:57:ARG:HG3	79:B2:1479:A:OP1	1.68	0.93
32:AX:99:ASN:HB2	83:CV:378:LYS:NZ	1.82	0.93
33:AY:21:LYS:CG	79:B2:782:U:O2	2.14	0.93
15:AG:174:LYS:CA	79:B2:79:C:C4'	2.47	0.93
15:AG:54:GLY:HA3	79:B2:163:G:H5'	1.51	0.93
20:AL:130:PRO:O	79:B2:335:U:O2'	1.83	0.93
32:AX:144:ARG:HH22	83:CV:314:LYS:HD3	1.34	0.93
52:BR:104:ARG:HH11	80:B5:1949:G:H5''	1.29	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:241:ARG:HG2	80:B5:2155:G:OP1	1.68	0.93
80:B5:2836:C:H5	80:B5:2852:C:H42	1.07	0.93
8:A7:91:THR:CG2	84:CW:36:U:N3	2.15	0.93
25:AQ:40:GLU:OE2	79:B2:1529:C:H4'	1.67	0.93
35:BA:9:ARG:NH2	80:B5:912:G:OP2	2.01	0.93
15:AG:132:ARG:O	79:B2:68:A:N6	2.00	0.93
17:AI:138:ASN:ND2	79:B2:197:A:H61	1.59	0.93
28:AT:102:ARG:NH2	79:B2:1502:G:O6	2.01	0.93
88:B2:1918:OHX:N4	88:B2:2062:OHX:N6	2.16	0.93
44:BJ:142:LYS:HE3	80:B5:2664:C:P	2.08	0.93
44:BJ:103:GLY:C	80:B5:2673:A:H4'	1.89	0.93
15:AG:10:ASN:HA	57:BW:80:ARG:CB	1.98	0.93
83:CV:20:LYS:NZ	89:CV:602:GCP:N3	2.16	0.93
14:AF:104:ASN:HD21	79:B2:1166:A:H5'	0.77	0.92
52:BR:164:LEU:N	79:B2:850:A:C5'	2.26	0.92
43:BI:82:ARG:NH1	80:B5:271:C:N3	127.89	0.92
8:A7:87:THR:HG22	84:CW:36:U:H5'	1.50	0.92
26:AR:53:TYR:HH	79:B2:1401:A:H5''	1.15	0.92
33:AY:120:GLY:C	79:B2:85:A:H4'	1.90	0.92
14:AF:78:ALA:O	79:B2:1615:C:N4	2.02	0.92
38:BD:265:TYR:CE1	81:B7:120:C:H2'	2.03	0.92
48:BN:31:ARG:NH1	48:BN:124:ASP:OD2	2.03	0.92
79:B2:48:G:C4	83:CV:387:ARG:NH1	2.37	0.92
8:A7:83:LYS:HB2	84:CW:30:G:N2	1.82	0.92
10:AB:97:LEU:HD13	10:AB:98:THR:H	1.34	0.92
11:AC:162:CYS:HA	88:AC:301:OHX:N5	1.84	0.92
12:AD:159:HIS:N	79:B2:1328:G:OP1	2.01	0.92
28:AT:91:TYR:HE1	79:B2:1469:A:OP1	1.51	0.92
79:B2:279:G:H3'	79:B2:280:U:H5''	1.50	0.92
79:B2:415:C:C6	83:CV:288:ARG:CB	2.50	0.92
8:A7:34:LYS:CE	80:B5:2693:C:H5'	1.99	0.92
20:AL:80:MET:HE2	79:B2:325:G:H4'	1.51	0.92
79:B2:732:G:O6	88:B2:2009:OHX:N5	2.03	0.92
1:A0:15:ARG:HG2	79:B2:943:C:N4	1.84	0.92
35:BA:200:ARG:HG3	80:B5:2147:A:OP1	1.70	0.92
79:B2:414:C:C6	83:CV:289:LEU:HD23	2.00	0.92
23:AO:45:GLY:CA	79:B2:900:A:P	2.57	0.92
54:BT:78:LYS:HE3	80:B5:2728:G:O6	1.68	0.92
15:AG:176:GLN:NE2	79:B2:65:A:OP1	2.02	0.92
15:AG:185:GLN:HG3	79:B2:284:G:C5	2.05	0.92
15:AG:175:ILE:CG1	79:B2:78:A:N9	2.32	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:70:LYS:HE2	79:B2:930:A:C5'	1.99	0.92
83:CV:236:GLU:CB	83:CV:360:LEU:HG	1.72	0.92
8:A7:72:ARG:NH1	79:B2:1460:A:O2'	2.02	0.92
28:AT:87:GLY:C	79:B2:1542:G:H5''	1.90	0.92
15:AG:108:VAL:HG21	79:B2:154:G:H5'	1.50	0.92
79:B2:1646:C:C1'	80:B5:2257:C:H41	1.82	0.92
79:B2:839:U:O4	88:B2:2069:OHX:N3	2.03	0.92
46:BL:73:ARG:NH1	80:B5:110:G:OP2	2.03	0.92
10:AB:54:LEU:HD11	80:B5:2438:A:H2	1.35	0.92
10:AB:165:ARG:NE	79:B2:946:U:O3'	2.03	0.92
60:BZ:115:LYS:HD3	80:B5:1629:U:O4'	1.70	0.92
44:BJ:95:ASN:N	80: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
23:AO:18:ARG:NH1	79:B2:919:A:P	2.43	0.92
8:A7:83:LYS:HB3	84:CW:30:G:H21	1.10	0.91
15:AG:95:LYS:HE2	79:B2:161:U:OP1	1.69	0.91
79:B2:1644:C:C1'	80:B5:2255:A:N1	2.33	0.91
35:BA:3:ARG:HD3	80:B5:911:C:H42	1.25	0.91
43:BI:102:MET:CA	83:CV:471:LYS:NZ	2.33	0.91
83:CV:85:ASN:CG	83:CV:368:LYS:HG2	1.88	0.91
24:AP:12:PHE:CD1	44:BJ:85:LYS:HE2	2.05	0.91
79:B2:1427:A:C2'	84:CW:34:C:H1'	2.00	0.91
23:AO:38:THR:CG2	79:B2:895:G:O3'	2.18	0.91
80:B5:3343:G:H21	80:B5:3362:A:H2	1.17	0.91
8:A7:89:ARG:CD	84:CW:33:U:H3'	1.99	0.91
8:A7:34:LYS:NZ	80:B5:2707:C:OP1	2.03	0.91
79:B2:51:A:N1	83:CV:243:PHE:CB	2.16	0.91
15:AG:132:ARG:NH2	79:B2:68:A:N7	2.18	0.91
23:AO:38:THR:HG22	79:B2:895:G:O2'	1.67	0.91
80:B5:2621:G:H8	84:CW:75:C:H5	1.11	0.91
33:AY:10:ARG:CZ	79:B2:778:G:N2	2.32	0.91
33:AY:120:GLY:HA2	79:B2:85:A:O2'	1.69	0.91
26:AR:4:VAL:HG11	79:B2:1315:U:O2	1.69	0.91
23:AO:120:PRO:HB2	79:B2:887:A:O3'	1.70	0.91
38:BD:207:TYR:HD1	81:B7:33:U:H1'	1.25	0.91
54:BT:49:GLN:HB3	80:B5:2756:C:C4'	2.01	0.91
83:CV:236:GLU:HG3	83:CV:361:GLY:HA2	1.48	0.91
15:AG:174:LYS:HA	79:B2:79:C:H1'	1.50	0.91
83:CV:237:VAL:N	83:CV:360:LEU:O	2.02	0.91
8:A7:86:ASN:N	84:CW:31:A:N7	2.00	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:82:THR:HB	84:CW:29:G:C2	2.06	0.91
15:AG:88:ARG:NE	79:B2:92:A:C2	2.38	0.91
24:AP:47:ARG:NH1	79:B2:1555:A:OP2	2.03	0.91
29:AU:23:ARG:HH22	79:B2:1347:U:P	1.93	0.91
27:AS:143:ARG:NH1	79:B2:1461:C:C5	2.39	0.91
23:AO:136:ARG:NH2	79:B2:1786:G:P	2.36	0.91
79:B2:433:C:OP1	83:CV:391:VAL:HG23	1.71	0.91
23:AO:29:HIS:CE1	79:B2:918:U:H4'	2.05	0.91
83:CV:85:ASN:ND2	83:CV:368:LYS:CG	2.32	0.91
6:A5:101:UNK:HA	79:B2:1229:G:OP2	1.71	0.91
8:A7:51:ARG:NH2	80:B5:2677:G:H8	1.68	0.91
79:B2:51:A:C1'	83:CV:242:GLY:N	2.16	0.91
48:BN:8:GLU:HG3	48:BN:50:ARG:HH12	1.35	0.91
8:A7:83:LYS:HB2	84:CW:30:G:C2	2.03	0.91
28:AT:88:VAL:CG2	79:B2:1172:G:H21	1.83	0.91
79:B2:1716:C:HO2'	79:B2:1717:G:H8	0.92	0.91
48:BN:76:PRO:O	80:B5:2166:A:OP2	1.87	0.91
80:B5:3027:A:O5'	83:CV:109:GLN:NE2	1.97	0.91
7:A6:285:ALA:HB2	79:B2:1394:G:OP1	1.68	0.91
8:A7:91:THR:CG2	84:CW:36:U:O2	2.18	0.91
15:AG:13:GLN:CG	79:B2:151:G:O2'	2.18	0.91
35:BA:203:ALA:O	80:B5:914:A:O2'	1.89	0.91
83:CV:131:LYS:CG	89:CV:602:GCP:N1	2.32	0.91
10:AB:114:VAL:HG21	79:B2:930:A:C2	2.05	0.90
26:AR:60:ARG:NH2	79:B2:1400:A:P	2.44	0.90
15:AG:132:ARG:CZ	79:B2:68:A:N7	2.34	0.90
80:B5:2615:G:C2'	84:CW:76:A:N1	2.31	0.90
10:AB:165:ARG:HH21	79:B2:947:U:P	1.94	0.90
79:B2:623:A:OP1	88:B2:2051:OHX:N1	2.04	0.90
52:BR:177:VAL:HG11	79: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	79:B2:163:G:C1'	1.99	0.90
26:AR:10:LYS:NZ	79:B2:1402:G:P	2.43	0.90
15:AG:4:ASN:ND2	79:B2:152:U:O2	2.04	0.90
29:AU:60:THR:O	88:B2:1977:OHX:N1	2.03	0.90
2:A1:28:PRO:HB3	79:B2:959:U:C5'	2.01	0.90
38:BD:218:ARG:HH12	81:B7:31:U:H4'	1.31	0.90
38:BD:145:PHE:CD1	80:B5:2748:A:H5'	2.07	0.90
83:CV:85:ASN:OD1	83:CV:368:LYS:CG	2.19	0.90
15:AG:174:LYS:HB2	79:B2:79:C:HO2'	1.32	0.90
25:AQ:143:ARG:NH1	84:CW:32:U:O5'	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:170:SER:HB2	79:B2:209:U:O3'	1.70	0.90
80:B5:2818:U:H6	80:B5:2818:U:H5'	1.37	0.90
42:BH:116:ASN:ND2	83:CV:136:TYR:CD1	2.39	0.90
80:B5:2284:C:O3'	83:CV:476:GLN:N	1.99	0.90
8:A7:33:LYS:NZ	80:B5:2692:A:P	2.45	0.90
79:B2:1637:C:H4'	85:CX:2:U:N3	1.85	0.90
79:B2:1715:G:C6	79:B2:1716:C:C4	2.60	0.90
41:BG:162:LEU:HD11	80:B5:147:U:C2	2.05	0.90
15:AG:132:ARG:NE	79:B2:68:A:C5	2.38	0.90
48:BN:188:ARG:NH2	80:B5:31:C:OP2	2.05	0.90
48:BN:35:VAL:HG23	80:B5:1543:G:P	2.12	0.90
79:B2:429:G:H4'	83:CV:276:ARG:CD	2.01	0.90
29:AU:53:LYS:HB3	79:B2:1345:A:C4'	2.01	0.89
88:B2:1918:OHX:N2	88:B2:2062:OHX:N6	2.19	0.89
8:A7:47:ALA:N	80:B5:2678:A:O4'	2.03	0.89
54:BT:130:ARG:O	80:B5:1098:A:O2'	1.87	0.89
8:A7:92:ASP:CB	84:CW:34:C:C5	2.46	0.89
79:B2:1761:U:N3	85:CX:1:A:O5'	2.00	0.89
79:B2:1780:G:C2'	80:B5:2262:A:H4'	2.01	0.89
48:BN:109:ARG:HH11	82:B8:141:C:P	1.94	0.89
79:B2:1780:G:HO2'	80:B5:2262:A:H4'	1.11	0.89
80:B5:2621:G:C8	84:CW:75:C:C6	2.61	0.89
8:A7:91:THR:CG2	84:CW:36:U:N1	2.36	0.89
24:AP:130:ARG:O	84:CW:45:U:H5''	1.72	0.89
26:AR:2:GLY:N	79:B2:1312:A:OP1	2.05	0.89
26:AR:33:ARG:NH2	79:B2:1387:G:OP1	2.06	0.89
43:BI:112:GLN:HA	83:CV:471:LYS:HG2	1.53	0.89
83:CV:237:VAL:N	83:CV:360:LEU:C	2.13	0.89
8:A7:84:LYS:O	84:CW:30:G:N9	2.05	0.89
10:AB:118:GLN:O	79:B2:931:C:O2'	1.88	0.89
48:BN:146:ALA:O	48:BN:148:TYR:N	2.05	0.89
8:A7:84:LYS:HZ2	84:CW:31:A:C2'	1.58	0.89
79:B2:1653:C:OP2	88:B2:1964:OHX:N4	2.05	0.89
23:AO:29:HIS:CE1	79:B2:918:U:H5'	2.07	0.89
8:A7:51:ARG:HH22	80:B5:2677:G:H8	1.20	0.89
8:A7:88:ARG:N	84:CW:36:U:H5''	1.86	0.89
15:AG:132:ARG:C	79:B2:68:A:H61	1.74	0.89
23:AO:85:ALA:H	23:AO:119:THR:HG22	1.36	0.89
17:AI:64:ASN:HB2	79:B2:258:C:C4'	2.03	0.89
38:BD:265:TYR:CD2	81:B7:120:C:C4	2.60	0.89
33:AY:10:ARG:CG	79:B2:778:G:H1	1.81	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:48:ARG:HG2	80:B5:1018:G:OP1	1.73	0.89
80:B5:3027:A:O2'	83:CV:109:GLN:CB	2.19	0.89
23:AO:130:GLY:H	79:B2:991:G:P	1.94	0.89
4:A3:32:ARG:N	79:B2:1595:U:OP1	2.04	0.89
37:BC:60:THR:CG2	80:B5:364:G:OP1	2.18	0.89
35:BA:247:ARG:CZ	79:B2:1013:A:C4'	2.51	0.89
8:A7:91:THR:HG22	84:CW:36:U:C2	2.07	0.89
15:AG:59:GLN:CA	79:B2:155:U:C4'	2.50	0.89
17:AI:138:ASN:HD22	79:B2:197:A:N6	1.68	0.89
79:B2:651:G:N7	88:B2:1981:OHX:N6	2.21	0.89
79:B2:1645:G:O3'	80:B5:2259:A:H2	1.51	0.89
15:AG:128:THR:HG23	57:BW:81:PRO:HG3	0.89	0.89
83:CV:131:LYS:HD3	89:CV:602:GCP:N3	1.87	0.89
10:AB:54:LEU:HD11	80:B5:2438:A:C2	2.07	0.88
15:AG:15:THR:CG2	79:B2:152:U:O3'	2.20	0.88
15:AG:174:LYS:CA	79:B2:79:C:H1'	1.93	0.88
28:AT:39:THR:OG1	79:B2:1478:G:OP1	1.91	0.88
79:B2:46:A:H2	83:CV:387:ARG:NH1	1.70	0.88
15:AG:160:ARG:CZ	79:B2:68:A:OP1	2.21	0.88
44:BJ:94:ARG:O	44:BJ:96:PHE:N	2.05	0.88
8:A7:77:THR:HG23	84:CW:43:C:O2'	1.71	0.88
8:A7:85:SER:N	84:CW:30:G:C6	2.39	0.88
52:BR:101:VAL:CG2	80:B5:1948:G:O3'	2.21	0.88
52:BR:170:ARG:NH1	88:BR:201:OHX:N4	2.21	0.88
79:B2:912:U:H4'	79:B2:913:G:H3'	1.52	0.88
50:BP:138:LYS:NZ	80:B5:2356:A:OP1	2.04	0.88
52:BR:143:ILE:CG1	80:B5:2093:A:C5'	2.51	0.88
14:AF:104:ASN:ND2	79:B2:1166:A:C5'	2.26	0.88
15:AG:133:LEU:HD12	79:B2:66:U:N3	1.88	0.88
23:AO:123:SER:CB	79:B2:885:G:C2	2.54	0.88
15:AG:175:ILE:O	79:B2:78:A:C2	2.26	0.88
60:BZ:115:LYS:HD3	80:B5:1629:U:C4'	2.03	0.88
79:B2:46:A:C2	83:CV:387:ARG:HB3	2.06	0.88
80:B5:2621:G:N7	84:CW:75:C:C5	2.41	0.88
8:A7:82:THR:CG2	84:CW:29:G:N2	2.26	0.88
52:BR:166:ASN:CG	88:BR:201:OHX:N4	2.25	0.88
80:B5:3027:A:N9	83:CV:109:GLN:NE2	2.21	0.88
8:A7:32:SER:HB3	80:B5:2706:G:O2'	1.74	0.88
8:A7:34:LYS:HZ2	80:B5:2693:C:H5'	1.22	0.88
40:BF:70:LYS:NZ	80:B5:519:A:OP2	2.06	0.88
83:CV:236:GLU:CA	83:CV:364:GLU:OE1	2.21	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:122:PRO:HA	79:B2:886:U:O2	1.73	0.88
41:BG:129:PRO:HG3	80:B5:121:A:C2	2.08	0.88
41:BG:157:VAL:HG13	80:B5:147:U:C4	2.09	0.88
80:B5:1759:C:N4	80:B5:1766:G:O6	2.06	0.88
35:BA:242:ARG:O	80:B5:2154:U:C5'	2.20	0.88
27:AS:118:LYS:CD	44:BJ:108:GLU:OE2	2.22	0.88
43:BI:103:LEU:C	83:CV:471:LYS:CB	2.41	0.88
54:BT:129:LYS:HB2	80:B5:1098:A:O5'	1.72	0.88
32:AX:144:ARG:NH2	83:CV:314:LYS:HD3	1.85	0.88
8:A7:85:SER:N	84:CW:30:G:N3	2.21	0.88
8:A7:88:ARG:HB3	84:CW:36:U:H5''	1.54	0.88
10:AB:32:ILE:HD11	10:AB:46:THR:HG23	1.55	0.88
32:AX:77:ILE:CG2	83:CV:391:VAL:HG11	2.03	0.88
38:BD:266:ALA:HA	81:B7:1:G:N9	1.89	0.88
50:BP:74:LYS:NZ	80:B5:3298:C:OP1	2.07	0.88
23:AO:132:ARG:N	79:B2:1787:C:OP2	2.07	0.88
79:B2:991:G:OP2	88:B2:2011:OHX:N1	2.07	0.88
8:A7:51:ARG:NH1	80:B5:2677:G:H1'	1.83	0.88
43:BI:160:PRO:HD3	80:B5:2854:U:H5''	1.56	0.88
37:BC:48:GLN:NE2	80:B5:336:A:O2'	2.08	0.87
60:BZ:115:LYS:CD	80:B5:1629:U:O4'	2.23	0.87
15:AG:107:ALA:HB3	79:B2:154:G:C4'	2.03	0.87
27:AS:40:ARG:NH1	79:B2:1539:G:C4'	2.36	0.87
79:B2:1190:C:C2	84:CW:31:A:OP1	2.26	0.87
8:A7:33:LYS:HE3	80:B5:2692:A:OP1	1.74	0.87
79:B2:440:U:C5	83:CV:277:ALA:HB2	2.09	0.87
23:AO:135:ARG:NE	79:B2:1008:G:OP1	2.06	0.87
29:AU:57:ARG:HG2	79:B2:1382:A:C4'	2.04	0.87
33:AY:10:ARG:HG3	79:B2:780:A:C8	2.07	0.87
8:A7:33:LYS:CE	80:B5:2692:A:OP1	2.22	0.87
26:AR:28:PHE:CD2	79:B2:1389:C:C6	2.62	0.87
43:BI:63:GLU:HB2	80:B5:2853:A:H5'	1.55	0.87
36:BB:247:ARG:HD3	80:B5:1888:U:OP1	1.73	0.87
36:BB:255:TRP:CD1	80:B5:2395:G:H5''	2.09	0.87
48:BN:76:PRO:HA	80:B5:2166:A:OP1	1.74	0.87
79:B2:415:C:C6	83:CV:288:ARG:CG	2.58	0.87
15:AG:174:LYS:CG	79:B2:79:C:O2'	2.23	0.87
18:AJ:110:GLN:HE22	18:AJ:126:ARG:HG2	1.39	0.87
8:A7:58:GLU:OE1	27:AS:120:ARG:NH1	2.08	0.87
15:AG:59:GLN:C	79:B2:155:U:H1'	1.94	0.87
80:B5:2512:C:H5'	80:B5:2512:C:H6	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:433:C:H5	83:CV:388:ARG:HB3	1.37	0.87
20:AL:67:ARG:NH1	79:B2:115:G:OP1	2.07	0.87
26:AR:25:THR:O	26:AR:27:ASP:N	2.07	0.87
12:AD:174:HIS:HE1	79: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	79:B2:1472:C:OP1	2.08	0.87
15:AG:134:GLY:N	79:B2:66:U:O4	0.73	0.87
22:AN:3:ARG:HH12	79:B2:867:G:P	1.98	0.87
26:AR:43:SER:CB	79:B2:1332:C:OP1	2.23	0.87
8:A7:32:SER:HB2	80:B5:2692:A:C1'	2.04	0.87
24:AP:12:PHE:HD1	44:BJ:85:LYS:HE2	1.38	0.87
17:AI:75:LYS:HB2	79:B2:258:C:C5'	2.04	0.87
20:AL:133:LYS:N	79:B2:336:G:O2'	2.07	0.87
79:B2:414:C:C5	83:CV:288:ARG:CB	2.57	0.87
8:A7:84:LYS:CG	84:CW:32:U:C5	2.58	0.86
23:AO:46:MET:CG	79:B2:899:G:C4'	2.52	0.86
30:AV:62:ARG:HH21	79:B2:1039:A:H5''	1.34	0.86
79:B2:301:A:OP2	88:B2:1941:OHX:N2	2.08	0.86
23:AO:18:ARG:NH2	79:B2:919:A:H5'	1.84	0.86
43:BI:115:MET:HB2	80:B5:2865:U:OP1	1.75	0.86
32:AX:144:ARG:CZ	83:CV:314:LYS:HD3	2.05	0.86
15:AG:134:GLY:N	79:B2:66:U:C4	1.78	0.86
79:B2:679:U:OP2	88:B2:2077:OHX:N1	2.08	0.86
15:AG:154:ARG:C	79: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	79:B2:165:G:H5''	2.05	0.86
4:A3:14:TYR:CD2	79:B2:1597:A:C8	2.63	0.86
15:AG:172:ALA:HB3	79:B2:79:C:P	2.13	0.86
26:AR:28:PHE:CE2	79:B2:1389:C:C5	2.64	0.86
23:AO:88:GLY:HA2	79:B2:888:U:H5'	1.57	0.86
80:B5:2283:G:H1'	83:CV:477:SER:OG	1.75	0.86
83:CV:199:ALA:N	89:CV:602:GCP:O6	2.07	0.86
17:AI:22:ARG:HB3	79:B2:385:A:H5''	1.58	0.86
23:AO:29:HIS:HE1	79:B2:918:U:C4'	1.86	0.86
79:B2:1758:U:O2'	80:B5:2255:A:H5'	1.75	0.86
79:B2:1680:G:O6	88:B2:1988: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	83:CV:314:LYS:HD2	0.70	0.86
79:B2:1202:A:OP1	88:B2:1990:OHX:N1	2.09	0.86
42:BH:70:THR:HG21	80:B5:3122:A:N1	1.90	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:140:ARG:NH1	30:AV:1:MET:SD	2.49	0.86
15:AG:56:ASN:HB2	79:B2:154:G:C1'	2.06	0.86
52:BR:143:ILE:HG13	80:B5:2093:A:C5'	2.05	0.86
38:BD:266:ALA:HB2	81:B7:1:G:C8	2.10	0.86
38:BD:16:PHE:CZ	80:B5:2688:U:C4	2.63	0.86
41:BG:51:LYS:HD3	80:B5:2523:A:OP2	1.75	0.86
9:AA:24:LEU:O	9:AA:163:ASN:ND2	2.09	0.86
15:AG:188:ARG:HD2	79:B2:284:G:C8	2.11	0.86
41:BG:181:LYS:CG	82:B8:154:C:H5''	2.04	0.86
48:BN:3:ALA:N	79:B2:1773:C:OP1	118.05	0.86
80:B5:2625:C:N3	84:CW:76:A:H8	1.70	0.86
15:AG:164:LYS:HZ3	79:B2:72:A:C5'	1.77	0.86
15:AG:59:GLN:C	79:B2:155:U:C1'	2.44	0.86
1:A0:92:ARG:HB3	79:B2:1796:C:O2	1.76	0.86
79:B2:431:C:H2'	83:CV:386:SER:N	1.79	0.86
79:B2:1746:A:C2	80:B5:2303:A:H1'	2.11	0.86
80:B5:1555:U:O4	80:B5:1557:A:N6	2.09	0.86
44:BJ:72:ARG:CZ	81:B7:40:C:O2	2.24	0.86
83:CV:131:LYS:HD3	89:CV:602:GCP:C2	2.02	0.86
79:B2:1637:C:C4'	85:CX:2:U:C4	2.45	0.86
25:AQ:135:ARG:O	79:B2:1581:C:H5'	1.75	0.85
26:AR:10:LYS:CE	79:B2:1316:G:O2'	2.19	0.85
38:BD:152:ARG:HD3	80:B5:2663:G:H5'	1.58	0.85
44:BJ:97:SER:HB2	80:B5:2672:G:H1'	1.58	0.85
79:B2:414:C:C6	83:CV:288:ARG:HB2	2.11	0.85
83:CV:16:THR:CB	89:CV:602:GCP:O3A	2.24	0.85
8:A7:86:ASN:HD21	84:CW:33:U:H6	0.87	0.85
2:A1:29:ARG:HH11	2:A1:29:ARG:HG3	1.41	0.85
80:B5:726:G:H8	80:B5:726:G:H5'	1.41	0.85
23:AO:52:ARG:HB2	79:B2:906:A:P	2.16	0.85
56:BV:47:ASN:O	80:B5:2338:C:H4'	1.75	0.85
36:BB:129:ALA:O	80:B5:3150:A:H5'	1.75	0.85
83:CV:239:VAL:C	83:CV:359:THR:HG22	1.96	0.85
25:AQ:123:ARG:O	79:B2:1584:G:C2'	2.23	0.85
29:AU:53:LYS:CD	79:B2:1345:A:H5'	2.06	0.85
26:AR:28:PHE:CZ	79:B2:1389:C:C6	2.55	0.85
17:AI:73:SER:N	79:B2:256:A:O2'	2.08	0.85
18:AJ:176:ASN:ND2	79:B2:511:A:OP2	2.10	0.85
1:A0:87:ARG:HD2	79:B2:1797:A:C6	2.11	0.85
24:AP:42:ARG:NH2	79:B2:1550:A:OP2	2.09	0.85
25:AQ:124:PRO:HA	79:B2:1585:U:OP1	1.74	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1655:A:H2	80:B5:2291:A:N3	1.74	0.85
41:BG:59:GLN:NE2	82:B8:150:G:H1'	1.91	0.85
8:A7:92:ASP:OD2	84:CW:34:C:C3'	2.19	0.85
23:AO:18:ARG:HH22	79:B2:919:A:H5''	1.36	0.85
35:BA:204:MET:HE2	35:BA:209:HIS:HB2	1.59	0.85
60:BZ:76:ASN:HB2	80:B5:1636:U:H1'	1.58	0.85
15:AG:53:SER:HB2	79:B2:163:G:C3'	2.06	0.85
34:AZ:77:ARG:HH21	79:B2:1533:C:H5	1.25	0.85
41:BG:248:LYS:CE	80:B5:2529:A:OP1	2.24	0.85
41:BG:59:GLN:HE22	82:B8:150:G:H1'	1.42	0.85
83:CV:237:VAL:CG2	83:CV:360:LEU:HD12	2.05	0.85
32:AX:99:ASN:C	83:CV:378:LYS:HZ3	1.79	0.85
35:BA:236:GLY:HA2	80:B5:2184:U:O4'	1.76	0.85
83:CV:85:ASN:ND2	83:CV:368:LYS:CD	1.72	0.85
15:AG:60:GLY:N	79:B2:155:U:O4'	2.10	0.85
35:BA:247:ARG:NH2	79:B2:1013:A:C4'	2.38	0.85
52:BR:171:ASP:CG	79:B2:852:C:OP2	2.07	0.85
23:AO:46:MET:HG3	79:B2:899:G:C4'	2.07	0.85
28:AT:57:ARG:NH1	79:B2:1479:A:OP2	2.10	0.85
23:AO:35:GLY:CA	79:B2:919:A:H4'	1.99	0.85
35:BA:50:HIS:CD2	80:B5:1795:U:C2'	2.60	0.85
83:CV:20:LYS:HB2	89:CV:602:GCP:N7	1.90	0.85
8:A7:87:THR:CG2	84:CW:37:A:OP1	2.25	0.84
1:A0:68:TYR:HB2	10:AB:111:ARG:HG3	1.59	0.84
15:AG:169:TYR:HH	79:B2:73:U:H5	1.25	0.84
17:AI:50:GLY:HA2	79:B2:397:A:H4'	1.57	0.84
79:B2:913:G:C6	80:B5:2206:G:C5'	2.59	0.84
58:BX:33:ARG:NE	80:B5:1580:A:N6	2.25	0.84
15:AG:56:ASN:CG	79:B2:153:G:H21	1.81	0.84
60:BZ:15:ARG:CD	80:B5:1637:A:H4'	2.07	0.84
79:B2:1002:G:C4'	80:B5:2265:C:OP1	2.25	0.84
1:A0:70:LYS:CE	79:B2:930:A:H5''	2.04	0.84
54:BT:129:LYS:HE3	80:B5:1097:G:H5'	1.58	0.84
9:AA:49:ASN:HB3	9:AA:52:LYS:HG3	1.56	0.84
23:AO:125:SER:HB2	79:B2:927:C:C1'	2.08	0.84
1:A0:92:ARG:O	79:B2:1796:C:H5''	1.77	0.84
23:AO:52:ARG:HB3	79:B2:906:A:OP1	1.77	0.84
43:BI:82:ARG:HD3	80:B5:295:A:H1'	131.13	0.84
17:AI:170:SER:OG	79:B2:209:U:H4'	1.77	0.84
79:B2:132:U:H1'	79:B2:133:U:OP2	1.77	0.84
15:AG:112:VAL:CG2	79:B2:164:A:H5'	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:157:VAL:HG11	79:B2:78:A:H4'	0.88	0.84
44:BJ:72:ARG:NH2	81:B7:40:C:O2	2.11	0.84
19:AK:27:PHE:HB3	19:AK:40:LEU:HD23	1.58	0.84
25:AQ:135:ARG:NH1	79:B2:1582:U:OP1	2.10	0.84
15:AG:108:VAL:HG11	79:B2:153:G:O2'	1.77	0.84
5:A4:18:THR:HG21	79:B2:584:C:H1'	1.59	0.84
15:AG:175:ILE:N	79:B2:78:A:C2	2.45	0.84
79:B2:1645:G:C2'	80:B5:2259:A:N1	2.41	0.84
59:BY:4:GLN:HB2	80:B5:229:G:H5''	1.58	0.84
15:AG:132:ARG:NH2	79:B2:68:A:C5	2.41	0.84
18:AJ:127:VAL:HG21	79:B2:478:A:C4'	2.08	0.84
52:BR:174:ALA:O	79:B2:853:G:OP1	1.88	0.84
46:BL:70:ARG:NH1	80:B5:76:G:OP1	2.10	0.84
46:BL:58:VAL:HG13	80:B5:75:G:H5''	1.58	0.84
79:B2:416:A:OP2	83:CV:287:LEU:HD21	1.78	0.84
15:AG:59:GLN:H	79:B2:155:U:H4'	0.72	0.84
18:AJ:93:LEU:HA	18:AJ:96:VAL:HG13	1.59	0.84
79:B2:51:A:C8	83:CV:242:GLY:N	2.25	0.84
23:AO:88:GLY:HA3	79:B2:888:U:C5'	2.08	0.84
41:BG:60:ARG:NH2	80:B5:1616:U:C5'	51.15	0.84
13:AE:139:VAL:HG13	13:AE:150:PRO:HG3	1.58	0.84
32:AX:79:ASN:HB3	32:AX:81:LYS:H	1.40	0.84
23:AO:129:LYS:CE	88:B2:2011:OHX:N1	2.40	0.84
79:B2:440:U:P	83:CV:274:ASN:ND2	2.50	0.84
38:BD:17:GLN:O	80:B5:2688:U:N3	2.09	0.84
15:AG:128:THR:O	57:BW:81:PRO:HG2	1.78	0.84
5:A4:28:LYS:NZ	79:B2:477:A:OP1	2.11	0.84
79:B2:1353:U:O4	88:B2:2024:OHX:N3	2.11	0.84
8:A7:28:SER:HB3	80:B5:2708:C:H4'	0.85	0.84
79:B2:1508:U:O4	88:B2:1909:OHX:N5	2.11	0.83
43:BI:84:ALA:O	43:BI:140:THR:HG22	1.77	0.83
79:B2:1427:A:H3'	84:CW:34:C:C1'	2.07	0.83
15:AG:188:ARG:CG	79:B2:284:G:OP2	2.26	0.83
8:A7:29:ASN:H	80:B5:2708:C:H5'	1.40	0.83
53:BS:50:LYS:NZ	81:B7:76:A:O2'	2.10	0.83
35:BA:69:TYR:CE2	80:B5:2558:U:C4	2.66	0.83
41:BG:60:ARG:NH2	80:B5:1616:U:H4'	50.10	0.83
8:A7:82:THR:HG22	84:CW:29:G:C2	2.10	0.83
17:AI:176:SER:HB2	79:B2:208:U:H5'	1.60	0.83
26:AR:45:ARG:NH1	79:B2:1415:U:OP1	2.11	0.83
29:AU:53:LYS:HB3	79:B2:1345:A:H5'	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:111:LYS:HD3	80:B5:1629:U:O4	1.79	0.83
80:B5:2622:C:C2	84:CW:75:C:C4'	2.62	0.83
80:B5:3278:C:O2'	80:B5:3279:A:OP2	1.95	0.83
83:CV:79:GLY:HA2	89:CV:602:GCP:O2G	1.79	0.83
32:AX:99:ASN:CA	83:CV:378:LYS:HZ3	1.91	0.83
79:B2:142:G:H22	79:B2:173:A:H2	1.23	0.83
48:BN:189:LYS:HB2	80:B5:29:C:OP1	1.79	0.83
80:B5:3027:A:H8	83:CV:109:GLN:HE21	1.15	0.83
35:BA:244:GLY:O	80:B5:2153:U:C5'	2.26	0.83
38:BD:95:TRP:CH2	38:BD:181:PRO:HD3	2.13	0.83
8:A7:82:THR:CG2	84:CW:29:G:N1	2.40	0.83
15:AG:57:ASP:HA	15:AG:106:LEU:HA	1.58	0.83
15:AG:174:LYS:CG	79:B2:79:C:H1'	2.08	0.83
52:BR:165:LYS:HE3	79:B2:824:G:N2	1.93	0.83
83:CV:131:LYS:CD	89:CV:602:GCP:C6	2.56	0.83
15:AG:112:VAL:CG2	79:B2:164:A:C5'	2.55	0.83
12:AD:159:HIS:O	79:B2:1421:A:H4'	1.77	0.83
27:AS:134:ARG:HG3	79:B2:1545:A:OP2	1.78	0.83
17:AI:10:LYS:HD3	79:B2:338:C:H5''	1.60	0.83
15:AG:133:LEU:HD12	79:B2:66:U:O2	1.77	0.83
11:AC:119:LYS:CE	79:B2:1291:G:H5'	2.07	0.83
79:B2:1542:G:N2	79:B2:1569:A:OP2	2.12	0.83
79:B2:1646:C:H4'	80:B5:2257:C:H42	1.41	0.83
79:B2:320:U:H2'	79:B2:321:C:H2'	1.58	0.83
60:BZ:69:LYS:HZ1	80:B5:1633:C:P	1.97	0.83
35:BA:227:ARG:NH2	80:B5:2155:G:O2'	2.09	0.83
38:BD:207:TYR:CZ	81:B7:33:U:C5	2.67	0.83
52:BR:173:ARG:HG2	79:B2:853:G:C4	2.12	0.83
79:B2:51:A:C1'	83:CV:242:GLY:HA2	1.70	0.83
8:A7:84:LYS:HZ2	84:CW:31:A:H2'	0.70	0.83
8:A7:34:LYS:HE3	80:B5:2693:C:OP1	1.78	0.83
12:AD:163:PRO:HG2	79:B2:1331:A:N1	1.93	0.83
25:AQ:125:GLU:N	79:B2:1585:U:OP1	2.11	0.83
33:AY:11:LYS:N	79:B2:783:G:O6	2.11	0.83
15:AG:8:PRO:HB2	79:B2:165:G:H5''	1.61	0.83
43:BI:4:ARG:NH2	80:B5:2828:G:O2'	2.10	0.83
43:BI:103:LEU:C	83:CV:471:LYS:HG3	1.99	0.83
25:AQ:74:HIS:HE1	79:B2:1480:G:N2	1.77	0.83
80:B5:2264:U:OP2	88:B5:3402:OHX:N3	2.12	0.83
43:BI:102:MET:CB	83:CV:471:LYS:NZ	2.41	0.83
15:AG:174:LYS:HD3	79:B2:79:C:C2	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1291:G:N2	79:B2:1324:G:H22	1.76	0.82
79:B2:1190:C:N1	84:CW:31:A:OP1	2.13	0.82
79:B2:1759:C:H1'	80:B5:2262:A:H2	1.41	0.82
80:B5:1225:A:N7	80:B5:1287:A:O2'	2.11	0.82
80:B5:851:C:H6	80: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	79:B2:837:G:O2'	1.80	0.82
15:AG:173:PRO:HA	79:B2:66:U:H5'	1.61	0.82
22:AN:151:ASN:O	88: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	79:B2:1610:G:N7	2.28	0.82
38:BD:145:PHE:CD1	80:B5:2748:A:C5'	2.62	0.82
46:BL:99:HIS:CG	80:B5:156:G:C4	2.68	0.82
8:A7:78:ASP:HB3	84:CW:43:C:C4	2.15	0.82
79:B2:1041:G:OP1	88:B2:2036:OHX:N5	2.12	0.82
10:AB:146:GLN:HE22	79:B2:1065:A:H1'	1.44	0.82
15:AG:175:ILE:CA	79:B2:78:A:N3	2.42	0.82
35:BA:152:SER:CB	80:B5:2157:G:O6	2.27	0.82
79:B2:1637:C:H5'	85:CX:2:U:O4	1.76	0.82
79:B2:1646:C:C3'	80:B5:2257:C:N4	2.41	0.82
44:BJ:98:ALA:N	80:B5:2671:A:O2'	2.13	0.82
52:BR:83:GLY:N	80:B5:1864:A:OP1	2.12	0.82
79:B2:414:C:O5'	83:CV:288:ARG:O	1.94	0.82
8:A7:47:ALA:N	80:B5:2678:A:C1'	2.41	0.82
11:AC:161:LYS:O	88:AC:301:OHX:N1	2.13	0.82
23:AO:129:LYS:CA	79:B2:990:C:H5''	2.10	0.82
26:AR:10:LYS:NZ	79:B2:1402:G:OP1	2.13	0.82
35:BA:35:ALA:HB2	80:B5:39:A:H5''	87.75	0.82
80:B5:2285:C:O4'	83:CV:476:GLN:O	1.96	0.82
17:AI:73:SER:HB2	79:B2:257:A:C1'	2.09	0.82
27:AS:118:LYS:HE2	44:BJ:108:GLU:OE2	1.79	0.82
52:BR:171:ASP:HB2	79:B2:851:U:O3'	1.44	0.82
79:B2:1759:C:C1'	80:B5:2262:A:N1	2.43	0.82
35:BA:187:HIS:CE1	80:B5:1794:G:C2	2.68	0.82
8:A7:96:ARG:NH2	84:CW:35:A:H1'	1.95	0.82
12:AD:108:LYS:HG2	12:AD:113:LEU:HD12	1.61	0.82
8:A7:33:LYS:NZ	80:B5:2692:A:OP1	2.13	0.82
52:BR:175:GLN:H	79:B2:852:C:H4'	0.65	0.82
83:CV:85:ASN:CG	83:CV:368:LYS:CG	2.47	0.82
11:AC:91:ARG:NH1	79:B2:1625:C:P	2.52	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1225:A:O4'	80:B5:1287:A:H2'	1.79	0.82
79:B2:433:C:C6	83:CV:388:ARG:CB	2.61	0.82
1:A0:15:ARG:HG2	79:B2:943:C:H42	1.45	0.81
26:AR:60:ARG:HH12	79:B2:1400:A:H4'	1.43	0.81
14:AF:101:GLY:CA	79:B2:1167:G:OP1	2.20	0.81
15:AG:59:GLN:C	79:B2:155:U:O4'	2.18	0.81
15:AG:169:TYR:OH	79:B2:73:U:H5	1.62	0.81
52:BR:143:ILE:HG12	80:B5:2093:A:H5''	1.61	0.81
83:CV:537:GLY:C	84:CW:73:A:N9	2.34	0.81
33:AY:8:ARG:CB	79:B2:780:A:C8	2.62	0.81
8:A7:47:ALA:CB	80:B5:2678:A:C8	2.63	0.81
80:B5:3027:A:C1'	83:CV:109:GLN:NE2	2.23	0.81
15:AG:182:GLN:NE2	79:B2:271:A:H61	1.76	0.81
25:AQ:15:SER:CB	79:B2:1608:U:OP1	2.28	0.81
79:B2:431:C:H2'	83:CV:386:SER:HB2	1.62	0.81
80:B5:1025:A:H3'	80:B5:1026:A:H4'	1.60	0.81
35:BA:211:HIS:ND1	80:B5:2185:G:OP1	2.10	0.81
36:BB:36:ASP:OD1	80:B5:2738:A:H5'	141.45	0.81
52:BR:62:ARG:NH2	80:B5:3068:U:OP2	2.13	0.81
50:BP:25:SER:O	50:BP:29:THR:HG23	1.80	0.81
8:A7:84:LYS:CD	84:CW:32:U:C5	2.64	0.81
20:AL:19:ILE:CD1	88:AL:201:OHX:N6	2.42	0.81
28:AT:57:ARG:NH1	79:B2:1479:A:P	2.53	0.81
23:AO:132:ARG:HB3	79:B2:1787:C:OP2	1.80	0.81
8:A7:88:ARG:HB3	84:CW:36:U:O5'	1.79	0.81
23:AO:129:LYS:CB	79:B2:990:C:H5''	2.10	0.81
79:B2:1686:C:C2'	79:B2:1687:U:H6	1.91	0.81
79:B2:829:A:O2'	79:B2:830:U:OP2	1.97	0.81
35:BA:15:ILE:CD1	80:B5:822:G:C4	2.63	0.81
23:AO:20:TYR:CD2	79:B2:917:U:H5''	2.16	0.81
79:B2:1229:G:O2'	79:B2:1255:G:N2	2.14	0.81
35:BA:244:GLY:O	80:B5:2153:U:H5''	1.81	0.81
48:BN:109:ARG:NH1	82:B8:141:C:P	2.52	0.81
52:BR:170:ARG:CZ	88:BR:201:OHX:N4	2.43	0.81
54:BT:68:THR:HG23	80:B5:2737:C:P	2.21	0.81
80:B5:2284:C:C5	83:CV:477:SER:CB	2.63	0.81
32:AX:144:ARG:NH1	83:CV:314:LYS:CD	2.44	0.81
80:B5:1815:U:O2'	80:B5:1816:A:OP2	1.98	0.81
38:BD:158:ARG:HD3	81:B7:46:A:P	2.21	0.81
15:AG:53:SER:C	79:B2:163:G:C4'	2.48	0.81
20:AL:99:ARG:NH1	32:AX:7:ARG:O	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:107:ARG:HG3	23:AO:107:ARG:HH11	1.45	0.81
80:B5:1015:U:O2'	80:B5:1017:C:OP1	1.99	0.81
38:BD:207:TYR:CD2	81:B7:33:U:C2	2.68	0.81
41:BG:55:TYR:OH	82:B8:149:A:O2'	1.96	0.81
48:BN:72:LYS:HD3	80:B5:2166:A:O3'	1.81	0.81
79:B2:1428:G:O5'	84:CW:34:C:C4'	2.29	0.81
4:A3:31:ILE:HD11	79:B2:1199:G:C6	2.16	0.81
8:A7:68:ARG:NH2	27:AS:145:ARG:HB3	1.96	0.81
37:BC:195:ARG:NH2	80:B5:341:G:N7	2.26	0.81
44:BJ:55:ARG:HD3	80:B5:353:G:N7	106.92	0.81
38:BD:266:ALA:CA	81:B7:1:G:C4	2.64	0.81
47:BM:106:ARG:HB2	47:BM:106:ARG:HH11	4.36	0.81
1:A0:97:PRO:O	79:B2:1798:U:H5	1.58	0.81
15:AG:175:ILE:CB	79:B2:78:A:C2	2.64	0.81
33:AY:120:GLY:HA2	79:B2:85:A:O3'	1.81	0.81
10:AB:148:ASN:CG	79:B2:1066:C:HO2'	1.83	0.81
80:B5:1804:A:H2'	80:B5:1805:C:C6	2.16	0.81
58:BX:115:ARG:NH1	58:BX:119:THR:OG1	2.14	0.81
8:A7:84:LYS:HD3	84:CW:32:U:C4	2.16	0.80
14:AF:37:GLN:HG2	25:AQ:53:LEU:HD13	1.60	0.80
79:B2:280:U:O2'	79:B2:281:G:OP2	1.99	0.80
37:BC:300:ARG:O	51:BQ:39:ARG:NH1	2.13	0.80
60:BZ:67:LYS:CE	80:B5:1630:U:OP1	2.29	0.80
80:B5:3027:A:O2'	83:CV:83:PHE:CE2	2.25	0.80
8:A7:96:ARG:NH2	84:CW:35:A:C1'	2.44	0.80
8:A7:91:THR:HG21	84:CW:36:U:N1	1.94	0.80
8:A7:48:ARG:CD	80:B5:2678:A:P	2.64	0.80
8:A7:88:ARG:CG	84:CW:36:U:O4'	2.28	0.80
8:A7:91:THR:HG21	84:CW:36:U:O2	1.77	0.80
11:AC:99:LYS:NZ	79:B2:1299:G:O3'	2.13	0.80
79:B2:1637:C:H5''	85:CX:2:U:O4	1.76	0.80
60:BZ:15:ARG:HD3	80:B5:1637:A:O3'	1.82	0.80
54:BT:49:GLN:NE2	80:B5:2755:C:O2'	2.14	0.80
80:B5:776:U:H5	80:B5:2719:U:O2	1.64	0.80
83:CV:20:LYS:N	89:CV:602:GCP:O2A	2.15	0.80
8:A7:51:ARG:NH1	80:B5:2677:G:C8	2.49	0.80
16:AH:131:PHE:O	16:AH:133:THR:N	2.14	0.80
35:BA:219:ILE:HD11	80:B5:2185:G:H5'	1.61	0.80
8:A7:34:LYS:HZ1	80:B5:2693:C:H5'	1.45	0.80
42:BH:98:PRO:O	83:CV:136:TYR:CD2	2.24	0.80
43:BI:154:ARG:NH1	80:B5:2838:A:OP1	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:113:LYS:HB2	82:B8:84:C:H1'	1.62	0.80
9:AA:179:ARG:HD3	9:AA:183:ARG:HH11	1.46	0.80
17:AI:64:ASN:HB2	79:B2:258:C:O4'	1.81	0.80
49:BO:72[A]:HIS:HD2	80:B5:3008:A:OP1	1.64	0.80
8:A7:87:THR:O	84:CW:36:U:H5''	1.81	0.80
10:AB:165:ARG:NE	79:B2:947:U:P	2.54	0.80
23:AO:52:ARG:CB	79:B2:906:A:P	2.70	0.80
52:BR:165:LYS:O	79:B2:850:A:C4	2.08	0.80
80:B5:1225:A:O4'	80:B5:1287:A:C2'	2.28	0.80
52:BR:83:GLY:H	80:B5:1864:A:P	2.04	0.80
52:BR:143:ILE:HG12	80:B5:2093:A:C5'	2.12	0.80
43:BI:7:ARG:NH1	80:B5:2828:G:OP2	2.15	0.80
54:BT:8:ARG:HG3	80:B5:2757:U:H4'	1.62	0.80
26:AR:3:ARG:N	79:B2:1403:C:OP1	2.14	0.80
29:AU:58:LEU:HD23	79:B2:1516:A:C8	2.17	0.80
15:AG:164:LYS:HZ3	79:B2:72:A:H5''	0.82	0.80
80:B5:437:G:N2	80:B5:622:A:H61	1.80	0.80
80:B5:2623:G:H2'	84:CW:76:A:OP2	1.80	0.80
13:AE:21:ASP:HB2	79:B2:773:C:H5''	1.62	0.80
15:AG:13:GLN:NE2	79:B2:151:G:H1'	1.96	0.80
33:AY:10:ARG:HH12	79:B2:778:G:N2	1.78	0.80
15:AG:132:ARG:CG	79:B2:68:A:C6	2.62	0.80
54:BT:68:THR:HG21	80:B5:2736:A:O2'	1.81	0.80
80:B5:2285:C:H5'	83:CV:475:ARG:C	2.02	0.80
10:AB:39:GLU:HG3	10:AB:40:ASN:H	1.47	0.80
20:AL:80:MET:HE2	79:B2:325:G:C4'	2.10	0.80
23:AO:38:THR:CG2	79:B2:896:U:O4'	2.29	0.80
15:AG:88:ARG:HG3	79:B2:92:A:N1	1.96	0.80
83:CV:200:VAL:N	89:CV:602:GCP:C6	2.44	0.80
83:CV:236:GLU:CB	83:CV:364:GLU:OE1	2.30	0.80
79:B2:1190:C:C6	84:CW:31:A:OP1	2.35	0.80
11:AC:56:ILE:HG23	11:AC:61:LEU:HB2	1.63	0.80
26:AR:49:LYS:HA	79:B2:1389:C:O3'	1.81	0.80
29:AU:53:LYS:CA	79:B2:1345:A:O5'	2.29	0.80
79:B2:1758:U:H5'	80:B5:2255:A:O3'	1.80	0.80
20:AL:80:MET:CE	79:B2:325:G:H5'	2.12	0.80
15:AG:175:ILE:HB	79:B2:78:A:C2	2.17	0.80
18:AJ:127:VAL:HG21	79:B2:478:A:H4'	1.62	0.80
33:AY:11:LYS:HG2	79:B2:784:C:H42	1.46	0.80
26:AR:60:ARG:NH1	79:B2:1400:A:H5'	1.96	0.80
35:BA:39:GLY:HA3	80:B5:2550:U:O4	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:110[B]:PRO:O	49:BO:112[B]:TYR:N	2.15	0.80
79:B2:136:C:H4'	79:B2:137:U:OP1	1.83	0.79
23:AO:25:ASP:OD2	79:B2:900:A:H5''	1.82	0.79
48:BN:172:ARG:NH1	80:B5:29:C:O2'	2.14	0.79
83:CV:200:VAL:N	89:CV:602:GCP:O6	2.14	0.79
15:AG:95:LYS:NZ	79:B2:160:C:O3'	2.15	0.79
15:AG:15:THR:CG2	79:B2:153:G:P	2.71	0.79
79:B2:432:G:H5'	83:CV:385:VAL:CA	2.07	0.79
8:A7:88:ARG:NH1	84:CW:35:A:C8	2.47	0.79
23:AO:50:ALA:O	23:AO:52:ARG:N	2.14	0.79
80:B5:2440:G:H8	80:B5:2440:G:H5'	1.46	0.79
38:BD:207:TYR:CE1	81: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	79:B2:920:U:H5''	2.12	0.79
24:AP:69:GLU:OE1	88:AP:201:OHX:N2	2.16	0.79
79:B2:1686:C:C2'	79:B2:1687:U:O5'	2.30	0.79
35:BA:40:TYR:N	80:B5:2550:U:O4	2.15	0.79
38:BD:207:TYR:CE1	81:B7:33:U:C1'	2.65	0.79
8:A7:33:LYS:HZ1	80:B5:2692:A:P	2.04	0.79
18:AJ:109:LEU:HB2	18:AJ:146:PHE:HB3	1.62	0.79
28:AT:93:HIS:ND1	79:B2:1525:A:OP1	2.14	0.79
83:CV:236:GLU:CD	83:CV:361:GLY:HA3	2.03	0.79
8:A7:79:SER:HA	84:CW:42:C:C2	2.18	0.79
79:B2:187:G:H4'	79:B2:188:A:OP1	1.83	0.79
15:AG:132:ARG:CZ	79:B2:68:A:C8	2.66	0.79
38:BD:265:TYR:OH	81:B7:121:U:OP2	1.99	0.79
38:BD:274:GLN:OE1	81:B7:60:G:C2	2.34	0.79
41:BG:242:ALA:HB2	80:B5:2586:G:O6	1.82	0.79
83:CV:248:ASP:CB	83:CV:360:LEU:HD23	2.09	0.79
80:B5:2623:G:O6	84:CW:76:A:H5'	1.83	0.79
33:AY:11:LYS:HG2	79: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
54:BT:129:LYS:NZ	80:B5:1097:G:OP1	2.15	0.79
83:CV:85:ASN:CG	83:CV:368:LYS:CD	2.51	0.79
83:CV:541:HSO:HA	84:CW:73:A:N7	1.76	0.79
20:AL:133:LYS:HD2	79:B2:338:C:P	2.23	0.79
79:B2:494:U:O2'	79:B2:495:C:O5'	2.01	0.79
80:B5:2255:A:H5'	80:B5:2261:G:H22	1.47	0.79
8:A7:89:ARG:O	84:CW:35:A:N6	2.13	0.79
14:AF:112:ARG:NH1	79:B2:1529:C:OP1	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:56:ASN:HB3	79:B2:154:G:H1'	1.63	0.79
79:B2:1064:G:O6	88:B2:2075:OHX:N6	2.15	0.79
27:AS:143:ARG:NH2	79:B2:1462:G:N7	2.30	0.79
15:AG:185:GLN:CG	79:B2:284:G:C6	2.65	0.79
38:BD:120:LYS:O	38:BD:248:ARG:NH2	2.16	0.79
41:BG:185:ARG:HD2	82:B8:155:A:C4'	2.12	0.79
53:BS:90:MET:HG2	80:B5:1213:G:H4'	1.65	0.79
83:CV:538:LYS:N	84:CW:73:A:C6	2.50	0.79
79:B2:1757:G:O2'	80:B5:2256:A:H2'	1.82	0.78
41:BG:242:ALA:CB	80:B5:2586:G:O6	2.31	0.78
35:BA:204:MET:HG2	80:B5:914:A:N3	1.97	0.78
53:BS:43:TYR:OH	81:B7:96:U:OP1	1.99	0.78
8:A7:84:LYS:NZ	84:CW:31:A:O2'	2.16	0.78
15:AG:108:VAL:HG21	79:B2:153:G:HO2'	1.45	0.78
23:AO:129:LYS:HA	79:B2:990:C:C4'	2.13	0.78
23:AO:29:HIS:CD2	79:B2:917:U:O2	2.35	0.78
24:AP:115:TYR:CE2	79:B2:1557:U:H5'	2.18	0.78
79:B2:1759:C:C1'	80:B5:2262:A:C2	2.60	0.78
35:BA:15:ILE:HG13	80:B5:822:G:C1'	2.14	0.78
8:A7:30:THR:CA	80:B5:2707:C:O2'	2.30	0.78
15:AG:175:ILE:CA	79:B2:78:A:C2	2.66	0.78
15:AG:95:LYS:HE2	79:B2:161:U:P	2.23	0.78
23:AO:45:GLY:HA3	79:B2:900:A:OP1	1.83	0.78
31:AW:27:ILE:HD11	31:AW:61:ILE:HD12	1.65	0.78
79:B2:1427:A:C5'	84:CW:34:C:C6	2.66	0.78
79:B2:839:U:O4	88:B2:2069:OHX:N4	2.16	0.78
20:AL:36:LYS:HD3	79:B2:248:U:C5'	2.14	0.78
33:AY:9:THR:HG23	79:B2:781:U:OP2	1.82	0.78
60:BZ:15:ARG:HD3	80:B5:1637:A:C4'	2.13	0.78
79:B2:51:A:N1	83:CV:243:PHE:CG	2.51	0.78
15:AG:153:VAL:O	15:AG:155:ASP:N	2.16	0.78
25:AQ:123:ARG:C	79:B2:1584:G:H2'	2.03	0.78
10:AB:116:LYS:HE2	79:B2:933:A:OP1	1.82	0.78
88:B2:1929:OHX:N2	80:B5:2275:A:OP1	2.17	0.78
42:BH:28:VAL:HG22	42:BH:33:THR:HB	1.64	0.78
10:AB:148:ASN:CG	79:B2:1066:C:O2'	2.20	0.78
15:AG:54:GLY:N	79:B2:163:G:H4'	1.97	0.78
79:B2:1686:C:H2'	79:B2:1687:U:O5'	1.83	0.78
23:AO:29:HIS:HE1	79:B2:918:U:C5'	1.97	0.78
80:B5:15:C:H5'	80:B5:15:C:H6	1.49	0.78
54:BT:71:SER:CB	80:B5:2736:A:H4'	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:168:UNK:HA	21:AM:125:ASN:HD21	1.46	0.78
8:A7:82:THR:HG21	84:CW:29:G:N1	1.99	0.78
15:AG:60:GLY:O	79:B2:154:G:N3	2.15	0.78
29:AU:57:ARG:CG	79:B2:1382:A:O4'	2.31	0.78
15:AG:112:VAL:CG2	79:B2:164:A:C4'	2.61	0.78
23:AO:120:PRO:CA	79:B2:887:A:H5''	2.14	0.78
8:A7:51:ARG:NH2	80:B5:2677:G:C8	2.52	0.78
22:AN:114:ARG:HH11	22:AN:114:ARG:HG2	1.49	0.78
23:AO:54:GLU:CD	79:B2:901:G:H1	1.84	0.78
79:B2:1681:A:H2'	79:B2:1682:U:H5'	1.65	0.78
79:B2:48:G:C2	83:CV:387:ARG:NH1	2.42	0.78
23:AO:29:HIS:CE1	79:B2:918:U:C5'	2.65	0.78
10:AB:165:ARG:NH2	79:B2:947:U:P	2.55	0.78
80:B5:766:U:H4'	80:B5:767:U:O5'	1.81	0.78
88:B7:203:OHX:N3	88:B7:219:OHX:N6	2.32	0.78
38:BD:145:PHE:CG	80:B5:2748:A:H4'	2.18	0.78
8:A7:85:SER:N	84:CW:30:G:C2	2.51	0.78
4:A3:33:LYS:HE3	79:B2:1593:A:O2'	1.83	0.78
23:AO:45:GLY:N	79:B2:900:A:OP1	2.16	0.78
79:B2:1073:G:H2'	79:B2:1074:G:H5''	1.66	0.78
14:AF:109:LYS:CD	79:B2:1473:U:H1'	2.14	0.78
79:B2:1758:U:O3'	80:B5:2255:A:H5''	1.84	0.78
54:BT:129:LYS:CE	80:B5:1097:G:H5'	2.13	0.78
80:B5:2444:C:H42	80: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	80:B5:1807:G:C5'	1.97	0.78
8:A7:91:THR:HG23	84:CW:36:U:N1	1.98	0.78
14:AF:62:VAL:HG13	14:AF:89:ILE:HG21	1.64	0.78
79:B2:734:A:H5''	79:B2:735:C:OP1	1.83	0.78
79:B2:1643:U:O2	80:B5:2262:A:H1'	1.84	0.78
54:BT:71:SER:OG	80:B5:2736:A:C4'	2.31	0.78
8:A7:51:ARG:HD3	80:B5:2678:A:P	2.22	0.78
17:AI:170:SER:CB	79:B2:209:U:O3'	2.32	0.78
52:BR:173:ARG:NH1	79:B2:819:G:N2	2.32	0.78
52:BR:165:LYS:CE	79:B2:824:G:C2	2.62	0.78
38:BD:175:HIS:HA	80:B5:2747:A:H5'	1.64	0.78
32:AX:73:ARG:HE	32:AX:84:THR:HG22	1.49	0.77
79:B2:838:G:N7	88:B2:2069:OHX:N2	2.32	0.77
52:BR:173:ARG:NH1	79:B2:819:G:H22	1.81	0.77
35:BA:187:HIS:ND1	80:B5:1794:G:C2	2.51	0.77
52:BR:64:ARG:NH1	80:B5:1689:U:OP1	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:92:ASP:OD2	84:CW:34:C:C4'	2.32	0.77
8:A7:88:ARG:CA	84:CW:36:U:H5''	2.14	0.77
8:A7:85:SER:HA	84:CW:30:G:O6	1.84	0.77
21:AM:76:GLU:OE2	21:AM:90:LYS:NZ	2.17	0.77
79:B2:1291:G:O5'	79:B2:1291:G:H8	1.66	0.77
29:AU:85:ARG:HH22	79:B2:1335:U:H5'	1.49	0.77
14:AF:80:LYS:HE3	79:B2:1405:G:OP1	1.83	0.77
25:AQ:13:LYS:HE2	79:B2:1584:G:O6	1.83	0.77
33:AY:10:ARG:NH2	79:B2:778:G:H22	1.83	0.77
52:BR:173:ARG:HG2	79:B2:853:G:C5	2.19	0.77
80:B5:1225:A:N9	80:B5:1287:A:C2'	2.47	0.77
80:B5:1952:G:H1	80:B5:2094:C:H42	1.32	0.77
83:CV:236:GLU:HB3	83:CV:360:LEU:HG	1.64	0.77
80:B5:3027:A:HO2'	83:CV:83:PHE:HE2	0.80	0.77
8:A7:88:ARG:CB	84:CW:36:U:O5'	2.32	0.77
14:AF:185:ARG:NH1	79:B2:1572:G:C8	2.52	0.77
23:AO:132:ARG:NE	79:B2:1788:G:C8	2.52	0.77
79:B2:452:A:OP2	88:B2:1916:OHX:N5	2.18	0.77
32:AX:78:LYS:HB3	79:B2:434:G:H5'	1.66	0.77
80:B5:1225:A:C8	80:B5:1287:A:C2'	2.68	0.77
41:BG:162:LEU:HD11	80: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	79:B2:260:U:C4	2.19	0.77
79:B2:1761:U:C5	85:CX:1:A:H5'	2.19	0.77
36:BB:188:ILE:HD12	36:BB:188:ILE:H	1.50	0.77
15:AG:154:ARG:HG3	79:B2:78:A:H8	1.47	0.77
46:BL:5:LYS:HD2	80:B5:1834:U:OP1	81.63	0.77
59:BY:24:SER:OG	82:B8:73:U:OP1	2.02	0.77
83:CV:199:ALA:CB	89:CV:602:GCP:C6	2.56	0.77
7:A6:284:ALA:HB2	26:AR:63:LYS:HE2	1.64	0.77
15:AG:56:ASN:ND2	79:B2:153:G:N2	2.32	0.77
27:AS:83:ALA:HA	27:AS:86:LEU:HD22	1.65	0.77
25:AQ:125:GLU:HB3	79:B2:1585:U:H5''	1.65	0.77
79:B2:1686:C:C2	79:B2:1687:U:C6	2.72	0.77
1:A0:87:ARG:HH12	79:B2:1796:C:H5'	1.49	0.77
17:AI:64:ASN:ND2	79:B2:257:A:C2'	2.41	0.77
33:AY:105:ARG:CB	79:B2:443:C:P	2.72	0.77
79:B2:484:C:H42	79:B2:503:G:H22	1.33	0.77
8:A7:89:ARG:CD	84:CW:33:U:C3'	2.34	0.77
79:B2:1761:U:C4	85:CX:1:A:C5'	2.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:109:LYS:HD2	79:B2:1473:U:H1'	1.65	0.77
79:B2:431:C:C2'	83:CV:386:SER:HB2	2.14	0.77
35:BA:34:TYR:CD2	80:B5:2525:G:C6	2.72	0.77
54:BT:68:THR:OG1	80:B5:2737:C:H4'	1.84	0.77
54:BT:68:THR:HG23	80:B5:2737:C:O5'	1.83	0.77
35:BA:217:GLN:NE2	80:B5:2146:C:OP1	2.15	0.77
35:BA:68:LYS:NZ	80:B5:1579:C:H5''	2.00	0.77
38:BD:272:TYR:CD2	81:B7:22:A:C8	2.73	0.77
38:BD:276:LYS:HB3	81:B7:61:G:H5''	1.67	0.77
57:BW:46:PRO:HB2	57:BW:54:LEU:HD23	1.64	0.77
32:AX:144:ARG:CZ	83:CV: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	79:B2:329:G:O4'	2.03	0.77
79:B2:1370:U:O4	88:B2:1999:OHX:N1	2.17	0.77
52:BR:134:HIS:CD2	80:B5:1947:G:H5'	2.20	0.77
38:BD:260:PHE:CD2	81:B7:121:U:H5'	2.19	0.77
1:A0:3:LYS:HA	79:B2:1792:G:H5''	1.66	0.77
15:AG:62:PRO:HB2	79:B2:162:A:C4'	2.15	0.77
25:AQ:14:LYS:CE	79:B2:1610:G:N7	2.48	0.77
35:BA:194:ASN:HD21	80:B5:822:G:H5'	1.50	0.77
79:B2:420:A:C6	83:CV:288:ARG:NH2	2.53	0.77
1:A0:35:ALA:HB3	1:A0:37:LYS:HE3	1.67	0.77
26:AR:2:GLY:HA3	79:B2:1312:A:P	2.25	0.77
28:AT:89:ARG:HD2	79:B2:1601:G:C6	2.20	0.77
30:AV:74:GLN:NE2	30:AV:81:ASN:O	2.18	0.77
34:AZ:77:ARG:NH2	79:B2:1533:C:C5	2.53	0.77
80:B5:2227:C:H2'	80:B5:2228:A:H5''	1.65	0.77
38:BD:266:ALA:CB	81:B7:1:G:C8	2.68	0.77
25:AQ:143:ARG:CZ	84:CW:32:U:O5'	2.26	0.77
27:AS:84:TRP:HA	27:AS:89:GLN:HE22	1.50	0.76
26:AR:48:ASN:CB	79:B2:1389:C:C4'	2.64	0.76
14:AF:185:ARG:NH2	79:B2:1572:G:O2'	2.18	0.76
79:B2:276:C:O2'	79:B2:277:U:H5''	1.84	0.76
60:BZ:69:LYS:NZ	80:B5:1633:C:OP2	2.15	0.76
80:B5:2511:A:H2'	80:B5:2512:C:H5''	1.66	0.76
38:BD:69:ILE:O	81:B7:8:G:H4'	1.86	0.76
43:BI:103:LEU:C	83:CV:471:LYS:CG	2.53	0.76
52:BR:43:LYS:HG2	80: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	79:B2:946:U:C5'	2.41	0.76
12:AD:174:HIS:HE1	79:B2:1278:G:C4'	1.97	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:150:A:H2'	80:B5:151:A:H5'	1.66	0.76
79:B2:1780:G:C2'	80:B5:2262:A:O2'	2.33	0.76
35:BA:69:TYR:CD2	80:B5:2558:U:C2	2.74	0.76
40:BF:216:VAL:HG11	40:BF:227:GLY:HA3	1.67	0.76
83:CV:78:PRO:O	89:CV:602:GCP:PG	2.44	0.76
84:CW:42:C:H5'	84:CW:42:C:C6	2.20	0.76
8:A7:47:ALA:HB2	80:B5:2678:A:C8	2.19	0.76
6:A5:138:ARG:NH2	79:B2:1236:A:O4'	2.19	0.76
17:AI:42:ARG:CA	79:B2:260:U:O4	2.32	0.76
79:B2:488:G:H4'	79:B2:488:G:OP1	1.86	0.76
79:B2:1655:A:O2'	80:B5:2302:G:O4'	2.03	0.76
80:B5:2509:U:H2'	80:B5:2510:U:H5''	1.68	0.76
37:BC:51:ALA:O	82:B8:26:U:O2'	2.03	0.76
15:AG:132:ARG:NE	79:B2:68:A:C6	2.52	0.76
10:AB:116:LYS:HZ1	79:B2:933:A:P	2.07	0.76
79:B2:1758:U:HO2'	80:B5:2255:A:H5''	1.48	0.76
38:BD:94:ASN:HA	81:B7:47:C:OP2	1.84	0.76
35:BA:219:ILE:HD11	80:B5:2185:G:C5'	2.16	0.76
52:BR:166:ASN:HB3	79:B2:850:A:H5''	1.66	0.76
10:AB:62:LYS:O	10:AB:64:ARG:N	2.18	0.76
20:AL:130:PRO:HG2	79:B2:115:G:C6	2.21	0.76
4:A3:14:TYR:HD2	79:B2:1597:A:C8	2.01	0.76
79:B2:1757:G:H2'	80:B5:2255:A:HO2'	1.49	0.76
35:BA:240:ALA:HB2	80:B5:2154:U:H4'	1.65	0.76
38:BD:218:ARG:HH12	81:B7:31:U:C4'	1.98	0.76
15:AG:169:TYR:OH	79:B2:73:U:C5	2.34	0.76
15:AG:56:ASN:HD21	79:B2:153:G:N2	1.82	0.76
35:BA:95:SER:OG	80:B5:2551:U:N3	2.17	0.76
13:AE:19:LEU:HD13	79:B2:788:A:C4	2.20	0.76
23:AO:46:MET:HA	79:B2:899:G:O5'	1.85	0.76
28:AT:12:GLN:NE2	79:B2:1530:C:C1'	2.49	0.76
29:AU:53:LYS:HA	79:B2:1345:A:O5'	1.85	0.76
79:B2:1646:C:C4'	80:B5:2257:C:H41	1.97	0.76
79:B2:1715:G:C6	79:B2:1716:C:N4	2.54	0.76
10:AB:65:VAL:HG22	79:B2:920:U:C5'	2.14	0.76
83:CV:85:ASN:CG	83:CV:368:LYS:HD3	1.99	0.76
8:A7:32:SER:CB	80:B5:2706:G:O2'	2.34	0.76
15:AG:59:GLN:O	79:B2:155:U:H1'	1.86	0.76
26:AR:88:VAL:HG22	26:AR:89:SER:H	1.47	0.76
8:A7:96:ARG:HH21	84:CW:35:A:C1'	1.98	0.76
80:B5:2623:G:O5'	84:CW:75:C:H5'	1.71	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1761:U:C4	85:CX:1:A:H5'	2.21	0.76
10:AB:181:LEU:O	10:AB:184:LEU:N	2.18	0.76
16:AH:35:LYS:O	16:AH:37:GLU:N	2.18	0.76
31:AW:30:SER:HA	31:AW:34:ILE:HD12	1.67	0.76
1:A0:3:LYS:HA	79:B2:1792:G:C5'	2.15	0.76
15:AG:186:ARG:NH2	79:B2:269:G:N7	2.33	0.76
23:AO:46:MET:HG2	79:B2:899:G:C4'	2.12	0.76
81:B7:60:G:OP2	88:B7:220:OHX:N6	2.19	0.76
43:BI:103:LEU:N	83:CV:471:LYS:HZ2	1.84	0.76
60:BZ:83:THR:HG23	60:BZ:85:TYR:H	1.50	0.76
8:A7:33:LYS:CD	80:B5:2692:A:H5'	2.15	0.76
12:AD:161:GLY:HA2	79:B2:1420:C:O2	1.85	0.76
79:B2:1716:C:O2'	79:B2:1717:G:H8	1.67	0.76
79:B2:433:C:H6	83:CV:388:ARG:CA	1.99	0.76
15:AG:159:ARG:NE	79:B2:77:U:C2	2.52	0.76
2:A1:67:THR:HG22	79:B2:872:G:H4'	1.68	0.76
57:BW:44:LYS:HE3	80:B5:2111:G:N3	2.01	0.76
48:BN:162:ARG:CG	80:B5:56:G:H1'	2.16	0.76
54:BT:70:SER:N	80:B5:2737:C:OP1	2.19	0.76
79:B2:1637:C:N3	84:CW:34:C:C4	2.53	0.76
1:A0:15:ARG:O	79:B2:942:G:N7	2.20	0.75
10:AB:117:TRP:CA	79: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	79:B2:1382:A:C1'	2.17	0.75
9:AA:104:PRO:HG2	79:B2:1321:A:O5'	1.86	0.75
80:B5:3028:G:OP1	83:CV:14:VAL:HG21	1.85	0.75
80:B5:437:G:H22	80:B5:622:A:N6	1.81	0.75
52:BR:173:ARG:CG	79:B2:853:G:C4	2.47	0.75
10:AB:54:LEU:CD1	80:B5:2438:A:H2	1.98	0.75
34:AZ:77:ARG:NH2	79:B2:1533:C:H5	1.84	0.75
4:A3:31:ILE:HD13	79:B2:1199:G:H1	1.50	0.75
26:AR:28:PHE:CD2	79:B2:1389:C:C5	2.74	0.75
79:B2:1645:G:O2'	80:B5:2258:U:O4	2.02	0.75
79:B2:46:A:N1	83:CV:387:ARG:CA	2.48	0.75
52:BR:175:GLN:N	79:B2:852:C:C4'	2.12	0.75
54:BT:49:GLN:CG	80:B5:2756:C:O4'	2.32	0.75
49:BO:72[A]:HIS:CD2	80:B5:3008:A:OP1	2.39	0.75
8:A7:88:ARG:HG3	84:CW:35:A:O2'	1.86	0.75
10:AB:146:GLN:NE2	79:B2:1065:A:H1'	2.00	0.75
15:AG:62:PRO:HB3	79:B2:162:A:O4'	1.85	0.75
33:AY:120:GLY:HA2	79:B2:85:A:C3'	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:174:PRO:O	80:B5:2747:A:H4'	1.87	0.75
80:B5:3049:A:H5'	80:B5:3049:A:H8	1.50	0.75
83:CV:63:GLU:CB	83:CV:210:TRP:CD2	2.69	0.75
44:BJ:55:ARG:NH1	84:CW:48:C:OP1	2.18	0.75
79:B2:1229:G:HO2'	79:B2:1255:G:N2	1.82	0.75
29:AU:23:ARG:NH1	79:B2:1347:U:OP1	2.19	0.75
28:AT:91:TYR:CE1	79:B2:1469:A:OP1	2.38	0.75
8:A7:51:ARG:CD	80:B5:2677:G:O3'	2.34	0.75
37:BC:93:MET:HB2	80:B5:658:G:N2	2.01	0.75
8:A7:51:ARG:CD	80:B5:2677:G:H4'	2.17	0.75
17:AI:36:THR:HB	17:AI:57:ALA:O	1.85	0.75
25:AQ:72:GLY:HA2	79:B2:1608:U:H5''	1.66	0.75
79:B2:1179:G:OP1	84:CW:29:G:O2'	2.01	0.75
10:AB:116:LYS:HA	79:B2:931:C:C4'	2.16	0.75
48:BN:67:ARG:HG3	80:B5:1544:G:H5'	1.67	0.75
37:BC:307:GLN:OE1	80:B5:1345:G:N2	2.19	0.75
42:BH:20:ILE:HD13	42:BH:25:VAL:HG22	1.65	0.75
54:BT:129:LYS:CB	80:B5:1098:A:O5'	2.34	0.75
83:CV:78:PRO:C	89:CV:602:GCP:O2G	2.25	0.75
8:A7:88:ARG:CB	84:CW:36:U:C4'	2.44	0.75
27:AS:143:ARG:HB3	79:B2:1461:C:P	2.27	0.75
79:B2:1057:U:O2'	79:B2:1058:U:OP2	2.02	0.75
38:BD:15:ARG:NE	80:B5:1003:A:H1'	2.02	0.75
38:BD:218:ARG:NH1	81: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
8:A7:77:THR:O	84:CW:43:C:H5'	1.85	0.75
18:AJ:175:ARG:HG3	18:AJ:175:ARG:HH11	1.51	0.75
17:AI:51:GLY:N	79:B2:397:A:H5''	2.00	0.75
23:AO:126:THR:CG2	79:B2:988:A:H2	1.94	0.75
44:BJ:92:ARG:HG2	44:BJ:92:ARG:HH11	1.51	0.75
43:BI:102:MET:CA	83:CV:471:LYS:HZ1	2.00	0.75
79:B2:514:G:H1	79:B2:543:C:H5	1.33	0.75
35:BA:211:HIS:HD1	80:B5:2185:G:P	2.10	0.75
38:BD:226:TYR:HE2	38:BD:236:LEU:HD11	1.51	0.75
13:AE:19:LEU:HD22	79:B2:788:A:H2'	1.68	0.75
23:AO:41:ARG:HH22	79:B2:915:A:N6	1.82	0.75
12:AD:159:HIS:CG	79:B2:1422:A:H4'	2.21	0.75
80:B5:2621:G:C5	84:CW:75:C:C6	2.75	0.75
80:B5:3030:G:OP1	83:CV:436:ARG:N	2.19	0.75
35:BA:114:SER:HB2	35:BA:169:ILE:HD12	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:8:LYS:NZ	80:B5:1473:G:OP2	2.20	0.75
8:A7:92:ASP:OD2	84:CW:34:C:O5'	2.05	0.75
8:A7:87:THR:O	84:CW:36:U:P	2.44	0.75
29:AU:57:ARG:HB3	79:B2:1382:A:O4'	1.87	0.74
6:A5:138:ARG:NH2	79:B2:1235:C:H2'	2.01	0.74
33:AY:10:ARG:CA	79:B2:778:G:O6	2.28	0.74
50:BP:127:ARG:HD2	80:B5:1505:C:OP1	1.86	0.74
35:BA:194:ASN:ND2	80:B5:822:G:C5'	2.50	0.74
36:BB:347:SER:HB3	36:BB:350:ALA:H	1.52	0.74
8:A7:96:ARG:HH21	84:CW:35:A:H1'	1.48	0.74
22:AN:12:SER:O	88:B2:1910:OHX:N3	2.20	0.74
17:AI:141:ARG:CZ	79:B2:196:G:N7	2.50	0.74
20:AL:133:LYS:HD2	79:B2:338:C:OP2	1.85	0.74
80:B5:1308:A:C8	80:B5:1308:A:OP2	2.40	0.74
35:BA:211:HIS:CE1	80:B5:2184:U:O3'	2.40	0.74
38:BD:17:GLN:N	80:B5:2688:U:O2	2.19	0.74
41:BG:185:ARG:CD	82:B8:155:A:H4'	2.16	0.74
43:BI:102:MET:C	83:CV:471:LYS:HZ3	1.90	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	79:B2:741:C:O2	2.20	0.74
23:AO:129:LYS:HA	79:B2:990:C:O3'	1.87	0.74
23:AO:18:ARG:NH1	79:B2:918:U:O2'	2.20	0.74
27:AS:26:ILE:HD11	27:AS:31:ALA:N	2.02	0.74
28:AT:93:HIS:HB2	79:B2:1525:A:H5'	1.68	0.74
88:B2:1918:OHX:N1	88:B2:2062:OHX:N3	2.35	0.74
79:B2:706:A:N1	79:B2:734:A:N6	2.34	0.74
23:AO:125:SER:CB	79:B2:927:C:H1'	2.13	0.74
51:BQ:38:ARG:NH2	80:B5:1348:U:OP2	2.20	0.74
39:BE:21:THR:HB	80:B5:612:U:OP1	1.87	0.74
44:BJ:137:ARG:NE	81:B7:43:U:OP1	2.18	0.74
15:AG:182:GLN:CD	79:B2:271:A:H62	1.91	0.74
80:B5:595:G:H1	80:B5:609:G:H5''	1.53	0.74
83:CV:131:LYS:HD3	89:CV:602:GCP:C6	2.17	0.74
43:BI:102:MET:HB3	83:CV:471:LYS:HZ3	1.47	0.74
10:AB:83:LYS:NZ	23:AO:116:GLU:OE2	2.18	0.74
23:AO:52:ARG:HB2	79:B2:906:A:OP2	1.88	0.74
27:AS:138:THR:OG1	79:B2:1459:C:OP2	2.05	0.74
7:A6:102:ARG:NH2	79:B2:1341:A:O2'	2.20	0.74
15:AG:133:LEU:HA	79:B2:66:U:C4	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:149:ARG:NH1	79:B2:765:G:C2	2.56	0.74
52:BR:101:VAL:HG22	80:B5:1949:G:P	2.27	0.74
56:BV:48:ARG:HA	80: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	79:B2:78:A:C2'	2.17	0.74
15:AG:56:ASN:CG	79:B2:153:G:N2	2.38	0.74
12:AD:161:GLY:N	79:B2:1420:C:O2	2.20	0.74
33:AY:105:ARG:HB3	79:B2:443:C:P	2.26	0.74
43:BI:103:LEU:N	83:CV:471:LYS:NZ	2.35	0.74
83:CV:535:VAL:O	84:CW:73:A:N6	2.20	0.74
14:AF:144:GLU:OE2	14:AF:225:ARG:NH2	2.21	0.74
17:AI:64:ASN:CG	79:B2:258:C:O4'	2.26	0.74
23:AO:18:ARG:NH1	79:B2:918:U:C3'	2.51	0.74
48:BN:72:LYS:NZ	80:B5:2166:A:O3'	2.19	0.74
17:AI:33:PRO:HA	79:B2:331:A:H5'	1.70	0.74
23:AO:128:LYS:O	79:B2:990:C:H4'	1.87	0.74
27:AS:143:ARG:HA	79:B2:1461:C:OP1	1.88	0.74
88:B2:1921:OHX:N5	88:B2:2048:OHX:N3	2.36	0.74
79:B2:355:G:OP2	88:B2:1914:OHX:N4	2.19	0.74
60:BZ:48:ARG:NH1	80:B5:1632:A:OP1	2.20	0.74
60:BZ:15:ARG:HB3	80:B5:1637:A:H5''	1.70	0.74
79:B2:1002:G:H4'	80:B5:2265:C:P	2.28	0.74
44:BJ:55:ARG:HH21	84:CW:47:U:C2'	2.00	0.74
79:B2:1638:G:OP2	85:CX:2:U:C4	2.40	0.74
8:A7:46:LYS:HG3	80:B5:2678:A:H4'	1.68	0.74
10:AB:157:GLN:O	10:AB:159:SER:N	2.20	0.74
15:AG:174:LYS:CE	79:B2:79:C:O2	2.35	0.74
16:AH:50:ASP:N	16:AH:50:ASP:OD1	2.21	0.74
32:AX:144:ARG:HH12	83:CV:314:LYS:CD	1.99	0.74
20:AL:65:SER:HG	79:B2:114:C:HO2'	0.75	0.74
79:B2:913:G:O6	80:B5:2206:G:C3'	2.34	0.74
40:BF:88:ARG:HD2	40:BF:90:LYS:O	1.86	0.74
17:AI:25:ARG:HA	79:B2:400:A:H5''	1.69	0.74
24:AP:42:ARG:NH1	79:B2:1549:C:OP1	2.20	0.74
15:AG:83:CYS:N	79:B2:162:A:P	2.60	0.74
10:AB:116:LYS:HA	79:B2:931:C:O3'	1.86	0.74
35:BA:194:ASN:ND2	80:B5:822:G:H5'	2.03	0.74
46:BL:99:HIS:NE2	80:B5:156:G:C6	2.55	0.74
48:BN:73:ARG:HG2	48:BN:75:VAL:HG13	1.70	0.74
12:AD:159:HIS:HB3	79:B2:1422:A:H5'	1.70	0.73
25:AQ:5:PRO:HG2	25:AQ:24:ALA:HB2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:82:ASP:O	26:AR:83:GLN:NE2	2.20	0.73
29:AU:57:ARG:CB	79:B2:1382:A:O4'	2.36	0.73
29:AU:57:ARG:CG	79:B2:1382:A:C4'	2.66	0.73
15:AG:58:LYS:HA	79:B2:155:U:C5'	2.18	0.73
25:AQ:75:VAL:CG1	79:B2:1610:G:OP1	2.34	0.73
54:BT:68:THR:HG21	80:B5:2736:A:O3'	1.87	0.73
80:B5:2818:U:C6	80:B5:2818:U:H5'	2.23	0.73
35:BA:200:ARG:HD3	80:B5:2187:G:O6	1.88	0.73
38:BD:272:TYR:OH	81:B7:22:A:H1'	1.87	0.73
43:BI:15:LYS:N	80:B5:73:C:OP1	94.88	0.73
54:BT:68:THR:HG22	54:BT:71:SER:H	1.51	0.73
15:AG:115:LYS:NZ	57:BW:74:LYS:O	2.21	0.73
15:AG:83:CYS:HA	79:B2:162:A:P	2.28	0.73
23:AO:41:ARG:HH22	79:B2:915:A:H62	1.36	0.73
26:AR:28:PHE:CE1	79:B2:1389:C:H1'	2.23	0.73
12:AD:7:LYS:NZ	29:AU:115:GLU:OE2	2.21	0.73
79:B2:108:A:H2'	79:B2:109:G:C8	2.23	0.73
79:B2:1427:A:O5'	84:CW:34:C:H6	1.68	0.73
79:B2:431:C:H2'	83:CV:386:SER:CB	2.17	0.73
35:BA:187:HIS:CD2	80:B5:1794:G:C6	2.76	0.73
49:BO:160[A]:ARG:NH2	80:B5:3182:G:OP1	2.22	0.73
59:BY:114:ASP:CG	82:B8:85:G:O6	2.26	0.73
25:AQ:74:HIS:HE1	79: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	79:B2:1479:A:C5'	2.13	0.73
29:AU:85:ARG:NH2	79:B2:1335:U:H5'	2.02	0.73
17:AI:97:THR:HB	79:B2:330:G:OP1	1.88	0.73
15:AG:164:LYS:CE	79:B2:72:A:H5''	2.19	0.73
80:B5:2211:U:H5	80:B5:2234:G:O6	1.71	0.73
48:BN:125:SER:HB3	80:B5:2433:U:H1'	1.70	0.73
52:BR:170:ARG:N	79:B2:851:U:H3'	2.03	0.73
80:B5:2286:U:OP1	83:CV:479:PRO:HD3	1.86	0.73
8:A7:84:LYS:C	84:CW:30:G:C2'	2.56	0.73
15:AG:107:ALA:CB	79:B2:154:G:O3'	2.37	0.73
17:AI:2:GLY:N	79:B2:393:C:OP2	2.21	0.73
15:AG:174:LYS:N	79:B2:79:C:O4'	2.20	0.73
80:B5:2372:A:H5''	80:B5:2373:A:H5'	1.70	0.73
88:B7:203:OHX:N1	88:B7:219:OHX:N2	2.35	0.73
51:BQ:43:PRO:CB	80:B5:728:G:H5''	2.18	0.73
15:AG:133:LEU:HD11	79:B2:66:U:HO2'	1.50	0.73
26:AR:7:LYS:CB	79:B2:1316:G:OP1	2.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:64:ASN:CB	79:B2:258:C:O4'	2.37	0.73
79:B2:582:U:C6	79:B2:582:U:H5''	2.24	0.73
79:B2:818:C:N4	79:B2:819:G:O6	2.21	0.73
80:B5:3289:G:H2'	80: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	79:B2:850:A:N3	2.04	0.73
83:CV:63:GLU:HB2	83:CV:210:TRP:CD2	2.23	0.73
79:B2:440:U:P	83:CV:274:ASN:HD21	2.08	0.73
8:A7:92:ASP:CB	84:CW:35:A:N7	2.33	0.73
79:B2:51:A:H1'	83:CV:242:GLY:N	1.95	0.73
79:B2:1655:A:C4'	80:B5:2302:G:H4'	2.18	0.73
80:B5:2397:A:OP1	80:B5:2398:A:H5''	1.88	0.73
54:BT:89:LEU:HD12	80:B5:2723:U:H5'	1.69	0.73
79:B2:51:A:C2'	83:CV:242:GLY:CA	2.62	0.73
79:B2:1428:G:O5'	84:CW:34:C:H5'	1.89	0.73
11:AC:206:THR:HG21	79:B2:14:C:OP2	1.89	0.73
21:AM:89:ILE:HG23	21:AM:90:LYS:H	1.52	0.73
79:B2:471:A:OP2	88:B2:1954:OHX:N4	2.21	0.73
17:AI:92:ARG:NH1	80:B5:2107:A:O2'	2.22	0.73
38:BD:272:TYR:CE2	81:B7:22:A:H1'	2.24	0.73
38:BD:224:LYS:HD2	81:B7:50:U:O2'	1.88	0.73
44:BJ:55:ARG:HH21	84:CW:47:U:C3'	2.01	0.73
54:BT:6:GLY:HA2	80:B5:2630:C:OP1	1.89	0.73
32:AX:144:ARG:CZ	83:CV:314:LYS:CE	2.66	0.73
8:A7:79:SER:C	84:CW:42:C:O2	2.26	0.73
9:AA:4:PRO:HB2	9:AA:7:PHE:HB2	1.70	0.73
12:AD:64:ARG:O	12:AD:67:ASN:N	2.20	0.73
12:AD:203:PRO:HB3	79:B2:1332:C:H5'	1.69	0.73
79:B2:1686:C:O2'	79:B2:1687:U:C5'	2.37	0.73
20:AL:80:MET:CE	79:B2:325:G:C4'	2.67	0.73
80:B5:2284:C:H3'	83:CV:477:SER:O	1.89	0.73
42:BH:171:ASP:OD1	42:BH:173:ARG:HD3	1.89	0.73
80:B5:2279:A:H62	83:CV:478:LYS:HE3	1.52	0.73
8:A7:92:ASP:OD2	84:CW:34:C:H3'	1.87	0.73
14:AF:97:LEU:O	79:B2:1473:U:O4	2.07	0.73
20:AL:28:SER:OG	79:B2:839:U:H5''	1.89	0.73
23:AO:123:SER:HB2	79:B2:885:G:H21	0.92	0.73
29:AU:53:LYS:CB	79:B2:1345:A:C5'	2.62	0.73
23:AO:120:PRO:HB2	79:B2:887:A:H5''	1.71	0.73
35:BA:71:LEU:HB2	80:B5:1651:U:H5''	1.71	0.73
38:BD:158:ARG:CD	81:B7:46:A:P	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:68:ARG:O	41:BG:69:LEU:HB2	1.89	0.73
12:AD:65:ARG:HA	12:AD:68:GLU:HG3	1.70	0.73
25:AQ:18:ALA:HB2	25:AQ:69:VAL:HG13	1.71	0.73
26:AR:49:LYS:N	79:B2:1389:C:H4'	2.04	0.73
79:B2:1428:G:H5'	79:B2:1428:G:H8	1.53	0.73
24:AP:47:ARG:HH11	79:B2:1555:A:P	2.11	0.73
20:AL:40:LEU:HD13	79:B2:246:G:H1'	1.71	0.73
18:AJ:149:ARG:NH1	79:B2:765:G:N3	2.37	0.73
80:B5:1781:C:H2'	80:B5:1782:U:H6	1.54	0.73
42:BH:70:THR:HB	80:B5:3112:G:O2'	1.88	0.73
80:B5:3027:A:C2'	83:CV:109:GLN:CB	2.63	0.73
83:CV:85:ASN:HD22	83:CV:368:LYS:HD3	1.44	0.73
7:A6:170:ILE:HG21	7:A6:211:ILE:HD11	1.70	0.72
12:AD:4:LEU:O	79:B2:1514:U:C6	2.42	0.72
79:B2:431:C:O2	83:CV:386:SER:HA	1.89	0.72
79:B2:433:C:P	83:CV:391:VAL:HG23	2.29	0.72
22:AN:14:SER:OG	79:B2:960:U:H5	1.72	0.72
8:A7:51:ARG:CZ	80:B5:2677:G:C8	2.71	0.72
36:BB:53:MET:HE1	80:B5:3048:A:H5'	1.71	0.72
8:A7:93:ARG:N	85:CX:3:G:N2	2.35	0.72
17:AI:25:ARG:HA	79:B2:400:A:C5'	2.18	0.72
79:B2:1062:A:OP2	88:B2:2075:OHX:N4	2.22	0.72
27:AS:143:ARG:HB3	79:B2:1461:C:O5'	1.88	0.72
28:AT:43:ASN:HB3	79:B2:1477:G:OP1	1.88	0.72
23:AO:132:ARG:N	79:B2:1787:C:P	2.58	0.72
79:B2:74:U:O2'	79:B2:75:U:OP2	2.06	0.72
23:AO:88:GLY:CA	79:B2:888:U:C5'	2.66	0.72
80:B5:1226:G:C1'	80:B5:1288:U:H4'	2.18	0.72
79:B2:1757:G:C2'	80:B5:2255:A:O2'	2.33	0.72
79:B2:1655:A:C2	80:B5:2291:A:N3	2.56	0.72
8:A7:33:LYS:HE3	80:B5:2692:A:C5'	2.19	0.72
38:BD:207:TYR:CD1	81:B7:33:U:C2	2.77	0.72
39:BE:78:ARG:HH11	39:BE:78:ARG:HG3	1.54	0.72
48:BN:4:TYR:CZ	80:B5:148:G:OP2	2.42	0.72
52:BR:165:LYS:CB	79: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	79:B2:339:C:P	2.61	0.72
79:B2:649:U:O2'	79:B2:650:U:O5'	2.07	0.72
52:BR:166:ASN:N	79:B2:850:A:C8	2.46	0.72
80:B5:2434:U:H4'	80:B5:2435:G:H5''	1.70	0.72
8:A7:96:ARG:NH2	84:CW:35:A:O4'	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:185:GLN:NE2	79:B2:284:G:C2	2.57	0.72
26:AR:48:ASN:HB2	79:B2:1389:C:O5'	1.89	0.72
79:B2:1542:G:N2	79:B2:1568:C:H1'	2.04	0.72
79:B2:433:C:C6	83:CV:388:ARG:CA	2.71	0.72
23:AO:37:GLU:HA	79:B2:895:G:H4'	1.72	0.72
1:A0:3:LYS:HE3	79:B2:1030:A:OP1	1.90	0.72
88:B2:1921:OHX:N5	88:B2:2048:OHX:N6	2.38	0.72
88:B2:1918:OHX:N4	88:B2:2062:OHX:N3	2.37	0.72
79:B2:759:U:OP1	88:B2:2057:OHX:N1	2.22	0.72
35:BA:68:LYS:HZ3	80:B5:1579:C:H5''	1.52	0.72
80:B5:1724:U:H4'	80: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
83:CV:236:GLU:HG2	83:CV:360:LEU:C	2.08	0.72
15:AG:188:ARG:HD2	79:B2:284:G:N7	2.05	0.72
23:AO:129:LYS:NZ	88:B2:2011:OHX:N3	2.37	0.72
31:AW:2:THR:N	79:B2:1034:C:HO2'	1.87	0.72
88:B2:1921:OHX:N2	88:B2:2048:OHX:N4	2.36	0.72
79:B2:415:C:H6	83:CV:287:LEU:C	1.92	0.72
23:AO:45:GLY:CA	79:B2:900:A:OP1	2.35	0.72
80:B5:2285:C:C4	83:CV:478:LYS:HG2	2.23	0.72
35:BA:204:MET:HG2	80:B5:914:A:C2	2.25	0.72
37:BC:80:GLY:O	80: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	80:B5:1898:G:H1'	1.71	0.72
8:A7:68:ARG:HH22	27:AS:145:ARG:HB3	1.54	0.72
8:A7:93:ARG:N	79:B2:1637:C:O2	2.21	0.72
79:B2:1600:A:H4'	79:B2:1601:G:OP1	1.90	0.72
79:B2:1683:C:O2'	79:B2:1684:U:O5'	2.07	0.72
48:BN:67:ARG:NE	80:B5:1544:G:OP1	2.19	0.72
52:BR:165:LYS:O	79:B2:850:A:N3	2.22	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
20:AL:130:PRO:HD2	79:B2:115:G:C5	2.24	0.72
15:AG:174:LYS:CB	79:B2:79:C:HO2'	1.93	0.72
23:AO:125:SER:HG	79:B2:927:C:C4'	2.01	0.72
8:A7:48:ARG:CB	80:B5:2678:A:OP1	2.38	0.72
23:AO:88:GLY:HA3	79:B2:888:U:H5''	1.72	0.72
79:B2:1160:A:H2'	79:B2:1161:C:C6	2.25	0.72
28:AT:43:ASN:CB	79:B2:1477:G:OP1	2.38	0.72
17:AI:64:ASN:OD1	79:B2:257:A:C2	2.43	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:132:ARG:CZ	79:B2:68:A:C4	2.71	0.72
36:BB:103:THR:HG21	36:BB:147:GLU:OE1	1.90	0.72
43:BI:194:GLY:HA3	80:B5:1010:G:H2'	1.72	0.72
51:BQ:158:HIS:H	51:BQ:186:VAL:HG12	1.55	0.72
8:A7:82:THR:HB	84:CW:29:G:H21	0.85	0.72
8:A7:82:THR:HG22	84:CW:29:G:N1	2.04	0.72
17:AI:64:ASN:HB2	79:B2:258:C:H4'	1.71	0.72
26:AR:28:PHE:CD2	79:B2:1389:C:H6	2.00	0.72
88:B2:1921:OHX:N1	88:B2:2048:OHX:N4	2.38	0.72
38:BD:36:LEU:HG	80:B5:2748:A:C2	2.25	0.72
80:B5:2875:U:H3	80:B5:2952:G:H1	1.35	0.72
48:BN:81:TYR:OH	80:B5:908:G:H3'	1.89	0.72
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	79:B2:1584:G:H5''	1.70	0.71
1:A0:79:ILE:HG21	79:B2:1794:A:N3	2.05	0.71
80:B5:2439:A:H2'	80:B5:2440:G:H5''	1.72	0.71
35:BA:13:GLY:HA2	80:B5:943:U:H3'	71.49	0.71
31:AW:57:ARG:NE	79:B2:863:A:OP1	2.22	0.71
79:B2:1191:U:H5'	84:CW:32:U:OP1	1.88	0.71
12:AD:9:ARG:NH1	79:B2:1489:U:P	2.63	0.71
79:B2:433:C:H5''	83:CV:391:VAL:HG23	1.71	0.71
53:BS:91:TYR:HB3	80:B5:1214:U:OP1	1.90	0.71
80:B5:2437:G:H5'	80:B5:2437:G:H8	1.55	0.71
41:BG:181:LYS:HD2	82:B8:155:A:P	2.30	0.71
35:BA:3:ARG:HD3	80:B5:911:C:H41	1.52	0.71
41:BG:193:LYS:HB3	80:B5:7:C:H5''	1.72	0.71
43:BI:102:MET:CB	83:CV:471:LYS:HZ1	2.02	0.71
50:BP:69:ARG:HG2	50:BP:79:THR:HG23	1.71	0.71
23:AO:46:MET:CA	79:B2:899:G:C5'	2.59	0.71
35:BA:234:LYS:NZ	80:B5:2162:U:OP1	2.22	0.71
43:BI:115:MET:CB	80:B5:2865:U:OP1	2.39	0.71
37:BC:52:VAL:HG22	80:B5:346:C:P	2.30	0.71
52:BR:164:LEU:N	79:B2:850:A:O5'	2.05	0.71
52:BR:46:LYS:HZ1	80: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	79:B2:1660:A:OP1	1.90	0.71
41:BG:95:ASN:OD1	41:BG:98:ARG:NH1	2.23	0.71
83:CV:63:GLU:HA	83:CV:210:TRP:CD2	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:88:ARG:CG	84:CW:35:A:C1'	2.63	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
24:AP:130:ARG:C	84:CW:46:G:OP1	2.27	0.71
25:AQ:75:VAL:HB	79:B2:1610:G:P	2.29	0.71
20:AL:132:SER:HA	79:B2:336:G:H4'	1.69	0.71
79:B2:717:C:H42	79:B2:720:G:H22	1.37	0.71
35:BA:69:TYR:HB2	80:B5:2558:U:O4'	1.91	0.71
37:BC:52:VAL:HG22	80:B5:346:C:OP1	1.89	0.71
44:BJ:124:GLY:HA3	80: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	79:B2:1581:C:C5'	2.38	0.71
25:AQ:143:ARG:HH12	84:CW:32:U:C4'	2.03	0.71
28:AT:57:ARG:HG3	28:AT:57:ARG:NH1	2.03	0.71
1:A0:15:ARG:HA	79:B2:942:G:O6	1.90	0.71
37:BC:115:HIS:HB2	80:B5:681:U:C6	2.26	0.71
49:BO:110[A]:PRO:O	49:BO:113[A]:ASP:N	2.20	0.71
79:B2:1179:G:P	84:CW:29:G:HO2'	2.13	0.71
8:A7:33:LYS:HE3	80:B5:2692:A:H5''	1.73	0.71
8:A7:84:LYS:CD	84:CW:32:U:C6	2.74	0.71
15:AG:24:ILE:O	15:AG:26:VAL:N	2.23	0.71
15:AG:107:ALA:CB	79:B2:154:G:C4'	2.63	0.71
22:AN:73:ARG:HD3	79:B2:859:A:N6	2.05	0.71
8:A7:34:LYS:HE3	80:B5:2692:A:O3'	1.90	0.71
35:BA:3:ARG:CD	80:B5:911:C:H42	2.01	0.71
8:A7:84:LYS:C	84:CW:30:G:H2'	2.11	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	79:B2:1564:U:OP1	1.90	0.71
33:AY:112:LYS:NZ	79:B2:55:A:OP1	2.24	0.71
80:B5:1024:G:H2'	80:B5:1026:A:H8	1.56	0.71
52:BR:114:LYS:HD3	80:B5:2093:A:N6	2.05	0.71
80:B5:2283:G:O3'	83:CV:477:SER:HB2	1.89	0.71
51:BQ:147:ARG:NH2	80:B5:670:C:OP1	2.24	0.71
8:A7:77:THR:HG23	84:CW:43:C:O3'	1.90	0.71
80:B5:2614:G:C2	84:CW:76:A:N6	2.59	0.71
13:AE:3:ARG:HB3	79:B2:93:A:H1'	1.73	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	79:B2:397:A:O3'	1.89	0.71
47:BM:125:LYS:HD2	80:B5:2897:A:H5''	93.51	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:68[B]:ARG:NH1	80:B5:2988:C:P	2.64	0.71
38:BD:270:LYS:HG2	81:B7:2:G:H5'	1.71	0.71
38:BD:207:TYR:CB	81:B7:33:U:O2	2.36	0.71
37:BC:60:THR:HG21	37:BC:77:VAL:HG22	1.71	0.71
38:BD:145:PHE:CD2	80:B5:2748:A:H4'	2.26	0.71
44:BJ:59:ILE:HD12	44:BJ:65:ILE:HD11	1.72	0.71
54:BT:2:GLY:N	80:B5:2626:A:O5'	2.24	0.71
8:A7:32:SER:HA	80:B5:2707:C:C5'	2.20	0.71
14:AF:40:ILE:HG23	14:AF:42:LEU:HD22	1.70	0.71
9:AA:185:ARG:HB2	30:AV:45:ALA:HB3	1.72	0.71
32:AX:77:ILE:HG23	83:CV:391:VAL:CG1	2.21	0.71
79:B2:1290:U:H2'	79:B2:1291:G:C8	2.25	0.71
28:AT:48:GLN:OE1	79:B2:1532:U:H1'	1.91	0.71
79:B2:1758:U:C5'	80:B5:2255:A:O3'	2.36	0.71
79:B2:415:C:C4	83:CV:288:ARG:HD2	2.22	0.71
15:AG:133:LEU:HA	79:B2:66:U:H3	1.55	0.71
52:BR:165:LYS:NZ	79:B2:824:G:H1'	2.05	0.71
60:BZ:17:ARG:NH2	80:B5:1634:G:N7	2.38	0.71
79:B2:913:G:C6	80:B5:2206:G:C4'	2.65	0.71
35:BA:40:TYR:O	80:B5:2550:U:C5	2.35	0.71
83:CV:537:GLY:HA2	84:CW:73:A:C8	2.26	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	79:B2:141:U:OP2	1.91	0.70
26:AR:48:ASN:HB2	79:B2:1389:C:C4'	2.21	0.70
32:AX:77:ILE:CG2	83:CV:391:VAL:CG1	2.69	0.70
6:A5:140:TYR:OH	79:B2:1234:A:H1'	1.91	0.70
14:AF:109:LYS:CE	79:B2:1474:G:P	2.77	0.70
17:AI:41:LYS:HE2	79:B2:260:U:OP2	1.91	0.70
8:A7:28:SER:HB2	80:B5:2708:C:C4'	2.18	0.70
48:BN:109:ARG:NH1	82:B8:140:G:O3'	2.23	0.70
38:BD:146:LEU:HD13	80:B5:2746:A:C2	2.26	0.70
80:B5:2621:G:C4	84:CW:75:C:C5	2.79	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
1:A0:95:ARG:HA	79:B2:1797:A:O4'	1.91	0.70
54:BT:87:LYS:NZ	80:B5:2728:G:N7	2.39	0.70
24:AP:59:LYS:NZ	79:B2:1242:A:OP1	2.23	0.70
29:AU:106:ILE:HG13	29:AU:107:THR:H	1.53	0.70
79:B2:1564:U:H2'	79:B2:1565:C:C6	2.26	0.70
79:B2:416:A:OP2	83:CV:287:LEU:HD22	1.85	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:88:GLY:H	80:B5:1729:A:P	102.26	0.70
52:BR:104:ARG:HH12	80:B5:1949:G:C5'	2.03	0.70
80:B5:2407:C:H2'	80:B5:2408:U:H6	1.56	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	79:B2:1281:G:OP1	1.92	0.70
79:B2:992:A:H2	79:B2:1012:U:H3	1.38	0.70
80:B5:2836:C:H5	80:B5:2852:C:N4	1.86	0.70
8:A7:31:SER:O	80: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	79: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
28:AT:88:VAL:HG22	79:B2:1172:G:N2	2.00	0.70
33:AY:105:ARG:HB2	79:B2:443:C:P	2.31	0.70
80:B5:1631:C:H5''	80:B5:1632:A:H5''	1.73	0.70
80:B5:2667:A:H8	80:B5:2667:A:H5'	1.56	0.70
41:BG:240:ASN:ND2	80:B5:2584:G:C4	2.60	0.70
52:BR:74:ARG:HD2	80:B5:1942:U:OP2	1.92	0.70
8:A7:77:THR:CG2	84:CW:43:C:C3'	2.64	0.70
15:AG:110:ALA:CB	79:B2:163:G:C1'	2.63	0.70
23:AO:41:ARG:CZ	79:B2:916:U:N3	2.47	0.70
79:B2:1448:G:O6	88:B2:2081:OHX:N1	2.25	0.70
79:B2:1746:A:H4'	80:B5:2290:C:O2'	1.92	0.70
38:BD:207:TYR:CE2	81:B7:33:U:C4	2.79	0.70
40:BF:151:ARG:NH2	80:B5:1334:U:O2'	2.24	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	80:B5:2724:U:H4'	2.26	0.70
15:AG:9:VAL:HG13	57:BW:78:ALA:O	1.91	0.70
25:AQ:97:VAL:HG12	25:AQ:98:ASP:H	1.57	0.70
28:AT:86:ARG:HG3	28:AT:86:ARG:HH11	1.55	0.70
79:B2:226:A:H2'	79:B2:227:U:H5'	1.73	0.70
79:B2:653:C:H2'	79:B2:654:C:O4'	1.92	0.70
23:AO:27:PHE:CE1	79:B2:916:U:O2'	2.19	0.70
46:BL:99:HIS:CD2	80:B5:156:G:C2	2.78	0.70
52:BR:170:ARG:NH2	88:BR:201:OHX:N4	2.38	0.70
83:CV:239:VAL:O	83:CV:359:THR:HG23	1.92	0.70
79:B2:48:G:C5	83:CV:387:ARG:NH1	2.59	0.70
80:B5:2286:U:C5	83:CV:478:LYS:CA	2.75	0.70
8:A7:51:ARG:CD	80:B5:2677:G:C4'	2.68	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:174:LYS:HE2	79:B2:79:C:O2	1.92	0.70
18:AJ:117:GLY:O	18:AJ:119:ALA:N	2.24	0.70
15:AG:58:LYS:CA	79:B2:155:U:H5'	2.21	0.70
15:AG:62:PRO:HB2	79:B2:162:A:H5'	1.74	0.70
79:B2:1780:G:O6	80:B5:2263:C:H4'	1.46	0.70
17:AI:138:ASN:CG	79:B2:197:A:N1	2.44	0.70
79:B2:1769:U:OP2	88:B2:2028:OHX:N1	2.25	0.70
17:AI:31:ARG:NH2	79:B2:333:A:OP1	2.25	0.70
80:B5:595:G:N1	80:B5:609:G:H5''	2.06	0.70
38:BD:260:PHE:CD2	81:B7:121:U:C5'	2.73	0.70
38:BD:23:ARG:NH2	80:B5:2703:A:OP2	2.23	0.70
13:AE:22:LYS:NZ	79:B2:772:G:OP1	2.21	0.70
43:BI:194:GLY:H	80:B5:1010:G:H21	1.40	0.70
48:BN:140:LYS:HG3	80:B5:127:G:OP1	1.91	0.70
80:B5:1765:U:H4'	80:B5:1765:U:OP1	1.91	0.70
53:BS:39:SER:OG	81:B7:98:C:OP1	2.08	0.70
35:BA:199:THR:HG21	80:B5:914:A:C8	2.27	0.70
46:BL:128:ARG:NH2	80:B5:170:G:OP1	2.24	0.70
52:BR:43:LYS:O	52:BR:47:ASN:HB2	1.92	0.70
43:BI:102:MET:HA	83:CV:471:LYS:HZ1	1.57	0.70
6:A5:146:SER:HB3	79:B2:1234:A:O2'	1.91	0.70
12:AD:29:LEU:HD21	12:AD:69:LEU:HD11	1.73	0.70
23:AO:123:SER:OG	79:B2:885:G:N3	2.24	0.70
28:AT:49:ASP:HB3	28:AT:53:TRP:HB3	1.73	0.70
24:AP:115:TYR:HE2	79:B2:1557:U:H5'	1.54	0.70
1:A0:92:ARG:HG2	79:B2:1796:C:OP1	1.92	0.70
88:B2:1915:OHX:N2	88:B2:2069:OHX:N2	2.40	0.70
79:B2:434:G:N7	88:CV:601:OHX:N4	2.40	0.70
48:BN:112:ASN:OD1	82:B8:141:C:H1'	1.92	0.70
83:CV:537:GLY:CA	84:CW:73:A:C8	2.75	0.70
9:AA:52:LYS:HD2	30:AV:82:VAL:HA	1.72	0.69
17:AI:51:GLY:N	79:B2:397:A:C5'	2.55	0.69
26:AR:43:SER:HB2	79:B2:1332:C:OP1	1.91	0.69
27:AS:40:ARG:CZ	79:B2:1539:G:H4'	2.22	0.69
29:AU:59:PRO:HG3	79:B2:1381:U:H4'	1.74	0.69
32:AX:91:GLY:O	32:AX:93:LEU:N	2.25	0.69
33:AY:8:ARG:HB3	79:B2:780:A:H8	1.55	0.69
29:AU:75:GLY:CA	79:B2:1194:A:OP2	2.40	0.69
12:AD:161:GLY:CA	79:B2:1420:C:O2	2.40	0.69
23:AO:51:ASP:CG	79:B2:902:G:H1	1.96	0.69
80:B5:155:G:H5''	80:B5:156:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:439:C:H4'	80:B5:440:A:H5'	1.74	0.69
38:BD:270:LYS:HB2	81:B7:2:G:H4'	1.72	0.69
37:BC:51:ALA:HB3	82: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	88: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	79:B2:86:A:H5'	2.27	0.69
79:B2:1179:G:H5''	84:CW:29:G:O2'	1.91	0.69
23:AO:88:GLY:HA3	79:B2:888:U:H5'	1.67	0.69
79:B2:995:A:C5'	80:B5:2196:C:OP1	2.32	0.69
54:BT:78:LYS:CE	80:B5:2728:G:O6	2.40	0.69
38:BD:269:SER:HA	81:B7:22:A:N1	2.07	0.69
35:BA:69:TYR:O	80:B5:1650:G:H4'	1.92	0.69
42:BH:166:ARG:HH11	42:BH:168:ARG:NH2	1.87	0.69
43:BI:102:MET:HA	83:CV:471:LYS:NZ	2.05	0.69
79:B2:432:G:H4'	83:CV:385:VAL:HG13	1.74	0.69
10:AB:176:VAL:O	10:AB:178:GLY:N	2.25	0.69
14:AF:185:ARG:HH22	79:B2:1572:G:C2'	2.05	0.69
