



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:55 PM GMT

PDB ID : 4WQF  
Title : Crystal structure of the *Thermus thermophilus* 70S ribosome in complex with elongation factor G and fusidic acid in the post-translocational state  
Authors : Lin, J.; Gagnon, M.G.; Steitz, T.A.  
Deposited on : 2014-10-21  
Resolution : 2.80 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.7 (RC4), CSD as536be (2015)  
Xtriage (Phenix) : 1.9-1692  
EDS : rb-20026688  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Refmac : 5.8.0135  
CCP4 : 6.5.0  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : trunk26865

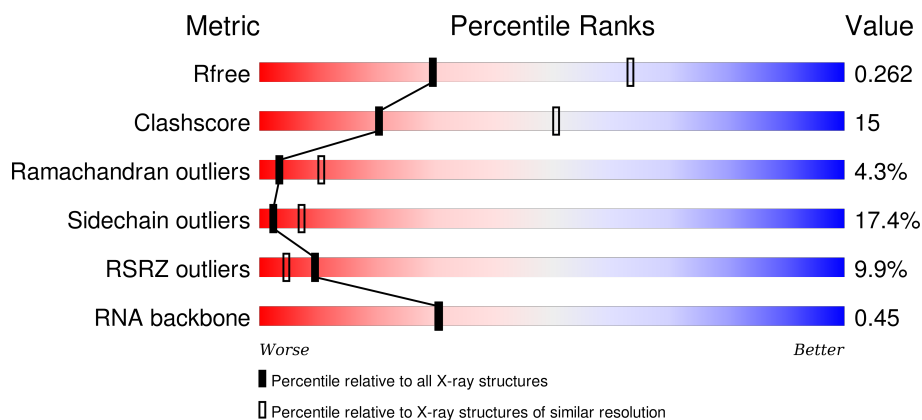
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 2.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	91344	2393 (2.80-2.80)
Clashscore	102246	2827 (2.80-2.80)
Ramachandran outliers	100387	2782 (2.80-2.80)
Sidechain outliers	100360	2784 (2.80-2.80)
RSRZ outliers	91569	2404 (2.80-2.80)
RNA backbone	2183	1091 (3.20-2.40)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	2915	<div> <div>4%</div> <div>19%</div> <div>49%</div> <div>25%</div> <div>5%</div> </div>
1	CA	2915	<div> <div>4%</div> <div>32%</div> <div>44%</div> <div>19%</div> <div>• •</div> </div>
2	AB	121	<div> <div>25%</div> <div>46%</div> <div>24%</div> <div>• •</div> </div>
2	CB	121	<div> <div>%</div> <div>44%</div> <div>41%</div> <div>13%</div> <div>• •</div> </div>





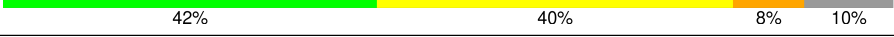



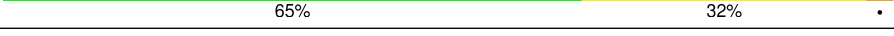

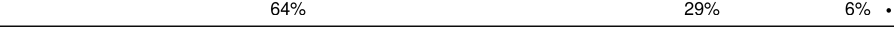
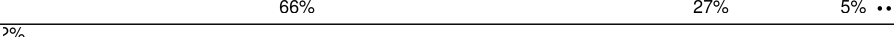

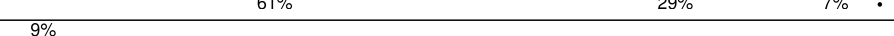


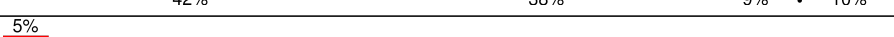

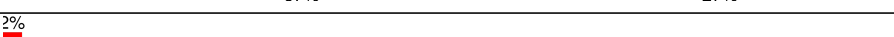






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Mol	Chain	Length	Quality of chain
3	AC	228	
3	CC	228	
4	AD	276	
4	CD	276	
5	AE	206	
5	CE	206	
6	AF	210	
6	CF	210	
7	AG	182	
7	CG	182	
8	AH	180	
8	CH	180	
9	AK	173	
9	CK	173	
10	AL	147	
10	CL	147	
11	AN	140	
11	CN	140	
12	AO	122	
12	CO	122	
13	AP	150	
13	CP	150	
14	AQ	141	
14	CQ	141	
15	AR	118	

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Mol	Chain	Length	Quality of chain
15	CR	118	
16	AS	112	
16	CS	112	
17	AT	146	
17	CT	146	
18	AU	118	
18	CU	118	
19	AV	101	
19	CV	101	
20	AW	113	
20	CW	113	
21	AX	96	
21	CX	96	
22	AY	110	
22	CY	110	
23	AZ	206	
23	CZ	206	
24	A0	85	
24	C0	85	
25	A1	98	
25	C1	98	
26	A2	72	
26	C2	72	
27	A3	60	
27	C3	60	

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Mol	Chain	Length	Quality of chain
28	A4	71	
28	C4	71	
29	A5	60	
29	C5	60	
30	A6	54	
30	C6	54	
31	A7	49	
31	C7	49	
32	A8	65	
32	C8	65	
33	A9	37	
33	C9	37	
34	BA	1521	
34	DA	1521	
35	BB	256	
35	DB	256	
36	BC	239	
36	DC	239	
37	BD	209	
37	DD	209	
38	BE	162	
38	DE	162	
39	BF	101	
39	DF	101	
40	BG	156	

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Mol	Chain	Length	Quality of chain
40	DG	156	
41	BH	138	
41	DH	138	
42	BI	128	
42	DI	128	
43	BJ	105	
43	DJ	105	
44	BK	129	
44	DK	129	
45	BL	132	
45	DL	132	
46	BM	126	
46	DM	126	
47	BN	61	
47	DN	61	
48	BO	89	
48	DO	89	
49	BP	88	
49	DP	88	
50	BQ	105	
50	DQ	105	
51	BR	88	
51	DR	88	
52	BS	93	
52	DS	93	

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Mol	Chain	Length	Quality of chain
53	BT	106	
53	DT	106	
54	BU	27	
54	DU	27	
55	BV	18	
55	DV	18	
56	BW	76	
56	BY	76	
56	DW	76	
56	DY	76	
57	BZ	758	
57	DZ	758	

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
58	MG	A7	103	-	-	-	X
58	MG	A8	5001	-	-	-	X
58	MG	AA	3012	-	-	-	X
58	MG	AA	3014	-	-	-	X
58	MG	AA	3018	-	-	-	X
58	MG	AA	3020	-	-	-	X
58	MG	AA	3023	-	-	-	X
58	MG	AA	3034	-	-	-	X
58	MG	AA	3035	-	-	-	X
58	MG	AA	3036	-	-	-	X
58	MG	AA	3037	-	-	-	X
58	MG	AA	3039	-	-	-	X
58	MG	AA	3040	-	-	-	X
58	MG	AA	3043	-	-	-	X
58	MG	AA	3044	-	-	-	X
58	MG	AA	3048	-	-	-	X
58	MG	AA	3051	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3059	-	-	-	X
58	MG	AA	3061	-	-	-	X
58	MG	AA	3081	-	-	-	X
58	MG	AA	3082	-	-	-	X
58	MG	AA	3101	-	-	-	X
58	MG	AA	3102	-	-	-	X
58	MG	AA	3109	-	-	-	X
58	MG	AA	3110	-	-	-	X
58	MG	AA	3112	-	-	-	X
58	MG	AA	3113	-	-	-	X
58	MG	AA	3116	-	-	-	X
58	MG	AA	3117	-	-	-	X
58	MG	AA	3120	-	-	-	X
58	MG	AA	3128	-	-	-	X
58	MG	AA	3130	-	-	-	X
58	MG	AA	3132	-	-	-	X
58	MG	AA	3133	-	-	-	X
58	MG	AA	3134	-	-	-	X
58	MG	AA	3135	-	-	-	X
58	MG	AA	3138	-	-	-	X
58	MG	AA	3142	-	-	-	X
58	MG	AA	3150	-	-	-	X
58	MG	AA	3162	-	-	-	X
58	MG	AA	3168	-	-	-	X
58	MG	AA	3171	-	-	-	X
58	MG	AA	3173	-	-	-	X
58	MG	AA	3174	-	-	-	X
58	MG	AA	3179	-	-	-	X
58	MG	AA	3183	-	-	-	X
58	MG	AA	3184	-	-	-	X
58	MG	AA	3185	-	-	-	X
58	MG	AA	3187	-	-	-	X
58	MG	AA	3190	-	-	-	X
58	MG	AA	3196	-	-	-	X
58	MG	AA	3206	-	-	-	X
58	MG	AA	3210	-	-	-	X
58	MG	AA	3211	-	-	-	X
58	MG	AA	3212	-	-	-	X
58	MG	AA	3221	-	-	-	X
58	MG	AA	3223	-	-	-	X
58	MG	AA	3231	-	-	-	X
58	MG	AA	3240	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3247	-	-	-	X
58	MG	AA	3249	-	-	-	X
58	MG	AA	3250	-	-	-	X
58	MG	AA	3253	-	-	-	X
58	MG	AA	3257	-	-	-	X
58	MG	AA	3267	-	-	-	X
58	MG	AA	3272	-	-	-	X
58	MG	AA	3282	-	-	-	X
58	MG	AA	3297	-	-	-	X
58	MG	AA	3301	-	-	-	X
58	MG	AA	3309	-	-	-	X
58	MG	AA	3311	-	-	-	X
58	MG	AA	3314	-	-	-	X
58	MG	AA	3316	-	-	-	X
58	MG	AA	3329	-	-	-	X
58	MG	AA	3331	-	-	-	X
58	MG	AA	3354	-	-	-	X
58	MG	AA	3357	-	-	-	X
58	MG	AA	3372	-	-	-	X
58	MG	AA	3381	-	-	-	X
58	MG	AA	3388	-	-	-	X
58	MG	AA	3395	-	-	-	X
58	MG	AA	3400	-	-	-	X
58	MG	AA	3410	-	-	-	X
58	MG	AA	3418	-	-	-	X
58	MG	AA	3420	-	-	-	X
58	MG	AA	3436	-	-	-	X
58	MG	AA	3439	-	-	-	X
58	MG	AA	3440	-	-	-	X
58	MG	AA	3442	-	-	-	X
58	MG	AA	3443	-	-	-	X
58	MG	AA	3453	-	-	-	X
58	MG	AA	3456	-	-	-	X
58	MG	AA	3462	-	-	-	X
58	MG	AA	3485	-	-	-	X
58	MG	AA	3488	-	-	-	X
58	MG	AA	3499	-	-	-	X
58	MG	AA	3506	-	-	-	X
58	MG	AA	3507	-	-	-	X
58	MG	AA	3508	-	-	-	X
58	MG	AA	3525	-	-	-	X
58	MG	AA	3551	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3559	-	-	-	X
58	MG	AA	3564	-	-	-	X
58	MG	AA	3565	-	-	-	X
58	MG	AA	3581	-	-	-	X
58	MG	AA	3589	-	-	-	X
58	MG	AA	3596	-	-	-	X
58	MG	AA	3602	-	-	-	X
58	MG	AA	3604	-	-	-	X
58	MG	AA	3606	-	-	-	X
58	MG	AA	3617	-	-	-	X
58	MG	AA	3620	-	-	-	X
58	MG	AA	3621	-	-	-	X
58	MG	AA	3623	-	-	-	X
58	MG	AA	3663	-	-	-	X
58	MG	AA	3698	-	-	-	X
58	MG	AA	3702	-	-	-	X
58	MG	AA	3704	-	-	-	X
58	MG	AA	3706	-	-	-	X
58	MG	AA	3708	-	-	-	X
58	MG	AA	3711	-	-	-	X
58	MG	AA	3717	-	-	-	X
58	MG	AA	3726	-	-	-	X
58	MG	AA	3735	-	-	-	X
58	MG	AA	3736	-	-	-	X
58	MG	AA	3739	-	-	-	X
58	MG	AA	3741	-	-	-	X
58	MG	AA	3768	-	-	-	X
58	MG	AA	3770	-	-	-	X
58	MG	AA	3771	-	-	-	X
58	MG	AA	3773	-	-	-	X
58	MG	AA	3791	-	-	-	X
58	MG	AA	3793	-	-	-	X
58	MG	AA	3798	-	-	-	X
58	MG	AA	3805	-	-	-	X
58	MG	AA	3806	-	-	-	X
58	MG	AA	3811	-	-	-	X
58	MG	AA	3812	-	-	-	X
58	MG	AA	3815	-	-	-	X
58	MG	AA	3816	-	-	-	X
58	MG	AA	3817	-	-	-	X
58	MG	AA	3819	-	-	-	X
58	MG	AA	3820	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3822	-	-	-	X
58	MG	AA	3823	-	-	-	X
58	MG	AA	3824	-	-	-	X
58	MG	AA	3827	-	-	-	X
58	MG	AA	3828	-	-	-	X
58	MG	AA	3829	-	-	-	X
58	MG	AA	3830	-	-	-	X
58	MG	AA	3831	-	-	-	X
58	MG	AA	3832	-	-	-	X
58	MG	AA	3833	-	-	-	X
58	MG	AA	3835	-	-	-	X
58	MG	AB	3003	-	-	-	X
58	MG	AB	3008	-	-	-	X
58	MG	AB	3023	-	-	-	X
58	MG	AD	301	-	-	-	X
58	MG	AD	302	-	-	-	X
58	MG	AD	304	-	-	-	X
58	MG	AD	305	-	-	-	X
58	MG	AD	308	-	-	-	X
58	MG	AD	309	-	-	-	X
58	MG	AD	310	-	-	-	X
58	MG	AE	304	-	-	-	X
58	MG	AF	302	-	-	-	X
58	MG	AF	303	-	-	-	X
58	MG	AH	3001	-	-	-	X
58	MG	AH	3002	-	-	-	X
58	MG	AN	3001	-	-	-	X
58	MG	AQ	202	-	-	-	X
58	MG	AU	201	-	-	-	X
58	MG	AU	202	-	-	-	X
58	MG	AU	203	-	-	-	X
58	MG	AV	202	-	-	-	X
58	MG	AW	3003	-	-	-	X
58	MG	AX	101	-	-	-	X
58	MG	BA	1615	-	-	-	X
58	MG	BA	1616	-	-	-	X
58	MG	BA	1623	-	-	-	X
58	MG	BA	1626	-	-	-	X
58	MG	BA	1629	-	-	-	X
58	MG	BA	1630	-	-	-	X
58	MG	BA	1648	-	-	-	X
58	MG	BA	1657	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	BA	1664	-	-	-	X
58	MG	BA	1671	-	-	-	X
58	MG	BA	1678	-	-	-	X
58	MG	BA	1683	-	-	-	X
58	MG	BA	1686	-	-	-	X
58	MG	BA	1690	-	-	-	X
58	MG	BA	1693	-	-	-	X
58	MG	BA	1695	-	-	-	X
58	MG	BA	1711	-	-	-	X
58	MG	BA	1721	-	-	-	X
58	MG	BA	1723	-	-	-	X
58	MG	BA	1738	-	-	-	X
58	MG	BA	1740	-	-	-	X
58	MG	BA	1755	-	-	-	X
58	MG	BA	1756	-	-	-	X
58	MG	BA	1763	-	-	-	X
58	MG	BA	1783	-	-	-	X
58	MG	BA	1801	-	-	-	X
58	MG	BA	1811	-	-	-	X
58	MG	BT	3001	-	-	-	X
58	MG	C3	3001	-	-	-	X
58	MG	C7	101	-	-	-	X
58	MG	CA	3002	-	-	-	X
58	MG	CA	3011	-	-	-	X
58	MG	CA	3013	-	-	-	X
58	MG	CA	3014	-	-	-	X
58	MG	CA	3023	-	-	-	X
58	MG	CA	3027	-	-	-	X
58	MG	CA	3028	-	-	-	X
58	MG	CA	3030	-	-	-	X
58	MG	CA	3035	-	-	-	X
58	MG	CA	3037	-	-	-	X
58	MG	CA	3038	-	-	-	X
58	MG	CA	3041	-	-	-	X
58	MG	CA	3043	-	-	-	X
58	MG	CA	3073	-	-	-	X
58	MG	CA	3084	-	-	-	X
58	MG	CA	3086	-	-	-	X
58	MG	CA	3088	-	-	-	X
58	MG	CA	3091	-	-	-	X
58	MG	CA	3106	-	-	-	X
58	MG	CA	3109	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	CA	3110	-	-	-	X
58	MG	CA	3114	-	-	-	X
58	MG	CA	3119	-	-	-	X
58	MG	CA	3124	-	-	-	X
58	MG	CA	3127	-	-	-	X
58	MG	CA	3133	-	-	-	X
58	MG	CA	3137	-	-	-	X
58	MG	CA	3146	-	-	-	X
58	MG	CA	3159	-	-	-	X
58	MG	CA	3163	-	-	-	X
58	MG	CA	3166	-	-	-	X
58	MG	CA	3168	-	-	-	X
58	MG	CA	3169	-	-	-	X
58	MG	CA	3177	-	-	-	X
58	MG	CA	3178	-	-	-	X
58	MG	CA	3182	-	-	-	X
58	MG	CA	3185	-	-	-	X
58	MG	CA	3190	-	-	-	X
58	MG	CA	3201	-	-	-	X
58	MG	CA	3212	-	-	-	X
58	MG	CA	3213	-	-	-	X
58	MG	CA	3217	-	-	-	X
58	MG	CA	3218	-	-	-	X
58	MG	CA	3221	-	-	-	X
58	MG	CA	3223	-	-	-	X
58	MG	CA	3226	-	-	-	X
58	MG	CA	3229	-	-	-	X
58	MG	CA	3230	-	-	-	X
58	MG	CA	3251	-	-	-	X
58	MG	CA	3263	-	-	-	X
58	MG	CA	3266	-	-	-	X
58	MG	CA	3276	-	-	-	X
58	MG	CA	3281	-	-	-	X
58	MG	CA	3290	-	-	-	X
58	MG	CA	3302	-	-	-	X
58	MG	CA	3309	-	-	-	X
58	MG	CA	3313	-	-	-	X
58	MG	CA	3314	-	-	-	X
58	MG	CA	3322	-	-	-	X
58	MG	CA	3324	-	-	-	X
58	MG	CA	3326	-	-	-	X
58	MG	CA	3328	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	CA	3330	-	-	-	X
58	MG	CA	3340	-	-	-	X
58	MG	CA	3348	-	-	-	X
58	MG	CA	3353	-	-	-	X
58	MG	CA	3358	-	-	-	X
58	MG	CA	3361	-	-	-	X
58	MG	CA	3364	-	-	-	X
58	MG	CA	3375	-	-	-	X
58	MG	CA	3383	-	-	-	X
58	MG	CA	3392	-	-	-	X
58	MG	CA	3396	-	-	-	X
58	MG	CA	3409	-	-	-	X
58	MG	CA	3420	-	-	-	X
58	MG	CA	3428	-	-	-	X
58	MG	CA	3432	-	-	-	X
58	MG	CA	3441	-	-	-	X
58	MG	CA	3452	-	-	-	X
58	MG	CA	3455	-	-	-	X
58	MG	CA	3458	-	-	-	X
58	MG	CA	3463	-	-	-	X
58	MG	CA	3467	-	-	-	X
58	MG	CA	3476	-	-	-	X
58	MG	CA	3489	-	-	-	X
58	MG	CA	3490	-	-	-	X
58	MG	CA	3491	-	-	-	X
58	MG	CA	3498	-	-	-	X
58	MG	CA	3500	-	-	-	X
58	MG	CA	3530	-	-	-	X
58	MG	CA	3542	-	-	-	X
58	MG	CA	3555	-	-	-	X
58	MG	CA	3567	-	-	-	X
58	MG	CA	3588	-	-	-	X
58	MG	CA	3596	-	-	-	X
58	MG	CA	3597	-	-	-	X
58	MG	CA	3603	-	-	-	X
58	MG	CA	3607	-	-	-	X
58	MG	CA	3618	-	-	-	X
58	MG	CA	3619	-	-	-	X
58	MG	CA	3626	-	-	-	X
58	MG	CA	3650	-	-	-	X
58	MG	CA	3654	-	-	-	X
58	MG	CA	3660	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	CA	3661	-	-	-	X
58	MG	CD	303	-	-	-	X
58	MG	CE	301	-	-	-	X
58	MG	CE	303	-	-	-	X
58	MG	CF	301	-	-	-	X
58	MG	CF	303	-	-	-	X
58	MG	CQ	201	-	-	-	X
58	MG	CU	201	-	-	-	X
58	MG	CV	202	-	-	-	X
58	MG	DA	1606	-	-	-	X
58	MG	DA	1610	-	-	-	X
58	MG	DA	1618	-	-	-	X
58	MG	DA	1636	-	-	-	X
58	MG	DA	1638	-	-	-	X
58	MG	DA	1647	-	-	-	X
58	MG	DA	1649	-	-	-	X
58	MG	DA	1651	-	-	-	X
58	MG	DA	1658	-	-	-	X
58	MG	DA	1668	-	-	-	X
58	MG	DA	1669	-	-	-	X
58	MG	DA	1672	-	-	-	X
58	MG	DA	1680	-	-	-	X
58	MG	DA	1684	-	-	-	X
58	MG	DA	1689	-	-	-	X
58	MG	DA	1694	-	-	-	X
58	MG	DA	1697	-	-	-	X
58	MG	DA	1722	-	-	-	X
58	MG	DA	1743	-	-	-	X
58	MG	DA	1768	-	-	-	X
58	MG	DF	3001	-	-	-	X
58	MG	DT	3001	-	-	-	X
60	SF4	DD	501	-	-	X	-
62	GDP	DZ	704	-	-	X	-

## 2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 310279 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	2852	Total	C	N	O	P	0	0	0
			61426	27339	11489	19747	2851			
1	CA	2848	Total	C	N	O	P	0	0	0
			61337	27299	11470	19721	2847			

- Molecule 2 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
2	CB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			
3	CC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
4	CD	275	Total	C	N	O	S	0	0	0
			2142	1352	426	361	3			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
5	CE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	203	Total	C	N	O	S	0	0	1
			1584	1009	298	275	2			
6	CF	203	Total	C	N	O	S	0	0	1
			1580	1007	297	274	2			

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	181	Total	C	N	O	S	0	0	0
			1425	914	256	251	4			
7	CG	181	Total	C	N	O	S	0	0	0
			1424	911	258	251	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			
8	CH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 9 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AK	130	Total	C	N	O		0	0	0
			641	381	130	130				
9	CK	130	Total	C	N	O		0	0	0
			641	381	130	130				

- Molecule 10 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

- Molecule 11 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			
11	CN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			

- Molecule 12 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
12	CO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 13 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AP	149	Total	C	N	O	S	0	0	0
			1139	709	231	196	3			
13	CP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 14 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
14	CQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 15 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
15	CR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 16 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
16	AS	110	Total	C	N	O	0	0	0
			877	553	175	149			
16	CS	110	Total	C	N	O	0	0	0
			870	549	173	148			

- Molecule 17 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
17	CT	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 18 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
18	CU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 19 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
19	CV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 20 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			
20	CW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

- Molecule 21 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
21	CX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 22 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			
22	CY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			

- Molecule 23 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			
23	CZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	A0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			
24	C0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			

- Molecule 25 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	A1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			
25	C1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			

- Molecule 26 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	A2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	C2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 27 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	A3	59	Total	C	N	O		0	0	0
			469	298	90	81				
27	C3	59	Total	C	N	O		0	0	0
			464	296	90	78				

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	A4	69	Total	C	N	O	S	0	0	0
			558	352	102	99	5			
28	C4	69	Total	C	N	O	S	0	0	0
			532	339	97	91	5			

- Molecule 29 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	A5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			
29	C5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			

- Molecule 30 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	A6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
30	C6	53	Total	C	N	O	S	0	0	0
			449	279	91	75	4			

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	A7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
31	C7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 32 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	A8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
32	C8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 33 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
33	C9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 34 is a RNA chain called 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BA	1495	Total	C	N	O	P	0	0	0
			32141	14304	5958	10384	1495			
34	DA	1501	Total	C	N	O	P	0	0	0
			32268	14361	5980	10426	1501			

- Molecule 35 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BB	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
35	DB	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BC	206	Total	C	N	O	S	0	0	0
			1552	976	302	273	1			
36	DC	206	Total	C	N	O	S	0	0	0
			1544	970	300	273	1			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BD	208	Total	C	N	O	S	0	0	0
			1659	1040	326	286	7			
37	DD	208	Total	C	N	O	S	0	0	0
			1678	1052	333	286	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BE	148	Total	C	N	O	S	0	0	0
			1129	714	213	198	4			
38	DE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BF	100	Total	C	N	O	S	0	0	0
			812	514	146	149	3			
39	DF	100	Total	C	N	O	S	0	0	0
			820	518	147	152	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BG	155	Total	C	N	O	S	0	0	0
			1231	766	243	216	6			
40	DG	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
41	DH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BI	127	Total	C	N	O		0	0	0
			986	626	193	167				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DI	127	Total	C	N	O	0	0	0
			978	619	190	169			

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BJ	97	Total	C	N	O	0	0	0
			709	440	138	131			
43	DJ	96	Total	C	N	O	0	0	0
			714	445	138	131			

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BK	114	Total	C	N	O	S	0	0	0
			833	519	156	155	3			
44	DK	114	Total	C	N	O	S	0	0	0
			833	519	156	155	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BL	122	Total	C	N	O	S	0	0	0
			930	585	185	159	1			
45	DL	122	Total	C	N	O	S	0	0	0
			930	585	185	159	1			

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BM	117	Total	C	N	O	S	0	0	0
			923	570	191	160	2			
46	DM	122	Total	C	N	O	S	0	0	0
			950	586	197	165	2			

- Molecule 47 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
47	DN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			
48	DO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BP	82	Total	C	N	O	S	0	0	0
			681	433	134	113	1			
49	DP	82	Total	C	N	O	S	0	0	0
			677	430	133	113	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
50	DQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BR	68	Total	C	N	O	0	0	0
			555	355	108	92			
51	DR	68	Total	C	N	O	0	0	0
			555	355	108	92			

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BS	84	Total	C	N	O	S	0	0	0
			661	423	122	114	2			
52	DS	83	Total	C	N	O	S	0	0	0
			646	412	119	113	2			

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BT	96	Total	C	N	O	S	0	0	0
			728	446	156	124	2			
53	DT	96	Total	C	N	O	S	0	0	0
			731	449	156	124	2			

- Molecule 54 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BU	23	Total	C	N	O		0	0	0
			199	122	48	29				
54	DU	23	Total	C	N	O		0	0	0
			199	122	48	29				

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BV	7	Total	C	N	O	P	0	0	0
			148	67	27	47	7			
55	DV	6	Total	C	N	O	P	0	0	0
			123	57	22	39	5			

- Molecule 56 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BW	76	Total	C	N	O	P	S	0	0
			1631	731	290	532	76	2		
56	BY	74	Total	C	N	O	P	S	0	0
			1581	707	285	515	73	1		
56	DW	76	Total	C	N	O	P	S	0	0
			1631	731	290	532	76	2		
56	DY	73	Total	C	N	O	P	S	0	0
			1561	698	283	507	72	1		

- Molecule 57 is a protein called 50S ribosomal protein L9,Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BZ	730	Total	C	N	O	S	0	0	0
			5690	3616	980	1075	19			
57	DZ	730	Total	C	N	O	S	0	0	0
			5690	3616	980	1075	19			

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AP	2	Total 2 Mg 2	0	0
58	CR	1	Total 1 Mg 1	0	0
58	BA	211	Total 211 Mg 211	0	0
58	CA	664	Total 664 Mg 664	0	0
58	C8	1	Total 1 Mg 1	0	0
58	C5	1	Total 1 Mg 1	0	0
58	AB	23	Total 23 Mg 23	0	0
58	BL	2	Total 2 Mg 2	0	0
58	CV	2	Total 2 Mg 2	0	0
58	A6	1	Total 1 Mg 1	0	0
58	BE	1	Total 1 Mg 1	0	0
58	AW	4	Total 4 Mg 4	0	0
58	AN	3	Total 3 Mg 3	0	0
58	DZ	2	Total 2 Mg 2	0	0
58	AX	1	Total 1 Mg 1	0	0
58	CN	1	Total 1 Mg 1	0	0
58	A2	2	Total 2 Mg 2	0	0
58	CY	1	Total 1 Mg 1	0	0
58	DD	1	Total 1 Mg 1	0	0
58	BB	1	Total 1 Mg 1	0	0
58	BT	1	Total 1 Mg 1	0	0
58	AE	4	Total 4 Mg 4	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	BM	2	Total 2	Mg 2	0	0
58	CU	1	Total 1	Mg 1	0	0
58	BF	1	Total 1	Mg 1	0	0
58	AV	3	Total 3	Mg 3	0	0
58	DA	168	Total 168	Mg 168	0	0
58	CB	13	Total 13	Mg 13	0	0
58	AA	835	Total 835	Mg 835	0	0
58	CQ	5	Total 5	Mg 5	0	0
58	A5	1	Total 1	Mg 1	0	0
58	AR	1	Total 1	Mg 1	0	0
58	CG	1	Total 1	Mg 1	0	0
58	DK	1	Total 1	Mg 1	0	0
58	DF	1	Total 1	Mg 1	0	0
58	AD	10	Total 10	Mg 10	0	0
58	BN	1	Total 1	Mg 1	0	0
58	DJ	1	Total 1	Mg 1	0	0
58	C7	1	Total 1	Mg 1	0	0
58	C3	1	Total 1	Mg 1	0	0
58	AZ	2	Total 2	Mg 2	0	0
58	A4	1	Total 1	Mg 1	0	0
58	BK	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AU	3	Total 3	Mg 3	0	0
58	DW	3	Total 3	Mg 3	0	0
58	A9	1	Total 1	Mg 1	0	0
58	CF	5	Total 5	Mg 5	0	0
58	BV	1	Total 1	Mg 1	0	0
58	A0	3	Total 3	Mg 3	0	0
58	AG	2	Total 2	Mg 2	0	0
58	DE	2	Total 2	Mg 2	0	0
58	AQ	3	Total 3	Mg 3	0	0
58	CE	6	Total 6	Mg 6	0	0
58	AH	2	Total 2	Mg 2	0	0
58	BZ	2	Total 2	Mg 2	0	0
58	CO	2	Total 2	Mg 2	0	0
58	CP	3	Total 3	Mg 3	0	0
58	CW	1	Total 1	Mg 1	0	0
58	A7	3	Total 3	Mg 3	0	0
58	CD	3	Total 3	Mg 3	0	0
58	BD	1	Total 1	Mg 1	0	0
58	DT	1	Total 1	Mg 1	0	0
58	A8	2	Total 2	Mg 2	0	0
58	AO	1	Total 1	Mg 1	0	0

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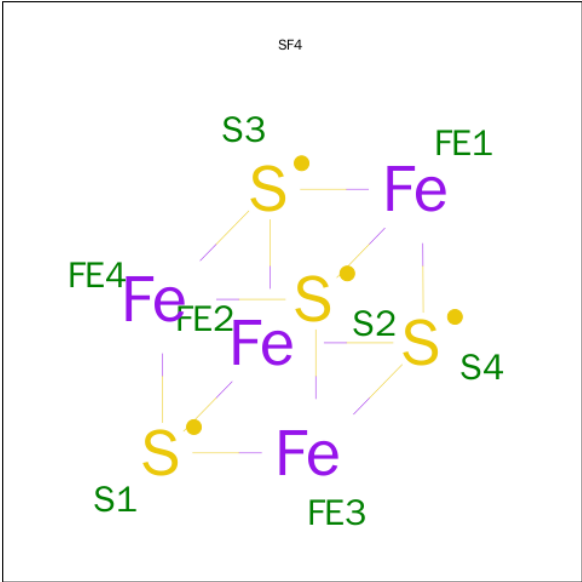
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	BW	3	Total 3	Mg 3	0	0
58	AY	1	Total 1	Mg 1	0	0
58	AF	5	Total 5	Mg 5	0	0

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

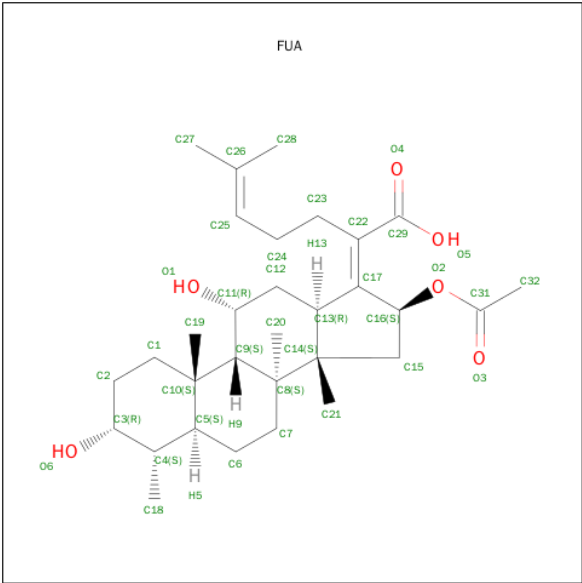
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AY	1	Total 1	Zn 1	0	0
59	BN	1	Total 1	Zn 1	0	0
59	C4	1	Total 1	Zn 1	0	0
59	C5	1	Total 1	Zn 1	0	0
59	C6	1	Total 1	Zn 1	0	0
59	A6	1	Total 1	Zn 1	0	0
59	C9	1	Total 1	Zn 1	0	0
59	DN	1	Total 1	Zn 1	0	0
59	A4	1	Total 1	Zn 1	0	0
59	A5	1	Total 1	Zn 1	0	0
59	A9	1	Total 1	Zn 1	0	0
59	CY	1	Total 1	Zn 1	0	0

- Molecule 60 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
60	BD	1	Total	Fe	S	0	0
			8	4	4		
60	DD	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 61 is FUSIDIC ACID (three-letter code: FUA) (formula: C<sub>31</sub>H<sub>48</sub>O<sub>6</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
61	BZ	1	Total	C	O	0	0
			37	31	6		
61	DZ	1	Total	C	O	0	0
			37	31	6		



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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AO	3	Total 3	O 3	0	0
63	AP	15	Total 15	O 15	0	0
63	AQ	3	Total 3	O 3	0	0
63	AR	3	Total 3	O 3	0	0
63	AS	1	Total 1	O 1	0	0
63	AT	2	Total 2	O 2	0	0
63	AU	6	Total 6	O 6	0	0
63	AW	1	Total 1	O 1	0	0
63	AX	2	Total 2	O 2	0	0
63	AZ	1	Total 1	O 1	0	0
63	A0	7	Total 7	O 7	0	0
63	A1	3	Total 3	O 3	0	0
63	A3	1	Total 1	O 1	0	0
63	A5	2	Total 2	O 2	0	0
63	A6	1	Total 1	O 1	0	0
63	A7	3	Total 3	O 3	0	0
63	A8	11	Total 11	O 11	0	0
63	BA	205	Total 205	O 205	0	0
63	BD	3	Total 3	O 3	0	0
63	BE	3	Total 3	O 3	0	0
63	BJ	1	Total 1	O 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	BL	2	Total	O	0	0
			2	2		
63	BM	1	Total	O	0	0
			1	1		
63	BO	1	Total	O	0	0
			1	1		
63	BV	2	Total	O	0	0
			2	2		
63	BW	1	Total	O	0	0
			1	1		
63	BZ	3	Total	O	0	0
			3	3		
63	CA	981	Total	O	0	0
			981	981		
63	CB	9	Total	O	0	0
			9	9		
63	CD	15	Total	O	0	0
			15	15		
63	CE	9	Total	O	0	0
			9	9		
63	CF	6	Total	O	0	0
			6	6		
63	CP	13	Total	O	0	0
			13	13		
63	CQ	1	Total	O	0	0
			1	1		
63	CT	3	Total	O	0	0
			3	3		
63	CU	4	Total	O	0	0
			4	4		
63	CV	1	Total	O	0	0
			1	1		
63	CW	1	Total	O	0	0
			1	1		
63	CX	1	Total	O	0	0
			1	1		
63	CY	1	Total	O	0	0
			1	1		
63	C0	5	Total	O	0	0
			5	5		
63	C1	3	Total	O	0	0
			3	3		

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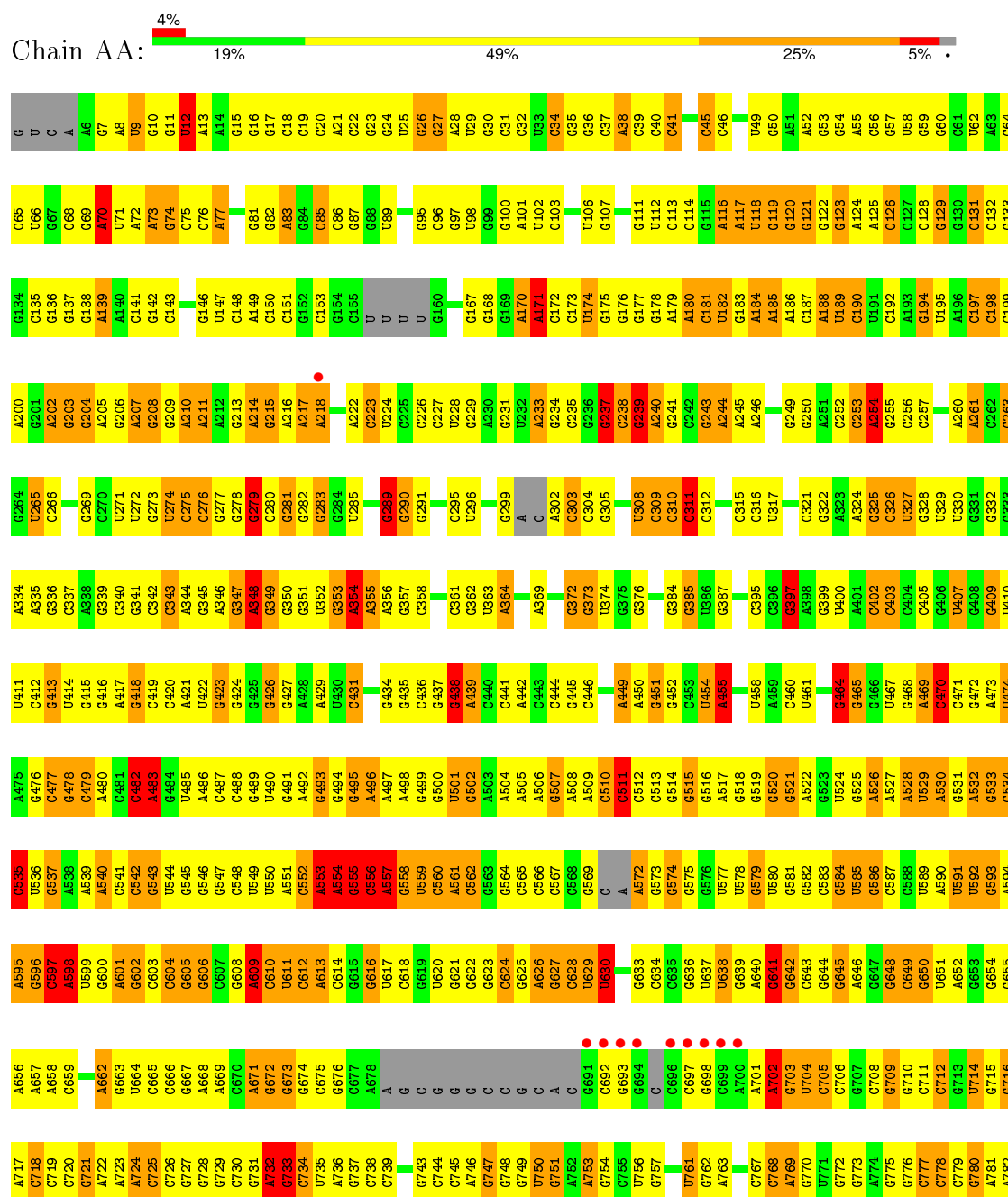
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	C3	1	Total 1	O 1	0	0
63	C5	1	Total 1	O 1	0	0
63	C7	3	Total 3	O 3	0	0
63	C8	3	Total 3	O 3	0	0
63	DA	153	Total 153	O 153	0	0
63	DE	2	Total 2	O 2	0	0
63	DH	1	Total 1	O 1	0	0
63	DJ	1	Total 1	O 1	0	0
63	DK	2	Total 2	O 2	0	0
63	DL	1	Total 1	O 1	0	0
63	DP	1	Total 1	O 1	0	0
63	DT	1	Total 1	O 1	0	0
63	DY	1	Total 1	O 1	0	0
63	DZ	2	Total 2	O 2	0	0

### 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 errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

#### • Molecule 1: 23S Ribosomal RNA





G1734	G1669	G1608	G1467	G1402	C1341	G1281	G1218	G1156	G1090	A1030	C969	U905	C844	C783
U1735	G1670	A1609	G1470	U1403	G1342	G1282	A1219	A1157	A1091	C1031	C996	G906	G845	C784
A1736	G1671	C1610	G1471	G1404	C1343	A1283	U1220	G1158	A1092	C1032	A972	G907	G846	C785
A1737	G1672	C1611	A1471	A1405	C1344	G1284	G1221	U1159	G1093	G1033	A973	A908	A847	G786
U1738	G1673	C1612	G1472	A1406	G1345	G1285	A1222	G1160	A1094	A1034	G974	G909	G848	U787
U1739	G1674	A1613	A1473	G1407	U1346	U1286	C1223	G1161	C1095	G1035	U975	A910	A849	G788
U1740	U1675	G1614	G1474	G1409	A1347	A1287	C1224	G1162	A1096	A1036	G976	G911	U850	G789
C1741	C1542	G1615	G1475	G1410	A1348	A1288	G1225	G1163	G1097	C1037	G977	G912	A851	G790
A1742	U1549	A1616	G1476	A1411	G1349	G1289	C1226	C1164	A978	C1038	A978	A913	G852	G791
G1743	A1679	A1617	U1477	A1412	C1350	G1290	G1229	C	C1098	G1039	G979	C914	G853	A792
G1744	G1680	A1618	A1478	A1413	C1351	G1291	C1230	C	A1100	C1040	G980	U915	U854	A793
A1745	C1681	A1619	A1479	G1414	C1352	A1292	G1231	C	G1101	C1041	C981	G916	U794	G794
G1746	G1682	G1620	A1480	G1415	A1353	A1293	G1232	C	G1102	A1042	A986	A917	G855	G795
A1747	C1683	C1621	G1481	C1416	A1354	G1294	U1233	C	A1103	G1043	G983	U918	U857	C796
A1748	A1684	U1622	G1482	G1417	G1355	U1295	A1234	C	G1104	C1044	G984	A919	U858	A797
G1749	U1685	U1623	C1483	U1418	G1356	G1296	G1235	G	U1105	U1045	G985	G920	C859	A798
U1750	U1686	G1624	A1484	A1419	G1357	G1297	G1236	A	U1106	A1046	A986	G921	U860	A799
U1751	G1687	U1625	U1485	G1420	U1358	G1298	G1237	A	U1107	A1047	G987	A922	C861	C800
U1752	A1688	A1626	G1486	C1421	U1359	A1299	G1238	A	G1108	G1048	U988	G922	C862	C801
U1753	G1689	A1627	G1487	C1422	C1360	A1300	A1239	A	U1109	G1049	G989	G926	C863	C802
G1754	G1690	G1628	G1488	G1423	C1361	U1301	G1240	U	C1110	C1050	A990	G927	C864	C803
U1755	C1691	C1629	A1491	A1424	A1362	G1302	C1241	G	U1111	C1051	G991	G928	G865	U804
U1756	G1692	A1630	A1425	A1425	A1363	C1303	G1242	A	U1112	C1052	G992	G929	A866	C805
C1757	C1693	C1631	G1492	G1426	C1364	G1304	U1243	U	A1113	C1053	G993	G930	A867	G806
U1758	G1694	A1632	C1493	G1427	G1365	G1305	U1244	C	G1114	C1054	G994	G931	A868	G807
U1759	A1695	A1633	G1494	G1428	C1366	G1306	C1245	G	A1115	A1055	G995	C932	A871	A808
G1760	G1696	G1634	G1495	C1429	A1367	C1307	G1246	G	A1116	A1056	C996	C933	C872	U809
U1761	G1697	C1635	U1496	A1430	A1368	A1308	C1247	G	U1117	G1057	G997	A934	G878	G810
U1762	G1698	U1636	G1497	G1431	C1369	U1309	G1248	G	C1118	U1058	G998	C935	U873	A811
G1763	A1699	G1637	C1498	C1432	G1370	G1310	A1249	C1185	A1119	C1059	G999	C936	U874	G812
U1764	G1700	C1638	G1499	C1433	G1371	A1311	U1250	U1186	G1120	U1060	A1000	A937	U875	C813
U1765	A1701	G1639	U1501	G1434	C1372	G1312	G1251	U1187	C1121	G1061	G1001	G938	A876	U814
G1766	A1702	G1640	G1502	G1435	C1373	G1313	G1252	A1188	C1122	G1062	A1002	G939	G877	G815
U1767	C1703	G1641	A1503	C1436	G1374	A1314	C1253	A1189	C1123	G1063	U1003	C940	G879	G816
C1768	G1704	A1642	G1504	U1437	U1375	A1315	G1254	G1190	C1124	C1064	A1004	U941	G878	G817
U1769	C1705	U1645	C1505	U1440	C1376	C1316	A1255	C1191	A1005	U1065	A942	C943	U880	G818
G1770	U1706	G1646	G1506	A1441	A1377	G1317	U1256	C1192	C1006	A1066	C943	C944	C881	C819
U1771	C1707	C1647	A1507	U1442	G1378	A1318	G1257	C1193	G1007	A1067	G1007	C944	A882	U820
U1772	G1708	G1648	G1508	U1443	C1379	U1319	A1258	A1194	U1008	G1068	U1008	A945	G883	A821
G1773	C1709	A1649	C1509	C1444	G1380	A1320	A1259	G1195	C1009	U1069	C1009	A945	C884	G822
U1774	A1650	U1649	G1514	C1445	U1381	A1321	G1260	C1196	C1010	G1070	C1010	C948	C885	G823
G1775	C1651	C1651	C1515	G1446	A1382	A1322	G1261	G1197	G1011	G1071	G1011	C949	U886	A824
U1776	G1652	G1651	C1515	G1447	G1383	G1323	C1262	C1198	C1012	U1072	C950	G825	C887	G825
G1777	C1653	C1652	C1515	G1448	G1384	A1324	G1263	C1199	G1013	A1073	U951	U826	A888	U826
U1778	A1654	G1654	C1518	C1449	G1385	G1325	G1264	G1200	U1014	A1074	G952	G827	G889	G827
U1779	A1655	U1654	A1518	U1450	U1386	G1326	A1265	A1201	C1015	A1075	U953	A828	G890	A828
A1780	A1656	C1655	C1514	U1451	U1387	G1327	C1266	A1202	C1016	G1076	C954	A829	C891	A829
U1781	G1656	G1525	C1515	U1452	A1388	U1328	C1267	G1203	G1017	G1077	A955	A830	G892	A830
A1791	G1657	G1526	C1515	C1453	G1389	G1329	C1268	G1204	A1018	A1078	C953	A831	C893	A831
C1792	C1658	G1527	C1554	C1454	G1390	A1330	G1269	U1205	G1019	U1079	A957	U894	U894	G832
U1793	G1659	C1598	U1528	C1455	C1390	G1331	G1270	G1206	C1020	G1080	C958	G895	G895	G832
G1794	A1660	G1599	G1529	G1456	G1393	A1332	C1271	C1207	G1021	U1081	U959	A896	A896	A835
U1795	C1661	A1600	C1457	C1457	G1394	A1333	A1272	G1208	C1022	G1082	C1022	C897	C897	A836
C1796	A1662	A1501	A1532	U1458	A1395	U1334	G1273	G1209	G1033	G1083	G962	U898	U898	C837
U1797	A1663	G1602	G1533	C1458	C1396	C1335	G1274	G1210	C1084	G1024	A963	G899	G899	C838
G1725	C1664	C1603	C1533	C1397	C1396	G1336	G1275	U1211	G1085	G1025	A964	G900	G900	G839
U1801	G1665	C1604	G1537	U1398	U1398	C1337	C1276	C1212	A1026	C1086	G965	G901	G901	A840
G1802	U1666	A1605	G1538	G1464	A1400	U1338	G1277	C1216	A1027	G1087	G966	G902	G902	G841
G1803	G1667	C1539	C1539	A1465	A1400	C1339	G1278	G1216	C1028	G1088	C903	G967	G967	C842
A1804	G1668	C1607	U1466	U1466	G1401	U1340	G1278	G1217	C1155	C1089	A1029	U968	C904	C843

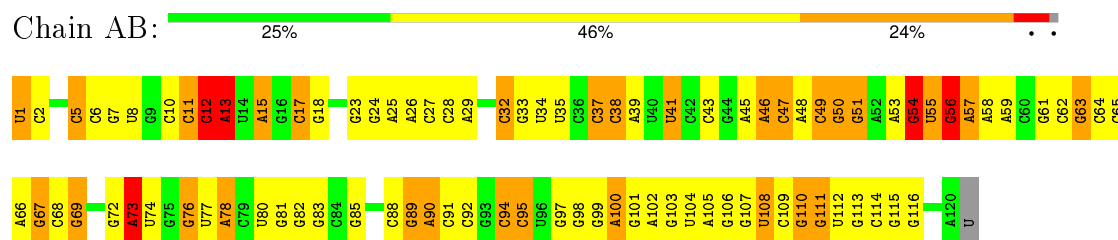
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G2609	U2549	C2429	C2368	C2305	C2243	A2180	G2120	G2060	A1999	C1936	G1866	U1806
A2611	C2550	A2430	U2369	C2306	U2244	G2181	G2121	G2061	A2000	A2000	G1870	G1807
G2610	C2551	U2431	G2370	C2307	U2245	G2182	G2122	G2062	C2001	A1938	G1871	U1808
A2612	C2552	C2432	G2371	U2308	C2246	G2183	G2123	U2063	G2002	U1939	U1872	U1809
C2613	G2493	C2433	A2372	C2309	G2247	G2184	U2124	G2064	A2003	A1940	U1873	U1810
G2614	A2554	C2434	A2373	A2310	C2248	C2185	G2125	C2065	C2004	A1941	C1874	A1811
G2615	G2555	U2435	G2374	G2311	C2249	C2186	G2126	C2066	C2005	C1942	C1875	C1812
U2616	G2556	C2436	C2375	G2312	G2250	G2187	G2127	G2067	G2006	G1943	C1876	C1813
C2618	U2497	A2437	G2376	G2313	G2251	U2188	G2128	U2068	G2007	G1944	G1877	A1814
G2619	G2498	A2438	G2377	G2314	C2252	U2189	G2129	U2069	A2008	U1945	G1878	A1815
G2620	C2499	C2439	A2378	G2315	G2253	G2190	G2130	G2070	G2009	U1946	A1879	A1816
G2621	A2500	G2440	G2379	A2316	U2255	A2191	U2131	G2071	C2010	U1948	A1878	A1817
U2622	G2501	G2441	C2380	G2317	U2256	A2192	G2132	C2072	G2011	A1949	G1880	A1818
C2623	G2502	A2442	A2381	G2318	U2257	A2193	C2133	A2073	G2012	A1950	G1881	A1819
C2624	U2503	U2443	G2382	G2319	G2258	U2194	G2134	G2074	U2013	G1951	U1882	A1820
G2625	G2504	A2444	G2383	A2321	G2259	A2195	U2135	G2075	G2014	G1952	C1883	C1821
U2626	U2505	A2445	G2384	G2322	U2260	C2196	A2136	A2076	U2015	G1953	A1884	A1822
C2627	G2506	A2446	G2385	U2324	G2261	C2197	G2137	C2077	C2016	A1954	A1885	G1823
U2628	G2507	A2447	G2386	C2325	G2262	C2198	G2138	G2078	U2017	G1955	G1886	C1824
C2629	C2508	G2448	G2387	C2326	G2263	A2199	A2139	A2079	C2018	G1956	G1887	U1825
G2630	A2509	U2449	A2388	A2332	G2264	C2200	U2140	A2080	G2019	A1958	G1888	C1826
U2631	C2510	U2450	A2389	C2337	C2265	C2201	A2141	A2081	G2020	A1959	U1889	U1827
C2632	G2511	A2451	G2390	C2338	G2266	U2202	G2142	A2082	C2021	A1960	A1890	C1828
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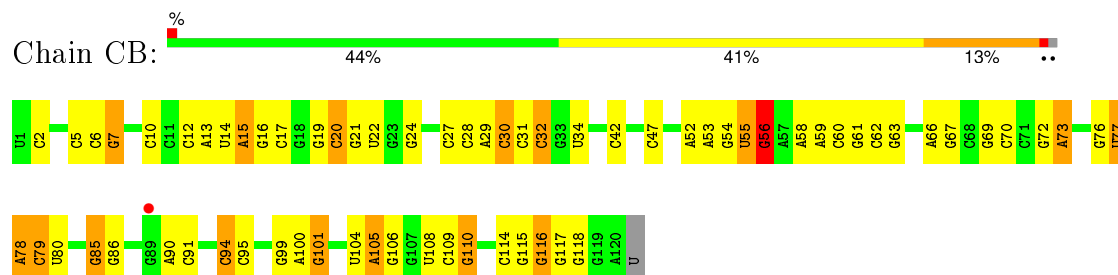
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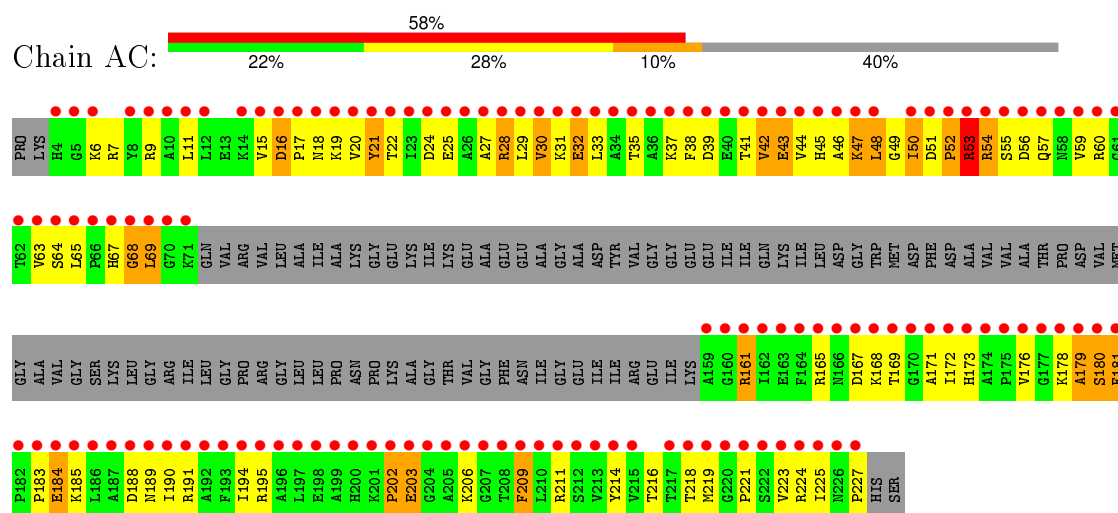
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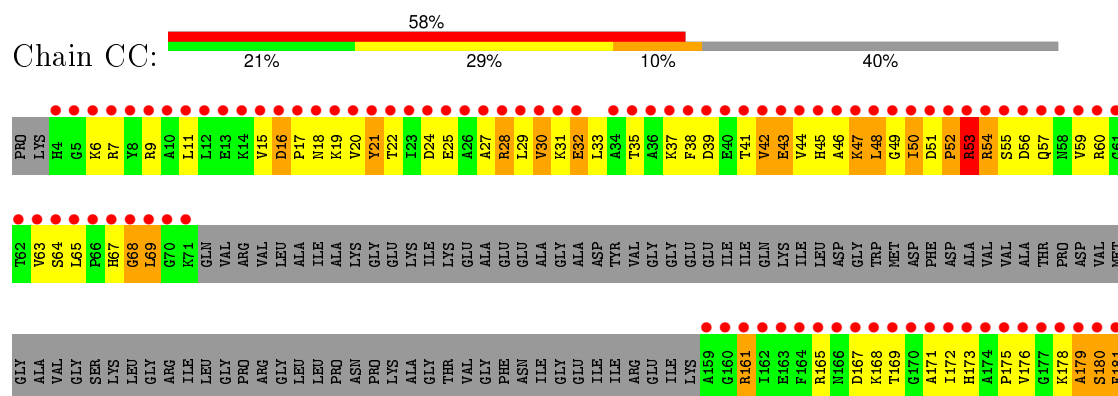
- Molecule 2: 5S Ribosomal RNA

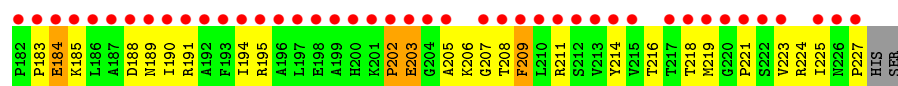


- Molecule 3: 50S ribosomal protein L1

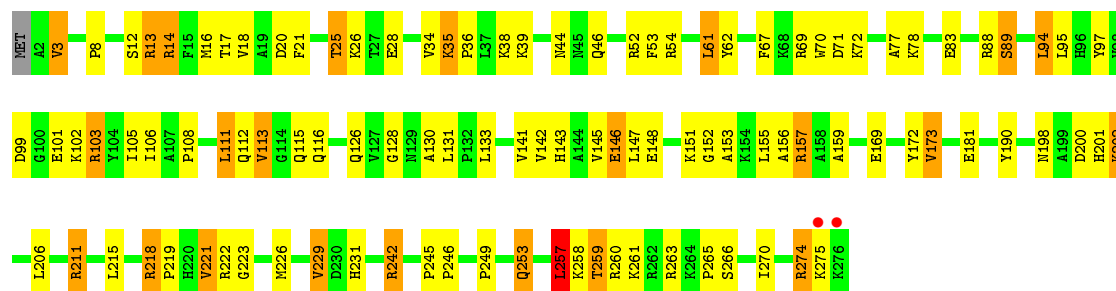


- Molecule 3: 50S ribosomal protein L1

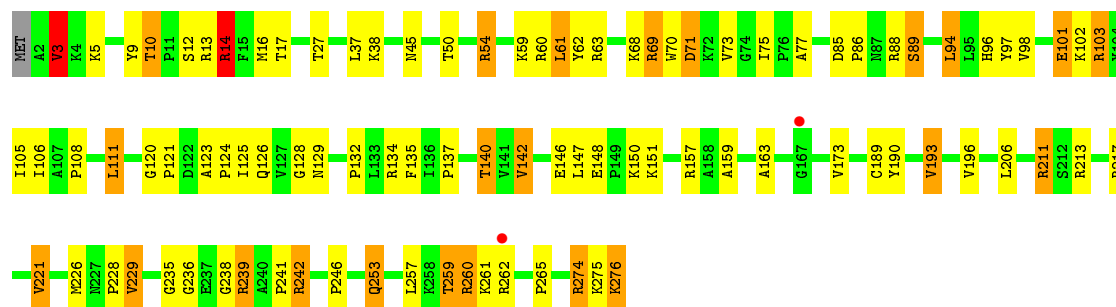




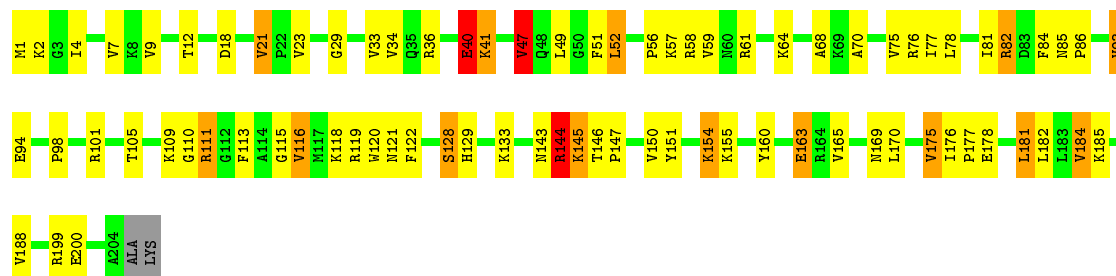
- Molecule 4: 50S ribosomal protein L2



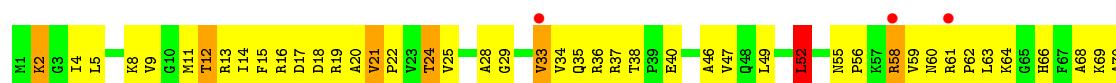
- Molecule 4: 50S ribosomal protein L2

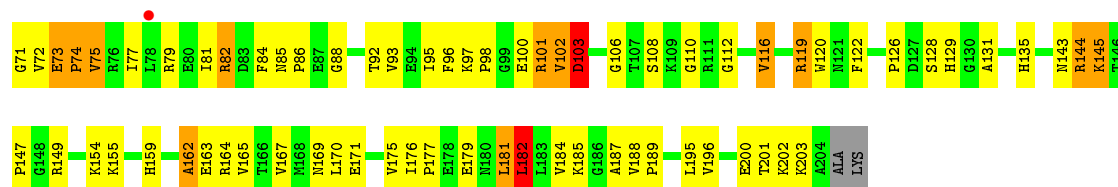


- Molecule 5: 50S ribosomal protein L3



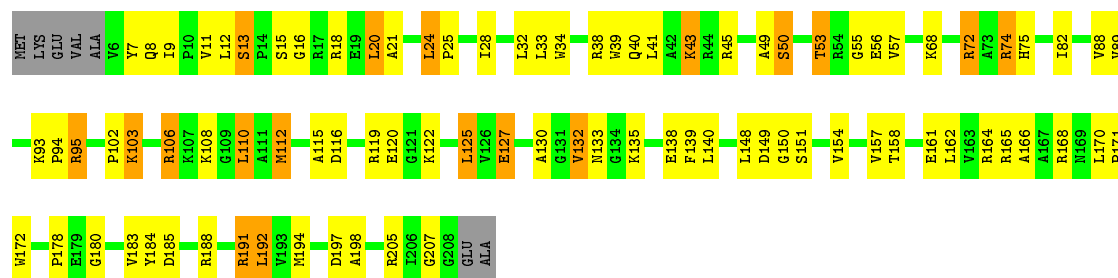
- Molecule 5: 50S ribosomal protein L3





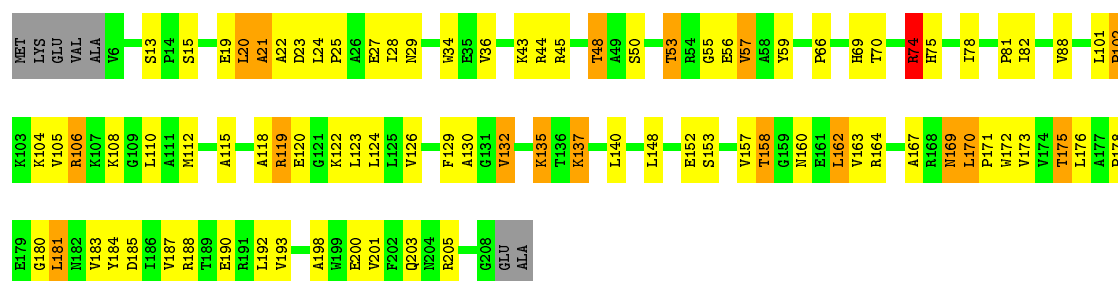
• Molecule 6: 50S ribosomal protein L4

Chain AF:

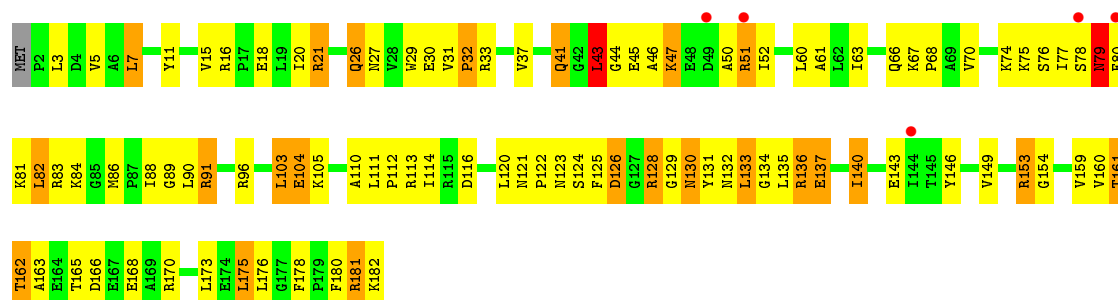


• Molecule 6: 50S ribosomal protein L4

Chain CF:



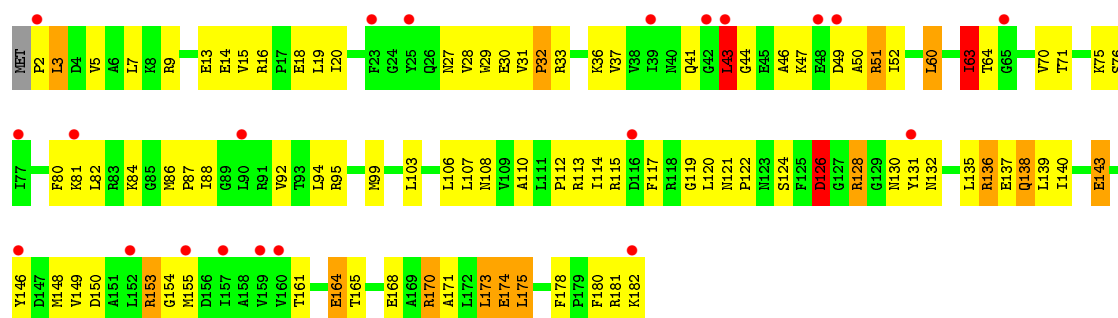
• Molecule 7: 50S ribosomal protein L5



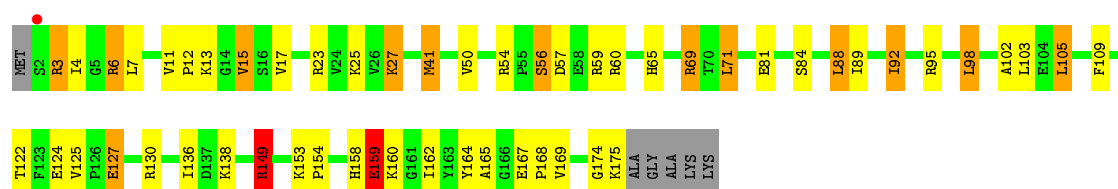
• Molecule 7: 50S ribosomal protein L5



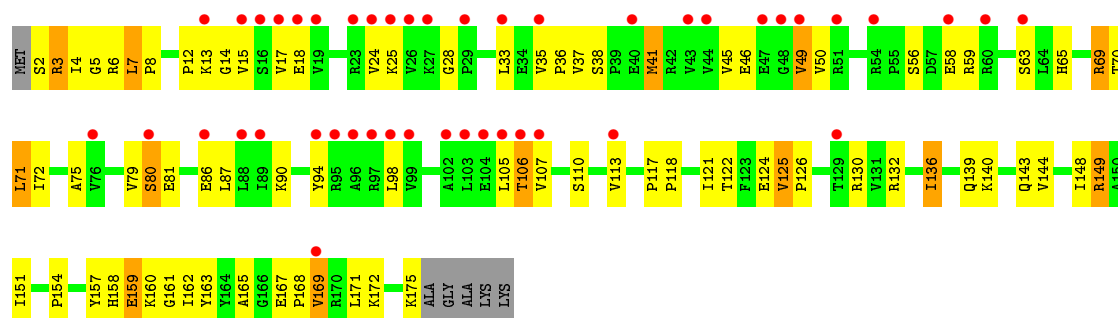




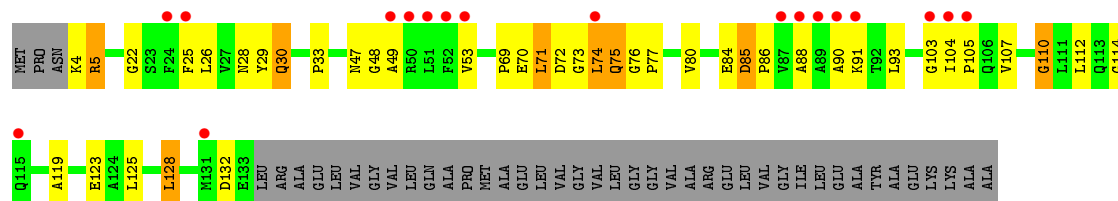
- Molecule 8: 50S ribosomal protein L6



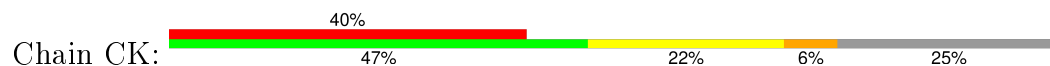
- Molecule 8: 50S ribosomal protein L6

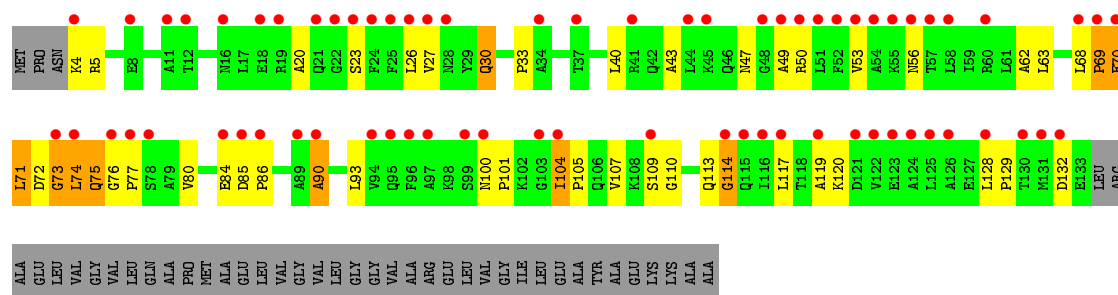


- Molecule 9: 50S ribosomal protein L10

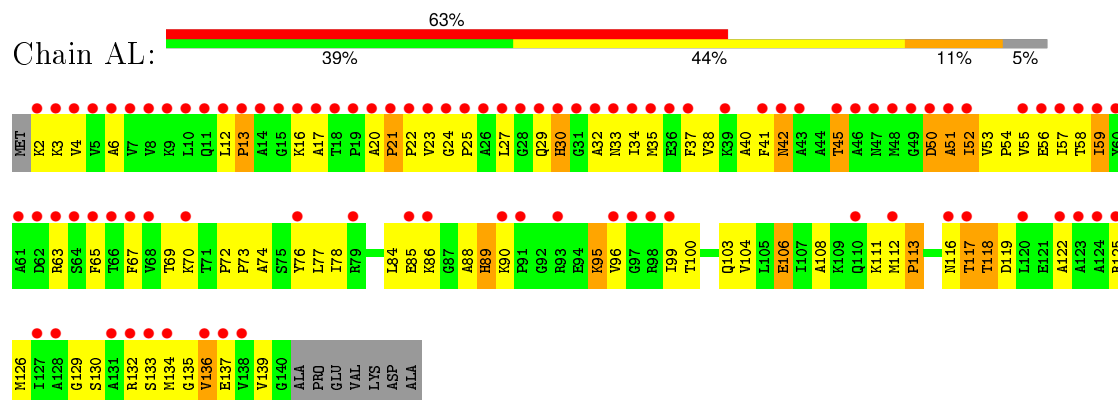


- Molecule 9: 50S ribosomal protein L10

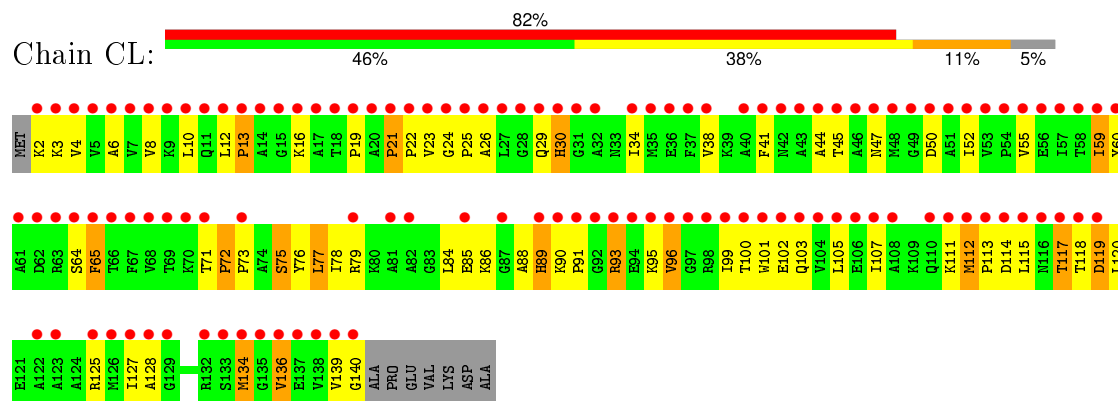




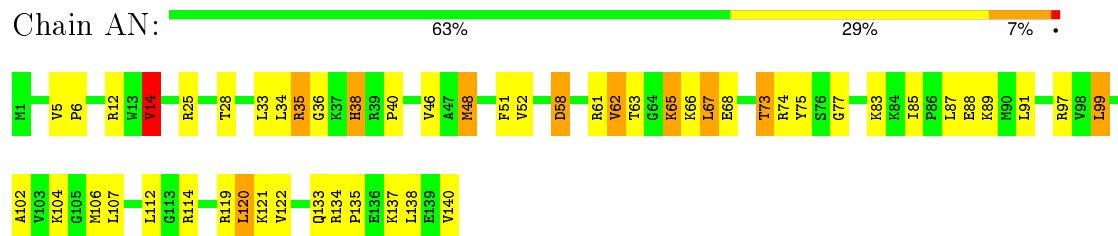
- Molecule 10: 50S ribosomal protein L11



- Molecule 10: 50S ribosomal protein L11

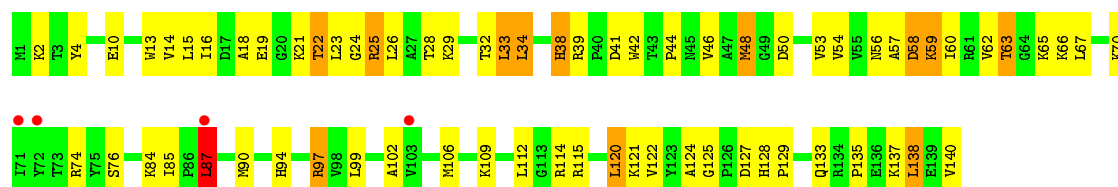


- Molecule 11: 50S ribosomal protein L13

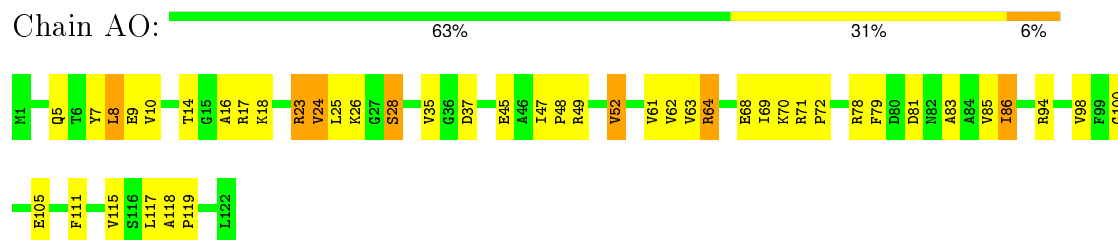


- Molecule 11: 50S ribosomal protein L13

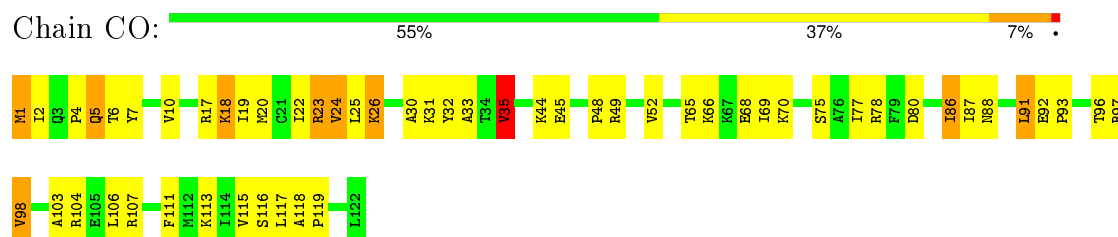




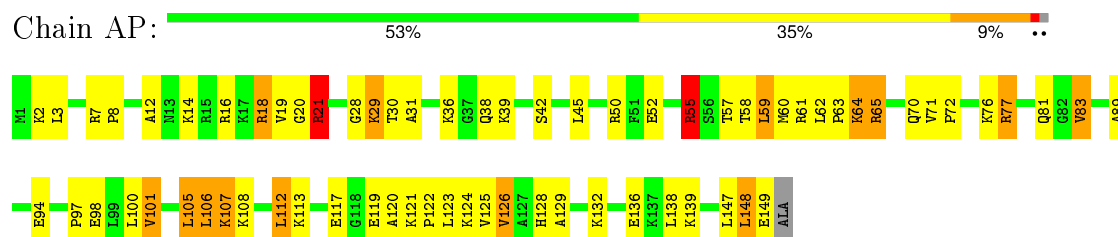
• Molecule 12: 50S ribosomal protein L14



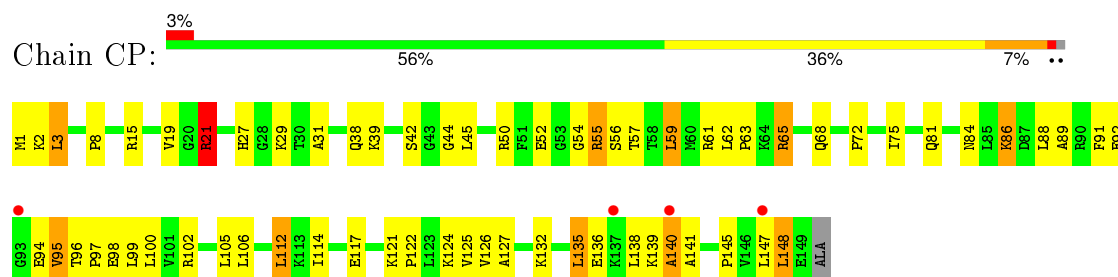
• Molecule 12: 50S ribosomal protein L14



• Molecule 13: 50S ribosomal protein L15

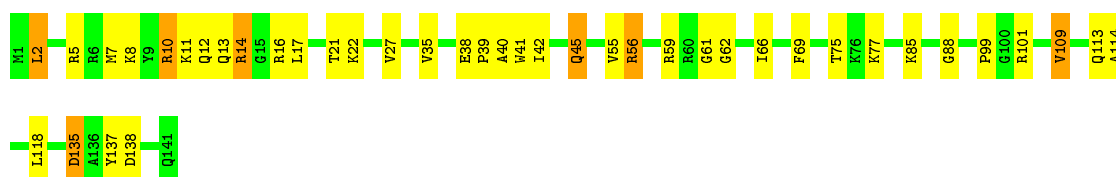


• Molecule 13: 50S ribosomal protein L15

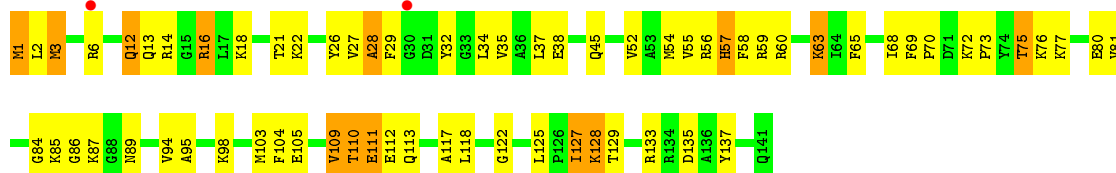


• Molecule 14: 50S ribosomal protein L16

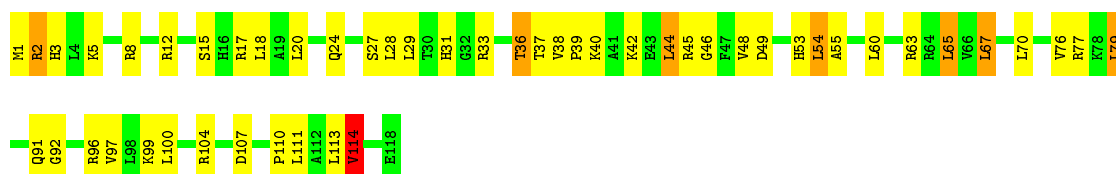




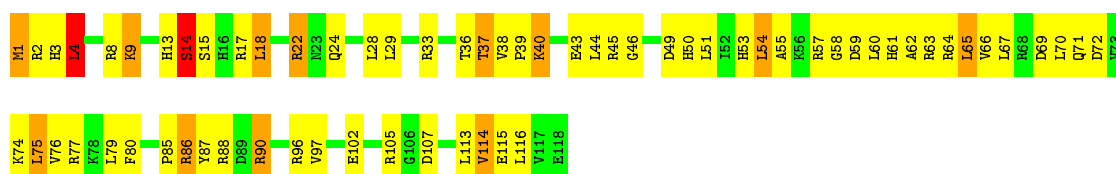
- Molecule 14: 50S ribosomal protein L16



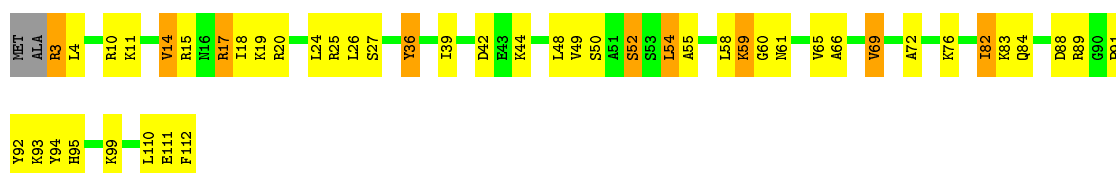
- Molecule 15: 50S ribosomal protein L17



- Molecule 15: 50S ribosomal protein L17

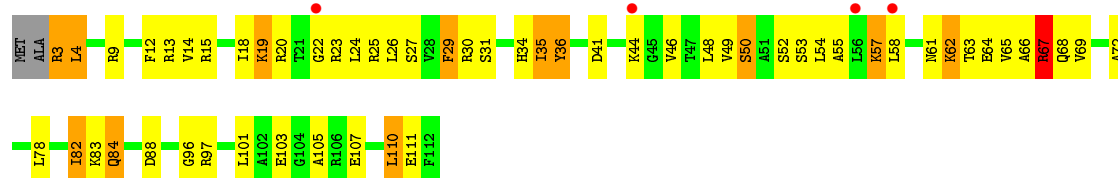


- Molecule 16: 50S ribosomal protein L18

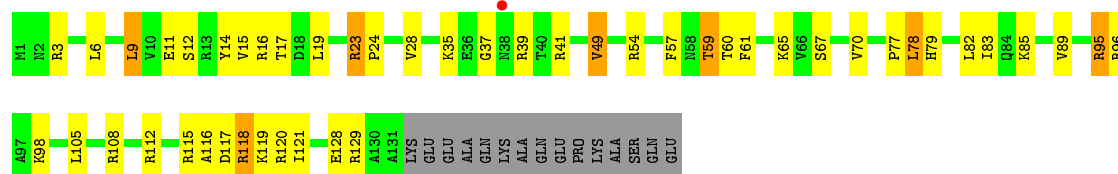


- Molecule 16: 50S ribosomal protein L18

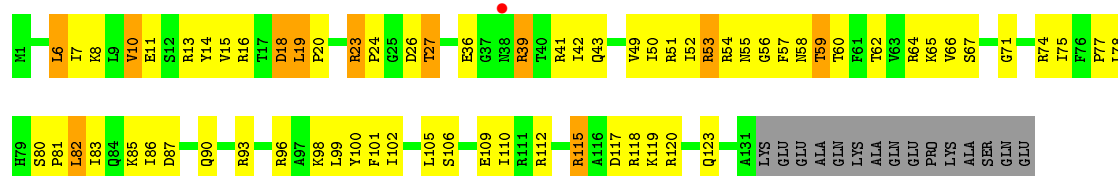
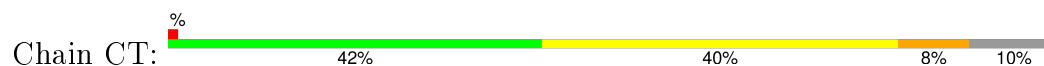




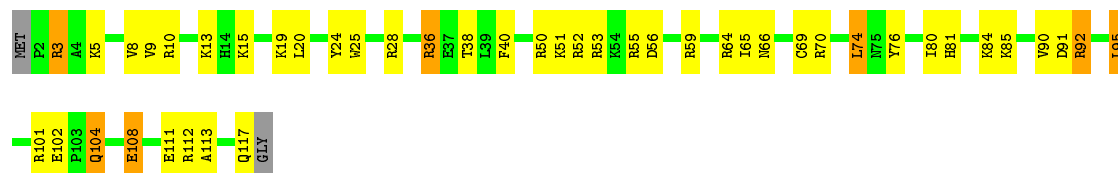
- Molecule 17: 50S ribosomal protein L19



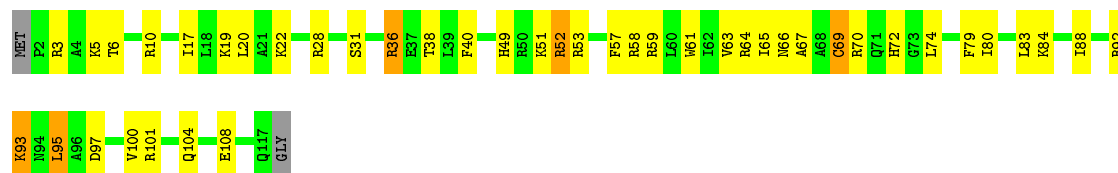
- Molecule 17: 50S ribosomal protein L19



- Molecule 18: 50S ribosomal protein L20

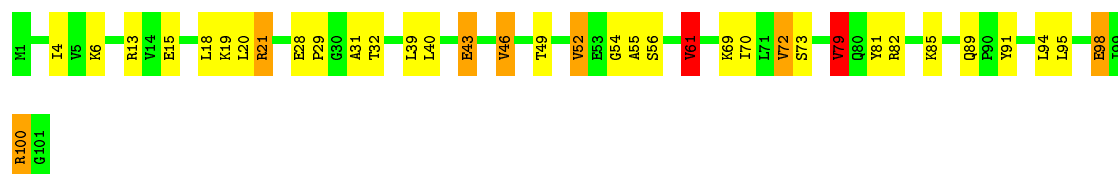


- Molecule 18: 50S ribosomal protein L20

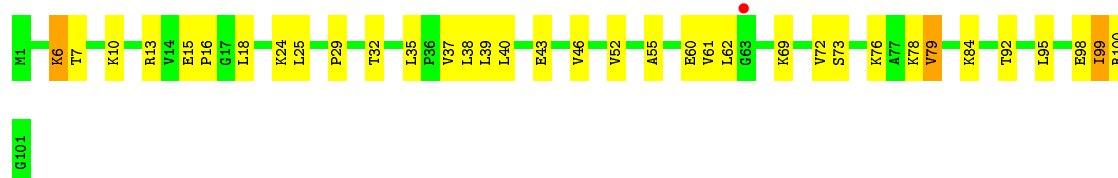


- Molecule 19: 50S ribosomal protein L21

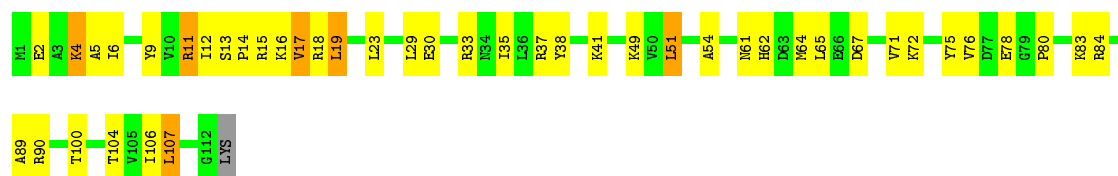




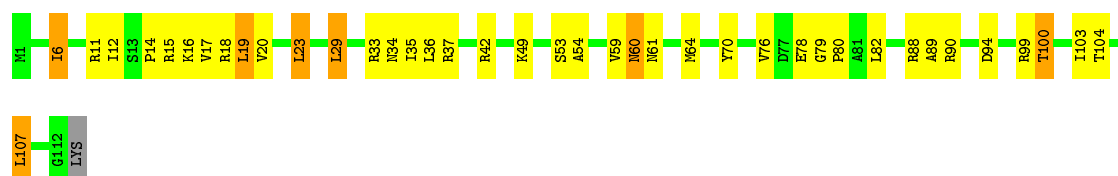
- Molecule 19: 50S ribosomal protein L21



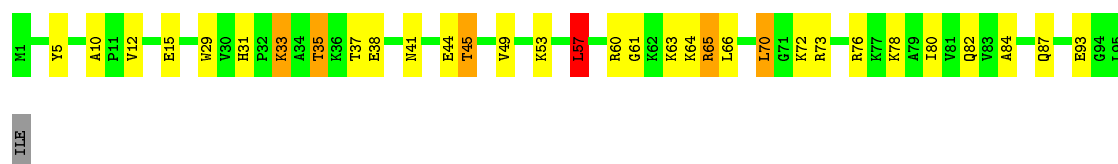
- Molecule 20: 50S ribosomal protein L22



- Molecule 20: 50S ribosomal protein L22

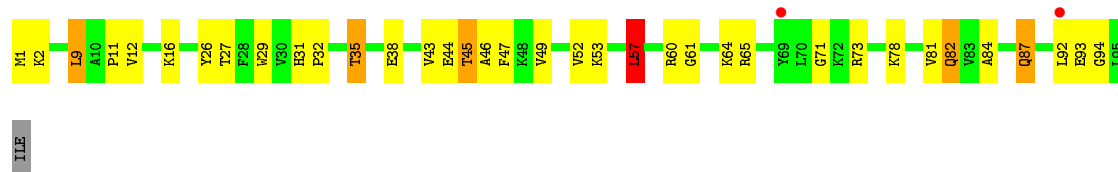


- Molecule 21: 50S ribosomal protein L23

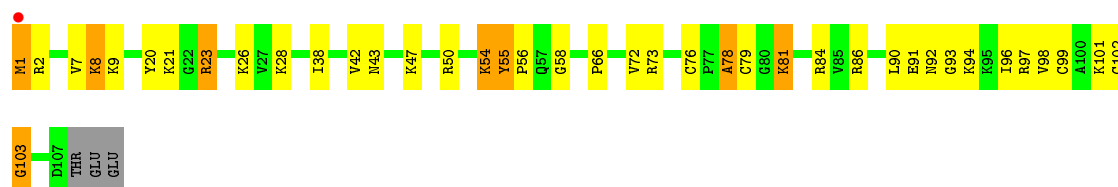


- Molecule 21: 50S ribosomal protein L23

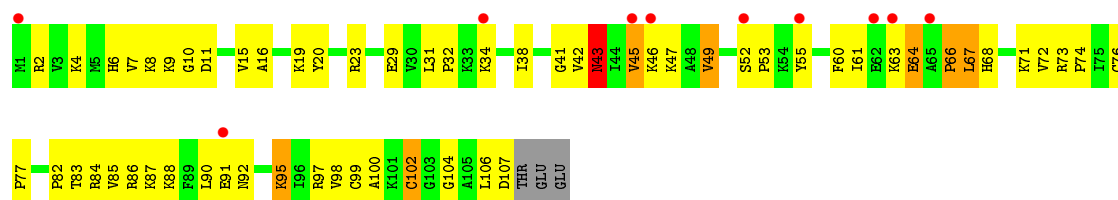
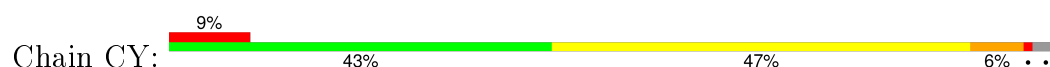




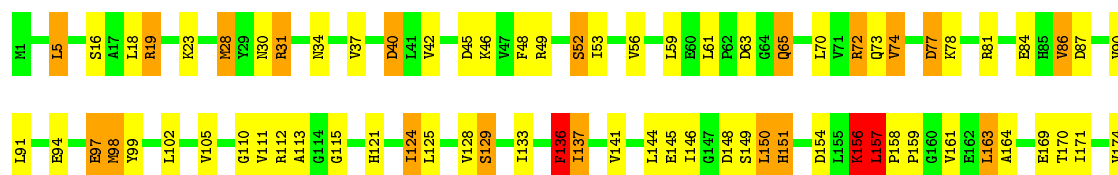
- Molecule 22: 50S ribosomal protein L24



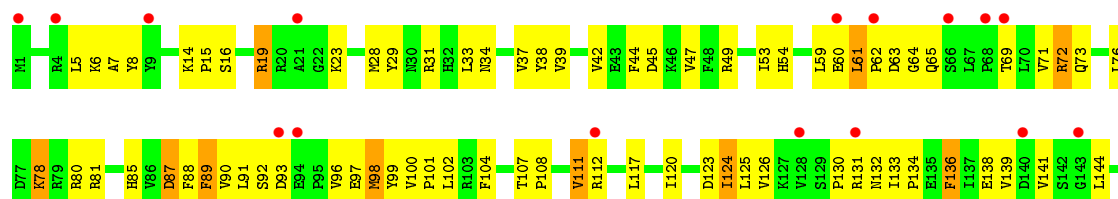
- Molecule 22: 50S ribosomal protein L24



- Molecule 23: 50S ribosomal protein L25



- Molecule 23: 50S ribosomal protein L25





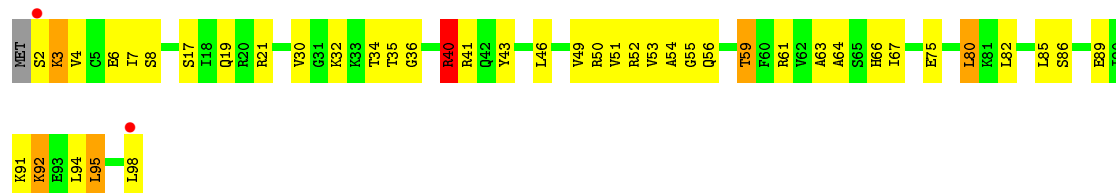
- Molecule 24: 50S ribosomal protein L27



- Molecule 24: 50S ribosomal protein L27



- Molecule 25: 50S ribosomal protein L28



- Molecule 25: 50S ribosomal protein L28



- Molecule 26: 50S ribosomal protein L29



- Molecule 26: 50S ribosomal protein L29



- Molecule 27: 50S ribosomal protein L30

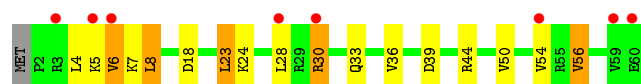


Chain A3: 



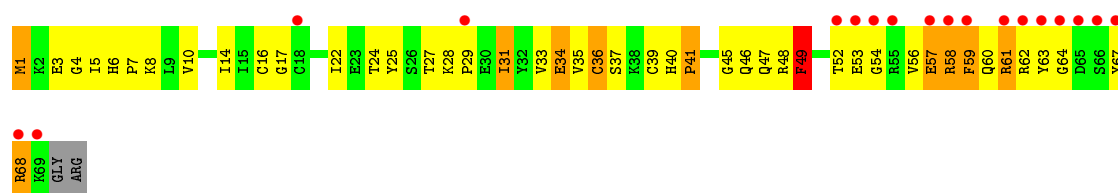
- Molecule 27: 50S ribosomal protein L30

Chain C3: 



- Molecule 28: 50S ribosomal protein L31

Chain A4: 



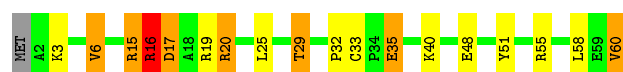
- Molecule 28: 50S ribosomal protein L31

Chain C4: 



- Molecule 29: 50S ribosomal protein L32

Chain A5: 



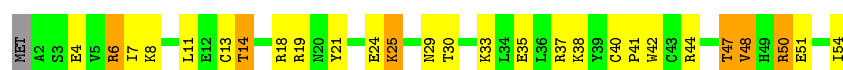
- Molecule 29: 50S ribosomal protein L32

Chain C5: 

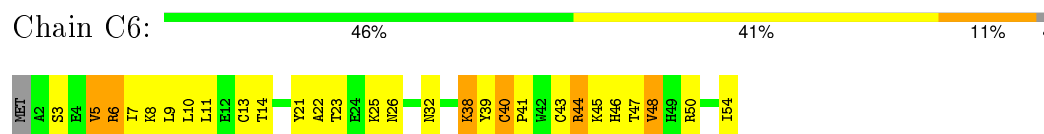


- Molecule 30: 50S ribosomal protein L33

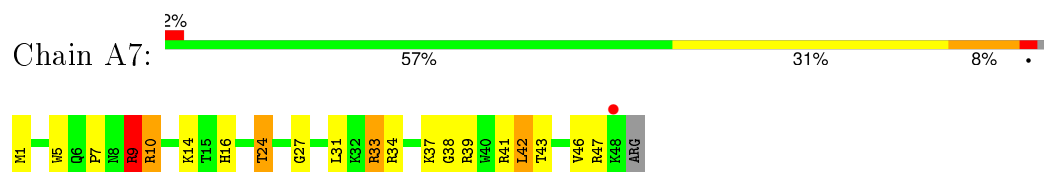
Chain A6: 



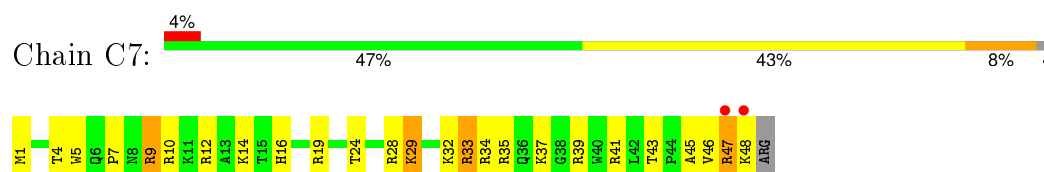
- Molecule 30: 50S ribosomal protein L33



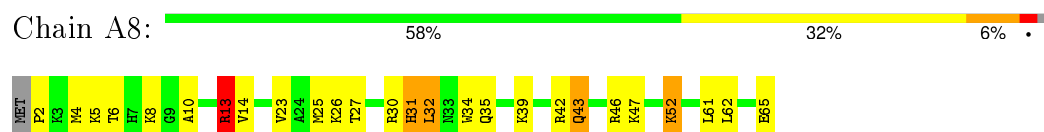
- Molecule 31: 50S ribosomal protein L34



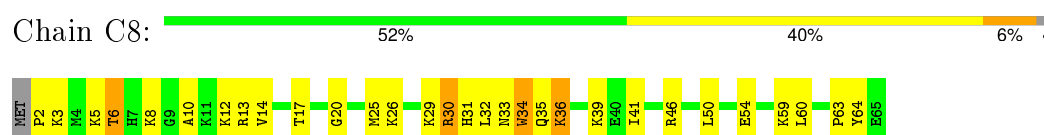
- Molecule 31: 50S ribosomal protein L34



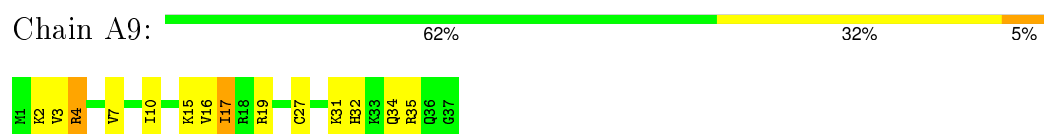
- Molecule 32: 50S ribosomal protein L35



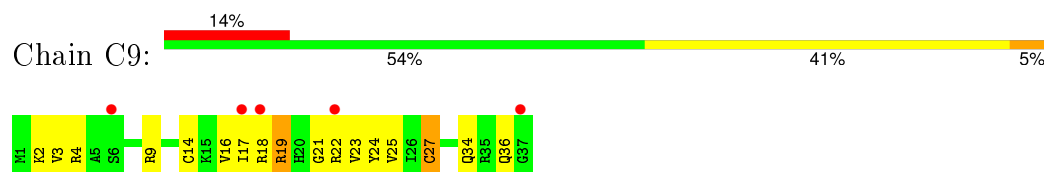
- Molecule 32: 50S ribosomal protein L35



- Molecule 33: 50S ribosomal protein L36

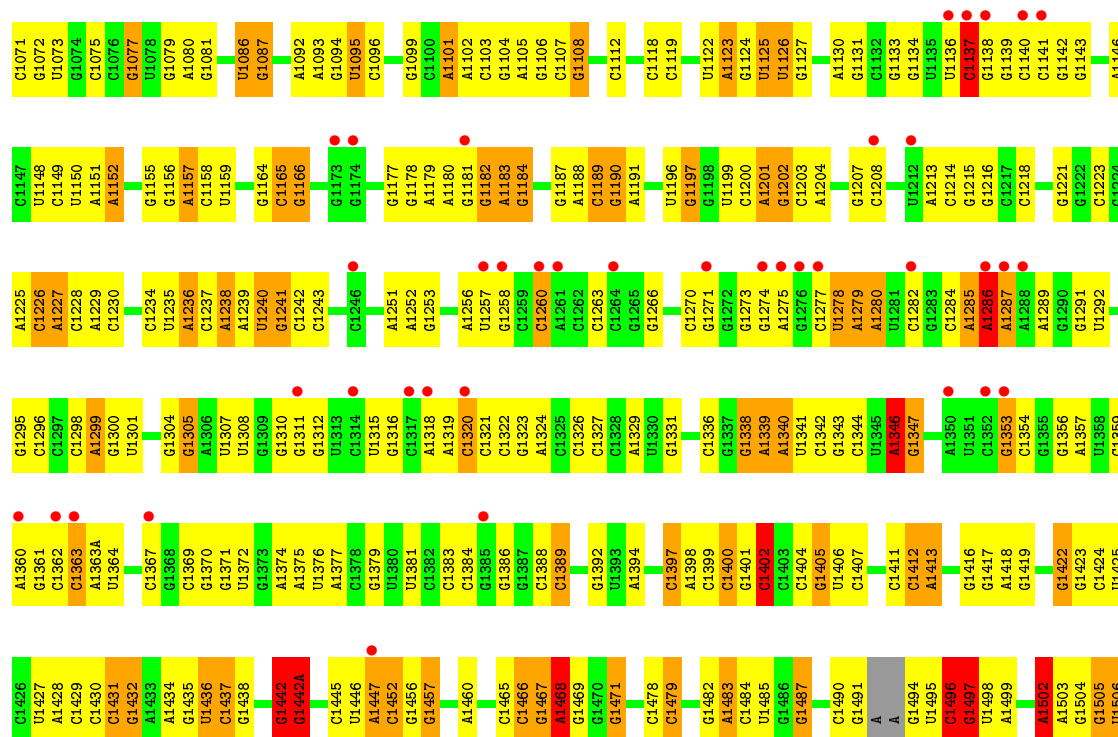


- Molecule 33: 50S ribosomal protein L36

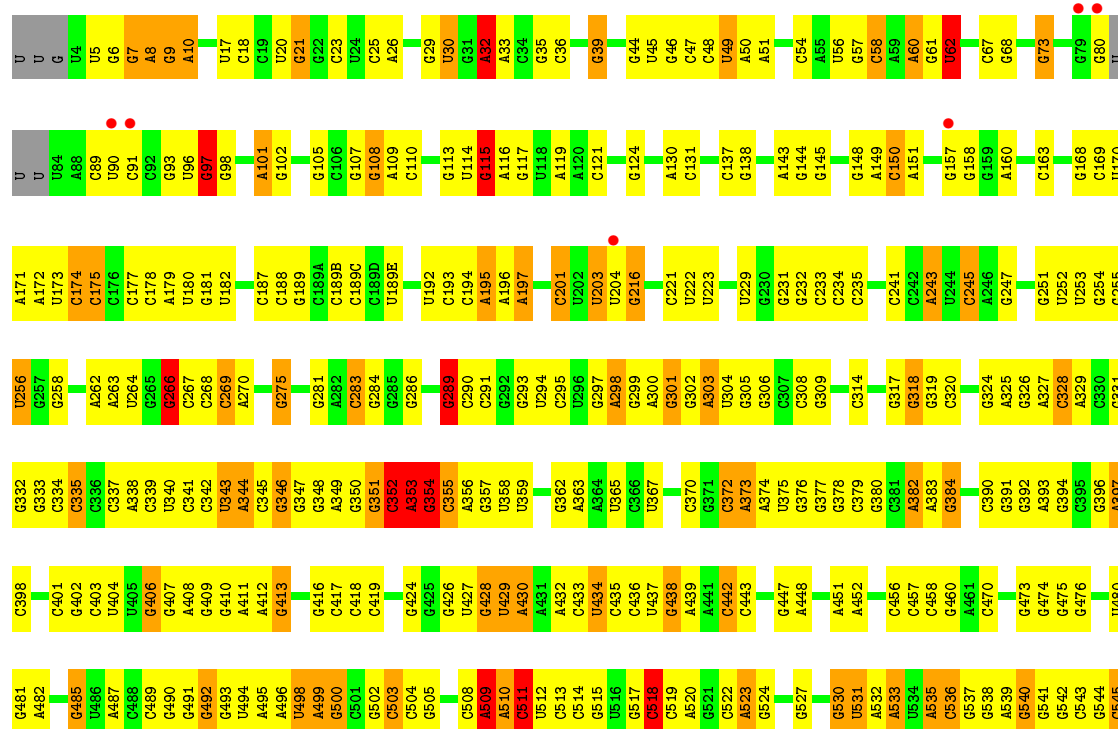


- Molecule 34: 16S Ribosomal RNA



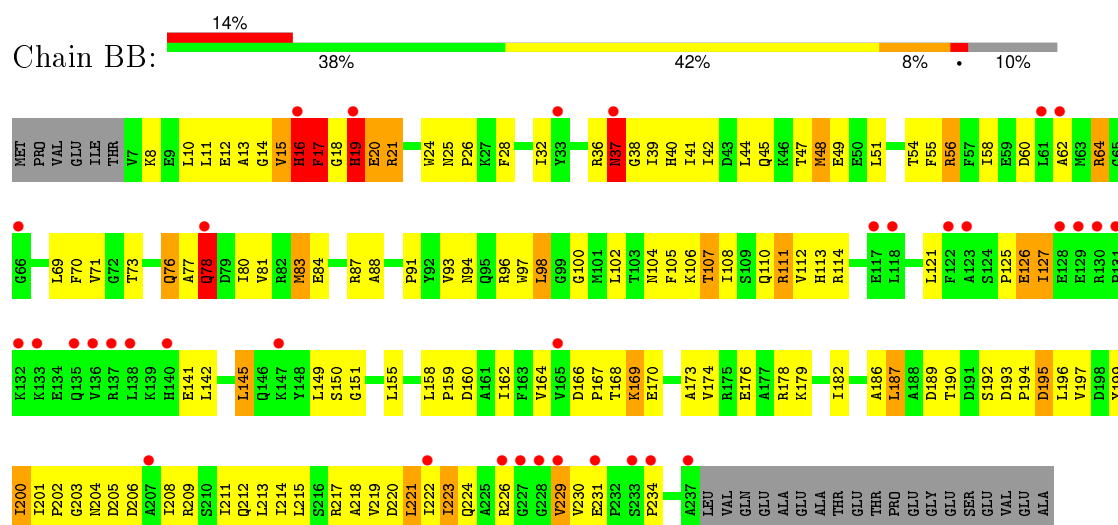


• Molecule 34: 16S Ribosomal RNA

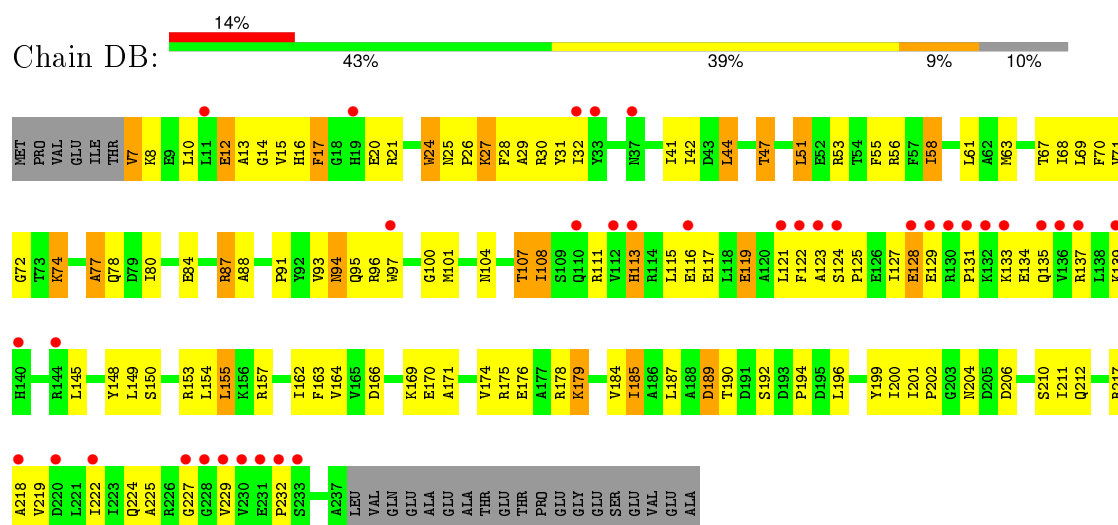


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U	G1467	A1318	C1255	G1191	U1127	U1063	G1003	C937	C866	C785	C707	C625	G548
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	C1326	C1264	C1264	A1201	U1135	G1072	G1011		C877	C793	C717	C634	C556
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		C1267	C1267	A1204	G1138	C1075	A1014		C880	C796	C720	A640	U560
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		U1308	U1308	C1245	A1180	G1117	C1054	C995		C858		C696	
		C1309	C1309	C1246	G1181	C1118	U1056	U997		A859	A777	C698	G617
		G1310	G1310	U1247	C1182	C1119	A1055	C996		C859		C699	C618
				C1248	A1183	G1120	C1056	U997		C860		C700	U619
				C1249	G1185	U1121	G1057	C998		A861	C779	C701	C620
				C1250	G1185	U1122	G1058	C999		C862	A780	C702	G621
				U1313	C1314	C1123	C1059	U1000		C863	A781	A702	A621
				A1251	G1186	C1124	C1060	C934		C864		A622	A623
				C1252				A1001					

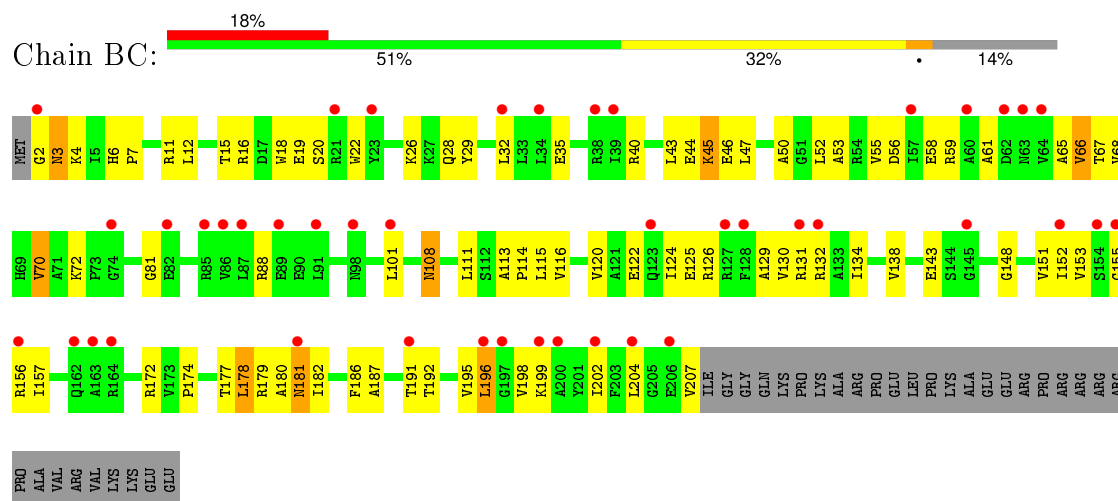
- Molecule 35: 30S ribosomal protein S2



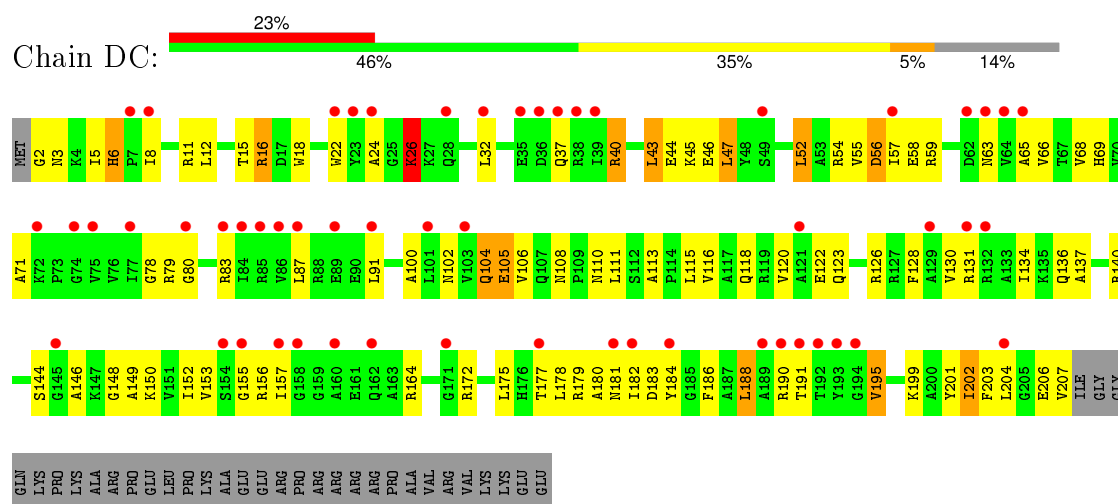
- Molecule 35: 30S ribosomal protein S2



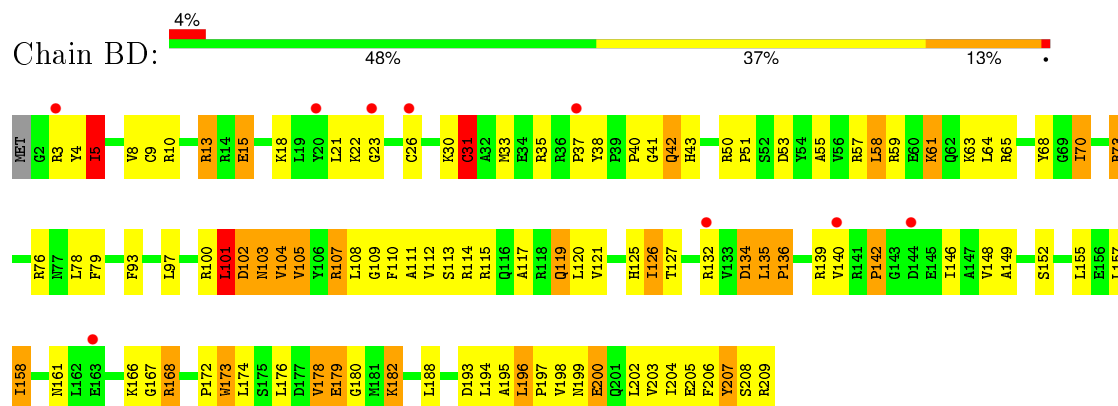
- Molecule 36: 30S ribosomal protein S3



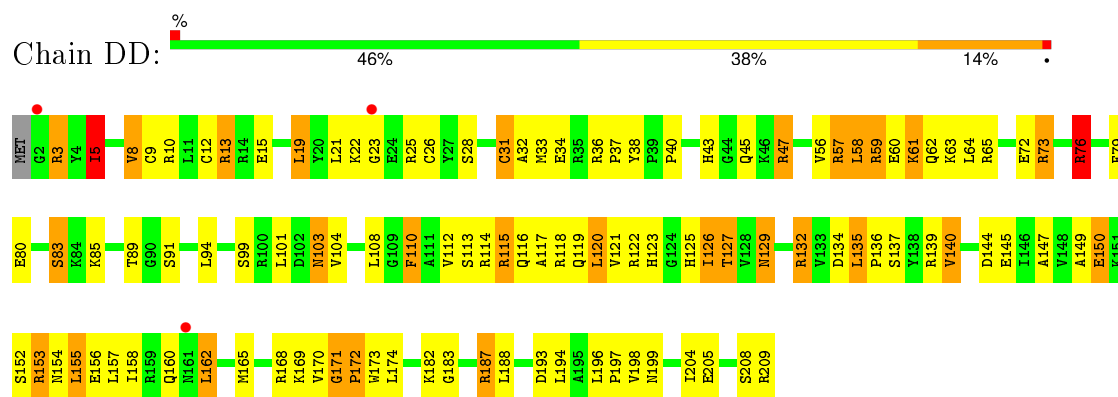
- Molecule 36: 30S ribosomal protein S3



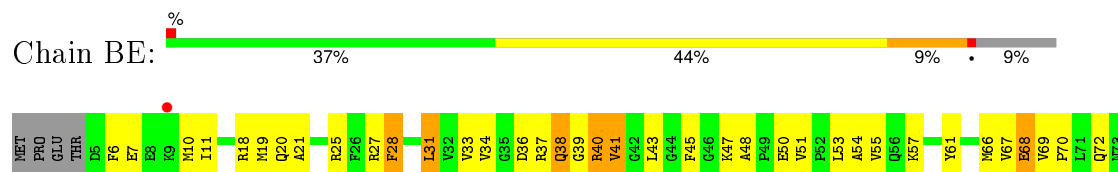
• Molecule 37: 30S ribosomal protein S4

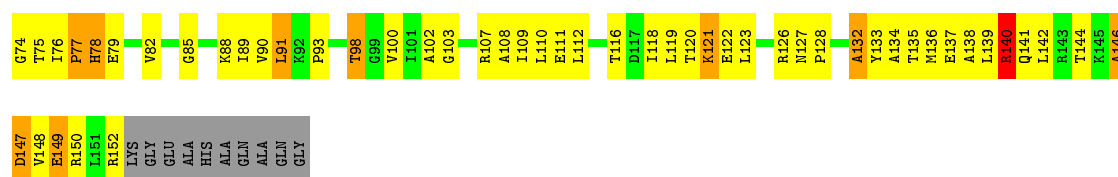


• Molecule 37: 30S ribosomal protein S4

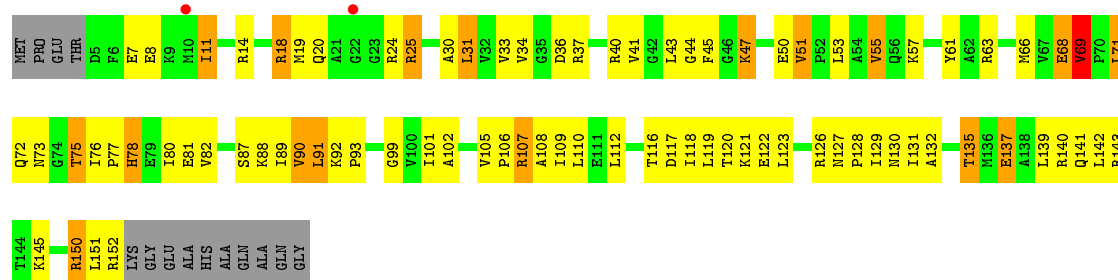


• Molecule 38: 30S ribosomal protein S5

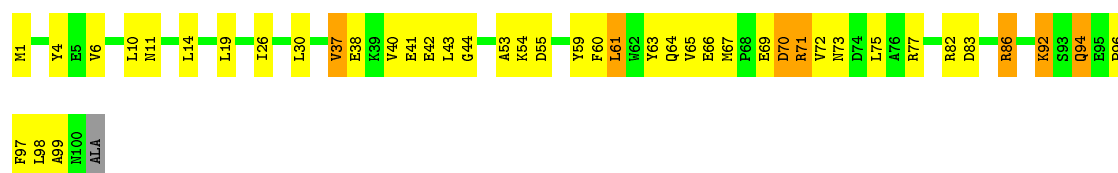




• Molecule 38: 30S ribosomal protein S5



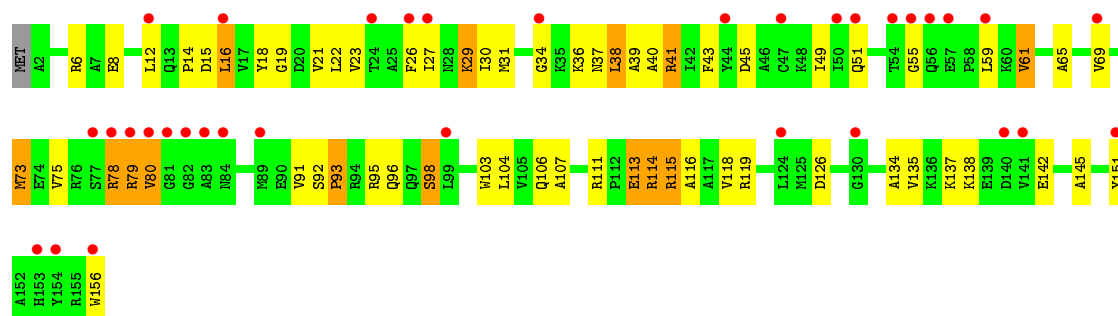
• Molecule 39: 30S ribosomal protein S6



• Molecule 39: 30S ribosomal protein S6

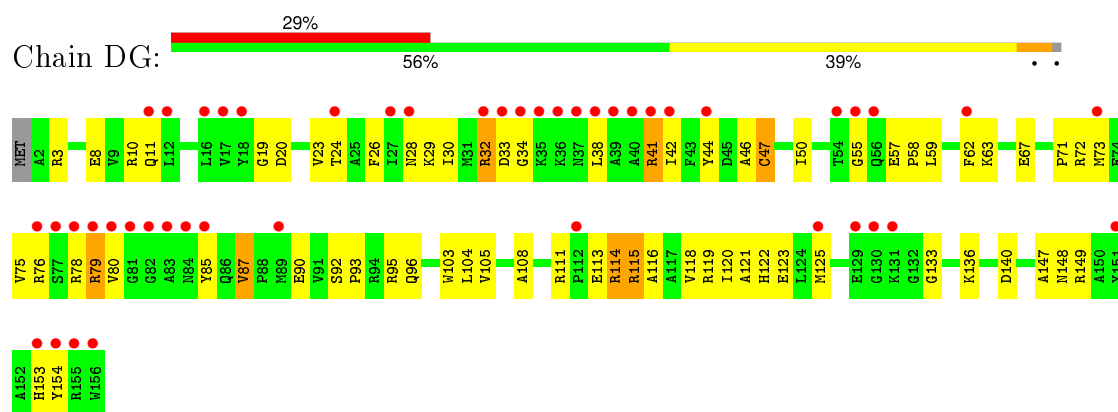


• Molecule 40: 30S ribosomal protein S7

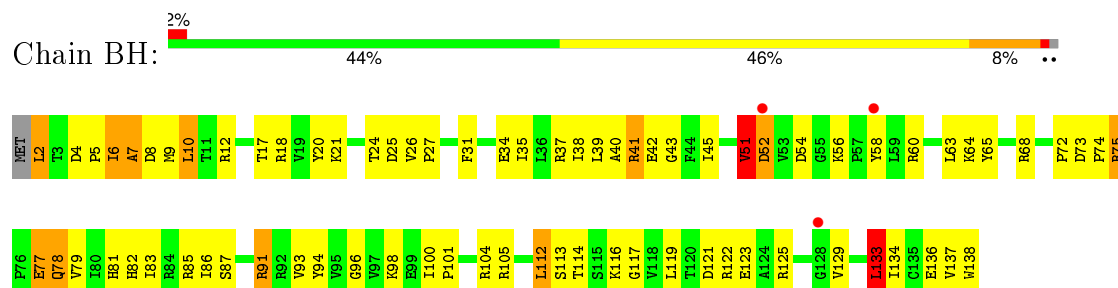


• Molecule 40: 30S ribosomal protein S7

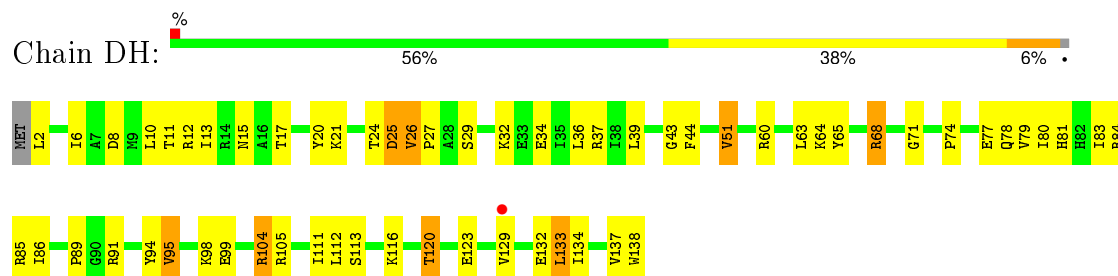




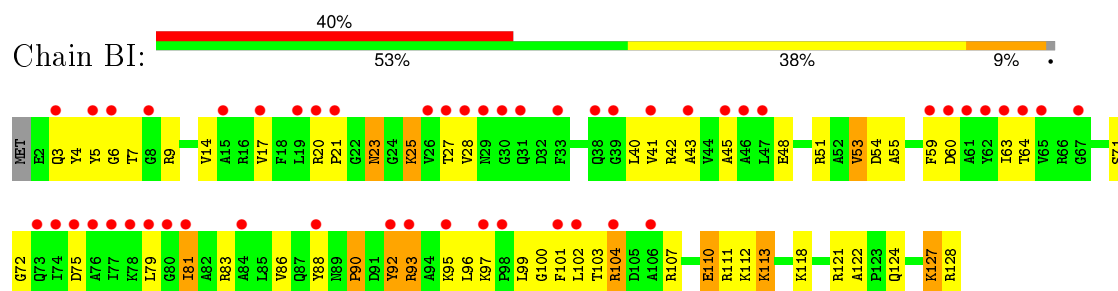
- Molecule 41: 30S ribosomal protein S8



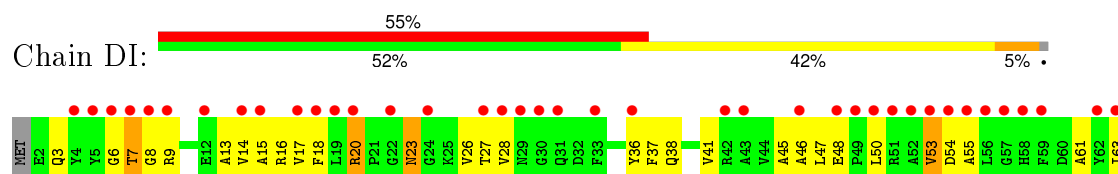
- Molecule 41: 30S ribosomal protein S8

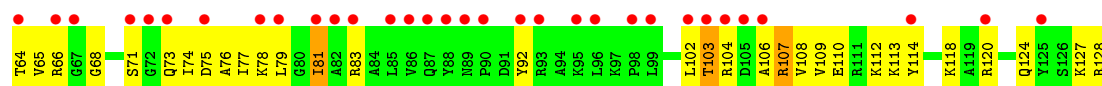


- Molecule 42: 30S ribosomal protein S9

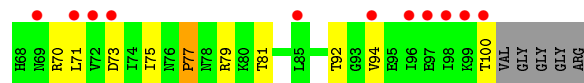
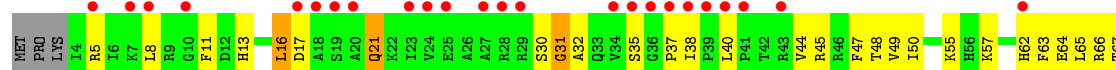


- Molecule 42: 30S ribosomal protein S9

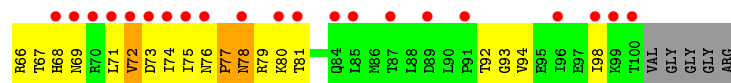
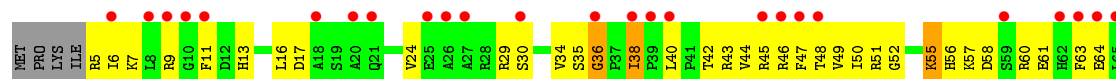




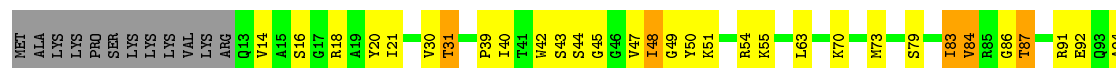
• Molecule 43: 30S ribosomal protein S10



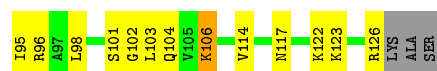
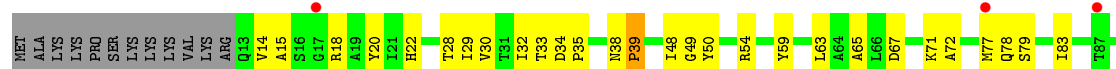
• Molecule 43: 30S ribosomal protein S10



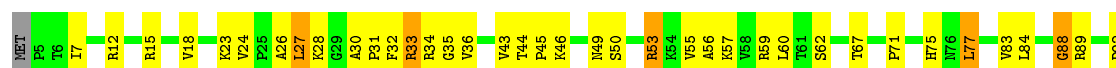
• Molecule 44: 30S ribosomal protein S11



• Molecule 44: 30S ribosomal protein S11

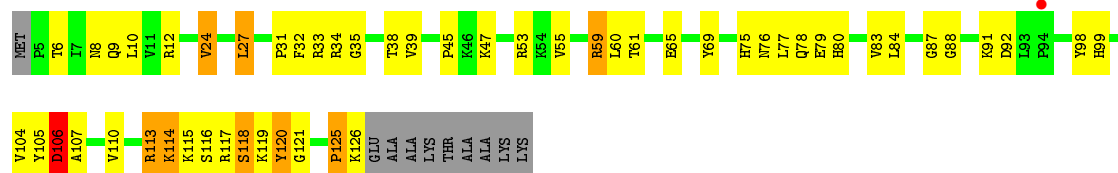


• Molecule 45: 30S ribosomal protein S12

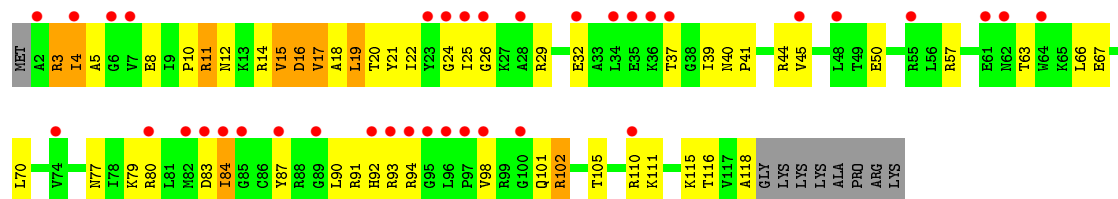




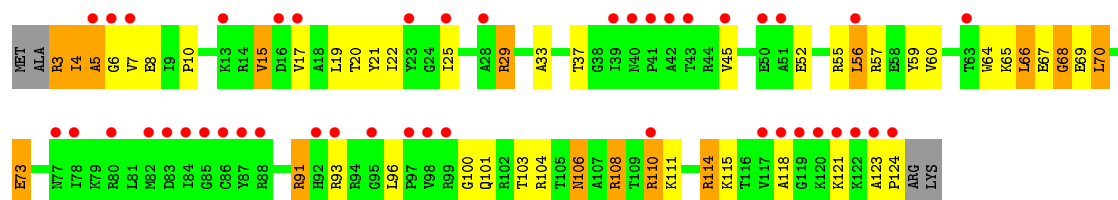
- Molecule 45: 30S ribosomal protein S12



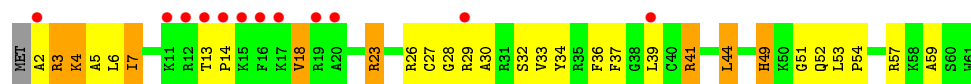
- Molecule 46: 30S ribosomal protein S13



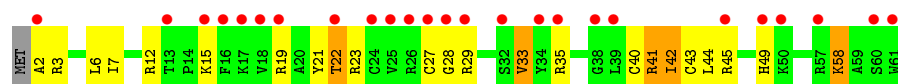
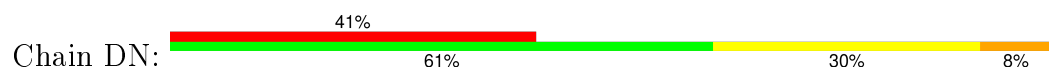
- Molecule 46: 30S ribosomal protein S13



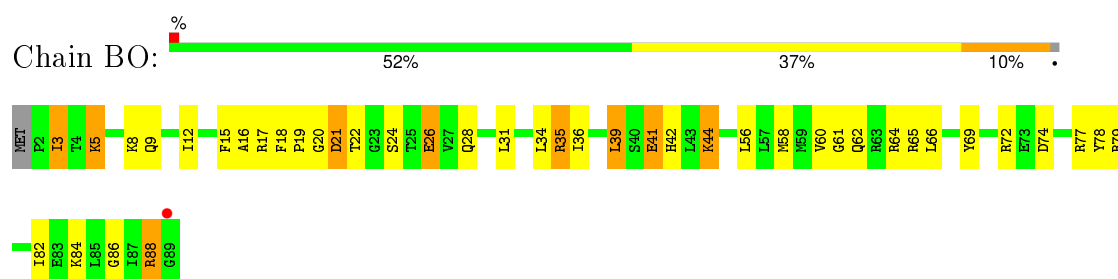
- Molecule 47: 30S ribosomal protein S14 type Z



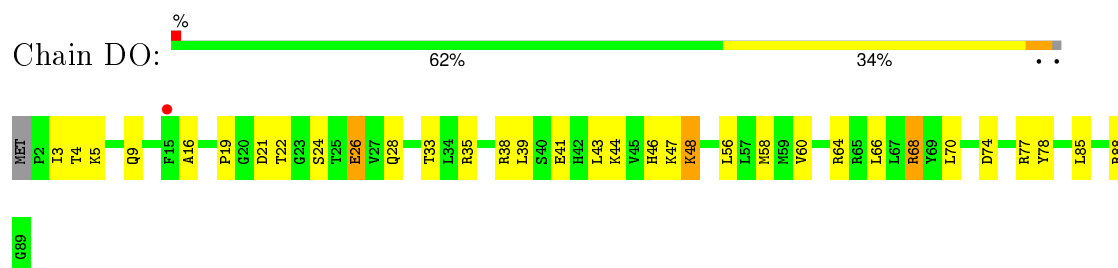
- Molecule 47: 30S ribosomal protein S14 type Z



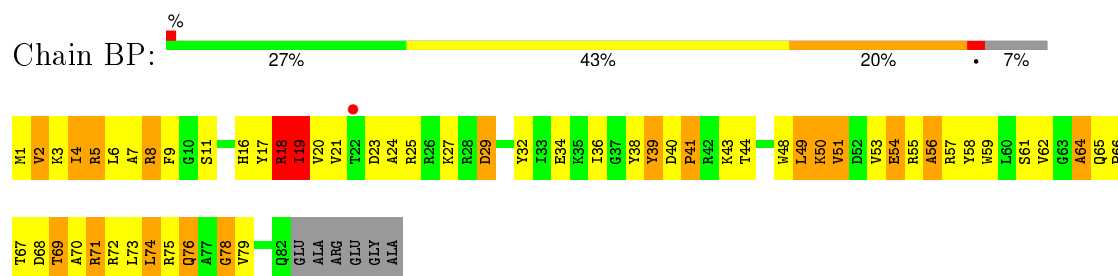
- Molecule 48: 30S ribosomal protein S15



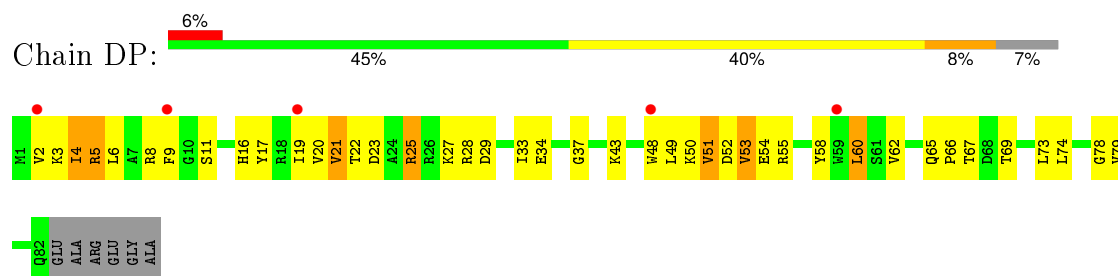
- Molecule 48: 30S ribosomal protein S15



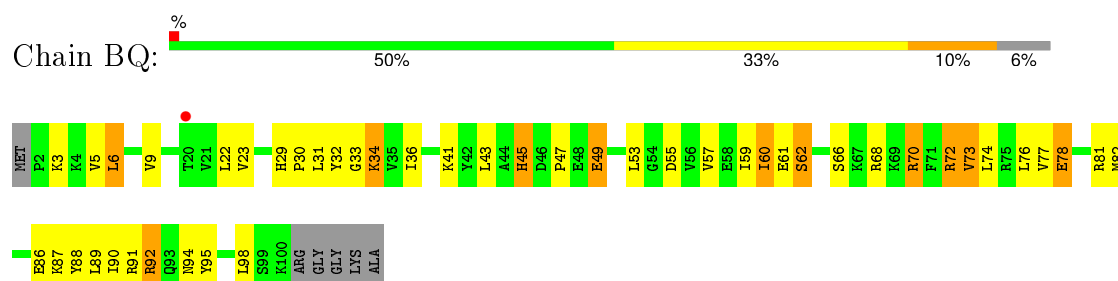
- Molecule 49: 30S ribosomal protein S16



- Molecule 49: 30S ribosomal protein S16

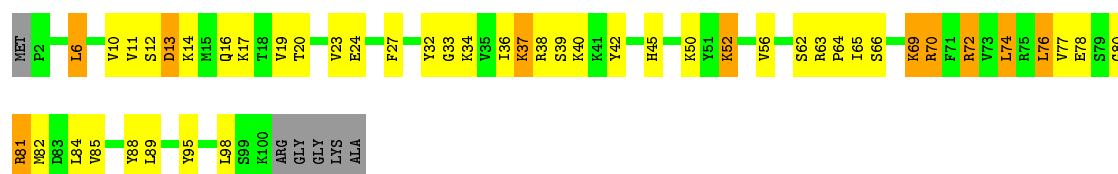


- Molecule 50: 30S ribosomal protein S17



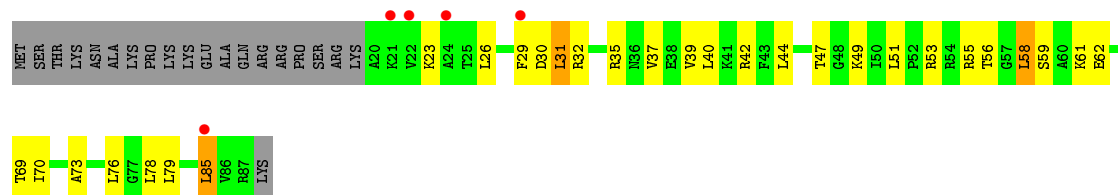
- Molecule 50: 30S ribosomal protein S17

Chain DQ: 



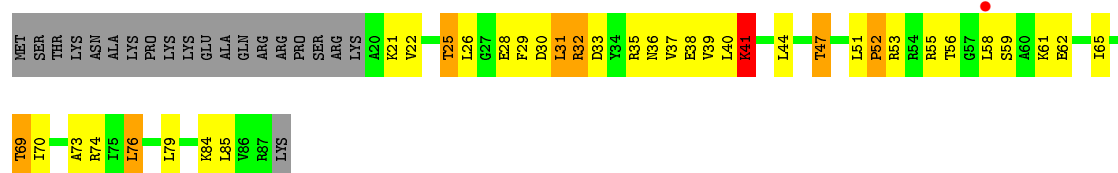
- Molecule 51: 30S ribosomal protein S18

Chain BR: 



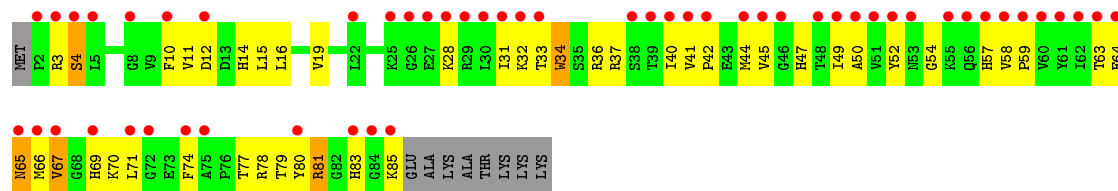
- Molecule 51: 30S ribosomal protein S18

Chain DR: 



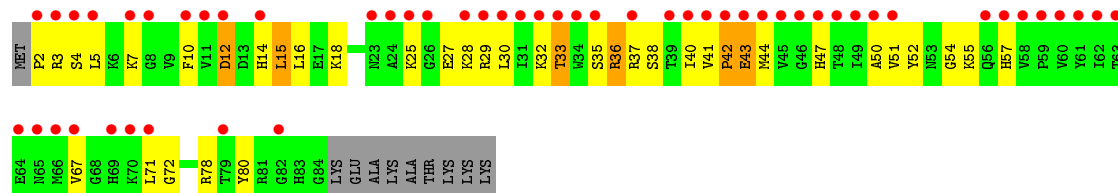
- Molecule 52: 30S ribosomal protein S19

Chain BS: 

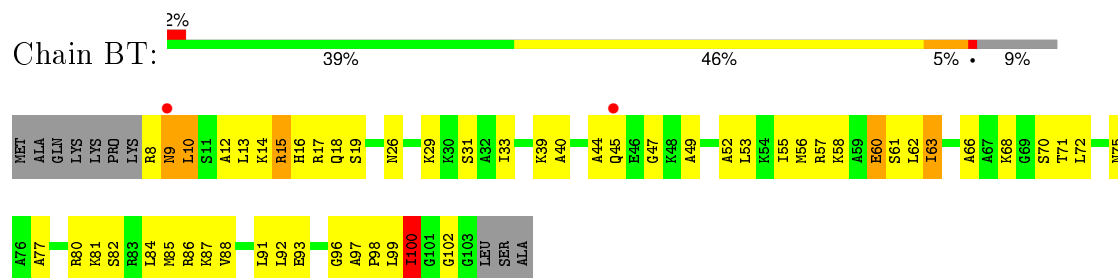


- Molecule 52: 30S ribosomal protein S19

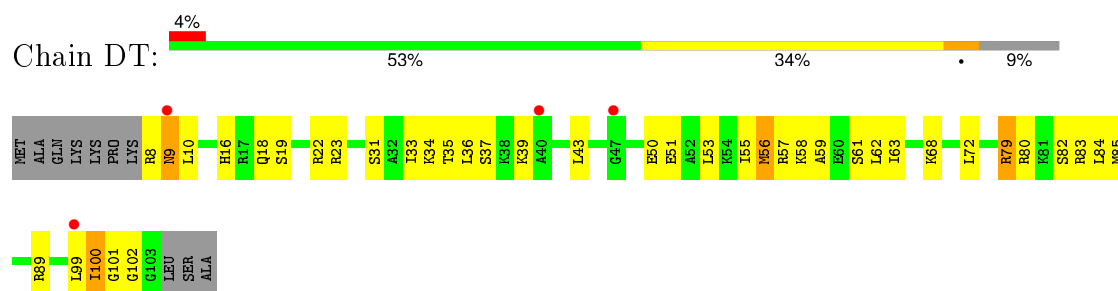
Chain DS: 



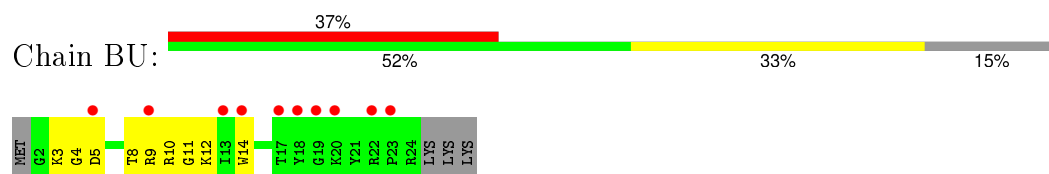
- Molecule 53: 30S ribosomal protein S20



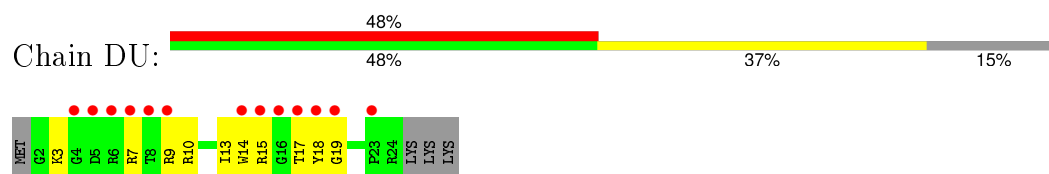
- Molecule 53: 30S ribosomal protein S20



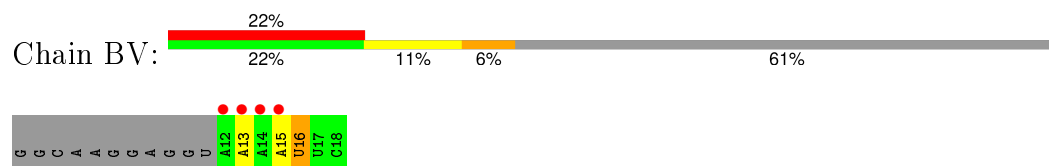
- Molecule 54: 30S ribosomal protein Thx



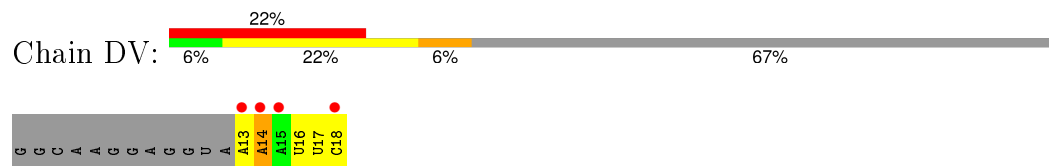
- Molecule 54: 30S ribosomal protein Thx



- Molecule 55: mRNA

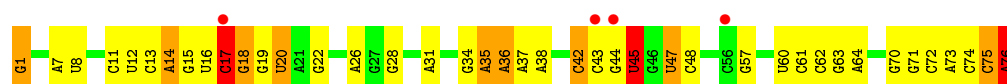


- Molecule 55: mRNA

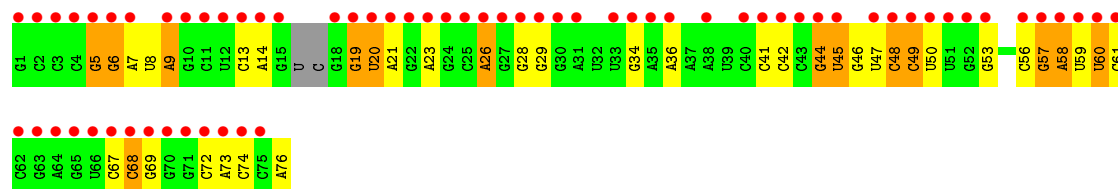


- Molecule 56: P-site tRNA

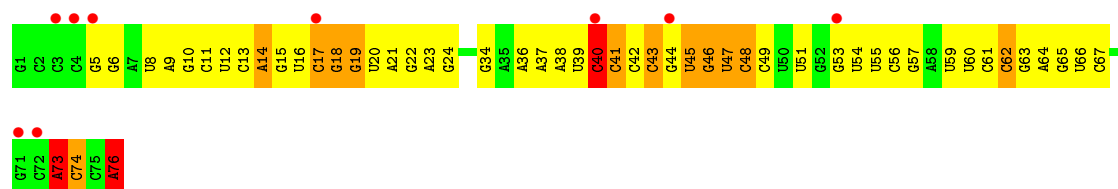




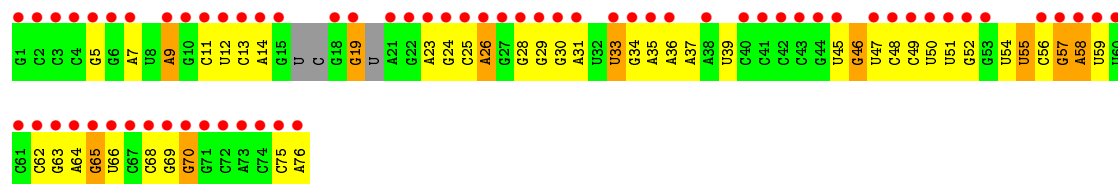
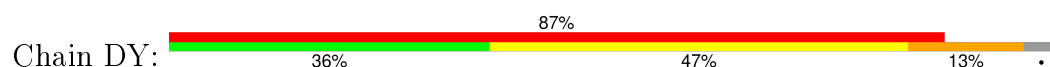
• Molecule 56: P-site tRNA



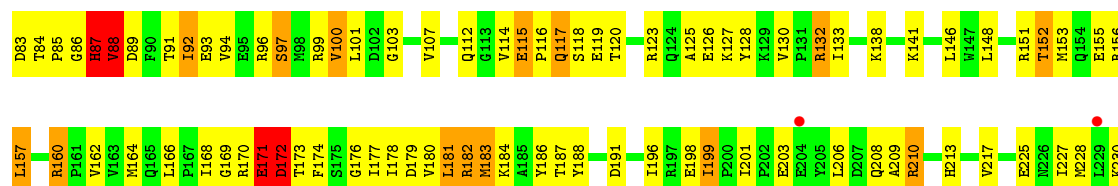
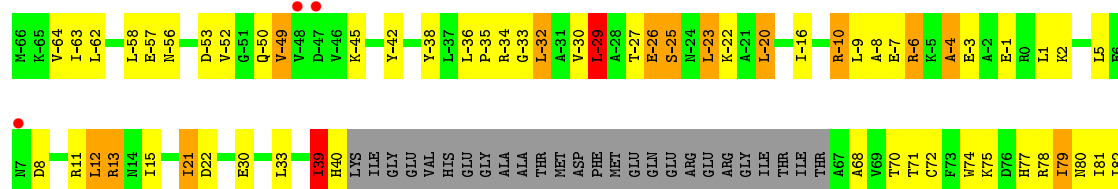
• Molecule 56: P-site tRNA

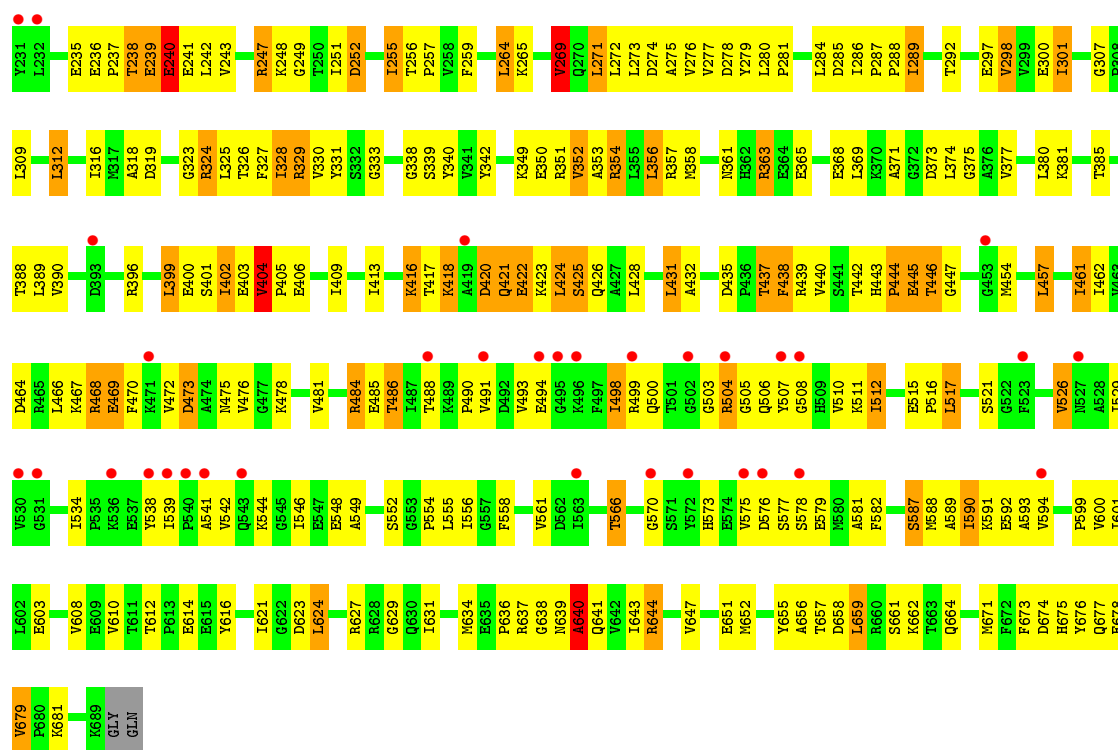


• Molecule 56: P-site tRNA

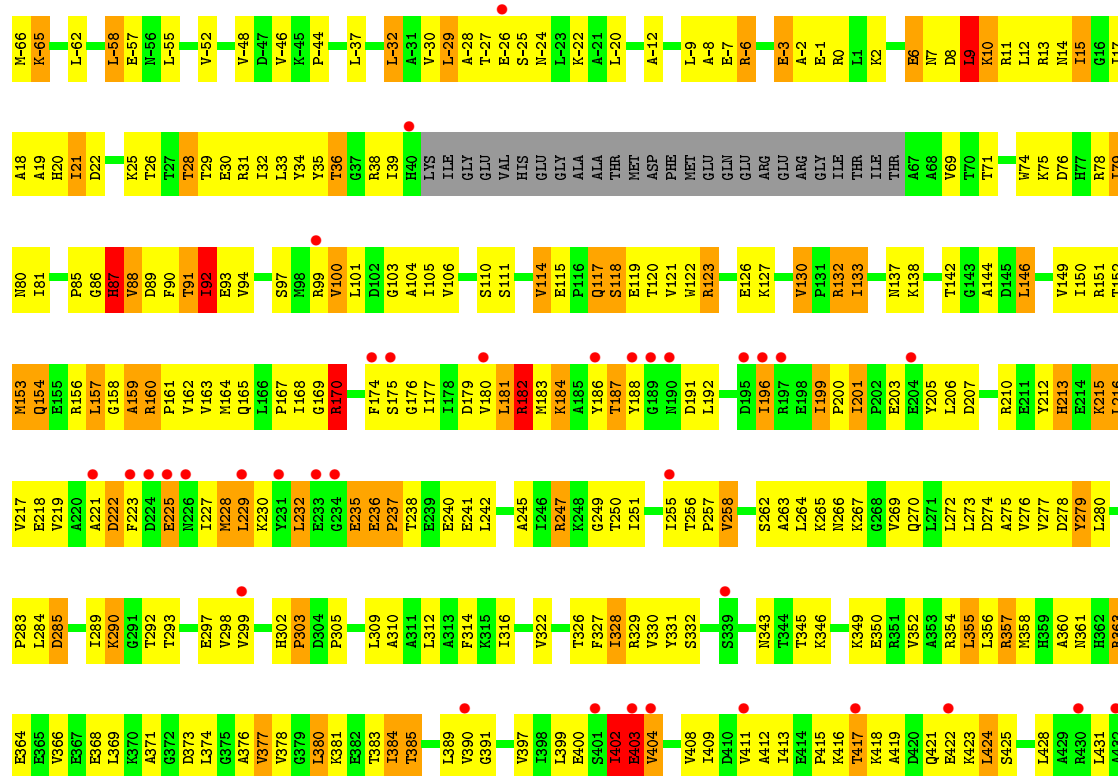


• Molecule 57: 50S ribosomal protein L9,Elongation factor G

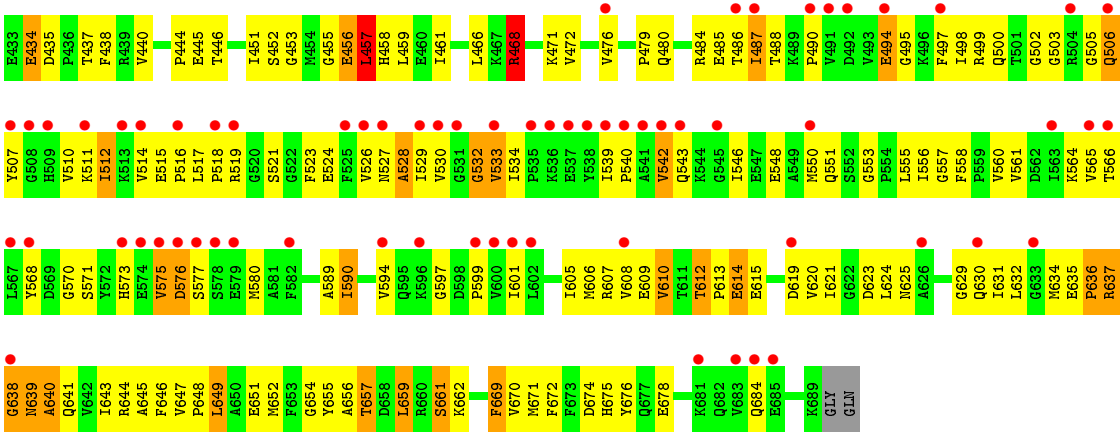




• Molecule 57: 50S ribosomal protein L9, Elongation factor G







## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.45Å 449.00Å 625.37Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.74 – 2.80 49.74 – 2.79	Depositor EDS
% Data completeness (in resolution range)	99.8 (49.74-2.80) 99.1 (49.74-2.79)	Depositor EDS
$R_{merge}$	0.20	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.08 (at 2.77Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.8.2_1309)	Depositor
R, $R_{free}$	0.200 , 0.255 0.211 , 0.262	Depositor DCC
$R_{free}$ test set	71854 reflections (5.28%)	DCC
Wilson B-factor (Å <sup>2</sup> )	54.2	Xtriage
Anisotropy	0.399	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.26 , 67.4	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 1439665 reflections	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	310279	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.54% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, GDP, ZN, MIA, SF4, MG, FUA, 4SU, 7MG, PSU

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 5$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	AA	1.51	654/68792 (1.0%)	2.24	4887/107377 (4.6%)
1	CA	1.01	71/68691 (0.1%)	1.68	1752/107219 (1.6%)
2	AB	1.21	5/2878 (0.2%)	2.01	141/4490 (3.1%)
2	CB	0.67	0/2878	1.30	18/4490 (0.4%)
3	AC	0.34	0/1083	0.65	0/1460
3	CC	0.34	0/1083	0.65	0/1460
4	AD	1.00	4/2186 (0.2%)	1.08	8/2944 (0.3%)
4	CD	0.76	0/2192	0.92	2/2951 (0.1%)
5	AE	1.03	5/1592 (0.3%)	1.08	4/2149 (0.2%)
5	CE	0.68	0/1592	0.85	1/2149 (0.0%)
6	AF	0.96	2/1619 (0.1%)	1.07	3/2193 (0.1%)
6	CF	0.64	0/1615	0.85	1/2188 (0.0%)
7	AG	0.55	0/1450	0.77	0/1959
7	CG	0.40	0/1449	0.63	0/1958
8	AH	0.84	0/1356	0.96	3/1834 (0.2%)
8	CH	0.42	0/1356	0.64	0/1834
9	AK	0.42	0/640	0.76	1/889 (0.1%)
9	CK	0.29	0/640	0.62	0/889
10	AL	0.34	0/1044	0.58	0/1416
10	CL	0.31	0/1044	0.53	0/1416
11	AN	1.06	2/1144 (0.2%)	1.09	3/1543 (0.2%)
11	CN	0.55	0/1144	0.76	0/1543
12	AO	1.00	0/943	1.09	2/1269 (0.2%)
12	CO	0.71	0/943	0.82	0/1269
13	AP	0.89	0/1156	1.08	9/1537 (0.6%)
13	CP	0.58	0/1152	0.86	1/1533 (0.1%)
14	AQ	0.98	0/1143	1.05	4/1527 (0.3%)
14	CQ	0.62	0/1143	0.77	0/1527
15	AR	0.98	0/982	1.15	4/1312 (0.3%)
15	CR	0.62	0/982	0.95	2/1312 (0.2%)
16	AS	0.76	0/887	0.96	0/1180
16	CS	0.56	0/880	0.83	2/1172 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AT	0.87	0/1105	1.04	2/1477 (0.1%)
17	CT	0.68	0/1097	0.89	0/1468
18	AU	1.18	2/977 (0.2%)	1.19	5/1301 (0.4%)
18	CU	0.67	0/977	0.78	0/1301
19	AV	1.02	1/782 (0.1%)	1.09	1/1049 (0.1%)
19	CV	0.54	0/782	0.74	0/1049
20	AW	1.21	1/897 (0.1%)	1.19	3/1205 (0.2%)
20	CW	0.77	0/897	0.91	0/1205
21	AX	0.98	1/764 (0.1%)	0.99	2/1025 (0.2%)
21	CX	0.70	0/764	0.78	1/1025 (0.1%)
22	AY	0.92	0/819	1.00	1/1095 (0.1%)
22	CY	0.62	0/819	0.77	0/1095
23	AZ	0.77	0/1483	1.00	3/2017 (0.1%)
23	CZ	0.47	0/1483	0.71	0/2017
24	A0	0.97	0/662	1.03	0/881
24	C0	0.60	0/662	0.77	0/881
25	A1	0.94	0/762	1.04	3/1014 (0.3%)
25	C1	0.70	0/762	0.86	0/1014
26	A2	0.88	0/590	0.91	0/781
26	C2	0.60	0/590	0.75	0/781
27	A3	0.99	0/474	1.09	2/635 (0.3%)
27	C3	0.51	0/469	0.78	0/630
28	A4	0.47	0/571	0.74	0/768
28	C4	0.35	0/545	0.59	0/737
29	A5	1.22	3/469 (0.6%)	1.22	4/635 (0.6%)
29	C5	0.75	0/469	0.89	2/635 (0.3%)
30	A6	0.89	0/460	1.02	1/613 (0.2%)
30	C6	0.67	0/456	0.76	0/608
31	A7	1.11	0/426	1.21	4/561 (0.7%)
31	C7	0.86	0/426	1.03	2/561 (0.4%)
32	A8	1.00	0/525	1.04	3/691 (0.4%)
32	C8	0.72	0/525	0.85	0/691
33	A9	1.09	0/310	1.04	0/407
33	C9	0.57	0/310	0.70	0/407
34	BA	0.79	7/35976 (0.0%)	1.44	496/56145 (0.9%)
34	DA	0.70	2/36119 (0.0%)	1.31	266/56370 (0.5%)
35	BB	0.47	0/1881	0.72	0/2542
35	DB	0.39	0/1860	0.64	0/2518
36	BC	0.38	0/1576	0.57	0/2130
36	DC	0.34	0/1568	0.54	0/2122
37	BD	0.52	0/1689	0.77	0/2267
37	DD	0.51	0/1708	0.77	1/2289 (0.0%)
38	BE	0.62	0/1145	0.84	0/1543

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DE	0.54	0/1149	0.78	1/1548 (0.1%)
39	BF	0.54	0/825	0.75	0/1118
39	DF	0.54	0/833	0.77	2/1128 (0.2%)
40	BG	0.40	0/1250	0.60	0/1679
40	DG	0.33	0/1254	0.52	0/1683
41	BH	0.58	0/1108	0.80	1/1494 (0.1%)
41	DH	0.48	0/1108	0.70	0/1494
42	BI	0.38	0/1005	0.61	0/1350
42	DI	0.33	0/997	0.58	0/1343
43	BJ	0.38	0/722	0.59	0/982
43	DJ	0.34	0/727	0.57	0/988
44	BK	0.55	0/848	0.75	0/1149
44	DK	0.51	0/848	0.70	0/1149
45	BL	0.74	0/946	0.88	1/1274 (0.1%)
45	DL	0.58	0/946	0.81	0/1274
46	BM	0.39	0/933	0.62	0/1253
46	DM	0.34	0/961	0.55	0/1291
47	BN	0.39	0/501	0.68	1/664 (0.2%)
47	DN	0.35	0/501	0.56	0/664
48	BO	0.56	0/739	0.81	0/985
48	DO	0.53	0/739	0.72	0/985
49	BP	0.55	0/697	0.79	1/939 (0.1%)
49	DP	0.53	0/693	0.71	0/935
50	BQ	0.63	0/836	0.78	0/1117
50	DQ	0.57	0/836	0.73	0/1117
51	BR	0.55	0/560	0.80	1/746 (0.1%)
51	DR	0.51	0/560	0.71	0/746
52	BS	0.35	0/676	0.57	0/911
52	DS	0.31	0/661	0.61	0/893
53	BT	0.49	0/730	0.74	0/965
53	DT	0.49	0/733	0.71	0/969
54	BU	0.38	0/203	0.65	0/266
54	DU	0.31	0/203	0.57	0/266
55	BV	0.71	0/165	1.15	1/254 (0.4%)
55	DV	0.60	0/137	1.05	0/211
56	BW	0.89	1/1650 (0.1%)	1.64	41/2569 (1.6%)
56	BY	0.42	0/1602	0.95	1/2493 (0.0%)
56	DW	0.70	0/1650	1.36	20/2569 (0.8%)
56	DY	0.35	0/1579	0.86	0/2455
57	BZ	0.58	0/5792	0.81	4/7844 (0.1%)
57	DZ	0.49	0/5792	0.72	4/7844 (0.1%)
All	All	0.99	761/330005 (0.2%)	1.56	7729/491779 (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
1	CA	0	1
17	CT	0	1
19	AV	0	1
21	AX	0	1
21	CX	0	1
23	AZ	0	1
24	A0	0	1
25	A1	0	1
28	A4	0	1
53	BT	0	1
53	DT	0	1
57	BZ	0	1
57	DZ	0	3
All	All	0	15

All (761) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1067	A	N9-C4	-18.69	1.26	1.37
1	AA	1188	A	N9-C4	-16.21	1.28	1.37
1	AA	990	A	N9-C4	-15.62	1.28	1.37
1	AA	354	A	N9-C4	-13.34	1.29	1.37
1	AA	1988	A	N9-C4	-12.57	1.30	1.37
1	AA	2299	A	N9-C4	-12.41	1.30	1.37
1	AA	555	G	C2-N3	-11.33	1.23	1.32
1	AA	553	A	N9-C8	11.14	1.46	1.37
1	AA	553	A	C5-C6	-11.12	1.31	1.41
1	CA	528	A	N9-C4	-10.51	1.31	1.37
1	AA	978	A	N9-C4	-10.47	1.31	1.37
4	AD	28	GLU	CG-CD	9.95	1.66	1.51
1	AA	254	A	N9-C4	-9.80	1.31	1.37
1	AA	354	A	N9-C8	9.77	1.45	1.37
1	AA	2290	A	N3-C4	-9.74	1.29	1.34
1	AA	2285	A	C5-C6	-9.55	1.32	1.41
1	AA	1342	G	N1-C2	-9.43	1.30	1.37
1	AA	978	A	C5-C6	-9.31	1.32	1.41
1	CA	330	A	N9-C4	-9.22	1.32	1.37
1	AA	1001	G	C6-O6	9.16	1.32	1.24
1	CA	1204	A	N9-C4	-9.14	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	978	A	N3-C4	-9.14	1.29	1.34
1	AA	2043	C	N1-C6	-9.00	1.31	1.37
1	AA	586	G	C6-O6	8.99	1.32	1.24
1	AA	1272	A	N9-C4	-8.98	1.32	1.37
1	AA	550	U	C2-O2	-8.92	1.14	1.22
1	AA	851	A	N9-C4	-8.70	1.32	1.37
1	AA	2553	A	C6-N1	-8.70	1.29	1.35
1	AA	990	A	C5-C6	-8.59	1.33	1.41
1	CA	1142(A)	A	N9-C4	-8.58	1.32	1.37
1	AA	2331	G	N9-C4	-8.55	1.31	1.38
1	AA	555	G	N9-C8	8.52	1.43	1.37
1	AA	553	A	C5-C4	8.46	1.44	1.38
1	AA	1988	A	N3-C4	-8.45	1.29	1.34
1	AA	829	A	N7-C5	-8.45	1.34	1.39
1	AA	1249	A	C5-C6	-8.42	1.33	1.41
1	AA	2037	A	N3-C4	-8.32	1.29	1.34
1	AA	558	G	C5-C4	-8.23	1.32	1.38
1	AA	1067	A	C5-C6	-8.23	1.33	1.41
1	AA	254	A	C5-C6	-8.22	1.33	1.41
1	AA	553	A	N3-C4	-8.20	1.29	1.34
1	AA	1189	A	N3-C4	-8.16	1.29	1.34
1	AA	1314	A	N3-C4	-8.14	1.29	1.34
1	AA	2446	A	N7-C5	-8.07	1.34	1.39
1	AA	2269	U	C4-O4	-7.98	1.17	1.23
1	AA	2278	A	C5-C4	-7.98	1.33	1.38
1	AA	354	A	C5-C6	-7.97	1.33	1.41
1	AA	990	A	C5-C4	7.96	1.44	1.38
1	AA	550	U	C2-N3	-7.91	1.32	1.37
4	AD	28	GLU	CB-CG	7.86	1.67	1.52
1	AA	1745	A	C5-C6	-7.86	1.33	1.41
1	AA	1293	A	N3-C4	-7.85	1.30	1.34
1	AA	590	A	C5-C4	-7.84	1.33	1.38
1	AA	1076	G	C5-C4	-7.83	1.32	1.38
1	AA	710	G	N3-C4	-7.83	1.29	1.35
1	AA	1249	A	N7-C5	-7.80	1.34	1.39
1	CA	1791	A	N3-C4	-7.77	1.30	1.34
1	AA	2045	G	C5-C6	-7.73	1.34	1.42
1	AA	1249	A	N3-C4	-7.71	1.30	1.34
1	AA	726	C	N1-C6	-7.68	1.32	1.37
1	AA	2331	G	N3-C4	-7.68	1.30	1.35
1	AA	2657	G	N9-C4	-7.67	1.31	1.38
1	AA	1054	C	C4-N4	-7.67	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	945	A	N9-C4	-7.64	1.33	1.37
1	AA	2298	A	C5-C4	7.64	1.44	1.38
1	AA	1311	A	N7-C5	-7.64	1.34	1.39
1	AA	1075	A	N3-C4	-7.63	1.30	1.34
1	AA	2777	A	N9-C4	-7.63	1.33	1.37
1	AA	470	C	N1-C2	-7.62	1.32	1.40
1	AA	2636	G	N9-C8	-7.61	1.32	1.37
1	AA	1076	G	C5-C6	-7.55	1.34	1.42
1	AA	2601	A	N3-C4	-7.53	1.30	1.34
1	AA	1302	G	C5-C4	-7.52	1.33	1.38
1	AA	1019	G	N7-C5	-7.51	1.34	1.39
1	AA	2775	G	C6-N1	-7.50	1.34	1.39
1	AA	2331	G	C2-N3	-7.49	1.26	1.32
1	AA	1274	G	C6-N1	-7.46	1.34	1.39
1	AA	2757	G	C2-N3	-7.46	1.26	1.32
1	CA	2441	C	N1-C6	-7.45	1.32	1.37
1	AA	896	A	N9-C4	-7.44	1.33	1.37
1	AA	2518	U	N1-C2	7.44	1.45	1.38
1	AA	2636	G	C5-C4	-7.43	1.33	1.38
1	AA	2083	G	N7-C5	-7.40	1.34	1.39
1	AA	2654	G	C6-N1	-7.39	1.34	1.39
1	AA	231	G	C6-N1	-7.37	1.34	1.39
1	AA	1188	A	C2-N3	-7.36	1.26	1.33
1	AA	1661	C	N1-C6	-7.36	1.32	1.37
1	AA	1659	G	C6-O6	-7.33	1.17	1.24
1	AA	559	U	C2-N3	-7.33	1.32	1.37
1	AA	2036	A	C6-N1	7.32	1.40	1.35
1	AA	831	A	C5-C4	-7.32	1.33	1.38
1	AA	1600	A	N7-C5	-7.31	1.34	1.39
1	AA	2500	A	N9-C4	-7.29	1.33	1.37
1	AA	1707	C	N3-C4	-7.29	1.28	1.33
1	AA	1745	A	N3-C4	-7.27	1.30	1.34
1	AA	856	G	C6-O6	-7.23	1.17	1.24
1	AA	593	G	C5-C4	-7.21	1.33	1.38
1	AA	2601	A	N9-C4	-7.21	1.33	1.37
1	AA	2451	A	N7-C5	-7.21	1.34	1.39
1	AA	2785	C	N1-C6	-7.19	1.32	1.37
1	AA	865	G	N3-C4	-7.14	1.30	1.35
1	AA	2278	A	N3-C4	-7.13	1.30	1.34
1	AA	1605	A	N7-C5	-7.06	1.35	1.39
1	AA	990	A	N1-C2	7.05	1.40	1.34
1	AA	598	A	C5-C4	-7.04	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2000	A	C5-C4	-7.02	1.33	1.38
1	AA	591	U	C4-O4	-7.01	1.18	1.23
1	AA	356	A	N9-C4	-7.00	1.33	1.37
1	CA	256	A	N7-C5	-6.97	1.35	1.39
1	CA	1378	A	N9-C4	-6.93	1.33	1.37
1	AA	1026	A	N9-C4	-6.92	1.33	1.37
1	AA	799	A	N9-C4	-6.91	1.33	1.37
1	AA	2300	A	N9-C4	6.90	1.42	1.37
1	AA	2063	U	C2-O2	-6.90	1.16	1.22
1	AA	598	A	N7-C5	-6.89	1.35	1.39
1	AA	782	A	N3-C4	-6.88	1.30	1.34
1	AA	2858	G	C5-C6	-6.88	1.35	1.42
1	AA	729	G	C6-N1	-6.88	1.34	1.39
1	AA	2067	C	N3-C4	6.85	1.38	1.33
1	CA	1558	A	N9-C4	-6.85	1.33	1.37
1	AA	2820	A	N3-C4	-6.84	1.30	1.34
1	AA	53	G	N3-C4	-6.83	1.30	1.35
1	AA	990	A	N3-C4	-6.81	1.30	1.34
34	DA	1513	A	N9-C4	-6.80	1.33	1.37
1	AA	2876	U	C4-C5	6.79	1.49	1.43
1	CA	2225	A	N9-C4	-6.78	1.33	1.37
1	AA	1605	A	C5-C6	-6.76	1.34	1.41
1	AA	590	A	N1-C2	-6.75	1.28	1.34
1	AA	1241	C	N1-C6	-6.75	1.33	1.37
1	AA	872	C	N1-C6	-6.75	1.33	1.37
1	AA	1019	G	N9-C8	-6.75	1.33	1.37
1	AA	1050	C	C2-O2	-6.75	1.18	1.24
1	AA	1809	U	N1-C2	-6.74	1.32	1.38
1	AA	2778	A	N9-C8	-6.73	1.32	1.37
1	AA	1067	A	N9-C8	6.73	1.43	1.37
1	AA	2757	G	C5-C4	-6.73	1.33	1.38
1	AA	710	G	C5-C4	-6.72	1.33	1.38
4	AD	39	LYS	CE-NZ	6.72	1.65	1.49
1	AA	1261	G	C5-C4	-6.72	1.33	1.38
1	AA	553	A	N7-C5	-6.72	1.35	1.39
1	AA	978	A	N9-C8	6.71	1.43	1.37
1	AA	26	G	C6-O6	-6.71	1.18	1.24
1	AA	1711	A	N9-C4	-6.70	1.33	1.37
1	AA	1020	C	C2-N3	-6.70	1.30	1.35
1	AA	1605	A	N3-C4	-6.70	1.30	1.34
1	AA	2612	A	C6-N1	-6.70	1.30	1.35
1	AA	2627	U	C4-O4	-6.69	1.18	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2641	A	C5-C6	-6.69	1.35	1.41
1	AA	1959	A	N9-C4	-6.69	1.33	1.37
1	AA	1725	G	N7-C5	-6.68	1.35	1.39
1	AA	835	A	N9-C4	-6.67	1.33	1.37
1	AA	1261	G	C5-C6	-6.67	1.35	1.42
1	AA	1711	A	N3-C4	-6.67	1.30	1.34
1	AA	171	A	N9-C4	-6.65	1.33	1.37
1	AA	2466	G	N3-C4	-6.65	1.30	1.35
1	CA	211	A	N9-C4	-6.64	1.33	1.37
1	AA	592	U	C2-N3	-6.63	1.33	1.37
1	AA	876	A	N7-C5	-6.62	1.35	1.39
1	AA	2060	G	N1-C2	-6.62	1.32	1.37
1	AA	2466	G	N1-C2	-6.61	1.32	1.37
1	AA	1243	U	C2-N3	-6.61	1.33	1.37
1	AA	2285	A	C6-N6	-6.61	1.28	1.33
1	AA	543	G	N9-C8	-6.60	1.33	1.37
1	AA	1745	A	N9-C4	-6.59	1.33	1.37
1	AA	978	A	N7-C5	-6.59	1.35	1.39
1	AA	1613	A	C6-N1	-6.59	1.30	1.35
1	CA	465	G	C6-N1	-6.58	1.34	1.39
1	AA	139	A	N9-C4	-6.58	1.33	1.37
1	AA	874	U	N1-C2	-6.58	1.32	1.38
1	AA	2013	U	C2-N3	-6.58	1.33	1.37
1	AA	2691	A	N3-C4	-6.57	1.30	1.34
1	AA	2778	A	N7-C5	-6.56	1.35	1.39
1	AA	732	A	N9-C4	-6.56	1.33	1.37
1	AA	2609	G	C5-C6	-6.55	1.35	1.42
1	AA	2239	A	N7-C5	-6.54	1.35	1.39
1	AA	1702	A	N9-C4	-6.54	1.33	1.37
1	AA	2641	A	N9-C8	6.53	1.43	1.37
1	AA	617	U	C2-N3	-6.52	1.33	1.37
1	AA	1200	G	C6-N1	-6.52	1.34	1.39
1	CA	2824	C	N1-C6	-6.52	1.33	1.37
1	AA	168	G	N3-C4	-6.51	1.30	1.35
1	CA	2287	A	N9-C4	-6.48	1.33	1.37
1	AA	1244	U	C2-N3	-6.46	1.33	1.37
1	AA	531	G	N1-C2	-6.46	1.32	1.37
1	AA	1993	A	N7-C5	-6.45	1.35	1.39
1	AA	597	C	N3-C4	-6.45	1.29	1.33
1	AA	2515	A	N3-C4	6.43	1.38	1.34
1	AA	2609	G	C5-C4	-6.43	1.33	1.38
1	AA	2840	G	N7-C5	-6.43	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1061	G	N7-C5	-6.43	1.35	1.39
1	AA	2093	A	C5-C4	-6.42	1.34	1.38
1	AA	2737	C	N1-C6	-6.41	1.33	1.37
1	AA	2068	G	N7-C5	-6.40	1.35	1.39
1	AA	841	G	N3-C4	6.40	1.40	1.35
1	AA	1307	C	C4-N4	-6.40	1.28	1.33
1	AA	996	C	N3-C4	-6.39	1.29	1.33
1	AA	2278	A	C6-N1	-6.38	1.31	1.35
1	CA	37	C	N1-C6	-6.38	1.33	1.37
1	AA	126	C	N1-C6	-6.38	1.33	1.37
1	AA	716	G	C5-C4	-6.38	1.33	1.38
1	AA	1000	C	C2-O2	-6.38	1.18	1.24
1	AA	2389	A	N9-C4	-6.38	1.34	1.37
1	AA	2530	A	N3-C4	-6.37	1.31	1.34
1	AA	352	U	C4-O4	-6.36	1.18	1.23
1	AA	2037	A	N7-C5	-6.36	1.35	1.39
1	AA	2475	C	C2-O2	-6.35	1.18	1.24
1	AA	1657	C	N1-C6	-6.34	1.33	1.37
21	AX	15	GLU	CG-CD	6.34	1.61	1.51
6	AF	103	LYS	CE-NZ	6.34	1.65	1.49
1	AA	597	C	C4-C5	-6.34	1.37	1.43
1	AA	2584	A	N9-C4	-6.34	1.34	1.37
1	AA	553	A	N9-C4	-6.34	1.34	1.37
1	AA	2093	A	N7-C5	-6.33	1.35	1.39
1	AA	470	C	C2-N3	-6.33	1.30	1.35
1	AA	593	G	N7-C5	-6.33	1.35	1.39
1	AA	1721	G	N7-C5	-6.32	1.35	1.39
1	AA	1283	A	N9-C8	-6.32	1.32	1.37
1	AA	521	G	N9-C8	-6.31	1.33	1.37
1	AA	16	G	N7-C5	-6.29	1.35	1.39
1	AA	654	G	N7-C5	-6.29	1.35	1.39
1	AA	2693	C	N1-C6	-6.28	1.33	1.37
1	AA	416	G	C5-C4	-6.27	1.33	1.38
1	AA	2428	C	N1-C2	-6.27	1.33	1.40
1	AA	709	G	C2-N3	-6.26	1.27	1.32
1	AA	555	G	N3-C4	-6.25	1.31	1.35
1	AA	896	A	N3-C4	-6.25	1.31	1.34
34	BA	1483	A	N9-C4	-6.24	1.34	1.37
1	AA	775	G	N1-C2	-6.23	1.32	1.37
1	AA	2617	U	C2-N3	-6.22	1.33	1.37
1	AA	608	G	C5-C4	-6.22	1.33	1.38
1	AA	1382	A	C5-C4	-6.21	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	738	C	C2-O2	-6.20	1.18	1.24
1	CA	2764	A	N9-C4	-6.20	1.34	1.37
1	AA	753	A	N9-C4	-6.20	1.34	1.37
1	AA	2893	A	N9-C4	6.19	1.41	1.37
1	AA	2590	G	N7-C5	-6.19	1.35	1.39
1	AA	2794	A	N3-C4	-6.19	1.31	1.34
1	AA	1067	A	N3-C4	-6.19	1.31	1.34
1	AA	2619	G	C5-C4	-6.19	1.34	1.38
1	AA	2277	U	N1-C6	-6.19	1.32	1.38
1	AA	1388	A	N3-C4	-6.17	1.31	1.34
1	AA	549	U	C4-O4	-6.17	1.18	1.23
1	AA	2299	A	C5-C6	-6.17	1.35	1.41
1	AA	1020	C	C2-O2	-6.17	1.18	1.24
1	AA	52	A	N9-C4	-6.16	1.34	1.37
1	AA	1329	G	N7-C5	-6.16	1.35	1.39
1	AA	543	G	N7-C5	-6.15	1.35	1.39
1	AA	650	G	N7-C5	-6.15	1.35	1.39
1	AA	2830	A	N3-C4	-6.15	1.31	1.34
1	AA	1707	C	N1-C6	-6.14	1.33	1.37
1	AA	2371	C	N1-C6	-6.14	1.33	1.37
1	AA	1303	C	N1-C6	-6.14	1.33	1.37
1	AA	725	C	N3-C4	-6.13	1.29	1.33
1	AA	354	A	C5-C4	6.12	1.43	1.38
1	AA	2581	G	N3-C4	-6.12	1.31	1.35
1	AA	2092	G	N3-C4	-6.11	1.31	1.35
1	CA	2060	A	N9-C4	-6.11	1.34	1.37
11	AN	104	LYS	CE-NZ	6.11	1.64	1.49
1	AA	1733	C	N1-C2	6.11	1.46	1.40
1	AA	2278	A	C5-C6	-6.10	1.35	1.41
1	AA	2003	A	C6-N1	-6.10	1.31	1.35
1	AA	2003	A	N3-C4	-6.09	1.31	1.34
1	AA	1054	C	N3-C4	-6.09	1.29	1.33
1	AA	552	C	N1-C6	-6.08	1.33	1.37
1	AA	1066	A	N7-C5	-6.08	1.35	1.39
1	AA	541	C	N3-C4	-6.08	1.29	1.33
1	AA	1066	A	C5-C6	-6.07	1.35	1.41
1	AA	2029	C	N1-C6	-6.07	1.33	1.37
1	AA	255	G	C5-C4	-6.07	1.34	1.38
1	AA	1282	G	C5-C4	-6.07	1.34	1.38
1	AA	884	C	N3-C4	-6.06	1.29	1.33
5	AE	163	GLU	CG-CD	6.06	1.61	1.51
1	AA	552	C	N3-C4	-6.05	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2466	G	C6-N1	-6.05	1.35	1.39
1	AA	2291	G	N7-C5	-6.04	1.35	1.39
1	AA	2514	G	C5-C4	-6.04	1.34	1.38
1	AA	613	A	N7-C5	-6.03	1.35	1.39
1	AA	1081	U	C2-N3	-6.03	1.33	1.37
1	AA	1845	G	C5-C6	-6.02	1.36	1.42
1	AA	1035	G	C2-N3	-6.02	1.27	1.32
1	AA	2035	A	N9-C4	-6.02	1.34	1.37
1	AA	791	G	N7-C5	-6.02	1.35	1.39
20	AW	30	GLU	CG-CD	6.01	1.60	1.51
1	AA	2044	U	N1-C6	-6.01	1.32	1.38
1	AA	2294	G	N1-C2	-6.01	1.32	1.37
1	AA	473	A	C6-N1	-6.01	1.31	1.35
1	AA	2605	U	C2-N3	-6.00	1.33	1.37
1	AA	1067	A	N7-C5	-6.00	1.35	1.39
1	AA	1274	G	N9-C4	-6.00	1.33	1.38
1	AA	1055	A	N9-C4	-5.99	1.34	1.37
1	AA	2405	A	N7-C5	-5.99	1.35	1.39
1	AA	2834	C	N1-C6	-5.99	1.33	1.37
1	AA	2562	G	N7-C5	-5.98	1.35	1.39
1	AA	605	G	C6-N1	-5.98	1.35	1.39
1	AA	1048	G	C2-N2	-5.98	1.28	1.34
1	AA	2034	G	C6-O6	-5.98	1.18	1.24
1	AA	595	A	N7-C5	-5.97	1.35	1.39
1	AA	1795	G	N1-C2	-5.97	1.32	1.37
1	AA	1345	G	N7-C5	-5.97	1.35	1.39
1	AA	1686	U	C4-O4	-5.96	1.18	1.23
29	A5	6	VAL	CB-CG2	-5.96	1.40	1.52
1	AA	2054	G	C6-N1	-5.96	1.35	1.39
1	AA	1395	A	N3-C4	5.95	1.38	1.34
1	AA	1029	A	C8-N7	-5.95	1.27	1.31
1	CA	1822	G	N3-C4	-5.95	1.31	1.35
1	AA	2019	G	C2-N3	5.94	1.37	1.32
1	CA	515	A	N3-C4	-5.94	1.31	1.34
1	AA	1249	A	N9-C8	5.93	1.42	1.37
1	AA	555	G	C6-N1	-5.93	1.35	1.39
1	AA	1302	G	N7-C5	-5.93	1.35	1.39
1	AA	2565	G	N9-C8	-5.93	1.33	1.37
1	AA	1041	C	N1-C6	-5.93	1.33	1.37
1	CA	2042	A	N9-C4	-5.92	1.34	1.37
1	AA	2650	G	N7-C5	-5.92	1.35	1.39
1	AA	597	C	N1-C2	-5.92	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	180	A	N9-C8	-5.91	1.33	1.37
1	AA	1711	A	C5-C6	-5.91	1.35	1.41
1	AA	119	G	N3-C4	-5.91	1.31	1.35
1	AA	470	C	C2-O2	-5.91	1.19	1.24
1	AA	561	A	C5-C4	-5.91	1.34	1.38
1	AA	1659	G	C5-C6	-5.91	1.36	1.42
1	AA	2084	A	C5-C6	5.91	1.46	1.41
1	AA	2828	G	C6-N1	-5.91	1.35	1.39
1	AA	1237	G	C5-C4	-5.90	1.34	1.38
1	AA	630	U	N1-C2	-5.90	1.33	1.38
1	AA	1441	A	C5-C6	-5.90	1.35	1.41
1	AA	780	G	N7-C5	-5.89	1.35	1.39
1	AA	1472	G	C5-C6	-5.89	1.36	1.42
1	AA	1343	C	N1-C6	-5.88	1.33	1.37
1	CA	310	A	N9-C4	-5.88	1.34	1.37
1	AA	1234	A	N3-C4	-5.87	1.31	1.34
1	AA	1255	A	C5-C4	-5.87	1.34	1.38
1	CA	1378	A	N3-C4	-5.87	1.31	1.34
1	AA	2711	C	N1-C6	-5.86	1.33	1.37
1	AA	2040	G	N9-C8	-5.86	1.33	1.37
1	AA	183	G	C6-O6	5.86	1.29	1.24
1	AA	2476	C	C4-N4	-5.85	1.28	1.33
1	AA	842	C	C2-O2	-5.85	1.19	1.24
1	AA	2505	U	C2-O2	-5.85	1.17	1.22
1	CA	2438	U	C2-N3	-5.85	1.33	1.37
1	AA	598	A	C8-N7	-5.83	1.27	1.31
34	BA	1523	G	N3-C4	-5.83	1.31	1.35
1	AA	710	G	C2-N3	-5.83	1.28	1.32
1	AA	826	U	C5-C6	-5.83	1.28	1.34
1	AA	825	G	N7-C5	-5.83	1.35	1.39
1	CA	2058	A	N3-C4	-5.82	1.31	1.34
1	AA	1332	A	N7-C5	-5.82	1.35	1.39
1	AA	990	A	N7-C5	-5.82	1.35	1.39
34	BA	1511	G	C5-C4	-5.82	1.34	1.38
1	AA	1378	G	N3-C4	-5.82	1.31	1.35
1	AA	2525	G	N3-C4	5.82	1.39	1.35
1	AA	2605	U	N3-C4	-5.81	1.33	1.38
1	AA	2525	G	C8-N7	-5.81	1.27	1.30
1	AA	2490	A	N9-C4	-5.81	1.34	1.37
1	CA	1791	A	C5-C4	-5.80	1.34	1.38
1	AA	1045	U	C4-O4	-5.80	1.19	1.23
1	AA	499	G	C6-N1	-5.80	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2278	A	N1-C2	-5.80	1.29	1.34
1	AA	2820	A	N7-C5	-5.80	1.35	1.39
1	AA	889	G	N3-C4	-5.79	1.31	1.35
1	AA	1332	A	N3-C4	-5.79	1.31	1.34
1	AA	702	A	N9-C4	-5.79	1.34	1.37
1	CA	1781	C	N3-C4	5.79	1.38	1.33
1	AA	2383	G	C5-C4	-5.78	1.34	1.38
1	AA	2442	A	C6-N1	-5.77	1.31	1.35
1	AA	1287	A	N9-C8	-5.77	1.33	1.37
1	AA	855	G	N7-C5	-5.77	1.35	1.39
1	AA	2493	G	N7-C5	-5.76	1.35	1.39
1	AA	1679	A	N3-C4	-5.76	1.31	1.34
1	AA	1049	G	C8-N7	-5.75	1.27	1.30
1	CA	1237	A	N9-C4	-5.75	1.34	1.37
1	AA	2068	G	C6-O6	-5.75	1.19	1.24
1	CA	2585	U	C2-N3	5.73	1.41	1.37
1	AA	866	A	C5-C4	-5.73	1.34	1.38
1	AA	789	G	N9-C4	-5.72	1.33	1.38
1	AA	2553	A	N3-C4	-5.72	1.31	1.34
1	AA	2582	G	C2-N3	-5.72	1.28	1.32
1	AA	1994	A	C6-N1	-5.72	1.31	1.35
1	AA	2400	A	N3-C4	-5.72	1.31	1.34
18	AU	15	LYS	CE-NZ	5.71	1.63	1.49
1	AA	1694	G	C2-N3	-5.71	1.28	1.32
1	AA	590	A	C5-C6	-5.71	1.35	1.41
1	AA	2454	C	N1-C2	-5.71	1.34	1.40
1	AA	254	A	N7-C5	-5.70	1.35	1.39
1	AA	2039	U	N3-C4	-5.69	1.33	1.38
1	AA	1812	C	N3-C4	5.69	1.38	1.33
1	AA	421	A	C5-C4	-5.69	1.34	1.38
1	AA	781	A	N7-C5	-5.68	1.35	1.39
1	AA	2331	G	N9-C8	5.68	1.41	1.37
1	AA	240	A	N3-C4	5.68	1.38	1.34
1	AA	46	C	C2-N3	-5.68	1.31	1.35
1	AA	608	G	N3-C4	-5.67	1.31	1.35
1	AA	1082	G	C5-C4	-5.67	1.34	1.38
1	AA	553	A	N1-C2	5.66	1.39	1.34
1	AA	979	G	N7-C5	-5.66	1.35	1.39
1	AA	73	A	N3-C4	-5.66	1.31	1.34
1	AA	1659	G	N7-C5	-5.66	1.35	1.39
56	BW	47	U	N1-C2	5.66	1.43	1.38
1	AA	492	A	C6-N6	-5.65	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2586	G	C6-O6	-5.65	1.19	1.24
1	AA	821	A	N9-C4	-5.64	1.34	1.37
1	AA	2643	G	N7-C5	-5.64	1.35	1.39
1	AA	849	A	N3-C4	-5.64	1.31	1.34
1	AA	1305	G	C6-N1	-5.64	1.35	1.39
1	AA	1711	A	N7-C5	-5.64	1.35	1.39
1	AA	1035	G	C5-C4	-5.63	1.34	1.38
1	AA	1709	C	C4-N4	-5.63	1.28	1.33
5	AE	184	VAL	CB-CG2	-5.63	1.41	1.52
1	CA	2448	A	N9-C4	-5.63	1.34	1.37
5	AE	40	GLU	CG-CD	5.62	1.60	1.51
34	BA	782	A	N3-C4	-5.62	1.31	1.34
1	AA	517	A	N7-C5	-5.62	1.35	1.39
1	AA	354	A	N3-C4	-5.62	1.31	1.34
1	AA	1617	A	C5-C6	-5.62	1.35	1.41
1	AA	494	G	C6-N1	-5.61	1.35	1.39
1	AA	622	G	N9-C8	-5.61	1.33	1.37
1	AA	1814	A	N3-C4	-5.61	1.31	1.34
1	AA	1048	G	N1-C2	-5.61	1.33	1.37
1	AA	2701	U	C3'-O3'	5.60	1.50	1.42
1	AA	487	C	N3-C4	-5.60	1.30	1.33
1	AA	602	G	C2-N3	-5.60	1.28	1.32
1	AA	1027	A	C5-C4	-5.60	1.34	1.38
1	CA	785	G	C6-N1	-5.60	1.35	1.39
1	AA	789	G	N9-C8	-5.59	1.33	1.37
1	AA	531	G	N3-C4	-5.59	1.31	1.35
1	AA	493	G	C6-N1	-5.59	1.35	1.39
1	AA	1255	A	C8-N7	-5.59	1.27	1.31
1	AA	1661	C	C2-N3	-5.59	1.31	1.35
1	AA	188	A	C6-N1	5.58	1.39	1.35
2	AB	26	A	N7-C5	-5.58	1.35	1.39
1	AA	340	C	N3-C4	-5.58	1.30	1.33
1	AA	1834	A	N3-C4	-5.58	1.31	1.34
1	CA	2577	A	N7-C5	-5.58	1.35	1.39
1	AA	2782	C	N1-C6	-5.58	1.33	1.37
1	CA	586	A	N3-C4	-5.57	1.31	1.34
1	AA	1072	U	N3-C4	5.57	1.43	1.38
1	AA	2444	A	N7-C5	-5.57	1.35	1.39
1	AA	2620	G	C6-O6	-5.57	1.19	1.24
1	AA	1741	C	N1-C6	-5.56	1.33	1.37
1	CA	563	G	N9-C4	-5.56	1.33	1.38
1	AA	438	G	N9-C4	5.56	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1696	G	N7-C5	-5.56	1.35	1.39
1	AA	2834	C	N3-C4	-5.55	1.30	1.33
1	AA	1745	A	N9-C8	5.54	1.42	1.37
1	AA	499	G	N1-C2	-5.54	1.33	1.37
1	AA	1033	G	N9-C8	-5.54	1.33	1.37
1	AA	2881	C	N1-C2	-5.53	1.34	1.40
1	CA	1776	G	C8-N7	-5.53	1.27	1.30
1	AA	2387	G	C5-C4	-5.53	1.34	1.38
1	AA	1067	A	N1-C2	5.53	1.39	1.34
1	AA	2281	A	N9-C4	-5.53	1.34	1.37
1	AA	2003	A	C5-C6	-5.52	1.36	1.41
1	AA	55	A	C6-N1	-5.52	1.31	1.35
1	AA	31	C	N3-C4	-5.52	1.30	1.33
1	AA	1293	A	N9-C4	-5.51	1.34	1.37
1	AA	2340	A	N7-C5	-5.51	1.35	1.39
1	AA	987	G	C5-C4	-5.51	1.34	1.38
1	AA	2545	A	N9-C4	-5.51	1.34	1.37
1	AA	2691	A	N9-C4	-5.51	1.34	1.37
1	AA	517	A	C8-N7	-5.50	1.27	1.31
1	AA	1251	G	C5-C4	-5.50	1.34	1.38
1	AA	1832	G	N7-C5	5.50	1.42	1.39
1	AA	2094	G	C5-C4	-5.49	1.34	1.38
1	AA	990	A	C2-N3	5.49	1.38	1.33
1	AA	878	G	N7-C5	5.49	1.42	1.39
1	AA	2459	G	C6-N1	-5.48	1.35	1.39
1	AA	29	U	C4-O4	-5.48	1.19	1.23
1	AA	200	A	N3-C4	-5.48	1.31	1.34
1	AA	831	A	N9-C8	-5.48	1.33	1.37
1	AA	2065	C	N1-C6	-5.48	1.33	1.37
1	AA	541	C	C2-N3	-5.48	1.31	1.35
1	AA	593	G	C5-C6	-5.48	1.36	1.42
1	AA	2024	G	C6-N1	-5.47	1.35	1.39
1	AA	1853	G	C6-N1	-5.47	1.35	1.39
34	BA	1483	A	N9-C8	-5.47	1.33	1.37
1	AA	1073	A	N9-C8	-5.47	1.33	1.37
1	AA	2470	G	N3-C4	-5.47	1.31	1.35
1	AA	113	C	N1-C6	-5.46	1.33	1.37
1	AA	1078	A	C5-C6	-5.46	1.36	1.41
1	CA	1652	A	N9-C4	-5.46	1.34	1.37
1	AA	2087	C	N3-C4	-5.46	1.30	1.33
1	AA	810	G	N3-C4	-5.45	1.31	1.35
1	AA	1824	C	N3-C4	-5.45	1.30	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	2435	A	N9-C4	-5.45	1.34	1.37
1	AA	2707	C	N3-C4	-5.44	1.30	1.33
1	AA	369	A	C5-C6	-5.44	1.36	1.41
1	AA	593	G	C6-O6	-5.44	1.19	1.24
1	AA	1423	G	N1-C2	-5.44	1.33	1.37
1	AA	2298	A	N3-C4	-5.44	1.31	1.34
1	AA	2386	C	N1-C6	-5.44	1.33	1.37
1	AA	511	C	C2-O2	-5.43	1.19	1.24
1	AA	2035	A	N9-C8	-5.43	1.33	1.37
1	AA	2092	G	C5-C4	-5.43	1.34	1.38
1	AA	2546	A	N9-C4	-5.43	1.34	1.37
1	AA	775	G	C6-N1	-5.43	1.35	1.39
1	AA	853	C	C4-C5	5.42	1.47	1.43
1	CA	2437	U	C2-N3	-5.42	1.33	1.37
1	AA	606	G	C8-N7	5.42	1.34	1.30
1	AA	2014	G	C3'-C2'	5.42	1.58	1.52
1	AA	2799	U	N3-C4	-5.42	1.33	1.38
1	AA	1371	G	C6-N1	-5.41	1.35	1.39
1	AA	2881	C	N1-C6	-5.41	1.33	1.37
1	AA	1049	G	C2-N2	-5.41	1.29	1.34
1	CA	1653	G	N7-C5	-5.41	1.36	1.39
1	AA	1374	G	C2-N2	-5.41	1.29	1.34
1	AA	2620	G	C5-C6	-5.41	1.36	1.42
1	AA	1707	C	C4-C5	-5.40	1.38	1.43
1	AA	2468	C	C2-O2	5.40	1.29	1.24
5	AE	165	VAL	CB-CG1	-5.40	1.41	1.52
1	CA	1791	A	C6-N1	-5.40	1.31	1.35
1	AA	1291	G	C6-N1	-5.39	1.35	1.39
2	AB	76	G	C6-N1	-5.39	1.35	1.39
1	AA	1022	C	C4-N4	-5.39	1.29	1.33
34	BA	1397	C	C2-N3	5.39	1.40	1.35
1	AA	2639	G	C5-C6	-5.38	1.36	1.42
1	AA	792	G	C2-N3	-5.38	1.28	1.32
1	AA	1274	G	N3-C4	-5.38	1.31	1.35
1	AA	2300	A	N3-C4	5.38	1.38	1.34
1	AA	2775	G	N1-C2	-5.38	1.33	1.37
29	A5	35	GLU	CD-OE1	5.38	1.31	1.25
1	AA	1026	A	C6-N6	-5.38	1.29	1.33
1	AA	26	G	C5-C6	-5.37	1.36	1.42
1	AA	2583	C	C4-C5	-5.37	1.38	1.43
1	AA	1312	G	N7-C5	-5.37	1.36	1.39
1	AA	1911	A	N9-C4	-5.37	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1959	A	N3-C4	-5.37	1.31	1.34
1	AA	2731	G	N3-C4	-5.37	1.31	1.35
1	CA	783	A	C6-N1	-5.37	1.31	1.35
1	CA	1698	A	N7-C5	-5.37	1.36	1.39
1	AA	2005	C	N1-C6	-5.36	1.33	1.37
1	CA	2542	A	N7-C5	-5.36	1.36	1.39
1	AA	725	C	C2-N3	-5.36	1.31	1.35
1	AA	1313	U	C2-O2	-5.36	1.17	1.22
1	AA	1665	G	C5-C4	-5.36	1.34	1.38
1	AA	1994	A	N3-C4	-5.36	1.31	1.34
5	AE	151	TYR	CB-CG	-5.36	1.43	1.51
1	AA	173	C	N1-C6	-5.35	1.33	1.37
1	AA	1048	G	C2-N3	-5.35	1.28	1.32
1	AA	787	U	N3-C4	-5.34	1.33	1.38
1	AA	2559	U	N1-C6	-5.34	1.33	1.38
1	AA	580	U	C4-O4	-5.34	1.19	1.23
1	AA	984	G	N7-C5	-5.33	1.36	1.39
6	AF	88	VAL	CB-CG1	-5.33	1.41	1.52
1	AA	355	A	C5-C4	-5.33	1.35	1.38
1	CA	330	A	C5-C6	-5.33	1.36	1.41
1	CA	1303	G	C6-N1	-5.33	1.35	1.39
1	AA	26	G	N7-C5	-5.33	1.36	1.39
1	AA	1259	A	N9-C8	-5.33	1.33	1.37
1	AA	1277	G	N3-C4	-5.33	1.31	1.35
1	AA	1804	A	N9-C4	-5.33	1.34	1.37
1	AA	2860	A	N7-C5	-5.33	1.36	1.39
1	CA	2062	A	N9-C4	5.33	1.41	1.37
1	AA	2046	G	C6-O6	-5.32	1.19	1.24
1	AA	2638	C	N1-C6	-5.32	1.33	1.37
1	AA	787	U	C2-N3	-5.32	1.34	1.37
1	AA	2449	U	C2-O2	-5.32	1.17	1.22
1	AA	2455	C	N1-C6	-5.31	1.33	1.37
34	BA	1397	C	N1-C6	5.31	1.40	1.37
1	AA	795	G	N1-C2	-5.31	1.33	1.37
1	CA	144	C	N3-C4	-5.31	1.30	1.33
1	AA	129	G	C5-C6	-5.31	1.37	1.42
1	AA	2068	G	C5-C4	-5.31	1.34	1.38
1	AA	2849	G	C6-N1	-5.31	1.35	1.39
1	CA	2286	A	C5-C6	-5.30	1.36	1.41
1	AA	956	A	N9-C8	-5.30	1.33	1.37
1	AA	1054	C	N1-C6	-5.30	1.33	1.37
1	AA	178	G	N7-C5	-5.30	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	471	C	N1-C6	-5.30	1.33	1.37
1	CA	2444	G	C2-N3	5.30	1.36	1.32
1	AA	120	G	N3-C4	-5.29	1.31	1.35
1	AA	887	C	N3-C4	-5.29	1.30	1.33
1	AA	2019	G	C6-O6	-5.29	1.19	1.24
1	CA	197	A	N9-C4	-5.29	1.34	1.37
1	AA	2295	C	N3-C4	5.29	1.37	1.33
1	AA	2041	A	C6-N1	-5.28	1.31	1.35
4	AD	39	LYS	CD-CE	5.28	1.64	1.51
1	AA	2520	G	N1-C2	-5.28	1.33	1.37
1	AA	880	U	O3'-P	-5.28	1.54	1.61
1	AA	2291	G	C8-N7	-5.28	1.27	1.30
1	AA	2611	G	N1-C2	-5.28	1.33	1.37
1	CA	563	G	C2-N3	-5.28	1.28	1.32
1	AA	2073	A	C5-C4	-5.27	1.35	1.38
1	AA	2597	U	C2-O2	5.27	1.27	1.22
1	AA	2239	A	N3-C4	-5.27	1.31	1.34
1	AA	2431	U	C2-N3	-5.26	1.34	1.37
1	AA	710	G	C6-N1	-5.26	1.35	1.39
18	AU	9	VAL	CB-CG1	-5.26	1.41	1.52
1	AA	55	A	C5-C6	-5.26	1.36	1.41
1	AA	836	A	N7-C5	-5.26	1.36	1.39
1	AA	2616	U	C2-N3	-5.26	1.34	1.37
1	AA	2525	G	C2-N3	5.25	1.36	1.32
1	CA	126	A	N3-C4	-5.25	1.31	1.34
1	CA	785	G	N1-C2	-5.25	1.33	1.37
1	AA	872	C	N3-C4	-5.25	1.30	1.33
1	CA	1204	A	N3-C4	-5.25	1.31	1.34
1	AA	1322	A	C6-N1	-5.25	1.31	1.35
1	AA	2060	G	C6-N1	-5.25	1.35	1.39
1	AA	1985	U	C2-N3	5.25	1.41	1.37
1	AA	2115	G	N3-C4	-5.25	1.31	1.35
1	AA	2440	G	C6-N1	-5.25	1.35	1.39
1	AA	808	A	N7-C5	-5.24	1.36	1.39
1	AA	1470	G	C6-N1	-5.24	1.35	1.39
1	AA	1846	A	N3-C4	-5.24	1.31	1.34
1	AA	2525	G	C6-N1	5.24	1.43	1.39
1	AA	753	A	C5-C6	-5.24	1.36	1.41
1	AA	2502	G	N1-C2	-5.24	1.33	1.37
1	AA	2402	U	C4-O4	-5.23	1.19	1.23
1	AA	2660	C	C2-O2	-5.23	1.19	1.24
1	AA	2582	G	C8-N7	-5.23	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	2570	G	N3-C4	-5.23	1.31	1.35
1	AA	1240	G	C5-C4	-5.22	1.34	1.38
1	AA	2285	A	N7-C5	-5.22	1.36	1.39
1	AA	2641	A	C5-C4	5.22	1.42	1.38
1	AA	1830	G	N3-C4	-5.22	1.31	1.35
1	CA	270	A	N9-C4	-5.21	1.34	1.37
1	AA	210	A	N7-C5	-5.21	1.36	1.39
1	AA	795	G	C6-N1	-5.21	1.35	1.39
1	AA	2639	G	C6-O6	-5.21	1.19	1.24
1	AA	353	G	C8-N7	-5.20	1.27	1.30
19	AV	61	VAL	CB-CG1	-5.20	1.42	1.52
1	CA	768	G	N7-C5	-5.20	1.36	1.39
1	AA	821	A	C8-N7	-5.20	1.27	1.31
1	AA	172	C	N3-C4	-5.19	1.30	1.33
1	AA	2545	A	N9-C8	-5.19	1.33	1.37
1	AA	1833	A	N7-C5	-5.19	1.36	1.39
1	CA	1027	A	N9-C4	-5.18	1.34	1.37
1	AA	1700	G	C6-N1	-5.17	1.35	1.39
1	AA	2402	U	C2-O2	-5.17	1.17	1.22
2	AB	98	G	N9-C8	-5.17	1.34	1.37
1	AA	2460	A	N7-C5	-5.17	1.36	1.39
1	AA	2605	U	C4-O4	-5.17	1.19	1.23
1	AA	2652	G	C2-N3	-5.17	1.28	1.32
1	AA	243	G	N7-C5	-5.17	1.36	1.39
1	AA	2556	G	N9-C4	-5.17	1.33	1.38
1	AA	1076	G	C6-N1	-5.17	1.35	1.39
1	AA	992	G	P-O5'	-5.16	1.54	1.59
1	AA	1377	A	C6-N1	-5.16	1.31	1.35
1	AA	2609	G	N3-C4	-5.16	1.31	1.35
1	AA	1616	A	C6-N1	-5.16	1.31	1.35
1	CA	2542	A	C5-C6	-5.16	1.36	1.41
1	AA	1401	G	C6-N1	-5.16	1.35	1.39
1	AA	835	A	C6-N1	-5.15	1.31	1.35
1	AA	255	G	N9-C8	-5.15	1.34	1.37
1	AA	593	G	N1-C2	-5.15	1.33	1.37
1	AA	2748	G	C6-N1	-5.15	1.35	1.39
1	AA	1878	A	N9-C4	5.15	1.41	1.37
1	AA	1979	C	N1-C6	-5.15	1.34	1.37
1	AA	1375	U	C2-O2	-5.15	1.17	1.22
1	AA	2621	U	P-O5'	-5.15	1.54	1.59
29	A5	35	GLU	CD-OE2	5.15	1.31	1.25
1	AA	2283	G	N1-C2	-5.15	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	2258	C	N1-C6	-5.14	1.34	1.37
1	AA	54	G	N1-C2	-5.14	1.33	1.37
1	AA	2619	G	C5-C6	-5.14	1.37	1.42
1	AA	194	G	C5-C6	-5.14	1.37	1.42
1	AA	1324	A	N3-C4	-5.14	1.31	1.34
1	AA	2239	A	C5-C4	-5.14	1.35	1.38
1	CA	2241	A	N9-C4	-5.14	1.34	1.37
1	AA	1282	G	C5-C6	-5.14	1.37	1.42
1	AA	1715	A	C6-N6	-5.13	1.29	1.33
1	AA	2084	A	N3-C4	5.13	1.38	1.34
1	AA	511	C	N1-C6	5.13	1.40	1.37
1	AA	608	G	C2-N3	-5.13	1.28	1.32
1	AA	847	A	N3-C4	-5.13	1.31	1.34
1	AA	1371	G	N1-C2	-5.13	1.33	1.37
1	AA	2463	A	C5-C4	-5.12	1.35	1.38
2	AB	98	G	N7-C5	-5.12	1.36	1.39
1	AA	2502	G	C6-N1	-5.12	1.35	1.39
11	AN	65	LYS	CE-NZ	5.12	1.61	1.49
1	CA	1890	A	C5-C6	-5.12	1.36	1.41
1	AA	522	A	N7-C5	-5.12	1.36	1.39
1	AA	2080	A	N7-C5	-5.12	1.36	1.39
1	AA	476	G	N9-C8	-5.12	1.34	1.37
1	AA	751	G	C5-C4	-5.12	1.34	1.38
1	AA	2576	A	N3-C4	-5.12	1.31	1.34
1	AA	726	C	C5-C6	-5.12	1.30	1.34
1	AA	2298	A	N9-C8	5.12	1.41	1.37
1	AA	561	A	N3-C4	-5.11	1.31	1.34
1	CA	1890	A	N9-C4	-5.11	1.34	1.37
1	AA	1723	A	N3-C4	-5.11	1.31	1.34
1	AA	1833	A	N3-C4	-5.11	1.31	1.34
1	AA	2092	G	N9-C4	-5.10	1.33	1.38
1	AA	2863	C	C2-N3	-5.10	1.31	1.35
1	AA	531	G	C5-C4	-5.09	1.34	1.38
1	AA	2057	G	N9-C8	-5.09	1.34	1.37
1	CA	180	G	N3-C4	5.09	1.39	1.35
1	AA	1600	A	N9-C8	-5.09	1.33	1.37
1	AA	340	C	C4-C5	-5.09	1.38	1.43
1	AA	1382	A	N3-C4	-5.09	1.31	1.34
1	AA	1814	A	C5-C4	-5.09	1.35	1.38
1	AA	2514	G	C6-N1	-5.09	1.35	1.39
1	CA	679	C	N1-C2	-5.08	1.35	1.40
1	AA	1067	A	C2-N3	-5.08	1.28	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	805	C	N1-C6	-5.08	1.34	1.37
1	AA	1833	A	N9-C4	-5.08	1.34	1.37
1	AA	1974	A	C5-C6	-5.08	1.36	1.41
1	AA	586	G	C2-N3	-5.08	1.28	1.32
1	AA	1260	G	N7-C5	-5.08	1.36	1.39
1	AA	2400	A	C6-N1	-5.08	1.31	1.35
1	AA	28	A	C2-N3	-5.07	1.28	1.33
1	AA	736	A	N9-C8	-5.07	1.33	1.37
1	AA	893	C	N3-C4	-5.07	1.30	1.33
1	AA	730	C	N1-C6	-5.06	1.34	1.37
1	AA	846	G	N7-C5	-5.06	1.36	1.39
1	AA	2024	G	C8-N7	-5.06	1.27	1.30
1	AA	1029	A	N9-C4	-5.06	1.34	1.37
1	AA	2409	G	N1-C2	-5.06	1.33	1.37
1	AA	2487	C	N1-C6	-5.06	1.34	1.37
1	AA	474	U	N3-C4	-5.06	1.33	1.38
1	AA	585	U	C4-O4	-5.06	1.19	1.23
1	AA	1309	U	C2-N3	-5.06	1.34	1.37
1	AA	1546	G	C5-C4	-5.06	1.34	1.38
1	AA	2569	G	C5-C6	-5.06	1.37	1.42
1	CA	2576	G	C5-C4	-5.06	1.34	1.38
1	AA	2576	A	C6-N1	-5.06	1.32	1.35
1	AA	1201	A	N9-C4	-5.05	1.34	1.37
1	AA	2070	G	N1-C2	-5.05	1.33	1.37
1	AA	1243	U	C2-O2	-5.05	1.17	1.22
1	AA	1648	U	C4-O4	-5.05	1.19	1.23
1	AA	2637	G	N9-C8	-5.05	1.34	1.37
1	AA	1742	G	C5-C6	-5.05	1.37	1.42
1	AA	1829	U	C2-N3	-5.05	1.34	1.37
1	AA	2556	G	N3-C4	-5.05	1.31	1.35
1	AA	883	G	N1-C2	-5.05	1.33	1.37
1	AA	894	U	C4-C5	5.05	1.48	1.43
1	AA	2011	G	C6-O6	5.05	1.28	1.24
1	AA	641	G	C6-N1	-5.04	1.36	1.39
1	AA	1455	C	C2-O2	-5.04	1.20	1.24
1	AA	1857	G	N3-C4	-5.04	1.31	1.35
1	CA	1945	G	N7-C5	-5.04	1.36	1.39
1	CA	2581	G	N7-C5	-5.04	1.36	1.39
1	AA	2033	U	N3-C4	-5.04	1.33	1.38
1	AA	851	A	N3-C4	-5.04	1.31	1.34
1	AA	2528	G	C2-N2	-5.04	1.29	1.34
1	AA	1270	C	C5-C6	-5.04	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1824	C	C4-N4	-5.04	1.29	1.33
1	AA	585	U	C2-O2	-5.03	1.17	1.22
1	AA	1334	U	P-OP2	-5.03	1.40	1.49
1	AA	2039	U	C2-N3	-5.03	1.34	1.37
1	CA	801	G	N7-C5	-5.03	1.36	1.39
1	AA	186	A	C6-N1	-5.03	1.32	1.35
1	AA	474	U	C2-O2	-5.03	1.17	1.22
1	AA	1240	G	C2-N3	-5.03	1.28	1.32
1	AA	1684	A	N9-C4	-5.02	1.34	1.37
1	AA	1321	A	C6-N1	-5.02	1.32	1.35
1	AA	27	G	P-O5'	-5.02	1.54	1.59
1	AA	584	G	C5-C4	-5.02	1.34	1.38
1	AA	2902	G	N9-C8	5.02	1.41	1.37
34	DA	295	C	N1-C6	-5.02	1.34	1.37
1	AA	1658	C	C4-N4	-5.01	1.29	1.33
2	AB	82	G	C6-N1	-5.01	1.36	1.39
1	AA	1359	U	N1-C6	-5.01	1.33	1.38
1	AA	2041	A	N7-C5	-5.01	1.36	1.39
1	CA	2556	C	N1-C6	-5.01	1.34	1.37
1	AA	1822	A	N9-C4	-5.01	1.34	1.37
1	AA	2084	A	C6-N1	5.01	1.39	1.35
1	AA	648	G	N1-C2	-5.01	1.33	1.37
1	AA	1231	G	N3-C4	5.01	1.39	1.35
1	AA	211	A	C5-C4	-5.00	1.35	1.38
1	AA	472	G	N7-C5	5.00	1.42	1.39
1	CA	330	A	N9-C8	5.00	1.41	1.37

