Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 09:10 AM EST

PDB ID	:	4V7H
EMDB ID	:	EMD-1345
Title	:	Structure of the 80S rRNA and proteins and P/E tRNA for eukaryotic ribosome based on cryo-EM map of Thermomyces lanuginosus ribosome at 8.9A resolution
Authors	:	Taylor, D.J.; Devkota, B.; Huang, A.D.; Topf, M.; Narayanan, E.; Sali, A.; Harvey, S.C.; Frank, J.
Deposited on	:	2009-09-22
Resolution	:	8.90 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

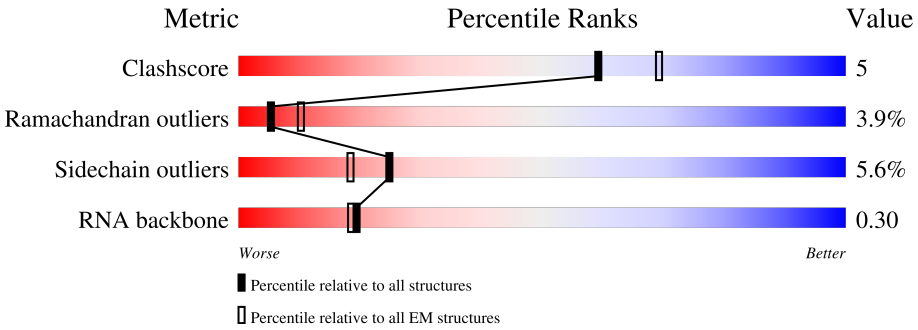
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance

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

The reported resolution of this entry is 8.90 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1761	15% 72% 24%
2	AB	193	35% 97%
3	AC	188	52% 93% 7%
4	AD	158	25% 65% 12% 22%
5	AE	162	46% 93% 6%
6	AG	186	41% 91% 8%
7	AH	125	49% 89% 7%

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Mol	Chain	Length	Quality of chain
8	AI	138	52% 83% 11%
9	AJ	96	50% 86% 10%
10	AK	125	43% 90% 10%
11	AL	118	46% 93% 7%
12	AM	130	29% 85% 13%
13	AN	50	38% 78% 14%
14	AO	84	54% 86% 13%
15	AQ	80	49% 92% 6%
16	AS	71	37% 89% 10%
17	AR	313	61% 25% 70% 5%
18	AT	141	43% 82% 15%
19	A7	76	36% 29% 43% 28%
20	B0	109	45% 85% 12%
21	B1	48	44% 92% 6%
22	B2	98	26% 96%
23	B8	118	25% 77% 20%
24	B9	72	43% 82% 14%
25	BA	213	38% 91% 8%
26	BB	243	49% 86% 12%
27	BC	362	39% 90% 10%
28	BD	257	30% 91% 8%
29	BE	237	20% 86% 13%
30	BF	213	39% 93% 6%
31	BG	113	26% 90% 9%
32	BH	179	32% 88% 11%

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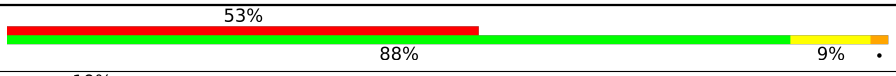
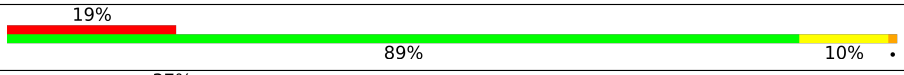
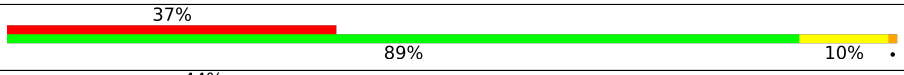
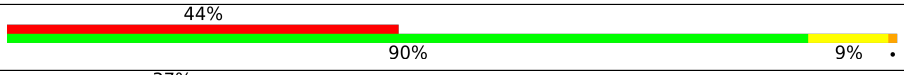
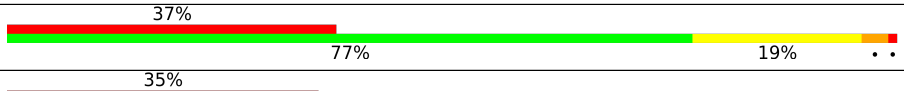
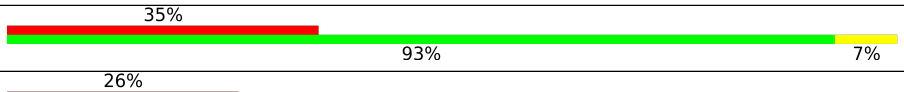
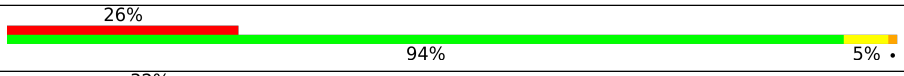
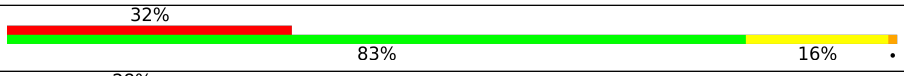
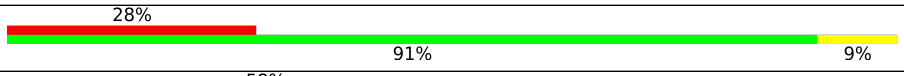
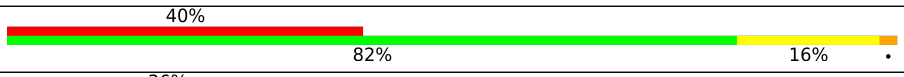
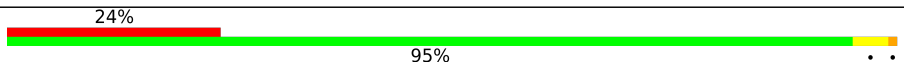
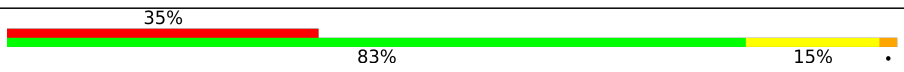
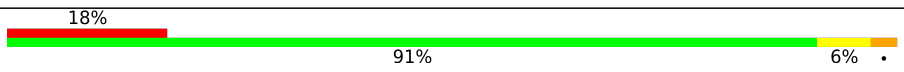
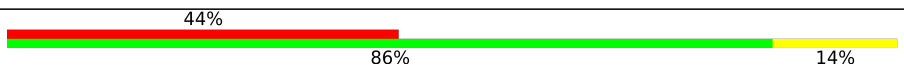
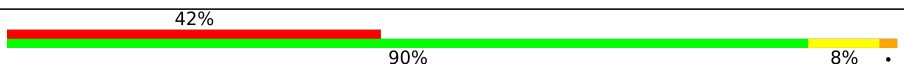
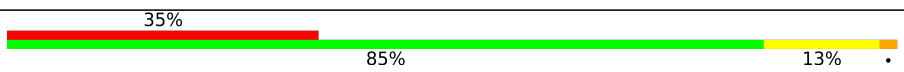
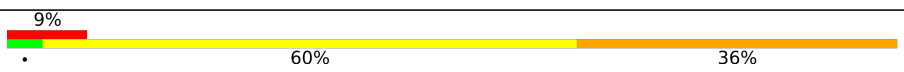
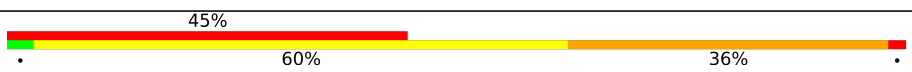
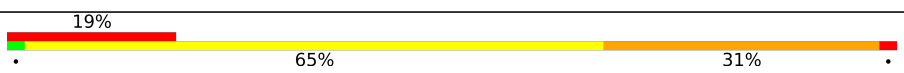
Mol	Chain	Length	Quality of chain
33	BI	165	
34	BJ	151	
35	BK	138	
36	BL	192	
37	BM	178	
38	BN	150	
39	BO	121	
40	BP	176	
41	BQ	116	
42	BR	131	
43	BS	45	
44	BT	80	
45	BU	116	
46	BV	142	
47	BW	79	
48	BX	86	
49	BY	52	
50	BZ	92	
51	B3	113	
52	B4	157	
53	B5	3170	

2 Entry composition (i)

There are 53 unique types of molecules in this entry. The entry contains 165754 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	AA	1761	37458	16745	6626	12327	1760	0	3

- Molecule 2 is a protein called 40S ribosomal protein S0(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	AB	193	1500	958	269	271	2	0	0

- Molecule 3 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	AC	188	1469	929	271	263	6	0	0

- Molecule 4 is a protein called 40S ribosomal protein S9(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	AD	124	1018	647	189	181	1	0	0

- Molecule 5 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AE	162	1207	765	222	218	2	0	0

- Molecule 6 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	AG	186	1456	908	277	268	3	0	0

- Molecule 7 is a protein called 40S ribosomal protein S22(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AH	125	Total	C	N	O	S	0	0
			992	634	181	174	3		

- Molecule 8 is a protein called 40S ribosomal protein S16(A).

Mol	Chain	Residues	Atoms				AltConf	Trace
8	AI	138	Total	C	N	O	0	0
			1087	695	200	192		

- Molecule 9 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AJ	96	Total	C	N	O	S	0	0
			771	487	140	143	1		

- Molecule 10 is a protein called 40S ribosomal protein S14(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AK	125	Total	C	N	O	S	0	0
			924	566	179	176	3		

- Molecule 11 is a protein called 40S ribosomal protein S23(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AL	118	Total	C	N	O	S	0	0
			906	579	166	159	2		

- Molecule 12 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AM	130	Total	C	N	O	S	0	0
			1077	669	217	189	2		

- Molecule 13 is a protein called 40S ribosomal protein S29(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AN	50	Total	C	N	O	S	0	0
			417	258	87	68	4		

- Molecule 14 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AO	84	Total	C	N	O	S	0	0
			694	446	129	118	1		

- Molecule 15 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AQ	80	Total	C	N	O	S	0	0
			643	410	127	104	2		

- Molecule 16 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AS	71	Total	C	N	O	S	0	0
			548	348	101	93	6		

- Molecule 17 is a protein called RACK1 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AR	313	Total	C	N	O	S	0	0
			2410	1526	413	463	8		

- Molecule 18 is a protein called s19e protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AT	141	Total	C	N	O	S	0	0
			1102	687	206	207	2		

- Molecule 19 is a RNA chain called P/E tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	A7	76	Total	C	N	O	P	0	0
			1648	746	294	533	75		

- Molecule 20 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	B0	109	Total	C	N	O	S	0	0
			881	555	176	149	1		

- Molecule 21 is a protein called 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	B1	48	Total	C	N	O	S	0	0
			424	263	95	64	2		

- Molecule 22 is a protein called 60S ribosomal protein L30e.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	B2	98	Total	C	N	O	S	0	0
			752	484	125	142	1		

- Molecule 23 is a protein called 60S ribosomal protein LP0.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	B8	118	Total	C	N	O	S	0	0
			947	609	167	168	3		

- Molecule 24 is a protein called 60S ribosomal protein L43.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	B9	72	Total	C	N	O	S	0	0
			539	332	104	98	5		

- Molecule 25 is a protein called 60S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BA	213	Total	C	N	O	S	0	0
			1683	1074	294	306	9		

- Molecule 26 is a protein called 60S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BB	243	Total	C	N	O	S	0	0
			1848	1150	374	323	1		

- Molecule 27 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BC	362	Total	C	N	O	S	0	0
			2887	1833	545	502	7		

- Molecule 28 is a protein called 60S ribosomal protein L4(B).

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BD	257	Total	C	N	O	S	0	0
			1950	1226	375	346	3		

- Molecule 29 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BE	237	Total	C	N	O	S	0	0
			1913	1210	329	372	2		

- Molecule 30 is a protein called 60S ribosomal protein L7(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BF	213	Total	C	N	O	S	0	0
			1561	1010	281	269	1		

- Molecule 31 is a protein called 60S ribosomal protein L8(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
31	BG	113	Total	C	N	O	S	0	0
			844	540	144	158	2		

- Molecule 32 is a protein called 60S ribosomal protein L9(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BH	179	Total	C	N	O	S	0	0
			1418	896	260	259	3		

- Molecule 33 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BI	165	Total	C	N	O	S	0	0
			1326	834	257	228	7		

- Molecule 34 is a protein called 60S ribosomal protein L11(B).

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BJ	151	Total	C	N	O	S	0	0
			1195	744	229	218	4		

- Molecule 35 is a protein called 60S ribosomal protein L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BK	138	Total	C	N	O	S	0	0
			1038	651	190	195	2		

- Molecule 36 is a protein called 60S ribosomal protein L15(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BL	192	Total	C	N	O	S	0	0
			1618	1011	340	266	1		

- Molecule 37 is a protein called 60S ribosomal protein L16(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BM	178	Total	C	N	O	S	0	0
			1317	845	254	217	1		

- Molecule 38 is a protein called 60S ribosomal protein L17(A).

Mol	Chain	Residues	Atoms				AltConf	Trace
38	BN	150	Total	C	N	O	0	0
			1189	742	230	217		

- Molecule 39 is a protein called 60S ribosomal protein L18(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
39	BO	121	Total	C	N	O	S	0	0
			931	598	170	162	1		

- Molecule 40 is a protein called 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	BP	176	Total	C	N	O	0	0
			1317	816	277	224		

- Molecule 41 is a protein called 60S ribosomal protein L21(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BQ	116	Total	C	N	O	S	0	0
			893	564	173	153	3		

- Molecule 42 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BR	131	Total	C	N	O	S	0	0
			977	614	183	173	7		

- Molecule 43 is a protein called 60S ribosomal protein L24(A).

Mol	Chain	Residues	Atoms				AltConf	Trace
43	BS	45	Total	C	N	O	0	0
			371	238	73	60		

- Molecule 44 is a protein called 60S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BT	80	Total	C	N	O	S	0	0
			642	411	108	121	2		

- Molecule 45 is a protein called 60S ribosomal protein L26(A).

Mol	Chain	Residues	Atoms				AltConf	Trace
45	BU	116	Total	C	N	O	0	0
			916	576	179	161		

- Molecule 46 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BV	142	Total	C	N	O	S	0	0
			1123	717	218	185	3		

- Molecule 47 is a protein called 60S ribosomal protein L31(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BW	79	Total	C	N	O	S	0	0
			663	415	135	112	1		

- Molecule 48 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BX	86	Total	C	N	O	S	0	0
			605	379	111	114	1		

- Molecule 49 is a protein called 60S ribosomal protein L37(A).

Mol	Chain	Residues	Atoms					AltConf	Trace
49	BY	52	Total	C	N	O	S	0	0
			403	245	85	69	4		

- Molecule 50 is a protein called 60S ribosomal protein L42.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	BZ	92	Total	C	N	O	S	0	0
			749	472	151	121	5		

- Molecule 51 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	B3	113	Total	C	N	O	P	0	0
			2403	1075	429	787	112		

- Molecule 52 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	B4	157	Total	C	N	O	P	0	0
			3329	1490	581	1102	156		

- Molecule 53 is a RNA chain called 26S ribosomal RNA.

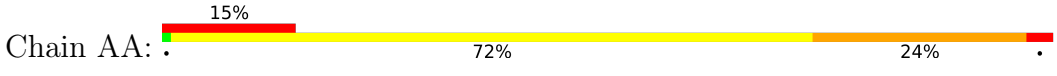
Mol	Chain	Residues	Atoms					AltConf	Trace
53	B5	3170	Total	C	N	O	P	0	0
			67775	30273	12178	22155	3169		

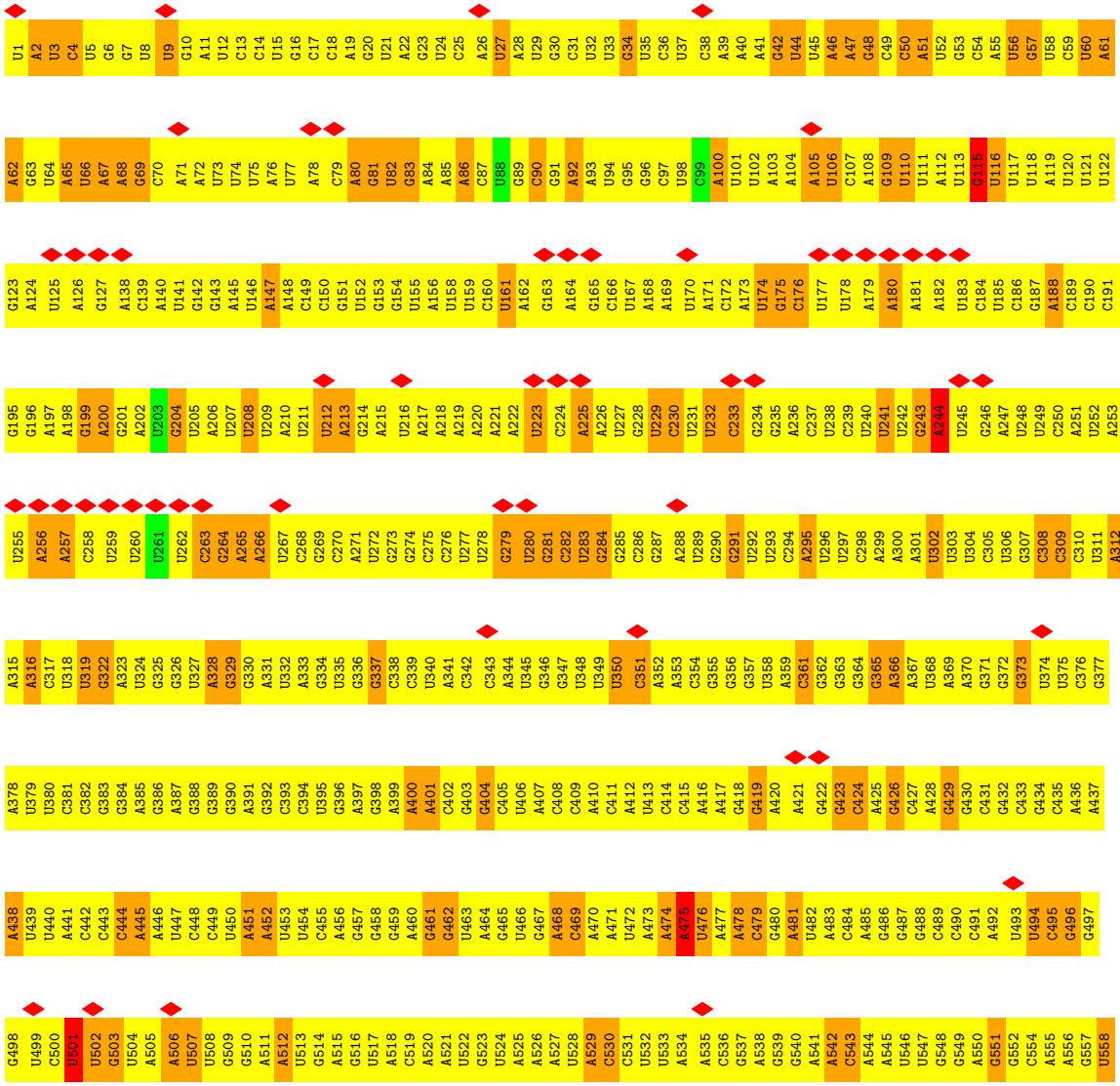
3 Residue-property plots (i)

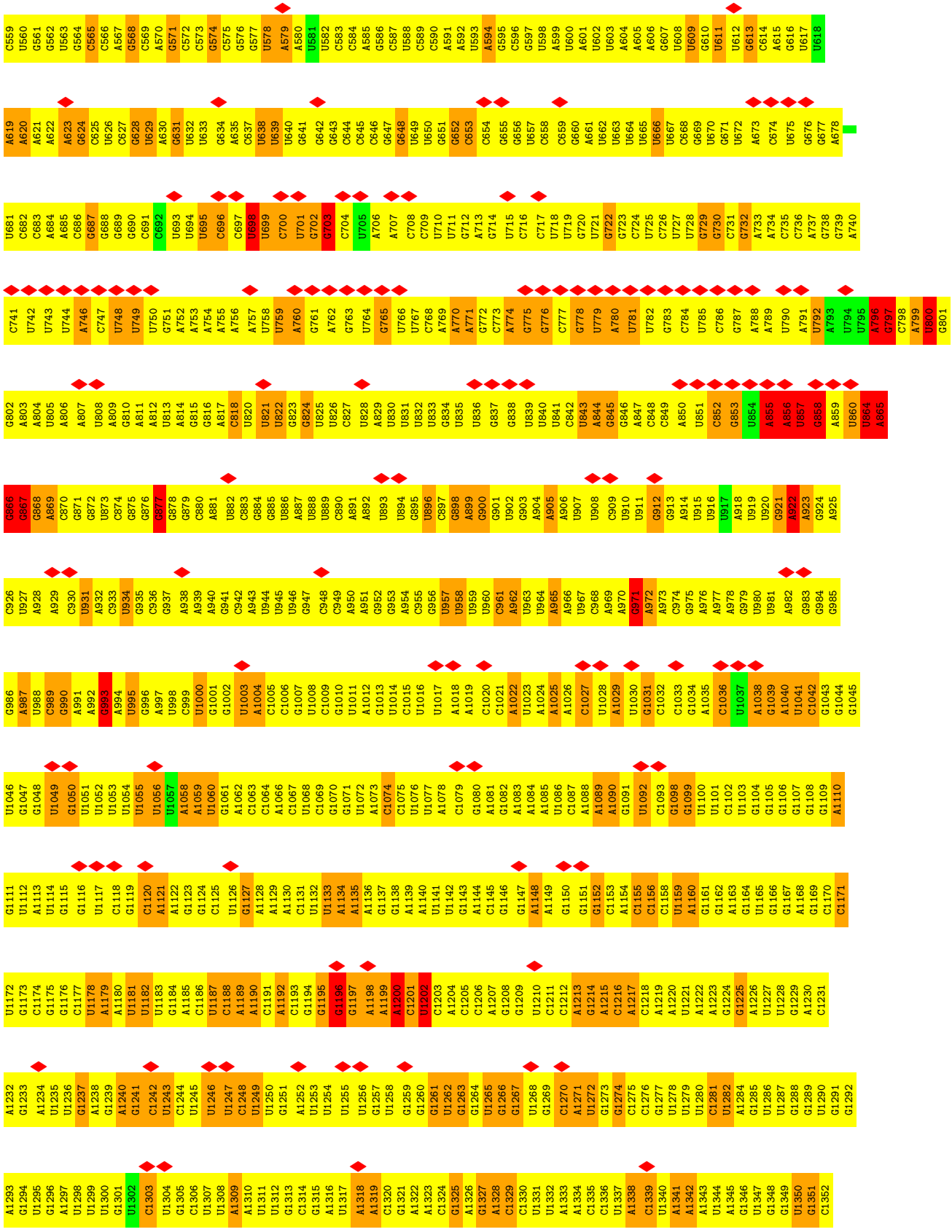
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

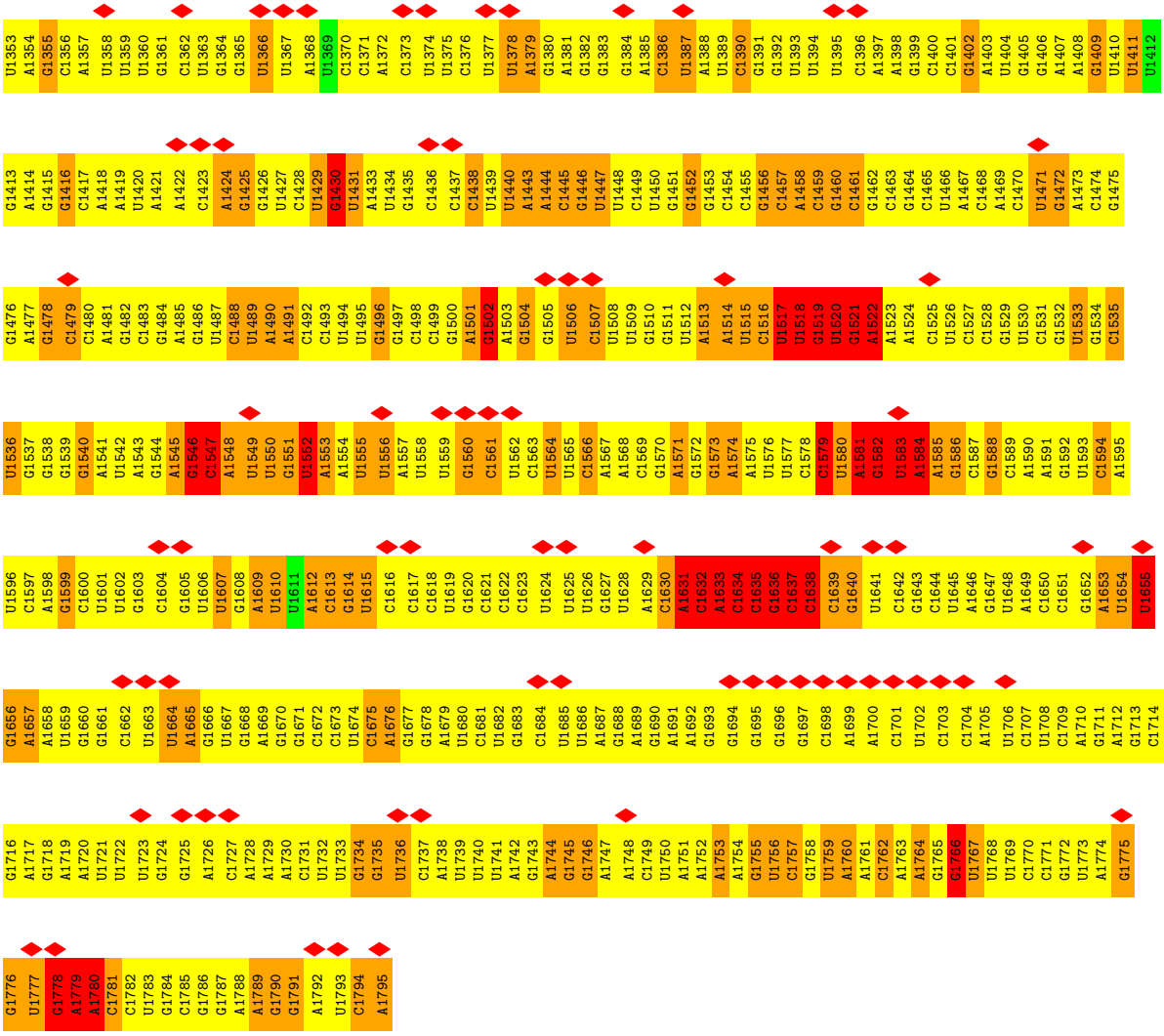
- Molecule 1: 18S rRNA

Chain AA:



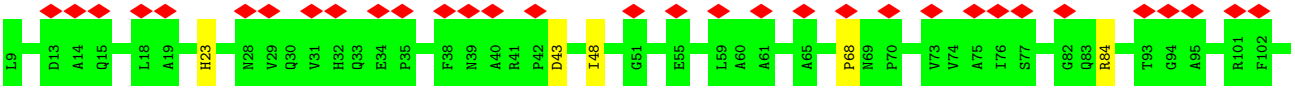


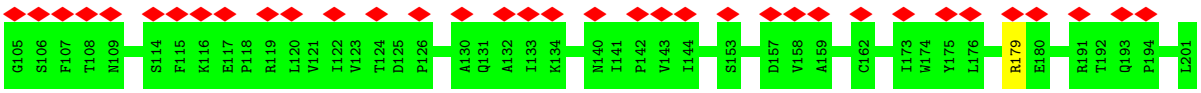




• Molecule 2: 40S ribosomal protein S0(A)

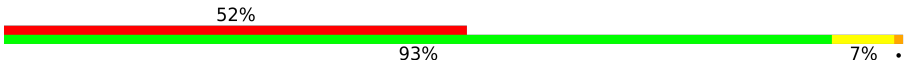
Chain AB:

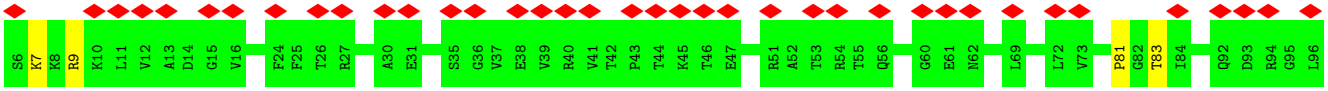


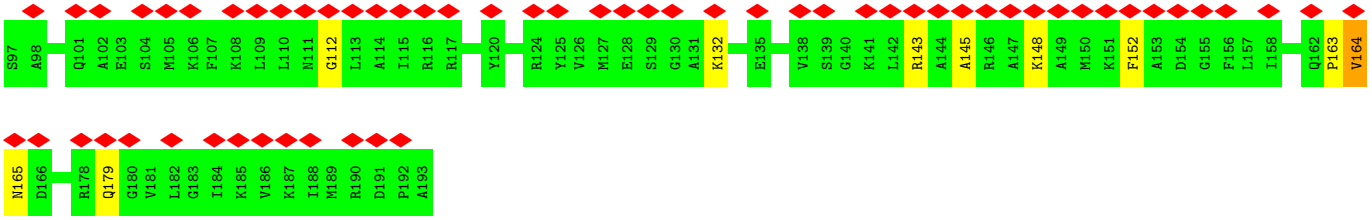


• Molecule 3: 40S ribosomal protein S3

Chain AC:

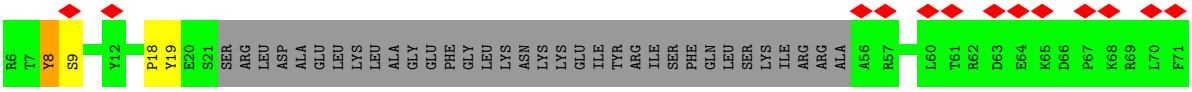


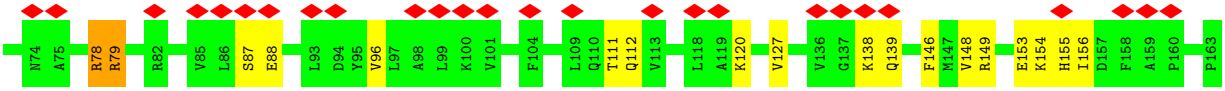




• Molecule 4: 40S ribosomal protein S9(A)

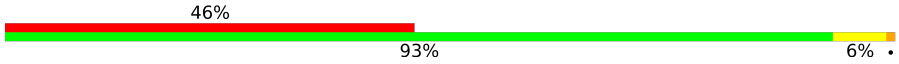
Chain AD:

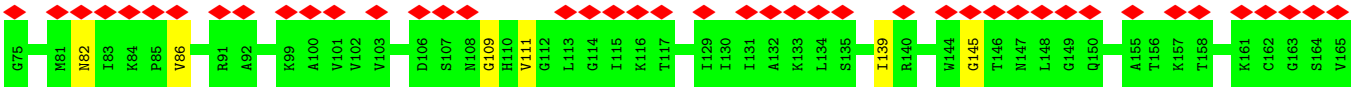


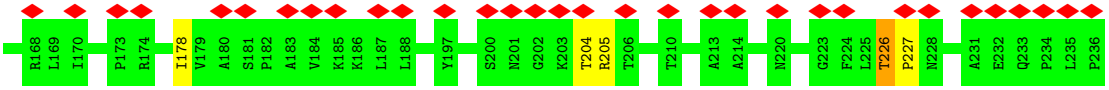


• Molecule 5: 40S ribosomal protein S2

Chain AE:

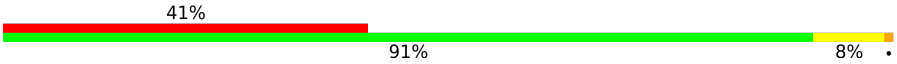


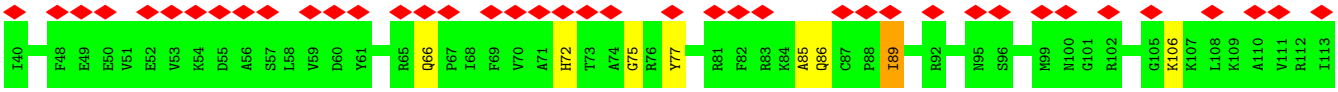


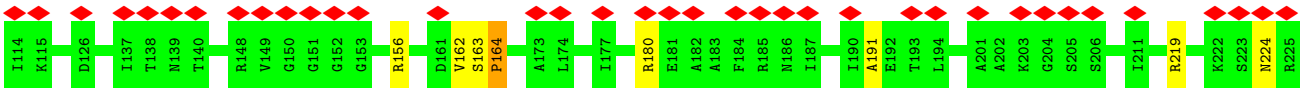


• Molecule 6: 40S ribosomal protein S5

Chain AG:

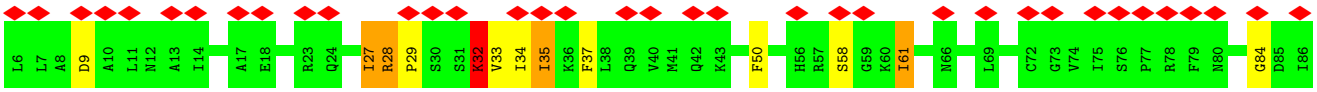






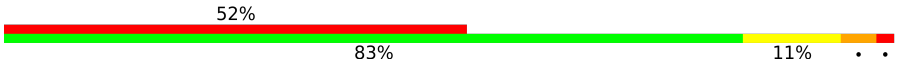
• Molecule 7: 40S ribosomal protein S22(A)

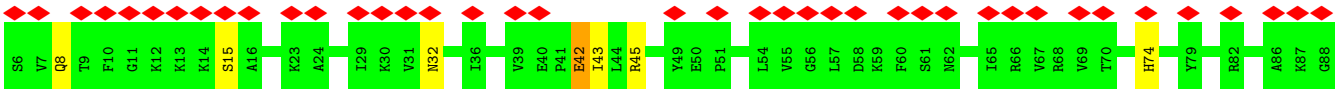
Chain AH:

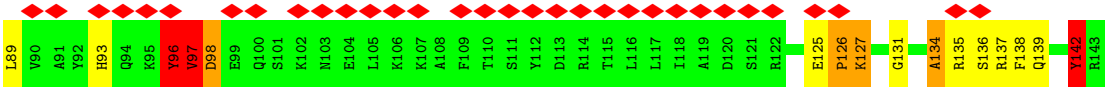


• Molecule 8: 40S ribosomal protein S16(A)

Chain AI:

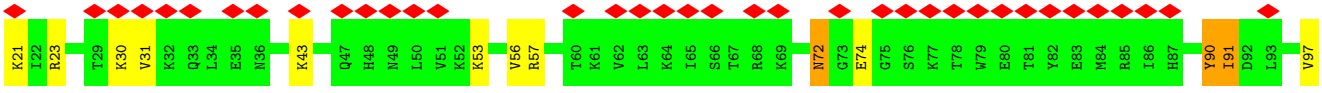


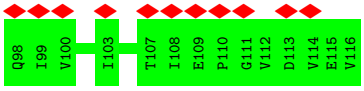




• Molecule 9: 40S ribosomal protein S20

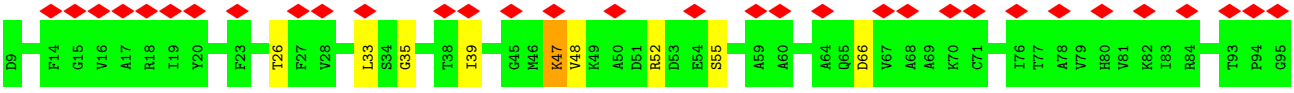
Chain AJ:

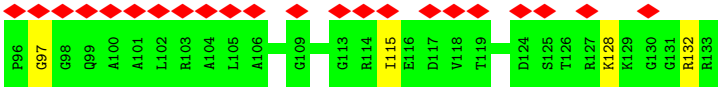




• Molecule 10: 40S ribosomal protein S14(A)

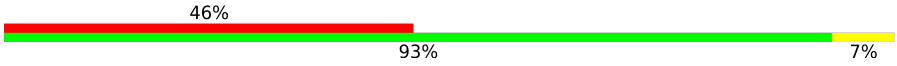
Chain AK:

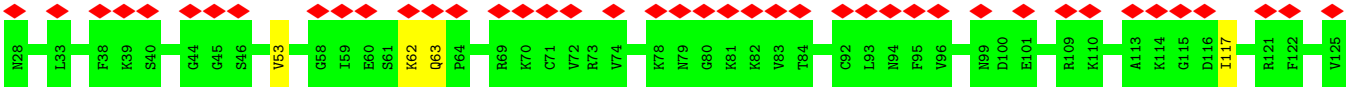


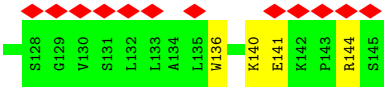


• Molecule 11: 40S ribosomal protein S23(A)

Chain AL:

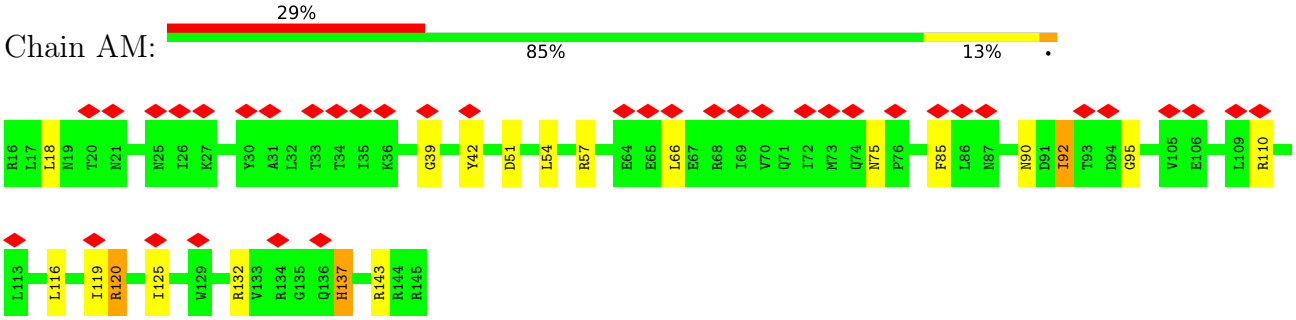






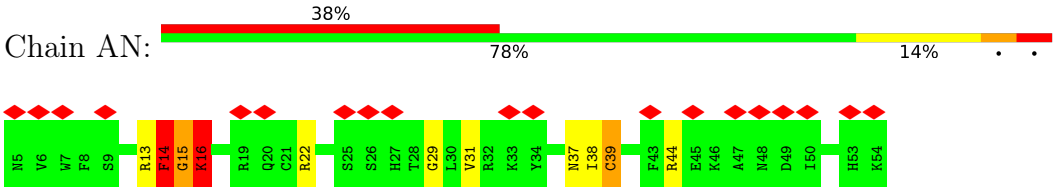
• Molecule 12: 40S ribosomal protein S18

Chain AM:



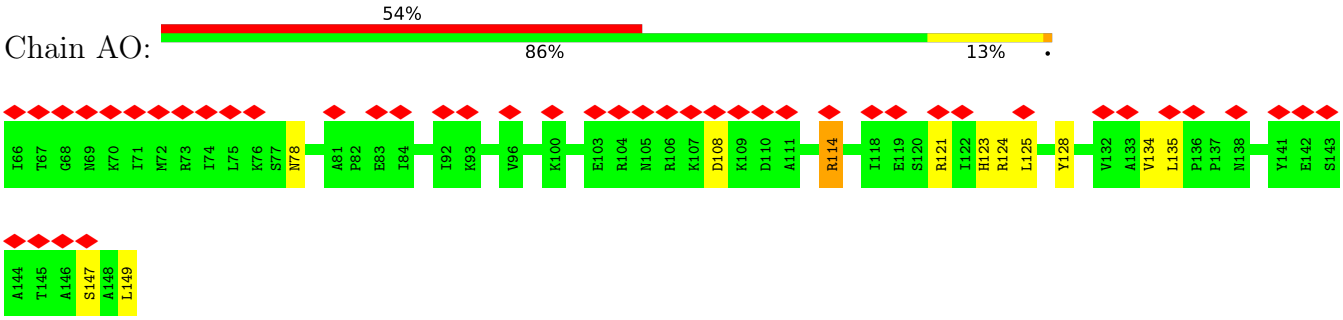
• Molecule 13: 40S ribosomal protein S29(A)

Chain AN:



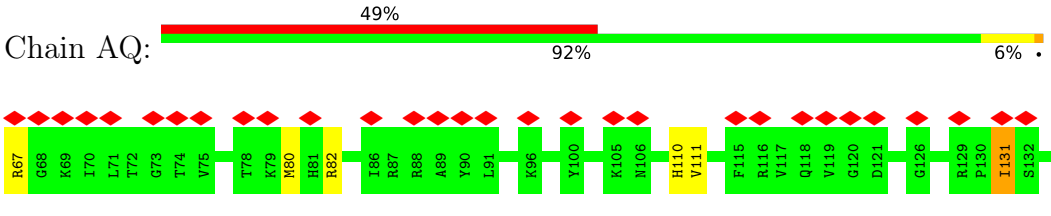
• Molecule 14: 40S ribosomal protein S13

Chain AO:



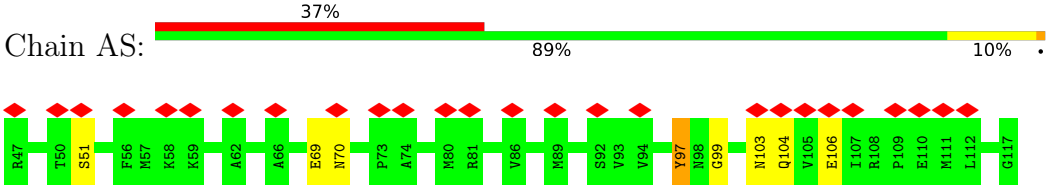
• Molecule 15: 40S ribosomal protein S11

Chain AQ:



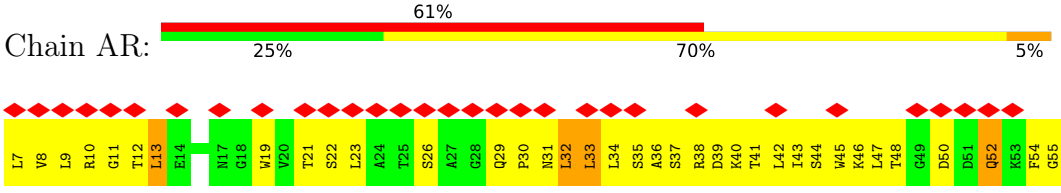
• Molecule 16: 40S ribosomal protein S15

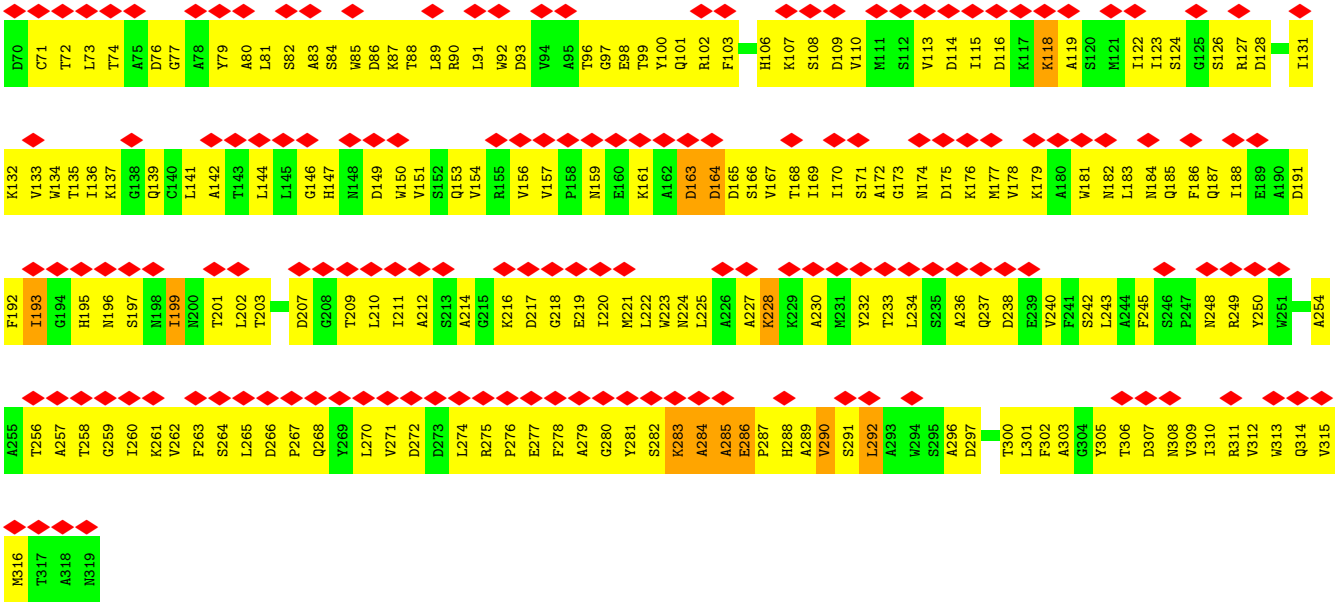
Chain AS:



• Molecule 17: RACK1 protein

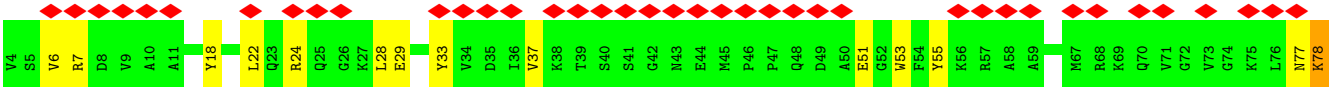
Chain AR:





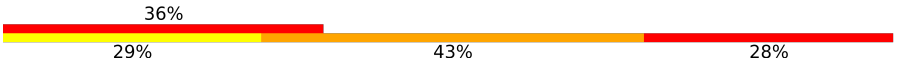
• Molecule 18: s19e protein

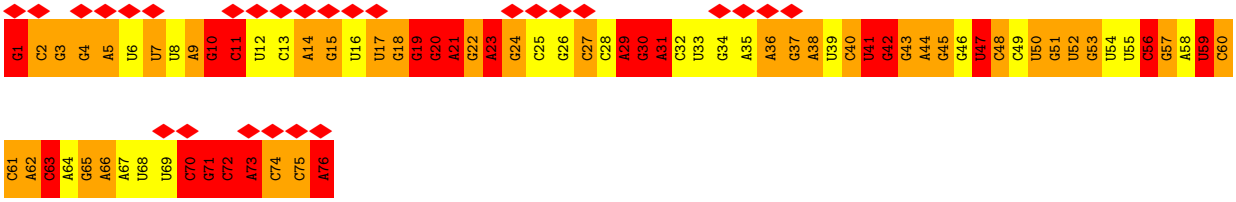
Chain AT:



• Molecule 19: P/E tRNA

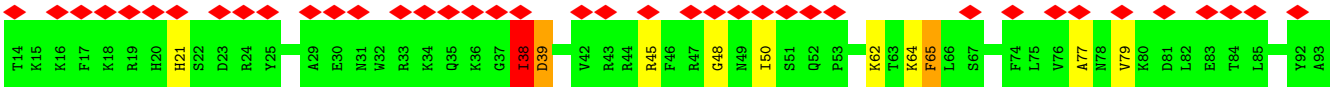
Chain A7:

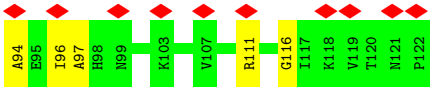




• Molecule 20: 60S ribosomal protein L32

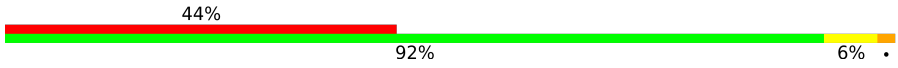
Chain B0:

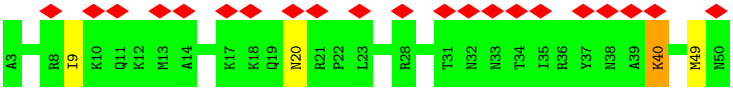




• Molecule 21: 60S ribosomal protein L39

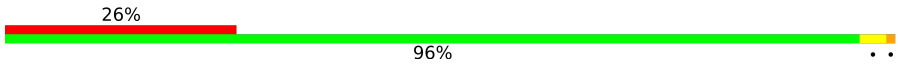
Chain B1:

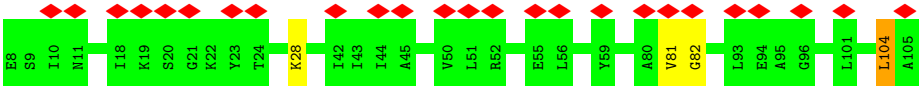




• Molecule 22: 60S ribosomal protein L30e

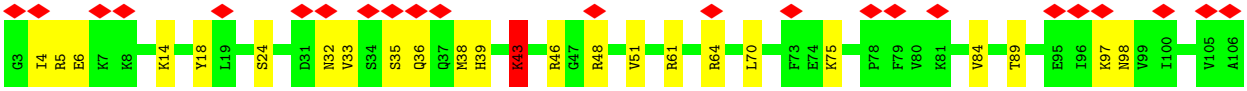
Chain B2:

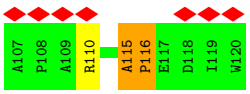




• Molecule 23: 60S ribosomal protein LP0

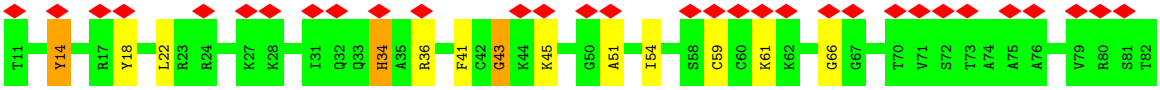
Chain B8:





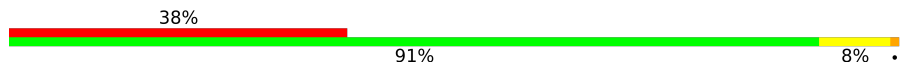
• Molecule 24: 60S ribosomal protein L43

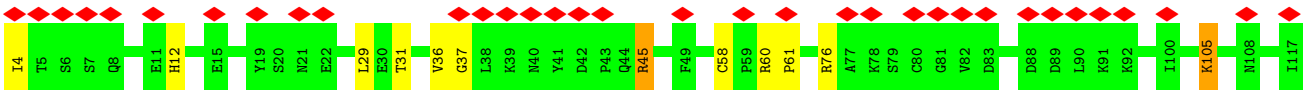
Chain B9:

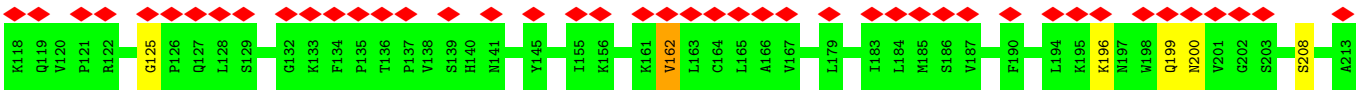


• Molecule 25: 60S ribosomal protein L1

Chain BA:

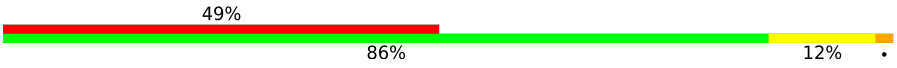


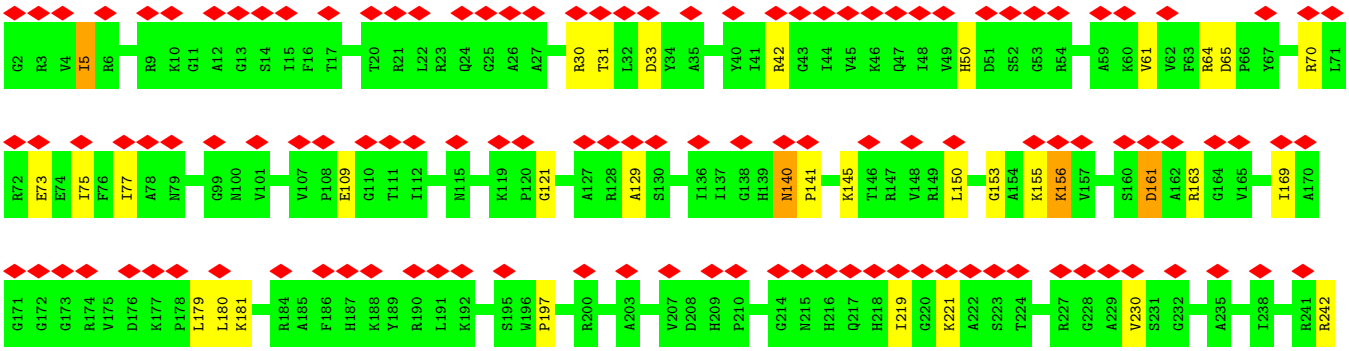




• Molecule 26: 60S ribosomal protein L2

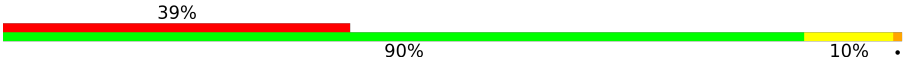
Chain BB:

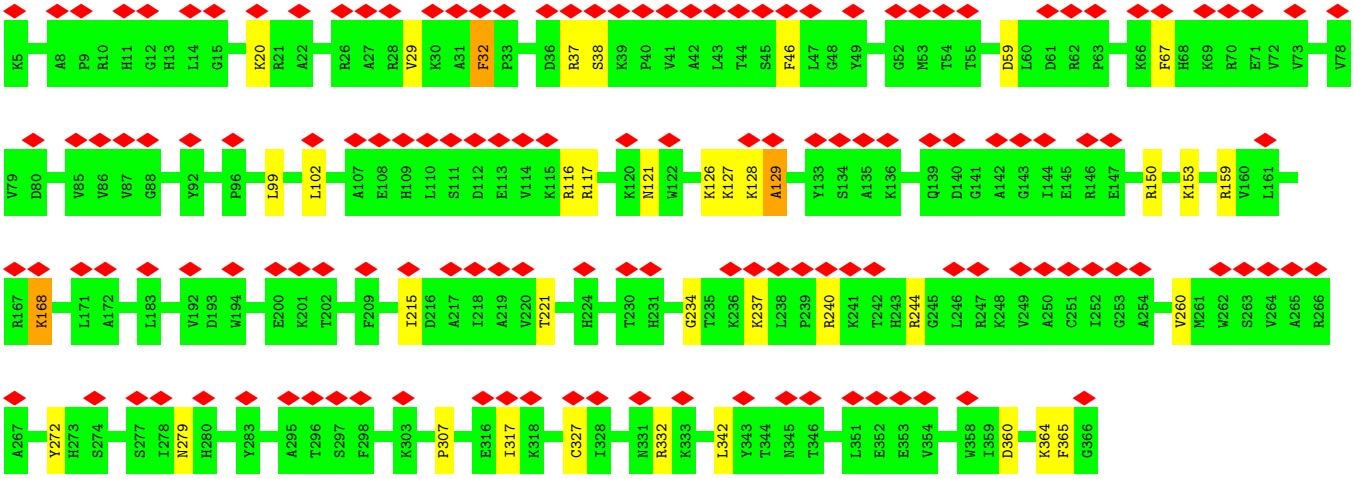




• Molecule 27: 60S ribosomal protein L3

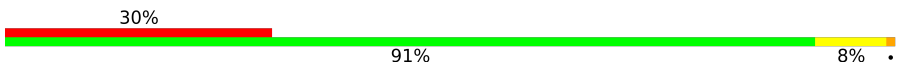
Chain BC:

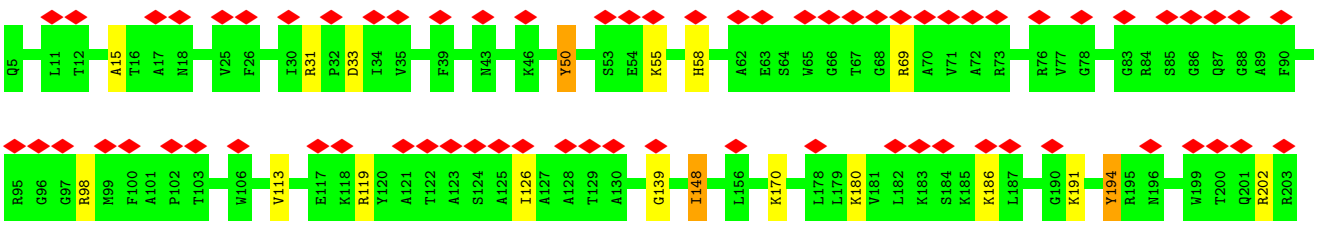


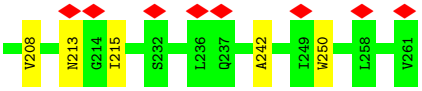


• Molecule 28: 60S ribosomal protein L4(B)

Chain BD:

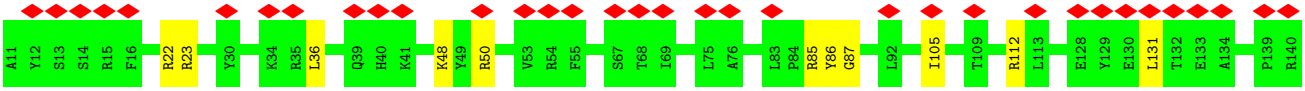


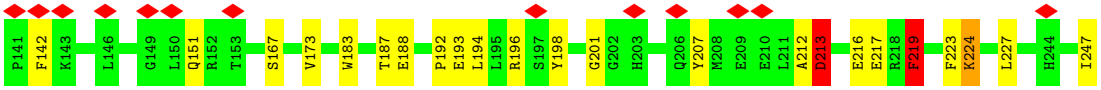




• Molecule 29: 60S ribosomal protein L5

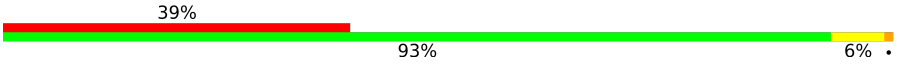
Chain BE:

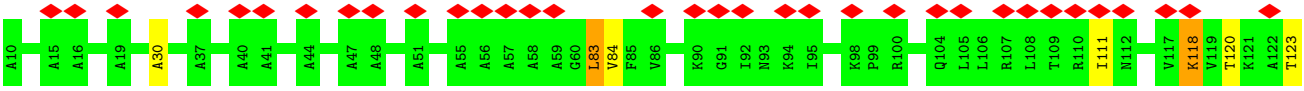


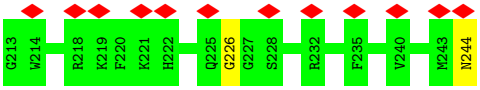


• Molecule 30: 60S ribosomal protein L7(A)

Chain BF:

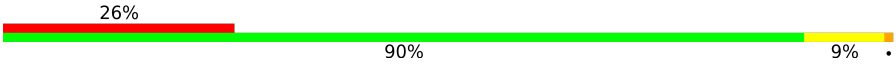


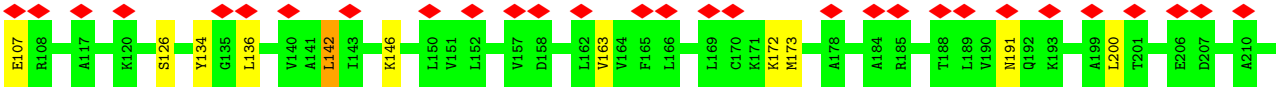




• Molecule 31: 60S ribosomal protein L8(A)

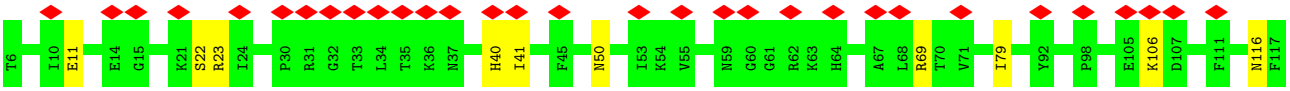
Chain BG:

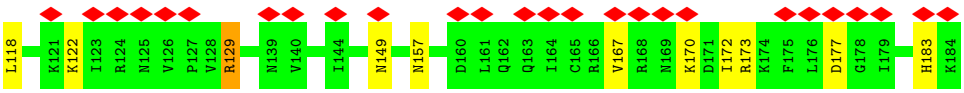




• Molecule 32: 60S ribosomal protein L9(A)

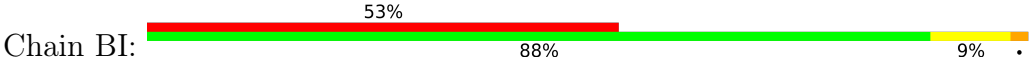
Chain BH:

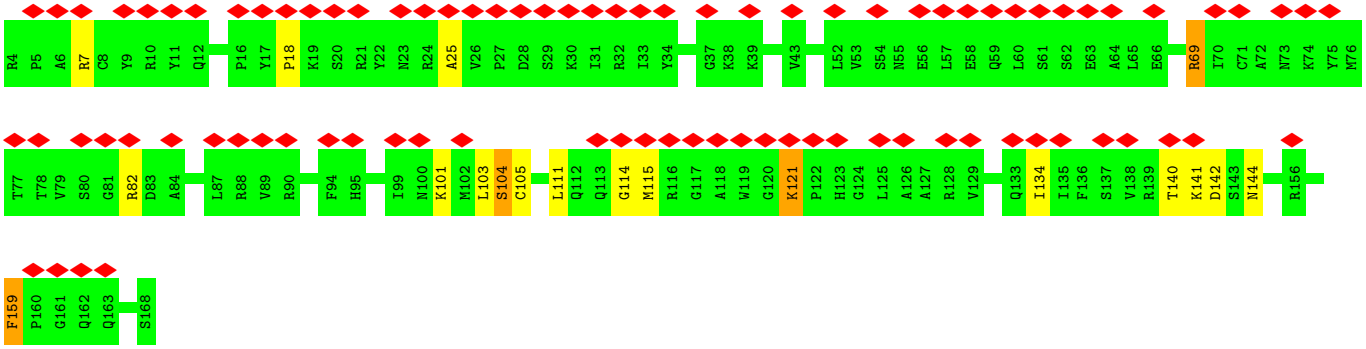




• Molecule 33: 60S ribosomal protein L10

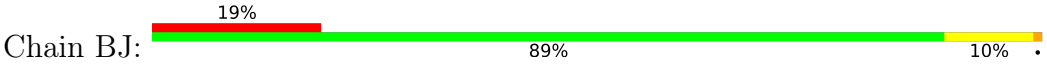
Chain BI:

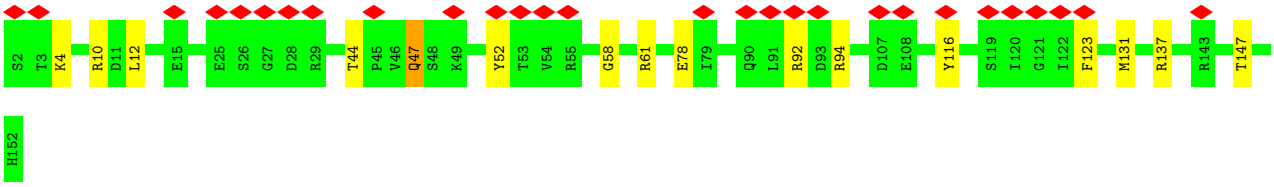




• Molecule 34: 60S ribosomal protein L11(B)

Chain BJ:



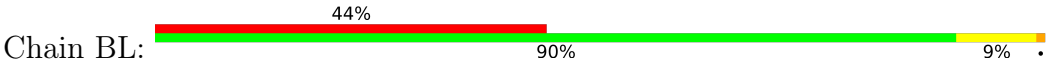


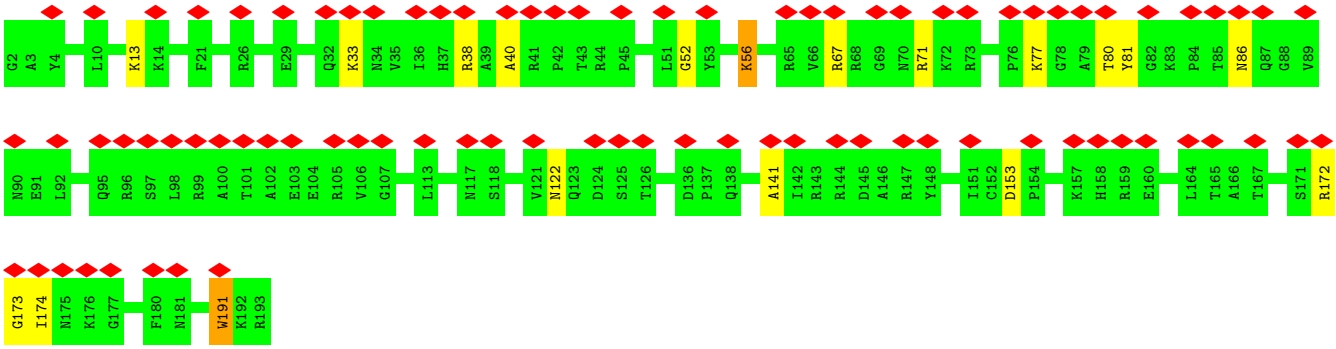
• Molecule 35: 60S ribosomal protein L12

Chain BK:

• Molecule 36: 60S ribosomal protein L15(A)

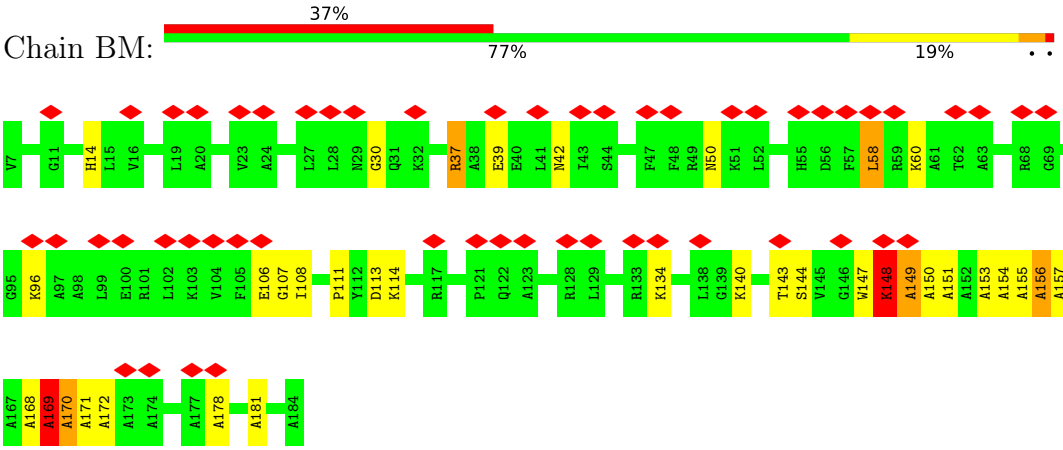
Chain BL:





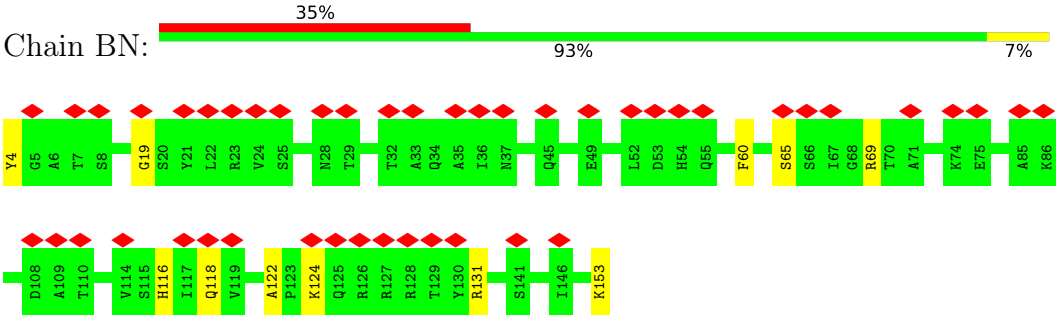
• Molecule 37: 60S ribosomal protein L16(A)

Chain BM:



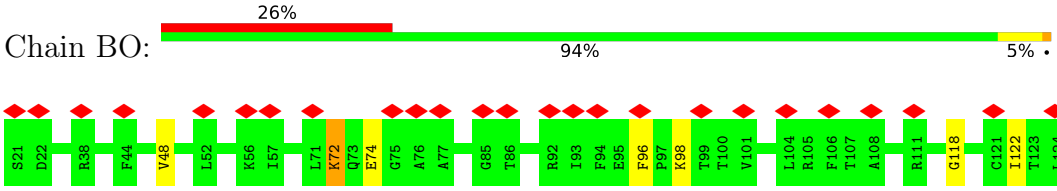
• Molecule 38: 60S ribosomal protein L17(A)

Chain BN:



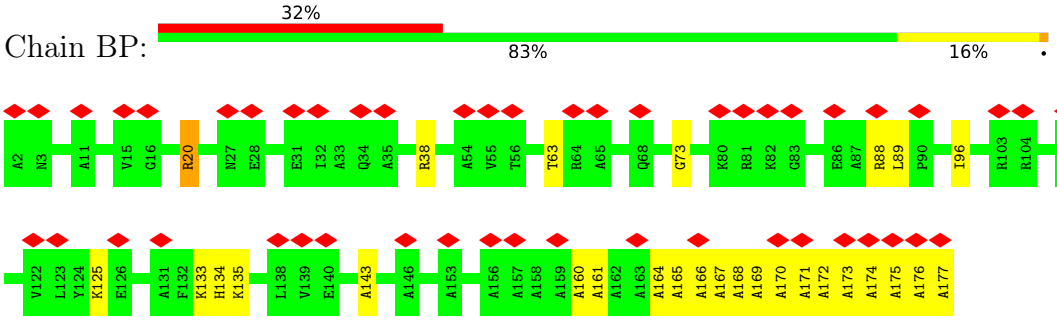
• Molecule 39: 60S ribosomal protein L18(A)

Chain BO:



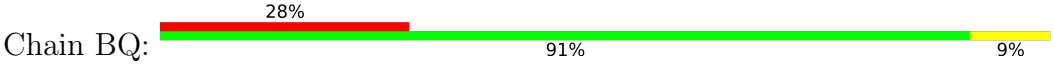
• Molecule 40: 60S ribosomal protein L19

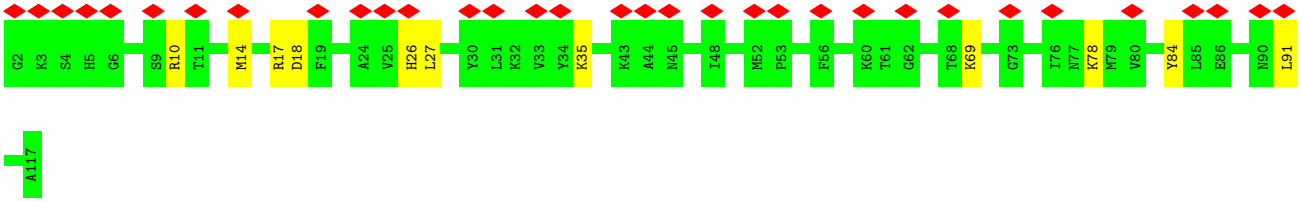
Chain BP:



• Molecule 41: 60S ribosomal protein L21(A)

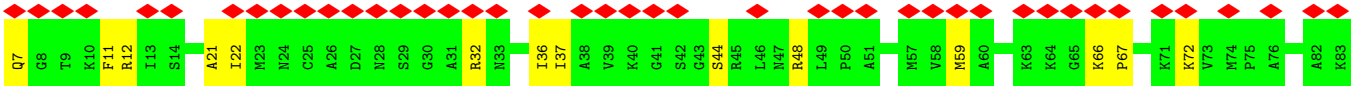
Chain BQ:

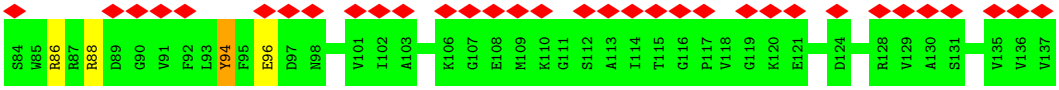




• Molecule 42: 60S ribosomal protein L23

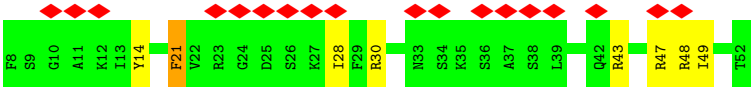
Chain BR:





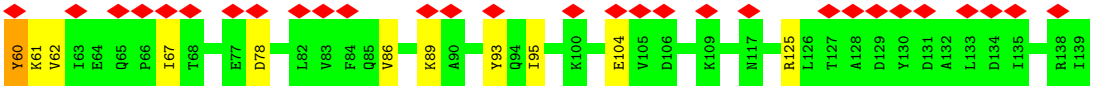
• Molecule 43: 60S ribosomal protein L24(A)

Chain BS:



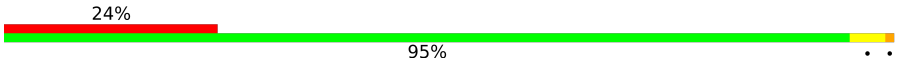
• Molecule 44: 60S ribosomal protein L25

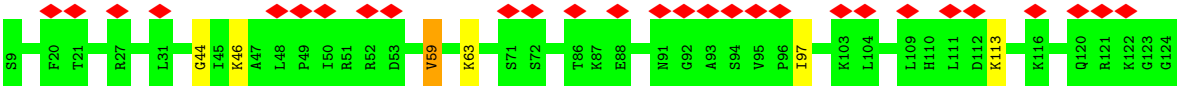
Chain BT:



• Molecule 45: 60S ribosomal protein L26(A)

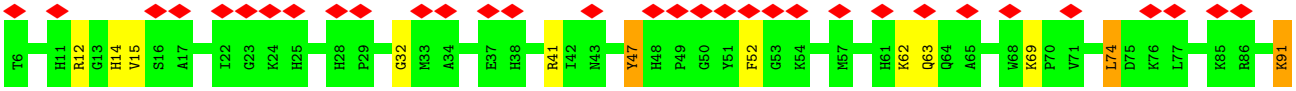
Chain BU:

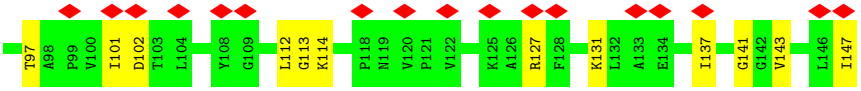




• Molecule 46: 60S ribosomal protein L28

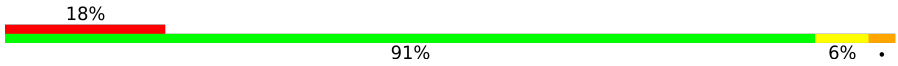
Chain BV:

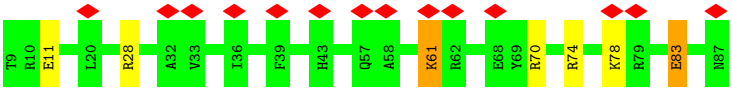




• Molecule 47: 60S ribosomal protein L31(A)

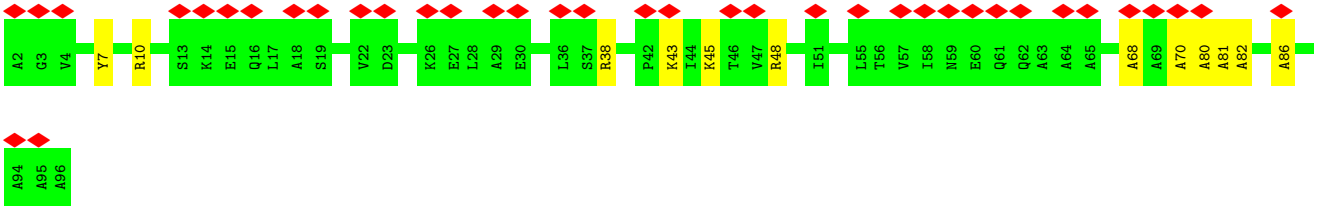
Chain BW:





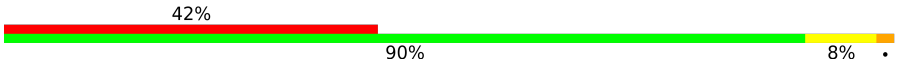
• Molecule 48: 60S ribosomal protein L35

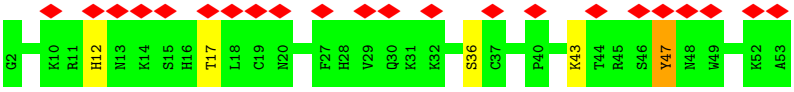
Chain BX:



• Molecule 49: 60S ribosomal protein L37(A)

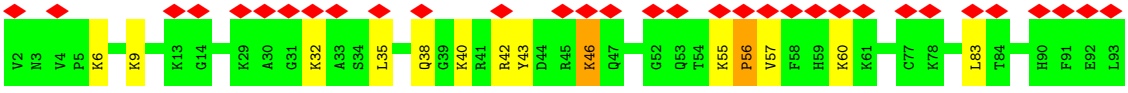
Chain BY:





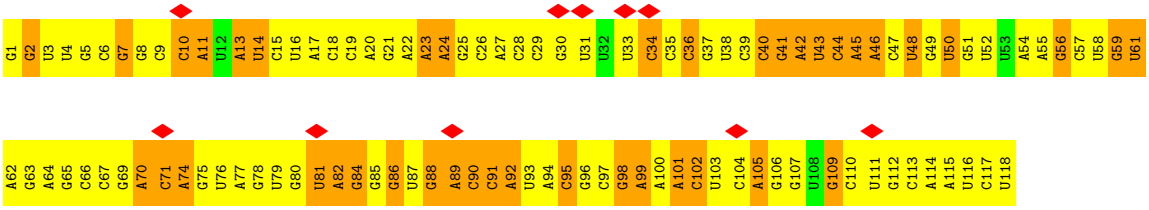
• Molecule 50: 60S ribosomal protein L42

Chain BZ:



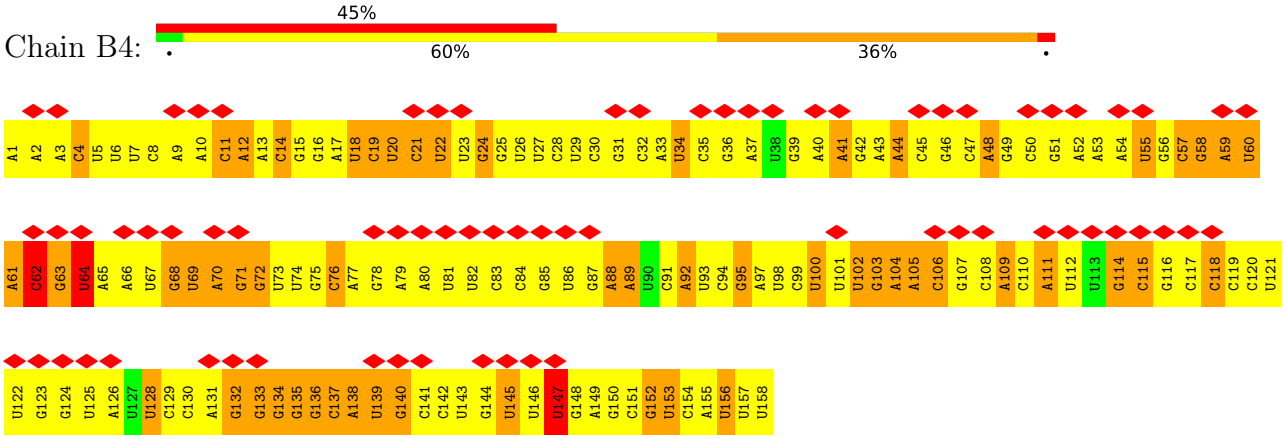
• Molecule 51: 5S ribosomal RNA

Chain B3:



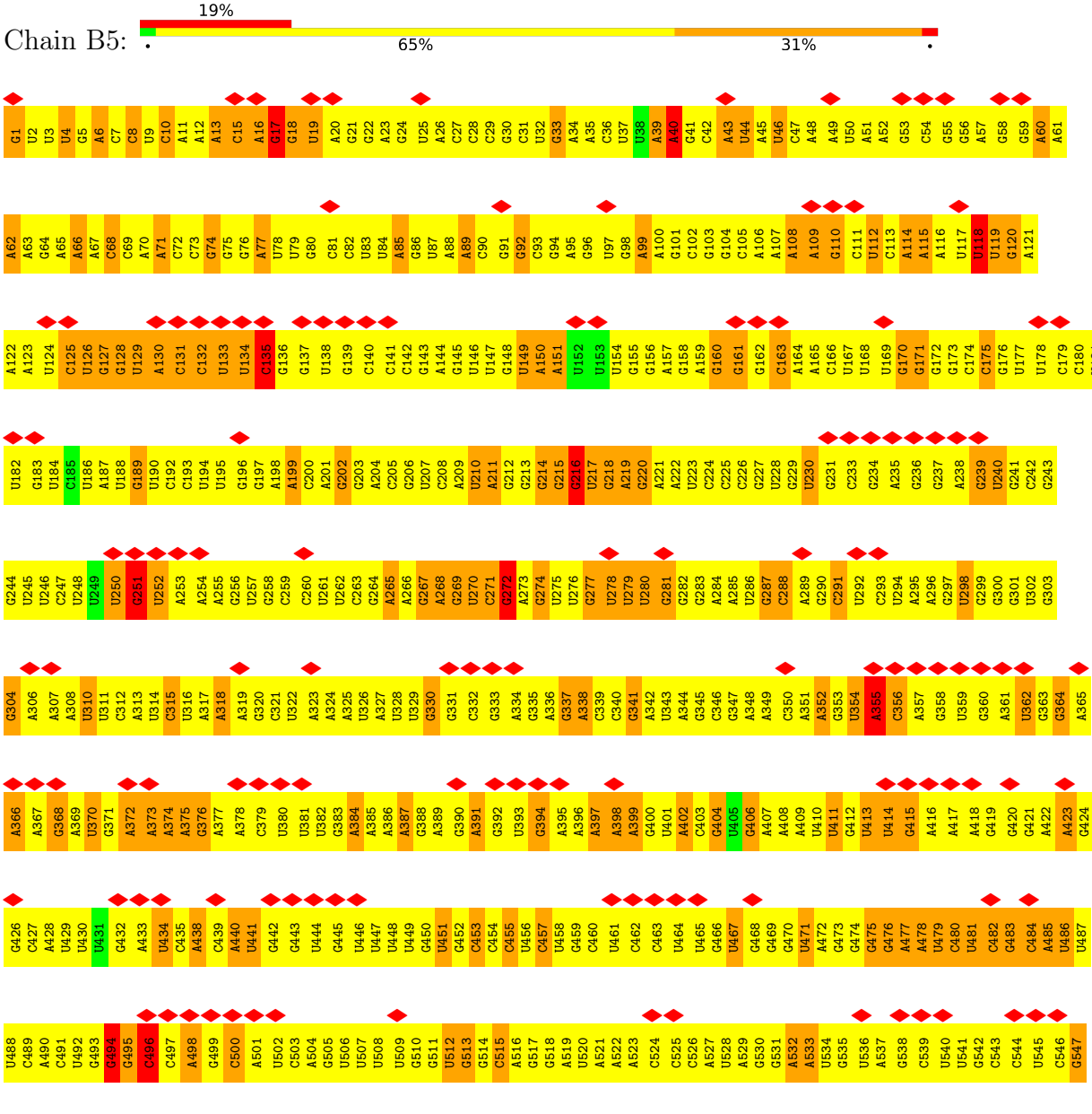
• Molecule 52: 5.8S ribosomal RNA

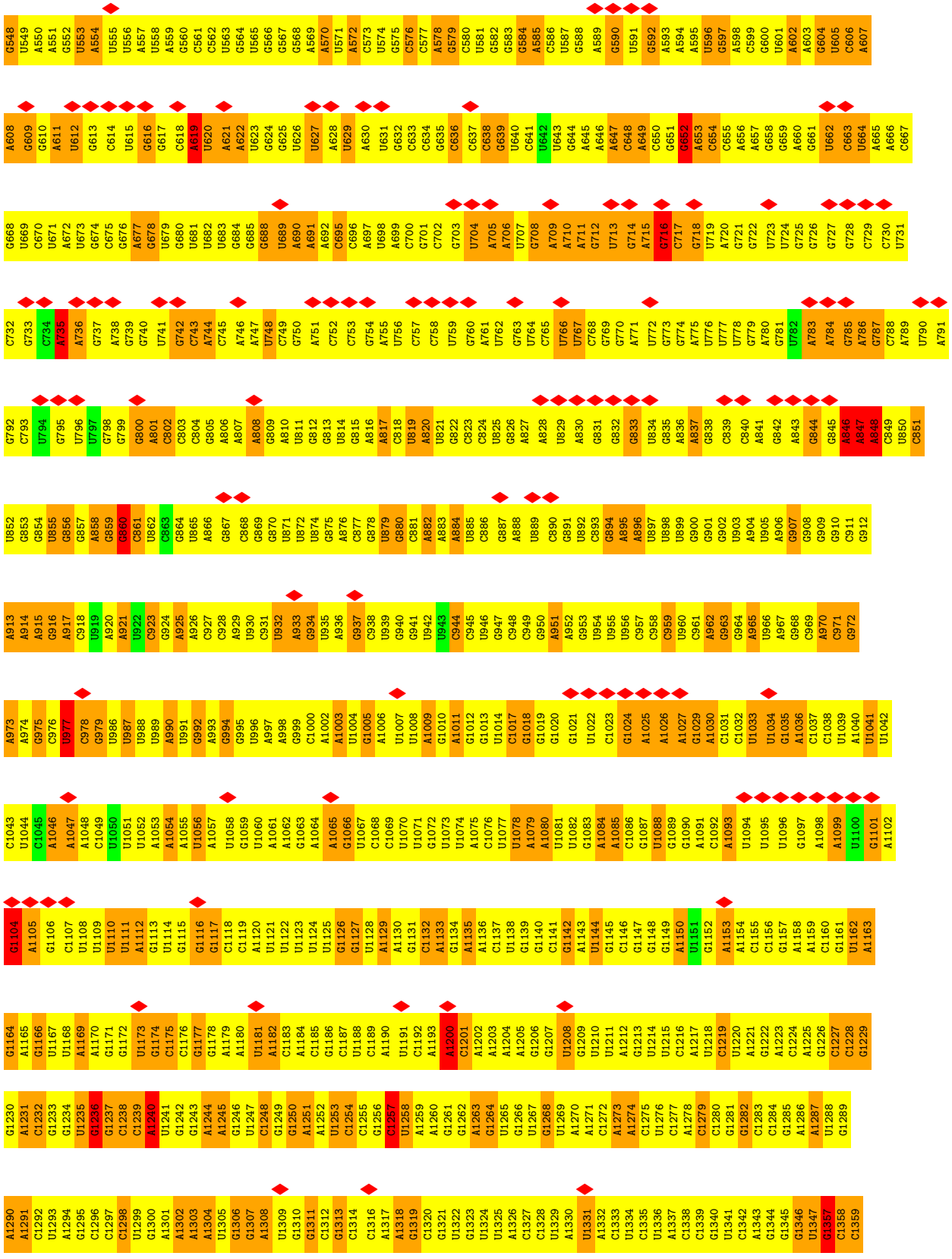
Chain B4:



• Molecule 53: 26S ribosomal RNA

Chain B5:





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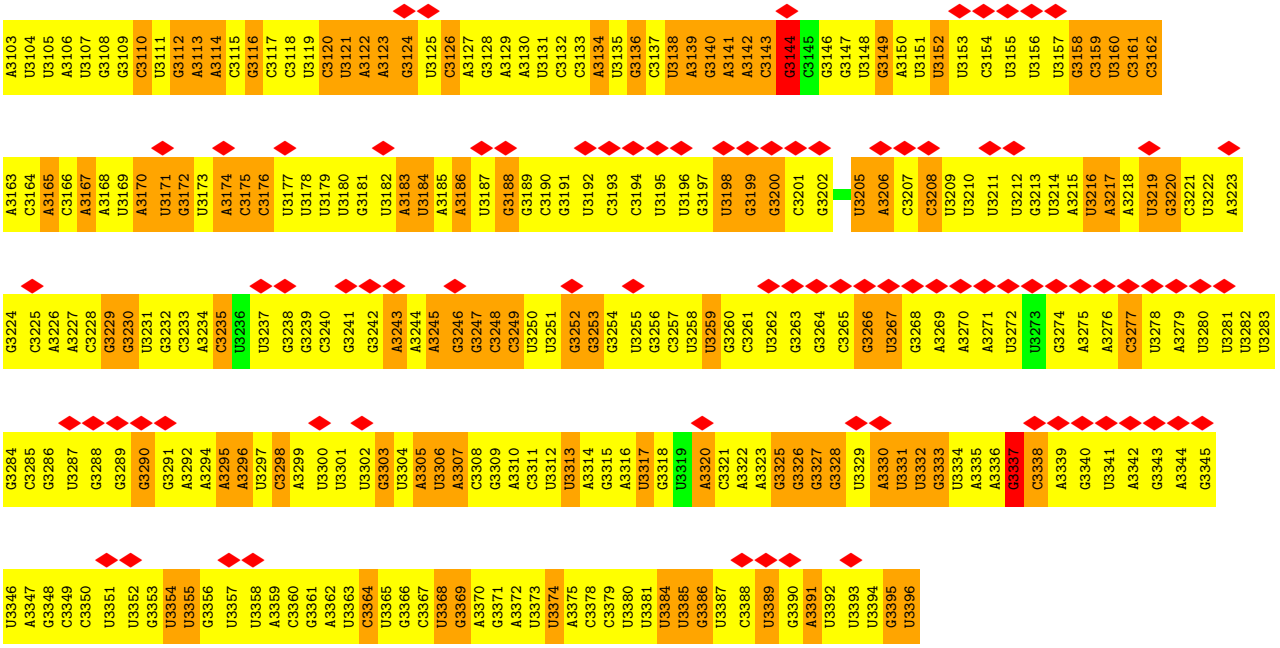
A3103 U3104 U3105 A3106 U3107 G3108 G3109 C3110 U3111 G3112 A3113 A3114 C3115 G3116 C3117 C3118 U3119 C3120 U3121 A3122 A3123 G3124 U3125 C3126 A3127 G3128 A3129 A3130 U3131 C3132 C3133 A3134 U3135 G3136 C3137 U3138 A3139 G3140 A3141 A3142 C3143 G3144 C3145 G3146 G3147 U3148 G3149 A3150 U3151 U3152 U3153 C3154 U3155 U3156 U3157 G3158 C3159 U3160 C3161 C3162
A3163 C3164 A3165 C3166 A3167 A3168 U3169 A3170 U3171 G3172 U3173 A3174 C3175 C3176 U3177 U3178 U3179 U3180 G3181 U3182 A3183 U3184 A3185 A3186 U3187 G3188 G3189 C3190 G3191 U3192 C3193 C3194 U3195 U3196 G3197 U3198 G3199 G3200 C3201 G3202 U3205 A3206 C3207 C3208 U3209 U3210 U3211 U3212 G3213 U3214 A3215 U3216 A3217 A3218 U3219 G3220 C3221 U3222 A3223
G3224 C3225 A3226 A3227 C3228 G3229 G3230 U3231 G3232 C3233 A3234 C3235 U3236 U3237 G3238 G3239 C3240 G3241 G3242 A3243 A3244 A3245 G3246 G3247 C3248 C3249 U3250 U3251 G3252 G3253 G3254 U3255 G3256 C3257 U3258 U3259 G3260 C3261 U3262 G3263 G3264 C3265 G3266 U3267 G3268 A3269 A3270 A3271 U3272 U3273 G3274 A3275 A3276 C3277 U3278 A3279 U3280 U3281 U3282 U3283
G3284 C3285 G3286 U3287 G3288 G3289 G3290 G3291 A3292 A3294 A3295 A3296 U3297 C3298 A3299 U3300 U3301 U3302 G3303 U3304 A3305 U3306 A3307 C3308 G3309 A3310 C3311 U3312 U3313 A3314 G3315 A3316 U3317 G3318 U3319 A3320 C3321 A3322 A3323 G3325 G3326 G3327 G3328 U3329 A3330 U3331 U3332 G3333 U3334 A3335 A3336 G3337 C3338 A3339 G3340 U3341 A3342 G3343 A3344 G3345
U3346 A3347 G3348 C3349 C3350 U3351 U3352 G3353 U3354 U3355 G3356 U3357 U3358 A3359 C3360 G3361 A3362 U3363 C3364 U3365 G3366 C3367 U3368 G3369 A3370 G3371 A3372 U3373 U3374 A3375 C3378 C3379 U3380 U3381 U3384 U3385 G3386 U3387 C3388 U3389 G3390 A3391 U3392 U3393 U3394 G3395 U3396