15:AG:175:ILE:HG12	79:B2:78:A:C1'	2.14	0.69
14:AF:185:ARG:NH1	79:B2:1572:G:H1'	2.06	0.69
79:B2:565:C:O2	88:B2:1917:OHX:N5	2.25	0.69
79:B2:582:U:H6	79:B2:582:U:H5''	1.57	0.69
23:AO:125:SER:OG	79:B2:927:C:C4'	2.39	0.69
53:BS:84:ARG:HD3	81:B7:89:G:H4'	1.74	0.69
80:B5:2624:G:C4	84:CW:76:A:OP1	2.25	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	79:B2:1546:G:OP2	2.23	0.69
79:B2:838:G:N7	88:B2:2069:OHX:N6	2.40	0.69
53:BS:137:ARG:HD3	80:B5:1213:G:OP1	1.91	0.69
80:B5:173:G:HO2'	80:B5:174:C:H6	1.40	0.69
80:B5:2286:U:C2'	83:CV:479:PRO:HD2	2.22	0.69
38:BD:12:TYR:OH	80:B5:2688:U:OP1	2.10	0.69
54:BT:8:ARG:HD3	80:B5:2757:U:C4'	2.22	0.69
44:BJ:23:VAL:HG12	44:BJ:25:GLU:H	1.56	0.69
52:BR:165:LYS:NZ	79:B2:824:G:N3	2.40	0.69
53:BS:9:VAL:HG22	53:BS:61:ILE:HD13	1.74	0.69
83:CV:388:ARG:NE	88:CV:601:OHX:N4	2.39	0.69
43:BI:102:MET:C	83:CV:471:LYS:NZ	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:136:SER:HA	79:B2:1580:C:O2'	1.92	0.69
79:B2:1711:C:H2'	79:B2:1712:A:H5''	1.74	0.69
79:B2:437:A:OP1	88:B2:2047:OHX:N3	2.26	0.69
79:B2:591:A:H2'	79:B2:592:A:C8	2.27	0.69
52:BR:103:ARG:NH1	80:B5:1722:U:OP2	2.24	0.69
80:B5:549:U:H2'	80:B5:550:A:C8	2.27	0.69
58:BX:49:LYS:CE	82:B8:135:G:OP1	2.38	0.69
48:BN:38:ARG:NH2	82:B8:143:U:OP1	2.25	0.69
36:BB:56:ILE:HD11	36:BB:359:ILE:HG12	1.74	0.69
46:BL:100:ARG:NE	80:B5:66:A:OP2	2.26	0.69
60:BZ:15:ARG:HD3	80: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	79:B2:209:U:H5'	2.23	0.69
17:AI:49:ARG:HG2	79:B2:117:U:O2'	1.92	0.69
29:AU:23:ARG:NH2	79:B2:1347:U:H6	1.90	0.69
52:BR:165:LYS:CG	79:B2:849:C:O2	2.39	0.69
52:BR:168:ALA:HB3	79:B2:850:A:H2'	1.74	0.69
56:BV:12:ARG:NH2	80:B5:3092:C:O2'	2.26	0.69
35:BA:204:MET:HG2	80:B5:914:A:C4	2.28	0.69
60:BZ:16:GLY:O	60:BZ:18:TYR:N	2.25	0.69
8:A7:48:ARG:HG3	80:B5:2678:A:H5'	1.74	0.69
26:AR:50:ILE:O	26:AR:54:THR:HG23	1.92	0.69
17:AI:47:ARG:HH21	79:B2:397:A:P	2.15	0.69
80:B5:1875:G:H2'	80:B5:1876:U:H5''	1.73	0.69
38:BD:48:LYS:NZ	80:B5:2749:G:OP1	2.17	0.69
35:BA:35:ALA:CB	80:B5:39:A:H5''	87.39	0.69
35:BA:85:GLY:CA	80:B5:2554:A:C4	2.76	0.69
36:BB:41:VAL:CA	36:BB:185:GLY:HA3	2.19	0.69
41:BG:137:ASN:HB2	80:B5:148:G:C6	2.27	0.69
9:AA:193:GLN:O	9:AA:195:TRP:N	2.26	0.69
79:B2:1179:G:C5'	84:CW:29:G:O2'	2.41	0.69
79:B2:1533:C:H4'	79:B2:1539:G:N1	2.06	0.69
88:B2:1921:OHX:N1	88:B2:2048:OHX:N3	2.40	0.69
15:AG:182:GLN:CD	79:B2:271:A:N6	2.46	0.69
80:B5:1781:C:H2'	80:B5:1782:U:C6	2.26	0.69
35:BA:187:HIS:CE1	80:B5:1794:G:N1	2.61	0.69
44:BJ:142:LYS:NZ	80: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
79:B2:131:C:OP1	88:B2:1951:OHX:N4	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:62:PRO:CG	79:B2:161:U:O2'	2.38	0.69
79:B2:440:U:O5'	83:CV:276:ARG:HG3	1.93	0.69
15:AG:133:LEU:CA	79:B2:66:U:C4	2.75	0.69
35:BA:237:LEU:HD23	80:B5:2183:A:H2	1.56	0.69
54:BT:5:HIS:N	80:B5:2630:C:OP2	2.24	0.69
38:BD:270:LYS:HB2	81:B7:2:G:C4'	2.21	0.69
49:BO:62[A]:THR:H	49:BO:69[A]:GLY:HA3	1.57	0.69
52:BR:165:LYS:HB2	79:B2:849:C:H2'	1.75	0.69
79:B2:46:A:N1	83:CV:387:ARG:HB3	2.07	0.69
1:A0:3:LYS:HA	79:B2:1792:G:O5'	1.93	0.69
18:AJ:109:LEU:HD13	18:AJ:129:ILE:HD13	1.75	0.69
15:AG:60:GLY:C	79:B2:154:G:H21	1.91	0.69
79:B2:1655:A:H4'	80:B5:2302:G:H4'	1.73	0.69
79:B2:1738:U:O4	88:B2:1919:OHX:N4	2.26	0.69
15:AG:175:ILE:HG13	79:B2:78:A:C4	2.23	0.69
49:BO:68[A]:ARG:NH1	80:B5:2988:C:P	2.65	0.69
38:BD:272:TYR:CE2	81:B7:22:A:C1'	2.76	0.69
37:BC:334:PHE:CD2	80:B5:578:A:C6	2.81	0.69
15:AG:132:ARG:HG3	79:B2:68:A:H61	1.47	0.69
17:AI:75:LYS:HB2	79:B2:258:C:H5''	1.74	0.69
22:AN:55:ARG:NH1	22:AN:56:ASP:OD2	2.26	0.69
15:AG:159:ARG:HD3	79:B2:77:U:H3	1.57	0.69
49:BO:60[B]:LYS:NZ	80:B5:1307:G:H5''	2.08	0.69
80:B5:1355:A:H4'	80:B5:1356:U:O5'	1.93	0.69
58:BX:111:ASN:HD21	80:B5:1608:C:H5''	1.55	0.69
80:B5:2403:G:N2	80:B5:2404:A:H62	1.91	0.69
35:BA:209:HIS:HE1	80:B5:2184:U:OP1	1.76	0.69
35:BA:236:GLY:H	80:B5:2183:A:C2'	2.05	0.69
83:CV:248:ASP:CB	83:CV:360:LEU:CD2	2.68	0.69
83:CV:199:ALA:HB1	89:CV:602:GCP:N7	2.08	0.69
80:B5:2621:G:H2'	84:CW:75:C:C2	2.13	0.69
2:A1:67:THR:O	79:B2:871:G:O2'	2.11	0.68
4:A3:32:ARG:NH2	79:B2:1597:A:OP2	2.26	0.68
32:AX:99:ASN:HB2	83:CV:378:LYS:HZ2	1.58	0.68
79:B2:1646:C:C3'	80:B5:2257:C:H42	2.05	0.68
41:BG:38:GLN:HA	80:B5:2557:A:C2	2.29	0.68
80:B5:2621:G:C8	84:CW:75:C:C4	2.75	0.68
8:A7:32:SER:CB	80:B5:2692:A:H1'	2.22	0.68
35:BA:199:THR:OG1	80:B5:913:A:C5'	2.41	0.68
36:BB:126:LYS:NZ	80:B5:3294:A:OP2	2.26	0.68
52:BR:168:ALA:CB	79:B2:850:A:O2'	2.40	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AN:84:ILE:HG22	22:AN:135:LEU:HD21	1.73	0.68
79:B2:176:C:OP1	88:B2:1951:OHX:N3	2.26	0.68
35:BA:231:SER:OG	80:B5:2164:A:OP2	2.10	0.68
35:BA:21:ARG:HD2	80:B5:825:U:OP1	1.93	0.68
88:B7:203:OHX:N1	88:B7:219:OHX:N5	2.41	0.68
38:BD:272:TYR:CZ	81:B7:22:A:C1'	2.75	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
46:BL:61:PRO:HD3	80:B5:75:G:H4'	1.74	0.68
79:B2:415:C:C6	83:CV:288:ARG:HG2	2.29	0.68
79:B2:431:C:H2'	83:CV:386:SER:CA	2.23	0.68
31:AW:15:ASN:HD21	31:AW:71:LYS:HA	1.58	0.68
29:AU:53:LYS:CB	79:B2:1345:A:H5'	2.24	0.68
15:AG:87:ARG:NH1	79:B2:159:U:O2	2.26	0.68
15:AG:174:LYS:CB	79:B2:79:C:C4'	2.71	0.68
23:AO:29:HIS:NE2	79:B2:918:U:O4'	2.25	0.68
36:BB:246:LEU:N	80:B5:1889:G:OP1	2.25	0.68
8:A7:51:ARG:NH1	80:B5:2677:G:N9	2.41	0.68
80:B5:3289:G:H2'	80:B5:3290:G:H8	1.59	0.68
23:AO:20:TYR:HE2	79:B2:917:U:OP1	1.75	0.68
28:AT:12:GLN:OE1	79:B2:1529:C:C1'	2.41	0.68
46:BL:99:HIS:CD2	80:B5:156:G:C6	2.81	0.68
80:B5:3317:U:H4'	80:B5:3318:G:O5'	1.92	0.68
52:BR:8:LYS:NZ	80:B5:1473:G:P	2.67	0.68
53:BS:50:LYS:CE	81:B7:76:A:N3	2.56	0.68
32:AX:144:ARG:NH1	83:CV:314:LYS:CE	2.57	0.68
17:AI:50:GLY:HA2	79:B2:397:A:C4'	2.23	0.68
17:AI:92:ARG:NH2	80:B5:2107:A:H4'	2.07	0.68
79:B2:131:C:O2'	79:B2:132:U:OP1	2.11	0.68
28:AT:12:GLN:OE1	79:B2:1529:C:H1'	1.92	0.68
79:B2:839:U:H2'	79:B2:840:U:H5'	1.76	0.68
51:BQ:63:SER:HB2	80:B5:785:G:N2	2.09	0.68
38:BD:207:TYR:CE2	81:B7:33:U:C5	2.81	0.68
38:BD:105:ILE:O	38:BD:109:THR:HG23	1.92	0.68
51:BQ:20:LYS:HD3	80:B5:671:U:O2'	1.93	0.68
83:CV:20:LYS:CB	89:CV:602:GCP:H8	2.00	0.68
4:A3:31:ILE:CD1	79:B2:1199:G:H1	2.07	0.68
13:AE:22:LYS:N	79:B2:773:C:OP1	2.26	0.68
26:AR:48:ASN:ND2	79:B2:1389:C:P	2.62	0.68
79:B2:1428:G:O5'	84:CW:34:C:C5'	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:701:U:H3	79:B2:737:A:N6	1.87	0.68
80:B5:1013:G:H2'	80:B5:1014:U:O4'	1.94	0.68
54:BT:127:GLN:HG3	80:B5:1095:U:N3	2.09	0.68
60:BZ:69:LYS:NZ	80:B5:1633:C:OP1	2.25	0.68
80:B5:2623:G:C2'	84:CW:76:A:OP2	2.41	0.68
8:A7:46:LYS:HG3	80:B5:2678:A:C4'	2.23	0.68
39:BE:26:ARG:NH2	80:B5:607:A:OP1	2.26	0.68
40:BF:134:VAL:O	40:BF:229:PHE:HA	1.94	0.68
79:B2:431:C:C2	83:CV:386:SER:CB	2.76	0.68
10:AB:115:ARG:O	79: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	79:B2:68:A:OP1	2.27	0.68
15:AG:164:LYS:HB3	15:AG:167:LYS:HB3	1.75	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	79:B2:1402:G:H4'	1.74	0.68
15:AG:59:GLN:N	79:B2:155:U:C5'	2.56	0.68
79:B2:1656:U:O2'	80:B5:2292:U:O2'	1.69	0.68
38:BD:207:TYR:CD2	81:B7:33:U:N3	2.62	0.68
36:BB:117:ARG:CZ	36:BB:175:LYS:HD2	2.23	0.68
42:BH:188:THR:HG22	42:BH:189:GLU:HG2	1.75	0.68
83:CV:200:VAL:CA	89:CV:602:GCP:N1	2.57	0.68
83:CV:199:ALA:HB3	89:CV:602:GCP:C5	2.24	0.68
8:A7:28:SER:CB	80: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	79:B2:1572:G:H8	1.91	0.68
79:B2:1644:C:O2	80:B5:2255:A:N1	2.26	0.68
80:B5:2507:C:O2'	80:B5:2508:U:OP1	2.10	0.68
80:B5:3330:A:H8	80:B5:3330:A:H5''	1.59	0.68
83:CV:537:GLY:O	84:CW:73:A:O4'	2.11	0.68
8:A7:78:ASP:HB3	84:CW:43:C:N4	2.07	0.68
44:BJ:55:ARG:NH2	84:CW:47:U:O3'	2.26	0.68
25:AQ:143:ARG:NH1	84:CW:32:U:C4'	2.57	0.68
26:AR:48:ASN:HB3	79:B2:1389:C:C4'	2.23	0.68
79:B2:1449:U:H2'	79:B2:1450:U:C6	2.28	0.68
8:A7:47:ALA:HA	80:B5:2678:A:C8	2.28	0.68
80:B5:3228:C:O2'	80:B5:3229:G:OP2	2.11	0.68
36:BB:150:ARG:HH11	36:BB:150:ARG:HG2	1.58	0.68
16:AH:107:ARG:NH1	79:B2:741:C:O2	2.27	0.68
9:AA:101:ARG:HH22	79:B2:1320:U:H3'	1.50	0.68
79:B2:1655:A:H1'	80:B5:2302:G:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AH:119:THR:HG23	79:B2:639:U:OP1	1.93	0.68
43:BI:194:GLY:HA3	80:B5:1010:G:N3	2.09	0.68
60:BZ:115:LYS:HD3	80:B5:1629:U:H4'	1.75	0.68
80:B5:2572:C:O2'	80:B5:2573:G:OP2	2.08	0.68
80:B5:2623:G:N1	84:CW:76:A:OP1	2.15	0.68
54:BT:6:GLY:CA	80:B5:2630:C:H5''	2.23	0.68
35:BA:15:ILE:HD12	80:B5:822:G:N3	2.09	0.68
46:BL:19:GLN:NE2	82:B8:53:A:OP1	46.80	0.68
41:BG:136:LEU:HD12	80:B5:147:U:H5'	1.76	0.68
51:BQ:69:ARG:HH22	80:B5:720:A:H2	1.39	0.68
55:BU:19:VAL:O	55:BU:23:THR:OG1	2.11	0.68
18:AJ:169:PRO:HD2	18:AJ:174:ARG:HD2	1.76	0.67
25:AQ:40:GLU:OE2	79: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	82:B8:143:U:P	2.17	0.67
80:B5:2622:C:N3	84:CW:75:C:C4'	2.56	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
79:B2:38:C:H2'	79:B2:39:A:H5'	1.76	0.67
23:AO:41:ARG:HH21	79:B2:915:A:N6	1.89	0.67
23:AO:128:LYS:C	79:B2:990:C:H4'	2.14	0.67
80:B5:2996:U:OP1	80:B5:2996:U:H4'	1.95	0.67
83:CV:63:GLU:C	83:CV: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	79:B2:1019:A:OP2	1.94	0.67
79:B2:1339:C:O2'	79:B2:1340:U:OP1	2.12	0.67
15:AG:53:SER:O	79:B2:163:G:H4'	1.94	0.67
17:AI:178:ARG:NH2	79:B2:207:U:O2	2.27	0.67
79:B2:1758:U:H5'	80:B5:2256:A:P	2.34	0.67
80:B5:2957:G:H8	80:B5:2957:G:H5'	1.59	0.67
54:BT:51:GLY:HA3	54:BT:92:ARG:HG3	1.76	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
13:AE:13:ALA:O	13:AE:39:ARG:NH2	2.27	0.67
15:AG:112:VAL:HG22	79:B2:164:A:C4'	2.12	0.67
16:AH:50:ASP:HA	16:AH:56:LYS:HA	1.76	0.67
22:AN:15:ALA:O	79:B2:959:U:H5'	1.94	0.67
79:B2:1619:C:OP2	88:B2:2071:OHX:N4	2.28	0.67
15:AG:8:PRO:HB3	79:B2:165:G:C5'	2.24	0.67
1:A0:87:ARG:CZ	79:B2:1797:A:C5	2.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:175:ILE:C	79:B2:78:A:H2	1.97	0.67
46:BL:45:LYS:HE3	80:B5:241:G:H5'	1.76	0.67
46:BL:16:LYS:O	80:B5:48:A:OP2	2.12	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
80:B5:2621:G:C1'	84:CW:75:C:C5	2.72	0.67
25:AQ:122:ARG:CA	79:B2:1584:G:H5''	2.24	0.67
79:B2:1756[B]:A:O2'	79:B2:1757:G:H5'	1.95	0.67
79:B2:433:C:C5'	83:CV:391:VAL:HG23	2.25	0.67
37:BC:93:MET:O	80:B5:1438:U:H1'	1.95	0.67
80:B5:304:G:N3	80:B5:304:G:H5'	2.10	0.67
42:BH:44:THR:HG22	80:B5:3186:A:C2	2.28	0.67
80:B5:3295:A:H2'	80:B5:3296:A:C8	2.29	0.67
60:BZ:135:ARG:CZ	80:B5:1807:G:H5''	2.23	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	79:B2:1347:U:C6	2.63	0.67
12:AD:204:ASP:CG	79:B2:1330:G:H1	1.90	0.67
79:B2:1747:G:O2'	80:B5:2304:C:C5'	2.34	0.67
79:B2:838:G:O6	88:B2:2069:OHX:N2	2.28	0.67
22:AN:3:ARG:NH1	79:B2:867:G:OP1	2.28	0.67
79:B2:913:G:O6	80:B5:2206:G:C5'	2.38	0.67
38:BD:274:GLN:OE1	81:B7:60:G:N3	2.27	0.67
8:A7:89:ARG:CZ	84:CW:33:U:C4	2.78	0.67
9:AA:70:PRO:HB2	9:AA:94:GLY:HA3	1.77	0.67
23:AO:38:THR:OG1	79:B2:896:U:H1'	1.93	0.67
32:AX:130:VAL:O	32:AX:131:SER:HB3	1.93	0.67
79:B2:1310:U:O4	88:B2:2078:OHX:N3	2.28	0.67
88:B2:1918:OHX:N2	88:B2:2062:OHX:N5	2.43	0.67
23:AO:120:PRO:HB3	79:B2:887:A:H5''	1.75	0.67
80:B5:1560:G:O2'	80:B5:1561:G:OP1	2.12	0.67
80:B5:2285:C:H5'	83:CV:475:ARG:O	1.95	0.67
49:BO:68[B]:ARG:NH1	80: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	81: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
15:AG:174:LYS:HB2	79:B2:79:C:C3'	2.22	0.67
32:AX:96:VAL:HG23	32:AX:97:ASP:H	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:174:LYS:CB	79:B2:79:C:C2'	2.38	0.67
41:BG:129:PRO:CG	80:B5:121:A:C2	2.78	0.67
38:BD:269:SER:O	81:B7:22:A:N6	2.27	0.67
36:BB:221:THR:HG22	36:BB:273:HIS:H	1.60	0.67
53:BS:13:ARG:HG3	53:BS:13:ARG:NH1	2.08	0.67
3:A2:32:PHE:HE1	3:A2:38:ARG:HB3	1.58	0.67
79:B2:1428:G:C5'	84:CW:34:C:C5'	2.66	0.67
79:B2:356:G:OP2	88:B2:1914:OHX:N6	2.28	0.67
48:BN:4:TYR:CE1	80:B5:148:G:OP2	2.48	0.67
54:BT:2:GLY:CA	80:B5:2626:A:O5'	2.43	0.67
48:BN:112:ASN:CG	82:B8:141:C:O2	2.33	0.67
37:BC:36:HIS:O	37:BC:40:THR:HG23	1.94	0.67
83:CV:78:PRO:O	89:CV:602: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	79: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	79:B2:1098:U:OP1	1.94	0.67
15:AG:108:VAL:CG1	79:B2:153:G:O2'	2.42	0.67
52:BR:169:ALA:HB3	79:B2:851:U:C4	1.72	0.67
80:B5:1225:A:C1'	80:B5:1287:A:C2'	2.73	0.67
80:B5:420:G:O5'	80: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	81:B7:47:C:P	2.35	0.67
79:B2:1427:A:C3'	84:CW:34:C:C1'	2.72	0.67
84:CW:48:C:C2	84:CW:59:U:H1'	2.30	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	79:B2:1034:C:OP1	2.26	0.66
26:AR:49:LYS:CG	79:B2:1390:U:P	2.80	0.66
79:B2:1746:A:H2	80:B5:2302:G:N3	1.92	0.66
79:B2:730:G:O6	88:B2:2046:OHX:N4	2.28	0.66
80:B5:252:U:H4'	80:B5:253:A:C5'	2.25	0.66
37:BC:88:GLY:CA	80:B5:1729:A:OP1	101.95	0.66
48:BN:60:VAL:HG21	82:B8:142:C:H5''	1.77	0.66
80:B5:2621:G:C4	84:CW:75:C:C6	2.83	0.66
26:AR:10:LYS:HE3	79:B2:1316:G:HO2'	1.51	0.66
14:AF:80:LYS:CE	79:B2:1405:G:OP1	2.43	0.66
79:B2:1537:C:N3	88:B2:2044:OHX:N3	2.43	0.66
20:AL:10:GLU:CG	79:B2:327:U:O2'	2.25	0.66
32:AX:78:LYS:HB3	79:B2:434:G:C5'	2.25	0.66
79:B2:995:A:H5''	80:B5:2196:C:P	2.36	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2872:A:OP1	80:B5:2872:A:H4'	1.93	0.66
41:BG:129:PRO:HB3	80: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	80:B5:2111:G:H1'	1.75	0.66
15:AG:13:GLN:HE21	79:B2:151:G:H1'	1.60	0.66
23:AO:25:ASP:CB	79:B2:901:G:P	2.83	0.66
79:B2:415:C:H5	83:CV:288:ARG:HB3	0.87	0.66
79:B2:740:A:H2'	79:B2:741:C:H5''	1.77	0.66
80:B5:2204:C:H4'	80:B5:2205:U:OP1	1.95	0.66
35:BA:64:ARG:HD2	80:B5:2557:A:N7	2.11	0.66
40:BF:178:ILE:HA	40:BF:183:ASP:HB3	1.77	0.66
43:BI:82:ARG:CD	80:B5:295:A:H1'	130.61	0.66
59:BY:2:ALA:N	80:B5:212:G:OP2	2.28	0.66
83:CV:199:ALA:CB	89:CV:602:GCP:N7	2.58	0.66
15:AG:174:LYS:HB2	79:B2:79:C:C4'	2.24	0.66
17:AI:138:ASN:HD22	79:B2:197:A:H61	1.27	0.66
79:B2:1507:G:O6	88:B2:2029:OHX:N5	2.28	0.66
79:B2:1780:G:H1'	80:B5:2262:A:C4'	1.82	0.66
79:B2:432:G:N3	83:CV:387:ARG:N	2.39	0.66
23:AO:27:PHE:CE2	79:B2:916:U:O2	2.35	0.66
41:BG:60:ARG:HH22	80:B5:1616:U:H4'	49.54	0.66
80:B5:1655:G:H8	80:B5:1655:G:C5'	2.08	0.66
79:B2:1646:C:H5'	80:B5:2258:U:O4	1.96	0.66
80:B5:3155:U:H4'	80: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
83:CV:247:ILE:HG22	83:CV:360:LEU:HD13	1.76	0.66
79:B2:432:G:H21	83:CV:387:ARG:HH11	1.42	0.66
17:AI:176:SER:CB	79:B2:208:U:H5'	2.26	0.66
20:AL:10:GLU:HG2	79:B2:327:U:HO2'	1.55	0.66
25:AQ:137:ARG:HB2	79:B2:1580:C:O3'	1.96	0.66
79:B2:1267:G:H21	79:B2:1448:G:H5''	1.59	0.66
79:B2:1758:U:C5'	80: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
43:BI:102:MET:CB	83:CV:471:LYS:HZ3	2.05	0.66
10:AB:154:SER:O	10:AB:154:SER:OG	2.09	0.66
12:AD:157:LEU:O	79:B2:1327:C:H4'	1.96	0.66
15:AG:67:VAL:HG21	15:AG:99:GLY:HA2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AJ:60:LEU:CD2	18:AJ:93:LEU:HD21	2.22	0.66
23:AO:125:SER:OG	79:B2:927:C:H4'	1.96	0.66
31:AW:27:ILE:HG12	31:AW:61:ILE:HB	1.77	0.66
15:AG:112:VAL:HG21	79:B2:164:A:H5'	1.71	0.66
88:B2:1915:OHX:N4	88:B2:2069:OHX:N1	2.42	0.66
15:AG:132:ARG:NE	79:B2:68:A:C4	2.64	0.66
23:AO:25:ASP:CG	79:B2:901:G:OP2	2.33	0.66
49:BO:121[B]:PRO:HA	49:BO:124[B]:LEU:HD22	1.76	0.66
60:BZ:67:LYS:HE2	80:B5:1630:U:OP1	1.94	0.66
3:A2:36:THR:OG1	3:A2:37:SER:N	2.28	0.66
8:A7:33:LYS:HD2	80:B5:2692:A:C5'	2.24	0.66
24:AP:12:PHE:HA	44:BJ:85:LYS:HD2	1.77	0.66
20:AL:65:SER:HB3	79:B2:114:C:H1'	1.76	0.66
29:AU:57:ARG:CG	79:B2:1382:A:H4'	2.26	0.66
23:AO:123:SER:O	79:B2:885:G:N2	2.28	0.66
53:BS:46:GLN:O	81:B7:77:G:H3'	1.96	0.66
46:BL:99:HIS:CD2	80: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	80:B5:2167:A:P	2.68	0.66
8:A7:88:ARG:CG	84:CW:35:A:N9	2.59	0.66
15:AG:128:THR:C	57:BW:81:PRO:HG2	2.16	0.66
79:B2:1316:G:HO2'	79:B2:1401:A:HO2'	1.43	0.66
54:BT:68:THR:CG2	80:B5:2737:C:P	2.84	0.66
38:BD:36:LEU:HG	80:B5:2748:A:N3	2.11	0.66
83:CV:63:GLU:CB	83:CV:210:TRP:CE3	2.79	0.66
8:A7:78:ASP:N	84:CW:43:C:H3'	2.08	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	79:B2:1516:A:OP1	2.27	0.66
79:B2:1688:U:H2'	79:B2:1689:A:C8	2.31	0.66
2:A1:68:GLY:N	79:B2:872:G:H1'	2.11	0.66
43:BI:15:LYS:HB3	80:B5:73:C:O4'	97.58	0.66
81:B7:91:G:H2'	81: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
22:AN:107:LYS:NZ	79:B2:1019:A:OP2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:125:SER:OG	79:B2:927:C:O4'	2.12	0.66
29:AU:57:ARG:NH2	79:B2:1382:A:N3	2.43	0.66
79:B2:843:U:H2'	79:B2:844:A:C8	2.31	0.66
23:AO:46:MET:HG2	79:B2:899:G:O5'	1.95	0.66
60:BZ:69:LYS:CE	80:B5:1633:C:OP1	2.44	0.66
79:B2:1759:C:O2'	80:B5:2263:C:H1'	1.96	0.66
8:A7:32:SER:OG	80:B5:2692:A:O4'	2.07	0.66
52:BR:84:THR:O	52:BR:88:ARG:HG2	1.96	0.66
79:B2:1041:G:H2'	79:B2:1042:G:C8	2.30	0.65
79:B2:205:U:O4	88:B2:1945:OHX:N3	2.29	0.65
79:B2:422:G:N7	88:B2:1985:OHX:N5	2.44	0.65
31:AW:119:LYS:HG2	79:B2:687:G:H5'	1.77	0.65
23:AO:38:THR:CG2	79:B2:895:G:O2'	2.12	0.65
80:B5:1481:A:OP1	80:B5:1481:A:O4'	2.13	0.65
37:BC:339:LEU:HA	37:BC:342:LYS:HB3	1.79	0.65
11:AC:89:GLN:HB3	79:B2:1146:G:C1'	2.27	0.65
26:AR:7:LYS:N	79:B2:1316:G:OP1	2.27	0.65
28:AT:117:SER:HB2	28:AT:123:ARG:HB2	1.77	0.65
25:AQ:139:GLN:HA	79:B2:1579:U:O2'	1.95	0.65
79:B2:1592:A:H2'	79:B2:1593:A:H8	1.61	0.65
79:B2:1606:C:H2'	79:B2:1607:G:C8	2.31	0.65
79:B2:1446:A:P	88:B2:2081:OHX:N2	2.70	0.65
79:B2:46:A:N3	83:CV:387:ARG:NH1	2.41	0.65
52:BR:46:LYS:NZ	80:B5:1766:G:C8	2.60	0.65
80:B5:2667:A:C8	80:B5:2667:A:H5'	2.30	0.65
46:BL:11:LYS:HE2	80:B5:98:G:O6	1.95	0.65
79:B2:432:G:C4'	83:CV:385:VAL:HA	2.25	0.65
7:A6:285:ALA:HB3	79:B2:1394:G:OP1	1.92	0.65
8:A7:87:THR:HG22	84:CW:36:U:C5'	2.24	0.65
10:AB:206:PRO:O	10:AB:207:LEU:HB2	1.95	0.65
11:AC:201:ASN:ND2	79:B2:1097:U:O4	2.29	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
79:B2:118:U:O4	88:B2:2043:OHX:N5	2.29	0.65
12:AD:162:GLN:HG2	79:B2:1333:C:C4'	2.26	0.65
79:B2:1686:C:C2'	79:B2:1687:U:O4'	2.45	0.65
52:BR:173:ARG:O	79:B2:853:G:H5'	1.96	0.65
80:B5:2103:U:H2'	80:B5:2104:A:C8	2.31	0.65
43:BI:22:TYR:HB3	80:B5:2647:A:H4'	1.78	0.65
80:B5:2777:G:H5''	80:B5:2777:G:C8	2.31	0.65
37:BC:20:LEU:HD11	37:BC:252:GLU:HG3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:221:ASN:HD21	80:B5:211:A:H3'	1.61	0.65
43:BI:194:GLY:CA	80:B5:1010:G:H2'	2.27	0.65
43:BI:67:ALA:HB2	80:B5:2852:C:H2'	1.77	0.65
25:AQ:50:GLU:OE1	25:AQ:82:ARG:NH2	2.27	0.65
26:AR:3:ARG:HG2	79:B2:1390:U:C6	2.32	0.65
29:AU:23:ARG:HH21	79:B2:1347:U:H6	1.38	0.65
14:AF:103:ASN:ND2	79:B2:1473:U:O2'	2.30	0.65
15:AG:107:ALA:HB1	79:B2:154:G:H4'	1.78	0.65
25:AQ:135:ARG:HB3	79:B2:1581:C:H4'	1.79	0.65
10:AB:116:LYS:HA	79:B2:931:C:H5''	1.77	0.65
79:B2:1780:G:C2'	80:B5:2262:A:C4'	2.68	0.65
80:B5:249:U:O2'	80:B5:250:U:H5''	1.95	0.65
80:B5:892:U:C2'	80:B5:893:C:H5'	2.26	0.65
54:BT:68:THR:CG2	80:B5:2736:A:O3'	2.45	0.65
79:B2:1644:C:H1'	80:B5:2255:A:C2	2.26	0.65
23:AO:132:ARG:CB	79:B2:1787:C:OP2	2.44	0.65
15:AG:133:LEU:C	79:B2:66:U:C4	2.61	0.65
33:AY:9:THR:CG2	79:B2:781:U:OP2	2.45	0.65
15:AG:172:ALA:HB3	79:B2:78:A:O3'	1.96	0.65
80:B5:3031:G:H8	83:CV:436:ARG:HH22	1.43	0.65
36:BB:9:PRO:HG2	80:B5:3043:C:H5'	1.79	0.65
82:B8:79:A:H3'	82:B8:80:A:C8	2.31	0.65
42:BH:116:ASN:ND2	83:CV:136:TYR:CG	2.63	0.65
27:AS:118:LYS:CE	44:BJ:108:GLU:CD	2.65	0.65
44:BJ:9:MET:O	44:BJ:11:ASP:N	2.29	0.65
48:BN:75:VAL:O	80:B5:2166:A:H5'	1.96	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:135:ARG:HH21	80:B5:1807:G:H5''	1.55	0.65
60:BZ:25:ILE:HA	60:BZ:43:VAL:HG12	1.78	0.65
1:A0:97:PRO:C	79:B2:1798:U:C5	2.70	0.65
15:AG:172:ALA:O	79:B2:79:C:C5'	2.39	0.65
34:AZ:41:ILE:HG23	34:AZ:42:LEU:H	1.59	0.65
79:B2:1339:C:O2'	79:B2:1341:A:N7	2.30	0.65
26:AR:60:ARG:HH22	79:B2:1400:A:C5'	1.98	0.65
4:A3:54:LYS:CE	79:B2:1420:C:OP1	2.44	0.65
28:AT:90:PRO:CD	79:B2:1467:C:O2'	2.40	0.65
28:AT:43:ASN:CG	79:B2:1477:G:OP1	2.34	0.65
79:B2:1536:G:C5	79:B2:1538:U:H1'	2.32	0.65
79:B2:1686:C:H2'	79:B2:1687:U:O4'	1.96	0.65
80:B5:2403:G:N7	80:B5:2870:C:H4'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:34:LYS:HE3	80:B5:2693:C:H5'	1.79	0.65
41:BG:181:LYS:HG2	82:B8:154:C:H5''	1.77	0.65
82:B8:77:A:H2'	82: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
79:B2:46:A:N1	83:CV:387:ARG:CB	2.60	0.65
80:B5:2285:C:C4	83:CV:477:SER:OG	2.49	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
79:B2:1780:G:C2'	80:B5:2262:A:C3'	2.58	0.65
38:BD:158:ARG:HD2	81:B7:46:A:O5'	1.96	0.65
53:BS:50:LYS:HE3	81:B7:76:A:C2	2.31	0.65
38:BD:15:ARG:NE	80:B5:1003:A:C1'	2.60	0.65
15:AG:151:ASP:OD1	57:BW:105:ARG:CZ	2.44	0.65
79:B2:1191:U:C5'	84:CW:32:U:OP1	2.45	0.65
1:A0:87:ARG:CD	79:B2:1797:A:C6	2.80	0.65
1:A0:86:VAL:CG2	79:B2:1795:U:OP1	2.45	0.65
79:B2:819:G:O2'	79:B2:820:U:H5'	1.96	0.65
80:B5:2569:A:H4'	80:B5:2570:U:H5'	1.78	0.65
8:A7:33:LYS:CE	80:B5:2692:A:H5'	2.26	0.65
38:BD:23:ARG:CZ	80:B5:2703:A:OP2	2.44	0.65
38:BD:270:LYS:O	38:BD:273:ARG:HB3	1.96	0.65
46:BL:5:LYS:O	80:B5:1833:G:C4'	84.68	0.65
51:BQ:89:ASP:HB3	80:B5:677:A:OP1	1.96	0.65
8:A7:86:ASN:CG	84:CW:32:U:C2	2.50	0.65
8:A7:82:THR:HG21	84:CW:29:G:C4	2.32	0.65
10:AB:114:VAL:HG21	79:B2:930:A:H2	1.62	0.65
14:AF:152:GLY:O	14:AF:154:ALA:N	2.30	0.65
24:AP:12:PHE:CA	44:BJ:85:LYS:HD2	2.26	0.65
15:AG:53:SER:CB	79:B2:163:G:C3'	2.67	0.65
79:B2:1645:G:C4'	80:B5:2259:A:H2	2.01	0.65
33:AY:120:GLY:CA	79:B2:85:A:O3'	2.45	0.65
80:B5:1818:U:H2'	80:B5:1819:U:H6	1.62	0.65
54:BT:8:ARG:HB2	80: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	79:B2:1013:A:H4'	1.61	0.65
37:BC:162:THR:OG1	80:B5:209:A:H2'	1.95	0.65
38:BD:285:ARG:HD3	81:B7:63:A:OP1	1.97	0.65
59:BY:35:LEU:HD13	59:BY:39:LEU:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BZ:67:LYS:HZ3	80:B5:1630:U:P	2.19	0.65
2:A1:29:ARG:NH1	2:A1:29:ARG:HG3	2.09	0.64
8:A7:92:ASP:OD1	84:CW:34:C:O2	1.95	0.64
15:AG:59:GLN:H	79:B2:155:U:C5'	2.10	0.64
18:AJ:96:VAL:HA	18:AJ:99:LEU:HD22	1.78	0.64
23:AO:129:LYS:HA	79:B2:990:C:H4'	1.77	0.64
15:AG:59:GLN:CA	79:B2:155:U:O4'	2.45	0.64
15:AG:53:SER:O	79:B2:163:G:C4'	2.44	0.64
79:B2:647:G:N2	79:B2:687:G:H22	1.95	0.64
79:B2:895:G:H1	79:B2:917:U:H3	1.45	0.64
80:B5:2549:G:H5'	80:B5:2549:G:C8	2.31	0.64
39:BE:78:ARG:NH1	80:B5:3272:C:OP2	2.30	0.64
80:B5:618:C:H2'	80:B5:619:A:C8	2.31	0.64
40:BF:122:ALA:HB1	80:B5:986:U:O2	1.96	0.64
44:BJ:95:ASN:HA	80:B5:2673:A:OP1	1.98	0.64
48:BN:80:THR:HG21	48:BN:87:GLN:HA	1.78	0.64
8:A7:77:THR:CG2	84:CW:43:C:O3'	2.45	0.64
7:A6:59:ARG:NH2	25:AQ:95:LYS:O	2.30	0.64
30:AV:62:ARG:NH2	79:B2:1039:A:C5'	2.48	0.64
79:B2:1789:G:H5''	79:B2:1789:G:H8	1.60	0.64
80:B5:1085:A:C5'	80:B5:1085:A:H8	2.10	0.64
40:BF:92:ILE:HD11	80:B5:1159:A:C2	2.33	0.64
53:BS:90:MET:CG	80:B5:1213:G:H4'	2.26	0.64
80:B5:15:C:H5'	80:B5:15:C:C6	2.31	0.64
51:BQ:43:PRO:HB3	80:B5:728:G:H5''	1.78	0.64
56:BV:33:ASN:HD22	56:BV:63:LYS:HB2	1.63	0.64
83:CV:443:GLU:HA	83:CV:446:ARG:HE	1.63	0.64
9:AA:168:HIS:HB3	9:AA:203:PHE:CZ	2.32	0.64
23:AO:126:THR:HG22	79:B2:988:A:N3	2.08	0.64
11:AC:86:VAL:HG11	79:B2:1300:A:H5''	1.79	0.64
79:B2:1638:G:OP2	85:CX:2:U:C5	2.50	0.64
17:AI:64:ASN:HB2	79:B2:258:C:C1'	2.27	0.64
17:AI:75:LYS:HB2	79:B2:258:C:H5'	1.79	0.64
23:AO:122:PRO:CA	79:B2:886:U:O2	2.43	0.64
23:AO:41:ARG:HH21	79:B2:916:U:H3	1.37	0.64
80:B5:118:U:O2	80: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	80:B5:1095:U:H3	2.09	0.64
60:BZ:70:PRO:HD2	80:B5:1629:U:O2	1.96	0.64
5:A4:14:VAL:O	5:A4:18:THR:HG23	1.97	0.64
8:A7:84:LYS:O	84:CW:30:G:C1'	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1015:U:H5''	79:B2:1016:C:OP2	1.97	0.64
11:AC:89:GLN:HB3	79:B2:1146:G:O4'	1.97	0.64
79:B2:158:U:O2'	79:B2:159:U:H3'	1.98	0.64
4:A3:33:LYS:HE3	79:B2:1594:G:H5'	1.80	0.64
79:B2:433:C:OP1	83:CV:391:VAL:CA	2.45	0.64
18:AJ:172:VAL:CG2	79:B2:511:A:H5''	2.18	0.64
49:BO:159[A]:LYS:NZ	80:B5:3243:A:OP1	2.31	0.64
38:BD:277:LEU:HG	81: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	80:B5:2756:C:C1'	2.28	0.64
8:A7:77:THR:CG2	84:CW:44:G:O5'	2.14	0.64
7:A6:195:HIS:CD2	7:A6:199:ILE:HD13	2.32	0.64
8:A7:87:THR:C	84:CW:36:U:C5'	2.62	0.64
23:AO:129:LYS:HA	79:B2:990:C:H5''	1.80	0.64
26:AR:7:LYS:CD	79:B2:1316:G:OP1	2.46	0.64
34:AZ:59:TYR:HE1	34:AZ:61:SER:HB3	1.61	0.64
79:B2:420:A:C4	83:CV:288:ARG:NH2	2.45	0.64
38:BD:269:SER:HA	81:B7:22:A:C2	2.32	0.64
8:A7:36:ASP:HB3	84:CW:52:G:H5'	1.79	0.64
79:B2:1518:C:OP1	88:B2:1999:OHX:N5	2.29	0.64
79:B2:562:G:OP2	88:B2:2023:OHX:N5	2.31	0.64
20:AL:36:LYS:HD3	79:B2:248:U:H5'	1.80	0.64
79:B2:497:G:H4'	79:B2:498:G:OP1	1.97	0.64
79:B2:711:U:H1'	79:B2:712:G:H5'	1.78	0.64
54:BT:57:TYR:OH	80:B5:2724:U:P	2.56	0.64
39:BE:37:GLY:HA3	80:B5:639:G:P	77.35	0.64
35:BA:181:LYS:NZ	80:B5:860:G:O5'	2.17	0.64
36:BB:241:LYS:HE2	80:B5:874:U:P	2.37	0.64
43:BI:102:MET:CA	83:CV:471:LYS:HZ3	2.09	0.64
48:BN:183:THR:O	48:BN:184:LYS:HB3	1.98	0.64
51:BQ:55:SER:HA	80:B5:672:A:OP1	1.97	0.64
7:A6:136:ILE:H	7:A6:136:ILE:HD13	1.63	0.64
13:AE:221:ARG:HG3	79:B2:753:A:H5'	1.80	0.64
15:AG:108:VAL:HG21	79:B2:153:G:C2'	2.27	0.64
50:BP:129:THR:OG1	80:B5:1507:G:N7	2.23	0.64
8:A7:33:LYS:CE	80:B5:2692:A:C5'	2.76	0.64
8:A7:28:SER:HB2	80:B5:2708:C:O4'	1.95	0.64
38:BD:266:ALA:CA	81:B7:1:G:N9	2.59	0.64
38:BD:16:PHE:CZ	80:B5:2688:U:N3	2.66	0.64
54:BT:101:CYS:HB3	80:B5:990:U:H1'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:103:VAL:HG12	11:AC:190:LEU:HD12	1.80	0.64
27:AS:110:ARG:HD2	44:BJ:118:PRO:HB3	1.80	0.64
79:B2:1190:C:C2	84:CW:31:A:C5'	2.72	0.64
26:AR:49:LYS:HG3	79:B2:1390:U:OP1	1.98	0.64
27:AS:143:ARG:CA	79:B2:1461:C:OP1	2.46	0.64
15:AG:62:PRO:HB2	79:B2:162:A:C5'	2.28	0.64
79:B2:1716:C:O2'	79:B2:1717:G:C8	2.47	0.64
79:B2:1758:U:H5'	80:B5:2255:A:O2'	1.96	0.64
35:BA:245:LEU:HD12	80:B5:2152:A:O3'	1.97	0.64
80:B5:2436:U:H3	80: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
48:BN:72:LYS:NZ	80:B5:2167:A:OP1	2.31	0.64
52:BR:101:VAL:HG21	80:B5:1948:G:H4'	1.80	0.64
32:AX:99:ASN:C	83:CV:378:LYS:NZ	2.49	0.64
7:A6:216:LYS:HA	7:A6:239:GLU:HG3	1.80	0.64
15:AG:133:LEU:HD11	79:B2:66:U:C2'	2.27	0.64
22:AN:54:LEU:HB3	22:AN:60:VAL:HG21	1.79	0.64
28:AT:57:ARG:HH12	79:B2:1479:A:P	2.18	0.64
29:AU:118:VAL:HG22	29:AU:119:ALA:H	1.63	0.64
19:AK:1:MET:HG3	79:B2:1217:A:H5''	1.80	0.64
23:AO:127:ARG:HH22	79:B2:1788:G:P	2.21	0.64
79:B2:836:U:OP1	88:B2:2074:OHX:N2	2.30	0.64
23:AO:38:THR:OG1	79:B2:896:U:C1'	2.45	0.64
35:BA:200:ARG:CZ	80:B5:2147:A:OP2	2.46	0.64
59:BY:13:ARG:NH1	82: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
79:B2:1190:C:O2'	84:CW:31:A:H3'	1.97	0.64
8:A7:88:ARG:CG	84:CW:35:A:C2'	1.83	0.64
8:A7:88:ARG:CD	84:CW:35:A:C4	2.66	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:90:PRO:HD3	79:B2:1467:C:HO2'	1.63	0.64
28:AT:86:ARG:NH1	28:AT:90:PRO:O	2.32	0.64
29:AU:54:GLY:O	79:B2:1344:A:O2'	2.14	0.64
26:AR:48:ASN:CB	79:B2:1389:C:O4'	2.37	0.64
27:AS:126:ARG:CZ	79:B2:1459:C:OP1	2.46	0.64
79:B2:1701:N:H3'	79:B2:1702:N:H5''	1.80	0.64
79:B2:140:A:N6	79:B2:281:G:OP1	2.21	0.64
33:AY:105:ARG:N	79:B2:443:C:OP1	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BR:171:ASP:CG	79:B2:852:C:P	2.11	0.64
80:B5:2283:G:O3'	83:CV:477:SER:OG	2.16	0.64
35:BA:3:ARG:NH2	80:B5:917:A:H62	1.95	0.64
43:BI:103:LEU:C	83:CV:471:LYS:HB2	2.19	0.64
44:BJ:95:ASN:CA	80:B5:2673:A:OP1	2.46	0.64
79:B2:51:A:O4'	83:CV:241:GLU:O	2.13	0.64
80:B5:2623:G:C5	84:CW:75:C:O2'	2.43	0.64
8:A7:85:SER:HA	84:CW:30:G:N7	1.88	0.63
18:AJ:176:ASN:HB2	79:B2:511:A:OP2	1.96	0.63
19:AK:8:ARG:HD2	19:AK:12:HIS:CE1	2.33	0.63
8:A7:71:ASN:OD1	24:AP:130:ARG:NH1	2.32	0.63
25:AQ:34:SER:HB3	25:AQ:38:LEU:HD12	1.80	0.63
79:B2:1498:G:C2'	79:B2:1499:G:H5'	2.28	0.63
79:B2:1657:U:O4	88:B2:1967:OHX:N4	2.31	0.63
17:AI:73:SER:CB	79:B2:257:A:H1'	2.17	0.63
79:B2:470:A:C8	79:B2:470:A:H5''	2.33	0.63
1:A0:70:LYS:NZ	79:B2:931:C:OP2	2.27	0.63
80:B5:1659:U:H2'	80:B5:1660:C:C6	2.32	0.63
80:B5:2436:U:H3	80:B5:2511:A:N6	1.95	0.63
80:B5:830:A:O2'	80:B5:1866:C:H2'	1.98	0.63
80:B5:900:G:H1'	80:B5:1589:A:N6	2.12	0.63
35:BA:34:TYR:CD2	80:B5:2525:G:O6	2.51	0.63
42:BH:90:MET:HB2	42:BH:144:ILE:HG22	1.80	0.63
46:BL:181:GLY:HA3	80:B5:2780:A:O2'	1.97	0.63
54:BT:8:ARG:CG	80:B5:2757:U:H4'	2.28	0.63
59:BY:112:ASP:HB3	59:BY:115:ARG:HB2	1.80	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
10:AB:138:PHE:HZ	79:B2:885:G:OP1	1.82	0.63
13:AE:259:GLN:O	13:AE:261:LEU:N	2.31	0.63
29:AU:53:LYS:CA	79:B2:1345:A:P	2.86	0.63
56:BV:67:PRO:CG	79:B2:1660:A:OP1	2.46	0.63
32:AX:38:PHE:HB3	79:B2:359:A:C2	2.33	0.63
13:AE:28:ALA:HA	79:B2:448:C:OP1	1.98	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	80:B5:728:G:H5''	1.79	0.63
54:BT:14:MET:HE2	54:BT:55:LYS:HB2	1.80	0.63
12:AD:4:LEU:CD1	79:B2:1514:U:C2	2.82	0.63
14:AF:81:ARG:HE	79:B2:1615:C:P	2.21	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:112:VAL:HG21	79:B2:164:A:H5''	1.78	0.63
18:AJ:172:VAL:HG13	79:B2:512:A:P	2.39	0.63
79:B2:1202:A:N6	79:B2:1457:C:H5''	2.13	0.63
26:AR:60:ARG:NH1	79:B2:1400:A:H4'	2.11	0.63
14:AF:185:ARG:HH12	79:B2:1572:G:H1'	1.64	0.63
80:B5:1566:A:H2'	80:B5:1567:U:H5'	1.81	0.63
43:BI:30:LYS:HE2	80:B5:266:A:H2'	117.82	0.63
46:BL:56:PRO:HG3	46:BL:74:GLY:O	1.98	0.63
83:CV:200:VAL:N	89:CV:602:GCP:N1	2.47	0.63
7:A6:90:ARG:NH1	7:A6:99:THR:OG1	2.31	0.63
8:A7:84:LYS:HG3	84:CW:32:U:C5	2.33	0.63
23:AO:52:ARG:HD3	79:B2:905:A:H5''	1.81	0.63
25:AQ:75:VAL:HG21	79:B2:1610:G:OP1	1.98	0.63
27:AS:94:ASP:OD2	27:AS:98:TYR:OH	2.17	0.63
25:AQ:123:ARG:O	79:B2:1584:G:H2'	1.98	0.63
80:B5:1564:U:H2'	80:B5:1565:G:C8	2.34	0.63
51:BQ:89:ASP:N	80:B5:677:A:OP2	2.24	0.63
36:BB:245:GLY:HA2	80: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	80:B5:677:A:P	2.21	0.63
15:AG:115:LYS:HE3	57:BW:74:LYS:CB	2.28	0.63
83:CV:59:MET:HB3	83:CV:62:TYR:H	1.64	0.63
79:B2:1428:G:C4'	84:CW:34:C:H5'	2.28	0.63
80:B5:2623:G:N1	84:CW:76:A:H5''	2.08	0.63
79:B2:1689:A:H2'	79:B2:1690:G:H8	1.64	0.63
1:A0:92:ARG:HA	79:B2:1796:C:OP1	1.98	0.63
17:AI:50:GLY:CA	79:B2:397:A:H4'	2.28	0.63
80:B5:1227:C:N3	80:B5:1284:C:N3	2.46	0.63
47:BM:106:ARG:HD2	80:B5:3209:A:C5	2.34	0.63
80:B5:528:U:H2'	80:B5:529:A:C8	2.33	0.63
35:BA:15:ILE:HG13	80:B5:822:G:O4'	1.98	0.63
80:B5:979:U:H1'	80:B5:980:A:C4	2.34	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
79:B2:431:C:C2	83:CV:386:SER:HB2	2.33	0.63
83:CV:388:ARG:CG	88:CV:601:OHX:N2	2.60	0.63
79:B2:1428:G:H4'	84:CW:34:C:C5'	2.29	0.63
8:A7:89:ARG:O	84:CW:35:A:N7	2.32	0.63
10:AB:134:VAL:HB	10:AB:219:LYS:HB2	1.80	0.63
10:AB:171:ILE:HA	10:AB:174:LYS:HE3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:114:ALA:HB3	12:AD:117:ARG:HB2	1.80	0.63
12:AD:143:ARG:NH2	79:B2:581:U:OP2	2.31	0.63
23:AO:41:ARG:HD2	79: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	79:B2:1542:G:H3'	1.80	0.63
79:B2:1592:A:H2'	79:B2:1593:A:C8	2.34	0.63
79:B2:1657:U:H4'	79:B2:1658:G:O5'	1.99	0.63
23:AO:125:SER:CB	79:B2:927:C:C1'	2.75	0.63
13:AE:3:ARG:HB2	79:B2:94:U:OP1	1.99	0.63
80:B5:1818:U:H2'	80:B5:1819:U:C6	2.32	0.63
80:B5:2818:U:C5'	80:B5:2818:U:H6	2.10	0.63
80:B5:3049:A:H5'	80:B5:3049:A:C8	2.34	0.63
80:B5:734:C:H2'	80:B5:735:A:H5''	1.81	0.63
80:B5:817:A:OP2	80:B5:817:A:H4'	1.98	0.63
35:BA:235:ALA:HB1	80:B5:2184:U:P	2.37	0.63
41:BG:60:ARG:NH2	80:B5:1616:U:C4'	50.75	0.63
79:B2:51:A:H2'	83:CV:242:GLY:HA3	1.79	0.63
43:BI:112:GLN:CB	83:CV:471:LYS:CE	2.76	0.63
83:CV:131:LYS:CD	89:CV:602:GCP:C5	2.74	0.63
8:A7:85:SER:OG	84:CW:30:G:N7	2.30	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
79:B2:1291:G:N2	79:B2:1324:G:N2	2.45	0.63
14:AF:109:LYS:NZ	79:B2:1474:G:OP2	2.29	0.63
25:AQ:42:GLU:OE1	79:B2:1529:C:H5''	1.98	0.63
79:B2:9:U:O4	88:B2:2045:OHX:N6	2.31	0.63
80:B5:2624:G:C1'	84:CW:76:A:OP1	2.43	0.63
38:BD:106:ALA:O	38:BD:110:LEU:HD22	1.97	0.63
83:CV:131:LYS:CD	89:CV:602:GCP:N3	2.55	0.63
1:A0:4:LYS:H	79:B2:1792:G:P	2.22	0.63
17:AI:23:LYS:HE2	79:B2:386:G:H5''	1.80	0.63
23:AO:130:GLY:CA	79:B2:991:G:OP1	2.46	0.63
14:AF:37:GLN:HB3	25:AQ:53:LEU:HB3	1.80	0.63
31:AW:80:ASN:ND2	79:B2:747:C:O2'	2.32	0.63
33:AY:11:LYS:HE2	79:B2:776:G:O6	1.99	0.63
35:BA:191:LEU:HG	80:B5:1795:U:P	2.39	0.63
80:B5:1804:A:H2'	80:B5:1805:C:H6	1.63	0.63
54:BT:17:ARG:N	80:B5:2700:G:OP1	2.21	0.63
54:BT:68:THR:CG2	80:B5:2737:C:O5'	2.47	0.63
38:BD:145:PHE:CE1	80:B5:2748:A:H5''	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BC:93:MET:HB2	80:B5:658:G:H21	1.63	0.63
46:BL:61:PRO:HD3	80:B5:75:G:C4'	2.28	0.63
38:BD:265:TYR:CG	81:B7:120:C:N3	2.67	0.63
51:BQ:134:GLY:O	51:BQ:137:THR:OG1	2.11	0.63
80:B5:2284:C:C1'	83:CV:476:GLN:OE1	2.29	0.63
15:AG:108:VAL:CB	79:B2:153:G:O2'	2.47	0.63
15:AG:114:VAL:HG12	15:AG:115:LYS:HD3	1.81	0.63
17:AI:137:LYS:HE3	79:B2:189:C:OP2	1.98	0.63
23:AO:52:ARG:HB3	79:B2:906:A:P	2.37	0.63
28:AT:102:ARG:NH2	79:B2:1502:G:C6	2.67	0.63
31:AW:105:THR:HG23	31:AW:110:ILE:HG12	1.81	0.63
27:AS:138:THR:HB	79:B2:1459:C:H2'	1.80	0.63
33:AY:113:ASN:ND2	79:B2:54:C:H5''	2.13	0.63
33:AY:120:GLY:O	79:B2:85:A:H4'	1.98	0.63
80:B5:1816:A:O2'	80:B5:1817:G:OP1	2.15	0.63
79:B2:1748:G:H5'	80:B5:2304:C:H5''	1.81	0.63
38:BD:146:LEU:HD13	80:B5:2746:A:N3	2.13	0.63
36:BB:53:MET:CE	80:B5:3048:A:H5'	2.29	0.63
47:BM:77:ARG:NH2	80:B5:524:U:OP1	2.31	0.63
48:BN:68:ARG:HA	48:BN:98:LEU:HD21	1.80	0.63
80:B5:3029:A:C5'	83:CV:81:GLU:OE1	2.32	0.63
8:A7:85:SER:C	84:CW:31:A:C5	2.34	0.63
2:A1:62:ILE:HG13	2:A1:63:LEU:H	1.62	0.62
14:AF:101:GLY:HA3	79:B2:1167:G:P	2.37	0.62
5:A4:33:ARG:HB2	18:AJ:37:LYS:HB3	1.81	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
22:AN:73:ARG:CD	79:B2:859:A:C6	2.79	0.62
33:AY:91:LEU:HA	33:AY:96:LEU:HD12	1.80	0.62
79:B2:213:A:OP2	88:B2:1995:OHX:N2	2.32	0.62
79:B2:433:C:OP1	83:CV:391:VAL:CG2	2.44	0.62
15:AG:133:LEU:CD1	79:B2:66:U:N1	2.62	0.62
80:B5:1094:U:O2'	80:B5:1095:U:H3'	1.99	0.62
49:BO:25[A]:LYS:HE3	80:B5:1176:C:OP1	1.98	0.62
79:B2:1758:U:H5'	80:B5:2256:A:OP2	1.99	0.62
80:B5:247:C:C2	80:B5:248:U:H1'	2.33	0.62
80:B5:3174:A:N6	80:B5:3278:C:N3	2.46	0.62
48:BN:60:VAL:HG21	82:B8:142:C:H4'	1.80	0.62
54:BT:127:GLN:HA	80: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:128:THR:HG23	57:BW:81:PRO:HG2	1.64	0.62
24:AP:44:ARG:HG2	79:B2:1556:A:OP1	1.99	0.62
26:AR:53:TYR:HH	79:B2:1401:A:C5'	2.03	0.62
29:AU:54:GLY:N	79:B2:1345:A:P	2.56	0.62
79:B2:1031:U:H4'	79:B2:1032:G:OP2	1.99	0.62
79:B2:1214:U:OP1	79:B2:1246:C:H1'	1.99	0.62
29:AU:58:LEU:HD23	79:B2:1516:A:H8	1.63	0.62
33:AY:10:ARG:CG	79:B2:780:A:C8	2.81	0.62
43:BI:8:CYS:SG	80:B5:2828:G:H5''	2.39	0.62
80:B5:541:U:H2'	80:B5:542:G:C8	2.34	0.62
35:BA:199:THR:OG1	80:B5:913:A:H5'	1.99	0.62
35:BA:7:ASN:HB2	80:B5:2183:A:OP1	2.00	0.62
8:A7:32:SER:CB	80:B5:2692:A:C1'	2.76	0.62
8:A7:87:THR:O	84:CW:36:U:C5'	2.47	0.62
15:AG:15:THR:HG23	79:B2:152:U:C3'	2.29	0.62
11:AC:91:ARG:CZ	79:B2:1625:C:OP1	2.44	0.62
79:B2:245:U:O4	88:B2:1971:OHX:N5	2.32	0.62
33:AY:120:GLY:CA	79:B2:85:A:O2'	2.47	0.62
54:BT:129:LYS:CB	80:B5:1097:G:H4'	2.15	0.62
80:B5:2561:A:HO2'	80:B5:2562:A:H8	1.46	0.62
35:BA:15:ILE:CD1	80:B5:822:G:N3	2.62	0.62
35:BA:234:LYS:HD2	80: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	80:B5:1558:A:C6	2.88	0.62
54:BT:12:ARG:HB2	80:B5:2632:G:H5''	1.80	0.62
23:AO:38:THR:HG1	79:B2:896:U:C1'	2.12	0.62
30:AV:62:ARG:HH21	79:B2:1039:A:C5'	2.08	0.62
79:B2:1623:C:H2'	79:B2:1624:C:C6	2.34	0.62
79:B2:915:A:OP1	88:B2:1972:OHX:N3	2.32	0.62
79:B2:702:G:O2'	79:B2:703:G:H8	1.82	0.62
79:B2:823:G:O2'	79:B2:824:G:P	2.57	0.62
80:B5:1023:C:H5''	80:B5:1024:G:OP2	1.99	0.62
80:B5:1282:G:H3'	80:B5:1283:C:C5'	2.29	0.62
79:B2:1002:G:C5'	80:B5:2265:C:OP1	2.47	0.62
80:B5:2621:G:N7	84:CW:75:C:C6	2.65	0.62
51:BQ:69:ARG:NH2	80:B5:720:A:C2	2.62	0.62
38:BD:266:ALA:CB	81: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
54:BT:129:LYS:HB3	80:B5:1097:G:C4'	2.14	0.62
1:A0:3:LYS:HE2	79:B2:1030:A:OP2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:AG:128:THR:OG1	57:BW:80:ARG:CA	2.45	0.62
32:AX:7:ARG:NH1	79:B2:1102:G:OP2	2.33	0.62
79:B2:1524:A:H2'	79:B2:1525:A:C8	2.34	0.62
79:B2:1762:A:H1'	79:B2:1783:C:H5'	1.80	0.62
33:AY:105:ARG:HD2	79:B2:443:C:H3'	1.82	0.62
32:AX:69:ARG:HH12	79:B2:569:C:H41	1.45	0.62
35:BA:71:LEU:N	80:B5:1651:U:OP1	2.30	0.62
48:BN:72:LYS:CD	80:B5:2166:A:O3'	2.46	0.62
80:B5:2286:U:OP1	83:CV:479:PRO:CD	2.28	0.62
8:A7:92:ASP:HA	84:CW:35:A:C8	2.33	0.62
13:AE:33:ALA:HB3	79:B2:121:U:H1'	1.81	0.62
15:AG:159:ARG:NH1	79:B2:77:U:H1'	2.13	0.62
16:AH:13:PRO:HB3	16:AH:14:THR:HB	1.82	0.62
7:A6:150:TRP:HE1	26:AR:37:GLU:HG3	1.64	0.62
30:AV:41:GLU:CD	30:AV:41:GLU:H	2.00	0.62
79:B2:1612:U:H2'	79:B2:1613:U:H5'	1.79	0.62
79:B2:497:G:O2'	79:B2:498:G:O5'	2.17	0.62
80:B5:2407:C:H2'	80:B5:2408:U:C6	2.35	0.62
80:B5:3195:U:O2'	80:B5:3196:U:H5'	1.99	0.62
58:BX:57:LEU:HD23	58:BX:61:LYS:HG2	1.82	0.62
83:CV:79:GLY:CA	89:CV:602:GCP:O2G	2.46	0.62
84:CW:67:C:C4	84:CW:68:C:C4	2.87	0.62
1:A0:59:TYR:HE2	23:AO:113:GLY:HA2	1.64	0.62
1:A0:79:ILE:CG2	79:B2:1794:A:N3	2.62	0.62
10:AB:110:LEU:HD12	10:AB:110:LEU:H	1.63	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	79:B2:1345:A:O5'	1.98	0.62
80:B5:2440:G:H2'	80:B5:2441:A:C8	2.34	0.62
52:BR:62:ARG:NE	80:B5:3070:A:OP1	2.26	0.62
36:BB:245:GLY:HA3	80:B5:1889:G:O5'	2.00	0.62
42:BH:96:HIS:HA	83:CV:164:ARG:HH22	1.63	0.62
49:BO:68[A]:ARG:NH1	80:B5:2988:C:OP1	2.32	0.62
53:BS:73:LYS:NZ	53:BS:97:VAL:O	2.32	0.62
8:A7:93:ARG:CB	85:CX:3:G:H22	1.99	0.62
11:AC:145:GLY:O	11:AC:146:THR:HB	1.98	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
27:AS:139:LYS:HG2	79:B2:1461:C:N4	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:AT:12:GLN:HE22	79:B2:1530:C:C1'	2.08	0.62
32:AX:109:ARG:HB3	32:AX:112:LYS:HB2	1.81	0.62
12:AD:158:ILE:HB	79:B2:1328:G:OP1	1.99	0.62
79:B2:1490:C:H4'	79:B2:1491:U:OP1	1.99	0.62
20:AL:36:LYS:CD	79:B2:248:U:H5'	2.30	0.62
79:B2:38:C:C2'	79:B2:39:A:H5'	2.29	0.62
80:B5:725:G:H2'	80:B5:726:G:H5''	1.81	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
38:BD:265:TYR:CE2	81:B7:120:C:C5	2.88	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
32:AX:77:ILE:HG21	83:CV:391:VAL:HG11	1.82	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
16:AH:145:GLY:O	16:AH:147:ASN:ND2	2.31	0.62
79:B2:1168:U:H2'	79:B2:1169:G:H5'	1.82	0.62
29:AU:89:ARG:CZ	79:B2:1383:G:OP1	2.47	0.62
15:AG:56:ASN:HD21	79:B2:153:G:H22	1.45	0.62
79:B2:498:G:O2'	79:B2:499:U:O5'	2.17	0.62
8:A7:28:SER:HA	80:B5:2708:C:H4'	1.82	0.62
35:BA:194:ASN:HD22	80:B5:822:G:C4'	2.13	0.62
37:BC:144:LYS:HG2	37:BC:145:ILE:H	1.65	0.62
79:B2:1427:A:O5'	84:CW:34:C:C5	2.52	0.62
79:B2:1428:G:O5'	84:CW:34:C:H4'	2.00	0.62
84:CW:42:C:C5'	84:CW:42:C:C6	2.83	0.62
10:AB:116:LYS:HA	79:B2:931:C:H4'	1.80	0.62
16:AH:110:GLN:OE1	79:B2:817:A:H1'	2.00	0.62
24:AP:65:LEU:O	88:AP:201:OHX:N1	2.33	0.62
79:B2:1081:A:H5''	79:B2:1082:C:OP1	1.99	0.62
79:B2:1615:C:H4'	79:B2:1616:G:O5'	2.00	0.62
80:B5:1605:A:O2'	80:B5:1607:U:OP2	2.12	0.62
52:BR:121:HIS:CE1	80:B5:1719:G:OP2	2.51	0.62
59:BY:75:ARG:HB2	82: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	80:B5:2746:A:N3	2.63	0.62
1:A0:35:ALA:O	1:A0:36:ILE:HG22	2.00	0.61
1:A0:5:ARG:NH2	79:B2:1793:G:O2'	2.33	0.61
3:A2:10:ALA:HB1	3:A2:30:VAL:HB	1.81	0.61
8:A7:51:ARG:HD2	80:B5:2677:G:O4'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AE:11:ARG:O	13:AE:12:LEU:HB2	1.99	0.61
20:AL:80:MET:CE	79:B2:325:G:C5'	2.77	0.61
28:AT:61:VAL:O	28:AT:65:ILE:HG13	2.00	0.61
79:B2:656:G:O2'	79:B2:657:U:O4'	2.16	0.61
8:A7:47:ALA:CA	80:B5:2678:A:C1'	2.76	0.61
83:CV:18:LYS:HB3	89:CV:602:GCP:O1A	1.99	0.61
79:B2:1427:A:C2'	84:CW:34:C:C1'	2.77	0.61
79:B2:677:G:H2'	79:B2:678:A:C8	2.36	0.61
23:AO:51:ASP:OD1	79:B2:902:G:N1	2.33	0.61
49:BO:60[A]:LYS:NZ	80:B5:1307:G:H5''	2.15	0.61
35:BA:68:LYS:CE	80:B5:1650:G:OP1	2.49	0.61
56:BV:48:ARG:HG2	80:B5:2339:C:P	2.40	0.61
38:BD:145:PHE:CE1	80:B5:2748:A:C5'	2.83	0.61
42:BH:168:ARG:HD2	80:B5:2894:C:OP1	2.01	0.61
80:B5:3165:A:H2'	80:B5:3166:C:H6	1.65	0.61
41:BG:194:THR:HG23	80:B5:7:C:H4'	1.80	0.61
35:BA:15:ILE:HA	80:B5:822:G:H1'	1.81	0.61
52:BR:104:ARG:NH1	80:B5:1949:G:OP1	2.33	0.61
83:CV:62:TYR:C	83:CV:210:TRP:CE2	2.73	0.61
15:AG:59:GLN:HA	79:B2:155:U:C4'	2.28	0.61
17:AI:23:LYS:HG3	79:B2:386:G:OP1	2.01	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
26:AR:60:ARG:NH1	79:B2:1400:A:C4'	2.64	0.61
27:AS:118:LYS:NZ	44:BJ:108:GLU:CD	2.54	0.61
33:AY:64:PHE:CE2	79:B2:767:U:C5	2.89	0.61
46:BL:99:HIS:CE1	80:B5:156:G:C5	2.89	0.61
35:BA:40:TYR:OH	80: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	81:B7:1:G:C2	2.34	0.61
48:BN:179:LYS:CE	80:B5:287:G:OP1	2.48	0.61
15:AG:83:CYS:HA	79: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
79:B2:1428:G:H5'	79:B2:1428:G:C8	2.35	0.61
33:AY:8:ARG:CA	79:B2:780:A:O2'	2.43	0.61
48:BN:67:ARG:CG	80:B5:1544:G:H5'	2.29	0.61
42:BH:171:ASP:OD2	80:B5:2899:C:H2'	2.00	0.61
38:BD:266:ALA:HA	81:B7:1:G:N3	2.15	0.61
48:BN:35:VAL:CG2	80:B5:1543:G:P	2.86	0.61
83:CV:16:THR:HB	89:CV:602:GCP:PB	2.39	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:236:GLU:OE1	83:CV:361:GLY:HA3	1.99	0.61
83:CV:236:GLU:HG2	83:CV:361:GLY:HA2	0.70	0.61
10:AB:166:LYS:NZ	79:B2:948:G:OP1	2.32	0.61
17:AI:72:ILE:HA	79:B2:256:A:H1'	1.83	0.61
17:AI:75:LYS:CB	79:B2:258:C:C5'	2.77	0.61
34:AZ:43:ASP:O	34:AZ:45:GLU:N	2.34	0.61
6:A5:138:ARG:NE	79:B2:1235:C:O2	2.33	0.61
29:AU:72:ASN:ND2	79:B2:1429:G:O2'	2.34	0.61
79:B2:1571:C:OP2	88:B2:2044:OHX:N1	2.33	0.61
15:AG:182:GLN:OE1	79:B2:270:C:N4	2.33	0.61
8:A7:47:ALA:CA	80:B5:2678:A:C8	2.84	0.61
35:BA:237:LEU:HD23	80:B5:2183:A:C2	2.35	0.61
38:BD:207:TYR:CG	81:B7:33:U:O2	2.53	0.61
50:BP:59:PRO:HG3	50:BP:76:PHE:CD2	2.35	0.61
50:BP:69:ARG:NH2	80:B5:2992:U:H1'	2.14	0.61
79:B2:1427:A:H5'	84:CW:34:C:C6	2.35	0.61
8:A7:77:THR:CB	84:CW:43:C:H2'	2.29	0.61
11:AC:89:GLN:O	79: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	79:B2:397:A:OP2	2.24	0.61
60:BZ:67:LYS:NZ	80:B5:1630:U:P	2.73	0.61
38:BD:226:TYR:CE2	38:BD:236:LEU:HD11	2.35	0.61
25:AQ:123:ARG:C	79:B2:1584:G:C2'	2.67	0.61
26:AR:10:LYS:HZ1	79: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	79:B2:85:A:H4'	2.31	0.61
20:AL:130:PRO:HG2	79:B2:115:G:O6	1.99	0.61
79:B2:145:A:O2'	79:B2:146:U:O5'	2.16	0.61
8:A7:34:LYS:HE3	80:B5:2693:C:C5'	2.30	0.61
80:B5:2970:C:O2'	80:B5:2971:A:OP2	2.16	0.61
88:B7:203:OHX:N4	88:B7:219:OHX:N6	2.49	0.61
82:B8:156:U:O2'	82:B8:157:U:OP1	2.17	0.61
60:BZ:79:HIS:HD1	80:B5:1636:U:C2'	2.07	0.61
79:B2:1761:U:C4	85:CX:1:A:H4'	2.36	0.61
1:A0:44:ILE:H	1:A0:44:ILE:HD12	1.65	0.61
4:A3:14:TYR:CD2	79:B2:1597:A:N7	2.69	0.61
6:A5:100:UNK:C	6:A5:102:VAL:H	2.14	0.61
8:A7:28:SER:CB	80:B5:2708:C:C1'	2.79	0.61
10:AB:117:TRP:H	79:B2:932:U:P	2.24	0.61
10:AB:137:ILE:HD11	10:AB:172:LEU:HB3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:109:LYS:CD	79:B2:1473:U:C1'	2.79	0.61
23:AO:125:SER:HB3	79:B2:926:A:C2	2.36	0.61
31:AW:104:LEU:HB2	31:AW:124:LYS:O	2.01	0.61
32:AX:126:LYS:NZ	79:B2:30:G:OP1	2.33	0.61
35:BA:247:ARG:NE	79:B2:1013:A:H4'	2.15	0.61
14:AF:109:LYS:HD3	79:B2:1473:U:C1'	2.31	0.61
58:BX:111:ASN:HD22	80:B5:1608:C:H5''	1.66	0.61
51:BQ:183:GLY:HA2	80:B5:2762:A:O3'	2.01	0.61
80:B5:3195:U:H1'	80:B5:3196:U:OP1	2.01	0.61
37:BC:312:VAL:HG21	80:B5:610:G:C8	2.35	0.61
53:BS:49:HIS:O	81:B7:77:G:H5''	2.01	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
47:BM:121:MET:HE1	80:B5:3215:A:O5'	2.00	0.61
49:BO:72[B]:HIS:CD2	80:B5:3008:A:OP1	2.54	0.61
54:BT:12:ARG:HG3	80:B5:2698:G:O2'	2.00	0.61
8:A7:84:LYS:HG3	84:CW:32:U:C6	2.36	0.61
79:B2:1427:A:C3'	84:CW:34:C:O4'	2.30	0.61
10:AB:165:ARG:CZ	79:B2:947:U:P	2.88	0.61
25:AQ:74:HIS:CE1	79:B2:1480:G:N2	2.65	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
26:AR:48:ASN:CB	79:B2:1389:C:O5'	2.49	0.61
1:A0:87:ARG:NH1	79:B2:1796:C:OP1	2.33	0.61
79:B2:843:U:H2'	79:B2:844:A:H8	1.64	0.61
79:B2:992:A:C2	79:B2:1012:U:N3	2.65	0.61
80:B5:150:A:C2'	80:B5:151:A:H5'	2.29	0.61
80:B5:2537:U:O2'	80:B5:2538:U:P	2.59	0.61
8:A7:44:PRO:HA	80:B5:2678:A:C2	2.36	0.61
80:B5:2895:G:H2'	80:B5:2896:A:H5''	1.82	0.61
49:BO:68[A]:ARG:HH12	80:B5:2987:A:H5''	1.66	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
2:A1:51:GLN:HB3	79:B2:870:C:O2'	2.01	0.61
18:AJ:146:PHE:CE2	18:AJ:149:ARG:HD3	2.36	0.61
80:B5:132:C:H2'	80:B5:133:U:H5''	1.82	0.61
37:BC:221:ASN:ND2	80:B5:211:A:H3'	2.16	0.61
47:BM:124:ARG:NH2	80:B5:3212:C:OP2	2.34	0.61
43:BI:15:LYS:HG2	80:B5:73:C:C2	96.73	0.61
80:B5:920:A:OP1	80: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:232:SER:O	37:BC:233:LEU:HB2	2.01	0.61
56:BV:22:ILE:N	80:B5:1899:G:OP1	2.32	0.61
12:AD:127:MET:HE1	12:AD:133:GLY:HA2	1.83	0.60
15:AG:62:PRO:CB	79:B2:162:A:O4'	2.49	0.60
22:AN:16:ILE:HG22	31:AW:57:ARG:NH2	2.15	0.60
23:AO:120:PRO:HB2	79:B2:887:A:C3'	2.30	0.60
23:AO:25:ASP:OD2	79:B2:901:G:OP2	2.19	0.60
22:AN:107:LYS:CE	79:B2:1019:A:OP2	2.49	0.60
60:BZ:15:ARG:HB3	80:B5:1637:A:H4'	1.81	0.60
48:BN:72:LYS:HZ3	80:B5:2167:A:P	2.24	0.60
80:B5:3358:U:H2'	80:B5:3359:A:H8	1.65	0.60
36:BB:334:ARG:NH2	80:B5:3304:U:O2'	2.30	0.60
60:BZ:83:THR:HG23	60:BZ:85:TYR:N	2.15	0.60
4:A3:32:ARG:HH21	79:B2:1596:C:H3'	1.66	0.60
9:AA:110:TYR:H	9:AA:110:TYR:HD1	1.46	0.60
14:AF:109:LYS:CD	79:B2:1473:U:O3'	2.49	0.60
34:AZ:54:VAL:O	34:AZ:88:ILE:HG21	2.01	0.60
88:B2:1915:OHX:N4	88:B2:2069:OHX:N5	2.48	0.60
79:B2:431:C:O3'	83:CV:384:ASP:O	2.19	0.60
79:B2:702:G:O6	79:B2:736:C:N4	2.19	0.60
79:B2:732:G:O2'	79:B2:733:A:O4'	2.19	0.60
35:BA:174:ARG:HG3	80:B5:1793:C:O4'	2.02	0.60
80:B5:2284:C:O5'	83:CV:477:SER:CA	2.49	0.60
38:BD:270:LYS:CG	81: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	80:B5:121:A:C2	2.85	0.60
49:BO:68[B]:ARG:NH1	80:B5:2988:C:OP2	2.34	0.60
51:BQ:69:ARG:NH2	80:B5:720:A:N3	2.48	0.60
83:CV:16:THR:CA	89:CV:602:GCP:O3A	2.48	0.60
8:A7:92:ASP:OD2	84:CW:34:C:O4'	2.05	0.60
8:A7:78:ASP:CB	84:CW:43:C:C4	2.77	0.60
8:A7:77:THR:CG2	84:CW:43:C:O2'	2.45	0.60
8:A7:68:ARG:CZ	27:AS:145:ARG:HD3	2.31	0.60
10:AB:116:LYS:HA	79:B2:931:C:C5'	2.31	0.60
15:AG:157:VAL:HG21	79:B2:78:A:HO2'	1.66	0.60
15:AG:83:CYS:CA	79:B2:162:A:P	2.89	0.60
79:B2:1370:U:H4'	79:B2:1371:A:C5'	2.31	0.60
26:AR:48:ASN:HB2	79:B2:1389:C:H4'	1.82	0.60
79:B2:693:U:H5'	79:B2:694:U:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:820:U:H2'	79:B2:821:U:H4'	1.82	0.60
23:AO:129:LYS:HA	79:B2:990:C:C5'	2.31	0.60
48:BN:90:ASN:ND2	80:B5:2425:G:OP2	2.32	0.60
80:B5:3341:U:H5''	80: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	82:B8:143:U:O3'	2.00	0.60
58:BX:33:ARG:CZ	80:B5:1580:A:N6	2.64	0.60
3:A2:45:LYS:HG3	14:AF:166:ARG:HD3	1.83	0.60
17:AI:64:ASN:ND2	79:B2:257:A:H2'	2.16	0.60
22:AN:5:HIS:HB3	22:AN:117:LEU:HD13	1.84	0.60
23:AO:120:PRO:CG	79:B2:888:U:OP1	2.50	0.60
31:AW:20:THR:HG21	79:B2:1038:U:O3'	2.01	0.60
79:B2:1686:C:N1	79:B2:1687:U:C6	2.69	0.60
79:B2:538:A:H8	79:B2:543:C:C4	2.19	0.60
79:B2:839:U:C4	88:B2:2069:OHX:N4	2.69	0.60
80:B5:1500:G:H2'	80:B5:1501:U:O4'	2.02	0.60
60:BZ:115:LYS:CD	80:B5:1629:U:C4'	2.78	0.60
35:BA:231:SER:CB	80:B5:2163:C:H5''	2.20	0.60
80:B5:3269:U:H4'	80:B5:3270:U:O5'	2.00	0.60
41:BG:132:VAL:HG21	41:BG:190:VAL:HG22	1.83	0.60
8:A7:93:ARG:CB	85:CX:3:G:H1	2.10	0.60
8:A7:83:LYS:CB	84:CW:30:G:H22	1.89	0.60
8:A7:88:ARG:NH1	84:CW:35:A:H8	1.99	0.60
12:AD:163:PRO:HD3	79:B2:1332:C:H1'	1.83	0.60
32:AX:144:ARG:NH2	83:CV:314:LYS:CE	2.60	0.60
79:B2:1358:G:H2'	79:B2:1359:C:C6	2.35	0.60
1:A0:87:ARG:NH1	79:B2:1797:A:C5	2.69	0.60
79:B2:218:A:O2'	79:B2:219:A:OP1	2.15	0.60
13:AE:7:LYS:CG	79:B2:450:U:OP1	2.49	0.60
54:BT:2:GLY:N	80:B5:2626:A:OP1	2.34	0.60
48:BN:179:LYS:NZ	80:B5:287:G:OP1	2.35	0.60
80:B5:3029:A:N9	83:CV:435:TYR:CD2	2.69	0.60
80:B5:22:G:H1'	82:B8:104:A:N3	2.16	0.60
82:B8:78:G:H2'	82:B8:79:A:O4'	2.02	0.60
38:BD:270:LYS:CB	81:B7:2:G:H4'	2.31	0.60
41:BG:194:THR:HG23	80:B5:7:C:O3'	2.00	0.60
48:BN:72:LYS:HD3	80:B5:2166:A:O2'	2.02	0.60
49:BO:85[A]:ARG:HD3	49:BO:90[A]:HIS:CG	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3030:G:O5'	83:CV:436:ARG:CD	2.34	0.60
1:A0:84:VAL:O	1:A0:86:VAL:N	2.29	0.60
13:AE:37:LYS:HB2	13:AE:40:GLU:HG2	1.84	0.60
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
33:AY:10:ARG:NH1	79:B2:778:G:C2	2.68	0.60
79:B2:470:A:H8	79:B2:470:A:H5''	1.67	0.60
80:B5:1567:U:H1'	80:B5:1570:U:H5	1.66	0.60
60:BZ:115:LYS:HD2	80:B5:1629:U:C1'	2.31	0.60
52:BR:134:HIS:HB2	80:B5:1947:G:H5''	1.84	0.60
8:A7:47:ALA:HB2	80:B5:2678:A:N9	2.16	0.60
80:B5:385:A:H2'	80:B5:386:A:C8	2.36	0.60
88:B7:203:OHX:N3	88:B7:219:OHX:N5	2.49	0.60
35:BA:194:ASN:CG	80:B5:822:G:H4'	2.21	0.60
39:BE:40:LEU:HB3	39:BE:84:VAL:HG13	1.82	0.60
43:BI:112:GLN:HA	83:CV:471:LYS:CG	2.27	0.60
38:BD:41:LYS:HB2	54:BT:68:THR:O	2.01	0.60
60:BZ:33:SER:HB3	60:BZ:36:HIS:HB2	1.83	0.60
79:B2:431:C:O2'	83:CV:384:ASP:C	2.40	0.60
8:A7:93:ARG:CG	84:CW:34:C:C4	2.82	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
12:AD:174:HIS:CE1	79:B2:1278:G:C4'	2.81	0.60
29:AU:35:GLU:HG2	79:B2:1383:G:H4'	1.82	0.60
15:AG:8:PRO:CB	79:B2:165:G:C5'	2.76	0.60
79:B2:415:C:N4	83:CV:288:ARG:HD2	2.17	0.60
10:AB:116:LYS:CA	79:B2:931:C:H5''	2.30	0.60
80:B5:2372:A:H4'	80:B5:2373:A:OP2	2.01	0.60
38:BD:282:ARG:HD3	81:B7:63:A:OP2	2.02	0.60
35:BA:187:HIS:HB3	80:B5:1794:G:C4	2.37	0.60
37:BC:81:GLY:O	80:B5:356:C:O2'	2.11	0.60
53:BS:52:LYS:NZ	81:B7:100:C:O5'	2.33	0.60
54:BT:6:GLY:HA3	80:B5:2630:C:H5''	1.84	0.60
8:A7:84:LYS:CB	84:CW:31:A:O5'	2.46	0.60
84:CW:67:C:C2	84:CW:68:C:N1	2.70	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:O	12:AD:53:THR:OG1	2.08	0.60
17:AI:92:ARG:CZ	80:B5:2107:A:H4'	2.32	0.60
25:AQ:40:GLU:HG3	25:AQ:42:GLU:HB2	1.84	0.60
12:AD:160:SER:OG	79:B2:1329:A:OP2	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:59:GLN:HA	79:B2:155:U:H4'	1.81	0.60
79:B2:1672:G:H2'	79:B2:1673:G:C8	2.37	0.60
79:B2:1757:G:O2'	80:B5:2256:A:H8	1.83	0.60
17:AI:64:ASN:CB	79:B2:258:C:C1'	2.79	0.60
79:B2:415:C:OP2	83:CV:288:ARG:CA	2.25	0.60
31:AW:57:ARG:NH2	79:B2:863:A:OP1	2.33	0.60
60:BZ:115:LYS:HD2	80:B5:1629:U:O4'	2.00	0.60
38:BD:145:PHE:CD1	80:B5:2748:A:H4'	2.37	0.60
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
80:B5:2285:C:H41	83:CV:478:LYS:HG3	1.58	0.60
2:A1:68:GLY:O	79: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:H	10:AB:181:LEU:HD13	1.66	0.60
11:AC:245:ASP:N	11:AC:245:ASP:OD1	2.34	0.60
15:AG:8:PRO:HB3	79:B2:165:G:H5'	1.83	0.60
29:AU:59:PRO:HA	79:B2:1381:U:O3'	2.02	0.60
26:AR:48:ASN:ND2	79:B2:1389:C:O5'	2.34	0.60
79:B2:703:G:H2'	79:B2:704:C:H5'	1.83	0.60
79:B2:794:U:O2	79:B2:794:U:H2'	2.00	0.60
52:BR:80:LYS:CE	80:B5:1940:G:OP1	2.43	0.60
42:BH:70:THR:HG21	80: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
80:B5:2285:C:N4	83:CV:477:SER:HG	1.98	0.60
20:AL:80:MET:HE3	79:B2:325:G:O4'	2.01	0.60
27:AS:41:ARG:HB2	79: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
20:AL:130:PRO:CG	79:B2:115:G:O6	2.50	0.60
79:B2:498:G:O2'	79:B2:499:U:P	2.60	0.60
15:AG:154:ARG:HA	79:B2:78:A:O4'	2.01	0.60
60:BZ:79:HIS:CE1	80:B5:1636:U:H2'	2.37	0.60
60:BZ:79:HIS:CE1	80:B5:1636:U:HO2'	2.03	0.60
35:BA:191:LEU:HD11	80:B5:1795:U:OP1	2.02	0.60
80:B5:726:G:H5'	80:B5:726:G:C8	2.31	0.60
38:BD:256:THR:N	81:B7:119:U:OP1	2.27	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:274:GLN:NE2	81:B7:60:G:H21	1.99	0.60
37:BC:68:GLY:O	80:B5:2401:A:N3	2.35	0.60
38:BD:64:ILE:HG13	38:BD:109:THR:HG21	1.84	0.60
41:BG:157:VAL:HG13	80:B5:147:U:C5	2.37	0.60
79:B2:415:C:C2	83:CV:288:ARG:HD3	2.37	0.60
84:CW:31:A:C5	84:CW:32:U:C4	2.89	0.60
1:A0:75:VAL:O	1:A0:79:ILE:N	2.26	0.59
1:A0:87:ARG:NH1	79:B2:1796:C:H5'	2.16	0.59
6:A5:131:PHE:HD2	79: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
34:AZ:60:VAL:HG22	34:AZ:101:TYR:HB2	1.83	0.59
79:B2:1474:G:H2'	79:B2:1475:A:C8	2.36	0.59
17:AI:138:ASN:CG	79:B2:197:A:H61	2.05	0.59
79:B2:433:C:H5''	83:CV:391:VAL:CG2	2.32	0.59
79:B2:440:U:O4'	83:CV:276:ARG:HG3	2.02	0.59
80:B5:1081:U:HO2'	80:B5:1082:U:C5'	2.14	0.59
60:BZ:48:ARG:CZ	80:B5:1631:C:OP2	2.44	0.59
80:B5:1879:A:H4'	80: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	80:B5:3051:U:H1'	2.36	0.59
60:BZ:16:GLY:HA2	80:B5:1638:A:OP2	2.01	0.59
8:A7:77:THR:HB	84:CW:44:G:C3'	2.16	0.59
13:AE:179:LYS:N	13:AE:194:THR:O	2.36	0.59
15:AG:175:ILE:C	79: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
79:B2:1381:U:H1'	79:B2:1516:A:N6	2.17	0.59
15:AG:185:GLN:CD	79:B2:284:G:N1	2.55	0.59
23:AO:37:GLU:HA	79:B2:895:G:C4'	2.31	0.59
80:B5:1225:A:H8	80:B5:1288:U:C4'	2.13	0.59
35:BA:243:THR:OG1	80:B5:2244:A:OP1	2.18	0.59
80:B5:955:U:H2'	80:B5:956:U:C6	2.37	0.59
35:BA:234:LYS:HZ3	80:B5:2162:U:P	2.25	0.59
43:BI:72:ALA:O	43:BI:76:MET:HG2	2.02	0.59
44:BJ:55:ARG:NH1	80:B5:353:G:N7	104.91	0.59
46:BL:93:ILE:HG22	46:BL:94:GLY:N	2.18	0.59
52:BR:143:ILE:HG12	80:B5:2093:A:H5'	1.84	0.59
59:BY:82:VAL:O	59:BY:84:LYS:N	2.35	0.59
12:AD:28:GLU:OE1	19:AK:56:LYS:NZ	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	79:B2:1278:G:O4'	2.48	0.59
12:AD:203:PRO:HB2	79:B2:1331:A:N3	2.16	0.59
25:AQ:14:LYS:HE3	79:B2:1610:G:N7	2.16	0.59
79:B2:497:G:H2'	79:B2:498:G:C8	2.36	0.59
15:AG:159:ARG:CD	79:B2:77:U:N3	2.43	0.59
79:B2:822:U:H2'	79:B2:823:G:H5''	1.83	0.59
41:BG:136:LEU:HB2	80:B5:147:U:OP2	2.01	0.59
80:B5:171:G:N2	80:B5:248:U:O2	2.35	0.59
80:B5:1764:U:H3'	80:B5:1765:U:H5''	1.84	0.59
80:B5:2537:U:H2'	80:B5:2538:U:O4'	2.02	0.59
8:A7:51:ARG:CD	80:B5:2677:G:H1'	2.33	0.59
44:BJ:24:GLY:HA2	80:B5:2680:A:C2	2.37	0.59
35:BA:19:HIS:NE2	80: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	81:B7:46:A:OP1	2.00	0.59
46:BL:13:HIS:HD2	80: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:A7:83:LYS:CA	84:CW:30:G:N2	2.40	0.59
8:A7:29:ASN:H	80: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
15:AG:62:PRO:CB	79:B2:162:A:H5'	2.31	0.59
17:AI:43:ILE:HB	79:B2:260:U:H5	1.68	0.59
25:AQ:75:VAL:HG11	79: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	79:B2:1420:C:OP1	2.02	0.59
79:B2:1492:A:O2'	79:B2:1493:A:H8	1.80	0.59
25:AQ:125:GLU:CB	79:B2:1585:U:H5''	2.33	0.59
79:B2:1657:U:H1'	79:B2:1658:G:OP2	2.02	0.59
60:BZ:135:ARG:HH22	80:B5:1807:G:H5'	1.65	0.59
80:B5:1949:G:H1	80:B5:2097:U:H3	1.50	0.59
80:B5:2897:A:H2'	80:B5:2899:C:C5'	2.32	0.59
80:B5:3227:A:H2'	80:B5:3228:C:H5'	1.82	0.59
35:BA:206:PRO:HD3	35:BA:213:GLY:HA2	1.84	0.59
35:BA:235:ALA:HB1	80:B5:2184:U:O5'	2.02	0.59
38:BD:16:PHE:CE1	80:B5:2688:U:C2	2.90	0.59
38:BD:85:ARG:HD3	38:BD:86:TYR:CE1	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:120:GLN:NE2	59:BY:126:LEU:HA	2.17	0.59
80:B5:2284:C:C5	83:CV:477:SER:HA	2.27	0.59
83:CV:20:LYS:H	89:CV:602:GCP:H8	1.67	0.59
15:AG:175:ILE:HD11	79:B2:78:A:O4'	1.96	0.59
9:AA:66:ALA:HB2	30:AV:37:ALA:HB2	1.85	0.59
79:B2:543:C:O2	79:B2:543:C:H5'	2.02	0.59
52:BR:170:ARG:N	79:B2:851:U:C3'	2.65	0.59
80:B5:3228:C:H4'	80:B5:3229:G:O5'	2.03	0.59
35:BA:237:LEU:CD2	80:B5:2183:A:H2	2.16	0.59
43:BI:168:SER:HB2	54:BT:160:ILE:O	2.03	0.59
46:BL:42:ARG:HH22	80:B5:1494:U:P	74.32	0.59
46:BL:99:HIS:CG	80:B5:156:G:C5	2.90	0.59
52:BR:61:SER:OG	80:B5:3069:G:O2'	2.02	0.59
3:A2:25:VAL:HG11	3:A2:66:LEU:HD12	1.85	0.59
8:A7:93:ARG:HG2	84:CW:34:C:C4	2.38	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
79:B2:514:G:N1	79:B2:543:C:H5	2.00	0.59
18:AJ:7:THR:O	79:B2:771:A:H4'	2.01	0.59
22:AN:14:SER:OG	79:B2:960:U:C5	2.50	0.59
80:B5:1329:U:H4'	80:B5:1330:A:OP1	2.02	0.59
60:BZ:15:ARG:HB3	80:B5:1637:A:C5'	2.32	0.59
80:B5:2279:A:N6	83:CV:478:LYS:HE3	2.18	0.59
56:BV:71:LYS:NZ	80: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
1:A0:3:LYS:CE	79:B2:1030:A:OP1	2.51	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
23:AO:129:LYS:CA	79:B2:990:C:C5'	2.81	0.59
34:AZ:92:ILE:HG12	34:AZ:100:ILE:HG22	1.84	0.59
25:AQ:75:VAL:CB	79:B2:1610:G:P	2.90	0.59
79:B2:1585:U:N3	79:B2:1611:A:H2	1.81	0.59
11:AC:88:LYS:NZ	88:B2:2048:OHX:N2	2.51	0.59
20:AL:80:MET:HE1	79:B2:325:G:H5'	1.84	0.59
17:AI:25:ARG:HD3	79:B2:400:A:P	2.42	0.59
79:B2:431:C:N1	83:CV:386:SER:HB2	2.18	0.59
5:A4:58:PRO:HA	79:B2:558:U:OP1	2.02	0.59
80:B5:208:C:C2'	80:B5:209:A:H5'	2.33	0.59
79:B2:1746:A:C2	80:B5:2303:A:C1'	2.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:162:ARG:HG2	80:B5:56:G:H1'	1.84	0.59
37:BC:119:ARG:NE	80:B5:695:C:OP1	2.31	0.59
35:BA:39:GLY:CA	80:B5:2550:U:O4	2.50	0.59
42:BH:26:LYS:HG3	42:BH:35:THR:HG22	1.85	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
10:AB:97:LEU:CD1	10:AB:98:THR:H	2.11	0.59
13:AE:51:ARG:NH2	79:B2:788:A:N1	2.50	0.59
33:AY:120:GLY:HA2	79:B2:85:A:C2'	2.33	0.59
26:AR:5:ARG:HB2	79:B2:1402:G:OP1	2.03	0.59
4:A3:32:ARG:NE	79:B2:1596:C:OP2	2.32	0.59
79:B2:580:A:OP1	88:B2:2023:OHX:N4	2.36	0.59
80:B5:1308:A:H8	80:B5:1308:A:OP2	1.85	0.59
79:B2:1655:A:C1'	80:B5:2302:G:O2'	2.51	0.59
36:BB:124:LYS:HB2	80:B5:3316:A:N1	2.17	0.59
37:BC:161:LYS:NZ	80:B5:209:A:OP1	2.35	0.59
46:BL:5:LYS:CD	80:B5:1834:U:OP1	82.26	0.59
58:BX:103:TYR:O	58:BX:105:VAL:HG23	2.03	0.59
8:A7:93:ARG:HG2	84:CW:34:C:N4	2.10	0.59
8:A7:83:LYS:NZ	84:CW:41:C:O4'	2.34	0.59
80:B5:2625:C:C6	84:CW:76:A:O3'	2.56	0.59
4:A3:14:TYR:CE2	79:B2:1597:A:C5	2.90	0.59
8:A7:77:THR:OG1	84:CW:43:C:H2'	2.02	0.59
9:AA:121:VAL:HG23	9:AA:141:ILE:HG21	1.84	0.59
13:AE:16:HIS:HE1	79:B2:789:A:OP2	1.86	0.59
23:AO:38:THR:HG21	79:B2:896:U:C4'	2.32	0.59
79:B2:1071:U:H2'	79:B2:1072:C:C6	2.38	0.59
29:AU:35:GLU:OE2	79:B2:1383:G:H4'	2.02	0.59
79:B2:1644:C:O2	80:B5:2255:A:N3	2.35	0.59
88:B2:1922:OHX:N4	88:B2:1976:OHX:N3	2.50	0.59
79:B2:420:A:C2	83:CV:289:LEU:HD21	2.38	0.59
35:BA:244:GLY:N	80:B5:2153:U:H4'	2.17	0.59
35:BA:234:LYS:HD3	80:B5:2162:U:H5''	1.85	0.59
41:BG:181:LYS:HD3	82:B8:154:C:H5''	1.84	0.59
41:BG:63:LYS:HE2	82: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	80:B5:1636:U:C2'	2.64	0.59
79:B2:432:G:N2	83:CV:387:ARG:NH1	2.41	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	79:B2:1550:A:P	2.26	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:30:TYR:O	27:AS:33:THR:OG1	2.15	0.59
26:AR:60:ARG:NH1	79:B2:1400:A:C5'	2.63	0.59
79:B2:1738:U:H2'	79:B2:1739:C:C6	2.37	0.59
79:B2:407:A:H2'	79:B2:408:C:C6	2.38	0.59
41:BG:162:LEU:HD13	80:B5:147:U:N1	2.17	0.59
80:B5:2511:A:C2'	80:B5:2512:C:H5''	2.32	0.59
41:BG:55:TYR:OH	82: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
52:BR:177:VAL:H	79:B2:853:G:H5'	1.68	0.59
79:B2:431:C:N3	83:CV:387:ARG:NH2	2.51	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	79:B2:1581:C:O3'	2.03	0.58
26:AR:17:ILE:HG23	26:AR:58:MET:HE1	1.83	0.58
79:B2:1488:G:H3'	79:B2:1515:A:H61	1.68	0.58
79:B2:1637:C:O2'	85:CX:3:G:C6	2.39	0.58
79:B2:1385:G:N7	88:B2:2013:OHX:N3	2.51	0.58
79:B2:702:G:C6	79:B2:737:A:N6	2.71	0.58
52:BR:166:ASN:CA	79:B2:850:A:C8	2.86	0.58
40:BF:207:LEU:O	80:B5:1334:U:H5'	2.02	0.58
80:B5:2103:U:H2'	80:B5:2104:A:H8	1.66	0.58
79:B2:913:G:N1	80:B5:2206:G:H5''	2.18	0.58
80:B5:2284:C:O5'	83:CV:477:SER:HB2	1.94	0.58
54:BT:2:GLY:N	80:B5:2626:A:P	2.76	0.58
41:BG:181:LYS:CD	82:B8:154:C:H5''	2.32	0.58
37:BC:259:ASP:N	37:BC:259:ASP:OD1	2.35	0.58
53:BS:146:LYS:HD3	80:B5:534:U:H1'	1.84	0.58
54:BT:105:PHE:CE1	80:B5:1062:A:H4'	2.38	0.58
83:CV:237:VAL:HG23	83:CV:360:LEU:HD12	1.82	0.58
79:B2:433:C:C5	83:CV:388:ARG:HB3	2.21	0.58
2:A1:68:GLY:CA	79:B2:872:G:H1'	2.33	0.58
8:A7:34:LYS:CE	80:B5:2693:C:C5'	2.79	0.58
15:AG:174:LYS:HG2	79:B2:79:C:O2'	2.03	0.58
15:AG:62:PRO:HB2	79:B2:162:A:H4'	1.85	0.58
16:AH:143:LEU:HB2	16:AH:147:ASN:HB2	1.85	0.58
9:AA:198:MET:SD	26:AR:85:VAL:HG11	2.44	0.58
79:B2:1442:U:H2'	79:B2:1443:U:C6	2.37	0.58
80:B5:1225:A:C8	80:B5:1288:U:C4'	2.72	0.58
80:B5:1226:G:H2'	80:B5:1227:C:C6	2.38	0.58
80:B5:1815:U:HO2'	80:B5:1816:A:P	2.25	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2434:U:C4'	80:B5:2435:G:H5''	2.34	0.58
80:B5:438:A:H2'	80:B5:494:G:H21	1.68	0.58
46:BL:16:LYS:HG3	80:B5:48:A:P	2.43	0.58
46:BL:73:ARG:NH2	80:B5:77:A:N7	2.51	0.58
52:BR:134:HIS:CG	80: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	80:B5:2678:A:C1'	2.32	0.58
8:A7:82:THR:O	84:CW:41:C:H2'	2.03	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	79:B2:1581:C:H4'	2.33	0.58
79:B2:279:G:C3'	79:B2:280:U:H5''	2.28	0.58
79:B2:702:G:O2'	79:B2:703:G:O4'	2.21	0.58
79:B2:833:U:OP2	88:B2:2022:OHX:N4	2.36	0.58
80:B5:1282:G:H3'	80:B5:1283:C:H5''	1.84	0.58
80:B5:1481:A:O2'	80:B5:1858:A:C2	2.56	0.58
35:BA:152:SER:HA	80:B5:2178:A:O2'	2.03	0.58
80:B5:2440:G:HO2'	80:B5:2441:A:P	2.26	0.58
80:B5:243:G:H2'	80:B5:244:G:C8	2.39	0.58
80:B5:2510:U:O2'	80:B5:2511:A:H5''	2.03	0.58
43:BI:24:ARG:NH2	80:B5:2648:G:OP1	2.36	0.58
88:B7:203:OHX:N4	88:B7:219:OHX:N2	2.51	0.58
48:BN:109:ARG:CD	82:B8:140:G:O2'	2.51	0.58
35:BA:235:ALA:HB1	80:B5:2184:U:OP1	2.03	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:160:PRO:HD3	80:B5:2854:U:C5'	2.31	0.58
46:BL:70:ARG:HH12	80:B5:76:G:P	2.26	0.58
7:A6:36:ALA:HB2	7:A6:71:CYS:HB3	1.85	0.58
8:A7:91:THR:HG23	84:CW:36:U:C6	2.38	0.58
13:AE:200:ARG:NH1	13:AE:202:ASP:OD2	2.36	0.58
16:AH:96:ARG:HB3	79:B2:856:A:N6	2.18	0.58
23:AO:36:LYS:O	79: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	79:B2:1565:C:OP1	2.35	0.58
79:B2:1542:G:H22	79:B2:1568:C:H1'	1.67	0.58
1:A0:87:ARG:CD	79:B2:1797:A:N6	2.63	0.58
50:BP:74:LYS:HE2	80:B5:3297:U:O3'	2.03	0.58
35:BA:13:GLY:CA	80:B5:943:U:H3'	70.62	0.58
38:BD:270:LYS:HG2	81:B7:2:G:C5'	2.33	0.58
43:BI:22:TYR:HB3	80:B5:2647:A:C4'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BJ:70:THR:HB	81:B7:39:C:O2	2.04	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	79:B2:68:A:C6	2.86	0.58
16:AH:51:VAL:HG23	16:AH:53:GLY:H	1.67	0.58
17:AI:171:SER:HA	79:B2:209:U:H5'	1.85	0.58
17:AI:37:LYS:H	17:AI:59:ARG:H	1.51	0.58
33:AY:10:ARG:NH2	79:B2:778:G:N2	2.48	0.58
1:A0:95:ARG:HA	79:B2:1797:A:C4'	2.34	0.58
17:AI:170:SER:C	79:B2:209:U:H5''	2.24	0.58
79:B2:429:G:HO2'	83:CV:243:PHE:HD1	1.51	0.58
48:BN:4:TYR:OH	80:B5:148:G:P	2.62	0.58
35:BA:50:HIS:NE2	80:B5:1795:U:H2'	2.18	0.58
80:B5:2439:A:N6	80:B5:2508:U:H3	2.01	0.58
37:BC:88:GLY:HA3	80:B5:1729:A:OP1	102.83	0.58
38:BD:266:ALA:HA	81:B7:1:G:C1'	2.32	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	79: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
52:BR:85:ARG:NH1	80:B5:2103:U:O3'	2.37	0.58
79:B2:913:G:O6	80:B5:2206:G:O3'	2.20	0.58
44:BJ:95:ASN:HA	80:B5:2673:A:C5'	2.34	0.58
38:BD:260:PHE:HE2	81:B7:121:U:C5'	2.11	0.58
38:BD:207:TYR:CE1	81:B7:33:U:O4'	2.56	0.58
48:BN:60:VAL:HG21	82:B8:142:C:C4'	2.33	0.58
35:BA:200:ARG:NE	80:B5:2147:A:OP2	2.36	0.58
83:CV:237:VAL:CG2	83:CV:360:LEU:CD1	2.82	0.58
10:AB:141:ALA:HB1	10:AB:207:LEU:HD23	1.84	0.58
25:AQ:47:LYS:HZ1	25:AQ:114:ARG:HH11	1.52	0.58
79:B2:1645:G:H5'	80:B5:2260:U:O2	2.04	0.58
88:AC:301:OHX:N6	88:B2:1906:OHX:N5	2.52	0.58
79:B2:241:U:H5'	79:B2:242:U:OP2	2.04	0.58
80:B5:1064:A:H4'	80:B5:1065:A:O5'	2.04	0.58
54:BT:127:GLN:CG	80:B5:1095:U:N3	2.67	0.58
80:B5:3155:U:H3'	80:B5:3156:U:H5''	1.85	0.58
46:BL:65:TYR:CD2	80:B5:103:G:H5'	2.39	0.58
83:CV:199:ALA:CB	89:CV:602:GCP:C5	2.81	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
79:B2:1178:G:H2'	79:B2:1179:G:O4'	2.04	0.58
79:B2:1338:C:H1'	79:B2:1410:A:C4	2.39	0.58
1:A0:92:ARG:CD	79:B2:1796:C:OP2	2.47	0.58
13:AE:7:LYS:HG3	79:B2:450:U:OP1	2.04	0.58
32:AX:5:LYS:HE2	79:B2:611:U:OP2	2.04	0.58
37:BC:334:PHE:CE2	80:B5:578:A:C6	2.91	0.58