All (7729) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1067	A	C2-N3-C4	-25.69	97.76	110.60
1	AA	1701	A	O5'-P-OP2	-25.21	80.44	110.70
1	AA	553	A	N1-C6-N6	25.19	133.71	118.60
1	AA	990	A	C5-N7-C8	-25.10	91.35	103.90
1	AA	553	A	C5-N7-C8	-23.43	92.19	103.90
1	AA	990	A	N1-C6-N6	22.68	132.21	118.60
1	AA	553	A	C6-C5-N7	-21.21	117.45	132.30
1	AA	354	A	C2-N3-C4	-21.08	100.06	110.60
1	AA	474	U	O5'-P-OP2	-21.05	85.44	110.70
1	AA	990	A	C6-C5-N7	-20.78	117.75	132.30
1	AA	553	A	N7-C8-N9	20.56	124.08	113.80
1	AA	1067	A	N3-C4-C5	20.20	140.94	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1605	A	C2-N3-C4	-19.70	100.75	110.60
1	AA	990	A	C2-N3-C4	-19.47	100.86	110.60
1	AA	553	A	C4-C5-N7	19.43	120.42	110.70
1	AA	990	A	C4-C5-N7	19.21	120.30	110.70
1	AA	1188	A	N3-C4-C5	19.00	140.10	126.80
1	AA	1807	G	O5'-P-OP2	-18.88	88.05	110.70
1	AA	2331	G	N3-C4-N9	-18.76	114.75	126.00
1	AA	553	A	C2-N3-C4	-18.63	101.28	110.60
1	AA	978	A	C5-N7-C8	-18.59	94.61	103.90
1	AA	990	A	N7-C8-N9	18.58	123.09	113.80
1	AA	1745	A	N1-C6-N6	18.46	129.68	118.60
1	AA	2299	A	C2-N3-C4	-18.38	101.41	110.60
1	AA	2045	G	O5'-P-OP1	-18.35	88.68	110.70
1	AA	2083	G	O5'-P-OP2	-18.25	88.80	110.70
1	AA	1811	A	O5'-P-OP2	-17.61	89.56	110.70
1	AA	254	A	C2-N3-C4	-17.57	101.82	110.60
1	AA	1188	A	C2-N3-C4	-17.51	101.84	110.60
1	AA	1067	A	N3-C4-N9	-17.42	113.46	127.40
1	AA	1605	A	N1-C2-N3	17.39	138.00	129.30
1	AA	2222	C	O5'-P-OP2	-17.26	89.99	110.70
1	AA	592	U	C5-C6-N1	-17.21	114.10	122.70
1	AA	1707	C	O5'-P-OP2	-17.14	90.13	110.70
1	AA	553	A	C8-N9-C4	-17.03	98.99	105.80
1	CA	1353	A	O5'-P-OP2	-16.66	90.71	105.70
1	AA	991	G	O5'-P-OP1	-16.59	90.77	105.70
1	AA	1188	A	N3-C4-N9	-16.57	114.14	127.40
1	AA	1745	A	C6-C5-N7	-16.48	120.76	132.30
1	AA	1067	A	C5-C6-N1	-16.45	109.47	117.70
1	AA	2045	G	C5-C6-O6	-16.34	118.80	128.60
1	AA	354	A	C5-N7-C8	-16.31	95.74	103.90
1	AA	2298	A	C2-N3-C4	-16.16	102.52	110.60
1	AA	978	A	C4-C5-N7	16.14	118.77	110.70
1	AA	555	G	N3-C4-N9	-16.14	116.31	126.00
1	AA	354	A	N3-C4-C5	16.10	138.07	126.80
1	AA	2418	U	O5'-P-OP1	-15.94	91.36	105.70
1	AA	1067	A	C5-N7-C8	-15.75	96.03	103.90
1	AA	1249	A	C6-C5-N7	-15.61	121.37	132.30
1	AA	254	A	N1-C6-N6	15.58	127.95	118.60
1	AA	1813	C	O5'-P-OP1	-15.46	91.78	105.70
1	AA	2331	G	N3-C4-C5	15.45	136.32	128.60
1	CA	2608	G	O5'-P-OP2	-15.30	91.93	105.70
1	AA	1745	A	C5-N7-C8	-15.21	96.30	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	528	A	C2-N3-C4	-15.14	103.03	110.60
1	AA	2298	A	N7-C8-N9	15.13	121.36	113.80
1	AA	1745	A	C4-C5-N7	15.05	118.22	110.70
1	AA	2619	G	C5-C6-O6	-14.92	119.65	128.60
1	AA	1249	A	C2-N3-C4	-14.82	103.19	110.60
1	AA	612	C	O5'-P-OP2	-14.81	92.37	105.70
1	AA	555	G	N3-C4-C5	14.65	135.93	128.60
1	AA	1812	C	C6-N1-C2	14.64	126.16	120.30
1	AA	1486	G	O5'-P-OP2	-14.55	92.60	105.70
34	BA	797	C	O5'-P-OP1	-14.55	92.60	105.70
1	AA	1686	U	O5'-P-OP2	-14.55	92.61	105.70
1	AA	990	A	N1-C2-N3	14.40	136.50	129.30
1	AA	2298	A	C5-N7-C8	-14.30	96.75	103.90
1	AA	1694	G	O5'-P-OP1	-14.28	92.85	105.70
1	CA	1998	G	O5'-P-OP2	-14.22	92.90	105.70
1	AA	1155	C	C5-C6-N1	14.20	128.10	121.00
1	AA	2065	C	O5'-P-OP1	-14.14	92.97	105.70
1	AA	990	A	C5-C6-N6	-14.14	112.39	123.70
1	AA	560	C	C5-C6-N1	-14.08	113.96	121.00
1	AA	2556	G	C5-C6-O6	-14.04	120.17	128.60
1	AA	1815	A	O5'-P-OP2	-14.03	93.07	105.70
1	CA	330	A	C2-N3-C4	-14.00	103.60	110.60
1	AA	204	G	O5'-P-OP1	-13.98	93.11	105.70
1	AA	1266	C	C6-N1-C2	-13.98	114.71	120.30
1	AA	2298	A	C6-C5-N7	-13.82	122.63	132.30
1	AA	1274	G	C2-N3-C4	-13.79	105.00	111.90
1	AA	354	A	N3-C4-N9	-13.72	116.42	127.40
1	AA	2515	A	N1-C2-N3	-13.66	122.47	129.30
1	AA	1249	A	N1-C6-N6	13.63	126.78	118.60
1	AA	2632	C	N1-C2-O2	-13.61	110.73	118.90
1	AA	553	A	N1-C2-N3	13.47	136.04	129.30
1	CA	1204	A	C2-N3-C4	-13.39	103.91	110.60
1	AA	2285	A	O5'-P-OP2	-13.38	93.66	105.70
1	AA	978	A	C2-N3-C4	-13.36	103.92	110.60
1	AA	553	A	O4'-C1'-N9	-13.24	97.61	108.20
1	AA	1612	C	O5'-P-OP2	-13.18	93.84	105.70
1	AA	1847	G	O5'-P-OP1	-13.11	93.90	105.70
1	AA	543	G	O5'-P-OP2	-13.09	93.92	105.70
1	AA	254	A	C5-N7-C8	-13.08	97.36	103.90
1	AA	18	C	O5'-P-OP2	-13.04	93.97	105.70
1	AA	1001	G	N1-C6-O6	13.03	127.72	119.90
1	CA	1204	A	N1-C6-N6	12.99	126.40	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2636	G	N7-C8-N9	-12.99	106.60	113.10
1	AA	2641	A	C5-N7-C8	-12.98	97.41	103.90
1	AA	553	A	C5-C6-N6	-12.97	113.33	123.70
1	AA	1472	G	C5-C6-O6	-12.97	120.82	128.60
1	AA	2269	U	C2-N3-C4	-12.93	119.24	127.00
1	AA	978	A	N1-C6-N6	12.90	126.34	118.60
1	AA	2298	A	N1-C6-N6	12.90	126.34	118.60
1	AA	1342	G	N1-C6-O6	-12.88	112.17	119.90
1	AA	1745	A	C2-N3-C4	-12.88	104.16	110.60
1	AA	354	A	C4-C5-N7	12.86	117.13	110.70
1	AA	539	A	O5'-P-OP2	-12.86	94.13	105.70
1	AA	894	U	N1-C2-N3	12.85	122.61	114.90
1	AA	1188	A	C6-N1-C2	12.85	126.31	118.60
1	AA	1188	A	C5-C6-N1	-12.85	111.28	117.70
1	AA	1249	A	N1-C2-N3	12.85	135.72	129.30
1	AA	2400	A	N9-C4-C5	12.80	110.92	105.80
1	AA	2627	U	O5'-P-OP1	-12.76	94.22	105.70
1	AA	978	A	N7-C8-N9	12.72	120.16	113.80
1	AA	2641	A	C6-C5-N7	-12.72	123.39	132.30
1	AA	812	G	O5'-P-OP2	-12.71	94.26	105.70
1	AA	2299	A	C5-N7-C8	-12.69	97.55	103.90
1	AA	2298	A	N1-C2-N3	12.63	135.62	129.30
1	AA	1605	A	C6-C5-N7	-12.62	123.46	132.30
1	AA	2368	C	C5-C4-N4	-12.62	111.37	120.20
1	AA	1032	C	N1-C2-O2	-12.62	111.33	118.90
1	AA	1543	U	C5-C4-O4	12.60	133.46	125.90
1	AA	2641	A	N1-C6-N6	12.59	126.15	118.60
1	AA	113	C	C6-N1-C2	12.57	125.33	120.30
1	AA	726	C	C2-N3-C4	-12.57	113.62	119.90
1	AA	2299	A	N3-C4-C5	12.54	135.58	126.80
1	AA	1926	G	N1-C6-O6	-12.54	112.38	119.90
1	AA	2539	C	C6-N1-C2	12.51	125.30	120.30
1	CA	512	G	O4'-C1'-N9	12.49	118.19	108.20
1	AA	989	G	C5-C6-O6	-12.46	121.12	128.60
1	AA	2452	C	C6-N1-C2	12.46	125.28	120.30
1	AA	2858	G	O5'-P-OP2	-12.44	94.50	105.70
1	AA	2636	G	C8-N9-C4	12.41	111.37	106.40
1	AA	2045	G	C4-C5-N7	12.41	115.77	110.80
1	AA	2641	A	C4-C5-N7	12.37	116.89	110.70
1	AA	1211	U	C2-N3-C4	-12.37	119.58	127.00
1	AA	1709	C	C2-N3-C4	-12.35	113.72	119.90
1	AA	2566	U	O5'-P-OP1	-12.34	94.59	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1422	C	O5'-P-OP1	-12.32	94.61	105.70
1	AA	2876	U	C5-C4-O4	12.29	133.27	125.90
1	AA	992	G	O5'-P-OP1	-12.26	94.67	105.70
1	AA	2298	A	C8-N9-C4	-12.25	100.90	105.80
1	AA	1429	C	O5'-P-OP1	-12.24	94.69	105.70
1	AA	884	C	C5-C6-N1	-12.23	114.88	121.00
1	CA	528	A	N3-C4-N9	-12.20	117.64	127.40
1	AA	840	A	O5'-P-OP2	-12.17	94.75	105.70
1	AA	1249	A	C4-C5-N7	12.16	116.78	110.70
1	AA	1605	A	N1-C6-N6	12.16	125.90	118.60
1	AA	2107	C	N3-C4-C5	12.13	126.75	121.90
1	CA	2435	A	O5'-P-OP1	-12.12	94.80	105.70
1	AA	978	A	N3-C4-C5	12.10	135.27	126.80
1	AA	1824	C	N3-C4-C5	12.09	126.74	121.90
1	AA	709	G	O5'-P-OP1	-12.08	94.83	105.70
1	AA	2015	U	O5'-P-OP1	-12.08	94.83	105.70
1	AA	1188	A	C5-N7-C8	-12.08	97.86	103.90
2	AB	73	A	O5'-P-OP2	-12.07	94.84	105.70
1	AA	1329	G	C6-C5-N7	-12.05	123.17	130.40
34	BA	1521	G	O5'-P-OP1	-12.05	94.86	105.70
1	AA	593	G	C5-C6-O6	-12.05	121.37	128.60
1	AA	2532	C	N1-C2-O2	-12.04	111.67	118.90
1	AA	2065	C	O5'-P-OP2	12.02	125.13	110.70
1	AA	1185	C	O5'-P-OP1	-12.02	94.89	105.70
1	AA	355	A	O5'-P-OP1	-11.98	94.92	105.70
1	AA	555	G	C5-C6-O6	11.97	135.78	128.60
1	AA	2426	G	O5'-P-OP1	11.97	125.07	110.70
1	AA	2556	G	N1-C6-O6	11.96	127.08	119.90
1	AA	254	A	C4-C5-N7	11.96	116.68	110.70
1	AA	139	A	C5-N7-C8	-11.95	97.92	103.90
1	AA	733	G	O5'-P-OP1	-11.94	94.95	105.70
1	AA	2053	A	O5'-P-OP1	-11.91	94.98	105.70
1	AA	325	G	C8-N9-C4	11.89	111.16	106.40
1	CA	330	A	C5-N7-C8	-11.88	97.96	103.90
1	AA	1249	A	C5-N7-C8	-11.85	97.97	103.90
1	AA	805	C	C6-N1-C2	11.81	125.03	120.30
1	AA	2331	G	N3-C2-N2	-11.80	111.64	119.90
1	AA	2550	C	C6-N1-C2	11.80	125.02	120.30
1	AA	2578	A	O5'-P-OP2	-11.79	95.09	105.70
1	AA	2367	C	N3-C4-C5	11.78	126.61	121.90
1	AA	2660	C	C2-N3-C4	-11.78	114.01	119.90
1	AA	1961	U	C4-C5-C6	-11.77	112.64	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1067	A	C4-C5-N7	11.75	116.58	110.70
1	AA	38	A	N1-C6-N6	-11.74	111.56	118.60
1	AA	1721	G	C6-N1-C2	-11.74	118.06	125.10
1	AA	1001	G	C5-C6-N1	-11.69	105.65	111.50
1	AA	641	G	O5'-P-OP2	-11.67	95.20	105.70
1	AA	2386	C	C6-N1-C2	11.66	124.96	120.30
1	AA	2331	G	C8-N9-C4	-11.63	101.75	106.40
1	CA	2193	G	OP1-P-O3'	-11.60	79.68	105.20
1	AA	126	C	O5'-P-OP1	-11.59	95.27	105.70
1	AA	1742	G	O5'-P-OP1	-11.55	95.30	105.70
1	AA	1691	C	N1-C2-O2	11.55	125.83	118.90
1	AA	254	A	C6-C5-N7	-11.53	124.23	132.30
1	AA	1745	A	C5-C6-N6	-11.52	114.48	123.70
1	AA	1745	A	N1-C2-N3	11.51	135.06	129.30
1	CA	763	G	O5'-P-OP1	-11.51	95.34	105.70
1	AA	716	G	C5-C6-O6	-11.45	121.73	128.60
1	AA	1694	G	N3-C2-N2	-11.44	111.89	119.90
1	CA	528	A	N3-C4-C5	11.43	134.80	126.80
1	CA	1673	U	O5'-P-OP1	-11.43	95.42	105.70
1	AA	2639	G	C8-N9-C4	11.42	110.97	106.40
1	AA	1709	C	N3-C4-C5	11.40	126.46	121.90
1	AA	2641	A	C2-N3-C4	-11.37	104.91	110.60
1	AA	1472	G	C4-C5-N7	11.37	115.35	110.80
34	DA	354	G	O5'-P-OP2	-11.35	95.49	105.70
1	AA	894	U	C5-C6-N1	-11.33	117.03	122.70
1	CA	1698	A	N1-C2-N3	11.31	134.96	129.30
1	AA	2018	C	C2-N3-C4	-11.30	114.25	119.90
1	AA	45	C	O5'-P-OP1	-11.29	95.54	105.70
1	AA	2018	C	N3-C4-C5	11.27	126.41	121.90
1	AA	618	C	O5'-P-OP2	-11.26	95.56	105.70
1	AA	1720	U	C5-C6-N1	-11.23	117.09	122.70
1	AA	1244	U	O5'-P-OP2	-11.21	95.61	105.70
1	CA	1269	A	O5'-P-OP2	-11.21	95.61	105.70
1	AA	1721	G	C5-C6-O6	-11.20	121.88	128.60
1	AA	2299	A	C5-C6-N1	-11.19	112.10	117.70
1	AA	2447	A	O5'-P-OP1	-11.17	95.64	105.70
1	AA	471	C	N1-C2-O2	-11.17	112.20	118.90
1	AA	2331	G	C5-N7-C8	-11.16	98.72	104.30
1	AA	1282	G	C8-N9-C4	11.12	110.85	106.40
1	AA	1080	G	OP1-P-OP2	11.12	136.28	119.60
1	CA	1362	C	C6-N1-C2	-11.08	115.87	120.30
1	AA	2876	U	C4-C5-C6	11.08	126.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	254	A	C5-C6-N1	-11.07	112.16	117.70
1	AA	847	A	N1-C6-N6	-11.06	111.96	118.60
1	AA	552	C	C5-C6-N1	-11.06	115.47	121.00
1	AA	2876	U	N1-C2-N3	11.06	121.54	114.90
1	CA	679	C	N1-C2-O2	-11.05	112.27	118.90
1	AA	139	A	N7-C8-N9	11.04	119.32	113.80
1	CA	1558	A	C2-N3-C4	-11.03	105.08	110.60
1	AA	438	G	N3-C4-C5	-11.02	123.09	128.60
1	AA	470	C	O5'-P-OP1	11.02	123.92	110.70
1	AA	2876	U	C5-C6-N1	-11.00	117.20	122.70
1	AA	2397	C	N3-C4-C5	10.97	126.29	121.90
1	AA	1067	A	C6-N1-C2	10.97	125.18	118.60
1	AA	2251	G	O5'-P-OP1	-10.96	95.84	105.70
1	AA	978	A	C5-C6-N1	-10.95	112.22	117.70
1	CA	2573	C	O5'-P-OP2	-10.95	95.84	105.70
1	AA	1371	G	O4'-C1'-N9	10.91	116.93	108.20
34	DA	1045	C	OP1-P-O3'	-10.89	81.23	105.20
1	AA	2426	G	O5'-P-OP2	-10.89	95.90	105.70
1	AA	1001	G	C2-N3-C4	-10.89	106.46	111.90
1	AA	1074	A	C5-C6-N6	-10.88	115.00	123.70
1	AA	726	C	C5-C4-N4	-10.86	112.60	120.20
1	AA	2045	G	N1-C6-O6	10.84	126.41	119.90
1	AA	2609	G	C5-C6-O6	-10.84	122.09	128.60
1	CA	330	A	C4-C5-N7	10.84	116.12	110.70
1	AA	1995	G	O5'-P-OP2	-10.82	95.96	105.70
1	CA	2261	C	O5'-P-OP2	-10.82	95.96	105.70
1	AA	2367	C	C2-N3-C4	-10.81	114.49	119.90
1	AA	1724	A	N1-C2-N3	10.81	134.70	129.30
1	AA	16	G	N1-C2-N3	10.80	130.38	123.90
1	AA	842	C	N3-C2-O2	-10.80	114.34	121.90
1	AA	537	G	O4'-C1'-N9	10.79	116.83	108.20
1	AA	552	C	C4-C5-C6	10.79	122.79	117.40
1	CA	1653	G	C8-N9-C4	-10.79	102.08	106.40
1	AA	1721	G	C5-C6-N1	10.78	116.89	111.50
1	AA	1013	G	N1-C6-O6	-10.77	113.44	119.90
1	AA	2400	A	N1-C6-N6	-10.77	112.14	118.60
1	AA	786	G	C5-C6-N1	10.76	116.88	111.50
1	AA	1237	G	C5-N7-C8	10.76	109.68	104.30
1	AA	614	C	N1-C2-O2	-10.75	112.45	118.90
1	CA	2286	A	N1-C6-N6	10.74	125.05	118.60
1	AA	978	A	C6-C5-N7	-10.74	124.78	132.30
1	AA	555	G	C2-N3-C4	-10.73	106.54	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1411	A	N1-C6-N6	10.72	125.03	118.60
34	DA	438	G	O5'-P-OP2	-10.71	96.06	105.70
1	AA	2019	G	O5'-P-OP2	-10.71	96.06	105.70
1	CA	1790	C	C6-N1-C2	-10.71	116.02	120.30
1	CA	2588	G	C8-N9-C4	10.70	110.68	106.40
1	AA	50	G	O5'-P-OP2	-10.70	96.07	105.70
1	AA	552	C	C2-N3-C4	-10.70	114.55	119.90
1	CA	1272	A	O5'-P-OP2	-10.69	96.08	105.70
1	AA	586	G	C5-C6-N1	-10.68	106.16	111.50
1	CA	1204	A	C5-N7-C8	-10.68	98.56	103.90
1	CA	2824	C	C6-N1-C2	10.68	124.57	120.30
1	CA	1698	A	C6-C5-N7	-10.67	124.83	132.30
1	CA	2004	G	O5'-P-OP2	-10.65	96.11	105.70
1	CA	450	G	N1-C6-O6	-10.63	113.52	119.90
1	AA	2295	C	O5'-P-OP2	-10.63	96.14	105.70
1	CA	330	A	N3-C4-C5	10.63	134.24	126.80
1	AA	2620	G	C5-C6-O6	-10.60	122.24	128.60
1	AA	884	C	C2-N3-C4	-10.60	114.60	119.90
1	AA	2884	C	N1-C2-O2	-10.59	112.55	118.90
1	AA	844	C	N1-C2-O2	-10.58	112.55	118.90
1	AA	2452	C	C5-C6-N1	-10.58	115.71	121.00
1	AA	1371	G	N1-C6-O6	-10.55	113.57	119.90
1	AA	2298	A	C5-C6-N1	-10.55	112.43	117.70
2	AB	82	G	C5-C6-O6	10.54	134.93	128.60
1	AA	1317	G	C5-C6-O6	-10.54	122.28	128.60
1	AA	357	G	C8-N9-C4	-10.53	102.19	106.40
34	DA	898	G	C5-C6-O6	-10.53	122.28	128.60
1	AA	2702	C	N1-C2-O2	-10.53	112.58	118.90
1	AA	2066	C	C2-N3-C4	-10.52	114.64	119.90
1	AA	1050	C	N1-C2-N3	10.52	126.56	119.20
1	AA	1189	A	C8-N9-C4	-10.52	101.59	105.80
1	AA	1239	A	N9-C4-C5	10.51	110.00	105.80
1	AA	1360	C	C2-N3-C4	-10.50	114.65	119.90
1	AA	1040	C	C6-N1-C2	10.49	124.50	120.30
1	CA	1941	C	O5'-P-OP1	-10.49	96.26	105.70
1	AA	2368	C	N3-C4-N4	10.48	125.34	118.00
1	AA	2520	G	O5'-P-OP1	-10.48	96.27	105.70
1	AA	1042	A	O5'-P-OP2	10.47	123.27	110.70
1	AA	1720	U	C2-N3-C4	-10.47	120.72	127.00
1	AA	2750	G	N1-C6-O6	-10.47	113.62	119.90
1	AA	1186	U	C2-N3-C4	-10.46	120.72	127.00
1	AA	591	U	N3-C4-C5	10.46	120.88	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	524	U	C5-C6-N1	-10.46	117.47	122.70
1	AA	1020	C	C5-C4-N4	10.46	127.52	120.20
1	AA	1186	U	N1-C2-N3	10.46	121.17	114.90
1	AA	2269	U	C5-C6-N1	-10.45	117.47	122.70
34	BA	816	A	O5'-P-OP1	10.42	123.21	110.70
1	AA	2269	U	N3-C4-C5	10.42	120.85	114.60
1	AA	2757	G	O5'-P-OP1	-10.39	96.35	105.70
1	CA	2234	G	C6-C5-N7	-10.39	124.17	130.40
2	AB	103	G	C2-N3-C4	-10.37	106.72	111.90
1	AA	181	C	C4-C5-C6	10.37	122.58	117.40
34	BA	817	C	O5'-P-OP1	-10.36	96.37	105.70
1	AA	2402	U	C5-C6-N1	-10.36	117.52	122.70
1	AA	2639	G	N9-C4-C5	-10.36	101.26	105.40
1	AA	1239	A	C8-N9-C4	-10.36	101.66	105.80
1	AA	847	A	N9-C4-C5	10.35	109.94	105.80
1	AA	2041	A	C2-N3-C4	-10.34	105.43	110.60
1	AA	496	A	O5'-P-OP1	-10.34	96.40	105.70
1	AA	719	C	O5'-P-OP2	-10.34	96.40	105.70
1	AA	2602	A	C8-N9-C4	10.33	109.93	105.80
34	BA	567	G	O5'-P-OP1	-10.33	96.40	105.70
1	CA	262	A	O5'-P-OP2	-10.33	96.40	105.70
34	BA	509	A	C8-N9-C4	-10.33	101.67	105.80
1	CA	2544	G	N1-C6-O6	10.30	126.08	119.90
1	AA	1082	G	N7-C8-N9	-10.30	107.95	113.10
1	CA	562	U	N3-C2-O2	-10.30	114.99	122.20
1	AA	1332	A	O5'-P-OP2	-10.28	96.45	105.70
1	AA	1397	C	N3-C4-N4	-10.28	110.80	118.00
1	AA	1189	A	N1-C2-N3	10.27	134.44	129.30
1	AA	841	G	C8-N9-C4	10.27	110.51	106.40
1	AA	1237	G	N7-C8-N9	-10.27	107.97	113.10
1	AA	980	C	C2-N3-C4	-10.26	114.77	119.90
1	AA	2063	U	N3-C2-O2	-10.26	115.02	122.20
1	AA	412	C	N1-C2-O2	-10.25	112.75	118.90
1	AA	2299	A	N3-C4-N9	-10.25	119.20	127.40
1	AA	553	A	C4-C5-C6	10.24	122.12	117.00
1	AA	1318	A	O5'-P-OP2	-10.24	96.49	105.70
34	BA	1502	A	C5-N7-C8	-10.24	98.78	103.90
1	AA	2505	U	N1-C2-N3	10.24	121.04	114.90
1	AA	1423	G	N3-C4-C5	-10.22	123.49	128.60
1	AA	2460	A	C6-N1-C2	-10.22	112.47	118.60
1	AA	1691	C	N3-C2-O2	-10.21	114.75	121.90
1	AA	975	U	N1-C2-O2	-10.21	115.65	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	792	G	O5'-P-OP2	-10.21	96.52	105.70
1	AA	1371	G	C2-N3-C4	10.20	117.00	111.90
1	AA	1458	A	O5'-P-OP2	10.20	122.94	110.70
1	AA	743	G	C8-N9-C4	10.19	110.47	106.40
1	AA	1067	A	N1-C6-N6	10.18	124.71	118.60
34	DA	900	A	O5'-P-OP1	-10.17	96.54	105.70
1	AA	1745	A	N7-C8-N9	10.13	118.86	113.80
1	AA	1342	G	N3-C2-N2	10.12	126.99	119.90
1	AA	832	G	C5-C6-O6	10.11	134.66	128.60
1	CA	2583	G	O5'-P-OP2	-10.10	96.61	105.70
1	CA	2080	G	O5'-P-OP2	-10.09	96.62	105.70
1	AA	2641	A	N1-C2-N3	10.09	134.34	129.30
1	AA	2775	G	C5-C6-O6	10.08	134.65	128.60
1	CA	1021	A	C2-N3-C4	-10.08	105.56	110.60
1	AA	2455	C	C2-N3-C4	-10.08	114.86	119.90
1	AA	1297	C	O5'-P-OP2	-10.07	96.64	105.70
1	AA	2019	G	C6-N1-C2	-10.07	119.06	125.10
18	AU	50	ARG	NE-CZ-NH1	-10.07	115.27	120.30
1	AA	1377	A	N1-C6-N6	-10.06	112.56	118.60
1	AA	2608	U	C2-N3-C4	-10.06	120.96	127.00
1	CA	1623	G	N3-C2-N2	-10.06	112.86	119.90
1	AA	2518	U	OP2-P-O3'	10.06	127.32	105.20
1	AA	2737	C	N3-C4-C5	-10.04	117.88	121.90
1	AA	254	A	N3-C4-C5	10.04	133.83	126.80
1	AA	2791	A	C2-N3-C4	-10.04	105.58	110.60
1	CA	205	G	C8-N9-C4	10.04	110.42	106.40
1	AA	1076	G	C5-C6-O6	-10.04	122.58	128.60
1	AA	2515	A	C8-N9-C4	10.03	109.81	105.80
1	AA	738	C	N3-C2-O2	-10.03	114.88	121.90
1	AA	778	C	C2-N3-C4	-10.02	114.89	119.90
1	AA	1033	G	OP1-P-OP2	-10.01	104.59	119.60
1	AA	904	C	O5'-P-OP1	-9.98	96.71	105.70
1	CA	2063	C	O5'-P-OP2	-9.96	96.73	105.70
1	AA	592	U	C6-N1-C2	9.96	126.97	121.00
1	AA	1048	G	O5'-P-OP2	-9.96	96.74	105.70
1	AA	1316	C	C6-N1-C2	9.96	124.28	120.30
1	AA	2497	G	C8-N9-C4	9.95	110.38	106.40
1	AA	1188	A	C4-C5-C6	-9.94	112.03	117.00
1	AA	2466	G	N1-C2-N2	-9.93	107.26	116.20
1	AA	139	A	C2-N3-C4	-9.93	105.64	110.60
1	AA	1018	A	N7-C8-N9	9.92	118.76	113.80
1	AA	2481	A	O5'-P-OP2	-9.92	96.77	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2053	A	O5'-P-OP2	9.92	122.60	110.70
1	AA	2579	G	N1-C6-O6	-9.92	113.95	119.90
1	AA	524	U	C5-C4-O4	9.91	131.85	125.90
1	AA	2693	C	C4-C5-C6	9.90	122.35	117.40
1	AA	2526	U	C5-C4-O4	9.90	131.84	125.90
1	CA	2503	A	N1-C2-N3	-9.89	124.35	129.30
1	AA	2559	U	N3-C4-O4	9.89	126.32	119.40
1	AA	990	A	C4-C5-C6	9.89	121.94	117.00
1	AA	1249	A	O4'-C1'-N9	9.88	116.10	108.20
1	AA	2048	C	O5'-P-OP2	-9.88	96.81	105.70
1	AA	2070	G	N3-C2-N2	9.88	126.81	119.90
2	AB	73	A	O5'-P-OP1	9.87	122.55	110.70
1	AA	82	G	C8-N9-C4	9.87	110.35	106.40
1	AA	986	A	O5'-P-OP1	-9.87	96.82	105.70
1	AA	2619	G	N1-C6-O6	9.87	125.82	119.90
1	AA	2641	A	N7-C8-N9	9.86	118.73	113.80
1	AA	2514	G	N7-C8-N9	-9.86	108.17	113.10
1	AA	1972	G	O5'-P-OP1	-9.86	96.83	105.70
1	AA	2298	A	C4-C5-N7	9.86	115.63	110.70
1	AA	796	C	C2-N3-C4	-9.85	114.98	119.90
2	AB	102	A	N1-C2-N3	9.85	134.22	129.30
1	AA	438	G	O5'-P-OP1	9.84	122.51	110.70
34	BA	756	C	C6-N1-C2	9.84	124.23	120.30
1	AA	832	G	N1-C6-O6	-9.83	114.00	119.90
1	CA	2618	G	O5'-P-OP2	-9.83	96.85	105.70
2	AB	82	G	N1-C6-O6	-9.83	114.00	119.90
1	AA	2383	G	C5-C6-N1	9.82	116.41	111.50
1	AA	2515	A	N9-C4-C5	-9.82	101.87	105.80
1	AA	73	A	N1-C2-N3	9.82	134.21	129.30
1	AA	1031	C	C6-N1-C2	-9.82	116.37	120.30
18	AU	50	ARG	NE-CZ-NH2	9.82	125.21	120.30
1	CA	945	A	C2-N3-C4	-9.81	105.70	110.60
1	CA	1363	C	O5'-P-OP2	-9.80	96.88	105.70
1	AA	1421	C	O5'-P-OP1	-9.80	96.88	105.70
1	AA	1006	C	C2-N3-C4	-9.79	115.01	119.90
1	AA	883	G	C2-N3-C4	9.78	116.79	111.90
2	AB	13	A	O5'-P-OP1	-9.78	96.90	105.70
1	AA	739	C	OP1-P-OP2	-9.77	104.94	119.60
1	AA	1605	A	C4-C5-C6	9.77	121.89	117.00
1	CA	2824	C	O5'-P-OP2	-9.76	96.91	105.70
1	AA	2723	A	O5'-P-OP2	-9.76	96.92	105.70
34	BA	1502	A	C2-N3-C4	-9.75	105.72	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1038	C	C2-N3-C4	-9.75	115.03	119.90
1	AA	240	A	C8-N9-C4	9.74	109.70	105.80
1	AA	2533	C	N3-C4-C5	9.74	125.80	121.90
1	AA	593	G	C5-C6-N1	9.73	116.37	111.50
1	CA	1284	A	N1-C6-N6	9.73	124.44	118.60
34	BA	868	C	O5'-P-OP1	-9.72	96.95	105.70
1	AA	843	C	C2-N3-C4	-9.72	115.04	119.90
1	CA	330	A	N1-C6-N6	9.71	124.43	118.60
1	AA	513	C	O5'-P-OP1	-9.71	96.97	105.70
34	BA	819	A	O5'-P-OP1	-9.70	96.97	105.70
34	DA	914	A	O5'-P-OP1	-9.70	96.97	105.70
1	AA	593	G	C4-C5-N7	9.69	114.67	110.80
34	BA	550	G	O5'-P-OP1	-9.69	96.98	105.70
1	AA	604	C	O5'-P-OP2	-9.68	96.98	105.70
1	AA	1249	A	C4-C5-C6	9.68	121.84	117.00
1	CA	1946	U	C5-C4-O4	-9.67	120.10	125.90
1	AA	2525	G	C5-C6-O6	-9.66	122.80	128.60
1	AA	794	U	O5'-P-OP2	-9.66	97.01	105.70
1	AA	993	G	C5-C6-N1	9.65	116.32	111.50
1	AA	1307	C	C5-C6-N1	-9.64	116.18	121.00
1	CA	2708	G	C8-N9-C4	9.63	110.25	106.40
1	AA	1274	G	N1-C2-N2	-9.63	107.53	116.20
1	AA	575	G	N1-C6-O6	-9.62	114.12	119.90
1	AA	1157	A	O4'-C1'-N9	9.62	115.90	108.20
1	AA	989	G	N3-C4-N9	9.62	131.77	126.00
1	AA	1186	U	C5-C6-N1	-9.62	117.89	122.70
1	AA	978	A	C8-N9-C4	-9.61	101.95	105.80
1	AA	2556	G	N3-C2-N2	-9.61	113.17	119.90
1	AA	246	A	O5'-P-OP2	-9.60	97.06	105.70
1	CA	1698	A	N7-C8-N9	9.60	118.60	113.80
1	AA	716	G	C5-C6-N1	9.59	116.30	111.50
1	AA	1255	A	P-O3'-C3'	9.59	131.21	119.70
56	BW	17	C	C2-N1-C1'	9.59	129.35	118.80
1	CA	221	A	O5'-P-OP1	-9.59	97.07	105.70
1	AA	1812	C	C5-C4-N4	-9.59	113.49	120.20
1	AA	2466	G	N1-C2-N3	9.59	129.65	123.90
1	AA	2041	A	C5-C6-N6	9.58	131.36	123.70
1	AA	500	G	C8-N9-C4	-9.58	102.57	106.40
1	AA	2775	G	N1-C6-O6	-9.58	114.16	119.90
1	AA	2636	G	C5-N7-C8	9.57	109.09	104.30
34	BA	1502	A	C6-C5-N7	-9.57	125.60	132.30
1	AA	2441	G	O5'-P-OP1	9.57	122.18	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	778	C	C5-C6-N1	-9.56	116.22	121.00
1	AA	1724	A	C2-N3-C4	-9.56	105.82	110.60
1	AA	2508	C	O5'-P-OP2	-9.56	97.09	105.70
56	BW	36	A	C6-N1-C2	9.55	124.33	118.60
1	AA	560	C	C2-N3-C4	-9.55	115.13	119.90
1	AA	1082	G	C5-C6-O6	9.54	134.33	128.60
1	CA	1142(A)	A	C2-N3-C4	-9.55	105.83	110.60
1	AA	1097	G	N1-C6-O6	9.53	125.62	119.90
1	CA	2229	C	C6-N1-C2	-9.53	116.49	120.30
1	AA	894	U	C2-N3-C4	-9.53	121.28	127.00
1	AA	1023	G	O5'-P-OP2	-9.53	97.13	105.70
1	AA	600	G	C5-C6-O6	-9.52	122.89	128.60
1	CA	1698	A	C4-C5-C6	9.52	121.76	117.00
1	AA	1455	C	C2-N3-C4	-9.52	115.14	119.90
1	AA	1784	G	N3-C2-N2	9.52	126.56	119.90
1	AA	2033	U	C5-C4-O4	9.52	131.61	125.90
34	BA	1502	A	N1-C2-N3	9.51	134.06	129.30
1	AA	1680	G	O5'-P-OP1	-9.51	97.14	105.70
1	AA	1728	G	C4-C5-N7	9.50	114.60	110.80
1	AA	1961	U	N3-C4-C5	9.50	120.30	114.60
1	AA	2581	G	O5'-P-OP1	-9.49	97.16	105.70
1	AA	1038	C	N3-C4-C5	9.49	125.70	121.90
1	AA	139	A	C8-N9-C4	-9.48	102.01	105.80
1	AA	1082	G	C5-N7-C8	9.48	109.04	104.30
1	AA	2298	A	C4-C5-C6	9.48	121.74	117.00
1	AA	553	A	C5-C6-N1	-9.48	112.96	117.70
1	AA	45	C	N1-C2-O2	-9.48	113.21	118.90
1	AA	1328	U	C5-C6-N1	-9.47	117.96	122.70
1	AA	1282	G	N9-C4-C5	-9.47	101.61	105.40
1	AA	2533	C	C2-N3-C4	-9.46	115.17	119.90
1	AA	776	G	C8-N9-C4	-9.46	102.61	106.40
1	AA	714	U	C5-C6-N1	-9.46	117.97	122.70
1	AA	2610	A	OP2-P-O3'	9.46	126.00	105.20
1	AA	796	C	C5-C6-N1	-9.45	116.27	121.00
1	AA	1270	C	C5-C6-N1	-9.44	116.28	121.00
1	AA	1812	C	N3-C4-C5	9.44	125.68	121.90
2	AB	46	A	O5'-P-OP1	-9.44	97.20	105.70
1	AA	2464	C	N1-C2-O2	-9.44	113.24	118.90
1	AA	2302	G	O5'-P-OP2	9.43	122.02	110.70
1	AA	823	G	C5-N7-C8	9.43	109.01	104.30
1	AA	1301	U	C5-C6-N1	9.42	127.41	122.70
1	CA	1204	A	C4-C5-N7	9.42	115.41	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	26	G	C5-C6-O6	-9.41	122.95	128.60
1	AA	1261	G	C5-C6-O6	-9.41	122.95	128.60
1	AA	1189	A	N9-C4-C5	9.41	109.56	105.80
1	CA	133	C	C6-N1-C2	9.41	124.06	120.30
1	AA	147	U	C6-N1-C2	9.40	126.64	121.00
1	AA	2107	C	C6-N1-C2	9.40	124.06	120.30
1	AA	2057	G	C5-C6-O6	-9.40	122.96	128.60
1	AA	174	U	O5'-P-OP2	-9.40	97.24	105.70
1	AA	2609	G	N1-C6-O6	9.39	125.54	119.90
1	AA	436	C	O5'-P-OP2	-9.39	97.25	105.70
1	AA	884	C	C4-C5-C6	9.39	122.09	117.40
1	CA	1902	C	C6-N1-C2	-9.38	116.55	120.30
1	AA	1350	C	O5'-P-OP2	-9.38	97.26	105.70
1	AA	723	A	C5-C6-N1	-9.38	113.01	117.70
1	AA	1659	G	C4-C5-N7	9.38	114.55	110.80
1	AA	643	C	N1-C2-O2	-9.37	113.28	118.90
1	AA	2019	G	C5-C6-N1	9.37	116.18	111.50
1	CA	2584	U	C5-C4-O4	-9.36	120.28	125.90
1	AA	493	G	N1-C6-O6	-9.36	114.28	119.90
1	AA	290	G	C8-N9-C4	9.36	110.14	106.40
1	AA	2281	A	O5'-P-OP1	-9.36	97.28	105.70
1	AA	894	U	C5-C4-O4	9.35	131.51	125.90
34	BA	1496	C	O5'-P-OP2	-9.35	97.29	105.70
1	AA	2418	U	O5'-P-OP2	9.34	121.91	110.70
1	AA	1811	A	C8-N9-C4	-9.34	102.07	105.80
34	BA	235	C	O5'-P-OP1	-9.34	97.30	105.70
1	CA	2548	G	C5-C6-O6	-9.34	123.00	128.60
1	AA	1249	A	N7-C8-N9	9.33	118.46	113.80
1	AA	751	G	O4'-C1'-N9	9.32	115.66	108.20
1	AA	2797	C	C2-N3-C4	-9.32	115.24	119.90
1	CA	2818	G	C8-N9-C4	9.32	110.13	106.40
1	CA	2286	A	C6-C5-N7	-9.31	125.78	132.30
1	AA	787	U	C6-N1-C2	-9.30	115.42	121.00
1	AA	315	C	C6-N1-C2	9.30	124.02	120.30
34	BA	665	A	O5'-P-OP2	-9.30	97.33	105.70
1	AA	560	C	C4-C5-C6	9.30	122.05	117.40
1	AA	591	U	C4-C5-C6	-9.29	114.12	119.70
1	AA	1081	U	N3-C4-C5	9.29	120.18	114.60
1	AA	1821	C	OP1-P-O3'	9.29	125.64	105.20
1	AA	1342	G	C5-C6-O6	9.29	134.17	128.60
1	AA	1985	U	C5-C6-N1	9.28	127.34	122.70
1	CA	388	G	O5'-P-OP1	-9.28	97.35	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	858	U	N1-C2-O2	-9.28	116.31	122.80
1	AA	181	C	N1-C2-O2	-9.27	113.34	118.90
1	AA	2078	G	C5-C6-O6	9.27	134.16	128.60
1	AA	1307	C	C2-N3-C4	-9.27	115.27	119.90
1	AA	1058	U	C5-C6-N1	-9.26	118.07	122.70
1	AA	1020	C	N3-C2-O2	-9.26	115.42	121.90
1	AA	1317	G	N9-C4-C5	-9.25	101.70	105.40
1	AA	786	G	N3-C4-C5	-9.24	123.98	128.60
1	CA	1204	A	C5-C6-N1	-9.24	113.08	117.70
1	AA	2066	C	N1-C2-O2	-9.24	113.36	118.90
1	AA	2581	G	OP1-P-OP2	9.23	133.45	119.60
1	AA	1458	A	O5'-P-OP1	-9.23	97.39	105.70
1	AA	1659	G	C5-C6-N1	9.22	116.11	111.50
1	CA	2425	A	O5'-P-OP2	-9.22	97.40	105.70
1	AA	1053	C	C4-C5-C6	9.21	122.00	117.40
1	CA	1698	A	C2-N3-C4	-9.20	106.00	110.60
1	AA	2902	G	C5-N7-C8	-9.19	99.70	104.30
1	AA	2060	G	N1-C6-O6	-9.19	114.39	119.90
1	AA	2460	A	O5'-P-OP1	-9.19	97.43	105.70
1	AA	1053	C	C5-C6-N1	-9.19	116.41	121.00
1	AA	2711	C	N1-C2-O2	9.19	124.41	118.90
1	AA	625	G	N3-C2-N2	9.18	126.33	119.90
1	AA	1251	G	C2-N3-C4	9.18	116.49	111.90
1	AA	2110	G	N1-C6-O6	9.18	125.41	119.90
1	CA	520	G	O5'-P-OP2	-9.18	97.44	105.70
1	CA	1296	G	C5-C6-O6	9.18	134.11	128.60
1	AA	1299	A	C5-C6-N1	9.17	122.29	117.70
1	AA	1856	A	O5'-P-OP2	-9.17	97.44	105.70
1	AA	2617	U	O5'-P-OP2	-9.17	97.45	105.70
1	CA	1934	C	C6-N1-C2	9.17	123.97	120.30
1	AA	894	U	C2-N1-C1'	-9.17	106.70	117.70
1	AA	1720	U	N1-C2-O2	-9.17	116.38	122.80
1	AA	1964	C	OP1-P-OP2	-9.17	105.85	119.60
1	AA	2269	U	OP1-P-OP2	-9.17	105.85	119.60
1	CA	2234	G	C4-C5-N7	9.17	114.47	110.80
1	AA	2556	G	O5'-P-OP1	-9.16	97.45	105.70
34	BA	1502	A	N7-C8-N9	9.16	118.38	113.80
1	CA	1979	C	O5'-P-OP2	-9.16	97.45	105.70
34	BA	33	A	O5'-P-OP2	-9.16	97.45	105.70
1	AA	1851	U	C5-C6-N1	-9.16	118.12	122.70
1	AA	2100	C	N3-C4-C5	9.15	125.56	121.90
2	AB	103	G	N1-C6-O6	9.15	125.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1327	C	O5'-P-OP2	-9.15	97.47	105.70
1	AA	446	C	O5'-P-OP2	-9.15	97.47	105.70
1	AA	1006	C	O5'-P-OP2	-9.14	97.47	105.70
1	AA	1155	C	C6-N1-C2	-9.14	116.64	120.30
34	BA	914	A	O5'-P-OP1	-9.14	97.47	105.70
34	DA	1045	C	OP2-P-O3'	-9.14	85.08	105.20
1	AA	990	A	N9-C4-C5	-9.14	102.14	105.80
1	AA	416	G	C6-N1-C2	-9.13	119.62	125.10
1	AA	2902	G	N7-C8-N9	9.12	117.66	113.10
34	BA	365	U	C5-C6-N1	-9.12	118.14	122.70
1	AA	1001	G	N3-C2-N2	-9.12	113.52	119.90
1	AA	2368	C	N1-C2-O2	-9.12	113.43	118.90
1	AA	413	G	C6-C5-N7	-9.12	124.93	130.40
1	AA	2718	G	N7-C8-N9	-9.12	108.54	113.10
1	AA	601	A	N1-C6-N6	-9.11	113.13	118.60
1	AA	772	G	C8-N9-C4	9.11	110.04	106.40
1	CA	1638	C	O5'-P-OP2	-9.11	97.50	105.70
1	AA	649	C	O5'-P-OP1	-9.11	97.50	105.70
1	AA	1998	U	O5'-P-OP2	-9.09	97.52	105.70
1	AA	209	G	N7-C8-N9	-9.08	108.56	113.10
1	AA	1000	C	N1-C2-N3	9.08	125.56	119.20
1	AA	1312	G	C5-C6-N1	9.08	116.04	111.50
1	CA	659	C	C5-C6-N1	-9.08	116.46	121.00
1	CA	748	G	N1-C6-O6	-9.08	114.45	119.90
1	AA	550	U	N1-C2-N3	9.07	120.34	114.90
1	AA	2518	U	P-O3'-C3'	9.07	130.58	119.70
1	AA	560	C	C6-N1-C2	9.06	123.92	120.30
1	AA	2550	C	N3-C2-O2	9.05	128.24	121.90
1	CA	773	U	O5'-P-OP1	-9.05	97.55	105.70
1	CA	1957	C	N3-C4-N4	9.05	124.34	118.00
1	AA	1802	C	N1-C2-O2	-9.05	113.47	118.90
1	AA	2037	A	C4-C5-C6	9.05	121.53	117.00
1	AA	2895	C	C6-N1-C2	-9.05	116.68	120.30
1	AA	2515	A	C2-N3-C4	9.04	115.12	110.60
1	AA	2748	G	N1-C6-O6	-9.04	114.47	119.90
34	BA	394	G	O5'-P-OP1	-9.04	97.56	105.70
1	AA	786	G	C5-C6-O6	-9.04	123.17	128.60
1	AA	1645	C	C5-C6-N1	-9.04	116.48	121.00
34	BA	1064	G	N3-C4-C5	9.04	133.12	128.60
1	CA	1760	A	O5'-P-OP2	-9.04	97.57	105.70
1	AA	126	C	C5-C4-N4	-9.03	113.88	120.20
1	AA	1298	G	OP2-P-O3'	9.03	125.06	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2827	G	C5-C6-O6	-9.03	123.18	128.60
1	CA	2544	G	C5-C6-O6	-9.03	123.18	128.60
1	AA	2004	C	C4-C5-C6	9.02	121.91	117.40
1	AA	1331	G	C5-C6-O6	-9.02	123.19	128.60
1	AA	2046	G	C8-N9-C4	9.02	110.01	106.40
1	AA	2383	G	C5-C6-O6	-9.02	123.19	128.60
1	AA	730	C	C5-C6-N1	-9.01	116.49	121.00
1	CA	474	G	N1-C6-O6	-9.01	114.49	119.90
1	AA	592	U	C2-N3-C4	-9.01	121.60	127.00
1	AA	663	G	N1-C6-O6	-9.01	114.50	119.90
1	AA	1733	C	N3-C2-O2	-9.01	115.59	121.90
1	CA	2234	G	C5-C6-O6	-9.01	123.20	128.60
2	AB	41	U	C5-C6-N1	-9.00	118.20	122.70
1	CA	1947	C	C6-N1-C2	9.00	123.90	120.30
1	CA	1992	G	N1-C6-O6	-9.00	114.50	119.90
1	AA	786	G	C6-N1-C2	-9.00	119.70	125.10
1	AA	1474	C	O5'-P-OP1	-9.00	97.60	105.70
1	AA	1657	C	C2-N3-C4	-9.00	115.40	119.90
1	CA	945	A	C5-N7-C8	-8.99	99.40	103.90
1	AA	1428	G	C5-C6-O6	-8.99	123.21	128.60
1	AA	121	G	O5'-P-OP2	-8.98	97.61	105.70
1	AA	600	G	C5-C6-N1	8.98	115.99	111.50
1	AA	353	G	C5-C6-O6	-8.98	123.21	128.60
1	AA	1097	G	O5'-P-OP1	-8.98	97.62	105.70
1	CA	2874	C	C6-N1-C2	-8.98	116.71	120.30
1	AA	12	U	N3-C2-O2	-8.98	115.92	122.20
1	AA	1809	U	N1-C2-O2	-8.97	116.52	122.80
1	AA	2331	G	C2-N3-C4	-8.97	107.42	111.90
1	AA	354	A	N7-C8-N9	8.97	118.28	113.80
1	AA	1021	G	O5'-P-OP2	-8.96	97.63	105.70
1	AA	2460	A	C5-C6-N1	8.97	122.18	117.70
1	AA	2651	A	N1-C2-N3	8.97	133.78	129.30
1	AA	845	G	C4-C5-N7	-8.96	107.22	110.80
1	AA	2858	G	O4'-C1'-N9	8.96	115.37	108.20
1	AA	535	C	N1-C2-O2	8.96	124.27	118.90
1	AA	978	A	N3-C4-N9	-8.96	120.24	127.40
34	BA	365	U	C2-N1-C1'	-8.96	106.95	117.70
1	CA	1698	A	C8-N9-C4	-8.95	102.22	105.80
1	CA	2850	A	O5'-P-OP2	-8.95	97.65	105.70
1	AA	497	A	N1-C2-N3	8.94	133.77	129.30
1	AA	1543	U	N3-C4-O4	-8.94	113.14	119.40
1	CA	1296	G	N1-C6-O6	-8.94	114.54	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	324	A	C2-N3-C4	8.93	115.07	110.60
1	AA	2448	G	O5'-P-OP1	-8.93	97.66	105.70
1	CA	975	C	N1-C2-O2	8.93	124.26	118.90
1	AA	2248	C	N3-C4-C5	8.93	125.47	121.90
1	CA	1639	U	O5'-P-OP2	-8.93	97.67	105.70
1	AA	564	G	C8-N9-C4	8.92	109.97	106.40
1	AA	1010	C	C6-N1-C2	-8.92	116.73	120.30
1	AA	1745	A	O4'-C1'-N9	8.92	115.33	108.20
1	AA	609	A	N1-C2-N3	-8.92	124.84	129.30
1	AA	787	U	O5'-P-OP1	8.91	121.40	110.70
1	AA	1039	G	O5'-P-OP2	-8.91	97.68	105.70
1	AA	183	G	C4-C5-N7	-8.90	107.24	110.80
1	AA	841	G	N9-C4-C5	-8.90	101.84	105.40
1	AA	524	U	N3-C4-O4	-8.90	113.17	119.40
1	AA	1664	A	O5'-P-OP1	-8.90	97.69	105.70
34	BA	533	A	O5'-P-OP1	-8.90	97.69	105.70
1	AA	327	U	C5-C6-N1	-8.89	118.25	122.70
1	AA	2429	C	O5'-P-OP2	-8.89	97.70	105.70
1	AA	2497	G	N9-C4-C5	-8.89	101.84	105.40
1	CA	2046	G	C8-N9-C4	8.89	109.96	106.40
1	AA	1658	C	N3-C4-C5	8.88	125.45	121.90
1	AA	2071	G	N7-C8-N9	8.88	117.54	113.10
1	AA	1701	A	C8-N9-C4	8.88	109.35	105.80
1	CA	1284	A	N9-C4-C5	-8.87	102.25	105.80
1	AA	16	G	O5'-P-OP1	-8.87	97.72	105.70
1	AA	1270	C	C2-N3-C4	-8.87	115.47	119.90
34	DA	1415	G	O5'-P-OP2	-8.86	97.73	105.70
1	AA	790	G	N1-C6-O6	-8.85	114.59	119.90
1	AA	1316	C	C2-N3-C4	-8.85	115.47	119.90
1	AA	2409	G	N1-C6-O6	-8.84	114.59	119.90
1	AA	2107	C	C2-N3-C4	-8.84	115.48	119.90
1	CA	1901	A	C2-N3-C4	8.84	115.02	110.60
1	AA	1340	U	C5-C6-N1	-8.83	118.28	122.70
1	AA	2277	U	C4-C5-C6	8.83	125.00	119.70
1	AA	2874	G	O5'-P-OP2	-8.83	97.75	105.70
1	CA	575	A	O5'-P-OP2	8.83	121.30	110.70
34	BA	1502	A	N1-C6-N6	8.83	123.90	118.60
1	AA	195	U	N3-C4-O4	-8.83	113.22	119.40
1	AA	2786	C	N3-C4-C5	8.83	125.43	121.90
1	AA	775	G	N3-C2-N2	8.83	126.08	119.90
1	AA	599	U	N1-C2-N3	8.82	120.19	114.90
1	AA	2641	A	C5-C6-N6	-8.82	116.64	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2576	G	C2-N3-C4	8.82	116.31	111.90
1	AA	634	C	C6-N1-C2	8.82	123.83	120.30
1	AA	981	C	N1-C2-O2	-8.82	113.61	118.90
1	AA	174	U	C5-C6-N1	-8.82	118.29	122.70
1	CA	1698	A	O4'-C1'-N9	8.82	115.25	108.20
1	AA	184	A	P-O3'-C3'	8.82	130.28	119.70
1	AA	2014	G	N3-C4-C5	-8.82	124.19	128.60
1	AA	2331	G	N9-C4-C5	8.82	108.93	105.40
1	AA	2453	C	C2-N3-C4	-8.81	115.49	119.90
1	AA	1308	A	O5'-P-OP2	8.81	121.27	110.70
1	CA	2563	U	N3-C2-O2	-8.81	116.03	122.20
1	CA	2593	U	N3-C4-O4	-8.81	113.23	119.40
1	AA	2476	C	N3-C4-C5	8.80	125.42	121.90
1	AA	2470	G	N3-C2-N2	-8.80	113.74	119.90
1	AA	786	G	C2-N3-C4	8.80	116.30	111.90
1	AA	907	U	O5'-P-OP2	-8.80	97.78	105.70
1	AA	1078	A	N1-C6-N6	8.80	123.88	118.60
1	AA	2285	A	C4-C5-N7	8.80	115.10	110.70
1	AA	822	G	N9-C4-C5	8.79	108.92	105.40
1	AA	2548	G	C4-C5-N7	-8.79	107.28	110.80
1	AA	1860	A	O5'-P-OP2	-8.79	97.79	105.70
1	AA	2443	U	O5'-P-OP2	-8.79	97.79	105.70
1	AA	2631	C	C5-C6-N1	-8.79	116.61	121.00
1	AA	2638	C	C5-C6-N1	-8.79	116.61	121.00
1	AA	887	C	O5'-P-OP2	-8.78	97.80	105.70
1	AA	1694	G	C4-C5-N7	-8.78	107.29	110.80
1	AA	2023	A	N1-C6-N6	-8.78	113.33	118.60
1	AA	2068	G	C5-C6-N1	8.78	115.89	111.50
1	AA	1926	G	C5-C6-O6	8.78	133.87	128.60
1	AA	2791	A	N1-C2-N3	8.78	133.69	129.30
1	AA	2307	C	O5'-P-OP1	-8.77	97.80	105.70
1	CA	1345	C	C6-N1-C2	8.77	123.81	120.30
1	AA	2299	A	C6-N1-C2	8.77	123.86	118.60
1	AA	22	C	N1-C2-O2	8.77	124.16	118.90
1	CA	2490	G	C4-C5-N7	8.77	114.31	110.80
1	CA	2006	C	N1-C2-O2	-8.76	113.64	118.90
1	AA	2115	G	C8-N9-C4	-8.76	102.89	106.40
1	AA	2260	C	C5-C6-N1	-8.76	116.62	121.00
1	AA	2384	G	N1-C6-O6	8.76	125.15	119.90
1	AA	1065	U	C5-C6-N1	-8.75	118.32	122.70
1	AA	1249	A	C8-N9-C4	-8.75	102.30	105.80
1	AA	1824	C	N3-C4-N4	-8.75	111.87	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1994	A	O5'-P-OP1	-8.75	97.83	105.70
1	AA	772	G	N7-C8-N9	-8.75	108.73	113.10
1	AA	2586	G	C5-C6-N1	8.75	115.87	111.50
16	CS	67	ARG	NE-CZ-NH1	8.75	124.67	120.30
1	CA	2287	A	O5'-P-OP2	-8.74	97.83	105.70
1	AA	535	C	N3-C2-O2	-8.74	115.78	121.90
1	CA	2548	G	N1-C6-O6	8.74	125.14	119.90
1	AA	836	A	O5'-P-OP1	-8.73	97.84	105.70
1	CA	2420	C	O5'-P-OP1	-8.73	97.85	105.70
1	AA	1045	U	N3-C4-C5	8.72	119.83	114.60
1	CA	448	U	O5'-P-OP1	-8.72	97.85	105.70
1	CA	1284	A	C4-C5-N7	8.72	115.06	110.70
1	CA	1323	U	N3-C4-C5	8.71	119.83	114.60
1	AA	126	C	N3-C4-C5	8.71	125.38	121.90
1	AA	649	C	C2-N3-C4	-8.71	115.55	119.90
1	AA	412	C	N3-C2-O2	8.71	127.99	121.90
1	AA	2331	G	N7-C8-N9	8.71	117.45	113.10
34	BA	1502	A	C4-C5-N7	8.71	115.05	110.70
1	AA	1008	U	C2-N3-C4	-8.70	121.78	127.00
1	AA	2530	A	N1-C2-N3	8.70	133.65	129.30
1	AA	1685	C	N3-C4-C5	8.70	125.38	121.90
2	AB	108	U	O5'-P-OP2	-8.70	97.87	105.70
1	AA	112	U	OP1-P-OP2	-8.69	106.56	119.60
1	AA	1986	G	O5'-P-OP1	-8.69	97.88	105.70
2	AB	82	G	C4-C5-N7	-8.69	107.32	110.80
1	AA	1200	G	N3-C4-N9	8.68	131.21	126.00
34	BA	266	G	C6-C5-N7	-8.68	125.19	130.40
1	AA	2527	C	N3-C2-O2	8.68	127.98	121.90
1	AA	2471	A	C2-N3-C4	8.68	114.94	110.60
1	AA	2394	G	O5'-P-OP2	-8.67	97.90	105.70
1	AA	36	G	N1-C6-O6	-8.67	114.70	119.90
1	AA	353	G	O5'-P-OP2	-8.67	97.90	105.70
1	AA	2096	U	N1-C2-O2	-8.66	116.73	122.80
1	AA	1919	G	O5'-P-OP1	-8.66	97.91	105.70
1	AA	2657	G	N3-C4-C5	8.66	132.93	128.60
1	CA	1941	C	C6-N1-C2	-8.65	116.84	120.30
1	AA	2057	G	C8-N9-C4	8.65	109.86	106.40
1	AA	727	G	O5'-P-OP1	-8.65	97.92	105.70
1	CA	1937	A	O4'-C1'-N9	8.65	115.12	108.20
1	CA	2679	A	O5'-P-OP2	-8.65	97.92	105.70
1	AA	1052	C	N1-C2-O2	-8.64	113.71	118.90
1	AA	2657	G	C5-N7-C8	-8.64	99.98	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	354	A	C5-C6-N1	-8.64	113.38	117.70
1	CA	2599	G	C5-C6-O6	8.64	133.78	128.60
1	AA	418	G	N9-C4-C5	-8.64	101.94	105.40
1	AA	1342	G	C2-N3-C4	8.64	116.22	111.90
1	AA	1011	G	C8-N9-C4	-8.63	102.95	106.40
1	AA	2290	A	N9-C4-C5	8.64	109.25	105.80
1	AA	204	G	O5'-P-OP2	8.63	121.06	110.70
1	AA	1816	A	C4-C5-C6	8.63	121.31	117.00
6	AF	74	ARG	NE-CZ-NH1	8.63	124.61	120.30
34	DA	50	A	C8-N9-C4	-8.63	102.35	105.80
1	AA	2718	G	C8-N9-C4	8.63	109.85	106.40
1	AA	900	G	O5'-P-OP2	-8.62	97.94	105.70
1	AA	2487	C	N3-C4-C5	-8.62	118.45	121.90
1	AA	2041	A	C5-C6-N1	-8.62	113.39	117.70
1	AA	2527	C	C5-C4-N4	-8.62	114.17	120.20
1	CA	1654	A	O5'-P-OP2	8.62	121.04	110.70
1	AA	187	C	O5'-P-OP2	-8.62	97.94	105.70
1	AA	2690	C	C2-N3-C4	8.61	124.21	119.90
1	AA	254	A	O4'-C1'-N9	8.61	115.09	108.20
18	AU	3	ARG	NE-CZ-NH1	-8.61	116.00	120.30
34	BA	915	A	O5'-P-OP2	-8.60	97.96	105.70
34	BA	1530	G	N1-C6-O6	8.60	125.06	119.90
1	AA	1081	U	C2-N3-C4	-8.60	121.84	127.00
1	AA	2693	C	N3-C4-N4	8.60	124.02	118.00
1	AA	1503	G	OP1-P-OP2	-8.59	106.71	119.60
34	BA	1523	G	N1-C6-O6	-8.59	114.74	119.90
1	CA	1790	C	N3-C4-C5	-8.59	118.46	121.90
34	DA	562	C	O5'-P-OP1	-8.59	97.97	105.70
1	AA	2014	G	C2-N3-C4	8.59	116.19	111.90
1	AA	2377	G	O5'-P-OP2	-8.59	97.97	105.70
1	CA	1763	G	C8-N9-C4	8.59	109.83	106.40
34	BA	266	G	C4-C5-N7	8.58	114.23	110.80
1	CA	1428	C	O5'-P-OP2	8.57	120.99	110.70
1	AA	804	U	C2-N3-C4	-8.57	121.86	127.00
1	AA	1686	U	N1-C2-O2	8.57	128.80	122.80
1	AA	241	G	C5-C6-O6	-8.56	123.46	128.60
1	AA	2833	A	C2-N3-C4	-8.56	106.32	110.60
1	CA	2540	C	N3-C4-C5	8.56	125.33	121.90
1	AA	710	G	N3-C2-N2	-8.56	113.91	119.90
1	AA	1282	G	N7-C8-N9	-8.55	108.82	113.10
1	AA	2833	A	N1-C2-N3	8.55	133.58	129.30
1	CA	141	A	C5-N7-C8	-8.55	99.62	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1334	G	N1-C6-O6	-8.55	114.77	119.90
1	AA	1081	U	N3-C4-O4	-8.55	113.42	119.40
1	AA	2881	C	C6-N1-C2	8.55	123.72	120.30
1	AA	853	C	O5'-P-OP2	8.54	120.95	110.70
1	AA	1472	G	C5-C6-N1	8.54	115.77	111.50
1	AA	2457	G	C5-C6-O6	8.54	133.73	128.60
1	AA	1728	G	N3-C4-C5	8.54	132.87	128.60
1	AA	1050	C	C4-C5-C6	8.54	121.67	117.40
1	AA	1329	G	C4-C5-C6	8.54	123.92	118.80
1	AA	2299	A	C4-C5-N7	8.53	114.97	110.70
1	AA	2554	A	C6-N1-C2	8.53	123.72	118.60
1	AA	552	C	C5-C4-N4	8.53	126.17	120.20
1	AA	35	G	C8-N9-C4	8.52	109.81	106.40
1	AA	2290	A	OP1-P-OP2	-8.52	106.81	119.60
1	AA	2516	U	O5'-P-OP2	-8.52	98.03	105.70
34	BA	1509	C	C6-N1-C2	8.52	123.71	120.30
1	CA	141	A	N7-C8-N9	8.52	118.06	113.80
1	AA	1733	C	N1-C2-O2	8.52	124.01	118.90
1	AA	2220	A	OP1-P-O3'	8.51	123.92	105.20
1	AA	2797	C	C5-C6-N1	-8.51	116.75	121.00
1	AA	1041	C	C6-N1-C2	8.51	123.70	120.30
1	AA	2505	U	N3-C2-O2	-8.51	116.25	122.20
1	AA	2529	C	C2-N3-C4	-8.51	115.65	119.90
1	AA	2876	U	N3-C2-O2	-8.51	116.25	122.20
1	CA	2023	G	O5'-P-OP1	-8.51	98.05	105.70
1	AA	718	C	C5-C4-N4	8.50	126.15	120.20
1	AA	1921	G	N7-C8-N9	8.50	117.35	113.10
2	AB	67	G	O5'-P-OP1	-8.50	98.05	105.70
1	CA	1996	C	C6-N1-C2	8.50	123.70	120.30
1	AA	842	C	N1-C2-O2	8.49	124.00	118.90
1	AA	1067	A	N7-C8-N9	8.49	118.05	113.80
1	CA	795	C	O5'-P-OP2	-8.49	98.06	105.70
1	AA	66	U	O5'-P-OP1	-8.49	98.06	105.70
1	CA	83	G	O5'-P-OP2	-8.49	98.06	105.70
1	CA	2540	C	C6-N1-C2	8.49	123.70	120.30
1	AA	1050	C	C6-N1-C2	-8.48	116.91	120.30
1	CA	963	U	OP1-P-OP2	-8.48	106.87	119.60
1	AA	2244	U	N3-C4-O4	-8.48	113.46	119.40
1	AA	1097	G	C5-C6-O6	-8.48	123.51	128.60
1	AA	27	G	O5'-P-OP2	-8.47	98.08	105.70
1	AA	794	U	OP1-P-OP2	8.47	132.30	119.60
1	AA	860	U	N3-C4-O4	-8.47	113.47	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1921	G	C8-N9-C4	-8.47	103.01	106.40
1	AA	2285	A	C5-C6-N6	-8.47	116.93	123.70
34	BA	365	U	C5-C4-O4	8.47	130.98	125.90
1	AA	1718	U	C5-C6-N1	-8.46	118.47	122.70
1	AA	2643	G	C8-N9-C4	-8.46	103.02	106.40
1	CA	1996	C	O5'-P-OP1	-8.46	98.09	105.70
1	CA	2394	C	N1-C2-O2	-8.46	113.83	118.90
1	AA	1656	A	C5-C6-N1	8.46	121.93	117.70
1	CA	2570	G	N9-C4-C5	8.45	108.78	105.40
1	AA	1261	G	N1-C6-O6	8.45	124.97	119.90
1	AA	2896	G	O5'-P-OP1	-8.45	98.09	105.70
1	AA	2896	G	C2-N3-C4	-8.45	107.67	111.90
34	BA	1523	G	N9-C4-C5	8.45	108.78	105.40
1	AA	853	C	OP1-P-OP2	-8.44	106.94	119.60
1	AA	1274	G	N3-C4-C5	8.44	132.82	128.60
1	CA	575	A	O5'-P-OP1	-8.44	98.11	105.70
34	DA	266	G	C6-C5-N7	-8.44	125.34	130.40
1	AA	873	U	OP2-P-O3'	8.43	123.75	105.20
1	AA	1855	G	OP2-P-O3'	8.43	123.74	105.20
1	AA	111	G	C5-C6-O6	-8.43	123.54	128.60
1	AA	1211	U	C5-C6-N1	-8.43	118.49	122.70
1	AA	2257	U	O5'-P-OP2	-8.42	98.12	105.70
56	BW	47	U	N3-C2-O2	-8.42	116.30	122.20
1	CA	2503	A	C2-N3-C4	8.42	114.81	110.60
34	DA	923	A	C8-N9-C4	-8.42	102.43	105.80
1	AA	100	G	N9-C4-C5	-8.42	102.03	105.40
1	AA	906	G	N1-C6-O6	8.42	124.95	119.90
1	AA	1237	G	C4-C5-N7	-8.42	107.43	110.80
1	CA	2581	G	C8-N9-C4	-8.42	103.03	106.40
1	AA	1843	A	OP1-P-OP2	8.41	132.22	119.60
1	AA	1018	A	C8-N9-C4	-8.40	102.44	105.80
1	AA	1361	C	N1-C2-O2	-8.39	113.86	118.90
1	AA	2453	C	C5-C6-N1	-8.39	116.80	121.00
1	AA	1003	U	C6-N1-C2	-8.39	115.97	121.00
1	AA	1040	C	C5-C6-N1	-8.39	116.81	121.00
1	AA	1371	G	N9-C4-C5	8.39	108.75	105.40
13	AP	18	ARG	NE-CZ-NH2	-8.39	116.11	120.30
1	AA	2046	G	N7-C8-N9	-8.38	108.91	113.10
1	CA	2409	G	N1-C6-O6	8.38	124.93	119.90
1	AA	1429	C	O5'-P-OP2	8.38	120.75	110.70
1	AA	624	C	N3-C2-O2	-8.37	116.04	121.90
1	AA	918	U	C5-C4-O4	-8.37	120.88	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2110	G	C5-C6-O6	-8.37	123.58	128.60
1	AA	1611	C	O5'-P-OP2	-8.37	98.17	105.70
34	DA	266	G	C4-C5-N7	8.37	114.15	110.80
1	AA	1710	C	C4-C5-C6	8.37	121.58	117.40
1	AA	606	G	N9-C4-C5	8.36	108.74	105.40
34	BA	328	C	O5'-P-OP1	-8.36	98.18	105.70
1	AA	2828	G	C5-C6-O6	8.35	133.61	128.60
1	AA	2691	A	N9-C4-C5	8.35	109.14	105.80
1	AA	1745	A	N9-C4-C5	-8.34	102.46	105.80
1	AA	2244	U	O5'-P-OP2	-8.34	98.19	105.70
1	AA	209	G	C5-N7-C8	8.34	108.47	104.30
1	AA	1700	G	N1-C6-O6	-8.34	114.90	119.90
1	AA	2018	C	N1-C2-O2	-8.33	113.90	118.90
1	AA	2078	G	C8-N9-C4	-8.33	103.07	106.40
1	AA	2294	G	O5'-P-OP1	-8.33	98.20	105.70
34	BA	767	A	N1-C6-N6	-8.33	113.60	118.60
1	CA	2498	C	N1-C2-O2	-8.33	113.90	118.90
1	AA	1074	A	C5-C6-N1	8.33	121.86	117.70
1	AA	1266	C	N3-C2-O2	-8.33	116.07	121.90
1	AA	1813	C	O5'-P-OP2	8.33	120.69	110.70
1	AA	738	C	C6-N1-C2	-8.33	116.97	120.30
1	AA	2607	G	C5-C6-O6	8.32	133.59	128.60
29	A5	15	ARG	NE-CZ-NH1	-8.32	116.14	120.30
1	AA	2041	A	C5-N7-C8	8.32	108.06	103.90
1	AA	856	G	N1-C6-O6	-8.32	114.91	119.90
34	BA	1528	U	O5'-P-OP2	-8.32	98.21	105.70
1	AA	802	C	C5-C6-N1	-8.32	116.84	121.00
1	AA	1829	U	N3-C4-O4	-8.32	113.58	119.40
1	CA	2353	G	O5'-P-OP2	-8.32	98.21	105.70
1	CA	270	A	C8-N9-C4	8.32	109.13	105.80
1	AA	1274	G	C5-C6-O6	8.31	133.59	128.60
1	CA	1204	A	C6-C5-N7	-8.31	126.48	132.30
1	AA	464	G	C5-C6-O6	-8.31	123.61	128.60
1	AA	2749	G	C8-N9-C4	8.31	109.72	106.40
1	AA	1317	G	N3-C4-N9	8.30	130.98	126.00
1	AA	1316	C	C5-C6-N1	-8.30	116.85	121.00
1	AA	2619	G	C6-N1-C2	-8.30	120.12	125.10
1	AA	1197	G	O5'-P-OP2	-8.29	98.23	105.70
1	AA	1617	A	C8-N9-C4	8.29	109.12	105.80
1	AA	2029	C	N1-C2-O2	-8.29	113.93	118.90
1	AA	431	C	N1-C2-O2	8.29	123.87	118.90
1	AA	2304	C	N3-C4-C5	-8.28	118.59	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2894	U	N1-C2-O2	-8.28	117.01	122.80
34	BA	1498	U	C2-N3-C4	-8.27	122.04	127.00
1	AA	793	A	O4'-C1'-N9	8.27	114.82	108.20
1	AA	2325	C	OP2-P-O3'	8.27	123.39	105.20
1	AA	516	G	O5'-P-OP1	-8.27	98.26	105.70
1	AA	2056	U	OP1-P-OP2	8.27	132.00	119.60
1	AA	1379	C	N3-C4-C5	8.27	125.21	121.90
1	AA	1721	G	N3-C4-N9	8.27	130.96	126.00
1	CA	204	A	C5-C6-N1	8.27	121.83	117.70
1	AA	1082	G	N1-C6-O6	-8.26	114.94	119.90
1	AA	1097	G	C4-C5-N7	8.26	114.10	110.80
1	AA	2827	G	C5-C6-N1	8.26	115.63	111.50
1	AA	2657	G	N3-C4-N9	-8.26	121.05	126.00
1	AA	1033	G	C4-C5-N7	-8.25	107.50	110.80
1	AA	2250	G	OP1-P-OP2	8.25	131.98	119.60
1	CA	2646	C	O5'-P-OP2	-8.25	98.27	105.70
1	AA	2707	C	N3-C2-O2	-8.25	116.12	121.90
1	AA	2003	A	C2-N3-C4	-8.25	106.48	110.60
1	CA	614	U	N3-C2-O2	-8.24	116.43	122.20
1	CA	2708	G	N9-C4-C5	-8.24	102.10	105.40
1	AA	539	A	O5'-P-OP1	-8.24	98.28	105.70
1	AA	2103	C	C6-N1-C2	-8.24	117.00	120.30
1	CA	2489	G	C5-C6-O6	-8.23	123.66	128.60
34	BA	1484	C	O5'-P-OP1	-8.23	98.29	105.70
4	CD	14	ARG	NE-CZ-NH2	-8.23	116.19	120.30
1	AA	1045	U	C4-C5-C6	-8.23	114.76	119.70
1	AA	1445	C	N1-C2-O2	-8.23	113.96	118.90
1	AA	1658	C	C5-C6-N1	-8.23	116.89	121.00
1	CA	1638	C	N3-C4-C5	8.23	125.19	121.90
1	AA	172	C	C2-N3-C4	-8.22	115.79	119.90
1	AA	511	C	N3-C2-O2	-8.22	116.15	121.90
1	CA	811	U	C6-N1-C2	8.22	125.93	121.00
1	CA	987	G	O5'-P-OP2	8.22	120.56	110.70
1	CA	811	U	N3-C4-C5	8.21	119.53	114.60
1	AA	564	G	O5'-P-OP1	-8.21	98.31	105.70
1	AA	1661	C	N1-C2-O2	8.21	123.83	118.90
1	AA	2776	G	N1-C6-O6	8.21	124.83	119.90
1	AA	1849	U	O5'-P-OP2	-8.21	98.31	105.70
1	AA	327	U	C2-N3-C4	-8.21	122.08	127.00
1	AA	2605	U	N3-C2-O2	-8.21	116.45	122.20
1	CA	2489	G	N1-C6-O6	8.21	124.83	119.90
1	AA	2282	G	C5-C6-O6	-8.20	123.68	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2713	A	N1-C6-N6	-8.19	113.68	118.60
1	CA	2626	C	C6-N1-C2	8.19	123.58	120.30
1	AA	962	G	O5'-P-OP2	8.19	120.53	110.70
1	AA	2393	C	C2-N3-C4	-8.19	115.81	119.90
1	AA	2376	C	C6-N1-C2	8.19	123.58	120.30
1	AA	787	U	N3-C2-O2	-8.18	116.47	122.20
1	AA	1816	A	C6-C5-N7	-8.18	126.57	132.30
1	AA	2078	G	N3-C2-N2	8.18	125.63	119.90
1	AA	2331	G	N1-C2-N2	8.18	123.56	116.20
1	AA	2019	G	C5-C6-O6	-8.17	123.70	128.60
1	AA	178	G	O5'-P-OP1	-8.17	98.35	105.70
34	BA	509	A	N7-C8-N9	8.17	117.88	113.80
1	AA	959	U	N1-C2-O2	-8.16	117.09	122.80
34	DA	619	U	C2-N1-C1'	-8.16	107.91	117.70
1	CA	2079	U	C4-C5-C6	8.16	124.60	119.70
1	AA	479	C	C5-C6-N1	-8.16	116.92	121.00
1	AA	35	G	N7-C8-N9	-8.16	109.02	113.10
34	BA	355	C	N3-C2-O2	-8.16	116.19	121.90
2	AB	104	U	N3-C4-C5	8.15	119.49	114.60
1	AA	714	U	C2-N3-C4	-8.15	122.11	127.00
1	AA	2619	G	C6-C5-N7	-8.15	125.51	130.40
1	AA	1423	G	C4-C5-N7	-8.15	107.54	110.80
1	CA	1334	G	C5-C6-N1	8.15	115.57	111.50
1	AA	2609	G	C4-C5-N7	8.14	114.06	110.80
1	AA	400	U	C5-C4-O4	-8.14	121.02	125.90
1	AA	241	G	N3-C2-N2	-8.14	114.20	119.90
1	AA	552	C	N3-C4-N4	-8.13	112.31	118.00
1	AA	565	C	N3-C4-C5	8.13	125.15	121.90
1	AA	1462	G	O4'-C1'-N9	8.13	114.71	108.20
1	AA	1657	C	N1-C2-O2	-8.13	114.02	118.90
1	AA	872	C	C5-C6-N1	-8.13	116.93	121.00
1	AA	1420	G	O5'-P-OP2	8.13	120.46	110.70
1	AA	1697	G	C5-C6-N1	8.13	115.56	111.50
1	AA	2351	G	C2-N3-C4	-8.13	107.83	111.90
1	AA	1239	A	N1-C6-N6	-8.13	113.72	118.60
1	AA	540	A	O5'-P-OP1	-8.13	98.39	105.70
1	AA	1620	G	C8-N9-C4	8.13	109.65	106.40
34	BA	1512	U	O5'-P-OP1	8.13	120.45	110.70
1	CA	1204	A	N3-C4-C5	8.13	132.49	126.80
1	AA	172	C	N3-C4-C5	8.12	125.15	121.90
1	CA	1694	C	N1-C2-O2	8.12	123.77	118.90
1	CA	1807	G	C8-N9-C4	8.12	109.65	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	38	A	C5-N7-C8	8.11	107.96	103.90
1	AA	978	A	O4'-C1'-N9	8.12	114.69	108.20
1	AA	2546	A	C5-C6-N6	-8.12	117.21	123.70
31	A7	9	ARG	NE-CZ-NH1	8.12	124.36	120.30
1	CA	1565	C	N1-C2-O2	-8.11	114.03	118.90
1	CA	1692	U	C2-N3-C4	-8.12	122.13	127.00
1	AA	1658	C	C2-N3-C4	-8.11	115.84	119.90
1	AA	2644	A	O5'-P-OP1	-8.11	98.41	105.70
1	AA	2009	G	N3-C2-N2	-8.10	114.23	119.90
1	AA	2548	G	N1-C6-O6	-8.10	115.04	119.90
1	CA	2856	C	C6-N1-C2	-8.10	117.06	120.30
1	AA	1620	G	N7-C8-N9	-8.10	109.05	113.10
34	DA	1103	C	C6-N1-C2	-8.10	117.06	120.30
1	AA	1034	A	C2-N3-C4	8.10	114.65	110.60
34	DA	1046	A	OP1-P-OP2	8.10	131.74	119.60
1	AA	2693	C	C5-C4-N4	-8.09	114.53	120.20
1	AA	1439	A	N1-C2-N3	-8.09	125.25	129.30
1	AA	1053	C	C2-N3-C4	-8.09	115.86	119.90
1	AA	1317	G	OP1-P-OP2	-8.09	107.47	119.60
1	AA	1360	C	C5-C6-N1	-8.09	116.96	121.00
1	AA	1605	A	O4'-C1'-N9	8.09	114.67	108.20
1	AA	577	U	O5'-P-OP1	8.08	120.40	110.70
1	AA	351	G	C5-C6-O6	8.08	133.45	128.60
1	AA	1008	U	N3-C4-C5	8.07	119.44	114.60
1	AA	978	A	C6-N1-C2	8.07	123.44	118.60
1	AA	1431	G	O4'-C1'-N9	8.07	114.66	108.20
1	CA	277	C	N1-C2-O2	8.07	123.74	118.90
1	AA	2386	C	C5-C4-N4	-8.06	114.56	120.20
1	AA	2355	C	N1-C2-O2	-8.06	114.07	118.90
1	AA	605	G	C5-C6-O6	8.05	133.43	128.60
1	AA	902	G	O5'-P-OP2	-8.05	98.45	105.70
1	AA	1710	C	N1-C2-O2	-8.05	114.07	118.90
1	AA	2514	G	C8-N9-C4	8.05	109.62	106.40
1	AA	739	C	O5'-P-OP2	8.05	120.36	110.70
1	AA	1277	G	C8-N9-C4	-8.05	103.18	106.40
1	CA	204	A	N1-C6-N6	-8.05	113.77	118.60
1	AA	2448	G	C8-N9-C4	-8.04	103.18	106.40
2	AB	41	U	C5-C4-O4	8.04	130.73	125.90
1	AA	1423	G	N1-C6-O6	-8.04	115.07	119.90
1	AA	2044	U	OP1-P-OP2	-8.04	107.54	119.60
1	AA	2354	C	O5'-P-OP2	8.04	120.35	110.70
56	BW	17	C	N1-C2-O2	8.03	123.72	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1745	A	C4-C5-C6	8.03	121.01	117.00
1	AA	2260	C	C2-N3-C4	-8.03	115.89	119.90
34	BA	266	G	C5-N7-C8	-8.03	100.29	104.30
1	CA	1692	U	C5-C6-N1	-8.03	118.69	122.70
1	AA	807	G	OP1-P-OP2	-8.02	107.57	119.60
1	CA	765	G	C8-N9-C4	-8.02	103.19	106.40
1	CA	1571	A	N1-C6-N6	-8.02	113.79	118.60
1	AA	423	G	N3-C2-N2	-8.02	114.29	119.90
1	AA	555	G	N1-C6-O6	-8.02	115.09	119.90
1	AA	968	U	C5-C4-O4	-8.02	121.09	125.90
1	AA	336	G	N7-C8-N9	8.01	117.11	113.10
1	AA	805	C	C5-C6-N1	-8.01	116.99	121.00
1	AA	2037	A	C5-C6-N1	-8.01	113.69	117.70
1	AA	2833	A	C8-N9-C4	8.01	109.00	105.80
34	BA	1417	G	C5-C6-N1	8.01	115.51	111.50
1	CA	1397	U	C6-N1-C2	-8.01	116.19	121.00
1	AA	831	A	O4'-C1'-N9	8.01	114.61	108.20
1	AA	1046	A	C5-C6-N1	-8.01	113.69	117.70
1	AA	1050	C	N3-C2-O2	-8.01	116.29	121.90
1	CA	148	C	C5-C6-N1	-8.01	117.00	121.00
1	CA	2196	C	O5'-P-OP2	-8.00	98.50	105.70
34	BA	365	U	N1-C2-N3	8.00	119.70	114.90
1	CA	946	G	O5'-P-OP1	-8.00	98.50	105.70
1	CA	1323	U	O5'-P-OP2	-8.00	98.50	105.70
1	AA	2902	G	C8-N9-C4	-7.99	103.20	106.40
1	AA	911	G	O5'-P-OP2	-7.99	98.51	105.70
1	AA	2800	C	C6-N1-C2	-7.99	117.10	120.30
1	AA	844	C	C2-N3-C4	-7.99	115.91	119.90
1	AA	421	A	N1-C6-N6	-7.98	113.81	118.60
1	AA	1720	U	C2-N1-C1'	-7.98	108.12	117.70
1	AA	2871	G	C5-C6-O6	-7.98	123.81	128.60
1	AA	184	A	OP2-P-O3'	7.98	122.75	105.20
1	CA	1972	A	O5'-P-OP2	-7.97	98.52	105.70
1	AA	2609	G	OP1-P-OP2	-7.97	107.64	119.60
1	AA	53	G	N9-C4-C5	7.97	108.59	105.40
1	AA	1258	A	N7-C8-N9	7.97	117.78	113.80
1	AA	725	C	N3-C4-N4	-7.97	112.42	118.00
1	AA	885	C	N3-C4-C5	7.97	125.09	121.90
34	BA	1384	C	C6-N1-C2	-7.97	117.11	120.30
1	CA	528	A	C5-C6-N1	-7.97	113.72	117.70
1	AA	990	A	O5'-P-OP1	-7.97	98.53	105.70
1	AA	1826	C	O5'-P-OP1	-7.96	98.53	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2384	G	C8-N9-C4	7.96	109.58	106.40
2	AB	104	U	C6-N1-C2	7.96	125.78	121.00
1	CA	2006	C	N3-C2-O2	7.96	127.47	121.90
1	AA	1297	C	N3-C4-C5	7.96	125.08	121.90
1	AA	511	C	C6-N1-C2	-7.96	117.12	120.30
1	AA	1371	G	N3-C4-C5	-7.96	124.62	128.60
1	CA	2582	G	O5'-P-OP2	-7.96	98.54	105.70
1	AA	975	U	C6-N1-C2	-7.95	116.23	121.00
1	AA	2585	C	N1-C2-O2	-7.95	114.13	118.90
1	AA	716	G	OP1-P-OP2	-7.95	107.68	119.60
1	AA	718	C	C6-N1-C2	-7.95	117.12	120.30
1	AA	894	U	N3-C4-O4	-7.95	113.84	119.40
1	CA	2619	C	C6-N1-C2	7.94	123.48	120.30
1	AA	241	G	C8-N9-C4	-7.94	103.22	106.40
1	CA	2330	G	N1-C6-O6	7.94	124.67	119.90
1	AA	324	A	C8-N9-C4	7.94	108.98	105.80
1	AA	1646	C	C2-N3-C4	-7.94	115.93	119.90
34	BA	813	U	O5'-P-OP1	7.93	120.22	110.70
2	AB	81	G	N3-C2-N2	-7.93	114.35	119.90
1	AA	98	U	C5-C4-O4	7.93	130.66	125.90
1	AA	1862	G	OP2-P-O3'	7.93	122.64	105.20
34	BA	868	C	O5'-P-OP2	7.93	120.22	110.70
34	BA	770	C	OP1-P-OP2	-7.93	107.71	119.60
1	AA	858	U	N1-C2-N3	7.93	119.66	114.90
1	AA	426	G	C2-N3-C4	-7.92	107.94	111.90
1	AA	893	C	C2-N3-C4	-7.92	115.94	119.90
34	BA	804	U	N3-C4-O4	-7.92	113.85	119.40
1	AA	1329	G	N1-C6-O6	7.92	124.65	119.90
1	CA	2586	C	N3-C2-O2	-7.92	116.35	121.90
34	BA	345	C	N1-C2-O2	7.92	123.65	118.90
1	AA	992	G	N9-C4-C5	7.92	108.57	105.40
1	AA	1741	C	C5-C6-N1	-7.91	117.04	121.00
1	CA	962	G	N1-C6-O6	7.91	124.65	119.90
1	AA	2749	G	N7-C8-N9	-7.91	109.14	113.10
34	BA	1530	G	N3-C4-C5	7.91	132.55	128.60
1	AA	616	G	C4-C5-N7	-7.91	107.64	110.80
1	CA	2330	G	C5-C6-O6	-7.91	123.86	128.60
1	AA	1000	C	N3-C4-C5	-7.90	118.74	121.90
1	AA	1605	A	C4-C5-N7	7.90	114.65	110.70
1	AA	578	U	C5-C4-O4	-7.89	121.17	125.90
1	AA	831	A	N7-C8-N9	-7.89	109.85	113.80
1	AA	1188	A	C4-C5-N7	7.89	114.65	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2279	A	O5'-P-OP1	-7.89	98.60	105.70
1	AA	147	U	C5-C6-N1	-7.89	118.75	122.70
1	AA	2783	G	C8-N9-C4	7.89	109.56	106.40
2	AB	99	G	N3-C2-N2	7.89	125.42	119.90
1	AA	797	A	O5'-P-OP2	-7.89	98.60	105.70
1	CA	1199	U	O5'-P-OP1	-7.89	98.60	105.70
1	AA	738	C	N1-C2-N3	7.88	124.72	119.20
1	AA	1656	A	C5-C6-N6	-7.88	117.39	123.70
20	AW	11	ARG	NE-CZ-NH1	7.88	124.24	120.30
34	DA	503	C	C6-N1-C2	-7.88	117.15	120.30
1	AA	418	G	C8-N9-C4	7.88	109.55	106.40
1	AA	1694	G	N1-C2-N2	7.88	123.29	116.20
1	AA	2067	C	C6-N1-C2	7.88	123.45	120.30
1	CA	1558	A	N1-C6-N6	7.88	123.33	118.60
1	AA	770	G	C5-C6-N1	7.87	115.44	111.50
1	AA	2559	U	C4-C5-C6	7.87	124.42	119.70
1	AA	1020	C	N1-C2-N3	7.87	124.71	119.20
1	AA	1740	U	C5-C6-N1	-7.87	118.77	122.70
1	AA	1318	A	O4'-C1'-N9	7.87	114.49	108.20
1	AA	2047	C	C5-C6-N1	-7.87	117.07	121.00
1	AA	74	G	C5-C6-O6	-7.86	123.88	128.60
1	CA	189	G	O5'-P-OP2	-7.86	98.62	105.70
1	AA	552	C	N1-C2-N3	7.86	124.70	119.20
1	AA	1815	A	OP1-P-OP2	7.86	131.39	119.60
34	BA	769	G	O5'-P-OP1	7.86	120.13	110.70
1	CA	2599	G	N1-C6-O6	-7.86	115.18	119.90
1	AA	894	U	C6-N1-C1'	7.86	132.20	121.20
1	AA	2348	A	N9-C4-C5	-7.86	102.66	105.80
1	AA	46	C	C2-N3-C4	-7.85	115.97	119.90
1	AA	757	G	N1-C6-O6	7.85	124.61	119.90
1	AA	1249	A	C5-C6-N6	-7.85	117.42	123.70
1	AA	1843	A	C5-C6-N1	7.84	121.62	117.70
1	AA	2605	U	N3-C4-O4	-7.84	113.91	119.40
1	AA	918	U	N3-C2-O2	7.84	127.69	122.20
1	AA	1231	G	N3-C2-N2	7.84	125.39	119.90
56	BW	36	A	C5-C6-N1	-7.84	113.78	117.70
1	AA	2045	G	C5-N7-C8	-7.84	100.38	104.30
34	BA	1436	U	O5'-P-OP2	-7.84	98.64	105.70
56	BW	47	U	C2-N1-C1'	7.84	127.11	117.70
1	AA	593	G	C2-N3-C4	7.84	115.82	111.90
1	AA	718	C	O5'-P-OP1	-7.84	98.65	105.70
1	AA	1784	G	N1-C2-N2	-7.84	109.15	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1026	A	C2-N3-C4	-7.83	106.68	110.60
1	AA	525	G	O5'-P-OP2	-7.83	98.65	105.70
1	AA	545	G	C5-N7-C8	7.83	108.21	104.30
1	AA	2301	G	C4-C5-N7	7.83	113.93	110.80
1	CA	2287	A	C2-N3-C4	-7.83	106.69	110.60
1	CA	195	A	P-O3'-C3'	7.83	129.09	119.70
1	AA	1505	C	C5-C6-N1	-7.82	117.09	121.00
17	AT	95	ARG	NE-CZ-NH1	-7.82	116.39	120.30
1	CA	2013	A	C4-C5-C6	7.82	120.91	117.00
1	AA	1709	C	C5-C6-N1	-7.82	117.09	121.00
1	AA	1742	G	OP1-P-OP2	7.82	131.33	119.60
1	AA	114	C	C5-C6-N1	-7.81	117.09	121.00
1	AA	1830	G	N9-C4-C5	7.81	108.52	105.40
1	AA	2025	G	C2-N3-C4	7.81	115.80	111.90
1	AA	1287	A	O5'-P-OP2	7.81	120.07	110.70
1	CA	2261	C	O5'-P-OP1	7.81	120.07	110.70
1	AA	788	G	OP1-P-OP2	-7.80	107.89	119.60
1	AA	1683	C	C4-C5-C6	7.80	121.30	117.40
1	CA	2503	A	C5-C6-N6	-7.80	117.46	123.70
1	AA	744	C	C5-C6-N1	-7.80	117.10	121.00
1	AA	1952	G	O5'-P-OP2	-7.80	98.68	105.70
1	AA	1832	G	OP1-P-OP2	7.80	131.30	119.60
1	AA	2407	C	N3-C4-C5	7.80	125.02	121.90
1	AA	1377	A	C5-C6-N6	7.80	129.94	123.70
1	AA	630	U	O5'-P-OP1	-7.79	98.69	105.70
1	AA	714	U	N1-C2-O2	-7.79	117.35	122.80
1	AA	2014	G	C8-N9-C4	-7.79	103.28	106.40
1	CA	277	C	C2-N1-C1'	7.79	127.37	118.80
1	CA	2043	C	O5'-P-OP2	-7.79	98.69	105.70
34	DA	912	C	C6-N1-C2	7.79	123.42	120.30
1	AA	2070	G	C8-N9-C4	7.79	109.52	106.40
1	CA	2554	U	O5'-P-OP2	7.79	120.04	110.70
1	AA	1645	C	C4-C5-C6	7.78	121.29	117.40
1	AA	1817	A	OP1-P-O3'	7.78	122.32	105.20
1	AA	2221	A	O5'-P-OP2	7.78	120.04	110.70
1	AA	2351	G	N1-C2-N3	7.78	128.57	123.90
34	BA	365	U	C6-N1-C1'	7.78	132.09	121.20
1	CA	1369	G	C8-N9-C4	-7.78	103.29	106.40
1	AA	1011	G	C5-C6-O6	7.77	133.26	128.60
1	AA	1749	G	C4-C5-N7	-7.77	107.69	110.80
1	AA	1661	C	N3-C2-O2	-7.77	116.46	121.90
1	AA	254	A	N7-C8-N9	7.77	117.68	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	414	C	O5'-P-OP2	-7.77	98.71	105.70
1	CA	1142(A)	A	N3-C4-C5	7.77	132.24	126.80
1	AA	1020	C	OP1-P-OP2	-7.77	107.95	119.60
1	AA	534	C	N1-C2-O2	7.76	123.56	118.90
1	AA	579	G	N1-C6-O6	-7.76	115.24	119.90
1	AA	976	G	O5'-P-OP1	-7.76	98.71	105.70
1	AA	2537	G	N1-C2-N2	-7.76	109.21	116.20
1	AA	2702	C	N3-C4-N4	7.76	123.43	118.00
1	AA	1052	C	C2-N1-C1'	-7.76	110.26	118.80
1	AA	1317	G	C4-C5-N7	7.76	113.91	110.80
34	BA	1484	C	C6-N1-C2	7.76	123.41	120.30
1	CA	2695	C	C6-N1-C2	7.76	123.40	120.30
1	AA	2873	C	N1-C2-O2	-7.76	114.25	118.90
1	AA	1022	C	N3-C4-C5	7.75	125.00	121.90
1	AA	783	C	C5-C4-N4	-7.75	114.77	120.20
1	AA	23	G	C4-C5-N7	-7.75	107.70	110.80
1	AA	1741	C	C2-N3-C4	-7.75	116.02	119.90
1	CA	856	C	C6-N1-C2	-7.75	117.20	120.30
1	AA	1425	A	N1-C6-N6	7.75	123.25	118.60
1	AA	1646	C	C5-C6-N1	-7.75	117.13	121.00
1	AA	2902	G	C4-C5-N7	7.75	113.90	110.80
1	CA	679	C	N3-C2-O2	7.75	127.33	121.90
1	AA	1543	U	N1-C2-N3	7.75	119.55	114.90
34	BA	1030(B)	C	N1-C2-O2	7.75	123.55	118.90
34	BA	1030(B)	C	C2-N1-C1'	7.74	127.32	118.80
34	BA	1417	G	C5-C6-O6	-7.74	123.95	128.60
1	AA	2063	U	N1-C2-N3	7.74	119.55	114.90
34	BA	290	C	C6-N1-C2	7.74	123.40	120.30
1	AA	325	G	N7-C8-N9	-7.74	109.23	113.10
1	AA	992	G	C4-C5-N7	-7.74	107.70	110.80
1	CA	792	G	O4'-C1'-N9	-7.74	102.01	108.20
1	AA	2083	G	C8-N9-C4	-7.74	103.31	106.40
1	AA	1020	C	N3-C4-N4	-7.74	112.58	118.00
1	CA	732	C	N1-C2-O2	7.73	123.54	118.90
1	AA	847	A	C8-N9-C4	-7.73	102.71	105.80
1	AA	802	C	C4-C5-C6	7.73	121.27	117.40
1	CA	2193	G	OP2-P-O3'	-7.73	88.19	105.20
1	AA	2098	U	C5-C6-N1	-7.73	118.84	122.70
1	AA	1849	U	C5-C6-N1	-7.73	118.84	122.70
1	AA	2660	C	N1-C2-N3	7.73	124.61	119.20
1	AA	2470	G	C6-N1-C2	-7.72	120.47	125.10
1	AA	1665	G	C5-C6-N1	7.72	115.36	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1851	U	N3-C2-O2	-7.72	116.80	122.20
1	AA	622	G	C8-N9-C4	7.72	109.49	106.40
1	AA	343	C	N3-C4-C5	-7.72	118.81	121.90
1	CA	1988	C	N1-C2-O2	7.72	123.53	118.90
1	AA	241	G	N1-C6-O6	7.72	124.53	119.90
1	AA	1418	U	N3-C4-O4	7.72	124.80	119.40
1	AA	22	C	N3-C4-N4	-7.71	112.60	118.00
1	AA	1097	G	O5'-P-OP2	7.71	119.96	110.70
1	CA	265	A	C5-N7-C8	-7.71	100.04	103.90
1	AA	23	G	C5-N7-C8	7.71	108.16	104.30
1	AA	2506	G	C5-C6-O6	7.71	133.23	128.60
1	CA	2286	A	C4-C5-N7	7.71	114.56	110.70
1	CA	2581	G	O4'-C1'-N9	7.71	114.37	108.20
1	AA	1987	C	C2-N1-C1'	-7.71	110.32	118.80
2	AB	54	G	N7-C8-N9	7.71	116.95	113.10
1	AA	892	G	O4'-C1'-N9	7.71	114.37	108.20
1	CA	2570	G	C4-C5-N7	-7.71	107.72	110.80
1	CA	2234	G	N1-C6-O6	7.71	124.52	119.90
1	AA	907	U	N3-C4-O4	-7.70	114.01	119.40
1	AA	1816	A	C6-N1-C2	-7.70	113.98	118.60
1	CA	1963	U	C2-N1-C1'	7.70	126.94	117.70
1	AA	1274	G	N3-C2-N2	7.70	125.29	119.90
1	AA	2828	G	N1-C6-O6	-7.70	115.28	119.90
1	AA	1710	C	C5-C6-N1	-7.70	117.15	121.00
1	AA	1275	G	O5'-P-OP2	-7.69	98.78	105.70
1	AA	2684	G	C5-C6-O6	-7.69	123.99	128.60
1	CA	1284	A	C5-C6-N6	-7.69	117.55	123.70
1	AA	2277	U	C5-C6-N1	-7.69	118.86	122.70
1	AA	1837	C	O5'-P-OP1	-7.69	98.78	105.70
1	AA	2785	C	C2-N3-C4	-7.69	116.06	119.90
1	CA	2824	C	C5-C6-N1	-7.69	117.16	121.00
1	AA	605	G	N1-C6-O6	-7.68	115.29	119.90
1	AA	2783	G	N9-C4-C5	-7.68	102.33	105.40
1	AA	1358	U	C5-C6-N1	-7.68	118.86	122.70
34	BA	756	C	N3-C4-C5	7.68	124.97	121.90
34	BA	1064	G	N3-C4-N9	-7.68	121.39	126.00
1	AA	1071	G	O5'-P-OP1	-7.68	98.79	105.70
1	AA	2279	A	C2-N3-C4	7.68	114.44	110.60
1	AA	231	G	C5-C6-O6	7.68	133.21	128.60
1	AA	1341	C	C5-C6-N1	-7.68	117.16	121.00
1	AA	2545	A	C8-N9-C4	7.68	108.87	105.80
1	AA	1811	A	N7-C8-N9	7.67	117.64	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1961	U	N3-C4-O4	-7.67	114.03	119.40
1	AA	2265	G	O5'-P-OP1	7.67	119.91	110.70
1	CA	1955	U	N1-C2-O2	-7.67	117.43	122.80
1	AA	500	G	N9-C4-C5	7.67	108.47	105.40
1	AA	625	G	N9-C4-C5	-7.67	102.33	105.40
1	AA	1802	C	C2-N3-C4	-7.67	116.07	119.90
1	CA	2732	G	N1-C6-O6	-7.67	115.30	119.90
1	AA	49	U	N1-C2-O2	7.67	128.17	122.80
56	DW	17	C	C2-N1-C1'	7.67	127.23	118.80
1	CA	2856	C	C5-C6-N1	7.67	124.83	121.00
1	AA	530	A	OP1-P-O3'	7.66	122.06	105.20
1	AA	822	G	O5'-P-OP2	-7.66	98.80	105.70
1	AA	1605	A	C5-C6-N1	-7.66	113.87	117.70
2	AB	38	C	N1-C2-O2	7.66	123.50	118.90
1	AA	726	C	OP1-P-OP2	-7.66	108.11	119.60
1	AA	1703	C	O5'-P-OP1	7.66	119.89	110.70
1	AA	1859	G	C4-C5-N7	-7.66	107.74	110.80
1	CA	1953	A	O5'-P-OP1	-7.66	98.81	105.70
1	AA	787	U	C5-C4-O4	7.66	130.50	125.90
1	AA	2054	G	N7-C8-N9	-7.66	109.27	113.10
1	AA	1864	U	C5-C6-N1	-7.65	118.87	122.70
1	CA	765	G	N7-C8-N9	7.65	116.93	113.10
1	AA	1439	A	C2-N3-C4	7.65	114.43	110.60
1	CA	1288	U	O5'-P-OP1	-7.65	98.81	105.70
1	AA	1464	G	O5'-P-OP1	-7.65	98.81	105.70
34	BA	345	C	C6-N1-C2	-7.65	117.24	120.30
1	CA	2067	G	N9-C4-C5	7.65	108.46	105.40
1	AA	731	G	C5-C6-O6	-7.65	124.01	128.60
34	BA	296	U	C5-C6-N1	-7.65	118.88	122.70
1	CA	1605	C	C4-C5-C6	7.65	121.22	117.40
1	AA	126	C	C2-N3-C4	-7.65	116.08	119.90
1	CA	945	A	N3-C4-C5	7.65	132.15	126.80
1	AA	2058	C	O5'-P-OP1	-7.64	98.82	105.70
1	AA	2653	G	O5'-P-OP1	-7.64	98.82	105.70
1	AA	555	G	C4-C5-C6	-7.64	114.22	118.80
1	AA	1478	C	N1-C2-O2	-7.64	114.31	118.90
1	AA	1665	G	O5'-P-OP2	-7.64	98.82	105.70
1	AA	2889	C	O5'-P-OP2	-7.64	98.82	105.70
1	AA	2548	G	C5-C6-O6	7.64	133.19	128.60
1	AA	2701	U	C6-N1-C2	-7.64	116.42	121.00
1	AA	192	C	N3-C2-O2	7.64	127.25	121.90
1	AA	2263	G	OP1-P-OP2	-7.64	108.14	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	96	C	O5'-P-OP2	-7.64	98.83	105.70
1	AA	2737	C	C4-C5-C6	7.63	121.22	117.40
1	AA	550	U	C5-C6-N1	-7.63	118.88	122.70
1	AA	1682	G	C5-C6-O6	-7.63	124.02	128.60
1	AA	782	A	O5'-P-OP1	-7.63	98.83	105.70
34	BA	355	C	N1-C2-O2	7.63	123.48	118.90
1	CA	1314	C	O5'-P-OP1	-7.63	98.83	105.70
1	AA	1445	C	N3-C2-O2	7.63	127.24	121.90
1	AA	2736	C	N3-C4-C5	7.63	124.95	121.90
1	AA	195	U	C5-C6-N1	-7.62	118.89	122.70
1	AA	1016	C	N3-C4-C5	-7.62	118.85	121.90
1	AA	1022	C	OP1-P-OP2	-7.62	108.17	119.60
1	AA	2505	U	C5-C4-O4	7.62	130.47	125.90
1	AA	883	G	N3-C4-C5	-7.62	124.79	128.60
2	CB	56	G	N3-C4-C5	-7.62	124.79	128.60
1	AA	1659	G	C5-C6-O6	-7.62	124.03	128.60
1	CA	1352	U	C5-C6-N1	-7.62	118.89	122.70
34	BA	266	G	N1-C6-O6	7.62	124.47	119.90
1	AA	1784	G	N9-C4-C5	-7.61	102.36	105.40
1	AA	2014	G	P-O3'-C3'	7.61	128.83	119.70
1	AA	2359	C	C6-N1-C2	-7.61	117.26	120.30
1	AA	2901	A	C8-N9-C4	7.61	108.84	105.80
34	BA	1517	G	O5'-P-OP2	-7.61	98.85	105.70
34	DA	509	A	C8-N9-C4	-7.61	102.76	105.80
1	AA	1303	C	N3-C4-C5	-7.61	118.86	121.90
1	AA	2014	G	C2'-C3'-O3'	7.61	126.23	109.50
1	AA	2066	C	N1-C2-N3	7.61	124.53	119.20
1	AA	2776	G	C6-C5-N7	-7.61	125.84	130.40
34	BA	924	C	N3-C2-O2	-7.61	116.58	121.90
1	AA	256	C	C6-N1-C2	7.61	123.34	120.30
1	AA	1743	G	O5'-P-OP2	-7.61	98.85	105.70
1	AA	2504	U	N1-C2-N3	7.61	119.46	114.90
1	AA	823	G	N7-C8-N9	-7.60	109.30	113.10
1	CA	1288	U	N3-C2-O2	-7.60	116.88	122.20
1	CA	1653	G	O5'-P-OP1	-7.60	98.86	105.70
1	AA	1322	A	C5-C6-N1	7.60	121.50	117.70
1	CA	1983	C	C6-N1-C2	7.60	123.34	120.30
1	AA	2383	G	N3-C4-N9	7.59	130.56	126.00
1	CA	1947	C	C5-C6-N1	-7.59	117.20	121.00
1	AA	2502	G	O5'-P-OP2	-7.59	98.87	105.70
34	BA	1523	G	C5-C6-O6	7.59	133.15	128.60
1	AA	775	G	N1-C6-O6	-7.58	115.35	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1329	G	C8-N9-C1'	-7.58	117.14	127.00
1	AA	1695	C	O5'-P-OP1	-7.58	98.88	105.70
1	AA	1830	G	C5-C6-O6	7.58	133.15	128.60
1	AA	1192	C	C6-N1-C2	7.58	123.33	120.30
34	BA	924	C	C6-N1-C2	-7.58	117.27	120.30
1	CA	12	U	C2-N1-C1'	7.58	126.80	117.70
1	CA	1792	G	C8-N9-C4	7.58	109.43	106.40
1	AA	1427	G	C6-N1-C2	-7.58	120.55	125.10
1	AA	2115	G	N9-C4-C5	7.58	108.43	105.40
1	AA	901	G	OP1-P-OP2	-7.57	108.24	119.60
1	AA	1262	C	O5'-P-OP2	7.57	119.79	110.70
1	CA	794	G	O5'-P-OP2	-7.57	98.88	105.70
1	AA	2347	A	O5'-P-OP1	-7.57	98.89	105.70
1	CA	2008	C	N3-C4-C5	7.57	124.93	121.90
1	CA	1266	G	C8-N9-C4	7.57	109.43	106.40
1	AA	980	C	C5-C6-N1	-7.57	117.22	121.00
1	AA	2021	C	N3-C4-C5	7.57	124.93	121.90
1	AA	2707	C	N1-C2-O2	7.57	123.44	118.90
1	CA	1291	C	C6-N1-C2	7.57	123.33	120.30
1	AA	721	G	C4-C5-N7	7.56	113.83	110.80
56	BW	47	U	N1-C2-O2	7.56	128.09	122.80
1	AA	2460	A	O5'-P-OP2	7.56	119.77	110.70
1	AA	1844	G	C8-N9-C4	7.56	109.42	106.40
1	AA	2162	C	N1-C2-O2	7.56	123.43	118.90
1	CA	2012	G	OP2-P-O3'	7.56	121.83	105.20
1	CA	2248	C	N1-C2-O2	-7.56	114.37	118.90
1	AA	1074	A	N1-C6-N6	7.56	123.13	118.60
1	AA	1362	U	O5'-P-OP1	-7.56	98.90	105.70
1	AA	888	A	C2-N3-C4	-7.55	106.82	110.60
1	AA	1251	G	N1-C2-N3	-7.55	119.37	123.90
1	AA	2779	G	C8-N9-C4	-7.55	103.38	106.40
1	AA	2797	C	N3-C4-C5	7.55	124.92	121.90
1	AA	2841	G	N1-C6-O6	-7.55	115.37	119.90
1	AA	1281	G	C6-N1-C2	-7.55	120.57	125.10
1	CA	2269	A	N1-C6-N6	7.55	123.13	118.60
1	AA	240	A	N9-C4-C5	-7.54	102.78	105.80
12	AO	64	ARG	NE-CZ-NH2	-7.54	116.53	120.30
1	AA	888	A	N1-C2-N3	7.54	133.07	129.30
1	AA	121	G	C6-N1-C2	-7.54	120.58	125.10
2	AB	102	A	C2-N3-C4	-7.54	106.83	110.60
1	AA	2062	C	N1-C2-O2	7.54	123.42	118.90
1	AA	1966	U	O5'-P-OP1	-7.54	98.92	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2611	G	C5-C6-N1	7.54	115.27	111.50
1	AA	2277	U	N1-C2-O2	-7.53	117.53	122.80
1	AA	883	G	OP2-P-O3'	7.53	121.77	105.20
1	AA	1018	A	C5-N7-C8	-7.53	100.14	103.90
1	AA	1273	G	C4-C5-N7	-7.53	107.79	110.80
1	AA	2029	C	C6-N1-C2	-7.53	117.29	120.30
34	BA	1513	A	C2-N3-C4	7.53	114.36	110.60
1	AA	1852	A	O5'-P-OP2	7.53	119.73	110.70
1	CA	395	U	O5'-P-OP2	-7.53	98.92	105.70
1	CA	730	C	C6-N1-C2	7.53	123.31	120.30
34	BA	345	C	N3-C2-O2	-7.53	116.63	121.90
1	AA	1007	G	N3-C2-N2	-7.53	114.63	119.90
1	AA	198	C	OP1-P-O3'	-7.52	88.65	105.20
1	AA	2020	G	C8-N9-C4	7.52	109.41	106.40
1	AA	637	U	C5-C4-O4	7.52	130.41	125.90
1	AA	1371	G	C8-N9-C4	-7.52	103.39	106.40
1	AA	2028	C	N3-C4-C5	7.52	124.91	121.90
1	AA	2525	G	N1-C6-O6	7.52	124.41	119.90
1	AA	121	G	C5-C6-N1	7.52	115.26	111.50
1	AA	822	G	O5'-P-OP1	-7.52	98.94	105.70
1	CA	2073	C	N3-C4-C5	7.52	124.91	121.90
1	AA	1645	C	O5'-P-OP2	-7.51	98.94	105.70
1	AA	1688	A	C8-N9-C4	-7.51	102.79	105.80
1	AA	2828	G	N1-C2-N2	-7.51	109.44	116.20
1	AA	1057	G	OP2-P-O3'	7.51	121.72	105.20
1	AA	1831	C	C2-N3-C4	-7.51	116.14	119.90
34	BA	123	C	C6-N1-C2	7.51	123.30	120.30
34	DA	758	G	C5-C6-O6	7.51	133.10	128.60
1	AA	1329	G	C4-N9-C1'	7.51	136.26	126.50
20	AW	17	VAL	CB-CA-C	-7.51	97.13	111.40
1	AA	1710	C	C2-N3-C4	-7.51	116.15	119.90
1	AA	2356	U	O5'-P-OP2	-7.50	98.95	105.70
1	CA	205	G	N7-C8-N9	-7.50	109.35	113.10
1	CA	308	G	O5'-P-OP2	-7.50	98.95	105.70
1	AA	2012	C	N1-C2-O2	-7.50	114.40	118.90
34	BA	924	C	N3-C4-C5	-7.50	118.90	121.90
1	CA	2566	A	O5'-P-OP2	-7.50	98.95	105.70
1	CA	2012	G	C8-N9-C4	-7.50	103.40	106.40
1	AA	2030	C	O5'-P-OP2	-7.50	98.95	105.70
1	CA	1807	G	N7-C8-N9	-7.50	109.35	113.10
56	BW	12	U	O5'-P-OP2	-7.50	98.95	105.70
1	CA	332	A	OP2-P-O3'	7.50	121.69	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2699	C	N1-C2-O2	7.50	123.40	118.90
1	AA	886	U	N3-C4-O4	-7.50	114.15	119.40
1	AA	2362	C	C2-N3-C4	-7.50	116.15	119.90
1	CA	2033	A	O5'-P-OP1	-7.49	98.96	105.70
1	AA	1453	C	N1-C2-O2	-7.49	114.41	118.90
1	AA	2301	G	C5-C6-N1	7.49	115.25	111.50
1	CA	631	A	O5'-P-OP2	-7.49	98.96	105.70
34	DA	890	G	N3-C4-C5	-7.49	124.86	128.60
34	BA	1495	U	O5'-P-OP2	-7.49	98.96	105.70
1	CA	2013	A	N1-C2-N3	7.49	133.04	129.30
1	AA	2612	A	N1-C6-N6	-7.48	114.11	118.60
1	AA	2083	G	C6-N1-C2	-7.48	120.61	125.10
1	AA	2299	A	N7-C8-N9	7.48	117.54	113.80
1	AA	733	G	OP1-P-OP2	7.48	130.81	119.60
1	AA	743	G	N7-C8-N9	-7.48	109.36	113.10
1	AA	778	C	C4-C5-C6	7.47	121.14	117.40
1	CA	2238	G	OP1-P-OP2	7.47	130.81	119.60
1	AA	2709	G	C8-N9-C4	7.47	109.39	106.40
1	AA	1071	G	N1-C2-N3	7.47	128.38	123.90
1	AA	2616	U	C5-C6-N1	-7.47	118.97	122.70
1	CA	687	C	C4-C5-C6	-7.47	113.67	117.40
1	CA	2549	G	C5-C6-O6	-7.47	124.12	128.60
1	AA	209	G	C4-C5-N7	-7.47	107.81	110.80
1	AA	663	G	N1-C2-N2	-7.47	109.48	116.20
1	AA	1000	C	C4-C5-C6	7.47	121.13	117.40
1	AA	2725	A	O5'-P-OP1	-7.47	98.98	105.70
1	CA	446	G	N3-C2-N2	-7.47	114.67	119.90
1	AA	74	G	N1-C6-O6	7.46	124.38	119.90
1	AA	139	A	C4-C5-N7	7.46	114.43	110.70
1	AA	586	G	C6-N1-C2	7.46	129.58	125.10
1	AA	844	C	C5-C4-N4	-7.46	114.98	120.20
1	AA	2067	C	C2-N3-C4	-7.46	116.17	119.90
1	AA	2697	G	C5-N7-C8	7.46	108.03	104.30
1	AA	976	G	C6-N1-C2	-7.46	120.62	125.10
1	AA	2888	U	N1-C2-N3	7.46	119.38	114.90
1	CA	2439	A	O5'-P-OP2	-7.46	98.99	105.70
1	AA	1658	C	C6-N1-C2	7.46	123.28	120.30
1	AA	2221	A	O5'-P-OP1	-7.46	98.99	105.70
1	AA	2855	G	N3-C4-C5	-7.46	124.87	128.60
1	AA	2858	G	O5'-P-OP1	7.46	119.65	110.70
1	CA	1658	C	O5'-P-OP2	-7.46	98.99	105.70
1	AA	2288	G	N1-C6-O6	-7.46	115.43	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1957	C	C5-C4-N4	-7.46	114.98	120.20
1	AA	1208	G	C5-N7-C8	7.46	108.03	104.30
1	AA	2075	G	N9-C4-C5	7.45	108.38	105.40
1	AA	2579	G	C6-C5-N7	7.45	134.87	130.40
1	AA	1665	G	C6-N1-C2	-7.45	120.63	125.10
1	AA	2506	G	C6-N1-C2	7.45	129.57	125.10
1	AA	2539	C	N3-C4-C5	7.45	124.88	121.90
1	AA	2775	G	N3-C2-N2	7.45	125.11	119.90
1	AA	362	G	C5-C6-O6	7.45	133.07	128.60
1	AA	1827	U	N3-C4-O4	7.45	124.61	119.40
1	AA	783	C	N3-C4-C5	7.45	124.88	121.90
1	CA	1646	C	N3-C2-O2	-7.45	116.69	121.90
1	AA	1807	G	N9-C4-C5	-7.45	102.42	105.40
1	CA	702	G	C5-N7-C8	7.45	108.02	104.30
1	AA	1077	G	C5-C6-N1	7.44	115.22	111.50
1	AA	2450	U	N1-C2-O2	-7.44	117.59	122.80
4	CD	229	VAL	CB-CA-C	-7.44	97.26	111.40
1	AA	1655	A	C5-C6-N6	-7.44	117.75	123.70
1	AA	2693	C	C2-N3-C4	-7.44	116.18	119.90
1	AA	2777	A	O5'-P-OP1	-7.44	99.01	105.70
1	AA	2249	G	N3-C2-N2	7.43	125.10	119.90
1	CA	150	C	N1-C2-O2	7.43	123.36	118.90
1	CA	25	U	N3-C2-O2	7.43	127.40	122.20
1	AA	2537	G	N3-C2-N2	7.43	125.10	119.90
1	AA	197	C	C5-C6-N1	-7.43	117.29	121.00
1	AA	2400	A	N1-C2-N3	7.43	133.01	129.30
1	AA	1410	G	N3-C4-C5	-7.42	124.89	128.60
1	CA	827	U	C6-N1-C2	7.42	125.45	121.00
1	CA	959	A	C8-N9-C4	-7.42	102.83	105.80
1	AA	2638	C	C6-N1-C2	7.42	123.27	120.30
1	AA	2718	G	N3-C2-N2	7.42	125.09	119.90
1	CA	2611	U	N1-C2-O2	-7.42	117.61	122.80
1	AA	1011	G	N1-C6-O6	-7.42	115.45	119.90
2	AB	97	G	N3-C2-N2	-7.42	114.71	119.90
1	CA	2580	U	C5-C6-N1	-7.42	118.99	122.70
34	DA	769	G	N1-C6-O6	7.42	124.35	119.90
1	CA	2406	U	O5'-P-OP2	7.42	119.60	110.70
1	CA	2638	G	O5'-P-OP1	-7.41	99.03	105.70
1	CA	563	G	N3-C2-N2	-7.41	114.71	119.90
1	CA	2779	U	N1-C2-O2	7.41	127.99	122.80
34	DA	912	C	C5-C6-N1	-7.41	117.30	121.00
1	AA	96	C	N1-C2-O2	7.40	123.34	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	181	C	C5-C6-N1	-7.40	117.30	121.00
1	AA	1384	G	OP1-P-OP2	-7.40	108.49	119.60
1	AA	1817	A	C8-N9-C4	7.40	108.76	105.80
1	CA	767	U	N3-C2-O2	-7.40	117.02	122.20
1	CA	1142(A)	A	C5-N7-C8	-7.40	100.20	103.90
1	AA	2757	G	N1-C2-N2	7.40	122.86	116.20
1	CA	2442	C	N3-C2-O2	-7.40	116.72	121.90
1	AA	496	A	C8-N9-C4	-7.40	102.84	105.80
1	AA	2697	G	C2-N3-C4	7.40	115.60	111.90
34	BA	885	G	O5'-P-OP2	-7.40	99.04	105.70
1	AA	805	C	N1-C2-O2	7.40	123.34	118.90
1	CA	2586	C	N3-C4-C5	7.40	124.86	121.90
1	AA	2341	G	N7-C8-N9	-7.39	109.40	113.10
1	AA	2400	A	C8-N9-C4	-7.39	102.84	105.80
1	CA	1978	A	OP2-P-O3'	7.39	121.47	105.20
1	AA	726	C	C6-N1-C2	7.39	123.26	120.30
1	AA	1742	G	C4-C5-N7	7.39	113.76	110.80
1	CA	1698	A	C5-N7-C8	-7.39	100.20	103.90
1	AA	2033	U	C4-C5-C6	7.39	124.13	119.70
1	AA	2455	C	N1-C2-N3	7.39	124.37	119.20
1	AA	995	G	C5-C6-N1	7.39	115.19	111.50
1	AA	2591	C	C5-C4-N4	-7.39	115.03	120.20
1	CA	2060	A	N1-C6-N6	-7.39	114.17	118.60
1	AA	2608	U	N1-C2-N3	7.39	119.33	114.90
1	CA	37	C	N3-C4-N4	7.39	123.17	118.00
1	AA	1454	C	N1-C2-O2	-7.39	114.47	118.90
1	AA	1686	U	N3-C2-O2	-7.39	117.03	122.20
34	BA	578	C	C6-N1-C2	-7.39	117.34	120.30
1	AA	534	C	C2-N3-C4	7.38	123.59	119.90
1	AA	2398	C	N3-C4-C5	-7.38	118.95	121.90
1	AA	2634	C	C2-N3-C4	-7.38	116.21	119.90
2	AB	77	U	C2-N3-C4	-7.38	122.57	127.00
1	AA	2077	C	O5'-P-OP2	-7.38	99.06	105.70
1	AA	1244	U	N3-C2-O2	-7.38	117.03	122.20
1	AA	2533	C	N1-C2-O2	-7.38	114.47	118.90
1	CA	997	G	O5'-P-OP1	-7.38	99.06	105.70
1	CA	2409	G	C6-C5-N7	-7.38	125.97	130.40
1	AA	597	C	C6-N1-C2	-7.38	117.35	120.30
34	BA	28	G	C5-C6-O6	-7.38	124.17	128.60
1	AA	1394	G	C5-C6-O6	-7.37	124.17	128.60
1	AA	2562	G	C6-C5-N7	-7.37	125.98	130.40
1	AA	240	A	N7-C8-N9	-7.37	110.11	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1653	G	N3-C4-C5	-7.37	124.92	128.60
1	CA	2582	G	N1-C2-N2	-7.37	109.57	116.20
1	AA	761	U	C5-C4-O4	-7.37	121.48	125.90
1	AA	1315	A	N1-C2-N3	-7.37	125.61	129.30
1	AA	2615	G	C8-N9-C4	7.37	109.35	106.40
34	BA	1513	A	N1-C2-N3	-7.37	125.62	129.30
1	AA	1987	C	N3-C2-O2	7.37	127.06	121.90
1	AA	2034	G	O5'-P-OP2	-7.36	99.07	105.70
1	CA	2049	G	O5'-P-OP2	-7.36	99.07	105.70
1	CA	2877	G	O5'-P-OP1	7.36	119.53	110.70
1	AA	1723	A	O5'-P-OP2	-7.36	99.08	105.70
34	BA	119	A	O5'-P-OP2	-7.36	99.08	105.70
1	CA	941	A	O5'-P-OP2	-7.36	99.08	105.70
1	CA	2554	U	O5'-P-OP1	-7.36	99.08	105.70
1	CA	265	A	N7-C8-N9	7.36	117.48	113.80
1	AA	16	G	C6-N1-C2	-7.36	120.69	125.10
1	AA	1804	A	C8-N9-C4	7.36	108.74	105.80
1	AA	2532	C	C5-C6-N1	-7.36	117.32	121.00
34	BA	1505	G	C5-C6-O6	7.36	133.01	128.60
1	AA	776	G	C4-N9-C1'	7.36	136.06	126.50
1	AA	1656	A	O5'-P-OP1	-7.36	99.08	105.70
1	AA	841	G	N7-C8-N9	-7.35	109.42	113.10
1	CA	2611	U	O5'-P-OP1	-7.35	99.08	105.70
1	AA	874	U	O5'-P-OP2	-7.35	99.08	105.70
1	AA	1698	G	C8-N9-C4	-7.35	103.46	106.40
1	AA	60	G	N3-C2-N2	-7.34	114.76	119.90
1	AA	2450	U	C5-C6-N1	-7.34	119.03	122.70
1	AA	19	C	N1-C2-O2	-7.34	114.49	118.90
1	AA	2369	U	N3-C2-O2	-7.34	117.06	122.20
1	AA	581	G	C8-N9-C4	7.34	109.33	106.40
1	AA	716	G	C8-N9-C4	7.34	109.34	106.40
1	AA	906	G	O4'-C1'-N9	-7.34	102.33	108.20
1	AA	2303	U	N3-C4-C5	-7.34	110.20	114.60
1	CA	2441	C	O5'-P-OP1	-7.34	99.09	105.70
1	AA	19	C	C2-N3-C4	-7.34	116.23	119.90
1	AA	2085	C	C6-N1-C2	7.34	123.23	120.30
2	AB	103	G	C6-C5-N7	-7.34	126.00	130.40
1	AA	516	G	C5-C6-O6	7.34	133.00	128.60
1	AA	651	U	O5'-P-OP2	-7.34	99.10	105.70
1	AA	721	G	C5-N7-C8	-7.34	100.63	104.30
1	AA	1621	C	OP2-P-O3'	7.33	121.33	105.20
1	AA	2858	G	C4-C5-N7	7.33	113.73	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	18	C	N3-C4-C5	-7.33	118.97	121.90
1	AA	1742	G	C5-C6-O6	-7.33	124.20	128.60
1	AA	2573	A	O5'-P-OP1	-7.33	99.10	105.70
2	AB	49	C	N1-C2-O2	-7.33	114.50	118.90
2	AB	101	G	O5'-P-OP2	-7.33	99.10	105.70
1	AA	1055	A	C8-N9-C4	7.33	108.73	105.80
1	AA	601	A	C5-C6-N6	7.33	129.56	123.70
1	CA	1497	U	O4'-C1'-N1	7.33	114.06	108.20
1	AA	2539	C	C5-C4-N4	-7.33	115.07	120.20
34	BA	770	C	N3-C4-N4	-7.33	112.87	118.00
1	AA	609	A	C2-N3-C4	7.32	114.26	110.60
1	AA	1033	G	C2-N3-C4	7.32	115.56	111.90
34	BA	803	G	C2-N3-C4	-7.32	108.24	111.90
1	CA	186	G	O5'-P-OP1	7.32	119.49	110.70
1	AA	1640	G	C5-C6-O6	-7.32	124.21	128.60
1	AA	2690	C	C5-C6-N1	7.32	124.66	121.00
34	BA	836	G	C5-C6-O6	-7.32	124.21	128.60
1	AA	1329	G	N3-C4-N9	7.32	130.39	126.00
1	CA	1774	C	O5'-P-OP2	-7.32	99.11	105.70
1	CA	2512	C	C2-N3-C4	-7.32	116.24	119.90
1	AA	1605	A	C5-N7-C8	-7.32	100.24	103.90
34	BA	875	C	O5'-P-OP2	-7.32	99.11	105.70
1	CA	2058	A	C2-N3-C4	-7.32	106.94	110.60
1	CA	1812	A	C2-N3-C4	7.31	114.26	110.60
1	AA	860	U	N3-C4-C5	7.31	118.99	114.60
1	AA	2535	G	C5-C6-O6	7.31	132.99	128.60
2	AB	104	U	C5-C4-O4	-7.31	121.52	125.90
1	AA	1875	C	C6-N1-C2	-7.31	117.38	120.30
1	AA	544	U	N1-C2-N3	7.30	119.28	114.90
1	AA	918	U	N1-C2-O2	-7.30	117.69	122.80
1	AA	1986	G	C4-C5-N7	7.30	113.72	110.80
1	AA	121	G	C5-C6-O6	-7.30	124.22	128.60
1	AA	839	G	C5-C6-N1	7.30	115.15	111.50
1	AA	1632	A	N1-C2-N3	7.30	132.95	129.30
2	AB	69	G	C8-N9-C4	7.30	109.32	106.40
1	AA	2702	C	C5-C4-N4	-7.30	115.09	120.20
1	AA	2799	U	N3-C4-O4	-7.30	114.29	119.40
1	CA	670	A	O4'-C1'-N9	-7.30	102.36	108.20
1	AA	2162	C	C2-N1-C1'	7.29	126.82	118.80
1	AA	340	C	N3-C4-C5	7.29	124.82	121.90
1	AA	1979	C	N3-C4-C5	-7.29	118.98	121.90
1	AA	2818	U	N3-C4-C5	-7.29	110.22	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	708	C	C2-N3-C4	-7.29	116.25	119.90
1	AA	2858	G	C5-C6-O6	-7.29	124.22	128.60
1	AA	1261	G	C4-C5-N7	7.29	113.72	110.80
1	AA	2448	G	C5-C6-O6	7.29	132.97	128.60
1	CA	1698	A	C4-N9-C1'	7.29	139.42	126.30
1	AA	972	A	C8-N9-C4	-7.29	102.89	105.80
1	AA	348	A	C8-N9-C4	7.28	108.71	105.80
1	AA	2423	A	C8-N9-C4	7.28	108.71	105.80
1	AA	181	C	C2-N3-C4	-7.28	116.26	119.90
1	CA	34	C	C6-N1-C2	-7.28	117.39	120.30
1	AA	497	A	C2-N3-C4	-7.28	106.96	110.60
1	AA	1835	C	OP2-P-O3'	7.28	121.22	105.20
34	BA	365	U	C4-C5-C6	7.28	124.07	119.70
1	AA	2535	G	N1-C6-O6	-7.28	115.53	119.90
1	AA	860	U	C2-N3-C4	-7.27	122.64	127.00
1	AA	1312	G	N1-C6-O6	-7.27	115.53	119.90
1	CA	732	C	N3-C2-O2	-7.27	116.81	121.90
1	AA	725	C	C6-N1-C2	-7.27	117.39	120.30
1	AA	452	G	C8-N9-C4	7.27	109.31	106.40
1	AA	795	G	O5'-P-OP1	-7.27	99.16	105.70
1	AA	1612	C	C6-N1-C2	7.27	123.21	120.30
1	AA	2641	A	C8-N9-C4	-7.27	102.89	105.80
1	AA	793	A	C8-N9-C4	-7.27	102.89	105.80
1	CA	1780	A	O5'-P-OP2	-7.27	99.16	105.70
1	AA	585	U	C5-C6-N1	-7.27	119.07	122.70
1	AA	2302	G	OP1-P-OP2	-7.27	108.70	119.60
1	AA	100	G	C8-N9-C4	7.26	109.31	106.40
1	AA	137	G	C8-N9-C4	-7.26	103.50	106.40
1	AA	1076	G	C4-C5-N7	7.26	113.71	110.80
1	AA	1691	C	C2-N1-C1'	7.26	126.79	118.80
1	CA	1328	G	O5'-P-OP2	7.26	119.42	110.70
1	AA	1926	G	N3-C4-C5	-7.26	124.97	128.60
1	AA	2589	A	C8-N9-C4	7.26	108.70	105.80
56	BW	73	A	O4'-C1'-N9	7.26	114.01	108.20
1	CA	2258	C	C5-C6-N1	-7.26	117.37	121.00
1	AA	129	G	N3-C2-N2	7.26	124.98	119.90
1	AA	1704	C	C5-C6-N1	-7.26	117.37	121.00
1	AA	2282	G	C5-C6-N1	7.26	115.13	111.50
34	BA	816	A	OP1-P-O3'	7.26	121.16	105.20
1	CA	1611	C	OP1-P-OP2	-7.26	108.72	119.60
1	CA	1842	G	O5'-P-OP2	-7.25	99.17	105.70
1	AA	283	G	OP1-P-O3'	7.25	121.16	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1711	A	N1-C6-N6	7.25	122.95	118.60
1	CA	2063	C	N1-C2-O2	-7.25	114.55	118.90
1	AA	2639	G	C4-C5-N7	7.25	113.70	110.80
1	AA	1378	G	N3-C4-C5	-7.25	124.97	128.60
2	AB	38	C	N3-C2-O2	-7.25	116.83	121.90
1	AA	518	G	O5'-P-OP2	-7.25	99.18	105.70
1	AA	1296	G	N1-C6-O6	-7.25	115.55	119.90
1	CA	242	G	C8-N9-C4	7.25	109.30	106.40
1	CA	1960	A	OP1-P-OP2	7.25	130.47	119.60
1	AA	2039	U	C5-C4-O4	7.25	130.25	125.90
1	CA	572	A	N1-C6-N6	7.25	122.95	118.60
1	CA	2006	C	O5'-P-OP2	-7.25	99.18	105.70
1	AA	2252	C	OP1-P-OP2	-7.25	108.73	119.60
1	CA	238	C	O5'-P-OP1	-7.24	99.18	105.70
1	CA	2382	G	O5'-P-OP2	-7.24	99.18	105.70
1	AA	1314	A	N1-C2-N3	7.24	132.92	129.30
1	AA	1986	G	N9-C4-C5	-7.24	102.50	105.40
1	AA	2437	A	C5-N7-C8	-7.24	100.28	103.90
1	AA	1951	G	O5'-P-OP1	-7.24	99.18	105.70
1	AA	2044	U	N3-C4-O4	7.24	124.47	119.40
1	CA	330	A	N9-C4-C5	-7.24	102.90	105.80
1	AA	2040	G	N1-C2-N3	-7.24	119.56	123.90
1	AA	2045	G	O5'-P-OP2	7.24	119.39	110.70
2	AB	7	G	N1-C6-O6	7.24	124.24	119.90
1	AA	256	C	N3-C4-C5	7.24	124.80	121.90
1	AA	1711	A	C2-N3-C4	-7.24	106.98	110.60
1	AA	2025	G	C4-C5-N7	-7.24	107.91	110.80
1	AA	1397	C	C5-C4-N4	7.23	125.26	120.20
1	AA	2108	U	O5'-P-OP2	-7.23	99.19	105.70
1	AA	2576	A	N1-C2-N3	7.23	132.92	129.30
1	AA	2701	U	OP1-P-O3'	7.23	121.11	105.20
1	AA	1308	A	O5'-P-OP1	-7.23	99.19	105.70
1	AA	2636	G	C4-C5-N7	-7.23	107.91	110.80
1	CA	1776	G	N3-C4-N9	7.23	130.34	126.00
34	DA	266	G	N1-C6-O6	7.23	124.24	119.90
1	AA	751	G	C5-C6-N1	7.23	115.11	111.50
1	AA	1987	C	C6-N1-C2	7.23	123.19	120.30
1	AA	227	C	C6-N1-C2	7.22	123.19	120.30
1	AA	905	U	N3-C4-C5	7.22	118.94	114.60
1	AA	1514	C	O5'-P-OP2	7.22	119.37	110.70
1	CA	774	A	O5'-P-OP2	-7.22	99.20	105.70
1	AA	734	C	N3-C4-N4	-7.22	112.94	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1208	G	C4-C5-N7	-7.22	107.91	110.80
1	AA	74	G	C4-C5-N7	7.22	113.69	110.80
34	BA	1511	G	N7-C8-N9	-7.22	109.49	113.10
1	CA	246	C	O5'-P-OP1	-7.22	99.20	105.70
1	AA	2871	G	N1-C6-O6	7.22	124.23	119.90
1	AA	2636	G	C6-N1-C2	-7.22	120.77	125.10
1	AA	1371	G	C5-C6-O6	7.21	132.93	128.60
1	CA	2561	A	OP1-P-OP2	7.21	130.42	119.60
1	AA	324	A	N1-C2-N3	-7.21	125.69	129.30
1	AA	2601	A	N1-C6-N6	-7.21	114.27	118.60
1	AA	2750	G	N9-C4-C5	7.21	108.28	105.40
1	AA	2892	A	OP1-P-OP2	7.21	130.42	119.60
1	CA	1768	U	C5-C4-O4	7.21	130.23	125.90
1	AA	45	C	N3-C2-O2	7.21	126.94	121.90
1	CA	73	A	N1-C6-N6	-7.21	114.27	118.60
1	CA	448	U	N3-C2-O2	-7.21	117.15	122.20
1	CA	1286	A	O5'-P-OP2	-7.21	99.21	105.70
1	CA	1626	G	C5-C6-O6	-7.21	124.28	128.60
34	DA	1414	U	C5-C6-N1	-7.21	119.10	122.70
1	AA	2548	G	C5-N7-C8	7.21	107.90	104.30
2	AB	97	G	N1-C2-N2	7.21	122.69	116.20
34	BA	1523	G	OP1-P-OP2	7.21	130.41	119.60
1	AA	2491	G	O5'-P-OP2	-7.21	99.22	105.70
1	AA	2638	C	C2-N3-C4	-7.21	116.30	119.90
1	AA	2602	A	C2-N3-C4	-7.20	107.00	110.60
1	AA	2833	A	C4-C5-C6	7.20	120.60	117.00
1	AA	823	G	N3-C4-C5	-7.20	125.00	128.60
1	AA	1042	A	C5-C6-N1	-7.20	114.10	117.70
34	BA	514	C	N1-C2-O2	-7.20	114.58	118.90
1	AA	260	A	O5'-P-OP2	-7.20	99.22	105.70
1	AA	545	G	C4-C5-N7	-7.20	107.92	110.80
1	AA	591	U	C5-C4-O4	-7.20	121.58	125.90
1	AA	2001	C	N3-C4-C5	7.20	124.78	121.90
1	AA	614	C	C2-N3-C4	-7.20	116.30	119.90
1	AA	1464	G	O5'-P-OP2	7.20	119.33	110.70
1	AA	975	U	N3-C4-O4	7.19	124.44	119.40
1	AA	541	C	N3-C4-N4	-7.19	112.97	118.00
1	AA	1837	C	C5-C6-N1	-7.19	117.40	121.00
1	AA	2566	U	O5'-P-OP2	7.19	119.33	110.70
1	CA	2607	G	N1-C2-N2	-7.19	109.73	116.20
1	AA	2535	G	N1-C2-N2	-7.19	109.73	116.20
1	AA	753	A	C2-N3-C4	-7.19	107.01	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2696	U	C2-N3-C4	-7.19	122.69	127.00
1	CA	2286	A	C2-N3-C4	-7.19	107.01	110.60
1	CA	1313	U	C2-N1-C1'	7.19	126.32	117.70
1	CA	1451	C	N1-C2-O2	-7.19	114.59	118.90
1	AA	1701	A	OP1-P-OP2	7.18	130.38	119.60
1	AA	2400	A	C5-C6-N6	7.18	129.45	123.70
1	AA	2655	G	C8-N9-C4	-7.18	103.53	106.40
1	AA	2078	G	N7-C8-N9	7.18	116.69	113.10
1	AA	2824	C	N1-C2-O2	-7.18	114.59	118.90
1	CA	562	U	N1-C2-N3	7.18	119.21	114.90
1	AA	823	G	N3-C4-N9	7.18	130.31	126.00
34	BA	836	G	N1-C6-O6	7.18	124.21	119.90
1	AA	1065	U	C2-N3-C4	-7.18	122.69	127.00
1	AA	2484	G	C5-N7-C8	7.18	107.89	104.30
1	AA	2779	G	O5'-P-OP2	-7.18	99.24	105.70
1	AA	1563	G	N1-C6-O6	7.18	124.21	119.90
1	AA	30	G	N1-C6-O6	-7.17	115.59	119.90
1	CA	1947	C	OP1-P-OP2	-7.17	108.84	119.60
1	AA	36	G	C4-C5-N7	-7.17	107.93	110.80
1	AA	575	G	C5-C6-O6	7.17	132.90	128.60
1	CA	59	U	OP2-P-O3'	7.17	120.98	105.20
1	CA	762	U	C5-C4-O4	-7.17	121.60	125.90
1	AA	555	G	C8-N9-C1'	7.17	136.32	127.00
1	AA	910	A	C8-N9-C4	-7.17	102.93	105.80
1	CA	474	G	C5-C6-O6	7.17	132.90	128.60
1	AA	1695	C	O5'-P-OP2	7.17	119.30	110.70
1	CA	2540	C	O5'-P-OP2	-7.17	99.25	105.70
1	AA	627	G	N1-C6-O6	-7.17	115.60	119.90
1	AA	2285	A	N1-C6-N6	7.16	122.90	118.60
1	CA	1698	A	N1-C6-N6	7.16	122.90	118.60
1	AA	1699	A	C8-N9-C4	-7.16	102.94	105.80
34	DA	295	C	C6-N1-C2	7.16	123.16	120.30
1	AA	715	G	C4-C5-N7	7.16	113.66	110.80
1	AA	989	G	N1-C6-O6	7.16	124.19	119.90
1	AA	1650	C	C2-N3-C4	-7.16	116.32	119.90
1	AA	2758	C	N1-C2-O2	-7.16	114.61	118.90
1	AA	2727	G	N1-C2-N3	-7.16	119.61	123.90
34	BA	519	C	C6-N1-C2	7.16	123.16	120.30
1	AA	1483	C	C6-N1-C2	-7.16	117.44	120.30
1	CA	1791	A	OP1-P-OP2	-7.15	108.87	119.60
1	AA	1704	C	OP2-P-O3'	7.15	120.93	105.20
1	CA	265	A	O4'-C1'-N9	7.15	113.92	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	659	C	C6-N1-C2	7.15	123.16	120.30
1	CA	1611	C	C6-N1-C2	7.15	123.16	120.30
1	AA	2711	C	N3-C4-C5	7.14	124.76	121.90
56	BW	1	G	C8-N9-C4	-7.14	103.54	106.40
1	AA	1032	C	N3-C2-O2	7.14	126.90	121.90
1	AA	2641	A	O4'-C1'-N9	7.14	113.91	108.20
1	AA	726	C	N3-C4-C5	7.14	124.76	121.90
1	AA	1312	G	N1-C2-N2	-7.14	109.78	116.20
1	AA	1839	U	O5'-P-OP1	-7.14	99.27	105.70
1	AA	2633	A	N1-C6-N6	-7.14	114.32	118.60
1	CA	1323	U	C6-N1-C2	7.14	125.28	121.00
1	CA	2818	G	N7-C8-N9	-7.14	109.53	113.10
1	AA	2455	C	O5'-P-OP1	-7.14	99.28	105.70
1	AA	721	G	C5-C6-O6	-7.14	124.32	128.60
1	AA	419	C	O5'-P-OP1	-7.13	99.28	105.70
1	AA	486	A	C8-N9-C4	7.13	108.65	105.80
1	AA	1060	U	OP2-P-O3'	7.13	120.89	105.20
1	AA	85	C	N3-C4-N4	-7.13	113.01	118.00
1	AA	710	G	N1-C6-O6	7.13	124.18	119.90
1	AA	1858	C	N1-C2-O2	7.13	123.18	118.90
1	CA	678	C	C6-N1-C2	7.13	123.15	120.30
2	AB	56	G	O5'-P-OP2	-7.13	99.29	105.70
1	CA	945	A	O4'-C1'-N9	7.13	113.90	108.20
1	AA	38	A	C4-C5-N7	-7.12	107.14	110.70
1	AA	1543	U	O5'-P-OP2	-7.12	99.29	105.70
1	AA	597	C	C5-C4-N4	7.12	125.19	120.20
1	CA	659	C	C2-N3-C4	-7.12	116.34	119.90
1	AA	975	U	N1-C2-N3	7.12	119.17	114.90
1	CA	918	A	O5'-P-OP1	-7.12	99.29	105.70
1	AA	1059	C	N1-C2-O2	-7.12	114.63	118.90
56	BW	47	U	C6-N1-C2	-7.12	116.73	121.00
1	CA	903	C	C6-N1-C2	7.12	123.15	120.30
1	CA	2046	G	N7-C8-N9	-7.12	109.54	113.10
1	AA	529	U	O5'-P-OP2	-7.11	99.30	105.70
1	AA	702	A	N3-C4-N9	-7.11	121.71	127.40
1	CA	1293	C	N3-C4-C5	7.11	124.75	121.90
1	AA	803	C	N1-C2-O2	-7.11	114.63	118.90
1	AA	1357	G	N7-C8-N9	7.11	116.66	113.10
1	AA	2757	G	N3-C4-C5	7.11	132.16	128.60
1	CA	593	G	N1-C6-O6	7.11	124.17	119.90
1	CA	408	G	C8-N9-C4	7.11	109.24	106.40
1	AA	1041	C	C5-C4-N4	-7.11	115.23	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	582	G	C8-N9-C4	-7.10	103.56	106.40
34	BA	899	C	C6-N1-C2	7.10	123.14	120.30
1	AA	1080	G	O5'-P-OP2	-7.10	99.31	105.70
1	CA	976	C	C6-N1-C2	7.10	123.14	120.30
1	AA	26	G	C5-C6-N1	7.10	115.05	111.50
1	AA	674	G	N3-C4-C5	-7.10	125.05	128.60
1	AA	953	U	OP2-P-O3'	7.10	120.81	105.20
1	CA	2003	G	OP2-P-O3'	7.10	120.82	105.20
1	AA	474	U	N3-C2-O2	-7.09	117.23	122.20
1	AA	640	A	C8-N9-C4	-7.09	102.96	105.80
1	AA	987	G	N7-C8-N9	-7.09	109.55	113.10
1	AA	990	A	O4'-C1'-N9	7.09	113.88	108.20
1	CA	945	A	C4-C5-N7	7.09	114.25	110.70
34	BA	1505	G	C4-C5-N7	-7.09	107.96	110.80
1	AA	2527	C	N1-C2-O2	-7.09	114.64	118.90
2	AB	72	G	C5-C6-O6	-7.09	124.35	128.60
1	AA	345	G	C5-C6-O6	-7.09	124.35	128.60
34	BA	900	A	O5'-P-OP2	7.09	119.20	110.70
1	CA	2576	G	N3-C4-N9	7.09	130.25	126.00
1	AA	111	G	N1-C6-O6	7.08	124.15	119.90
29	C5	16	ARG	NE-CZ-NH1	7.08	123.84	120.30
1	AA	107	G	N1-C6-O6	-7.08	115.65	119.90
1	AA	1747	A	O5'-P-OP1	-7.08	99.33	105.70
1	AA	1979	C	C4-C5-C6	7.08	120.94	117.40
1	AA	354	A	N1-C6-N6	7.08	122.85	118.60
1	CA	690	G	N3-C4-N9	7.08	130.25	126.00
1	CA	1899	G	OP1-P-O3'	7.08	120.77	105.20
1	AA	1698	G	N7-C8-N9	7.08	116.64	113.10
1	AA	2064	A	C2-N3-C4	-7.07	107.06	110.60
1	CA	2062	A	C2-N3-C4	7.07	114.14	110.60
34	DA	266	G	C5-C6-O6	-7.07	124.36	128.60
1	AA	1784	G	C8-N9-C4	7.07	109.23	106.40
1	AA	871	A	C2-N3-C4	7.07	114.14	110.60
1	AA	2065	C	N3-C4-C5	-7.07	119.07	121.90
1	AA	2576	A	C6-N1-C2	-7.07	114.36	118.60
1	AA	206	G	N3-C2-N2	-7.07	114.95	119.90
1	AA	552	C	O4'-C1'-N1	7.07	113.85	108.20
1	AA	1010	C	C5-C4-N4	7.07	125.15	120.20
1	AA	2000	A	C2-N3-C4	7.07	114.13	110.60
34	DA	353	A	N1-C6-N6	7.07	122.84	118.60
1	AA	901	G	C5-C6-O6	7.07	132.84	128.60
1	CA	600	G	C8-N9-C4	-7.07	103.57	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1807	G	N3-C4-N9	7.06	130.24	126.00
1	AA	1053	C	O5'-P-OP2	-7.06	99.34	105.70
1	AA	46	C	N3-C4-C5	7.06	124.72	121.90
1	AA	860	U	N3-C2-O2	-7.06	117.26	122.20
1	AA	2631	C	C4-C5-C6	7.06	120.93	117.40
2	AB	91	C	N3-C4-C5	7.06	124.72	121.90
1	AA	539	A	OP1-P-OP2	7.06	130.19	119.60
34	BA	1064	G	C4-N9-C1'	-7.06	117.33	126.50
1	AA	1926	G	C4-C5-N7	-7.05	107.98	110.80
1	AA	354	A	C6-N1-C2	7.05	122.83	118.60
1	AA	71	U	N1-C2-O2	-7.05	117.86	122.80
1	AA	89	U	C5-C4-O4	7.05	130.13	125.90
1	AA	343	C	N3-C2-O2	-7.05	116.97	121.90
1	AA	1402	G	N1-C6-O6	-7.05	115.67	119.90
1	AA	2592	U	C2-N3-C4	-7.05	122.77	127.00
1	AA	1715	A	N1-C6-N6	-7.05	114.37	118.60
1	AA	1718	U	C6-N1-C2	7.05	125.23	121.00
1	AA	2058	C	C2-N3-C4	-7.05	116.38	119.90
1	AA	822	G	OP1-P-O3'	7.04	120.70	105.20
1	CA	1558	A	C5-C6-N1	-7.04	114.18	117.70
1	AA	2409	G	C5-C6-N1	7.04	115.02	111.50
1	CA	141	A	C6-C5-N7	-7.04	127.37	132.30
1	CA	270	A	C2-N3-C4	-7.04	107.08	110.60
1	CA	2038	G	C5-C6-O6	7.04	132.82	128.60
1	AA	600	G	N3-C4-N9	7.04	130.22	126.00
1	AA	1281	G	C5-C6-O6	-7.04	124.38	128.60
1	AA	2601	A	N9-C4-C5	7.04	108.61	105.80
1	AA	347	G	O4'-C1'-N9	7.03	113.83	108.20
1	AA	778	C	N1-C2-N3	7.03	124.12	119.20
1	AA	2532	C	O5'-P-OP2	-7.03	99.37	105.70
34	BA	1422	G	O5'-P-OP1	-7.03	99.37	105.70
1	AA	753	A	N1-C6-N6	7.03	122.82	118.60
1	AA	1617	A	N1-C6-N6	7.03	122.82	118.60
1	AA	2781	C	N3-C4-C5	7.03	124.71	121.90
1	AA	38	A	N7-C8-N9	-7.03	110.28	113.80
1	AA	2048	C	OP1-P-OP2	7.03	130.15	119.60
1	CA	2258	C	N1-C2-O2	-7.03	114.68	118.90
1	AA	2750	G	C5-C6-O6	7.03	132.82	128.60
1	CA	1795	C	C6-N1-C2	7.03	123.11	120.30
1	AA	1057	G	O5'-P-OP2	-7.03	99.38	105.70
1	AA	176	G	C8-N9-C4	-7.03	103.59	106.40
1	AA	352	U	C2-N3-C4	-7.02	122.79	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2619	G	C4-C5-N7	7.02	113.61	110.80
1	AA	2836	A	OP1-P-OP2	-7.02	109.06	119.60
1	AA	1243	U	N3-C2-O2	-7.02	117.28	122.20
2	AB	12	C	N3-C4-C5	7.02	124.71	121.90
1	CA	2805	G	O4'-C1'-N9	7.02	113.82	108.20
1	AA	1805	C	C2-N3-C4	-7.02	116.39	119.90
1	AA	2684	G	N1-C6-O6	7.02	124.11	119.90
34	BA	1516	G	O5'-P-OP2	-7.02	99.38	105.70
1	AA	2833	A	N1-C6-N6	7.02	122.81	118.60
1	AA	491	G	N7-C8-N9	7.01	116.61	113.10
1	AA	1258	A	N1-C2-N3	7.01	132.81	129.30
1	AA	2368	C	C2-N3-C4	-7.01	116.39	119.90
1	AA	2865	C	OP2-P-O3'	7.01	120.62	105.20
1	CA	446	G	N1-C6-O6	7.01	124.11	119.90
34	DA	1501	C	C6-N1-C2	7.01	123.11	120.30
1	AA	1257	G	O5'-P-OP2	-7.01	99.39	105.70
1	CA	2437	U	OP2-P-O3'	7.01	120.62	105.20
1	AA	1475	G	C8-N9-C4	-7.01	103.60	106.40
1	AA	2060	G	C5-C6-O6	7.01	132.81	128.60
34	BA	1506	U	N3-C4-O4	7.01	124.31	119.40
2	AB	81	G	N9-C4-C5	7.00	108.20	105.40
1	AA	1921	G	C5-N7-C8	-7.00	100.80	104.30
1	AA	586	G	C4-C5-N7	-7.00	108.00	110.80
34	BA	643	C	O5'-P-OP1	-7.00	99.40	105.70
1	AA	1255	A	C2-N3-C4	7.00	114.10	110.60
1	AA	1752	G	N1-C6-O6	-7.00	115.70	119.90
1	AA	535	C	OP1-P-OP2	7.00	130.10	119.60
1	AA	1872	U	N1-C2-N3	7.00	119.10	114.90
1	CA	1812	A	C5-C6-N1	7.00	121.20	117.70
1	CA	2708	G	N3-C2-N2	7.00	124.80	119.90
1	AA	1595	C	N1-C2-O2	-7.00	114.70	118.90
1	AA	2236	G	C5-N7-C8	-7.00	100.80	104.30
1	AA	73	A	C2-N3-C4	-7.00	107.10	110.60
1	AA	2103	C	N1-C2-N3	6.99	124.10	119.20
1	CA	450	G	N9-C4-C5	6.99	108.20	105.40
1	CA	1776	G	N3-C4-C5	-6.99	125.10	128.60
1	AA	1666	G	C4-C5-N7	-6.99	108.00	110.80
1	AA	2450	U	C2-N3-C4	-6.99	122.81	127.00
1	AA	1255	A	OP2-P-O3'	6.99	120.58	105.20
1	CA	1314	C	C2-N1-C1'	6.99	126.49	118.80
1	AA	188	A	O5'-P-OP1	-6.99	99.41	105.70
1	AA	1038	C	C5-C6-N1	-6.99	117.50	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2067	G	C4-C5-N7	-6.99	108.00	110.80
1	AA	2025	G	C6-C5-N7	6.99	134.59	130.40
1	CA	1623	G	N1-C2-N2	6.99	122.49	116.20
56	DW	76	A	N1-C6-N6	6.99	122.79	118.60
1	AA	10	G	C5-C6-O6	6.98	132.79	128.60
1	AA	77	A	N1-C2-N3	6.98	132.79	129.30
1	AA	2609	G	C8-N9-C4	6.98	109.19	106.40
34	BA	1402	C	N3-C4-C5	-6.98	119.11	121.90
1	CA	241	A	O5'-P-OP2	-6.98	99.42	105.70
1	AA	1058	U	C6-N1-C2	6.98	125.19	121.00
34	BA	575	G	O4'-C1'-N9	-6.98	102.62	108.20
1	AA	451	G	C8-N9-C4	6.98	109.19	106.40
1	AA	1026	A	C8-N9-C4	6.98	108.59	105.80
1	AA	1670	G	N1-C6-O6	-6.98	115.71	119.90
1	CA	198	C	O5'-P-OP1	-6.98	99.42	105.70
1	AA	235	C	C5-C6-N1	-6.98	117.51	121.00
1	AA	2073	A	C5-N7-C8	6.98	107.39	103.90
1	AA	1017	G	C8-N9-C4	-6.98	103.61	106.40
1	AA	179	A	OP1-P-OP2	6.97	130.06	119.60
1	AA	804	U	N3-C4-C5	6.97	118.78	114.60
1	AA	1721	G	N3-C4-C5	-6.97	125.11	128.60
34	BA	605	U	C5-C4-O4	6.97	130.08	125.90
1	AA	1003	U	N3-C4-C5	-6.97	110.42	114.60
1	CA	933	A	O4'-C1'-N9	6.97	113.78	108.20
1	AA	865	G	N7-C8-N9	-6.97	109.61	113.10
1	AA	1307	C	C4-C5-C6	6.97	120.89	117.40
1	AA	1806	U	N3-C4-O4	-6.97	114.52	119.40
1	AA	1816	A	N1-C2-N3	6.97	132.78	129.30
1	CA	563	G	C5-N7-C8	-6.97	100.82	104.30
1	AA	2064	A	N7-C8-N9	-6.96	110.32	113.80
1	CA	797	C	C6-N1-C2	-6.96	117.51	120.30
2	AB	100	A	OP1-P-OP2	6.96	130.04	119.60
1	CA	2674	G	O5'-P-OP2	-6.96	99.43	105.70
1	AA	1264	G	O5'-P-OP2	-6.96	99.43	105.70
1	AA	1695	C	C5-C4-N4	6.96	125.07	120.20
1	AA	2040	G	C6-N1-C2	6.96	129.28	125.10
2	AB	54	G	C5-N7-C8	-6.96	100.82	104.30
34	BA	912	C	N1-C2-O2	-6.96	114.72	118.90
1	AA	1027	A	N7-C8-N9	-6.96	110.32	113.80
1	AA	1289	G	N1-C6-O6	-6.96	115.72	119.90
56	BW	35	A	OP2-P-O3'	6.96	120.51	105.20
1	CA	1339	G	N1-C6-O6	-6.96	115.72	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1836	C	O5'-P-OP1	6.96	119.05	110.70
1	AA	2497	G	N3-C2-N2	6.96	124.77	119.90
2	AB	81	G	N1-C2-N3	6.96	128.07	123.90
1	CA	1949	G	N1-C6-O6	6.96	124.07	119.90
1	AA	586	G	C5-C6-O6	6.96	132.77	128.60
1	AA	716	G	OP2-P-O3'	6.96	120.50	105.20
2	AB	68	C	C6-N1-C2	6.96	123.08	120.30
1	CA	783	A	O5'-P-OP2	-6.96	99.44	105.70
1	CA	1554	A	N1-C6-N6	-6.95	114.43	118.60
1	AA	1698	G	C5-C6-N1	6.95	114.98	111.50
1	AA	598	A	N7-C8-N9	-6.95	110.33	113.80
1	AA	797	A	C5-N7-C8	-6.95	100.42	103.90
1	CA	148	C	C6-N1-C2	6.95	123.08	120.30
1	AA	2015	U	N1-C2-N3	6.95	119.07	114.90
1	AA	2053	A	C8-N9-C4	-6.95	103.02	105.80
1	CA	383	U	O4'-C1'-N1	6.95	113.76	108.20
1	AA	38	A	C5-C6-N1	6.95	121.17	117.70
1	AA	411	U	N3-C4-O4	-6.95	114.54	119.40
1	AA	736	A	O5'-P-OP2	-6.95	99.45	105.70
34	BA	800	G	O5'-P-OP2	-6.95	99.45	105.70
1	AA	328	G	C5-C6-O6	-6.94	124.43	128.60
1	AA	841	G	C5-C6-N1	6.94	114.97	111.50
1	AA	1815	A	C8-N9-C4	6.94	108.58	105.80
1	CA	2256	G	O5'-P-OP2	-6.94	99.45	105.70
1	AA	851	A	C2-N3-C4	-6.94	107.13	110.60
1	AA	1988	A	N3-C4-C5	6.94	131.66	126.80
1	AA	1276	C	C6-N1-C2	-6.94	117.53	120.30
1	AA	1360	C	N1-C2-N3	6.94	124.06	119.20
1	AA	2580	C	C6-N1-C2	6.94	123.08	120.30
1	AA	2511	C	C5-C6-N1	6.94	124.47	121.00
1	AA	2594	G	OP1-P-OP2	-6.93	109.20	119.60
1	CA	665	C	C5-C6-N1	6.93	124.47	121.00
1	CA	2503	A	O5'-P-OP1	-6.93	99.46	105.70
1	AA	1737	A	N9-C4-C5	6.93	108.57	105.80
1	AA	1832	G	O5'-P-OP1	-6.93	99.46	105.70
1	CA	571	A	C2-N3-C4	6.93	114.07	110.60
34	DA	58	C	C6-N1-C2	-6.93	117.53	120.30
34	DA	898	G	C5-C6-N1	6.93	114.97	111.50
1	AA	1806	U	O5'-P-OP2	-6.93	99.46	105.70
34	DA	882	C	N3-C2-O2	-6.93	117.05	121.90
1	AA	2522	C	O5'-P-OP2	-6.93	99.46	105.70
1	AA	2650	G	C6-C5-N7	-6.93	126.24	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2385	C	N1-C2-O2	-6.93	114.74	118.90
1	CA	1963	U	N1-C2-O2	6.93	127.65	122.80
34	DA	677	U	O5'-P-OP1	-6.93	99.47	105.70
1	AA	663	G	N3-C2-N2	6.92	124.75	119.90
1	AA	1085	G	C8-N9-C4	6.92	109.17	106.40
1	AA	2712	C	OP1-P-OP2	6.92	129.99	119.60
1	CA	2498	C	N3-C2-O2	6.92	126.75	121.90
34	DA	289	G	C5-C6-O6	-6.92	124.45	128.60
1	CA	2625	G	C5-C6-O6	-6.92	124.45	128.60
1	CA	2827	C	C6-N1-C2	6.92	123.07	120.30
1	AA	1405	A	C4-C5-C6	-6.92	113.54	117.00
1	AA	1312	G	C6-N1-C2	-6.92	120.95	125.10
1	AA	2348	A	C8-N9-C4	6.92	108.57	105.80
1	AA	2703	C	OP1-P-OP2	-6.92	109.22	119.60
34	BA	1498	U	N3-C4-C5	6.92	118.75	114.60
1	AA	199	C	C6-N1-C2	6.92	123.07	120.30
1	AA	1666	G	N9-C4-C5	6.92	108.17	105.40
1	AA	2434	A	N1-C2-N3	6.92	132.76	129.30
1	AA	2890	C	O5'-P-OP2	-6.92	99.47	105.70
1	AA	478	G	N1-C2-N2	6.92	122.42	116.20
1	AA	1316	C	N3-C4-C5	6.92	124.67	121.90
1	AA	2601	A	N3-C4-N9	-6.92	121.87	127.40
1	AA	557	A	N1-C2-N3	6.91	132.76	129.30
1	AA	1277	G	N9-C4-C5	6.91	108.17	105.40
1	AA	1411	A	C2-N3-C4	-6.91	107.14	110.60
1	AA	627	G	C4-C5-N7	-6.91	108.03	110.80
1	AA	1029	A	C8-N9-C4	6.91	108.56	105.80
1	AA	1398	U	O5'-P-OP1	-6.91	99.48	105.70
1	AA	2787	C	C5-C6-N1	-6.91	117.54	121.00
1	AA	2797	C	C5-C4-N4	-6.91	115.36	120.20
1	AA	351	G	N1-C2-N2	-6.91	109.98	116.20
1	AA	555	G	C8-N9-C4	-6.91	103.64	106.40
2	AB	41	U	C4-C5-C6	6.91	123.84	119.70
34	DA	780	A	C8-N9-C4	-6.91	103.04	105.80
2	AB	13	A	OP1-P-OP2	6.91	129.96	119.60
1	CA	1353	A	OP1-P-OP2	6.91	129.96	119.60
1	AA	2457	G	N1-C6-O6	-6.91	115.76	119.90
1	AA	2546	A	C5-N7-C8	-6.91	100.45	103.90
1	AA	182	U	O5'-P-OP1	6.90	118.98	110.70
1	AA	2609	G	OP2-P-O3'	6.90	120.39	105.20
1	CA	442	G	N3-C2-N2	-6.90	115.07	119.90
1	AA	29	U	N1-C2-O2	-6.90	117.97	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1455	C	N1-C2-N3	6.90	124.03	119.20
1	CA	567	A	C5-C6-N6	-6.90	118.18	123.70
1	AA	1052	C	N3-C2-O2	6.90	126.73	121.90
1	CA	515	A	N1-C2-N3	6.90	132.75	129.30
1	AA	455	A	C5'-C4'-C3'	-6.89	104.97	116.00
1	AA	2556	G	C5-N7-C8	-6.89	100.85	104.30
1	AA	2718	G	C5-N7-C8	6.89	107.75	104.30
1	AA	737	G	N1-C6-O6	-6.89	115.77	119.90
1	AA	1006	C	C2-N1-C1'	-6.89	111.22	118.80
1	AA	1660	A	OP2-P-O3'	6.89	120.36	105.20
1	AA	2458	G	C2-N3-C4	6.89	115.35	111.90
1	AA	545	G	N7-C8-N9	-6.89	109.66	113.10
1	CA	749	C	C6-N1-C2	6.89	123.06	120.30
1	AA	1047	A	O5'-P-OP1	-6.89	99.50	105.70
1	AA	728	G	C8-N9-C4	6.88	109.15	106.40
1	AA	1788	U	C5-C6-N1	-6.88	119.26	122.70
1	AA	912	C	N3-C4-C5	-6.88	119.15	121.90
1	AA	1155	C	C4-C5-C6	-6.88	113.96	117.40
1	AA	2108	U	C5-C6-N1	-6.88	119.26	122.70
34	BA	893	C	OP1-P-OP2	-6.88	109.28	119.60
1	AA	415	G	O5'-P-OP2	-6.88	99.51	105.70
1	AA	2252	C	C5-C4-N4	-6.88	115.38	120.20
1	AA	2279	A	O4'-C1'-N9	-6.88	102.70	108.20
1	AA	106	U	C2-N3-C4	-6.88	122.87	127.00
1	AA	708	C	C5-C6-N1	-6.88	117.56	121.00
1	AA	728	G	N7-C8-N9	-6.88	109.66	113.10
1	CA	2674	G	C5-C6-O6	6.88	132.73	128.60
1	AA	1428	G	N1-C6-O6	6.88	124.03	119.90
1	AA	1746	G	O5'-P-OP1	6.88	118.95	110.70
1	AA	53	G	C8-N9-C4	-6.88	103.65	106.40
1	AA	1157	A	C5-N7-C8	-6.88	100.46	103.90
1	AA	1342	G	N1-C2-N2	-6.88	110.01	116.20
1	AA	1024	G	C4-C5-N7	-6.87	108.05	110.80
1	AA	2639	G	N3-C2-N2	6.87	124.71	119.90
1	AA	2888	U	N3-C2-O2	-6.87	117.39	122.20
1	CA	2552	U	O5'-P-OP2	-6.87	99.52	105.70
1	AA	478	G	N3-C4-N9	-6.87	121.88	126.00
1	AA	2604	G	O5'-P-OP1	-6.87	99.52	105.70
1	AA	2694	U	O5'-P-OP2	-6.87	99.52	105.70
1	CA	2442	C	C6-N1-C2	-6.87	117.55	120.30
1	AA	357	G	N7-C8-N9	6.87	116.53	113.10
1	AA	712	C	N3-C2-O2	-6.87	117.09	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	120	G	C6-N1-C2	-6.87	120.98	125.10
1	AA	803	C	C6-N1-C2	-6.87	117.55	120.30
1	CA	748	G	C5-C6-O6	6.87	132.72	128.60
1	CA	811	U	C5-C6-N1	-6.87	119.27	122.70
1	CA	2732	G	C4-C5-N7	-6.87	108.05	110.80
1	AA	2780	C	C2-N3-C4	-6.87	116.47	119.90
15	AR	114	VAL	CB-CA-C	-6.87	98.36	111.40
1	AA	98	U	N3-C4-O4	-6.86	114.59	119.40
1	AA	1749	G	C6-C5-N7	6.86	134.52	130.40
1	AA	846	G	N3-C4-C5	-6.86	125.17	128.60
1	AA	734	C	C5-C4-N4	6.86	125.00	120.20
1	AA	2078	G	N1-C6-O6	-6.86	115.78	119.90
1	AA	2465	A	OP1-P-OP2	-6.86	109.31	119.60
1	AA	1755	C	C6-N1-C2	6.86	123.04	120.30
1	AA	2446	A	C8-N9-C4	-6.86	103.06	105.80
1	AA	315	C	C5-C6-N1	-6.86	117.57	121.00
1	AA	621	G	O5'-P-OP2	-6.86	99.53	105.70
1	CA	1823	G	C5-C6-O6	6.86	132.72	128.60
1	AA	896	A	C2-N3-C4	-6.86	107.17	110.60
1	AA	2632	C	N1-C2-N3	6.86	124.00	119.20
1	CA	2572	A	C5-N7-C8	6.86	107.33	103.90
1	AA	610	C	C2-N3-C4	-6.85	116.47	119.90
1	AA	1922	A	C2-N3-C4	6.85	114.03	110.60
1	AA	50	G	N3-C4-C5	-6.85	125.17	128.60
1	AA	734	C	N3-C2-O2	-6.85	117.10	121.90
1	AA	1424	A	O5'-P-OP2	-6.85	99.53	105.70
1	AA	730	C	C2-N3-C4	-6.85	116.47	119.90
1	AA	1266	C	N3-C4-C5	-6.85	119.16	121.90
1	AA	2001	C	N1-C2-O2	-6.85	114.79	118.90
1	AA	2562	G	O5'-P-OP1	6.85	118.92	110.70
1	AA	520	G	C4-C5-N7	-6.85	108.06	110.80
1	AA	2546	A	C6-N1-C2	-6.85	114.49	118.60
2	AB	46	A	OP2-P-O3'	6.85	120.26	105.20
1	CA	2617	C	C6-N1-C2	6.85	123.04	120.30
1	AA	989	G	N3-C4-C5	-6.84	125.18	128.60
1	AA	1852	A	C8-N9-C4	-6.84	103.06	105.80
1	AA	2500	A	N1-C6-N6	-6.84	114.50	118.60
1	AA	2651	A	C6-N1-C2	-6.84	114.50	118.60
1	AA	2752	U	O5'-P-OP2	6.84	118.91	110.70
2	AB	32	C	C6-N1-C2	6.84	123.04	120.30
1	AA	637	U	N3-C2-O2	-6.84	117.41	122.20
1	AA	1231	G	N1-C6-O6	-6.84	115.80	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1543	U	C6-N1-C2	-6.84	116.90	121.00
1	AA	464	G	N1-C6-O6	6.84	124.00	119.90
1	AA	776	G	N7-C8-N9	6.84	116.52	113.10
1	AA	2033	U	N3-C4-C5	-6.83	110.50	114.60
1	AA	27	G	O4'-C1'-N9	6.83	113.67	108.20
1	AA	1266	C	N1-C2-N3	6.83	123.98	119.20
1	CA	1812	A	O5'-P-OP1	-6.83	99.55	105.70
1	AA	69	G	OP1-P-OP2	-6.83	109.36	119.60
1	AA	183	G	N9-C4-C5	6.83	108.13	105.40
1	AA	542	C	N3-C4-C5	6.83	124.63	121.90
1	AA	1316	C	OP2-P-O3'	6.83	120.23	105.20
1	AA	2282	G	O5'-P-OP1	-6.83	99.55	105.70
34	BA	811	C	C6-N1-C2	6.83	123.03	120.30
1	AA	129	G	N3-C4-N9	6.83	130.10	126.00
1	AA	148	C	N3-C4-N4	-6.83	113.22	118.00
34	DA	812	C	O5'-P-OP2	-6.83	99.56	105.70
1	AA	2828	G	C2-N3-C4	-6.82	108.49	111.90
1	CA	1554	A	N9-C4-C5	6.82	108.53	105.80
2	CB	79	C	O5'-P-OP2	-6.82	99.56	105.70
56	DW	73	A	C5-N7-C8	-6.82	100.49	103.90
1	AA	82	G	N1-C6-O6	6.82	123.99	119.90
1	CA	2732	G	N9-C4-C5	6.82	108.13	105.40
1	AA	511	C	N3-C4-N4	-6.82	113.23	118.00
1	AA	1683	C	OP1-P-OP2	-6.82	109.37	119.60
1	CA	141	A	N1-C6-N6	6.82	122.69	118.60
1	CA	530	G	N3-C4-N9	-6.82	121.91	126.00
1	AA	254	A	N9-C4-C5	-6.81	103.08	105.80
2	AB	82	G	N9-C4-C5	6.81	108.12	105.40
34	BA	239	U	N3-C2-O2	-6.81	117.43	122.20
1	CA	511	U	O5'-P-OP1	-6.81	99.57	105.70
1	AA	796	C	C6-N1-C2	6.81	123.02	120.30
1	AA	2655	G	C5-C6-O6	6.81	132.69	128.60
1	AA	2718	G	N1-C2-N2	-6.81	110.07	116.20
1	CA	790	C	C5-C4-N4	-6.81	115.43	120.20
1	AA	514	G	N1-C6-O6	-6.81	115.81	119.90
1	AA	663	G	N3-C4-C5	-6.81	125.20	128.60
1	AA	1744	G	C8-N9-C4	6.81	109.12	106.40
1	CA	372	G	O4'-C1'-N9	6.81	113.65	108.20
1	CA	693	C	N3-C4-C5	6.81	124.62	121.90
1	AA	1012	C	C6-N1-C2	-6.81	117.58	120.30
1	AA	2448	G	N1-C6-O6	-6.81	115.82	119.90
1	AA	726	C	C5-C6-N1	-6.80	117.60	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2634	C	N3-C4-C5	6.80	124.62	121.90
1	CA	2194	G	OP1-P-OP2	6.80	129.81	119.60
1	AA	353	G	N9-C4-C5	-6.80	102.68	105.40
2	AB	101	G	C8-N9-C4	6.80	109.12	106.40
1	AA	1749	G	N3-C4-N9	-6.80	121.92	126.00
1	AA	2071	G	C8-N9-C4	-6.80	103.68	106.40
34	DA	692	U	N3-C4-O4	6.80	124.16	119.40
1	AA	1341	C	OP1-P-OP2	6.80	129.80	119.60
1	AA	1796	C	OP2-P-O3'	6.80	120.16	105.20
1	AA	2443	U	C5-C6-N1	-6.80	119.30	122.70
1	CA	2618	G	O5'-P-OP1	6.80	118.86	110.70
1	AA	716	G	C6-N1-C2	-6.80	121.02	125.10
1	AA	410	U	O4'-C1'-N1	6.80	113.64	108.20
1	AA	798	A	C6-N1-C2	-6.80	114.52	118.60
1	AA	1206	G	OP2-P-O3'	6.80	120.15	105.20
2	AB	94	C	C6-N1-C2	-6.80	117.58	120.30
34	BA	1412	C	C5-C6-N1	-6.80	117.60	121.00
1	AA	1212	C	N3-C4-N4	6.79	122.76	118.00
1	AA	780	G	C5-N7-C8	6.79	107.70	104.30
1	AA	1200	G	N3-C4-C5	-6.79	125.20	128.60
1	AA	200	A	O5'-P-OP2	-6.79	99.59	105.70
1	AA	1009	C	N1-C2-O2	6.79	122.97	118.90
1	AA	2054	G	C5-N7-C8	6.79	107.69	104.30
1	CA	2512	C	C5-C6-N1	-6.79	117.61	121.00
1	AA	290	G	N3-C4-C5	6.79	131.99	128.60
1	AA	1919	G	C2-N3-C4	-6.79	108.51	111.90
1	AA	2594	G	C5-C6-O6	-6.79	124.53	128.60
1	AA	227	C	N3-C4-C5	6.79	124.61	121.90
1	AA	413	G	C4-C5-N7	6.79	113.52	110.80
1	CA	450	G	C5-C6-N1	6.79	114.89	111.50
1	AA	865	G	C4-C5-N7	-6.79	108.08	110.80
1	AA	1078	A	N9-C4-C5	-6.79	103.09	105.80
1	AA	2250	G	C5-N7-C8	-6.79	100.91	104.30
1	AA	2525	G	N9-C4-C5	-6.79	102.69	105.40
1	AA	1273	G	N1-C2-N3	6.78	127.97	123.90
1	AA	1505	C	C6-N1-C2	6.78	123.01	120.30
34	BA	1530	G	N3-C2-N2	-6.78	115.15	119.90
1	AA	895	G	N1-C6-O6	-6.78	115.83	119.90
1	AA	2480	G	C5-C6-N1	6.78	114.89	111.50
1	CA	2607	G	N3-C4-N9	6.78	130.07	126.00
1	AA	233	A	N1-C6-N6	6.78	122.67	118.60
1	AA	2435	U	OP1-P-OP2	6.78	129.77	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	AH	149	ARG	NE-CZ-NH1	-6.78	116.91	120.30
1	CA	1211	U	N1-C2-O2	6.78	127.55	122.80
1	CA	1324	G	C8-N9-C4	6.78	109.11	106.40
1	AA	796	C	C4-C5-C6	6.78	120.79	117.40
1	AA	2736	C	C5-C6-N1	-6.78	117.61	121.00
1	AA	719	C	N1-C2-O2	-6.78	114.83	118.90
1	CA	393	C	O5'-P-OP1	-6.78	99.60	105.70
1	CA	2490	G	N3-C4-C5	6.78	131.99	128.60
1	AA	867	A	C5-N7-C8	6.77	107.29	103.90
1	AA	1061	G	C6-C5-N7	-6.77	126.34	130.40
1	AA	1616	A	N1-C6-N6	-6.77	114.54	118.60
1	AA	2518	U	N3-C2-O2	-6.77	117.46	122.20
1	AA	2660	C	C4-C5-C6	6.77	120.79	117.40
1	AA	57	G	C5-C6-N1	6.77	114.89	111.50
1	AA	384	G	C8-N9-C4	6.77	109.11	106.40
1	AA	718	C	N3-C4-N4	-6.77	113.26	118.00
1	AA	2264	G	C8-N9-C1'	6.77	135.80	127.00
1	AA	1579	C	C6-N1-C2	-6.77	117.59	120.30
1	AA	1987	C	N1-C2-O2	-6.77	114.84	118.90
1	CA	2597	G	O5'-P-OP2	-6.77	99.61	105.70
1	AA	1237	G	N1-C6-O6	-6.77	115.84	119.90
1	AA	60	G	N3-C4-N9	-6.76	121.94	126.00
1	AA	1859	G	C5-C6-N1	-6.76	108.12	111.50
1	AA	2852	G	C2-N3-C4	-6.76	108.52	111.90
1	CA	150	C	N3-C4-C5	6.76	124.61	121.90
1	CA	1617	C	C6-N1-C2	-6.76	117.59	120.30
1	AA	907	U	C5-C6-N1	-6.76	119.32	122.70
1	AA	200	A	N1-C2-N3	6.76	132.68	129.30
1	AA	984	G	OP2-P-O3'	6.76	120.07	105.20
1	AA	2718	G	N1-C6-O6	-6.76	115.84	119.90
1	CA	2287	A	C5-N7-C8	-6.76	100.52	103.90
1	AA	60	G	N3-C4-C5	6.76	131.98	128.60
1	AA	1317	G	C6-C5-N7	-6.76	126.34	130.40
1	AA	1627	A	C8-N9-C4	-6.76	103.10	105.80
1	CA	2494	G	O5'-P-OP2	-6.76	99.62	105.70
1	AA	1208	G	N7-C8-N9	-6.76	109.72	113.10
1	AA	1331	G	N9-C4-C5	-6.76	102.70	105.40
1	AA	2115	G	N3-C4-N9	-6.76	121.95	126.00
1	AA	1411	A	N9-C4-C5	-6.75	103.10	105.80
1	AA	2833	A	N7-C8-N9	-6.75	110.42	113.80
2	AB	85	G	N3-C4-C5	-6.75	125.22	128.60
1	AA	887	C	C2-N3-C4	-6.75	116.52	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1736	A	OP2-P-O3'	6.75	120.06	105.20
34	DA	266	G	C5-N7-C8	-6.75	100.92	104.30
1	AA	1033	G	C5-N7-C8	6.75	107.67	104.30
1	AA	2540	U	N3-C2-O2	6.75	126.92	122.20
1	AA	2650	G	C5-C6-O6	-6.75	124.55	128.60
1	AA	620	U	N3-C2-O2	-6.75	117.48	122.20
1	AA	2697	G	N7-C8-N9	-6.75	109.73	113.10
1	AA	2466	G	C6-N1-C2	-6.75	121.05	125.10
1	AA	1200	G	N1-C2-N2	-6.75	110.13	116.20
1	AA	1864	U	C4-C5-C6	6.75	123.75	119.70
1	AA	738	C	OP1-P-OP2	-6.74	109.48	119.60
1	AA	1232	G	N1-C6-O6	-6.74	115.85	119.90
1	AA	1715	A	O5'-P-OP2	-6.74	99.63	105.70
1	AA	566	C	C6-N1-C2	-6.74	117.60	120.30
1	AA	1563	G	C5-C6-O6	-6.74	124.56	128.60
34	BA	913	A	P-O3'-C3'	6.74	127.79	119.70
1	CA	120	U	O5'-P-OP1	-6.74	99.63	105.70
1	CA	1142	U	C5-C6-N1	6.74	126.07	122.70
1	AA	1373	C	N3-C4-C5	-6.74	119.20	121.90
1	AA	2329	C	O5'-P-OP1	-6.74	99.64	105.70
1	AA	2470	G	C5-C6-O6	-6.74	124.56	128.60
1	AA	2898	C	C2-N3-C4	-6.74	116.53	119.90
56	BW	17	C	C6-N1-C1'	-6.74	112.71	120.80
1	CA	1812	A	OP1-P-OP2	6.74	129.71	119.60
1	AA	24	G	OP2-P-O3'	6.74	120.02	105.20
1	AA	525	G	C8-N9-C4	6.74	109.09	106.40
1	AA	1000	C	N1-C2-O2	-6.74	114.86	118.90
1	AA	1885	A	C6-N1-C2	-6.74	114.56	118.60
1	AA	1247	C	C5-C6-N1	-6.73	117.63	121.00
1	AA	1749	G	N9-C4-C5	6.73	108.09	105.40
56	BW	36	A	C2-N3-C4	-6.73	107.23	110.60
1	AA	881	C	C2-N3-C4	-6.73	116.53	119.90
1	CA	843	G	C8-N9-C4	6.73	109.09	106.40
34	DA	819	A	C2-N3-C4	-6.73	107.23	110.60
1	AA	339	G	O5'-P-OP2	-6.73	99.64	105.70
1	AA	990	A	C8-N9-C4	-6.73	103.11	105.80
1	AA	1097	G	N9-C4-C5	-6.73	102.71	105.40
1	AA	1843	A	O5'-P-OP1	-6.73	99.64	105.70
1	AA	2040	G	N3-C2-N2	6.73	124.61	119.90
1	AA	2572	C	C6-N1-C2	-6.73	117.61	120.30
1	CA	2520	C	C6-N1-C2	6.73	122.99	120.30
1	AA	1046	A	N1-C6-N6	6.73	122.64	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1381	U	N1-C2-O2	-6.73	118.09	122.80
34	BA	899	C	N1-C2-O2	-6.73	114.86	118.90
1	AA	2455	C	C5-C6-N1	-6.73	117.64	121.00
1	AA	239	G	C5-C6-O6	-6.72	124.56	128.60
1	AA	845	G	C5-N7-C8	6.72	107.66	104.30
1	AA	1339	C	N3-C4-C5	6.72	124.59	121.90
34	BA	326	G	C5-C6-O6	-6.72	124.57	128.60
1	AA	2762	A	C6-N1-C2	-6.72	114.57	118.60
1	CA	2360	A	C6-N1-C2	-6.72	114.57	118.60
1	CA	2409	G	C5-C6-O6	-6.72	124.57	128.60
1	AA	517	A	C5-N7-C8	6.72	107.26	103.90
1	AA	564	G	OP2-P-O3'	6.72	119.98	105.20
1	AA	718	C	OP1-P-OP2	6.72	129.68	119.60
1	AA	1784	G	C4-C5-N7	6.72	113.49	110.80
34	BA	880	C	N3-C4-C5	6.72	124.59	121.90
1	CA	109	G	N1-C6-O6	-6.72	115.87	119.90
1	CA	2390	U	O5'-P-OP1	-6.72	99.65	105.70
1	AA	1874	C	N3-C4-C5	6.72	124.59	121.90
1	AA	363	U	N3-C4-C5	6.72	118.63	114.60
1	AA	2757	G	N3-C2-N2	-6.72	115.20	119.90
1	CA	2361	A	N1-C6-N6	6.72	122.63	118.60
1	AA	285	U	O4'-C1'-N1	6.71	113.57	108.20
1	AA	1857	G	C8-N9-C4	-6.71	103.71	106.40
1	AA	2546	A	C4-C5-N7	6.71	114.06	110.70
34	BA	1527	C	C2-N3-C4	-6.71	116.54	119.90
2	CB	70	C	C6-N1-C2	-6.71	117.61	120.30
1	AA	562	C	C2-N3-C4	-6.71	116.54	119.90
1	AA	1378	G	C6-N1-C2	-6.71	121.07	125.10
1	AA	1749	G	C5-C6-O6	6.71	132.63	128.60
1	AA	2513	C	C5-C6-N1	-6.71	117.64	121.00
1	AA	551	A	OP1-P-O3'	-6.71	90.44	105.20
1	AA	1343	C	C5-C6-N1	-6.71	117.64	121.00
1	CA	34	C	N1-C2-O2	6.71	122.93	118.90
1	AA	1453	C	C5-C4-N4	-6.71	115.50	120.20
1	AA	1837	C	C4-C5-C6	6.71	120.75	117.40
1	AA	2301	G	C5-C6-O6	-6.71	124.57	128.60
1	AA	2383	G	C2-N3-C4	6.71	115.25	111.90
34	BA	1442	G	C2-N3-C4	-6.71	108.55	111.90
1	AA	2049	G	OP1-P-OP2	6.71	129.66	119.60
1	AA	2113	U	C5-C6-N1	-6.71	119.35	122.70
1	AA	2399	U	N1-C2-O2	-6.71	118.10	122.80
1	CA	261	G	C8-N9-C4	6.71	109.08	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	135	C	N3-C4-C5	6.71	124.58	121.90
1	AA	625	G	C6-N1-C2	6.71	129.12	125.10
1	AA	1924	C	OP2-P-O3'	6.71	119.95	105.20
1	CA	2608	G	N7-C8-N9	-6.71	109.75	113.10
34	BA	894	G	N9-C4-C5	6.71	108.08	105.40
34	DA	822	C	O5'-P-OP1	-6.71	99.67	105.70
1	AA	1627	A	N7-C8-N9	6.70	117.15	113.80
1	AA	2608	U	C5-C6-N1	-6.70	119.35	122.70
2	AB	56	G	N3-C4-C5	-6.70	125.25	128.60
1	CA	2576	G	C5-C6-N1	6.70	114.85	111.50
1	AA	1092	A	N1-C6-N6	-6.70	114.58	118.60
1	AA	1542	A	C8-N9-C4	-6.70	103.12	105.80
1	AA	2260	C	C6-N1-C2	6.70	122.98	120.30
1	CA	1950	G	OP1-P-OP2	6.70	129.65	119.60
1	CA	2569	G	C5-C6-O6	-6.70	124.58	128.60
1	CA	133	C	N3-C4-C5	6.70	124.58	121.90
1	AA	1042	A	O5'-P-OP1	-6.70	99.67	105.70
1	AA	1074	A	C6-N1-C2	-6.70	114.58	118.60
1	AA	1341	C	C2-N3-C4	-6.70	116.55	119.90
1	AA	1474	C	C5-C6-N1	-6.69	117.65	121.00
1	AA	2221	A	OP2-P-O3'	6.69	119.92	105.20
1	AA	666	C	N3-C4-C5	-6.69	119.22	121.90
1	AA	905	U	N3-C4-O4	-6.69	114.72	119.40
1	AA	2488	A	C4-C5-N7	6.69	114.05	110.70
34	BA	918	A	N1-C6-N6	-6.69	114.59	118.60
1	CA	456	C	C6-N1-C2	6.69	122.98	120.30
1	CA	1914	C	C6-N1-C2	-6.69	117.62	120.30
1	AA	1648	U	O5'-P-OP2	6.69	118.73	110.70
1	AA	139	A	OP1-P-OP2	-6.69	109.57	119.60
1	AA	495	G	O5'-P-OP1	6.69	118.73	110.70
1	AA	1030	A	C8-N9-C4	6.69	108.47	105.80
1	AA	2391	G	N3-C2-N2	-6.69	115.22	119.90
1	CA	2586	C	O5'-P-OP2	-6.69	99.68	105.70
1	AA	2269	U	N3-C4-O4	-6.69	114.72	119.40
1	AA	987	G	C5-N7-C8	6.68	107.64	104.30
1	AA	1341	C	N3-C2-O2	-6.68	117.22	121.90
1	AA	2304	C	OP2-P-O3'	6.68	119.91	105.20
1	AA	2344	U	C5-C6-N1	-6.68	119.36	122.70
1	AA	2515	A	C6-N1-C2	6.68	122.61	118.60
1	CA	2510	C	C6-N1-C2	-6.68	117.63	120.30
1	CA	962	G	C5-C6-O6	-6.68	124.59	128.60
1	AA	1275	G	O5'-P-OP1	6.68	118.72	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1486	G	N7-C8-N9	-6.68	109.76	113.10
1	AA	725	C	N3-C2-O2	-6.68	117.23	121.90
1	AA	822	G	N1-C6-O6	-6.68	115.89	119.90
1	AA	2532	C	C2-N3-C4	-6.68	116.56	119.90
34	DA	286	G	C8-N9-C4	6.68	109.07	106.40
1	AA	1802	C	N1-C2-N3	6.67	123.87	119.20
1	AA	2375	C	N3-C4-N4	-6.67	113.33	118.00
1	AA	2528	G	C4-C5-N7	-6.67	108.13	110.80
34	BA	574	A	N1-C6-N6	6.67	122.61	118.60
1	CA	37	C	C5-C4-N4	-6.67	115.53	120.20
1	CA	150	C	N3-C2-O2	-6.67	117.23	121.90
1	AA	976	G	N3-C4-C5	-6.67	125.26	128.60
34	BA	731	G	C8-N9-C4	-6.67	103.73	106.40
2	AB	37	C	OP2-P-O3'	6.67	119.88	105.20
2	AB	61	G	C5-C6-N1	-6.67	108.16	111.50
1	AA	2522	C	N3-C2-O2	-6.67	117.23	121.90
1	AA	2399	U	C5-C6-N1	-6.67	119.37	122.70
1	AA	2761	A	OP2-P-O3'	6.67	119.87	105.20
1	CA	1636	C	C6-N1-C2	6.67	122.97	120.30
1	CA	2629	A	O4'-C1'-N9	6.67	113.53	108.20
34	DA	813	U	C6-N1-C2	6.67	125.00	121.00
1	AA	1766	G	C5-N7-C8	-6.67	100.97	104.30
1	CA	1565	C	C5-C6-N1	-6.67	117.67	121.00
1	AA	103	C	OP2-P-O3'	6.67	119.86	105.20
1	AA	75	C	O5'-P-OP2	-6.66	99.70	105.70
1	AA	867	A	N7-C8-N9	-6.66	110.47	113.80
1	AA	1614	A	O5'-P-OP1	6.66	118.70	110.70
1	AA	2065	C	C6-N1-C2	-6.66	117.63	120.30
1	CA	1332	G	O5'-P-OP2	-6.66	99.70	105.70
1	AA	214	A	O5'-P-OP2	-6.66	99.71	105.70
1	AA	787	U	N1-C2-N3	6.66	118.90	114.90
1	AA	913	A	N7-C8-N9	6.66	117.13	113.80
1	AA	2494	G	N1-C6-O6	6.66	123.90	119.90
1	AA	2609	G	N9-C4-C5	-6.66	102.74	105.40
1	CA	1558	A	C5-N7-C8	-6.66	100.57	103.90
34	BA	501	C	C6-N1-C2	-6.66	117.64	120.30
1	AA	2741	U	N1-C2-N3	6.66	118.89	114.90
1	CA	220	G	C5-C6-O6	-6.66	124.61	128.60
1	AA	174	U	C4-C5-C6	6.66	123.69	119.70
1	AA	415	G	O5'-P-OP1	6.66	118.69	110.70
1	AA	2335	G	C5-C6-O6	-6.66	124.61	128.60
1	CA	384	U	C5-C6-N1	-6.66	119.37	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	827	U	C5-C6-N1	-6.66	119.37	122.70
1	AA	514	G	C5-C6-O6	6.65	132.59	128.60
1	AA	549	U	C2-N3-C4	-6.65	123.01	127.00
1	AA	663	G	N3-C4-N9	6.65	129.99	126.00
1	AA	2450	U	N3-C2-O2	6.65	126.86	122.20
1	AA	2588	G	OP1-P-OP2	-6.65	109.62	119.60
1	AA	2794	A	N7-C8-N9	-6.65	110.47	113.80
1	AA	702	A	C2-N3-C4	-6.65	107.28	110.60
1	AA	2639	G	N3-C4-C5	6.65	131.93	128.60
1	AA	2647	C	C2-N3-C4	-6.65	116.58	119.90
1	CA	383	U	C4-C5-C6	6.65	123.69	119.70
1	CA	109	G	O5'-P-OP2	-6.65	99.72	105.70
1	CA	1792	G	O5'-P-OP2	-6.65	99.72	105.70
1	AA	1334	U	O5'-P-OP2	-6.65	99.72	105.70
2	AB	12	C	C2-N3-C4	-6.65	116.58	119.90
1	AA	1038	C	N3-C4-N4	-6.65	113.35	118.00
1	AA	2012	C	C5-C4-N4	-6.65	115.55	120.20
1	AA	540	A	N1-C6-N6	-6.64	114.61	118.60
1	AA	1811	A	O5'-P-OP1	6.64	118.67	110.70
1	AA	2442	A	C6-N1-C2	6.64	122.59	118.60
1	AA	2741	U	C6-N1-C2	-6.64	117.01	121.00
1	CA	741	G	C5-C6-O6	6.64	132.59	128.60
1	AA	436	C	C2-N3-C4	6.64	123.22	119.90
1	AA	719	C	N3-C4-C5	6.64	124.56	121.90
1	AA	2028	C	C5-C4-N4	-6.64	115.55	120.20
1	AA	2290	A	O5'-P-OP1	6.64	118.67	110.70
1	AA	2380	C	C6-N1-C2	6.64	122.96	120.30
1	AA	2550	C	C5-C4-N4	-6.64	115.55	120.20
1	CA	141	A	C2-N3-C4	-6.64	107.28	110.60
1	CA	2195	C	OP1-P-O3'	6.64	119.81	105.20
1	AA	726	C	N3-C4-N4	6.64	122.64	118.00
1	AA	1100	A	N1-C6-N6	6.64	122.58	118.60
1	AA	1922	A	C8-N9-C4	-6.64	103.14	105.80
1	AA	2530	A	C2-N3-C4	-6.63	107.28	110.60
1	AA	1050	C	C2-N3-C4	-6.63	116.58	119.90
1	AA	1449	C	O5'-P-OP1	-6.63	99.73	105.70
34	BA	345	C	C2-N1-C1'	6.63	126.09	118.80
1	CA	1333	C	C5-C4-N4	-6.63	115.56	120.20
1	AA	1331	G	N3-C4-N9	6.63	129.98	126.00
1	AA	1857	G	N9-C4-C5	6.63	108.05	105.40
1	AA	593	G	C5-N7-C8	-6.63	100.98	104.30
1	CA	798	G	C5-C6-O6	6.63	132.58	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	97	G	N9-C4-C5	6.63	108.05	105.40
1	AA	132	C	O5'-P-OP1	6.63	118.65	110.70
1	AA	1252	C	C2-N3-C4	-6.63	116.59	119.90
1	AA	1665	G	N3-C4-N9	6.63	129.98	126.00
1	AA	2295	C	N3-C4-N4	6.63	122.64	118.00
1	AA	2785	C	N3-C2-O2	-6.63	117.26	121.90
1	AA	423	G	O5'-P-OP1	-6.62	99.74	105.70
1	AA	2366	G	C8-N9-C1'	-6.62	118.39	127.00
34	BA	567	G	C4-C5-N7	-6.62	108.15	110.80
1	AA	630	U	C6-N1-C2	6.62	124.97	121.00
1	AA	1204	C	C6-N1-C2	-6.62	117.65	120.30
1	CA	572	A	O5'-P-OP2	-6.62	99.74	105.70
1	CA	961	C	C6-N1-C2	6.62	122.95	120.30
1	CA	1829	A	N1-C6-N6	6.62	122.57	118.60
1	CA	2043	C	N3-C4-C5	6.62	124.55	121.90
1	AA	712	C	N3-C4-N4	-6.62	113.37	118.00
1	AA	2659	U	N3-C4-C5	6.62	118.57	114.60
1	AA	114	C	C2-N3-C4	-6.62	116.59	119.90
1	AA	1725	G	C6-N1-C2	-6.62	121.13	125.10
1	AA	2220	A	O4'-C1'-N9	6.62	113.50	108.20
1	AA	2702	C	N3-C2-O2	6.62	126.53	121.90
34	BA	373	A	OP1-P-O3'	6.62	119.76	105.20
1	AA	46	C	C5-C6-N1	-6.62	117.69	121.00
1	AA	2387	G	C5-C6-N1	6.62	114.81	111.50
1	CA	1997	G	O5'-P-OP2	-6.62	99.75	105.70
34	DA	442	C	C6-N1-C2	-6.62	117.65	120.30
1	AA	1021	G	C6-N1-C2	6.61	129.07	125.10
1	AA	2414	C	O5'-P-OP2	-6.61	99.75	105.70
1	AA	2724	U	OP1-P-OP2	6.61	129.52	119.60
1	CA	2618	G	C6-N1-C2	-6.61	121.13	125.10
1	CA	769	G	C6-C5-N7	-6.61	126.44	130.40
1	CA	2673	G	C5-C6-O6	6.61	132.57	128.60
1	AA	1040	C	C2-N3-C4	-6.61	116.60	119.90
1	AA	1421	C	O5'-P-OP2	6.61	118.63	110.70
1	AA	581	G	N7-C8-N9	-6.61	109.80	113.10
1	CA	563	G	N3-C4-N9	-6.61	122.04	126.00
15	CR	64	ARG	NE-CZ-NH1	6.61	123.60	120.30
1	AA	418	G	N1-C6-O6	6.60	123.86	119.90
1	AA	580	U	OP2-P-O3'	6.60	119.73	105.20
1	AA	859	C	C2-N3-C4	-6.60	116.60	119.90
1	AA	1474	C	N1-C2-N3	6.60	123.82	119.20
1	CA	2490	G	C5-N7-C8	-6.60	101.00	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	549	U	N3-C4-C5	6.60	118.56	114.60
1	AA	2379	G	N3-C4-C5	-6.60	125.30	128.60
1	CA	1901	A	C5-C6-N1	6.60	121.00	117.70
1	CA	2500	U	C5-C6-N1	-6.60	119.40	122.70
1	AA	1477	U	C5-C6-N1	6.60	126.00	122.70
1	AA	1741	C	C6-N1-C2	6.60	122.94	120.30
34	DA	640	A	C8-N9-C4	-6.60	103.16	105.80
1	AA	29	U	C2-N3-C4	-6.59	123.04	127.00
1	AA	844	C	N3-C4-N4	6.59	122.62	118.00
1	AA	464	G	C6-C5-N7	-6.59	126.44	130.40
1	AA	2876	U	N3-C4-O4	-6.59	114.78	119.40
1	AA	555	G	N3-C2-N2	-6.59	115.29	119.90
1	AA	2307	C	O5'-P-OP2	6.59	118.61	110.70
1	AA	2838	C	C6-N1-C2	6.59	122.94	120.30
1	CA	1653	G	OP1-P-OP2	6.59	129.49	119.60
1	AA	839	G	C5-C6-O6	-6.59	124.65	128.60
1	AA	998	A	C2-N3-C4	-6.59	107.31	110.60
1	AA	1847	G	N1-C2-N2	6.59	122.13	116.20
34	BA	1524	C	N1-C2-N3	6.59	123.81	119.20
1	CA	2029	G	C5-C6-O6	-6.59	124.65	128.60
1	AA	1193	C	C2-N1-C1'	-6.59	111.55	118.80
1	AA	2591	C	N3-C4-N4	6.59	122.61	118.00
1	AA	1411	A	C6-C5-N7	-6.59	127.69	132.30
1	AA	2662	U	C5-C4-O4	6.59	129.85	125.90
1	AA	2826	C	N1-C2-O2	6.59	122.85	118.90
30	A6	19	ARG	NE-CZ-NH1	-6.59	117.01	120.30
1	AA	1724	A	C6-N1-C2	-6.58	114.65	118.60
1	CA	1300	U	P-O3'-C3'	6.58	127.60	119.70
1	AA	627	G	N3-C4-C5	-6.58	125.31	128.60
1	AA	1330	A	OP1-P-OP2	6.58	129.47	119.60
1	AA	2070	G	N7-C8-N9	-6.58	109.81	113.10
1	AA	2445	A	N1-C6-N6	6.58	122.55	118.60
1	CA	2827	C	N3-C2-O2	6.58	126.51	121.90
34	DA	1484	C	C6-N1-C2	6.58	122.93	120.30
1	AA	1053	C	N1-C2-O2	-6.58	114.95	118.90
1	AA	1356	G	O5'-P-OP1	-6.58	99.78	105.70
1	AA	2417	G	C4-C5-N7	6.58	113.43	110.80
1	AA	211	A	N9-C4-C5	6.58	108.43	105.80
1	AA	1021	G	OP1-P-OP2	6.58	129.46	119.60
34	BA	770	C	C5-C4-N4	6.58	124.80	120.20
1	CA	2238	G	O5'-P-OP1	-6.58	99.78	105.70
1	AA	993	G	O5'-P-OP1	-6.57	99.78	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2490	G	N9-C4-C5	-6.57	102.77	105.40
1	CA	2580	U	C6-N1-C2	6.57	124.94	121.00
1	AA	2386	C	C2-N3-C4	-6.57	116.61	119.90
1	AA	2440	G	N1-C2-N2	-6.57	110.28	116.20
34	BA	1412	C	C6-N1-C2	6.57	122.93	120.30
1	CA	1949	G	C5-C6-O6	-6.57	124.66	128.60
1	AA	901	G	C4-C5-N7	-6.57	108.17	110.80
1	AA	1757	C	O5'-P-OP1	6.57	118.58	110.70
1	AA	2045	G	C5-C6-N1	6.57	114.78	111.50
1	CA	600	G	N3-C4-C5	-6.57	125.32	128.60
1	AA	1034	A	N1-C2-N3	-6.57	126.02	129.30
1	CA	2832	U	C5-C6-N1	-6.57	119.42	122.70
1	AA	1063	G	C4-C5-N7	-6.56	108.17	110.80
1	AA	1457	C	N3-C4-C5	6.56	124.53	121.90
34	BA	363	A	O5'-P-OP2	-6.56	99.79	105.70
56	DW	17	C	C6-N1-C2	-6.56	117.67	120.30
1	AA	472	G	C5-C6-O6	-6.56	124.66	128.60
1	AA	1064	C	N1-C2-O2	6.56	122.84	118.90
1	AA	1345	G	O5'-P-OP2	6.56	118.58	110.70
1	CA	2503	A	N9-C4-C5	-6.56	103.17	105.80
1	CA	2763	G	C5-C6-O6	6.56	132.54	128.60
1	AA	70	A	C4-C5-C6	6.56	120.28	117.00
1	AA	107	G	C6-C5-N7	6.56	134.34	130.40
1	AA	555	G	C5-N7-C8	-6.56	101.02	104.30
1	AA	2471	A	N3-C4-C5	-6.56	122.21	126.80
1	CA	204	A	C6-N1-C2	-6.56	114.66	118.60
1	AA	1617	A	N9-C4-C5	-6.56	103.18	105.80
1	AA	1766	G	C4-C5-N7	6.56	113.42	110.80
34	BA	1530	G	C5-C6-O6	-6.56	124.67	128.60
1	CA	811	U	C2-N3-C4	-6.56	123.07	127.00
1	AA	327	U	C5-C4-O4	-6.56	121.97	125.90
1	AA	534	C	N1-C2-N3	-6.56	114.61	119.20
34	BA	115	G	P-O3'-C3'	6.56	127.57	119.70
1	CA	382	G	C2-N3-C4	6.56	115.18	111.90
1	AA	431	C	N3-C2-O2	-6.55	117.31	121.90
1	AA	861	C	O5'-P-OP1	6.55	118.56	110.70
1	AA	1040	C	N3-C4-C5	6.55	124.52	121.90
1	CA	2560	C	N1-C2-O2	6.55	122.83	118.90
1	CA	512	G	O5'-P-OP1	-6.55	99.80	105.70
1	AA	213	G	N9-C4-C5	6.55	108.02	105.40
1	AA	743	G	N9-C4-C5	-6.55	102.78	105.40
1	CA	1424	G	O5'-P-OP2	-6.55	99.80	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1682	G	C5-C6-N1	6.55	114.78	111.50
1	AA	1700	G	O4'-C1'-N9	-6.55	102.96	108.20
34	BA	964	A	C8-N9-C4	6.55	108.42	105.80
1	AA	611	U	O5'-P-OP2	-6.55	99.81	105.70
1	AA	1493	C	N3-C2-O2	-6.55	117.32	121.90
1	AA	1599	G	O5'-P-OP2	-6.55	99.81	105.70
1	AA	2822	G	C4-C5-N7	-6.55	108.18	110.80
2	AB	39	A	C8-N9-C4	6.55	108.42	105.80
34	BA	1383	C	C6-N1-C2	-6.55	117.68	120.30
34	DA	586	C	C5-C4-N4	-6.55	115.62	120.20
1	AA	211	A	C2-N3-C4	6.54	113.87	110.60
1	AA	1694	G	C6-C5-N7	6.54	134.33	130.40
1	CA	1296	G	O5'-P-OP1	-6.54	99.81	105.70
1	AA	100	G	C4-C5-N7	6.54	113.42	110.80
1	CA	264	C	C6-N1-C2	6.54	122.92	120.30
1	CA	1704	G	N1-C6-O6	6.54	123.83	119.90
1	AA	1439	A	N1-C6-N6	-6.54	114.67	118.60
1	AA	2857	U	C5-C6-N1	-6.54	119.43	122.70
1	CA	1745(A)	C	C6-N1-C2	-6.54	117.68	120.30
1	CA	2732	G	C5-C6-O6	6.54	132.53	128.60
1	AA	2011	G	C5-C6-N1	-6.54	108.23	111.50
1	AA	137	G	N3-C4-C5	-6.54	125.33	128.60
18	AU	3	ARG	NE-CZ-NH2	6.54	123.57	120.30
1	AA	1669	G	O5'-P-OP2	-6.54	99.82	105.70
1	AA	1978	U	N3-C4-C5	6.54	118.52	114.60
1	AA	597	C	N3-C4-N4	-6.54	113.43	118.00
1	AA	627	G	N9-C4-C5	6.54	108.01	105.40
1	AA	208	G	O5'-P-OP2	-6.53	99.82	105.70
1	AA	550	U	N3-C2-O2	-6.53	117.63	122.20
1	AA	816	G	N3-C2-N2	6.53	124.47	119.90
1	AA	1030	A	N7-C8-N9	-6.53	110.53	113.80
1	AA	1343	C	C2-N3-C4	-6.53	116.63	119.90
1	AA	243	G	C5-C6-N1	6.53	114.77	111.50
1	AA	436	C	O5'-P-OP1	6.53	118.54	110.70
1	AA	872	C	C6-N1-C2	6.53	122.91	120.30
1	AA	2468	C	C6-N1-C2	6.53	122.91	120.30
2	CB	85	G	O5'-P-OP2	-6.53	99.82	105.70
1	AA	112	U	C5-C4-O4	-6.53	121.98	125.90
1	AA	1024	G	N9-C4-C5	6.53	108.01	105.40
1	AA	2660	C	N1-C2-O2	-6.53	114.98	118.90
1	CA	195	A	OP2-P-O3'	6.53	119.56	105.20
1	CA	1902	C	C5-C6-N1	6.53	124.26	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2713	A	C5-C6-N6	6.53	128.92	123.70
34	DA	1513	A	C8-N9-C4	6.53	108.41	105.80
1	AA	426	G	N1-C2-N3	6.53	127.81	123.90
1	AA	1232	G	O5'-P-OP1	6.53	118.53	110.70
1	AA	1797	U	OP1-P-OP2	-6.53	109.81	119.60
1	AA	2367	C	C5-C6-N1	-6.53	117.74	121.00
1	AA	2454	C	N1-C2-O2	-6.53	114.98	118.90
1	AA	1008	U	C5-C6-N1	-6.52	119.44	122.70
1	AA	1024	G	N1-C6-O6	-6.52	115.99	119.90
1	AA	1210	G	O5'-P-OP2	-6.52	99.83	105.70
1	CA	139(A)	G	N3-C4-N9	6.52	129.91	126.00
1	CA	933	A	C5-N7-C8	-6.52	100.64	103.90
2	AB	62	C	O5'-P-OP2	-6.52	99.83	105.70
1	CA	914	C	N1-C2-O2	6.52	122.81	118.90
1	AA	715	G	OP2-P-O3'	6.52	119.54	105.20
1	AA	1718	U	C5-C4-O4	-6.52	121.99	125.90
1	AA	2092	G	OP1-P-OP2	6.52	129.38	119.60
34	DA	1505	G	N3-C4-C5	6.52	131.86	128.60
1	AA	1307	C	N3-C4-N4	-6.52	113.44	118.00
1	AA	2422	G	C8-N9-C4	6.52	109.01	106.40
1	AA	1390	G	N7-C8-N9	-6.51	109.84	113.10
1	AA	1443	U	C5-C6-N1	-6.51	119.44	122.70
1	AA	2612	A	C5-C6-N6	6.51	128.91	123.70
1	CA	1792	G	N9-C4-C5	-6.51	102.79	105.40
1	CA	2553	G	N3-C2-N2	6.51	124.46	119.90
1	AA	1735	U	N3-C4-O4	-6.51	114.84	119.40
1	AA	2272	C	O5'-P-OP1	-6.51	99.84	105.70
1	AA	455	A	N7-C8-N9	6.51	117.06	113.80
1	AA	1234	A	N1-C2-N3	6.51	132.56	129.30
1	AA	1700	G	N3-C4-C5	-6.51	125.34	128.60
1	AA	2513	C	OP2-P-O3'	6.51	119.52	105.20
1	AA	2733	U	C5-C6-N1	-6.51	119.44	122.70
1	CA	39	C	N3-C4-C5	6.51	124.50	121.90
34	DA	546	G	N1-C6-O6	-6.51	115.99	119.90
1	AA	704	U	C2-N3-C4	-6.51	123.09	127.00
1	CA	2222	G	N1-C6-O6	-6.51	116.00	119.90
1	CA	2501	C	C6-N1-C2	6.51	122.90	120.30
1	AA	1097	G	N3-C4-C5	6.51	131.85	128.60
34	BA	1405	G	N1-C6-O6	-6.51	116.00	119.90
1	AA	122	G	OP1-P-OP2	6.50	129.36	119.60
1	AA	907	U	C6-N1-C2	6.50	124.90	121.00
1	AA	16	G	C8-N9-C4	-6.50	103.80	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	420	C	N1-C2-O2	6.50	122.80	118.90
1	AA	2293	C	N1-C2-O2	-6.50	115.00	118.90
1	AA	2716	C	C5-C6-N1	6.50	124.25	121.00
1	AA	438	G	N3-C4-N9	6.50	129.90	126.00
1	AA	775	G	N1-C2-N2	-6.50	110.35	116.20
1	AA	912	C	N3-C4-N4	6.50	122.55	118.00
1	AA	1846	A	O5'-P-OP1	-6.50	99.85	105.70
1	AA	341	G	N1-C6-O6	-6.50	116.00	119.90
1	AA	592	U	C4-C5-C6	6.50	123.60	119.70
1	AA	2244	U	C5-C6-N1	-6.50	119.45	122.70
1	AA	2327	G	C8-N9-C4	6.50	109.00	106.40
1	AA	2107	C	C5-C4-N4	-6.50	115.65	120.20
1	AA	2294	G	C2-N3-C4	6.50	115.15	111.90
1	AA	2787	C	C4-C5-C6	6.50	120.65	117.40
1	AA	832	G	C6-C5-N7	6.49	134.30	130.40
1	AA	1573	G	N1-C6-O6	6.49	123.80	119.90
1	AA	1795	G	N3-C2-N2	6.49	124.45	119.90
1	AA	2000	A	N1-C2-N3	-6.49	126.05	129.30
1	AA	2466	G	N3-C4-C5	-6.49	125.35	128.60
1	CA	1154	G	N3-C4-N9	6.49	129.89	126.00
1	AA	354	A	C4-C5-C6	-6.49	113.76	117.00
1	AA	1474	C	C4-C5-C6	6.49	120.64	117.40
1	AA	1411	A	C5-C6-N6	-6.49	118.51	123.70
1	AA	1819	C	O5'-P-OP1	-6.49	99.86	105.70
1	CA	1021	A	N1-C2-N3	6.49	132.54	129.30
1	AA	827	G	C5-C6-O6	-6.48	124.71	128.60
1	AA	1783	C	N1-C2-O2	-6.48	115.01	118.90
1	AA	26	G	C4-C5-N7	6.48	113.39	110.80
1	AA	2604	G	O5'-P-OP2	6.48	118.48	110.70
1	AA	1068	G	N3-C4-N9	-6.48	122.11	126.00
1	AA	2294	G	O5'-P-OP2	6.48	118.48	110.70
1	AA	2712	C	O5'-P-OP2	-6.48	99.87	105.70
1	CA	2058	A	N1-C2-N3	6.48	132.54	129.30
1	AA	789	G	C2-N3-C4	-6.48	108.66	111.90
1	CA	741	G	C2-N3-C4	-6.48	108.66	111.90
1	AA	1805	C	N1-C2-O2	-6.48	115.01	118.90
1	AA	2000	A	N7-C8-N9	-6.48	110.56	113.80
1	AA	2400	A	C4-C5-N7	-6.48	107.46	110.70
1	AA	2478	C	C4-C5-C6	6.48	120.64	117.40
1	CA	801	G	N3-C4-C5	-6.48	125.36	128.60
1	CA	954	G	C8-N9-C4	-6.48	103.81	106.40
1	AA	1243	U	N1-C2-N3	6.47	118.78	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2374	G	N1-C2-N3	6.47	127.78	123.90
34	BA	854	G	C8-N9-C4	-6.47	103.81	106.40
1	AA	1194	A	N1-C6-N6	-6.47	114.72	118.60
1	AA	1307	C	C6-N1-C2	6.47	122.89	120.30
1	AA	2052	A	OP1-P-OP2	6.47	129.31	119.60
1	AA	2367	C	C6-N1-C2	6.47	122.89	120.30
1	CA	2249	U	N1-C2-O2	6.47	127.33	122.80
1	AA	1013	G	C5-C6-O6	6.47	132.48	128.60
1	AA	1700	G	P-O3'-C3'	6.47	127.47	119.70
1	AA	2773	C	OP2-P-O3'	6.47	119.44	105.20
1	AA	2792	U	N1-C2-N3	6.47	118.78	114.90
34	DA	1509	C	N3-C4-C5	6.47	124.49	121.90
1	AA	2024	G	OP2-P-O3'	-6.47	90.97	105.20
1	AA	1200	G	C6-C5-N7	-6.46	126.52	130.40
1	AA	1411	A	N1-C2-N3	6.46	132.53	129.30
1	AA	1481	G	O5'-P-OP1	6.46	118.46	110.70
1	AA	2227	G	N3-C4-C5	6.46	131.83	128.60
1	CA	383	U	N1-C2-N3	6.46	118.78	114.90
1	AA	422	U	O5'-P-OP1	-6.46	99.88	105.70
56	BW	45	U	N1-C2-O2	6.46	127.32	122.80
1	AA	420	C	N3-C4-C5	-6.46	119.31	121.90
1	AA	531	G	C2-N3-C4	6.46	115.13	111.90
1	AA	1948	U	N3-C2-O2	-6.46	117.68	122.20
1	AA	2677	A	N1-C6-N6	6.46	122.48	118.60
34	BA	1510	U	C6-N1-C2	6.46	124.88	121.00
1	CA	579	G	C5-C6-O6	-6.46	124.72	128.60
34	DA	498	U	O5'-P-OP2	-6.46	99.88	105.70
34	BA	1397	C	C5-C6-N1	6.46	124.23	121.00
34	DA	634	C	C6-N1-C2	-6.46	117.72	120.30
1	AA	989	G	C6-C5-N7	-6.46	126.53	130.40
1	CA	2083	G	C6-C5-N7	-6.46	126.53	130.40
1	CA	2275	C	OP1-P-O3'	6.46	119.41	105.20
1	AA	1187	U	C5-C4-O4	-6.46	122.03	125.90
34	BA	841	U	C5-C6-N1	6.46	125.93	122.70
1	AA	2640	C	N3-C4-C5	6.46	124.48	121.90
34	BA	1437	C	O5'-P-OP1	-6.46	99.89	105.70
34	BA	885	G	C5-C6-O6	-6.45	124.73	128.60
1	AA	598	A	C5-N7-C8	6.45	107.13	103.90
34	BA	1263	C	C6-N1-C2	6.45	122.88	120.30
1	CA	214	G	C8-N9-C4	6.45	108.98	106.40
1	CA	474	G	OP2-P-O3'	6.45	119.39	105.20
1	CA	2257	U	N3-C4-C5	6.45	118.47	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2610	A	OP1-P-OP2	-6.45	109.93	119.60
1	CA	2413	G	C8-N9-C4	6.45	108.98	106.40
1	AA	1443	U	O5'-P-OP2	6.45	118.44	110.70
1	AA	1645	C	C2-N3-C4	-6.45	116.68	119.90
1	AA	1876	G	C2-N3-C4	-6.45	108.68	111.90
34	DA	1502	A	C2-N3-C4	-6.45	107.38	110.60
1	AA	472	G	C4-C5-N7	6.45	113.38	110.80
1	AA	1985	U	OP1-P-O3'	6.45	119.38	105.20
1	CA	1142(A)	A	N3-C4-N9	-6.45	122.24	127.40
1	CA	845	G	O4'-C1'-N9	6.44	113.36	108.20
1	AA	1515	C	O5'-P-OP1	6.44	118.43	110.70
1	AA	139	A	O4'-C1'-N9	6.44	113.35	108.20
1	AA	2612	A	C6-C5-N7	6.44	136.81	132.30
1	AA	2740	G	C5-C6-O6	6.44	132.46	128.60
34	BA	1520	G	O5'-P-OP1	6.44	118.43	110.70
1	AA	791	G	C5-C6-O6	6.44	132.46	128.60
1	AA	2825	C	C6-N1-C2	-6.44	117.73	120.30
1	AA	831	A	C5-N7-C8	6.43	107.12	103.90
1	AA	2256	U	N1-C2-N3	6.43	118.76	114.90
1	AA	2538	G	O5'-P-OP1	6.43	118.42	110.70
1	AA	822	G	C8-N9-C4	-6.43	103.83	106.40
1	AA	839	G	C6-N1-C2	-6.43	121.24	125.10
1	AA	241	G	C6-C5-N7	-6.43	126.54	130.40
1	AA	821	A	OP2-P-O3'	6.43	119.34	105.20
1	AA	1031	C	C5-C6-N1	6.43	124.21	121.00
1	AA	2566	U	N1-C2-O2	-6.43	118.30	122.80
1	CA	1609	A	C8-N9-C4	6.43	108.37	105.80
1	CA	2628	C	N1-C2-O2	-6.43	115.04	118.90
1	AA	69	G	C4-C5-N7	6.43	113.37	110.80
1	AA	1410	G	N3-C4-N9	6.43	129.86	126.00
1	AA	477	C	C5-C6-N1	-6.43	117.79	121.00
1	AA	623	G	OP1-P-OP2	6.43	129.24	119.60
1	CA	2442	C	N1-C2-O2	6.43	122.76	118.90
1	AA	364	A	O5'-P-OP2	6.42	118.41	110.70
1	AA	472	G	C5-N7-C8	-6.42	101.09	104.30
1	AA	1960	A	C2-N3-C4	-6.42	107.39	110.60
1	AA	2528	G	N1-C6-O6	-6.42	116.05	119.90
1	AA	2894	U	N3-C2-O2	6.42	126.70	122.20
34	BA	1497	G	C8-N9-C4	6.42	108.97	106.40
1	AA	1331	G	C4-C5-N7	6.42	113.37	110.80
1	AA	1609	A	C2-N3-C4	-6.42	107.39	110.60
1	AA	1861	C	N3-C4-C5	6.42	124.47	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2092	G	O5'-P-OP2	-6.42	99.92	105.70
1	AA	2386	C	C5-C6-N1	-6.42	117.79	121.00
1	AA	2782	C	C2-N3-C4	-6.42	116.69	119.90
32	A8	13	ARG	NE-CZ-NH1	6.42	123.51	120.30
1	CA	1607	C	C6-N1-C2	-6.42	117.73	120.30
1	CA	2588	G	N3-C4-C5	6.42	131.81	128.60
1	AA	1745	A	C4-N9-C1'	6.42	137.86	126.30
1	AA	1749	G	N1-C6-O6	-6.42	116.05	119.90
1	AA	195	U	C5-C4-O4	6.42	129.75	125.90
1	AA	1998	U	OP1-P-O3'	6.42	119.32	105.20
1	CA	141	A	C4-C5-N7	6.42	113.91	110.70
1	CA	1635	G	OP1-P-O3'	6.42	119.32	105.20
34	DA	397	A	O5'-P-OP2	-6.42	99.92	105.70
1	AA	36	G	C5-C6-O6	6.42	132.45	128.60
1	AA	1276	C	O5'-P-OP1	6.42	118.40	110.70
1	AA	1473	A	O5'-P-OP2	-6.42	99.93	105.70
19	AV	13	ARG	NE-CZ-NH1	-6.42	117.09	120.30
1	AA	385	G	N1-C6-O6	6.42	123.75	119.90
1	AA	908	A	N1-C6-N6	-6.42	114.75	118.60
1	AA	733	G	N1-C2-N2	-6.41	110.43	116.20
1	AA	1064	C	C6-N1-C2	-6.41	117.73	120.30
1	AA	2012	C	C6-N1-C2	-6.41	117.73	120.30
1	CA	2574	G	C5-C6-O6	-6.41	124.75	128.60
1	AA	1983	C	N3-C4-C5	-6.41	119.33	121.90
1	CA	144	C	N3-C4-C5	-6.41	119.33	121.90
1	CA	60	G	C4-C5-N7	6.41	113.36	110.80
1	CA	1655	A	OP1-P-OP2	-6.41	109.99	119.60
1	CA	2610	C	N3-C2-O2	-6.41	117.41	121.90
1	CA	2767	C	C6-N1-C2	-6.41	117.74	120.30
1	AA	743	G	O5'-P-OP1	-6.41	99.93	105.70
1	AA	243	G	N1-C2-N2	-6.41	110.44	116.20
1	AA	976	G	N1-C2-N3	6.41	127.74	123.90
1	AA	1978	U	O5'-P-OP2	-6.41	99.94	105.70
1	AA	2485	U	O5'-P-OP1	-6.41	99.93	105.70
1	AA	2755	C	N3-C2-O2	-6.40	117.42	121.90
1	CA	1683	C	N3-C4-C5	-6.40	119.34	121.90
1	CA	2023	G	N3-C2-N2	-6.40	115.42	119.90
1	AA	1365	G	N7-C8-N9	6.40	116.30	113.10
1	AA	1756	U	C5-C6-N1	-6.40	119.50	122.70
1	AA	2075	G	C4-C5-N7	-6.40	108.24	110.80
1	AA	2504	U	C6-N1-C2	-6.40	117.16	121.00
1	CA	1321	A	N1-C6-N6	6.40	122.44	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	82	G	N9-C4-C5	-6.40	102.84	105.40
1	AA	1270	C	C6-N1-C2	6.40	122.86	120.30
1	AA	857	U	O5'-P-OP1	6.40	118.38	110.70
1	AA	1066	A	N1-C6-N6	6.40	122.44	118.60
1	AA	1683	C	O5'-P-OP2	6.40	118.38	110.70
1	CA	37	C	C2-N3-C4	-6.40	116.70	119.90
1	CA	716	A	N9-C4-C5	6.40	108.36	105.80
1	AA	1262	C	C2-N3-C4	-6.40	116.70	119.90
1	CA	252	G	C4-C5-N7	-6.40	108.24	110.80
1	CA	1968	G	N3-C2-N2	-6.40	115.42	119.90
1	AA	181	C	N1-C2-N3	6.39	123.68	119.20
1	AA	674	G	C2-N3-C4	6.39	115.10	111.90
1	AA	2440	G	N1-C6-O6	-6.39	116.06	119.90
1	AA	2530	A	C4-C5-C6	6.39	120.20	117.00
1	CA	1770	G	O5'-P-OP2	6.39	118.37	110.70
1	CA	1774	C	O5'-P-OP1	6.39	118.37	110.70
1	CA	2708	G	N3-C4-N9	6.39	129.84	126.00
1	AA	188	A	N9-C4-C5	6.39	108.36	105.80
1	AA	1830	G	C4-C5-N7	-6.39	108.24	110.80
1	AA	2285	A	C6-C5-N7	-6.39	127.83	132.30
2	AB	68	C	OP2-P-O3'	6.39	119.26	105.20
34	DA	1158	C	C6-N1-C2	-6.39	117.74	120.30
1	AA	1639	G	O5'-P-OP1	-6.39	99.95	105.70
1	AA	2020	G	N3-C2-N2	6.39	124.37	119.90
1	AA	2432	C	C2-N3-C4	-6.39	116.70	119.90
1	AA	354	A	C8-N9-C4	-6.39	103.24	105.80
1	AA	525	G	N7-C8-N9	-6.39	109.91	113.10
1	AA	767	C	C6-N1-C2	6.39	122.86	120.30
1	AA	2441	G	N3-C2-N2	-6.39	115.43	119.90
1	CA	772	C	C5-C6-N1	-6.39	117.81	121.00
1	AA	749	G	O5'-P-OP2	-6.39	99.95	105.70
1	AA	984	G	N3-C2-N2	6.39	124.37	119.90
1	AA	2014	G	N1-C6-O6	-6.39	116.07	119.90
1	AA	716	G	N9-C4-C5	-6.39	102.85	105.40
1	AA	1012	C	N3-C4-N4	-6.39	113.53	118.00
1	AA	1686	U	OP1-P-OP2	6.39	129.18	119.60
1	AA	1814	A	N9-C4-C5	6.39	108.35	105.80
1	CA	64	A	N1-C6-N6	6.39	122.43	118.60
1	CA	572	A	C5-C6-N6	-6.39	118.59	123.70
34	DA	1081	G	C8-N9-C4	6.39	108.95	106.40
1	AA	531	G	N1-C6-O6	-6.38	116.07	119.90
1	AA	785	G	C4-C5-N7	6.38	113.35	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2697	G	C4-C5-N7	-6.38	108.25	110.80
1	CA	1647	G	O5'-P-OP1	-6.38	99.95	105.70
34	DA	335	C	N3-C2-O2	-6.38	117.43	121.90
34	BA	552	U	O5'-P-OP2	-6.38	99.95	105.70
1	AA	208	G	N3-C4-N9	6.38	129.83	126.00
1	AA	893	C	N1-C2-N3	6.38	123.67	119.20
1	AA	2095	C	OP2-P-O3'	6.38	119.24	105.20
1	AA	2461	U	C5-C4-O4	-6.38	122.07	125.90
1	AA	2484	G	N7-C8-N9	-6.38	109.91	113.10
1	AA	2515	A	N1-C6-N6	6.38	122.43	118.60
1	CA	1798	U	N3-C4-O4	-6.38	114.93	119.40
1	AA	1281	G	N1-C2-N3	6.38	127.73	123.90
1	AA	1394	G	C5-C6-N1	6.38	114.69	111.50
1	AA	1441	A	C5-C6-N1	6.38	120.89	117.70
1	AA	2081	A	OP2-P-O3'	6.38	119.23	105.20
1	AA	2580	C	C5-C6-N1	-6.38	117.81	121.00
1	CA	1835	G	N3-C4-N9	6.38	129.83	126.00
1	CA	2245	U	C5-C4-O4	-6.38	122.07	125.90
34	DA	29	G	O5'-P-OP1	-6.38	99.96	105.70
1	AA	1416	C	C5-C4-N4	-6.38	115.74	120.20
1	AA	2536	G	OP2-P-O3'	6.38	119.23	105.20
1	CA	1565	C	C6-N1-C2	6.38	122.85	120.30
1	AA	905	U	O5'-P-OP2	-6.38	99.96	105.70
1	AA	2782	C	N3-C4-C5	6.38	124.45	121.90
1	AA	1663	C	N3-C4-C5	6.37	124.45	121.90
1	AA	2051	G	O5'-P-OP2	-6.37	99.97	105.70
34	BA	556	C	C6-N1-C2	-6.37	117.75	120.30
1	CA	1792	G	C8-N9-C1'	-6.37	118.72	127.00
1	CA	690	G	O5'-P-OP1	-6.37	99.97	105.70
1	AA	326	C	N3-C4-C5	-6.37	119.35	121.90
34	BA	1417	G	C6-N1-C2	-6.37	121.28	125.10
1	CA	2824	C	C2-N3-C4	-6.37	116.72	119.90
1	AA	592	U	C2-N1-C1'	-6.37	110.06	117.70
1	AA	998	A	N7-C8-N9	6.37	116.98	113.80
1	AA	1822	A	C4-C5-C6	-6.37	113.82	117.00
1	CA	2574	G	N1-C6-O6	6.37	123.72	119.90
34	DA	729	A	C8-N9-C4	-6.37	103.25	105.80
56	DW	6	G	C8-N9-C4	6.37	108.95	106.40
1	AA	461	U	O5'-P-OP2	-6.36	99.97	105.70
1	AA	1387	U	O5'-P-OP1	-6.36	99.97	105.70
1	AA	1857	G	C5-C6-O6	6.36	132.42	128.60
1	CA	2584	U	N3-C2-O2	6.36	126.66	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1036	A	OP2-P-O3'	6.36	119.19	105.20
1	AA	1365	G	C5-C6-O6	6.36	132.42	128.60
1	CA	2610	C	N1-C2-O2	6.36	122.72	118.90
1	AA	2660	C	C5-C6-N1	-6.36	117.82	121.00
1	AA	207	A	C5-C6-N1	-6.36	114.52	117.70
1	AA	458	U	N3-C2-O2	-6.36	117.75	122.20
1	AA	578	U	C2-N3-C4	-6.36	123.19	127.00
1	AA	1252	C	C5-C4-N4	-6.36	115.75	120.20
1	AA	1472	G	N9-C4-C5	-6.36	102.86	105.40
1	AA	2223	C	N3-C2-O2	-6.36	117.45	121.90
1	AA	2657	G	C4-C5-N7	6.36	113.34	110.80
1	CA	776	G	C5-C6-O6	6.36	132.41	128.60
1	AA	133	G	OP2-P-O3'	6.36	119.18	105.20
1	AA	587	C	N1-C2-O2	-6.36	115.09	118.90
1	AA	1334	U	N1-C2-N3	6.36	118.71	114.90
1	AA	2057	G	N1-C6-O6	6.36	123.71	119.90
1	AA	2849	G	N3-C2-N2	6.36	124.35	119.90
1	CA	2713	A	N9-C4-C5	6.36	108.34	105.80
1	AA	884	C	N1-C2-N3	6.35	123.65	119.20
1	AA	1317	G	C5-C6-N1	6.35	114.68	111.50
1	AA	455	A	C5-N7-C8	-6.35	100.72	103.90
1	AA	905	U	C2-N3-C4	-6.35	123.19	127.00
1	CA	735	A	C2-N3-C4	6.35	113.78	110.60
1	CA	2561	A	O4'-C1'-N9	6.35	113.28	108.20
1	AA	599	U	C6-N1-C2	-6.35	117.19	121.00
1	AA	905	U	OP2-P-O3'	6.35	119.17	105.20
1	AA	2264	G	C4-N9-C1'	-6.35	118.25	126.50
4	AD	229	VAL	CB-CA-C	-6.35	99.33	111.40
1	CA	115	C	C6-N1-C2	6.35	122.84	120.30
34	DA	511	C	C6-N1-C2	-6.35	117.76	120.30
1	AA	541	C	N3-C4-C5	6.35	124.44	121.90
1	AA	1349	G	O5'-P-OP1	-6.35	99.99	105.70
1	AA	1474	C	N1-C2-O2	-6.35	115.09	118.90
34	BA	801	U	N3-C4-O4	-6.35	114.96	119.40
34	DA	583	A	C8-N9-C4	6.35	108.34	105.80
1	AA	171	A	OP2-P-O3'	6.35	119.16	105.20
1	AA	1067	A	C6-C5-N7	-6.35	127.86	132.30
1	AA	959	U	N3-C2-O2	6.34	126.64	122.20
1	AA	1834	A	OP2-P-O3'	6.34	119.16	105.20
1	AA	2236	G	C4-C5-N7	6.34	113.34	110.80
13	AP	14	LYS	CD-CE-NZ	-6.34	97.11	111.70
25	A1	40	ARG	NE-CZ-NH1	6.34	123.47	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	540	A	C4-C5-N7	-6.34	107.53	110.70
1	AA	1601	A	C8-N9-C4	-6.34	103.26	105.80
34	DA	758	G	N9-C4-C5	6.34	107.94	105.40
1	AA	336	G	C8-N9-C4	-6.34	103.86	106.40
1	AA	1642	A	N1-C6-N6	-6.34	114.80	118.60
34	BA	218	C	C6-N1-C2	-6.34	117.76	120.30
1	AA	881	C	OP1-P-OP2	6.34	129.11	119.60
1	AA	1244	U	OP2-P-O3'	6.34	119.15	105.20
1	AA	1319	U	N3-C4-O4	-6.34	114.96	119.40
1	AA	1948	U	C5-C4-O4	6.34	129.70	125.90
1	AA	2333	G	O5'-P-OP1	6.34	118.31	110.70
2	AB	54	G	C8-N9-C4	-6.34	103.86	106.40
1	CA	733	G	N9-C4-C5	-6.34	102.86	105.40
1	CA	965	C	O5'-P-OP2	-6.34	99.99	105.70
1	CA	1792	G	N3-C4-N9	6.34	129.80	126.00
1	CA	2708	G	N7-C8-N9	-6.34	109.93	113.10
1	AA	898	U	C5-C6-N1	-6.34	119.53	122.70
1	AA	2703	C	C2-N3-C4	-6.34	116.73	119.90
1	AA	535	C	N3-C4-N4	-6.34	113.56	118.00
1	AA	2537	G	OP2-P-O3'	6.34	119.14	105.20
1	CA	512	G	OP1-P-OP2	6.34	129.10	119.60
1	CA	563	G	N3-C4-C5	6.34	131.77	128.60
1	AA	2501	G	N1-C6-O6	6.33	123.70	119.90
1	AA	2544	G	N3-C2-N2	-6.33	115.47	119.90
1	AA	1300	A	C8-N9-C4	-6.33	103.27	105.80
1	AA	2833	A	N9-C4-C5	-6.33	103.27	105.80
34	DA	7	G	N3-C4-N9	-6.33	122.20	126.00
1	AA	733	G	N9-C4-C5	-6.33	102.87	105.40
34	DA	266	G	P-O3'-C3'	6.33	127.30	119.70
1	AA	1038	C	N1-C2-N3	6.33	123.63	119.20
1	AA	1713	G	C5-C6-O6	-6.33	124.80	128.60
1	CA	90	U	N3-C2-O2	-6.33	117.77	122.20
1	CA	515	A	N9-C4-C5	6.33	108.33	105.80
1	CA	769	G	N1-C6-O6	6.33	123.70	119.90
1	CA	1670	C	O5'-P-OP1	-6.33	100.00	105.70
1	CA	1614	A	O5'-P-OP1	-6.33	100.01	105.70
1	CA	2051	A	O5'-P-OP2	-6.33	100.00	105.70
1	AA	1252	C	N3-C4-N4	6.33	122.43	118.00
1	AA	1393	G	C8-N9-C4	-6.33	103.87	106.40
1	AA	2741	U	N3-C2-O2	-6.33	117.77	122.20
1	CA	127	A	OP1-P-O3'	6.33	119.11	105.20
1	CA	312	G	C4-N9-C1'	6.33	134.72	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1363	C	C5-C6-N1	-6.33	117.84	121.00
34	DA	755	G	N3-C2-N2	-6.33	115.47	119.90
1	AA	59	G	C5-C6-N1	6.32	114.66	111.50
1	AA	1475	G	N9-C4-C5	6.32	107.93	105.40
8	AH	3	ARG	CG-CD-NE	-6.32	98.52	111.80
1	AA	2499	G	C8-N9-C4	6.32	108.93	106.40
1	AA	2448	G	N7-C8-N9	6.32	116.26	113.10
1	CA	2576	G	N7-C8-N9	-6.32	109.94	113.10
1	AA	608	G	N7-C8-N9	-6.32	109.94	113.10
1	AA	2549	U	N3-C2-O2	-6.32	117.78	122.20
34	BA	1514	C	C4-C5-C6	6.32	120.56	117.40
1	AA	1733	C	C2-N1-C1'	6.32	125.75	118.80
34	BA	576	G	C5-C6-O6	-6.32	124.81	128.60
1	AA	826	U	C5-C4-O4	-6.32	122.11	125.90
1	AA	1431	G	C5-C6-O6	-6.32	124.81	128.60
1	AA	2609	G	N3-C4-C5	6.32	131.76	128.60
1	AA	865	G	C5-N7-C8	6.31	107.46	104.30
1	AA	875	U	OP2-P-O3'	6.31	119.09	105.20
1	AA	1011	G	N9-C4-C5	6.31	107.92	105.40
1	AA	1211	U	N3-C4-C5	6.31	118.39	114.60
1	AA	1660	A	O5'-P-OP1	-6.31	100.02	105.70
1	AA	2446	A	C4-C5-C6	6.31	120.16	117.00
1	CA	1615	C	C4-C5-C6	6.31	120.56	117.40
1	AA	1696	G	N3-C4-C5	-6.31	125.44	128.60
1	AA	2888	U	C6-N1-C2	-6.31	117.22	121.00
34	BA	303	A	C8-N9-C4	6.31	108.32	105.80
1	AA	2083	G	N1-C2-N3	6.31	127.69	123.90
1	AA	2452	C	C2-N3-C4	-6.31	116.75	119.90
2	AB	73	A	C4-C5-C6	-6.31	113.85	117.00
1	CA	190	A	O5'-P-OP2	-6.31	100.02	105.70
1	CA	1599	C	C5-C6-N1	-6.31	117.85	121.00
1	AA	114	C	C6-N1-C2	6.30	122.82	120.30
1	AA	1355	G	OP1-P-OP2	-6.30	110.14	119.60
1	AA	1678	A	OP1-P-O3'	6.30	119.07	105.20
1	AA	2227	G	C4-N9-C1'	-6.30	118.30	126.50
34	BA	912	C	C5-C4-N4	-6.30	115.79	120.20
1	AA	1735	U	OP2-P-O3'	6.30	119.07	105.20
1	CA	2549	G	N9-C4-C5	-6.30	102.88	105.40
1	AA	1416	C	N3-C2-O2	6.30	126.31	121.90
1	CA	1559	G	C8-N9-C4	6.30	108.92	106.40
1	CA	1772	G	N9-C1'-C2'	-6.30	105.07	112.00
1	AA	1282	G	N3-C2-N2	6.30	124.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2540	U	N1-C2-O2	-6.30	118.39	122.80
1	CA	98	G	N1-C6-O6	-6.30	116.12	119.90
1	AA	132	C	OP1-P-OP2	-6.30	110.15	119.60
1	AA	2735	G	C5-C6-N1	6.30	114.65	111.50
34	BA	873	A	C2-N3-C4	6.30	113.75	110.60
34	DA	821	G	O5'-P-OP1	-6.30	100.03	105.70
1	AA	257	C	N3-C4-C5	6.29	124.42	121.90
1	AA	490	U	OP1-P-OP2	-6.29	110.16	119.60
1	AA	1690	G	OP1-P-OP2	6.29	129.04	119.60
1	AA	1966	U	N1-C2-N3	6.29	118.68	114.90
1	AA	215	G	O4'-C1'-N9	6.29	113.23	108.20
1	AA	1283	A	C4-C5-N7	-6.29	107.55	110.70
1	AA	2559	U	N1-C2-O2	-6.29	118.39	122.80
1	CA	1260	G	C8-N9-C4	6.29	108.92	106.40
1	AA	1457	C	C6-N1-C2	6.29	122.82	120.30
1	AA	2397	C	OP1-P-OP2	6.29	129.04	119.60
1	AA	2409	G	C6-C5-N7	6.29	134.17	130.40
1	CA	751	A	O5'-P-OP1	-6.29	100.04	105.70
1	AA	1068	G	N3-C2-N2	-6.29	115.50	119.90
1	AA	1998	U	C5-C4-O4	-6.29	122.13	125.90
1	AA	873	U	OP1-P-O3'	-6.29	91.37	105.20
1	AA	1922	A	N9-C4-C5	6.29	108.31	105.80
1	AA	2464	C	C6-N1-C2	-6.29	117.78	120.30
34	BA	36	C	C6-N1-C2	-6.29	117.78	120.30
1	CA	2081	C	O5'-P-OP2	-6.29	100.04	105.70
1	CA	2689	U	P-O3'-C3'	6.29	127.25	119.70
34	DA	325	A	N1-C6-N6	-6.29	114.83	118.60
1	CA	801	G	C8-N9-C4	-6.29	103.89	106.40
1	AA	1249	A	C4-N9-C1'	6.29	137.62	126.30
1	AA	2051	G	C5-C6-O6	-6.29	124.83	128.60
2	AB	81	G	N3-C4-N9	-6.29	122.23	126.00
1	CA	1267	U	C5-C6-N1	6.29	125.84	122.70
1	CA	2364	C	O5'-P-OP1	6.29	118.24	110.70
1	AA	1342	G	N3-C4-C5	-6.28	125.46	128.60
1	CA	2348	U	N3-C4-O4	-6.28	115.00	119.40
34	DA	619	U	C5-C6-N1	-6.28	119.56	122.70
2	AB	34	U	N3-C4-O4	6.28	123.80	119.40
34	BA	769	G	OP1-P-OP2	-6.28	110.18	119.60
1	CA	2507	C	N3-C4-C5	-6.28	119.39	121.90
1	AA	562	C	N3-C4-N4	-6.28	113.60	118.00
1	AA	634	C	C5-C6-N1	-6.28	117.86	121.00
1	AA	1186	U	N1-C2-O2	-6.28	118.40	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1605	C	C5-C6-N1	-6.28	117.86	121.00
1	AA	30	G	C5-C6-O6	6.28	132.37	128.60
1	AA	867	A	OP2-P-O3'	6.28	119.01	105.20
1	AA	2025	G	N9-C4-C5	6.28	107.91	105.40
34	BA	564	C	C6-N1-C2	-6.28	117.79	120.30
1	AA	439	A	C8-N9-C4	-6.28	103.29	105.80
1	AA	871	A	OP2-P-O3'	6.28	119.01	105.20
1	AA	2252	C	N3-C4-C5	6.28	124.41	121.90
34	BA	1425	U	N3-C4-C5	6.28	118.37	114.60
1	CA	989	G	C5-C6-N1	6.28	114.64	111.50
1	AA	2273	C	O5'-P-OP2	-6.28	100.05	105.70
1	AA	2298	A	C4-N9-C1'	6.28	137.59	126.30
2	AB	41	U	N1-C2-N3	6.28	118.67	114.90
1	CA	2013	A	OP1-P-OP2	-6.28	110.19	119.60
34	DA	863	U	C5-C4-O4	6.28	129.67	125.90
1	AA	1400	A	OP2-P-O3'	6.27	119.00	105.20
1	AA	1802	C	C4-C5-C6	6.27	120.54	117.40
1	CA	2079	U	N3-C4-O4	6.27	123.79	119.40
1	CA	2447	G	C8-N9-C1'	6.27	135.16	127.00
1	CA	2604	U	N3-C4-C5	6.27	118.36	114.60
1	AA	2248	C	C6-N1-C2	6.27	122.81	120.30
34	BA	1490	C	N1-C2-O2	6.27	122.66	118.90
1	CA	2519	U	O5'-P-OP1	-6.27	100.05	105.70
1	CA	2782	G	N1-C6-O6	6.27	123.66	119.90
1	CA	2525	G	OP2-P-O3'	6.27	119.00	105.20
1	AA	244	A	N1-C2-N3	6.27	132.43	129.30
1	AA	2748	G	C5-C6-O6	6.27	132.36	128.60
1	AA	2755	C	C6-N1-C2	-6.27	117.79	120.30
34	BA	194	C	C6-N1-C2	-6.27	117.79	120.30
1	CA	1558	A	N3-C4-C5	6.27	131.19	126.80
1	AA	10	G	N1-C6-O6	-6.26	116.14	119.90
1	AA	107	G	C4-C5-N7	-6.26	108.29	110.80
1	AA	416	G	C5-C6-N1	6.26	114.63	111.50
1	AA	1808	U	C5-C6-N1	-6.26	119.57	122.70
1	AA	1894	G	C8-N9-C4	6.26	108.91	106.40
1	AA	2107	C	C5-C6-N1	-6.26	117.87	121.00
1	AA	2279	A	OP1-P-OP2	6.26	129.00	119.60
1	CA	2069	G	N3-C4-N9	-6.26	122.24	126.00
1	AA	2460	A	C5-C6-N6	-6.26	118.69	123.70
1	AA	2495	C	C5-C6-N1	6.26	124.13	121.00
1	CA	1266	G	N7-C8-N9	-6.26	109.97	113.10
1	AA	1299	A	C4-C5-C6	-6.26	113.87	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2092	G	C6-N1-C2	-6.26	121.34	125.10
1	AA	2542	A	N1-C6-N6	6.26	122.36	118.60
55	BV	16	U	O4'-C1'-N1	-6.26	103.19	108.20
1	AA	843	C	N3-C4-C5	6.26	124.40	121.90
1	CA	1559	G	N3-C4-C5	6.26	131.73	128.60
34	DA	576	G	C8-N9-C4	6.26	108.90	106.40
1	AA	1319	U	N3-C4-C5	6.26	118.36	114.60
1	AA	1845	G	C4-C5-N7	6.26	113.30	110.80
1	AA	756	U	OP1-P-O3'	-6.26	91.44	105.20
1	AA	917	A	O5'-P-OP2	-6.26	100.07	105.70
1	AA	1132	A	N1-C6-N6	6.26	122.35	118.60
34	BA	665	A	O5'-P-OP1	-6.26	100.07	105.70
1	AA	2022	G	C2-N3-C4	6.25	115.03	111.90
1	AA	2643	G	C5-C6-O6	6.25	132.35	128.60
1	AA	990	A	C4-N9-C1'	6.25	137.56	126.30
1	AA	1665	G	N7-C8-N9	-6.25	109.97	113.10
1	AA	1806	U	N3-C2-O2	-6.25	117.82	122.20
1	AA	1872	U	N3-C2-O2	-6.25	117.82	122.20
1	AA	2277	U	C2-N3-C4	-6.25	123.25	127.00
2	AB	41	U	N3-C2-O2	-6.25	117.82	122.20
1	AA	1655	A	C6-N1-C2	-6.25	114.85	118.60
1	CA	2272	U	N3-C2-O2	-6.25	117.82	122.20
1	AA	2529	C	O5'-P-OP1	6.25	118.20	110.70
1	CA	1836	C	O5'-P-OP2	-6.25	100.08	105.70
1	AA	36	G	O5'-P-OP2	-6.25	100.08	105.70
1	AA	1276	C	N1-C2-N3	6.25	123.58	119.20
1	AA	2636	G	C5-C6-N1	6.25	114.62	111.50
1	CA	1299	G	N3-C4-N9	-6.25	122.25	126.00
1	CA	2851	A	C2-N3-C4	-6.25	107.48	110.60
34	DA	689	C	C6-N1-C2	-6.25	117.80	120.30
1	AA	998	A	N1-C2-N3	6.25	132.42	129.30
1	CA	25	U	C6-N1-C2	6.25	124.75	121.00
1	AA	704	U	C5-C6-N1	-6.24	119.58	122.70
1	AA	865	G	C5-C6-O6	6.24	132.35	128.60
1	AA	1082	G	C4-C5-N7	-6.24	108.30	110.80
29	A5	17	ASP	CB-CG-OD2	6.24	123.92	118.30
1	AA	315	C	C2-N3-C4	-6.24	116.78	119.90
1	AA	716	G	C4-C5-N7	6.24	113.30	110.80
1	AA	172	C	C5-C6-N1	-6.24	117.88	121.00
1	AA	866	A	C2-N3-C4	6.24	113.72	110.60
1	AA	2299	A	N1-C6-N6	6.24	122.34	118.60
14	AQ	135	ASP	CB-CA-C	-6.24	97.92	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	123	C	N3-C2-O2	6.24	126.27	121.90
1	CA	1294	U	C5-C6-N1	6.24	125.82	122.70
1	AA	995	G	C4-C5-N7	6.24	113.30	110.80
1	AA	1071	G	O5'-P-OP2	6.24	118.19	110.70
1	AA	1282	G	OP2-P-O3'	6.24	118.92	105.20
1	AA	2238	C	C6-N1-C2	6.24	122.80	120.30
1	AA	168	G	N1-C2-N3	6.24	127.64	123.90
34	DA	872	A	O4'-C1'-N9	6.24	113.19	108.20
1	AA	1725	G	C6-C5-N7	-6.24	126.66	130.40
1	CA	1807	G	C5-N7-C8	6.24	107.42	104.30
1	AA	413	G	N7-C8-N9	6.23	116.22	113.10
1	CA	1320	C	N1-C2-O2	-6.23	115.16	118.90
1	AA	2780	C	N3-C4-C5	6.23	124.39	121.90
11	AN	65	LYS	CD-CE-NZ	6.23	126.04	111.70
1	AA	70	A	O5'-P-OP2	-6.23	100.09	105.70
1	AA	1379	C	C6-N1-C2	6.23	122.79	120.30
1	AA	1701	A	N9-C4-C5	-6.23	103.31	105.80
1	AA	2036	A	N1-C6-N6	6.23	122.34	118.60
1	CA	2413	G	O5'-P-OP2	-6.23	100.09	105.70
1	AA	1239	A	C2-N3-C4	6.23	113.72	110.60
1	CA	19	C	N3-C2-O2	-6.23	117.54	121.90
34	DA	886	G	C8-N9-C4	6.23	108.89	106.40
1	AA	823	G	C4-C5-N7	-6.23	108.31	110.80
1	AA	2281	A	C2-N3-C4	-6.23	107.49	110.60
1	CA	144	C	C6-N1-C2	-6.23	117.81	120.30
34	BA	115	G	O5'-P-OP2	-6.23	100.10	105.70
1	AA	521	G	C8-N9-C4	6.22	108.89	106.40
1	AA	1819	C	C5-C6-N1	-6.22	117.89	121.00
1	AA	1046	A	N9-C4-C5	-6.22	103.31	105.80
1	AA	1210	G	C5-C6-O6	6.22	132.33	128.60
1	AA	1238	G	C6-N1-C2	-6.22	121.37	125.10
1	AA	1720	U	C6-N1-C2	6.22	124.73	121.00
1	AA	1925	G	OP2-P-O3'	6.22	118.89	105.20
2	AB	114	C	C6-N1-C2	6.22	122.79	120.30
12	AO	8	LEU	CA-CB-CG	6.22	129.61	115.30
1	AA	397	G	O4'-C1'-N9	-6.22	103.22	108.20
1	AA	912	C	N1-C2-O2	-6.22	115.17	118.90
1	AA	2066	C	C6-N1-C2	-6.22	117.81	120.30
1	CA	2695	C	C2-N1-C1'	-6.22	111.96	118.80
34	DA	365	U	C5-C6-N1	-6.22	119.59	122.70
34	DA	885	G	C8-N9-C4	6.22	108.89	106.40
1	CA	1775	U	N1-C2-O2	-6.22	118.45	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	508	A	O5'-P-OP2	-6.22	100.11	105.70
1	AA	641	G	N7-C8-N9	-6.22	109.99	113.10
1	AA	879	G	N1-C6-O6	-6.22	116.17	119.90
1	AA	1001	G	N3-C4-C5	6.22	131.71	128.60
1	AA	2083	G	N3-C4-C5	-6.22	125.49	128.60
1	AA	2240	G	C5-C6-O6	6.22	132.33	128.60
1	AA	500	G	N7-C8-N9	6.21	116.21	113.10
1	AA	734	C	O5'-P-OP2	-6.21	100.11	105.70
1	AA	2610	A	N9-C4-C5	-6.21	103.31	105.80
1	AA	2896	G	N1-C2-N3	6.21	127.63	123.90
1	AA	310	C	C5-C6-N1	-6.21	117.89	121.00
1	AA	989	G	C5-C6-N1	6.21	114.61	111.50
1	AA	2899	C	N3-C4-C5	6.21	124.39	121.90
1	AA	1015	C	C4-C5-C6	6.21	120.51	117.40
1	AA	1479	U	C5-C6-N1	-6.21	119.59	122.70
1	AA	1922	A	C5-C6-N1	6.21	120.81	117.70
34	BA	219	C	C6-N1-C2	-6.21	117.82	120.30
34	BA	910	C	O5'-P-OP2	-6.21	100.11	105.70
1	CA	2572	A	C4-C5-N7	-6.21	107.59	110.70
1	AA	793	A	N1-C2-N3	6.21	132.41	129.30
1	AA	1003	U	C2-N3-C4	6.21	130.72	127.00
1	CA	915	C	C6-N1-C2	-6.21	117.82	120.30
1	AA	625	G	C8-N9-C4	6.21	108.88	106.40
1	CA	53	A	C5-N7-C8	6.21	107.00	103.90
1	AA	76	C	N3-C4-C5	6.21	124.38	121.90
1	AA	139	A	N3-C4-C5	6.21	131.14	126.80
1	AA	249	G	C4-C5-N7	-6.21	108.32	110.80
1	AA	351	G	N1-C6-O6	-6.20	116.18	119.90
1	AA	802	C	N1-C2-O2	-6.20	115.18	118.90
1	AA	1370	G	OP1-P-O3'	6.20	118.85	105.20
1	AA	1453	C	N3-C4-C5	6.20	124.38	121.90
1	CA	334	C	N3-C2-O2	-6.20	117.56	121.90
1	CA	1795	C	N3-C4-C5	6.20	124.38	121.90
1	AA	426	G	O5'-P-OP1	6.20	118.14	110.70
1	AA	1013	G	N9-C4-C5	6.20	107.88	105.40
1	AA	1362	U	N3-C4-C5	-6.20	110.88	114.60
1	AA	2070	G	N1-C2-N2	-6.20	110.62	116.20
34	BA	365	U	N1-C2-O2	-6.20	118.46	122.80
34	BA	553	A	N1-C6-N6	6.20	122.32	118.60
34	DA	898	G	C8-N9-C4	6.20	108.88	106.40
1	AA	209	G	C8-N9-C4	6.20	108.88	106.40
1	AA	637	U	N3-C4-O4	-6.20	115.06	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1835	G	C8-N9-C1'	-6.20	118.94	127.00
39	DF	79	LEU	CA-CB-CG	6.20	129.56	115.30
1	AA	511	C	N1-C2-N3	6.20	123.54	119.20
1	AA	543	G	O5'-P-OP1	6.20	118.14	110.70
1	CA	2326	C	O5'-P-OP1	-6.20	100.12	105.70
1	AA	2716	C	C6-N1-C2	-6.20	117.82	120.30
1	CA	489	G	OP2-P-O3'	6.20	118.83	105.20
1	AA	637	U	N1-C2-N3	6.19	118.62	114.90
1	AA	2226	C	C6-N1-C2	-6.19	117.82	120.30
1	AA	2560	G	C2-N3-C4	6.19	115.00	111.90
1	AA	2635	G	N1-C2-N2	-6.19	110.62	116.20
1	CA	1367	A	N1-C6-N6	-6.19	114.88	118.60
1	AA	57	G	C6-N1-C2	-6.19	121.39	125.10
1	AA	592	U	N1-C2-O2	-6.19	118.47	122.80
1	AA	2294	G	N1-C2-N3	-6.19	120.19	123.90
34	BA	553	A	O5'-P-OP1	6.19	118.13	110.70
1	AA	498	A	C5-C6-N1	-6.19	114.61	117.70
1	AA	1157	A	C4-C5-N7	6.19	113.80	110.70
1	AA	2470	G	O5'-P-OP2	-6.19	100.13	105.70
1	CA	1957	C	N1-C2-O2	-6.19	115.19	118.90
1	AA	12	U	C2-N1-C1'	6.19	125.13	117.70
1	AA	815	G	N9-C4-C5	6.19	107.88	105.40
1	AA	1659	G	C6-N1-C2	-6.19	121.39	125.10
1	AA	1860	A	C5-N7-C8	6.19	106.99	103.90
1	AA	2585	C	C2-N1-C1'	-6.19	111.99	118.80
1	CA	408	G	N9-C4-C5	-6.19	102.92	105.40
1	CA	1694	C	C6-N1-C1'	-6.19	113.38	120.80
1	AA	147	U	N3-C4-C5	6.19	118.31	114.60
1	AA	564	G	N7-C8-N9	-6.19	110.01	113.10
1	AA	910	A	C2-N3-C4	6.19	113.69	110.60
1	CA	1636	C	C5-C6-N1	-6.19	117.91	121.00
1	AA	717	A	C5-N7-C8	-6.18	100.81	103.90
1	AA	1317	G	C8-N9-C4	6.18	108.87	106.40
1	AA	1507	A	O4'-C1'-N9	6.18	113.15	108.20
1	AA	2270	C	N3-C4-C5	6.18	124.37	121.90
1	AA	2434	A	C4-C5-C6	6.18	120.09	117.00
1	AA	2626	A	C8-N9-C4	-6.18	103.33	105.80
1	CA	989	G	N1-C6-O6	-6.18	116.19	119.90
1	CA	1945	G	OP2-P-O3'	6.18	118.81	105.20
1	CA	2249	U	N3-C4-O4	-6.18	115.07	119.40
1	AA	2544	G	N1-C6-O6	6.18	123.61	119.90
1	CA	2893	G	C4-N9-C1'	6.18	134.54	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1826	C	OP1-P-OP2	6.18	128.87	119.60
1	AA	22	C	C6-N1-C2	6.18	122.77	120.30
1	AA	860	U	N1-C2-N3	6.18	118.61	114.90
1	AA	1056	A	N9-C4-C5	6.18	108.27	105.80
1	CA	1674	G	OP1-P-OP2	6.18	128.87	119.60
34	BA	550	G	N3-C2-N2	-6.18	115.58	119.90
1	CA	193	U	N3-C4-O4	6.18	123.72	119.40
1	CA	2272	U	N1-C2-O2	6.18	127.12	122.80
1	AA	819	C	N1-C2-O2	-6.18	115.19	118.90
1	AA	1788	U	C6-N1-C2	6.18	124.71	121.00
1	AA	2876	U	C2-N3-C4	-6.18	123.29	127.00
1	CA	2033	A	O4'-C1'-N9	6.18	113.14	108.20
1	AA	53	G	N3-C4-C5	-6.17	125.51	128.60
1	AA	176	G	N1-C2-N3	6.17	127.61	123.90
1	CA	2593	U	N3-C4-C5	6.17	118.30	114.60
1	AA	409	G	N3-C2-N2	6.17	124.22	119.90
1	AA	421	A	N9-C4-C5	6.17	108.27	105.80
1	AA	465	G	C4-C5-N7	6.17	113.27	110.80
1	AA	1699	A	N7-C8-N9	6.17	116.89	113.80
1	AA	1894	G	O5'-P-OP2	-6.17	100.14	105.70
6	AF	45	ARG	NE-CZ-NH2	6.17	123.39	120.30
1	CA	769	G	C4-C5-N7	6.17	113.27	110.80
1	CA	1790	C	P-O3'-C3'	6.17	127.11	119.70
1	CA	1796	U	C5-C6-N1	-6.17	119.61	122.70
1	CA	2356	C	N1-C2-O2	-6.17	115.20	118.90
1	AA	829	A	C6-N1-C2	-6.17	114.90	118.60
1	AA	1964	C	N1-C2-O2	-6.17	115.20	118.90
1	AA	2029	C	OP2-P-O3'	6.17	118.77	105.20
1	AA	2162	C	N3-C2-O2	-6.17	117.58	121.90
1	AA	2559	U	C5-C4-O4	-6.17	122.20	125.90
1	CA	600	G	N9-C4-C5	6.17	107.87	105.40
1	CA	778	G	N1-C6-O6	6.17	123.60	119.90
56	BW	73	A	N1-C6-N6	6.17	122.30	118.60
1	AA	210	A	N1-C6-N6	6.17	122.30	118.60
1	AA	575	G	C6-C5-N7	6.17	134.10	130.40
1	AA	1258	A	C8-N9-C4	-6.17	103.33	105.80
1	CA	2722	G	N3-C4-C5	-6.17	125.52	128.60
1	CA	1284	A	C5-N7-C8	-6.16	100.82	103.90
1	AA	2252	C	N3-C2-O2	6.16	126.21	121.90
1	AA	2697	G	N1-C6-O6	-6.16	116.20	119.90
1	CA	1331	A	C8-N9-C4	6.16	108.27	105.80
1	AA	1050	C	C5-C6-N1	-6.16	117.92	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2239	A	N9-C4-C5	6.16	108.26	105.80
1	CA	786	C	OP1-P-OP2	-6.16	110.36	119.60
1	CA	1154	G	C6-C5-N7	-6.16	126.70	130.40
1	AA	129	G	C4-C5-N7	6.16	113.26	110.80
1	AA	195	U	C2-N3-C4	-6.16	123.31	127.00
1	AA	2071	G	C5-N7-C8	-6.16	101.22	104.30
1	CA	2598	A	C8-N9-C4	6.16	108.26	105.80
1	AA	1021	G	C5-C6-O6	6.16	132.29	128.60
1	AA	1814	A	O4'-C1'-N9	-6.16	103.28	108.20
1	AA	2058	C	N3-C4-C5	6.16	124.36	121.90
1	CA	496	G	C2-N3-C4	-6.16	108.82	111.90
1	CA	330	A	C5-C6-N1	-6.15	114.62	117.70
1	AA	49	U	OP2-P-O3'	6.15	118.74	105.20
1	AA	2518	U	OP1-P-O3'	-6.15	91.67	105.20
1	AA	2610	A	N1-C6-N6	6.15	122.29	118.60
1	AA	2703	C	N3-C4-C5	6.15	124.36	121.90
34	BA	1484	C	N3-C2-O2	6.15	126.21	121.90
34	BA	1505	G	C6-C5-N7	6.15	134.09	130.40
1	CA	1648	C	N1-C2-O2	-6.15	115.21	118.90
1	AA	327	U	C6-N1-C2	6.15	124.69	121.00
1	AA	1009	C	C6-N1-C2	-6.15	117.84	120.30
1	AA	1258	A	C5-N7-C8	-6.15	100.83	103.90
1	CA	2242	G	N9-C4-C5	-6.15	102.94	105.40
1	AA	429	A	N1-C6-N6	-6.15	114.91	118.60
1	AA	1365	G	N1-C6-O6	-6.15	116.21	119.90
1	AA	1682	G	C6-N1-C2	-6.15	121.41	125.10
1	AA	1805	C	N1-C2-N3	6.15	123.50	119.20
1	AA	1849	U	C2-N3-C4	-6.15	123.31	127.00
32	A8	13	ARG	NE-CZ-NH2	-6.15	117.23	120.30
1	CA	2253	G	N1-C6-O6	6.15	123.59	119.90
34	DA	518	C	N1-C2-O2	6.15	122.59	118.90
1	CA	2673	G	OP1-P-OP2	6.15	128.82	119.60
1	AA	31	C	C6-N1-C2	-6.14	117.84	120.30
1	AA	39	C	C2-N3-C4	-6.14	116.83	119.90
1	AA	85	C	C5-C4-N4	6.14	124.50	120.20
1	AA	1007	G	C5-C6-O6	-6.14	124.91	128.60
1	AA	1376	C	N3-C2-O2	6.14	126.20	121.90
1	AA	1728	G	C5-N7-C8	-6.14	101.23	104.30
1	AA	2341	G	N1-C6-O6	-6.14	116.21	119.90
2	AB	55	U	C5-C6-N1	-6.14	119.63	122.70
1	CA	1914	C	N3-C2-O2	-6.14	117.60	121.90
1	CA	2318	G	C8-N9-C4	6.14	108.86	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2429	G	N3-C2-N2	-6.14	115.60	119.90
1	AA	237	G	C2-N3-C4	6.14	114.97	111.90
1	AA	1783	C	N3-C2-O2	6.14	126.20	121.90
1	AA	1989	C	OP1-P-O3'	6.14	118.71	105.20
1	AA	2287	C	C5'-C4'-O4'	-6.14	101.73	109.10
1	AA	2802	C	C2-N1-C1'	-6.14	112.04	118.80
1	CA	777	A	N1-C2-N3	6.14	132.37	129.30
1	CA	1350	C	N1-C2-O2	-6.14	115.21	118.90
1	AA	2015	U	C5-C4-O4	6.14	129.59	125.90
1	CA	2499	C	N3-C4-N4	6.14	122.30	118.00
1	AA	369	A	N1-C6-N6	6.14	122.28	118.60
1	AA	465	G	N1-C6-O6	6.14	123.58	119.90
1	AA	2073	A	C4-C5-N7	-6.14	107.63	110.70
1	AA	2266	C	C6-N1-C2	6.14	122.76	120.30
1	CA	141	A	C8-N9-C4	-6.14	103.34	105.80
1	CA	2512	C	C4-C5-C6	6.14	120.47	117.40
34	DA	720	C	C6-N1-C2	-6.14	117.84	120.30
1	AA	972	A	N9-C4-C5	6.14	108.25	105.80
1	AA	2060	G	N3-C2-N2	6.14	124.20	119.90
1	AA	2076	A	OP2-P-O3'	6.14	118.70	105.20
56	BW	17	C	C5-C6-N1	6.14	124.07	121.00
1	CA	2499	C	N1-C2-O2	-6.14	115.22	118.90
2	CB	30	C	C6-N1-C2	-6.14	117.84	120.30
1	AA	1866	G	O5'-P-OP1	6.14	118.06	110.70
34	BA	562	C	N3-C4-C5	6.14	124.36	121.90
1	CA	1430	C	N3-C2-O2	6.14	126.19	121.90
1	CA	1814	G	C5-C6-O6	-6.14	124.92	128.60
1	CA	2443	C	C6-N1-C2	6.14	122.75	120.30
1	CA	2874	C	N3-C4-C5	-6.14	119.44	121.90
1	AA	1656	A	C6-N1-C2	-6.13	114.92	118.60
1	AA	2602	A	N7-C8-N9	-6.13	110.73	113.80
2	AB	102	A	O5'-P-OP2	6.13	118.06	110.70
20	AW	11	ARG	NE-CZ-NH2	-6.13	117.23	120.30
34	BA	1412	C	C2-N3-C4	-6.13	116.83	119.90
34	DA	691	G	N1-C6-O6	6.13	123.58	119.90
34	DA	890	G	N3-C4-N9	6.13	129.68	126.00
34	BA	902	G	O5'-P-OP2	-6.13	100.18	105.70
34	BA	909	A	OP1-P-OP2	6.13	128.80	119.60
1	AA	753	A	C4-C5-N7	6.13	113.77	110.70
1	AA	772	G	C5-N7-C8	6.13	107.36	104.30
1	AA	1265	A	OP2-P-O3'	6.13	118.69	105.20
1	AA	2828	G	N1-C2-N3	6.13	127.58	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	675	C	N3-C4-N4	-6.13	113.71	118.00
1	CA	1683	C	C6-N1-C2	-6.13	117.85	120.30
1	AA	322	G	C5-N7-C8	6.13	107.36	104.30
1	AA	845	G	C6-C5-N7	6.13	134.08	130.40
34	DA	1505	G	N3-C4-N9	-6.13	122.32	126.00
1	AA	460	C	C2-N3-C4	-6.13	116.84	119.90
1	AA	628	C	OP1-P-OP2	-6.13	110.41	119.60
1	AA	1659	G	O5'-P-OP1	6.13	118.05	110.70
1	AA	1795	G	N1-C2-N2	-6.13	110.69	116.20
1	AA	1859	G	C5-C6-O6	6.13	132.28	128.60
1	AA	2602	A	N1-C2-N3	6.13	132.36	129.30
1	CA	277	C	N3-C2-O2	-6.13	117.61	121.90
1	CA	1329	U	OP1-P-O3'	6.13	118.68	105.20
1	AA	150	C	C5-C6-N1	-6.12	117.94	121.00
1	AA	451	G	N7-C8-N9	-6.12	110.04	113.10
1	AA	2796	G	OP2-P-O3'	6.12	118.67	105.20
34	BA	1064	G	C8-N9-C1'	6.12	134.96	127.00
1	AA	543	G	N3-C2-N2	6.12	124.19	119.90
1	AA	845	G	C5-C6-O6	6.12	132.27	128.60
1	AA	345	G	N9-C4-C5	-6.12	102.95	105.40
1	AA	1486	G	C8-N9-C4	6.12	108.85	106.40
1	CA	12	U	N1-C2-O2	6.12	127.08	122.80
1	AA	667	G	O5'-P-OP2	-6.12	100.19	105.70
1	AA	1812	C	C2-N3-C4	-6.12	116.84	119.90
1	AA	2162	C	C6-N1-C2	-6.12	117.85	120.30
1	CA	1314	C	C5-C4-N4	-6.12	115.92	120.20
1	AA	1423	G	N9-C4-C5	6.12	107.85	105.40
1	AA	2277	U	N1-C2-N3	6.12	118.57	114.90
1	AA	2525	G	O5'-P-OP2	-6.12	100.20	105.70
1	CA	205	G	OP1-P-OP2	6.12	128.77	119.60
1	CA	531	C	O5'-P-OP1	-6.12	100.20	105.70
1	CA	1396	U	N1-C2-O2	6.12	127.08	122.80
1	CA	1963	U	N3-C2-O2	-6.12	117.92	122.20
1	CA	2828	C	N3-C4-C5	6.12	124.35	121.90
1	AA	1824	C	OP2-P-O3'	6.11	118.65	105.20
1	AA	2014	G	OP1-P-OP2	-6.11	110.43	119.60
1	CA	2575	C	C4-C5-C6	6.11	120.46	117.40
1	AA	491	G	N1-C2-N3	6.11	127.57	123.90
1	AA	23	G	C5-C6-N1	-6.11	108.44	111.50
1	AA	2295	C	N3-C4-C5	-6.11	119.45	121.90
1	AA	2611	G	N3-C2-N2	6.11	124.18	119.90
1	AA	2696	U	N1-C2-N3	6.11	118.57	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2769	U	OP1-P-O3'	6.11	118.64	105.20
56	BW	76	A	N1-C6-N6	6.11	122.27	118.60
1	CA	312	G	N7-C8-N9	6.11	116.16	113.10
1	CA	481	G	O5'-P-OP2	-6.11	100.20	105.70
1	CA	2683	C	N3-C4-C5	-6.11	119.46	121.90
1	AA	745	C	N1-C2-O2	-6.11	115.23	118.90
1	AA	1660	A	OP1-P-O3'	-6.11	91.76	105.20
1	AA	1817	A	OP2-P-O3'	-6.11	91.76	105.20
1	AA	2096	U	C4-C5-C6	6.11	123.37	119.70
34	BA	893	C	N3-C4-N4	6.11	122.28	118.00
1	AA	357	G	N3-C4-C5	-6.11	125.55	128.60
1	AA	549	U	C5-C6-N1	-6.11	119.65	122.70
1	AA	2312	G	C8-N9-C4	-6.11	103.96	106.40
1	CA	2611	U	N1-C2-N3	6.11	118.56	114.90
1	AA	2654	G	C5-C6-O6	6.11	132.26	128.60
1	AA	2834	C	N3-C4-N4	6.11	122.27	118.00
1	CA	307	G	C2-N3-C4	6.11	114.95	111.90
1	AA	1357	G	C8-N9-C4	-6.10	103.96	106.40
1	AA	83	A	O4'-C1'-N9	6.10	113.08	108.20
1	AA	616	G	C5-N7-C8	6.10	107.35	104.30
1	AA	1440	U	OP1-P-OP2	-6.10	110.45	119.60
1	AA	1770	A	N1-C6-N6	6.10	122.26	118.60
1	AA	2383	G	C4-C5-N7	6.10	113.24	110.80
1	CA	64	A	C5-C6-N6	-6.10	118.82	123.70
1	AA	850	U	C2-N3-C4	-6.10	123.34	127.00
1	AA	1357	G	O5'-P-OP2	-6.10	100.21	105.70
1	AA	1988	A	C5-N7-C8	-6.10	100.85	103.90
1	CA	503	A	O4'-C1'-N9	6.10	113.08	108.20
57	DZ	229	LEU	CA-CB-CG	6.10	129.33	115.30
1	AA	554	A	C5-N7-C8	-6.10	100.85	103.90
1	AA	865	G	O5'-P-OP2	6.10	118.02	110.70
1	AA	1704	C	OP1-P-O3'	-6.10	91.78	105.20
1	AA	2402	U	C2-N3-C4	-6.10	123.34	127.00
1	AA	2867	G	OP1-P-OP2	6.10	128.75	119.60
2	AB	35	U	N3-C2-O2	-6.10	117.93	122.20
34	BA	579	G	N1-C6-O6	6.10	123.56	119.90
56	BW	45	U	O4'-C1'-N1	6.10	113.08	108.20
1	CA	1330	C	N1-C2-O2	-6.10	115.24	118.90
1	AA	597	C	N1-C2-O2	-6.10	115.24	118.90
1	AA	1065	U	C6-N1-C2	6.10	124.66	121.00
1	AA	1082	G	C8-N9-C4	6.10	108.84	106.40
1	AA	1652	G	N1-C6-O6	-6.10	116.24	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2710	U	N1-C2-O2	-6.10	118.53	122.80
1	AA	2867	G	C8-N9-C4	6.10	108.84	106.40
1	CA	1405	U	O5'-P-OP2	-6.10	100.21	105.70
1	CA	2713	A	C8-N9-C4	-6.10	103.36	105.80
1	AA	1628	G	C4-N9-C1'	6.10	134.43	126.50
34	BA	297	G	N1-C6-O6	6.10	123.56	119.90
1	AA	2428	C	OP2-P-O3'	6.09	118.61	105.20
1	AA	2342	G	C5-C6-N1	6.09	114.55	111.50
1	AA	2386	C	N3-C4-C5	6.09	124.34	121.90
1	AA	2566	U	N1-C2-N3	6.09	118.56	114.90
34	BA	23	C	OP1-P-OP2	-6.09	110.46	119.60
1	AA	399	G	O4'-C1'-N9	6.09	113.07	108.20
1	AA	791	G	N3-C2-N2	6.09	124.16	119.90
1	AA	2250	G	N7-C8-N9	6.09	116.14	113.10
1	AA	2372	A	N9-C4-C5	6.09	108.23	105.80
1	AA	2411	G	N1-C2-N2	-6.09	110.72	116.20
1	AA	2884	C	C6-N1-C2	-6.09	117.86	120.30
1	CA	1936	A	N9-C4-C5	-6.09	103.36	105.80
1	CA	2604	U	N1-C2-O2	6.09	127.06	122.80
1	AA	2380	C	C5-C6-N1	-6.09	117.96	121.00
1	AA	86	C	O5'-P-OP2	-6.09	100.22	105.70
1	AA	989	G	C6-N1-C2	-6.09	121.45	125.10
1	AA	1283	A	C4-C5-C6	6.09	120.04	117.00
2	AB	99	G	N1-C2-N2	-6.09	110.72	116.20
1	AA	290	G	N7-C8-N9	-6.08	110.06	113.10
1	AA	721	G	C5-C6-N1	6.08	114.54	111.50
34	BA	1524	C	C6-N1-C2	-6.08	117.87	120.30
1	CA	378	C	C6-N1-C2	6.08	122.73	120.30
1	AA	203	G	O4'-C1'-N9	6.08	113.07	108.20
1	AA	534	C	C6-N1-C2	6.08	122.73	120.30
1	AA	2586	G	C4-C5-C6	-6.08	115.15	118.80
22	AY	21	LYS	CD-CE-NZ	6.08	125.69	111.70
34	DA	800	G	N1-C6-O6	6.08	123.55	119.90
1	AA	82	G	C5-C6-O6	-6.08	124.95	128.60
1	AA	139	A	N3-C4-N9	-6.08	122.53	127.40
1	AA	445	G	C5-C6-O6	6.08	132.25	128.60
1	AA	1448	C	N3-C4-C5	6.08	124.33	121.90
1	AA	2397	C	C4-C5-C6	-6.08	114.36	117.40
1	AA	2551	C	C5-C4-N4	6.08	124.46	120.20
34	BA	543	C	C6-N1-C2	-6.08	117.87	120.30
1	AA	416	G	C8-N9-C4	6.08	108.83	106.40
1	AA	2488	A	C5-N7-C8	-6.08	100.86	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AD	222	ARG	NE-CZ-NH2	-6.08	117.26	120.30
1	CA	154	G	C8-N9-C4	6.08	108.83	106.40
1	AA	1829	U	N3-C4-C5	6.08	118.25	114.60
1	AA	2244	U	C5-C4-O4	6.08	129.55	125.90
1	AA	2739	U	O5'-P-OP1	6.08	117.99	110.70
1	AA	2846	U	O5'-P-OP2	6.08	117.99	110.70
1	CA	19	C	C6-N1-C2	-6.08	117.87	120.30
1	CA	1623	G	N1-C6-O6	6.08	123.55	119.90
56	DW	6	G	N3-C4-C5	6.08	131.64	128.60
1	AA	737	G	N3-C2-N2	6.07	124.15	119.90
1	AA	846	G	C6-N1-C2	-6.07	121.46	125.10
1	AA	847	A	C4-C5-N7	-6.07	107.66	110.70
1	AA	1204	C	N1-C2-N3	6.07	123.45	119.20
1	AA	337	C	C5-C6-N1	-6.07	117.96	121.00
1	AA	2043	C	O5'-P-OP2	-6.07	100.23	105.70
34	BA	1482	G	N1-C6-O6	-6.07	116.26	119.90
1	CA	836	G	C2-N3-C4	6.07	114.94	111.90
1	CA	2394	C	C4-C5-C6	6.07	120.44	117.40
1	AA	907	U	N3-C4-C5	6.07	118.24	114.60
2	AB	107	G	N1-C6-O6	6.07	123.54	119.90
34	BA	504	C	C6-N1-C2	-6.07	117.87	120.30
1	AA	2896	G	O5'-P-OP2	6.07	117.98	110.70
1	CA	998	C	N1-C2-O2	6.07	122.54	118.90
1	CA	1367	A	N7-C8-N9	-6.07	110.77	113.80
1	AA	310	C	C2-N3-C4	-6.07	116.87	119.90
1	AA	1665	G	C8-N9-C4	6.07	108.83	106.40
1	AA	2372	A	C8-N9-C4	-6.07	103.37	105.80
1	CA	202	U	C5-C4-O4	-6.07	122.26	125.90
1	CA	1975	G	C4-C5-N7	6.07	113.23	110.80
1	AA	1028	C	N1-C2-O2	-6.07	115.26	118.90
1	AA	1312	G	C8-N9-C1'	6.07	134.88	127.00
1	AA	1754	G	C8-N9-C1'	-6.07	119.11	127.00
1	AA	2526	U	N3-C4-O4	-6.07	115.15	119.40
2	AB	63	G	O5'-P-OP2	-6.07	100.24	105.70
1	AA	2384	G	C5-C6-O6	-6.06	124.96	128.60
2	AB	38	C	N3-C4-N4	-6.06	113.75	118.00
1	CA	2832	U	C6-N1-C2	6.06	124.64	121.00
1	AA	640	A	N7-C8-N9	6.06	116.83	113.80
1	AA	1244	U	N3-C4-O4	-6.06	115.16	119.40
1	AA	1268	C	C4-C5-C6	6.06	120.43	117.40
1	AA	1373	C	N3-C2-O2	6.06	126.14	121.90
1	AA	2385	G	C5-C6-O6	-6.06	124.96	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2619	G	C5-C6-N1	6.06	114.53	111.50
1	AA	2620	G	C5-C6-N1	6.06	114.53	111.50
56	BW	17	C	C6-N1-C2	-6.06	117.88	120.30
1	CA	203	C	N3-C4-C5	6.06	124.33	121.90
1	AA	1037	C	C5-C4-N4	-6.06	115.96	120.20
1	AA	2054	G	C2-N3-C4	-6.06	108.87	111.90
1	AA	2794	A	C5-C6-N1	6.06	120.73	117.70
1	CA	2487	G	N3-C2-N2	6.06	124.14	119.90
1	AA	606	G	C2-N3-C4	6.06	114.93	111.90
1	AA	2641	A	N9-C1'-C2'	6.06	121.88	114.00
1	CA	2451	A	P-O3'-C3'	-6.06	112.43	119.70
1	AA	873	U	C5-C6-N1	-6.05	119.67	122.70
1	AA	1241	C	OP2-P-O3'	6.05	118.52	105.20
1	AA	2250	G	C2-N3-C4	6.05	114.93	111.90
1	CA	790	C	N3-C4-N4	6.05	122.24	118.00
1	CA	2576	G	C5-C6-O6	-6.05	124.97	128.60
1	AA	2414	C	C6-N1-C2	6.05	122.72	120.30
34	DA	919	A	N1-C6-N6	6.05	122.23	118.60
1	AA	715	G	N9-C4-C5	-6.05	102.98	105.40
1	AA	1303	C	C4-C5-C6	6.05	120.42	117.40
1	AA	1824	C	C2-N3-C4	-6.05	116.87	119.90
1	AA	35	G	C5-N7-C8	6.05	107.33	104.30
1	AA	1244	U	C5-C4-O4	6.05	129.53	125.90
1	AA	1690	G	O5'-P-OP2	-6.05	100.25	105.70
1	AA	1707	C	C2-N3-C4	-6.05	116.88	119.90
2	AB	5	C	N1-C2-O2	-6.05	115.27	118.90
34	BA	733	A	OP1-P-OP2	6.05	128.67	119.60
1	CA	2239	G	N1-C6-O6	-6.05	116.27	119.90
1	AA	50	G	N1-C2-N3	6.05	127.53	123.90
1	AA	2792	U	C6-N1-C2	-6.05	117.37	121.00
1	CA	1654	A	O5'-P-OP1	-6.05	100.26	105.70
1	AA	1188	A	O5'-P-OP1	-6.05	100.26	105.70
1	AA	2020	G	N9-C4-C5	-6.05	102.98	105.40
1	AA	2189	U	C2-N1-C1'	6.05	124.95	117.70
1	AA	2272	C	OP2-P-O3'	6.05	118.50	105.20
34	BA	578	C	N3-C2-O2	-6.05	117.67	121.90
31	C7	33	ARG	NE-CZ-NH1	-6.05	117.28	120.30
34	DA	1183	A	P-O3'-C3'	6.05	126.96	119.70
1	AA	633	G	C5-C6-O6	6.04	132.23	128.60
1	AA	2837	C	N3-C4-C5	6.04	124.32	121.90
1	AA	2571	C	N1-C2-O2	6.04	122.53	118.90
34	BA	581	G	N3-C4-N9	-6.04	122.37	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	528	A	C5-C6-N6	6.04	128.54	123.70
1	AA	489	G	OP1-P-O3'	6.04	118.49	105.20
1	AA	1665	G	C5-C6-O6	-6.04	124.97	128.60
1	CA	60	G	C6-C5-N7	-6.04	126.78	130.40
1	CA	1647	G	C5-C6-O6	-6.04	124.97	128.60
1	CA	2089	U	C4-C5-C6	6.04	123.33	119.70
1	CA	2570	G	N3-C2-N2	-6.04	115.67	119.90
1	AA	374	U	N3-C4-O4	-6.04	115.17	119.40
1	AA	555	G	C6-N1-C2	6.04	128.72	125.10
1	CA	1668	A	O5'-P-OP1	-6.04	100.26	105.70
1	CA	2576	G	C8-N9-C4	6.04	108.82	106.40
1	AA	990	A	N9-C1'-C2'	6.04	121.85	114.00
1	AA	2331	G	N9-C1'-C2'	6.04	121.85	114.00
34	DA	769	G	C5-C6-O6	-6.04	124.98	128.60
1	AA	231	G	C2-N3-C4	-6.04	108.88	111.90
34	BA	1286	A	C8-N9-C4	-6.04	103.39	105.80
1	CA	1329	U	C5-C6-N1	-6.04	119.68	122.70
1	AA	28	A	C6-N1-C2	6.04	122.22	118.60
1	AA	1707	C	N3-C4-C5	6.04	124.31	121.90
1	AA	2351	G	C5-C6-O6	6.04	132.22	128.60
1	AA	2359	C	N3-C2-O2	-6.04	117.67	121.90
1	AA	2461	U	C2-N3-C4	-6.04	123.38	127.00
1	AA	2600	G	C4-C5-N7	6.04	113.21	110.80
1	AA	2646	G	C5-C6-O6	-6.04	124.98	128.60
1	AA	2738	A	C8-N9-C4	6.04	108.21	105.80
1	AA	2753	A	C8-N9-C4	6.04	108.21	105.80
1	CA	191	A	OP1-P-O3'	-6.04	91.92	105.20
1	CA	2698	U	N3-C4-C5	6.04	118.22	114.60
2	CB	70	C	C5-C6-N1	6.04	124.02	121.00
1	AA	1001	G	C4-C5-C6	6.03	122.42	118.80
1	AA	1056	A	C4-C5-N7	-6.03	107.68	110.70
1	AA	1188	A	C8-N9-C1'	6.03	138.56	127.70
1	AA	2019	G	N3-C4-C5	-6.03	125.58	128.60
1	AA	2760	G	C5-C6-O6	-6.03	124.98	128.60
1	AA	2834	C	C5-C4-N4	-6.03	115.98	120.20
1	CA	2444	G	C5-C6-O6	6.03	132.22	128.60
1	AA	1067	A	C8-N9-C1'	6.03	138.56	127.70
1	AA	913	A	C4-N9-C1'	6.03	137.16	126.30
1	AA	1526	G	C4-C5-N7	6.03	113.21	110.80
1	AA	2059	G	N3-C2-N2	6.03	124.12	119.90
1	CA	1377	G	C6-C5-N7	-6.03	126.78	130.40
1	CA	2010	G	O5'-P-OP2	6.03	117.94	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	411	U	N3-C4-C5	6.03	118.22	114.60
1	AA	642	G	OP2-P-O3'	6.03	118.46	105.20
34	BA	1346	A	O4'-C1'-N9	6.03	113.02	108.20
1	CA	607	U	O5'-P-OP1	-6.03	100.27	105.70
1	CA	2486	G	C8-N9-C1'	-6.03	119.16	127.00
1	CA	2755	C	C5-C6-N1	6.03	124.01	121.00
34	DA	328	C	N3-C4-N4	6.03	122.22	118.00
1	AA	97	G	N1-C6-O6	-6.03	116.28	119.90
1	AA	738	C	C2-N3-C4	-6.03	116.89	119.90
1	AA	756	U	OP2-P-O3'	6.03	118.46	105.20
1	AA	841	G	N3-C2-N2	6.03	124.12	119.90
1	AA	894	U	C4-C5-C6	6.03	123.32	119.70
1	AA	2021	C	N3-C4-N4	-6.03	113.78	118.00
1	AA	2650	G	N3-C4-C5	-6.03	125.59	128.60
1	AA	2711	C	C6-N1-C2	6.03	122.71	120.30
34	BA	1201	A	P-O3'-C3'	6.03	126.93	119.70
1	AA	194	G	O5'-P-OP1	-6.02	100.28	105.70
1	AA	2498	G	C5-C6-O6	6.02	132.22	128.60
1	CA	1798	U	C2-N3-C4	-6.02	123.39	127.00
1	CA	1835	G	C4-N9-C1'	6.02	134.33	126.50
1	AA	1064	C	N3-C2-O2	-6.02	117.68	121.90
1	AA	2012	C	N3-C4-N4	6.02	122.22	118.00
1	AA	2070	G	N1-C6-O6	-6.02	116.29	119.90
1	AA	2895	C	N3-C4-C5	-6.02	119.49	121.90
1	AA	352	U	N3-C4-C5	6.02	118.21	114.60
1	CA	2038	G	N3-C2-N2	6.02	124.11	119.90
1	CA	2395	C	C2-N3-C4	-6.02	116.89	119.90
1	AA	1524	A	O5'-P-OP2	-6.02	100.28	105.70
1	AA	1487	G	N3-C2-N2	-6.02	115.69	119.90
56	BW	36	A	N3-C4-N9	-6.02	122.59	127.40
1	CA	1653	G	N7-C8-N9	6.02	116.11	113.10
1	AA	123	G	OP2-P-O3'	6.01	118.43	105.20