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	102689	Depositor
Resolution determination method	Not provided	
CTF correction method	Not provided	
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	25	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	39000	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	280.857	Depositor
Minimum map value	-103.711	Depositor
Average map value	7.703	Depositor
Map value standard deviation	27.906	Depositor
Recommended contour level	70.4	Depositor
Map size (Å)	381.3, 381.3, 381.3	wwPDB
Map dimensions	205, 205, 205	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	1.86, 1.86, 1.86	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PSU, M2G, YYG, OMG, 5MU, 5MC, H2U, 1MA, 2MG, OMC, 7MG

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	1.91	76/41893 (0.2%)	2.21	3096/65278 (4.7%)
2	AB	0.87	0/1535	0.91	0/2097
3	AC	0.94	0/1488	1.00	0/1996
4	AD	0.93	0/1035	1.13	5/1390 (0.4%)
5	AE	0.86	0/1227	0.99	0/1663
6	AG	0.91	0/1472	0.98	1/1982 (0.1%)
7	AH	0.95	2/1008 (0.2%)	1.17	2/1351 (0.1%)
8	AI	2.93	6/1106 (0.5%)	1.15	5/1481 (0.3%)
9	AJ	0.85	0/781	1.04	2/1053 (0.2%)
10	AK	0.93	0/935	1.07	0/1257
11	AL	0.88	0/920	0.98	0/1226
12	AM	0.94	0/1094	1.08	2/1468 (0.1%)
13	AN	3.66	2/427 (0.5%)	1.42	4/567 (0.7%)
14	AO	0.92	0/707	1.04	0/950
15	AQ	0.96	0/656	1.04	0/885
16	AS	0.90	0/559	1.02	2/748 (0.3%)
17	AR	0.91	1/2463 (0.0%)	1.24	7/3350 (0.2%)
18	AT	0.96	2/1118 (0.2%)	1.10	6/1498 (0.4%)
19	A7	3.12	162/1483 (10.9%)	3.79	362/2311 (15.7%)
20	B0	0.91	0/898	1.03	0/1201
21	B1	1.04	0/431	1.09	0/570
22	B2	0.85	0/760	0.89	0/1020
23	B8	0.94	0/965	1.09	4/1298 (0.3%)
24	B9	0.94	0/546	1.14	3/729 (0.4%)
25	BA	0.84	0/1709	0.97	0/2295
26	BB	0.95	0/1882	1.06	1/2528 (0.0%)
27	BC	0.91	0/2953	1.05	3/3974 (0.1%)
28	BD	0.89	0/1987	0.98	4/2690 (0.1%)
29	BE	0.94	0/1956	1.11	8/2646 (0.3%)
30	BF	0.85	0/1593	0.98	2/2160 (0.1%)
31	BG	0.80	0/853	1.01	0/1153
32	BH	0.89	0/1437	1.06	0/1935

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	BI	0.96	0/1352	1.12	3/1815 (0.2%)
34	BJ	0.97	0/1212	1.03	0/1622
35	BK	1.98	6/1049 (0.6%)	1.04	1/1408 (0.1%)
36	BL	1.01	0/1652	1.03	1/2211 (0.0%)
37	BM	0.97	2/1341 (0.1%)	1.33	6/1808 (0.3%)
38	BN	0.93	0/1212	1.03	4/1631 (0.2%)
39	BO	0.92	0/943	0.97	0/1274
40	BP	0.94	0/1334	0.98	0/1791
41	BQ	0.91	0/909	0.98	1/1216 (0.1%)
42	BR	0.92	0/992	1.13	2/1333 (0.2%)
43	BS	1.03	0/380	1.12	2/504 (0.4%)
44	BT	0.85	0/649	1.00	2/873 (0.2%)
45	BU	0.93	0/927	0.96	0/1237
46	BV	0.88	0/1152	1.07	2/1542 (0.1%)
47	BW	0.99	0/673	1.06	0/894
48	BX	0.82	0/607	1.03	2/818 (0.2%)
49	BY	0.95	0/413	1.10	2/548 (0.4%)
50	BZ	0.91	0/761	1.12	3/1006 (0.3%)
51	B3	1.34	1/2686 (0.0%)	2.18	192/4184 (4.6%)
52	B4	1.35	0/3719	2.19	267/5791 (4.6%)
53	B5	1.35	3/75857 (0.0%)	2.17	5569/118271 (4.7%)
All	All	1.46	263/179697 (0.1%)	1.97	9578/268527 (3.6%)

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	AA	2	28
2	AB	0	1
4	AD	0	3
5	AE	0	1
7	AH	1	0
8	AI	0	3
9	AJ	0	3
10	AK	0	4
12	AM	0	3
13	AN	0	2
14	AO	0	4
19	A7	0	44
20	B0	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
23	B8	0	3
24	B9	0	3
26	BB	1	4
27	BC	0	1
28	BD	0	3
29	BE	1	7
30	BF	1	0
31	BG	2	2
32	BH	0	3
33	BI	0	2
34	BJ	0	3
35	BK	0	2
36	BL	1	7
37	BM	0	5
38	BN	0	2
39	BO	0	1
40	BP	0	4
42	BR	0	3
43	BS	0	1
44	BT	0	1
45	BU	0	1
46	BV	0	3
47	BW	0	2
48	BX	2	1
49	BY	0	1
50	BZ	0	5
51	B3	1	0
52	B4	0	6
53	B5	33	112
All	All	45	285

All (263) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	856	A	N3-C4	94.83	1.91	1.34
1	AA	856	A	C5-C4	83.45	1.97	1.38
1	AA	1200	A	N3-C4	80.10	1.82	1.34
1	AA	501	U	C2-N3	76.02	1.91	1.37
1	AA	856	A	C6-N1	74.78	1.87	1.35
13	AN	16	LYS	N-CA	71.90	2.90	1.46
1	AA	1200	A	C5-C4	68.16	1.86	1.38
1	AA	501	U	C4-C5	68.10	2.04	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1200	A	C6-N1	66.53	1.82	1.35
1	AA	856	A	C5-C6	65.06	1.99	1.41
1	AA	501	U	N1-C2	62.64	1.95	1.38
1	AA	501	U	N1-C6	57.45	1.89	1.38
1	AA	501	U	N3-C4	56.90	1.89	1.38
1	AA	856	A	C2-N3	56.28	1.84	1.33
1	AA	856	A	N1-C2	53.59	1.82	1.34
1	AA	1200	A	C5-C6	51.88	1.87	1.41
1	AA	1200	A	C2-N3	46.90	1.75	1.33
1	AA	1200	A	N1-C2	44.72	1.74	1.34
8	AI	96	TYR	CE1-CZ	40.35	1.91	1.38
8	AI	96	TYR	CG-CD1	39.95	1.91	1.39
8	AI	96	TYR	CE2-CZ	39.90	1.90	1.38
8	AI	96	TYR	CG-CD2	39.33	1.90	1.39
1	AA	501	U	C5-C6	36.66	1.67	1.34
8	AI	96	TYR	CD1-CE1	33.09	1.89	1.39
8	AI	96	TYR	CD2-CE2	32.79	1.88	1.39
35	BK	121	PHE	CG-CD2	28.86	1.82	1.38
35	BK	121	PHE	CG-CD1	28.18	1.81	1.38
35	BK	121	PHE	CE2-CZ	22.09	1.79	1.37
35	BK	121	PHE	CE1-CZ	21.43	1.78	1.37
35	BK	121	PHE	CD1-CE1	20.51	1.80	1.39
35	BK	121	PHE	CD2-CE2	18.75	1.76	1.39
1	AA	858	G	N3-C4	16.40	1.47	1.35
1	AA	1521	G	N3-C4	15.47	1.46	1.35
19	A7	45	G	N7-C5	14.47	1.48	1.39
1	AA	1520	U	C4'-C3'	-12.96	1.38	1.53
1	AA	864	U	C3'-C2'	-12.93	1.38	1.52
19	A7	62	A	C5-C4	-11.95	1.30	1.38
19	A7	5	A	N7-C5	11.34	1.46	1.39
19	A7	36	A	C6-N1	-11.27	1.27	1.35
1	AA	856	A	N9-C8	10.86	1.46	1.37
1	AA	864	U	C4'-C3'	10.53	1.64	1.53
19	A7	72	C	N3-C4	-10.30	1.26	1.33
19	A7	74	C	P-O5'	10.25	1.70	1.59
19	A7	57	G	N7-C5	10.20	1.45	1.39
37	BM	148	LYS	C-N	9.88	1.56	1.34
37	BM	169	ALA	C-N	9.87	1.56	1.34
19	A7	72	C	C5'-C4'	9.74	1.63	1.51
19	A7	9	A	C6-N1	-9.64	1.28	1.35
19	A7	36	A	C5-C4	9.61	1.45	1.38
19	A7	61	C	N3-C4	-9.45	1.27	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	13	C	C4-N4	-9.32	1.25	1.33
19	A7	1	G	C6-N1	-9.26	1.33	1.39
19	A7	42	G	C2-N2	-9.14	1.25	1.34
19	A7	76	A	C5'-C4'	9.09	1.62	1.51
1	AA	1521	G	N9-C4	8.99	1.45	1.38
1	AA	1635	C	C5'-C4'	8.82	1.61	1.51
19	A7	15	G	N9-C4	8.73	1.45	1.38
19	A7	35	A	N9-C8	8.70	1.44	1.37
1	AA	858	G	C2-N2	8.64	1.43	1.34
19	A7	76	A	C5-C4	-8.59	1.32	1.38
1	AA	1521	G	C2-N2	8.54	1.43	1.34
19	A7	43	G	C2-N2	-8.53	1.26	1.34
19	A7	14	A	C6-N6	8.50	1.40	1.33
19	A7	34	OMG	O3'-P	-8.40	1.51	1.61
19	A7	57	G	N1-C2	-8.38	1.31	1.37
1	AA	864	U	O3'-P	-8.33	1.51	1.61
19	A7	41	U	P-O5'	8.30	1.68	1.59
19	A7	52	U	P-O5'	8.25	1.68	1.59
19	A7	53	G	C2'-O2'	-8.15	1.31	1.41
19	A7	9	A	C5-C4	-8.04	1.33	1.38
1	AA	1200	A	N9-C8	7.80	1.44	1.37
1	AA	858	G	N9-C4	7.75	1.44	1.38
1	AA	1516	C	P-O5'	-7.72	1.52	1.59
19	A7	13	C	C2-O2	-7.71	1.17	1.24
19	A7	25	C	C5-C6	7.66	1.40	1.34
19	A7	11	C	N3-C4	-7.63	1.28	1.33
19	A7	31	A	N7-C5	-7.61	1.34	1.39
19	A7	72	C	C4-C5	7.61	1.49	1.43
19	A7	19	G	C2-N2	-7.58	1.26	1.34
13	AN	16	LYS	CA-CB	7.56	1.70	1.53
1	AA	856	A	C8-N7	7.50	1.36	1.31
19	A7	15	G	C2-N2	-7.42	1.27	1.34
1	AA	857	U	C5'-C4'	7.37	1.60	1.51
1	AA	1584	A	C5'-C4'	7.34	1.60	1.51
19	A7	2	C	N1-C6	7.33	1.41	1.37
19	A7	14	A	N3-C4	7.33	1.39	1.34
19	A7	41	U	C2'-O2'	7.30	1.51	1.41
19	A7	60	C	C5-C6	7.28	1.40	1.34
19	A7	71	G	C5'-C4'	7.22	1.60	1.51
19	A7	64	A	C5-C6	7.17	1.47	1.41
19	A7	7	U	N1-C2	7.16	1.45	1.38
1	AA	1519	G	C4'-C3'	7.16	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	68	U	N1-C6	7.12	1.44	1.38
19	A7	36	A	C5-C6	7.12	1.47	1.41
19	A7	22	G	N3-C4	-7.11	1.30	1.35
19	A7	71	G	C2-N2	-7.09	1.27	1.34
1	AA	1547	C	O3'-P	-7.08	1.52	1.61
19	A7	20	G	N7-C5	7.04	1.43	1.39
19	A7	23	A	C6-N1	-7.03	1.30	1.35
1	AA	856	A	C6-N6	7.00	1.39	1.33
19	A7	12	U	C4'-O4'	-7.00	1.36	1.45
1	AA	1200	A	C6-N6	7.00	1.39	1.33
19	A7	44	A	C5-C6	7.00	1.47	1.41
19	A7	44	A	N9-C4	6.98	1.42	1.37
19	A7	47	U	C5-C6	6.96	1.40	1.34
19	A7	1	G	N7-C5	6.95	1.43	1.39
19	A7	76	A	N9-C4	-6.92	1.33	1.37
19	A7	13	C	N3-C4	-6.91	1.29	1.33
19	A7	20	G	C2-N3	6.89	1.38	1.32
1	AA	859	A	P-O5'	6.88	1.66	1.59
19	A7	76	A	N7-C5	-6.84	1.35	1.39
1	AA	1583	U	C5'-C4'	6.82	1.59	1.51
19	A7	30	G	N3-C4	6.78	1.40	1.35
19	A7	45	G	C6-N1	-6.76	1.34	1.39
1	AA	1548	A	P-O5'	-6.76	1.52	1.59
19	A7	30	G	C6-N1	-6.75	1.34	1.39
1	AA	1520	U	O3'-P	-6.65	1.53	1.61
19	A7	45	G	N3-C4	6.65	1.40	1.35
1	AA	1200	A	C8-N7	6.64	1.36	1.31
19	A7	59	U	O3'-P	-6.64	1.53	1.61
19	A7	51	G	N1-C2	-6.57	1.32	1.37
19	A7	18	G	C2-N2	-6.54	1.28	1.34
1	AA	867	G	C3'-C2'	-6.54	1.45	1.52
19	A7	69	U	O3'-P	-6.52	1.53	1.61
19	A7	59	U	C2-N3	6.51	1.42	1.37
1	AA	1520	U	C3'-O3'	-6.50	1.33	1.42
1	AA	858	G	C2-N3	6.44	1.38	1.32
19	A7	23	A	C3'-C2'	-6.43	1.45	1.52
1	AA	1521	G	C5'-C4'	6.42	1.59	1.51
19	A7	35	A	C8-N7	-6.40	1.27	1.31
19	A7	36	A	N7-C5	6.39	1.43	1.39
19	A7	64	A	C2-N3	-6.37	1.27	1.33
19	A7	24	G	P-O5'	6.36	1.66	1.59
1	AA	1547	C	C3'-O3'	-6.34	1.33	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	53	G	C3'-C2'	6.33	1.59	1.52
1	AA	1547	C	C4'-C3'	-6.32	1.46	1.53
18	AT	78	LYS	CA-C	6.30	1.69	1.52
19	A7	50	U	C4-O4	6.30	1.28	1.23
19	A7	4	G	C4'-O4'	-6.28	1.37	1.45
19	A7	4	G	N3-C4	6.25	1.39	1.35
19	A7	6	U	N3-C4	-6.25	1.32	1.38
19	A7	41	U	C2-O2	6.22	1.27	1.22
19	A7	56	C	N3-C4	-6.19	1.29	1.33
1	AA	1518	U	C3'-C2'	-6.18	1.46	1.52
19	A7	3	G	N3-C4	6.17	1.39	1.35
19	A7	5	A	P-O5'	-6.16	1.53	1.59
1	AA	1636	G	C3'-C2'	6.15	1.59	1.52
1	AA	1519	G	C3'-O3'	-6.15	1.33	1.42
19	A7	21	A	P-O5'	-6.12	1.53	1.59
19	A7	57	G	N9-C4	-6.12	1.33	1.38
19	A7	74	C	C4-C5	-6.12	1.38	1.43
19	A7	35	A	N7-C5	6.10	1.43	1.39
19	A7	46	7MG	O3'-P	-6.10	1.53	1.61
19	A7	50	U	P-O5'	-6.08	1.53	1.59
19	A7	41	U	C2-N3	6.05	1.42	1.37
19	A7	53	G	N7-C5	6.05	1.42	1.39
19	A7	42	G	C5'-C4'	6.02	1.58	1.51
19	A7	24	G	C2-N2	-6.00	1.28	1.34
19	A7	12	U	C5'-C4'	6.00	1.58	1.51
19	A7	20	G	C2'-C1'	6.00	1.59	1.53
19	A7	2	C	C4-N4	-5.98	1.28	1.33
1	AA	1552	U	C4'-C3'	-5.98	1.46	1.52
1	AA	1521	G	C2-N3	5.97	1.37	1.32
19	A7	61	C	C4-N4	-5.97	1.28	1.33
19	A7	66	A	C6-N1	-5.96	1.31	1.35
19	A7	21	A	O3'-P	-5.95	1.54	1.61
1	AA	1521	G	N1-C2	5.94	1.42	1.37
19	A7	31	A	C5-C4	-5.94	1.34	1.38
19	A7	76	A	C8-N7	-5.93	1.27	1.31
19	A7	51	G	C6-N1	-5.93	1.35	1.39
1	AA	1521	G	C8-N7	-5.92	1.27	1.30
19	A7	27	C	C4-N4	-5.92	1.28	1.33
51	B3	46	A	C5'-C4'	5.91	1.58	1.51
19	A7	51	G	N7-C5	-5.90	1.35	1.39
19	A7	14	A	C6-N1	-5.89	1.31	1.35
7	AH	61	ILE	CA-CB	5.89	1.68	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	60	C	C2'-C1'	5.89	1.59	1.53
19	A7	69	U	O4'-C1'	5.89	1.49	1.41
19	A7	30	G	C4'-C3'	5.88	1.59	1.53
19	A7	63	C	P-O5'	-5.88	1.53	1.59
19	A7	64	A	N3-C4	5.88	1.38	1.34
17	AR	164	ASP	N-CA	-5.87	1.34	1.46
19	A7	3	G	C2'-O2'	5.87	1.49	1.41
19	A7	29	A	N3-C4	5.87	1.38	1.34
19	A7	47	U	N1-C2	5.86	1.43	1.38
19	A7	43	G	P-O5'	5.84	1.65	1.59
19	A7	67	A	C6-N6	-5.82	1.29	1.33
19	A7	19	G	C5'-C4'	5.77	1.58	1.51
1	AA	1545	A	C4'-C3'	5.76	1.59	1.53
19	A7	65	G	C8-N7	-5.75	1.27	1.30
1	AA	864	U	P-O5'	5.74	1.65	1.59
19	A7	70	C	C4-N4	-5.73	1.28	1.33
19	A7	68	U	C2-N3	5.66	1.41	1.37
7	AH	32	LYS	CA-C	5.65	1.67	1.52
19	A7	71	G	C2-N3	5.64	1.37	1.32
19	A7	69	U	C2-O2	5.63	1.27	1.22
1	AA	797	G	P-O5'	-5.63	1.54	1.59
53	B5	2229	A	C5'-C4'	5.61	1.58	1.51
19	A7	47	U	C4-O4	-5.61	1.19	1.23
1	AA	1519	G	C3'-C2'	-5.60	1.46	1.52
19	A7	67	A	C2'-O2'	5.57	1.48	1.41
19	A7	47	U	C1'-N1	5.55	1.57	1.48
19	A7	57	G	C5-C6	5.55	1.48	1.42
19	A7	42	G	N7-C5	5.52	1.42	1.39
19	A7	48	C	C3'-C2'	5.51	1.59	1.52
19	A7	57	G	C8-N7	5.50	1.34	1.30
1	AA	1635	C	C4'-C3'	5.49	1.59	1.53
1	AA	858	G	N1-C2	5.49	1.42	1.37
19	A7	5	A	C5-C4	-5.49	1.34	1.38
1	AA	859	A	C5'-C4'	5.48	1.57	1.51
19	A7	69	U	C4-O4	-5.46	1.19	1.23
19	A7	11	C	C2-O2	-5.43	1.19	1.24
1	AA	858	G	C6-N1	5.41	1.43	1.39
19	A7	56	C	N1-C6	-5.40	1.33	1.37
19	A7	73	A	C8-N7	5.40	1.35	1.31
19	A7	28	C	C2'-O2'	-5.39	1.34	1.41
19	A7	44	A	C4'-O4'	-5.39	1.38	1.45
1	AA	502	U	C5'-C4'	5.39	1.57	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1546	G	P-O5'	5.39	1.65	1.59
19	A7	60	C	O3'-P	5.37	1.67	1.61
19	A7	3	G	C5'-C4'	5.32	1.57	1.51
1	AA	1612	A	C5'-C4'	5.29	1.57	1.51
19	A7	64	A	C4'-C3'	5.29	1.58	1.53
19	A7	72	C	C3'-C2'	-5.28	1.47	1.52
1	AA	1515	U	O3'-P	-5.26	1.54	1.61
19	A7	3	G	N7-C5	-5.25	1.36	1.39
19	A7	3	G	C4'-O4'	5.25	1.52	1.45
19	A7	63	C	C5-C6	-5.25	1.30	1.34
19	A7	53	G	N1-C2	-5.22	1.33	1.37
19	A7	52	U	C4'-O4'	-5.22	1.38	1.45
1	AA	1637	C	O3'-P	-5.21	1.54	1.61
19	A7	41	U	C5-C6	5.21	1.38	1.34
19	A7	11	C	N1-C2	5.21	1.45	1.40
19	A7	12	U	O4'-C1'	5.19	1.48	1.41
1	AA	1520	U	C5'-C4'	-5.18	1.45	1.51
53	B5	1421	G	C5'-C4'	5.18	1.57	1.51
18	AT	79	LEU	N-CA	5.18	1.56	1.46
19	A7	59	U	C5-C6	5.17	1.38	1.34
19	A7	66	A	C5'-C4'	5.17	1.57	1.51
19	A7	48	C	C5-C6	-5.16	1.30	1.34
19	A7	56	C	C5-C6	5.16	1.38	1.34
1	AA	1521	G	O4'-C1'	5.16	1.48	1.41
19	A7	19	G	C5-C6	5.16	1.47	1.42
19	A7	33	U	C2'-O2'	5.16	1.48	1.41
19	A7	51	G	C3'-C2'	5.15	1.58	1.52
19	A7	48	C	O4'-C1'	5.14	1.48	1.41
19	A7	1	G	O3'-P	-5.13	1.54	1.61
19	A7	63	C	O3'-P	-5.12	1.55	1.61
19	A7	62	A	C2'-C1'	-5.12	1.47	1.53
19	A7	6	U	C4'-O4'	-5.12	1.38	1.45
1	AA	1518	U	C3'-O3'	-5.11	1.35	1.42
19	A7	35	A	N3-C4	5.10	1.38	1.34
19	A7	71	G	C5-C6	5.10	1.47	1.42
1	AA	796	A	O3'-P	-5.09	1.55	1.61
19	A7	37	YYG	O3'-P	-5.08	1.55	1.61
1	AA	1520	U	P-O5'	-5.08	1.54	1.59
19	A7	6	U	C5'-C4'	5.08	1.57	1.51
19	A7	30	G	N7-C5	5.07	1.42	1.39
19	A7	53	G	N3-C4	-5.06	1.31	1.35
19	A7	28	C	C3'-O3'	5.03	1.49	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	15	G	C5-C6	5.02	1.47	1.42
1	AA	799	A	C5'-C4'	5.02	1.57	1.51
53	B5	2623	G	C2-N3	5.00	1.36	1.32