80:B5:979:U:H4'	80: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
8:A7:89:ARG:HD3	84:CW:35:A:OP2	2.03	0.58
6:A5:91:UNK:HG2	79:B2:1445:G:C4	2.38	0.58
15:AG:186:ARG:O	15:AG:190:GLN:HG2	2.04	0.58
17:AI:25:ARG:HA	79:B2:400:A:O5'	2.02	0.58
26:AR:48:ASN:C	79:B2:1389:C:H4'	2.23	0.58
79:B2:1498:G:H2'	79:B2:1499:G:H5'	1.85	0.58
27:AS:40:ARG:HD2	79:B2:1539:G:H5''	1.86	0.58
79:B2:373:G:N7	88:B2:2056:OHX:N6	2.51	0.58
80:B5:1579:C:H2'	80:B5:1580:A:H5'	1.86	0.58
35:BA:69:TYR:CD2	80: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	80:B5:3051:U:H1'	2.39	0.58
57:BW:120:LYS:HA	57:BW:123:ARG:HH11	1.69	0.58
11:AC:91:ARG:HD2	79:B2:1625:C:OP1	2.03	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	79:B2:776:G:O6	2.52	0.58
79:B2:1715:G:H2'	79:B2:1716:C:H5'	1.85	0.58
79:B2:190:C:N4	79:B2:196:G:O6	2.37	0.58
52:BR:175:GLN:CA	79:B2:852:C:H4'	2.29	0.58
23:AO:27:PHE:CE2	79:B2:916:U:C2'	2.87	0.58
56:BV:48:ARG:HG3	80:B5:2339:C:OP2	2.04	0.58
80:B5:2946:A:H5''	80:B5:2947:G:H5'	1.86	0.58
44:BJ:55:ARG:HD3	80:B5:353:G:C8	108.00	0.58
37:BC:16:THR:HG23	37:BC:18:ASN:H	1.68	0.58
42:BH:174:LYS:HG2	80:B5:2900:A:O2'	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:15[A]:LEU:HD21	49:BO:125[A]:ARG:HG3	1.86	0.58
52:BR:165:LYS:HZ1	79:B2:824:G:H1'	1.67	0.58
79:B2:1637:C:O3'	85:CX:3:G:O6	2.22	0.58
14:AF:145:ASP:OD1	14:AF:146:THR:N	2.36	0.57
15:AG:15:THR:HG21	79:B2:153:G:P	2.40	0.57
23:AO:107:ARG:HG3	23:AO:107:ARG:NH1	2.15	0.57
14:AF:72:HIS:O	25:AQ:47:LYS:HE2	2.04	0.57
33:AY:104:SER:HB3	33:AY:107:GLN:HB2	1.85	0.57
20:AL:130:PRO:CG	79:B2:115:G:C6	2.87	0.57
79:B2:1483:A:H2'	79:B2:1484:G:C8	2.39	0.57
1:A0:87:ARG:NH1	79:B2:1797:A:N7	2.52	0.57
17:AI:31:ARG:HB2	79:B2:332:U:OP1	2.04	0.57
17:AI:25:ARG:NH2	79:B2:386:G:OP2	2.38	0.57
80:B5:1581:C:OP2	80:B5:1581:C:H4'	2.03	0.57
53:BS:50:LYS:CE	81:B7:76:A:C2	2.87	0.57
38:BD:258:LYS:HG2	38:BD:258:LYS:O	2.02	0.57
41:BG:129:PRO:HB3	80:B5:121:A:H2	1.68	0.57
48:BN:168:GLY:O	48:BN:172:ARG:HB2	2.04	0.57
83:CV:85:ASN:OD1	83:CV:368:LYS:NZ	2.37	0.57
8:A7:88:ARG:HG3	84:CW:35:A:H2'	0.58	0.57
8:A7:89:ARG:C	84:CW:35:A:N6	2.57	0.57
2:A1:51:GLN:OE1	79:B2:870:C:O2'	2.21	0.57
3:A2:32:PHE:CE1	3:A2:38:ARG:HB3	2.38	0.57
17:AI:75:LYS:CB	79:B2:258:C:H5''	2.34	0.57
18:AJ:176:ASN:HD22	79:B2:511:A:P	2.26	0.57
23:AO:20:TYR:HD2	79:B2:917:U:C5'	2.13	0.57
24:AP:99:GLY:O	79:B2:1211:A:H1'	2.04	0.57
79:B2:1015:U:OP1	88:B2:1923:OHX:N6	2.38	0.57
14:AF:109:LYS:HD3	79:B2:1473:U:H1'	1.84	0.57
79:B2:625:C:H2'	79:B2:626:U:C6	2.39	0.57
79:B2:1747:G:HO2'	80:B5:2304:C:H5'	1.64	0.57
80:B5:2264:U:P	88:B5:3402:OHX:N3	2.77	0.57
80:B5:547:G:H2'	80:B5:548:G:O4'	2.03	0.57
35:BA:85:GLY:HA2	80: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
24:AP:70:ASN:ND2	44:BJ:172:LEU:CD2	2.67	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
83:CV:248:ASP:CA	83:CV:360:LEU:HD22	2.32	0.57
2:A1:28:PRO:HB3	79:B2:959:U:O5'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:62:PRO:CB	79:B2:162:A:C4'	2.82	0.57
22:AN:123:HIS:NE2	80:B5:847:A:H4'	2.19	0.57
79:B2:104:A:OP2	79:B2:308:C:N4	2.37	0.57
23:AO:52:ARG:CB	79:B2:906:A:OP2	2.51	0.57
1:A0:95:ARG:NH1	79:B2:934:C:C6	2.73	0.57
79:B2:990:C:H2'	79:B2:991:G:O4'	2.04	0.57
80:B5:252:U:H4'	80:B5:253:A:H5''	1.86	0.57
80:B5:2546:C:H2'	80:B5:2547:A:H8	1.68	0.57
37:BC:170:LYS:HG3	37:BC:175:HIS:HB2	1.86	0.57
42:BH:120:ASP:OD2	42:BH:124:ARG:NH2	2.37	0.57
44:BJ:103:GLY:O	80:B5:2673:A:H4'	2.03	0.57
37:BC:59:GLN:OE1	44:BJ:55:ARG:NH2	102.23	0.57
39:BE:176:PHE:H	47:BM:117:ARG:HH22	1.51	0.57
52:BR:93:VAL:HG21	80:B5:1779:C:H1'	1.85	0.57
60:BZ:54:THR:H	60:BZ:57:HIS:CD2	2.20	0.57
32:AX:144:ARG:NE	83:CV:268:ASN:OD1	2.37	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	79:B2:115:G:C6	2.87	0.57
28:AT:93:HIS:CE1	79:B2:1525:A:OP1	2.57	0.57
79:B2:1711:C:O2'	79:B2:1712:A:OP1	2.14	0.57
1:A0:86:VAL:HA	79:B2:1795:U:H5'	1.86	0.57
88:B2:1922:OHX:N4	88:B2:1976:OHX:N6	2.52	0.57
79:B2:45:U:O2'	79:B2:46:A:H2'	2.02	0.57
33:AY:11:LYS:NZ	79:B2:775:G:O6	2.37	0.57
80:B5:1574:C:O2'	80:B5:1575:A:OP1	2.22	0.57
79:B2:1746:A:C2	80:B5:2302:G:N3	2.71	0.57
80:B5:3078:U:H4'	80:B5:3079:U:O5'	2.02	0.57
80:B5:3358:U:H2'	80:B5:3359:A:C8	2.39	0.57
82:B8:126:A:O2'	82:B8:128:U:OP2	2.16	0.57
43:BI:103:LEU:O	83:CV:471:LYS:HB2	2.05	0.57
79:B2:415:C:N4	83:CV:288:ARG:CD	2.65	0.57
10:AB:117:TRP:HA	79:B2:932:U:OP2	2.04	0.57
14:AF:185:ARG:CZ	79:B2:1572:G:H1'	2.35	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
7:A6:17:ASN:HD21	79:B2:1408:G:H4'	1.68	0.57
79:B2:1595:U:N3	79:B2:1600:A:H2	2.02	0.57
79:B2:67:A:O3'	79:B2:68:A:H3'	2.03	0.57
79:B2:704:C:H3'	79:B2:704:C:OP2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2440:G:O2'	80:B5:2441:A:OP1	2.18	0.57
38:BD:146:LEU:CB	80:B5:2746:A:C2	2.73	0.57
80:B5:2897:A:H2'	80:B5:2899:C:H5''	1.86	0.57
36:BB:2:SER:HA	80:B5:2940:A:N7	2.19	0.57
80:B5:3280:U:O2'	80:B5:3281:U:H5''	2.03	0.57
39:BE:109:GLU:CD	39:BE:109:GLU:H	2.07	0.57
41:BG:157:VAL:CG1	80: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
79:B2:429:G:O2'	83:CV: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
79:B2:1207:C:H42	79:B2:1456:C:H5	1.53	0.57
79:B2:143:G:H2'	79:B2:144:U:H5''	1.85	0.57
53:BS:115:ARG:NH1	80:B5:1296:C:H5'	2.20	0.57
37:BC:162:THR:HG21	80:B5:209:A:C4	2.40	0.57
80:B5:2112:U:H4'	80:B5:2113:A:H5'	1.86	0.57
80:B5:892:U:O2'	80: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	80: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
53:BS:137:ARG:NH1	80:B5:1213:G:H5''	2.19	0.57
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
8:A7:79:SER:OG	84:CW:43:C:C1'	2.52	0.57
23:AO:120:PRO:CB	79:B2:887:A:C5'	2.75	0.57
23:AO:81:VAL:HG13	23:AO:115:ILE:HG21	1.86	0.57
26:AR:48:ASN:CB	79:B2:1389:C:H4'	2.34	0.57
29:AU:28:SER:OG	29:AU:29:THR:N	2.38	0.57
20:AL:34:TRP:NE1	79:B2:249:U:OP1	2.32	0.57
20:AL:136:ARG:HD3	79:B2:304:U:OP1	2.04	0.57
33:AY:64:PHE:CE2	79:B2:767:U:C6	2.93	0.57
23:AO:129:LYS:HA	79:B2:990:C:C3'	2.34	0.57
79:B2:1759:C:O2	80:B5:2262:A:H2	1.88	0.57
80:B5:2530:G:H2'	80:B5:2531:C:H5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2726:C:O2'	80:B5:2727:A:H2'	2.04	0.57
43:BI:7:ARG:HH11	80:B5:2828:G:P	2.27	0.57
35:BA:183:GLY:HA3	80: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
79:B2:414:C:N3	83:CV:289:LEU:HD21	2.17	0.57
43:BI:112:GLN:CA	83:CV:471:LYS:HD3	2.30	0.57
80:B5:2286:U:C5	83:CV:479:PRO:HD3	2.36	0.57
1:A0:24:VAL:HG11	1:A0:71:LEU:HD12	1.85	0.57
4:A3:44:ARG:NH2	79:B2:1280:C:H5'	2.19	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:3:LEU:HD13	15:AG:111:LEU:HD11	1.85	0.57
21:AM:30:VAL:HB	21:AM:132:GLU:HG3	1.86	0.57
26:AR:5:ARG:NH2	79:B2:1402:G:OP2	2.38	0.57
26:AR:5:ARG:O	26:AR:10:LYS:HE2	2.05	0.57
27:AS:70:VAL:HG12	27:AS:74:GLN:OE1	2.05	0.57
19:AK:1:MET:HG3	79:B2:1217:A:C5'	2.34	0.57
24:AP:47:ARG:NH1	79:B2:1555:A:P	2.73	0.57
79:B2:1130:G:OP2	88:B2:1952:OHX:N2	2.38	0.57
15:AG:189:HIS:CD2	79:B2:285:G:OP2	2.58	0.57
79:B2:542:A:H2'	79:B2:543:C:H3'	1.86	0.57
79:B2:735:C:OP2	79:B2:735:C:H2'	2.05	0.57
52:BR:171:ASP:OD1	79:B2:852:C:P	2.56	0.57
80:B5:1573:G:C6	80:B5:1574:C:H1'	2.40	0.57
80:B5:2659:G:H4'	80:B5:2751:G:O2'	2.05	0.57
80:B5:2971:A:OP2	80:B5:2971:A:H3'	2.04	0.57
38:BD:152:ARG:HG3	38:BD:152:ARG:NH1	2.19	0.57
38:BD:31:TYR:HE2	80:B5:2705:A:OP1	1.88	0.57
41:BG:90:THR:HG22	41:BG:214:LEU:HG	1.87	0.57
83:CV:248:ASP:H	83:CV:360:LEU:HD22	0.67	0.57
15:AG:88:ARG:CZ	79:B2:92:A:C2	2.88	0.57
79:B2:1226:A:O2'	79:B2:1227:A:OP1	2.23	0.57
26:AR:49:LYS:CG	79:B2:1390:U:OP2	2.52	0.57
79:B2:238:U:O2'	79:B2:239:C:H5'	2.05	0.57
79:B2:639:U:H4'	79:B2:639:U:OP2	2.04	0.57
60:BZ:15:ARG:HB3	80:B5:1637:A:C4'	2.35	0.57
35:BA:21:ARG:HD2	80:B5:1797:A:H1'	1.85	0.57
80:B5:708:G:H8	80:B5:708:G:H5''	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:4:VAL:HB	80:B5:910:G:OP2	2.03	0.57
41:BG:151:VAL:HG13	41:BG:199:ALA:HB2	1.87	0.57
41:BG:133:LYS:HB2	41:BG:199:ALA:O	2.04	0.57
46:BL:5:LYS:HG2	80:B5:1833:G:O3'	84.62	0.57
49:BO:65[A]:ASN:OD1	49:BO:67[A]:THR:HB	2.04	0.57
12:AD:159:HIS:CB	79:B2:1422:A:H5'	2.35	0.57
12:AD:162:GLN:HB3	79: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	79:B2:1565:C:O2'	2.23	0.57
79:B2:312:A:C2	79:B2:314:C:H2'	2.40	0.57
79:B2:885:G:H2'	79:B2:886:U:C6	2.40	0.57
51:BQ:56:LYS:NZ	80:B5:674:G:O6	2.38	0.57
40:BF:206:LYS:HB3	80:B5:1334:U:OP1	2.05	0.57
48:BN:60:VAL:HG21	82:B8:142:C:C5'	2.35	0.57
44:BJ:55:ARG:NH2	84:CW:47:U:C3'	2.66	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	79:B2:1389:C:C5'	2.35	0.56
28:AT:14:PHE:HZ	28:AT:132:LEU:HD23	1.69	0.56
31:AW:57:ARG:HG2	79:B2:863:A:O5'	2.05	0.56
34:AZ:94:LYS:HE2	79:B2:1530:C:OP1	2.05	0.56
17:AI:33:PRO:HA	79:B2:331:A:C5'	2.35	0.56
79:B2:495:C:H3'	79:B2:496:G:O4'	2.04	0.56
79:B2:717:C:N3	79:B2:720:G:N1	2.48	0.56
80:B5:1085:A:C5'	80:B5:1085:A:C8	2.88	0.56
79:B2:1780:G:C1'	80:B5:2262:A:H4'	2.31	0.56
80:B5:2440:G:C8	80:B5:2440:G:H5'	2.35	0.56
80:B5:550:A:H2'	80:B5:551:A:C8	2.40	0.56
53:BS:53:LYS:HD3	81:B7:99:G:OP1	2.05	0.56
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
80:B5:2286:U:C4	83:CV:478:LYS:HA	2.38	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
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	79:B2:68:A:H61	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:43:ILE:N	79:B2:260:U:O4	2.38	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
79:B2:1160:A:H2'	79:B2:1161:C:H6	1.69	0.56
79:B2:180:A:H2'	79:B2:181:A:O4'	2.05	0.56
80:B5:1032:C:H5'	80:B5:1033:U:OP2	2.06	0.56
8:A7:30:THR:HA	80:B5:2707:C:H1'	1.87	0.56
49:BO:72[B]:HIS:N	80:B5:3008:A:OP1	2.36	0.56
46:BL:60:ALA:H	80:B5:75:G:H5'	1.71	0.56
35:BA:15:ILE:HG12	80:B5:821:U:O2	2.05	0.56
38:BD:145:PHE:CG	80:B5:2748:A:C4'	2.86	0.56
84:CW:41:C:C3'	84:CW:42:C:H5''	2.33	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	79: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	79:B2:1298:U:O3'	2.38	0.56
79:B2:229:U:H3	79:B2:236:A:H61	1.51	0.56
79:B2:855:A:C2	79:B2:857:U:H1'	2.40	0.56
80:B5:1157:G:H2'	80:B5:1158:A:O4'	2.06	0.56
80:B5:2211:U:H5	80:B5:2234:G:C6	2.22	0.56
44:BJ:95:ASN:HA	80:B5:2673:A:P	2.46	0.56
35:BA:69:TYR:CE2	80:B5:2558:U:N3	2.73	0.56
48:BN:109:ARG:HD3	82:B8:140:G:O2'	2.05	0.56
56:BV:3:GLY:HA2	56:BV:40:LYS:HB3	1.87	0.56
56:BV:57:MET:HE3	56:BV:126:TRP:CH2	2.40	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	81:B7:46:A:P	2.43	0.56
38:BD:276:LYS:HD2	81:B7:61:G:OP1	2.05	0.56
35:BA:200:ARG:CD	80:B5:2187:G:O6	2.52	0.56
35:BA:227:ARG:HH22	80:B5:2155:G:HO2'	1.45	0.56
53:BS:12:ARG:HB3	53:BS:24:LEU:HD23	1.87	0.56
8:A7:84:LYS:HA	84:CW:30:G:H2'	0.69	0.56
84:CW:33:U:C2	84:CW:35:A:OP2	2.58	0.56
8:A7:91:THR:HG23	84:CW:36:U:C5	2.39	0.56
28:AT:6:VAL:HG13	28:AT:66:TYR:CE2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AC:89:GLN:N	79:B2:1145:U:O2'	2.36	0.56
79:B2:1158:C:OP2	88:B2:2012:OHX:N5	2.38	0.56
79:B2:1511:U:H2'	79:B2:1512:G:C8	2.41	0.56
79:B2:1637:C:H4'	85:CX:2:U:H3	1.70	0.56
79:B2:83:G:OP2	88:B2:1944:OHX:N5	2.38	0.56
79:B2:1029:U:O4	88:B2:2032:OHX:N3	2.38	0.56
13:AE:21:ASP:CB	79:B2:773:C:H5''	2.31	0.56
79:B2:827:C:H2'	79:B2:828:U:C6	2.40	0.56
79:B2:918:U:H2'	79:B2:919:A:C8	2.39	0.56
80:B5:1688:U:H2'	80:B5:1689:U:C6	2.41	0.56
80:B5:1835:A:H5''	80:B5:1836:C:OP2	2.05	0.56
35:BA:240:ALA:CA	80:B5:2154:U:O3'	2.37	0.56
80:B5:2436:U:H2'	80:B5:2437:G:H5''	1.88	0.56
80:B5:3279:A:C2'	80:B5:3280:U:H5'	2.36	0.56
80:B5:701:G:H2'	80:B5:702:C:C6	2.40	0.56
80:B5:725:G:C3'	80: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	80:B5:2764:C:OP1	2.06	0.56
79:B2:415:C:C6	83:CV:288:ARG:HD3	2.38	0.56
80:B5:2279:A:N7	83:CV:478:LYS:CE	2.67	0.56
4:A3:33:LYS:CE	79:B2:1593:A:O2'	2.52	0.56
26:AR:5:ARG:N	79:B2:1402:G:OP1	2.33	0.56
24:AP:40:ARG:HD3	79:B2:1557:U:OP1	2.06	0.56
5:A4:28:LYS:NZ	79:B2:477:A:P	2.79	0.56
79:B2:647:G:N2	79:B2:687:G:N2	2.54	0.56
80:B5:913:A:H2	80:B5:2134:G:N3	2.04	0.56
41:BG:32:LYS:HB2	80:B5:2561:A:C2	2.40	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	80:B5:1779:C:N3	2.19	0.56
56:BV:47:ASN:O	80:B5:2338:C:C4'	2.51	0.56
36:BB:367:LYS:HZ1	57:BW:34:SER:H	1.53	0.56
84:CW:67:C:N3	84:CW:68:C:C2	2.74	0.56
8:A7:79:SER:HA	84:CW:42:C:N3	2.21	0.56
24:AP:96:ILE:HD11	24:AP:116:LEU:HD22	1.88	0.56
11:AC:86:VAL:HG11	79:B2:1300:A:C5'	2.36	0.56
29:AU:54:GLY:CA	79:B2:1344:A:O2'	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:B2:1968:OHX:N3	88:B2:2011:OHX:N6	2.54	0.56
79:B2:25:C:O2	88:B2:1961:OHX:N1	2.39	0.56
79:B2:717:C:N4	79:B2:720:G:H22	2.03	0.56
80:B5:2537:U:O2'	80:B5:2538:U:O5'	2.22	0.56
54:BT:49:GLN:CB	80:B5:2756:C:C4'	2.80	0.56
48:BN:179:LYS:HE2	80:B5:287:G:OP1	2.06	0.56
38:BD:218:ARG:HH11	81:B7:31:U:H4'	1.63	0.56
35:BA:236:GLY:HA2	80:B5:2184:U:C1'	2.36	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
79:B2:1761:U:O4	85:CX:1:A:H4'	2.05	0.56
79:B2:1446:A:O5'	88:B2:2081:OHX:N2	2.39	0.56
52:BR:165:LYS:HB3	79:B2:849:C:O2	2.06	0.56
80:B5:420:G:OP1	80:B5:420:G:OP2	2.24	0.56
80:B5:541:U:H2'	80: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
5:A4:55:ARG:HB3	5:A4:58:PRO:HG3	1.87	0.56
15:AG:175:ILE:CD1	79: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	79:B2:600:U:OP2	2.06	0.56
17:AI:2:GLY:N	79:B2:400:A:N6	2.54	0.56
80:B5:1093:A:H4'	80:B5:1093:A:OP1	2.05	0.56
35:BA:211:HIS:HE1	80:B5:2184:U:O3'	1.88	0.56
43:BI:8:CYS:SG	80: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
83:CV:63:GLU:C	83:CV:210:TRP:CZ3	2.79	0.56
80:B5:2621:G:C5	84:CW:75:C:C5	2.93	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	79:B2:1539:G:H5''	2.36	0.56
12:AD:174:HIS:CE1	79:B2:1277:G:HO2'	2.13	0.56
26:AR:52:GLY:HA3	79:B2:1389:C:O2'	2.06	0.56
1:A0:75:VAL:HG11	79:B2:1793:G:N1	2.21	0.56
88:B2:1963:OHX:N1	88:B2:2025:OHX:N4	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AI:23:LYS:HE3	79:B2:387:A:OP1	2.05	0.56
41:BG:105:LYS:NZ	80:B5:123:A:OP1	2.32	0.56
35:BA:191:LEU:CD1	80:B5:1795:U:OP1	2.54	0.56
80:B5:2442:G:H22	80:B5:2506:U:H3	1.53	0.56
46:BL:50:PRO:O	46:BL:51:LEU:HB2	2.06	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	79:B2:780:A:HO2'	1.70	0.56
79:B2:1428:G:H4'	84:CW:34:C:H5'	1.88	0.56
79:B2:1639:C:OP1	88:B2:2068:OHX:N4	2.39	0.56
20:AL:83:THR:HG21	79:B2:325:G:H4'	1.88	0.56
18:AJ:173:ALA:N	79:B2:512:A:OP2	2.32	0.56
80:B5:2207:A:H62	80:B5:2236:G:H1	1.52	0.56
80:B5:2284:C:N1	83:CV:476:GLN:CD	2.43	0.56
54:BT:4:SER:CB	80: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	80:B5:2630:C:H5''	1.87	0.56
60:BZ:135:ARG:HB3	60:BZ:135:ARG:HH11	1.71	0.56
83:CV:248:ASP:N	83:CV:360:LEU:CD2	2.41	0.56
79:B2:1190:C:O2'	84:CW:31:A:C3'	2.52	0.56
8:A7:84:LYS:HG2	84:CW:32:U:C5	2.40	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	79: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	79:B2:905:A:H4'	1.71	0.55
26:AR:71:PHE:HE1	26:AR:73:LEU:HD22	1.71	0.55
79:B2:116:U:H2'	79:B2:117:U:C6	2.40	0.55
79:B2:540:G:O3'	79:B2:541:A:H3'	2.05	0.55
80:B5:1541:G:H2'	80:B5:1542:G:O5'	2.06	0.55
80:B5:173:G:H22	80:B5:246:U:H1'	1.71	0.55
80:B5:2676:A:H4'	80:B5:2677:G:O5'	2.05	0.55
80:B5:599:C:H2'	80:B5:600:G:O4'	2.06	0.55
35:BA:187:HIS:CG	80:B5:1794:G:C5	2.95	0.55
35:BA:94:ALA:HA	80:B5:2551:U:O4	2.06	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
37:BC:48:GLN:HG3	80:B5:337:G:C4'	2.36	0.55
49:BO:160[B]:ARG:NH2	80:B5:3182:G:OP1	2.39	0.55
84:CW:33:U:O2	84:CW:35:A:OP2	2.23	0.55
6:A5:135:HIS:ND1	6:A5:138:ARG:HD2	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:46:MET:CG	79:B2:899:G:C5'	2.85	0.55
26:AR:60:ARG:HH12	79:B2:1400:A:C4'	2.17	0.55
79:B2:1179:G:P	84:CW:29:G:O2'	2.64	0.55
20:AL:132:SER:CA	79:B2:336:G:H4'	2.36	0.55
79:B2:489:C:H42	79:B2:497:G:H22	1.53	0.55
79:B2:514:G:O2'	79:B2:515:A:H5'	2.06	0.55
80:B5:1110:U:H2'	80:B5:1111:U:C6	2.41	0.55
79:B2:1757:G:O2'	80:B5:2256:A:C8	2.59	0.55
79:B2:1780:G:C1'	80:B5:2262:A:C4'	2.58	0.55
56:BV:47:ASN:O	80:B5:2338:C:C5'	2.54	0.55
38:BD:31:TYR:CE2	80:B5:2705:A:OP1	2.59	0.55
36:BB:223:GLY:N	80:B5:3305:A:OP1	2.34	0.55
80:B5:3343:G:N2	80:B5:3362:A:H2	1.97	0.55
43:BI:210:ILE:HA	43:BI:217:PHE:CE1	2.41	0.55
48:BN:179:LYS:HB3	80:B5:287:G:H5'	1.89	0.55
79:B2:1428:G:H4'	84:CW:34:C:H5''	1.88	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	79: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	79:B2:444:C:P	2.29	0.55
79:B2:1332:C:O5'	79:B2:1332:C:H6	1.89	0.55
79:B2:1427:A:H2'	84:CW:34:C:C1'	2.23	0.55
12:AD:4:LEU:HD13	79:B2:1514:U:C6	2.42	0.55
52:BR:166:ASN:HB2	79:B2:850:A:H5''	1.85	0.55
79:B2:852:C:H6	79:B2:852:C:O5'	1.89	0.55
38:BD:19:PRO:HD3	80:B5:2688:U:O4	2.06	0.55
48:BN:112:ASN:ND2	82:B8:141:C:O2	2.39	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
1:A0:75:VAL:HG11	79:B2:1793:G:C6	2.42	0.55
8:A7:102:THR:O	8:A7:106:VAL:HG23	2.06	0.55
15:AG:159:ARG:HH11	79: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	79:B2:899:G:C5'	2.36	0.55
24:AP:18:ARG:NH1	27:AS:90:ASN:O	2.40	0.55
4:A3:54:LYS:NZ	79:B2:1420:C:OP1	2.40	0.55
79:B2:1650:U:H2'	79:B2:1651:A:C8	2.42	0.55
79:B2:1759:C:C2	80:B5:2262:A:H2	2.24	0.55
80:B5:1716:U:H6	80:B5:1716:U:H5'	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:209:A:H4'	80:B5:211:A:C8	2.42	0.55
80:B5:2284:C:C2	83:CV:477:SER:HA	1.95	0.55
8:A7:51:ARG:NH1	80:B5:2677:G:O4'	2.38	0.55
37:BC:82:THR:OG1	80: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	80:B5:1347:U:H4'	1.72	0.55
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
8:A7:92:ASP:CA	84:CW:35:A:C8	2.85	0.55
24:AP:130:ARG:CA	84:CW:46:G:OP1	2.54	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	79:B2:916:U:H2'	2.37	0.55
79:B2:1686:C:O2'	79:B2:1687:U:H5'	2.06	0.55
79:B2:749:U:H2'	79:B2:750:U:C6	2.41	0.55
53:BS:115:ARG:NH2	80:B5:1320:C:O2	2.39	0.55
36:BB:253:GLY:O	80:B5:2394:G:H5'	2.07	0.55
80:B5:2512:C:C6	80:B5:2512:C:H5'	2.29	0.55
36:BB:2:SER:N	80:B5:2943:G:N7	2.55	0.55
80:B5:585:A:H2'	80:B5:586:C:C6	2.41	0.55
41:BG:38:GLN:CB	80: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	80:B5:56:G:H1'	1.86	0.55
1:A0:9:GLY:HA3	1:A0:34:LYS:HE2	1.89	0.55
1:A0:97:PRO:O	79:B2:1798:U:C4	2.58	0.55
12:AD:162:GLN:HB3	79:B2:1332:C:O2'	2.06	0.55
13:AE:159:THR:HG23	13:AE:173:ILE:HD13	1.88	0.55
27:AS:134:ARG:NH2	79:B2:1545:A:C8	2.74	0.55
32:AX:102:VAL:HG12	32:AX:127:VAL:HG12	1.88	0.55
80:B5:1811:G:H2'	80:B5:1812:G:O4'	2.07	0.55
48:BN:74:PRO:HA	80:B5:2166:A:O4'	2.07	0.55
79:B2:1646:C:C4'	80:B5:2257:C:H42	1.98	0.55
80:B5:3288:G:C4	80:B5:3289:G:C8	2.95	0.55
35:BA:15:ILE:HD12	80: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
46:BL:7:LEU:HD13	80:B5:796:U:H1'	1.87	0.55
80:B5:2625:C:C5	84:CW:76:A:O3'	2.54	0.55
10:AB:124:ASN:ND2	79:B2:884:A:C4'	2.63	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:AX:99:ASN:CA	83:CV:378:LYS:NZ	2.67	0.55
34:AZ:60:VAL:CG2	34:AZ:101:TYR:HB2	2.37	0.55
24:AP:99:GLY:HA3	79:B2:1183:A:N1	2.21	0.55
88:B2:1953:OHX:N6	88:B2:2066:OHX:N5	2.54	0.55
88:B2:1915:OHX:N6	88:B2:2069:OHX:N5	2.55	0.55
80:B5:59:G:H4'	80:B5:60:A:H4'	1.88	0.55
40:BF:175:LYS:HD3	40:BF:176:TYR:CZ	2.42	0.55
58:BX:48:SER:HB2	82:B8:136:G:OP1	2.06	0.55
80:B5:2625:C:C4	84:CW:76:A:H8	2.20	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
23:AO:38:THR:CG2	79:B2:895:G:C3'	2.72	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
12:AD:4:LEU:HD13	79:B2:1514:U:N1	2.22	0.55
23:AO:132:ARG:N	79:B2:1787:C:OP1	2.39	0.55
1:A0:95:ARG:NH2	79:B2:1797:A:OP1	2.40	0.55
79:B2:558:U:O2'	79:B2:559:C:O5'	2.24	0.55
80:B5:2263:C:P	88:B5:3402:OHX:N1	2.80	0.55
79:B2:1002:G:H5''	80:B5:2265:C:OP1	2.05	0.55
35:BA:64:ARG:CD	80:B5:2557:A:C5	2.90	0.55
43:BI:7:ARG:NH1	80:B5:2828:G:P	2.80	0.55
80:B5:3288:G:HO2'	80:B5:3289:G:H8	1.55	0.55
48:BN:95:GLN:HG3	80:B5:32:U:OP2	2.07	0.55
80:B5:8:C:H2'	80: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	80:B5:147:U:N1	2.69	0.55
43:BI:171:TRP:O	43:BI:174:THR:HG22	2.07	0.55
49:BO:159[B]:LYS:NZ	80:B5:3243:A:OP1	2.39	0.55
2:A1:67:THR:HA	79:B2:872:G:C4'	2.36	0.55
12:AD:162:GLN:HG2	79:B2:1333:C:O4'	2.07	0.55
17:AI:182:TYR:HB3	79: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
79:B2:1291:G:C8	79:B2:1291:G:O5'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:133:U:H4'	79:B2:134:U:OP2	2.07	0.55
79:B2:1413:U:H4'	79:B2:1414:U:OP2	2.06	0.55
34:AZ:77:ARG:CZ	79:B2:1534:G:N7	2.66	0.55
15:AG:59:GLN:CA	79:B2:155:U:C1'	2.85	0.55
79:B2:197:A:H2'	79:B2:198:A:C8	2.42	0.55
79:B2:499:U:O2'	79:B2:500:C:OP1	2.24	0.55
79:B2:652:G:H1	79:B2:682:C:N4	2.04	0.55
23:AO:54:GLU:OE2	79:B2:901:G:N1	2.40	0.55
80:B5:1568:U:H4'	80:B5:1569:U:OP1	2.06	0.55
38:BD:16:PHE:HD1	80:B5:2688:U:H2'	1.72	0.55
38:BD:269:SER:OG	81:B7:1:G:N3	2.30	0.55
38:BD:16:PHE:CD1	80:B5:2688:U:H2'	2.41	0.55
38:BD:265:TYR:HB3	81: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
8:A7:84:LYS:CG	84:CW:32:U:C6	2.89	0.55
1:A0:32:LYS:NZ	79:B2:930:A:OP1	2.40	0.55
8:A7:93:ARG:HG3	79:B2:1637:C:C2	2.42	0.55
10:AB:48:VAL:HG13	10:AB:61:LEU:HD21	1.89	0.55
12:AD:4:LEU:HD12	79:B2:1514:U:C4	2.41	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
79:B2:872:G:O6	88:B2:2006:OHX:N3	2.40	0.55
79:B2:480:G:N2	79:B2:509:G:H1'	2.22	0.55
54:BT:4:SER:HB2	80:B5:2630:C:C4	2.42	0.55
80:B5:851:C:C6	80:B5:851:C:H5''	2.34	0.55
48:BN:110:ALA:HB1	82:B8:141:C:O2'	2.07	0.55
56:BV:67:PRO:HG2	79:B2:1660:A:C5'	2.37	0.55
1:A0:23:CYS:HB2	1:A0:74:CYS:HB3	1.88	0.54
1:A0:86:VAL:HG22	79:B2:1795:U:OP1	2.07	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	79:B2:164:A:H5'	1.88	0.54
79:B2:1776:A:H2'	79:B2:1777:G:C8	2.42	0.54
35:BA:22:LEU:CD2	80:B5:1797:A:O5'	2.54	0.54
52:BR:79:GLY:N	80:B5:1939:G:OP1	2.35	0.54
80:B5:3334:U:H4'	80:B5:3335:A:H5''	1.88	0.54
37:BC:35:VAL:HG21	37:BC:244:LEU:HD21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:46:THR:HG23	80:B5:1078:U:H4'	1.89	0.54
39:BE:176:PHE:H	47:BM:117:ARG:NH2	2.04	0.54
43:BI:81:GLY:O	43:BI:83:ASP:N	2.36	0.54
47:BM:16:GLU:HB3	53:BS:149:LYS:HB3	1.89	0.54
1:A0:97:PRO:HA	79:B2:1798:U:C6	2.42	0.54
8:A7:48:ARG:HD3	80:B5:2678:A:OP1	2.07	0.54
1:A0:59:TYR:OH	10:AB:72:ASP:OD1	2.14	0.54
13:AE:8:HIS:CE1	79:B2:449:C:H4'	2.41	0.54
16:AH:35:LYS:HZ2	16:AH:39:ARG:HD2	1.72	0.54
29:AU:53:LYS:CB	79:B2:1345:A:O5'	2.53	0.54
79:B2:103:A:H4'	79:B2:104:A:OP2	2.07	0.54
11:AC:91:ARG:HA	79:B2:1147:A:OP1	2.08	0.54
4:A3:45:GLU:OE1	79:B2:1433:G:N2	2.40	0.54
15:AG:164:LYS:CE	79:B2:72:A:C5'	2.83	0.54
79:B2:832:U:H2'	79:B2:833:U:H5''	1.89	0.54
33:AY:120:GLY:N	79:B2:85:A:O3'	2.40	0.54
23:AO:120:PRO:HB2	79:B2:887:A:C4'	2.37	0.54
41:BG:241:LYS:HB2	80:B5:2586:G:N7	2.22	0.54
80:B5:2589:G:C2'	80:B5:2590:A:H5'	2.37	0.54
80:B5:2971:A:H5''	80:B5:2972:G:C5'	2.37	0.54
80:B5:495:G:H2'	80:B5:496:C:O4'	2.07	0.54
38:BD:145:PHE:CD1	80:B5:2748:A:C4'	2.90	0.54
39:BE:31:ARG:NH2	39:BE:81:ALA:O	2.40	0.54
39:BE:50:LYS:HG2	39:BE:74:VAL:HG21	1.89	0.54
80:B5:3029:A:N9	83:CV:435:TYR:HD2	2.06	0.54
83:CV:536:TYR:HA	83:CV:540:ILE:HG23	1.90	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
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
33:AY:94:TYR:HD2	33:AY:96:LEU:HD11	1.72	0.54
27:AS:139:LYS:HD3	79:B2:1178:G:O6	2.07	0.54
15:AG:53:SER:CB	79:B2:163:G:H4'	2.36	0.54
79:B2:1655:A:H1'	80:B5:2302:G:C2'	2.35	0.54
79:B2:286:C:H2'	79:B2:287:G:H5'	1.89	0.54
79:B2:499:U:O2'	79:B2:500:C:O4'	2.15	0.54
5:A4:21:VAL:HG22	79:B2:586:G:H4'	1.88	0.54
80:B5:1579:C:C2'	80:B5:1580:A:H5'	2.37	0.54
80:B5:1724:U:H1'	80:B5:1725:C:C6	2.42	0.54
80:B5:2439:A:OP1	80:B5:2439:A:H4'	2.07	0.54
80:B5:600:G:H5''	80:B5:600:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	80:B5:3007:U:OP1	2.08	0.54
2:A1:36:LYS:HG2	2:A1:43:ILE:HG22	1.89	0.54
13:AE:12:LEU:O	79:B2:756:A:H1'	2.08	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
79:B2:1157:A:C8	79:B2:1157:A:H3'	2.42	0.54
25:AQ:13:LYS:NZ	79:B2:1584:G:O6	2.38	0.54
22:AN:13:SER:HB3	88:B2:1910:OHX:N3	2.22	0.54
79:B2:348:U:O4	88:B2:2007:OHX:N5	2.40	0.54
17:AI:171:SER:CB	79:B2:209:U:H5'	2.37	0.54
23:AO:122:PRO:CA	79:B2:887:A:H1'	2.36	0.54
81:B7:91:G:H2'	81:B7:92:A:H8	1.69	0.54
38:BD:269:SER:OG	81: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
80:B5:3027:A:C3'	83:CV:109:GLN:CB	2.56	0.54
13:AE:192:ILE:HG13	13:AE:243:GLY:HA3	1.89	0.54
18:AJ:65:LYS:HA	18:AJ:70:LEU:HD11	1.89	0.54
28:AT:57:ARG:HA	79:B2:1479:A:OP1	2.07	0.54
79:B2:1433:G:H2'	79:B2:1434:U:C6	2.42	0.54
4:A3:14:TYR:HD2	79:B2:1597:A:N7	2.05	0.54
88:B2:1953:OHX:N6	88:B2:2066:OHX:N2	2.56	0.54
17:AI:86:SER:OG	79:B2:329:G:C1'	2.56	0.54
15:AG:136:LYS:CE	79:B2:65:A:OP1	2.55	0.54
10:AB:117:TRP:N	79:B2:932:U:P	2.80	0.54
52:BR:134:HIS:CB	80:B5:1947:G:C5'	2.85	0.54
80:B5:240:U:O2'	80: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	79:B2:1796:C:O2	2.46	0.54
12:AD:203:PRO:HD2	79: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	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AU:35:GLU:CG	79:B2:1383:G:O2'	2.55	0.54
28:AT:121:GLY:HA2	79:B2:1499:G:OP1	2.07	0.54
79:B2:230:C:H2'	79:B2:231:U:H5''	1.90	0.54
79:B2:425:A:H8	79:B2:425:A:H5'	1.72	0.54
79:B2:839:U:C5	88:B2:2069:OHX:N6	2.76	0.54
46:BL:99:HIS:CE1	80:B5:156:G:C6	2.95	0.54
80:B5:1654:A:H2'	80:B5:1655:G:H5''	1.89	0.54
35:BA:244:GLY:H	80:B5:2153:U:H4'	1.73	0.54
38:BD:16:PHE:HA	80:B5:2688:U:HO2'	1.73	0.54
80:B5:3273:A:C2'	80:B5:3274:A:H5'	2.38	0.54
80:B5:3285:C:H2'	80:B5:3286:G:H5''	1.88	0.54
80:B5:419:G:O3'	80:B5:420:G:OP2	2.24	0.54
41:BG:181:LYS:HD2	82: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
8:A7:89:ARG:NE	84:CW:33:U:C3'	2.55	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	79:B2:1328:G:H5''	1.89	0.54
79:B2:1354:G:H5'	79:B2:1355:C:OP2	2.07	0.54
79:B2:1514:U:H5'	79:B2:1514:U:O2	2.07	0.54
15:AG:140:ASN:ND2	79:B2:168:A:OP1	2.38	0.54
79:B2:1783:C:H2'	79:B2:1784:C:H6	1.72	0.54
23:AO:131:GLY:HA2	79:B2:1787:C:OP1	2.08	0.54
79:B2:706:A:C6	79:B2:734:A:N6	2.75	0.54
15:AG:172:ALA:C	79:B2:79:C:H5''	2.28	0.54
52:BR:165:LYS:CE	79:B2:824:G:N2	2.69	0.54
79:B2:823:G:O2'	79:B2:824:G:O5'	2.23	0.54
2:A1:68:GLY:N	79:B2:872:G:C1'	2.71	0.54
80:B5:2425:G:H2'	80:B5:2426:U:O4'	2.08	0.54
43:BI:30:LYS:NZ	80:B5:317:A:OP2	114.96	0.54
80:B5:3198:U:H4'	80:B5:3199:G:OP2	2.08	0.54
42:BH:175:PHE:HE1	80: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	82:B8:24:G:P	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:75:ASP:O	84:CW:45:U:OP2	2.26	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
22:AN:5:HIS:HE2	79:B2:628:G:P	2.30	0.54
23:AO:132:ARG:NH2	79:B2:1788:G:C8	2.76	0.54
79:B2:1157:A:H2'	79:B2:1160:A:N7	2.21	0.54
6:A5:138:ARG:CZ	79:B2:1235:C:C2	2.91	0.54
79:B2:1758:U:O2'	80:B5:2255:A:C4'	2.39	0.54
79:B2:1760:G:H2'	79:B2:1761:U:H5'	1.88	0.54
88:B2:1907:OHX:N5	88:B2:2081:OHX:N6	2.56	0.54
79:B2:503:G:O2'	79:B2:504:U:P	2.65	0.54
79:B2:591:A:H2'	79:B2:592:A:H8	1.70	0.54
79:B2:989:U:H2'	79:B2:990:C:C6	2.42	0.54
79:B2:1657:U:H5	80:B5:2125:A:O3'	1.90	0.54
35:BA:193:ARG:NH2	80:B5:2181:C:OP1	2.41	0.54
52:BR:60:LYS:HB2	80:B5:1690:C:OP1	2.08	0.54
79:B2:420:A:N7	83:CV:288:ARG:NH2	2.56	0.54
79:B2:1169:G:N1	79:B2:1575:G:OP2	2.37	0.54
79:B2:1759:C:O2'	80:B5:2263:C:C1'	2.56	0.54
88:B2:1953:OHX:N4	88:B2:2066:OHX:N1	2.56	0.54
20:AL:80:MET:HE2	79:B2:325:G:H5'	1.90	0.54
79:B2:420:A:H2'	79:B2:421:A:O4'	2.08	0.54
32:AX:78:LYS:CB	79:B2:434:G:H5'	2.36	0.54
79:B2:970:A:H5'	79:B2:971:A:OP2	2.07	0.54
35:BA:235:ALA:HA	80:B5:2183:A:O3'	2.08	0.54
79:B2:1645:G:C3'	80:B5:2259:A:H2	2.07	0.54
80:B5:2970:C:HO2'	80:B5:2971:A:P	2.30	0.54
80:B5:595:G:C8	80:B5:609:G:C6	2.96	0.54
36:BB:50:LYS:HE2	36:BB:328:ILE:HG22	1.88	0.54
38:BD:15:ARG:NH2	80:B5:1003:A:H1'	2.21	0.54
38:BD:91:GLY:HA3	81: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
8:A7:84:LYS:HD3	84:CW:32:U:N1	2.23	0.54
17:AI:25:ARG:HD3	79:B2:400:A:O5'	2.07	0.54
25:AQ:123:ARG:CA	79:B2:1584:G:H2'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:AW:83:ILE:HD12	31:AW:122:SER:HB2	1.89	0.54
79:B2:1352:G:H2'	79:B2:1353:U:O4'	2.08	0.54
79:B2:720:G:H1'	79:B2:721:U:H5''	1.90	0.54
80:B5:1192:C:H41	80:B5:1302:A:P	2.31	0.54
79:B2:1655:A:C1'	80:B5:2302:G:H1'	2.15	0.54
80:B5:3160:U:H2'	80:B5:3161:C:C6	2.42	0.54
53:BS:50:LYS:HE3	81:B7:76:A:N3	2.22	0.54
35:BA:245:LEU:HD13	80:B5:2152:A:H4'	1.89	0.54
43:BI:38:LYS:CG	43:BI:41:ALA:HB2	2.38	0.54
47:BM:121:MET:HG3	80:B5:3214:U:C4	2.42	0.54
56:BV:13:ILE:HD13	56:BV:53:SER:HB2	1.89	0.54
57:BW:50:ALA:HA	57:BW:55:PHE:CG	2.43	0.54
83:CV:101:ILE:H	83:CV:129:LEU:HA	1.73	0.54
83:CV:62:TYR:C	83:CV:210:TRP:CZ2	2.81	0.54
3:A2:13:ILE:HG13	3:A2:29:ARG:O	2.08	0.53
6:A5:97:UNK:HG1	79:B2:1231:U:C5	2.43	0.53
8:A7:84:LYS:O	84:CW:30:G:C8	2.61	0.53
12:AD:34:TYR:OH	12:AD:37:VAL:HG22	2.07	0.53
13:AE:19:LEU:HD13	79:B2:788:A:N9	2.23	0.53
23:AO:120:PRO:HG3	79: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	79:B2:1382:A:N3	2.71	0.53
88:B2:1953:OHX:N3	88:B2:2066:OHX:N5	2.56	0.53
79:B2:237:C:H4'	79:B2:238:U:H5'	1.90	0.53
79:B2:290:G:O6	88:B2:2041:OHX:N2	2.41	0.53
35:BA:34:TYR:CG	80:B5:2525:G:C5	2.96	0.53
80:B5:252:U:H4'	80:B5:253:A:O5'	2.08	0.53
80:B5:2778:G:C2'	80:B5:2779:A:H5'	2.38	0.53
80:B5:2778:G:H2'	80:B5:2779:A:H5'	1.90	0.53
50:BP:133:HIS:NE2	80:B5:880:G:C6	2.76	0.53
80:B5:916:G:H5'	80:B5:917:A:OP1	2.08	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
83:CV:236:GLU:HB3	83:CV:360:LEU:CG	2.31	0.53
5:A4:12:GLY:HA2	32:AX:90:ASP:OD1	2.08	0.53
8:A7:61:ILE:HG23	27:AS:125:ILE:HG12	1.90	0.53
10:AB:180:THR:O	10:AB:184:LEU:HB2	2.08	0.53
12:AD:204:ASP:OD1	79:B2:1330:G:C6	2.56	0.53
14:AF:94:THR:O	14:AF:97:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:AI:75:LYS:CB	79:B2:258:C:H5'	2.38	0.53
20:AL:130:PRO:CD	79:B2:115:G:C5	2.91	0.53
33:AY:36:SER:O	33:AY:40:LEU:HG	2.08	0.53
79:B2:577:G:H8	79:B2:577:G:H3'	1.72	0.53
80:B5:2844:C:H5''	80:B5:2845:A:OP2	2.09	0.53
80:B5:420:G:OP1	80: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
79:B2:414:C:O2	83:CV: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
25:AQ:15:SER:OG	79:B2:1608:U:P	2.65	0.53
27:AS:31:ALA:O	27:AS:34:THR:HG23	2.08	0.53
79:B2:1062:A:H2'	79:B2:1063:U:O4'	2.09	0.53
20:AL:34:TRP:HZ2	79:B2:248:U:O3'	1.92	0.53
79:B2:93:A:H4'	79:B2:94:U:OP2	2.07	0.53
80:B5:1214:U:H2'	80:B5:1215:U:C6	2.43	0.53
80:B5:2625:C:N4	84:CW:76:A:C8	2.77	0.53
80:B5:776:U:C5	80:B5:2719:U:O2	2.52	0.53
80:B5:2995:A:H5''	80:B5:2996:U:OP2	2.08	0.53
35:BA:149:ARG:NH2	35:BA:252:THR:O	2.42	0.53
37:BC:162:THR:HG21	80:B5:209:A:C5	2.43	0.53
38:BD:265:TYR:HE1	81:B7:121:U:H5''	1.74	0.53
38:BD:270:LYS:CB	81:B7:2:G:C4'	2.86	0.53
41:BG:108:ARG:O	41:BG:112:GLU:N	2.31	0.53
47:BM:98:SER:HB2	80:B5:3205:G:OP1	2.08	0.53
50:BP:139:TYR:CZ	80:B5:1507:G:H1'	2.43	0.53
53:BS:119:ARG:HD2	81: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
83:CV:239:VAL:H	83:CV:358:ASP:C	2.11	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	79:B2:301:A:H5''	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	79:B2:918:U:C2'	2.72	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
27:AS:40:ARG:CZ	79:B2:1539:G:C4'	2.84	0.53
79:B2:1756[B]:A:HO2'	79:B2:1757:G:H5'	1.74	0.53
88:B2:1968:OHX:N5	88:B2:2011:OHX:N6	2.55	0.53
79:B2:851:U:H2'	79:B2:852:C:C6	2.42	0.53
23:AO:18:ARG:HH12	79:B2:919:A:H5'	0.72	0.53
80:B5:112:U:O2'	80:B5:113:C:OP2	2.24	0.53
80:B5:2211:U:C5	80:B5:2234:G:O6	2.59	0.53
42:BH:63:LYS:HD3	80:B5:3122:A:O2'	2.08	0.53
80:B5:3380:U:O2'	80:B5:3381:U:H5'	2.09	0.53
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
46:BL:61:PRO:HD2	46:BL:70:ARG:HH21	1.72	0.53
52:BR:166:ASN:HA	79:B2:850:A:C8	2.43	0.53
55:BU:54:VAL:HG13	55:BU:67:SER:HB2	1.90	0.53
2:A1:17:ARG:HD3	79: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	79: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
79:B2:138:A:N6	79:B2:266:A:H61	2.06	0.53
79:B2:711:U:H4'	79:B2:712:G:OP1	2.07	0.53
33:AY:119:PHE:CE1	79:B2:86:A:OP1	2.61	0.53
10:AB:165:ARG:NE	79:B2:947:U:OP1	2.33	0.53
79:B2:981:U:H2'	79:B2:982:U:H5'	1.91	0.53
38:BD:271:LYS:HE2	81:B7:1:G:O2'	2.07	0.53
81:B7:49:G:H4'	81:B7:50:U:O5'	2.08	0.53
38:BD:202:GLY:O	38:BD:206:GLN:HG3	2.08	0.53
58:BX:105:VAL:HG11	58:BX:126:LEU:HD13	1.89	0.53
83:CV:20:LYS:HG3	89:CV:602:GCP:O5'	2.09	0.53
8:A7:88:ARG:CG	84:CW:35:A:C4	2.91	0.53
7:A6:136:ILE:N	7:A6:136:ILE:HD13	2.24	0.53
15:AG:56:ASN:OD1	79:B2:153:G:C2	2.59	0.53
29:AU:88:LYS:HE3	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1595:U:H3	79:B2:1600:A:H2	1.56	0.53
15:AG:84:TYR:HD1	79:B2:161:U:OP1	1.90	0.53
79:B2:1655:A:N1	80:B5:2291:A:O2'	2.32	0.53
79:B2:61:A:H8	79:B2:269:G:HO2'	1.52	0.53
18:AJ:17:ARG:NH2	79:B2:4:C:O2'	2.38	0.53
16:AH:107:ARG:CZ	79:B2:741:C:O2	2.57	0.53
10:AB:116:LYS:HA	79:B2:931:C:C3'	2.38	0.53
80:B5:1085:A:H5'	80:B5:1085:A:H8	1.72	0.53
80:B5:1940:G:H21	80:B5:3362:A:H8	1.55	0.53
52:BR:74:ARG:CD	80:B5:1942:U:OP2	2.57	0.53
80:B5:2209:U:H4'	80:B5:2210:G:OP1	2.08	0.53
80:B5:2733:A:H2'	80:B5:2734:A:O4'	2.09	0.53
80:B5:3242:G:H5''	80:B5:3245:A:H8	1.74	0.53
80:B5:929:A:H2'	80: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
40:BF:92:ILE:HD11	80:B5:1159:A:H2	1.73	0.53
51:BQ:171:LYS:NZ	80:B5:90:C:H41	2.07	0.53
52:BR:74:ARG:NH1	80:B5:1942:U:P	2.81	0.53
59:BY:52:ARG:HA	59:BY:70:ILE:CG2	2.39	0.53
32:AX:99:ASN:CB	83:CV:378:LYS:NZ	2.48	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	79:B2:338:C:OP1	2.08	0.53
20:AL:80:MET:HE2	79:B2:325:G:C5'	2.37	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
24:AP:128:HIS:ND1	79:B2:1180:C:O2'	2.42	0.53
25:AQ:123:ARG:N	79:B2:1584:G:C5'	2.52	0.53
79:B2:226:A:C2'	79:B2:227:U:H5'	2.38	0.53
79:B2:432:G:N2	83:CV:387:ARG:HH11	2.01	0.53
79:B2:542:A:O2'	79:B2:543:C:P	2.67	0.53
79:B2:542:A:H5''	79:B2:544:A:C8	2.43	0.53
79:B2:830:U:OP1	88:B2:2082:OHX:N3	2.41	0.53
23:AO:125:SER:HB3	79:B2:926:A:N3	2.23	0.53
80:B5:1283:C:O2'	80:B5:1284:C:H5'	2.08	0.53
52:BR:125:LYS:CE	80:B5:1720:U:O4	2.56	0.53
80:B5:644:G:H2'	80:B5:2372:A:N7	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2943:G:H2'	80:B5:2944:U:O4'	2.09	0.53
80:B5:3057:U:O2'	80:B5:3059:G:OP1	2.27	0.53
36:BB:332:ARG:NH1	36:BB:333:LYS:HD2	2.24	0.53
36:BB:53:MET:CE	80: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
46:BL:63:VAL:HG13	80:B5:72:C:C5'	2.39	0.53
83:CV:483:GLY:HA2	83:CV:528:ALA:HA	1.91	0.53
83:CV:79:GLY:HA2	89:CV:602:GCP:PG	2.48	0.53
8:A7:92:ASP:CB	84:CW:35:A:C8	2.92	0.53
84:CW:37:A:C2	85:CX:1:A:C2	2.96	0.53
1:A0:10:ARG:HB2	1:A0:34:LYS:HG3	1.90	0.53
4:A3:32:ARG:HB2	79:B2:1595:U:OP1	2.09	0.53
4:A3:22:ARG:HD2	4:A3:38:ILE:HD11	1.91	0.53
5:A4:28:LYS:HZ1	79:B2:477:A:P	2.30	0.53
8:A7:88:ARG:HG2	84:CW:35:A:C4	2.44	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
10:AB:34:ALA:HB2	10:AB:43:VAL:HG23	1.89	0.53
17:AI:105:ASP:OD2	17:AI:107:THR:HG23	2.09	0.53
17:AI:10:LYS:HZ1	79:B2:339:C:P	2.30	0.53
19:AK:53:GLY:O	19:AK:55:VAL:N	2.39	0.53
23:AO:54:GLU:OE1	79:B2:902:G:O6	2.27	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	79:B2:86:A:C4'	2.91	0.53
24:AP:115:TYR:CD2	79:B2:1557:U:O4'	2.62	0.53
88:B2:1922:OHX:N2	88:B2:1976:OHX:N6	2.56	0.53
15:AG:172:ALA:CB	79:B2:78:A:O3'	2.56	0.53
52:BR:165:LYS:HZ2	79:B2:824:G:H1'	1.73	0.53
79:B2:872:G:H2'	79:B2:873:U:O4'	2.09	0.53
80:B5:2284:C:C6	83:CV:477:SER:OG	2.38	0.53
80:B5:2403:G:H22	80:B5:2404:A:H62	1.55	0.53
41:BG:241:LYS:HG3	80:B5:2527:G:O4'	2.09	0.53
35:BA:247:ARG:O	79:B2:1013:A:OP1	2.26	0.53
35:BA:70:ARG:HB3	80:B5:1650:G:H5''	1.90	0.53
37:BC:138:ARG:HH21	37:BC:240:PRO:HB2	1.72	0.53
43:BI:102:MET:HB3	83:CV:471:LYS:HZ1	1.61	0.53
9:AA:14:ALA:O	9:AA:18:LEU:HG	2.09	0.53
3:A2:45:LYS:HB3	14:AF:162:VAL:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:133:U:OP2	79:B2:133:U:H3'	2.07	0.53
25:AQ:122:ARG:CB	79:B2:1584:G:H5''	2.39	0.53
88:B2:1953:OHX:N4	88:B2:2066:OHX:N2	2.57	0.53
17:AI:5:ARG:NH1	79:B2:332:U:O2'	2.41	0.53
79:B2:414:C:O3'	83:CV:286:GLU:C	2.46	0.53
79:B2:501:U:HO2'	79:B2:502:U:H6	1.56	0.53
80:B5:1554:U:H4'	80:B5:1555:U:OP1	2.08	0.53
80:B5:1878:G:O2'	80:B5:1879:A:OP1	2.25	0.53
80:B5:1915:A:H2'	80:B5:1916:U:C6	2.43	0.53
35:BA:34:TYR:CG	80:B5:2525:G:C6	2.96	0.53
80:B5:2541:U:H4'	80:B5:2542:U:OP1	2.09	0.53
80:B5:3153:U:H4'	80:B5:3154:C:H5'	1.90	0.53
80:B5:725:G:C2'	80:B5:726:G:H5''	2.39	0.53
80:B5:741:U:H2'	80:B5:742:G:O4'	2.09	0.53
47:BM:132:LYS:HD3	80: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
52:BR:170:ARG:O	79:B2:852:C:H3'	2.09	0.53
58:BX:44:PRO:O	58:BX:45:LYS:HB2	2.08	0.53
8:A7:88:ARG:NE	84:CW:35:A:C8	2.76	0.53
6:A5:86:UNK:C	6:A5:87:UNK:HG3	2.38	0.53
7:A6:285:ALA:CB	79: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	79: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
79:B2:1473:U:O2	79:B2:1473:U:H2'	2.08	0.53
88:B2:2014:OHX:N6	88:B2:2071:OHX:N2	2.57	0.53
79:B2:206:A:OP2	88:B2:1978:OHX:N5	2.41	0.53
80:B5:1307:G:C2	80:B5:1308:A:C2	2.96	0.53
80:B5:2364:G:H22	80:B5:2396:G:H1'	1.74	0.53
41:BG:38:GLN:HA	80:B5:2557:A:H2	1.72	0.53
35:BA:21:ARG:HB3	80:B5:641:C:OP1	77.31	0.53
51:BQ:107:THR:HG21	80:B5:676:G:H3'	1.91	0.53
35:BA:15:ILE:CD1	80:B5:822:G:H1'	2.39	0.53
41:BG:129:PRO:HG3	80:B5:121:A:N1	2.23	0.53
27:AS:118:LYS:CG	44:BJ:108:GLU:OE2	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:118:LYS:HG3	44:BJ:108:GLU:OE2	2.09	0.53
46:BL:5:LYS:NZ	80:B5:796:U:H5''	2.23	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
83:CV:19:THR:OG1	89:CV:602:GCP:O1B	2.26	0.53
8:A7:84:LYS:CD	84:CW:32:U:C4	2.92	0.52
10:AB:157:GLN:H	10:AB:160:HIS:HB2	1.73	0.52
11:AC:234:PRO:O	11:AC:235:LEU:HB2	2.09	0.52
13:AE:12:LEU:O	79:B2:756:A:O2'	2.22	0.52
19:AK:12:HIS:NE2	19:AK:49:LEU:HD21	2.24	0.52
19:AK:1:MET:HG2	19:AK:2:LEU:H	1.73	0.52
12:AD:20:GLU:HG3	19:AK:61:TRP:CD2	2.45	0.52
20:AL:84:ILE:HD12	20:AL:86:ILE:HG23	1.90	0.52
23:AO:38:THR:HG21	79:B2:896:U:C5'	2.38	0.52
12:AD:156:PHE:HE2	79:B2:1326:A:O3'	1.92	0.52
79:B2:1487:A:H2'	79:B2:1488:G:C8	2.44	0.52
79:B2:1760:G:C2'	79:B2:1761:U:H5'	2.39	0.52
11:AC:205:ARG:NH1	79:B2:7:G:N7	2.53	0.52
23:AO:46:MET:CA	79:B2:899:G:O5'	2.56	0.52
48:BN:35:VAL:N	80:B5:1543:G:OP1	2.35	0.52
54:BT:4:SER:HB2	80: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
16:AH:96:ARG:CZ	16:AH:124:LYS:HB3	2.39	0.52
23:AO:129:LYS:HB3	79: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
79:B2:1320:U:O2	79:B2:1322:A:H5'	2.09	0.52
15:AG:59:GLN:HA	79:B2:155:U:C1'	2.39	0.52
79:B2:1676:U:O2'	79:B2:1677:C:H5'	2.09	0.52
79:B2:520:A:H2'	79:B2:521:A:C8	2.44	0.52
79:B2:779:U:OP2	79:B2:780:A:H2	1.93	0.52
37:BC:241:GLY:HA3	80:B5:1383:G:O4'	2.10	0.52
80:B5:1560:G:HO2'	80:B5:1561:G:P	2.33	0.52
80:B5:1716:U:C6	80:B5:1716:U:H5'	2.44	0.52
80:B5:2286:U:O5'	83:CV:475:ARG:NH1	2.29	0.52
80:B5:3218:A:H5''	80:B5:3219:G:C5	2.44	0.52
36:BB:256:HIS:HA	36:BB:257:PRO:C	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:2:SER:HB3	80:B5:2943:G:C8	2.44	0.52
38:BD:94:ASN:CA	81: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
79:B2:46:A:C6	83:CV:387:ARG:CB	2.92	0.52
84:CW:31:A:H2'	84:CW:32:U:C6	2.44	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	79: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	79: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
79:B2:1334:U:H2'	79:B2:1335:U:C6	2.45	0.52
79:B2:1655:A:O4'	80:B5:2302:G:O2'	2.26	0.52
88:B2:1973:OHX:N3	88:B2:1987:OHX:N5	2.57	0.52
79:B2:513:U:H2'	79:B2:514:G:C8	2.44	0.52
79:B2:555:A:C8	79:B2:555:A:H3'	2.45	0.52
15:AG:134:GLY:HA3	79:B2:66:U:O4	1.94	0.52
80:B5:1566:A:C2'	80:B5:1567:U:H5'	2.38	0.52
80:B5:2523:A:H4'	80:B5:2524:A:OP2	2.10	0.52
38:BD:152:ARG:CD	80:B5:2663:G:H5'	2.35	0.52
80:B5:3354:U:H4'	80:B5:3355:U:H5''	1.91	0.52
82:B8:66:A:H2'	82:B8:67:U:C6	2.45	0.52
39:BE:37:GLY:HA3	80: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
1:A0:22:ARG:HH12	23:AO:127:ARG:HG3	1.75	0.52
4:A3:31:ILE:CD1	79:B2:1199:G:N1	2.72	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	79:B2:163:G:C5'	2.32	0.52
17:AI:117:TYR:CD1	17:AI:150:ALA:HB2	2.44	0.52
79:B2:1011:G:OP2	88:B2:1968:OHX:N6	2.42	0.52
6:A5:138:ARG:HH21	79:B2:1235:C:H2'	1.71	0.52
25:AQ:76:SER:CB	79:B2:1609:U:P	2.83	0.52
25:AQ:75:VAL:CG1	79:B2:1610:G:P	2.98	0.52
88:B2:1963:OHX:N1	88:B2:2025:OHX:N3	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:287:G:O2'	79:B2:288:A:OP2	2.24	0.52
79:B2:542:A:O2'	79:B2:543:C:O5'	2.26	0.52
79:B2:61:A:H8	79:B2:269:G:O2'	1.92	0.52
54:BT:129:LYS:HB2	80:B5:1098:A:C5'	2.40	0.52
80:B5:2438:A:C6	80:B5:2510:U:N3	2.77	0.52
43:BI:67:ALA:HB2	80:B5:2852:C:C2'	2.39	0.52
80:B5:374:A:N3	80:B5:376:G:H5''	2.25	0.52
35:BA:235:ALA:CB	80:B5:2184:U:OP1	2.58	0.52
37:BC:119:ARG:HA	37:BC:122:THR:HG23	1.91	0.52
42:BH:70:THR:HB	80: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	79:B2:850:A:OP2	2.09	0.52
52:BR:169:ALA:O	79:B2:852:C:N1	2.41	0.52
10:AB:116:LYS:CA	79:B2:931:C:O3'	2.57	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:60:GLY:HA2	79:B2:154:G:C2'	2.40	0.52
15:AG:57:ASP:OD2	15:AG:72:ARG:NH1	2.43	0.52
18:AJ:88:GLU:HG3	18:AJ:91:LYS:HE3	1.90	0.52
25:AQ:76:SER:HB2	79:B2:1609:U:OP2	2.08	0.52
33:AY:49:LYS:HD3	33:AY:49:LYS:N	2.24	0.52
34:AZ:71:ILE:HB	34:AZ:76:ALA:HB2	1.92	0.52
4:A3:9:SER:HA	79:B2:1451:C:OP1	2.10	0.52
28:AT:60:SER:OG	79:B2:1479:A:H5''	2.08	0.52
88:B2:1921:OHX:N2	88:B2:2048:OHX:N6	2.58	0.52
79:B2:240:U:H1'	79:B2:241:U:P	2.49	0.52
15:AG:175:ILE:HD11	79:B2:78:A:H1'	0.52	0.52
79:B2:912:U:H4'	79:B2:913:G:O5'	2.10	0.52
80:B5:2101:C:O2'	80:B5:2102:U:OP1	2.23	0.52
35:BA:203:ALA:CB	80: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	81: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	79:B2:850:A:H5''	2.13	0.52
52:BR:170:ARG:H	79:B2:851:U:H3'	1.74	0.52
79:B2:433:C:O5'	83:CV:391:VAL:HG23	2.09	0.52
84:CW:33:U:N3	84:CW:35:A:OP2	2.37	0.52
27:AS:18:LEU:HD21	27:AS:70:VAL:HG13	1.92	0.52
33:AY:9:THR:H	79:B2:780:A:H1'	1.74	0.52
79:B2:114:C:H6	79:B2:114:C:H5'	1.74	0.52
4:A3:32:ARG:CB	79:B2:1595:U:OP1	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:487:G:H3'	79:B2:488:G:H5''	1.92	0.52
79:B2:20:G:H5'	79:B2:571:G:C5	2.43	0.52
80:B5:1269:U:O5'	80:B5:1269:U:H6	1.93	0.52
79:B2:1655:A:N3	80:B5:2302:G:H1'	2.24	0.52
80:B5:2590:A:H2'	80:B5:2591:A:O5'	2.09	0.52
8:A7:51:ARG:HD2	80: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	80:B5:73:C:P	94.11	0.52
48:BN:112:ASN:HA	80:B5:19:U:O2'	2.07	0.52
48:BN:72:LYS:HD3	80:B5:2166:A:C3'	2.40	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
83:CV:80:HSO:CB	83:CV:369:ILE:HD11	2.38	0.52
3:A2:15:VAL:HA	3:A2:28:VAL:HG22	1.92	0.52
4:A3:31:ILE:CD1	79:B2:1199:G:C6	2.90	0.52
8:A7:88:ARG:NH1	84:CW:34:C:H2'	2.24	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	79:B2:1421:A:C4'	2.55	0.52
15:AG:62:PRO:HG3	79:B2:161:U:HO2'	1.69	0.52
16:AH:104:ARG:O	16:AH:106:SER:N	2.42	0.52
17:AI:50:GLY:HA2	79:B2:397:A:C3'	2.40	0.52
20:AL:50:GLU:OE2	79: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	79:B2:926:A:C2	2.93	0.52
23:AO:38:THR:HG21	79:B2:896:U:O5'	2.09	0.52
30:AV:72:LEU:O	30:AV:76:ASP:HB2	2.09	0.52
33:AY:33:ALA:CB	79:B2:533:U:H4'	2.40	0.52
79:B2:1002:G:H2'	79:B2:1003:A:H5'	1.92	0.52
15:AG:6:SER:HB2	79:B2:164:A:O2'	2.10	0.52
79:B2:256:A:H2'	79:B2:257:A:O4'	2.09	0.52
79:B2:515:A:OP2	88:B2:1948:OHX:N3	2.43	0.52
79:B2:838:G:C6	88:B2:2069:OHX:N2	2.78	0.52
52:BR:9:ARG:NH2	80:B5:1602:A:O3'	2.43	0.52
80:B5:2285:C:N4	83:CV:478:LYS:HG2	2.17	0.52
48:BN:172:ARG:NH1	80:B5:29:C:O3'	2.42	0.52
43:BI:15:LYS:HE2	80:B5:73:C:N3	93.48	0.52
80:B5:920:A:OP1	80:B5:922:U:C5	2.63	0.52
80:B5:996:A:H2'	80:B5:997:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:116:LYS:HE3	82:B8:84:C:N3	2.24	0.52
35:BA:231:SER:HB2	80:B5:2163:C:C5'	2.23	0.52
35:BA:234:LYS:NZ	80:B5:2162:U:P	2.83	0.52
36:BB:159:ARG:HG2	36:BB:182:GLN:HA	1.91	0.52
48:BN:138:GLN:CD	80:B5:19:U:H4'	2.29	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	79:B2:1199:G:N7	2.25	0.52
79:B2:1234:A:O2'	79:B2:1235:C:O5'	2.20	0.52
79:B2:1291:G:H22	79:B2:1324:G:N2	2.07	0.52
79:B2:144:U:O2'	79:B2:145:A:H5'	2.10	0.52
79:B2:142:G:N2	79:B2:173:A:H2	2.00	0.52
79:B2:1761:U:N3	85:CX:1:A:C5'	2.73	0.52
17:AI:146:ARG:NH2	79:B2:186:C:OP1	2.34	0.52
79:B2:710:U:H2'	79:B2:711:U:H5'	1.91	0.52
35:BA:237:LEU:HD21	80:B5:2153:U:O2	2.10	0.52
50:BP:139:TYR:CE2	80:B5:2355:G:H5'	2.45	0.52
8:A7:51:ARG:CD	80:B5:2677:G:C1'	2.88	0.52
37:BC:48:GLN:HG3	80:B5:337:G:O4'	2.10	0.52
36:BB:35:ASP:OD2	36:BB:37:ARG:HD2	2.09	0.52
46:BL:16:LYS:HE3	80:B5:49:A:OP1	2.10	0.52
48:BN:71:ARG:NH1	80:B5:1546:A:N7	2.58	0.52
52:BR:167:ARG:HB3	52:BR:167:ARG:HH11	1.75	0.52
1:A0:86:VAL:HG23	79:B2:1795:U:OP1	2.09	0.52
8:A7:34:LYS:HZ2	80:B5:2693:C:C5'	2.08	0.52
10:AB:128:LYS:CE	10:AB:132:ASP:HB3	2.40	0.52
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
4:A3:56:ARG:HG3	79:B2:1418:G:H1'	1.92	0.52
34:AZ:77:ARG:NH2	79:B2:1533:C:C6	2.76	0.52
79:B2:1535:U:O2'	79:B2:1536:G:N3	2.35	0.52
79:B2:432:G:H3'	83:CV:388:ARG:H	1.67	0.52
79:B2:929:A:OP2	79:B2:931:C:N4	2.43	0.52
80:B5:1017:C:P	80:B5:1017:C:H2'	2.50	0.52
80:B5:2568:C:N4	80:B5:2574:G:O6	2.42	0.52
41:BG:242:ALA:HB3	80:B5:2586:G:O6	2.09	0.52
51:BQ:105:ARG:HH12	80:B5:674:G:P	2.33	0.52
80:B5:1831:U:O2'	82: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:137:ASN:HB2	80:B5:148:G:O6	2.10	0.52
48:BN:184:LYS:C	48:BN:186:GLY:H	2.13	0.52
52:BR:168:ALA:HB3	79:B2:850:A:HO2'	1.72	0.52
2:A1:4:VAL:HA	31:AW:24:GLN:NE2	2.24	0.52
8:A7:79:SER:CA	84:CW:42:C:O2	2.58	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
79:B2:1149:G:H1'	79:B2:1765:A:C4	2.44	0.52
79:B2:1217:A:H5'	79:B2:1217:A:H8	1.73	0.52
79:B2:1370:U:O4	88:B2:1999:OHX:N5	2.43	0.52
79:B2:539:G:OP2	79:B2:539:G:H8	1.93	0.52
79:B2:651:G:C2	79:B2:684:A:C6	2.98	0.52
79:B2:677:G:H2'	79:B2:678:A:H8	1.73	0.52
79:B2:717:C:H2'	79:B2:718:U:H5''	1.90	0.52
79:B2:749:U:H3	79:B2:800:U:H3	1.58	0.52
15:AG:88:ARG:CG	79:B2:92:A:N1	2.71	0.52
80:B5:1200:A:H5'	80:B5:1201:C:O5'	2.10	0.52
80:B5:1267:U:H3'	80:B5:1268:G:H8	1.75	0.52
80:B5:152:U:H5''	80:B5:153:U:OP2	2.09	0.52
80:B5:2257:C:H2'	80:B5:2258:U:O4'	2.09	0.52
80:B5:2439:A:C2'	80:B5:2440:G:H5''	2.40	0.52
80:B5:3165:A:H2'	80:B5:3166:C:C6	2.43	0.52
46:BL:16:LYS:HG3	80:B5:48:A:O5'	2.09	0.52
35:BA:15:ILE:CG1	80:B5:822:G:C1'	2.88	0.52
38:BD:265:TYR:HE1	81: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
52:BR:85:ARG:HH12	80:B5:2104:A:P	2.33	0.52
56:BV:2:SER:O	56:BV:57:MET:N	2.42	0.52
10:AB:116:LYS:CG	79: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	79:B2:1625:C:P	2.22	0.51
14:AF:102:ARG:HH22	79:B2:1472:C:P	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:AR:49:LYS:HG3	79:B2:1389:C:O3'	2.09	0.51
29:AU:54:GLY:CA	79:B2:1345:A:OP1	2.53	0.51
79:B2:1637:C:N3	84:CW:34:C:C5	2.78	0.51
10:AB:116:LYS:HG3	79:B2:931:C:OP1	2.10	0.51
52:BR:82:LYS:HB2	80:B5:1863:G:H4'	1.91	0.51
80:B5:1876:U:H5''	80:B5:1876:U:H6	1.75	0.51
80:B5:209:A:H4'	80:B5:211:A:N7	2.26	0.51
80:B5:243:G:O2'	80:B5:244:G:H5'	2.10	0.51
80:B5:2682:C:O2'	80:B5:2683:U:OP1	2.15	0.51
80:B5:3330:A:C8	80:B5:3330:A:H5''	2.43	0.51
80:B5:385:A:O2'	80:B5:386:A:H5'	2.10	0.51
80:B5:409:A:H2	80:B5:1441:G:N3	2.08	0.51
80:B5:558:U:H4'	80:B5:559:A:OP2	2.09	0.51
38:BD:265:TYR:OH	81: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	80:B5:1942:U:P	2.26	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
6:A5:108:VAL:HG13	21:AM:73:LYS:NZ	2.26	0.51
16:AH:99:LEU:HD12	16:AH:116:ARG:HG2	1.92	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	79:B2:1345:A:OP2	2.11	0.51
4:A3:34:TYR:CE1	79:B2:1487:A:OP1	2.63	0.51
29:AU:88:LYS:CE	79:B2:1516:A:OP1	2.57	0.51
4:A3:14:TYR:HE2	79:B2:1597:A:C5	2.29	0.51
79:B2:542:A:H5''	79:B2:544:A:N7	2.26	0.51
79:B2:710:U:HO2'	79:B2:729:G:H1	1.58	0.51
31:AW:107:SER:O	79:B2:803:A:H4'	2.10	0.51
16:AH:97:ARG:N	79:B2:856:A:N7	2.55	0.51
23:AO:18:ARG:HD3	79:B2:918:U:O3'	2.10	0.51
80:B5:1228:C:C2	80:B5:1283:C:C2	2.98	0.51
80:B5:1638:A:H5''	80:B5:1639:C:OP2	2.10	0.51
80:B5:1655:G:H8	80:B5:1655:G:H5''	1.73	0.51
80:B5:1481:A:O2'	80:B5:1858:A:N3	2.40	0.51
80:B5:2573:G:H2'	80:B5:2574:G:O4'	2.09	0.51
80:B5:428:A:H2'	80:B5:429:U:C6	2.45	0.51
48:BN:155:VAL:HG13	80:B5:58:G:H4'	1.91	0.51
80:B5:847:A:H2'	80:B5:848:A:C8	2.45	0.51
39:BE:68:PRO:HG2	39:BE:71:VAL:CG2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BO:61[A]:ALA:HB1	49:BO:66[A]:LYS:HG3	1.92	0.51
84:CW:3:C:H2'	84:CW:4:C:C2	2.45	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
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
18:AJ:8:TYR:HB2	79:B2:770:A:O2'	2.10	0.51
10:AB:124:ASN:HD22	79:B2:884:A:H4'	1.71	0.51
37:BC:189:ALA:O	80:B5:1420:C:OP2	2.28	0.51
79:B2:1655:A:O4'	80:B5:2302:G:H4'	2.10	0.51
51:BQ:69:ARG:CZ	80:B5:784:A:C8	2.93	0.51
48:BN:113:LEU:HD11	82: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
6:A5:133:ALA:HB2	79:B2:1252:C:O4'	2.09	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
24:AP:29:SER:OG	24:AP:31:GLU:HG3	2.10	0.51
34:AZ:77:ARG:NH2	79:B2:1534:G:C5	2.74	0.51
6:A5:138:ARG:CZ	79:B2:1235:C:O2	2.59	0.51
79:B2:1366:U:O4	88:B2:1987:OHX:N6	2.44	0.51
20:AL:20:PHE:HB2	79:B2:211:U:H5''	1.91	0.51
17:AI:47:ARG:NH2	79:B2:397:A:H5''	2.25	0.51
79:B2:838:G:C5	88:B2:2069:OHX:N2	2.78	0.51
52:BR:169:ALA:C	79:B2:852:C:C6	2.64	0.51
49:BO:133[B]:ARG:CZ	80:B5:1189:C:C4	2.93	0.51
80:B5:1819:U:H2'	80:B5:1820:U:H5'	1.93	0.51
80:B5:2624:G:N2	84:CW:76:A:H1'	2.22	0.51
80:B5:3058:U:H5'	80:B5:3059:G:OP1	2.09	0.51
37:BC:81:GLY:HA3	80:B5:357:A:O4'	2.11	0.51
22:AN:123:HIS:CE1	80:B5:847:A:H4'	2.46	0.51
35:BA:199:THR:OG1	80:B5:913:A:H4'	2.09	0.51
36:BB:153:LYS:HG2	36:BB:154:TYR:CZ	2.46	0.51
38:BD:72:ASP:N	81: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
52:BR:82:LYS:HE3	80:B5:2115:G:O2'	2.09	0.51
54:BT:130:ARG:HD3	80:B5:1098:A:OP2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:466:ILE:HA	83:CV:487:LEU:HB3	1.92	0.51
84:CW:18:G:C6	84:CW:58:A:C5	2.99	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	88:A6:401:OHX:N5	2.25	0.51
10:AB:104:ASP:OD1	10:AB:214:LYS:NZ	2.43	0.51
14:AF:185:ARG:NH2	79:B2:1572:G:H1'	2.25	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
79:B2:1474:G:H2'	79:B2:1475:A:H8	1.73	0.51
79:B2:1535:U:OP1	79:B2:1535:U:H4'	2.10	0.51
88:B2:1953:OHX:N3	88:B2:2066:OHX:N1	2.59	0.51
17:AI:171:SER:HB3	79:B2:209:U:H5'	1.91	0.51
79:B2:577:G:C8	79:B2:577:G:H3'	2.45	0.51
79:B2:698:U:O4	88:B2:1974:OHX:N3	2.44	0.51
23:AO:38:THR:OG1	79:B2:896:U:O4'	2.28	0.51
80:B5:1229:G:C6	80:B5:1230:G:C2	2.99	0.51
80:B5:172:G:H2'	80:B5:173:G:H5''	1.91	0.51
35:BA:187:HIS:CE1	80:B5:1794:G:N2	2.78	0.51
80:B5:249:U:OP2	80:B5:249:U:H2'	2.11	0.51
80:B5:715:A:H4'	80:B5:716:A:OP1	2.10	0.51
81:B7:64:A:H5'	81:B7:65:G:H5''	1.91	0.51
35:BA:200:ARG:HE	80:B5:2147:A:P	2.34	0.51
35:BA:64:ARG:HD2	80:B5:2557:A:C5	2.46	0.51
37:BC:271:LYS:HB2	37:BC:274:TYR:HB3	1.90	0.51
38:BD:17:GLN:HB2	54:BT:20:ARG:HG2	1.93	0.51
40:BF:80:GLN:HG3	54:BT:136:ARG:CB	2.41	0.51
52:BR:175:GLN:CB	79:B2:852:C:H4'	2.40	0.51
83:CV:237:VAL:HG22	83:CV:360:LEU:CD1	2.40	0.51
79:B2:46:A:C6	83:CV:387:ARG:HB3	2.46	0.51
3:A2:34:GLU:O	3:A2:35:ASP:HB2	2.09	0.51
7:A6:286:GLU:CG	88:A6:401:OHX:N5	2.73	0.51
8:A7:94:HIS:NE2	79:B2:1638:G:OP1	2.44	0.51
12:AD:4:LEU:CD1	79:B2:1514:U:N1	2.74	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:B2:1963:OHX:N5	88:B2:2025:OHX:N6	2.59	0.51
79:B2:446:A:N6	79:B2:461:G:H21	2.08	0.51
23:AO:126:THR:CG2	79:B2:988:A:C2	2.67	0.51
37:BC:220:ARG:HG3	80:B5:211:A:OP1	2.10	0.51
80:B5:2623:G:N3	84:CW:75:C:OP1	2.37	0.51
80:B5:2896:A:H8	80:B5:2896:A:H5'	1.75	0.51
40:BF:70:LYS:NZ	80: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	80:B5:1898:G:H1'	2.40	0.51
60:BZ:80:LEU:O	60:BZ:82:PRO:HD3	2.11	0.51
83:CV:554:HSO:HA	83:CV:557:ILE:HB	1.93	0.51
8:A7:82:THR:CA	84:CW:42:C:C5'	2.88	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
8:A7:93:ARG:HB2	85:CX:3:G:N1	2.13	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
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
79:B2:1215:C:N4	88:B2:2081:OHX:N3	2.59	0.51
26:AR:4:VAL:CG2	79:B2:1402:G:H4'	2.40	0.51
14:AF:84:LYS:HE3	79:B2:1613:U:OP2	2.10	0.51
79:B2:229:U:H2'	79:B2:230:C:C6	2.46	0.51
79:B2:279:G:H8	79:B2:279:G:H3'	1.75	0.51
79:B2:927:C:H2'	79:B2:928:U:C6	2.46	0.51
80:B5:1176:C:H2'	80:B5:1177:G:N2	2.26	0.51
79:B2:1644:C:C2	80:B5:2255:A:C2	2.95	0.51
80:B5:3027:A:C3'	83:CV:109:GLN:HB2	2.39	0.51
80:B5:308:A:H5'	80:B5:2223:A:O2'	2.11	0.51
80:B5:787:G:H2'	80:B5:788:C:C6	2.46	0.51
35:BA:187:HIS:CG	80:B5:1794:G:C4	2.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
83:CV:466:ILE:HA	83:CV:487:LEU:H	1.76	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:A7:89:ARG:NH1	84:CW:33:U:C2	2.75	0.51
20:AL:105:LYS:HD2	79: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	79:B2:887:A:C1'	2.74	0.51
24:AP:87:PRO:HD3	24:AP:112:LEU:HD22	1.91	0.51
25:AQ:73:GLY:H	25:AQ:76:SER:HB3	1.76	0.51
25:AQ:7:VAL:HG22	25:AQ:22:VAL:HB	1.92	0.51
33:AY:31:ASN:O	33:AY:32:ARG:HB2	2.11	0.51
79:B2:1081:A:H4'	79:B2:1082:C:O5'	2.10	0.51
79:B2:1410:A:H2'	79:B2:1411:A:O4'	2.11	0.51
88:B2:1907:OHX:N1	88:B2:2081:OHX:N4	2.58	0.51
17:AI:138:ASN:HB3	79:B2:197:A:H61	1.76	0.51
88:B2:1915:OHX:N2	88:B2:2069:OHX:N5	2.58	0.51
36:BB:228:GLY:N	80:B5:1887:A:H4'	2.25	0.51
80:B5:3000:A:H2'	80:B5:3001:C:C6	2.45	0.51
36:BB:309:GLY:O	80:B5:3379:C:H1'	2.11	0.51
80:B5:435:C:H2'	80:B5:436:A:O4'	2.11	0.51
35:BA:204:MET:HE3	80: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	80:B5:1886:A:O2'	2.20	0.51
41:BG:59:GLN:NE2	82: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	79:B2:1327:C:H5'	2.45	0.51
15:AG:157:VAL:CG1	79:B2:78:A:C4'	2.60	0.51
15:AG:28:PHE:CE2	15:AG:104:PRO:HG3	2.46	0.51
21:AM:29:LYS:HE2	21:AM:100:TRP:NE1	2.26	0.51
27:AS:134:ARG:HG3	79:B2:1545:A:P	2.50	0.51
88:B2:1973:OHX:N4	88:B2:1987:OHX:N2	2.59	0.51
79:B2:56:U:H4'	79:B2:57:G:H5'	1.93	0.51
80:B5:2112:U:O2'	88:B5:3401:OHX:N1	2.44	0.51
38:BD:26:GLY:C	80:B5:2703:A:H61	2.15	0.51
36:BB:53:MET:HB2	80:B5:3049:A:H5''	1.93	0.51
35:BA:187:HIS:ND1	35:BA:190:ARG:NH1	2.58	0.51
35:BA:219:ILE:HD11	80:B5:2185:G:H4'	1.93	0.51
35:BA:240:ALA:HA	80:B5:2155:G:P	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:55:PHE:CZ	38:BD:158:ARG:HB3	2.45	0.51
43:BI:57:LEU:HD12	81:B7:93:C:H5'	1.91	0.51
44:BJ:54:VAL:HG23	44:BJ:57:PHE:HB2	1.93	0.51
37:BC:286:VAL:HG11	51:BQ:31:LYS:HD2	1.93	0.51
60:BZ:4:PHE:O	60:BZ:5:LEU:HG	2.10	0.51
8:A7:84:LYS:CA	84:CW:30:G:C2'	2.46	0.51
13:AE:163:ASP:O	13:AE:164:LEU:HB2	2.11	0.51
15:AG:70:PRO:C	15:AG:98:ARG:HH21	2.14	0.51
17:AI:123:LYS:O	88:AI:302:OHX:N6	2.44	0.51
17:AI:170:SER:OG	79:B2:209:U:C4'	2.55	0.51
25:AQ:114:ARG:O	25:AQ:115:THR:OG1	2.26	0.51
14:AF:37:GLN:CD	25:AQ:53:LEU:HD22	2.32	0.51
79:B2:1367:G:N7	88:B2:1987:OHX:N6	2.59	0.51
79:B2:1570:A:OP1	88:B2:2044:OHX:N5	2.43	0.51
79:B2:707:A:H2'	79:B2:708:C:H5''	1.92	0.51
79:B2:868:G:H1	79:B2:960:U:H3	1.59	0.51
41:BG:137:ASN:CG	80:B5:148:G:N7	2.63	0.51
80:B5:1567:U:H1'	80:B5:1570:U:C5	2.45	0.51
80:B5:200:C:H5'	80:B5:221:A:C2	2.46	0.51
80:B5:2249:G:C8	80:B5:2249:G:H3'	2.46	0.51
54:BT:2:GLY:HA3	80:B5:2626:A:O5'	2.11	0.51
80:B5:2627:C:N4	84:CW:76:A:C8	2.79	0.51
35:BA:225:ILE:O	35:BA:238:ILE:O	2.29	0.51
38:BD:266:ALA:HA	81:B7:1:G:H1'	1.92	0.51
41:BG:59:GLN:HE22	82:B8:150:G:C1'	2.20	0.51
44:BJ:130:VAL:CG1	80:B5:2683:U:O2'	2.59	0.51
47:BM:109:ARG:NH1	80:B5:3210:A:OP1	2.44	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
42:BH:96:HIS:HA	83:CV:164:ARG:NH2	2.26	0.51
83:CV:468:LEU:HB2	83:CV:543:GLY:H	1.76	0.51
84:CW:58:A:C4	84:CW:61:C:C5	2.98	0.51
12:AD:192:PRO:O	12:AD:195:SER:HB2	2.11	0.50
18:AJ:120:LYS:O	18:AJ:121:SER:HB2	2.12	0.50
20:AL:10:GLU:HG2	79:B2:327:U:C2'	2.35	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
79:B2:1061:A:H2'	79:B2:1062:A:H5'	1.92	0.50
79:B2:1202:A:H61	79:B2:1457:C:H5''	1.76	0.50
79:B2:1458:G:N3	79:B2:1458:G:H2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:136:ARG:HH12	79:B2:1785:U:H5''	1.76	0.50
79:B2:76:A:H5'	88:B2:2037:OHX:N1	2.25	0.50
79:B2:501:U:H4'	79:B2:502:U:OP1	2.11	0.50
79:B2:734:A:O2'	79:B2:735:C:H5'	2.12	0.50
79:B2:926:A:OP1	79:B2:1016:C:O2'	2.22	0.50
10:AB:165:ARG:CZ	79:B2:946:U:O3'	2.60	0.50
39:BE:2:SER:N	80:B5:1387:G:HO2'	2.09	0.50
52:BR:43:LYS:NZ	80:B5:1765:U:H5'	2.26	0.50
80:B5:1876:U:C5'	80:B5:1876:U:H6	2.24	0.50
54:BT:89:LEU:HD12	80:B5:2723:U:C5'	2.39	0.50
80:B5:3167:A:O2'	80:B5:3168:A:OP1	2.27	0.50
80:B5:508:U:H2'	80:B5:509:U:C6	2.46	0.50
80:B5:621:A:H2'	80:B5:622:A:C8	2.46	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
53:BS:38:LYS:HD2	53:BS:58:ILE:HD13	1.94	0.50
57:BW:120:LYS:HA	57:BW:123:ARG:HD2	1.93	0.50
88:AC:301:OHX:N3	88:B2:1906:OHX:N5	2.60	0.50
11:AC:88:LYS:HB2	79:B2:1301:U:OP1	2.11	0.50
15:AG:108:VAL:HG11	79:B2:153:G:HO2'	1.75	0.50
31:AW:82:LYS:HB2	31:AW:85:ASP:OD2	2.12	0.50
15:AG:59:GLN:HA	79:B2:155:U:O2'	2.11	0.50
17:AI:171:SER:HB3	79:B2:208:U:O2'	2.11	0.50
79:B2:606:A:H4'	79:B2:607:G:H5''	1.93	0.50
79:B2:902:G:O5'	79:B2:902:G:H8	1.93	0.50
80:B5:1312:C:H5''	80:B5:1313:G:OP2	2.11	0.50
80:B5:839:C:H1'	80:B5:1724:U:OP1	2.11	0.50
35:BA:243:THR:OG1	80:B5:2244:A:H5''	2.11	0.50
80:B5:3241:G:H2'	80:B5:3245:A:H8	1.76	0.50
80:B5:65:A:H2'	80:B5:110:G:N7	2.25	0.50
80:B5:707:U:H2'	80:B5:708:G:H5''	1.93	0.50
38:BD:155:THR:O	81:B7:36:C:H5'	2.11	0.50
37:BC:283:THR:HG21	37:BC:288:ARG:NH2	2.26	0.50
38:BD:277:LEU:HD11	81:B7:62:U:H5''	1.92	0.50
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
79:B2:48:G:C6	83:CV:387:ARG:NH1	2.75	0.50
84:CW:41:C:N3	84:CW:42:C:C5	2.79	0.50
8:A7:85:SER:N	84:CW:30:G:N1	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AE:3:ARG:HB3	79:B2:93:A:O3'	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	79:B2:1315:U:O2	2.53	0.50
79:B2:1686:C:C6	79:B2:1687:U:C5	2.99	0.50
88:B2:1963:OHX:N2	88:B2:2025:OHX:N4	2.59	0.50
79:B2:647:G:H1	79:B2:687:G:H1	1.58	0.50
79:B2:838:G:C5	88:B2:2069:OHX:N6	2.78	0.50
80:B5:1225:A:C8	80:B5:1287:A:H2'	2.46	0.50
80:B5:1267:U:H3'	80:B5:1268:G:C8	2.47	0.50
35:BA:22:LEU:HD22	80:B5:1796:G:H5''	1.93	0.50
80:B5:2660:G:O3'	80:B5:2749:G:N2	2.44	0.50
47:BM:125:LYS:NZ	80:B5:2847:A:O4'	96.16	0.50
56:BV:48:ARG:NH2	80:B5:3043:C:OP2	2.44	0.50
59:BY:114:ASP:CB	82:B8:85:G:O6	2.59	0.50
44:BJ:72:ARG:NH1	82:B8:95:G:OP2	151.50	0.50
35:BA:35:ALA:HB2	80:B5:39:A:C5'	86.88	0.50
35:BA:85:GLY:HA3	80:B5:2554:A:C4	2.45	0.50
46:BL:121:SER:O	46:BL:121:SER:OG	2.30	0.50
46:BL:65:TYR:CZ	80:B5:103:G:O4'	2.65	0.50
49:BO:127[A]:LEU:HD11	53:BS:168:PRO:HG3	1.93	0.50
49:BO:65[A]:ASN:HB3	49:BO:68[A]:ARG:HD2	1.94	0.50
54:BT:17:ARG:HH11	54:BT:17:ARG:HG2	1.76	0.50
60:BZ:65:ARG:HH11	60:BZ:65:ARG:HG3	1.76	0.50
60:BZ:88:ASP:O	60:BZ:121:ARG:NH2	2.44	0.50
8:A7:84:LYS:HD3	84:CW:32:U:C2	2.46	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	79: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
79:B2:1168:U:C2'	79:B2:1169:G:H5'	2.41	0.50
79:B2:1201:G:O2'	88:B2:1990:OHX:N1	2.45	0.50
6:A5:138:ARG:HH22	79:B2:1236:A:C1'	2.24	0.50
88:B2:1963:OHX:N5	88:B2:2025:OHX:N3	2.60	0.50
79:B2:220:A:H5''	79:B2:832:U:H1'	1.93	0.50
80:B5:736:A:H2'	80:B5:737:G:O4'	2.12	0.50
35:BA:204:MET:CG	80:B5:914:A:C2	2.93	0.50
82:B8:156:U:HO2'	82:B8:157:U:P	2.35	0.50
36:BB:150:ARG:NH1	36:BB:150:ARG:HG2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:2:SER:HB3	80: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
52:BR:8:LYS:HZ2	80:B5:1473:G:P	2.32	0.50
79:B2:415:C:H6	83:CV:288:ARG:N	2.10	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:98:GLY:C	21:AM:103:LEU:HD21	2.32	0.50
21:AM:123:VAL:HG11	21:AM:126:TRP:HB3	1.94	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	88:B2:1917:OHX:N3	2.44	0.50
79:B2:484:C:N4	79:B2:503:G:H22	2.05	0.50
33:AY:113:ASN:HD22	79:B2:54:C:H5'	1.76	0.50
79:B2:647:G:H22	79:B2:687:G:N2	2.09	0.50
79:B2:882:U:H2'	79:B2:883:C:C6	2.46	0.50
80:B5:1655:G:C5'	80:B5:1655:G:C8	2.91	0.50
48:BN:138:GLN:OE1	80:B5:19:U:H4'	2.11	0.50
80:B5:2555:G:H5'	80:B5:2556:C:OP2	2.10	0.50
82:B8:27:U:H6	82:B8:27:U:O5'	1.95	0.50
35:BA:209:HIS:CD2	35:BA:211:HIS:H	2.29	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
37:BC:302:ALA:HB2	51:BQ:39:ARG:NH1	2.26	0.50
1:A0:23:CYS:SG	1:A0:74:CYS:HB3	2.52	0.50
2:A1:67:THR:HA	79:B2:872:G:O4'	2.11	0.50
7:A6:154:VAL:HG12	7:A6:171:SER:HB3	1.93	0.50
8:A7:88:ARG:HG3	84:CW:35:A:C1'	2.26	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
32:AX:97:ASP:HB2	32:AX:100:ASP:OD2	2.12	0.50
79:B2:1267:G:H21	79:B2:1448:G:C5'	2.23	0.50
88:B2:1973:OHX:N3	88:B2:1987:OHX:N1	2.60	0.50
17:AI:180:ASP:OD2	79:B2:208:U:O2	2.29	0.50
22:AN:117:LEU:CD2	79:B2:627:C:H4'	2.41	0.50
13:AE:22:LYS:HB2	79:B2:773:C:P	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:52:ARG:NH1	79:B2:905:A:H4'	2.25	0.50
23:AO:29:HIS:NE2	79:B2:917:U:O2	2.45	0.50
37:BC:305:ALA:HA	80:B5:1347:U:C1'	2.41	0.50
80:B5:1717:U:H2'	80:B5:1718:G:C8	2.47	0.50
48:BN:93:LYS:NZ	80:B5:2600:C:OP1	2.44	0.50
43:BI:30:LYS:CE	80:B5:266:A:H2'	118.70	0.50
38:BD:146:LEU:CD1	80:B5:2746:A:C2	2.95	0.50
47:BM:125:LYS:CD	80:B5:2897:A:H5''	93.34	0.50
35:BA:194:ASN:ND2	80:B5:822:G:O4'	2.44	0.50
82:B8:145:U:H2'	82:B8:146:U:C6	2.47	0.50
82:B8:26:U:H2'	82:B8:27:U:C6	2.47	0.50
36:BB:169:THR:CG2	36:BB:171:LEU:H	2.18	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
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
49:BO:72[B]:HIS:HD2	80:B5:3008:A:OP1	1.93	0.50
49:BO:96[B]:LYS:HE2	80:B5:2384:A:N1	2.27	0.50
50:BP:109:ALA:HA	50:BP:112:LEU:HD22	1.94	0.50
80:B5:3027:A:C2'	83:CV:109:GLN:HB2	2.31	0.50
83:CV:236:GLU:HB3	83:CV:360:LEU:CD2	2.42	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	79:B2:1146:G:H1'	1.92	0.50
17:AI:146:ARG:HH22	79:B2:186:C:P	2.35	0.50
17:AI:73:SER:O	79:B2:257:A:H4'	2.11	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	79:B2:1459:C:OP1	2.45	0.50
27:AS:40:ARG:NH1	79:B2:1539:G:H4'	2.20	0.50
31:AW:77:PRO:HD2	31:AW:79:PHE:CE1	2.47	0.50
88:B2:1915:OHX:N2	88:B2:2069:OHX:N1	2.59	0.50
88:B2:1973:OHX:N4	88:B2:1987:OHX:N1	2.59	0.50
88:B2:1963:OHX:N2	88:B2:2025:OHX:N6	2.60	0.50
17:AI:23:LYS:N	79:B2:386:G:OP1	2.38	0.50
79:B2:702:G:O6	79:B2:737:A:N6	2.45	0.50
22:AN:124:ARG:NH2	79:B2:966:A:OP2	2.38	0.50
40:BF:97:PRO:HD3	80:B5:1138:U:O3'	2.11	0.50
79:B2:1655:A:C1'	80:B5:2302:G:C1'	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:256:G:H2'	80:B5:257:U:C6	2.47	0.50
51:BQ:176:ARG:HG3	80:B5:2763:U:H5'	1.94	0.50
80:B5:3273:A:O2'	80: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
43:BI:112:GLN:CA	83:CV:471:LYS:CD	2.90	0.50
83:CV:62:TYR:O	83:CV:210:TRP:CE2	2.64	0.50
11:AC:99:LYS:NZ	79:B2:1300:A:P	2.85	0.50
14:AF:59:VAL:O	14:AF:60:ASP:HB2	2.12	0.50
17:AI:72:ILE:HA	79:B2:256:A:C1'	2.42	0.50
26:AR:2:GLY:CA	79:B2:1312:A:OP1	2.60	0.50
79:B2:1156:C:OP1	88:B2:2076:OHX:N2	2.45	0.50
79:B2:1622:G:H2'	79:B2:1623:C:C6	2.47	0.50
79:B2:1154:G:N7	88:B2:2014:OHX:N1	2.60	0.50
80:B5:132:C:C4	80:B5:134:U:H5	2.30	0.50
80:B5:1576:G:H5'	80:B5:1577:G:OP2	2.12	0.50
60:BZ:79:HIS:CE1	80:B5:1637:A:O4'	2.64	0.50
80:B5:1810:A:H2'	80:B5:1811:G:C8	2.46	0.50
35:BA:15:ILE:CG1	80:B5:822:G:H1'	2.41	0.50
80:B5:94:G:H2'	80:B5:95:A:C8	2.47	0.50