1	AA	859	C	C5-C6-N1	-6.01	117.99	121.00
1	AA	342	C	N1-C2-O2	-6.01	115.29	118.90
29	A5	20	ARG	NE-CZ-NH2	-6.01	117.29	120.30
56	BW	36	A	N3-C4-C5	6.01	131.01	126.80
1	AA	719	C	C6-N1-C2	-6.01	117.90	120.30
1	AA	1211	U	N1-C2-N3	6.01	118.51	114.90
1	CA	2607	G	N3-C2-N2	6.01	124.11	119.90
1	AA	585	U	N3-C4-O4	-6.01	115.19	119.40
1	AA	1817	A	N1-C2-N3	-6.01	126.30	129.30
1	CA	2675	A	OP1-P-OP2	-6.01	110.59	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1565	G	C5-C6-O6	6.01	132.20	128.60
1	AA	1725	G	C8-N9-C4	-6.01	104.00	106.40
1	CA	750	A	OP1-P-O3'	6.01	118.42	105.20
37	DD	157	LEU	CA-CB-CG	6.01	129.12	115.30
1	AA	207	A	N1-C6-N6	6.00	122.20	118.60
1	AA	1295	U	C2-N3-C4	-6.00	123.40	127.00
1	AA	1670	G	C5-C6-O6	6.00	132.20	128.60
1	CA	729	G	N3-C2-N2	6.00	124.10	119.90
1	AA	723	A	C6-N1-C2	6.00	122.20	118.60
1	AA	989	G	C4-C5-N7	6.00	113.20	110.80
1	CA	963	U	OP2-P-O3'	6.00	118.40	105.20
34	DA	913	A	P-O3'-C3'	6.00	126.90	119.70
1	AA	437	G	C2-N3-C4	-6.00	108.90	111.90
34	BA	652	U	N3-C2-O2	6.00	126.40	122.20
1	CA	37	C	N1-C2-O2	-6.00	115.30	118.90
1	CA	2071	A	O5'-P-OP1	-6.00	100.30	105.70
1	AA	444	C	O5'-P-OP1	-6.00	100.30	105.70
1	AA	1247	C	C6-N1-C2	6.00	122.70	120.30
1	AA	1984	C	C5-C6-N1	6.00	124.00	121.00
1	AA	2440	G	N3-C2-N2	6.00	124.10	119.90
1	CA	2612	C	O5'-P-OP2	-6.00	100.30	105.70
34	DA	583	A	N9-C4-C5	-6.00	103.40	105.80
39	DF	87	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	AA	120	G	C2-N3-C4	6.00	114.90	111.90
1	AA	2037	A	N9-C4-C5	6.00	108.20	105.80
1	AA	2084	A	C4-C5-N7	-6.00	107.70	110.70
1	AA	2087	C	N3-C4-N4	-6.00	113.80	118.00
1	AA	2510	C	N1-C2-O2	-6.00	115.30	118.90
1	AA	2513	C	C2-N1-C1'	-6.00	112.20	118.80
34	BA	885	G	N1-C6-O6	6.00	123.50	119.90
1	CA	2381	C	O5'-P-OP1	6.00	117.89	110.70
1	AA	2060	G	N1-C2-N2	-5.99	110.81	116.20
1	AA	2484	G	C2-N3-C4	5.99	114.90	111.90
1	CA	2678	C	C5-C6-N1	-5.99	118.00	121.00
1	AA	17	G	N3-C2-N2	5.99	124.09	119.90
1	AA	325	G	N9-C4-C5	-5.99	103.00	105.40
1	AA	1734	G	C5-C6-O6	5.99	132.19	128.60
1	AA	2355	C	OP1-P-OP2	5.99	128.59	119.60
1	CA	2286	A	C5-N7-C8	-5.99	100.90	103.90
1	AA	114	C	N1-C2-O2	-5.99	115.31	118.90
1	AA	357	G	N1-C6-O6	-5.99	116.31	119.90
1	AA	2507	G	C5-C6-N1	-5.99	108.50	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	509	A	C4-C5-C6	5.99	120.00	117.00
1	CA	407	G	OP2-P-O3'	5.99	118.38	105.20
1	AA	886	U	N3-C4-C5	5.99	118.19	114.60
1	AA	998	A	O5'-P-OP2	5.99	117.89	110.70
34	BA	509	A	C6-C5-N7	-5.99	128.11	132.30
1	CA	312	G	O5'-P-OP1	-5.99	100.31	105.70
1	CA	2775	A	N1-C6-N6	5.99	122.19	118.60
34	DA	589	C	C6-N1-C2	-5.99	117.91	120.30
1	AA	233	A	C5-C6-N6	-5.99	118.91	123.70
1	AA	350	G	OP2-P-O3'	5.99	118.37	105.20
34	BA	718	G	C4-C5-N7	5.99	113.19	110.80
1	CA	1957	C	C6-N1-C2	-5.99	117.91	120.30
1	AA	1068	G	N3-C4-C5	5.99	131.59	128.60
1	AA	1274	G	N3-C4-N9	-5.99	122.41	126.00
1	AA	1310	G	O5'-P-OP2	-5.99	100.31	105.70
1	AA	1548	C	N3-C4-N4	5.99	122.19	118.00
34	BA	498	U	O5'-P-OP2	-5.99	100.31	105.70
1	CA	204	A	OP1-P-OP2	5.99	128.58	119.60
1	CA	2500	U	N3-C4-C5	5.99	118.19	114.60
1	AA	2331	G	O4'-C1'-N9	5.98	112.99	108.20
1	AA	2402	U	N3-C4-O4	-5.98	115.21	119.40
1	AA	29	U	N1-C2-N3	5.98	118.49	114.90
1	AA	405	C	C2-N3-C4	-5.98	116.91	119.90
57	BZ	88	VAL	CB-CA-C	-5.98	100.03	111.40
1	CA	1313	U	C6-N1-C2	-5.98	117.41	121.00
1	AA	751	G	C8-N9-C4	-5.98	104.01	106.40
1	AA	1744	G	OP1-P-O3'	5.98	118.36	105.20
1	AA	2778	A	O5'-P-OP1	-5.98	100.32	105.70
1	AA	2855	G	C2-N3-C4	5.98	114.89	111.90
1	CA	763	G	OP1-P-OP2	5.98	128.57	119.60
1	CA	1860	G	N7-C8-N9	5.98	116.09	113.10
1	AA	896	A	C5-C6-N1	-5.98	114.71	117.70
1	AA	1812	C	C6-N1-C1'	-5.98	113.62	120.80
1	AA	187	C	C5-C4-N4	-5.98	116.02	120.20
1	AA	2431	U	N3-C4-O4	-5.98	115.22	119.40
1	AA	2655	G	N1-C2-N3	5.98	127.49	123.90
1	CA	201	C	C2-N3-C4	-5.98	116.91	119.90
1	CA	964	C	N1-C2-O2	5.98	122.49	118.90
1	CA	2070	G	O5'-P-OP1	5.98	117.87	110.70
1	AA	34	C	C6-N1-C2	-5.98	117.91	120.30
1	AA	1847	G	N3-C4-N9	-5.97	122.42	126.00
1	AA	2776	G	OP2-P-O3'	5.97	118.34	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	85	G	N3-C4-N9	5.97	129.59	126.00
1	CA	940	G	N1-C6-O6	-5.97	116.31	119.90
1	CA	2436	G	O5'-P-OP1	-5.97	100.32	105.70
1	AA	785	G	C6-C5-N7	-5.97	126.82	130.40
1	AA	828	A	C5-N7-C8	5.97	106.89	103.90
1	AA	872	C	C2-N3-C4	-5.97	116.91	119.90
1	AA	1370	G	OP1-P-OP2	-5.97	110.64	119.60
1	AA	1477	U	N3-C4-O4	5.97	123.58	119.40
1	AA	1721	G	N1-C2-N3	5.97	127.48	123.90
1	CA	2079	U	C5-C6-N1	-5.97	119.71	122.70
1	CA	2721	A	O5'-P-OP1	-5.97	100.33	105.70
1	AA	991	G	N3-C4-C5	5.97	131.59	128.60
34	BA	1384	C	C5-C6-N1	5.97	123.99	121.00
1	AA	1846	A	OP1-P-OP2	5.97	128.55	119.60
1	AA	2098	U	C4-C5-C6	5.97	123.28	119.70
1	CA	1313	U	C5-C6-N1	5.97	125.69	122.70
1	CA	1675	C	O5'-P-OP2	5.97	117.86	110.70
1	AA	2399	U	OP1-P-O3'	-5.97	92.07	105.20
1	CA	376	C	C6-N1-C2	-5.97	117.91	120.30
34	DA	442	C	C5-C6-N1	5.97	123.98	121.00
1	AA	732	A	C5-N7-C8	-5.97	100.92	103.90
1	AA	980	C	N3-C4-C5	5.97	124.29	121.90
1	AA	1816	A	OP1-P-OP2	-5.97	110.65	119.60
1	AA	1847	G	N3-C2-N2	-5.97	115.72	119.90
1	AA	2370	G	C4-C5-N7	5.97	113.19	110.80
1	AA	2527	C	C6-N1-C2	5.97	122.69	120.30
1	AA	2551	C	N3-C4-N4	-5.97	113.82	118.00
1	AA	184	A	OP1-P-OP2	-5.96	110.65	119.60
1	AA	213	G	C5-C6-O6	5.96	132.18	128.60
1	AA	565	C	O5'-P-OP2	-5.96	100.33	105.70
1	AA	1705	C	C2-N3-C4	-5.96	116.92	119.90
1	AA	1859	G	C5-N7-C8	5.96	107.28	104.30
1	AA	2611	G	C2-N3-C4	5.96	114.88	111.90
1	CA	1397	U	C5-C6-N1	5.96	125.68	122.70
1	AA	854	U	C5-C4-O4	5.96	129.48	125.90
1	AA	1195	G	N9-C4-C5	5.96	107.78	105.40
1	AA	1252	C	C4-C5-C6	5.96	120.38	117.40
34	BA	731	G	O5'-P-OP2	-5.96	100.33	105.70
1	CA	822	U	C4-C5-C6	5.96	123.28	119.70
1	AA	1029	A	OP1-P-OP2	-5.96	110.66	119.60
1	AA	1846	A	C8-N9-C4	-5.96	103.42	105.80
1	AA	2372	A	O5'-P-OP1	5.96	117.85	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2455	C	C4-C5-C6	5.96	120.38	117.40
1	AA	2546	A	C5-C6-N1	5.96	120.68	117.70
1	AA	969	C	N1-C2-O2	-5.96	115.32	118.90
1	CA	2584	U	C6-N1-C2	5.96	124.58	121.00
1	AA	702	A	C8-N9-C4	-5.96	103.42	105.80
1	AA	757	G	C2-N3-C4	-5.96	108.92	111.90
1	AA	1022	C	N3-C4-N4	-5.96	113.83	118.00
1	AA	2528	G	C6-C5-N7	5.96	133.97	130.40
1	CA	2379	G	C6-C5-N7	-5.96	126.83	130.40
1	AA	244	A	C8-N9-C4	-5.96	103.42	105.80
1	AA	2849	G	C8-N9-C4	5.96	108.78	106.40
34	BA	687	A	P-O3'-C3'	5.96	126.85	119.70
1	AA	2015	U	C4-C5-C6	5.96	123.27	119.70
1	AA	2480	G	N3-C4-N9	5.96	129.57	126.00
1	CA	668	G	C4-C5-N7	5.96	113.18	110.80
1	CA	784	A	O5'-P-OP1	-5.96	100.34	105.70
1	CA	2242	G	C8-N9-C4	5.96	108.78	106.40
1	AA	502	G	N3-C4-N9	5.95	129.57	126.00
1	AA	797	A	N7-C8-N9	5.95	116.78	113.80
34	BA	1416	G	C4-C5-N7	-5.95	108.42	110.80
1	AA	126	C	C6-N1-C2	5.95	122.68	120.30
1	AA	989	G	OP1-P-OP2	5.95	128.53	119.60
1	AA	473	A	N1-C6-N6	-5.95	115.03	118.60
1	AA	530	A	C8-N9-C4	-5.95	103.42	105.80
1	AA	718	C	N3-C2-O2	-5.95	117.73	121.90
1	AA	1340	U	C4-C5-C6	5.95	123.27	119.70
1	AA	2102	G	N1-C2-N3	5.95	127.47	123.90
1	AA	2399	U	OP2-P-O3'	5.95	118.29	105.20
1	AA	2726	A	C4-C5-N7	-5.95	107.72	110.70
1	CA	1301	A	OP1-P-OP2	5.95	128.53	119.60
1	CA	1975	G	N9-C4-C5	-5.95	103.02	105.40
1	CA	2073	C	C5-C4-N4	-5.95	116.03	120.20
1	AA	50	G	C6-N1-C2	-5.95	121.53	125.10
1	AA	240	A	C5-N7-C8	5.95	106.87	103.90
34	BA	815	A	C5-N7-C8	5.95	106.88	103.90
1	CA	945	A	N3-C4-N9	-5.95	122.64	127.40
1	CA	1668	A	C5-C6-N6	-5.95	118.94	123.70
1	CA	2586	C	C2-N3-C4	-5.95	116.93	119.90
1	AA	1022	C	OP2-P-O3'	5.95	118.28	105.20
1	AA	199	C	OP2-P-O3'	5.95	118.28	105.20
1	AA	416	G	N7-C8-N9	-5.95	110.13	113.10
1	AA	540	A	N9-C4-C5	5.95	108.18	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1655	A	N1-C6-N6	5.95	122.17	118.60
1	CA	567	A	C5-N7-C8	-5.94	100.93	103.90
1	AA	705	C	C5-C6-N1	-5.94	118.03	121.00
1	AA	1518	A	N1-C2-N3	5.94	132.27	129.30
1	AA	1597	C	C5-C4-N4	-5.94	116.04	120.20
1	AA	2458	G	N9-C4-C5	5.94	107.78	105.40
1	CA	1154	G	C4-N9-C1'	5.94	134.22	126.50
1	CA	2393	A	C8-N9-C4	-5.94	103.42	105.80
34	DA	314	C	N1-C2-O2	-5.94	115.33	118.90
34	DA	1469	G	N3-C2-N2	-5.94	115.74	119.90
1	AA	431	C	N3-C4-C5	5.94	124.28	121.90
1	AA	460	C	OP2-P-O3'	5.94	118.27	105.20
1	AA	777	C	C2-N3-C4	-5.94	116.93	119.90
1	AA	1472	G	C2-N3-C4	5.94	114.87	111.90
1	AA	1724	A	C4-C5-C6	5.94	119.97	117.00
1	AA	2801	C	N1-C2-O2	-5.94	115.34	118.90
34	BA	797	C	O5'-P-OP2	5.94	117.83	110.70
1	CA	1359	A	N1-C2-N3	5.94	132.27	129.30
1	AA	985	G	C2-N3-C4	5.94	114.87	111.90
1	AA	1737	A	N1-C6-N6	-5.94	115.04	118.60
1	AA	2279	A	P-O3'-C3'	5.94	126.83	119.70
1	CA	513	A	C5-N7-C8	-5.94	100.93	103.90
1	AA	1376	C	C6-N1-C2	5.94	122.67	120.30
1	AA	1453	C	C2-N3-C4	-5.94	116.93	119.90
1	AA	1704	C	C6-N1-C2	5.94	122.67	120.30
1	AA	2757	G	C8-N9-C4	5.94	108.78	106.40
1	AA	2881	C	C5-C6-N1	-5.94	118.03	121.00
34	BA	652	U	N1-C2-N3	-5.94	111.34	114.90
1	AA	1003	U	O5'-P-OP2	-5.94	100.36	105.70
1	AA	1449	C	C5-C6-N1	-5.94	118.03	121.00
1	AA	1317	G	C6-N1-C2	-5.93	121.54	125.10
1	AA	2219	U	C5-C6-N1	-5.93	119.73	122.70
1	AA	2355	C	N1-C2-N3	5.93	123.35	119.20
2	AB	81	G	C2-N3-C4	-5.93	108.93	111.90
1	CA	2567	G	C8-N9-C4	5.93	108.77	106.40
1	AA	872	C	OP1-P-OP2	-5.93	110.70	119.60
1	CA	1615	C	N3-C4-C5	-5.93	119.53	121.90
34	DA	1406	U	C5-C6-N1	-5.93	119.73	122.70
1	AA	478	G	N7-C8-N9	-5.93	110.14	113.10
1	AA	838	C	C2-N1-C1'	-5.93	112.28	118.80
1	CA	1846	G	C4-C5-N7	-5.93	108.43	110.80
1	AA	491	G	C8-N9-C4	-5.93	104.03	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1988	A	N3-C4-N9	-5.93	122.66	127.40
1	CA	214	G	N7-C8-N9	-5.93	110.14	113.10
1	CA	1785	A	N1-C2-N3	5.93	132.26	129.30
1	CA	1946	U	O5'-P-OP2	-5.93	100.36	105.70
1	CA	2486	G	N3-C4-N9	5.93	129.56	126.00
34	DA	1464	G	O5'-P-OP1	-5.93	100.36	105.70
1	CA	2330	G	C6-C5-N7	-5.93	126.84	130.40
1	AA	2342	G	C5-C6-O6	-5.93	125.05	128.60
1	AA	2561	G	C5-N7-C8	5.93	107.26	104.30
34	BA	1067	A	P-O3'-C3'	5.93	126.81	119.70
1	CA	2509	G	N1-C6-O6	5.93	123.45	119.90
1	AA	1472	G	N3-C4-N9	5.92	129.56	126.00
1	AA	1725	G	N1-C2-N3	5.92	127.45	123.90
1	AA	2255	U	C4-C5-C6	5.92	123.25	119.70
1	AA	2296	C	C6-N1-C2	-5.92	117.93	120.30
1	AA	2403	G	C2-N3-C4	-5.92	108.94	111.90
1	AA	2448	G	N3-C4-N9	-5.92	122.44	126.00
2	AB	7	G	N3-C4-C5	5.92	131.56	128.60
34	BA	1529	G	C8-N9-C4	-5.92	104.03	106.40
1	CA	690	G	N3-C4-C5	-5.92	125.64	128.60
1	CA	1997	G	OP2-P-O3'	5.92	118.23	105.20
1	CA	1985	G	O5'-P-OP2	-5.92	100.37	105.70
1	AA	208	G	C5-C6-N1	5.92	114.46	111.50
1	AA	208	G	N3-C2-N2	5.92	124.05	119.90
1	AA	1248	G	N3-C4-N9	5.92	129.55	126.00
1	AA	1733	C	O5'-P-OP2	5.92	117.81	110.70
1	AA	1802	C	C5-C6-N1	-5.92	118.04	121.00
1	CA	1801	G	C8-N9-C4	5.92	108.77	106.40
1	CA	2494	G	C8-N9-C4	5.92	108.77	106.40
1	AA	1431	G	N3-C2-N2	-5.92	115.76	119.90
1	AA	1653	C	N3-C4-C5	-5.92	119.53	121.90
1	AA	2036	A	C5-N7-C8	5.92	106.86	103.90
1	AA	2046	G	C5-N7-C8	5.92	107.26	104.30
4	AD	54	ARG	NE-CZ-NH2	-5.92	117.34	120.30
1	AA	138	G	C8-N9-C4	-5.92	104.03	106.40
1	AA	837	C	N1-C2-O2	5.92	122.45	118.90
1	AA	1008	U	O5'-P-OP2	-5.92	100.37	105.70
1	AA	1270	C	C4-C5-C6	5.92	120.36	117.40
1	AA	1334	U	C5-C6-N1	-5.92	119.74	122.70
1	AA	1342	G	C6-C5-N7	5.92	133.95	130.40
1	AA	2073	A	N1-C6-N6	-5.92	115.05	118.60
1	CA	1770	G	N3-C2-N2	5.92	124.04	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	78	A	N1-C2-N3	5.92	132.26	129.30
34	DA	283	C	N1-C2-O2	5.92	122.45	118.90
1	AA	1514	C	OP1-P-OP2	-5.92	110.72	119.60
1	AA	182	U	OP2-P-O3'	5.92	118.21	105.20
1	CA	474	G	C4-C5-N7	-5.92	108.43	110.80
1	CA	2295	C	N1-C2-O2	5.92	122.45	118.90
1	AA	502	G	N3-C2-N2	5.91	124.04	119.90
1	CA	1253	A	O4'-C1'-N9	-5.91	103.47	108.20
34	DA	577	G	C2-N3-C4	-5.91	108.94	111.90
1	AA	985	G	OP2-P-O3'	5.91	118.21	105.20
16	CS	67	ARG	NE-CZ-NH2	-5.91	117.34	120.30
1	AA	2667	G	O5'-P-OP2	-5.91	100.38	105.70
1	AA	989	G	O5'-P-OP2	-5.91	100.38	105.70
1	AA	2243	C	C4-C5-C6	5.91	120.35	117.40
1	CA	801	G	N9-C4-C5	5.91	107.76	105.40
1	AA	1518	A	C8-N9-C4	-5.91	103.44	105.80
1	AA	1787	G	N1-C2-N2	-5.91	110.88	116.20
1	AA	582	G	N7-C8-N9	5.91	116.05	113.10
1	AA	1003	U	OP1-P-OP2	5.91	128.46	119.60
1	AA	2599	A	C2-N3-C4	-5.91	107.65	110.60
8	AH	41	MET	CG-SD-CE	-5.91	90.75	100.20
1	AA	2076	A	C5-N7-C8	5.90	106.85	103.90
1	AA	211	A	O5'-P-OP1	-5.90	100.39	105.70
1	AA	829	A	C5-C6-N1	5.90	120.65	117.70
1	AA	1316	C	OP1-P-OP2	-5.90	110.75	119.60
1	AA	2580	C	C4-C5-C6	5.90	120.35	117.40
34	BA	894	G	C8-N9-C4	-5.90	104.04	106.40
1	CA	586	A	C8-N9-C4	5.90	108.16	105.80
1	CA	1376	C	N3-C4-N4	5.90	122.13	118.00
1	CA	2465	C	N3-C2-O2	-5.90	117.77	121.90
1	AA	1664	A	N1-C6-N6	-5.90	115.06	118.60
1	AA	1684	A	N3-C4-C5	5.90	130.93	126.80
1	AA	2068	G	N7-C8-N9	-5.90	110.15	113.10
1	AA	2600	G	N3-C4-C5	5.90	131.55	128.60
1	AA	2722	C	O5'-P-OP1	-5.90	100.39	105.70
34	BA	672	U	C5-C4-O4	5.90	129.44	125.90
1	CA	562	U	C5-C4-O4	5.90	129.44	125.90
1	CA	790	C	N3-C2-O2	5.90	126.03	121.90
34	DA	509	A	N7-C8-N9	5.90	116.75	113.80
1	AA	981	C	N3-C4-N4	5.90	122.13	118.00
1	AA	499	G	C5-C6-O6	5.90	132.14	128.60
1	AA	555	G	N9-C4-C5	5.90	107.76	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1287	A	C8-N9-C4	5.90	108.16	105.80
1	AA	2480	G	N3-C4-C5	-5.90	125.65	128.60
1	AA	2684	G	N3-C2-N2	-5.90	115.77	119.90
1	AA	2697	G	C6-C5-N7	5.90	133.94	130.40
34	BA	1069	C	C6-N1-C2	-5.90	117.94	120.30
34	DA	1079	G	C8-N9-C4	-5.90	104.04	106.40
1	AA	461	U	N1-C2-O2	-5.90	118.67	122.80
1	AA	96	C	N3-C2-O2	-5.89	117.77	121.90
1	AA	1852	A	N9-C4-C5	5.89	108.16	105.80
1	AA	2505	U	C4-C5-C6	5.89	123.24	119.70
2	AB	55	U	N1-C2-O2	-5.89	118.67	122.80
34	BA	766	A	C5-C6-N6	-5.89	118.98	123.70
1	CA	702	G	N1-C6-O6	-5.89	116.36	119.90
1	CA	2386	C	N1-C2-O2	-5.89	115.36	118.90
34	DA	275	G	N1-C6-O6	5.89	123.44	119.90
1	AA	21	A	N1-C6-N6	5.89	122.14	118.60
1	AA	341	G	C5-C6-O6	5.89	132.13	128.60
1	AA	557	A	C6-N1-C2	-5.89	115.06	118.60
1	AA	2852	G	OP1-P-O3'	5.89	118.17	105.20
1	CA	125	G	C4-C5-N7	5.89	113.16	110.80
1	CA	1423	G	C8-N9-C4	5.89	108.76	106.40
1	AA	585	U	O4'-C1'-N1	-5.89	103.49	108.20
1	CA	393	C	N1-C2-O2	-5.89	115.37	118.90
1	AA	60	G	C2-N3-C4	-5.89	108.95	111.90
1	AA	980	C	N1-C2-O2	-5.89	115.37	118.90
1	AA	1188	A	C5-C6-N6	5.89	128.41	123.70
1	AA	2655	G	C5-C6-N1	-5.89	108.56	111.50
1	AA	2745	G	N1-C2-N3	5.89	127.43	123.90
2	AB	65	C	O5'-P-OP2	5.89	117.77	110.70
1	CA	2224	G	N1-C6-O6	5.89	123.43	119.90
1	AA	178	G	OP1-P-OP2	5.89	128.43	119.60
1	AA	705	C	C2-N3-C4	-5.89	116.96	119.90
1	AA	2437	A	N1-C6-N6	5.89	122.13	118.60
1	AA	176	G	N7-C8-N9	5.89	116.04	113.10
1	AA	471	C	N3-C2-O2	5.89	126.02	121.90
1	AA	819	C	N3-C4-N4	5.89	122.12	118.00
1	AA	1858	C	N3-C2-O2	-5.89	117.78	121.90
1	CA	514	A	C5-C6-N1	-5.89	114.76	117.70
1	AA	578	U	N3-C4-C5	5.88	118.13	114.60
1	AA	721	G	N3-C2-N2	5.88	124.02	119.90
1	AA	1856	A	N1-C6-N6	-5.88	115.07	118.60
1	AA	2249	G	N1-C6-O6	-5.88	116.37	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2838	C	C5-C4-N4	-5.88	116.08	120.20
1	AA	1847	G	C4-C5-N7	-5.88	108.45	110.80
1	AA	2466	G	N1-C6-O6	-5.88	116.37	119.90
1	AA	2855	G	N3-C4-N9	5.88	129.53	126.00
34	BA	926	G	OP1-P-OP2	5.88	128.43	119.60
1	AA	1505	C	C4-C5-C6	5.88	120.34	117.40
1	AA	1720	U	OP1-P-OP2	-5.88	110.78	119.60
1	AA	1849	U	C6-N1-C2	5.88	124.53	121.00
1	AA	1922	A	C6-N1-C2	-5.88	115.07	118.60
1	AA	2361	G	C5-N7-C8	5.88	107.24	104.30
1	AA	2366	G	C4-N9-C1'	5.88	134.15	126.50
1	AA	2553	A	C2-N3-C4	-5.88	107.66	110.60
1	AA	2562	G	C4-C5-C6	5.88	122.33	118.80
34	BA	876	G	C5-C6-O6	5.88	132.13	128.60
1	AA	1858	C	N3-C4-N4	-5.88	113.88	118.00
1	AA	2570	C	OP1-P-O3'	5.88	118.14	105.20
1	AA	183	G	OP2-P-O3'	5.88	118.13	105.20
1	AA	343	C	N1-C2-O2	5.88	122.43	118.90
1	AA	786	G	OP2-P-O3'	-5.88	92.27	105.20
1	AA	1156	G	P-O3'-C3'	-5.88	112.65	119.70
1	AA	2658	C	C5-C6-N1	5.88	123.94	121.00
1	AA	2767	U	OP2-P-O3'	5.88	118.13	105.20
1	AA	2776	G	C4-C5-N7	5.88	113.15	110.80
1	CA	324	A	C2-N3-C4	-5.88	107.66	110.60
34	DA	777	A	O5'-P-OP1	5.88	117.75	110.70
34	DA	1483	A	C8-N9-C4	5.88	108.15	105.80
1	AA	355	A	OP1-P-OP2	5.88	128.41	119.60
1	AA	1046	A	C2-N3-C4	-5.88	107.66	110.60
1	AA	1423	G	C6-N1-C2	-5.88	121.57	125.10
1	CA	784	A	O4'-C1'-N9	5.88	112.90	108.20
1	CA	2041	U	C5-C6-N1	-5.88	119.76	122.70
1	CA	2598	A	OP1-P-OP2	-5.88	110.78	119.60
1	AA	989	G	N9-C4-C5	-5.88	103.05	105.40
1	AA	2468	C	N1-C2-O2	5.88	122.42	118.90
34	BA	1431	C	N1-C2-O2	-5.88	115.38	118.90
1	AA	832	G	N3-C2-N2	5.87	124.01	119.90
1	AA	2096	U	N1-C2-N3	5.87	118.42	114.90
34	BA	778	G	C5-C6-O6	5.87	132.12	128.60
1	CA	513	A	N1-C6-N6	5.87	122.12	118.60
1	CA	2784	C	O5'-P-OP2	-5.87	100.41	105.70
34	DA	699	C	C6-N1-C2	-5.87	117.95	120.30
1	AA	1030	A	P-O3'-C3'	5.87	126.75	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1278	G	O5'-P-OP2	5.87	117.75	110.70
1	AA	2372	A	O5'-P-OP2	-5.87	100.42	105.70
1	AA	2822	G	N9-C4-C5	5.87	107.75	105.40
1	CA	1362	C	C5-C6-N1	5.87	123.94	121.00
1	CA	2580	U	C6-N1-C1'	-5.87	112.98	121.20
34	DA	716	A	C8-N9-C4	-5.87	103.45	105.80
1	AA	585	U	N3-C2-O2	-5.87	118.09	122.20
1	AA	1385	G	O5'-P-OP2	5.87	117.74	110.70
1	AA	2660	C	C5-C4-N4	-5.87	116.09	120.20
1	AA	40	C	N3-C2-O2	5.87	126.01	121.90
1	AA	347	G	C8-N9-C4	-5.87	104.05	106.40
1	AA	364	A	N1-C2-N3	-5.87	126.36	129.30
1	AA	813	C	OP2-P-O3'	5.87	118.11	105.20
1	AA	879	G	C4-C5-N7	-5.87	108.45	110.80
1	AA	981	C	N3-C2-O2	5.87	126.01	121.90
1	AA	2112	G	C5-C6-N1	5.87	114.43	111.50
1	AA	2227	G	C8-N9-C1'	5.87	134.63	127.00
1	AA	2520	G	C5-C6-N1	5.87	114.43	111.50
34	DA	590	C	C6-N1-C2	-5.87	117.95	120.30
1	AA	798	A	O5'-P-OP1	-5.87	100.42	105.70
2	AB	98	G	N1-C6-O6	5.87	123.42	119.90
34	BA	1030(B)	C	N3-C2-O2	-5.87	117.79	121.90
1	CA	2044	C	O5'-P-OP2	-5.87	100.42	105.70
1	AA	290	G	N9-C4-C5	-5.87	103.05	105.40
1	AA	2097	U	C5-C6-N1	-5.87	119.77	122.70
1	AA	2236	G	OP1-P-OP2	-5.87	110.80	119.60
1	AA	2715	C	C6-N1-C2	-5.87	117.95	120.30
34	BA	731	G	N3-C2-N2	-5.87	115.80	119.90
1	CA	1367	A	C5-C6-N6	5.87	128.39	123.70
1	AA	369	A	C4-C5-N7	5.86	113.63	110.70
1	AA	829	A	OP1-P-OP2	5.86	128.40	119.60
1	AA	975	U	N3-C4-C5	-5.86	111.08	114.60
1	AA	1249	A	N9-C1'-C2'	5.86	121.62	114.00
1	AA	2416	C	C6-N1-C2	5.86	122.65	120.30
1	CA	1610	A	O5'-P-OP1	-5.86	100.42	105.70
1	AA	957	A	C5-C6-N1	5.86	120.63	117.70
1	AA	1801	G	OP1-P-OP2	5.86	128.39	119.60
1	AA	2053	A	N7-C8-N9	5.86	116.73	113.80
1	AA	2393	C	N1-C2-O2	-5.86	115.38	118.90
1	AA	2593	G	O4'-C1'-N9	5.86	112.89	108.20
2	AB	100	A	C5-N7-C8	-5.86	100.97	103.90
34	BA	20	U	OP2-P-O3'	5.86	118.09	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2035	G	C8-N9-C4	5.86	108.74	106.40
1	AA	805	C	N3-C4-C5	5.86	124.24	121.90
34	BA	523	A	C5-C6-N6	5.86	128.39	123.70
1	CA	676	A	C5-C6-N1	-5.86	114.77	117.70
1	CA	814	C	N1-C2-O2	-5.86	115.39	118.90
1	AA	2552	C	C6-N1-C2	5.86	122.64	120.30
1	AA	2572	C	N1-C2-N3	5.86	123.30	119.20
1	AA	2591	C	N1-C2-O2	-5.86	115.39	118.90
1	CA	702	G	N7-C8-N9	-5.86	110.17	113.10
1	AA	1297	C	C6-N1-C2	5.85	122.64	120.30
1	CA	1604	C	C5-C4-N4	-5.85	116.10	120.20
1	AA	32	C	N3-C4-N4	-5.85	113.90	118.00
1	AA	748	G	C8-N9-C4	5.85	108.74	106.40
1	AA	981	C	C5-C4-N4	-5.85	116.10	120.20
1	AA	1232	G	N3-C2-N2	5.85	124.00	119.90
1	AA	1235	G	C5-N7-C8	5.85	107.23	104.30
1	AA	1296	G	N3-C2-N2	5.85	124.00	119.90
1	AA	2279	A	N1-C2-N3	-5.85	126.37	129.30
1	AA	2335	G	C6-C5-N7	-5.85	126.89	130.40
2	AB	83	G	OP2-P-O3'	5.85	118.07	105.20
1	CA	1898	U	C5-C6-N1	-5.85	119.77	122.70
1	AA	2579	G	C5-C6-O6	5.85	132.11	128.60
34	BA	442	C	C5-C6-N1	5.85	123.93	121.00
1	CA	450	G	C8-N9-C4	-5.85	104.06	106.40
1	CA	1615	C	C6-N1-C2	-5.85	117.96	120.30
1	AA	917	A	N1-C6-N6	-5.85	115.09	118.60
1	AA	969	C	N3-C2-O2	5.85	126.00	121.90
1	AA	1155	C	C2-N3-C4	5.85	122.82	119.90
1	AA	2222	C	C6-N1-C2	5.85	122.64	120.30
1	AA	2303	U	C5-C4-O4	5.85	129.41	125.90
1	AA	2546	A	N1-C6-N6	5.85	122.11	118.60
1	AA	2556	G	N1-C2-N2	5.85	121.46	116.20
1	CA	2500	U	C2-N3-C4	-5.85	123.49	127.00
1	AA	199	C	C2-N1-C1'	-5.85	112.37	118.80
1	AA	778	C	N1-C2-O2	-5.85	115.39	118.90
1	AA	1472	G	N1-C6-O6	5.85	123.41	119.90
1	AA	1807	G	C5-C6-O6	-5.85	125.09	128.60
1	AA	722	A	C5-N7-C8	-5.84	100.98	103.90
1	CA	2229	C	C5-C6-N1	5.84	123.92	121.00
1	CA	2544	G	C4-C5-N7	5.84	113.14	110.80
34	DA	758	G	O5'-P-OP2	-5.84	100.44	105.70
1	AA	542	C	C2-N3-C4	-5.84	116.98	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1985	U	C2-N3-C4	5.84	130.51	127.00
1	AA	190	C	C2-N3-C4	-5.84	116.98	119.90
1	AA	1301	U	C6-N1-C2	-5.84	117.50	121.00
1	AA	1369	U	OP1-P-O3'	5.84	118.05	105.20
1	AA	1823	G	N7-C8-N9	-5.84	110.18	113.10
57	DZ	-20	LEU	CA-CB-CG	5.84	128.74	115.30
1	AA	1404	G	C5-C6-O6	5.84	132.10	128.60
1	AA	2347	A	N1-C6-N6	-5.84	115.10	118.60
1	AA	2749	G	C5-N7-C8	5.84	107.22	104.30
1	AA	245	A	N7-C8-N9	-5.84	110.88	113.80
1	AA	985	G	O5'-P-OP2	-5.84	100.45	105.70
1	AA	2712	C	C6-N1-C2	5.84	122.64	120.30
1	CA	587	C	C5-C6-N1	-5.84	118.08	121.00
1	CA	2497	A	C4-C5-C6	5.84	119.92	117.00
1	AA	122	G	C5-C6-O6	-5.84	125.10	128.60
1	AA	1083	G	O5'-P-OP1	5.84	117.70	110.70
1	AA	1229	G	C4-C5-N7	5.84	113.13	110.80
1	AA	2529	C	N3-C4-C5	5.84	124.23	121.90
34	DA	819	A	N1-C6-N6	5.84	122.10	118.60
1	AA	1539	C	C4-C5-C6	5.83	120.32	117.40
1	AA	2301	G	C4-C5-C6	-5.83	115.30	118.80
1	AA	40	C	C6-N1-C2	5.83	122.63	120.30
1	AA	643	C	N3-C2-O2	5.83	125.98	121.90
1	AA	1712	A	O5'-P-OP1	-5.83	100.45	105.70
1	AA	2073	A	C6-N1-C2	-5.83	115.10	118.60
1	AA	2458	G	C8-N9-C4	-5.83	104.07	106.40
1	AA	2846	U	C5-C4-O4	-5.83	122.40	125.90
34	BA	16	A	C5-N7-C8	5.83	106.82	103.90
34	BA	322	C	C6-N1-C2	5.83	122.63	120.30
34	BA	1397	C	C2-N3-C4	5.83	122.82	119.90
1	CA	1283	G	O5'-P-OP2	-5.83	100.45	105.70
1	CA	1314	C	C6-N1-C1'	-5.83	113.80	120.80
1	AA	372	G	C4-C5-N7	-5.83	108.47	110.80
1	AA	1007	G	C6-N1-C2	-5.83	121.60	125.10
1	AA	2448	G	N9-C4-C5	5.83	107.73	105.40
1	AA	1056	A	C2-N3-C4	5.83	113.52	110.60
1	AA	1249	A	C6-N1-C2	-5.83	115.10	118.60
1	AA	1322	A	N9-C4-C5	-5.83	103.47	105.80
1	AA	1830	G	N1-C6-O6	-5.83	116.40	119.90
1	AA	2261	U	C2-N1-C1'	5.83	124.69	117.70
1	AA	2554	A	N1-C2-N3	-5.83	126.39	129.30
1	CA	1190	G	N1-C6-O6	-5.83	116.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2422	A	C8-N9-C4	-5.83	103.47	105.80
1	CA	474	G	N9-C4-C5	5.83	107.73	105.40
1	AA	26	G	N3-C4-N9	5.83	129.50	126.00
1	AA	813	C	C6-N1-C2	5.83	122.63	120.30
1	AA	1652	G	N3-C2-N2	5.83	123.98	119.90
1	AA	2524	C	OP1-P-OP2	-5.83	110.86	119.60
1	AA	2691	A	C8-N9-C4	-5.83	103.47	105.80
1	CA	2385	C	N3-C4-C5	-5.83	119.57	121.90
1	AA	838	C	C6-N1-C2	5.82	122.63	120.30
1	AA	1076	G	N1-C6-O6	5.82	123.39	119.90
1	AA	2047	C	N3-C4-N4	-5.82	113.92	118.00
1	AA	2533	C	C6-N1-C2	5.82	122.63	120.30
1	AA	2720	G	C5-C6-N1	5.82	114.41	111.50
34	BA	902	G	C8-N9-C4	5.82	108.73	106.40
56	BW	45	U	N3-C2-O2	-5.82	118.12	122.20
1	CA	964	C	O5'-P-OP2	-5.82	100.46	105.70
1	CA	2381	C	O5'-P-OP2	-5.82	100.46	105.70
1	CA	2432	A	OP1-P-OP2	-5.82	110.86	119.60
1	AA	1013	G	N3-C2-N2	5.82	123.98	119.90
1	AA	1235	G	C4-C5-N7	-5.82	108.47	110.80
1	AA	2509	A	C6-N1-C2	-5.82	115.11	118.60
1	CA	2360	A	N1-C2-N3	5.82	132.21	129.30
1	CA	2540	C	C2-N3-C4	-5.82	116.99	119.90
1	AA	136	G	C5-C6-N1	5.82	114.41	111.50
1	AA	675	C	C5-C6-N1	-5.82	118.09	121.00
1	AA	745	C	C4-C5-C6	5.82	120.31	117.40
1	AA	1015	C	N3-C4-N4	5.82	122.07	118.00
1	AA	2105	G	N3-C4-N9	-5.82	122.51	126.00
1	AA	98	U	N3-C2-O2	-5.82	118.13	122.20
1	AA	114	C	OP2-P-O3'	5.82	118.00	105.20
1	AA	537	G	OP2-P-O3'	5.82	118.00	105.20
1	AA	1455	C	C6-N1-C2	-5.82	117.97	120.30
1	CA	137	C	C6-N1-C2	-5.82	117.97	120.30
1	CA	848	G	N3-C4-C5	-5.82	125.69	128.60
1	CA	2805	G	C8-N9-C1'	5.82	134.56	127.00
1	AA	356	A	C5-N7-C8	-5.82	100.99	103.90
1	AA	636	G	O5'-P-OP2	-5.82	100.47	105.70
1	AA	2459	G	O4'-C1'-N9	5.82	112.85	108.20
1	CA	740	U	C5-C4-O4	5.82	129.39	125.90
1	CA	2242	G	N3-C4-C5	5.82	131.51	128.60
1	CA	2432	A	C6-N1-C2	-5.82	115.11	118.60
1	AA	438	G	C6-N1-C2	-5.81	121.61	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1989	C	C2-N1-C1'	5.81	125.20	118.80
1	AA	2697	G	C5-C6-N1	5.81	114.41	111.50
34	BA	744	C	C2-N1-C1'	-5.81	112.41	118.80
1	AA	824	A	C4-C5-C6	5.81	119.91	117.00
1	AA	1292	A	N9-C4-C5	5.81	108.12	105.80
1	AA	1329	G	N9-C4-C5	-5.81	103.08	105.40
1	AA	2050	U	N3-C2-O2	-5.81	118.13	122.20
1	AA	2681	G	OP2-P-O3'	5.81	117.99	105.20
2	AB	108	U	OP1-P-OP2	5.81	128.32	119.60
34	DA	289	G	N9-C4-C5	-5.81	103.08	105.40
34	DA	352	C	C2-N1-C1'	5.81	125.19	118.80
34	DA	783	C	C6-N1-C2	5.81	122.62	120.30
1	AA	467	U	C5-C6-N1	-5.81	119.80	122.70
1	AA	1454	C	C4-C5-C6	5.81	120.31	117.40
34	BA	134	A	N1-C6-N6	5.81	122.08	118.60
1	CA	788	A	N9-C4-C5	-5.81	103.48	105.80
1	AA	556	C	N3-C4-N4	-5.81	113.94	118.00
1	AA	2867	G	N9-C4-C5	-5.81	103.08	105.40
34	BA	442	C	C6-N1-C2	-5.81	117.98	120.30
1	CA	1790	C	C5-C6-N1	5.81	123.90	121.00
1	AA	1334	U	C4-C5-C6	5.81	123.18	119.70
1	AA	1418	U	C2-N1-C1'	5.81	124.67	117.70
1	AA	2361	G	C4-C5-N7	-5.81	108.48	110.80
1	AA	2368	C	N3-C2-O2	5.81	125.96	121.90
1	AA	2656	G	OP1-P-OP2	-5.81	110.89	119.60
1	CA	908	C	N1-C2-O2	-5.81	115.42	118.90
1	AA	486	A	N9-C4-C5	-5.80	103.48	105.80
1	AA	2520	G	N9-C4-C5	5.80	107.72	105.40
1	CA	446	G	N1-C2-N2	5.80	121.42	116.20
1	CA	1914	C	N1-C2-O2	5.80	122.38	118.90
1	CA	2252	G	C2-N3-C4	-5.80	109.00	111.90
1	AA	1847	G	C4-N9-C1'	-5.80	118.96	126.50
1	AA	2781	C	C2-N3-C4	-5.80	117.00	119.90
34	DA	1466	C	C6-N1-C2	-5.80	117.98	120.30
1	AA	1009	C	N3-C2-O2	-5.80	117.84	121.90
1	AA	1194	A	N7-C8-N9	-5.80	110.90	113.80
1	AA	2471	A	N9-C4-C5	5.80	108.12	105.80
1	AA	2610	A	OP1-P-O3'	-5.80	92.44	105.20
1	AA	2773	C	C5-C6-N1	-5.80	118.10	121.00
34	BA	566	G	N3-C2-N2	-5.80	115.84	119.90
34	BA	890	G	C4-C5-N7	5.80	113.12	110.80
1	CA	2318	G	N7-C8-N9	-5.80	110.20	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1387	U	N1-C2-N3	-5.80	111.42	114.90
1	AA	1518	A	N7-C8-N9	5.80	116.70	113.80
1	AA	1628	G	C8-N9-C4	-5.80	104.08	106.40
1	AA	1694	G	N9-C4-C5	5.80	107.72	105.40
1	AA	2229	A	O4'-C1'-N9	5.80	112.84	108.20
1	AA	2290	A	C8-N9-C4	-5.80	103.48	105.80
1	AA	2297	C	O5'-P-OP1	5.80	117.66	110.70
34	BA	1497	G	N9-C4-C5	-5.80	103.08	105.40
1	AA	1525	G	O5'-P-OP2	-5.80	100.48	105.70
1	AA	2411	G	N1-C2-N3	5.80	127.38	123.90
14	AQ	14	ARG	NE-CZ-NH2	-5.80	117.40	120.30
56	DW	76	A	C6-C5-N7	-5.80	128.24	132.30
1	AA	184	A	OP1-P-O3'	-5.80	92.45	105.20
1	AA	200	A	C6-N1-C2	-5.80	115.12	118.60
1	AA	235	C	OP1-P-O3'	5.80	117.95	105.20
1	AA	2260	C	C4-C5-C6	5.80	120.30	117.40
1	AA	2351	G	N1-C2-N2	-5.80	110.98	116.20
34	BA	854	G	O5'-P-OP2	5.80	117.66	110.70
34	BA	1505	G	N9-C4-C5	5.80	107.72	105.40
1	AA	781	A	N1-C6-N6	5.79	122.08	118.60
1	AA	803	C	C5-C4-N4	-5.79	116.14	120.20
1	AA	129	G	C6-C5-N7	-5.79	126.92	130.40
1	AA	2266	C	O5'-P-OP1	5.79	117.65	110.70
25	A1	41	ARG	NE-CZ-NH2	-5.79	117.40	120.30
1	CA	1313	U	OP1-P-OP2	-5.79	110.91	119.60
1	CA	1760	A	C2-N3-C4	-5.79	107.70	110.60
1	CA	1905	C	C4-C5-C6	-5.79	114.50	117.40
1	CA	1965	C	N3-C4-C5	5.79	124.22	121.90
1	CA	2085	C	C2-N3-C4	-5.79	117.00	119.90
1	AA	420	C	C6-N1-C2	-5.79	117.98	120.30
1	AA	1542	A	OP2-P-O3'	5.79	117.94	105.20
1	AA	1737	A	C8-N9-C4	-5.79	103.48	105.80
34	BA	454	C	N1-C2-O2	5.79	122.37	118.90
34	BA	1510	U	C5-C6-N1	-5.79	119.81	122.70
1	CA	313	C	C6-N1-C2	5.79	122.62	120.30
1	CA	2042	A	N3-C4-N9	-5.79	122.77	127.40
1	AA	213	G	C4-C5-N7	-5.79	108.48	110.80
34	DA	1158	C	C2-N1-C1'	5.79	125.17	118.80
1	AA	1441	A	C5-C6-N6	-5.79	119.07	123.70
1	AA	1844	G	N9-C4-C5	-5.79	103.09	105.40
1	AA	2542	A	C6-C5-N7	-5.79	128.25	132.30
1	CA	51	G	N1-C6-O6	-5.79	116.43	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	194	G	N3-C4-N9	5.79	129.47	126.00
1	CA	2478	A	C8-N9-C4	5.79	108.11	105.80
1	AA	1435	G	OP1-P-OP2	-5.78	110.92	119.60
1	AA	1659	G	N9-C4-C5	-5.78	103.09	105.40
1	AA	1985	U	C2-N1-C1'	5.78	124.64	117.70
1	CA	113	G	N3-C4-C5	5.78	131.49	128.60
1	CA	2386	C	C2-N1-C1'	-5.78	112.44	118.80
1	AA	1305	G	C5-C6-O6	5.78	132.07	128.60
1	AA	2493	G	C6-C5-N7	-5.78	126.93	130.40
1	AA	1092	A	C8-N9-C4	-5.78	103.49	105.80
1	AA	1744	G	N7-C8-N9	-5.78	110.21	113.10
1	AA	2331	G	C4-C5-N7	5.78	113.11	110.80
2	AB	98	G	C5-C6-O6	-5.78	125.13	128.60
34	BA	809	G	N1-C6-O6	-5.78	116.43	119.90
1	CA	2258	C	C2-N3-C4	-5.78	117.01	119.90
34	DA	1414	U	C6-N1-C2	5.78	124.47	121.00
56	DW	73	A	C4-C5-N7	5.78	113.59	110.70
1	AA	2006	G	C4-C5-N7	-5.78	108.49	110.80
1	CA	48	G	C5-C6-N1	-5.78	108.61	111.50
1	CA	2829	C	C2-N3-C4	5.78	122.79	119.90
1	AA	630	U	C2-N1-C1'	-5.78	110.77	117.70
1	AA	761	U	C6-N1-C1'	-5.78	113.11	121.20
1	AA	1409	C	O5'-P-OP2	-5.78	100.50	105.70
1	AA	2608	U	N1-C2-O2	-5.78	118.75	122.80
2	AB	41	U	C2-N1-C1'	-5.78	110.77	117.70
2	AB	106	G	N9-C4-C5	5.78	107.71	105.40
1	CA	1331	A	N7-C8-N9	-5.78	110.91	113.80
1	CA	1759	A	N1-C2-N3	5.78	132.19	129.30
1	CA	1905	C	C5-C6-N1	5.78	123.89	121.00
1	AA	1001	G	C6-C5-N7	-5.78	126.94	130.40
1	AA	2673	G	C5-C6-O6	5.78	132.07	128.60
1	CA	451	C	C6-N1-C2	5.78	122.61	120.30
1	CA	2053	G	N1-C6-O6	5.78	123.36	119.90
1	CA	2358	G	O5'-P-OP2	-5.78	100.50	105.70
34	DA	352	C	C6-N1-C2	-5.78	117.99	120.30
1	AA	1007	G	OP1-P-O3'	5.77	117.90	105.20
1	AA	2526	U	N1-C2-O2	5.77	126.84	122.80
1	CA	124	G	C6-N1-C2	-5.77	121.64	125.10
34	DA	357	G	OP1-P-O3'	5.77	117.90	105.20
1	AA	485	U	C2-N3-C4	-5.77	123.54	127.00
1	AA	2004	C	C5-C6-N1	-5.77	118.11	121.00
1	AA	2289	G	N7-C8-N9	-5.77	110.21	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	174	C	C6-N1-C2	-5.77	117.99	120.30
1	CA	1901	A	N1-C6-N6	-5.77	115.14	118.60
1	CA	2584	U	N3-C4-C5	5.77	118.06	114.60
1	AA	2352	G	C8-N9-C4	-5.77	104.09	106.40
1	AA	2616	U	C2-N3-C4	-5.77	123.54	127.00
1	CA	1810	A	O5'-P-OP2	-5.77	100.51	105.70
1	AA	711	C	N3-C4-C5	5.77	124.21	121.90
1	AA	790	G	N1-C2-N2	-5.77	111.01	116.20
56	BW	74	C	C4-C5-C6	5.77	120.28	117.40
1	CA	2447	G	C4-N9-C1'	-5.77	119.00	126.50
1	CA	2893	G	N3-C4-C5	-5.77	125.72	128.60
1	AA	885	C	N1-C2-O2	5.77	122.36	118.90
1	AA	1049	G	N3-C2-N2	-5.77	115.86	119.90
1	AA	1188	A	C4-N9-C1'	-5.77	115.92	126.30
1	AA	2343	G	N7-C8-N9	-5.77	110.22	113.10
1	AA	2361	G	N7-C8-N9	-5.77	110.22	113.10
34	BA	784	C	C2-N3-C4	-5.77	117.02	119.90
1	CA	1199	U	N1-C2-N3	5.77	118.36	114.90
34	DA	241	C	N3-C4-C5	5.77	124.21	121.90
1	AA	479	C	C4-C5-C6	5.77	120.28	117.40
1	AA	959	U	N3-C4-O4	5.77	123.44	119.40
1	AA	2513	C	OP1-P-OP2	-5.77	110.95	119.60
1	AA	2779	G	N9-C4-C5	5.77	107.71	105.40
1	CA	814	C	N3-C2-O2	5.77	125.94	121.90
1	AA	2229	A	N7-C8-N9	5.76	116.68	113.80
34	BA	1339	A	O5'-P-OP2	-5.76	100.51	105.70
34	DA	656	C	N3-C2-O2	5.76	125.94	121.90
34	DA	898	G	N9-C4-C5	-5.76	103.09	105.40
1	AA	1242	G	C6-C5-N7	5.76	133.86	130.40
34	BA	815	A	C4-C5-N7	-5.76	107.82	110.70
1	CA	787	U	O5'-P-OP1	-5.76	100.51	105.70
1	AA	502	G	O5'-P-OP1	-5.76	100.51	105.70
1	AA	562	C	C5-C6-N1	-5.76	118.12	121.00
1	AA	2846	U	C2-N3-C4	-5.76	123.54	127.00
2	AB	51	G	OP1-P-OP2	-5.76	110.96	119.60
1	CA	527	C	O4'-C1'-N1	5.76	112.81	108.20
1	CA	2287	A	N3-C4-C5	5.76	130.83	126.80
1	AA	991	G	C6-C5-N7	5.76	133.86	130.40
1	AA	1078	A	C5-C6-N6	-5.76	119.09	123.70
1	AA	1211	U	N3-C2-O2	-5.76	118.17	122.20
34	BA	566	G	N9-C4-C5	5.76	107.70	105.40
34	BA	809	G	N9-C4-C5	5.76	107.70	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2250	G	OP1-P-OP2	5.76	128.24	119.60
1	CA	2526	G	N1-C6-O6	5.76	123.36	119.90
1	AA	904	C	OP1-P-OP2	5.76	128.24	119.60
1	AA	2621	U	OP2-P-O3'	5.76	117.87	105.20
1	AA	730	C	N3-C2-O2	-5.76	117.87	121.90
1	AA	910	A	N3-C4-C5	-5.76	122.77	126.80
1	AA	1210	G	N9-C4-C5	5.76	107.70	105.40
1	AA	1744	G	C5-C6-N1	5.76	114.38	111.50
1	AA	1977	U	N3-C4-C5	5.76	118.05	114.60
1	AA	2585	C	N3-C2-O2	5.76	125.93	121.90
1	AA	2776	G	C5-C6-N1	-5.76	108.62	111.50
34	DA	687	A	P-O3'-C3'	5.76	126.61	119.70
1	AA	589	U	C6-N1-C2	-5.75	117.55	121.00
1	AA	1078	A	C8-N9-C4	5.75	108.10	105.80
1	AA	1701	A	N7-C8-N9	-5.75	110.92	113.80
1	AA	2782	C	C5-C4-N4	-5.75	116.17	120.20
34	BA	1416	G	N9-C4-C5	5.75	107.70	105.40
1	CA	958	U	C6-N1-C2	-5.75	117.55	121.00
1	AA	1402	G	C8-N9-C4	5.75	108.70	106.40
1	AA	2285	A	C5-N7-C8	-5.75	101.02	103.90
1	AA	2518	U	N1-C2-O2	5.75	126.83	122.80
2	AB	56	G	N3-C4-N9	5.75	129.45	126.00
1	CA	668	G	OP2-P-O3'	5.75	117.85	105.20
1	AA	26	G	C6-N1-C2	-5.75	121.65	125.10
1	AA	150	C	C6-N1-C2	5.75	122.60	120.30
34	BA	1137	C	C6-N1-C2	-5.75	118.00	120.30
1	CA	330	A	C6-C5-N7	-5.75	128.28	132.30
1	AA	12	U	N1-C2-O2	5.75	126.82	122.80
1	AA	2088	C	OP1-P-O3'	5.75	117.85	105.20
1	AA	2471	A	N1-C6-N6	-5.75	115.15	118.60
34	BA	762	C	N1-C2-O2	5.75	122.35	118.90
1	CA	2286	A	C5-C6-N6	-5.75	119.10	123.70
1	AA	991	G	N7-C8-N9	-5.75	110.23	113.10
1	AA	991	G	C8-N9-C4	5.75	108.70	106.40
1	AA	1035	G	N7-C8-N9	-5.75	110.23	113.10
1	AA	2572	C	N1-C2-O2	-5.75	115.45	118.90
1	AA	2629	C	N1-C2-O2	-5.75	115.45	118.90
1	CA	2617	C	OP2-P-O3'	5.75	117.84	105.20
1	AA	803	C	N3-C4-C5	5.75	124.20	121.90
1	AA	1086	C	C6-N1-C2	5.75	122.60	120.30
1	AA	1825	U	OP2-P-O3'	5.75	117.84	105.20
1	AA	2456	G	N7-C8-N9	-5.75	110.23	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2752	U	OP1-P-OP2	-5.74	110.98	119.60
1	CA	272(E)	G	N3-C4-C5	5.74	131.47	128.60
1	CA	1955	U	N1-C2-N3	5.74	118.35	114.90
1	CA	2763	G	N1-C6-O6	-5.74	116.45	119.90
34	DA	890	G	O4'-C1'-N9	5.74	112.79	108.20
1	CA	845	G	C4-N9-C1'	5.74	133.96	126.50
1	CA	1619	G	OP1-P-O3'	5.74	117.83	105.20
1	CA	2698	U	N1-C2-O2	5.74	126.82	122.80
1	AA	181	C	OP1-P-OP2	5.74	128.21	119.60
1	AA	629	U	N3-C2-O2	-5.74	118.18	122.20
1	AA	652	A	N7-C8-N9	-5.74	110.93	113.80
1	AA	2651	A	C2-N3-C4	-5.74	107.73	110.60
2	AB	69	G	N9-C4-C5	-5.74	103.10	105.40
1	CA	1963	U	C5-C6-N1	5.74	125.57	122.70
1	CA	2852	G	O5'-P-OP1	-5.74	100.53	105.70
34	DA	1201	A	P-O3'-C3'	5.74	126.59	119.70
1	AA	210	A	C5'-C4'-O4'	-5.74	102.21	109.10
1	AA	908	A	C5-C6-N1	5.74	120.57	117.70
1	AA	992	G	C2-N3-C4	5.74	114.77	111.90
1	AA	1474	C	C6-N1-C1'	5.74	127.69	120.80
1	AA	2689	G	N9-C4-C5	-5.74	103.11	105.40
34	BA	816	A	O5'-P-OP2	-5.74	100.54	105.70
1	CA	674	G	N1-C2-N3	5.74	127.34	123.90
1	CA	2444	G	C8-N9-C1'	-5.74	119.54	127.00
1	CA	151	C	C5-C6-N1	-5.74	118.13	121.00
1	AA	106	U	OP2-P-O3'	5.74	117.82	105.20
1	AA	1705	C	C6-N1-C2	5.74	122.59	120.30
1	AA	1709	C	N3-C4-N4	-5.74	113.98	118.00
1	AA	2877	G	N3-C4-N9	-5.74	122.56	126.00
34	BA	652	U	C6-N1-C2	5.74	124.44	121.00
1	CA	139(A)	G	C8-N9-C1'	-5.74	119.54	127.00
1	AA	418	G	C6-C5-N7	-5.73	126.96	130.40
1	AA	990	A	C6-N1-C2	-5.73	115.16	118.60
34	DA	912	C	OP2-P-O3'	5.73	117.81	105.20
1	AA	1984	C	N1-C2-O2	5.73	122.34	118.90
1	AA	2556	G	C4-C5-N7	5.73	113.09	110.80
1	AA	2827	G	C6-N1-C2	-5.73	121.66	125.10
1	CA	994	C	N3-C4-C5	-5.73	119.61	121.90
1	CA	1962	C	OP1-P-OP2	-5.73	111.00	119.60
56	DW	74	C	C6-N1-C2	-5.73	118.01	120.30
1	AA	277	G	N3-C4-N9	-5.73	122.56	126.00
1	AA	471	C	C4-C5-C6	5.73	120.27	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	587	C	C2-N1-C1'	-5.73	112.50	118.80
1	AA	819	C	C5-C4-N4	-5.73	116.19	120.20
1	AA	956	A	N1-C6-N6	-5.73	115.16	118.60
1	AA	1885	A	C5-C6-N1	5.73	120.56	117.70
34	BA	809	G	C5-C6-O6	5.73	132.04	128.60
1	CA	1646	C	OP1-P-O3'	5.73	117.81	105.20
1	AA	69	G	C8-N9-C4	-5.73	104.11	106.40
1	AA	458	U	C5-C6-N1	-5.73	119.84	122.70
1	AA	1684	A	C2-N3-C4	-5.73	107.74	110.60
1	AA	1865	U	OP2-P-O3'	5.73	117.80	105.20
2	AB	6	C	N1-C2-O2	-5.73	115.46	118.90
1	CA	1944	U	O5'-P-OP2	-5.73	100.55	105.70
1	CA	2038	G	N1-C6-O6	-5.73	116.46	119.90
1	AA	916	G	O5'-P-OP2	-5.73	100.55	105.70
1	CA	1798	U	N3-C4-C5	5.73	118.03	114.60
1	AA	552	C	N1-C2-O2	-5.72	115.47	118.90
1	AA	789	G	C4-C5-N7	-5.72	108.51	110.80
1	AA	1700	G	C5-C6-N1	5.72	114.36	111.50
1	AA	1830	G	OP2-P-O3'	5.72	117.79	105.20
34	BA	1520	G	C5-C6-N1	5.72	114.36	111.50
56	BW	73	A	C4-C5-N7	5.72	113.56	110.70
1	CA	1979	C	C6-N1-C2	-5.72	118.01	120.30
34	DA	7	G	N3-C2-N2	-5.72	115.89	119.90
34	DA	50	A	N9-C4-C5	5.72	108.09	105.80
1	AA	597	C	C6-N1-C1'	5.72	127.67	120.80
1	AA	914	C	C6-N1-C2	5.72	122.59	120.30
1	AA	1274	G	C5-C6-N1	-5.72	108.64	111.50
1	AA	1678	A	C2-N3-C4	-5.72	107.74	110.60
1	AA	2689	G	N3-C2-N2	5.72	123.91	119.90
18	AU	53	ARG	NE-CZ-NH1	5.72	123.16	120.30
1	CA	1227	G	N9-C4-C5	5.72	107.69	105.40
1	AA	1613	A	N1-C6-N6	-5.72	115.17	118.60
1	AA	1902	C	O5'-P-OP2	-5.72	100.55	105.70
1	CA	1992	G	C5-C6-O6	5.72	132.03	128.60
1	CA	2291	U	C5-C6-N1	-5.72	119.84	122.70
1	AA	600	G	OP2-P-O3'	5.72	117.78	105.20
1	AA	1375	U	O5'-P-OP1	5.72	117.56	110.70
1	AA	2022	G	O5'-P-OP2	-5.72	100.55	105.70
1	AA	2643	G	N9-C4-C5	5.72	107.69	105.40
1	AA	2736	C	N3-C4-N4	-5.72	114.00	118.00
2	AB	103	G	C4-C5-N7	5.72	113.09	110.80
1	AA	2544	G	C5-C6-O6	-5.72	125.17	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2563	U	N1-C2-O2	5.72	126.80	122.80
1	AA	290	G	N1-C6-O6	5.72	123.33	119.90
1	AA	2494	G	N3-C2-N2	-5.72	115.90	119.90
13	AP	50	ARG	NE-CZ-NH1	-5.72	117.44	120.30
1	CA	1369	G	N7-C8-N9	5.72	115.96	113.10
1	CA	2438	U	N3-C2-O2	-5.72	118.20	122.20
34	DA	1482	G	C4-N9-C1'	5.72	133.93	126.50
1	AA	363	U	N3-C4-O4	-5.71	115.40	119.40
1	AA	823	G	C8-N9-C4	5.71	108.69	106.40
2	AB	92	C	O5'-P-OP2	5.71	117.56	110.70
34	BA	1087	G	C8-N9-C4	-5.71	104.11	106.40
1	CA	2242	G	C6-N1-C2	5.71	128.53	125.10
34	DA	853	G	N1-C6-O6	5.71	123.33	119.90
1	AA	702	A	C5-C6-N6	5.71	128.27	123.70
1	AA	1211	U	O5'-P-OP2	-5.71	100.56	105.70
1	AA	1811	A	C5'-C4'-O4'	5.71	115.95	109.10
1	AA	468	G	OP1-P-OP2	-5.71	111.03	119.60
1	AA	761	U	C2-N1-C1'	5.71	124.55	117.70
1	AA	1015	C	C5-C4-N4	-5.71	116.20	120.20
1	AA	1457	C	C5-C6-N1	-5.71	118.14	121.00
1	AA	1843	A	C2-N3-C4	5.71	113.46	110.60
1	AA	2558	U	C5-C4-O4	5.71	129.33	125.90
1	AA	2626	A	OP1-P-OP2	-5.71	111.03	119.60
34	BA	546	G	N3-C4-C5	-5.71	125.74	128.60
1	CA	1637	A	N9-C4-C5	5.71	108.08	105.80
1	CA	1837	C	C6-N1-C2	-5.71	118.02	120.30
1	AA	2627	U	OP1-P-OP2	5.71	128.16	119.60
34	DA	879	C	N3-C4-N4	-5.71	114.00	118.00
1	AA	1301	U	OP1-P-OP2	5.71	128.16	119.60
1	AA	2275	C	N3-C4-C5	5.71	124.18	121.90
1	CA	2874	C	C5-C6-N1	5.71	123.85	121.00
34	DA	523	A	N3-C4-N9	-5.71	122.83	127.40
1	AA	589	U	OP1-P-O3'	5.71	117.75	105.20
1	AA	780	G	N3-C4-N9	5.71	129.42	126.00
1	AA	1282	G	O4'-C1'-N9	5.71	112.77	108.20
1	AA	1705	C	N3-C4-C5	5.71	124.18	121.90
34	BA	1402	C	C5-C4-N4	5.71	124.19	120.20
1	CA	51	G	N9-C4-C5	5.71	107.68	105.40
2	CB	47	C	C2-N3-C4	5.71	122.75	119.90
1	AA	2285	A	N1-C2-N3	-5.71	126.45	129.30
1	AA	2488	A	C5-C6-N6	-5.71	119.14	123.70
1	CA	2078	C	OP2-P-O3'	5.71	117.75	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	101	G	C8-N9-C4	5.71	108.68	106.40
1	AA	15	G	N9-C1'-C2'	-5.70	105.72	112.00
1	AA	1000	C	C2-N3-C4	-5.70	117.05	119.90
1	AA	1195	G	C8-N9-C4	-5.70	104.12	106.40
1	AA	1312	G	N3-C2-N2	5.70	123.89	119.90
1	AA	2264	G	O4'-C1'-N9	5.70	112.76	108.20
34	BA	329	A	O4'-C1'-N9	-5.70	103.64	108.20
34	BA	675	A	OP1-P-O3'	5.70	117.75	105.20
34	BA	814	A	C8-N9-C4	5.70	108.08	105.80
34	BA	1436	U	O5'-P-OP1	5.70	117.54	110.70
1	CA	1352	U	O5'-P-OP1	5.70	117.54	110.70
1	AA	1369	U	N1-C2-N3	-5.70	111.48	114.90
1	AA	1853	G	N1-C6-O6	-5.70	116.48	119.90
1	AA	23	G	N3-C2-N2	-5.70	115.91	119.90
1	AA	1931	C	C5-C4-N4	-5.70	116.21	120.20
1	AA	2289	G	C5-N7-C8	5.70	107.15	104.30
1	AA	2892	A	O5'-P-OP2	-5.70	100.57	105.70
14	AQ	22	LYS	CD-CE-NZ	-5.70	98.59	111.70
1	CA	25	U	OP1-P-OP2	5.70	128.15	119.60
1	CA	446	G	C5-C6-O6	-5.70	125.18	128.60
1	CA	528	A	N1-C2-N3	5.70	132.15	129.30
1	AA	551	A	OP1-P-OP2	-5.70	111.05	119.60
1	AA	1201	A	C5-N7-C8	-5.70	101.05	103.90
1	AA	1859	G	C2-N3-C4	-5.70	109.05	111.90
1	AA	2343	G	C4-C5-N7	-5.70	108.52	110.80
1	AA	2632	C	C6-N1-C1'	5.70	127.64	120.80
1	AA	2674	A	OP1-P-O3'	5.70	117.74	105.20
1	AA	2841	G	C5-C6-N1	5.70	114.35	111.50
34	BA	730	G	O5'-P-OP2	-5.70	100.57	105.70
34	BA	1529	G	O4'-C1'-N9	5.70	112.76	108.20
1	CA	2070	G	N1-C2-N2	-5.70	111.07	116.20
1	AA	1263	C	OP1-P-OP2	5.70	128.15	119.60
1	CA	1141	U	C5-C6-N1	-5.70	119.85	122.70
1	CA	1571	A	C8-N9-C4	-5.70	103.52	105.80
1	CA	2572	A	N7-C8-N9	-5.70	110.95	113.80
1	AA	799	A	N1-C2-N3	5.70	132.15	129.30
1	AA	1092	A	N9-C4-C5	5.70	108.08	105.80
1	AA	1689	G	C4-C5-N7	-5.70	108.52	110.80
1	AA	2061	C	O5'-P-OP1	-5.70	100.57	105.70
1	AA	2097	U	OP2-P-O3'	5.70	117.73	105.20
56	BW	76	A	C6-C5-N7	-5.70	128.31	132.30
1	CA	1361	G	N1-C6-O6	-5.70	116.48	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1571	A	N9-C4-C5	5.70	108.08	105.80
1	AA	1431	G	N1-C2-N2	5.69	121.32	116.20
1	AA	2884	C	N1-C2-N3	5.69	123.19	119.20
1	AA	1653	C	C2-N3-C4	5.69	122.75	119.90
1	AA	2088	C	N3-C2-O2	-5.69	117.92	121.90
1	AA	2402	U	N3-C2-O2	-5.69	118.22	122.20
1	AA	59	G	C2-N3-C4	5.69	114.75	111.90
1	AA	1343	C	C4-C5-C6	5.69	120.25	117.40
1	AA	2272	C	C5-C6-N1	-5.69	118.16	121.00
1	CA	948	G	N1-C6-O6	-5.69	116.48	119.90
1	CA	2008	C	O5'-P-OP1	5.69	117.53	110.70
1	CA	2608	G	C8-N9-C4	5.69	108.68	106.40
1	AA	413	G	C5-C6-O6	-5.69	125.19	128.60
1	AA	575	G	C2-N3-C4	5.69	114.74	111.90
1	CA	772	C	C6-N1-C2	5.69	122.58	120.30
1	CA	2444	G	N1-C2-N2	-5.69	111.08	116.20
1	AA	723	A	OP1-P-OP2	5.69	128.13	119.60
1	AA	745	C	N3-C4-C5	-5.69	119.62	121.90
1	AA	1061	G	N1-C2-N3	5.69	127.31	123.90
1	AA	2539	C	OP2-P-O3'	5.69	117.71	105.20
1	CA	2382	G	C5-C6-O6	5.69	132.01	128.60
1	AA	25	U	N3-C4-O4	5.69	123.38	119.40
1	AA	514	G	N3-C2-N2	5.69	123.88	119.90
1	AA	1954	A	OP1-P-OP2	-5.69	111.07	119.60
1	AA	2064	A	N3-C4-C5	5.69	130.78	126.80
1	CA	1657	C	C5-C4-N4	5.69	124.18	120.20
1	CA	2893	G	N3-C4-N9	5.69	129.41	126.00
1	AA	744	C	C6-N1-C2	5.68	122.57	120.30
1	AA	781	A	C5-C6-N6	-5.68	119.15	123.70
1	AA	2771	A	C5-N7-C8	-5.68	101.06	103.90
1	CA	572	A	N9-C4-C5	-5.68	103.53	105.80
34	DA	739	C	N3-C4-C5	-5.68	119.63	121.90
1	AA	413	G	N1-C6-O6	5.68	123.31	119.90
1	CA	330	A	N3-C4-N9	-5.68	122.85	127.40
1	CA	614(B)	G	O4'-C1'-N9	5.68	112.75	108.20
1	AA	2066	C	C5-C4-N4	-5.68	116.22	120.20
1	CA	496	G	N1-C2-N3	5.68	127.31	123.90
1	CA	2250	G	O5'-P-OP2	-5.68	100.59	105.70
1	AA	126	C	OP1-P-OP2	5.68	128.12	119.60
1	AA	198	C	OP2-P-O3'	5.68	117.70	105.20
1	AA	829	A	C5-N7-C8	5.68	106.74	103.90
1	AA	1418	U	C4-C5-C6	5.68	123.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1735	U	C5-C4-O4	5.68	129.31	125.90
1	AA	2303	U	C4-C5-C6	5.68	123.11	119.70
1	AA	2369	U	N1-C2-N3	5.68	118.31	114.90
29	A5	16	ARG	NE-CZ-NH2	-5.68	117.46	120.30
1	CA	2582	G	C2-N3-C4	-5.68	109.06	111.90
1	AA	1897	C	C2-N1-C1'	5.68	125.05	118.80
1	AA	239	G	N1-C6-O6	5.68	123.31	119.90
1	AA	593	G	C6-C5-N7	-5.68	126.99	130.40
1	AA	1410	G	C5-C6-N1	5.68	114.34	111.50
1	AA	1895	U	N1-C2-O2	-5.68	118.83	122.80
1	AA	2078	G	N1-C2-N2	-5.68	111.09	116.20
34	BA	862	C	O5'-P-OP2	-5.68	100.59	105.70
57	BZ	-29	LEU	CA-CB-CG	5.68	128.36	115.30
1	CA	361	G	N1-C6-O6	5.68	123.31	119.90
1	CA	1288	U	N1-C2-O2	5.68	126.77	122.80
1	CA	2503	A	C5-C6-N1	5.68	120.54	117.70
1	CA	2608	G	O5'-P-OP1	5.68	117.51	110.70
1	AA	622	G	O5'-P-OP2	-5.67	100.59	105.70
1	AA	1346	U	C2-N1-C1'	5.67	124.51	117.70
34	BA	13	U	OP1-P-OP2	5.67	128.11	119.60
34	BA	771	G	C5-C6-N1	-5.67	108.66	111.50
1	CA	446	G	C8-N9-C4	5.67	108.67	106.40
1	CA	1206	G	N3-C2-N2	-5.67	115.93	119.90
1	AA	566	C	N3-C2-O2	-5.67	117.93	121.90
1	AA	733	G	N3-C4-N9	5.67	129.40	126.00
1	AA	1981	G	OP2-P-O3'	5.67	117.68	105.20
1	AA	2404	A	O4'-C1'-N9	-5.67	103.66	108.20
1	AA	192	C	C4-C5-C6	-5.67	114.56	117.40
1	AA	241	G	N7-C8-N9	5.67	115.94	113.10
1	AA	480	A	C5-C6-N1	-5.67	114.86	117.70
1	AA	998	A	C6-C5-N7	-5.67	128.33	132.30
1	AA	1427	G	C5-C6-N1	5.67	114.33	111.50
1	AA	1451	U	O5'-P-OP2	-5.67	100.59	105.70
1	AA	2041	A	N1-C6-N6	-5.67	115.20	118.60
2	AB	77	U	C5-C4-O4	-5.67	122.50	125.90
1	CA	686	G	N1-C6-O6	5.67	123.30	119.90
1	CA	2235	G	C4-C5-N7	-5.67	108.53	110.80
34	DA	835	U	O5'-P-OP1	-5.67	100.59	105.70
1	CA	1814	G	N1-C6-O6	5.67	123.30	119.90
1	CA	1857	G	N1-C6-O6	-5.67	116.50	119.90
1	CA	2504	U	OP1-P-O3'	5.67	117.67	105.20
1	AA	113	C	N1-C2-N3	-5.67	115.23	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	593	G	N3-C4-N9	5.67	129.40	126.00
1	AA	1187	U	O5'-P-OP1	-5.67	100.60	105.70
1	AA	2020	G	N1-C2-N2	-5.67	111.10	116.20
1	AA	2252	C	N1-C2-O2	-5.67	115.50	118.90
1	AA	2452	C	N3-C4-C5	5.67	124.17	121.90
1	AA	2871	G	C4-C5-N7	5.67	113.07	110.80
34	BA	1077	G	OP1-P-O3'	5.67	117.67	105.20
1	CA	2503	A	N1-C6-N6	5.67	122.00	118.60
1	CA	2570	G	N3-C4-N9	-5.67	122.60	126.00
1	CA	2596	U	N3-C4-O4	-5.67	115.43	119.40
34	DA	8	A	C8-N9-C4	5.67	108.07	105.80
34	DA	550	G	C8-N9-C4	5.67	108.67	106.40
1	AA	835	A	N1-C2-N3	-5.67	126.47	129.30
1	AA	1237	G	C8-N9-C4	5.67	108.67	106.40
1	AA	1340	U	N1-C2-O2	-5.67	118.83	122.80
1	AA	2597	U	N1-C2-N3	-5.67	111.50	114.90
1	CA	1626	G	N1-C6-O6	5.67	123.30	119.90
1	AA	1684	A	C6-N1-C2	5.67	122.00	118.60
1	CA	1558	A	N1-C2-N3	5.67	132.13	129.30
1	AA	820	U	C5-C4-O4	-5.66	122.50	125.90
1	AA	824	A	OP1-P-OP2	5.66	128.09	119.60
1	AA	1238	G	C2-N3-C4	5.66	114.73	111.90
1	AA	1977	U	C6-N1-C2	5.66	124.40	121.00
1	AA	2001	C	C2-N3-C4	-5.66	117.07	119.90
1	AA	2311	G	C8-N9-C4	-5.66	104.13	106.40
1	AA	2639	G	C4-C5-C6	-5.66	115.40	118.80
1	CA	804	A	O5'-P-OP2	5.66	117.50	110.70
1	AA	2651	A	OP1-P-O3'	5.66	117.66	105.20
1	CA	1142(A)	A	N1-C6-N6	5.66	122.00	118.60
1	AA	724	A	C4-C5-N7	-5.66	107.87	110.70
1	AA	887	C	N3-C4-C5	5.66	124.16	121.90
1	AA	1205	U	C2-N3-C4	-5.66	123.60	127.00
1	AA	2090	U	O5'-P-OP2	-5.66	100.61	105.70
1	CA	588	U	O5'-P-OP2	-5.66	100.61	105.70
1	CA	2590	A	N1-C6-N6	-5.66	115.20	118.60
34	DA	370	C	N3-C2-O2	-5.66	117.94	121.90
1	AA	2870	A	N1-C6-N6	-5.66	115.20	118.60
34	BA	402	G	C8-N9-C4	-5.66	104.14	106.40
1	CA	94(A)	G	N1-C6-O6	5.66	123.30	119.90
1	CA	1755	A	O5'-P-OP1	-5.66	100.61	105.70
1	AA	2238	C	C5-C6-N1	-5.66	118.17	121.00
1	AA	2633	A	N9-C4-C5	5.66	108.06	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BW	75	C	C5-C6-N1	-5.66	118.17	121.00
1	CA	777	A	N7-C8-N9	5.66	116.63	113.80
1	CA	1975	G	C5-C6-O6	-5.66	125.21	128.60
1	AA	1390	G	C8-N9-C4	5.66	108.66	106.40
1	CA	2067	G	C5-C6-O6	5.66	131.99	128.60
1	AA	533	G	C4-C5-N7	-5.65	108.54	110.80
1	AA	1063	G	N9-C4-C5	5.65	107.66	105.40
1	AA	1394	G	C8-N9-C4	5.65	108.66	106.40
1	AA	2864	G	N9-C1'-C2'	-5.65	105.78	112.00
1	AA	714	U	N1-C2-N3	5.65	118.29	114.90
1	AA	1097	G	OP2-P-O3'	5.65	117.64	105.20
1	AA	1950	A	C8-N9-C4	5.65	108.06	105.80
1	AA	2004	C	N3-C4-C5	-5.65	119.64	121.90
1	AA	2014	G	C5-C6-N1	5.65	114.33	111.50
1	CA	777	A	C8-N9-C4	-5.65	103.54	105.80
1	CA	1624	G	N1-C6-O6	-5.65	116.51	119.90
1	AA	2463	A	C2-N3-C4	5.65	113.42	110.60
2	AB	103	G	C5-C6-N1	-5.65	108.67	111.50
56	BW	76	A	C5-N7-C8	-5.65	101.08	103.90
1	CA	1680	U	O5'-P-OP1	-5.65	100.61	105.70
1	CA	1814	G	C4-C5-N7	5.65	113.06	110.80
1	CA	2694	G	N7-C8-N9	5.65	115.92	113.10
1	AA	1845	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	2515	A	N3-C4-N9	5.65	131.92	127.40
1	CA	945	A	N7-C8-N9	5.65	116.62	113.80
1	CA	2050	C	C5-C4-N4	-5.65	116.25	120.20
1	AA	625	G	N1-C2-N2	-5.65	111.12	116.20
1	AA	1042	A	C6-N1-C2	5.65	121.99	118.60
34	BA	896	C	C6-N1-C2	5.65	122.56	120.30
1	CA	1533	G	C4-N9-C1'	5.65	133.84	126.50
1	AA	1610	G	O5'-P-OP1	-5.65	100.62	105.70
1	AA	847	A	C2-N3-C4	5.64	113.42	110.60
1	AA	2020	G	C2-N3-C4	-5.64	109.08	111.90
1	AA	2074	G	N9-C4-C5	5.64	107.66	105.40
1	AA	2220	A	O5'-P-OP1	-5.64	100.62	105.70
1	AA	2450	U	C6-N1-C2	5.64	124.39	121.00
1	AA	210	A	P-O5'-C5'	-5.64	111.87	120.90
1	AA	1883	C	N3-C2-O2	-5.64	117.95	121.90
34	BA	890	G	N9-C4-C5	-5.64	103.14	105.40
1	CA	2875	C	C5-C6-N1	-5.64	118.18	121.00
34	DA	867	G	C8-N9-C4	-5.64	104.14	106.40
1	AA	1797	U	O5'-P-OP1	5.64	117.47	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1814	A	C5-C6-N1	-5.64	114.88	117.70
1	AA	2108	U	OP1-P-O3'	-5.64	92.79	105.20
1	CA	1673	U	C2-N1-C1'	-5.64	110.93	117.70
1	AA	1070	G	C6-N1-C2	-5.64	121.72	125.10
1	AA	1387	U	C2-N1-C1'	-5.64	110.93	117.70
1	AA	2511	C	C6-N1-C2	-5.64	118.04	120.30
1	AA	2554	A	N3-C4-C5	5.64	130.75	126.80
1	CA	2061	G	C5-C6-O6	-5.64	125.22	128.60
1	AA	202	A	OP2-P-O3'	5.64	117.61	105.20
1	AA	2039	U	N1-C2-N3	5.64	118.28	114.90
1	AA	2772	G	N3-C2-N2	-5.64	115.95	119.90
2	AB	92	C	C5-C4-N4	-5.64	116.25	120.20
34	BA	809	G	C4-C5-N7	-5.64	108.55	110.80
1	CA	1798	U	C5-C6-N1	-5.64	119.88	122.70
1	AA	574	G	OP2-P-O3'	5.64	117.60	105.20
1	AA	589	U	C5-C6-N1	5.64	125.52	122.70
1	AA	1427	G	N1-C2-N3	5.64	127.28	123.90
1	AA	1563	G	N3-C2-N2	-5.64	115.95	119.90
1	AA	2441	G	OP1-P-OP2	-5.64	111.14	119.60
2	AB	6	C	C6-N1-C2	5.64	122.55	120.30
34	BA	560	U	O5'-P-OP2	-5.64	100.63	105.70
1	CA	1379	A	N1-C6-N6	5.64	121.98	118.60
1	CA	2456	C	OP2-P-O3'	5.64	117.60	105.20
1	CA	2741	A	C8-N9-C4	5.64	108.06	105.80
1	AA	355	A	C5-C6-N1	5.63	120.52	117.70
1	AA	384	G	N9-C4-C5	-5.63	103.15	105.40
1	AA	1384	G	C5-C6-O6	5.63	131.98	128.60
1	AA	1518	A	C2-N3-C4	-5.63	107.78	110.60
1	AA	1609	A	C8-N9-C4	5.63	108.05	105.80
1	AA	2894	U	C2-N1-C1'	-5.63	110.94	117.70
2	AB	104	U	C2-N3-C4	-5.63	123.62	127.00
34	BA	1354	C	C6-N1-C2	-5.63	118.05	120.30
1	CA	2089	U	N1-C2-N3	5.63	118.28	114.90
34	DA	32	A	C2-N3-C4	5.63	113.42	110.60
1	AA	373	G	OP2-P-O3'	5.63	117.59	105.20
1	AA	1006	C	C5-C6-N1	-5.63	118.18	121.00
1	AA	1702	A	C4-C5-C6	-5.63	114.18	117.00
1	AA	2331	G	C8-N9-C1'	5.63	134.32	127.00
1	CA	450	G	C6-N1-C2	-5.63	121.72	125.10
1	CA	1339	G	C5-C6-O6	5.63	131.98	128.60
1	CA	2438	U	OP2-P-O3'	5.63	117.59	105.20
1	CA	2767	C	N3-C4-N4	5.63	121.94	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	171	A	C5-N7-C8	-5.63	101.08	103.90
1	AA	510	C	C5-C6-N1	5.63	123.82	121.00
1	AA	579	G	C5-C6-O6	5.63	131.98	128.60
1	AA	711	C	OP1-P-OP2	5.63	128.05	119.60
1	AA	807	G	O5'-P-OP2	5.63	117.46	110.70
1	AA	2366	G	O4'-C1'-N9	-5.63	103.69	108.20
1	CA	127	A	O5'-P-OP2	-5.63	100.63	105.70
1	CA	2503	A	N3-C4-N9	5.63	131.91	127.40
1	AA	878	G	C5-N7-C8	-5.63	101.48	104.30
1	AA	2272	C	C4-C5-C6	5.63	120.22	117.40
1	AA	2802	C	O4'-C1'-N1	5.63	112.70	108.20
1	AA	891	C	C6-N1-C2	5.63	122.55	120.30
1	AA	1849	U	C5-C4-O4	-5.63	122.52	125.90
1	AA	1859	G	N1-C2-N3	5.63	127.28	123.90
1	CA	1035	U	N1-C2-O2	5.63	126.74	122.80
1	CA	1047	G	N3-C4-C5	-5.63	125.78	128.60
1	CA	1646	C	C4-C5-C6	5.63	120.21	117.40
1	AA	900	G	C8-N9-C4	-5.63	104.15	106.40
1	AA	984	G	N9-C4-C5	-5.63	103.15	105.40
1	AA	1021	G	N3-C2-N2	5.63	123.84	119.90
1	CA	39	C	C5-C6-N1	-5.63	118.19	121.00
1	CA	50	U	N1-C2-N3	-5.63	111.52	114.90
2	AB	115	G	OP1-P-OP2	5.62	128.04	119.60
34	BA	574	A	C4-C5-N7	5.62	113.51	110.70
1	AA	244	A	C2-N3-C4	-5.62	107.79	110.60
34	DA	21	G	C4-C5-N7	5.62	113.05	110.80
34	DA	1515	C	C6-N1-C2	5.62	122.55	120.30
1	AA	28	A	N1-C6-N6	-5.62	115.23	118.60
1	AA	848	G	OP1-P-O3'	5.62	117.57	105.20
1	AA	1809	U	N3-C2-O2	5.62	126.14	122.20
1	CA	674	G	C2-N3-C4	-5.62	109.09	111.90
1	CA	1350	C	C2-N3-C4	-5.62	117.09	119.90
1	CA	1768	U	N3-C4-O4	-5.62	115.46	119.40
1	CA	2194	G	O5'-P-OP1	5.62	117.45	110.70
34	DA	1496	C	N1-C2-O2	-5.62	115.53	118.90
1	AA	129	G	N9-C4-C5	-5.62	103.15	105.40
1	AA	231	G	N1-C6-O6	-5.62	116.53	119.90
1	AA	1315	A	C6-N1-C2	5.62	121.97	118.60
1	AA	137	G	C4-N9-C1'	5.62	133.80	126.50
1	AA	777	C	C6-N1-C2	-5.62	118.05	120.30
1	AA	1003	U	C5-C6-N1	5.62	125.51	122.70
1	AA	1657	C	C4-C5-C6	5.62	120.21	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	116	G	N1-C2-N2	-5.62	111.14	116.20
34	BA	284	G	O5'-P-OP1	5.62	117.44	110.70
34	BA	766	A	C2-N3-C4	5.62	113.41	110.60
2	AB	109	C	O4'-C1'-N1	5.62	112.69	108.20
1	AA	2501	G	N3-C2-N2	-5.62	115.97	119.90
1	CA	1798	U	N3-C2-O2	-5.62	118.27	122.20
1	CA	2062	A	OP2-P-O3'	5.62	117.56	105.20
1	CA	2444	G	N1-C6-O6	-5.62	116.53	119.90
1	AA	223	C	N1-C2-O2	5.61	122.27	118.90
1	AA	400	U	C2-N3-C4	-5.61	123.63	127.00
1	AA	593	G	N3-C4-C5	-5.61	125.79	128.60
1	AA	708	C	N3-C4-C5	5.61	124.14	121.90
1	AA	1646	C	C6-N1-C2	5.61	122.55	120.30
1	AA	1752	G	N3-C2-N2	5.61	123.83	119.90
1	CA	643	A	C8-N9-C4	5.61	108.05	105.80
1	CA	2581	G	O5'-P-OP2	-5.61	100.65	105.70
1	AA	983	G	OP1-P-OP2	-5.61	111.18	119.60
1	AA	1830	G	O5'-P-OP1	5.61	117.44	110.70
1	AA	2655	G	N9-C4-C5	5.61	107.64	105.40
1	AA	2673	G	OP1-P-O3'	5.61	117.55	105.20
15	AR	113	LEU	CA-CB-CG	5.61	128.21	115.30
56	BW	45	U	C2-N1-C1'	5.61	124.44	117.70
1	AA	2005	C	C6-N1-C2	5.61	122.54	120.30
1	AA	2041	A	C4-C5-N7	-5.61	107.89	110.70
1	AA	2556	G	C6-N1-C2	-5.61	121.73	125.10
2	AB	38	C	OP2-P-O3'	5.61	117.54	105.20
34	BA	1442(A)	G	C5-C6-O6	-5.61	125.23	128.60
1	AA	1385	G	O5'-P-OP1	-5.61	100.65	105.70
1	AA	1594	C	N3-C2-O2	-5.61	117.97	121.90
1	AA	2048	C	OP1-P-O3'	-5.61	92.86	105.20
1	CA	224	G	O5'-P-OP2	-5.61	100.65	105.70
4	AD	258	LYS	CD-CE-NZ	-5.61	98.81	111.70
1	CA	52	A	N7-C8-N9	5.61	116.60	113.80
1	CA	1154	G	C8-N9-C1'	-5.61	119.71	127.00
1	CA	2793	G	C8-N9-C4	-5.61	104.16	106.40
1	AA	2041	A	N7-C8-N9	-5.60	111.00	113.80
1	CA	1896	G	C4-N9-C1'	-5.60	119.22	126.50
1	AA	41	C	N3-C4-N4	-5.60	114.08	118.00
1	AA	555	G	OP2-P-O3'	5.60	117.53	105.20
1	AA	1019	G	OP1-P-O3'	5.60	117.53	105.20
34	BA	188	C	C6-N1-C2	-5.60	118.06	120.30
1	CA	2067	G	C8-N9-C4	-5.60	104.16	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2870	C	C6-N1-C2	-5.60	118.06	120.30
1	AA	311	C	O5'-P-OP2	-5.60	100.66	105.70
1	AA	587	C	C6-N1-C1'	5.60	127.52	120.80
1	AA	1333	A	N1-C6-N6	-5.60	115.24	118.60
1	AA	2550	C	N1-C2-O2	-5.60	115.54	118.90
34	BA	296	U	C4-C5-C6	5.60	123.06	119.70
1	CA	679	C	OP1-P-OP2	-5.60	111.20	119.60
1	AA	490	U	C5-C6-N1	-5.60	119.90	122.70
1	AA	793	A	N9-C4-C5	5.60	108.04	105.80
1	AA	865	G	C6-C5-N7	5.60	133.76	130.40
1	AA	963	A	O4'-C1'-N9	-5.60	103.72	108.20
1	AA	1354	A	OP2-P-O3'	5.60	117.52	105.20
1	AA	1450	C	OP1-P-OP2	5.60	128.00	119.60
1	AA	2291	G	C5-N7-C8	5.60	107.10	104.30
13	AP	21	ARG	NE-CZ-NH1	-5.60	117.50	120.30
1	CA	1260	G	N7-C8-N9	-5.60	110.30	113.10
1	AA	202	A	O5'-P-OP2	-5.60	100.66	105.70
1	AA	1429	C	N3-C4-C5	5.60	124.14	121.90
1	AA	2045	G	C6-C5-N7	-5.60	127.04	130.40
1	AA	2464	C	N1-C2-N3	5.60	123.12	119.20
2	AB	41	U	N3-C4-O4	-5.60	115.48	119.40
1	AA	747	G	N7-C8-N9	-5.60	110.30	113.10
1	AA	1640	G	N1-C6-O6	5.60	123.26	119.90
1	AA	2632	C	C2-N3-C4	-5.60	117.10	119.90
1	CA	939	G	N1-C6-O6	5.60	123.26	119.90
1	CA	1657	C	N3-C4-N4	-5.60	114.08	118.00
1	AA	234	G	N3-C4-C5	-5.59	125.80	128.60
1	AA	437	G	C8-N9-C4	5.59	108.64	106.40
1	AA	2311	G	N9-C4-C5	5.59	107.64	105.40
1	CA	34	C	C2-N1-C1'	5.59	124.95	118.80
1	CA	318	C	N3-C4-N4	5.59	121.92	118.00
1	CA	480	A	N1-C6-N6	-5.59	115.24	118.60
1	CA	2373	G	C4-C5-C6	5.59	122.16	118.80
1	AA	1289	G	N1-C2-N2	-5.59	111.17	116.20
1	AA	2586	G	N1-C2-N3	-5.59	120.54	123.90
1	CA	516	C	N1-C2-O2	-5.59	115.54	118.90
1	CA	1647	G	C5-C6-N1	5.59	114.30	111.50
1	AA	630	U	C5-C6-N1	-5.59	119.90	122.70
1	AA	2532	C	N1-C2-N3	5.59	123.11	119.20
13	AP	55	ARG	NE-CZ-NH1	5.59	123.10	120.30
1	CA	125	G	C5-N7-C8	-5.59	101.50	104.30
1	CA	576	U	O5'-P-OP2	-5.59	100.67	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	372	C	C5-C4-N4	-5.59	116.28	120.20
34	DA	1149	C	C6-N1-C2	-5.59	118.06	120.30
1	AA	139	A	N1-C2-N3	5.59	132.09	129.30
1	AA	706	C	O5'-P-OP2	-5.59	100.67	105.70
1	AA	1457	C	C2-N3-C4	-5.59	117.11	119.90
1	AA	1632	A	C4-C5-C6	5.59	119.80	117.00
34	BA	254	G	O5'-P-OP1	-5.59	100.67	105.70
1	CA	1644	C	C2-N1-C1'	5.59	124.95	118.80
34	DA	874	G	N3-C4-N9	5.59	129.35	126.00
34	DA	1064	G	P-O3'-C3'	5.59	126.41	119.70
1	CA	1338	G	O5'-P-OP2	-5.59	100.67	105.70
34	DA	256	U	C5-C6-N1	-5.59	119.91	122.70
1	AA	889	G	N9-C4-C5	5.59	107.64	105.40
1	AA	1486	G	C5-N7-C8	5.59	107.09	104.30
1	AA	2645	G	N7-C8-N9	-5.59	110.31	113.10
1	AA	1533	G	C8-N9-C4	-5.58	104.17	106.40
1	AA	1974	A	C5-C6-N1	-5.58	114.91	117.70
34	BA	266	G	N7-C8-N9	5.58	115.89	113.10
15	CR	64	ARG	NE-CZ-NH2	-5.58	117.51	120.30
1	AA	1377	A	N9-C4-C5	5.58	108.03	105.80
1	AA	2019	G	C5'-C4'-O4'	5.58	115.80	109.10
2	AB	55	U	N1-C2-N3	5.58	118.25	114.90
1	AA	353	G	N3-C4-N9	5.58	129.35	126.00
1	AA	413	G	N3-C4-N9	5.58	129.35	126.00
1	AA	423	G	N1-C2-N2	5.58	121.22	116.20
1	AA	496	A	N7-C8-N9	5.58	116.59	113.80
1	AA	1821	C	C6-N1-C2	5.58	122.53	120.30
1	AA	2075	G	C5-C6-O6	5.58	131.95	128.60
1	AA	2436	C	OP1-P-OP2	5.58	127.97	119.60
34	BA	134	A	N9-C4-C5	-5.58	103.57	105.80
1	AA	962	G	N1-C2-N3	5.58	127.25	123.90
1	AA	2241	C	N3-C4-C5	5.58	124.13	121.90
1	CA	214	G	O4'-C1'-N9	5.58	112.66	108.20
1	CA	530	G	C8-N9-C4	-5.58	104.17	106.40
1	AA	889	G	OP2-P-O3'	5.58	117.47	105.20
1	CA	424	G	N1-C2-N2	5.58	121.22	116.20
1	CA	1309	G	C5-C6-O6	-5.58	125.25	128.60
1	AA	97	G	C5-C6-O6	5.58	131.95	128.60
1	AA	543	G	OP1-P-OP2	5.58	127.97	119.60
1	AA	1039	G	OP2-P-O3'	5.58	117.47	105.20
1	AA	1274	G	C8-N9-C4	5.58	108.63	106.40
1	AA	1482	G	C8-N9-C4	-5.58	104.17	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2075	G	O5'-P-OP1	-5.58	100.68	105.70
34	BA	741	G	O5'-P-OP2	-5.58	100.68	105.70
1	CA	948	G	N7-C8-N9	-5.58	110.31	113.10
1	CA	2596	U	C5-C6-N1	-5.58	119.91	122.70
34	DA	853	G	C8-N9-C4	-5.58	104.17	106.40
1	AA	340	C	N3-C4-N4	-5.57	114.10	118.00
1	AA	721	G	OP2-P-O3'	5.57	117.46	105.20
1	AA	895	G	N9-C4-C5	5.57	107.63	105.40
1	AA	1006	C	N3-C4-C5	5.57	124.13	121.90
1	AA	1653	C	OP1-P-O3'	5.57	117.46	105.20
1	AA	2039	U	N3-C2-O2	-5.57	118.30	122.20
1	CA	38	A	C8-N9-C4	-5.57	103.57	105.80
1	AA	1204	C	C4-C5-C6	5.57	120.19	117.40
1	AA	2613	C	C5-C4-N4	-5.57	116.30	120.20
1	CA	1318	C	N3-C4-C5	5.57	124.13	121.90
1	AA	554	A	N7-C8-N9	5.57	116.59	113.80
1	AA	731	G	C5-C6-N1	5.57	114.29	111.50
1	AA	864	C	OP1-P-OP2	-5.57	111.25	119.60
1	AA	922	G	N9-C4-C5	-5.57	103.17	105.40
1	AA	1239	A	C6-N1-C2	-5.57	115.26	118.60
1	AA	1702	A	N1-C6-N6	-5.57	115.26	118.60
1	AA	2410	U	C5-C4-O4	5.57	129.24	125.90
34	BA	312	C	OP2-P-O3'	5.57	117.46	105.20
34	BA	1523	G	C8-N9-C4	-5.57	104.17	106.40
1	CA	2415	G	N7-C8-N9	5.57	115.89	113.10
1	AA	845	G	N1-C6-O6	-5.57	116.56	119.90
1	AA	1041	C	OP1-P-O3'	5.57	117.45	105.20
1	AA	1684	A	C5-C6-N1	-5.57	114.92	117.70
1	CA	465	G	N3-C4-C5	-5.57	125.82	128.60
1	CA	1387	C	C6-N1-C2	-5.57	118.07	120.30
1	AA	226	C	C5-C6-N1	-5.57	118.22	121.00
1	AA	535	C	C5-C6-N1	-5.57	118.22	121.00
1	AA	780	G	N3-C4-C5	-5.57	125.82	128.60
1	AA	1690	G	C5-N7-C8	5.57	107.08	104.30
1	AA	1975	A	C4-C5-C6	-5.57	114.22	117.00
1	AA	2623	U	C2-N3-C4	-5.57	123.66	127.00
1	CA	1310	G	O4'-C1'-N9	5.57	112.65	108.20
1	AA	53	G	C4-C5-N7	-5.57	108.57	110.80
1	AA	593	G	C6-N1-C2	-5.57	121.76	125.10
1	AA	1689	G	N3-C4-C5	-5.57	125.82	128.60
1	AA	2561	G	C4-C5-N7	-5.57	108.57	110.80
2	AB	25	A	C8-N9-C4	5.57	108.03	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	809	G	C2-N3-C4	5.57	114.68	111.90
1	CA	2611	U	C2-N3-C4	-5.57	123.66	127.00
34	DA	718	G	N3-C2-N2	-5.57	116.00	119.90
1	AA	27	G	N1-C6-O6	-5.56	116.56	119.90
1	AA	345	G	C4-C5-N7	5.56	113.03	110.80
1	AA	1474	C	C2-N3-C4	-5.56	117.12	119.90
34	BA	236	G	OP1-P-O3'	5.56	117.44	105.20
1	CA	123	G	C6-N1-C2	-5.56	121.76	125.10
1	CA	387	U	N3-C2-O2	-5.56	118.31	122.20
1	CA	1219	G	N1-C6-O6	-5.56	116.56	119.90
1	AA	1922	A	N3-C4-C5	-5.56	122.91	126.80
1	AA	2454	C	OP1-P-OP2	-5.56	111.26	119.60
1	AA	2630	G	N7-C8-N9	5.56	115.88	113.10
1	AA	2645	G	C5-N7-C8	5.56	107.08	104.30
34	BA	897	C	OP1-P-O3'	5.56	117.44	105.20
1	CA	151	C	C6-N1-C2	5.56	122.53	120.30
1	AA	19	C	N3-C4-C5	5.56	124.12	121.90
1	AA	418	G	C2-N3-C4	-5.56	109.12	111.90
1	AA	883	G	N3-C4-N9	5.56	129.34	126.00
1	AA	2502	G	N1-C6-O6	-5.56	116.56	119.90
1	CA	1217	C	C6-N1-C2	-5.56	118.08	120.30
1	CA	1351	C	C5-C6-N1	-5.56	118.22	121.00
1	AA	337	C	C6-N1-C2	5.56	122.52	120.30
1	AA	1085	G	N7-C8-N9	-5.56	110.32	113.10
1	AA	1829	U	C2-N3-C4	-5.56	123.66	127.00
1	CA	1672	C	C2-N3-C4	-5.56	117.12	119.90
56	DW	40	C	P-O3'-C3'	5.56	126.37	119.70
1	AA	22	C	N3-C2-O2	-5.56	118.01	121.90
34	BA	804	U	N3-C4-C5	5.56	117.94	114.60
1	CA	1835	G	C6-C5-N7	-5.56	127.06	130.40
1	CA	2879	C	C4-C5-C6	5.56	120.18	117.40
34	DA	923	A	N7-C8-N9	5.56	116.58	113.80
1	AA	949	C	N1-C2-O2	-5.56	115.57	118.90
1	AA	1360	C	C4-C5-C6	5.56	120.18	117.40
1	CA	1788	C	N3-C4-C5	-5.56	119.68	121.90
1	CA	2010	G	O5'-P-OP1	-5.56	100.70	105.70
34	DA	289	G	C4-C5-N7	5.56	113.02	110.80
1	AA	426	G	N1-C2-N2	-5.55	111.20	116.20
1	AA	675	C	C2-N3-C4	-5.55	117.12	119.90
1	AA	710	G	N1-C2-N2	5.55	121.20	116.20
1	AA	757	G	C5-C6-O6	-5.55	125.27	128.60
1	AA	777	C	N1-C2-N3	5.55	123.09	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1270	C	N3-C4-C5	5.55	124.12	121.90
1	AA	1372	U	N3-C2-O2	-5.55	118.31	122.20
1	AA	1926	G	N9-C4-C5	5.55	107.62	105.40
34	BA	1523	G	C4-C5-N7	-5.55	108.58	110.80
1	CA	2069	G	N3-C2-N2	-5.55	116.01	119.90
1	AA	176	G	C2-N3-C4	-5.55	109.12	111.90
1	AA	317	U	OP1-P-OP2	5.55	127.93	119.60
1	AA	886	U	C4-C5-C6	-5.55	116.37	119.70
1	AA	1299	A	C5-N7-C8	-5.55	101.12	103.90
1	AA	2417	G	C6-C5-N7	-5.55	127.07	130.40
1	AA	501	U	N1-C2-N3	5.55	118.23	114.90
1	AA	2042	A	OP1-P-OP2	5.55	127.93	119.60
34	BA	558	G	N3-C4-N9	5.55	129.33	126.00
34	BA	733	A	O5'-P-OP1	-5.55	100.70	105.70
1	CA	265	A	C4-C5-N7	5.55	113.48	110.70
1	CA	1439	A	O5'-P-OP2	-5.55	100.70	105.70
1	CA	2849	U	OP2-P-O3'	5.55	117.41	105.20
34	DA	877	C	C6-N1-C2	5.55	122.52	120.30
1	AA	2290	A	N1-C6-N6	-5.55	115.27	118.60
1	AA	2497	G	N3-C4-N9	5.55	129.33	126.00
1	AA	2620	G	N1-C6-O6	5.55	123.23	119.90
1	AA	2645	G	C6-N1-C2	-5.55	121.77	125.10
1	CA	2374	C	C6-N1-C2	5.55	122.52	120.30
1	CA	2571	C	C4-C5-C6	5.55	120.17	117.40
1	AA	480	A	N9-C4-C5	5.55	108.02	105.80
57	BZ	87	HIS	N-CA-C	-5.55	96.02	111.00
1	CA	2315	G	N9-C4-C5	-5.55	103.18	105.40
1	AA	1462	G	OP1-P-OP2	5.55	127.92	119.60
1	AA	2114	U	N1-C2-N3	5.55	118.23	114.90
1	AA	2775	G	N1-C2-N2	-5.55	111.21	116.20
34	BA	283	C	N3-C2-O2	-5.55	118.02	121.90
56	BW	34	G	N1-C6-O6	5.55	123.23	119.90
1	AA	532	A	C8-N9-C4	-5.54	103.58	105.80
34	BA	1527	C	N1-C2-N3	5.54	123.08	119.20
1	CA	204	A	N9-C4-C5	5.54	108.02	105.80
1	CA	1941	C	N3-C4-C5	-5.54	119.68	121.90
1	AA	38	A	C6-C5-N7	5.54	136.18	132.30
1	AA	352	U	OP1-P-O3'	5.54	117.39	105.20
1	AA	743	G	N1-C6-O6	-5.54	116.57	119.90
1	AA	1248	G	N1-C2-N3	5.54	127.23	123.90
1	AA	2016	C	O5'-P-OP2	-5.54	100.71	105.70
1	AA	2479	C	C5-C6-N1	-5.54	118.23	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2598	C	OP1-P-OP2	-5.54	111.28	119.60
1	AA	2616	U	N3-C2-O2	-5.54	118.32	122.20
1	AA	2857	U	C2-N3-C4	-5.54	123.67	127.00
34	BA	1509	C	N3-C4-C5	5.54	124.12	121.90
1	AA	702	A	C5-C6-N1	-5.54	114.93	117.70
1	AA	1543	U	C6-N1-C1'	5.54	128.96	121.20
1	AA	2268	G	OP1-P-OP2	-5.54	111.29	119.60
1	AA	2279	A	C8-N9-C1'	-5.54	117.72	127.70
1	CA	2061	G	O5'-P-OP2	-5.54	100.71	105.70
1	AA	101	A	C5-C6-N6	-5.54	119.27	123.70
1	AA	999	G	OP1-P-OP2	-5.54	111.29	119.60
1	AA	2709	G	N3-C2-N2	5.54	123.78	119.90
1	CA	799	G	N3-C4-C5	-5.54	125.83	128.60
1	AA	1284	G	OP2-P-O3'	5.54	117.39	105.20
1	AA	1412	A	N1-C6-N6	-5.54	115.28	118.60
1	AA	1670	G	N3-C2-N2	5.54	123.78	119.90
1	AA	2081	A	N9-C4-C5	-5.54	103.58	105.80
1	AA	2703	C	N3-C4-N4	-5.54	114.12	118.00
34	BA	528	C	N3-C4-C5	5.54	124.11	121.90
1	CA	575	A	C2-N3-C4	5.54	113.37	110.60
1	CA	1609	A	C2-N3-C4	-5.54	107.83	110.60
1	CA	2388	A	O4'-C1'-N9	5.54	112.63	108.20
1	CA	2727	G	N1-C6-O6	-5.54	116.58	119.90
34	DA	705	U	C5-C6-N1	5.54	125.47	122.70
1	AA	1295	U	C5-C4-O4	-5.54	122.58	125.90
1	AA	2458	G	N1-C6-O6	-5.54	116.58	119.90
1	CA	2234	G	C5-N7-C8	-5.54	101.53	104.30
1	CA	2618	G	N7-C8-N9	-5.54	110.33	113.10
1	AA	69	G	O5'-P-OP1	5.54	117.34	110.70
1	AA	918	U	N3-C4-O4	5.54	123.27	119.40
1	AA	975	U	OP1-P-O3'	5.54	117.38	105.20
1	AA	1187	U	N3-C4-O4	5.54	123.28	119.40
1	AA	1661	C	N3-C4-N4	-5.54	114.12	118.00
1	AA	2088	C	N3-C4-N4	-5.54	114.13	118.00
1	AA	2832	G	C5-C6-O6	-5.54	125.28	128.60
34	BA	596	C	N1-C2-O2	5.54	122.22	118.90
1	CA	2452	C	OP2-P-O3'	5.54	117.38	105.20
1	AA	315	C	N3-C4-C5	5.53	124.11	121.90
1	AA	464	G	C6-N1-C2	-5.53	121.78	125.10
1	AA	1032	C	C2-N3-C4	-5.53	117.13	119.90
1	AA	1966	U	C2-N3-C4	-5.53	123.68	127.00
13	AP	61	ARG	NE-CZ-NH2	-5.53	117.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AX	57	LEU	CA-CB-CG	5.53	128.03	115.30
1	CA	592	G	N3-C4-N9	5.53	129.32	126.00
1	CA	2057	A	N7-C8-N9	-5.53	111.03	113.80
1	CA	2558	C	C5-C4-N4	-5.53	116.33	120.20
34	DA	563	A	O4'-C1'-N9	5.53	112.63	108.20
1	AA	1690	G	N7-C8-N9	-5.53	110.33	113.10
1	AA	2647	C	O5'-P-OP1	5.53	117.34	110.70
1	AA	124	A	N7-C8-N9	-5.53	111.03	113.80
1	AA	2741	U	C4-C5-C6	5.53	123.02	119.70
1	CA	1428	C	C5-C4-N4	5.53	124.07	120.20
1	CA	1821	A	N1-C6-N6	-5.53	115.28	118.60
1	CA	2691	C	OP1-P-OP2	5.53	127.90	119.60
34	BA	1465	C	OP1-P-OP2	5.53	127.89	119.60
56	DW	15	G	C5-C6-O6	5.53	131.92	128.60
1	AA	345	G	C8-N9-C4	5.53	108.61	106.40
1	AA	515	G	N1-C2-N3	5.53	127.22	123.90
1	AA	590	A	C5-C6-N6	-5.53	119.28	123.70
1	AA	1078	A	C4-C5-N7	5.53	113.46	110.70
1	AA	1603	C	N3-C4-C5	-5.53	119.69	121.90
1	AA	2341	G	C5-N7-C8	5.53	107.06	104.30
1	CA	1377	G	N3-C4-N9	5.53	129.32	126.00
1	CA	1427	A	P-O3'-C3'	5.53	126.33	119.70
1	CA	2049	G	N3-C2-N2	5.53	123.77	119.90
1	AA	309	C	C2-N3-C4	-5.53	117.14	119.90
1	AA	1013	G	C2-N3-C4	5.53	114.66	111.90
1	AA	1738	C	N3-C4-N4	-5.53	114.13	118.00
34	BA	1471	G	O5'-P-OP2	-5.53	100.73	105.70
34	DA	873	A	N1-C6-N6	5.53	121.92	118.60
1	AA	16	G	C2-N3-C4	-5.52	109.14	111.90
1	AA	2883	A	N1-C2-N3	-5.52	126.54	129.30
1	CA	248	G	C8-N9-C4	-5.52	104.19	106.40
1	AA	1413	A	OP1-P-OP2	5.52	127.88	119.60
1	AA	2264	G	C2-N3-C4	-5.52	109.14	111.90
1	AA	2342	G	C4-C5-N7	5.52	113.01	110.80
1	AA	2676	G	C4-C5-N7	5.52	113.01	110.80
1	AA	2782	C	N1-C2-O2	-5.52	115.59	118.90
1	CA	34	C	C2-N3-C4	5.52	122.66	119.90
1	CA	384	U	C6-N1-C2	5.52	124.31	121.00
1	CA	1653	G	P-O3'-C3'	5.52	126.33	119.70
1	AA	465	G	C6-C5-N7	-5.52	127.09	130.40
1	AA	982	U	C6-N1-C2	5.52	124.31	121.00
1	AA	2785	C	C5-C6-N1	-5.52	118.24	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1303	C	O5'-P-OP2	5.52	117.32	110.70
1	AA	1693	C	N1-C2-O2	-5.52	115.59	118.90
1	CA	141	A	O4'-C1'-N9	5.52	112.62	108.20
1	CA	1441	G	N9-C4-C5	5.52	107.61	105.40
1	CA	2559	C	O5'-P-OP1	-5.52	100.73	105.70
1	CA	2689	U	C6-N1-C2	-5.52	117.69	121.00
1	CA	2895	U	C5-C6-N1	5.52	125.46	122.70
34	DA	36	C	C6-N1-C2	-5.52	118.09	120.30
1	AA	761	U	N1-C2-N3	-5.52	111.59	114.90
1	AA	1429	C	C6-N1-C2	5.52	122.51	120.30
1	AA	1668	G	OP2-P-O3'	5.52	117.34	105.20
2	AB	94	C	OP2-P-O3'	5.52	117.34	105.20
1	CA	220	G	N1-C6-O6	5.52	123.21	119.90
1	CA	1959	G	N3-C4-N9	-5.52	122.69	126.00
1	AA	57	G	C8-N9-C4	5.52	108.61	106.40
34	DA	266	G	N7-C8-N9	5.52	115.86	113.10
1	AA	1261	G	C6-C5-N7	-5.51	127.09	130.40
1	AA	2033	U	N1-C2-N3	5.51	118.21	114.90
1	AA	2774	G	OP2-P-O3'	5.51	117.33	105.20
1	AA	2803	A	N7-C8-N9	5.51	116.56	113.80
1	CA	491	G	N3-C4-N9	-5.51	122.69	126.00
1	CA	743	G	N3-C4-C5	-5.51	125.84	128.60
1	CA	2073	C	C2-N3-C4	-5.51	117.14	119.90
56	DW	17	C	C5-C6-N1	5.51	123.76	121.00
1	AA	28	A	C4-C5-C6	-5.51	114.24	117.00
1	AA	518	G	C6-C5-N7	-5.51	127.09	130.40
1	AA	2454	C	O5'-P-OP1	5.51	117.31	110.70
1	CA	2070	G	C5-N7-C8	5.51	107.06	104.30
1	AA	565	C	N1-C2-O2	-5.51	115.59	118.90
1	AA	734	C	N1-C2-N3	5.51	123.06	119.20
1	AA	907	U	OP1-P-O3'	5.51	117.32	105.20
1	AA	1234	A	C6-N1-C2	-5.51	115.29	118.60
1	AA	2839	C	OP2-P-O3'	5.51	117.32	105.20
34	BA	28	G	N3-C2-N2	-5.51	116.04	119.90
1	CA	535	C	N1-C2-O2	-5.51	115.59	118.90
1	AA	964	A	C2-N3-C4	-5.51	107.84	110.60
1	AA	1065	U	N1-C2-O2	-5.51	118.94	122.80
1	AA	1341	C	N3-C4-N4	-5.51	114.14	118.00
1	AA	1360	C	N3-C2-O2	-5.51	118.04	121.90
1	AA	1950	A	N1-C2-N3	-5.51	126.55	129.30
1	AA	2028	C	C2-N3-C4	-5.51	117.14	119.90
1	AA	2742	G	C6-N1-C2	5.51	128.41	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	172	C	N3-C4-N4	-5.51	114.14	118.00
1	AA	904	C	N1-C2-N3	5.51	123.06	119.20
1	AA	2362	C	C5-C6-N1	-5.51	118.25	121.00
1	CA	59	U	N1-C2-N3	5.51	118.20	114.90
1	CA	1846	G	N9-C4-C5	5.51	107.60	105.40
1	AA	508	A	N1-C2-N3	5.51	132.05	129.30
1	AA	2091	G	O5'-P-OP1	-5.51	100.74	105.70
1	AA	2240	G	N1-C6-O6	-5.51	116.60	119.90
56	BW	17	C	N3-C2-O2	-5.51	118.05	121.90
1	CA	416	C	OP1-P-OP2	-5.51	111.34	119.60
1	CA	2544	G	C6-C5-N7	-5.51	127.10	130.40
1	AA	1509	C	C2-N1-C1'	5.50	124.86	118.80
1	CA	25	U	N1-C2-O2	-5.50	118.95	122.80
1	AA	1398	U	OP1-P-OP2	-5.50	111.35	119.60
1	AA	1784	G	OP1-P-O3'	5.50	117.31	105.20
1	AA	2637	G	N3-C2-N2	-5.50	116.05	119.90
1	CA	659	C	C2-N1-C1'	-5.50	112.75	118.80
1	CA	1190	G	O5'-P-OP2	-5.50	100.75	105.70
1	CA	1597	A	O4'-C1'-N9	5.50	112.60	108.20
1	CA	1687	G	OP2-P-O3'	5.50	117.31	105.20
34	DA	353	A	N9-C4-C5	-5.50	103.60	105.80
1	AA	437	G	C5-C6-N1	-5.50	108.75	111.50
1	AA	790	G	C5-C6-O6	5.50	131.90	128.60
1	CA	571	A	OP2-P-O3'	5.50	117.30	105.20
1	AA	1256	U	OP1-P-OP2	-5.50	111.35	119.60
1	AA	2025	G	C5-C6-N1	5.50	114.25	111.50
1	AA	2065	C	C5-C6-N1	5.50	123.75	121.00
1	CA	2509	G	C2-N3-C4	-5.50	109.15	111.90
1	AA	702	A	N9-C4-C5	5.50	108.00	105.80
1	AA	2083	G	N7-C8-N9	5.50	115.85	113.10
1	AA	2399	U	C2-N3-C4	-5.50	123.70	127.00
1	AA	2401	G	OP1-P-O3'	5.50	117.30	105.20
1	AA	414	U	C5-C4-O4	-5.50	122.60	125.90
1	AA	1272	A	O5'-P-OP2	-5.50	100.75	105.70
1	AA	2243	C	C5-C6-N1	-5.50	118.25	121.00
2	AB	49	C	N3-C2-O2	5.50	125.75	121.90
2	AB	82	G	C5-N7-C8	5.50	107.05	104.30
1	AA	241	G	N3-C4-C5	-5.50	125.85	128.60
1	AA	2249	G	C8-N9-C4	5.50	108.60	106.40
1	CA	1812	A	N1-C6-N6	-5.50	115.30	118.60
1	CA	2850	A	O5'-P-OP1	5.50	117.29	110.70
1	AA	101	A	N1-C6-N6	5.49	121.90	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1548	C	C5-C4-N4	-5.49	116.36	120.20
1	AA	2108	U	C6-N1-C2	5.49	124.30	121.00
1	AA	2227	G	N3-C4-N9	-5.49	122.70	126.00
1	AA	2513	C	C5-C4-N4	5.49	124.05	120.20
1	AA	2791	A	OP2-P-O3'	5.49	117.28	105.20
1	CA	914	C	N3-C2-O2	-5.49	118.05	121.90
1	CA	1692	U	N1-C2-O2	-5.49	118.95	122.80
1	CA	2439	A	C5'-C4'-O4'	-5.49	102.51	109.10
1	AA	724	A	C4-C5-C6	5.49	119.75	117.00
1	AA	865	G	N1-C6-O6	-5.49	116.61	119.90
1	AA	1040	C	N1-C2-O2	-5.49	115.61	118.90
34	BA	291	C	C2-N1-C1'	-5.49	112.76	118.80
1	CA	1309	G	N1-C6-O6	5.49	123.19	119.90
1	CA	2552	U	N3-C4-O4	-5.49	115.56	119.40
34	DA	906	G	C4-C5-N7	5.49	113.00	110.80
1	AA	22	C	OP1-P-O3'	-5.49	93.12	105.20
1	AA	137	G	C6-C5-N7	-5.49	127.11	130.40
1	AA	2504	U	N3-C2-O2	-5.49	118.36	122.20
1	AA	2514	G	C5-N7-C8	5.49	107.05	104.30
1	AA	2639	G	N7-C8-N9	-5.49	110.36	113.10
1	AA	2803	A	C8-N9-C4	-5.49	103.60	105.80
34	BA	17	U	C5-C4-O4	5.49	129.19	125.90
34	BA	916	G	N3-C4-C5	-5.49	125.85	128.60
1	CA	1240	U	N1-C2-O2	-5.49	118.96	122.80
1	AA	385	G	C5-C6-O6	-5.49	125.31	128.60
1	AA	953	U	C5-C4-O4	-5.49	122.61	125.90
1	AA	1317	G	N1-C2-N2	-5.49	111.26	116.20
1	AA	1559	C	O5'-P-OP2	5.49	117.28	110.70
1	AA	1719	C	N3-C2-O2	-5.49	118.06	121.90
1	AA	2030	C	OP1-P-O3'	5.49	117.28	105.20
6	AF	89	VAL	C-N-CA	-5.49	107.98	121.70
34	BA	769	G	OP2-P-O3'	5.49	117.28	105.20
1	CA	128	C	O5'-P-OP2	-5.49	100.76	105.70
1	CA	2582	G	N1-C2-N3	5.49	127.19	123.90
1	CA	378	C	N1-C2-O2	5.49	122.19	118.90
34	DA	882	C	C4-C5-C6	5.49	120.14	117.40
1	AA	451	G	N3-C4-C5	5.49	131.34	128.60
1	AA	890	G	OP2-P-O3'	5.49	117.27	105.20
1	AA	1705	C	C5-C6-N1	-5.49	118.26	121.00
1	AA	1977	U	C2-N3-C4	-5.49	123.71	127.00
1	AA	1988	A	C2-N3-C4	-5.49	107.86	110.60
1	CA	2051	A	C6-N1-C2	-5.49	115.31	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	619	U	C6-N1-C1'	5.48	128.88	121.20
1	AA	200	A	C2-N3-C4	-5.48	107.86	110.60
1	AA	998	A	C5-N7-C8	-5.48	101.16	103.90
1	AA	1931	C	N3-C4-N4	5.48	121.84	118.00
1	AA	2222	C	C5-C6-N1	-5.48	118.26	121.00
1	AA	2903	G	C5-N7-C8	5.48	107.04	104.30
34	BA	427	U	C6-N1-C2	-5.48	117.71	121.00
34	DA	353	A	C4-C5-N7	5.48	113.44	110.70
1	AA	98	U	O4'-C1'-N1	5.48	112.58	108.20
1	AA	496	A	N1-C6-N6	-5.48	115.31	118.60
1	AA	554	A	C8-N9-C4	-5.48	103.61	105.80
1	AA	2690	C	C6-N1-C2	-5.48	118.11	120.30
1	AA	2724	U	O4'-C1'-N1	5.48	112.58	108.20
34	BA	1413	A	OP1-P-O3'	5.48	117.26	105.20
1	CA	254	G	N3-C4-N9	-5.48	122.71	126.00
1	CA	948	G	C8-N9-C4	5.48	108.59	106.40
34	DA	50	A	OP1-P-OP2	5.48	127.82	119.60
1	AA	23	G	N7-C8-N9	-5.48	110.36	113.10
1	AA	1474	C	C2-N1-C1'	-5.48	112.77	118.80
1	AA	2554	A	C4-C5-C6	-5.48	114.26	117.00
1	CA	567	A	C5-C6-N1	5.48	120.44	117.70
1	CA	1408	C	C6-N1-C2	-5.48	118.11	120.30
1	AA	321	C	N3-C4-C5	-5.48	119.71	121.90
1	AA	566	C	N1-C2-O2	5.48	122.19	118.90
1	AA	798	A	N1-C2-N3	5.48	132.04	129.30
1	AA	1188	A	N7-C8-N9	5.48	116.54	113.80
1	AA	1819	C	C2-N3-C4	-5.48	117.16	119.90
1	CA	2607	G	C6-C5-N7	-5.48	127.11	130.40
1	CA	2719	G	C5-C6-O6	5.48	131.89	128.60
1	CA	2827	C	O5'-P-OP2	-5.48	100.77	105.70
1	AA	1312	G	C4-N9-C1'	-5.48	119.38	126.50
1	AA	1375	U	C2-N3-C4	-5.48	123.71	127.00
5	AE	47	VAL	CB-CA-C	-5.48	101.00	111.40
34	BA	801	U	N3-C4-C5	5.48	117.89	114.60
56	BW	11	C	O5'-P-OP2	-5.48	100.77	105.70
1	CA	1565	C	N3-C2-O2	5.48	125.73	121.90
1	AA	311	C	O5'-P-OP1	5.47	117.27	110.70
1	AA	547	G	OP2-P-O3'	5.47	117.24	105.20
1	AA	862	C	N3-C2-O2	-5.47	118.07	121.90
1	AA	2415	C	C6-N1-C2	-5.47	118.11	120.30
1	AA	2837	C	C6-N1-C2	5.47	122.49	120.30
27	A3	31	LEU	CB-CG-CD2	-5.47	101.69	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BW	73	A	N9-C4-C5	-5.47	103.61	105.80
1	CA	527	C	N3-C4-N4	-5.47	114.17	118.00
1	CA	580	C	C5-C6-N1	-5.47	118.26	121.00
1	CA	1614	A	OP1-P-O3'	5.47	117.24	105.20
1	CA	2043	C	OP1-P-OP2	5.47	127.81	119.60
1	CA	2348	U	C5-C4-O4	5.47	129.19	125.90
34	DA	566	G	N1-C6-O6	-5.47	116.61	119.90
34	DA	1230	C	C6-N1-C2	-5.47	118.11	120.30
1	AA	867	A	C8-N9-C4	5.47	107.99	105.80
1	AA	868	A	C2-N3-C4	5.47	113.34	110.60
1	AA	1953	U	C6-N1-C2	-5.47	117.72	121.00
1	AA	2422	G	N7-C8-N9	-5.47	110.36	113.10
34	BA	901	A	O5'-P-OP2	5.47	117.27	110.70
1	CA	942	G	C5-C6-N1	5.47	114.24	111.50
1	AA	73	A	C6-N1-C2	-5.47	115.32	118.60
1	AA	1397	C	O5'-P-OP1	5.47	117.27	110.70
5	AE	144	ARG	NE-CZ-NH1	5.47	123.04	120.30
34	BA	1518	A	N1-C6-N6	-5.47	115.32	118.60
1	CA	37	C	C4-C5-C6	5.47	120.14	117.40
1	AA	31	C	N3-C2-O2	-5.47	118.07	121.90
1	AA	724	A	C5-C6-N6	5.47	128.08	123.70
1	AA	1610	G	OP2-P-O3'	5.47	117.23	105.20
1	AA	2620	G	N9-C1'-C2'	-5.47	105.98	112.00
1	AA	2650	G	N3-C4-N9	5.47	129.28	126.00
1	CA	1786	A	O4'-C1'-N9	5.47	112.58	108.20
1	CA	2439	A	O5'-P-OP1	5.47	117.26	110.70
1	CA	2841	C	O5'-P-OP2	-5.47	100.78	105.70
1	AA	757	G	OP2-P-O3'	5.47	117.23	105.20
1	AA	1851	U	C4-C5-C6	5.47	122.98	119.70
1	AA	2297	C	OP2-P-O3'	5.47	117.23	105.20
1	AA	2834	C	N1-C2-O2	-5.47	115.62	118.90
34	BA	339	C	N1-C2-O2	-5.47	115.62	118.90
1	CA	518	G	N3-C4-N9	-5.47	122.72	126.00
1	CA	1694	C	C6-N1-C2	5.47	122.49	120.30
1	CA	2456	C	OP1-P-O3'	-5.47	93.17	105.20
1	CA	2487	G	OP1-P-OP2	5.47	127.80	119.60
1	AA	790	G	N3-C2-N2	5.47	123.73	119.90
1	AA	894	U	N1-C2-O2	-5.47	118.97	122.80
1	AA	2718	G	C5-C6-O6	5.47	131.88	128.60
1	AA	2801	C	N1-C2-N3	5.47	123.03	119.20
1	CA	2444	G	C5-N7-C8	5.47	107.03	104.30
1	AA	580	U	C2-N3-C4	-5.46	123.72	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	725	C	C5-C4-N4	5.46	124.03	120.20
1	AA	1052	C	C6-N1-C1'	5.46	127.36	120.80
1	AA	1274	G	N1-C2-N3	5.46	127.18	123.90
1	AA	2404	A	N9-C4-C5	-5.46	103.61	105.80
1	AA	2609	G	N7-C8-N9	-5.46	110.37	113.10
1	AA	2886	G	N1-C6-O6	-5.46	116.62	119.90
1	CA	856	C	P-O3'-C3'	5.46	126.26	119.70
1	CA	2771	C	N1-C2-O2	-5.46	115.62	118.90
1	AA	1935	A	O4'-C1'-N9	-5.46	103.83	108.20
34	BA	731	G	N9-C4-C5	5.46	107.58	105.40
56	DW	56	C	C6-N1-C2	-5.46	118.11	120.30
1	AA	1057	G	N3-C4-N9	5.46	129.28	126.00
1	AA	2015	U	N3-C2-O2	-5.46	118.38	122.20
1	CA	702	G	C4-C5-N7	-5.46	108.62	110.80
1	AA	978	A	C5'-C4'-O4'	5.46	115.65	109.10
1	CA	2680	C	O5'-P-OP2	-5.46	100.79	105.70
1	AA	235	C	C4-C5-C6	5.46	120.13	117.40
1	AA	847	A	C6-N1-C2	-5.46	115.32	118.60
1	AA	1327	G	C8-N9-C4	-5.46	104.22	106.40
1	AA	2404	A	C2-N3-C4	-5.46	107.87	110.60
1	AA	2563	C	N1-C2-O2	-5.46	115.62	118.90
34	BA	46	G	N1-C6-O6	5.46	123.17	119.90
1	CA	1781	C	C6-N1-C1'	-5.46	114.25	120.80
34	DA	893	C	OP1-P-OP2	5.46	127.79	119.60
1	AA	400	U	N3-C4-C5	5.46	117.87	114.60
1	AA	768	C	N1-C2-O2	-5.46	115.63	118.90
1	AA	1444	C	C6-N1-C2	-5.46	118.12	120.30
2	AB	100	A	N3-C4-N9	-5.46	123.03	127.40
1	CA	766	C	C5-C6-N1	-5.46	118.27	121.00
1	AA	1735	U	C5-C6-N1	-5.46	119.97	122.70
1	CA	1656	C	N3-C2-O2	-5.46	118.08	121.90
1	CA	2232	U	C5-C4-O4	5.46	129.17	125.90
34	DA	729	A	N7-C8-N9	5.46	116.53	113.80
5	AE	182	LEU	CA-CB-CG	5.45	127.84	115.30
56	BW	1	G	N3-C4-C5	-5.45	125.87	128.60
1	CA	1372	U	N3-C4-O4	5.45	123.22	119.40
1	AA	992	G	N3-C4-C5	-5.45	125.87	128.60
1	AA	1230	C	C5-C6-N1	-5.45	118.28	121.00
34	BA	111	G	N1-C6-O6	5.45	123.17	119.90
1	CA	939	G	C5-C6-O6	-5.45	125.33	128.60
1	CA	1821	A	C5-N7-C8	5.45	106.62	103.90
1	CA	2234	G	C6-N1-C2	-5.45	121.83	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2420	C	N3-C4-C5	5.45	124.08	121.90
1	CA	2678	C	N1-C2-O2	-5.45	115.63	118.90
1	AA	972	A	C2-N3-C4	5.45	113.32	110.60
1	AA	1346	U	N3-C2-O2	-5.45	118.39	122.20
1	AA	1423	G	C8-N9-C4	-5.45	104.22	106.40
1	AA	2400	A	N3-C4-N9	-5.45	123.04	127.40
1	AA	2405	A	C2-N3-C4	-5.45	107.88	110.60
1	AA	2721	G	O5'-P-OP2	5.45	117.24	110.70
1	CA	787	U	O5'-P-OP2	5.45	117.24	110.70
1	CA	1323	U	C5-C6-N1	-5.45	119.98	122.70
1	CA	1823	G	C4-C5-N7	-5.45	108.62	110.80
1	AA	880	U	N3-C4-O4	5.45	123.21	119.40
1	AA	1387	U	N3-C2-O2	5.45	126.01	122.20
1	CA	324	A	C8-N9-C4	5.45	107.98	105.80
1	AA	724	A	C5-N7-C8	5.45	106.62	103.90
1	AA	1302	G	N7-C8-N9	-5.45	110.38	113.10
1	AA	2057	G	OP1-P-OP2	5.45	127.77	119.60
1	AA	624	C	C4-C5-C6	5.44	120.12	117.40
1	AA	2742	G	C8-N9-C4	5.44	108.58	106.40
34	BA	733	A	N1-C6-N6	5.44	121.87	118.60
1	AA	894	U	N3-C2-O2	-5.44	118.39	122.20
1	AA	2030	C	C6-N1-C2	-5.44	118.12	120.30
1	AA	2389	A	C8-N9-C4	5.44	107.98	105.80
1	CA	141	A	N1-C2-N3	5.44	132.02	129.30
1	CA	1032	A	C8-N9-C4	5.44	107.98	105.80
34	DA	572	A	N7-C8-N9	-5.44	111.08	113.80
34	DA	755	G	N1-C6-O6	5.44	123.17	119.90
34	DA	1473	A	OP2-P-O3'	5.44	117.17	105.20
1	AA	2558	U	N3-C4-O4	-5.44	115.59	119.40
1	CA	109	G	C6-C5-N7	5.44	133.66	130.40
1	CA	665	C	N3-C4-N4	5.44	121.81	118.00
1	CA	2571	C	N1-C2-N3	5.44	123.01	119.20
34	DA	97	G	O4'-C1'-N9	5.44	112.55	108.20
1	AA	1210	G	C4-C5-N7	-5.44	108.62	110.80
1	AA	1608	G	O5'-P-OP2	5.44	117.23	110.70
1	AA	1980	C	N3-C4-C5	-5.44	119.72	121.90
1	CA	1695	G	C5-C6-N1	-5.44	108.78	111.50
1	AA	518	G	N3-C4-N9	5.44	129.26	126.00
1	AA	1608	G	N3-C2-N2	-5.44	116.09	119.90
1	AA	1707	C	O5'-P-OP1	5.44	117.22	110.70
14	AQ	56	ARG	NE-CZ-NH1	5.44	123.02	120.30
34	BA	28	G	N1-C6-O6	5.44	123.16	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	77	U	C6-N1-C2	-5.44	117.74	121.00
1	AA	2617	U	N3-C4-O4	-5.44	115.59	119.40
1	AA	2799	U	C5-C6-N1	-5.44	119.98	122.70
1	CA	2565	A	O5'-P-OP2	5.44	117.22	110.70
1	AA	122	G	N1-C6-O6	5.43	123.16	119.90
1	AA	518	G	O5'-P-OP1	5.43	117.22	110.70
1	AA	908	A	OP1-P-OP2	-5.43	111.45	119.60
1	AA	996	C	N1-C2-O2	5.43	122.16	118.90
1	AA	1597	C	N3-C4-N4	5.43	121.81	118.00
1	AA	1741	C	N1-C2-O2	-5.43	115.64	118.90
1	AA	2522	C	C4-C5-C6	5.43	120.12	117.40
1	AA	2550	C	N3-C4-C5	5.43	124.07	121.90
1	AA	2641	A	C4-C5-C6	5.43	119.72	117.00
1	CA	119	A	C2-N3-C4	-5.43	107.88	110.60
1	CA	2383	G	N1-C2-N2	-5.43	111.31	116.20
34	DA	283	C	N3-C2-O2	-5.43	118.09	121.90
34	DA	1158	C	N3-C2-O2	-5.43	118.10	121.90
1	AA	27	G	C4-C5-N7	-5.43	108.63	110.80
1	AA	357	G	N9-C4-C5	5.43	107.57	105.40
1	AA	1282	G	O5'-P-OP2	5.43	117.22	110.70
1	AA	2008	A	O5'-P-OP1	-5.43	100.81	105.70
1	AA	2635	G	C4-N9-C1'	5.43	133.56	126.50
34	BA	653	A	N1-C6-N6	5.43	121.86	118.60
1	CA	799	G	C2-N3-C4	5.43	114.62	111.90
1	CA	2023	G	C8-N9-C4	-5.43	104.23	106.40
34	DA	50	A	N7-C8-N9	5.43	116.52	113.80
1	AA	28	A	N1-C2-N3	-5.43	126.58	129.30
1	AA	38	A	C6-N1-C2	-5.43	115.34	118.60
1	AA	728	G	C5-N7-C8	5.43	107.02	104.30
1	AA	1237	G	C6-C5-N7	5.43	133.66	130.40
1	AA	2289	G	N1-C2-N3	5.43	127.16	123.90
1	CA	2244	U	O5'-P-OP2	-5.43	100.81	105.70
2	CB	47	C	N1-C2-N3	-5.43	115.40	119.20
1	AA	141	C	OP2-P-O3'	5.43	117.14	105.20
1	AA	353	G	C5-C6-N1	5.43	114.22	111.50
1	AA	546	G	OP1-P-OP2	-5.43	111.46	119.60
1	AA	673	G	N1-C2-N3	5.43	127.16	123.90
1	AA	901	G	C5-C6-N1	-5.43	108.78	111.50
1	AA	1015	C	C5-C6-N1	-5.43	118.28	121.00
1	AA	1612	C	OP1-P-OP2	5.43	127.75	119.60
34	BA	283	C	C6-N1-C2	-5.43	118.13	120.30
1	CA	933	A	N7-C8-N9	5.43	116.51	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2516	G	C6-C5-N7	-5.43	127.14	130.40
1	AA	1051	C	OP2-P-O3'	5.43	117.14	105.20
1	AA	1317	G	N3-C2-N2	5.43	123.70	119.90
1	AA	1463	C	OP1-P-OP2	-5.43	111.46	119.60
1	AA	12	U	C6-N1-C2	-5.43	117.74	121.00
1	AA	585	U	C2-N3-C4	-5.43	123.74	127.00
1	AA	2527	C	N3-C4-C5	5.43	124.07	121.90
1	CA	1656	C	OP2-P-O3'	5.43	117.14	105.20
1	CA	2555	U	OP1-P-O3'	-5.43	93.26	105.20
29	C5	16	ARG	NE-CZ-NH2	-5.43	117.59	120.30
1	AA	58	U	OP2-P-O3'	5.42	117.14	105.20
1	AA	528	A	O5'-P-OP2	-5.42	100.82	105.70
1	AA	1206	G	O5'-P-OP2	5.42	117.21	110.70
1	AA	2379	G	N3-C4-N9	5.42	129.25	126.00
1	AA	2636	G	C2-N3-C4	5.42	114.61	111.90
2	AB	11	C	N3-C2-O2	-5.42	118.10	121.90
11	AN	99	LEU	CB-CG-CD1	-5.42	101.78	111.00
34	BA	579	G	C5-C6-N1	-5.42	108.79	111.50
1	CA	515	A	C6-N1-C2	-5.42	115.34	118.60
1	AA	710	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	1874	C	N3-C4-N4	-5.42	114.20	118.00
1	AA	2385	G	N1-C6-O6	5.42	123.15	119.90
1	CA	424	G	N3-C4-C5	5.42	131.31	128.60
1	CA	1622	G	C8-N9-C4	5.42	108.57	106.40
1	CA	1698	A	C4-C5-N7	5.42	113.41	110.70
34	DA	754	C	N3-C2-O2	-5.42	118.10	121.90
1	AA	2862	G	C5-C6-O6	5.42	131.85	128.60
1	CA	1768	U	C2-N1-C1'	-5.42	111.19	117.70
1	CA	2088	G	N9-C4-C5	5.42	107.57	105.40
1	CA	2540	C	OP1-P-OP2	5.42	127.73	119.60
1	CA	2588	G	C6-N1-C2	5.42	128.35	125.10
1	AA	2263	G	C5-N7-C8	5.42	107.01	104.30
1	AA	2379	G	C4-N9-C1'	5.42	133.54	126.50
1	CA	330	A	N7-C8-N9	5.42	116.51	113.80
1	CA	513	A	C6-C5-N7	-5.42	128.51	132.30
1	CA	1351	C	N3-C4-N4	-5.42	114.21	118.00
1	AA	243	G	N3-C2-N2	5.42	123.69	119.90
1	AA	879	G	OP1-P-O3'	5.42	117.12	105.20
1	AA	1082	G	C6-C5-N7	5.42	133.65	130.40
1	CA	567	A	C4-C5-N7	5.42	113.41	110.70
56	DW	59	U	N3-C2-O2	-5.42	118.41	122.20
1	AA	622	G	N7-C8-N9	-5.42	110.39	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	724	A	N1-C6-N6	-5.42	115.35	118.60
1	AA	1741	C	N3-C4-C5	5.42	124.07	121.90
1	AA	1742	G	N1-C2-N3	-5.42	120.65	123.90
1	CA	734	A	N1-C2-N3	5.42	132.01	129.30
1	CA	1334	G	C6-C5-N7	5.42	133.65	130.40
1	CA	1678	G	N1-C2-N3	5.42	127.15	123.90
1	CA	2230	G	C8-N9-C4	-5.42	104.23	106.40
1	AA	2249	G	N9-C4-C5	-5.42	103.23	105.40
1	AA	2475	C	C2-N3-C4	-5.42	117.19	119.90
34	BA	769	G	C5-C6-O6	-5.42	125.35	128.60
1	CA	1768	U	C6-N1-C1'	5.42	128.78	121.20
1	CA	2222	G	C5-C6-O6	5.42	131.85	128.60
1	AA	1850	A	C5-C6-N1	-5.41	114.99	117.70
34	BA	771	G	N3-C4-N9	-5.41	122.75	126.00
1	CA	34	C	C5-C6-N1	5.41	123.71	121.00
34	DA	1065	U	P-O3'-C3'	5.41	126.19	119.70
1	AA	756	U	C5-C6-N1	-5.41	119.99	122.70
1	AA	2026	G	C2-N3-C4	-5.41	109.19	111.90
1	AA	2449	U	OP1-P-OP2	5.41	127.72	119.60
1	AA	2518	U	OP1-P-OP2	-5.41	111.48	119.60
1	CA	328	U	C5-C6-N1	-5.41	119.99	122.70
1	CA	1659	U	C2-N3-C4	-5.41	123.75	127.00
1	AA	213	G	C8-N9-C4	-5.41	104.24	106.40
1	AA	240	A	N3-C4-N9	5.41	131.73	127.40
1	AA	1958	A	N1-C6-N6	5.41	121.85	118.60
1	AA	2574	U	C4-C5-C6	5.41	122.95	119.70
1	AA	2696	U	N1-C2-O2	-5.41	119.01	122.80
34	BA	715	A	N1-C6-N6	5.41	121.85	118.60
1	CA	2086	U	O5'-P-OP1	5.41	117.19	110.70
34	DA	108	G	C4-C5-N7	5.41	112.97	110.80
1	AA	132	C	OP2-P-O3'	5.41	117.10	105.20
1	AA	253	C	C6-N1-C2	5.41	122.46	120.30
1	AA	831	A	C8-N9-C4	5.41	107.96	105.80
1	AA	1423	G	N1-C2-N3	5.41	127.14	123.90
1	AA	1711	A	C5-C6-N1	-5.41	115.00	117.70
1	AA	1754	G	N9-C4-C5	-5.41	103.24	105.40
1	AA	2115	G	C8-N9-C1'	5.41	134.03	127.00
34	BA	1057	G	N3-C4-N9	-5.41	122.75	126.00
1	CA	24	G	C8-N9-C4	5.41	108.56	106.40
1	CA	2396	G	C5-C6-N1	5.41	114.20	111.50
1	CA	2739	U	C5-C6-N1	-5.41	120.00	122.70
34	DA	275	G	C5-C6-O6	-5.41	125.35	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	665	A	OP1-P-OP2	5.41	127.71	119.60
34	BA	9	G	N3-C4-N9	5.41	129.24	126.00
1	CA	41	C	OP2-P-O3'	5.41	117.10	105.20
1	CA	1673	U	C2-N3-C4	-5.41	123.76	127.00
1	CA	2679	A	OP2-P-O3'	5.41	117.10	105.20
1	AA	76	C	C6-N1-C2	5.41	122.46	120.30
1	AA	1354	A	C5-C6-N1	-5.41	115.00	117.70
1	AA	1628	G	N3-C4-C5	-5.41	125.90	128.60
1	AA	1642	A	N7-C8-N9	-5.41	111.10	113.80
1	AA	2802	C	C5-C6-N1	-5.41	118.30	121.00
34	DA	39	G	O5'-P-OP2	-5.41	100.83	105.70
1	AA	729	G	C8-N9-C1'	-5.40	119.97	127.00
1	AA	1045	U	C5-C4-O4	-5.40	122.66	125.90
1	AA	1262	C	C5-C6-N1	-5.40	118.30	121.00
1	AA	1721	G	C4-C5-N7	5.40	112.96	110.80
4	AD	94	LEU	CB-CG-CD1	-5.40	101.81	111.00
34	BA	329	A	O5'-P-OP2	-5.40	100.84	105.70
1	CA	1760	A	OP1-P-OP2	5.40	127.71	119.60
1	CA	2820	A	C4-N9-C1'	5.40	136.03	126.30
1	AA	176	G	C6-C5-N7	-5.40	127.16	130.40
1	AA	1066	A	C4-C5-N7	5.40	113.40	110.70
1	AA	1264	G	C6-C5-N7	-5.40	127.16	130.40
1	AA	1611	C	OP2-P-O3'	5.40	117.09	105.20
1	AA	1962	U	P-O3'-C3'	5.40	126.18	119.70
1	CA	1558	A	O4'-C1'-N9	5.40	112.52	108.20
1	CA	2598	A	O5'-P-OP1	5.40	117.18	110.70
34	DA	922	G	C8-N9-C4	-5.40	104.24	106.40
1	AA	239	G	C4-C5-N7	5.40	112.96	110.80
1	AA	550	U	N3-C4-O4	-5.40	115.62	119.40
1	AA	617	U	C4-C5-C6	-5.40	116.46	119.70
1	AA	1493	C	N1-C2-O2	5.40	122.14	118.90
1	AA	1502	G	C5-C6-N1	5.40	114.20	111.50
1	AA	2062	C	C6-N1-C2	5.40	122.46	120.30
34	BA	1394	A	C8-N9-C4	5.40	107.96	105.80
1	CA	330	A	C6-N1-C2	5.40	121.84	118.60
1	CA	2259	G	N3-C4-C5	5.40	131.30	128.60
1	CA	2407	G	O5'-P-OP2	-5.40	100.84	105.70
34	DA	1482	G	C5-C6-N1	-5.40	108.80	111.50
1	AA	1022	C	N1-C2-O2	5.40	122.14	118.90
1	CA	127	A	C8-N9-C4	-5.40	103.64	105.80
1	CA	1381	G	C5-C6-N1	5.40	114.20	111.50
1	AA	649	C	N1-C2-N3	5.40	122.98	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	817	G	C5-N7-C8	-5.40	101.60	104.30
2	AB	6	C	C2-N3-C4	-5.40	117.20	119.90
1	CA	690	G	C5-C6-O6	-5.40	125.36	128.60
1	CA	1600	C	N1-C2-O2	-5.40	115.66	118.90
1	CA	2014	A	N1-C6-N6	5.40	121.84	118.60
1	AA	103	C	N3-C4-C5	5.40	124.06	121.90
1	AA	200	A	O5'-P-OP1	5.40	117.17	110.70
1	AA	327	U	N3-C4-C5	5.40	117.84	114.60
1	AA	1854	G	C5-C6-N1	5.40	114.20	111.50
1	AA	2595	G	O5'-P-OP2	-5.40	100.84	105.70
34	BA	757	U	C5-C6-N1	-5.40	120.00	122.70
1	CA	562	U	C6-N1-C2	-5.40	117.76	121.00
1	CA	1721	G	N3-C4-N9	5.40	129.24	126.00
1	AA	324	A	C5-C6-N6	-5.39	119.38	123.70
1	AA	743	G	N3-C2-N2	5.39	123.68	119.90
1	AA	761	U	N1-C2-O2	5.39	126.58	122.80
1	AA	957	A	C2-N3-C4	5.39	113.30	110.60
1	AA	1278	G	N3-C2-N2	-5.39	116.12	119.90
1	AA	1526	G	C5-C6-O6	-5.39	125.36	128.60
1	AA	1745	A	C8-N9-C1'	-5.39	117.99	127.70
1	AA	2698	G	OP1-P-OP2	5.39	127.69	119.60
1	CA	2073	C	C6-N1-C2	5.39	122.46	120.30
1	CA	2694	G	C8-N9-C4	-5.39	104.24	106.40
1	AA	120	G	N9-C4-C5	5.39	107.56	105.40
1	AA	593	G	OP2-P-O3'	5.39	117.06	105.20
1	AA	714	U	C4-C5-C6	5.39	122.94	119.70
1	AA	896	A	C4-C5-C6	5.39	119.70	117.00
1	AA	917	A	C2-N3-C4	5.39	113.30	110.60
1	AA	1061	G	N1-C2-N2	-5.39	111.35	116.20
23	AZ	77	ASP	CB-CG-OD1	5.39	123.15	118.30
34	BA	514	C	N3-C2-O2	5.39	125.67	121.90
34	BA	728	A	O5'-P-OP2	-5.39	100.85	105.70
34	BA	791	G	N3-C4-N9	5.39	129.24	126.00
1	CA	127	A	N9-C4-C5	5.39	107.96	105.80
1	CA	1352	U	O5'-P-OP2	-5.39	100.85	105.70
1	CA	1934	C	C5-C6-N1	-5.39	118.30	121.00
34	DA	748	C	P-O3'-C3'	5.39	126.17	119.70
1	AA	499	G	C2-N3-C4	-5.39	109.20	111.90
1	AA	904	C	C2-N3-C4	-5.39	117.20	119.90
1	AA	2375	C	OP1-P-OP2	5.39	127.69	119.60
1	CA	240	G	C5-C6-O6	-5.39	125.36	128.60
1	CA	811	U	O5'-P-OP1	-5.39	100.85	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2500	U	C6-N1-C2	5.39	124.23	121.00
1	CA	2681	C	C6-N1-C2	-5.39	118.14	120.30
1	AA	1314	A	N9-C4-C5	5.39	107.95	105.80
1	AA	1475	G	N3-C4-C5	-5.39	125.91	128.60
1	AA	1860	A	N7-C8-N9	-5.39	111.11	113.80
1	AA	1212	C	C5-C4-N4	-5.39	116.43	120.20
1	AA	2038	U	OP2-P-O3'	5.39	117.05	105.20
1	AA	2548	G	N3-C4-C5	-5.39	125.91	128.60
34	BA	611	A	O5'-P-OP2	-5.39	100.85	105.70
34	BA	1405	G	OP2-P-O3'	5.39	117.05	105.20
1	CA	2432	A	N1-C2-N3	5.39	131.99	129.30
1	AA	438	G	O5'-P-OP2	-5.38	100.86	105.70
1	AA	1245	C	C6-N1-C2	5.38	122.45	120.30
1	AA	2693	C	C5-C6-N1	-5.38	118.31	121.00
1	CA	2570	G	C5-C6-N1	-5.38	108.81	111.50
1	AA	2468	C	N1-C2-N3	-5.38	115.43	119.20
34	BA	1087	G	N7-C8-N9	5.38	115.79	113.10
1	AA	195	U	N1-C2-N3	5.38	118.13	114.90
1	AA	907	U	C2-N3-C4	-5.38	123.77	127.00
1	AA	1234	A	N1-C6-N6	5.38	121.83	118.60
1	AA	1720	U	N3-C4-C5	5.38	117.83	114.60
1	AA	1766	G	N7-C8-N9	5.38	115.79	113.10
1	AA	2516	U	C2-N3-C4	-5.38	123.77	127.00
1	AA	2645	G	N1-C6-O6	-5.38	116.67	119.90
1	AA	2705	A	C5-C6-N6	-5.38	119.40	123.70
2	AB	17	C	N3-C4-C5	-5.38	119.75	121.90
34	BA	399	G	C8-N9-C4	5.38	108.55	106.40
34	BA	899	C	N3-C2-O2	5.38	125.67	121.90
34	BA	1527	C	C5-C6-N1	-5.38	118.31	121.00
1	AA	1149	A	C2-N3-C4	-5.38	107.91	110.60
1	AA	1912	A	OP2-P-O3'	5.38	117.03	105.20
1	AA	1926	G	C2-N3-C4	5.38	114.59	111.90
1	CA	659	C	N1-C2-O2	-5.38	115.67	118.90
1	CA	1385	G	N3-C4-N9	-5.38	122.77	126.00
1	CA	1408	C	N1-C2-O2	-5.38	115.67	118.90
1	CA	2229	C	O5'-P-OP2	5.38	117.16	110.70
34	DA	618	C	N1-C2-O2	5.38	122.13	118.90
1	AA	254	A	N3-C4-N9	-5.38	123.10	127.40
1	AA	1423	G	C5-C6-O6	5.38	131.83	128.60
1	AA	1674	G	C2-N3-C4	5.38	114.59	111.90
1	AA	2446	A	N1-C2-N3	5.38	131.99	129.30
1	AA	2593	G	C8-N9-C4	-5.38	104.25	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	AD	257	LEU	CB-CG-CD1	-5.38	101.86	111.00
34	BA	1030(B)	C	C6-N1-C2	-5.38	118.15	120.30
1	CA	1660	C	O4'-C1'-N1	5.38	112.50	108.20
1	CA	2253	G	C5-C6-O6	-5.38	125.37	128.60
1	CA	2568	C	O5'-P-OP2	-5.38	100.86	105.70
1	AA	19	C	C5-C4-N4	-5.38	116.44	120.20
1	AA	177	G	C5-C6-O6	5.38	131.83	128.60
1	AA	2505	U	C6-N1-C2	-5.38	117.77	121.00
34	BA	900	A	C5-C6-N6	-5.38	119.40	123.70
1	CA	205	G	N9-C4-C5	-5.38	103.25	105.40
1	CA	2066	C	C5-C6-N1	-5.38	118.31	121.00
34	DA	115	G	P-O3'-C3'	5.38	126.15	119.70
1	AA	2019	G	O5'-P-OP1	5.38	117.15	110.70
1	AA	2397	C	C6-N1-C2	5.38	122.45	120.30
1	AA	483	A	C5-C6-N1	-5.37	115.01	117.70
1	AA	672	G	N3-C4-C5	-5.37	125.91	128.60
1	AA	1951	G	C5-C6-O6	5.37	131.82	128.60
1	AA	2622	C	C4-C5-C6	5.37	120.09	117.40
1	AA	2847	G	O5'-P-OP1	-5.37	100.86	105.70
1	CA	123	G	C5-C6-O6	-5.37	125.38	128.60
1	CA	450	G	N3-C4-C5	-5.37	125.91	128.60
1	CA	1265	A	C2-N3-C4	-5.37	107.91	110.60
1	CA	1552	G	C5-C6-O6	5.37	131.82	128.60
1	CA	2576	G	N3-C4-C5	-5.37	125.91	128.60
1	CA	2699	C	N3-C2-O2	-5.37	118.14	121.90
1	AA	16	G	N9-C4-C5	5.37	107.55	105.40
1	AA	1248	G	N1-C2-N2	-5.37	111.36	116.20
1	AA	1497	G	N1-C6-O6	-5.37	116.68	119.90
1	AA	2321	A	C8-N9-C4	-5.37	103.65	105.80
1	AA	2527	C	N3-C4-N4	5.37	121.76	118.00
34	BA	576	G	N1-C6-O6	5.37	123.12	119.90
1	CA	2588	G	N9-C4-C5	-5.37	103.25	105.40
1	AA	1282	G	C8-N9-C1'	-5.37	120.02	127.00
1	AA	2376	C	N1-C2-N3	-5.37	115.44	119.20
1	AA	599	U	N1-C2-O2	-5.37	119.04	122.80
1	AA	911	G	N3-C4-N9	5.37	129.22	126.00
1	AA	1357	G	C5-N7-C8	-5.37	101.62	104.30
1	AA	1974	A	C2-N3-C4	-5.37	107.92	110.60
34	BA	1402	C	N1-C2-O2	-5.37	115.68	118.90
1	CA	52	A	C2-N3-C4	-5.37	107.92	110.60
1	CA	513	A	N1-C2-N3	5.37	131.98	129.30
1	CA	2549	G	N3-C4-N9	5.37	129.22	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2691	C	C5-C6-N1	5.37	123.68	121.00
34	DA	577	G	OP2-P-O3'	5.37	117.01	105.20
1	AA	18	C	C6-N1-C2	5.37	122.45	120.30
1	AA	197	C	C6-N1-C2	5.37	122.45	120.30
1	AA	470	C	C5-C4-N4	5.37	123.96	120.20
1	AA	2057	G	O5'-P-OP2	-5.37	100.87	105.70
1	AA	2613	C	N3-C4-N4	5.37	121.76	118.00
34	BA	918	A	N9-C4-C5	5.37	107.95	105.80
1	CA	463	G	O5'-P-OP2	-5.37	100.87	105.70
1	CA	2570	G	C5-C6-O6	5.37	131.82	128.60
1	AA	854	U	N3-C4-O4	-5.37	115.64	119.40
1	AA	1009	C	O5'-P-OP2	-5.37	100.87	105.70
1	AA	1617	A	C2-N3-C4	-5.37	107.92	110.60
1	AA	1858	C	OP2-P-O3'	5.37	117.00	105.20
2	AB	98	G	O5'-P-OP2	-5.37	100.87	105.70
1	CA	64	A	O5'-P-OP1	-5.37	100.87	105.70
1	CA	298	G	N3-C4-N9	5.37	129.22	126.00
1	CA	1278	A	N1-C2-N3	5.37	131.98	129.30
1	AA	488	C	C6-N1-C1'	5.36	127.24	120.80
1	AA	1475	G	P-O3'-C3'	5.36	126.14	119.70
1	AA	1815	A	OP1-P-O3'	5.36	117.00	105.20
1	AA	2220	A	O5'-P-OP2	5.36	117.14	110.70
1	AA	2829	G	N1-C2-N3	5.36	127.12	123.90
34	BA	115	G	C2-N3-C4	5.36	114.58	111.90
34	BA	791	G	N3-C2-N2	5.36	123.65	119.90
34	BA	1484	C	N1-C2-O2	-5.36	115.68	118.90
1	CA	12	U	N3-C2-O2	-5.36	118.45	122.20
1	CA	687	C	C5-C6-N1	5.36	123.68	121.00
1	CA	749	C	O5'-P-OP2	5.36	117.14	110.70
1	AA	976	G	C4-C5-N7	-5.36	108.66	110.80
1	AA	2406	C	OP1-P-O3'	5.36	116.99	105.20
1	CA	312	G	C8-N9-C4	-5.36	104.26	106.40
1	CA	2707	G	C2-N3-C4	-5.36	109.22	111.90
34	DA	7	G	N3-C4-C5	5.36	131.28	128.60
1	AA	2236	G	N7-C8-N9	5.36	115.78	113.10
1	AA	2239	A	C4-C5-C6	5.36	119.68	117.00
34	DA	698	G	O5'-P-OP2	-5.36	100.88	105.70
1	AA	124	A	C5-N7-C8	5.36	106.58	103.90
1	AA	309	C	N3-C2-O2	-5.36	118.15	121.90
1	AA	990	A	C1'-O4'-C4'	-5.36	105.61	109.90
1	AA	1015	C	C6-N1-C1'	-5.36	114.37	120.80
1	AA	1371	G	C4-C5-N7	-5.36	108.66	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	504	C	C2-N1-C1'	5.36	124.69	118.80
34	BA	586	C	N1-C2-O2	-5.36	115.69	118.90
34	BA	824	C	OP2-P-O3'	5.36	116.99	105.20
1	CA	704	G	C5-C6-O6	-5.36	125.39	128.60
1	AA	345	G	N1-C6-O6	5.36	123.11	119.90
1	AA	845	G	N7-C8-N9	-5.36	110.42	113.10
1	AA	1737	A	OP1-P-OP2	-5.36	111.57	119.60
27	A3	56	VAL	CB-CA-C	-5.36	101.22	111.40
34	BA	768	A	C5-C6-N6	-5.36	119.42	123.70
1	CA	141	A	OP2-P-O3'	5.36	116.98	105.20
1	CA	592	G	N3-C2-N2	5.36	123.65	119.90
1	CA	662	G	C8-N9-C4	5.36	108.54	106.40
1	CA	1296	G	C8-N9-C4	-5.36	104.26	106.40
1	CA	1936	A	C8-N9-C4	5.36	107.94	105.80
34	DA	335	C	N1-C2-O2	5.36	122.11	118.90
1	AA	281	G	C8-N9-C4	5.35	108.54	106.40
1	AA	2858	G	N1-C2-N3	-5.35	120.69	123.90
34	BA	884	U	N3-C4-C5	-5.35	111.39	114.60
1	CA	829	A	O5'-P-OP1	-5.35	100.88	105.70
1	CA	2239	G	C5-C6-O6	5.35	131.81	128.60
1	AA	129	G	O5'-P-OP1	5.35	117.12	110.70
1	AA	510	C	C4-C5-C6	-5.35	114.72	117.40
1	AA	1363	A	C2-N3-C4	-5.35	107.92	110.60
1	AA	1684	A	N3-C4-N9	-5.35	123.12	127.40
1	AA	2854	G	C5-C6-N1	5.35	114.18	111.50
1	CA	1822	G	N3-C4-N9	-5.35	122.79	126.00
1	AA	2026	G	N1-C6-O6	5.35	123.11	119.90
1	AA	2829	G	C2-N3-C4	-5.35	109.22	111.90
31	A7	33	ARG	NE-CZ-NH1	5.35	122.98	120.30
34	BA	299	G	C6-C5-N7	-5.35	127.19	130.40
1	CA	2499	C	C5-C4-N4	-5.35	116.45	120.20
1	CA	2727	G	OP2-P-O3'	5.35	116.97	105.20
1	AA	211	A	N1-C6-N6	-5.35	115.39	118.60
1	AA	1017	G	N7-C8-N9	5.35	115.77	113.10
1	AA	2466	G	C5-C6-O6	5.35	131.81	128.60
1	AA	2484	G	N3-C4-N9	5.35	129.21	126.00
1	AA	2625	U	OP1-P-OP2	5.35	127.62	119.60
2	AB	37	C	OP1-P-O3'	-5.35	93.43	105.20
1	CA	561	G	N1-C6-O6	-5.35	116.69	119.90
1	CA	1968	G	OP2-P-O3'	5.35	116.97	105.20
1	AA	724	A	N9-C4-C5	5.35	107.94	105.80
1	AA	1975	A	N1-C6-N6	-5.35	115.39	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	429	U	O5'-P-OP1	-5.35	100.89	105.70
1	CA	668	G	N9-C4-C5	-5.35	103.26	105.40
1	CA	687	C	N3-C4-C5	5.35	124.04	121.90
1	CA	1558	A	C4-C5-N7	5.35	113.37	110.70
1	CA	2534	A	OP2-P-O3'	5.35	116.96	105.20
1	AA	192	C	N1-C2-O2	-5.35	115.69	118.90
1	AA	407	U	O5'-P-OP1	5.35	117.11	110.70
1	AA	413	G	C5-N7-C8	-5.35	101.63	104.30
1	CA	1675	C	C5-C6-N1	5.35	123.67	121.00
1	CA	1970	A	O4'-C1'-N9	-5.35	103.92	108.20
1	AA	1552	C	C6-N1-C2	-5.34	118.16	120.30
34	BA	1432	G	N1-C6-O6	-5.34	116.69	119.90
1	CA	389	G	C8-N9-C4	5.34	108.54	106.40
1	CA	2236	C	OP2-P-O3'	5.34	116.96	105.20
34	DA	353	A	C5-C6-N6	-5.34	119.42	123.70
1	AA	884	C	N1-C2-O2	-5.34	115.69	118.90
1	AA	2636	G	N3-C4-C5	-5.34	125.93	128.60
1	AA	2773	C	C6-N1-C2	5.34	122.44	120.30
34	BA	454	C	N3-C2-O2	-5.34	118.16	121.90
1	CA	1782	C	OP1-P-OP2	5.34	127.61	119.60
1	CA	2254	C	OP2-P-O3'	5.34	116.95	105.20
1	CA	2546	U	C5-C6-N1	-5.34	120.03	122.70
1	AA	1192	C	N3-C2-O2	5.34	125.64	121.90
1	AA	1476	C	C2-N3-C4	-5.34	117.23	119.90
1	AA	1962	U	OP1-P-O3'	5.34	116.95	105.20
47	BN	44	LEU	CA-CB-CG	5.34	127.58	115.30
56	BW	12	U	N3-C2-O2	-5.34	118.46	122.20
1	CA	1027	A	C8-N9-C4	5.34	107.94	105.80
1	CA	1609	A	N9-C4-C5	-5.34	103.66	105.80
1	CA	1905	C	N1-C2-N3	-5.34	115.46	119.20
34	DA	1482	G	C4-C5-C6	5.34	122.00	118.80
1	AA	256	C	C2-N3-C4	-5.34	117.23	119.90
1	AA	1186	U	C4-C5-C6	5.34	122.90	119.70
1	AA	1653	C	C6-N1-C1'	-5.34	114.39	120.80
1	CA	786	C	OP2-P-O3'	5.34	116.94	105.20
1	CA	2698	U	C4-C5-C6	-5.34	116.50	119.70
2	CB	78	A	C6-N1-C2	-5.34	115.40	118.60
34	DA	853	G	C6-C5-N7	-5.34	127.20	130.40
1	AA	744	C	O5'-P-OP2	-5.34	100.90	105.70
1	AA	1046	A	O5'-P-OP1	-5.34	100.90	105.70
1	AA	1225	C	C6-N1-C2	5.34	122.44	120.30
1	AA	1378	G	C2-N3-C4	5.34	114.57	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1703	C	OP1-P-OP2	-5.34	111.60	119.60
1	AA	2487	C	N1-C2-O2	5.34	122.10	118.90
1	AA	2506	G	C5-C6-N1	-5.34	108.83	111.50
34	BA	912	C	N3-C2-O2	5.34	125.64	121.90
34	BA	1529	G	N1-C6-O6	-5.34	116.70	119.90
1	CA	263	C	C5-C4-N4	-5.34	116.47	120.20
1	CA	424	G	N3-C4-N9	-5.34	122.80	126.00
1	AA	663	G	C5-C6-O6	5.33	131.80	128.60
1	AA	721	G	N7-C8-N9	5.33	115.77	113.10
1	AA	1449	C	C4-C5-C6	5.33	120.07	117.40
1	CA	942	G	N1-C6-O6	-5.33	116.70	119.90
1	CA	1785	A	O5'-P-OP1	-5.33	100.90	105.70
1	CA	2486	G	C4-N9-C1'	5.33	133.44	126.50
1	AA	471	C	C5-C6-N1	-5.33	118.33	121.00
1	AA	1786	A	OP1-P-OP2	5.33	127.60	119.60
1	AA	2705	A	C8-N9-C4	5.33	107.93	105.80
34	BA	123	C	N1-C2-O2	-5.33	115.70	118.90
56	BW	76	A	C4-C5-N7	5.33	113.37	110.70
1	CA	386	G	O4'-C1'-N9	5.33	112.47	108.20
1	AA	119	G	C6-N1-C2	-5.33	121.90	125.10
1	AA	586	G	C5-N7-C8	5.33	106.97	104.30
1	AA	1648	U	N1-C2-O2	5.33	126.53	122.80
1	AA	2742	G	C5-C6-O6	5.33	131.80	128.60
1	CA	1185	C	O5'-P-OP2	-5.33	100.90	105.70
1	CA	1763	G	N3-C4-C5	5.33	131.27	128.60
1	CA	1914	C	C2-N1-C1'	5.33	124.66	118.80
1	AA	623	G	N1-C6-O6	-5.33	116.70	119.90
1	AA	1023	G	C5-C6-N1	5.33	114.17	111.50
1	AA	2479	C	C6-N1-C2	5.33	122.43	120.30
9	AK	128	LEU	C-N-CA	5.33	144.38	122.00
34	BA	160	A	C8-N9-C4	-5.33	103.67	105.80
34	BA	1442	G	N1-C6-O6	5.33	123.10	119.90
1	CA	393	C	O5'-P-OP2	5.33	117.10	110.70
1	CA	2738	A	C8-N9-C4	5.33	107.93	105.80
1	AA	493	G	C5-C6-N1	5.33	114.17	111.50
1	AA	1922	A	N1-C6-N6	-5.33	115.40	118.60
1	AA	2289	G	C4-C5-N7	-5.33	108.67	110.80
1	AA	2600	G	C2-N3-C4	-5.33	109.23	111.90
17	AT	95	ARG	NE-CZ-NH2	5.33	122.96	120.30
34	BA	991	U	P-O3'-C3'	5.33	126.09	119.70
1	CA	571	A	C5-C6-N1	5.33	120.36	117.70
1	CA	2444	G	C4-N9-C1'	5.33	133.43	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	926	G	N9-C4-C5	5.33	107.53	105.40
34	DA	1503	A	C8-N9-C4	5.33	107.93	105.80
1	AA	2638	C	C4-C5-C6	5.33	120.06	117.40
1	AA	310	C	C6-N1-C2	5.33	122.43	120.30
1	AA	348	A	OP1-P-O3'	5.33	116.92	105.20
1	AA	577	U	C5-C4-O4	-5.33	122.70	125.90
1	AA	1066	A	C6-C5-N7	-5.33	128.57	132.30
2	AB	85	G	C4-N9-C1'	5.33	133.42	126.50
34	BA	753	A	OP1-P-O3'	5.33	116.92	105.20
1	CA	681	G	C8-N9-C4	5.33	108.53	106.40
1	CA	1817	G	O5'-P-OP2	-5.33	100.91	105.70
1	CA	2286	A	C4-C5-C6	5.33	119.66	117.00
1	AA	1052	C	C5-C6-N1	-5.32	118.34	121.00
1	AA	1626	A	O5'-P-OP1	-5.32	100.91	105.70
1	AA	1792	C	N1-C2-O2	-5.32	115.71	118.90
1	AA	2411	G	N1-C6-O6	-5.32	116.71	119.90
1	AA	2412	G	N9-C4-C5	-5.32	103.27	105.40
1	CA	1274	A	C6-C5-N7	-5.32	128.57	132.30
1	CA	1648	C	C2-N1-C1'	-5.32	112.94	118.80
1	AA	1989	C	N3-C2-O2	-5.32	118.17	121.90
1	AA	2529	C	C5-C6-N1	-5.32	118.34	121.00
34	BA	1431	C	C2-N3-C4	-5.32	117.24	119.90
1	CA	277	C	C6-N1-C1'	-5.32	114.41	120.80
1	CA	777	A	C6-N1-C2	-5.32	115.41	118.60
1	CA	1769	G	N3-C2-N2	-5.32	116.17	119.90
1	AA	255	G	OP2-P-O3'	5.32	116.90	105.20
1	AA	748	G	OP1-P-OP2	5.32	127.58	119.60
1	AA	1331	G	C5-C6-N1	5.32	114.16	111.50
1	AA	1634	C	N3-C2-O2	5.32	125.62	121.90
1	AA	2622	C	C6-N1-C2	-5.32	118.17	120.30
1	AA	2882	G	OP1-P-OP2	5.32	127.58	119.60
2	AB	80	U	C6-N1-C2	5.32	124.19	121.00
2	AB	91	C	C5-C4-N4	-5.32	116.47	120.20
2	AB	102	A	OP2-P-O3'	5.32	116.91	105.20
34	BA	896	C	O5'-P-OP2	-5.32	100.91	105.70
34	BA	1524	C	C4-C5-C6	5.32	120.06	117.40
1	CA	1309	G	N3-C2-N2	-5.32	116.18	119.90
1	CA	2226	C	N1-C2-O2	5.32	122.09	118.90
1	CA	2674	G	N1-C6-O6	-5.32	116.71	119.90
1	AA	148	C	N3-C4-C5	5.32	124.03	121.90
1	AA	526	A	N1-C2-N3	5.32	131.96	129.30
1	AA	964	A	C6-N1-C2	5.32	121.79	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1691	C	C6-N1-C2	-5.32	118.17	120.30
1	AA	2383	G	N3-C4-C5	-5.32	125.94	128.60
1	AA	2493	G	C2-N3-C4	-5.32	109.24	111.90
1	CA	1428	C	N3-C4-N4	-5.32	114.28	118.00
1	AA	751	G	C2-N3-C4	5.32	114.56	111.90
1	AA	846	G	C4-C5-N7	-5.32	108.67	110.80
1	AA	1079	U	N3-C4-O4	-5.32	115.68	119.40
1	AA	1081	U	C5-C6-N1	-5.32	120.04	122.70
1	AA	2428	C	N3-C4-C5	-5.32	119.77	121.90
1	AA	2495	C	O5'-P-OP2	5.32	117.08	110.70
1	AA	2614	A	OP1-P-O3'	5.32	116.90	105.20
34	BA	295	C	C6-N1-C2	5.32	122.43	120.30
34	BA	1502	A	C8-N9-C4	-5.32	103.67	105.80
49	BP	51	VAL	CB-CA-C	-5.32	101.30	111.40
1	CA	915	C	N3-C4-C5	-5.32	119.77	121.90
2	CB	56	G	C8-N9-C4	-5.32	104.27	106.40
1	AA	559	U	N3-C4-O4	-5.32	115.68	119.40
1	AA	948	C	O5'-P-OP1	-5.32	100.92	105.70
1	AA	1617	A	N7-C8-N9	-5.32	111.14	113.80
1	AA	2293	C	C4-C5-C6	5.32	120.06	117.40
1	CA	2653	U	N3-C2-O2	-5.32	118.48	122.20
1	CA	2675	A	O5'-P-OP1	5.32	117.08	110.70
1	AA	1374	G	N3-C4-N9	5.31	129.19	126.00
1	AA	1650	C	N1-C2-N3	5.31	122.92	119.20
1	CA	1032	A	N7-C8-N9	-5.31	111.14	113.80
1	CA	1367	A	C2-N3-C4	-5.31	107.94	110.60
1	AA	411	U	C2-N3-C4	-5.31	123.81	127.00
1	AA	1256	U	C6-N1-C2	5.31	124.19	121.00
1	AA	2057	G	N7-C8-N9	-5.31	110.44	113.10
1	AA	2070	G	N3-C4-N9	5.31	129.19	126.00
1	AA	2601	A	C6-C5-N7	5.31	136.02	132.30
1	AA	2772	G	C4-C5-N7	-5.31	108.67	110.80
34	BA	1530	G	N3-C4-N9	-5.31	122.81	126.00
1	CA	150	C	N3-C4-N4	-5.31	114.28	118.00
1	CA	470	A	OP1-P-OP2	5.31	127.57	119.60
1	CA	2805	G	C4-N9-C1'	-5.31	119.59	126.50
34	DA	508	C	C2-N1-C1'	5.31	124.64	118.80
1	AA	567	C	OP1-P-OP2	5.31	127.56	119.60
1	AA	753	A	C5-N7-C8	-5.31	101.25	103.90
1	AA	1309	U	N3-C2-O2	-5.31	118.48	122.20
1	AA	1390	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	2241	C	N1-C2-O2	5.31	122.09	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	51	G	O5'-P-OP1	5.31	117.07	110.70
34	BA	1499	A	C8-N9-C4	5.31	107.92	105.80
1	CA	944	G	C5-C6-N1	-5.31	108.84	111.50
1	AA	534	C	O5'-P-OP2	-5.31	100.92	105.70
1	AA	895	G	C5-C6-O6	5.31	131.78	128.60
1	AA	1477	U	N1-C2-N3	-5.31	111.72	114.90
2	AB	38	C	C6-N1-C2	5.31	122.42	120.30
1	CA	596	G	C2-N3-C4	5.31	114.55	111.90
1	CA	795	C	C4-C5-C6	5.31	120.05	117.40
1	CA	2782	G	C6-C5-N7	-5.31	127.22	130.40
1	CA	2805	G	C4-C5-N7	-5.31	108.68	110.80
34	DA	673	G	N3-C4-C5	-5.31	125.95	128.60
1	AA	474	U	N1-C2-N3	5.30	118.08	114.90
1	AA	1379	C	C5-C4-N4	-5.30	116.49	120.20
1	AA	1491	A	OP2-P-O3'	5.30	116.87	105.20
1	AA	2484	G	N3-C4-C5	-5.30	125.95	128.60
2	AB	1	U	N1-C2-O2	5.30	126.51	122.80
34	BA	545	C	N1-C2-O2	5.30	122.08	118.90
1	CA	600	G	OP2-P-O3'	5.30	116.87	105.20
1	CA	1333	C	C5-C6-N1	5.30	123.65	121.00
1	CA	1408	C	N3-C4-C5	-5.30	119.78	121.90
1	CA	1968	G	C5-C6-O6	-5.30	125.42	128.60
1	CA	2233	U	N1-C2-O2	-5.30	119.09	122.80
1	CA	2501	C	N3-C4-C5	5.30	124.02	121.90
1	AA	178	G	C8-N9-C4	-5.30	104.28	106.40
1	AA	2084	A	OP2-P-O3'	5.30	116.86	105.20
1	AA	2509	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	2760	G	C6-N1-C2	-5.30	121.92	125.10
34	DA	530	G	N3-C4-N9	-5.30	122.82	126.00
34	DA	1383	C	C6-N1-C2	-5.30	118.18	120.30
1	AA	1565	G	N3-C4-N9	-5.30	122.82	126.00
1	AA	1752	G	C5-C6-O6	5.30	131.78	128.60
1	AA	2301	G	C5-N7-C8	-5.30	101.65	104.30
34	BA	523	A	N9-C4-C5	5.30	107.92	105.80
34	BA	1030(B)	C	C6-N1-C1'	-5.30	114.44	120.80
1	CA	271(A)	A	C8-N9-C4	5.30	107.92	105.80
1	AA	1239	A	C5-C6-N1	5.30	120.35	117.70
1	AA	1351	C	C2-N1-C1'	5.30	124.63	118.80
34	BA	818	G	N3-C4-C5	-5.30	125.95	128.60
1	CA	296	C	N3-C4-C5	-5.30	119.78	121.90
1	CA	1236	G	O5'-P-OP1	-5.30	100.93	105.70
1	CA	1271	G	N3-C4-N9	5.30	129.18	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	987	G	C4-C5-N7	-5.30	108.68	110.80
1	AA	1373	C	N1-C2-O2	-5.30	115.72	118.90
1	AA	1440	U	N3-C2-O2	-5.30	118.49	122.20
1	AA	2003	A	OP1-P-OP2	-5.30	111.65	119.60
1	CA	201	C	N3-C4-C5	5.30	124.02	121.90
1	CA	2056	G	OP2-P-O3'	5.30	116.85	105.20
1	CA	2379	G	C4-N9-C1'	5.30	133.39	126.50
34	DA	175	C	N1-C2-O2	5.30	122.08	118.90
1	AA	586	G	N9-C4-C5	5.29	107.52	105.40
1	AA	847	A	C5-C6-N6	5.29	127.94	123.70
1	AA	2240	G	N3-C2-N2	5.29	123.61	119.90
34	BA	122	G	C5-C6-O6	-5.29	125.42	128.60
1	CA	263	C	N3-C4-N4	5.29	121.71	118.00
1	CA	448	U	O5'-P-OP2	5.29	117.05	110.70
1	CA	2050	C	N3-C4-C5	5.29	124.02	121.90
1	CA	2320	A	C2-N3-C4	5.29	113.25	110.60
56	DW	73	A	O4'-C1'-N9	5.29	112.44	108.20
1	AA	649	C	C5-C6-N1	-5.29	118.35	121.00
1	AA	2282	G	O5'-P-OP2	5.29	117.05	110.70
1	AA	2618	C	N3-C4-C5	5.29	124.02	121.90
31	A7	9	ARG	NE-CZ-NH2	-5.29	117.65	120.30
1	CA	2501	C	C2-N1-C1'	-5.29	112.98	118.80
1	AA	1921	G	N9-C4-C5	5.29	107.52	105.40
1	AA	2620	G	OP1-P-O3'	5.29	116.84	105.20
2	AB	72	G	C4-C5-N7	5.29	112.92	110.80
1	CA	2581	G	N3-C2-N2	-5.29	116.19	119.90
1	AA	237	G	N1-C2-N3	-5.29	120.73	123.90
1	AA	2638	C	C2-N1-C1'	-5.29	112.98	118.80
1	CA	2429	G	N3-C4-N9	-5.29	122.83	126.00
1	AA	913	A	C8-N9-C4	-5.29	103.68	105.80
1	AA	1321	A	N1-C6-N6	-5.29	115.43	118.60
1	AA	1845	G	O5'-P-OP2	-5.29	100.94	105.70
1	AA	1847	G	C6-C5-N7	5.29	133.57	130.40
34	BA	347	G	N3-C4-C5	-5.29	125.96	128.60
34	BA	1505	G	N3-C4-N9	-5.29	122.83	126.00
1	CA	686	G	C5-C6-O6	-5.29	125.43	128.60
34	DA	26	A	N1-C2-N3	5.29	131.94	129.30
1	AA	1717	C	OP1-P-O3'	5.29	116.83	105.20
34	BA	339	C	N3-C2-O2	5.29	125.60	121.90
1	CA	1007	C	C5-C6-N1	-5.29	118.36	121.00
1	AA	649	C	O5'-P-OP2	5.29	117.04	110.70
1	AA	1879	A	C8-N9-C4	5.29	107.91	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	122	G	C8-N9-C4	5.29	108.51	106.40
1	CA	374	A	OP1-P-OP2	5.29	127.53	119.60
1	CA	1663	C	N1-C2-O2	5.29	122.07	118.90
1	CA	1695	G	N1-C6-O6	5.29	123.07	119.90
1	CA	1980	G	C5-C6-O6	-5.29	125.43	128.60
1	CA	2249	U	N3-C2-O2	-5.29	118.50	122.20
1	AA	128	C	OP2-P-O3'	5.28	116.82	105.20
1	AA	608	G	C2-N3-C4	5.28	114.54	111.90
1	AA	1611	C	C4-C5-C6	5.28	120.04	117.40
1	AA	1892	G	O5'-P-OP2	-5.28	100.94	105.70
1	AA	2403	G	OP1-P-OP2	5.28	127.52	119.60
1	AA	2537	G	C5-N7-C8	-5.28	101.66	104.30
1	AA	2833	A	C6-C5-N7	-5.28	128.60	132.30
1	AA	2879	G	C5-N7-C8	5.28	106.94	104.30
34	BA	804	U	C5-C6-N1	-5.28	120.06	122.70
1	CA	1211	U	N3-C2-O2	-5.28	118.50	122.20
1	CA	2038	G	N1-C2-N2	-5.28	111.44	116.20
34	DA	355	C	N3-C4-C5	-5.28	119.79	121.90
1	AA	1443	U	C2-N3-C4	-5.28	123.83	127.00
1	AA	422	U	O4'-C1'-N1	5.28	112.42	108.20
1	AA	621	G	N3-C2-N2	5.28	123.60	119.90
1	AA	1238	G	C5-C6-N1	5.28	114.14	111.50
1	AA	2089	G	N9-C4-C5	5.28	107.51	105.40
1	AA	2353	G	C6-C5-N7	5.28	133.57	130.40
1	AA	2376	C	C2-N1-C1'	-5.28	112.99	118.80
1	AA	2410	U	N1-C2-N3	5.28	118.07	114.90
34	BA	711	G	N3-C4-N9	5.28	129.17	126.00
1	CA	1760	A	N1-C2-N3	5.28	131.94	129.30
1	CA	1829	A	O5'-P-OP2	-5.28	100.95	105.70
1	CA	2446	G	N3-C2-N2	5.28	123.60	119.90
1	CA	12	U	C6-N1-C1'	-5.28	113.81	121.20
1	CA	265	A	C2-N3-C4	-5.28	107.96	110.60
1	CA	453	C	N3-C4-C5	5.28	124.01	121.90
1	CA	641	C	O5'-P-OP1	-5.28	100.95	105.70
1	CA	2521	C	N1-C2-O2	-5.28	115.73	118.90
1	AA	1403	U	N3-C4-C5	5.28	117.77	114.60
1	AA	1977	U	C5-C4-O4	-5.28	122.73	125.90
1	AA	2287	C	C2-N3-C4	-5.28	117.26	119.90
1	AA	2422	G	N9-C4-C5	-5.28	103.29	105.40
1	AA	2562	G	OP1-P-OP2	-5.28	111.68	119.60
1	AA	2890	C	C4-C5-C6	5.28	120.04	117.40
1	CA	2741	A	N7-C8-N9	-5.28	111.16	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	774	G	OP2-P-O3'	5.28	116.81	105.20
1	AA	189	U	OP1-P-OP2	5.28	127.51	119.60
1	AA	893	C	O4'-C1'-N1	5.28	112.42	108.20
1	AA	1326	G	C5-C6-N1	5.28	114.14	111.50
1	AA	1844	G	N3-C4-N9	5.28	129.17	126.00
1	AA	1980	C	N3-C4-N4	5.28	121.69	118.00
1	AA	2503	U	C5-C4-O4	-5.28	122.73	125.90
1	AA	2631	C	N3-C2-O2	-5.28	118.21	121.90
1	AA	721	G	O5'-P-OP2	5.27	117.03	110.70
1	AA	748	G	OP2-P-O3'	5.27	116.80	105.20
1	AA	2456	G	C6-C5-N7	5.27	133.56	130.40
1	AA	2633	A	C5-C6-N6	5.27	127.92	123.70
1	CA	114	U	C6-N1-C1'	-5.27	113.82	121.20
34	DA	841	U	C5-C6-N1	5.27	125.34	122.70
1	AA	31	C	N1-C2-O2	5.27	122.06	118.90
1	AA	374	U	OP2-P-O3'	5.27	116.80	105.20
1	AA	1328	U	C4-C5-C6	5.27	122.86	119.70
1	AA	1816	A	N1-C6-N6	5.27	121.76	118.60
1	AA	1881	G	N1-C2-N3	5.27	127.06	123.90
1	AA	1972	G	OP2-P-O3'	5.27	116.80	105.20
1	AA	2528	G	OP2-P-O3'	5.27	116.80	105.20
32	A8	61	LEU	CB-CG-CD1	-5.27	102.04	111.00
1	CA	740	U	OP1-P-O3'	5.27	116.80	105.20
1	AA	500	G	C5-C6-O6	5.27	131.76	128.60
34	BA	767	A	N9-C4-C5	5.27	107.91	105.80
1	CA	486	C	OP2-P-O3'	5.27	116.80	105.20
1	AA	835	A	C8-N9-C4	5.27	107.91	105.80
1	AA	2343	G	C5-C6-N1	5.27	114.14	111.50
1	CA	574	C	O5'-P-OP1	-5.27	100.96	105.70
1	CA	2881	C	N3-C2-O2	-5.27	118.21	121.90
1	AA	1926	G	C6-C5-N7	5.27	133.56	130.40
1	AA	2656	G	C2-N3-C4	-5.27	109.27	111.90
2	AB	76	G	O5'-P-OP2	5.27	117.02	110.70
34	BA	574	A	N9-C4-C5	-5.27	103.69	105.80
1	CA	1239	G	C4-C5-N7	5.27	112.91	110.80
1	AA	136	G	C6-N1-C2	-5.27	121.94	125.10
1	AA	174	U	C2-N3-C4	-5.27	123.84	127.00
34	BA	821	G	OP1-P-OP2	-5.27	111.70	119.60
34	BA	855	G	C8-N9-C4	-5.27	104.29	106.40
1	CA	1244	G	C8-N9-C4	5.27	108.51	106.40
34	DA	758	G	C8-N9-C4	-5.27	104.29	106.40
1	AA	337	C	C2-N1-C1'	-5.26	113.01	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	658	A	N9-C4-C5	-5.26	103.69	105.80
1	AA	876	A	N1-C6-N6	5.26	121.76	118.60
1	AA	1329	G	C4-C5-N7	5.26	112.91	110.80
1	AA	1720	U	N3-C2-O2	5.26	125.89	122.20
1	AA	2403	G	C4-N9-C1'	-5.26	119.66	126.50
1	AA	2439	C	OP2-P-O3'	5.26	116.78	105.20
1	AA	2535	G	N1-C2-N3	5.26	127.06	123.90
1	AA	1206	G	C2-N3-C4	5.26	114.53	111.90
1	AA	1329	G	C5-C6-N1	-5.26	108.87	111.50
1	AA	2778	A	C5-N7-C8	5.26	106.53	103.90
2	AB	34	U	N3-C4-C5	-5.26	111.44	114.60
2	AB	49	C	C5-C4-N4	-5.26	116.52	120.20
34	BA	239	U	N1-C2-O2	5.26	126.48	122.80
1	CA	71	A	C2-N3-C4	5.26	113.23	110.60
1	CA	400	G	OP2-P-O3'	5.26	116.78	105.20
1	CA	1299	G	C6-N1-C2	5.26	128.26	125.10
1	CA	1903	G	N3-C4-C5	5.26	131.23	128.60
1	CA	2042	A	C5-C6-N6	5.26	127.91	123.70
34	DA	524	G	N3-C4-C5	5.26	131.23	128.60
34	DA	882	C	N1-C2-O2	5.26	122.06	118.90
1	AA	906	G	C4-N9-C1'	-5.26	119.66	126.50
1	AA	1199	C	OP2-P-O3'	5.26	116.77	105.20
1	AA	1528	U	N1-C2-O2	-5.26	119.12	122.80
1	AA	2219	U	C4-C5-C6	5.26	122.86	119.70
1	AA	2223	C	C2-N1-C1'	5.26	124.59	118.80
1	AA	2548	G	N1-C2-N3	5.26	127.06	123.90
1	AA	2627	U	N3-C4-O4	-5.26	115.72	119.40
1	AA	2745	G	C4-C5-N7	-5.26	108.70	110.80
34	BA	823	G	N3-C4-C5	5.26	131.23	128.60
1	AA	1189	A	C5-C6-N6	5.26	127.91	123.70
1	AA	1622	C	C2-N1-C1'	-5.26	113.02	118.80
1	AA	2835	C	C4-C5-C6	5.26	120.03	117.40
2	AB	8	U	C6-N1-C2	5.26	124.16	121.00
34	BA	916	G	N3-C4-N9	5.26	129.16	126.00
1	CA	1698	A	C8-N9-C1'	-5.26	118.23	127.70
1	AA	36	G	C5-N7-C8	5.26	106.93	104.30
1	AA	1253	C	C6-N1-C1'	-5.26	114.49	120.80
1	AA	2086	C	OP2-P-O3'	5.26	116.76	105.20
1	AA	2557	G	C5-C6-O6	-5.26	125.45	128.60
1	AA	2677	A	N9-C4-C5	-5.26	103.70	105.80
13	CP	21	ARG	NE-CZ-NH1	-5.26	117.67	120.30
1	AA	613	A	C8-N9-C4	-5.25	103.70	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1058	U	C2-N3-C4	-5.25	123.85	127.00
1	CA	223	A	C8-N9-C4	-5.25	103.70	105.80
34	DA	687	A	C8-N9-C4	-5.25	103.70	105.80
1	AA	922	G	C8-N9-C4	5.25	108.50	106.40
1	AA	1484	U	N1-C2-O2	-5.25	119.12	122.80
1	AA	2072	C	N1-C2-O2	-5.25	115.75	118.90
34	BA	328	C	OP1-P-O3'	5.25	116.76	105.20
56	BW	47	U	C5-C6-N1	5.25	125.33	122.70
1	CA	797	C	O5'-P-OP2	-5.25	100.97	105.70
1	CA	797	C	N1-C2-O2	-5.25	115.75	118.90
1	CA	2058	A	OP2-P-O3'	5.25	116.76	105.20
1	AA	361	C	OP2-P-O3'	5.25	116.75	105.20
1	AA	717	A	O4'-C1'-N9	-5.25	104.00	108.20
1	AA	954	C	O5'-P-OP2	-5.25	100.97	105.70
1	AA	1963	C	C2-N1-C1'	5.25	124.58	118.80
1	AA	2002	G	C2-N3-C4	-5.25	109.27	111.90
1	AA	2048	C	N3-C4-C5	-5.25	119.80	121.90
1	AA	2634	C	C5-C6-N1	-5.25	118.38	121.00
1	AA	2838	C	N3-C4-C5	5.25	124.00	121.90
15	AR	12	ARG	NE-CZ-NH1	-5.25	117.67	120.30
1	CA	1689	A	N1-C6-N6	-5.25	115.45	118.60
34	DA	798	G	C8-N9-C4	-5.25	104.30	106.40
1	AA	75	C	N3-C4-N4	5.25	121.67	118.00
1	AA	1410	G	C2-N3-C4	5.25	114.53	111.90
1	AA	2114	U	OP1-P-O3'	5.25	116.75	105.20
34	BA	1226	C	N3-C4-C5	-5.25	119.80	121.90
1	AA	1192	C	C5-C6-N1	-5.25	118.38	121.00
1	AA	1845	G	C5-C6-N1	5.25	114.12	111.50
1	AA	1967	G	C2-N3-C4	-5.25	109.28	111.90
1	CA	277	C	C6-N1-C2	-5.25	118.20	120.30
1	CA	1559	G	C4-N9-C1'	-5.25	119.68	126.50
34	DA	492	G	C8-N9-C4	-5.25	104.30	106.40
1	AA	87	G	C8-N9-C4	-5.25	104.30	106.40
1	AA	738	C	O5'-P-OP1	5.25	117.00	110.70
1	AA	1264	G	C2-N3-C4	-5.25	109.28	111.90
1	AA	1377	A	C4-C5-N7	-5.25	108.08	110.70
1	AA	1862	G	C8-N9-C4	-5.25	104.30	106.40
1	AA	1958	A	C5-C6-N6	-5.25	119.50	123.70
1	AA	2625	U	OP2-P-O3'	5.25	116.74	105.20
1	AA	2762	A	N3-C4-C5	-5.25	123.13	126.80
34	BA	519	C	C5-C6-N1	-5.25	118.38	121.00
51	BR	85	LEU	CA-CB-CG	5.25	127.37	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1313	U	N3-C4-O4	5.25	123.07	119.40
34	DA	863	U	C6-N1-C1'	5.25	128.54	121.20
1	AA	1442	U	O5'-P-OP1	-5.25	100.98	105.70
1	CA	1602	U	N1-C2-N3	5.25	118.05	114.90
1	AA	36	G	C6-C5-N7	5.24	133.55	130.40
1	AA	841	G	N3-C4-N9	5.24	129.15	126.00
1	AA	2556	G	O5'-P-OP2	5.24	116.99	110.70
34	BA	562	C	C5-C4-N4	-5.24	116.53	120.20
1	CA	1204	A	N7-C8-N9	5.24	116.42	113.80
34	DA	150	C	C6-N1-C2	-5.24	118.20	120.30
1	AA	1100	A	C6-C5-N7	-5.24	128.63	132.30
1	CA	195	A	O4'-C1'-N9	5.24	112.39	108.20
1	CA	1957	C	C5-C6-N1	5.24	123.62	121.00
1	AA	2298	A	N9-C1'-C2'	5.24	120.81	114.00
1	AA	2386	C	N3-C2-O2	5.24	125.57	121.90
1	AA	2471	A	C4-C5-N7	-5.24	108.08	110.70
2	AB	99	G	N3-C4-N9	5.24	129.14	126.00
34	BA	34	C	C6-N1-C2	5.24	122.40	120.30
34	BA	1468	A	N9-C4-C5	-5.24	103.70	105.80
1	CA	2734	A	C8-N9-C4	-5.24	103.70	105.80
1	AA	214	A	O5'-P-OP1	5.24	116.98	110.70
1	AA	1317	G	N1-C6-O6	5.24	123.04	119.90
1	AA	2426	G	N1-C6-O6	-5.24	116.76	119.90
34	BA	878	G	C4-C5-N7	5.24	112.90	110.80
1	CA	757	U	N3-C2-O2	-5.24	118.53	122.20
1	CA	1204	A	N1-C2-N3	5.24	131.92	129.30
1	AA	2011	G	N1-C6-O6	5.24	123.04	119.90
1	CA	1022	G	N1-C6-O6	-5.24	116.76	119.90
1	CA	2438	U	C2-N3-C4	-5.24	123.86	127.00
1	AA	548	C	C6-N1-C1'	5.24	127.08	120.80
1	AA	566	C	C2-N1-C1'	5.24	124.56	118.80
1	AA	1027	A	C5-N7-C8	5.24	106.52	103.90
1	AA	1231	G	C8-N9-C4	5.24	108.49	106.40
1	AA	1252	C	C5-C6-N1	-5.24	118.38	121.00
1	AA	1321	A	C4-C5-N7	-5.24	108.08	110.70
1	AA	1434	G	OP1-P-OP2	5.24	127.45	119.60
1	AA	1454	C	N3-C4-C5	-5.24	119.81	121.90
1	AA	2611	G	N3-C4-N9	5.24	129.14	126.00
1	AA	2659	U	C4-C5-C6	-5.24	116.56	119.70
34	BA	771	G	C6-N1-C2	5.24	128.24	125.10
1	CA	186	G	N1-C6-O6	5.24	123.04	119.90
1	CA	210	C	N3-C4-N4	-5.24	114.33	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2820	A	C8-N9-C1'	-5.24	118.28	127.70
34	DA	115	G	O5'-P-OP2	-5.24	100.99	105.70
34	DA	858	G	C6-C5-N7	-5.24	127.26	130.40
1	CA	1684	C	N1-C2-O2	-5.23	115.76	118.90
1	CA	2429	G	N9-C4-C5	5.23	107.49	105.40
34	DA	10	A	C8-N9-C4	-5.23	103.71	105.80
1	AA	279	G	N7-C8-N9	5.23	115.72	113.10
1	AA	2263	G	C6-N1-C2	-5.23	121.96	125.10
1	AA	2636	G	N3-C4-N9	5.23	129.14	126.00
21	AX	76	ARG	NE-CZ-NH2	-5.23	117.68	120.30
23	AZ	5	LEU	CA-CB-CG	5.23	127.33	115.30
34	BA	103	C	C6-N1-C2	-5.23	118.21	120.30
1	CA	923	C	C5-C6-N1	5.23	123.62	121.00
1	CA	2456	C	C2-N3-C4	-5.23	117.28	119.90
1	AA	455	A	C6-C5-N7	-5.23	128.64	132.30
1	AA	460	C	P-O3'-C3'	5.23	125.98	119.70
1	AA	1783	C	C2-N1-C1'	-5.23	113.05	118.80
1	AA	2267	G	C5-C6-O6	-5.23	125.46	128.60
1	AA	2455	C	N3-C2-O2	-5.23	118.24	121.90
1	AA	2478	C	N3-C4-C5	-5.23	119.81	121.90
1	AA	2528	G	C5-N7-C8	5.23	106.92	104.30
1	AA	2826	C	O5'-P-OP2	-5.23	100.99	105.70
34	BA	28	G	N1-C2-N2	5.23	120.91	116.20
34	BA	505	G	C8-N9-C4	-5.23	104.31	106.40
34	BA	611	A	C8-N9-C4	5.23	107.89	105.80
1	CA	513	A	N7-C8-N9	5.23	116.42	113.80
1	CA	1637	A	C8-N9-C4	-5.23	103.71	105.80
31	C7	33	ARG	NE-CZ-NH2	5.23	122.92	120.30
1	AA	1220	U	P-O3'-C3'	5.23	125.97	119.70
1	AA	1972	G	O5'-P-OP2	5.23	116.97	110.70
1	AA	2297	C	O5'-P-OP2	-5.23	100.99	105.70
1	AA	2374	G	C6-N1-C2	-5.23	121.96	125.10
34	BA	804	U	C2-N1-C1'	-5.23	111.43	117.70
1	CA	2568	C	O5'-P-OP1	5.23	116.97	110.70
1	CA	2879	C	N1-C2-O2	-5.23	115.76	118.90
34	DA	1077	G	C8-N9-C4	5.23	108.49	106.40
1	AA	549	U	C6-N1-C2	5.23	124.14	121.00
1	AA	1397	C	C6-N1-C2	-5.23	118.21	120.30
1	AA	1909	C	N3-C4-N4	5.23	121.66	118.00
1	AA	2737	C	N1-C2-O2	-5.23	115.76	118.90
1	CA	530	G	N3-C4-C5	5.23	131.21	128.60
1	CA	965	C	N1-C2-O2	5.23	122.04	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1238	G	C4-C5-N7	5.23	112.89	110.80
1	AA	326	C	C6-N1-C2	-5.23	118.21	120.30
1	AA	2100	C	O5'-P-OP1	-5.23	101.00	105.70
1	AA	1328	U	C6-N1-C2	5.22	124.14	121.00
1	AA	1604	C	C2-N3-C4	-5.22	117.29	119.90
1	AA	2359	C	C5-C6-N1	5.22	123.61	121.00
1	AA	2619	G	N3-C4-N9	5.22	129.13	126.00
1	AA	2852	G	N7-C8-N9	-5.22	110.49	113.10
34	BA	311	C	N3-C4-C5	5.22	123.99	121.90
56	BW	70	G	N3-C4-N9	-5.22	122.86	126.00
1	CA	183	C	C6-N1-C2	5.22	122.39	120.30
1	CA	1421	G	C8-N9-C4	-5.22	104.31	106.40
1	CA	1783	A	C5-C6-N6	5.22	127.88	123.70
1	CA	1901	A	C6-N1-C2	-5.22	115.47	118.60
1	CA	2522	U	OP2-P-O3'	5.22	116.69	105.20
1	AA	20	C	OP2-P-O3'	5.22	116.69	105.20
1	AA	474	U	C5-C6-N1	-5.22	120.09	122.70
34	BA	819	A	OP1-P-O3'	5.22	116.69	105.20
34	DA	861	G	N9-C4-C5	5.22	107.49	105.40
1	AA	773	G	N1-C6-O6	-5.22	116.77	119.90
1	AA	1266	C	OP1-P-OP2	-5.22	111.77	119.60
1	AA	1736	A	C5-C6-N1	5.22	120.31	117.70
34	BA	1064	G	N3-C2-N2	-5.22	116.25	119.90
1	CA	2274	A	C4-C5-N7	-5.22	108.09	110.70
1	CA	2401	U	O5'-P-OP1	-5.22	101.00	105.70
1	CA	2524	G	O5'-P-OP1	5.22	116.97	110.70
1	AA	16	G	N1-C2-N2	-5.22	111.50	116.20
1	AA	627	G	OP1-P-O3'	5.22	116.68	105.20
1	AA	2762	A	C4-C5-C6	5.22	119.61	117.00
1	AA	2786	C	C6-N1-C2	5.22	122.39	120.30
1	AA	2848	G	N7-C8-N9	-5.22	110.49	113.10
34	BA	330	C	N1-C2-O2	5.22	122.03	118.90
34	BA	756	C	N3-C2-O2	5.22	125.55	121.90
1	CA	1217	C	OP2-P-O3'	5.22	116.68	105.20
1	CA	1351	C	C2-N3-C4	-5.22	117.29	119.90
1	CA	2085	C	C4-C5-C6	5.22	120.01	117.40
1	AA	877	G	C2-N3-C4	-5.22	109.29	111.90
1	AA	1431	G	O5'-P-OP2	5.22	116.96	110.70
2	AB	5	C	N1-C2-N3	5.22	122.85	119.20
2	AB	92	C	N3-C4-N4	5.22	121.65	118.00
1	CA	374	A	O5'-P-OP1	-5.22	101.00	105.70
1	CA	1600	C	O5'-P-OP2	-5.22	101.00	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2487	G	O5'-P-OP2	-5.22	101.00	105.70
34	DA	718	G	N1-C2-N2	5.22	120.90	116.20
1	AA	131	C	N1-C2-O2	5.22	122.03	118.90
1	AA	991	G	N3-C4-N9	-5.22	122.87	126.00
34	BA	558	G	C6-C5-N7	-5.22	127.27	130.40
34	BA	1383	C	C5-C6-N1	5.22	123.61	121.00
1	CA	1293	C	C2-N3-C4	-5.22	117.29	119.90
1	CA	2489	G	C6-C5-N7	-5.22	127.27	130.40
2	CB	105	A	C8-N9-C4	5.22	107.89	105.80
1	AA	478	G	N9-C4-C5	5.21	107.49	105.40
1	AA	561	A	N7-C8-N9	-5.21	111.19	113.80
1	AA	1745	A	C6-N1-C2	-5.21	115.47	118.60
1	AA	2028	C	N1-C2-O2	-5.21	115.77	118.90
1	AA	2275	C	C2-N1-C1'	-5.21	113.06	118.80
1	AA	2554	A	N9-C4-C5	-5.21	103.71	105.80
34	BA	1036	G	C4-N9-C1'	5.21	133.28	126.50
1	CA	495	G	O5'-P-OP2	-5.21	101.01	105.70
1	CA	2265	U	C5-C6-N1	5.21	125.31	122.70
1	CA	2335	A	O4'-C1'-N9	5.21	112.37	108.20
1	CA	2569	G	C4-C5-N7	5.21	112.89	110.80
34	DA	175	C	N3-C2-O2	-5.21	118.25	121.90
34	DA	1513	A	N3-C4-C5	5.21	130.45	126.80
1	AA	471	C	C2-N3-C4	-5.21	117.29	119.90
1	AA	789	G	O5'-P-OP2	5.21	116.95	110.70
1	AA	862	C	C6-N1-C2	-5.21	118.22	120.30
34	BA	905	U	O5'-P-OP1	-5.21	101.01	105.70
1	CA	114	U	C2-N1-C1'	5.21	123.95	117.70
1	CA	328	U	OP1-P-O3'	5.21	116.67	105.20
1	CA	524	U	OP1-P-OP2	5.21	127.42	119.60
1	AA	750	U	C2-N1-C1'	5.21	123.95	117.70
1	AA	1455	C	OP2-P-O3'	5.21	116.67	105.20
1	AA	1766	G	N1-C6-O6	5.21	123.03	119.90
1	CA	1796	U	C2-N3-C4	-5.21	123.87	127.00
1	CA	2463	C	N3-C4-N4	-5.21	114.35	118.00
1	CA	2588	G	C5-C6-N1	-5.21	108.89	111.50
1	CA	2602	A	O4'-C1'-N9	5.21	112.37	108.20
1	CA	2655	G	C8-N9-C4	5.21	108.48	106.40
1	AA	308	U	C5-C6-N1	5.21	125.31	122.70
1	AA	556	C	C2-N3-C4	-5.21	117.30	119.90
1	AA	2559	U	N3-C4-C5	-5.21	111.47	114.60
34	BA	1404	C	N3-C4-C5	5.21	123.98	121.90
1	CA	2067	G	N1-C6-O6	-5.21	116.77	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	208	G	C2-N3-C4	5.21	114.50	111.90
1	AA	627	G	O5'-P-OP2	-5.21	101.01	105.70
1	AA	796	C	OP1-P-OP2	5.21	127.41	119.60
1	AA	914	C	C5-C6-N1	-5.21	118.40	121.00
1	AA	1233	U	OP2-P-O3'	5.21	116.66	105.20
1	AA	2423	A	N7-C8-N9	-5.21	111.20	113.80
1	AA	2632	C	C2-N1-C1'	-5.21	113.07	118.80
34	BA	302	G	OP2-P-O3'	5.21	116.66	105.20
56	BW	75	C	C2-N3-C4	-5.21	117.30	119.90
1	CA	450	G	C4-C5-N7	-5.21	108.72	110.80
1	CA	2340	G	N3-C4-N9	5.21	129.12	126.00
1	AA	177	G	C4-C5-N7	-5.21	108.72	110.80
1	AA	1648	U	N3-C4-C5	5.21	117.72	114.60
1	AA	2348	A	O4'-C1'-N9	-5.21	104.04	108.20
34	BA	768	A	C6-N1-C2	-5.21	115.48	118.60
34	BA	895	G	C6-C5-N7	5.21	133.52	130.40
1	CA	1951	U	N3-C2-O2	-5.21	118.56	122.20
1	CA	2016	U	C2-N3-C4	5.21	130.12	127.00
1	AA	720	C	OP2-P-O3'	5.21	116.65	105.20
1	AA	1231	G	N9-C4-C5	-5.21	103.32	105.40
1	AA	1473	A	N1-C2-N3	5.21	131.90	129.30
1	AA	2635	G	C8-N9-C4	-5.21	104.32	106.40
1	AA	786	G	N3-C4-N9	5.20	129.12	126.00
1	AA	817	G	C5-C6-N1	5.20	114.10	111.50
1	AA	1725	G	C4-C5-C6	5.20	121.92	118.80
1	AA	2834	C	C4-C5-C6	5.20	120.00	117.40
1	CA	125	G	O4'-C1'-N9	-5.20	104.04	108.20
1	CA	799	G	N3-C4-N9	5.20	129.12	126.00
1	CA	1368	G	OP2-P-O3'	5.20	116.65	105.20
1	CA	1651	G	N1-C6-O6	-5.20	116.78	119.90
1	CA	2406	U	O5'-P-OP1	-5.20	101.02	105.70
1	AA	560	C	N3-C4-C5	5.20	123.98	121.90
1	AA	1716	A	O4'-C1'-N9	5.20	112.36	108.20
34	BA	1502	A	O5'-P-OP2	-5.20	101.02	105.70
1	CA	2077	A	C5-C6-N6	-5.20	119.54	123.70
1	AA	775	G	C5-C6-O6	5.20	131.72	128.60
1	AA	915	U	O5'-P-OP1	-5.20	101.02	105.70
1	AA	1052	C	C6-N1-C2	5.20	122.38	120.30
1	AA	1251	G	N7-C8-N9	-5.20	110.50	113.10
1	AA	1253	C	C2-N1-C1'	5.20	124.52	118.80
1	AA	1619	A	O5'-P-OP2	-5.20	101.02	105.70
1	AA	1817	A	C6-N1-C2	5.20	121.72	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2097	U	C2-N3-C4	-5.20	123.88	127.00
1	AA	2611	G	C8-N9-C4	5.20	108.48	106.40
1	AA	2720	G	OP2-P-O3'	5.20	116.64	105.20
1	AA	2757	G	N1-C6-O6	5.20	123.02	119.90
1	AA	2833	A	C5-N7-C8	5.20	106.50	103.90
1	CA	252	G	C6-C5-N7	5.20	133.52	130.40
1	CA	1956	U	N3-C4-C5	5.20	117.72	114.60
1	CA	2342	C	C5-C6-N1	5.20	123.60	121.00
56	DW	43	C	C2-N1-C1'	5.20	124.52	118.80
1	AA	174	U	C5-C4-O4	-5.20	122.78	125.90
1	AA	608	G	OP1-P-O3'	5.20	116.64	105.20
1	AA	1296	G	C8-N9-C4	-5.20	104.32	106.40
1	AA	1962	U	C4-C5-C6	5.20	122.82	119.70
1	AA	2108	U	OP2-P-O3'	5.20	116.64	105.20
1	AA	2500	A	C5-C6-N6	5.20	127.86	123.70
1	CA	265	A	C8-N9-C4	-5.20	103.72	105.80
1	CA	1021	A	C5-N7-C8	-5.20	101.30	103.90
1	CA	1274	A	N1-C6-N6	5.20	121.72	118.60
1	CA	2253	G	N3-C2-N2	-5.20	116.26	119.90
56	DW	73	A	N7-C8-N9	5.20	116.40	113.80
1	AA	2050	U	N3-C4-O4	-5.20	115.76	119.40
1	AA	2063	U	OP2-P-O3'	5.20	116.63	105.20
1	AA	2626	A	N7-C8-N9	5.20	116.40	113.80
1	AA	2707	C	OP2-P-O3'	5.20	116.63	105.20
1	AA	2833	A	C6-N1-C2	-5.20	115.48	118.60
34	BA	275	G	C8-N9-C4	-5.20	104.32	106.40
1	CA	2049	G	N1-C2-N2	-5.20	111.52	116.20
1	CA	2883	A	O4'-C1'-N9	5.20	112.36	108.20
34	DA	758	G	N1-C6-O6	-5.20	116.78	119.90
1	AA	354	A	N1-C2-N3	5.20	131.90	129.30
1	AA	725	C	N1-C2-N3	5.20	122.84	119.20
1	AA	2074	G	OP1-P-O3'	5.20	116.63	105.20
1	AA	2353	G	N9-C4-C5	5.20	107.48	105.40
1	AA	2401	G	N3-C4-N9	-5.20	122.88	126.00
1	AA	2408	G	N1-C6-O6	-5.20	116.78	119.90
1	AA	2661	U	OP2-P-O3'	5.20	116.63	105.20
1	AA	2725	A	OP1-P-OP2	5.20	127.39	119.60
2	AB	102	A	C8-N9-C4	5.20	107.88	105.80
4	AD	222	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	CA	2045	C	N3-C4-C5	5.20	123.98	121.90
1	CA	2618	G	C5-N7-C8	5.20	106.90	104.30
1	AA	2520	G	C2-N3-C4	5.19	114.50	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1320	C	N3-C2-O2	5.19	125.54	121.90
5	CE	103	ASP	N-CA-C	-5.19	96.98	111.00
1	AA	1472	G	C6-C5-N7	-5.19	127.28	130.40
1	AA	1685	C	N1-C1'-C2'	-5.19	106.29	112.00
1	AA	2088	C	C5-C4-N4	5.19	123.83	120.20
1	AA	2189	U	N1-C2-O2	5.19	126.44	122.80
1	AA	2714	U	O4'-C1'-N1	-5.19	104.05	108.20
13	AP	55	ARG	NE-CZ-NH2	-5.19	117.70	120.30
23	AZ	77	ASP	CB-CG-OD2	-5.19	113.63	118.30
1	CA	300	A	C4-C5-C6	-5.19	114.40	117.00
1	CA	448	U	N1-C2-O2	5.19	126.43	122.80
1	CA	798	G	N9-C4-C5	5.19	107.48	105.40
1	CA	1598	C	OP1-P-O3'	5.19	116.62	105.20
1	CA	2767	C	C2-N1-C1'	5.19	124.51	118.80
1	AA	591	U	C2-N3-C4	-5.19	123.89	127.00
1	AA	657	A	OP1-P-O3'	5.19	116.62	105.20
1	AA	2869	G	C5-C6-O6	5.19	131.71	128.60
1	CA	2235	G	N3-C2-N2	-5.19	116.27	119.90
1	AA	524	U	N3-C2-O2	-5.19	118.57	122.20
1	AA	844	C	C4-C5-C6	5.19	120.00	117.40
1	AA	1376	C	N3-C4-N4	5.19	121.63	118.00
1	AA	2269	U	N1-C2-N3	5.19	118.01	114.90
1	AA	533	G	N9-C4-C5	5.19	107.47	105.40
1	AA	556	C	N3-C4-C5	5.19	123.97	121.90
1	AA	730	C	C4-C5-C6	5.19	119.99	117.40
1	AA	1484	U	N3-C4-O4	5.19	123.03	119.40
1	AA	1739	U	C5-C6-N1	-5.19	120.11	122.70
1	AA	2688	C	C6-N1-C2	5.19	122.38	120.30
1	AA	2858	G	C5-C6-N1	5.19	114.09	111.50
1	CA	1346	G	C5-C6-O6	5.19	131.71	128.60
1	CA	2255	G	C8-N9-C4	5.19	108.47	106.40
34	DA	303	A	N1-C6-N6	-5.19	115.49	118.60
34	DA	560	U	N3-C2-O2	-5.19	118.57	122.20
34	DA	731	G	OP2-P-O3'	5.19	116.61	105.20
34	DA	813	U	N3-C2-O2	5.19	125.83	122.20
1	AA	483	A	N1-C6-N6	5.19	121.71	118.60
1	AA	1193	C	C6-N1-C1'	5.19	127.02	120.80
1	AA	2627	U	C2-N3-C4	-5.19	123.89	127.00
13	AP	60	MET	CG-SD-CE	5.19	108.50	100.20
34	BA	923	A	O5'-P-OP1	-5.19	101.03	105.70
1	CA	705	A	O5'-P-OP2	-5.19	101.03	105.70
1	CA	795	C	C5-C6-N1	-5.19	118.41	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	798	A	C5-C6-N6	-5.18	119.55	123.70
1	AA	1264	G	O5'-P-OP1	5.18	116.92	110.70
1	AA	2484	G	C5-C6-N1	5.18	114.09	111.50
34	BA	1394	A	OP1-P-O3'	5.18	116.61	105.20
1	CA	2553	G	N1-C2-N2	-5.18	111.53	116.20
1	CA	2580	U	N3-C4-C5	5.18	117.71	114.60
1	AA	261	A	OP2-P-O3'	5.18	116.60	105.20
1	AA	473	A	N1-C2-N3	5.18	131.89	129.30
1	AA	1571	G	O5'-P-OP1	-5.18	101.03	105.70
1	AA	2849	G	N7-C8-N9	-5.18	110.51	113.10
34	BA	778	G	N1-C2-N2	-5.18	111.54	116.20
1	CA	350	U	N3-C2-O2	-5.18	118.57	122.20
1	CA	767	U	N1-C2-O2	5.18	126.43	122.80
1	CA	1905	C	C2-N3-C4	5.18	122.49	119.90
1	CA	2342	C	O5'-P-OP2	5.18	116.92	110.70
34	DA	716	A	N7-C8-N9	5.18	116.39	113.80
1	AA	1416	C	N1-C2-O2	-5.18	115.79	118.90
1	AA	1822	A	OP2-P-O3'	5.18	116.60	105.20
1	AA	712	C	N1-C2-O2	5.18	122.01	118.90
1	AA	835	A	C6-N1-C2	5.18	121.71	118.60
1	AA	1394	G	N9-C4-C5	-5.18	103.33	105.40
1	AA	2383	G	C6-N1-C2	-5.18	121.99	125.10
1	AA	2512	U	C2-N3-C4	-5.18	123.89	127.00
1	CA	1782	C	C2-N3-C4	5.18	122.49	119.90
1	CA	1999	C	N3-C4-C5	5.18	123.97	121.90
34	DA	665	A	O5'-P-OP2	-5.18	101.04	105.70
1	AA	46	C	C5-C4-N4	-5.18	116.58	120.20
1	AA	2374	G	C8-N9-C4	5.18	108.47	106.40
1	CA	2229	C	N3-C4-C5	-5.18	119.83	121.90
34	DA	7	G	C4-N9-C1'	-5.18	119.77	126.50
1	AA	952	G	N1-C6-O6	-5.18	116.79	119.90
1	AA	1080	G	N7-C8-N9	-5.18	110.51	113.10
34	BA	378	G	OP1-P-O3'	5.18	116.59	105.20
1	CA	1653	G	N1-C6-O6	-5.18	116.79	119.90
1	CA	2012	G	N7-C8-N9	5.18	115.69	113.10
1	CA	2444	G	N3-C2-N2	5.18	123.52	119.90
1	CA	2525	G	OP1-P-O3'	-5.18	93.81	105.20
34	DA	567	G	C8-N9-C4	-5.18	104.33	106.40
1	AA	100	G	N1-C6-O6	5.17	123.00	119.90
1	AA	183	G	C5-C6-O6	5.17	131.71	128.60
1	AA	546	G	C6-N1-C2	-5.17	122.00	125.10
1	AA	587	C	N3-C4-C5	-5.17	119.83	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	634	C	C2-N3-C4	-5.17	117.31	119.90
1	AA	640	A	C5-N7-C8	-5.17	101.31	103.90
1	AA	908	A	C4-C5-C6	-5.17	114.41	117.00
1	AA	982	U	N3-C2-O2	5.17	125.82	122.20
1	AA	1477	U	C2-N3-C4	5.17	130.10	127.00
1	AA	1664	A	O5'-P-OP2	5.17	116.91	110.70
1	AA	2387	G	OP1-P-OP2	5.17	127.36	119.60
1	AA	2454	C	N3-C4-N4	5.17	121.62	118.00
34	BA	882	C	C6-N1-C2	5.17	122.37	120.30
1	AA	2830	A	C5-N7-C8	-5.17	101.31	103.90
1	AA	2859	U	C2-N3-C4	-5.17	123.90	127.00
41	BH	112	LEU	CA-CB-CG	5.17	127.20	115.30
1	CA	946	G	C2-N3-C4	-5.17	109.31	111.90
1	CA	2893	G	C8-N9-C1'	-5.17	120.28	127.00
34	DA	105	G	N3-C4-N9	5.17	129.10	126.00
1	AA	776	G	OP2-P-O3'	5.17	116.58	105.20
1	AA	1241	C	N1-C2-O2	-5.17	115.80	118.90
1	AA	1416	C	N3-C4-N4	5.17	121.62	118.00
1	AA	1753	U	N1-C2-O2	5.17	126.42	122.80
1	AA	2256	U	C4-C5-C6	5.17	122.80	119.70
1	AA	2554	A	C8-N9-C4	5.17	107.87	105.80
1	AA	2559	U	C5-C6-N1	-5.17	120.11	122.70
1	AA	2832	G	N3-C4-N9	5.17	129.10	126.00
34	BA	879	C	OP2-P-O3'	5.17	116.58	105.20
1	CA	1441	G	C4-C5-N7	-5.17	108.73	110.80
34	DA	434	U	C6-N1-C2	-5.17	117.90	121.00
1	AA	554	A	C5'-C4'-C3'	-5.17	107.73	116.00
1	AA	655	G	O5'-P-OP2	-5.17	101.05	105.70
1	AA	1752	G	N1-C2-N2	-5.17	111.55	116.20
1	AA	167	G	N7-C8-N9	-5.17	110.52	113.10
1	AA	1501	U	N3-C2-O2	5.17	125.82	122.20
1	CA	741	G	N3-C4-N9	-5.17	122.90	126.00
1	CA	1460	A	O4'-C1'-N9	5.17	112.33	108.20
1	CA	2519	U	N3-C2-O2	5.17	125.82	122.20
1	CA	2606	C	OP2-P-O3'	5.17	116.57	105.20
1	AA	1678	A	C5-C6-N1	-5.17	115.12	117.70
1	AA	2235	G	OP2-P-O3'	5.17	116.57	105.20
1	AA	2594	G	C5-C6-N1	5.17	114.08	111.50
2	AB	38	C	C5-C6-N1	-5.17	118.42	121.00
34	BA	744	C	N3-C4-C5	5.17	123.97	121.90
1	CA	829	A	OP1-P-OP2	5.17	127.35	119.60
1	AA	449	A	OP1-P-OP2	-5.16	111.85	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	916	G	OP1-P-OP2	5.16	127.34	119.60
1	AA	2780	C	O5'-P-OP2	-5.16	101.05	105.70
2	AB	106	G	C2-N3-C4	5.16	114.48	111.90
4	AD	61	LEU	CA-CB-CG	5.16	127.18	115.30
13	AP	18	ARG	NE-CZ-NH1	5.16	122.88	120.30
34	BA	1519	A	C4-C5-C6	5.16	119.58	117.00
1	CA	764	A	O4'-C1'-N9	5.16	112.33	108.20
1	CA	1790	C	OP1-P-O3'	5.16	116.56	105.20
1	CA	2586	C	N1-C2-O2	5.16	122.00	118.90
1	CA	2618	G	C5-C6-N1	5.16	114.08	111.50
1	CA	2641	G	O5'-P-OP2	-5.16	101.05	105.70
1	CA	2673	G	C8-N9-C1'	-5.16	120.29	127.00
1	AA	188	A	OP2-P-O3'	5.16	116.56	105.20
1	AA	872	C	C4-C5-C6	5.16	119.98	117.40
1	AA	2000	A	C8-N9-C4	5.16	107.86	105.80
1	AA	911	G	O5'-P-OP1	5.16	116.89	110.70
1	AA	1071	G	C6-N1-C2	-5.16	122.00	125.10
1	AA	1423	G	C2-N3-C4	5.16	114.48	111.90
1	AA	2439	C	C5-C6-N1	-5.16	118.42	121.00
1	AA	2544	G	C5-N7-C8	-5.16	101.72	104.30
56	BY	74	C	C6-N1-C2	5.16	122.36	120.30
1	AA	150	C	C2-N3-C4	-5.16	117.32	119.90
1	AA	821	A	N7-C8-N9	5.16	116.38	113.80
1	AA	959	U	O5'-P-OP2	-5.16	101.06	105.70
1	AA	1017	G	OP1-P-O3'	5.16	116.55	105.20
1	AA	1273	G	C6-N1-C2	-5.16	122.00	125.10
1	AA	1502	G	N1-C6-O6	-5.16	116.81	119.90
1	AA	2013	U	N3-C4-O4	-5.16	115.79	119.40
1	AA	2487	C	N3-C2-O2	-5.16	118.29	121.90
1	CA	52	A	O5'-P-OP1	-5.16	101.06	105.70
1	CA	1721	G	C6-C5-N7	-5.16	127.31	130.40
1	CA	2050	C	C2-N3-C4	-5.16	117.32	119.90
34	DA	1528	U	C5-C6-N1	-5.16	120.12	122.70
1	AA	2011	G	C2-N3-C4	-5.16	109.32	111.90
1	AA	2050	U	N1-C2-O2	5.16	126.41	122.80
1	AA	2715	C	N1-C2-N3	5.16	122.81	119.20
56	BW	16	U	C2-N1-C1'	-5.16	111.51	117.70
1	AA	26	G	N9-C4-C5	-5.16	103.34	105.40
1	AA	478	G	N3-C2-N2	-5.16	116.29	119.90
1	AA	489	G	OP1-P-OP2	-5.16	111.87	119.60
1	AA	1422	C	N3-C2-O2	-5.16	118.29	121.90
1	AA	2011	G	N3-C4-C5	5.16	131.18	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2074	G	C6-C5-N7	5.16	133.49	130.40
1	AA	2113	U	C2-N3-C4	-5.16	123.91	127.00
1	CA	414	C	C4-C5-C6	5.16	119.98	117.40
1	CA	616	G	O5'-P-OP2	-5.16	101.06	105.70
1	CA	1645	G	N1-C2-N2	-5.16	111.56	116.20
1	CA	2393	A	N9-C4-C5	5.16	107.86	105.80
1	AA	325	G	C4-N9-C1'	-5.15	119.80	126.50
1	AA	874	U	OP1-P-OP2	5.15	127.33	119.60
1	AA	2462	A	C6-N1-C2	5.15	121.69	118.60
34	BA	784	C	N3-C4-C5	5.15	123.96	121.90
1	CA	315	G	O5'-P-OP1	5.15	116.89	110.70
1	AA	81	G	C4-C5-N7	5.15	112.86	110.80
1	AA	1067	A	C8-N9-C4	-5.15	103.74	105.80
1	CA	514	A	N1-C6-N6	5.15	121.69	118.60
1	CA	665	C	C6-N1-C2	-5.15	118.24	120.30
6	CF	74	ARG	NE-CZ-NH2	5.15	122.88	120.30
34	DA	7	G	C8-N9-C1'	5.15	133.70	127.00
57	DZ	216	LEU	CA-CB-CG	5.15	127.15	115.30
1	AA	277	G	N9-C4-C5	5.15	107.46	105.40
1	AA	1013	G	C5-C6-N1	5.15	114.08	111.50
1	AA	1266	C	C4-C5-C6	5.15	119.98	117.40
1	AA	1403	U	N3-C2-O2	-5.15	118.59	122.20
1	AA	2294	G	C5-N7-C8	-5.15	101.72	104.30
1	AA	2549	U	N3-C4-O4	-5.15	115.80	119.40
1	CA	483	A	O5'-P-OP1	-5.15	101.06	105.70
1	CA	2435	A	C5-N7-C8	-5.15	101.32	103.90
1	CA	2568	C	C6-N1-C2	5.15	122.36	120.30
1	AA	438	G	C8-N9-C4	-5.15	104.34	106.40
1	AA	2331	G	C4-C5-C6	-5.15	115.71	118.80
1	CA	1599	C	N3-C4-N4	-5.15	114.40	118.00
1	CA	2510	C	C4-C5-C6	5.15	119.97	117.40
1	AA	243	G	C6-N1-C2	-5.15	122.01	125.10
1	AA	435	G	OP2-P-O3'	5.15	116.53	105.20
1	AA	791	G	N1-C2-N2	-5.15	111.57	116.20
1	AA	855	G	N1-C2-N2	-5.15	111.57	116.20
1	AA	889	G	N3-C4-N9	-5.15	122.91	126.00
1	AA	1082	G	C4-N9-C1'	-5.15	119.81	126.50
1	AA	2464	C	C2-N3-C4	-5.15	117.33	119.90
1	AA	2620	G	C8-N9-C4	5.15	108.46	106.40
1	AA	2710	U	C5-C6-N1	-5.15	120.13	122.70
1	AA	2870	A	OP2-P-O3'	5.15	116.52	105.20
1	CA	578	A	C5-C6-N6	-5.15	119.58	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2074	U	O5'-P-OP1	-5.15	101.07	105.70
34	DA	60	A	OP1-P-O3'	5.15	116.52	105.20
34	DA	355	C	C6-N1-C2	-5.15	118.24	120.30
1	AA	2434	A	N1-C6-N6	5.15	121.69	118.60
34	BA	644	G	O5'-P-OP2	-5.15	101.07	105.70
1	CA	702	G	O5'-P-OP2	-5.15	101.07	105.70
1	CA	1333	C	O5'-P-OP1	5.15	116.88	110.70
34	DA	882	C	C2-N1-C1'	5.15	124.46	118.80
1	AA	559	U	C5-C4-O4	5.14	128.99	125.90
1	AA	628	C	C6-N1-C2	5.14	122.36	120.30
1	AA	818	G	N9-C4-C5	5.14	107.46	105.40
1	AA	1020	C	C6-N1-C1'	5.14	126.97	120.80
1	AA	1290	G	C8-N9-C4	5.14	108.46	106.40
1	CA	296	C	C6-N1-C2	-5.14	118.24	120.30
1	CA	1296	G	N3-C2-N2	5.14	123.50	119.90
1	CA	1666	G	O5'-P-OP2	5.14	116.88	110.70
1	CA	2069	G	N9-C4-C5	5.14	107.46	105.40
34	DA	30	U	N1-C2-O2	-5.14	119.20	122.80
1	AA	577	U	OP1-P-OP2	-5.14	111.89	119.60
1	AA	847	A	N3-C4-C5	-5.14	123.20	126.80
1	AA	1070	G	C5-C6-O6	-5.14	125.52	128.60
1	AA	1237	G	C5-C6-O6	5.14	131.69	128.60
1	AA	1700	G	N1-C2-N2	-5.14	111.57	116.20
1	AA	1811	A	N9-C4-C5	5.14	107.86	105.80
1	AA	2764	G	O4'-C1'-N9	5.14	112.31	108.20
34	BA	397	A	N1-C2-N3	5.14	131.87	129.30
34	BA	881	G	O5'-P-OP1	5.14	116.87	110.70
34	BA	885	G	O5'-P-OP1	5.14	116.87	110.70
34	BA	1484	C	C5-C6-N1	-5.14	118.43	121.00
1	CA	787	U	C6-N1-C2	-5.14	117.91	121.00
1	CA	952	G	N1-C6-O6	-5.14	116.81	119.90
1	CA	964	C	OP2-P-O3'	5.14	116.51	105.20
1	CA	1779	U	O4'-C1'-N1	5.14	112.31	108.20
1	CA	2877	G	O5'-P-OP2	-5.14	101.07	105.70
34	DA	728	A	O5'-P-OP2	-5.14	101.07	105.70
34	DA	955	U	C5-C6-N1	5.14	125.27	122.70
1	AA	29	U	C5-C6-N1	-5.14	120.13	122.70
1	AA	478	G	C6-C5-N7	5.14	133.48	130.40
1	AA	2052	A	O5'-P-OP2	-5.14	101.07	105.70
1	AA	2081	A	N1-C2-N3	-5.14	126.73	129.30
1	AA	2257	U	O5'-P-OP1	5.14	116.87	110.70
56	BW	71	G	N3-C4-C5	5.14	131.17	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	114	C	C4-C5-C6	5.14	119.97	117.40
1	AA	1185	C	OP2-P-O3'	5.14	116.50	105.20
1	AA	2304	C	C4-C5-C6	5.14	119.97	117.40
1	CA	1323	U	C2-N3-C4	-5.14	123.92	127.00
1	AA	988	U	C5-C4-O4	-5.14	122.82	125.90
1	AA	1605	A	N7-C8-N9	5.14	116.37	113.80
1	AA	2471	A	C5-C6-N1	5.14	120.27	117.70
1	CA	2042	A	C2-N3-C4	-5.14	108.03	110.60
1	CA	2059	A	C8-N9-C4	5.14	107.86	105.80
1	CA	2885	C	N1-C2-O2	5.14	121.98	118.90
34	DA	221	C	N3-C2-O2	-5.14	118.30	121.90
1	AA	85	C	OP2-P-O3'	5.14	116.50	105.20
1	AA	449	A	C8-N9-C4	-5.14	103.75	105.80
1	AA	1610	G	C4-C5-N7	-5.14	108.75	110.80
1	AA	1664	A	C5-C6-N1	5.14	120.27	117.70
1	AA	1697	G	N1-C6-O6	-5.14	116.82	119.90
1	AA	2458	G	OP2-P-O3'	5.14	116.50	105.20
1	AA	2722	C	N1-C2-O2	5.14	121.98	118.90
34	BA	266	G	P-O3'-C3'	5.14	125.86	119.70
34	BA	809	G	C8-N9-C4	-5.14	104.34	106.40
34	BA	1402	C	C6-N1-C2	-5.14	118.25	120.30
1	CA	265	A	C6-C5-N7	-5.14	128.70	132.30
1	CA	2356	C	N3-C2-O2	5.14	125.50	121.90
1	CA	2673	G	C4-N9-C1'	5.14	133.18	126.50
1	CA	2677	G	C8-N9-C4	-5.14	104.35	106.40
1	AA	2437	A	C4-C5-N7	5.13	113.27	110.70
1	AA	2633	A	N3-C4-N9	-5.13	123.29	127.40
1	CA	468	G	C8-N9-C4	5.13	108.45	106.40
1	CA	508	G	N3-C4-N9	-5.13	122.92	126.00
1	CA	760	G	OP1-P-O3'	5.13	116.50	105.20
1	CA	1653	G	N9-C4-C5	5.13	107.45	105.40
1	CA	2255	G	O5'-P-OP2	-5.13	101.08	105.70
1	CA	2500	U	C2-N1-C1'	-5.13	111.54	117.70
1	CA	2851	A	N7-C8-N9	5.13	116.37	113.80
34	DA	678	U	N1-C2-O2	-5.13	119.21	122.80
38	DE	18	ARG	N-CA-C	-5.13	97.14	111.00
1	AA	1364	C	C5-C4-N4	-5.13	116.61	120.20
1	AA	2001	C	O5'-P-OP2	5.13	116.86	110.70
34	BA	1498	U	N3-C4-O4	-5.13	115.81	119.40
1	AA	235	C	C2-N3-C4	-5.13	117.33	119.90
1	AA	1364	C	OP2-P-O3'	5.13	116.49	105.20
1	AA	1403	U	N1-C2-O2	5.13	126.39	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1976	G	N3-C2-N2	5.13	123.49	119.90
1	AA	2056	U	C4-C5-C6	5.13	122.78	119.70
1	AA	2425	G	N3-C2-N2	-5.13	116.31	119.90
25	A1	46	LEU	CA-CB-CG	5.13	127.10	115.30
1	CA	761	A	OP1-P-O3'	5.13	116.49	105.20
1	CA	1767	C	C2-N1-C1'	-5.13	113.16	118.80
1	CA	2778	A	O5'-P-OP1	5.13	116.86	110.70
2	CB	10	C	C6-N1-C2	-5.13	118.25	120.30
1	AA	332	G	N1-C6-O6	-5.13	116.82	119.90
1	AA	2090	U	N3-C2-O2	5.13	125.79	122.20
1	CA	1752	C	N3-C4-C5	5.13	123.95	121.90
1	AA	351	G	C5-N7-C8	5.13	106.86	104.30
1	AA	1035	G	OP2-P-O3'	5.13	116.48	105.20
1	AA	1077	G	C5-C6-O6	-5.13	125.52	128.60
1	AA	1579	C	C5-C6-N1	5.13	123.56	121.00
1	AA	1628	G	N7-C8-N9	5.13	115.66	113.10
1	AA	1673	G	O5'-P-OP2	-5.13	101.08	105.70
1	AA	1698	G	C5-C6-O6	-5.13	125.52	128.60
34	BA	581	G	N3-C4-C5	5.13	131.16	128.60
1	CA	764	A	OP1-P-OP2	-5.13	111.91	119.60
1	CA	773	U	O5'-P-OP2	5.13	116.85	110.70
1	AA	1615	G	N3-C2-N2	5.13	123.49	119.90
1	AA	1656	A	O4'-C1'-N9	-5.13	104.10	108.20
1	AA	1789	G	OP2-P-O3'	5.13	116.48	105.20
1	AA	2641	A	C4-N9-C1'	5.13	135.53	126.30
1	AA	2691	A	N1-C6-N6	-5.13	115.52	118.60
1	AA	2780	C	N3-C4-N4	-5.13	114.41	118.00
1	AA	2835	C	C2-N3-C4	-5.13	117.34	119.90
1	CA	741	G	C5-C6-N1	-5.13	108.94	111.50
1	AA	249	G	N1-C6-O6	-5.12	116.83	119.90
1	AA	726	C	OP2-P-O3'	5.12	116.47	105.20
2	AB	67	G	C5-C6-O6	5.12	131.68	128.60
1	CA	1776	G	C8-N9-C1'	-5.12	120.34	127.00
1	CA	2816	C	O5'-P-OP1	-5.12	101.09	105.70
1	AA	241	G	O5'-P-OP1	-5.12	101.09	105.70
1	AA	824	A	N3-C4-C5	-5.12	123.21	126.80
1	AA	1242	G	C4-N9-C1'	-5.12	119.84	126.50
1	AA	1739	U	C2-N3-C4	-5.12	123.93	127.00
1	AA	1792	C	O5'-P-OP2	5.12	116.85	110.70
1	CA	271(W)	G	N1-C2-N3	5.12	126.97	123.90
1	CA	2276	G	N3-C2-N2	5.12	123.49	119.90
1	CA	2777	G	C2-N3-C4	-5.12	109.34	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	730	C	C6-N1-C2	5.12	122.35	120.30
1	AA	851	A	N3-C4-N9	-5.12	123.30	127.40
1	AA	1700	G	C2'-C3'-O3'	5.12	121.90	113.70
1	AA	1833	A	O4'-C1'-N9	-5.12	104.10	108.20
1	AA	2006	G	C5-C6-N1	-5.12	108.94	111.50
34	BA	554	C	N3-C2-O2	5.12	125.48	121.90
34	BA	807	A	C2-N3-C4	5.12	113.16	110.60
1	CA	704	G	C6-C5-N7	-5.12	127.33	130.40
1	CA	1100	C	C2-N1-C1'	5.12	124.44	118.80
1	CA	1309	G	C5-N7-C8	5.12	106.86	104.30
1	CA	2638	G	C6-C5-N7	5.12	133.47	130.40
1	AA	213	G	N1-C6-O6	-5.12	116.83	119.90
1	AA	308	U	C6-N1-C2	-5.12	117.93	121.00
1	AA	2305	C	C6-N1-C2	5.12	122.35	120.30
1	AA	2781	C	C5-C6-N1	-5.12	118.44	121.00
1	CA	1288	U	OP1-P-OP2	5.12	127.28	119.60
1	CA	1501	C	C5-C6-N1	5.12	123.56	121.00
1	CA	1984	G	O4'-C1'-N9	-5.12	104.10	108.20
1	AA	438	G	C2-N3-C4	5.12	114.46	111.90
1	AA	482	C	OP2-P-O3'	5.12	116.46	105.20
1	AA	793	A	C6-N1-C2	-5.12	115.53	118.60
1	AA	2488	A	N1-C6-N6	5.12	121.67	118.60
1	AA	2617	U	N1-C2-N3	5.12	117.97	114.90
2	AB	88	C	C2-N1-C1'	-5.12	113.17	118.80
1	CA	475	U	O5'-P-OP2	-5.12	101.09	105.70
1	CA	748	G	C4-C5-N7	-5.12	108.75	110.80
1	CA	1763	G	N9-C4-C5	-5.12	103.35	105.40
1	CA	1991	U	N1-C2-N3	5.12	117.97	114.90
1	CA	2269	A	N9-C4-C5	-5.12	103.75	105.80
1	CA	2540	C	N3-C4-N4	-5.12	114.42	118.00
1	AA	120	G	C8-N9-C4	-5.12	104.35	106.40
1	AA	332	G	N3-C4-N9	5.12	129.07	126.00
1	AA	1275	G	OP2-P-O3'	5.12	116.46	105.20
1	AA	2023	A	C5-C6-N6	5.12	127.79	123.70
1	AA	2530	A	C5-C6-N1	-5.12	115.14	117.70
1	AA	2607	G	N1-C6-O6	-5.12	116.83	119.90
34	BA	1507	A	N1-C6-N6	5.12	121.67	118.60
1	CA	2073	C	N1-C2-O2	-5.12	115.83	118.90
1	AA	1372	U	N1-C2-O2	5.12	126.38	122.80
1	AA	1650	C	N3-C4-C5	5.12	123.95	121.90
1	AA	2798	C	C2-N3-C4	-5.12	117.34	119.90
1	AA	2867	G	N3-C2-N2	5.12	123.48	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	503	C	O5'-P-OP1	-5.12	101.10	105.70
1	CA	848	G	C4-N9-C1'	5.12	133.15	126.50
1	CA	1451	C	C2-N1-C1'	-5.12	113.17	118.80
1	CA	1982	C	C4-C5-C6	-5.12	114.84	117.40
1	AA	724	A	N1-C2-N3	5.11	131.86	129.30
1	AA	887	C	C5-C6-N1	-5.11	118.44	121.00
1	AA	1487	G	OP1-P-OP2	-5.11	111.93	119.60
1	AA	1960	A	O4'-C1'-N9	5.11	112.29	108.20
34	BA	1530	G	C2-N3-C4	-5.11	109.34	111.90
1	CA	424	G	OP2-P-O3'	5.11	116.45	105.20
1	CA	1023	U	C5-C4-O4	5.11	128.97	125.90
1	CA	1345	C	O5'-P-OP1	-5.11	101.10	105.70
34	DA	1125	U	C5-C6-N1	5.11	125.26	122.70
34	DA	1469	G	N1-C2-N2	5.11	120.80	116.20
1	AA	337	C	C2-N3-C4	-5.11	117.34	119.90
1	AA	1685	C	C2-N3-C4	-5.11	117.34	119.90
1	AA	2597	U	N1-C2-O2	5.11	126.38	122.80
1	CA	1946	U	N3-C4-O4	5.11	122.98	119.40
1	CA	1992	G	P-O3'-C3'	5.11	125.83	119.70
1	CA	2510	C	N3-C4-C5	-5.11	119.86	121.90
34	DA	1462	G	C8-N9-C4	5.11	108.44	106.40
1	AA	403	C	C6-N1-C2	5.11	122.34	120.30
1	AA	542	C	C5-C6-N1	-5.11	118.44	121.00
1	AA	674	G	C8-N9-C4	-5.11	104.36	106.40
1	AA	723	A	C5-N7-C8	5.11	106.45	103.90
1	AA	1545	C	C5-C4-N4	-5.11	116.62	120.20
1	AA	2411	G	C5-C6-O6	5.11	131.67	128.60
34	BA	552	U	O5'-P-OP1	5.11	116.83	110.70
34	BA	782	A	N9-C4-C5	5.11	107.84	105.80
34	BA	1406	U	C5-C6-N1	-5.11	120.14	122.70
1	AA	591	U	C5-C6-N1	5.11	125.25	122.70
1	AA	1194	A	C4-C5-N7	-5.11	108.15	110.70
1	CA	1860	G	C8-N9-C4	-5.11	104.36	106.40
1	AA	439	A	OP2-P-O3'	5.11	116.44	105.20
1	AA	801	C	C2-N3-C4	-5.11	117.35	119.90
1	AA	893	C	N1-C2-O2	-5.11	115.84	118.90
11	AN	35	ARG	NE-CZ-NH2	5.11	122.85	120.30
1	CA	394	A	C4-C5-C6	-5.11	114.45	117.00
1	CA	569	U	N1-C2-O2	-5.11	119.22	122.80
1	CA	758	C	C5-C4-N4	-5.11	116.62	120.20
1	CA	1790	C	N3-C4-N4	5.11	121.58	118.00
1	CA	2080	G	OP2-P-O3'	5.11	116.44	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	348	A	C2-N3-C4	-5.11	108.05	110.60
1	AA	416	G	N1-C2-N3	5.11	126.96	123.90
1	AA	594	A	N1-C2-N3	-5.11	126.75	129.30
1	AA	622	G	N3-C4-N9	5.11	129.06	126.00
1	AA	1081	U	N3-C2-O2	-5.11	118.63	122.20
1	AA	1364	C	N3-C2-O2	5.11	125.47	121.90
1	AA	1698	G	N3-C4-C5	-5.11	126.05	128.60
1	AA	2289	G	OP2-P-O3'	5.11	116.43	105.20
1	AA	2450	U	OP2-P-O3'	5.11	116.43	105.20
1	CA	1993	U	C6-N1-C2	5.11	124.06	121.00
1	CA	2486	G	N3-C4-C5	-5.11	126.05	128.60
1	AA	263	C	C5-C6-N1	5.10	123.55	121.00
1	AA	1001	G	N1-C2-N3	5.10	126.96	123.90
1	AA	2607	G	C6-N1-C2	5.10	128.16	125.10
34	BA	301	G	N9-C4-C5	5.10	107.44	105.40
34	BA	1502	A	C5-C6-N6	-5.10	119.62	123.70
1	CA	704	G	N1-C6-O6	5.10	122.96	119.90
1	CA	1743	C	C6-N1-C2	-5.10	118.26	120.30
34	DA	105	G	N3-C4-C5	-5.10	126.05	128.60
34	DA	792	A	C2-N3-C4	5.10	113.15	110.60
1	AA	216	A	C4-C5-C6	5.10	119.55	117.00
1	AA	1037	C	OP1-P-O3'	5.10	116.42	105.20
1	AA	2515	A	N7-C8-N9	-5.10	111.25	113.80
1	AA	2768	C	O5'-P-OP1	-5.10	101.11	105.70
1	AA	2781	C	C6-N1-C2	5.10	122.34	120.30
1	AA	2836	A	C2-N3-C4	-5.10	108.05	110.60
2	AB	7	G	C5-C6-O6	-5.10	125.54	128.60
34	BA	1230	C	C6-N1-C2	-5.10	118.26	120.30
1	CA	2273	A	OP2-P-O3'	5.10	116.43	105.20
1	CA	2642	G	OP1-P-OP2	-5.10	111.94	119.60
1	CA	2878	U	OP1-P-OP2	-5.10	111.94	119.60
1	AA	416	G	C5-C6-O6	-5.10	125.54	128.60
1	AA	2399	U	N1-C2-N3	5.10	117.96	114.90
1	AA	474	U	P-O3'-C3'	-5.10	113.58	119.70
1	AA	1704	C	C5-C4-N4	-5.10	116.63	120.20
1	AA	2244	U	OP1-P-OP2	5.10	127.25	119.60
34	BA	553	A	C5-C6-N6	-5.10	119.62	123.70
1	CA	1775	U	N1-C2-N3	5.10	117.96	114.90
1	CA	2522	U	N1-C2-O2	5.10	126.37	122.80
1	CA	2625	G	N3-C4-N9	5.10	129.06	126.00
1	AA	250	G	N1-C2-N2	-5.10	111.61	116.20
1	AA	900	G	OP2-P-O3'	5.10	116.42	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1032	C	C2-N1-C1'	-5.10	113.19	118.80
1	AA	1211	U	C5-C4-O4	-5.10	122.84	125.90
1	AA	1276	C	O5'-P-OP2	-5.10	101.11	105.70
1	AA	1471	G	C5-C6-O6	-5.10	125.54	128.60
1	AA	1518	A	C4-C5-C6	5.10	119.55	117.00
1	AA	1685	C	C2-N1-C1'	-5.10	113.19	118.80
1	AA	1819	C	C4-C5-C6	5.10	119.95	117.40
1	AA	2634	C	O5'-P-OP2	-5.10	101.11	105.70
1	AA	2849	G	N1-C6-O6	-5.10	116.84	119.90
34	BA	125	U	OP2-P-O3'	5.10	116.42	105.20
34	BA	386	C	C6-N1-C2	-5.10	118.26	120.30
1	CA	535	C	C2-N3-C4	-5.10	117.35	119.90
34	DA	1482	G	C6-C5-N7	-5.10	127.34	130.40
1	AA	1746	G	O4'-C1'-N9	-5.10	104.12	108.20
1	AA	2641	A	C6-N1-C2	-5.10	115.54	118.60
2	AB	110	G	O5'-P-OP1	-5.10	101.11	105.70
1	CA	254	G	C5-C6-O6	5.10	131.66	128.60
1	AA	129	G	OP2-P-O3'	5.09	116.41	105.20
1	AA	1828	C	N3-C4-C5	5.09	123.94	121.90
1	AA	2072	C	C6-N1-C2	5.09	122.34	120.30
1	AA	2733	U	O5'-P-OP1	-5.09	101.11	105.70
34	BA	299	G	N1-C6-O6	5.09	122.96	119.90
34	BA	574	A	C5-C6-N6	-5.09	119.62	123.70
34	BA	774	G	O5'-P-OP1	-5.09	101.11	105.70
1	CA	197	A	OP1-P-OP2	-5.09	111.96	119.60
1	CA	383	U	O5'-P-OP1	-5.09	101.12	105.70
1	CA	2248	C	N1-C2-N3	5.09	122.77	119.20
1	CA	2587	A	N1-C6-N6	5.09	121.66	118.60
1	CA	2708	G	C8-N9-C1'	-5.09	120.38	127.00
34	DA	62	U	O5'-P-OP2	-5.09	101.11	105.70
1	AA	460	C	N1-C2-N3	5.09	122.77	119.20
1	AA	1741	C	OP1-P-O3'	5.09	116.40	105.20
1	AA	2491	G	C5-C6-O6	5.09	131.66	128.60
1	AA	2553	A	N1-C2-N3	5.09	131.85	129.30
1	AA	2837	C	N3-C2-O2	5.09	125.47	121.90
1	AA	2846	U	N3-C4-C5	5.09	117.66	114.60
1	CA	1791	A	C6-N1-C2	-5.09	115.54	118.60
1	CA	1837	C	O5'-P-OP2	5.09	116.81	110.70
1	AA	347	G	C5-C6-N1	5.09	114.05	111.50
1	AA	810	G	N3-C2-N2	5.09	123.46	119.90
1	AA	904	C	N1-C2-O2	-5.09	115.84	118.90
1	AA	2008	A	C4-C5-C6	5.09	119.55	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	724	G	OP1-P-O3'	5.09	116.40	105.20
1	CA	2678	C	C2-N3-C4	-5.09	117.35	119.90
1	AA	438	G	C4-C5-N7	-5.09	108.76	110.80
1	AA	652	A	C5-N7-C8	5.09	106.44	103.90
1	AA	733	G	N1-C2-N3	5.09	126.95	123.90
1	AA	1615	G	C5-C6-N1	5.09	114.05	111.50
1	AA	1971	G	C5-N7-C8	5.09	106.84	104.30
1	AA	2381	A	C2-N3-C4	5.09	113.14	110.60
2	AB	62	C	N1-C2-O2	-5.09	115.85	118.90
34	BA	366	C	N1-C2-O2	-5.09	115.85	118.90
34	BA	401	C	C6-N1-C2	-5.09	118.26	120.30
34	BA	720	C	N1-C2-O2	5.09	121.95	118.90
34	BA	914	A	OP1-P-O3'	5.09	116.40	105.20
1	CA	1142(A)	A	C4-C5-N7	5.09	113.25	110.70
1	CA	1648	C	C6-N1-C1'	5.09	126.91	120.80
1	CA	2897	U	C2-N1-C1'	5.09	123.81	117.70
34	DA	552	U	O5'-P-OP2	-5.09	101.12	105.70
1	AA	2104	A	OP2-P-O3'	5.09	116.39	105.20
1	AA	2350	G	N1-C6-O6	-5.09	116.85	119.90
1	AA	2397	C	N3-C4-N4	-5.09	114.44	118.00
1	CA	1975	G	C6-C5-N7	-5.09	127.35	130.40
34	DA	1205	U	C6-N1-C2	-5.09	117.95	121.00
1	AA	100	G	N3-C2-N2	5.09	123.46	119.90
1	AA	409	G	N1-C2-N2	-5.09	111.62	116.20
1	AA	801	C	O5'-P-OP2	-5.09	101.12	105.70
1	AA	1010	C	N3-C4-N4	-5.09	114.44	118.00
1	AA	1981	G	N3-C4-C5	-5.09	126.06	128.60
1	AA	2058	C	OP2-P-O3'	5.09	116.39	105.20
1	AA	2547	G	C2-N3-C4	-5.09	109.36	111.90
34	BA	194	C	C5-C6-N1	5.09	123.54	121.00
34	BA	1511	G	C6-N1-C2	-5.09	122.05	125.10
34	DA	175	C	C6-N1-C2	-5.09	118.27	120.30
1	AA	1353	A	C2-N3-C4	-5.08	108.06	110.60
1	CA	1195	G	C5-C6-O6	-5.08	125.55	128.60
1	CA	2483	C	N3-C4-C5	5.08	123.93	121.90
1	AA	515	G	C6-N1-C2	-5.08	122.05	125.10
1	AA	555	G	C4-N9-C1'	-5.08	119.89	126.50
1	AA	1299	A	C5-C6-N6	-5.08	119.63	123.70
1	AA	1397	C	N3-C4-C5	5.08	123.93	121.90
1	AA	1962	U	O5'-P-OP2	-5.08	101.12	105.70
1	AA	1975	A	C6-C5-N7	5.08	135.86	132.30
1	AA	2669	A	C8-N9-C4	-5.08	103.77	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	586	C	N1-C2-N3	5.08	122.76	119.20
34	BA	1527	C	N3-C2-O2	-5.08	118.34	121.90
1	CA	803	U	N1-C2-N3	5.08	117.95	114.90
1	CA	1378	A	N7-C8-N9	-5.08	111.26	113.80
1	CA	1644	C	C6-N1-C1'	-5.08	114.70	120.80
1	CA	2237	G	C5-N7-C8	5.08	106.84	104.30
34	DA	6	G	C5-C6-O6	-5.08	125.55	128.60
1	AA	711	C	C2-N1-C1'	-5.08	113.21	118.80
1	AA	855	G	N3-C2-N2	5.08	123.46	119.90
1	AA	1693	C	N3-C2-O2	5.08	125.46	121.90
1	AA	1790	A	C6-N1-C2	-5.08	115.55	118.60
1	AA	1873	G	N7-C8-N9	-5.08	110.56	113.10
34	BA	720	C	N3-C2-O2	-5.08	118.34	121.90
34	BA	1457	G	C8-N9-C4	5.08	108.43	106.40
1	CA	267	C	C6-N1-C2	5.08	122.33	120.30
1	CA	514	A	O5'-P-OP2	-5.08	101.13	105.70
1	CA	946	G	OP1-P-OP2	5.08	127.22	119.60
1	CA	1204	A	O4'-C1'-N9	5.08	112.27	108.20
1	CA	2769	C	C6-N1-C2	-5.08	118.27	120.30
34	DA	540	G	C8-N9-C4	-5.08	104.37	106.40
1	AA	137	G	N3-C4-N9	5.08	129.05	126.00
1	AA	1984	C	C4-C5-C6	-5.08	114.86	117.40
1	AA	2085	C	C5-C6-N1	-5.08	118.46	121.00
1	AA	2689	G	N1-C2-N2	-5.08	111.63	116.20
1	AA	2793	G	N3-C2-N2	-5.08	116.34	119.90
1	AA	2863	C	C6-N1-C2	5.08	122.33	120.30
1	AA	1341	C	C6-N1-C2	5.08	122.33	120.30
1	AA	1694	G	C5-N7-C8	5.08	106.84	104.30
1	AA	1912	A	N1-C6-N6	-5.08	115.55	118.60
1	AA	2448	G	OP1-P-O3'	5.08	116.37	105.20
34	BA	1487	G	O5'-P-OP2	-5.08	101.13	105.70
1	CA	60	G	C5-C6-O6	-5.08	125.55	128.60
1	CA	382	G	N3-C4-C5	-5.08	126.06	128.60
1	CA	733	G	O5'-P-OP2	-5.08	101.13	105.70
1	CA	1190	G	C5-C6-O6	5.08	131.65	128.60
1	CA	2599	G	O5'-P-OP1	-5.08	101.13	105.70
34	DA	1499	A	C2-N3-C4	-5.08	108.06	110.60
56	DW	5	G	C8-N9-C4	5.08	108.43	106.40
1	AA	1986	G	C6-C5-N7	-5.08	127.35	130.40
1	AA	2694	U	C2-N3-C4	-5.08	123.95	127.00
34	BA	875	C	OP1-P-O3'	5.08	116.37	105.20
1	CA	1227	G	C8-N9-C4	-5.08	104.37	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	769	A	OP1-P-OP2	5.08	127.21	119.60
1	AA	1657	C	C5-C6-N1	-5.08	118.46	121.00
1	AA	2437	A	N7-C8-N9	5.08	116.34	113.80
1	AA	2675	G	O5'-P-OP2	-5.08	101.13	105.70
1	AA	2818	U	N3-C2-O2	-5.08	118.65	122.20
15	AR	2	ARG	NE-CZ-NH1	-5.08	117.76	120.30
34	BA	804	U	OP2-P-O3'	5.08	116.37	105.20
1	CA	2508	G	N9-C1'-C2'	-5.08	106.42	112.00
1	AA	183	G	N3-C2-N2	-5.07	116.35	119.90
1	AA	995	G	C5-N7-C8	-5.07	101.76	104.30
1	AA	1020	C	N3-C4-C5	-5.07	119.87	121.90
1	AA	1259	A	O5'-P-OP2	-5.07	101.13	105.70
1	AA	2370	G	C5-N7-C8	-5.07	101.76	104.30
34	BA	33	A	C5-C6-N1	5.07	120.24	117.70
34	BA	594	G	C5-C6-O6	-5.07	125.56	128.60
1	CA	1778	U	C5-C6-N1	-5.07	120.16	122.70
1	AA	50	G	OP1-P-OP2	5.07	127.21	119.60
1	AA	289	G	C8-N9-C4	5.07	108.43	106.40
1	AA	541	C	O5'-P-OP1	5.07	116.79	110.70
1	AA	1766	G	C5-C6-O6	-5.07	125.56	128.60
34	BA	740	U	O5'-P-OP2	-5.07	101.14	105.70
1	CA	491	G	N9-C4-C5	5.07	107.43	105.40
1	CA	2581	G	N7-C8-N9	5.07	115.64	113.10
1	AA	199	C	O5'-P-OP1	5.07	116.78	110.70
1	AA	465	G	C5-C6-O6	-5.07	125.56	128.60
1	AA	726	C	C6-N1-C1'	-5.07	114.72	120.80
1	AA	1308	A	C8-N9-C4	5.07	107.83	105.80
34	BA	566	G	N1-C2-N2	5.07	120.76	116.20
1	CA	804	A	OP2-P-O3'	5.07	116.36	105.20
1	CA	1272	A	O4'-C1'-N9	5.07	112.26	108.20
1	CA	1333	C	N3-C4-C5	5.07	123.93	121.90
1	CA	1702	G	N3-C2-N2	-5.07	116.35	119.90
1	CA	1857	G	N1-C2-N2	-5.07	111.64	116.20
1	CA	2207	G	N7-C8-N9	5.07	115.64	113.10
1	CA	2698	U	O5'-P-OP2	-5.07	101.14	105.70
21	CX	57	LEU	CA-CB-CG	5.07	126.96	115.30
1	AA	627	G	C8-N9-C4	-5.07	104.37	106.40
1	AA	1306	G	OP2-P-O3'	5.07	116.35	105.20
2	AB	62	C	C5-C6-N1	-5.07	118.47	121.00
1	CA	137	C	O5'-P-OP1	-5.07	101.14	105.70
1	CA	2596	U	C2-N3-C4	-5.07	123.96	127.00
34	DA	1232	U	C5-C6-N1	5.07	125.23	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	324	A	N9-C4-C5	-5.07	103.77	105.80
1	AA	1782	C	OP2-P-O3'	5.07	116.35	105.20
1	AA	2014	G	N9-C4-C5	5.07	107.43	105.40
1	AA	2750	G	C8-N9-C4	-5.07	104.37	106.40
34	BA	1507	A	C5-C6-N6	-5.07	119.65	123.70
1	CA	365	C	N3-C2-O2	-5.07	118.35	121.90
1	CA	1947	C	C2-N3-C4	-5.07	117.37	119.90
1	AA	785	G	C5-N7-C8	-5.07	101.77	104.30
1	AA	1194	A	C5-C6-N6	5.07	127.75	123.70
1	AA	1632	A	C2-N3-C4	-5.07	108.07	110.60
1	AA	1858	C	C4-C5-C6	-5.07	114.87	117.40
1	AA	1884	A	C5-N7-C8	-5.07	101.37	103.90
1	AA	2222	C	C4-C5-C6	5.07	119.93	117.40
1	AA	2293	C	N3-C2-O2	5.07	125.45	121.90
1	AA	2782	C	C6-N1-C2	5.07	122.33	120.30
2	AB	23	G	C8-N9-C4	-5.07	104.37	106.40
1	CA	420	C	N3-C4-N4	-5.07	114.45	118.00
1	CA	589	C	C5-C4-N4	5.07	123.75	120.20
1	AA	1401	G	OP2-P-O3'	5.06	116.34	105.20
5	AE	146	THR	C-N-CD	-5.06	109.46	120.60
34	BA	730	G	N3-C2-N2	5.06	123.44	119.90
1	CA	793	A	OP1-P-O3'	5.06	116.34	105.20
1	AA	1064	C	O4'-C1'-N1	5.06	112.25	108.20
1	AA	1351	C	O5'-P-OP2	-5.06	101.14	105.70
1	AA	1428	G	C8-N9-C4	5.06	108.42	106.40
1	AA	2090	U	N1-C2-O2	-5.06	119.26	122.80
1	AA	2252	C	C6-N1-C2	5.06	122.33	120.30
1	CA	592	G	N1-C2-N2	-5.06	111.64	116.20
1	CA	614	U	C5-C4-O4	5.06	128.94	125.90
1	CA	1321	A	C5-C6-N6	-5.06	119.65	123.70
1	CA	1675	C	C6-N1-C2	-5.06	118.28	120.30
1	CA	1920	C	O5'-P-OP2	-5.06	101.14	105.70
1	CA	2469	A	OP1-P-OP2	5.06	127.19	119.60
1	CA	2616	C	O5'-P-OP1	-5.06	101.14	105.70
1	CA	2805	G	C5-C6-O6	5.06	131.64	128.60
57	DZ	92	ILE	N-CA-C	-5.06	97.33	111.00
1	AA	474	U	C5'-C4'-O4'	5.06	115.17	109.10
1	AA	582	G	N1-C6-O6	-5.06	116.86	119.90
34	BA	698	G	C5-N7-C8	-5.06	101.77	104.30
1	CA	440	G	C8-N9-C4	5.06	108.42	106.40
1	CA	2531	A	C8-N9-C4	5.06	107.83	105.80
2	CB	115	G	C8-N9-C4	5.06	108.42	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DW	76	A	C2-N3-C4	-5.06	108.07	110.60
1	AA	52	A	N1-C2-N3	5.06	131.83	129.30
1	AA	103	C	OP1-P-O3'	-5.06	94.07	105.20
1	AA	455	A	C8-N9-C4	-5.06	103.78	105.80
1	AA	1463	C	O5'-P-OP2	5.06	116.77	110.70
1	AA	2735	G	C8-N9-C4	5.06	108.42	106.40
2	AB	97	G	OP2-P-O3'	5.06	116.33	105.20
34	BA	1498	U	N1-C2-N3	5.06	117.94	114.90
1	CA	113	G	C5-C6-O6	-5.06	125.56	128.60
1	CA	587	C	C2-N3-C4	-5.06	117.37	119.90
1	CA	748	G	C6-C5-N7	5.06	133.44	130.40
34	DA	583	A	N1-C6-N6	5.06	121.64	118.60
1	AA	805	C	O5'-P-OP1	5.06	116.77	110.70
1	AA	1288	A	OP2-P-O3'	5.06	116.32	105.20
1	AA	2361	G	C6-N1-C2	-5.06	122.07	125.10
1	AA	2450	U	C5-C4-O4	-5.06	122.86	125.90
34	BA	1384	C	N3-C4-C5	-5.06	119.88	121.90
1	CA	458	G	C6-C5-N7	-5.06	127.37	130.40
1	CA	992	C	OP1-P-O3'	5.06	116.33	105.20
1	CA	1315	C	O5'-P-OP1	-5.06	101.15	105.70
1	CA	1333	C	C4-C5-C6	-5.06	114.87	117.40
34	DA	619	U	N1-C2-O2	-5.06	119.26	122.80
1	AA	72	A	C5-C6-N1	5.06	120.23	117.70
1	AA	1648	U	N3-C2-O2	-5.06	118.66	122.20
1	AA	2400	A	O4'-C1'-N9	5.06	112.25	108.20
1	AA	2738	A	N7-C8-N9	-5.06	111.27	113.80
1	AA	2895	C	N1-C2-O2	-5.06	115.87	118.90
31	A7	42	LEU	CB-CG-CD1	-5.06	102.40	111.00
1	CA	2555	U	OP2-P-O3'	5.06	116.32	105.20
1	AA	1076	G	C5-C6-N1	5.05	114.03	111.50
1	AA	2280	A	N1-C6-N6	5.05	121.63	118.60
1	AA	2837	C	C4-C5-C6	-5.05	114.87	117.40
34	BA	193	C	N3-C2-O2	-5.05	118.36	121.90
34	BA	204	U	N1-C2-O2	5.05	126.34	122.80
1	CA	387	U	OP1-P-O3'	5.05	116.32	105.20
1	CA	1654	A	C5-C6-N1	-5.05	115.17	117.70
1	CA	2061	G	OP1-P-OP2	5.05	127.18	119.60
34	DA	574	A	C8-N9-C4	5.05	107.82	105.80
56	DW	6	G	N7-C8-N9	-5.05	110.57	113.10
1	AA	582	G	C5-C6-O6	5.05	131.63	128.60
1	AA	952	G	OP2-P-O3'	5.05	116.32	105.20
1	AA	2720	G	N3-C2-N2	5.05	123.44	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	791	G	C4-C5-N7	5.05	112.82	110.80
1	AA	806	G	N3-C2-N2	-5.05	116.36	119.90
1	AA	1208	G	C8-N9-C4	5.05	108.42	106.40
1	AA	1642	A	OP1-P-O3'	-5.05	94.09	105.20
1	AA	1789	G	O5'-P-OP2	5.05	116.76	110.70
1	AA	2355	C	C2-N3-C4	-5.05	117.38	119.90
1	AA	2470	G	OP1-P-OP2	5.05	127.18	119.60
1	CA	424	G	N1-C2-N3	-5.05	120.87	123.90
1	CA	1604	C	C6-N1-C2	5.05	122.32	120.30
1	CA	2033	A	N1-C6-N6	5.05	121.63	118.60
1	CA	2548	G	C4-C5-N7	5.05	112.82	110.80
1	AA	209	G	C5-C6-O6	5.05	131.63	128.60
1	AA	1077	G	OP2-P-O3'	5.05	116.31	105.20
1	AA	1080	G	C8-N9-C4	5.05	108.42	106.40
1	AA	1264	G	C8-N9-C4	5.05	108.42	106.40
1	AA	1721	G	C4-N9-C1'	5.05	133.06	126.50
1	AA	1989	C	OP1-P-OP2	5.05	127.17	119.60
1	AA	980	C	N1-C2-N3	5.05	122.73	119.20
1	AA	2377	G	O5'-P-OP1	5.05	116.76	110.70
1	AA	2529	C	O5'-P-OP2	-5.05	101.16	105.70
1	CA	2006	C	OP1-P-OP2	5.05	127.17	119.60
1	AA	96	C	OP1-P-OP2	5.05	127.17	119.60
1	AA	747	G	OP1-P-O3'	-5.05	94.10	105.20
1	AA	1843	A	N1-C6-N6	-5.05	115.57	118.60
1	AA	1851	U	C2-N3-C4	-5.05	123.97	127.00
1	AA	2721	G	C5-C6-N1	-5.05	108.98	111.50
34	BA	266	G	O4'-C1'-N9	-5.05	104.16	108.20
34	BA	303	A	N7-C8-N9	-5.05	111.28	113.80
1	CA	738	G	O5'-P-OP1	5.05	116.75	110.70
1	CA	1333	C	C2-N1-C1'	5.05	124.35	118.80
1	CA	1397	U	N1-C2-N3	5.05	117.93	114.90
1	CA	2023	G	N9-C4-C5	5.05	107.42	105.40
1	AA	348	A	N7-C8-N9	-5.04	111.28	113.80
1	AA	648	G	C2-N3-C4	5.04	114.42	111.90
1	AA	1814	A	C5-C6-N6	5.04	127.74	123.70
34	BA	1466	C	OP1-P-O3'	5.04	116.30	105.20
1	AA	569	G	C8-N9-C4	-5.04	104.38	106.40
1	AA	856	G	OP2-P-O3'	5.04	116.30	105.20
1	AA	1264	G	N1-C2-N2	-5.04	111.66	116.20
1	AA	1291	G	OP1-P-O3'	5.04	116.30	105.20
1	AA	2633	A	N1-C2-N3	-5.04	126.78	129.30
1	AA	2757	G	C5-C6-O6	-5.04	125.57	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	558	G	C4-C5-N7	5.04	112.82	110.80
34	BA	566	G	C8-N9-C4	-5.04	104.38	106.40
34	BA	841	U	C2-N1-C1'	5.04	123.75	117.70
34	BA	899	C	C2-N3-C4	-5.04	117.38	119.90
1	CA	410	G	C6-C5-N7	5.04	133.43	130.40
1	CA	446	G	N7-C8-N9	-5.04	110.58	113.10
1	CA	817	C	N3-C4-C5	-5.04	119.88	121.90
1	CA	1721	G	N3-C4-C5	-5.04	126.08	128.60
1	CA	1845	G	N9-C4-C5	5.04	107.42	105.40
1	AA	402	C	O5'-P-OP2	-5.04	101.16	105.70
1	AA	612	C	OP1-P-OP2	5.04	127.16	119.60
1	AA	884	C	N3-C4-N4	-5.04	114.47	118.00
1	AA	1498	C	C6-N1-C2	5.04	122.32	120.30
34	BA	864	A	OP1-P-OP2	-5.04	112.04	119.60
34	BA	1425	U	OP2-P-O3'	5.04	116.29	105.20
1	CA	512	G	O5'-P-OP2	-5.04	101.16	105.70
1	CA	848	G	N3-C4-N9	5.04	129.03	126.00
1	CA	1391	U	O5'-P-OP1	-5.04	101.16	105.70
1	CA	1930	G	C4-C5-N7	-5.04	108.78	110.80
1	CA	2056	G	O4'-C1'-N9	-5.04	104.17	108.20
1	AA	749	G	OP1-P-OP2	5.04	127.16	119.60
1	AA	1356	G	OP2-P-O3'	5.04	116.29	105.20
1	AA	2611	G	N9-C4-C5	-5.04	103.38	105.40
1	CA	1898	U	N3-C4-O4	-5.04	115.87	119.40
1	AA	139	A	O5'-P-OP2	5.04	116.75	110.70
1	AA	407	U	OP2-P-O3'	5.04	116.28	105.20
1	AA	566	C	N3-C4-C5	5.04	123.92	121.90
1	AA	624	C	N1-C2-O2	5.04	121.92	118.90
1	AA	1365	G	C8-N9-C4	-5.04	104.38	106.40
1	AA	1908	C	OP1-P-O3'	5.04	116.28	105.20
1	AA	2048	C	O4'-C1'-N1	5.04	112.23	108.20
1	AA	2444	A	C4-C5-N7	5.04	113.22	110.70
1	AA	2466	G	C8-N9-C4	-5.04	104.39	106.40
1	AA	2575	U	O5'-P-OP2	-5.04	101.17	105.70
1	AA	2599	A	N1-C6-N6	5.04	121.62	118.60
1	AA	2612	A	C6-N1-C2	5.04	121.62	118.60
1	AA	2828	G	O5'-P-OP2	5.04	116.75	110.70
34	BA	694	A	N1-C6-N6	5.04	121.62	118.60
34	BA	777	A	C8-N9-C4	-5.04	103.78	105.80
34	BA	985	C	C6-N1-C2	-5.04	118.28	120.30
1	CA	217	G	C8-N9-C1'	-5.04	120.45	127.00
1	CA	1897	G	C8-N9-C4	5.04	108.42	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1999	C	C2-N3-C4	-5.04	117.38	119.90
1	AA	477	C	C2-N3-C4	-5.04	117.38	119.90
1	AA	816	G	N3-C4-N9	5.04	129.02	126.00
1	AA	1265	A	C8-N9-C4	-5.04	103.78	105.80
1	AA	1690	G	N3-C4-N9	5.04	129.02	126.00
1	AA	1860	A	C4-C5-N7	-5.04	108.18	110.70
1	CA	430	G	C5-C6-O6	-5.04	125.58	128.60
1	CA	665	C	N3-C4-C5	-5.04	119.89	121.90
34	DA	314	C	C5-C4-N4	-5.04	116.67	120.20
34	DA	766	A	N1-C2-N3	-5.04	126.78	129.30
34	DA	926	G	C8-N9-C4	-5.04	104.39	106.40
1	AA	544	U	C2-N3-C4	-5.04	123.98	127.00
1	AA	977	G	C5-C6-N1	5.04	114.02	111.50
1	AA	2361	G	N1-C6-O6	-5.04	116.88	119.90
1	AA	2497	G	N7-C8-N9	-5.04	110.58	113.10
34	BA	226	G	C8-N9-C4	5.04	108.41	106.40
1	CA	202	U	OP1-P-OP2	5.04	127.15	119.60
1	CA	797	C	N3-C4-C5	-5.04	119.89	121.90
34	DA	331	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	28	A	C5-C6-N6	5.03	127.73	123.70
1	AA	216	A	O5'-P-OP1	-5.03	101.17	105.70
1	AA	762	G	N1-C6-O6	5.03	122.92	119.90
1	AA	866	A	O5'-P-OP2	-5.03	101.17	105.70
1	AA	1046	A	C6-N1-C2	5.03	121.62	118.60
1	AA	1065	U	C5-C4-O4	-5.03	122.88	125.90
1	AA	2363	G	N3-C4-N9	5.03	129.02	126.00
1	AA	2460	A	C8-N9-C4	-5.03	103.79	105.80
1	AA	2593	G	O5'-P-OP2	-5.03	101.17	105.70
2	AB	56	G	C4-N9-C1'	5.03	133.04	126.50
34	BA	266	G	C5-C6-O6	-5.03	125.58	128.60
1	CA	1233	C	C6-N1-C2	-5.03	118.29	120.30
1	CA	1295	C	OP2-P-O3'	5.03	116.27	105.20
34	DA	352	C	O5'-P-OP1	-5.03	101.17	105.70
1	AA	2605	U	OP2-P-O3'	5.03	116.27	105.20
1	CA	25	U	C2-N1-C1'	-5.03	111.66	117.70
1	AA	98	U	N1-C2-O2	5.03	126.32	122.80
1	AA	1307	C	N3-C4-C5	5.03	123.91	121.90
1	CA	210	C	OP2-P-O3'	5.03	116.27	105.20
34	DA	1508	G	O5'-P-OP2	-5.03	101.17	105.70
1	AA	1079	U	C5-C6-N1	-5.03	120.19	122.70
1	AA	1148	C	C2-N1-C1'	5.03	124.33	118.80
1	AA	1655	A	C6-C5-N7	-5.03	128.78	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1804	A	P-O3'-C3'	-5.03	113.67	119.70
1	CA	1984	G	C4-N9-C1'	5.03	133.04	126.50
1	CA	2851	A	C5-N7-C8	-5.03	101.39	103.90
34	DA	912	C	C2-N1-C1'	-5.03	113.27	118.80
1	AA	789	G	OP1-P-OP2	-5.03	112.06	119.60
1	AA	906	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	1155	C	N3-C4-N4	5.03	121.52	118.00
1	AA	1413	A	O5'-P-OP2	-5.03	101.17	105.70
1	AA	1652	G	OP1-P-O3'	5.03	116.26	105.20
1	AA	1721	G	O4'-C1'-N9	-5.03	104.18	108.20
1	AA	2047	C	N3-C4-C5	5.03	123.91	121.90
1	AA	2409	G	OP2-P-O3'	5.03	116.26	105.20
1	AA	2528	G	C8-N9-C4	5.03	108.41	106.40
1	AA	2586	G	C6-C5-N7	5.03	133.42	130.40
2	AB	80	U	N3-C4-C5	5.03	117.62	114.60
34	BA	968	A	C8-N9-C4	5.03	107.81	105.80
34	BA	1509	C	OP1-P-OP2	5.03	127.14	119.60
1	CA	474	G	N3-C4-C5	-5.03	126.09	128.60
1	AA	30	G	OP1-P-O3'	5.03	116.26	105.20
1	AA	555	G	C6-C5-N7	5.03	133.42	130.40
1	AA	633	G	N1-C2-N2	-5.03	111.68	116.20
1	AA	912	C	C4-C5-C6	5.03	119.91	117.40
1	AA	1098	C	C3'-C2'-C1'	-5.03	97.48	101.50
1	AA	1641	G	N3-C4-C5	-5.03	126.09	128.60
1	AA	2727	G	C2-N3-C4	5.03	114.41	111.90
1	CA	195	A	N9-C4-C5	5.03	107.81	105.80
1	CA	562	U	O5'-P-OP2	-5.03	101.18	105.70
1	CA	1142(A)	A	C5-C6-N1	-5.03	115.19	117.70
1	AA	415	G	C4-C5-N7	5.02	112.81	110.80
1	AA	743	G	C4-C5-C6	-5.02	115.79	118.80
1	AA	1659	G	OP1-P-OP2	-5.02	112.06	119.60
34	BA	1485	U	N3-C2-O2	-5.02	118.68	122.20
1	CA	1992	G	C6-C5-N7	5.02	133.41	130.40
1	AA	556	C	N3-C2-O2	-5.02	118.39	121.90
1	AA	1276	C	C2-N3-C4	-5.02	117.39	119.90
1	AA	1399	A	C8-N9-C4	5.02	107.81	105.80
1	AA	1648	U	O5'-P-OP1	-5.02	101.18	105.70
1	AA	1698	G	N3-C4-N9	5.02	129.01	126.00
1	AA	2069	U	C5-C4-O4	-5.02	122.89	125.90
1	AA	2498	G	N1-C6-O6	-5.02	116.89	119.90
1	AA	2510	C	O5'-P-OP1	5.02	116.73	110.70
1	AA	2783	G	N7-C8-N9	-5.02	110.59	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2839	C	N1-C2-O2	-5.02	115.89	118.90
2	AB	78	A	N1-C6-N6	5.02	121.61	118.60
34	BA	757	U	O5'-P-OP1	5.02	116.73	110.70
1	CA	1276	A	N9-C4-C5	-5.02	103.79	105.80
1	CA	1533	G	N3-C4-N9	5.02	129.01	126.00
1	CA	1757	U	C2-N1-C1'	-5.02	111.67	117.70
1	AA	1646	C	N3-C4-C5	5.02	123.91	121.90
1	AA	2657	G	C8-N9-C1'	5.02	133.53	127.00
1	AA	2759	U	C5-C4-O4	5.02	128.91	125.90
34	BA	364	A	N9-C4-C5	5.02	107.81	105.80
34	BA	672	U	N3-C2-O2	-5.02	118.69	122.20
1	CA	1665	A	C6-N1-C2	-5.02	115.59	118.60
1	CA	2557	G	OP2-P-O3'	5.02	116.25	105.20
1	AA	151	C	C6-N1-C2	5.02	122.31	120.30
1	AA	1393	G	N9-C4-C5	5.02	107.41	105.40
1	AA	1482	G	OP1-P-O3'	5.02	116.25	105.20
1	AA	2450	U	N3-C4-C5	5.02	117.61	114.60
34	BA	579	G	C6-C5-N7	-5.02	127.39	130.40
34	BA	585	G	N3-C4-C5	5.02	131.11	128.60
1	CA	1204	A	N9-C4-C5	-5.02	103.79	105.80
1	CA	1695	G	N3-C2-N2	-5.02	116.39	119.90
34	DA	286	G	N7-C8-N9	-5.02	110.59	113.10
1	AA	642	G	N1-C6-O6	-5.02	116.89	119.90
1	AA	1595	C	OP1-P-OP2	-5.02	112.07	119.60
1	AA	1627	A	C6-C5-N7	-5.02	128.79	132.30
1	AA	2017	U	C5-C4-O4	-5.02	122.89	125.90
1	AA	2256	U	C5-C4-O4	5.02	128.91	125.90
1	AA	2647	C	O5'-P-OP2	-5.02	101.19	105.70
1	AA	2737	C	N3-C4-N4	5.02	121.51	118.00
1	CA	1385	G	O4'-C1'-N9	5.02	112.21	108.20
1	CA	2038	G	OP2-P-O3'	5.02	116.24	105.20
1	AA	598	A	C5-C6-N6	-5.02	119.69	123.70
1	AA	1665	G	N9-C4-C5	-5.02	103.39	105.40
1	AA	2702	C	OP2-P-O3'	5.02	116.23	105.20
34	BA	1405	G	C5-C6-O6	5.02	131.61	128.60
1	CA	826	U	OP1-P-O3'	5.02	116.23	105.20
1	CA	2569	G	N1-C6-O6	5.02	122.91	119.90
1	CA	2582	G	C6-C5-N7	-5.02	127.39	130.40
1	AA	454	U	N3-C2-O2	5.01	125.71	122.20
1	AA	612	C	N1-C2-O2	-5.01	115.89	118.90
1	AA	1198	C	OP1-P-OP2	-5.01	112.08	119.60
1	AA	1211	U	C4-C5-C6	5.01	122.71	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2047	C	C6-N1-C2	5.01	122.31	120.30
1	AA	2673	G	N1-C6-O6	-5.01	116.89	119.90
34	BA	560	U	C3'-C2'-C1'	5.01	105.51	101.50
34	BA	810	C	OP1-P-O3'	5.01	116.23	105.20
45	BL	77	LEU	CB-CG-CD1	-5.01	102.47	111.00
1	CA	1215	G	OP2-P-O3'	5.01	116.23	105.20
1	CA	1637	A	C5-C6-N1	-5.01	115.19	117.70
1	CA	1936	A	O4'-C1'-N9	5.01	112.21	108.20
2	CB	10	C	N3-C2-O2	-5.01	118.39	121.90
1	AA	249	G	N9-C4-C5	5.01	107.41	105.40
1	AA	316	C	C5-C4-N4	-5.01	116.69	120.20
1	AA	1873	G	OP2-P-O3'	5.01	116.23	105.20
1	AA	2761	A	N1-C2-N3	-5.01	126.79	129.30
2	AB	99	G	O5'-P-OP2	-5.01	101.19	105.70
34	BA	1467	G	N1-C2-N2	-5.01	111.69	116.20
34	BA	1505	G	N1-C6-O6	-5.01	116.89	119.90
1	CA	1808	U	C6-N1-C2	5.01	124.01	121.00
1	AA	499	G	N1-C2-N2	-5.01	111.69	116.20
1	AA	621	G	N1-C6-O6	-5.01	116.89	119.90
1	AA	1100	A	C4-C5-N7	5.01	113.21	110.70
1	AA	1149	A	N3-C4-C5	5.01	130.31	126.80
1	AA	2635	G	N3-C4-C5	-5.01	126.09	128.60
1	AA	2700	U	C5-C4-O4	-5.01	122.89	125.90
34	BA	174	C	N1-C2-O2	5.01	121.91	118.90
34	BA	1383	C	C2-N3-C4	5.01	122.41	119.90
1	CA	1423	G	N9-C4-C5	-5.01	103.39	105.40
34	DA	692	U	N3-C4-C5	-5.01	111.59	114.60
34	DA	765	G	C5-C6-O6	5.01	131.61	128.60
1	AA	478	G	C4-C5-N7	-5.01	108.80	110.80
1	AA	2307	C	C5-C6-N1	5.01	123.50	121.00
1	AA	2637	G	C4-C5-N7	-5.01	108.80	110.80
1	CA	762	U	C6-N1-C1'	-5.01	114.19	121.20
1	CA	2083	G	N1-C6-O6	5.01	122.91	119.90
1	CA	2487	G	N9-C4-C5	-5.01	103.40	105.40
1	CA	2727	G	P-O3'-C3'	5.01	125.71	119.70
34	DA	906	G	N9-C4-C5	-5.01	103.40	105.40
1	AA	1683	C	P-O3'-C3'	-5.01	113.69	119.70
2	AB	91	C	C6-N1-C2	5.01	122.30	120.30
1	CA	1567	A	N1-C6-N6	-5.01	115.59	118.60
1	CA	2080	G	O5'-P-OP1	5.01	116.71	110.70
34	DA	550	G	N3-C4-C5	5.01	131.10	128.60
1	AA	309	C	O5'-P-OP2	-5.01	101.19	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	676	G	C5-C6-O6	-5.01	125.60	128.60
1	AA	858	U	C2-N3-C4	-5.01	124.00	127.00
1	AA	1289	G	N3-C2-N2	5.01	123.41	119.90
1	AA	1958	A	N9-C4-C5	-5.01	103.80	105.80
1	AA	2290	A	OP2-P-O3'	5.01	116.21	105.20
2	AB	101	G	N9-C4-C5	-5.01	103.40	105.40
1	CA	1350	C	N1-C2-N3	5.01	122.70	119.20
1	CA	1666	G	OP1-P-OP2	-5.01	112.09	119.60
1	CA	1830	C	C6-N1-C2	-5.01	118.30	120.30
1	CA	2059	A	N7-C8-N9	-5.01	111.30	113.80
34	DA	503	C	C5-C6-N1	5.01	123.50	121.00
1	AA	1948	U	O5'-P-OP1	-5.00	101.20	105.70
1	CA	1380	G	O5'-P-OP2	-5.00	101.19	105.70
1	CA	1804	C	OP1-P-O3'	5.00	116.21	105.20
1	CA	1888	G	N3-C4-C5	-5.00	126.10	128.60
1	AA	129	G	N1-C2-N2	-5.00	111.70	116.20
1	AA	493	G	N3-C4-C5	-5.00	126.10	128.60
1	AA	1411	A	C8-N9-C4	5.00	107.80	105.80
1	AA	2870	A	C5-C6-N6	5.00	127.70	123.70
34	BA	801	U	N3-C2-O2	-5.00	118.70	122.20
57	BZ	640	ALA	N-CA-C	5.00	124.51	111.00
1	CA	1698	A	C5-C6-N1	-5.00	115.20	117.70
1	CA	1975	G	N1-C6-O6	5.00	122.90	119.90
1	CA	2057	A	C8-N9-C4	5.00	107.80	105.80
1	CA	2242	G	C5-C6-N1	-5.00	109.00	111.50
2	CB	55	U	O5'-P-OP1	-5.00	101.20	105.70
1	AA	789	G	N9-C4-C5	5.00	107.40	105.40
1	AA	2453	C	N3-C2-O2	-5.00	118.40	121.90
1	AA	2696	U	C5-C6-N1	-5.00	120.20	122.70
1	AA	2838	C	OP2-P-O3'	5.00	116.20	105.20
34	DA	619	U	C5-C4-O4	5.00	128.90	125.90