All (9578) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1545	A	O5'-P-OP1	-67.13	30.14	110.70
1	AA	864	U	P-O3'-C3'	-44.04	66.85	119.70
1	AA	1516	C	O5'-P-OP2	-30.31	74.33	110.70
1	AA	1213	A	O5'-P-OP1	-23.91	82.01	110.70
1	AA	1519	G	O3'-P-O5'	23.73	149.08	104.00
1	AA	1213	A	O5'-P-OP2	-23.37	82.65	110.70
1	AA	1520	U	O3'-P-O5'	23.19	148.06	104.00
1	AA	1521	G	N9-C4-C5	-22.98	96.21	105.40
1	AA	1516	C	O5'-P-OP1	22.56	137.77	110.70
1	AA	856	A	N7-C8-N9	21.87	124.73	113.80
1	AA	1579	C	P-O3'-C3'	21.67	145.70	119.70
37	BM	148	LYS	O-C-N	-20.85	89.34	122.70
1	AA	1547	C	P-O3'-C3'	-20.45	95.16	119.70
37	BM	169	ALA	O-C-N	-19.62	91.30	122.70
1	AA	1521	G	C4-C5-N7	19.32	118.53	110.80
1	AA	1548	A	O5'-P-OP1	19.25	133.80	110.70
1	AA	866	G	O5'-P-OP2	-18.88	88.05	110.70
19	A7	75	C	N3-C4-C5	18.68	129.37	121.90
1	AA	856	A	P-O3'-C3'	18.65	142.08	119.70
19	A7	36	A	N7-C8-N9	18.59	123.09	113.80
1	AA	867	G	OP1-P-OP2	-18.33	92.11	119.60
1	AA	865	A	O5'-P-OP2	-18.23	88.82	110.70
1	AA	865	A	P-O3'-C3'	-18.12	97.95	119.70
1	AA	858	G	C1'-O4'-C4'	-17.43	95.96	109.90
1	AA	1520	U	P-O3'-C3'	-17.41	98.80	119.70
1	AA	858	G	O4'-C4'-C3'	-17.05	86.95	104.00
1	AA	1535	C	P-O3'-C3'	17.02	140.12	119.70
1	AA	852	C	P-O3'-C3'	16.93	140.01	119.70
1	AA	1520	U	C4'-C3'-O3'	-16.51	74.72	109.40
1	AA	1196	G	P-O3'-C3'	16.48	139.48	119.70
53	B5	3143	C	P-O3'-C3'	16.18	139.12	119.70
19	A7	76	A	N1-C2-N3	-16.08	121.26	129.30
1	AA	1547	C	C4'-C3'-C2'	16.08	118.68	102.60
1	AA	1200	A	N7-C8-N9	16.04	121.82	113.80
1	AA	748	U	P-O3'-C3'	16.03	138.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	856	A	C4-C5-N7	-15.97	102.72	110.70
53	B5	2787	G	P-O3'-C3'	15.89	138.77	119.70
1	AA	858	G	O4'-C1'-N9	15.82	120.86	108.20
1	AA	856	A	N9-C4-C5	-15.71	99.52	105.80
1	AA	1520	U	C3'-C2'-C1'	-15.63	88.99	101.50
19	A7	36	A	C5-N7-C8	-15.53	96.14	103.90
1	AA	1318	A	P-O3'-C3'	15.52	138.33	119.70
1	AA	1635	C	P-O3'-C3'	-15.51	101.09	119.70
1	AA	652	G	P-O3'-C3'	15.30	138.06	119.70
1	AA	1543	A	P-O3'-C3'	-15.13	101.54	119.70
52	B4	152	G	P-O3'-C3'	15.00	137.70	119.70
19	A7	75	C	C2-N3-C4	-14.77	112.52	119.90
53	B5	1582	C	P-O3'-C3'	14.74	137.39	119.70
19	A7	76	A	C5-C6-N1	14.73	125.06	117.70
19	A7	9	A	C5-C6-N1	14.66	125.03	117.70
53	B5	475	G	P-O3'-C3'	14.64	137.26	119.70
53	B5	1163	A	P-O3'-C3'	14.56	137.18	119.70
53	B5	1302	A	P-O3'-C3'	14.53	137.13	119.70
52	B4	19	C	P-O3'-C3'	14.52	137.13	119.70
53	B5	638	C	P-O3'-C3'	14.50	137.10	119.70
1	AA	1521	G	P-O3'-C3'	-14.48	102.33	119.70
19	A7	31	A	C8-N9-C4	-14.44	100.02	105.80
53	B5	239	G	P-O3'-C3'	14.42	137.01	119.70
53	B5	712	G	P-O3'-C3'	14.35	136.92	119.70
19	A7	5	A	N1-C6-N6	-14.28	110.03	118.60
19	A7	76	A	C2-N3-C4	14.21	117.71	110.60
1	AA	1213	A	OP1-P-OP2	14.19	140.88	119.60
1	AA	1560	G	P-O3'-C3'	14.14	136.67	119.70
19	A7	44	A	N1-C6-N6	-14.14	110.11	118.60
53	B5	3160	U	P-O3'-C3'	14.13	136.65	119.70
37	BM	148	LYS	CA-C-N	-14.12	86.14	117.20
53	B5	1590	G	P-O3'-C3'	14.11	136.63	119.70
53	B5	2571	U	P-O3'-C3'	14.07	136.59	119.70
1	AA	1200	A	C4-C5-N7	-14.07	103.67	110.70
53	B5	1737	U	P-O3'-C3'	14.04	136.55	119.70
53	B5	1626	U	P-O3'-C3'	14.03	136.54	119.70
1	AA	1098	G	P-O3'-C3'	14.00	136.50	119.70
1	AA	1520	U	C2'-C3'-O3'	-13.96	78.80	109.50
1	AA	1488	C	P-O3'-C3'	13.95	136.44	119.70
1	AA	1639	C	P-O3'-C3'	13.94	136.42	119.70
1	AA	1055	U	P-O3'-C3'	13.93	136.42	119.70
1	AA	229	U	P-O3'-C3'	13.93	136.41	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	B3	23	A	P-O3'-C3'	13.93	136.41	119.70
1	AA	1675	C	P-O3'-C3'	13.91	136.39	119.70
19	A7	62	A	N1-C6-N6	-13.90	110.26	118.60
1	AA	1518	U	OP1-P-OP2	-13.87	98.80	119.60
1	AA	1429	U	P-O3'-C3'	13.80	136.26	119.70
1	AA	1759	U	P-O3'-C3'	13.74	136.19	119.70
53	B5	3384	U	P-O3'-C3'	13.72	136.17	119.70
19	A7	36	A	C4-C5-C6	-13.71	110.15	117.00
1	AA	1478	G	P-O3'-C3'	13.67	136.11	119.70
1	AA	1133	U	P-O3'-C3'	13.65	136.09	119.70
53	B5	3083	G	P-O3'-C3'	13.61	136.04	119.70
53	B5	3219	U	P-O3'-C3'	13.61	136.03	119.70
1	AA	759	U	P-O3'-C3'	13.59	136.00	119.70
1	AA	212	U	P-O3'-C3'	13.54	135.95	119.70
53	B5	2988	C	P-O3'-C3'	13.52	135.93	119.70
19	A7	53	G	C5-N7-C8	-13.51	97.55	104.30
53	B5	1033	U	P-O3'-C3'	13.50	135.90	119.70
19	A7	47	U	O4'-C1'-N1	13.49	118.99	108.20
53	B5	3049	A	P-O3'-C3'	13.48	135.88	119.70
1	AA	1629	A	P-O3'-C3'	-13.43	103.59	119.70
1	AA	1521	G	N3-C4-N9	13.42	134.05	126.00
18	AT	78	LYS	CA-C-O	-13.40	91.95	120.10
1	AA	1281	C	P-O3'-C3'	13.40	135.78	119.70
19	A7	76	A	C4-C5-C6	-13.39	110.31	117.00
53	B5	2913	C	P-O3'-C3'	13.38	135.76	119.70
1	AA	1544	G	O5'-P-OP2	-13.37	93.67	105.70
53	B5	801	A	P-O3'-C3'	13.37	135.74	119.70
19	A7	45	G	C6-C5-N7	13.35	138.41	130.40
1	AA	461	G	P-O3'-C3'	13.34	135.71	119.70
53	B5	2459	A	P-O3'-C3'	13.28	135.63	119.70
1	AA	66	U	P-O3'-C3'	13.26	135.61	119.70
1	AA	1636	G	C2'-C3'-O3'	13.23	138.62	109.50
1	AA	770	A	P-O3'-C3'	13.21	135.55	119.70
1	AA	922	A	P-O3'-C3'	13.21	135.55	119.70
53	B5	2538	U	P-O3'-C3'	13.20	135.54	119.70
52	B4	102	U	P-O3'-C3'	13.19	135.52	119.70
19	A7	9	A	N1-C6-N6	-13.18	110.69	118.60
53	B5	1084	A	P-O3'-C3'	13.17	135.50	119.70
1	AA	56	U	P-O3'-C3'	13.13	135.46	119.70
1	AA	199	G	P-O3'-C3'	13.12	135.44	119.70
1	AA	1216	C	P-O3'-C3'	13.11	135.43	119.70
53	B5	3138	U	P-O3'-C3'	13.11	135.43	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	866	G	O5'-P-OP1	-13.10	93.91	105.70
19	A7	64	A	N1-C6-N6	-13.03	110.78	118.60
19	A7	1	G	C5-C6-O6	-13.01	120.79	128.60
53	B5	215	G	P-O3'-C3'	12.97	135.26	119.70
1	AA	856	A	N3-C4-N9	12.94	137.75	127.40
1	AA	365	G	P-O3'-C3'	12.93	135.22	119.70
53	B5	3141	A	P-O3'-C3'	12.91	135.19	119.70
1	AA	175	G	P-O3'-C3'	12.89	135.17	119.70
1	AA	867	G	O5'-P-OP1	12.85	126.12	110.70
1	AA	1200	A	N9-C4-C5	-12.83	100.67	105.80
17	AR	163	ASP	C-N-CA	-12.80	89.69	121.70
19	A7	27	C	N3-C2-O2	-12.79	112.95	121.90
1	AA	1200	A	N1-C6-N6	12.77	126.26	118.60
1	AA	501	U	C2-N3-C4	-12.76	119.34	127.00
51	B3	91	C	P-O3'-C3'	12.76	135.02	119.70
53	B5	1549	U	P-O3'-C3'	12.76	135.02	119.70
1	AA	1789	A	P-O3'-C3'	12.72	134.96	119.70
1	AA	1457	C	P-O3'-C3'	12.71	134.95	119.70
1	AA	1181	U	P-O3'-C3'	12.68	134.91	119.70
37	BM	169	ALA	CA-C-N	-12.68	89.31	117.20
53	B5	2654	C	P-O3'-C3'	12.60	134.82	119.70
1	AA	438	A	P-O3'-C3'	12.56	134.77	119.70
1	AA	1551	G	OP1-P-OP2	-12.53	100.80	119.60
53	B5	1390	A	P-O3'-C3'	12.52	134.72	119.70
1	AA	1779	A	P-O3'-C3'	12.51	134.71	119.70
53	B5	3310	A	N1-C6-N6	12.48	126.09	118.60
53	B5	52	A	N1-C6-N6	12.47	126.08	118.60
1	AA	1635	C	C2'-C3'-O3'	12.44	136.87	109.50
52	B4	69	U	P-O3'-C3'	12.34	134.51	119.70
1	AA	350	U	P-O3'-C3'	12.32	134.48	119.70
1	AA	1636	G	O5'-P-OP2	-12.31	94.62	105.70
53	B5	372	A	P-O3'-C3'	12.20	134.34	119.70
19	A7	6	U	C5-C6-N1	-12.20	116.60	122.70
1	AA	1144	A	N1-C6-N6	12.19	125.91	118.60
53	B5	1643	A	P-O3'-C3'	12.18	134.31	119.70
37	BM	169	ALA	C-N-CA	-12.17	91.28	121.70
1	AA	864	U	N1-C1'-C2'	-12.12	98.25	114.00
19	A7	21	A	O4'-C1'-N9	12.11	117.89	108.20
19	A7	2	C	N3-C4-N4	-12.09	109.54	118.00
1	AA	1238	A	N1-C6-N6	12.08	125.85	118.60
19	A7	45	G	C5-C6-N1	12.08	117.54	111.50
19	A7	28	C	O4'-C1'-N1	12.07	117.85	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1212	C	O3'-P-O5'	12.05	126.89	104.00
19	A7	8	U	N3-C4-O4	11.97	127.78	119.40
53	B5	920	A	N1-C6-N6	11.97	125.78	118.60
19	A7	5	A	N1-C2-N3	-11.91	123.35	129.30
53	B5	134	U	P-O3'-C3'	11.88	133.95	119.70
13	AN	16	LYS	N-CA-CB	11.87	131.97	110.60
53	B5	2177	G	P-O3'-C3'	11.87	133.94	119.70
53	B5	3330	A	P-O3'-C3'	11.86	133.93	119.70
1	AA	1200	A	N3-C4-N9	11.86	136.88	127.40
52	B4	21	C	P-O3'-C3'	11.83	133.90	119.70
13	AN	15	GLY	C-N-CA	11.80	151.21	121.70
53	B5	2314	U	P-O3'-C3'	11.75	133.80	119.70
1	AA	1547	C	C3'-C2'-C1'	-11.75	92.10	101.50
19	A7	71	G	C2-N3-C4	11.73	117.77	111.90
19	A7	76	A	N1-C6-N6	-11.72	111.57	118.60
53	B5	2373	A	P-O3'-C3'	11.68	133.72	119.70
1	AA	1585	A	N1-C6-N6	11.66	125.60	118.60
19	A7	62	A	C5-C6-N1	11.66	123.53	117.70
1	AA	1265	U	P-O3'-C3'	11.65	133.69	119.70
1	AA	1520	U	OP2-P-O3'	-11.63	79.61	105.20
53	B5	810	A	N1-C6-N6	11.60	125.56	118.60
7	AH	32	LYS	CA-C-O	-11.59	95.77	120.10
53	B5	2474	G	P-O3'-C3'	11.59	133.60	119.70
53	B5	1915	A	N1-C6-N6	11.52	125.51	118.60
19	A7	33	U	O4'-C1'-N1	11.51	117.41	108.20
53	B5	2833	A	N1-C6-N6	11.49	125.50	118.60
19	A7	64	A	C4-C5-C6	-11.49	111.26	117.00
53	B5	2520	A	P-O3'-C3'	11.48	133.48	119.70
19	A7	59	U	C5-C4-O4	11.48	132.79	125.90
1	AA	1212	C	OP1-P-O3'	-11.47	79.96	105.20
53	B5	3086	A	N1-C6-N6	11.46	125.48	118.60
1	AA	1517	U	OP1-P-OP2	-11.46	102.41	119.60
53	B5	620	U	P-O3'-C3'	11.45	133.44	119.70
53	B5	791	A	N1-C6-N6	11.43	125.46	118.60
1	AA	1521	G	OP1-P-OP2	-11.43	102.46	119.60
53	B5	3016	A	N1-C6-N6	11.43	125.45	118.60
1	AA	1520	U	OP1-P-O3'	-11.42	80.08	105.20
53	B5	219	A	N1-C6-N6	11.38	125.43	118.60
1	AA	1521	G	O4'-C4'-C3'	-11.35	92.65	104.00
53	B5	2231	C	C2-N1-C1'	11.35	131.28	118.80
53	B5	820	A	N1-C6-N6	11.35	125.41	118.60
19	A7	30	G	C5-C6-N1	11.34	117.17	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	27	C	C2-N3-C4	-11.32	114.24	119.90
53	B5	2748	A	N1-C6-N6	11.32	125.39	118.60
1	AA	856	A	C2-N3-C4	11.31	116.25	110.60
53	B5	1271	A	N1-C6-N6	11.29	125.38	118.60
1	AA	444	C	P-O3'-C3'	11.27	133.22	119.70
1	AA	1553	A	OP1-P-OP2	-11.24	102.74	119.60
53	B5	997	A	N1-C6-N6	11.23	125.34	118.60
1	AA	1521	G	N3-C2-N2	11.22	127.75	119.90
1	AA	1122	A	N1-C6-N6	11.22	125.33	118.60
1	AA	1788	A	N1-C6-N6	11.21	125.33	118.60
53	B5	2172	A	N1-C6-N6	11.21	125.33	118.60
19	A7	56	C	C2-N3-C4	11.20	125.50	119.90
53	B5	965	A	N1-C6-N6	11.20	125.32	118.60
53	B5	2386	A	N1-C6-N6	11.20	125.32	118.60
1	AA	100	A	N1-C6-N6	11.18	125.31	118.60
53	B5	2671	A	N1-C6-N6	11.18	125.31	118.60
53	B5	3049	A	N1-C6-N6	11.18	125.31	118.60
53	B5	628	A	N1-C6-N6	11.18	125.31	118.60
53	B5	277	G	P-O3'-C3'	11.17	133.11	119.70
53	B5	1813	A	N1-C6-N6	11.16	125.30	118.60
53	B5	433	A	N1-C6-N6	11.16	125.30	118.60
1	AA	685	A	N1-C6-N6	11.15	125.29	118.60
53	B5	2295	A	N1-C6-N6	11.14	125.29	118.60
53	B5	608	A	N1-C6-N6	11.14	125.28	118.60
19	A7	9	A	N9-C4-C5	11.13	110.25	105.80
1	AA	929	A	N1-C6-N6	11.13	125.28	118.60
53	B5	3322	A	N1-C6-N6	11.12	125.27	118.60
53	B5	2811	A	N1-C6-N6	11.11	125.27	118.60
53	B5	2897	A	N1-C6-N6	11.10	125.26	118.60
53	B5	847	A	N1-C6-N6	11.10	125.26	118.60
53	B5	1456	A	N1-C6-N6	11.10	125.26	118.60
52	B4	92	A	N1-C6-N6	11.09	125.25	118.60
53	B5	119	U	P-O3'-C3'	11.08	132.99	119.70
53	B5	1048	A	N1-C6-N6	11.07	125.24	118.60
53	B5	2447	A	N1-C6-N6	11.07	125.24	118.60
53	B5	1818	U	P-O3'-C3'	11.06	132.97	119.70
53	B5	3385	U	P-O3'-C3'	11.06	132.97	119.70
1	AA	1338	A	N1-C6-N6	11.05	125.23	118.60
53	B5	1491	A	N1-C6-N6	11.05	125.23	118.60
53	B5	318	A	N1-C6-N6	11.05	125.23	118.60
53	B5	926	A	N1-C6-N6	11.05	125.23	118.60
1	AA	867	G	O5'-P-OP2	11.04	123.95	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1679	A	N1-C6-N6	11.03	125.22	118.60
53	B5	827	A	N1-C6-N6	11.03	125.22	118.60
53	B5	1904	C	O4'-C1'-N1	11.02	117.02	108.20
53	B5	2480	A	N1-C6-N6	11.02	125.21	118.60
53	B5	1165	A	N1-C6-N6	11.02	125.21	118.60
1	AA	1212	C	OP2-P-O3'	-11.00	81.00	105.20
1	AA	1159	U	P-O3'-C3'	11.00	132.90	119.70
1	AA	1654	U	P-O3'-C3'	10.98	132.88	119.70
1	AA	1226	A	N1-C6-N6	10.97	125.18	118.60
53	B5	1933	A	N1-C6-N6	10.96	125.18	118.60
1	AA	62	A	N1-C6-N6	10.96	125.17	118.60
53	B5	2279	A	N1-C6-N6	10.95	125.17	118.60
1	AA	1234	A	N1-C6-N6	10.94	125.17	118.60
53	B5	817	A	N1-C6-N6	10.92	125.15	118.60
1	AA	1491	A	N1-C6-N6	10.91	125.15	118.60
53	B5	13	A	N1-C6-N6	10.91	125.15	118.60
1	AA	1518	U	O5'-P-OP1	10.91	123.79	110.70
19	A7	30	G	N1-C6-O6	-10.90	113.36	119.90
53	B5	828	A	N1-C6-N6	10.90	125.14	118.60
1	AA	1473	A	N1-C6-N6	10.89	125.14	118.60
53	B5	26	A	N1-C6-N6	10.89	125.14	118.60
53	B5	2149	A	N1-C6-N6	10.89	125.14	118.60
53	B5	2796	G	P-O3'-C3'	10.89	132.77	119.70
51	B3	55	A	N1-C6-N6	10.89	125.14	118.60
53	B5	3320	A	N1-C6-N6	10.89	125.13	118.60
1	AA	756	A	N1-C6-N6	10.88	125.12	118.60
53	B5	324	A	N1-C6-N6	10.87	125.12	118.60
53	B5	2224	A	N1-C6-N6	10.87	125.12	118.60
52	B4	149	A	N1-C6-N6	10.85	125.11	118.60
53	B5	705	A	N1-C6-N6	10.85	125.11	118.60
19	A7	68	U	N3-C2-O2	-10.84	114.61	122.20
1	AA	1519	G	OP1-P-O3'	-10.83	81.38	105.20
53	B5	2926	A	N1-C6-N6	10.83	125.10	118.60
53	B5	2956	A	N1-C6-N6	10.83	125.10	118.60
19	A7	7	U	O4'-C1'-N1	10.82	116.86	108.20
53	B5	1715	A	N1-C6-N6	10.82	125.09	118.60
53	B5	2419	A	N1-C6-N6	10.82	125.09	118.60
53	B5	1529	A	N1-C6-N6	10.82	125.09	118.60
53	B5	89	A	N1-C6-N6	10.81	125.09	118.60
53	B5	2387	A	N1-C6-N6	10.80	125.08	118.60
53	B5	2515	A	N1-C6-N6	10.79	125.08	118.60
1	AA	68	A	N1-C6-N6	10.79	125.07	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	44	A	N1-C6-N6	10.79	125.07	118.60
1	AA	799	A	O5'-P-OP2	-10.78	96.00	105.70
53	B5	1643	A	N1-C6-N6	10.78	125.07	118.60
53	B5	2691	A	N1-C6-N6	10.78	125.07	118.60
19	A7	5	A	C4-C5-C6	-10.77	111.62	117.00
53	B5	2215	A	N1-C6-N6	10.77	125.06	118.60
1	AA	1022	A	N1-C6-N6	10.77	125.06	118.60
1	AA	855	A	N1-C6-N6	10.76	125.06	118.60
1	AA	417	A	N1-C6-N6	10.76	125.05	118.60
1	AA	445	A	N1-C6-N6	10.75	125.05	118.60
53	B5	2902	A	N1-C6-N6	10.75	125.05	118.60
1	AA	1185	A	N1-C6-N6	10.74	125.05	118.60
1	AA	41	A	N1-C6-N6	10.73	125.04	118.60
19	A7	66	A	N1-C6-N6	-10.73	112.16	118.60
53	B5	1203	A	N1-C6-N6	10.72	125.03	118.60
1	AA	456	A	N1-C6-N6	10.72	125.03	118.60
53	B5	2847	A	N1-C6-N6	10.71	125.02	118.60
1	AA	804	A	N1-C6-N6	10.70	125.02	118.60
53	B5	2609	A	N1-C6-N6	10.70	125.02	118.60
53	B5	1080	A	N1-C6-N6	10.70	125.02	118.60
19	A7	1	G	C6-N1-C2	-10.69	118.69	125.10
53	B5	808	A	N1-C6-N6	10.69	125.01	118.60
19	A7	44	A	C5'-C4'-O4'	10.68	121.92	109.10
53	B5	1079	A	P-O3'-C3'	10.67	132.51	119.70
53	B5	3279	A	N1-C6-N6	10.66	125.00	118.60
1	AA	1730	A	N1-C6-N6	10.64	124.99	118.60
52	B4	43	A	N1-C6-N6	10.64	124.98	118.60
53	B5	836	A	N1-C6-N6	10.64	124.98	118.60
1	AA	1085	A	N1-C6-N6	10.63	124.98	118.60
53	B5	2229	A	N1-C6-N6	10.63	124.98	118.60
53	B5	2838	A	N1-C6-N6	10.63	124.98	118.60
53	B5	1064	A	N1-C6-N6	10.63	124.98	118.60
53	B5	1504	A	N1-C6-N6	10.63	124.98	118.60
53	B5	2703	A	N1-C6-N6	10.63	124.98	118.60
19	A7	69	U	N1-C2-N3	10.63	121.28	114.90
53	B5	784	A	N1-C6-N6	10.62	124.97	118.60
53	B5	1332	A	N1-C6-N6	10.62	124.97	118.60
53	B5	1750	A	N1-C6-N6	10.62	124.97	118.60
53	B5	3362	A	N1-C6-N6	10.62	124.97	118.60
53	B5	439	C	O4'-C1'-N1	10.61	116.69	108.20
53	B5	2139	A	N1-C6-N6	10.61	124.97	118.60
1	AA	188	A	N1-C6-N6	10.60	124.96	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1112	A	N1-C6-N6	10.60	124.96	118.60
53	B5	254	A	N1-C6-N6	10.59	124.95	118.60
53	B5	1291	A	N1-C6-N6	10.59	124.96	118.60
53	B5	2326	A	N1-C6-N6	10.59	124.96	118.60
53	B5	3218	A	N1-C6-N6	10.59	124.96	118.60
53	B5	3245	A	N1-C6-N6	10.59	124.95	118.60
1	AA	1520	U	O4'-C1'-N1	-10.59	99.73	108.20
53	B5	974	A	N1-C6-N6	10.58	124.95	118.60
1	AA	951	A	N1-C6-N6	10.58	124.95	118.60
1	AA	1792	A	N1-C6-N6	10.58	124.95	118.60
53	B5	1027	A	N1-C6-N6	10.57	124.94	118.60
53	B5	1120	A	N1-C6-N6	10.57	124.94	118.60
53	B5	2837	A	N1-C6-N6	10.55	124.93	118.60
53	B5	3073	A	N1-C6-N6	10.55	124.93	118.60
53	B5	2143	A	N1-C6-N6	10.55	124.93	118.60
53	B5	1003	A	N1-C6-N6	10.54	124.92	118.60
53	B5	319	A	N1-C6-N6	10.54	124.92	118.60
53	B5	917	A	N1-C6-N6	10.54	124.92	118.60
53	B5	1804	A	N1-C6-N6	10.53	124.92	118.60
53	B5	1446	A	N1-C6-N6	10.52	124.92	118.60
1	AA	39	A	N1-C6-N6	10.52	124.91	118.60
1	AA	858	G	C5'-C4'-C3'	10.52	132.83	116.00
53	B5	386	A	N1-C6-N6	10.52	124.91	118.60
19	A7	53	G	O4'-C4'-C3'	10.51	114.51	104.00
53	B5	70	A	N1-C6-N6	10.51	124.91	118.60
53	B5	2958	A	N1-C6-N6	10.51	124.90	118.60
1	AA	1521	G	O4'-C1'-N9	10.50	116.60	108.20
19	A7	31	A	N9-C4-C5	10.50	110.00	105.80
1	AA	615	A	N1-C6-N6	10.50	124.90	118.60
1	AA	1700	A	N1-C6-N6	10.50	124.90	118.60
53	B5	1245	A	N1-C6-N6	10.50	124.90	118.60
53	B5	607	A	N1-C6-N6	10.49	124.90	118.60
53	B5	2491	A	N1-C6-N6	10.49	124.90	118.60
53	B5	2656	A	N1-C6-N6	10.49	124.90	118.60
53	B5	3113	A	P-O3'-C3'	10.49	132.29	119.70
53	B5	3323	A	N1-C6-N6	10.49	124.90	118.60
53	B5	1893	A	N1-C6-N6	10.48	124.89	118.60
53	B5	1787	A	N1-C6-N6	10.48	124.89	118.60
53	B5	2674	A	N1-C6-N6	10.48	124.89	118.60
53	B5	2679	A	N1-C6-N6	10.48	124.89	118.60
53	B5	1418	A	N1-C6-N6	10.48	124.89	118.60
53	B5	77	A	N1-C6-N6	10.47	124.89	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	710	A	N1-C6-N6	10.47	124.89	118.60
53	B5	3027	A	N1-C6-N6	10.47	124.88	118.60
53	B5	3305	A	N1-C6-N6	10.47	124.89	118.60
53	B5	100	A	N1-C6-N6	10.47	124.88	118.60
53	B5	2120	A	N1-C6-N6	10.47	124.88	118.60
1	AA	1524	A	N1-C6-N6	10.46	124.88	118.60
1	AA	962	A	N1-C6-N6	10.46	124.88	118.60
53	B5	2636	A	N1-C6-N6	10.46	124.88	118.60
53	B5	3168	A	N1-C6-N6	10.46	124.87	118.60
1	AA	1519	G	P-O3'-C3'	10.45	132.24	119.70
1	AA	171	A	N1-C6-N6	10.45	124.87	118.60
1	AA	521	A	N1-C6-N6	10.45	124.87	118.60
1	AA	219	A	N1-C6-N6	10.45	124.87	118.60
53	B5	1602	A	N1-C6-N6	10.45	124.87	118.60
1	AA	954	A	N1-C6-N6	10.44	124.87	118.60
1	AA	1760	A	N1-C6-N6	10.45	124.87	118.60
53	B5	201	A	N1-C6-N6	10.45	124.87	118.60
53	B5	2892	A	N1-C6-N6	10.44	124.87	118.60
53	B5	12	A	N1-C6-N6	10.44	124.86	118.60
53	B5	1287	A	N1-C6-N6	10.44	124.86	118.60
1	AA	939	A	N1-C6-N6	10.44	124.86	118.60
53	B5	3227	A	N1-C6-N6	10.44	124.86	118.60
1	AA	865	A	O3'-P-O5'	10.43	123.82	104.00
51	B3	92	A	N1-C6-N6	10.43	124.86	118.60
53	B5	2367	A	N1-C6-N6	10.43	124.86	118.60
1	AA	1217	A	N1-C6-N6	10.42	124.85	118.60
53	B5	2188	A	N1-C6-N6	10.41	124.85	118.60
19	A7	5	A	C8-N9-C4	10.41	109.96	105.80
53	B5	1381	A	N1-C6-N6	10.41	124.84	118.60
53	B5	2178	A	N1-C6-N6	10.40	124.84	118.60
53	B5	1603	A	N1-C6-N6	10.39	124.84	118.60
53	B5	761	A	N1-C6-N6	10.39	124.83	118.60
53	B5	2903	A	N1-C6-N6	10.39	124.83	118.60
1	AA	1129	A	N1-C6-N6	10.39	124.83	118.60
53	B5	3046	A	N1-C6-N6	10.38	124.83	118.60
1	AA	1026	A	N1-C6-N6	10.38	124.83	118.60
53	B5	1575	A	N1-C6-N6	10.38	124.83	118.60
53	B5	352	A	N1-C6-N6	10.38	124.83	118.60
1	AA	202	A	N1-C6-N6	10.37	124.82	118.60
1	AA	707	A	N1-C6-N6	10.38	124.83	118.60
53	B5	375	A	N1-C6-N6	10.38	124.83	118.60
53	B5	690	A	N1-C6-N6	10.37	124.82	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	775	A	N1-C6-N6	10.37	124.82	118.60
53	B5	1025	A	N1-C6-N6	10.37	124.82	118.60
1	AA	485	A	N1-C6-N6	10.37	124.82	118.60
53	B5	67	A	N1-C6-N6	10.36	124.81	118.60
53	B5	3039	C	P-O3'-C3'	10.36	132.13	119.70
1	AA	86	A	N1-C6-N6	10.36	124.81	118.60
53	B5	2851	A	N1-C6-N6	10.35	124.81	118.60
1	AA	914	A	N1-C6-N6	10.34	124.81	118.60
52	B4	40	A	N1-C6-N6	10.34	124.80	118.60
53	B5	409	A	N1-C6-N6	10.34	124.80	118.60
53	B5	3299	A	N1-C6-N6	10.34	124.80	118.60
53	B5	1079	A	N1-C6-N6	10.33	124.80	118.60
1	AA	928	A	N1-C6-N6	10.33	124.80	118.60
1	AA	1554	A	N1-C6-N6	10.33	124.80	118.60
53	B5	1676	A	N1-C6-N6	10.33	124.80	118.60
1	AA	1328	A	N1-C6-N6	10.33	124.80	118.60
1	AA	1134	A	P-O3'-C3'	10.33	132.09	119.70
53	B5	602	A	N1-C6-N6	10.33	124.80	118.60
53	B5	2304	C	O4'-C1'-N1	10.33	116.46	108.20
53	B5	377	A	N1-C6-N6	10.32	124.79	118.60
53	B5	2445	A	N1-C6-N6	10.32	124.79	118.60
53	B5	222	A	N1-C6-N6	10.32	124.79	118.60
19	A7	60	C	C6-N1-C2	-10.32	116.17	120.30
53	B5	2348	A	N1-C6-N6	10.32	124.79	118.60
51	B3	24	A	N1-C6-N6	10.32	124.79	118.60
53	B5	2113	A	N1-C6-N6	10.32	124.79	118.60
1	AA	1422	A	N1-C6-N6	10.31	124.79	118.60
53	B5	830	A	N1-C6-N6	10.31	124.79	118.60
51	B3	54	A	N1-C6-N6	10.31	124.79	118.60
53	B5	783	A	N1-C6-N6	10.31	124.78	118.60
53	B5	1231	A	N1-C6-N6	10.31	124.78	118.60
53	B5	2256	A	N1-C6-N6	10.31	124.78	118.60
53	B5	2195	C	O4'-C1'-N1	10.30	116.44	108.20
53	B5	2321	A	N1-C6-N6	10.30	124.78	118.60
53	B5	744	A	N1-C6-N6	10.30	124.78	118.60
53	B5	2357	A	N1-C6-N6	10.30	124.78	118.60
51	B3	101	A	N1-C6-N6	10.29	124.78	118.60
53	B5	2145	A	N1-C6-N6	10.29	124.78	118.60
1	AA	940	A	N1-C6-N6	10.29	124.78	118.60
53	B5	1133	A	N1-C6-N6	10.29	124.77	118.60
53	B5	621	A	P-O3'-C3'	10.29	132.05	119.70
53	B5	268	A	N1-C6-N6	10.29	124.77	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3186	A	N1-C6-N6	10.28	124.77	118.60
53	B5	3347	A	N1-C6-N6	10.29	124.77	118.60
53	B5	1075	A	N1-C6-N6	10.28	124.77	118.60
53	B5	2312	A	N1-C6-N6	10.28	124.77	118.60
1	AA	1761	A	N1-C6-N6	10.28	124.77	118.60
52	B4	10	A	N1-C6-N6	10.28	124.77	118.60
53	B5	2341	A	N1-C6-N6	10.28	124.77	118.60
1	AA	734	A	N1-C6-N6	10.27	124.76	118.60
53	B5	1697	A	N1-C6-N6	10.27	124.76	118.60
1	AA	1754	A	N1-C6-N6	10.27	124.76	118.60
53	B5	3170	A	N1-C6-N6	10.27	124.76	118.60
1	AA	1547	C	C2'-C3'-O3'	-10.27	86.91	109.50
1	AA	1354	A	N1-C6-N6	10.27	124.76	118.60
1	AA	244	A	N1-C6-N6	10.26	124.76	118.60
51	B3	70	A	N1-C6-N6	10.26	124.76	118.60
52	B4	52	A	N1-C6-N6	10.26	124.76	118.60
53	B5	1559	A	N1-C6-N6	10.26	124.75	118.60
53	B5	619	A	N1-C6-N6	10.26	124.75	118.60
1	AA	856	A	C6-C5-N7	10.25	139.47	132.30
1	AA	1160	A	N1-C6-N6	10.25	124.75	118.60
1	AA	1612	A	O4'-C1'-N9	10.25	116.40	108.20
53	B5	417	A	N1-C6-N6	10.25	124.75	118.60
53	B5	1741	A	N1-C6-N6	10.24	124.75	118.60
53	B5	2456	A	N1-C6-N6	10.24	124.75	118.60
53	B5	2705	A	P-O3'-C3'	10.24	131.99	119.70
1	AA	148	A	N1-C6-N6	10.24	124.75	118.60
1	AA	470	A	N1-C6-N6	10.24	124.74	118.60
1	AA	341	A	N1-C6-N6	10.24	124.74	118.60
1	AA	1168	A	N1-C6-N6	10.24	124.74	118.60
1	AA	1541	A	N1-C6-N6	10.24	124.74	118.60
1	AA	162	A	N1-C6-N6	10.23	124.74	118.60
1	AA	1653	A	N1-C6-N6	10.23	124.74	118.60
53	B5	1163	A	N1-C6-N6	10.23	124.74	118.60
53	B5	1696	A	N1-C6-N6	10.23	124.74	118.60
53	B5	2368	A	N1-C6-N6	10.23	124.74	118.60
53	B5	354	U	P-O3'-C3'	10.23	131.98	119.70
53	B5	2523	A	N1-C6-N6	10.23	124.74	118.60
53	B5	2640	A	N1-C6-N6	10.23	124.74	118.60
1	AA	22	A	N1-C6-N6	10.23	124.74	118.60
52	B4	131	A	N1-C6-N6	10.23	124.74	118.60
53	B5	2167	A	N1-C6-N6	10.23	124.74	118.60
53	B5	71	A	N1-C6-N6	10.22	124.73	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	67	A	N1-C6-N6	10.22	124.73	118.60
53	B5	1566	A	N1-C6-N6	10.22	124.73	118.60
19	A7	9	A	O4'-C1'-N9	10.21	116.37	108.20
53	B5	973	A	N1-C6-N6	10.21	124.73	118.60
53	B5	1153	A	N1-C6-N6	10.21	124.73	118.60
53	B5	2946	A	N1-C6-N6	10.21	124.73	118.60
19	A7	44	A	C8-N9-C4	-10.21	101.72	105.80
1	AA	905	A	N1-C6-N6	10.21	124.72	118.60
53	B5	2130	G	N1-C6-O6	10.21	126.03	119.90
1	AA	621	A	N1-C6-N6	10.21	124.72	118.60
53	B5	1886	A	N1-C6-N6	10.21	124.72	118.60
19	A7	11	C	N3-C4-C5	10.20	125.98	121.90
53	B5	348	A	N1-C6-N6	10.20	124.72	118.60
1	AA	1636	G	P-O3'-C3'	10.20	131.94	119.70
53	B5	387	A	N1-C6-N6	10.20	124.72	118.60
53	B5	1910	A	N1-C6-N6	10.20	124.72	118.60
53	B5	2779	A	N1-C6-N6	10.20	124.72	118.60
4	AD	8	TYR	CB-CG-CD1	-10.20	114.88	121.00
53	B5	1435	A	N1-C6-N6	10.19	124.72	118.60
53	B5	2817	A	N1-C6-N6	10.20	124.72	118.60
1	AA	1485	A	N1-C6-N6	10.19	124.72	118.60
53	B5	884	A	N1-C6-N6	10.19	124.71	118.60
52	B4	155	A	N1-C6-N6	10.19	124.71	118.60
53	B5	308	A	N1-C6-N6	10.19	124.71	118.60
53	B5	2317	A	N1-C6-N6	10.19	124.71	118.60
53	B5	585	A	N1-C6-N6	10.18	124.71	118.60
53	B5	1159	A	N1-C6-N6	10.18	124.71	118.60
53	B5	2539	A	N1-C6-N6	10.18	124.71	118.60
53	B5	2511	A	N1-C6-N6	10.18	124.71	118.60
1	AA	247	A	N1-C6-N6	10.18	124.71	118.60
53	B5	408	A	N1-C6-N6	10.18	124.71	118.60
1	AA	771	A	N1-C6-N6	10.17	124.70	118.60
1	AA	1140	A	N1-C6-N6	10.17	124.70	118.60
53	B5	711	A	N1-C6-N6	10.17	124.70	118.60
1	AA	1319	A	N1-C6-N6	10.17	124.70	118.60
53	B5	925	A	N1-C6-N6	10.17	124.70	118.60
1	AA	370	A	N1-C6-N6	10.17	124.70	118.60
1	AA	1196	G	O4'-C1'-N9	10.16	116.33	108.20
1	AA	1310	A	N1-C6-N6	10.16	124.70	118.60
53	B5	157	A	N1-C6-N6	10.16	124.70	118.60
53	B5	1193	A	N1-C6-N6	10.16	124.70	118.60
53	B5	265	A	N1-C6-N6	10.16	124.70	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1707	A	N1-C6-N6	10.16	124.70	118.60
53	B5	611	A	N1-C6-N6	10.16	124.69	118.60
53	B5	2569	A	N1-C6-N6	10.16	124.69	118.60
1	AA	1385	A	N1-C6-N6	10.15	124.69	118.60
53	B5	1062	A	N1-C6-N6	10.15	124.69	118.60
53	B5	1704	A	N1-C6-N6	10.15	124.69	118.60
52	B4	109	A	N1-C6-N6	10.15	124.69	118.60
53	B5	402	A	N1-C6-N6	10.15	124.69	118.60
53	B5	2443	A	N1-C6-N6	10.15	124.69	118.60
1	AA	1720	A	N1-C6-N6	10.14	124.69	118.60
1	AA	437	A	N1-C6-N6	10.14	124.68	118.60
19	A7	25	C	N3-C4-C5	10.14	125.96	121.90
53	B5	114	A	N1-C6-N6	10.14	124.68	118.60
53	B5	1683	A	N1-C6-N6	10.14	124.68	118.60
1	AA	965	A	N1-C6-N6	10.14	124.68	118.60
52	B4	53	A	N1-C6-N6	10.14	124.68	118.60
1	AA	301	A	N1-C6-N6	10.13	124.68	118.60
1	AA	1753	A	N1-C6-N6	10.13	124.68	118.60
53	B5	65	A	N1-C6-N6	10.13	124.68	118.60
52	B4	60	U	O4'-C1'-N1	10.13	116.30	108.20
1	AA	505	A	N1-C6-N6	10.12	124.67	118.60
1	AA	1591	A	N1-C6-N6	10.12	124.67	118.60
1	AA	859	A	O4'-C1'-N9	10.12	116.30	108.20
53	B5	2649	A	N1-C6-N6	10.12	124.67	118.60
1	AA	391	A	N1-C6-N6	10.12	124.67	118.60
1	AA	1692	A	N1-C6-N6	10.12	124.67	118.60
19	A7	36	A	O4'-C1'-N9	10.12	116.30	108.20
53	B5	1085	A	N1-C6-N6	10.12	124.67	118.60
53	B5	1273	A	N1-C6-N6	10.12	124.67	118.60
53	B5	3127	A	N1-C6-N6	10.12	124.67	118.60
53	B5	2716	U	O4'-C1'-N1	10.11	116.29	108.20
53	B5	1200	A	P-O3'-C3'	10.11	131.83	119.70
1	AA	1584	A	N1-C6-N6	10.11	124.67	118.60
52	B4	89	A	N1-C6-N6	10.11	124.67	118.60
53	B5	1847	A	N1-C6-N6	10.11	124.67	118.60
53	B5	1921	A	N1-C6-N6	10.11	124.66	118.60
53	B5	2540	A	N1-C6-N6	10.10	124.66	118.60
53	B5	1909	A	N1-C6-N6	10.10	124.66	118.60
53	B5	2931	C	O4'-C1'-N1	10.10	116.28	108.20
1	AA	1199	A	N1-C6-N6	10.10	124.66	118.60
53	B5	418	A	N1-C6-N6	10.10	124.66	118.60
53	B5	3174	A	N1-C6-N6	10.10	124.66	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	238	A	N1-C6-N6	10.09	124.66	118.60
1	AA	1744	A	N1-C6-N6	10.09	124.66	118.60
53	B5	1946	A	N1-C6-N6	10.09	124.66	118.60
53	B5	677	A	N1-C6-N6	10.09	124.65	118.60
53	B5	2255	A	N1-C6-N6	10.09	124.66	118.60
53	B5	1879	A	N1-C6-N6	10.09	124.65	118.60
53	B5	3336	A	N1-C6-N6	10.09	124.65	118.60
53	B5	1647	A	N1-C6-N6	10.08	124.65	118.60
53	B5	2390	A	N1-C6-N6	10.08	124.65	118.60
53	B5	2910	A	N1-C6-N6	10.08	124.65	118.60
53	B5	2432	A	N1-C6-N6	10.08	124.65	118.60
53	B5	1835	A	N1-C6-N6	10.08	124.65	118.60
53	B5	2559	A	N1-C6-N6	10.08	124.65	118.60
1	AA	400	A	N1-C6-N6	10.08	124.65	118.60
53	B5	3234	A	N1-C6-N6	10.08	124.64	118.60
1	AA	966	A	N1-C6-N6	10.07	124.64	118.60
53	B5	385	A	N1-C6-N6	10.07	124.64	118.60
53	B5	1509	A	N1-C6-N6	10.07	124.64	118.60
1	AA	605	A	N1-C6-N6	10.07	124.64	118.60
53	B5	1343	A	N1-C6-N6	10.07	124.64	118.60
53	B5	1605	A	N1-C6-N6	10.07	124.64	118.60
1	AA	1318	A	N1-C6-N6	10.06	124.64	118.60
53	B5	2358	A	N1-C6-N6	10.06	124.64	118.60
1	AA	1230	A	N1-C6-N6	10.06	124.63	118.60
53	B5	2919	A	N1-C6-N6	10.06	124.63	118.60
1	AA	1139	A	N1-C6-N6	10.05	124.63	118.60
1	AA	1154	A	N1-C6-N6	10.05	124.63	118.60
53	B5	952	A	N1-C6-N6	10.05	124.63	118.60
53	B5	1881	A	N1-C6-N6	10.05	124.63	118.60
53	B5	1290	A	N1-C6-N6	10.05	124.63	118.60
1	AA	399	A	N1-C6-N6	10.05	124.63	118.60
1	AA	1398	A	N1-C6-N6	10.05	124.63	118.60
53	B5	1757	A	N1-C6-N6	10.05	124.63	118.60
53	B5	2736	A	N1-C6-N6	10.05	124.63	118.60
1	AA	1081	A	N1-C6-N6	10.04	124.63	118.60
53	B5	416	A	N1-C6-N6	10.04	124.63	118.60
53	B5	1093	A	N1-C6-N6	10.05	124.63	118.60
53	B5	2590	A	N1-C6-N6	10.05	124.63	118.60
53	B5	1539	A	N1-C6-N6	10.04	124.63	118.60
53	B5	846	A	N1-C6-N6	10.04	124.62	118.60
53	B5	2628	A	N1-C6-N6	10.04	124.62	118.60
53	B5	338	A	N1-C6-N6	10.04	124.62	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1204	A	N1-C6-N6	10.04	124.62	118.60
1	AA	180	A	N1-C6-N6	10.03	124.62	118.60
1	AA	755	A	N1-C6-N6	10.03	124.62	118.60
53	B5	2969	A	N1-C6-N6	10.03	124.62	118.60
1	AA	1467	A	N1-C6-N6	10.03	124.62	118.60
53	B5	39	A	N1-C6-N6	10.03	124.62	118.60
53	B5	3269	A	N1-C6-N6	10.03	124.62	118.60
1	AA	737	A	N1-C6-N6	10.03	124.61	118.60
1	AA	1424	A	N1-C6-N6	10.03	124.61	118.60
19	A7	44	A	C4-C5-C6	-10.03	111.99	117.00
53	B5	736	A	N1-C6-N6	10.02	124.61	118.60
1	AA	1200	A	C5-C6-N6	-10.02	115.69	123.70
1	AA	61	A	N1-C6-N6	10.02	124.61	118.60
53	B5	45	A	N1-C6-N6	10.01	124.61	118.60
1	AA	401	A	N1-C6-N6	10.01	124.61	118.60
1	AA	1669	A	N1-C6-N6	10.01	124.61	118.60
52	B4	70	A	N1-C6-N6	10.01	124.61	118.60
53	B5	389	A	N1-C6-N6	10.01	124.60	118.60
1	AA	1200	A	C2-N3-C4	10.00	115.60	110.60
1	AA	452	A	N1-C6-N6	10.00	124.60	118.60
53	B5	1102	A	N1-C6-N6	10.00	124.60	118.60
53	B5	1503	A	N1-C6-N6	10.00	124.60	118.60
53	B5	2601	A	N1-C6-N6	10.00	124.60	118.60
53	B5	2761	G	N1-C6-O6	10.00	125.90	119.90
19	A7	66	A	C6-C5-N7	10.00	139.30	132.30
52	B4	41	A	N1-C6-N6	10.00	124.60	118.60
53	B5	578	A	N1-C6-N6	10.00	124.60	118.60
53	B5	3000	A	N1-C6-N6	10.00	124.60	118.60
1	AA	1646	A	N1-C6-N6	9.99	124.60	118.60
53	B5	1259	A	N1-C6-N6	9.99	124.59	118.60
1	AA	1443	A	N1-C6-N6	9.99	124.59	118.60
53	B5	2252	A	N1-C6-N6	9.99	124.59	118.60
53	B5	1648	A	N1-C6-N6	9.99	124.59	118.60
53	B5	2967	A	N1-C6-N6	9.99	124.59	118.60
1	AA	906	A	N1-C6-N6	9.98	124.59	118.60
1	AA	938	A	N1-C6-N6	9.98	124.59	118.60
52	B4	97	A	N1-C6-N6	9.98	124.59	118.60
53	B5	1105	A	N1-C6-N6	9.98	124.59	118.60
53	B5	1337	A	N1-C6-N6	9.98	124.59	118.60
53	B5	1462	A	N1-C6-N6	9.98	124.59	118.60
1	AA	438	A	N1-C6-N6	9.98	124.59	118.60
1	AA	916	U	P-O3'-C3'	9.98	131.68	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1222	A	N1-C6-N6	9.98	124.59	118.60
53	B5	806	A	N1-C6-N6	9.98	124.59	118.60
1	AA	72	A	N1-C6-N6	9.97	124.58	118.60
53	B5	1883	A	N1-C6-N6	9.97	124.58	118.60
53	B5	2259	A	N1-C6-N6	9.97	124.58	118.60
53	B5	2373	A	N1-C6-N6	9.97	124.58	118.60