81:B7:3:U:H2'	81:B7:4:U:H6	1.76	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
79:B2:431:C:C2	83:CV:386:SER:HA	2.46	0.50
84:CW:18:G:H4'	84:CW:60:U:C2	2.47	0.50
8:A7:84:LYS:C	84:CW:30:G:C1'	2.80	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	79: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	79: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	79:B2:1557:U:H5'	2.47	0.50
79:B2:1638:G:OP1	85:CX:3:G:N7	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:8:ASN:HB3	79:B2:1791:A:OP1	2.11	0.50
79:B2:190:C:O2'	79:B2:191:C:OP2	2.23	0.50
88:B2:1922:OHX:N2	88:B2:1976:OHX:N3	2.60	0.50
17:A1:43:ILE:N	79:B2:260:U:C5	2.80	0.50
79:B2:425:A:H5'	79:B2:425:A:C8	2.46	0.50
80:B5:1295:G:H2'	80:B5:1296:C:C6	2.47	0.50
52:BR:46:LYS:NZ	80:B5:1766:G:H8	2.03	0.50
52:BR:101:VAL:HG22	80:B5:1949:G:OP1	2.11	0.50
80:B5:2927:C:H2'	80:B5:2928:C:C6	2.47	0.50
35:BA:15:ILE:HD11	80:B5:822:G:N9	2.25	0.50
35:BA:44:ILE:H	35:BA:44:ILE:HD12	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	80:B5:347:G:OP1	2.11	0.50
39:BE:47:PHE:O	39:BE:50:LYS:HB2	2.11	0.50
40:BF:97:PRO:HG3	80:B5:1139:G:OP1	2.11	0.50
43:BI:35:ASP:OD2	80:B5:1008:U:O2'	2.29	0.50
50:BP:122:ALA:HB3	50:BP:143:PRO:HB2	1.94	0.50
53:BS:146:LYS:HE2	80:B5:535:G:P	2.51	0.50
83:CV:248:ASP:CA	83:CV:360:LEU:CD2	2.89	0.50
80:B5:3030:G:C4'	83:CV:436:ARG:HD3	2.37	0.50
8:A7:88:ARG:C	84:CW:33:U:H1'	2.30	0.50
84:CW:40:C:C4	84:CW:41:C:C5	3.00	0.50
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
12:AD:203:PRO:HB2	79:B2:1331:A:H2'	1.94	0.49
13:AE:153:ASN:O	13:AE:174:LYS:NZ	2.40	0.49
15:AG:133:LEU:CD1	79:B2:66:U:O2	2.48	0.49
16:AH:110:GLN:OE1	79:B2:817:A:C1'	2.60	0.49
23:AO:25:ASP:N	23:AO:55:SER:HB3	2.26	0.49
26:AR:32:LYS:NZ	79:B2:1388:A:OP1	2.44	0.49
27:AS:27:LYS:O	27:AS:29:VAL:N	2.44	0.49
28:AT:48:GLN:OE1	79:B2:1531:G:N2	2.42	0.49
31:AW:16:ASN:HB2	79:B2:1037:C:O2'	2.12	0.49
26:AR:10:LYS:HE2	79:B2:1316:G:H4'	1.94	0.49
3:A2:22:ARG:HE	79:B2:1619:C:H1'	1.77	0.49
79:B2:320:U:H3'	79:B2:321:C:H5''	1.94	0.49
79:B2:393:C:H4'	79:B2:1673:G:O2'	2.12	0.49
79:B2:498:G:H2'	79:B2:499:U:C5	2.47	0.49
80:B5:1097:G:H4'	80:B5:1098:A:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1131:G:C4	80:B5:2373:A:C2	3.00	0.49
80:B5:1875:G:C2'	80:B5:1876:U:H5''	2.40	0.49
80:B5:3227:A:C2'	80:B5:3228:C:H5'	2.41	0.49
37:BC:48:GLN:HG3	80: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	80: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
79:B2:433:C:OP1	83:CV:391:VAL:CB	2.59	0.49
83:CV:199:ALA:HB3	89:CV:602:GCP:N7	2.27	0.49
8:A7:86:ASN:N	84:CW:31:A:C5	2.70	0.49
2:A1:51:GLN:HA	79:B2:871:G:H4'	1.93	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	79:B2:284:G:C2	2.86	0.49
17:AI:24:LYS:O	79: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	79:B2:781:U:P	2.69	0.49
26:AR:2:GLY:CA	79:B2:1312:A:P	3.00	0.49
15:AG:136:LYS:CD	79:B2:66:U:OP1	2.52	0.49
23:AO:46:MET:N	79:B2:899:G:H5'	2.27	0.49
36:BB:247:ARG:HB2	80:B5:1888:U:H5''	1.94	0.49
80:B5:1944:U:H2'	80:B5:1945:A:C8	2.47	0.49
35:BA:219:ILE:CD1	80:B5:2185:G:H5'	2.36	0.49
56:BV:49:LEU:HG	80:B5:2338:C:H1'	1.94	0.49
38:BD:36:LEU:HD23	80:B5:2748:A:N3	2.27	0.49
38:BD:36:LEU:CG	80:B5:2748:A:N3	2.75	0.49
49:BO:27[A]:LEU:O	49:BO:101[A]:ARG:NH1	2.45	0.49
60:BZ:75:VAL:HA	80:B5:1636:U:H4'	1.94	0.49
83:CV:468:LEU:HD22	83:CV:484:VAL:HG22	1.93	0.49
79:B2:1190:C:C1'	84:CW:32:U:OP1	2.56	0.49
8:A7:91:THR:HG22	84:CW:36:U:N3	2.21	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	79:B2:1785:U:P	2.36	0.49
24:AP:22:LEU:HD21	24:AP:109:PRO:HB3	1.94	0.49
1:A0:3:LYS:HE2	79:B2:1030:A:P	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1686:C:O2'	79:B2:1687:U:O4'	2.30	0.49
37:BC:305:ALA:HA	80:B5:1347:U:H1'	1.95	0.49
80:B5:1595:U:C2	80:B5:1596:C:C5	2.99	0.49
80:B5:2622:C:H5''	80:B5:2623:G:OP2	2.10	0.49
80:B5:36:C:H2'	80:B5:37:U:H5'	1.94	0.49
81:B7:23:A:H2'	81:B7:24:A:C8	2.47	0.49
35:BA:15:ILE:HG13	80: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	81:B7:2:G:H4'	1.93	0.49
39:BE:80:ASN:HB2	80:B5:3272:C:O2	2.12	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
59:BY:13:ARG:HD3	82:B8:24:G:OP2	2.13	0.49
83:CV:354:VAL:HG21	83:CV:396:ALA:HB2	1.93	0.49
83:CV:63:GLU:HB2	83:CV:210:TRP:CE3	2.48	0.49
8:A7:88:ARG:CZ	84:CW:35:A:C8	2.96	0.49
1:A0:15:ARG:NH1	79: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
15:AG:188:ARG:NH1	79:B2:283:U:C4	2.80	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
79:B2:1244:A:HO2'	79:B2:1245:G:P	2.35	0.49
79:B2:1716:C:O2'	79:B2:1717:G:O5'	2.30	0.49
79:B2:194:U:O2'	79:B2:195:G:O4'	2.30	0.49
79:B2:1352:G:O6	88:B2:2024:OHX:N1	2.45	0.49
17:AI:2:GLY:CA	79:B2:393:C:OP2	2.60	0.49
79:B2:489:C:H2'	79:B2:490:C:C6	2.48	0.49
79:B2:498:G:C4	79:B2:499:U:N3	2.81	0.49
23:AO:38:THR:CB	79:B2:896:U:O4'	2.61	0.49
80:B5:1226:G:N1	80:B5:1285:G:C2	2.80	0.49
54:BT:4:SER:OG	80:B5:2630:C:C5	2.66	0.49
42:BH:174:LYS:NZ	80:B5:3026:G:OP1	2.41	0.49
47:BM:133:LYS:NZ	80:B5:3227:A:O2'	2.25	0.49
38:BD:266:ALA:O	81:B7:1:G:H1'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
83:CV:239:VAL:N	83:CV:359:THR:HG22	2.27	0.49
80:B5:3029:A:H5'	83:CV:81:GLU:OE1	2.10	0.49
1:A0:79:ILE:HA	1:A0:84:VAL:HG21	1.93	0.49
4:A3:32:ARG:NH2	79:B2:1596:C:H3'	2.27	0.49
10:AB:124:ASN:OD1	10:AB:124:ASN:N	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
29:AU:89:ARG:NH2	79:B2:1383:G:OP1	2.45	0.49
79:B2:1156:C:C2'	79:B2:1157:A:H5'	2.43	0.49
79:B2:1446:A:OP1	88:B2:2081:OHX:N2	2.46	0.49
79:B2:487:G:H3'	79:B2:488:G:C5'	2.43	0.49
16:AH:64:VAL:HG11	79:B2:856:A:H1'	1.94	0.49
41:BG:138:HIS:CE1	80:B5:119:U:C2	3.01	0.49
56:BV:21:ALA:HA	80:B5:1898:G:O3'	2.12	0.49
80:B5:2546:C:H2'	80:B5:2547:A:C8	2.46	0.49
36:BB:259:HIS:HB3	80:B5:2987:A:O2'	2.12	0.49
37:BC:98:ARG:HD2	37:BC:99:MET:O	2.13	0.49
43:BI:115:MET:HB2	80: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	80:B5:2701:U:P	2.27	0.49
79:B2:1190:C:C5	84:CW:31:A:OP1	2.64	0.49
11:AC:140:ARG:NH2	11:AC:226:THR:HG23	2.27	0.49
15:AG:136:LYS:HE2	79:B2:65:A:O5'	2.13	0.49
17:AI:136:SER:HG	17:AI:137:LYS:H	1.58	0.49
18:AJ:142:ASN:OD1	79:B2:767:U:H5	1.96	0.49
31:AW:19:LYS:NZ	79:B2:1095:U:H4'	2.28	0.49
79:B2:1049:U:H2'	79:B2:1050:G:C8	2.47	0.49
79:B2:1230:A:HO2'	79:B2:1258:U:H5	1.61	0.49
17:AI:170:SER:HB2	79:B2:210:A:P	2.53	0.49
79:B2:70:C:H2'	79:B2:71:A:O4'	2.12	0.49
79:B2:730:G:H21	79:B2:731:C:H5''	1.78	0.49
80:B5:2263:C:C2'	80:B5:2264:U:H5'	2.42	0.49
80:B5:2568:C:O2'	80:B5:2569:A:O5'	2.28	0.49
44:BJ:105:GLY:CA	80:B5:2674:A:O4'	2.52	0.49
80:B5:3259:U:H5'	80:B5:3259:U:C6	2.47	0.49
80:B5:3346:U:H2'	80:B5:3347:A:O4'	2.13	0.49
80:B5:439:C:H4'	80:B5:440:A:OP1	2.12	0.49
35:BA:15:ILE:HD13	80:B5:904:A:C2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:407:A:C2	82:B8:17:A:H1'	2.47	0.49
82:B8:79:A:H4'	82:B8:79:A:OP1	2.11	0.49
37:BC:141:ARG:CZ	37:BC:180:LYS:HD3	2.43	0.49
46:BL:99:HIS:ND1	80:B5:156:G:C5	2.80	0.49
52:BR:165:LYS:HE3	79:B2:824:G:H21	1.70	0.49
52:BR:177:VAL:HG11	79:B2:854:U:P	2.53	0.49
57:BW:82:ILE:O	57:BW:82:ILE:HG22	2.13	0.49
83:CV:236:GLU:H	83:CV:360:LEU:CD2	2.07	0.49
84:CW:59:U:C5	84:CW:60:U:C5	3.00	0.49
17:AI:141:ARG:NH2	79:B2:196:G:C5	2.51	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	79:B2:1401:A:C5'	2.34	0.49
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	79:B2:861:U:O2'	2.09	0.49
33:AY:15:ASN:OD1	33:AY:17:LEU:HD12	2.12	0.49
88:B2:1922:OHX:N4	88:B2:1976:OHX:N4	2.61	0.49
31:AW:78:ARG:NH1	79:B2:805:U:O2'	2.45	0.49
52:BR:3:ASN:OD1	80:B5:1471:U:H4'	2.13	0.49
60:BZ:16:GLY:C	80:B5:1635:G:O6	2.51	0.49
80:B5:1643:A:H4'	80:B5:1822:C:H5'	1.95	0.49
41:BG:51:LYS:CD	80:B5:2523:A:OP2	2.54	0.49
80:B5:629:U:H2'	80:B5:630:A:C8	2.48	0.49
80:B5:662:U:H2'	80:B5:663:C:C6	2.47	0.49
80:B5:873:C:H4'	80:B5:874:U:OP2	2.12	0.49
38:BD:269:SER:CB	81: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
56:BV:80:ARG:HD3	56:BV:117:PRO:O	2.13	0.49
84:CW:41:C:H3'	84:CW:42:C:H5''	1.95	0.49
79:B2:1637:C:C4'	85:CX:2:U:N3	2.67	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
11:AC:208:GLU:OE1	79:B2:1299:G:H4'	2.12	0.49
14:AF:185:ARG:HH12	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:AZ:50:ILE:O	34:AZ:54:VAL:HG23	2.11	0.49
79:B2:1114:G:O6	88:B2:1952:OHX:N5	2.45	0.49
79:B2:1282:U:O4	88:B2:2025:OHX:N2	2.45	0.49
28:AT:57:ARG:NH1	79:B2:1479:A:OP1	2.33	0.49
14:AF:98:MET:HE3	79:B2:1611:A:H1'	1.94	0.49
79:B2:1686:C:C5	79:B2:1687:U:C5	3.01	0.49
79:B2:1746:A:H2'	79:B2:1747:G:O4'	2.13	0.49
88:B2:1981:OHX:N2	88:B2:2077:OHX:N4	2.60	0.49
79:B2:1446:A:H2'	88:B2:2081:OHX:N2	2.28	0.49
79:B2:358:U:O2'	79:B2:360:A:H5''	2.13	0.49
79:B2:393:C:H2'	79:B2:394:C:C6	2.48	0.49
52:BR:61:SER:HB3	80:B5:1689:U:C5'	2.42	0.49
80:B5:996:A:C2	80:B5:1054:A:C4	3.01	0.49
35:BA:242:ARG:NH1	35:BA:246:LEU:HD12	2.28	0.49
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
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
8:A7:88:ARG:O	84:CW:33:U:H1'	2.12	0.49
15:AG:126:ASP:OD1	15:AG:127:THR:HG22	2.13	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
20:AL:65:SER:CB	79:B2:114:C:H1'	2.42	0.49
17:AI:52:ASN:ND2	79:B2:118:U:OP1	2.45	0.49
79:B2:1253:U:H2'	79:B2:1254:U:C6	2.48	0.49
79:B2:1686:C:O2'	79:B2:1687:U:O5'	2.30	0.49
79:B2:838:G:O6	88:B2:2069:OHX:N4	2.46	0.49
17:AI:72:ILE:HB	79:B2:256:A:O2'	2.13	0.49
17:AI:21:PHE:CE2	79:B2:385:A:H5'	2.48	0.49
79:B2:61:A:C8	79:B2:269:G:O2'	2.65	0.49
15:AG:133:LEU:HG	79:B2:66:U:C6	2.47	0.49
79:B2:713:A:H61	79:B2:725:U:H3	1.58	0.49
79:B2:818:C:N4	79:B2:819:G:C6	2.80	0.49
38:BD:11:ALA:HB1	80:B5:1003:A:H5'	1.94	0.49
46:BL:39:ARG:NH1	80:B5:107:A:OP1	2.42	0.49
80:B5:690:A:H4'	80:B5:691:A:OP1	2.13	0.49
80:B5:59:G:H2'	82:B8:33:A:O2'	2.12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BX:38:LEU:O	58:BX:39:LYS:HB2	2.11	0.49
83:CV:239:VAL:CG1	83:CV:382:ILE:HD12	2.43	0.49
79:B2:51:A:H1'	83:CV:242:GLY:CA	2.02	0.49
83:CV:83:PHE:H	83:CV:84:SER:HA	1.78	0.49
1:A0:36:ILE:HG23	1:A0:73:TYR:HB2	1.95	0.49
8:A7:86:ASN:ND2	84:CW:32:U:C2	2.81	0.49
10:AB:22:ASP:O	10:AB:24:PHE:N	2.46	0.49
12:AD:4:LEU:CD1	79:B2:1514:U:C6	2.96	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
79:B2:1715:G:O6	79:B2:1716:C:C4	2.56	0.49
80:B5:1239:C:C4	80:B5:1250:G:C6	3.00	0.49
40:BF:160:ARG:HD3	80:B5:1363:A:OP1	2.13	0.49
80:B5:2228:A:H5''	80:B5:2228:A:H8	1.78	0.49
8:A7:47:ALA:HB2	80:B5:2678:A:C4	2.48	0.49
52:BR:61:SER:CB	80:B5:3069:G:HO2'	2.24	0.49
80:B5:735:A:O2'	80:B5:736:A:OP1	2.30	0.49
35:BA:15:ILE:CD1	80:B5:822:G:N9	2.76	0.49
80:B5:959:C:OP2	80:B5:960:U:H5	1.96	0.49
82:B8:66:A:H2'	82: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	80:B5:1651:U:H5''	1.95	0.49
36:BB:92:TYR:HB2	36:BB:157:VAL:HG22	1.95	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
80:B5:2622:C:H2'	84:CW:75:C:H5''	1.95	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
21:AM:33:ARG:O	21:AM:37:VAL:HG23	2.13	0.48
23:AO:120:PRO:CA	79: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
33:AY:105:ARG:CD	79:B2:444:C:OP2	2.61	0.48
34:AZ:50:ILE:HG22	34:AZ:51:LEU:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1369:U:O4	88:B2:1973:OHX:N5	2.45	0.48
29:AU:74:GLU:HG2	79:B2:1429:G:C1'	2.43	0.48
79:B2:190:C:H1'	79:B2:191:C:H5'	1.93	0.48
79:B2:976:G:O6	88:B2:1927:OHX:N3	2.45	0.48
79:B2:233:C:HO2'	79:B2:234:G:P	2.36	0.48
79:B2:929:A:N6	79:B2:930:A:C6	2.80	0.48
80:B5:1036:A:H2'	80:B5:1037:C:O4'	2.13	0.48
35:BA:227:ARG:NH2	80:B5:2161:G:O3'	2.38	0.48
80:B5:2403:G:N2	80:B5:2404:A:N7	2.55	0.48
8:A7:44:PRO:HA	80:B5:2678:A:N3	2.29	0.48
35:BA:13:GLY:HA2	80:B5:943:U:O5'	69.55	0.48
80:B5:998:A:O2'	80:B5:999:G:H5'	2.12	0.48
38:BD:265:TYR:CD2	81:B7:120:C:N4	2.81	0.48
43:BI:100:ASN:O	43:BI:101:LYS:HB3	2.12	0.48
44:BJ:55:ARG:NH1	80:B5:353:G:O6	102.85	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	80:B5:1629:U:C1'	2.90	0.48
60:BZ:79:HIS:CE1	80:B5:1636:U:C2'	2.95	0.48
60:BZ:95:VAL:HG11	60:BZ:110:ALA:HA	1.93	0.48
83:CV:456:TRP:CH2	83:CV:566:LEU:HA	2.47	0.48
84:CW:18:G:C5	84:CW:57:G:C6	3.01	0.48
1:A0:84:VAL:HG13	1:A0:85:ARG:H	1.79	0.48
10:AB:116:LYS:CE	79:B2:933:A:P	2.97	0.48
15:AG:67:VAL:HG23	15:AG:68:LEU:O	2.13	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
6:A5:149:LYS:HD3	79:B2:1235:C:O2'	2.12	0.48
21:AM:46:ARG:HD2	79:B2:1255:G:O6	2.13	0.48
9:AA:108:THR:OG1	79:B2:1294:G:O2'	2.29	0.48
29:AU:89:ARG:NH1	79:B2:1383:G:P	2.69	0.48
79:B2:383:G:N7	88:B2:2010:OHX:N4	2.61	0.48
16:AH:119:THR:HG23	79:B2:639:U:P	2.53	0.48
22:AN:109:LYS:HE2	79:B2:975:C:H5''	1.94	0.48
35:BA:200:ARG:NE	80:B5:2147:A:P	2.86	0.48
35:BA:234:LYS:HB2	80:B5:2163:C:OP1	2.13	0.48
35:BA:209:HIS:CE1	80:B5:2184:U:OP1	2.62	0.48
51:BQ:183:GLY:H	80:B5:2763:U:P	2.35	0.48
80:B5:653:A:H5'	80:B5:2361:A:H5''	1.95	0.48
36:BB:37:ARG:HA	36:BB:186:GLY:HA2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:37:ARG:CG	36:BB:187:SER:H	2.19	0.48
36:BB:296:THR:HG21	36:BB:357:LYS:HA	1.95	0.48
38:BD:266:ALA:HB2	81:B7:1:G:N7	2.28	0.48
41:BG:244:ALA:HA	41:BG:247:ASP:HB2	1.95	0.48
41:BG:38:GLN:CA	80:B5:2557:A:H2	2.26	0.48
46:BL:87:ALA:O	46:BL:91:ARG:HG3	2.14	0.48
39:BE:89:THR:HG21	47:BM:115:PHE:HB2	1.94	0.48
42:BH:19:SER:HB3	47:BM:6:ILE:H	1.78	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:CW:21:A:C3'	84:CW:22:G:H5''	2.43	0.48
2:A1:54:VAL:O	2:A1:63:LEU:HB2	2.13	0.48
4:A3:36:LEU:HD21	29:AU:65:ILE:HD11	1.95	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
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	79: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
15:AG:188:ARG:NH1	79:B2:284:G:O6	2.43	0.48
79:B2:497:G:O2'	79:B2:498:G:O4'	2.29	0.48
52:BR:165:LYS:HZ2	79:B2:824:G:C1'	2.25	0.48
79:B2:978:A:OP1	88:B2:2058:OHX:N5	2.45	0.48
79:B2:992:A:H2	79:B2:1012:U:N3	2.06	0.48
54:BT:116:ARG:NH2	80:B5:1097:G:N7	2.61	0.48
80:B5:1750:A:H4'	80:B5:1751:G:H5'	1.95	0.48
80:B5:3013:U:H2'	80: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	80:B5:1003:A:O4'	2.46	0.48
43:BI:9:TYR:CG	43:BI:97:LEU:HD13	2.48	0.48
60:BZ:54:THR:HG22	60:BZ:57:HIS:CE1	2.48	0.48
1:A0:38:ARG:HH21	1:A0:83:ILE:HG13	1.78	0.48
14:AF:120:ILE:O	14:AF:124:LEU:HD12	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
79:B2:1482:C:OP2	79:B2:1521:G:N2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1639:C:O2	79:B2:1763:A:N1	2.46	0.48
79:B2:738:G:O6	88:B2:1974:OHX:N4	2.46	0.48
88:B2:1968:OHX:N5	88:B2:2011:OHX:N2	2.61	0.48
15:AG:188:ARG:HD3	79:B2:283:U:H5''	1.95	0.48
79:B2:350:U:O2	79:B2:352:A:C6	2.66	0.48
79:B2:495:C:H3'	79:B2:496:G:C4'	2.43	0.48
33:AY:11:LYS:HG3	79:B2:777:C:N4	2.28	0.48
52:BR:173:ARG:O	79:B2:853:G:C5'	2.61	0.48
23:AO:122:PRO:HB3	79:B2:887:A:O2'	2.13	0.48
52:BR:134:HIS:CB	80:B5:1947:G:H5''	2.44	0.48
8:A7:34:LYS:CE	80:B5:2692:A:O3'	2.59	0.48
80:B5:3274:A:H3'	80:B5:3275:U:H5''	1.94	0.48
38:BD:272:TYR:CE2	81:B7:22:A:C8	3.02	0.48
48:BN:109:ARG:HD2	82:B8:141:C:H5'	1.95	0.48
36:BB:255:TRP:CD1	80:B5:2395:G:C5'	2.92	0.48
36:BB:339:ARG:HG2	36:BB:340:LYS:O	2.12	0.48
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:76:PRO:O	80:B5:2166:A:P	2.71	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
83:CV:19:THR:HA	89:CV:602:GCP:O3A	2.10	0.48
9:AA:119:ARG:HD2	11:AC:241:ASP:OD1	2.12	0.48
10:AB:61:LEU:O	10:AB:63:GLY:N	2.47	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:2:LEU:HD13	79:B2:1258:U:H4'	1.94	0.48
24:AP:19:GLY:N	27:AS:93:THR:O	2.47	0.48
29:AU:57:ARG:HG3	79:B2:1382:A:H4'	1.96	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:1:MET:CG	79:B2:1217:A:H5''	2.44	0.48
79:B2:1522:U:OP1	88:B2:1936:OHX:N3	2.46	0.48
79:B2:209:U:H2'	79:B2:210:A:C8	2.49	0.48
79:B2:526:A:H2'	79:B2:527:A:O4'	2.14	0.48
79:B2:680:U:H2'	79:B2:681:U:C6	2.49	0.48
79:B2:881:A:H2'	79:B2:882:U:O4'	2.13	0.48
80:B5:1018:G:H2'	80:B5:1019:G:O4'	2.13	0.48
80:B5:1085:A:H5''	80:B5:1085:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BX:33:ARG:HE	80:B5:1580:A:N6	2.09	0.48
35:BA:191:LEU:HG	80:B5:1795:U:OP1	2.13	0.48
79:B2:1780:G:N1	80:B5:2263:C:O4'	2.46	0.48
36:BB:255:TRP:NE1	80:B5:2395:G:H5''	2.26	0.48
80:B5:2960:C:H2'	80:B5:2961:G:C8	2.47	0.48
80:B5:3241:G:H2'	80:B5:3245:A:C8	2.49	0.48
35:BA:183:GLY:HA2	80:B5:896:A:H5'	1.94	0.48
36:BB:228:GLY:H	80:B5:1887:A:H4'	1.78	0.48
46:BL:100:ARG:O	46:BL:101:ARG:HB3	2.14	0.48
46:BL:63:VAL:HG13	80:B5:72:C:H5''	1.94	0.48
56:BV:67:PRO:HG2	79:B2:1660:A:H5''	1.96	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
8:A7:88:ARG:CB	84:CW:36:U:C1'	2.90	0.48
10:AB:146:GLN:H	10:AB:149:GLN:NE2	2.11	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	79: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	79: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	79:B2:533:U:C5'	2.43	0.48
79:B2:11:A:C2'	79:B2:12:U:H5'	2.44	0.48
14:AF:109:LYS:NZ	79:B2:1474:G:P	2.87	0.48
28:AT:79:LEU:HD11	79:B2:1481:C:C4	2.49	0.48
79:B2:545:A:H4'	79:B2:546:U:OP1	2.14	0.48
79:B2:694:U:H2'	79:B2:695:U:H5	1.78	0.48
33:AY:9:THR:OG1	79:B2:781:U:OP2	2.31	0.48
80:B5:1081:U:O2'	80:B5:1082:U:O5'	2.28	0.48
80:B5:1573:G:C5	80:B5:1574:C:H1'	2.48	0.48
80:B5:3121:U:H1'	80:B5:3122:A:H5''	1.96	0.48
80:B5:3245:A:H2	80:B5:3246:G:N1	2.12	0.48
50:BP:62:ARG:NH1	80:B5:412:G:OP1	2.47	0.48
82:B8:82:U:H1'	82:B8:87:G:H5'	1.96	0.48
35:BA:94:ALA:CA	80:B5:2551:U:O4	2.62	0.48
52:BR:167:ARG:HB3	52:BR:167:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:CV:238:LYS:HG2	83:CV:360:LEU:HB3	1.95	0.48
8:A7:83:LYS:CA	84:CW:29:G:H22	2.19	0.48
12:AD:46:THR:HB	12:AD:84:ILE:HG12	1.96	0.48
22:AN:73:ARG:HD3	79:B2:859:A:C5	2.46	0.48
24:AP:44:ARG:CG	79:B2:1556:A:OP1	2.62	0.48
26:AR:7:LYS:H	79: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
79:B2:1351:G:C2	79:B2:1375:A:C2	3.02	0.48
79:B2:1553:G:N2	79:B2:1555:A:H3'	2.28	0.48
79:B2:1196:A:H1'	79:B2:1602:C:O2'	2.13	0.48
79:B2:1729:C:H5''	79:B2:1730:A:OP2	2.12	0.48
17:AI:136:SER:OG	79:B2:188:A:OP2	2.28	0.48
17:AI:138:ASN:CB	79:B2:197:A:H61	2.27	0.48
79:B2:1203:A:OP2	88:B2:1990:OHX:N5	2.47	0.48
79:B2:1670:G:N7	88:B2:2002:OHX:N5	2.62	0.48
17:AI:33:PRO:CA	79:B2:331:A:H5'	2.42	0.48
79:B2:507:U:O2	79:B2:507:U:H3'	2.13	0.48
79:B2:700:C:H42	79:B2:738:G:H1	1.62	0.48
79:B2:812:A:OP1	79:B2:858:G:N2	2.47	0.48
80:B5:1307:G:H1'	80:B5:1308:A:N7	2.28	0.48
80:B5:135:C:H4'	80:B5:136:G:OP2	2.12	0.48
59:BY:3:LYS:HA	80:B5:228:U:O3'	2.13	0.48
35:BA:95:SER:OG	80:B5:2551:U:C4	2.43	0.48
80:B5:677:A:H4'	80:B5:678:G:O5'	2.14	0.48
46:BL:66:ASN:ND2	80: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:176:ARG:HG3	80:B5:2763:U:C5'	2.43	0.48
51:BQ:43:PRO:HD2	80:B5:729:C:OP1	2.14	0.48
51:BQ:96:PHE:CG	51:BQ:97:PRO:HD2	2.49	0.48
52:BR:169:ALA:CB	79:B2:850:A:N1	2.75	0.48
52:BR:169:ALA:O	79:B2:851:U:H2'	1.77	0.48
83:CV:236:GLU:CA	83:CV:364:GLU:OE2	2.51	0.48
10:AB:181:LEU:O	10:AB:182:ALA:C	2.52	0.48
14:AF:133:VAL:HG22	14:AF:198:LEU:HD13	1.96	0.48
14:AF:172:ILE:O	14:AF:176:THR:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
88:B2:1918:OHX:N4	88:B2:2062:OHX:N4	2.62	0.48
31:AW:32:LYS:HG3	79:B2:637:C:OP1	2.14	0.48
79:B2:711:U:C1'	79:B2:712:G:H5'	2.44	0.48
15:AG:172:ALA:C	79:B2:79:C:C5'	2.82	0.48
80:B5:2206:G:O2'	80:B5:2207:A:H5'	2.13	0.48
38:BD:110:LEU:HA	38:BD:113:LEU:HB2	1.95	0.48
38:BD:155:THR:O	81:B7:36:C:C5'	2.62	0.48
41:BG:194:THR:CG2	80:B5:7:C:O3'	2.61	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
49:BO:171[B]:LYS:NZ	80:B5:3180:A:OP1	2.46	0.48
57:BW:126:GLU:OE2	57:BW:129:LYS:NZ	2.47	0.48
84:CW:67:C:N3	84:CW:68:C:N3	2.62	0.48
79:B2:1637:C:C4'	85:CX:2:U:H3	2.26	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
24:AP:115:TYR:HD2	79:B2:1557:U:O4'	1.97	0.48
25:AQ:47:LYS:HZ2	25:AQ:114:ARG:HG2	1.79	0.48
26:AR:28:PHE:CD2	79:B2:1389:C:H5	2.30	0.48
29:AU:35:GLU:OE2	79:B2:1383:G:C4'	2.62	0.48
34:AZ:72:GLY:O	34:AZ:74:SER:N	2.47	0.48
79:B2:130:C:O2'	79:B2:131:C:OP1	2.29	0.48
17:AI:141:ARG:NH2	79:B2:190:C:H42	2.12	0.48
88:B2:1968:OHX:N1	88:B2:2011:OHX:N4	2.62	0.48
79:B2:440:U:C5	83:CV:277:ALA:CB	2.92	0.48
79:B2:740:A:C2'	79:B2:741:C:H5''	2.43	0.48
52:BR:172:ARG:CZ	79:B2:851:U:H1'	2.43	0.48
80:B5:1280:C:C5	80:B5:1281:G:C2	3.02	0.48
35:BA:241:ARG:N	80:B5:2155:G:OP1	2.22	0.48
8:A7:62:ARG:HD2	80:B5:2675:C:O2'	2.12	0.48
38:BD:36:LEU:CD2	80:B5:2748:A:N3	2.77	0.48
41:BG:181:LYS:HG3	82:B8:154:C:H5''	1.94	0.48
41:BG:38:GLN:HB3	80:B5:2557:A:H2	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	80:B5:148:G:P	2.34	0.48
54:BT:16:GLN:HA	80:B5:2699:G:O3'	2.14	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
84:CW:37:A:H3'	84:CW:38:A:C8	2.49	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
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
12:AD:181:VAL:HG22	79:B2:1277:G:O4'	2.14	0.48
79:B2:131:C:HO2'	79:B2:132:U:P	2.34	0.48
26:AR:43:SER:OG	79:B2:1332:C:OP1	2.31	0.48
15:AG:53:SER:CA	79:B2:163:G:H4'	2.41	0.48
15:AG:137:ARG:HH12	79:B2:169:A:P	2.36	0.48
79:B2:1746:A:H4'	80:B5:2290:C:HO2'	1.79	0.48
1:A0:75:VAL:HG11	79:B2:1793:G:C2	2.49	0.48
79:B2:269:G:C6	79:B2:287:G:C6	3.02	0.48
20:AL:28:SER:OG	79:B2:839:U:OP1	2.27	0.48
2:A1:67:THR:C	79:B2:871:G:HO2'	2.15	0.48
79:B2:894:U:H2'	79:B2:895:G:C8	2.49	0.48
41:BG:60:ARG:CZ	80:B5:1593:A:H1'	52.10	0.48
80:B5:2702:A:H5'	80:B5:2704:A:O4'	2.13	0.48
40:BF:60:ARG:HD2	80:B5:3275:U:C4	69.73	0.48
35:BA:203:ALA:HB1	80:B5:2146:C:C5'	2.44	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
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
46:BL:99:HIS:CD2	80:B5:156:G:C5	3.02	0.48
49:BO:156[B]:LEU:HB3	80:B5:3243:A:N7	2.29	0.48
83:CV:20:LYS:HG3	89:CV:602:GCP:H8	1.09	0.48
6:A5:144:CYS:O	6:A5:146:SER:N	2.47	0.47
8:A7:88:ARG:N	84:CW:36:U:H3'	2.28	0.47
14:AF:133:VAL:O	14:AF:137:ILE:HG12	2.13	0.47
23:AO:122:PRO:HA	79:B2:887:A:O4'	2.14	0.47
23:AO:41:ARG:NH2	79:B2:915:A:C6	2.80	0.47
27:AS:11:PHE:CD1	27:AS:59:GLY:HA2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:139:LYS:HE2	79:B2:1459:C:H42	1.79	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	79:B2:1217:A:O5'	2.14	0.47
79:B2:1783:C:H2'	79:B2:1784:C:C6	2.49	0.47
79:B2:192:U:H2'	79:B2:192:U:O2	2.13	0.47
18:AJ:173:ALA:HA	79:B2:511:A:OP2	2.14	0.47
18:AJ:172:VAL:CG1	79:B2:512:A:OP2	2.39	0.47
79:B2:542:A:H8	79:B2:542:A:HO2'	1.62	0.47
23:AO:25:ASP:HB3	79:B2:901:G:P	2.53	0.47
2:A1:28:PRO:CB	79:B2:959:U:H5'	2.27	0.47
79:B2:992:A:O2'	79:B2:1785:U:O2	2.31	0.47
80:B5:1470:U:H2'	80:B5:1471:U:C6	2.49	0.47
80:B5:1879:A:N3	80:B5:1879:A:H2'	2.29	0.47
80:B5:217:U:H2'	80:B5:218:G:OP1	2.13	0.47
80:B5:2263:C:H2'	80:B5:2264:U:H5'	1.96	0.47
54:BT:16:GLN:HG3	80:B5:2699:G:H5''	1.95	0.47
39:BE:54:TYR:HA	39:BE:65:ILE:CD1	2.44	0.47
41:BG:244:ALA:HB1	80:B5:2528:G:H4'	1.96	0.47
43:BI:30:LYS:HD2	80:B5:266:A:C4	122.50	0.47
44:BJ:100:GLY:O	44:BJ:159:THR:HG21	2.13	0.47
50:BP:69:ARG:NH1	80:B5:3308:C:N3	2.62	0.47
55:BU:100:THR:O	55:BU:101:ASN:HB2	2.14	0.47
60:BZ:121:ARG:CG	60:BZ:121:ARG:HH11	2.27	0.47
84:CW:6:G:C6	84:CW:68:C:N3	2.82	0.47
1:A0:15:ARG:HD3	79:B2:936:G:O6	2.14	0.47
8:A7:83:LYS:H	84:CW:29:G:H22	0.56	0.47
10:AB:30:PHE:CE1	10:AB:96:LEU:HB3	2.50	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	79: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	79:B2:1039:A:H5''	1.67	0.47
79:B2:1250:U:HO2'	79:B2:1251:U:P	2.37	0.47
12:AD:159:HIS:CE1	79:B2:1327:C:HO2'	2.32	0.47
12:AD:203:PRO:CB	79:B2:1331:A:H2'	2.45	0.47
79:B2:190:C:N4	79:B2:196:G:C6	2.82	0.47
79:B2:190:C:O2'	79:B2:191:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1657:U:C4	88:B2:1967:OHX:N4	2.82	0.47
79:B2:196:G:O2'	79:B2:197:A:C8	2.65	0.47
88:B2:1973:OHX:N6	88:B2:1987:OHX:N5	2.61	0.47
88:B2:1973:OHX:N6	88:B2:1987:OHX:N2	2.62	0.47
88:B2:2014:OHX:N5	88:B2:2033:OHX:N3	2.62	0.47
80:B5:1724:U:O2	80:B5:1725:C:C2	2.66	0.47
80:B5:191:U:H2'	80:B5:192:C:C6	2.49	0.47
35:BA:237:LEU:CD2	80:B5:2153:U:O2	2.62	0.47
80:B5:2641:U:H5''	80:B5:2642:A:OP1	2.13	0.47
35:BA:204:MET:HE3	35:BA:208:ASP:CB	2.43	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
51:BQ:62:VAL:O	51:BQ:87:VAL:HA	2.14	0.47
52:BR:172:ARG:H	79:B2:851:U:C2'	2.26	0.47
83:CV:239:VAL:HG22	83:CV:358:ASP:C	2.35	0.47
79:B2:413:U:O2	83:CV:289:LEU:CD2	2.62	0.47
7:A6:133:VAL:HB	7:A6:142:ALA:HB3	1.96	0.47
10:AB:63:GLY:HA2	10:AB:88:VAL:O	2.13	0.47
11:AC:205:ARG:NH2	79:B2:7:G:O6	2.47	0.47
11:AC:214:ALA:O	11:AC:218:ILE:HG13	2.14	0.47
12:AD:84:ILE:HD13	12:AD:85:VAL:H	1.79	0.47
23:AO:46:MET:HG2	79:B2:898:A:H4'	1.95	0.47
25:AQ:112:TYR:CZ	25:AQ:114:ARG:NH2	2.82	0.47
8:A7:68:ARG:NH1	27:AS:145:ARG:HD3	2.29	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
23:AO:135:ARG:CD	79:B2:1008:G:OP1	2.62	0.47
31:AW:19:LYS:HZ2	79:B2:1095:U:H4'	1.80	0.47
79:B2:1231:U:O5'	79:B2:1259:U:H1'	2.14	0.47
12:AD:183:GLY:HA3	79:B2:1277:G:O3'	2.15	0.47
12:AD:159:HIS:CD2	79:B2:1422:A:H4'	2.48	0.47
34:AZ:94:LYS:CE	79:B2:1530:C:OP1	2.62	0.47
79:B2:1644:C:C1'	80:B5:2255:A:C6	2.98	0.47
79:B2:1757:G:N2	80:B5:2255:A:C4	2.82	0.47
79:B2:1789:G:C8	79:B2:1789:G:H5''	2.46	0.47
17:AI:66:SER:OG	79:B2:210:A:H1'	2.13	0.47
17:AI:22:ARG:NH2	79:B2:302:U:OP1	2.47	0.47
79:B2:539:G:OP2	79:B2:539:G:C8	2.68	0.47
79:B2:819:G:C6	79:B2:853:G:N1	2.83	0.47
79:B2:823:G:H2'	79:B2:824:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:823:G:H2'	79:B2:824:G:O4'	2.14	0.47
20:AL:25:VAL:CG1	79:B2:837:G:O2'	2.57	0.47
35:BA:71:LEU:HD22	80:B5:1651:U:C5'	2.44	0.47
80:B5:1819:U:C2'	80:B5:1820:U:H5'	2.45	0.47
80:B5:3335:A:H5'	80:B5:3335:A:H8	1.78	0.47
37:BC:53:SER:N	80:B5:346:C:OP1	2.38	0.47
37:BC:334:PHE:CD2	80:B5:578:A:C5	3.02	0.47
38:BD:260:PHE:HE2	81:B7:121:U:O5'	1.96	0.47
43:BI:63:GLU:CB	80: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	80: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	80:B5:1631:C:P	2.79	0.47
8:A7:82:THR:HG22	84:CW:29:G:N2	2.18	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
23:AO:41:ARG:NH2	79:B2:916:U:C4	2.80	0.47
27:AS:143:ARG:NH1	79:B2:1461:C:C4	2.82	0.47
28:AT:60:SER:HG	79:B2:1480:G:P	2.36	0.47
29:AU:48:HIS:O	29:AU:48:HIS:CG	2.67	0.47
79:B2:1486:G:H1'	79:B2:1592:A:O2'	2.14	0.47
79:B2:1781:A:O4'	80:B5:2262:A:O2'	2.32	0.47
5:A4:21:VAL:HG22	79:B2:586:G:C4'	2.45	0.47
20:AL:28:SER:CB	79:B2:839:U:H5''	2.43	0.47
80:B5:1017:C:OP1	80:B5:1017:C:H2'	2.13	0.47
48:BN:40:ALA:HB2	80:B5:10:C:OP2	2.15	0.47
80:B5:1204:A:C2'	80:B5:1205:A:H5'	2.45	0.47
80:B5:1355:A:H1'	80:B5:1356:U:OP2	2.15	0.47
80:B5:1816:A:O2'	80:B5:1817:G:H5''	2.14	0.47
80:B5:2696:A:H2'	80:B5:2697:A:C8	2.50	0.47
80:B5:547:G:C5	80:B5:548:G:H1'	2.48	0.47
38:BD:269:SER:HB3	81: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
46:BL:65:TYR:CE2	80:B5:103:G:O4'	2.67	0.47
42:BH:111:PHE:HE1	46:BL:89:TYR:HB2	176.13	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
79:B2:51:A:N9	83:CV:242:GLY:CA	0.72	0.47
6:A5:127:GLY:O	6:A5:129:GLY:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:62:LYS:O	10:AB:88:VAL:HB	2.15	0.47
12:AD:174:HIS:CE1	79:B2:1278:G:H4'	2.49	0.47
19:AK:12:HIS:CD2	19:AK:79:TYR:HD2	2.33	0.47
23:AO:120:PRO:HA	79:B2:887:A:H5''	1.91	0.47
24:AP:81:ARG:HH12	24:AP:120:SER:HB3	1.78	0.47
28:AT:52:GLY:C	28:AT:54:PHE:H	2.15	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
35:BA:247:ARG:NH2	79:B2:1013:A:O2'	2.47	0.47
20:AL:129:ARG:HB3	79:B2:115:G:OP2	2.14	0.47
79:B2:1317:C:H2'	79:B2:1318:G:O4'	2.14	0.47
29:AU:35:GLU:HG2	79:B2:1383:G:O2'	2.14	0.47
26:AR:28:PHE:CZ	79:B2:1389:C:H1'	2.49	0.47
24:AP:43:ARG:NH1	79:B2:1553:G:O6	2.41	0.47
25:AQ:75:VAL:CB	79:B2:1610:G:OP1	2.61	0.47
88:AL:201:OHX:N3	88:B2:1995:OHX:N5	2.62	0.47
79:B2:1537:C:C4	88:B2:2044:OHX:N3	2.82	0.47
79:B2:499:U:O2'	79:B2:500:C:P	2.72	0.47
79:B2:503:G:O2'	79:B2:504:U:OP1	2.27	0.47
79:B2:717:C:O2	79:B2:722:G:N1	2.47	0.47
80:B5:1565:G:N2	80:B5:1566:A:H1'	2.30	0.47
80:B5:1481:A:H2'	80:B5:1858:A:N3	2.30	0.47
80:B5:2257:C:H6	80:B5:2257:C:O5'	1.98	0.47
47:BM:13:ARG:NH2	80:B5:3206:C:N3	2.61	0.47
80:B5:687:U:O2'	80:B5:688:G:H5'	2.14	0.47
80:B5:731:U:H2'	80:B5:732:C:H6	1.79	0.47
82:B8:130:C:H2'	82:B8:131:A:C8	2.49	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	81:B7:22:A:N1	2.75	0.47
38:BD:274:GLN:NE2	81:B7:60:G:N2	2.62	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	80:B5:2853:A:OP1	2.14	0.47
54:BT:7:TYR:CZ	54:BT:54:HIS:HB2	2.49	0.47
59:BY:75:ARG:NH2	82:B8:72:A:H4'	2.30	0.47
60:BZ:65:ARG:HH11	60:BZ:65:ARG:CG	2.27	0.47
1:A0:3:LYS:CE	79:B2:1030:A:P	3.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:143:G:C2'	79:B2:144:U:H5''	2.44	0.47
17:AI:26:LYS:CE	79:B2:396:G:O6	2.62	0.47
79:B2:372:G:H1'	79:B2:612:U:O2	2.14	0.47
80:B5:2520:A:H2'	80:B5:2521:U:C6	2.50	0.47
80:B5:879:U:O2	80:B5:2357:A:H1'	2.14	0.47
41:BG:55:TYR:HH	82:B8:149:A:HO2'	1.38	0.47
35:BA:244:GLY:N	80:B5:2244:A:OP1	2.47	0.47
35:BA:70:ARG:HB2	80:B5:1650:G:O3'	2.14	0.47
38:BD:68:THR:HG22	38:BD:70:THR:N	2.30	0.47
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
8:A7:91:THR:HG21	84:CW:36:U:C1'	2.43	0.47
1:A0:19:LYS:HG3	1:A0:20:PRO:HD2	1.96	0.47
4:A3:8:PHE:HA	79:B2:1450:U:O2'	2.15	0.47
6:A5:147:VAL:O	6:A5:148:TYR:HB2	2.14	0.47
9:AA:140:ASN:HD21	30:AV:29:HIS:HA	1.80	0.47
10:AB:61:LEU:CD2	10:AB:62:LYS:H	2.27	0.47
13:AE:7:LYS:HG2	79:B2:450:U:OP1	2.13	0.47
20:AL:22:ASN:OD1	20:AL:24:LYS:HB2	2.14	0.47
32:AX:33:LEU:HD23	32:AX:33:LEU:HA	1.70	0.47
33:AY:105:ARG:HD2	79:B2:444:C:OP2	2.13	0.47
79:B2:1509:C:H2'	79:B2:1510:U:O4'	2.14	0.47
28:AT:87:GLY:CA	79:B2:1542:G:H3'	2.45	0.47
79:B2:1745:G:O6	88:B2:1964:OHX:N5	2.48	0.47
79:B2:279:G:C8	79:B2:279:G:H3'	2.48	0.47
79:B2:414:C:H2'	83:CV:288:ARG:HG2	1.97	0.47
18:AJ:176:ASN:CB	79:B2:511:A:OP2	2.62	0.47
79:B2:77:U:H4'	79:B2:78:A:O5'	2.14	0.47
52:BR:172:ARG:N	79:B2:851:U:C2'	2.77	0.47
80:B5:128:G:H2'	80:B5:129:U:O4'	2.14	0.47
80:B5:1701:C:H2'	80:B5:1702:U:O4'	2.15	0.47
35:BA:203:ALA:HB2	80:B5:2146:C:H5''	1.97	0.47
35:BA:245:LEU:CD1	80:B5:2152:A:H4'	2.45	0.47
56:BV:49:LEU:HG	80:B5:2338:C:C1'	2.44	0.47
80:B5:253:A:O2'	80:B5:254:A:H8	1.97	0.47
54:BT:7:TYR:CE1	80:B5:2724:U:H1'	2.50	0.47
43:BI:3:ARG:NH2	80:B5:2854:U:OP2	2.48	0.47
36:BB:53:MET:HE1	80:B5:3048:A:C5'	2.41	0.47
51:BQ:63:SER:CB	80:B5:785:G:N2	2.77	0.47
80:B5:818:C:H2'	80:B5:819:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:BX:49:LYS:CD	82:B8:135:G:OP1	2.62	0.47
37:BC:305:ALA:H	80:B5:1347:U:C4'	2.27	0.47
80:B5:3030:G:C4'	83:CV:436:ARG:CD	2.88	0.47
85:CX:1:A:O2'	88:CX:101:OHX:N4	2.48	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:A7:101:ASP:OD2	12:AD:144:ALA:HB1	2.14	0.47
8:A7:30:THR:HA	80:B5:2707:C:C2'	2.45	0.47
15:AG:13:GLN:NE2	79:B2:151:G:C1'	2.74	0.47
18:AJ:143:ILE:HD13	79:B2:768:C:N1	2.30	0.47
25:AQ:94:GLN:HB2	25:AQ:102:LYS:HD2	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
29:AU:74:GLU:HG2	79:B2:1429:G:H1'	1.96	0.47
28:AT:57:ARG:CG	79:B2:1479:A:OP1	2.52	0.47
79:B2:1480:G:H3'	79:B2:1481:C:C6	2.49	0.47
15:AG:107:ALA:HB2	79:B2:154:G:O3'	2.13	0.47
79:B2:349:U:O4	88:B2:2007:OHX:N3	2.47	0.47
79:B2:72:A:C3'	79:B2:73:U:H5''	2.44	0.47
15:AG:159:ARG:CZ	79:B2:77:U:O4'	2.62	0.47
16:AH:96:ARG:HB3	79:B2:856:A:C6	2.49	0.47
80:B5:1228:C:N3	80:B5:1283:C:C2	2.82	0.47
80:B5:1541:G:C2'	80:B5:1542:G:O5'	2.63	0.47
80:B5:2514:U:OP1	80:B5:2514:U:C6	2.68	0.47
80:B5:2947:G:N2	80:B5:2948:C:C2	2.83	0.47
41:BG:194:THR:CG2	80: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	79: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
24:AP:130:ARG:HA	84:CW:46:G:OP1	2.14	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:87:ARG:NH1	79:B2:159:U:H1'	2.30	0.47
17:AI:41:LYS:HD3	79:B2:260:U:O4'	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:AX:50:LYS:HD3	32:AX:101:GLU:HG2	1.97	0.47
23:AO:135:ARG:NE	79:B2:1007:C:O3'	2.48	0.47
79:B2:1450:U:H2'	79:B2:1451:C:C6	2.50	0.47
15:AG:15:THR:HG23	79:B2:152:U:O2'	2.15	0.47
15:AG:60:GLY:CA	79:B2:154:G:N3	2.78	0.47
79:B2:1617:U:O2'	79:B2:1618:C:H5'	2.14	0.47
17:AI:172:ARG:NH2	79:B2:332:U:O4	2.48	0.47
79:B2:558:U:O2	79:B2:558:U:H2'	2.14	0.47
18:AJ:149:ARG:HD2	79:B2:765:G:N1	2.30	0.47
79:B2:840:U:O2'	79:B2:841:U:H5''	2.15	0.47
48:BN:94:TYR:CE1	80:B5:1546:A:H1'	2.49	0.47
80:B5:1621:A:H2'	80:B5:1622:U:C6	2.50	0.47
80:B5:1765:U:H2'	80:B5:1766:G:O4'	2.15	0.47
80:B5:181:U:H2'	80:B5:182:U:O4'	2.14	0.47
80:B5:2279:A:N7	83:CV:478:LYS:CG	2.77	0.47
80:B5:3029:A:C8	83:CV:435:TYR:CD2	3.03	0.47
43:BI:206:LEU:HD13	81: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
49:BO:42[B]:ASN:OD1	49:BO:125[B]:ARG:HD3	2.13	0.47
53:BS:137:ARG:HD3	80: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
79:B2:1646:C:H5'	80:B5:2258:U:C4	2.50	0.47
79:B2:417:A:H62	83:CV:287:LEU:HD21	1.80	0.47
80:B5:2102:U:H2'	80:B5:2103:U:C6	2.50	0.47
79:B2:1644:C:C2'	80:B5:2255:A:N1	2.77	0.47
80:B5:2397:A:OP1	80:B5:2398:A:C5'	2.60	0.47
80:B5:2440:G:O2'	80:B5:2441:A:P	2.73	0.47
8:A7:34:LYS:HG2	80:B5:2693:C:OP1	2.10	0.47
43:BI:157:TYR:CB	80:B5:2836:C:H1'	2.44	0.47
80:B5:3225:C:H2'	80:B5:3226:A:O4'	2.15	0.47
80:B5:663:C:H2'	80:B5:664:U:C6	2.50	0.47
38:BD:285:ARG:NH1	81:B7:62:U:C3'	2.76	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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	79:B2:66:U:C5'	2.40	0.47
15:AG:188:ARG:CD	79:B2:283:U:H3'	2.44	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
22:AN:11:ILE:O	22:AN:11:ILE:HG13	2.15	0.47
23:AO:121:VAL:O	79: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
79:B2:1004:U:H4'	79:B2:1005:A:OP2	2.15	0.47
79:B2:1347:U:O2	79:B2:1516:A:H5'	2.14	0.47
79:B2:1450:U:OP2	88:B2:1939:OHX:N5	2.48	0.47
79:B2:782:U:H4'	79:B2:783:G:OP2	2.14	0.47
80:B5:1655:G:H8	80:B5:1655:G:H5'	1.80	0.47
8:A7:28:SER:HB2	80:B5:2708:C:C1'	2.45	0.47
80:B5:322:U:H5''	80:B5:323:A:OP1	2.14	0.47
80:B5:380:U:H2'	80:B5:381:U:C6	2.50	0.47
82:B8:125:U:O2'	82:B8:126:A:H5'	2.15	0.47
48:BN:113:LEU:HD11	82: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	80: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:HD23	54:BT:85:LEU:HA	1.67	0.47
55:BU:12:ALA:HB2	55:BU:68:THR:HG23	1.97	0.47
56:BV:48:ARG:CG	80:B5:2339:C:P	3.03	0.47
60:BZ:67:LYS:HE2	60:BZ:115:LYS:HZ1	1.78	0.47
83:CV:537:GLY:CA	84:CW:73:A:N9	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A1:67:THR:C	79:B2:872:G:O4'	2.53	0.46
7:A6:183:LEU:HD23	7:A6:183:LEU:HA	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
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	88:AN:201:OHX:N3	2.29	0.46
23:AO:17:ALA:HB3	23:AO:81:VAL:HB	1.96	0.46
26:AR:32:LYS:HZ2	79:B2:1388:A:P	2.37	0.46
27:AS:35:ILE:HB	27:AS:38:VAL:HG21	1.96	0.46
34:AZ:54:VAL:HG22	34:AZ:57:TYR:CE2	2.50	0.46
79:B2:1071:U:H2'	79:B2:1072:C:H6	1.79	0.46
11:AC:168:ARG:HG3	79:B2:1097:U:O2'	2.15	0.46
79:B2:114:C:H5'	79:B2:114:C:C6	2.49	0.46
79:B2:1244:A:H3'	79:B2:1244:A:N3	2.29	0.46
79:B2:1585:U:N3	79:B2:1611:A:C2	2.67	0.46
79:B2:1715:G:C5	79:B2:1716:C:C5	3.03	0.46
79:B2:239:C:H3'	79:B2:240:U:O4'	2.15	0.46
32:AX:131:SER:HB2	79:B2:30:G:H4'	1.97	0.46
79:B2:507:U:H2'	79:B2:508:U:O5'	2.16	0.46
33:AY:9:THR:N	79:B2:780:A:H1'	2.30	0.46
2:A1:67:THR:C	79:B2:871:G:O2'	2.54	0.46
54:BT:130:ARG:NH1	80:B5:1062:A:N3	2.60	0.46
41:BG:136:LEU:N	80:B5:147:U:OP2	2.46	0.46
80:B5:1481:A:C2'	80:B5:1858:A:N3	2.78	0.46
80:B5:2897:A:H2'	80:B5:2899:C:H5'	1.97	0.46
80:B5:620:U:OP2	80:B5:620:U:H6	1.98	0.46
80:B5:736:A:C4	80:B5:737:G:H1'	2.50	0.46
80:B5:792:G:H2'	80:B5:793:C:C6	2.50	0.46
35:BA:15:ILE:CD1	80:B5:904:A:C2	2.98	0.46
36:BB:39:LYS:HB2	36:BB:40:PRO:HD2	1.96	0.46
37:BC:150:LEU:HD13	37:BC:249:ILE:HG12	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BU:56:VAL:HG22	55:BU:65:VAL:HG22	1.96	0.46
58:BX:49:LYS:HD2	82:B8:135:G:OP1	2.14	0.46
83:CV:17:GLY:HA2	83:CV: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
10:AB:150:VAL:HB	79:B2:1067:C:OP1	2.14	0.46
10:AB:101:HIS:HD2	10:AB:217:LEU:HD22	1.80	0.46
12:AD:159:HIS:O	79:B2:1421:A:C5'	2.63	0.46
14:AF:187:ILE:H	14:AF:187:ILE:HD12	1.81	0.46
17:AI:138:ASN:ND2	79:B2:187:G:C4	2.83	0.46
18:AJ:60:LEU:HD23	18:AJ:93:LEU:HD11	1.97	0.46
20:AL:131:ILE:HA	20:AL:131:ILE:HD13	1.45	0.46
20:AL:81:HIS:CE1	79:B2:326:G:HO2'	2.34	0.46
23:AO:132:ARG:CZ	79:B2:1788:G:H8	2.22	0.46
9:AA:140:ASN:ND2	30:AV:29:HIS:HA	2.30	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
79:B2:1064:G:H2'	79:B2:1065:A:C8	2.49	0.46
20:AL:129:ARG:HB2	79:B2:115:G:C8	2.49	0.46
88:AC:301:OHX:N3	88:B2:1906:OHX:N1	2.63	0.46
79:B2:432:G:H5'	83:CV:385:VAL:C	2.27	0.46
79:B2:702:G:C6	79:B2:737:A:C6	3.03	0.46
16:AH:108:GLN:HB2	79:B2:743:U:P	2.55	0.46
54:BT:129:LYS:HB3	80:B5:1098:A:O5'	2.15	0.46
80:B5:1118:C:H6	80:B5:1118:C:O5'	1.99	0.46
80:B5:1283:C:C5	80:B5:1284:C:C5	3.03	0.46
80:B5:1313:G:H2'	80:B5:1314:C:H6	1.80	0.46
80:B5:217:U:C2'	80:B5:218:G:OP1	2.62	0.46
50:BP:68:GLY:HA3	80:B5:2350:C:O3'	2.15	0.46
35:BA:34:TYR:CE2	80:B5:2525:G:C6	3.02	0.46
80:B5:2622:C:N3	84:CW:75:C:H4'	2.28	0.46
42:BH:175:PHE:CE1	80:B5:2901:G:H5'	2.50	0.46
80:B5:3242:G:H5''	80:B5:3245:A:C8	2.50	0.46
80:B5:3340:G:H4'	80:B5:3341:U:OP1	2.15	0.46
80:B5:546:C:H4'	80:B5:547:G:O5'	2.14	0.46
81:B7:58:C:OP1	88:B7:202:OHX:N3	2.49	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:O	38:BD:273:ARG:HG2	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:145:ASP:OD1	48:BN:147:ARG:HB2	2.15	0.46
52:BR:165:LYS:HD3	79:B2:849:C:C2	2.43	0.46
53:BS:139:TYR:CD1	53:BS:140:VAL:HG23	2.51	0.46
8:A7:68:ARG:NH2	27:AS:146:ALA:H	2.14	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
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	79:B2:1459:C:N4	2.30	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
79:B2:1039:A:O2'	79:B2:1040:G:P	2.74	0.46
31:AW:71:LYS:NZ	79:B2:1099:U:OP1	2.45	0.46
4:A3:40:ARG:HD2	79:B2:1199:G:C8	2.50	0.46
17:AI:170:SER:C	79:B2:209:U:C5'	2.84	0.46
32:AX:69:ARG:NH1	79:B2:570:A:N6	2.63	0.46
79:B2:705:U:OP1	79:B2:705:U:H4'	2.14	0.46
80:B5:1464:G:N2	80:B5:1466:G:H3'	2.31	0.46
8:A7:34:LYS:CE	80:B5:2693:C:OP1	2.55	0.46
8:A7:30:THR:CA	80:B5:2707:C:H1'	2.46	0.46
80:B5:2816:G:C8	80:B5:2869:U:H3'	2.50	0.46
80:B5:3174:A:H2'	80:B5:3175:U:C5'	2.46	0.46
37:BC:118:LYS:HE2	80:B5:694:C:OP2	2.15	0.46
81:B7:106:U:H2'	81:B7:107:C:C6	2.50	0.46
81:B7:43:U:C4	81: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	81:B7:77:G:C3'	2.64	0.46
1:A0:87:ARG:HD2	79:B2:1797:A:H61	1.76	0.46
10:AB:117:TRP:NE1	10:AB:152:ARG:CZ	2.77	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
23:AO:132:ARG:CZ	79:B2:1788:G:N7	2.67	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:AQ:13:LYS:CE	79: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
34:AZ:55:PRO:C	34:AZ:57:TYR:H	2.19	0.46
12:AD:203:PRO:HD2	79:B2:1331:A:H2	1.79	0.46
79:B2:1349:G:N2	79:B2:1350:U:C2	2.83	0.46
79:B2:1655:A:C1'	80:B5:2302:G:O4'	2.61	0.46
17:AI:64:ASN:CB	79:B2:258:C:H1'	2.45	0.46
79:B2:258:C:N4	79:B2:259:U:O4	2.48	0.46
18:AJ:127:VAL:CG2	79:B2:478:A:H4'	2.39	0.46
79:B2:494:U:HO2'	79:B2:495:C:P	2.34	0.46
79:B2:505:A:H2'	79:B2:505:A:N3	2.30	0.46
33:AY:33:ALA:HB2	79:B2:533:U:H5'	1.98	0.46
79:B2:58:U:O4	88:B2:1924:OHX:N1	2.49	0.46
80:B5:1024:G:C2'	80:B5:1026:A:H8	2.26	0.46
80:B5:1085:A:H5''	80:B5:1085:A:H8	1.78	0.46
80:B5:1096:U:H4'	80:B5:1097:G:O5'	2.16	0.46
80:B5:2111:G:H4'	80:B5:2112:U:OP2	2.15	0.46
80:B5:2805:G:N3	80:B5:2967:A:H2	2.13	0.46
80:B5:2946:A:C5'	80:B5:2947:G:H5'	2.45	0.46
80:B5:3238:G:C5'	80:B5:3238:G:H8	2.29	0.46
80:B5:3288:G:O2'	80:B5:3289:G:H8	1.97	0.46
80:B5:508:U:H2'	80:B5:509:U:H6	1.78	0.46
35:BA:244:GLY:O	80: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
38:BD:155:THR:O	81:B7:36:C:H4'	2.16	0.46
42:BH:156:GLN:NE2	42:BH:160:ASP:OD1	2.46	0.46
48:BN:57:GLN:OE1	80: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	79: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	79:B2:1584:G:OP2	2.14	0.46
27:AS:108:LYS:HE3	27:AS:111:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
79:B2:1194:A:H2'	79:B2:1195:C:H5'	1.98	0.46
79:B2:1589:C:OP1	88:B2:2061:OHX:N1	2.48	0.46
79:B2:417:A:H5'	79:B2:418:G:C5	2.50	0.46
79:B2:616:G:C2	79:B2:622:A:N7	2.84	0.46
31:AW:57:ARG:CZ	79:B2:863:A:OP1	2.63	0.46
79:B2:909:U:H2'	79:B2:910:C:H6	1.80	0.46
1:A0:15:ARG:CG	79:B2:943:C:H42	2.21	0.46
22:AN:14:SER:HG	79:B2:960:U:H5	1.40	0.46
41:BG:136:LEU:CB	80:B5:147:U:OP2	2.63	0.46
80:B5:123:A:C6	80:B5:150:A:C5	3.04	0.46
80:B5:208:C:H2'	80:B5:209:A:H5'	1.97	0.46
35:BA:200:ARG:CG	80:B5:2147:A:OP1	2.52	0.46
80:B5:528:U:H2'	80:B5:529:A:H8	1.78	0.46
37:BC:272:VAL:N	80:B5:696:C:OP1	2.48	0.46
35:BA:247:ARG:HB3	79:B2:1013:A:OP1	2.16	0.46
36:BB:331:ASN:OD1	36:BB:331:ASN:N	2.49	0.46
38:BD:285:ARG:HH12	81:B7:62:U:C3'	2.28	0.46
38:BD:36:LEU:HD23	80:B5:2748:A:H1'	1.98	0.46
41:BG:134:TYR:CG	41:BG:190:VAL:HG11	2.50	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
32:AX:144:ARG:NH2	83:CV:267:MET:SD	2.89	0.46
1:A0:92:ARG:O	79:B2:1796:C:H2'	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:7:THR:HG21	79:B2:758:U:OP1	2.16	0.46
18:AJ:85:VAL:HG12	18:AJ:99:LEU:HD11	1.98	0.46
8:A7:172:UNK:O	21:AM:54:ARG:HB2	2.15	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	79:B2:778:G:C6	2.48	0.46
20:AL:130:PRO:HD2	79:B2:115:G:N7	2.31	0.46
79:B2:1200:G:H4'	79:B2:1201:G:C5'	2.45	0.46
29:AU:23:ARG:NH2	79:B2:1347:U:P	2.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AS:139:LYS:HG3	79:B2:1459:C:C4	2.50	0.46
79:B2:1513:G:O2'	79:B2:1515:A:N3	2.38	0.46
15:AG:107:ALA:HB1	79:B2:154:G:C4'	2.42	0.46
17:AI:142:LYS:HZ3	79:B2:186:C:H5'	1.79	0.46
79:B2:25:C:OP2	79:B2:26:A:H2'	2.15	0.46
17:AI:27:PHE:CE1	79:B2:301:A:H5''	2.51	0.46
79:B2:485:A:H2'	79:B2:486:G:O4'	2.15	0.46
79:B2:795:U:C5	79:B2:796:A:C8	3.04	0.46
80:B5:1025:A:H5'	80:B5:1026:A:OP2	2.16	0.46
35:BA:174:ARG:CD	80:B5:1793:C:O4'	2.63	0.46
80:B5:2746:A:H2'	80:B5:2747:A:O4'	2.16	0.46
80:B5:65:A:C4	80:B5:110:G:N7	2.84	0.46
46:BL:100:ARG:NH2	80:B5:66:A:OP2	2.49	0.46
53:BS:53:LYS:HD3	81:B7:99:G:P	2.55	0.46
82:B8:155:A:H2'	82:B8:156:U:O4'	2.16	0.46
35:BA:187:HIS:CB	80:B5:1794:G:C4	2.98	0.46
35:BA:240:ALA:CB	80: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	80:B5:1949:G:H5'	1.79	0.46
59:BY:2:ALA:HA	80:B5:213:A:O4'	2.15	0.46
83:CV:552:GLU:HA	83:CV:555:TYR:CE1	2.49	0.46
79:B2:1428:G:C4'	84:CW:34:C:C5'	2.90	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
10:AB:65:VAL:O	23:AO:34:SER:HA	2.16	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
20:AL:20:PHE:CG	79:B2:211:U:H5''	2.51	0.46
23:AO:20:TYR:CD2	79:B2:917:U:C5'	2.93	0.46
32:AX:69:ARG:HH11	79:B2:570:A:N6	2.14	0.46
29:AU:77:LYS:HE2	79:B2:1195:C:OP1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1477:G:H2'	79:B2:1478:G:C8	2.50	0.46
88:B2:1968:OHX:N1	88:B2:2011:OHX:N2	2.64	0.46
16:AH:113:PRO:HD3	79:B2:811:A:N6	2.29	0.46
80:B5:208:C:O2'	80:B5:209:A:H5'	2.16	0.46
79:B2:1759:C:C1'	80:B5:2262:A:H2	2.17	0.46
80:B5:2664:C:O2'	80:B5:2665:U:H5'	2.15	0.46
36:BB:20:LYS:HB2	80:B5:2991:A:OP1	2.16	0.46
36:BB:312:VAL:HA	80:B5:3378:C:O2'	2.16	0.46
80:B5:655:C:H2'	80:B5:656:A:C8	2.51	0.46
82:B8:9:A:H2'	82:B8:10:A:C8	2.50	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
2:A1:28:PRO:HG3	79:B2:959:U:C2	2.50	0.46
7:A6:285:ALA:HB2	79: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:A7:88:ARG:HB2	84:CW:36:U:C1'	2.33	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
8:A7:68:ARG:NE	27:AS:145:ARG:HH11	2.13	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
79:B2:1053:G:N7	88:B2:2059:OHX:N5	2.63	0.46
79:B2:1280:C:H2'	79:B2:1281:G:H8	1.80	0.46
79:B2:1558:U:H3'	79:B2:1559:A:H4'	1.98	0.46
4:A3:33:LYS:HG3	79:B2:1594:G:H5''	1.98	0.46
79:B2:544:A:H5''	79:B2:545:A:OP2	2.15	0.46
15:AG:175:ILE:HG13	79:B2:78:A:N9	2.23	0.46
2:A1:67:THR:CA	79:B2:871:G:O2'	2.64	0.46
80:B5:3031:G:P	83:CV:436:ARG:HH22	2.32	0.46
80:B5:491:C:H5''	80:B5:492:U:OP2	2.15	0.46
37:BC:331:ALA:HA	80:B5:578:A:N3	2.30	0.46
80:B5:725:G:H3'	80:B5:726:G:H5''	1.96	0.46
38:BD:265:TYR:CD1	81:B7:120:C:C2	3.03	0.46
48:BN:109:ARG:HD2	82:B8:140:G:O2'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:B8:83:C:H4'	82:B8:85:G:N3	2.31	0.46
35:BA:72:ARG:HG3	35:BA:72:ARG:HH11	1.80	0.46
35:BA:72:ARG:NH1	35:BA:72:ARG:HG3	2.31	0.46
36:BB:236:LYS:HD3	80:B5:2340:U:OP2	2.16	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	80:B5:1558:A:P	2.55	0.46
42:BH:26:LYS:HB2	80:B5:3198:U:C4	2.51	0.46
54:BT:127:GLN:HG2	80:B5:1095:U:H3	1.78	0.46
54:BT:129:LYS:CB	80:B5:1098:A:P	3.03	0.46
83:CV:80:HSO:HB2	83:CV:369:ILE:HD11	1.97	0.46
1:A0:10:ARG:HB3	1:A0:34:LYS:HA	1.97	0.46
2:A1:51:GLN:CB	79:B2:870:C:O2'	2.63	0.46
8:A7:86:ASN:N	84:CW:31:A:C8	2.79	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	79: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	79:B2:1459:C:N4	2.30	0.46
79:B2:1552:U:H2'	79:B2:1553:G:O4'	2.16	0.46
79:B2:1612:U:C2'	79:B2:1613:U:H5'	2.46	0.46
79:B2:1629:G:H2'	79:B2:1630:U:C6	2.51	0.46
79:B2:1655:A:H1'	80:B5:2302:G:O2'	2.15	0.46
79:B2:688:G:O6	88:B2:2038:OHX:N2	2.48	0.46
79:B2:432:G:H21	83:CV:387:ARG:NH1	2.05	0.46
15:AG:172:ALA:CB	79:B2:79:C:OP1	2.46	0.46
80:B5:1227:C:N3	80:B5:1284:C:C2	2.83	0.46
37:BC:305:ALA:HA	80:B5:1347:U:O4'	2.16	0.46
48:BN:67:ARG:HB2	80:B5:1545:A:OP2	2.16	0.46
80:B5:2772:C:H1'	80:B5:2773:C:OP2	2.16	0.46
80:B5:2898:G:OP2	80:B5:2899:C:H5'	2.15	0.46
47:BM:125:LYS:NZ	80:B5:3215:A:OP2	2.49	0.46
80:B5:3275:U:C6	80:B5:3275:U:OP1	2.69	0.46
80:B5:627:U:H4'	80:B5:1399:A:O2'	2.16	0.46
80:B5:801:A:H4'	80:B5:802:C:O5'	2.15	0.46
38:BD:256:THR:CG2	81:B7:119:U:H5''	2.46	0.46
46:BL:21:ARG:NH2	82:B8:51:G:OP2	59.86	0.46
35:BA:130:SER:HA	35:BA:169:ILE:HG22	1.97	0.46
36:BB:243:HIS:HD2	80:B5:876:A:OP1	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BG:202:GLU:O	41:BG:203:VAL:HB	2.15	0.46
46:BL:168:ARG:HH22	80:B5:769:G:H4'	1.81	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
8:A7:91:THR:N	84:CW:36:U:C4	2.84	0.46
8:A7:93:ARG:CA	85:CX:3:G:N2	1.80	0.46
1:A0:75:VAL:CG1	79:B2:1793:G:N1	2.79	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	79: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
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	79:B2:1473:U:O4'	2.16	0.46
79:B2:1657:U:C4	88:B2:1967:OHX:N2	2.84	0.46
79:B2:287:G:O2'	79:B2:288:A:P	2.74	0.46
17:AI:27:PHE:CD1	79:B2:301:A:H4'	2.51	0.46
31:AW:30:SER:O	79:B2:636:A:H4'	2.16	0.46
79:B2:920:U:H2'	79:B2:921:U:O4'	2.15	0.46
80:B5:1012:G:O2'	80:B5:1013:G:H5'	2.16	0.46
80:B5:1614:C:H2'	80:B5:1615:C:H6	1.81	0.46
80:B5:1655:G:H5''	80:B5:1655:G:C8	2.51	0.46
80:B5:2437:G:H5'	80:B5:2437:G:C8	2.44	0.46
80:B5:3159:C:H4'	80:B5:3395:G:C5	2.51	0.46
82:B8:10:A:H2'	82:B8:11:C:C6	2.51	0.46
82:B8:84:C:H5'	82:B8:85:G:H5'	1.97	0.46
35:BA:208:ASP:OD1	80:B5:912:G:C2	2.58	0.46
35:BA:42:ARG:NH2	80: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
37:BC:197:ARG:NH1	80:B5:1381:A:OP1	2.49	0.46
38:BD:211:LEU:HD13	38:BD:219:PHE:CA	2.46	0.46
41:BG:60:ARG:HH21	80: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:87:THR:CG2	84:CW:36:U:H5'	2.36	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	79: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	79: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	79:B2:1300:A:OP1	2.49	0.45
79:B2:1541:G:C6	79:B2:1542:G:N1	2.84	0.45
1:A0:75:VAL:HG21	79:B2:1793:G:O6	2.16	0.45
79:B2:694:U:H2'	79:B2:695:U:C5	2.52	0.45
80:B5:1225:A:C4	80:B5:1287:A:O3'	2.67	0.45
80:B5:1352:A:H1'	80:B5:1353:U:H5'	1.97	0.45
80:B5:2180:G:H2'	80:B5:2181:C:C6	2.51	0.45
54:BT:90:ASN:O	80:B5:2735:U:O2'	2.33	0.45
36:BB:120:LYS:NZ	80:B5:3001:C:OP1	2.49	0.45
80:B5:3177:G:O2'	80:B5:3179:U:OP1	2.22	0.45
80:B5:3287:U:N3	80:B5:3288:G:N7	2.64	0.45
80:B5:709:A:H2'	80:B5:710:A:O4'	2.16	0.45
50:BP:133:HIS:CD2	80:B5:880:G:O6	2.68	0.45
39:BE:162:SER:HB2	80:B5:3219:G:H1	1.79	0.45
42:BH:168:ARG:NH1	80:B5:2894:C:OP1	2.48	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
60:BZ:46:ILE:HD11	60:BZ:49:TYR:CE2	2.51	0.45
83:CV:236:GLU:CB	83:CV:360:LEU:CD2	2.90	0.45
1:A0:50:VAL:O	1:A0:53:LEU:HB3	2.16	0.45
5:A4:10:ARG:HH21	79:B2:567:A:P	2.39	0.45
7:A6:16:HIS:CD2	7:A6:20:VAL:HG22	2.52	0.45
8:A7:40:PRO:HD2	80:B5:2668:U:OP1	2.16	0.45
8:A7:79:SER:OG	84:CW:43:C:H1'	2.15	0.45
14:AF:100:ASN:O	14:AF:102:ARG:N	2.49	0.45
3:A2:46:GLY:HA3	14:AF:166:ARG:HB2	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:AY:120:GLY:HA2	79:B2:85:A:C4'	2.46	0.45
79:B2:1111:G:C2'	79:B2:1112:G:H5'	2.46	0.45
79:B2:1138:A:H2'	79:B2:1139:A:C8	2.51	0.45
79:B2:1519:U:H2'	79:B2:1520:U:C5	2.51	0.45
15:AG:2:LYS:NZ	79:B2:153:G:O3'	2.46	0.45
25:AQ:72:GLY:CA	79:B2:1608:U:H5''	2.43	0.45
79:B2:1698:N:O2'	79:B2:1699:N:P	2.74	0.45
88:B2:2014:OHX:N6	88:B2:2071:OHX:N5	2.64	0.45
20:AL:133:LYS:CD	79:B2:338:C:OP2	2.61	0.45
79:B2:491:C:H42	79:B2:496:G:H1	1.63	0.45
15:AG:133:LEU:HD11	79:B2:66:U:C1'	2.46	0.45
15:AG:169:TYR:CZ	79:B2:73:U:H5	2.34	0.45
79:B2:381:C:H1'	79:B2:756:A:C2	2.51	0.45
80:B5:1354:G:C6	80:B5:1358:C:H5'	2.51	0.45
80:B5:174:C:H2'	80:B5:175:C:C6	2.51	0.45
80:B5:2298:U:O4	80:B5:2923:U:H5	2.00	0.45
80:B5:244:G:C6	80:B5:245:U:C4	3.04	0.45
8:A7:51:ARG:CD	80:B5:2677:G:C3'	2.95	0.45
36:BB:130:PHE:CE2	80:B5:3149:G:H4'	2.51	0.45
80:B5:90:C:C2'	80:B5:91:G:H5'	2.47	0.45
81:B7:3:U:H2'	81:B7:4:U:C6	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
80:B5:2625:C:C4	84:CW:76:A:C8	2.80	0.45
8:A7:87:THR:HG22	84:CW:36:U:O3'	2.16	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
79:B2:1217:A:H5'	79:B2:1217:A:C8	2.51	0.45
1:A0:97:PRO:HA	79:B2:1798:U:C5	2.51	0.45
79:B2:192:U:O2'	79:B2:193:U:O4'	2.33	0.45
79:B2:260:U:H5'	79:B2:261:U:H5''	1.98	0.45
79:B2:730:G:H2'	79:B2:730:G:N3	2.31	0.45
79:B2:707:A:H2	79:B2:731:C:H2'	1.81	0.45
35:BA:69:TYR:O	80:B5:1650:G:H5'	2.16	0.45
35:BA:68:LYS:HE2	80:B5:1650:G:OP1	2.17	0.45
80:B5:1710:C:H2'	80:B5:1711:C:H6	1.81	0.45
80:B5:1801:U:H2'	80:B5:1802:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1816:A:C2'	80:B5:1817:G:H5''	2.46	0.45
80:B5:2304:C:C5	80:B5:2305:G:C6	3.04	0.45
80:B5:3163:A:O2'	80:B5:3164:C:H5'	2.16	0.45
35:BA:19:HIS:CE1	80:B5:823:C:OP1	2.69	0.45
81:B7:22:A:C6	81:B7:23:A:C6	3.04	0.45
35:BA:137:ILE:HG12	35:BA:147:ARG:HG3	1.98	0.45
37:BC:78:GLY:O	37:BC:85:SER:HB3	2.15	0.45
41:BG:219:ASP:O	41:BG:223:ALA:HB3	2.16	0.45
41:BG:99:PRO:HG2	41:BG:190:VAL:HG13	1.99	0.45
42:BH:139:ASN:OD1	42:BH:139:ASN:N	2.47	0.45
49:BO:128[A]:ARG:HA	49:BO:128[A]:ARG:HD3	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
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:A7:84:LYS:CG	84:CW:31:A:O5'	2.65	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
79:B2:1281:G:H2'	79:B2:1282:U:H6	1.82	0.45
29:AU:53:LYS:CB	79:B2:1345:A:H4'	2.34	0.45
79:B2:1417:A:OP1	88:B2:1949:OHX:N5	2.49	0.45
79:B2:1649:G:N7	88:B2:1928:OHX:N1	2.64	0.45
79:B2:1686:C:C4	79:B2:1687:U:C4	3.05	0.45
79:B2:196:G:O2'	79:B2:197:A:OP2	2.34	0.45
80:B5:398:A:O2'	80:B5:1416:C:OP1	2.20	0.45
80:B5:1876:U:C5'	80:B5:1876:U:C6	2.99	0.45
80:B5:2514:U:OP1	80:B5:2514:U:H6	1.99	0.45
36:BB:20:LYS:HB2	80:B5:2991:A:P	2.56	0.45
80:B5:3242:G:N2	80:B5:3245:A:H5''	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:578:A:H5''	80:B5:579:G:O5'	2.15	0.45
80:B5:611:A:OP2	80:B5:611:A:H4'	2.16	0.45
80:B5:92:G:H5''	80:B5:94:G:N7	2.32	0.45
35:BA:85:GLY:HA3	80:B5:2554:A:C8	2.51	0.45
41:BG:56:VAL:HG13	82:B8:150:G:H4'	1.98	0.45
48:BN:140:LYS:HB2	80: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
8:A7:89:ARG:HA	84:CW:35:A:N7	2.32	0.45
3:A2:49:ARG:HG2	3:A2:52:ASP:OD1	2.16	0.45
5:A4:18:THR:HG21	79: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
11:AC:140:ARG:NH2	11:AC:229:LEU:HD22	2.32	0.45
15:AG:53:SER:CB	79: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:C	17:AI:29:LEU:HD23	2.36	0.45
18:AJ:118:LEU:HG	18:AJ:158:PHE:CZ	2.51	0.45
23:AO:24:ASN:HB3	79:B2:902:G:N7	2.32	0.45
79:B2:1363:U:O2	79:B2:1363:U:H2'	2.16	0.45
28:AT:43:ASN:OD1	79:B2:1477:G:OP1	2.34	0.45
88:A3:102:OHX:N6	88:B2:1939:OHX:N4	2.65	0.45
88:AL:201:OHX:N3	88:B2:1995:OHX:N6	2.64	0.45
79:B2:231:U:O2'	79:B2:232:U:H5''	2.17	0.45
79:B2:46:A:C2	83:CV:387:ARG:CB	2.90	0.45
79:B2:702:G:H4'	79:B2:702:G:OP1	2.17	0.45
79:B2:915:A:H5'	79:B2:916:U:OP2	2.17	0.45
79:B2:918:U:H2'	79:B2:919:A:H8	1.81	0.45
80:B5:1024:G:H5''	80:B5:1025:A:OP2	2.17	0.45
54:BT:129:LYS:NZ	80:B5:1097:G:H5'	2.31	0.45
79:B2:1646:C:H5'	80:B5:2258:U:H3	1.81	0.45
80:B5:2282:U:O2	80:B5:2310:U:H4'	2.16	0.45
80:B5:3195:U:C1'	80:B5:3196:U:OP1	2.65	0.45
38:BD:274:GLN:HB3	81: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:H	43:BI:178:ARG:HG2	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	80:B5:2093:A:H61	1.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BI:112:GLN:HA	83:CV:471:LYS:CD	2.46	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:HD23	14:AF:198:LEU:HA	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	79:B2:1461:C:H41	1.81	0.45
31:AW:83:ILE:HG13	31:AW:117:ARG:HH12	1.80	0.45
79:B2:1294:G:O2'	79:B2:1321:A:N1	2.48	0.45
26:AR:28:PHE:CE1	79:B2:1389:C:H6	2.28	0.45
79:B2:1780:G:HO2'	80:B5:2262:A:C4'	2.03	0.45
88:B2:1981:OHX:N5	88:B2:2077:OHX:N3	2.64	0.45
17:AI:170:SER:OG	79:B2:209:U:O3'	2.34	0.45
79:B2:489:C:O5'	79:B2:489:C:H6	1.99	0.45
2:A1:20:LYS:CE	79:B2:958:U:OP2	2.65	0.45
35:BA:174:ARG:CG	80:B5:1793:C:O4'	2.64	0.45
80:B5:3163:A:C6	80:B5:3164:C:N4	2.85	0.45
80:B5:958:C:C4	80:B5:960:U:H1'	2.51	0.45
82:B8:62:C:H4'	82: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	80:B5:3214:U:H2'	1.98	0.45
57:BW:102:LYS:HG2	57:BW:105:ARG:NH2	2.32	0.45
83:CV:77:THR:H	83:CV: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	79:B2:888:U:P	2.57	0.45
27:AS:11:PHE:C	27:AS:11:PHE:CD1	2.90	0.45
29:AU:74:GLU:HG2	79:B2:1429:G:O4'	2.17	0.45
32:AX:73:ARG:NE	32:AX:84:THR:HG22	2.27	0.45
79:B2:1051:G:O2'	79:B2:1052:U:P	2.75	0.45
79:B2:1686:C:C2'	79:B2:1687:U:C6	2.79	0.45
79:B2:1727:G:H2'	79:B2:1728:A:C8	2.51	0.45
79:B2:240:U:OP1	79:B2:240:U:H4'	2.16	0.45
33:AY:105:ARG:NE	79:B2:444:C:OP2	2.50	0.45
79:B2:68:A:O2'	79:B2:69:G:OP2	2.25	0.45
79:B2:819:G:HO2'	79:B2:820:U:H5'	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AN:71:ILE:HD13	79:B2:961:U:H5''	1.99	0.45
80:B5:1109:U:H2'	80:B5:1110:U:O4'	2.17	0.45
41:BG:136:LEU:HB2	80:B5:147:U:C5'	2.46	0.45
80:B5:1567:U:H2'	80:B5:1568:U:C4'	2.47	0.45
80:B5:1658:G:H2'	80:B5:1659:U:C6	2.50	0.45
80:B5:173:G:O2'	80:B5:174:C:H6	1.96	0.45
80:B5:183:G:H2'	80:B5:184:U:O4'	2.17	0.45
80:B5:247:C:N3	80:B5:248:U:H1'	2.32	0.45
80:B5:2567:C:H42	80:B5:2568:C:H41	1.64	0.45
80:B5:2770:G:H2'	80:B5:2771:U:H5'	1.99	0.45
80:B5:2830:G:H5''	83:CV:526:LYS:HB2	1.99	0.45
36:BB:30:LYS:NZ	80:B5:3139:A:OP2	2.40	0.45
80:B5:312:C:O2'	80:B5:313:A:H5'	2.16	0.45
38:BD:63:GLN:NE2	81:B7:5:G:O2'	2.42	0.45
35:BA:236:GLY:HA2	80: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	81:B7:120:C:N3	2.85	0.45
43:BI:158:LYS:O	80:B5:2854:U:H5'	2.17	0.45
43:BI:24:ARG:HG3	43:BI:24:ARG:H	1.43	0.45
47:BM:133:LYS:HZ2	80:B5:3227:A:HO2'	1.57	0.45
49:BO:25[B]:LYS:HG3	80:B5:1175:C:H5''	1.99	0.45
50:BP:66:SER:HB2	80:B5:1448:U:H5''	1.98	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
79:B2:51:A:H1'	83:CV:242:GLY:HA3	1.66	0.45
79:B2:414:C:C2	83:CV:289:LEU:CD1	2.69	0.45
83:CV:19:THR:CA	89:CV:602: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	79:B2:1332:C:C5'	2.43	0.45
15:AG:211:LEU:O	15:AG:215:ARG:HB2	2.16	0.45
18:AJ:176:ASN:ND2	79:B2:511:A:P	2.88	0.45
22:AN:15:ALA:O	79: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
79:B2:1082:C:H2'	79:B2:1083:G:H5'	1.98	0.45
79:B2:1396:U:H2'	79:B2:1397:U:C6	2.51	0.45
79:B2:1537:C:N4	88:B2:2044:OHX:N6	2.64	0.45
79:B2:1578:U:O2'	79:B2:1579:U:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AG:53:SER:C	79:B2:163:G:C5'	2.71	0.45
79:B2:1686:C:C2	79:B2:1687:U:N1	2.85	0.45
33:AY:105:ARG:HB2	79:B2:443:C:OP1	2.16	0.45
79:B2:72:A:C2	79:B2:73:U:C4	3.05	0.45
79:B2:782:U:C4'	79:B2:783:G:OP2	2.64	0.45
79:B2:960:U:H2'	79:B2:961:U:H6	1.81	0.45
80:B5:1103:A:H3'	80:B5:1104:G:H5'	1.99	0.45
80:B5:1204:A:H2'	80:B5:1205:A:H5'	1.98	0.45
80:B5:1229:G:O6	80:B5:1230:G:C5	2.70	0.45
80:B5:138:U:H2'	80:B5:139:G:C8	2.52	0.45
60:BZ:115:LYS:HD2	80:B5:1629:U:H1'	1.98	0.45
80:B5:1686:U:O2	80:B5:1688:U:H1'	2.17	0.45
80:B5:181:U:O5'	80:B5:181:U:H6	2.00	0.45
80:B5:3276:G:H4'	80:B5:3277:U:OP1	2.17	0.45
80:B5:406:G:H1'	82:B8:16:G:N2	2.32	0.45
46:BL:26:PHE:HB2	82:B8:28:C:O3'	2.17	0.45
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
55:BU:29:ASP:O	55:BU:32:SER:N	2.50	0.45
79:B2:1190:C:C4	84:CW:31:A:OP1	2.70	0.45
1:A0:38:ARG:NH2	1:A0:83:ILE:HG21	2.32	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
10:AB:165:ARG:CZ	79: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:HH11	18:AJ:132:ARG:HG3	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
79:B2:1111:G:H2'	79:B2:1112:G:H5'	1.99	0.45
79:B2:1166:A:H2'	79:B2:1167:G:O4'	2.17	0.45
79:B2:1277:G:H2'	79:B2:1278:G:O4'	2.17	0.45
79:B2:1629:G:H2'	79:B2:1630:U:H6	1.80	0.45
17:AI:142:LYS:NZ	79:B2:187:G:N7	2.57	0.45
20:AL:40:LEU:HD22	79:B2:246:G:C2	2.52	0.45
17:AI:43:ILE:CB	79:B2:260:U:H5	2.29	0.45
79:B2:417:A:H4'	79:B2:418:G:O5'	2.17	0.45
79:B2:595:G:H2'	79:B2:596:C:C6	2.52	0.45
79:B2:725:U:H2'	79:B2:726:C:O4'	2.16	0.45
79:B2:861:U:H5'	79:B2:862:A:OP2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A1:51:GLN:HA	79:B2:871:G:C4'	2.47	0.45
35:BA:9:ARG:NH2	80:B5:1430:U:H2'	66.35	0.45
80:B5:1564:U:H2'	80:B5:1565:G:H8	1.80	0.45
80:B5:1565:G:C2	80:B5:1566:A:H1'	2.51	0.45
80:B5:173:G:H1'	80:B5:174:C:H5'	1.98	0.45
80:B5:182:U:OP1	80:B5:182:U:H4'	2.16	0.45
80:B5:2681:U:O2'	80:B5:2682:C:H5'	2.16	0.45
80:B5:2949:U:C5	80:B5:2950:G:C6	3.05	0.45
80:B5:92:G:H5'	80:B5:93:C:H5''	1.98	0.45
82:B8:154:C:H2'	82: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
38:BD:272:TYR:CE2	81:B7:22:A:N9	2.85	0.45
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	82:B8:140:G:O2'	2.25	0.45
51:BQ:147:ARG:HH21	80:B5:670:C:P	2.40	0.45
51:BQ:55:SER:CB	80: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
58:BX:48:SER:CB	82:B8:136:G:OP1	2.65	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	79: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
79:B2:1060:U:H5''	79:B2:1061:A:OP2	2.16	0.45
79:B2:1316:G:H2'	79:B2:1317:C:H6	1.81	0.45
79:B2:139:C:H4'	79:B2:140:A:O5'	2.17	0.45
25:AQ:124:PRO:CA	79:B2:1585:U:OP1	2.56	0.45
79:B2:47:A:N1	79:B2:386:G:H1'	2.32	0.45
79:B2:501:U:H2'	79:B2:502:U:C6	2.51	0.45
79:B2:779:U:O2'	79:B2:780:A:H5''	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AB:138:PHE:HE2	79:B2:885:G:H5'	1.82	0.45
80:B5:1494:U:H4'	80:B5:1495:U:O5'	2.16	0.45
80:B5:1813:A:O2'	80:B5:1816:A:N3	2.47	0.45
80:B5:183:G:H3'	80:B5:183:G:C8	2.52	0.45
46:BL:45:LYS:HA	80:B5:241:G:O2'	2.17	0.45
80:B5:3228:C:HO2'	80:B5:3229:G:P	2.40	0.45
80:B5:3245:A:H2	80:B5:3246:G:C2	2.35	0.45
80:B5:3330:A:C8	80:B5:3330:A:C5'	3.00	0.45
80:B5:3330:A:H8	80:B5:3330:A:C5'	2.29	0.45
80:B5:412:G:H2'	80:B5:413:U:C6	2.53	0.45
80:B5:642:U:H6	80:B5:642:U:O5'	1.99	0.45
44:BJ:70:THR:OG1	81:B7:39:C:N3	2.37	0.45
41:BG:236:GLY:O	41:BG:237:ILE:HB	2.17	0.45
44:BJ:171:VAL:HG13	44:BJ:172:LEU:N	2.31	0.45
44:BJ:20:ASN:HB3	44:BJ:126:ASP:HB2	1.98	0.45
48:BN:111:ALA:HB3	80:B5:20:A:H1'	1.98	0.45
51:BQ:55:SER:HB2	80:B5:672:A:OP2	2.17	0.45
52:BR:101:VAL:HG21	80:B5:1948:G:C4'	2.45	0.45
60:BZ:46:ILE:HD12	60:BZ:47:GLU:N	2.32	0.45
83:CV:138:TRP:CD2	83:CV:153:GLN:OE1	2.70	0.45
84:CW:16:U:C2	84:CW:60:U:O2	2.69	0.45
88:A3:102:OHX:N5	88:B2:1939:OHX:N3	2.65	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
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
30:AV:11:LEU:HG	30:AV:11:LEU:H	1.34	0.44
2:A1:25:VAL:HG13	31:AW:55:ASP:HA	1.99	0.44
79:B2:1238:A:OP2	88:B2:1925:OHX:N2	2.50	0.44
9:AA:109:ASN:HB2	79:B2:1294:G:O2'	2.17	0.44
29:AU:35:GLU:HG3	79:B2:1383:G:O2'	2.17	0.44
26:AR:59:LYS:HE2	79:B2:1393:C:OP2	2.17	0.44
12:AD:176:LEU:HD23	79:B2:1437:U:H5'	1.98	0.44
88:B2:1918:OHX:N3	88:B2:2047:OHX:N1	2.65	0.44
79:B2:492:A:H2'	79:B2:494:U:H5''	1.98	0.44
13:AE:22:LYS:HB2	79:B2:773:C:OP1	2.17	0.44
80:B5:1229:G:C5	80:B5:1230:G:C2	3.05	0.44
80:B5:1256:G:O2'	80:B5:1257:C:H5'	2.18	0.44
35:BA:187:HIS:CG	80:B5:1794:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:50:HIS:CD2	80:B5:1795:U:O2'	2.70	0.44
56:BV:48:ARG:HG2	80:B5:2339:C:OP1	2.17	0.44
80:B5:163:C:H42	80:B5:258:G:H1	1.65	0.44
80:B5:2768:U:H2'	80:B5:2769:A:C8	2.52	0.44
80:B5:2836:C:C5	80:B5:2852:C:N4	2.71	0.44
80:B5:620:U:H5''	80:B5:621:A:O5'	2.16	0.44
80:B5:731:U:H2'	80:B5:732:C:C6	2.52	0.44
36:BB:53:MET:HE3	80:B5:3048:A:C5'	2.47	0.44
37:BC:322:GLN:CB	80: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
41:BG:59:GLN:NE2	82:B8:150:G:O2'	2.48	0.44
46:BL:80:VAL:HG12	46:BL:85:LEU:O	2.17	0.44
47:BM:106:ARG:NH1	47:BM:106:ARG:HB2	4.44	0.44
52:BR:162:ARG:HH22	79:B2:848:C:H4'	0.81	0.44
57:BW:119:GLU:O	57:BW:122:ALA:HB3	2.17	0.44
60:BZ:36:HIS:H	60:BZ:37:PRO:HD3	1.82	0.44
80:B5:2284:C:H4'	83:CV:476:GLN:HB3	1.62	0.44
8:A7:83:LYS:CB	84:CW:30:G:H21	1.84	0.44
83:CV:538:LYS:HE3	84:CW:73:A:H2	1.82	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
8:A7:32:SER:CB	80:B5:2692:A:O4'	2.64	0.44
14:AF:109:LYS:HD2	79:B2:1473:U:C1'	2.41	0.44
15:AG:132:ARG:NH2	79: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
79:B2:1253:U:H2'	79:B2:1254:U:H6	1.82	0.44
79:B2:1256:A:H4'	79:B2:1257:U:O5'	2.17	0.44
79:B2:1287:A:N6	79:B2:1329:A:H5'	2.32	0.44
79:B2:1480:G:H3'	79:B2:1481:C:H6	1.82	0.44
79:B2:156:A:H2'	79:B2:157:A:O4'	2.17	0.44
88:B2:1960:OHX:N3	88:B2:1962:OHX:N5	2.65	0.44
79:B2:416:A:H4'	79:B2:417:A:OP2	2.17	0.44
80:B5:1807:G:C6	80:B5:1808:G:N1	2.85	0.44
80:B5:1838:G:H4'	80:B5:1839:A:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2174:G:H4'	80:B5:2175:U:O5'	2.17	0.44
79:B2:1758:U:H1'	80:B5:2255:A:N3	2.26	0.44
80:B5:2872:A:O2'	80:B5:2873:U:OP1	2.35	0.44
36:BB:232:ARG:NH2	80:B5:2989:U:O2'	2.51	0.44
80:B5:3279:A:H2'	80:B5:3280:U:H5'	1.99	0.44
38:BD:125:VAL:HG12	38:BD:125:VAL:O	2.17	0.44
38:BD:222:LEU:HD23	38:BD:222:LEU:HA	1.77	0.44
38:BD:91:GLY:CA	81: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	81:B7:44:C:P	2.80	0.44
51:BQ:43:PRO:HG2	80:B5:729:C:OP2	2.16	0.44
47:BM:40:ASP:HA	53:BS:143:PHE:CE2	2.52	0.44
79:B2:429:G:O2'	83:CV:243:PHE:CD1	2.63	0.44
9:AA:120:LEU:HD12	9:AA:142:PRO:O	2.17	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	79: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
79:B2:1057:U:H1'	79:B2:1058:U:H2'	1.99	0.44
79:B2:1231:U:C4	79:B2:1255:G:N2	2.85	0.44
79:B2:1393:C:H2'	79:B2:1394:G:O4'	2.18	0.44
12:AD:9:ARG:CZ	79:B2:1489:U:P	3.05	0.44
79:B2:1683:C:HO2'	79:B2:1684:U:P	2.38	0.44
35:BA:211:HIS:ND1	80:B5:2185:G:P	2.86	0.44
80:B5:2224:A:H5''	80:B5:2225:U:OP2	2.17	0.44
43:BI:82:ARG:CZ	80:B5:295:A:N3	132.07	0.44
80:B5:3085:G:H5''	80:B5:3086:A:OP1	2.17	0.44
36:BB:243:HIS:CD2	80:B5:876:A:OP1	2.70	0.44
35:BA:21:ARG:CD	80:B5:825:U:OP1	2.63	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	81: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
48:BN:112:ASN:ND2	80:B5:18:G:N2	2.65	0.44