There are no chirality outliers.

All (15) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
24	A0	11	ARG	Peptide
25	A1	2	SER	Peptide
28	A4	52	THR	Peptide
19	AV	54	GLY	Peptide
21	AX	93	GLU	Peptide
23	AZ	176	PRO	Peptide

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Mol	Chain	Res	Type	Group
53	BT	9	ASN	Peptide
57	BZ	404	VAL	Peptide
1	CA	512	G	Sidechain
17	CT	27	THR	Peptide
21	CX	93	GLU	Peptide
53	DT	9	ASN	Peptide
57	DZ	159	ALA	Peptide
57	DZ	87	HIS	Peptide
57	DZ	91	THR	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	61426	0	30937	933	0
1	CA	61337	0	30928	1107	0
2	AB	2573	0	1306	39	0
2	CB	2573	0	1306	49	0
3	AC	1063	0	1089	162	0
3	CC	1063	0	1091	203	0
4	AD	2136	0	2218	72	0
4	CD	2142	0	2229	72	0
5	AE	1559	0	1618	46	0
5	CE	1559	0	1618	92	0
6	AF	1584	0	1625	58	0
6	CF	1580	0	1619	68	0
7	AG	1425	0	1443	69	0
7	CG	1424	0	1434	59	0
8	AH	1330	0	1407	40	0
8	CH	1330	0	1407	51	0
9	AK	641	0	309	13	0
9	CK	641	0	309	13	0
10	AL	1025	0	1066	54	0
10	CL	1025	0	1066	50	0
11	AN	1117	0	1184	32	0
11	CN	1117	0	1184	45	0
12	AO	933	0	996	32	0
12	CO	933	0	996	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	AP	1139	0	1223	48	0
13	CP	1135	0	1212	46	0
14	AQ	1122	0	1179	35	0
14	CQ	1122	0	1179	54	0
15	AR	968	0	1033	26	0
15	CR	968	0	1033	44	0
16	AS	877	0	938	30	0
16	CS	870	0	923	43	0
17	AT	1091	0	1151	35	0
17	CT	1083	0	1136	55	0
18	AU	959	0	1019	30	0
18	CU	959	0	1018	34	0
19	AV	771	0	829	24	0
19	CV	771	0	830	16	0
20	AW	886	0	940	26	0
20	CW	886	0	940	31	0
21	AX	750	0	814	27	0
21	CX	750	0	814	27	0
22	AY	806	0	881	23	0
22	CY	806	0	881	39	0
23	AZ	1451	0	1457	56	0
23	CZ	1451	0	1457	66	0
24	A0	653	0	674	29	0
24	C0	653	0	674	22	0
25	A1	755	0	826	24	0
25	C1	755	0	826	23	0
26	A2	588	0	643	13	0
26	C2	588	0	643	19	0
27	A3	469	0	518	13	0
27	C3	464	0	514	11	0
28	A4	558	0	547	24	0
28	C4	532	0	505	14	0
29	A5	455	0	465	18	0
29	C5	455	0	465	20	0
30	A6	453	0	473	18	0
30	C6	449	0	469	13	0
31	A7	418	0	467	17	0
31	C7	418	0	467	17	0
32	A8	517	0	582	22	0
32	C8	517	0	582	28	0
33	A9	307	0	335	10	0
33	C9	307	0	335	14	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	BA	32141	0	16224	675	0
34	DA	32268	0	16287	690	0
35	BB	1846	0	1867	102	0
35	DB	1825	0	1828	82	0
36	BC	1552	0	1546	59	0
36	DC	1544	0	1524	63	0
37	BD	1659	0	1678	93	0
37	DD	1678	0	1720	90	0
38	BE	1129	0	1185	65	0
38	DE	1133	0	1191	64	0
39	BF	812	0	804	27	0
39	DF	820	0	814	22	0
40	BG	1231	0	1238	42	0
40	DG	1235	0	1249	32	0
41	BH	1088	0	1126	62	0
41	DH	1088	0	1126	36	0
42	BI	986	0	995	41	0
42	DI	978	0	966	40	0
43	BJ	709	0	650	37	0
43	DJ	714	0	672	47	0
44	BK	833	0	836	31	0
44	DK	833	0	836	25	0
45	BL	930	0	980	37	0
45	DL	930	0	980	44	0
46	BM	923	0	970	29	0
46	DM	950	0	988	46	0
47	BN	492	0	529	29	0
47	DN	492	0	531	20	0
48	BO	728	0	760	29	0
48	DO	728	0	760	18	0
49	BP	681	0	697	51	0
49	DP	677	0	686	33	0
50	BQ	823	0	891	26	0
50	DQ	823	0	891	35	0
51	BR	555	0	618	22	0
51	DR	555	0	618	25	0
52	BS	661	0	675	34	0
52	DS	646	0	644	30	0
53	BT	728	0	798	35	0
53	DT	731	0	807	24	0
54	BU	199	0	208	5	0
54	DU	199	0	208	8	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	BV	148	0	76	5	0
55	DV	123	0	66	5	0
56	BW	1631	0	839	22	0
56	BY	1581	0	805	24	0
56	DW	1631	0	839	45	0
56	DY	1561	0	796	40	0
57	BZ	5690	0	5783	272	0
57	DZ	5690	0	5783	322	0
58	A0	3	0	0	0	0
58	A2	2	0	0	0	0
58	A4	1	0	0	0	0
58	A5	1	0	0	0	0
58	A6	1	0	0	0	0
58	A7	3	0	0	0	0
58	A8	2	0	0	0	0
58	A9	1	0	0	0	0
58	AA	835	0	0	0	0
58	AB	23	0	0	0	0
58	AD	10	0	0	0	0
58	AE	4	0	0	0	0
58	AF	5	0	0	0	0
58	AG	2	0	0	0	0
58	AH	2	0	0	0	0
58	AN	3	0	0	0	0
58	AO	1	0	0	0	0
58	AP	2	0	0	0	0
58	AQ	3	0	0	0	0
58	AR	1	0	0	0	0
58	AU	3	0	0	0	0
58	AV	3	0	0	0	0
58	AW	4	0	0	0	0
58	AX	1	0	0	0	0
58	AY	1	0	0	0	0
58	AZ	2	0	0	0	0
58	BA	211	0	0	0	0
58	BB	1	0	0	0	0
58	BD	1	0	0	0	0
58	BE	1	0	0	0	0
58	BF	1	0	0	0	0
58	BK	1	0	0	0	0
58	BL	2	0	0	0	0
58	BM	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	BN	1	0	0	0	0
58	BT	1	0	0	0	0
58	BV	1	0	0	0	0
58	BW	3	0	0	0	0
58	BZ	2	0	0	0	0
58	C3	1	0	0	0	0
58	C5	1	0	0	0	0
58	C7	1	0	0	0	0
58	C8	1	0	0	0	0
58	CA	664	0	0	0	0
58	CB	13	0	0	0	0
58	CD	3	0	0	0	0
58	CE	6	0	0	0	0
58	CF	5	0	0	0	0
58	CG	1	0	0	0	0
58	CN	1	0	0	0	0
58	CO	2	0	0	0	0
58	CP	3	0	0	0	0
58	CQ	5	0	0	0	0
58	CR	1	0	0	0	0
58	CU	1	0	0	0	0
58	CV	2	0	0	0	0
58	CW	1	0	0	0	0
58	CY	1	0	0	0	0
58	DA	168	0	0	0	0
58	DD	1	0	0	0	0
58	DE	2	0	0	0	0
58	DF	1	0	0	0	0
58	DJ	1	0	0	0	0
58	DK	1	0	0	0	0
58	DT	1	0	0	0	0
58	DW	3	0	0	0	0
58	DZ	2	0	0	0	0
59	A4	1	0	0	0	0
59	A5	1	0	0	0	0
59	A6	1	0	0	0	0
59	A9	1	0	0	0	0
59	AY	1	0	0	0	0
59	BN	1	0	0	0	0
59	C4	1	0	0	0	0
59	C5	1	0	0	0	0
59	C6	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	C9	1	0	0	0	0
59	CY	1	0	0	0	0
59	DN	1	0	0	0	0
60	BD	8	0	0	1	0
60	DD	8	0	0	2	0
61	BZ	37	0	47	11	0
61	DZ	37	0	47	17	0
62	BZ	28	0	12	5	0
62	DZ	28	0	12	9	0
63	A0	7	0	0	1	0
63	A1	3	0	0	0	0
63	A3	1	0	0	0	0
63	A5	2	0	0	0	0
63	A6	1	0	0	0	0
63	A7	3	0	0	2	0
63	A8	11	0	0	2	0
63	AA	1408	0	0	60	0
63	AB	36	0	0	1	0
63	AD	15	0	0	1	0
63	AE	19	0	0	5	0
63	AF	8	0	0	1	0
63	AG	3	0	0	1	0
63	AH	1	0	0	0	0
63	AN	2	0	0	1	0
63	AO	3	0	0	0	0
63	AP	15	0	0	0	0
63	AQ	3	0	0	0	0
63	AR	3	0	0	0	0
63	AS	1	0	0	0	0
63	AT	2	0	0	0	0
63	AU	6	0	0	0	0
63	AW	1	0	0	0	0
63	AX	2	0	0	0	0
63	AZ	1	0	0	0	0
63	BA	205	0	0	13	0
63	BD	3	0	0	0	0
63	BE	3	0	0	0	0
63	BJ	1	0	0	0	0
63	BL	2	0	0	0	0
63	BM	1	0	0	0	0
63	BO	1	0	0	0	0
63	BV	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	BW	1	0	0	0	0
63	BZ	3	0	0	0	0
63	C0	5	0	0	0	0
63	C1	3	0	0	0	0
63	C3	1	0	0	0	0
63	C5	1	0	0	0	0
63	C7	3	0	0	0	0
63	C8	3	0	0	1	0
63	CA	981	0	0	65	0
63	CB	9	0	0	0	0
63	CD	15	0	0	0	0
63	CE	9	0	0	1	0
63	CF	6	0	0	0	0
63	CP	13	0	0	3	0
63	CQ	1	0	0	0	0
63	CT	3	0	0	0	0
63	CU	4	0	0	1	0
63	CV	1	0	0	0	0
63	CW	1	0	0	0	0
63	CX	1	0	0	0	0
63	CY	1	0	0	0	0
63	DA	153	0	0	11	0
63	DE	2	0	0	0	0
63	DH	1	0	0	1	0
63	DJ	1	0	0	0	0
63	DK	2	0	0	0	0
63	DL	1	0	0	0	0
63	DP	1	0	0	0	0
63	DT	1	0	0	0	0
63	DY	1	0	0	0	0
63	DZ	2	0	0	0	0
All	All	310279	0	209988	7291	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 15.