53	B5	2438	A	N1-C6-N6	9.97	124.58	118.60
53	B5	365	A	N1-C6-N6	9.97	124.58	118.60
53	B5	2131	A	N1-C6-N6	9.97	124.58	118.60
1	AA	1655	U	P-O3'-C3'	9.96	131.66	119.70
53	B5	61	A	N1-C6-N6	9.96	124.58	118.60
53	B5	355	A	N1-C6-N6	9.96	124.58	118.60
53	B5	2900	A	N1-C6-N6	9.96	124.58	118.60
1	AA	1038	A	N1-C6-N6	9.96	124.58	118.60
52	B4	9	A	N1-C6-N6	9.96	124.58	118.60
53	B5	2689	A	N1-C6-N6	9.96	124.58	118.60
53	B5	3183	A	N1-C6-N6	9.96	124.58	118.60
53	B5	325	A	N1-C6-N6	9.96	124.58	118.60
53	B5	344	A	N1-C6-N6	9.96	124.58	118.60
53	B5	2303	A	N1-C6-N6	9.96	124.57	118.60
1	AA	1062	A	N1-C6-N6	9.95	124.57	118.60
53	B5	1221	A	N1-C6-N6	9.95	124.57	118.60
53	B5	1731	A	N1-C6-N6	9.96	124.57	118.60
1	AA	511	A	N1-C6-N6	9.95	124.57	118.60
53	B5	735	A	N1-C6-N6	9.95	124.57	118.60
53	B5	1642	A	N1-C6-N6	9.95	124.57	118.60
53	B5	2790	A	N1-C6-N6	9.95	124.57	118.60
1	AA	1752	A	N1-C6-N6	9.95	124.57	118.60
53	B5	1558	A	N1-C6-N6	9.95	124.57	118.60
53	B5	2971	A	N1-C6-N6	9.95	124.57	118.60
53	B5	3029	A	N1-C6-N6	9.94	124.57	118.60
1	AA	1240	A	N1-C6-N6	9.94	124.57	118.60
53	B5	1593	A	N1-C6-N6	9.94	124.56	118.60
53	B5	1858	A	N1-C6-N6	9.94	124.56	118.60
1	AA	1388	A	N1-C6-N6	9.94	124.56	118.60
53	B5	657	A	N1-C6-N6	9.94	124.56	118.60
53	B5	1225	A	N1-C6-N6	9.94	124.56	118.60
53	B5	16	A	N1-C6-N6	9.94	124.56	118.60
1	AA	105	A	N1-C6-N6	9.93	124.56	118.60
1	AA	1326	A	N1-C6-N6	9.93	124.56	118.60
1	AA	1379	A	N1-C6-N6	9.93	124.56	118.60
53	B5	357	A	N1-C6-N6	9.93	124.56	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2104	A	N1-C6-N6	9.93	124.56	118.60
53	B5	532	A	N1-C6-N6	9.93	124.56	118.60
53	B5	2694	A	N1-C6-N6	9.93	124.56	118.60
53	B5	374	A	N1-C6-N6	9.93	124.56	118.60
53	B5	1911	A	N1-C6-N6	9.92	124.56	118.60
1	AA	1687	A	N1-C6-N6	9.92	124.55	118.60
53	B5	2399	A	N1-C6-N6	9.92	124.55	118.60
53	B5	2401	A	N1-C6-N6	9.92	124.55	118.60
53	B5	2635	A	N1-C6-N6	9.92	124.55	118.60
1	AA	757	A	N1-C6-N6	9.91	124.55	118.60
53	B5	3165	A	N1-C6-N6	9.91	124.55	118.60
53	B5	1419	A	N1-C6-N6	9.91	124.55	118.60
53	B5	2462	A	N1-C6-N6	9.91	124.55	118.60
53	B5	3372	A	N1-C6-N6	9.91	124.55	118.60
1	AA	378	A	N1-C6-N6	9.91	124.55	118.60
53	B5	3243	A	N1-C6-N6	9.91	124.55	118.60
1	AA	1583	U	C4'-C3'-C2'	-9.91	92.69	102.60
1	AA	1728	A	N1-C6-N6	9.91	124.54	118.60
53	B5	62	A	N1-C6-N6	9.91	124.54	118.60
1	AA	1284	A	N1-C6-N6	9.90	124.54	118.60
53	B5	1534	A	N1-C6-N6	9.90	124.54	118.60
53	B5	2733	A	N1-C6-N6	9.90	124.54	118.60
53	B5	3134	A	N1-C6-N6	9.90	124.54	118.60
53	B5	666	A	N1-C6-N6	9.90	124.54	118.60
53	B5	3126	C	O4'-C1'-N1	9.90	116.12	108.20
1	AA	538	A	N1-C6-N6	9.90	124.54	118.60
1	AA	1408	A	N1-C6-N6	9.90	124.54	118.60
53	B5	933	A	N1-C6-N6	9.89	124.54	118.60
53	B5	2198	A	N1-C6-N6	9.89	124.54	118.60
53	B5	3011	A	N1-C6-N6	9.89	124.54	118.60
1	AA	85	A	N1-C6-N6	9.89	124.54	118.60
53	B5	2676	A	N1-C6-N6	9.89	124.54	118.60
1	AA	1148	A	N1-C6-N6	9.89	124.53	118.60
1	AA	1719	A	N1-C6-N6	9.89	124.53	118.60
53	B5	2219	A	N1-C6-N6	9.89	124.53	118.60
53	B5	998	A	N1-C6-N6	9.89	124.53	118.60
53	B5	2982	A	N1-C6-N6	9.89	124.53	118.60
53	B5	397	A	N1-C6-N6	9.88	124.53	118.60
53	B5	742	G	P-O3'-C3'	9.88	131.56	119.70
53	B5	1454	A	N1-C6-N6	9.88	124.53	118.60
19	A7	38	A	C4-C5-C6	-9.88	112.06	117.00
1	AA	254	A	N1-C6-N6	9.88	124.53	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1113	A	N1-C6-N6	9.88	124.53	118.60
53	B5	284	A	N1-C6-N6	9.88	124.53	118.60
53	B5	307	A	N1-C6-N6	9.88	124.53	118.60
1	AA	515	A	N1-C6-N6	9.88	124.53	118.60
53	B5	313	A	N1-C6-N6	9.88	124.53	118.60
53	B5	915	A	N1-C6-N6	9.88	124.53	118.60
1	AA	28	A	N1-C6-N6	9.88	124.53	118.60
53	B5	235	A	N1-C6-N6	9.87	124.52	118.60
53	B5	1401	A	N1-C6-N6	9.87	124.52	118.60
53	B5	1535	A	N1-C6-N6	9.87	124.52	118.60
53	B5	1841	A	N1-C6-N6	9.87	124.52	118.60
1	AA	367	A	N1-C6-N6	9.87	124.52	118.60
1	AA	788	A	N1-C6-N6	9.87	124.52	118.60
53	B5	1932	A	N1-C6-N6	9.87	124.52	118.60
53	B5	2792	A	N1-C6-N6	9.87	124.52	118.60
1	AA	300	A	N1-C6-N6	9.87	124.52	118.60
1	AA	352	A	N1-C6-N6	9.86	124.52	118.60
53	B5	1040	A	N1-C6-N6	9.86	124.52	118.60
53	B5	2144	A	N1-C6-N6	9.86	124.52	118.60
53	B5	3185	A	N1-C6-N6	9.86	124.52	118.60
1	AA	770	A	N1-C6-N6	9.86	124.52	118.60
52	B4	57	C	P-O3'-C3'	9.86	131.53	119.70
53	B5	523	A	N1-C6-N6	9.86	124.52	118.60
53	B5	660	A	N1-C6-N6	9.86	124.52	118.60
53	B5	1699	A	N1-C6-N6	9.86	124.52	118.60
53	B5	3048	A	N1-C6-N6	9.86	124.52	118.60
1	AA	164	A	N1-C6-N6	9.86	124.52	118.60
1	AA	1738	A	N1-C6-N6	9.86	124.52	118.60
53	B5	3391	A	N1-C6-N6	9.86	124.52	118.60
53	B5	6	A	N1-C6-N6	9.86	124.51	118.60
1	AA	366	A	N1-C6-N6	9.85	124.51	118.60
1	AA	904	A	N1-C6-N6	9.85	124.51	118.60
53	B5	882	A	N1-C6-N6	9.85	124.51	118.60
53	B5	3142	A	N1-C6-N6	9.85	124.51	118.60
53	B5	3017	A	N1-C6-N6	9.85	124.51	118.60
19	A7	76	A	C6-C5-N7	9.85	139.19	132.30
51	B3	77	A	N1-C6-N6	9.85	124.51	118.60
53	B5	1055	A	N1-C6-N6	9.85	124.51	118.60
1	AA	156	A	N1-C6-N6	9.85	124.51	118.60
1	AA	1717	A	N1-C6-N6	9.85	124.51	118.60
53	B5	2799	A	N1-C6-N6	9.85	124.51	118.60
1	AA	471	A	N1-C6-N6	9.84	124.51	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1945	A	N1-C6-N6	9.84	124.50	118.60
1	AA	850	A	N1-C6-N6	9.84	124.50	118.60
53	B5	557	A	N1-C6-N6	9.84	124.50	118.60
1	AA	789	A	N1-C6-N6	9.84	124.50	118.60
53	B5	2147	A	N1-C6-N6	9.83	124.50	118.60
1	AA	138	A	N1-C6-N6	9.83	124.50	118.60
1	AA	359	A	N1-C6-N6	9.83	124.50	118.60
53	B5	3035	A	N1-C6-N6	9.83	124.50	118.60
53	B5	1235	U	P-O3'-C3'	9.83	131.50	119.70
4	AD	8	TYR	CB-CG-CD2	9.82	126.89	121.00
53	B5	1490	A	N1-C6-N6	9.82	124.50	118.60
53	B5	2166	A	N1-C6-N6	9.82	124.49	118.60
1	AA	1163	A	N1-C6-N6	9.82	124.49	118.60
53	B5	367	A	N1-C6-N6	9.82	124.49	118.60
1	AA	387	A	N1-C6-N6	9.82	124.49	118.60
1	AA	541	A	N1-C6-N6	9.81	124.49	118.60
1	AA	1544	G	O5'-P-OP1	9.81	122.48	110.70
53	B5	144	A	N1-C6-N6	9.81	124.49	118.60
53	B5	551	A	N1-C6-N6	9.81	124.49	118.60
1	AA	140	A	N1-C6-N6	9.81	124.49	118.60
53	B5	3175	C	O4'-C1'-N1	9.81	116.05	108.20
1	AA	542	A	N1-C6-N6	9.81	124.48	118.60
1	AA	1699	A	N1-C6-N6	9.81	124.48	118.60
19	A7	69	U	C5-C4-O4	-9.81	120.02	125.90
53	B5	598	A	N1-C6-N6	9.81	124.48	118.60
1	AA	78	A	N1-C6-N6	9.81	124.48	118.60
1	AA	397	A	N1-C6-N6	9.80	124.48	118.60
1	AA	922	A	N1-C6-N6	9.80	124.48	118.60
1	AA	1309	A	N1-C6-N6	9.80	124.48	118.60
53	B5	1842	A	N1-C6-N6	9.80	124.48	118.60
53	B5	1594	A	N1-C6-N6	9.80	124.48	118.60
53	B5	2721	A	N1-C6-N6	9.80	124.48	118.60
1	AA	1567	A	N1-C6-N6	9.80	124.48	118.60
1	AA	215	A	N1-C6-N6	9.80	124.48	118.60
19	A7	11	C	C6-N1-C2	-9.80	116.38	120.30
19	A7	53	G	N7-C8-N9	9.80	118.00	113.10
51	B3	94	A	N1-C6-N6	9.80	124.48	118.60
52	B4	66	A	N1-C6-N6	9.80	124.48	118.60
53	B5	1506	A	N1-C6-N6	9.80	124.48	118.60
53	B5	2520	A	N1-C6-N6	9.80	124.48	118.60
1	AA	119	A	N1-C6-N6	9.80	124.48	118.60
19	A7	6	U	C4-C5-C6	9.80	125.58	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	123	A	N1-C6-N6	9.80	124.48	118.60
1	AA	506	A	N1-C6-N6	9.79	124.48	118.60
51	B3	17	A	N1-C6-N6	9.79	124.48	118.60
52	B4	33	A	N1-C6-N6	9.79	124.48	118.60
53	B5	211	A	N1-C6-N6	9.80	124.48	118.60
53	B5	317	A	N1-C6-N6	9.79	124.48	118.60
53	B5	2643	A	N1-C6-N6	9.79	124.48	118.60
53	B5	3123	A	N1-C6-N6	9.79	124.48	118.60
1	AA	803	A	N1-C6-N6	9.79	124.47	118.60
52	B4	3	A	N1-C6-N6	9.79	124.47	118.60
53	B5	187	A	N1-C6-N6	9.79	124.47	118.60
53	B5	2561	A	N1-C6-N6	9.79	124.47	118.60
1	AA	220	A	N1-C6-N6	9.79	124.47	118.60
53	B5	1580	A	N1-C6-N6	9.79	124.47	118.60
1	AA	1397	A	N1-C6-N6	9.79	124.47	118.60
53	B5	2734	A	N1-C6-N6	9.79	124.47	118.60
53	B5	2872	A	N1-C6-N6	9.79	124.47	118.60
53	B5	1084	A	N1-C6-N6	9.79	124.47	118.60
1	AA	181	A	N1-C6-N6	9.79	124.47	118.60
53	B5	2106	A	N1-C6-N6	9.79	124.47	118.60
53	B5	1054	A	N1-C6-N6	9.78	124.47	118.60
53	B5	1867	A	N1-C6-N6	9.78	124.47	118.60
1	AA	169	A	N1-C6-N6	9.78	124.47	118.60
1	AA	271	A	N1-C6-N6	9.78	124.47	118.60
1	AA	1345	A	N1-C6-N6	9.78	124.47	118.60
53	B5	3094	A	N1-C6-N6	9.78	124.47	118.60
1	AA	570	A	N1-C6-N6	9.78	124.47	118.60
1	AA	1433	A	N1-C6-N6	9.78	124.47	118.60
52	B4	54	A	N1-C6-N6	9.78	124.47	118.60
53	B5	423	A	N1-C6-N6	9.78	124.47	118.60
53	B5	327	A	N1-C6-N6	9.78	124.47	118.60
53	B5	594	A	N1-C6-N6	9.78	124.47	118.60
53	B5	285	A	N1-C6-N6	9.78	124.47	118.60
1	AA	1190	A	N1-C6-N6	9.77	124.46	118.60
1	AA	1215	A	N1-C6-N6	9.77	124.46	118.60
1	AA	1220	A	N1-C6-N6	9.77	124.46	118.60
53	B5	255	A	N1-C6-N6	9.77	124.46	118.60
53	B5	1872	C	O4'-C1'-N1	9.77	116.02	108.20
53	B5	680	G	N1-C6-O6	9.77	125.76	119.90
53	B5	2397	A	N1-C6-N6	9.77	124.46	118.60
53	B5	2500	A	N1-C6-N6	9.77	124.46	118.60
52	B4	13	A	N1-C6-N6	9.77	124.46	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	936	A	N1-C6-N6	9.77	124.46	118.60
53	B5	1205	A	N1-C6-N6	9.77	124.46	118.60
53	B5	2535	A	N1-C6-N6	9.77	124.46	118.60
53	B5	2673	A	N1-C6-N6	9.77	124.46	118.60
53	B5	3039	C	O4'-C1'-N1	9.77	116.02	108.20
53	B5	1180	A	N1-C6-N6	9.77	124.46	118.60
53	B5	2991	A	N1-C6-N6	9.77	124.46	118.60
53	B5	3370	A	N1-C6-N6	9.76	124.46	118.60
1	AA	1058	A	N1-C6-N6	9.76	124.46	118.60
53	B5	3012	A	N1-C6-N6	9.76	124.46	118.60
53	B5	876	A	N1-C6-N6	9.76	124.45	118.60
53	B5	361	A	N1-C6-N6	9.76	124.45	118.60
1	AA	1333	A	N1-C6-N6	9.75	124.45	118.60
1	AA	1779	A	N1-C6-N6	9.75	124.45	118.60
53	B5	3223	A	N1-C6-N6	9.75	124.45	118.60
1	AA	713	A	N1-C6-N6	9.75	124.45	118.60
19	A7	7	U	C4-C5-C6	9.75	125.55	119.70
53	B5	501	A	N1-C6-N6	9.75	124.45	118.60
53	B5	569	A	N1-C6-N6	9.75	124.45	118.60
53	B5	697	A	N1-C6-N6	9.75	124.45	118.60
1	AA	295	A	N1-C6-N6	9.75	124.45	118.60
1	AA	534	A	N1-C6-N6	9.75	124.45	118.60
1	AA	684	A	N1-C6-N6	9.75	124.45	118.60
1	AA	1223	A	N1-C6-N6	9.75	124.45	118.60
53	B5	1524	A	N1-C6-N6	9.74	124.45	118.60
1	AA	1121	A	N1-C6-N6	9.74	124.44	118.60
51	B3	82	A	N1-C6-N6	9.74	124.45	118.60
53	B5	1200	A	N1-C6-N6	9.74	124.44	118.60
53	B5	720	A	N1-C6-N6	9.74	124.44	118.60
53	B5	2243	A	N1-C6-N6	9.74	124.44	118.60
1	AA	265	A	N1-C6-N6	9.74	124.44	118.60
1	AA	420	A	N1-C6-N6	9.74	124.44	118.60
53	B5	580	C	O4'-C1'-N1	9.74	115.99	108.20
53	B5	1303	A	N1-C6-N6	9.74	124.44	118.60
53	B5	1760	A	N1-C6-N6	9.74	124.44	118.60
53	B5	888	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1135	A	N1-C6-N6	9.73	124.44	118.60
53	B5	2813	A	N1-C6-N6	9.73	124.44	118.60
1	AA	145	A	N1-C6-N6	9.73	124.44	118.60
1	AA	527	A	N1-C6-N6	9.73	124.44	118.60
53	B5	706	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1202	A	N1-C6-N6	9.73	124.44	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2330	C	O4'-C1'-N1	9.73	115.99	108.20
53	B5	755	A	N1-C6-N6	9.73	124.44	118.60
53	B5	786	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1798	A	N1-C6-N6	9.73	124.44	118.60
53	B5	122	A	N1-C6-N6	9.73	124.44	118.60
1	AA	477	A	N1-C6-N6	9.73	124.44	118.60
1	AA	972	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1850	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1936	A	N1-C6-N6	9.73	124.44	118.60
53	B5	3206	A	N1-C6-N6	9.73	124.44	118.60
1	AA	1612	A	N1-C6-N6	9.73	124.44	118.60
53	B5	113	C	O4'-C1'-N1	9.73	115.98	108.20
53	B5	550	A	N1-C6-N6	9.73	124.44	118.60
53	B5	738	A	N1-C6-N6	9.73	124.44	118.60
53	B5	1169	A	N1-C6-N6	9.73	124.44	118.60
1	AA	92	A	N1-C6-N6	9.72	124.43	118.60
1	AA	1090	A	N1-C6-N6	9.72	124.44	118.60
1	AA	407	A	N1-C6-N6	9.72	124.43	118.60
51	B3	45	A	N1-C6-N6	9.72	124.44	118.60
53	B5	665	A	N1-C6-N6	9.72	124.43	118.60
53	B5	1654	A	N1-C6-N6	9.72	124.43	118.60
1	AA	1780	A	N1-C6-N6	9.72	124.43	118.60
53	B5	1006	A	N1-C6-N6	9.72	124.43	118.60
53	B5	1223	A	N1-C6-N6	9.72	124.43	118.60
53	B5	2637	A	N1-C6-N6	9.72	124.43	118.60
52	B4	77	A	N1-C6-N6	9.72	124.43	118.60
53	B5	2642	A	N1-C6-N6	9.71	124.43	118.60
53	B5	2896	A	N1-C6-N6	9.72	124.43	118.60
53	B5	3344	A	N1-C6-N6	9.72	124.43	118.60
53	B5	3113	A	N1-C6-N6	9.71	124.43	118.60
1	AA	108	A	N1-C6-N6	9.71	124.43	118.60
53	B5	715	A	N1-C6-N6	9.71	124.43	118.60
1	AA	221	A	N1-C6-N6	9.71	124.43	118.60
1	AA	678	A	N1-C6-N6	9.71	124.43	118.60
53	B5	1461	A	N1-C6-N6	9.71	124.43	118.60
53	B5	2424	A	N1-C6-N6	9.71	124.42	118.60
1	AA	47	A	N1-C6-N6	9.71	124.42	118.60
19	A7	61	C	N1-C2-O2	9.71	124.72	118.90
52	B4	12	A	N1-C6-N6	9.71	124.42	118.60
53	B5	334	A	N1-C6-N6	9.70	124.42	118.60
1	AA	410	A	N1-C6-N6	9.70	124.42	118.60
1	AA	860	U	O4'-C1'-N1	9.70	115.96	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1551	G	O5'-P-OP1	9.70	122.34	110.70
1	AA	1501	A	N1-C6-N6	9.70	124.42	118.60
53	B5	653	A	N1-C6-N6	9.70	124.42	118.60
53	B5	3375	A	N1-C6-N6	9.70	124.42	118.60
53	B5	2488	A	N1-C6-N6	9.69	124.42	118.60
53	B5	2746	A	N1-C6-N6	9.70	124.42	118.60
1	AA	416	A	N1-C6-N6	9.69	124.42	118.60
1	AA	1421	A	N1-C6-N6	9.69	124.42	118.60
1	AA	1789	A	N1-C6-N6	9.69	124.41	118.60
53	B5	3070	A	N1-C6-N6	9.69	124.41	118.60
1	AA	1089	A	N1-C6-N6	9.69	124.41	118.60
53	B5	165	A	N1-C6-N6	9.69	124.41	118.60
53	B5	692	A	N1-C6-N6	9.69	124.41	118.60
53	B5	1308	A	N1-C6-N6	9.69	124.41	118.60
53	B5	2740	A	N1-C6-N6	9.69	124.41	118.60
53	B5	896	A	N1-C6-N6	9.69	124.41	118.60
53	B5	990	A	N1-C6-N6	9.69	124.41	118.60
53	B5	1452	A	N1-C6-N6	9.69	124.41	118.60
1	AA	661	A	N1-C6-N6	9.68	124.41	118.60
53	B5	645	A	N1-C6-N6	9.68	124.41	118.60
1	AA	441	A	N1-C6-N6	9.68	124.41	118.60
1	AA	1088	A	N1-C6-N6	9.68	124.41	118.60
1	AA	1414	A	N1-C6-N6	9.68	124.41	118.60
1	AA	1490	A	N1-C6-N6	9.68	124.41	118.60
53	B5	2864	A	N1-C6-N6	9.68	124.41	118.60
53	B5	2152	A	N1-C6-N6	9.68	124.41	118.60
53	B5	621	A	N1-C6-N6	9.68	124.41	118.60
53	B5	2692	A	N1-C6-N6	9.68	124.41	118.60
51	B3	19	C	O4'-C1'-N1	9.67	115.94	108.20
53	B5	1212	A	N1-C6-N6	9.67	124.41	118.60
53	B5	1394	A	N1-C6-N6	9.67	124.40	118.60
53	B5	1638	A	N1-C6-N6	9.67	124.40	118.60
53	B5	529	A	N1-C6-N6	9.67	124.40	118.60
53	B5	2887	A	N1-C6-N6	9.67	124.40	118.60
53	B5	2890	A	N1-C6-N6	9.67	124.40	118.60
53	B5	1459	C	O4'-C1'-N1	9.67	115.93	108.20
1	AA	222	A	N1-C6-N6	9.66	124.40	118.60
1	AA	555	A	N1-C6-N6	9.66	124.40	118.60
1	AA	987	A	N1-C6-N6	9.66	124.40	118.60
53	B5	904	A	N1-C6-N6	9.66	124.40	118.60
53	B5	1498	A	N1-C6-N6	9.66	124.40	118.60
1	AA	1503	A	N1-C6-N6	9.66	124.40	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	8	U	N3-C4-C5	-9.66	108.80	114.60
1	AA	1477	A	N1-C6-N6	9.66	124.39	118.60
53	B5	789	A	N1-C6-N6	9.66	124.39	118.60
1	AA	978	A	N1-C6-N6	9.65	124.39	118.60
1	AA	1609	A	N1-C6-N6	9.65	124.39	118.60
53	B5	250	U	P-O3'-C3'	9.65	131.28	119.70
53	B5	3359	A	N1-C6-N6	9.65	124.39	118.60
1	AA	1078	A	N1-C6-N6	9.65	124.39	118.60
53	B5	121	A	N1-C6-N6	9.65	124.39	118.60
1	AA	333	A	N1-C6-N6	9.65	124.39	118.60
1	AA	385	A	N1-C6-N6	9.65	124.39	118.60
1	AA	1517	U	O5'-P-OP1	9.65	122.28	110.70
53	B5	1170	A	N1-C6-N6	9.65	124.39	118.60
53	B5	1489	A	N1-C6-N6	9.65	124.39	118.60
53	B5	369	A	N1-C6-N6	9.65	124.39	118.60
1	AA	1083	A	N1-C6-N6	9.64	124.39	118.60
1	AA	1341	A	N1-C6-N6	9.64	124.39	118.60
52	B4	80	A	N1-C6-N6	9.64	124.39	118.60
53	B5	1009	A	N1-C6-N6	9.64	124.39	118.60
53	B5	1806	A	N1-C6-N6	9.64	124.39	118.60
53	B5	2220	A	N1-C6-N6	9.64	124.39	118.60
1	AA	740	A	N1-C6-N6	9.64	124.38	118.60
53	B5	2345	A	N1-C6-N6	9.64	124.39	118.60
53	B5	2119	A	N1-C6-N6	9.64	124.38	118.60
53	B5	3316	A	N1-C6-N6	9.64	124.38	118.60
1	AA	40	A	N1-C6-N6	9.64	124.38	118.60
1	AA	173	A	N1-C6-N6	9.64	124.38	118.60
1	AA	526	A	N1-C6-N6	9.64	124.38	118.60
1	AA	791	A	N1-C6-N6	9.64	124.38	118.60
53	B5	646	A	N1-C6-N6	9.64	124.38	118.60
1	AA	421	A	N1-C6-N6	9.64	124.38	118.60
53	B5	2207	A	N1-C6-N6	9.64	124.38	118.60
53	B5	2549	A	N1-C6-N6	9.64	124.38	118.60
53	B5	843	A	N1-C6-N6	9.64	124.38	118.60
1	AA	858	G	N3-C2-N2	9.63	126.64	119.90
53	B5	1823	A	N1-C6-N6	9.63	124.38	118.60
53	B5	521	A	N1-C6-N6	9.63	124.38	118.60
53	B5	2320	A	N1-C6-N6	9.63	124.38	118.60
53	B5	2987	A	N1-C6-N6	9.63	124.38	118.60
53	B5	970	A	N1-C6-N6	9.62	124.37	118.60
53	B5	3008	A	N1-C6-N6	9.62	124.37	118.60
53	B5	3040	A	N1-C6-N6	9.62	124.37	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1458	A	N1-C6-N6	9.62	124.37	118.60
52	B4	79	A	N1-C6-N6	9.62	124.37	118.60
53	B5	43	A	N1-C6-N6	9.62	124.37	118.60
53	B5	3106	A	N1-C6-N6	9.62	124.37	118.60
51	B3	42	A	N1-C6-N6	9.62	124.37	118.60
1	AA	1689	A	N1-C6-N6	9.61	124.37	118.60
1	AA	1763	A	N1-C6-N6	9.62	124.37	118.60
53	B5	34	A	N1-C6-N6	9.62	124.37	118.60
53	B5	3176	C	O4'-C1'-N1	9.61	115.89	108.20
1	AA	550	A	N1-C6-N6	9.61	124.37	118.60
53	B5	1474	A	N1-C6-N6	9.61	124.37	118.60
53	B5	1557	A	N1-C6-N6	9.61	124.37	118.60
53	B5	2138	A	N1-C6-N6	9.61	124.37	118.60
1	AA	525	A	N1-C6-N6	9.61	124.37	118.60
51	B3	23	A	N1-C6-N6	9.61	124.36	118.60
53	B5	1304	A	N1-C6-N6	9.61	124.36	118.60
53	B5	1048	A	O4'-C1'-N9	9.61	115.88	108.20
53	B5	2468	A	N1-C6-N6	9.61	124.36	118.60
1	AA	126	A	N1-C6-N6	9.60	124.36	118.60
1	AA	604	A	N1-C6-N6	9.60	124.36	118.60
19	A7	27	C	N1-C2-N3	9.60	125.92	119.20
1	AA	1381	A	N1-C6-N6	9.60	124.36	118.60
1	AA	1549	U	O4'-C1'-N1	9.60	115.88	108.20
53	B5	1030	A	N1-C6-N6	9.60	124.36	118.60
53	B5	2398	A	N1-C6-N6	9.60	124.36	118.60
53	B5	2695	A	N1-C6-N6	9.60	124.36	118.60
53	B5	3215	A	N1-C6-N6	9.60	124.36	118.60
1	AA	34	G	O4'-C1'-N9	9.60	115.88	108.20
1	AA	65	A	N1-C6-N6	9.60	124.36	118.60
53	B5	85	A	N1-C6-N6	9.60	124.36	118.60
53	B5	150	A	N1-C6-N6	9.60	124.36	118.60
53	B5	2130	G	C5-C6-O6	-9.60	122.84	128.60
53	B5	3146	G	O4'-C1'-N9	9.60	115.88	108.20
1	AA	594	A	N1-C6-N6	9.59	124.35	118.60
53	B5	1712	G	O4'-C1'-N9	9.59	115.87	108.20
1	AA	867	G	P-O3'-C3'	-9.59	108.19	119.70
1	AA	925	A	N1-C6-N6	9.59	124.35	118.60
1	AA	1368	A	N1-C6-N6	9.59	124.35	118.60
53	B5	2441	A	N1-C6-N6	9.59	124.35	118.60
53	B5	422	A	N1-C6-N6	9.58	124.35	118.60
53	B5	1908	A	N1-C6-N6	9.58	124.35	118.60
1	AA	251	A	N1-C6-N6	9.58	124.35	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	76	A	N1-C6-N6	9.58	124.35	118.60
53	B5	490	A	N1-C6-N6	9.58	124.35	118.60
53	B5	914	A	N1-C6-N6	9.58	124.35	118.60
53	B5	1143	A	N1-C6-N6	9.57	124.34	118.60
53	B5	2739	A	N1-C6-N6	9.57	124.34	118.60
1	AA	182	A	N1-C6-N6	9.57	124.34	118.60
1	AA	1774	A	N1-C6-N6	9.57	124.34	118.60
53	B5	2262	A	N1-C6-N6	9.57	124.34	118.60
53	B5	1182	A	N1-C6-N6	9.57	124.34	118.60
1	AA	344	A	N1-C6-N6	9.57	124.34	118.60
19	A7	23	A	C3'-C2'-C1'	9.57	109.15	101.50
53	B5	378	A	N1-C6-N6	9.57	124.34	118.60
53	B5	519	A	N1-C6-N6	9.57	124.34	118.60
53	B5	2271	A	N1-C6-N6	9.57	124.34	118.60
53	B5	2228	A	N1-C6-N6	9.56	124.34	118.60
53	B5	1587	A	N1-C6-N6	9.56	124.34	118.60
53	B5	2363	A	N1-C6-N6	9.56	124.34	118.60
1	AA	1691	A	N1-C6-N6	9.56	124.33	118.60
53	B5	296	A	N1-C6-N6	9.56	124.33	118.60
1	AA	217	A	N1-C6-N6	9.56	124.33	118.60
1	AA	620	A	N1-C6-N6	9.55	124.33	118.60
1	AA	754	A	N1-C6-N6	9.55	124.33	118.60
1	AA	997	A	N1-C6-N6	9.56	124.33	118.60
1	AA	1712	A	N1-C6-N6	9.56	124.33	118.60
1	AA	864	U	C4'-C3'-C2'	9.55	112.15	102.60
53	B5	2519	A	N1-C6-N6	9.55	124.33	118.60
53	B5	376	G	N1-C6-O6	9.55	125.63	119.90
53	B5	1810	A	N1-C6-N6	9.55	124.33	118.60
52	B4	48	A	N1-C6-N6	9.55	124.33	118.60
1	AA	253	A	N1-C6-N6	9.55	124.33	118.60
1	AA	1629	A	N1-C6-N6	9.55	124.33	118.60
53	B5	1373	A	N1-C6-N6	9.55	124.33	118.60
53	B5	2223	A	N1-C6-N6	9.55	124.33	118.60
53	B5	3296	A	N1-C6-N6	9.55	124.33	118.60
53	B5	533	A	N1-C6-N6	9.54	124.33	118.60
53	B5	2802	A	N1-C6-N6	9.55	124.33	118.60
53	B5	342	A	N1-C6-N6	9.54	124.33	118.60
53	B5	1098	A	N1-C6-N6	9.54	124.32	118.60
53	B5	2738	A	N1-C6-N6	9.54	124.32	118.60
53	B5	3335	A	N1-C6-N6	9.54	124.32	118.60
53	B5	2486	A	N1-C6-N6	9.54	124.32	118.60
1	AA	1149	A	N1-C6-N6	9.53	124.32	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2941	A	N1-C6-N6	9.53	124.32	118.60
52	B4	61	A	N1-C6-N6	9.53	124.32	118.60
53	B5	289	A	N1-C6-N6	9.53	124.32	118.60
53	B5	2232	A	N1-C6-N6	9.53	124.32	118.60
53	B5	2413	A	N1-C6-N6	9.53	124.32	118.60
53	B5	3021	A	N1-C6-N6	9.53	124.32	118.60
1	AA	923	A	N1-C6-N6	9.53	124.32	118.60
1	AA	817	A	N1-C6-N6	9.52	124.31	118.60
51	B3	100	A	N1-C6-N6	9.52	124.31	118.60
53	B5	1061	A	N1-C6-N6	9.52	124.31	118.60
1	AA	312	A	N1-C6-N6	9.52	124.31	118.60
1	AA	529	A	N1-C6-N6	9.52	124.31	118.60
1	AA	606	A	N1-C6-N6	9.52	124.31	118.60
1	AA	257	A	N1-C6-N6	9.52	124.31	118.60
1	AA	1658	A	N1-C6-N6	9.52	124.31	118.60
53	B5	2484	A	N1-C6-N6	9.51	124.31	118.60
1	AA	1207	A	N1-C6-N6	9.51	124.31	118.60
53	B5	2547	A	N1-C6-N6	9.51	124.31	118.60
53	B5	2580	A	N1-C6-N6	9.51	124.31	118.60
1	AA	982	A	N1-C6-N6	9.51	124.30	118.60
19	A7	5	A	C5-C6-N1	9.51	122.45	117.70
53	B5	1467	A	N1-C6-N6	9.51	124.30	118.60
53	B5	3276	A	N1-C6-N6	9.51	124.30	118.60
53	B5	11	A	N1-C6-N6	9.50	124.30	118.60
53	B5	273	A	N1-C6-N6	9.50	124.30	118.60
53	B5	2803	A	N1-C6-N6	9.50	124.30	118.60
53	B5	1026	A	N1-C6-N6	9.50	124.30	118.60
1	AA	288	A	N1-C6-N6	9.50	124.30	118.60
1	AA	994	A	N1-C6-N6	9.50	124.30	118.60
1	AA	1657	A	N1-C6-N6	9.50	124.30	118.60
53	B5	1896	A	N1-C6-N6	9.49	124.30	118.60
1	AA	1549	U	C3'-C2'-C1'	-9.49	93.91	101.50
52	B4	138	A	N1-C6-N6	9.49	124.29	118.60
53	B5	107	A	N1-C6-N6	9.49	124.29	118.60
53	B5	1330	A	N1-C6-N6	9.49	124.29	118.60
53	B5	1465	A	N1-C6-N6	9.49	124.29	118.60
1	AA	1130	A	N1-C6-N6	9.49	124.29	118.60
1	AA	1342	A	N1-C6-N6	9.49	124.29	118.60
53	B5	2743	A	N1-C6-N6	9.49	124.29	118.60
53	B5	1407	A	N1-C6-N6	9.48	124.29	118.60
1	AA	1297	A	N1-C6-N6	9.48	124.29	118.60
53	B5	3114	A	N1-C6-N6	9.48	124.29	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	425	A	N1-C6-N6	9.48	124.29	118.60
1	AA	556	A	N1-C6-N6	9.48	124.29	118.60
1	AA	991	A	N1-C6-N6	9.48	124.29	118.60
1	AA	706	A	N1-C6-N6	9.48	124.29	118.60
1	AA	811	A	N1-C6-N6	9.48	124.29	118.60
1	AA	1136	A	N1-C6-N6	9.48	124.29	118.60
19	A7	14	A	N1-C6-N6	-9.48	112.91	118.60
51	B3	89	A	N1-C6-N6	9.48	124.29	118.60
53	B5	570	A	N1-C6-N6	9.48	124.28	118.60
1	AA	84	A	N1-C6-N6	9.47	124.28	118.60
1	AA	866	G	C4'-C3'-C2'	9.47	112.07	102.60
53	B5	2485	A	N1-C6-N6	9.47	124.28	118.60
53	B5	2820	A	N1-C6-N6	9.47	124.28	118.60
1	AA	622	A	N1-C6-N6	9.47	124.28	118.60
19	A7	1	G	C5-C6-N1	9.47	116.23	111.50
1	AA	512	A	N1-C6-N6	9.47	124.28	118.60
53	B5	1895	A	N1-C6-N6	9.47	124.28	118.60
53	B5	2595	A	N1-C6-N6	9.46	124.28	118.60
1	AA	733	A	N1-C6-N6	9.46	124.28	118.60
1	AA	1520	U	P-O5'-C5'	-9.46	105.76	120.90
52	B4	37	A	N1-C6-N6	9.46	124.28	118.60
1	AA	847	A	N1-C6-N6	9.46	124.28	118.60
53	B5	2430	A	N1-C6-N6	9.46	124.28	118.60
1	AA	323	A	N1-C6-N6	9.46	124.28	118.60
1	AA	630	A	N1-C6-N6	9.46	124.28	118.60
1	AA	1679	A	N1-C6-N6	9.46	124.28	118.60
53	B5	1324	U	O4'-C1'-N1	9.46	115.77	108.20
53	B5	23	A	N1-C6-N6	9.46	124.27	118.60
53	B5	2529	A	N1-C6-N6	9.46	124.27	118.60
1	AA	206	A	N1-C6-N6	9.46	124.27	118.60
53	B5	603	A	N1-C6-N6	9.46	124.27	118.60
1	AA	774	A	N1-C6-N6	9.45	124.27	118.60
1	AA	1514	A	N1-C6-N6	9.46	124.27	118.60
53	B5	1468	A	N1-C6-N6	9.46	124.27	118.60
53	B5	3045	G	P-O3'-C3'	9.46	131.05	119.70
1	AA	1073	A	N1-C6-N6	9.45	124.27	118.60
51	B3	75	G	N1-C6-O6	9.45	125.57	119.90
53	B5	3128	G	N1-C6-O6	9.45	125.57	119.90
1	AA	780	A	N1-C6-N6	9.45	124.27	118.60
53	B5	3163	A	N1-C6-N6	9.45	124.27	118.60
52	B4	111	A	N1-C6-N6	9.45	124.27	118.60
1	AA	752	A	N1-C6-N6	9.44	124.27	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1025	A	N1-C6-N6	9.44	124.27	118.60
1	AA	1543	A	N1-C6-N6	9.45	124.27	118.60
53	B5	204	A	N1-C6-N6	9.44	124.27	118.60
53	B5	1294	A	N1-C6-N6	9.44	124.27	118.60
53	B5	2275	A	N1-C6-N6	9.45	124.27	118.60
1	AA	1128	A	N1-C6-N6	9.44	124.27	118.60
1	AA	1403	A	N1-C6-N6	9.44	124.26	118.60
19	A7	64	A	C6-C5-N7	9.44	138.91	132.30
51	B3	35	C	O4'-C1'-N1	9.44	115.75	108.20
52	B4	2	A	N1-C6-N6	9.44	124.27	118.60
53	B5	672	A	N1-C6-N6	9.44	124.27	118.60
53	B5	2183	A	N1-C6-N6	9.44	124.26	118.60
53	B5	2280	A	N1-C6-N6	9.44	124.27	118.60
1	AA	1481	A	N1-C6-N6	9.44	124.26	118.60
1	AA	71	A	N1-C6-N6	9.44	124.26	118.60
53	B5	2994	A	N1-C6-N6	9.44	124.26	118.60
53	B5	1460	A	N1-C6-N6	9.43	124.26	118.60
1	AA	932	A	N1-C6-N6	9.43	124.26	118.60
1	AA	1729	A	N1-C6-N6	9.43	124.26	118.60
53	B5	164	A	N1-C6-N6	9.43	124.26	118.60
1	AA	328	A	N1-C6-N6	9.43	124.26	118.60
1	AA	1742	A	N1-C6-N6	9.43	124.26	118.60
53	B5	1002	A	N1-C6-N6	9.43	124.26	118.60
53	B5	1714	A	N1-C6-N6	9.43	124.26	118.60
52	B4	17	A	N1-C6-N6	9.43	124.26	118.60
53	B5	472	A	N1-C6-N6	9.43	124.26	118.60
53	B5	1900	A	N1-C6-N6	9.43	124.25	118.60
1	AA	475	A	N1-C6-N6	9.42	124.25	118.60
53	B5	51	A	N1-C6-N6	9.42	124.25	118.60
1	AA	1035	A	N1-C6-N6	9.42	124.25	118.60
51	B3	114	A	N1-C6-N6	9.42	124.25	118.60
53	B5	1280	C	O4'-C1'-N1	9.42	115.73	108.20
53	B5	3024	A	N1-C6-N6	9.42	124.25	118.60
53	B5	1656	A	N1-C6-N6	9.41	124.25	118.60
1	AA	11	A	N1-C6-N6	9.41	124.25	118.60
1	AA	483	A	N1-C6-N6	9.41	124.25	118.60
53	B5	2697	A	N1-C6-N6	9.41	124.25	118.60
53	B5	589	A	N1-C6-N6	9.41	124.25	118.60
1	AA	478	A	N1-C6-N6	9.41	124.25	118.60
53	B5	1637	A	N1-C6-N6	9.41	124.25	118.60
53	B5	2524	A	N1-C6-N6	9.41	124.25	118.60
1	AA	814	A	N1-C6-N6	9.41	124.24	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	887	A	N1-C6-N6	9.41	124.25	118.60
53	B5	527	A	N1-C6-N6	9.40	124.24	118.60
1	AA	46	A	N1-C6-N6	9.40	124.24	118.60
53	B5	751	A	N1-C6-N6	9.40	124.24	118.60
53	B5	49	A	N1-C6-N6	9.40	124.24	118.60
53	B5	3077	A	N1-C6-N6	9.40	124.24	118.60
1	AA	266	A	N1-C6-N6	9.40	124.24	118.60
53	B5	1515	A	N1-C6-N6	9.40	124.24	118.60
53	B5	2621	G	N1-C6-O6	9.40	125.54	119.90
53	B5	2785	A	N1-C6-N6	9.40	124.24	118.60
1	AA	446	A	N1-C6-N6	9.39	124.24	118.60
1	AA	544	A	N1-C6-N6	9.39	124.24	118.60
1	AA	619	A	N1-C6-N6	9.39	124.24	118.60
1	AA	1316	A	N1-C6-N6	9.39	124.24	118.60
53	B5	115	A	N1-C6-N6	9.39	124.24	118.60
53	B5	2125	A	N1-C6-N6	9.39	124.24	118.60
53	B5	3271	A	N1-C6-N6	9.39	124.24	118.60
1	AA	1598	A	N1-C6-N6	9.39	124.23	118.60
1	AA	1059	A	N1-C6-N6	9.39	124.23	118.60
53	B5	1179	A	N1-C6-N6	9.39	124.23	118.60
53	B5	1809	A	N1-C6-N6	9.39	124.23	118.60
52	B4	1	A	N1-C6-N6	9.38	124.23	118.60
53	B5	251	G	P-O3'-C3'	9.38	130.96	119.70
53	B5	1723	A	N1-C6-N6	9.38	124.23	118.60
53	B5	1749	A	N1-C6-N6	9.38	124.23	118.60
1	AA	240	U	O4'-C1'-N1	9.38	115.70	108.20
51	B3	27	A	N1-C6-N6	9.38	124.23	118.60
53	B5	106	A	N1-C6-N6	9.38	124.23	118.60
53	B5	1326	A	N1-C6-N6	9.38	124.23	118.60
53	B5	2324	A	N1-C6-N6	9.38	124.23	118.60
53	B5	2383	C	O4'-C1'-N1	9.38	115.70	108.20
1	AA	198	A	N1-C6-N6	9.38	124.22	118.60
1	AA	197	A	N1-C6-N6	9.37	124.22	118.60
53	B5	3110	C	O4'-C1'-N1	9.38	115.70	108.20
1	AA	210	A	N1-C6-N6	9.37	124.22	118.60
53	B5	2591	A	N1-C6-N6	9.37	124.22	118.60
19	A7	64	A	C4'-C3'-C2'	-9.37	93.23	102.60
53	B5	1136	A	N1-C6-N6	9.37	124.22	118.60
53	B5	1238	C	O4'-C1'-N1	9.37	115.69	108.20
53	B5	2801	A	N1-C6-N6	9.37	124.22	118.60
53	B5	2164	A	N1-C6-N6	9.37	124.22	118.60
53	B5	3032	A	N1-C6-N6	9.37	124.22	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	124	A	N1-C6-N6	9.37	124.22	118.60
1	AA	1571	A	N1-C6-N6	9.36	124.22	118.60
53	B5	691	A	N1-C6-N6	9.37	124.22	118.60
53	B5	841	A	N1-C6-N6	9.37	124.22	118.60
53	B5	3226	A	N1-C6-N6	9.37	124.22	118.60
1	AA	200	A	N1-C6-N6	9.36	124.22	118.60
1	AA	599	A	N1-C6-N6	9.36	124.22	118.60
1	AA	899	A	N1-C6-N6	9.36	124.22	118.60
1	AA	218	A	N1-C6-N6	9.36	124.22	118.60
1	AA	579	A	N1-C6-N6	9.36	124.21	118.60
19	A7	66	A	C4'-C3'-C2'	-9.36	93.24	102.60
53	B5	428	A	N1-C6-N6	9.36	124.21	118.60
1	AA	1180	A	N1-C6-N6	9.36	124.21	118.60
53	B5	1816	A	N1-C6-N6	9.36	124.21	118.60
1	AA	585	A	N1-C6-N6	9.35	124.21	118.60
1	AA	1040	A	N1-C6-N6	9.35	124.21	118.60
53	B5	174	C	O4'-C1'-N1	9.35	115.68	108.20
53	B5	1251	A	N1-C6-N6	9.35	124.21	118.60
53	B5	2647	A	N1-C6-N6	9.35	124.21	118.60
53	B5	391	A	N1-C6-N6	9.35	124.21	118.60
53	B5	2769	A	N1-C6-N6	9.35	124.21	118.60
53	B5	3330	A	N1-C6-N6	9.35	124.21	118.60
1	AA	19	A	N1-C6-N6	9.35	124.21	118.60
1	AA	213	A	N1-C6-N6	9.35	124.21	118.60
53	B5	883	A	N1-C6-N6	9.35	124.21	118.60
53	B5	1302	A	N1-C6-N6	9.35	124.21	118.60
53	B5	1256	G	N1-C6-O6	9.35	125.51	119.90
53	B5	504	A	N1-C6-N6	9.35	124.21	118.60
53	B5	1036	A	N1-C6-N6	9.35	124.21	118.60
53	B5	1270	A	N1-C6-N6	9.35	124.21	118.60
1	AA	807	A	N1-C6-N6	9.35	124.21	118.60
53	B5	2214	A	N1-C6-N6	9.35	124.21	118.60
53	B5	2808	A	N1-C6-N6	9.35	124.21	118.60
1	AA	225	A	N1-C6-N6	9.34	124.21	118.60
1	AA	1726	A	N1-C6-N6	9.34	124.21	118.60
53	B5	3339	A	N1-C6-N6	9.34	124.20	118.60
1	AA	1513	A	N1-C6-N6	9.34	124.20	118.60
53	B5	399	A	N1-C6-N6	9.34	124.20	118.60
53	B5	747	A	N1-C6-N6	9.34	124.20	118.60
1	AA	226	A	N1-C6-N6	9.33	124.20	118.60
1	AA	977	A	N1-C6-N6	9.33	124.20	118.60
52	B4	68	G	P-O3'-C3'	9.33	130.90	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1475	A	N1-C6-N6	9.33	124.20	118.60
1	AA	1751	A	N1-C6-N6	9.33	124.20	118.60
52	B4	88	A	N1-C6-N6	9.33	124.20	118.60
1	AA	673	A	N1-C6-N6	9.33	124.20	118.60
13	AN	16	LYS	CB-CA-C	-9.33	91.74	110.40
53	B5	1428	A	N1-C6-N6	9.33	124.20	118.60
1	AA	760	A	N1-C6-N6	9.33	124.20	118.60
53	B5	630	A	N1-C6-N6	9.33	124.20	118.60
53	B5	649	A	N1-C6-N6	9.33	124.20	118.60
53	B5	2936	A	N1-C6-N6	9.33	124.20	118.60
53	B5	3028	G	N1-C6-O6	9.33	125.50	119.90
53	B5	1884	A	N1-C6-N6	9.32	124.19	118.60
1	AA	1	U	O4'-C1'-N1	9.32	115.66	108.20
1	AA	792	U	OP1-P-OP2	-9.32	105.62	119.60
51	B3	33	U	O4'-C1'-N1	9.32	115.66	108.20
53	B5	57	A	N1-C6-N6	9.32	124.19	118.60
53	B5	2270	A	N1-C6-N6	9.32	124.19	118.60
53	B5	3270	A	N1-C6-N6	9.32	124.19	118.60
53	B5	3292	A	N1-C6-N6	9.32	124.19	118.60
53	B5	1752	A	N1-C6-N6	9.31	124.19	118.60
1	AA	812	A	N1-C6-N6	9.30	124.18	118.60
1	AA	1521	G	C6-C5-N7	-9.31	124.82	130.40
53	B5	3244	A	N1-C6-N6	9.30	124.18	118.60
19	A7	41	U	C2-N3-C4	-9.30	121.42	127.00