53:BS:155:ARG:HD3	53:BS:172:TYR:CD2	2.52	0.44
83:CV:310:ASN:H	83:CV:310:ASN:HD22	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A2:19:THR:O	3:A2:23:GLY:HA2	2.17	0.44
8:A7:32:SER:HB3	80:B5:2706:G:HO2'	1.78	0.44
10:AB:149:GLN:NE2	79:B2:1066:C:H4'	2.32	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	79: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	79:B2:1581:C:C4'	2.44	0.44
31:AW:78:ARG:CD	31:AW:126:LEU:HD23	2.47	0.44
79:B2:1225:U:O2	79:B2:1230:A:H4'	2.16	0.44
34:AZ:94:LYS:NZ	79:B2:1530:C:OP1	2.48	0.44
88:B2:1922:OHX:N1	88:B2:1976:OHX:N3	2.66	0.44
79:B2:277:U:H2'	79:B2:278:U:OP1	2.17	0.44
13:AE:8:HIS:CE1	79:B2:449:C:C4'	3.00	0.44
13:AE:19:LEU:CD2	79:B2:788:A:H2'	2.44	0.44
23:AO:37:GLU:CA	79:B2:895:G:H4'	2.44	0.44
10:AB:115:ARG:C	79:B2:931:C:H4'	2.37	0.44
80:B5:1456:A:H4'	80:B5:1457:U:O5'	2.17	0.44
80:B5:1815:U:O2'	80:B5:1816:A:P	2.72	0.44
38:BD:146:LEU:HD12	80:B5:2746:A:N3	2.32	0.44
80:B5:622:A:H2'	80:B5:623:U:O4'	2.17	0.44
38:BD:270:LYS:CG	81:B7:2:G:H5'	2.42	0.44
46:BL:26:PHE:HB2	82:B8:29:U:P	2.58	0.44
40:BF:67:ARG:NH2	80:B5:517:G:H5''	2.32	0.44
43:BI:174:THR:OG1	43:BI:175:ASN:N	2.48	0.44
43:BI:98:ARG:HH21	80:B5:1127:G:P	2.40	0.44
84:CW:53:G:C2	84:CW:62:C:C2	3.06	0.44
1:A0:75:VAL:HG21	79:B2:1793:G:C6	2.53	0.44
1:A0:87:ARG:HH12	79:B2:1796:C:C5'	2.27	0.44
6:A5:83:UNK:O	6:A5:84:UNK:HG3	2.18	0.44
8:A7:83:LYS:HD3	84:CW:41:C:O2'	1.65	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:HD22	14:AF:25:LEU:H	1.82	0.44
14:AF:63:GLN:HB3	14:AF:64:VAL:H	1.70	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:AY:11:LYS:NZ	79:B2:775:G:C6	2.85	0.44
33:AY:33:ALA:CB	79:B2:533:U:H5'	2.47	0.44
79:B2:105:A:H2'	79:B2:106:U:O4'	2.17	0.44
79:B2:1248:C:H2'	79:B2:1249:U:C6	2.52	0.44
79:B2:1617:U:H2'	79:B2:1618:C:C6	2.52	0.44
15:AG:63:MET:O	79:B2:162:A:H4'	2.18	0.44
79:B2:273:G:H1	79:B2:283:U:H3	1.65	0.44
79:B2:413:U:H2'	79:B2:414:C:C6	2.52	0.44
79:B2:489:C:N4	79:B2:497:G:H22	2.15	0.44
79:B2:71:A:O3'	79:B2:72:A:H4'	2.17	0.44
33:AY:11:LYS:NZ	79:B2:776:G:O6	2.48	0.44
79:B2:960:U:H2'	79:B2:961:U:C6	2.53	0.44
49:BO:18[B]:ARG:NH1	80:B5:1314:C:O3'	2.51	0.44
52:BR:90:PRO:CD	80:B5:1779:C:N3	2.81	0.44
80:B5:1783:U:H2'	80:B5:1784:G:C8	2.53	0.44
80:B5:1942:U:H2'	80:B5:1943:C:O4'	2.18	0.44
35:BA:246:LEU:HD13	80:B5:2153:U:OP1	2.17	0.44
80:B5:2209:U:H1'	80:B5:2210:G:H5''	1.99	0.44
80:B5:2285:C:C4	83:CV:477:SER:CB	2.97	0.44
80:B5:3362:A:C2	80:B5:3363:U:C2	3.06	0.44
80:B5:29:C:H4'	80:B5:62:A:H4'	2.00	0.44
38:BD:277:LEU:CD1	81:B7:62:U:H5''	2.48	0.44
36:BB:106:TRP:CH2	36:BB:161:LEU:HD13	2.52	0.44
42:BH:161:LEU:O	42:BH:164:ILE:HG22	2.18	0.44
42:BH:90:MET:O	42:BH:143:GLU:O	2.34	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	82:B8:142:C:H5'	1.99	0.44
52:BR:170:ARG:NH2	88:BR:201:OHX:N3	2.58	0.44
83:CV:26:ARG:HH21	83:CV:45:THR:HG23	1.82	0.44
83:CV:239:VAL:CA	83:CV:359:THR:HG22	2.47	0.44
80:B5:2616:C:N3	84:CW:76:A:C1'	2.81	0.44
5:A4:39:LEU:HD12	5:A4:43:ARG:NH2	2.33	0.44
8:A7:93:ARG:HG2	84:CW:34:C:C5	2.52	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:HD23	20:AL:91:LEU:HA	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:AT:118:PRO:O	28:AT:119:LYS:HB2	2.18	0.44
29:AU:57:ARG:HB3	79: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
79:B2:1191:U:H5'	84:CW:32:U:P	2.57	0.44
79:B2:1346:A:C8	79:B2:1370:U:O2	2.71	0.44
24:AP:82:ASN:CB	79:B2:1557:U:O4	2.66	0.44
79:B2:443:C:H2'	79:B2:444:C:O4'	2.18	0.44
79:B2:823:G:O2'	79:B2:824:G:OP1	2.36	0.44
38:BD:145:PHE:CE2	80:B5:2748:A:H4'	2.52	0.44
36:BB:13:HIS:HB2	80:B5:3044:G:O3'	2.18	0.44
36:BB:53:MET:HE3	80:B5:3048:A:H5''	1.98	0.44
52:BR:61:SER:CB	80:B5:3069:G:O2'	2.65	0.44
80:B5:422:A:C2	80:B5:2363:A:H4'	2.52	0.44
80:B5:499:G:H2'	80:B5:500:C:C6	2.52	0.44
38:BD:266:ALA:CA	81:B7:1:G:H1'	2.47	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
51:BQ:176:ARG:HB2	80:B5:2763:U:H4'	2.00	0.44
83:CV:511:MET:SD	83:CV:521:ALA:HB2	2.58	0.44
84:CW:18:G:C6	84:CW:58:A:C6	3.05	0.44
9:AA:142:PRO:HG3	30:AV:32:VAL:HG13	1.99	0.44
9:AA:175:TYR:CD2	9:AA:199:PRO:HA	2.53	0.44
10:AB:157:GLN:OE1	79:B2:874:C:H5''	2.18	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
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
79:B2:1171:A:H2'	79:B2:1172:G:C8	2.52	0.44
79:B2:1584:G:O2'	79:B2:1610:G:O6	2.29	0.44
79:B2:186:C:H3'	79:B2:187:G:H8	1.83	0.44
79:B2:431:C:C3'	83:CV:384:ASP:O	2.66	0.44
13:AE:8:HIS:ND1	79:B2:449:C:H4'	2.33	0.44
31:AW:107:SER:HB3	79:B2:802:G:H21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1128:U:H2'	80:B5:1129:A:O4'	2.18	0.44
80:B5:1510:G:H8	80:B5:1510:G:O5'	2.00	0.44
80:B5:1523:U:H3'	80:B5:1607:U:O2	2.18	0.44
80:B5:1802:C:H2'	80:B5:1803:C:C6	2.53	0.44
80:B5:1819:U:O2'	80:B5:1820:U:OP1	2.26	0.44
80:B5:1864:A:H2'	80:B5:1865:A:C8	2.53	0.44
79:B2:1645:G:C1'	80:B5:2259:A:N1	2.81	0.44
80:B5:2437:G:H2'	80:B5:2438:A:O4'	2.18	0.44
80:B5:2596:U:H2'	80:B5:2597:U:C6	2.53	0.44
46:BL:181:GLY:CA	80:B5:2780:A:O2'	2.65	0.44
43:BI:4:ARG:HA	80:B5:2829:U:OP1	2.17	0.44
48:BN:186:GLY:HA2	80:B5:30:G:OP1	2.18	0.44
80:B5:892:U:H2'	80:B5:893:C:H5'	1.99	0.44
38:BD:269:SER:O	81:B7:22:A:C6	2.70	0.44
59:BY:114:ASP:OD2	82:B8:85:G:C6	2.71	0.44
35:BA:105:GLY:CA	35:BA:160:SER:HB3	2.47	0.44
36:BB:365:PHE:CE1	80:B5:3378:C:H1'	2.52	0.44
38:BD:257:GLU:O	38:BD:258:LYS:HD3	2.18	0.44
46:BL:27:ASP:CG	46:BL:31:LYS:HD2	2.38	0.44
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
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	79:B2:896:U:OP1	2.18	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
79:B2:1334:U:H2'	79:B2:1335:U:H6	1.83	0.44
12:AD:4:LEU:HD12	79:B2:1514:U:C5	2.53	0.44
79:B2:1536:G:C6	79:B2:1538:U:H1'	2.53	0.44
79:B2:1657:U:N3	88:B2:1967:OHX:N2	2.65	0.44
1:A0:3:LYS:CA	79:B2:1792:G:H5''	2.41	0.44
79:B2:281:G:H2'	79:B2:282:C:C6	2.52	0.44
15:AG:188:ARG:CZ	79:B2:283:U:C5	3.01	0.44
79:B2:296:U:H2'	79:B2:297:U:C6	2.52	0.44
79:B2:538:A:C8	79:B2:543:C:C4	3.03	0.44
79:B2:560:U:H2'	79:B2:561:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A1:51:GLN:CD	79:B2:870:C:O2'	2.56	0.44
80:B5:1753:G:H2'	80:B5:1754:G:O5'	2.17	0.44
80:B5:2427:U:H2'	80:B5:2428:U:C6	2.53	0.44
8:A7:32:SER:HB2	80:B5:2706:G:O2'	2.13	0.44
80:B5:439:C:H4'	80:B5:440:A:C5'	2.46	0.44
44:BJ:85:LYS:NZ	82:B8:86:U:O2	188.40	0.44
35:BA:85:GLY:HA3	80:B5:2554:A:C5	2.52	0.44
38:BD:260:PHE:CD2	81: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
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
83:CV:85:ASN:OD1	83:CV:368:LYS:CD	2.65	0.44
84:CW:42:C:C5'	84:CW:42:C:H6	2.31	0.44
84:CW:59:U:C6	84:CW:60:U:C5	3.05	0.44
3:A2:58:GLU:HG2	14:AF:225:ARG:CZ	2.48	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
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
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
79:B2:1196:A:H3'	79:B2:1196:A:OP1	2.17	0.44
14:AF:84:LYS:NZ	79:B2:1614:A:OP2	2.36	0.44
79:B2:1002:G:N1	79:B2:1761:U:OP1	2.43	0.44
15:AG:182:GLN:CD	79:B2:270:C:N4	2.72	0.44
79:B2:501:U:H2'	79:B2:502:U:C5	2.53	0.44
79:B2:542:A:H8	79:B2:542:A:O2'	2.01	0.44
43:BI:196:PHE:CD2	80:B5:1042:U:H4'	2.53	0.44
80:B5:1151:U:H3'	80:B5:1152:G:C8	2.53	0.44
80:B5:1565:G:H1'	80:B5:1575:A:C2	2.52	0.44
80:B5:238:A:H2'	80:B5:239:G:O4'	2.17	0.44
80:B5:238:A:HO2'	80:B5:239:G:P	2.41	0.44
80:B5:2540:A:O2'	80:B5:2541:U:H2'	2.18	0.44
80:B5:2726:C:O5'	80:B5:2726:C:O2	2.36	0.44
80:B5:3060:C:H1'	80:B5:3332:U:H1'	1.99	0.44
80:B5:702:C:O2	80:B5:788:C:H4'	2.18	0.44
41:BG:181:LYS:CD	82:B8:155:A:P	3.03	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:B8:47:C:H1'	82: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	81:B7:22:A:C4	3.06	0.44
43:BI:36:LEU:HD12	43:BI:36:LEU:N	2.33	0.44
56:BV:71:LYS:HA	80:B5:2295:A:OP2	2.18	0.44
58:BX:125:ARG:HH22	80:B5:1610:G:P	2.41	0.44
84:CW:6:G:H1	84:CW:67:C:H42	1.65	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	88:B2:2011:OHX:N1	2.65	0.43
23:AO:136:ARG:NH2	79:B2:1786:G:OP2	2.51	0.43
25:AQ:75:VAL:HB	79:B2:1610:G:OP2	2.18	0.43
26:AR:45:ARG:HA	79:B2:1389:C:P	2.58	0.43
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
28:AT:79:LEU:HD11	79:B2:1481:C:N4	2.32	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
79:B2:1165:G:C6	79:B2:1166:A:C6	3.06	0.43
26:AR:5:ARG:CZ	79:B2:1402:G:OP2	2.66	0.43
79:B2:1586:A:H1'	79:B2:1611:A:N6	2.32	0.43
79:B2:1747:G:H1'	80:B5:2303:A:O2'	2.18	0.43
88:B2:1932:OHX:N4	88:B2:2080:OHX:N3	2.66	0.43
23:AO:122:PRO:C	79:B2:886:U:O2	2.55	0.43
80:B5:1230:G:H2'	80:B5:1231:A:H62	1.82	0.43
80:B5:1817:G:O2'	80:B5:1818:U:P	2.76	0.43
80:B5:2358:A:H2'	80:B5:2359:C:O4'	2.18	0.43
80:B5:261:U:H2'	80:B5:262:U:C6	2.53	0.43
38:BD:16:PHE:HZ	80:B5:2688:U:C4	2.31	0.43
80:B5:3287:U:H2'	80:B5:3288:G:H5'	2.00	0.43
80:B5:625:G:H2'	80:B5:626:U:O4'	2.18	0.43
38:BD:269:SER:OG	81:B7:1:G:C2	2.69	0.43
59:BY:75:ARG:CZ	82:B8:72:A:H4'	2.48	0.43
36:BB:148:LEU:HD21	36:BB:196:ARG:HD3	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:260:VAL:HB	80:B5:2988:C:H1'	2.00	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	79:B2:849:C:C2	2.78	0.43
84:CW:16:U:H3	84:CW:59:U:H3	1.65	0.43
4:A3:34:TYR:HE1	79:B2:1487:A:OP1	1.99	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
8:A7:92:ASP:OD2	84:CW:34:C:C5'	2.65	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	79: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
79:B2:1142:A:H2'	79:B2:1143:A:C8	2.53	0.43
79:B2:1149:G:H5''	79:B2:1150:G:OP1	2.18	0.43
25:AQ:136:SER:OG	79:B2:1587:A:OP1	2.32	0.43
1:A0:92:ARG:HG2	79:B2:1796:C:P	2.58	0.43
79:B2:187:G:C4'	79:B2:188:A:OP1	2.61	0.43
79:B2:604:A:OP2	88:B2:1989:OHX:N5	2.51	0.43
79:B2:512:A:HO2'	79:B2:513:U:P	2.42	0.43
79:B2:981:U:C2'	79:B2:982:U:H5'	2.47	0.43
80:B5:1226:G:O4'	80:B5:1288:U:C5'	2.66	0.43
80:B5:1313:G:H2'	80:B5:1314:C:C6	2.53	0.43
80:B5:1952:G:H1	80:B5:2094:C:N4	2.09	0.43
80:B5:278:U:H6	80:B5:278:U:O5'	2.00	0.43
43:BI:61:SER:OG	80:B5:2854:U:OP1	2.36	0.43
80:B5:2140:U:O2'	80:B5:2978:U:H5'	2.18	0.43
80:B5:3287:U:N3	80:B5:3288:G:C8	2.87	0.43
80:B5:507:U:H2'	80:B5:508:U:C6	2.53	0.43
47:BM:77:ARG:NH1	80:B5:562:C:OP2	2.49	0.43
40:BF:30:ARG:NH2	80:B5:595:G:OP2	2.51	0.43
80:B5:736:A:C5	80:B5:737:G:H1'	2.52	0.43
35:BA:219:ILE:HD11	80: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	80:B5:211:A:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
44:BJ:8:PRO:HD2	44:BJ:10:ARG:HG2	1.99	0.43
46:BL:45:LYS:HB2	80:B5:241:G:H1'	1.98	0.43
47:BM:125:LYS:HD2	80:B5:2897:A:C5'	93.07	0.43
49:BO:115[B]:LYS:HG2	80:B5:3178:A:C2	2.53	0.43
52:BR:28:GLU:O	52:BR:32:ILE:HG13	2.18	0.43
54:BT:129:LYS:HB2	80:B5:1098:A:P	2.57	0.43
60:BZ:135:ARG:CB	60:BZ:135:ARG:HH11	2.31	0.43
83:CV:466:ILE:HG22	83:CV:486:VAL:HA	1.99	0.43
84:CW:71:G:C5	84:CW:72:C:C4	3.07	0.43
10:AB:116:LYS:HE2	79: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	79: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
28:AT:87:GLY:O	79:B2:1542:G:H5''	2.18	0.43
28:AT:88:VAL:N	79:B2:1542:G:H5''	2.33	0.43
15:AG:95:LYS:CE	79:B2:160:C:O3'	2.66	0.43
15:AG:83:CYS:HG	79:B2:162:A:H5''	1.79	0.43
17:AI:49:ARG:NH2	79:B2:398:G:H4'	2.32	0.43
10:AB:138:PHE:CZ	79:B2:885:G:OP1	2.68	0.43
79:B2:886:U:H2'	79:B2:887:A:O4'	2.18	0.43
43:BI:198:LYS:NZ	80:B5:1040:A:N3	2.57	0.43
80:B5:1093:A:H2	80:B5:1096:U:O2	2.01	0.43
80:B5:1155:C:O2'	80:B5:1197:A:N1	2.44	0.43
80:B5:1225:A:H8	80:B5:1288:U:O4'	2.01	0.43
41:BG:55:TYR:CE1	80:B5:1558:A:C5	3.07	0.43
80:B5:174:C:H2'	80:B5:175:C:H6	1.84	0.43
80:B5:248:U:C3'	80:B5:249:U:H5'	2.48	0.43
80:B5:3094:A:H2'	80:B5:3095:U:C6	2.54	0.43
80:B5:3350:C:H2'	80:B5:3351:U:C2	2.54	0.43
80:B5:378:A:N7	80:B5:391:A:H2	2.16	0.43
80:B5:437:G:H5''	80: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	82:B8:155:A:C5'	2.46	0.43
41:BG:81:THR:OG1	41:BG:82:LEU:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HA	60:BZ:34:LYS:HD2	1.67	0.43
83:CV:83:PHE:CD1	83:CV:110:GLN:HB3	2.54	0.43
84:CW:16:U:H2'	84:CW:18:G:H5''	2.00	0.43
7:A6:17:ASN:HD21	79: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
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
24:AP:70:ASN:CG	44:BJ:172:LEU:CD2	2.87	0.43
25:AQ:132:LYS:NZ	79:B2:1587:A:OP1	2.52	0.43
79:B2:1002:G:C2'	79:B2:1003:A:H5'	2.48	0.43
79:B2:1497:U:OP2	88:B2:1909:OHX:N1	2.52	0.43
79:B2:273:G:H2'	79:B2:274:G:O4'	2.18	0.43
17:AI:85:PRO:HG2	79:B2:328:A:O2'	2.19	0.43
79:B2:477:A:N7	79:B2:538:A:N1	2.66	0.43
79:B2:560:U:H2'	79:B2:561:G:C8	2.54	0.43
80:B5:1614:C:H2'	80:B5:1615:C:C6	2.53	0.43
80:B5:2818:U:C5'	80:B5:2818:U:C6	2.95	0.43
80:B5:2836:C:O2	80:B5:2836:C:O4'	2.33	0.43
80:B5:32:U:H6	80:B5:32:U:O5'	2.00	0.43
36:BB:228:GLY:HA3	80:B5:1887:A:O3'	2.18	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
44:BJ:95:ASN:HA	80: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BY:103:LYS:HA	59:BY:103:LYS:HD3	1.45	0.43
8:A7:89:ARG:NH2	84:CW:34:C:OP1	2.52	0.43
2:A1:51:GLN:CG	79: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
8:A7:78:ASP:HA	84:CW:43:C:H5''	2.01	0.43
10:AB:87:ARG:HB3	10:AB:87:ARG:HE	1.49	0.43
11:AC:99:LYS:HZ2	79:B2:1300:A:P	2.41	0.43
15:AG:188:ARG:HD2	79:B2:284:G:H8	1.76	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	88:AP:201:OHX:N4	2.51	0.43
33:AY:33:ALA:HB2	79:B2:533:U:H4'	2.01	0.43
33:AY:37:LYS:HZ1	79: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	79:B2:1253:U:OP1	2.70	0.43
79:B2:1796:C:H4'	79:B2:1797:A:OP2	2.18	0.43
32:AX:5:LYS:NZ	79:B2:614:C:OP2	2.47	0.43
79:B2:72:A:O2'	79:B2:73:U:H5''	2.18	0.43
18:AJ:149:ARG:CZ	79:B2:765:G:C4	3.01	0.43
23:AO:125:SER:CB	79:B2:927:C:O4'	2.67	0.43
79:B2:924:A:O2'	79:B2:987:G:OP1	2.36	0.43
43:BI:193:ASP:CG	80:B5:1010:G:N2	2.69	0.43
80:B5:1152:G:H8	80:B5:1152:G:OP2	2.01	0.43
80:B5:1165:A:H2'	80:B5:1166:G:O4'	2.19	0.43
80:B5:1498:A:H2'	80:B5:1499:C:C6	2.54	0.43
80:B5:1753:G:C2'	80:B5:1754:G:O5'	2.66	0.43
80:B5:1758:G:H5''	80:B5:1759:C:OP2	2.18	0.43
80:B5:1764:U:H3'	80:B5:1765:U:C5'	2.47	0.43
80:B5:1480:G:N2	80:B5:1872:C:C5	2.87	0.43
36:BB:245:GLY:CA	80:B5:1889:G:O5'	2.67	0.43
80:B5:242:C:H2'	80:B5:243:G:H8	1.83	0.43
80:B5:1895:A:O2'	80:B5:3053:G:H4'	2.18	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
41:BG:162:LEU:HD23	48:BN:7:LEU:HD21	1.99	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:BN:73:ARG:HB2	48:BN:92:LEU:HD23	2.00	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
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	79:B2:271:A:N6	2.44	0.43
18:AJ:175:ARG:HD2	18:AJ:176:ASN:N	2.34	0.43
20:AL:28:SER:OG	79:B2:839:U:C5'	2.64	0.43
1:A0:62:TYR:CZ	23:AO:114:ARG:HA	2.54	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	79:B2:1166:A:H5''	1.99	0.43
79:B2:1487:A:H2'	79:B2:1488:G:H8	1.83	0.43
79:B2:1600:A:O2'	79:B2:1602:C:N4	2.52	0.43
18:AJ:173:ALA:HA	79:B2:511:A:H5'	1.99	0.43
79:B2:517:U:H3	79:B2:535:A:H61	1.65	0.43
18:AJ:39:LYS:HG2	79:B2:592:A:OP1	2.19	0.43
79:B2:729:G:N3	79:B2:729:G:H2'	2.33	0.43
79:B2:88:U:H4'	79:B2:171:A:O4'	2.19	0.43
49:BO:18[A]:ARG:NH1	80:B5:1315:U:OP1	2.49	0.43
80:B5:1563:C:N3	80:B5:1576:G:O6	2.51	0.43
80:B5:2101:C:HO2'	80:B5:2102:U:P	2.39	0.43
79:B2:1780:G:C2	80:B5:2263:C:O4'	2.72	0.43
44:BJ:124:GLY:C	80:B5:2674:A:C6	2.92	0.43
48:BN:179:LYS:O	80:B5:287:G:H5'	2.19	0.43
80:B5:48:A:O4'	80:B5:50:U:C6	2.71	0.43
38:BD:207:TYR:CE2	81:B7:33:U:C6	3.04	0.43
40:BF:224:ILE:HG21	81:B7:97:A:H4'	2.00	0.43
82:B8:121:U:O2'	82: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
40:BF:94:LYS:HA	80:B5:1139:G:O3'	2.19	0.43
42:BH:17:THR:O	42:BH:17:THR:OG1	2.30	0.43
83:CV:388:ARG:CG	88:CV:601:OHX:N4	2.81	0.43
7:A6:201:THR:CB	7:A6:242:SER:HA	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:AC:203:LYS:HD2	79:B2:14:C:H5''	2.00	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
79:B2:1191:U:OP1	84:CW:33:U:O4	2.36	0.43
79:B2:1720:G:O6	88:B2:1959:OHX:N5	2.52	0.43
79:B2:473:A:C2'	79:B2:474:A:H5'	2.49	0.43
79:B2:51:A:H2	83:CV:243:PHE:HB2	1.53	0.43
79:B2:719:U:O2	79:B2:719:U:H2'	2.18	0.43
79:B2:839:U:O4	79:B2:840:U:C4	2.71	0.43
80:B5:1237:G:C5	80:B5:1238:C:C5	3.06	0.43
80:B5:1390:A:N3	80:B5:1390:A:H5'	2.33	0.43
80:B5:1580:A:O2'	80:B5:1581:C:OP2	2.30	0.43
60:BZ:16:GLY:CA	80:B5:1638:A:OP2	2.66	0.43
80:B5:1715:A:H4'	80:B5:1716:U:OP1	2.18	0.43
52:BR:104:ARG:HD3	80:B5:1950:U:OP1	2.18	0.43
80:B5:2147:A:H2'	80:B5:2148:U:O4'	2.19	0.43
80:B5:3238:G:H5''	80:B5:3238:G:H8	1.84	0.43
80:B5:342:A:C2	80:B5:368:G:C8	3.06	0.43
80:B5:911:C:O2	80:B5:917:A:N1	2.51	0.43
38:BD:91:GLY:HA2	81:B7:48:U:P	2.59	0.43
35:BA:70:ARG:HA	80:B5:1650:G:O3'	2.18	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
84:CW:22:G:H2'	84:CW:23:A:C8	2.54	0.43
80:B5:2624:G:H1'	84:CW:76:A:OP1	2.18	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	80:B5:2677:G:N9	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	79:B2:211:U:H5''	2.54	0.43
23:AO:122:PRO:CA	79:B2:887:A:C1'	2.97	0.43
25:AQ:9:THR:OG1	25:AQ:20:ALA:HB3	2.19	0.43
79:B2:1321:A:H4'	79:B2:1322:A:O5'	2.19	0.43
29:AU:85:ARG:NH2	79:B2:1334:U:O2'	2.51	0.43
79:B2:1402:G:H2'	79:B2:1403:C:C6	2.54	0.43
79:B2:1535:U:H2'	79:B2:1535:U:H6	1.60	0.43
79:B2:1681:A:H2	79:B2:1720:G:H21	1.64	0.43
1:A0:87:ARG:HD3	79:B2:1796:C:OP1	2.19	0.43
79:B2:237:C:C4'	79:B2:238:U:H5'	2.49	0.43
79:B2:498:G:H2'	79:B2:499:U:C4	2.54	0.43
79:B2:712:G:C8	79:B2:712:G:H3'	2.53	0.43
23:AO:46:MET:CG	79:B2:899:G:O5'	2.65	0.43
80:B5:123:A:H5'	80:B5:124:U:OP2	2.18	0.43
80:B5:1262:G:C8	80:B5:1262:G:H3'	2.53	0.43
80:B5:1763:U:H3'	80:B5:1764:U:C5	2.54	0.43
80:B5:2192:C:H2'	80:B5:2193:U:O4'	2.18	0.43
80:B5:2796:G:H5''	80:B5:2798:C:O4'	2.19	0.43
57:BW:61:LYS:HE3	80:B5:3369:G:OP2	2.18	0.43
80:B5:492:U:C2'	80:B5:493:G:H5'	2.49	0.43
51:BQ:107:THR:HB	80:B5:676:G:O5'	2.18	0.43
81:B7:106:U:H2'	81:B7:107:C:O4'	2.19	0.43
81:B7:11:A:O2'	81: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
83:CV:131:LYS:HD2	89:CV:602:GCP:N2	2.29	0.43
83:CV:464:ALA:HB1	83:CV:466:ILE:HG23	1.99	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
9:AA:88:LYS:HE3	26:AR:82:ASP:OD2	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AO:38:THR:CG2	79: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
27:AS:143:ARG:HB3	79:B2:1461:C:OP1	2.18	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
79:B2:1491:U:O2	79:B2:1491:U:H5''	2.19	0.43
79:B2:1781:A:H2'	79:B2:1782:A:O4'	2.18	0.43
8:A7:100:THR:O	79:B2:577:G:O6	2.36	0.43
32:AX:106:GLY:O	79:B2:599:A:H4'	2.19	0.43
79:B2:609:U:H4'	79:B2:610:G:O5'	2.18	0.43
79:B2:685:A:O2'	79:B2:686:C:H5'	2.19	0.43
2:A1:66:PRO:HB2	79:B2:871:G:H4'	2.00	0.43
23:AO:126:THR:C	79:B2:989:U:O2'	2.57	0.43
80:B5:1237:G:C6	80:B5:1238:C:C4	3.07	0.43
80:B5:1239:C:C6	80:B5:1239:C:C5'	3.02	0.43
80:B5:2213:A:H61	80:B5:2429:G:H1'	1.84	0.43
80:B5:237:G:C2	80:B5:238:A:C8	3.06	0.43
80:B5:2406:C:H2'	80:B5:2407:C:C6	2.53	0.43
80:B5:2442:G:N2	80:B5:2506:U:H3	2.17	0.43
80:B5:2585:G:N3	80:B5:2585:G:H2'	2.33	0.43
80:B5:2621:G:C5	84:CW:75:C:H6	2.33	0.43
80:B5:2882:U:H2'	80:B5:2883:U:C6	2.54	0.43
80:B5:3164:C:O2'	80:B5:3165:A:P	2.77	0.43
39:BE:26:ARG:O	80:B5:502:U:H4'	2.19	0.43
80:B5:726:G:H1'	80:B5:744:A:N6	2.33	0.43
82:B8:157:U:O2'	82:B8:158:U:H5'	2.19	0.43
35:BA:15:ILE:CD1	80: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
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:HA	10:AB:97:LEU:HD22	1.65	0.43
13:AE:131:LEU:HD13	13:AE:135:GLY:HA2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	79:B2:1545:A:P	3.07	0.43
28:AT:89:ARG:HD2	79: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	79:B2:1533:C:H6	1.67	0.43
79:B2:1710:U:H2'	79:B2:1711:C:C5	2.54	0.43
1:A0:87:ARG:NE	79:B2:1797:A:C6	2.87	0.43
79:B2:480:G:H22	79:B2:509:G:H1'	1.84	0.43
79:B2:542:A:H8	79:B2:543:C:H2'	1.84	0.43
79:B2:763:G:C6	79:B2:764:U:C4	3.07	0.43
37:BC:141:ARG:NH1	80:B5:1385:C:OP1	2.51	0.43
80:B5:1597:C:H5'	80:B5:1696:A:H1'	2.01	0.43
80:B5:178:U:H2'	80:B5:179:C:O4'	2.18	0.43
80:B5:2257:C:O2'	80:B5:2258:U:OP1	2.34	0.43
50:BP:137:ASN:HB3	80:B5:2356:A:O2'	2.18	0.43
80:B5:2436:U:C2'	80:B5:2437:G:H5''	2.48	0.43
80:B5:243:G:H2'	80:B5:244:G:H8	1.83	0.43
80:B5:2957:G:H5'	80:B5:2957:G:C8	2.45	0.43
80:B5:3027:A:H2'	80:B5:3028:G:O4'	2.19	0.43
36:BB:275:ARG:NH1	80:B5:3045:G:O3'	2.52	0.43
35:BA:10:LYS:HE3	80:B5:1375:G:O6	80.27	0.43
35:BA:15:ILE:HD12	35:BA:15:ILE:HA	1.66	0.43
35:BA:199:THR:HG21	80: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	80:B5:990:U:C1'	2.49	0.43
83:CV:455:LYS:HA	83:CV:458:GLU:CD	2.40	0.43
11:AC:61:LEU:HA	11:AC:62:PRO:HD2	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:AE:95:THR:HG22	33:AY:16:PRO:HG2	2.00	0.42
79:B2:12:U:H2'	79:B2:13:C:C6	2.54	0.42
29:AU:54:GLY:N	79:B2:1344:A:O2'	2.52	0.42
15:AG:149:LYS:CD	79:B2:141:U:OP2	2.65	0.42
25:AQ:73:GLY:HA3	79:B2:1608:U:O3'	2.19	0.42
88:B2:2014:OHX:N2	88:B2:2033:OHX:N4	2.67	0.42
17:AI:73:SER:O	79:B2:257:A:C4'	2.67	0.42
32:AX:78:LYS:HA	79:B2:434:G:OP1	2.19	0.42
79:B2:479:C:O2	79:B2:510:G:N2	2.52	0.42
79:B2:577:G:C8	79:B2:577:G:C3'	3.01	0.42
10:AB:116:LYS:CA	79:B2:931:C:H4'	2.49	0.42
79:B2:978:A:H2'	79:B2:979:A:O4'	2.19	0.42
80:B5:1084:A:H2'	80:B5:1085:A:H5''	2.00	0.42
80:B5:1307:G:H1'	80:B5:1308:A:C8	2.54	0.42
80:B5:1620:U:H2'	80:B5:1621:A:C8	2.54	0.42
80:B5:1638:A:H2	80:B5:1736:G:N3	2.16	0.42
80:B5:1770:G:H5'	80:B5:1771:C:OP2	2.18	0.42
80:B5:958:C:OP1	80:B5:2799:A:H3'	2.19	0.42
80:B5:735:A:H5''	80:B5:735:A:H8	1.84	0.42
38:BD:277:LEU:N	81:B7:62:U:OP1	2.34	0.42
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:148:VAL:HG12	40:BF:181:ILE:HD11	2.01	0.42
40:BF:137:GLY:HA3	40:BF:236:ILE:HB	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
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
88:A3:102:OHX:N2	88:B2:1939:OHX:N1	2.67	0.42
9:AA:35:PRO:HG3	30:AV:87:ARG:HH21	1.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:29:ILE:HG21	25:AQ:57:LEU:HD11	2.00	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
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
34:AZ:71:ILE:HG22	34:AZ:75:LEU:HD12	2.02	0.42
20:AL:65:SER:HB3	79:B2:114:C:O2	2.20	0.42
79:B2:1150:G:O2'	79:B2:1151:A:OP2	2.33	0.42
28:AT:99:SER:N	79:B2:1504:G:OP1	2.51	0.42
88:B2:1985:OHX:N4	88:B2:2063:OHX:N6	2.67	0.42
79:B2:538:A:H8	79:B2:543:C:N4	2.16	0.42
79:B2:781:U:O2'	79:B2:782:U:H6	2.02	0.42
79:B2:839:U:C2'	79:B2:840:U:H5'	2.47	0.42
31:AW:2:THR:HG21	79:B2:966:A:O2'	2.18	0.42
80:B5:1014:U:H2'	80:B5:1015:U:H5''	2.00	0.42
80:B5:1471:U:H2'	80:B5:1472:U:C6	2.54	0.42
80:B5:1525:G:C6	80:B5:1526:U:O4	2.72	0.42
80:B5:1661:G:H2'	80:B5:1662:G:C8	2.53	0.42
80:B5:1668:G:H2'	80:B5:1669:C:O4'	2.19	0.42
80:B5:1912:U:N3	80:B5:2122:G:OP2	2.46	0.42
80:B5:2289:U:H2'	80:B5:2290:C:C6	2.55	0.42
38:BD:16:PHE:CD1	80:B5:2688:U:C2	3.07	0.42
80:B5:3174:A:H2'	80:B5:3175:U:H5'	2.01	0.42
80:B5:1940:G:N2	80:B5:3362:A:H8	2.17	0.42
80:B5:630:A:H2'	80:B5:631:U:C6	2.54	0.42
80:B5:83:U:H2'	80:B5:84:U:O4'	2.18	0.42
80:B5:999:G:C6	80:B5:1000:C:N4	2.87	0.42
35:BA:217:GLN:O	35:BA:218:HIS:HB3	2.18	0.42
35:BA:234:LYS:HD2	80:B5:2163:C:OP1	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	79: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
8:A7:89:ARG:O	84:CW:35:A:C5	2.72	0.42
10:AB:77:GLU:C	10:AB:79:HIS:H	2.21	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
17:AI:43:ILE:HD13	79:B2:260:U:OP1	2.19	0.42
18:AJ:143:ILE:HG21	79:B2:768:C:H1'	2.01	0.42
20:AL:132:SER:O	20:AL:134:THR:N	2.52	0.42
20:AL:87:ARG:HH21	20:AL:104:HIS:CE1	2.38	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
32:AX:5:LYS:HA	32:AX:6:PRO:HD2	1.81	0.42
33:AY:120:GLY:HA2	79:B2:85:A:H4'	2.00	0.42
79:B2:1151:A:H2'	79:B2:1152:A:C8	2.54	0.42
79:B2:1318:G:O2'	79:B2:1319:A:H5'	2.19	0.42
79:B2:1370:U:O2'	79:B2:1371:A:OP2	2.20	0.42
12:AD:151:LYS:HD2	79:B2:1424:A:OP1	2.19	0.42
79:B2:1645:G:H1'	80:B5:2259:A:H61	1.84	0.42
15:AG:66:GLY:CA	79:B2:1681:A:H8	2.31	0.42
79:B2:233:C:O2'	79:B2:234:G:P	2.76	0.42
79:B2:506:A:H3'	79:B2:506:A:OP1	2.18	0.42
33:AY:37:LYS:NZ	79:B2:522:U:OP1	2.50	0.42
79:B2:794:U:H3'	79:B2:794:U:OP2	2.20	0.42
23:AO:125:SER:CB	79:B2:926:A:H2	2.31	0.42
49:BO:122[B]:GLN:NE2	80:B5:1181:U:H2'	2.34	0.42
80:B5:2511:A:C3'	80:B5:2512:C:H5''	2.49	0.42
80:B5:2590:A:C2'	80:B5:2591:A:O5'	2.67	0.42
80:B5:2373:A:N7	80:B5:2867:C:H1'	2.34	0.42
46:BL:5:LYS:HZ3	80:B5:796:U:H5''	1.84	0.42
80:B5:79:U:H2'	80:B5:80:G:C8	2.54	0.42
35:BA:199:THR:HG1	80:B5:913:A:H5'	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:B7:202:OHX:N6	88:B7:220:OHX:N4	2.67	0.42
82:B8:59:A:H3'	82: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
41:BG:136:LEU:HD23	41:BG:136:LEU:HA	1.72	0.42
39:BE:175:LYS:HD2	47:BM:111:ALA:HA	2.00	0.42
60:BZ:36:HIS:N	60:BZ:37:PRO:HD3	2.33	0.42
60:BZ:81:LEU:HA	60:BZ:81:LEU:HD22	1.48	0.42
83:CV:494:GLY:HA2	83:CV:508:VAL:HB	2.00	0.42
84:CW:24:G:C2	84:CW:25:C:C2	3.07	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
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
15:AG:15:THR:HG23	79:B2:152:U:C2'	2.49	0.42
79:B2:1560:U:O2	79:B2:1560:U:O4'	2.37	0.42
79:B2:993:A:H4'	79:B2:1777:G:O2'	2.19	0.42
88:B2:1907:OHX:N5	88:B2:2081:OHX:N4	2.67	0.42
79:B2:328:A:H2'	79:B2:329:G:O4'	2.19	0.42
79:B2:40:A:H2'	79:B2:41:A:O4'	2.19	0.42
79:B2:68:A:H3'	79:B2:68:A:H8	1.85	0.42
80:B5:1243:G:C6	80:B5:1244:A:C2	3.07	0.42
80:B5:2207:A:H2'	80:B5:2208:A:O4'	2.18	0.42
59:BY:4:GLN:N	80:B5:229:G:OP1	2.32	0.42
80:B5:2509:U:H2'	80:B5:2510:U:C5'	2.45	0.42
80:B5:3006:A:H2'	80:B5:3007:U:O4'	2.19	0.42
37:BC:50:TYR:HB3	80:B5:337:G:H21	1.84	0.42
80:B5:536:U:H1'	80:B5:559:A:C8	2.55	0.42
81:B7:55:A:H2'	81:B7:56:A:O4'	2.20	0.42
82:B8:126:A:OP2	82: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:H	48:BN:20:ARG:HG2	1.67	0.42
48:BN:49:ARG:HB3	48:BN:50:ARG:H	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	80:B5:2755:C:C2'	2.28	0.42
7:A6:42:LEU:O	7:A6:61:PHE:HD1	2.03	0.42
8:A7:83:LYS:O	84:CW:29:G:C2	2.70	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
26:AR:6:THR:HA	79:B2:1315:U:O2'	2.20	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
79:B2:1340:U:N3	79:B2:1378:U:H4'	2.34	0.42
79:B2:1370:U:H4'	79:B2:1371:A:H5'	2.01	0.42
79:B2:1511:U:H2'	79:B2:1512:G:H8	1.83	0.42
1:A0:87:ARG:CZ	79:B2:1797:A:C4	3.02	0.42
88:B2:1907:OHX:N2	88:B2:2081:OHX:N6	2.68	0.42
88:B2:1960:OHX:N6	88:B2:1962:OHX:N5	2.67	0.42
88:B2:1960:OHX:N4	88:B2:1962:OHX:N1	2.67	0.42
88:B2:1907:OHX:N2	88:B2:2081:OHX:N4	2.66	0.42
79:B2:431:C:O2	83:CV:386:SER:CA	2.63	0.42
79:B2:460:A:H3'	79:B2:461:G:H8	1.85	0.42
79:B2:648:G:C4	79:B2:687:G:N2	2.88	0.42
79:B2:67:A:C2	79:B2:69:G:H1'	2.54	0.42
79:B2:720:G:O2'	79:B2:721:U:H5'	2.18	0.42
23:AO:129:LYS:CA	79:B2:990:C:H4'	2.45	0.42
80:B5:1014:U:H3'	80:B5:1015:U:H5'	2.01	0.42
48:BN:49:ARG:NH2	80:B5:149:U:OP1	2.22	0.42
80:B5:1553:U:H1'	80:B5:1554:U:H5	1.84	0.42
80:B5:1561:G:O2'	80:B5:1562:C:OP2	2.26	0.42
80:B5:1880:U:H2'	80:B5:1881:A:O4'	2.19	0.42
80:B5:2286:U:C5	83:CV:478:LYS:HA	2.51	0.42
80:B5:2534:G:H8	80:B5:2534:G:OP2	2.03	0.42
80:B5:2537:U:HO2'	80:B5:2538:U:P	2.38	0.42
80:B5:2518:C:C2	80:B5:2590:A:C2	3.06	0.42
80:B5:2667:A:H8	80:B5:2667:A:C5'	2.28	0.42
80:B5:2953:U:H5''	80:B5:2954:U:OP2	2.20	0.42
51:BQ:90:ASP:OD1	80:B5:785:G:C6	2.72	0.42
35:BA:200:ARG:NE	80:B5:2187:G:O6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:211:HIS:ND1	80: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	80: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
83:CV:322:LEU:HD21	83:CV:333:LEU:HD11	2.02	0.42
84:CW:2:C:H2'	84:CW:3:C:C6	2.54	0.42
8:A7:79:SER:OG	84:CW:43:C:C2'	2.68	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
17:AI:26:LYS:HE2	79:B2:396:G:O6	2.19	0.42
18:AJ:49:LEU:HD22	18:AJ:53:ARG:HG3	2.01	0.42
20:AL:130:PRO:HD2	79:B2:115:G:C6	2.53	0.42
24:AP:108:ARG:HG2	24:AP:109:PRO:HD2	2.00	0.42
25:AQ:139:GLN:OE1	79:B2:1579:U:H1'	2.20	0.42
25:AQ:53:LEU:HD23	25:AQ:53:LEU:N	2.35	0.42
26:AR:5:ARG:N	26:AR:5:ARG:HD3	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
4:A3:54:LYS:HZ3	29:AU:80:GLU:HG3	1.84	0.42
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
79:B2:1489:U:H2'	79:B2:1490:C:OP1	2.19	0.42
79:B2:1644:C:O2	80:B5:2255:A:C6	2.72	0.42
79:B2:1590:G:OP2	88:B2:2020:OHX:N3	2.52	0.42
5:A4:31:LYS:HG2	79:B2:477:A:OP1	2.19	0.42
2:A1:20:LYS:HE3	79:B2:958:U:OP2	2.19	0.42
80:B5:1867:A:H2'	80:B5:1868:G:C8	2.54	0.42
36:BB:236:LYS:HD3	80:B5:2340:U:P	2.59	0.42
80:B5:2656:A:C8	80:B5:2658:G:C8	3.07	0.42
80:B5:2910:A:H8	80:B5:2910:A:H5''	1.85	0.42
80:B5:2935:U:H2'	80:B5:2935:U:O2	2.19	0.42
49:BO:65[A]:ASN:ND2	80:B5:2988:C:OP1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:3158:G:C5	80:B5:3159:C:C5	3.08	0.42
80:B5:3294:A:H2'	80:B5:3295:A:O4'	2.19	0.42
80:B5:339:C:OP1	80:B5:1380:G:O2'	2.30	0.42
80:B5:567:G:H2'	80:B5:568:G:C8	2.55	0.42
80:B5:926:A:H2'	80: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	80: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	79: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:CW:18:G:C6	84:CW:57:G:C6	3.07	0.42
8:A7:61:ILE:HD12	8:A7:62:ARG:N	2.35	0.42
10:AB:90:GLU:HG2	10:AB:223:PHE:HZ	1.84	0.42
12:AD:179:GLN:C	12:AD:179:GLN:HE21	2.23	0.42
12:AD:28:GLU:HA	12:AD:28:GLU:OE1	2.18	0.42
13:AE:22:LYS:NZ	79:B2:772:G:P	2.93	0.42
14:AF:95:ASN:O	14:AF:98:MET:HG2	2.20	0.42
15:AG:79:LYS:O	15:AG:80:ASN:HB2	2.19	0.42
15:AG:76:LEU:HD22	15:AG:92:ARG:HB3	2.01	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
24:AP:40:ARG:CZ	79:B2:1556:A:H2'	2.50	0.42
33:AY:105:ARG:CB	79:B2:443:C:OP1	2.68	0.42
33:AY:35:VAL:HG11	33:AY:40:LEU:HD11	2.01	0.42
79:B2:1201:G:H22	79:B2:1600:A:H5'	1.85	0.42
79:B2:1244:A:O2'	79:B2:1245:G:OP1	2.29	0.42
79:B2:1456:C:O4'	79:B2:1456:C:O2	2.38	0.42
79:B2:1595:U:H5	79:B2:1596:C:C5	2.37	0.42
20:AL:103:ARG:NH1	79:B2:307:G:H5''	2.35	0.42
79:B2:36:C:H2'	79:B2:37:U:O4'	2.20	0.42
79:B2:505:A:H2'	79:B2:506:A:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:681:U:O4	79:B2:682:C:N4	2.52	0.42
79:B2:778:G:C5	79:B2:783:G:N1	2.88	0.42
79:B2:805:U:H2'	79:B2:806:A:H5''	2.02	0.42
80:B5:1483:G:C8	80:B5:1485:G:C8	3.07	0.42
35:BA:191:LEU:CG	80:B5:1795:U:OP1	2.68	0.42
80:B5:1815:U:H1'	80:B5:1816:A:O5'	2.19	0.42
80:B5:2985:C:H2'	80:B5:2986:U:C6	2.55	0.42
80:B5:3227:A:N3	80:B5:3227:A:O4'	2.51	0.42
80:B5:3329:U:H2'	80:B5:3330:A:H5''	2.00	0.42
80:B5:3393:U:H2'	80:B5:3394:U:O4'	2.20	0.42
80:B5:863:C:H2'	80:B5:864:G:O4'	2.18	0.42
80:B5:806:A:H5''	80:B5:936:A:H61	1.85	0.42
82:B8:92:A:H2'	82:B8:93:U:O4'	2.19	0.42
35:BA:84:THR:HB	80:B5:2554:A:C2	2.53	0.42
38:BD:265:TYR:CE1	81: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	80: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:HD13	42:BH:191:LEU:HA	1.89	0.42
42:BH:31:ARG:HB2	42:BH:82:VAL:HA	2.02	0.42
44:BJ:72:ARG:HD2	82:B8:94:C:H3'	154.30	0.42
49:BO:61[A]:ALA:CB	49:BO:66[A]:LYS:HG3	2.48	0.42
49:BO:85[B]:ARG:HD3	49:BO:90[B]:HIS:ND1	2.33	0.42
54:BT:92:ARG:HD2	80:B5:2736:A:OP1	2.19	0.42
59:BY:50:ILE:HD12	59:BY:70:ILE:HG12	2.02	0.42
79:B2:429:G:C4'	83:CV:276:ARG:HD2	2.24	0.42
79:B2:429:G:O2'	83:CV:276:ARG:NE	2.52	0.42
44:BJ:55:ARG:NH2	84:CW:47:U:C2'	2.76	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
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
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
24:AP:18:ARG:O	27:AS:95:GLY:HA3	2.20	0.42
29:AU:109:GLU:HA	29:AU:110:PRO:HD2	1.78	0.42
31:AW:105:THR:CG2	79:B2:804:A:O2'	2.68	0.42
32:AX:13:ARG:HA	32:AX:16:ARG:HD3	2.01	0.42
79:B2:1151:A:H2'	79:B2:1152:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1686:C:C4	79:B2:1687:U:C5	3.08	0.42
88:B2:2014:OHX:N4	88:B2:2071:OHX:N1	2.68	0.42
88:B2:1942:OHX:N1	88:B2:2078:OHX:N5	2.68	0.42
79:B2:812:A:OP1	79:B2:814:A:C8	2.73	0.42
23:AO:124:ASP:O	79:B2:927:C:H1'	2.19	0.42
13:AE:3:ARG:NH1	79:B2:93:A:O4'	2.52	0.42
80:B5:124:U:O2	80:B5:149:U:O2'	2.32	0.42
56:BV:18:PRO:CD	80:B5:1898:G:H1'	2.50	0.42
80:B5:2294:U:C2	80:B5:2297:U:C5	3.07	0.42
80:B5:815:G:C6	80:B5:906:A:C4	3.08	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:HE2	37:BC:93:MET:H	1.85	0.42
38:BD:269:SER:O	81:B7:22:A:N1	2.52	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	81:B7:76:A:H2	1.82	0.42
57:BW:127:LYS:HA	57:BW:130:SER:OG	2.20	0.42
80:B5:3030:G:H4'	83:CV:436:ARG:HD3	2.02	0.42
83:CV:131:LYS:CG	89:CV:602: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	79:B2:66:U:P	2.42	0.42
16:AH:75:THR:OG1	16:AH:76:LYS:N	2.52	0.42
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
14:AF:69:PHE:CD2	25:AQ:50:GLU:HG2	2.54	0.42
25:AQ:82:ARG:HH12	25:AQ:114:ARG:HB3	1.84	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
79:B2:1570:A:H2'	79:B2:1571:C:O4'	2.20	0.42
79:B2:1586:A:H2'	79:B2:1587:A:C8	2.54	0.42
79:B2:1642:G:O6	88:B2:1901:OHX:N6	2.53	0.42
79:B2:1740:A:O2'	79:B2:1741:U:H5'	2.19	0.42
32:AX:50:LYS:HB2	79:B2:435:C:H5'	2.02	0.42
79:B2:568:G:O2'	79:B2:569:C:H5'	2.20	0.42
79:B2:71:A:C2	79:B2:72:A:C2	3.08	0.42
79:B2:709:C:N4	79:B2:730:G:C4	2.87	0.42
23:AO:20:TYR:CE2	79:B2:917:U:OP1	2.64	0.42
41:BG:136:LEU:HB2	80:B5:147:U:H5''	2.01	0.42
80:B5:1565:G:N1	80:B5:1574:C:C2	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BL:99:HIS:HB2	80:B5:156:G:C1'	2.49	0.42
54:BT:54:HIS:NE2	80:B5:2724:U:H4'	2.34	0.42
80:B5:283:G:O6	80:B5:304:G:H1'	2.20	0.42
80:B5:748:U:H2'	80:B5:749:C:C6	2.55	0.42
80:B5:806:A:O2'	80: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:HA	46:BL:46:ILE:HD13	1.45	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
80:B5:2285:C:H5''	83:CV:475:ARG:HD3	1.55	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
7:A6:29:GLN:C	7:A6:31:ASN:H	2.23	0.42
8:A7:33:LYS:HE3	80: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:148:SER:C	15:AG:150:GLU:H	2.22	0.42
15:AG:32:ILE:HD12	15:AG:100:ALA:HB1	2.02	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	79:B2:1330:G:N2	2.35	0.42
79:B2:1337:A:H5'	79:B2:1338:C:OP2	2.20	0.42
25:AQ:75:VAL:CG2	79:B2:1610:G:OP1	2.65	0.42
79:B2:717:C:H42	79:B2:720:G:N2	2.09	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:814:A:C5	79:B2:816:G:C8	3.07	0.42
80:B5:1049:C:H2'	80:B5:1050:U:C6	2.55	0.42
80:B5:1190:A:C8	80:B5:1193:A:H1'	2.55	0.42
41:BG:124:ASP:HA	80:B5:120:G:H22	1.85	0.42
80:B5:1226:G:O4'	80:B5:1288:U:C3'	2.65	0.42
80:B5:1449:A:C2	80:B5:2356:A:C4	3.08	0.42
80:B5:2441:A:N1	80:B5:2507:C:C2	2.87	0.42
8:A7:46:LYS:CG	80:B5:2678:A:H4'	2.42	0.42
80:B5:275:U:H2'	80:B5:276:U:C6	2.54	0.42
80:B5:2827:U:O2	80:B5:2827:U:H2'	2.20	0.42
80:B5:2896:A:C5'	80:B5:2896:A:H8	2.32	0.42
36:BB:226:PHE:HB2	80:B5:3307:A:OP1	2.20	0.42
37:BC:119:ARG:HH21	80:B5:695:C:P	2.43	0.42
80:B5:971:G:H2'	80:B5:972:A:O4'	2.20	0.42
36:BB:39:LYS:HE2	36:BB:39:LYS:HB3	1.69	0.42
40:BF:236:ILE:O	40:BF:240:VAL:HG23	2.20	0.42
41:BG:181:LYS:HG2	82:B8:154:C:C5'	2.46	0.42
42:BH:129:ARG:O	42:BH:132:VAL:HG13	2.20	0.42
46:BL:67:ARG:H	46:BL:67:ARG:HG3	1.40	0.42
47:BM:38:ILE:HA	47:BM:44:VAL:HG12	2.02	0.42
42:BH:20:ILE:HG13	47:BM:7:VAL:HG22	2.01	0.42
49:BO:156[A]:LEU:HD13	80:B5:3243:A:C8	2.54	0.42
52:BR:43:LYS:CE	80: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	80:B5:2736:A:C2'	2.49	0.42
79:B2:420:A:C2	83:CV:289:LEU:CD2	3.03	0.42
84:CW:4:C:C4	84:CW:69:G:O6	2.73	0.42
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
9:AA:63:ILE:HG12	30:AV:36:VAL:HG22	2.01	0.41
10:AB:168:ILE:O	10:AB:172:LEU:HG	2.19	0.41
11:AC:230:TRP:CE2	31:AW:68:ARG:HB3	2.55	0.41
12:AD:70:THR:OG1	12:AD:71:LEU:N	2.51	0.41
13:AE:108:ARG:HH12	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AK:72:GLY:O	19:AK:76:LEU:HD22	2.20	0.41
25:AQ:73:GLY:N	79:B2:1608:U:O3'	2.52	0.41
27:AS:109:LEU:HG	27:AS:113:LEU:CD1	2.50	0.41
34:AZ:97:LYS:HG3	34:AZ:98:GLN:H	1.84	0.41
79:B2:1013:A:H2'	79:B2:1014:G:O4'	2.19	0.41
79:B2:143:G:C2	79:B2:173:A:N3	2.88	0.41
79:B2:1535:U:H1'	79:B2:1536:G:C2	2.55	0.41
15:AG:95:LYS:CE	79:B2:161:U:P	3.03	0.41
79:B2:1449:U:O4	88:B2:1907:OHX:N1	2.53	0.41
88:B2:1985:OHX:N1	88:B2:2063:OHX:N5	2.68	0.41
88:AL:201:OHX:N4	88:B2:1995:OHX:N2	2.68	0.41
79:B2:488:G:N7	79:B2:498:G:N2	2.68	0.41
79:B2:68:A:C8	79:B2:68:A:H3'	2.55	0.41
2:A1:66:PRO:CB	79:B2:871:G:H4'	2.49	0.41
79:B2:992:A:O4'	79:B2:992:A:N3	2.53	0.41
80:B5:1560:G:O2'	80:B5:1561:G:P	2.76	0.41
46:BL:99:HIS:CD2	80:B5:156:G:C4	3.08	0.41
80:B5:1648:A:H2'	80:B5:1649:U:O4'	2.19	0.41
80:B5:1690:C:H2'	80:B5:1691:U:O4'	2.20	0.41
80:B5:2777:G:C5'	80:B5:2777:G:C8	3.02	0.41
80:B5:314:U:H2'	80:B5:315:C:C6	2.55	0.41
80:B5:3288:G:O2'	80:B5:3289:G:P	2.78	0.41
48:BN:60:VAL:CG2	82:B8:142:C:O3'	2.68	0.41
82:B8:6:U:H2'	82: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:HA	43:BI:74:LYS:HD3	1.75	0.41
44:BJ:24:GLY:HA2	80:B5:2680:A:H2	1.81	0.41
46:BL:45:LYS:HB2	80:B5:241:G:C1'	2.49	0.41
48:BN:179:LYS:HB3	80: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
83:CV:558:LEU:HA	83:CV:558:LEU:HD12	1.96	0.41
84:CW:67:C:C2	84:CW:68:C:C2	3.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AD:162:GLN:HG2	79: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	79: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	79: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
35:BA:247:ARG:NE	79:B2:1013:A:C5'	2.83	0.41
6:A5:140:TYR:HH	79:B2:1234:A:H1'	1.83	0.41
24:AP:47:ARG:HD3	79:B2:1555:A:OP1	2.19	0.41
15:AG:62:PRO:CB	79:B2:162:A:C5'	2.96	0.41
79:B2:1645:G:O2'	80:B5:2259:A:N6	2.52	0.41
79:B2:1780:G:C2'	80:B5:2262:A:C2'	2.98	0.41
88:B2:1942:OHX:N4	88:B2:2078:OHX:N6	2.68	0.41
79:B2:240:U:H4'	79:B2:241:U:OP2	2.20	0.41
79:B2:686:C:H2'	79:B2:687:G:C8	2.55	0.41
79:B2:73:U:C2	79:B2:74:U:O2	2.73	0.41
79:B2:81:G:C6	79:B2:82:U:N3	2.88	0.41
79:B2:901:G:C6	79:B2:902:G:C6	3.08	0.41
80:B5:1366:A:C2	80:B5:1367:G:C4	3.08	0.41
35:BA:187:HIS:HB3	80:B5:1794:G:N9	2.34	0.41
80:B5:2179:C:H4'	80:B5:2180:G:OP2	2.20	0.41
80:B5:173:G:N1	80:B5:246:U:C2	2.88	0.41
35:BA:69:TYR:CZ	80:B5:2558:U:C4	3.08	0.41
80:B5:726:G:C5'	80:B5:726:G:C8	3.01	0.41
80:B5:956:U:H2'	80:B5:957:C:C6	2.55	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:HB3	56:BV:126:TRP:CD1	2.55	0.41
56:BV:125:LEU:HA	56:BV:125:LEU:HD12	1.84	0.41
58:BX:40:LEU:HB3	58:BX:41:ALA:H	1.58	0.41
8:A7:83:LYS:C	84:CW:29:G:N2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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	80: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
12:AD:66:ILE:O	12:AD:70:THR:HG23	2.20	0.41
14:AF:104:ASN:ND2	79:B2:1166:A:C4'	2.83	0.41
15:AG:107:ALA:HB3	79: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
10:AB:72:ASP:OD2	23:AO:114:ARG:HD2	2.20	0.41
25:AQ:122:ARG:HA	79: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	79: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
79:B2:1042:G:C6	79:B2:1043:A:N7	2.88	0.41
79:B2:11:A:H2'	79:B2:12:U:H5'	2.03	0.41
79:B2:1250:U:O2'	79:B2:1251:U:OP1	2.31	0.41
79:B2:739:G:O6	88:B2:1974:OHX:N4	2.53	0.41
79:B2:322:G:OP1	88:B2:1969:OHX:N4	2.53	0.41
15:AG:159:ARG:HD3	79:B2:77:U:O2	1.89	0.41
80:B5:171:G:H1	80:B5:247:C:H42	1.67	0.41
80:B5:1932:A:H5'	80:B5:1933:A:OP2	2.19	0.41
57:BW:44:LYS:NZ	80:B5:2111:G:O2'	2.39	0.41
35:BA:236:GLY:CA	80:B5:2183:A:O2'	2.66	0.41
80:B5:2313:A:H4'	80:B5:2314:U:C5'	2.50	0.41
80:B5:2572:C:HO2'	80:B5:2573:G:P	2.39	0.41
54:BT:7:TYR:HE1	80:B5:2724:U:H1'	1.85	0.41
36:BB:5:LYS:HE3	80:B5:2878:G:OP1	2.20	0.41
80:B5:2298:U:C5	80:B5:2921:U:H1'	2.55	0.41
80:B5:291:C:H2'	80:B5:292:U:C6	2.56	0.41
80:B5:2971:A:H4'	80:B5:2972:G:OP2	2.20	0.41
80:B5:3245:A:C2	80:B5:3246:G:C2	3.08	0.41
80:B5:3349:C:H2'	80:B5:3350:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:438:A:H2'	80:B5:494:G:N2	2.33	0.41
81:B7:4:U:H2'	81:B7:5:G:H8	1.86	0.41
35:BA:85:GLY:HA2	80:B5:2554:A:N9	2.36	0.41
38:BD:269:SER:C	81:B7:22:A:N1	2.74	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
80:B5:3031:G:O5'	83:CV:436:ARG:NH2	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
16:AH:35:LYS:NZ	16:AH:36:ALA:H	2.17	0.41
17:AI:54:LYS:NZ	79: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
29:AU:57:ARG:HG2	79:B2:1382:A:H1'	1.99	0.41
21:AM:67:THR:HB	79:B2:1228:G:H1	1.85	0.41
79:B2:132:U:C1'	79:B2:133:U:OP2	2.58	0.41
79:B2:1540:G:C6	79:B2:1541:G:C4	3.07	0.41
24:AP:39:ALA:N	79:B2:1549:C:OP2	2.49	0.41
15:AG:59:GLN:HA	79:B2:155:U:C2'	2.50	0.41
79:B2:1654:G:H2'	79:B2:1745:G:N2	2.35	0.41
88:B2:2020:OHX:N1	88:B2:2067:OHX:N4	2.68	0.41
79:B2:420:A:H2	83:CV:289:LEU:CD2	2.32	0.41
79:B2:830:U:H2'	79:B2:830:U:O2	2.20	0.41
23:AO:130:GLY:N	79:B2:991:G:P	2.78	0.41
43:BI:198:LYS:HE3	80:B5:1041:U:H1'	2.01	0.41
35:BA:68:LYS:NZ	80:B5:1650:G:OP1	2.53	0.41
80:B5:1760:A:H5'	80:B5:1761:C:OP2	2.19	0.41
80:B5:1939:G:C6	80:B5:2110:G:O6	2.74	0.41
35:BA:246:LEU:HD13	80:B5:2153:U:H5''	2.02	0.41
35:BA:94:ALA:C	80:B5:2551:U:O4	2.52	0.41
80:B5:2840:C:H2'	80:B5:2841:G:O4'	2.20	0.41
80:B5:3089:C:H2'	80:B5:3090:U:O4'	2.21	0.41
80:B5:544:C:HO2'	80:B5:545:U:H6	1.67	0.41
80:B5:594:U:C5'	80:B5:609:G:H1	2.34	0.41
80:B5:629:U:H2'	80:B5:630:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BS:50:LYS:NZ	81:B7:76:A:N3	2.67	0.41
36:BB:120:LYS:HB2	80: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
46:BL:109:PHE:O	46:BL:113:VAL:HG23	2.20	0.41
48:BN:113:LEU:HD11	82:B8:142:C:C5'	2.51	0.41
52:BR:58:HIS:O	80:B5:1690:C:H5''	2.20	0.41
54:BT:9:SER:N	80:B5:2631:U:OP1	2.53	0.41
58:BX:105:VAL:HG13	58:BX:130:TYR:CG	2.56	0.41
83:CV:131:LYS:HD3	89:CV:602:GCP:N1	2.13	0.41
84:CW:67:C:C4	84:CW:68:C:C5	3.08	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	79:B2:1147:A:P	2.60	0.41
13:AE:2:ALA:O	79:B2:94:U:OP1	2.37	0.41
13:AE:3:ARG:HB2	79:B2:94:U:P	2.60	0.41
14:AF:185:ARG:NH2	79:B2:1572:G:O3'	2.53	0.41
16:AH:99:LEU:HD23	16:AH:100:PRO:HD2	2.02	0.41
25:AQ:22:VAL:HG22	25:AQ:65:ILE:CD1	2.49	0.41
27:AS:30:TYR:HE2	79:B2:1539:G:H5'	1.86	0.41
27:AS:8:GLN:HB2	27:AS:9:GLY:H	1.56	0.41
20:AL:98:ASN:ND2	31:AW:79:PHE:HD2	2.19	0.41
32:AX:47:SER:HB3	79:B2:600:U:H1'	2.01	0.41
33:AY:44:LEU:HA	33:AY:47:VAL:HG22	2.03	0.41
79:B2:1344:A:H4'	79:B2:1345:A:OP1	2.19	0.41
79:B2:1346:A:H8	79:B2:1370:U:O2	2.03	0.41
26:AR:60:ARG:NH1	79:B2:1400:A:O3'	2.53	0.41
79:B2:499:U:H2'	79:B2:500:C:C6	2.55	0.41
79:B2:74:U:H1'	79:B2:75:U:O5'	2.20	0.41
79:B2:948:G:H2'	79:B2:949:C:O4'	2.21	0.41
80:B5:1403:C:C2	80:B5:1409:G:C2	3.08	0.41
58:BX:125:ARG:NH2	80:B5:1610:G:OP1	2.49	0.41
60:BZ:70:PRO:CD	80:B5:1629:U:O2	2.67	0.41
80:B5:2191:U:H2'	80:B5:2192:C:O4'	2.20	0.41
80:B5:2222:A:O5'	80:B5:2222:A:H8	2.04	0.41
80:B5:240:U:O2'	80:B5:241:G:H8	2.02	0.41
80:B5:2775:U:H2'	80:B5:2776:C:C6	2.56	0.41
80:B5:2397:A:C2	80:B5:2873:U:H5'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BB:102:LEU:O	80:B5:3147:G:H4'	2.21	0.41
22:AN:123:HIS:CD2	80:B5:847:A:H4'	2.56	0.41
81:B7:110:G:C6	81:B7:111:U:C4	3.08	0.41
38:BD:266:ALA:CA	81: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	80:B5:2672:G:C1'	2.38	0.41
46:BL:65:TYR:CG	80:B5:103:G:H5'	2.55	0.41
51:BQ:55:SER:HB3	80:B5:671:U:H5''	2.03	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
79:B2:51:A:N9	83:CV:242:GLY:HA2	0.45	0.41
83:CV:555:TYR:CE2	83:CV:556:HSO:CE1	3.04	0.41
84:CW:52:G:H1	84:CW:62:C:H42	1.68	0.41
84:CW:6:G:C2	84:CW:68:C:N3	2.88	0.41
2:A1:67:THR:CA	79:B2:872:G:O4'	2.68	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:OD1	11:AC:106:ASP:N	2.44	0.41
11:AC:168:ARG:HG3	79:B2:1097:U:HO2'	1.85	0.41
12:AD:159:HIS:CG	79: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
3:A2:46:GLY:HA2	14:AF:166:ARG:HD2	2.02	0.41
15:AG:133:LEU:HG	79: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
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
79:B2:1133:A:H2'	79:B2:1134:C:O4'	2.19	0.41
79:B2:1172:G:C5	79:B2:1173:C:C4	3.09	0.41
79:B2:1655:A:C1'	80:B5:2302:G:C4'	2.99	0.41
88:B2:1922:OHX:N6	88:B2:1976:OHX:N6	2.68	0.41
79:B2:570:A:H5''	79:B2:571:G:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A7:104:LYS:HB3	79:B2:575:C:H5'	2.01	0.41
52:BR:162:ARG:HG2	79:B2:849:C:H6	1.85	0.41
80:B5:118:U:C5	80:B5:119:U:C4	3.09	0.41
80:B5:2558:U:O2'	80:B5:2559:U:H5'	2.21	0.41
80:B5:2572:C:O2'	80:B5:2573:G:P	2.79	0.41
41:BG:241:LYS:CD	80:B5:2584:G:N2	2.84	0.41
80:B5:2666:C:H2'	80:B5:2667:A:H5''	2.03	0.41
43:BI:4:ARG:HB2	80:B5:2828:G:O3'	2.20	0.41
80:B5:3242:G:C5'	80:B5:3245:A:C8	3.03	0.41
80:B5:372:A:C6	80:B5:373:A:C6	3.09	0.41
80:B5:600:G:H5'	80:B5:601:U:OP2	2.20	0.41
80:B5:916:G:C5'	80: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:169:LYS:O	43:BI:170:LYS:HB2	2.21	0.41
24:AP:12:PHE:CB	44:BJ:85:LYS:HD2	2.50	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:156[B]:LEU:HD13	80:B5:3243:A:C8	2.56	0.41
49:BO:88[B]:VAL:HG12	49:BO:89[B]:SER:N	2.36	0.41
50:BP:46:LYS:HE3	50:BP:46:LYS:HB2	1.87	0.41
43:BI:168:SER:HB2	54:BT:160:ILE:C	2.41	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
83:CV:232:ALA:HB3	83:CV:321:LEU:HB3	2.02	0.41
8:A7:78:ASP:CA	84:CW:43:C:H5''	2.51	0.41
84:CW:49:C:H2'	84:CW:50:U:C6	2.56	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
8:A7:84:LYS:HD3	8:A7:86:ASN:HB2	1.98	0.41
9:AA:63:ILE:HG23	30:AV:35:ASN:O	2.20	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	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AF:217:LEU:HD23	14:AF:217:LEU:HA	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
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
79:B2:1244:A:O2'	79:B2:1245:G:P	2.78	0.41
29:AU:53:LYS:C	79:B2:1345:A:O5'	2.58	0.41
12:AD:7:LYS:HB2	79:B2:1515:A:OP2	2.21	0.41
88:B2:1981:OHX:N5	88:B2:2077:OHX:N6	2.68	0.41
88:AL:201:OHX:N1	88:B2:1995:OHX:N2	2.68	0.41
88:B2:2020:OHX:N1	88:B2:2067:OHX:N3	2.69	0.41
79:B2:279:G:C3'	79:B2:279:G:C8	3.03	0.41
79:B2:732:G:N1	88:B2:2009:OHX:N3	2.68	0.41
79:B2:817:A:C6	79:B2:818:C:N4	2.89	0.41
79:B2:82:U:H2'	79:B2:83:G:O4'	2.21	0.41
45:BK:123:UNK:O	80:B5:1257:C:C6	2.73	0.41
80:B5:1283:C:C2'	80:B5:1284:C:H5'	2.51	0.41
80:B5:1596:C:H2'	80:B5:1597:C:C6	2.56	0.41
80:B5:1766:G:C2'	80:B5:1767:C:H5'	2.51	0.41
80:B5:2101:C:O2'	80:B5:2102:U:P	2.78	0.41
80:B5:2504:U:O2'	80:B5:2505:U:OP1	2.35	0.41
80:B5:2660:G:H4'	80:B5:2750:U:O2	2.21	0.41
80:B5:3155:U:C3'	80:B5:3156:U:H5''	2.49	0.41
80:B5:945:C:H2'	80:B5:946:U:C6	2.56	0.41
35:BA:152:SER:HB3	80: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	80:B5:1947:G:H4'	2.01	0.41
52:BR:167:ARG:O	79:B2:851:U:H3'	2.19	0.41
59:BY:37:LYS:HE2	59:BY:37:LYS:H	1.85	0.41
1:A0:3:LYS:HE3	79:B2:1030:A:P	2.61	0.41
1:A0:82:ARG:O	1:A0:84:VAL:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A0:87:ARG:HH11	79:B2:1796:C:P	2.44	0.41
1:A0:95:ARG:O	79:B2:1797:A:H4'	2.21	0.41
4:A3:41:GLN:HG2	79:B2:1433:G:C8	2.56	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	79: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	79:B2:1549:C:P	2.93	0.41
25:AQ:59:LYS:HD3	25:AQ:59:LYS:HA	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	79: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
79:B2:1162:C:H5''	79:B2:1163:A:OP2	2.20	0.41
6:A5:133:ALA:HB2	79:B2:1252:C:C1'	2.51	0.41
79:B2:1274:C:H4'	79:B2:1275:A:O5'	2.21	0.41
79:B2:1301:U:H2'	79:B2:1302:U:O4'	2.21	0.41
79:B2:1748:G:O6	88:B2:1982:OHX:N4	2.54	0.41
88:B2:2014:OHX:N4	88:B2:2071:OHX:N2	2.69	0.41
79:B2:229:U:H2'	79:B2:230:C:H6	1.85	0.41
15:AG:133:LEU:HD11	79:B2:66:U:C2	2.40	0.41
79:B2:714:G:C6	79:B2:715:U:C2	3.08	0.41
15:AG:159:ARG:CZ	79:B2:77:U:C2	3.04	0.41
80:B5:1056:U:H2'	80:B5:1057:A:O5'	2.21	0.41
80:B5:1480:G:H4'	80:B5:1481:A:OP1	2.21	0.41
80:B5:1685:C:H2'	80:B5:1686:U:C6	2.56	0.41
80:B5:1821:U:H4'	80:B5:1822:C:OP2	2.21	0.41
80:B5:2442:G:C2	80:B5:2443:A:N7	2.89	0.41
38:BD:179:ARG:NE	80:B5:2746:A:OP1	2.51	0.41
80:B5:2405:C:O2	80:B5:2819:A:N1	2.53	0.41
43:BI:157:TYR:HB3	80:B5:2836:C:H1'	2.03	0.41
80:B5:2926:A:O2'	80:B5:2927:C:H5'	2.21	0.41
36:BB:43:LEU:HG	36:BB:181:ILE:HG21	2.03	0.41
36:BB:245:GLY:HA2	80:B5:1889:G:C5'	2.47	0.41
36:BB:57:VAL:HG23	36:BB:358:TRP:HE3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BE:18:LEU:O	80: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	80: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:HD13	58:BX:40:LEU:HA	1.82	0.41
60:BZ:68:ILE:O	60:BZ:115:LYS:HG3	2.21	0.41
8:A7:84:LYS:HE2	84:CW:30:G:N2	2.36	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
17:AI:2:GLY:HA3	79: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
23:AO:137:LEU:HB3	79:B2:1007:C:H5'	2.02	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
79:B2:1138:A:H2'	79:B2:1139:A:H8	1.86	0.41
79:B2:1413:U:O2	88:B2:1949:OHX:N4	2.54	0.41
79:B2:1427:A:C5'	84:CW:34:C:C5	3.04	0.41
79:B2:1686:C:HO2'	79:B2:1687:U:C4'	2.33	0.41
79:B2:1762:A:C1'	79:B2:1783:C:H5'	2.49	0.41
79:B2:190:C:C4	79:B2:196:G:C6	3.09	0.41
79:B2:5:U:H2'	79:B2:6:G:H8	1.86	0.41
79:B2:74:U:O2'	79:B2:75:U:H5'	2.20	0.41
22:AN:20:ARG:NE	79:B2:862:A:OP1	2.51	0.41
23:AO:51:ASP:CB	79:B2:902:G:H1	2.34	0.41
80:B5:1072:G:H2'	80:B5:1073:U:C6	2.56	0.41
80:B5:1116:G:H4'	80:B5:1117:G:OP2	2.20	0.41
80:B5:1284:C:H4'	80:B5:1285:G:OP1	2.21	0.41
37:BC:305:ALA:N	80:B5:1347:U:H4'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:1358:C:H2'	80:B5:1359:C:O4'	2.21	0.41
80:B5:2995:A:H8	80:B5:2995:A:O5'	2.03	0.41
80:B5:594:U:O2'	80:B5:595:G:H5'	2.21	0.41
80:B5:622:A:H8	80:B5:622:A:O5'	2.03	0.41
81:B7:24:A:H2'	81:B7:25:G:O4'	2.21	0.41
81:B7:90:U:O5'	81:B7:90:U:H6	2.04	0.41
36:BB:233:TRP:CD1	36:BB:265:ALA:HB1	2.56	0.41
36:BB:47:LEU:HD12	80:B5:749:C:O2'	138.31	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
37:BC:301:PRO:C	51:BQ:39:ARG:HH12	2.23	0.41
54:BT:129:LYS:CA	80:B5:1098:A:OP2	2.69	0.41
58:BX:33:ARG:CZ	80:B5:1580:A:H62	2.34	0.41
42:BH:98:PRO:HB2	83:CV:136:TYR:HD2	1.11	0.41
83:CV:13:HSO:HD1	83:CV:14:VAL:H	1.68	0.41
79:B2:419:G:H22	83:CV:289:LEU:HD11	1.84	0.41
83:CV:80:HSO:HB3	83:CV:368:LYS:NZ	2.36	0.41
84:CW:38:A:H3'	84:CW:39:U:C6	2.56	0.41
84:CW:4:C:C6	84:CW:5:G:C8	3.09	0.41
84:CW:65:G:N2	84:CW:66:U:C2	2.89	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
8:A7:86:ASN:ND2	84:CW:33:U:C5	2.83	0.41
8:A7:87:THR:CG2	84:CW:36:U:O3'	2.69	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
13:AE:19:LEU:HD23	13:AE:19:LEU:HA	1.80	0.41
14:AF:103:ASN:OD1	79:B2:1473:U:C2	2.74	0.41
22:AN:33:VAL:HA	22:AN:36:GLN:HB2	2.02	0.41
22:AN:93:LYS:HG3	22:AN:150:VAL:HG11	2.03	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
33:AY:47:VAL:HG12	79:B2:781:U:O2	2.20	0.41
79:B2:1053:G:C8	79:B2:1053:G:H5'	2.56	0.41
79:B2:1281:G:C5	79:B2:1282:U:C5	3.09	0.41
79:B2:1340:U:C2	79:B2:1378:U:H4'	2.56	0.41
8:A7:68:ARG:HD3	79:B2:1460:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1490:C:O4'	79:B2:1490:C:P	2.78	0.41
79:B2:1756[A]:A:OP2	79:B2:1756[A]:A:H8	2.04	0.41
1:A0:92:ARG:CB	79:B2:1796:C:O2	2.60	0.41
79:B2:196:G:O2'	79:B2:197:A:H8	2.02	0.41
79:B2:458:G:H5''	79:B2:459:G:OP1	2.21	0.41
79:B2:473:A:H2'	79:B2:474:A:H5'	2.03	0.41
79:B2:487:G:C6	79:B2:488:G:C8	3.09	0.41
23:AO:35:GLY:CA	79:B2:919:A:C4'	2.72	0.41
13:AE:3:ARG:CB	79:B2:93:A:O3'	2.69	0.41
80:B5:1622:U:H2'	80:B5:1623:G:O4'	2.20	0.41
80:B5:2199:G:H2'	80:B5:2200:U:H6	1.86	0.41
80:B5:242:C:H2'	80:B5:243:G:C8	2.55	0.41
80:B5:248:U:O2	80:B5:248:U:H2'	2.20	0.41
80:B5:2561:A:O2'	80:B5:2562:A:H8	2.02	0.41
8:A7:29:ASN:N	80:B5:2708:C:H5'	2.22	0.41
54:BT:49:GLN:CB	80:B5:2756:C:O4'	2.69	0.41
80:B5:2911:A:H4'	80:B5:2912:G:C8	2.56	0.41
80:B5:3132:C:H2'	80:B5:3133:C:C6	2.56	0.41
80:B5:36:C:C2'	80:B5:37:U:H5'	2.51	0.41
80:B5:438:A:O2'	80:B5:439:C:P	2.79	0.41
82:B8:65:A:H2'	82:B8:66:A:O4'	2.21	0.41
35:BA:179:LEU:O	35:BA:184:ARG:HD2	2.21	0.41
38:BD:16:PHE:HA	80:B5:2688:U:O2'	2.19	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	80:B5:2683:U:H1'	2.56	0.41
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	80:B5:2384:A:N1	2.36	0.41
54:BT:85:LEU:HD13	80:B5:2728:G:C8	2.56	0.41
59:BY:11:ASP:HB3	59:BY:14:LYS:HG3	2.02	0.41
83:CV:410:ASN:HD21	83:CV:432:ASN:HD22	1.68	0.41
83:CV:63:GLU:CA	83:CV:63:GLU:N	2.84	0.41
80:B5:2621:G:H8	84:CW:75:C:C5	1.95	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
4:A3:14:TYR:CE2	79:B2:1597:A:N7	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
79:B2:1360:A:H2'	79:B2:1361:U:C1'	2.51	0.41
12:AD:159:HIS:C	79:B2:1421:A:H4'	2.41	0.41
27:AS:39:GLY:CA	79:B2:1567:U:OP2	2.69	0.41
88:B2:1914:OHX:N3	88:B2:1937:OHX:N4	2.69	0.41
88:B2:1918:OHX:N5	88:B2:2047:OHX:N1	2.69	0.41
79:B2:1233:G:OP2	88:B2:2040:OHX:N1	2.54	0.41
15:AG:185:GLN:HB2	79:B2:284:G:O6	2.21	0.41
80:B5:1064:A:N6	80:B5:1096:U:H3	2.19	0.41
80:B5:167:U:H2'	80:B5:168:U:H6	1.86	0.41
80:B5:174:C:H2'	80:B5:175:C:O4'	2.21	0.41
36:BB:245:GLY:CA	80:B5:1889:G:C5'	2.99	0.41
48:BN:72:LYS:CD	80:B5:2166:A:O2'	2.68	0.41
80:B5:2285:C:C5	83:CV:477:SER:CB	2.79	0.41
80:B5:2537:U:O5'	80:B5:2537:U:H6	2.04	0.41
41:BG:40:VAL:CG2	80:B5:2558:U:H5'	2.51	0.41
80:B5:2573:G:H3'	80:B5:2574:G:H5''	2.02	0.41
80:B5:3156:U:O2'	80:B5:3157:U:O2	2.35	0.41
80:B5:3237:U:H2'	80:B5:3238:G:H5''	2.03	0.41
80:B5:371:G:H4'	80:B5:396:A:N1	2.36	0.41
80:B5:411:U:H2'	80:B5:412:G:H8	1.86	0.41
80:B5:436:A:H8	80:B5:436:A:H5''	1.86	0.41
48:BN:110:ALA:CB	82:B8:141:C:O2'	2.69	0.41
35:BA:240:ALA:HB2	80: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
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
83:CV:416:SER:HA	83:CV:419:GLN:CD	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:CW:38:A:H3'	84:CW:39:U:H6	1.85	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:HG23	14:AF:190:ILE:HD12	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	79:B2:478:A:O4'	2.19	0.40
19:AK:1:MET:CG	19:AK:2:LEU:H	2.35	0.40
20:AL:12:ALA:CB	79:B2:328:A:H4'	2.51	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	79:B2:888:U:P	3.10	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
79:B2:1096:C:O2	79:B2:1096:C:H2'	2.20	0.40
27:AS:143:ARG:CZ	79:B2:1461:C:C5	3.04	0.40
25:AQ:71:GLY:HA2	79:B2:1483:A:H4'	2.02	0.40
1:A0:97:PRO:CA	79:B2:1798:U:C6	3.04	0.40
79:B2:377:G:O6	88:B2:1956:OHX:N5	2.55	0.40
88:B2:1960:OHX:N3	88:B2:1962:OHX:N1	2.68	0.40
88:B2:1971:OHX:N4	88:B2:1986:OHX:N3	2.68	0.40
88:B2:2004:OHX:N6	88:B2:2042:OHX:N5	2.69	0.40
13:AE:7:LYS:O	79:B2:449:C:H5''	2.20	0.40
79:B2:74:U:O2'	79:B2:75:U:P	2.78	0.40
80:B5:1064:A:N6	80:B5:1096:U:N3	2.69	0.40
80:B5:1641:U:HO2'	80:B5:1642:A:H3'	1.86	0.40
80:B5:1763:U:H3'	80:B5:1764:U:C6	2.56	0.40
80:B5:2314:U:OP2	80:B5:2314:U:H4'	2.20	0.40
54:BT:22:HIS:ND1	80:B5:2701:U:OP2	2.54	0.40
80:B5:3028:G:H2'	80:B5:3029:A:C8	2.56	0.40
80:B5:3131:U:H2'	80:B5:3132:C:C6	2.56	0.40
80:B5:384:A:H1'	80:B5:1465:A:C8	2.56	0.40
80:B5:529:A:H2'	80:B5:530:G:O4'	2.20	0.40
80:B5:561:C:H2'	80:B5:562:C:H6	1.86	0.40
81:B7:27:A:H2'	81:B7:28:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BD:274:GLN:HE22	81:B7:60:G:N2	2.18	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	80:B5:1888:U:P	2.58	0.40
36:BB:365:PHE:CE2	80:B5:3378:C:C2	3.09	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
79:B2:431:C:O2'	83:CV:385:VAL:N	2.53	0.40
83:CV:433:VAL:O	83:CV:437:LEU:N	2.55	0.40
84:CW:15:G:C6	84:CW:59:U:O2	2.74	0.40
8:A7:83:LYS:CA	84:CW:30:G:H21	2.21	0.40
88:A3:102:OHX:N6	88:B2:1939:OHX:N3	2.69	0.40
8:A7:33:LYS:CE	80: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	79:B2:1601:G:O6	2.18	0.40
29:AU:50:LEU:HB3	29:AU:51:VAL:H	1.64	0.40
79:B2:1181:U:H2'	79:B2:1182:U:O4'	2.21	0.40
19:AK:48:SER:HA	79:B2:1219:A:O2'	2.20	0.40
79:B2:1280:C:H2'	79:B2:1281:G:C8	2.55	0.40
79:B2:1361:U:H2'	79:B2:1361:U:O2	2.21	0.40
79:B2:142:G:C8	79:B2:266:A:N1	2.89	0.40
25:AQ:123:ARG:N	79:B2:1584:G:H2'	2.36	0.40
20:AL:103:ARG:NH1	79:B2:307:G:OP1	2.37	0.40
79:B2:734:A:H4'	79:B2:735:C:H5'	2.02	0.40
79:B2:830:U:O2'	79:B2:831:U:OP2	2.34	0.40
80:B5:1014:U:H3'	80:B5:1015:U:C5'	2.51	0.40
80:B5:1070:U:C2'	80:B5:1071:U:H5'	2.51	0.40
80:B5:1547:G:H2'	80:B5:1548:C:C6	2.56	0.40
35:BA:85:GLY:CA	80:B5:2554:A:N9	2.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2567:C:N4	80:B5:2568:C:H41	2.19	0.40
80:B5:2663:G:H2'	80:B5:2664:C:O4'	2.21	0.40
54:BT:8:ARG:CD	80:B5:2757:U:C4'	2.95	0.40
80:B5:2881:C:H2'	80:B5:2882:U:C6	2.57	0.40
80:B5:3084:C:H2'	80:B5:3085:G:O4'	2.21	0.40
80:B5:3205:G:H2'	80:B5:3206:C:C5	2.56	0.40
44:BJ:150:ASN:ND2	81:B7:17:A:OP1	2.52	0.40
81:B7:4:U:H2'	81:B7:5:G:C8	2.56	0.40
38:BD:95:TRP:CZ2	38:BD:181:PRO:HD3	2.54	0.40
38:BD:207:TYR:CD2	81:B7:33:U:C4	3.09	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	80:B5:1315:U:O2'	2.22	0.40
49:BO:60[B]:LYS:HE2	80:B5:1307:G:OP1	2.21	0.40
59:BY:75:ARG:O	59:BY:77:LYS:N	2.53	0.40
32:AX:100:ASP:N	83:CV:378:LYS:NZ	2.69	0.40
83:CV:395:ILE:O	83:CV:395:ILE:HG22	2.22	0.40
2:A1:49:HIS:CE1	2:A1:70:LYS:HG2	2.57	0.40
4:A3:54:LYS:HZ1	79:B2:1420:C:P	2.44	0.40
8:A7:30:THR:O	80: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	79: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
79:B2:1182:U:O2	79:B2:1184:A:H8	2.04	0.40
23:AO:132:ARG:CB	79:B2:1787:C:P	3.09	0.40
79:B2:205:U:H2'	79:B2:206:A:O4'	2.21	0.40
79:B2:330:G:H2'	79:B2:331:A:O4'	2.22	0.40
79:B2:827:C:H2'	79:B2:828:U:H6	1.84	0.40
10:AB:124:ASN:HD21	79:B2:884:A:H4'	1.79	0.40
80:B5:1046:A:H2'	80:B5:1049:C:C5	2.56	0.40
80:B5:1352:A:P	80:B5:1352:A:H3'	2.61	0.40
80:B5:1572:U:O2'	80:B5:1573:G:H8	2.04	0.40
80:B5:2166:A:H2'	80:B5:2167:A:C8	2.57	0.40
80:B5:2697:A:H2'	80:B5:2698:G:C8	2.56	0.40
54:BT:54:HIS:CG	80:B5:2724:U:H4'	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:B5:2872:A:O2'	80:B5:2873:U:P	2.79	0.40
80:B5:1886:A:O4'	80:B5:3307:A:H5'	2.21	0.40
48:BN:83:LYS:HB2	80:B5:35:A:OP1	2.22	0.40
80:B5:797:U:O2'	80:B5:798:G:H5'	2.21	0.40
35:BA:208:ASP:CB	80:B5:914:A:H2	2.34	0.40
48:BN:38:ARG:NH1	82: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	80: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	80: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	80:B5:1639:C:H42	1.86	0.40
83:CV:415:PRO:O	83:CV:418:ALA:HB3	2.22	0.40
8:A7:79:SER:CA	84:CW:42:C:C2	2.95	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
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:O	20:AL:132:SER:OG	2.39	0.40
88:AL:201:OHX:N1	88:B2:1995:OHX:N5	2.69	0.40
88:AL:201:OHX:N2	79: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:B2:1018:U:H2'	79:B2:1019:A:C8	2.57	0.40
79:B2:1163:A:N6	79:B2:1164:G:C6	2.89	0.40
79:B2:1441:C:H2'	79:B2:1442:U:C6	2.57	0.40
79:B2:1644:C:O2	80:B5:2255:A:C4	2.74	0.40
17:AI:142:LYS:NZ	79:B2:186:C:H5'	2.36	0.40
88:B2:1947:OHX:N6	88:B2:2073:OHX:N5	2.69	0.40
79:B2:755:A:O2'	79:B2:756:A:OP1	2.36	0.40
79:B2:830:U:O2'	79:B2:831:U:P	2.80	0.40
2:A1:67:THR:HA	79:B2:872:G:H5'	2.03	0.40
79:B2:964:U:H4'	79:B2:965:U:O5'	2.21	0.40
80:B5:1077:U:H2'	80:B5:1078:U:C6	2.56	0.40
80:B5:1267:U:C5	80:B5:1268:G:C5	3.09	0.40
35:BA:22:LEU:HD21	80:B5:1797:A:O5'	2.22	0.40
80:B5:237:G:N2	80:B5:238:A:O4'	2.54	0.40
38:BD:16:PHE:CE1	80:B5:2688:U:C4	3.06	0.40
47:BM:121:MET:CE	80:B5:3214:U:H2'	2.51	0.40
80:B5:3255:U:O5'	80:B5:3255:U:H6	2.04	0.40
51:BQ:164:ARG:CZ	80: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	80: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
52:BR:138:LEU:HD22	52:BR:138:LEU:O	2.22	0.40
52:BR:61:SER:HB3	80:B5:1689:U:H5''	2.03	0.40
54:BT:71:SER:OG	80:B5:2736:A:C5'	2.69	0.40
59:BY:31:LEU:HD23	59:BY:31:LEU:HA	1.85	0.40
83:CV:512:GLN:HA	83:CV:516:GLU:O	2.21	0.40
83:CV:199:ALA:O	89:CV:602: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:AP:130:ARG:O	84:CW:45:U:C5'	2.55	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	79:B2:1105:C:H41	2.35	0.40
79:B2:1357:A:C6	79:B2:1358:G:C6	3.10	0.40
79:B2:1459:C:OP2	79:B2:1459:C:H6	2.04	0.40
79:B2:1490:C:H1'	79:B2:1491:U:O4'	2.22	0.40
79:B2:143:G:C2	79:B2:173:A:C2	3.10	0.40
79:B2:991:G:O6	88:B2:1968:OHX:N2	2.54	0.40
88:B2:1981:OHX:N2	88:B2:2077:OHX:N6	2.69	0.40
79:B2:333:A:C6	79:B2:334:G:C6	3.09	0.40
79:B2:414:C:C6	83:CV:289:LEU:CD2	2.70	0.40
79:B2:440:U:O4'	83:CV:276:ARG:CG	2.69	0.40
79:B2:633:U:H2'	79:B2:634:G:O4'	2.22	0.40
31:AW:31:SER:HB3	79:B2:636:A:H5''	2.03	0.40
79:B2:781:U:O2'	79:B2:782:U:O5'	2.38	0.40
58:BX:125:ARG:NH2	80:B5:1610:G:P	2.94	0.40
38:BD:16:PHE:CE1	80:B5:2688:U:N3	2.90	0.40
80:B5:2829:U:H4'	83:CV:526:LYS:HD3	1.96	0.40
43:BI:64:ALA:HB2	80:B5:2853:A:O3'	2.22	0.40
80:B5:3164:C:C2	80:B5:3165:A:C8	3.10	0.40
80:B5:3257:C:H2'	80:B5:3258:U:O4'	2.20	0.40
80:B5:345:G:H2'	82:B8:25:G:O2'	2.22	0.40
80:B5:734:C:H6	80:B5:734:C:OP1	2.04	0.40
80:B5:703:G:O2'	80:B5:787:G:H4'	2.22	0.40
80:B5:856:G:C6	80:B5:857:G:N1	2.90	0.40
80:B5:953:G:H2'	80:B5:1117:G:H5''	2.04	0.40
80:B5:973:A:H5''	80: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	80: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:HE3	47:BM:133:LYS:HB2	1.86	0.40
49:BO:64[A]:PHE:CE2	49:BO:68[A]:ARG:HD3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
83:CV:385:VAL:HA	83:CV:389:ASP:HB2	2.02	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	25
3	A2	61/67 (91%)	47 (77%)	9 (15%)	5 (8%)	1	15
4	A3	51/56 (91%)	43 (84%)	6 (12%)	2 (4%)	3	29
5	A4	58/63 (92%)	49 (84%)	7 (12%)	2 (3%)	4	33
6	A5	50/152 (33%)	30 (60%)	9 (18%)	11 (22%)	0	2
7	A6	316/319 (99%)	273 (86%)	30 (10%)	13 (4%)	3	29
8	A7	120/273 (44%)	92 (77%)	17 (14%)	11 (9%)	1	14
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
11	AC	215/254 (85%)	187 (87%)	16 (7%)	12 (6%)	2	24
12	AD	221/240 (92%)	180 (81%)	27 (12%)	14 (6%)	1	21
13	AE	258/261 (99%)	201 (78%)	36 (14%)	21 (8%)	1	16
14	AF	204/225 (91%)	155 (76%)	30 (15%)	19 (9%)	1	13
15	AG	224/236 (95%)	190 (85%)	23 (10%)	11 (5%)	2	26
16	AH	182/190 (96%)	128 (70%)	27 (15%)	27 (15%)	0	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	AI	184/200 (92%)	155 (84%)	14 (8%)	15 (8%)	1	15
18	AJ	183/197 (93%)	153 (84%)	18 (10%)	12 (7%)	1	20
19	AK	94/105 (90%)	66 (70%)	18 (19%)	10 (11%)	0	9
20	AL	153/156 (98%)	125 (82%)	19 (12%)	9 (6%)	2	22
21	AM	122/143 (85%)	66 (54%)	23 (19%)	33 (27%)	0	0
22	AN	148/151 (98%)	125 (84%)	15 (10%)	8 (5%)	2	24
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	6
25	AQ	139/143 (97%)	114 (82%)	14 (10%)	11 (8%)	1	16
26	AR	116/136 (85%)	87 (75%)	17 (15%)	12 (10%)	0	10
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	15
29	AU	105/121 (87%)	87 (83%)	13 (12%)	5 (5%)	2	26
30	AV	85/87 (98%)	64 (75%)	11 (13%)	10 (12%)	0	7
31	AW	127/130 (98%)	114 (90%)	10 (8%)	3 (2%)	6	40
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%)	5	37
36	BB	384/386 (100%)	341 (89%)	34 (9%)	9 (2%)	7	41
37	BC	359/361 (99%)	306 (85%)	32 (9%)	21 (6%)	2	23
38	BD	292/296 (99%)	267 (91%)	19 (6%)	6 (2%)	8	43
39	BE	153/175 (87%)	134 (88%)	15 (10%)	4 (3%)	6	38
40	BF	221/243 (91%)	201 (91%)	16 (7%)	4 (2%)	9	47
41	BG	229/255 (90%)	180 (79%)	28 (12%)	21 (9%)	1	14
42	BH	189/191 (99%)	172 (91%)	13 (7%)	4 (2%)	8	43
43	BI	209/220 (95%)	175 (84%)	22 (10%)	12 (6%)	2	23
44	BJ	167/173 (96%)	135 (81%)	19 (11%)	13 (8%)	1	17
46	BL	192/198 (97%)	161 (84%)	20 (10%)	11 (6%)	2	23
47	BM	135/137 (98%)	124 (92%)	10 (7%)	1 (1%)	24	67
48	BN	201/203 (99%)	182 (90%)	13 (6%)	6 (3%)	5	35