All (7291) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1891:G:C5'	3:AC:206:LYS:CG	1.80	1.55
1:AA:1891:G:H5''	3:AC:206:LYS:CG	1.26	1.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1891:G:C5'	3:AC:206:LYS:HG3	1.40	1.40
1:CA:2128:C:H5''	3:CC:219:MET:CE	1.55	1.37
1:AA:2143:G:N2	3:AC:169:THR:OG1	1.57	1.36
1:CA:2176:A:H4'	3:CC:45:HIS:CD2	1.62	1.32
1:AA:1891:G:H5'	3:AC:206:LYS:CD	1.61	1.30
1:CA:2121:G:O2'	3:CC:168:LYS:HB3	1.17	1.26
1:CA:2121:G:N2	3:CC:169:THR:OG1	1.63	1.26
1:CA:2177:C:H1'	3:CC:171:ALA:CB	1.64	1.25
1:CA:2177:C:H4'	3:CC:46:ALA:O	1.40	1.20
57:DZ:87:HIS:NE2	61:DZ:703:FUA:H283	1.55	1.20
1:CA:2176:A:O2'	3:CC:45:HIS:ND1	1.74	1.19
1:CA:1859:A:O2'	3:CC:206:LYS:HE3	1.42	1.18
1:AA:2143:G:O2'	3:AC:168:LYS:HD3	1.43	1.16
1:CA:2121:G:C1'	3:CC:168:LYS:HD3	1.75	1.16
1:CA:2121:G:H1'	3:CC:168:LYS:CD	1.74	1.16
1:AA:2143:G:O2'	3:AC:168:LYS:HB3	1.48	1.14
46:DM:123:ALA:HB3	57:DZ:573:HIS:HB2	1.31	1.12
1:CA:2177:C:H1'	3:CC:171:ALA:HB1	1.32	1.11
1:AA:1891:G:H5'	3:AC:206:LYS:HD2	1.12	1.10
1:AA:1891:G:C5'	3:AC:206:LYS:CD	2.21	1.10
1:AA:1891:G:H5''	3:AC:206:LYS:HG2	1.25	1.09
1:AA:2143:G:C2'	3:AC:168:LYS:HD3	1.79	1.09
61:BZ:703:FUA:H5	61:BZ:703:FUA:H202	1.29	1.08
1:CA:2121:G:O2'	3:CC:168:LYS:CB	2.02	1.07
1:CA:2176:A:O2'	3:CC:45:HIS:CG	2.06	1.07
61:DZ:703:FUA:H5	61:DZ:703:FUA:H202	1.29	1.06
1:AA:1891:G:C4'	3:AC:206:LYS:HG3	1.84	1.06
1:AA:1891:G:C5'	3:AC:206:LYS:HD2	1.85	1.05
17:CT:54:ARG:HA	17:CT:59:THR:HB	1.33	1.05
1:CA:1859:A:H2'	3:CC:206:LYS:CD	1.85	1.05
1:CA:1859:A:H2'	3:CC:206:LYS:HD2	1.09	1.05
1:CA:2176:A:O2'	3:CC:45:HIS:CE1	2.09	1.04
1:CA:1861:G:P	3:CC:206:LYS:HA	1.98	1.04
1:CA:1798:U:H5'	4:CD:259:THR:HG22	1.35	1.03
1:CA:2121:G:C1'	3:CC:168:LYS:CD	2.34	1.02
1:CA:2177:C:H1'	3:CC:171:ALA:HB2	1.37	1.02
57:DZ:160:ARG:NH1	57:DZ:256:THR:OG1	1.93	1.01
1:CA:1859:A:C2'	3:CC:206:LYS:HD2	1.92	0.99
35:DB:185:ILE:HG22	35:DB:199:TYR:HB2	1.40	0.99
1:AA:2331:G:H22	16:AS:3:ARG:HG2	1.26	0.98
1:CA:2128:C:C5'	3:CC:219:MET:CE	2.42	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2124:G:H4'	3:CC:175:PRO:HG3	1.44	0.98
1:CA:2128:C:C5'	3:CC:219:MET:HE3	1.94	0.98
21:AX:31:HIS:HD2	21:AX:33:LYS:H	1.09	0.97
4:CD:60:ARG:HD3	4:CD:86:PRO:HB2	1.45	0.97
1:CA:2128:C:H5''	3:CC:219:MET:HE3	0.98	0.97
1:AA:2143:G:O2'	3:AC:168:LYS:CD	2.13	0.97
1:CA:1860:G:H5'	3:CC:206:LYS:C	1.60	0.96
1:AA:9:U:H3	1:AA:2641:A:H2	1.06	0.96
1:CA:2176:A:C4'	3:CC:45:HIS:CD2	2.48	0.96
57:BZ:644:ARG:HB2	57:BZ:644:ARG:HH11	1.29	0.96
1:CA:2132:U:H1'	3:CC:6:LYS:HB3	1.48	0.95
1:AA:1219:A:H1'	1:AA:1220:U:H5''	1.46	0.95
4:AD:148:GLU:HB2	4:AD:151:LYS:HD2	1.49	0.95
1:CA:2121:G:H1'	3:CC:168:LYS:CE	1.97	0.95
35:BB:16:HIS:HB2	35:BB:204:ASN:HB3	1.48	0.94
1:AA:1891:G:H5'	3:AC:206:LYS:CG	1.77	0.93
57:DZ:191:ASP:OD1	57:DZ:267:LYS:NZ	2.02	0.93
34:DA:396:G:OP1	57:DZ:349:LYS:NZ	2.01	0.93
1:AA:1736:A:H62	1:AA:1745:A:H2	1.17	0.92
1:AA:2459:G:OP2	63:AA:4488:HOH:O	1.87	0.92
1:CA:2121:G:HO2'	3:CC:168:LYS:HB3	1.31	0.92
1:AA:1154:U:HO2'	1:AA:1155:C:H6	0.97	0.92
1:CA:2206:G:H3'	1:CA:2207:G:C8	2.05	0.92
1:AA:2143:G:O2'	3:AC:168:LYS:CB	2.17	0.92
31:A7:24:THR:HG22	31:A7:27:GLY:H	1.32	0.92
1:CA:1861:G:OP2	3:CC:206:LYS:HA	1.69	0.92
1:CA:1782:C:OP1	63:CA:4469:HOH:O	1.88	0.91
1:AA:1829:U:H5'	4:AD:259:THR:HG22	1.51	0.91
14:CQ:110:THR:HG23	14:CQ:113:GLN:HB2	1.52	0.91
53:DT:57:ARG:HH22	53:DT:100:ILE:HD12	1.33	0.91
1:CA:1019:U:HO2'	1:CA:1021:A:H2	0.98	0.91
57:BZ:210:ARG:HB2	57:BZ:210:ARG:HH11	1.35	0.91
1:CA:1271:G:OP2	63:CA:4162:HOH:O	1.89	0.91
1:CA:1689:A:H62	1:CA:1698:A:H2	1.15	0.91
7:AG:41:GLN:NE2	7:AG:154:GLY:O	2.03	0.90
1:CA:2177:C:O2	3:CC:171:ALA:CB	2.19	0.90
1:AA:1090:G:O2'	1:AA:1157:A:N6	2.04	0.90
57:BZ:13:ARG:HH12	57:BZ:247:ARG:HH12	0.96	0.90
34:BA:559:A:OP1	38:BE:126:ARG:NH2	2.04	0.90
34:BA:160:A:N6	34:BA:345:C:OP2	2.02	0.90
1:AA:1891:G:H4'	3:AC:206:LYS:CD	2.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:169:GLY:H	57:DZ:170:ARG:NH1	1.69	0.90
37:DD:13:ARG:NH1	37:DD:38:TYR:O	2.05	0.89
1:CA:1021:A:H62	1:CA:1141:U:H3	1.18	0.89
37:BD:41:GLY:O	37:BD:43:HIS:N	2.05	0.89
37:BD:104:VAL:HG11	37:BD:146:ILE:HD13	1.55	0.89
20:AW:14:PRO:HG2	20:AW:78:GLU:HG2	1.53	0.89
1:AA:1100:A:H62	1:AA:1151:U:H3	1.20	0.89
3:CC:31:LYS:NZ	3:CC:181:PHE:O	2.06	0.89
1:CA:1332:G:OP1	63:CA:4126:HOH:O	1.89	0.89
1:CA:2788:C:OP1	5:CE:61:ARG:NH2	2.06	0.89
39:DF:87:ARG:HH11	39:DF:87:ARG:HG3	1.36	0.89
34:DA:1129:C:H42	34:DA:1143:G:H1	1.17	0.88
22:AY:102:CYS:SG	22:AY:103:GLY:N	2.44	0.88
34:DA:922:G:H4'	38:DE:20:GLN:HA	1.53	0.88
1:CA:2177:C:O2	3:CC:171:ALA:HB3	1.74	0.88
1:CA:198:C:OP2	63:CA:4246:HOH:O	1.89	0.88
1:AA:535:C:OP1	63:AA:4769:HOH:O	1.90	0.88
57:BZ:114:VAL:HG23	57:BZ:152:THR:HB	1.56	0.87
1:CA:2046:G:H5'	29:C5:19:ARG:HA	1.55	0.87
1:AA:553:A:C8	1:AA:553:A:H3'	2.09	0.87
57:DZ:88:VAL:O	57:DZ:90:PHE:N	2.08	0.87
16:AS:52:SER:HB2	16:AS:55:ALA:H	1.38	0.87
56:DY:7:A:H61	56:DY:66:U:H3	1.23	0.87
3:AC:31:LYS:NZ	3:AC:181:PHE:O	2.06	0.86
57:BZ:373:ASP:OD2	57:BZ:374:LEU:N	2.07	0.86
24:C0:11:ARG:O	24:C0:14:ARG:NH2	2.09	0.86
1:AA:1065:U:HO2'	1:AA:1067:A:H2	1.21	0.86
1:CA:2177:C:C1'	3:CC:171:ALA:HB2	2.04	0.86
37:BD:167:GLY:H	37:BD:168:ARG:HH12	1.20	0.86
1:CA:2121:G:C1'	3:CC:168:LYS:CE	2.53	0.86
1:CA:2124:G:H4'	3:CC:175:PRO:CG	2.06	0.86
34:DA:1502:A:H2	34:DA:1505:G:H1	1.19	0.86
3:AC:52:PRO:HG2	3:AC:53:ARG:HD3	1.57	0.85
34:BA:560:U:H5'	34:BA:566:G:N2	1.91	0.85
57:DZ:169:GLY:HA3	57:DZ:174:PHE:HA	1.58	0.85
34:DA:1320:C:N3	52:DS:36:ARG:NH2	2.24	0.85
34:DA:959:A:O2'	34:DA:984:C:O2'	1.93	0.85
1:CA:1268:A:OP1	63:CA:3952:HOH:O	1.94	0.85
1:AA:778:C:OP2	63:AA:4735:HOH:O	1.95	0.85
57:BZ:132:ARG:HH11	57:BZ:160:ARG:NH1	1.75	0.85
34:BA:406:G:H21	37:BD:119:GLN:HE22	1.22	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1891:G:C5'	3:AC:206:LYS:HG2	1.84	0.85
34:BA:343:U:H3	34:BA:347:G:H22	1.21	0.85
1:CA:1315:C:OP2	63:CA:4126:HOH:O	1.94	0.85
57:BZ:225:GLU:HA	57:BZ:228:MET:HB3	1.59	0.84
1:AA:2143:G:H1'	3:AC:168:LYS:HG2	1.57	0.84
1:AA:874:U:OP1	63:AA:4781:HOH:O	1.93	0.84
1:CA:2121:G:H1'	3:CC:168:LYS:HE2	1.59	0.84
28:C4:40:HIS:HB3	28:C4:43:TYR:HB2	1.58	0.84
1:CA:2206:G:H3'	1:CA:2207:G:H8	1.42	0.84
3:CC:52:PRO:HG2	3:CC:53:ARG:HD3	1.58	0.84
34:BA:1125:U:H4'	43:BJ:5:ARG:HH22	1.42	0.84
34:BA:1356:G:H2'	34:BA:1357:A:C8	2.13	0.84
63:AE:415:HOH:O	15:AR:3:HIS:NE2	2.10	0.84
56:DW:40:C:H4'	56:DY:36:A:H5'	1.59	0.83
34:DA:355:C:OP2	63:DA:3334:HOH:O	1.96	0.83
34:BA:78:G:H22	34:BA:92:C:H42	1.27	0.83
1:AA:1541:A:OP2	63:AA:4073:HOH:O	1.96	0.83
1:AA:553:A:H2'	1:AA:554:A:H5'	1.60	0.83
21:CX:43:VAL:HG11	21:CX:81:VAL:HG21	1.60	0.83
6:AF:50:SER:HB2	6:AF:94:PRO:HD3	1.61	0.83
17:CT:39:ARG:NH2	34:DA:345:C:OP2	2.11	0.83
21:CX:60:ARG:HH22	31:C7:47:ARG:HH22	1.26	0.83
14:AQ:14:ARG:HG2	14:AQ:41:TRP:HH2	1.43	0.83
1:CA:1022:G:H22	1:CA:1142(A):A:H2	1.24	0.82
20:CW:34:ASN:OD1	20:CW:37:ARG:NH2	2.11	0.82
34:BA:812:C:N3	63:BA:5133:HOH:O	2.10	0.82
55:BV:15:A:HO2'	55:BV:16:U:H5	0.89	0.82
1:CA:1204:A:H2	1:CA:1241:A:H62	1.26	0.82
8:AH:41:MET:HE1	8:AH:65:HIS:HA	1.62	0.82
2:CB:66:A:H61	2:CB:109:C:H5''	1.43	0.82
1:AA:2801:C:OP1	5:AE:61:ARG:NH2	2.11	0.82
1:AA:656:A:OP1	13:AP:65:ARG:NH1	2.12	0.82
1:AA:427:G:N7	63:AA:4918:HOH:O	2.11	0.82
57:BZ:13:ARG:NH1	57:BZ:247:ARG:HH12	1.76	0.82
43:BJ:35:SER:HB3	43:BJ:73:ASP:HB2	1.61	0.82
1:CA:397:G:N7	63:CA:4557:HOH:O	2.11	0.82
34:BA:456:C:H42	34:BA:475:G:H1	1.25	0.82
57:DZ:553:GLY:H	57:DZ:557:GLY:HA2	1.42	0.82
34:DA:1279:A:O2'	34:DA:1282:C:N4	2.13	0.82
36:DC:180:ALA:HB1	36:DC:182:ILE:HG13	1.62	0.82
1:CA:2836:U:H2'	1:CA:2837:G:C8	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:218:A:OP2	63:CA:3751:HOH:O	1.96	0.82
34:BA:262:A:H2'	34:BA:263:A:C8	2.15	0.82
57:BZ:357:ARG:NH1	57:BZ:373:ASP:OD1	2.12	0.82
34:DA:266:G:H5''	34:DA:268:C:H41	1.45	0.82
1:CA:1658:C:OP1	63:CA:4668:HOH:O	1.95	0.82
1:AA:1891:G:C4'	3:AC:206:LYS:CD	2.57	0.82
1:CA:1861:G:OP1	3:CC:205:ALA:O	1.97	0.82
1:CA:2121:G:H1'	3:CC:168:LYS:CG	2.10	0.82
34:BA:1158:C:H5	34:BA:1181:G:H1	1.28	0.82
6:AF:53:THR:HG22	6:AF:55:GLY:H	1.45	0.82
57:BZ:13:ARG:NH1	57:BZ:280:LEU:O	2.11	0.81
34:DA:742:G:OP2	48:DO:35:ARG:NH2	2.13	0.81
1:CA:2287:A:H62	1:CA:2344:U:H3	1.27	0.81
34:BA:392:G:H2'	34:BA:393:A:H8	1.45	0.81
1:CA:1859:A:O2'	3:CC:206:LYS:CE	2.27	0.81
1:AA:1016:C:OP2	63:AA:5197:HOH:O	1.97	0.81
34:BA:1399:C:H4'	34:BA:1400:C:H5''	1.63	0.81
3:AC:54:ARG:NH2	3:AC:56:ASP:HB3	1.95	0.81
34:BA:538:G:H5''	45:BL:114:LYS:HB2	1.60	0.81
34:DA:998:G:H1	34:DA:1043:C:H42	1.29	0.81
57:BZ:93:GLU:OE2	57:BZ:96:ARG:NH2	2.13	0.81
1:AA:2143:G:O2'	3:AC:168:LYS:CG	2.29	0.81
1:AA:878:G:OP1	63:AA:4750:HOH:O	1.98	0.81
3:CC:54:ARG:NH2	3:CC:56:ASP:HB3	1.95	0.81
1:CA:2448:A:N1	63:CA:4239:HOH:O	2.13	0.81
1:CA:855:G:O2'	24:C0:27:GLU:OE2	1.98	0.81
46:DM:25:ILE:HG13	46:DM:29:ARG:HG2	1.62	0.81
38:DE:126:ARG:HA	38:DE:131:ILE:HD11	1.62	0.81
35:DB:69:LEU:HB3	35:DB:162:ILE:HG22	1.61	0.81
10:CL:84:LEU:HD21	10:CL:96:VAL:HB	1.63	0.81
37:DD:13:ARG:HB2	37:DD:40:PRO:HD3	1.61	0.80
1:CA:601:C:OP1	6:CF:108:LYS:NZ	2.14	0.80
42:BI:17:VAL:HG21	42:BI:81:ILE:HG22	1.63	0.80
49:DP:53:VAL:HG13	49:DP:79:VAL:HG13	1.63	0.80
34:BA:1502:A:H2	34:BA:1505:G:H1	1.29	0.80
14:CQ:34:LEU:HD11	14:CQ:129:THR:HB	1.61	0.80
57:BZ:92:ILE:HG21	57:BZ:437:THR:HG21	1.64	0.80
25:C1:3:LYS:HB2	25:C1:61:ARG:NH1	1.97	0.80
56:BW:26:A:H61	56:BW:44:G:H1	1.29	0.80
1:AA:927:G:N2	1:AA:944:C:N3	2.29	0.80
41:DH:64:LYS:HG2	41:DH:79:VAL:HG21	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1082:U:H5'	10:CL:117:THR:HA	1.63	0.80
34:BA:1375:A:H4'	40:BG:29:LYS:HE2	1.64	0.80
37:BD:178:VAL:O	37:BD:180:GLY:N	2.14	0.80
1:CA:2176:A:H4'	3:CC:45:HIS:HD2	1.40	0.80
35:DB:178:ARG:NH1	35:DB:196:LEU:O	2.15	0.80
34:DA:838:G:H1	34:DA:848:C:H42	1.30	0.80
34:BA:674:G:N2	34:BA:717:C:O2	2.14	0.80
5:CE:106:GLY:HA3	5:CE:189:PRO:HB2	1.63	0.79
1:CA:1557:C:OP2	1:CA:1558:A:O2'	2.00	0.79
9:CK:73:GLY:O	9:CK:75:GLN:N	2.13	0.79
56:BW:28:G:H1	56:BW:42:C:H42	1.29	0.79
6:AF:191:ARG:HG2	6:AF:191:ARG:HH11	1.46	0.79
35:DB:16:HIS:HB2	35:DB:204:ASN:HB3	1.64	0.79
1:AA:1891:G:C4'	3:AC:206:LYS:CG	2.53	0.79
1:CA:2121:G:O4'	3:CC:168:LYS:HD3	1.82	0.79
17:AT:65:LYS:HE2	17:AT:67:SER:HB2	1.64	0.79
44:BK:79:SER:HA	44:BK:104:GLN:HB2	1.62	0.79
5:AE:105:THR:OG1	5:AE:199:ARG:NH2	2.16	0.79
1:AA:553:A:H3'	1:AA:553:A:H8	1.48	0.79
14:AQ:109:VAL:HG13	14:AQ:113:GLN:HB3	1.63	0.79
38:BE:147:ASP:OD1	38:BE:147:ASP:N	2.16	0.79
1:AA:1151:U:H2'	1:AA:1152:G:H8	1.47	0.79
20:AW:18:ARG:NH1	20:AW:76:VAL:O	2.16	0.79
1:AA:1891:G:H5''	3:AC:206:LYS:HG3	0.83	0.79
15:CR:33:ARG:NH2	29:C5:57:VAL:O	2.16	0.79
1:CA:568:U:O4	63:CA:3804:HOH:O	1.99	0.79
13:AP:100:LEU:HD12	13:AP:112:LEU:HD11	1.65	0.79
37:DD:64:LEU:HD13	37:DD:198:VAL:HG11	1.65	0.78
38:BE:100:VAL:O	38:BE:107:ARG:NH2	2.16	0.78
1:AA:2299:A:H62	1:AA:2356:U:H3	1.30	0.78
29:C5:45:VAL:HG11	29:C5:58:LEU:HD13	1.65	0.78
1:AA:2328:C:H2'	1:AA:2329:C:H6	1.48	0.78
35:BB:111:ARG:HH11	35:BB:111:ARG:HG2	1.49	0.78
34:BA:1305:G:H22	34:BA:1331:G:H1'	1.48	0.78
5:AE:111:ARG:HG3	5:AE:160:TYR:CD2	2.18	0.78
34:BA:452:A:OP1	49:BP:43:LYS:NZ	2.15	0.78
34:DA:115:G:OP1	63:DA:3268:HOH:O	2.00	0.78
1:AA:2143:G:H1'	3:AC:168:LYS:CG	2.05	0.78
1:AA:554:A:N6	1:AA:2063:U:O2	2.17	0.78
14:CQ:34:LEU:HB2	14:CQ:118:LEU:HD22	1.66	0.78
57:DZ:-66:MET:N	57:DZ:-46:VAL:O	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1201:A:OP1	18:AU:55:ARG:HD3	1.83	0.78
10:CL:6:ALA:HB3	10:CL:30:HIS:HE1	1.48	0.78
1:CA:2137:C:H42	1:CA:2154:G:H1	1.30	0.78
1:AA:1378:G:OP1	63:AA:4578:HOH:O	2.01	0.78
34:BA:1353:G:N2	34:BA:1369:C:O2	2.14	0.78
14:CQ:18:LYS:O	14:CQ:98:LYS:NZ	2.16	0.78
36:BC:70:VAL:HG22	36:BC:72:LYS:H	1.47	0.78
34:DA:656:C:O2'	48:DO:28:GLN:NE2	2.13	0.78
57:DZ:87:HIS:NE2	61:DZ:703:FUA:C28	2.42	0.78
1:AA:1749:G:N7	63:AA:4933:HOH:O	2.17	0.78
20:CW:18:ARG:NH1	20:CW:76:VAL:O	2.17	0.78
15:CR:97:VAL:HG22	15:CR:114:VAL:HG13	1.65	0.78
1:CA:641:C:O2'	1:CA:2350:C:OP1	2.01	0.78
57:DZ:182:ARG:O	57:DZ:184:LYS:N	2.17	0.78
1:AA:11:G:H2'	1:AA:12:U:H5''	1.66	0.78
57:BZ:132:ARG:HH11	57:BZ:160:ARG:HH12	1.32	0.78
25:C1:3:LYS:HB2	25:C1:61:ARG:HH12	1.47	0.78
34:DA:1086:U:H3	34:DA:1099:G:H22	1.29	0.78
1:AA:1312:G:O5'	20:AW:15:ARG:NH2	2.17	0.78
34:BA:972:C:OP2	43:BJ:57:LYS:NZ	2.17	0.78
1:CA:2124:G:C4'	3:CC:175:PRO:HG3	2.14	0.78
57:DZ:169:GLY:H	57:DZ:170:ARG:HH12	1.28	0.78
34:BA:514:C:O2	34:BA:538:G:N2	2.17	0.78
21:CX:35:THR:HG22	21:CX:38:GLU:H	1.48	0.78
1:AA:1151:U:H2'	1:AA:1152:G:C8	2.19	0.77
57:BZ:330:VAL:HG12	57:BZ:371:ALA:HA	1.63	0.77
57:BZ:119:GLU:OE1	57:BZ:156:ARG:NH1	2.17	0.77
1:AA:1501:U:OP1	15:AR:77:ARG:NH1	2.16	0.77
34:DA:1004:A:H62	34:DA:1037:C:H2'	1.48	0.77
1:CA:2022:U:OP1	63:CA:4132:HOH:O	2.01	0.77
1:CA:1970:A:OP1	63:CA:3911:HOH:O	2.02	0.77
38:BE:33:VAL:HG13	38:BE:112:LEU:HD12	1.66	0.77
38:BE:48:ALA:H	38:BE:54:ALA:HB2	1.48	0.77
1:CA:761:A:OP1	63:CA:4232:HOH:O	2.03	0.77
2:AB:105:A:OP1	23:AZ:72:ARG:NH1	2.18	0.77
56:DW:39:PSU:O3'	56:DY:35:A:O2'	2.02	0.77
21:AX:31:HIS:CD2	21:AX:33:LYS:H	2.00	0.77
1:AA:839:G:H5''	1:AA:840:A:H5'	1.66	0.77
34:BA:128:G:O2'	50:BQ:3:LYS:NZ	2.17	0.77
34:BA:382:A:H2'	34:BA:383:A:H8	1.48	0.77
3:CC:24:ASP:O	3:CC:28:ARG:HG3	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:978:A:OP2	34:BA:1363:C:N4	2.17	0.77
1:CA:2178:C:O2	3:CC:169:THR:HG21	1.85	0.77
34:BA:1086:U:H3	34:BA:1099:G:H22	1.29	0.77
49:DP:43:LYS:HG2	49:DP:48:TRP:CD2	2.19	0.77
34:BA:656:C:O2'	48:BO:28:GLN:NE2	2.15	0.77
1:AA:2198:A:O2'	3:AC:45:HIS:CD2	2.38	0.77
34:DA:878:G:H5'	41:DH:89:PRO:HG2	1.66	0.77
1:CA:2124:G:O3'	3:CC:175:PRO:CG	2.33	0.77
57:BZ:87:HIS:O	57:BZ:89:ASP:N	2.17	0.77
57:BZ:148:LEU:O	57:BZ:152:THR:OG1	2.02	0.77
3:AC:20:VAL:O	3:AC:21:TYR:HB2	1.83	0.77
3:AC:24:ASP:O	3:AC:28:ARG:HG3	1.85	0.77
49:BP:53:VAL:HG13	49:BP:79:VAL:HG13	1.66	0.77
4:CD:69:ARG:NH2	4:CD:128:GLY:O	2.18	0.77
6:AF:53:THR:CG2	6:AF:55:GLY:H	1.97	0.77
57:BZ:428:LEU:HD13	57:BZ:440:VAL:HG21	1.66	0.77
34:DA:358:U:OP1	57:DZ:381:LYS:NZ	2.15	0.77
34:BA:1118:C:H1'	34:BA:1179:A:C4	2.19	0.77
14:AQ:56:ARG:HG3	14:AQ:56:ARG:HH11	1.50	0.77
57:DZ:170:ARG:HH11	57:DZ:170:ARG:N	1.82	0.76
1:CA:2808:U:O2	1:CA:2892:A:N6	2.18	0.76
34:BA:392:G:H2'	34:BA:393:A:C8	2.19	0.76
3:AC:27:ALA:O	3:AC:30:VAL:HG22	1.85	0.76
55:BV:15:A:O2'	55:BV:16:U:H5	1.66	0.76
35:BB:47:THR:HA	35:BB:202:PRO:HG2	1.67	0.76
7:AG:41:GLN:HG3	7:AG:60:LEU:HD21	1.67	0.76
38:DE:122:GLU:O	38:DE:126:ARG:NH1	2.18	0.76
39:BF:97:PHE:HD1	51:BR:31:LEU:HD21	1.50	0.76
1:CA:2285:C:OP2	30:C6:6:ARG:NH1	2.18	0.76
4:CD:276:LYS:H	4:CD:276:LYS:HD3	1.48	0.76
1:CA:2070:G:OP2	63:CA:4419:HOH:O	2.03	0.76
13:CP:44:GLY:O	63:CP:302:HOH:O	2.04	0.76
16:AS:58:LEU:HD22	16:AS:59:LYS:HG3	1.67	0.76
3:CC:27:ALA:O	3:CC:30:VAL:HG22	1.85	0.76
1:CA:1278:A:OP1	15:CR:36:THR:HG22	1.86	0.76
57:DZ:74:TRP:CE2	57:DZ:273:LEU:HB3	2.19	0.76
3:CC:20:VAL:O	3:CC:21:TYR:HB2	1.83	0.76
23:AZ:52:SER:OG	23:AZ:53:ILE:N	2.17	0.76
34:BA:1274:G:N2	34:BA:1275:A:N7	2.33	0.76
1:CA:1627:G:OP1	63:CA:4466:HOH:O	2.04	0.76
34:DA:1302:U:OP2	46:DM:21:TYR:OH	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:29:PRO:HA	19:AV:61:VAL:HG22	1.66	0.76
57:BZ:422:GLU:HA	57:BZ:425:SER:HB2	1.68	0.76
57:DZ:526:VAL:HB	57:DZ:566:THR:HA	1.68	0.76
33:C9:25:VAL:HB	33:C9:34:GLN:HB2	1.68	0.76
36:BC:58:GLU:HB3	43:BJ:92:THR:HG21	1.66	0.76
1:CA:2849:U:O4	17:CT:23:ARG:NH2	2.18	0.76
34:BA:941:G:O6	34:BA:1342:C:N4	2.17	0.76
1:CA:1859:A:HO2'	3:CC:206:LYS:HE3	1.51	0.75
1:CA:1817:G:OP1	4:CD:88:ARG:NH2	2.20	0.75
1:CA:1021:A:OP2	11:CN:65:LYS:NZ	2.19	0.75
1:CA:1653:G:OP1	1:CA:2822:G:N2	2.19	0.75
1:AA:2772:G:OP2	63:AA:4053:HOH:O	2.03	0.75
36:BC:19:GLU:HB3	36:BC:40:ARG:HH22	1.51	0.75
35:DB:189:ASP:OD1	35:DB:189:ASP:N	2.19	0.75
1:CA:2121:G:C2'	3:CC:168:LYS:HD3	2.17	0.75
23:AZ:72:ARG:NH2	23:AZ:97:GLU:O	2.19	0.75
23:CZ:144:LEU:HD11	23:CZ:150:LEU:HD23	1.67	0.75
16:CS:27:SER:HA	16:CS:88:ASP:HB3	1.67	0.75
34:DA:1318:A:H1'	52:DS:37:ARG:HD3	1.67	0.75
1:AA:1249:A:N6	63:AA:4783:HOH:O	2.15	0.75
1:CA:54:G:N7	63:CA:4438:HOH:O	2.18	0.75
57:DZ:33:LEU:HD12	57:DZ:360:ALA:HB2	1.68	0.75
1:CA:300:A:OP1	22:CY:86:ARG:NH2	2.19	0.75
34:BA:972:C:O2'	43:BJ:55:LYS:O	2.05	0.75
43:BJ:49:VAL:HG23	47:BN:41:ARG:HB2	1.68	0.75
57:BZ:404:VAL:HG13	57:BZ:405:PRO:HD3	1.67	0.75
61:BZ:703:FUA:H202	61:BZ:703:FUA:C5	2.15	0.75
1:AA:1831:C:OP1	4:AD:260:ARG:NH2	2.19	0.75
34:BA:1182:G:H4'	34:BA:1183:A:H5'	1.67	0.75
17:CT:16:ARG:HD2	17:CT:19:LEU:HD11	1.69	0.75
34:DA:493:G:O6	63:DA:3343:HOH:O	2.02	0.75
34:BA:401:C:OP2	37:BD:73:ARG:NH1	2.20	0.75
1:AA:1084:C:H42	1:AA:1163:G:H1	1.31	0.75
57:BZ:13:ARG:HH12	57:BZ:247:ARG:NH1	1.81	0.74
57:DZ:13:ARG:NE	57:DZ:280:LEU:O	2.18	0.74
38:DE:33:VAL:HG21	38:DE:109:ILE:HA	1.67	0.74
8:AH:98:LEU:HD22	8:AH:125:VAL:HG23	1.70	0.74
6:CF:129:PHE:HB2	6:CF:132:VAL:HG21	1.68	0.74
1:CA:825:C:OP1	63:CA:4609:HOH:O	2.05	0.74
7:CG:122:PRO:HB3	7:CG:170:ARG:HH21	1.50	0.74
48:BO:26:GLU:OE2	48:BO:77:ARG:NE	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:8:VAL:HG22	37:DD:21:LEU:HD13	1.69	0.74
41:BH:113:SER:HB2	41:BH:134:ILE:HD11	1.69	0.74
46:DM:15:VAL:HG13	46:DM:45:VAL:HG22	1.69	0.74
56:DW:39:PSU:O2'	56:DY:35:A:H1'	1.87	0.74
14:CQ:85:LYS:HG2	24:C0:7:LEU:HB3	1.70	0.74
16:AS:84:GLN:HA	16:AS:111:GLU:HB2	1.70	0.74
44:BK:86:GLY:N	44:BK:112:THR:OG1	2.16	0.74
13:CP:89:ALA:O	13:CP:121:LYS:NZ	2.18	0.74
35:DB:163:PHE:HD1	35:DB:185:ILE:HG13	1.51	0.74
3:CC:48:LEU:HB3	3:CC:50:ILE:HD12	1.70	0.74
1:AA:1891:G:C4'	3:AC:206:LYS:HD2	2.18	0.74
1:AA:1093:G:H21	1:AA:1157:A:H2	1.35	0.74
34:BA:200:G:H1	34:BA:217:C:H42	1.35	0.74
6:CF:164:ARG:HD2	6:CF:175:THR:HG23	1.70	0.74
1:AA:1154:U:O2'	1:AA:1155:C:H5''	1.88	0.74
34:BA:382:A:H2'	34:BA:383:A:C8	2.22	0.74
12:CO:2:ILE:HB	12:CO:33:ALA:HB3	1.70	0.74
1:CA:2612:C:OP2	29:C5:2:ALA:N	2.20	0.74
1:AA:2317:A:H5''	7:AG:134:GLY:HA3	1.69	0.74
37:DD:135:LEU:O	37:DD:137:SER:N	2.19	0.74
1:AA:1199:C:OP2	63:AA:4586:HOH:O	2.06	0.74
61:DZ:703:FUA:H202	61:DZ:703:FUA:C5	2.15	0.74
61:DZ:703:FUA:H5	61:DZ:703:FUA:C20	2.12	0.74
1:AA:1094:A:OP2	1:AA:1155:C:N4	2.21	0.74
53:BT:10:LEU:HB3	53:BT:12:ALA:H	1.52	0.74
19:AV:40:LEU:HB2	19:AV:46:VAL:HG13	1.70	0.74
1:CA:2121:G:O4'	3:CC:168:LYS:NZ	2.20	0.73
57:BZ:132:ARG:HD3	57:BZ:160:ARG:HH12	1.51	0.73
1:AA:1001:G:OP2	14:AQ:14:ARG:NH2	2.21	0.73
34:DA:337:C:H2'	34:DA:338:A:C8	2.22	0.73
34:BA:1197:G:OP2	63:BA:5175:HOH:O	2.05	0.73
15:CR:70:LEU:O	15:CR:72:ASP:N	2.19	0.73
35:DB:16:HIS:CD2	35:DB:17:PHE:H	2.06	0.73
15:CR:85:PRO:O	15:CR:87:TYR:N	2.22	0.73
34:BA:972:C:OP1	63:BA:5237:HOH:O	2.07	0.73
1:CA:11:G:H2'	1:CA:12:U:H5''	1.70	0.73
2:AB:13:A:N1	2:AB:69:G:O2'	2.19	0.73
7:CG:43:LEU:HD11	7:CG:153:ARG:HG2	1.70	0.73
47:BN:27:CYS:SG	47:BN:28:GLY:N	2.61	0.73
1:CA:2128:C:C5'	3:CC:219:MET:HE1	2.14	0.73
39:DF:2:ARG:NE	39:DF:69:GLU:HG2	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:69:VAL:HG21	57:DZ:374:LEU:HD23	1.71	0.73
29:C5:16:ARG:HG2	29:C5:16:ARG:HH11	1.53	0.73
49:DP:21:VAL:HG13	49:DP:34:GLU:HB3	1.71	0.73
1:CA:2107:C:H42	1:CA:2182:G:H1	1.36	0.73
1:AA:2601:A:OP2	63:AA:4561:HOH:O	2.06	0.73
13:AP:38:GLN:HG2	13:AP:45:LEU:HD23	1.70	0.73
34:BA:711:G:OP1	39:BF:54:LYS:NZ	2.17	0.73
4:AD:8:PRO:HB3	4:AD:14:ARG:HB2	1.70	0.73
1:AA:2143:G:HO2'	3:AC:168:LYS:HB3	1.52	0.73
57:BZ:210:ARG:HH11	57:BZ:210:ARG:CB	2.01	0.73
30:C6:6:ARG:NH1	30:C6:26:ASN:HB2	2.04	0.73
53:BT:10:LEU:HD23	53:BT:12:ALA:HB2	1.71	0.73
50:BQ:66:SER:O	50:BQ:70:ARG:NH1	2.22	0.73
13:CP:100:LEU:HD12	13:CP:112:LEU:HD11	1.71	0.73
6:CF:101:LEU:O	6:CF:106:ARG:NH1	2.21	0.73
34:BA:820:U:H4'	34:BA:821:G:OP2	1.89	0.73
34:DA:1347:G:N2	34:DA:1373:G:H2'	2.04	0.73
7:CG:113:ARG:NH1	7:CG:139:LEU:O	2.21	0.73
34:BA:560:U:H5'	34:BA:566:G:H22	1.51	0.73
34:DA:664:G:H22	34:DA:741:G:H1	1.37	0.73
39:BF:97:PHE:HB2	51:BR:32:ARG:HD2	1.68	0.73
22:AY:92:ASN:HB2	22:AY:94:LYS:H	1.51	0.73
34:BA:564:C:O2'	41:BH:91:ARG:NH2	2.20	0.73
1:AA:965:G:N2	1:AA:2281:A:OP2	2.22	0.73
5:AE:110:GLY:O	63:AE:415:HOH:O	2.06	0.72
1:AA:2199:C:O2	3:AC:173:HIS:CE1	2.42	0.72
13:CP:88:LEU:HD11	13:CP:114:ILE:HD12	1.69	0.72
11:AN:75:TYR:CE2	11:AN:77:GLY:HA2	2.23	0.72
4:CD:206:LEU:HD22	4:CD:211:ARG:HG2	1.70	0.72
1:CA:2178:C:OP1	3:CC:47:LYS:HG2	1.88	0.72
37:BD:101:LEU:O	37:BD:103:ASN:N	2.22	0.72
2:CB:86:G:N2	2:CB:91:C:O2	2.18	0.72
6:AF:135:LYS:HB2	6:AF:138:GLU:HG3	1.70	0.72
41:BH:6:ILE:HG22	41:BH:10:LEU:HD21	1.71	0.72
1:CA:854:G:O6	63:CA:4561:HOH:O	2.07	0.72
1:CA:1418:G:N7	63:CA:4067:HOH:O	2.20	0.72
41:DH:86:ILE:HG21	41:DH:133:LEU:HD13	1.69	0.72
35:BB:179:LYS:HA	41:BH:72:PRO:HG3	1.70	0.72
37:BD:167:GLY:H	37:BD:168:ARG:NH1	1.87	0.72
57:DZ:103:GLY:H	57:DZ:130:VAL:HG23	1.54	0.72
34:BA:664:G:H22	34:BA:741:G:H1	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2200:C:H4'	3:AC:47:LYS:NZ	2.05	0.72
10:AL:17:ALA:HB3	10:AL:38:VAL:HG13	1.70	0.72
35:DB:119:GLU:OE2	35:DB:153:ARG:NH1	2.22	0.72
1:CA:1798:U:OP2	4:CD:274:ARG:NH2	2.23	0.72
35:DB:178:ARG:HH21	41:DH:74:PRO:HB3	1.55	0.72
1:CA:981:A:OP1	63:CA:4070:HOH:O	2.08	0.72
34:DA:1304:G:N2	34:DA:1332:A:OP2	2.21	0.72
3:AC:48:LEU:HB3	3:AC:50:ILE:HD12	1.70	0.72
1:AA:2297:C:OP2	30:A6:6:ARG:NH1	2.23	0.72
1:CA:2121:G:C1'	3:CC:168:LYS:HE2	2.16	0.72
37:BD:176:LEU:HG	37:BD:178:VAL:HG22	1.71	0.72
1:CA:2660:A:N6	57:DZ:661:SER:OG	2.22	0.72
1:CA:2439:A:C8	1:CA:2439:A:H5''	2.24	0.72
1:AA:1154:U:O2'	1:AA:1155:C:H6	1.72	0.72
8:CH:3:ARG:HH22	8:CH:5:GLY:H	1.37	0.72
14:CQ:57:HIS:CD2	14:CQ:117:ALA:HB2	2.25	0.72
34:DA:1344:C:H4'	42:DI:120:ARG:HB3	1.72	0.72
37:BD:13:ARG:NH1	37:BD:38:TYR:O	2.23	0.72
34:BA:395:C:O3'	57:BZ:349:LYS:NZ	2.22	0.72
1:CA:740:U:OP2	63:CA:4170:HOH:O	2.08	0.72
34:DA:677:U:H3	34:DA:713:G:H22	1.38	0.72
57:DZ:132:ARG:N	57:DZ:132:ARG:HD2	2.05	0.71
1:AA:2199:C:O2	3:AC:173:HIS:HE1	1.71	0.71
57:DZ:127:LYS:NZ	57:DZ:404:VAL:HG11	2.05	0.71
38:BE:152:ARG:HB3	41:BH:43:GLY:HA3	1.72	0.71
1:CA:1268:A:OP1	63:CA:3954:HOH:O	2.08	0.71
1:CA:2445:G:OP1	6:CF:74:ARG:NH2	2.23	0.71
1:CA:1310:G:OP2	31:C7:9:ARG:NH1	2.22	0.71
57:DZ:146:LEU:HD12	57:DZ:167:PRO:HD3	1.70	0.71
8:CH:149:ARG:NH1	8:CH:167:GLU:OE2	2.23	0.71
1:AA:2457:G:OP1	6:AF:74:ARG:NH2	2.23	0.71
56:DY:19:G:N2	56:DY:56:C:N3	2.37	0.71
23:CZ:29:TYR:HB3	23:CZ:34:ASN:HD22	1.54	0.71
16:CS:83:LYS:HG3	16:CS:84:GLN:HG3	1.72	0.71
47:BN:3:ARG:O	47:BN:6:LEU:N	2.19	0.71
57:DZ:92:ILE:HD13	57:DZ:93:GLU:H	1.55	0.71
47:BN:3:ARG:O	47:BN:5:ALA:N	2.24	0.71
17:AT:54:ARG:HA	17:AT:59:THR:HB	1.71	0.71
1:AA:1466:U:O2'	1:AA:1467:G:OP1	2.09	0.71
52:BS:63:THR:OG1	52:BS:65:ASN:ND2	2.24	0.71
30:A6:14:THR:HB	30:A6:48:VAL:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2154:U:C5	3:AC:6:LYS:HB2	2.25	0.71
1:AA:1480:A:H61	1:AA:1605:A:N6	1.88	0.71
12:AO:64:ARG:NH1	12:AO:81:ASP:OD1	2.18	0.71
57:DZ:71:THR:HG22	57:DZ:80:ASN:OD1	1.90	0.71
34:DA:1106:G:H5'	36:DC:172:ARG:HG2	1.72	0.71
3:CC:51:ASP:HB3	3:CC:57:GLN:OE1	1.91	0.71
45:DL:75:HIS:CD2	45:DL:77:LEU:H	2.08	0.71
11:CN:22:THR:HB	11:CN:25:ARG:HG3	1.71	0.71
46:DM:123:ALA:HB3	57:DZ:573:HIS:CB	2.16	0.71
1:CA:1971:A:OP2	4:CD:242:ARG:NH2	2.24	0.71
1:AA:2108:U:N3	1:AA:2245:U:O4	2.18	0.71
41:BH:86:ILE:HG21	41:BH:133:LEU:HD13	1.72	0.71
13:AP:62:LEU:O	32:A8:13:ARG:HD3	1.91	0.71
2:CB:56:G:H5'	7:CG:27:ASN:ND2	2.05	0.71
7:CG:27:ASN:HB3	7:CG:30:GLU:HG3	1.72	0.71
12:CO:104:ARG:HH22	17:CT:43:GLN:HE22	1.36	0.71
14:CQ:63:LYS:HG2	23:CZ:178:GLU:HG2	1.73	0.71
1:CA:2132:U:C1'	3:CC:6:LYS:HB3	2.21	0.71
1:CA:2176:A:H4'	3:CC:45:HIS:NE2	2.06	0.71
35:BB:187:LEU:HA	35:BB:201:ILE:HB	1.73	0.71
1:CA:1434:A:H61	1:CA:1558:A:H62	1.39	0.71
2:CB:62:C:H2'	2:CB:63:G:H8	1.55	0.71
1:CA:1386:C:H2'	1:CA:1387:C:H6	1.54	0.71
34:BA:782:A:OP1	63:BA:5146:HOH:O	2.08	0.71
1:CA:1064:C:H4'	10:CL:89:HIS:HA	1.72	0.71
34:DA:920:U:H2'	34:DA:921:U:C6	2.25	0.71
35:BB:69:LEU:HB3	35:BB:162:ILE:HG22	1.72	0.71
19:CV:6:LYS:HB2	19:CV:38:LEU:HD21	1.71	0.71
1:CA:1647:G:OP1	63:CA:4162:HOH:O	2.09	0.70
1:CA:2839:G:H5'	15:CR:46:GLY:HA2	1.73	0.70
42:DI:9:ARG:H	42:DI:79:LEU:HD23	1.55	0.70
19:CV:40:LEU:HB2	19:CV:46:VAL:HG13	1.73	0.70
37:DD:132:ARG:HB3	37:DD:132:ARG:HH21	1.56	0.70
57:BZ:169:GLY:O	57:BZ:173:THR:OG1	2.09	0.70
6:AF:75:HIS:ND1	63:AF:406:HOH:O	2.23	0.70
37:DD:119:GLN:HG3	37:DD:123:HIS:CD2	2.26	0.70
44:BK:98:LEU:O	44:BK:101:SER:OG	2.07	0.70
36:BC:130:VAL:HG11	36:BC:153:VAL:HG11	1.73	0.70
1:AA:181:C:H2'	1:AA:182:U:H5'	1.71	0.70
1:CA:2121:G:O2'	3:CC:168:LYS:HD3	1.91	0.70
35:DB:189:ASP:O	35:DB:192:SER:OG	2.09	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1226:C:O2'	46:DM:111:LYS:NZ	2.24	0.70
1:CA:1309:G:H4'	31:C7:7:PRO:HB2	1.74	0.70
57:BZ:-53:ASP:H	57:BZ:-50:GLN:NE2	1.89	0.70
10:CL:76:TYR:HD1	10:CL:79:ARG:HH21	1.39	0.70
9:AK:73:GLY:O	9:AK:75:GLN:N	2.19	0.70
34:DA:1075:C:OP1	35:DB:179:LYS:NZ	2.24	0.70
6:AF:185:ASP:HA	6:AF:188:ARG:HD3	1.72	0.70
4:AD:95:LEU:HD11	4:AD:105:ILE:HD13	1.73	0.70
11:CN:14:VAL:HG11	11:CN:138:LEU:HD12	1.71	0.70
1:CA:9:U:H3	1:CA:2629:A:H2	1.39	0.70
56:BY:60:U:H5''	56:BY:61:C:H5	1.56	0.70
1:AA:455:A:H8	1:AA:455:A:OP2	1.74	0.70
1:CA:2121:G:H21	3:CC:169:THR:HG1	1.38	0.70
61:BZ:703:FUA:H122	61:BZ:703:FUA:H231	1.73	0.70
12:CO:2:ILE:HD12	12:CO:6:THR:HG21	1.72	0.70
34:BA:501:C:H2'	34:BA:502:G:C8	2.27	0.70
47:DN:27:CYS:SG	47:DN:28:GLY:N	2.64	0.70
41:DH:120:THR:H	41:DH:123:GLU:HB3	1.56	0.70
61:DZ:703:FUA:H122	61:DZ:703:FUA:H231	1.73	0.70
35:DB:162:ILE:HD11	35:DB:184:VAL:HG22	1.73	0.70
1:CA:2631:G:O2'	1:CA:2810:A:N1	2.24	0.70
38:BE:36:ASP:OD1	38:BE:38:GLN:N	2.20	0.70
6:AF:9:ILE:HG21	6:AF:125:LEU:HD22	1.72	0.70
3:AC:51:ASP:HB3	3:AC:57:GLN:OE1	1.91	0.70
3:CC:15:VAL:O	3:CC:16:ASP:HB3	1.92	0.70
19:CV:25:LEU:N	19:CV:92:THR:OG1	2.21	0.70
57:DZ:110:SER:OG	57:DZ:137:ASN:O	2.08	0.70
1:CA:2124:G:O3'	3:CC:175:PRO:HG3	1.91	0.70
44:BK:86:GLY:H	44:BK:112:THR:HG1	1.37	0.70
34:DA:1240:U:OP2	40:DG:116:ALA:N	2.23	0.70
30:C6:8:LYS:HD3	32:C8:34:TRP:CD2	2.27	0.70
34:DA:1111:A:N1	36:DC:177:THR:OG1	2.22	0.70
38:DE:50:GLU:HB2	38:DE:53:LEU:HD13	1.73	0.70
8:CH:86:GLU:HB2	8:CH:165:ALA:HB2	1.74	0.70
57:DZ:92:ILE:O	57:DZ:94:VAL:N	2.25	0.69
57:DZ:117:GLN:NE2	57:DZ:120:THR:OG1	2.24	0.69
1:CA:323:G:HO2'	1:CA:1205:U:H3	1.40	0.69
1:AA:1740:U:O2'	4:AD:14:ARG:NH2	2.24	0.69
14:CQ:57:HIS:HD2	14:CQ:117:ALA:HB2	1.56	0.69
37:BD:23:GLY:N	37:BD:26:CYS:SG	2.65	0.69
8:CH:3:ARG:NH2	8:CH:5:GLY:H	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1349:A:OP1	63:CA:4335:HOH:O	2.10	0.69
15:AR:67:LEU:HD13	15:AR:76:VAL:HG21	1.74	0.69
57:BZ:264:LEU:HB2	62:BZ:704:GDP:C6	2.26	0.69
57:DZ:619:ASP:HB3	57:DZ:662:LYS:HD2	1.74	0.69
46:DM:108:ARG:HD2	46:DM:114:ARG:HD2	1.74	0.69
41:DH:51:VAL:HG11	41:DH:60:ARG:HH11	1.56	0.69
1:AA:2827:G:OP1	15:AR:99:LYS:NZ	2.25	0.69
10:AL:72:PRO:O	10:AL:111:LYS:NZ	2.24	0.69
34:DA:23:C:OP2	34:DA:561:U:N3	2.21	0.69
57:BZ:428:LEU:HA	57:BZ:431:LEU:HB2	1.74	0.69
47:BN:3:ARG:HH21	47:BN:3:ARG:HB3	1.56	0.69
44:BK:73:MET:HG2	44:BK:103:LEU:HD21	1.73	0.69
30:A6:13:CYS:SG	30:A6:47:THR:HG21	2.32	0.69
57:BZ:552:SER:O	57:BZ:591:LYS:NZ	2.25	0.69
3:CC:46:ALA:HB3	3:CC:172:ILE:HG22	1.75	0.69
1:CA:2150:U:H2'	1:CA:2151:G:H8	1.58	0.69
1:CA:1842:G:O2'	4:CD:253:GLN:NE2	2.26	0.69
1:CA:323:G:O2'	1:CA:1205:U:N3	2.26	0.69
1:AA:2118:U:H2'	1:AA:2119:C:C6	2.26	0.69
28:A4:61:ARG:HH21	52:BS:42:PRO:HD2	1.55	0.69
57:DZ:485:GLU:HG2	57:DZ:555:LEU:HD12	1.72	0.69
57:BZ:485:GLU:HG2	57:BZ:554:PRO:HD2	1.74	0.69
1:CA:1860:G:C5'	3:CC:207:GLY:N	2.56	0.69
8:AH:3:ARG:HH12	8:AH:65:HIS:HB3	1.58	0.69
1:CA:2836:U:H2'	1:CA:2837:G:H8	1.58	0.69
3:AC:57:GLN:O	3:AC:57:GLN:HG3	1.93	0.69
3:CC:57:GLN:HG3	3:CC:57:GLN:O	1.93	0.69
1:CA:2022:U:OP1	63:CA:4131:HOH:O	2.10	0.69
40:BG:111:ARG:NH2	40:BG:126:ASP:OD2	2.26	0.69
1:CA:1253:A:N7	63:CA:3852:HOH:O	2.26	0.69
34:BA:36:C:O2'	45:BL:117:ARG:NH2	2.26	0.69
6:CF:110:LEU:HD11	6:CF:181:LEU:HD23	1.73	0.69
3:AC:183:PRO:HG2	3:AC:184:GLU:OE2	1.92	0.69
1:AA:1189:A:OP1	11:AN:25:ARG:NH2	2.25	0.69
34:DA:352:C:OP2	63:DA:3237:HOH:O	2.11	0.69
2:CB:104:U:O3'	23:CZ:72:ARG:NH1	2.25	0.69
61:BZ:703:FUA:H5	61:BZ:703:FUA:C20	2.12	0.69
34:DA:838:G:N2	34:DA:848:C:N3	2.37	0.69
15:AR:55:ALA:HB2	15:AR:79:LEU:HD13	1.74	0.69
1:CA:1837:C:O2'	1:CA:1927:A:N3	2.22	0.69
34:DA:188:C:H2'	34:DA:189:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:555:G:O4'	1:AA:555:G:N3	2.18	0.69
1:AA:1056:A:OP2	63:AA:4596:HOH:O	2.11	0.69
5:CE:33:VAL:HG21	5:CE:36:ARG:HE	1.58	0.69
1:AA:9:U:N3	1:AA:2641:A:H2	1.88	0.69
1:CA:646:A:H2'	1:CA:647:G:O4'	1.93	0.69
1:CA:1651:G:OP1	15:CR:40:LYS:NZ	2.25	0.69
1:CA:2059:A:OP2	63:CA:3916:HOH:O	2.11	0.69
1:CA:2177:C:H5'	3:CC:45:HIS:HB3	1.75	0.68
1:CA:816:C:OP2	63:CA:4594:HOH:O	2.10	0.68
1:AA:2255:U:OP1	63:AA:3945:HOH:O	2.10	0.68
34:DA:1279:A:O2'	34:DA:1281:U:OP2	2.10	0.68
7:AG:83:ARG:N	7:AG:86:MET:SD	2.60	0.68
14:CQ:65:PHE:HB2	14:CQ:105:GLU:HB2	1.74	0.68
3:CC:183:PRO:HG2	3:CC:184:GLU:OE2	1.92	0.68
27:C3:39:ASP:OD2	27:C3:44:ARG:NH1	2.27	0.68
4:AD:108:PRO:HD2	4:AD:111:LEU:HG	1.75	0.68
1:CA:1860:G:H5'	3:CC:207:GLY:N	2.08	0.68
3:AC:55:SER:O	3:AC:57:GLN:N	2.22	0.68
48:DO:16:ALA:HB1	48:DO:21:ASP:HB3	1.75	0.68
36:DC:122:GLU:O	36:DC:126:ARG:NH1	2.26	0.68
1:AA:2825:C:H5'	29:A5:29:THR:HG21	1.74	0.68
1:AA:121:G:OP2	63:AA:3922:HOH:O	2.11	0.68
1:CA:1588:C:H2'	1:CA:1589:C:H6	1.58	0.68
1:AA:2564:U:OP2	63:AA:5097:HOH:O	2.11	0.68
1:CA:2286:A:H4'	1:CA:2287:A:O4'	1.94	0.68
3:CC:25:GLU:HA	3:CC:28:ARG:HD2	1.74	0.68
34:DA:624:C:H2'	34:DA:625:G:H8	1.58	0.68
1:CA:528:A:O2'	1:CA:529:A:H5''	1.94	0.68
1:CA:991:C:OP2	63:CA:4149:HOH:O	2.12	0.68
16:CS:34:HIS:O	16:CS:97:ARG:NH2	2.26	0.68
23:AZ:45:ASP:OD1	23:AZ:49:ARG:HD2	1.92	0.68
1:AA:2764:G:H4'	8:AH:4:ILE:HD11	1.76	0.68
34:DA:1129:C:N3	34:DA:1143:G:N2	2.33	0.68
1:AA:243:G:O6	32:A8:5:LYS:HG2	1.94	0.68
34:DA:457:C:H2'	34:DA:458:C:H6	1.59	0.68
51:DR:32:ARG:HA	51:DR:69:THR:HG21	1.76	0.68
34:DA:522:C:H41	45:DL:53:ARG:HH22	1.39	0.68
35:BB:21:ARG:HH21	35:BB:21:ARG:H	1.40	0.68
3:AC:25:GLU:HA	3:AC:28:ARG:HD2	1.74	0.68
1:CA:1153:C:OP1	18:CU:92:ARG:NH1	2.20	0.68
3:AC:46:ALA:HB3	3:AC:172:ILE:HG22	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:99:ARG:O	57:BZ:101:LEU:N	2.27	0.68
49:BP:58:TYR:O	49:BP:61:SER:OG	2.11	0.68
36:DC:40:ARG:NH2	36:DC:55:VAL:O	2.26	0.68
1:CA:1336:A:OP2	21:CX:64:LYS:NZ	2.25	0.68
22:AY:23:ARG:HG2	22:AY:42:VAL:HG22	1.74	0.68
34:BA:1238:A:OP2	63:BA:5228:HOH:O	2.12	0.68
38:BE:50:GLU:HB2	38:BE:53:LEU:HD13	1.76	0.68
3:CC:30:VAL:HG23	3:CC:31:LYS:N	2.09	0.68
40:BG:113:GLU:HB2	40:BG:119:ARG:HG2	1.76	0.68
3:AC:15:VAL:O	3:AC:16:ASP:HB3	1.92	0.68
34:BA:259:G:H2'	34:BA:260:G:H8	1.59	0.68
34:DA:736:C:H2'	34:DA:737:A:C8	2.27	0.68
53:BT:26:ASN:ND2	53:BT:71:THR:OG1	2.23	0.68
1:CA:1405:U:H2'	1:CA:1406:U:C6	2.29	0.68
3:CC:41:THR:O	3:CC:42:VAL:HB	1.94	0.68
3:AC:30:VAL:HG23	3:AC:31:LYS:H	1.58	0.68
3:AC:46:ALA:HB3	3:AC:172:ILE:CG2	2.23	0.68
1:AA:1249:A:H2	1:AA:1287:A:H62	1.42	0.68
57:DZ:285:ASP:N	57:DZ:285:ASP:OD2	2.25	0.68
41:DH:10:LEU:HD22	41:DH:83:ILE:HD11	1.76	0.68
23:CZ:45:ASP:OD1	23:CZ:49:ARG:NH1	2.27	0.68
57:BZ:388:THR:HG23	57:BZ:399:LEU:HD22	1.74	0.68
25:C1:25:LYS:O	25:C1:27:GLU:N	2.27	0.68
9:AK:70:GLU:O	9:AK:72:ASP:N	2.27	0.68
1:CA:1784:A:O2'	63:CA:4517:HOH:O	2.11	0.68
57:DZ:533:VAL:HG12	57:DZ:534:ILE:HG13	1.76	0.68
34:BA:406:G:N2	37:BD:119:GLN:HE22	1.92	0.67
23:CZ:183:LEU:O	23:CZ:185:GLU:N	2.28	0.67
23:CZ:5:LEU:HD23	23:CZ:47:VAL:HG21	1.76	0.67
7:CG:64:THR:HB	7:CG:94:LEU:HD21	1.76	0.67
1:AA:2623:U:H6	1:AA:2623:U:H5'	1.58	0.67
35:BB:21:ARG:HB3	35:BB:39:ILE:HG12	1.75	0.67
1:AA:2771:A:OP2	63:AA:4053:HOH:O	2.12	0.67
57:BZ:99:ARG:NH1	57:BZ:401:SER:O	2.27	0.67
34:DA:1335:C:O2	63:DA:3259:HOH:O	2.09	0.67
34:DA:1352:C:H2'	34:DA:1353:G:C8	2.29	0.67
57:BZ:316:ILE:HD12	57:BZ:326:THR:HG23	1.76	0.67
34:BA:1369:C:H2'	34:BA:1370:G:C8	2.29	0.67
1:AA:2775:G:OP2	63:AA:5117:HOH:O	2.12	0.67
34:DA:512:U:H2'	34:DA:513:C:C6	2.30	0.67
34:DA:512:U:H2'	34:DA:513:C:H6	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:891:U:OP2	63:DA:3261:HOH:O	2.11	0.67
57:BZ:573:HIS:CD2	57:BZ:576:ASP:H	2.12	0.67
57:BZ:616:TYR:CE2	57:BZ:664:GLN:HG3	2.30	0.67
1:CA:2357:U:OP1	24:C0:20:ARG:NH1	2.28	0.67
51:BR:59:SER:H	51:BR:62:GLU:HG3	1.59	0.67
5:CE:175:VAL:HG23	5:CE:177:PRO:HD3	1.77	0.67
34:BA:67:C:H2'	34:BA:68:G:C8	2.29	0.67
23:AZ:31:ARG:NH1	23:AZ:94:GLU:OE1	2.27	0.67
1:CA:2120:G:H21	3:CC:168:LYS:HE2	1.59	0.67
3:AC:30:VAL:HG23	3:AC:31:LYS:N	2.09	0.67
57:DZ:-65:LYS:HB3	57:DZ:-28:ALA:HB3	1.75	0.67
45:DL:80:HIS:ND1	57:DZ:425:SER:OG	2.26	0.67
34:BA:738:C:H2'	34:BA:739:C:H6	1.58	0.67
1:AA:2703:C:OP2	63:AA:4913:HOH:O	2.12	0.67
52:DS:15:LEU:HD22	52:DS:33:THR:HB	1.76	0.67
1:CA:2684:U:H1'	12:CO:70:LYS:HD2	1.76	0.67
34:DA:542:G:OP1	37:DD:10:ARG:NH1	2.26	0.67
1:CA:1269:A:OP2	63:CA:4473:HOH:O	2.11	0.67
38:BE:78:HIS:CD2	38:BE:142:LEU:HD23	2.29	0.67
37:DD:153:ARG:O	37:DD:155:LEU:N	2.28	0.67
34:DA:392:G:H2'	34:DA:393:A:H8	1.60	0.67
1:CA:994:C:OP1	18:CU:53:ARG:NH2	2.28	0.67
3:CC:30:VAL:HG23	3:CC:31:LYS:H	1.58	0.67
57:BZ:369:LEU:HD21	57:BZ:375:GLY:HA3	1.76	0.67
50:BQ:55:ASP:O	50:BQ:57:VAL:HG13	1.95	0.67
1:CA:330:A:HO2'	1:CA:331:A:H8	1.43	0.67
57:BZ:276:VAL:HG13	57:BZ:280:LEU:HD12	1.75	0.67
1:AA:1360:C:OP1	63:AA:4578:HOH:O	2.11	0.67
1:CA:2150:U:H2'	1:CA:2151:G:C8	2.30	0.67
57:BZ:84:THR:HB	57:BZ:94:VAL:HG22	1.75	0.67
36:DC:47:LEU:HG	36:DC:68:VAL:HG11	1.76	0.67
22:CY:19:LYS:NZ	22:CY:20:TYR:OH	2.27	0.67
3:CC:46:ALA:HB3	3:CC:172:ILE:CG2	2.23	0.67
1:CA:1859:A:C2'	3:CC:206:LYS:CD	2.64	0.67
56:DW:41:C:P	56:DY:36:A:OP1	2.53	0.67
1:AA:553:A:C8	1:AA:553:A:C3'	2.76	0.67
1:AA:2442:A:OP2	63:AA:4781:HOH:O	2.13	0.67
41:BH:101:PRO:HG3	41:BH:133:LEU:HD11	1.76	0.67
38:DE:7:GLU:OE1	38:DE:37:ARG:NH2	2.20	0.67
53:DT:50:GLU:H	53:DT:99:LEU:HD12	1.60	0.67
1:AA:1846:A:OP1	1:AA:1846:A:H8	1.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1133:G:N2	1:AA:1148:C:O2	2.25	0.67
49:DP:52:ASP:O	49:DP:54:GLU:N	2.28	0.67
57:BZ:275:ALA:HA	57:BZ:278:ASP:HB2	1.77	0.67
45:BL:89:ARG:HA	45:BL:97:ARG:HA	1.77	0.67
3:CC:55:SER:O	3:CC:57:GLN:N	2.22	0.67
57:DZ:120:THR:HG22	57:DZ:123:ARG:HH22	1.59	0.67
1:CA:2693:A:H2'	1:CA:2694:G:H8	1.60	0.67
1:CA:572:A:N7	63:CA:4663:HOH:O	2.27	0.67
1:CA:668:G:H5'	1:CA:669:G:OP2	1.94	0.67
38:BE:140:ARG:HG3	38:BE:140:ARG:O	1.93	0.67
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C6	2.29	0.67
6:CF:101:LEU:HD12	6:CF:102:PRO:HD2	1.77	0.67
34:DA:352:C:O2'	34:DA:354:G:OP1	2.12	0.67
14:CQ:65:PHE:N	14:CQ:105:GLU:O	2.24	0.67
37:BD:157:LEU:O	37:BD:161:ASN:ND2	2.28	0.67
41:BH:51:VAL:HG12	41:BH:52:ASP:H	1.59	0.67
5:AE:40:GLU:CD	5:AE:40:GLU:H	1.97	0.67
34:BA:1137:C:H4'	34:BA:1138:G:C2	2.30	0.67
46:DM:25:ILE:HG23	46:DM:29:ARG:HB3	1.75	0.66
7:CG:170:ARG:NH1	7:CG:174:GLU:OE2	2.27	0.66
3:CC:42:VAL:HG13	3:CC:43:GLU:N	2.10	0.66
1:AA:929:G:N2	1:AA:941:U:O2	2.28	0.66
34:DA:619:U:N3	37:DD:134:ASP:OD1	2.27	0.66
1:AA:2562:G:OP1	63:AA:5041:HOH:O	2.13	0.66
34:BA:1399:C:C2	34:BA:1502:A:N6	2.64	0.66
1:AA:1716:A:OP2	63:AA:5041:HOH:O	2.13	0.66
1:CA:2450:A:O2'	56:DW:76:A:N6	2.28	0.66
3:AC:41:THR:O	3:AC:42:VAL:HB	1.94	0.66
34:BA:403:C:H2'	34:BA:404:U:H6	1.61	0.66
1:CA:2177:C:H5'	3:CC:45:HIS:CB	2.25	0.66
45:BL:59:ARG:HE	57:BZ:422:GLU:HG2	1.59	0.66
15:CR:74:LYS:HG2	15:CR:77:ARG:HH21	1.60	0.66
1:AA:2807:C:H42	1:AA:2813:G:H1	1.43	0.66
1:AA:1336:C:H2'	1:AA:1337:C:H6	1.58	0.66
1:CA:2121:G:H1'	3:CC:168:LYS:HG2	1.76	0.66
35:BB:16:HIS:O	35:BB:18:GLY:N	2.29	0.66
3:CC:31:LYS:NZ	3:CC:180:SER:O	2.28	0.66
4:CD:242:ARG:HD3	4:CD:242:ARG:N	2.10	0.66
57:BZ:546:ILE:HG23	57:BZ:590:ILE:HG13	1.78	0.66
34:BA:881:G:P	45:BL:12:ARG:HH22	2.19	0.66
40:DG:133:GLY:HA2	40:DG:136:LYS:HB2	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:13:GLU:O	7:CG:15:VAL:N	2.28	0.66
1:CA:2177:C:C1'	3:CC:171:ALA:CB	2.56	0.66
61:BZ:703:FUA:H201	61:BZ:703:FUA:O1	1.95	0.66
43:BJ:50:ILE:HD11	43:BJ:57:LYS:HD3	1.77	0.66
19:CV:25:LEU:H	19:CV:92:THR:HG1	1.41	0.66
1:AA:664:U:H2'	1:AA:665:C:C6	2.30	0.66
1:CA:1919:A:N1	34:DA:1495:U:O2'	2.23	0.66
29:A5:16:ARG:HG2	29:A5:16:ARG:HH11	1.60	0.66
39:BF:55:ASP:OD2	39:BF:86:ARG:NH1	2.26	0.66
1:CA:2121:G:O4'	3:CC:168:LYS:CE	2.44	0.66
17:AT:24:PRO:HA	17:AT:49:VAL:HG22	1.76	0.66
43:DJ:61:GLU:OE2	47:DN:49:HIS:NE2	2.27	0.66
3:AC:176:VAL:HG11	3:AC:190:ILE:HD13	1.76	0.66
1:CA:2025:C:H2'	1:CA:2026:C:C6	2.30	0.66
3:CC:176:VAL:HG11	3:CC:190:ILE:HD13	1.76	0.66
34:BA:17:U:H2'	34:BA:18:C:C6	2.31	0.66
1:CA:195:A:N7	63:CA:4246:HOH:O	2.27	0.66
4:CD:68:LYS:HD2	4:CD:70:TRP:CZ2	2.31	0.66
1:AA:1525:G:O2'	1:AA:1605:A:H2	1.77	0.66
34:DA:1311:G:N2	34:DA:1326:C:O2	2.27	0.66
1:CA:2422:A:O4'	56:DY:76:A:N6	2.29	0.66
34:DA:1279:A:OP2	43:DJ:9:ARG:NH1	2.29	0.66
5:CE:36:ARG:NH2	5:CE:88:GLY:O	2.29	0.66
57:BZ:603:GLU:HG2	57:BZ:679:VAL:HG12	1.77	0.66
34:BA:1304:G:OP2	63:BA:5206:HOH:O	2.14	0.66
4:AD:69:ARG:NH2	4:AD:128:GLY:O	2.26	0.66
1:CA:2632:A:HO2'	1:CA:2811:G:HO2'	1.27	0.66
38:BE:102:ALA:H	38:BE:107:ARG:NH2	1.94	0.66
1:AA:2146:G:N2	1:AA:2196:C:N3	2.34	0.66
14:CQ:63:LYS:HA	23:CZ:178:GLU:HG3	1.77	0.66
34:DA:999:C:H42	34:DA:1042:G:H1	1.42	0.66
3:AC:65:LEU:HB3	3:AC:189:ASN:ND2	2.11	0.66
1:CA:858:U:O2	1:CA:2268:A:H2'	1.96	0.66
1:CA:2695:C:H2'	1:CA:2696:U:H6	1.61	0.66
5:CE:36:ARG:HG2	5:CE:47:VAL:HG12	1.78	0.66
34:DA:975:A:H4'	34:DA:976:G:H5''	1.78	0.66
17:CT:117:ASP:OD2	17:CT:120:ARG:NE	2.26	0.65
57:DZ:13:ARG:HH21	57:DZ:247:ARG:NH1	1.94	0.65
3:AC:42:VAL:HG13	3:AC:43:GLU:N	2.10	0.65
10:CL:88:ALA:O	10:CL:90:LYS:N	2.29	0.65
3:AC:63:VAL:O	3:AC:161:ARG:HA	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1047:G:O2'	34:BA:1215:G:O2'	2.13	0.65
34:DA:222:U:H2'	34:DA:223:U:C6	2.31	0.65
1:CA:400:G:N7	63:CA:4346:HOH:O	2.28	0.65
1:AA:1100:A:N6	1:AA:1151:U:H3	1.92	0.65
56:BY:53:G:H1	56:BY:61:C:H42	1.42	0.65
57:DZ:601:ILE:HD12	57:DZ:684:GLN:HB2	1.78	0.65
48:BO:39:LEU:HD13	48:BO:56:LEU:HB2	1.78	0.65
20:CW:88:ARG:NH1	20:CW:94:ASP:OD2	2.29	0.65
36:BC:111:LEU:HB3	36:BC:204:LEU:HD21	1.77	0.65
1:CA:1019:U:H3	1:CA:1142(A):A:H62	1.42	0.65
34:DA:229:U:O2'	49:DP:23:ASP:OD2	2.14	0.65
42:BI:45:ALA:HA	42:BI:48:GLU:HB2	1.77	0.65
1:CA:2583:G:OP2	63:CA:3973:HOH:O	2.14	0.65
34:BA:1329:A:H5"	46:BM:26:GLY:H	1.61	0.65
12:CO:75:SER:HB2	17:CT:75:ILE:O	1.97	0.65
3:AC:31:LYS:NZ	3:AC:180:SER:O	2.28	0.65
1:AA:2255:U:H2'	1:AA:2256:U:C6	2.32	0.65
34:DA:1312:G:H5'	52:DS:5:LEU:HD11	1.78	0.65
45:DL:24:VAL:HG12	45:DL:98:TYR:CE1	2.32	0.65
1:AA:2574:U:H1'	12:AO:23:ARG:HH11	1.60	0.65
3:CC:65:LEU:HB3	3:CC:189:ASN:ND2	2.11	0.65
1:AA:1891:G:H4'	3:AC:206:LYS:CG	2.26	0.65
3:AC:206:LYS:NZ	3:AC:206:LYS:HB3	2.12	0.65
61:DZ:703:FUA:H201	61:DZ:703:FUA:O1	1.95	0.65
46:DM:124:PRO:HB3	57:DZ:500:GLN:HG3	1.78	0.65
17:CT:24:PRO:HG3	17:CT:52:ILE:HG13	1.77	0.65
1:AA:542:C:OP1	29:A5:16:ARG:NH2	2.29	0.65
1:AA:1825:U:H2'	1:AA:1826:C:H6	1.60	0.65
1:CA:2572:A:N7	5:CE:145:LYS:HB2	2.12	0.65
34:DA:812:C:N3	63:DA:3216:HOH:O	2.30	0.65
16:AS:15:ARG:O	16:AS:19:LYS:HG2	1.97	0.65
36:BC:134:ILE:HG23	36:BC:151:VAL:HB	1.79	0.65
2:CB:105:A:P	23:CZ:72:ARG:HH12	2.18	0.65
34:BA:259:G:H2'	34:BA:260:G:C8	2.31	0.65
57:BZ:498:ILE:HB	57:BZ:507:TYR:HD1	1.61	0.65
34:BA:1445:C:O2'	34:BA:1447:A:N6	2.29	0.65
43:DJ:30:SER:O	43:DJ:81:THR:OG1	2.10	0.65
34:BA:542:G:OP1	37:BD:10:ARG:NH2	2.26	0.65
50:DQ:95:TYR:HA	50:DQ:98:LEU:HD12	1.77	0.65
41:BH:34:GLU:OE1	41:BH:37:ARG:NH2	2.30	0.65
1:CA:614(B):G:H2'	6:CF:44:ARG:HH11	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CN:58:ASP:OD1	11:CN:125:GLY:N	2.24	0.65
1:AA:139:A:H8	1:AA:1454:C:HO2'	1.42	0.65
43:BJ:17:ASP:OD1	43:BJ:70:ARG:NH1	2.30	0.65
8:AH:149:ARG:NH1	8:AH:167:GLU:OE2	2.29	0.65
43:DJ:6:ILE:HG12	43:DJ:98:ILE:HG12	1.78	0.65
57:DZ:90:PHE:CE1	61:DZ:703:FUA:H122	2.31	0.65
1:AA:1067:A:H3'	1:AA:1067:A:C8	2.32	0.65
11:CN:15:LEU:HD23	11:CN:53:VAL:HB	1.79	0.65
1:AA:1117:G:O2'	1:AA:1135:G:OP2	2.13	0.65
34:DA:881:G:P	45:DL:12:ARG:HH22	2.20	0.65
42:BI:40:LEU:O	42:BI:42:ARG:N	2.29	0.65
4:AD:77:ALA:O	4:AD:116:GLN:HA	1.97	0.65
3:CC:63:VAL:O	3:CC:161:ARG:HA	1.96	0.65
57:BZ:120:THR:HG22	57:BZ:123:ARG:NH1	2.12	0.65
37:DD:129:ASN:ND2	37:DD:145:GLU:H	1.95	0.65
1:CA:2316:C:H2'	1:CA:2317:C:C6	2.30	0.65
1:CA:1316:U:H2'	1:CA:1317:A:C8	2.31	0.65
3:CC:206:LYS:NZ	3:CC:206:LYS:HB3	2.12	0.65
1:AA:2227:G:H5'	1:AA:2228:G:N7	2.11	0.65
34:BA:757:U:H2'	34:BA:758:G:O4'	1.97	0.65
41:BH:81:HIS:N	41:BH:138:TRP:O	2.30	0.65
16:CS:63:THR:HG23	16:CS:64:GLU:H	1.62	0.65
1:AA:638:U:H6	1:AA:638:U:O5'	1.79	0.65
14:AQ:21:THR:HG21	14:AQ:101:ARG:HB2	1.78	0.65
1:CA:2176:A:O2'	3:CC:45:HIS:CD2	2.50	0.65
57:DZ:505:GLY:HA2	57:DZ:576:ASP:HB2	1.79	0.65
34:DA:1227:A:OP1	52:DS:80:TYR:OH	2.07	0.65
7:CG:28:VAL:O	7:CG:31:VAL:HG12	1.97	0.65
57:DZ:181:LEU:HD12	57:DZ:216:LEU:HD21	1.78	0.65
34:DA:235:C:H5'	50:DQ:70:ARG:HG2	1.79	0.65
57:DZ:631:ILE:HD12	57:DZ:645:ALA:HB2	1.79	0.65
1:AA:426:G:OP2	63:AA:4920:HOH:O	2.14	0.65
42:DI:53:VAL:O	42:DI:55:ALA:N	2.31	0.65
34:BA:1015:A:N3	34:BA:1218:C:O2'	2.30	0.65
8:AH:159:GLU:HG3	8:AH:169:VAL:HG11	1.79	0.65
35:DB:74:LYS:NZ	35:DB:206:ASP:OD1	2.30	0.65
1:CA:1803:A:O2'	4:CD:259:THR:HG21	1.96	0.64
36:DC:47:LEU:HB3	36:DC:52:LEU:HB3	1.79	0.64
10:AL:13:PRO:HA	10:AL:52:ILE:HG12	1.79	0.64
24:A0:32:ARG:H	24:A0:35:ASN:ND2	1.96	0.64
1:CA:831:G:O2'	13:CP:38:GLN:NE2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:164:U:H2'	34:BA:165:C:C6	2.32	0.64
49:DP:43:LYS:HG2	49:DP:48:TRP:CG	2.31	0.64
33:C9:14:CYS:HA	33:C9:27:CYS:HB2	1.80	0.64
56:DY:50:U:H3	56:DY:64:A:H61	1.45	0.64
7:AG:173:LEU:HA	7:AG:176:LEU:HD12	1.80	0.64
1:AA:1356:G:OP2	31:A7:9:ARG:NH1	2.29	0.64
1:AA:1829:U:OP2	4:AD:274:ARG:NH2	2.30	0.64
1:AA:553:A:C2'	1:AA:554:A:H5'	2.26	0.64
1:CA:2268:A:OP1	63:CA:4086:HOH:O	2.14	0.64
35:DB:95:GLN:HG3	35:DB:148:TYR:HA	1.78	0.64
30:C6:9:LEU:HA	30:C6:54:ILE:HB	1.79	0.64
23:CZ:93:ASP:HB2	23:CZ:131:ARG:HH22	1.62	0.64
34:DA:1207:G:H2'	34:DA:1208:C:C6	2.32	0.64
1:CA:2124:G:O3'	3:CC:175:PRO:HG2	1.98	0.64
11:CN:62:VAL:HG21	11:CN:87:LEU:HD11	1.79	0.64
1:AA:1848:G:H2'	1:AA:1849:U:H5'	1.79	0.64
34:BA:108:G:C6	53:BT:15:ARG:HD2	2.33	0.64
57:DZ:127:LYS:HZ3	57:DZ:404:VAL:HG11	1.62	0.64
10:CL:79:ARG:NH1	10:CL:85:GLU:O	2.31	0.64
1:CA:527:C:OP1	63:CA:4143:HOH:O	2.15	0.64
37:DD:171:GLY:O	37:DD:174:LEU:N	2.30	0.64
50:DQ:32:TYR:O	50:DQ:34:LYS:N	2.30	0.64
34:DA:179:A:H2'	34:DA:180:U:C6	2.32	0.64
34:DA:1097:C:O2'	34:DA:1169:A:N3	2.30	0.64
57:DZ:518:PRO:O	57:DZ:521:SER:OG	2.12	0.64
34:BA:973:G:H3'	34:BA:974:A:H5''	1.80	0.64
57:DZ:532:GLY:O	57:DZ:534:ILE:N	2.31	0.64
34:BA:1014:A:H2'	34:BA:1015:A:C8	2.33	0.64
5:CE:97:LYS:N	5:CE:100:GLU:OE1	2.19	0.64
25:C1:8:SER:HB3	25:C1:66:HIS:CD2	2.32	0.64
34:BA:1442:G:O2'	34:BA:1442(A):G:OP1	2.16	0.64
41:DH:104:ARG:NH2	63:DH:4001:HOH:O	2.22	0.64
48:BO:17:ARG:HG3	48:BO:17:ARG:HH11	1.62	0.64
8:AH:54:ARG:HD3	8:AH:65:HIS:ND1	2.12	0.64
49:DP:23:ASP:OD1	49:DP:25:ARG:HD3	1.97	0.64
17:AT:23:ARG:HG3	17:AT:120:ARG:CZ	2.28	0.64
34:DA:978:A:O2'	34:DA:1322:C:N3	2.29	0.64
30:C6:43:CYS:O	30:C6:45:LYS:N	2.30	0.64
3:AC:69:LEU:O	3:AC:178:LYS:HG3	1.97	0.64
1:CA:1466:G:O2'	1:CA:1546:C:O2'	2.13	0.64
1:AA:2510:C:OP2	63:AA:4620:HOH:O	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DI:46:ALA:HA	42:DI:78:LYS:HB2	1.79	0.64
11:AN:74:ARG:HH12	11:AN:85:ILE:CD1	2.10	0.64
57:BZ:99:ARG:C	57:BZ:101:LEU:H	2.00	0.64
1:CA:1588:C:H2'	1:CA:1589:C:C6	2.32	0.64
16:CS:35:ILE:HD12	16:CS:101:LEU:HD12	1.78	0.64
34:BA:1077:G:N2	34:BA:1080:A:OP2	2.30	0.64
1:AA:2860:A:OP2	1:AA:2876:U:H5	1.79	0.64
34:DA:1435:G:H2'	34:DA:1436:U:C6	2.33	0.64
1:CA:2820:A:C4	15:CR:4:LEU:HD21	2.32	0.64
1:CA:848:G:H2'	1:CA:849:A:C8	2.31	0.64
8:CH:18:GLU:HB3	8:CH:25:LYS:HB2	1.77	0.64
1:CA:1237:A:OP1	63:CA:4442:HOH:O	2.15	0.64
34:DA:922:G:H2'	34:DA:923:A:C8	2.33	0.64
1:AA:1634:C:H2'	1:AA:1635:C:H6	1.62	0.64
3:AC:44:VAL:CG2	3:AC:176:VAL:HG21	2.28	0.64
13:CP:38:GLN:HG2	13:CP:45:LEU:H	1.62	0.64
1:AA:2052:A:H5''	1:AA:2053:A:OP1	1.98	0.64
1:CA:2456:C:N4	63:CA:4095:HOH:O	2.30	0.64
23:AZ:145:GLU:N	23:AZ:148:ASP:OD2	2.27	0.64
1:AA:1475:G:H2'	1:AA:1476:C:C6	2.32	0.64
8:CH:38:SER:HB3	8:CH:41:MET:HG2	1.80	0.64
35:BB:195:ASP:O	41:BH:68:ARG:NH2	2.31	0.64
1:AA:483:A:OP1	63:AA:5245:HOH:O	2.15	0.64
1:AA:1233:U:H4'	19:AV:79:VAL:HG22	1.78	0.64
56:BY:8:4SU:H4'	56:BY:48:C:H4'	1.79	0.64
34:BA:390:C:H2'	34:BA:391:G:H8	1.63	0.64
10:CL:30:HIS:HA	10:CL:59:ILE:HD12	1.80	0.64
1:CA:2218:U:O4'	25:C1:52:ARG:NH2	2.31	0.64
1:AA:2434:A:O4'	56:BY:76:A:N6	2.31	0.64
1:AA:2832:G:OP2	63:AE:415:HOH:O	2.15	0.64
34:BA:435:C:H2'	34:BA:436:C:H6	1.62	0.64
1:CA:997:G:OP1	18:CU:92:ARG:HG2	1.97	0.64
37:DD:57:ARG:NH2	37:DD:205:GLU:OE2	2.26	0.64
1:CA:2096:U:H2'	1:CA:2097:C:C6	2.33	0.64
4:CD:71:ASP:CG	4:CD:103:ARG:HH22	2.01	0.64
37:BD:155:LEU:HD13	37:BD:158:ILE:HD11	1.79	0.64
1:AA:1675:U:O4	63:AA:4127:HOH:O	2.12	0.64
34:DA:517:G:N2	34:DA:533:A:OP2	2.31	0.64
37:DD:165:MET:SD	37:DD:168:ARG:NH1	2.60	0.64
3:CC:29:LEU:O	3:CC:32:GLU:N	2.31	0.63
57:DZ:179:ASP:OD2	57:DZ:182:ARG:HD2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:68:GLY:N	3:CC:189:ASN:HD21	1.96	0.63
57:DZ:517:LEU:HG	57:DZ:518:PRO:HD2	1.80	0.63
34:BA:626:U:H2'	34:BA:627:G:H8	1.62	0.63
1:CA:2064:C:OP2	63:CA:4245:HOH:O	2.14	0.63
11:AN:46:VAL:HG23	11:AN:48:MET:HG2	1.80	0.63
57:DZ:168:ILE:HG23	57:DZ:205:TYR:HE2	1.63	0.63
34:DA:673:G:H2'	34:DA:674:G:C8	2.33	0.63
1:CA:2168:G:H2'	1:CA:2169:A:H8	1.62	0.63
3:CC:69:LEU:O	3:CC:178:LYS:HG3	1.97	0.63
39:DF:23:LYS:NZ	39:DF:42:GLU:OE2	2.31	0.63
34:DA:1143:G:H2'	34:DA:1144:G:H8	1.63	0.63
3:AC:29:LEU:O	3:AC:32:GLU:N	2.32	0.63
44:DK:79:SER:HA	44:DK:104:GLN:HB3	1.79	0.63
1:AA:303:C:H42	1:AA:385:G:H1	1.46	0.63
34:DA:403:C:H2'	34:DA:404:U:H6	1.64	0.63
1:CA:2867:G:OP2	17:CT:119:LYS:NZ	2.32	0.63
46:DM:33:ALA:HA	46:DM:59:TYR:HE2	1.63	0.63
30:C6:13:CYS:SG	30:C6:47:THR:HG21	2.39	0.63
37:BD:57:ARG:NH2	37:BD:205:GLU:OE2	2.31	0.63
56:DW:40:C:H1'	56:DY:35:A:H4'	1.79	0.63
17:CT:16:ARG:HH11	17:CT:19:LEU:HD21	1.61	0.63
16:CS:84:GLN:HA	16:CS:111:GLU:HB2	1.80	0.63
3:AC:68:GLY:N	3:AC:189:ASN:HD21	1.96	0.63
34:DA:976:G:OP2	34:DA:1358:U:O2'	2.15	0.63
46:BM:90:LEU:HD23	46:BM:93:ARG:HD2	1.79	0.63
1:AA:1935:A:OP1	57:BZ:499:ARG:NH2	2.31	0.63
1:AA:671:A:H2'	1:AA:672:G:O4'	1.99	0.63
6:AF:32:LEU:HB3	6:AF:112:MET:HE1	1.80	0.63
34:BA:1063:C:H2'	34:BA:1064:G:C8	2.32	0.63
57:DZ:230:LYS:HB3	57:DZ:235:GLU:HB3	1.78	0.63
34:DA:148:G:H2'	34:DA:149:A:H8	1.62	0.63
3:AC:7:ARG:O	3:AC:11:LEU:HD23	1.99	0.63
3:CC:44:VAL:CG2	3:CC:176:VAL:HG21	2.28	0.63
5:CE:143:ASN:HD22	5:CE:147:PRO:HD3	1.63	0.63
1:CA:2037:G:O6	63:CA:4152:HOH:O	2.11	0.63
53:BT:56:MET:CE	53:BT:85:MET:HA	2.29	0.63
5:CE:73:GLU:OE2	5:CE:73:GLU:N	2.31	0.63
1:AA:2367:C:H1'	24:A0:39:ARG:HH21	1.62	0.63
1:AA:2326:C:H2'	1:AA:2327:G:H8	1.63	0.63
1:CA:2646:C:OP2	1:CA:2732:G:O2'	2.15	0.63
1:AA:1296:G:OP2	13:AP:21:ARG:NH1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:53:GLU:HB3	28:A4:54:GLY:HA2	1.80	0.63
48:BO:16:ALA:HB1	48:BO:21:ASP:HB3	1.79	0.63
22:AY:8:LYS:HD3	22:AY:97:ARG:NH1	2.14	0.63
57:DZ:497:PHE:CE2	57:DZ:506:GLN:HG3	2.32	0.63
35:DB:16:HIS:CG	35:DB:17:PHE:H	2.16	0.63
57:BZ:264:LEU:HB2	62:BZ:704:GDP:C5	2.33	0.63
34:DA:404:U:H5'	37:DD:122:ARG:HE	1.61	0.63
34:DA:811:C:O2'	34:DA:901:A:N1	2.30	0.63
18:CU:49:HIS:HA	18:CU:52:ARG:HB3	1.80	0.63
7:AG:143:GLU:O	28:A4:28:LYS:NZ	2.30	0.63
1:AA:1701:A:OP1	15:AR:1:MET:N	2.25	0.63
8:CH:113:VAL:HG11	8:CH:151:ILE:HG21	1.81	0.63
34:BA:921:U:O2	38:BE:19:MET:HB2	1.99	0.63
57:BZ:629:GLY:HA3	57:BZ:647:VAL:HG12	1.79	0.63
34:DA:932:C:H2'	34:DA:933:G:C8	2.33	0.63
1:CA:214:G:O2'	1:CA:216:A:O2'	2.08	0.63
57:BZ:-9:LEU:O	57:BZ:-6:ARG:N	2.20	0.63
23:CZ:104:PHE:HA	23:CZ:139:VAL:HG22	1.80	0.63
1:AA:354:A:H2	1:AA:1255:A:HO2'	1.46	0.63
3:CC:7:ARG:O	3:CC:11:LEU:HD23	1.99	0.63
57:DZ:497:PHE:O	57:DZ:507:TYR:HA	1.99	0.63
1:CA:830:G:H4'	1:CA:831:G:OP2	1.97	0.63
36:DC:113:ALA:HB2	36:DC:202:ILE:HG13	1.79	0.63
9:AK:28:ASN:O	9:AK:30:GLN:N	2.31	0.63
2:AB:66:A:H61	2:AB:108:U:H2'	1.64	0.63
15:CR:57:ARG:O	15:CR:59:ASP:N	2.32	0.63
57:BZ:508:GLY:HA3	57:BZ:581:ALA:O	1.98	0.63
57:BZ:239:GLU:O	57:BZ:241:GLU:N	2.32	0.63
30:A6:35:GLU:OE2	30:A6:50:ARG:NH1	2.31	0.63
1:CA:1859:A:C2'	3:CC:206:LYS:CE	2.77	0.63
1:AA:1003:U:OP2	14:AQ:14:ARG:HD3	1.99	0.63
1:AA:2152:U:H4'	1:AA:2155:G:H4'	1.80	0.63
1:CA:486:C:O2'	20:CW:60:ASN:OD1	2.12	0.63
57:DZ:215:LYS:HA	57:DZ:218:GLU:HB3	1.81	0.63
8:AH:88:LEU:HD12	8:AH:130:ARG:HG2	1.79	0.63
57:DZ:524:GLU:HB3	57:DZ:564:LYS:HA	1.81	0.63
10:AL:100:THR:HA	10:AL:139:VAL:HB	1.81	0.63
35:BB:55:PHE:CD1	35:BB:58:ILE:HD12	2.34	0.63
34:DA:1456:G:O3'	53:DT:39:LYS:NZ	2.31	0.63
56:DW:55:PSU:O2'	56:DW:57:G:N7	2.20	0.63
40:BG:31:MET:SD	40:BG:34:GLY:HA2	2.39	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2331:G:H22	16:AS:3:ARG:CG	2.06	0.62
34:DA:437:U:O2'	37:DD:125:HIS:HE1	1.81	0.62
1:CA:1705:G:O6	63:CA:4615:HOH:O	2.13	0.62
37:DD:23:GLY:N	37:DD:26:CYS:SG	2.61	0.62
7:CG:80:PHE:O	7:CG:82:LEU:N	2.31	0.62
1:CA:340:A:H2'	1:CA:341:G:O4'	1.99	0.62
14:CQ:38:GLU:HG3	14:CQ:127:ILE:HG22	1.80	0.62
11:CN:42:TRP:CH2	11:CN:44:PRO:HB3	2.34	0.62
1:AA:1324:A:OP1	15:AR:36:THR:HG22	1.98	0.62
54:DU:3:LYS:HB3	54:DU:14:TRP:CD1	2.33	0.62
10:CL:71:THR:O	10:CL:111:LYS:NZ	2.32	0.62
57:BZ:549:ALA:HB1	57:BZ:591:LYS:HE2	1.81	0.62
1:AA:482:C:H4'	63:AA:5245:HOH:O	1.99	0.62
1:CA:1913:A:H4'	1:CA:1914:C:H5'	1.80	0.62
20:AW:4:LYS:HB2	20:AW:106:ILE:HG12	1.82	0.62
10:AL:45:THR:O	10:AL:45:THR:OG1	2.16	0.62
57:BZ:356:LEU:HD12	57:BZ:365:GLU:HA	1.79	0.62
34:BA:1240:U:OP2	40:BG:116:ALA:N	2.26	0.62
57:DZ:332:SER:HA	57:DZ:371:ALA:HB2	1.79	0.62
3:CC:6:LYS:HG3	3:CC:7:ARG:N	2.14	0.62
1:CA:1859:A:C2'	3:CC:206:LYS:HE3	2.29	0.62
1:AA:831:A:OP2	63:AA:4559:HOH:O	2.15	0.62
2:AB:66:A:N6	2:AB:108:U:H2'	2.15	0.62
34:DA:1228:C:OP1	46:DM:115:LYS:N	2.29	0.62
1:AA:714:U:O2	32:A8:2:PRO:HD2	1.98	0.62
8:CH:45:VAL:HG22	8:CH:50:VAL:HG22	1.81	0.62
1:CA:328:U:H4'	22:CY:68:HIS:CD2	2.34	0.62
1:CA:922:U:H2'	1:CA:923:C:C6	2.33	0.62
36:BC:35:GLU:OE2	36:BC:59:ARG:NH2	2.31	0.62
34:DA:473:G:H2'	34:DA:474:G:H8	1.62	0.62
34:BA:437:U:O2'	37:BD:125:HIS:HE1	1.81	0.62
34:BA:565:U:OP2	34:BA:566:G:O2'	2.14	0.62
20:AW:14:PRO:CG	20:AW:78:GLU:HG2	2.29	0.62
47:DN:27:CYS:SG	47:DN:29:ARG:N	2.73	0.62
35:BB:55:PHE:HD1	35:BB:58:ILE:HD12	1.65	0.62
1:CA:1815:A:OP2	4:CD:54:ARG:NH2	2.32	0.62
35:DB:13:ALA:N	35:DB:14:GLY:HA3	2.14	0.62
6:AF:24:LEU:HB3	6:AF:115:ALA:HB2	1.79	0.62
4:AD:223:GLY:HA3	4:AD:231:HIS:CE1	2.34	0.62
34:DA:560:U:O2'	34:DA:561:U:OP2	2.18	0.62
34:BA:1238:A:O5'	34:BA:1336:C:N4	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:57:ARG:HG2	37:BD:202:LEU:HD22	1.81	0.62
4:AD:145:VAL:HG12	4:AD:146:GLU:O	2.00	0.62
57:DZ:-9:LEU:O	57:DZ:-6:ARG:N	2.32	0.62
1:CA:813:U:H2'	1:CA:814:C:C6	2.34	0.62
34:BA:1316:G:H4'	47:BN:18:VAL:HG13	1.81	0.62
18:AU:66:ASN:O	18:AU:70:ARG:HG3	2.00	0.62
1:AA:2175:G:H2'	1:AA:2176:G:H8	1.63	0.62
3:AC:53:ARG:H	3:AC:53:ARG:HD3	1.65	0.62
28:C4:44:THR:O	28:C4:46:GLN:N	2.31	0.62
3:CC:68:GLY:H	3:CC:189:ASN:HD21	1.47	0.62
1:AA:116:A:C8	1:AA:117:A:C8	2.87	0.62
28:A4:10:VAL:HG21	28:A4:29:PRO:HG3	1.81	0.62
34:BA:499:A:O2'	34:BA:546:G:N2	2.32	0.62
1:AA:1627:A:H8	1:AA:1627:A:OP2	1.82	0.62
50:BQ:6:LEU:HD23	50:BQ:23:VAL:HG11	1.80	0.62
57:DZ:87:HIS:CD2	61:DZ:703:FUA:H283	2.31	0.62
34:DA:1339:A:O3'	56:DY:35:A:OP1	2.16	0.62
1:CA:2124:G:C3'	3:CC:175:PRO:HG3	2.30	0.62
1:AA:553:A:H2	1:AA:2065:C:H5'	1.63	0.62
1:AA:552:C:C5	1:AA:2792:U:H2'	2.35	0.62
3:AC:6:LYS:HG3	3:AC:7:ARG:N	2.14	0.62
1:CA:307:G:N1	1:CA:310:A:OP2	2.29	0.62
36:BC:116:VAL:HG21	36:BC:202:ILE:HD11	1.82	0.62
57:BZ:432:ALA:HA	57:BZ:438:PHE:HE1	1.65	0.62
34:DA:1292:U:OP2	40:DG:41:ARG:NH2	2.32	0.62
1:CA:2562:U:H1'	12:CO:23:ARG:HH11	1.63	0.62
9:CK:104:ILE:HA	9:CK:109:SER:HA	1.82	0.62
6:CF:118:ALA:HB2	6:CF:123:LEU:HD23	1.81	0.62
1:AA:1891:G:H4'	3:AC:206:LYS:HD3	1.79	0.62
34:DA:1347:G:H22	34:DA:1373:G:H2'	1.62	0.62
34:BA:501:C:H2'	34:BA:502:G:H8	1.64	0.62
35:BB:166:ASP:HB3	35:BB:169:LYS:HB2	1.81	0.62
36:DC:11:ARG:HB3	36:DC:15:THR:HB	1.82	0.62
34:DA:9:G:OP2	38:DE:121:LYS:NZ	2.31	0.62
61:BZ:703:FUA:O2	61:BZ:703:FUA:H211	2.00	0.62
5:CE:47:VAL:HG11	5:CE:86:PRO:HD2	1.81	0.62
1:AA:215:G:H21	1:AA:217:A:H62	1.48	0.62
51:DR:58:LEU:HD12	51:DR:62:GLU:HB3	1.82	0.62
1:CA:1671:U:HO2'	1:CA:1673:U:H5	1.48	0.62
40:BG:36:LYS:HA	40:BG:39:ALA:HB3	1.81	0.62
61:DZ:703:FUA:O2	61:DZ:703:FUA:H211	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C5	2.34	0.62
6:AF:148:LEU:HD13	6:AF:154:VAL:HG21	1.82	0.62
34:BA:1497:G:O6	63:BA:5225:HOH:O	2.15	0.62
38:BE:31:LEU:HD23	38:BE:45:PHE:HB2	1.81	0.62
1:CA:1877:A:H5'	1:CA:1878:G:OP2	2.00	0.62
3:CC:53:ARG:HD3	3:CC:53:ARG:H	1.65	0.61
1:CA:2892:A:H2'	1:CA:2893:G:H8	1.65	0.61
1:CA:2632:A:O2'	1:CA:2811:G:O2'	2.05	0.61
1:AA:1825:U:H2'	1:AA:1826:C:C6	2.34	0.61
45:DL:113:ARG:HG2	45:DL:117:ARG:HG2	1.80	0.61
1:CA:1665:A:H1'	12:CO:1:MET:HG3	1.82	0.61
12:CO:4:PRO:O	12:CO:5:GLN:HB2	1.99	0.61
34:DA:255:G:H1'	50:DQ:16:GLN:NE2	2.15	0.61
14:AQ:135:ASP:HB3	14:AQ:137:TYR:H	1.64	0.61
34:DA:1468:A:H2'	34:DA:1469:G:O4'	1.99	0.61
54:BU:3:LYS:HB3	54:BU:14:TRP:CG	2.35	0.61
34:DA:1016:A:HO2'	34:DA:1217:C:HO2'	1.44	0.61
57:BZ:210:ARG:HB2	57:BZ:210:ARG:NH1	2.12	0.61
3:AC:68:GLY:H	3:AC:189:ASN:HD21	1.47	0.61
35:DB:55:PHE:HA	35:DB:58:ILE:HG13	1.81	0.61
38:DE:77:PRO:HD2	38:DE:142:LEU:HD22	1.82	0.61
57:DZ:328:ILE:HD12	57:DZ:377:VAL:HG12	1.81	0.61
7:AG:180:PHE:O	7:AG:182:LYS:N	2.33	0.61
57:DZ:363:ARG:CG	57:DZ:363:ARG:HH11	2.13	0.61
34:BA:345:C:H4'	34:BA:346:G:C2	2.35	0.61
34:DA:1059:C:OP2	36:DC:199:LYS:NZ	2.33	0.61
20:AW:13:SER:HB3	20:AW:16:LYS:HD2	1.82	0.61
25:C1:83:GLU:OE1	25:C1:83:GLU:N	2.33	0.61
34:BA:1318:A:H2'	34:BA:1319:A:H5''	1.82	0.61
6:CF:20:LEU:HD13	6:CF:21:ALA:H	1.65	0.61
34:DA:353:A:H5'	34:DA:353:A:H8	1.66	0.61
2:CB:76:G:H2'	2:CB:77:U:O4'	2.00	0.61
34:DA:559:A:OP1	38:DE:126:ARG:NH2	2.33	0.61
6:AF:191:ARG:HG2	6:AF:191:ARG:NH1	2.11	0.61
38:DE:57:LYS:HD3	38:DE:61:TYR:HE2	1.64	0.61
57:DZ:177:ILE:HG13	57:DZ:188:TYR:HE2	1.64	0.61
6:CF:120:GLU:HB2	6:CF:122:LYS:HG2	1.81	0.61
36:DC:111:LEU:HD22	36:DC:146:ALA:HB2	1.83	0.61
42:BI:110:GLU:OE2	42:BI:113:LYS:NZ	2.33	0.61
34:BA:1013:G:N2	34:BA:1016:A:OP2	2.32	0.61
46:BM:84:ILE:HB	52:BS:74:PHE:HE1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:223:PHE:CZ	57:DZ:249:GLY:HA3	2.35	0.61
1:AA:868:A:H2'	1:AA:991:G:H5''	1.82	0.61
37:DD:187:ARG:NH2	37:DD:193:ASP:OD2	2.34	0.61
34:DA:1494:G:H5''	57:DZ:506:GLN:HE22	1.65	0.61
55:BV:15:A:O2'	55:BV:16:U:C5	2.39	0.61
1:AA:1935:A:H4'	1:AA:1936:C:H5''	1.81	0.61
1:AA:1935:A:H4'	1:AA:1936:C:C5'	2.30	0.61
30:A6:25:LYS:HE3	30:A6:30:THR:O	2.00	0.61
34:BA:277:C:P	50:BQ:41:LYS:HZ1	2.23	0.61
34:BA:1347:G:H5''	42:BI:107:ARG:HB3	1.81	0.61
57:DZ:264:LEU:HD12	62:DZ:704:GDP:C4	2.35	0.61
1:CA:2631:G:N3	1:CA:2810:A:H2	1.98	0.61
34:BA:347:G:H2'	34:BA:348:G:O4'	1.99	0.61
45:BL:34:ARG:HG2	45:BL:35:GLY:N	2.16	0.61
34:BA:407:G:H5''	37:BD:115:ARG:HB3	1.83	0.61
10:CL:64:SER:OG	10:CL:65:PHE:N	2.33	0.61
49:BP:67:THR:HB	49:BP:70:ALA:HB2	1.82	0.61
57:DZ:74:TRP:NE1	57:DZ:273:LEU:HB3	2.16	0.61
18:AU:76:TYR:CE1	18:AU:80:ILE:HG13	2.36	0.61
12:AO:64:ARG:HD3	17:AT:70:VAL:HG11	1.83	0.61
7:AG:124:SER:HB2	7:AG:131:TYR:CE1	2.36	0.61
7:AG:140:ILE:HD12	7:AG:140:ILE:H	1.66	0.61
34:BA:1372:U:OP1	42:BI:72:GLY:N	2.33	0.61
5:AE:116:VAL:HG13	5:AE:122:PHE:HB2	1.83	0.61
3:CC:11:LEU:HD12	3:CC:33:LEU:HA	1.82	0.61
61:BZ:703:FUA:H12	61:BZ:703:FUA:O1	2.00	0.61
1:CA:1803:A:H4'	4:CD:259:THR:HG23	1.83	0.61
20:AW:14:PRO:HG2	20:AW:78:GLU:CG	2.30	0.61
51:BR:32:ARG:HA	51:BR:69:THR:HG21	1.83	0.61
56:DW:47:U:O2'	56:DW:48:C:OP1	2.18	0.61
1:CA:1095:A:N6	57:DZ:614:GLU:OE1	2.33	0.61
50:DQ:10:VAL:HG13	50:DQ:19:VAL:HB	1.83	0.61
1:AA:2023:A:H2'	1:AA:2024:G:C8	2.36	0.61
4:CD:238:GLY:O	4:CD:239:ARG:HB2	1.98	0.61
50:BQ:86:GLU:O	50:BQ:88:TYR:N	2.33	0.61
34:BA:308:C:H2'	34:BA:309:G:H8	1.66	0.61
1:CA:2121:G:O2'	3:CC:168:LYS:CG	2.49	0.61
49:DP:53:VAL:HG22	49:DP:79:VAL:HG22	1.82	0.61
1:CA:338:G:N7	63:CA:3740:HOH:O	2.31	0.61
7:CG:126:ASP:HB3	7:CG:128:ARG:H	1.66	0.61
57:BZ:512:ILE:HD12	57:BZ:589:ALA:HB1	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BL:33:ARG:HD3	45:BL:62:SER:HB3	1.83	0.61
1:AA:2658:C:H2'	1:AA:2659:U:O4'	2.01	0.61
17:CT:83:ILE:HD13	17:CT:86:ILE:HD11	1.83	0.61
57:DZ:169:GLY:N	57:DZ:170:ARG:HH12	1.99	0.61
22:AY:92:ASN:H	22:AY:92:ASN:HD22	1.49	0.61
35:BB:178:ARG:NH1	35:BB:196:LEU:O	2.34	0.61
34:DA:407:G:H5''	37:DD:115:ARG:HD2	1.81	0.61
34:BA:1227:A:O3'	46:BM:115:LYS:HD2	2.01	0.61
56:DW:9:A:O2'	56:DW:10:G:N7	2.34	0.61
25:A1:49:VAL:HG21	25:A1:67:ILE:HG23	1.81	0.61
42:DI:3:GLN:OE1	42:DI:20:ARG:NH2	2.30	0.61
21:AX:65:ARG:HB2	21:AX:70:LEU:HD22	1.83	0.61
1:CA:775:G:N2	1:CA:794:G:H5'	2.15	0.61
57:DZ:32:ILE:O	57:DZ:36:THR:OG1	2.19	0.60
1:AA:1125:C:O2'	10:AL:132:ARG:NH1	2.34	0.60
51:BR:59:SER:H	51:BR:62:GLU:CG	2.14	0.60
34:DA:972:C:OP2	43:DJ:57:LYS:NZ	2.24	0.60
1:CA:2168:G:H2'	1:CA:2169:A:C8	2.36	0.60
2:AB:45:A:OP2	7:AG:96:ARG:NH2	2.30	0.60
40:BG:69:VAL:HG22	40:BG:135:VAL:HG22	1.82	0.60
17:AT:60:THR:HG22	17:AT:77:PRO:HA	1.83	0.60
40:BG:92:SER:O	40:BG:95:ARG:N	2.32	0.60
1:AA:591:U:OP1	13:AP:36:LYS:HE3	2.01	0.60
1:AA:2451:A:C8	1:AA:2451:A:H5'	2.36	0.60
34:BA:1055:A:H2'	36:BC:156:ARG:HD2	1.83	0.60
1:AA:2695:C:O2	12:AO:70:LYS:NZ	2.29	0.60
1:AA:2328:C:H2'	1:AA:2329:C:C6	2.34	0.60
57:BZ:99:ARG:NH1	57:BZ:312:LEU:HD11	2.16	0.60
1:AA:1848:G:OP1	4:AD:88:ARG:NH2	2.33	0.60
1:AA:2859:U:OP2	17:AT:95:ARG:NH1	2.34	0.60
5:CE:35:GLN:OE1	5:CE:66:HIS:HE1	1.84	0.60
5:CE:68:ALA:O	5:CE:70:ALA:N	2.34	0.60
18:AU:25:TRP:O	18:AU:28:ARG:HB2	2.01	0.60
8:CH:144:VAL:O	8:CH:148:ILE:HG12	2.01	0.60
11:CN:21:LYS:NZ	11:CN:140:VAL:OXT	2.31	0.60
1:AA:2349:G:OP1	63:AA:4052:HOH:O	2.16	0.60
36:DC:157:ILE:HD12	36:DC:164:ARG:HB3	1.82	0.60
34:BA:1221:G:H4'	52:BS:77:THR:HG21	1.83	0.60
16:AS:10:ARG:O	16:AS:14:VAL:HG13	2.01	0.60
1:CA:1693:U:O2'	4:CD:14:ARG:NH2	2.33	0.60
1:CA:2177:C:C2'	3:CC:171:ALA:HB2	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1912:A:O3'	57:DZ:499:ARG:NH2	2.34	0.60
1:CA:1364:G:N7	25:C1:3:LYS:HE2	2.16	0.60
34:DA:620:C:C2	37:DD:135:LEU:HG	2.36	0.60
38:BE:152:ARG:HA	41:BH:64:LYS:NZ	2.17	0.60
1:CA:2298:A:H2'	1:CA:2299:G:O4'	2.01	0.60
35:DB:219:VAL:HA	35:DB:222:ILE:HG12	1.83	0.60
57:DZ:637:ARG:C	57:DZ:639:ASN:H	2.05	0.60
10:AL:30:HIS:HD2	10:AL:65:PHE:HB2	1.66	0.60
1:CA:77:C:OP1	26:C2:59:ARG:HD3	2.00	0.60
1:CA:2113:U:H2'	1:CA:2114:A:H8	1.64	0.60
1:CA:2364:C:H2'	1:CA:2365:G:O4'	2.01	0.60
7:AG:77:ILE:HG22	7:AG:80:PHE:H	1.65	0.60
34:DA:982:U:H5''	47:DN:6:LEU:HD21	1.81	0.60
34:DA:343:U:O2'	34:DA:344:A:H2'	2.02	0.60
7:AG:43:LEU:HD11	7:AG:153:ARG:HG2	1.83	0.60
23:CZ:132:ASN:O	23:CZ:134:PRO:HD3	2.02	0.60
34:BA:509:A:H3'	34:BA:509:A:C8	2.36	0.60
1:CA:2162:G:OP1	1:CA:2172:U:O2'	2.17	0.60
61:DZ:703:FUA:H12	61:DZ:703:FUA:O1	2.00	0.60
37:DD:36:ARG:HG3	37:DD:38:TYR:CE2	2.37	0.60
11:AN:75:TYR:CZ	11:AN:77:GLY:HA2	2.37	0.60
41:BH:51:VAL:HG21	41:BH:60:ARG:HD2	1.83	0.60
1:CA:1709:U:H2'	1:CA:1710:C:C6	2.37	0.60
16:AS:27:SER:HA	16:AS:88:ASP:HB3	1.84	0.60
56:DW:40:C:O2'	56:DY:36:A:OP1	2.19	0.60
1:AA:2331:G:N1	16:AS:3:ARG:HA	2.16	0.60
57:BZ:350:GLU:OE1	57:BZ:381:LYS:N	2.17	0.60
53:BT:77:ALA:O	53:BT:81:LYS:HG3	2.00	0.60
34:BA:1372:U:H5''	42:BI:71:SER:HB3	1.81	0.60
16:CS:14:VAL:O	16:CS:18:ILE:HG12	2.01	0.60
1:AA:2402:U:P	32:A8:35:GLN:HE22	2.25	0.60
23:CZ:69:THR:HG22	23:CZ:90:VAL:HG22	1.82	0.60
1:CA:1683:C:H2'	1:CA:1684:C:C6	2.36	0.60
34:BA:167:G:H2'	34:BA:168:G:C8	2.36	0.60
1:AA:1405:A:N1	1:AA:1418:U:C4	2.69	0.60
3:CC:41:THR:HG22	3:CC:42:VAL:N	2.17	0.60
1:CA:889:C:O2'	1:CA:890:A:O4'	2.19	0.60
1:AA:469:A:H1'	1:AA:1246:C:O4'	2.02	0.60
24:C0:10:THR:HG22	24:C0:12:ASN:H	1.66	0.60
46:BM:16:ASP:N	46:BM:16:ASP:OD1	2.31	0.60
3:AC:214:TYR:CE2	3:AC:224:ARG:HG2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:129:PHE:O	6:CF:132:VAL:HG22	2.02	0.60
34:DA:1347:G:C8	42:DI:107:ARG:HB3	2.36	0.60
1:CA:2317:C:N4	1:CA:2318:G:O6	2.35	0.60
1:CA:1420:U:O2'	1:CA:1421:G:OP1	2.19	0.60
35:DB:166:ASP:OD2	35:DB:169:LYS:N	2.34	0.60
1:CA:748:G:O6	20:CW:90:ARG:NH1	2.35	0.60
5:CE:16:ARG:NH1	5:CE:171:GLU:OE2	2.31	0.60
34:BA:959:A:HO2'	34:BA:984:C:HO2'	1.36	0.60
24:A0:11:ARG:O	24:A0:14:ARG:NH2	2.26	0.60
36:DC:65:ALA:HA	36:DC:100:ALA:HB3	1.83	0.60
42:BI:23:ASN:HD22	42:BI:25:LYS:HG2	1.66	0.60
1:AA:2157:A:N6	1:AA:2178:G:O2'	2.23	0.60
25:C1:50:ARG:HG2	25:C1:59:THR:HB	1.83	0.60
1:AA:2511:C:N3	63:AA:4228:HOH:O	2.31	0.60
53:DT:18:GLN:O	53:DT:22:ARG:HG3	2.01	0.60
34:BA:1030(C):G:H2'	34:BA:1030(D):A:H8	1.65	0.60
18:AU:76:TYR:CZ	18:AU:80:ILE:HG13	2.37	0.60
1:CA:2307:G:N1	7:CG:43:LEU:O	2.34	0.60
3:CC:194:ILE:HD11	3:CC:227:PRO:CB	2.32	0.60
34:DA:187:C:OP1	53:DT:82:SER:OG	2.18	0.60
45:BL:53:ARG:HG3	45:BL:93:LEU:HD21	1.84	0.60
57:BZ:74:TRP:CD1	57:BZ:273:LEU:HB3	2.37	0.59
1:AA:1065:U:O2'	1:AA:1067:A:H2	1.83	0.59
1:CA:774:A:HO2'	1:CA:775:G:H8	1.49	0.59
57:BZ:639:ASN:HA	57:BZ:640:ALA:O	2.02	0.59
34:BA:828:A:H2'	34:BA:829:G:O4'	2.02	0.59
57:DZ:510:VAL:HG21	57:DZ:542:VAL:HG21	1.84	0.59
3:AC:194:ILE:HD11	3:AC:227:PRO:CB	2.32	0.59
49:DP:55:ARG:O	49:DP:58:TYR:N	2.35	0.59
57:DZ:606:MET:HG3	57:DZ:649:LEU:HD23	1.84	0.59
34:BA:279:A:N6	50:BQ:98:LEU:O	2.35	0.59
34:BA:321:A:N7	34:BA:328:C:O2'	2.29	0.59
28:A4:58:ARG:O	28:A4:60:GLN:N	2.35	0.59
34:BA:508:C:OP1	37:BD:209:ARG:NH2	2.34	0.59
1:AA:2473:C:H2'	1:AA:2474:U:C6	2.37	0.59
1:AA:818:G:OP1	31:A7:10:ARG:NH1	2.35	0.59
38:DE:11:ILE:HG22	38:DE:31:LEU:HB3	1.84	0.59
1:AA:1219:A:H4'	1:AA:1220:U:OP1	2.01	0.59
1:CA:1359:A:H2'	1:CA:1360:A:H5'	1.83	0.59
3:AC:11:LEU:HD12	3:AC:33:LEU:HA	1.82	0.59
57:DZ:630:GLN:O	57:DZ:646:PHE:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DJ:52:GLY:O	47:DN:41:ARG:NH2	2.33	0.59
24:A0:6:GLY:O	56:BW:1:G:O2'	2.19	0.59
1:AA:2230:U:O4'	25:A1:52:ARG:NH2	2.34	0.59
6:CF:36:VAL:HG11	6:CF:183:VAL:HG13	1.83	0.59
6:AF:191:ARG:HH11	6:AF:191:ARG:CG	2.14	0.59
34:DA:493:G:N2	34:DA:494:U:O4	2.36	0.59
1:AA:483:A:H5''	63:AA:5245:HOH:O	2.03	0.59
10:AL:99:ILE:HG23	10:AL:103:GLN:HB3	1.84	0.59
57:BZ:512:ILE:HB	57:BZ:566:THR:O	2.02	0.59
49:DP:28:ARG:NH1	49:DP:29:ASP:OD1	2.36	0.59
7:AG:130:ASN:HB3	7:AG:160:VAL:HA	1.84	0.59
56:BY:6:G:O6	56:BY:7:A:N6	2.36	0.59
5:AE:120:TRP:CD2	5:AE:155:LYS:HG2	2.37	0.59
4:CD:146:GLU:HB2	4:CD:189:CYS:HB3	1.84	0.59
38:DE:88:LYS:HB3	38:DE:123:LEU:HB2	1.84	0.59
34:BA:671:G:H5'	39:BF:77:ARG:HH22	1.66	0.59
17:CT:50:ILE:HA	17:CT:99:LEU:HB2	1.84	0.59
13:AP:101:VAL:HG23	13:AP:106:LEU:HB3	1.84	0.59
10:CL:125:ARG:HA	10:CL:128:ALA:HB3	1.84	0.59
1:CA:2128:C:N3	1:CA:2160:G:N2	2.40	0.59
1:CA:1859:A:N6	1:CA:1883:G:O2'	2.35	0.59
57:BZ:210:ARG:CG	57:BZ:210:ARG:HH11	2.16	0.59
34:DA:1133:G:H2'	34:DA:1134:G:H8	1.65	0.59
6:CF:129:PHE:CD2	6:CF:163:VAL:HG21	2.37	0.59
42:DI:9:ARG:HG2	42:DI:14:VAL:HG12	1.84	0.59
10:AL:51:ALA:HB1	10:AL:72:PRO:HB3	1.85	0.59
1:CA:528:A:OP2	11:CN:114:ARG:NH1	2.35	0.59
34:DA:737:A:H1'	39:DF:73:ASN:OD1	2.03	0.59
37:DD:26:CYS:HA	60:DD:501:SF4:S3	2.43	0.59
1:AA:2658:C:O5'	1:AA:2658:C:H6	1.85	0.59
49:DP:5:ARG:HH12	49:DP:28:ARG:HA	1.67	0.59
34:BA:539:A:OP2	45:BL:115:LYS:NZ	2.35	0.59
1:CA:72:U:OP2	21:CX:1:MET:N	2.35	0.59
1:AA:794:U:O2	1:AA:2036:A:H1'	2.02	0.59
13:CP:63:PRO:HG2	32:C8:25:MET:HB2	1.83	0.59
1:AA:1410:G:C8	25:A1:3:LYS:HE2	2.37	0.59
53:DT:33:ILE:O	53:DT:37:SER:OG	2.11	0.59
1:CA:81:G:O6	63:CA:4119:HOH:O	2.17	0.59
35:BB:204:ASN:OD1	35:BB:205:ASP:N	2.35	0.59
28:C4:41:PRO:HA	28:C4:44:THR:HG22	1.84	0.59
57:BZ:421:GLN:O	57:BZ:424:LEU:HB3	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:402:ILE:HG23	57:BZ:403:GLU:H	1.67	0.59
34:BA:435:C:H2'	34:BA:436:C:C6	2.36	0.59
41:BH:4:ASP:OD2	41:BH:85:ARG:NH1	2.33	0.59
7:CG:15:VAL:HA	7:CG:175:LEU:HD23	1.83	0.59
1:CA:1466:G:HO2'	1:CA:1546:C:HO2'	1.50	0.59
1:AA:1935:A:H8	1:AA:1935:A:H5'	1.67	0.59
16:AS:14:VAL:O	16:AS:18:ILE:HG12	2.02	0.59
34:BA:1525:G:P	44:BK:120:ARG:HH22	2.25	0.59
10:CL:100:THR:HA	10:CL:139:VAL:HB	1.84	0.59
1:CA:1292:U:H2'	1:CA:1293:C:C6	2.38	0.59
34:DA:1457:G:H5''	53:DT:35:THR:HG21	1.84	0.59
57:BZ:338:GLY:O	57:BZ:351:ARG:NH2	2.34	0.59
44:BK:84:VAL:HG21	44:BK:95:ILE:HD11	1.85	0.59
34:BA:1356:G:H2'	34:BA:1357:A:H8	1.63	0.59
1:AA:2298:A:H4'	1:AA:2299:A:O4'	2.01	0.59
7:AG:146:TYR:O	7:AG:149:VAL:HG12	2.03	0.59
37:BD:18:LYS:HG2	37:BD:33:MET:HG2	1.84	0.59
20:AW:62:HIS:O	20:AW:64:MET:HG3	2.03	0.59
26:C2:19:VAL:HA	26:C2:22:GLU:HG3	1.85	0.59
1:AA:1793:A:H2'	63:AA:5101:HOH:O	2.02	0.59
34:DA:1342:C:O2'	42:DI:124:GLN:HG2	2.02	0.59
1:AA:2331:G:N2	16:AS:3:ARG:HG2	2.09	0.59
36:BC:40:ARG:HG2	36:BC:55:VAL:HG11	1.85	0.59
14:CQ:27:VAL:O	14:CQ:29:PHE:N	2.35	0.59
18:AU:28:ARG:HG2	18:AU:38:THR:OG1	2.02	0.59
35:DB:127:ILE:HG12	35:DB:128:GLU:H	1.65	0.59
42:DI:16:ARG:HB2	42:DI:64:THR:HG23	1.84	0.59
1:CA:25:U:H5''	20:CW:80:PRO:HD3	1.84	0.59
16:CS:50:SER:OG	16:CS:50:SER:O	2.17	0.59
1:CA:2121:G:O4'	3:CC:168:LYS:CD	2.47	0.59
56:DY:33:U:H2'	56:DY:35:A:OP2	2.02	0.59
49:BP:69:THR:HA	49:BP:72:ARG:HB2	1.84	0.59
3:AC:214:TYR:CZ	3:AC:224:ARG:HG2	2.37	0.59
49:BP:74:LEU:O	49:BP:79:VAL:HG23	2.03	0.59
57:BZ:601:ILE:O	57:BZ:679:VAL:HG13	2.02	0.59
53:BT:56:MET:HE2	53:BT:85:MET:HG2	1.84	0.59
34:DA:390:C:O3'	49:DP:28:ARG:NH2	2.36	0.59
34:BA:222:U:H2'	34:BA:223:U:C6	2.37	0.59
1:AA:41:C:H42	1:AA:464:G:H1	1.49	0.59
43:BJ:45:ARG:HH11	47:BN:36:PHE:HE1	1.49	0.59
34:BA:43:C:H42	34:BA:399:G:H1	1.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1363(A):A:H1'	34:DA:1365:G:N7	2.17	0.59
1:AA:2362:C:OP2	63:AA:3980:HOH:O	2.17	0.59
23:CZ:156:LYS:HD2	23:CZ:158:PRO:HD3	1.85	0.59
33:A9:15:LYS:HE2	33:A9:17:ILE:HD11	1.85	0.59
34:BA:688:G:O2'	34:BA:704:A:N1	2.27	0.59
37:BD:105:VAL:HG13	37:BD:110:PHE:HB2	1.85	0.59
3:CC:214:TYR:CZ	3:CC:224:ARG:HG2	2.37	0.59
34:DA:624:C:H2'	34:DA:625:G:C8	2.38	0.59
12:CO:104:ARG:HH22	17:CT:43:GLN:NE2	2.00	0.59
1:CA:1429:G:H2'	1:CA:1430:C:C6	2.37	0.59
34:BA:147:G:N2	34:BA:175:C:O2	2.31	0.59
34:DA:981:U:H5'	47:DN:21:TYR:CE2	2.38	0.59
17:CT:6:LEU:O	17:CT:10:VAL:HG23	2.03	0.59
6:AF:178:PRO:HB3	6:AF:198:ALA:HB1	1.83	0.59
7:AG:129:GLY:O	7:AG:161:THR:HG22	2.03	0.59
34:BA:412:A:H8	37:BD:35:ARG:HH21	1.50	0.59
9:CK:27:VAL:HA	9:CK:113:GLN:HA	1.85	0.59
1:CA:1044:G:H21	1:CA:1111:A:H2	1.51	0.59
1:CA:1055:G:H3'	1:CA:1056:G:H8	1.66	0.59
34:DA:1143:G:H2'	34:DA:1144:G:C8	2.38	0.59
17:CT:16:ARG:NH1	17:CT:19:LEU:HD21	2.18	0.59
43:DJ:6:ILE:HB	43:DJ:72:VAL:HG23	1.84	0.59
56:BY:67:C:H2'	56:BY:68:C:C6	2.38	0.59
34:BA:447:G:H2'	34:BA:485:G:N2	2.18	0.59
57:DZ:413:ILE:HB	57:DZ:476:VAL:HG12	1.84	0.59
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C5	2.38	0.58
4:AD:148:GLU:O	4:AD:151:LYS:HB2	2.03	0.58
1:CA:1359:A:H2	1:CA:1372:U:O4	1.86	0.58
15:CR:33:ARG:HE	15:CR:113:LEU:HD22	1.67	0.58
34:DA:1348:U:H4'	42:DI:120:ARG:HD3	1.85	0.58
34:DA:978:A:OP2	34:DA:1363:C:N4	2.36	0.58
34:DA:35:G:O2'	45:DL:118:SER:O	2.13	0.58
29:C5:20:ARG:O	29:C5:23:HIS:HB2	2.02	0.58
57:DZ:114:VAL:HG21	57:DZ:156:ARG:HB2	1.85	0.58
34:DA:426:G:OP1	37:DD:38:TYR:OH	2.21	0.58
38:BE:152:ARG:HA	41:BH:64:LYS:HZ2	1.68	0.58
1:AA:595:A:H5''	1:AA:596:G:OP2	2.02	0.58
35:BB:170:GLU:HB3	35:BB:173:ALA:HB3	1.83	0.58
1:AA:2250:G:N3	1:AA:2250:G:H2'	2.18	0.58
34:BA:186:C:H2'	34:BA:187:C:H6	1.68	0.58
36:BC:6:HIS:HB2	47:BN:49:HIS:HD2	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:158:LEU:HG	35:BB:182:ILE:HD11	1.85	0.58
41:DH:44:PHE:HB3	41:DH:80:ILE:HD11	1.85	0.58
34:DA:537:G:H2'	34:DA:538:G:C8	2.38	0.58
14:AQ:38:GLU:HA	14:AQ:99:PRO:HG3	1.85	0.58
36:BC:11:ARG:HH21	36:BC:180:ALA:HB3	1.67	0.58
44:BK:44:SER:OG	44:BK:47:VAL:HG23	2.03	0.58
1:AA:692:C:H2'	1:AA:693:G:C8	2.38	0.58
1:CA:946:G:OP1	63:CA:4242:HOH:O	2.16	0.58
56:DW:36:A:N6	56:DW:37:MIA:H152	2.18	0.58
2:CB:66:A:N6	2:CB:109:C:H5''	2.16	0.58
6:AF:53:THR:HG22	6:AF:55:GLY:N	2.17	0.58
34:BA:1305:G:N2	34:BA:1331:G:H1'	2.15	0.58
3:CC:214:TYR:CE2	3:CC:224:ARG:HG2	2.37	0.58
1:CA:1006:C:O2'	11:CN:106:MET:HB3	2.03	0.58
27:A3:3:ARG:HH11	27:A3:60:GLU:CD	2.07	0.58
34:BA:1095:U:OP1	34:BA:1108:G:N1	2.33	0.58
1:CA:2861:G:H2'	1:CA:2862:G:H8	1.67	0.58
6:AF:161:GLU:OE1	6:AF:165:ARG:NH1	2.36	0.58
1:CA:829:A:N7	1:CA:2247:A:O2'	2.37	0.58
1:CA:284:U:H2'	1:CA:285:C:C6	2.38	0.58
56:DY:5:G:H1	56:DY:68:C:H42	1.48	0.58
23:AZ:183:LEU:O	23:AZ:185:GLU:N	2.37	0.58
57:DZ:225:GLU:HA	57:DZ:228:MET:HB3	1.84	0.58
34:BA:358:U:OP1	57:BZ:381:LYS:NZ	2.37	0.58
2:CB:6:C:H2'	2:CB:7:G:O4'	2.04	0.58
34:DA:976:G:H5'	34:DA:1358:U:O2'	2.03	0.58
57:BZ:-4:ALA:HA	57:BZ:-1:GLU:HB3	1.85	0.58
34:BA:1239:A:H4'	34:BA:1240:U:H5''	1.86	0.58
34:BA:1226:C:P	46:BM:91:ARG:HH22	2.26	0.58
57:BZ:637:ARG:C	57:BZ:639:ASN:H	2.06	0.58
1:AA:1338:U:H2'	1:AA:1339:C:C6	2.38	0.58
1:AA:1700:G:H3'	15:AR:2:ARG:HD3	1.84	0.58
43:BJ:38:ILE:HD11	43:BJ:71:LEU:HD23	1.85	0.58
57:DZ:35:TYR:CE2	57:DZ:269:VAL:HB	2.38	0.58
34:BA:102:G:O2'	34:BA:151:A:N3	2.32	0.58
13:AP:52:GLU:HG3	13:AP:57:THR:HG22	1.86	0.58
1:CA:2121:G:C4'	3:CC:168:LYS:HD3	2.34	0.58
34:BA:942:G:H21	42:BI:124:GLN:NE2	2.00	0.58
34:DA:670:G:H21	39:DF:73:ASN:HD21	1.51	0.58
3:AC:41:THR:HG22	3:AC:42:VAL:N	2.17	0.58
1:AA:116:A:H5'	1:AA:117:A:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CN:58:ASP:N	11:CN:58:ASP:OD1	2.35	0.58
36:BC:11:ARG:NH2	36:BC:177:THR:O	2.36	0.58
33:C9:18:ARG:NH1	33:C9:21:GLY:HA2	2.18	0.58
1:AA:992:G:OP2	63:AA:4762:HOH:O	2.17	0.58
1:CA:787:U:OP2	63:CA:3874:HOH:O	2.17	0.58
34:BA:243:A:H4'	34:BA:244:U:O5'	2.02	0.58
38:BE:57:LYS:HG2	38:BE:61:TYR:HE2	1.67	0.58
34:BA:1125:U:H4'	43:BJ:5:ARG:NH2	2.17	0.58
34:DA:1346:A:OP1	42:DI:120:ARG:NH2	2.28	0.58
14:CQ:52:VAL:HG22	23:CZ:183:LEU:HD11	1.86	0.58
34:DA:60:A:N1	34:DA:107:G:O2'	2.26	0.58
27:A3:3:ARG:NH1	27:A3:60:GLU:OE1	2.37	0.58
34:DA:1190:G:OP1	36:DC:5:ILE:N	2.36	0.58
34:BA:1376:U:OP1	40:BG:98:SER:OG	2.21	0.58
57:DZ:99:ARG:HD2	57:DZ:289:ILE:HD11	1.86	0.58
34:DA:1189:C:OP1	43:DJ:51:ARG:NH2	2.36	0.58
1:AA:1891:G:H4'	3:AC:206:LYS:HG3	1.80	0.58
17:CT:23:ARG:HG3	17:CT:120:ARG:NH1	2.19	0.58
41:BH:64:LYS:HG2	41:BH:79:VAL:HG21	1.85	0.58
34:BA:1030(C):G:N7	34:BA:1031:G:N2	2.52	0.58
1:CA:1840:G:OP2	63:CA:4373:HOH:O	2.17	0.58
34:DA:678:U:H2'	34:DA:679:C:C6	2.37	0.58
1:AA:1452:U:H2'	1:AA:1453:C:C6	2.39	0.58
34:BA:452:A:H4'	49:BP:72:ARG:NH1	2.19	0.58
57:DZ:15:ILE:HA	57:DZ:103:GLY:O	2.04	0.58
34:DA:1071:C:H2'	34:DA:1072:G:H8	1.69	0.58
34:DA:456:C:H42	34:DA:475:G:H1	1.50	0.58
57:DZ:316:ILE:HG12	57:DZ:385:THR:HG22	1.86	0.58
57:DZ:175:SER:O	57:DZ:188:TYR:N	2.34	0.58
49:DP:5:ARG:HB3	49:DP:67:THR:HG23	1.86	0.58
35:BB:215:LEU:O	35:BB:219:VAL:HG23	2.04	0.58
34:DA:1412:C:H2'	34:DA:1413:A:C8	2.38	0.58
42:DI:13:ALA:HB2	42:DI:68:GLY:HA3	1.86	0.58
1:AA:662:A:H8	13:AP:117:GLU:HG3	1.68	0.58
28:A4:3:GLU:O	28:A4:5:ILE:N	2.36	0.58
12:AO:18:LYS:HB2	12:AO:45:GLU:HB3	1.85	0.58
1:AA:409:G:OP2	63:AA:4963:HOH:O	2.16	0.58
10:AL:53:VAL:HG12	10:AL:69:THR:HB	1.85	0.58
35:BB:15:VAL:HB	35:BB:209:ARG:HD3	1.85	0.58
34:DA:337:C:H2'	34:DA:338:A:H8	1.67	0.58
34:DA:433:C:H2'	34:DA:434:U:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:16:CYS:SG	28:A4:17:GLY:N	2.75	0.58
1:CA:492:A:H2'	1:CA:493:G:O4'	2.03	0.58
10:AL:50:ASP:OD1	10:AL:50:ASP:N	2.37	0.58
12:CO:35:VAL:HG13	12:CO:65:THR:HG23	1.85	0.58
49:DP:74:LEU:O	49:DP:79:VAL:HG23	2.04	0.58
1:AA:2856:G:H2'	1:AA:2857:U:O4'	2.04	0.58
1:CA:307:G:H21	1:CA:330:A:H62	1.52	0.58
1:CA:2864:G:O2'	1:CA:2865:U:H5'	2.04	0.58
34:BA:42:G:OP1	63:BA:5286:HOH:O	2.16	0.58
57:BZ:71:THR:HG22	57:BZ:80:ASN:OD1	2.04	0.58
43:DJ:34:VAL:HG12	43:DJ:74:ILE:HG12	1.86	0.58
6:AF:34:TRP:CE2	13:AP:8:PRO:HD3	2.38	0.58
17:AT:16:ARG:NH2	17:AT:83:ILE:O	2.33	0.58
1:AA:1273:G:OP1	18:AU:13:LYS:HE3	2.03	0.58
35:BB:18:GLY:O	35:BB:19:HIS:HB3	2.03	0.57
34:BA:434:U:H2'	34:BA:435:C:O4'	2.04	0.57
34:BA:955:U:H2'	34:BA:956:U:H6	1.69	0.57
34:BA:687:A:N3	34:BA:688:G:H1'	2.19	0.57
1:CA:1240:U:O4	63:CA:4307:HOH:O	2.13	0.57
49:BP:49:LEU:HD12	49:BP:50:LYS:N	2.19	0.57
42:DI:112:LYS:NZ	42:DI:113:LYS:O	2.35	0.57
1:AA:1652:G:H5''	1:AA:1653:C:OP1	2.03	0.57
1:CA:1902:C:H5'	4:CD:246:PRO:HD3	1.85	0.57
57:BZ:318:ALA:O	57:BZ:319:ASP:HB2	2.04	0.57
10:CL:101:TRP:HE1	10:CL:140:GLY:HA3	1.69	0.57
1:AA:2274:U:OP2	24:A0:19:LYS:NZ	2.37	0.57
7:CG:107:LEU:HD21	7:CG:178:PHE:CE2	2.39	0.57
57:DZ:519:ARG:NH1	57:DZ:678:GLU:H	2.02	0.57
37:BD:117:ALA:O	37:BD:121:VAL:HG23	2.04	0.57
1:AA:2303:U:H2'	1:AA:2304:C:C6	2.38	0.57
34:DA:1224:G:OP1	63:DA:3269:HOH:O	2.17	0.57
34:BA:222:U:H2'	34:BA:223:U:H6	1.68	0.57
36:DC:78:GLY:HA3	36:DC:83:ARG:H	1.68	0.57
34:BA:814:A:H2'	34:BA:816:A:H5''	1.86	0.57
1:CA:2387:U:OP1	24:C0:55:ARG:NH1	2.32	0.57
34:BA:661:G:H1	34:BA:744:C:H42	1.52	0.57
32:C8:6:THR:HG22	32:C8:64:TYR:HD2	1.68	0.57
1:CA:1263:U:H1'	29:C5:10:LYS:HG3	1.86	0.57
1:CA:530:G:N1	63:CA:4131:HOH:O	2.22	0.57
1:AA:1285:G:H2'	1:AA:1286:U:O4'	2.04	0.57
57:DZ:402:ILE:HG23	57:DZ:403:GLU:H	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:OP2	63:AA:4596:HOH:O	2.17	0.57
8:AH:7:LEU:O	8:AH:69:ARG:HD3	2.03	0.57
36:DC:44:GLU:HG3	36:DC:52:LEU:HD11	1.86	0.57
43:DJ:63:PHE:HE2	47:DN:45:ARG:HA	1.69	0.57
34:BA:1014:A:H4'	52:BS:14:HIS:CE1	2.39	0.57
35:BB:178:ARG:HH22	41:BH:68:ARG:NH1	2.02	0.57
46:DM:65:LYS:HB2	46:DM:69:GLU:HB2	1.85	0.57
1:CA:2345:G:N3	1:CA:2381:C:H2'	2.19	0.57
34:DA:765:G:H5''	34:DA:766:A:OP1	2.04	0.57
54:DU:9:ARG:O	54:DU:13:ILE:HG13	2.04	0.57
34:DA:1289:A:H3'	34:DA:1290:G:H8	1.69	0.57
57:DZ:494:GLU:HB2	57:DZ:511:LYS:HE2	1.86	0.57
51:DR:25:THR:O	51:DR:25:THR:OG1	2.23	0.57
35:BB:100:GLY:N	35:BB:176:GLU:OE2	2.34	0.57
34:BA:920:U:H2'	34:BA:921:U:C6	2.39	0.57
57:BZ:227:ILE:HA	57:BZ:230:LYS:HG3	1.86	0.57
12:CO:48:PRO:HB3	34:DA:1422:G:H5'	1.86	0.57
32:A8:39:LYS:O	32:A8:43:GLN:HB2	2.05	0.57
1:CA:1339:G:H5''	21:CX:16:LYS:HD2	1.85	0.57
50:BQ:45:HIS:HB3	50:BQ:72:ARG:HB3	1.86	0.57
34:BA:458:C:N4	34:BA:474:G:O6	2.37	0.57
1:CA:2751:G:N2	8:CH:2:SER:OG	2.38	0.57
34:BA:1070:U:H2'	34:BA:1071:C:H6	1.69	0.57
1:AA:2144:U:O2'	3:AC:167:ASP:HB3	2.03	0.57
34:BA:375:U:C2	34:BA:376:G:C8	2.93	0.57
1:CA:674:G:H1'	6:CF:74:ARG:HD3	1.86	0.57
53:BT:56:MET:HE2	53:BT:85:MET:HA	1.86	0.57
35:BB:219:VAL:HA	35:BB:222:ILE:HD12	1.86	0.57
17:CT:82:LEU:HD12	17:CT:82:LEU:H	1.68	0.57
22:AY:54:LYS:HA	22:AY:56:PRO:HD3	1.86	0.57
1:CA:2661:G:O6	8:CH:175:LYS:NZ	2.37	0.57
57:DZ:169:GLY:N	57:DZ:170:ARG:NH1	2.48	0.57
1:AA:2245:U:H2'	1:AA:2246:G:C8	2.40	0.57
1:CA:526:A:N1	1:CA:2625:G:O2'	2.29	0.57
43:BJ:8:LEU:HB2	43:BJ:70:ARG:HB2	1.85	0.57
1:AA:1451:U:H2'	1:AA:1452:U:C6	2.40	0.57
34:DA:798:G:OP1	44:DK:122:LYS:NZ	2.37	0.57
1:CA:2320:A:H2'	1:CA:2320:A:N3	2.18	0.57
42:BI:21:PRO:HA	42:BI:59:PHE:HA	1.87	0.57
1:AA:2054:G:O2'	5:AE:145:LYS:HE3	2.05	0.57
7:CG:120:LEU:HB3	7:CG:131:TYR:OH	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2539:C:H4'	33:C9:3:VAL:HG21	1.85	0.57
1:AA:2289:G:P	24:A0:10:THR:HG21	2.45	0.57
3:CC:6:LYS:HG3	3:CC:7:ARG:H	1.69	0.57
1:CA:2177:C:O2	3:CC:171:ALA:HB2	2.04	0.57
1:AA:2357:G:OP2	30:A6:38:LYS:HD3	2.04	0.57
34:BA:67:C:H2'	34:BA:68:G:H8	1.69	0.57
57:DZ:363:ARG:HG2	57:DZ:363:ARG:HH11	1.68	0.57
5:CE:181:LEU:HD21	17:CT:6:LEU:HD12	1.86	0.57
43:BJ:38:ILE:HG13	43:BJ:71:LEU:HB3	1.86	0.57
16:AS:39:ILE:HB	16:AS:49:VAL:HG12	1.86	0.57
1:CA:1154:G:O5'	1:CA:1154:G:H8	1.87	0.57
34:DA:1151:A:O2'	34:DA:1152:A:O5'	2.21	0.57
12:AO:16:ALA:HB2	12:AO:52:VAL:CG2	2.35	0.57
34:BA:413:G:H1'	34:BA:428:G:H21	1.69	0.57
5:AE:4:ILE:HD11	5:AE:29:GLY:HA2	1.86	0.57
1:AA:801:C:H2'	1:AA:802:C:C6	2.39	0.57
1:CA:1386:C:H2'	1:CA:1387:C:C6	2.39	0.57
1:CA:2267:A:H5''	1:CA:2268:A:H5'	1.86	0.57
34:DA:1356:G:H2'	34:DA:1357:A:C8	2.39	0.57
57:DZ:177:ILE:HG13	57:DZ:188:TYR:CE2	2.39	0.57
57:BZ:526:VAL:HG23	57:BZ:566:THR:HA	1.87	0.57
1:CA:2365:G:O6	32:C8:39:LYS:HE3	2.04	0.57
26:C2:64:LEU:HD11	26:C2:68:ARG:HH21	1.69	0.57
34:DA:1288:A:N1	34:DA:1371:G:H1'	2.20	0.57
37:DD:103:ASN:OD1	37:DD:114:ARG:NE	2.36	0.57
1:CA:1530:C:H42	1:CA:1539:G:H1	1.51	0.57
34:DA:17:U:H2'	34:DA:18:C:C6	2.40	0.57
1:CA:731:C:OP1	63:CA:4294:HOH:O	2.18	0.57
48:DO:26:GLU:OE2	48:DO:77:ARG:NE	2.20	0.57
7:AG:11:TYR:HA	7:AG:15:VAL:HB	1.86	0.57
39:DF:82:ARG:HB2	39:DF:85:VAL:HG23	1.86	0.57
1:AA:2559:U:H2'	1:AA:2560:G:C8	2.40	0.57
42:BI:93:ARG:HB2	42:BI:93:ARG:HH11	1.70	0.57
6:AF:28:ILE:HD13	6:AF:119:ARG:HH21	1.69	0.57
1:AA:927:G:OP2	1:AA:927:G:H8	1.88	0.57
47:BN:4:LYS:HA	47:BN:7:ILE:HG23	1.87	0.57
57:DZ:326:THR:HB	57:DZ:377:VAL:HG13	1.86	0.57
52:BS:3:ARG:NH1	52:BS:10:PHE:HB2	2.20	0.57
49:BP:49:LEU:HD11	49:BP:51:VAL:HG23	1.86	0.57
34:BA:189(C):C:H2'	34:BA:189(D):C:O4'	2.05	0.57
34:DA:157:G:H2'	34:DA:158:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DJ:43:ARG:HB2	43:DJ:67:THR:HG23	1.85	0.57
10:CL:8:VAL:HG21	10:CL:26:ALA:HB1	1.87	0.57
4:CD:13:ARG:HD2	4:CD:16:MET:HE3	1.86	0.57
34:DA:646:U:H2'	34:DA:647:C:C6	2.39	0.57
42:DI:77:ILE:O	42:DI:81:ILE:HG22	2.05	0.57
57:DZ:210:ARG:HH11	57:DZ:210:ARG:HG3	1.70	0.57
1:AA:1529:G:O6	1:AA:1553:A:N6	2.38	0.57
7:AG:41:GLN:CG	7:AG:60:LEU:HD21	2.35	0.57
37:BD:110:PHE:CE2	37:BD:148:VAL:HG23	2.40	0.57
1:CA:184:C:H2'	1:CA:185:U:C6	2.39	0.57
56:BW:44:G:O2'	56:BW:45:U:H5'	2.05	0.57
34:BA:408:A:OP1	37:BD:113:SER:OG	2.18	0.57
34:DA:1305:G:O2'	34:DA:1331:G:N2	2.37	0.57
38:BE:36:ASP:OD1	38:BE:39:GLY:N	2.34	0.57
52:DS:33:THR:OG1	52:DS:35:SER:O	2.23	0.57
45:DL:76:ASN:ND2	45:DL:106:ASP:O	2.37	0.57
15:CR:18:LEU:HD22	15:CR:22:ARG:HD2	1.87	0.57
1:CA:2291:U:H2'	1:CA:2292:C:C6	2.40	0.57
41:BH:77:GLU:HG3	41:BH:78:GLN:N	2.19	0.57
1:CA:1956:U:H2'	1:CA:1957:C:H5'	1.86	0.57
41:DH:8:ASP:OD2	41:DH:12:ARG:NH1	2.38	0.57
23:AZ:19:ARG:NH1	23:AZ:84:GLU:O	2.37	0.57
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:HH11	1.70	0.57
1:AA:847:A:OP1	1:AA:847:A:H8	1.88	0.57
1:AA:630:U:OP1	6:AF:102:PRO:HA	2.05	0.57
34:DA:1022:G:H2'	34:DA:1023:G:H8	1.69	0.57
1:CA:1270:C:H5''	1:CA:1271:G:O5'	2.05	0.56
14:AQ:56:ARG:HG3	14:AQ:56:ARG:NH1	2.19	0.56
57:DZ:555:LEU:HD11	57:DZ:599:PRO:HB2	1.87	0.56
57:DZ:326:THR:HG21	57:DZ:380:LEU:HD23	1.87	0.56
34:DA:1412:C:H2'	34:DA:1413:A:H8	1.69	0.56
34:BA:1530:G:H4'	34:BA:1530:G:OP1	2.05	0.56
1:CA:2554:U:H2'	1:CA:2555:U:C6	2.39	0.56
34:BA:633:G:H2'	34:BA:634:C:C6	2.40	0.56
36:BC:53:ALA:HB2	36:BC:115:LEU:HD13	1.86	0.56
7:CG:117:PHE:CE1	7:CG:119:GLY:HA2	2.40	0.56
1:CA:64:A:O3'	21:CX:71:GLY:HA3	2.05	0.56
50:DQ:76:LEU:HD12	50:DQ:77:VAL:H	1.69	0.56
10:CL:6:ALA:HB3	10:CL:30:HIS:CE1	2.36	0.56
1:AA:1084:C:N4	1:AA:1163:G:H1	2.03	0.56
3:AC:6:LYS:HG3	3:AC:7:ARG:H	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AO:64:ARG:HG2	12:AO:79:PHE:CG	2.40	0.56
38:BE:78:HIS:HD2	38:BE:142:LEU:HD23	1.69	0.56
10:AL:99:ILE:O	10:AL:139:VAL:N	2.36	0.56
35:DB:58:ILE:HA	35:DB:61:LEU:HB3	1.86	0.56
13:AP:81:GLN:OE1	13:AP:106:LEU:HD23	2.05	0.56
33:A9:2:LYS:HE2	33:A9:31:LYS:O	2.05	0.56
48:BO:69:TYR:HA	48:BO:72:ARG:HH11	1.70	0.56
42:BI:9:ARG:H	42:BI:79:LEU:HD23	1.69	0.56
6:CF:167:ALA:HB1	6:CF:173:VAL:HG11	1.87	0.56
34:DA:1220:G:N2	52:DS:54:GLY:O	2.38	0.56
1:CA:1657:C:H2'	1:CA:1658:C:C6	2.41	0.56
49:BP:6:LEU:HB3	49:BP:17:TYR:CD1	2.40	0.56
57:DZ:15:ILE:HB	57:DZ:104:ALA:HA	1.87	0.56
53:BT:9:ASN:O	53:BT:10:LEU:HB2	2.05	0.56
57:DZ:373:ASP:OD2	57:DZ:374:LEU:N	2.33	0.56
34:BA:394:G:H2'	34:BA:395:C:H6	1.70	0.56
32:C8:34:TRP:CD2	32:C8:35:GLN:HG2	2.40	0.56
6:CF:157:VAL:HG11	6:CF:181:LEU:HD12	1.87	0.56
34:DA:392:G:H2'	34:DA:393:A:C8	2.39	0.56
1:CA:2692:C:H2'	1:CA:2693:A:H8	1.70	0.56
35:DB:51:LEU:HD11	35:DB:201:ILE:HG23	1.88	0.56
1:AA:2736:C:OP2	5:AE:109:LYS:HE2	2.06	0.56
22:CY:77:PRO:HD3	22:CY:106:LEU:HD23	1.86	0.56
1:AA:1487:G:H2'	1:AA:1488:G:H8	1.70	0.56
40:BG:138:LYS:NZ	40:BG:142:GLU:OE2	2.34	0.56
7:AG:16:ARG:O	7:AG:20:ILE:HG13	2.06	0.56
57:DZ:222:ASP:N	57:DZ:222:ASP:OD2	2.35	0.56
1:AA:2379:G:N7	63:AA:5202:HOH:O	2.33	0.56
35:BB:212:GLN:NE2	35:BB:234:PRO:O	2.38	0.56
34:DA:685:G:C2	34:DA:686:U:C4	2.93	0.56
57:DZ:546:ILE:HG23	57:DZ:590:ILE:HG13	1.86	0.56
37:DD:3:ARG:HG2	37:DD:118:ARG:NE	2.20	0.56
49:BP:18:ARG:O	49:BP:20:VAL:HB	2.06	0.56
34:DA:174:C:H2'	34:DA:175:C:H6	1.70	0.56
1:AA:1250:U:C2	6:AF:171:PRO:HB3	2.41	0.56
3:CC:49:GLY:N	3:CC:209:PHE:O	2.39	0.56
36:BC:18:TRP:CD1	47:BN:54:PRO:HA	2.41	0.56
1:AA:1532:A:H2'	1:AA:1533:G:H8	1.70	0.56
35:DB:93:VAL:HG21	35:DB:97:TRP:CD1	2.40	0.56
1:CA:1022:G:N7	11:CN:66:LYS:HE2	2.20	0.56
1:AA:2326:C:H2'	1:AA:2327:G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:528:A:C2	1:CA:2043:C:H4'	2.39	0.56
34:DA:519:C:H2'	34:DA:520:A:O4'	2.06	0.56
1:AA:2851:C:OP1	15:AR:53:HIS:NE2	2.39	0.56
1:AA:650:G:N7	13:AP:107:LYS:NZ	2.54	0.56
6:CF:34:TRP:CZ2	13:CP:8:PRO:HG3	2.40	0.56
1:AA:2672:A:N6	57:BZ:661:SER:OG	2.38	0.56
1:CA:1899:G:O2'	1:CA:1900:A:OP2	2.18	0.56
56:DY:55:PSU:N3	56:DY:58:A:N7	2.47	0.56
1:CA:566:U:O4	19:CV:78:LYS:HE2	2.05	0.56
2:CB:100:A:H3'	2:CB:101:G:H8	1.71	0.56
21:AX:63:LYS:O	21:AX:64:LYS:HD3	2.04	0.56
1:AA:815:G:O2'	1:AA:1425:A:N1	2.35	0.56
34:BA:559:A:H4'	34:BA:560:U:H3'	1.87	0.56
1:AA:1405:A:C2	1:AA:1418:U:O4	2.58	0.56
42:BI:5:TYR:OH	42:BI:7:THR:OG1	2.21	0.56
57:DZ:32:ILE:HG23	57:DZ:273:LEU:HD21	1.88	0.56
57:DZ:13:ARG:HH21	57:DZ:247:ARG:HH12	1.51	0.56
37:BD:23:GLY:HA3	37:BD:112:VAL:HG12	1.88	0.56
1:CA:2693:A:H2'	1:CA:2694:G:C8	2.39	0.56
1:AA:2807:C:N4	1:AA:2813:G:H1	2.03	0.56
1:AA:2574:U:H1'	12:AO:23:ARG:HD3	1.87	0.56
33:C9:9:ARG:HG2	33:C9:14:CYS:HB2	1.87	0.56
38:DE:139:LEU:O	38:DE:141:GLN:N	2.37	0.56
34:BA:507:C:OP2	34:BA:508:C:O2'	2.17	0.56
34:DA:1150:U:O4	34:DA:1151:A:N6	2.39	0.56
34:DA:691:G:H2'	34:DA:692:U:C6	2.41	0.56
1:CA:2343:C:O2'	1:CA:2373:G:O2'	2.16	0.56
1:AA:2340:A:H2'	1:AA:2341:G:C8	2.40	0.56
57:BZ:257:PRO:HB2	57:BZ:259:PHE:HE1	1.69	0.56
5:CE:135:HIS:H	5:CE:135:HIS:CD2	2.21	0.56
35:DB:104:ASN:HB3	35:DB:108:ILE:HD11	1.88	0.56
11:AN:120:LEU:HD22	11:AN:122:VAL:HG23	1.88	0.56
48:BO:74:ASP:CG	48:BO:77:ARG:HG3	2.26	0.56
1:AA:597:C:H4'	1:AA:598:A:O5'	2.05	0.56
23:CZ:138:GLU:H	23:CZ:156:LYS:HZ1	1.54	0.56
37:DD:118:ARG:O	37:DD:121:VAL:N	2.38	0.56
1:CA:1090:U:H2'	1:CA:1091:G:C8	2.40	0.56
1:CA:987:G:O2'	1:CA:1000:A:N3	2.34	0.56
1:CA:898:C:H2'	1:CA:899:A:O4'	2.05	0.56
1:CA:271(E):U:H2'	1:CA:271(F):C:C6	2.40	0.56
57:BZ:494:GLU:HG2	57:BZ:511:LYS:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:652:U:O4	34:DA:752:G:O2'	2.16	0.56
1:AA:613:A:OP1	6:AF:95:ARG:NH1	2.38	0.56
23:CZ:160:GLY:HA2	23:CZ:161:VAL:HG12	1.88	0.56
1:CA:2124:G:H4'	3:CC:175:PRO:CD	2.35	0.56
34:BA:1305:G:H5''	54:BU:4:GLY:HA3	1.87	0.56
3:CC:42:VAL:O	3:CC:216:THR:O	2.24	0.56
34:BA:328:C:H4'	34:BA:329:A:H5''	1.88	0.56
34:BA:1530:G:H2'	34:BA:1531:A:O4'	2.04	0.56
34:BA:1388:C:H2'	34:BA:1389:C:C6	2.41	0.56
34:DA:1237:C:H2'	34:DA:1336:C:C5	2.41	0.56
13:AP:94:GLU:HG3	13:AP:124:LYS:HB3	1.88	0.56
1:CA:747:U:O2	1:CA:2014:A:H1'	2.06	0.56
1:CA:477:A:H2'	1:CA:478:A:C8	2.40	0.56
1:CA:869:G:N1	1:CA:909:A:C6	2.74	0.56
4:CD:75:ILE:HD12	4:CD:75:ILE:H	1.70	0.56
1:AA:2661:U:H2'	1:AA:2662:U:C6	2.41	0.56
37:DD:10:ARG:HA	37:DD:13:ARG:HG3	1.86	0.56
37:DD:150:GLU:HA	37:DD:153:ARG:HE	1.71	0.56
1:CA:2572:A:C8	5:CE:144:ARG:HD2	2.40	0.56
34:DA:537:G:H2'	34:DA:538:G:H8	1.71	0.56
36:DC:71:ALA:HB2	36:DC:106:VAL:HB	1.87	0.56
13:CP:139:LYS:O	13:CP:141:ALA:N	2.38	0.56
8:CH:159:GLU:HG3	8:CH:169:VAL:HG11	1.87	0.56
7:AG:15:VAL:HG22	7:AG:175:LEU:HB3	1.88	0.56
34:DA:1022:G:H2'	34:DA:1023:G:C8	2.41	0.56
1:AA:1856:A:OP1	4:AD:249:PRO:HD3	2.06	0.56
13:CP:59:LEU:O	32:C8:13:ARG:HD2	2.06	0.56
1:CA:2641:G:P	11:CN:74:ARG:HH21	2.29	0.56
1:CA:1266:G:O2'	1:CA:2012:G:O6	2.20	0.56
1:AA:2798:C:OP1	5:AE:41:LYS:HE3	2.05	0.56
23:CZ:63:ASP:O	23:CZ:65:GLN:N	2.34	0.56
13:CP:94:GLU:HG3	13:CP:124:LYS:HD3	1.86	0.56
34:BA:1496:C:OP2	57:BZ:504:ARG:NH2	2.38	0.56
5:AE:36:ARG:HH11	5:AE:85:ASN:ND2	2.03	0.56
34:BA:1401:G:C2	34:BA:1402:C:H1'	2.41	0.56
45:BL:71:PRO:O	45:BL:102:ARG:NH1	2.33	0.56
1:AA:2262:G:OP1	14:AQ:85:LYS:NZ	2.22	0.56
1:AA:533:G:N2	20:AW:80:PRO:HG2	2.21	0.56
1:AA:1900:G:H2'	1:AA:1901:C:C6	2.41	0.56
1:CA:1657:C:H2'	1:CA:1658:C:H6	1.71	0.56
49:BP:6:LEU:HB3	49:BP:17:TYR:HD1	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:41:GLN:NE2	7:CG:154:GLY:O	2.27	0.56
34:DA:97:G:O2'	34:DA:98:G:OP2	2.19	0.56
34:DA:407:G:O2'	37:DD:116:GLN:HG3	2.06	0.56
45:BL:34:ARG:HG3	45:BL:105:TYR:CE2	2.41	0.56
50:BQ:86:GLU:C	50:BQ:88:TYR:H	2.09	0.56
1:CA:829:A:N7	1:CA:2248:C:H5'	2.21	0.56
24:A0:27:GLU:HG3	24:A0:68:GLU:HA	1.86	0.56
49:BP:3:LYS:O	49:BP:21:VAL:HA	2.06	0.56
57:DZ:176:GLY:HA2	57:DZ:187:THR:HA	1.88	0.56
1:CA:127:A:H5''	1:CA:128:C:C6	2.41	0.56
7:AG:165:THR:OG1	7:AG:168:GLU:HG3	2.06	0.56
1:AA:418:G:H1'	1:AA:438:G:O4'	2.06	0.56
57:DZ:484:ARG:HD2	57:DZ:676:TYR:CE1	2.40	0.56
1:CA:2379:G:H5''	1:CA:2379:G:H8	1.71	0.56
1:CA:321:G:OP2	6:CF:135:LYS:HG3	2.05	0.56
1:CA:796:C:H2'	1:CA:797:C:C6	2.41	0.56
57:DZ:573:HIS:CE1	57:DZ:575:VAL:HB	2.41	0.55
57:DZ:132:ARG:HD3	57:DZ:160:ARG:CZ	2.36	0.55
35:BB:19:HIS:HE1	35:BB:189:ASP:HB3	1.71	0.55
34:DA:1318:A:OP1	52:DS:3:ARG:NH1	2.38	0.55
15:CR:85:PRO:C	15:CR:87:TYR:H	2.09	0.55
34:BA:742:G:OP2	48:BO:35:ARG:NH2	2.38	0.55
1:CA:1778:U:H2'	1:CA:1784:A:N6	2.21	0.55
23:AZ:110:GLY:N	23:AZ:144:LEU:O	2.39	0.55
22:AY:8:LYS:HD3	22:AY:97:ARG:HH12	1.70	0.55
35:BB:218:ALA:O	35:BB:222:ILE:HG13	2.07	0.55
50:DQ:63:ARG:HG2	50:DQ:64:PRO:HD2	1.88	0.55
1:AA:2679:C:H2'	1:AA:2680:G:O4'	2.05	0.55
1:CA:2474:C:H5''	1:CA:2475:C:OP2	2.06	0.55
1:AA:1114:G:O2'	1:AA:1142:A:O2'	2.24	0.55
23:AZ:150:LEU:O	23:AZ:171:ILE:HG13	2.07	0.55
34:BA:1326:C:H2'	34:BA:1327:C:C6	2.40	0.55
1:CA:205:G:OP2	63:CA:4260:HOH:O	2.18	0.55
34:BA:353:A:H5'	34:BA:353:A:H8	1.71	0.55
34:BA:1053:G:O2'	34:BA:1199:U:OP2	2.14	0.55
36:BC:3:ASN:OD1	36:BC:3:ASN:N	2.37	0.55
1:AA:2571:C:O2'	1:AA:2572:C:H5'	2.07	0.55
1:AA:2331:G:H1	16:AS:3:ARG:HA	1.71	0.55
1:AA:1099:C:H2'	1:AA:1100:A:H5''	1.87	0.55
37:DD:64:LEU:HD11	37:DD:94:LEU:HD21	1.89	0.55
1:AA:2153:G:OP1	3:AC:6:LYS:CD	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DF:35:ALA:HA	39:DF:67:MET:HB3	1.87	0.55
34:BA:1177:G:H2'	34:BA:1178:G:O4'	2.05	0.55
36:DC:8:ILE:HD13	36:DC:184:TYR:HD2	1.72	0.55
52:BS:33:THR:OG1	52:BS:34:TRP:N	2.39	0.55
8:CH:46:GLU:HB2	8:CH:49:VAL:HG12	1.87	0.55
35:DB:171:ALA:O	35:DB:175:ARG:N	2.37	0.55
31:C7:19:ARG:HG2	31:C7:19:ARG:HH11	1.71	0.55
34:BA:617:G:C6	34:BA:618:C:C5	2.94	0.55
1:CA:2176:A:C4'	3:CC:45:HIS:NE2	2.67	0.55
57:DZ:264:LEU:HD12	62:DZ:704:GDP:N3	2.20	0.55
17:CT:16:ARG:NH1	17:CT:18:ASP:OD2	2.40	0.55
57:BZ:498:ILE:HB	57:BZ:507:TYR:CD1	2.41	0.55
1:AA:2585:C:H3'	63:AA:4115:HOH:O	2.05	0.55
34:BA:736:C:H2'	34:BA:737:A:C8	2.40	0.55
13:CP:62:LEU:HD11	32:C8:50:LEU:HD11	1.87	0.55
34:BA:1005:A:H1'	34:BA:1036:G:H22	1.71	0.55
43:DJ:13:HIS:HB3	43:DJ:68:HIS:CE1	2.41	0.55
34:DA:173:U:H5''	34:DA:197:A:O4'	2.07	0.55
1:AA:1211:U:H2'	1:AA:1212:C:C6	2.40	0.55
21:AX:57:LEU:CD1	21:AX:78:LYS:HB2	2.36	0.55
1:CA:479:A:N3	1:CA:481:G:H5''	2.21	0.55
55:DV:13:A:O2'	55:DV:14:A:H5''	2.06	0.55
57:BZ:177:ILE:HD12	57:BZ:188:TYR:CE2	2.41	0.55
1:CA:1796:U:H2'	1:CA:1797:C:C6	2.42	0.55
57:DZ:512:ILE:HG13	57:DZ:514:VAL:HG23	1.88	0.55
1:AA:1417:G:H2'	1:AA:1418:U:H5	1.70	0.55
8:AH:3:ARG:HG2	8:AH:6:ARG:HG2	1.88	0.55
34:BA:200:G:H1	34:BA:217:C:N4	2.04	0.55
1:CA:2059:A:O2'	6:CF:69:HIS:HD2	1.89	0.55
1:AA:1634:C:H2'	1:AA:1635:C:C6	2.41	0.55
7:CG:126:ASP:HB2	7:CG:130:ASN:H	1.71	0.55
49:BP:4:ILE:HA	49:BP:20:VAL:O	2.07	0.55
7:CG:29:TRP:O	7:CG:33:ARG:NH1	2.38	0.55
34:DA:339:C:H2'	34:DA:340:U:C6	2.41	0.55
57:BZ:416:LYS:HE2	57:BZ:475:ASN:HD22	1.70	0.55
36:DC:45:LYS:HG3	36:DC:46:GLU:HG2	1.87	0.55
32:A8:23:VAL:HG11	32:A8:47:LYS:HD3	1.89	0.55
57:DZ:25:LYS:NZ	62:DZ:704:GDP:O2B	2.27	0.55
14:CQ:109:VAL:HG13	14:CQ:113:GLN:HB3	1.88	0.55
37:BD:110:PHE:HE2	37:BD:148:VAL:HG23	1.71	0.55
35:BB:73:THR:OG1	35:BB:170:GLU:OE2	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:227:ILE:HG12	57:BZ:237:PRO:HG3	1.89	0.55
39:BF:61:LEU:HD12	39:BF:63:TYR:OH	2.07	0.55
1:AA:1558:G:H2'	1:AA:1559:C:O4'	2.07	0.55
51:BR:39:VAL:O	51:BR:42:ARG:HB2	2.06	0.55
1:AA:935:C:N3	1:AA:936:C:N4	2.54	0.55
34:BA:598:U:H4'	41:BH:94:TYR:CD2	2.42	0.55
19:CV:37:VAL:HG12	19:CV:39:LEU:H	1.71	0.55
34:DA:1409:C:H2'	34:DA:1410:G:H8	1.71	0.55
1:AA:554:A:H62	1:AA:2063:U:H3	1.55	0.55
35:DB:16:HIS:HB2	35:DB:204:ASN:CB	2.36	0.55
22:AY:92:ASN:CB	22:AY:94:LYS:H	2.19	0.55
34:BA:1227:A:OP2	46:BM:111:LYS:HD2	2.07	0.55
1:AA:1735:U:O2	1:AA:1747:A:H5'	2.05	0.55
57:DZ:38:ARG:NH1	57:DZ:270:GLN:NE2	2.55	0.55
34:BA:1000:U:H2'	34:BA:1001:A:H8	1.71	0.55
57:DZ:-37:LEU:HD23	57:DZ:-32:LEU:HD12	1.89	0.55
7:CG:136:ARG:HH11	7:CG:137:GLU:H	1.54	0.55
57:BZ:309:LEU:HA	57:BZ:333:GLY:HA3	1.87	0.55
12:AO:49:ARG:NH2	34:BA:1423:G:OP1	2.30	0.55
3:CC:52:PRO:HB2	3:CC:168:LYS:O	2.06	0.55
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C6	2.42	0.55
57:DZ:132:ARG:H	57:DZ:132:ARG:HD2	1.70	0.55
36:BC:19:GLU:OE1	36:BC:40:ARG:NH2	2.40	0.55
15:CR:72:ASP:OD2	15:CR:75:LEU:HB2	2.06	0.55
35:DB:95:GLN:HB2	35:DB:148:TYR:HD1	1.72	0.55
35:BB:174:VAL:O	35:BB:178:ARG:HB2	2.06	0.55
10:CL:21:PRO:HD2	57:DZ:641:GLN:NE2	2.21	0.55
34:BA:1225:A:H2'	34:BA:1226:C:C5	2.42	0.55
42:BI:23:ASN:ND2	42:BI:25:LYS:HG2	2.22	0.55
1:AA:1653:C:H4'	1:AA:1654:A:O5'	2.06	0.55
1:CA:500:G:N2	1:CA:502:A:H3'	2.21	0.55
1:CA:1510:G:H2'	1:CA:1511:C:O4'	2.07	0.55
34:BA:127:G:OP1	34:BA:635:G:H1'	2.06	0.55
1:AA:561:A:H2'	1:AA:562:C:C6	2.41	0.55
15:CR:38:VAL:HB	15:CR:39:PRO:HD3	1.89	0.55
34:DA:1260:C:O5'	34:DA:1284:C:H4'	2.07	0.55
34:BA:489:C:OP1	37:BD:132:ARG:NH2	2.39	0.55
40:DG:113:GLU:HB2	40:DG:119:ARG:HG2	1.87	0.55
1:CA:1494:A:H2'	1:CA:1495:A:C8	2.42	0.55
11:CN:19:GLU:HG3	11:CN:59:LYS:HB3	1.89	0.55
56:BW:7:A:H5''	56:BW:7:A:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:153:SER:OG	6:CF:190:GLU:N	2.38	0.55
57:BZ:644:ARG:CB	57:BZ:644:ARG:HH11	2.10	0.55
35:BB:17:PHE:HA	35:BB:44:LEU:HD11	1.88	0.55
37:BD:134:ASP:O	37:BD:136:PRO:HD3	2.06	0.55
1:CA:2022:U:OP2	29:C5:15:ARG:NH2	2.40	0.55
34:DA:622:A:C8	34:DA:623:C:C6	2.94	0.55
2:CB:56:G:H5'	7:CG:27:ASN:HD22	1.70	0.55
38:DE:57:LYS:HD3	38:DE:61:TYR:CE2	2.41	0.55
43:DJ:63:PHE:HE1	47:DN:58:LYS:HG2	1.71	0.55
34:DA:263:A:OP1	53:DT:79:ARG:NH1	2.40	0.55
34:DA:363:A:OP2	45:DL:34:ARG:NH2	2.40	0.55
1:CA:30:G:H2'	1:CA:31:C:C6	2.41	0.55
49:DP:4:ILE:O	49:DP:66:PRO:HA	2.06	0.55
1:AA:2140:U:C4	1:AA:2171:G:H1'	2.42	0.55
37:DD:15:GLU:OE1	37:DD:63:LYS:HG3	2.06	0.55
34:DA:1141:C:H2'	34:DA:1142:G:H8	1.71	0.55
57:BZ:329:ARG:HB2	57:BZ:374:LEU:HG	1.89	0.55
33:C9:25:VAL:HG11	33:C9:34:GLN:NE2	2.21	0.55
57:BZ:127:LYS:HB3	57:BZ:128:TYR:CD2	2.41	0.55
34:DA:1305:G:N2	34:DA:1331:G:H1'	2.21	0.55
1:CA:528:A:N1	1:CA:2042:A:H2'	2.22	0.55
34:DA:481:G:H21	34:DA:482:A:N6	2.05	0.55
1:CA:375:C:H2'	1:CA:376:C:C6	2.42	0.55
1:AA:278:G:H2'	1:AA:279:G:H5''	1.89	0.55
51:BR:47:THR:HG23	51:BR:49:LYS:HG3	1.89	0.55
1:AA:142:G:H1'	21:AX:37:THR:HG21	1.88	0.55
7:CG:146:TYR:O	7:CG:149:VAL:HG12	2.07	0.55
26:C2:35:LEU:HD12	26:C2:53:LEU:HD12	1.88	0.55
1:AA:1072:U:H4'	1:AA:1073:A:OP1	2.07	0.55
34:BA:1435:G:H2'	34:BA:1436:U:C6	2.41	0.55
1:CA:2132:U:C1'	3:CC:6:LYS:CB	2.86	0.55
1:AA:1525:G:HO2'	1:AA:1605:A:H2	1.53	0.55
3:AC:42:VAL:O	3:AC:216:THR:O	2.24	0.55
3:CC:44:VAL:HG23	3:CC:176:VAL:HG21	1.89	0.55
1:CA:2386:C:H2'	1:CA:2387:U:C6	2.42	0.55
44:DK:123:LYS:O	44:DK:126:ARG:HG3	2.06	0.55
23:AZ:115:GLY:HA2	23:AZ:177:PRO:HB3	1.89	0.55
57:BZ:445:GLU:OE1	57:BZ:484:ARG:NH1	2.39	0.55
34:DA:275:G:H5'	50:DQ:14:LYS:HB3	1.88	0.55
1:CA:754:C:H2'	1:CA:755:C:C6	2.42	0.55
42:DI:23:ASN:ND2	42:DI:23:ASN:H	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:C2:2:LYS:O	26:C2:5:GLU:N	2.40	0.55
13:AP:63:PRO:HG2	32:A8:25:MET:HB2	1.89	0.55
3:CC:6:LYS:HA	3:CC:9:ARG:HH11	1.73	0.54
3:AC:54:ARG:CZ	3:AC:56:ASP:HB3	2.37	0.54
38:DE:8:GLU:HG2	38:DE:34:VAL:HG23	1.89	0.54
34:DA:67:C:H2'	34:DA:68:G:C8	2.41	0.54
17:AT:119:LYS:HB2	34:BA:1442(A):G:N2	2.22	0.54
34:DA:93:G:H2'	34:DA:96:U:O4'	2.06	0.54
1:AA:354:A:HO2'	1:AA:355:A:H8	1.53	0.54
3:AC:194:ILE:HD11	3:AC:227:PRO:HB3	1.89	0.54
43:DJ:49:VAL:HG23	47:DN:41:ARG:HB2	1.88	0.54
34:DA:1289:A:N1	34:DA:1371:G:O2'	2.32	0.54
1:AA:1553:A:O2'	1:AA:1554:A:O5'	2.25	0.54
1:CA:2102:U:H2'	1:CA:2103:C:C6	2.42	0.54
53:DT:53:LEU:HA	53:DT:56:MET:HG2	1.89	0.54
28:C4:59:PHE:HA	28:C4:61:ARG:N	2.23	0.54
40:DG:93:PRO:HA	40:DG:96:GLN:HB2	1.88	0.54
57:BZ:12:LEU:HD12	57:BZ:78:ARG:HB3	1.90	0.54
51:DR:70:ILE:O	51:DR:74:ARG:HG3	2.07	0.54
16:AS:82:ILE:HD12	16:AS:82:ILE:H	1.71	0.54
38:DE:36:ASP:OD2	38:DE:40:ARG:HB2	2.06	0.54
1:AA:1218:G:O2'	1:AA:1219:A:O4'	2.21	0.54
35:BB:17:PHE:HB2	35:BB:44:LEU:HD21	1.89	0.54
1:AA:1848:G:C2'	1:AA:1849:U:H5'	2.37	0.54
13:CP:91:PHE:O	13:CP:121:LYS:NZ	2.39	0.54
38:DE:53:LEU:H	38:DE:53:LEU:HD12	1.71	0.54
23:AZ:45:ASP:O	23:AZ:49:ARG:HG3	2.07	0.54
1:CA:1404:C:O2'	1:CA:1405:U:H5'	2.06	0.54
34:DA:435:C:H2'	34:DA:436:C:C6	2.42	0.54
45:BL:31:PRO:HB2	45:BL:32:PHE:CD2	2.42	0.54
27:A3:59:VAL:O	27:A3:60:GLU:HG2	2.07	0.54
34:DA:1504:G:OP1	34:DA:1507:A:H4'	2.07	0.54
1:CA:749:C:O2	1:CA:1618:A:H2'	2.07	0.54
30:C6:21:TYR:CE1	30:C6:38:LYS:HG2	2.42	0.54
1:AA:2324:U:H5'	7:AG:88:ILE:HD11	1.89	0.54
11:CN:128:HIS:CE1	11:CN:135:PRO:HG2	2.43	0.54
1:CA:639:U:H2'	1:CA:640:C:C6	2.41	0.54
1:AA:1305:G:O2'	1:AA:1306:G:H5'	2.08	0.54
42:BI:4:TYR:CE1	42:BI:88:TYR:HA	2.42	0.54
5:CE:60:ASN:OD1	5:CE:62:PRO:HD2	2.07	0.54
23:CZ:92:SER:O	23:CZ:130:PRO:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:128:SER:OG	5:AE:129:HIS:N	2.38	0.54
57:BZ:179:ASP:OD2	57:BZ:182:ARG:HD2	2.07	0.54
35:BB:20:GLU:HA	35:BB:21:ARG:NH2	2.21	0.54
1:AA:553:A:C2	1:AA:2064:A:H2'	2.42	0.54
13:AP:83:VAL:HG13	13:AP:112:LEU:HD21	1.89	0.54
14:CQ:37:LEU:HB2	14:CQ:128:LYS:HB2	1.89	0.54
36:BC:6:HIS:HB2	47:BN:49:HIS:CD2	2.41	0.54
34:DA:137:C:H2'	34:DA:138:G:C8	2.42	0.54
39:BF:70:ASP:HB2	39:BF:71:ARG:HG2	1.89	0.54
1:CA:631:A:OP1	13:CP:65:ARG:NH1	2.39	0.54
46:BM:11:ARG:HA	46:BM:45:VAL:HB	1.89	0.54
34:BA:100:C:H2'	34:BA:101:A:O4'	2.06	0.54
1:CA:1969:A:O2'	1:CA:1972:A:N3	2.31	0.54
1:CA:98:G:OP1	26:C2:3:LEU:N	2.31	0.54
34:DA:45:U:O5'	34:DA:45:U:H6	1.90	0.54
34:DA:499:A:H4'	34:DA:500:G:OP1	2.08	0.54
34:BA:161:A:H2'	34:BA:162:A:C8	2.42	0.54
1:CA:2121:G:O2'	3:CC:168:LYS:CD	2.54	0.54
1:AA:1093:G:N2	1:AA:1157:A:H2	2.04	0.54
37:BD:104:VAL:O	37:BD:107:ARG:N	2.40	0.54
42:BI:86:VAL:O	42:BI:90:PRO:HG3	2.07	0.54
16:CS:23:ARG:HH21	16:CS:84:GLN:HB3	1.71	0.54
1:CA:1914:C:H5''	1:CA:1915:U:OP2	2.08	0.54
23:CZ:63:ASP:C	23:CZ:65:GLN:H	2.10	0.54
57:BZ:443:HIS:ND1	57:BZ:446:THR:HG22	2.22	0.54
1:CA:2389:G:H5''	1:CA:2390:U:O4'	2.06	0.54
1:CA:221:A:O2'	1:CA:266:G:N7	2.32	0.54
20:AW:19:LEU:HB3	29:A5:25:LEU:HD11	1.90	0.54
1:CA:2394:C:OP1	32:C8:30:ARG:NH1	2.40	0.54
1:CA:45:C:OP2	1:CA:215:G:H5'	2.08	0.54
50:DQ:56:VAL:HB	50:DQ:78:GLU:HB3	1.88	0.54
3:AC:49:GLY:N	3:AC:209:PHE:O	2.39	0.54
10:CL:19:PRO:HB3	10:CL:34:ILE:HD12	1.89	0.54
41:DH:25:ASP:OD1	41:DH:25:ASP:N	2.40	0.54
34:BA:1216:G:OP1	47:BN:2:ALA:N	2.40	0.54
3:AC:52:PRO:HB2	3:AC:168:LYS:O	2.07	0.54
35:BB:204:ASN:OD1	35:BB:206:ASP:N	2.40	0.54
39:BF:97:PHE:CB	51:BR:32:ARG:HD2	2.37	0.54
1:AA:1286:U:H3'	63:AA:4783:HOH:O	2.06	0.54
34:BA:167:G:H2'	34:BA:168:G:H8	1.72	0.54
37:BD:31:CYS:SG	37:BD:33:MET:N	2.80	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1095:U:H2'	34:BA:1096:C:O4'	2.07	0.54
36:DC:137:ALA:HA	36:DC:140:ARG:HD3	1.90	0.54
5:CE:2:LYS:HG3	5:CE:200:GLU:HB2	1.90	0.54
53:DT:16:HIS:O	53:DT:19:SER:OG	2.16	0.54
34:DA:909:A:H2'	34:DA:910:C:O4'	2.07	0.54
57:BZ:406:GLU:HG2	57:BZ:439:ARG:HH22	1.73	0.54
25:C1:23:LYS:HB3	25:C1:29:GLY:HA3	1.90	0.54
52:BS:40:ILE:HB	52:BS:67:VAL:HA	1.89	0.54
19:AV:52:VAL:HG22	19:AV:55:ALA:HB3	1.90	0.54
3:AC:52:PRO:HG2	3:AC:53:ARG:H	1.73	0.54
57:BZ:329:ARG:HD3	57:BZ:331:TYR:CZ	2.42	0.54
1:CA:1970:A:H4'	1:CA:1971:A:OP1	2.08	0.54
38:BE:67:VAL:HG12	38:BE:69:VAL:HG12	1.88	0.54
1:CA:1843:C:H5'	4:CD:253:GLN:NE2	2.22	0.54
1:CA:299:A:N3	1:CA:319:C:O2'	2.33	0.54
14:CQ:38:GLU:OE2	14:CQ:128:LYS:HG2	2.08	0.54
26:C2:10:LEU:HD21	26:C2:59:ARG:HD2	1.90	0.54
34:BA:677:U:H3	34:BA:713:G:H22	1.56	0.54
12:CO:49:ARG:NH1	34:DA:1423:G:OP1	2.41	0.54
38:BE:93:PRO:HG2	41:BH:105:ARG:HE	1.72	0.54
31:C7:34:ARG:NH1	31:C7:41:ARG:O	2.41	0.54
6:AF:150:GLY:HA2	6:AF:172:TRP:CD2	2.43	0.54
10:CL:75:SER:HA	10:CL:78:ILE:HG22	1.88	0.54
3:CC:52:PRO:HG2	3:CC:53:ARG:H	1.73	0.54
3:CC:30:VAL:HG23	3:CC:31:LYS:HG2	1.89	0.54
34:BA:975:A:N1	43:BJ:48:THR:HB	2.22	0.54
34:BA:373:A:C2	34:BA:374:A:C8	2.94	0.54
1:CA:2726:U:O2'	1:CA:2727:G:H5'	2.08	0.54
35:DB:47:THR:O	35:DB:51:LEU:HD22	2.07	0.54
57:DZ:35:TYR:HE2	57:DZ:269:VAL:HB	1.73	0.54
23:AZ:28:MET:HE3	23:AZ:59:LEU:HD12	1.89	0.54
57:BZ:466:LEU:O	57:BZ:470:PHE:HB2	2.07	0.54
34:DA:416:G:C5	34:DA:417:C:C4	2.96	0.54
32:A8:42:ARG:HD2	63:A8:6307:HOH:O	2.08	0.54
37:BD:149:ALA:HB3	37:BD:152:SER:HB2	1.89	0.54
34:BA:193:C:H2'	34:BA:194:C:C6	2.42	0.54
21:CX:57:LEU:HD13	21:CX:78:LYS:HB3	1.89	0.54
1:CA:861:A:C2	1:CA:917:A:C4	2.96	0.54
1:CA:1297:C:H2'	1:CA:1298:C:H6	1.72	0.54
1:CA:1297:C:OP1	1:CA:2710:C:H4'	2.08	0.54
1:CA:7:G:H4'	11:CN:13:TRP:HH2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:611:U:H2'	1:AA:612:C:C6	2.43	0.54
34:BA:1068:G:H8	34:BA:1068:G:OP2	1.90	0.54
56:DW:40:C:H4'	56:DY:35:A:O3'	2.08	0.54
34:BA:1086:U:H2'	34:BA:1087:G:O4'	2.07	0.54
34:BA:435:C:C2	34:BA:436:C:C5	2.96	0.54
4:AD:8:PRO:CB	4:AD:14:ARG:HB2	2.38	0.54
1:AA:1633:A:H2'	1:AA:1634:C:C6	2.42	0.54
1:CA:2432:A:H4'	56:DY:76:A:P	2.47	0.54
1:CA:2590:A:O2'	1:CA:2591:C:H5'	2.07	0.54
8:CH:154:PRO:HA	8:CH:161:GLY:HA3	1.90	0.54
46:BM:3:ARG:NH2	46:BM:11:ARG:HH12	2.04	0.54
5:CE:2:LYS:HB2	5:CE:95:ILE:HD12	1.90	0.54
34:DA:333:G:H4'	53:DT:16:HIS:CE1	2.42	0.54
15:CR:13:HIS:O	15:CR:15:SER:N	2.41	0.54
34:BA:643:C:H5'	41:BH:31:PHE:CD1	2.43	0.54
50:DQ:40:LYS:HD3	50:DQ:42:TYR:CZ	2.42	0.54
34:BA:134:A:H61	49:BP:25:ARG:HH12	1.56	0.54
34:BA:487:A:H2'	34:BA:488:C:O4'	2.08	0.54
26:A2:2:LYS:O	26:A2:6:VAL:HG23	2.08	0.54
1:CA:1786:A:H1'	1:CA:1938:A:N6	2.22	0.54
14:AQ:16:ARG:C	14:AQ:17:LEU:HD23	2.27	0.54
34:BA:1338:G:H2'	34:BA:1339:A:C8	2.42	0.54
14:CQ:70:PRO:HA	14:CQ:95:ALA:HB2	1.90	0.54
34:DA:1281:U:P	34:DA:1282:C:H41	2.30	0.54
1:CA:601:C:O2'	1:CA:605:C:H5''	2.08	0.54
34:BA:973:G:OP1	43:BJ:57:LYS:HE3	2.08	0.54
37:DD:25:ARG:HG2	37:DD:25:ARG:O	2.08	0.54
34:DA:1207:G:H2'	34:DA:1208:C:H6	1.71	0.54
1:CA:1708:C:H2'	1:CA:1709:U:H6	1.72	0.54
34:BA:685:G:C2	34:BA:686:U:C4	2.96	0.54
34:BA:1070:U:H2'	34:BA:1071:C:C6	2.43	0.54
20:CW:29:LEU:O	20:CW:33:ARG:HG3	2.08	0.54
35:BB:12:GLU:HA	35:BB:213:LEU:HD11	1.89	0.54
36:BC:155:GLY:HA3	36:BC:196:LEU:HD12	1.88	0.54
34:DA:177:C:H2'	34:DA:178:C:H6	1.73	0.54
1:CA:192:C:O2'	1:CA:802:A:N3	2.37	0.54
35:DB:25:ASN:O	35:DB:27:LYS:N	2.40	0.54
40:DG:26:PHE:O	40:DG:30:ILE:HG13	2.08	0.54
25:A1:80:LEU:HB3	25:A1:82:LEU:HG	1.90	0.54
5:CE:59:VAL:HG12	5:CE:64:LYS:HE2	1.90	0.54
3:CC:171:ALA:HB1	3:CC:173:HIS:CE1	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1004:A:H8	34:DA:1005:A:H4'	1.73	0.54
2:CB:62:C:H2'	2:CB:63:G:C8	2.41	0.54
56:BY:53:G:H1	56:BY:61:C:N4	2.06	0.54
8:AH:4:ILE:O	8:AH:69:ARG:HG2	2.07	0.54
57:BZ:503:GLY:O	57:BZ:505:GLY:N	2.41	0.54
1:AA:1476:C:H2'	1:AA:1477:U:C6	2.43	0.54
1:CA:375:C:H2'	1:CA:376:C:H6	1.73	0.54
57:DZ:514:VAL:HG22	57:DZ:565:VAL:HA	1.90	0.54
57:BZ:484:ARG:HG2	57:BZ:561:VAL:HG22	1.90	0.54
7:AG:123:ASN:O	63:AG:301:HOH:O	2.18	0.54
1:CA:1991:U:H2'	1:CA:1992:G:H5''	1.89	0.54
34:BA:630:G:O2'	34:BA:631:G:H5'	2.08	0.54
57:DZ:620:VAL:O	57:DZ:624:LEU:HB2	2.08	0.54
5:CE:119:ARG:HD2	5:CE:120:TRP:CE2	2.43	0.54
5:CE:101:ARG:NH1	5:CE:169:ASN:O	2.40	0.54
41:DH:116:LYS:HD2	41:DH:129:VAL:HG11	1.90	0.54
39:BF:10:LEU:HB2	39:BF:59:TYR:HB3	1.90	0.54
34:BA:502:G:C2	34:BA:503:C:C2	2.96	0.53
38:DE:80:ILE:HD13	41:DH:104:ARG:HH21	1.72	0.53
7:AG:131:TYR:O	7:AG:159:VAL:HG12	2.08	0.53
50:BQ:88:TYR:HD2	50:BQ:89:LEU:HD23	1.71	0.53
4:AD:242:ARG:N	4:AD:242:ARG:HD3	2.23	0.53
1:AA:559:U:H2'	1:AA:560:C:C6	2.43	0.53
23:AZ:63:ASP:OD1	23:AZ:65:GLN:HB2	2.07	0.53
57:BZ:655:TYR:CE2	57:BZ:659:LEU:HG	2.42	0.53
52:BS:50:ALA:HB1	52:BS:57:HIS:HB3	1.90	0.53
24:A0:43:THR:HG23	24:A0:43:THR:O	2.08	0.53
57:DZ:250:THR:HG21	57:DZ:279:TYR:O	2.08	0.53
48:DO:70:LEU:HD23	48:DO:78:TYR:HA	1.88	0.53
6:AF:20:LEU:HD22	6:AF:21:ALA:O	2.08	0.53
11:AN:65:LYS:NZ	11:AN:65:LYS:HB2	2.23	0.53
34:BA:300:A:H1'	34:BA:565:U:O2	2.08	0.53
34:BA:345:C:O5'	34:BA:345:C:H6	1.91	0.53
1:CA:2892:A:H2'	1:CA:2893:G:C8	2.43	0.53
1:AA:1540:A:H2'	1:AA:1541:A:C8	2.43	0.53
3:AC:171:ALA:HB1	3:AC:173:HIS:CE1	2.44	0.53
17:CT:26:ASP:O	17:CT:49:VAL:HG12	2.09	0.53
1:AA:1604:C:H5''	1:AA:1605:A:OP2	2.08	0.53
34:DA:1073:U:OP1	38:DE:57:LYS:HE3	2.08	0.53
1:AA:1336:C:H2'	1:AA:1337:C:C6	2.41	0.53
34:DA:160:A:H1'	34:DA:344:A:C5	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:194:ILE:HD11	3:CC:227:PRO:HB3	1.89	0.53
1:AA:2096:U:H2'	1:AA:2097:U:C6	2.43	0.53
1:CA:2454:G:H1'	63:CA:3887:HOH:O	2.07	0.53
40:BG:115:ARG:HH11	40:BG:118:VAL:HG21	1.73	0.53
39:BF:37:VAL:HG12	39:BF:38:GLU:H	1.73	0.53
32:C8:36:LYS:HB2	32:C8:41:ILE:HD11	1.90	0.53
25:A1:6:GLU:HB2	25:A1:61:ARG:O	2.08	0.53
1:CA:2355:C:H1'	24:C0:39:ARG:HH21	1.73	0.53
1:CA:2880:C:O3'	15:CR:90:ARG:NH1	2.37	0.53
1:AA:254:A:N6	1:AA:454:U:O2'	2.41	0.53
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CG	2.43	0.53
1:CA:1558:A:H4'	1:CA:1559:G:O5'	2.08	0.53
46:BM:118:ALA:HB1	56:BW:28:G:H4'	1.89	0.53
39:BF:94:GLN:OE1	51:BR:32:ARG:NH2	2.42	0.53
34:BA:1241:G:H2'	34:BA:1242:C:C6	2.43	0.53
1:AA:1136:U:O2	1:AA:1148:C:H1'	2.08	0.53
3:AC:42:VAL:HG13	3:AC:43:GLU:H	1.73	0.53
1:CA:2315:G:H2'	1:CA:2316:C:C6	2.43	0.53
34:BA:626:U:H2'	34:BA:627:G:C8	2.43	0.53
50:BQ:59:ILE:HG22	50:BQ:73:VAL:HA	1.90	0.53
37:DD:3:ARG:NH1	37:DD:5:ILE:HG13	2.24	0.53
20:CW:6:ILE:HD13	20:CW:104:THR:HG23	1.90	0.53
34:BA:196:A:OP1	53:BT:68:LYS:NZ	2.40	0.53
57:BZ:490:PRO:HG3	57:BZ:515:GLU:HB3	1.90	0.53
1:CA:2408:U:OP2	63:CA:3857:HOH:O	2.19	0.53
34:DA:827:U:H5''	34:DA:828:A:OP2	2.08	0.53
8:CH:80:SER:OG	8:CH:81:GLU:N	2.41	0.53
57:DZ:490:PRO:HG3	57:DZ:516:PRO:HD2	1.89	0.53
1:AA:1093:G:N2	1:AA:1156:G:O2'	2.41	0.53
34:DA:1142:G:H2'	34:DA:1143:G:O4'	2.08	0.53
1:AA:2198:A:H2'	1:AA:2199:C:C6	2.42	0.53
34:BA:396:G:P	57:BZ:349:LYS:HZ1	2.32	0.53
5:CE:176:ILE:HB	5:CE:181:LEU:HB2	1.91	0.53
34:DA:828:A:H2'	34:DA:829:G:O4'	2.08	0.53
1:AA:2209:G:O2'	1:AA:2210:C:OP1	2.24	0.53
41:DH:26:VAL:HG23	41:DH:27:PRO:O	2.09	0.53
11:CN:120:LEU:HD22	11:CN:122:VAL:HG23	1.90	0.53
39:DF:99:ALA:O	51:DR:28:GLU:HA	2.08	0.53
23:CZ:8:TYR:HB2	23:CZ:38:TYR:CZ	2.44	0.53
40:DG:50:ILE:HD11	40:DG:58:PRO:HB3	1.89	0.53
35:BB:45:GLN:O	35:BB:49:GLU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:269:C:H2'	34:DA:270:A:C8	2.43	0.53
34:BA:1510:U:H2'	34:BA:1511:G:C8	2.42	0.53
57:BZ:269:VAL:O	57:BZ:272:LEU:HB3	2.08	0.53
1:CA:1792:G:O2'	1:CA:1830:C:OP1	2.26	0.53
1:AA:2576:A:OP1	1:AA:2660:C:O2'	2.23	0.53
1:CA:1860:G:OP2	1:CA:1860:G:H8	1.92	0.53
1:CA:2837:G:O2'	1:CA:2838:G:H5'	2.09	0.53
13:AP:39:LYS:HG3	13:AP:45:LEU:HD11	1.90	0.53
1:CA:1070:A:H2'	1:CA:1097:U:OP1	2.08	0.53
34:DA:737:A:H2'	34:DA:738:C:C6	2.44	0.53
1:AA:354:A:H2	1:AA:1255:A:O2'	1.92	0.53
11:CN:42:TRP:HD1	11:CN:48:MET:HE1	1.74	0.53
1:CA:329:G:OP2	22:CY:71:LYS:HD2	2.08	0.53
54:BU:3:LYS:HA	54:BU:11:GLY:HA2	1.88	0.53
40:DG:30:ILE:HD13	40:DG:120:ILE:HD13	1.91	0.53
1:AA:325:G:OP2	22:AY:84:ARG:NH2	2.42	0.53
1:CA:2850:A:H2'	1:CA:2851:A:C8	2.43	0.53
34:DA:448:A:C4	34:DA:487:A:C2	2.96	0.53
34:DA:642:A:N3	41:DH:113:SER:OG	2.37	0.53
2:CB:54:G:H2'	2:CB:55:U:H6	1.74	0.53
4:CD:108:PRO:HD2	4:CD:111:LEU:HG	1.89	0.53
34:DA:953:G:H5'	34:DA:965:A:H61	1.73	0.53
34:DA:1129:C:H2'	34:DA:1139:G:N7	2.24	0.53
3:AC:30:VAL:HG23	3:AC:31:LYS:HG2	1.89	0.53
38:DE:131:ILE:O	38:DE:135:THR:OG1	2.26	0.53
48:BO:24:SER:O	48:BO:28:GLN:N	2.34	0.53
34:DA:1304:G:C6	34:DA:1305:G:N1	2.77	0.53
1:AA:721:G:H1'	6:AF:74:ARG:HD3	1.90	0.53
1:AA:1604:C:OP2	1:AA:1605:A:O2'	2.24	0.53
18:CU:92:ARG:HA	18:CU:95:LEU:HB2	1.88	0.53
35:DB:12:GLU:C	35:DB:14:GLY:HA3	2.28	0.53
1:AA:1587:U:H2'	1:AA:1588:G:O4'	2.09	0.53
1:CA:1769:G:O2'	1:CA:1958:C:OP1	2.20	0.53
1:CA:583:G:OP2	18:CU:10:ARG:HD2	2.09	0.53
1:AA:2325:C:H4'	7:AG:91:ARG:HG3	1.89	0.53
8:CH:107:VAL:HG11	8:CH:162:ILE:HD11	1.90	0.53
53:BT:87:LYS:O	53:BT:91:LEU:HG	2.09	0.53
5:CE:21:VAL:HG23	5:CE:185:LYS:HD2	1.90	0.53
39:DF:78:GLU:C	39:DF:80:ARG:H	2.11	0.53
13:CP:99:LEU:HA	13:CP:102:ARG:HB2	1.90	0.53
1:AA:1941:A:O3'	34:BA:1517:G:H1'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:51:ASP:OD2	3:CC:54:ARG:HB2	2.09	0.53
3:CC:54:ARG:CZ	3:CC:56:ASP:HB3	2.37	0.53
57:BZ:330:VAL:CG1	57:BZ:371:ALA:HA	2.37	0.53
49:BP:75:ARG:O	49:BP:78:GLY:N	2.31	0.53
57:DZ:526:VAL:HG11	57:DZ:566:THR:HG23	1.91	0.53
1:AA:1133:G:C2	1:AA:1149:A:C2	2.97	0.53
7:CG:19:LEU:HG	7:CG:175:LEU:HD22	1.91	0.53
34:DA:107:G:H2'	34:DA:108:G:O4'	2.08	0.53
1:CA:2531:A:H5''	8:CH:157:TYR:CE2	2.44	0.53
37:DD:121:VAL:HG22	37:DD:126:ILE:HG13	1.91	0.53
1:CA:301:G:OP2	22:CY:84:ARG:NH2	2.42	0.53
1:CA:1059:G:H5''	1:CA:1060:U:H2'	1.91	0.53
7:AG:111:LEU:HD22	7:AG:120:LEU:HD21	1.89	0.53
1:CA:579:G:H2'	1:CA:580:C:C6	2.44	0.53
34:BA:1207:G:H2'	34:BA:1208:C:C6	2.44	0.53
1:AA:2294:G:H4'	1:AA:2401:G:O2'	2.09	0.53
1:AA:1100:A:H2'	1:AA:1101:G:O4'	2.09	0.53
1:AA:2150:C:H4'	3:AC:219:MET:HE3	1.91	0.53
3:AC:6:LYS:HA	3:AC:9:ARG:HH11	1.72	0.53
1:AA:2044:U:O2'	1:AA:2629:C:H5'	2.09	0.53
2:CB:116:G:OP2	2:CB:116:G:H8	1.92	0.53
25:C1:25:LYS:C	25:C1:27:GLU:H	2.12	0.53
37:DD:129:ASN:HD21	37:DD:144:ASP:HA	1.74	0.53
57:BZ:608:VAL:HG21	57:BZ:647:VAL:HG22	1.91	0.53
8:CH:157:TYR:HE1	8:CH:172:LYS:HG2	1.74	0.53
34:DA:786:G:H2'	34:DA:787:A:O4'	2.09	0.53
1:CA:910:A:H62	14:CQ:12:GLN:HA	1.73	0.53
39:BF:19:LEU:HD11	39:BF:59:TYR:CE2	2.44	0.53
34:BA:1278:U:H5'	34:BA:1279:A:H5'	1.91	0.53
1:AA:1014:U:O3'	27:A3:14:GLY:HA2	2.08	0.53
48:DO:5:LYS:HD2	48:DO:5:LYS:H	1.74	0.53
11:AN:12:ARG:HH21	11:AN:138:LEU:HD21	1.73	0.53
57:DZ:609:GLU:HG2	57:DZ:644:ARG:HG2	1.91	0.53
1:CA:2869:G:H2'	1:CA:2870:C:O4'	2.09	0.53
4:CD:142:VAL:HG12	4:CD:163:ALA:HB3	1.91	0.53
1:CA:2689:U:P	1:CA:2719:G:H22	2.32	0.53
8:AH:11:VAL:HG13	8:AH:15:VAL:HG22	1.91	0.53
16:CS:65:VAL:O	16:CS:68:GLN:HB2	2.09	0.53
34:BA:148:G:H2'	34:BA:149:A:C8	2.43	0.53
17:CT:60:THR:HG22	17:CT:77:PRO:HA	1.91	0.53
34:BA:1516:G:N1	34:BA:1519:A:OP2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1431:C:H2'	34:BA:1432:G:O4'	2.09	0.53
1:CA:2120:G:H21	3:CC:168:LYS:CE	2.20	0.53
57:BZ:273:LEU:O	57:BZ:276:VAL:N	2.42	0.53
2:CB:66:A:N6	2:CB:108:U:H3'	2.24	0.53
1:CA:323:G:C8	6:CF:171:PRO:HG3	2.44	0.53
43:BJ:17:ASP:O	43:BJ:21:GLN:HB2	2.09	0.53
7:AG:178:PHE:O	7:AG:180:PHE:HD2	1.91	0.53
44:BK:99:GLN:HG2	44:BK:105:VAL:HG11	1.91	0.53
38:BE:93:PRO:HG2	41:BH:105:ARG:NE	2.24	0.53
57:BZ:490:PRO:HB3	57:BZ:515:GLU:HG2	1.91	0.53
1:AA:1571:G:H2'	1:AA:1572:G:O4'	2.09	0.53
34:DA:612:C:O2	34:DA:629:G:N2	2.41	0.53
52:BS:36:ARG:NH1	52:BS:52:TYR:O	2.37	0.53
1:AA:1686:U:O2'	1:AA:1687:C:H5'	2.08	0.53
4:CD:3:VAL:HG13	4:CD:17:THR:HB	1.90	0.53
1:AA:1325:G:H4'	15:AR:31:HIS:CD2	2.44	0.53
27:C3:18:ASP:OD1	27:C3:18:ASP:N	2.42	0.53
34:BA:1292:U:OP2	40:BG:41:ARG:NH2	2.41	0.53
1:AA:1358:U:H4'	1:AA:1359:U:O5'	2.09	0.53
35:BB:21:ARG:HA	35:BB:39:ILE:HG23	1.90	0.53
34:BA:375:U:N3	34:BA:376:G:N7	2.57	0.53
11:CN:14:VAL:HG12	11:CN:15:LEU:H	1.73	0.53
1:AA:1188:A:C4	1:AA:1190:G:C8	2.97	0.53
29:A5:16:ARG:NH1	29:A5:17:ASP:OD1	2.39	0.53
3:AC:44:VAL:HG23	3:AC:176:VAL:HG21	1.89	0.53
43:BJ:45:ARG:HG2	43:BJ:47:PHE:CZ	2.44	0.53
1:AA:1452:U:H2'	1:AA:1453:C:H6	1.74	0.53
1:CA:1049:C:H3'	1:CA:1050:A:H8	1.73	0.53
34:DA:544:G:OP1	37:DD:59:ARG:NH2	2.31	0.53
34:BA:38:G:H22	34:BA:397:A:H5''	1.73	0.53
34:BA:368:U:N3	57:BZ:354:ARG:NH1	2.50	0.53
16:CS:66:ALA:O	16:CS:69:VAL:N	2.42	0.53
1:CA:443:A:H1'	1:CA:1201:C:O4'	2.08	0.53
1:CA:1639:U:H2'	1:CA:1640:C:H5''	1.91	0.53
17:AT:108:ARG:HH12	17:AT:112:ARG:HE	1.57	0.53
34:DA:1179:A:H4'	42:DI:103:THR:HA	1.90	0.53
34:DA:253:U:H2'	34:DA:254:G:C8	2.44	0.53
57:DZ:486:THR:OG1	57:DZ:487:ILE:N	2.42	0.53
1:CA:2682:U:H5'	5:CE:11:MET:O	2.08	0.53
1:CA:1046:A:H3'	1:CA:1047:G:H5'	1.91	0.53
1:CA:2887:U:H2'	1:CA:2888:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:89:G:H2'	2:AB:90:A:C8	2.43	0.53
47:DN:7:ILE:HG22	47:DN:23:ARG:HD2	1.90	0.53
20:CW:20:VAL:O	20:CW:23:LEU:HB2	2.09	0.53
1:AA:1405:A:N6	1:AA:1418:U:H3	2.07	0.52
3:CC:48:LEU:CB	3:CC:50:ILE:HD12	2.38	0.52
1:CA:1068:G:H21	1:CA:1096:A:H5'	1.74	0.52
38:DE:53:LEU:O	38:DE:57:LYS:HB2	2.08	0.52
3:AC:65:LEU:HD22	3:AC:189:ASN:HB3	1.91	0.52
1:CA:2572:A:N7	5:CE:144:ARG:HD2	2.25	0.52
35:BB:51:LEU:HD22	35:BB:55:PHE:CE2	2.44	0.52
45:BL:34:ARG:HG2	45:BL:35:GLY:H	1.74	0.52
5:CE:70:ALA:O	5:CE:72:VAL:N	2.38	0.52
17:CT:99:LEU:HD22	17:CT:101:PHE:HE1	1.74	0.52
49:BP:18:ARG:NH1	49:BP:32:TYR:OH	2.42	0.52
57:BZ:182:ARG:O	57:BZ:184:LYS:N	2.42	0.52
37:DD:60:GLU:OE1	37:DD:199:ASN:N	2.40	0.52
57:DZ:612:THR:OG1	57:DZ:613:PRO:O	2.26	0.52
34:BA:731:G:H5'	34:BA:766:A:H4'	1.91	0.52
6:CF:25:PRO:HD2	6:CF:115:ALA:HB2	1.91	0.52
34:DA:938:A:H2'	34:DA:939:G:O4'	2.09	0.52
57:BZ:342:TYR:N	57:BZ:390:VAL:O	2.38	0.52
46:BM:20:THR:HA	46:BM:25:ILE:O	2.08	0.52
23:CZ:85:HIS:HE1	23:CZ:87:ASP:OD2	1.92	0.52
35:BB:77:ALA:HB2	35:BB:211:ILE:HD13	1.90	0.52
17:CT:66:VAL:HA	17:CT:71:GLY:HA2	1.91	0.52
31:A7:33:ARG:NH2	63:A7:201:HOH:O	2.41	0.52
23:AZ:23:LYS:HD2	23:AZ:40:ASP:HA	1.90	0.52
34:BA:251:G:H4'	34:BA:252:U:O5'	2.09	0.52
36:DC:182:ILE:HG12	36:DC:203:PHE:HD1	1.74	0.52
34:DA:148:G:H2'	34:DA:149:A:C8	2.43	0.52
35:BB:111:ARG:NH1	35:BB:111:ARG:HG2	2.20	0.52
20:CW:76:VAL:HG22	20:CW:103:ILE:HG23	1.92	0.52
34:DA:1347:G:O2'	34:DA:1373:G:O6	2.27	0.52
1:CA:1651:G:N2	1:CA:2007:C:C2	2.77	0.52
57:DZ:534:ILE:HD11	57:DZ:570:GLY:HA3	1.91	0.52
14:CQ:37:LEU:HD12	14:CQ:128:LYS:HB3	1.91	0.52
7:AG:110:ALA:HB1	7:AG:140:ILE:HG22	1.91	0.52
50:BQ:88:TYR:CD2	50:BQ:89:LEU:HD23	2.44	0.52
57:DZ:546:ILE:HD12	57:DZ:546:ILE:H	1.74	0.52
57:BZ:133:ILE:HG22	57:BZ:257:PRO:HB2	1.90	0.52
1:AA:934:A:OP1	1:AA:935:C:N4	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1639:U:C2'	1:CA:1640:C:H5''	2.39	0.52
2:AB:24:G:H3'	63:AB:3101:HOH:O	2.08	0.52
1:AA:2584:A:N7	5:AE:144:ARG:HD2	2.24	0.52
1:CA:2458:G:O2'	1:CA:2460:U:O4	2.21	0.52
34:DA:1219:U:OP1	47:DN:19:ARG:NH1	2.41	0.52
1:AA:2880:C:H2'	1:AA:2881:C:O4'	2.08	0.52
1:CA:272:G:H4'	1:CA:272(A):U:H5''	1.90	0.52
34:BA:1243:C:N3	34:BA:1295:G:N2	2.57	0.52
1:CA:2148:G:H2'	1:CA:2149:G:C8	2.43	0.52
38:DE:127:ASN:O	38:DE:131:ILE:HG12	2.10	0.52
13:CP:97:PRO:HG3	13:CP:112:LEU:HD12	1.91	0.52
3:AC:48:LEU:CB	3:AC:50:ILE:HD12	2.38	0.52
3:AC:64:SER:HA	3:AC:161:ARG:H	1.74	0.52
34:DA:1189:C:O5'	34:DA:1189:C:H6	1.92	0.52
13:AP:120:ALA:HB1	13:AP:138:LEU:HD12	1.92	0.52
41:BH:2:LEU:HD11	41:BH:8:ASP:HB2	1.91	0.52
13:AP:132:LYS:O	13:AP:136:GLU:HG3	2.08	0.52
56:BW:35:A:H4'	57:BZ:575:VAL:HG21	1.92	0.52
45:BL:24:VAL:HB	45:BL:27:LEU:HD22	1.92	0.52
34:BA:659:U:C2	34:BA:660:G:C8	2.98	0.52
1:AA:1698:G:OP1	15:AR:40:LYS:HE3	2.08	0.52
1:CA:664:C:H2'	1:CA:665:C:H6	1.74	0.52
1:AA:346:A:H4'	1:AA:347:G:OP2	2.09	0.52
34:DA:1057:G:N2	34:DA:1204:A:H1'	2.24	0.52
53:DT:59:ALA:O	53:DT:62:LEU:N	2.42	0.52
1:CA:2712:U:H2'	1:CA:2714:G:H5''	1.90	0.52
1:AA:1222:A:H2'	1:AA:1222:A:N3	2.24	0.52
57:BZ:273:LEU:HA	57:BZ:276:VAL:HG23	1.92	0.52
34:BA:922:G:C6	34:BA:923:A:C6	2.98	0.52
1:AA:1199:C:OP1	18:AU:92:ARG:NH1	2.43	0.52
34:DA:933:G:O6	40:DG:3:ARG:NH2	2.40	0.52
57:DZ:363:ARG:HG2	57:DZ:363:ARG:NH1	2.24	0.52
37:DD:3:ARG:HE	37:DD:118:ARG:HD3	1.75	0.52
35:DB:93:VAL:HG21	35:DB:97:TRP:HD1	1.74	0.52
1:CA:1001:A:H2'	1:CA:1002:G:O4'	2.08	0.52
34:BA:397:A:N6	34:BA:548:G:C5	2.78	0.52
34:DA:411:A:H62	34:DA:413:G:H21	1.55	0.52
1:CA:2648:C:H2'	1:CA:2649:U:C6	2.44	0.52
34:DA:1053:G:O5'	34:DA:1054:C:H5'	2.10	0.52
56:DW:53:G:N2	56:DW:61:C:O2	2.36	0.52
57:BZ:166:LEU:HB3	57:BZ:178:ILE:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AQ:27:VAL:N	14:AQ:138:ASP:OD1	2.39	0.52
57:BZ:323:GLY:O	57:BZ:325:LEU:N	2.42	0.52
1:CA:394:A:O2'	1:CA:395:U:H5'	2.09	0.52
1:AA:238:C:O2'	13:AP:64:LYS:HE3	2.09	0.52
53:BT:82:SER:O	53:BT:86:ARG:HG3	2.09	0.52
34:BA:310:G:OP2	49:BP:27:LYS:NZ	2.38	0.52
44:DK:48:ILE:O	44:DK:50:TYR:N	2.42	0.52
25:C1:67:ILE:N	25:C1:68:PRO:HD2	2.24	0.52
1:CA:2166:G:H3'	1:CA:2167:U:H5''	1.91	0.52
1:AA:2413:U:OP1	30:A6:18:ARG:NH2	2.42	0.52
1:AA:1636:U:H2'	1:AA:1637:G:C8	2.45	0.52
1:AA:2187:G:H1	1:AA:2194:U:H5	1.57	0.52
34:BA:1131:G:OP1	42:BI:20:ARG:NH2	2.41	0.52
1:AA:70:A:N7	21:AX:31:HIS:HE1	2.06	0.52
22:CY:86:ARG:HB2	22:CY:98:VAL:HG23	1.91	0.52
34:BA:402:G:C6	34:BA:403:C:C4	2.98	0.52
1:AA:1296:G:N7	13:AP:18:ARG:NH2	2.57	0.52
10:AL:59:ILE:HD11	10:AL:63:ARG:HA	1.90	0.52
34:BA:814:A:N7	34:BA:816:A:C4	2.77	0.52
57:BZ:443:HIS:ND1	57:BZ:445:GLU:O	2.39	0.52
1:CA:635:C:O2'	1:CA:639:U:OP1	2.27	0.52
1:AA:1857:G:H4'	4:AD:242:ARG:CZ	2.39	0.52
16:CS:69:VAL:O	16:CS:72:ALA:HB3	2.10	0.52
44:DK:59:TYR:CE1	44:DK:63:LEU:HD21	2.44	0.52
34:BA:714:G:H2'	34:BA:715:A:C8	2.45	0.52
1:AA:2211:U:H2'	1:AA:2212:G:C8	2.44	0.52
8:CH:24:VAL:HG13	8:CH:37:VAL:HG21	1.91	0.52
1:AA:1106:U:O4	10:AL:130:SER:OG	2.11	0.52
1:CA:2756:U:H1'	1:CA:2757:A:H5''	1.91	0.52
1:CA:2028:U:H2'	1:CA:2029:G:O4'	2.10	0.52
15:CR:51:LEU:HD23	15:CR:66:VAL:HG22	1.91	0.52
41:DH:20:TYR:HD2	41:DH:65:TYR:CE2	2.27	0.52
1:CA:108:U:H2'	1:CA:109:G:H8	1.75	0.52
7:AG:27:ASN:HB3	7:AG:30:GLU:HG3	1.92	0.52
7:AG:47:LYS:O	7:AG:51:ARG:HG2	2.09	0.52
57:BZ:627:ARG:HH22	57:BZ:658:ASP:CG	2.12	0.52
1:CA:1058:G:O2'	10:CL:114:ASP:O	2.26	0.52
27:C3:30:ARG:HB3	27:C3:33:GLN:HB2	1.92	0.52
7:AG:66:GLN:HG3	28:A4:1:MET:CE	2.40	0.52
1:AA:2143:G:N2	3:AC:169:THR:CB	2.68	0.52
43:BJ:5:ARG:NH2	43:BJ:73:ASP:OD2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:43:VAL:HG21	21:CX:81:VAL:HG11	1.91	0.52
1:AA:2200:C:OP1	3:AC:47:LYS:HG2	2.09	0.52
1:CA:740:U:H2'	1:CA:741:G:C8	2.45	0.52
1:CA:996:A:C2	1:CA:997:G:C8	2.97	0.52
1:CA:2727:G:O3'	12:CO:70:LYS:NZ	2.38	0.52
34:DA:1095:U:H5'	34:DA:1109:C:O2	2.10	0.52
34:DA:1224:G:O2'	34:DA:1322:C:OP1	2.26	0.52
1:AA:1475:G:H2'	1:AA:1476:C:H6	1.74	0.52
10:CL:99:ILE:O	10:CL:139:VAL:N	2.41	0.52
13:AP:52:GLU:HB2	13:AP:55:ARG:HD2	1.91	0.52
35:DB:100:GLY:O	35:DB:104:ASN:N	2.39	0.52
1:AA:27:G:N7	63:AA:4832:HOH:O	2.34	0.52
1:CA:2682:U:OP2	63:CA:3790:HOH:O	2.19	0.52
37:BD:55:ALA:O	37:BD:58:LEU:N	2.43	0.52
6:CF:53:THR:HG22	6:CF:56:GLU:HG3	1.92	0.52
6:CF:53:THR:HB	6:CF:56:GLU:OE2	2.09	0.52
4:CD:121:PRO:HB3	4:CD:135:PHE:CE2	2.45	0.52
46:BM:15:VAL:O	46:BM:19:LEU:HD13	2.09	0.52
57:DZ:528:ALA:O	57:DZ:568:TYR:HA	2.10	0.52
38:DE:143:ARG:HD2	41:DH:77:GLU:OE2	2.10	0.52
36:DC:22:TRP:HA	43:DJ:93:GLY:HA2	1.91	0.52
23:AZ:30:ASN:ND2	23:AZ:90:VAL:HB	2.23	0.52
1:CA:1401:G:C6	1:CA:1402:C:C4	2.98	0.52
1:AA:616:G:O4'	32:A8:4:MET:HE2	2.09	0.52
28:C4:36:CYS:SG	28:C4:37:SER:N	2.83	0.52
1:CA:2120:G:N2	3:CC:168:LYS:HE2	2.23	0.52
49:DP:51:VAL:O	49:DP:53:VAL:HG23	2.10	0.52
1:CA:1653:G:H3'	15:CR:2:ARG:HD3	1.92	0.52
34:BA:44:G:H2'	34:BA:45:U:O4'	2.09	0.52
34:BA:1063:C:H3'	34:BA:1064:G:H2'	1.92	0.52
34:BA:509:A:H3'	34:BA:509:A:H8	1.73	0.52
34:BA:175:C:H2'	34:BA:176:C:C6	2.44	0.52
6:AF:34:TRP:CH2	13:AP:8:PRO:HB3	2.45	0.52
13:CP:84:ASN:CG	13:CP:117:GLU:HB2	2.29	0.52
52:BS:40:ILE:HG12	52:BS:71:LEU:HD12	1.91	0.52
13:AP:121:LYS:O	13:AP:123:LEU:N	2.43	0.52
38:BE:43:LEU:HD21	38:BE:132:ALA:HB1	1.92	0.52
44:DK:98:LEU:O	44:DK:101:SER:OG	2.19	0.52
34:DA:1161:C:H2'	34:DA:1162:C:H6	1.75	0.52
1:CA:2683:C:H4'	5:CE:13:ARG:NH2	2.24	0.52
35:DB:178:ARG:O	41:DH:71:GLY:HA2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:108:LEU:HB3	37:BD:110:PHE:CE1	2.45	0.52
34:DA:149:A:H2'	34:DA:150:C:C6	2.45	0.52
3:AC:51:ASP:OD2	3:AC:54:ARG:HB2	2.09	0.52
38:BE:100:VAL:HG22	38:BE:118:ILE:HG22	1.92	0.52
35:BB:108:ILE:O	35:BB:111:ARG:HB2	2.10	0.52
57:BZ:89:ASP:OD1	57:BZ:457:LEU:HB2	2.09	0.52
34:DA:522:C:H41	45:DL:53:ARG:NH2	2.05	0.52
34:DA:977:A:H2'	34:DA:978:A:H5''	1.92	0.52
23:AZ:110:GLY:O	23:AZ:113:ALA:HB3	2.10	0.52
34:DA:255:G:H1'	50:DQ:16:GLN:HE21	1.75	0.52
33:A9:15:LYS:HG2	33:A9:17:ILE:HD13	1.91	0.52
34:BA:735:C:H2'	34:BA:736:C:H6	1.75	0.52
34:BA:368:U:C4	57:BZ:354:ARG:NH1	2.77	0.52
34:DA:253:U:H2'	34:DA:254:G:H8	1.74	0.52
11:CN:112:LEU:O	11:CN:115:ARG:N	2.42	0.52
1:CA:2653:U:O2'	8:CH:110:SER:HB2	2.10	0.52
1:AA:1851:U:C2	4:AD:202:LYS:HG2	2.45	0.52
56:DW:73:A:H5''	56:DW:74:C:H5'	1.91	0.52
21:CX:53:LYS:HB3	21:CX:82:GLN:HB3	1.90	0.52
15:AR:97:VAL:HG22	15:AR:114:VAL:HG13	1.92	0.52
23:CZ:125:LEU:HB3	23:CZ:165:VAL:HG13	1.90	0.52
16:CS:105:ALA:O	16:CS:110:LEU:HB2	2.10	0.52
35:BB:62:ALA:HB1	35:BB:226:ARG:HD3	1.92	0.52
4:AD:147:LEU:HD22	4:AD:155:LEU:HD11	1.91	0.52
34:BA:153:C:H42	34:BA:169:C:N4	2.06	0.52
3:AC:29:LEU:O	3:AC:30:VAL:C	2.48	0.52
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.75	0.52
1:AA:1068:G:N7	11:AN:66:LYS:HE2	2.24	0.52
3:CC:67:HIS:CG	3:CC:185:LYS:HD2	2.45	0.52
18:CU:65:ILE:O	18:CU:69:CYS:HB2	2.09	0.52
7:CG:37:VAL:HG23	7:CG:99:MET:HG3	1.92	0.52
34:DA:229:U:H5''	49:DP:33:ILE:HD13	1.92	0.52
43:DJ:55:LYS:O	43:DJ:57:LYS:N	2.42	0.52
57:BZ:217:VAL:HG22	57:BZ:242:LEU:HD21	1.92	0.52
1:AA:692:C:H2'	1:AA:693:G:H8	1.75	0.52
1:CA:2600:A:N6	63:CA:3928:HOH:O	2.42	0.52
1:AA:2124:U:H2'	1:AA:2125:C:C6	2.44	0.52
20:CW:14:PRO:HG2	20:CW:78:GLU:HG2	1.91	0.52
2:CB:15:A:H1'	2:CB:110:G:C5	2.45	0.52
4:CD:148:GLU:OE1	4:CD:151:LYS:NZ	2.33	0.52
1:CA:570:G:H2'	1:CA:2030:A:C5	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BH:87:SER:HA	41:BH:93:VAL:HG23	1.92	0.52
14:CQ:122:GLY:HA2	14:CQ:125:LEU:HD12	1.92	0.52
10:AL:134:MET:HG3	10:AL:136:VAL:HG12	1.91	0.52
1:CA:2327:A:H2'	1:CA:2328:A:C8	2.44	0.52
12:AO:100:GLY:O	12:AO:119:PRO:HD2	2.10	0.52
1:CA:2177:C:O2'	3:CC:47:LYS:HD3	2.09	0.52
34:BA:559:A:P	38:BE:126:ARG:HH22	2.31	0.52
1:CA:2788:C:O2'	1:CA:2809:A:N3	2.39	0.52
34:DA:297:G:N2	34:DA:300:A:OP2	2.42	0.52
1:CA:527:C:H4'	1:CA:528:A:O5'	2.10	0.52
34:DA:433:C:H2'	34:DA:434:U:C6	2.44	0.52
1:AA:1846:A:O3'	63:AA:4736:HOH:O	2.19	0.52
1:CA:857:C:H2'	1:CA:858:U:C6	2.44	0.52
3:CC:65:LEU:HD22	3:CC:189:ASN:HB3	1.91	0.52
1:CA:374:A:H2'	1:CA:375:C:H5'	1.92	0.52
34:DA:967:C:H6	34:DA:967:C:O5'	1.93	0.52
46:DM:37:THR:HG21	46:DM:56:LEU:HA	1.92	0.52
49:BP:54:GLU:HG3	49:BP:55:ARG:N	2.24	0.52
38:DE:107:ARG:HG2	38:DE:108:ALA:N	2.25	0.52
1:CA:1337:G:OP2	21:CX:73:ARG:NH2	2.42	0.52
48:DO:64:ARG:O	48:DO:68:ARG:N	2.43	0.52
4:AD:18:VAL:HG12	4:AD:211:ARG:NH2	2.25	0.52
4:AD:206:LEU:HD22	4:AD:211:ARG:HG2	1.91	0.52
1:AA:2891:C:H2'	1:AA:2892:A:O4'	2.10	0.52
13:CP:81:GLN:NE2	13:CP:105:LEU:O	2.42	0.52
20:CW:12:ILE:HD13	20:CW:17:VAL:HG13	1.92	0.52
44:BK:115:PRO:HB2	44:BK:118:GLY:H	1.75	0.52
57:BZ:539:ILE:HA	57:BZ:542:VAL:HG12	1.91	0.52
38:BE:109:ILE:HD12	38:BE:135:THR:HB	1.91	0.52
4:AD:133:LEU:HB3	4:AD:173:VAL:HG11	1.92	0.52
17:AT:15:VAL:HG13	17:AT:79:HIS:CE1	2.46	0.52
3:CC:6:LYS:N	3:CC:9:ARG:NH1	2.58	0.51
1:AA:1218:G:OP2	1:AA:1218:G:H2'	2.10	0.51
1:AA:1067:A:H8	1:AA:1067:A:H3'	1.72	0.51
49:BP:71:ARG:HA	49:BP:74:LEU:HB2	1.90	0.51
57:BZ:424:LEU:O	57:BZ:428:LEU:HG	2.10	0.51
34:BA:1191:A:H5''	36:BC:4:LYS:NZ	2.25	0.51
3:AC:67:HIS:CG	3:AC:185:LYS:HD2	2.45	0.51
53:BT:56:MET:O	53:BT:60:GLU:HB2	2.10	0.51
1:AA:2022:G:OP1	15:AR:5:LYS:NZ	2.43	0.51
2:CB:15:A:H5'	2:CB:16:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:132:PRO:HD3	4:CD:190:TYR:CZ	2.45	0.51
36:BC:186:PHE:CG	36:BC:187:ALA:N	2.78	0.51
1:CA:1032:A:H1'	33:C9:23:VAL:HG21	1.92	0.51
1:AA:2705:A:H2'	1:AA:2706:G:H8	1.75	0.51
37:DD:158:ILE:HG22	37:DD:162:LEU:HD12	1.91	0.51
11:AN:51:PHE:CZ	11:AN:119:ARG:HG2	2.45	0.51
53:DT:9:ASN:O	53:DT:10:LEU:HB2	2.08	0.51
35:BB:145:LEU:O	35:BB:149:LEU:HB2	2.09	0.51
40:BG:27:ILE:HD12	40:BG:40:ALA:HA	1.92	0.51
1:AA:1817:A:H1'	1:AA:1960:A:N6	2.25	0.51
34:BA:15:G:C4	34:BA:16:A:C8	2.98	0.51
57:DZ:276:VAL:O	57:DZ:280:LEU:HB2	2.09	0.51
3:CC:50:ILE:HD13	3:CC:50:ILE:H	1.76	0.51
3:AC:218:THR:HG22	3:AC:219:MET:SD	2.50	0.51
3:CC:44:VAL:HG21	3:CC:176:VAL:HG21	1.92	0.51
3:CC:64:SER:HA	3:CC:161:ARG:H	1.74	0.51
13:AP:52:GLU:OE1	13:AP:55:ARG:NH1	2.33	0.51
5:AE:93:VAL:N	63:AE:417:HOH:O	2.35	0.51
1:AA:2803:A:H5''	1:AA:2804:C:H5''	1.92	0.51
1:CA:1046:A:H3'	1:CA:1047:G:C5'	2.39	0.51
44:DK:59:TYR:CZ	44:DK:63:LEU:HD21	2.46	0.51
21:CX:47:PHE:O	21:CX:49:VAL:HG13	2.10	0.51
34:DA:992:U:H3	34:DA:1044:A:H62	1.58	0.51
34:BA:316:G:OP2	34:BA:351:G:O2'	2.28	0.51
40:BG:103:TRP:HA	40:BG:106:GLN:HB2	1.92	0.51
2:CB:106:G:H5'	23:CZ:31:ARG:HG2	1.93	0.51
34:BA:1286:A:H2'	34:BA:1287:A:H4'	1.92	0.51
26:A2:35:LEU:HD12	26:A2:53:LEU:HD12	1.91	0.51
17:AT:116:ALA:HB1	17:AT:121:ILE:HD11	1.92	0.51
23:CZ:100:VAL:O	23:CZ:124:ILE:N	2.43	0.51
24:C0:40:GLN:HE21	24:C0:59:LEU:HG	1.76	0.51
34:DA:1402:C:H2'	34:DA:1403:C:O4'	2.10	0.51
56:DW:40:C:H2'	56:DW:41:C:C6	2.45	0.51
3:CC:29:LEU:O	3:CC:30:VAL:C	2.48	0.51
34:BA:406:G:H21	37:BD:119:GLN:NE2	2.02	0.51
34:DA:1281:U:OP2	34:DA:1282:C:N4	2.38	0.51
6:CF:126:VAL:HG21	6:CF:129:PHE:CE1	2.45	0.51
34:DA:401:C:OP2	37:DD:73:ARG:NH2	2.42	0.51
1:AA:2146:G:H1	1:AA:2196:C:H42	1.58	0.51
34:DA:406:G:H1	34:DA:436:C:H42	1.58	0.51
3:AC:68:GLY:H	3:AC:189:ASN:ND2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:196:A:H62	13:CP:38:GLN:HE22	1.56	0.51
11:AN:74:ARG:HH11	11:AN:74:ARG:HG3	1.74	0.51
46:DM:33:ALA:HA	46:DM:59:TYR:CE2	2.45	0.51
57:BZ:181:LEU:HD23	57:BZ:182:ARG:HG3	1.93	0.51
1:AA:1386:U:H4'	1:AA:1387:U:OP2	2.10	0.51
1:CA:68:G:N2	1:CA:74:A:OP2	2.43	0.51
34:DA:1148:U:H2'	34:DA:1149:C:O4'	2.10	0.51
1:CA:2336:A:H61	24:C0:43:THR:HG22	1.75	0.51
57:BZ:88:VAL:HG13	57:BZ:117:GLN:NE2	2.25	0.51
57:BZ:72:CYS:SG	57:BZ:79:ILE:HB	2.51	0.51
1:CA:918:A:C5	1:CA:919:G:H1'	2.45	0.51
34:DA:837:G:H1	34:DA:849:C:H42	1.58	0.51
28:C4:8:LYS:O	28:C4:27:THR:HA	2.10	0.51
1:AA:905:U:O2	1:AA:2280:A:H2'	2.09	0.51
57:DZ:150:ILE:HA	57:DZ:153:MET:HB3	1.92	0.51
1:CA:2124:G:O6	1:CA:2174:C:N4	2.38	0.51
35:BB:201:ILE:HG21	35:BB:214:ILE:HG21	1.93	0.51
57:BZ:180:VAL:O	57:BZ:213:HIS:HD2	1.93	0.51
34:DA:539:A:OP2	45:DL:115:LYS:NZ	2.42	0.51
34:DA:391:G:C6	34:DA:392:G:C5	2.99	0.51
1:CA:794:G:H2'	1:CA:795:C:C6	2.46	0.51
13:AP:8:PRO:HB2	13:AP:12:ALA:HB3	1.92	0.51
1:AA:2802:C:O2'	1:AA:2803:A:O4'	2.28	0.51
34:DA:1112:C:O2	36:DC:179:ARG:HG2	2.10	0.51
45:DL:119:LYS:O	45:DL:121:GLY:N	2.44	0.51
37:BD:79:PHE:HB2	37:BD:93:PHE:CZ	2.45	0.51
1:CA:2016:U:H2'	1:CA:2017:U:H6	1.76	0.51
1:AA:1940:A:O2'	1:AA:1942:C:N4	2.43	0.51
39:DF:62:TRP:CD1	51:DR:35:ARG:HD3	2.45	0.51
17:CT:27:THR:HB	17:CT:90:GLN:HB3	1.91	0.51
57:BZ:-63:ILE:HG12	57:BZ:-49:VAL:HG23	1.93	0.51
35:BB:54:THR:HG23	35:BB:199:TYR:HB3	1.91	0.51
57:DZ:201:ILE:HG21	57:DZ:206:LEU:HD13	1.93	0.51
34:DA:289:G:OP2	63:DA:3239:HOH:O	2.19	0.51
8:CH:15:VAL:HG23	8:CH:28:GLY:HA3	1.93	0.51
34:DA:1144:G:N2	34:DA:1146:A:H62	2.08	0.51
34:BA:975:A:N6	34:BA:1367:C:O4'	2.44	0.51
34:BA:232:G:H2'	34:BA:233:C:H6	1.76	0.51
48:DO:24:SER:O	48:DO:28:GLN:HG3	2.10	0.51
35:DB:192:SER:O	35:DB:194:PRO:HD3	2.11	0.51
57:DZ:103:GLY:N	57:DZ:130:VAL:HG23	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CN:14:VAL:HG12	11:CN:15:LEU:N	2.25	0.51
2:CB:73:A:C4	2:CB:105:A:C2	2.99	0.51
3:CC:42:VAL:CG1	3:CC:43:GLU:N	2.73	0.51
35:DB:88:ALA:HB2	35:DB:219:VAL:HG13	1.93	0.51
1:AA:2473:C:H2'	1:AA:2474:U:H6	1.75	0.51
13:CP:139:LYS:C	13:CP:141:ALA:H	2.14	0.51
34:DA:1014:A:H4'	52:DS:14:HIS:CE1	2.46	0.51
1:CA:2335:A:O2'	1:CA:2336:A:OP2	2.20	0.51
34:DA:1513:A:H2'	34:DA:1514:C:C6	2.45	0.51
1:CA:804:A:H5''	1:CA:805:G:OP1	2.11	0.51
1:CA:20:C:OP1	18:CU:22:LYS:NZ	2.30	0.51
56:DY:51:U:H3	56:DY:63:G:H1	1.58	0.51
1:AA:861:C:O2'	1:AA:862:C:H5'	2.11	0.51
34:BA:131:C:H2'	34:BA:132:C:C6	2.45	0.51
10:AL:125:ARG:O	10:AL:129:GLY:N	2.43	0.51
1:AA:397:G:H8	1:AA:397:G:OP2	1.94	0.51
47:BN:51:GLY:O	47:BN:53:LEU:N	2.43	0.51
1:CA:1866:C:H2'	1:CA:1876:A:O4'	2.11	0.51
53:BT:97:ALA:N	53:BT:98:PRO:HD3	2.26	0.51
12:CO:31:LYS:HB3	12:CO:32:TYR:CE2	2.46	0.51
34:BA:1251:A:H2'	34:BA:1252:A:C8	2.45	0.51
1:CA:2175:C:H2'	1:CA:2176:A:O4'	2.11	0.51
53:DT:57:ARG:HH12	53:DT:101:GLY:H	1.58	0.51
34:DA:1145:C:H4'	34:DA:1146:A:H5'	1.93	0.51
3:AC:54:ARG:HD2	3:AC:55:SER:H	1.76	0.51
3:AC:54:ARG:HH22	3:AC:56:ASP:HB3	1.76	0.51
3:CC:57:GLN:HB2	3:CC:202:PRO:HG2	1.93	0.51
34:BA:401:C:O2'	34:BA:621:A:N3	2.39	0.51
1:AA:1104:G:N2	1:AA:1127:U:H1'	2.26	0.51
34:DA:565:U:OP2	34:DA:566:G:O2'	2.13	0.51
28:A4:59:PHE:CD2	52:BS:42:PRO:HB3	2.45	0.51
51:BR:58:LEU:HB3	51:BR:62:GLU:HG3	1.91	0.51
3:AC:44:VAL:HG21	3:AC:176:VAL:HG21	1.92	0.51
1:CA:846:C:H4'	1:CA:847:U:O5'	2.10	0.51
34:BA:1072:G:C5	34:BA:1073:U:C4	2.98	0.51
8:CH:87:LEU:HD11	8:CH:148:ILE:HB	1.92	0.51
34:BA:243:A:C2	34:BA:246:A:C8	2.99	0.51
43:DJ:11:PHE:CE1	43:DJ:67:THR:HB	2.46	0.51
1:AA:142:G:H2'	1:AA:143:C:C6	2.46	0.51
21:CX:57:LEU:CD1	21:CX:78:LYS:HB3	2.40	0.51
1:CA:1110:G:N3	1:CA:1110:G:H2'	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2543:G:H2'	1:CA:2544:G:C8	2.46	0.51
1:AA:2769:U:H1'	1:AA:2770:A:H5''	1.91	0.51
13:CP:54:GLY:O	63:CP:309:HOH:O	2.19	0.51
52:BS:44:MET:O	52:BS:47:HIS:HB2	2.11	0.51
1:CA:1093:G:H21	1:CA:1098:A:H62	1.58	0.51
1:CA:673:C:H5''	6:CF:81:PRO:HD2	1.93	0.51
1:CA:556:G:H2'	1:CA:557:U:C6	2.46	0.51
12:CO:7:TYR:HE1	12:CO:20:MET:HE3	1.75	0.51
1:CA:2124:G:C4'	3:CC:175:PRO:CG	2.82	0.51
34:BA:28:G:O2'	34:BA:296:U:OP1	2.27	0.51
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CD1	2.46	0.51
3:AC:57:GLN:HB2	3:AC:202:PRO:HG2	1.93	0.51
5:CE:12:THR:HG21	17:CT:11:GLU:OE2	2.11	0.51
8:AH:7:LEU:HD23	8:AH:69:ARG:NH1	2.26	0.51
34:DA:436:C:H2'	34:DA:437:U:H6	1.75	0.51
1:CA:2025:C:H2'	1:CA:2026:C:H6	1.71	0.51
3:CC:65:LEU:HB3	3:CC:189:ASN:HD22	1.75	0.51
1:AA:2901:A:N7	1:AA:2902:G:C6	2.79	0.51
44:DK:79:SER:HB2	44:DK:106:LYS:HE3	1.92	0.51
1:AA:956:A:N1	1:AA:2289:G:H1'	2.25	0.51
1:AA:417:A:H4'	1:AA:418:G:H5'	1.92	0.51
5:CE:169:ASN:HD22	5:CE:203:LYS:HB2	1.76	0.51
6:AF:7:TYR:O	6:AF:21:ALA:HA	2.10	0.51
57:BZ:490:PRO:HG3	57:BZ:516:PRO:HD2	1.92	0.51
1:AA:85:C:H4'	1:AA:102:U:H1'	1.93	0.51
1:CA:271(O):C:H2'	1:CA:271(P):C:C6	2.46	0.51
42:BI:121:ARG:NH1	42:BI:122:ALA:O	2.40	0.51
56:BY:19:G:H4'	56:BY:20:U:OP2	2.09	0.51
34:BA:1307:U:H2'	34:BA:1308:U:C6	2.45	0.51
1:AA:1321:A:N3	1:AA:1322:A:H1'	2.25	0.51
22:CY:11:ASP:OD2	22:CY:97:ARG:NH2	2.43	0.51
6:CF:184:TYR:CE2	6:CF:188:ARG:HD2	2.45	0.51
36:DC:54:ARG:HB3	36:DC:54:ARG:HH11	1.76	0.51
1:CA:2537:U:H2'	1:CA:2538:C:C6	2.46	0.51
1:CA:958:U:O2	2:CB:90:A:O2'	2.23	0.51
1:CA:144:C:H5'	21:CX:2:LYS:HE2	1.92	0.51
3:CC:218:THR:HG22	3:CC:219:MET:SD	2.50	0.51
57:DZ:20:HIS:O	57:DZ:25:LYS:NZ	2.29	0.51
57:DZ:138:LYS:HA	62:DZ:704:GDP:N1	2.25	0.51
1:AA:552:C:O2	1:AA:552:C:O4'	2.27	0.51
6:CF:108:LYS:O	6:CF:112:MET:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:196:LEU:O	37:DD:198:VAL:N	2.41	0.51
8:AH:98:LEU:HD12	8:AH:102:ALA:O	2.11	0.51
13:CP:97:PRO:HD3	13:CP:126:VAL:O	2.10	0.51
23:CZ:29:TYR:HB3	23:CZ:34:ASN:ND2	2.25	0.51
1:AA:1186:U:H6	11:AN:63:THR:HG1	1.57	0.51
38:BE:78:HIS:NE2	38:BE:142:LEU:HA	2.26	0.51
3:AC:65:LEU:HB3	3:AC:189:ASN:HD22	1.75	0.51
1:AA:2556:G:H1'	1:AA:2658:C:H4'	1.93	0.51
1:AA:956:A:H62	14:AQ:12:GLN:HA	1.74	0.51
1:AA:2559:U:H2'	1:AA:2560:G:H8	1.76	0.51
34:BA:153:C:H42	34:BA:169:C:H42	1.58	0.51
23:CZ:39:VAL:HG21	23:CZ:44:PHE:HB2	1.92	0.51
7:CG:49:ASP:C	7:CG:51:ARG:H	2.13	0.51
1:CA:2469:A:O3'	14:CQ:56:ARG:NH2	2.43	0.51
1:AA:864:C:H4'	1:AA:977:G:C5	2.46	0.51
57:DZ:12:LEU:O	57:DZ:283:PRO:HD3	2.10	0.51
34:DA:1372:U:H5''	42:DI:71:SER:HB3	1.93	0.51
34:BA:771:G:H2'	34:BA:772:U:C6	2.46	0.51
17:CT:115:ARG:H	17:CT:115:ARG:HD2	1.75	0.51
34:BA:441:A:H8	34:BA:441:A:OP2	1.94	0.51
34:DA:1029:C:H2'	34:DA:1030:C:H5''	1.92	0.51
1:CA:1861:G:OP1	3:CC:205:ALA:C	2.48	0.51
1:AA:2304:C:P	16:AS:17:ARG:HH12	2.34	0.51
34:DA:1003:G:H2'	34:DA:1004:A:O4'	2.11	0.51
34:DA:1003:G:N2	34:DA:1025:U:O4	2.43	0.51
23:AZ:48:PHE:CE2	23:AZ:52:SER:HA	2.46	0.51
37:BD:13:ARG:HB3	37:BD:13:ARG:HH11	1.76	0.51
15:CR:37:THR:OG1	15:CR:40:LYS:HB2	2.10	0.51
18:CU:65:ILE:HD11	18:CU:95:LEU:HB3	1.92	0.51
36:BC:134:ILE:O	36:BC:138:VAL:HG23	2.11	0.51
57:BZ:647:VAL:HG21	57:BZ:652:MET:SD	2.51	0.51
1:CA:2112:G:N7	1:CA:2113:U:H1'	2.26	0.51
57:BZ:639:ASN:N	57:BZ:640:ALA:HB3	2.26	0.51
1:CA:2854:G:H2'	1:CA:2855:C:C6	2.45	0.51
1:CA:1049:C:H3'	1:CA:1050:A:C8	2.46	0.51
34:DA:503:C:OP2	45:DL:116:SER:HB3	2.10	0.51
46:BM:15:VAL:HA	46:BM:18:ALA:HB3	1.92	0.51
52:BS:16:LEU:HD12	52:BS:19:VAL:HB	1.92	0.51
38:BE:88:LYS:HE2	38:BE:123:LEU:HD12	1.92	0.51
1:AA:7:G:H2'	1:AA:8:A:C8	2.45	0.51
34:BA:551:U:H2'	34:BA:552:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:548:GLU:O	57:DZ:551:GLN:HG2	2.09	0.51
34:DA:428:G:C5	34:DA:430:A:C6	2.99	0.51
57:DZ:556:ILE:HG13	57:DZ:558:PHE:HD2	1.75	0.51
26:C2:28:LYS:HE3	26:C2:56:GLN:OE1	2.11	0.51
1:AA:1704:C:H4'	5:AE:133:LYS:HB3	1.92	0.51
1:AA:515:G:N7	20:AW:49:LYS:NZ	2.57	0.51
34:DA:460:G:O6	34:DA:470:C:H5''	2.11	0.51
57:BZ:240:GLU:H	57:BZ:240:GLU:CD	2.14	0.51
4:AD:221:VAL:HG22	4:AD:226:MET:CE	2.41	0.51
57:DZ:409:ILE:HD11	57:DZ:654:GLY:HA2	1.92	0.51
35:DB:163:PHE:CD1	35:DB:185:ILE:HG13	2.41	0.51
57:BZ:114:VAL:CG2	57:BZ:152:THR:HB	2.36	0.51
1:CA:2349:G:H3'	1:CA:2350:C:H5''	1.93	0.51
9:AK:73:GLY:C	9:AK:75:GLN:H	2.11	0.51
56:BY:58:A:C2	56:BY:60:U:H2'	2.46	0.51
40:BG:111:ARG:NH1	40:BG:113:GLU:OE2	2.43	0.51
7:CG:37:VAL:O	7:CG:94:LEU:N	2.35	0.51
1:CA:994:C:H1'	19:CV:10:LYS:HE3	1.92	0.51
3:CC:68:GLY:H	3:CC:189:ASN:ND2	2.09	0.51
34:DA:1016:A:O2'	34:DA:1217:C:O2'	2.18	0.51
10:AL:30:HIS:CG	10:AL:59:ILE:HB	2.46	0.51
11:CN:102:ALA:O	11:CN:106:MET:HG3	2.11	0.51
1:AA:2343:G:H4'	24:A0:43:THR:H	1.76	0.51
1:CA:2850:A:H2'	1:CA:2851:A:H8	1.76	0.51
1:CA:580:C:H2'	1:CA:581:C:C6	2.46	0.51
34:DA:502:G:C6	34:DA:503:C:N3	2.79	0.51
34:DA:1118:C:H1'	34:DA:1179:A:C4	2.46	0.51
34:DA:1040:U:N3	34:DA:1041:A:N7	2.58	0.51
41:DH:11:THR:O	41:DH:15:ASN:ND2	2.39	0.51
12:CO:18:LYS:HB2	12:CO:45:GLU:HB3	1.92	0.51
1:AA:843:C:H2'	1:AA:844:C:C6	2.45	0.51
1:CA:2395:C:O2'	25:C1:30:VAL:HG22	2.11	0.51
1:CA:1041:C:H42	1:CA:1114:G:H1	1.57	0.51
1:AA:990:A:C4	1:AA:2460:A:C2	2.99	0.51
18:AU:90:VAL:HB	18:AU:95:LEU:HD13	1.92	0.51
57:DZ:415:PRO:HB3	57:DZ:424:LEU:HD23	1.92	0.51
34:BA:345:C:H4'	34:BA:346:G:C4	2.47	0.50
1:CA:2788:C:N4	1:CA:2789:C:H41	2.09	0.50
34:BA:390:C:H2'	34:BA:391:G:C8	2.44	0.50
41:BH:10:LEU:HD11	41:BH:85:ARG:HG2	1.93	0.50
41:DH:6:ILE:O	41:DH:10:LEU:HG	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:626:U:C2	34:BA:627:G:C8	2.99	0.50
34:DA:475:G:H2'	34:DA:476:G:H8	1.76	0.50
16:AS:10:ARG:HG2	16:AS:91:PRO:HA	1.93	0.50
34:DA:137:C:H2'	34:DA:138:G:H8	1.76	0.50
34:BA:448:A:C4	34:BA:487:A:C2	2.99	0.50
34:DA:987:G:N2	34:DA:1219:U:O2	2.44	0.50
25:A1:53:VAL:HG21	25:A1:94:LEU:HD11	1.93	0.50
1:CA:2823:A:OP1	5:CE:159:HIS:NE2	2.32	0.50
40:DG:118:VAL:HG13	40:DG:122:HIS:NE2	2.26	0.50
1:CA:247:G:H4'	1:CA:386:G:C5	2.46	0.50
35:BB:105:PHE:O	35:BB:107:THR:N	2.45	0.50
24:A0:70:GLN:OE1	24:A0:80:HIS:NE2	2.37	0.50
34:DA:1103:C:H2'	34:DA:1104:G:O4'	2.11	0.50
1:CA:2207:G:H3'	1:CA:2208:A:H5''	1.93	0.50
1:AA:552:C:H4'	1:AA:553:A:O5'	2.11	0.50
34:BA:376:G:O3'	49:BP:5:ARG:HD2	2.10	0.50
3:AC:6:LYS:N	3:AC:9:ARG:NH1	2.58	0.50
5:CE:49:LEU:HD22	5:CE:81:ILE:HG13	1.93	0.50
57:BZ:-6:ARG:C	57:BZ:-4:ALA:H	2.14	0.50
38:DE:90:VAL:HG23	38:DE:121:LYS:HB3	1.92	0.50
43:BJ:47:PHE:HB2	43:BJ:63:PHE:HB2	1.93	0.50
56:BY:5:G:H1	56:BY:68:C:H42	1.59	0.50
13:CP:86:LYS:HD3	13:CP:117:GLU:HB3	1.93	0.50
1:CA:2420:C:P	32:C8:33:ASN:H	2.34	0.50
39:DF:36:ARG:NH1	39:DF:38:GLU:OE2	2.44	0.50
34:BA:1381:U:O4'	40:BG:79:ARG:NE	2.43	0.50
52:DS:27:GLU:HG2	52:DS:47:HIS:CD2	2.46	0.50
1:AA:1128:U:H5''	1:AA:1129:U:OP2	2.12	0.50
34:BA:1234:C:H1'	34:BA:1364:U:O2	2.11	0.50
38:BE:40:ARG:NH2	38:BE:68:GLU:HA	2.26	0.50
46:DM:124:PRO:HD2	57:DZ:507:TYR:HB2	1.92	0.50
34:BA:27:G:H2'	34:BA:28:G:C8	2.46	0.50
1:CA:1359:A:C2	1:CA:1372:U:O4	2.65	0.50
34:DA:1320:C:C2	52:DS:72:GLY:HA3	2.46	0.50
34:DA:1256:A:H61	34:DA:1278:U:H1'	1.76	0.50
1:CA:1971:A:C4	4:CD:241:PRO:HD3	2.46	0.50
6:CF:132:VAL:HG21	6:CF:163:VAL:HG22	1.92	0.50
3:CC:42:VAL:HG13	3:CC:43:GLU:H	1.73	0.50
57:BZ:616:TYR:HE2	57:BZ:664:GLN:HG3	1.75	0.50
1:CA:2112:G:C5	1:CA:2113:U:H1'	2.47	0.50
16:CS:15:ARG:O	16:CS:19:LYS:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1525:G:OP1	44:BK:120:ARG:NH2	2.44	0.50
1:AA:1160:G:H2'	1:AA:1161:G:C8	2.46	0.50
8:CH:90:LYS:HD3	8:CH:159:GLU:HG2	1.94	0.50
1:CA:1274:A:N3	1:CA:1297:C:H1'	2.26	0.50
1:AA:1993:A:OP2	4:AD:242:ARG:NH2	2.44	0.50
7:CG:46:ALA:O	7:CG:51:ARG:HA	2.10	0.50
13:AP:113:LYS:HG3	13:AP:129:ALA:HB3	1.93	0.50
9:AK:26:LEU:HA	9:AK:84:GLU:HA	1.94	0.50
41:BH:39:LEU:HB3	41:BH:45:ILE:HG12	1.93	0.50
34:DA:792:A:H4'	34:DA:793:U:O5'	2.12	0.50
22:AY:86:ARG:HB2	22:AY:98:VAL:HG23	1.93	0.50
34:BA:302:G:N3	34:BA:556:C:H4'	2.27	0.50
9:AK:4:LYS:N	9:AK:5:ARG:HA	2.27	0.50
1:CA:1745(A):C:H5'	1:CA:1746:G:OP2	2.11	0.50
1:AA:1221:G:H1'	1:AA:1222:A:H5'	1.94	0.50
55:BV:15:A:C2'	55:BV:16:U:H5	2.24	0.50
34:DA:1316:G:N7	52:DS:7:LYS:NZ	2.60	0.50
3:AC:50:ILE:H	3:AC:50:ILE:HD13	1.76	0.50
45:BL:32:PHE:HB3	45:BL:84:LEU:HD11	1.92	0.50
45:BL:84:LEU:HD23	45:BL:105:TYR:HE2	1.76	0.50
44:BK:99:GLN:HG2	44:BK:105:VAL:HG21	1.92	0.50
57:DZ:221:ALA:HB1	57:DZ:228:MET:HB2	1.93	0.50
1:CA:754:C:H2'	1:CA:755:C:H6	1.76	0.50
34:DA:447:G:H2'	34:DA:485:G:N2	2.25	0.50
1:AA:1636:U:O2'	1:AA:1637:G:H5'	2.12	0.50
1:CA:1472:A:N6	1:CA:1519:G:H1'	2.27	0.50
34:DA:90:U:H2'	34:DA:91:C:C6	2.46	0.50
25:C1:95:LEU:O	25:C1:98:LEU:HB2	2.12	0.50
31:C7:24:THR:O	31:C7:28:ARG:HG3	2.11	0.50
34:DA:986:A:O2'	52:DS:55:LYS:O	2.30	0.50
1:AA:2221:A:H3'	1:AA:2222:C:H6	1.77	0.50
34:DA:665:A:H2'	34:DA:732:C:O2	2.11	0.50
1:AA:2896:G:O2'	29:A5:32:PRO:HD2	2.11	0.50
26:A2:46:GLN:HB2	26:A2:49:LYS:HD2	1.94	0.50
34:DA:707:C:H2'	34:DA:708:C:H6	1.76	0.50
1:AA:1537:G:C5	1:AA:1546:G:N2	2.80	0.50
34:DA:836:G:OP1	51:DR:61:LYS:NZ	2.43	0.50
34:BA:1148:U:H2'	34:BA:1149:C:O4'	2.11	0.50
14:AQ:10:ARG:HB2	14:AQ:10:ARG:CZ	2.41	0.50
1:AA:441:C:H2'	1:AA:442:A:C8	2.47	0.50
11:CN:24:GLY:O	11:CN:28:THR:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2177:C:O3'	3:CC:47:LYS:HB2	2.10	0.50
1:AA:1834:A:O2'	4:AD:259:THR:HG21	2.11	0.50
34:BA:389:A:N6	34:BA:390:C:O2	2.44	0.50
1:CA:1364:G:C8	25:C1:3:LYS:HE2	2.47	0.50
35:DB:150:SER:O	35:DB:153:ARG:HG2	2.11	0.50
1:AA:2155:G:O2'	1:AA:2178:G:N2	2.44	0.50
34:DA:976:G:N2	34:DA:1362:C:H2'	2.27	0.50
1:CA:614(B):G:H2'	6:CF:44:ARG:NH1	2.26	0.50
30:A6:50:ARG:HG3	30:A6:51:GLU:N	2.26	0.50
35:BB:88:ALA:HB2	35:BB:219:VAL:HG13	1.93	0.50
34:DA:685:G:N1	34:DA:686:U:O4	2.44	0.50
1:CA:2394:C:P	32:C8:30:ARG:HH11	2.34	0.50
34:DA:144:G:H2'	34:DA:145:G:H8	1.76	0.50
1:CA:1059:G:OP2	1:CA:1060:U:H3'	2.11	0.50
1:AA:1106:U:H4'	1:AA:1107:U:H5'	1.93	0.50
56:DY:25:C:H2'	56:DY:26:A:H8	1.77	0.50
23:AZ:70:LEU:HD11	23:AZ:98:MET:CE	2.42	0.50
25:A1:34:THR:HG22	25:A1:36:GLY:H	1.75	0.50
34:BA:1466:C:H2'	34:BA:1467:G:O4'	2.11	0.50
38:DE:101:ILE:HG13	38:DE:119:LEU:HD23	1.93	0.50
40:BG:26:PHE:O	40:BG:30:ILE:HG13	2.11	0.50
10:AL:55:VAL:HG13	10:AL:57:ILE:HD11	1.93	0.50
26:C2:16:LEU:HD13	26:C2:20:GLU:HB3	1.92	0.50
34:DA:189(B):C:H2'	34:DA:189(C):C:C6	2.47	0.50
1:CA:2636:U:H1'	1:CA:2783:G:N2	2.26	0.50
1:CA:487:C:H1'	20:CW:53:SER:HA	1.93	0.50
11:AN:5:VAL:HG23	11:AN:6:PRO:HD2	1.94	0.50
37:BD:42:GLN:O	37:BD:42:GLN:HG3	2.11	0.50
1:CA:503:A:H4'	1:CA:504:U:H5'	1.93	0.50
45:BL:88:GLY:O	45:BL:99:HIS:CD2	2.64	0.50
57:BZ:225:GLU:HA	57:BZ:228:MET:CB	2.38	0.50
1:AA:1739:U:O2'	1:AA:1740:U:H2'	2.11	0.50
38:BE:6:PHE:CE2	38:BE:36:ASP:HB3	2.47	0.50
38:BE:41:VAL:O	38:BE:67:VAL:N	2.44	0.50
5:CE:96:PHE:O	5:CE:175:VAL:HG11	2.11	0.50
40:BG:93:PRO:HA	40:BG:96:GLN:HB2	1.94	0.50
34:BA:1030(D):A:H62	34:BA:1031:G:H21	1.58	0.50
3:CC:191:ARG:O	3:CC:195:ARG:HG2	2.11	0.50
1:AA:1410:G:OP2	25:A1:3:LYS:HD2	2.12	0.50
57:DZ:35:TYR:OH	57:DZ:266:ASN:HB3	2.11	0.50
12:AO:16:ALA:HB2	12:AO:52:VAL:HG21	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:912:C:H2'	1:CA:913:U:C6	2.46	0.50
1:CA:265:A:C8	1:CA:266:G:H1'	2.47	0.50
1:AA:997:G:OP1	14:AQ:16:ARG:NH2	2.45	0.50
41:BH:40:ALA:O	41:BH:42:GLU:N	2.45	0.50
47:DN:40:CYS:O	47:DN:43:CYS:N	2.45	0.50
1:AA:641:G:OP2	6:AF:43:LYS:NZ	2.44	0.50
39:BF:96:PRO:HB3	51:BR:30:ASP:OD2	2.12	0.50
56:DY:12:U:H3	56:DY:23:A:H61	1.59	0.50
10:AL:88:ALA:O	10:AL:90:LYS:N	2.45	0.50
1:AA:1827:U:H2'	1:AA:1828:C:C6	2.46	0.50
45:DL:69:TYR:HB3	45:DL:99:HIS:ND1	2.27	0.50
49:DP:6:LEU:HD23	49:DP:17:TYR:CD1	2.46	0.50
4:AD:89:SER:HB2	4:AD:159:ALA:H	1.76	0.50
18:AU:102:GLU:HA	18:AU:104:GLN:HE22	1.76	0.50
34:DA:377:G:OP1	49:DP:3:LYS:HD2	2.12	0.50
28:A4:47:GLN:HG2	28:A4:49:PHE:H	1.76	0.50
4:AD:112:GLN:O	4:AD:115:GLN:HB3	2.11	0.50
34:BA:142:G:H2'	34:BA:143:A:H8	1.77	0.50
57:DZ:498:ILE:HG22	57:DZ:507:TYR:CE2	2.47	0.50
57:DZ:132:ARG:HD3	57:DZ:160:ARG:NH1	2.27	0.50
49:BP:43:LYS:HG2	49:BP:48:TRP:CE2	2.47	0.50
34:DA:1240:U:H5'	34:DA:1241:G:C8	2.47	0.50
1:AA:2119:C:H2'	1:AA:2120:U:O4'	2.11	0.50
3:AC:42:VAL:CG1	3:AC:43:GLU:N	2.73	0.50
43:BJ:13:HIS:HA	43:BJ:16:LEU:HB3	1.92	0.50
43:BJ:16:LEU:HD21	43:BJ:70:ARG:HG2	1.94	0.50
34:DA:520:A:N1	34:DA:536:C:H1'	2.27	0.50
20:CW:60:ASN:N	20:CW:60:ASN:HD22	2.09	0.50
3:AC:191:ARG:O	3:AC:194:ILE:HG22	2.12	0.50
41:DH:44:PHE:HB3	41:DH:80:ILE:CD1	2.41	0.50
2:CB:78:A:C2	2:CB:100:A:C4	3.00	0.50
7:CG:137:GLU:HB3	7:CG:140:ILE:HD13	1.94	0.50
4:AD:221:VAL:HG22	4:AD:226:MET:HE3	1.94	0.50
1:CA:2360:A:H2'	1:CA:2361:A:O4'	2.11	0.50
34:DA:509:A:H8	34:DA:509:A:H3'	1.77	0.50
57:BZ:-38:TYR:O	57:BZ:-35:PRO:HD2	2.12	0.50
4:CD:89:SER:HB2	4:CD:159:ALA:HB2	1.94	0.50
4:CD:228:PRO:HD3	4:CD:235:GLY:HA3	1.93	0.50
1:CA:469:G:C2'	1:CA:470:A:H5''	2.42	0.50
9:AK:69:PRO:C	9:AK:71:LEU:H	2.15	0.50
34:DA:1268:A:O2'	54:DU:19:GLY:HA2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1772:C:H6	1:AA:1772:C:O5'	1.94	0.50
9:CK:74:LEU:O	9:CK:76:GLY:N	2.45	0.50
12:CO:26:LYS:O	12:CO:30:ALA:HB2	2.11	0.50
7:AG:61:ALA:O	28:A4:7:PRO:HG2	2.12	0.50
1:CA:1860:G:OP1	3:CC:207:GLY:CA	2.60	0.50
1:AA:2317:A:N1	7:AG:154:GLY:N	2.54	0.50
1:AA:1157:A:H8	1:AA:1158:G:H1'	1.75	0.50
46:DM:17:VAL:O	46:DM:20:THR:OG1	2.22	0.50
3:CC:20:VAL:O	3:CC:21:TYR:CB	2.58	0.50
34:BA:437:U:H2'	34:BA:438:G:H5'	1.92	0.50
34:BA:1320:C:H2'	34:BA:1321:C:O4'	2.12	0.50
17:AT:16:ARG:HH12	17:AT:19:LEU:HD21	1.76	0.50
1:AA:2221:A:H5''	1:AA:2222:C:OP2	2.12	0.50
1:CA:2729:G:C6	1:CA:2730:C:C4	3.00	0.50
37:BD:64:LEU:HD11	37:BD:97:LEU:HD13	1.92	0.50
34:DA:418:C:H2'	34:DA:419:C:C6	2.47	0.50
1:CA:2203:U:H2'	1:CA:2205:C:H6	1.77	0.50
34:BA:937:A:OP2	63:BA:5214:HOH:O	2.18	0.50
46:BM:24:GLY:O	46:BM:29:ARG:NH1	2.43	0.50
57:DZ:412:ALA:HB2	57:DZ:479:PRO:HB3	1.92	0.50
1:CA:1680:U:O2	1:CA:1763:G:H3'	2.11	0.50
56:BY:26:A:H61	56:BY:44:G:H1	1.59	0.50
29:A5:35:GLU:HG3	29:A5:51:TYR:CD2	2.46	0.50
1:CA:34:C:O2	1:CA:34:C:H2'	2.12	0.50
1:AA:2737:C:OP1	5:AE:118:LYS:NZ	2.45	0.50
11:CN:38:HIS:NE2	11:CN:50:ASP:OD2	2.38	0.50
30:C6:10:LEU:HD23	30:C6:22:ALA:HB2	1.94	0.50
34:DA:1123:A:H4'	43:DJ:36:GLY:HA3	1.94	0.50
1:AA:2144:U:H1'	3:AC:167:ASP:HB2	1.92	0.50
57:BZ:247:ARG:O	57:BZ:251:ILE:HG13	2.12	0.50
34:DA:1132:C:H2'	34:DA:1133:G:C8	2.46	0.50
1:CA:1268:A:C2	1:CA:2013:A:C4	3.00	0.50
38:BE:146:ALA:O	38:BE:149:GLU:N	2.45	0.50
23:CZ:139:VAL:HG23	23:CZ:141:VAL:HG13	1.94	0.50
44:BK:84:VAL:HG11	44:BK:91:ARG:HH11	1.77	0.50
1:AA:860:U:H2'	1:AA:861:C:C6	2.47	0.50
34:BA:1106:G:C6	34:BA:1107:C:C4	2.99	0.50
1:AA:779:C:H2'	1:AA:780:G:O4'	2.12	0.50
1:AA:326:C:H2'	1:AA:327:U:H6	1.77	0.50
1:AA:1232:G:H5''	19:AV:81:TYR:CE1	2.47	0.50
48:BO:3:ILE:HG21	48:BO:34:LEU:HD21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:180:VAL:O	57:BZ:213:HIS:CD2	2.65	0.49
39:DF:87:ARG:NH1	39:DF:87:ARG:HG3	2.13	0.49
6:CF:29:ASN:H	6:CF:112:MET:HE2	1.76	0.49
34:BA:107:G:H2'	34:BA:108:G:O4'	2.12	0.49
41:BH:20:TYR:HA	41:BH:65:TYR:OH	2.11	0.49
34:DA:561:U:O2'	34:DA:562:C:OP2	2.29	0.49
3:AC:183:PRO:C	3:AC:185:LYS:H	2.16	0.49
57:BZ:612:THR:OG1	57:BZ:616:TYR:HB2	2.12	0.49
1:CA:860:U:C2	1:CA:2268:A:C8	3.00	0.49
34:DA:474:G:H2'	34:DA:475:G:H8	1.76	0.49
12:AO:71:ARG:NH2	12:AO:105:GLU:OE1	2.44	0.49
32:A8:34:TRP:CG	32:A8:35:GLN:N	2.80	0.49
1:CA:1340:U:OP1	21:CX:16:LYS:NZ	2.43	0.49
1:AA:2287:C:H6	1:AA:2287:C:H5'	1.77	0.49
34:BA:622:A:N7	34:BA:623:C:C2	2.80	0.49
44:DK:65:ALA:HB1	44:DK:98:LEU:HD23	1.94	0.49
36:DC:179:ARG:NH1	36:DC:206:GLU:OE1	2.44	0.49
38:DE:92:LYS:HB3	38:DE:119:LEU:HB2	1.94	0.49
1:AA:642:G:OP2	6:AF:106:ARG:NH2	2.45	0.49
1:AA:2219:U:C6	1:AA:2236:G:C6	2.99	0.49
1:CA:272(C):G:H2'	1:CA:272(D):G:O4'	2.12	0.49
4:AD:181:GLU:OE2	4:AD:270:ILE:HG12	2.11	0.49
34:DA:1325:C:H4'	54:DU:17:THR:HG21	1.93	0.49
1:CA:489:G:N7	20:CW:49:LYS:NZ	2.60	0.49
2:AB:48:A:H4'	16:AS:95:HIS:HD2	1.77	0.49
16:CS:48:LEU:HD23	16:CS:82:ILE:HD11	1.93	0.49
34:BA:520:A:N1	34:BA:536:C:H1'	2.26	0.49
29:A5:48:GLU:O	29:A5:60:VAL:HG11	2.12	0.49
35:DB:174:VAL:O	35:DB:178:ARG:HB2	2.12	0.49
34:DA:1399:C:C2	34:DA:1502:A:N6	2.80	0.49
3:CC:54:ARG:HD2	3:CC:55:SER:H	1.76	0.49
34:BA:453:A:O2'	49:BP:68:ASP:O	2.31	0.49
34:DA:1374:A:H4'	40:DG:28:ASN:ND2	2.27	0.49
1:AA:2398:C:H2'	1:AA:2399:U:C6	2.47	0.49
1:AA:26:G:OP1	20:AW:80:PRO:HB3	2.12	0.49
1:AA:142:G:H1'	21:AX:37:THR:CG2	2.42	0.49
1:AA:612:C:P	13:AP:16:ARG:HH22	2.34	0.49
1:CA:2823:A:P	5:CE:159:HIS:HE2	2.35	0.49
34:DA:509:A:H3'	34:DA:509:A:C8	2.48	0.49
1:CA:58:G:O2'	1:CA:73:A:N1	2.43	0.49
53:BT:16:HIS:O	53:BT:19:SER:OG	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:72:GLU:O	37:DD:76:ARG:HB3	2.12	0.49
1:CA:1721:G:H8	1:CA:1741:A:H62	1.59	0.49
41:DH:36:LEU:HA	41:DH:39:LEU:HD23	1.95	0.49
57:BZ:674:ASP:HB3	57:BZ:675:HIS:HD2	1.77	0.49
38:DE:93:PRO:O	41:DH:105:ARG:NH2	2.45	0.49
34:BA:7:G:H5'	34:BA:298:A:O4'	2.11	0.49
34:DA:1273:G:H3'	34:DA:1274:G:C8	2.47	0.49
38:BE:28:PHE:CD1	38:BE:28:PHE:N	2.80	0.49
34:DA:1443:G:N2	34:DA:1460:A:H1'	2.26	0.49
37:BD:196:LEU:O	37:BD:198:VAL:N	2.39	0.49
48:BO:88:ARG:HB3	48:BO:88:ARG:CZ	2.41	0.49
1:CA:236:C:H2'	1:CA:237:C:C6	2.47	0.49
7:AG:68:PRO:HG2	7:AG:90:LEU:HD22	1.93	0.49
61:DZ:703:FUA:O1	61:DZ:703:FUA:C1	2.60	0.49
57:DZ:170:ARG:N	57:DZ:170:ARG:NH1	2.57	0.49
38:BE:121:LYS:HG3	38:BE:122:GLU:N	2.26	0.49
17:AT:41:ARG:NH2	34:BA:346:G:OP1	2.43	0.49
37:DD:38:TYR:CE1	37:DD:45:GLN:HG3	2.47	0.49
1:AA:553:A:OP2	11:AN:114:ARG:NH1	2.45	0.49
1:CA:300:A:H2'	1:CA:334:C:H1'	1.95	0.49
37:DD:19:LEU:O	37:DD:21:LEU:N	2.45	0.49
34:DA:620:C:H2'	34:DA:621:A:O4'	2.13	0.49
38:BE:139:LEU:O	38:BE:141:GLN:N	2.46	0.49
35:BB:170:GLU:O	35:BB:174:VAL:HG23	2.12	0.49
34:DA:536:C:H6	34:DA:536:C:O5'	1.96	0.49
34:BA:1318:A:O2'	52:BS:37:ARG:HB3	2.13	0.49
34:DA:982:U:O2	34:DA:1222:G:N1	2.37	0.49
56:BY:7:A:O2'	56:BY:49:C:H5'	2.13	0.49
1:AA:801:C:H2'	1:AA:802:C:H6	1.77	0.49
1:CA:1956:U:C2'	1:CA:1957:C:H5'	2.41	0.49
8:CH:163:TYR:CE2	8:CH:169:VAL:HG22	2.47	0.49
34:DA:130:A:C8	50:DQ:63:ARG:HG3	2.46	0.49
13:AP:63:PRO:HD3	32:A8:27:THR:HG22	1.93	0.49
38:BE:40:ARG:HB3	38:BE:66:MET:CE	2.42	0.49
6:CF:57:VAL:HG13	6:CF:59:TYR:CD2	2.47	0.49
18:AU:81:HIS:CE1	18:AU:85:LYS:HD2	2.47	0.49
40:DG:32:ARG:O	40:DG:34:GLY:N	2.45	0.49
1:CA:1533:G:H2'	1:CA:1536:C:H42	1.76	0.49
38:DE:43:LEU:HD12	38:DE:44:GLY:N	2.28	0.49
43:DJ:50:ILE:HA	43:DJ:60:ARG:HD3	1.95	0.49
1:CA:866:A:C6	1:CA:914:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:43:LEU:HB3	36:BC:47:LEU:HD12	1.93	0.49
23:AZ:156:LYS:O	23:AZ:157:LEU:HB2	2.10	0.49
9:CK:49:ALA:N	9:CK:90:ALA:HB1	2.26	0.49
18:CU:28:ARG:HD3	18:CU:38:THR:OG1	2.11	0.49
14:AQ:11:LYS:HE2	14:AQ:88:GLY:O	2.12	0.49
34:DA:201:C:H42	34:DA:216:G:H1	1.60	0.49
21:CX:11:PRO:HB3	21:CX:92:LEU:HD21	1.93	0.49
34:DA:866:C:C4	34:DA:867:G:H1'	2.47	0.49
2:AB:73:A:C4	2:AB:105:A:C2	3.01	0.49
1:CA:2577:A:O4'	29:C5:3:LYS:HB2	2.13	0.49
34:DA:1347:G:H8	42:DI:107:ARG:HB3	1.77	0.49
34:DA:188:C:H2'	34:DA:189:G:C8	2.44	0.49
4:AD:102:LYS:C	4:AD:103:ARG:HG2	2.28	0.49
1:AA:116:A:H3'	1:AA:117:A:H5''	1.95	0.49
1:CA:828:U:H4'	1:CA:831:G:N1	2.27	0.49
12:CO:23:ARG:HG3	12:CO:24:VAL:N	2.27	0.49
35:DB:51:LEU:O	35:DB:55:PHE:N	2.35	0.49
34:DA:538:G:H5''	45:DL:114:LYS:HB2	1.93	0.49
23:AZ:184:ALA:O	23:AZ:185:GLU:HB3	2.13	0.49
34:DA:1063:C:OP2	34:DA:1064:G:O2'	2.15	0.49
7:CG:124:SER:HB2	7:CG:131:TYR:CE1	2.46	0.49
34:BA:192:U:H2'	34:BA:193:C:H6	1.77	0.49
36:BC:195:VAL:O	36:BC:196:LEU:HD13	2.12	0.49
57:BZ:166:LEU:HD21	57:BZ:208:GLN:HG2	1.95	0.49
23:AZ:30:ASN:HD22	23:AZ:90:VAL:HB	1.77	0.49
38:DE:43:LEU:HD21	38:DE:132:ALA:HB1	1.94	0.49
36:BC:43:LEU:HD22	36:BC:47:LEU:HD11	1.93	0.49
36:DC:186:PHE:CE2	36:DC:188:LEU:HB2	2.47	0.49
1:CA:1688:U:H1'	1:CA:1701:A:C6	2.48	0.49
1:CA:2512:C:H2'	1:CA:2513:G:O4'	2.12	0.49
1:CA:2557:G:H2'	1:CA:2558:C:C6	2.48	0.49
40:BG:61:VAL:O	40:BG:65:ALA:N	2.45	0.49
34:BA:931:C:H42	34:BA:1386:G:H1	1.61	0.49
51:BR:44:LEU:HD21	51:BR:70:ILE:HG21	1.94	0.49
28:A4:24:THR:OG1	28:A4:25:TYR:N	2.46	0.49
1:CA:1652:A:OP1	15:CR:8:ARG:NH1	2.45	0.49
1:AA:1402:G:H2'	1:AA:1403:U:C6	2.48	0.49
1:AA:1785:C:N3	1:AA:2729:U:O2'	2.44	0.49
1:CA:2123:G:H21	3:CC:45:HIS:HE1	1.60	0.49
57:DZ:127:LYS:NZ	57:DZ:404:VAL:HG21	2.28	0.49
10:CL:22:PRO:HA	10:CL:25:PRO:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:264:LEU:HD12	62:BZ:704:GDP:N3	2.27	0.49
36:DC:43:LEU:O	36:DC:47:LEU:N	2.24	0.49
17:CT:62:THR:OG1	17:CT:75:ILE:HG12	2.12	0.49
1:CA:2646:C:H6	1:CA:2646:C:O5'	1.95	0.49
34:DA:1235:U:H5''	54:DU:3:LYS:HB2	1.94	0.49
1:AA:868:A:C2'	1:AA:991:G:H5''	2.42	0.49
3:AC:191:ARG:O	3:AC:195:ARG:HG2	2.11	0.49
1:CA:2661:G:H2'	1:CA:2662:A:O4'	2.12	0.49
40:BG:38:LEU:HA	40:BG:41:ARG:HB2	1.92	0.49
45:BL:27:LEU:HD13	45:BL:98:TYR:CE2	2.47	0.49
1:CA:1607:C:H4'	1:CA:1608:A:O5'	2.12	0.49
57:BZ:467:LYS:O	57:BZ:469:GLU:N	2.38	0.49
1:CA:1063:G:H4'	10:CL:134:MET:HB3	1.94	0.49
1:CA:1805:U:O2	4:CD:50:THR:HB	2.11	0.49
4:AD:20:ASP:N	4:AD:20:ASP:OD1	2.45	0.49
1:AA:2697:G:H5'	12:AO:68:GLU:OE1	2.12	0.49
22:CY:74:PRO:O	22:CY:82:PRO:HA	2.12	0.49
34:DA:1114:C:H42	34:DA:1186:G:H1	1.60	0.49
34:DA:1376:U:H2'	34:DA:1377:A:C8	2.47	0.49
22:CY:90:LEU:HB2	22:CY:92:ASN:HB3	1.94	0.49
37:BD:188:LEU:H	37:BD:188:LEU:HD23	1.77	0.49
15:CR:96:ARG:HD2	15:CR:115:GLU:OE1	2.13	0.49
34:DA:859:A:H2'	34:DA:860:A:O4'	2.12	0.49
1:AA:1891:G:C3'	3:AC:206:LYS:HG3	2.43	0.49
56:DW:37:MIA:H3'	56:DW:38:A:H8	1.77	0.49
35:BB:19:HIS:HE1	35:BB:189:ASP:CB	2.26	0.49
56:BW:45:U:H2'	56:BW:45:U:OP2	2.13	0.49
47:BN:32:SER:HB3	47:BN:41:ARG:HG2	1.95	0.49
57:DZ:247:ARG:NH2	57:DZ:285:ASP:OD1	2.46	0.49
34:DA:623:C:C4	34:DA:624:C:C5	3.01	0.49
1:AA:2149:G:H21	1:AA:2195:A:H1'	1.77	0.49
34:BA:794:A:OP2	63:BA:5146:HOH:O	2.20	0.49
34:DA:1202:G:O4'	47:DN:29:ARG:NH1	2.46	0.49
42:DI:75:ASP:HA	42:DI:78:LYS:HE3	1.94	0.49
35:BB:178:ARG:NH2	41:BH:74:PRO:HB3	2.28	0.49
34:DA:1058:G:H2'	34:DA:1059:C:C6	2.47	0.49
57:DZ:639:ASN:N	57:DZ:640:ALA:HB3	2.27	0.49
14:AQ:38:GLU:HB2	14:AQ:39:PRO:HD2	1.95	0.49
57:DZ:590:ILE:O	57:DZ:594:VAL:HG23	2.12	0.49
13:AP:89:ALA:HA	13:AP:121:LYS:HE2	1.94	0.49
34:DA:430:A:OP1	37:DD:9:CYS:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:842:C:H2'	1:AA:843:C:C6	2.48	0.49
22:CY:38:ILE:HD11	22:CY:66:PRO:HG3	1.93	0.49
57:DZ:133:ILE:HA	57:DZ:257:PRO:HD2	1.94	0.49
22:CY:49:VAL:HG21	22:CY:61:ILE:HG23	1.93	0.49
1:CA:2840:C:H5''	15:CR:53:HIS:ND1	2.28	0.49
1:CA:1922:G:H2'	1:CA:1923:U:O4'	2.13	0.49
34:DA:1286:A:C8	34:DA:1287:A:H4'	2.47	0.49
9:CK:26:LEU:O	9:CK:114:GLY:N	2.43	0.49
34:DA:491:G:H2'	34:DA:492:G:H8	1.78	0.49
10:CL:112:MET:HG3	10:CL:113:PRO:HD3	1.94	0.49
5:CE:52:LEU:O	5:CE:75:VAL:HA	2.11	0.49
35:DB:162:ILE:O	35:DB:185:ILE:HG12	2.12	0.49
34:DA:1392:G:O2'	34:DA:1393:U:H5'	2.13	0.49
34:BA:232:G:H2'	34:BA:233:C:C6	2.48	0.49
8:AH:125:VAL:HG12	8:AH:127:GLU:O	2.13	0.49
2:CB:61:G:C6	2:CB:62:C:C4	3.00	0.49
38:BE:139:LEU:C	38:BE:141:GLN:H	2.15	0.49
40:BG:16:LEU:HD12	42:BI:45:ALA:HB2	1.94	0.49
37:DD:112:VAL:HG22	37:DD:116:GLN:OE1	2.12	0.49
5:CE:167:VAL:HG21	63:CE:3102:HOH:O	2.12	0.49
3:CC:191:ARG:O	3:CC:194:ILE:HG22	2.12	0.49
1:AA:1112:U:H2'	1:AA:1113:A:C8	2.47	0.49
37:DD:59:ARG:O	37:DD:61:LYS:N	2.45	0.49
34:DA:1460:A:H2'	34:DA:1461:G:O4'	2.13	0.49
1:AA:2207:C:H2'	1:AA:2208:G:H8	1.77	0.49
1:AA:894:U:H5	1:AA:978:A:H62	1.60	0.49
34:BA:1266:G:N2	34:BA:1270:C:N3	2.61	0.49
34:DA:757:U:H2'	34:DA:758:G:O4'	2.12	0.49
34:DA:1258:G:H2'	34:DA:1259:C:C6	2.47	0.49
21:AX:35:THR:HG22	21:AX:38:GLU:CB	2.42	0.49
42:DI:7:THR:O	42:DI:83:ARG:NH1	2.43	0.49
1:AA:1097:G:C6	1:AA:1098:C:C4	3.00	0.49
1:CA:1021:A:H8	1:CA:1022:G:H5''	1.78	0.49
34:BA:975:A:C8	34:BA:1357:A:H2	2.31	0.49
2:CB:14:U:O3'	2:CB:108:U:O2'	2.30	0.49
34:BA:924:C:O2'	34:BA:1502:A:N6	2.46	0.49
14:AQ:109:VAL:HG13	14:AQ:113:GLN:CB	2.39	0.49
35:BB:42:ILE:HD12	35:BB:203:GLY:HA2	1.94	0.49
57:BZ:401:SER:OG	57:BZ:402:ILE:N	2.46	0.49
56:BW:36:A:H1'	57:BZ:503:GLY:H	1.78	0.49
34:BA:1152:A:H4'	43:BJ:13:HIS:ND1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:672:G:H2'	1:AA:673:G:O4'	2.13	0.49
32:C8:63:PRO:HG2	32:C8:64:TYR:CE2	2.47	0.49
34:BA:1126:U:HO2'	34:BA:1127:G:H8	1.61	0.49
27:C3:8:LEU:HD12	27:C3:30:ARG:O	2.13	0.49
40:BG:23:VAL:O	40:BG:27:ILE:HG12	2.12	0.49
45:DL:119:LYS:C	45:DL:121:GLY:H	2.15	0.49
12:CO:20:MET:HE3	12:CO:44:LYS:HE3	1.95	0.49
35:BB:104:ASN:OD1	35:BB:107:THR:OG1	2.23	0.49
1:CA:1472:A:H2'	1:CA:1473:G:O4'	2.12	0.49
44:DK:15:ALA:HB1	44:DK:78:GLN:HG3	1.95	0.49
35:DB:133:LYS:C	35:DB:135:GLN:H	2.16	0.49
1:CA:244:A:C2	1:CA:255:A:C4	3.01	0.49
19:AV:98:GLU:CD	19:AV:100:ARG:HH11	2.15	0.49
35:DB:78:GLN:HA	35:DB:94:ASN:ND2	2.27	0.49
1:CA:2177:C:H5'	3:CC:45:HIS:HB2	1.95	0.49
35:BB:16:HIS:CG	35:BB:17:PHE:N	2.80	0.49
57:BZ:132:ARG:N	57:BZ:132:ARG:HD2	2.27	0.49
34:DA:1072:G:H21	35:DB:107:THR:HG21	1.77	0.49
3:CC:183:PRO:C	3:CC:185:LYS:H	2.16	0.49
7:CG:64:THR:HG21	7:CG:92:VAL:HG11	1.94	0.49
32:C8:63:PRO:HG2	32:C8:64:TYR:CD2	2.48	0.49
1:AA:2377:G:O6	32:A8:39:LYS:HE3	2.12	0.49
34:BA:1279:A:H5''	34:BA:1280:A:OP1	2.13	0.49
34:BA:748:C:H4'	34:BA:749:C:O5'	2.13	0.49
1:AA:1134:A:N6	10:AL:133:SER:OG	2.46	0.49
34:DA:1367:C:H4'	43:DJ:48:THR:HG21	1.94	0.49
1:CA:657:U:H2'	1:CA:658:C:C6	2.47	0.49
15:CR:61:HIS:O	15:CR:65:LEU:HD22	2.13	0.49
34:BA:791:G:C6	34:BA:792:A:N7	2.81	0.49
1:AA:2286:A:O2'	1:AA:2288:G:OP1	2.22	0.49
50:BQ:32:TYR:O	50:BQ:34:LYS:N	2.41	0.49
8:AH:56:SER:OG	8:AH:57:ASP:N	2.45	0.49
34:DA:1494:G:O3'	57:DZ:499:ARG:NH1	2.46	0.49
35:DB:178:ARG:HH22	41:DH:68:ARG:HH22	1.61	0.49
34:BA:1346:A:N6	34:BA:1375:A:OP2	2.44	0.49
49:BP:67:THR:HG22	49:BP:69:THR:HG23	1.95	0.49
46:DM:10:PRO:HG2	46:DM:21:TYR:CD1	2.48	0.49
1:CA:1061:U:H4'	1:CA:1070:A:H1'	1.94	0.49
1:CA:1420:U:HO2'	1:CA:1421:G:P	2.35	0.49
17:CT:99:LEU:HD22	17:CT:101:PHE:CE1	2.47	0.49
1:CA:729:G:OP2	4:CD:13:ARG:HD3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2420:C:OP2	32:C8:33:ASN:HB2	2.13	0.49
1:CA:1109:C:H5'	1:CA:1110:G:OP2	2.13	0.49
57:BZ:15:ILE:HA	57:BZ:103:GLY:O	2.13	0.49
34:BA:1478:C:H2'	34:BA:1479:C:C6	2.48	0.49
5:CE:108:SER:O	5:CE:162:ALA:HA	2.13	0.49
57:BZ:600:VAL:HG21	57:BZ:678:GLU:HG3	1.94	0.49
17:CT:93:ARG:HG2	17:CT:93:ARG:HH11	1.78	0.49
1:CA:141:A:H8	1:CA:1408:C:HO2'	1.60	0.49
20:AW:83:LYS:O	20:AW:84:ARG:HD3	2.13	0.49
38:BE:72:GLN:O	38:BE:75:THR:HG22	2.13	0.49
1:CA:2630:G:H2'	1:CA:2631:G:C8	2.48	0.48
6:CF:129:PHE:HB2	6:CF:132:VAL:CG2	2.41	0.48
28:A4:59:PHE:CE1	52:BS:45:VAL:HG21	2.48	0.48
57:BZ:554:PRO:HG3	57:BZ:594:VAL:O	2.12	0.48
18:CU:79:PHE:HE1	18:CU:83:LEU:HD13	1.77	0.48
1:CA:2695:C:H2'	1:CA:2696:U:C6	2.46	0.48
48:BO:56:LEU:O	48:BO:60:VAL:HG23	2.12	0.48
1:AA:139:A:H8	1:AA:1454:C:O2'	1.96	0.48
39:DF:42:GLU:OE1	39:DF:59:TYR:OH	2.19	0.48
53:BT:63:ILE:HD12	53:BT:81:LYS:HG2	1.95	0.48
57:DZ:-6:ARG:O	57:DZ:-2:ALA:HB3	2.13	0.48
34:BA:939:G:OP1	40:BG:95:ARG:NH2	2.41	0.48
7:AG:126:ASP:HB3	7:AG:128:ARG:H	1.78	0.48
1:AA:1532:A:H2'	1:AA:1533:G:C8	2.46	0.48
7:CG:136:ARG:HD2	7:CG:137:GLU:N	2.28	0.48
45:DL:34:ARG:O	45:DL:61:THR:HG23	2.13	0.48
1:CA:2787:C:H1'	5:CE:62:PRO:HG3	1.95	0.48
24:A0:24:LYS:O	24:A0:25:ARG:HD3	2.12	0.48
34:BA:1123:A:O2'	43:BJ:37:PRO:O	2.28	0.48
50:DQ:12:SER:HB3	50:DQ:20:THR:OG1	2.13	0.48
1:CA:2748:A:C2	8:CH:63:SER:HB2	2.48	0.48
57:DZ:456:GLU:C	57:DZ:458:HIS:H	2.17	0.48
41:BH:73:ASP:OD1	41:BH:75:ARG:HD3	2.13	0.48
35:BB:32:ILE:HD13	35:BB:40:HIS:CG	2.48	0.48
1:AA:2701:U:P	1:AA:2732:G:H22	2.35	0.48
24:A0:73:GLY:O	24:A0:75:LEU:N	2.46	0.48
1:CA:1812:A:O2'	4:CD:45:ASN:N	2.45	0.48
57:DZ:-55:LEU:HD22	57:DZ:-48:VAL:HG21	1.95	0.48
34:BA:1310:G:H5'	46:BM:77:ASN:ND2	2.28	0.48
23:CZ:154:ASP:N	23:CZ:154:ASP:OD2	2.46	0.48
1:AA:520:G:N3	20:AW:61:ASN:ND2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:516:U:C4	34:BA:517:G:C6	3.01	0.48
39:BF:99:ALA:HB1	51:BR:23:LYS:HE3	1.95	0.48
29:C5:33:CYS:O	29:C5:37:LYS:N	2.46	0.48
34:DA:1087:G:N2	34:DA:1099:G:H1'	2.28	0.48
17:CT:53:ARG:NH1	17:CT:58:ASN:O	2.45	0.48
6:CF:132:VAL:O	6:CF:132:VAL:HG23	2.13	0.48
3:CC:42:VAL:HA	3:CC:216:THR:O	2.13	0.48
34:DA:513:C:H2'	34:DA:514:C:H6	1.78	0.48
36:BC:138:VAL:HG22	36:BC:151:VAL:HG23	1.95	0.48
43:DJ:38:ILE:HG12	43:DJ:71:LEU:O	2.13	0.48
38:DE:76:ILE:HB	38:DE:77:PRO:HD2	1.93	0.48
46:BM:87:TYR:O	46:BM:91:ARG:HG2	2.13	0.48
5:CE:167:VAL:HG22	5:CE:170:LEU:HD11	1.94	0.48
34:DA:942:G:C2	34:DA:1342:C:C2	3.01	0.48
1:CA:1005:C:H2'	1:CA:1006:C:C6	2.48	0.48
1:CA:7:G:H4'	11:CN:13:TRP:CH2	2.48	0.48
16:CS:66:ALA:HA	16:CS:69:VAL:HG12	1.94	0.48
56:DY:62:C:H2'	56:DY:63:G:C8	2.48	0.48
57:BZ:-38:TYR:O	57:BZ:-34:ARG:HG2	2.13	0.48
11:CN:38:HIS:O	18:CU:67:ALA:HB1	2.13	0.48
57:BZ:461:ILE:HD12	57:BZ:462:ILE:H	1.78	0.48
48:DO:33:THR:HG21	48:DO:85:LEU:HD22	1.94	0.48
1:AA:2517:G:H2'	1:AA:2588:G:O6	2.12	0.48
22:CY:46:LYS:HG2	22:CY:60:PHE:CD2	2.48	0.48
35:DB:91:PRO:HG3	35:DB:155:LEU:HG	1.96	0.48
34:DA:1531:A:N7	34:DA:1532:U:C4	2.81	0.48
1:AA:1204:C:H4'	27:A3:32:GLN:HB2	1.95	0.48
1:CA:2303:G:O2'	7:CG:132:ASN:HB2	2.13	0.48
1:CA:1773:A:H2'	1:CA:1774:C:O4'	2.13	0.48
1:AA:1216:G:N2	1:AA:1225:C:C2	2.81	0.48
34:DA:913:A:OP2	45:DL:91:LYS:NZ	2.45	0.48
10:AL:112:MET:HG2	10:AL:113:PRO:HD3	1.95	0.48
35:BB:56:ARG:HB2	35:BB:56:ARG:HE	1.37	0.48
22:CY:16:ALA:HB2	22:CY:73:ARG:HG3	1.96	0.48
57:BZ:534:ILE:HD11	57:BZ:570:GLY:HA3	1.96	0.48
1:AA:2846:U:H2'	1:AA:2847:G:C8	2.48	0.48
57:BZ:116:PRO:O	57:BZ:118:SER:N	2.43	0.48
34:BA:475:G:H2'	34:BA:476:G:C8	2.48	0.48
7:CG:41:GLN:HB3	7:CG:43:LEU:HD22	1.95	0.48
1:CA:741:G:O2'	1:CA:742:G:H5'	2.14	0.48
1:AA:1105:G:H1'	10:AL:126:MET:HE3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:184:GLU:O	3:CC:188:ASP:OD2	2.31	0.48
1:CA:2267:A:H5'	1:CA:2268:A:C5'	2.43	0.48
1:CA:2097:C:H2'	1:CA:2098:U:C6	2.48	0.48
10:CL:77:LEU:HD11	10:CL:111:LYS:HD2	1.96	0.48
8:CH:140:LYS:O	8:CH:144:VAL:HG23	2.13	0.48
1:CA:2113:U:H2'	1:CA:2114:A:C8	2.47	0.48
1:CA:55:G:N3	1:CA:127:A:H2	2.11	0.48
57:BZ:406:GLU:HG2	57:BZ:439:ARG:NH2	2.28	0.48
39:BF:60:PHE:CE2	51:BR:78:LEU:HD21	2.48	0.48
34:BA:1277:C:O2'	34:BA:1279:A:H1'	2.13	0.48
12:AO:100:GLY:H	12:AO:119:PRO:HG2	1.78	0.48
5:AE:143:ASN:HD22	5:AE:147:PRO:CD	2.25	0.48
34:DA:309:G:H1'	34:DA:608:A:C2	2.47	0.48
23:AZ:74:VAL:HG13	23:AZ:86:VAL:HG13	1.95	0.48
34:BA:1260:C:O5'	34:BA:1284:C:H4'	2.13	0.48
34:BA:48:C:H5''	34:BA:365:U:O4	2.13	0.48
23:CZ:54:HIS:HA	23:CZ:98:MET:HE1	1.95	0.48
40:BG:107:ALA:HB3	40:BG:134:ALA:HB2	1.94	0.48
1:CA:468:G:N7	31:C7:39:ARG:NH2	2.50	0.48
18:AU:69:CYS:HB3	18:AU:74:LEU:HD13	1.94	0.48
6:AF:157:VAL:HB	6:AF:194:MET:HG2	1.95	0.48
1:CA:1614:A:H8	1:CA:1614:A:P	2.35	0.48
1:CA:197:A:N6	1:CA:2430:A:H2'	2.27	0.48
5:AE:68:ALA:C	5:AE:70:ALA:H	2.17	0.48
1:AA:628:C:H2'	1:AA:629:U:O4'	2.13	0.48
34:BA:580:U:H5''	48:BO:58:MET:HG2	1.95	0.48
57:DZ:503:GLY:C	57:DZ:505:GLY:H	2.17	0.48
34:BA:27:G:H2'	34:BA:28:G:H8	1.78	0.48
57:BZ:132:ARG:H	57:BZ:132:ARG:HD2	1.78	0.48
42:BI:83:ARG:HA	42:BI:86:VAL:HG22	1.95	0.48
34:BA:1274:G:N2	34:BA:1275:A:H62	2.11	0.48
57:BZ:127:LYS:NZ	57:BZ:404:VAL:HG11	2.29	0.48
34:DA:401:C:P	37:DD:73:ARG:HE	2.35	0.48
1:CA:2306:C:H3'	1:CA:2307:G:H8	1.79	0.48
37:DD:119:GLN:HG3	37:DD:123:HIS:HD2	1.78	0.48
1:CA:1589:C:H2'	1:CA:1590:U:C6	2.48	0.48
51:BR:59:SER:OG	51:BR:62:GLU:HG2	2.13	0.48
23:AZ:111:VAL:HG12	23:AZ:112:ARG:H	1.79	0.48
57:BZ:493:VAL:HG23	57:BZ:512:ILE:HD11	1.95	0.48
1:CA:1540:U:O2'	1:CA:1541:G:H5'	2.14	0.48
40:DG:44:TYR:HA	40:DG:47:CYS:SG	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:76:ARG:O	37:DD:80:GLU:HG2	2.13	0.48
38:DE:68:GLU:HG2	38:DE:69:VAL:N	2.28	0.48
38:DE:110:LEU:HD13	38:DE:118:ILE:HD13	1.95	0.48
44:BK:31:THR:HA	44:BK:42:TRP:HA	1.94	0.48
1:CA:271(A):A:N7	1:CA:271(W):G:N2	2.58	0.48
1:AA:2141:A:O2'	1:AA:2142:G:H5'	2.13	0.48
28:A4:14:ILE:HG23	28:A4:31:ILE:HG22	1.94	0.48
42:BI:111:ARG:NH2	43:BJ:62:HIS:HD2	2.11	0.48
1:AA:2518:U:O2'	1:AA:2519:C:O5'	2.30	0.48
34:DA:33:A:N3	45:DL:32:PHE:HE2	2.12	0.48
53:BT:99:LEU:HA	53:BT:100:ILE:O	2.12	0.48
34:BA:1202:G:O4'	47:BN:29:ARG:NH1	2.45	0.48
57:DZ:495:GLY:HA3	57:DZ:589:ALA:HB2	1.95	0.48
35:DB:44:LEU:HD22	35:DB:44:LEU:H	1.78	0.48
1:CA:2529:G:H5''	1:CA:2530:A:H5''	1.95	0.48
1:CA:2814:C:O2'	29:C5:29:THR:HG21	2.13	0.48
1:CA:969:U:H2'	1:CA:970:C:C6	2.49	0.48
1:AA:2200:C:H4'	3:AC:47:LYS:CE	2.43	0.48
14:CQ:54:MET:HG2	14:CQ:117:ALA:O	2.14	0.48
38:BE:6:PHE:HE2	38:BE:36:ASP:HB3	1.79	0.48
1:AA:2118:U:H2'	1:AA:2119:C:H6	1.77	0.48
37:DD:156:GLU:O	37:DD:160:GLN:HG3	2.13	0.48
1:AA:929:G:H1	1:AA:940:C:H42	1.61	0.48
26:C2:22:GLU:OE2	26:C2:68:ARG:NH2	2.45	0.48
1:CA:897:C:H3'	1:CA:898:C:C6	2.49	0.48
57:DZ:187:THR:HB	57:DZ:199:ILE:HD11	1.96	0.48
34:BA:659:U:N3	34:BA:660:G:N7	2.61	0.48
1:CA:235:U:C4	1:CA:236:C:N4	2.81	0.48
1:CA:1063:G:H21	10:CL:91:PRO:HG2	1.78	0.48
21:AX:84:ALA:HB3	21:AX:87:GLN:NE2	2.29	0.48
4:CD:221:VAL:HG22	4:CD:226:MET:CE	2.44	0.48
41:DH:29:SER:HB3	41:DH:32:LYS:HB2	1.96	0.48
1:CA:1448:G:N2	1:CA:1463:C:O2	2.43	0.48
1:AA:2504:U:H2'	1:AA:2505:U:C6	2.49	0.48
22:CY:45:VAL:HG23	22:CY:63:LYS:HB3	1.95	0.48
19:CV:32:THR:HG22	19:CV:60:GLU:HB2	1.95	0.48
41:BH:121:ASP:OD1	41:BH:125:ARG:NH2	2.47	0.48
37:DD:149:ALA:O	37:DD:152:SER:N	2.45	0.48
1:CA:2686:G:C2	1:CA:2724:C:O2	2.66	0.48
28:A4:36:CYS:SG	28:A4:37:SER:N	2.86	0.48
1:AA:2627:U:H2'	1:AA:2628:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:119:GLU:O	57:DZ:122:TRP:N	2.46	0.48
5:AE:59:VAL:O	5:AE:64:LYS:HE2	2.13	0.48
44:BK:87:THR:OG1	44:BK:87:THR:O	2.28	0.48
1:CA:2704:C:H2'	1:CA:2705:A:O4'	2.13	0.48
35:DB:42:ILE:HG21	35:DB:202:PRO:O	2.13	0.48
40:BG:45:ASP:O	40:BG:49:ILE:HG13	2.12	0.48
34:DA:426:G:C6	34:DA:427:U:C4	3.01	0.48
1:CA:2279:G:N7	24:C0:14:ARG:NH1	2.62	0.48
23:CZ:108:PRO:HB3	23:CZ:144:LEU:HB2	1.96	0.48
18:AU:76:TYR:HH	18:AU:92:ARG:HH11	1.61	0.48
1:AA:2857:U:OP1	17:AT:98:LYS:HD3	2.13	0.48
2:CB:19:G:H2'	2:CB:20:C:O4'	2.14	0.48
34:BA:1236:A:H2'	34:BA:1237:C:C6	2.48	0.48
1:CA:1316:U:H2'	1:CA:1317:A:H8	1.74	0.48
36:DC:113:ALA:HB2	36:DC:183:ASP:HB3	1.96	0.48
1:CA:1683:C:H2'	1:CA:1684:C:H6	1.77	0.48
49:DP:29:ASP:N	49:DP:29:ASP:OD1	2.44	0.48
34:BA:186:C:H2'	34:BA:187:C:C6	2.46	0.48
17:AT:16:ARG:NH1	17:AT:19:LEU:HD21	2.29	0.48
34:BA:603:U:H2'	34:BA:604:G:C8	2.48	0.48
34:BA:1511:G:H2'	34:BA:1512:U:O4'	2.14	0.48
34:DA:1161:C:H2'	34:DA:1162:C:C6	2.47	0.48
1:AA:2705:A:H2'	1:AA:2706:G:C8	2.49	0.48
1:CA:2622:C:H5'	5:CE:159:HIS:ND1	2.28	0.48
35:BB:105:PHE:C	35:BB:107:THR:H	2.16	0.48
1:CA:1165:U:H2'	1:CA:1166:C:C6	2.48	0.48
4:AD:245:PRO:HB3	4:AD:253:GLN:NE2	2.29	0.48
34:DA:7:G:O2'	38:DE:120:THR:O	2.32	0.48
23:AZ:128:VAL:HG22	23:AZ:129:SER:O	2.14	0.48
57:DZ:635:GLU:HG3	57:DZ:636:PRO:HD2	1.96	0.48
36:DC:149:ALA:HA	36:DC:201:TYR:O	2.13	0.48
23:CZ:111:VAL:O	23:CZ:112:ARG:HB2	2.13	0.48
37:BD:63:LYS:HE3	37:BD:197:PRO:O	2.13	0.48
1:AA:1684:A:H5'	1:AA:1791:A:O2'	2.13	0.48
2:AB:1:U:O2	2:AB:1:U:H2'	2.13	0.48
57:BZ:248:LYS:O	57:BZ:252:ASP:N	2.42	0.48
6:CF:187:VAL:HG13	13:CP:1:MET:O	2.13	0.48
1:CA:1861:G:P	3:CC:206:LYS:CA	2.86	0.48
35:DB:174:VAL:HG13	35:DB:184:VAL:HG11	1.93	0.48
8:AH:3:ARG:HG2	8:AH:6:ARG:HD2	1.94	0.48
46:DM:19:LEU:O	46:DM:22:ILE:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BI:17:VAL:HG23	42:BI:63:ILE:HG12	1.96	0.48
57:BZ:138:LYS:HA	62:BZ:704:GDP:N1	2.28	0.48
34:BA:1238:A:N3	34:BA:1241:G:O2'	2.40	0.48
5:CE:98:PRO:HD3	5:CE:175:VAL:HG13	1.96	0.48
30:A6:25:LYS:NZ	30:A6:51:GLU:OE1	2.46	0.48
34:DA:107:G:C2	34:DA:108:G:H1'	2.49	0.48
1:AA:2735:G:H2'	1:AA:2736:C:C6	2.49	0.48
1:CA:910:A:N1	1:CA:2277:G:H1'	2.28	0.48
1:CA:955:C:OP1	14:CQ:87:LYS:HE2	2.13	0.48
1:AA:2798:C:H2'	1:AA:2799:U:O4'	2.13	0.48
1:AA:2679:C:H1'	8:AH:109:PHE:CD1	2.49	0.48
1:AA:1359:U:H2'	1:AA:1656:A:C2	2.49	0.48
57:DZ:9:LEU:O	57:DZ:283:PRO:HD2	2.14	0.48
34:DA:707:C:H4'	44:DK:20:TYR:CD2	2.49	0.48
42:DI:114:TYR:HE1	43:DJ:60:ARG:H	1.59	0.48
51:BR:40:LEU:HD22	51:BR:70:ILE:HG12	1.95	0.48
1:AA:1402:G:H2'	1:AA:1403:U:H6	1.78	0.48
56:DW:45:U:O2'	56:DW:46:7MG:H82	2.14	0.48
46:DM:66:LEU:O	46:DM:68:GLY:N	2.47	0.48
34:BA:1092:A:C6	34:BA:1093:A:C6	3.02	0.48
1:CA:1810:A:H2'	1:CA:1811:G:O4'	2.13	0.48
1:AA:768:C:H2'	1:AA:769:A:C8	2.49	0.48
34:BA:6:G:C4	38:BE:119:LEU:HD11	2.48	0.48
10:CL:13:PRO:HA	10:CL:52:ILE:HG23	1.95	0.48
3:CC:17:PRO:HG2	3:CC:18:ASN:H	1.79	0.48
34:DA:243:A:C2	34:DA:245:C:C2	3.02	0.48
4:AD:67:PHE:HB3	4:AD:153:ALA:H	1.77	0.48
1:CA:2250:G:H5''	1:CA:2250:G:N3	2.28	0.48
5:CE:4:ILE:HD11	5:CE:29:GLY:HA2	1.96	0.48
43:BJ:11:PHE:HE1	43:BJ:67:THR:HG22	1.78	0.48
46:DM:124:PRO:HB3	56:DW:36:A:H4'	1.96	0.48
57:BZ:13:ARG:HH21	57:BZ:77:HIS:CE1	2.32	0.48
34:BA:375:U:H4'	49:BP:17:TYR:CE1	2.48	0.48
57:DZ:-66:MET:HB2	57:DZ:-65:LYS:H	1.47	0.48
34:DA:1024:G:H2'	34:DA:1025:U:H5''	1.95	0.48
34:DA:1317:C:O2	52:DS:37:ARG:NH1	2.46	0.48
56:BY:57:G:H2'	56:BY:58:A:H5'	1.95	0.48
3:AC:42:VAL:HA	3:AC:216:THR:O	2.13	0.48
34:DA:535:A:H4'	34:DA:536:C:OP2	2.14	0.48
57:BZ:238:THR:HG23	57:BZ:241:GLU:HG2	1.94	0.48
43:DJ:11:PHE:HE1	43:DJ:67:THR:HB	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:899:A:O2'	1:CA:900:A:H5'	2.13	0.48
13:AP:94:GLU:OE2	13:AP:124:LYS:HD3	2.14	0.48
37:DD:59:ARG:HA	37:DD:59:ARG:NE	2.29	0.48
34:DA:1179:A:H2'	34:DA:1180:A:O4'	2.13	0.48
23:CZ:73:GLN:H	23:CZ:87:ASP:HB2	1.79	0.48
1:CA:1809:A:H2'	1:CA:1810:A:C8	2.48	0.48
43:BJ:11:PHE:CE1	43:BJ:67:THR:HG22	2.49	0.48
19:CV:76:LYS:O	19:CV:79:VAL:HG12	2.13	0.48
57:DZ:346:LYS:HZ1	57:DZ:384:ILE:CD1	2.27	0.48
22:CY:102:CYS:SG	22:CY:104:GLY:N	2.80	0.48
43:BJ:44:VAL:HG22	43:BJ:66:ARG:HE	1.78	0.48
1:AA:118:U:H5'	1:AA:118:U:H6	1.78	0.48
35:BB:192:SER:O	35:BB:194:PRO:HD3	2.14	0.48
25:A1:8:SER:HB3	25:A1:66:HIS:CD2	2.49	0.48
56:BW:19:G:H4'	56:BW:20:U:OP2	2.14	0.48
56:DY:69:G:H2'	56:DY:70:G:O4'	2.14	0.48
50:DQ:62:SER:HB3	50:DQ:72:ARG:HD3	1.94	0.48
1:CA:118:A:H1'	1:CA:178:G:O4'	2.13	0.48
20:AW:5:ALA:C	20:AW:6:ILE:HG13	2.33	0.48
1:AA:2144:U:H1'	3:AC:167:ASP:CB	2.44	0.48
34:BA:557:G:C6	34:BA:558:G:C6	3.01	0.48
39:DF:87:ARG:HH11	39:DF:87:ARG:CG	2.17	0.48
1:CA:1268:A:H2'	1:CA:1269:A:O5'	2.13	0.48
14:AQ:14:ARG:HG2	14:AQ:41:TRP:CH2	2.35	0.48
34:DA:151:A:N6	34:DA:171:A:N7	2.62	0.48
34:DA:741:G:H2'	34:DA:742:G:O4'	2.13	0.48
34:BA:1323:G:H2'	34:BA:1324:A:C8	2.48	0.48
52:DS:3:ARG:HH11	52:DS:7:LYS:HE2	1.79	0.48
57:DZ:15:ILE:HG21	57:DZ:280:LEU:HD13	1.94	0.48
1:AA:1495:G:H1'	1:AA:1574:A:N1	2.27	0.48
1:AA:217:A:H3'	1:AA:218:A:C5'	2.44	0.48
43:DJ:47:PHE:N	43:DJ:63:PHE:O	2.41	0.48
23:AZ:111:VAL:C	23:AZ:113:ALA:H	2.17	0.48
6:CF:21:ALA:HB3	6:CF:22:ALA:HA	1.96	0.48
6:AF:178:PRO:C	6:AF:180:GLY:H	2.17	0.48
1:CA:2852:G:C2	1:CA:2853:C:O2	2.67	0.48
34:DA:1060:C:C4	36:DC:2:GLY:HA3	2.49	0.48
5:AE:52:LEU:O	5:AE:75:VAL:HA	2.14	0.48
42:DI:28:VAL:HG22	42:DI:63:ILE:HB	1.96	0.48
1:AA:1293:A:OP1	6:AF:95:ARG:NH2	2.47	0.48
1:CA:103:A:H5'	26:C2:3:LEU:HD11	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:544:G:C2	34:DA:545:C:C2	3.01	0.48
1:AA:2122:G:C2	1:AA:2212:G:C2	3.02	0.48
27:C3:30:ARG:NH2	27:C3:33:GLN:HE21	2.12	0.48
44:DK:95:ILE:O	44:DK:98:LEU:N	2.47	0.48
18:AU:74:LEU:HD12	18:AU:74:LEU:H	1.78	0.48
15:AR:44:LEU:HD22	15:AR:48:VAL:HG23	1.95	0.48
36:DC:57:ILE:HG13	36:DC:66:VAL:HG22	1.96	0.48
1:CA:2271:G:C6	1:CA:2272:U:C4	3.01	0.48
1:AA:2673:G:H5''	57:BZ:21:ILE:HG13	1.95	0.48
1:AA:733:G:H4'	1:AA:734:C:OP2	2.12	0.48
10:AL:12:LEU:HD11	10:AL:23:VAL:HG22	1.96	0.48
1:CA:1452:A:O2'	1:CA:1453:U:H2'	2.14	0.48
1:CA:862:G:H2'	1:CA:863:A:O4'	2.14	0.48
22:CY:83:THR:HG21	22:CY:99:CYS:HA	1.96	0.48
9:CK:40:LEU:HA	9:CK:43:ALA:HB3	1.96	0.48
16:AS:89:ARG:HD2	16:AS:92:TYR:O	2.13	0.48