53	B5	1453	A	N1-C6-N6	9.30	124.18	118.60
53	B5	1814	A	N1-C6-N6	9.30	124.18	118.60
53	B5	478	A	N1-C6-N6	9.29	124.18	118.60
53	B5	1154	A	N1-C6-N6	9.29	124.18	118.60
1	AA	492	A	N1-C6-N6	9.29	124.18	118.60
53	B5	1424	C	O4'-C1'-N1	9.29	115.63	108.20
1	AA	112	A	N1-C6-N6	9.29	124.17	118.60
1	AA	1012	A	N1-C6-N6	9.29	124.17	118.60
53	B5	516	A	N1-C6-N6	9.29	124.17	118.60
53	B5	656	A	N1-C6-N6	9.29	124.17	118.60
53	B5	780	A	N1-C6-N6	9.29	124.17	118.60
1	AA	869	A	N1-C6-N6	9.28	124.17	118.60
53	B5	349	A	N1-C6-N6	9.28	124.17	118.60
53	B5	2352	A	N1-C6-N6	9.28	124.17	118.60
53	B5	2863	G	O4'-C1'-N9	9.28	115.63	108.20
53	B5	2995	A	N1-C6-N6	9.29	124.17	118.60
1	AA	950	A	N1-C6-N6	9.28	124.17	118.60
1	AA	806	A	N1-C6-N6	9.28	124.17	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1232	A	N1-C6-N6	9.28	124.17	118.60
53	B5	1919	G	N1-C6-O6	9.28	125.47	119.90
53	B5	771	A	N1-C6-N6	9.28	124.17	118.60
53	B5	1046	A	N1-C6-N6	9.28	124.17	118.60
53	B5	1244	A	N1-C6-N6	9.28	124.17	118.60
53	B5	1571	A	N1-C6-N6	9.28	124.17	118.60
53	B5	2231	C	C6-N1-C1'	-9.28	109.67	120.80
1	AA	428	A	N1-C6-N6	9.28	124.17	118.60
1	AA	753	A	N1-C6-N6	9.28	124.17	118.60
1	AA	1649	A	N1-C6-N6	9.28	124.17	118.60
53	B5	2276	G	N1-C6-O6	9.28	125.47	119.90
53	B5	2747	A	N1-C6-N6	9.28	124.17	118.60
53	B5	593	A	N1-C6-N6	9.27	124.16	118.60
53	B5	3006	A	N1-C6-N6	9.27	124.17	118.60
51	B3	105	A	N1-C6-N6	9.27	124.16	118.60
53	B5	2948	C	O4'-C1'-N1	9.27	115.62	108.20
1	AA	1419	A	N1-C6-N6	9.27	124.16	118.60
53	B5	2291	A	N1-C6-N6	9.27	124.16	118.60
1	AA	1252	A	N1-C6-N6	9.27	124.16	118.60
53	B5	2222	A	N1-C6-N6	9.26	124.16	118.60
1	AA	892	A	N1-C6-N6	9.26	124.16	118.60
53	B5	1130	A	N1-C6-N6	9.26	124.16	118.60
1	AA	746	A	N1-C6-N6	9.26	124.16	118.60
53	B5	929	A	N1-C6-N6	9.26	124.16	118.60
1	AA	179	A	N1-C6-N6	9.26	124.16	118.60
1	AA	1747	A	N1-C6-N6	9.26	124.15	118.60
53	B5	1011	A	N1-C6-N6	9.26	124.15	118.60
53	B5	1065	A	N1-C6-N6	9.26	124.15	118.60
53	B5	2930	A	N1-C6-N6	9.25	124.15	118.60
53	B5	398	A	N1-C6-N6	9.25	124.15	118.60
53	B5	858	A	N1-C6-N6	9.25	124.15	118.60
52	B4	126	A	N1-C6-N6	9.24	124.15	118.60
53	B5	2940	A	N1-C6-N6	9.24	124.15	118.60
53	B5	2353	G	N1-C6-O6	9.24	125.44	119.90
1	AA	1357	A	N1-C6-N6	9.24	124.14	118.60
53	B5	913	A	N1-C6-N6	9.24	124.14	118.60
53	B5	2439	A	N1-C6-N6	9.24	124.14	118.60
53	B5	2841	G	N1-C6-O6	9.24	125.44	119.90
53	B5	2667	A	N1-C6-N6	9.23	124.14	118.60
1	AA	520	A	N1-C6-N6	9.23	124.14	118.60
53	B5	3314	A	N1-C6-N6	9.23	124.14	118.60
1	AA	1469	A	N1-C6-N6	9.23	124.14	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1545	A	N1-C6-N6	9.23	124.14	118.60
53	B5	1521	G	N1-C6-O6	9.22	125.44	119.90
53	B5	1648	A	P-O3'-C3'	9.22	130.77	119.70
1	AA	1418	A	N1-C6-N6	9.22	124.13	118.60
1	AA	1029	A	N1-C6-N6	9.22	124.13	118.60
1	AA	1676	A	N1-C6-N6	9.22	124.13	118.60
53	B5	60	A	N1-C6-N6	9.22	124.13	118.60
53	B5	3295	A	N1-C6-N6	9.22	124.13	118.60
1	AA	1665	A	N1-C6-N6	9.22	124.13	118.60
53	B5	2657	A	N1-C6-N6	9.21	124.13	118.60
1	AA	1710	A	N1-C6-N6	9.21	124.13	118.60
53	B5	2929	C	O4'-C1'-N1	9.21	115.57	108.20
1	AA	601	A	N1-C6-N6	9.21	124.12	118.60
53	B5	1390	A	N1-C6-N6	9.21	124.12	118.60
53	B5	3122	A	N1-C6-N6	9.21	124.12	118.60
53	B5	647	A	N1-C6-N6	9.21	124.12	118.60
53	B5	709	A	N1-C6-N6	9.20	124.12	118.60
1	AA	331	A	N1-C6-N6	9.20	124.12	118.60
1	AA	844	A	N1-C6-N6	9.20	124.12	118.60
1	AA	1334	A	N1-C6-N6	9.20	124.12	118.60
1	AA	1795	A	N1-C6-N6	9.20	124.12	118.60
19	A7	52	U	N1-C2-N3	9.20	120.42	114.90
53	B5	99	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1583	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1799	A	N1-C6-N6	9.20	124.12	118.60
53	B5	395	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1150	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1263	A	N1-C6-N6	9.20	124.12	118.60
53	B5	2402	A	N1-C6-N6	9.20	124.12	118.60
51	B3	97	C	O4'-C1'-N1	9.20	115.56	108.20
53	B5	807	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1240	A	N1-C6-N6	9.20	124.12	118.60
53	B5	1286	A	N1-C6-N6	9.19	124.11	118.60
53	B5	746	A	N1-C6-N6	9.19	124.11	118.60
53	B5	3307	A	N1-C6-N6	9.19	124.11	118.60
19	A7	71	G	N1-C6-O6	-9.19	114.39	119.90
51	B3	99	A	N1-C6-N6	9.19	124.11	118.60
53	B5	40	A	N1-C6-N6	9.19	124.11	118.60
53	B5	109	A	N1-C6-N6	9.19	124.11	118.60
53	B5	485	A	N1-C6-N6	9.19	124.11	118.60
1	AA	1189	A	N1-C6-N6	9.18	124.11	118.60
1	AA	1748	A	N1-C6-N6	9.18	124.11	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1406	A	N1-C6-N6	9.18	124.11	118.60
1	AA	943	A	N1-C6-N6	9.18	124.11	118.60
53	B5	48	A	N1-C6-N6	9.18	124.11	118.60
53	B5	453	C	O4'-C1'-N1	9.18	115.54	108.20
1	AA	1084	A	N1-C6-N6	9.18	124.11	118.60
53	B5	1588	A	N1-C6-N6	9.18	124.11	118.60
53	B5	1913	A	N1-C6-N6	9.18	124.11	118.60
53	B5	1537	A	N1-C6-N6	9.17	124.10	118.60
1	AA	1192	A	N1-C6-N6	9.17	124.10	118.60
53	B5	1274	A	N1-C6-N6	9.17	124.10	118.60
53	B5	1346	G	N1-C6-O6	9.17	125.40	119.90
1	AA	881	A	N1-C6-N6	9.17	124.10	118.60
1	AA	1590	A	N1-C6-N6	9.17	124.10	118.60
19	A7	61	C	N3-C2-O2	-9.17	115.48	121.90
53	B5	199	A	N1-C6-N6	9.17	124.10	118.60
53	B5	2702	A	N1-C6-N6	9.17	124.10	118.60
53	B5	2233	A	N1-C6-N6	9.17	124.10	118.60
19	A7	69	U	O4'-C1'-N1	9.17	115.53	108.20
53	B5	1864	A	N1-C6-N6	9.17	124.10	118.60
1	AA	797	G	P-O5'-C5'	-9.16	106.24	120.90
53	B5	3034	C	O4'-C1'-N1	9.16	115.53	108.20
1	AA	545	A	N1-C6-N6	9.16	124.10	118.60
1	AA	566	C	O4'-C1'-N1	9.16	115.53	108.20
53	B5	175	C	O4'-C1'-N1	9.16	115.53	108.20
53	B5	2568	C	O4'-C1'-N1	9.16	115.53	108.20
1	AA	1293	A	N1-C6-N6	9.16	124.09	118.60
53	B5	130	A	N1-C6-N6	9.16	124.09	118.60
53	B5	1091	A	N1-C6-N6	9.15	124.09	118.60
53	B5	1301	A	N1-C6-N6	9.15	124.09	118.60
1	AA	762	A	N1-C6-N6	9.15	124.09	118.60
53	B5	1865	A	N1-C6-N6	9.15	124.09	118.60
1	AA	1574	A	N1-C6-N6	9.14	124.08	118.60
1	AA	1323	A	N1-C6-N6	9.14	124.08	118.60
53	B5	1384	U	O4'-C1'-N1	9.14	115.51	108.20
53	B5	2536	A	N1-C6-N6	9.14	124.08	118.60
53	B5	1612	A	N1-C6-N6	9.14	124.08	118.60
53	B5	1667	A	N1-C6-N6	9.14	124.08	118.60
53	B5	1369	A	N1-C6-N6	9.13	124.08	118.60
53	B5	1863	G	N1-C6-O6	9.13	125.38	119.90
53	B5	2680	A	N1-C6-N6	9.13	124.08	118.60
53	B5	711	A	P-O3'-C3'	9.13	130.66	119.70
53	B5	2911	A	N1-C6-N6	9.13	124.08	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	369	A	N1-C6-N6	9.13	124.08	118.60
53	B5	1859	A	N1-C6-N6	9.13	124.08	118.60
53	B5	3120	C	O4'-C1'-N1	9.13	115.50	108.20
1	AA	1557	A	N1-C6-N6	9.13	124.08	118.60
53	B5	2285	C	O4'-C1'-N1	9.13	115.50	108.20
53	B5	1771	C	O4'-C1'-N1	9.13	115.50	108.20
53	B5	2382	G	N1-C6-O6	9.13	125.38	119.90
53	B5	3005	A	N1-C6-N6	9.12	124.08	118.60
1	AA	1219	A	N1-C6-N6	9.12	124.07	118.60
53	B5	1053	A	N1-C6-N6	9.12	124.07	118.60
53	B5	1875	G	N1-C6-O6	9.12	125.37	119.90
1	AA	51	A	N1-C6-N6	9.12	124.07	118.60
53	B5	2372	A	N1-C6-N6	9.12	124.07	118.60
53	B5	3112	G	N1-C6-O6	9.12	125.37	119.90
51	B3	20	A	N1-C6-N6	9.12	124.07	118.60
53	B5	2213	A	N1-C6-N6	9.11	124.07	118.60
1	AA	809	A	N1-C6-N6	9.11	124.07	118.60
1	AA	1608	G	N1-C6-O6	9.11	125.37	119.90
53	B5	515	C	O4'-C1'-N1	9.11	115.49	108.20
53	B5	1477	A	N1-C6-N6	9.11	124.07	118.60
53	B5	2804	A	N1-C6-N6	9.11	124.07	118.60
53	B5	3103	A	N1-C6-N6	9.11	124.06	118.60
1	AA	1444	A	N1-C6-N6	9.11	124.06	118.60
53	B5	2494	A	N1-C6-N6	9.11	124.06	118.60
53	B5	63	A	N1-C6-N6	9.10	124.06	118.60
53	B5	967	A	N1-C6-N6	9.10	124.06	118.60
53	B5	3087	A	N1-C6-N6	9.10	124.06	118.60
1	AA	1004	A	N1-C6-N6	9.10	124.06	118.60
51	B3	64	A	N1-C6-N6	9.10	124.06	118.60
53	B5	1099	A	N1-C6-N6	9.10	124.06	118.60
1	AA	891	A	N1-C6-N6	9.09	124.05	118.60
53	B5	866	A	N1-C6-N6	9.09	124.05	118.60
53	B5	3342	A	N1-C6-N6	9.09	124.05	118.60
1	AA	464	A	N1-C6-N6	9.09	124.05	118.60
1	AA	1343	A	N1-C6-N6	9.09	124.05	118.60
1	AA	299	A	N1-C6-N6	9.08	124.05	118.60
53	B5	1047	A	N1-C6-N6	9.08	124.05	118.60
1	AA	481	A	N1-C6-N6	9.08	124.05	118.60
19	A7	29	A	O4'-C1'-N9	9.08	115.46	108.20
53	B5	3139	A	N1-C6-N6	9.08	124.05	118.60
1	AA	236	A	N1-C6-N6	9.08	124.05	118.60
1	AA	468	A	N1-C6-N6	9.08	124.05	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	35	A	N1-C6-N6	9.08	124.05	118.60
53	B5	2281	A	N1-C6-N6	9.08	124.05	118.60
19	A7	13	C	O4'-C1'-N1	9.08	115.46	108.20
51	B3	62	A	N1-C6-N6	9.08	124.05	118.60
1	AA	104	A	N1-C6-N6	9.07	124.04	118.60
53	B5	1433	A	N1-C6-N6	9.07	124.04	118.60
19	A7	71	G	C5-C6-N1	9.06	116.03	111.50
53	B5	962	A	N1-C6-N6	9.06	124.04	118.60
53	B5	1260	A	N1-C6-N6	9.06	124.04	118.60
53	B5	2182	A	N1-C6-N6	9.06	124.04	118.60
1	AA	400	A	P-O3'-C3'	9.06	130.57	119.70
1	AA	635	A	N1-C6-N6	9.06	124.04	118.60
53	B5	2244	A	N1-C6-N6	9.06	124.04	118.60
53	B5	3217	A	N1-C6-N6	9.06	124.04	118.60
53	B5	3130	A	N1-C6-N6	9.06	124.04	118.60
53	B5	2988	C	O4'-C1'-N1	9.06	115.44	108.20
53	B5	151	A	N1-C6-N6	9.05	124.03	118.60
53	B5	912	G	N1-C6-O6	9.05	125.33	119.90
1	AA	80	A	N1-C6-N6	9.04	124.03	118.60
1	AA	1705	A	N1-C6-N6	9.04	124.03	118.60
52	B4	104	A	N1-C6-N6	9.04	124.02	118.60
53	B5	622	A	N1-C6-N6	9.04	124.02	118.60
53	B5	1254	C	O4'-C1'-N1	9.04	115.43	108.20
53	B5	2853	A	N1-C6-N6	9.04	124.02	118.60
1	AA	580	A	N1-C6-N6	9.03	124.02	118.60
53	B5	993	A	N1-C6-N6	9.03	124.02	118.60
53	B5	951	A	N1-C6-N6	9.03	124.02	118.60
1	AA	256	A	N1-C6-N6	9.03	124.02	118.60
1	AA	518	A	N1-C6-N6	9.03	124.02	118.60
51	B3	13	A	N1-C6-N6	9.03	124.02	118.60
53	B5	1252	A	N1-C6-N6	9.03	124.02	118.60
1	AA	623	A	N1-C6-N6	9.03	124.02	118.60
1	AA	1179	A	N1-C6-N6	9.03	124.02	118.60
53	B5	266	A	N1-C6-N6	9.02	124.01	118.60
53	B5	351	A	N1-C6-N6	9.02	124.02	118.60
53	B5	977	U	P-O3'-C3'	9.02	130.53	119.70
53	B5	559	A	N1-C6-N6	9.02	124.01	118.60
53	B5	699	A	N1-C6-N6	9.02	124.01	118.60
53	B5	1437	C	O4'-C1'-N1	9.02	115.42	108.20
1	AA	1575	A	N1-C6-N6	9.02	124.01	118.60
19	A7	21	A	C4-C5-C6	-9.02	112.49	117.00
53	B5	205	C	O4'-C1'-N1	9.01	115.41	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1213	A	N1-C6-N6	9.01	124.01	118.60
53	B5	1797	A	N1-C6-N6	9.01	124.00	118.60
19	A7	45	G	C4-C5-C6	-9.01	113.40	118.80
53	B5	1685	C	O4'-C1'-N1	9.01	115.41	108.20
53	B5	2168	A	N1-C6-N6	9.01	124.00	118.60
1	AA	353	A	N1-C6-N6	9.00	124.00	118.60
1	AA	1204	A	N1-C6-N6	9.00	124.00	118.60
53	B5	3150	A	N1-C6-N6	9.00	124.00	118.60
1	AA	829	A	N1-C6-N6	9.00	124.00	118.60
1	AA	1322	A	N1-C6-N6	9.00	124.00	118.60
53	B5	1057	A	N1-C6-N6	9.00	124.00	118.60
53	B5	1930	A	N1-C6-N6	9.00	124.00	118.60
53	B5	1901	A	N1-C6-N6	9.00	124.00	118.60
53	B5	2142	A	N1-C6-N6	9.00	124.00	118.60
53	B5	2933	A	N1-C6-N6	9.00	124.00	118.60
1	AA	1372	A	N1-C6-N6	8.99	124.00	118.60
1	AA	1407	A	N1-C6-N6	8.99	124.00	118.60
1	AA	1479	C	O4'-C1'-N1	8.99	115.39	108.20
53	B5	674	G	N1-C6-O6	8.99	125.30	119.90
53	B5	1129	A	N1-C6-N6	8.99	124.00	118.60
53	B5	323	A	N1-C6-N6	8.99	124.00	118.60
53	B5	2461	A	N1-C6-N6	8.99	124.00	118.60
53	B5	2705	A	N1-C6-N6	8.99	124.00	118.60
53	B5	2546	C	O4'-C1'-N1	8.99	115.39	108.20
53	B5	1035	G	N1-C6-O6	8.99	125.29	119.90
1	AA	1066	A	N1-C6-N6	8.98	123.99	118.60
1	AA	1325	G	N1-C6-O6	8.98	125.29	119.90
53	B5	2305	G	N1-C6-O6	8.98	125.29	119.90
1	AA	1636	G	C4'-C3'-C2'	-8.98	93.62	102.60
19	A7	51	G	N3-C2-N2	-8.98	113.61	119.90
53	B5	1255	C	O4'-C1'-N1	8.98	115.38	108.20
53	B5	2356	A	N1-C6-N6	8.98	123.99	118.60
53	B5	2458	A	N1-C6-N6	8.98	123.99	118.60
53	B5	2709	C	O4'-C1'-N1	8.98	115.38	108.20
53	B5	848	A	N1-C6-N6	8.97	123.98	118.60
1	AA	1517	U	P-O3'-C3'	-8.97	108.93	119.70
1	AA	1595	A	N1-C6-N6	8.97	123.98	118.60
53	B5	2361	A	N1-C6-N6	8.97	123.98	118.60
51	B3	91	C	O4'-C1'-N1	8.97	115.38	108.20
53	B5	1449	A	N1-C6-N6	8.96	123.98	118.60
53	B5	1482	A	N1-C6-N6	8.96	123.98	118.60
53	B5	193	C	O4'-C1'-N1	8.96	115.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	438	A	N1-C6-N6	8.96	123.98	118.60
53	B5	1666	G	O4'-C1'-N9	8.96	115.37	108.20
53	B5	95	A	N1-C6-N6	8.96	123.98	118.60
1	AA	147	A	N1-C6-N6	8.96	123.97	118.60
53	B5	1874	A	N1-C6-N6	8.96	123.97	118.60
19	A7	13	C	N1-C2-O2	8.96	124.27	118.90
1	AA	990	G	N1-C6-O6	8.96	125.27	119.90
53	B5	1481	A	N1-C6-N6	8.96	123.97	118.60
53	B5	1839	A	N1-C6-N6	8.95	123.97	118.60
53	B5	88	A	N1-C6-N6	8.95	123.97	118.60
1	AA	103	A	N1-C6-N6	8.94	123.97	118.60
19	A7	36	A	C6-N1-C2	8.94	123.97	118.60
19	A7	52	U	N3-C2-O2	-8.95	115.94	122.20
53	B5	816	A	N1-C6-N6	8.95	123.97	118.60
53	B5	1525	G	N1-C6-O6	8.94	125.27	119.90
53	B5	1632	A	N1-C6-N6	8.94	123.97	118.60
53	B5	2107	A	N1-C6-N6	8.94	123.96	118.60
53	B5	366	A	N1-C6-N6	8.94	123.96	118.60
53	B5	1520	G	N1-C6-O6	8.93	125.26	119.90
51	B3	22	A	N1-C6-N6	8.93	123.96	118.60
53	B5	2196	C	O4'-C1'-N1	8.93	115.34	108.20
53	B5	3167	A	N1-C6-N6	8.93	123.96	118.60
1	AA	1521	G	O5'-P-OP2	8.93	121.41	110.70
53	B5	2696	A	N1-C6-N6	8.93	123.96	118.60
19	A7	69	U	C2-N3-C4	-8.93	121.64	127.00
53	B5	837	A	N1-C6-N6	8.93	123.96	118.60
53	B5	1317	A	N1-C6-N6	8.93	123.95	118.60
53	B5	801	A	N1-C6-N6	8.92	123.95	118.60
51	B3	115	A	N1-C6-N6	8.92	123.95	118.60
53	B5	209	A	N1-C6-N6	8.92	123.95	118.60
53	B5	1800	A	N1-C6-N6	8.92	123.95	118.60
53	B5	336	A	N1-C6-N6	8.91	123.95	118.60
1	AA	93	A	N1-C6-N6	8.91	123.95	118.60
53	B5	372	A	N1-C6-N6	8.91	123.95	118.60
53	B5	537	A	N1-C6-N6	8.91	123.95	118.60
53	B5	1899	G	N1-C6-O6	8.91	125.25	119.90
53	B5	3141	A	N1-C6-N6	8.91	123.95	118.60
51	B3	11	A	N1-C6-N6	8.91	123.94	118.60
53	B5	1546	A	N1-C6-N6	8.91	123.94	118.60
53	B5	2758	A	N1-C6-N6	8.91	123.94	118.60
53	B5	1363	A	N1-C6-N6	8.90	123.94	118.60
53	B5	3161	C	O4'-C1'-N1	8.90	115.32	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	306	A	N1-C6-N6	8.90	123.94	118.60
53	B5	839	C	O4'-C1'-N1	8.90	115.32	108.20
53	B5	3062	G	N1-C6-O6	8.90	125.24	119.90
52	B4	59	A	N1-C6-N6	8.90	123.94	118.60
53	B5	1275	C	O4'-C1'-N1	8.90	115.32	108.20
1	AA	316	A	N1-C6-N6	8.90	123.94	118.60
51	B3	46	A	N1-C6-N6	8.89	123.94	118.60
53	B5	3050	U	O4'-C1'-N1	8.89	115.31	108.20
19	A7	12	U	C5-C6-N1	-8.88	118.26	122.70
1	AA	535	A	N1-C6-N6	8.88	123.92	118.60
1	AA	1518	U	P-O3'-C3'	-8.87	109.06	119.70
53	B5	3053	G	N1-C6-O6	8.87	125.22	119.90
1	AA	592	A	N1-C6-N6	8.87	123.92	118.60
53	B5	728	G	N1-C6-O6	8.87	125.22	119.90
53	B5	2467	G	N1-C6-O6	8.87	125.22	119.90
1	AA	1764	A	N1-C6-N6	8.87	123.92	118.60
52	B4	65	A	N1-C6-N6	8.86	123.92	118.60
53	B5	2242	A	N1-C6-N6	8.86	123.92	118.60
53	B5	1366	A	N1-C6-N6	8.86	123.92	118.60
53	B5	1043	C	O4'-C1'-N1	8.86	115.28	108.20
53	B5	1500	G	N1-C6-O6	8.85	125.21	119.90
53	B5	1183	C	O4'-C1'-N1	8.85	115.28	108.20
53	B5	1776	G	N1-C6-O6	8.85	125.21	119.90
53	B5	156	G	N1-C6-O6	8.85	125.21	119.90
53	B5	1922	A	N1-C6-N6	8.85	123.91	118.60
53	B5	1334	U	O4'-C1'-N1	8.85	115.28	108.20
53	B5	1613	A	N1-C6-N6	8.85	123.91	118.60
1	AA	769	A	N1-C6-N6	8.84	123.91	118.60
19	A7	69	U	N3-C2-O2	-8.84	116.01	122.20
53	B5	108	A	N1-C6-N6	8.84	123.91	118.60
1	AA	436	A	N1-C6-N6	8.84	123.91	118.60
1	AA	1271	A	N1-C6-N6	8.84	123.91	118.60
19	A7	36	A	N1-C2-N3	-8.84	124.88	129.30
53	B5	2562	G	N1-C6-O6	8.84	125.20	119.90
52	B4	154	C	O4'-C1'-N1	8.83	115.27	108.20
53	B5	804	C	O4'-C1'-N1	8.83	115.27	108.20
53	B5	2449	A	N1-C6-N6	8.83	123.90	118.60
53	B5	3172	G	N1-C6-O6	8.83	125.20	119.90
1	AA	1127	G	N1-C6-O6	8.83	125.20	119.90
53	B5	1729	A	N1-C6-N6	8.83	123.90	118.60
53	B5	1779	C	O4'-C1'-N1	8.83	115.26	108.20
53	B5	2819	A	N1-C6-N6	8.83	123.90	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	30	G	N9-C4-C5	8.82	108.93	105.40
53	B5	676	G	N1-C6-O6	8.82	125.19	119.90
53	B5	1826	C	O4'-C1'-N1	8.82	115.26	108.20
53	B5	1887	A	N1-C6-N6	8.82	123.89	118.60
53	B5	198	A	N1-C6-N6	8.82	123.89	118.60
53	B5	394	G	N1-C6-O6	8.82	125.19	119.90
53	B5	1217	A	N1-C6-N6	8.81	123.89	118.60
53	B5	1658	G	N1-C6-O6	8.81	125.18	119.90
53	B5	2780	A	N1-C6-N6	8.80	123.88	118.60
1	AA	1018	A	N1-C6-N6	8.80	123.88	118.60
53	B5	1184	A	N1-C6-N6	8.80	123.88	118.60
51	B3	104	C	O4'-C1'-N1	8.79	115.23	108.20
53	B5	66	A	N1-C6-N6	8.79	123.88	118.60
53	B5	729	C	O4'-C1'-N1	8.79	115.23	108.20
53	B5	1918	C	O4'-C1'-N1	8.78	115.23	108.20
1	AA	55	A	N1-C6-N6	8.78	123.87	118.60
53	B5	73	C	O4'-C1'-N1	8.78	115.22	108.20
1	AA	346	G	N1-C6-O6	8.78	125.17	119.90
1	AA	1198	A	N1-C6-N6	8.78	123.86	118.60
53	B5	2404	A	N1-C6-N6	8.78	123.86	118.60
1	AA	1335	C	O4'-C1'-N1	8.77	115.22	108.20
53	B5	20	A	N1-C6-N6	8.77	123.86	118.60
53	B5	127	G	N1-C6-O6	8.77	125.16	119.90
1	AA	460	A	N1-C6-N6	8.76	123.86	118.60
53	B5	290	G	N1-C6-O6	8.76	125.16	119.90
53	B5	2831	G	N1-C6-O6	8.76	125.16	119.90
1	AA	1520	U	C4'-C3'-C2'	8.76	111.36	102.60
19	A7	30	G	N3-C4-C5	-8.76	124.22	128.60
51	B3	40	C	O4'-C1'-N1	8.76	115.21	108.20
1	AA	1134	A	N1-C6-N6	8.75	123.85	118.60
1	AA	1019	A	N1-C6-N6	8.74	123.85	118.60
1	AA	1515	U	P-O3'-C3'	-8.74	109.21	119.70
53	B5	253	A	N1-C6-N6	8.74	123.85	118.60
53	B5	2525	G	N1-C6-O6	8.74	125.14	119.90
19	A7	18	G	O4'-C1'-N9	8.73	115.19	108.20
53	B5	1201	C	O4'-C1'-N1	8.73	115.19	108.20
1	AA	1627	G	N1-C6-O6	8.73	125.14	119.90
53	B5	2308	C	O4'-C1'-N1	8.73	115.19	108.20
53	B5	2686	A	N1-C6-N6	8.73	123.84	118.60
53	B5	2638	C	O4'-C1'-N1	8.73	115.18	108.20
1	AA	989	C	O4'-C1'-N1	8.73	115.18	108.20
53	B5	3261	C	O4'-C1'-N1	8.73	115.18	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	639	G	N1-C6-O6	8.72	125.13	119.90
53	B5	680	G	C5-C6-O6	-8.72	123.36	128.60
53	B5	3313	U	O4'-C1'-N1	8.72	115.18	108.20
53	B5	2459	A	N1-C6-N6	8.72	123.83	118.60
53	B5	2651	G	P-O3'-C3'	8.72	130.17	119.70
53	B5	15	C	O4'-C1'-N1	8.72	115.18	108.20
1	AA	872	G	N1-C6-O6	8.72	125.13	119.90
53	B5	321	C	O4'-C1'-N1	8.72	115.17	108.20
1	AA	315	A	N1-C6-N6	8.71	123.83	118.60
53	B5	159	A	N1-C6-N6	8.71	123.82	118.60
53	B5	1833	G	N1-C6-O6	8.71	125.12	119.90
53	B5	3038	U	O4'-C1'-N1	8.71	115.17	108.20
1	AA	451	A	N1-C6-N6	8.70	123.82	118.60
53	B5	1278	A	N1-C6-N6	8.70	123.82	118.60
1	AA	970	A	N1-C6-N6	8.70	123.82	118.60
53	B5	2150	G	N1-C6-O6	8.70	125.12	119.90
19	A7	36	A	N1-C6-N6	-8.69	113.39	118.60
53	B5	2856	G	N1-C6-O6	8.69	125.11	119.90
53	B5	2296	A	N1-C6-N6	8.69	123.81	118.60
53	B5	554	A	N1-C6-N6	8.69	123.81	118.60
53	B5	151	A	O4'-C1'-N9	8.68	115.14	108.20
53	B5	1828	A	N1-C6-N6	8.68	123.81	118.60
53	B5	2934	A	N1-C6-N6	8.68	123.81	118.60
1	AA	918	A	N1-C6-N6	8.68	123.81	118.60
1	AA	1197	G	N1-C6-O6	8.68	125.11	119.90
53	B5	384	A	N1-C6-N6	8.68	123.81	118.60
53	B5	440	A	N1-C6-N6	8.68	123.81	118.60
53	B5	1383	G	N1-C6-O6	8.68	125.11	119.90
53	B5	3088	G	N1-C6-O6	8.68	125.11	119.90
53	B5	2108	C	O4'-C1'-N1	8.68	115.14	108.20
53	B5	2313	A	N1-C6-N6	8.68	123.81	118.60
53	B5	2384	A	N1-C6-N6	8.67	123.80	118.60
53	B5	2976	A	N1-C6-N6	8.67	123.80	118.60
53	B5	3052	G	N1-C6-O6	8.67	125.10	119.90
17	AR	164	ASP	CB-CA-C	8.67	127.74	110.40
53	B5	2852	C	O4'-C1'-N1	8.67	115.13	108.20
1	AA	473	A	N1-C6-N6	8.66	123.80	118.60
53	B5	1947	G	O4'-C1'-N9	8.66	115.13	108.20
53	B5	2111	G	N1-C6-O6	8.66	125.10	119.90
1	AA	1110	A	N1-C6-N6	8.66	123.79	118.60
53	B5	1421	G	N1-C6-O6	8.66	125.09	119.90
53	B5	2708	C	O4'-C1'-N1	8.66	115.13	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	221	A	N1-C6-N6	8.65	123.79	118.60
53	B5	2309	A	N1-C6-N6	8.65	123.79	118.60
53	B5	3275	A	N1-C6-N6	8.65	123.79	118.60
1	AA	742	U	O4'-C1'-N1	8.65	115.12	108.20
1	AA	1024	A	N1-C6-N6	8.65	123.79	118.60
53	B5	1031	C	O4'-C1'-N1	8.65	115.12	108.20
53	B5	1318	A	N1-C6-N6	8.65	123.79	118.60
53	B5	2110	G	N1-C6-O6	8.65	125.09	119.90
1	AA	26	A	N1-C6-N6	8.64	123.79	118.60
1	AA	312	A	P-O3'-C3'	8.64	130.07	119.70
53	B5	259	C	O4'-C1'-N1	8.64	115.11	108.20
53	B5	1827	C	O4'-C1'-N1	8.64	115.11	108.20
53	B5	2420	C	O4'-C1'-N1	8.64	115.11	108.20
53	B5	2177	G	N1-C6-O6	8.63	125.08	119.90
51	B3	74	A	N1-C6-N6	8.62	123.78	118.60
53	B5	950	G	N1-C6-O6	8.62	125.07	119.90
19	A7	3	G	N3-C4-C5	-8.62	124.29	128.60
53	B5	2619	G	N1-C6-O6	8.62	125.07	119.90
53	B5	1257	C	O4'-C1'-N1	8.61	115.09	108.20
53	B5	595	A	N1-C6-N6	8.61	123.77	118.60
1	AA	1568	A	N1-C6-N6	8.61	123.77	118.60
53	B5	3152	U	O4'-C1'-N1	8.61	115.09	108.20
53	B5	1282	G	N1-C6-O6	8.61	125.06	119.90
53	B5	494	G	P-O3'-C3'	8.59	130.01	119.70
53	B5	2715	A	N1-C6-N6	8.59	123.75	118.60
53	B5	3225	C	O4'-C1'-N1	8.58	115.07	108.20
53	B5	1718	G	N1-C6-O6	8.58	125.05	119.90
53	B5	3061	G	N1-C6-O6	8.58	125.05	119.90
53	B5	132	C	O4'-C1'-N1	8.57	115.06	108.20
1	AA	47	A	P-O3'-C3'	8.57	129.99	119.70
1	AA	857	U	O4'-C1'-N1	8.57	115.06	108.20
53	B5	2126	A	N1-C6-N6	8.57	123.74	118.60
1	AA	865	A	P-O5'-C5'	-8.57	107.19	120.90
53	B5	815	G	N1-C6-O6	8.57	125.04	119.90
19	A7	44	A	C5'-C4'-C3'	-8.56	102.30	116.00
19	A7	57	G	C3'-C2'-C1'	8.56	108.35	101.50
53	B5	116	A	N1-C6-N6	8.56	123.74	118.60
53	B5	135	C	O4'-C1'-N1	8.56	115.05	108.20
53	B5	3004	C	O4'-C1'-N1	8.56	115.05	108.20
53	B5	2216	G	N1-C6-O6	8.55	125.03	119.90
53	B5	2192	C	O4'-C1'-N1	8.55	115.04	108.20
7	AH	61	ILE	CA-CB-CG1	-8.54	94.77	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1104	G	N1-C6-O6	8.54	125.03	119.90
52	B4	15	G	N1-C6-O6	8.54	125.03	119.90
53	B5	94	G	N1-C6-O6	8.54	125.02	119.90
51	B3	1	G	N1-C6-O6	8.54	125.02	119.90
53	B5	907	G	N1-C6-O6	8.54	125.02	119.90
53	B5	3037	U	O4'-C1'-N1	8.54	115.03	108.20
53	B5	1902	G	N1-C6-O6	8.53	125.02	119.90
53	B5	2117	A	N1-C6-N6	8.53	123.72	118.60
1	AA	1457	C	O4'-C1'-N1	8.53	115.02	108.20
53	B5	2265	C	O4'-C1'-N1	8.53	115.02	108.20
1	AA	474	A	N1-C6-N6	8.52	123.71	118.60
52	B4	112	U	O4'-C1'-N1	8.52	115.02	108.20
53	B5	2448	G	O4'-C1'-N9	8.52	115.02	108.20
53	B5	2823	G	N1-C6-O6	8.51	125.01	119.90
1	AA	992	A	N1-C6-N6	8.51	123.70	118.60
19	A7	47	U	C1'-O4'-C4'	-8.51	103.10	109.90
53	B5	1232	C	O4'-C1'-N1	8.51	115.00	108.20
53	B5	2906	C	O4'-C1'-N1	8.51	115.00	108.20
1	AA	309	C	O4'-C1'-N1	8.50	115.00	108.20
53	B5	477	A	N1-C6-N6	8.50	123.70	118.60
53	B5	1049	C	O4'-C1'-N1	8.50	115.00	108.20
53	B5	2237	C	O4'-C1'-N1	8.50	115.00	108.20
1	AA	973	A	N1-C6-N6	8.50	123.70	118.60
52	B4	11	C	O4'-C1'-N1	8.50	115.00	108.20
1	AA	1607	U	O4'-C1'-N1	8.49	115.00	108.20
1	AA	50	C	O4'-C1'-N1	8.49	114.99	108.20
1	AA	1499	C	O4'-C1'-N1	8.49	114.99	108.20
53	B5	3350	C	O4'-C1'-N1	8.49	114.99	108.20
1	AA	567	A	N1-C6-N6	8.48	123.69	118.60
53	B5	295	A	N1-C6-N6	8.48	123.69	118.60
53	B5	373	A	N1-C6-N6	8.48	123.69	118.60
53	B5	1140	G	N1-C6-O6	8.48	124.99	119.90
53	B5	2489	C	O4'-C1'-N1	8.48	114.98	108.20
53	B5	2331	C	O4'-C1'-N1	8.48	114.98	108.20
53	B5	2664	C	O4'-C1'-N1	8.48	114.98	108.20
53	B5	3116	G	N1-C6-O6	8.48	124.99	119.90
19	A7	62	A	C5-N7-C8	-8.47	99.66	103.90
53	B5	3125	U	O4'-C1'-N1	8.47	114.98	108.20
52	B4	142	C	O4'-C1'-N1	8.47	114.98	108.20
1	AA	168	A	N1-C6-N6	8.47	123.68	118.60
1	AA	867	G	C4'-C3'-C2'	8.47	111.07	102.60
53	B5	54	C	O4'-C1'-N1	8.47	114.97	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1748	G	N1-C6-O6	8.47	124.98	119.90
53	B5	849	C	O4'-C1'-N1	8.47	114.97	108.20
53	B5	196	G	N1-C6-O6	8.46	124.98	119.90
53	B5	3129	A	N1-C6-N6	8.47	123.68	118.60
1	AA	568	G	N1-C6-O6	8.46	124.98	119.90
1	AA	1354	A	O4'-C1'-N9	8.46	114.97	108.20
19	A7	45	G	N7-C8-N9	8.46	117.33	113.10
1	AA	1548	A	P-O5'-C5'	-8.46	107.37	120.90
53	B5	637	C	O4'-C1'-N1	8.46	114.97	108.20
53	B5	2208	A	N1-C6-N6	8.46	123.67	118.60
53	B5	2476	C	O4'-C1'-N1	8.46	114.97	108.20
1	AA	1070	G	N1-C6-O6	8.45	124.97	119.90
1	AA	412	A	N1-C6-N6	8.45	123.67	118.60
19	A7	21	A	C5'-C4'-O4'	8.45	119.24	109.10
52	B4	141	C	O4'-C1'-N1	8.45	114.96	108.20
1	AA	1794	C	O4'-C1'-N1	8.45	114.96	108.20
53	B5	3274	G	N1-C6-O6	8.44	124.97	119.90
19	A7	24	G	C2-N3-C4	8.44	116.12	111.90
53	B5	2210	G	N1-C6-O6	8.43	124.96	119.90
53	B5	953	G	N1-C6-O6	8.43	124.95	119.90
52	B4	130	C	O4'-C1'-N1	8.42	114.94	108.20
19	A7	36	A	C8-N9-C4	-8.41	102.43	105.80
1	AA	856	A	N3-C4-C5	-8.41	120.91	126.80
52	B4	57	C	O4'-C1'-N1	8.41	114.93	108.20
53	B5	1117	G	N1-C6-O6	8.41	124.95	119.90
53	B5	2510	U	O4'-C1'-N1	8.41	114.93	108.20
53	B5	3112	G	C5-C6-O6	-8.41	123.55	128.60
1	AA	591	A	N1-C6-N6	8.41	123.64	118.60
19	A7	43	G	O4'-C1'-N9	8.41	114.92	108.20
53	B5	2299	A	N1-C6-N6	8.41	123.64	118.60
1	AA	587	C	O4'-C1'-N1	8.40	114.92	108.20
53	B5	1790	G	N1-C6-O6	8.40	124.94	119.90
53	B5	3091	A	N1-C6-N6	8.40	123.64	118.60
1	AA	176	C	O4'-C1'-N1	8.40	114.92	108.20
53	B5	1127	G	N1-C6-O6	8.40	124.94	119.90
1	AA	1071	G	N1-C6-O6	8.40	124.94	119.90
1	AA	1634	C	P-O3'-C3'	-8.40	109.62	119.70
53	B5	2263	C	O4'-C1'-N1	8.39	114.91	108.20
53	B5	2329	C	O4'-C1'-N1	8.39	114.91	108.20
53	B5	96	G	N1-C6-O6	8.39	124.93	119.90
53	B5	2928	C	O4'-C1'-N1	8.38	114.91	108.20
1	AA	1079	C	O4'-C1'-N1	8.38	114.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	64	G	N1-C6-O6	8.38	124.93	119.90
53	B5	2566	C	O4'-C1'-N1	8.38	114.90	108.20
53	B5	3338	C	O4'-C1'-N1	8.38	114.90	108.20
53	B5	1161	G	N1-C6-O6	8.38	124.93	119.90
53	B5	2630	C	O4'-C1'-N1	8.38	114.90	108.20
53	B5	3332	U	P-O3'-C3'	8.38	129.75	119.70
1	AA	319	U	O4'-C1'-N1	8.38	114.90	108.20
53	B5	133	U	P-O3'-C3'	8.38	129.75	119.70
53	B5	435	C	O4'-C1'-N1	8.38	114.90	108.20
1	AA	1425	G	N1-C6-O6	8.37	124.92	119.90
53	B5	695	C	O4'-C1'-N1	8.37	114.90	108.20
51	B3	88	G	N1-C6-O6	8.37	124.92	119.90
53	B5	2755	C	O4'-C1'-N1	8.37	114.89	108.20
53	B5	2853	A	O4'-C1'-N9	8.37	114.89	108.20
19	A7	71	G	C6-C5-N7	8.37	135.42	130.40
53	B5	826	G	N1-C6-O6	8.37	124.92	119.90
53	B5	2845	A	O4'-C1'-N9	8.37	114.89	108.20
53	B5	3033	A	N1-C6-N6	8.36	123.62	118.60
1	AA	1520	U	O4'-C4'-C3'	-8.36	95.64	104.00
1	AA	1093	C	O4'-C1'-N1	8.36	114.89	108.20
53	B5	678	G	N1-C6-O6	8.36	124.91	119.90
19	A7	27	C	C4'-C3'-C2'	-8.35	94.25	102.60
53	B5	2762	A	N1-C6-N6	8.35	123.61	118.60
53	B5	2332	A	N1-C6-N6	8.35	123.61	118.60
53	B5	1447	G	N1-C6-O6	8.35	124.91	119.90
1	AA	1587	C	O4'-C1'-N1	8.35	114.88	108.20
51	B3	75	G	C5-C6-O6	-8.34	123.59	128.60
53	B5	1917	C	O4'-C1'-N1	8.34	114.88	108.20
53	B5	1947	G	P-O3'-C3'	8.34	129.71	119.70
1	AA	625	C	O4'-C1'-N1	8.34	114.87	108.20
53	B5	1359	C	O4'-C1'-N1	8.34	114.87	108.20
53	B5	3248	C	O4'-C1'-N1	8.34	114.87	108.20
53	B5	787	G	N1-C6-O6	8.34	124.90	119.90
53	B5	1107	C	O4'-C1'-N1	8.34	114.87	108.20
53	B5	1735	G	N1-C6-O6	8.34	124.90	119.90
53	B5	1139	G	N1-C6-O6	8.34	124.90	119.90
53	B5	2845	A	N1-C6-N6	8.34	123.60	118.60
19	A7	43	G	N3-C2-N2	-8.33	114.07	119.90
53	B5	1487	G	N1-C6-O6	8.33	124.90	119.90
53	B5	1423	C	O4'-C1'-N1	8.33	114.87	108.20
53	B5	2812	C	O4'-C1'-N1	8.33	114.86	108.20
53	B5	3190	C	O4'-C1'-N1	8.33	114.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	68	C	O4'-C1'-N1	8.33	114.86	108.20
1	AA	866	G	P-O3'-C3'	-8.33	109.71	119.70
1	AA	1075	C	O4'-C1'-N1	8.32	114.86	108.20
53	B5	727	G	N1-C6-O6	8.32	124.89	119.90
53	B5	840	C	O4'-C1'-N1	8.32	114.86	108.20
53	B5	1414	G	N1-C6-O6	8.32	124.89	119.90
53	B5	2963	C	O4'-C1'-N1	8.32	114.85	108.20
1	AA	564	G	N1-C6-O6	8.31	124.89	119.90
19	A7	2	C	C5-C6-N1	-8.31	116.84	121.00
1	AA	1701	C	O4'-C1'-N1	8.31	114.85	108.20
53	B5	1393	A	N1-C6-N6	8.31	123.59	118.60
53	B5	2678	A	N1-C6-N6	8.31	123.59	118.60
1	AA	1521	G	N1-C2-N3	-8.31	118.91	123.90
52	B4	71	G	O4'-C1'-N9	8.31	114.85	108.20
53	B5	572	A	N1-C6-N6	8.31	123.58	118.60
53	B5	3102	G	N1-C6-O6	8.31	124.89	119.90
52	B4	137	C	O4'-C1'-N1	8.31	114.84	108.20
19	A7	59	U	C6-N1-C2	-8.30	116.02	121.00
53	B5	1420	C	O4'-C1'-N1	8.30	114.84	108.20
1	AA	858	G	N3-C4-N9	8.30	130.98	126.00
1	AA	1472	G	N1-C6-O6	8.30	124.88	119.90
53	B5	1387	G	N1-C6-O6	8.30	124.88	119.90
53	B5	609	G	N1-C6-O6	8.30	124.88	119.90
53	B5	1216	C	O4'-C1'-N1	8.30	114.84	108.20
53	B5	539	C	O4'-C1'-N1	8.30	114.84	108.20
53	B5	1653	G	N1-C6-O6	8.29	124.88	119.90
53	B5	1157	G	N1-C6-O6	8.29	124.88	119.90
53	B5	2651	G	N1-C6-O6	8.29	124.88	119.90
53	B5	2623	G	N1-C6-O6	8.29	124.87	119.90
53	B5	2245	C	O4'-C1'-N1	8.29	114.83	108.20
19	A7	44	A	N7-C8-N9	8.29	117.94	113.80
53	B5	2625	C	O4'-C1'-N1	8.29	114.83	108.20
53	B5	906	A	N1-C6-N6	8.29	123.57	118.60
53	B5	971	C	O4'-C1'-N1	8.28	114.83	108.20
1	AA	501	U	P-O3'-C3'	8.28	129.64	119.70
53	B5	809	G	N1-C6-O6	8.28	124.87	119.90
53	B5	1466	G	N1-C6-O6	8.28	124.87	119.90
53	B5	2496	C	O4'-C1'-N1	8.28	114.83	108.20
1	AA	1067	C	O4'-C1'-N1	8.28	114.82	108.20
1	AA	1277	G	N1-C6-O6	8.28	124.87	119.90
53	B5	2323	G	N1-C6-O6	8.28	124.87	119.90
53	B5	2682	C	O4'-C1'-N1	8.28	114.82	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	15	G	C5-C6-O6	8.28	133.56	128.60
53	B5	1360	C	O4'-C1'-N1	8.27	114.82	108.20
53	B5	1365	G	N1-C6-O6	8.27	124.86	119.90
53	B5	2469	G	N1-C6-O6	8.27	124.86	119.90
51	B3	26	C	O4'-C1'-N1	8.27	114.81	108.20
51	B3	50	U	O4'-C1'-N1	8.27	114.81	108.20
52	B4	68	G	N1-C6-O6	8.27	124.86	119.90
51	B3	113	C	O4'-C1'-N1	8.26	114.81	108.20
53	B5	425	G	N1-C6-O6	8.26	124.86	119.90
53	B5	1900	A	P-O3'-C3'	8.26	129.61	119.70
53	B5	2151	C	O4'-C1'-N1	8.26	114.81	108.20
53	B5	2465	G	N1-C6-O6	8.26	124.86	119.90
53	B5	2276	G	C5-C6-O6	-8.26	123.65	128.60
53	B5	1190	A	N1-C6-N6	8.25	123.55	118.60
53	B5	2158	A	N1-C6-N6	8.25	123.55	118.60
53	B5	3228	C	O4'-C1'-N1	8.25	114.80	108.20
53	B5	3264	G	N1-C6-O6	8.25	124.85	119.90
1	AA	174	U	O4'-C1'-N1	8.25	114.80	108.20
53	B5	272	G	O4'-C1'-N9	8.25	114.80	108.20
19	A7	63	C	C1'-O4'-C4'	-8.24	103.31	109.90
53	B5	2297	U	O4'-C1'-N1	8.24	114.80	108.20
53	B5	1719	G	N1-C6-O6	8.24	124.84	119.90
53	B5	3030	G	N1-C6-O6	8.24	124.85	119.90
53	B5	824	C	O4'-C1'-N1	8.24	114.79	108.20
53	B5	1845	G	N1-C6-O6	8.24	124.84	119.90
53	B5	2545	C	O4'-C1'-N1	8.24	114.79	108.20
53	B5	3294	A	N1-C6-N6	8.24	123.54	118.60
53	B5	910	G	N1-C6-O6	8.24	124.84	119.90
53	B5	1186	G	N1-C6-O6	8.24	124.84	119.90
53	B5	1870	C	O4'-C1'-N1	8.24	114.79	108.20
53	B5	1251	A	O4'-C1'-N9	8.23	114.79	108.20
53	B5	968	G	N1-C6-O6	8.23	124.84	119.90