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	BO	352/218 (162%)	324 (92%)	18 (5%)	10 (3%)	5	37
50	BP	153/183 (84%)	142 (93%)	9 (6%)	2 (1%)	13	54
51	BQ	183/185 (99%)	168 (92%)	9 (5%)	6 (3%)	4	33
52	BR	186/188 (99%)	167 (90%)	16 (9%)	3 (2%)	11	50
53	BS	170/172 (99%)	163 (96%)	6 (4%)	1 (1%)	27	70
54	BT	157/159 (99%)	146 (93%)	9 (6%)	2 (1%)	13	54
55	BU	96/120 (80%)	80 (83%)	13 (14%)	3 (3%)	4	34
56	BV	134/136 (98%)	124 (92%)	8 (6%)	2 (2%)	11	51
57	BW	133/155 (86%)	106 (80%)	19 (14%)	8 (6%)	2	22
58	BX	118/141 (84%)	104 (88%)	6 (5%)	8 (7%)	1	19
59	BY	124/126 (98%)	107 (86%)	12 (10%)	5 (4%)	3	29
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	33
62	Bb	56/58 (97%)	44 (79%)	7 (12%)	5 (9%)	1	14
63	Bc	98/104 (94%)	87 (89%)	8 (8%)	3 (3%)	4	34
64	Bd	107/112 (96%)	88 (82%)	13 (12%)	6 (6%)	2	24
65	Be	125/129 (97%)	110 (88%)	9 (7%)	6 (5%)	2	26
66	Bf	104/106 (98%)	96 (92%)	5 (5%)	3 (3%)	5	36
67	Bg	110/120 (92%)	93 (84%)	13 (12%)	4 (4%)	4	32
68	Bh	117/119 (98%)	99 (85%)	14 (12%)	4 (3%)	4	33
69	Bi	97/99 (98%)	77 (79%)	13 (13%)	7 (7%)	1	18
70	Bj	85/87 (98%)	75 (88%)	8 (9%)	2 (2%)	6	40
71	Bk	75/77 (97%)	61 (81%)	10 (13%)	4 (5%)	2	24
72	Bl	48/50 (96%)	41 (85%)	6 (12%)	1 (2%)	8	43
73	Bm	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	8	45
74	Bn	23/25 (92%)	22 (96%)	0	1 (4%)	3	28
75	Bo	103/105 (98%)	90 (87%)	11 (11%)	2 (2%)	9	45
76	Bq	141/312 (45%)	105 (74%)	14 (10%)	22 (16%)	0	4
83	CV	555/586 (95%)	450 (81%)	61 (11%)	44 (8%)	1	16
All	All	11839/12944 (92%)	9833 (83%)	1245 (10%)	761 (6%)	3	21