34:DA:382:A:H2'	34:DA:383:A:C8	2.48	0.48
1:AA:185:A:H2'	1:AA:185:A:N3	2.29	0.48
21:AX:60:ARG:NH2	31:A7:47:ARG:HH21	2.12	0.48
24:A0:18:ALA:HB3	24:A0:20:ARG:HH21	1.78	0.48
57:DZ:20:HIS:CG	57:DZ:21:ILE:N	2.82	0.48
34:BA:343:U:H3	34:BA:347:G:N2	2.01	0.48
7:CG:112:PRO:HG3	28:C4:43:TYR:CE2	2.49	0.48
49:BP:69:THR:O	49:BP:69:THR:OG1	2.32	0.48
34:BA:1183:A:O2'	34:BA:1184:G:OP1	2.29	0.48
22:AY:92:ASN:HB2	22:AY:94:LYS:N	2.25	0.48
1:CA:2839:G:H5'	15:CR:46:GLY:CA	2.44	0.48
57:BZ:485:GLU:O	57:BZ:486:THR:HB	2.14	0.48
1:CA:1651:G:C2	1:CA:2007:C:C2	3.02	0.48
1:AA:941:U:H5'	1:AA:942:A:P	2.54	0.48
49:DP:5:ARG:NH1	49:DP:28:ARG:HA	2.28	0.48
5:AE:29:GLY:O	5:AE:51:PHE:HE1	1.97	0.48
1:CA:1899:G:H2'	1:CA:1899:G:N3	2.29	0.48
34:BA:617:G:O6	34:BA:623:C:N4	2.40	0.48
43:DJ:13:HIS:HB3	43:DJ:68:HIS:HE1	1.77	0.48
32:C8:30:ARG:O	63:C8:6001:HOH:O	2.19	0.48
6:CF:53:THR:HG23	6:CF:55:GLY:H	1.79	0.48
34:BA:520:A:C2	34:BA:536:C:H1'	2.49	0.48
1:CA:480:A:OP2	22:CY:47:LYS:HE2	2.13	0.48
1:AA:2509:A:H5''	63:AA:3911:HOH:O	2.13	0.48
33:A9:7:VAL:HG12	33:A9:34:GLN:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:662:G:H2'	34:BA:663:A:C8	2.49	0.48
34:BA:9:G:C2	34:BA:26:A:N1	2.82	0.48
41:BH:82:HIS:O	41:BH:137:VAL:HA	2.14	0.48
27:A3:8:LEU:HD13	27:A3:31:LEU:HD23	1.95	0.48
51:DR:38:GLU:HA	51:DR:41:LYS:NZ	2.29	0.48
52:DS:41:VAL:O	52:DS:43:GLU:N	2.47	0.48
21:CX:9:LEU:HB2	21:CX:29:TRP:O	2.14	0.48
34:DA:57:G:C2	34:DA:58:C:C2	3.02	0.48
13:AP:59:LEU:HD11	32:A8:10:ALA:HB2	1.96	0.48
47:DN:22:THR:HB	47:DN:33:VAL:HB	1.95	0.48
29:C5:36:CYS:O	29:C5:38:ALA:N	2.47	0.48
35:DB:69:LEU:HD12	35:DB:70:PHE:N	2.28	0.47
1:CA:2124:G:H4'	3:CC:175:PRO:HD3	1.96	0.47
1:AA:1834:A:H4'	4:AD:259:THR:HG23	1.95	0.47
1:AA:1540:A:OP2	63:AA:4072:HOH:O	2.20	0.47
34:DA:171:A:H2'	34:DA:172:A:C8	2.49	0.47
34:BA:1155:G:H2'	34:BA:1156:G:O4'	2.13	0.47
14:CQ:81:VAL:HB	24:C0:7:LEU:HD11	1.95	0.47
1:CA:2611:U:C4	29:C5:3:LYS:HG2	2.49	0.47
38:BE:39:GLY:O	38:BE:69:VAL:HG13	2.14	0.47
3:AC:184:GLU:O	3:AC:188:ASP:OD2	2.31	0.47
1:AA:555:G:C5	1:AA:2044:U:H5''	2.49	0.47
1:CA:2626:C:H2'	1:CA:2627:G:O4'	2.14	0.47
53:BT:71:THR:O	53:BT:72:LEU:HD23	2.14	0.47
1:AA:215:G:N2	1:AA:217:A:H62	2.12	0.47
34:BA:67:C:O2'	34:BA:171:A:H1'	2.14	0.47
3:AC:68:GLY:N	3:AC:189:ASN:ND2	2.62	0.47
34:DA:1096:C:H2'	34:DA:1097:C:H6	1.79	0.47
53:BT:63:ILE:HD13	53:BT:80:ARG:HB2	1.96	0.47
34:BA:177:C:H2'	34:BA:178:C:H6	1.79	0.47
34:BA:1034:G:H3'	34:BA:1035:A:C8	2.48	0.47
1:CA:2861:G:H2'	1:CA:2862:G:C8	2.49	0.47
1:AA:2289:G:OP2	24:A0:10:THR:HG21	2.14	0.47
34:BA:1311:G:H2'	34:BA:1312:G:O4'	2.13	0.47
34:BA:604:G:C2	34:BA:635:G:C5	3.02	0.47
45:DL:34:ARG:HG2	45:DL:35:GLY:N	2.29	0.47
51:DR:40:LEU:HD22	51:DR:70:ILE:HG12	1.96	0.47
57:BZ:655:TYR:O	57:BZ:657:THR:N	2.47	0.47
34:DA:502:G:N2	34:DA:544:G:C4	2.82	0.47
1:AA:2283:G:OP1	24:A0:18:ALA:HB1	2.13	0.47
1:AA:821:A:HO2'	1:AA:822:G:H8	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:32:LEU:HD12	36:DC:59:ARG:NH1	2.30	0.47
56:DW:51:U:H3	56:DW:63:G:H1	1.60	0.47
1:CA:2845:G:H2'	1:CA:2846:G:C8	2.49	0.47
30:C6:3:SER:OG	30:C6:5:VAL:HG13	2.14	0.47
1:CA:1469:A:H2'	1:CA:1470:G:C8	2.49	0.47
10:AL:56:GLU:O	10:AL:67:PHE:HA	2.14	0.47
14:CQ:75:THR:HA	14:CQ:89:ASN:O	2.14	0.47
1:CA:2309:A:N6	1:CA:2310:A:N1	2.62	0.47
17:CT:14:TYR:N	17:CT:14:TYR:CD2	2.82	0.47
1:CA:1488:G:H5'	1:CA:1489:U:OP2	2.13	0.47
1:AA:645:G:N3	1:AA:645:G:H2'	2.28	0.47
16:CS:67:ARG:HH11	16:CS:67:ARG:HG2	1.79	0.47
11:AN:58:ASP:N	11:AN:58:ASP:OD1	2.36	0.47
34:DA:922:G:C2	34:DA:923:A:C4	3.01	0.47
3:AC:30:VAL:CG2	3:AC:31:LYS:H	2.27	0.47
34:DA:266:G:H5'	34:DA:266:G:C8	2.49	0.47
1:CA:1434:A:H61	1:CA:1558:A:N6	2.10	0.47
15:CR:33:ARG:NH2	29:C5:57:VAL:HG12	2.29	0.47
34:DA:1304:G:C5	34:DA:1305:G:C6	3.02	0.47
11:CN:14:VAL:CG1	11:CN:138:LEU:HB2	2.43	0.47
18:CU:79:PHE:CZ	18:CU:83:LEU:HD22	2.49	0.47
11:CN:56:ASN:N	11:CN:125:GLY:O	2.37	0.47
34:DA:1217:C:H2'	34:DA:1218:C:C6	2.48	0.47
25:A1:3:LYS:HG2	25:A1:4:VAL:N	2.29	0.47
1:CA:25:U:H5'	20:CW:79:GLY:HA2	1.95	0.47
1:CA:2531:A:H5''	8:CH:157:TYR:CZ	2.49	0.47
1:AA:27:G:C4	1:AA:537:G:N2	2.82	0.47
14:AQ:138:ASP:OD2	23:AZ:81:ARG:NH1	2.46	0.47
38:BE:132:ALA:O	38:BE:134:ALA:N	2.47	0.47
1:CA:1577:C:H2'	1:CA:1578:U:C1'	2.43	0.47
16:CS:67:ARG:CG	16:CS:67:ARG:HH11	2.27	0.47
38:BE:74:GLY:HA3	38:BE:116:THR:HG22	1.95	0.47
34:BA:445:G:C6	34:BA:446:G:C5	3.03	0.47
34:BA:269:C:H2'	34:BA:270:A:C8	2.49	0.47
1:CA:1932:A:H2'	1:CA:1933:G:O4'	2.14	0.47
8:AH:174:GLY:O	8:AH:175:LYS:HB2	2.15	0.47
56:DW:23:A:H2'	56:DW:24:G:C8	2.49	0.47
61:DZ:703:FUA:O1	61:DZ:703:FUA:C20	2.62	0.47
1:CA:1912:A:O2'	34:DA:1494:G:O2'	2.32	0.47
1:AA:1220:U:O3'	1:AA:1221:G:H4'	2.14	0.47
1:CA:1204:A:H2	1:CA:1241:A:N6	2.04	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:391:G:C6	34:BA:392:G:C5	3.02	0.47
57:BZ:99:ARG:C	57:BZ:101:LEU:N	2.67	0.47
1:CA:2611:U:H6	1:CA:2611:U:H5'	1.79	0.47
56:BY:58:A:O2'	56:BY:60:U:H5	1.98	0.47
34:DA:1070:U:H2'	34:DA:1071:C:H6	1.79	0.47
18:CU:79:PHE:CE1	18:CU:83:LEU:HD13	2.49	0.47
1:AA:217:A:H8	1:AA:218:A:H5'	1.78	0.47
34:DA:434:U:H2'	34:DA:435:C:C6	2.49	0.47
57:DZ:-9:LEU:O	57:DZ:-7:GLU:N	2.47	0.47
7:AG:77:ILE:HB	7:AG:82:LEU:HD12	1.96	0.47
7:AG:126:ASP:HB2	7:AG:130:ASN:O	2.13	0.47
8:CH:157:TYR:CE1	8:CH:172:LYS:HG2	2.49	0.47
57:BZ:445:GLU:O	57:BZ:447:GLY:N	2.42	0.47
39:BF:44:GLY:O	39:BF:60:PHE:N	2.42	0.47
53:BT:44:ALA:HB1	53:BT:91:LEU:HB2	1.95	0.47
37:DD:59:ARG:O	37:DD:62:GLN:N	2.47	0.47
56:BW:19:G:C4	56:BW:57:G:N2	2.82	0.47
1:CA:1469:A:H2'	1:CA:1470:G:H8	1.79	0.47
1:CA:892:G:H2'	1:CA:893:C:O4'	2.14	0.47
37:DD:108:LEU:HD21	37:DD:183:GLY:HA3	1.96	0.47
1:CA:706:A:H2'	1:CA:707:G:O4'	2.14	0.47
1:CA:2334:G:H5'	16:CS:9:ARG:HG2	1.95	0.47
1:CA:1685:C:H2'	1:CA:1686:C:C6	2.49	0.47
23:CZ:101:PRO:O	23:CZ:102:LEU:HD12	2.14	0.47
1:CA:1939:U:OP1	1:CA:2604:U:O2'	2.25	0.47
34:BA:1142:G:H2'	34:BA:1143:G:O4'	2.14	0.47
22:AY:20:TYR:CE1	22:AY:43:ASN:HA	2.50	0.47
19:AV:72:VAL:HG11	19:AV:85:LYS:HD2	1.96	0.47
34:DA:303:A:HO2'	34:DA:555:C:HO2'	1.56	0.47
34:BA:785:G:N2	34:BA:798:G:C4	2.82	0.47
57:BZ:357:ARG:HH11	57:BZ:373:ASP:CG	2.17	0.47
34:DA:438:G:O2'	34:DA:494:U:O4	2.33	0.47
14:CQ:63:LYS:HA	23:CZ:178:GLU:CG	2.41	0.47
38:BE:139:LEU:HA	38:BE:142:LEU:HD12	1.96	0.47
45:DL:24:VAL:HG12	45:DL:98:TYR:HE1	1.79	0.47
1:AA:2053:A:C6	1:AA:2510:C:H1'	2.49	0.47
30:A6:8:LYS:HD3	32:A8:34:TRP:CD2	2.49	0.47
17:CT:99:LEU:O	17:CT:101:PHE:N	2.47	0.47
1:AA:1451:U:H2'	1:AA:1452:U:H6	1.79	0.47
34:BA:1053:G:C4	34:BA:1199:U:C5	3.03	0.47
1:CA:2103:C:H1'	1:CA:2187:G:N2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:495:G:O2'	20:CW:61:ASN:ND2	2.47	0.47
53:BT:44:ALA:HB3	53:BT:91:LEU:HD12	1.95	0.47
16:CS:66:ALA:O	16:CS:69:VAL:HG12	2.14	0.47
23:AZ:70:LEU:HD11	23:AZ:98:MET:HE3	1.96	0.47
1:CA:237:C:H2'	1:CA:238:C:H6	1.79	0.47
34:DA:303:A:H2'	34:DA:304:U:O4'	2.14	0.47
48:BO:62:GLN:O	48:BO:65:ARG:N	2.47	0.47
1:AA:2586:G:H2'	1:AA:2587:C:C6	2.50	0.47
7:AG:33:ARG:O	7:AG:162:THR:HG23	2.14	0.47
1:CA:1075:C:H5'	1:CA:1076:C:OP2	2.14	0.47
34:BA:1187:G:H2'	34:BA:1188:A:C8	2.49	0.47
34:BA:33:A:H2'	34:BA:34:C:C6	2.49	0.47
57:DZ:26:THR:O	57:DZ:30:GLU:HB2	2.14	0.47
34:BA:652:U:O4	34:BA:752:G:O2'	2.26	0.47
1:AA:2059:G:O6	63:AA:4616:HOH:O	2.18	0.47
4:AD:261:LYS:HZ1	4:AD:263:ARG:NH2	2.12	0.47
8:CH:118:PRO:HG2	8:CH:121:ILE:HB	1.96	0.47
1:AA:310:C:H2'	1:AA:311:C:H6	1.79	0.47
57:BZ:417:THR:HA	57:BZ:418:LYS:CB	2.45	0.47
5:CE:163:GLU:HG2	5:CE:164:ARG:N	2.30	0.47
34:BA:1037:C:H2'	34:BA:1038:C:C6	2.49	0.47
20:AW:9:TYR:HA	20:AW:100:THR:HG23	1.95	0.47
37:BD:111:ALA:HB2	37:BD:120:LEU:HD12	1.95	0.47
18:CU:66:ASN:HD21	18:CU:70:ARG:NH2	2.12	0.47
1:AA:1447:G:H2'	1:AA:1448:C:O4'	2.14	0.47
34:BA:899:C:H2'	34:BA:900:A:C8	2.49	0.47
1:AA:265:U:H2'	1:AA:266:C:C6	2.50	0.47
34:BA:707:C:H2'	34:BA:708:C:C6	2.48	0.47
45:DL:84:LEU:HB2	45:DL:105:TYR:CE2	2.50	0.47
1:AA:1099:C:C2	1:AA:1153:G:C2	3.02	0.47
57:BZ:128:TYR:N	57:BZ:128:TYR:CD2	2.81	0.47
1:CA:1115:G:H2'	1:CA:1116:C:C6	2.50	0.47
11:CN:53:VAL:HA	11:CN:121:LYS:O	2.13	0.47
34:BA:503:C:H2'	34:BA:504:C:H6	1.78	0.47
18:CU:83:LEU:HG	18:CU:88:ILE:HB	1.96	0.47
1:CA:2725:A:O2'	1:CA:2726:U:OP2	2.30	0.47
38:BE:77:PRO:HD2	38:BE:142:LEU:HD22	1.96	0.47
3:CC:68:GLY:N	3:CC:189:ASN:ND2	2.62	0.47
44:DK:104:GLN:HG2	44:DK:106:LYS:HG2	1.95	0.47
37:BD:53:ASP:O	37:BD:57:ARG:HG3	2.15	0.47
7:AG:125:PHE:CE1	7:AG:131:TYR:HB2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:959:A:O2'	34:BA:984:C:O2'	2.16	0.47
36:DC:78:GLY:O	36:DC:80:GLY:N	2.45	0.47
49:BP:34:GLU:OE2	49:BP:59:TRP:NE1	2.36	0.47
34:BA:1295:G:O2'	46:BM:14:ARG:NH1	2.47	0.47
27:C3:8:LEU:HD23	27:C3:54:VAL:HG23	1.97	0.47
35:BB:141:GLU:O	35:BB:145:LEU:HB2	2.13	0.47
1:AA:311:C:H2'	1:AA:312:C:C6	2.50	0.47
34:DA:883:C:C2'	34:DA:884:U:H5'	2.44	0.47
1:AA:2864:G:H2'	1:AA:2865:C:C6	2.49	0.47
48:DO:46:HIS:O	48:DO:48:LYS:N	2.48	0.47
57:DZ:272:LEU:HA	57:DZ:272:LEU:HD12	1.46	0.47
1:CA:1813:G:H2'	1:CA:1814:G:H5'	1.97	0.47
34:DA:256:U:OP1	50:DQ:17:LYS:NZ	2.39	0.47
1:CA:2497:A:H5''	63:CA:3708:HOH:O	2.14	0.47
20:CW:16:LYS:O	20:CW:19:LEU:HB2	2.14	0.47
34:DA:380:G:C2	34:DA:384:G:C6	3.02	0.47
1:AA:2653:G:H5''	1:AA:2653:G:H8	1.80	0.47
17:AT:9:LEU:HD23	17:AT:9:LEU:C	2.34	0.47
1:AA:509:A:H2'	1:AA:510:C:H5'	1.95	0.47
34:DA:599:C:H5''	41:DH:95:VAL:O	2.14	0.47
3:CC:6:LYS:HA	3:CC:9:ARG:NH1	2.30	0.47
57:DZ:505:GLY:HA2	57:DZ:576:ASP:CB	2.45	0.47
37:BD:121:VAL:O	37:BD:134:ASP:HA	2.15	0.47
34:BA:1392:G:H21	34:BA:1502:A:H8	1.61	0.47
34:BA:923:A:OP1	38:BE:21:ALA:HB2	2.14	0.47
49:BP:57:ARG:NE	49:BP:79:VAL:O	2.35	0.47
35:BB:200:ILE:HB	35:BB:202:PRO:HD3	1.96	0.47
1:CA:2306:C:H3'	1:CA:2307:G:H2'	1.96	0.47
41:BH:6:ILE:O	41:BH:9:MET:N	2.48	0.47
1:AA:455:A:C8	1:AA:455:A:OP2	2.62	0.47
57:BZ:587:SER:OG	57:BZ:588:MET:N	2.48	0.47
1:CA:330:A:H2	1:CA:1210:A:H2'	1.79	0.47
14:AQ:21:THR:CG2	14:AQ:101:ARG:HB2	2.44	0.47
1:CA:2097:C:H2'	1:CA:2098:U:H6	1.78	0.47
8:CH:17:VAL:HG11	8:CH:50:VAL:HG21	1.95	0.47
7:AG:131:TYR:HB3	7:AG:159:VAL:HG13	1.97	0.47
57:DZ:152:THR:C	57:DZ:154:GLN:H	2.18	0.47
34:DA:693:G:H2'	34:DA:694:A:C8	2.50	0.47
34:DA:503:C:H2'	34:DA:504:C:H6	1.79	0.47
7:AG:66:GLN:HG3	28:A4:1:MET:HE1	1.96	0.47
1:CA:2328:A:H2'	1:CA:2329:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2542:A:H4'	1:CA:2543:G:C8	2.49	0.47
1:CA:2203:U:H2'	1:CA:2205:C:C6	2.49	0.47
34:DA:1286:A:H8	34:DA:1287:A:H4'	1.79	0.47
1:AA:2207:C:H2'	1:AA:2208:G:C8	2.50	0.47
35:DB:200:ILE:O	35:DB:202:PRO:HD3	2.14	0.47
48:BO:62:GLN:NE2	48:BO:65:ARG:HH12	2.13	0.47
46:DM:3:ARG:N	46:DM:7:VAL:O	2.48	0.47
14:AQ:61:GLY:HA3	23:AZ:178:GLU:O	2.15	0.47
57:DZ:527:ASN:O	57:DZ:529:ILE:N	2.48	0.47
13:AP:128:HIS:CE1	13:AP:148:LEU:HD21	2.49	0.47
45:BL:111:LYS:O	45:BL:112:ASP:HB2	2.15	0.47
36:BC:12:LEU:HD23	36:BC:16:ARG:HB3	1.97	0.47
34:BA:284:G:H2'	34:BA:285:G:C8	2.50	0.47
16:AS:66:ALA:O	16:AS:69:VAL:HG13	2.14	0.47
5:AE:9:VAL:HB	17:AT:3:ARG:HG2	1.95	0.47
1:AA:2796:G:H2'	1:AA:2797:C:C6	2.49	0.47
12:AO:48:PRO:HB3	34:BA:1422:G:H5'	1.97	0.47
4:AD:130:ALA:C	4:AD:131:LEU:HD12	2.34	0.47
35:BB:229:VAL:HG12	35:BB:230:VAL:H	1.79	0.47
34:DA:1307:U:OP1	46:DM:101:GLN:NE2	2.47	0.47
1:CA:1860:G:H5''	3:CC:207:GLY:N	2.27	0.47
56:DY:7:A:N6	56:DY:66:U:H3	2.02	0.47
3:AC:180:SER:O	3:AC:181:PHE:O	2.33	0.47
34:BA:475:G:H2'	34:BA:476:G:H8	1.79	0.47
34:BA:376:G:C2	34:BA:389:A:C2	3.03	0.47
38:BE:102:ALA:H	38:BE:107:ARG:HH21	1.62	0.47
51:BR:31:LEU:HD23	51:BR:31:LEU:H	1.78	0.47
5:CE:12:THR:HG22	17:CT:58:ASN:HD21	1.79	0.47
57:DZ:79:ILE:HD13	57:DZ:276:VAL:HG11	1.95	0.47
37:DD:135:LEU:C	37:DD:137:SER:H	2.13	0.47
29:C5:16:ARG:HG2	29:C5:16:ARG:NH1	2.22	0.47
34:BA:741:G:H2'	34:BA:742:G:O4'	2.15	0.47
57:BZ:138:LYS:HG2	62:BZ:704:GDP:C2	2.49	0.47
57:BZ:590:ILE:HA	57:BZ:590:ILE:HD13	1.76	0.47
1:CA:2684:U:C4	1:CA:2685:G:N7	2.82	0.47
4:AD:69:ARG:C	4:AD:71:ASP:H	2.18	0.47
34:BA:1151:A:O2'	34:BA:1152:A:H8	1.98	0.47
50:DQ:32:TYR:C	50:DQ:34:LYS:H	2.17	0.47
1:AA:2859:U:O4	17:AT:23:ARG:NH2	2.33	0.47
1:AA:2859:U:N3	1:AA:2877:G:O4'	2.48	0.47
57:DZ:168:ILE:HG23	57:DZ:205:TYR:CE2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1318:A:H5''	52:BS:3:ARG:NH2	2.30	0.47
34:BA:1318:A:OP1	52:BS:3:ARG:NH2	2.43	0.47
1:CA:794:G:H2'	1:CA:795:C:H6	1.80	0.47
7:AG:77:ILE:N	7:AG:82:LEU:O	2.32	0.47
1:AA:417:A:C6	13:AP:71:VAL:HG11	2.50	0.47
38:DE:40:ARG:HB3	38:DE:66:MET:CE	2.45	0.47
34:DA:177:C:H2'	34:DA:178:C:C6	2.50	0.47
39:DF:78:GLU:O	39:DF:80:ARG:N	2.48	0.47
1:CA:580:C:H2'	1:CA:581:C:H6	1.78	0.47
45:DL:110:VAL:HG23	45:DL:120:TYR:O	2.15	0.47
1:AA:2760:G:OP1	8:AH:138:LYS:NZ	2.39	0.47
16:AS:93:LYS:HG2	16:AS:95:HIS:HB2	1.97	0.47
1:AA:895:G:N9	1:AA:978:A:H8	2.13	0.47
44:DK:14:VAL:HG12	44:DK:15:ALA:H	1.80	0.47
57:BZ:249:GLY:HA2	57:BZ:252:ASP:HB2	1.97	0.47
56:DW:44:G:O2'	56:DW:45:U:H5'	2.14	0.47
50:DQ:62:SER:CB	50:DQ:72:ARG:HD3	2.45	0.47
1:CA:2093:G:H1	1:CA:2196:C:H42	1.63	0.47
34:DA:324:G:N2	34:DA:327:A:C8	2.82	0.47
1:AA:919:A:H2'	1:AA:920:G:O4'	2.14	0.47
1:CA:2006:C:OP2	63:CA:4474:HOH:O	2.20	0.47
1:CA:1366:A:H2'	1:CA:1367:A:O4'	2.15	0.47
34:BA:567:G:O6	45:BL:15:ARG:NH1	2.40	0.47
1:AA:1310:G:OP1	29:A5:19:ARG:NH2	2.35	0.47
5:CE:15:PHE:CD2	17:CT:81:PRO:HD2	2.50	0.47
1:CA:687:C:H2'	1:CA:688:U:O4'	2.14	0.47
57:DZ:213:HIS:HD1	57:DZ:213:HIS:C	2.18	0.47
10:CL:93:ARG:HB3	10:CL:93:ARG:HE	1.34	0.47
43:BJ:64:GLU:HB3	47:BN:59:ALA:HB2	1.95	0.47
23:CZ:157:LEU:HD11	23:CZ:163:LEU:HB2	1.97	0.47
2:AB:17:C:H2'	2:AB:18:G:O4'	2.15	0.47
57:DZ:213:HIS:ND1	57:DZ:213:HIS:O	2.39	0.47
20:CW:70:TYR:O	20:CW:107:LEU:HA	2.15	0.47
39:DF:33:TYR:HD1	39:DF:75:LEU:HD23	1.79	0.47
35:DB:63:MET:HG2	35:DB:225:ALA:HB1	1.97	0.47
34:BA:653:A:OP1	41:BH:56:LYS:NZ	2.48	0.47
2:AB:32:C:C2	2:AB:51:G:N2	2.83	0.47
41:BH:116:LYS:O	41:BH:119:LEU:HD21	2.15	0.47
4:CD:126:GLN:O	4:CD:193:VAL:HG22	2.15	0.47
21:CX:84:ALA:HB3	21:CX:87:GLN:OE1	2.14	0.47
15:CR:9:LYS:HA	15:CR:17:ARG:HE	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BW:17:C:H5'	56:BW:18:G:OP1	2.14	0.47
1:CA:1832:C:H2'	1:CA:1833:U:O4'	2.14	0.47
40:DG:111:ARG:HD2	40:DG:123:GLU:HB2	1.95	0.47
57:DZ:97:SER:HA	57:DZ:100:VAL:HG12	1.96	0.47
1:AA:1692:G:H5''	1:AA:1693:C:H5'	1.96	0.47
1:AA:1888:G:C2'	1:AA:1889:G:H5'	2.44	0.47
22:AY:55:TYR:N	22:AY:55:TYR:CD1	2.82	0.47
1:AA:2105:G:H8	1:AA:2105:G:O5'	1.98	0.47
1:CA:652(E):G:H8	1:CA:652(E):G:O5'	1.98	0.47
57:DZ:-58:LEU:HD13	57:DZ:-58:LEU:HA	1.65	0.47
45:BL:75:HIS:ND1	45:BL:77:LEU:HB2	2.30	0.47
34:BA:964:A:N3	34:BA:969:A:O2'	2.35	0.47
37:DD:31:CYS:SG	37:DD:33:MET:N	2.87	0.47
1:CA:952:G:C6	1:CA:966:G:C6	3.03	0.47
34:BA:255:G:H2'	34:BA:256:U:C6	2.50	0.47
61:DZ:703:FUA:H16	61:DZ:703:FUA:H322	1.74	0.47
1:AA:1158:G:H2'	1:AA:1159:U:O4'	2.14	0.47
49:BP:74:LEU:HG	49:BP:79:VAL:HG21	1.97	0.47
3:CC:15:VAL:O	3:CC:21:TYR:OH	2.29	0.47
36:BC:66:VAL:HG12	36:BC:68:VAL:HG23	1.97	0.47
1:CA:300:A:P	22:CY:86:ARG:NH2	2.88	0.47
2:CB:20:C:H42	2:CB:63:G:H1	1.63	0.47
1:CA:1843:C:H5'	4:CD:253:GLN:HE21	1.79	0.47
1:AA:1825:U:O2'	1:AA:1826:C:H5'	2.14	0.47
34:BA:437:U:O2'	37:BD:125:HIS:CE1	2.67	0.47
1:CA:774:A:O2'	1:CA:775:G:H8	1.97	0.47
26:C2:10:LEU:O	26:C2:14:ARG:HB2	2.15	0.47
1:CA:729:G:OP2	4:CD:13:ARG:NH1	2.32	0.47
57:BZ:177:ILE:HD12	57:BZ:188:TYR:HE2	1.79	0.47
39:BF:10:LEU:HD21	39:BF:26:ILE:HD11	1.97	0.47
1:AA:2583:C:H5''	1:AA:2584:A:H5''	1.96	0.47
29:A5:35:GLU:HG3	29:A5:51:TYR:CG	2.50	0.47
41:BH:56:LYS:HB2	41:BH:58:TYR:HE1	1.78	0.47
57:DZ:162:VAL:H	57:DZ:258:VAL:HG23	1.78	0.47
34:DA:232:G:H1'	34:DA:262:A:N1	2.30	0.47
48:DO:41:GLU:O	48:DO:44:LYS:HB2	2.15	0.47
11:AN:14:VAL:HG12	11:AN:52:VAL:HA	1.96	0.47
1:CA:453:C:OP1	63:CA:4580:HOH:O	2.20	0.47
1:CA:819:A:C4	1:CA:1189:A:C2	3.03	0.47
38:DE:152:ARG:HG2	41:DH:43:GLY:HA3	1.96	0.47
34:BA:111:G:O5'	34:BA:111:G:H8	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:A:C2	1:AA:2035:A:C4	3.03	0.47
32:C8:20:GLY:O	32:C8:59:LYS:HE2	2.15	0.47
16:CS:53:SER:O	16:CS:57:LYS:N	2.48	0.47
42:DI:8:GLY:HA3	42:DI:76:ALA:O	2.15	0.47
3:AC:223:VAL:HG23	3:AC:223:VAL:O	2.15	0.47
34:BA:8:A:N7	37:BD:208:SER:OG	2.44	0.47
57:DZ:21:ILE:CD1	57:DZ:87:HIS:HA	2.44	0.47
56:DW:41:C:H2'	56:DW:42:C:O4'	2.15	0.47
37:BD:114:ARG:HA	37:BD:117:ALA:HB3	1.96	0.47
3:CC:180:SER:O	3:CC:181:PHE:O	2.33	0.47
34:BA:1157:A:C6	34:BA:1180:A:C6	3.03	0.47
3:AC:46:ALA:O	3:AC:47:LYS:HB2	2.15	0.47
4:CD:85:ASP:OD2	4:CD:88:ARG:NH1	2.46	0.47
34:DA:457:C:H2'	34:DA:458:C:C6	2.43	0.47
3:CC:42:VAL:CG1	3:CC:43:GLU:H	2.28	0.47
3:AC:42:VAL:CG1	3:AC:43:GLU:H	2.27	0.47
34:DA:181:G:N1	34:DA:195:A:C8	2.83	0.47
57:BZ:120:THR:HG22	57:BZ:123:ARG:HH12	1.78	0.47
6:CF:21:ALA:CB	6:CF:22:ALA:HA	2.45	0.47
34:BA:977:A:H1'	34:BA:982:U:O4	2.15	0.47
5:CE:181:LEU:HD12	5:CE:181:LEU:HA	1.67	0.47
23:AZ:180:VAL:O	23:AZ:183:LEU:HB2	2.15	0.47
36:BC:22:TRP:CE2	47:BN:54:PRO:HG3	2.49	0.47
1:AA:2679:C:H1'	8:AH:109:PHE:HD1	1.79	0.47
1:CA:1024:G:HO2'	1:CA:1144:G:HO2'	1.58	0.47
23:CZ:8:TYR:HB2	23:CZ:38:TYR:CE2	2.49	0.47
34:DA:1014:A:N3	34:DA:1219:U:O2'	2.38	0.47
45:BL:26:ALA:HB3	45:BL:98:TYR:OH	2.14	0.47
1:AA:2184:G:H4'	1:AA:2194:U:H2'	1.96	0.47
51:BR:73:ALA:HB3	51:BR:79:LEU:HD12	1.96	0.47
1:AA:821:A:H2'	1:AA:821:A:N3	2.30	0.47
1:AA:1026:A:N3	1:AA:2059:G:O2'	2.39	0.47
34:BA:363:A:N7	45:BL:30:ALA:HB1	2.29	0.47
4:CD:137:PRO:O	4:CD:140:THR:OG1	2.29	0.47
1:CA:211:A:H2'	1:CA:212:G:O4'	2.14	0.47
23:CZ:28:MET:HA	23:CZ:88:PHE:O	2.15	0.47
34:DA:814:A:H2'	34:DA:816:A:H5''	1.97	0.47
57:BZ:389:LEU:HA	57:BZ:389:LEU:HD12	1.61	0.47
50:DQ:74:LEU:HD23	50:DQ:74:LEU:HA	1.72	0.47
1:AA:2137:G:H21	1:AA:2193:A:H61	1.62	0.47
9:CK:70:GLU:O	9:CK:72:ASP:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2650:G:P	5:AE:82:ARG:NH2	2.88	0.47
19:CV:55:ALA:HA	19:CV:100:ARG:O	2.15	0.47
22:AY:1:MET:HB2	22:AY:2:ARG:H	1.59	0.47
43:DJ:78:ASN:O	43:DJ:80:LYS:N	2.47	0.47
1:CA:2711:A:H1'	63:CA:4654:HOH:O	2.14	0.47
1:CA:325:G:O2'	1:CA:326:G:H5'	2.14	0.47
34:BA:1119:C:OP1	42:BI:83:ARG:NH1	2.42	0.47
1:CA:530:G:C5	1:CA:2022:U:H5''	2.50	0.47
1:AA:2199:C:O2'	3:AC:46:ALA:O	2.31	0.47
1:CA:2849:U:H4'	1:CA:2868:A:C2	2.49	0.47
34:BA:216:G:H2'	34:BA:217:C:C6	2.50	0.47
41:BH:4:ASP:OD1	41:BH:7:ALA:N	2.48	0.47
56:DY:19:G:H1	56:DY:56:C:H42	1.62	0.47
1:AA:1911:A:N1	1:AA:2246:G:H1'	2.29	0.47
2:CB:22:U:H3	2:CB:61:G:H1	1.61	0.47
10:AL:73:PRO:O	10:AL:77:LEU:HG	2.15	0.47
34:DA:300:A:H1'	34:DA:565:U:O2	2.15	0.47
52:DS:33:THR:HG21	52:DS:71:LEU:HD21	1.97	0.47
34:DA:1312:G:N7	52:DS:2:PRO:HD2	2.30	0.47
57:DZ:630:GLN:O	57:DZ:645:ALA:HB1	2.15	0.47
1:AA:2175:G:H2'	1:AA:2176:G:C8	2.48	0.47
10:CL:21:PRO:HD2	57:DZ:641:GLN:HE22	1.79	0.47
1:CA:2112:G:H2'	1:CA:2113:U:H4'	1.97	0.47
34:DA:60:A:H4'	34:DA:61:G:O5'	2.15	0.47
48:DO:26:GLU:H	48:DO:26:GLU:HG2	1.43	0.47
1:CA:2340:G:H2'	1:CA:2341:G:H8	1.80	0.47
1:AA:2021:C:H4'	1:AA:2736:C:O2	2.14	0.47
1:CA:868:U:C4	1:CA:869:G:N7	2.83	0.47
5:AE:47:VAL:HG22	5:AE:84:PHE:O	2.15	0.47
23:AZ:150:LEU:HD12	23:AZ:150:LEU:HA	1.75	0.47
1:AA:1073:A:C2	1:AA:2500:A:H5'	2.50	0.47
30:A6:40:CYS:SG	30:A6:42:TRP:HB2	2.54	0.47
41:DH:63:LEU:HD23	41:DH:65:TYR:OH	2.14	0.47
42:DI:71:SER:HA	42:DI:74:ILE:HD12	1.95	0.47
18:AU:104:GLN:H	18:AU:104:GLN:CD	2.17	0.47
23:CZ:101:PRO:HA	23:CZ:123:ASP:HA	1.96	0.47
1:AA:1841:A:C2'	1:AA:1842:G:H5'	2.45	0.47
34:DA:1442(A):G:H3'	34:DA:1442(B):A:H8	1.80	0.47
6:AF:18:ARG:NH2	6:AF:127:GLU:OE1	2.48	0.47
38:DE:82:VAL:HG11	38:DE:137:GLU:HB3	1.97	0.47
35:BB:83:MET:HB2	35:BB:84:GLU:OE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:826:C:H5'	41:BH:12:ARG:NH1	2.30	0.47
57:DZ:-3:GLU:HG3	57:DZ:0:ARG:HH11	1.80	0.47
34:BA:1112:C:N3	36:BC:178:LEU:N	2.51	0.47
1:AA:2439:C:H5''	1:AA:2440:G:OP1	2.14	0.47
14:CQ:76:LYS:HG2	14:CQ:77:LYS:O	2.15	0.47
52:DS:40:ILE:HB	52:DS:67:VAL:O	2.15	0.47
56:BW:61:C:H2'	56:BW:62:C:H6	1.79	0.47
11:AN:134:ARG:N	11:AN:135:PRO:HD3	2.30	0.47
57:DZ:92:ILE:HG21	57:DZ:437:THR:HG21	1.97	0.46
34:BA:406:G:N3	37:BD:119:GLN:NE2	2.63	0.46
8:AH:41:MET:CE	8:AH:65:HIS:HA	2.40	0.46
8:AH:3:ARG:HG2	8:AH:6:ARG:CG	2.45	0.46
4:CD:68:LYS:HD2	4:CD:70:TRP:CH2	2.49	0.46
34:DA:622:A:H2'	34:DA:623:C:H5'	1.96	0.46
7:CG:43:LEU:HB3	7:CG:44:GLY:H	1.58	0.46
13:AP:39:LYS:HG3	13:AP:45:LEU:CD1	2.44	0.46
3:AC:6:LYS:HA	3:AC:9:ARG:NH1	2.30	0.46
16:CS:29:PHE:HD1	16:CS:30:ARG:N	2.13	0.46
57:DZ:181:LEU:HD12	57:DZ:216:LEU:HD11	1.95	0.46
56:DW:19:G:N2	56:DW:57:G:H1'	2.31	0.46
34:DA:983:A:N1	34:DA:1222:G:N2	2.64	0.46
57:DZ:539:ILE:HA	57:DZ:542:VAL:HG12	1.98	0.46
1:CA:284:U:H2'	1:CA:285:C:H6	1.79	0.46
7:CG:173:LEU:HD22	7:CG:178:PHE:CE1	2.50	0.46
34:DA:17:U:H5''	38:DE:14:ARG:NH1	2.30	0.46
35:DB:71:VAL:HG23	35:DB:164:VAL:HG13	1.98	0.46
53:DT:79:ARG:HD2	53:DT:83:ARG:NH1	2.30	0.46
34:DA:1409:C:H2'	34:DA:1410:G:C8	2.50	0.46
52:BS:40:ILE:O	52:BS:67:VAL:HG13	2.15	0.46
36:DC:54:ARG:NH1	36:DC:54:ARG:HB3	2.30	0.46
34:DA:986:A:N3	52:DS:52:TYR:OH	2.40	0.46
38:DE:78:HIS:HA	41:DH:105:ARG:HG3	1.97	0.46
52:DS:41:VAL:O	52:DS:44:MET:N	2.42	0.46
3:AC:17:PRO:HG2	3:AC:18:ASN:H	1.79	0.46
37:DD:22:LYS:O	37:DD:113:SER:HB3	2.15	0.46
56:DY:30:G:H2'	56:DY:31:A:H8	1.79	0.46
34:DA:1107:C:C4	34:DA:1108:G:C8	3.04	0.46
1:CA:442:G:H21	6:CF:48:THR:HB	1.79	0.46
34:BA:913:A:H4'	34:BA:914:A:O5'	2.15	0.46
1:AA:2871:G:O2'	1:AA:2872:G:H5'	2.15	0.46
35:BB:36:ARG:O	35:BB:38:GLY:N	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DY:9:A:H5'	56:DY:46:7MG:H1'	1.98	0.46
34:DA:20:U:H2'	34:DA:21:G:O4'	2.15	0.46
34:BA:1411:C:H2'	34:BA:1412:C:C6	2.50	0.46
1:AA:1038:C:O2'	1:AA:1039:G:H5'	2.14	0.46
38:DE:18:ARG:HH21	38:DE:25:ARG:CG	2.27	0.46
7:CG:76:SER:CB	7:CG:84:LYS:H	2.28	0.46
1:CA:684:G:OP1	31:C7:16:HIS:ND1	2.46	0.46
9:AK:53:VAL:O	9:AK:85:ASP:HA	2.15	0.46
48:BO:18:PHE:HD1	48:BO:20:GLY:H	1.62	0.46
34:DA:1478:C:H2'	34:DA:1479:C:H6	1.80	0.46
34:DA:767:A:H2'	34:DA:768:A:O4'	2.15	0.46
2:AB:94:C:H2'	2:AB:95:C:H6	1.79	0.46
19:AV:21:ARG:HG3	19:AV:91:TYR:CD1	2.50	0.46
55:DV:17:U:C2	56:DW:36:A:C2	3.03	0.46
1:CA:1021:A:C8	1:CA:1021:A:H3'	2.50	0.46
7:AG:60:LEU:HA	7:AG:63:ILE:HD12	1.97	0.46
46:DM:60:VAL:HG23	46:DM:64:TRP:CE3	2.50	0.46
34:DA:1241:G:H2'	34:DA:1242:C:C6	2.50	0.46
52:DS:15:LEU:HG	52:DS:18:LYS:HD3	1.96	0.46
34:DA:1326:C:H5''	54:DU:18:TYR:O	2.15	0.46
57:DZ:637:ARG:O	57:DZ:639:ASN:N	2.47	0.46
35:DB:121:LEU:O	35:DB:127:ILE:HB	2.16	0.46
1:AA:2399:U:OP1	24:A0:55:ARG:NH2	2.48	0.46
1:CA:729:G:C4	1:CA:1775:U:O2	2.68	0.46
1:CA:912:C:H2'	1:CA:913:U:H6	1.79	0.46
1:CA:2277:G:H5''	14:CQ:87:LYS:HB3	1.97	0.46
56:BW:7:A:H5''	56:BW:7:A:C8	2.50	0.46
1:CA:2103:C:H1'	1:CA:2187:G:H22	1.79	0.46
34:BA:944:G:O2'	34:BA:1339:A:N6	2.44	0.46
1:AA:2760:G:C2	1:AA:2769:U:C5	3.03	0.46
57:DZ:2:LYS:O	57:DZ:6:GLU:HB2	2.15	0.46
53:BT:57:ARG:HH12	53:BT:100:ILE:HG13	1.80	0.46
21:AX:53:LYS:HB3	21:AX:82:GLN:HB3	1.97	0.46
34:BA:1456:G:H1'	53:BT:39:LYS:NZ	2.30	0.46
1:AA:1470:G:H2'	1:AA:1471:G:O4'	2.15	0.46
50:DQ:24:GLU:HB3	50:DQ:39:SER:HB3	1.97	0.46
35:DB:145:LEU:O	35:DB:149:LEU:HB2	2.14	0.46
1:AA:1938:A:H2'	1:AA:1939:U:O4'	2.16	0.46
34:BA:753:A:H4'	34:BA:754:C:H5''	1.97	0.46
1:AA:495:G:O6	31:A7:37:LYS:HE2	2.16	0.46
1:CA:736:C:H2'	1:CA:737:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DG:78:ARG:HG2	40:DG:79:ARG:H	1.80	0.46
34:DA:1126:U:H3	43:DJ:40:LEU:HD11	1.81	0.46
1:CA:1220:A:OP2	18:CU:19:LYS:NZ	2.43	0.46
1:CA:225:A:N6	1:CA:226:G:C2	2.84	0.46
22:AY:9:LYS:HE3	22:AY:28:LYS:O	2.15	0.46
34:BA:414:A:C5	34:BA:431:A:C2	3.04	0.46
57:DZ:94:VAL:HG21	57:DZ:121:VAL:HG23	1.96	0.46
57:DZ:499:ARG:HB2	57:DZ:506:GLN:HB3	1.97	0.46
37:BD:101:LEU:O	37:BD:104:VAL:N	2.48	0.46
1:AA:1501:U:O2'	1:AA:1502:G:N7	2.48	0.46
1:CA:2577:A:O2'	29:C5:2:ALA:HB1	2.15	0.46
1:AA:2149:G:H2'	1:AA:2150:C:C6	2.51	0.46
1:AA:1480:A:N6	1:AA:1605:A:N6	2.61	0.46
34:DA:920:U:H2'	34:DA:921:U:H6	1.79	0.46
1:CA:1842:G:O3'	4:CD:253:GLN:NE2	2.43	0.46
1:AA:2178:G:H2'	1:AA:2179:G:C4	2.51	0.46
1:AA:941:U:H5'	1:AA:942:A:OP2	2.16	0.46
57:DZ:-9:LEU:O	57:DZ:-6:ARG:HB2	2.16	0.46
57:DZ:639:ASN:HA	57:DZ:640:ALA:O	2.15	0.46
44:BK:43:SER:OG	44:BK:44:SER:N	2.49	0.46
5:CE:13:ARG:O	17:CT:57:PHE:HE2	1.98	0.46
18:AU:65:ILE:HD11	18:AU:95:LEU:HB3	1.97	0.46
4:CD:89:SER:HB2	4:CD:159:ALA:CB	2.45	0.46
38:BE:28:PHE:CD2	38:BE:51:VAL:HG22	2.51	0.46
36:DC:186:PHE:HE2	36:DC:188:LEU:HB2	1.80	0.46
1:AA:2729:U:O2'	1:AA:2730:G:H5'	2.15	0.46
1:AA:2074:G:H4'	5:AE:143:ASN:O	2.15	0.46
34:BA:431:A:H2'	34:BA:432:A:O4'	2.15	0.46
34:BA:354:G:H2'	34:BA:355:C:H5'	1.98	0.46
45:DL:78:GLN:HG3	45:DL:79:GLU:O	2.16	0.46
2:AB:43:C:OP1	28:A4:6:HIS:NE2	2.42	0.46
34:BA:684:A:O2'	44:BK:39:PRO:O	2.33	0.46
37:DD:83:SER:HA	37:DD:89:THR:OG1	2.15	0.46
51:DR:33:ASP:CG	51:DR:36:ASN:HB2	2.34	0.46
37:BD:8:VAL:HG22	37:BD:21:LEU:HD13	1.98	0.46
4:AD:70:TRP:HB3	4:AD:190:TYR:CZ	2.50	0.46
46:BM:80:ARG:NH2	52:BS:69:HIS:HE1	2.13	0.46
34:BA:763:G:H2'	34:BA:764:C:H6	1.79	0.46
56:BY:28:G:H2'	56:BY:29:G:H8	1.80	0.46
42:DI:47:LEU:HB3	42:DI:50:LEU:HD12	1.96	0.46
1:CA:1762:A:N1	63:CA:4249:HOH:O	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1225:G:C2	1:CA:1226:A:C2	3.03	0.46
34:BA:1427:U:H2'	34:BA:1428:A:C8	2.50	0.46
34:BA:1429:C:H2'	34:BA:1430:C:C6	2.50	0.46
57:DZ:329:ARG:HD3	57:DZ:331:TYR:CZ	2.50	0.46
57:DZ:435:ASP:O	57:DZ:438:PHE:HD1	1.98	0.46
34:DA:396:G:H2'	34:DA:397:A:H5''	1.97	0.46
3:CC:30:VAL:CG2	3:CC:31:LYS:N	2.78	0.46
34:BA:1346:A:N1	34:BA:1374:A:H5''	2.30	0.46
34:BA:453:A:C6	34:BA:454:C:C4	3.04	0.46
1:AA:2198:A:O2'	3:AC:45:HIS:CG	2.68	0.46
52:DS:3:ARG:NH2	52:DS:10:PHE:HB2	2.30	0.46
1:AA:2149:G:N2	1:AA:2195:A:H1'	2.30	0.46
57:BZ:169:GLY:HA3	57:BZ:174:PHE:HA	1.97	0.46
44:BK:70:LYS:HA	44:BK:73:MET:HE3	1.96	0.46
14:CQ:104:PHE:O	14:CQ:105:GLU:HG3	2.14	0.46
34:BA:1226:C:O2'	46:BM:111:LYS:NZ	2.48	0.46
25:A1:64:ALA:HA	25:A1:67:ILE:HG13	1.97	0.46
35:DB:127:ILE:C	35:DB:129:GLU:H	2.18	0.46
1:CA:336:C:OP1	22:CY:84:ARG:HG2	2.15	0.46
34:DA:834:C:H2'	34:DA:835:U:H6	1.80	0.46
46:DM:3:ARG:NH1	46:DM:4:ILE:HB	2.31	0.46
34:BA:1412:C:H2'	34:BA:1413:A:C8	2.51	0.46
34:DA:782:A:O3'	34:DA:1515:C:H4'	2.16	0.46
20:AW:71:VAL:HA	20:AW:107:LEU:HD12	1.97	0.46
4:CD:124:PRO:HD2	4:CD:129:ASN:ND2	2.30	0.46
8:CH:35:VAL:HA	8:CH:36:PRO:HD2	1.60	0.46
1:AA:2594:G:C2	1:AA:2595:G:C8	3.04	0.46
38:BE:91:LEU:HD12	38:BE:120:THR:HG22	1.97	0.46
44:BK:20:TYR:O	44:BK:30:VAL:HA	2.15	0.46
42:BI:100:GLY:O	42:BI:103:THR:HG22	2.15	0.46
1:AA:1764:G:C2'	1:AA:1765:U:H5'	2.45	0.46
10:CL:10:LEU:N	10:CL:55:VAL:O	2.48	0.46
35:DB:29:ALA:HA	35:DB:32:ILE:HD12	1.97	0.46
8:CH:124:GLU:HB2	8:CH:132:ARG:HB3	1.97	0.46
35:BB:60:ASP:OD2	35:BB:64:ARG:NH2	2.48	0.46
50:DQ:66:SER:OG	50:DQ:69:LYS:HB2	2.15	0.46
13:CP:96:THR:OG1	13:CP:98:GLU:HG2	2.15	0.46
34:BA:590:C:H2'	34:BA:591:U:H6	1.79	0.46
34:DA:743:U:H2'	34:DA:744:C:C6	2.50	0.46
11:AN:91:LEU:HA	11:AN:91:LEU:HD23	1.81	0.46
5:CE:46:ALA:HB2	5:CE:82:ARG:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:99:U:O4	22:CY:8:LYS:NZ	2.28	0.46
57:DZ:106:VAL:HG23	57:DZ:132:ARG:HB2	1.97	0.46
1:AA:1153:G:H2'	1:AA:1154:U:O2	2.15	0.46
8:AH:3:ARG:HG2	8:AH:6:ARG:CD	2.45	0.46
38:BE:144:THR:OG1	38:BE:147:ASP:OD1	2.27	0.46
57:DZ:36:THR:HG22	57:DZ:74:TRP:HA	1.97	0.46
3:CC:20:VAL:O	3:CC:224:ARG:O	2.33	0.46
1:AA:1466:U:HO2'	1:AA:1467:G:P	2.36	0.46
34:DA:954:G:H21	34:DA:1227:A:H62	1.63	0.46
34:DA:1239:A:H62	34:DA:1299:A:N6	2.13	0.46
2:CB:114:C:H4'	16:CS:46:VAL:HG22	1.97	0.46
1:CA:2024:G:O2'	1:CA:2025:C:H5'	2.16	0.46
3:CC:176:VAL:HG12	3:CC:176:VAL:O	2.15	0.46
18:AU:24:TYR:HB3	18:AU:28:ARG:HB3	1.97	0.46
42:BI:9:ARG:HG2	42:BI:14:VAL:HG22	1.97	0.46
37:DD:117:ALA:HA	37:DD:120:LEU:HB2	1.97	0.46
1:CA:910:A:C5	14:CQ:13:GLN:HG3	2.50	0.46
12:CO:97:ARG:NH1	34:DA:339:C:OP2	2.44	0.46
1:AA:1817:A:H8	63:AA:5177:HOH:O	1.98	0.46
1:AA:1387:U:O2	21:AX:80:ILE:HD12	2.15	0.46
1:CA:20:C:H2'	1:CA:21:A:H8	1.81	0.46
34:DA:1039:C:H2'	34:DA:1040:U:O4'	2.15	0.46
7:AG:105:LYS:HG2	28:A4:24:THR:HG21	1.96	0.46
27:A3:32:GLN:HA	27:A3:32:GLN:NE2	2.29	0.46
35:BB:64:ARG:HE	35:BB:64:ARG:HB2	1.29	0.46
12:CO:111:PHE:O	12:CO:115:VAL:HG23	2.16	0.46
1:AA:1934:A:N1	34:BA:1407:C:O2'	2.40	0.46
1:CA:1633:G:C5	1:CA:1635:G:C5	3.03	0.46
33:C9:22:ARG:HB2	33:C9:24:TYR:CE1	2.50	0.46
1:AA:1120:G:H2'	1:AA:1121:C:C6	2.51	0.46
18:AU:108:GLU:OE2	18:AU:112:ARG:NH1	2.44	0.46
34:BA:669:U:C2	34:BA:670:G:C8	3.03	0.46
50:DQ:85:VAL:O	50:DQ:89:LEU:HB2	2.16	0.46
10:AL:95:LYS:HG2	10:AL:137:GLU:HB3	1.97	0.46
38:BE:37:ARG:HH12	38:BE:111:GLU:HG2	1.81	0.46
17:CT:41:ARG:CZ	34:DA:345:C:H3'	2.45	0.46
34:DA:1086:U:H3	34:DA:1099:G:N2	2.06	0.46
34:BA:1323:G:H4'	34:BA:1363:C:N3	2.30	0.46
49:BP:71:ARG:O	49:BP:75:ARG:N	2.35	0.46
1:AA:1884:A:O2'	1:AA:1885:A:H5'	2.15	0.46
57:DZ:619:ASP:HB3	57:DZ:662:LYS:CD	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:C5	1:AA:1185:C:C4	3.03	0.46
14:CQ:29:PHE:HB3	14:CQ:65:PHE:CD2	2.50	0.46
29:A5:16:ARG:HG2	29:A5:17:ASP:OD1	2.15	0.46
1:AA:1324:A:OP1	15:AR:36:THR:CG2	2.63	0.46
34:DA:113:G:N3	34:DA:353:A:O2'	2.44	0.46
7:CG:107:LEU:HD11	7:CG:178:PHE:CE1	2.51	0.46
45:DL:35:GLY:HA2	45:DL:60:LEU:HA	1.97	0.46
1:CA:2887:U:H2'	1:CA:2888:C:C6	2.50	0.46
4:CD:221:VAL:HG22	4:CD:226:MET:HE3	1.96	0.46
34:DA:1307:U:H2'	34:DA:1308:U:C6	2.51	0.46
34:BA:965:A:C2	34:BA:969:A:C2	3.04	0.46
22:CY:31:LEU:HA	22:CY:31:LEU:HD23	1.79	0.46
1:AA:1370:G:C4	1:AA:1374:G:O6	2.68	0.46
1:CA:1432:C:H2'	1:CA:1433:U:O4'	2.16	0.46
34:DA:530:G:O2'	34:DA:531:U:OP1	2.27	0.46
50:DQ:6:LEU:HB3	50:DQ:23:VAL:HG21	1.97	0.46
26:A2:22:GLU:OE2	26:A2:68:ARG:NH2	2.49	0.46
34:DA:1078:U:H1'	38:DE:130:ASN:HD21	1.81	0.46
1:AA:1932:G:C2	1:AA:1943:G:C4	3.04	0.46
21:AX:10:ALA:HA	26:A2:37:PHE:CE1	2.51	0.46
14:CQ:72:LYS:HA	14:CQ:73:PRO:HD3	1.84	0.46
35:BB:78:GLN:O	35:BB:94:ASN:ND2	2.37	0.46
3:CC:223:VAL:HG23	3:CC:223:VAL:O	2.15	0.46
1:AA:606:G:OP2	18:AU:10:ARG:HD2	2.15	0.46
35:BB:37:ASN:OD1	35:BB:37:ASN:N	2.48	0.46
8:CH:13:LYS:HA	8:CH:14:GLY:HA2	1.61	0.46
61:BZ:703:FUA:C20	61:BZ:703:FUA:O1	2.62	0.46
34:BA:812:C:OP1	34:BA:903:G:H1'	2.15	0.46
1:AA:2326:C:C2	1:AA:2327:G:C8	3.03	0.46
34:BA:1191:A:H5''	36:BC:4:LYS:HZ2	1.80	0.46
1:AA:1248:G:OP2	1:AA:1249:A:O2'	2.28	0.46
1:CA:1097:U:O2	10:CL:22:PRO:HG3	2.16	0.46
34:BA:502:G:C6	34:BA:503:C:C4	3.03	0.46
34:DA:935:A:H61	40:DG:3:ARG:HG3	1.80	0.46
6:CF:123:LEU:HD12	6:CF:124:LEU:N	2.31	0.46
5:AE:120:TRP:CE2	5:AE:155:LYS:HG2	2.51	0.46
37:DD:5:ILE:O	37:DD:5:ILE:HG23	2.15	0.46
1:CA:909:A:C6	1:CA:912:C:C2	3.03	0.46
57:DZ:199:ILE:HB	57:DZ:200:PRO:HD2	1.97	0.46
1:CA:55:G:N3	1:CA:127:A:C2	2.84	0.46
57:BZ:309:LEU:CA	57:BZ:333:GLY:HA3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2690:C:OP2	15:CR:14:SER:HB2	2.15	0.46
57:BZ:166:LEU:HA	57:BZ:166:LEU:HD12	1.71	0.46
38:DE:151:LEU:HD11	41:DH:77:GLU:OE1	2.16	0.46
34:DA:986:A:H1'	52:DS:55:LYS:HA	1.97	0.46
1:CA:2272:U:H5''	1:CA:2273:A:OP1	2.16	0.46
1:AA:733:G:H1	31:A7:16:HIS:CD2	2.34	0.46
1:CA:2094:G:C2	1:CA:2196:C:C2	3.03	0.46
1:AA:753:A:H2'	1:AA:754:G:O4'	2.16	0.46
33:C9:17:ILE:HG23	33:C9:24:TYR:HB2	1.98	0.46
1:CA:2563:U:O2	1:CA:2565:A:H8	1.98	0.46
34:DA:109:A:H2'	34:DA:326:G:N2	2.31	0.46
9:AK:74:LEU:O	9:AK:76:GLY:N	2.39	0.46
1:AA:2078:G:C2	1:AA:2079:A:C8	3.04	0.46
7:AG:18:GLU:O	7:AG:21:ARG:HB2	2.16	0.46
1:AA:2087:C:H2'	1:AA:2088:C:C6	2.51	0.46
57:BZ:75:LYS:HD2	57:BZ:75:LYS:HA	1.64	0.46
17:AT:105:LEU:HA	17:AT:105:LEU:HD23	1.62	0.46
43:DJ:35:SER:HB3	43:DJ:73:ASP:HB2	1.96	0.46
34:BA:1437:C:H2'	34:BA:1438:G:C8	2.50	0.46
3:CC:30:VAL:CG2	3:CC:31:LYS:H	2.27	0.46
34:DA:345:C:H4'	34:DA:346:G:O4'	2.15	0.46
34:DA:622:A:C8	34:DA:623:C:C5	3.04	0.46
1:CA:2439:A:H5''	1:CA:2439:A:H8	1.75	0.46
1:AA:2183:C:O2'	1:AA:2195:A:H4'	2.15	0.46
3:AC:176:VAL:O	3:AC:176:VAL:HG12	2.15	0.46
1:CA:1682:G:H2'	1:CA:1683:C:C6	2.51	0.46
34:DA:730:G:C5	34:DA:731:G:H1'	2.50	0.46
1:AA:1160:G:H2'	1:AA:1161:G:H8	1.81	0.46
42:BI:9:ARG:HD2	42:BI:104:ARG:NH1	2.31	0.46
1:AA:1487:G:H2'	1:AA:1488:G:C8	2.50	0.46
34:BA:1001:A:H2'	34:BA:1001(A):G:C8	2.51	0.46
46:BM:8:GLU:OE2	46:BM:11:ARG:NH2	2.48	0.46
34:DA:416:G:C6	34:DA:417:C:C4	3.03	0.46
4:AD:3:VAL:HG13	4:AD:17:THR:HB	1.98	0.46
1:AA:1321:A:H4'	1:AA:1322:A:OP1	2.15	0.46
1:CA:1449:A:H5'	1:CA:1450:G:OP2	2.16	0.46
1:AA:311:C:H2'	1:AA:312:C:H6	1.81	0.46
1:AA:509:A:C2'	1:AA:510:C:H5'	2.46	0.46
20:CW:54:ALA:HB1	20:CW:107:LEU:HD22	1.96	0.46
37:BD:22:LYS:HG3	60:BD:501:SF4:S4	2.56	0.46
1:AA:2116:G:C2	1:AA:2218:C:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:976:G:C8	34:BA:1362:C:N4	2.84	0.46
1:AA:1566:U:H2'	1:AA:1567:G:O4'	2.16	0.46
29:C5:35:GLU:HG2	29:C5:51:TYR:CD2	2.51	0.46
1:AA:2319:G:H4'	1:AA:2320:G:O5'	2.16	0.46
1:CA:1265:A:O4'	1:CA:1267:U:C6	2.69	0.46
1:AA:750:U:H2'	1:AA:751:G:O4'	2.15	0.46
27:A3:26:LEU:O	27:A3:35:ARG:NE	2.45	0.46
2:AB:111:G:H2'	2:AB:112:U:H6	1.81	0.46
7:CG:135:LEU:HD23	7:CG:155:MET:SD	2.56	0.46
15:CR:67:LEU:HD13	15:CR:76:VAL:HG21	1.98	0.46
16:CS:103:GLU:O	16:CS:107:GLU:HG3	2.15	0.46
40:DG:46:ALA:HB1	40:DG:121:ALA:HB2	1.98	0.46
7:CG:143:GLU:HA	28:C4:31:ILE:HD13	1.98	0.46
1:AA:2162:C:O2	1:AA:2162:C:H2'	2.15	0.46
1:AA:624:C:OP1	6:AF:108:LYS:HE3	2.15	0.46
56:DY:65:G:H2'	56:DY:66:U:C6	2.51	0.46
1:AA:2356:U:OP1	30:A6:37:ARG:HD3	2.15	0.46
57:BZ:97:SER:O	57:BZ:101:LEU:HD12	2.16	0.46
14:CQ:81:VAL:HB	24:C0:7:LEU:HD21	1.98	0.46
39:DF:2:ARG:CZ	39:DF:69:GLU:HG2	2.46	0.46
1:CA:2625:G:H2'	1:CA:2626:C:O4'	2.16	0.46
25:C1:21:ARG:HD3	25:C1:35:THR:HG21	1.96	0.46
34:DA:73:G:C6	34:DA:97:G:C6	3.03	0.46
34:DA:687:A:H4'	34:DA:688:G:O5'	2.16	0.46
34:BA:43:C:N4	34:BA:399:G:H1	2.14	0.46
57:DZ:151:ARG:O	57:DZ:154:GLN:HG2	2.15	0.46
50:BQ:45:HIS:O	50:BQ:73:VAL:HG23	2.16	0.46
34:BA:1036:G:H2'	34:BA:1036:G:N3	2.31	0.46
1:CA:637:A:H4'	1:CA:638:G:O5'	2.16	0.46
34:DA:298:A:O5'	34:DA:298:A:H8	1.98	0.46
23:CZ:7:ALA:HB2	23:CZ:59:LEU:HD22	1.97	0.46
23:CZ:59:LEU:O	23:CZ:61:LEU:HD22	2.16	0.46
48:BO:61:GLY:O	48:BO:64:ARG:HB3	2.16	0.46
34:BA:1298:C:C5	40:BG:114:ARG:HD2	2.50	0.46
34:BA:572:A:H5'	34:BA:573:A:OP2	2.15	0.46
1:CA:288:C:O2'	1:CA:289:A:H5'	2.16	0.46
34:BA:865:A:N3	34:BA:918:A:O2'	2.35	0.46
13:AP:29:LYS:HG2	13:AP:30:THR:HG23	1.98	0.46
7:AG:79:ASN:OD1	7:AG:79:ASN:N	2.32	0.46
13:CP:135:LEU:HA	13:CP:135:LEU:HD23	1.86	0.46
1:CA:2784:C:H1'	5:CE:37:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:343:C:H2'	1:AA:344:A:O4'	2.15	0.46
35:DB:7:VAL:HG12	35:DB:8:LYS:HG2	1.98	0.46
57:BZ:141:LYS:O	57:BZ:171:GLU:HB3	2.16	0.46
1:AA:2843:G:H4'	1:AA:2844:G:OP2	2.15	0.46
34:DA:717:C:H4'	44:DK:117:ASN:HD22	1.81	0.46
1:CA:2176:A:C3'	3:CC:45:HIS:CD2	3.00	0.46
3:CC:46:ALA:O	3:CC:47:LYS:HB2	2.15	0.46
1:CA:1882:C:H2'	1:CA:1883:G:O4'	2.16	0.46
34:BA:27:G:C5	34:BA:557:G:C2	3.04	0.46
37:BD:101:LEU:HG	37:BD:121:VAL:HG11	1.98	0.46
1:AA:553:A:H2	1:AA:2065:C:C5'	2.28	0.46
35:DB:116:GLU:HA	35:DB:119:GLU:HB2	1.98	0.46
35:BB:69:LEU:HD12	35:BB:70:PHE:N	2.31	0.46
32:C8:34:TRP:CE2	32:C8:35:GLN:HG2	2.50	0.46
34:BA:403:C:H2'	34:BA:404:U:C6	2.47	0.46
36:BC:181:ASN:HB3	36:BC:204:LEU:HB2	1.97	0.46
1:AA:596:G:O2'	1:AA:597:C:H3'	2.15	0.46
1:CA:2169:A:H2'	1:CA:2170:A:C8	2.51	0.46
57:DZ:188:TYR:CD1	57:DZ:196:ILE:HD13	2.51	0.46
7:AG:75:LYS:HE3	7:AG:77:ILE:HD11	1.98	0.46
34:BA:1401:G:N2	34:BA:1402:C:H1'	2.31	0.46
57:DZ:488:THR:O	57:DZ:516:PRO:HG3	2.15	0.46
1:AA:732:A:H1'	1:AA:735:U:O4	2.16	0.46
1:AA:645:G:H5'	1:AA:645:G:N3	2.30	0.46
23:CZ:53:ILE:HD12	23:CZ:99:TYR:HB2	1.98	0.46
39:DF:33:TYR:CD1	39:DF:75:LEU:HD23	2.51	0.46
23:CZ:19:ARG:HA	23:CZ:23:LYS:O	2.16	0.46
1:CA:1711:C:H2'	1:CA:1712:C:H6	1.80	0.46
1:AA:2047:C:H2'	1:AA:2048:C:C6	2.51	0.46
5:AE:18:ASP:HB3	17:AT:82:LEU:HD11	1.97	0.46
1:CA:271(S):G:C6	1:CA:271(T):C:C4	3.03	0.46
34:BA:1203:C:H2'	34:BA:1204:A:H8	1.81	0.46
34:BA:581:G:O2'	34:BA:582:U:H5'	2.15	0.46
26:A2:51:ARG:HD3	26:A2:55:ARG:NH1	2.30	0.46
48:BO:9:GLN:HA	48:BO:12:ILE:HD12	1.98	0.46
54:BU:8:THR:O	54:BU:12:LYS:HB2	2.17	0.46
2:CB:59:A:H2'	2:CB:60:C:O4'	2.16	0.46
10:CL:44:ALA:O	10:CL:47:ASN:HB3	2.16	0.46
20:AW:2:GLU:OE2	20:AW:72:LYS:NZ	2.31	0.46
50:DQ:52:LYS:HE3	50:DQ:52:LYS:HB2	1.74	0.46
34:DA:302:G:N3	34:DA:556:C:H4'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:107:ARG:HH22	37:BD:194:LEU:HD11	1.81	0.45
34:DA:1124:G:O2'	34:DA:1145:C:C4	2.69	0.45
34:DA:926:G:H5''	34:DA:927:G:O5'	2.16	0.45
34:BA:232:G:H1'	34:BA:262:A:N1	2.30	0.45
3:AC:20:VAL:O	3:AC:224:ARG:O	2.34	0.45
34:DA:407:G:C6	34:DA:408:A:C6	3.04	0.45
51:DR:56:THR:HB	51:DR:58:LEU:HD23	1.96	0.45
13:AP:81:GLN:OE1	13:AP:106:LEU:HA	2.16	0.45
1:AA:464:G:H8	1:AA:464:G:O5'	1.98	0.45
28:A4:16:CYS:HA	28:A4:33:VAL:HB	1.98	0.45
35:DB:101:MET:HA	35:DB:108:ILE:HG13	1.98	0.45
35:BB:213:LEU:HD23	35:BB:213:LEU:O	2.15	0.45
42:BI:118:LYS:HG3	42:BI:121:ARG:HB3	1.98	0.45
34:DA:201:C:H42	34:DA:216:G:H22	1.63	0.45
56:DY:9:A:H8	56:DY:11:C:H41	1.64	0.45
2:AB:27:C:H5''	16:AS:54:LEU:HD13	1.98	0.45
56:DW:65:G:H2'	56:DW:66:U:C6	2.51	0.45
11:CN:84:LYS:C	11:CN:85:ILE:HG13	2.35	0.45
34:DA:350:G:O2'	34:DA:351:G:H5'	2.16	0.45
56:BW:14:A:C2	56:BW:15:G:H1'	2.51	0.45
40:DG:59:LEU:HG	40:DG:63:LYS:HE2	1.97	0.45
1:CA:1562:A:H2'	1:CA:1563:G:C8	2.51	0.45
44:DK:22:HIS:HB3	44:DK:29:ILE:HB	1.98	0.45
35:DB:28:PHE:CD1	35:DB:190:THR:HG22	2.51	0.45
17:AT:61:PHE:CE1	17:AT:78:LEU:HD23	2.51	0.45
57:BZ:162:VAL:O	57:BZ:164:MET:HG2	2.16	0.45
3:AC:211:ARG:HH11	3:AC:211:ARG:HG2	1.81	0.45
1:CA:2177:C:O2'	3:CC:171:ALA:HB2	2.16	0.45
57:DZ:21:ILE:HD12	57:DZ:87:HIS:HA	1.98	0.45
1:AA:1157:A:H2'	1:AA:1158:G:O4'	2.16	0.45
37:BD:178:VAL:HG12	37:BD:179:GLU:H	1.81	0.45
35:DB:16:HIS:CG	35:DB:17:PHE:N	2.84	0.45
57:DZ:184:LYS:NZ	57:DZ:184:LYS:HB2	2.32	0.45
57:DZ:182:ARG:NH2	57:DZ:278:ASP:OD2	2.49	0.45
17:CT:23:ARG:HG3	17:CT:120:ARG:CZ	2.46	0.45
3:AC:48:LEU:HD23	3:AC:59:VAL:HG21	1.98	0.45
34:BA:781:A:C5	34:BA:802:A:C2	3.04	0.45
34:BA:1241:G:H1	34:BA:1296:C:H42	1.63	0.45
34:DA:688:G:H2'	34:DA:689:C:H6	1.81	0.45
7:AG:137:GLU:C	7:AG:140:ILE:HD13	2.36	0.45
42:BI:23:ASN:N	42:BI:60:ASP:OD1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:126:ASP:CG	7:AG:130:ASN:HD22	2.19	0.45
16:AS:39:ILE:HB	16:AS:49:VAL:CG1	2.46	0.45
1:AA:26:G:C6	1:AA:27:G:N1	2.85	0.45
31:C7:19:ARG:HG2	31:C7:19:ARG:NH1	2.31	0.45
34:DA:1410:G:H2'	34:DA:1411:C:C6	2.51	0.45
1:AA:2500:A:H2'	1:AA:2501:G:O4'	2.16	0.45
34:DA:45:U:H2'	34:DA:46:G:C8	2.51	0.45
34:BA:642:A:H2'	34:BA:643:C:C6	2.51	0.45
6:CF:53:THR:CG2	6:CF:55:GLY:H	2.28	0.45
1:AA:886:U:H1'	1:AA:1236:G:H1'	1.98	0.45
57:DZ:411:VAL:HB	57:DZ:459:LEU:HD13	1.99	0.45
45:BL:88:GLY:O	45:BL:99:HIS:HD2	1.99	0.45
10:CL:134:MET:HG3	10:CL:136:VAL:HG12	1.98	0.45
50:DQ:65:ILE:HD11	50:DQ:72:ARG:HD2	1.98	0.45
38:BE:37:ARG:NH1	38:BE:111:GLU:HG2	2.31	0.45
34:DA:718:G:H5'	44:DK:117:ASN:HB2	1.98	0.45
2:CB:94:C:H2'	2:CB:95:C:H6	1.81	0.45
37:DD:79:PHE:CE1	37:DD:204:ILE:HD13	2.51	0.45
7:CG:106:LEU:O	7:CG:110:ALA:HB3	2.16	0.45
22:AY:99:CYS:SG	22:AY:101:LYS:HB2	2.56	0.45
1:CA:271(H):G:O2'	1:CA:271(I):G:H8	1.99	0.45
2:AB:63:G:H2'	2:AB:64:C:C6	2.52	0.45
1:AA:950:C:H2'	1:AA:951:U:C6	2.51	0.45
1:AA:1773:C:H2'	1:AA:1774:C:C6	2.51	0.45
1:CA:1054:A:O2'	9:CK:30:GLN:O	2.35	0.45
57:DZ:7:ASN:O	57:DZ:11:ARG:NH2	2.45	0.45
15:AR:65:LEU:HD12	15:AR:65:LEU:HA	1.73	0.45
18:CU:17:ILE:HA	18:CU:17:ILE:HD13	1.87	0.45
14:AQ:2:LEU:HG	14:AQ:69:PHE:CD2	2.51	0.45
57:DZ:169:GLY:C	57:DZ:170:ARG:HH11	2.19	0.45
10:CL:59:ILE:HG12	10:CL:60:TYR:N	2.31	0.45
34:DA:617:G:C6	34:DA:618:C:C5	3.04	0.45
8:CH:3:ARG:CZ	8:CH:5:GLY:H	2.30	0.45
45:DL:75:HIS:CD2	45:DL:77:LEU:N	2.82	0.45
1:AA:180:A:H2'	1:AA:181:C:C6	2.51	0.45
46:DM:96:LEU:C	46:DM:110:ARG:HG2	2.37	0.45
1:CA:1068:G:O2'	1:CA:1096:A:O2'	2.26	0.45
6:AF:184:TYR:CE2	6:AF:188:ARG:HD2	2.50	0.45
57:BZ:388:THR:OG1	57:BZ:399:LEU:HB2	2.16	0.45
34:DA:1353:G:H2'	34:DA:1354:C:H6	1.82	0.45
57:BZ:505:GLY:HA2	57:BZ:576:ASP:OD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1136:U:C2	1:AA:1148:C:H1'	2.51	0.45
34:DA:110:C:O2'	49:DP:25:ARG:O	2.33	0.45
34:BA:510:A:N3	34:BA:543:C:H1'	2.31	0.45
34:BA:1064:G:H4'	34:BA:1065:U:OP1	2.14	0.45
34:BA:938:A:C6	34:BA:939:G:C5	3.05	0.45
34:BA:958:A:N6	52:BS:77:THR:O	2.48	0.45
1:AA:1114:G:N2	1:AA:1142:A:H5'	2.31	0.45
1:CA:188:G:H2'	1:CA:189:G:H5'	1.98	0.45
5:CE:120:TRP:CE3	5:CE:155:LYS:HD3	2.52	0.45
36:DC:179:ARG:HD2	36:DC:206:GLU:HB2	1.97	0.45
41:BH:40:ALA:C	41:BH:42:GLU:H	2.19	0.45
34:DA:245:C:O2	34:DA:283:C:N3	2.48	0.45
34:BA:1437:C:H2'	34:BA:1438:G:H8	1.82	0.45
10:AL:20:ALA:HB1	57:BZ:636:PRO:HG2	1.97	0.45
34:DA:1428:A:H2'	34:DA:1429:C:O4'	2.15	0.45
22:CY:2:ARG:CZ	22:CY:4:LYS:HD2	2.46	0.45
48:BO:15:PHE:CZ	48:BO:84:LYS:HD2	2.51	0.45
1:CA:901:A:H5''	1:CA:902:C:OP2	2.17	0.45
3:CC:37:LYS:O	3:CC:38:PHE:HB3	2.17	0.45
1:CA:1996:C:H4'	1:CA:1997:G:OP1	2.17	0.45
34:DA:49:U:H3	34:DA:362:G:H1'	1.80	0.45
46:BM:40:ASN:HA	46:BM:41:PRO:HD3	1.81	0.45
14:CQ:135:ASP:HB2	14:CQ:137:TYR:HB2	1.98	0.45
1:CA:942:G:O2'	1:CA:943:U:H5'	2.16	0.45
1:AA:1632:A:H8	1:AA:1632:A:O5'	1.99	0.45
36:BC:26:LYS:H	36:BC:26:LYS:HG3	1.59	0.45
6:CF:137:LYS:HB3	6:CF:137:LYS:HE2	1.55	0.45
36:DC:18:TRP:H	36:DC:18:TRP:HE3	1.63	0.45
57:DZ:309:LEU:HD12	57:DZ:310:ALA:H	1.82	0.45
10:CL:107:ILE:HG21	10:CL:127:ILE:HG21	1.98	0.45
53:DT:55:ILE:O	53:DT:58:LYS:N	2.49	0.45
4:CD:101:GLU:HG3	4:CD:102:LYS:N	2.31	0.45
57:BZ:39:ILE:HD12	57:BZ:40:HIS:H	1.81	0.45
1:AA:1096:A:H2'	1:AA:1097:G:C8	2.51	0.45
1:AA:1102:G:H5''	1:AA:1103:A:O4'	2.16	0.45
34:DA:1141:C:H2'	34:DA:1142:G:C8	2.51	0.45
3:AC:30:VAL:CG2	3:AC:31:LYS:N	2.78	0.45
1:CA:1203:G:OP2	1:CA:1204:A:O2'	2.28	0.45
3:CC:54:ARG:HH22	3:CC:56:ASP:HB3	1.75	0.45
24:C0:27:GLU:HG3	24:C0:68:GLU:HA	1.98	0.45
35:BB:42:ILE:HG21	35:BB:202:PRO:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:401:C:H1'	34:DA:622:A:H1'	1.98	0.45
3:AC:7:ARG:HH22	3:AC:219:MET:HB2	1.82	0.45
57:BZ:507:TYR:HB3	57:BZ:577:SER:HB2	1.98	0.45
10:CL:90:LYS:HE3	10:CL:90:LYS:HB3	1.83	0.45
34:BA:540:G:H2'	34:BA:541:G:O4'	2.16	0.45
34:BA:165:C:H2'	34:BA:166:G:C8	2.52	0.45
1:AA:354:A:O2'	1:AA:355:A:H8	1.99	0.45
1:CA:1668:A:C8	1:CA:1674:G:C6	3.05	0.45
34:BA:509:A:C8	34:BA:509:A:C3'	2.99	0.45
1:CA:2853:C:H2'	1:CA:2854:G:H8	1.81	0.45
1:AA:1699:A:C2'	1:AA:1700:G:H5'	2.47	0.45
1:AA:372:G:H2'	1:AA:373:G:O4'	2.17	0.45
54:DU:10:ARG:HA	54:DU:13:ILE:HD12	1.99	0.45
48:DO:74:ASP:OD2	48:DO:77:ARG:HG3	2.16	0.45
35:BB:12:GLU:C	35:BB:14:GLY:H	2.20	0.45
1:CA:2880:C:O2'	15:CR:90:ARG:NH1	2.50	0.45
38:BE:51:VAL:O	38:BE:55:VAL:HG23	2.17	0.45
23:AZ:163:LEU:HD12	23:AZ:163:LEU:HA	1.57	0.45
21:CX:26:TYR:HD1	21:CX:92:LEU:HD12	1.80	0.45
12:AO:68:GLU:HB3	12:AO:78:ARG:HB2	1.99	0.45
1:CA:154(A):C:H42	1:CA:171:G:H1	1.65	0.45
50:BQ:31:LEU:HD23	50:BQ:32:TYR:CZ	2.52	0.45
1:CA:2250:G:C8	1:CA:2496:C:H5''	2.51	0.45
1:CA:2276:G:H5'	14:CQ:86:GLY:HA2	1.97	0.45
34:DA:303:A:O2'	34:DA:555:C:O2'	2.30	0.45
42:DI:8:GLY:O	42:DI:15:ALA:N	2.39	0.45
1:AA:646:A:OP2	13:AP:108:LYS:NZ	2.48	0.45
44:BK:21:ILE:HD13	44:BK:94:ALA:HB3	1.98	0.45
3:AC:37:LYS:O	3:AC:38:PHE:HB3	2.17	0.45
40:DG:92:SER:O	40:DG:95:ARG:N	2.48	0.45
39:BF:4:TYR:CD1	39:BF:92:LYS:HA	2.52	0.45
23:CZ:117:LEU:HD12	23:CZ:174:VAL:HG22	1.98	0.45
34:BA:948:C:O2'	34:BA:949:A:H5'	2.16	0.45
49:BP:29:ASP:N	49:BP:29:ASP:OD1	2.49	0.45
6:AF:110:LEU:HD23	6:AF:110:LEU:HA	1.80	0.45
1:CA:2478:A:H1'	1:CA:2528:U:O2'	2.16	0.45
1:CA:694:U:OP1	4:CD:59:LYS:NZ	2.50	0.45
57:DZ:314:PHE:CE2	57:DZ:327:PHE:HB3	2.50	0.45
1:CA:2353:G:H2'	1:CA:2354:G:O4'	2.15	0.45
1:CA:2128:C:H5'	1:CA:2173:A:N3	2.32	0.45
23:CZ:144:LEU:HD22	23:CZ:148:ASP:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:84:GLY:O	14:CQ:85:LYS:HB2	2.15	0.45
31:C7:5:TRP:CD1	31:C7:7:PRO:HD3	2.51	0.45
10:CL:72:PRO:HA	10:CL:73:PRO:HD3	1.83	0.45
1:AA:1066:A:N1	1:AA:1186:U:O2'	2.35	0.45
1:AA:2045:G:H5'	1:AA:2629:C:H4'	1.98	0.45
49:DP:23:ASP:OD2	49:DP:25:ARG:NH1	2.49	0.45
16:CS:3:ARG:HE	16:CS:4:LEU:H	1.64	0.45
34:DA:1292:U:H2'	34:DA:1293:G:H8	1.82	0.45
34:DA:9:G:H2'	34:DA:10:A:C8	2.52	0.45
34:DA:9:G:H2'	34:DA:10:A:H8	1.80	0.45
1:CA:1537:G:H2'	1:CA:1538:G:H8	1.80	0.45
57:DZ:606:MET:N	57:DZ:647:VAL:O	2.46	0.45
34:DA:376:G:H5''	49:DP:5:ARG:HB2	1.99	0.45
7:AG:161:THR:HG23	7:AG:163:ALA:H	1.81	0.45
34:DA:1060:C:H4'	43:DJ:51:ARG:HB3	1.97	0.45
5:AE:29:GLY:HA3	63:AE:417:HOH:O	2.16	0.45
1:AA:1529:G:C6	1:AA:1553:A:C6	3.04	0.45
1:CA:271(D):G:H2'	1:CA:271(E):U:C6	2.51	0.45
13:CP:59:LEU:HD11	32:C8:10:ALA:HA	1.99	0.45
34:BA:597:G:C4	34:BA:644:G:C2	3.04	0.45
28:C4:61:ARG:HE	52:DS:42:PRO:HG3	1.81	0.45
34:DA:589:C:H2'	34:DA:590:C:H6	1.82	0.45
45:DL:69:TYR:CD2	45:DL:99:HIS:HE1	2.35	0.45
22:CY:49:VAL:HG11	22:CY:55:TYR:CD2	2.51	0.45
5:CE:77:ILE:HD11	5:CE:79:ARG:HH12	1.81	0.45
15:CR:62:ALA:HA	15:CR:65:LEU:HD23	1.98	0.45
24:A0:72:ARG:HB2	24:A0:75:LEU:HB2	1.97	0.45
5:CE:4:ILE:HD13	5:CE:28:ALA:HB1	1.97	0.45
1:AA:820:U:H2'	1:AA:821:A:H5'	1.98	0.45
1:AA:37:C:H2'	1:AA:38:A:C8	2.51	0.45
1:CA:957:A:C2	1:CA:2459:A:H5'	2.50	0.45
57:BZ:-23:LEU:HA	57:BZ:-20:LEU:HB2	1.99	0.45
1:CA:1069:A:N7	1:CA:1073:A:N6	2.64	0.45
22:AY:79:CYS:SG	22:AY:81:LYS:HG3	2.57	0.45
30:C6:14:THR:OG1	30:C6:48:VAL:O	2.20	0.45
34:DA:893:C:C4	34:DA:894:G:N7	2.84	0.45
57:BZ:112:GLN:HG2	57:BZ:115:GLU:CD	2.37	0.45
40:BG:21:VAL:HG23	40:BG:22:LEU:N	2.31	0.45
42:DI:36:TYR:HD2	42:DI:37:PHE:CE2	2.35	0.45
1:CA:2687:U:H2'	1:CA:2688:U:O4'	2.16	0.45
1:CA:1378:A:O2'	1:CA:1380:G:N7	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:626:A:O4'	1:AA:702:A:N6	2.50	0.45
43:BJ:30:SER:HB2	43:BJ:81:THR:HG21	1.98	0.45
1:CA:1206:G:C2	1:CA:1207:C:C2	3.05	0.45
40:BG:14:PRO:HB3	40:BG:19:GLY:C	2.37	0.45
43:DJ:44:VAL:HG13	43:DJ:66:ARG:HG2	1.98	0.45
34:DA:489:C:N4	34:DA:490:G:O6	2.50	0.45
12:AO:117:LEU:HA	12:AO:117:LEU:HD23	1.52	0.45
11:AN:68:GLU:HG2	11:AN:88:GLU:OE2	2.16	0.45
7:CG:180:PHE:O	7:CG:182:LYS:N	2.49	0.45
61:BZ:703:FUA:C1	61:BZ:703:FUA:O1	2.60	0.45
1:AA:11:G:C2'	1:AA:12:U:H5''	2.42	0.45
3:CC:22:THR:HG23	3:CC:25:GLU:OE1	2.17	0.45
1:AA:1480:A:C2	1:AA:1481:G:C4	3.04	0.45
1:AA:1911:A:H1'	1:AA:2109:G:O4'	2.16	0.45
35:BB:69:LEU:HD12	35:BB:70:PHE:H	1.81	0.45
1:AA:1186:U:OP1	11:AN:25:ARG:NH1	2.45	0.45
1:CA:2582:G:OP2	1:CA:2582:G:H3'	2.16	0.45
17:AT:23:ARG:HG3	17:AT:120:ARG:NH1	2.31	0.45
57:BZ:432:ALA:HA	57:BZ:438:PHE:CE1	2.49	0.45
54:BU:5:ASP:O	54:BU:11:GLY:HA3	2.17	0.45
6:CF:36:VAL:HG11	6:CF:183:VAL:CG1	2.46	0.45
34:DA:1064:G:H21	34:DA:1190:G:H2'	1.81	0.45
1:CA:478:A:N1	1:CA:500:G:H4'	2.31	0.45
1:AA:1857:G:H2'	1:AA:1858:C:H6	1.82	0.45
56:DY:23:A:N6	56:DY:24:G:O6	2.50	0.45
22:CY:76:CYS:SG	22:CY:99:CYS:HB2	2.56	0.45
12:AO:47:ILE:HB	12:AO:48:PRO:HD2	1.98	0.45
1:AA:2190:G:O6	1:AA:2193:A:H2'	2.16	0.45
22:CY:31:LEU:HA	22:CY:32:PRO:HD3	1.71	0.45
46:BM:4:ILE:HA	46:BM:5:ALA:HA	1.72	0.45
57:BZ:287:PRO:HA	57:BZ:288:PRO:HD3	1.76	0.45
1:CA:632:A:H2'	1:CA:633:A:C8	2.51	0.45
38:DE:72:GLN:O	38:DE:75:THR:HG22	2.17	0.45
34:BA:294:U:OP1	34:BA:610:G:O2'	2.27	0.45
34:DA:25:C:C5	34:DA:558:G:N2	2.84	0.45
37:DD:99:SER:O	37:DD:140:VAL:HG23	2.16	0.45
36:BC:125:GLU:HA	36:BC:191:THR:HG22	1.98	0.45
19:CV:16:PRO:HD3	19:CV:99:ILE:HD11	1.98	0.45
34:BA:528:C:H41	45:BL:49:ASN:HD21	1.62	0.45
1:CA:1666:G:O2'	1:CA:1667:G:H5'	2.16	0.45
12:CO:68:GLU:HG2	12:CO:68:GLU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:43:GLU:H	19:AV:43:GLU:HG2	1.45	0.45
4:CD:260:ARG:O	4:CD:260:ARG:HG3	2.17	0.45
1:CA:587:C:OP2	13:CP:21:ARG:NH2	2.49	0.45
1:AA:329:U:H2'	1:AA:330:U:C6	2.51	0.45
34:DA:1340:A:P	56:DY:35:A:OP1	2.75	0.45
3:AC:31:LYS:HG2	3:AC:31:LYS:H	1.57	0.45
34:BA:456:C:N4	34:BA:475:G:H1	2.03	0.45
24:C0:68:GLU:OE2	24:C0:82:ARG:NH1	2.49	0.45
1:CA:1557:C:H5''	1:CA:1558:A:OP2	2.17	0.45
1:CA:1651:G:C2	1:CA:2007:C:N3	2.85	0.45
34:DA:933:G:C2	34:DA:1385:G:C2	3.04	0.45
34:DA:1292:U:H2'	34:DA:1293:G:C8	2.52	0.45
35:BB:166:ASP:HA	35:BB:167:PRO:HD3	1.64	0.45
34:BA:1376:U:H2'	34:BA:1377:A:C8	2.52	0.45
32:C8:6:THR:CG2	32:C8:64:TYR:HD2	2.29	0.45
21:AX:12:VAL:HG22	21:AX:29:TRP:CE2	2.52	0.45
1:CA:1796:U:H2'	1:CA:1797:C:H6	1.80	0.45
53:DT:56:MET:HE1	53:DT:85:MET:HG2	1.98	0.45
41:BH:31:PHE:CE2	41:BH:35:ILE:HD11	2.51	0.45
39:BF:44:GLY:HA2	39:BF:59:TYR:CE1	2.51	0.45
57:DZ:608:VAL:O	57:DZ:644:ARG:HA	2.17	0.45
37:DD:59:ARG:HA	37:DD:59:ARG:HE	1.80	0.45
1:CA:2460:U:H2'	1:CA:2461:C:O4'	2.17	0.45
34:BA:1295:G:O5'	34:BA:1295:G:H8	1.98	0.45
1:AA:2221:A:OP2	1:AA:2222:C:H5	1.99	0.45
57:BZ:-32:LEU:HA	57:BZ:-32:LEU:HD23	1.71	0.45
9:CK:49:ALA:H	9:CK:90:ALA:HB1	1.82	0.45
2:CB:27:C:H5''	16:CS:54:LEU:HD11	1.98	0.45
56:DW:23:A:H2'	56:DW:24:G:H8	1.81	0.45
37:BD:61:LYS:HG3	37:BD:203:VAL:HG22	1.98	0.45
1:CA:212:G:H2'	1:CA:213:A:O4'	2.17	0.45
1:CA:518:G:H2'	1:CA:519:U:C6	2.52	0.45
22:AY:76:CYS:SG	22:AY:78:ALA:HB3	2.56	0.45
7:CG:2:PRO:HB2	7:CG:3:LEU:H	1.57	0.45
1:CA:359:A:H2'	1:CA:360:G:O4'	2.16	0.45
32:A8:62:LEU:HB3	32:A8:65:GLU:HG2	1.98	0.45
22:CY:41:GLY:N	22:CY:64:GLU:OE2	2.40	0.45
34:BA:839:U:H4'	34:BA:840:C:OP2	2.16	0.45
1:AA:1775:C:H5'	1:AA:1776:G:OP2	2.17	0.45
1:CA:840:C:H2'	1:CA:841:A:C8	2.52	0.45
11:CN:4:TYR:O	18:CU:64:ARG:NH2	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:91:PRO:HG2	35:BB:155:LEU:HD13	1.97	0.45
46:DM:123:ALA:HB2	57:DZ:507:TYR:CD1	2.51	0.45
1:AA:1097:G:H5'	1:AA:1098:C:OP2	2.16	0.45
34:BA:1418:A:C2	34:BA:1483:A:C2	3.05	0.45
57:BZ:160:ARG:HB2	57:BZ:255:ILE:HA	1.99	0.45
1:CA:185:U:H4'	1:CA:218:A:H4'	1.99	0.45
57:DZ:357:ARG:HH12	57:DZ:373:ASP:CG	2.20	0.45
1:AA:1481:G:H21	1:AA:1525:G:H5'	1.82	0.45
2:CB:22:U:O2	2:CB:61:G:N2	2.35	0.45
41:BH:51:VAL:HG21	41:BH:60:ARG:CD	2.47	0.45
1:CA:2582:G:C2	1:CA:2583:G:C8	3.05	0.45
56:BY:48:C:H2'	56:BY:48:C:OP1	2.17	0.45
34:DA:403:C:H2'	34:DA:404:U:C6	2.49	0.45
7:AG:125:PHE:HB3	7:AG:166:ASP:OD1	2.16	0.45
34:BA:1101:A:H4'	34:BA:1102:A:O5'	2.17	0.45
7:AG:43:LEU:HB2	7:AG:89:GLY:HA2	1.99	0.45
49:DP:5:ARG:CZ	49:DP:22:THR:HG21	2.47	0.45
1:AA:2036:A:H2'	1:AA:2037:A:C8	2.52	0.45
4:CD:10:THR:HG23	4:CD:13:ARG:HG2	1.99	0.45
35:DB:108:ILE:HG12	35:DB:108:ILE:H	1.54	0.45
1:AA:1112:U:O2	1:AA:1114:G:C8	2.70	0.45
36:DC:136:GLN:O	36:DC:140:ARG:N	2.43	0.45
4:CD:5:LYS:HG2	4:CD:17:THR:HG22	1.98	0.45
1:AA:346:A:H5'	1:AA:364:A:H1'	1.98	0.45
34:DA:834:C:H2'	34:DA:835:U:C6	2.51	0.45
4:CD:228:PRO:HD3	4:CD:235:GLY:CA	2.47	0.45
1:CA:2841:C:C2	1:CA:2877:G:N2	2.84	0.45
1:CA:2702:U:H4'	1:CA:2703:C:OP1	2.17	0.45
34:BA:110:C:H2'	34:BA:111:G:O4'	2.17	0.45
37:BD:61:LYS:HD3	37:BD:206:PHE:CE1	2.52	0.45
41:BH:12:ARG:NH2	41:BH:27:PRO:HD3	2.31	0.45
34:BA:1361:G:H2'	34:BA:1362:C:O4'	2.17	0.45
57:DZ:390:VAL:HG23	57:DZ:391:GLY:O	2.17	0.45
1:CA:768:G:O2'	1:CA:1379:A:N1	2.45	0.45
1:AA:233:A:C2	1:AA:244:A:C4	3.05	0.45
1:AA:1193:C:O2'	1:AA:1194:A:H5'	2.16	0.45
1:AA:197:C:H2'	1:AA:198:C:C6	2.52	0.45
12:CO:118:ALA:HA	12:CO:119:PRO:HD3	1.71	0.45
40:DG:38:LEU:O	40:DG:42:ILE:HG13	2.16	0.45
1:CA:874:G:N2	1:CA:904:C:C2	2.85	0.45
1:CA:2761:G:C2	1:CA:2762:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:32:TYR:HE2	14:CQ:111:GLU:HA	1.82	0.45
36:BC:44:GLU:HA	36:BC:52:LEU:HD12	1.99	0.45
2:AB:57:A:H1'	7:AG:29:TRP:HB2	1.98	0.45
34:DA:1006:C:H2'	34:DA:1007:C:O4'	2.16	0.45
8:AH:71:LEU:HA	8:AH:71:LEU:HD12	1.82	0.45
44:DK:102:GLY:O	44:DK:103:LEU:HD22	2.17	0.45
57:DZ:236:GLU:HA	57:DZ:237:PRO:HD3	1.79	0.45
2:CB:79:C:H2'	2:CB:80:U:O4'	2.17	0.45
45:DL:6:THR:HG23	45:DL:9:GLN:CD	2.36	0.45
46:DM:123:ALA:HB1	57:DZ:507:TYR:HB3	1.98	0.45
34:BA:559:A:N3	34:BA:559:A:H2'	2.31	0.45
47:BN:34:TYR:N	47:BN:39:LEU:O	2.48	0.45
34:BA:514:C:O2	34:BA:538:G:C2	2.69	0.45
17:CT:24:PRO:HA	17:CT:49:VAL:HG13	1.98	0.45
3:CC:48:LEU:HD23	3:CC:59:VAL:HG21	1.98	0.45
19:AV:39:LEU:HD23	19:AV:40:LEU:N	2.32	0.45
10:AL:17:ALA:HB1	10:AL:38:VAL:HG22	1.99	0.45
34:BA:781:A:H5'	34:BA:782:A:OP2	2.17	0.45
34:DA:921:U:O2	38:DE:19:MET:HB2	2.17	0.45
49:BP:58:TYR:O	49:BP:62:VAL:HG22	2.16	0.45
3:AC:16:ASP:OD2	3:AC:19:LYS:HB2	2.17	0.45
34:BA:738:C:C2	34:BA:739:C:C5	3.04	0.45
34:DA:437:U:H5'	37:DD:155:LEU:HD21	1.98	0.45
1:AA:1116:A:O2'	1:AA:1117:G:OP1	2.32	0.45
1:AA:2874:G:OP1	17:AT:119:LYS:HD2	2.17	0.45
1:AA:1935:A:C8	1:AA:1935:A:H5'	2.48	0.45
34:DA:475:G:H2'	34:DA:476:G:C8	2.52	0.45
5:CE:68:ALA:C	5:CE:70:ALA:N	2.70	0.45
10:AL:6:ALA:H	10:AL:59:ILE:HG22	1.82	0.45
29:C5:20:ARG:HA	29:C5:23:HIS:ND1	2.32	0.45
34:BA:189(F):U:C4	50:BQ:72:ARG:NH1	2.85	0.45
7:CG:114:ILE:HB	7:CG:117:PHE:HD2	1.82	0.45
1:AA:2287:C:O2	14:AQ:85:LYS:HG3	2.17	0.45
23:AZ:150:LEU:HB3	23:AZ:171:ILE:HD11	1.99	0.45
5:CE:201:THR:HG23	5:CE:203:LYS:H	1.81	0.45
34:DA:707:C:H2'	34:DA:708:C:C6	2.51	0.45
1:AA:1401:G:C6	1:AA:1402:G:C5	3.05	0.45
22:CY:29:GLU:HB3	22:CY:38:ILE:HG13	1.99	0.45
1:CA:687:C:C2	1:CA:788:A:H5'	2.52	0.45
37:DD:79:PHE:HE1	37:DD:204:ILE:HD13	1.81	0.45
1:CA:904:C:H2'	1:CA:905:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2589:A:O4'	29:A5:3:LYS:HB2	2.17	0.45
1:AA:1556:A:H3'	1:AA:1557:A:H8	1.82	0.45
36:DC:58:GLU:HB3	43:DJ:92:THR:HG21	1.99	0.45
34:BA:545:C:OP2	37:BD:65:ARG:NH2	2.50	0.45
52:BS:31:ILE:HB	52:BS:49:ILE:HG23	1.97	0.45
35:BB:28:PHE:CD1	35:BB:190:THR:HA	2.52	0.45
6:CF:178:PRO:HB3	6:CF:198:ALA:HB1	1.98	0.45
42:BI:99:LEU:HB3	42:BI:101:PHE:CE1	2.52	0.45
37:DD:127:THR:HG23	37:DD:147:ALA:HB3	1.99	0.45
1:CA:667:U:O2	32:C8:2:PRO:HD2	2.17	0.45
44:DK:34:ASP:HB2	44:DK:35:PRO:HD2	1.98	0.45
21:AX:41:ASN:O	21:AX:45:THR:HG23	2.17	0.45
57:DZ:-62:LEU:HD12	57:DZ:-62:LEU:N	2.32	0.45
39:BF:41:GLU:O	39:BF:43:LEU:N	2.50	0.45
34:BA:512:U:H2'	34:BA:513:C:C6	2.52	0.45
34:DA:778:G:C6	34:DA:779:C:C4	3.05	0.45
1:AA:809:U:H4'	1:AA:810:G:O5'	2.17	0.45
34:BA:340:U:H2'	34:BA:341:C:C6	2.52	0.45
57:DZ:20:HIS:HB2	57:DZ:118:SER:CB	2.47	0.45
57:DZ:138:LYS:HA	62:DZ:704:GDP:C6	2.51	0.45
1:CA:1911:U:H2'	1:CA:1918:A:N1	2.31	0.45
35:BB:187:LEU:HD11	35:BB:204:ASN:O	2.17	0.45
14:CQ:109:VAL:HG22	14:CQ:113:GLN:OE1	2.16	0.45
37:BD:105:VAL:HG21	37:BD:126:ILE:HD12	1.98	0.45
3:AC:179:ALA:O	3:AC:180:SER:O	2.35	0.45
1:CA:184:C:H2'	1:CA:185:U:H6	1.81	0.45
34:BA:1157:A:C5	34:BA:1181:G:C6	3.05	0.45
34:BA:375:U:C4	34:BA:376:G:N7	2.85	0.45
22:CY:86:ARG:HG3	22:CY:100:ALA:HB2	1.99	0.45
57:BZ:312:LEU:O	57:BZ:328:ILE:HA	2.17	0.45
6:AF:135:LYS:HB2	6:AF:138:GLU:CG	2.43	0.45
41:BH:10:LEU:HD23	41:BH:10:LEU:H	1.81	0.45
1:CA:2439:A:C5'	1:CA:2439:A:C8	2.97	0.45
2:CB:72:G:O2'	2:CB:105:A:N6	2.45	0.45
1:AA:116:A:H3'	1:AA:117:A:C5'	2.45	0.45
53:DT:43:LEU:HD13	53:DT:51:GLU:HB3	1.99	0.45
15:AR:36:THR:HB	15:AR:37:THR:H	1.51	0.45
57:DZ:223:PHE:HD2	57:DZ:245:ALA:O	2.00	0.45
34:BA:1343:G:H2'	34:BA:1344:C:C6	2.51	0.45
40:BG:92:SER:HA	40:BG:93:PRO:HD2	1.66	0.45
34:DA:61:G:H2'	34:DA:62:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DM:65:LYS:NZ	46:DM:73:GLU:OE2	2.50	0.45
1:AA:1250:U:H4'	1:AA:1251:G:OP2	2.17	0.45
36:BC:22:TRP:CH2	36:BC:32:LEU:HB2	2.52	0.45
39:BF:19:LEU:HD11	39:BF:59:TYR:CD2	2.52	0.45
13:AP:138:LEU:HD12	13:AP:138:LEU:HA	1.77	0.45
34:DA:967:C:H2'	34:DA:968:A:N7	2.31	0.45
1:CA:671:C:H2'	1:CA:672:C:C6	2.52	0.45
7:AG:67:LYS:NZ	7:AG:68:PRO:O	2.50	0.45
34:DA:57:G:N2	34:DA:58:C:O2	2.49	0.45
1:CA:1512:U:H2'	1:CA:1513:C:C6	2.52	0.45
1:CA:422:A:H2'	1:CA:423:A:C8	2.51	0.45
34:DA:1327:C:H2'	34:DA:1328:C:C6	2.52	0.45
25:C1:94:LEU:O	25:C1:97:LEU:HB2	2.16	0.45
34:DA:931:C:H1'	34:DA:1387:G:N2	2.32	0.45
7:AG:76:SER:N	7:AG:84:LYS:HB2	2.32	0.45
2:AB:46:A:C5	2:AB:47:C:C5	3.05	0.45
50:DQ:81:ARG:HH21	50:DQ:84:LEU:HD21	1.82	0.45
34:DA:1466:C:H2'	34:DA:1467:G:O4'	2.17	0.45
34:DA:293:G:C5	34:DA:294:U:C5	3.05	0.45
57:BZ:624:LEU:HD12	57:BZ:624:LEU:HA	1.69	0.45
1:AA:1921:G:H2'	1:AA:1921:G:N3	2.32	0.45
3:AC:203:GLU:N	3:AC:203:GLU:CD	2.70	0.45
34:BA:986:A:H1'	52:BS:54:GLY:O	2.17	0.45
1:CA:96:G:OP1	26:C2:46:GLN:NE2	2.50	0.45
34:DA:596:C:H2'	34:DA:597:G:H8	1.82	0.45
57:DZ:18:ALA:HB1	57:DZ:121:VAL:HG21	1.99	0.44
35:BB:189:ASP:N	35:BB:189:ASP:OD1	2.46	0.44
34:BA:300:A:H2'	34:BA:301:G:O4'	2.16	0.44
34:BA:345:C:H4'	34:BA:346:G:C6	2.52	0.44
57:BZ:114:VAL:O	57:BZ:118:SER:HB2	2.16	0.44
55:BV:16:U:O5'	55:BV:16:U:C6	2.70	0.44
34:DA:114:U:O2'	34:DA:115:G:H5'	2.17	0.44
1:CA:300:A:P	22:CY:86:ARG:HH21	2.40	0.44
1:AA:2154:U:C6	3:AC:6:LYS:CB	3.00	0.44
1:CA:1096:A:H2	10:CL:22:PRO:HD3	1.82	0.44
57:BZ:485:GLU:HG3	57:BZ:555:LEU:HD12	1.98	0.44
34:DA:736:C:H2'	34:DA:737:A:H8	1.78	0.44
34:BA:738:C:H2'	34:BA:739:C:C6	2.44	0.44
1:CA:814:C:H2'	1:CA:815:C:H6	1.83	0.44
34:BA:42:G:H5''	63:BA:5286:HOH:O	2.16	0.44
50:BQ:45:HIS:CE1	50:BQ:47:PRO:HG3	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:646:U:H2'	34:DA:647:C:H6	1.82	0.44
1:AA:2339:A:H2'	1:AA:2340:A:C8	2.53	0.44
37:DD:63:LYS:NZ	37:DD:197:PRO:O	2.41	0.44
35:BB:12:GLU:O	35:BB:14:GLY:N	2.50	0.44
10:AL:74:ALA:O	10:AL:78:ILE:HG22	2.17	0.44
6:CF:185:ASP:HA	6:CF:188:ARG:HD3	1.98	0.44
11:CN:38:HIS:CE1	11:CN:39:ARG:HG3	2.52	0.44
1:CA:2557:G:H2'	1:CA:2558:C:H6	1.82	0.44
34:DA:1258:G:O2'	34:DA:1259:C:H5'	2.16	0.44
27:A3:31:LEU:HA	27:A3:31:LEU:HD23	1.44	0.44
57:DZ:327:PHE:CE1	57:DZ:376:ALA:HB2	2.52	0.44
1:CA:1378:A:OP1	31:C7:10:ARG:NH2	2.50	0.44
38:DE:72:GLN:C	38:DE:73:ASN:HD22	2.20	0.44
56:BW:75:C:H2'	56:BW:76:A:C2	2.53	0.44
1:CA:465:G:OP1	31:C7:12:ARG:NH2	2.46	0.44
22:CY:95:LYS:HE3	22:CY:95:LYS:HB3	1.69	0.44
34:DA:885:G:O2'	34:DA:914:A:N1	2.48	0.44
8:CH:98:LEU:HD22	8:CH:125:VAL:HG23	1.99	0.44
57:DZ:232:LEU:HD13	57:DZ:232:LEU:HA	1.86	0.44
3:CC:211:ARG:HH11	3:CC:211:ARG:HG2	1.81	0.44
10:CL:16:LYS:HE3	10:CL:16:LYS:HB2	1.71	0.44
26:A2:8:LYS:HD3	26:A2:8:LYS:HA	1.48	0.44
7:AG:7:LEU:HD12	7:AG:104:GLU:HA	2.00	0.44
45:BL:45:PRO:HB3	45:BL:92:ASP:HB3	1.99	0.44
1:CA:2721:A:H2'	1:CA:2722:G:O4'	2.16	0.44
3:CC:7:ARG:HH22	3:CC:219:MET:HB2	1.81	0.44
46:DM:124:PRO:O	57:DZ:576:ASP:HB2	2.17	0.44
3:CC:31:LYS:HG2	3:CC:31:LYS:H	1.57	0.44
34:BA:262:A:C6	34:BA:263:A:C6	3.05	0.44
38:BE:144:THR:OG1	38:BE:146:ALA:HB3	2.18	0.44
57:DZ:78:ARG:NH1	57:DZ:357:ARG:NH2	2.66	0.44
34:DA:432:A:N7	34:DA:433:C:C4	2.85	0.44
7:CG:168:GLU:O	7:CG:171:ALA:HB3	2.17	0.44
34:BA:541:G:C6	34:BA:542:G:C5	3.05	0.44
43:BJ:70:ARG:HD3	43:BJ:70:ARG:HA	1.80	0.44
57:BZ:-7:GLU:O	57:BZ:-6:ARG:NH1	2.49	0.44
7:AG:140:ILE:CD1	7:AG:140:ILE:H	2.30	0.44
5:CE:68:ALA:C	5:CE:70:ALA:H	2.20	0.44
34:DA:130:A:N6	34:DA:234:C:O4'	2.51	0.44
28:C4:59:PHE:HA	28:C4:61:ARG:HB2	1.99	0.44
1:CA:2850:A:C6	1:CA:2851:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BH:5:PRO:O	41:BH:8:ASP:HB3	2.17	0.44
1:AA:1636:U:H2'	1:AA:1637:G:H8	1.82	0.44
34:BA:15:G:H2'	34:BA:16:A:H8	1.82	0.44
1:CA:2075:U:OP2	1:CA:2238:G:O2'	2.29	0.44
34:DA:1040:U:C2	34:DA:1041:A:C8	3.05	0.44
1:CA:2846:G:H2'	1:CA:2847:U:O4'	2.17	0.44
1:CA:1489:U:H5'	1:CA:1490:A:OP1	2.18	0.44
34:BA:256:U:H2'	34:BA:257:G:C8	2.53	0.44
38:DE:18:ARG:HH21	38:DE:25:ARG:HG2	1.80	0.44
18:AU:108:GLU:O	18:AU:112:ARG:HG2	2.17	0.44
1:AA:2417:G:OP1	13:AP:77:ARG:NH2	2.50	0.44
8:CH:56:SER:HB3	8:CH:58:GLU:HG2	2.00	0.44
1:CA:1480:G:C6	1:CA:1481:U:C4	3.05	0.44
1:CA:1365:A:OP1	25:C1:41:ARG:NH1	2.50	0.44
3:CC:203:GLU:CD	3:CC:203:GLU:N	2.70	0.44
16:AS:24:LEU:HA	16:AS:24:LEU:HD23	1.79	0.44
1:AA:1347:A:C8	1:AA:1349:G:C8	3.05	0.44
34:DA:1203:C:OP1	47:DN:3:ARG:HG3	2.17	0.44
1:CA:793:A:OP2	1:CA:2071:A:O2'	2.32	0.44
57:DZ:607:ARG:HH22	57:DZ:672:PHE:HD2	1.65	0.44
49:DP:9:PHE:N	49:DP:16:HIS:O	2.50	0.44
3:AC:206:LYS:HB3	3:AC:206:LYS:HZ3	1.81	0.44
57:DZ:90:PHE:CD1	61:DZ:703:FUA:H121	2.53	0.44
1:CA:1912:A:C8	1:CA:1918:A:C2	3.05	0.44
31:A7:24:THR:HG23	63:A7:203:HOH:O	2.17	0.44
57:BZ:125:ALA:HB1	57:BZ:132:ARG:HH21	1.83	0.44
3:CC:55:SER:C	3:CC:57:GLN:N	2.71	0.44
38:BE:110:LEU:HD13	38:BE:118:ILE:HG21	1.99	0.44
1:CA:2306:C:H3'	1:CA:2307:G:C8	2.51	0.44
37:BD:13:ARG:NH1	37:BD:13:ARG:HB3	2.32	0.44
1:AA:2146:G:H2'	1:AA:2147:G:O4'	2.18	0.44
1:CA:2432:A:N1	25:C1:35:THR:HG22	2.32	0.44
3:AC:39:ASP:O	3:AC:178:LYS:HE3	2.17	0.44
1:CA:2218:U:O2	25:C1:52:ARG:NE	2.48	0.44
34:BA:625:G:H2'	34:BA:626:U:H6	1.83	0.44
57:DZ:223:PHE:CE2	57:DZ:249:GLY:HA3	2.52	0.44
57:BZ:637:ARG:C	57:BZ:639:ASN:N	2.70	0.44
36:BC:6:HIS:ND1	47:BN:49:HIS:HB3	2.33	0.44
1:CA:2857:G:C2	1:CA:2861:G:C6	3.05	0.44
5:AE:51:PHE:O	5:AE:75:VAL:HG13	2.18	0.44
21:AX:57:LEU:HD13	21:AX:78:LYS:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:38:G:C2	34:BA:397:A:C2	3.06	0.44
1:CA:1045:A:O4'	1:CA:1047:G:H8	2.00	0.44
12:AO:118:ALA:HA	12:AO:119:PRO:HD3	1.87	0.44
1:AA:895:G:C4	1:AA:978:A:H8	2.35	0.44
35:DB:135:GLN:O	35:DB:139:LYS:HB2	2.17	0.44
34:BA:49:U:O4	34:BA:365:U:H5	2.01	0.44
10:AL:22:PRO:O	10:AL:27:LEU:HD13	2.17	0.44
1:AA:2240:G:OP1	4:AD:261:LYS:HE2	2.16	0.44
14:AQ:62:GLY:H	23:AZ:178:GLU:HB2	1.83	0.44
5:AE:9:VAL:HG23	17:AT:3:ARG:HG2	1.98	0.44
43:DJ:78:ASN:C	43:DJ:80:LYS:H	2.19	0.44
48:BO:8:LYS:O	48:BO:12:ILE:HG13	2.17	0.44
2:AB:63:G:H2'	2:AB:64:C:H6	1.81	0.44
53:BT:29:LYS:O	53:BT:33:ILE:HG13	2.17	0.44
9:AK:88:ALA:C	9:AK:90:ALA:H	2.20	0.44
19:AV:69:LYS:HG3	19:AV:70:ILE:N	2.32	0.44
45:DL:45:PRO:HB2	45:DL:92:ASP:HB3	1.98	0.44
25:A1:50:ARG:HG2	25:A1:59:THR:HB	1.99	0.44
1:AA:2430:A:H2'	1:AA:2431:U:C6	2.52	0.44
33:C9:2:LYS:HD3	33:C9:4:ARG:NH2	2.32	0.44
28:A4:40:HIS:HA	28:A4:41:PRO:HD2	1.52	0.44
9:CK:4:LYS:HA	9:CK:5:ARG:HA	1.78	0.44
34:DA:654:G:H2'	34:DA:655:A:O4'	2.17	0.44
6:CF:119:ARG:HB3	6:CF:119:ARG:CZ	2.45	0.44
49:DP:60:LEU:HD13	49:DP:60:LEU:HA	1.80	0.44
53:DT:36:LEU:HD13	53:DT:36:LEU:HA	1.78	0.44
34:DA:587:G:C2	34:DA:755:G:C5	3.06	0.44
34:BA:115:G:H4'	34:BA:116:A:O5'	2.17	0.44
34:DA:124:G:H4'	34:DA:291:C:O2'	2.17	0.44
13:CP:27:HIS:NE2	63:CP:311:HOH:O	2.35	0.44
5:CE:55:ASN:HA	5:CE:56:PRO:HD3	1.88	0.44
34:DA:426:G:OP1	37:DD:36:ARG:HD2	2.17	0.44
37:BD:166:LYS:N	37:BD:168:ARG:HH12	2.16	0.44
3:AC:24:ASP:C	3:AC:24:ASP:OD1	2.55	0.44
3:AC:22:THR:HG23	3:AC:25:GLU:OE1	2.17	0.44
17:CT:26:ASP:OD1	17:CT:120:ARG:NH2	2.45	0.44
34:BA:1066:C:C2'	34:BA:1067:A:H5'	2.47	0.44
38:DE:33:VAL:HG13	38:DE:112:LEU:HD12	1.98	0.44
57:BZ:340:TYR:CD1	57:BZ:349:LYS:HD3	2.52	0.44
10:AL:108:ALA:O	10:AL:111:LYS:N	2.47	0.44
53:BT:63:ILE:HG22	53:BT:77:ALA:HB1	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:88:LEU:HD22	8:AH:165:ALA:HA	1.98	0.44
57:DZ:515:GLU:HG3	57:DZ:564:LYS:HB3	2.00	0.44
1:CA:921:G:C5	1:CA:922:U:C4	3.06	0.44
34:BA:1101:A:OP2	35:BB:96:ARG:HD3	2.17	0.44
34:DA:1165:C:H2'	34:DA:1166:G:O4'	2.16	0.44
1:CA:638:G:H2'	1:CA:639:U:O4'	2.17	0.44
1:CA:191:A:C2	1:CA:192:C:C2	3.06	0.44
32:C8:33:ASN:HA	32:C8:36:LYS:HG3	2.00	0.44
40:DG:50:ILE:HG22	40:DG:125:MET:HG3	1.99	0.44
34:DA:965:A:H5'	34:DA:969:A:O4'	2.16	0.44
34:BA:1280:A:H5'	43:BJ:40:LEU:HD22	1.99	0.44
34:DA:1118:C:H1'	34:DA:1179:A:C5	2.52	0.44
1:CA:2166:G:H3'	1:CA:2167:U:C5'	2.47	0.44
20:CW:12:ILE:HG13	20:CW:42:ARG:HH11	1.82	0.44
1:AA:861:C:H4'	1:AA:1270:C:O2	2.18	0.44
52:BS:15:LEU:O	52:BS:19:VAL:HG23	2.17	0.44
1:CA:469:G:H2'	1:CA:470:A:H5''	2.00	0.44
1:CA:2749:A:H1'	8:CH:63:SER:HB3	1.99	0.44
21:AX:60:ARG:HH22	31:A7:47:ARG:HH21	1.65	0.44
19:AV:72:VAL:HG13	19:AV:85:LYS:HB3	2.00	0.44
11:CN:23:LEU:HA	11:CN:60:ILE:HD11	2.00	0.44
34:DA:952:U:O4	46:DM:104:ARG:HD3	2.17	0.44
16:AS:25:ARG:HD3	16:AS:42:ASP:OD2	2.18	0.44
38:BE:89:ILE:HD12	38:BE:90:VAL:H	1.82	0.44
34:BA:1468:A:H5''	34:BA:1469:G:OP2	2.17	0.44
9:AK:103:GLY:HA2	9:AK:110:GLY:HA3	1.98	0.44
44:BK:48:ILE:O	44:BK:50:TYR:N	2.41	0.44
12:CO:87:ILE:HD12	12:CO:91:LEU:HA	1.99	0.44
1:CA:2493:U:O2'	14:CQ:80:GLU:OE1	2.20	0.44
1:CA:2415:G:C6	1:CA:2416:C:C4	3.05	0.44
1:CA:2418:A:OP2	32:C8:29:LYS:NZ	2.30	0.44
50:BQ:81:ARG:HA	50:BQ:81:ARG:HD2	1.60	0.44
51:DR:47:THR:OG1	51:DR:47:THR:O	2.34	0.44
1:AA:2747:A:H2'	1:AA:2748:G:O4'	2.17	0.44
17:AT:14:TYR:HB2	17:AT:57:PHE:CE1	2.53	0.44
3:CC:179:ALA:O	3:CC:180:SER:O	2.35	0.44
1:CA:2830:G:O2'	1:CA:2883:A:N1	2.43	0.44
57:BZ:100:VAL:HG12	57:BZ:100:VAL:O	2.17	0.44
49:BP:67:THR:C	49:BP:69:THR:H	2.21	0.44
34:BA:108:G:O6	53:BT:15:ARG:HD2	2.17	0.44
1:AA:2856:G:OP2	17:AT:54:ARG:HB2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:137:ASN:OD1	57:DZ:263:ALA:N	2.38	0.44
11:AN:63:THR:O	11:AN:66:LYS:HG3	2.18	0.44
57:BZ:573:HIS:HB3	57:BZ:577:SER:H	1.82	0.44
49:DP:23:ASP:CG	49:DP:25:ARG:HH11	2.21	0.44
1:AA:596:G:N1	1:AA:2053:A:OP2	2.35	0.44
56:DW:54:5MU:H73	56:DW:55:PSU:C2	2.53	0.44
44:BK:95:ILE:O	44:BK:99:GLN:HG3	2.18	0.44
1:CA:1239:G:H2'	1:CA:1240:U:O4'	2.17	0.44
1:CA:65:C:H2'	1:CA:66:C:C6	2.52	0.44
37:DD:117:ALA:O	37:DD:121:VAL:HG23	2.18	0.44
1:CA:652(C):G:H5''	1:CA:652(D):C:OP2	2.17	0.44
56:DY:55:PSU:HN1	56:DY:57:G:H5'	1.82	0.44
2:CB:100:A:H3'	2:CB:101:G:C8	2.52	0.44
1:CA:864:G:N2	1:CA:913:U:C2	2.86	0.44
34:BA:606:G:N2	34:BA:631:G:N7	2.65	0.44
24:A0:48:GLY:HA3	24:A0:80:HIS:ND1	2.33	0.44
23:AZ:156:LYS:HG2	23:AZ:157:LEU:N	2.33	0.44
1:AA:1400:A:H2'	1:AA:1401:G:O4'	2.17	0.44
57:DZ:-55:LEU:HD23	57:DZ:-55:LEU:HA	1.82	0.44
56:BY:28:G:H2'	56:BY:29:G:C8	2.52	0.44
35:BB:164:VAL:HB	35:BB:186:ALA:HB2	1.99	0.44
57:DZ:8:ASP:O	57:DZ:10:LYS:N	2.50	0.44
34:DA:839:U:H5''	34:DA:840:C:H5	1.82	0.44
42:DI:18:PHE:O	42:DI:61:ALA:HA	2.17	0.44
10:CL:12:LEU:HD11	10:CL:23:VAL:HG21	1.98	0.44
12:CO:92:GLU:HA	12:CO:93:PRO:HD2	1.79	0.44
32:C8:8:LYS:HB3	32:C8:12:LYS:HE3	2.00	0.44
1:AA:704:U:H2'	1:AA:705:C:C6	2.52	0.44
1:CA:2056:G:N2	29:C5:5:PRO:HA	2.33	0.44
1:AA:1617:A:H2'	1:AA:1618:A:C8	2.53	0.44
6:AF:41:LEU:HD23	6:AF:41:LEU:HA	1.78	0.44
22:CY:9:LYS:HA	22:CY:10:GLY:HA2	1.57	0.44
1:CA:2658:C:O3'	8:CH:158:HIS:HE1	2.00	0.44
34:BA:1165:C:H2'	34:BA:1166:G:O4'	2.17	0.44
37:BD:194:LEU:HD12	37:BD:195:ALA:N	2.33	0.44
1:AA:1405:A:H2	1:AA:1418:U:O4	2.01	0.44
3:AC:55:SER:C	3:AC:57:GLN:N	2.71	0.44
1:AA:2357:G:N3	1:AA:2393:C:H2'	2.33	0.44
14:AQ:109:VAL:CG1	14:AQ:113:GLN:HB3	2.43	0.44
3:CC:16:ASP:OD2	3:CC:19:LYS:HB2	2.17	0.44
17:CT:11:GLU:O	17:CT:15:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:39:LEU:C	19:AV:39:LEU:HD23	2.38	0.44
2:AB:15:A:OP2	2:AB:69:G:N2	2.45	0.44
41:BH:100:ILE:HA	41:BH:101:PRO:HD2	1.77	0.44
34:DA:1226:C:OP2	46:DM:91:ARG:NH1	2.36	0.44
34:DA:566:G:H4'	34:DA:567:G:OP1	2.18	0.44
34:DA:409:G:H1	34:DA:433:C:N4	2.15	0.44
1:AA:1135:G:OP2	1:AA:1135:G:H2'	2.17	0.44
41:BH:51:VAL:HG11	41:BH:60:ARG:HH11	1.83	0.44
1:CA:2318:G:O2'	1:CA:2318:G:N3	2.40	0.44
57:BZ:-9:LEU:O	57:BZ:-6:ARG:HB2	2.17	0.44
1:AA:354:A:H2	1:AA:1255:A:C2'	2.31	0.44
57:DZ:515:GLU:OE2	57:DZ:564:LYS:HD3	2.18	0.44
22:CY:68:HIS:HB3	22:CY:71:LYS:HG3	1.99	0.44
1:CA:2591:C:OP1	4:CD:239:ARG:HD2	2.18	0.44
45:BL:28:LYS:HG3	45:BL:62:SER:HB2	2.00	0.44
34:BA:1388:C:H2'	34:BA:1389:C:H6	1.82	0.44
34:BA:909:A:H2'	34:BA:910:C:O4'	2.16	0.44
5:CE:22:PRO:O	5:CE:185:LYS:HA	2.17	0.44
1:AA:1358:U:C2	1:AA:1649:A:C2	3.05	0.44
1:CA:1031:G:H21	33:C9:36:GLN:HE22	1.65	0.44
34:DA:1104:G:H4'	35:DB:111:ARG:NH1	2.32	0.44
4:AD:20:ASP:OD1	4:AD:21:PHE:N	2.51	0.44
34:BA:47:C:C6	34:BA:365:U:H2'	2.53	0.44
23:CZ:98:MET:HB2	23:CZ:98:MET:HE2	1.73	0.44
2:AB:32:C:C2	2:AB:51:G:C2	3.05	0.44
34:BA:654:G:C4	34:BA:753:A:C6	3.04	0.44
43:DJ:40:LEU:HB2	43:DJ:69:ASN:HB3	2.00	0.44
2:AB:111:G:H2'	2:AB:112:U:C6	2.53	0.44
1:CA:2056:G:H2'	1:CA:2056:G:N3	2.33	0.44
57:BZ:556:ILE:HG13	57:BZ:558:PHE:HD2	1.82	0.44
4:CD:77:ALA:HA	4:CD:97:TYR:HA	1.99	0.44
33:A9:3:VAL:C	33:A9:4:ARG:HG3	2.37	0.44
8:CH:7:LEU:HA	8:CH:8:PRO:HD3	1.82	0.44
1:CA:584:C:OP2	18:CU:6:THR:OG1	2.21	0.44
34:DA:1079:G:C6	34:DA:1080:A:N6	2.85	0.44
36:DC:130:VAL:HG11	36:DC:153:VAL:HG11	2.00	0.44
40:BG:137:LYS:HG3	40:BG:137:LYS:O	2.17	0.44
50:BQ:29:HIS:HA	50:BQ:30:PRO:HD2	1.74	0.44
1:CA:1860:G:P	3:CC:206:LYS:HE2	2.52	0.44
57:BZ:11:ARG:O	57:BZ:77:HIS:HA	2.17	0.44
17:AT:41:ARG:NH1	34:BA:346:G:OP1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:C0:82:ARG:HB2	24:C0:82:ARG:HH11	1.83	0.44
57:BZ:349:LYS:HG2	57:BZ:350:GLU:N	2.33	0.44
40:BG:113:GLU:H	40:BG:113:GLU:HG2	1.39	0.44
2:CB:7:G:H4'	16:CS:29:PHE:CD2	2.53	0.44
34:DA:1355:G:H2'	34:DA:1356:G:O4'	2.18	0.44
8:AH:167:GLU:HA	8:AH:168:PRO:HD3	1.74	0.44
1:CA:2318:G:N2	16:CS:3:ARG:HH12	2.15	0.44
34:DA:1091:U:C2	34:DA:1095:U:C4	3.06	0.44
34:BA:1494:G:O3'	57:BZ:499:ARG:NH1	2.50	0.44
53:BT:60:GLU:O	53:BT:63:ILE:HB	2.17	0.44
30:A6:30:THR:HG22	30:A6:30:THR:O	2.18	0.44
10:CL:21:PRO:CG	57:DZ:614:GLU:HB2	2.48	0.44
10:AL:29:GLN:O	10:AL:59:ILE:HD12	2.17	0.44
22:CY:77:PRO:CD	22:CY:106:LEU:HD23	2.47	0.44
35:DB:104:ASN:O	35:DB:108:ILE:HG12	2.18	0.44
41:DH:20:TYR:HD2	41:DH:65:TYR:CD2	2.35	0.44
21:CX:61:GLY:HA3	21:CX:73:ARG:O	2.18	0.44
34:DA:1128:C:H1'	34:DA:1148:U:H3	1.83	0.44
57:DZ:453:GLY:HA3	57:DZ:459:LEU:HG	2.00	0.44
1:CA:487:C:C2'	1:CA:488:G:H5'	2.48	0.44
1:AA:1828:C:H4'	4:AD:257:LEU:O	2.18	0.44
1:AA:644:G:O6	6:AF:103:LYS:HE3	2.17	0.44
6:AF:106:ARG:H	6:AF:106:ARG:HG2	1.60	0.44
34:DA:546:G:P	37:DD:72:GLU:HB3	2.57	0.44
21:CX:26:TYR:HB3	21:CX:92:LEU:HD12	1.98	0.44
1:CA:1063:G:N3	10:CL:91:PRO:HG2	2.33	0.44
34:DA:32:A:C2	34:DA:33:A:C4	3.05	0.44
45:DL:105:TYR:O	45:DL:107:ALA:N	2.51	0.44
56:BW:18:G:H4'	56:BW:60:U:C6	2.53	0.44
33:C9:17:ILE:HG21	33:C9:19:ARG:HH21	1.83	0.44
7:CG:36:LYS:HD3	7:CG:95:ARG:CZ	2.47	0.44
5:CE:102:VAL:HB	5:CE:103:ASP:H	1.58	0.44
23:CZ:89:PHE:CE1	23:CZ:96:VAL:HG21	2.52	0.44
38:DE:30:ALA:O	38:DE:45:PHE:HD1	2.01	0.44
1:CA:1071:G:H1'	1:CA:1089:G:C8	2.53	0.44
57:BZ:292:THR:HA	57:BZ:298:VAL:HA	2.00	0.44
34:BA:1189:C:H5''	34:BA:1190:G:OP2	2.18	0.44
34:DA:1153:C:H2'	34:DA:1154:G:H5''	1.99	0.44
1:CA:1300:U:C2	1:CA:1626:G:C6	3.06	0.44
57:DZ:540:PRO:O	57:DZ:543:GLN:HB3	2.18	0.44
1:CA:1443:G:N2	1:CA:1549:C:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CQ:58:PHE:O	14:CQ:59:ARG:HB2	2.18	0.44
1:CA:1820:U:H4'	1:CA:1821:A:OP2	2.17	0.44
40:DG:105:VAL:O	40:DG:108:ALA:HB3	2.17	0.44
1:CA:2723:C:H4'	15:CR:1:MET:HG3	2.00	0.44
1:AA:174:U:H4'	1:AA:207:A:H4'	2.00	0.44
37:BD:78:LEU:HD23	37:BD:78:LEU:HA	1.77	0.44
17:CT:109:GLU:HG2	17:CT:112:ARG:HH22	1.81	0.44
12:AO:111:PHE:O	12:AO:115:VAL:HG23	2.18	0.44
23:CZ:166:SER:HA	23:CZ:167:PRO:HD3	1.81	0.44
37:BD:4:TYR:O	37:BD:5:ILE:HG22	2.17	0.44
1:AA:1157:A:O2'	1:AA:1158:G:H4'	2.18	0.44
34:BA:299:G:C6	34:BA:300:A:C6	3.06	0.44
34:BA:673:G:H2'	34:BA:674:G:C8	2.53	0.44
35:DB:15:VAL:HG23	35:DB:16:HIS:ND1	2.33	0.44
34:BA:453:A:H62	34:BA:479:C:H42	1.66	0.44
3:CC:24:ASP:OD1	3:CC:24:ASP:C	2.55	0.44
57:DZ:74:TRP:HE1	57:DZ:274:ASP:N	2.15	0.44
34:DA:402:G:O2'	34:DA:620:C:N3	2.49	0.44
23:AZ:31:ARG:HG3	23:AZ:31:ARG:H	1.28	0.44
29:A5:16:ARG:HD2	29:A5:20:ARG:NH1	2.33	0.44
34:DA:196:A:N3	34:DA:222:U:H1'	2.33	0.44
16:CS:63:THR:HG23	16:CS:64:GLU:N	2.30	0.44
10:AL:103:GLN:O	10:AL:106:GLU:HG3	2.18	0.44
34:BA:960:U:H1'	34:BA:1223:C:H5'	1.99	0.44
23:CZ:136:PHE:HA	23:CZ:136:PHE:HD2	1.78	0.44
1:CA:889:C:O2'	1:CA:890:A:O5'	2.34	0.44
34:BA:1027:C:H5''	34:BA:1028:C:OP2	2.18	0.44
40:DG:47:CYS:HB3	40:DG:58:PRO:HB3	2.00	0.44
1:CA:2886:G:H2'	1:CA:2887:U:H6	1.83	0.44
36:DC:22:TRP:HZ3	36:DC:24:ALA:HB2	1.83	0.44
4:AD:16:MET:HG3	4:AD:206:LEU:O	2.18	0.44
57:BZ:88:VAL:HG13	57:BZ:117:GLN:HE22	1.83	0.44
57:DZ:149:VAL:O	57:DZ:153:MET:HB2	2.18	0.44
1:CA:2016:U:H2'	1:CA:2017:U:C6	2.52	0.44
9:AK:25:PHE:O	9:AK:84:GLU:HA	2.17	0.44
1:AA:2282:G:H2'	1:AA:2283:G:O4'	2.17	0.44
56:BW:17:C:O2	56:BW:17:C:H2'	2.17	0.44
11:CN:85:ILE:HG21	11:CN:90:MET:HE2	1.99	0.44
7:CG:36:LYS:HD3	7:CG:95:ARG:NH1	2.33	0.44
34:BA:612:C:O2	34:BA:629:G:N2	2.51	0.44
57:BZ:191:ASP:HA	57:BZ:265:LYS:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2643:G:N2	1:CA:2772:C:C2	2.86	0.44
53:BT:14:LYS:O	53:BT:18:GLN:HG3	2.18	0.44
1:CA:1355:G:P	4:CD:38:LYS:HE2	2.58	0.44
1:AA:2784:C:H2'	1:AA:2785:C:C6	2.53	0.44
36:BC:174:PRO:HD2	36:BC:182:ILE:HD11	2.00	0.44
1:AA:1496:A:H5'	1:AA:1497:G:OP2	2.17	0.44
1:CA:1035:U:H2'	1:CA:1036:G:C8	2.53	0.44
1:AA:1036:A:H5''	1:AA:1037:C:P	2.58	0.44
34:DA:904:C:H2'	34:DA:905:U:O4'	2.17	0.44
1:AA:237:G:OP1	63:AA:4921:HOH:O	2.21	0.44
21:AX:5:TYR:CZ	26:A2:30:ARG:HB2	2.53	0.44
37:BD:59:ARG:NE	37:BD:59:ARG:HA	2.33	0.44
37:DD:110:PHE:CD1	37:DD:110:PHE:N	2.86	0.44
15:AR:70:LEU:HD23	15:AR:70:LEU:HA	1.66	0.44
36:BC:122:GLU:O	36:BC:126:ARG:NH1	2.44	0.44
1:AA:282:G:H2'	1:AA:283:G:O4'	2.18	0.44
45:DL:59:ARG:NH1	45:DL:65:GLU:OE1	2.51	0.44
34:DA:1142:G:H3'	34:DA:1143:G:C8	2.52	0.44
49:BP:40:ASP:HA	49:BP:41:PRO:HD2	1.66	0.44
57:BZ:435:ASP:OD2	57:BZ:437:THR:OG1	2.34	0.44
57:DZ:74:TRP:NE1	57:DZ:273:LEU:C	2.72	0.44
1:AA:1740:U:H1'	4:AD:14:ARG:NH2	2.33	0.44
57:BZ:350:GLU:HG2	57:BZ:380:LEU:HA	2.00	0.44
38:BE:69:VAL:HA	38:BE:70:PRO:HD2	1.83	0.44
4:AD:108:PRO:HG3	4:AD:143:HIS:CE1	2.53	0.44
1:CA:2063:C:O2	1:CA:2450:A:N1	2.50	0.44
4:AD:71:ASP:OD2	4:AD:103:ARG:NH2	2.47	0.44
34:DA:1089:G:C6	34:DA:1090:U:C4	3.06	0.44
57:DZ:363:ARG:NH1	57:DZ:363:ARG:CG	2.78	0.44
47:DN:2:ALA:O	47:DN:6:LEU:HD22	2.18	0.44
3:CC:194:ILE:HD11	3:CC:227:PRO:HB2	1.99	0.44
52:BS:32:LYS:HA	52:BS:50:ALA:HB3	1.99	0.44
11:CN:34:LEU:HD21	11:CN:120:LEU:HG	2.00	0.44
5:CE:11:MET:HG2	5:CE:24:THR:HG22	1.99	0.44
33:C9:23:VAL:HB	33:C9:36:GLN:NE2	2.32	0.44
34:BA:1234:C:H2'	34:BA:1235:U:C6	2.53	0.44
44:DK:20:TYR:CD1	44:DK:83:ILE:HB	2.53	0.44
45:DL:69:TYR:CD2	45:DL:99:HIS:CE1	3.06	0.44
18:AU:74:LEU:HD12	18:AU:74:LEU:N	2.33	0.44
4:AD:253:GLN:HE21	4:AD:253:GLN:HB3	1.63	0.44
34:BA:662:G:O2'	34:BA:836:G:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DM:3:ARG:O	46:DM:57:ARG:NH2	2.47	0.44
36:BC:178:LEU:HA	36:BC:178:LEU:HD13	1.83	0.44
22:CY:87:LYS:HD2	22:CY:95:LYS:HD2	1.99	0.44
57:DZ:8:ASP:C	57:DZ:10:LYS:H	2.21	0.44
38:DE:51:VAL:O	38:DE:55:VAL:HG23	2.18	0.44
18:CU:97:ASP:OD1	18:CU:101:ARG:NH1	2.51	0.44
5:CE:116:VAL:HG13	5:CE:122:PHE:HB2	2.00	0.44
1:AA:2225:U:O2'	1:AA:2226:C:H5'	2.17	0.44
23:AZ:102:LEU:HD11	23:AZ:124:ILE:HB	2.00	0.44
1:CA:908:C:OP2	14:CQ:22:LYS:HD3	2.18	0.44
51:DR:26:LEU:HD23	51:DR:29:PHE:CE1	2.52	0.44
15:CR:55:ALA:HA	15:CR:80:PHE:CZ	2.53	0.44
1:AA:1140:U:H2'	1:AA:1141:A:H3'	2.00	0.44
34:BA:967:C:O5'	34:BA:967:C:H6	2.01	0.44
14:AQ:45:GLN:N	14:AQ:45:GLN:OE1	2.46	0.44
1:AA:263:C:H6	1:AA:263:C:H5''	1.83	0.44
36:DC:104:GLN:HE21	36:DC:104:GLN:HB3	1.62	0.44
27:A3:18:ASP:N	27:A3:18:ASP:OD1	2.42	0.44
31:A7:31:LEU:HD22	31:A7:42:LEU:HB3	1.99	0.44
4:CD:61:LEU:O	4:CD:63:ARG:NH1	2.51	0.44
34:BA:1340:A:H2'	34:BA:1341:U:O4'	2.18	0.44
6:AF:120:GLU:HG3	6:AF:122:LYS:HG2	2.00	0.44
44:DK:72:ALA:HB1	44:DK:77:MET:HB2	1.98	0.44
57:DZ:170:ARG:HA	57:DZ:170:ARG:HD3	1.68	0.43
1:AA:1154:U:H1'	1:AA:1155:C:OP1	2.18	0.43
1:AA:1067:A:C3'	1:AA:1067:A:C8	2.98	0.43
57:BZ:225:GLU:H	57:BZ:225:GLU:HG2	1.63	0.43
1:AA:2200:C:H4'	3:AC:47:LYS:HZ3	1.80	0.43
34:BA:408:A:H2'	34:BA:409:G:H8	1.82	0.43
1:AA:967:G:H4'	1:AA:2281:A:C5	2.53	0.43
34:DA:1348:U:H2'	34:DA:1349:A:H8	1.83	0.43
34:DA:1074:G:O2'	34:DA:1101:A:N1	2.44	0.43
14:CQ:29:PHE:HB2	14:CQ:105:GLU:OE2	2.18	0.43
25:C1:25:LYS:C	25:C1:27:GLU:N	2.70	0.43
52:DS:15:LEU:HD21	52:DS:32:LYS:O	2.17	0.43
34:DA:195:A:OP2	63:DA:3299:HOH:O	2.21	0.43
3:CC:39:ASP:O	3:CC:178:LYS:HE3	2.17	0.43
37:BD:57:ARG:HE	37:BD:205:GLU:HB2	1.83	0.43
57:DZ:316:ILE:CD1	57:DZ:326:THR:HG23	2.48	0.43
1:CA:76:C:O3'	26:C2:59:ARG:HG3	2.17	0.43
3:AC:194:ILE:HD11	3:AC:227:PRO:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:629:GLY:HA2	57:DZ:648:PRO:HD3	2.00	0.43
17:CT:99:LEU:HA	17:CT:99:LEU:HD23	1.79	0.43
34:BA:413:G:H1'	34:BA:428:G:N2	2.32	0.43
49:BP:36:ILE:HD12	49:BP:56:ALA:HB2	1.99	0.43
34:DA:130:A:H1'	34:DA:263:A:O2'	2.18	0.43
34:BA:735:C:H2'	34:BA:736:C:C6	2.53	0.43
34:BA:604:G:N2	34:BA:635:G:C4	2.86	0.43
46:BM:17:VAL:O	46:BM:20:THR:OG1	2.28	0.43
45:BL:26:ALA:HB3	45:BL:98:TYR:CZ	2.53	0.43
36:DC:54:ARG:NH1	36:DC:56:ASP:OD2	2.51	0.43
1:AA:989:G:H5''	1:AA:990:A:H5'	2.00	0.43
1:CA:2360:A:H8	1:CA:2360:A:O5'	2.01	0.43
1:AA:734:C:H2'	1:AA:735:U:O4'	2.18	0.43
10:AL:23:VAL:HG13	10:AL:27:LEU:HD22	2.00	0.43
10:AL:40:ALA:HB3	10:AL:67:PHE:HZ	1.82	0.43
34:BA:1429:C:H2'	34:BA:1430:C:H6	1.81	0.43
1:CA:2784:C:H1'	5:CE:37:ARG:HH12	1.82	0.43
32:A8:62:LEU:HB3	32:A8:65:GLU:CG	2.48	0.43
57:DZ:238:THR:HG22	57:DZ:241:GLU:OE2	2.17	0.43
34:BA:696:A:O2'	34:BA:697:U:H5'	2.18	0.43
49:BP:2:VAL:O	49:BP:64:ALA:HA	2.17	0.43
57:BZ:413:ILE:HA	57:BZ:476:VAL:HG12	1.99	0.43
1:AA:1757:C:O2'	1:AA:2868:C:N3	2.44	0.43
4:AD:72:LYS:HD3	4:AD:97:TYR:CE2	2.53	0.43
34:BA:1133:G:H2'	34:BA:1134:G:H8	1.82	0.43
57:BZ:673:PHE:HZ	57:BZ:676:TYR:CD2	2.35	0.43
1:CA:1290:C:H2'	1:CA:1291:C:C6	2.54	0.43
40:DG:71:PRO:HG3	40:DG:103:TRP:CH2	2.53	0.43
1:CA:590:A:H2'	1:CA:591:C:C6	2.53	0.43
51:DR:22:VAL:HG23	51:DR:55:ARG:O	2.18	0.43
34:BA:689:C:OP2	44:BK:55:LYS:NZ	2.51	0.43
34:BA:1229:A:H8	34:BA:1229:A:O5'	2.01	0.43
1:AA:2191:A:N3	1:AA:2191:A:H2'	2.33	0.43
7:AG:103:LEU:HA	7:AG:103:LEU:HD23	1.78	0.43
34:DA:960:U:O2	34:DA:960:U:H2'	2.18	0.43
4:AD:13:ARG:HD2	4:AD:13:ARG:HA	1.69	0.43
8:AH:92:ILE:HD13	8:AH:92:ILE:HA	1.74	0.43
1:AA:1074:A:N3	1:AA:2498:G:O2'	2.37	0.43
21:AX:31:HIS:HD2	21:AX:33:LYS:N	1.94	0.43
3:CC:54:ARG:HE	3:CC:57:GLN:HG2	1.83	0.43
56:BW:28:G:H1	56:BW:42:C:N4	2.08	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2327:G:C6	1:AA:2328:C:N4	2.86	0.43
1:CA:981:A:OP2	1:CA:982:C:N4	2.48	0.43
34:DA:1374:A:C4	34:DA:1375:A:C8	3.06	0.43
37:BD:13:ARG:HB2	37:BD:40:PRO:HD3	2.01	0.43
34:DA:1075:C:H5''	35:DB:179:LYS:HZ1	1.82	0.43
34:DA:1095:U:H2'	34:DA:1096:C:O4'	2.18	0.43
1:CA:322:A:H5'	1:CA:340:A:H1'	1.99	0.43
1:CA:921:G:H4'	1:CA:2269:A:C5	2.53	0.43
6:CF:148:LEU:HD11	6:CF:193:VAL:HG21	2.00	0.43
57:DZ:638:GLY:C	57:DZ:640:ALA:HB3	2.38	0.43
16:CS:14:VAL:HG23	16:CS:15:ARG:N	2.33	0.43
1:CA:748:G:C8	20:CW:89:ALA:HB1	2.53	0.43
1:CA:1056:G:H4'	1:CA:1086:A:C8	2.53	0.43
1:CA:2854:G:C2	1:CA:2864:G:C2	3.05	0.43
1:AA:2274:U:P	24:A0:19:LYS:HZ3	2.41	0.43
34:BA:189(F):U:C2	50:BQ:72:ARG:NH2	2.86	0.43
57:DZ:38:ARG:NH1	57:DZ:270:GLN:HE21	2.16	0.43
41:BH:35:ILE:O	41:BH:38:ILE:HB	2.17	0.43
1:CA:2717:G:C6	1:CA:2718:G:C5	3.06	0.43
1:CA:2652:C:H2'	1:CA:2653:U:O4'	2.18	0.43
45:DL:119:LYS:HB2	45:DL:120:TYR:HD2	1.83	0.43
57:BZ:-34:ARG:O	57:BZ:-32:LEU:N	2.51	0.43
51:BR:70:ILE:HG23	51:BR:79:LEU:HD13	1.99	0.43
50:DQ:45:HIS:HB3	50:DQ:72:ARG:HG3	1.99	0.43
2:CB:24:G:N3	2:CB:27:C:N4	2.55	0.43
57:DZ:272:LEU:HD12	57:DZ:275:ALA:HB3	2.00	0.43
37:BD:206:PHE:C	37:BD:208:SER:H	2.21	0.43
51:DR:33:ASP:OD2	51:DR:36:ASN:HB2	2.18	0.43
10:CL:10:LEU:HB2	10:CL:55:VAL:HG13	2.00	0.43
45:BL:44:THR:HA	45:BL:45:PRO:HD3	1.79	0.43
57:BZ:187:THR:HG22	57:BZ:199:ILE:HG12	2.00	0.43
10:AL:21:PRO:HG3	10:AL:25:PRO:HD3	2.00	0.43
1:AA:2101:U:O3'	25:A1:35:THR:OG1	2.34	0.43
1:AA:601:A:OP1	1:AA:1301:U:H4'	2.18	0.43
42:BI:53:VAL:O	42:BI:55:ALA:N	2.51	0.43
34:DA:941:G:C2	34:DA:1343:G:C2	3.06	0.43
34:BA:1299:A:O2'	34:BA:1301:U:H5'	2.18	0.43
25:A1:54:ALA:O	25:A1:56:GLN:N	2.50	0.43
16:CS:41:ASP:OD2	16:CS:44:LYS:HE2	2.18	0.43
34:DA:630:G:H2'	34:DA:631:G:H8	1.84	0.43
1:AA:2444:A:H2'	1:AA:2445:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:8:ARG:NH1	15:AR:39:PRO:HB3	2.33	0.43
1:AA:424:G:H1'	1:AA:2243:C:O2'	2.19	0.43
1:AA:1099:C:C2	1:AA:1153:G:N2	2.86	0.43
34:BA:345:C:H4'	34:BA:346:G:C5	2.53	0.43
49:BP:6:LEU:HD12	49:BP:19:ILE:HB	1.99	0.43
34:BA:1273:G:H3'	34:BA:1274:G:H8	1.83	0.43
17:CT:18:ASP:N	17:CT:18:ASP:OD1	2.41	0.43
6:CF:102:PRO:HB2	6:CF:105:VAL:HB	2.01	0.43
1:AA:966:G:C2'	1:AA:967:G:H5'	2.49	0.43
1:CA:9:U:N3	1:CA:2629:A:H2	2.11	0.43
57:DZ:530:VAL:HG13	57:DZ:533:VAL:HG21	2.00	0.43
1:CA:2728:U:OP1	12:CO:70:LYS:NZ	2.51	0.43
34:DA:195:A:OP1	53:DT:68:LYS:NZ	2.50	0.43
34:DA:517:G:N1	34:DA:533:A:OP2	2.50	0.43
56:DW:18:G:H4'	56:DW:60:U:C5	2.53	0.43
34:DA:1015:A:N3	34:DA:1218:C:O2'	2.44	0.43
35:DB:218:ALA:O	35:DB:222:ILE:HG23	2.18	0.43
35:BB:81:VAL:HG12	35:BB:215:LEU:HD11	1.98	0.43
34:DA:1171:G:H8	34:DA:1171:G:OP2	2.01	0.43
1:CA:1540:U:C2'	1:CA:1541:G:H5'	2.48	0.43
1:CA:797:C:O5'	1:CA:797:C:H6	2.01	0.43
1:AA:253:C:O2'	1:AA:254:A:H2'	2.18	0.43
34:DA:826:C:H2'	34:DA:827:U:C6	2.53	0.43
48:DO:5:LYS:O	48:DO:9:GLN:HG2	2.18	0.43
34:DA:543:C:H2'	34:DA:544:G:O4'	2.19	0.43
34:DA:509:A:C6	34:DA:510:A:N1	2.86	0.43
29:A5:48:GLU:C	29:A5:60:VAL:HG11	2.39	0.43
1:CA:71:A:H5''	1:CA:73:A:C8	2.54	0.43
56:DW:44:G:C5	56:DW:45:U:C4	3.06	0.43
5:CE:14:ILE:HB	17:CT:14:TYR:CZ	2.54	0.43
34:DA:577:G:C4	34:DA:816:A:C2	3.06	0.43
34:BA:866:C:C4	34:BA:867:G:H1'	2.54	0.43
34:BA:313:A:C6	34:BA:314:C:C4	3.07	0.43
36:BC:148:GLY:HA3	36:BC:172:ARG:O	2.18	0.43
1:AA:1821:C:H2'	1:AA:1822:A:C5	2.54	0.43
1:AA:2579:G:H2'	1:AA:2580:C:C6	2.53	0.43
41:DH:13:ILE:O	41:DH:17:THR:HG23	2.17	0.43
48:DO:56:LEU:O	48:DO:60:VAL:HG23	2.18	0.43
1:CA:209:C:H2'	1:CA:210:C:O4'	2.18	0.43
1:CA:2391:G:O2'	1:CA:2424:C:N4	2.41	0.43
2:CB:29:A:C2	2:CB:30:C:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2679:A:O2'	1:CA:2680:C:H5'	2.18	0.43
3:AC:60:ARG:HG3	3:AC:165:ARG:HB2	2.01	0.43
13:AP:19:VAL:HB	13:AP:31:ALA:HB1	2.01	0.43
1:AA:1414:G:C2	1:AA:1415:G:C8	3.06	0.43
25:A1:85:LEU:HA	25:A1:85:LEU:HD23	1.66	0.43
1:CA:2351:G:O5'	1:CA:2351:G:H8	2.02	0.43
57:BZ:5:LEU:HD23	57:BZ:5:LEU:HA	1.67	0.43
1:CA:277:C:O2	1:CA:277:C:H2'	2.18	0.43
34:BA:872:A:C2	34:BA:874:G:C6	3.06	0.43
12:AO:35:VAL:HA	12:AO:62:VAL:HG12	2.00	0.43
6:CF:13:SER:OG	6:CF:15:SER:HB2	2.18	0.43
1:CA:1860:G:C8	1:CA:1860:G:OP2	2.72	0.43
37:BD:101:LEU:HD12	37:BD:101:LEU:C	2.38	0.43
37:BD:173:TRP:CZ3	37:BD:174:LEU:HD11	2.53	0.43
1:CA:1268:A:C2'	1:CA:1269:A:O5'	2.66	0.43
34:DA:1256:A:OP2	36:DC:26:LYS:NZ	2.46	0.43
1:CA:2275:C:O2	14:CQ:85:LYS:HD2	2.18	0.43
34:DA:919:A:O2'	34:DA:920:U:H5'	2.19	0.43
38:BE:41:VAL:HG22	38:BE:69:VAL:HG11	2.00	0.43
57:BZ:590:ILE:HD13	57:BZ:593:ALA:HB3	2.00	0.43
1:AA:2564:U:H2'	1:AA:2566:U:H5''	2.01	0.43
7:CG:37:VAL:HB	7:CG:94:LEU:HB2	2.00	0.43
41:BH:51:VAL:HG12	41:BH:52:ASP:N	2.28	0.43
43:DJ:63:PHE:HZ	47:DN:49:HIS:CD2	2.36	0.43
1:CA:857:C:O2'	1:CA:858:U:H5'	2.18	0.43
1:CA:2053:G:OP1	5:CE:144:ARG:HG2	2.18	0.43
34:BA:1079:G:H2'	34:BA:1080:A:C8	2.54	0.43
34:DA:533:A:N6	34:DA:536:C:O2	2.51	0.43
34:BA:625:G:H2'	34:BA:626:U:C6	2.53	0.43
37:DD:32:ALA:HB3	60:DD:501:SF4:S2	2.58	0.43
34:BA:1225:A:OP1	46:BM:102:ARG:HA	2.19	0.43
1:AA:956:A:H2'	1:AA:957:A:C8	2.53	0.43
1:CA:1530:C:N4	1:CA:1539:G:H1	2.17	0.43
34:DA:547:A:H4'	34:DA:548:G:O5'	2.18	0.43
7:CG:136:ARG:HD2	7:CG:137:GLU:H	1.84	0.43
1:CA:637:A:H2'	13:CP:117:GLU:OE2	2.19	0.43
5:CE:169:ASN:HD22	5:CE:203:LYS:CB	2.31	0.43
1:CA:956:G:OP2	14:CQ:14:ARG:NH2	2.50	0.43
1:AA:310:C:H2'	1:AA:311:C:C6	2.54	0.43
40:DG:78:ARG:HH21	40:DG:79:ARG:HH22	1.66	0.43
36:DC:134:ILE:HD11	36:DC:153:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1154:G:C6	34:DA:1155:G:C6	3.06	0.43
33:A9:27:CYS:HB3	33:A9:32:HIS:HB2	1.99	0.43
1:AA:1478:C:H2'	1:AA:1479:U:O4'	2.18	0.43
1:AA:289:G:H2'	1:AA:290:G:C8	2.53	0.43
1:CA:2747:G:O6	1:CA:2755:C:H5''	2.19	0.43
5:CE:128:SER:OG	5:CE:129:HIS:N	2.48	0.43
1:CA:2758:A:C2	1:CA:2759:G:H1'	2.52	0.43
1:CA:875:G:H5''	23:CZ:149:SER:OG	2.18	0.43
4:AD:35:LYS:HB2	4:AD:36:PRO:HD2	2.00	0.43
57:DZ:655:TYR:C	57:DZ:657:THR:H	2.22	0.43
53:BT:40:ALA:HB2	53:BT:55:ILE:HG22	2.01	0.43
34:BA:837:G:N2	34:BA:850:U:H1'	2.32	0.43
34:DA:841:U:H6	34:DA:841:U:P	2.42	0.43
4:CD:94:LEU:HD23	4:CD:94:LEU:HA	1.83	0.43
7:AG:26:GLN:HA	7:AG:26:GLN:HE21	1.82	0.43
32:A8:26:LYS:HB3	63:A8:6310:HOH:O	2.19	0.43
55:DV:17:U:C2	56:DW:36:A:H2	2.36	0.43
34:BA:457:C:N3	34:BA:475:G:C2	2.87	0.43
34:BA:941:G:C2	34:BA:942:G:H1'	2.53	0.43
34:BA:1075:C:OP1	35:BB:179:LYS:HE3	2.18	0.43
34:DA:1226:C:H4'	34:DA:1227:A:OP1	2.17	0.43
10:AL:51:ALA:HB2	10:AL:76:TYR:CE2	2.54	0.43
34:DA:563:A:H2'	34:DA:567:G:C8	2.53	0.43
1:AA:1147:U:H2'	1:AA:1148:C:C6	2.53	0.43
43:DJ:63:PHE:CE1	47:DN:58:LYS:HG2	2.53	0.43
1:CA:857:C:H4'	24:C0:23:VAL:HG21	1.99	0.43
1:CA:827:U:H5'	1:CA:828:U:O5'	2.19	0.43
13:CP:38:GLN:HG2	13:CP:45:LEU:N	2.29	0.43
1:AA:1935:A:C6	34:BA:1494:G:H5'	2.53	0.43
40:BG:91:VAL:HG12	40:BG:95:ARG:HB3	1.99	0.43
28:A4:57:GLU:HA	28:A4:58:ARG:HA	1.43	0.43
34:DA:1064:G:N2	34:DA:1190:G:H2'	2.33	0.43
34:DA:1171:G:H2'	34:DA:1172:C:C6	2.54	0.43
1:CA:1099:G:C2	1:CA:1100:C:H1'	2.53	0.43
32:C8:50:LEU:HA	32:C8:50:LEU:HD23	1.63	0.43
6:CF:152:GLU:HA	6:CF:190:GLU:OE2	2.19	0.43
42:BI:4:TYR:CE2	42:BI:88:TYR:HD1	2.36	0.43
34:BA:162:A:C8	34:BA:163:C:H1'	2.53	0.43
34:DA:448:A:P	34:DA:485:G:H22	2.40	0.43
34:DA:410:G:C2	34:DA:429:U:C2	3.06	0.43
27:C3:7:LYS:O	27:C3:54:VAL:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:990:A:OP2	63:AA:4348:HOH:O	2.21	0.43
23:AZ:157:LEU:HD11	23:AZ:163:LEU:HD13	1.99	0.43
5:CE:52:LEU:HD12	5:CE:52:LEU:HA	1.68	0.43
1:CA:2842:G:C2	1:CA:2876:G:C2	3.06	0.43
46:DM:5:ALA:HB1	46:DM:66:LEU:HD22	1.99	0.43
1:CA:1489:U:HO2'	1:CA:1490:A:H8	1.64	0.43
1:AA:309:C:H2'	1:AA:310:C:C6	2.52	0.43
23:CZ:59:LEU:HD11	23:CZ:88:PHE:CD1	2.54	0.43
1:CA:226:G:C2	1:CA:227:A:C6	3.06	0.43
20:AW:54:ALA:CB	20:AW:107:LEU:HD22	2.49	0.43
26:A2:51:ARG:O	26:A2:55:ARG:HG3	2.19	0.43
11:AN:67:LEU:HB3	11:AN:88:GLU:HG3	2.01	0.43
57:DZ:655:TYR:CE2	57:DZ:659:LEU:HG	2.54	0.43
1:CA:2835:A:N6	1:CA:2878:U:H3'	2.33	0.43
49:DP:19:ILE:N	49:DP:37:GLY:O	2.50	0.43
57:DZ:550:MET:HB3	57:DZ:560:VAL:HB	2.00	0.43
4:CD:157:ARG:O	4:CD:196:VAL:HG11	2.19	0.43
1:CA:411:G:C5	13:CP:72:PRO:HB3	2.54	0.43
34:BA:583:A:H2'	34:BA:584:G:O4'	2.19	0.43
34:DA:193:C:H2'	34:DA:194:C:C6	2.53	0.43
1:AA:887:C:H2'	1:AA:888:A:H8	1.83	0.43
34:DA:1008:C:H2'	34:DA:1009:G:O4'	2.19	0.43
1:AA:2904:U:H2'	1:AA:2905:C:C6	2.54	0.43
13:AP:105:LEU:HD12	13:AP:105:LEU:H	1.84	0.43
1:AA:1464:G:O5'	1:AA:1464:G:H8	2.01	0.43
16:CS:24:LEU:HD23	16:CS:24:LEU:HA	1.73	0.43
1:CA:471:A:O5'	1:CA:471:A:H8	2.01	0.43
3:CC:11:LEU:HD11	3:CC:35:THR:HG23	2.01	0.43
57:DZ:20:HIS:CG	57:DZ:21:ILE:H	2.37	0.43
57:DZ:91:THR:O	57:DZ:92:ILE:HG22	2.18	0.43
1:AA:1099:C:C4	1:AA:1100:A:C2	3.06	0.43
37:BD:102:ASP:HA	37:BD:121:VAL:HG21	2.01	0.43
1:AA:1016:C:H2'	1:AA:1017:G:H5'	2.00	0.43
46:DM:29:ARG:HG3	46:DM:64:TRP:CZ2	2.54	0.43
1:AA:2299:A:C4	1:AA:2301:G:C8	3.06	0.43
34:DA:750:G:O2'	48:DO:21:ASP:OD1	2.37	0.43
4:CD:68:LYS:C	4:CD:70:TRP:H	2.22	0.43
19:AV:4:ILE:HD12	19:AV:39:LEU:HB3	2.01	0.43
15:CR:87:TYR:OH	15:CR:116:LEU:HB3	2.18	0.43
34:BA:1048:G:OP1	47:BN:4:LYS:HB2	2.18	0.43
1:AA:1480:A:H61	1:AA:1605:A:H61	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:258:G:H2'	34:BA:259:G:H8	1.83	0.43
34:BA:259:G:O2'	34:BA:260:G:H5'	2.18	0.43
51:BR:56:THR:HB	51:BR:58:LEU:HD22	2.00	0.43
34:DA:409:G:OP1	37:DD:25:ARG:N	2.47	0.43
34:DA:1001:A:H2'	34:DA:1001(A):G:H8	1.83	0.43
36:BC:108:ASN:HB3	36:BC:111:LEU:HG	1.99	0.43
1:AA:139:A:C8	1:AA:1454:C:O2'	2.69	0.43
1:CA:299:A:N1	1:CA:322:A:O2'	2.38	0.43
6:CF:124:LEU:HB3	6:CF:193:VAL:HG22	1.99	0.43
25:A1:63:ALA:O	25:A1:64:ALA:C	2.56	0.43
34:BA:1525:G:P	44:BK:120:ARG:NH2	2.91	0.43
34:DA:1062:U:H2'	34:DA:1063:C:C6	2.53	0.43
49:BP:49:LEU:HD23	49:BP:76:GLN:HG2	2.00	0.43
1:AA:2274:U:OP1	1:AA:2399:U:O2'	2.24	0.43
1:CA:1091:G:H2'	1:CA:1092:C:O4'	2.19	0.43
1:AA:1210:G:H2'	1:AA:1211:U:C6	2.54	0.43
1:CA:2397:G:N2	1:CA:2420:C:H1'	2.34	0.43
34:DA:872:A:C8	34:DA:874:G:C8	3.07	0.43
1:CA:2718:G:C6	1:CA:2719:G:C5	3.06	0.43
57:DZ:487:ILE:HB	57:DZ:597:GLY:O	2.19	0.43
34:DA:1401:G:C2	34:DA:1402:C:H1'	2.54	0.43
34:DA:1040:U:H6	34:DA:1040:U:O5'	2.02	0.43
2:AB:11:C:H3'	2:AB:12:C:H6	1.84	0.43
1:CA:1448:G:N2	1:CA:1449:A:N6	2.67	0.43
1:CA:1932:A:N6	1:CA:1968:G:H1'	2.33	0.43
34:BA:949:A:C6	34:BA:950:U:C4	3.06	0.43
1:AA:702:A:H8	1:AA:703:G:C1'	2.32	0.43
1:CA:874:G:O2'	23:CZ:120:ILE:HD11	2.19	0.43
42:DI:26:VAL:HG22	42:DI:61:ALA:HB3	2.00	0.43
1:AA:174:U:H2'	1:AA:175:G:H8	1.83	0.43
1:AA:1007:G:C5	1:AA:1008:U:C5	3.06	0.43
1:AA:1657:C:OP1	63:AA:5027:HOH:O	2.21	0.43
1:AA:1002:A:P	14:AQ:77:LYS:HG3	2.59	0.43
1:AA:668:A:O2'	1:AA:669:A:H5'	2.19	0.43
1:CA:1167:U:H2'	1:CA:1168:G:C8	2.52	0.43
24:C0:21:LEU:HD11	24:C0:41:ARG:HG2	1.99	0.43
34:BA:1508:G:H2'	34:BA:1509:C:O4'	2.19	0.43
57:DZ:423:LYS:NZ	57:DZ:471:LYS:HD3	2.33	0.43
34:DA:1183:A:H1'	34:DA:1184:G:OP1	2.19	0.43
1:CA:1388:G:H2'	1:CA:1389:G:H8	1.84	0.43
40:DG:75:VAL:HA	40:DG:87:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:99:G:H8	2:CB:99:G:O5'	2.01	0.43
16:AS:36:TYR:N	16:AS:36:TYR:CD1	2.86	0.43
23:AZ:151:HIS:HD1	23:AZ:151:HIS:N	2.17	0.43
11:AN:73:THR:HG21	63:AN:3101:HOH:O	2.18	0.43
34:BA:136:C:O3'	49:BP:65:GLN:NE2	2.52	0.43
57:DZ:417:THR:HA	57:DZ:418:LYS:HG2	2.00	0.43
56:DW:38:A:H2'	56:DW:39:PSU:O4'	2.18	0.43
34:DA:396:G:H5''	57:DZ:349:LYS:NZ	2.34	0.43
34:DA:1139:G:N2	34:DA:1142:G:O6	2.44	0.43
1:AA:1885:A:C8	1:AA:1886:G:C8	3.06	0.43
1:AA:1885:A:C2	1:AA:2109:G:N3	2.87	0.43
52:BS:45:VAL:HG11	52:BS:64:GLU:HG2	1.99	0.43
34:DA:435:C:H2'	34:DA:436:C:H6	1.80	0.43
34:DA:1001(A):G:C4	34:DA:1002:G:H1'	2.54	0.43
34:DA:403:C:O2'	37:DD:122:ARG:NH2	2.50	0.43
36:DC:113:ALA:O	36:DC:116:VAL:N	2.50	0.43
34:DA:1291:G:O2'	42:DI:38:GLN:HG3	2.18	0.43
6:AF:34:TRP:CZ3	13:AP:8:PRO:HB3	2.53	0.43
35:BB:97:TRP:CZ2	35:BB:102:LEU:HD13	2.54	0.43
35:BB:97:TRP:HZ3	35:BB:176:GLU:OE2	2.02	0.43
1:CA:1266:G:C5	20:CW:15:ARG:NH1	2.86	0.43
34:BA:1434:A:H2'	34:BA:1435:G:O4'	2.19	0.43
4:AD:202:LYS:NZ	34:BA:774:G:OP1	2.49	0.43
34:DA:1122:U:O4	34:DA:1123:A:N6	2.51	0.43
4:AD:266:SER:O	4:AD:270:ILE:HD12	2.19	0.43
27:A3:9:VAL:HG12	27:A3:32:GLN:HE22	1.84	0.43
23:CZ:61:LEU:HD12	23:CZ:62:PRO:HD2	2.00	0.43
37:DD:104:VAL:HG21	37:DD:140:VAL:HG21	1.99	0.43
6:CF:178:PRO:HB2	6:CF:201:VAL:HG21	2.01	0.43
6:CF:119:ARG:HG2	6:CF:119:ARG:O	2.18	0.43
5:CE:116:VAL:O	5:CE:122:PHE:HB2	2.18	0.43
2:CB:28:C:OP1	16:CS:36:TYR:OH	2.33	0.43
34:BA:872:A:C4	34:BA:874:G:N7	2.87	0.43
1:CA:391:G:C6	1:CA:411:G:C2	3.07	0.43
23:AZ:146:ILE:HA	23:AZ:174:VAL:HG12	2.00	0.43
13:CP:19:VAL:CG2	13:CP:31:ALA:HB1	2.49	0.43
46:DM:52:GLU:HG2	46:DM:55:ARG:NH2	2.33	0.43
1:AA:649:C:O5'	1:AA:649:C:H6	2.02	0.43
1:CA:2774:C:H2'	1:CA:2775:A:O4'	2.18	0.43
20:AW:37:ARG:HD2	20:AW:38:TYR:CE2	2.53	0.43
1:AA:2529:C:C6	1:AA:2554:A:N7	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2359:C:O2'	32:C8:54:GLU:HG3	2.19	0.43
36:DC:12:LEU:HD23	36:DC:16:ARG:HB3	2.00	0.43
1:AA:239:G:H2'	1:AA:240:A:C8	2.54	0.43
57:BZ:153:MET:O	57:BZ:157:LEU:HD12	2.17	0.43
1:CA:339:U:O5'	1:CA:339:U:H6	2.01	0.43
34:DA:796:C:O5'	34:DA:796:C:H6	2.02	0.43
45:BL:122:THR:HG22	45:BL:123:LYS:O	2.19	0.43
3:CC:60:ARG:HG3	3:CC:165:ARG:HB2	2.01	0.43
57:DZ:507:TYR:O	57:DZ:577:SER:OG	2.26	0.43
57:DZ:174:PHE:O	57:DZ:267:LYS:HE2	2.18	0.43
1:AA:1101:G:H5'	1:AA:1102:G:OP2	2.18	0.43
1:AA:1405:A:H61	1:AA:1418:U:H3	1.67	0.43
34:DA:355:C:C2	34:DA:356:A:C8	3.07	0.43
1:AA:1541:A:O2'	1:AA:1542:A:H5'	2.19	0.43
8:AH:6:ARG:HE	8:AH:6:ARG:HB3	1.39	0.43
36:BC:56:ASP:O	36:BC:66:VAL:HA	2.19	0.43
1:CA:333:G:H5''	1:CA:334:C:OP2	2.18	0.43
34:BA:358:U:H2'	34:BA:359:U:H6	1.83	0.43
5:CE:47:VAL:HG23	5:CE:49:LEU:HD13	2.00	0.43
34:DA:393:A:C2	34:DA:394:G:C8	3.07	0.43
1:AA:1462:G:HO2'	1:AA:1463:C:H5	1.66	0.43
7:CG:171:ALA:O	7:CG:175:LEU:HB2	2.19	0.43
1:AA:402:C:H2'	1:AA:403:C:C6	2.54	0.43
34:DA:179:A:H2'	34:DA:180:U:H6	1.80	0.43
1:AA:1233:U:C4'	19:AV:79:VAL:HG22	2.48	0.43
34:BA:939:G:H2'	34:BA:940:C:C6	2.54	0.43
42:DI:63:ILE:HG21	42:DI:77:ILE:HG12	2.01	0.43
1:CA:1957:C:H2'	1:CA:1958:C:C6	2.54	0.43
23:CZ:160:GLY:N	23:CZ:161:VAL:HB	2.34	0.43
57:DZ:38:ARG:HH12	57:DZ:270:GLN:NE2	2.17	0.43
57:BZ:182:ARG:O	57:BZ:184:LYS:HG3	2.19	0.43
34:DA:44:G:C2	34:DA:45:U:H1'	2.53	0.43
30:A6:18:ARG:HD3	30:A6:42:TRP:CD1	2.53	0.43
1:CA:672:C:H2'	1:CA:673:C:C6	2.54	0.43
1:AA:2219:U:C5	1:AA:2236:G:C6	3.07	0.43
35:DB:155:LEU:HD23	35:DB:155:LEU:HA	1.82	0.43
53:BT:57:ARG:HH22	53:BT:100:ILE:HG13	1.84	0.43
1:CA:2274:A:C2	1:CA:2276:G:H1'	2.54	0.43
34:BA:284:G:H2'	34:BA:285:G:H8	1.82	0.43
37:BD:206:PHE:O	37:BD:208:SER:N	2.52	0.43
12:CO:10:VAL:HG21	12:CO:86:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:-36:LEU:HD21	57:BZ:-29:LEU:HD22	2.00	0.43
4:CD:73:VAL:HG13	4:CD:120:GLY:HA2	2.00	0.43
7:AG:121:ASN:HA	7:AG:122:PRO:HD3	1.81	0.43
1:AA:1110:C:H4'	10:AL:89:HIS:HA	1.99	0.43
34:DA:601:C:H2'	34:DA:602:A:C8	2.53	0.43
38:DE:102:ALA:HB1	38:DE:106:PRO:HG2	2.01	0.43
57:DZ:355:LEU:HB3	57:DZ:366:VAL:HG23	2.01	0.43
1:CA:2243:U:H2'	1:CA:2244:U:C6	2.54	0.43
34:DA:1251:A:H2'	34:DA:1252:A:O4'	2.19	0.43
41:BH:83:ILE:HA	41:BH:136:GLU:O	2.19	0.43
34:BA:957:U:H4'	52:BS:79:THR:O	2.18	0.43
1:AA:2359:C:H2'	1:AA:2360:U:C6	2.54	0.43
57:BZ:420:ASP:CG	57:BZ:423:LYS:HE3	2.39	0.43
6:AF:39:TRP:O	6:AF:40:GLN:C	2.57	0.43
34:DA:680:C:O5'	34:DA:680:C:H6	2.02	0.43
5:CE:58:ARG:HA	5:CE:58:ARG:HD3	1.62	0.43
20:AW:75:TYR:CZ	20:AW:104:THR:HG21	2.54	0.43
34:BA:13:U:OP1	63:BA:5218:HOH:O	2.22	0.43
3:CC:6:LYS:N	3:CC:9:ARG:HH12	2.17	0.43
3:CC:206:LYS:HB3	3:CC:206:LYS:HZ3	1.82	0.43
57:BZ:210:ARG:O	57:BZ:213:HIS:HB3	2.18	0.43
37:BD:101:LEU:O	37:BD:102:ASP:C	2.57	0.43
34:DA:1133:G:N2	34:DA:1141:C:O2	2.51	0.43
42:BI:7:THR:O	42:BI:83:ARG:HD2	2.19	0.43
56:BW:44:G:OP2	56:BW:44:G:H8	2.02	0.43
57:DZ:182:ARG:H	57:DZ:182:ARG:HG3	1.63	0.43
1:AA:12:U:O2	1:AA:12:U:H2'	2.19	0.43
48:BO:26:GLU:H	48:BO:26:GLU:HG2	1.31	0.43
41:BH:10:LEU:HD23	41:BH:10:LEU:N	2.34	0.43
1:AA:2154:U:C6	3:AC:6:LYS:HB2	2.52	0.43
34:BA:502:G:N1	34:BA:503:C:N3	2.67	0.43
1:AA:1147:U:H2'	1:AA:1148:C:H6	1.84	0.43
34:DA:473:G:C2	34:DA:474:G:N7	2.87	0.43
34:BA:1315:U:H2'	34:BA:1316:G:O4'	2.19	0.43
51:DR:59:SER:H	51:DR:62:GLU:HB2	1.83	0.43
36:DC:155:GLY:O	36:DC:157:ILE:HG13	2.18	0.43
23:AZ:183:LEU:HD12	23:AZ:183:LEU:HA	1.68	0.43
1:CA:493:G:H2'	1:CA:494:G:O4'	2.19	0.43
5:CE:18:ASP:HB3	17:CT:82:LEU:HD21	2.00	0.43
57:BZ:494:GLU:CD	57:BZ:511:LYS:HE2	2.39	0.43
36:DC:6:HIS:NE2	36:DC:184:TYR:HE2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CR:13:HIS:O	15:CR:14:SER:C	2.57	0.43
34:DA:938:A:C6	34:DA:939:G:C5	3.06	0.43
34:BA:1285:A:H4'	34:BA:1286:A:O5'	2.19	0.43
8:CH:12:PRO:O	8:CH:15:VAL:HG12	2.19	0.43
12:CO:31:LYS:HB3	12:CO:32:TYR:CD2	2.53	0.43
37:BD:68:TYR:CD1	37:BD:97:LEU:HD22	2.53	0.43
34:DA:169:C:H2'	34:DA:170:U:C6	2.54	0.43
57:DZ:529:ILE:HD13	57:DZ:529:ILE:HA	1.75	0.43
34:BA:567:G:H2'	34:BA:568:G:O4'	2.19	0.43
1:AA:1888:G:C6	1:AA:1889:G:C6	3.05	0.43
34:BA:1203:C:H2'	34:BA:1204:A:C8	2.53	0.43
5:CE:116:VAL:HG13	5:CE:122:PHE:CD2	2.53	0.43
1:CA:210:C:OP2	31:C7:29:LYS:HE3	2.19	0.43
1:CA:602:G:O2'	1:CA:655:A:N6	2.51	0.43
1:AA:2308:U:H4'	1:AA:2309:C:OP1	2.19	0.43
34:BA:636:U:H2'	34:BA:637:G:C8	2.54	0.43
36:DC:123:GLN:O	36:DC:128:PHE:HB2	2.19	0.43
5:AE:181:LEU:HA	5:AE:181:LEU:HD12	1.68	0.43
1:AA:1596:C:H2'	1:AA:1597:C:O4'	2.18	0.43
34:BA:319:G:H2'	34:BA:320:C:O4'	2.19	0.43
34:BA:767:A:H2'	34:BA:768:A:O4'	2.19	0.43
4:AD:52:ARG:NH2	63:AD:412:HOH:O	2.50	0.43
1:AA:602:G:H2'	1:AA:603:C:C6	2.54	0.43
51:BR:61:LYS:HB2	51:BR:61:LYS:HE3	1.76	0.43
55:DV:16:U:O5'	55:DV:16:U:H6	2.01	0.43
35:BB:87:ARG:NH1	35:BB:220:ASP:OD1	2.49	0.43
34:BA:152:A:N6	34:BA:170:U:C2	2.87	0.43
52:DS:50:ALA:HB1	52:DS:57:HIS:HB3	2.01	0.43
56:DW:40:C:O2'	56:DY:36:A:P	2.77	0.43
61:BZ:703:FUA:H322	61:BZ:703:FUA:H16	1.74	0.43
1:AA:1221:G:H1'	1:AA:1222:A:C5'	2.49	0.43
36:DC:148:GLY:HA3	36:DC:203:PHE:HB3	2.01	0.43
34:DA:1004:A:H5'	34:DA:1024:G:H22	1.83	0.43
1:CA:10:G:H2'	1:CA:11:G:C8	2.54	0.43
34:BA:818:G:HO2'	34:BA:820:U:H6	1.62	0.43
41:BH:6:ILE:O	41:BH:7:ALA:C	2.57	0.43
40:BG:113:GLU:HG3	40:BG:119:ARG:HG2	2.01	0.43
1:AA:2564:U:C2	1:AA:2566:U:H5'	2.54	0.43
51:BR:59:SER:N	51:BR:62:GLU:HG3	2.31	0.43
34:DA:1357:A:N6	34:DA:1358:U:O4	2.52	0.43
1:AA:1539:C:H5	1:AA:2227:G:O2'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1550:C:H2'	1:AA:1551:C:C6	2.52	0.43
23:AZ:111:VAL:HG12	23:AZ:112:ARG:N	2.34	0.43
34:BA:977:A:C8	34:BA:1223:C:C4	3.07	0.43
34:BA:146:G:N2	34:BA:177:C:N3	2.66	0.43
1:CA:1338:G:C6	1:CA:1339:G:C5	3.06	0.43
1:CA:1090:U:O2	1:CA:1102:C:H1'	2.19	0.43
1:AA:1857:G:H2'	1:AA:1858:C:C6	2.54	0.43
1:CA:1047:G:O2'	1:CA:1110:G:O6	2.31	0.43
57:DZ:6:GLU:HA	57:DZ:9:LEU:CD2	2.49	0.43
1:AA:1216:G:N2	1:AA:1225:C:O2	2.52	0.43
34:DA:283:C:H2'	34:DA:284:G:O4'	2.18	0.43
8:CH:117:PRO:HA	8:CH:118:PRO:HD2	1.90	0.43
1:AA:1314:A:H2'	1:AA:1315:A:O4'	2.18	0.43
1:CA:2776:A:C6	1:CA:2778:A:C6	3.07	0.43
1:AA:1374:G:O6	63:AA:4164:HOH:O	2.21	0.43
43:DJ:42:THR:HG21	43:DJ:66:ARG:HB3	2.00	0.43
1:AA:174:U:H2'	1:AA:175:G:C8	2.54	0.43
53:BT:14:LYS:O	53:BT:17:ARG:HB2	2.18	0.43
1:AA:261:A:N7	1:AA:283:G:N2	2.62	0.43
8:AH:105:LEU:HA	8:AH:105:LEU:HD12	1.79	0.43
43:DJ:16:LEU:HD23	43:DJ:94:VAL:HG22	2.01	0.43
1:CA:2515:C:O2'	1:CA:2516:G:H5'	2.18	0.43
15:AR:38:VAL:HG23	15:AR:110:PRO:O	2.19	0.43
4:AD:26:LYS:HD3	4:AD:83:GLU:OE2	2.19	0.43
1:CA:2574:G:H2'	1:CA:2575:C:C6	2.53	0.43
1:CA:727:A:O2'	1:CA:728:G:H5'	2.19	0.43
18:AU:36:ARG:HD2	18:AU:40:PHE:CZ	2.54	0.43
1:AA:1688:A:H2'	1:AA:1689:G:O4'	2.18	0.43
1:AA:1790:A:C8	1:AA:2708:U:H1'	2.54	0.43
39:BF:11:ASN:O	39:BF:14:LEU:HG	2.19	0.43
13:CP:136:GLU:O	13:CP:140:ALA:HB3	2.19	0.43
1:CA:2052:G:N3	5:CE:149:ARG:HA	2.34	0.43
54:DU:15:ARG:HH11	54:DU:15:ARG:HB2	1.84	0.43
34:DA:580:U:H2'	34:DA:581:G:O4'	2.19	0.43
1:AA:609:A:N1	1:AA:856:G:O2'	2.43	0.43
8:AH:25:LYS:HE3	8:AH:27:LYS:HE2	2.00	0.43
34:DA:790:A:H5'	56:DW:39:PSU:OP1	2.18	0.42
1:AA:1088:G:C6	1:AA:1089:C:C4	3.07	0.42
1:CA:2046:G:H2'	1:CA:2047:U:C6	2.53	0.42
1:AA:1417:G:H2'	1:AA:1418:U:C5	2.53	0.42
28:C4:40:HIS:O	28:C4:44:THR:N	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:355:C:C4	34:DA:356:A:N7	2.87	0.42
1:CA:1364:G:OP2	25:C1:3:LYS:HG3	2.19	0.42
34:BA:1104:G:C2	34:BA:1105:A:C4	3.07	0.42
36:BC:50:ALA:HB1	36:BC:70:VAL:HG21	2.00	0.42
34:DA:1085:U:H3'	34:DA:1086:U:H5	1.84	0.42
2:AB:73:A:N1	23:AZ:34:ASN:ND2	2.67	0.42
57:BZ:89:ASP:CG	57:BZ:457:LEU:HB2	2.39	0.42
47:BN:3:ARG:HB3	47:BN:4:LYS:H	1.69	0.42
12:AO:64:ARG:HG2	12:AO:79:PHE:CB	2.49	0.42
1:AA:181:C:C2'	1:AA:182:U:H5'	2.46	0.42
1:CA:528:A:C2	1:CA:2042:A:H2'	2.53	0.42
42:BI:48:GLU:OE1	42:BI:51:ARG:NH1	2.52	0.42
1:CA:2318:G:H21	16:CS:3:ARG:HH12	1.67	0.42
13:CP:39:LYS:HA	13:CP:45:LEU:HG	2.00	0.42
30:A6:50:ARG:HB2	30:A6:50:ARG:HE	1.61	0.42
11:CN:42:TRP:CE3	18:CU:63:VAL:HG11	2.54	0.42
4:CD:238:GLY:O	4:CD:239:ARG:CB	2.63	0.42
34:BA:1072:G:H2'	34:BA:1073:U:C6	2.54	0.42
8:CH:140:LYS:HE3	8:CH:140:LYS:HB2	1.74	0.42
34:BA:176:C:H2'	34:BA:177:C:C6	2.54	0.42
37:BD:30:LYS:HA	37:BD:35:ARG:HH11	1.83	0.42
42:DI:110:GLU:OE2	42:DI:113:LYS:NZ	2.52	0.42
1:CA:1340:U:H4'	1:CA:1341:U:OP2	2.18	0.42
34:DA:157:G:H2'	34:DA:158:G:C8	2.50	0.42
34:BA:66:G:O4'	34:BA:173:U:C4	2.72	0.42
40:DG:26:PHE:HB2	40:DG:62:PHE:HZ	1.84	0.42
34:DA:987:G:O5'	34:DA:987:G:H8	2.01	0.42
34:BA:16:A:N1	34:BA:919:A:H2	2.17	0.42
17:AT:117:ASP:O	17:AT:121:ILE:HG13	2.19	0.42
1:CA:2469:A:C2	1:CA:2470:G:H1'	2.54	0.42
40:BG:79:ARG:HB3	40:BG:80:VAL:H	1.56	0.42
1:CA:489:G:H2'	1:CA:491:G:O4'	2.19	0.42
45:DL:31:PRO:HB2	45:DL:32:PHE:CD2	2.53	0.42
1:CA:1225:G:H4'	19:CV:84:LYS:HG2	2.01	0.42
1:CA:1666:G:C2'	1:CA:1667:G:H5'	2.48	0.42
44:BK:48:ILE:HD12	44:BK:63:LEU:CB	2.49	0.42
1:AA:223:C:H2'	1:AA:224:U:C6	2.54	0.42
57:DZ:431:LEU:HA	57:DZ:434:GLU:HB3	2.00	0.42
1:AA:1568:G:H2'	1:AA:1569:U:O4'	2.19	0.42
23:AZ:136:PHE:O	23:AZ:137:ILE:HG13	2.19	0.42
1:CA:2122:U:O2	3:CC:167:ASP:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1195:G:O2'	1:CA:1196:C:H5'	2.19	0.42
42:DI:45:ALA:O	42:DI:48:GLU:HB2	2.19	0.42
1:CA:1750:G:N3	1:CA:2860:A:H2	2.17	0.42
34:DA:1254:C:OP1	43:DJ:45:ARG:HA	2.19	0.42
42:DI:106:ALA:O	42:DI:108:VAL:N	2.52	0.42
38:DE:47:LYS:HB2	38:DE:47:LYS:HE2	1.64	0.42
13:CP:68:GLN:OE1	13:CP:68:GLN:HA	2.19	0.42
51:DR:31:LEU:HD13	51:DR:31:LEU:HA	1.80	0.42
1:AA:526:A:C6	1:AA:527:A:C6	3.07	0.42
34:BA:1291:G:H5'	40:BG:37:ASN:HD21	1.84	0.42
31:A7:34:ARG:NH1	31:A7:41:ARG:O	2.52	0.42
1:AA:1098:C:O2'	1:AA:1099:C:H5'	2.19	0.42
17:AT:39:ARG:NH2	34:BA:345:C:C5	2.87	0.42
34:BA:454:C:N4	34:BA:479:C:N3	2.67	0.42
34:BA:1274:G:H22	34:BA:1275:A:H62	1.66	0.42
17:CT:15:VAL:HG12	17:CT:16:ARG:N	2.34	0.42
34:DA:1074:G:C6	34:DA:1075:C:C4	3.07	0.42
10:AL:72:PRO:HA	10:AL:73:PRO:HD3	1.86	0.42
1:AA:1185:C:O3'	11:AN:25:ARG:NH1	2.52	0.42
51:DR:65:ILE:O	51:DR:69:THR:HG23	2.19	0.42
23:AZ:110:GLY:C	23:AZ:111:VAL:O	2.56	0.42
1:CA:311:A:C6	1:CA:328:U:C4	3.07	0.42
38:DE:81:GLU:HB3	38:DE:90:VAL:HG13	2.00	0.42
1:CA:1668:A:H5''	12:CO:5:GLN:HG2	2.01	0.42
38:DE:139:LEU:C	38:DE:141:GLN:H	2.21	0.42
36:BC:6:HIS:CD2	36:BC:7:PRO:HD2	2.54	0.42
1:CA:2853:C:H2'	1:CA:2854:G:C8	2.53	0.42
15:CR:18:LEU:HA	15:CR:18:LEU:HD23	1.86	0.42
21:AX:29:TRP:CZ3	21:AX:78:LYS:HG2	2.53	0.42
1:CA:2393:A:H2'	1:CA:2394:C:H6	1.84	0.42
37:DD:59:ARG:O	37:DD:60:GLU:C	2.57	0.42
4:AD:159:ALA:HB1	4:AD:198:ASN:O	2.18	0.42
6:AF:103:LYS:O	6:AF:106:ARG:HG2	2.19	0.42
35:DB:133:LYS:O	35:DB:137:ARG:HG3	2.19	0.42
34:DA:56:U:H2'	34:DA:57:G:C8	2.54	0.42
34:BA:445:G:C4	34:BA:446:G:C8	3.07	0.42
4:AD:261:LYS:NZ	4:AD:263:ARG:NH2	2.67	0.42
1:AA:510:C:H2'	1:AA:511:C:C6	2.54	0.42
34:BA:1112:C:O2	36:BC:179:ARG:HG2	2.19	0.42
4:CD:96:HIS:CD2	4:CD:102:LYS:HG2	2.55	0.42
1:AA:556:C:H4'	1:AA:557:A:H5''	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2216:G:H2'	1:AA:2217:C:O4'	2.19	0.42
1:CA:993:G:OP2	18:CU:51:LYS:NZ	2.52	0.42
1:CA:18:C:H2'	1:CA:19:C:H6	1.84	0.42
5:AE:150:VAL:CG1	5:AE:154:LYS:HG3	2.49	0.42
22:CY:52:SER:HB2	22:CY:53:PRO:HD2	2.01	0.42
23:AZ:99:TYR:CZ	23:AZ:125:LEU:HD13	2.54	0.42
1:AA:2050:U:O4	63:AA:4233:HOH:O	2.19	0.42
34:BA:57:G:H2'	34:BA:58:C:O4'	2.19	0.42
6:AF:13:SER:N	6:AF:16:GLY:O	2.45	0.42
1:CA:1287:A:OP1	15:CR:105:ARG:HB3	2.18	0.42
36:BC:45:LYS:HD3	36:BC:46:GLU:HG2	2.01	0.42
34:BA:1041:A:H2'	34:BA:1042:G:O4'	2.19	0.42
41:DH:94:TYR:CE1	41:DH:132:GLU:HB2	2.54	0.42
20:CW:35:ILE:HG22	20:CW:36:LEU:N	2.34	0.42
28:A4:63:TYR:N	28:A4:64:GLY:HA2	2.33	0.42
57:BZ:544:LYS:O	57:BZ:548:GLU:HB2	2.19	0.42
1:AA:1815:A:H4'	1:AA:1816:A:C5'	2.50	0.42
57:DZ:605:ILE:HD13	57:DZ:675:HIS:CE1	2.55	0.42
56:DY:35:A:N6	56:DY:36:A:N1	2.68	0.42
1:AA:2331:G:H1	16:AS:3:ARG:HD3	1.83	0.42
1:CA:1141:U:H2'	11:CN:63:THR:HG21	2.00	0.42
34:BA:558:G:C5	34:BA:559:A:C2	3.07	0.42
1:AA:553:A:C2	1:AA:2065:C:H4'	2.54	0.42
34:BA:342:C:C2	34:BA:348:G:N2	2.87	0.42
1:CA:530:G:O4'	1:CA:530:G:N3	2.52	0.42
49:BP:57:ARG:HG2	49:BP:79:VAL:HG12	2.00	0.42
34:BA:358:U:H2'	34:BA:359:U:C6	2.54	0.42
34:DA:1072:G:H2'	34:DA:1073:U:O4'	2.19	0.42
34:DA:481:G:H21	34:DA:482:A:H62	1.67	0.42
34:DA:1222:G:C2	34:DA:1223:C:C2	3.07	0.42
16:CS:15:ARG:HB3	16:CS:19:LYS:NZ	2.34	0.42
3:CC:195:ARG:HG3	3:CC:195:ARG:HH11	1.83	0.42
34:BA:1095:U:P	34:BA:1108:G:H1	2.41	0.42
34:DA:797:C:O2'	34:DA:798:G:H5'	2.19	0.42
7:CG:117:PHE:HE1	7:CG:119:GLY:HA2	1.80	0.42
1:CA:565:C:H2'	1:CA:566:U:O4'	2.18	0.42
34:BA:1000:U:H2'	34:BA:1001:A:C8	2.53	0.42
23:CZ:130:PRO:O	23:CZ:133:ILE:HG12	2.20	0.42
56:DW:61:C:H2'	56:DW:62:C:C6	2.54	0.42
20:CW:78:GLU:OE1	20:CW:99:ARG:NH1	2.49	0.42
56:DY:51:U:O2	56:DY:63:G:N2	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:BS:41:VAL:N	52:BS:44:MET:SD	2.81	0.42
34:DA:298:A:H5''	34:DA:299:G:OP2	2.19	0.42
34:BA:444:C:C2	34:BA:445:G:C8	3.08	0.42
1:CA:1076:C:H2'	1:CA:1077:A:O4'	2.20	0.42
41:BH:56:LYS:O	41:BH:58:TYR:HD1	2.01	0.42
1:AA:702:A:H2'	1:AA:703:G:O4'	2.19	0.42
1:AA:424:G:O2'	1:AA:2243:C:H1'	2.19	0.42
37:DD:209:ARG:OXT	37:DD:209:ARG:HG2	2.18	0.42
1:CA:1257:C:H5'	6:CF:75:HIS:CE1	2.55	0.42
1:CA:553:G:C5	1:CA:554:U:C5	3.07	0.42
8:AH:154:PRO:HD3	8:AH:162:ILE:O	2.19	0.42
38:DE:99:GLY:O	38:DE:117:ASP:HA	2.19	0.42
1:AA:1968:U:H2'	1:AA:1969:C:C6	2.54	0.42
18:CU:36:ARG:HD2	18:CU:40:PHE:CZ	2.55	0.42
2:CB:117:G:H5'	16:CS:55:ALA:HB2	2.01	0.42
57:BZ:151:ARG:O	57:BZ:155:GLU:HB2	2.19	0.42
6:CF:169:ASN:HD22	6:CF:169:ASN:HA	1.51	0.42
11:CN:33:LEU:HD13	11:CN:33:LEU:HA	1.80	0.42
19:AV:89:GLN:HA	19:AV:89:GLN:OE1	2.19	0.42
9:CK:23:SER:HA	9:CK:117:LEU:O	2.18	0.42
34:BA:1026:G:H2'	34:BA:1026:G:N3	2.33	0.42
38:DE:91:LEU:HA	38:DE:91:LEU:HD12	1.79	0.42
1:AA:2007:G:OP2	63:AA:4910:HOH:O	2.22	0.42
34:DA:955:U:H2'	34:DA:956:U:O4'	2.19	0.42
34:BA:522:C:C2'	34:BA:523:A:H5'	2.49	0.42
56:BY:9:A:H1'	56:BY:45:U:H2'	2.00	0.42
35:DB:178:ARG:HH22	41:DH:68:ARG:HH12	1.66	0.42
1:AA:1064:C:C2'	1:AA:1065:U:H5'	2.49	0.42
57:DZ:553:GLY:H	57:DZ:557:GLY:CA	2.24	0.42
1:CA:1557:C:P	1:CA:1558:A:HO2'	2.39	0.42
34:BA:1118:C:C1'	34:BA:1179:A:C4	2.99	0.42
3:AC:6:LYS:N	3:AC:9:ARG:HH12	2.17	0.42
1:CA:1115:G:H2'	1:CA:1116:C:H6	1.82	0.42
34:BA:542:G:H2'	34:BA:543:C:H6	1.85	0.42
43:DJ:7:LYS:HG2	43:DJ:71:LEU:HD13	2.01	0.42
1:AA:1549:U:H2'	1:AA:1550:C:C6	2.55	0.42
34:BA:987:G:H2'	34:BA:988:G:C8	2.55	0.42
1:AA:1476:C:H2'	1:AA:1477:U:H6	1.83	0.42
34:DA:1291:G:C6	34:DA:1292:U:C4	3.07	0.42
34:BA:308:C:H2'	34:BA:309:G:C8	2.51	0.42
10:AL:30:HIS:HB2	10:AL:32:ALA:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:195:ARG:NH1	3:CC:195:ARG:HG3	2.35	0.42
3:CC:225:ILE:O	3:CC:227:PRO:HD3	2.19	0.42
3:AC:195:ARG:NH1	3:AC:195:ARG:HG3	2.34	0.42
20:CW:80:PRO:O	20:CW:100:THR:HB	2.20	0.42
1:CA:2861:G:C4	1:CA:2862:G:C8	3.07	0.42
10:AL:41:PHE:HE1	10:AL:53:VAL:HB	1.83	0.42
1:CA:1000:A:C6	1:CA:1001:A:C6	3.06	0.42
34:DA:264:U:H4'	50:DQ:63:ARG:HD3	2.01	0.42
52:BS:32:LYS:HE2	52:BS:57:HIS:CD2	2.54	0.42
13:CP:95:VAL:HA	13:CP:99:LEU:HD21	2.02	0.42
34:DA:1057:G:H1'	36:DC:195:VAL:HG12	2.02	0.42
34:DA:117:G:OP2	63:DA:3239:HOH:O	2.21	0.42
1:CA:958:U:H5''	14:CQ:14:ARG:HD3	2.02	0.42
57:BZ:-34:ARG:HB3	57:BZ:-34:ARG:HE	1.57	0.42
5:CE:75:VAL:HG13	5:CE:77:ILE:H	1.84	0.42
6:AF:192:LEU:HD22	6:AF:194:MET:HG3	2.02	0.42
56:DW:14:A:C4	56:DW:22:G:C2	3.07	0.42
1:AA:308:U:H2'	1:AA:309:C:C6	2.53	0.42
34:BA:654:G:C2	34:BA:753:A:C4	3.07	0.42
42:BI:53:VAL:HG21	42:BI:92:TYR:CE1	2.54	0.42
1:CA:1287:A:H5''	1:CA:1288:U:OP2	2.19	0.42
7:AG:112:PRO:C	7:AG:114:ILE:H	2.23	0.42
1:AA:1913:G:C6	1:AA:1914:C:C4	3.08	0.42
57:DZ:164:MET:O	57:DZ:180:VAL:HG22	2.19	0.42
1:AA:2305:C:H2'	1:AA:2306:C:C6	2.54	0.42
1:CA:1162:G:O3'	19:CV:24:LYS:NZ	2.51	0.42
12:CO:66:LYS:HE2	12:CO:80:ASP:O	2.20	0.42
56:BY:72:C:H2'	56:BY:73:A:O4'	2.18	0.42
34:DA:705:U:C5	34:DA:706:A:C5	3.07	0.42
1:CA:2108:C:H2'	1:CA:2109:U:C6	2.53	0.42
9:CK:69:PRO:O	9:CK:71:LEU:N	2.52	0.42
20:AW:29:LEU:O	20:AW:33:ARG:HG3	2.20	0.42
1:CA:888:C:H5'	46:DM:93:ARG:HD3	2.02	0.42
36:BC:152:ILE:HB	36:BC:199:LYS:HB2	2.02	0.42
18:AU:113:ALA:O	18:AU:117:GLN:HG2	2.19	0.42
10:CL:41:PHE:CZ	10:CL:45:THR:HG21	2.54	0.42
34:DA:203:U:H2'	34:DA:203:U:OP2	2.18	0.42
5:CE:5:LEU:N	5:CE:5:LEU:HD23	2.34	0.42
5:AE:94:GLU:H	5:AE:94:GLU:HG2	1.59	0.42
6:CF:170:LEU:HG	6:CF:172:TRP:NE1	2.34	0.42
1:AA:974:G:O5'	1:AA:974:G:H8	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:517:LEU:HA	57:BZ:517:LEU:HD12	1.72	0.42
25:A1:91:LYS:HG2	25:A1:95:LEU:HD22	2.01	0.42
57:BZ:621:ILE:HG13	57:BZ:643:ILE:HD13	2.01	0.42
11:AN:102:ALA:O	11:AN:106:MET:HG3	2.20	0.42
1:AA:2019:G:O2'	1:AA:2020:G:H5'	2.19	0.42
57:DZ:303:PRO:O	57:DZ:305:PRO:HD3	2.20	0.42
3:AC:54:ARG:HE	3:AC:57:GLN:HG2	1.83	0.42
57:BZ:100:VAL:H	57:BZ:100:VAL:HG23	1.63	0.42
57:DZ:13:ARG:NH2	57:DZ:277:VAL:O	2.52	0.42
32:C8:34:TRP:CE3	32:C8:35:GLN:HG2	2.55	0.42
57:BZ:277:VAL:HG12	57:BZ:278:ASP:N	2.34	0.42
34:DA:1090:U:H2'	34:DA:1091:U:C6	2.55	0.42
3:AC:195:ARG:HH11	3:AC:195:ARG:HG3	1.83	0.42
3:AC:225:ILE:O	3:AC:227:PRO:HD3	2.19	0.42
34:BA:1033:G:H2'	34:BA:1034:G:H8	1.84	0.42
10:AL:37:PHE:CE1	10:AL:41:PHE:HB2	2.55	0.42
7:CG:103:LEU:HD22	7:CG:178:PHE:HZ	1.85	0.42
35:BB:97:TRP:HZ2	35:BB:102:LEU:HD13	1.83	0.42
1:CA:1539:G:H2'	1:CA:1540:U:O4'	2.19	0.42
1:CA:1834:U:H4'	1:CA:1969:A:C6	2.54	0.42
34:DA:144:G:H2'	34:DA:145:G:C8	2.53	0.42
5:CE:119:ARG:HD2	5:CE:120:TRP:NE1	2.35	0.42
1:AA:252:C:H2'	1:AA:253:C:O4'	2.19	0.42
34:DA:1530:G:H2'	34:DA:1531:A:O4'	2.19	0.42
1:CA:2845:G:H2'	1:CA:2846:G:H8	1.83	0.42
1:AA:1888:G:H8	1:AA:1888:G:O5'	2.03	0.42
48:BO:18:PHE:HB2	48:BO:19:PRO:HD2	2.01	0.42
4:CD:123:ALA:HA	4:CD:124:PRO:HD3	1.85	0.42
1:CA:1893:C:C5	1:CA:1894:C:C5	3.07	0.42
14:AQ:2:LEU:HG	14:AQ:69:PHE:CE2	2.54	0.42
34:DA:779:C:H2'	34:DA:780:A:O4'	2.19	0.42
12:CO:88:ASN:OD1	12:CO:92:GLU:HB2	2.19	0.42
34:BA:1289:A:N1	34:BA:1371:G:O2'	2.30	0.42
49:DP:49:LEU:HD12	49:DP:50:LYS:N	2.34	0.42
1:AA:2235:G:OP1	4:AD:172:TYR:OH	2.28	0.42
53:BT:49:ALA:O	53:BT:53:LEU:HG	2.20	0.42
1:CA:370:G:OP2	63:CA:3748:HOH:O	2.21	0.42
1:AA:2242:G:O3'	25:A1:43:TYR:HB2	2.19	0.42
11:AN:36:GLY:HA2	11:AN:38:HIS:CE1	2.54	0.42
4:AD:53:PHE:HB3	4:AD:218:ARG:O	2.20	0.42
34:BA:325:A:H2'	34:BA:326:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1916:A:O5'	1:CA:1916:A:H8	2.02	0.42
8:CH:71:LEU:HA	8:CH:71:LEU:HD12	1.82	0.42
36:DC:175:LEU:H	36:DC:175:LEU:HD12	1.84	0.42
40:DG:147:ALA:C	40:DG:149:ARG:H	2.23	0.42
18:CU:61:TRP:CZ3	18:CU:93:LYS:HB2	2.55	0.42
7:AG:50:ALA:O	7:AG:52:ILE:N	2.53	0.42
57:BZ:168:ILE:N	57:BZ:176:GLY:O	2.49	0.42
34:BA:895:G:H2'	34:BA:896:C:C6	2.55	0.42
1:AA:2638:C:H2'	1:AA:2639:G:C8	2.54	0.42
34:BA:430:A:OP1	37:BD:9:CYS:HB2	2.20	0.42
27:C3:5:LYS:O	27:C3:56:VAL:HA	2.19	0.42
4:CD:68:LYS:HB3	4:CD:70:TRP:CE2	2.54	0.42
1:AA:1849:U:H2'	4:AD:157:ARG:HG3	2.01	0.42
18:CU:69:CYS:SG	18:CU:79:PHE:HB2	2.59	0.42
1:CA:310:A:C4	1:CA:312:G:C8	3.07	0.42
34:DA:1000:U:O2	34:DA:1042:G:N2	2.52	0.42
1:CA:2572:A:C6	5:CE:144:ARG:NH1	2.87	0.42
1:AA:2228:G:O2'	1:AA:2229:A:OP1	2.30	0.42
1:CA:1545:A:H2'	1:CA:1546:C:O4'	2.19	0.42
34:DA:533:A:C6	34:DA:536:C:C2	3.07	0.42
53:DT:39:LYS:O	53:DT:43:LEU:HG	2.20	0.42
52:BS:3:ARG:HG2	52:BS:4:SER:H	1.85	0.42
34:BA:279:A:H5'	50:BQ:95:TYR:OH	2.19	0.42
49:DP:28:ARG:HG3	49:DP:29:ASP:OD1	2.19	0.42
1:CA:1005:C:OP2	1:CA:1011:G:O2'	2.21	0.42
28:C4:59:PHE:HA	28:C4:60:GLN:C	2.40	0.42
20:AW:19:LEU:HB3	29:A5:25:LEU:CD1	2.50	0.42
34:BA:189(K):U:H2'	34:BA:189(L):G:C8	2.54	0.42
34:BA:1405:G:H1'	34:BA:1519:A:H4'	2.01	0.42
1:AA:493:G:OP1	31:A7:33:ARG:HD2	2.19	0.42
1:CA:569:U:C4	1:CA:570:G:C6	3.07	0.42
1:CA:2542:A:H4'	1:CA:2543:G:H8	1.84	0.42
45:DL:69:TYR:HD2	45:DL:99:HIS:CE1	2.37	0.42
34:BA:1270:C:H2'	34:BA:1271:G:H8	1.83	0.42
46:DM:5:ALA:HB1	46:DM:66:LEU:HD13	2.01	0.42
41:BH:119:LEU:HB3	41:BH:123:GLU:HB3	2.01	0.42
1:CA:1189:A:OP2	63:CA:4135:HOH:O	2.21	0.42
35:BB:83:MET:H	35:BB:83:MET:HG2	1.63	0.42
56:DY:46:7MG:H81	56:DY:46:7MG:H2'	1.69	0.42
19:AV:20:LEU:HD12	19:AV:21:ARG:H	1.84	0.42
44:BK:45:GLY:O	44:BK:50:TYR:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:266:G:C8	34:BA:266:G:H5'	2.54	0.42
34:BA:578:C:O4'	34:BA:729:A:H1'	2.19	0.42
1:AA:572:A:H62	19:AV:19:LYS:NZ	2.16	0.42
32:A8:6:THR:HB	32:A8:8:LYS:HE2	2.00	0.42
1:CA:833:U:O2	13:CP:55:ARG:NH2	2.53	0.42
1:AA:64:C:H2'	1:AA:65:C:C6	2.54	0.42
1:CA:2488:A:H2'	1:CA:2489:G:C8	2.55	0.42
16:AS:61:ASN:O	16:AS:65:VAL:HG23	2.20	0.42
2:AB:54:G:H2'	2:AB:55:U:H6	1.84	0.42
1:AA:1202:A:C8	18:AU:51:LYS:HD2	2.54	0.42
1:AA:583:C:H2'	1:AA:584:G:O4'	2.20	0.42
39:DF:98:LEU:HD23	51:DR:30:ASP:HA	2.02	0.42
34:BA:750:G:H1'	48:BO:22:THR:O	2.20	0.42
34:BA:410:G:C2	34:BA:429:U:C2	3.08	0.42
8:CH:72:ILE:O	8:CH:75:ALA:HB3	2.19	0.42
34:DA:374:A:C6	34:DA:375:U:C4	3.06	0.42
26:C2:49:LYS:HB3	26:C2:49:LYS:NZ	2.34	0.42
4:AD:215:LEU:HA	4:AD:215:LEU:HD23	1.81	0.42
51:DR:76:LEU:HA	51:DR:76:LEU:HD12	1.80	0.42
1:CA:516:C:H6	1:CA:516:C:O5'	2.03	0.42
1:AA:2321:A:H8	1:AA:2321:A:O5'	2.02	0.42
1:CA:2258:C:H4'	1:CA:2259:G:OP2	2.20	0.42
57:BZ:538:TYR:HB3	57:BZ:582:PHE:CD1	2.54	0.42
1:AA:170:A:H2'	1:AA:171:A:C8	2.54	0.42
1:CA:2532:G:H2'	1:CA:2533:A:O4'	2.20	0.42
34:DA:1404:C:H2'	34:DA:1405:G:C8	2.55	0.42
57:DZ:20:HIS:CE1	57:DZ:21:ILE:HG12	2.55	0.42
57:DZ:265:LYS:O	57:DZ:267:LYS:HG3	2.19	0.42
34:DA:396:G:P	57:DZ:349:LYS:HZ2	2.43	0.42
1:AA:1834:A:H4'	4:AD:259:THR:CG2	2.50	0.42
34:DA:1256:A:N6	34:DA:1278:U:O2	2.52	0.42
34:BA:923:A:H2'	34:BA:924:C:C6	2.55	0.42
14:CQ:85:LYS:HG3	24:C0:8:GLY:O	2.20	0.42
47:BN:6:LEU:HG	47:BN:23:ARG:NH2	2.34	0.42
1:CA:1068:G:N2	1:CA:1096:A:H5'	2.33	0.42
11:AN:62:VAL:CG1	11:AN:66:LYS:HB2	2.49	0.42
36:DC:37:GLN:HA	36:DC:40:ARG:HG3	2.01	0.42
37:DD:150:GLU:HA	37:DD:153:ARG:NE	2.34	0.42
4:AD:69:ARG:C	4:AD:71:ASP:N	2.72	0.42
1:AA:2228:G:H2'	1:AA:2229:A:C2	2.54	0.42
26:C2:14:ARG:HA	26:C2:63:VAL:HG11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:183:VAL:HG23	6:CF:183:VAL:O	2.19	0.42
10:CL:99:ILE:HD12	10:CL:103:GLN:HB3	2.01	0.42
34:DA:731:G:OP1	34:DA:766:A:H1'	2.20	0.42
1:CA:1314:C:C2	1:CA:1339:G:N2	2.87	0.42
22:AY:56:PRO:C	22:AY:58:GLY:H	2.23	0.42
1:CA:985:C:H2'	1:CA:986:C:H6	1.84	0.42
34:DA:339:C:H2'	34:DA:340:U:H6	1.84	0.42
1:CA:627:A:C6	1:CA:637:A:C8	3.08	0.42
57:BZ:182:ARG:HG3	57:BZ:182:ARG:H	1.62	0.42
30:A6:40:CYS:HA	30:A6:41:PRO:HD3	1.85	0.42
1:CA:2517:C:C2	1:CA:2542:A:N6	2.88	0.42
1:CA:1805:U:H2'	1:CA:1806:C:C6	2.55	0.42
1:CA:1408:C:C2	1:CA:1595:G:N2	2.88	0.42
34:DA:7:G:H5'	34:DA:298:A:O4'	2.19	0.42
36:DC:150:LYS:HD2	36:DC:201:TYR:HD1	1.84	0.42
1:AA:118:U:OP2	63:AA:3919:HOH:O	2.21	0.42
45:DL:105:TYR:C	45:DL:107:ALA:H	2.23	0.42
41:BH:12:ARG:HH21	41:BH:27:PRO:HD3	1.84	0.42
2:AB:111:G:C6	2:AB:112:U:C4	3.08	0.42
14:CQ:135:ASP:CB	14:CQ:137:TYR:HB2	2.49	0.42
57:DZ:309:LEU:HB3	57:DZ:391:GLY:N	2.35	0.42
1:AA:701:A:O2'	1:AA:702:A:H5'	2.20	0.42
45:DL:6:THR:HG23	45:DL:9:GLN:OE1	2.20	0.42
5:AE:176:ILE:HA	5:AE:177:PRO:HD2	1.85	0.42
34:DA:8:A:N6	37:DD:209:ARG:HB2	2.35	0.42
8:CH:75:ALA:O	8:CH:79:VAL:HG22	2.20	0.42
2:AB:29:A:C2	2:AB:56:G:C2	3.08	0.42
30:C6:39:TYR:HA	30:C6:46:HIS:HA	2.01	0.42
34:DA:799:G:O6	34:DA:800:G:C2	2.73	0.42
34:BA:189(B):C:N3	34:BA:189(J):G:C2	2.88	0.42
43:BJ:31:GLY:HA2	43:BJ:32:ALA:HA	1.58	0.42
30:C6:40:CYS:HA	30:C6:41:PRO:HD3	1.80	0.42
1:CA:262:A:H2'	1:CA:263:C:O4'	2.20	0.42
34:BA:35:G:N2	45:BL:118:SER:OG	2.38	0.42
57:BZ:300:GLU:C	57:BZ:301:ILE:HG12	2.39	0.42
34:BA:1103:C:H5''	35:BB:98:LEU:HD13	2.01	0.42
1:AA:1954:A:H2'	1:AA:1955:G:O4'	2.19	0.42
57:DZ:290:LYS:HG2	57:DZ:400:GLU:OE1	2.18	0.42
40:BG:78:ARG:HG3	40:BG:156:TRP:CE3	2.54	0.42
30:A6:11:LEU:HB2	30:A6:21:TYR:HB2	2.02	0.42
5:AE:56:PRO:C	5:AE:58:ARG:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1619:A:H5'	63:AA:4021:HOH:O	2.18	0.42
15:AR:96:ARG:O	15:AR:96:ARG:HG3	2.18	0.42
37:DD:169:LYS:HB3	37:DD:169:LYS:NZ	2.35	0.42
1:AA:1952:G:O2'	1:AA:1990:G:O6	2.31	0.42
17:CT:102:ILE:HB	17:CT:110:ILE:HG12	2.01	0.42
37:BD:204:ILE:HG21	38:BE:98:THR:O	2.19	0.42
28:C4:16:CYS:SG	28:C4:17:GLY:N	2.93	0.42
39:DF:15:ASP:OD1	39:DF:18:GLN:N	2.38	0.42
17:CT:56:GLY:N	17:CT:59:THR:HG22	2.35	0.42
37:BD:104:VAL:HG12	37:BD:105:VAL:N	2.35	0.42
43:BJ:48:THR:O	47:BN:34:TYR:OH	2.36	0.42
17:CT:41:ARG:NH2	34:DA:345:C:H3'	2.34	0.42
37:DD:94:LEU:HD23	37:DD:94:LEU:HA	1.59	0.42
38:DE:8:GLU:OE2	38:DE:63:ARG:NH2	2.52	0.42
53:BT:12:ALA:O	53:BT:15:ARG:HB2	2.20	0.42
44:BK:97:ALA:O	44:BK:101:SER:HB3	2.20	0.42
57:BZ:549:ALA:HB2	57:BZ:587:SER:HB2	2.00	0.42
17:AT:118:ARG:HG2	34:BA:1442(A):G:C8	2.55	0.42
34:DA:972:C:O2'	43:DJ:55:LYS:O	2.35	0.42
1:CA:921:G:C6	1:CA:922:U:C4	3.08	0.42
57:DZ:328:ILE:H	57:DZ:328:ILE:HD13	1.85	0.42
7:AG:136:ARG:HG3	7:AG:137:GLU:HG3	2.01	0.42
5:CE:171:GLU:O	5:CE:184:VAL:HG23	2.19	0.42
34:BA:685:G:O2'	34:BA:686:U:H5'	2.20	0.42
5:CE:176:ILE:HG22	5:CE:176:ILE:O	2.19	0.42
34:DA:786:G:C2	34:DA:797:C:C2	3.08	0.42
35:DB:100:GLY:N	35:DB:176:GLU:OE2	2.51	0.42
1:CA:878:A:C6	1:CA:900:A:C8	3.07	0.42
1:CA:897:C:OP2	1:CA:897:C:H6	2.03	0.42
51:DR:74:ARG:HG3	51:DR:74:ARG:H	1.68	0.42
39:DF:78:GLU:C	39:DF:80:ARG:N	2.72	0.42
34:BA:148:G:H2'	34:BA:149:A:H8	1.84	0.42
44:DK:48:ILE:HG21	44:DK:63:LEU:HD12	2.01	0.42
1:CA:2167:U:OP1	1:CA:2167:U:H4'	2.20	0.42
34:DA:1512:U:O2'	34:DA:1513:A:H5'	2.19	0.42
1:AA:1236:G:O5'	1:AA:1236:G:H8	2.03	0.42
11:CN:39:ARG:HB3	11:CN:41:ASP:OD1	2.19	0.42
19:AV:81:TYR:C	19:AV:82:ARG:HD2	2.40	0.42
1:CA:1063:G:H1'	10:CL:134:MET:HA	2.01	0.42
1:AA:2284:U:H5''	1:AA:2285:A:OP1	2.20	0.42
34:DA:304:U:H2'	34:DA:305:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1831:G:H2'	1:CA:1832:C:C6	2.55	0.42
1:CA:2697:G:C2	1:CA:2711:A:C2	3.08	0.42
1:CA:2784:C:H6	1:CA:2784:C:O5'	2.03	0.42
34:DA:1327:C:H2'	34:DA:1328:C:H6	1.85	0.42
12:CO:107:ARG:NH2	17:CT:36:GLU:OE2	2.53	0.42
1:AA:1743:G:C6	1:AA:1744:G:C4	3.07	0.42
1:AA:478:G:H2'	1:AA:479:C:H6	1.85	0.42
57:BZ:201:ILE:HB	57:BZ:206:LEU:HD13	2.01	0.42
7:CG:86:MET:HA	7:CG:87:PRO:HD2	1.95	0.42
1:AA:228:U:H2'	1:AA:229:G:O4'	2.18	0.42
1:AA:2710:U:H2'	1:AA:2711:C:C6	2.54	0.42
7:CG:164:GLU:CD	7:CG:164:GLU:H	2.20	0.42
15:AR:54:LEU:HD12	15:AR:54:LEU:HA	1.59	0.42
29:A5:15:ARG:HD3	29:A5:15:ARG:HH11	1.64	0.42
34:BA:681:C:H6	34:BA:681:C:O5'	2.02	0.42
1:AA:1042:A:H4'	18:AU:91:ASP:OD2	2.18	0.42
42:DI:127:LYS:O	42:DI:128:ARG:HB3	2.19	0.42
21:AX:61:GLY:HA3	21:AX:73:ARG:O	2.19	0.42
61:BZ:703:FUA:C15	61:BZ:703:FUA:H323	2.49	0.42
46:DM:22:ILE:HB	46:DM:25:ILE:HB	2.01	0.42
42:BI:5:TYR:HA	42:BI:17:VAL:O	2.20	0.42
2:AB:73:A:H5'	2:AB:74:U:OP2	2.19	0.42
36:BC:19:GLU:O	36:BC:56:ASP:HA	2.20	0.42
34:BA:1182:G:C4'	34:BA:1183:A:H5'	2.44	0.42
57:DZ:251:ILE:HD13	57:DZ:285:ASP:HB3	2.02	0.42
16:AS:111:GLU:O	16:AS:112:PHE:HB3	2.20	0.42
1:AA:1043:G:OP1	18:AU:92:ARG:HB2	2.19	0.42
3:AC:48:LEU:CD2	3:AC:59:VAL:HG21	2.50	0.42
34:DA:920:U:N3	34:DA:921:U:C4	2.88	0.42
34:DA:1239:A:H4'	34:DA:1240:U:H5''	2.00	0.42
3:AC:42:VAL:O	3:AC:216:THR:C	2.58	0.42
1:CA:856:C:H2'	1:CA:857:C:C6	2.55	0.42
34:DA:195:A:C6	34:DA:196:A:N1	2.87	0.42
13:CP:45:LEU:HD23	13:CP:45:LEU:HA	1.60	0.42
37:BD:202:LEU:HD23	37:BD:202:LEU:HA	1.83	0.42
57:BZ:227:ILE:HD11	57:BZ:241:GLU:HG3	2.01	0.42
1:AA:464:G:H2'	1:AA:465:G:O4'	2.20	0.42
14:AQ:59:ARG:O	23:AZ:180:VAL:HB	2.20	0.42
41:BH:17:THR:HG22	41:BH:63:LEU:HG	2.02	0.42
1:CA:64:A:H2'	1:CA:65:C:O4'	2.20	0.42
1:CA:867:C:O2	1:CA:913:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:658:G:H2'	34:BA:659:U:C6	2.55	0.42
34:BA:715:A:H2'	34:BA:716:A:C8	2.55	0.42
17:AT:15:VAL:HG13	17:AT:79:HIS:HE1	1.85	0.42
26:A2:53:LEU:HA	26:A2:53:LEU:HD23	1.71	0.42
34:DA:377:G:O2'	34:DA:378:G:H5'	2.19	0.42
34:DA:1244:C:C2	34:DA:1294:G:N2	2.87	0.42
10:CL:134:MET:HG2	10:CL:134:MET:H	1.61	0.42
56:DW:63:G:H2'	56:DW:64:A:C8	2.55	0.42
1:AA:1841:A:H2'	1:AA:1842:G:O4'	2.20	0.42
2:CB:58:A:N7	2:CB:59:A:N7	2.67	0.42
25:C1:91:LYS:HA	25:C1:94:LEU:HD12	2.02	0.42
44:BK:48:ILE:O	44:BK:48:ILE:HG12	2.18	0.42
1:AA:1007:G:C6	1:AA:1008:U:C4	3.07	0.42
23:AZ:151:HIS:ND1	23:AZ:151:HIS:N	2.68	0.42
1:AA:239:G:C6	1:AA:240:A:C6	3.08	0.42
34:BA:21:G:H2'	34:BA:22:G:C8	2.55	0.42
21:AX:44:GLU:HG2	21:AX:49:VAL:O	2.20	0.42
1:CA:585:G:H2'	1:CA:1251:C:H42	1.85	0.42
34:BA:271:C:H2'	34:BA:272:C:H6	1.85	0.42
1:AA:746:A:H2'	1:AA:747:G:O4'	2.19	0.42
1:CA:449:A:O2'	18:CU:3:ARG:NH1	2.52	0.42
1:AA:1756:U:H1'	1:AA:2870:A:N3	2.35	0.42
1:CA:949:C:H2'	1:CA:950:G:C8	2.55	0.42
4:AD:34:VAL:HA	4:AD:62:TYR:O	2.20	0.42
6:AF:139:PHE:HB2	6:AF:166:ALA:HB1	2.01	0.42
1:CA:1197:G:O2'	1:CA:1198:U:H5'	2.20	0.42
5:CE:110:GLY:O	15:CR:3:HIS:HE1	2.03	0.42
40:BG:73:MET:HG2	40:BG:145:ALA:HB1	2.02	0.42
1:AA:2575:U:H4'	12:AO:28:SER:HA	2.02	0.42
57:BZ:68:ALA:HB3	57:BZ:327:PHE:CD1	2.54	0.42
12:AO:24:VAL:O	12:AO:24:VAL:HG22	2.20	0.42
38:DE:145:LYS:HE2	38:DE:145:LYS:HB3	1.77	0.42
1:CA:1221:C:N4	1:CA:1229:G:H1	2.18	0.42
34:BA:1513:A:H2'	34:BA:1514:C:C6	2.55	0.42
44:BK:92:GLU:O	44:BK:96:ARG:HB2	2.20	0.42
11:CN:18:ALA:HB2	11:CN:54:VAL:CG1	2.49	0.42
1:CA:2815:C:H2'	1:CA:2816:C:O4'	2.20	0.42
56:DW:41:C:O5'	56:DY:36:A:OP1	2.38	0.42
35:BB:19:HIS:HA	35:BB:39:ILE:HG21	2.02	0.42
34:BA:921:U:H2'	34:BA:922:G:O4'	2.20	0.42
34:DA:114:U:H2'	34:DA:115:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2136:C:O2'	1:CA:2137:C:P	2.78	0.42
57:DZ:28:THR:O	57:DZ:32:ILE:HG13	2.19	0.42
57:BZ:99:ARG:HB2	57:BZ:128:TYR:CD1	2.55	0.42
57:BZ:82:ILE:HD12	57:BZ:101:LEU:HD11	2.02	0.42
57:DZ:80:ASN:HD22	57:DZ:374:LEU:HB2	1.84	0.42
34:BA:741:G:C2	34:BA:742:G:C4	3.08	0.42
41:BH:65:TYR:HA	41:BH:79:VAL:HG23	2.02	0.42
3:AC:11:LEU:HD11	3:AC:35:THR:HG23	2.01	0.42
1:AA:1605:A:H4'	1:AA:1606:G:H2'	2.00	0.42
12:AO:64:ARG:HD2	12:AO:81:ASP:HB3	2.02	0.42
16:CS:101:LEU:HD23	16:CS:101:LEU:O	2.20	0.42
3:CC:42:VAL:O	3:CC:216:THR:C	2.58	0.42
34:DA:513:C:N3	34:DA:539:A:C2	2.88	0.42
34:BA:1452:C:O2'	34:BA:1457:G:C8	2.73	0.42
34:BA:988:G:C2	34:BA:1218:C:O2	2.73	0.42
24:A0:32:ARG:O	24:A0:33:ALA:C	2.58	0.42
50:DQ:27:PHE:CE2	50:DQ:36:ILE:HD11	2.55	0.42
34:DA:1096:C:HO2'	34:DA:1170:A:HO2'	1.66	0.42
1:CA:909:A:O2'	1:CA:910:A:H5'	2.19	0.42
5:AE:84:PHE:CZ	5:AE:86:PRO:HB3	2.55	0.42
8:AH:11:VAL:HA	8:AH:12:PRO:HD3	1.88	0.42
45:BL:27:LEU:HD13	45:BL:98:TYR:HE2	1.83	0.42
21:CX:44:GLU:HG2	21:CX:49:VAL:O	2.20	0.42
34:DA:1402:C:O2	34:DA:1500:A:N1	2.52	0.42
1:AA:864:C:O2'	1:AA:886:U:H5''	2.20	0.42
1:AA:304:C:H2'	1:AA:305:G:O4'	2.20	0.42
4:CD:124:PRO:HD2	4:CD:129:ASN:HD22	1.85	0.42
44:BK:20:TYR:CD1	44:BK:83:ILE:HB	2.54	0.42
12:AO:98:VAL:HG13	12:AO:117:LEU:HB3	2.01	0.42
2:AB:46:A:C5	2:AB:47:C:C4	3.07	0.42
1:CA:554:U:C4	1:CA:555:U:C4	3.08	0.42
34:DA:1400:C:C2	56:DW:34:G:C2	3.07	0.42
1:CA:948:G:C6	1:CA:949:C:C4	3.07	0.42
36:DC:181:ASN:OD1	36:DC:204:LEU:HD12	2.20	0.42
1:AA:915:U:C4	1:AA:916:G:N7	2.88	0.42
31:A7:5:TRP:CD1	31:A7:7:PRO:HD3	2.55	0.42
34:DA:319:G:C2	34:DA:320:C:C2	3.08	0.42
1:CA:2190:G:H2'	1:CA:2191:G:H8	1.85	0.42
1:CA:577:G:O2'	1:CA:1254:A:OP1	2.37	0.42
1:AA:2753:A:C6	1:AA:2777:A:C8	3.08	0.42
49:BP:23:ASP:OD1	49:BP:24:ALA:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1298:C:N4	40:DG:114:ARG:HB3	2.35	0.42
40:BG:151:TYR:OH	44:BK:54:ARG:NH1	2.53	0.42
23:AZ:61:LEU:HD22	23:AZ:61:LEU:H	1.85	0.42
1:CA:129:C:H2'	1:CA:130:C:H6	1.85	0.42
1:CA:876:C:H2'	1:CA:877:U:O4'	2.20	0.42
31:A7:38:GLY:O	31:A7:39:ARG:C	2.59	0.42
25:A1:86:SER:OG	25:A1:89:GLU:HG2	2.20	0.42
57:DZ:330:VAL:HG21	57:DZ:369:LEU:HB3	2.02	0.42
44:DK:67:ASP:O	44:DK:71:LYS:HG3	2.19	0.42
57:DZ:90:PHE:O	57:DZ:93:GLU:HB2	2.20	0.41
46:DM:121:LYS:HB2	57:DZ:507:TYR:OH	2.20	0.41
34:BA:565:U:C4	34:BA:566:G:C5	3.07	0.41
1:CA:1363:C:H2'	1:CA:1364:G:H8	1.84	0.41
34:BA:452:A:O2'	34:BA:453:A:OP2	2.29	0.41
35:DB:113:HIS:HA	35:DB:116:GLU:HG2	2.01	0.41
1:AA:1126:C:O2'	10:AL:126:MET:HG3	2.20	0.41
34:DA:300:A:H2'	34:DA:301:G:O4'	2.19	0.41
24:C0:23:VAL:HG22	24:C0:38:VAL:HG22	2.01	0.41
34:BA:987:G:H2'	34:BA:988:G:H8	1.84	0.41
17:AT:118:ARG:HH11	17:AT:118:ARG:HG3	1.85	0.41
1:CA:1914:C:O2	1:CA:1914:C:H2'	2.20	0.41
16:CS:15:ARG:HD3	16:CS:25:ARG:NH2	2.34	0.41
42:DI:6:GLY:O	42:DI:17:VAL:HG12	2.20	0.41
1:CA:1794:U:H1'	1:CA:1900:A:N3	2.35	0.41
1:CA:1233:C:C2'	1:CA:1234:U:H5'	2.50	0.41
57:BZ:181:LEU:HD23	57:BZ:182:ARG:CG	2.50	0.41
1:CA:2690:C:N4	1:CA:2713:A:H1'	2.35	0.41
1:AA:2123:G:H1	1:AA:2210:C:H42	1.68	0.41
1:CA:2689:U:H2'	1:CA:2689:U:O2	2.20	0.41
34:BA:548:G:H2'	34:BA:549:C:C6	2.54	0.41
34:BA:657:G:O2'	34:BA:658:G:H5'	2.19	0.41
10:AL:78:ILE:HD13	10:AL:134:MET:SD	2.60	0.41
34:BA:142:G:H2'	34:BA:143:A:C8	2.55	0.41
1:CA:470:A:C5'	1:CA:470:A:H8	2.33	0.41
1:CA:171:G:H2'	1:CA:172:C:C6	2.55	0.41
1:AA:2285:A:H2'	1:AA:2286:A:C8	2.54	0.41
2:AB:12:C:H2'	24:A0:73:GLY:HA3	2.02	0.41
21:CX:12:VAL:HG22	21:CX:29:TRP:CD1	2.54	0.41
1:CA:1469:A:H2'	1:CA:1470:G:O4'	2.19	0.41
34:BA:900:A:O5'	34:BA:900:A:H8	2.03	0.41
34:BA:1112:C:O2	36:BC:179:ARG:N	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:354:G:C2'	34:BA:355:C:H5'	2.49	0.41
14:AQ:2:LEU:HA	14:AQ:2:LEU:HD12	1.74	0.41
6:CF:178:PRO:HB2	6:CF:201:VAL:CG2	2.50	0.41
39:BF:41:GLU:O	39:BF:43:LEU:HD12	2.19	0.41
1:AA:2092:G:H2'	1:AA:2093:A:O4'	2.20	0.41
15:AR:104:ARG:NH1	15:AR:107:ASP:OD2	2.53	0.41
1:CA:252:G:P	13:CP:50:ARG:HH12	2.43	0.41
12:CO:98:VAL:HG13	12:CO:117:LEU:HB3	2.02	0.41
36:DC:87:LEU:O	36:DC:91:LEU:HB2	2.20	0.41
34:DA:451:A:N6	34:DA:480:U:H2'	2.35	0.41
1:CA:384:U:H2'	1:CA:385:C:H6	1.85	0.41
11:AN:40:PRO:O	18:AU:64:ARG:HD3	2.19	0.41
1:CA:844:C:C5	1:CA:845:G:C6	3.07	0.41
1:AA:2085:C:O2	1:AA:2462:A:N1	2.53	0.41
27:A3:5:LYS:HZ1	27:A3:55:ARG:HH12	1.67	0.41
1:CA:1851:U:H2'	1:CA:1852:C:O4'	2.20	0.41
1:CA:1857:G:C6	1:CA:1858:G:N1	2.88	0.41
1:AA:2371:C:O5'	1:AA:2371:C:H6	2.03	0.41
28:A4:68:ARG:H	28:A4:68:ARG:HG2	1.57	0.41
27:C3:4:LEU:HA	27:C3:4:LEU:HD23	1.77	0.41
1:AA:274:U:H6	1:AA:274:U:H2'	1.67	0.41
10:AL:84:LEU:HD21	10:AL:96:VAL:HB	2.02	0.41
5:CE:25:VAL:HG21	17:CT:7:ILE:HD13	2.02	0.41
57:BZ:541:ALA:HB3	57:BZ:579:GLU:HG2	2.01	0.41
8:AH:17:VAL:HG11	8:AH:50:VAL:HG21	2.02	0.41
10:CL:119:ASP:HB3	10:CL:120:LEU:H	1.63	0.41
1:AA:1220:U:H1'	1:AA:1221:G:OP1	2.19	0.41
1:CA:2830:G:N3	1:CA:2883:A:H2	2.18	0.41
57:BZ:89:ASP:O	57:BZ:454:MET:HB3	2.19	0.41
4:CD:70:TRP:CZ2	4:CD:150:LYS:HA	2.55	0.41
1:CA:317:G:N2	1:CA:334:C:O2	2.48	0.41
34:DA:438:G:N1	34:DA:495:A:OP2	2.42	0.41
22:AY:92:ASN:HB3	22:AY:94:LYS:HG3	2.02	0.41
57:DZ:403:GLU:O	57:DZ:404:VAL:HG23	2.20	0.41
1:AA:1463:C:H4'	1:AA:1633:A:H2	1.85	0.41
34:DA:976:G:H22	34:DA:1362:C:H2'	1.86	0.41
1:CA:830:G:H5''	63:CA:3984:HOH:O	2.20	0.41
1:AA:1475:G:O2'	1:AA:1476:C:H5'	2.20	0.41
35:BB:48:MET:HA	35:BB:51:LEU:HD12	2.02	0.41
12:AO:71:ARG:HA	12:AO:72:PRO:HD3	1.95	0.41
34:BA:1221:G:OP1	34:BA:1320:C:N4	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CL:99:ILE:HG23	10:CL:103:GLN:CB	2.51	0.41
37:BD:18:LYS:HG2	37:BD:33:MET:CG	2.48	0.41
34:DA:515:G:C4	34:DA:537:G:N2	2.89	0.41
57:DZ:546:ILE:HG13	57:DZ:590:ILE:HB	2.02	0.41
1:CA:897:C:H3'	1:CA:898:C:H6	1.85	0.41
49:BP:21:VAL:CG1	49:BP:34:GLU:HB3	2.50	0.41
1:CA:2690:C:H6	1:CA:2690:C:OP2	2.03	0.41
1:CA:448:U:C4	1:CA:583:G:H1'	2.55	0.41
34:BA:547:A:H4'	34:BA:548:G:O5'	2.20	0.41
20:CW:23:LEU:HA	20:CW:23:LEU:HD12	1.81	0.41
34:BA:748:C:H6	34:BA:748:C:H2'	1.65	0.41
15:CR:61:HIS:CD2	15:CR:65:LEU:HD21	2.55	0.41
1:AA:520:G:C6	1:AA:521:G:C5	3.08	0.41
37:DD:31:CYS:SG	37:DD:33:MET:HB2	2.60	0.41
1:AA:207:A:C2	1:AA:224:U:H4'	2.55	0.41
1:AA:648:G:H2'	1:AA:649:C:C6	2.55	0.41
8:AH:103:LEU:HG	8:AH:105:LEU:HD13	2.02	0.41
34:DA:317:G:C6	34:DA:318:G:N7	2.88	0.41
1:CA:1157:G:C2	1:CA:1158:C:C2	3.08	0.41
36:BC:113:ALA:HB3	36:BC:114:PRO:HD3	2.02	0.41
57:DZ:354:ARG:HB3	57:DZ:378:VAL:HB	2.02	0.41
13:CP:56:SER:OG	13:CP:61:ARG:HD2	2.20	0.41
1:AA:2310:A:H2'	1:AA:2311:G:O4'	2.20	0.41
14:CQ:1:MET:HB2	14:CQ:2:LEU:H	1.71	0.41
34:BA:838:G:N2	34:BA:849:C:C2	2.88	0.41
52:BS:58:VAL:HA	52:BS:59:PRO:HD2	1.78	0.41
12:AO:14:THR:HG21	12:AO:86:ILE:HB	2.03	0.41
34:DA:1486:G:H2'	34:DA:1487:G:C8	2.55	0.41
1:CA:995:C:C2	18:CU:57:PHE:CE1	3.08	0.41
45:BL:55:VAL:HG12	45:BL:56:ALA:N	2.34	0.41
1:AA:507:G:C4	1:AA:532:A:C2	3.08	0.41
13:CP:127:ALA:O	13:CP:148:LEU:HD23	2.19	0.41
5:CE:8:LYS:HD2	5:CE:188:VAL:HG12	2.01	0.41
30:C6:11:LEU:HA	30:C6:11:LEU:HD23	1.83	0.41
57:DZ:17:ILE:H	57:DZ:17:ILE:HD12	1.85	0.41
18:AU:20:LEU:HA	18:AU:20:LEU:HD23	1.79	0.41
48:DO:43:LEU:HA	48:DO:43:LEU:HD23	1.82	0.41
57:BZ:-62:LEU:H	57:BZ:-62:LEU:HD12	1.85	0.41
8:CH:94:TYR:HA	8:CH:106:THR:O	2.20	0.41
6:CF:158:THR:HG1	6:CF:160:ASN:H	1.60	0.41
37:BD:50:ARG:HA	37:BD:51:PRO:HD2	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:681:C:C2	34:DA:710:G:C2	3.07	0.41
26:C2:66:GLU:HA	26:C2:69:ARG:NH1	2.35	0.41
57:DZ:20:HIS:HB2	57:DZ:118:SER:HB2	2.03	0.41
35:DB:163:PHE:HA	35:DB:185:ILE:O	2.20	0.41
37:BD:194:LEU:HD12	37:BD:195:ALA:H	1.84	0.41
34:BA:922:G:H3'	34:BA:923:A:C8	2.55	0.41
1:CA:1477:A:H2'	1:CA:1478:G:O4'	2.20	0.41
34:BA:1104:G:OP1	35:BB:111:ARG:HD2	2.20	0.41
4:CD:68:LYS:O	4:CD:70:TRP:N	2.53	0.41
12:CO:2:ILE:CD1	12:CO:6:THR:HG21	2.47	0.41
57:DZ:110:SER:HB2	57:DZ:144:ALA:HB1	2.03	0.41
23:CZ:45:ASP:OD1	23:CZ:49:ARG:HG3	2.20	0.41
45:DL:27:LEU:HD13	45:DL:98:TYR:CE1	2.55	0.41
34:BA:955:U:H2'	34:BA:956:U:C6	2.52	0.41
1:AA:1356:G:C2'	1:AA:1357:G:H5'	2.50	0.41
37:DD:171:GLY:HA2	37:DD:172:PRO:HD2	1.83	0.41
1:CA:1465:G:N1	1:CA:1466:G:C5	2.88	0.41
23:AZ:111:VAL:C	23:AZ:113:ALA:N	2.73	0.41
7:AG:178:PHE:O	7:AG:180:PHE:CD2	2.73	0.41
5:CE:170:LEU:HB3	5:CE:184:VAL:CG2	2.50	0.41
57:DZ:647:VAL:HG11	57:DZ:652:MET:SD	2.60	0.41
20:CW:79:GLY:CA	20:CW:100:THR:HG22	2.50	0.41
34:BA:175:C:C2	34:BA:176:C:C5	3.08	0.41
1:CA:2854:G:C4	1:CA:2864:G:N2	2.88	0.41
1:CA:1154:G:OP2	18:CU:58:ARG:NH2	2.50	0.41
42:DI:17:VAL:HG23	42:DI:63:ILE:HG12	2.02	0.41
1:AA:2803:A:H2'	1:AA:2803:A:N3	2.35	0.41
49:DP:65:GLN:HA	49:DP:66:PRO:HD2	1.94	0.41
46:BM:20:THR:C	46:BM:22:ILE:H	2.24	0.41
1:CA:2166:G:N2	1:CA:2167:U:O4	2.54	0.41
1:AA:842:C:H2'	1:AA:843:C:H6	1.83	0.41
52:DS:27:GLU:HB3	52:DS:28:LYS:HG2	2.01	0.41
37:BD:15:GLU:HG3	37:BD:63:LYS:HD3	2.02	0.41
56:DW:46:7MG:H81	56:DW:46:7MG:H2'	1.85	0.41
23:CZ:53:ILE:HG22	23:CZ:71:VAL:HB	2.01	0.41
48:BO:62:GLN:HA	48:BO:65:ARG:NH1	2.34	0.41
1:AA:1841:A:H2'	1:AA:1842:G:H5'	2.02	0.41
34:BA:1411:C:H2'	34:BA:1412:C:H6	1.84	0.41
1:CA:224:G:H2'	1:CA:225:A:O4'	2.20	0.41
56:DW:65:G:H2'	56:DW:66:U:H6	1.86	0.41
22:AY:81:LYS:HB3	22:AY:81:LYS:HE2	1.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:71:LEU:O	38:DE:72:GLN:HG2	2.20	0.41
34:BA:1164:G:C2'	34:BA:1165:C:H5'	2.50	0.41
3:AC:60:ARG:NH2	3:AC:165:ARG:HH21	2.18	0.41
5:AE:176:ILE:HB	5:AE:181:LEU:HB2	2.03	0.41
57:DZ:157:LEU:HD12	57:DZ:158:GLY:N	2.34	0.41
36:DC:110:ASN:ND2	36:DC:144:SER:OG	2.52	0.41
12:AO:63:VAL:HG11	12:AO:85:VAL:HG23	2.01	0.41
1:CA:710:G:H2'	1:CA:711:G:C8	2.55	0.41
1:CA:2294:C:H2'	1:CA:2295:C:H6	1.85	0.41
1:AA:1944:G:H2'	1:AA:1945:U:O4'	2.21	0.41
39:DF:61:LEU:HD23	39:DF:63:TYR:OH	2.21	0.41
11:CN:94:HIS:O	11:CN:97:ARG:HB2	2.20	0.41
15:CR:50:HIS:CE1	15:CR:54:LEU:HD11	2.55	0.41
50:DQ:80:GLY:O	50:DQ:82:MET:HG2	2.19	0.41
5:AE:101:ARG:HD2	5:AE:169:ASN:OD1	2.20	0.41
34:BA:495:A:H4'	34:BA:496:A:OP1	2.21	0.41
51:DR:51:LEU:HA	51:DR:52:PRO:HD3	1.85	0.41
13:AP:20:GLY:HA2	13:AP:28:GLY:HA2	2.01	0.41
16:AS:94:TYR:CE1	16:AS:99:LYS:HG3	2.55	0.41
32:A8:52:LYS:HB3	32:A8:52:LYS:HE2	1.81	0.41
34:BA:425:G:C2	34:BA:426:G:C8	3.09	0.41
1:AA:1544:C:O4'	1:AA:1624:C:H4'	2.20	0.41
11:CN:62:VAL:HG12	11:CN:67:LEU:HD22	2.03	0.41
34:BA:345:C:H4'	34:BA:346:G:N1	2.35	0.41
37:BD:108:LEU:HD11	37:BD:174:LEU:HB3	2.02	0.41
34:DA:922:G:O2'	34:DA:1398:A:N1	2.38	0.41
1:AA:1065:U:O2'	1:AA:1067:A:C2	2.62	0.41
34:BA:405:U:H3'	34:BA:406:G:H5'	2.02	0.41
43:BJ:5:ARG:HE	43:BJ:5:ARG:HB3	1.51	0.41
8:AH:41:MET:HB3	8:AH:41:MET:HE3	1.90	0.41
46:DM:91:ARG:O	46:DM:110:ARG:NH1	2.52	0.41
1:CA:1061:U:O4	10:CL:73:PRO:HG3	2.20	0.41
34:DA:561:U:O2'	34:DA:562:C:P	2.79	0.41
53:BT:66:ALA:HB1	53:BT:71:THR:HG21	2.01	0.41
23:AZ:31:ARG:HD2	23:AZ:31:ARG:HH11	1.72	0.41
34:DA:1000:U:H2'	34:DA:1001:A:C8	2.55	0.41
8:AH:164:TYR:O	8:AH:167:GLU:HB3	2.21	0.41
34:DA:690:G:H2'	34:DA:691:G:C8	2.55	0.41
8:CH:154:PRO:HB3	8:CH:163:TYR:CE2	2.55	0.41
34:BA:1423:G:C6	34:BA:1424:C:C4	3.09	0.41
1:AA:2315:G:O2'	7:AG:132:ASN:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1516:G:H2'	34:BA:1518:A:OP2	2.20	0.41
2:CB:16:G:C6	2:CB:69:G:C2	3.08	0.41
21:CX:44:GLU:O	21:CX:46:ALA:N	2.53	0.41
57:DZ:409:ILE:HG23	57:DZ:459:LEU:HD12	2.01	0.41
34:DA:1366:C:O2'	43:DJ:60:ARG:NH2	2.54	0.41
57:DZ:346:LYS:HE2	57:DZ:384:ILE:HG23	2.02	0.41
1:CA:2273:A:H2'	1:CA:2274:A:C8	2.55	0.41
1:CA:1932:A:H61	1:CA:1968:G:H1'	1.84	0.41
34:BA:1112:C:H1'	36:BC:179:ARG:HE	1.84	0.41
10:AL:95:LYS:HA	10:AL:135:GLY:O	2.20	0.41
38:BE:7:GLU:CD	38:BE:37:ARG:HH21	2.23	0.41
1:CA:2563:U:O2	1:CA:2565:A:C8	2.74	0.41
50:DQ:81:ARG:HA	50:DQ:81:ARG:HD2	1.86	0.41
34:DA:1154:G:C6	34:DA:1155:G:C5	3.08	0.41
37:BD:5:ILE:HD13	37:BD:5:ILE:O	2.21	0.41
34:BA:522:C:H2'	34:BA:523:A:H5'	2.01	0.41
27:C3:23:LEU:HB3	27:C3:28:LEU:O	2.21	0.41
1:CA:242:G:C8	32:C8:5:LYS:HG2	2.56	0.41
34:DA:1394:A:C6	34:DA:1501:C:H4'	2.56	0.41
1:CA:1467:C:C2	1:CA:1526:G:N2	2.89	0.41
34:DA:600:C:H42	34:DA:638:G:H1	1.68	0.41
1:AA:291:G:N2	1:AA:395:C:C2	2.89	0.41
6:AF:149:ASP:OD2	6:AF:151:SER:N	2.46	0.41
34:DA:334:C:H2'	34:DA:335:C:H6	1.85	0.41
7:CG:60:LEU:HD22	7:CG:63:ILE:HD11	2.01	0.41
34:DA:1077:G:N1	34:DA:1081:G:C6	2.88	0.41
34:BA:291:C:O2'	34:BA:292:G:H5'	2.19	0.41
47:BN:13:THR:HA	47:BN:14:PRO:HD3	1.80	0.41
34:BA:69:G:C2	34:BA:70:G:C5	3.08	0.41
13:CP:138:LEU:HD23	13:CP:145:PRO:HG3	2.03	0.41
7:AG:44:GLY:C	7:AG:46:ALA:H	2.22	0.41
1:AA:470:C:H4'	6:AF:49:ALA:HB2	2.01	0.41
11:AN:107:LEU:HD23	11:AN:107:LEU:HA	1.80	0.41
35:DB:41:ILE:HD13	35:DB:41:ILE:HA	1.86	0.41
6:AF:72:ARG:HE	6:AF:72:ARG:HB3	1.52	0.41
18:AU:52:ARG:HH11	18:AU:52:ARG:HG3	1.85	0.41
35:BB:76:GLN:H	35:BB:76:GLN:HG2	1.51	0.41
57:BZ:358:MET:HE1	57:BZ:363:ARG:HG2	2.01	0.41
1:CA:614(C):A:C4	6:CF:180:GLY:HA3	2.56	0.41
1:AA:2099:A:O2'	1:AA:2100:C:H5'	2.20	0.41
23:CZ:14:LYS:HA	23:CZ:15:PRO:HD3	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:19:ALA:HB3	57:DZ:25:LYS:HG3	2.02	0.41
61:DZ:703:FUA:C12	61:DZ:703:FUA:H231	2.45	0.41
1:CA:1271:G:N2	1:CA:1617:C:O4'	2.53	0.41
34:DA:1278:U:H5'	34:DA:1279:A:C5'	2.51	0.41
1:CA:1478:G:O2'	1:CA:1558:A:C2	2.70	0.41
34:DA:358:U:H2'	34:DA:359:U:C6	2.55	0.41
1:CA:54:G:O2'	31:C7:35:ARG:HD3	2.21	0.41
19:AV:40:LEU:HA	19:AV:40:LEU:HD23	1.72	0.41
3:AC:11:LEU:HD22	3:AC:11:LEU:H	1.86	0.41
10:CL:73:PRO:HB2	10:CL:76:TYR:H	1.85	0.41
1:AA:2825:C:O5'	1:AA:2825:C:H6	2.03	0.41
34:DA:539:A:N6	34:DA:540:G:O6	2.53	0.41
57:BZ:123:ARG:O	57:BZ:126:GLU:HB2	2.20	0.41
57:DZ:631:ILE:HG13	57:DZ:632:LEU:N	2.36	0.41
35:DB:95:GLN:HB2	35:DB:96:ARG:H	1.73	0.41
34:BA:627:G:O2'	34:BA:628:G:H5'	2.21	0.41
1:CA:319:C:H2'	1:CA:320:A:O4'	2.20	0.41
1:CA:1575:C:H2'	1:CA:1576:U:O4'	2.21	0.41
45:BL:84:LEU:HB2	45:BL:105:TYR:CD2	2.56	0.41
34:BA:960:U:H2'	34:BA:1225:A:H62	1.84	0.41
38:DE:11:ILE:HD13	38:DE:105:VAL:HG13	2.02	0.41
1:AA:2679:C:O2	8:AH:109:PHE:HB3	2.19	0.41
1:CA:189:G:H2'	1:CA:205:G:N2	2.36	0.41
34:BA:604:G:C2	34:BA:635:G:C4	3.09	0.41
57:BZ:443:HIS:HA	57:BZ:444:PRO:HD2	1.86	0.41
16:CS:61:ASN:O	16:CS:65:VAL:HG23	2.21	0.41
1:AA:2879:G:H2'	1:AA:2880:C:C6	2.56	0.41
1:CA:1401:G:C5	1:CA:1402:C:C4	3.08	0.41
29:A5:58:LEU:HD22	29:A5:60:VAL:HG23	2.03	0.41
21:CX:12:VAL:CG2	21:CX:27:THR:HG22	2.50	0.41
1:CA:1488:G:N2	1:CA:1502:C:C2	2.89	0.41
5:CE:163:GLU:HG2	5:CE:164:ARG:H	1.86	0.41
19:CV:98:GLU:OE1	19:CV:100:ARG:NH1	2.48	0.41
50:DQ:6:LEU:HA	50:DQ:6:LEU:HD12	1.86	0.41
1:AA:604:C:H2'	1:AA:605:G:H8	1.84	0.41
34:DA:778:G:C6	34:DA:779:C:N3	2.89	0.41
4:AD:218:ARG:HB3	4:AD:219:PRO:HD2	2.02	0.41
34:BA:266:G:N2	63:BA:5136:HOH:O	2.53	0.41
19:AV:19:LYS:HA	19:AV:94:LEU:O	2.19	0.41
34:DA:961:U:H2'	34:DA:962:C:O4'	2.21	0.41
39:BF:1:MET:HE3	39:BF:66:GLU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:41:U:H5	7:AG:70:VAL:HB	1.86	0.41
1:AA:1281:G:C6	1:AA:1282:G:N1	2.89	0.41
34:DA:1055:A:C6	34:DA:1206:G:C5	3.09	0.41
1:CA:14:A:N1	1:CA:2044:C:O2'	2.40	0.41
34:DA:1012:U:H2'	34:DA:1013:G:C8	2.55	0.41
34:BA:199:G:N2	34:BA:219:C:O2	2.53	0.41
34:DA:348:G:O2'	34:DA:349:A:H5'	2.20	0.41
1:AA:2418:U:C2	13:AP:72:PRO:HG2	2.56	0.41
34:BA:416:G:C6	34:BA:417:C:N3	2.88	0.41
24:A0:65:GLY:HA3	24:A0:81:VAL:HG12	2.03	0.41
35:BB:223:ILE:H	35:BB:223:ILE:HG12	1.35	0.41
52:BS:70:LYS:HD3	52:BS:70:LYS:HA	1.95	0.41
1:AA:449:A:C6	1:AA:450:A:C6	3.09	0.41
34:DA:863:U:H2'	34:DA:865:A:OP2	2.21	0.41
20:CW:59:VAL:HG22	20:CW:64:MET:O	2.20	0.41
3:AC:167:ASP:OD1	3:AC:169:THR:OG1	2.38	0.41
57:DZ:20:HIS:HB2	57:DZ:118:SER:OG	2.21	0.41
61:DZ:703:FUA:H323	61:DZ:703:FUA:C15	2.49	0.41
35:DB:163:PHE:HA	35:DB:185:ILE:HG12	2.01	0.41
37:BD:107:ARG:HH22	37:BD:194:LEU:CD1	2.33	0.41
1:CA:2809:A:C2'	1:CA:2810:A:H5'	2.50	0.41
34:BA:389:A:C5	34:BA:390:C:H1'	2.56	0.41
1:CA:1478:G:O2'	1:CA:1558:A:N1	2.50	0.41
38:BE:108:ALA:O	38:BE:110:LEU:N	2.53	0.41
15:CR:24:GLN:OE1	15:CR:36:THR:HG21	2.19	0.41
46:DM:10:PRO:HG2	46:DM:21:TYR:HD1	1.85	0.41
1:CA:464:U:H4'	31:C7:5:TRP:CZ3	2.56	0.41
6:AF:185:ASP:OD1	6:AF:188:ARG:NH1	2.49	0.41
56:BY:56:C:H2'	56:BY:57:G:O4'	2.20	0.41
34:DA:562:C:H4'	34:DA:563:A:O5'	2.20	0.41
14:CQ:29:PHE:HB3	14:CQ:65:PHE:CE2	2.54	0.41
3:AC:44:VAL:HG23	3:AC:176:VAL:CG2	2.51	0.41
34:BA:954:G:H2'	34:BA:955:U:C6	2.56	0.41
1:AA:1355:G:P	31:A7:9:ARG:HD3	2.60	0.41
37:DD:23:GLY:HA3	37:DD:112:VAL:O	2.20	0.41
30:A6:8:LYS:HE2	32:A8:34:TRP:CZ3	2.55	0.41
38:DE:105:VAL:HG21	38:DE:128:PRO:HB3	2.01	0.41
47:DN:41:ARG:HG3	47:DN:42:ILE:N	2.35	0.41
49:BP:73:LEU:HA	49:BP:76:GLN:HB3	2.02	0.41
49:BP:4:ILE:HG21	49:BP:36:ILE:HD11	2.02	0.41
1:AA:2169:G:H2'	1:AA:2170:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:278:G:C2	1:AA:279:G:C8	3.08	0.41
34:BA:1207:G:H2'	34:BA:1208:C:H6	1.86	0.41
16:CS:62:LYS:O	16:CS:65:VAL:HB	2.20	0.41
1:AA:2211:U:H2'	1:AA:2212:G:H8	1.86	0.41
12:CO:20:MET:CE	12:CO:44:LYS:HE3	2.50	0.41
1:CA:1773:A:C5	1:CA:1829:A:H1'	2.56	0.41
34:BA:753:A:H4'	34:BA:754:C:C5'	2.49	0.41
34:BA:1428:A:H2'	34:BA:1429:C:O4'	2.19	0.41
1:CA:2527:C:H2'	1:CA:2528:U:O4'	2.20	0.41
35:BB:28:PHE:CD1	35:BB:190:THR:HG22	2.55	0.41
45:BL:43:VAL:HG12	45:BL:44:THR:N	2.36	0.41
34:BA:116:A:H61	34:BA:313:A:H1'	1.84	0.41
1:AA:2102:G:OP1	25:A1:35:THR:HG21	2.20	0.41
2:CB:28:C:H2'	2:CB:29:A:H8	1.85	0.41
1:CA:1168:G:C2	1:CA:1182:A:C2	3.08	0.41
5:AE:98:PRO:HD3	5:AE:175:VAL:HG13	2.03	0.41
22:CY:15:VAL:HG21	22:CY:42:VAL:HG11	2.03	0.41
45:DL:125:PRO:HB2	45:DL:126:LYS:H	1.71	0.41
57:DZ:343:ASN:ND2	57:DZ:383:THR:HG23	2.36	0.41
34:DA:511:C:O3'	37:DD:43:HIS:CE1	2.74	0.41
57:BZ:623:ASP:HB2	57:BZ:662:LYS:HD2	2.02	0.41
23:AZ:121:HIS:HE1	23:AZ:169:GLU:OE2	2.02	0.41
1:CA:357:A:H2'	1:CA:358:U:O4'	2.21	0.41
1:AA:1668:G:C2	1:AA:1669:G:C8	3.09	0.41
6:AF:164:ARG:O	6:AF:168:ARG:HB2	2.19	0.41
23:CZ:97:GLU:HA	23:CZ:126:VAL:O	2.20	0.41
4:AD:25:THR:HG21	4:AD:113:VAL:HG11	2.02	0.41
11:AN:112:LEU:HD12	11:AN:112:LEU:O	2.21	0.41
57:BZ:339:SER:HB2	57:BZ:352:VAL:HG13	2.02	0.41
35:BB:71:VAL:HG13	35:BB:93:VAL:HG23	2.03	0.41
1:AA:718:C:N4	63:AA:4823:HOH:O	2.53	0.41
19:CV:7:THR:HB	19:CV:35:LEU:HD12	2.02	0.41
34:BA:690:G:C6	34:BA:691:G:C6	3.09	0.41
17:CT:55:ASN:H	17:CT:59:THR:HG22	1.86	0.41
17:AT:37:GLY:C	17:AT:39:ARG:H	2.23	0.41
42:BI:28:VAL:HA	42:BI:63:ILE:O	2.21	0.41
34:BA:1374:A:C4	34:BA:1375:A:C8	3.09	0.41
34:DA:1085:U:H3'	34:DA:1086:U:C5	2.56	0.41
2:AB:73:A:N3	2:AB:73:A:H2'	2.36	0.41
14:AQ:56:ARG:CG	14:AQ:56:ARG:NH1	2.82	0.41
3:CC:48:LEU:CD2	3:CC:59:VAL:HG21	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:555:LEU:HD11	57:BZ:599:PRO:HB2	2.02	0.41
57:BZ:590:ILE:O	57:BZ:594:VAL:HG23	2.21	0.41
43:DJ:6:ILE:O	43:DJ:71:LEU:HD12	2.20	0.41
1:CA:1823:G:OP1	4:CD:54:ARG:NH1	2.54	0.41
50:BQ:41:LYS:HZ2	50:BQ:92:ARG:HH21	1.68	0.41
5:AE:116:VAL:HG13	5:AE:122:PHE:CB	2.50	0.41
1:AA:2022:G:C6	1:AA:2023:A:N7	2.89	0.41
34:DA:343:U:O3'	34:DA:344:A:H8	2.02	0.41
1:AA:2291:G:N7	24:A0:14:ARG:NH1	2.50	0.41
33:A9:16:VAL:O	33:A9:17:ILE:HD12	2.21	0.41
34:DA:981:U:H5'	47:DN:21:TYR:CZ	2.55	0.41
41:BH:78:GLN:HE21	41:BH:78:GLN:HB2	1.59	0.41
49:BP:7:ALA:HB2	49:BP:20:VAL:HG11	2.03	0.41
1:AA:27:G:C2	1:AA:537:G:N3	2.88	0.41
34:BA:1127:G:H5'	34:BA:1280:A:O2'	2.21	0.41
34:DA:411:A:C6	34:DA:429:U:C4	3.09	0.41
1:AA:616:G:N2	1:AA:712:C:C2	2.89	0.41
37:BD:79:PHE:CZ	37:BD:207:TYR:HD2	2.37	0.41
1:AA:2769:U:OP2	33:A9:19:ARG:NE	2.39	0.41
6:CF:184:TYR:CE1	13:CP:3:LEU:HD21	2.56	0.41
1:AA:1537:G:C4	1:AA:1546:G:N2	2.89	0.41
1:AA:1537:G:O2'	4:AD:101:GLU:HB2	2.21	0.41
1:CA:1688:U:O2	1:CA:1700:A:H5'	2.19	0.41
35:DB:72:GLY:O	35:DB:94:ASN:ND2	2.48	0.41
14:AQ:62:GLY:O	23:AZ:178:GLU:HG2	2.20	0.41
1:AA:1373:C:H2'	1:AA:1374:G:O4'	2.21	0.41
27:A3:26:LEU:HA	27:A3:26:LEU:HD23	1.80	0.41
1:AA:2047:C:H2'	1:AA:2048:C:H6	1.86	0.41
39:BF:92:LYS:HB2	39:BF:92:LYS:HE3	1.59	0.41
9:AK:48:GLY:C	9:AK:90:ALA:HB1	2.40	0.41
34:BA:1299:A:H5''	34:BA:1299:A:N3	2.36	0.41
2:AB:41:U:C5	7:AG:70:VAL:HB	2.55	0.41
25:A1:17:SER:HB2	25:A1:40:ARG:HG2	2.02	0.41
1:CA:2734:A:C8	1:CA:2735:G:C8	3.08	0.41
13:AP:97:PRO:HD3	13:AP:126:VAL:O	2.20	0.41
34:BA:1024:G:H2'	34:BA:1025:U:H5''	2.03	0.41
24:C0:46:LYS:O	24:C0:78:TYR:HA	2.20	0.41
1:CA:777:A:C2	1:CA:778:G:C4	3.08	0.41
6:CF:162:LEU:HD12	6:CF:162:LEU:HA	1.79	0.41
5:CE:182:LEU:HD12	5:CE:182:LEU:C	2.41	0.41
57:BZ:271:LEU:HD12	57:BZ:271:LEU:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:105:GLU:HG3	36:DC:105:GLU:H	1.72	0.41
6:AF:93:LYS:HA	6:AF:93:LYS:HD3	1.77	0.41
57:BZ:203:GLU:H	57:BZ:203:GLU:CD	2.24	0.41
57:DZ:88:VAL:O	57:DZ:91:THR:N	2.53	0.41
34:BA:557:G:N1	34:BA:558:G:C2	2.89	0.41
49:BP:17:TYR:CE2	49:BP:41:PRO:HG3	2.55	0.41
5:AE:111:ARG:HG2	5:AE:111:ARG:H	1.43	0.41
1:AA:831:A:C8	1:AA:839:G:C5	3.09	0.41
1:AA:1739:U:H2'	1:AA:1741:C:C5	2.56	0.41
1:AA:1525:G:H2'	1:AA:1526:G:C8	2.55	0.41
34:DA:523:A:H61	45:DL:53:ARG:HH12	1.69	0.41
1:CA:1406:U:H2'	1:CA:1407:C:C6	2.56	0.41
56:DY:75:C:HO2'	56:DY:76:A:H8	1.66	0.41
1:CA:2422:A:C6	56:DY:76:A:C2	3.09	0.41
12:CO:4:PRO:O	12:CO:5:GLN:CB	2.68	0.41
23:CZ:134:PRO:C	23:CZ:136:PHE:H	2.23	0.41
3:AC:194:ILE:CD1	3:AC:227:PRO:CB	2.99	0.41
34:BA:685:G:N1	34:BA:686:U:O4	2.54	0.41
1:AA:2097:U:H2'	1:AA:2250:G:N2	2.36	0.41
1:CA:2856:C:N3	1:CA:2862:G:C2	2.89	0.41
1:CA:285:C:O2'	1:CA:286:C:H5'	2.21	0.41
1:AA:1700:G:H3'	15:AR:2:ARG:CD	2.51	0.41
34:DA:678:U:H1'	34:DA:777:A:O3'	2.20	0.41
34:DA:785:G:N2	34:DA:798:G:C4	2.89	0.41
35:DB:71:VAL:HG12	35:DB:93:VAL:HG22	2.01	0.41
5:AE:2:LYS:HA	5:AE:84:PHE:CD1	2.56	0.41
57:BZ:443:HIS:CG	57:BZ:446:THR:HG22	2.55	0.41
51:DR:44:LEU:HD21	51:DR:70:ILE:HD13	2.02	0.41
1:CA:7:G:H2'	1:CA:8:A:O4'	2.20	0.41
34:DA:1117:G:N2	34:DA:1180:A:O2'	2.54	0.41
34:BA:665:A:N3	34:BA:732:C:H2'	2.35	0.41
15:CR:51:LEU:HD21	15:CR:69:ASP:HB2	2.02	0.41
36:DC:54:ARG:O	36:DC:69:HIS:ND1	2.39	0.41
34:BA:1381:U:H1'	40:BG:79:ARG:HG3	2.02	0.41
1:CA:470:A:OP1	6:CF:59:TYR:HE1	2.03	0.41
20:AW:83:LYS:C	20:AW:84:ARG:HD3	2.41	0.41
34:DA:232:G:H2'	34:DA:233:C:O4'	2.21	0.41
1:CA:1662:C:H2'	1:CA:1663:C:O4'	2.20	0.41
57:DZ:237:PRO:HB3	57:DZ:241:GLU:OE1	2.21	0.41
15:CR:55:ALA:HA	15:CR:80:PHE:CE2	2.55	0.41
34:BA:872:A:C2	34:BA:874:G:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:16:ARG:HD2	36:DC:16:ARG:HA	1.81	0.41
34:DA:1052:U:O2'	34:DA:1055:A:OP2	2.33	0.41
1:CA:13:A:H2	1:CA:14:A:N6	2.19	0.41
22:CY:42:VAL:HG12	22:CY:43:ASN:N	2.36	0.41
57:DZ:159:ALA:O	57:DZ:161:PRO:HD3	2.21	0.41
1:CA:1149:G:H2'	1:CA:1150:C:C6	2.54	0.41
34:DA:1418:A:H5''	34:DA:1419:G:OP2	2.20	0.41
34:BA:827:U:C4	34:BA:870:U:N3	2.89	0.41
34:BA:370:C:O2'	34:BA:371:G:H5'	2.20	0.41
34:BA:40:C:C2	34:BA:41:G:C8	3.09	0.41
57:DZ:31:ARG:O	57:DZ:34:TYR:HB3	2.20	0.41
34:BA:1060:C:C5	36:BC:2:GLY:HA3	2.55	0.41
12:AO:9:GLU:O	12:AO:83:ALA:HA	2.20	0.41
46:BM:94:ARG:CZ	52:BS:80:TYR:HD2	2.34	0.41
40:BG:18:TYR:HD2	40:BG:59:LEU:HD22	1.86	0.41
8:AH:23:ARG:CZ	8:AH:23:ARG:HB2	2.50	0.41
1:CA:1507:A:O5'	1:CA:1507:A:H8	2.03	0.41
24:A0:5:LYS:HE3	24:A0:5:LYS:HB2	1.80	0.41
45:DL:10:LEU:HA	45:DL:10:LEU:HD23	1.86	0.41
57:DZ:669:PHE:H	57:DZ:669:PHE:HD1	1.69	0.41
34:DA:857:C:H2'	34:DA:858:G:O4'	2.21	0.41
34:BA:337:C:H2'	34:BA:338:A:C8	2.55	0.41
1:AA:2845:A:C6	1:AA:2889:C:C6	3.09	0.41
57:DZ:349:LYS:HB2	57:DZ:349:LYS:HE3	1.90	0.41
11:CN:62:VAL:HG13	11:CN:66:LYS:HB2	2.02	0.41
57:BZ:183:MET:SD	57:BZ:213:HIS:CD2	3.14	0.41
17:AT:39:ARG:NH2	34:BA:345:C:H5	2.19	0.41
34:DA:541:G:N2	34:DA:542:G:H1'	2.36	0.41
34:DA:926:G:C6	34:DA:1505:G:C5	3.09	0.41
52:DS:36:ARG:HG2	52:DS:51:VAL:HG13	2.02	0.41
1:CA:2836:U:C4	1:CA:2883:A:N6	2.89	0.41
6:AF:53:THR:HB	6:AF:56:GLU:OE2	2.21	0.41
1:AA:1016:C:C2'	1:AA:1017:G:H5'	2.51	0.41
57:BZ:96:ARG:O	57:BZ:100:VAL:HG23	2.20	0.41
46:DM:20:THR:C	46:DM:22:ILE:H	2.25	0.41
42:BI:6:GLY:O	42:BI:17:VAL:HG12	2.21	0.41
1:AA:2303:U:OP1	1:AA:2393:C:H5'	2.21	0.41
48:DO:21:ASP:OD2	48:DO:24:SER:HB3	2.20	0.41
43:BJ:55:LYS:HB3	43:BJ:55:LYS:HE2	1.89	0.41
16:AS:58:LEU:HA	16:AS:58:LEU:HD23	1.71	0.41
57:DZ:74:TRP:HE1	57:DZ:273:LEU:C	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CZ:150:LEU:HD12	23:CZ:171:ILE:HD11	2.02	0.41
52:DS:3:ARG:HG2	52:DS:4:SER:H	1.86	0.41
57:DZ:29:THR:O	57:DZ:33:LEU:HD23	2.20	0.41
34:DA:623:C:H2'	34:DA:624:C:H6	1.84	0.41
34:DA:401:C:OP2	37:DD:73:ARG:NE	2.53	0.41
1:AA:967:G:H2'	1:AA:968:U:C6	2.56	0.41
1:AA:721:G:O2'	6:AF:74:ARG:HD3	2.21	0.41
47:BN:23:ARG:HD2	47:BN:30:ALA:HB2	2.03	0.41
45:DL:75:HIS:CD2	45:DL:77:LEU:HB2	2.56	0.41
36:BC:124:ILE:HG22	36:BC:130:VAL:HG22	2.02	0.41
56:BY:60:U:H5''	56:BY:61:C:C5	2.45	0.41
2:CB:6:C:C2	2:CB:116:G:N2	2.89	0.41
18:CU:79:PHE:CE1	18:CU:83:LEU:HD22	2.55	0.41
36:DC:52:LEU:HD13	36:DC:118:GLN:HE22	1.86	0.41
5:CE:144:ARG:HB3	5:CE:145:LYS:H	1.56	0.41
1:CA:2299:G:N2	1:CA:2318:G:N7	2.69	0.41
1:CA:1913:A:C6	57:DZ:580:MET:HE2	2.56	0.41
34:DA:473:G:H8	34:DA:473:G:O5'	2.04	0.41
34:DA:687:A:O2'	34:DA:701:C:N4	2.53	0.41
4:AD:146:GLU:HG2	4:AD:152:GLY:C	2.42	0.41
23:CZ:69:THR:HG22	23:CZ:90:VAL:HA	2.01	0.41
57:DZ:647:VAL:HA	57:DZ:648:PRO:HD3	1.96	0.41
34:BA:828:A:H2'	34:BA:829:G:O5'	2.21	0.41
1:CA:1292:U:H2'	1:CA:1293:C:H6	1.83	0.41
34:BA:186:C:C2	34:BA:187:C:C5	3.08	0.41
50:BQ:62:SER:OG	50:BQ:72:ARG:HD2	2.20	0.41
1:CA:2320:A:C2	1:CA:2333:A:C8	3.09	0.41
56:DY:55:PSU:HN1	56:DY:57:G:C5'	2.33	0.41
1:CA:501:A:C6	1:CA:502:A:C6	3.08	0.41
1:CA:1368:G:O2'	1:CA:1369:G:H5'	2.21	0.41
26:C2:3:LEU:HD23	26:C2:3:LEU:HA	1.79	0.41
1:CA:264:C:O2'	1:CA:265:A:H2'	2.21	0.41
20:CW:29:LEU:HD12	20:CW:29:LEU:O	2.21	0.41
1:AA:2342:G:H2'	1:AA:2343:G:O4'	2.21	0.41
1:AA:2343:G:O3'	24:A0:43:THR:HG22	2.21	0.41
34:DA:953:G:H5'	34:DA:965:A:N6	2.35	0.41
41:DH:113:SER:HB2	41:DH:134:ILE:HD11	2.03	0.41
1:AA:2294:G:OP1	1:AA:2295:C:H1'	2.21	0.41
34:BA:1277:C:H1'	34:BA:1282:C:O2	2.21	0.41
57:DZ:610:VAL:HG23	57:DZ:612:THR:HG22	2.03	0.41
34:BA:658:G:H2'	34:BA:659:U:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:108:U:H2'	1:CA:109:G:C8	2.54	0.41
5:CE:13:ARG:HD2	5:CE:20:ALA:HB1	2.03	0.41
1:AA:1851:U:O2	4:AD:201:HIS:HB3	2.19	0.41
35:BB:197:VAL:HG12	35:BB:199:TYR:H	1.86	0.41
52:BS:11:VAL:HG11	52:BS:16:LEU:HB2	2.02	0.41
1:CA:1041:C:H5'	1:CA:1042:G:OP2	2.21	0.41
34:DA:860:A:H2'	34:DA:861:G:O4'	2.20	0.41
1:CA:140:G:O4'	1:CA:141:A:H2	2.04	0.41
21:AX:60:ARG:HH12	31:A7:47:ARG:NH2	2.19	0.41
1:CA:2092:U:H4'	1:CA:2093:G:O5'	2.21	0.41
41:BH:116:LYS:HD2	41:BH:129:VAL:HG11	2.03	0.41
1:CA:453:C:OP1	63:CA:4582:HOH:O	2.22	0.41
1:AA:1370:G:C5	1:AA:1374:G:O6	2.74	0.41
34:DA:518:C:O2'	34:DA:530:G:N2	2.54	0.41
1:CA:1379:A:H4'	1:CA:1380:G:OP2	2.21	0.41
1:CA:589:C:H2'	1:CA:590:A:C8	2.55	0.41
42:BI:92:TYR:HA	42:BI:92:TYR:HD1	1.77	0.41
2:CB:28:C:H2'	2:CB:29:A:C8	2.56	0.41
34:BA:872:A:C5	34:BA:874:G:C8	3.09	0.41
33:A9:10:ILE:HG21	33:A9:32:HIS:CD2	2.56	0.41
1:CA:251:A:C5	1:CA:252:G:H1'	2.56	0.41
1:CA:1155:A:C4	1:CA:1157:G:C8	3.09	0.41
1:AA:2418:U:H6	1:AA:2418:U:H2'	1.66	0.41
1:AA:2845:A:C5	1:AA:2889:C:C5	3.09	0.41
34:BA:620:C:C2	37:BD:135:LEU:HG	2.56	0.41
14:CQ:26:TYR:CE1	14:CQ:28:ALA:HB2	2.56	0.41
23:AZ:105:VAL:O	23:AZ:141:VAL:HG22	2.21	0.41
1:CA:705:A:H1'	4:CD:9:TYR:CE2	2.56	0.41
12:CO:103:ALA:O	12:CO:106:LEU:HB2	2.21	0.41
1:AA:2787:C:H2'	1:AA:2788:A:O4'	2.21	0.41
1:AA:585:U:C4	1:AA:2058:C:O4'	2.74	0.41
14:CQ:68:ILE:HD13	14:CQ:103:MET:HB3	2.03	0.41
1:CA:818:G:H5'	1:CA:839:U:OP1	2.20	0.41
1:AA:1702:A:H4'	5:AE:115:GLY:N	2.36	0.41
1:AA:2550:C:H2'	1:AA:2551:C:C6	2.55	0.41
1:CA:2699:C:H2'	1:CA:2700:C:O4'	2.20	0.41
43:DJ:46:ARG:HG3	43:DJ:64:GLU:HB3	2.02	0.41
44:DK:18:ARG:O	44:DK:32:ILE:HA	2.21	0.41
4:CD:213:ARG:HD2	4:CD:213:ARG:HA	1.70	0.41
57:DZ:468:ARG:HB3	57:DZ:468:ARG:HE	1.59	0.41
20:AW:51:LEU:HA	20:AW:51:LEU:HD23	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1289:G:H4'	13:AP:7:ARG:NH2	2.36	0.41
4:CD:37:LEU:HD12	4:CD:62:TYR:HB2	2.03	0.41
22:AY:38:ILE:HD13	22:AY:66:PRO:HA	2.02	0.41
57:DZ:419:ALA:O	57:DZ:422:GLU:HB3	2.21	0.41
35:BB:150:SER:OG	35:BB:151:GLY:N	2.53	0.41
1:AA:275:C:H2'	1:AA:276:C:C6	2.56	0.41
1:CA:239:U:H2'	1:CA:240:G:O4'	2.21	0.41
1:AA:280:C:H2'	1:AA:281:G:H8	1.84	0.41
35:DB:84:GLU:OE1	35:DB:87:ARG:NH1	2.54	0.41
34:DA:995:C:H2'	34:DA:996:A:H8	1.86	0.41
34:BA:966:G:H21	42:BI:127:LYS:NZ	2.19	0.41
8:CH:69:ARG:HG3	8:CH:70:THR:N	2.34	0.41
56:DW:11:C:N4	56:DW:12:U:O4	2.54	0.41
26:A2:9:GLN:OE1	26:A2:56:GLN:HG2	2.21	0.41
34:BA:599:C:H5'	41:BH:96:GLY:HA2	2.02	0.41
53:DT:31:SER:O	53:DT:34:LYS:HB2	2.21	0.41
35:BB:221:LEU:HA	35:BB:221:LEU:HD22	1.84	0.41
1:AA:1075:A:O5'	1:AA:1075:A:H8	2.04	0.41
40:DG:29:LYS:HD3	40:DG:29:LYS:HA	1.90	0.41
48:BO:82:ILE:H	48:BO:82:ILE:HG13	1.75	0.41
49:DP:73:LEU:HD23	49:DP:73:LEU:HA	1.93	0.41
36:BC:120:VAL:HB	36:BC:198:VAL:HG11	2.03	0.41
36:BC:129:ALA:HB3	36:BC:132:ARG:HB2	2.03	0.41
1:AA:2385:G:H2'	1:AA:2386:C:C6	2.56	0.41
1:CA:1321:A:H2'	1:CA:1322:A:O4'	2.20	0.41
3:CC:11:LEU:CD1	3:CC:33:LEU:HA	2.50	0.41
46:DM:123:ALA:HB3	57:DZ:573:HIS:CG	2.56	0.41
1:CA:1332:G:N3	1:CA:1332:G:H2'	2.36	0.41
47:BN:26:ARG:HB2	47:BN:39:LEU:HD22	2.03	0.41
17:CT:41:ARG:HH22	34:DA:346:G:P	2.44	0.41
1:AA:1046:A:C6	1:AA:1201:A:C8	3.09	0.41
7:CG:121:ASN:HA	7:CG:122:PRO:HD3	1.75	0.41
7:CG:138:GLN:HB3	7:CG:153:ARG:O	2.21	0.41
1:CA:606:U:O3'	1:CA:607:U:H4'	2.21	0.41
22:AY:92:ASN:N	22:AY:93:GLY:HA2	2.36	0.41
57:BZ:172:ASP:OD2	57:BZ:173:THR:N	2.54	0.41
19:CV:25:LEU:HD23	19:CV:25:LEU:HA	1.67	0.41
6:CF:110:LEU:HD12	6:CF:110:LEU:HA	1.85	0.41
16:CS:30:ARG:HB2	16:CS:35:ILE:HD11	2.03	0.41
34:BA:953:G:H2'	34:BA:954:G:O4'	2.21	0.41
18:CU:63:VAL:HG13	63:CU:304:HOH:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:24:GLN:OE1	15:AR:36:THR:HG21	2.21	0.41
1:AA:2556:G:H2'	1:AA:2557:G:O4'	2.21	0.41
12:AO:70:LYS:C	12:AO:71:ARG:HG3	2.41	0.41
34:DA:942:G:H2'	34:DA:943:U:C6	2.55	0.41
23:CZ:156:LYS:HB3	23:CZ:156:LYS:HE2	1.83	0.41
41:BH:17:THR:HB	41:BH:78:GLN:OE1	2.21	0.41
1:AA:536:U:H5''	1:AA:537:G:OP2	2.21	0.41
1:AA:540:A:H2	1:AA:1306:G:N3	2.18	0.41
34:BA:731:G:H2'	34:BA:732:C:H6	1.86	0.41
4:AD:3:VAL:HG22	4:AD:18:VAL:O	2.21	0.41
34:DA:1401:G:H5''	34:DA:1402:C:OP2	2.21	0.41
34:DA:378:G:C6	34:DA:379:C:C4	3.08	0.41
34:BA:1122:U:H2'	34:BA:1123:A:O4'	2.21	0.41
24:A0:73:GLY:O	24:A0:74:ARG:C	2.60	0.41
34:BA:935:A:C2	34:BA:936:C:C2	3.09	0.41
34:DA:56:U:H2'	34:DA:57:G:H8	1.86	0.41
41:BH:41:ARG:HH22	41:BH:123:GLU:CD	2.24	0.41
34:BA:965:A:H5'	34:BA:969:A:O4'	2.20	0.41
10:AL:95:LYS:HG3	10:AL:135:GLY:O	2.21	0.41
13:CP:21:ARG:HD3	13:CP:21:ARG:HA	1.47	0.41
34:BA:314:C:O2'	34:BA:315:A:H5'	2.21	0.41
3:CC:60:ARG:NH2	3:CC:165:ARG:HH21	2.18	0.41
1:CA:2052:G:H21	5:CE:149:ARG:HA	1.85	0.41
2:AB:28:C:H2'	2:AB:29:A:O4'	2.21	0.41
1:CA:1526:G:C6	1:CA:1527:G:C2	3.09	0.41
24:A0:26:TYR:N	24:A0:29:GLN:OE1	2.40	0.41
39:BF:65:VAL:HG21	39:BF:67:MET:HE2	2.02	0.41
49:BP:8:ARG:HG2	49:BP:9:PHE:N	2.36	0.41
46:BM:92:HIS:CE1	46:BM:98:VAL:HG21	2.56	0.41
1:AA:153:C:OP2	25:A1:92:LYS:NZ	2.47	0.41
1:CA:1802:A:N1	1:CA:1822:G:H1'	2.36	0.41
1:CA:539:G:C6	1:CA:540:C:C4	3.08	0.41
25:C1:53:VAL:HG22	25:C1:74:VAL:HG13	2.03	0.41
1:CA:2262:U:P	24:C0:19:LYS:HZ2	2.44	0.41
57:DZ:-27:THR:O	57:DZ:-26:GLU:C	2.59	0.41
1:AA:955:A:C6	1:AA:958:C:C2	3.09	0.41
1:CA:1926:U:O2	1:CA:1928:A:C8	2.74	0.41
57:DZ:293:THR:HA	57:DZ:397:VAL:HG12	2.02	0.41
10:AL:119:ASP:HB3	10:AL:122:ALA:HB3	2.02	0.41
8:AH:158:HIS:O	8:AH:160:LYS:N	2.54	0.41
1:CA:1394:U:H2'	1:CA:1395:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:132:VAL:HG22	6:AF:132:VAL:O	2.21	0.41
20:CW:82:LEU:HD23	20:CW:82:LEU:HA	1.93	0.41
1:AA:1431:G:H4'	1:AA:1432:C:OP1	2.21	0.41
8:CH:136:ILE:HG13	8:CH:136:ILE:H	1.43	0.41
1:CA:780:G:C2	1:CA:782:A:C2	3.09	0.41
56:BW:63:G:H2'	56:BW:64:A:O4'	2.21	0.41
1:CA:475:U:H1'	1:CA:509:C:C2	2.56	0.41
1:AA:2181:G:H2'	1:AA:2182:G:H8	1.86	0.41
1:CA:1270:C:O2'	1:CA:1648:C:OP2	2.28	0.40
1:CA:2809:A:N1	1:CA:2892:A:C4	2.89	0.40
1:AA:2063:U:H2'	1:AA:2064:A:O5'	2.21	0.40
34:BA:374:A:C6	34:BA:375:U:C4	3.09	0.40
49:BP:38:TYR:HB2	49:BP:39:TYR:H	1.71	0.40
34:DA:1004:A:N6	34:DA:1037:C:C2	2.89	0.40
3:AC:20:VAL:O	3:AC:21:TYR:CB	2.58	0.40
34:DA:1315:U:H2'	34:DA:1316:G:O4'	2.21	0.40
39:BF:53:ALA:O	39:BF:54:LYS:HB2	2.21	0.40
1:CA:2040:C:H2'	1:CA:2041:U:O4'	2.20	0.40
37:DD:155:LEU:HD23	37:DD:156:GLU:H	1.86	0.40
34:DA:373:A:C2	34:DA:482:A:C6	3.09	0.40
14:AQ:21:THR:HG21	14:AQ:101:ARG:CB	2.50	0.40
50:DQ:34:LYS:O	50:DQ:36:ILE:HG23	2.21	0.40
34:DA:1321:C:H5''	34:DA:1322:C:H2'	2.02	0.40
1:CA:848:G:C2	1:CA:849:A:C5	3.09	0.40
57:BZ:236:GLU:HA	57:BZ:237:PRO:HD3	1.89	0.40
50:BQ:22:LEU:HD12	50:BQ:23:VAL:N	2.36	0.40
7:AG:131:TYR:HB3	7:AG:159:VAL:CG1	2.51	0.40
34:DA:187:C:O2'	53:DT:89:ARG:NH2	2.54	0.40
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:NH1	2.35	0.40
34:BA:1311:G:N2	34:BA:1327:C:C2	2.89	0.40
32:A8:23:VAL:HG13	32:A8:47:LYS:HB3	2.02	0.40
34:DA:416:G:C6	34:DA:417:C:N3	2.89	0.40
1:CA:443:A:N7	6:CF:45:ARG:HG2	2.36	0.40
40:BG:40:ALA:O	40:BG:43:PHE:HB3	2.21	0.40
42:BI:112:LYS:HD2	42:BI:118:LYS:O	2.21	0.40
57:DZ:456:GLU:HB3	57:DZ:457:LEU:H	1.69	0.40
34:DA:168:G:O2'	34:DA:169:C:H5'	2.20	0.40
2:CB:31:C:H2'	2:CB:32:C:H5'	2.03	0.40
17:CT:80:SER:HA	17:CT:81:PRO:HD2	1.83	0.40
2:AB:49:C:C2'	2:AB:50:G:H5'	2.50	0.40
34:BA:1112:C:N3	36:BC:178:LEU:HB2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AV:91:TYR:C	19:AV:91:TYR:CD1	2.94	0.40
43:DJ:5:ARG:HA	43:DJ:73:ASP:OD1	2.21	0.40
34:BA:865:A:H2'	34:BA:866:C:O4'	2.21	0.40
56:DW:66:U:C4	56:DW:67:C:C4	3.09	0.40
48:BO:84:LYS:O	48:BO:84:LYS:HD3	2.20	0.40
36:DC:12:LEU:HD23	36:DC:12:LEU:HA	1.97	0.40
42:DI:127:LYS:HE3	56:DW:34:G:OP2	2.21	0.40
57:DZ:350:GLU:OE2	57:DZ:383:THR:OG1	2.24	0.40
57:DZ:-29:LEU:HB3	57:DZ:-27:THR:HG23	2.04	0.40
32:A8:31:HIS:O	32:A8:32:LEU:HB2	2.19	0.40
2:AB:37:C:C5	2:AB:38:C:C5	3.08	0.40
57:DZ:356:LEU:HD23	57:DZ:358:MET:HE1	2.03	0.40
5:CE:126:PRO:HB2	5:CE:131:ALA:HB2	2.03	0.40
1:CA:458:G:C8	31:C7:37:LYS:HG2	2.56	0.40
34:BA:105:G:C6	34:BA:106:C:C4	3.09	0.40
35:DB:30:ARG:HG3	35:DB:31:TYR:CD1	2.56	0.40
34:BA:422:C:H2'	34:BA:422:C:OP2	2.21	0.40
28:C4:15:ILE:HD13	28:C4:21:VAL:HG22	2.02	0.40
41:DH:81:HIS:HB2	41:DH:138:TRP:OXT	2.20	0.40
1:CA:783:A:C5	1:CA:785:G:H1'	2.56	0.40
43:DJ:76:ASN:HA	43:DJ:77:PRO:HD2	1.90	0.40
21:CX:31:HIS:HA	21:CX:32:PRO:HD3	1.76	0.40
1:AA:451:G:N7	63:AA:4827:HOH:O	2.37	0.40
34:BA:693:G:C6	34:BA:694:A:C6	3.10	0.40
1:AA:1405:A:N3	1:AA:1405:A:O4'	2.53	0.40
34:BA:537:G:H2'	34:BA:538:G:H8	1.87	0.40
1:AA:2299:A:N3	1:AA:2301:G:C8	2.89	0.40
1:AA:2145:G:O2'	3:AC:173:HIS:HB2	2.20	0.40
57:BZ:404:VAL:HG22	57:BZ:405:PRO:N	2.36	0.40
1:CA:607:U:OP1	6:CF:102:PRO:HA	2.22	0.40
1:AA:2154:U:C6	3:AC:6:LYS:HB3	2.56	0.40
1:AA:1104:G:N2	10:AL:126:MET:SD	2.94	0.40
16:CS:34:HIS:HB3	16:CS:35:ILE:H	1.65	0.40
1:CA:997:G:H2'	1:CA:998:C:H6	1.85	0.40
1:AA:2152:U:H1'	1:AA:2180:A:N1	2.37	0.40
38:BE:136:MET:O	38:BE:139:LEU:N	2.54	0.40
34:DA:1198:G:O2'	43:DJ:55:LYS:HE2	2.21	0.40
1:CA:2646:C:H2'	1:CA:2647:U:O4'	2.21	0.40
57:BZ:-7:GLU:C	57:BZ:-6:ARG:HH11	2.25	0.40
22:CY:67:LEU:CD2	22:CY:71:LYS:HD3	2.51	0.40
45:BL:84:LEU:HD23	45:BL:105:TYR:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:637:ARG:HB3	57:DZ:638:GLY:H	1.71	0.40
1:CA:1234:U:H2'	1:CA:1235:G:O4'	2.21	0.40
5:AE:85:ASN:HA	5:AE:86:PRO:HD2	1.88	0.40
36:BC:155:GLY:O	36:BC:157:ILE:N	2.54	0.40
34:DA:641:U:H1'	34:DA:642:A:N7	2.36	0.40
38:BE:132:ALA:C	38:BE:134:ALA:N	2.75	0.40
47:BN:37:PHE:CE1	47:BN:53:LEU:HD13	2.56	0.40
1:CA:953:A:OP2	14:CQ:16:ARG:NE	2.54	0.40
34:DA:90:U:H2'	34:DA:91:C:H6	1.87	0.40
21:AX:35:THR:HG22	21:AX:38:GLU:HB3	2.03	0.40
1:AA:2701:U:OP2	1:AA:2732:G:N2	2.46	0.40
21:AX:60:ARG:NH1	31:A7:47:ARG:NH2	2.69	0.40
43:BJ:30:SER:O	43:BJ:81:THR:HG21	2.21	0.40
1:AA:2444:A:OP1	63:AA:4190:HOH:O	2.21	0.40
57:BZ:-29:LEU:HB2	57:BZ:-27:THR:HG23	2.01	0.40
4:AD:218:ARG:HD3	4:AD:218:ARG:HH11	1.77	0.40
40:BG:78:ARG:HH21	40:BG:156:TRP:HB3	1.86	0.40
15:AR:46:GLY:HA2	15:AR:49:ASP:HB2	2.04	0.40
34:DA:1323:G:H2'	34:DA:1324:A:C8	2.57	0.40
56:DY:28:G:H2'	56:DY:29:G:H8	1.85	0.40
14:AQ:114:ALA:O	14:AQ:118:LEU:HG	2.20	0.40
35:BB:25:ASN:HA	35:BB:26:PRO:HD3	1.87	0.40
41:BH:114:THR:OG1	41:BH:117:GLY:O	2.32	0.40
50:BQ:76:LEU:HD11	50:BQ:78:GLU:O	2.21	0.40
4:AD:44:ASN:OD1	4:AD:46:GLN:HB2	2.22	0.40
1:CA:56:A:H2'	1:CA:57:C:O4'	2.21	0.40
42:DI:65:VAL:HG21	42:DI:73:GLN:HB3	2.03	0.40
12:AO:26:LYS:NZ	12:AO:37:ASP:OD2	2.49	0.40
17:CT:105:LEU:HA	17:CT:105:LEU:HD23	1.66	0.40
6:AF:68:LYS:HE3	6:AF:68:LYS:HB3	1.87	0.40
57:DZ:435:ASP:C	57:DZ:437:THR:H	2.25	0.40
1:AA:874:U:H6	63:AA:4779:HOH:O	2.02	0.40
49:BP:40:ASP:OD2	49:BP:44:THR:OG1	2.25	0.40
13:AP:112:LEU:HA	13:AP:112:LEU:HD23	1.87	0.40
35:BB:111:ARG:O	35:BB:114:ARG:HB3	2.21	0.40
38:DE:33:VAL:HG22	38:DE:34:VAL:H	1.86	0.40
1:CA:11:G:C2'	1:CA:12:U:H5"	2.45	0.40
34:DA:101:A:C5	34:DA:102:G:N7	2.89	0.40
18:CU:65:ILE:CD1	18:CU:95:LEU:HB3	2.51	0.40
57:BZ:399:LEU:HD12	57:BZ:399:LEU:HA	1.80	0.40
57:BZ:573:HIS:HD2	57:BZ:576:ASP:H	1.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:171:GLY:O	37:DD:173:TRP:N	2.54	0.40
38:DE:80:ILE:HD12	38:DE:80:ILE:HA	1.93	0.40
1:AA:592:U:C4	1:AA:593:G:C6	3.10	0.40
34:BA:613:C:H42	34:BA:627:G:H1	1.69	0.40
1:AA:859:C:H1'	1:AA:1296:G:C2	2.56	0.40
57:BZ:239:GLU:O	57:BZ:242:LEU:N	2.48	0.40
28:A4:10:VAL:CG2	28:A4:29:PRO:HG3	2.48	0.40
38:DE:139:LEU:HA	38:DE:142:LEU:HD12	2.02	0.40
34:BA:938:A:C5	34:BA:939:G:C8	3.10	0.40
24:A0:14:ARG:O	24:A0:15:ASP:HB2	2.21	0.40
56:BY:49:C:H2'	56:BY:50:U:H6	1.86	0.40
10:AL:53:VAL:HA	10:AL:54:PRO:HD3	1.75	0.40
1:CA:986:C:H2'	1:CA:987:G:H5'	2.02	0.40
45:BL:102:ARG:H	45:BL:102:ARG:HG2	1.65	0.40
1:CA:2305:A:N3	7:CG:136:ARG:HA	2.37	0.40
14:CQ:69:PHE:CD1	14:CQ:70:PRO:HD2	2.56	0.40
2:CB:54:G:C4	2:CB:55:U:C5	3.10	0.40
1:CA:2719:G:O2'	1:CA:2720:U:H5'	2.22	0.40
37:DD:58:LEU:O	37:DD:61:LYS:HB3	2.21	0.40
1:CA:2029:G:H2'	1:CA:2031:A:OP1	2.21	0.40
34:DA:460:G:C6	34:DA:470:C:H5''	2.57	0.40
23:AZ:98:MET:CE	23:AZ:133:ILE:HD12	2.51	0.40
12:CO:25:LEU:O	12:CO:26:LYS:HB2	2.21	0.40
1:AA:326:C:H2'	1:AA:327:U:C6	2.55	0.40
1:CA:1721:G:H5''	1:CA:1721:G:N3	2.36	0.40
21:AX:35:THR:HG22	21:AX:38:GLU:HB2	2.02	0.40
1:CA:2274:A:C5	1:CA:2276:G:C8	3.09	0.40
1:AA:2653:G:C8	1:AA:2653:G:H5''	2.56	0.40
1:AA:509:A:C8	1:AA:510:C:C5	3.10	0.40
23:CZ:152:ALA:HB1	23:CZ:163:LEU:HD21	2.03	0.40
1:AA:605:G:H2'	1:AA:606:G:C8	2.56	0.40
57:BZ:-27:THR:O	57:BZ:-26:GLU:C	2.60	0.40
19:AV:94:LEU:HA	19:AV:94:LEU:HD23	1.82	0.40
1:AA:2418:U:C6	1:AA:2418:U:H5'	2.56	0.40
35:DB:77:ALA:HB2	35:DB:211:ILE:HD13	2.03	0.40
1:CA:2884:U:C2	29:C5:52:TYR:CE1	3.08	0.40
34:DA:1248:A:H2'	34:DA:1249:C:C6	2.57	0.40
11:CN:57:ALA:HB3	11:CN:124:ALA:HA	2.03	0.40
1:CA:467:G:OP1	31:C7:33:ARG:NH1	2.55	0.40
50:DQ:37:LYS:O	50:DQ:38:ARG:HD3	2.21	0.40
24:A0:2:ALA:N	63:A0:201:HOH:O	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BM:10:PRO:HG3	46:BM:21:TYR:CD1	2.57	0.40
5:AE:21:VAL:O	5:AE:23:VAL:HG13	2.21	0.40
1:CA:2228:G:C5	1:CA:2229:C:C4	3.09	0.40
43:BJ:75:ILE:O	43:BJ:77:PRO:HD3	2.21	0.40
1:AA:1485:A:C2	1:AA:1600:A:C5	3.09	0.40
35:BB:121:LEU:HA	35:BB:121:LEU:HD13	1.90	0.40
48:BO:31:LEU:HD23	48:BO:31:LEU:HA	1.53	0.40
37:BD:200:GLU:HG2	37:BD:200:GLU:H	1.73	0.40
53:BT:88:VAL:O	53:BT:92:LEU:HG	2.22	0.40
18:CU:80:ILE:HA	18:CU:80:ILE:HD13	1.94	0.40
46:DM:70:LEU:HA	46:DM:70:LEU:HD23	1.89	0.40
51:DR:73:ALA:HB3	51:DR:79:LEU:HD12	2.03	0.40
57:DZ:25:LYS:HZ3	57:DZ:25:LYS:HG3	1.75	0.40
35:BB:15:VAL:O	35:BB:16:HIS:ND1	2.54	0.40
57:DZ:174:PHE:HD2	57:DZ:267:LYS:HD3	1.86	0.40
34:DA:192:U:H4'	53:DT:57:ARG:HD3	2.04	0.40
38:BE:122:GLU:HB2	38:BE:126:ARG:HD3	2.03	0.40
37:BD:121:VAL:HA	37:BD:126:ILE:HG13	2.02	0.40
37:BD:173:TRP:CD1	37:BD:173:TRP:N	2.89	0.40
1:CA:1653:G:OP1	1:CA:2822:G:N1	2.52	0.40
47:BN:23:ARG:NH1	47:BN:30:ALA:HB2	2.36	0.40
45:DL:75:HIS:HD2	45:DL:77:LEU:N	2.18	0.40
34:DA:1240:U:OP2	40:DG:115:ARG:HA	2.21	0.40
57:BZ:577:SER:OG	57:BZ:578:SER:N	2.55	0.40
29:A5:16:ARG:NH1	29:A5:16:ARG:HG2	2.29	0.40
1:AA:2227:G:O2'	1:AA:2228:G:OP1	2.35	0.40
1:AA:593:G:H2'	1:AA:2052:A:N7	2.36	0.40
23:AZ:110:GLY:CA	23:AZ:145:GLU:HA	2.51	0.40
56:DW:19:G:H5''	56:DW:60:U:O4	2.21	0.40
34:DA:474:G:H2'	34:DA:475:G:C8	2.55	0.40
1:CA:886:C:H1'	1:CA:890:A:H61	1.85	0.40
56:BY:5:G:H1'	56:BY:69:G:N2	2.36	0.40
57:DZ:114:VAL:HB	57:DZ:152:THR:HB	2.04	0.40
34:DA:1060:C:C5'	43:DJ:51:ARG:HB3	2.50	0.40
57:DZ:511:LYS:HB2	57:DZ:511:LYS:HE3	1.85	0.40
34:DA:692:U:O2'	34:DA:694:A:N7	2.47	0.40
34:BA:736:C:C2	34:BA:737:A:C8	3.10	0.40
11:CN:128:HIS:HA	11:CN:129:PRO:HD3	1.69	0.40
34:BA:185:A:C2	34:BA:193:C:C2	3.09	0.40
1:AA:709:G:H5''	13:AP:16:ARG:HG3	2.03	0.40
34:DA:502:G:N2	34:DA:544:G:N3	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:543:C:C2	34:DA:544:G:C8	3.09	0.40
34:DA:543:C:O2'	34:DA:544:G:H5'	2.21	0.40
2:CB:15:A:H1'	2:CB:110:G:N7	2.36	0.40
34:DA:1030:C:H42	34:DA:1031:G:H1	1.68	0.40
5:CE:112:GLY:O	5:CE:159:HIS:HA	2.21	0.40
56:BY:44:G:H8	56:BY:44:G:OP2	2.04	0.40
34:DA:491:G:C4	34:DA:492:G:C8	3.09	0.40
56:DW:63:G:H2'	56:DW:64:A:H8	1.86	0.40
6:AF:11:VAL:HB	6:AF:18:ARG:HB3	2.03	0.40
34:BA:865:A:H2	34:BA:918:A:H4'	1.86	0.40
35:BB:155:LEU:HD11	35:BB:159:PRO:HG3	2.04	0.40
5:CE:116:VAL:HG13	5:CE:122:PHE:CB	2.51	0.40
51:DR:29:PHE:CD2	51:DR:39:VAL:HG11	2.57	0.40
25:A1:19:GLN:O	25:A1:35:THR:HG22	2.21	0.40
6:CF:170:LEU:HA	6:CF:170:LEU:HD12	1.87	0.40
27:C3:6:VAL:HG13	27:C3:56:VAL:HG13	2.03	0.40
1:CA:2815:C:H2'	1:CA:2816:C:H6	1.87	0.40
40:DG:20:ASP:OD2	40:DG:23:VAL:HG23	2.22	0.40
1:CA:701:G:N2	1:CA:732:C:C2	2.89	0.40
1:CA:2744:G:N2	8:CH:143:GLN:OE1	2.53	0.40
1:CA:1171:G:N2	1:CA:1179:C:C2	2.84	0.40
50:BQ:60:ILE:HG12	50:BQ:61:GLU:N	2.36	0.40
1:CA:303:U:H2'	1:CA:304:G:O4'	2.20	0.40
1:AA:125:A:H5''	1:AA:126:C:C6	2.57	0.40
26:A2:48:HIS:O	26:A2:52:ASP:HB2	2.21	0.40
1:CA:2311:A:H1'	7:CG:88:ILE:HD12	2.03	0.40
50:DQ:11:VAL:HB	50:DQ:88:TYR:CE2	2.57	0.40
1:AA:504:A:C6	1:AA:506:A:C6	3.09	0.40
1:AA:1053:C:OP1	11:AN:35:ARG:NH1	2.53	0.40
56:BW:37:MIA:H3'	56:BW:38:A:H8	1.86	0.40
1:CA:2233:U:H2'	1:CA:2234:G:C8	2.57	0.40
42:BI:95:LYS:O	42:BI:96:LEU:HD23	2.21	0.40
48:BO:5:LYS:H	48:BO:5:LYS:HD2	1.85	0.40
50:DQ:13:ASP:OD1	50:DQ:13:ASP:N	2.54	0.40
18:AU:3:ARG:HD3	18:AU:3:ARG:HH11	1.61	0.40
18:CU:20:LEU:HD23	18:CU:20:LEU:HA	1.81	0.40
32:C8:60:LEU:HA	32:C8:60:LEU:HD23	1.92	0.40
1:AA:348:A:H2'	1:AA:349:G:O5'	2.21	0.40
1:CA:2521:C:H2'	1:CA:2522:U:O4'	2.21	0.40
48:BO:41:GLU:HA	48:BO:44:LYS:HD2	2.03	0.40
1:CA:2079:U:H2'	1:CA:2080:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:804:U:H2'	1:AA:805:C:O4'	2.21	0.40
1:CA:2120:G:H22	3:CC:169:THR:CG2	2.35	0.40
56:DY:36:A:H2'	56:DY:37:MIA:O4'	2.22	0.40
57:DZ:126:GLU:OE2	57:DZ:132:ARG:NH2	2.54	0.40
1:CA:2046:G:H2'	1:CA:2047:U:H6	1.86	0.40
49:BP:39:TYR:CD2	49:BP:41:PRO:HD3	2.57	0.40
3:AC:54:ARG:CZ	3:AC:55:SER:O	2.69	0.40
46:DM:20:THR:HA	46:DM:25:ILE:O	2.22	0.40
1:CA:143(A):C:H4'	21:CX:38:GLU:OE2	2.22	0.40
4:CD:68:LYS:O	4:CD:69:ARG:HB2	2.21	0.40
1:CA:2107:C:N4	1:CA:2182:G:H1	2.11	0.40
10:AL:38:VAL:O	10:AL:42:ASN:HB2	2.21	0.40
3:AC:6:LYS:CA	3:AC:9:ARG:NH1	2.85	0.40
1:CA:2725:A:C4	1:CA:2727:G:C8	3.10	0.40
1:AA:1137:G:N2	1:AA:1147:U:H1'	2.37	0.40
16:CS:3:ARG:HB2	16:CS:3:ARG:CZ	2.51	0.40
33:C9:9:ARG:NH1	33:C9:16:VAL:HG23	2.36	0.40
35:BB:193:ASP:HB3	35:BB:196:LEU:HB2	2.02	0.40
11:AN:46:VAL:CG2	11:AN:48:MET:HG2	2.51	0.40
42:DI:16:ARG:HB2	42:DI:64:THR:CG2	2.50	0.40
1:CA:2862:G:O2'	1:CA:2863:C:H5'	2.22	0.40
34:BA:814:A:H2'	34:BA:816:A:C5'	2.49	0.40
36:BC:20:SER:O	47:BN:54:PRO:HB3	2.20	0.40
34:DA:694:A:H2'	34:DA:695:A:O4'	2.21	0.40
34:BA:1005:A:H5''	34:BA:1006:C:OP2	2.21	0.40
5:CE:24:THR:HG21	5:CE:187:ALA:HA	2.03	0.40
2:CB:16:G:H2'	2:CB:17:C:C6	2.57	0.40
10:AL:78:ILE:HD11	10:AL:136:VAL:HG11	2.04	0.40
34:DA:1401:G:OP2	55:DV:18:C:C5	2.75	0.40
26:C2:9:GLN:OE1	26:C2:56:GLN:HG2	2.21	0.40
34:BA:143:A:H2	34:BA:220:G:H1	1.69	0.40
38:DE:129:ILE:O	38:DE:132:ALA:HB3	2.21	0.40
1:CA:2556:C:H2'	1:CA:2557:G:O4'	2.21	0.40
57:DZ:455:GLY:O	57:DZ:458:HIS:HB3	2.21	0.40
23:CZ:99:TYR:HB3	23:CZ:123:ASP:OD1	2.22	0.40
1:AA:2865:C:O2'	1:AA:2866:C:H5'	2.21	0.40
1:AA:2690:C:H2'	1:AA:2691:A:O4'	2.21	0.40
46:DM:3:ARG:HG2	46:DM:8:GLU:OE1	2.21	0.40
2:AB:33:G:N2	2:AB:50:G:C4	2.89	0.40
15:CR:9:LYS:HA	15:CR:17:ARG:NE	2.37	0.40
1:CA:1568:G:H5'	4:CD:59:LYS:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1468:A:H8	34:BA:1468:A:O5'	2.04	0.40
8:CH:158:HIS:O	8:CH:160:LYS:N	2.55	0.40
33:A9:3:VAL:HA	33:A9:35:ARG:O	2.21	0.40
34:BA:697:U:C5	34:BA:698:G:C8	3.10	0.40
13:CP:52:GLU:OE1	13:CP:55:ARG:NH1	2.47	0.40
34:DA:575:G:H4'	34:DA:576:G:O5'	2.21	0.40
34:DA:1077:G:N2	34:DA:1081:G:C4	2.90	0.40
34:BA:416:G:H2'	34:BA:417:C:O4'	2.22	0.40
49:BP:8:ARG:HD3	49:BP:8:ARG:HH11	1.74	0.40
1:AA:505:A:H4'	1:AA:506:A:OP1	2.22	0.40
38:BE:127:ASN:HA	38:BE:128:PRO:HD3	1.87	0.40
35:BB:126:GLU:HB3	35:BB:127:ILE:H	1.65	0.40
38:BE:82:VAL:HB	38:BE:138:ALA:HB2	2.04	0.40
7:AG:133:LEU:HD12	7:AG:135:LEU:CD1	2.52	0.40
1:AA:761:U:O2'	1:AA:763:A:N7	2.38	0.40
2:AB:78:A:C2	2:AB:100:A:C4	3.09	0.40
25:A1:7:ILE:HD12	25:A1:98:LEU:HD11	2.03	0.40
1:CA:927:G:H2'	1:CA:928:G:O4'	2.21	0.40
34:DA:552:U:O3'	45:DL:87:GLY:HA3	2.21	0.40
10:AL:117:THR:OG1	10:AL:118:THR:N	2.55	0.40
1:AA:1882:U:H2'	1:AA:1883:C:O4'	2.21	0.40
26:A2:63:VAL:O	26:A2:66:GLU:HB3	2.22	0.40
44:DK:38:ASN:HA	44:DK:39:PRO:HD2	1.88	0.40
57:BZ:681:LYS:HB3	57:BZ:681:LYS:HE3	1.57	0.40
19:AV:49:THR:O	19:AV:49:THR:HG22	2.20	0.40
23:CZ:78:LYS:HB3	23:CZ:78:LYS:NZ	2.36	0.40
24:C0:48:GLY:N	24:C0:79:VAL:O	2.54	0.40
37:BD:70:ILE:HG13	37:BD:100:ARG:NH2	2.36	0.40
1:CA:89:G:H3'	1:CA:90:U:H5''	2.04	0.40
1:AA:1266:C:H2'	1:AA:1267:C:H6	1.87	0.40
1:AA:795:G:C8	20:AW:89:ALA:HB1	2.56	0.40
46:BM:79:LYS:NZ	46:BM:83:ASP:OD1	2.50	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