53	B5	696	C	O4'-C1'-N1	8.23	114.78	108.20
53	B5	522	A	N1-C6-N6	8.23	123.54	118.60
53	B5	2511	A	O4'-C1'-N9	8.23	114.78	108.20
19	A7	74	C	O4'-C1'-N1	8.22	114.78	108.20
53	B5	2704	A	N1-C6-N6	8.22	123.53	118.60
53	B5	2382	G	P-O3'-C3'	8.22	129.56	119.70
52	B4	78	G	N1-C6-O6	8.22	124.83	119.90
53	B5	2163	C	O4'-C1'-N1	8.22	114.78	108.20
1	AA	1581	A	N1-C6-N6	8.21	123.53	118.60
53	B5	714	G	N1-C6-O6	8.21	124.83	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2783	U	O4'-C1'-N1	8.22	114.77	108.20
53	B5	2849	C	O4'-C1'-N1	8.21	114.77	108.20
1	AA	1638	C	OP1-P-OP2	-8.21	107.28	119.60
51	B3	48	U	O4'-C1'-N1	8.21	114.77	108.20
53	B5	2407	C	O4'-C1'-N1	8.21	114.77	108.20
1	AA	307	G	P-O3'-C3'	8.21	129.55	119.70
53	B5	312	C	O4'-C1'-N1	8.21	114.76	108.20
1	AA	976	A	N1-C6-N6	8.20	123.52	118.60
52	B4	150	G	N1-C6-O6	8.20	124.82	119.90
53	B5	258	G	N1-C6-O6	8.20	124.82	119.90
53	B5	1582	C	O4'-C1'-N1	8.20	114.76	108.20
53	B5	3367	C	O4'-C1'-N1	8.20	114.76	108.20
1	AA	1370	C	O4'-C1'-N1	8.19	114.75	108.20
53	B5	233	C	O4'-C1'-N1	8.19	114.75	108.20
53	B5	1119	C	O4'-C1'-N1	8.19	114.75	108.20
53	B5	1429	G	N1-C6-O6	8.19	124.81	119.90
53	B5	3101	G	N1-C6-O6	8.19	124.81	119.90
53	B5	3284	G	N1-C6-O6	8.19	124.81	119.90
53	B5	1219	C	O4'-C1'-N1	8.19	114.75	108.20
51	B3	18	C	O4'-C1'-N1	8.18	114.75	108.20
53	B5	484	C	O4'-C1'-N1	8.18	114.75	108.20
53	B5	1276	U	O4'-C1'-N1	8.18	114.75	108.20
1	AA	1637	C	P-O3'-C3'	-8.18	109.89	119.70
53	B5	1927	G	N1-C6-O6	8.18	124.81	119.90
53	B5	3098	G	N1-C6-O6	8.18	124.81	119.90
19	A7	43	G	N1-C2-N3	8.18	128.81	123.90
53	B5	928	C	O4'-C1'-N1	8.18	114.74	108.20
53	B5	1652	G	N1-C6-O6	8.18	124.81	119.90
1	AA	1201	C	O4'-C1'-N1	8.17	114.74	108.20
1	AA	1216	C	O4'-C1'-N1	8.17	114.74	108.20
53	B5	614	C	O4'-C1'-N1	8.17	114.74	108.20
1	AA	434	G	N1-C6-O6	8.17	124.80	119.90
1	AA	1064	C	O4'-C1'-N1	8.17	114.74	108.20
52	B4	129	C	O4'-C1'-N1	8.17	114.73	108.20
1	AA	969	A	N1-C6-N6	8.17	123.50	118.60
53	B5	1377	G	N1-C6-O6	8.17	124.80	119.90
1	AA	2	A	N1-C6-N6	8.16	123.50	118.60
1	AA	57	G	N1-C6-O6	8.16	124.80	119.90
53	B5	1508	C	O4'-C1'-N1	8.16	114.73	108.20
53	B5	2267	C	O4'-C1'-N1	8.16	114.73	108.20
53	B5	2526	C	O4'-C1'-N1	8.16	114.73	108.20
53	B5	2577	C	O4'-C1'-N1	8.16	114.73	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	B3	66	C	O4'-C1'-N1	8.16	114.73	108.20
1	AA	4	C	O4'-C1'-N1	8.16	114.72	108.20
53	B5	1243	G	N1-C6-O6	8.15	124.79	119.90
1	AA	1156	C	O4'-C1'-N1	8.15	114.72	108.20
1	AA	1400	C	O4'-C1'-N1	8.15	114.72	108.20
19	A7	31	A	O4'-C1'-N9	8.15	114.72	108.20
53	B5	1592	G	O4'-C1'-N9	8.15	114.72	108.20
53	B5	3290	G	N1-C6-O6	8.15	124.79	119.90
19	A7	3	G	N1-C6-O6	-8.15	115.01	119.90
53	B5	752	C	O4'-C1'-N1	8.15	114.72	108.20
53	B5	3084	C	O4'-C1'-N1	8.15	114.72	108.20
1	AA	796	A	OP1-P-OP2	-8.14	107.39	119.60
53	B5	2620	G	N1-C6-O6	8.14	124.79	119.90
53	B5	592	G	N1-C6-O6	8.14	124.78	119.90
53	B5	768	C	O4'-C1'-N1	8.14	114.71	108.20
53	B5	1464	G	N1-C6-O6	8.14	124.78	119.90
1	AA	298	C	O4'-C1'-N1	8.14	114.71	108.20
1	AA	1152	G	N1-C6-O6	8.13	124.78	119.90
53	B5	1285	G	N1-C6-O6	8.13	124.78	119.90
53	B5	1389	G	N1-C6-O6	8.13	124.78	119.90
53	B5	22	G	N1-C6-O6	8.13	124.78	119.90
53	B5	3128	G	C5-C6-O6	-8.13	123.72	128.60
1	AA	894	U	O4'-C1'-N1	8.13	114.70	108.20
19	A7	63	C	C6-N1-C2	-8.13	117.05	120.30
53	B5	574	U	O4'-C1'-N1	8.13	114.70	108.20
53	B5	2307	G	N1-C6-O6	8.13	124.78	119.90
53	B5	1340	G	N1-C6-O6	8.13	124.78	119.90
53	B5	2616	C	O4'-C1'-N1	8.12	114.70	108.20
1	AA	860	U	C4'-C3'-C2'	8.12	110.72	102.60
53	B5	1861	G	N1-C6-O6	8.12	124.77	119.90
53	B5	562	C	O4'-C1'-N1	8.12	114.70	108.20
53	B5	2583	C	O4'-C1'-N1	8.12	114.70	108.20
19	A7	71	G	N1-C2-N2	8.12	123.51	116.20
53	B5	460	C	O4'-C1'-N1	8.12	114.69	108.20
53	B5	1767	C	O4'-C1'-N1	8.12	114.69	108.20
53	B5	421	G	O4'-C1'-N9	8.11	114.69	108.20
53	B5	561	C	O4'-C1'-N1	8.11	114.69	108.20
53	B5	1068	C	O4'-C1'-N1	8.12	114.69	108.20
53	B5	2204	C	O4'-C1'-N1	8.12	114.69	108.20
53	B5	3208	C	O4'-C1'-N1	8.12	114.69	108.20
1	AA	1105	G	N1-C6-O6	8.11	124.77	119.90
19	A7	24	G	N3-C4-C5	-8.11	124.54	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	76	G	N1-C6-O6	8.11	124.77	119.90
1	AA	1241	G	N1-C6-O6	8.11	124.77	119.90
53	B5	407	A	N1-C6-N6	8.11	123.47	118.60
53	B5	1283	C	O4'-C1'-N1	8.11	114.69	108.20
19	A7	21	A	N9-C1'-C2'	-8.11	103.08	112.00
53	B5	274	G	N1-C6-O6	8.11	124.76	119.90
53	B5	1246	G	N1-C6-O6	8.11	124.76	119.90
53	B5	2927	C	O4'-C1'-N1	8.11	114.69	108.20
52	B4	25	G	N1-C6-O6	8.10	124.76	119.90
53	B5	240	U	O4'-C1'-N1	8.10	114.68	108.20
53	B5	1825	G	N1-C6-O6	8.10	124.76	119.90
53	B5	1403	C	O4'-C1'-N1	8.10	114.68	108.20
51	B3	8	G	N1-C6-O6	8.10	124.76	119.90
1	AA	1436	C	O4'-C1'-N1	8.09	114.67	108.20
53	B5	1794	G	N1-C6-O6	8.09	124.75	119.90
53	B5	155	G	N1-C6-O6	8.09	124.75	119.90
53	B5	1412	G	N1-C6-O6	8.09	124.75	119.90
53	B5	2618	G	N1-C6-O6	8.09	124.75	119.90
53	B5	19	U	O4'-C1'-N1	8.09	114.67	108.20
53	B5	1592	G	N1-C6-O6	8.09	124.75	119.90
53	B5	2202	C	O4'-C1'-N1	8.09	114.67	108.20
1	AA	1074	C	O4'-C1'-N1	8.08	114.66	108.20
53	B5	421	G	N1-C6-O6	8.08	124.75	119.90
53	B5	1069	C	O4'-C1'-N1	8.08	114.66	108.20
53	B5	1516	C	O4'-C1'-N1	8.08	114.67	108.20
1	AA	347	G	N1-C6-O6	8.08	124.75	119.90
1	AA	1371	C	O4'-C1'-N1	8.08	114.66	108.20
51	B3	15	C	O4'-C1'-N1	8.08	114.66	108.20
1	AA	172	C	O4'-C1'-N1	8.07	114.66	108.20
1	AA	339	C	O4'-C1'-N1	8.07	114.66	108.20
53	B5	3240	C	O4'-C1'-N1	8.07	114.66	108.20
53	B5	2945	G	N1-C6-O6	8.07	124.74	119.90
53	B5	2959	C	O4'-C1'-N1	8.07	114.66	108.20
1	AA	716	C	O4'-C1'-N1	8.07	114.65	108.20
53	B5	192	C	O4'-C1'-N1	8.07	114.65	108.20
1	AA	1020	C	O4'-C1'-N1	8.06	114.65	108.20
53	B5	111	C	O4'-C1'-N1	8.06	114.65	108.20
53	B5	427	C	O4'-C1'-N1	8.06	114.65	108.20
53	B5	1297	C	O4'-C1'-N1	8.06	114.65	108.20
53	B5	2830	G	O4'-C1'-N9	8.06	114.65	108.20
1	AA	310	C	O4'-C1'-N1	8.06	114.65	108.20
1	AA	1486	G	N1-C6-O6	8.06	124.74	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	332	C	O4'-C1'-N1	8.06	114.65	108.20
1	AA	184	C	O4'-C1'-N1	8.06	114.65	108.20
53	B5	237	G	N1-C6-O6	8.06	124.73	119.90
53	B5	1868	G	N1-C6-O6	8.06	124.73	119.90
53	B5	3312	U	O4'-C1'-N1	8.06	114.65	108.20
53	B5	1624	G	N1-C6-O6	8.06	124.73	119.90
53	B5	2483	G	N1-C6-O6	8.06	124.73	119.90
53	B5	2905	U	O4'-C1'-N1	8.06	114.65	108.20
51	B3	29	C	O4'-C1'-N1	8.06	114.64	108.20
1	AA	1171	C	O4'-C1'-N1	8.05	114.64	108.20
53	B5	1829	G	N1-C6-O6	8.05	124.73	119.90
1	AA	1401	C	O4'-C1'-N1	8.05	114.64	108.20
1	AA	645	C	O4'-C1'-N1	8.05	114.64	108.20
1	AA	1497	G	N1-C6-O6	8.05	124.73	119.90
53	B5	792	G	O4'-C1'-N9	8.05	114.64	108.20
53	B5	895	A	N1-C6-N6	8.05	123.43	118.60
53	B5	1928	G	N1-C6-O6	8.05	124.73	119.90
53	B5	3149	G	N1-C6-O6	8.05	124.73	119.90
1	AA	1336	C	O4'-C1'-N1	8.05	114.64	108.20
53	B5	1007	U	O4'-C1'-N1	8.05	114.64	108.20
53	B5	966	U	O4'-C1'-N1	8.05	114.64	108.20
53	B5	1846	C	O4'-C1'-N1	8.05	114.64	108.20
53	B5	2997	G	N1-C6-O6	8.05	124.73	119.90
1	AA	559	C	O4'-C1'-N1	8.04	114.63	108.20
53	B5	1376	C	O4'-C1'-N1	8.04	114.63	108.20
1	AA	644	C	O4'-C1'-N1	8.04	114.63	108.20
51	B3	95	C	O4'-C1'-N1	8.04	114.63	108.20
53	B5	2569	A	P-O3'-C3'	8.04	129.34	119.70
19	A7	9	A	C6-N1-C2	-8.04	113.78	118.60
53	B5	2303	A	O4'-C1'-N9	8.04	114.63	108.20
53	B5	2614	G	N1-C6-O6	8.04	124.72	119.90
53	B5	3289	G	N1-C6-O6	8.04	124.72	119.90
53	B5	1631	C	O4'-C1'-N1	8.03	114.63	108.20
53	B5	131	C	P-O3'-C3'	8.03	129.34	119.70
53	B5	404	G	N1-C6-O6	8.03	124.72	119.90
53	B5	1070	U	O4'-C1'-N1	8.03	114.62	108.20
53	B5	2961	G	N1-C6-O6	8.03	124.72	119.90
1	AA	627	C	O4'-C1'-N1	8.02	114.62	108.20
51	B3	39	C	O4'-C1'-N1	8.02	114.62	108.20
52	B4	105	A	N1-C6-N6	8.02	123.41	118.60
53	B5	1701	C	O4'-C1'-N1	8.02	114.62	108.20
53	B5	1725	C	O4'-C1'-N1	8.02	114.62	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3092	C	O4'-C1'-N1	8.02	114.61	108.20
53	B5	2964	G	N1-C6-O6	8.02	124.71	119.90
53	B5	3241	G	N1-C6-O6	8.02	124.71	119.90
1	AA	773	C	O4'-C1'-N1	8.01	114.61	108.20
1	AA	777	C	O4'-C1'-N1	8.01	114.61	108.20
1	AA	1001	G	N1-C6-O6	8.01	124.71	119.90
51	B3	30	G	N1-C6-O6	8.01	124.71	119.90
53	B5	3193	C	O4'-C1'-N1	8.01	114.61	108.20
53	B5	2761	G	C5-C6-O6	-8.01	123.79	128.60
53	B5	2885	C	O4'-C1'-N1	8.01	114.61	108.20
19	A7	43	G	N3-C4-C5	-8.01	124.59	128.60
53	B5	139	G	N1-C6-O6	8.01	124.71	119.90
53	B5	3288	G	N1-C6-O6	8.01	124.70	119.90
53	B5	163	C	O4'-C1'-N1	8.01	114.61	108.20
53	B5	3022	G	N1-C6-O6	8.01	124.70	119.90
1	AA	674	C	O4'-C1'-N1	8.01	114.60	108.20
52	B4	144	G	N1-C6-O6	8.01	124.70	119.90
53	B5	260	C	O4'-C1'-N1	8.01	114.60	108.20
53	B5	281	G	N1-C6-O6	8.01	124.70	119.90
53	B5	1319	G	N1-C6-O6	8.01	124.70	119.90
53	B5	3197	G	N1-C6-O6	8.00	124.70	119.90
53	B5	463	C	O4'-C1'-N1	8.00	114.60	108.20
53	B5	1943	C	O4'-C1'-N1	8.00	114.60	108.20
1	AA	1416	G	N1-C6-O6	8.00	124.70	119.90
1	AA	784	C	O4'-C1'-N1	8.00	114.60	108.20
1	AA	961	C	O4'-C1'-N1	8.00	114.60	108.20
53	B5	1565	G	N1-C6-O6	8.00	124.70	119.90
1	AA	1274	G	N1-C6-O6	7.99	124.70	119.90
53	B5	1551	C	O4'-C1'-N1	7.99	114.59	108.20
53	B5	1654	A	O4'-C1'-N9	7.99	114.59	108.20
53	B5	3072	C	O4'-C1'-N1	7.99	114.59	108.20
53	B5	573	C	O4'-C1'-N1	7.99	114.59	108.20
53	B5	1628	C	O4'-C1'-N1	7.99	114.59	108.20
1	AA	708	C	O4'-C1'-N1	7.99	114.59	108.20
1	AA	1446	G	N1-C6-O6	7.99	124.69	119.90
53	B5	1764	U	O4'-C1'-N1	7.99	114.59	108.20
53	B5	105	C	O4'-C1'-N1	7.98	114.59	108.20
52	B4	110	C	O4'-C1'-N1	7.98	114.58	108.20
53	B5	190	U	O4'-C1'-N1	7.98	114.58	108.20
53	B5	1597	C	O4'-C1'-N1	7.98	114.58	108.20
53	B5	1947	G	N1-C6-O6	7.98	124.69	119.90
19	A7	8	U	C4-C5-C6	7.98	124.49	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	293	C	O4'-C1'-N1	7.98	114.58	108.20
1	AA	1373	C	O4'-C1'-N1	7.97	114.58	108.20
53	B5	849	C	C2-N1-C1'	7.97	127.57	118.80
53	B5	1668	G	N1-C6-O6	7.97	124.69	119.90
53	B5	2841	G	C5-C6-O6	-7.97	123.81	128.60
1	AA	1584	A	O4'-C1'-N9	7.97	114.58	108.20
52	B4	115	C	O4'-C1'-N1	7.97	114.58	108.20
53	B5	300	G	N1-C6-O6	7.97	124.68	119.90
53	B5	1733	G	N1-C6-O6	7.97	124.68	119.90
53	B5	2925	C	O4'-C1'-N1	7.97	114.58	108.20
53	B5	2710	C	O4'-C1'-N1	7.97	114.57	108.20
1	AA	1437	C	O4'-C1'-N1	7.96	114.57	108.20
1	AA	1520	U	C1'-C2'-O2'	7.96	134.49	110.60
53	B5	1499	C	O4'-C1'-N1	7.96	114.57	108.20
53	B5	2504	U	O4'-C1'-N1	7.96	114.57	108.20
53	B5	3369	G	N1-C6-O6	7.96	124.68	119.90
1	AA	703	G	N1-C6-O6	7.96	124.68	119.90
52	B4	106	C	O4'-C1'-N1	7.96	114.57	108.20
53	B5	1660	C	O4'-C1'-N1	7.96	114.57	108.20
53	B5	2189	U	O4'-C1'-N1	7.96	114.57	108.20
53	B5	1032	C	O4'-C1'-N1	7.96	114.57	108.20
53	B5	2277	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	1358	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	2490	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	881	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	2385	G	N1-C6-O6	7.95	124.67	119.90
53	B5	3060	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	3097	C	O4'-C1'-N1	7.95	114.56	108.20
1	AA	848	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	3366	G	N1-C6-O6	7.95	124.67	119.90
51	B3	93	U	O4'-C1'-N1	7.95	114.56	108.20
53	B5	2942	C	O4'-C1'-N1	7.95	114.56	108.20
53	B5	376	G	C5-C6-O6	-7.94	123.83	128.60
53	B5	767	U	O4'-C1'-N1	7.94	114.55	108.20
53	B5	1544	G	N1-C6-O6	7.94	124.67	119.90
53	B5	2836	C	O4'-C1'-N1	7.94	114.55	108.20
53	B5	148	G	N1-C6-O6	7.94	124.66	119.90
53	B5	1878	G	N1-C6-O6	7.94	124.66	119.90
53	B5	2622	C	O4'-C1'-N1	7.94	114.55	108.20
1	AA	115	G	N1-C6-O6	7.94	124.66	119.90
52	B4	133	G	O4'-C1'-N9	7.94	114.55	108.20
53	B5	225	C	O4'-C1'-N1	7.93	114.55	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	396	A	N1-C6-N6	7.93	123.36	118.60
53	B5	247	C	O4'-C1'-N1	7.93	114.55	108.20
53	B5	2444	C	O4'-C1'-N1	7.93	114.55	108.20
1	AA	867	G	C3'-C2'-C1'	-7.93	95.16	101.50
1	AA	717	C	O4'-C1'-N1	7.93	114.54	108.20
1	AA	491	C	O4'-C1'-N1	7.92	114.54	108.20
53	B5	1608	C	O4'-C1'-N1	7.92	114.54	108.20
52	B4	87	G	N1-C6-O6	7.92	124.65	119.90
53	B5	1518	U	O4'-C1'-N1	7.92	114.54	108.20
53	B5	1227	C	O4'-C1'-N1	7.92	114.53	108.20
53	B5	1357	G	N1-C6-O6	7.92	124.65	119.90
53	B5	3096	C	O4'-C1'-N1	7.92	114.53	108.20
1	AA	1770	C	O4'-C1'-N1	7.92	114.53	108.20
53	B5	1666	G	N1-C6-O6	7.92	124.65	119.90
53	B5	29	C	O4'-C1'-N1	7.91	114.53	108.20
53	B5	1067	U	O4'-C1'-N1	7.91	114.53	108.20
53	B5	2274	U	O4'-C1'-N1	7.91	114.53	108.20
53	B5	482	C	O4'-C1'-N1	7.91	114.53	108.20
53	B5	1416	C	O4'-C1'-N1	7.91	114.53	108.20
53	B5	2965	U	O4'-C1'-N1	7.91	114.53	108.20
53	B5	2218	G	N1-C6-O6	7.91	124.64	119.90
53	B5	2479	C	O4'-C1'-N1	7.91	114.53	108.20
53	B5	1131	G	N1-C6-O6	7.91	124.64	119.90
52	B4	151	C	O4'-C1'-N1	7.91	114.53	108.20
53	B5	3028	G	C5-C6-O6	-7.91	123.86	128.60
53	B5	927	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	1037	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	2350	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	2477	G	N1-C6-O6	7.90	124.64	119.90
53	B5	2542	U	O4'-C1'-N1	7.90	114.52	108.20
1	AA	442	C	O4'-C1'-N1	7.90	114.52	108.20
1	AA	974	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	383	G	N1-C6-O6	7.90	124.64	119.90
53	B5	1038	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	3311	C	O4'-C1'-N1	7.90	114.52	108.20
1	AA	1339	C	O4'-C1'-N1	7.90	114.52	108.20
53	B5	1905	G	N1-C6-O6	7.90	124.64	119.90
52	B4	51	G	N1-C6-O6	7.89	124.64	119.90
19	A7	13	C	C5'-C4'-O4'	7.89	118.57	109.10
53	B5	496	C	O4'-C1'-N1	7.89	114.51	108.20
53	B5	1563	C	O4'-C1'-N1	7.89	114.51	108.20
53	B5	1803	C	O4'-C1'-N1	7.89	114.52	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2765	C	O4'-C1'-N1	7.89	114.51	108.20
1	AA	38	C	O4'-C1'-N1	7.89	114.51	108.20
1	AA	1528	C	O4'-C1'-N1	7.89	114.51	108.20
53	B5	206	G	N1-C6-O6	7.89	124.63	119.90
53	B5	1164	G	N1-C6-O6	7.89	124.63	119.90
53	B5	3233	C	O4'-C1'-N1	7.89	114.51	108.20
1	AA	1340	U	O4'-C1'-N1	7.89	114.51	108.20
53	B5	730	C	O4'-C1'-N1	7.89	114.51	108.20
1	AA	697	C	O4'-C1'-N1	7.88	114.51	108.20
53	B5	42	C	O4'-C1'-N1	7.88	114.51	108.20
53	B5	498	A	N1-C6-N6	7.88	123.33	118.60
53	B5	769	G	N1-C6-O6	7.88	124.63	119.90
53	B5	1658	G	C5-C6-O6	-7.88	123.87	128.60
53	B5	1497	C	O4'-C1'-N1	7.88	114.51	108.20
53	B5	2685	C	O4'-C1'-N1	7.88	114.50	108.20
1	AA	1675	C	O4'-C1'-N1	7.88	114.50	108.20
51	B3	71	C	O4'-C1'-N1	7.88	114.50	108.20
53	B5	346	C	O4'-C1'-N1	7.88	114.50	108.20
53	B5	3371	G	N1-C6-O6	7.88	124.63	119.90
1	AA	467	G	N1-C6-O6	7.88	124.63	119.90
53	B5	2707	C	O4'-C1'-N1	7.88	114.50	108.20
1	AA	658	C	O4'-C1'-N1	7.88	114.50	108.20
1	AA	1637	C	O5'-P-OP1	7.88	120.15	110.70
1	AA	735	C	O4'-C1'-N1	7.87	114.50	108.20
53	B5	1838	G	N1-C6-O6	7.87	124.62	119.90
53	B5	2826	U	P-O3'-C3'	7.87	129.15	119.70
53	B5	795	G	N1-C6-O6	7.87	124.62	119.90
53	B5	2646	C	O4'-C1'-N1	7.87	114.50	108.20
1	AA	1080	G	N1-C6-O6	7.87	124.62	119.90
53	B5	2862	U	O4'-C1'-N1	7.87	114.50	108.20
53	B5	1422	G	O4'-C1'-N9	7.87	114.50	108.20
52	B4	45	C	O4'-C1'-N1	7.87	114.49	108.20
1	AA	393	C	O4'-C1'-N1	7.86	114.49	108.20
19	A7	62	A	C4-C5-C6	-7.86	113.07	117.00
51	B3	57	C	O4'-C1'-N1	7.86	114.49	108.20
19	A7	75	C	N1-C2-N3	7.86	124.70	119.20
37	BM	148	LYS	C-N-CA	-7.86	102.05	121.70
53	B5	2893	C	O4'-C1'-N1	7.86	114.49	108.20
53	B5	158	G	N1-C6-O6	7.86	124.62	119.90
53	B5	480	C	O4'-C1'-N1	7.86	114.49	108.20
53	B5	2966	G	N1-C6-O6	7.86	124.62	119.90
1	AA	1616	C	O4'-C1'-N1	7.86	114.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1707	C	O4'-C1'-N1	7.86	114.48	108.20
53	B5	1024	G	N1-C6-O6	7.86	124.61	119.90
53	B5	1209	G	N1-C6-O6	7.86	124.61	119.90
53	B5	2355	G	N1-C6-O6	7.86	124.61	119.90
53	B5	2913	C	O4'-C1'-N1	7.86	114.49	108.20
53	B5	47	C	O4'-C1'-N1	7.86	114.48	108.20
53	B5	242	C	O4'-C1'-N1	7.86	114.48	108.20
53	B5	2221	G	N1-C6-O6	7.86	124.61	119.90
1	AA	1453	G	N1-C6-O6	7.85	124.61	119.90
53	B5	2562	G	C5-C6-O6	-7.85	123.89	128.60
53	B5	2666	C	O4'-C1'-N1	7.85	114.48	108.20
53	B5	2389	C	O4'-C1'-N1	7.85	114.48	108.20
1	AA	500	C	O4'-C1'-N1	7.85	114.48	108.20
1	AA	1050	G	O4'-C1'-N9	7.85	114.48	108.20
53	B5	359	U	O4'-C1'-N1	7.85	114.48	108.20
53	B5	670	C	O4'-C1'-N1	7.85	114.48	108.20
53	B5	1476	G	N1-C6-O6	7.85	124.61	119.90
53	B5	2422	C	O4'-C1'-N1	7.85	114.48	108.20
53	B5	3242	G	N1-C6-O6	7.85	124.61	119.90
53	B5	1756	C	O4'-C1'-N1	7.85	114.48	108.20
53	B5	1450	G	N1-C6-O6	7.84	124.61	119.90
53	B5	3333	G	N1-C6-O6	7.84	124.61	119.90
53	B5	489	C	O4'-C1'-N1	7.84	114.47	108.20
19	A7	28	C	C4-C5-C6	-7.84	113.48	117.40
53	B5	1042	U	O4'-C1'-N1	7.84	114.47	108.20
53	B5	1379	G	N1-C6-O6	7.84	124.61	119.90
53	B5	2512	C	O4'-C1'-N1	7.84	114.47	108.20
53	B5	2567	C	O4'-C1'-N1	7.84	114.47	108.20
1	AA	1584	A	O4'-C4'-C3'	-7.84	96.16	104.00
53	B5	1292	C	O4'-C1'-N1	7.84	114.47	108.20
53	B5	120	G	N1-C6-O6	7.84	124.60	119.90
53	B5	457	C	O4'-C1'-N1	7.84	114.47	108.20
53	B5	1158	A	N1-C6-N6	7.83	123.30	118.60
52	B4	103	G	N1-C6-O6	7.83	124.60	119.90
53	B5	753	C	O4'-C1'-N1	7.83	114.47	108.20
53	B5	861	C	O4'-C1'-N1	7.83	114.47	108.20
53	B5	1244	A	O4'-C1'-N9	7.83	114.47	108.20
53	B5	1549	U	O4'-C1'-N1	7.83	114.47	108.20
1	AA	230	C	O4'-C1'-N1	7.83	114.47	108.20
1	AA	465	G	N1-C6-O6	7.83	124.60	119.90
1	AA	1550	U	C3'-C2'-C1'	-7.83	95.23	101.50
53	B5	1185	C	O4'-C1'-N1	7.83	114.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1441	G	N1-C6-O6	7.83	124.60	119.90
1	AA	286	C	O4'-C1'-N1	7.83	114.46	108.20
53	B5	92	G	N1-C6-O6	7.83	124.60	119.90
53	B5	948	C	O4'-C1'-N1	7.83	114.46	108.20
53	B5	2156	C	O4'-C1'-N1	7.83	114.46	108.20
1	AA	1043	G	N1-C6-O6	7.83	124.60	119.90
53	B5	597	G	N1-C6-O6	7.83	124.59	119.90
53	B5	2548	C	O4'-C1'-N1	7.83	114.46	108.20
53	B5	1422	G	N1-C6-O6	7.82	124.59	119.90
53	B5	1222	G	N1-C6-O6	7.82	124.59	119.90
1	AA	883	C	O4'-C1'-N1	7.82	114.46	108.20
19	A7	7	U	N3-C2-O2	-7.82	116.73	122.20
52	B4	47	C	O4'-C1'-N1	7.82	114.45	108.20
19	A7	20	G	N1-C6-O6	-7.82	115.21	119.90
53	B5	218	G	N1-C6-O6	7.82	124.59	119.90
53	B5	667	C	O4'-C1'-N1	7.82	114.45	108.20
53	B5	2828	G	N1-C6-O6	7.82	124.59	119.90
51	B3	110	C	O4'-C1'-N1	7.82	114.45	108.20
53	B5	499	G	N1-C6-O6	7.81	124.59	119.90
53	B5	2286	U	O4'-C1'-N1	7.81	114.45	108.20
1	AA	637	C	O4'-C1'-N1	7.81	114.45	108.20
53	B5	788	C	O4'-C1'-N1	7.81	114.45	108.20
53	B5	1869	C	O4'-C1'-N1	7.81	114.45	108.20
19	A7	22	G	C5'-C4'-O4'	7.81	118.47	109.10
53	B5	1665	C	O4'-C1'-N1	7.81	114.45	108.20
19	A7	48	C	O4'-C1'-N1	7.81	114.45	108.20
53	B5	613	G	N1-C6-O6	7.81	124.58	119.90
1	AA	1409	G	N1-C6-O6	7.80	124.58	119.90
52	B4	24	G	N1-C6-O6	7.80	124.58	119.90
53	B5	765	C	O4'-C1'-N1	7.80	114.44	108.20
1	AA	1009	C	O4'-C1'-N1	7.80	114.44	108.20
19	A7	66	A	N9-C4-C5	7.80	108.92	105.80
53	B5	1076	C	O4'-C1'-N1	7.80	114.44	108.20
53	B5	2579	G	N1-C6-O6	7.80	124.58	119.90
53	B5	2916	U	O4'-C1'-N1	7.80	114.44	108.20
1	AA	372	G	N1-C6-O6	7.80	124.58	119.90
1	AA	1518	U	O4'-C4'-C3'	-7.80	96.20	104.00
53	B5	1578	C	O4'-C1'-N1	7.80	114.44	108.20
53	B5	2810	C	O4'-C1'-N1	7.80	114.44	108.20
1	AA	1352	C	O4'-C1'-N1	7.80	114.44	108.20
19	A7	7	U	C5-C6-N1	-7.80	118.80	122.70
53	B5	957	C	O4'-C1'-N1	7.80	114.44	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3132	C	O4'-C1'-N1	7.80	114.44	108.20
53	B5	3162	C	O4'-C1'-N1	7.80	114.44	108.20
53	B5	818	C	O4'-C1'-N1	7.79	114.44	108.20
53	B5	2544	U	O4'-C1'-N1	7.79	114.44	108.20
53	B5	908	G	N1-C6-O6	7.79	124.58	119.90
53	B5	3213	G	N1-C6-O6	7.79	124.58	119.90
53	B5	1333	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	1395	G	N1-C6-O6	7.79	124.57	119.90
53	B5	1586	G	N1-C6-O6	7.79	124.57	119.90
53	B5	3364	C	O4'-C1'-N1	7.79	114.43	108.20
1	AA	408	C	O4'-C1'-N1	7.79	114.43	108.20
1	AA	490	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	959	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	1397	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	1492	G	N1-C6-O6	7.79	124.57	119.90
53	B5	2879	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	2337	C	O4'-C1'-N1	7.79	114.43	108.20
1	AA	1036	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	945	C	O4'-C1'-N1	7.79	114.43	108.20
53	B5	3309	G	N1-C6-O6	7.79	124.57	119.90
52	B4	39	G	N1-C6-O6	7.78	124.57	119.90
53	B5	142	C	O4'-C1'-N1	7.78	114.43	108.20
1	AA	431	C	O4'-C1'-N1	7.78	114.42	108.20
53	B5	1116	G	N1-C6-O6	7.78	124.57	119.90
1	AA	189	C	O4'-C1'-N1	7.78	114.42	108.20
53	B5	785	G	N1-C6-O6	7.78	124.57	119.90
53	B5	2744	U	O4'-C1'-N1	7.78	114.42	108.20
53	B5	1770	G	N1-C6-O6	7.78	124.57	119.90
53	B5	271	C	O4'-C1'-N1	7.78	114.42	108.20
1	AA	613	G	N1-C6-O6	7.78	124.56	119.90
1	AA	926	C	O4'-C1'-N1	7.78	114.42	108.20
52	B4	95	G	O4'-C1'-N9	7.78	114.42	108.20
53	B5	455	C	O4'-C1'-N1	7.78	114.42	108.20
53	B5	638	C	O4'-C1'-N1	7.77	114.42	108.20
53	B5	1316	C	O4'-C1'-N1	7.77	114.42	108.20
53	B5	3285	C	O4'-C1'-N1	7.77	114.42	108.20
1	AA	1578	C	O4'-C1'-N1	7.77	114.42	108.20
53	B5	69	C	O4'-C1'-N1	7.77	114.42	108.20
53	B5	576	C	O4'-C1'-N1	7.77	114.42	108.20
53	B5	582	G	O4'-C1'-N9	7.77	114.42	108.20
53	B5	2370	G	N1-C6-O6	7.77	124.56	119.90
53	B5	3390	G	N1-C6-O6	7.77	124.56	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1364	C	O4'-C1'-N1	7.77	114.42	108.20
1	AA	405	C	O4'-C1'-N1	7.77	114.41	108.20
1	AA	726	C	O4'-C1'-N1	7.77	114.41	108.20
53	B5	82	C	O4'-C1'-N1	7.77	114.41	108.20
53	B5	2478	C	O4'-C1'-N1	7.77	114.41	108.20
53	B5	3053	G	C5-C6-O6	-7.77	123.94	128.60
1	AA	1749	C	O4'-C1'-N1	7.76	114.41	108.20
19	A7	67	A	O4'-C1'-N9	7.76	114.41	108.20
53	B5	1693	C	O4'-C1'-N1	7.76	114.41	108.20
19	A7	42	G	N3-C4-C5	-7.76	124.72	128.60
53	B5	3207	C	O4'-C1'-N1	7.76	114.41	108.20
1	AA	1200	A	N3-C4-C5	-7.76	121.37	126.80
52	B4	8	C	O4'-C1'-N1	7.76	114.41	108.20
1	AA	1704	C	O4'-C1'-N1	7.76	114.41	108.20
52	B4	117	C	O4'-C1'-N1	7.76	114.41	108.20
53	B5	81	C	O4'-C1'-N1	7.76	114.41	108.20
53	B5	3235	C	O4'-C1'-N1	7.76	114.41	108.20
53	B5	1562	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	3063	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	955	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	525	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	757	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	921	A	N1-C6-N6	7.75	123.25	118.60
53	B5	1426	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	696	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	1132	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	1734	G	N1-C6-O6	7.75	124.55	119.90
53	B5	3257	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	1608	G	C5-C6-O6	-7.75	123.95	128.60
53	B5	2351	U	O4'-C1'-N1	7.75	114.40	108.20
1	AA	190	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	1563	C	O4'-C1'-N1	7.75	114.40	108.20
53	B5	886	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	530	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	898	G	N1-C6-O6	7.75	124.55	119.90
53	B5	880	G	N1-C6-O6	7.75	124.55	119.90
53	B5	3340	G	N1-C6-O6	7.75	124.55	119.90
19	A7	19	G	C4-C5-N7	7.74	113.90	110.80
53	B5	2475	G	O4'-C1'-N9	7.74	114.39	108.20
53	B5	2624	G	N1-C6-O6	7.74	124.55	119.90
1	AA	827	C	O4'-C1'-N1	7.74	114.39	108.20
1	AA	489	C	O4'-C1'-N1	7.74	114.39	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	13	C	C3'-C2'-C1'	7.74	107.69	101.50
19	A7	19	G	C8-N9-C4	-7.74	103.31	106.40
53	B5	3015	G	N1-C6-O6	7.74	124.54	119.90
53	B5	74	G	N1-C6-O6	7.73	124.54	119.90
53	B5	1162	U	O4'-C1'-N1	7.73	114.39	108.20
53	B5	2452	G	N1-C6-O6	7.73	124.54	119.90
1	AA	688	G	N1-C6-O6	7.73	124.54	119.90
1	AA	1762	C	O4'-C1'-N1	7.73	114.38	108.20
53	B5	586	C	O4'-C1'-N1	7.73	114.39	108.20
53	B5	1816	A	O4'-C1'-N9	7.73	114.38	108.20
53	B5	2600	C	O4'-C1'-N1	7.73	114.39	108.20
1	AA	54	C	O4'-C1'-N1	7.73	114.38	108.20
53	B5	2582	C	O4'-C1'-N1	7.73	114.38	108.20
1	AA	191	C	O4'-C1'-N1	7.73	114.38	108.20
1	AA	1362	C	O4'-C1'-N1	7.73	114.38	108.20
19	A7	13	C	N3-C2-O2	-7.73	116.49	121.90
53	B5	3337	G	N1-C6-O6	7.73	124.54	119.90
1	AA	1768	U	O4'-C1'-N1	7.73	114.38	108.20
1	AA	1450	U	O4'-C1'-N1	7.72	114.38	108.20
1	AA	1461	C	O4'-C1'-N1	7.72	114.38	108.20
1	AA	1638	C	P-O5'-C5'	-7.72	108.54	120.90
53	B5	2899	C	O4'-C1'-N1	7.72	114.38	108.20
1	AA	1511	G	N1-C6-O6	7.72	124.53	119.90
52	B4	76	C	O4'-C1'-N1	7.72	114.38	108.20
53	B5	1303	A	O4'-C1'-N9	7.72	114.38	108.20
53	B5	1520	G	C5-C6-O6	-7.72	123.97	128.60
1	AA	1275	C	O4'-C1'-N1	7.72	114.38	108.20
53	B5	1747	G	N1-C6-O6	7.72	124.53	119.90
53	B5	2594	C	O4'-C1'-N1	7.72	114.38	108.20
1	AA	354	C	O4'-C1'-N1	7.72	114.38	108.20
1	AA	1125	C	O4'-C1'-N1	7.72	114.37	108.20
1	AA	1790	G	N1-C6-O6	7.72	124.53	119.90
52	B4	21	C	O4'-C1'-N1	7.72	114.37	108.20
1	AA	402	C	O4'-C1'-N1	7.71	114.37	108.20
1	AA	342	C	O4'-C1'-N1	7.71	114.37	108.20
53	B5	1573	G	N1-C6-O6	7.71	124.53	119.90
53	B5	1781	C	O4'-C1'-N1	7.71	114.37	108.20
1	AA	1651	C	O4'-C1'-N1	7.71	114.37	108.20
53	B5	963	G	N1-C6-O6	7.71	124.53	119.90
1	AA	765	G	O4'-C1'-N9	7.71	114.37	108.20
1	AA	1642	C	O4'-C1'-N1	7.71	114.37	108.20
53	B5	415	G	N1-C6-O6	7.71	124.53	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1613	C	O4'-C1'-N1	7.71	114.37	108.20
53	B5	2518	C	O4'-C1'-N1	7.71	114.37	108.20
53	B5	2835	U	O4'-C1'-N1	7.71	114.36	108.20
53	B5	3315	G	N1-C6-O6	7.71	124.52	119.90
53	B5	3355	U	O4'-C1'-N1	7.71	114.36	108.20
53	B5	291	C	O4'-C1'-N1	7.71	114.36	108.20
53	B5	2876	C	O4'-C1'-N1	7.71	114.36	108.20
53	B5	3148	U	O4'-C1'-N1	7.71	114.36	108.20
53	B5	379	C	O4'-C1'-N1	7.70	114.36	108.20
53	B5	1675	G	N1-C6-O6	7.70	124.52	119.90
53	B5	2729	U	O4'-C1'-N1	7.70	114.36	108.20
53	B5	2793	G	N1-C6-O6	7.70	124.52	119.90
46	BV	47	TYR	CB-CG-CD2	7.70	125.62	121.00
1	AA	501	U	N1-C2-N3	7.70	119.52	114.90
1	AA	1253	U	O4'-C1'-N1	7.70	114.36	108.20
19	A7	66	A	C4-C5-N7	-7.70	106.85	110.70
53	B5	644	G	N1-C6-O6	7.70	124.52	119.90
1	AA	1169	G	N1-C6-O6	7.69	124.52	119.90
1	AA	425	A	O4'-C1'-N9	7.69	114.36	108.20
53	B5	1472	U	O4'-C1'-N1	7.69	114.35	108.20
53	B5	1793	C	O4'-C1'-N1	7.69	114.35	108.20
1	AA	30	G	N1-C6-O6	7.69	124.51	119.90
1	AA	53	G	N1-C6-O6	7.69	124.51	119.90
53	B5	1596	C	O4'-C1'-N1	7.69	114.35	108.20
1	AA	730	G	N1-C6-O6	7.69	124.51	119.90
53	B5	1392	G	N1-C6-O6	7.69	124.51	119.90
53	B5	1852	G	N1-C6-O6	7.69	124.51	119.90
1	AA	1296	G	N1-C6-O6	7.69	124.51	119.90
1	AA	398	G	N1-C6-O6	7.68	124.51	119.90
1	AA	1775	G	N1-C6-O6	7.68	124.51	119.90
53	B5	140	C	O4'-C1'-N1	7.68	114.35	108.20
1	AA	986	G	N1-C6-O6	7.68	124.51	119.90
1	AA	1493	C	O4'-C1'-N1	7.68	114.34	108.20
53	B5	3221	C	O4'-C1'-N1	7.68	114.34	108.20
53	B5	3386	G	N1-C6-O6	7.68	124.51	119.90
1	AA	1098	G	N1-C6-O6	7.68	124.51	119.90
1	AA	1703	C	O4'-C1'-N1	7.68	114.34	108.20
53	B5	1277	C	O4'-C1'-N1	7.68	114.34	108.20
1	AA	1776	G	N1-C6-O6	7.68	124.51	119.90
53	B5	1655	G	N1-C6-O6	7.68	124.51	119.90
19	A7	18	G	N3-C4-N9	-7.67	121.39	126.00
53	B5	392	G	N1-C6-O6	7.67	124.50	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3135	U	O4'-C1'-N1	7.67	114.34	108.20
53	B5	3360	C	O4'-C1'-N1	7.67	114.34	108.20
53	B5	633	C	O4'-C1'-N1	7.67	114.34	108.20
19	A7	5	A	C4'-C3'-C2'	-7.67	94.93	102.60
19	A7	66	A	C5-C6-N1	7.67	121.53	117.70
53	B5	131	C	O4'-C1'-N1	7.67	114.34	108.20
53	B5	1177	G	N1-C6-O6	7.67	124.50	119.90
53	B5	1777	U	O4'-C1'-N1	7.67	114.33	108.20
53	B5	2589	G	N1-C6-O6	7.67	124.50	119.90
53	B5	2677	G	O4'-C1'-N9	7.67	114.33	108.20
1	AA	1465	C	O4'-C1'-N1	7.67	114.33	108.20
1	AA	1586	G	N1-C6-O6	7.67	124.50	119.90
1	AA	1673	C	O4'-C1'-N1	7.67	114.33	108.20
53	B5	560	G	N1-C6-O6	7.67	124.50	119.90
53	B5	1187	C	O4'-C1'-N1	7.67	114.33	108.20
53	B5	2507	C	O4'-C1'-N1	7.67	114.33	108.20
53	B5	59	G	N1-C6-O6	7.67	124.50	119.90
53	B5	2794	G	N1-C6-O6	7.66	124.50	119.90
1	AA	502	U	O4'-C1'-N1	7.66	114.33	108.20
53	B5	1639	C	O4'-C1'-N1	7.66	114.33	108.20
1	AA	107	C	O4'-C1'-N1	7.66	114.33	108.20
52	B4	120	C	O4'-C1'-N1	7.66	114.33	108.20
53	B5	340	C	O4'-C1'-N1	7.66	114.33	108.20
53	B5	407	A	O4'-C1'-N9	7.66	114.33	108.20
53	B5	462	C	O4'-C1'-N1	7.66	114.33	108.20
53	B5	737	G	N1-C6-O6	7.66	124.50	119.90
53	B5	3318	G	N1-C6-O6	7.66	124.50	119.90
1	AA	519	C	O4'-C1'-N1	7.66	114.33	108.20
1	AA	1507	C	O4'-C1'-N1	7.66	114.33	108.20
53	B5	452	G	N1-C6-O6	7.66	124.49	119.90
1	AA	139	C	O4'-C1'-N1	7.66	114.33	108.20
1	AA	414	C	O4'-C1'-N1	7.66	114.33	108.20
1	AA	1594	C	O4'-C1'-N1	7.66	114.32	108.20
1	AA	1786	G	N1-C6-O6	7.66	124.49	119.90
53	B5	599	C	O4'-C1'-N1	7.66	114.32	108.20
1	AA	1566	C	O4'-C1'-N1	7.65	114.32	108.20
53	B5	2318	U	O4'-C1'-N1	7.65	114.32	108.20
53	B5	1382	G	N1-C6-O6	7.65	124.49	119.90
53	B5	2128	C	O4'-C1'-N1	7.65	114.32	108.20
53	B5	3113	A	O4'-C1'-N9	7.65	114.32	108.20
53	B5	2174	G	N1-C6-O6	7.65	124.49	119.90
53	B5	712	G	N1-C6-O6	7.65	124.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2831	G	C5-C6-O6	-7.65	124.01	128.60
53	B5	3378	C	O4'-C1'-N1	7.65	114.32	108.20
1	AA	574	G	N1-C6-O6	7.64	124.49	119.90
53	B5	568	G	N1-C6-O6	7.64	124.49	119.90
53	B5	2756	C	O4'-C1'-N1	7.64	114.31	108.20
1	AA	241	U	O4'-C1'-N1	7.64	114.31	108.20
52	B4	83	C	O4'-C1'-N1	7.64	114.31	108.20
53	B5	1919	G	C5-C6-O6	-7.64	124.02	128.60
53	B5	2264	U	O4'-C1'-N1	7.64	114.31	108.20
53	B5	2732	G	N1-C6-O6	7.64	124.48	119.90
53	B5	1312	C	O4'-C1'-N1	7.64	114.31	108.20
1	AA	1200	A	O4'-C1'-N9	7.64	114.31	108.20
53	B5	166	C	O4'-C1'-N1	7.64	114.31	108.20
53	B5	297	G	N1-C6-O6	7.64	124.48	119.90
1	AA	1529	G	N1-C6-O6	7.63	124.48	119.90
53	B5	503	C	O4'-C1'-N1	7.63	114.31	108.20
53	B5	1714	A	O4'-C1'-N9	7.63	114.31	108.20
53	B5	3349	C	O4'-C1'-N1	7.63	114.31	108.20
53	B5	992	G	N1-C6-O6	7.63	124.48	119.90