All (761) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	107	ALA
76	Bq	186	THR
76	Bq	203	ASP
83	CV	60	ALA
83	CV	77	THR
83	CV	83	PHE
83	CV	187	ASN
83	CV	244	GLY
83	CV	352	GLY
83	CV	478	LYS
83	CV	493	GLN
83	CV	534	ALA
1	A0	36	ILE
1	A0	63	ALA
1	A0	75	VAL
1	A0	86	VAL
2	A1	63	LEU

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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
83	CV	56	THR
83	CV	73	LEU
83	CV	94	CYS
83	CV	138	TRP
83	CV	385	VAL
83	CV	433	VAL
83	CV	509	GLU
83	CV	526	LYS
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
83	CV	16	THR
83	CV	32	GLY
83	CV	41	GLN
83	CV	61	GLU
83	CV	79	GLY
83	CV	109	GLN
83	CV	280	THR
83	CV	283	PRO
83	CV	286	GLU
83	CV	290	LYS
83	CV	462	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
83	CV	82	SER
83	CV	353	VAL
83	CV	399	GLU
83	CV	461	ILE
83	CV	503	GLU
83	CV	551	PRO
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

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Mol	Chain	Res	Type
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
71	Bk	19	ASP
73	Bm	78	ILE
76	Bq	103	ASN
83	CV	154	SER
83	CV	267	MET
83	CV	400	ASP
83	CV	476	GLN
83	CV	505	VAL
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