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

of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	1
3	CC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	1
4	AD	273/276 (99%)	249 (91%)	20 (7%)	4 (2%)	13	40
4	CD	273/276 (99%)	242 (89%)	26 (10%)	5 (2%)	11	34
5	AE	202/206 (98%)	191 (95%)	9 (4%)	2 (1%)	19	52
5	CE	202/206 (98%)	174 (86%)	19 (9%)	9 (4%)	3	10
6	AF	201/210 (96%)	187 (93%)	11 (6%)	3 (2%)	13	40
6	CF	201/210 (96%)	186 (92%)	12 (6%)	3 (2%)	13	40
7	AG	179/182 (98%)	143 (80%)	25 (14%)	11 (6%)	2	5
7	CG	179/182 (98%)	148 (83%)	20 (11%)	11 (6%)	2	5
8	AH	172/180 (96%)	150 (87%)	20 (12%)	2 (1%)	16	47
8	CH	172/180 (96%)	148 (86%)	19 (11%)	5 (3%)	6	19
9	AK	128/173 (74%)	68 (53%)	33 (26%)	27 (21%)	0	0
9	CK	128/173 (74%)	69 (54%)	24 (19%)	35 (27%)	0	0
10	AL	137/147 (93%)	105 (77%)	23 (17%)	9 (7%)	1	4
10	CL	137/147 (93%)	95 (69%)	33 (24%)	9 (7%)	1	4
11	AN	138/140 (99%)	133 (96%)	4 (3%)	1 (1%)	26	62
11	CN	138/140 (99%)	125 (91%)	11 (8%)	2 (1%)	14	42
12	AO	120/122 (98%)	114 (95%)	4 (3%)	2 (2%)	11	36
12	CO	120/122 (98%)	105 (88%)	12 (10%)	3 (2%)	7	24
13	AP	147/150 (98%)	132 (90%)	13 (9%)	2 (1%)	14	42
13	CP	147/150 (98%)	128 (87%)	16 (11%)	3 (2%)	9	30
14	AQ	139/141 (99%)	124 (89%)	13 (9%)	2 (1%)	14	42
14	CQ	139/141 (99%)	121 (87%)	15 (11%)	3 (2%)	8	28
15	AR	116/118 (98%)	100 (86%)	13 (11%)	3 (3%)	7	22
15	CR	116/118 (98%)	92 (79%)	16 (14%)	8 (7%)	1	3
16	AS	108/112 (96%)	92 (85%)	12 (11%)	4 (4%)	4	14
16	CS	108/112 (96%)	86 (80%)	17 (16%)	5 (5%)	3	9
17	AT	129/146 (88%)	118 (92%)	10 (8%)	1 (1%)	24	58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
17	CT	129/146 (88%)	109 (84%)	15 (12%)	5 (4%)	4	12
18	AU	114/118 (97%)	111 (97%)	3 (3%)	0	100	100
18	CU	114/118 (97%)	103 (90%)	10 (9%)	1 (1%)	21	55
19	AV	99/101 (98%)	92 (93%)	5 (5%)	2 (2%)	9	30
19	CV	99/101 (98%)	87 (88%)	9 (9%)	3 (3%)	5	18
20	AW	110/113 (97%)	106 (96%)	4 (4%)	0	100	100
20	CW	110/113 (97%)	100 (91%)	10 (9%)	0	100	100
21	AX	93/96 (97%)	88 (95%)	5 (5%)	0	100	100
21	CX	93/96 (97%)	80 (86%)	11 (12%)	2 (2%)	8	28
22	AY	105/110 (96%)	91 (87%)	11 (10%)	3 (3%)	6	19
22	CY	105/110 (96%)	90 (86%)	13 (12%)	2 (2%)	10	32
23	AZ	183/206 (89%)	146 (80%)	24 (13%)	13 (7%)	1	3
23	CZ	183/206 (89%)	140 (76%)	31 (17%)	12 (7%)	1	4
24	A0	81/85 (95%)	72 (89%)	8 (10%)	1 (1%)	16	47
24	C0	81/85 (95%)	70 (86%)	11 (14%)	0	100	100
25	A1	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	9	29
25	C1	95/98 (97%)	87 (92%)	4 (4%)	4 (4%)	3	11
26	A2	68/72 (94%)	62 (91%)	5 (7%)	1 (2%)	13	40
26	C2	68/72 (94%)	63 (93%)	4 (6%)	1 (2%)	13	40
27	A3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
27	C3	57/60 (95%)	52 (91%)	5 (9%)	0	100	100
28	A4	67/71 (94%)	41 (61%)	19 (28%)	7 (10%)	1	1
28	C4	67/71 (94%)	53 (79%)	11 (16%)	3 (4%)	3	10
29	A5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
29	C5	57/60 (95%)	51 (90%)	5 (9%)	1 (2%)	11	34
30	A6	51/54 (94%)	48 (94%)	2 (4%)	1 (2%)	9	30
30	C6	51/54 (94%)	46 (90%)	4 (8%)	1 (2%)	9	30
31	A7	46/49 (94%)	44 (96%)	2 (4%)	0	100	100
31	C7	46/49 (94%)	43 (94%)	1 (2%)	2 (4%)	3	10
32	A8	62/65 (95%)	60 (97%)	2 (3%)	0	100	100
32	C8	62/65 (95%)	59 (95%)	2 (3%)	1 (2%)	12	38

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
33	A9	35/37 (95%)	35 (100%)	0	0	100	100
33	C9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
35	BB	229/256 (90%)	176 (77%)	42 (18%)	11 (5%)	3	9
35	DB	229/256 (90%)	177 (77%)	37 (16%)	15 (7%)	1	4
36	BC	204/239 (85%)	169 (83%)	28 (14%)	7 (3%)	5	16
36	DC	204/239 (85%)	175 (86%)	26 (13%)	3 (2%)	13	40
37	BD	206/209 (99%)	154 (75%)	34 (16%)	18 (9%)	1	2
37	DD	206/209 (99%)	161 (78%)	31 (15%)	14 (7%)	1	4
38	BE	146/162 (90%)	111 (76%)	26 (18%)	9 (6%)	2	5
38	DE	146/162 (90%)	122 (84%)	21 (14%)	3 (2%)	9	29
39	BF	98/101 (97%)	80 (82%)	15 (15%)	3 (3%)	5	17
39	DF	98/101 (97%)	82 (84%)	15 (15%)	1 (1%)	19	52
40	BG	153/156 (98%)	131 (86%)	17 (11%)	5 (3%)	5	16
40	DG	153/156 (98%)	133 (87%)	14 (9%)	6 (4%)	4	12
41	BH	135/138 (98%)	111 (82%)	18 (13%)	6 (4%)	3	10
41	DH	135/138 (98%)	122 (90%)	13 (10%)	0	100	100
42	BI	125/128 (98%)	104 (83%)	16 (13%)	5 (4%)	4	12
42	DI	125/128 (98%)	104 (83%)	18 (14%)	3 (2%)	7	25
43	BJ	95/105 (90%)	80 (84%)	12 (13%)	3 (3%)	5	17
43	DJ	94/105 (90%)	76 (81%)	9 (10%)	9 (10%)	1	1
44	BK	112/129 (87%)	96 (86%)	12 (11%)	4 (4%)	4	14
44	DK	112/129 (87%)	98 (88%)	11 (10%)	3 (3%)	6	21
45	BL	120/132 (91%)	111 (92%)	7 (6%)	2 (2%)	11	36
45	DL	120/132 (91%)	103 (86%)	13 (11%)	4 (3%)	5	16
46	BM	115/126 (91%)	89 (77%)	23 (20%)	3 (3%)	7	22
46	DM	120/126 (95%)	100 (83%)	12 (10%)	8 (7%)	1	4
47	BN	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	5	16
47	DN	58/61 (95%)	53 (91%)	5 (9%)	0	100	100
48	BO	86/89 (97%)	72 (84%)	8 (9%)	6 (7%)	1	3
48	DO	86/89 (97%)	75 (87%)	8 (9%)	3 (4%)	4	15
49	BP	80/88 (91%)	52 (65%)	19 (24%)	9 (11%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	DP	80/88 (91%)	65 (81%)	12 (15%)	3 (4%)	4	13
50	BQ	97/105 (92%)	82 (84%)	9 (9%)	6 (6%)	2	5
50	DQ	97/105 (92%)	87 (90%)	7 (7%)	3 (3%)	5	17
51	BR	66/88 (75%)	60 (91%)	6 (9%)	0	100	100
51	DR	66/88 (75%)	57 (86%)	7 (11%)	2 (3%)	5	18
52	BS	82/93 (88%)	66 (80%)	14 (17%)	2 (2%)	7	25
52	DS	81/93 (87%)	68 (84%)	8 (10%)	5 (6%)	2	5
53	BT	94/106 (89%)	77 (82%)	10 (11%)	7 (7%)	1	3
53	DT	94/106 (89%)	81 (86%)	10 (11%)	3 (3%)	5	17
54	BU	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
54	DU	21/27 (78%)	19 (90%)	1 (5%)	1 (5%)	3	9
57	BZ	726/758 (96%)	569 (78%)	106 (15%)	51 (7%)	1	3
57	DZ	726/758 (96%)	554 (76%)	121 (17%)	51 (7%)	1	3
All	All	13389/14444 (93%)	11230 (84%)	1582 (12%)	577 (4%)	3	10

All (577) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	42	VAL
3	AC	47	LYS
3	AC	68	GLY
3	AC	180	SER
3	AC	181	PHE
4	AD	275	LYS
7	AG	43	LEU
7	AG	47	LYS
7	AG	51	ARG
7	AG	181	ARG
9	AK	29	TYR
9	AK	47	ASN
9	AK	71	LEU
9	AK	74	LEU
9	AK	77	PRO
9	AK	80	VAL
9	AK	91	LYS
9	AK	104	ILE
9	AK	105	PRO

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Mol	Chain	Res	Type
9	AK	107	VAL
9	AK	125	LEU
9	AK	128	LEU
10	AL	16	LYS
16	AS	59	LYS
23	AZ	136	PHE
23	AZ	154	ASP
23	AZ	158	PRO
23	AZ	177	PRO
23	AZ	178	GLU
23	AZ	183	LEU
23	AZ	184	ALA
28	A4	4	GLY
28	A4	34	GLU
28	A4	59	PHE
28	A4	62	ARG
30	A6	29	ASN
35	BB	10	LEU
35	BB	13	ALA
35	BB	17	PHE
35	BB	125	PRO
36	BC	65	ALA
37	BD	5	ILE
37	BD	31	CYS
37	BD	42	GLN
37	BD	101	LEU
37	BD	102	ASP
37	BD	178	VAL
37	BD	179	GLU
37	BD	207	TYR
38	BE	98	THR
38	BE	140	ARG
39	BF	42	GLU
40	BG	79	ARG
40	BG	80	VAL
42	BI	41	VAL
42	BI	54	ASP
43	BJ	31	GLY
44	BK	106	LYS
47	BN	4	LYS
48	BO	21	ASP
49	BP	66	PRO

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Mol	Chain	Res	Type
53	BT	10	LEU
53	BT	100	ILE
57	BZ	-57	GLU
57	BZ	-25	SER
57	BZ	-23	LEU
57	BZ	39	ILE
57	BZ	87	HIS
57	BZ	88	VAL
57	BZ	100	VAL
57	BZ	183	MET
57	BZ	239	GLU
57	BZ	240	GLU
57	BZ	324	ARG
57	BZ	402	ILE
57	BZ	404	VAL
57	BZ	446	THR
57	BZ	469	GLU
57	BZ	504	ARG
3	CC	42	VAL
3	CC	47	LYS
3	CC	68	GLY
3	CC	180	SER
3	CC	181	PHE
4	CD	239	ARG
5	CE	17	ASP
5	CE	74	PRO
6	CF	130	ALA
7	CG	14	GLU
7	CG	47	LYS
7	CG	126	ASP
7	CG	181	ARG
8	CH	126	PRO
9	CK	68	LEU
9	CK	69	PRO
9	CK	71	LEU
9	CK	74	LEU
9	CK	75	GLN
9	CK	77	PRO
9	CK	80	VAL
9	CK	85	ASP
9	CK	90	ALA
9	CK	93	LEU

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Mol	Chain	Res	Type
9	CK	107	VAL
9	CK	128	LEU
10	CL	115	LEU
12	CO	26	LYS
14	CQ	28	ALA
15	CR	14	SER
15	CR	58	GLY
15	CR	86	ARG
16	CS	57	LYS
17	CT	100	TYR
19	CV	79	VAL
23	CZ	154	ASP
23	CZ	158	PRO
23	CZ	161	VAL
23	CZ	183	LEU
23	CZ	184	ALA
25	C1	3	LYS
25	C1	26	ARG
25	C1	85	LEU
30	C6	44	ARG
35	DB	10	LEU
35	DB	17	PHE
35	DB	21	ARG
35	DB	24	TRP
35	DB	74	LYS
37	DD	136	PRO
37	DD	154	ASN
38	DE	140	ARG
39	DF	79	LEU
40	DG	80	VAL
42	DI	54	ASP
42	DI	107	ARG
43	DJ	56	HIS
43	DJ	75	ILE
46	DM	106	ASN
48	DO	19	PRO
50	DQ	74	LEU
51	DR	52	PRO
53	DT	100	ILE
57	DZ	-57	GLU
57	DZ	-25	SER
57	DZ	-12	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	DZ	89	ASP
57	DZ	92	ILE
57	DZ	160	ARG
57	DZ	183	MET
57	DZ	290	LYS
57	DZ	303	PRO
57	DZ	402	ILE
57	DZ	416	LYS
57	DZ	472	VAL
57	DZ	528	ALA
3	AC	53	ARG
3	AC	161	ARG
3	AC	179	ALA
6	AF	130	ALA
7	AG	21	ARG
7	AG	78	SER
7	AG	140	ILE
9	AK	49	ALA
9	AK	75	GLN
9	AK	119	ALA
9	AK	123	GLU
9	AK	132	ASP
10	AL	89	HIS
15	AR	42	LYS
17	AT	129	ARG
19	AV	79	VAL
22	AY	78	ALA
24	A0	74	ARG
35	BB	16	HIS
35	BB	37	ASN
35	BB	106	LYS
36	BC	66	VAL
36	BC	70	VAL
37	BD	172	PRO
38	BE	68	GLU
38	BE	85	GLY
38	BE	103	GLY
38	BE	133	TYR
38	BE	146	ALA
41	BH	41	ARG
41	BH	51	VAL
41	BH	104	ARG

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Mol	Chain	Res	Type
41	BH	133	LEU
42	BI	43	ALA
46	BM	101	GLN
47	BN	52	GLN
49	BP	78	GLY
50	BQ	34	LYS
50	BQ	49	GLU
50	BQ	87	LYS
53	BT	47	GLY
53	BT	96	GLY
57	BZ	-33	GLY
57	BZ	-8	ALA
57	BZ	-4	ALA
57	BZ	86	GLY
57	BZ	171	GLU
57	BZ	172	ASP
57	BZ	199	ILE
57	BZ	235	GLU
57	BZ	400	GLU
57	BZ	416	LYS
57	BZ	418	LYS
57	BZ	468	ARG
57	BZ	472	VAL
57	BZ	656	ALA
57	BZ	671	MET
3	CC	53	ARG
3	CC	161	ARG
3	CC	179	ALA
5	CE	69	LYS
6	CF	21	ALA
7	CG	51	ARG
7	CG	81	LYS
9	CK	33	PRO
9	CK	50	ARG
9	CK	53	VAL
9	CK	70	GLU
9	CK	73	GLY
9	CK	100	ASN
9	CK	104	ILE
9	CK	110	GLY
10	CL	13	PRO
10	CL	89	HIS

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Mol	Chain	Res	Type
11	CN	2	LYS
13	CP	140	ALA
14	CQ	3	MET
14	CQ	55	VAL
15	CR	4	LEU
15	CR	71	GLN
16	CS	82	ILE
17	CT	10	VAL
21	CX	94	GLY
23	CZ	60	GLU
23	CZ	64	GLY
23	CZ	182	LYS
28	C4	45	GLY
28	C4	46	GLN
29	C5	37	LYS
31	C7	46	VAL
35	DB	26	PRO
36	DC	26	LYS
37	DD	3	ARG
37	DD	56	VAL
37	DD	76	ARG
37	DD	110	PHE
37	DD	171	GLY
37	DD	182	LYS
38	DE	150	ARG
40	DG	79	ARG
40	DG	148	ASN
43	DJ	29	ARG
43	DJ	55	LYS
43	DJ	77	PRO
43	DJ	79	ARG
44	DK	49	GLY
46	DM	100	GLY
48	DO	88	ARG
49	DP	78	GLY
50	DQ	33	GLY
52	DS	25	LYS
57	DZ	-1	GLU
57	DZ	39	ILE
57	DZ	85	PRO
57	DZ	182	ARG
57	DZ	403	GLU

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Mol	Chain	Res	Type
57	DZ	446	THR
57	DZ	456	GLU
57	DZ	468	ARG
57	DZ	533	VAL
3	AC	30	VAL
3	AC	43	GLU
3	AC	52	PRO
3	AC	69	LEU
3	AC	184	GLU
3	AC	202	PRO
3	AC	209	PHE
4	AD	156	ALA
5	AE	52	LEU
6	AF	25	PRO
7	AG	74	LYS
7	AG	79	ASN
9	AK	30	GLN
9	AK	33	PRO
9	AK	93	LEU
9	AK	112	LEU
12	AO	5	GLN
19	AV	31	ALA
22	AY	54	LYS
23	AZ	159	PRO
23	AZ	161	VAL
25	A1	3	LYS
35	BB	19	HIS
37	BD	3	ARG
37	BD	109	GLY
37	BD	142	PRO
38	BE	132	ALA
41	BH	6	ILE
44	BK	49	GLY
44	BK	96	ARG
44	BK	100	ALA
45	BL	50	SER
49	BP	56	ALA
50	BQ	82	MET
50	BQ	94	ASN
57	BZ	85	PRO
57	BZ	170	ARG
57	BZ	274	ASP

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Mol	Chain	Res	Type
57	BZ	486	THR
57	BZ	521	SER
57	BZ	638	GLY
3	CC	30	VAL
3	CC	43	GLU
3	CC	52	PRO
3	CC	69	LEU
3	CC	184	GLU
3	CC	202	PRO
3	CC	209	PHE
4	CD	3	VAL
5	CE	103	ASP
8	CH	159	GLU
8	CH	169	VAL
9	CK	20	ALA
9	CK	30	GLN
9	CK	56	ASN
9	CK	62	ALA
9	CK	63	LEU
9	CK	114	GLY
9	CK	119	ALA
9	CK	132	ASP
18	CU	72	HIS
19	CV	29	PRO
22	CY	43	ASN
23	CZ	178	GLU
26	C2	22	GLU
28	C4	68	ARG
31	C7	45	ALA
35	DB	20	GLU
35	DB	77	ALA
35	DB	134	GLU
35	DB	232	PRO
37	DD	47	ARG
40	DG	33	ASP
40	DG	55	GLY
44	DK	106	LYS
45	DL	106	ASP
45	DL	125	PRO
46	DM	67	GLU
46	DM	118	ALA
52	DS	30	LEU

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Mol	Chain	Res	Type
52	DS	42	PRO
53	DT	102	GLY
54	DU	7	ARG
57	DZ	-65	LYS
57	DZ	-8	ALA
57	DZ	9	LEU
57	DZ	115	GLU
57	DZ	153	MET
57	DZ	235	GLU
57	DZ	404	VAL
57	DZ	444	PRO
57	DZ	457	LEU
57	DZ	636	PRO
57	DZ	671	MET
3	AC	16	ASP
4	AD	169	GLU
8	AH	159	GLU
9	AK	5	ARG
9	AK	110	GLY
10	AL	33	ASN
10	AL	42	ASN
13	AP	29	LYS
13	AP	122	PRO
15	AR	45	ARG
23	AZ	137	ILE
23	AZ	157	LEU
23	AZ	164	ALA
28	A4	41	PRO
36	BC	61	ALA
36	BC	81	GLY
36	BC	88	ARG
37	BD	105	VAL
37	BD	182	LYS
38	BE	77	PRO
39	BF	70	ASP
41	BH	7	ALA
42	BI	97	LYS
46	BM	12	ASN
48	BO	44	LYS
48	BO	78	TYR
49	BP	18	ARG
49	BP	49	LEU

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Mol	Chain	Res	Type
49	BP	64	ALA
52	BS	81	ARG
53	BT	102	GLY
57	BZ	-26	GLU
57	BZ	22	ASP
57	BZ	181	LEU
57	BZ	269	VAL
57	BZ	473	ASP
57	BZ	500	GLN
57	BZ	640	ALA
3	CC	16	ASP
5	CE	162	ALA
7	CG	32	PRO
7	CG	43	LEU
7	CG	50	ALA
8	CH	65	HIS
9	CK	47	ASN
9	CK	101	PRO
10	CL	72	PRO
12	CO	5	GLN
13	CP	29	LYS
13	CP	122	PRO
16	CS	84	GLN
17	CT	82	LEU
35	DB	123	ALA
35	DB	125	PRO
35	DB	131	PRO
36	DC	79	ARG
36	DC	156	ARG
37	DD	101	LEU
37	DD	172	PRO
38	DE	69	VAL
42	DI	118	LYS
43	DJ	78	ASN
45	DL	120	TYR
46	DM	5	ALA
46	DM	6	GLY
50	DQ	81	ARG
51	DR	41	LYS
52	DS	12	ASP
52	DS	29	ARG
57	DZ	-24	ASN

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Mol	Chain	Res	Type
57	DZ	88	VAL
57	DZ	170	ARG
57	DZ	199	ILE
57	DZ	247	ARG
57	DZ	640	ALA
57	DZ	656	ALA
3	AC	21	TYR
4	AD	146	GLU
5	AE	57	LYS
6	AF	207	GLY
7	AG	113	ARG
8	AH	127	GLU
9	AK	85	ASP
10	AL	13	PRO
10	AL	51	ALA
11	AN	14	VAL
12	AO	25	LEU
14	AQ	13	GLN
14	AQ	40	ALA
16	AS	82	ILE
26	A2	68	ARG
28	A4	49	PHE
35	BB	231	GLU
37	BD	199	ASN
40	BG	6	ARG
40	BG	93	PRO
42	BI	90	PRO
45	BL	88	GLY
49	BP	39	TYR
52	BS	67	VAL
53	BT	52	ALA
57	BZ	243	VAL
57	BZ	353	ALA
57	BZ	444	PRO
3	CC	21	TYR
4	CD	125	ILE
4	CD	275	LYS
5	CE	182	LEU
9	CK	86	PRO
9	CK	120	LYS
10	CL	3	LYS
10	CL	50	ASP

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Mol	Chain	Res	Type
10	CL	119	ASP
11	CN	87	LEU
12	CO	35	VAL
15	CR	45	ARG
15	CR	49	ASP
15	CR	107	ASP
16	CS	96	GLY
19	CV	43	GLU
21	CX	45	THR
22	CY	66	PRO
23	CZ	155	LEU
23	CZ	157	LEU
23	CZ	160	GLY
25	C1	45	ASN
35	DB	124	SER
37	DD	5	ILE
37	DD	59	ARG
43	DJ	36	GLY
46	DM	68	GLY
48	DO	47	LYS
57	DZ	380	LEU
57	DZ	532	GLY
3	AC	221	PRO
16	AS	72	ALA
23	AZ	156	LYS
25	A1	55	GLY
35	BB	78	GLN
35	BB	126	GLU
36	BC	101	LEU
37	BD	104	VAL
43	BJ	79	ARG
46	BM	67	GLU
48	BO	79	ARG
48	BO	86	GLY
53	BT	63	ILE
57	BZ	209	ALA
57	BZ	281	PRO
3	CC	221	PRO
5	CE	52	LEU
6	CF	132	VAL
7	CG	52	ILE
8	CH	168	PRO

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Mol	Chain	Res	Type
9	CK	84	GLU
16	CS	22	GLY
17	CT	20	PRO
17	CT	106	SER
32	C8	17	THR
35	DB	227	GLY
57	DZ	154	GLN
57	DZ	575	VAL
57	DZ	637	ARG
9	AK	22	GLY
9	AK	114	GLY
16	AS	60	GLY
28	A4	45	GLY
40	BG	55	GLY
5	CE	102	VAL
53	DT	63	ILE
57	DZ	502	GLY
7	AG	32	PRO
9	AK	86	PRO
10	AL	24	GLY
10	AL	113	PRO
57	BZ	307	GLY
9	CK	105	PRO
10	CL	21	PRO
37	DD	37	PRO
43	DJ	24	VAL
49	DP	51	VAL
10	AL	21	PRO
37	BD	37	PRO
39	BF	6	VAL
48	BO	36	ILE
49	BP	19	ILE
57	BZ	-16	ILE
4	CD	236	GLY
7	CG	63	ILE
9	CK	129	PRO
10	CL	24	GLY
45	DL	88	GLY
57	DZ	237	PRO
22	AY	103	GLY
37	BD	136	PRO
43	BJ	77	PRO

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Mol	Chain	Res	Type
49	BP	41	PRO
50	BQ	33	GLY
5	CE	71	GLY
40	DG	19	GLY
44	DK	39	PRO
46	DM	4	ILE
49	DP	53	VAL
57	DZ	86	GLY
57	DZ	163	VAL
57	DZ	638	GLY
15	AR	92	GLY
57	DZ	384	ILE

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	AC	111/180 (62%)	104 (94%)	7 (6%)	22	53
3	CC	111/180 (62%)	103 (93%)	8 (7%)	18	45
4	AD	215/218 (99%)	181 (84%)	34 (16%)	3	9
4	CD	216/218 (99%)	179 (83%)	37 (17%)	2	7
5	AE	164/166 (99%)	130 (79%)	34 (21%)	1	4
5	CE	164/166 (99%)	130 (79%)	34 (21%)	1	4
6	AF	160/166 (96%)	128 (80%)	32 (20%)	1	5
6	CF	159/166 (96%)	124 (78%)	35 (22%)	1	3
7	AG	143/156 (92%)	114 (80%)	29 (20%)	1	4
7	CG	142/156 (91%)	111 (78%)	31 (22%)	1	3
8	AH	144/148 (97%)	121 (84%)	23 (16%)	3	9
8	CH	144/148 (97%)	124 (86%)	20 (14%)	4	13
10	AL	104/111 (94%)	83 (80%)	21 (20%)	1	4
10	CL	104/111 (94%)	84 (81%)	20 (19%)	2	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
11	AN	118/119 (99%)	97 (82%)	21 (18%)	2	6
11	CN	118/119 (99%)	92 (78%)	26 (22%)	1	3
12	AO	100/100 (100%)	88 (88%)	12 (12%)	6	19
12	CO	100/100 (100%)	82 (82%)	18 (18%)	2	6
13	AP	116/116 (100%)	90 (78%)	26 (22%)	1	3
13	CP	115/116 (99%)	95 (83%)	20 (17%)	2	7
14	AQ	111/111 (100%)	99 (89%)	12 (11%)	8	23
14	CQ	111/111 (100%)	91 (82%)	20 (18%)	2	6
15	AR	101/101 (100%)	81 (80%)	20 (20%)	1	5
15	CR	101/101 (100%)	78 (77%)	23 (23%)	1	3
16	AS	87/88 (99%)	70 (80%)	17 (20%)	2	5
16	CS	85/88 (97%)	66 (78%)	19 (22%)	1	3
17	AT	115/127 (91%)	98 (85%)	17 (15%)	4	11
17	CT	113/127 (89%)	90 (80%)	23 (20%)	1	4
18	AU	93/94 (99%)	79 (85%)	14 (15%)	3	10
18	CU	93/94 (99%)	80 (86%)	13 (14%)	4	13
19	AV	80/82 (98%)	63 (79%)	17 (21%)	1	4
19	CV	80/82 (98%)	68 (85%)	12 (15%)	3	11
20	AW	90/92 (98%)	77 (86%)	13 (14%)	4	12
20	CW	90/92 (98%)	82 (91%)	8 (9%)	12	34
21	AX	77/78 (99%)	69 (90%)	8 (10%)	9	25
21	CX	77/78 (99%)	69 (90%)	8 (10%)	9	25
22	AY	85/91 (93%)	71 (84%)	14 (16%)	3	8
22	CY	85/91 (93%)	69 (81%)	16 (19%)	2	6
23	AZ	156/179 (87%)	121 (78%)	35 (22%)	1	3
23	CZ	156/179 (87%)	129 (83%)	27 (17%)	2	7
24	A0	65/67 (97%)	61 (94%)	4 (6%)	23	54
24	C0	65/67 (97%)	60 (92%)	5 (8%)	16	41
25	A1	80/83 (96%)	70 (88%)	10 (12%)	6	17
25	C1	80/83 (96%)	66 (82%)	14 (18%)	2	7
26	A2	65/67 (97%)	55 (85%)	10 (15%)	3	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	C2	65/67 (97%)	51 (78%)	14 (22%)	1	3
27	A3	51/52 (98%)	41 (80%)	10 (20%)	1	5
27	C3	50/52 (96%)	42 (84%)	8 (16%)	3	9
28	A4	60/63 (95%)	42 (70%)	18 (30%)	0	1
28	C4	53/63 (84%)	41 (77%)	12 (23%)	1	3
29	A5	50/52 (96%)	43 (86%)	7 (14%)	4	13
29	C5	50/52 (96%)	42 (84%)	8 (16%)	3	9
30	A6	51/52 (98%)	39 (76%)	12 (24%)	1	2
30	C6	50/52 (96%)	39 (78%)	11 (22%)	1	3
31	A7	41/42 (98%)	34 (83%)	7 (17%)	2	7
31	C7	41/42 (98%)	32 (78%)	9 (22%)	1	3
32	A8	54/55 (98%)	46 (85%)	8 (15%)	4	11
32	C8	54/55 (98%)	44 (82%)	10 (18%)	2	6
33	A9	34/34 (100%)	32 (94%)	2 (6%)	24	57
33	C9	34/34 (100%)	32 (94%)	2 (6%)	24	57
35	BB	192/220 (87%)	153 (80%)	39 (20%)	1	4
35	DB	187/220 (85%)	151 (81%)	36 (19%)	2	5
36	BC	143/188 (76%)	129 (90%)	14 (10%)	10	28
36	DC	141/188 (75%)	116 (82%)	25 (18%)	2	7
37	BD	170/181 (94%)	143 (84%)	27 (16%)	3	9
37	DD	174/181 (96%)	137 (79%)	37 (21%)	1	4
38	BE	113/123 (92%)	89 (79%)	24 (21%)	1	4
38	DE	114/123 (93%)	92 (81%)	22 (19%)	2	5
39	BF	84/90 (93%)	68 (81%)	16 (19%)	2	5
39	DF	86/90 (96%)	75 (87%)	11 (13%)	5	16
40	BG	119/127 (94%)	102 (86%)	17 (14%)	4	12
40	DG	120/127 (94%)	99 (82%)	21 (18%)	2	7
41	BH	114/119 (96%)	96 (84%)	18 (16%)	3	9
41	DH	114/119 (96%)	92 (81%)	22 (19%)	2	5
42	BI	91/99 (92%)	75 (82%)	16 (18%)	2	7
42	DI	89/99 (90%)	76 (85%)	13 (15%)	4	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	BJ	66/92 (72%)	61 (92%)	5 (8%)	16	42
43	DJ	69/92 (75%)	65 (94%)	4 (6%)	25	57
44	BK	83/99 (84%)	68 (82%)	15 (18%)	2	6
44	DK	83/99 (84%)	77 (93%)	6 (7%)	18	45
45	BL	97/109 (89%)	83 (86%)	14 (14%)	4	12
45	DL	97/109 (89%)	82 (84%)	15 (16%)	3	10
46	BM	91/101 (90%)	70 (77%)	21 (23%)	1	3
46	DM	92/101 (91%)	79 (86%)	13 (14%)	4	12
47	BN	49/50 (98%)	40 (82%)	9 (18%)	2	6
47	DN	49/50 (98%)	40 (82%)	9 (18%)	2	6
48	BO	78/80 (98%)	69 (88%)	9 (12%)	7	21
48	DO	78/80 (98%)	68 (87%)	10 (13%)	5	16
49	BP	69/74 (93%)	53 (77%)	16 (23%)	1	3
49	DP	68/74 (92%)	56 (82%)	12 (18%)	2	7
50	BQ	94/97 (97%)	74 (79%)	20 (21%)	1	4
50	DQ	94/97 (97%)	85 (90%)	9 (10%)	10	29
51	BR	59/77 (77%)	48 (81%)	11 (19%)	2	6
51	DR	59/77 (77%)	47 (80%)	12 (20%)	1	4
52	BS	70/80 (88%)	60 (86%)	10 (14%)	4	12
52	DS	67/80 (84%)	59 (88%)	8 (12%)	6	19
53	BT	70/82 (85%)	56 (80%)	14 (20%)	1	5
53	DT	71/82 (87%)	63 (89%)	8 (11%)	7	22
54	BU	18/22 (82%)	16 (89%)	2 (11%)	8	23
54	DU	18/22 (82%)	18 (100%)	0	100	100
57	BZ	609/636 (96%)	485 (80%)	124 (20%)	1	4
57	DZ	609/636 (96%)	474 (78%)	135 (22%)	1	3
All	All	10785/11672 (92%)	8911 (83%)	1874 (17%)	2	7

All (1874) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AC	28	ARG
3	AC	32	GLU

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Mol	Chain	Res	Type
3	AC	48	LEU
3	AC	50	ILE
3	AC	53	ARG
3	AC	54	ARG
3	AC	203	GLU
4	AD	3	VAL
4	AD	12	SER
4	AD	13	ARG
4	AD	14	ARG
4	AD	25	THR
4	AD	35	LYS
4	AD	38	LYS
4	AD	61	LEU
4	AD	78	LYS
4	AD	89	SER
4	AD	94	LEU
4	AD	99	ASP
4	AD	103	ARG
4	AD	106	ILE
4	AD	111	LEU
4	AD	113	VAL
4	AD	126	GLN
4	AD	141	VAL
4	AD	142	VAL
4	AD	157	ARG
4	AD	173	VAL
4	AD	200	ASP
4	AD	202	LYS
4	AD	211	ARG
4	AD	218	ARG
4	AD	221	VAL
4	AD	229	VAL
4	AD	242	ARG
4	AD	246	PRO
4	AD	253	GLN
4	AD	257	LEU
4	AD	259	THR
4	AD	265	PRO
4	AD	274	ARG
5	AE	1	MET
5	AE	7	VAL
5	AE	12	THR

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Mol	Chain	Res	Type
5	AE	21	VAL
5	AE	33	VAL
5	AE	34	VAL
5	AE	40	GLU
5	AE	41	LYS
5	AE	47	VAL
5	AE	49	LEU
5	AE	76	ARG
5	AE	77	ILE
5	AE	78	LEU
5	AE	81	ILE
5	AE	82	ARG
5	AE	93	VAL
5	AE	111	ARG
5	AE	113	PHE
5	AE	116	VAL
5	AE	119	ARG
5	AE	121	ASN
5	AE	128	SER
5	AE	144	ARG
5	AE	145	LYS
5	AE	154	LYS
5	AE	163	GLU
5	AE	170	LEU
5	AE	175	VAL
5	AE	178	GLU
5	AE	181	LEU
5	AE	184	VAL
5	AE	185	LYS
5	AE	188	VAL
5	AE	200	GLU
6	AF	8	GLN
6	AF	12	LEU
6	AF	13	SER
6	AF	15	SER
6	AF	20	LEU
6	AF	24	LEU
6	AF	33	LEU
6	AF	38	ARG
6	AF	43	LYS
6	AF	50	SER
6	AF	53	THR

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Mol	Chain	Res	Type
6	AF	57	VAL
6	AF	72	ARG
6	AF	82	ILE
6	AF	95	ARG
6	AF	106	ARG
6	AF	110	LEU
6	AF	112	MET
6	AF	116	ASP
6	AF	125	LEU
6	AF	127	GLU
6	AF	132	VAL
6	AF	133	ASN
6	AF	140	LEU
6	AF	158	THR
6	AF	162	LEU
6	AF	170	LEU
6	AF	183	VAL
6	AF	191	ARG
6	AF	192	LEU
6	AF	197	ASP
6	AF	205	ARG
7	AG	3	LEU
7	AG	5	VAL
7	AG	7	LEU
7	AG	26	GLN
7	AG	31	VAL
7	AG	32	PRO
7	AG	37	VAL
7	AG	41	GLN
7	AG	43	LEU
7	AG	45	GLU
7	AG	79	ASN
7	AG	81	LYS
7	AG	82	LEU
7	AG	91	ARG
7	AG	103	LEU
7	AG	104	GLU
7	AG	116	ASP
7	AG	126	ASP
7	AG	128	ARG
7	AG	130	ASN
7	AG	133	LEU

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Mol	Chain	Res	Type
7	AG	136	ARG
7	AG	137	GLU
7	AG	153	ARG
7	AG	161	THR
7	AG	162	THR
7	AG	170	ARG
7	AG	175	LEU
7	AG	181	ARG
8	AH	6	ARG
8	AH	13	LYS
8	AH	15	VAL
8	AH	27	LYS
8	AH	56	SER
8	AH	59	ARG
8	AH	60	ARG
8	AH	69	ARG
8	AH	71	LEU
8	AH	81	GLU
8	AH	84	SER
8	AH	88	LEU
8	AH	89	ILE
8	AH	92	ILE
8	AH	95	ARG
8	AH	98	LEU
8	AH	105	LEU
8	AH	122	THR
8	AH	124	GLU
8	AH	136	ILE
8	AH	149	ARG
8	AH	153	LYS
8	AH	159	GLU
10	AL	2	LYS
10	AL	3	LYS
10	AL	4	VAL
10	AL	30	HIS
10	AL	34	ILE
10	AL	35	MET
10	AL	45	THR
10	AL	50	ASP
10	AL	52	ILE
10	AL	58	THR
10	AL	59	ILE

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Mol	Chain	Res	Type
10	AL	70	LYS
10	AL	85	GLU
10	AL	86	LYS
10	AL	95	LYS
10	AL	104	VAL
10	AL	106	GLU
10	AL	116	ASN
10	AL	117	THR
10	AL	118	THR
10	AL	136	VAL
11	AN	14	VAL
11	AN	28	THR
11	AN	33	LEU
11	AN	34	LEU
11	AN	38	HIS
11	AN	48	MET
11	AN	58	ASP
11	AN	61	ARG
11	AN	62	VAL
11	AN	67	LEU
11	AN	73	THR
11	AN	83	LYS
11	AN	87	LEU
11	AN	89	LYS
11	AN	97	ARG
11	AN	99	LEU
11	AN	120	LEU
11	AN	121	LYS
11	AN	133	GLN
11	AN	137	LYS
11	AN	140	VAL
12	AO	7	TYR
12	AO	8	LEU
12	AO	10	VAL
12	AO	17	ARG
12	AO	23	ARG
12	AO	24	VAL
12	AO	28	SER
12	AO	52	VAL
12	AO	61	VAL
12	AO	69	ILE
12	AO	86	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	AO	94	ARG
13	AP	2	LYS
13	AP	3	LEU
13	AP	21	ARG
13	AP	42	SER
13	AP	55	ARG
13	AP	58	THR
13	AP	59	LEU
13	AP	64	LYS
13	AP	65	ARG
13	AP	70	GLN
13	AP	76	LYS
13	AP	77	ARG
13	AP	83	VAL
13	AP	98	GLU
13	AP	101	VAL
13	AP	105	LEU
13	AP	106	LEU
13	AP	107	LYS
13	AP	112	LEU
13	AP	119	GLU
13	AP	125	VAL
13	AP	126	VAL
13	AP	139	LYS
13	AP	147	LEU
13	AP	148	LEU
13	AP	149	GLU
14	AQ	2	LEU
14	AQ	5	ARG
14	AQ	7	MET
14	AQ	8	LYS
14	AQ	10	ARG
14	AQ	35	VAL
14	AQ	42	ILE
14	AQ	45	GLN
14	AQ	55	VAL
14	AQ	66	ILE
14	AQ	75	THR
14	AQ	109	VAL
15	AR	15	SER
15	AR	17	ARG
15	AR	18	LEU

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Mol	Chain	Res	Type
15	AR	20	LEU
15	AR	27	SER
15	AR	28	LEU
15	AR	29	LEU
15	AR	33	ARG
15	AR	36	THR
15	AR	44	LEU
15	AR	54	LEU
15	AR	60	LEU
15	AR	63	ARG
15	AR	65	LEU
15	AR	67	LEU
15	AR	79	LEU
15	AR	91	GLN
15	AR	100	LEU
15	AR	111	LEU
15	AR	114	VAL
16	AS	3	ARG
16	AS	4	LEU
16	AS	11	LYS
16	AS	14	VAL
16	AS	17	ARG
16	AS	20	ARG
16	AS	26	LEU
16	AS	36	TYR
16	AS	44	LYS
16	AS	48	LEU
16	AS	50	SER
16	AS	52	SER
16	AS	54	LEU
16	AS	69	VAL
16	AS	76	LYS
16	AS	83	LYS
16	AS	110	LEU
17	AT	6	LEU
17	AT	9	LEU
17	AT	11	GLU
17	AT	12	SER
17	AT	17	THR
17	AT	23	ARG
17	AT	28	VAL
17	AT	35	LYS

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Mol	Chain	Res	Type
17	AT	49	VAL
17	AT	59	THR
17	AT	78	LEU
17	AT	85	LYS
17	AT	89	VAL
17	AT	96	ARG
17	AT	115	ARG
17	AT	118	ARG
17	AT	128	GLU
18	AU	5	LYS
18	AU	8	VAL
18	AU	19	LYS
18	AU	36	ARG
18	AU	56	ASP
18	AU	59	ARG
18	AU	74	LEU
18	AU	84	LYS
18	AU	92	ARG
18	AU	95	LEU
18	AU	101	ARG
18	AU	104	GLN
18	AU	108	GLU
18	AU	111	GLU
19	AV	6	LYS
19	AV	15	GLU
19	AV	18	LEU
19	AV	21	ARG
19	AV	28	GLU
19	AV	32	THR
19	AV	43	GLU
19	AV	46	VAL
19	AV	52	VAL
19	AV	56	SER
19	AV	61	VAL
19	AV	72	VAL
19	AV	73	SER
19	AV	79	VAL
19	AV	95	LEU
19	AV	98	GLU
19	AV	100	ARG
20	AW	4	LYS
20	AW	11	ARG

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Mol	Chain	Res	Type
20	AW	12	ILE
20	AW	17	VAL
20	AW	19	LEU
20	AW	23	LEU
20	AW	35	ILE
20	AW	41	LYS
20	AW	51	LEU
20	AW	65	LEU
20	AW	67	ASP
20	AW	90	ARG
20	AW	107	LEU
21	AX	33	LYS
21	AX	35	THR
21	AX	45	THR
21	AX	57	LEU
21	AX	65	ARG
21	AX	66	LEU
21	AX	70	LEU
21	AX	72	LYS
22	AY	1	MET
22	AY	7	VAL
22	AY	8	LYS
22	AY	23	ARG
22	AY	26	LYS
22	AY	47	LYS
22	AY	50	ARG
22	AY	55	TYR
22	AY	72	VAL
22	AY	73	ARG
22	AY	81	LYS
22	AY	90	LEU
22	AY	91	GLU
22	AY	96	ILE
23	AZ	5	LEU
23	AZ	16	SER
23	AZ	18	LEU
23	AZ	19	ARG
23	AZ	28	MET
23	AZ	31	ARG
23	AZ	37	VAL
23	AZ	40	ASP
23	AZ	42	VAL

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Mol	Chain	Res	Type
23	AZ	46	LYS
23	AZ	52	SER
23	AZ	56	VAL
23	AZ	65	GLN
23	AZ	72	ARG
23	AZ	73	GLN
23	AZ	74	VAL
23	AZ	77	ASP
23	AZ	78	LYS
23	AZ	86	VAL
23	AZ	87	ASP
23	AZ	91	LEU
23	AZ	97	GLU
23	AZ	98	MET
23	AZ	124	ILE
23	AZ	129	SER
23	AZ	136	PHE
23	AZ	149	SER
23	AZ	150	LEU
23	AZ	151	HIS
23	AZ	156	LYS
23	AZ	157	LEU
23	AZ	163	LEU
23	AZ	170	THR
23	AZ	180	VAL
23	AZ	183	LEU
24	A0	7	LEU
24	A0	20	ARG
24	A0	43	THR
24	A0	55	ARG
25	A1	21	ARG
25	A1	30	VAL
25	A1	32	LYS
25	A1	40	ARG
25	A1	51	VAL
25	A1	59	THR
25	A1	75	GLU
25	A1	80	LEU
25	A1	92	LYS
25	A1	95	LEU
26	A2	8	LYS
26	A2	32	LEU

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Mol	Chain	Res	Type
26	A2	40	SER
26	A2	41	ILE
26	A2	52	ASP
26	A2	53	LEU
26	A2	62	THR
26	A2	64	LEU
26	A2	67	LYS
26	A2	70	GLN
27	A3	5	LYS
27	A3	8	LEU
27	A3	18	ASP
27	A3	23	LEU
27	A3	29	ARG
27	A3	32	GLN
27	A3	34	GLU
27	A3	35	ARG
27	A3	54	VAL
27	A3	58	VAL
28	A4	1	MET
28	A4	8	LYS
28	A4	22	ILE
28	A4	27	THR
28	A4	31	ILE
28	A4	34	GLU
28	A4	35	VAL
28	A4	36	CYS
28	A4	39	CYS
28	A4	46	GLN
28	A4	48	ARG
28	A4	49	PHE
28	A4	56	VAL
28	A4	57	GLU
28	A4	58	ARG
28	A4	61	ARG
28	A4	67	TYR
28	A4	68	ARG
29	A5	6	VAL
29	A5	16	ARG
29	A5	29	THR
29	A5	33	CYS
29	A5	40	LYS
29	A5	55	ARG

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Mol	Chain	Res	Type
29	A5	60	VAL
30	A6	4	GLU
30	A6	6	ARG
30	A6	7	ILE
30	A6	14	THR
30	A6	24	GLU
30	A6	25	LYS
30	A6	33	LYS
30	A6	44	ARG
30	A6	47	THR
30	A6	48	VAL
30	A6	50	ARG
30	A6	54	ILE
31	A7	1	MET
31	A7	9	ARG
31	A7	10	ARG
31	A7	14	LYS
31	A7	24	THR
31	A7	43	THR
31	A7	46	VAL
32	A8	13	ARG
32	A8	14	VAL
32	A8	30	ARG
32	A8	31	HIS
32	A8	32	LEU
32	A8	43	GLN
32	A8	46	ARG
32	A8	52	LYS
33	A9	4	ARG
33	A9	17	ILE
35	BB	8	LYS
35	BB	11	LEU
35	BB	15	VAL
35	BB	16	HIS
35	BB	17	PHE
35	BB	19	HIS
35	BB	20	GLU
35	BB	21	ARG
35	BB	24	TRP
35	BB	37	ASN
35	BB	41	ILE
35	BB	48	MET

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Mol	Chain	Res	Type
35	BB	56	ARG
35	BB	64	ARG
35	BB	76	GLN
35	BB	78	GLN
35	BB	80	ILE
35	BB	83	MET
35	BB	98	LEU
35	BB	107	THR
35	BB	110	GLN
35	BB	111	ARG
35	BB	112	VAL
35	BB	113	HIS
35	BB	127	ILE
35	BB	142	LEU
35	BB	145	LEU
35	BB	160	ASP
35	BB	168	THR
35	BB	169	LYS
35	BB	187	LEU
35	BB	195	ASP
35	BB	200	ILE
35	BB	208	ILE
35	BB	217	ARG
35	BB	221	LEU
35	BB	223	ILE
35	BB	224	GLN
35	BB	229	VAL
36	BC	3	ASN
36	BC	15	THR
36	BC	28	GLN
36	BC	29	TYR
36	BC	45	LYS
36	BC	67	THR
36	BC	108	ASN
36	BC	131	ARG
36	BC	143	GLU
36	BC	178	LEU
36	BC	181	ASN
36	BC	192	THR
36	BC	196	LEU
36	BC	207	VAL
37	BD	5	ILE

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Mol	Chain	Res	Type
37	BD	13	ARG
37	BD	15	GLU
37	BD	31	CYS
37	BD	58	LEU
37	BD	61	LYS
37	BD	70	ILE
37	BD	73	ARG
37	BD	76	ARG
37	BD	101	LEU
37	BD	103	ASN
37	BD	107	ARG
37	BD	119	GLN
37	BD	126	ILE
37	BD	127	THR
37	BD	134	ASP
37	BD	135	LEU
37	BD	139	ARG
37	BD	140	VAL
37	BD	142	PRO
37	BD	158	ILE
37	BD	168	ARG
37	BD	173	TRP
37	BD	182	LYS
37	BD	193	ASP
37	BD	196	LEU
37	BD	200	GLU
38	BE	10	MET
38	BE	11	ILE
38	BE	18	ARG
38	BE	20	GLN
38	BE	25	ARG
38	BE	27	ARG
38	BE	28	PHE
38	BE	31	LEU
38	BE	34	VAL
38	BE	38	GLN
38	BE	40	ARG
38	BE	41	VAL
38	BE	47	LYS
38	BE	76	ILE
38	BE	78	HIS
38	BE	79	GLU

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Mol	Chain	Res	Type
38	BE	91	LEU
38	BE	121	LYS
38	BE	137	GLU
38	BE	140	ARG
38	BE	147	ASP
38	BE	148	VAL
38	BE	149	GLU
38	BE	150	ARG
39	BF	30	LEU
39	BF	37	VAL
39	BF	40	VAL
39	BF	61	LEU
39	BF	64	GLN
39	BF	69	GLU
39	BF	71	ARG
39	BF	72	VAL
39	BF	73	ASN
39	BF	75	LEU
39	BF	82	ARG
39	BF	83	ASP
39	BF	86	ARG
39	BF	92	LYS
39	BF	94	GLN
39	BF	98	LEU
40	BG	8	GLU
40	BG	12	LEU
40	BG	15	ASP
40	BG	16	LEU
40	BG	29	LYS
40	BG	38	LEU
40	BG	41	ARG
40	BG	51	GLN
40	BG	61	VAL
40	BG	73	MET
40	BG	75	VAL
40	BG	78	ARG
40	BG	98	SER
40	BG	104	LEU
40	BG	113	GLU
40	BG	114	ARG
40	BG	115	ARG
41	BH	2	LEU

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Mol	Chain	Res	Type
41	BH	10	LEU
41	BH	18	ARG
41	BH	21	LYS
41	BH	24	THR
41	BH	25	ASP
41	BH	26	VAL
41	BH	51	VAL
41	BH	52	ASP
41	BH	54	ASP
41	BH	75	ARG
41	BH	77	GLU
41	BH	78	GLN
41	BH	91	ARG
41	BH	98	LYS
41	BH	112	LEU
41	BH	122	ARG
41	BH	133	LEU
42	BI	3	GLN
42	BI	23	ASN
42	BI	25	LYS
42	BI	27	THR
42	BI	53	VAL
42	BI	64	THR
42	BI	75	ASP
42	BI	81	ILE
42	BI	92	TYR
42	BI	93	ARG
42	BI	102	LEU
42	BI	104	ARG
42	BI	110	GLU
42	BI	113	LYS
42	BI	127	LYS
42	BI	128	ARG
43	BJ	16	LEU
43	BJ	21	GLN
43	BJ	65	LEU
43	BJ	94	VAL
43	BJ	100	THR
44	BK	14	VAL
44	BK	16	SER
44	BK	18	ARG
44	BK	31	THR

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Mol	Chain	Res	Type
44	BK	40	ILE
44	BK	48	ILE
44	BK	51	LYS
44	BK	83	ILE
44	BK	84	VAL
44	BK	87	THR
44	BK	96	ARG
44	BK	98	LEU
44	BK	104	GLN
44	BK	109	VAL
44	BK	112	THR
45	BL	7	ILE
45	BL	18	VAL
45	BL	23	LYS
45	BL	27	LEU
45	BL	33	ARG
45	BL	36	VAL
45	BL	46	LYS
45	BL	53	ARG
45	BL	57	LYS
45	BL	60	LEU
45	BL	67	THR
45	BL	83	VAL
45	BL	97	ARG
45	BL	100	ILE
46	BM	3	ARG
46	BM	4	ILE
46	BM	11	ARG
46	BM	15	VAL
46	BM	16	ASP
46	BM	17	VAL
46	BM	19	LEU
46	BM	32	GLU
46	BM	37	THR
46	BM	39	ILE
46	BM	44	ARG
46	BM	50	GLU
46	BM	57	ARG
46	BM	63	THR
46	BM	66	LEU
46	BM	70	LEU
46	BM	84	ILE

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Mol	Chain	Res	Type
46	BM	102	ARG
46	BM	105	THR
46	BM	110	ARG
46	BM	116	THR
47	BN	3	ARG
47	BN	7	ILE
47	BN	18	VAL
47	BN	23	ARG
47	BN	33	VAL
47	BN	41	ARG
47	BN	44	LEU
47	BN	49	HIS
47	BN	57	ARG
48	BO	3	ILE
48	BO	5	LYS
48	BO	26	GLU
48	BO	35	ARG
48	BO	39	LEU
48	BO	41	GLU
48	BO	42	HIS
48	BO	66	LEU
48	BO	88	ARG
49	BP	1	MET
49	BP	2	VAL
49	BP	4	ILE
49	BP	5	ARG
49	BP	8	ARG
49	BP	11	SER
49	BP	16	HIS
49	BP	18	ARG
49	BP	19	ILE
49	BP	29	ASP
49	BP	50	LYS
49	BP	54	GLU
49	BP	69	THR
49	BP	71	ARG
49	BP	74	LEU
49	BP	76	GLN
50	BQ	5	VAL
50	BQ	6	LEU
50	BQ	9	VAL
50	BQ	36	ILE

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Mol	Chain	Res	Type
50	BQ	43	LEU
50	BQ	45	HIS
50	BQ	49	GLU
50	BQ	53	LEU
50	BQ	60	ILE
50	BQ	62	SER
50	BQ	68	ARG
50	BQ	70	ARG
50	BQ	72	ARG
50	BQ	73	VAL
50	BQ	74	LEU
50	BQ	77	VAL
50	BQ	78	GLU
50	BQ	90	ILE
50	BQ	91	ARG
50	BQ	92	ARG
51	BR	26	LEU
51	BR	29	PHE
51	BR	31	LEU
51	BR	35	ARG
51	BR	37	VAL
51	BR	51	LEU
51	BR	53	ARG
51	BR	55	ARG
51	BR	58	LEU
51	BR	76	LEU
51	BR	85	LEU
52	BS	4	SER
52	BS	12	ASP
52	BS	28	LYS
52	BS	34	TRP
52	BS	65	ASN
52	BS	66	MET
52	BS	78	ARG
52	BS	81	ARG
52	BS	83	HIS
52	BS	85	LYS
53	BT	8	ARG
53	BT	13	LEU
53	BT	15	ARG
53	BT	31	SER
53	BT	45	GLN

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Mol	Chain	Res	Type
53	BT	58	LYS
53	BT	60	GLU
53	BT	61	SER
53	BT	62	LEU
53	BT	70	SER
53	BT	75	ASN
53	BT	84	LEU
53	BT	93	GLU
53	BT	100	ILE
54	BU	9	ARG
54	BU	10	ARG
57	BZ	-64	VAL
57	BZ	-58	LEU
57	BZ	-56	ASN
57	BZ	-52	VAL
57	BZ	-49	VAL
57	BZ	-45	LYS
57	BZ	-42	TYR
57	BZ	-32	LEU
57	BZ	-30	VAL
57	BZ	-29	LEU
57	BZ	-25	SER
57	BZ	-22	LYS
57	BZ	-20	LEU
57	BZ	-10	ARG
57	BZ	-6	ARG
57	BZ	-3	GLU
57	BZ	1	LEU
57	BZ	2	LYS
57	BZ	8	ASP
57	BZ	12	LEU
57	BZ	13	ARG
57	BZ	21	ILE
57	BZ	30	GLU
57	BZ	33	LEU
57	BZ	39	ILE
57	BZ	70	THR
57	BZ	79	ILE
57	BZ	81	ILE
57	BZ	83	ASP
57	BZ	88	VAL
57	BZ	91	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BZ	92	ILE
57	BZ	97	SER
57	BZ	107	VAL
57	BZ	115	GLU
57	BZ	117	GLN
57	BZ	130	VAL
57	BZ	132	ARG
57	BZ	146	LEU
57	BZ	152	THR
57	BZ	157	LEU
57	BZ	160	ARG
57	BZ	171	GLU
57	BZ	172	ASP
57	BZ	182	ARG
57	BZ	186	TYR
57	BZ	196	ILE
57	BZ	198	GLU
57	BZ	210	ARG
57	BZ	238	THR
57	BZ	240	GLU
57	BZ	247	ARG
57	BZ	252	ASP
57	BZ	255	ILE
57	BZ	256	THR
57	BZ	264	LEU
57	BZ	269	VAL
57	BZ	271	LEU
57	BZ	279	TYR
57	BZ	284	LEU
57	BZ	285	ASP
57	BZ	286	ILE
57	BZ	289	ILE
57	BZ	297	GLU
57	BZ	298	VAL
57	BZ	301	ILE
57	BZ	312	LEU
57	BZ	324	ARG
57	BZ	328	ILE
57	BZ	329	ARG
57	BZ	352	VAL
57	BZ	354	ARG
57	BZ	356	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	BZ	361	ASN
57	BZ	363	ARG
57	BZ	368	GLU
57	BZ	377	VAL
57	BZ	385	THR
57	BZ	396	ARG
57	BZ	399	LEU
57	BZ	409	ILE
57	BZ	420	ASP
57	BZ	421	GLN
57	BZ	422	GLU
57	BZ	424	LEU
57	BZ	425	SER
57	BZ	426	GLN
57	BZ	431	LEU
57	BZ	437	THR
57	BZ	438	PHE
57	BZ	442	THR
57	BZ	445	GLU
57	BZ	457	LEU
57	BZ	461	ILE
57	BZ	464	ASP
57	BZ	468	ARG
57	BZ	473	ASP
57	BZ	478	LYS
57	BZ	481	VAL
57	BZ	484	ARG
57	BZ	488	THR
57	BZ	491	VAL
57	BZ	498	ILE
57	BZ	506	GLN
57	BZ	510	VAL
57	BZ	512	ILE
57	BZ	517	LEU
57	BZ	526	VAL
57	BZ	529	ILE
57	BZ	566	THR
57	BZ	587	SER
57	BZ	590	ILE
57	BZ	592	GLU
57	BZ	610	VAL
57	BZ	614	GLU

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Mol	Chain	Res	Type
57	BZ	624	LEU
57	BZ	631	ILE
57	BZ	634	MET
57	BZ	641	GLN
57	BZ	644	ARG
57	BZ	651	GLU
57	BZ	659	LEU
57	BZ	677	GLN
57	BZ	679	VAL
3	CC	28	ARG
3	CC	32	GLU
3	CC	48	LEU
3	CC	50	ILE
3	CC	53	ARG
3	CC	54	ARG
3	CC	203	GLU
3	CC	208	THR
4	CD	3	VAL
4	CD	10	THR
4	CD	12	SER
4	CD	14	ARG
4	CD	27	THR
4	CD	54	ARG
4	CD	61	LEU
4	CD	69	ARG
4	CD	71	ASP
4	CD	89	SER
4	CD	94	LEU
4	CD	98	VAL
4	CD	101	GLU
4	CD	103	ARG
4	CD	105	ILE
4	CD	106	ILE
4	CD	111	LEU
4	CD	134	ARG
4	CD	140	THR
4	CD	142	VAL
4	CD	147	LEU
4	CD	173	VAL
4	CD	193	VAL
4	CD	211	ARG
4	CD	217	ARG

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Mol	Chain	Res	Type
4	CD	221	VAL
4	CD	229	VAL
4	CD	242	ARG
4	CD	253	GLN
4	CD	257	LEU
4	CD	259	THR
4	CD	260	ARG
4	CD	261	LYS
4	CD	262	ARG
4	CD	265	PRO
4	CD	274	ARG
4	CD	276	LYS
5	CE	2	LYS
5	CE	9	VAL
5	CE	12	THR
5	CE	19	ARG
5	CE	21	VAL
5	CE	24	THR
5	CE	33	VAL
5	CE	34	VAL
5	CE	38	THR
5	CE	40	GLU
5	CE	52	LEU
5	CE	58	ARG
5	CE	63	LEU
5	CE	73	GLU
5	CE	74	PRO
5	CE	75	VAL
5	CE	82	ARG
5	CE	84	PHE
5	CE	85	ASN
5	CE	92	THR
5	CE	93	VAL
5	CE	101	ARG
5	CE	116	VAL
5	CE	119	ARG
5	CE	144	ARG
5	CE	145	LYS
5	CE	154	LYS
5	CE	165	VAL
5	CE	179	GLU
5	CE	181	LEU

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Mol	Chain	Res	Type
5	CE	182	LEU
5	CE	195	LEU
5	CE	196	VAL
5	CE	202	LYS
6	CF	19	GLU
6	CF	20	LEU
6	CF	23	ASP
6	CF	24	LEU
6	CF	27	GLU
6	CF	28	ILE
6	CF	43	LYS
6	CF	48	THR
6	CF	50	SER
6	CF	53	THR
6	CF	57	VAL
6	CF	66	PRO
6	CF	70	THR
6	CF	74	ARG
6	CF	78	ILE
6	CF	82	ILE
6	CF	88	VAL
6	CF	102	PRO
6	CF	104	LYS
6	CF	106	ARG
6	CF	119	ARG
6	CF	135	LYS
6	CF	137	LYS
6	CF	140	LEU
6	CF	158	THR
6	CF	162	LEU
6	CF	169	ASN
6	CF	170	LEU
6	CF	175	THR
6	CF	176	LEU
6	CF	181	LEU
6	CF	192	LEU
6	CF	200	GLU
6	CF	203	GLN
6	CF	205	ARG
7	CG	3	LEU
7	CG	5	VAL
7	CG	7	LEU

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Mol	Chain	Res	Type
7	CG	9	ARG
7	CG	16	ARG
7	CG	18	GLU
7	CG	20	ILE
7	CG	32	PRO
7	CG	43	LEU
7	CG	60	LEU
7	CG	63	ILE
7	CG	70	VAL
7	CG	71	THR
7	CG	75	LYS
7	CG	108	ASN
7	CG	115	ARG
7	CG	126	ASP
7	CG	128	ARG
7	CG	136	ARG
7	CG	138	GLN
7	CG	143	GLU
7	CG	148	MET
7	CG	150	ASP
7	CG	153	ARG
7	CG	161	THR
7	CG	164	GLU
7	CG	165	THR
7	CG	170	ARG
7	CG	173	LEU
7	CG	174	GLU
7	CG	175	LEU
8	CH	3	ARG
8	CH	4	ILE
8	CH	6	ARG
8	CH	7	LEU
8	CH	33	LEU
8	CH	41	MET
8	CH	49	VAL
8	CH	59	ARG
8	CH	69	ARG
8	CH	71	LEU
8	CH	80	SER
8	CH	105	LEU
8	CH	106	THR
8	CH	122	THR

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Mol	Chain	Res	Type
8	CH	125	VAL
8	CH	130	ARG
8	CH	136	ILE
8	CH	139	GLN
8	CH	149	ARG
8	CH	171	LEU
10	CL	2	LYS
10	CL	4	VAL
10	CL	29	GLN
10	CL	30	HIS
10	CL	38	VAL
10	CL	59	ILE
10	CL	65	PHE
10	CL	75	SER
10	CL	77	LEU
10	CL	86	LYS
10	CL	93	ARG
10	CL	95	LYS
10	CL	96	VAL
10	CL	102	GLU
10	CL	105	LEU
10	CL	112	MET
10	CL	117	THR
10	CL	118	THR
10	CL	134	MET
10	CL	136	VAL
11	CN	10	GLU
11	CN	16	ILE
11	CN	22	THR
11	CN	25	ARG
11	CN	26	LEU
11	CN	29	LYS
11	CN	32	THR
11	CN	33	LEU
11	CN	34	LEU
11	CN	38	HIS
11	CN	46	VAL
11	CN	48	MET
11	CN	58	ASP
11	CN	59	LYS
11	CN	63	THR
11	CN	70	LYS

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Mol	Chain	Res	Type
11	CN	76	SER
11	CN	87	LEU
11	CN	97	ARG
11	CN	99	LEU
11	CN	109	LYS
11	CN	120	LEU
11	CN	127	ASP
11	CN	133	GLN
11	CN	137	LYS
11	CN	138	LEU
12	CO	1	MET
12	CO	17	ARG
12	CO	18	LYS
12	CO	19	ILE
12	CO	22	ILE
12	CO	23	ARG
12	CO	24	VAL
12	CO	35	VAL
12	CO	52	VAL
12	CO	69	ILE
12	CO	77	ILE
12	CO	78	ARG
12	CO	86	ILE
12	CO	91	LEU
12	CO	96	THR
12	CO	98	VAL
12	CO	113	LYS
12	CO	116	SER
13	CP	2	LYS
13	CP	3	LEU
13	CP	15	ARG
13	CP	21	ARG
13	CP	42	SER
13	CP	55	ARG
13	CP	57	THR
13	CP	59	LEU
13	CP	65	ARG
13	CP	75	ILE
13	CP	86	LYS
13	CP	92	GLU
13	CP	95	VAL
13	CP	106	LEU

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Mol	Chain	Res	Type
13	CP	112	LEU
13	CP	125	VAL
13	CP	132	LYS
13	CP	135	LEU
13	CP	147	LEU
13	CP	148	LEU
14	CQ	1	MET
14	CQ	3	MET
14	CQ	6	ARG
14	CQ	12	GLN
14	CQ	16	ARG
14	CQ	21	THR
14	CQ	35	VAL
14	CQ	45	GLN
14	CQ	57	HIS
14	CQ	60	ARG
14	CQ	63	LYS
14	CQ	75	THR
14	CQ	94	VAL
14	CQ	109	VAL
14	CQ	110	THR
14	CQ	111	GLU
14	CQ	112	GLU
14	CQ	127	ILE
14	CQ	128	LYS
14	CQ	133	ARG
15	CR	1	MET
15	CR	4	LEU
15	CR	9	LYS
15	CR	14	SER
15	CR	18	LEU
15	CR	22	ARG
15	CR	28	LEU
15	CR	29	LEU
15	CR	37	THR
15	CR	40	LYS
15	CR	43	GLU
15	CR	44	LEU
15	CR	54	LEU
15	CR	60	LEU
15	CR	63	ARG
15	CR	65	LEU

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Mol	Chain	Res	Type
15	CR	75	LEU
15	CR	79	LEU
15	CR	86	ARG
15	CR	88	ARG
15	CR	90	ARG
15	CR	102	GLU
15	CR	114	VAL
16	CS	3	ARG
16	CS	4	LEU
16	CS	12	PHE
16	CS	13	ARG
16	CS	19	LYS
16	CS	20	ARG
16	CS	26	LEU
16	CS	29	PHE
16	CS	31	SER
16	CS	35	ILE
16	CS	36	TYR
16	CS	49	VAL
16	CS	50	SER
16	CS	52	SER
16	CS	58	LEU
16	CS	62	LYS
16	CS	67	ARG
16	CS	78	LEU
16	CS	110	LEU
17	CT	6	LEU
17	CT	8	LYS
17	CT	13	ARG
17	CT	18	ASP
17	CT	19	LEU
17	CT	23	ARG
17	CT	39	ARG
17	CT	42	ILE
17	CT	51	ARG
17	CT	53	ARG
17	CT	59	THR
17	CT	64	ARG
17	CT	65	LYS
17	CT	67	SER
17	CT	74	ARG
17	CT	78	LEU

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Mol	Chain	Res	Type
17	CT	85	LYS
17	CT	87	ASP
17	CT	96	ARG
17	CT	98	LYS
17	CT	115	ARG
17	CT	118	ARG
17	CT	123	GLN
18	CU	5	LYS
18	CU	31	SER
18	CU	36	ARG
18	CU	52	ARG
18	CU	59	ARG
18	CU	69	CYS
18	CU	74	LEU
18	CU	84	LYS
18	CU	93	LYS
18	CU	95	LEU
18	CU	100	VAL
18	CU	104	GLN
18	CU	108	GLU
19	CV	6	LYS
19	CV	13	ARG
19	CV	15	GLU
19	CV	18	LEU
19	CV	52	VAL
19	CV	61	VAL
19	CV	62	LEU
19	CV	69	LYS
19	CV	72	VAL
19	CV	73	SER
19	CV	95	LEU
19	CV	99	ILE
20	CW	6	ILE
20	CW	11	ARG
20	CW	19	LEU
20	CW	23	LEU
20	CW	29	LEU
20	CW	60	ASN
20	CW	100	THR
20	CW	107	LEU
21	CX	9	LEU
21	CX	35	THR

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Mol	Chain	Res	Type
21	CX	45	THR
21	CX	52	VAL
21	CX	57	LEU
21	CX	65	ARG
21	CX	82	GLN
21	CX	87	GLN
22	CY	6	HIS
22	CY	7	VAL
22	CY	23	ARG
22	CY	34	LYS
22	CY	43	ASN
22	CY	45	VAL
22	CY	49	VAL
22	CY	64	GLU
22	CY	67	LEU
22	CY	72	VAL
22	CY	85	VAL
22	CY	88	LYS
22	CY	91	GLU
22	CY	95	LYS
22	CY	102	CYS
22	CY	107	ASP
23	CZ	6	LYS
23	CZ	16	SER
23	CZ	19	ARG
23	CZ	33	LEU
23	CZ	37	VAL
23	CZ	42	VAL
23	CZ	61	LEU
23	CZ	72	ARG
23	CZ	76	LEU
23	CZ	78	LYS
23	CZ	80	ARG
23	CZ	81	ARG
23	CZ	87	ASP
23	CZ	89	PHE
23	CZ	91	LEU
23	CZ	98	MET
23	CZ	107	THR
23	CZ	111	VAL
23	CZ	124	ILE
23	CZ	136	PHE

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Mol	Chain	Res	Type
23	CZ	149	SER
23	CZ	150	LEU
23	CZ	153	SER
23	CZ	154	ASP
23	CZ	156	LYS
23	CZ	161	VAL
23	CZ	170	THR
24	C0	3	HIS
24	C0	11	ARG
24	C0	20	ARG
24	C0	74	ARG
24	C0	82	ARG
25	C1	4	VAL
25	C1	30	VAL
25	C1	37	ILE
25	C1	38	SER
25	C1	40	ARG
25	C1	41	ARG
25	C1	52	ARG
25	C1	59	THR
25	C1	62	VAL
25	C1	69	LYS
25	C1	78	LYS
25	C1	80	LEU
25	C1	94	LEU
25	C1	95	LEU
26	C2	2	LYS
26	C2	9	GLN
26	C2	14	ARG
26	C2	28	LYS
26	C2	30	ARG
26	C2	32	LEU
26	C2	41	ILE
26	C2	51	ARG
26	C2	52	ASP
26	C2	53	LEU
26	C2	59	ARG
26	C2	62	THR
26	C2	63	VAL
26	C2	70	GLN
27	C3	6	VAL
27	C3	8	LEU

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Mol	Chain	Res	Type
27	C3	23	LEU
27	C3	24	LYS
27	C3	30	ARG
27	C3	36	VAL
27	C3	50	VAL
27	C3	56	VAL
28	C4	5	ILE
28	C4	34	GLU
28	C4	35	VAL
28	C4	50	VAL
28	C4	56	VAL
28	C4	58	ARG
28	C4	59	PHE
28	C4	61	ARG
28	C4	63	TYR
28	C4	67	TYR
28	C4	68	ARG
28	C4	69	LYS
29	C5	6	VAL
29	C5	9	LYS
29	C5	12	SER
29	C5	16	ARG
29	C5	20	ARG
29	C5	36	CYS
29	C5	40	LYS
29	C5	57	VAL
30	C6	5	VAL
30	C6	6	ARG
30	C6	7	ILE
30	C6	23	THR
30	C6	25	LYS
30	C6	32	ASN
30	C6	38	LYS
30	C6	40	CYS
30	C6	44	ARG
30	C6	48	VAL
30	C6	50	ARG
31	C7	1	MET
31	C7	4	THR
31	C7	9	ARG
31	C7	14	LYS
31	C7	29	LYS

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Mol	Chain	Res	Type
31	C7	32	LYS
31	C7	43	THR
31	C7	47	ARG
31	C7	48	LYS
32	C8	3	LYS
32	C8	6	THR
32	C8	14	VAL
32	C8	26	LYS
32	C8	30	ARG
32	C8	31	HIS
32	C8	32	LEU
32	C8	34	TRP
32	C8	36	LYS
32	C8	46	ARG
33	C9	19	ARG
33	C9	27	CYS
35	DB	7	VAL
35	DB	12	GLU
35	DB	24	TRP
35	DB	27	LYS
35	DB	44	LEU
35	DB	47	THR
35	DB	51	LEU
35	DB	53	ARG
35	DB	56	ARG
35	DB	58	ILE
35	DB	67	THR
35	DB	68	ILE
35	DB	80	ILE
35	DB	87	ARG
35	DB	94	ASN
35	DB	107	THR
35	DB	108	ILE
35	DB	113	HIS
35	DB	115	LEU
35	DB	117	GLU
35	DB	119	GLU
35	DB	122	PHE
35	DB	128	GLU
35	DB	154	LEU
35	DB	155	LEU
35	DB	157	ARG

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Mol	Chain	Res	Type
35	DB	170	GLU
35	DB	179	LYS
35	DB	185	ILE
35	DB	187	LEU
35	DB	189	ASP
35	DB	210	SER
35	DB	212	GLN
35	DB	217	ARG
35	DB	224	GLN
35	DB	229	VAL
36	DC	3	ASN
36	DC	6	HIS
36	DC	16	ARG
36	DC	26	LYS
36	DC	40	ARG
36	DC	43	LEU
36	DC	47	LEU
36	DC	52	LEU
36	DC	56	ASP
36	DC	63	ASN
36	DC	102	ASN
36	DC	104	GLN
36	DC	105	GLU
36	DC	108	ASN
36	DC	115	LEU
36	DC	120	VAL
36	DC	131	ARG
36	DC	152	ILE
36	DC	178	LEU
36	DC	188	LEU
36	DC	190	ARG
36	DC	191	THR
36	DC	195	VAL
36	DC	202	ILE
36	DC	207	VAL
37	DD	5	ILE
37	DD	8	VAL
37	DD	12	CYS
37	DD	13	ARG
37	DD	19	LEU
37	DD	28	SER
37	DD	31	CYS

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Mol	Chain	Res	Type
37	DD	34	GLU
37	DD	47	ARG
37	DD	57	ARG
37	DD	58	LEU
37	DD	61	LYS
37	DD	65	ARG
37	DD	73	ARG
37	DD	76	ARG
37	DD	83	SER
37	DD	85	LYS
37	DD	91	SER
37	DD	103	ASN
37	DD	115	ARG
37	DD	120	LEU
37	DD	126	ILE
37	DD	127	THR
37	DD	129	ASN
37	DD	132	ARG
37	DD	135	LEU
37	DD	139	ARG
37	DD	140	VAL
37	DD	150	GLU
37	DD	153	ARG
37	DD	155	LEU
37	DD	162	LEU
37	DD	170	VAL
37	DD	187	ARG
37	DD	188	LEU
37	DD	194	LEU
37	DD	208	SER
38	DE	11	ILE
38	DE	24	ARG
38	DE	25	ARG
38	DE	31	LEU
38	DE	41	VAL
38	DE	47	LYS
38	DE	51	VAL
38	DE	55	VAL
38	DE	68	GLU
38	DE	69	VAL
38	DE	71	LEU
38	DE	75	THR

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Mol	Chain	Res	Type
38	DE	78	HIS
38	DE	87	SER
38	DE	89	ILE
38	DE	90	VAL
38	DE	91	LEU
38	DE	107	ARG
38	DE	116	THR
38	DE	135	THR
38	DE	137	GLU
38	DE	150	ARG
39	DF	25	ILE
39	DF	27	GLN
39	DF	28	ARG
39	DF	48	LEU
39	DF	69	GLU
39	DF	70	ASP
39	DF	72	VAL
39	DF	79	LEU
39	DF	82	ARG
39	DF	86	ARG
39	DF	87	ARG
40	DG	8	GLU
40	DG	10	ARG
40	DG	11	GLN
40	DG	24	THR
40	DG	32	ARG
40	DG	41	ARG
40	DG	47	CYS
40	DG	57	GLU
40	DG	67	GLU
40	DG	72	ARG
40	DG	73	MET
40	DG	76	ARG
40	DG	85	TYR
40	DG	87	VAL
40	DG	90	GLU
40	DG	104	LEU
40	DG	114	ARG
40	DG	115	ARG
40	DG	140	ASP
40	DG	153	HIS
40	DG	154	TYR

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Mol	Chain	Res	Type
41	DH	2	LEU
41	DH	21	LYS
41	DH	24	THR
41	DH	25	ASP
41	DH	26	VAL
41	DH	34	GLU
41	DH	37	ARG
41	DH	51	VAL
41	DH	68	ARG
41	DH	78	GLN
41	DH	84	ARG
41	DH	85	ARG
41	DH	91	ARG
41	DH	95	VAL
41	DH	98	LYS
41	DH	99	GLU
41	DH	104	ARG
41	DH	111	ILE
41	DH	112	LEU
41	DH	120	THR
41	DH	133	LEU
41	DH	137	VAL
42	DI	7	THR
42	DI	20	ARG
42	DI	23	ASN
42	DI	27	THR
42	DI	41	VAL
42	DI	53	VAL
42	DI	66	ARG
42	DI	81	ILE
42	DI	92	TYR
42	DI	102	LEU
42	DI	103	THR
42	DI	104	ARG
42	DI	109	VAL
43	DJ	17	ASP
43	DJ	38	ILE
43	DJ	58	ASP
43	DJ	72	VAL
44	DK	28	THR
44	DK	30	VAL
44	DK	33	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	DK	54	ARG
44	DK	96	ARG
44	DK	114	VAL
45	DL	8	ASN
45	DL	24	VAL
45	DL	27	LEU
45	DL	33	ARG
45	DL	38	THR
45	DL	39	VAL
45	DL	47	LYS
45	DL	55	VAL
45	DL	59	ARG
45	DL	83	VAL
45	DL	104	VAL
45	DL	106	ASP
45	DL	113	ARG
45	DL	114	LYS
45	DL	118	SER
46	DM	3	ARG
46	DM	15	VAL
46	DM	29	ARG
46	DM	56	LEU
46	DM	66	LEU
46	DM	70	LEU
46	DM	73	GLU
46	DM	91	ARG
46	DM	103	THR
46	DM	106	ASN
46	DM	108	ARG
46	DM	110	ARG
46	DM	114	ARG
47	DN	12	ARG
47	DN	15	LYS
47	DN	22	THR
47	DN	33	VAL
47	DN	35	ARG
47	DN	41	ARG
47	DN	42	ILE
47	DN	44	LEU
47	DN	58	LYS
48	DO	3	ILE
48	DO	4	THR

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Mol	Chain	Res	Type
48	DO	22	THR
48	DO	26	GLU
48	DO	38	ARG
48	DO	39	LEU
48	DO	48	LYS
48	DO	58	MET
48	DO	66	LEU
48	DO	68	ARG
49	DP	2	VAL
49	DP	4	ILE
49	DP	5	ARG
49	DP	8	ARG
49	DP	11	SER
49	DP	20	VAL
49	DP	21	VAL
49	DP	25	ARG
49	DP	27	LYS
49	DP	60	LEU
49	DP	62	VAL
49	DP	69	THR
50	DQ	6	LEU
50	DQ	13	ASP
50	DQ	37	LYS
50	DQ	50	LYS
50	DQ	52	LYS
50	DQ	69	LYS
50	DQ	70	ARG
50	DQ	72	ARG
50	DQ	76	LEU
51	DR	21	LYS
51	DR	25	THR
51	DR	31	LEU
51	DR	32	ARG
51	DR	37	VAL
51	DR	41	LYS
51	DR	47	THR
51	DR	53	ARG
51	DR	69	THR
51	DR	76	LEU
51	DR	84	LYS
51	DR	85	LEU
52	DS	12	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	DS	15	LEU
52	DS	16	LEU
52	DS	33	THR
52	DS	36	ARG
52	DS	38	SER
52	DS	43	GLU
52	DS	78	ARG
53	DT	8	ARG
53	DT	23	ARG
53	DT	56	MET
53	DT	61	SER
53	DT	72	LEU
53	DT	79	ARG
53	DT	80	ARG
53	DT	84	LEU
57	DZ	-58	LEU
57	DZ	-52	VAL
57	DZ	-44	PRO
57	DZ	-32	LEU
57	DZ	-30	VAL
57	DZ	-29	LEU
57	DZ	-22	LYS
57	DZ	-6	ARG
57	DZ	-3	GLU
57	DZ	6	GLU
57	DZ	9	LEU
57	DZ	10	LYS
57	DZ	14	ASN
57	DZ	15	ILE
57	DZ	21	ILE
57	DZ	22	ASP
57	DZ	28	THR
57	DZ	36	THR
57	DZ	75	LYS
57	DZ	76	ASP
57	DZ	79	ILE
57	DZ	81	ILE
57	DZ	87	HIS
57	DZ	92	ILE
57	DZ	100	VAL
57	DZ	101	LEU
57	DZ	105	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	DZ	111	SER
57	DZ	114	VAL
57	DZ	117	GLN
57	DZ	118	SER
57	DZ	123	ARG
57	DZ	130	VAL
57	DZ	132	ARG
57	DZ	133	ILE
57	DZ	142	THR
57	DZ	146	LEU
57	DZ	157	LEU
57	DZ	165	GLN
57	DZ	170	ARG
57	DZ	181	LEU
57	DZ	182	ARG
57	DZ	184	LYS
57	DZ	186	TYR
57	DZ	187	THR
57	DZ	192	LEU
57	DZ	196	ILE
57	DZ	201	ILE
57	DZ	203	GLU
57	DZ	207	ASP
57	DZ	212	TYR
57	DZ	213	HIS
57	DZ	215	LYS
57	DZ	217	VAL
57	DZ	219	VAL
57	DZ	222	ASP
57	DZ	225	GLU
57	DZ	227	ILE
57	DZ	228	MET
57	DZ	229	LEU
57	DZ	232	LEU
57	DZ	236	GLU
57	DZ	240	GLU
57	DZ	242	LEU
57	DZ	255	ILE
57	DZ	258	VAL
57	DZ	262	SER
57	DZ	279	TYR
57	DZ	284	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	DZ	285	ASP
57	DZ	292	THR
57	DZ	297	GLU
57	DZ	298	VAL
57	DZ	299	VAL
57	DZ	302	HIS
57	DZ	312	LEU
57	DZ	322	VAL
57	DZ	328	ILE
57	DZ	345	THR
57	DZ	352	VAL
57	DZ	355	LEU
57	DZ	357	ARG
57	DZ	361	ASN
57	DZ	363	ARG
57	DZ	364	GLU
57	DZ	368	GLU
57	DZ	377	VAL
57	DZ	385	THR
57	DZ	389	LEU
57	DZ	399	LEU
57	DZ	402	ILE
57	DZ	403	GLU
57	DZ	408	VAL
57	DZ	417	THR
57	DZ	421	GLN
57	DZ	424	LEU
57	DZ	428	LEU
57	DZ	434	GLU
57	DZ	440	VAL
57	DZ	445	GLU
57	DZ	451	ILE
57	DZ	452	SER
57	DZ	457	LEU
57	DZ	461	ILE
57	DZ	466	LEU
57	DZ	468	ARG
57	DZ	480	GLN
57	DZ	487	ILE
57	DZ	494	GLU
57	DZ	506	GLN
57	DZ	512	ILE

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Mol	Chain	Res	Type
57	DZ	523	PHE
57	DZ	542	VAL
57	DZ	561	VAL
57	DZ	571	SER
57	DZ	576	ASP
57	DZ	590	ILE
57	DZ	610	VAL
57	DZ	612	THR
57	DZ	614	GLU
57	DZ	615	GLU
57	DZ	621	ILE
57	DZ	623	ASP
57	DZ	625	ASN
57	DZ	634	MET
57	DZ	639	ASN
57	DZ	643	ILE
57	DZ	649	LEU
57	DZ	651	GLU
57	DZ	657	THR
57	DZ	659	LEU
57	DZ	661	SER
57	DZ	669	PHE
57	DZ	670	VAL
57	DZ	674	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (175) such sidechains are listed below:

Mol	Chain	Res	Type
3	AC	45	HIS
3	AC	67	HIS
3	AC	173	HIS
3	AC	189	ASN
3	AC	200	HIS
4	AD	253	GLN
5	AE	54	GLN
5	AE	85	ASN
6	AF	69	HIS
6	AF	203	GLN
7	AG	26	GLN
10	AL	29	GLN
10	AL	47	ASN
13	AP	38	GLN

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Mol	Chain	Res	Type
17	AT	43	GLN
17	AT	123	GLN
18	AU	81	HIS
18	AU	104	GLN
21	AX	31	HIS
21	AX	82	GLN
22	AY	92	ASN
23	AZ	34	ASN
23	AZ	121	HIS
24	A0	35	ASN
26	A2	38	GLN
27	A3	32	GLN
28	A4	46	GLN
32	A8	35	GLN
33	A9	36	GLN
35	BB	40	HIS
35	BB	76	GLN
36	BC	28	GLN
36	BC	37	GLN
36	BC	69	HIS
36	BC	98	ASN
36	BC	136	GLN
36	BC	181	ASN
37	BD	77	ASN
37	BD	119	GLN
37	BD	123	HIS
37	BD	125	HIS
37	BD	161	ASN
38	BE	38	GLN
38	BE	56	GLN
38	BE	73	ASN
38	BE	141	GLN
39	BF	73	ASN
40	BG	28	ASN
40	BG	86	GLN
42	BI	23	ASN
42	BI	31	GLN
42	BI	73	GLN
42	BI	89	ASN
42	BI	124	GLN
43	BJ	21	GLN
43	BJ	56	HIS

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Mol	Chain	Res	Type
44	BK	93	GLN
44	BK	104	GLN
45	BL	99	HIS
46	BM	12	ASN
47	BN	49	HIS
48	BO	9	GLN
48	BO	13	GLN
48	BO	28	GLN
48	BO	62	GLN
50	BQ	16	GLN
52	BS	65	ASN
52	BS	69	HIS
52	BS	83	HIS
53	BT	26	ASN
53	BT	90	GLN
57	BZ	-50	GLN
57	BZ	-24	ASN
57	BZ	165	GLN
57	BZ	213	HIS
57	BZ	270	GLN
57	BZ	361	ASN
57	BZ	426	GLN
57	BZ	448	GLN
57	BZ	475	ASN
57	BZ	509	HIS
57	BZ	573	HIS
57	BZ	641	GLN
57	BZ	675	HIS
3	CC	67	HIS
3	CC	189	ASN
3	CC	200	HIS
4	CD	87	ASN
4	CD	126	GLN
4	CD	253	GLN
5	CE	85	ASN
5	CE	143	ASN
5	CE	169	ASN
6	CF	29	ASN
6	CF	69	HIS
6	CF	75	HIS
6	CF	133	ASN
6	CF	169	ASN

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Mol	Chain	Res	Type
6	CF	203	GLN
7	CG	40	ASN
7	CG	108	ASN
8	CH	158	HIS
10	CL	30	HIS
10	CL	42	ASN
10	CL	103	GLN
13	CP	38	GLN
14	CQ	57	HIS
14	CQ	89	ASN
15	CR	50	HIS
16	CS	68	GLN
17	CT	43	GLN
17	CT	58	ASN
17	CT	123	GLN
18	CU	72	HIS
19	CV	64	HIS
21	CX	31	HIS
21	CX	82	GLN
22	CY	43	ASN
23	CZ	34	ASN
23	CZ	50	GLN
23	CZ	55	HIS
23	CZ	65	GLN
24	C0	29	GLN
24	C0	50	ASN
26	C2	46	GLN
33	C9	36	GLN
35	DB	45	GLN
35	DB	76	GLN
35	DB	224	GLN
36	DC	104	GLN
36	DC	110	ASN
36	DC	118	GLN
36	DC	123	GLN
37	DD	45	GLN
37	DD	77	ASN
37	DD	123	HIS
37	DD	125	HIS
37	DD	129	ASN
37	DD	160	GLN
38	DE	20	GLN

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Mol	Chain	Res	Type
38	DE	73	ASN
38	DE	130	ASN
39	DF	100	ASN
40	DG	28	ASN
40	DG	51	GLN
40	DG	97	GLN
42	DI	31	GLN
43	DJ	21	GLN
43	DJ	68	HIS
44	DK	93	GLN
44	DK	117	ASN
45	DL	49	ASN
45	DL	75	HIS
45	DL	78	GLN
45	DL	99	HIS
46	DM	77	ASN
46	DM	106	ASN
48	DO	13	GLN
48	DO	28	GLN
50	DQ	16	GLN
52	DS	83	HIS
53	DT	16	HIS
57	DZ	-50	GLN
57	DZ	-24	ASN
57	DZ	77	HIS
57	DZ	117	GLN
57	DZ	266	ASN
57	DZ	270	GLN
57	DZ	302	HIS
57	DZ	361	ASN
57	DZ	362	HIS
57	DZ	421	GLN
57	DZ	480	GLN
57	DZ	506	GLN
57	DZ	641	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	2845/2915 (97%)	527 (18%)	56 (1%)
1	CA	2839/2915 (97%)	579 (20%)	39 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	AB	119/121 (98%)	23 (19%)	0
2	CB	119/121 (98%)	21 (17%)	0
34	BA	1491/1521 (98%)	310 (20%)	22 (1%)
34	DA	1498/1521 (98%)	303 (20%)	24 (1%)
55	BV	6/18 (33%)	1 (16%)	0
55	DV	5/18 (27%)	1 (20%)	0
56	BW	74/76 (97%)	15 (20%)	0
56	BY	71/76 (93%)	23 (32%)	2 (2%)
56	DW	74/76 (97%)	19 (25%)	2 (2%)
56	DY	69/76 (90%)	21 (30%)	1 (1%)
All	All	9210/9454 (97%)	1843 (20%)	146 (1%)

All (1843) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	U
1	AA	12	U
1	AA	13	A
1	AA	34	C
1	AA	45	C
1	AA	56	C
1	AA	62	U
1	AA	68	C
1	AA	70	A
1	AA	73	A
1	AA	74	G
1	AA	77	A
1	AA	83	A
1	AA	95	G
1	AA	116	A
1	AA	117	A
1	AA	118	U
1	AA	119	G
1	AA	120	G
1	AA	123	G
1	AA	129	G
1	AA	131	C
1	AA	146	G
1	AA	149	A
1	AA	170	A
1	AA	171	A
1	AA	185	A

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Mol	Chain	Res	Type
1	AA	188	A
1	AA	189	U
1	AA	190	C
1	AA	194	G
1	AA	202	A
1	AA	203	G
1	AA	204	G
1	AA	205	A
1	AA	208	G
1	AA	211	A
1	AA	214	A
1	AA	217	A
1	AA	218	A
1	AA	222	A
1	AA	237	G
1	AA	239	G
1	AA	254	A
1	AA	265	U
1	AA	269	G
1	AA	271	U
1	AA	272	U
1	AA	273	G
1	AA	274	U
1	AA	275	C
1	AA	276	C
1	AA	279	G
1	AA	289	G
1	AA	295	C
1	AA	296	U
1	AA	299	G
1	AA	303	C
1	AA	311	C
1	AA	334	A
1	AA	335	A
1	AA	348	A
1	AA	349	G
1	AA	353	G
1	AA	354	A
1	AA	358	C
1	AA	376	G
1	AA	387	G
1	AA	397	G

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Mol	Chain	Res	Type
1	AA	407	U
1	AA	413	G
1	AA	423	G
1	AA	431	C
1	AA	434	G
1	AA	438	G
1	AA	439	A
1	AA	455	A
1	AA	464	G
1	AA	469	A
1	AA	470	C
1	AA	474	U
1	AA	477	C
1	AA	482	C
1	AA	483	A
1	AA	496	A
1	AA	501	U
1	AA	502	G
1	AA	507	G
1	AA	511	C
1	AA	512	C
1	AA	519	G
1	AA	529	U
1	AA	530	A
1	AA	534	C
1	AA	535	C
1	AA	543	G
1	AA	553	A
1	AA	554	A
1	AA	555	G
1	AA	556	C
1	AA	557	A
1	AA	558	G
1	AA	573	G
1	AA	574	G
1	AA	579	G
1	AA	586	G
1	AA	596	G
1	AA	597	C
1	AA	598	A
1	AA	609	A
1	AA	610	C

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Mol	Chain	Res	Type
1	AA	626	A
1	AA	627	G
1	AA	630	U
1	AA	638	U
1	AA	639	G
1	AA	641	G
1	AA	659	C
1	AA	662	A
1	AA	671	A
1	AA	697	C
1	AA	698	G
1	AA	702	A
1	AA	703	G
1	AA	716	G
1	AA	724	A
1	AA	725	C
1	AA	733	G
1	AA	777	C
1	AA	787	U
1	AA	811	A
1	AA	812	G
1	AA	821	A
1	AA	822	G
1	AA	823	G
1	AA	829	A
1	AA	831	A
1	AA	832	G
1	AA	837	C
1	AA	839	G
1	AA	852	G
1	AA	859	C
1	AA	874	U
1	AA	875	U
1	AA	906	G
1	AA	913	A
1	AA	914	C
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	933	C
1	AA	934	A
1	AA	935	C

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Mol	Chain	Res	Type
1	AA	936	C
1	AA	937	A
1	AA	938	G
1	AA	939	C
1	AA	940	C
1	AA	942	A
1	AA	943	C
1	AA	945	A
1	AA	953	U
1	AA	954	C
1	AA	956	A
1	AA	967	G
1	AA	968	U
1	AA	977	G
1	AA	986	A
1	AA	990	A
1	AA	991	G
1	AA	992	G
1	AA	1004	A
1	AA	1006	C
1	AA	1019	G
1	AA	1020	C
1	AA	1029	A
1	AA	1036	A
1	AA	1040	C
1	AA	1042	A
1	AA	1048	G
1	AA	1051	C
1	AA	1058	U
1	AA	1059	C
1	AA	1068	G
1	AA	1072	U
1	AA	1073	A
1	AA	1079	U
1	AA	1084	C
1	AA	1087	C
1	AA	1093	G
1	AA	1097	G
1	AA	1099	C
1	AA	1100	A
1	AA	1105	G
1	AA	1107	U

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Mol	Chain	Res	Type
1	AA	1108	G
1	AA	1112	U
1	AA	1116	A
1	AA	1119	A
1	AA	1120	G
1	AA	1121	C
1	AA	1122	C
1	AA	1128	U
1	AA	1129	U
1	AA	1132	A
1	AA	1134	A
1	AA	1135	G
1	AA	1141	A
1	AA	1147	U
1	AA	1155	C
1	AA	1156	G
1	AA	1161	G
1	AA	1195	G
1	AA	1217	G
1	AA	1218	G
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G
1	AA	1222	A
1	AA	1223	C
1	AA	1255	A
1	AA	1256	U
1	AA	1265	A
1	AA	1299	A
1	AA	1302	G
1	AA	1317	G
1	AA	1318	A
1	AA	1319	U
1	AA	1321	A
1	AA	1346	U
1	AA	1347	A
1	AA	1349	G
1	AA	1359	U
1	AA	1367	A
1	AA	1398	U
1	AA	1405	A
1	AA	1406	A

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Mol	Chain	Res	Type
1	AA	1411	A
1	AA	1416	C
1	AA	1422	C
1	AA	1423	G
1	AA	1424	A
1	AA	1426	G
1	AA	1430	A
1	AA	1431	G
1	AA	1432	C
1	AA	1462	G
1	AA	1463	C
1	AA	1466	U
1	AA	1467	G
1	AA	1474	C
1	AA	1477	U
1	AA	1491	A
1	AA	1493	C
1	AA	1496	A
1	AA	1497	G
1	AA	1503	G
1	AA	1506	G
1	AA	1514	C
1	AA	1518	A
1	AA	1529	G
1	AA	1539	C
1	AA	1554	A
1	AA	1555	C
1	AA	1556	A
1	AA	1569	U
1	AA	1578	C
1	AA	1589	A
1	AA	1590	C
1	AA	1605	A
1	AA	1607	G
1	AA	1613	A
1	AA	1616	A
1	AA	1625	U
1	AA	1628	G
1	AA	1629	C
1	AA	1631	C
1	AA	1632	A
1	AA	1652	G

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Mol	Chain	Res	Type
1	AA	1653	C
1	AA	1654	A
1	AA	1655	A
1	AA	1656	A
1	AA	1663	C
1	AA	1671	C
1	AA	1688	A
1	AA	1694	G
1	AA	1695	C
1	AA	1700	G
1	AA	1701	A
1	AA	1721	G
1	AA	1743	G
1	AA	1746	G
1	AA	1747	A
1	AA	1748	A
1	AA	1765	U
1	AA	1766	G
1	AA	1767	A
1	AA	1768	U
1	AA	1769	G
1	AA	1776	G
1	AA	1777	G
1	AA	1787	G
1	AA	1793	A
1	AA	1794	G
1	AA	1795	G
1	AA	1804	A
1	AA	1811	A
1	AA	1812	C
1	AA	1813	C
1	AA	1822	A
1	AA	1831	C
1	AA	1832	G
1	AA	1833	A
1	AA	1845	G
1	AA	1847	G
1	AA	1848	G
1	AA	1851	U
1	AA	1859	G
1	AA	1860	A
1	AA	1870	G

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Mol	Chain	Res	Type
1	AA	1878	A
1	AA	1886	G
1	AA	1889	G
1	AA	1892	G
1	AA	1898	A
1	AA	1911	A
1	AA	1922	A
1	AA	1928	G
1	AA	1937	U
1	AA	1951	G
1	AA	1952	G
1	AA	1953	U
1	AA	1954	A
1	AA	1960	A
1	AA	1966	U
1	AA	1977	U
1	AA	1985	U
1	AA	1986	G
1	AA	1987	C
1	AA	1989	C
1	AA	1992	A
1	AA	1993	A
1	AA	1994	A
1	AA	2010	C
1	AA	2014	G
1	AA	2015	U
1	AA	2018	C
1	AA	2019	G
1	AA	2045	G
1	AA	2052	A
1	AA	2053	A
1	AA	2055	A
1	AA	2061	C
1	AA	2064	A
1	AA	2065	C
1	AA	2071	G
1	AA	2077	C
1	AA	2078	G
1	AA	2082	A
1	AA	2083	G
1	AA	2084	A
1	AA	2091	G

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Mol	Chain	Res	Type
1	AA	2102	G
1	AA	2104	A
1	AA	2122	G
1	AA	2133	C
1	AA	2134	G
1	AA	2135	U
1	AA	2139	A
1	AA	2141	A
1	AA	2149	G
1	AA	2151	C
1	AA	2154	U
1	AA	2155	G
1	AA	2156	A
1	AA	2157	A
1	AA	2158	C
1	AA	2160	C
1	AA	2161	C
1	AA	2162	C
1	AA	2163	G
1	AA	2164	C
1	AA	2167	C
1	AA	2168	C
1	AA	2169	G
1	AA	2172	U
1	AA	2173	G
1	AA	2175	G
1	AA	2178	G
1	AA	2179	G
1	AA	2180	A
1	AA	2181	G
1	AA	2182	G
1	AA	2188	G
1	AA	2189	U
1	AA	2190	G
1	AA	2191	A
1	AA	2192	A
1	AA	2194	U
1	AA	2195	A
1	AA	2197	C
1	AA	2204	G
1	AA	2206	G
1	AA	2210	C

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Mol	Chain	Res	Type
1	AA	2211	U
1	AA	2213	G
1	AA	2214	G
1	AA	2217	C
1	AA	2218	C
1	AA	2220	A
1	AA	2221	A
1	AA	2227	G
1	AA	2228	G
1	AA	2229	A
1	AA	2237	A
1	AA	2280	A
1	AA	2281	A
1	AA	2285	A
1	AA	2287	C
1	AA	2291	G
1	AA	2295	C
1	AA	2298	A
1	AA	2299	A
1	AA	2301	G
1	AA	2307	C
1	AA	2317	A
1	AA	2320	G
1	AA	2324	U
1	AA	2327	G
1	AA	2332	A
1	AA	2337	G
1	AA	2346	G
1	AA	2347	A
1	AA	2348	A
1	AA	2352	G
1	AA	2355	C
1	AA	2356	U
1	AA	2359	C
1	AA	2361	G
1	AA	2362	C
1	AA	2369	U
1	AA	2376	C
1	AA	2377	G
1	AA	2395	G
1	AA	2397	C
1	AA	2418	U

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Mol	Chain	Res	Type
1	AA	2419	G
1	AA	2426	G
1	AA	2434	A
1	AA	2435	U
1	AA	2437	A
1	AA	2440	G
1	AA	2441	G
1	AA	2442	A
1	AA	2445	A
1	AA	2446	A
1	AA	2451	A
1	AA	2453	C
1	AA	2460	A
1	AA	2461	U
1	AA	2482	G
1	AA	2488	A
1	AA	2490	A
1	AA	2503	U
1	AA	2514	G
1	AA	2517	G
1	AA	2518	U
1	AA	2519	C
1	AA	2530	A
1	AA	2541	G
1	AA	2547	G
1	AA	2566	U
1	AA	2567	U
1	AA	2578	A
1	AA	2579	G
1	AA	2584	A
1	AA	2585	C
1	AA	2596	U
1	AA	2597	U
1	AA	2600	G
1	AA	2613	C
1	AA	2614	A
1	AA	2621	U
1	AA	2622	C
1	AA	2623	U
1	AA	2624	C
1	AA	2642	G
1	AA	2653	G

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Mol	Chain	Res	Type
1	AA	2670	C
1	AA	2674	A
1	AA	2681	G
1	AA	2691	A
1	AA	2701	U
1	AA	2702	C
1	AA	2715	C
1	AA	2725	A
1	AA	2726	A
1	AA	2727	G
1	AA	2730	G
1	AA	2738	A
1	AA	2739	U
1	AA	2746	A
1	AA	2757	G
1	AA	2770	A
1	AA	2771	A
1	AA	2778	A
1	AA	2779	G
1	AA	2782	C
1	AA	2791	A
1	AA	2803	A
1	AA	2804	C
1	AA	2807	C
1	AA	2813	G
1	AA	2814	C
1	AA	2818	U
1	AA	2830	A
1	AA	2831	A
1	AA	2843	G
1	AA	2845	A
1	AA	2876	U
1	AA	2882	G
1	AA	2883	A
1	AA	2892	A
1	AA	2902	G
1	AA	2903	G
1	AA	2906	U
2	AB	2	C
2	AB	5	C
2	AB	10	C
2	AB	12	C

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Mol	Chain	Res	Type
2	AB	13	A
2	AB	15	A
2	AB	47	C
2	AB	50	G
2	AB	53	A
2	AB	54	G
2	AB	56	G
2	AB	57	A
2	AB	58	A
2	AB	59	A
2	AB	67	G
2	AB	73	A
2	AB	76	G
2	AB	89	G
2	AB	90	A
2	AB	95	C
2	AB	110	G
2	AB	111	G
2	AB	113	G
34	BA	5	U
34	BA	7	G
34	BA	9	G
34	BA	10	A
34	BA	11	G
34	BA	32	A
34	BA	39	G
34	BA	43	C
34	BA	44	G
34	BA	47	C
34	BA	48	C
34	BA	50	A
34	BA	51	A
34	BA	61	G
34	BA	71	C
34	BA	77	G
34	BA	78	G
34	BA	79	G
34	BA	97	G
34	BA	101	A
34	BA	105	G
34	BA	116	A
34	BA	121	C

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Mol	Chain	Res	Type
34	BA	127	G
34	BA	131	C
34	BA	137	C
34	BA	163	C
34	BA	174	C
34	BA	182	U
34	BA	189(F)	U
34	BA	189(G)	G
34	BA	189(J)	G
34	BA	194	C
34	BA	195	A
34	BA	197	A
34	BA	199	G
34	BA	202	U
34	BA	204	U
34	BA	216	G
34	BA	220	G
34	BA	231	G
34	BA	236	G
34	BA	240	C
34	BA	243	A
34	BA	244	U
34	BA	247	G
34	BA	251	G
34	BA	259	G
34	BA	261	U
34	BA	266	G
34	BA	267	C
34	BA	270	A
34	BA	289	G
34	BA	298	A
34	BA	318	G
34	BA	321	A
34	BA	328	C
34	BA	329	A
34	BA	331	G
34	BA	332	G
34	BA	347	G
34	BA	348	G
34	BA	350	G
34	BA	351	G
34	BA	352	C

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Mol	Chain	Res	Type
34	BA	353	A
34	BA	354	G
34	BA	355	C
34	BA	359	U
34	BA	367	U
34	BA	372	C
34	BA	384	G
34	BA	397	A
34	BA	398	C
34	BA	411	A
34	BA	412	A
34	BA	413	G
34	BA	422	C
34	BA	424	G
34	BA	429	U
34	BA	432	A
34	BA	439	A
34	BA	442	C
34	BA	443	C
34	BA	446	G
34	BA	452	A
34	BA	470	C
34	BA	484	G
34	BA	485	G
34	BA	496	A
34	BA	498	U
34	BA	499	A
34	BA	504	C
34	BA	505	G
34	BA	509	A
34	BA	510	A
34	BA	511	C
34	BA	514	C
34	BA	516	U
34	BA	518	C
34	BA	521	G
34	BA	527	G
34	BA	531	U
34	BA	532	A
34	BA	533	A
34	BA	536	C
34	BA	547	A

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Mol	Chain	Res	Type
34	BA	558	G
34	BA	559	A
34	BA	560	U
34	BA	561	U
34	BA	564	C
34	BA	570	G
34	BA	572	A
34	BA	573	A
34	BA	576	G
34	BA	581	G
34	BA	618	C
34	BA	630	G
34	BA	631	G
34	BA	633	G
34	BA	649	G
34	BA	653	A
34	BA	665	A
34	BA	687	A
34	BA	688	G
34	BA	693	G
34	BA	694	A
34	BA	697	U
34	BA	705	U
34	BA	714	G
34	BA	717	C
34	BA	723	U
34	BA	724	G
34	BA	728	A
34	BA	731	G
34	BA	734	G
34	BA	738	C
34	BA	747	C
34	BA	749	C
34	BA	752	G
34	BA	755	G
34	BA	774	G
34	BA	777	A
34	BA	792	A
34	BA	793	U
34	BA	794	A
34	BA	815	A
34	BA	816	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	BA	817	C
34	BA	828	A
34	BA	829	G
34	BA	840	C
34	BA	841	U
34	BA	848	C
34	BA	851	G
34	BA	859	A
34	BA	870	U
34	BA	872	A
34	BA	874	G
34	BA	902	G
34	BA	905	U
34	BA	910	C
34	BA	913	A
34	BA	914	A
34	BA	922	G
34	BA	923	A
34	BA	926	G
34	BA	927	G
34	BA	934	C
34	BA	936	C
34	BA	941	G
34	BA	942	G
34	BA	960	U
34	BA	961	U
34	BA	964	A
34	BA	968	A
34	BA	969	A
34	BA	971	G
34	BA	973	G
34	BA	974	A
34	BA	975	A
34	BA	976	G
34	BA	977	A
34	BA	992	U
34	BA	993	G
34	BA	1003	G
34	BA	1004	A
34	BA	1005	A
34	BA	1009	G
34	BA	1016	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	BA	1019	C
34	BA	1021	G
34	BA	1022	G
34	BA	1023	G
34	BA	1025	U
34	BA	1026	G
34	BA	1028	C
34	BA	1029	C
34	BA	1030	C
34	BA	1030(A)	G
34	BA	1030(C)	G
34	BA	1031	G
34	BA	1033	G
34	BA	1042	G
34	BA	1045	C
34	BA	1053	G
34	BA	1054	C
34	BA	1055	A
34	BA	1056	U
34	BA	1063	C
34	BA	1065	U
34	BA	1066	C
34	BA	1067	A
34	BA	1068	G
34	BA	1070	U
34	BA	1081	G
34	BA	1086	U
34	BA	1094	G
34	BA	1095	U
34	BA	1101	A
34	BA	1108	G
34	BA	1123	A
34	BA	1124	G
34	BA	1125	U
34	BA	1126	U
34	BA	1130	A
34	BA	1136	U
34	BA	1137	C
34	BA	1139	G
34	BA	1140	C
34	BA	1141	C
34	BA	1146	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	BA	1150	U
34	BA	1152	A
34	BA	1157	A
34	BA	1159	U
34	BA	1165	C
34	BA	1166	G
34	BA	1182	G
34	BA	1183	A
34	BA	1184	G
34	BA	1189	C
34	BA	1190	G
34	BA	1196	U
34	BA	1197	G
34	BA	1200	C
34	BA	1201	A
34	BA	1202	G
34	BA	1213	A
34	BA	1214	C
34	BA	1227	A
34	BA	1228	C
34	BA	1236	A
34	BA	1238	A
34	BA	1240	U
34	BA	1241	G
34	BA	1253	G
34	BA	1256	A
34	BA	1257	U
34	BA	1258	G
34	BA	1260	C
34	BA	1278	U
34	BA	1279	A
34	BA	1280	A
34	BA	1286	A
34	BA	1287	A
34	BA	1299	A
34	BA	1300	G
34	BA	1305	G
34	BA	1320	C
34	BA	1322	C
34	BA	1338	G
34	BA	1340	A
34	BA	1346	A

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Mol	Chain	Res	Type
34	BA	1347	G
34	BA	1353	G
34	BA	1359	C
34	BA	1360	A
34	BA	1363	C
34	BA	1363(A)	A
34	BA	1379	G
34	BA	1389	C
34	BA	1397	C
34	BA	1398	A
34	BA	1400	C
34	BA	1402	C
34	BA	1419	G
34	BA	1442	G
34	BA	1442(A)	G
34	BA	1446	U
34	BA	1447	A
34	BA	1452	C
34	BA	1460	A
34	BA	1468	A
34	BA	1471	G
34	BA	1479	C
34	BA	1487	G
34	BA	1491	G
34	BA	1496	C
34	BA	1497	G
34	BA	1502	A
34	BA	1503	A
34	BA	1504	G
34	BA	1506	U
34	BA	1507	A
34	BA	1517	G
34	BA	1529	G
34	BA	1530	G
34	BA	1531	A
55	BV	13	A
56	BW	8	4SU
56	BW	13	C
56	BW	14	A
56	BW	17	C
56	BW	18	G
56	BW	20	U

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Mol	Chain	Res	Type
56	BW	22	G
56	BW	31	A
56	BW	42	C
56	BW	43	C
56	BW	45	U
56	BW	47	U
56	BW	48	C
56	BW	72	C
56	BW	76	A
56	BY	5	G
56	BY	6	G
56	BY	9	A
56	BY	13	C
56	BY	14	A
56	BY	20	U
56	BY	21	A
56	BY	23	A
56	BY	26	A
56	BY	34	G
56	BY	36	A
56	BY	41	C
56	BY	42	C
56	BY	44	G
56	BY	45	U
56	BY	46	7MG
56	BY	47	U
56	BY	48	C
56	BY	49	C
56	BY	57	G
56	BY	59	U
56	BY	60	U
56	BY	68	C
1	CA	10	G
1	CA	12	U
1	CA	14	A
1	CA	15	G
1	CA	34	C
1	CA	35	G
1	CA	36	G
1	CA	45	C
1	CA	51	G
1	CA	54	G

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Mol	Chain	Res	Type
1	CA	55	G
1	CA	71	A
1	CA	74	A
1	CA	75	G
1	CA	78	A
1	CA	84	A
1	CA	90	U
1	CA	95	G
1	CA	100	G
1	CA	102	G
1	CA	118	A
1	CA	119	A
1	CA	120	U
1	CA	133	C
1	CA	139(A)	G
1	CA	141	A
1	CA	149	A
1	CA	154(A)	C
1	CA	157	U
1	CA	181	A
1	CA	196	A
1	CA	197	A
1	CA	199	A
1	CA	205	G
1	CA	214	G
1	CA	215	G
1	CA	216	A
1	CA	221	A
1	CA	222	A
1	CA	225	A
1	CA	226	G
1	CA	228	A
1	CA	229	A
1	CA	232	G
1	CA	248	G
1	CA	271(A)	A
1	CA	271(I)	G
1	CA	271(K)	U
1	CA	271(L)	U
1	CA	271(M)	G
1	CA	271(P)	C
1	CA	272(A)	U

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Mol	Chain	Res	Type
1	CA	272(B)	G
1	CA	272(J)	C
1	CA	277	C
1	CA	278	A
1	CA	283	A
1	CA	286	C
1	CA	289	A
1	CA	298	G
1	CA	299	A
1	CA	310	A
1	CA	311	A
1	CA	317	G
1	CA	324	A
1	CA	327	G
1	CA	329	G
1	CA	330	A
1	CA	333	G
1	CA	338	G
1	CA	339	U
1	CA	352	G
1	CA	362	U
1	CA	363	G
1	CA	363(C)	G
1	CA	363(E)	U
1	CA	386	G
1	CA	407	G
1	CA	411	G
1	CA	412	A
1	CA	416	C
1	CA	422	A
1	CA	428	A
1	CA	443	A
1	CA	444	C
1	CA	451	C
1	CA	455	C
1	CA	456	C
1	CA	457	A
1	CA	470	A
1	CA	471	A
1	CA	475	U
1	CA	477	A
1	CA	481	G

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Mol	Chain	Res	Type
1	CA	504	U
1	CA	505	A
1	CA	507	A
1	CA	508	G
1	CA	509	C
1	CA	521	G
1	CA	528	A
1	CA	529	A
1	CA	530	G
1	CA	531	C
1	CA	532	A
1	CA	533	G
1	CA	545	G
1	CA	557	U
1	CA	563	G
1	CA	573	G
1	CA	575	A
1	CA	586	A
1	CA	588	U
1	CA	592	G
1	CA	603	A
1	CA	604	G
1	CA	606	U
1	CA	607	U
1	CA	614(A)	U
1	CA	614(B)	G
1	CA	614(C)	A
1	CA	615	G
1	CA	620	G
1	CA	623	G
1	CA	627	A
1	CA	631	A
1	CA	637	A
1	CA	645	C
1	CA	646	A
1	CA	652(B)	A
1	CA	652(C)	G
1	CA	652(U)	G
1	CA	653	A
1	CA	669	G
1	CA	686	G
1	CA	730	C

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Mol	Chain	Res	Type
1	CA	732	C
1	CA	743	G
1	CA	762	U
1	CA	764	A
1	CA	765	G
1	CA	774	A
1	CA	775	G
1	CA	776	G
1	CA	782	A
1	CA	784	A
1	CA	785	G
1	CA	792	G
1	CA	794	G
1	CA	802	A
1	CA	805	G
1	CA	812	C
1	CA	819	A
1	CA	822	U
1	CA	827	U
1	CA	828	U
1	CA	831	G
1	CA	847	U
1	CA	857	C
1	CA	859	G
1	CA	866	A
1	CA	879	G
1	CA	880	G
1	CA	884	C
1	CA	886	C
1	CA	887	A
1	CA	888	C
1	CA	889	C
1	CA	890	A
1	CA	893	C
1	CA	896	A
1	CA	897	C
1	CA	898	C
1	CA	900	A
1	CA	901	A
1	CA	907	U
1	CA	910	A
1	CA	914	C

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Mol	Chain	Res	Type
1	CA	915	C
1	CA	917	A
1	CA	926	A
1	CA	932	G
1	CA	938	G
1	CA	941	A
1	CA	944	G
1	CA	945	A
1	CA	946	G
1	CA	958	U
1	CA	959	A
1	CA	961	C
1	CA	974	G
1	CA	975	C
1	CA	983	A
1	CA	996	A
1	CA	1005	C
1	CA	1009	A
1	CA	1012	U
1	CA	1013	C
1	CA	1018	C
1	CA	1020	A
1	CA	1022	G
1	CA	1025	G
1	CA	1027	A
1	CA	1033	U
1	CA	1038	C
1	CA	1039	G
1	CA	1041	C
1	CA	1042	G
1	CA	1046	A
1	CA	1047	G
1	CA	1048	A
1	CA	1049	C
1	CA	1050	A
1	CA	1055	G
1	CA	1057	A
1	CA	1058	G
1	CA	1060	U
1	CA	1061	U
1	CA	1062	G
1	CA	1070	A

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Mol	Chain	Res	Type
1	CA	1073	A
1	CA	1075	C
1	CA	1076	C
1	CA	1079	C
1	CA	1083	U
1	CA	1088	A
1	CA	1090	U
1	CA	1101	U
1	CA	1106	G
1	CA	1110	G
1	CA	1111	A
1	CA	1112	G
1	CA	1114	G
1	CA	1116	C
1	CA	1144	G
1	CA	1149	G
1	CA	1171	G
1	CA	1180	C
1	CA	1188	U
1	CA	1205	U
1	CA	1220	A
1	CA	1221	C
1	CA	1223	G
1	CA	1229	G
1	CA	1236	G
1	CA	1241	A
1	CA	1248	G
1	CA	1250	G
1	CA	1253	A
1	CA	1256	G
1	CA	1268	A
1	CA	1269	A
1	CA	1271	G
1	CA	1272	A
1	CA	1287	A
1	CA	1300	U
1	CA	1301	A
1	CA	1305	C
1	CA	1314	C
1	CA	1321	A
1	CA	1342	A
1	CA	1348	G

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Mol	Chain	Res	Type
1	CA	1351	C
1	CA	1359	A
1	CA	1360	A
1	CA	1365	A
1	CA	1368	G
1	CA	1370	C
1	CA	1384	A
1	CA	1385	G
1	CA	1388	G
1	CA	1390	U
1	CA	1416	G
1	CA	1417	C
1	CA	1419	A
1	CA	1420	U
1	CA	1421	G
1	CA	1422	G
1	CA	1426	G
1	CA	1427	A
1	CA	1428	C
1	CA	1437	C
1	CA	1445	A
1	CA	1449	A
1	CA	1450	G
1	CA	1452	A
1	CA	1455	G
1	CA	1459	G
1	CA	1460	A
1	CA	1461	G
1	CA	1467	C
1	CA	1471	A
1	CA	1473	G
1	CA	1482	G
1	CA	1489	U
1	CA	1490	A
1	CA	1493	C
1	CA	1496	A
1	CA	1497	U
1	CA	1509	C
1	CA	1509(A)	A
1	CA	1525	G
1	CA	1531	C
1	CA	1542	A

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Mol	Chain	Res	Type
1	CA	1543	C
1	CA	1544	A
1	CA	1547	C
1	CA	1558	A
1	CA	1559	G
1	CA	1560	G
1	CA	1566	A
1	CA	1569	A
1	CA	1578	U
1	CA	1580	A
1	CA	1583	A
1	CA	1584	C
1	CA	1586	A
1	CA	1608	A
1	CA	1609	A
1	CA	1612	C
1	CA	1640	C
1	CA	1647	G
1	CA	1648	C
1	CA	1653	G
1	CA	1654	A
1	CA	1670	C
1	CA	1674	G
1	CA	1675	C
1	CA	1682	G
1	CA	1696	G
1	CA	1700	A
1	CA	1701	A
1	CA	1703	G
1	CA	1722	A
1	CA	1742	G
1	CA	1746	G
1	CA	1756	G
1	CA	1758	G
1	CA	1762	A
1	CA	1763	G
1	CA	1764	G
1	CA	1769	G
1	CA	1773	A
1	CA	1774	C
1	CA	1780	A
1	CA	1782	C

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Mol	Chain	Res	Type
1	CA	1791	A
1	CA	1800	C
1	CA	1801	G
1	CA	1816	G
1	CA	1829	A
1	CA	1835	G
1	CA	1847	A
1	CA	1848	A
1	CA	1859	A
1	CA	1877	A
1	CA	1878	G
1	CA	1886	C
1	CA	1900	A
1	CA	1906	G
1	CA	1913	A
1	CA	1914	C
1	CA	1929	G
1	CA	1930	G
1	CA	1934	C
1	CA	1937	A
1	CA	1938	A
1	CA	1955	U
1	CA	1962	C
1	CA	1963	U
1	CA	1967	C
1	CA	1970	A
1	CA	1971	A
1	CA	1972	A
1	CA	1984	G
1	CA	1992	G
1	CA	1993	U
1	CA	1994	C
1	CA	1997	G
1	CA	2020	A
1	CA	2023	G
1	CA	2027	G
1	CA	2030	A
1	CA	2031	A
1	CA	2032	G
1	CA	2033	A
1	CA	2043	C
1	CA	2046	G

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Mol	Chain	Res	Type
1	CA	2052	G
1	CA	2055	C
1	CA	2056	G
1	CA	2060	A
1	CA	2061	G
1	CA	2062	A
1	CA	2069	G
1	CA	2082	A
1	CA	2099	U
1	CA	2102	U
1	CA	2105	C
1	CA	2106	G
1	CA	2110	G
1	CA	2111	C
1	CA	2113	U
1	CA	2115	G
1	CA	2116	G
1	CA	2117	A
1	CA	2119	A
1	CA	2122	U
1	CA	2125	G
1	CA	2126	A
1	CA	2127	G
1	CA	2129	C
1	CA	2131	G
1	CA	2132	U
1	CA	2133	G
1	CA	2134	A
1	CA	2135	A
1	CA	2136	C
1	CA	2137	C
1	CA	2142	C
1	CA	2144	U
1	CA	2146	C
1	CA	2150	U
1	CA	2153	G
1	CA	2154	G
1	CA	2157	G
1	CA	2158	A
1	CA	2162	G
1	CA	2164	C
1	CA	2165	G

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Mol	Chain	Res	Type
1	CA	2167	U
1	CA	2168	G
1	CA	2169	A
1	CA	2172	U
1	CA	2175	C
1	CA	2178	C
1	CA	2181	G
1	CA	2184	G
1	CA	2185	C
1	CA	2186	G
1	CA	2188	C
1	CA	2189	U
1	CA	2190	G
1	CA	2192	G
1	CA	2195	C
1	CA	2198	A
1	CA	2206	G
1	CA	2207	G
1	CA	2208	A
1	CA	2218	U
1	CA	2225	A
1	CA	2238	G
1	CA	2240	C
1	CA	2256	G
1	CA	2268	A
1	CA	2273	A
1	CA	2275	C
1	CA	2278	A
1	CA	2283	C
1	CA	2287	A
1	CA	2288	A
1	CA	2289	G
1	CA	2305	A
1	CA	2306	C
1	CA	2308	G
1	CA	2312	U
1	CA	2318	G
1	CA	2319	G
1	CA	2320	A
1	CA	2325	G
1	CA	2327	A
1	CA	2334	G

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Mol	Chain	Res	Type
1	CA	2336	A
1	CA	2343	C
1	CA	2347	C
1	CA	2350	C
1	CA	2353	G
1	CA	2354	G
1	CA	2383	G
1	CA	2385	C
1	CA	2406	U
1	CA	2410	G
1	CA	2422	A
1	CA	2423	U
1	CA	2425	A
1	CA	2428	G
1	CA	2429	G
1	CA	2430	A
1	CA	2432	A
1	CA	2434	A
1	CA	2435	A
1	CA	2439	A
1	CA	2440	C
1	CA	2441	C
1	CA	2448	A
1	CA	2459	A
1	CA	2460	U
1	CA	2465	C
1	CA	2468	G
1	CA	2474	C
1	CA	2476	A
1	CA	2502	G
1	CA	2505	G
1	CA	2506	U
1	CA	2507	C
1	CA	2518	A
1	CA	2520	C
1	CA	2525	G
1	CA	2529	G
1	CA	2531	A
1	CA	2533	A
1	CA	2554	U
1	CA	2556	C
1	CA	2562	U

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Mol	Chain	Res	Type
1	CA	2564	A
1	CA	2566	A
1	CA	2567	G
1	CA	2573	C
1	CA	2579	C
1	CA	2582	G
1	CA	2596	U
1	CA	2602	A
1	CA	2609	U
1	CA	2610	C
1	CA	2611	U
1	CA	2612	C
1	CA	2621	A
1	CA	2630	G
1	CA	2632	A
1	CA	2634	G
1	CA	2647	U
1	CA	2653	U
1	CA	2654	A
1	CA	2663	G
1	CA	2673	G
1	CA	2674	G
1	CA	2689	U
1	CA	2690	C
1	CA	2699	C
1	CA	2702	U
1	CA	2712(A)	A
1	CA	2713	A
1	CA	2720	U
1	CA	2721	A
1	CA	2726	U
1	CA	2727	G
1	CA	2733	A
1	CA	2745	C
1	CA	2748	A
1	CA	2751	G
1	CA	2757	A
1	CA	2758	A
1	CA	2760	C
1	CA	2765	A
1	CA	2766	G
1	CA	2767	C

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Mol	Chain	Res	Type
1	CA	2775	A
1	CA	2778	A
1	CA	2802	G
1	CA	2803	C
1	CA	2807	G
1	CA	2809	A
1	CA	2810	A
1	CA	2818	G
1	CA	2820	A
1	CA	2821	A
1	CA	2833	G
1	CA	2835	A
1	CA	2839	G
1	CA	2872	G
1	CA	2874	C
1	CA	2875	C
1	CA	2877	G
1	CA	2879	C
1	CA	2892	A
1	CA	2893	G
1	CA	2894	G
1	CA	2896	C
1	CA	2897	U
2	CB	2	C
2	CB	5	C
2	CB	7	G
2	CB	12	C
2	CB	13	A
2	CB	15	A
2	CB	20	C
2	CB	21	G
2	CB	32	C
2	CB	34	U
2	CB	42	C
2	CB	52	A
2	CB	53	A
2	CB	56	G
2	CB	67	G
2	CB	73	A
2	CB	85	G
2	CB	94	C
2	CB	110	G

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Mol	Chain	Res	Type
2	CB	116	G
2	CB	118	G
34	DA	5	U
34	DA	9	G
34	DA	30	U
34	DA	32	A
34	DA	39	G
34	DA	47	C
34	DA	48	C
34	DA	49	U
34	DA	51	A
34	DA	54	C
34	DA	62	U
34	DA	73	G
34	DA	80	G
34	DA	89	C
34	DA	97	G
34	DA	101	A
34	DA	116	A
34	DA	121	C
34	DA	131	C
34	DA	143	A
34	DA	163	C
34	DA	174	C
34	DA	182	U
34	DA	189(E)	U
34	DA	195	A
34	DA	197	A
34	DA	201	C
34	DA	203	U
34	DA	204	U
34	DA	216	G
34	DA	231	G
34	DA	243	A
34	DA	245	C
34	DA	247	G
34	DA	251	G
34	DA	252	U
34	DA	258	G
34	DA	266	G
34	DA	267	C
34	DA	269	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DA	281	G
34	DA	289	G
34	DA	290	C
34	DA	298	A
34	DA	301	G
34	DA	306	G
34	DA	308	C
34	DA	318	G
34	DA	328	C
34	DA	329	A
34	DA	332	G
34	DA	341	C
34	DA	342	C
34	DA	343	U
34	DA	344	A
34	DA	346	G
34	DA	347	G
34	DA	351	G
34	DA	352	C
34	DA	353	A
34	DA	354	G
34	DA	367	U
34	DA	372	C
34	DA	373	A
34	DA	382	A
34	DA	384	G
34	DA	398	C
34	DA	406	G
34	DA	412	A
34	DA	413	G
34	DA	424	G
34	DA	429	U
34	DA	430	A
34	DA	439	A
34	DA	442	C
34	DA	443	C
34	DA	452	A
34	DA	485	G
34	DA	496	A
34	DA	498	U
34	DA	499	A
34	DA	500	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DA	505	G
34	DA	509	A
34	DA	510	A
34	DA	511	C
34	DA	518	C
34	DA	527	G
34	DA	531	U
34	DA	532	A
34	DA	533	A
34	DA	536	C
34	DA	545	C
34	DA	547	A
34	DA	559	A
34	DA	560	U
34	DA	561	U
34	DA	562	C
34	DA	564	C
34	DA	567	G
34	DA	572	A
34	DA	573	A
34	DA	576	G
34	DA	577	G
34	DA	581	G
34	DA	592	G
34	DA	596	C
34	DA	600	C
34	DA	601	C
34	DA	619	U
34	DA	630	G
34	DA	632	A
34	DA	651	C
34	DA	653	A
34	DA	665	A
34	DA	675	A
34	DA	687	A
34	DA	688	G
34	DA	693	G
34	DA	695	A
34	DA	698	G
34	DA	702	A
34	DA	717	C
34	DA	721	G

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Mol	Chain	Res	Type
34	DA	723	U
34	DA	728	A
34	DA	731	G
34	DA	749	C
34	DA	755	G
34	DA	766	A
34	DA	768	A
34	DA	774	G
34	DA	777	A
34	DA	788	U
34	DA	792	A
34	DA	793	U
34	DA	794	A
34	DA	816	A
34	DA	817	C
34	DA	821	G
34	DA	825	G
34	DA	827	U
34	DA	828	A
34	DA	829	G
34	DA	834	C
34	DA	840	C
34	DA	841	U
34	DA	848	C
34	DA	851	G
34	DA	859	A
34	DA	873	A
34	DA	874	G
34	DA	876	G
34	DA	880	C
34	DA	884	U
34	DA	887	G
34	DA	902	G
34	DA	913	A
34	DA	914	A
34	DA	916	G
34	DA	922	G
34	DA	926	G
34	DA	927	G
34	DA	934	C
34	DA	935	A
34	DA	936	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DA	959	A
34	DA	961	U
34	DA	966	G
34	DA	968	A
34	DA	969	A
34	DA	971	G
34	DA	974	A
34	DA	975	A
34	DA	976	G
34	DA	977	A
34	DA	981	U
34	DA	989	C
34	DA	992	U
34	DA	993	G
34	DA	999	C
34	DA	1003	G
34	DA	1005	A
34	DA	1006	C
34	DA	1007	C
34	DA	1016	A
34	DA	1017	G
34	DA	1022	G
34	DA	1025	U
34	DA	1026	G
34	DA	1027	C
34	DA	1028	C
34	DA	1030	C
34	DA	1030(A)	G
34	DA	1030(B)	C
34	DA	1033	G
34	DA	1064	G
34	DA	1065	U
34	DA	1066	C
34	DA	1067	A
34	DA	1081	G
34	DA	1094	G
34	DA	1095	U
34	DA	1097	C
34	DA	1101	A
34	DA	1105	A
34	DA	1117	G
34	DA	1121	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DA	1122	U
34	DA	1125	U
34	DA	1127	G
34	DA	1130	A
34	DA	1136	U
34	DA	1137	C
34	DA	1138	G
34	DA	1139	G
34	DA	1140	C
34	DA	1146	A
34	DA	1152	A
34	DA	1154	G
34	DA	1155	G
34	DA	1159	U
34	DA	1161	C
34	DA	1164	G
34	DA	1166	G
34	DA	1181	G
34	DA	1183	A
34	DA	1184	G
34	DA	1190	G
34	DA	1193	G
34	DA	1195	C
34	DA	1196	U
34	DA	1197	G
34	DA	1201	A
34	DA	1202	G
34	DA	1211	U
34	DA	1212	U
34	DA	1213	A
34	DA	1214	C
34	DA	1220	G
34	DA	1225	A
34	DA	1227	A
34	DA	1228	C
34	DA	1236	A
34	DA	1238	A
34	DA	1240	U
34	DA	1241	G
34	DA	1249	C
34	DA	1252	A
34	DA	1253	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DA	1254	C
34	DA	1256	A
34	DA	1257	U
34	DA	1258	G
34	DA	1261	A
34	DA	1279	A
34	DA	1280	A
34	DA	1281	U
34	DA	1282	C
34	DA	1285	A
34	DA	1286	A
34	DA	1287	A
34	DA	1297	C
34	DA	1298	C
34	DA	1301	U
34	DA	1305	G
34	DA	1320	C
34	DA	1322	C
34	DA	1326	C
34	DA	1340	A
34	DA	1346	A
34	DA	1347	G
34	DA	1355	G
34	DA	1360	A
34	DA	1363	C
34	DA	1363(A)	A
34	DA	1364	U
34	DA	1368	G
34	DA	1381	U
34	DA	1397	C
34	DA	1398	A
34	DA	1401	G
34	DA	1419	G
34	DA	1442	G
34	DA	1442(A)	G
34	DA	1442(B)	A
34	DA	1446	U
34	DA	1447	A
34	DA	1452	C
34	DA	1456	G
34	DA	1469	G
34	DA	1487	G

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Mol	Chain	Res	Type
34	DA	1497	G
34	DA	1503	A
34	DA	1504	G
34	DA	1506	U
34	DA	1517	G
34	DA	1520	G
34	DA	1525	G
34	DA	1529	G
34	DA	1530	G
34	DA	1531	A
34	DA	1532	U
55	DV	14	A
56	DW	8	4SU
56	DW	14	A
56	DW	16	U
56	DW	17	C
56	DW	18	G
56	DW	19	G
56	DW	20	U
56	DW	21	A
56	DW	40	C
56	DW	41	C
56	DW	43	C
56	DW	45	U
56	DW	46	7MG
56	DW	47	U
56	DW	48	C
56	DW	49	C
56	DW	62	C
56	DW	73	A
56	DW	76	A
56	DY	9	A
56	DY	13	C
56	DY	14	A
56	DY	19	G
56	DY	26	A
56	DY	33	U
56	DY	34	G
56	DY	39	PSU
56	DY	45	U
56	DY	46	7MG
56	DY	47	U

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Mol	Chain	Res	Type
56	DY	48	C
56	DY	49	C
56	DY	52	G
56	DY	54	5MU
56	DY	55	PSU
56	DY	57	G
56	DY	58	A
56	DY	59	U
56	DY	65	G
56	DY	70	G

All (146) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	184	A
1	AA	185	A
1	AA	188	A
1	AA	204	G
1	AA	210	A
1	AA	238	C
1	AA	302	A
1	AA	334	A
1	AA	528	A
1	AA	572	A
1	AA	596	G
1	AA	645	G
1	AA	716	G
1	AA	732	A
1	AA	793	A
1	AA	811	A
1	AA	821	A
1	AA	823	G
1	AA	837	C
1	AA	906	G
1	AA	990	A
1	AA	1019	G
1	AA	1057	G
1	AA	1072	U
1	AA	1098	C
1	AA	1154	U
1	AA	1188	A
1	AA	1219	A

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Mol	Chain	Res	Type
1	AA	1220	U
1	AA	1221	G
1	AA	1255	A
1	AA	1425	A
1	AA	1442	U
1	AA	1466	U
1	AA	1654	A
1	AA	1655	A
1	AA	1700	G
1	AA	1793	A
1	AA	1811	A
1	AA	2014	G
1	AA	2019	G
1	AA	2203	G
1	AA	2209	G
1	AA	2227	G
1	AA	2287	C
1	AA	2347	A
1	AA	2358	A
1	AA	2418	U
1	AA	2434	A
1	AA	2451	A
1	AA	2459	G
1	AA	2518	U
1	AA	2623	U
1	AA	2701	U
1	AA	2769	U
1	AA	2902	G
34	BA	115	G
34	BA	243	A
34	BA	250	A
34	BA	266	G
34	BA	347	G
34	BA	509	A
34	BA	510	A
34	BA	530	G
34	BA	560	U
34	BA	687	A
34	BA	748	C
34	BA	793	U
34	BA	839	U
34	BA	884	U

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Mol	Chain	Res	Type
34	BA	913	A
34	BA	991	U
34	BA	1065	U
34	BA	1067	A
34	BA	1165	C
34	BA	1201	A
34	BA	1285	A
34	BA	1442	G
56	BY	19	G
56	BY	58	A
1	CA	27	G
1	CA	195	A
1	CA	196	A
1	CA	271(K)	U
1	CA	277	C
1	CA	310	A
1	CA	503	A
1	CA	645	C
1	CA	685	A
1	CA	746	A
1	CA	764	A
1	CA	774	A
1	CA	776	G
1	CA	830	G
1	CA	856	C
1	CA	900	A
1	CA	974	G
1	CA	1026	U
1	CA	1057	A
1	CA	1240	U
1	CA	1300	U
1	CA	1379	A
1	CA	1420	U
1	CA	1427	A
1	CA	1558	A
1	CA	1608	A
1	CA	1653	G
1	CA	1913	A
1	CA	1992	G
1	CA	1997	G
1	CA	2110	G
1	CA	2288	A

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Mol	Chain	Res	Type
1	CA	2318	G
1	CA	2406	U
1	CA	2439	A
1	CA	2566	A
1	CA	2689	U
1	CA	2726	U
1	CA	2756	U
34	DA	115	G
34	DA	119	A
34	DA	251	G
34	DA	266	G
34	DA	428	G
34	DA	429	U
34	DA	499	A
34	DA	509	A
34	DA	535	A
34	DA	560	U
34	DA	687	A
34	DA	748	C
34	DA	793	U
34	DA	840	C
34	DA	873	A
34	DA	884	U
34	DA	913	A
34	DA	991	U
34	DA	1064	G
34	DA	1065	U
34	DA	1183	A
34	DA	1201	A
34	DA	1279	A
34	DA	1442	G
56	DW	13	C
56	DW	45	U
56	DY	46	7MG

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

28 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$
56	PSU	BW	32	56	13,21,22	0.78	1 (7%)	18,30,33	3.92	6 (33%)
56	MIA	BW	37	56	21,31,32	1.84	3 (14%)	26,44,47	3.07	7 (26%)
56	PSU	BW	39	56	13,21,22	1.68	1 (7%)	18,30,33	3.33	6 (33%)
56	7MG	BW	46	56	19,26,27	0.86	1 (5%)	24,39,42	3.18	7 (29%)
56	5MU	BW	54	56	12,22,23	0.48	0	14,32,35	2.03	2 (14%)
56	PSU	BW	55	56	13,21,22	1.25	1 (7%)	18,30,33	3.62	6 (33%)
56	4SU	BW	8	56	11,21,22	1.14	1 (9%)	13,30,33	1.24	1 (7%)
56	PSU	BY	32	56	13,21,22	0.92	1 (7%)	18,30,33	3.39	5 (27%)
56	MIA	BY	37	56	15,24,32	1.27	2 (13%)	16,35,47	2.16	2 (12%)
56	PSU	BY	39	56	13,21,22	1.09	1 (7%)	18,30,33	3.46	6 (33%)
56	7MG	BY	46	56	19,26,27	1.00	1 (5%)	24,39,42	3.05	6 (25%)
56	5MU	BY	54	56	12,22,23	0.34	0	14,32,35	2.40	2 (14%)
56	PSU	BY	55	56	13,21,22	1.12	1 (7%)	18,30,33	3.33	6 (33%)
56	4SU	BY	8	56	11,21,22	1.17	1 (9%)	13,30,33	1.52	2 (15%)
56	PSU	DW	32	56	13,21,22	0.60	0	18,30,33	4.03	7 (38%)
56	MIA	DW	37	56	21,31,32	2.02	2 (9%)	26,44,47	1.20	3 (11%)
56	PSU	DW	39	56	13,21,22	1.19	1 (7%)	18,30,33	3.44	7 (38%)
56	7MG	DW	46	56	19,26,27	0.94	1 (5%)	24,39,42	3.04	6 (25%)
56	5MU	DW	54	56	12,22,23	0.54	0	14,32,35	2.23	2 (14%)
56	PSU	DW	55	56	13,21,22	0.96	1 (7%)	18,30,33	3.57	6 (33%)
56	4SU	DW	8	56	11,21,22	1.23	1 (9%)	13,30,33	1.45	1 (7%)
56	PSU	DY	32	56	13,21,22	1.00	1 (7%)	18,30,33	3.45	6 (33%)
56	MIA	DY	37	56	15,24,32	1.17	2 (13%)	16,35,47	2.08	2 (12%)
56	PSU	DY	39	56	13,21,22	1.21	1 (7%)	18,30,33	3.35	5 (27%)
56	7MG	DY	46	56	19,26,27	1.06	2 (10%)	24,39,42	3.24	8 (33%)
56	5MU	DY	54	56	12,22,23	0.37	0	14,32,35	2.31	2 (14%)
56	PSU	DY	55	56	13,21,22	1.19	1 (7%)	18,30,33	3.34	6 (33%)
56	4SU	DY	8	56	11,21,22	1.28	1 (9%)	13,30,33	1.31	1 (7%)

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
56	PSU	BW	32	56	-	0/7/25/26	0/2/2/2
56	MIA	BW	37	56	-	0/11/33/34	0/3/3/3
56	PSU	BW	39	56	-	0/7/25/26	0/2/2/2
56	7MG	BW	46	56	-	0/7/37/38	0/3/3/3
56	5MU	BW	54	56	-	0/3/25/26	0/2/2/2
56	PSU	BW	55	56	-	0/7/25/26	0/2/2/2
56	4SU	BW	8	56	-	0/3/25/26	0/2/2/2
56	PSU	BY	32	56	-	0/7/25/26	0/2/2/2
56	MIA	BY	37	56	-	0/3/25/34	0/3/3/3
56	PSU	BY	39	56	-	0/7/25/26	0/2/2/2
56	7MG	BY	46	56	-	0/7/37/38	0/3/3/3
56	5MU	BY	54	56	-	0/3/25/26	0/2/2/2
56	PSU	BY	55	56	-	0/7/25/26	0/2/2/2
56	4SU	BY	8	56	-	0/3/25/26	0/2/2/2
56	PSU	DW	32	56	-	0/7/25/26	0/2/2/2
56	MIA	DW	37	56	-	0/11/33/34	0/3/3/3
56	PSU	DW	39	56	-	0/7/25/26	0/2/2/2
56	7MG	DW	46	56	-	0/7/37/38	0/3/3/3
56	5MU	DW	54	56	-	0/3/25/26	0/2/2/2
56	PSU	DW	55	56	-	0/7/25/26	0/2/2/2
56	4SU	DW	8	56	-	0/3/25/26	0/2/2/2
56	PSU	DY	32	56	-	0/7/25/26	0/2/2/2
56	MIA	DY	37	56	-	0/3/25/34	0/3/3/3
56	PSU	DY	39	56	-	0/7/25/26	0/2/2/2
56	7MG	DY	46	56	-	0/7/37/38	0/3/3/3
56	5MU	DY	54	56	-	0/3/25/26	0/2/2/2
56	PSU	DY	55	56	-	0/7/25/26	0/2/2/2
56	4SU	DY	8	56	-	0/3/25/26	0/2/2/2

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DW	37	MIA	C2-S10	-7.86	1.69	1.75
56	BW	37	MIA	C2-S10	-7.15	1.69	1.75
56	BW	39	PSU	C5-C1'	-5.69	1.47	1.52
56	BW	55	PSU	C5-C1'	-3.98	1.48	1.52
56	DY	8	4SU	C4-S4	-3.81	1.60	1.67
56	DY	55	PSU	C5-C1'	-3.70	1.49	1.52
56	DW	39	PSU	C5-C1'	-3.67	1.49	1.52
56	DW	8	4SU	C4-S4	-3.53	1.60	1.67
56	BY	8	4SU	C4-S4	-3.51	1.60	1.67
56	BY	55	PSU	C5-C1'	-3.47	1.49	1.52
56	BW	8	4SU	C4-S4	-3.42	1.60	1.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DY	39	PSU	C5-C1'	-3.41	1.49	1.52
56	BY	39	PSU	C5-C1'	-3.28	1.49	1.52
56	DY	32	PSU	C5-C1'	-2.91	1.49	1.52
56	DW	55	PSU	C5-C1'	-2.73	1.49	1.52
56	BY	32	PSU	C5-C1'	-2.55	1.50	1.52
56	BW	32	PSU	C5-C1'	-2.07	1.50	1.52
56	DY	46	7MG	CM7-N7	2.19	1.49	1.46
56	BW	37	MIA	C6-N1	2.24	1.36	1.33
56	DY	37	MIA	C2-N3	2.24	1.36	1.32
56	BY	37	MIA	C2-N3	2.33	1.36	1.32
56	BW	46	7MG	C5-C4	2.59	1.46	1.39
56	BW	37	MIA	C5-C4	2.67	1.46	1.40
56	BY	46	7MG	C5-C4	3.01	1.47	1.39
56	DY	46	7MG	C5-C4	3.05	1.47	1.39
56	DW	46	7MG	C5-C4	3.11	1.47	1.39
56	DW	37	MIA	C5-C4	3.27	1.47	1.40
56	DY	37	MIA	C5-C4	3.34	1.48	1.40
56	BY	37	MIA	C5-C4	3.60	1.48	1.40

All (126) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BW	37	MIA	C11-S10-C2	-13.56	93.56	102.26
56	DW	32	PSU	N1-C2-N3	-13.22	119.90	128.33
56	BW	32	PSU	N1-C2-N3	-13.10	119.97	128.33
56	BW	55	PSU	N1-C2-N3	-11.55	120.97	128.33
56	DW	55	PSU	N1-C2-N3	-11.33	121.10	128.33
56	DY	32	PSU	N1-C2-N3	-11.13	121.23	128.33
56	BY	39	PSU	N1-C2-N3	-10.85	121.41	128.33
56	BY	32	PSU	N1-C2-N3	-10.81	121.44	128.33
56	DY	39	PSU	N1-C2-N3	-10.58	121.58	128.33
56	DY	55	PSU	N1-C2-N3	-10.51	121.63	128.33
56	DW	39	PSU	N1-C2-N3	-10.49	121.64	128.33
56	BY	55	PSU	N1-C2-N3	-10.45	121.67	128.33
56	BW	46	7MG	C5-C4-N3	-10.41	116.67	126.82
56	BW	39	PSU	N1-C2-N3	-10.31	121.76	128.33
56	DY	46	7MG	C5-C4-N3	-9.69	117.37	126.82
56	BY	46	7MG	C5-C4-N3	-9.31	117.75	126.82
56	DW	46	7MG	C5-C4-N3	-9.14	117.91	126.82
56	BY	37	MIA	N3-C2-N1	-7.36	123.26	128.89
56	DY	37	MIA	N3-C2-N1	-7.12	123.44	128.89
56	BY	54	5MU	C5-C4-N3	-5.75	118.73	125.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DY	54	5MU	C5-C4-N3	-5.43	119.09	125.14
56	DW	54	5MU	C5-C4-N3	-5.23	119.31	125.14
56	DW	46	7MG	C5-C6-N1	-5.08	115.65	123.46
56	DY	46	7MG	C5-C6-N1	-4.96	115.83	123.46
56	BY	8	4SU	C5-C4-N3	-4.91	118.82	123.63
56	DW	8	4SU	C5-C4-N3	-4.89	118.84	123.63
56	BY	46	7MG	C5-C6-N1	-4.79	116.10	123.46
56	BW	54	5MU	C5-C4-N3	-4.28	120.37	125.14
56	BW	37	MIA	C4-C5-N7	-4.24	105.58	109.48
56	BW	32	PSU	C5-C6-N1	-4.17	118.51	124.39
56	DW	39	PSU	C5-C6-N1	-4.02	118.72	124.39
56	DY	8	4SU	C5-C4-N3	-3.98	119.73	123.63
56	BW	39	PSU	C5-C6-N1	-3.96	118.80	124.39
56	BW	46	7MG	C5-C6-N1	-3.81	117.59	123.46
56	BW	32	PSU	C5-C1'-C2'	-3.78	108.82	115.52
56	BW	55	PSU	C5-C6-N1	-3.74	119.12	124.39
56	DW	39	PSU	C5-C1'-C2'	-3.65	109.03	115.52
56	DW	55	PSU	C5-C6-N1	-3.56	119.37	124.39
56	DY	55	PSU	C5-C6-N1	-3.53	119.41	124.39
56	BY	37	MIA	C4-C5-N7	-3.52	106.24	109.48
56	DW	32	PSU	C5-C1'-C2'	-3.41	109.46	115.52
56	BW	8	4SU	C5-C4-N3	-3.41	120.29	123.63
56	BY	32	PSU	C5-C6-N1	-3.36	119.65	124.39
56	DY	37	MIA	C4-C5-N7	-3.32	106.43	109.48
56	BY	55	PSU	C5-C6-N1	-3.18	119.90	124.39
56	BW	55	PSU	C5-C1'-C2'	-3.16	109.90	115.52
56	DW	46	7MG	CM7-N7-C8	-3.08	111.80	120.52
56	BY	39	PSU	C5-C6-N1	-3.02	120.13	124.39
56	BY	39	PSU	C5-C1'-C2'	-2.97	110.25	115.52
56	DY	32	PSU	C5-C6-N1	-2.94	120.24	124.39
56	BW	46	7MG	CM7-N7-C8	-2.93	112.22	120.52
56	DY	46	7MG	CM7-N7-C8	-2.92	112.24	120.52
56	DW	37	MIA	C4-C5-N7	-2.84	106.86	109.48
56	DW	39	PSU	O2'-C2'-C1'	-2.83	105.60	111.83
56	BW	37	MIA	C5-C6-N1	-2.82	117.57	120.48
56	BY	46	7MG	CM7-N7-C8	-2.69	112.88	120.52
56	DW	32	PSU	C5-C6-N1	-2.57	120.77	124.39
56	DY	39	PSU	C5-C6-N1	-2.54	120.80	124.39
56	DW	37	MIA	C11-S10-C2	-2.48	100.67	102.26
56	DY	55	PSU	C5-C1'-C2'	-2.46	111.14	115.52
56	BY	55	PSU	C5-C1'-C2'	-2.45	111.16	115.52
56	BW	37	MIA	C2'-C1'-N9	-2.34	110.71	114.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DW	55	PSU	C5-C1'-C2'	-2.33	111.38	115.52
56	BW	37	MIA	N3-C2-N1	-2.33	122.32	126.79
56	DY	32	PSU	C5-C1'-C2'	-2.14	111.72	115.52
56	DY	46	7MG	C5-C4-N9	-2.11	103.07	106.18
56	BW	39	PSU	C5-C1'-C2'	-2.05	111.88	115.52
56	BY	8	4SU	C6-N1-C2	-2.04	117.98	121.28
56	BW	46	7MG	CM7-N7-C5	2.07	131.03	124.09
56	BY	46	7MG	CM7-N7-C5	2.09	131.08	124.09
56	DY	46	7MG	C4-N9-C1'	2.10	131.76	126.70
56	DY	39	PSU	O4'-C1'-C2'	2.29	107.06	104.73
56	DW	39	PSU	O4'-C1'-C2'	2.31	107.08	104.73
56	BW	37	MIA	N6-C6-N1	2.32	121.51	118.52
56	DW	55	PSU	O4'-C1'-C2'	2.33	107.10	104.73
56	BW	55	PSU	O4'-C1'-C2'	2.35	107.12	104.73
56	DW	46	7MG	CM7-N7-C5	2.38	132.04	124.09
56	DY	46	7MG	CM7-N7-C5	2.38	132.05	124.09
56	BY	39	PSU	O4'-C1'-C2'	2.42	107.19	104.73
56	BW	46	7MG	C2-N3-C4	2.57	122.04	114.53
56	BW	32	PSU	O4'-C1'-C2'	2.61	107.39	104.73
56	DW	37	MIA	C2-N1-C6	2.64	121.09	113.35
56	DY	55	PSU	O4'-C1'-C2'	2.64	107.42	104.73
56	BY	55	PSU	O4'-C1'-C2'	2.74	107.53	104.73
56	DW	32	PSU	O4'-C1'-C2'	2.75	107.53	104.73
56	DY	32	PSU	O4'-C1'-C2'	2.84	107.62	104.73
56	BW	39	PSU	O4'-C1'-C2'	2.84	107.63	104.73
56	BW	37	MIA	C2-N1-C6	2.91	121.89	113.35
56	DW	32	PSU	C4-C5-C1'	3.03	126.76	121.23
56	BY	32	PSU	O4'-C1'-C2'	3.04	107.83	104.73
56	DY	39	PSU	C6-N1-C2	3.67	121.38	115.47
56	BW	46	7MG	C6-N1-C2	3.86	121.29	115.94
56	BY	55	PSU	C6-N1-C2	3.94	121.81	115.47
56	BW	39	PSU	C6-N1-C2	4.04	121.97	115.47
56	BY	39	PSU	C6-N1-C2	4.05	121.97	115.47
56	DY	32	PSU	C6-N1-C2	4.12	122.09	115.47
56	BY	32	PSU	C6-N1-C2	4.27	122.33	115.47
56	DY	55	PSU	C6-N1-C2	4.37	122.49	115.47
56	DW	39	PSU	C6-N1-C2	4.48	122.67	115.47
56	BW	55	PSU	C6-N1-C2	4.52	122.74	115.47
56	DW	55	PSU	C6-N1-C2	4.58	122.84	115.47
56	DY	46	7MG	C6-N1-C2	4.76	122.55	115.94
56	DW	32	PSU	C6-N1-C2	4.80	123.18	115.47
56	BY	46	7MG	C6-N1-C2	4.81	122.61	115.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DW	46	7MG	C6-N1-C2	4.87	122.70	115.94
56	BW	32	PSU	C4-N3-C2	5.36	119.88	115.25
56	BW	32	PSU	C6-N1-C2	5.60	124.48	115.47
56	BW	54	5MU	C4-N3-C2	5.78	120.24	115.25
56	DW	39	PSU	C4-N3-C2	5.96	120.40	115.25
56	DW	54	5MU	C4-N3-C2	6.05	120.48	115.25
56	DY	55	PSU	C4-N3-C2	6.33	120.72	115.25
56	BW	55	PSU	C4-N3-C2	6.42	120.80	115.25
56	DY	54	5MU	C4-N3-C2	6.42	120.80	115.25
56	BY	54	5MU	C4-N3-C2	6.49	120.86	115.25
56	BW	39	PSU	C4-N3-C2	6.68	121.02	115.25
56	BY	32	PSU	C4-N3-C2	6.70	121.04	115.25
56	BY	55	PSU	C4-N3-C2	6.76	121.09	115.25
56	DY	32	PSU	C4-N3-C2	6.83	121.15	115.25
56	DW	55	PSU	C4-N3-C2	6.93	121.23	115.25
56	BY	39	PSU	C4-N3-C2	7.00	121.30	115.25
56	DW	32	PSU	C4-N3-C2	7.37	121.62	115.25
56	DY	39	PSU	C4-N3-C2	7.47	121.70	115.25
56	DW	46	7MG	N3-C4-N9	7.82	138.48	126.75
56	BY	46	7MG	N3-C4-N9	8.11	138.93	126.75
56	BW	46	7MG	N3-C4-N9	8.45	139.44	126.75
56	DY	46	7MG	N3-C4-N9	8.53	139.55	126.75

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

10 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	BW	37	MIA	1	0
56	BY	8	4SU	1	0
56	DW	37	MIA	2	0
56	DW	39	PSU	4	0
56	DW	46	7MG	2	0
56	DW	54	5MU	1	0
56	DW	55	PSU	2	0
56	DY	37	MIA	1	0
56	DY	46	7MG	2	0
56	DY	55	PSU	3	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 2058 ligands modelled in this entry, 2052 are monoatomic - leaving 6 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$
60	SF4	BD	501	37	0,12,12	0.00	-	0,24,24	0.00	-
61	FUA	BZ	703	-	37,40,40	1.70	6 (16%)	45,64,64	1.66	7 (15%)
62	GDP	BZ	704	58	23,30,30	1.02	2 (8%)	30,47,47	1.86	6 (20%)
60	SF4	DD	501	37	0,12,12	0.00	-	0,24,24	0.00	-
61	FUA	DZ	703	-	37,40,40	1.69	6 (16%)	45,64,64	1.66	7 (15%)
62	GDP	DZ	704	58	23,30,30	1.24	2 (8%)	30,47,47	2.37	7 (23%)

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
60	SF4	BD	501	37	-	0/0/48/48	0/6/5/5
61	FUA	BZ	703	-	-	0/10/92/92	0/4/4/4
62	GDP	BZ	704	58	-	0/12/32/32	0/3/3/3
60	SF4	DD	501	37	-	0/0/48/48	0/6/5/5
61	FUA	DZ	703	-	-	0/10/92/92	0/4/4/4
62	GDP	DZ	704	58	-	0/12/32/32	0/3/3/3

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	BZ	703	FUA	C23-C22	-5.99	1.39	1.51
61	DZ	703	FUA	C23-C22	-5.94	1.40	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	BZ	703	FUA	C23-C24	-4.18	1.39	1.53
61	DZ	703	FUA	C23-C24	-4.16	1.39	1.53
61	DZ	703	FUA	C24-C25	-3.83	1.39	1.50
61	BZ	703	FUA	C24-C25	-3.83	1.39	1.50
61	BZ	703	FUA	C14-C8	-2.80	1.53	1.58
61	DZ	703	FUA	C14-C8	-2.78	1.53	1.58
61	BZ	703	FUA	C10-C9	-2.10	1.53	1.57
61	DZ	703	FUA	C10-C9	-2.09	1.53	1.57
61	BZ	703	FUA	C25-C26	2.24	1.39	1.32
61	DZ	703	FUA	C25-C26	2.26	1.39	1.32
62	BZ	704	GDP	C5-C4	2.61	1.46	1.40
62	BZ	704	GDP	C6-C5	2.66	1.46	1.41
62	DZ	704	GDP	C5-C4	3.37	1.48	1.40
62	DZ	704	GDP	C6-C5	4.06	1.49	1.41

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	DZ	704	GDP	C2'-C1'-N9	-6.55	104.29	114.29
62	BZ	704	GDP	C2'-C1'-N9	-5.04	106.59	114.29
62	DZ	704	GDP	C5-C6-N1	-4.92	116.87	123.59
61	BZ	703	FUA	C13-C12-C11	-4.54	105.80	111.95
61	DZ	703	FUA	C13-C12-C11	-4.50	105.85	111.95
62	DZ	704	GDP	PA-O3A-PB	-4.50	117.59	132.67
61	DZ	703	FUA	C16-O2-C31	-3.74	111.10	117.14
61	BZ	703	FUA	C16-O2-C31	-3.73	111.12	117.14
62	BZ	704	GDP	C5-C6-N1	-3.57	118.71	123.59
61	BZ	703	FUA	C8-C9-C10	-3.50	112.76	116.45
61	DZ	703	FUA	C8-C9-C10	-3.45	112.81	116.45
62	DZ	704	GDP	C6-C5-C4	-3.30	116.95	120.90
62	DZ	704	GDP	C4-C5-N7	-3.00	106.72	109.48
62	BZ	704	GDP	C6-C5-C4	-2.96	117.36	120.90
62	DZ	704	GDP	N3-C2-N1	-2.92	123.00	127.44
62	BZ	704	GDP	N3-C2-N1	-2.84	123.12	127.44
62	BZ	704	GDP	C4-C5-N7	-2.02	107.62	109.48
61	BZ	703	FUA	C28-C26-C27	2.08	119.75	114.64
61	DZ	703	FUA	C28-C26-C27	2.09	119.77	114.64
61	DZ	703	FUA	C23-C24-C25	2.20	117.46	111.69
61	BZ	703	FUA	C23-C24-C25	2.21	117.47	111.69
61	BZ	703	FUA	O2-C31-C32	2.87	116.52	111.10
61	DZ	703	FUA	O2-C31-C32	2.88	116.54	111.10
62	BZ	704	GDP	C6-N1-C2	3.58	120.91	115.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	DZ	703	FUA	C24-C23-C22	4.85	124.09	112.02
61	BZ	703	FUA	C24-C23-C22	4.85	124.11	112.02
62	DZ	704	GDP	C6-N1-C2	5.47	123.54	115.94

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

6 monomers are involved in 45 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	BD	501	SF4	1	0
61	BZ	703	FUA	11	0
62	BZ	704	GDP	5	0
60	DD	501	SF4	2	0
61	DZ	703	FUA	17	0
62	DZ	704	GDP	9	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.



## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	2852/2915 (97%)	0.34	112 (3%)	43	31	14, 34, 139, 364	4 (0%)
1	CA	2848/2915 (97%)	0.39	126 (4%)	38	26	27, 57, 180, 356	0
2	AB	120/121 (99%)	-0.12	0	100	100	23, 50, 73, 110	0
2	CB	120/121 (99%)	0.14	1 (0%)	87	81	64, 92, 120, 168	0
3	AC	137/228 (60%)	10.45	133 (97%)	0	0	258, 289, 307, 313	0
3	CC	137/228 (60%)	11.82	133 (97%)	0	0	281, 312, 331, 336	0
4	AD	275/276 (99%)	-0.32	2 (0%)	89	84	13, 35, 59, 137	1 (0%)
4	CD	275/276 (99%)	-0.26	2 (0%)	89	84	19, 48, 74, 130	2 (0%)
5	AE	204/206 (99%)	-0.38	0	100	100	5, 33, 57, 80	3 (1%)
5	CE	204/206 (99%)	0.01	4 (1%)	68	58	21, 63, 107, 134	0
6	AF	203/210 (96%)	-0.27	0	100	100	10, 35, 78, 174	0
6	CF	203/210 (96%)	-0.26	0	100	100	21, 64, 107, 155	0
7	AG	181/182 (99%)	0.04	5 (2%)	56	44	34, 78, 134, 212	1 (0%)
7	CG	181/182 (99%)	0.73	21 (11%)	6	3	73, 112, 177, 207	0
8	AH	174/180 (96%)	-0.35	1 (0%)	90	86	26, 46, 70, 112	0
8	CH	174/180 (96%)	1.32	45 (25%)	1	0	65, 112, 161, 200	0
9	AK	130/173 (75%)	0.76	18 (13%)	4	2	48, 105, 170, 232	0
9	CK	130/173 (75%)	2.64	69 (53%)	0	0	75, 162, 204, 231	0
10	AL	139/147 (94%)	3.55	92 (66%)	0	0	96, 173, 233, 253	0
10	CL	139/147 (94%)	5.92	120 (86%)	0	0	127, 196, 252, 287	1 (0%)
11	AN	140/140 (100%)	-0.38	0	100	100	14, 28, 61, 97	1 (0%)
11	CN	140/140 (100%)	0.16	4 (2%)	55	43	32, 72, 108, 150	0
12	AO	122/122 (100%)	-0.32	0	100	100	17, 37, 63, 79	1 (0%)
12	CO	122/122 (100%)	-0.21	0	100	100	36, 59, 85, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AP	149/150 (99%)	-0.06	0 100 100	11, 42, 81, 107	1 (0%)
13	CP	149/150 (99%)	0.25	4 (2%) 58 45	30, 68, 117, 137	0
14	AQ	141/141 (100%)	-0.31	0 100 100	11, 34, 54, 81	0
14	CQ	141/141 (100%)	-0.16	2 (1%) 78 69	38, 71, 101, 120	0
15	AR	118/118 (100%)	-0.34	0 100 100	16, 29, 45, 56	0
15	CR	118/118 (100%)	-0.11	0 100 100	33, 56, 90, 106	0
16	AS	110/112 (98%)	-0.21	0 100 100	29, 51, 81, 94	0
16	CS	110/112 (98%)	0.36	4 (3%) 46 34	46, 85, 120, 152	0
17	AT	131/146 (89%)	-0.28	1 (0%) 87 81	24, 41, 92, 165	0
17	CT	131/146 (89%)	-0.08	1 (0%) 87 81	43, 65, 105, 143	0
18	AU	116/118 (98%)	-0.32	0 100 100	9, 22, 38, 90	1 (0%)
18	CU	116/118 (98%)	-0.04	0 100 100	27, 65, 93, 107	0
19	AV	101/101 (100%)	-0.44	0 100 100	9, 28, 50, 75	0
19	CV	101/101 (100%)	0.18	1 (0%) 84 77	36, 80, 113, 171	0
20	AW	112/113 (99%)	-0.35	0 100 100	13, 26, 43, 112	1 (0%)
20	CW	112/113 (99%)	-0.12	0 100 100	27, 50, 81, 119	0
21	AX	95/96 (98%)	-0.29	0 100 100	16, 35, 67, 99	1 (1%)
21	CX	95/96 (98%)	-0.01	2 (2%) 67 56	38, 62, 86, 107	0
22	AY	107/110 (97%)	-0.23	1 (0%) 85 79	24, 44, 87, 161	0
22	CY	107/110 (97%)	0.49	10 (9%) 11 5	46, 76, 115, 167	0
23	AZ	185/206 (89%)	-0.38	0 100 100	29, 57, 92, 148	0
23	CZ	185/206 (89%)	0.67	21 (11%) 7 3	61, 106, 149, 213	0
24	A0	83/85 (97%)	-0.06	4 (4%) 34 23	12, 35, 83, 225	1 (1%)
24	C0	83/85 (97%)	0.75	10 (12%) 6 3	42, 66, 122, 228	0
25	A1	97/98 (98%)	-0.13	2 (2%) 67 56	19, 43, 80, 101	1 (1%)
25	C1	97/98 (98%)	-0.16	1 (1%) 84 77	31, 52, 91, 125	0
26	A2	70/72 (97%)	-0.27	2 (2%) 55 43	25, 44, 69, 123	1 (1%)
26	C2	70/72 (97%)	0.01	3 (4%) 39 27	49, 71, 101, 117	0
27	A3	59/60 (98%)	-0.31	0 100 100	14, 30, 56, 101	1 (1%)
27	C3	59/60 (98%)	0.66	8 (13%) 4 2	46, 73, 112, 150	0
28	A4	69/71 (97%)	1.03	18 (26%) 1 0	59, 118, 206, 239	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	C4	69/71 (97%)	1.51	24 (34%) 0 0	81, 159, 207, 228	0
29	A5	59/60 (98%)	-0.29	0 100 100	8, 26, 40, 52	0
29	C5	59/60 (98%)	-0.08	0 100 100	27, 52, 90, 104	0
30	A6	53/54 (98%)	-0.41	0 100 100	23, 41, 55, 74	0
30	C6	53/54 (98%)	-0.32	0 100 100	41, 61, 80, 106	0
31	A7	48/49 (97%)	-0.23	1 (2%) 67 56	14, 24, 69, 134	1 (2%)
31	C7	48/49 (97%)	0.02	2 (4%) 40 28	26, 40, 96, 119	0
32	A8	64/65 (98%)	-0.30	0 100 100	16, 29, 45, 65	1 (1%)
32	C8	64/65 (98%)	-0.09	0 100 100	37, 52, 73, 85	0
33	A9	37/37 (100%)	-0.05	0 100 100	23, 35, 57, 68	1 (2%)
33	C9	37/37 (100%)	0.89	5 (13%) 4 2	45, 79, 96, 127	0
34	BA	1495/1521 (98%)	0.49	92 (6%) 24 15	31, 85, 186, 337	0
34	DA	1501/1521 (98%)	0.58	124 (8%) 14 7	39, 90, 196, 346	0
35	BB	231/256 (90%)	0.68	35 (15%) 3 1	43, 106, 173, 223	0
35	DB	231/256 (90%)	0.83	36 (15%) 3 1	71, 125, 176, 215	0
36	BC	206/239 (86%)	1.16	43 (20%) 1 1	56, 119, 174, 197	0
36	DC	206/239 (86%)	1.44	55 (26%) 1 0	69, 136, 182, 212	0
37	BD	208/209 (99%)	0.34	9 (4%) 39 27	44, 87, 138, 196	0
37	DD	208/209 (99%)	0.23	3 (1%) 78 69	59, 87, 136, 201	0
38	BE	148/162 (91%)	-0.06	1 (0%) 89 84	35, 73, 105, 128	0
38	DE	148/162 (91%)	0.05	2 (1%) 78 69	50, 81, 117, 182	0
39	BF	100/101 (99%)	-0.12	0 100 100	56, 86, 117, 138	0
39	DF	100/101 (99%)	-0.00	2 (2%) 68 58	48, 87, 115, 134	0
40	BG	155/156 (99%)	1.23	34 (21%) 1 1	68, 113, 183, 226	0
40	DG	155/156 (99%)	1.79	46 (29%) 1 0	72, 131, 194, 222	0
41	BH	137/138 (99%)	0.10	3 (2%) 65 54	47, 73, 99, 119	0
41	DH	137/138 (99%)	0.10	1 (0%) 89 84	57, 81, 111, 140	0
42	BI	127/128 (99%)	1.93	51 (40%) 0 0	65, 125, 167, 199	0
42	DI	127/128 (99%)	2.50	71 (55%) 0 0	91, 146, 193, 216	0
43	BJ	97/105 (92%)	1.66	35 (36%) 0 0	83, 131, 186, 215	0
43	DJ	96/105 (91%)	2.24	46 (47%) 0 0	92, 151, 200, 234	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BK	114/129 (88%)	0.16	0 100 100	35, 79, 125, 151	0
44	DK	114/129 (88%)	0.24	3 (2%) 59 47	52, 91, 116, 177	0
45	BL	122/132 (92%)	-0.23	0 100 100	37, 60, 78, 113	0
45	DL	122/132 (92%)	-0.08	1 (0%) 87 81	46, 72, 96, 117	0
46	BM	117/126 (92%)	1.69	37 (31%) 1 0	77, 134, 182, 211	0
46	DM	122/126 (96%)	2.11	44 (36%) 0 0	94, 151, 201, 275	0
47	BN	60/61 (98%)	1.10	12 (20%) 1 1	67, 113, 146, 168	0
47	DN	60/61 (98%)	1.90	25 (41%) 0 0	98, 137, 179, 200	0
48	BO	88/89 (98%)	-0.11	1 (1%) 82 74	36, 71, 106, 121	0
48	DO	88/89 (98%)	0.03	1 (1%) 82 74	47, 71, 107, 153	0
49	BP	82/88 (93%)	0.44	1 (1%) 81 73	49, 80, 119, 171	0
49	DP	82/88 (93%)	0.50	5 (6%) 25 15	54, 78, 111, 153	0
50	BQ	99/105 (94%)	0.07	1 (1%) 84 77	44, 73, 99, 124	0
50	DQ	99/105 (94%)	0.04	0 100 100	44, 78, 104, 119	0
51	BR	68/88 (77%)	0.35	5 (7%) 17 9	42, 81, 123, 136	0
51	DR	68/88 (77%)	0.31	1 (1%) 76 68	53, 83, 128, 145	0
52	BS	84/93 (90%)	3.28	53 (63%) 0 0	97, 145, 198, 212	0
52	DS	83/93 (89%)	3.36	53 (63%) 0 0	90, 165, 216, 226	0
53	BT	96/106 (90%)	0.22	2 (2%) 67 56	62, 85, 122, 162	0
53	DT	96/106 (90%)	0.36	4 (4%) 40 28	58, 86, 135, 157	0
54	BU	23/27 (85%)	2.30	10 (43%) 0 0	62, 119, 158, 177	0
54	DU	23/27 (85%)	2.27	13 (56%) 0 0	92, 134, 173, 189	0
55	BV	7/18 (38%)	2.56	4 (57%) 0 0	53, 88, 211, 226	0
55	DV	6/18 (33%)	2.74	4 (66%) 0 0	84, 106, 214, 225	0
56	BW	69/76 (90%)	0.89	4 (5%) 26 16	38, 72, 106, 212	0
56	BY	67/76 (88%)	8.37	66 (98%) 0 0	82, 289, 329, 354	0
56	DW	69/76 (90%)	1.15	9 (13%) 5 2	54, 98, 141, 254	0
56	DY	66/76 (86%)	9.64	66 (100%) 0 0	213, 296, 333, 355	0
57	BZ	730/758 (96%)	0.19	38 (5%) 31 20	36, 79, 135, 190	0
57	DZ	730/758 (96%)	0.66	101 (13%) 4 2	36, 102, 169, 225	0
All	All	22825/23898 (95%)	0.62	2268 (9%) 9 4	5, 71, 189, 364	25 (0%)

All (2268) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	AC	159	ALA	36.1
3	AC	57	GLN	34.3
3	CC	68	GLY	33.7
3	CC	27	ALA	33.5
3	CC	172	ILE	32.9
3	CC	171	ALA	30.8
3	CC	67	HIS	29.7
3	AC	58	ASN	28.1
3	CC	180	SER	27.8
56	BY	35	A	27.5
3	AC	200	HIS	27.4
56	DY	38	A	27.2
3	AC	59	VAL	26.8
3	AC	174	ALA	26.8
3	CC	227	PRO	26.7
3	AC	173	HIS	24.4
3	CC	173	HIS	24.3
3	CC	181	PHE	24.0
3	AC	166	ASN	24.0
3	CC	159	ALA	23.2
3	AC	67	HIS	23.0
3	CC	175	PRO	22.8
3	AC	39	ASP	22.5
3	CC	164	PHE	22.4
3	CC	178	LYS	22.3
3	CC	41	THR	21.7
3	CC	166	ASN	21.7
3	CC	39	ASP	21.6
3	AC	164	PHE	21.4
3	CC	57	GLN	21.3
46	DM	123	ALA	21.3
3	CC	170	GLY	21.1
56	BY	36	A	21.1
10	CL	19	PRO	20.9
3	AC	66	PRO	20.6
3	AC	177	GLY	20.4
3	CC	70	GLY	20.2
3	CC	179	ALA	19.9
3	CC	4	HIS	19.7
3	CC	204	GLY	19.4
56	DY	29	G	19.3
40	DG	83	ALA	19.1

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Mol	Chain	Res	Type	RSRZ
3	CC	226	ASN	19.1
3	AC	172	ILE	19.1
1	CA	2123	G	19.1
3	AC	163	GLU	18.9
10	CL	14	ALA	18.7
1	CA	2124	G	18.5
3	AC	196	ALA	18.3
1	CA	2179	C	18.3
3	CC	183	PRO	18.0
3	AC	63	VAL	18.0
10	CL	13	PRO	17.8
3	CC	189	ASN	17.8
3	CC	213	VAL	17.7
3	CC	200	HIS	17.7
3	AC	176	VAL	17.7
3	CC	52	PRO	17.4
1	AA	2181	G	17.3
3	AC	25	GLU	17.2
3	CC	212	SER	17.2
3	CC	177	GLY	17.2
3	CC	71	LYS	17.1
3	AC	23	ILE	17.1
3	CC	199	ALA	17.1
1	CA	2115	G	17.0
3	AC	44	VAL	17.0
56	DY	34	G	16.9
3	CC	69	LEU	16.8
56	BY	34	G	16.8
10	CL	24	GLY	16.7
3	CC	44	VAL	16.7
3	AC	52	PRO	16.7
1	CA	2146	C	16.6
3	AC	56	ASP	16.6
56	DY	36	A	16.6
1	AA	2138	G	16.6
3	CC	202	PRO	16.5
3	CC	60	ARG	16.5
3	CC	160	GLY	16.3
1	AA	2182	G	16.3
34	BA	1030(B)	C	16.2
3	AC	167	ASP	16.2
3	CC	66	PRO	16.0

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Mol	Chain	Res	Type	RSRZ
10	CL	11	GLN	16.0
10	CL	20	ALA	16.0
1	CA	2121	G	16.0
3	CC	182	PRO	16.0
56	BY	42	C	15.9
3	AC	55	SER	15.8
3	CC	185	LYS	15.8
10	CL	10	LEU	15.7
3	AC	198	GLU	15.7
3	CC	165	ARG	15.7
1	CA	2110	G	15.6
3	AC	186	LEU	15.6
1	CA	2112	G	15.4
56	DY	42	C	15.4
3	CC	163	GLU	15.4
3	CC	59	VAL	15.3
56	DY	62	C	15.3
10	CL	12	LEU	15.2
3	AC	170	GLY	15.2
3	CC	56	ASP	15.2
3	AC	162	ILE	15.1
3	AC	171	ALA	15.1
3	AC	189	ASN	15.0
46	DM	124	PRO	15.0
3	CC	21	TYR	15.0
1	AA	2188	G	14.9
3	CC	186	LEU	14.9
1	CA	2127	G	14.9
1	CA	2168	G	14.8
3	AC	27	ALA	14.8
3	AC	26	ALA	14.8
9	CK	50	ARG	14.8
3	AC	187	ALA	14.7
1	AA	2137	G	14.7
3	AC	183	PRO	14.6
1	AA	2132	G	14.5
3	AC	190	ILE	14.5
10	CL	37	PHE	14.4
3	CC	192	ALA	14.4
3	CC	23	ILE	14.4
1	AA	2151	C	14.3
56	DY	1	G	14.3

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Mol	Chain	Res	Type	RSRZ
3	CC	176	VAL	14.2
56	DY	72	C	14.1
56	DY	40	C	14.1
1	CA	2159	G	14.1
56	BY	1	G	14.0
3	CC	20	VAL	14.0
10	CL	115	LEU	14.0
3	CC	167	ASP	13.9
1	AA	2190	G	13.9
34	DA	1030(B)	C	13.8
1	AA	2145	G	13.8
1	CA	2139	C	13.7
56	DY	2	C	13.7
56	DY	30	G	13.6
56	DY	56	C	13.6
1	AA	2201	C	13.5
1	CA	2111	C	13.4
1	AA	2167	C	13.3
3	CC	25	GLU	13.2
56	BY	24	G	13.2
3	CC	203	GLU	13.2
3	CC	65	LEU	13.1
1	AA	2136	A	13.1
10	CL	5	VAL	13.0
3	CC	42	VAL	12.9
56	DY	41	C	12.9
10	AL	52	ILE	12.9
3	CC	225	ILE	12.9
56	BY	33	U	12.8
52	DS	30	LEU	12.8
3	CC	174	ALA	12.8
56	DY	64	A	12.7
3	AC	207	GLY	12.7
1	CA	2117	A	12.7
3	AC	192	ALA	12.7
1	AA	2163	G	12.7
10	AL	7	VAL	12.6
1	CA	2122	U	12.6
56	DY	65	G	12.6
56	BY	70	G	12.5
3	AC	70	GLY	12.5
1	CA	2147	G	12.5

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Mol	Chain	Res	Type	RSRZ
3	AC	41	THR	12.5
3	AC	65	LEU	12.4
56	DY	28	G	12.4
3	AC	69	LEU	12.4
3	AC	204	GLY	12.3
1	AA	2164	C	12.3
56	DY	3	C	12.3
3	AC	203	GLU	12.3
3	AC	191	ARG	12.3
56	DY	63	G	12.3
10	CL	28	GLY	12.3
1	CA	2104	G	12.2
1	AA	2152	U	12.2
3	AC	60	ARG	12.2
3	AC	195	ARG	12.1
1	AA	2126	G	12.1
56	DY	61	C	12.1
10	CL	8	VAL	12.1
56	BY	23	A	12.1
56	DY	74	C	12.0
3	AC	64	SER	12.0
3	AC	21	TYR	12.0
3	CC	195	ARG	11.9
56	BY	38	A	11.9
3	AC	199	ALA	11.9
3	AC	188	ASP	11.9
56	DY	53	G	11.8
3	AC	68	GLY	11.8
1	AA	2168	C	11.8
3	CC	196	ALA	11.8
3	AC	185	LYS	11.7
10	CL	15	GLY	11.7
3	AC	178	LYS	11.7
3	AC	226	ASN	11.7
10	CL	22	PRO	11.6
56	BY	29	G	11.6
56	BY	2	C	11.6
10	CL	3	LYS	11.6
56	DY	52	G	11.6
57	DZ	576	ASP	11.5
1	AA	2165	C	11.5
10	CL	9	LYS	11.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CL	114	ASP	11.5
3	AC	24	ASP	11.5
3	AC	4	HIS	11.5
10	CL	25	PRO	11.4
1	AA	2134	G	11.4
56	BY	63	G	11.4
3	CC	58	ASN	11.4
34	BA	1003	G	11.3
34	DA	1001(A)	G	11.3
1	AA	2169	G	11.3
1	AA	2156	A	11.3
42	DI	30	GLY	11.2
1	CA	2135	A	11.2
1	AA	2131	U	11.2
46	DM	121	LYS	11.2
3	AC	20	VAL	11.2
10	CL	21	PRO	11.2
3	AC	182	PRO	11.1
3	AC	201	LYS	11.0
1	CA	2145	C	11.0
46	DM	120	LYS	11.0
3	CC	61	GLY	11.0
40	DG	79	ARG	11.0
56	BY	62	C	11.0
3	CC	51	ASP	10.9
56	DY	35	A	10.9
40	DG	78	ARG	10.9
56	DY	6	G	10.8
24	C0	3	HIS	10.8
3	CC	9	ARG	10.8
3	CC	31	LYS	10.8
9	AK	51	LEU	10.8
9	CK	89	ALA	10.7
1	CA	2105	C	10.7
56	DY	71	G	10.6
10	CL	136	VAL	10.6
10	CL	18	THR	10.6
56	BY	71	G	10.6
3	AC	165	ARG	10.6
1	CA	2166	G	10.6
1	CA	2170	A	10.5
1	CA	2120	G	10.5

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Mol	Chain	Res	Type	RSRZ
40	DG	156	TRP	10.4
56	DY	75	C	10.4
3	AC	51	ASP	10.3
56	DY	31	A	10.3
9	CK	53	VAL	10.3
1	AA	2162	C	10.3
3	CC	210	LEU	10.3
1	CA	2177	C	10.3
3	CC	40	GLU	10.3
1	AA	2203	G	10.3
3	AC	205	ALA	10.3
10	CL	7	VAL	10.2
3	CC	207	GLY	10.2
56	BY	22	G	10.2
10	AL	13	PRO	10.2
9	CK	115	GLN	10.1
10	AL	64	SER	10.1
10	AL	2	LYS	10.1
1	CA	2155	G	10.1
56	DY	4	C	10.1
3	AC	197	LEU	10.1
56	BY	61	C	10.1
56	DY	70	G	10.0
1	AA	2139	A	10.0
3	CC	62	THR	10.0
10	AL	60	TYR	10.0
3	CC	46	ALA	10.0
56	DY	57	G	9.9
56	BY	56	C	9.9
10	CL	50	ASP	9.9
1	CA	2165	G	9.9
10	CL	29	GLN	9.9
56	DY	5	G	9.9
56	DY	24	G	9.8
56	BY	73	A	9.8
1	CA	2160	G	9.8
1	AA	2135	U	9.8
56	BY	28	G	9.8
1	CA	2134	A	9.7
10	CL	31	GLY	9.7
3	AC	160	GLY	9.7
3	CC	188	ASP	9.7

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Mol	Chain	Res	Type	RSRZ
56	BY	72	C	9.7
1	AA	935	C	9.7
1	CA	2136	C	9.7
3	CC	162	ILE	9.6
3	CC	10	ALA	9.6
34	DA	1030	C	9.6
56	DY	18	G	9.6
3	CC	191	ARG	9.5
57	DZ	575	VAL	9.5
56	DY	73	A	9.5
56	BY	26	A	9.5
3	CC	64	SER	9.5
3	AC	48	LEU	9.4
52	BS	56	GLN	9.4
3	AC	28	ARG	9.4
56	DY	19	G	9.4
3	CC	193	PHE	9.4
56	BY	27	G	9.4
1	CA	2178	C	9.3
3	AC	169	THR	9.3
10	CL	2	LYS	9.3
56	BY	19	G	9.3
1	AA	2187	G	9.2
3	CC	54	ARG	9.2
56	BY	57	G	9.2
52	DS	63	THR	9.2
3	CC	194	ILE	9.2
10	CL	4	VAL	9.2
3	CC	198	GLU	9.1
56	DY	33	U	9.1
3	CC	28	ARG	9.1
1	AA	2202	U	9.1
22	AY	1	MET	9.1
3	CC	5	GLY	9.1
56	DY	58	A	9.0
10	CL	127	ILE	9.0
3	AC	218	THR	9.0
3	CC	184	GLU	9.0
10	CL	99	ILE	9.0
3	CC	205	ALA	8.9
1	AA	2130	C	8.9
56	BY	30	G	8.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	AL	21	PRO	8.9
1	AA	2191	A	8.9
56	BY	40	C	8.8
10	AL	49	GLY	8.8
56	DY	22	G	8.8
3	AC	175	PRO	8.8
10	CL	122	ALA	8.8
10	AL	14	ALA	8.7
3	AC	224	ARG	8.7
57	DZ	507	TYR	8.7
10	CL	69	THR	8.7
1	CA	2181	G	8.7
1	CA	2133	G	8.7
10	AL	16	LYS	8.7
3	AC	202	PRO	8.7
40	DG	84	ASN	8.6
3	CC	197	LEU	8.6
1	CA	2128	C	8.6
10	AL	15	GLY	8.6
3	AC	219	MET	8.6
34	DA	1030(D)	A	8.6
52	BS	57	HIS	8.6
3	AC	211	ARG	8.6
3	CC	24	ASP	8.5
1	AA	2155	G	8.5
3	CC	211	ARG	8.5
10	CL	41	PHE	8.5
3	CC	55	SER	8.5
34	DA	1036	G	8.5
10	CL	17	ALA	8.5
10	CL	138	VAL	8.4
34	DA	1030(A)	G	8.4
57	DZ	538	TYR	8.4
1	CA	2154	G	8.4
42	BI	80	GLY	8.3
3	CC	63	VAL	8.3
10	CL	96	VAL	8.3
1	CA	2113	U	8.3
3	CC	38	PHE	8.3
9	CK	96	PHE	8.3
56	BY	53	G	8.3
3	CC	190	ILE	8.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
56	BY	74	C	8.3
40	DG	80	VAL	8.3
3	AC	61	GLY	8.3
1	CA	2129	C	8.2
3	AC	161	ARG	8.2
56	DY	14	A	8.2
10	CL	49	GLY	8.2
3	AC	210	LEU	8.2
34	DA	1033	G	8.1
3	AC	71	LYS	8.1
34	BA	1002	G	8.1
40	DG	82	GLY	8.1
56	DY	15	G	8.1
9	CK	51	LEU	8.1
1	CA	2109	U	8.0
10	AL	27	LEU	8.0
3	CC	8	TYR	8.0
10	CL	54	PRO	8.0
10	AL	23	VAL	8.0
1	CA	2169	A	8.0
52	DS	69	HIS	8.0
1	AA	2157	A	8.0
46	DM	6	GLY	7.9
24	C0	2	ALA	7.9
1	CA	2143	C	7.9
34	BA	1030	C	7.9
34	BA	1029	C	7.8
3	AC	181	PHE	7.8
1	AA	2133	C	7.8
1	AA	2199	C	7.8
3	CC	219	MET	7.8
10	CL	48	MET	7.8
56	BY	5	G	7.8
40	BG	156	TRP	7.8
1	AA	2142	G	7.8
3	CC	26	ALA	7.8
47	DN	25	VAL	7.8
10	CL	57	ILE	7.7
34	BA	1036	G	7.7
52	DS	29	ARG	7.7
3	CC	22	THR	7.7
3	CC	6	LYS	7.7

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Mol	Chain	Res	Type	RSRZ
3	CC	187	ALA	7.7
1	CA	2137	C	7.7
3	AC	193	PHE	7.7
52	BS	71	LEU	7.7
10	CL	110	GLN	7.7
56	BY	43	C	7.7
56	DY	26	A	7.7
9	CK	114	GLY	7.7
9	CK	49	ALA	7.7
10	AL	12	LEU	7.7
56	DY	76	A	7.7
1	AA	2161	C	7.6
3	CC	53	ARG	7.6
56	BY	64	A	7.6
46	BM	2	ALA	7.6
9	AK	53	VAL	7.6
3	AC	208	THR	7.6
56	BY	75	C	7.6
56	DY	43	C	7.5
34	DA	1030(C)	G	7.5
46	BM	24	GLY	7.5
52	BS	4	SER	7.5
9	AK	49	ALA	7.4
9	AK	90	ALA	7.4
56	BY	41	C	7.4
9	CK	94	VAL	7.4
1	AA	2153	G	7.4
56	BY	65	G	7.4
1	AA	2177	G	7.4
10	CL	123	ALA	7.4
56	DY	27	G	7.4
34	DA	1031	G	7.3
52	BS	62	ILE	7.3
10	AL	4	VAL	7.3
52	DS	31	ILE	7.3
56	BY	3	C	7.3
43	DJ	74	ILE	7.3
1	AA	2186	C	7.3
1	AA	2183	C	7.3
1	CA	2138	C	7.3
10	CL	63	ARG	7.3
3	CC	208	THR	7.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
56	DY	13	C	7.2
10	CL	30	HIS	7.2
56	BW	44	G	7.2
3	AC	206	LYS	7.2
42	BI	30	GLY	7.2
56	BY	14	A	7.2
56	BY	58	A	7.2
56	BY	69	G	7.2
52	BS	51	VAL	7.2
1	CA	2156	G	7.2
3	CC	50	ILE	7.2
40	BG	79	ARG	7.1
3	CC	43	GLU	7.1
42	DI	49	PRO	7.1
42	DI	62	TYR	7.1
10	CL	62	ASP	7.1
1	CA	2174	C	7.1
56	BY	15	G	7.1
46	DM	119	GLY	7.1
10	CL	116	ASN	7.1
1	AA	2170	G	7.1
40	BG	81	GLY	7.1
9	AK	104	ILE	7.1
57	DZ	574	GLU	7.1
1	CA	2126	A	7.0
10	CL	61	ALA	7.0
3	AC	54	ARG	7.0
56	BY	4	C	7.0
43	DJ	27	ALA	7.0
34	DA	1032	G	7.0
1	AA	2200	C	7.0
56	DY	44	G	7.0
10	CL	65	PHE	7.0
10	CL	26	ALA	7.0
28	A4	65	ASP	7.0
56	DY	51	U	7.0
3	AC	209	PHE	6.9
9	AK	50	ARG	6.9
34	BA	1030(A)	G	6.9
34	DA	1002	G	6.9
57	BZ	538	TYR	6.9
56	BY	52	G	6.9

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Mol	Chain	Res	Type	RSRZ
46	DM	122	LYS	6.9
10	AL	66	THR	6.9
1	CA	2140	C	6.9
56	DY	25	C	6.9
1	CA	2141	G	6.8
34	BA	1028	C	6.8
10	AL	65	PHE	6.8
35	DB	228	GLY	6.8
3	AC	53	ARG	6.8
3	AC	194	ILE	6.8
3	AC	179	ALA	6.8
1	AA	2192	A	6.8
42	DI	105	ASP	6.8
3	AC	31	LYS	6.7
10	AL	62	ASP	6.7
8	CH	29	PRO	6.7
34	BA	1030(C)	G	6.7
52	DS	56	GLN	6.7
3	AC	220	GLY	6.7
36	DC	155	GLY	6.7
10	AL	58	THR	6.7
52	DS	4	SER	6.7
1	AA	2180	A	6.7
52	BS	64	GLU	6.6
3	CC	49	GLY	6.6
34	DA	1001	A	6.6
9	CK	125	LEU	6.6
1	CA	2142	C	6.6
56	DY	21	A	6.6
9	AK	88	ALA	6.6
56	BY	11	C	6.6
42	DI	5	TYR	6.6
52	DS	82	GLY	6.6
1	AA	2143	G	6.6
1	CA	2108	C	6.5
1	AA	2154	U	6.5
40	DG	37	ASN	6.5
56	BY	6	G	6.5
10	AL	67	PHE	6.5
1	CA	2180	U	6.5
42	DI	18	PHE	6.5
57	DZ	530	VAL	6.5

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Mol	Chain	Res	Type	RSRZ
3	AC	22	THR	6.5
1	CA	888	C	6.5
23	CZ	156	LYS	6.5
54	BU	17	THR	6.4
10	CL	137	GLU	6.4
1	AA	2173	G	6.4
1	AA	2160	C	6.4
57	DZ	573	HIS	6.4
1	CA	2114	A	6.4
43	BJ	99	LYS	6.4
56	BY	44	G	6.4
24	C0	5	LYS	6.4
10	AL	48	MET	6.4
3	CC	7	ARG	6.4
10	AL	25	PRO	6.4
10	CL	56	GLU	6.4
52	DS	48	THR	6.3
10	AL	56	GLU	6.3
1	AA	2166	U	6.3
1	AA	2141	A	6.3
3	CC	47	LYS	6.3
3	CC	201	LYS	6.3
10	AL	3	LYS	6.3
35	BB	228	GLY	6.3
52	DS	49	ILE	6.3
9	CK	117	LEU	6.3
52	DS	67	VAL	6.3
56	BY	13	C	6.3
3	AC	227	PRO	6.2
28	C4	62	ARG	6.2
1	AA	2176	G	6.2
56	DY	60	U	6.2
35	BB	136	VAL	6.2
3	AC	29	LEU	6.2
52	BS	30	LEU	6.2
1	AA	2196	C	6.2
1	CA	2116	G	6.2
3	AC	35	THR	6.2
10	CL	52	ILE	6.2
3	CC	18	ASN	6.2
3	AC	180	SER	6.2
24	A0	3	HIS	6.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	2158	C	6.2
10	AL	61	ALA	6.2
56	DY	67	C	6.2
3	AC	10	ALA	6.1
40	DG	154	TYR	6.1
3	CC	35	THR	6.1
36	DC	87	LEU	6.1
40	BG	34	GLY	6.1
52	DS	62	ILE	6.1
56	BY	21	A	6.1
52	BS	65	ASN	6.1
8	CH	27	LYS	6.1
24	C0	4	LYS	6.1
10	CL	128	ALA	6.0
47	DN	2	ALA	6.0
10	AL	124	ALA	6.0
46	DM	82	MET	6.0
43	BJ	98	ILE	6.0
9	CK	100	ASN	6.0
10	CL	68	VAL	6.0
34	BA	1001(A)	G	6.0
3	AC	38	PHE	6.0
10	AL	10	LEU	6.0
52	BS	84	GLY	6.0
40	BG	78	ARG	6.0
1	CA	2167	U	6.0
52	DS	61	TYR	5.9
54	BU	18	TYR	5.9
3	AC	62	THR	5.9
54	DU	17	THR	5.9
3	AC	45	HIS	5.9
52	DS	66	MET	5.9
56	DY	69	G	5.9
43	DJ	100	THR	5.8
47	DN	38	GLY	5.8
10	AL	37	PHE	5.8
10	CL	104	VAL	5.8
1	AA	1555	C	5.8
52	BS	29	ARG	5.8
3	AC	225	ILE	5.8
9	CK	77	PRO	5.8
28	C4	64	GLY	5.8

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Mol	Chain	Res	Type	RSRZ
40	BG	80	VAL	5.8
52	BS	59	PRO	5.8
52	BS	74	PHE	5.8
22	CY	1	MET	5.8
34	BA	1035	A	5.8
56	BY	25	C	5.8
43	DJ	39	PRO	5.8
47	DN	17	LYS	5.7
1	CA	2164	C	5.7
10	CL	55	VAL	5.7
35	BB	135	GLN	5.7
1	CA	2152	G	5.7
3	AC	212	SER	5.7
36	DC	39	ILE	5.7
56	BY	49	C	5.7
56	BY	10	G	5.7
56	DY	23	A	5.7
9	CK	90	ALA	5.7
8	CH	13	LYS	5.7
1	CA	2106	G	5.7
1	CA	2182	G	5.6
56	BY	67	C	5.6
56	BY	9	A	5.6
10	CL	126	MET	5.6
52	DS	43	GLU	5.6
34	BA	1033	G	5.6
28	C4	68	ARG	5.6
1	CA	229	A	5.6
34	BA	1286	A	5.6
34	DA	1137	C	5.6
10	AL	22	PRO	5.6
52	DS	79	THR	5.5
52	BS	72	GLY	5.5
56	DY	50	U	5.5
1	AA	2210	C	5.5
9	CK	25	PHE	5.5
46	BM	95	GLY	5.5
56	BY	18	G	5.5
10	CL	59	ILE	5.5
46	BM	83	ASP	5.5
52	DS	42	PRO	5.5
28	C4	51	ASP	5.5

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Mol	Chain	Res	Type	RSRZ
9	CK	97	ALA	5.4
43	DJ	20	ALA	5.4
1	CA	2144	U	5.4
1	AA	1221	G	5.4
35	DB	222	ILE	5.4
9	CK	44	LEU	5.4
46	DM	98	VAL	5.4
55	BV	12	A	5.4
56	BY	7	A	5.4
10	AL	8	VAL	5.4
10	AL	46	ALA	5.4
10	CL	135	GLY	5.4
35	BB	66	GLY	5.4
52	DS	35	SER	5.4
46	DM	87	TYR	5.4
1	CA	889	C	5.4
34	DA	1034	G	5.4
10	AL	28	GLY	5.4
3	AC	40	GLU	5.4
1	CA	2125	G	5.3
10	CL	134	MET	5.3
1	AA	2123	G	5.3
1	AA	2175	G	5.3
1	AA	2184	G	5.3
36	DC	36	ASP	5.3
1	CA	2153	G	5.3
1	AA	696	C	5.3
3	AC	47	LYS	5.3
52	DS	28	LYS	5.3
1	CA	2157	G	5.3
57	DZ	231	TYR	5.3
36	BC	2	GLY	5.3
42	DI	9	ARG	5.2
1	CA	2175	C	5.2
42	DI	8	GLY	5.2
10	CL	98	ARG	5.2
46	DM	93	ARG	5.2
43	DJ	73	ASP	5.2
34	DA	1257	U	5.2
1	AA	2179	G	5.2
1	AA	2125	C	5.2
34	BA	1004	A	5.2