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Mol	Chain	Res	Type
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
83	CV	136	TYR
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
83	CV	495	TYR
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
83	CV	490	VAL
83	CV	508	VAL
11	AC	163	GLY
13	AE	45	ILE
15	AG	70	PRO

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Mol	Chain	Res	Type
19	AK	89	GLY
21	AM	117	GLY
66	Bf	59	VAL
83	CV	506	GLY

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	7
2	A1	70/71 (99%)	62 (89%)	8 (11%)	6	26
3	A2	56/60 (93%)	38 (68%)	18 (32%)	0	2
4	A3	47/49 (96%)	38 (81%)	9 (19%)	1	10
5	A4	51/54 (94%)	43 (84%)	8 (16%)	3	17
6	A5	43/116 (37%)	32 (74%)	11 (26%)	0	4
7	A6	259/262 (99%)	221 (85%)	38 (15%)	3	19
8	A7	97/195 (50%)	74 (76%)	23 (24%)	1	5
9	AA	164/210 (78%)	122 (74%)	42 (26%)	0	4
10	AB	191/224 (85%)	137 (72%)	54 (28%)	0	3
11	AC	176/205 (86%)	130 (74%)	46 (26%)	0	4
12	AD	182/195 (93%)	138 (76%)	44 (24%)	1	5
13	AE	221/222 (100%)	166 (75%)	55 (25%)	0	5
14	AF	173/191 (91%)	137 (79%)	36 (21%)	1	8
15	AG	188/201 (94%)	149 (79%)	39 (21%)	1	8
16	AH	165/170 (97%)	124 (75%)	41 (25%)	0	5
17	AI	150/161 (93%)	118 (79%)	32 (21%)	1	7
18	AJ	158/166 (95%)	117 (74%)	41 (26%)	0	4
19	AK	77/98 (79%)	58 (75%)	19 (25%)	0	5
20	AL	129/137 (94%)	105 (81%)	24 (19%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	1	11
25	AQ	117/119 (98%)	83 (71%)	34 (29%)	0	3
26	AR	94/124 (76%)	70 (74%)	24 (26%)	0	4
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	5
31	AW	110/111 (99%)	84 (76%)	26 (24%)	1	5
32	AX	119/120 (99%)	97 (82%)	22 (18%)	2	11
33	AY	112/113 (99%)	84 (75%)	28 (25%)	0	4
34	AZ	61/89 (68%)	43 (70%)	18 (30%)	0	3
35	BA	192/195 (98%)	153 (80%)	39 (20%)	1	8
36	BB	320/322 (99%)	250 (78%)	70 (22%)	1	7
37	BC	288/288 (100%)	223 (77%)	65 (23%)	1	6
38	BD	243/244 (100%)	196 (81%)	47 (19%)	1	10
39	BE	135/152 (89%)	115 (85%)	20 (15%)	3	19
40	BF	187/204 (92%)	158 (84%)	29 (16%)	3	17
41	BG	177/207 (86%)	138 (78%)	39 (22%)	1	7
42	BH	171/171 (100%)	132 (77%)	39 (23%)	1	6
43	BI	179/186 (96%)	142 (79%)	37 (21%)	1	8
44	BJ	147/149 (99%)	114 (78%)	33 (22%)	1	7
46	BL	154/158 (98%)	124 (80%)	30 (20%)	1	10
47	BM	108/108 (100%)	84 (78%)	24 (22%)	1	7
48	BN	175/175 (100%)	143 (82%)	32 (18%)	2	12
49	BO	323/178 (182%)	267 (83%)	56 (17%)	2	14
50	BP	125/145 (86%)	103 (82%)	22 (18%)	2	13
51	BQ	150/150 (100%)	123 (82%)	27 (18%)	2	12
52	BR	153/153 (100%)	121 (79%)	32 (21%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
53	BS	156/156 (100%)	123 (79%)	33 (21%)	1	7
54	BT	136/136 (100%)	109 (80%)	27 (20%)	1	9
55	BU	85/106 (80%)	62 (73%)	23 (27%)	0	4
56	BV	104/104 (100%)	96 (92%)	8 (8%)	14	44
57	BW	100/129 (78%)	85 (85%)	15 (15%)	3	18
58	BX	104/117 (89%)	81 (78%)	23 (22%)	1	7
59	BY	109/109 (100%)	85 (78%)	24 (22%)	1	7
60	BZ	115/115 (100%)	89 (77%)	26 (23%)	1	6
61	Ba	118/118 (100%)	95 (80%)	23 (20%)	1	10
62	Bb	46/46 (100%)	35 (76%)	11 (24%)	1	5
63	Bc	84/87 (97%)	68 (81%)	16 (19%)	1	10
64	Bd	94/96 (98%)	73 (78%)	21 (22%)	1	7
65	Be	109/110 (99%)	89 (82%)	20 (18%)	2	12
66	Bf	90/90 (100%)	79 (88%)	11 (12%)	5	24
67	Bg	95/102 (93%)	71 (75%)	24 (25%)	0	4
68	Bh	103/104 (99%)	77 (75%)	26 (25%)	0	4
69	Bi	80/81 (99%)	51 (64%)	29 (36%)	0	1
70	Bj	70/70 (100%)	53 (76%)	17 (24%)	1	5
71	Bk	67/68 (98%)	53 (79%)	14 (21%)	1	8
72	Bl	45/45 (100%)	34 (76%)	11 (24%)	1	5
73	Bm	47/116 (40%)	34 (72%)	13 (28%)	0	3
74	Bn	23/23 (100%)	16 (70%)	7 (30%)	0	2
75	Bo	90/90 (100%)	74 (82%)	16 (18%)	2	13
76	Bq	101/254 (40%)	91 (90%)	10 (10%)	8	31
83	CV	481/497 (97%)	450 (94%)	31 (6%)	19	50
All	All	9986/10821 (92%)	7877 (79%)	2109 (21%)	4	7

All (2109) 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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
76	Bq	64	ARG
76	Bq	89	THR
76	Bq	186	THR
83	CV	16	THR
83	CV	23	ASP
83	CV	69	VAL
83	CV	110	GLN
83	CV	126	VAL
83	CV	133	ASP
83	CV	235	LEU
83	CV	243	PHE
83	CV	251	LEU
83	CV	255	TYR
83	CV	267	MET
83	CV	294	VAL
83	CV	310	ASN
83	CV	322	LEU
83	CV	336	ASP
83	CV	387	ARG
83	CV	401	ARG
83	CV	415	PRO
83	CV	420	GLU
83	CV	422	LYS
83	CV	435	TYR
83	CV	451	GLU
83	CV	485	GLU
83	CV	495	TYR
83	CV	509	GLU

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Mol	Chain	Res	Type
83	CV	525	GLN
83	CV	538	LYS
83	CV	553	ASN
83	CV	575	ASP
83	CV	580	ILE
83	CV	582	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (86) 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
27	AS	136	GLN

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Mol	Chain	Res	Type
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
70	Bj	79	GLN

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Mol	Chain	Res	Type
72	Bl	4	GLN
72	Bl	19	GLN
76	Bq	39	HIS
76	Bq	56	ASN
76	Bq	103	ASN
83	CV	65	GLN
83	CV	95	ASN
83	CV	109	GLN
83	CV	153	GLN
83	CV	184	GLN
83	CV	310	ASN
83	CV	432	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
79	B2	1764/1800 (98%)	545 (30%)	86 (4%)
80	B5	3140/3396 (92%)	741 (23%)	131 (4%)
81	B7	120/121 (99%)	18 (15%)	0
82	B8	157/158 (99%)	32 (20%)	3 (1%)
84	CW	74/76 (97%)	23 (31%)	5 (6%)
85	CX	2/3 (66%)	0	0
All	All	5257/5554 (94%)	1359 (25%)	225 (4%)

All (1359) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
79	B2	2	A
79	B2	4	C
79	B2	8	U
79	B2	16	G
79	B2	20	G
79	B2	25	C
79	B2	26	A
79	B2	27	U
79	B2	34	G
79	B2	39	A
79	B2	41	A
79	B2	42	G
79	B2	45	U
79	B2	46	A

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Mol	Chain	Res	Type
79	B2	47	A
79	B2	50	C
79	B2	57	G
79	B2	60	U
79	B2	67	A
79	B2	68	A
79	B2	69	G
79	B2	72	A
79	B2	73	U
79	B2	74	U
79	B2	75	U
79	B2	76	A
79	B2	77	U
79	B2	78	A
79	B2	97	C
79	B2	100	A
79	B2	101	U
79	B2	104	A
79	B2	114	C
79	B2	126	A
79	B2	127	G
79	B2	131	C
79	B2	132	U
79	B2	133	U
79	B2	134	U
79	B2	135	A
79	B2	136	C
79	B2	137	U
79	B2	138	A
79	B2	139	C
79	B2	140	A
79	B2	141	U
79	B2	144	U
79	B2	145	A
79	B2	146	U
79	B2	153	G
79	B2	158	U
79	B2	159	U
79	B2	175	G
79	B2	178	U
79	B2	179	A
79	B2	185	U

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Mol	Chain	Res	Type
79	B2	186	C
79	B2	187	G
79	B2	188	A
79	B2	189	C
79	B2	190	C
79	B2	191	C
79	B2	192	U
79	B2	193	U
79	B2	194	U
79	B2	195	G
79	B2	196	G
79	B2	197	A
79	B2	198	A
79	B2	199	G
79	B2	200	A
79	B2	215	A
79	B2	218	A
79	B2	219	A
79	B2	223	U
79	B2	225	A
79	B2	226	A
79	B2	227	U
79	B2	228	G
79	B2	229	U
79	B2	233	C
79	B2	234	G
79	B2	235	G
79	B2	236	A
79	B2	238	U
79	B2	239	C
79	B2	240	U
79	B2	241	U
79	B2	242	U
79	B2	249	U
79	B2	250	C
79	B2	261	U
79	B2	262	U
79	B2	265	A
79	B2	266	A
79	B2	271	A
79	B2	272	U
79	B2	274	G

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Mol	Chain	Res	Type
79	B2	275	C
79	B2	276	C
79	B2	277	U
79	B2	278	U
79	B2	279	G
79	B2	280	U
79	B2	281	G
79	B2	288	A
79	B2	290	G
79	B2	299	A
79	B2	301	A
79	B2	306	U
79	B2	308	C
79	B2	309	C
79	B2	314	C
79	B2	316	A
79	B2	319	U
79	B2	320	U
79	B2	321	C
79	B2	322	G
79	B2	337	G
79	B2	338	C
79	B2	341	A
79	B2	348	U
79	B2	352	A
79	B2	359	A
79	B2	360	A
79	B2	361	C
79	B2	399	A
79	B2	400	A
79	B2	401	A
79	B2	402	C
79	B2	403	G
79	B2	404	G
79	B2	411	C
79	B2	416	A
79	B2	418	G
79	B2	423	G
79	B2	424	C
79	B2	425	A
79	B2	426	G
79	B2	428	A

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Mol	Chain	Res	Type
79	B2	434	G
79	B2	439	U
79	B2	444	C
79	B2	445	A
79	B2	446	A
79	B2	448	C
79	B2	467	G
79	B2	468	A
79	B2	470	A
79	B2	475	A
79	B2	477	A
79	B2	484	C
79	B2	485	A
79	B2	486	G
79	B2	487	G
79	B2	488	G
79	B2	493	U
79	B2	494	U
79	B2	495	C
79	B2	496	G
79	B2	497	G
79	B2	498	G
79	B2	499	U
79	B2	500	C
79	B2	502	U
79	B2	503	G
79	B2	504	U
79	B2	505	A
79	B2	506	A
79	B2	507	U
79	B2	508	U
79	B2	510	G
79	B2	511	A
79	B2	512	A
79	B2	513	U
79	B2	515	A
79	B2	516	G
79	B2	519	C
79	B2	525	A
79	B2	527	A
79	B2	532	U
79	B2	538	A

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Mol	Chain	Res	Type
79	B2	539	G
79	B2	540	G
79	B2	541	A
79	B2	542	A
79	B2	543	C
79	B2	544	A
79	B2	545	A
79	B2	548	G
79	B2	555	A
79	B2	556	A
79	B2	557	G
79	B2	558	U
79	B2	559	C
79	B2	565	C
79	B2	570	A
79	B2	575	C
79	B2	579	A
79	B2	580	A
79	B2	582	U
79	B2	583	C
79	B2	585	A
79	B2	594	A
79	B2	595	G
79	B2	597	G
79	B2	605	A
79	B2	607	G
79	B2	611	U
79	B2	619	A
79	B2	620	A
79	B2	622	A
79	B2	623	A
79	B2	624	G
79	B2	630	A
79	B2	639	U
79	B2	640	U
79	B2	650	U
79	B2	653	C
79	B2	655	G
79	B2	656	G
79	B2	657	U
79	B2	658	C
79	B2	677	G

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Mol	Chain	Res	Type
79	B2	679	U
79	B2	680	U
79	B2	684	A
79	B2	685	A
79	B2	686	C
79	B2	692	C
79	B2	694	U
79	B2	696	C
79	B2	697	C
79	B2	699	U
79	B2	700	C
79	B2	701	U
79	B2	702	G
79	B2	703	G
79	B2	704	C
79	B2	705	U
79	B2	706	A
79	B2	707	A
79	B2	709	C
79	B2	710	U
79	B2	712	G
79	B2	713	A
79	B2	714	G
79	B2	717	C
79	B2	718	U
79	B2	719	U
79	B2	720	G
79	B2	721	U
79	B2	722	G
79	B2	723	G
79	B2	725	U
79	B2	727	U
79	B2	728	U
79	B2	729	G
79	B2	730	G
79	B2	731	C
79	B2	732	G
79	B2	733	A
79	B2	734	A
79	B2	735	C
79	B2	736	C
79	B2	737	A

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Mol	Chain	Res	Type
79	B2	738	G
79	B2	742	U
79	B2	743	U
79	B2	745	U
79	B2	754	A
79	B2	755	A
79	B2	756	A
79	B2	758	U
79	B2	765	G
79	B2	766	U
79	B2	771	A
79	B2	774	A
79	B2	775	G
79	B2	778	G
79	B2	779	U
79	B2	780	A
79	B2	781	U
79	B2	782	U
79	B2	783	G
79	B2	784	C
79	B2	785	U
79	B2	787	G
79	B2	789	A
79	B2	793	A
79	B2	794	U
79	B2	795	U
79	B2	806	A
79	B2	811	A
79	B2	812	A
79	B2	813	U
79	B2	815	G
79	B2	816	G
79	B2	818	C
79	B2	819	G
79	B2	820	U
79	B2	821	U
79	B2	823	G
79	B2	824	G
79	B2	829	A
79	B2	830	U
79	B2	831	U
79	B2	832	U

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Mol	Chain	Res	Type
79	B2	833	U
79	B2	837	G
79	B2	838	G
79	B2	840	U
79	B2	846	G
79	B2	848	C
79	B2	849	C
79	B2	854	U
79	B2	862	A
79	B2	863	A
79	B2	864	U
79	B2	873	U
79	B2	876	G
79	B2	892	A
79	B2	896	U
79	B2	898	A
79	B2	912	U
79	B2	913	G
79	B2	914	G
79	B2	921	U
79	B2	928	U
79	B2	933	A
79	B2	935	U
79	B2	942	G
79	B2	944	A
79	B2	951	A
79	B2	959	U
79	B2	960	U
79	B2	961	U
79	B2	966	A
79	B2	968	U
79	B2	982	U
79	B2	988	A
79	B2	992	A
79	B2	993	A
79	B2	995	A
79	B2	997	G
79	B2	1003	A
79	B2	1004	U
79	B2	1005	A
79	B2	1020	A
79	B2	1021	C

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Mol	Chain	Res	Type
79	B2	1026	A
79	B2	1028	C
79	B2	1031	U
79	B2	1039	A
79	B2	1040	G
79	B2	1052	U
79	B2	1053	G
79	B2	1058	U
79	B2	1059	U
79	B2	1060	U
79	B2	1061	A
79	B2	1064	G
79	B2	1073	G
79	B2	1074	G
79	B2	1079	U
79	B2	1080	U
79	B2	1082	C
79	B2	1083	G
79	B2	1084	A
79	B2	1086	A
79	B2	1087	A
79	B2	1091	A
79	B2	1092	A
79	B2	1093	A
79	B2	1096	C
79	B2	1097	U
79	B2	1100	G
79	B2	1104	U
79	B2	1111	G
79	B2	1138	A
79	B2	1139	A
79	B2	1146	G
79	B2	1149	G
79	B2	1151	A
79	B2	1152	A
79	B2	1155	G
79	B2	1157	A
79	B2	1158	C
79	B2	1160	A
79	B2	1162	C
79	B2	1167	G
79	B2	1185	U

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Mol	Chain	Res	Type
79	B2	1188	G
79	B2	1191	U
79	B2	1194	A
79	B2	1196	A
79	B2	1197	C
79	B2	1199	G
79	B2	1200	G
79	B2	1202	A
79	B2	1207	C
79	B2	1208	A
79	B2	1217	A
79	B2	1218	G
79	B2	1219	A
79	B2	1221	A
79	B2	1226	A
79	B2	1227	A
79	B2	1228	G
79	B2	1229	G
79	B2	1235	C
79	B2	1243	G
79	B2	1244	A
79	B2	1245	G
79	B2	1250	U
79	B2	1251	U
79	B2	1257	U
79	B2	1258	U
79	B2	1260	U
79	B2	1269	U
79	B2	1286	U
79	B2	1301	U
79	B2	1314	U
79	B2	1315	U
79	B2	1321	A
79	B2	1329	A
79	B2	1337	A
79	B2	1339	C
79	B2	1340	U
79	B2	1341	A
79	B2	1344	A
79	B2	1345	A
79	B2	1349	G
79	B2	1354	G

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Mol	Chain	Res	Type
79	B2	1361	U
79	B2	1363	U
79	B2	1364	G
79	B2	1370	U
79	B2	1371	A
79	B2	1372	U
79	B2	1379	C
79	B2	1382	A
79	B2	1383	G
79	B2	1388	A
79	B2	1390	U
79	B2	1398	U
79	B2	1399	C
79	B2	1400	A
79	B2	1412	G
79	B2	1413	U
79	B2	1414	U
79	B2	1415	U
79	B2	1420	C
79	B2	1421	A
79	B2	1427	A
79	B2	1428	G
79	B2	1429	G
79	B2	1431	C
79	B2	1445	G
79	B2	1446	A
79	B2	1448	G
79	B2	1454	G
79	B2	1457	C
79	B2	1459	C
79	B2	1461	C
79	B2	1462	G
79	B2	1471	A
79	B2	1473	U
79	B2	1474	G
79	B2	1475	A
79	B2	1478	G
79	B2	1482	C
79	B2	1486	G
79	B2	1488	G
79	B2	1489	U
79	B2	1490	C

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Mol	Chain	Res	Type
79	B2	1491	U
79	B2	1492	A
79	B2	1493	A
79	B2	1499	G
79	B2	1500	C
79	B2	1506	G
79	B2	1514	U
79	B2	1516	A
79	B2	1518	C
79	B2	1521	G
79	B2	1523	G
79	B2	1524	A
79	B2	1535	U
79	B2	1536	G
79	B2	1537	C
79	B2	1538	U
79	B2	1539	G
79	B2	1540	G
79	B2	1557	U
79	B2	1559	A
79	B2	1569	A
79	B2	1573	A
79	B2	1574	G
79	B2	1575	G
79	B2	1584	G
79	B2	1590	G
79	B2	1601	G
79	B2	1616	G
79	B2	1619	C
79	B2	1624	C
79	B2	1625	C
79	B2	1631	A
79	B2	1635	A
79	B2	1649	G
79	B2	1657	U
79	B2	1658	G
79	B2	1663	G
79	B2	1680	G
79	B2	1682	U
79	B2	1683	C
79	B2	1684	U
79	B2	1685	G

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Mol	Chain	Res	Type
79	B2	1686	C
79	B2	1687	U
79	B2	1693	A
79	B2	1712	A
79	B2	1713	G
79	B2	1716	C
79	B2	1717	G
79	B2	1727	G
79	B2	1729	C
79	B2	1731	A
79	B2	1759	C
79	B2	1760	G
79	B2	1761	U
79	B2	1762	A
79	B2	1766	A
79	B2	1768	G
79	B2	1769	U
79	B2	1770	U
79	B2	1780	G
79	B2	1782	A
79	B2	1783	C
79	B2	1789	G
79	B2	1792	G
79	B2	1793	G
79	B2	1794	A
79	B2	1795	U
79	B2	1796	C
80	B5	14	U
80	B5	15	C
80	B5	16	A
80	B5	26	A
80	B5	38	U
80	B5	40	A
80	B5	43	A
80	B5	49	A
80	B5	60	A
80	B5	65	A
80	B5	66	A
80	B5	74	G
80	B5	76	G
80	B5	77	A
80	B5	92	G

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Mol	Chain	Res	Type
80	B5	93	C
80	B5	96	G
80	B5	99	A
80	B5	109	A
80	B5	110	G
80	B5	111	C
80	B5	116	A
80	B5	121	A
80	B5	122	A
80	B5	133	U
80	B5	134	U
80	B5	135	C
80	B5	136	G
80	B5	146	U
80	B5	150	A
80	B5	152	U
80	B5	156	G
80	B5	157	A
80	B5	160	G
80	B5	166	C
80	B5	170	G
80	B5	171	G
80	B5	174	C
80	B5	178	U
80	B5	180	C
80	B5	182	U
80	B5	183	G
80	B5	184	U
80	B5	187	A
80	B5	190	U
80	B5	191	U
80	B5	200	C
80	B5	201	A
80	B5	210	U
80	B5	218	G
80	B5	219	A
80	B5	221	A
80	B5	235	A
80	B5	236	G
80	B5	238	A
80	B5	239	G
80	B5	240	U

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Mol	Chain	Res	Type
80	B5	242	C
80	B5	244	G
80	B5	248	U
80	B5	249	U
80	B5	250	U
80	B5	251	G
80	B5	252	U
80	B5	253	A
80	B5	254	A
80	B5	258	G
80	B5	259	C
80	B5	269	G
80	B5	283	G
80	B5	284	A
80	B5	286	U
80	B5	294	U
80	B5	295	A
80	B5	305	U
80	B5	322	U
80	B5	323	A
80	B5	329	U
80	B5	334	A
80	B5	339	C
80	B5	349	A
80	B5	350	C
80	B5	351	A
80	B5	352	A
80	B5	370	U
80	B5	376	G
80	B5	390	G
80	B5	395	A
80	B5	398	A
80	B5	399	A
80	B5	401	U
80	B5	402	A
80	B5	403	C
80	B5	421	G
80	B5	422	A
80	B5	436	A
80	B5	437	G
80	B5	438	A
80	B5	439	C

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Mol	Chain	Res	Type
80	B5	440	A
80	B5	441	U
80	B5	442	G
80	B5	443	G
80	B5	492	U
80	B5	493	G
80	B5	495	G
80	B5	520	U
80	B5	521	A
80	B5	531	G
80	B5	535	G
80	B5	538	G
80	B5	546	C
80	B5	547	G
80	B5	548	G
80	B5	551	A
80	B5	553	U
80	B5	555	U
80	B5	557	A
80	B5	559	A
80	B5	578	A
80	B5	579	G
80	B5	592	A
80	B5	594	U
80	B5	595	G
80	B5	600	G
80	B5	604	G
80	B5	609	G
80	B5	610	G
80	B5	611	A
80	B5	612	U
80	B5	619	A
80	B5	620	U
80	B5	621	A
80	B5	630	A
80	B5	636	C
80	B5	649	A
80	B5	653	A
80	B5	656	A
80	B5	660	A
80	B5	675	C
80	B5	677	A

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Mol	Chain	Res	Type
80	B5	681	U
80	B5	705	A
80	B5	708	G
80	B5	712	G
80	B5	715	A
80	B5	716	A
80	B5	719	U
80	B5	720	A
80	B5	725	G
80	B5	726	G
80	B5	735	A
80	B5	736	A
80	B5	750	G
80	B5	758	C
80	B5	766	U
80	B5	767	U
80	B5	768	C
80	B5	776	U
80	B5	777	U
80	B5	780	A
80	B5	781	G
80	B5	785	G
80	B5	786	A
80	B5	806	A
80	B5	809	G
80	B5	817	A
80	B5	830	A
80	B5	846	A
80	B5	851	C
80	B5	861	C
80	B5	862	U
80	B5	871	U
80	B5	874	U
80	B5	879	U
80	B5	891	G
80	B5	893	C
80	B5	896	A
80	B5	897	U
80	B5	907	G
80	B5	908	G
80	B5	914	A
80	B5	916	G

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Mol	Chain	Res	Type
80	B5	917	A
80	B5	921	A
80	B5	923	C
80	B5	924	G
80	B5	937	G
80	B5	944	C
80	B5	946	U
80	B5	947	G
80	B5	958	C
80	B5	959	C
80	B5	960	U
80	B5	974	G
80	B5	979	U
80	B5	980	A
80	B5	981	U
80	B5	983	A
80	B5	994	G
80	B5	1000	C
80	B5	1001	G
80	B5	1002	A
80	B5	1003	A
80	B5	1010	G
80	B5	1014	U
80	B5	1015	U
80	B5	1016	C
80	B5	1017	C
80	B5	1018	G
80	B5	1020	G
80	B5	1021	G
80	B5	1023	C
80	B5	1024	G
80	B5	1025	A
80	B5	1026	A
80	B5	1027	A
80	B5	1028	U
80	B5	1029	G
80	B5	1032	C
80	B5	1034	U
80	B5	1035	G
80	B5	1047	A
80	B5	1049	C
80	B5	1057	A

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Mol	Chain	Res	Type
80	B5	1064	A
80	B5	1065	A
80	B5	1071	U
80	B5	1072	G
80	B5	1081	U
80	B5	1082	U
80	B5	1085	A
80	B5	1093	A
80	B5	1094	U
80	B5	1095	U
80	B5	1096	U
80	B5	1097	G
80	B5	1098	A
80	B5	1103	A
80	B5	1104	G
80	B5	1117	G
80	B5	1131	G
80	B5	1153	A
80	B5	1159	A
80	B5	1160	C
80	B5	1174	G
80	B5	1178	G
80	B5	1179	A
80	B5	1180	A
80	B5	1181	U
80	B5	1182	A
80	B5	1191	U
80	B5	1192	C
80	B5	1193	A
80	B5	1201	C
80	B5	1209	G
80	B5	1213	G
80	B5	1229	G
80	B5	1230	G
80	B5	1231	A
80	B5	1232	C
80	B5	1233	G
80	B5	1236	G
80	B5	1237	G
80	B5	1239	C
80	B5	1240	A
80	B5	1241	U

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Mol	Chain	Res	Type
80	B5	1242	G
80	B5	1244	A
80	B5	1245	A
80	B5	1246	G
80	B5	1247	U
80	B5	1248	C
80	B5	1258	U
80	B5	1259	A
80	B5	1261	G
80	B5	1262	G
80	B5	1263	A
80	B5	1264	G
80	B5	1265	U
80	B5	1266	G
80	B5	1271	A
80	B5	1272	C
80	B5	1278	A
80	B5	1279	C
80	B5	1280	C
80	B5	1282	G
80	B5	1283	C
80	B5	1284	C
80	B5	1285	G
80	B5	1294	A
80	B5	1307	G
80	B5	1308	A
80	B5	1309	U
80	B5	1312	C
80	B5	1330	A
80	B5	1332	A
80	B5	1348	U
80	B5	1349	G
80	B5	1350	A
80	B5	1351	U
80	B5	1352	A
80	B5	1353	U
80	B5	1354	G
80	B5	1355	A
80	B5	1356	U
80	B5	1357	G
80	B5	1366	A
80	B5	1385	C

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Mol	Chain	Res	Type
80	B5	1386	A
80	B5	1387	G
80	B5	1399	A
80	B5	1400	G
80	B5	1403	C
80	B5	1419	A
80	B5	1422	G
80	B5	1428	A
80	B5	1434	G
80	B5	1437	C
80	B5	1440	G
80	B5	1446	A
80	B5	1450	G
80	B5	1460	A
80	B5	1481	A
80	B5	1482	A
80	B5	1490	A
80	B5	1495	U
80	B5	1502	C
80	B5	1503	A
80	B5	1508	C
80	B5	1527	C
80	B5	1541	G
80	B5	1542	G
80	B5	1549	U
80	B5	1554	U
80	B5	1555	U
80	B5	1556	C
80	B5	1557	A
80	B5	1560	G
80	B5	1561	G
80	B5	1562	C
80	B5	1563	C
80	B5	1565	G
80	B5	1566	A
80	B5	1567	U
80	B5	1568	U
80	B5	1569	U
80	B5	1570	U
80	B5	1571	A
80	B5	1572	U
80	B5	1574	C

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Mol	Chain	Res	Type
80	B5	1575	A
80	B5	1576	G
80	B5	1577	G
80	B5	1578	C
80	B5	1580	A
80	B5	1581	C
80	B5	1582	C
80	B5	1583	A
80	B5	1587	A
80	B5	1589	A
80	B5	1593	A
80	B5	1605	A
80	B5	1607	U
80	B5	1608	C
80	B5	1620	U
80	B5	1629	U
80	B5	1633	C
80	B5	1635	G
80	B5	1639	C
80	B5	1641	U
80	B5	1643	A
80	B5	1644	C
80	B5	1645	U
80	B5	1655	G
80	B5	1657	C
80	B5	1680	G
80	B5	1683	A
80	B5	1716	U
80	B5	1717	U
80	B5	1718	G
80	B5	1724	U
80	B5	1725	C
80	B5	1736	G
80	B5	1750	A
80	B5	1751	G
80	B5	1754	G
80	B5	1758	G
80	B5	1760	A
80	B5	1762	C
80	B5	1764	U
80	B5	1765	U
80	B5	1766	G

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Mol	Chain	Res	Type
80	B5	1767	C
80	B5	1770	G
80	B5	1778	G
80	B5	1780	G
80	B5	1783	U
80	B5	1797	A
80	B5	1810	A
80	B5	1812	G
80	B5	1814	A
80	B5	1815	U
80	B5	1816	A
80	B5	1817	G
80	B5	1818	U
80	B5	1820	U
80	B5	1821	U
80	B5	1835	A
80	B5	1841	A
80	B5	1842	A
80	B5	1846	C
80	B5	1849	C
80	B5	1850	A
80	B5	1855	U
80	B5	1871	U
80	B5	1876	U
80	B5	1878	G
80	B5	1879	A
80	B5	1880	U
80	B5	1905	G
80	B5	1906	G
80	B5	1909	A
80	B5	1918	C
80	B5	1927	G
80	B5	1940	G
80	B5	1953	G
80	B5	2100	A
80	B5	2101	C
80	B5	2102	U
80	B5	2112	U
80	B5	2113	A
80	B5	2114	C
80	B5	2121	G
80	B5	2122	G

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Mol	Chain	Res	Type
80	B5	2128	C
80	B5	2131	A
80	B5	2134	G
80	B5	2139	A
80	B5	2144	A
80	B5	2158	A
80	B5	2169	G
80	B5	2170	U
80	B5	2171	G
80	B5	2192	C
80	B5	2201	G
80	B5	2205	U
80	B5	2210	G
80	B5	2213	A
80	B5	2222	A
80	B5	2223	A
80	B5	2228	A
80	B5	2229	A
80	B5	2244	A
80	B5	2250	G
80	B5	2253	G
80	B5	2255	A
80	B5	2256	A
80	B5	2257	C
80	B5	2258	U
80	B5	2264	U
80	B5	2270	A
80	B5	2273	G
80	B5	2276	G
80	B5	2278	C
80	B5	2279	A
80	B5	2288	G
80	B5	2290	C
80	B5	2294	U
80	B5	2298	U
80	B5	2307	G
80	B5	2310	U
80	B5	2313	A
80	B5	2315	G
80	B5	2324	A
80	B5	2329	C
80	B5	2334	U

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Mol	Chain	Res	Type
80	B5	2335	G
80	B5	2336	U
80	B5	2373	A
80	B5	2374	C
80	B5	2375	G
80	B5	2377	G
80	B5	2385	G
80	B5	2388	U
80	B5	2393	G
80	B5	2394	G
80	B5	2396	G
80	B5	2397	A
80	B5	2398	A
80	B5	2400	G
80	B5	2401	A
80	B5	2402	A
80	B5	2403	G
80	B5	2404	A
80	B5	2405	C
80	B5	2406	C
80	B5	2411	U
80	B5	2418	G
80	B5	2435	G
80	B5	2436	U
80	B5	2437	G
80	B5	2438	A
80	B5	2439	A
80	B5	2440	G
80	B5	2441	A
80	B5	2443	A
80	B5	2504	U
80	B5	2505	U
80	B5	2506	U
80	B5	2507	C
80	B5	2508	U
80	B5	2510	U
80	B5	2511	A
80	B5	2512	C
80	B5	2513	U
80	B5	2514	U
80	B5	2515	A
80	B5	2518	C

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Mol	Chain	Res	Type
80	B5	2523	A
80	B5	2524	A
80	B5	2526	C
80	B5	2530	G
80	B5	2531	C
80	B5	2532	U
80	B5	2534	G
80	B5	2538	U
80	B5	2539	C
80	B5	2540	A
80	B5	2543	U
80	B5	2544	U
80	B5	2549	G
80	B5	2552	C
80	B5	2555	G
80	B5	2562	A
80	B5	2567	C
80	B5	2568	C
80	B5	2569	A
80	B5	2570	U
80	B5	2571	U
80	B5	2572	C
80	B5	2573	G
80	B5	2574	G
80	B5	2584	G
80	B5	2585	G
80	B5	2589	G
80	B5	2590	A
80	B5	2591	A
80	B5	2593	A
80	B5	2594	C
80	B5	2598	G
80	B5	2599	U
80	B5	2606	G
80	B5	2607	G
80	B5	2610	G
80	B5	2614	G
80	B5	2615	G
80	B5	2622	C
80	B5	2637	A
80	B5	2639	G
80	B5	2652	U

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Mol	Chain	Res	Type
80	B5	2656	A
80	B5	2662	G
80	B5	2663	G
80	B5	2667	A
80	B5	2674	A
80	B5	2677	G
80	B5	2678	A
80	B5	2681	U
80	B5	2683	U
80	B5	2689	A
80	B5	2691	A
80	B5	2694	A
80	B5	2696	A
80	B5	2714	G
80	B5	2723	U
80	B5	2728	G
80	B5	2729	U
80	B5	2752	U
80	B5	2753	G
80	B5	2762	A
80	B5	2771	U
80	B5	2772	C
80	B5	2773	C
80	B5	2776	C
80	B5	2777	G
80	B5	2778	G
80	B5	2779	A
80	B5	2796	G
80	B5	2799	A
80	B5	2800	G
80	B5	2801	A
80	B5	2810	C
80	B5	2817	A
80	B5	2818	U
80	B5	2819	A
80	B5	2822	U
80	B5	2829	U
80	B5	2839	G
80	B5	2844	C
80	B5	2845	A
80	B5	2853	A
80	B5	2871	G

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Mol	Chain	Res	Type
80	B5	2872	A
80	B5	2873	U
80	B5	2875	U
80	B5	2887	A
80	B5	2889	C
80	B5	2896	A
80	B5	2897	A
80	B5	2898	G
80	B5	2899	C
80	B5	2904	U
80	B5	2910	A
80	B5	2923	U
80	B5	2928	C
80	B5	2935	U
80	B5	2936	A
80	B5	2941	A
80	B5	2942	C
80	B5	2945	G
80	B5	2947	G
80	B5	2954	U
80	B5	2957	G
80	B5	2970	C
80	B5	2971	A
80	B5	2972	G
80	B5	2979	U
80	B5	2983	C
80	B5	2987	A
80	B5	2990	G
80	B5	2996	U
80	B5	2997	G
80	B5	3012	A
80	B5	3028	G
80	B5	3050	U
80	B5	3056	U
80	B5	3057	U
80	B5	3059	G
80	B5	3078	U
80	B5	3079	U
80	B5	3080	G
80	B5	3086	A
80	B5	3087	A
80	B5	3092	C

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Mol	Chain	Res	Type
80	B5	3130	A
80	B5	3131	U
80	B5	3139	A
80	B5	3142	A
80	B5	3143	C
80	B5	3148	U
80	B5	3153	U
80	B5	3154	C
80	B5	3155	U
80	B5	3156	U
80	B5	3157	U
80	B5	3158	G
80	B5	3159	C
80	B5	3164	C
80	B5	3165	A
80	B5	3166	C
80	B5	3168	A
80	B5	3171	U
80	B5	3172	A
80	B5	3173	G
80	B5	3174	A
80	B5	3175	U
80	B5	3176	G
80	B5	3177	G
80	B5	3179	U
80	B5	3180	A
80	B5	3181	C
80	B5	3187	A
80	B5	3195	U
80	B5	3196	U
80	B5	3207	U
80	B5	3217	C
80	B5	3218	A
80	B5	3219	G
80	B5	3222	U
80	B5	3223	A
80	B5	3224	G
80	B5	3227	A
80	B5	3229	G
80	B5	3238	G
80	B5	3245	A
80	B5	3246	G

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Mol	Chain	Res	Type
80	B5	3247	G
80	B5	3251	U
80	B5	3253	G
80	B5	3259	U
80	B5	3260	G
80	B5	3269	U
80	B5	3270	U
80	B5	3273	A
80	B5	3275	U
80	B5	3276	G
80	B5	3277	U
80	B5	3279	A
80	B5	3280	U
80	B5	3282	U
80	B5	3284	G
80	B5	3285	C
80	B5	3286	G
80	B5	3288	G
80	B5	3289	G
80	B5	3290	G
80	B5	3292	A
80	B5	3294	A
80	B5	3304	U
80	B5	3307	A
80	B5	3313	U
80	B5	3316	A
80	B5	3317	U
80	B5	3318	G
80	B5	3319	U
80	B5	3320	A
80	B5	3330	A
80	B5	3333	G
80	B5	3335	A
80	B5	3336	A
80	B5	3341	U
80	B5	3342	A
80	B5	3343	G
80	B5	3345	G
80	B5	3349	C
80	B5	3351	U
80	B5	3352	U
80	B5	3354	U

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Mol	Chain	Res	Type
80	B5	3355	U
80	B5	3356	G
80	B5	3357	U
80	B5	3358	U
80	B5	3369	G
80	B5	3378	C
80	B5	3382	U
80	B5	3383	G
80	B5	3389	U
80	B5	3390	G
80	B5	3393	U
80	B5	3396	U
81	B7	7	G
81	B7	22	A
81	B7	27	A
81	B7	33	U
81	B7	38	U
81	B7	42	A
81	B7	54	U
81	B7	61	G
81	B7	65	G
81	B7	66	A
81	B7	73	C
81	B7	74	C
81	B7	93	C
81	B7	101	G
81	B7	102	A
81	B7	103	A
81	B7	104	A
81	B7	112	G
82	B8	21	C
82	B8	34	U
82	B8	35	C
82	B8	48	A
82	B8	52	A
82	B8	53	A
82	B8	59	A
82	B8	62	C
82	B8	63	G
82	B8	79	A
82	B8	80	A
82	B8	81	U

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Mol	Chain	Res	Type
82	B8	83	C
82	B8	84	C
82	B8	86	U
82	B8	87	G
82	B8	90	U
82	B8	95	G
82	B8	104	A
82	B8	105	A
82	B8	106	C
82	B8	111	A
82	B8	113	U
82	B8	122	U
82	B8	125	U
82	B8	126	A
82	B8	127	U
82	B8	138	A
82	B8	152	G
82	B8	156	U
82	B8	157	U
82	B8	158	U
84	CW	2	C
84	CW	3	C
84	CW	8	U
84	CW	17	C
84	CW	18	G
84	CW	19	G
84	CW	20	U
84	CW	21	A
84	CW	22	G
84	CW	37	A
84	CW	42	C
84	CW	46	G
84	CW	48	C
84	CW	52	G
84	CW	57	G
84	CW	60	U
84	CW	61	C
84	CW	68	C
84	CW	72	C
84	CW	73	A
84	CW	74	C
84	CW	75	C

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Mol	Chain	Res	Type
84	CW	76	A

All (225) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
79	B2	2	A
79	B2	25	C
79	B2	45	U
79	B2	68	A
79	B2	73	U
79	B2	74	U
79	B2	76	A
79	B2	103	A
79	B2	114	C
79	B2	126	A
79	B2	130	C
79	B2	131	C
79	B2	132	U
79	B2	133	U
79	B2	136	C
79	B2	139	C
79	B2	144	U
79	B2	158	U
79	B2	187	G
79	B2	217	A
79	B2	218	A
79	B2	232	U
79	B2	239	C
79	B2	240	U
79	B2	278	U
79	B2	280	U
79	B2	320	U
79	B2	400	A
79	B2	417	A
79	B2	484	C
79	B2	495	C
79	B2	497	G
79	B2	498	G
79	B2	499	U
79	B2	501	U
79	B2	503	G
79	B2	507	U

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Mol	Chain	Res	Type
79	B2	512	A
79	B2	542	A
79	B2	543	C
79	B2	555	A
79	B2	558	U
79	B2	582	U
79	B2	685	A
79	B2	704	C
79	B2	720	G
79	B2	721	U
79	B2	734	A
79	B2	755	A
79	B2	781	U
79	B2	782	U
79	B2	794	U
79	B2	811	A
79	B2	815	G
79	B2	819	G
79	B2	823	G
79	B2	829	A
79	B2	913	G
79	B2	1051	G
79	B2	1058	U
79	B2	1081	A
79	B2	1137	A
79	B2	1157	A
79	B2	1187	U
79	B2	1195	C
79	B2	1196	A
79	B2	1207	C
79	B2	1226	A
79	B2	1234	A
79	B2	1244	A
79	B2	1250	U
79	B2	1339	C
79	B2	1344	A
79	B2	1370	U
79	B2	1428	G
79	B2	1481	C
79	B2	1489	U
79	B2	1490	C
79	B2	1521	G

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Mol	Chain	Res	Type
79	B2	1568	C
79	B2	1572	G
79	B2	1573	A
79	B2	1615	C
79	B2	1657	U
79	B2	1711	C
79	B2	1761	U
80	B5	43	A
80	B5	65	A
80	B5	93	C
80	B5	151	A
80	B5	169	U
80	B5	183	G
80	B5	217	U
80	B5	238	A
80	B5	282	G
80	B5	397	A
80	B5	436	A
80	B5	438	A
80	B5	439	C
80	B5	545	U
80	B5	546	C
80	B5	588	G
80	B5	611	A
80	B5	619	A
80	B5	647	A
80	B5	705	A
80	B5	715	A
80	B5	719	U
80	B5	726	G
80	B5	735	A
80	B5	765	C
80	B5	786	A
80	B5	816	A
80	B5	873	C
80	B5	896	A
80	B5	908	G
80	B5	916	G
80	B5	937	G
80	B5	979	U
80	B5	993	G
80	B5	1027	A

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Mol	Chain	Res	Type
80	B5	1033	U
80	B5	1064	A
80	B5	1081	U
80	B5	1085	A
80	B5	1094	U
80	B5	1152	G
80	B5	1181	U
80	B5	1192	C
80	B5	1230	G
80	B5	1231	A
80	B5	1236	G
80	B5	1238	C
80	B5	1241	U
80	B5	1256	G
80	B5	1258	U
80	B5	1284	C
80	B5	1307	G
80	B5	1317	A
80	B5	1329	U
80	B5	1331	U
80	B5	1352	A
80	B5	1355	A
80	B5	1434	G
80	B5	1481	A
80	B5	1507	G
80	B5	1514	G
80	B5	1554	U
80	B5	1560	G
80	B5	1568	U
80	B5	1574	C
80	B5	1580	A
80	B5	1589	A
80	B5	1607	U
80	B5	1716	U
80	B5	1724	U
80	B5	1815	U
80	B5	1816	A
80	B5	1817	G
80	B5	1819	U
80	B5	1841	A
80	B5	1842	A
80	B5	1849	C

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Mol	Chain	Res	Type
80	B5	1878	G
80	B5	1879	A
80	B5	2101	C
80	B5	2112	U
80	B5	2116	G
80	B5	2204	C
80	B5	2209	U
80	B5	2249	G
80	B5	2255	A
80	B5	2257	C
80	B5	2372	A
80	B5	2374	C
80	B5	2440	G
80	B5	2507	C
80	B5	2513	U
80	B5	2531	C
80	B5	2537	U
80	B5	2539	C
80	B5	2583	C
80	B5	2585	G
80	B5	2593	A
80	B5	2662	G
80	B5	2682	C
80	B5	2689	A
80	B5	2714	G
80	B5	2728	G
80	B5	2752	U
80	B5	2772	C
80	B5	2777	G
80	B5	2801	A
80	B5	2817	A
80	B5	2818	U
80	B5	2887	A
80	B5	2896	A
80	B5	2970	C
80	B5	2971	A
80	B5	2996	U
80	B5	3056	U
80	B5	3078	U
80	B5	3154	C
80	B5	3155	U
80	B5	3167	A

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Mol	Chain	Res	Type
80	B5	3195	U
80	B5	3218	A
80	B5	3228	C
80	B5	3259	U
80	B5	3269	U
80	B5	3275	U
80	B5	3289	G
80	B5	3317	U
80	B5	3330	A
80	B5	3340	G
80	B5	3341	U
80	B5	3357	U
82	B8	111	A
82	B8	126	A
82	B8	156	U
84	CW	17	C
84	CW	20	U
84	CW	68	C
84	CW	69	G
84	CW	73	A

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

9 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
83	HSO	CV	105	83	6,10,10	2.34	2 (33%)	4,12,12	1.87	2 (50%)
83	HSO	CV	13	83	6,10,10	2.17	1 (16%)	4,12,12	1.52	1 (25%)
83	HSO	CV	229	83	6,10,10	2.02	1 (16%)	4,12,12	1.75	1 (25%)
83	HSO	CV	295	83	6,10,10	2.11	1 (16%)	4,12,12	1.50	1 (25%)
83	HSO	CV	296	83	6,10,10	2.33	2 (33%)	4,12,12	2.27	2 (50%)
83	HSO	CV	541	83	6,10,10	2.71	2 (33%)	4,12,12	1.67	2 (50%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
83	HSO	CV	554	83	6,10,10	2.48	2 (33%)	4,12,12	1.52	1 (25%)
83	HSO	CV	556	83	6,10,10	2.38	2 (33%)	4,12,12	2.06	2 (50%)
83	HSO	CV	80	83	6,10,10	2.39	2 (33%)	4,12,12	1.38	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
83	HSO	CV	105	83	-	3/6/6/6	0/1/1/1
83	HSO	CV	13	83	-	5/6/6/6	0/1/1/1
83	HSO	CV	229	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	295	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	296	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	541	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	554	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	556	83	-	2/6/6/6	0/1/1/1
83	HSO	CV	80	83	-	4/6/6/6	0/1/1/1

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	CV	296	HSO	O-C	-4.66	1.22	1.42
83	CV	556	HSO	O-C	-4.66	1.22	1.42
83	CV	541	HSO	O-C	-4.65	1.22	1.42
83	CV	295	HSO	O-C	-4.64	1.22	1.42
83	CV	13	HSO	O-C	-4.61	1.23	1.42
83	CV	80	HSO	O-C	-4.60	1.23	1.42
83	CV	105	HSO	O-C	-4.60	1.23	1.42
83	CV	554	HSO	O-C	-4.59	1.23	1.42
83	CV	229	HSO	O-C	-4.56	1.23	1.42
83	CV	541	HSO	C-CA	-4.27	1.46	1.52
83	CV	554	HSO	C-CA	-3.40	1.47	1.52
83	CV	105	HSO	C-CA	-3.12	1.47	1.52
83	CV	556	HSO	C-CA	-3.08	1.47	1.52
83	CV	296	HSO	C-CA	-2.96	1.48	1.52
83	CV	80	HSO	C-CA	-2.65	1.48	1.52

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	CV	296	HSO	CB-CA-C	-3.68	105.49	112.25
83	CV	556	HSO	CB-CA-C	-2.82	107.07	112.25
83	CV	556	HSO	O-C-CA	2.80	121.97	111.55
83	CV	229	HSO	O-C-CA	2.78	121.91	111.55
83	CV	105	HSO	CB-CA-C	-2.62	107.44	112.25
83	CV	13	HSO	O-C-CA	2.58	121.14	111.55
83	CV	296	HSO	O-C-CA	2.53	120.95	111.55
83	CV	105	HSO	O-C-CA	2.37	120.36	111.55
83	CV	541	HSO	CB-CA-C	-2.26	108.09	112.25
83	CV	541	HSO	O-C-CA	2.24	119.89	111.55
83	CV	295	HSO	O-C-CA	2.15	119.56	111.55
83	CV	554	HSO	O-C-CA	2.15	119.54	111.55
83	CV	80	HSO	O-C-CA	2.06	119.21	111.55

There are no chirality outliers.

All (24) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
83	CV	105	HSO	O-C-CA-N
83	CV	105	HSO	O-C-CA-CB
83	CV	105	HSO	CA-CB-CG-ND1
83	CV	80	HSO	N-CA-CB-CG
83	CV	80	HSO	C-CA-CB-CG
83	CV	295	HSO	O-C-CA-CB
83	CV	229	HSO	O-C-CA-N
83	CV	229	HSO	O-C-CA-CB
83	CV	554	HSO	O-C-CA-N
83	CV	554	HSO	CA-CB-CG-ND1
83	CV	541	HSO	O-C-CA-CB
83	CV	296	HSO	O-C-CA-N
83	CV	556	HSO	O-C-CA-N
83	CV	556	HSO	O-C-CA-CB
83	CV	13	HSO	N-CA-CB-CG
83	CV	13	HSO	O-C-CA-CB
83	CV	13	HSO	CA-CB-CG-ND1
83	CV	13	HSO	CA-CB-CG-CD2
83	CV	80	HSO	O-C-CA-CB
83	CV	296	HSO	O-C-CA-CB
83	CV	80	HSO	O-C-CA-N
83	CV	295	HSO	O-C-CA-N
83	CV	541	HSO	O-C-CA-N
83	CV	13	HSO	O-C-CA-N

There are no ring outliers.

5 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
83	CV	13	HSO	1	0
83	CV	541	HSO	1	0
83	CV	554	HSO	1	0
83	CV	556	HSO	1	0
83	CV	80	HSO	3	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 443 ligands modelled in this entry, 232 are monoatomic - leaving 211 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	$\# Z  > 2$
88	OHX	A3	102	-	0,6,6	0.00	-	-		
88	OHX	A6	401	-	0,6,6	0.00	-	-		
88	OHX	AC	301	-	0,6,6	0.00	-	-		
88	OHX	AI	301	-	0,6,6	0.00	-	-		
88	OHX	AI	302	-	0,6,6	0.00	-	-		
88	OHX	AL	201	-	0,6,6	0.00	-	-		
88	OHX	AN	201	-	0,6,6	0.00	-	-		
88	OHX	AP	201	-	0,6,6	0.00	-	-		
88	OHX	B2	1901	-	0,6,6	0.00	-	-		
88	OHX	B2	1902	-	0,6,6	0.00	-	-		
88	OHX	B2	1903	-	0,6,6	0.00	-	-		
88	OHX	B2	1904	-	0,6,6	0.00	-	-		
88	OHX	B2	1905	-	0,6,6	0.00	-	-		
88	OHX	B2	1906	87	0,6,6	0.00	-	-		
88	OHX	B2	1907	-	0,6,6	0.00	-	-		
88	OHX	B2	1908	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
88	OHX	B2	1909	88	0,6,6	0.00	-	-		
88	OHX	B2	1910	-	0,6,6	0.00	-	-		
88	OHX	B2	1911	-	0,6,6	0.00	-	-		
88	OHX	B2	1912	-	0,6,6	0.00	-	-		
88	OHX	B2	1913	-	0,6,6	0.00	-	-		
88	OHX	B2	1914	-	0,6,6	0.00	-	-		
88	OHX	B2	1915	-	0,6,6	0.00	-	-		
88	OHX	B2	1916	-	0,6,6	0.00	-	-		
88	OHX	B2	1917	-	0,6,6	0.00	-	-		
88	OHX	B2	1918	88	0,6,6	0.00	-	-		
88	OHX	B2	1919	-	0,6,6	0.00	-	-		
88	OHX	B2	1920	-	0,6,6	0.00	-	-		
88	OHX	B2	1921	-	0,6,6	0.00	-	-		
88	OHX	B2	1922	-	0,6,6	0.00	-	-		
88	OHX	B2	1923	-	0,6,6	0.00	-	-		
88	OHX	B2	1924	-	0,6,6	0.00	-	-		
88	OHX	B2	1925	-	0,6,6	0.00	-	-		
88	OHX	B2	1926	-	0,6,6	0.00	-	-		
88	OHX	B2	1927	-	0,6,6	0.00	-	-		
88	OHX	B2	1928	-	0,6,6	0.00	-	-		
88	OHX	B2	1929	-	0,6,6	0.00	-	-		
88	OHX	B2	1930	-	0,6,6	0.00	-	-		
88	OHX	B2	1931	-	0,6,6	0.00	-	-		
88	OHX	B2	1932	-	0,6,6	0.00	-	-		
88	OHX	B2	1933	-	0,6,6	0.00	-	-		
88	OHX	B2	1934	-	0,6,6	0.00	-	-		
88	OHX	B2	1935	-	0,6,6	0.00	-	-		
88	OHX	B2	1936	-	0,6,6	0.00	-	-		
88	OHX	B2	1937	-	0,6,6	0.00	-	-		
88	OHX	B2	1938	-	0,6,6	0.00	-	-		
88	OHX	B2	1939	-	0,6,6	0.00	-	-		
88	OHX	B2	1940	-	0,6,6	0.00	-	-		
88	OHX	B2	1941	-	0,6,6	0.00	-	-		
88	OHX	B2	1942	-	0,6,6	0.00	-	-		
88	OHX	B2	1943	-	0,6,6	0.00	-	-		
88	OHX	B2	1944	-	0,6,6	0.00	-	-		
88	OHX	B2	1945	-	0,6,6	0.00	-	-		
88	OHX	B2	1946	-	0,6,6	0.00	-	-		
88	OHX	B2	1947	-	0,6,6	0.00	-	-		
88	OHX	B2	1948	-	0,6,6	0.00	-	-		
88	OHX	B2	1949	-	0,6,6	0.00	-	-		
88	OHX	B2	1950	-	0,6,6	0.00	-	-		
88	OHX	B2	1951	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
88	OHX	B2	1952	-	0,6,6	0.00	-	-		
88	OHX	B2	1953	-	0,6,6	0.00	-	-		
88	OHX	B2	1954	-	0,6,6	0.00	-	-		
88	OHX	B2	1955	-	0,6,6	0.00	-	-		
88	OHX	B2	1956	-	0,6,6	0.00	-	-		
88	OHX	B2	1957	-	0,6,6	0.00	-	-		
88	OHX	B2	1958	-	0,6,6	0.00	-	-		
88	OHX	B2	1959	-	0,6,6	0.00	-	-		
88	OHX	B2	1960	-	0,6,6	0.00	-	-		
88	OHX	B2	1961	-	0,6,6	0.00	-	-		
88	OHX	B2	1962	-	0,6,6	0.00	-	-		
88	OHX	B2	1963	-	0,6,6	0.00	-	-		
88	OHX	B2	1964	-	0,6,6	0.00	-	-		
88	OHX	B2	1965	-	0,6,6	0.00	-	-		
88	OHX	B2	1966	-	0,6,6	0.00	-	-		
88	OHX	B2	1967	-	0,6,6	0.00	-	-		
88	OHX	B2	1968	-	0,6,6	0.00	-	-		
88	OHX	B2	1969	-	0,6,6	0.00	-	-		
88	OHX	B2	1970	-	0,6,6	0.00	-	-		
88	OHX	B2	1971	-	0,6,6	0.00	-	-		
88	OHX	B2	1972	-	0,6,6	0.00	-	-		
88	OHX	B2	1973	-	0,6,6	0.00	-	-		
88	OHX	B2	1974	-	0,6,6	0.00	-	-		
88	OHX	B2	1975	-	0,6,6	0.00	-	-		
88	OHX	B2	1976	-	0,6,6	0.00	-	-		
88	OHX	B2	1977	-	0,6,6	0.00	-	-		
88	OHX	B2	1978	-	0,6,6	0.00	-	-		
88	OHX	B2	1979	-	0,6,6	0.00	-	-		
88	OHX	B2	1980	-	0,6,6	0.00	-	-		
88	OHX	B2	1981	-	0,6,6	0.00	-	-		
88	OHX	B2	1982	-	0,6,6	0.00	-	-		
88	OHX	B2	1983	-	0,6,6	0.00	-	-		
88	OHX	B2	1984	-	0,6,6	0.00	-	-		
88	OHX	B2	1985	-	0,6,6	0.00	-	-		
88	OHX	B2	1986	-	0,6,6	0.00	-	-		
88	OHX	B2	1987	-	0,6,6	0.00	-	-		
88	OHX	B2	1988	-	0,6,6	0.00	-	-		
88	OHX	B2	1989	-	0,6,6	0.00	-	-		
88	OHX	B2	1990	-	0,6,6	0.00	-	-		
88	OHX	B2	1991	-	0,6,6	0.00	-	-		
88	OHX	B2	1992	-	0,6,6	0.00	-	-		
88	OHX	B2	1993	-	0,6,6	0.00	-	-		
88	OHX	B2	1994	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
88	OHX	B2	1995	-	0,6,6	0.00	-	-		
88	OHX	B2	1996	-	0,6,6	0.00	-	-		
88	OHX	B2	1997	-	0,6,6	0.00	-	-		
88	OHX	B2	1998	-	0,6,6	0.00	-	-		
88	OHX	B2	1999	-	0,6,6	0.00	-	-		
88	OHX	B2	2000	-	0,6,6	0.00	-	-		
88	OHX	B2	2001	-	0,6,6	0.00	-	-		
88	OHX	B2	2002	-	0,6,6	0.00	-	-		
88	OHX	B2	2003	-	0,6,6	0.00	-	-		
88	OHX	B2	2004	-	0,6,6	0.00	-	-		
88	OHX	B2	2005	-	0,6,6	0.00	-	-		
88	OHX	B2	2006	-	0,6,6	0.00	-	-		
88	OHX	B2	2007	-	0,6,6	0.00	-	-		
88	OHX	B2	2008	-	0,6,6	0.00	-	-		
88	OHX	B2	2009	-	0,6,6	0.00	-	-		
88	OHX	B2	2010	-	0,6,6	0.00	-	-		
88	OHX	B2	2011	-	0,6,6	0.00	-	-		
88	OHX	B2	2012	-	0,6,6	0.00	-	-		
88	OHX	B2	2013	-	0,6,6	0.00	-	-		
88	OHX	B2	2014	-	0,6,6	0.00	-	-		
88	OHX	B2	2015	-	0,6,6	0.00	-	-		
88	OHX	B2	2016	-	0,6,6	0.00	-	-		
88	OHX	B2	2017	-	0,6,6	0.00	-	-		
88	OHX	B2	2018	-	0,6,6	0.00	-	-		
88	OHX	B2	2019	-	0,6,6	0.00	-	-		
88	OHX	B2	2020	-	0,6,6	0.00	-	-		
88	OHX	B2	2021	-	0,6,6	0.00	-	-		
88	OHX	B2	2022	-	0,6,6	0.00	-	-		
88	OHX	B2	2023	-	0,6,6	0.00	-	-		
88	OHX	B2	2024	-	0,6,6	0.00	-	-		
88	OHX	B2	2025	-	0,6,6	0.00	-	-		
88	OHX	B2	2026	-	0,6,6	0.00	-	-		
88	OHX	B2	2027	-	0,6,6	0.00	-	-		
88	OHX	B2	2028	-	0,6,6	0.00	-	-		
88	OHX	B2	2029	88	0,6,6	0.00	-	-		
88	OHX	B2	2030	-	0,6,6	0.00	-	-		
88	OHX	B2	2031	-	0,6,6	0.00	-	-		
88	OHX	B2	2032	-	0,6,6	0.00	-	-		
88	OHX	B2	2033	-	0,6,6	0.00	-	-		
88	OHX	B2	2034	-	0,6,6	0.00	-	-		
88	OHX	B2	2035	-	0,6,6	0.00	-	-		
88	OHX	B2	2036	-	0,6,6	0.00	-	-		
88	OHX	B2	2037	-	0,6,6	0.00	-	-		



Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
88	OHX	B2	2038	-	0,6,6	0.00	-	-		
88	OHX	B2	2039	-	0,6,6	0.00	-	-		
88	OHX	B2	2040	-	0,6,6	0.00	-	-		
88	OHX	B2	2041	-	0,6,6	0.00	-	-		
88	OHX	B2	2042	-	0,6,6	0.00	-	-		
88	OHX	B2	2043	-	0,6,6	0.00	-	-		
88	OHX	B2	2044	-	0,6,6	0.00	-	-		
88	OHX	B2	2045	-	0,6,6	0.00	-	-		
88	OHX	B2	2046	-	0,6,6	0.00	-	-		
88	OHX	B2	2047	-	0,6,6	0.00	-	-		
88	OHX	B2	2048	87	0,6,6	0.00	-	-		
88	OHX	B2	2049	-	0,6,6	0.00	-	-		
88	OHX	B2	2050	-	0,6,6	0.00	-	-		
88	OHX	B2	2051	-	0,6,6	0.00	-	-		
88	OHX	B2	2052	-	0,6,6	0.00	-	-		
88	OHX	B2	2053	-	0,6,6	0.00	-	-		
88	OHX	B2	2054	-	0,6,6	0.00	-	-		
88	OHX	B2	2055	-	0,6,6	0.00	-	-		
88	OHX	B2	2056	-	0,6,6	0.00	-	-		
88	OHX	B2	2057	-	0,6,6	0.00	-	-		
88	OHX	B2	2058	-	0,6,6	0.00	-	-		
88	OHX	B2	2059	-	0,6,6	0.00	-	-		
88	OHX	B2	2060	-	0,6,6	0.00	-	-		
88	OHX	B2	2061	-	0,6,6	0.00	-	-		
88	OHX	B2	2062	88,87	0,6,6	0.00	-	-		
88	OHX	B2	2063	-	0,6,6	0.00	-	-		
88	OHX	B2	2064	-	0,6,6	0.00	-	-		
88	OHX	B2	2065	-	0,6,6	0.00	-	-		
88	OHX	B2	2066	-	0,6,6	0.00	-	-		
88	OHX	B2	2067	-	0,6,6	0.00	-	-		
88	OHX	B2	2068	-	0,6,6	0.00	-	-		
88	OHX	B2	2069	79	0,6,6	0.00	-	-		
88	OHX	B2	2070	-	0,6,6	0.00	-	-		
88	OHX	B2	2071	-	0,6,6	0.00	-	-		
88	OHX	B2	2072	-	0,6,6	0.00	-	-		
88	OHX	B2	2073	-	0,6,6	0.00	-	-		
88	OHX	B2	2074	-	0,6,6	0.00	-	-		
88	OHX	B2	2075	-	0,6,6	0.00	-	-		
88	OHX	B2	2076	-	0,6,6	0.00	-	-		
88	OHX	B2	2077	-	0,6,6	0.00	-	-		
88	OHX	B2	2078	-	0,6,6	0.00	-	-		
88	OHX	B2	2079	-	0,6,6	0.00	-	-		
88	OHX	B2	2080	-	0,6,6	0.00	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
88	OHX	B2	2081	-	0,6,6	0.00	-	-		
88	OHX	B2	2082	-	0,6,6	0.00	-	-		
88	OHX	B5	3401	-	0,6,6	0.00	-	-		
88	OHX	B5	3402	-	0,6,6	0.00	-	-		
88	OHX	B5	3403	-	0,6,6	0.00	-	-		
88	OHX	B7	201	-	0,6,6	0.00	-	-		
88	OHX	B7	202	-	0,6,6	0.00	-	-		
88	OHX	B7	203	-	0,6,6	0.00	-	-		
88	OHX	B7	204	-	0,6,6	0.00	-	-		
88	OHX	B7	205	-	0,6,6	0.00	-	-		
88	OHX	B7	206	-	0,6,6	0.00	-	-		
88	OHX	B7	210	-	0,6,6	0.00	-	-		
88	OHX	B7	212	-	0,6,6	0.00	-	-		
88	OHX	B7	214	-	0,6,6	0.00	-	-		
88	OHX	B7	215	-	0,6,6	0.00	-	-		
88	OHX	B7	219	87	0,6,6	0.00	-	-		
88	OHX	B7	220	-	0,6,6	0.00	-	-		
88	OHX	B7	221	-	0,6,6	0.00	-	-		
88	OHX	BR	201	-	0,6,6	0.00	-	-		
88	OHX	Bn	101	-	0,6,6	0.00	-	-		
88	OHX	CV	601	-	0,6,6	0.00	-	-		
89	GCP	CV	602	-	26,34,34	2.77	7 (26%)	31,54,54	2.39	7 (22%)
88	OHX	CX	101	-	0,6,6	0.00	-	-		

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	GCP	CV	602	-	-	2/18/38/38	0/3/3/3

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
89	CV	602	GCP	C4-N9	-9.57	1.35	1.47
89	CV	602	GCP	C6-N1	5.56	1.42	1.33
89	CV	602	GCP	C5-C6	-5.10	1.44	1.52
89	CV	602	GCP	C2'-C1'	-2.98	1.43	1.53
89	CV	602	GCP	C8-N9	-2.63	1.36	1.45
89	CV	602	GCP	C5-C4	-2.44	1.37	1.52
89	CV	602	GCP	PB-O3A	-2.32	1.55	1.58

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
89	CV	602	GCP	O3G-PG-C3B	-7.36	88.55	106.40
89	CV	602	GCP	C4-C5-N7	6.46	111.02	102.46
89	CV	602	GCP	C5-C6-N1	-3.76	113.79	118.27
89	CV	602	GCP	O6-C6-C5	3.50	127.03	119.82
89	CV	602	GCP	O1B-PB-C3B	2.92	116.72	109.15
89	CV	602	GCP	O2G-PG-O1G	2.72	119.54	112.29
89	CV	602	GCP	O6-C6-N1	-2.62	119.18	122.68

There are no chirality outliers.

All (2) torsion outliers are listed below:

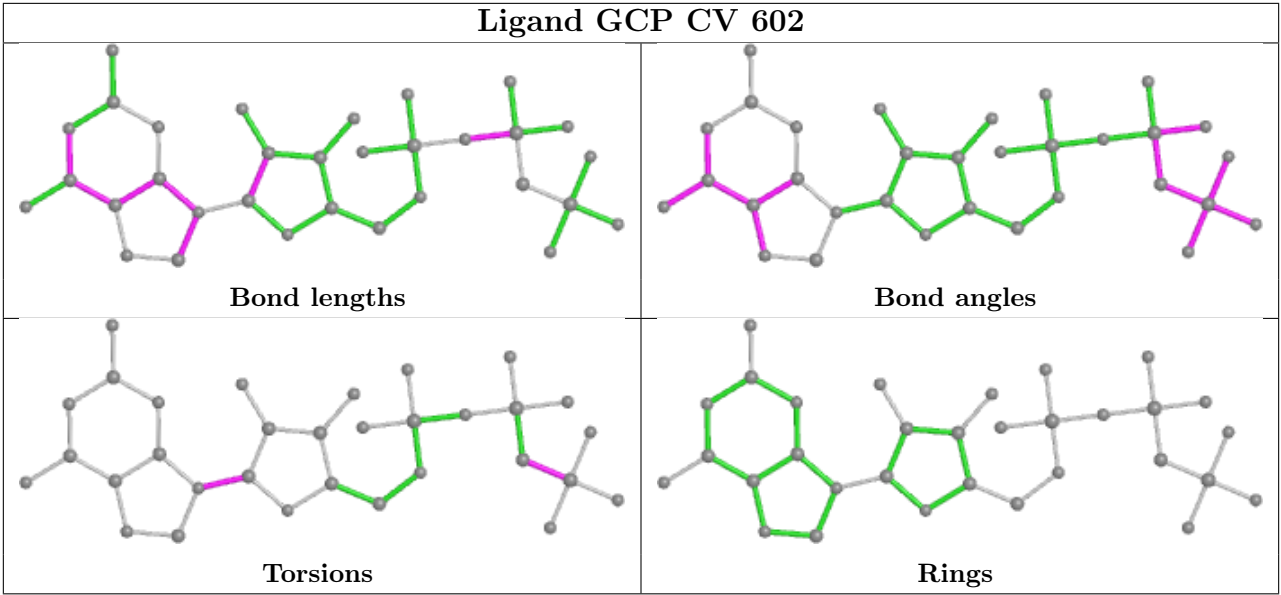
Mol	Chain	Res	Type	Atoms
89	CV	602	GCP	C2'-C1'-N9-C4
89	CV	602	GCP	PB-C3B-PG-O1G

There are no ring outliers.

1 monomer is involved in 63 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	CV	602	GCP	63	0

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



5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
80	B5	1
84	CW	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B5	1285:G	O3'	1286:A	P	6.77
1	CW	33:U	O3'	34:C	P	4.25