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Mol	Chain	Res	Type	RSRZ
55	DV	14	A	5.2
9	CK	52	PHE	5.2
36	BC	206	GLU	5.2
43	DJ	6	ILE	5.2
3	AC	9	ARG	5.2
42	DI	19	LEU	5.2
28	A4	68	ARG	5.2
57	BZ	570	GLY	5.2
34	DA	1286	A	5.2
36	BC	39	ILE	5.2
43	DJ	10	GLY	5.2
43	DJ	85	LEU	5.2
34	BA	1034	G	5.2
36	BC	154	SER	5.1
3	AC	34	ALA	5.1
52	DS	12	ASP	5.1
9	CK	26	LEU	5.1
57	DZ	567	LEU	5.1
1	AA	933	C	5.1
1	CA	2151	G	5.1
40	DG	77	SER	5.1
10	AL	50	ASP	5.1
56	BY	45	U	5.1
34	BA	1030(D)	A	5.1
42	DI	17	VAL	5.1
10	AL	136	VAL	5.1
10	CL	70	LYS	5.1
56	DY	11	C	5.1
3	CC	218	THR	5.1
56	BY	31	A	5.1
34	BA	999	C	5.1
34	DA	1021	G	5.1
1	AA	2159	C	5.0
10	AL	19	PRO	5.0
36	BC	155	GLY	5.0
28	A4	59	PHE	5.0
34	BA	1026	G	5.0
3	AC	50	ILE	5.0
57	BZ	495	GLY	5.0
1	AA	2178	G	5.0
34	BA	1031	G	5.0
36	DC	23	TYR	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
57	DZ	536	LYS	5.0
52	BS	22	LEU	5.0
10	CL	60	TYR	5.0
10	CL	93	ARG	5.0
7	CG	48	GLU	5.0
10	AL	63	ARG	5.0
28	A4	55	ARG	5.0
10	AL	20	ALA	5.0
10	CL	42	ASN	5.0
42	DI	43	ALA	5.0
52	BS	41	VAL	5.0
1	AA	2189	U	4.9
34	DA	1256	A	4.9
46	DM	45	VAL	4.9
1	AA	932	C	4.9
3	CC	169	THR	4.9
36	DC	64	VAL	4.9
42	DI	104	ARG	4.9
10	AL	26	ALA	4.9
3	AC	223	VAL	4.9
8	CH	105	LEU	4.9
46	BM	6	GLY	4.9
46	DM	23	TYR	4.9
1	AA	2127	C	4.9
1	AA	2207	C	4.9
3	CC	168	LYS	4.9
35	BB	122	PHE	4.9
3	AC	42	VAL	4.9
52	BS	31	ILE	4.8
52	DS	40	ILE	4.8
34	DA	1042	G	4.8
3	CC	17	PRO	4.8
17	AT	38	ASN	4.8
40	BG	54	THR	4.8
52	BS	33	THR	4.8
10	CL	35	MET	4.8
57	DZ	600	VAL	4.8
51	BR	85	LEU	4.8
10	AL	59	ILE	4.8
52	DS	3	ARG	4.8
3	AC	5	GLY	4.8
46	DM	92	HIS	4.8

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Mol	Chain	Res	Type	RSRZ
28	C4	69	LYS	4.8
10	AL	9	LYS	4.8
1	AA	934	A	4.8
52	BS	61	TYR	4.8
43	BJ	24	VAL	4.8
34	BA	1138	G	4.8
56	DW	44	G	4.8
56	BY	20	U	4.8
42	DI	27	THR	4.8
43	DJ	96	ILE	4.8
36	BC	199	LYS	4.7
57	BZ	499	ARG	4.7
10	CL	140	GLY	4.7
34	DA	1035	A	4.7
40	BG	84	ASN	4.7
28	A4	54	GLY	4.7
9	CK	86	PRO	4.7
1	CA	2158	A	4.7
43	BJ	69	ASN	4.7
46	BM	36	LYS	4.7
28	A4	66	SER	4.7
52	DS	7	LYS	4.7
52	DS	14	HIS	4.7
43	DJ	81	THR	4.7
1	AA	2208	G	4.7
34	DA	1026	G	4.7
34	DA	1043	C	4.7
46	BM	93	ARG	4.7
10	CL	85	GLU	4.7
35	DB	232	PRO	4.6
42	DI	81	ILE	4.6
1	CA	1509	C	4.6
34	DA	1027	C	4.6
1	AA	2149	G	4.6
57	BZ	530	VAL	4.6
42	BI	61	ALA	4.6
10	AL	30	HIS	4.6
52	BS	32	LYS	4.6
56	DY	66	U	4.6
36	BC	89	GLU	4.6
8	CH	97	ARG	4.6
42	DI	31	GLN	4.6

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Mol	Chain	Res	Type	RSRZ
52	BS	40	ILE	4.6
42	DI	86	VAL	4.6
1	CA	652(D)	C	4.6
34	BA	1043	C	4.6
42	BI	98	PRO	4.6
57	BZ	229	LEU	4.6
52	BS	83	HIS	4.5
9	CK	57	THR	4.5
36	BC	32	LEU	4.5
56	DY	7	A	4.5
35	BB	118	LEU	4.5
28	A4	69	LYS	4.5
40	BG	55	GLY	4.5
10	CL	139	VAL	4.5
3	AC	217	THR	4.5
10	CL	23	VAL	4.5
42	DI	42	ARG	4.5
56	DW	17	C	4.5
56	DY	49	C	4.5
3	AC	46	ALA	4.5
35	BB	123	ALA	4.5
1	CA	2101	G	4.5
9	CK	131	MET	4.5
40	DG	16	LEU	4.5
56	DY	48	C	4.5
57	DZ	539	ILE	4.5
37	DD	23	GLY	4.5
34	DA	1265	G	4.5
28	C4	49	PHE	4.4
35	DB	135	GLN	4.4
10	CL	107	ILE	4.4
10	CL	51	ALA	4.4
43	DJ	70	ARG	4.4
3	AC	32	GLU	4.4
3	CC	214	TYR	4.4
54	DU	18	TYR	4.4
10	CL	81	ALA	4.4
56	BY	12	U	4.4
3	AC	222	SER	4.4
10	AL	137	GLU	4.4
34	BA	1274	G	4.4
56	BY	48	C	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CL	125	ARG	4.4
46	DM	5	ALA	4.4
47	BN	17	LYS	4.4
42	BI	63	ILE	4.4
42	BI	17	VAL	4.4
47	DN	15	LYS	4.4
1	AA	2204	G	4.4
28	C4	45	GLY	4.4
9	CK	85	ASP	4.4
35	DB	233	SER	4.4
43	DJ	8	LEU	4.4
36	DC	63	ASN	4.4
42	DI	6	GLY	4.4
44	DK	17	GLY	4.4
3	CC	11	LEU	4.4
43	BJ	28	ARG	4.3
46	BM	23	TYR	4.3
10	AL	127	ILE	4.3
42	DI	98	PRO	4.3
34	BA	1032	G	4.3
35	BB	233	SER	4.3
42	BI	81	ILE	4.3
42	DI	93	ARG	4.3
37	BD	23	GLY	4.3
46	BM	98	VAL	4.3
52	BS	60	VAL	4.3
3	CC	29	LEU	4.3
10	CL	100	THR	4.3
36	DC	190	ARG	4.3
34	BA	1042	G	4.3
1	CA	2176	A	4.3
10	AL	33	ASN	4.3
10	CL	66	THR	4.3
10	CL	117	THR	4.3
1	AA	2128	G	4.3
10	AL	35	MET	4.3
34	BA	1447	A	4.3
56	DY	9	A	4.3
42	DI	99	LEU	4.3
25	C1	2	SER	4.3
46	DM	84	ILE	4.3
49	DP	19	ILE	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	DA	1370	G	4.3
52	DS	41	VAL	4.3
56	DY	47	U	4.3
42	DI	95	LYS	4.3
52	BS	58	VAL	4.3
10	CL	6	ALA	4.3
42	BI	102	LEU	4.3
52	DS	32	LYS	4.2
24	C0	6	GLY	4.2
34	BA	1021	G	4.2
52	BS	45	VAL	4.2
10	AL	6	ALA	4.2
40	DG	18	TYR	4.2
36	BC	152	ILE	4.2
54	DU	5	ASP	4.2
10	AL	132	ARG	4.2
34	BA	1037	C	4.2
9	CK	11	ALA	4.2
46	DM	86	CYS	4.2
1	AA	2174	G	4.2
1	CA	2100	G	4.2
40	BG	82	GLY	4.2
3	AC	214	TYR	4.2
10	AL	76	TYR	4.2
40	DG	85	TYR	4.2
54	BU	13	ILE	4.2
57	BZ	541	ALA	4.2
52	BS	12	ASP	4.2
46	DM	80	ARG	4.1
42	BI	38	GLN	4.1
1	CA	887	A	4.1
34	DA	79	G	4.1
55	BV	13	A	4.1
40	DG	27	ILE	4.1
53	BT	9	ASN	4.1
57	DZ	411	VAL	4.1
34	DA	1018	C	4.1
57	BZ	540	PRO	4.1
1	CA	652(U)	G	4.1
46	DM	51	ALA	4.1
55	DV	13	A	4.1
52	BS	66	MET	4.1

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Mol	Chain	Res	Type	RSRZ
1	CA	2190	G	4.1
10	AL	24	GLY	4.1
52	BS	50	ALA	4.1
52	BS	63	THR	4.1
46	DM	85	GLY	4.1
43	DJ	78	ASN	4.1
52	BS	49	ILE	4.1
36	DC	85	ARG	4.1
56	DY	68	C	4.1
1	AA	694	G	4.1
34	BA	1137	C	4.0
36	DC	101	LEU	4.0
40	DG	17	VAL	4.0
23	CZ	9	TYR	4.0
57	DZ	531	GLY	4.0
46	BM	28	ALA	4.0
57	DZ	255	ILE	4.0
3	CC	13	GLU	4.0
1	CA	652(B)	A	4.0
34	DA	1029	C	4.0
3	CC	220	GLY	4.0
33	C9	37	GLY	4.0
57	BZ	527	ASN	4.0
52	BS	2	PRO	4.0
1	AA	2150	C	4.0
34	BA	1027	C	4.0
10	AL	31	GLY	4.0
57	DZ	508	GLY	4.0
9	CK	116	ILE	4.0
43	BJ	41	PRO	4.0
28	A4	57	GLU	4.0
43	BJ	97	GLU	4.0
56	DY	12	U	4.0
10	CL	58	THR	4.0
52	BS	8	GLY	4.0
10	CL	94	GLU	4.0
40	BG	89	MET	4.0
8	CH	26	VAL	4.0
34	BA	1257	U	4.0
10	CL	89	HIS	4.0
34	DA	1045	C	4.0
42	BI	15	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
42	DI	7	THR	4.0
3	AC	184	GLU	3.9
1	AA	2197	C	3.9
52	DS	50	ALA	3.9
56	BY	68	C	3.9
9	CK	58	LEU	3.9
40	DG	81	GLY	3.9
9	CK	119	ALA	3.9
52	BS	52	TYR	3.9
1	AA	2171	G	3.9
56	DY	10	G	3.9
42	DI	66	ARG	3.9
10	CL	45	THR	3.9
8	CH	113	VAL	3.9
36	BC	87	LEU	3.9
43	DJ	98	ILE	3.9
1	CA	2148	G	3.9
9	CK	130	THR	3.9
34	DA	1024	G	3.9
28	C4	63	TYR	3.9
35	DB	33	TYR	3.9
36	DC	77	ILE	3.9
46	DM	117	VAL	3.9
28	C4	50	VAL	3.9
36	BC	91	LEU	3.9
40	BG	47	CYS	3.9
10	CL	132	ARG	3.9
36	BC	57	ILE	3.9
42	BI	6	GLY	3.9
57	BZ	232	LEU	3.9
42	DI	87	GLN	3.9
34	DA	1287	A	3.8
57	DZ	529	ILE	3.8
3	CC	222	SER	3.8
46	BM	62	ASN	3.8
1	AA	697	C	3.8
1	CA	1079	C	3.8
10	CL	105	LEU	3.8
36	DC	7	PRO	3.8
43	DJ	72	VAL	3.8
46	BM	45	VAL	3.8
57	DZ	537	GLU	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CL	32	ALA	3.8
1	CA	2185	C	3.8
46	BM	94	ARG	3.8
57	DZ	565	VAL	3.8
52	BS	48	THR	3.8
35	DB	139	LYS	3.8
46	BM	80	ARG	3.8
52	BS	26	GLY	3.8
3	CC	32	GLU	3.8
52	DS	57	HIS	3.8
54	DU	16	GLY	3.8
57	DZ	403	GLU	3.8
36	BC	164	ARG	3.8
46	BM	85	GLY	3.8
57	BZ	502	GLY	3.8
46	DM	43	THR	3.8
42	DI	29	ASN	3.8
10	CL	111	LYS	3.8
34	DA	1266	G	3.8
3	AC	43	GLU	3.8
40	BG	57	GLU	3.8
43	BJ	34	VAL	3.8
57	DZ	506	GLN	3.8
1	CA	886	C	3.8
34	DA	999	C	3.8
42	BI	75	ASP	3.8
36	DC	57	ILE	3.8
42	DI	103	THR	3.8
7	CG	42	GLY	3.8
10	CL	73	PRO	3.8
52	DS	26	GLY	3.8
57	DZ	633	GLY	3.8
57	DZ	492	ASP	3.7
3	CC	30	VAL	3.7
52	DS	60	VAL	3.7
40	BG	56	GLN	3.7
56	BY	47	U	3.7
52	BS	85	LYS	3.7
9	CK	132	ASP	3.7
3	CC	15	VAL	3.7
10	CL	34	ILE	3.7
35	DB	229	VAL	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
43	DJ	99	LYS	3.7
46	BM	26	GLY	3.7
3	AC	12	LEU	3.7
3	CC	37	LYS	3.7
40	DG	155	ARG	3.7
57	DZ	543	GLN	3.7
1	AA	2122	G	3.7
9	CK	54	ALA	3.7
10	AL	120	LEU	3.7
57	DZ	540	PRO	3.7
10	CL	27	LEU	3.7
34	DA	1039	C	3.7
57	DZ	430	ARG	3.7
10	AL	116	ASN	3.7
46	DM	41	PRO	3.7
23	CZ	155	LEU	3.7
1	CA	2103	C	3.7
42	DI	73	GLN	3.7
52	DS	46	GLY	3.7
42	DI	75	ASP	3.7
46	DM	83	ASP	3.7
35	BB	131	PRO	3.7
56	DY	45	U	3.7
43	BJ	29	ARG	3.7
1	AA	698	G	3.6
22	CY	65	ALA	3.7
57	DZ	566	THR	3.6
1	CA	1847	A	3.6
9	CK	109	SER	3.6
55	DV	15	A	3.6
4	AD	276	LYS	3.6
9	CK	56	ASN	3.6
35	DB	230	VAL	3.6
10	CL	43	ALA	3.6
1	AA	2144	U	3.6
3	CC	161	ARG	3.6
57	DZ	491	VAL	3.6
57	DZ	601	ILE	3.6
57	BZ	231	TYR	3.6
34	DA	1264	C	3.6
43	BJ	20	ALA	3.6
56	BY	60	U	3.6

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Mol	Chain	Res	Type	RSRZ
57	DZ	234	GLY	3.6
3	AC	30	VAL	3.6
10	AL	96	VAL	3.6
9	AK	131	MET	3.6
35	BB	37	ASN	3.6
3	CC	34	ALA	3.6
43	BJ	40	LEU	3.6
10	AL	70	LYS	3.6
43	BJ	35	SER	3.6
23	CZ	60	GLU	3.6
28	C4	67	TYR	3.6
42	BI	28	VAL	3.6
34	BA	1039	C	3.6
46	BM	82	MET	3.6
56	BY	50	U	3.6
9	CK	24	PHE	3.6
24	C0	65	GLY	3.6
36	BC	145	GLY	3.6
38	DE	22	GLY	3.6
7	CG	152	LEU	3.5
10	CL	87	GLY	3.5
40	DG	153	HIS	3.5
46	BM	100	GLY	3.5
8	AH	2	SER	3.5
23	CZ	153	SER	3.5
3	CC	19	LYS	3.5
25	A1	2	SER	3.5
36	DC	37	GLN	3.5
28	C4	29	PRO	3.5
43	DJ	36	GLY	3.5
34	DA	1037	C	3.5
3	CC	12	LEU	3.5
36	BC	181	ASN	3.5
10	AL	11	GLN	3.5
22	CY	55	TYR	3.5
52	DS	64	GLU	3.5
34	DA	1044	A	3.5
9	CK	104	ILE	3.5
57	BZ	539	ILE	3.5
52	DS	34	TRP	3.5
42	BI	19	LEU	3.5
10	CL	16	LYS	3.5

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Mol	Chain	Res	Type	RSRZ
10	CL	64	SER	3.5
57	DZ	578	SER	3.5
56	BY	51	U	3.5
57	DZ	526	VAL	3.5
1	CA	2119	A	3.5
1	CA	2833	G	3.5
9	CK	12	THR	3.5
42	BI	31	GLN	3.5
43	BJ	62	HIS	3.5
8	CH	48	GLY	3.5
34	BA	1044	A	3.5
42	BI	97	LYS	3.5
43	BJ	18	ALA	3.5
52	BS	55	LYS	3.5
57	DZ	224	ASP	3.4
57	DZ	681	LYS	3.4
8	CH	16	SER	3.4
36	BC	163	ALA	3.4
35	DB	231	GLU	3.4
34	DA	1164	G	3.4
40	DG	76	ARG	3.4
46	BM	25	ILE	3.4
42	DI	102	LEU	3.4
47	DN	39	LEU	3.4
34	BA	998	G	3.4
8	CH	102	ALA	3.4
35	DB	123	ALA	3.4
42	DI	82	ALA	3.4
8	CH	88	LEU	3.4
43	BJ	10	GLY	3.4
42	BI	84	ALA	3.4
57	DZ	579	GLU	3.4
34	BA	1353	G	3.4
55	BV	14	A	3.4
57	DZ	577	SER	3.4
10	CL	92	GLY	3.4
3	CC	217	THR	3.4
42	BI	64	THR	3.4
17	CT	38	ASN	3.4
9	CK	121	ASP	3.4
57	DZ	527	ASN	3.4
34	DA	1531	A	3.4

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Mol	Chain	Res	Type	RSRZ
10	AL	51	ALA	3.4
36	DC	121	ALA	3.4
36	DC	129	ALA	3.4
57	DZ	417	THR	3.4
42	BI	74	ILE	3.3
36	DC	131	ARG	3.3
36	DC	189	ALA	3.3
1	CA	1099	G	3.3
34	DA	1003	G	3.3
34	DA	1022	G	3.3
52	BS	39	THR	3.3
36	DC	158	GLY	3.3
56	DY	59	U	3.3
40	DG	89	MET	3.3
52	BS	44	MET	3.3
52	BS	42	PRO	3.3
16	CS	56	LEU	3.3
46	DM	95	GLY	3.3
42	BI	29	ASN	3.3
36	BC	200	ALA	3.3
10	CL	101	TRP	3.3
57	BZ	494	GLU	3.3
3	AC	19	LYS	3.3
10	AL	134	MET	3.3
10	CL	47	ASN	3.3
40	DG	28	ASN	3.3
7	AG	49	ASP	3.3
42	DI	56	LEU	3.3
43	DJ	84	GLN	3.3
48	BO	89	GLY	3.3
34	DA	1041	A	3.3
34	DA	1353	G	3.3
9	CK	99	SER	3.3
42	DI	67	GLY	3.3
36	DC	91	LEU	3.3
42	DI	50	LEU	3.3
10	AL	45	THR	3.3
8	CH	95	ARG	3.3
10	AL	36	GLU	3.3
36	BC	127	ARG	3.3
36	DC	157	ILE	3.3
46	DM	13	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
1	CA	2191	G	3.3
52	DS	71	LEU	3.3
35	DB	140	HIS	3.3
36	BC	202	ILE	3.3
43	BJ	38	ILE	3.3
52	BS	46	GLY	3.3
8	CH	17	VAL	3.3
8	CH	76	VAL	3.3
10	CL	38	VAL	3.3
1	AA	2172	U	3.3
52	DS	2	PRO	3.3
34	DA	1019	C	3.2
47	BN	15	LYS	3.2
52	DS	45	VAL	3.2
57	DZ	40	HIS	3.2
57	DZ	594	VAL	3.2
9	AK	52	PHE	3.2
42	BI	45	ALA	3.2
3	AC	18	ASN	3.2
10	AL	47	ASN	3.2
47	DN	28	GLY	3.2
35	DB	132	LYS	3.2
27	C3	6	VAL	3.2
1	CA	883	G	3.2
22	CY	63	LYS	3.2
49	DP	59	TRP	3.2
42	BI	41	VAL	3.2
1	CA	2163	C	3.2
35	BB	207	ALA	3.2
35	DB	130	ARG	3.2
47	DN	26	ARG	3.2
56	DW	4	C	3.2
52	BS	75	ALA	3.2
43	BJ	8	LEU	3.2
54	DU	6	ARG	3.2
57	BZ	507	TYR	3.2
36	DC	80	GLY	3.2
40	BG	83	ALA	3.2
46	BM	84	ILE	3.2
34	DA	80	G	3.2
34	DA	1138	G	3.2
36	DC	32	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
47	BN	16	PHE	3.2
1	CA	2130	U	3.2
1	CA	645	C	3.2
22	CY	91	GLU	3.2
28	A4	53	GLU	3.2
43	DJ	71	LEU	3.2
57	BZ	393	ASP	3.2
21	CX	69	TYR	3.2
35	DB	124	SER	3.2
36	DC	24	ALA	3.2
36	DC	193	TYR	3.2
1	CA	900	A	3.2
8	CH	49	VAL	3.2
43	BJ	36	GLY	3.2
34	BA	1023	G	3.2
34	BA	1258	G	3.2
42	DI	88	TYR	3.2
42	BI	78	LYS	3.2
53	BT	45	GLN	3.2
1	CA	885	C	3.2
36	DC	89	GLU	3.2
3	AC	168	LYS	3.2
31	C7	48	LYS	3.2
43	DJ	26	ALA	3.2
10	AL	110	GLN	3.2
34	BA	78	G	3.2
34	DA	1023	G	3.2
3	AC	6	LYS	3.1
8	CH	107	VAL	3.1
10	CL	97	GLY	3.1
40	DG	34	GLY	3.1
42	BI	20	ARG	3.1
57	DZ	404	VAL	3.1
3	CC	36	ALA	3.1
10	AL	17	ALA	3.1
43	DJ	59	SER	3.1
57	BZ	572	TYR	3.1
9	CK	74	LEU	3.1
34	BA	1006	C	3.1
34	DA	1270	C	3.1
3	CC	215	VAL	3.1
28	C4	59	PHE	3.1

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Mol	Chain	Res	Type	RSRZ
10	AL	131	ALA	3.1
36	BC	98	ASN	3.1
24	A0	7	LEU	3.1
10	AL	39	LYS	3.1
36	DC	72	LYS	3.1
34	DA	1291	G	3.1
34	BA	1246	C	3.1
43	BJ	72	VAL	3.1
52	BS	67	VAL	3.1
28	A4	62	ARG	3.1
35	DB	131	PRO	3.1
42	DI	63	ILE	3.1
36	DC	184	TYR	3.1
9	AK	24	PHE	3.1
34	BA	1038	C	3.1
52	DS	10	PHE	3.1
10	AL	34	ILE	3.1
10	AL	86	LYS	3.1
9	AK	74	LEU	3.1
23	CZ	157	LEU	3.1
46	BM	37	THR	3.1
3	AC	213	VAL	3.1
42	DI	79	LEU	3.1
43	BJ	25	GLU	3.1
43	DJ	25	GLU	3.1
37	BD	144	ASP	3.1
34	DA	1209	C	3.1
28	C4	61	ARG	3.1
35	BB	138	LEU	3.1
57	BZ	531	GLY	3.1
13	CP	137	LYS	3.1
40	DG	36	LYS	3.1
36	DC	192	THR	3.1
57	DZ	197	ARG	3.1
35	BB	132	LYS	3.1
34	DA	1013	G	3.1
43	DJ	68	HIS	3.1
52	DS	47	HIS	3.1
42	DI	46	ALA	3.1
42	DI	12	GLU	3.1
43	DJ	64	GLU	3.1
26	C2	7	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
10	AL	90	LYS	3.1
1	AA	2185	C	3.1
1	AA	2193	A	3.1
35	DB	122	PHE	3.0
8	CH	106	THR	3.0
34	DA	998	G	3.0
9	CK	55	LYS	3.0
51	BR	21	LYS	3.0
43	DJ	65	LEU	3.0
34	DA	1314	C	3.0
56	BW	17	C	3.0
47	DN	19	ARG	3.0
47	DN	29	ARG	3.0
7	CG	159	VAL	3.0
10	CL	53	VAL	3.0
34	BA	1174	G	3.0
43	DJ	21	GLN	3.0
5	CE	78	LEU	3.0
9	AK	105	PRO	3.0
10	CL	90	LYS	3.0
34	BA	1277	C	3.0
36	DC	191	THR	3.0
54	DU	4	GLY	3.0
9	CK	60	ARG	3.0
46	DM	40	ASN	3.0
1	CA	878	A	3.0
7	CG	49	ASP	3.0
1	AA	931	C	3.0
3	CC	223	VAL	3.0
8	CH	19	VAL	3.0
35	DB	112	VAL	3.0
23	CZ	112	ARG	3.0
26	C2	1	MET	3.0
34	BA	1275	A	3.0
56	BY	66	U	3.0
3	AC	37	LYS	3.0
28	A4	64	GLY	3.0
57	DZ	602	LEU	3.0
34	BA	1024	G	3.0
34	DA	1202	G	3.0
34	DA	1028	C	3.0
10	AL	57	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
28	C4	31	ILE	3.0
23	CZ	150	LEU	3.0
43	BJ	73	ASP	3.0
10	AL	112	MET	3.0
34	DA	1190	G	3.0
36	BC	23	TYR	3.0
10	AL	98	ARG	3.0
23	CZ	69	THR	3.0
42	DI	64	THR	3.0
3	CC	16	ASP	3.0
52	DS	11	VAL	3.0
57	BZ	576	ASP	3.0
46	DM	25	ILE	3.0
49	DP	48	TRP	3.0
34	BA	841	U	3.0
8	CH	169	VAL	2.9
57	DZ	626	ALA	2.9
43	BJ	5	ARG	2.9
34	DA	91	C	2.9
10	CL	46	ALA	2.9
35	DB	136	VAL	2.9
9	AK	115	GLN	2.9
35	DB	227	GLY	2.9
52	DS	33	THR	2.9
34	BA	1041	A	2.9
36	BC	101	LEU	2.9
37	BD	20	TYR	2.9
42	DI	92	TYR	2.9
1	AA	2209	G	2.9
36	DC	49	SER	2.9
34	DA	1008	C	2.9
35	BB	137	ARG	2.9
42	BI	88	TYR	2.9
36	BC	197	GLY	2.9
42	DI	14	VAL	2.9
28	A4	52	THR	2.9
52	DS	39	THR	2.9
16	CS	58	LEU	2.9
52	BS	80	TYR	2.9
57	DZ	683	VAL	2.9
7	CG	39	ILE	2.9
7	CG	81	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
38	DE	10	MET	2.9
3	CC	209	PHE	2.9
7	AG	80	PHE	2.9
10	AL	42	ASN	2.9
10	CL	67	PHE	2.9
36	BC	128	PHE	2.9
35	BB	227	GLY	2.9
46	DM	118	ALA	2.9
57	DZ	180	VAL	2.9
54	DU	14	TRP	2.9
34	BA	1136	U	2.9
34	DA	1040	U	2.9
42	BI	21	PRO	2.9
8	CH	129	THR	2.9
42	BI	59	PHE	2.9
1	CA	1044	G	2.9
10	AL	43	ALA	2.9
40	DG	39	ALA	2.9
43	BJ	27	ALA	2.9
46	BM	110	ARG	2.9
1	CA	652(T)	C	2.9
34	DA	1321	C	2.9
46	DM	16	ASP	2.9
35	BB	222	ILE	2.9
46	BM	4	ILE	2.9
52	BS	27	GLU	2.9
47	DN	13	THR	2.9
4	CD	167	GLY	2.9
40	BG	130	GLY	2.9
8	CH	15	VAL	2.9
40	DG	56	GLN	2.9
46	BM	87	TYR	2.9
52	DS	51	VAL	2.9
34	BA	1045	C	2.9
57	DZ	563	ILE	2.9
9	CK	69	PRO	2.9
36	BC	38	ARG	2.9
8	CH	25	LYS	2.9
36	DC	86	VAL	2.8
23	CZ	140	ASP	2.8
1	CA	2804	C	2.8
40	BG	12	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
52	BS	10	PHE	2.8
57	DZ	518	PRO	2.8
57	DZ	511	LYS	2.8
46	BM	92	HIS	2.8
52	BS	53	ASN	2.8
57	DZ	226	ASN	2.8
1	CA	2132	U	2.8
54	BU	22	ARG	2.8
34	DA	1274	G	2.8
34	DA	1316	G	2.8
10	CL	118	THR	2.8
34	BA	1001	A	2.8
42	DI	4	TYR	2.8
28	C4	19	GLY	2.8
40	DG	130	GLY	2.8
52	DS	44	MET	2.8
42	BI	95	LYS	2.8
57	DZ	390	VAL	2.8
11	CN	71	ILE	2.8
40	DG	38	LEU	2.8
46	DM	88	ARG	2.8
9	CK	4	LYS	2.8
46	BM	74	VAL	2.8
52	DS	65	ASN	2.8
36	BC	191	THR	2.8
34	BA	1350	A	2.8
36	DC	8	ILE	2.8
54	BU	5	ASP	2.8
54	BU	19	GLY	2.8
57	DZ	188	TYR	2.8
31	A7	48	LYS	2.8
57	DZ	233	GLU	2.8
56	DW	40	C	2.8
42	DI	58	HIS	2.8
9	CK	48	GLY	2.8
42	DI	72	GLY	2.8
54	DU	7	ARG	2.8
3	CC	221	PRO	2.8
23	CZ	21	ALA	2.8
36	DC	160	ALA	2.8
1	AA	936	C	2.8
34	DA	1326	C	2.8

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Mol	Chain	Res	Type	RSRZ
40	DG	125	MET	2.8
10	CL	133	SER	2.8
34	BA	1000	U	2.8
10	CL	102	GLU	2.8
28	C4	30	GLU	2.8
34	DA	947	G	2.8
36	DC	22	TRP	2.8
42	BI	46	ALA	2.8
23	CZ	128	VAL	2.8
47	DN	18	VAL	2.8
10	CL	129	GLY	2.8
9	AK	25	PHE	2.8
51	DR	58	LEU	2.8
7	CG	182	LYS	2.8
9	CK	122	VAL	2.8
9	CK	78	SER	2.7
10	AL	97	GLY	2.7
19	CV	63	GLY	2.7
42	DI	22	GLY	2.7
47	DN	16	PHE	2.7
34	DA	1173	G	2.7
42	DI	53	VAL	2.7
43	BJ	85	LEU	2.7
34	DA	1275	A	2.7
36	DC	162	GLN	2.7
43	DJ	87	THR	2.7
10	AL	68	VAL	2.7
35	BB	231	GLU	2.7
52	DS	8	GLY	2.7
35	BB	130	ARG	2.7
1	CA	1080	C	2.7
34	BA	1140	C	2.7
56	BY	59	U	2.7
24	A0	2	ALA	2.7
1	CA	890	A	2.7
46	BM	55	ARG	2.7
51	BR	22	VAL	2.7
57	BZ	575	VAL	2.7
57	BZ	536	LYS	2.7
1	AA	938	G	2.7
34	DA	1011	G	2.7
34	DA	1057	G	2.7

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Mol	Chain	Res	Type	RSRZ
57	DZ	174	PHE	2.7
57	DZ	229	LEU	2.7
34	BA	76	C	2.7
40	BG	140	ASP	2.7
56	BW	43	C	2.7
9	CK	123	GLU	2.7
7	CG	146	TYR	2.7
57	DZ	568	TYR	2.7
28	C4	52	THR	2.7
40	DG	55	GLY	2.7
7	CG	23	PHE	2.7
42	DI	33	PHE	2.7
43	DJ	75	ILE	2.7
35	DB	113	HIS	2.7
1	AA	2147	G	2.7
34	BA	79	G	2.7
34	DA	1142	G	2.7
5	CE	58	ARG	2.7
10	CL	106	GLU	2.7
27	C3	3	ARG	2.7
57	DZ	225	GLU	2.7
3	AC	221	PRO	2.7
40	BG	27	ILE	2.7
1	AA	693	G	2.7
34	DA	1293	G	2.7
10	AL	93	ARG	2.7
42	BI	47	LEU	2.7
43	BJ	23	ILE	2.7
40	DG	33	ASP	2.7
47	DN	60	SER	2.7
57	DZ	175	SER	2.7
57	DZ	401	SER	2.7
57	DZ	541	ALA	2.7
41	BH	128	GLY	2.7
43	DJ	69	ASN	2.7
3	AC	8	TYR	2.7
35	BB	226	ARG	2.7
34	BA	1287	A	2.7
40	BG	44	TYR	2.7
10	CL	113	PRO	2.7
24	C0	7	LEU	2.7
36	BC	82	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
36	DC	182	ILE	2.7
8	CH	96	ALA	2.7
36	DC	65	ALA	2.7
10	AL	125	ARG	2.7
40	DG	32	ARG	2.7
54	DU	15	ARG	2.7
4	AD	275	LYS	2.6
35	BB	33	TYR	2.6
48	DO	15	PHE	2.6
56	DW	71	G	2.6
43	DJ	38	ILE	2.6
42	DI	106	ALA	2.6
35	DB	144	ARG	2.6
46	BM	7	VAL	2.6
40	DG	62	PHE	2.6
28	C4	32	TYR	2.6
10	AL	99	ILE	2.6
52	DS	59	PRO	2.6
9	CK	124	ALA	2.6
28	A4	58	ARG	2.6
34	DA	1182	G	2.6
36	DC	194	GLY	2.6
42	BI	76	ALA	2.6
43	DJ	46	ARG	2.6
52	DS	37	ARG	2.6
57	DZ	542	VAL	2.6
1	AA	2803	A	2.6
34	DA	1248	A	2.6
16	CS	44	LYS	2.6
42	BI	67	GLY	2.6
34	BA	1025	U	2.6
36	DC	35	GLU	2.6
8	CH	51	ARG	2.6
42	DI	120	ARG	2.6
34	BA	1317	C	2.6
34	DA	1320	C	2.6
40	DG	35	LYS	2.6
35	BB	78	GLN	2.6
40	DG	40	ALA	2.6
40	DG	112	PRO	2.6
46	DM	97	PRO	2.6
10	CL	71	THR	2.6

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Mol	Chain	Res	Type	RSRZ
47	DN	22	THR	2.6
7	CG	25	TYR	2.6
34	DA	1249	C	2.6
9	CK	95	GLN	2.6
34	DA	1236	A	2.6
9	CK	73	GLY	2.6
10	AL	123	ALA	2.6
34	BA	1352	C	2.6
42	BI	8	GLY	2.6
34	DA	1288	A	2.6
10	AL	138	VAL	2.6
35	BB	19	HIS	2.6
42	BI	26	VAL	2.6
9	CK	68	LEU	2.6
47	DN	32	SER	2.6
1	CA	2189	U	2.6
22	CY	46	LYS	2.6
34	DA	1038	C	2.6
34	DA	1165	C	2.6
36	DC	62	ASP	2.6
8	CH	44	VAL	2.6
42	DI	24	GLY	2.6
43	DJ	30	SER	2.6
46	DM	78	ILE	2.6
57	DZ	422	GLU	2.6
27	C3	5	LYS	2.6
57	DZ	684	GLN	2.6
1	AA	2146	G	2.6
7	CG	2	PRO	2.6
34	DA	1273	G	2.6
57	DZ	299	VAL	2.6
3	CC	45	HIS	2.5
3	AC	14	LYS	2.5
8	CH	40	GLU	2.5
36	DC	204	LEU	2.5
42	DI	96	LEU	2.5
36	DC	74	GLY	2.5
46	DM	63	THR	2.5
43	DJ	76	ASN	2.5
42	BI	62	TYR	2.5
42	DI	114	TYR	2.5
46	BM	97	PRO	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	CH	24	VAL	2.5
35	DB	137	ARG	2.5
36	DC	83	ARG	2.5
47	DN	35	ARG	2.5
43	DJ	11	PHE	2.5
57	DZ	476	VAL	2.5
8	CH	18	GLU	2.5
28	C4	8	LYS	2.5
57	BZ	496	LYS	2.5
36	DC	28	GLN	2.5
57	DZ	432	ALA	2.5
9	CK	27	VAL	2.5
28	C4	11	PRO	2.5
1	AA	218	A	2.5
9	CK	8	GLU	2.5
34	BA	1367	C	2.5
38	BE	9	LYS	2.5
43	DJ	47	PHE	2.5
34	BA	630	G	2.5
34	DA	1175	G	2.5
9	CK	34	ALA	2.5
43	DJ	18	ALA	2.5
46	DM	110	ARG	2.5
47	BN	13	THR	2.5
8	CH	94	TYR	2.5
37	BD	37	PRO	2.5
1	CA	2131	G	2.5
1	CA	2162	G	2.5
28	C4	48	ARG	2.5
36	BC	131	ARG	2.5
13	CP	140	ALA	2.5
47	BN	2	ALA	2.5
57	BZ	543	GLN	2.5
36	DC	154	SER	2.5
33	C9	18	ARG	2.5
34	BA	1282	C	2.5
55	DV	18	C	2.5
42	BI	43	ALA	2.5
46	DM	42	ALA	2.5
34	DA	1134	G	2.5
7	CG	116	ASP	2.5
8	CH	63	SER	2.5

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Mol	Chain	Res	Type	RSRZ
33	C9	6	SER	2.5
42	DI	20	ARG	2.5
57	DZ	514	VAL	2.5
37	DD	2	GLY	2.5
42	DI	90	PRO	2.5
35	DB	121	LEU	2.5
36	BC	34	LEU	2.5
3	AC	16	ASP	2.5
23	CZ	4	ARG	2.5
27	C3	30	ARG	2.5
42	DI	71	SER	2.5
46	DM	17	VAL	2.5
23	CZ	143	GLY	2.5
35	DB	37	ASN	2.5
36	DC	145	GLY	2.5
57	BZ	7	ASN	2.5
42	BI	5	TYR	2.5
34	DA	1261	A	2.5
34	DA	1349	A	2.5
10	AL	41	PHE	2.5
1	CA	652(C)	G	2.5
1	CA	879	G	2.5
3	AC	17	PRO	2.5
9	CK	28	ASN	2.5
56	DW	53	G	2.5
1	AA	1878	A	2.5
42	BI	106	ALA	2.5
1	AA	2129	C	2.5
3	AC	15	VAL	2.5
42	DI	57	GLY	2.5
44	DK	77	MET	2.5
53	DT	47	GLY	2.5
7	CG	90	LEU	2.4
40	DG	54	THR	2.4
43	BJ	37	PRO	2.4
43	BJ	71	LEU	2.4
10	CL	36	GLU	2.4
33	C9	17	ILE	2.4
34	DA	1272	G	2.4
1	CA	901	A	2.4
35	BB	229	VAL	2.4
4	CD	262	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
7	AG	51	ARG	2.4
36	DC	132	ARG	2.4
10	AL	133	SER	2.4
21	CX	92	LEU	2.4
37	BD	163	GLU	2.4
40	BG	16	LEU	2.4
52	BS	38	SER	2.4
34	BA	1212	U	2.4
36	BC	63	ASN	2.4
40	DG	11	GLN	2.4
42	DI	89	ASN	2.4
54	DU	8	THR	2.4
10	CL	82	ALA	2.4
43	BJ	96	ILE	2.4
47	BN	20	ALA	2.4
34	BA	73	G	2.4
34	DA	1310	G	2.4
47	DN	49	HIS	2.4
55	BV	15	A	2.4
1	CA	2107	C	2.4
47	BN	12	ARG	2.4
52	DS	58	VAL	2.4
9	CK	84	GLU	2.4
42	DI	78	LYS	2.4
35	DB	110	GLN	2.4
28	A4	63	TYR	2.4
28	A4	61	ARG	2.4
43	DJ	9	ARG	2.4
1	AA	2206	G	2.4
23	CZ	93	ASP	2.4
3	CC	14	LYS	2.4
8	CH	47	GLU	2.4
34	DA	1149	C	2.4
35	BB	133	LYS	2.4
47	BN	39	LEU	2.4
35	BB	62	ALA	2.4
54	BU	23	PRO	2.4
36	DC	181	ASN	2.4
9	CK	76	GLY	2.4
36	DC	171	GLY	2.4
28	C4	18	CYS	2.4
46	BM	32	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
57	DZ	533	VAL	2.4
1	CA	652(V)	C	2.4
1	CA	2161	C	2.4
34	BA	1314	C	2.4
34	BA	1385	G	2.4
34	DA	157	G	2.4
34	DA	1331	G	2.4
10	AL	32	ALA	2.4
42	DI	15	ALA	2.4
47	DN	34	TYR	2.4
54	BU	20	LYS	2.4
8	CH	43	VAL	2.4
42	DI	54	ASP	2.4
1	CA	2184	G	2.4
1	CA	2793	G	2.4
9	CK	21	GLN	2.4
10	AL	128	ALA	2.4
34	BA	1009	G	2.4
34	BA	1276	G	2.4
52	BS	25	LYS	2.4
9	CK	23	SER	2.4
57	DZ	189	GLY	2.4
40	BG	154	TYR	2.4
42	BI	33	PHE	2.4
1	AA	2195	A	2.4
36	BC	86	VAL	2.4
10	AL	29	GLN	2.4
57	DZ	596	LYS	2.4
9	AK	89	ALA	2.4
9	CK	126	ALA	2.4
34	BA	91	C	2.4
34	BA	1362	C	2.4
34	DA	1141	C	2.4
34	DA	1367	C	2.4
57	BZ	563	ILE	2.4
1	CA	882	G	2.4
1	CA	1170	G	2.4
34	BA	1271	G	2.4
34	DA	1300	G	2.4
40	BG	26	PHE	2.4
46	BM	64	TRP	2.4
57	BZ	453	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
23	CZ	66	SER	2.4
51	BR	29	PHE	2.4
40	DG	44	TYR	2.4
39	DF	92	LYS	2.4
34	BA	1363	C	2.4
35	BB	117	GLU	2.4
23	CZ	62	PRO	2.4
37	DD	161	ASN	2.4
40	BG	151	TYR	2.4
42	BI	92	TYR	2.4
57	DZ	195	ASP	2.4
40	DG	73	MET	2.3
7	CG	77	ILE	2.3
10	CL	79	ARG	2.3
36	BC	156	ARG	2.3
54	BU	9	ARG	2.3
57	BZ	204	GLU	2.3
7	CG	160	VAL	2.3
35	BB	165	VAL	2.3
41	DH	129	VAL	2.3
43	BJ	19	SER	2.3
26	A2	12	GLU	2.3
28	C4	23	GLU	2.3
31	C7	47	ARG	2.3
57	BZ	504	ARG	2.3
13	CP	93	GLY	2.3
1	AA	699	C	2.3
57	DZ	516	PRO	2.3
34	DA	1532	U	2.3
36	BC	64	VAL	2.3
28	A4	67	TYR	2.3
43	DJ	40	LEU	2.3
1	CA	1042	G	2.3
28	A4	18	CYS	2.3
34	DA	1224	G	2.3
34	DA	1304	G	2.3
34	DA	204	U	2.3
57	DZ	582	PHE	2.3
1	CA	1043	C	2.3
14	CQ	6	ARG	2.3
34	DA	1363	C	2.3
43	DJ	91	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
56	DW	3	C	2.3
42	BI	65	VAL	2.3
8	CH	58	GLU	2.3
40	BG	124	LEU	2.3
46	BM	35	GLU	2.3
40	BG	153	HIS	2.3
43	DJ	62	HIS	2.3
57	BZ	419	ALA	2.3
34	DA	1174	G	2.3
35	DB	32	ILE	2.3
46	DM	39	ILE	2.3
57	DZ	204	GLU	2.3
57	DZ	513	LYS	2.3
1	AA	2211	U	2.3
8	CH	98	LEU	2.3
36	BC	196	LEU	2.3
9	CK	16	ASN	2.3
41	BH	58	TYR	2.3
42	BI	3	GLN	2.3
57	DZ	630	GLN	2.3
46	BM	89	GLY	2.3
46	DM	28	ALA	2.3
1	AA	2148	A	2.3
8	CH	54	ARG	2.3
40	BG	24	THR	2.3
42	BI	77	ILE	2.3
8	CH	99	VAL	2.3
27	C3	60	GLU	2.3
36	DC	75	VAL	2.3
43	BJ	39	PRO	2.3
1	CA	2188	C	2.3
8	CH	33	LEU	2.3
34	DA	1116	C	2.3
40	BG	59	LEU	2.3
42	BI	60	ASP	2.3
10	AL	117	THR	2.3
34	DA	1211	U	2.3
34	DA	1245	A	2.3
35	DB	133	LYS	2.3
42	BI	101	PHE	2.3
42	DI	28	VAL	2.3
2	CB	89	G	2.3

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Mol	Chain	Res	Type	RSRZ
34	DA	1178	G	2.3
45	DL	94	PRO	2.3
1	AA	692	C	2.3
9	CK	19	ARG	2.3
57	DZ	619	ASP	2.3
1	CA	2102	U	2.3
42	DI	125	TYR	2.3
47	BN	11	LYS	2.3
52	DS	70	LYS	2.3
10	CL	112	MET	2.3
42	DI	59	PHE	2.3
57	DZ	550	MET	2.3
1	AA	2614	A	2.3
36	DC	177	THR	2.3
10	AL	55	VAL	2.3
10	AL	91	PRO	2.3
27	C3	28	LEU	2.3
34	DA	1020	U	2.3
57	BZ	594	VAL	2.3
57	DZ	99	ARG	2.3
35	BB	61	LEU	2.3
36	BC	74	GLY	2.3
36	BC	162	GLN	2.3
42	DI	85	LEU	2.3
35	DB	218	ALA	2.3
35	DB	19	HIS	2.3
40	DG	151	TYR	2.3
35	DB	128	GLU	2.3
57	BZ	523	PHE	2.3
57	DZ	525	PHE	2.3
57	DZ	685	GLU	2.3
34	BA	1288	A	2.3
22	CY	45	VAL	2.3
43	DJ	48	THR	2.3
9	CK	45	LYS	2.3
10	CL	95	LYS	2.3
24	C0	71	ASP	2.2
47	BN	14	PRO	2.3
39	DF	35	ALA	2.2
34	BA	1320	C	2.2
34	DA	1161	C	2.2
34	BA	1181	G	2.2

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Mol	Chain	Res	Type	RSRZ
53	DT	9	ASN	2.2
8	CH	23	ARG	2.2
1	AA	700	A	2.2
52	BS	28	LYS	2.2
57	BZ	491	VAL	2.2
14	CQ	30	GLY	2.2
40	BG	99	LEU	2.2
57	DZ	-26	GLU	2.2
34	DA	1210	C	2.2
34	BA	1311	G	2.2
52	DS	25	LYS	2.2
56	DW	5	G	2.2
57	BZ	471	LYS	2.2
5	CE	33	VAL	2.2
11	CN	103	VAL	2.2
35	DB	11	LEU	2.2
42	BI	27	THR	2.2
3	AC	36	ALA	2.2
10	CL	108	ALA	2.2
40	DG	41	ARG	2.2
51	BR	24	ALA	2.2
53	DT	40	ALA	2.2
22	CY	52	SER	2.2
57	BZ	578	SER	2.2
1	CA	2187	G	2.2
43	BJ	94	VAL	2.2
46	DM	7	VAL	2.2
7	CG	43	LEU	2.2
36	BC	123	GLN	2.2
42	DI	48	GLU	2.2
43	BJ	100	THR	2.2
43	DJ	89	ASP	2.2
37	BD	26	CYS	2.2
47	DN	27	CYS	2.2
1	CA	898	C	2.2
8	CH	80	SER	2.2
56	BW	56	C	2.2
56	DW	72	C	2.2
9	AK	87	VAL	2.2
42	BI	39	GLY	2.2
42	BI	104	ARG	2.2
34	BA	1318	A	2.2

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Mol	Chain	Res	Type	RSRZ
34	DA	1004	A	2.2
10	CL	40	ALA	2.2
42	DI	52	ALA	2.2
9	CK	37	THR	2.2
10	AL	79	ARG	2.2
43	BJ	43	ARG	2.2
7	CG	131	TYR	2.2
34	BA	217	C	2.2
40	DG	12	LEU	2.2
40	DG	131	LYS	2.2
49	DP	2	VAL	2.2
3	AC	11	LEU	2.2
46	DM	56	LEU	2.2
10	CL	44	ALA	2.2
1	CA	2118	U	2.2
57	DZ	490	PRO	2.2
40	BG	50	ILE	2.2
54	BU	14	TRP	2.2
26	A2	11	GLU	2.2
28	C4	4	GLY	2.2
35	BB	140	HIS	2.2
57	DZ	545	GLY	2.2
10	AL	5	VAL	2.2
24	C0	78	TYR	2.2
34	BA	1007	C	2.2
34	DA	1246	C	2.2
36	DC	103	VAL	2.2
10	AL	122	ALA	2.2
36	BC	62	ASP	2.2
42	DI	55	ALA	2.2
57	DZ	504	ARG	2.2
35	BB	234	PRO	2.2
57	DZ	535	PRO	2.2
10	AL	18	THR	2.2
57	DZ	487	ILE	2.2
1	AA	2212	G	2.2
34	BA	1173	G	2.2
34	DA	1120	G	2.2
7	CG	155	MET	2.2
10	CL	103	GLN	2.2
27	C3	59	VAL	2.2
42	BI	73	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
57	DZ	608	VAL	2.2
33	C9	22	ARG	2.2
34	DA	980	C	2.2
10	CL	119	ASP	2.2
43	DJ	63	PHE	2.2
1	CA	1058	G	2.2
1	CA	1533	G	2.2
8	CH	35	VAL	2.2
9	CK	128	LEU	2.2
34	BA	93	G	2.2
36	BC	85	ARG	2.2
36	BC	204	LEU	2.2
46	BM	48	LEU	2.2
52	BS	5	LEU	2.2
57	DZ	221	ALA	2.2
1	CA	884	C	2.1
22	CY	34	LYS	2.1
57	DZ	339	SER	2.1
49	DP	9	PHE	2.1
40	BG	69	VAL	2.1
1	AA	2124	U	2.1
46	BM	34	LEU	2.1
46	BM	96	LEU	2.1
35	BB	147	LYS	2.1
34	BA	77	G	2.1
34	DA	1365	G	2.1
41	BH	52	ASP	2.1
57	DZ	494	GLU	2.1
34	BA	1261	A	2.1
9	CK	103	GLY	2.1
57	DZ	519	ARG	2.1
57	DZ	599	PRO	2.1
57	DZ	638	GLY	2.1
34	DA	723	U	2.1
3	CC	48	LEU	2.1
42	BI	79	LEU	2.1
49	BP	22	THR	2.1
52	BS	69	HIS	2.1
43	BJ	17	ASP	2.1
46	DM	77	ASN	2.1
5	CE	61	ARG	2.1
34	DA	1317	C	2.1

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Mol	Chain	Res	Type	RSRZ
46	DM	99	ARG	2.1
47	DN	57	ARG	2.1
8	CH	89	ILE	2.1
9	CK	22	GLY	2.1
34	DA	1168	A	2.1
46	DM	50	GLU	2.1
47	BN	19	ARG	2.1
54	DU	9	ARG	2.1
35	DB	97	TRP	2.1
34	DA	1260	C	2.1
10	CL	91	PRO	2.1
3	AC	215	VAL	2.1
37	BD	140	VAL	2.1
40	BG	51	GLN	2.1
40	BG	141	VAL	2.1
9	CK	70	GLU	2.1
22	CY	62	GLU	2.1
23	CZ	131	ARG	2.1
35	BB	129	GLU	2.1
50	BQ	20	THR	2.1
52	DS	24	ALA	2.1
57	DZ	509	HIS	2.1
7	AG	78	SER	2.1
34	DA	90	U	2.1
34	DA	1025	U	2.1
47	DN	24	CYS	2.1
57	DZ	196	ILE	2.1
1	AA	691	G	2.1
9	CK	41	ARG	2.1
47	BN	29	ARG	2.1
3	AC	33	LEU	2.1
11	CN	87	LEU	2.1
35	DB	116	GLU	2.1
23	CZ	1	MET	2.1
43	BJ	7	LYS	2.1
7	CG	157	ILE	2.1
37	BD	3	ARG	2.1
42	DI	83	ARG	2.1
52	BS	3	ARG	2.1
1	CA	2183	C	2.1
10	AL	85	GLU	2.1
34	BA	162	A	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
34	BA	848	C	2.1
1	AA	1137	G	2.1
1	CA	652(E)	G	2.1
57	DZ	497	PHE	2.1
7	CG	65	GLY	2.1
36	DC	38	ARG	2.1
37	BD	132	ARG	2.1
47	DN	45	ARG	2.1
23	CZ	94	GLU	2.1
40	DG	129	GLU	2.1
8	CH	103	LEU	2.1
34	BA	1141	C	2.1
34	BA	1260	C	2.1
34	BA	1264	C	2.1
34	BA	1360	A	2.1
34	DA	1214	C	2.1
8	CH	60	ARG	2.1
16	CS	22	GLY	2.1
34	DA	1133	G	2.1
36	BC	21	ARG	2.1
8	CH	86	GLU	2.1
9	CK	18	GLU	2.1
43	DJ	80	LYS	2.1
52	DS	23	ASN	2.1
13	CP	147	LEU	2.1
27	C3	54	VAL	2.1
57	BZ	-48	VAL	2.1
1	CA	1041	C	2.1
34	BA	1019	C	2.1
35	BB	237	ALA	2.1
43	DJ	45	ARG	2.1
9	AK	91	LYS	2.0
35	BB	16	HIS	2.0
35	DB	220	ASP	2.0
47	DN	50	LYS	2.0
1	AA	2843	G	2.0
34	BA	1022	G	2.0
34	DA	1290	G	2.0
34	DA	1294	G	2.0
34	DA	1334	G	2.0
35	DB	129	GLU	2.0
40	DG	42	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
44	DK	87	THR	2.0
25	A1	98	LEU	2.0
9	AK	103	GLY	2.0
24	A0	6	GLY	2.0
34	DA	1096	C	2.0
54	DU	19	GLY	2.0
57	BZ	508	GLY	2.0
26	C2	8	LYS	2.0
24	C0	43	THR	2.0
34	DA	1446	U	2.0
36	BC	132	ARG	2.0
40	DG	24	THR	2.0
57	DZ	486	THR	2.0
28	A4	29	PRO	2.0
57	DZ	223	PHE	2.0
34	BA	1208	C	2.0
46	BM	61	GLU	2.0
7	AG	144	ILE	2.0
42	BI	93	ARG	2.0
11	CN	72	TYR	2.0
57	DZ	186	TYR	2.0
52	DS	5	LEU	2.0
57	DZ	190	ASN	2.0
1	AA	928	G	2.0
1	CA	1112	G	2.0
1	CA	1718	G	2.0
34	BA	202	U	2.0
34	DA	1258	G	2.0
8	CH	104	GLU	2.0
35	BB	128	GLU	2.0
54	DU	23	PRO	2.0
34	DA	975	A	2.0
42	DI	51	ARG	2.0
47	DN	61	TRP	2.0
57	BZ	-47	ASP	2.0
36	DC	84	ILE	2.0
42	DI	36	TYR	2.0
53	DT	99	LEU	2.0
36	BC	60	ALA	2.0
57	BZ	488	THR	2.0
23	CZ	68	PRO	2.0
40	BG	77	SER	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
56	4SU	BY	8	20/21	0.26	0.50	-	300,300,300,300	0
56	5MU	DY	54	21/22	0.34	0.74	-	305,305,305,305	1
56	PSU	DW	39	20/21	0.87	0.35	-	93,93,93,93	3
56	7MG	DW	46	24/25	0.88	0.29	-	114,114,114,114	2
56	MIA	DW	37	29/30	0.91	0.27	-	94,94,94,94	0
56	5MU	BW	54	21/22	0.95	0.25	-	74,74,74,74	1
56	4SU	DY	8	20/21	0.17	0.51	-	275,275,275,275	0
56	PSU	BY	39	20/21	0.06	1.19	-	316,316,316,316	0
56	PSU	BW	55	20/21	0.88	0.24	-	74,74,74,74	5
56	PSU	BY	55	20/21	0.04	0.67	-	302,302,302,302	1
56	PSU	DY	32	20/21	0.18	1.61	-	268,268,268,268	0
56	PSU	DW	55	20/21	0.78	0.23	-	106,106,106,106	2
56	PSU	BY	32	20/21	0.34	0.89	-	254,254,254,254	1
56	5MU	BY	54	21/22	0.23	0.82	-	315,315,315,315	0
56	7MG	BW	46	24/25	0.94	0.20	-	63,63,63,63	5
56	PSU	DY	55	20/21	0.42	0.71	-	246,246,246,246	0
56	4SU	DW	8	20/21	0.93	0.20	-	88,88,88,88	3
56	PSU	DY	39	20/21	0.28	1.29	-	284,284,284,284	0
56	PSU	BW	39	20/21	0.95	0.25	-	65,65,65,65	3
56	PSU	BW	32	20/21	0.92	0.17	-	81,81,81,81	1
56	PSU	DW	32	20/21	0.88	0.21	-	106,106,106,106	1
56	5MU	DW	54	21/22	0.88	0.33	-	114,114,114,114	1
56	7MG	DY	46	24/25	0.52	0.53	-	302,302,302,302	0
56	7MG	BY	46	24/25	0.25	0.45	-	302,302,302,302	0
56	MIA	DY	37	22/30	0.12	1.85	-	319,319,319,319	1
56	MIA	BW	37	29/30	0.92	0.26	-	79,79,79,79	2
56	MIA	BY	37	22/30	0.05	1.39	-	284,284,284,284	0
56	4SU	BW	8	20/21	0.94	0.15	-	51,51,51,51	6

## 6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	AA	3018	1/1	0.83	1.37	126.81	78,78,78,78	0
58	MG	CA	3106	1/1	0.86	0.74	100.56	55,55,55,55	0
58	MG	CA	3043	1/1	0.59	0.83	64.26	102,102,102,102	0
58	MG	AA	3135	1/1	0.94	0.66	58.03	62,62,62,62	1
58	MG	AA	3171	1/1	0.96	0.49	53.19	25,25,25,25	1
58	MG	BA	1711	1/1	0.64	0.60	47.54	71,71,71,71	0
58	MG	CA	3185	1/1	0.91	0.48	46.01	59,59,59,59	0
58	MG	CA	3467	1/1	0.87	0.64	45.66	80,80,80,80	0
58	MG	CA	3314	1/1	0.74	0.53	41.67	77,77,77,77	0
58	MG	AA	3604	1/1	0.84	0.39	37.61	38,38,38,38	1
58	MG	BA	1801	1/1	0.89	0.46	34.36	69,69,69,69	0
58	MG	CA	3088	1/1	0.76	0.53	33.45	75,75,75,75	0
58	MG	CA	3619	1/1	0.89	0.44	33.17	47,47,47,47	1
58	MG	CA	3290	1/1	0.75	0.47	32.36	75,75,75,75	0
58	MG	CA	3114	1/1	0.93	0.45	32.24	39,39,39,39	0
58	MG	CA	3073	1/1	0.84	0.60	31.06	91,91,91,91	0
58	MG	BA	1657	1/1	0.86	0.41	30.60	73,73,73,73	0
58	MG	A7	103	1/1	0.82	0.50	30.26	38,38,38,38	1
58	MG	BA	1738	1/1	0.96	0.43	30.16	56,56,56,56	0
58	MG	CA	3168	1/1	0.86	0.52	29.98	56,56,56,56	0
58	MG	CA	3218	1/1	0.95	0.50	27.35	54,54,54,54	0
58	MG	CA	3223	1/1	0.83	0.58	27.21	65,65,65,65	0
58	MG	CA	3618	1/1	0.69	0.36	27.08	65,65,65,65	0
58	MG	CA	3498	1/1	0.94	0.49	26.75	68,68,68,68	0
58	MG	AH	3002	1/1	0.82	0.72	26.53	74,74,74,74	0
58	MG	CA	3542	1/1	0.94	0.39	26.28	68,68,68,68	0
58	MG	DA	1651	1/1	0.95	0.41	26.07	59,59,59,59	0
58	MG	CA	3230	1/1	0.93	0.42	26.04	51,51,51,51	0
58	MG	AA	3162	1/1	0.93	0.37	26.00	47,47,47,47	0
58	MG	DA	1743	1/1	0.92	0.35	25.94	72,72,72,72	0
58	MG	AB	3023	1/1	0.82	0.48	25.90	76,76,76,76	0
58	MG	AA	3211	1/1	0.92	0.57	25.62	42,42,42,42	1
58	MG	AA	3822	1/1	0.92	0.55	25.50	65,65,65,65	0
58	MG	C7	101	1/1	0.89	0.67	25.03	42,42,42,42	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	DA	1668	1/1	0.97	0.42	24.86	62,62,62,62	0
58	MG	AA	3453	1/1	0.94	0.33	24.32	56,56,56,56	0
58	MG	BA	1664	1/1	0.88	0.39	24.13	59,59,59,59	0
58	MG	AA	3663	1/1	0.88	0.45	23.95	62,62,62,62	0
58	MG	AA	3132	1/1	0.88	0.28	23.76	27,27,27,27	1
58	MG	AA	3116	1/1	0.92	0.39	23.49	51,51,51,51	0
58	MG	AA	3768	1/1	0.72	0.40	23.47	99,99,99,99	0
58	MG	AA	3835	1/1	0.82	0.60	23.27	111,111,111,111	0
58	MG	AA	3212	1/1	0.94	0.41	23.24	34,34,34,34	1
58	MG	AA	3112	1/1	0.76	0.60	22.98	98,98,98,98	0
58	MG	CA	3441	1/1	0.91	0.35	22.41	77,77,77,77	0
58	MG	CA	3035	1/1	0.84	0.49	21.69	60,60,60,60	0
58	MG	AA	3462	1/1	0.94	0.45	21.41	71,71,71,71	0
58	MG	AA	3770	1/1	0.94	0.39	21.01	37,37,37,37	0
58	MG	BA	1629	1/1	0.91	0.49	20.83	64,64,64,64	0
58	MG	AA	3739	1/1	0.56	0.51	20.54	94,94,94,94	0
58	MG	AA	3117	1/1	0.85	0.32	20.44	30,30,30,30	1
58	MG	AA	3040	1/1	0.96	0.30	20.34	40,40,40,40	1
58	MG	CA	3588	1/1	0.95	0.35	20.31	63,63,63,63	0
58	MG	AA	3035	1/1	0.86	0.44	19.89	57,57,57,57	0
58	MG	AA	3196	1/1	0.94	0.39	19.69	52,52,52,52	0
58	MG	AA	3061	1/1	0.91	0.30	19.64	27,27,27,27	0
58	MG	DA	1684	1/1	0.85	0.54	19.53	72,72,72,72	0
58	MG	CA	3660	1/1	0.44	0.66	19.19	101,101,101,101	0
58	MG	AA	3101	1/1	0.90	0.36	19.02	52,52,52,52	0
58	MG	AA	3297	1/1	0.96	0.31	18.70	20,20,20,20	1
58	MG	AN	3001	1/1	0.31	0.89	18.66	85,85,85,85	0
58	MG	AA	3051	1/1	0.88	0.35	18.60	36,36,36,36	0
58	MG	CA	3166	1/1	0.96	0.38	18.35	44,44,44,44	0
58	MG	AA	3206	1/1	0.83	0.28	18.19	39,39,39,39	0
58	MG	AU	203	1/1	0.95	0.45	18.12	62,62,62,62	0
58	MG	AA	3185	1/1	0.89	0.29	18.11	41,41,41,41	0
58	MG	AA	3221	1/1	0.88	0.34	18.07	56,56,56,56	0
58	MG	AA	3133	1/1	0.79	0.37	17.72	69,69,69,69	0
58	MG	CA	3348	1/1	0.88	0.27	17.69	54,54,54,54	0
58	MG	AA	3134	1/1	0.97	0.39	17.48	59,59,59,59	1
58	MG	CA	3182	1/1	0.97	0.36	17.45	27,27,27,27	0
58	MG	BA	1756	1/1	0.78	0.37	17.44	68,68,68,68	0
58	MG	AA	3301	1/1	0.93	0.33	17.11	23,23,23,23	0
58	MG	DA	1672	1/1	0.61	0.47	16.84	73,73,73,73	0
58	MG	DA	1606	1/1	0.67	1.00	16.78	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3184	1/1	0.81	0.34	16.74	68,68,68,68	0
58	MG	DA	1647	1/1	0.95	0.33	16.73	58,58,58,58	0
58	MG	CA	3322	1/1	0.99	0.28	16.68	45,45,45,45	0
58	MG	AW	3003	1/1	0.88	0.45	16.57	52,52,52,52	0
58	MG	CA	3500	1/1	0.64	0.43	16.55	64,64,64,64	0
58	MG	CF	301	1/1	0.67	0.40	16.46	63,63,63,63	0
58	MG	AA	3436	1/1	0.96	0.34	16.37	38,38,38,38	0
58	MG	AA	3606	1/1	0.89	0.33	16.09	61,61,61,61	0
58	MG	CA	3028	1/1	0.97	0.55	16.00	35,35,35,35	1
58	MG	AA	3702	1/1	0.96	0.37	15.80	35,35,35,35	1
58	MG	AA	3708	1/1	0.90	0.52	15.56	53,53,53,53	1
58	MG	AA	3829	1/1	0.93	0.60	15.40	88,88,88,88	0
58	MG	AX	101	1/1	0.74	0.44	15.36	75,75,75,75	0
58	MG	AA	3168	1/1	0.80	0.38	15.05	63,63,63,63	0
58	MG	CA	3276	1/1	0.95	0.31	14.95	50,50,50,50	0
58	MG	CA	3038	1/1	0.90	0.37	14.89	48,48,48,48	0
58	MG	CA	3201	1/1	0.98	0.38	14.71	59,59,59,59	0
58	MG	AA	3525	1/1	0.95	0.33	14.67	40,40,40,40	0
58	MG	AA	3110	1/1	0.90	0.32	14.45	79,79,79,79	0
58	MG	CA	3226	1/1	0.84	0.35	14.36	69,69,69,69	0
58	MG	BA	1686	1/1	0.96	0.32	14.33	52,52,52,52	0
58	MG	AA	3267	1/1	0.91	0.42	14.05	63,63,63,63	0
58	MG	CA	3229	1/1	0.96	0.33	14.00	51,51,51,51	0
58	MG	CA	3597	1/1	0.94	0.28	13.92	39,39,39,39	0
58	MG	CU	201	1/1	0.89	0.56	13.82	64,64,64,64	0
58	MG	AA	3223	1/1	0.84	0.42	13.79	35,35,35,35	0
58	MG	AA	3823	1/1	0.97	0.24	13.46	37,37,37,37	1
58	MG	AA	3771	1/1	0.88	0.24	13.23	31,31,31,31	1
58	MG	CA	3212	1/1	0.83	0.33	13.18	69,69,69,69	0
58	MG	DA	1636	1/1	0.91	0.41	13.09	70,70,70,70	0
58	MG	AA	3819	1/1	0.92	0.26	13.05	25,25,25,25	1
58	MG	CA	3313	1/1	0.95	0.33	12.88	50,50,50,50	0
58	MG	AA	3173	1/1	0.96	0.24	12.82	60,60,60,60	0
58	MG	AA	3372	1/1	0.86	0.31	12.69	63,63,63,63	0
58	MG	CE	301	1/1	0.95	0.37	12.67	66,66,66,66	0
58	MG	CA	3428	1/1	0.93	0.29	12.49	54,54,54,54	1
58	MG	CA	3361	1/1	0.97	0.31	12.25	58,58,58,58	0
58	MG	AA	3138	1/1	0.94	0.37	12.22	50,50,50,50	0
58	MG	CA	3654	1/1	0.85	0.39	12.10	51,51,51,51	0
58	MG	CA	3661	1/1	0.91	0.26	12.01	74,74,74,74	0
58	MG	CA	3169	1/1	0.95	0.28	11.95	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AD	301	1/1	0.82	0.49	11.78	70,70,70,70	0
58	MG	AA	3331	1/1	0.95	0.28	11.75	34,34,34,34	0
58	MG	DA	1697	1/1	0.93	0.31	11.70	62,62,62,62	0
58	MG	AA	3400	1/1	0.98	0.36	11.68	39,39,39,39	0
58	MG	CA	3030	1/1	0.89	0.47	11.67	57,57,57,57	1
58	MG	AA	3316	1/1	0.97	0.29	11.65	60,60,60,60	0
58	MG	CA	3110	1/1	0.95	0.35	11.12	63,63,63,63	0
58	MG	AA	3179	1/1	0.97	0.31	11.04	71,71,71,71	0
58	MG	CA	3084	1/1	0.92	0.34	11.01	59,59,59,59	1
58	MG	CA	3324	1/1	0.94	0.32	10.99	40,40,40,40	0
58	MG	CA	3014	1/1	0.89	0.44	10.96	62,62,62,62	0
58	MG	CD	303	1/1	0.97	0.52	10.87	37,37,37,37	0
58	MG	AA	3420	1/1	0.93	0.23	10.86	26,26,26,26	0
58	MG	DA	1618	1/1	0.91	0.45	10.86	65,65,65,65	0
58	MG	BA	1623	1/1	0.92	0.27	10.84	65,65,65,65	0
58	MG	CF	303	1/1	0.92	0.39	10.84	62,62,62,62	0
58	MG	AA	3282	1/1	0.90	0.49	10.72	40,40,40,40	0
58	MG	CA	3137	1/1	0.89	0.36	10.65	73,73,73,73	0
58	MG	AA	3150	1/1	0.96	0.31	10.51	15,15,15,15	0
58	MG	AA	3773	1/1	0.94	0.34	10.48	30,30,30,30	1
58	MG	AA	3620	1/1	0.95	0.32	10.45	40,40,40,40	0
58	MG	CA	3455	1/1	0.95	0.27	10.29	47,47,47,47	0
58	MG	BA	1616	1/1	0.67	0.61	10.19	134,134,134,134	0
58	MG	CA	3027	1/1	0.85	0.36	10.16	44,44,44,44	0
58	MG	DA	1638	1/1	0.91	0.33	10.13	83,83,83,83	0
58	MG	AA	3210	1/1	0.95	0.33	9.99	24,24,24,24	1
58	MG	AA	3698	1/1	0.94	0.28	9.93	32,32,32,32	1
58	MG	BA	1783	1/1	0.90	0.33	9.62	69,69,69,69	0
58	MG	AH	3001	1/1	0.93	0.30	9.59	52,52,52,52	0
58	MG	AA	3130	1/1	0.94	0.26	9.55	37,37,37,37	0
58	MG	AA	3602	1/1	0.94	0.27	9.54	37,37,37,37	0
58	MG	CA	3375	1/1	0.92	0.32	9.52	71,71,71,71	0
58	MG	AA	3039	1/1	0.95	0.32	9.51	39,39,39,39	1
58	MG	CA	3326	1/1	0.92	0.24	9.50	34,34,34,34	0
58	MG	AA	3418	1/1	0.92	0.24	9.47	43,43,43,43	0
58	MG	CA	3607	1/1	0.84	0.28	9.46	97,97,97,97	0
58	MG	AD	302	1/1	0.87	0.38	9.43	19,19,19,19	0
58	MG	AA	3559	1/1	0.96	0.22	9.30	39,39,39,39	0
58	MG	BA	1683	1/1	0.94	0.30	9.22	69,69,69,69	0
58	MG	BA	1721	1/1	0.91	0.23	9.15	60,60,60,60	0
58	MG	CA	3163	1/1	0.90	0.34	9.12	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3174	1/1	0.89	0.31	9.02	63,63,63,63	0
58	MG	BA	1630	1/1	0.70	0.31	9.00	63,63,63,63	0
58	MG	CA	3489	1/1	0.89	0.25	8.92	80,80,80,80	0
58	MG	DA	1649	1/1	0.71	0.85	8.91	93,93,93,93	0
58	MG	AB	3008	1/1	0.94	0.47	8.80	51,51,51,51	0
58	MG	CA	3463	1/1	0.85	0.28	8.66	49,49,49,49	0
58	MG	AA	3805	1/1	0.94	0.33	8.64	35,35,35,35	1
58	MG	AA	3249	1/1	0.87	0.34	8.63	24,24,24,24	1
58	MG	CA	3432	1/1	0.91	0.28	8.57	61,61,61,61	0
58	MG	CA	3119	1/1	0.98	0.31	8.51	128,128,128,128	0
58	MG	BA	1755	1/1	0.98	0.31	8.51	38,38,38,38	0
58	MG	CA	3213	1/1	0.90	0.27	8.46	44,44,44,44	0
58	MG	AA	3816	1/1	0.94	0.29	8.37	43,43,43,43	0
58	MG	AA	3081	1/1	0.85	0.29	8.35	40,40,40,40	0
58	MG	CA	3013	1/1	0.79	0.31	8.28	63,63,63,63	0
58	MG	AA	3617	1/1	0.89	0.23	8.25	49,49,49,49	0
58	MG	CA	3420	1/1	0.86	0.29	8.22	71,71,71,71	0
58	MG	AA	3311	1/1	0.89	0.21	8.03	33,33,33,33	0
58	MG	CA	3626	1/1	0.91	0.28	8.02	75,75,75,75	0
58	MG	AA	3354	1/1	0.83	0.31	8.01	60,60,60,60	0
58	MG	AD	309	1/1	0.74	0.30	7.94	57,57,57,57	0
58	MG	AA	3250	1/1	0.85	0.30	7.94	46,46,46,46	0
58	MG	AA	3190	1/1	0.92	0.25	7.93	45,45,45,45	0
58	MG	AA	3565	1/1	0.88	0.28	7.92	29,29,29,29	0
58	MG	DT	3001	1/1	0.87	0.53	7.92	67,67,67,67	0
58	MG	AA	3706	1/1	0.95	0.24	7.90	27,27,27,27	1
58	MG	AF	303	1/1	0.96	0.32	7.82	50,50,50,50	0
58	MG	AU	202	1/1	0.97	0.30	7.80	29,29,29,29	1
58	MG	AA	3817	1/1	0.90	0.32	7.79	61,61,61,61	0
58	MG	AA	3833	1/1	0.92	0.40	7.70	49,49,49,49	0
58	MG	AA	3037	1/1	0.96	0.31	7.69	45,45,45,45	0
58	MG	AD	304	1/1	0.91	0.31	7.64	38,38,38,38	1
58	MG	AA	3381	1/1	0.94	0.27	7.64	27,27,27,27	0
58	MG	DA	1694	1/1	0.91	0.29	7.62	60,60,60,60	0
58	MG	AA	3120	1/1	0.91	0.25	7.61	46,46,46,46	0
58	MG	AU	201	1/1	0.93	0.30	7.60	44,44,44,44	0
58	MG	AA	3824	1/1	0.89	0.27	7.56	45,45,45,45	0
58	MG	CA	3221	1/1	0.86	0.27	7.45	54,54,54,54	0
58	MG	DA	1768	1/1	0.94	0.43	7.31	73,73,73,73	0
58	MG	AA	3048	1/1	0.97	0.26	7.26	34,34,34,34	0
58	MG	CA	3530	1/1	0.95	0.26	7.07	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3124	1/1	0.93	0.26	6.82	48,48,48,48	0
58	MG	CA	3396	1/1	0.75	0.24	6.74	58,58,58,58	0
58	MG	AA	3508	1/1	0.94	0.27	6.70	49,49,49,49	0
58	MG	AA	3564	1/1	0.98	0.22	6.66	19,19,19,19	0
58	MG	AD	308	1/1	0.93	0.39	6.62	42,42,42,42	0
58	MG	AA	3507	1/1	0.97	0.25	6.57	14,14,14,14	0
58	MG	AA	3253	1/1	0.94	0.27	6.56	29,29,29,29	1
58	MG	DA	1680	1/1	0.92	0.31	6.53	62,62,62,62	0
58	MG	CA	3383	1/1	0.96	0.25	6.49	44,44,44,44	0
58	MG	AA	3113	1/1	0.91	0.32	6.48	64,64,64,64	0
58	MG	AA	3798	1/1	0.98	0.27	6.45	35,35,35,35	0
58	MG	CA	3217	1/1	0.80	0.30	6.38	52,52,52,52	0
58	MG	CA	3490	1/1	0.97	0.26	6.38	67,67,67,67	0
58	MG	AA	3240	1/1	0.95	0.34	6.37	30,30,30,30	0
58	MG	AA	3059	1/1	0.77	0.26	6.27	51,51,51,51	0
58	MG	CE	303	1/1	0.90	0.34	6.26	54,54,54,54	0
58	MG	CA	3650	1/1	0.95	0.27	6.23	27,27,27,27	0
58	MG	AA	3506	1/1	0.96	0.27	6.23	32,32,32,32	0
58	MG	CA	3190	1/1	0.91	0.37	6.20	83,83,83,83	0
58	MG	AA	3589	1/1	0.93	0.26	6.14	21,21,21,21	1
58	MG	CA	3091	1/1	0.92	0.35	6.04	111,111,111,111	0
58	MG	AA	3488	1/1	0.98	0.23	6.04	20,20,20,20	0
58	MG	CA	3330	1/1	0.94	0.24	5.99	43,43,43,43	0
58	MG	CA	3109	1/1	0.86	0.25	5.96	54,54,54,54	0
58	MG	AA	3443	1/1	0.93	0.21	5.94	65,65,65,65	0
58	MG	CA	3011	1/1	0.95	0.23	5.94	47,47,47,47	0
58	MG	CA	3127	1/1	0.97	0.25	5.90	63,63,63,63	0
58	MG	CA	3476	1/1	0.95	0.25	5.83	55,55,55,55	0
58	MG	AA	3791	1/1	0.99	0.26	5.73	16,16,16,16	0
58	MG	CA	3452	1/1	0.96	0.24	5.71	61,61,61,61	0
58	MG	AA	3596	1/1	0.87	0.23	5.69	40,40,40,40	0
58	MG	AA	3247	1/1	0.87	0.31	5.64	63,63,63,63	0
58	MG	BA	1648	1/1	0.85	0.22	5.62	37,37,37,37	0
58	MG	AV	202	1/1	0.89	0.30	5.60	55,55,55,55	1
58	MG	CA	3458	1/1	0.90	0.24	5.59	49,49,49,49	0
58	MG	A8	5001	1/1	0.88	0.35	5.58	59,59,59,59	0
58	MG	CA	3603	1/1	0.80	0.25	5.56	51,51,51,51	0
58	MG	DA	1669	1/1	0.89	0.40	5.49	84,84,84,84	0
58	MG	AD	310	1/1	0.93	0.31	5.47	58,58,58,58	0
58	MG	AA	3329	1/1	0.98	0.23	5.43	17,17,17,17	0
58	MG	BA	1811	1/1	0.81	0.32	5.35	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3034	1/1	0.90	0.29	5.34	57,57,57,57	0
58	MG	AA	3023	1/1	0.98	0.31	5.33	33,33,33,33	1
58	MG	AA	3142	1/1	0.94	0.18	5.29	26,26,26,26	1
58	MG	AA	3717	1/1	0.96	0.24	5.27	47,47,47,47	0
58	MG	AA	3014	1/1	0.91	0.20	5.19	45,45,45,45	0
58	MG	AA	3187	1/1	0.93	0.26	5.12	32,32,32,32	0
58	MG	CQ	201	1/1	0.66	0.28	5.08	62,62,62,62	0
58	MG	AA	3551	1/1	0.93	0.23	5.00	52,52,52,52	0
58	MG	AA	3036	1/1	0.92	0.19	4.95	51,51,51,51	0
58	MG	CA	3037	1/1	0.85	0.23	4.95	58,58,58,58	0
58	MG	DA	1722	1/1	0.86	0.26	4.92	65,65,65,65	0
58	MG	CA	3023	1/1	0.96	0.25	4.91	46,46,46,46	0
58	MG	AD	305	1/1	0.77	0.40	4.88	53,53,53,53	1
58	MG	AA	3439	1/1	0.97	0.23	4.80	17,17,17,17	0
58	MG	AA	3357	1/1	0.95	0.22	4.80	27,27,27,27	0
58	MG	AA	3820	1/1	0.94	0.29	4.79	40,40,40,40	0
58	MG	AA	3830	1/1	0.95	0.26	4.75	45,45,45,45	0
58	MG	AA	3395	1/1	0.96	0.21	4.74	18,18,18,18	0
58	MG	AA	3183	1/1	0.88	0.25	4.74	35,35,35,35	1
58	MG	CA	3353	1/1	0.97	0.23	4.71	48,48,48,48	0
58	MG	AA	3440	1/1	0.96	0.22	4.61	31,31,31,31	0
58	MG	AA	3806	1/1	0.81	0.25	4.61	61,61,61,61	0
58	MG	CA	3041	1/1	0.94	0.27	4.60	31,31,31,31	0
58	MG	CA	3263	1/1	0.93	0.25	4.58	57,57,57,57	0
58	MG	AA	3309	1/1	0.92	0.20	4.50	44,44,44,44	0
58	MG	CA	3086	1/1	0.94	0.24	4.50	36,36,36,36	0
58	MG	CA	3358	1/1	0.93	0.29	4.49	45,45,45,45	0
58	MG	AB	3003	1/1	0.88	0.24	4.46	51,51,51,51	0
58	MG	AA	3704	1/1	0.88	0.27	4.44	59,59,59,59	0
58	MG	BA	1671	1/1	0.81	0.23	4.41	75,75,75,75	0
58	MG	BA	1723	1/1	0.89	0.31	4.37	71,71,71,71	0
58	MG	BA	1678	1/1	0.87	0.26	4.35	69,69,69,69	0
58	MG	AA	3827	1/1	0.96	0.22	4.35	40,40,40,40	0
58	MG	DA	1610	1/1	0.86	0.22	4.35	75,75,75,75	0
58	MG	CA	3409	1/1	0.91	0.24	4.25	40,40,40,40	0
58	MG	CV	202	1/1	0.91	0.28	4.23	85,85,85,85	0
58	MG	CA	3364	1/1	0.97	0.24	4.21	29,29,29,29	0
58	MG	DA	1689	1/1	0.87	0.22	4.15	58,58,58,58	0
58	MG	BA	1626	1/1	0.88	0.30	4.13	75,75,75,75	0
58	MG	AA	3711	1/1	0.93	0.29	4.11	34,34,34,34	1
58	MG	CA	3555	1/1	0.74	0.26	4.11	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3133	1/1	0.91	0.24	4.07	69,69,69,69	0
58	MG	AA	3082	1/1	0.97	0.20	3.98	23,23,23,23	1
58	MG	AA	3102	1/1	0.97	0.19	3.92	49,49,49,49	0
58	MG	AA	3811	1/1	0.93	0.29	3.85	58,58,58,58	0
58	MG	CA	3309	1/1	0.97	0.21	3.78	29,29,29,29	0
58	MG	AA	3231	1/1	0.85	0.22	3.74	53,53,53,53	0
58	MG	AA	3442	1/1	0.81	0.30	3.61	49,49,49,49	0
58	MG	AA	3812	1/1	0.91	0.22	3.59	42,42,42,42	0
58	MG	AF	302	1/1	0.91	0.29	3.56	41,41,41,41	0
58	MG	AA	3109	1/1	0.88	0.22	3.54	50,50,50,50	0
58	MG	AA	3621	1/1	0.79	0.18	3.46	46,46,46,46	0
58	MG	AA	3020	1/1	0.96	0.20	3.40	25,25,25,25	0
58	MG	AA	3388	1/1	0.99	0.23	3.37	25,25,25,25	0
58	MG	CA	3002	1/1	0.43	0.28	3.37	114,114,114,114	0
58	MG	AE	304	1/1	0.89	0.27	3.33	30,30,30,30	0
58	MG	CA	3596	1/1	0.72	0.23	3.29	72,72,72,72	0
58	MG	AA	3012	1/1	0.80	0.23	3.26	34,34,34,34	0
58	MG	AA	3456	1/1	0.91	0.18	3.25	30,30,30,30	0
58	MG	AA	3410	1/1	0.91	0.22	3.18	30,30,30,30	0
58	MG	BA	1695	1/1	0.70	0.21	3.15	98,98,98,98	0
58	MG	CA	3491	1/1	0.91	0.20	3.15	51,51,51,51	0
58	MG	BA	1693	1/1	0.70	0.28	3.14	67,67,67,67	0
58	MG	AA	3831	1/1	0.89	0.22	3.11	65,65,65,65	0
58	MG	AA	3828	1/1	0.92	0.28	3.08	37,37,37,37	1
58	MG	AA	3735	1/1	0.67	0.23	3.01	35,35,35,35	0
58	MG	DF	3001	1/1	0.79	0.22	2.97	49,49,49,49	0
58	MG	AA	3581	1/1	0.92	0.22	2.95	40,40,40,40	0
58	MG	BA	1690	1/1	0.81	0.30	2.90	89,89,89,89	0
58	MG	BA	1763	1/1	0.91	0.27	2.90	62,62,62,62	0
58	MG	BT	3001	1/1	0.95	0.37	2.86	62,62,62,62	0
58	MG	AA	3726	1/1	0.92	0.19	2.82	67,67,67,67	0
58	MG	CA	3178	1/1	0.93	0.22	2.82	57,57,57,57	0
58	MG	AA	3128	1/1	0.86	0.28	2.80	59,59,59,59	0
58	MG	AA	3044	1/1	0.94	0.20	2.76	34,34,34,34	0
58	MG	CA	3328	1/1	0.86	0.26	2.76	55,55,55,55	0
58	MG	DA	1658	1/1	0.92	0.21	2.69	72,72,72,72	0
58	MG	AQ	202	1/1	0.97	0.21	2.68	31,31,31,31	0
58	MG	BA	1615	1/1	0.78	0.31	2.62	74,74,74,74	0
58	MG	AA	3272	1/1	0.74	0.45	2.62	52,52,52,52	0
58	MG	CA	3251	1/1	0.94	0.19	2.57	56,56,56,56	0
58	MG	CA	3567	1/1	0.94	0.20	2.50	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3159	1/1	0.83	0.41	2.50	69,69,69,69	0
58	MG	CA	3392	1/1	0.85	0.21	2.49	35,35,35,35	0
58	MG	AA	3257	1/1	0.88	0.19	2.47	14,14,14,14	0
58	MG	CA	3302	1/1	0.86	0.21	2.45	68,68,68,68	0
58	MG	AA	3485	1/1	0.92	0.21	2.45	14,14,14,14	0
58	MG	AA	3832	1/1	0.97	0.22	2.43	38,38,38,38	0
58	MG	CA	3281	1/1	0.96	0.26	2.42	51,51,51,51	0
58	MG	AA	3043	1/1	0.96	0.22	2.40	31,31,31,31	0
58	MG	AA	3736	1/1	0.96	0.21	2.40	78,78,78,78	0
58	MG	AA	3815	1/1	0.98	0.17	2.31	29,29,29,29	1
58	MG	AA	3623	1/1	0.67	0.20	2.28	74,74,74,74	0
58	MG	AA	3314	1/1	0.97	0.20	2.25	28,28,28,28	0
58	MG	CA	3177	1/1	0.96	0.22	2.25	36,36,36,36	0
58	MG	C3	3001	1/1	0.95	0.33	2.13	69,69,69,69	0
58	MG	BA	1740	1/1	0.93	0.19	2.12	50,50,50,50	0
58	MG	CA	3266	1/1	0.96	0.21	2.10	69,69,69,69	0
58	MG	CA	3146	1/1	0.93	0.24	2.07	60,60,60,60	0
58	MG	CA	3340	1/1	0.88	0.22	2.07	48,48,48,48	0
58	MG	AA	3793	1/1	0.87	0.22	2.07	28,28,28,28	0
58	MG	AA	3499	1/1	0.95	0.18	2.07	51,51,51,51	1
58	MG	AA	3741	1/1	0.93	0.20	2.01	34,34,34,34	1
58	MG	AA	3519	1/1	0.87	0.19	2.00	21,21,21,21	0
58	MG	BA	1773	1/1	0.93	0.24	1.99	78,78,78,78	0
58	MG	CA	3214	1/1	0.95	0.19	1.95	40,40,40,40	0
58	MG	DA	1765	1/1	0.84	0.19	1.95	95,95,95,95	0
58	MG	CA	3362	1/1	0.93	0.19	1.92	44,44,44,44	0
58	MG	BA	1603	1/1	0.68	0.23	1.90	67,67,67,67	0
58	MG	AB	3014	1/1	0.94	0.18	1.86	67,67,67,67	0
58	MG	AA	3334	1/1	0.91	0.21	1.85	57,57,57,57	0
58	MG	AB	3016	1/1	0.96	0.17	1.81	34,34,34,34	0
58	MG	AA	3721	1/1	0.91	0.22	1.80	10,10,10,10	0
58	MG	AA	3518	1/1	0.87	0.22	1.79	33,33,33,33	0
58	MG	AA	3356	1/1	0.89	0.20	1.78	35,35,35,35	0
58	MG	CA	3318	1/1	0.99	0.22	1.74	33,33,33,33	0
58	MG	AA	3394	1/1	0.96	0.18	1.74	27,27,27,27	0
58	MG	BA	1752	1/1	0.97	0.21	1.73	48,48,48,48	0
58	MG	BF	3001	1/1	0.91	0.26	1.72	74,74,74,74	0
58	MG	AB	3017	1/1	0.69	0.18	1.72	77,77,77,77	0
58	MG	CV	201	1/1	0.79	0.22	1.70	100,100,100,100	0
58	MG	AA	3278	1/1	0.92	0.18	1.70	36,36,36,36	0
58	MG	AA	3543	1/1	0.83	0.20	1.66	52,52,52,52	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AP	201	1/1	0.96	0.21	1.62	28,28,28,28	1
58	MG	CW	201	1/1	0.94	0.26	1.58	39,39,39,39	0
58	MG	CA	3657	1/1	0.84	0.21	1.58	67,67,67,67	0
58	MG	AA	3714	1/1	0.94	0.20	1.52	56,56,56,56	0
58	MG	CA	3400	1/1	0.92	0.23	1.52	62,62,62,62	0
58	MG	CA	3521	1/1	0.93	0.20	1.48	61,61,61,61	0
58	MG	CA	3243	1/1	0.70	0.19	1.47	78,78,78,78	0
58	MG	CA	3433	1/1	0.95	0.16	1.47	71,71,71,71	0
58	MG	AA	3505	1/1	0.94	0.17	1.43	31,31,31,31	0
58	MG	BA	1700	1/1	0.85	0.24	1.43	61,61,61,61	0
58	MG	CB	3007	1/1	0.76	0.19	1.42	65,65,65,65	0
58	MG	AA	3401	1/1	0.95	0.19	1.42	33,33,33,33	0
58	MG	DA	1739	1/1	0.87	0.20	1.40	79,79,79,79	0
61	FUA	BZ	703	37/37	0.85	0.27	1.36	69,69,69,69	0
58	MG	AA	3821	1/1	0.97	0.20	1.29	41,41,41,41	1
58	MG	AA	3290	1/1	0.92	0.18	1.28	63,63,63,63	0
58	MG	AD	307	1/1	0.87	0.16	1.25	37,37,37,37	0
58	MG	DA	1682	1/1	0.95	0.20	1.24	47,47,47,47	0
58	MG	AD	303	1/1	0.88	0.17	1.24	63,63,63,63	0
58	MG	CA	3662	1/1	0.87	0.23	1.22	55,55,55,55	0
58	MG	CA	3487	1/1	0.92	0.21	1.21	70,70,70,70	0
58	MG	AA	3433	1/1	0.97	0.21	1.20	28,28,28,28	0
58	MG	AA	3181	1/1	0.92	0.18	1.19	56,56,56,56	0
58	MG	AA	3459	1/1	0.98	0.19	1.14	18,18,18,18	0
58	MG	CG	3001	1/1	0.69	0.31	1.10	83,83,83,83	0
58	MG	AA	3050	1/1	0.95	0.19	1.08	53,53,53,53	0
58	MG	CA	3655	1/1	0.98	0.23	1.03	70,70,70,70	0
58	MG	AA	3045	1/1	0.98	0.19	1.03	43,43,43,43	0
58	MG	CA	3550	1/1	0.97	0.18	1.00	33,33,33,33	0
58	MG	CA	3332	1/1	0.92	0.22	0.99	42,42,42,42	0
61	FUA	DZ	703	37/37	0.87	0.23	0.98	85,85,85,85	0
58	MG	CA	3413	1/1	0.94	0.21	0.97	39,39,39,39	0
58	MG	AA	3723	1/1	0.98	0.20	0.95	21,21,21,21	0
58	MG	AA	3511	1/1	0.92	0.21	0.91	12,12,12,12	0
58	MG	AA	3213	1/1	0.84	0.17	0.87	58,58,58,58	0
58	MG	BA	1624	1/1	0.63	0.19	0.85	87,87,87,87	0
58	MG	BK	201	1/1	0.87	0.17	0.85	57,57,57,57	0
58	MG	DE	201	1/1	0.86	0.18	0.82	84,84,84,84	0
58	MG	AA	3473	1/1	0.98	0.21	0.80	15,15,15,15	0
58	MG	DA	1720	1/1	0.47	0.19	0.76	72,72,72,72	0
58	MG	BA	1704	1/1	0.87	0.23	0.74	61,61,61,61	0
58	MG	CA	3453	1/1	0.97	0.20	0.68	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3169	1/1	0.94	0.20	0.67	39,39,39,39	0
58	MG	BA	1662	1/1	0.85	0.17	0.65	53,53,53,53	0
58	MG	CA	3457	1/1	0.96	0.21	0.62	47,47,47,47	0
58	MG	AA	3300	1/1	0.95	0.19	0.60	50,50,50,50	0
58	MG	AA	3145	1/1	0.95	0.17	0.59	33,33,33,33	0
58	MG	AD	306	1/1	0.91	0.16	0.59	73,73,73,73	0
58	MG	AA	3622	1/1	0.96	0.17	0.59	45,45,45,45	0
58	MG	DA	1637	1/1	0.89	0.25	0.57	76,76,76,76	0
58	MG	AA	3469	1/1	0.95	0.16	0.57	43,43,43,43	0
58	MG	BA	1748	1/1	0.86	0.30	0.55	84,84,84,84	0
58	MG	CA	3267	1/1	0.88	0.17	0.53	56,56,56,56	0
58	MG	AA	3546	1/1	0.92	0.20	0.50	32,32,32,32	0
58	MG	AA	3404	1/1	0.95	0.19	0.50	19,19,19,19	0
58	MG	CA	3315	1/1	0.97	0.16	0.46	60,60,60,60	0
58	MG	AA	3389	1/1	0.99	0.19	0.46	17,17,17,17	0
58	MG	AA	3041	1/1	0.77	0.17	0.44	75,75,75,75	0
58	MG	AA	3235	1/1	0.57	0.16	0.39	64,64,64,64	0
58	MG	CF	302	1/1	0.95	0.19	0.31	56,56,56,56	0
58	MG	CA	3417	1/1	0.98	0.21	0.25	37,37,37,37	0
58	MG	AA	3007	1/1	0.91	0.16	0.25	21,21,21,21	0
58	MG	AA	3315	1/1	0.96	0.18	0.24	34,34,34,34	0
58	MG	AA	3535	1/1	0.95	0.19	0.20	15,15,15,15	0
58	MG	CF	305	1/1	0.77	0.16	0.18	51,51,51,51	0
58	MG	CA	3448	1/1	0.96	0.19	0.17	43,43,43,43	0
58	MG	CA	3564	1/1	0.99	0.19	0.14	40,40,40,40	1
58	MG	AA	3275	1/1	0.93	0.22	0.14	47,47,47,47	1
58	MG	BA	1800	1/1	0.65	0.21	0.13	84,84,84,84	0
62	GDP	DZ	704	28/28	0.93	0.17	0.13	80,80,80,80	3
58	MG	BA	1810	1/1	0.85	0.26	0.12	66,66,66,66	0
58	MG	BA	1685	1/1	0.90	0.18	0.12	50,50,50,50	0
58	MG	BA	1640	1/1	0.90	0.19	0.12	55,55,55,55	0
58	MG	CA	3579	1/1	0.88	0.18	0.12	51,51,51,51	0
58	MG	AA	3540	1/1	0.97	0.19	0.05	29,29,29,29	0
58	MG	AA	3377	1/1	0.99	0.19	0.05	20,20,20,20	0
58	MG	CA	3424	1/1	0.96	0.17	0.03	55,55,55,55	0
58	MG	CA	3003	1/1	0.92	0.20	0.02	45,45,45,45	0
58	MG	BA	1702	1/1	0.78	0.18	0.00	89,89,89,89	0
58	MG	AA	3686	1/1	0.93	0.18	-0.01	73,73,73,73	0
58	MG	CA	3273	1/1	0.87	0.17	-0.02	69,69,69,69	0
58	MG	AA	3341	1/1	0.92	0.21	-0.04	15,15,15,15	0
58	MG	AA	3217	1/1	0.96	0.17	-0.09	6,6,6,6	0
58	MG	AA	3687	1/1	0.93	0.18	-0.12	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	AA	3258	1/1	0.82	0.18	-0.14	22,22,22,22	0
58	MG	DA	1715	1/1	0.90	0.24	-0.17	76,76,76,76	0
58	MG	CA	3656	1/1	0.92	0.23	-0.19	61,61,61,61	0
58	MG	AA	3378	1/1	0.95	0.17	-0.20	19,19,19,19	0
58	MG	AA	3517	1/1	0.97	0.19	-0.21	19,19,19,19	0
58	MG	CA	3311	1/1	0.92	0.15	-0.22	48,48,48,48	0
58	MG	AA	3649	1/1	0.91	0.14	-0.27	92,92,92,92	0
58	MG	AA	3383	1/1	0.90	0.19	-0.34	54,54,54,54	0
58	MG	CA	3047	1/1	0.88	0.16	-0.37	61,61,61,61	0
58	MG	CQ	203	1/1	0.86	0.15	-0.41	67,67,67,67	0
58	MG	CA	3615	1/1	0.96	0.18	-0.44	38,38,38,38	0
58	MG	AA	3583	1/1	0.99	0.16	-0.45	13,13,13,13	0
58	MG	AA	3202	1/1	0.74	0.15	-0.46	47,47,47,47	0
58	MG	CA	3020	1/1	0.76	0.17	-0.48	63,63,63,63	0
58	MG	AA	3524	1/1	0.94	0.17	-0.48	28,28,28,28	0
58	MG	DA	1709	1/1	0.89	0.16	-0.48	72,72,72,72	0
58	MG	CA	3439	1/1	0.91	0.20	-0.49	38,38,38,38	0
58	MG	AA	3515	1/1	0.95	0.17	-0.51	20,20,20,20	0
58	MG	CA	3069	1/1	0.94	0.18	-0.52	81,81,81,81	0
58	MG	CA	3192	1/1	0.92	0.14	-0.52	58,58,58,58	0
58	MG	AA	3734	1/1	0.98	0.17	-0.55	22,22,22,22	0
58	MG	AV	201	1/1	0.98	0.19	-0.59	38,38,38,38	0
58	MG	CB	3004	1/1	0.93	0.15	-0.60	68,68,68,68	0
62	GDP	BZ	704	28/28	0.97	0.15	-0.60	53,53,53,53	1
58	MG	CA	3337	1/1	0.93	0.17	-0.60	41,41,41,41	0
58	MG	AA	3792	1/1	0.92	0.17	-0.61	45,45,45,45	0
58	MG	CA	3664	1/1	0.92	0.15	-0.63	54,54,54,54	0
58	MG	AA	3542	1/1	0.95	0.15	-0.63	63,63,63,63	0
58	MG	CA	3160	1/1	0.91	0.13	-0.68	42,42,42,42	0
58	MG	CA	3057	1/1	0.93	0.17	-0.70	49,49,49,49	0
58	MG	AA	3794	1/1	0.91	0.17	-0.76	58,58,58,58	1
58	MG	DA	1630	1/1	0.81	0.16	-0.80	61,61,61,61	0
58	MG	AA	3393	1/1	0.98	0.18	-0.83	21,21,21,21	0
59	ZN	A5	101	1/1	1.00	0.12	-0.95	36,36,36,36	0
58	MG	BA	1679	1/1	0.96	0.15	-0.99	36,36,36,36	0
58	MG	AG	202	1/1	0.93	0.14	-1.02	73,73,73,73	0
58	MG	DA	1695	1/1	0.93	0.14	-1.04	66,66,66,66	0
58	MG	DA	1666	1/1	0.94	0.17	-1.05	66,66,66,66	0
58	MG	BA	1675	1/1	0.91	0.16	-1.05	57,57,57,57	0
58	MG	BA	1789	1/1	0.85	0.13	-1.06	68,68,68,68	0
58	MG	CA	3410	1/1	0.96	0.19	-1.12	31,31,31,31	0
58	MG	DA	1601	1/1	0.89	0.14	-1.12	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3725	1/1	0.93	0.17	-1.13	39,39,39,39	0
59	ZN	C5	102	1/1	0.99	0.09	-1.17	68,68,68,68	0
58	MG	AA	3818	1/1	0.94	0.16	-1.26	19,19,19,19	0
58	MG	BM	201	1/1	0.87	0.12	-1.34	57,57,57,57	0
58	MG	CA	3105	1/1	0.61	0.12	-1.38	80,80,80,80	0
59	ZN	A4	501	1/1	0.96	0.06	-1.39	137,137,137,137	0
58	MG	AA	3009	1/1	0.94	0.14	-1.41	24,24,24,24	0
58	MG	DA	1721	1/1	0.92	0.13	-1.42	67,67,67,67	0
58	MG	AA	3571	1/1	0.89	0.15	-1.43	48,48,48,48	0
58	MG	AA	3826	1/1	0.96	0.17	-1.44	20,20,20,20	0
59	ZN	A9	501	1/1	1.00	0.10	-1.44	42,42,42,42	0
58	MG	CA	3346	1/1	0.95	0.17	-1.45	31,31,31,31	0
58	MG	CA	3427	1/1	0.86	0.14	-1.53	55,55,55,55	0
58	MG	AA	3200	1/1	0.73	0.11	-1.54	91,91,91,91	0
58	MG	CA	3227	1/1	0.96	0.15	-1.55	53,53,53,53	0
59	ZN	AY	501	1/1	0.99	0.08	-1.55	65,65,65,65	0
59	ZN	C6	501	1/1	0.99	0.10	-1.57	61,61,61,61	0
58	MG	AA	3072	1/1	0.94	0.14	-1.58	26,26,26,26	0
58	MG	AA	3099	1/1	0.87	0.13	-1.58	62,62,62,62	0
58	MG	AA	3529	1/1	0.97	0.16	-1.59	16,16,16,16	0
58	MG	AA	3619	1/1	0.96	0.15	-1.61	42,42,42,42	0
58	MG	CA	3261	1/1	0.96	0.17	-1.62	29,29,29,29	0
58	MG	DE	202	1/1	0.80	0.13	-1.66	94,94,94,94	0
58	MG	DA	1670	1/1	0.97	0.14	-1.68	75,75,75,75	0
60	SF4	DD	501	8/8	0.98	0.10	-1.70	90,90,90,90	1
58	MG	CA	3104	1/1	0.95	0.15	-1.72	48,48,48,48	0
58	MG	CA	3101	1/1	0.66	0.14	-1.73	78,78,78,78	0
58	MG	AA	3413	1/1	0.98	0.16	-1.78	20,20,20,20	0
58	MG	CA	3339	1/1	0.98	0.14	-1.78	34,34,34,34	0
58	MG	AA	3670	1/1	0.96	0.13	-1.79	33,33,33,33	0
60	SF4	BD	501	8/8	0.97	0.09	-1.79	80,80,80,80	0
59	ZN	C4	501	1/1	0.59	0.06	-1.85	189,189,189,189	0
58	MG	DA	1652	1/1	0.75	0.13	-1.86	71,71,71,71	0
58	MG	CA	3462	1/1	0.95	0.13	-1.89	49,49,49,49	0
58	MG	CA	3658	1/1	0.94	0.12	-1.90	50,50,50,50	0
58	MG	CA	3019	1/1	0.95	0.15	-1.92	28,28,28,28	0
58	MG	CA	3425	1/1	0.96	0.14	-1.93	53,53,53,53	0
58	MG	CA	3600	1/1	0.92	0.12	-1.93	50,50,50,50	0
58	MG	CA	3501	1/1	0.96	0.16	-1.94	45,45,45,45	1
59	ZN	A6	102	1/1	1.00	0.11	-1.96	46,46,46,46	0
58	MG	AA	3532	1/1	0.96	0.16	-2.00	25,25,25,25	0
58	MG	BA	1617	1/1	0.94	0.13	-2.01	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3189	1/1	0.90	0.10	-2.07	68,68,68,68	0
58	MG	DA	1730	1/1	0.83	0.15	-2.09	88,88,88,88	0
58	MG	AA	3251	1/1	0.98	0.14	-2.11	42,42,42,42	0
58	MG	CA	3050	1/1	0.98	0.10	-2.12	44,44,44,44	0
59	ZN	C9	501	1/1	0.99	0.07	-2.14	94,94,94,94	0
58	MG	AA	3084	1/1	0.96	0.11	-2.15	32,32,32,32	0
58	MG	CA	3617	1/1	0.99	0.13	-2.18	31,31,31,31	0
58	MG	DA	1686	1/1	0.77	0.15	-2.19	53,53,53,53	0
58	MG	CA	3310	1/1	0.94	0.12	-2.19	48,48,48,48	0
59	ZN	DN	501	1/1	0.96	0.06	-2.29	129,129,129,129	0
58	MG	BA	1733	1/1	0.93	0.15	-2.35	62,62,62,62	0
58	MG	AA	3069	1/1	0.95	0.13	-2.38	34,34,34,34	0
58	MG	CA	3157	1/1	0.92	0.15	-2.38	55,55,55,55	0
58	MG	AA	3384	1/1	0.98	0.15	-2.39	34,34,34,34	0
58	MG	AA	3313	1/1	0.97	0.13	-2.40	35,35,35,35	0
59	ZN	BN	501	1/1	0.95	0.05	-2.50	123,123,123,123	0
58	MG	AA	3614	1/1	0.94	0.12	-2.50	56,56,56,56	0
58	MG	CA	3274	1/1	0.98	0.12	-2.53	50,50,50,50	1
58	MG	AA	3528	1/1	0.97	0.15	-2.55	28,28,28,28	0
58	MG	DA	1617	1/1	0.89	0.10	-2.56	48,48,48,48	0
58	MG	AA	3574	1/1	0.95	0.16	-2.58	30,30,30,30	1
58	MG	DA	1624	1/1	0.87	0.13	-2.61	44,44,44,44	0
59	ZN	CY	501	1/1	0.98	0.04	-2.66	93,93,93,93	0
58	MG	AA	3307	1/1	0.98	0.15	-2.67	6,6,6,6	0
58	MG	CA	3138	1/1	0.85	0.11	-2.70	63,63,63,63	0
58	MG	CA	3306	1/1	0.93	0.12	-2.72	41,41,41,41	0
58	MG	BA	1607	1/1	0.91	0.12	-2.75	62,62,62,62	0
58	MG	AA	3613	1/1	0.62	0.12	-2.76	104,104,104,104	0
58	MG	AA	3408	1/1	0.99	0.15	-2.78	20,20,20,20	0
58	MG	AA	3514	1/1	0.98	0.14	-2.82	18,18,18,18	0
58	MG	AA	3322	1/1	0.98	0.13	-2.84	32,32,32,32	1
58	MG	CE	302	1/1	0.97	0.13	-2.85	47,47,47,47	0
58	MG	CA	3372	1/1	0.99	0.13	-2.92	42,42,42,42	0
58	MG	CA	3320	1/1	0.98	0.15	-3.03	30,30,30,30	0
58	MG	AB	3020	1/1	0.93	0.11	-3.07	55,55,55,55	0
58	MG	CA	3010	1/1	0.84	0.08	-3.07	41,41,41,41	0
58	MG	AA	3526	1/1	0.98	0.16	-3.08	20,20,20,20	0
58	MG	CA	3360	1/1	0.94	0.12	-3.09	49,49,49,49	0
58	MG	AA	3344	1/1	0.96	0.10	-3.10	84,84,84,84	0
58	MG	AA	3396	1/1	0.94	0.14	-3.13	22,22,22,22	0
58	MG	CA	3419	1/1	0.92	0.11	-3.24	60,60,60,60	0
58	MG	AA	3398	1/1	0.99	0.14	-3.26	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	AA	3022	1/1	0.92	0.16	-3.28	9,9,9,9	0
58	MG	BA	1680	1/1	0.98	0.11	-3.29	53,53,53,53	0
58	MG	AA	3547	1/1	0.88	0.10	-3.29	31,31,31,31	0
58	MG	CA	3211	1/1	0.94	0.11	-3.32	40,40,40,40	0
58	MG	BA	1620	1/1	0.96	0.09	-3.42	37,37,37,37	0
58	MG	DA	1687	1/1	0.67	0.13	-3.42	100,100,100,100	0
58	MG	CA	3370	1/1	0.94	0.13	-3.43	47,47,47,47	0
58	MG	CA	3464	1/1	0.94	0.14	-3.43	46,46,46,46	0
58	MG	BA	1654	1/1	0.95	0.09	-3.46	54,54,54,54	0
58	MG	BB	3001	1/1	0.91	0.12	-3.49	75,75,75,75	0
58	MG	AG	201	1/1	0.95	0.10	-3.49	52,52,52,52	0
58	MG	AA	3750	1/1	0.91	0.13	-3.49	24,24,24,24	0
58	MG	AA	3486	1/1	0.95	0.16	-3.54	27,27,27,27	0
58	MG	AA	3572	1/1	0.93	0.14	-3.56	32,32,32,32	0
58	MG	CA	3278	1/1	0.87	0.15	-3.57	37,37,37,37	0
58	MG	CA	3488	1/1	0.91	0.10	-3.58	51,51,51,51	0
58	MG	CA	3265	1/1	0.96	0.11	-3.59	40,40,40,40	0
58	MG	CA	3560	1/1	0.98	0.13	-3.60	36,36,36,36	0
58	MG	AA	3435	1/1	0.96	0.16	-3.61	20,20,20,20	0
58	MG	AA	3324	1/1	0.96	0.12	-3.76	33,33,33,33	0
58	MG	AA	3642	1/1	0.95	0.14	-3.76	49,49,49,49	0
58	MG	AA	3387	1/1	0.99	0.14	-3.80	17,17,17,17	0
58	MG	AA	3038	1/1	0.99	0.13	-3.83	11,11,11,11	0
58	MG	CA	3584	1/1	0.95	0.13	-3.87	46,46,46,46	0
58	MG	AA	3775	1/1	0.89	0.11	-3.94	45,45,45,45	0
58	MG	BA	1674	1/1	0.94	0.05	-3.96	68,68,68,68	0
58	MG	AA	3556	1/1	0.94	0.15	-3.99	39,39,39,39	0
58	MG	AA	3054	1/1	0.94	0.14	-4.07	38,38,38,38	0
58	MG	DA	1645	1/1	0.98	0.12	-4.12	64,64,64,64	0
58	MG	CA	3282	1/1	0.98	0.12	-4.16	50,50,50,50	0
58	MG	CA	3343	1/1	0.91	0.13	-4.18	36,36,36,36	0
58	MG	AA	3825	1/1	0.94	0.13	-4.22	17,17,17,17	1
58	MG	BA	1741	1/1	0.96	0.09	-4.33	46,46,46,46	0
58	MG	AB	3007	1/1	0.93	0.09	-4.38	45,45,45,45	0
58	MG	AA	3777	1/1	0.98	0.10	-4.50	19,19,19,19	0
58	MG	AA	3299	1/1	0.98	0.13	-4.53	20,20,20,20	0
58	MG	BA	1611	1/1	0.97	0.13	-4.71	31,31,31,31	0
58	MG	DA	1654	1/1	0.97	0.10	-4.76	30,30,30,30	0
58	MG	AA	3385	1/1	0.98	0.13	-5.03	28,28,28,28	0
58	MG	AA	3403	1/1	0.96	0.09	-5.09	28,28,28,28	0
58	MG	AA	3539	1/1	0.96	0.14	-5.15	28,28,28,28	0
58	MG	BA	1612	1/1	0.91	0.10	-5.23	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3526	1/1	0.94	0.10	-5.34	40,40,40,40	0
58	MG	CA	3321	1/1	0.97	0.12	-5.48	31,31,31,31	0
58	MG	CA	3317	1/1	0.92	0.12	-5.54	44,44,44,44	0
58	MG	CA	3438	1/1	0.92	0.15	-5.71	46,46,46,46	0
58	MG	AA	3434	1/1	0.93	0.12	-5.77	17,17,17,17	0
58	MG	AA	3616	1/1	0.94	0.10	-5.81	28,28,28,28	0
58	MG	AA	3374	1/1	0.98	0.08	-5.89	18,18,18,18	0
58	MG	AA	3003	1/1	0.98	0.09	-6.00	20,20,20,20	0
58	MG	AA	3502	1/1	0.97	0.12	-6.14	51,51,51,51	1
58	MG	AA	3021	1/1	0.92	0.11	-6.28	40,40,40,40	0
58	MG	CA	3647	1/1	0.91	0.07	-6.69	66,66,66,66	0
58	MG	AA	3449	1/1	0.97	0.11	-6.79	15,15,15,15	0
58	MG	AA	3754	1/1	0.98	0.08	-6.82	29,29,29,29	0
58	MG	CA	3029	1/1	0.94	0.11	-6.84	33,33,33,33	0
58	MG	AA	3342	1/1	0.99	0.14	-7.04	5,5,5,5	0
58	MG	AA	3684	1/1	0.97	0.10	-7.16	29,29,29,29	0
58	MG	AA	3669	1/1	0.97	0.06	-7.28	33,33,33,33	0
58	MG	CA	3242	1/1	0.91	0.12	-7.99	41,41,41,41	0
58	MG	BA	1643	1/1	0.94	0.07	-8.03	58,58,58,58	0
58	MG	BA	1728	1/1	0.97	0.11	-8.14	52,52,52,52	0
58	MG	AA	3562	1/1	0.97	0.06	-8.28	48,48,48,48	1
58	MG	BA	1613	1/1	0.90	0.08	-9.17	101,101,101,101	0
58	MG	CA	3628	1/1	0.96	0.13	-9.52	66,66,66,66	0
58	MG	CA	3291	1/1	0.97	0.12	-9.95	27,27,27,27	0
58	MG	AA	3493	1/1	0.95	0.13	-10.19	30,30,30,30	1
58	MG	AA	3498	1/1	0.99	0.12	-10.33	37,37,37,37	0
58	MG	AA	3011	1/1	0.97	0.09	-11.13	40,40,40,40	0
58	MG	BA	1758	1/1	0.98	0.06	-12.63	57,57,57,57	0
58	MG	CA	3021	1/1	0.96	0.12	-13.57	29,29,29,29	0
58	MG	DA	1621	1/1	0.94	0.12	-15.63	44,44,44,44	0
58	MG	BW	503	1/1	0.89	0.15	-	45,45,45,45	0
58	MG	CA	3423	1/1	0.88	0.19	-	50,50,50,50	0
58	MG	CA	3048	1/1	0.94	0.18	-	86,86,86,86	0
58	MG	BA	1794	1/1	0.96	0.17	-	77,77,77,77	0
58	MG	CA	3454	1/1	0.92	0.18	-	81,81,81,81	0
58	MG	CA	3074	1/1	0.92	0.50	-	53,53,53,53	0
58	MG	BA	1757	1/1	0.87	0.28	-	65,65,65,65	0
58	MG	AA	3452	1/1	0.95	0.14	-	69,69,69,69	0
58	MG	AQ	203	1/1	0.94	0.43	-	41,41,41,41	0
58	MG	AA	3656	1/1	0.81	0.22	-	56,56,56,56	0
58	MG	AY	502	1/1	0.91	0.31	-	58,58,58,58	0
58	MG	AA	3146	1/1	0.95	0.23	-	33,33,33,33	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3545	1/1	0.91	0.13	-	68,68,68,68	0
58	MG	CA	3644	1/1	0.65	0.25	-	84,84,84,84	0
58	MG	BA	1644	1/1	0.81	0.33	-	75,75,75,75	0
58	MG	AA	3164	1/1	0.89	0.23	-	58,58,58,58	0
58	MG	DA	1700	1/1	0.40	0.28	-	124,124,124,124	0
58	MG	CA	3056	1/1	0.76	0.25	-	85,85,85,85	0
58	MG	AA	3699	1/1	0.92	0.37	-	46,46,46,46	1
58	MG	DA	1702	1/1	0.95	0.10	-	65,65,65,65	0
58	MG	AA	3013	1/1	0.95	0.18	-	35,35,35,35	0
58	MG	CA	3121	1/1	0.89	0.15	-	45,45,45,45	0
58	MG	BA	1786	1/1	0.97	0.16	-	66,66,66,66	0
58	MG	CA	3236	1/1	0.78	0.45	-	87,87,87,87	0
58	MG	CA	3087	1/1	0.86	0.21	-	67,67,67,67	0
58	MG	CA	3188	1/1	0.91	0.56	-	58,58,58,58	0
58	MG	CA	3444	1/1	0.80	0.15	-	91,91,91,91	0
58	MG	CA	3365	1/1	0.97	0.20	-	48,48,48,48	0
58	MG	DA	1626	1/1	0.94	0.50	-	49,49,49,49	0
58	MG	AA	3071	1/1	0.95	0.75	-	41,41,41,41	0
58	MG	CA	3547	1/1	0.96	0.14	-	61,61,61,61	0
58	MG	AA	3359	1/1	0.79	0.19	-	51,51,51,51	0
58	MG	DA	1605	1/1	0.92	0.23	-	73,73,73,73	0
58	MG	CA	3286	1/1	0.87	0.21	-	64,64,64,64	0
58	MG	CA	3352	1/1	0.98	0.18	-	68,68,68,68	0
58	MG	AA	3005	1/1	0.92	0.21	-	62,62,62,62	0
58	MG	CA	3573	1/1	0.79	0.20	-	80,80,80,80	0
58	MG	CB	3009	1/1	0.91	0.16	-	67,67,67,67	0
58	MG	CA	3234	1/1	0.96	0.30	-	54,54,54,54	0
58	MG	DA	1690	1/1	0.89	0.53	-	82,82,82,82	0
58	MG	CA	3629	1/1	0.96	0.17	-	55,55,55,55	0
58	MG	AB	3021	1/1	0.72	0.21	-	61,61,61,61	0
58	MG	BA	1622	1/1	0.70	1.05	-	75,75,75,75	0
58	MG	AA	3479	1/1	0.88	0.26	-	54,54,54,54	0
58	MG	AA	3705	1/1	0.98	0.24	-	24,24,24,24	1
58	MG	AA	3087	1/1	0.93	0.25	-	72,72,72,72	0
58	MG	BA	1781	1/1	0.96	0.39	-	62,62,62,62	0
58	MG	AA	3073	1/1	0.94	0.27	-	58,58,58,58	0
58	MG	CA	3553	1/1	0.79	0.21	-	81,81,81,81	0
58	MG	AB	3009	1/1	0.94	0.08	-	56,56,56,56	0
58	MG	CA	3341	1/1	0.97	0.34	-	71,71,71,71	0
58	MG	CA	3275	1/1	0.95	0.23	-	42,42,42,42	0
58	MG	BV	101	1/1	0.82	0.34	-	110,110,110,110	0
58	MG	AA	3789	1/1	0.95	0.18	-	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3137	1/1	0.82	0.29	-	56,56,56,56	0
58	MG	DA	1633	1/1	0.87	0.49	-	73,73,73,73	0
58	MG	CE	305	1/1	0.96	0.26	-	43,43,43,43	0
58	MG	AA	3321	1/1	0.95	0.32	-	70,70,70,70	0
58	MG	AA	3157	1/1	0.98	0.11	-	34,34,34,34	0
58	MG	CA	3514	1/1	0.72	0.80	-	105,105,105,105	0
58	MG	AA	3283	1/1	0.82	0.56	-	62,62,62,62	0
58	MG	CA	3152	1/1	0.68	0.28	-	56,56,56,56	0
58	MG	AZ	301	1/1	0.73	0.34	-	98,98,98,98	0
58	MG	DA	1685	1/1	0.94	0.37	-	65,65,65,65	0
58	MG	CA	3203	1/1	0.85	0.12	-	60,60,60,60	0
58	MG	AA	3780	1/1	0.92	0.32	-	42,42,42,42	0
58	MG	AA	3254	1/1	0.96	0.19	-	42,42,42,42	0
58	MG	CA	3634	1/1	0.86	0.10	-	81,81,81,81	0
58	MG	AA	3659	1/1	0.89	0.24	-	14,14,14,14	0
58	MG	AA	3609	1/1	0.98	0.19	-	53,53,53,53	0
58	MG	CA	3225	1/1	0.85	0.47	-	65,65,65,65	0
58	MG	AA	3057	1/1	0.87	0.46	-	57,57,57,57	0
58	MG	CA	3331	1/1	0.94	0.36	-	52,52,52,52	0
58	MG	AA	3182	1/1	0.90	0.22	-	76,76,76,76	0
58	MG	CA	3518	1/1	0.88	0.32	-	86,86,86,86	0
58	MG	AA	3733	1/1	0.90	0.20	-	68,68,68,68	0
58	MG	CA	3430	1/1	0.89	0.33	-	53,53,53,53	0
58	MG	DA	1619	1/1	0.78	0.31	-	71,71,71,71	0
58	MG	AA	3167	1/1	0.96	0.14	-	65,65,65,65	0
58	MG	BA	1731	1/1	0.96	0.27	-	63,63,63,63	0
58	MG	BA	1676	1/1	0.96	0.25	-	44,44,44,44	0
58	MG	DA	1740	1/1	0.92	0.09	-	81,81,81,81	0
58	MG	CA	3296	1/1	0.97	0.32	-	42,42,42,42	0
58	MG	CP	203	1/1	0.82	0.25	-	67,67,67,67	0
58	MG	BA	1659	1/1	0.82	0.42	-	84,84,84,84	0
58	MG	AA	3339	1/1	0.87	0.29	-	43,43,43,43	0
58	MG	AA	3246	1/1	0.69	0.41	-	72,72,72,72	0
58	MG	CA	3297	1/1	0.98	0.34	-	56,56,56,56	0
58	MG	AA	3047	1/1	0.89	0.35	-	34,34,34,34	0
58	MG	CA	3044	1/1	0.91	0.35	-	52,52,52,52	0
58	MG	AA	3495	1/1	0.93	0.17	-	59,59,59,59	0
58	MG	BA	1809	1/1	0.91	0.22	-	68,68,68,68	0
58	MG	AA	3679	1/1	0.88	0.28	-	65,65,65,65	0
58	MG	AA	3423	1/1	0.98	0.15	-	22,22,22,22	0
58	MG	BA	1775	1/1	0.72	0.21	-	75,75,75,75	0
58	MG	CA	3621	1/1	0.88	0.31	-	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3445	1/1	0.93	0.32	-	40,40,40,40	0
58	MG	AA	3326	1/1	0.97	0.12	-	58,58,58,58	0
58	MG	DA	1703	1/1	0.95	0.29	-	74,74,74,74	0
58	MG	BA	1701	1/1	0.96	0.46	-	58,58,58,58	0
58	MG	CA	3036	1/1	0.85	0.19	-	44,44,44,44	0
58	MG	DA	1677	1/1	0.87	0.13	-	74,74,74,74	0
58	MG	AA	3067	1/1	0.97	0.41	-	55,55,55,55	0
58	MG	BA	1697	1/1	0.90	0.38	-	78,78,78,78	0
58	MG	AA	3579	1/1	0.93	0.14	-	38,38,38,38	0
58	MG	AA	3799	1/1	0.90	0.19	-	47,47,47,47	0
58	MG	CA	3529	1/1	0.96	0.08	-	57,57,57,57	0
58	MG	AA	3497	1/1	0.93	0.04	-	46,46,46,46	0
58	MG	CA	3052	1/1	0.91	0.43	-	69,69,69,69	0
58	MG	CA	3536	1/1	0.87	0.12	-	71,71,71,71	0
58	MG	AA	3744	1/1	0.67	0.29	-	86,86,86,86	0
58	MG	CA	3195	1/1	0.91	0.15	-	60,60,60,60	0
58	MG	AA	3143	1/1	0.87	0.33	-	47,47,47,47	0
58	MG	AA	3237	1/1	0.86	0.14	-	71,71,71,71	0
58	MG	AA	3380	1/1	0.93	0.14	-	15,15,15,15	0
58	MG	AA	3266	1/1	0.93	0.50	-	50,50,50,50	0
58	MG	AA	3161	1/1	0.86	0.48	-	60,60,60,60	0
58	MG	CA	3630	1/1	0.91	0.12	-	63,63,63,63	0
58	MG	CA	3480	1/1	0.88	0.29	-	55,55,55,55	0
58	MG	CA	3541	1/1	0.90	0.17	-	71,71,71,71	0
58	MG	AA	3718	1/1	0.88	0.11	-	43,43,43,43	0
58	MG	AA	3063	1/1	0.80	0.45	-	67,67,67,67	0
58	MG	AA	3634	1/1	0.91	0.32	-	62,62,62,62	0
58	MG	AA	3630	1/1	0.87	0.23	-	71,71,71,71	0
58	MG	AA	3802	1/1	0.86	0.38	-	55,55,55,55	0
58	MG	A0	102	1/1	0.87	0.23	-	40,40,40,40	0
58	MG	AA	3118	1/1	0.90	0.62	-	64,64,64,64	0
58	MG	AF	301	1/1	0.93	0.17	-	43,43,43,43	0
58	MG	AA	3302	1/1	0.91	0.21	-	56,56,56,56	0
58	MG	BA	1706	1/1	0.94	0.43	-	62,62,62,62	0
58	MG	BA	1651	1/1	0.80	0.16	-	102,102,102,102	0
58	MG	AA	3064	1/1	0.90	0.17	-	29,29,29,29	0
58	MG	BA	1771	1/1	0.19	0.94	-	115,115,115,115	0
58	MG	CA	3175	1/1	0.99	0.28	-	42,42,42,42	0
58	MG	AA	3373	1/1	0.82	0.29	-	59,59,59,59	0
58	MG	CA	3299	1/1	0.98	0.16	-	61,61,61,61	0
58	MG	CA	3652	1/1	0.95	0.17	-	53,53,53,53	0
58	MG	AA	3160	1/1	0.94	0.17	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3148	1/1	0.98	0.29	-	65,65,65,65	0
58	MG	CB	3002	1/1	0.72	0.27	-	66,66,66,66	0
58	MG	CA	3082	1/1	0.73	0.31	-	70,70,70,70	0
58	MG	AA	3763	1/1	0.96	0.36	-	65,65,65,65	0
58	MG	BA	1798	1/1	0.91	0.15	-	69,69,69,69	0
58	MG	BA	1673	1/1	0.78	0.96	-	77,77,77,77	0
58	MG	CA	3571	1/1	0.66	0.14	-	65,65,65,65	0
58	MG	AA	3238	1/1	0.93	0.35	-	61,61,61,61	0
58	MG	BA	1734	1/1	0.68	0.40	-	81,81,81,81	0
58	MG	AA	3033	1/1	0.96	0.23	-	29,29,29,29	1
58	MG	CA	3215	1/1	0.86	0.09	-	73,73,73,73	0
58	MG	DA	1748	1/1	0.92	0.16	-	78,78,78,78	0
58	MG	AA	3585	1/1	0.69	0.17	-	65,65,65,65	0
58	MG	CA	3477	1/1	0.89	0.11	-	74,74,74,74	0
58	MG	CB	3010	1/1	0.93	0.23	-	55,55,55,55	0
58	MG	DA	1712	1/1	0.93	0.14	-	81,81,81,81	0
58	MG	AA	3446	1/1	0.91	0.51	-	61,61,61,61	0
58	MG	AA	3580	1/1	0.79	0.14	-	23,23,23,23	0
58	MG	AA	3428	1/1	0.94	0.17	-	35,35,35,35	0
58	MG	CA	3659	1/1	0.95	0.11	-	77,77,77,77	0
58	MG	AA	3318	1/1	0.96	0.25	-	51,51,51,51	1
58	MG	BA	1791	1/1	0.89	0.14	-	63,63,63,63	0
58	MG	AA	3364	1/1	0.88	0.34	-	81,81,81,81	0
58	MG	AA	3232	1/1	0.91	0.30	-	79,79,79,79	0
58	MG	CA	3640	1/1	0.86	0.29	-	59,59,59,59	0
58	MG	CA	3602	1/1	0.89	0.17	-	66,66,66,66	0
58	MG	AA	3567	1/1	0.97	0.21	-	51,51,51,51	0
58	MG	DA	1691	1/1	0.76	0.20	-	85,85,85,85	0
58	MG	AA	3633	1/1	0.88	0.25	-	48,48,48,48	1
58	MG	DA	1644	1/1	0.96	0.16	-	57,57,57,57	0
58	MG	CA	3220	1/1	0.88	0.24	-	78,78,78,78	0
58	MG	AA	3086	1/1	0.95	0.15	-	47,47,47,47	0
58	MG	CA	3531	1/1	0.91	0.21	-	51,51,51,51	0
58	MG	CA	3107	1/1	0.36	0.47	-	108,108,108,108	0
58	MG	AA	3431	1/1	0.98	0.10	-	25,25,25,25	0
58	MG	AA	3159	1/1	0.94	0.23	-	46,46,46,46	1
58	MG	AA	3628	1/1	0.89	0.28	-	80,80,80,80	0
58	MG	DA	1736	1/1	0.95	0.11	-	79,79,79,79	0
58	MG	CA	3509	1/1	0.83	0.18	-	76,76,76,76	0
58	MG	CA	3538	1/1	0.89	0.07	-	71,71,71,71	0
58	MG	AA	3749	1/1	0.98	0.14	-	14,14,14,14	0
58	MG	CA	3204	1/1	0.74	0.37	-	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3565	1/1	0.98	0.39	-	51,51,51,51	0
58	MG	A0	103	1/1	0.93	0.12	-	37,37,37,37	0
58	MG	AA	3426	1/1	0.91	0.15	-	50,50,50,50	0
58	MG	CA	3401	1/1	0.93	0.23	-	69,69,69,69	0
58	MG	AA	3358	1/1	0.88	0.17	-	63,63,63,63	0
58	MG	AA	3214	1/1	0.93	0.16	-	34,34,34,34	0
58	MG	AA	3491	1/1	0.88	0.29	-	35,35,35,35	0
58	MG	AA	3809	1/1	0.89	0.22	-	62,62,62,62	0
58	MG	CA	3376	1/1	0.94	0.08	-	66,66,66,66	0
58	MG	BA	1694	1/1	0.86	0.07	-	80,80,80,80	0
58	MG	AA	3095	1/1	0.77	0.47	-	82,82,82,82	0
58	MG	DA	1757	1/1	0.89	0.33	-	75,75,75,75	0
58	MG	AA	3340	1/1	0.98	0.10	-	59,59,59,59	0
58	MG	AA	3647	1/1	0.91	0.21	-	72,72,72,72	0
58	MG	DA	1657	1/1	0.40	0.20	-	93,93,93,93	0
58	MG	CA	3164	1/1	0.96	0.41	-	41,41,41,41	0
58	MG	AA	3558	1/1	0.83	0.14	-	51,51,51,51	0
58	MG	AA	3441	1/1	0.93	0.18	-	51,51,51,51	1
58	MG	CA	3139	1/1	0.84	0.33	-	123,123,123,123	0
58	MG	AA	3355	1/1	0.86	0.17	-	58,58,58,58	0
58	MG	CA	3510	1/1	0.92	0.14	-	65,65,65,65	0
58	MG	BA	1646	1/1	0.83	0.80	-	75,75,75,75	0
58	MG	AA	3075	1/1	0.97	0.15	-	9,9,9,9	0
58	MG	DA	1764	1/1	0.92	0.08	-	55,55,55,55	0
58	MG	BA	1747	1/1	0.94	0.40	-	68,68,68,68	0
58	MG	AA	3607	1/1	0.97	0.09	-	30,30,30,30	0
58	MG	AA	3371	1/1	0.96	0.34	-	62,62,62,62	0
58	MG	AA	3730	1/1	0.96	0.27	-	30,30,30,30	0
58	MG	CA	3125	1/1	0.88	0.50	-	73,73,73,73	0
58	MG	CA	3651	1/1	0.86	0.24	-	31,31,31,31	0
58	MG	CA	3134	1/1	0.55	1.10	-	86,86,86,86	0
58	MG	AA	3294	1/1	0.88	0.25	-	66,66,66,66	0
58	MG	AA	3225	1/1	0.92	0.26	-	27,27,27,27	1
58	MG	CA	3009	1/1	0.85	0.51	-	67,67,67,67	0
58	MG	AA	3320	1/1	0.95	0.19	-	24,24,24,24	0
58	MG	CA	3351	1/1	0.91	0.14	-	46,46,46,46	0
58	MG	CA	3594	1/1	0.37	0.21	-	80,80,80,80	0
58	MG	CA	3055	1/1	0.97	0.51	-	39,39,39,39	0
58	MG	DA	1653	1/1	0.90	0.19	-	60,60,60,60	0
58	MG	AA	3636	1/1	0.84	0.25	-	65,65,65,65	0
58	MG	CA	3627	1/1	0.93	0.18	-	63,63,63,63	0
58	MG	CA	3248	1/1	0.81	0.65	-	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3636	1/1	0.82	0.19	-	80,80,80,80	0
58	MG	DA	1761	1/1	0.97	0.29	-	66,66,66,66	0
58	MG	AR	201	1/1	0.96	0.28	-	32,32,32,32	0
58	MG	DA	1719	1/1	0.92	0.12	-	74,74,74,74	0
58	MG	CA	3645	1/1	0.85	0.14	-	82,82,82,82	0
58	MG	AA	3476	1/1	0.82	0.24	-	69,69,69,69	0
58	MG	CA	3136	1/1	0.90	0.35	-	53,53,53,53	0
58	MG	AA	3070	1/1	0.89	0.40	-	60,60,60,60	0
58	MG	DA	1648	1/1	0.96	0.22	-	50,50,50,50	0
58	MG	CA	3067	1/1	0.84	0.34	-	72,72,72,72	0
58	MG	AA	3289	1/1	0.94	0.11	-	27,27,27,27	0
58	MG	AA	3584	1/1	0.96	0.08	-	65,65,65,65	0
58	MG	AB	3012	1/1	0.99	0.22	-	29,29,29,29	1
58	MG	BA	1797	1/1	0.80	0.21	-	63,63,63,63	0
58	MG	CA	3354	1/1	0.97	0.25	-	61,61,61,61	0
58	MG	CA	3200	1/1	0.89	0.47	-	54,54,54,54	0
58	MG	AA	3480	1/1	0.91	0.08	-	54,54,54,54	0
58	MG	AA	3586	1/1	0.90	0.14	-	62,62,62,62	0
58	MG	CA	3623	1/1	0.90	0.26	-	64,64,64,64	0
58	MG	CA	3240	1/1	0.91	0.15	-	64,64,64,64	0
58	MG	AA	3566	1/1	0.96	0.18	-	27,27,27,27	0
58	MG	AA	3561	1/1	0.88	0.26	-	58,58,58,58	0
58	MG	AA	3415	1/1	0.96	0.07	-	56,56,56,56	0
58	MG	CA	3012	1/1	0.97	0.26	-	59,59,59,59	0
58	MG	CA	3172	1/1	0.79	0.33	-	83,83,83,83	0
58	MG	AA	3406	1/1	0.91	0.16	-	57,57,57,57	0
58	MG	AA	3695	1/1	0.93	0.51	-	78,78,78,78	0
58	MG	AA	3001	1/1	0.96	0.10	-	37,37,37,37	0
58	MG	DA	1750	1/1	0.86	0.17	-	68,68,68,68	0
58	MG	BA	1614	1/1	0.83	0.32	-	88,88,88,88	0
58	MG	AA	3697	1/1	0.80	0.15	-	63,63,63,63	0
58	MG	CA	3199	1/1	0.90	0.35	-	74,74,74,74	0
58	MG	AA	3330	1/1	0.97	0.13	-	69,69,69,69	0
58	MG	AA	3748	1/1	0.96	0.28	-	56,56,56,56	0
58	MG	AA	3738	1/1	0.80	0.26	-	75,75,75,75	0
58	MG	AA	3555	1/1	0.97	0.17	-	38,38,38,38	0
58	MG	AA	3197	1/1	0.96	0.38	-	37,37,37,37	0
58	MG	DA	1604	1/1	0.81	0.37	-	76,76,76,76	0
58	MG	AA	3188	1/1	0.98	0.18	-	13,13,13,13	0
58	MG	AA	3530	1/1	0.98	0.12	-	53,53,53,53	0
58	MG	BA	1805	1/1	0.64	0.18	-	83,83,83,83	0
58	MG	CA	3610	1/1	0.81	0.16	-	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3761	1/1	0.88	0.46	-	50,50,50,50	0
58	MG	AA	3764	1/1	0.97	0.20	-	55,55,55,55	0
58	MG	DA	1763	1/1	0.85	0.20	-	77,77,77,77	0
58	MG	AA	3227	1/1	0.92	0.26	-	55,55,55,55	0
58	MG	AA	3277	1/1	0.80	0.23	-	79,79,79,79	0
58	MG	CA	3080	1/1	0.61	0.22	-	87,87,87,87	0
58	MG	CA	3103	1/1	0.85	0.49	-	62,62,62,62	0
58	MG	CA	3582	1/1	0.93	0.19	-	44,44,44,44	0
58	MG	AA	3678	1/1	0.97	0.24	-	31,31,31,31	0
58	MG	DW	501	1/1	0.91	0.26	-	74,74,74,74	0
58	MG	AA	3693	1/1	0.96	0.21	-	48,48,48,48	0
58	MG	AA	3189	1/1	0.95	0.40	-	40,40,40,40	0
58	MG	BA	1739	1/1	0.86	0.14	-	93,93,93,93	0
58	MG	CA	3018	1/1	0.78	0.32	-	64,64,64,64	0
58	MG	DA	1718	1/1	0.74	0.15	-	77,77,77,77	0
58	MG	BW	502	1/1	0.96	0.11	-	53,53,53,53	0
58	MG	CA	3556	1/1	0.86	0.08	-	48,48,48,48	0
58	MG	AA	3611	1/1	0.97	0.15	-	51,51,51,51	0
58	MG	DA	1681	1/1	0.95	0.17	-	55,55,55,55	0
58	MG	CA	3349	1/1	0.97	0.26	-	41,41,41,41	0
58	MG	CA	3347	1/1	0.93	0.13	-	59,59,59,59	0
58	MG	AA	3463	1/1	0.94	0.30	-	46,46,46,46	0
58	MG	BA	1672	1/1	0.88	0.26	-	61,61,61,61	0
58	MG	CA	3099	1/1	0.88	0.15	-	92,92,92,92	0
58	MG	BA	1790	1/1	0.86	0.10	-	72,72,72,72	0
58	MG	AA	3361	1/1	0.98	0.15	-	29,29,29,29	0
58	MG	CA	3186	1/1	0.81	0.35	-	69,69,69,69	0
58	MG	DA	1701	1/1	0.85	0.28	-	63,63,63,63	0
58	MG	AA	3668	1/1	0.93	0.19	-	40,40,40,40	0
58	MG	CA	3319	1/1	0.93	0.19	-	67,67,67,67	0
58	MG	CA	3193	1/1	0.94	0.23	-	64,64,64,64	0
58	MG	CA	3015	1/1	0.70	0.54	-	85,85,85,85	0
58	MG	AA	3467	1/1	0.98	0.12	-	44,44,44,44	0
58	MG	CA	3591	1/1	0.95	0.14	-	83,83,83,83	0
58	MG	CA	3061	1/1	0.92	0.46	-	67,67,67,67	0
58	MG	BA	1602	1/1	0.92	0.11	-	53,53,53,53	0
58	MG	AA	3492	1/1	0.88	0.36	-	45,45,45,45	0
58	MG	AA	3046	1/1	0.96	0.23	-	34,34,34,34	0
58	MG	AA	3681	1/1	0.91	0.37	-	65,65,65,65	0
58	MG	CA	3595	1/1	0.95	0.10	-	53,53,53,53	0
58	MG	CA	3173	1/1	0.69	0.46	-	65,65,65,65	0
58	MG	AA	3287	1/1	0.97	0.40	-	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3545	1/1	0.89	0.10	-	51,51,51,51	1
58	MG	BA	1726	1/1	0.98	0.30	-	52,52,52,52	0
58	MG	CA	3006	1/1	0.73	0.26	-	67,67,67,67	0
58	MG	CB	3008	1/1	0.89	0.12	-	59,59,59,59	0
58	MG	AA	3800	1/1	0.94	0.13	-	30,30,30,30	0
58	MG	BA	1714	1/1	0.85	0.26	-	88,88,88,88	0
58	MG	CA	3483	1/1	0.93	0.48	-	69,69,69,69	0
58	MG	BA	1806	1/1	0.70	0.28	-	81,81,81,81	0
58	MG	CA	3141	1/1	0.76	0.30	-	54,54,54,54	0
58	MG	AA	3760	1/1	0.68	0.20	-	27,27,27,27	0
58	MG	AA	3106	1/1	0.93	0.28	-	52,52,52,52	0
58	MG	AA	3527	1/1	0.95	0.18	-	26,26,26,26	0
58	MG	CA	3170	1/1	0.94	0.34	-	47,47,47,47	0
58	MG	AA	3573	1/1	0.88	0.14	-	50,50,50,50	0
58	MG	CA	3062	1/1	0.64	0.25	-	68,68,68,68	0
58	MG	AA	3363	1/1	0.93	0.34	-	28,28,28,28	0
58	MG	AA	3430	1/1	0.93	0.14	-	44,44,44,44	0
58	MG	DW	502	1/1	0.78	0.11	-	84,84,84,84	0
58	MG	CA	3469	1/1	0.86	0.13	-	69,69,69,69	0
58	MG	AA	3349	1/1	0.85	0.29	-	40,40,40,40	0
58	MG	AA	3487	1/1	0.93	0.17	-	39,39,39,39	0
58	MG	BA	1605	1/1	0.52	0.28	-	67,67,67,67	0
58	MG	CA	3031	1/1	0.82	0.08	-	76,76,76,76	0
58	MG	DD	502	1/1	0.96	0.63	-	62,62,62,62	0
58	MG	AA	3031	1/1	0.93	0.25	-	10,10,10,10	1
58	MG	CA	3562	1/1	0.96	0.21	-	76,76,76,76	0
58	MG	CA	3180	1/1	0.75	0.49	-	108,108,108,108	0
58	MG	BA	1633	1/1	0.83	0.35	-	62,62,62,62	0
58	MG	AA	3027	1/1	0.93	0.48	-	77,77,77,77	0
58	MG	AA	3370	1/1	0.94	0.28	-	58,58,58,58	0
58	MG	AA	3066	1/1	0.97	0.29	-	50,50,50,50	0
58	MG	AA	3170	1/1	0.94	0.44	-	53,53,53,53	0
58	MG	CA	3357	1/1	0.92	0.06	-	80,80,80,80	0
58	MG	AA	3201	1/1	0.86	0.37	-	65,65,65,65	0
58	MG	AV	203	1/1	0.97	0.35	-	38,38,38,38	0
58	MG	CA	3241	1/1	0.61	0.55	-	107,107,107,107	0
58	MG	AA	3366	1/1	0.95	0.22	-	53,53,53,53	0
58	MG	CA	3268	1/1	0.95	0.30	-	69,69,69,69	0
58	MG	AZ	302	1/1	0.88	0.21	-	68,68,68,68	0
58	MG	BA	1634	1/1	0.68	0.51	-	100,100,100,100	0
58	MG	AA	3233	1/1	0.82	0.36	-	55,55,55,55	0
58	MG	AA	3513	1/1	0.97	0.11	-	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3451	1/1	0.94	0.24	-	48,48,48,48	0
58	MG	AA	3627	1/1	0.98	0.17	-	54,54,54,54	0
58	MG	AA	3305	1/1	0.96	0.24	-	55,55,55,55	0
58	MG	CA	3416	1/1	0.98	0.17	-	48,48,48,48	0
58	MG	DA	1725	1/1	0.78	0.20	-	70,70,70,70	0
58	MG	CA	3112	1/1	0.88	0.26	-	61,61,61,61	0
58	MG	AA	3336	1/1	0.94	0.17	-	54,54,54,54	0
58	MG	BA	1699	1/1	0.94	0.17	-	75,75,75,75	0
58	MG	AA	3643	1/1	0.99	0.17	-	49,49,49,49	0
58	MG	BA	1799	1/1	0.95	0.21	-	65,65,65,65	0
58	MG	CA	3232	1/1	0.96	0.09	-	60,60,60,60	0
58	MG	CA	3004	1/1	0.87	0.42	-	64,64,64,64	0
58	MG	AA	3291	1/1	0.88	0.15	-	44,44,44,44	0
58	MG	AA	3807	1/1	0.77	0.30	-	62,62,62,62	1
58	MG	BA	1649	1/1	0.89	0.24	-	68,68,68,68	0
58	MG	AA	3756	1/1	0.96	0.16	-	40,40,40,40	1
58	MG	BA	1727	1/1	0.92	0.10	-	45,45,45,45	0
58	MG	BA	1735	1/1	0.89	0.28	-	72,72,72,72	0
58	MG	CA	3187	1/1	0.91	0.28	-	37,37,37,37	0
58	MG	AA	3516	1/1	0.97	0.17	-	18,18,18,18	0
58	MG	BA	1684	1/1	0.89	0.13	-	81,81,81,81	0
58	MG	CA	3585	1/1	0.85	0.21	-	78,78,78,78	0
58	MG	AA	3834	1/1	0.80	0.22	-	58,58,58,58	0
58	MG	AA	3575	1/1	0.96	0.12	-	69,69,69,69	0
58	MG	CA	3356	1/1	0.92	0.16	-	57,57,57,57	0
58	MG	CA	3049	1/1	0.97	0.13	-	81,81,81,81	0
58	MG	AA	3477	1/1	0.88	0.17	-	58,58,58,58	0
58	MG	AA	3369	1/1	0.96	0.24	-	27,27,27,27	0
58	MG	CA	3499	1/1	0.93	0.24	-	83,83,83,83	0
58	MG	AA	3788	1/1	0.91	0.27	-	58,58,58,58	1
58	MG	AA	3207	1/1	0.94	0.18	-	22,22,22,22	1
58	MG	AA	3522	1/1	0.95	0.22	-	28,28,28,28	0
58	MG	AA	3457	1/1	0.91	0.18	-	67,67,67,67	0
58	MG	AA	3481	1/1	0.88	0.15	-	51,51,51,51	0
58	MG	AA	3582	1/1	0.96	0.41	-	66,66,66,66	0
58	MG	CA	3345	1/1	0.99	0.22	-	38,38,38,38	0
58	MG	AA	3598	1/1	0.94	0.23	-	54,54,54,54	0
58	MG	BA	1670	1/1	0.94	0.23	-	92,92,92,92	0
58	MG	BA	1708	1/1	0.76	0.20	-	79,79,79,79	0
58	MG	CA	3040	1/1	0.92	0.15	-	66,66,66,66	0
58	MG	CA	3171	1/1	0.94	0.33	-	55,55,55,55	0
58	MG	BA	1618	1/1	0.74	0.30	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3460	1/1	0.70	0.47	-	109,109,109,109	0
58	MG	AA	3786	1/1	0.89	0.37	-	59,59,59,59	0
58	MG	CA	3609	1/1	0.88	0.23	-	76,76,76,76	0
58	MG	CA	3633	1/1	0.96	0.23	-	68,68,68,68	0
58	MG	AA	3242	1/1	0.90	0.27	-	72,72,72,72	0
58	MG	AA	3779	1/1	0.91	0.20	-	62,62,62,62	0
58	MG	AA	3646	1/1	0.89	0.13	-	58,58,58,58	0
58	MG	AA	3576	1/1	0.97	0.28	-	38,38,38,38	0
58	MG	BA	1639	1/1	0.92	0.37	-	49,49,49,49	0
58	MG	CA	3312	1/1	0.97	0.14	-	51,51,51,51	0
58	MG	BA	1770	1/1	0.98	0.38	-	56,56,56,56	0
58	MG	CA	3151	1/1	0.91	0.17	-	50,50,50,50	0
58	MG	AA	3444	1/1	0.89	0.27	-	63,63,63,63	0
58	MG	AA	3790	1/1	0.96	0.06	-	49,49,49,49	0
58	MG	CA	3308	1/1	0.96	0.11	-	41,41,41,41	0
58	MG	AA	3151	1/1	0.81	0.21	-	50,50,50,50	0
58	MG	AB	3018	1/1	0.93	0.14	-	84,84,84,84	0
58	MG	AA	3376	1/1	0.97	0.17	-	19,19,19,19	0
58	MG	DA	1679	1/1	0.95	0.42	-	58,58,58,58	0
58	MG	AA	3368	1/1	0.93	0.21	-	37,37,37,37	0
58	MG	AA	3650	1/1	0.92	0.07	-	60,60,60,60	0
58	MG	CA	3598	1/1	0.80	0.09	-	73,73,73,73	0
58	MG	AA	3348	1/1	0.93	0.22	-	32,32,32,32	0
58	MG	AA	3629	1/1	0.94	0.17	-	61,61,61,61	0
58	MG	AA	3122	1/1	0.82	0.28	-	54,54,54,54	0
58	MG	AA	3554	1/1	0.89	0.15	-	49,49,49,49	0
58	MG	CA	3250	1/1	0.94	0.16	-	52,52,52,52	0
58	MG	CA	3147	1/1	0.84	0.35	-	76,76,76,76	0
58	MG	DA	1665	1/1	0.91	0.49	-	61,61,61,61	0
58	MG	DA	1671	1/1	0.90	0.59	-	83,83,83,83	0
58	MG	CA	3574	1/1	0.74	0.15	-	72,72,72,72	0
58	MG	AA	3333	1/1	0.94	0.15	-	66,66,66,66	0
58	MG	AA	3379	1/1	0.95	0.14	-	30,30,30,30	0
58	MG	AA	3653	1/1	0.88	0.15	-	68,68,68,68	0
58	MG	AA	3654	1/1	0.97	0.29	-	66,66,66,66	0
58	MG	AA	3720	1/1	0.85	0.72	-	77,77,77,77	0
58	MG	CA	3631	1/1	0.91	0.13	-	77,77,77,77	0
58	MG	AA	3203	1/1	0.91	0.33	-	46,46,46,46	1
58	MG	BA	1698	1/1	0.62	0.28	-	74,74,74,74	0
58	MG	AA	3407	1/1	0.98	0.12	-	49,49,49,49	0
58	MG	BA	1760	1/1	0.85	0.13	-	89,89,89,89	0
58	MG	AA	3347	1/1	0.97	0.10	-	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	AA	3538	1/1	0.85	0.26	-	61,61,61,61	1
58	MG	AA	3494	1/1	0.97	0.23	-	50,50,50,50	0
58	MG	DZ	702	1/1	0.99	0.28	-	57,57,57,57	0
58	MG	CA	3338	1/1	0.97	0.17	-	63,63,63,63	0
58	MG	A2	102	1/1	0.79	0.37	-	54,54,54,54	0
58	MG	AA	3375	1/1	0.89	0.25	-	57,57,57,57	0
58	MG	CA	3022	1/1	0.96	0.20	-	38,38,38,38	0
58	MG	AA	3127	1/1	0.98	0.37	-	71,71,71,71	0
58	MG	DA	1759	1/1	0.82	0.35	-	76,76,76,76	0
58	MG	CA	3198	1/1	0.91	0.13	-	37,37,37,37	0
58	MG	DA	1655	1/1	0.96	0.42	-	58,58,58,58	0
58	MG	CA	3113	1/1	0.81	0.30	-	92,92,92,92	0
58	MG	AA	3125	1/1	0.93	0.22	-	23,23,23,23	1
58	MG	CA	3207	1/1	0.96	0.15	-	71,71,71,71	0
58	MG	AA	3470	1/1	0.96	0.16	-	29,29,29,29	0
58	MG	DA	1692	1/1	0.87	0.15	-	76,76,76,76	0
58	MG	AA	3450	1/1	0.91	0.27	-	53,53,53,53	0
58	MG	AA	3068	1/1	0.92	0.48	-	65,65,65,65	0
58	MG	AA	3610	1/1	0.50	0.18	-	51,51,51,51	1
58	MG	CA	3005	1/1	0.92	0.23	-	59,59,59,59	0
58	MG	AB	3013	1/1	0.98	0.18	-	54,54,54,54	0
58	MG	A7	101	1/1	0.85	0.16	-	49,49,49,49	1
58	MG	AA	3552	1/1	0.97	0.15	-	63,63,63,63	0
58	MG	CA	3007	1/1	0.97	0.10	-	28,28,28,28	0
58	MG	DA	1635	1/1	0.86	0.35	-	65,65,65,65	0
58	MG	AA	3114	1/1	0.93	0.21	-	17,17,17,17	0
58	MG	CA	3492	1/1	0.68	0.54	-	105,105,105,105	0
58	MG	AA	3425	1/1	0.95	0.24	-	18,18,18,18	0
58	MG	CA	3572	1/1	0.93	0.16	-	54,54,54,54	0
58	MG	CA	3046	1/1	-0.24	0.35	-	114,114,114,114	0
58	MG	CA	3118	1/1	0.82	0.23	-	57,57,57,57	0
58	MG	AA	3521	1/1	0.98	0.16	-	29,29,29,29	0
58	MG	AA	3490	1/1	0.82	0.09	-	50,50,50,50	0
58	MG	CA	3486	1/1	0.95	0.27	-	69,69,69,69	0
58	MG	CA	3373	1/1	0.85	0.50	-	58,58,58,58	0
58	MG	DA	1662	1/1	0.80	0.23	-	64,64,64,64	0
58	MG	AA	3591	1/1	0.96	0.25	-	65,65,65,65	0
58	MG	AA	3703	1/1	0.84	0.10	-	76,76,76,76	0
58	MG	AA	3796	1/1	0.95	0.26	-	50,50,50,50	0
58	MG	AA	3256	1/1	0.97	0.16	-	21,21,21,21	1
58	MG	CA	3442	1/1	0.93	0.46	-	67,67,67,67	0
58	MG	BA	1749	1/1	0.95	0.12	-	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	CA	3108	1/1	0.92	0.18	-	60,60,60,60	0
58	MG	AA	3808	1/1	0.93	0.20	-	28,28,28,28	1
58	MG	CA	3336	1/1	0.93	0.16	-	69,69,69,69	0
58	MG	AA	3165	1/1	0.83	0.42	-	57,57,57,57	0
58	MG	BA	1707	1/1	0.88	0.26	-	50,50,50,50	0
58	MG	AA	3746	1/1	0.94	0.15	-	64,64,64,64	0
58	MG	CA	3608	1/1	0.91	0.22	-	56,56,56,56	0
58	MG	CA	3149	1/1	0.92	0.08	-	66,66,66,66	0
58	MG	AA	3317	1/1	0.97	0.14	-	58,58,58,58	0
58	MG	BA	1636	1/1	0.96	0.40	-	64,64,64,64	0
58	MG	DA	1642	1/1	0.93	0.20	-	66,66,66,66	0
58	MG	AA	3466	1/1	0.95	0.12	-	63,63,63,63	0
58	MG	CA	3161	1/1	0.94	0.19	-	66,66,66,66	0
58	MG	CA	3570	1/1	0.86	0.21	-	77,77,77,77	0
58	MG	BA	1713	1/1	0.96	0.27	-	55,55,55,55	0
58	MG	AA	3665	1/1	0.85	0.34	-	85,85,85,85	0
58	MG	BZ	701	1/1	0.22	0.30	-	137,137,137,137	0
58	MG	CA	3515	1/1	0.85	0.20	-	79,79,79,79	0
58	MG	CA	3551	1/1	0.82	0.17	-	88,88,88,88	0
58	MG	DA	1676	1/1	0.83	0.09	-	78,78,78,78	0
58	MG	CA	3075	1/1	0.84	0.40	-	71,71,71,71	0
58	MG	DA	1646	1/1	0.95	0.34	-	62,62,62,62	0
58	MG	DA	1678	1/1	0.71	0.37	-	82,82,82,82	0
58	MG	AA	3327	1/1	0.97	0.14	-	13,13,13,13	0
58	MG	CQ	202	1/1	0.93	0.66	-	64,64,64,64	0
58	MG	AA	3219	1/1	0.92	0.29	-	58,58,58,58	0
58	MG	CA	3092	1/1	0.98	0.16	-	70,70,70,70	0
58	MG	CA	3495	1/1	0.85	0.15	-	65,65,65,65	0
58	MG	AA	3016	1/1	0.76	0.40	-	59,59,59,59	0
58	MG	CA	3174	1/1	0.78	0.54	-	61,61,61,61	0
58	MG	DA	1693	1/1	0.90	0.22	-	54,54,54,54	0
58	MG	AA	3382	1/1	0.82	0.17	-	36,36,36,36	1
58	MG	AA	3104	1/1	0.96	0.17	-	28,28,28,28	0
58	MG	CA	3316	1/1	0.94	0.17	-	50,50,50,50	0
58	MG	CA	3643	1/1	0.93	0.09	-	76,76,76,76	0
58	MG	CA	3581	1/1	0.92	0.12	-	81,81,81,81	0
58	MG	BA	1807	1/1	0.94	0.15	-	83,83,83,83	0
58	MG	AA	3261	1/1	0.85	0.36	-	51,51,51,51	0
58	MG	BA	1729	1/1	0.97	0.18	-	49,49,49,49	0
58	MG	DA	1622	1/1	0.89	0.54	-	77,77,77,77	0
58	MG	BA	1796	1/1	0.88	0.11	-	70,70,70,70	0
58	MG	CE	304	1/1	0.85	0.76	-	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	BA	1762	1/1	0.90	0.07	-	52,52,52,52	1
58	MG	AA	3195	1/1	0.98	0.19	-	50,50,50,50	0
58	MG	AA	3155	1/1	0.84	0.31	-	64,64,64,64	0
58	MG	DA	1760	1/1	0.95	0.37	-	66,66,66,66	0
58	MG	AA	3058	1/1	0.90	0.20	-	35,35,35,35	0
58	MG	CA	3535	1/1	0.93	0.30	-	69,69,69,69	0
58	MG	DA	1710	1/1	0.97	0.20	-	70,70,70,70	0
58	MG	CA	3440	1/1	0.98	0.31	-	57,57,57,57	0
58	MG	AA	3810	1/1	0.91	0.24	-	54,54,54,54	0
58	MG	AA	3115	1/1	0.72	0.45	-	67,67,67,67	1
58	MG	AA	3141	1/1	0.92	0.47	-	40,40,40,40	0
58	MG	BA	1720	1/1	0.98	0.45	-	62,62,62,62	0
58	MG	AA	3192	1/1	0.18	0.65	-	76,76,76,76	0
58	MG	AA	3148	1/1	0.89	0.34	-	68,68,68,68	0
58	MG	CB	3001	1/1	0.89	0.20	-	99,99,99,99	0
58	MG	DA	1628	1/1	0.86	0.49	-	74,74,74,74	0
58	MG	AA	3060	1/1	0.88	0.69	-	65,65,65,65	0
58	MG	AA	3010	1/1	0.76	0.62	-	68,68,68,68	0
58	MG	BA	1746	1/1	0.89	0.17	-	83,83,83,83	0
58	MG	CA	3394	1/1	0.96	0.16	-	55,55,55,55	0
58	MG	DA	1659	1/1	0.91	0.08	-	64,64,64,64	0
58	MG	AA	3096	1/1	0.85	0.14	-	63,63,63,63	0
58	MG	CA	3167	1/1	0.93	0.10	-	60,60,60,60	0
58	MG	CA	3465	1/1	0.95	0.34	-	66,66,66,66	0
58	MG	BA	1724	1/1	0.81	0.20	-	64,64,64,64	0
58	MG	CA	3543	1/1	0.90	0.20	-	63,63,63,63	0
58	MG	BA	1779	1/1	0.91	0.15	-	46,46,46,46	1
58	MG	CA	3065	1/1	0.89	0.12	-	52,52,52,52	0
58	MG	AB	3019	1/1	0.93	0.18	-	65,65,65,65	0
58	MG	CA	3095	1/1	0.90	0.31	-	64,64,64,64	0
58	MG	CA	3447	1/1	0.82	0.44	-	80,80,80,80	0
58	MG	BA	1737	1/1	0.95	0.27	-	63,63,63,63	0
58	MG	AA	3696	1/1	0.88	0.16	-	69,69,69,69	0
58	MG	AA	3269	1/1	0.77	0.46	-	84,84,84,84	0
58	MG	AA	3747	1/1	0.92	0.39	-	58,58,58,58	0
58	MG	CA	3247	1/1	0.92	0.66	-	66,66,66,66	0
58	MG	CA	3583	1/1	0.76	0.30	-	78,78,78,78	1
58	MG	CA	3344	1/1	0.95	0.08	-	87,87,87,87	0
58	MG	CA	3429	1/1	0.92	0.36	-	74,74,74,74	0
58	MG	DA	1698	1/1	0.93	0.40	-	68,68,68,68	0
58	MG	AA	3076	1/1	0.96	0.25	-	92,92,92,92	0
58	MG	AA	3391	1/1	0.96	0.15	-	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3312	1/1	0.96	0.19	-	55,55,55,55	0
58	MG	CA	3398	1/1	0.85	0.10	-	65,65,65,65	0
58	MG	CA	3287	1/1	0.94	0.15	-	52,52,52,52	0
58	MG	DA	1738	1/1	0.94	0.59	-	80,80,80,80	0
58	MG	AA	3732	1/1	0.69	0.23	-	68,68,68,68	0
58	MG	CA	3256	1/1	0.97	0.18	-	40,40,40,40	0
58	MG	AA	3688	1/1	0.91	0.19	-	25,25,25,25	1
58	MG	AA	3700	1/1	0.95	0.22	-	35,35,35,35	0
58	MG	AA	3199	1/1	0.89	0.18	-	54,54,54,54	0
58	MG	CA	3639	1/1	0.93	0.32	-	55,55,55,55	0
58	MG	AA	3615	1/1	0.85	0.20	-	35,35,35,35	1
58	MG	DA	1767	1/1	0.90	0.14	-	74,74,74,74	0
58	MG	AA	3597	1/1	0.90	0.09	-	63,63,63,63	0
58	MG	DA	1675	1/1	0.92	0.36	-	74,74,74,74	0
58	MG	AA	3496	1/1	0.87	0.17	-	52,52,52,52	0
58	MG	BA	1709	1/1	0.51	0.21	-	104,104,104,104	0
58	MG	AA	3236	1/1	0.69	0.21	-	57,57,57,57	0
58	MG	AA	3119	1/1	0.93	0.34	-	40,40,40,40	1
58	MG	CA	3484	1/1	0.96	0.27	-	76,76,76,76	0
58	MG	AA	3280	1/1	0.88	0.34	-	47,47,47,47	0
58	MG	AA	3178	1/1	0.44	0.53	-	78,78,78,78	0
58	MG	CA	3262	1/1	0.92	0.17	-	61,61,61,61	0
58	MG	DA	1733	1/1	0.70	0.17	-	83,83,83,83	0
58	MG	DA	1747	1/1	0.87	0.17	-	70,70,70,70	0
58	MG	BA	1767	1/1	0.72	0.09	-	58,58,58,58	0
58	MG	AA	3216	1/1	0.90	0.21	-	51,51,51,51	0
58	MG	AA	3194	1/1	0.93	0.48	-	44,44,44,44	0
58	MG	BA	1667	1/1	0.39	0.21	-	89,89,89,89	0
58	MG	CA	3369	1/1	0.98	0.13	-	59,59,59,59	0
58	MG	DA	1661	1/1	0.86	0.41	-	70,70,70,70	0
58	MG	DZ	701	1/1	0.57	0.61	-	111,111,111,111	0
58	MG	AA	3782	1/1	0.94	0.27	-	74,74,74,74	0
58	MG	CA	3246	1/1	0.71	0.50	-	59,59,59,59	0
58	MG	DA	1731	1/1	0.93	0.51	-	82,82,82,82	0
58	MG	AA	3405	1/1	0.93	0.40	-	46,46,46,46	0
58	MG	CA	3305	1/1	0.98	0.18	-	62,62,62,62	0
58	MG	DA	1745	1/1	0.94	0.18	-	61,61,61,61	0
58	MG	AB	3005	1/1	0.97	0.28	-	69,69,69,69	0
58	MG	CA	3434	1/1	0.92	0.18	-	28,28,28,28	0
58	MG	AA	3601	1/1	0.97	0.39	-	47,47,47,47	0
58	MG	CR	201	1/1	0.85	0.45	-	51,51,51,51	0
58	MG	CA	3085	1/1	0.79	0.54	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
58	MG	CA	3143	1/1	0.92	0.71	-	57,57,57,57	0
58	MG	AA	3801	1/1	0.82	0.07	-	88,88,88,88	0
58	MG	BA	1669	1/1	0.67	0.30	-	73,73,73,73	0
58	MG	CA	3228	1/1	0.86	0.26	-	63,63,63,63	0
58	MG	AA	3549	1/1	0.97	0.08	-	54,54,54,54	0
58	MG	AA	3474	1/1	0.97	0.28	-	53,53,53,53	0
58	MG	CD	302	1/1	0.80	0.45	-	95,95,95,95	0
58	MG	BA	1635	1/1	0.96	0.23	-	72,72,72,72	0
58	MG	AA	3568	1/1	0.94	0.19	-	16,16,16,16	0
58	MG	CA	3208	1/1	0.81	0.44	-	84,84,84,84	0
58	MG	AA	3399	1/1	0.97	0.10	-	18,18,18,18	0
58	MG	CA	3391	1/1	0.97	0.05	-	63,63,63,63	0
58	MG	CA	3601	1/1	0.81	0.08	-	75,75,75,75	0
58	MG	CA	3293	1/1	0.97	0.06	-	71,71,71,71	0
58	MG	AA	3360	1/1	0.88	0.12	-	114,114,114,114	0
58	MG	DA	1758	1/1	0.94	0.16	-	71,71,71,71	0
58	MG	CA	3576	1/1	0.95	0.10	-	36,36,36,36	0
58	MG	AA	3264	1/1	0.91	0.08	-	62,62,62,62	0
58	MG	CA	3132	1/1	0.86	0.20	-	30,30,30,30	0
58	MG	CA	3549	1/1	0.93	0.06	-	57,57,57,57	0
58	MG	BA	1606	1/1	0.89	0.17	-	74,74,74,74	0
58	MG	CA	3076	1/1	0.74	0.41	-	84,84,84,84	0
58	MG	CA	3466	1/1	0.96	0.48	-	57,57,57,57	0
58	MG	CA	3561	1/1	0.58	0.19	-	95,95,95,95	0
58	MG	CA	3179	1/1	0.90	0.53	-	75,75,75,75	0
58	MG	AA	3218	1/1	0.96	0.16	-	38,38,38,38	0
58	MG	AA	3644	1/1	0.94	0.18	-	56,56,56,56	0
58	MG	AA	3310	1/1	0.90	0.26	-	58,58,58,58	0
58	MG	CA	3334	1/1	0.96	0.27	-	44,44,44,44	0
58	MG	AA	3753	1/1	0.89	0.18	-	41,41,41,41	0
58	MG	AA	3803	1/1	0.86	0.32	-	62,62,62,62	0
58	MG	DA	1683	1/1	0.95	0.37	-	54,54,54,54	0
58	MG	AA	3065	1/1	0.87	0.54	-	48,48,48,48	0
58	MG	BA	1780	1/1	0.87	0.20	-	81,81,81,81	0
58	MG	DA	1616	1/1	0.95	0.24	-	64,64,64,64	0
58	MG	AA	3758	1/1	0.78	0.36	-	81,81,81,81	0
58	MG	CA	3115	1/1	0.91	0.23	-	76,76,76,76	0
58	MG	CA	3016	1/1	0.89	0.56	-	80,80,80,80	0
58	MG	AA	3715	1/1	0.92	0.08	-	66,66,66,66	0
58	MG	AA	3489	1/1	0.93	0.09	-	64,64,64,64	0
58	MG	CO	201	1/1	0.94	0.16	-	64,64,64,64	0
58	MG	AA	3599	1/1	0.83	0.41	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3523	1/1	0.86	0.32	-	40,40,40,40	0
58	MG	CA	3001	1/1	0.75	0.40	-	73,73,73,73	0
58	MG	AA	3751	1/1	0.78	0.64	-	56,56,56,56	1
58	MG	AA	3285	1/1	0.91	0.38	-	45,45,45,45	0
58	MG	BA	1722	1/1	0.97	0.44	-	55,55,55,55	0
58	MG	DA	1728	1/1	0.90	0.16	-	63,63,63,63	0
58	MG	BL	201	1/1	0.88	0.27	-	80,80,80,80	0
58	MG	AA	3691	1/1	0.75	0.21	-	89,89,89,89	0
58	MG	CA	3155	1/1	0.73	0.25	-	86,86,86,86	0
58	MG	AA	3675	1/1	0.96	0.10	-	38,38,38,38	0
58	MG	AA	3421	1/1	0.97	0.18	-	12,12,12,12	0
58	MG	AA	3397	1/1	0.94	0.13	-	15,15,15,15	0
58	MG	AN	3002	1/1	0.97	0.16	-	27,27,27,27	0
58	MG	AA	3094	1/1	0.89	0.75	-	111,111,111,111	0
58	MG	CA	3620	1/1	0.51	0.27	-	69,69,69,69	0
58	MG	CA	3034	1/1	0.88	0.58	-	101,101,101,101	0
58	MG	AA	3509	1/1	0.96	0.16	-	49,49,49,49	0
58	MG	AA	3024	1/1	0.78	0.14	-	57,57,57,57	0
58	MG	BA	1754	1/1	0.91	0.09	-	98,98,98,98	0
58	MG	AA	3772	1/1	0.95	0.28	-	17,17,17,17	1
58	MG	CA	3238	1/1	0.90	0.26	-	59,59,59,59	0
58	MG	BA	1601	1/1	0.88	0.27	-	93,93,93,93	0
58	MG	BA	1788	1/1	0.87	0.12	-	75,75,75,75	0
58	MG	AA	3745	1/1	0.92	0.18	-	29,29,29,29	0
58	MG	CA	3497	1/1	0.94	0.32	-	73,73,73,73	0
58	MG	CA	3456	1/1	0.98	0.13	-	60,60,60,60	0
58	MG	CA	3231	1/1	0.96	0.38	-	57,57,57,57	0
58	MG	CA	3382	1/1	0.95	0.19	-	40,40,40,40	0
58	MG	CA	3525	1/1	0.93	0.30	-	83,83,83,83	0
58	MG	AA	3042	1/1	0.85	0.43	-	38,38,38,38	0
58	MG	AA	3198	1/1	0.95	0.07	-	58,58,58,58	0
58	MG	AA	3129	1/1	0.91	0.50	-	66,66,66,66	1
58	MG	AA	3740	1/1	0.92	0.17	-	45,45,45,45	0
58	MG	C5	101	1/1	0.95	0.64	-	65,65,65,65	0
58	MG	DA	1663	1/1	0.71	0.22	-	72,72,72,72	0
58	MG	CA	3120	1/1	0.96	0.52	-	62,62,62,62	0
58	MG	DA	1754	1/1	0.57	0.37	-	81,81,81,81	0
58	MG	AA	3759	1/1	0.91	0.29	-	65,65,65,65	0
58	MG	AA	3783	1/1	0.96	0.21	-	54,54,54,54	0
58	MG	DA	1711	1/1	0.93	0.32	-	45,45,45,45	0
58	MG	AA	3288	1/1	0.92	0.17	-	24,24,24,24	0
58	MG	AA	3153	1/1	0.89	0.30	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	BA	1803	1/1	0.93	0.22	-	64,64,64,64	0
58	MG	DA	1753	1/1	0.96	0.40	-	70,70,70,70	0
58	MG	BA	1628	1/1	0.89	0.56	-	55,55,55,55	0
58	MG	CA	3077	1/1	0.90	0.39	-	66,66,66,66	0
58	MG	CA	3519	1/1	0.89	0.28	-	79,79,79,79	0
58	MG	DA	1727	1/1	0.89	0.17	-	66,66,66,66	0
58	MG	AB	3001	1/1	0.76	0.57	-	87,87,87,87	0
58	MG	CA	3479	1/1	0.95	0.22	-	46,46,46,46	0
58	MG	AA	3784	1/1	0.48	0.38	-	74,74,74,74	0
58	MG	DA	1752	1/1	0.96	0.22	-	74,74,74,74	0
58	MG	CA	3418	1/1	0.88	0.27	-	41,41,41,41	0
58	MG	DA	1735	1/1	0.89	0.57	-	83,83,83,83	0
58	MG	CA	3548	1/1	0.87	0.14	-	48,48,48,48	1
58	MG	AA	3259	1/1	0.98	0.33	-	20,20,20,20	1
58	MG	AA	3512	1/1	0.93	0.34	-	60,60,60,60	0
58	MG	BA	1689	1/1	0.53	0.77	-	91,91,91,91	0
58	MG	CA	3563	1/1	0.69	0.20	-	91,91,91,91	0
58	MG	AA	3648	1/1	0.97	0.17	-	40,40,40,40	0
58	MG	CA	3323	1/1	0.88	0.23	-	67,67,67,67	0
58	MG	AA	3353	1/1	0.91	0.08	-	76,76,76,76	0
58	MG	AA	3645	1/1	0.93	0.51	-	79,79,79,79	0
58	MG	AA	3652	1/1	0.91	0.28	-	77,77,77,77	0
58	MG	DA	1744	1/1	0.89	0.10	-	79,79,79,79	0
58	MG	AA	3062	1/1	0.89	0.35	-	67,67,67,67	0
58	MG	AA	3338	1/1	0.95	0.15	-	30,30,30,30	0
58	MG	AA	3533	1/1	0.95	0.14	-	22,22,22,22	0
58	MG	BA	1619	1/1	0.91	0.19	-	52,52,52,52	0
58	MG	AA	3208	1/1	0.85	0.32	-	61,61,61,61	0
58	MG	BA	1665	1/1	0.89	0.38	-	55,55,55,55	0
58	MG	AA	3689	1/1	0.92	0.16	-	55,55,55,55	1
58	MG	CA	3191	1/1	0.93	0.29	-	65,65,65,65	0
58	MG	CA	3355	1/1	0.97	0.11	-	41,41,41,41	0
58	MG	AA	3464	1/1	0.81	0.15	-	63,63,63,63	0
58	MG	DA	1751	1/1	0.72	0.26	-	81,81,81,81	0
58	MG	CA	3380	1/1	0.95	0.20	-	71,71,71,71	0
58	MG	BA	1681	1/1	0.53	1.14	-	84,84,84,84	0
58	MG	BA	1785	1/1	0.69	0.33	-	87,87,87,87	0
58	MG	AA	3701	1/1	0.86	0.46	-	43,43,43,43	1
58	MG	CA	3255	1/1	0.88	0.48	-	67,67,67,67	0
58	MG	CA	3388	1/1	0.85	0.12	-	83,83,83,83	0
58	MG	AA	3742	1/1	0.94	0.25	-	82,82,82,82	0
58	MG	DA	1674	1/1	0.94	0.40	-	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3124	1/1	0.95	0.63	-	63,63,63,63	0
58	MG	AA	3088	1/1	0.91	0.33	-	34,34,34,34	0
58	MG	CA	3605	1/1	0.93	0.27	-	73,73,73,73	0
58	MG	AA	3553	1/1	0.93	0.17	-	40,40,40,40	0
58	MG	AA	3690	1/1	0.90	0.25	-	71,71,71,71	0
58	MG	BA	1730	1/1	0.88	0.26	-	78,78,78,78	0
58	MG	AA	3149	1/1	0.90	0.27	-	62,62,62,62	0
58	MG	DA	1708	1/1	0.90	0.10	-	87,87,87,87	0
58	MG	AA	3813	1/1	0.93	0.59	-	54,54,54,54	0
58	MG	CA	3194	1/1	0.89	0.57	-	72,72,72,72	0
58	MG	AA	3220	1/1	0.82	0.28	-	62,62,62,62	0
58	MG	DA	1762	1/1	0.80	0.08	-	73,73,73,73	0
58	MG	AA	3241	1/1	0.94	0.21	-	69,69,69,69	0
58	MG	BA	1745	1/1	0.88	0.43	-	66,66,66,66	0
58	MG	CA	3284	1/1	0.95	0.20	-	92,92,92,92	0
58	MG	AA	3685	1/1	0.93	0.20	-	47,47,47,47	0
58	MG	AA	3682	1/1	0.96	0.30	-	53,53,53,53	0
58	MG	AA	3468	1/1	0.94	0.37	-	52,52,52,52	0
58	MG	AA	3390	1/1	0.89	0.22	-	35,35,35,35	0
58	MG	CA	3244	1/1	0.72	0.67	-	78,78,78,78	0
58	MG	AA	3683	1/1	0.96	0.37	-	67,67,67,67	0
58	MG	CA	3415	1/1	0.98	0.21	-	31,31,31,31	1
58	MG	CA	3070	1/1	0.63	0.81	-	87,87,87,87	0
58	MG	AA	3510	1/1	0.95	0.36	-	58,58,58,58	0
58	MG	CA	3625	1/1	0.85	0.54	-	79,79,79,79	0
58	MG	AA	3618	1/1	0.94	0.16	-	38,38,38,38	0
58	MG	AP	202	1/1	0.88	0.18	-	40,40,40,40	0
58	MG	CA	3421	1/1	0.57	0.25	-	76,76,76,76	0
58	MG	AA	3475	1/1	0.96	0.14	-	62,62,62,62	0
58	MG	AA	3716	1/1	0.96	0.17	-	57,57,57,57	0
58	MG	CA	3612	1/1	0.94	0.23	-	68,68,68,68	0
58	MG	AA	3710	1/1	0.79	0.27	-	75,75,75,75	0
58	MG	AA	3676	1/1	0.95	0.19	-	66,66,66,66	0
58	MG	DA	1607	1/1	0.84	0.32	-	61,61,61,61	0
58	MG	CA	3450	1/1	0.97	0.19	-	48,48,48,48	0
58	MG	AA	3177	1/1	0.94	0.34	-	61,61,61,61	0
58	MG	AA	3667	1/1	0.95	0.20	-	28,28,28,28	0
58	MG	C8	5001	1/1	0.90	0.36	-	51,51,51,51	0
58	MG	CA	3532	1/1	0.75	0.12	-	79,79,79,79	0
58	MG	BA	1725	1/1	0.90	0.11	-	59,59,59,59	0
58	MG	AA	3350	1/1	0.92	0.29	-	31,31,31,31	0
58	MG	BA	1772	1/1	0.81	0.18	-	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3578	1/1	0.94	0.42	-	55,55,55,55	0
58	MG	AA	3478	1/1	0.98	0.16	-	40,40,40,40	0
58	MG	CA	3505	1/1	0.93	0.27	-	73,73,73,73	0
58	MG	BA	1776	1/1	0.96	0.26	-	64,64,64,64	0
58	MG	AF	305	1/1	0.94	0.22	-	55,55,55,55	0
58	MG	CA	3116	1/1	0.81	0.43	-	75,75,75,75	0
58	MG	DA	1756	1/1	0.93	0.24	-	68,68,68,68	0
58	MG	CA	3537	1/1	0.69	0.29	-	78,78,78,78	0
58	MG	AA	3461	1/1	0.87	0.50	-	66,66,66,66	0
58	MG	BA	1660	1/1	0.73	0.21	-	70,70,70,70	0
58	MG	CA	3473	1/1	0.93	0.17	-	54,54,54,54	0
58	MG	CA	3637	1/1	0.98	0.36	-	59,59,59,59	0
58	MG	CA	3335	1/1	0.73	0.18	-	62,62,62,62	0
58	MG	CA	3363	1/1	0.86	0.24	-	66,66,66,66	0
58	MG	AA	3230	1/1	0.82	0.58	-	80,80,80,80	0
58	MG	AA	3657	1/1	0.90	0.24	-	43,43,43,43	1
58	MG	AA	3328	1/1	0.94	0.17	-	18,18,18,18	0
58	MG	DA	1734	1/1	0.86	0.25	-	83,83,83,83	0
58	MG	AA	3587	1/1	0.91	0.31	-	53,53,53,53	0
58	MG	CB	3003	1/1	0.95	0.13	-	77,77,77,77	0
58	MG	DA	1742	1/1	0.96	0.33	-	79,79,79,79	0
58	MG	CA	3379	1/1	0.90	0.29	-	65,65,65,65	0
58	MG	AA	3303	1/1	0.91	0.33	-	56,56,56,56	0
58	MG	AA	3471	1/1	0.95	0.26	-	34,34,34,34	0
58	MG	CA	3481	1/1	0.58	0.34	-	91,91,91,91	0
58	MG	AB	3002	1/1	0.98	0.18	-	59,59,59,59	0
58	MG	BA	1658	1/1	0.93	0.51	-	76,76,76,76	0
58	MG	AA	3417	1/1	0.97	0.17	-	25,25,25,25	0
58	MG	AA	3265	1/1	0.87	0.50	-	77,77,77,77	0
58	MG	DA	1634	1/1	0.59	0.34	-	90,90,90,90	0
58	MG	AA	3234	1/1	0.95	0.17	-	30,30,30,30	1
58	MG	CA	3181	1/1	0.94	0.24	-	47,47,47,47	0
58	MG	AA	3098	1/1	0.93	0.31	-	58,58,58,58	0
58	MG	CA	3653	1/1	0.78	0.39	-	95,95,95,95	0
58	MG	DA	1696	1/1	0.86	0.20	-	91,91,91,91	0
58	MG	CA	3592	1/1	0.95	0.61	-	76,76,76,76	0
58	MG	CA	3039	1/1	0.82	0.91	-	71,71,71,71	0
58	MG	AA	3204	1/1	0.72	0.39	-	57,57,57,57	0
58	MG	AA	3186	1/1	0.83	0.16	-	37,37,37,37	0
58	MG	AO	5001	1/1	0.87	0.18	-	55,55,55,55	0
58	MG	CA	3408	1/1	0.98	0.13	-	64,64,64,64	0
58	MG	AA	3308	1/1	0.81	0.13	-	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3528	1/1	0.83	0.42	-	79,79,79,79	0
58	MG	CA	3233	1/1	0.91	0.46	-	71,71,71,71	0
58	MG	CA	3502	1/1	0.99	0.14	-	70,70,70,70	0
58	MG	AA	3176	1/1	0.90	0.31	-	50,50,50,50	0
58	MG	CA	3496	1/1	0.98	0.17	-	63,63,63,63	0
58	MG	AA	3172	1/1	0.85	0.75	-	71,71,71,71	0
58	MG	CA	3196	1/1	0.92	0.56	-	64,64,64,64	0
58	MG	AA	3484	1/1	0.92	0.23	-	35,35,35,35	0
58	MG	AA	3594	1/1	0.92	0.23	-	43,43,43,43	0
58	MG	CA	3412	1/1	0.88	0.26	-	81,81,81,81	0
58	MG	DA	1716	1/1	0.90	0.37	-	78,78,78,78	0
58	MG	CA	3539	1/1	0.95	0.43	-	73,73,73,73	0
58	MG	CA	3058	1/1	0.72	0.42	-	77,77,77,77	0
58	MG	AA	3454	1/1	0.98	0.12	-	51,51,51,51	0
58	MG	CA	3622	1/1	0.84	0.24	-	55,55,55,55	0
58	MG	AA	3337	1/1	0.97	0.24	-	10,10,10,10	0
58	MG	AA	3319	1/1	0.90	0.18	-	69,69,69,69	0
58	MG	DW	503	1/1	0.62	0.18	-	84,84,84,84	0
58	MG	AA	3108	1/1	0.76	0.48	-	125,125,125,125	0
58	MG	CA	3260	1/1	0.97	0.23	-	65,65,65,65	0
58	MG	AA	3346	1/1	0.94	0.21	-	46,46,46,46	0
58	MG	AB	3015	1/1	0.96	0.18	-	40,40,40,40	0
58	MG	CA	3131	1/1	0.80	0.21	-	62,62,62,62	0
58	MG	CA	3117	1/1	0.80	0.31	-	68,68,68,68	0
58	MG	AA	3386	1/1	0.98	0.22	-	29,29,29,29	0
58	MG	CA	3474	1/1	0.83	0.33	-	76,76,76,76	0
58	MG	AW	3004	1/1	0.89	0.32	-	65,65,65,65	0
58	MG	AA	3612	1/1	0.86	0.21	-	56,56,56,56	0
58	MG	CA	3270	1/1	0.98	0.19	-	35,35,35,35	0
58	MG	CA	3130	1/1	0.91	0.68	-	73,73,73,73	0
58	MG	AA	3639	1/1	0.87	0.18	-	77,77,77,77	0
58	MG	BA	1743	1/1	0.95	0.18	-	52,52,52,52	0
58	MG	CA	3235	1/1	0.85	0.61	-	75,75,75,75	0
58	MG	CA	3368	1/1	0.92	0.21	-	59,59,59,59	0
58	MG	CA	3176	1/1	0.96	0.48	-	50,50,50,50	0
58	MG	CA	3402	1/1	0.93	0.12	-	70,70,70,70	0
58	MG	CA	3471	1/1	0.94	0.17	-	45,45,45,45	0
58	MG	BA	1736	1/1	0.85	0.12	-	73,73,73,73	0
58	MG	CA	3032	1/1	0.85	0.58	-	67,67,67,67	0
58	MG	CA	3300	1/1	0.80	0.40	-	86,86,86,86	0
58	MG	CA	3142	1/1	0.90	0.27	-	69,69,69,69	0
58	MG	CA	3294	1/1	0.75	0.21	-	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3289	1/1	0.97	0.32	-	42,42,42,42	0
58	MG	AA	3776	1/1	0.94	0.12	-	40,40,40,40	0
58	MG	CA	3558	1/1	0.91	0.20	-	51,51,51,51	1
58	MG	AA	3166	1/1	0.94	0.17	-	31,31,31,31	0
58	MG	CA	3096	1/1	0.82	0.35	-	68,68,68,68	0
58	MG	AA	3465	1/1	0.94	0.21	-	39,39,39,39	0
58	MG	DA	1656	1/1	0.79	0.23	-	75,75,75,75	0
58	MG	CA	3406	1/1	0.86	0.13	-	70,70,70,70	0
58	MG	AA	3531	1/1	0.92	0.30	-	62,62,62,62	0
58	MG	CB	3006	1/1	0.85	0.13	-	83,83,83,83	0
58	MG	AA	3409	1/1	0.98	0.20	-	45,45,45,45	0
58	MG	CA	3072	1/1	0.86	0.28	-	56,56,56,56	0
58	MG	BA	1625	1/1	0.87	0.32	-	57,57,57,57	0
58	MG	AA	3640	1/1	0.72	0.44	-	77,77,77,77	0
58	MG	CA	3468	1/1	0.82	0.16	-	61,61,61,61	0
58	MG	AA	3030	1/1	0.93	0.32	-	26,26,26,26	1
58	MG	CA	3663	1/1	0.85	0.39	-	91,91,91,91	0
58	MG	CA	3504	1/1	0.88	0.08	-	62,62,62,62	0
58	MG	DA	1714	1/1	0.97	0.12	-	51,51,51,51	0
58	MG	CA	3210	1/1	0.93	0.31	-	75,75,75,75	0
58	MG	AA	3603	1/1	0.91	0.19	-	63,63,63,63	0
58	MG	CA	3552	1/1	0.97	0.14	-	69,69,69,69	0
58	MG	AW	3002	1/1	0.91	0.28	-	55,55,55,55	0
58	MG	AA	3180	1/1	0.89	0.31	-	94,94,94,94	0
58	MG	CA	3575	1/1	0.93	0.10	-	43,43,43,43	1
58	MG	AA	3008	1/1	0.95	0.17	-	19,19,19,19	0
58	MG	CA	3051	1/1	0.97	0.44	-	63,63,63,63	0
58	MG	CA	3414	1/1	0.93	0.20	-	50,50,50,50	0
58	MG	BA	1774	1/1	0.83	0.13	-	61,61,61,61	0
58	MG	BA	1642	1/1	0.85	0.42	-	69,69,69,69	0
58	MG	AA	3729	1/1	0.84	0.11	-	38,38,38,38	0
58	MG	AA	3279	1/1	0.88	0.35	-	53,53,53,53	0
58	MG	AA	3074	1/1	0.97	0.35	-	15,15,15,15	0
58	MG	CA	3437	1/1	0.97	0.11	-	48,48,48,48	0
58	MG	AA	3306	1/1	0.81	0.19	-	47,47,47,47	0
58	MG	BA	1804	1/1	0.92	0.18	-	67,67,67,67	0
58	MG	AA	3680	1/1	0.92	0.25	-	59,59,59,59	0
58	MG	CA	3292	1/1	0.89	0.08	-	73,73,73,73	0
58	MG	CA	3054	1/1	0.88	0.14	-	71,71,71,71	0
58	MG	CA	3071	1/1	0.32	0.51	-	97,97,97,97	0
58	MG	CA	3123	1/1	0.83	0.87	-	88,88,88,88	0
58	MG	AA	3123	1/1	0.92	0.37	-	37,37,37,37	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3766	1/1	0.60	0.20	-	72,72,72,72	0
58	MG	AA	3273	1/1	0.83	0.33	-	90,90,90,90	0
58	MG	AA	3028	1/1	0.87	0.37	-	51,51,51,51	1
58	MG	DA	1615	1/1	0.98	0.54	-	53,53,53,53	0
58	MG	CA	3422	1/1	0.95	0.26	-	55,55,55,55	0
58	MG	BA	1682	1/1	0.89	0.11	-	69,69,69,69	0
58	MG	DA	1640	1/1	0.95	0.18	-	79,79,79,79	0
58	MG	AA	3362	1/1	0.87	0.48	-	69,69,69,69	0
58	MG	AA	3774	1/1	0.86	0.23	-	80,80,80,80	0
58	MG	BA	1784	1/1	0.88	0.22	-	60,60,60,60	0
58	MG	CA	3206	1/1	0.93	0.59	-	56,56,56,56	0
58	MG	CA	3271	1/1	0.90	0.32	-	57,57,57,57	0
58	MG	CA	3079	1/1	0.94	0.34	-	57,57,57,57	0
58	MG	CA	3145	1/1	0.92	0.08	-	79,79,79,79	0
58	MG	AA	3091	1/1	0.89	0.39	-	38,38,38,38	1
58	MG	BA	1609	1/1	0.89	0.14	-	69,69,69,69	0
58	MG	CA	3649	1/1	0.78	0.35	-	85,85,85,85	0
58	MG	CD	301	1/1	0.74	0.47	-	81,81,81,81	0
58	MG	AA	3017	1/1	0.81	0.16	-	78,78,78,78	0
58	MG	AA	3737	1/1	0.94	0.15	-	29,29,29,29	0
58	MG	AA	3245	1/1	0.82	0.78	-	69,69,69,69	0
58	MG	CA	3303	1/1	0.93	0.47	-	54,54,54,54	0
58	MG	AA	3767	1/1	0.60	0.31	-	63,63,63,63	1
58	MG	AA	3077	1/1	0.92	0.34	-	50,50,50,50	0
58	MG	CA	3288	1/1	0.97	0.25	-	54,54,54,54	0
58	MG	AB	3004	1/1	0.79	0.30	-	89,89,89,89	0
58	MG	CA	3374	1/1	0.80	0.43	-	76,76,76,76	0
58	MG	CA	3042	1/1	0.60	0.73	-	95,95,95,95	0
58	MG	BA	1652	1/1	0.77	0.14	-	69,69,69,69	0
58	MG	AA	3447	1/1	0.80	0.18	-	61,61,61,61	0
58	MG	BM	202	1/1	0.86	0.39	-	65,65,65,65	0
58	MG	AA	3778	1/1	0.93	0.21	-	54,54,54,54	0
58	MG	BA	1691	1/1	0.86	0.56	-	74,74,74,74	0
58	MG	DA	1643	1/1	0.90	0.16	-	55,55,55,55	0
58	MG	AA	3228	1/1	0.96	0.19	-	51,51,51,51	0
58	MG	BA	1716	1/1	0.78	0.17	-	67,67,67,67	0
58	MG	AA	3154	1/1	0.91	0.35	-	46,46,46,46	0
58	MG	AA	3432	1/1	0.90	0.33	-	57,57,57,57	0
58	MG	CE	306	1/1	0.92	0.07	-	67,67,67,67	0
58	MG	AA	3605	1/1	0.86	0.28	-	68,68,68,68	0
58	MG	CB	3005	1/1	0.94	0.31	-	62,62,62,62	0
58	MG	CA	3397	1/1	0.98	0.13	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CN	5001	1/1	0.91	0.09	-	77,77,77,77	0
58	MG	CA	3154	1/1	0.80	0.31	-	72,72,72,72	0
58	MG	AA	3131	1/1	0.96	0.45	-	55,55,55,55	0
58	MG	AA	3097	1/1	0.98	0.20	-	26,26,26,26	0
58	MG	CA	3078	1/1	0.87	0.25	-	47,47,47,47	0
58	MG	BA	1715	1/1	0.74	0.21	-	83,83,83,83	0
58	MG	CA	3102	1/1	0.92	0.35	-	56,56,56,56	0
58	MG	CA	3557	1/1	0.89	0.11	-	76,76,76,76	0
58	MG	BA	1795	1/1	0.97	0.27	-	69,69,69,69	0
58	MG	AA	3205	1/1	0.85	0.46	-	64,64,64,64	0
58	MG	CA	3377	1/1	0.97	0.19	-	80,80,80,80	0
58	MG	AA	3416	1/1	0.97	0.17	-	30,30,30,30	0
58	MG	BA	1637	1/1	0.88	0.23	-	66,66,66,66	0
58	MG	AA	3392	1/1	0.96	0.17	-	42,42,42,42	0
58	MG	CA	3472	1/1	0.93	0.60	-	72,72,72,72	0
58	MG	CA	3184	1/1	0.89	0.30	-	66,66,66,66	0
58	MG	CA	3081	1/1	0.82	0.16	-	68,68,68,68	0
58	MG	AA	3692	1/1	0.97	0.18	-	53,53,53,53	0
58	MG	DA	1704	1/1	0.96	0.07	-	69,69,69,69	0
58	MG	CB	3013	1/1	0.80	0.19	-	98,98,98,98	0
58	MG	CA	3053	1/1	0.96	0.75	-	58,58,58,58	0
58	MG	CA	3350	1/1	0.79	0.09	-	85,85,85,85	0
58	MG	AA	3448	1/1	0.89	0.05	-	78,78,78,78	0
58	MG	AA	3437	1/1	0.89	0.25	-	54,54,54,54	0
58	MG	AA	3424	1/1	0.86	0.15	-	65,65,65,65	0
58	MG	AA	3262	1/1	0.97	0.38	-	70,70,70,70	0
58	MG	BA	1650	1/1	0.71	0.36	-	72,72,72,72	0
58	MG	BA	1759	1/1	0.95	0.14	-	63,63,63,63	0
58	MG	AA	3638	1/1	0.71	0.41	-	72,72,72,72	0
58	MG	AA	3624	1/1	0.93	0.15	-	65,65,65,65	0
58	MG	AA	3608	1/1	0.86	0.18	-	73,73,73,73	0
58	MG	AA	3103	1/1	0.98	0.07	-	15,15,15,15	0
58	MG	BA	1761	1/1	0.93	0.18	-	55,55,55,55	0
58	MG	CA	3426	1/1	0.91	0.19	-	55,55,55,55	0
58	MG	BA	1808	1/1	0.93	0.14	-	50,50,50,50	0
58	MG	AA	3105	1/1	0.84	0.14	-	81,81,81,81	0
58	MG	DA	1602	1/1	0.92	0.12	-	80,80,80,80	0
58	MG	CA	3508	1/1	0.94	0.15	-	96,96,96,96	0
58	MG	CP	202	1/1	0.88	0.42	-	71,71,71,71	0
58	MG	AA	3728	1/1	0.92	0.21	-	61,61,61,61	0
58	MG	CA	3064	1/1	0.95	0.06	-	43,43,43,43	0
58	MG	CA	3578	1/1	0.85	0.26	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3015	1/1	0.81	0.48	-	64,64,64,64	0
58	MG	DA	1611	1/1	0.96	0.09	-	38,38,38,38	0
58	MG	CA	3566	1/1	0.96	0.13	-	41,41,41,41	0
58	MG	AA	3156	1/1	0.95	0.34	-	33,33,33,33	1
58	MG	DA	1660	1/1	0.52	0.63	-	90,90,90,90	0
58	MG	AA	3085	1/1	0.84	0.32	-	53,53,53,53	0
58	MG	AA	3367	1/1	0.96	0.17	-	52,52,52,52	0
58	MG	AA	3274	1/1	0.92	0.29	-	55,55,55,55	0
58	MG	CA	3066	1/1	0.62	0.59	-	84,84,84,84	0
58	MG	AA	3563	1/1	0.97	0.16	-	49,49,49,49	1
58	MG	DA	1705	1/1	0.92	0.32	-	62,62,62,62	0
58	MG	AA	3422	1/1	0.88	0.10	-	71,71,71,71	0
58	MG	CA	3387	1/1	0.95	0.34	-	70,70,70,70	0
58	MG	DJ	5001	1/1	0.53	0.48	-	105,105,105,105	0
58	MG	AA	3577	1/1	0.93	0.11	-	32,32,32,32	0
58	MG	AA	3332	1/1	0.95	0.14	-	46,46,46,46	0
58	MG	AA	3298	1/1	0.93	0.08	-	59,59,59,59	0
58	MG	AA	3724	1/1	0.97	0.28	-	40,40,40,40	0
58	MG	CA	3586	1/1	0.92	0.15	-	69,69,69,69	0
58	MG	AA	3343	1/1	0.95	0.14	-	65,65,65,65	0
58	MG	AA	3402	1/1	0.96	0.30	-	33,33,33,33	0
58	MG	CA	3520	1/1	0.92	0.18	-	59,59,59,59	0
58	MG	CA	3604	1/1	0.80	0.19	-	69,69,69,69	0
58	MG	AA	3365	1/1	0.91	0.31	-	57,57,57,57	0
58	MG	AA	3472	1/1	0.96	0.21	-	24,24,24,24	0
58	MG	CA	3366	1/1	0.96	0.24	-	61,61,61,61	0
58	MG	AA	3293	1/1	0.96	0.20	-	32,32,32,32	0
58	MG	AA	3004	1/1	0.92	0.16	-	25,25,25,25	0
58	MG	AA	3672	1/1	0.79	0.35	-	25,25,25,25	1
58	MG	CA	3307	1/1	0.97	0.30	-	52,52,52,52	0
58	MG	CA	3237	1/1	0.96	0.31	-	75,75,75,75	0
58	MG	AA	3052	1/1	0.86	0.64	-	65,65,65,65	0
58	MG	AA	3752	1/1	0.84	0.60	-	72,72,72,72	0
58	MG	AA	3352	1/1	0.89	0.25	-	51,51,51,51	0
58	MG	BA	1627	1/1	0.89	0.28	-	87,87,87,87	0
58	MG	CA	3059	1/1	0.77	0.37	-	60,60,60,60	0
58	MG	AA	3460	1/1	0.83	0.47	-	72,72,72,72	0
58	MG	CA	3257	1/1	0.94	0.48	-	57,57,57,57	0
58	MG	AA	3438	1/1	0.89	0.22	-	57,57,57,57	0
58	MG	AA	3229	1/1	0.89	0.31	-	43,43,43,43	0
58	MG	BA	1751	1/1	0.89	0.13	-	58,58,58,58	0
58	MG	DA	1620	1/1	0.81	0.14	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3224	1/1	0.69	0.97	-	81,81,81,81	0
58	MG	CA	3219	1/1	0.98	0.21	-	31,31,31,31	0
58	MG	AA	3570	1/1	0.85	0.17	-	15,15,15,15	0
58	MG	CA	3589	1/1	0.85	0.07	-	79,79,79,79	0
58	MG	AA	3139	1/1	0.92	0.10	-	58,58,58,58	0
58	MG	DA	1673	1/1	0.65	0.37	-	100,100,100,100	0
58	MG	CA	3599	1/1	0.54	0.23	-	80,80,80,80	0
58	MG	AA	3804	1/1	0.93	0.40	-	68,68,68,68	0
58	MG	AA	3548	1/1	0.95	0.16	-	57,57,57,57	1
58	MG	CA	3540	1/1	0.83	0.33	-	85,85,85,85	0
58	MG	CA	3371	1/1	0.95	0.21	-	55,55,55,55	0
58	MG	CA	3144	1/1	0.90	0.32	-	67,67,67,67	0
58	MG	AA	3080	1/1	0.80	0.40	-	57,57,57,57	0
58	MG	AA	3660	1/1	0.91	0.23	-	70,70,70,70	0
58	MG	AA	3323	1/1	0.86	0.12	-	22,22,22,22	0
58	MG	CA	3068	1/1	0.78	0.26	-	57,57,57,57	0
58	MG	CA	3060	1/1	0.91	0.41	-	77,77,77,77	0
58	MG	CA	3407	1/1	0.90	0.23	-	55,55,55,55	0
58	MG	AA	3419	1/1	0.96	0.14	-	31,31,31,31	0
58	MG	AA	3757	1/1	0.90	0.12	-	55,55,55,55	0
58	MG	CA	3205	1/1	0.09	0.69	-	105,105,105,105	0
58	MG	BA	1655	1/1	0.91	0.32	-	69,69,69,69	0
58	MG	AA	3557	1/1	0.97	0.17	-	19,19,19,19	0
58	MG	DK	5001	1/1	0.93	0.27	-	100,100,100,100	0
58	MG	CA	3386	1/1	0.90	0.28	-	65,65,65,65	0
58	MG	AA	3429	1/1	0.96	0.21	-	41,41,41,41	0
58	MG	CQ	205	1/1	0.55	0.51	-	81,81,81,81	0
58	MG	CA	3249	1/1	0.95	0.19	-	46,46,46,46	0
58	MG	CB	3012	1/1	0.95	0.35	-	76,76,76,76	0
58	MG	AA	3121	1/1	0.86	0.33	-	70,70,70,70	0
58	MG	BE	3001	1/1	0.94	0.12	-	60,60,60,60	0
58	MG	CQ	204	1/1	0.85	0.31	-	61,61,61,61	0
58	MG	CA	3435	1/1	0.97	0.11	-	52,52,52,52	0
58	MG	AB	3006	1/1	0.77	0.30	-	72,72,72,72	0
58	MG	CA	3197	1/1	0.90	0.48	-	64,64,64,64	0
58	MG	BA	1766	1/1	0.75	0.36	-	86,86,86,86	0
58	MG	AA	3658	1/1	0.99	0.15	-	62,62,62,62	0
58	MG	BA	1610	1/1	0.66	0.12	-	79,79,79,79	0
58	MG	CA	3239	1/1	0.72	0.39	-	75,75,75,75	0
58	MG	CA	3590	1/1	0.71	0.17	-	95,95,95,95	0
58	MG	CA	3642	1/1	0.83	0.99	-	80,80,80,80	0
58	MG	CA	3451	1/1	0.95	0.19	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3269	1/1	0.94	0.13	-	86,86,86,86	0
58	MG	BA	1764	1/1	0.85	0.33	-	63,63,63,63	0
58	MG	BA	1638	1/1	0.79	0.63	-	78,78,78,78	0
58	MG	AA	3765	1/1	0.85	0.37	-	63,63,63,63	0
58	MG	AA	3713	1/1	0.79	0.41	-	52,52,52,52	1
58	MG	CA	3327	1/1	0.94	0.25	-	53,53,53,53	0
58	MG	AA	3727	1/1	0.88	0.15	-	49,49,49,49	0
58	MG	CA	3507	1/1	0.63	0.26	-	100,100,100,100	0
58	MG	BA	1692	1/1	0.82	0.30	-	86,86,86,86	0
58	MG	CA	3632	1/1	0.85	0.17	-	79,79,79,79	0
58	MG	AA	3078	1/1	0.80	0.29	-	66,66,66,66	0
58	MG	CA	3129	1/1	0.85	0.54	-	69,69,69,69	0
58	MG	DA	1608	1/1	0.87	0.08	-	47,47,47,47	0
58	MG	BA	1631	1/1	0.89	0.11	-	48,48,48,48	0
58	MG	DA	1713	1/1	0.96	0.54	-	72,72,72,72	0
58	MG	DA	1749	1/1	0.85	0.43	-	80,80,80,80	0
58	MG	CA	3277	1/1	0.95	0.11	-	90,90,90,90	0
58	MG	BA	1792	1/1	0.95	0.19	-	75,75,75,75	0
58	MG	CA	3153	1/1	0.89	0.19	-	78,78,78,78	0
58	MG	AA	3193	1/1	0.85	0.23	-	62,62,62,62	0
58	MG	AA	3534	1/1	0.98	0.17	-	27,27,27,27	0
58	MG	AA	3286	1/1	0.94	0.21	-	52,52,52,52	0
58	MG	DA	1755	1/1	0.74	0.64	-	86,86,86,86	0
58	MG	CA	3098	1/1	0.60	0.39	-	83,83,83,83	0
58	MG	BA	1632	1/1	0.90	0.30	-	54,54,54,54	0
58	MG	DA	1625	1/1	0.92	0.55	-	73,73,73,73	0
58	MG	AA	3458	1/1	0.92	0.19	-	72,72,72,72	0
58	MG	BA	1663	1/1	0.94	0.09	-	79,79,79,79	0
58	MG	CA	3090	1/1	0.87	0.53	-	65,65,65,65	0
58	MG	AA	3536	1/1	0.94	0.10	-	35,35,35,35	0
58	MG	BA	1661	1/1	0.73	0.99	-	82,82,82,82	0
58	MG	CA	3280	1/1	0.90	0.18	-	30,30,30,30	0
58	MG	CA	3111	1/1	0.82	0.13	-	71,71,71,71	0
58	MG	DA	1766	1/1	0.85	0.12	-	58,58,58,58	0
58	MG	CA	3359	1/1	0.93	0.19	-	42,42,42,42	0
58	MG	AA	3093	1/1	0.91	0.28	-	27,27,27,27	1
58	MG	CA	3245	1/1	0.89	0.48	-	57,57,57,57	0
58	MG	DA	1639	1/1	0.87	0.16	-	75,75,75,75	0
58	MG	CA	3298	1/1	0.94	0.15	-	68,68,68,68	0
58	MG	AA	3655	1/1	0.98	0.16	-	61,61,61,61	0
58	MG	AA	3163	1/1	0.88	0.38	-	40,40,40,40	0
58	MG	AA	3503	1/1	0.94	0.15	-	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3534	1/1	0.84	0.18	-	79,79,79,79	0
58	MG	CA	3593	1/1	0.68	0.26	-	73,73,73,73	0
58	MG	AA	3661	1/1	0.94	0.32	-	43,43,43,43	0
58	MG	AA	3588	1/1	0.90	0.19	-	38,38,38,38	0
58	MG	AA	3292	1/1	0.90	0.13	-	74,74,74,74	0
58	MG	AA	3029	1/1	0.87	0.29	-	53,53,53,53	0
58	MG	CA	3511	1/1	0.96	0.12	-	68,68,68,68	0
58	MG	AA	3666	1/1	0.95	0.07	-	64,64,64,64	0
58	MG	CA	3089	1/1	0.72	0.41	-	80,80,80,80	0
58	MG	AA	3092	1/1	0.94	0.13	-	53,53,53,53	0
58	MG	AA	3635	1/1	0.99	0.11	-	23,23,23,23	0
58	MG	CA	3517	1/1	0.99	0.33	-	64,64,64,64	0
58	MG	DA	1729	1/1	0.88	0.13	-	57,57,57,57	0
58	MG	CA	3008	1/1	0.72	0.41	-	100,100,100,100	0
58	MG	CA	3638	1/1	0.91	0.32	-	55,55,55,55	0
58	MG	BA	1641	1/1	0.92	0.23	-	71,71,71,71	0
58	MG	CA	3527	1/1	0.47	0.13	-	78,78,78,78	0
58	MG	AA	3268	1/1	0.80	0.12	-	88,88,88,88	0
58	MG	CA	3641	1/1	0.79	0.40	-	67,67,67,67	0
58	MG	AF	304	1/1	0.92	0.32	-	62,62,62,62	0
58	MG	AA	3244	1/1	0.45	0.25	-	100,100,100,100	0
58	MG	CA	3524	1/1	0.79	0.09	-	77,77,77,77	0
58	MG	AA	3224	1/1	0.83	0.41	-	75,75,75,75	0
58	MG	BA	1765	1/1	0.97	0.11	-	61,61,61,61	0
58	MG	CA	3554	1/1	0.95	0.18	-	67,67,67,67	0
58	MG	AA	3595	1/1	0.96	0.25	-	55,55,55,55	0
58	MG	AA	3560	1/1	0.87	0.27	-	58,58,58,58	0
58	MG	BA	1787	1/1	0.88	0.24	-	90,90,90,90	0
58	MG	AA	3483	1/1	0.85	0.07	-	43,43,43,43	1
58	MG	DA	1737	1/1	0.91	0.16	-	72,72,72,72	0
58	MG	CA	3094	1/1	0.92	0.32	-	87,87,87,87	0
58	MG	DA	1629	1/1	0.93	0.41	-	58,58,58,58	0
58	MG	CP	201	1/1	0.85	0.82	-	65,65,65,65	0
58	MG	CA	3025	1/1	0.83	0.28	-	77,77,77,77	0
58	MG	DA	1667	1/1	0.96	0.24	-	49,49,49,49	0
58	MG	AA	3140	1/1	0.93	0.31	-	50,50,50,50	0
58	MG	CA	3478	1/1	0.94	0.14	-	58,58,58,58	0
58	MG	AA	3500	1/1	0.95	0.12	-	47,47,47,47	0
58	MG	AA	3055	1/1	0.95	0.28	-	35,35,35,35	0
58	MG	CA	3045	1/1	0.88	0.41	-	67,67,67,67	0
58	MG	AN	3003	1/1	0.91	0.13	-	47,47,47,47	0
58	MG	CA	3093	1/1	0.58	0.64	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3781	1/1	0.76	0.33	-	44,44,44,44	1
58	MG	CA	3156	1/1	0.93	0.32	-	68,68,68,68	0
58	MG	BA	1777	1/1	0.90	0.21	-	79,79,79,79	0
58	MG	DA	1706	1/1	0.72	0.28	-	128,128,128,128	0
58	MG	AA	3281	1/1	0.84	0.40	-	61,61,61,61	0
58	MG	AA	3625	1/1	0.88	0.21	-	60,60,60,60	0
58	MG	DA	1627	1/1	0.80	0.23	-	70,70,70,70	0
58	MG	A4	502	1/1	0.63	0.65	-	123,123,123,123	0
58	MG	AA	3263	1/1	0.88	0.80	-	80,80,80,80	0
58	MG	BL	202	1/1	0.94	0.35	-	67,67,67,67	0
58	MG	DA	1741	1/1	0.93	0.16	-	78,78,78,78	0
58	MG	BA	1769	1/1	0.97	0.28	-	63,63,63,63	0
58	MG	CA	3494	1/1	0.94	0.21	-	63,63,63,63	0
58	MG	AB	3010	1/1	0.92	0.18	-	47,47,47,47	1
58	MG	CA	3122	1/1	0.91	0.22	-	67,67,67,67	0
58	MG	CA	3516	1/1	0.96	0.12	-	62,62,62,62	0
58	MG	AA	3226	1/1	0.92	0.27	-	56,56,56,56	0
58	MG	CA	3587	1/1	0.99	0.12	-	34,34,34,34	0
58	MG	AA	3722	1/1	0.94	0.14	-	18,18,18,18	0
58	MG	CA	3026	1/1	0.97	0.25	-	81,81,81,81	0
58	MG	AA	3674	1/1	0.94	0.25	-	75,75,75,75	0
58	MG	BA	1712	1/1	0.93	0.14	-	61,61,61,61	0
58	MG	AA	3032	1/1	0.95	0.27	-	36,36,36,36	0
58	MG	AA	3662	1/1	0.89	0.22	-	59,59,59,59	0
58	MG	CA	3616	1/1	0.66	0.66	-	79,79,79,79	0
58	MG	CA	3254	1/1	0.96	0.21	-	42,42,42,42	0
58	MG	AA	3083	1/1	0.94	0.24	-	38,38,38,38	1
58	MG	AA	3243	1/1	0.98	0.24	-	24,24,24,24	1
58	MG	CA	3611	1/1	0.74	0.70	-	91,91,91,91	0
58	MG	AA	3276	1/1	0.99	0.28	-	47,47,47,47	1
58	MG	CA	3446	1/1	0.95	0.18	-	63,63,63,63	0
58	MG	DA	1732	1/1	0.89	0.36	-	76,76,76,76	0
58	MG	A2	101	1/1	0.93	0.20	-	35,35,35,35	0
58	MG	AA	3270	1/1	0.77	0.24	-	54,54,54,54	0
58	MG	AA	3053	1/1	0.97	0.16	-	14,14,14,14	0
58	MG	DA	1726	1/1	0.93	0.17	-	77,77,77,77	0
58	MG	AA	3296	1/1	0.95	0.12	-	17,17,17,17	0
58	MG	AA	3252	1/1	0.73	0.55	-	66,66,66,66	0
58	MG	AA	3255	1/1	0.89	0.35	-	53,53,53,53	0
58	MG	AA	3412	1/1	0.96	0.21	-	43,43,43,43	0
58	MG	AE	302	1/1	0.99	0.23	-	18,18,18,18	0
58	MG	AB	3022	1/1	0.98	0.05	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	BA	1604	1/1	0.92	0.15	-	65,65,65,65	0
58	MG	AA	3144	1/1	0.97	0.12	-	40,40,40,40	0
58	MG	CA	3033	1/1	0.65	0.87	-	89,89,89,89	0
58	MG	AA	3147	1/1	0.88	0.27	-	69,69,69,69	0
58	MG	CA	3150	1/1	0.91	0.18	-	54,54,54,54	0
58	MG	BA	1645	1/1	0.77	0.64	-	61,61,61,61	0
58	MG	CA	3459	1/1	0.97	0.18	-	48,48,48,48	0
58	MG	CA	3461	1/1	0.94	0.18	-	43,43,43,43	0
58	MG	A7	102	1/1	0.95	0.10	-	43,43,43,43	0
58	MG	AA	3632	1/1	0.93	0.14	-	76,76,76,76	0
58	MG	AB	3011	1/1	0.96	0.19	-	30,30,30,30	0
58	MG	CA	3389	1/1	0.69	0.49	-	75,75,75,75	0
58	MG	CA	3381	1/1	0.94	0.10	-	38,38,38,38	0
58	MG	AA	3191	1/1	0.94	0.26	-	42,42,42,42	0
58	MG	BA	1778	1/1	0.98	0.07	-	42,42,42,42	0
58	MG	CA	3395	1/1	0.96	0.33	-	65,65,65,65	0
58	MG	DA	1632	1/1	0.81	0.32	-	61,61,61,61	0
58	MG	AA	3482	1/1	0.98	0.15	-	65,65,65,65	0
58	MG	AA	3158	1/1	0.90	0.31	-	97,97,97,97	0
58	MG	CA	3162	1/1	0.97	0.47	-	46,46,46,46	0
58	MG	AA	3049	1/1	0.94	0.27	-	52,52,52,52	0
58	MG	CA	3503	1/1	0.83	0.17	-	62,62,62,62	0
58	MG	AA	3785	1/1	0.92	0.19	-	72,72,72,72	0
58	MG	CA	3613	1/1	0.92	0.34	-	74,74,74,74	0
58	MG	AA	3107	1/1	0.91	0.51	-	76,76,76,76	0
58	MG	CA	3279	1/1	0.94	0.16	-	34,34,34,34	0
58	MG	AA	3631	1/1	0.94	0.30	-	46,46,46,46	0
58	MG	CA	3580	1/1	0.88	0.07	-	100,100,100,100	0
58	MG	CA	3544	1/1	0.60	0.19	-	81,81,81,81	0
58	MG	CO	202	1/1	0.93	0.21	-	53,53,53,53	0
58	MG	BA	1742	1/1	0.67	0.21	-	79,79,79,79	0
58	MG	AA	3152	1/1	0.93	0.29	-	71,71,71,71	0
58	MG	CA	3470	1/1	0.93	0.35	-	72,72,72,72	0
58	MG	AA	3427	1/1	0.96	0.11	-	33,33,33,33	0
58	MG	CA	3304	1/1	0.76	0.13	-	93,93,93,93	0
58	MG	AA	3345	1/1	0.89	0.10	-	68,68,68,68	0
58	MG	CA	3097	1/1	0.82	0.26	-	80,80,80,80	0
58	MG	AA	3411	1/1	0.80	0.23	-	47,47,47,47	0
58	MG	AA	3504	1/1	0.94	0.20	-	58,58,58,58	0
58	MG	CA	3063	1/1	0.84	0.29	-	53,53,53,53	0
58	MG	CA	3209	1/1	0.20	0.65	-	93,93,93,93	0
58	MG	AA	3455	1/1	0.91	0.33	-	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3673	1/1	0.89	0.17	-	67,67,67,67	0
58	MG	AA	3520	1/1	0.96	0.13	-	38,38,38,38	0
58	MG	CA	3384	1/1	0.87	0.23	-	71,71,71,71	0
58	MG	AA	3731	1/1	0.91	0.19	-	42,42,42,42	0
58	MG	AA	3814	1/1	0.76	0.37	-	93,93,93,93	0
58	MG	BN	502	1/1	0.95	0.24	-	66,66,66,66	0
58	MG	CA	3606	1/1	0.91	0.42	-	65,65,65,65	0
58	MG	AA	3351	1/1	0.97	0.14	-	30,30,30,30	0
58	MG	AA	3335	1/1	0.91	0.23	-	41,41,41,41	0
58	MG	AA	3677	1/1	0.92	0.22	-	41,41,41,41	0
58	MG	AA	3709	1/1	0.98	0.19	-	29,29,29,29	1
58	MG	AA	3769	1/1	0.93	0.23	-	57,57,57,57	0
58	MG	CA	3648	1/1	0.95	0.33	-	53,53,53,53	0
58	MG	AA	3026	1/1	0.82	0.39	-	86,86,86,86	0
58	MG	CA	3569	1/1	0.94	0.26	-	79,79,79,79	0
58	MG	AA	3248	1/1	0.73	0.52	-	64,64,64,64	0
58	MG	CA	3522	1/1	0.90	0.34	-	56,56,56,56	0
58	MG	CA	3399	1/1	0.93	0.10	-	75,75,75,75	0
58	MG	AA	3592	1/1	0.90	0.25	-	52,52,52,52	0
58	MG	CA	3252	1/1	0.94	0.23	-	64,64,64,64	0
58	MG	BA	1793	1/1	0.80	0.66	-	86,86,86,86	0
58	MG	BA	1666	1/1	0.77	0.53	-	75,75,75,75	0
58	MG	DA	1723	1/1	0.97	0.30	-	66,66,66,66	0
58	MG	CA	3475	1/1	0.91	0.36	-	55,55,55,55	0
58	MG	AE	301	1/1	0.79	0.28	-	69,69,69,69	0
58	MG	AA	3025	1/1	0.93	0.39	-	35,35,35,35	1
58	MG	DA	1699	1/1	0.99	0.08	-	75,75,75,75	0
58	MG	DA	1664	1/1	0.94	0.15	-	64,64,64,64	0
58	MG	AE	303	1/1	0.97	0.25	-	41,41,41,41	0
58	MG	AA	3215	1/1	0.89	0.62	-	42,42,42,42	1
58	MG	A9	502	1/1	0.88	0.28	-	60,60,60,60	0
58	MG	CA	3624	1/1	0.53	0.17	-	104,104,104,104	0
58	MG	AA	3637	1/1	0.89	0.29	-	45,45,45,45	0
58	MG	A5	102	1/1	0.89	0.34	-	60,60,60,60	0
58	MG	AA	3671	1/1	0.93	0.22	-	58,58,58,58	0
58	MG	CA	3253	1/1	0.70	0.18	-	95,95,95,95	0
58	MG	DA	1641	1/1	0.92	0.09	-	77,77,77,77	0
58	MG	CA	3126	1/1	0.79	0.28	-	93,93,93,93	0
58	MG	AA	3089	1/1	0.90	0.31	-	47,47,47,47	1
58	MG	AA	3006	1/1	0.93	0.46	-	52,52,52,52	0
58	MG	AA	3569	1/1	0.96	0.17	-	19,19,19,19	0
58	MG	CA	3449	1/1	0.95	0.10	-	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	BA	1703	1/1	0.93	0.25	-	78,78,78,78	0
58	MG	CA	3512	1/1	0.81	0.48	-	65,65,65,65	0
58	MG	DA	1688	1/1	0.97	0.20	-	66,66,66,66	0
58	MG	CA	3333	1/1	0.94	0.32	-	75,75,75,75	0
58	MG	AA	3550	1/1	0.94	0.21	-	47,47,47,47	0
58	MG	CA	3404	1/1	0.94	0.19	-	54,54,54,54	0
58	MG	AW	3001	1/1	0.90	0.31	-	52,52,52,52	0
58	MG	DA	1612	1/1	0.82	0.39	-	72,72,72,72	0
58	MG	CA	3533	1/1	0.79	0.20	-	81,81,81,81	0
58	MG	CA	3301	1/1	0.98	0.35	-	47,47,47,47	0
58	MG	AA	3541	1/1	0.98	0.18	-	43,43,43,43	0
58	MG	BA	1608	1/1	0.89	0.50	-	60,60,60,60	0
58	MG	CA	3393	1/1	0.68	0.08	-	82,82,82,82	0
58	MG	CA	3017	1/1	0.93	0.58	-	46,46,46,46	0
58	MG	DA	1650	1/1	0.91	0.34	-	61,61,61,61	0
58	MG	CA	3158	1/1	0.70	0.32	-	70,70,70,70	0
58	MG	CA	3614	1/1	0.84	0.20	-	52,52,52,52	0
58	MG	CA	3259	1/1	0.96	0.22	-	47,47,47,47	0
58	MG	BA	1653	1/1	0.85	0.43	-	78,78,78,78	0
58	MG	AA	3797	1/1	0.96	0.26	-	15,15,15,15	1
58	MG	CA	3635	1/1	0.85	0.16	-	79,79,79,79	0
58	MG	CA	3222	1/1	0.96	0.26	-	75,75,75,75	0
58	MG	AA	3712	1/1	0.91	0.23	-	46,46,46,46	0
58	MG	A8	5002	1/1	0.97	0.24	-	31,31,31,31	0
58	MG	AA	3795	1/1	0.90	0.33	-	68,68,68,68	1
58	MG	AA	3002	1/1	0.86	0.21	-	55,55,55,55	0
58	MG	AA	3762	1/1	0.90	0.19	-	53,53,53,53	1
58	MG	AA	3271	1/1	0.93	0.36	-	69,69,69,69	0
58	MG	BA	1718	1/1	0.86	0.52	-	83,83,83,83	0
58	MG	AA	3743	1/1	0.88	0.25	-	80,80,80,80	0
58	MG	CA	3443	1/1	0.97	0.11	-	36,36,36,36	0
58	MG	CA	3272	1/1	0.84	0.48	-	75,75,75,75	0
58	MG	BA	1744	1/1	0.88	0.10	-	37,37,37,37	0
58	MG	CA	3367	1/1	0.95	0.23	-	65,65,65,65	0
58	MG	AA	3523	1/1	0.97	0.20	-	30,30,30,30	0
58	MG	BA	1668	1/1	0.86	0.25	-	83,83,83,83	0
58	MG	CA	3264	1/1	0.98	0.18	-	59,59,59,59	0
58	MG	DA	1609	1/1	0.94	0.30	-	46,46,46,46	0
58	MG	AA	3719	1/1	0.94	0.12	-	58,58,58,58	0
58	MG	AA	3651	1/1	0.84	0.24	-	52,52,52,52	0
58	MG	CA	3482	1/1	0.90	0.24	-	70,70,70,70	0
58	MG	AA	3414	1/1	0.82	0.16	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	AA	3175	1/1	0.90	0.33	-	51,51,51,51	0
58	MG	BA	1647	1/1	0.83	0.15	-	75,75,75,75	0
58	MG	AA	3593	1/1	0.94	0.21	-	25,25,25,25	1
58	MG	CY	502	1/1	0.92	0.17	-	56,56,56,56	0
58	MG	AA	3126	1/1	0.88	0.42	-	50,50,50,50	0
58	MG	BA	1687	1/1	0.88	0.33	-	72,72,72,72	0
58	MG	BA	1677	1/1	0.86	0.16	-	87,87,87,87	0
58	MG	AA	3707	1/1	0.98	0.24	-	29,29,29,29	1
58	MG	CA	3405	1/1	0.84	0.23	-	91,91,91,91	0
58	MG	AA	3787	1/1	0.97	0.25	-	53,53,53,53	0
58	MG	CA	3403	1/1	0.93	0.08	-	91,91,91,91	0
58	MG	CA	3295	1/1	0.73	0.20	-	84,84,84,84	0
58	MG	AA	3501	1/1	0.95	0.11	-	24,24,24,24	0
58	MG	AQ	201	1/1	0.77	0.51	-	62,62,62,62	0
58	MG	BA	1768	1/1	0.94	0.07	-	75,75,75,75	0
58	MG	AA	3590	1/1	0.92	0.21	-	69,69,69,69	0
58	MG	BA	1719	1/1	0.83	0.27	-	80,80,80,80	0
58	MG	BA	1656	1/1	0.86	0.13	-	90,90,90,90	0
58	MG	BD	502	1/1	0.83	0.63	-	82,82,82,82	0
58	MG	AA	3325	1/1	0.97	0.10	-	66,66,66,66	0
58	MG	DA	1724	1/1	0.91	0.31	-	61,61,61,61	0
58	MG	CA	3411	1/1	0.94	0.36	-	61,61,61,61	0
58	MG	CA	3506	1/1	0.89	0.17	-	58,58,58,58	0
58	MG	CA	3128	1/1	0.90	0.42	-	71,71,71,71	0
58	MG	CA	3342	1/1	0.98	0.17	-	45,45,45,45	0
58	MG	AA	3295	1/1	0.89	0.39	-	47,47,47,47	0
58	MG	BZ	702	1/1	0.95	0.34	-	46,46,46,46	0
58	MG	CA	3325	1/1	0.88	0.10	-	38,38,38,38	0
58	MG	CA	3165	1/1	0.92	0.17	-	62,62,62,62	0
58	MG	CA	3100	1/1	0.84	0.46	-	79,79,79,79	0
58	MG	CA	3285	1/1	0.95	0.37	-	57,57,57,57	0
58	MG	BA	1802	1/1	0.86	0.14	-	68,68,68,68	1
58	MG	DA	1613	1/1	0.91	0.25	-	72,72,72,72	0
58	MG	AA	3600	1/1	0.81	0.25	-	60,60,60,60	0
58	MG	AA	3111	1/1	0.89	0.43	-	48,48,48,48	0
58	MG	DA	1707	1/1	0.71	0.30	-	87,87,87,87	0
58	MG	CA	3258	1/1	0.86	0.36	-	70,70,70,70	0
58	MG	AA	3100	1/1	0.87	0.27	-	53,53,53,53	0
58	MG	CA	3546	1/1	0.63	0.11	-	119,119,119,119	0
58	MG	AA	3222	1/1	0.90	0.32	-	28,28,28,28	0
58	MG	AA	3079	1/1	0.92	0.10	-	34,34,34,34	0
58	MG	CA	3436	1/1	0.95	0.12	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3485	1/1	0.76	0.23	-	83,83,83,83	0
58	MG	AA	3304	1/1	0.88	0.25	-	30,30,30,30	0
58	MG	AA	3019	1/1	0.94	0.30	-	58,58,58,58	0
58	MG	A0	101	1/1	0.98	0.14	-	43,43,43,43	0
58	MG	AA	3239	1/1	0.86	0.36	-	64,64,64,64	0
58	MG	CA	3568	1/1	0.89	0.20	-	41,41,41,41	0
58	MG	CA	3083	1/1	0.66	0.75	-	90,90,90,90	0
58	MG	DA	1623	1/1	0.55	0.13	-	117,117,117,117	0
58	MG	AA	3284	1/1	0.89	0.42	-	44,44,44,44	0
58	MG	CA	3385	1/1	0.96	0.47	-	64,64,64,64	0
58	MG	AA	3641	1/1	0.98	0.22	-	41,41,41,41	0
58	MG	BA	1732	1/1	0.86	0.07	-	71,71,71,71	0
58	MG	DA	1631	1/1	0.95	0.20	-	70,70,70,70	0
58	MG	CA	3024	1/1	0.83	0.68	-	88,88,88,88	0
58	MG	AA	3260	1/1	0.75	0.39	-	71,71,71,71	0
58	MG	CA	3513	1/1	0.90	0.26	-	75,75,75,75	0
58	MG	AA	3056	1/1	0.92	0.26	-	63,63,63,63	0
58	MG	AA	3544	1/1	0.97	0.11	-	16,16,16,16	0
58	MG	BA	1621	1/1	0.93	0.41	-	49,49,49,49	0
58	MG	CB	3011	1/1	0.94	0.29	-	53,53,53,53	0
58	MG	CA	3431	1/1	0.95	0.29	-	100,100,100,100	0
58	MG	DA	1603	1/1	0.86	0.30	-	74,74,74,74	0
58	MG	BA	1705	1/1	0.48	0.21	-	92,92,92,92	0
58	MG	DA	1614	1/1	0.79	0.80	-	87,87,87,87	0
58	MG	CA	3390	1/1	0.95	0.14	-	64,64,64,64	0
58	MG	BA	1753	1/1	0.95	0.13	-	94,94,94,94	0
58	MG	BA	1717	1/1	0.96	0.18	-	44,44,44,44	0
58	MG	BA	1750	1/1	0.97	0.27	-	65,65,65,65	0
58	MG	CA	3378	1/1	0.81	0.12	-	84,84,84,84	0
58	MG	CA	3135	1/1	0.96	0.21	-	66,66,66,66	0
58	MG	AA	3445	1/1	0.65	0.23	-	75,75,75,75	0
58	MG	CA	3493	1/1	0.81	0.39	-	88,88,88,88	0
58	MG	AA	3694	1/1	0.89	0.15	-	45,45,45,45	0
58	MG	CA	3140	1/1	0.71	0.60	-	98,98,98,98	0
58	MG	CA	3202	1/1	0.13	0.83	-	77,77,77,77	0
58	MG	BW	501	1/1	0.93	0.27	-	48,48,48,48	0
58	MG	AA	3537	1/1	0.78	0.15	-	95,95,95,95	0
58	MG	DA	1746	1/1	0.81	0.19	-	91,91,91,91	0
58	MG	AA	3626	1/1	0.81	0.27	-	74,74,74,74	0
58	MG	A6	101	1/1	0.93	0.37	-	65,65,65,65	0
58	MG	CA	3646	1/1	0.62	0.20	-	95,95,95,95	0
58	MG	AA	3664	1/1	0.97	0.23	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
58	MG	CA	3559	1/1	0.98	0.26	-	52,52,52,52	1
58	MG	AA	3755	1/1	0.83	0.42	-	63,63,63,63	0
58	MG	AA	3136	1/1	0.72	0.20	-	52,52,52,52	0
58	MG	BA	1710	1/1	0.88	0.69	-	73,73,73,73	0
58	MG	CA	3283	1/1	0.89	0.19	-	60,60,60,60	0
58	MG	CA	3183	1/1	0.76	1.07	-	86,86,86,86	0
58	MG	DA	1717	1/1	0.94	0.30	-	52,52,52,52	0
58	MG	CA	3216	1/1	0.81	0.62	-	66,66,66,66	0
58	MG	BA	1782	1/1	0.91	0.19	-	50,50,50,50	0
58	MG	AA	3090	1/1	0.93	0.56	-	30,30,30,30	1
58	MG	BA	1696	1/1	0.72	0.40	-	68,68,68,68	0
58	MG	CF	304	1/1	0.98	0.36	-	65,65,65,65	0
58	MG	CA	3577	1/1	0.92	0.17	-	83,83,83,83	0
58	MG	BA	1688	1/1	0.89	0.71	-	70,70,70,70	0
58	MG	CA	3329	1/1	0.97	0.21	-	29,29,29,29	0
58	MG	AA	3209	1/1	0.93	0.33	-	63,63,63,63	0

## 6.5 Other polymers

There are no such residues in this entry.