1	AA	1276	C	O4'-C1'-N1	7.63	114.31	108.20
53	B5	2431	C	O4'-C1'-N1	7.63	114.31	108.20
1	AA	880	C	O4'-C1'-N1	7.63	114.30	108.20
52	B4	27	U	O4'-C1'-N1	7.63	114.30	108.20
53	B5	197	G	N1-C6-O6	7.63	124.48	119.90
53	B5	1146	C	O4'-C1'-N1	7.63	114.30	108.20
53	B5	2400	G	N1-C6-O6	7.63	124.48	119.90
1	AA	897	C	O4'-C1'-N1	7.63	114.30	108.20
53	B5	2416	U	O4'-C1'-N1	7.63	114.30	108.20
53	B5	2531	C	O4'-C1'-N1	7.63	114.30	108.20
1	AA	1644	C	O4'-C1'-N1	7.62	114.30	108.20
52	B4	36	G	N1-C6-O6	7.62	124.47	119.90
53	B5	1137	C	O4'-C1'-N1	7.62	114.30	108.20
1	AA	305	C	O4'-C1'-N1	7.62	114.30	108.20
1	AA	628	G	N1-C6-O6	7.62	124.47	119.90
53	B5	2922	G	N1-C6-O6	7.62	124.47	119.90
1	AA	846	G	N1-C6-O6	7.62	124.47	119.90
1	AA	1390	C	O4'-C1'-N1	7.62	114.30	108.20
53	B5	2714	G	N1-C6-O6	7.62	124.47	119.90
52	B4	4	C	O4'-C1'-N1	7.62	114.30	108.20
53	B5	2677	G	N1-C6-O6	7.62	124.47	119.90
53	B5	1298	C	O4'-C1'-N1	7.62	114.29	108.20
1	AA	1158	C	O4'-C1'-N1	7.62	114.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1546	G	C4'-C3'-C2'	7.62	110.22	102.60
53	B5	800	G	N1-C6-O6	7.62	124.47	119.90
53	B5	2199	G	N1-C6-O6	7.62	124.47	119.90
53	B5	3133	C	O4'-C1'-N1	7.61	114.29	108.20
53	B5	1857	C	O4'-C1'-N1	7.61	114.29	108.20
1	AA	1273	G	N1-C6-O6	7.61	124.47	119.90
1	AA	1603	G	O4'-C1'-N9	7.61	114.29	108.20
53	B5	3117	C	O4'-C1'-N1	7.61	114.29	108.20
1	AA	1406	G	N1-C6-O6	7.61	124.47	119.90
1	AA	683	C	O4'-C1'-N1	7.61	114.28	108.20
1	AA	1684	C	O4'-C1'-N1	7.61	114.29	108.20
23	B8	43	LYS	CB-CG-CD	7.61	131.38	111.60
53	B5	2475	G	N1-C6-O6	7.61	124.47	119.90
1	AA	1386	C	C2-N1-C1'	7.61	127.17	118.80
53	B5	2405	C	O4'-C1'-N1	7.61	114.28	108.20
53	B5	2884	C	O4'-C1'-N1	7.60	114.28	108.20
1	AA	1159	U	O4'-C1'-N1	7.60	114.28	108.20
53	B5	1898	G	O4'-C1'-N9	7.60	114.28	108.20
1	AA	1460	G	N1-C6-O6	7.60	124.46	119.90
1	AA	1589	C	O4'-C1'-N1	7.60	114.28	108.20
53	B5	2711	C	O4'-C1'-N1	7.60	114.28	108.20
53	B5	823	C	O4'-C1'-N1	7.60	114.28	108.20
1	AA	17	C	O4'-C1'-N1	7.59	114.28	108.20
1	AA	343	C	O4'-C1'-N1	7.59	114.28	108.20
1	AA	1331	U	O4'-C1'-N1	7.59	114.27	108.20
51	B3	21	G	N1-C6-O6	7.59	124.45	119.90
53	B5	2180	G	N1-C6-O6	7.59	124.45	119.90
53	B5	2918	G	P-O3'-C3'	7.59	128.81	119.70
1	AA	1170	C	O4'-C1'-N1	7.59	114.27	108.20
1	AA	1355	G	N1-C6-O6	7.59	124.45	119.90
53	B5	330	G	N1-C6-O6	7.59	124.45	119.90
53	B5	864	G	N1-C6-O6	7.59	124.45	119.90
53	B5	2751	G	N1-C6-O6	7.59	124.45	119.90
53	B5	3358	U	O4'-C1'-N1	7.59	114.27	108.20
53	B5	2273	G	N1-C6-O6	7.59	124.45	119.90
1	AA	263	C	O4'-C1'-N1	7.59	114.27	108.20
1	AA	849	C	O4'-C1'-N1	7.59	114.27	108.20
51	B3	107	G	N1-C6-O6	7.59	124.45	119.90
1	AA	1099	G	N1-C6-O6	7.58	124.45	119.90
52	B4	30	C	O4'-C1'-N1	7.58	114.27	108.20
53	B5	994	G	N1-C6-O6	7.58	124.45	119.90
53	B5	2960	C	O4'-C1'-N1	7.58	114.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1731	C	O4'-C1'-N1	7.58	114.27	108.20
53	B5	28	C	O4'-C1'-N1	7.58	114.27	108.20
53	B5	2605	G	N1-C6-O6	7.58	124.45	119.90
53	B5	2973	G	N1-C6-O6	7.58	124.45	119.90
53	B5	2305	G	C5-C6-O6	-7.58	124.05	128.60
1	AA	596	C	O4'-C1'-N1	7.58	114.26	108.20
53	B5	1413	G	N1-C6-O6	7.58	124.45	119.90
1	AA	543	C	O4'-C1'-N1	7.58	114.26	108.20
1	AA	1013	G	N1-C6-O6	7.58	124.45	119.90
19	A7	70	C	C5'-C4'-O4'	7.58	118.19	109.10
53	B5	2593	A	N1-C6-N6	7.58	123.14	118.60
51	B3	6	C	O4'-C1'-N1	7.57	114.26	108.20
53	B5	251	G	N1-C6-O6	7.57	124.44	119.90
53	B5	1736	G	N1-C6-O6	7.57	124.44	119.90
1	AA	949	C	O4'-C1'-N1	7.57	114.26	108.20
53	B5	1372	C	O4'-C1'-N1	7.57	114.26	108.20
53	B5	2302	G	N1-C6-O6	7.57	124.44	119.90
1	AA	686	C	O4'-C1'-N1	7.57	114.25	108.20
1	AA	1534	G	N1-C6-O6	7.57	124.44	119.90
1	AA	1580	U	O4'-C1'-N1	7.57	114.25	108.20
53	B5	360	G	N1-C6-O6	7.57	124.44	119.90
53	B5	485	A	O4'-C1'-N9	7.57	114.25	108.20
53	B5	1830	G	N1-C6-O6	7.57	124.44	119.90
53	B5	283	G	N1-C6-O6	7.57	124.44	119.90
53	B5	94	G	C5-C6-O6	-7.56	124.06	128.60
53	B5	1604	G	N1-C6-O6	7.56	124.44	119.90
1	AA	700	C	O4'-C1'-N1	7.56	114.25	108.20
1	AA	798	C	OP1-P-OP2	-7.56	108.26	119.60
53	B5	1519	G	N1-C6-O6	7.56	124.44	119.90
1	AA	1459	C	O4'-C1'-N1	7.56	114.25	108.20
1	AA	1550	U	OP1-P-OP2	-7.56	108.27	119.60
1	AA	1621	C	O4'-C1'-N1	7.56	114.25	108.20
53	B5	2719	U	O4'-C1'-N1	7.56	114.25	108.20
53	B5	2881	C	O4'-C1'-N1	7.56	114.25	108.20
53	B5	3379	C	O4'-C1'-N1	7.56	114.25	108.20
19	A7	52	U	C2-N3-C4	-7.55	122.47	127.00
53	B5	3172	G	C5-C6-O6	-7.55	124.07	128.60
1	AA	49	C	O4'-C1'-N1	7.55	114.24	108.20
1	AA	952	G	N1-C6-O6	7.55	124.43	119.90
53	B5	1156	C	O4'-C1'-N1	7.55	114.24	108.20
53	B5	1525	G	C5-C6-O6	-7.55	124.07	128.60
53	B5	1863	G	C5-C6-O6	-7.55	124.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	89	G	N1-C6-O6	7.55	124.43	119.90
1	AA	1351	G	O4'-C1'-N9	7.55	114.24	108.20
53	B5	604	G	N1-C6-O6	7.55	124.43	119.90
53	B5	180	C	O4'-C1'-N1	7.55	114.24	108.20
53	B5	1411	C	O4'-C1'-N1	7.55	114.24	108.20
1	AA	224	C	O4'-C1'-N1	7.55	114.24	108.20
53	B5	770	G	N1-C6-O6	7.55	124.43	119.90
53	B5	2898	G	N1-C6-O6	7.55	124.43	119.90
1	AA	307	G	N1-C6-O6	7.54	124.43	119.90
53	B5	1017	C	O4'-C1'-N1	7.54	114.24	108.20
53	B5	3130	A	O4'-C1'-N9	7.54	114.24	108.20
53	B5	3365	U	O4'-C1'-N1	7.54	114.24	108.20
1	AA	568	G	C5-C6-O6	-7.54	124.07	128.60
1	AA	1625	U	O4'-C1'-N1	7.54	114.23	108.20
51	B3	63	G	N1-C6-O6	7.54	124.43	119.90
53	B5	1480	G	N1-C6-O6	7.54	124.43	119.90
53	B5	2203	U	O4'-C1'-N1	7.54	114.23	108.20
53	B5	2653	C	O4'-C1'-N1	7.54	114.23	108.20
53	B5	2972	G	N1-C6-O6	7.54	124.42	119.90
1	AA	731	C	O4'-C1'-N1	7.54	114.23	108.20
53	B5	1152	G	N1-C6-O6	7.54	124.42	119.90
53	B5	1555	U	O4'-C1'-N1	7.54	114.23	108.20
53	B5	3009	G	N1-C6-O6	7.54	124.42	119.90
53	B5	893	C	O4'-C1'-N1	7.54	114.23	108.20
1	AA	365	G	N1-C6-O6	7.54	124.42	119.90
1	AA	1588	G	N1-C6-O6	7.54	124.42	119.90
53	B5	2371	G	N1-C6-O6	7.54	124.42	119.90
53	B5	2770	G	N1-C6-O6	7.54	124.42	119.90
53	B5	3329	U	O4'-C1'-N1	7.54	114.23	108.20
1	AA	325	G	O4'-C1'-N9	7.54	114.23	108.20
1	AA	595	G	N1-C6-O6	7.53	124.42	119.90
53	B5	2346	C	O4'-C1'-N1	7.53	114.23	108.20
1	AA	235	G	N1-C6-O6	7.53	124.42	119.90
1	AA	1320	C	O4'-C1'-N1	7.53	114.23	108.20
53	B5	1010	G	N1-C6-O6	7.53	124.42	119.90
53	B5	1171	G	N1-C6-O6	7.53	124.42	119.90
53	B5	1550	C	O4'-C1'-N1	7.53	114.22	108.20
1	AA	1604	C	O4'-C1'-N1	7.53	114.22	108.20
1	AA	1662	C	O4'-C1'-N1	7.53	114.22	108.20
1	AA	736	C	O4'-C1'-N1	7.53	114.22	108.20
53	B5	320	G	O4'-C1'-N9	7.53	114.22	108.20
53	B5	916	G	N1-C6-O6	7.53	124.42	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	949	C	O4'-C1'-N1	7.53	114.22	108.20
19	A7	12	U	N1-C2-N3	7.53	119.42	114.90
53	B5	31	C	O4'-C1'-N1	7.53	114.22	108.20
53	B5	212	G	N1-C6-O6	7.53	124.42	119.90
53	B5	544	C	O4'-C1'-N1	7.53	114.22	108.20
53	B5	1293	U	O4'-C1'-N1	7.53	114.22	108.20
53	B5	224	C	O4'-C1'-N1	7.52	114.22	108.20
53	B5	2284	C	O4'-C1'-N1	7.52	114.22	108.20
1	AA	1570	G	N1-C6-O6	7.52	124.41	119.90
1	AA	394	C	O4'-C1'-N1	7.52	114.22	108.20
53	B5	1012	G	N1-C6-O6	7.52	124.41	119.90
53	B5	2786	G	N1-C6-O6	7.52	124.41	119.90
53	B5	290	G	C5-C6-O6	-7.52	124.09	128.60
1	AA	409	C	O4'-C1'-N1	7.52	114.21	108.20
1	AA	1082	G	N1-C6-O6	7.52	124.41	119.90
1	AA	761	G	N1-C6-O6	7.51	124.41	119.90
53	B5	805	G	N1-C6-O6	7.51	124.41	119.90
53	B5	2365	C	O4'-C1'-N1	7.51	114.21	108.20
1	AA	523	G	N1-C6-O6	7.51	124.41	119.90
53	B5	498	A	O4'-C1'-N9	7.51	114.21	108.20
53	B5	1327	C	O4'-C1'-N1	7.51	114.21	108.20
53	B5	1611	G	N1-C6-O6	7.51	124.41	119.90
51	B3	51	G	N1-C6-O6	7.51	124.41	119.90
53	B5	493	G	N1-C6-O6	7.51	124.41	119.90
53	B5	1711	C	O4'-C1'-N1	7.51	114.21	108.20
53	B5	2325	G	N1-C6-O6	7.51	124.41	119.90
53	B5	2798	C	O4'-C1'-N1	7.51	114.21	108.20
1	AA	1525	C	O4'-C1'-N1	7.51	114.21	108.20
52	B4	56	G	N1-C6-O6	7.51	124.41	119.90
53	B5	2238	G	N1-C6-O6	7.51	124.41	119.90
53	B5	3083	G	O4'-C1'-N9	7.51	114.21	108.20
53	B5	3136	G	N1-C6-O6	7.51	124.41	119.90
51	B3	28	C	O4'-C1'-N1	7.51	114.20	108.20
53	B5	1328	C	O4'-C1'-N1	7.50	114.20	108.20
53	B5	567	G	N1-C6-O6	7.50	124.40	119.90
53	B5	3249	C	O4'-C1'-N1	7.50	114.20	108.20
1	AA	583	C	O4'-C1'-N1	7.50	114.20	108.20
53	B5	91	G	N1-C6-O6	7.50	124.40	119.90
53	B5	3180	U	O4'-C1'-N1	7.50	114.20	108.20
53	B5	2338	C	O4'-C1'-N1	7.50	114.20	108.20
53	B5	2784	G	N1-C6-O6	7.50	124.40	119.90
53	B5	2838	A	O4'-C1'-N9	7.50	114.20	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1766	G	N1-C6-O6	7.50	124.40	119.90
53	B5	335	G	N1-C6-O6	7.50	124.40	119.90
53	B5	3085	G	N1-C6-O6	7.50	124.40	119.90
1	AA	948	C	O4'-C1'-N1	7.50	114.20	108.20
51	B3	98	G	N1-C6-O6	7.50	124.40	119.90
53	B5	1513	G	N1-C6-O6	7.50	124.40	119.90
53	B5	2206	G	N1-C6-O6	7.50	124.40	119.90
53	B5	2564	G	N1-C6-O6	7.50	124.40	119.90
1	AA	860	U	C3'-C2'-C1'	-7.49	95.50	101.50
1	AA	1174	C	O4'-C1'-N1	7.49	114.19	108.20
53	B5	1815	U	O4'-C1'-N1	7.49	114.19	108.20
53	B5	2687	G	N1-C6-O6	7.49	124.39	119.90
1	AA	1202	U	O4'-C1'-N1	7.49	114.19	108.20
53	B5	1362	G	N1-C6-O6	7.49	124.39	119.90
1	AA	779	U	O4'-C1'-N1	7.49	114.19	108.20
1	AA	1270	C	O4'-C1'-N1	7.49	114.19	108.20
1	AA	1583	U	P-O3'-C3'	7.49	128.69	119.70
53	B5	138	U	O4'-C1'-N1	7.49	114.19	108.20
53	B5	741	U	O4'-C1'-N1	7.49	114.19	108.20
1	AA	1449	C	O4'-C1'-N1	7.49	114.19	108.20
53	B5	213	G	N1-C6-O6	7.49	124.39	119.90
53	B5	276	U	O4'-C1'-N1	7.49	114.19	108.20
1	AA	936	C	O4'-C1'-N1	7.48	114.19	108.20
19	A7	71	G	C4-C5-C6	-7.48	114.31	118.80
1	AA	641	G	N1-C6-O6	7.48	124.39	119.90
53	B5	33	G	N1-C6-O6	7.48	124.39	119.90
1	AA	228	G	N1-C6-O6	7.48	124.39	119.90
53	B5	1224	C	O4'-C1'-N1	7.48	114.18	108.20
53	B5	2323	G	C5-C6-O6	-7.48	124.11	128.60
53	B5	1751	G	N1-C6-O6	7.48	124.39	119.90
52	B4	135	G	N1-C6-O6	7.48	124.39	119.90
53	B5	663	C	O4'-C1'-N1	7.48	114.18	108.20
53	B5	1738	C	O4'-C1'-N1	7.48	114.18	108.20
51	B3	47	C	O4'-C1'-N1	7.48	114.18	108.20
1	AA	1539	G	N1-C6-O6	7.47	124.39	119.90
53	B5	479	U	O4'-C1'-N1	7.47	114.18	108.20
53	B5	867	G	N1-C6-O6	7.47	124.39	119.90
53	B5	3052	G	C5-C6-O6	-7.47	124.11	128.60
53	B5	1072	G	N1-C6-O6	7.47	124.38	119.90
1	AA	495	C	O4'-C1'-N1	7.47	114.18	108.20
1	AA	503	G	N1-C6-O6	7.47	124.38	119.90
53	B5	2621	G	C5-C6-O6	-7.47	124.12	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2764	C	O4'-C1'-N1	7.47	114.18	108.20
1	AA	270	C	O4'-C1'-N1	7.47	114.17	108.20
53	B5	3062	G	C5-C6-O6	-7.47	124.12	128.60
1	AA	101	U	O4'-C1'-N1	7.46	114.17	108.20
1	AA	1177	C	O4'-C1'-N1	7.46	114.17	108.20
53	B5	1778	G	N1-C6-O6	7.46	124.38	119.90
1	AA	1325	G	C5-C6-O6	-7.46	124.12	128.60
53	B5	1640	G	O4'-C1'-N9	7.46	114.17	108.20
53	B5	2415	C	O4'-C1'-N1	7.46	114.17	108.20
1	AA	377	G	N1-C6-O6	7.46	124.38	119.90
53	B5	3201	C	O4'-C1'-N1	7.46	114.17	108.20
53	B5	3232	G	O4'-C1'-N9	7.46	114.17	108.20
53	B5	102	C	O4'-C1'-N1	7.46	114.17	108.20
1	AA	166	C	O4'-C1'-N1	7.46	114.17	108.20
1	AA	569	C	O4'-C1'-N1	7.46	114.17	108.20
53	B5	916	G	O4'-C1'-N9	7.46	114.17	108.20
1	AA	1564	U	O4'-C1'-N1	7.46	114.17	108.20
1	AA	455	C	O4'-C1'-N1	7.45	114.16	108.20
1	AA	1620	G	N1-C6-O6	7.45	124.37	119.90
53	B5	1706	C	O4'-C1'-N1	7.45	114.16	108.20
53	B5	1836	C	O4'-C1'-N1	7.45	114.16	108.20
53	B5	1931	U	O4'-C1'-N1	7.45	114.16	108.20
53	B5	2393	G	N1-C6-O6	7.45	124.37	119.90
53	B5	30	G	N1-C6-O6	7.45	124.37	119.90
1	AA	433	C	O4'-C1'-N1	7.45	114.16	108.20
53	B5	716	G	N1-C6-O6	7.45	124.37	119.90
53	B5	1118	C	O4'-C1'-N1	7.45	114.16	108.20
53	B5	606	C	O4'-C1'-N1	7.45	114.16	108.20
1	AA	1123	G	N1-C6-O6	7.45	124.37	119.90
53	B5	3357	U	O4'-C1'-N1	7.45	114.16	108.20
52	B4	71	G	N1-C6-O6	7.45	124.37	119.90
53	B5	1543	G	N1-C6-O6	7.45	124.37	119.90
1	AA	1135	A	N1-C6-N6	7.44	123.07	118.60
53	B5	2425	G	N1-C6-O6	7.44	124.36	119.90
53	B5	2993	G	N1-C6-O6	7.44	124.36	119.90
53	B5	3254	G	O4'-C1'-N9	7.44	114.15	108.20
1	AA	303	U	O4'-C1'-N1	7.44	114.15	108.20
53	B5	701	G	N1-C6-O6	7.44	124.36	119.90
53	B5	1635	G	N1-C6-O6	7.44	124.36	119.90
52	B4	12	A	O4'-C1'-N9	7.44	114.15	108.20
53	B5	115	A	O4'-C1'-N9	7.44	114.15	108.20
53	B5	1671	C	O4'-C1'-N1	7.44	114.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	49	G	N1-C6-O6	7.44	124.36	119.90
53	B5	1690	C	O4'-C1'-N1	7.44	114.15	108.20
53	B5	538	G	N1-C6-O6	7.43	124.36	119.90
53	B5	3105	U	O4'-C1'-N1	7.43	114.15	108.20
1	AA	1231	C	O4'-C1'-N1	7.43	114.15	108.20
19	A7	7	U	C2-N3-C4	-7.43	122.54	127.00
53	B5	1256	G	C5-C6-O6	-7.43	124.14	128.60
53	B5	1595	U	O4'-C1'-N1	7.43	114.15	108.20
53	B5	2532	U	O4'-C1'-N1	7.43	114.15	108.20
1	AA	1131	C	O4'-C1'-N1	7.43	114.14	108.20
53	B5	2825	C	O4'-C1'-N1	7.43	114.14	108.20
53	B5	547	G	N1-C6-O6	7.43	124.36	119.90
53	B5	773	G	N1-C6-O6	7.43	124.36	119.90
53	B5	1375	G	N1-C6-O6	7.43	124.36	119.90
53	B5	1527	C	O4'-C1'-N1	7.43	114.14	108.20
52	B4	119	C	O4'-C1'-N1	7.43	114.14	108.20
53	B5	380	U	O4'-C1'-N1	7.43	114.14	108.20
1	AA	1612	A	C5'-C4'-O4'	7.43	118.01	109.10
52	B4	107	G	N1-C6-O6	7.43	124.36	119.90
53	B5	2552	C	O4'-C1'-N1	7.43	114.14	108.20
53	B5	3390	G	O4'-C1'-N9	7.43	114.14	108.20
1	AA	1431	U	O4'-C1'-N1	7.42	114.14	108.20
19	A7	73	A	C4'-C3'-C2'	-7.42	95.18	102.60
53	B5	363	G	N1-C6-O6	7.42	124.35	119.90
53	B5	2375	G	N1-C6-O6	7.42	124.36	119.90
19	A7	45	G	C4-C5-N7	-7.42	107.83	110.80
53	B5	337	G	N1-C6-O6	7.42	124.35	119.90
53	B5	475	G	N1-C6-O6	7.42	124.35	119.90
1	AA	141	U	O4'-C1'-N1	7.42	114.14	108.20
1	AA	396	G	N1-C6-O6	7.42	124.35	119.90
1	AA	720	G	N1-C6-O6	7.42	124.35	119.90
53	B5	420	G	N1-C6-O6	7.42	124.35	119.90
53	B5	868	C	O4'-C1'-N1	7.42	114.14	108.20
1	AA	937	G	N1-C6-O6	7.42	124.35	119.90
52	B4	34	U	O4'-C1'-N1	7.42	114.13	108.20
53	B5	1791	C	O4'-C1'-N1	7.42	114.14	108.20
53	B5	3031	G	N1-C6-O6	7.42	124.35	119.90
53	B5	1111	U	O4'-C1'-N1	7.42	114.13	108.20
53	B5	1755	C	O4'-C1'-N1	7.42	114.13	108.20
53	B5	732	C	O4'-C1'-N1	7.42	114.13	108.20
53	B5	2639	G	N1-C6-O6	7.42	124.35	119.90
1	AA	358	U	O4'-C1'-N1	7.41	114.13	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1811	G	N1-C6-O6	7.41	124.35	119.90
53	B5	2457	G	N1-C6-O6	7.41	124.35	119.90
1	AA	799	A	O5'-P-OP1	-7.41	99.03	105.70
53	B5	2414	G	N1-C6-O6	7.41	124.35	119.90
53	B5	177	U	O4'-C1'-N1	7.41	114.13	108.20
53	B5	353	G	N1-C6-O6	7.41	124.35	119.90
53	B5	1272	C	O4'-C1'-N1	7.41	114.13	108.20
53	B5	2381	G	N1-C6-O6	7.41	124.35	119.90
53	B5	1035	G	C5-C6-O6	-7.41	124.16	128.60
53	B5	1451	C	O4'-C1'-N1	7.41	114.13	108.20
53	B5	2335	G	O4'-C1'-N9	7.41	114.13	108.20
1	AA	909	C	O4'-C1'-N1	7.41	114.12	108.20
1	AA	1709	C	O4'-C1'-N1	7.41	114.12	108.20
52	B4	139	U	O4'-C1'-N1	7.41	114.12	108.20
53	B5	1346	G	C5-C6-O6	-7.41	124.16	128.60
53	B5	2109	U	O4'-C1'-N1	7.41	114.12	108.20
53	B5	2487	U	O4'-C1'-N1	7.41	114.12	108.20
53	B5	3018	C	O4'-C1'-N1	7.41	114.12	108.20
1	AA	536	C	O4'-C1'-N1	7.40	114.12	108.20
1	AA	1379	A	O4'-C1'-N9	7.40	114.12	108.20
52	B4	32	C	O4'-C1'-N1	7.40	114.12	108.20
53	B5	150	A	O4'-C1'-N9	7.40	114.12	108.20
53	B5	424	G	N1-C6-O6	7.40	124.34	119.90
53	B5	476	G	N1-C6-O6	7.40	124.34	119.90
53	B5	1678	G	N1-C6-O6	7.40	124.34	119.90
1	AA	1781	C	O4'-C1'-N1	7.40	114.12	108.20
53	B5	566	G	N1-C6-O6	7.40	124.34	119.90
1	AA	1778	G	N1-C6-O6	7.40	124.34	119.90
53	B5	434	U	O4'-C1'-N1	7.40	114.12	108.20
53	B5	1923	C	O4'-C1'-N1	7.39	114.11	108.20
52	B4	46	G	N1-C6-O6	7.39	124.33	119.90
53	B5	270	U	O4'-C1'-N1	7.39	114.11	108.20
1	AA	691	C	O4'-C1'-N1	7.39	114.11	108.20
51	B3	65	G	N1-C6-O6	7.39	124.33	119.90
53	B5	112	U	O4'-C1'-N1	7.39	114.11	108.20
53	B5	1444	G	N1-C6-O6	7.39	124.33	119.90
53	B5	1493	G	N1-C6-O6	7.39	124.33	119.90
53	B5	110	G	O4'-C1'-N9	7.39	114.11	108.20
53	B5	2435	G	N1-C6-O6	7.39	124.33	119.90
53	B5	3118	C	O4'-C1'-N1	7.39	114.11	108.20
1	AA	1521	G	C8-N9-C1'	-7.39	117.40	127.00
19	A7	43	G	C4'-C3'-C2'	-7.39	95.21	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2354	C	O4'-C1'-N1	7.39	114.11	108.20
53	B5	287	G	N1-C6-O6	7.39	124.33	119.90
53	B5	2686	A	O4'-C1'-N9	7.39	114.11	108.20
52	B4	16	G	N1-C6-O6	7.38	124.33	119.90
53	B5	679	U	O4'-C1'-N1	7.38	114.11	108.20
53	B5	2675	C	O4'-C1'-N1	7.38	114.11	108.20
53	B5	3001	C	O4'-C1'-N1	7.38	114.11	108.20
1	AA	1444	A	O4'-C1'-N9	7.38	114.11	108.20
1	AA	870	C	O4'-C1'-N1	7.38	114.11	108.20
1	AA	1516	C	O5'-C5'-C4'	-7.38	97.68	111.70
1	AA	1579	C	O4'-C1'-N1	7.38	114.11	108.20
53	B5	1230	G	O4'-C1'-N9	7.38	114.11	108.20
53	B5	1796	G	N1-C6-O6	7.38	124.33	119.90
53	B5	2717	U	O4'-C1'-N1	7.38	114.11	108.20
53	B5	3043	C	O4'-C1'-N1	7.38	114.11	108.20
52	B4	118	C	O4'-C1'-N1	7.38	114.10	108.20
53	B5	406	G	N1-C6-O6	7.38	124.33	119.90
1	AA	448	C	O4'-C1'-N1	7.38	114.10	108.20
1	AA	741	C	O4'-C1'-N1	7.38	114.10	108.20
1	AA	1306	C	O4'-C1'-N1	7.38	114.10	108.20
1	AA	1494	U	O4'-C1'-N1	7.38	114.10	108.20
19	A7	41	U	C4'-C3'-C2'	-7.38	95.22	102.60
53	B5	774	G	N1-C6-O6	7.38	124.33	119.90
53	B5	2951	G	N1-C6-O6	7.38	124.33	119.90
53	B5	1882	G	N1-C6-O6	7.38	124.33	119.90
1	AA	1118	C	O4'-C1'-N1	7.37	114.10	108.20
53	B5	2288	G	N1-C6-O6	7.37	124.33	119.90
53	B5	2335	G	N1-C6-O6	7.37	124.32	119.90
53	B5	2821	C	O4'-C1'-N1	7.37	114.10	108.20
1	AA	150	C	O4'-C1'-N1	7.37	114.10	108.20
1	AA	208	U	O4'-C1'-N1	7.37	114.10	108.20
53	B5	497	C	O4'-C1'-N1	7.37	114.10	108.20
53	B5	2467	G	C5-C6-O6	-7.37	124.18	128.60
1	AA	1218	C	O4'-C1'-N1	7.37	114.10	108.20
1	AA	1381	A	O4'-C1'-N9	7.37	114.09	108.20
19	A7	15	G	C8-N9-C4	-7.37	103.45	106.40
53	B5	1773	C	O4'-C1'-N1	7.37	114.09	108.20
1	AA	1248	C	O4'-C1'-N1	7.37	114.09	108.20
53	B5	2527	G	N1-C6-O6	7.37	124.32	119.90
1	AA	1496	G	N1-C6-O6	7.36	124.32	119.90
53	B5	728	G	C5-C6-O6	-7.36	124.18	128.60
53	B5	1175	C	O4'-C1'-N1	7.36	114.09	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	852	C	O4'-C1'-N1	7.36	114.09	108.20
53	B5	350	C	O4'-C1'-N1	7.36	114.09	108.20
1	AA	702	G	O4'-C1'-N9	7.36	114.09	108.20
53	B5	1161	G	C5-C6-O6	-7.36	124.18	128.60
53	B5	1178	G	N1-C6-O6	7.36	124.32	119.90
53	B5	2943	G	N1-C6-O6	7.36	124.31	119.90
53	B5	3089	C	O4'-C1'-N1	7.36	114.09	108.20
53	B5	502	U	O4'-C1'-N1	7.36	114.09	108.20
1	AA	152	U	O4'-C1'-N1	7.36	114.08	108.20
1	AA	646	C	O4'-C1'-N1	7.36	114.08	108.20
52	B4	63	G	N1-C6-O6	7.36	124.31	119.90
53	B5	2737	C	O4'-C1'-N1	7.36	114.08	108.20
1	AA	381	C	O4'-C1'-N1	7.35	114.08	108.20
53	B5	2239	G	N1-C6-O6	7.35	124.31	119.90
53	B5	1314	C	O4'-C1'-N1	7.35	114.08	108.20
53	B5	3229	G	N1-C6-O6	7.35	124.31	119.90
1	AA	1002	G	N1-C6-O6	7.35	124.31	119.90
53	B5	2895	G	N1-C6-O6	7.35	124.31	119.90
1	AA	362	G	N1-C6-O6	7.35	124.31	119.90
1	AA	1173	G	N1-C6-O6	7.35	124.31	119.90
19	A7	61	C	C4-C5-C6	-7.35	113.72	117.40
53	B5	842	G	N1-C6-O6	7.35	124.31	119.90
53	B5	2830	G	N1-C6-O6	7.35	124.31	119.90
1	AA	1787	G	N1-C6-O6	7.35	124.31	119.90
53	B5	744	A	O4'-C1'-N9	7.35	114.08	108.20
1	AA	990	G	C5-C6-O6	-7.34	124.19	128.60
53	B5	448	U	O4'-C1'-N1	7.34	114.08	108.20
53	B5	1383	G	C5-C6-O6	-7.34	124.19	128.60
53	B5	2481	G	N1-C6-O6	7.34	124.31	119.90
1	AA	7	G	N1-C6-O6	7.34	124.31	119.90
51	B3	96	G	N1-C6-O6	7.34	124.31	119.90
53	B5	486	U	O4'-C1'-N1	7.34	114.07	108.20
53	B5	612	U	O4'-C1'-N1	7.34	114.07	108.20
53	B5	2778	G	N1-C6-O6	7.34	124.31	119.90
53	B5	2788	C	O4'-C1'-N1	7.34	114.07	108.20
1	AA	711	U	O4'-C1'-N1	7.34	114.07	108.20
1	AA	1206	C	O4'-C1'-N1	7.34	114.07	108.20
1	AA	1492	C	O4'-C1'-N1	7.34	114.07	108.20
53	B5	505	G	N1-C6-O6	7.34	124.30	119.90
53	B5	1086	C	O4'-C1'-N1	7.34	114.07	108.20
53	B5	1814	A	O4'-C1'-N9	7.34	114.07	108.20
51	B3	44	C	O4'-C1'-N1	7.34	114.07	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	288	C	O4'-C1'-N1	7.34	114.07	108.20
1	AA	1304	U	O4'-C1'-N1	7.33	114.07	108.20
1	AA	317	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	2235	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	2857	C	O4'-C1'-N1	7.33	114.06	108.20
1	AA	1392	G	N1-C6-O6	7.33	124.30	119.90
1	AA	1015	C	O4'-C1'-N1	7.33	114.06	108.20
51	B3	106	G	N1-C6-O6	7.33	124.30	119.90
53	B5	758	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1609	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1821	U	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1167	U	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1458	U	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1744	G	N1-C6-O6	7.33	124.30	119.90
53	B5	3171	U	O4'-C1'-N1	7.33	114.06	108.20
1	AA	614	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	1633	C	O4'-C1'-N1	7.33	114.06	108.20
53	B5	2301	U	O4'-C1'-N1	7.33	114.06	108.20
53	B5	2466	G	N1-C6-O6	7.33	124.30	119.90
1	AA	1303	C	O4'-C1'-N1	7.32	114.06	108.20
19	A7	35	A	N1-C2-N3	-7.32	125.64	129.30
1	AA	723	G	N1-C6-O6	7.32	124.29	119.90
53	B5	659	G	N1-C6-O6	7.32	124.29	119.90
1	AA	934	U	O4'-C1'-N1	7.32	114.06	108.20
1	AA	1330	C	O4'-C1'-N1	7.32	114.06	108.20
52	B4	19	C	O4'-C1'-N1	7.32	114.06	108.20
53	B5	1761	C	O4'-C1'-N1	7.32	114.06	108.20
53	B5	3220	G	N1-C6-O6	7.32	124.29	119.90
53	B5	3388	C	O4'-C1'-N1	7.32	114.06	108.20
1	AA	1211	C	O4'-C1'-N1	7.32	114.06	108.20
53	B5	93	C	O4'-C1'-N1	7.32	114.06	108.20
1	AA	346	G	C5-C6-O6	-7.32	124.21	128.60
1	AA	1145	C	O4'-C1'-N1	7.32	114.05	108.20
1	AA	631	G	N1-C6-O6	7.32	124.29	119.90
1	AA	1314	C	O4'-C1'-N1	7.32	114.05	108.20
53	B5	179	C	O4'-C1'-N1	7.32	114.05	108.20
53	B5	227	G	N1-C6-O6	7.32	124.29	119.90
53	B5	310	U	O4'-C1'-N1	7.32	114.05	108.20
53	B5	1941	C	O4'-C1'-N1	7.32	114.05	108.20
53	B5	2382	G	C5-C6-O6	-7.32	124.21	128.60
53	B5	2839	G	P-O3'-C3'	7.32	128.48	119.70
1	AA	858	G	N3-C4-C5	-7.31	124.94	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1623	C	O4'-C1'-N1	7.31	114.05	108.20
53	B5	708	G	N1-C6-O6	7.31	124.29	119.90
53	B5	2856	G	C5-C6-O6	-7.31	124.21	128.60
53	B5	918	C	O4'-C1'-N1	7.31	114.05	108.20
1	AA	1409	G	O4'-C1'-N9	7.31	114.05	108.20
51	B3	61	U	O4'-C1'-N1	7.31	114.05	108.20
1	AA	648	G	N1-C6-O6	7.31	124.28	119.90
1	AA	1622	C	O4'-C1'-N1	7.31	114.05	108.20
53	B5	412	G	O4'-C1'-N9	7.31	114.05	108.20
53	B5	2508	U	O4'-C1'-N1	7.31	114.05	108.20
46	BV	47	TYR	CB-CG-CD1	-7.31	116.62	121.00
53	B5	1284	C	O4'-C1'-N1	7.31	114.05	108.20
53	B5	1398	U	O4'-C1'-N1	7.31	114.05	108.20
53	B5	2241	U	O4'-C1'-N1	7.31	114.05	108.20
53	B5	2440	G	N1-C6-O6	7.31	124.28	119.90
1	AA	275	C	O4'-C1'-N1	7.30	114.04	108.20
53	B5	1488	G	N1-C6-O6	7.30	124.28	119.90
1	AA	338	C	O4'-C1'-N1	7.30	114.04	108.20
1	AA	1287	U	O4'-C1'-N1	7.30	114.04	108.20
53	B5	2344	U	O4'-C1'-N1	7.30	114.04	108.20
1	AA	386	G	N1-C6-O6	7.30	124.28	119.90
1	AA	1191	C	O4'-C1'-N1	7.30	114.04	108.20
19	A7	31	A	N7-C8-N9	7.30	117.45	113.80
51	B3	78	G	N1-C6-O6	7.30	124.28	119.90
51	B3	87	U	O4'-C1'-N1	7.30	114.04	108.20
53	B5	763	G	N1-C6-O6	7.30	124.28	119.90
53	B5	1325	U	O4'-C1'-N1	7.30	114.04	108.20
53	B5	1746	U	O4'-C1'-N1	7.30	114.04	108.20
53	B5	912	G	C5-C6-O6	-7.30	124.22	128.60
53	B5	1149	G	N1-C6-O6	7.30	124.28	119.90
53	B5	1895	A	O4'-C1'-N9	7.30	114.04	108.20
53	B5	2118	C	O4'-C1'-N1	7.30	114.04	108.20
53	B5	2176	U	O4'-C1'-N1	7.30	114.04	108.20
1	AA	1627	G	C5-C6-O6	-7.30	124.22	128.60
1	AA	1758	G	N1-C6-O6	7.30	124.28	119.90
53	B5	845	G	N1-C6-O6	7.30	124.28	119.90
53	B5	1731	A	O4'-C1'-N9	7.30	114.04	108.20
53	B5	2146	C	O4'-C1'-N1	7.30	114.04	108.20
53	B5	3075	G	N1-C6-O6	7.30	124.28	119.90
1	AA	443	C	O4'-C1'-N1	7.30	114.04	108.20
24	B9	14	TYR	CB-CG-CD1	-7.30	116.62	121.00
53	B5	388	G	O4'-C1'-N9	7.29	114.04	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	382	C	O4'-C1'-N1	7.29	114.03	108.20
1	AA	851	U	O4'-C1'-N1	7.29	114.03	108.20
1	AA	930	C	O4'-C1'-N1	7.29	114.03	108.20
53	B5	2378	C	O4'-C1'-N1	7.29	114.03	108.20
1	AA	18	C	O4'-C1'-N1	7.29	114.03	108.20
1	AA	160	C	O4'-C1'-N1	7.29	114.03	108.20
52	B4	28	C	O4'-C1'-N1	7.29	114.03	108.20
53	B5	698	U	O4'-C1'-N1	7.29	114.03	108.20
53	B5	803	C	O4'-C1'-N1	7.29	114.03	108.20
53	B5	2124	G	P-O3'-C3'	7.29	128.45	119.70
53	B5	3230	G	N1-C6-O6	7.29	124.27	119.90
53	B5	548	G	O4'-C1'-N9	7.29	114.03	108.20
53	B5	1623	G	N1-C6-O6	7.29	124.27	119.90
1	AA	853	G	N1-C6-O6	7.29	124.27	119.90
1	AA	967	U	O4'-C1'-N1	7.29	114.03	108.20
19	A7	62	A	C2-N3-C4	7.29	114.24	110.60
19	A7	1	G	N3-C4-C5	-7.29	124.96	128.60
53	B5	1299	U	O4'-C1'-N1	7.29	114.03	108.20
1	AA	495	C	C2-N1-C1'	7.29	126.81	118.80
1	AA	1405	G	N1-C6-O6	7.29	124.27	119.90
53	B5	911	C	O4'-C1'-N1	7.29	114.03	108.20
53	B5	2659	G	N1-C6-O6	7.29	124.27	119.90
1	AA	469	C	O4'-C1'-N1	7.28	114.03	108.20
1	AA	504	U	O4'-C1'-N1	7.28	114.03	108.20
53	B5	86	G	N1-C6-O6	7.28	124.27	119.90
53	B5	2654	C	O4'-C1'-N1	7.28	114.03	108.20
53	B5	75	G	N1-C6-O6	7.28	124.27	119.90
53	B5	1005	G	N1-C6-O6	7.28	124.27	119.90
53	B5	1094	U	O4'-C1'-N1	7.28	114.03	108.20
53	B5	1250	G	N1-C6-O6	7.28	124.27	119.90
53	B5	2408	U	O4'-C1'-N1	7.28	114.02	108.20
1	AA	1672	C	O4'-C1'-N1	7.28	114.02	108.20
19	A7	68	U	C6-N1-C2	-7.28	116.63	121.00
53	B5	979	G	N1-C6-O6	7.28	124.27	119.90
53	B5	1541	G	N1-C6-O6	7.28	124.27	119.90
1	AA	1527	C	O4'-C1'-N1	7.28	114.02	108.20
1	AA	824	G	N1-C6-O6	7.28	124.27	119.90
53	B5	226	C	O4'-C1'-N1	7.28	114.02	108.20
53	B5	315	C	O4'-C1'-N1	7.27	114.02	108.20
53	B5	944	C	O4'-C1'-N1	7.27	114.02	108.20
1	AA	552	G	N1-C6-O6	7.27	124.26	119.90
1	AA	682	C	O4'-C1'-N1	7.27	114.02	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1371	G	N1-C6-O6	7.27	124.26	119.90
53	B5	1443	G	N1-C6-O6	7.27	124.26	119.90
1	AA	1071	G	C5-C6-O6	-7.27	124.24	128.60
51	B3	45	A	P-O3'-C3'	7.27	128.43	119.70
53	B5	565	U	O4'-C1'-N1	7.27	114.02	108.20
53	B5	1342	C	O4'-C1'-N1	7.27	114.02	108.20
53	B5	1500	G	C5-C6-O6	-7.27	124.24	128.60
1	AA	1193	C	O4'-C1'-N1	7.27	114.02	108.20
53	B5	2889	C	O4'-C1'-N1	7.27	114.02	108.20
53	B5	3300	U	O4'-C1'-N1	7.27	114.02	108.20
1	AA	419	G	N1-C6-O6	7.27	124.26	119.90
53	B5	446	U	O4'-C1'-N1	7.27	114.01	108.20
53	B5	3385	U	O4'-C1'-N1	7.27	114.01	108.20
1	AA	1162	G	N1-C6-O6	7.27	124.26	119.90
51	B3	4	U	O4'-C1'-N1	7.27	114.01	108.20
53	B5	1300	G	N1-C6-O6	7.27	124.26	119.90
53	B5	2293	C	O4'-C1'-N1	7.27	114.01	108.20
19	A7	21	A	N1-C2-N3	-7.26	125.67	129.30
53	B5	1759	C	O4'-C1'-N1	7.26	114.01	108.20
53	B5	832	G	N1-C6-O6	7.26	124.26	119.90
1	AA	1771	C	O4'-C1'-N1	7.26	114.01	108.20
53	B5	46	U	O4'-C1'-N1	7.26	114.01	108.20
53	B5	931	C	O4'-C1'-N1	7.26	114.01	108.20
53	B5	2718	U	O4'-C1'-N1	7.26	114.01	108.20
53	B5	1313	G	N1-C6-O6	7.26	124.26	119.90
53	B5	1567	U	O4'-C1'-N1	7.26	114.01	108.20
1	AA	1070	G	C5-C6-O6	-7.26	124.25	128.60
1	AA	1650	C	O4'-C1'-N1	7.26	114.00	108.20
53	B5	1765	U	O4'-C1'-N1	7.26	114.01	108.20
53	B5	2985	C	O4'-C1'-N1	7.26	114.00	108.20
53	B5	1323	G	O4'-C1'-N9	7.25	114.00	108.20
1	AA	616	G	N1-C6-O6	7.25	124.25	119.90
1	AA	639	U	O4'-C1'-N1	7.25	114.00	108.20
53	B5	264	G	N1-C6-O6	7.25	124.25	119.90
53	B5	2359	C	O4'-C1'-N1	7.25	114.00	108.20
53	B5	2528	G	N1-C6-O6	7.25	124.25	119.90
53	B5	2894	C	O4'-C1'-N1	7.25	114.00	108.20
53	B5	2944	U	O4'-C1'-N1	7.25	114.00	108.20
1	AA	281	G	N1-C6-O6	7.25	124.25	119.90
1	AA	859	A	C3'-C2'-C1'	-7.25	95.70	101.50
19	A7	69	U	N3-C4-O4	7.25	124.48	119.40
53	B5	16	A	O4'-C1'-N9	7.25	114.00	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	443	G	N1-C6-O6	7.25	124.25	119.90
53	B5	1396	C	O4'-C1'-N1	7.25	114.00	108.20
53	B5	2170	U	O4'-C1'-N1	7.25	114.00	108.20
53	B5	2240	G	N1-C6-O6	7.25	124.25	119.90
53	B5	3253	G	O4'-C1'-N9	7.25	114.00	108.20
1	AA	1116	G	N1-C6-O6	7.25	124.25	119.90
53	B5	546	C	P-O3'-C3'	7.25	128.40	119.70
53	B5	2283	G	O4'-C1'-N9	7.25	114.00	108.20
51	B3	2	G	O4'-C1'-N9	7.25	114.00	108.20
53	B5	855	U	O4'-C1'-N1	7.25	114.00	108.20
1	AA	204	G	O4'-C1'-N9	7.25	114.00	108.20
1	AA	1596	U	O4'-C1'-N1	7.25	114.00	108.20
53	B5	2185	G	N1-C6-O6	7.25	124.25	119.90
53	B5	2563	G	N1-C6-O6	7.25	124.25	119.90
53	B5	125	C	O4'-C1'-N1	7.25	114.00	108.20
53	B5	1296	C	O4'-C1'-N1	7.25	114.00	108.20
53	B5	1404	G	N1-C6-O6	7.25	124.25	119.90
53	B5	2861	U	O4'-C1'-N1	7.25	114.00	108.20
1	AA	653	C	O4'-C1'-N1	7.24	114.00	108.20
53	B5	442	G	N1-C6-O6	7.24	124.25	119.90
53	B5	454	C	O4'-C1'-N1	7.24	114.00	108.20
53	B5	1820	U	O4'-C1'-N1	7.24	114.00	108.20
53	B5	2904	U	O4'-C1'-N1	7.24	114.00	108.20
53	B5	60	A	O4'-C1'-N9	7.24	113.99	108.20
53	B5	143	G	N1-C6-O6	7.24	124.24	119.90
53	B5	650	C	O4'-C1'-N1	7.24	113.99	108.20
53	B5	1281	G	N1-C6-O6	7.24	124.25	119.90
1	AA	269	G	N1-C6-O6	7.24	124.24	119.90
51	B3	31	U	O4'-C1'-N1	7.24	113.99	108.20
53	B5	1210	U	O4'-C1'-N1	7.24	113.99	108.20
53	B5	1410	U	O4'-C1'-N1	7.24	113.99	108.20
53	B5	676	G	C5-C6-O6	-7.24	124.26	128.60
53	B5	1496	C	C6-N1-C2	-7.24	117.41	120.30
53	B5	1899	G	C5-C6-O6	-7.24	124.26	128.60
1	AA	758	U	O4'-C1'-N1	7.23	113.99	108.20
1	AA	1298	U	O4'-C1'-N1	7.23	113.99	108.20
53	B5	104	G	N1-C6-O6	7.23	124.24	119.90
52	B4	134	G	O4'-C1'-N9	7.23	113.99	108.20
53	B5	877	C	O4'-C1'-N1	7.23	113.98	108.20
53	B5	2194	G	O4'-C1'-N9	7.23	113.99	108.20
53	B5	2486	A	O4'-C1'-N9	7.23	113.99	108.20
1	AA	654	C	O4'-C1'-N1	7.23	113.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2364	G	N1-C6-O6	7.23	124.24	119.90
53	B5	2409	G	N1-C6-O6	7.23	124.24	119.90
53	B5	2471	U	O4'-C1'-N1	7.23	113.98	108.20
1	AA	453	U	O4'-C1'-N1	7.23	113.98	108.20
53	B5	374	A	P-O3'-C3'	7.23	128.37	119.70
53	B5	668	G	N1-C6-O6	7.23	124.24	119.90
53	B5	1802	C	O4'-C1'-N1	7.23	113.98	108.20
53	B5	2197	C	O4'-C1'-N1	7.23	113.98	108.20
53	B5	1206	G	N1-C6-O6	7.23	124.23	119.90
53	B5	3345	G	N1-C6-O6	7.23	124.24	119.90
1	AA	90	C	O4'-C1'-N1	7.22	113.98	108.20
1	AA	186	C	O4'-C1'-N1	7.22	113.98	108.20
53	B5	634	C	O4'-C1'-N1	7.22	113.98	108.20
53	B5	1436	U	O4'-C1'-N1	7.22	113.98	108.20
53	B5	2395	G	N1-C6-O6	7.22	124.23	119.90
53	B5	2403	G	O4'-C1'-N9	7.22	113.98	108.20
1	AA	153	G	N1-C6-O6	7.22	124.23	119.90
53	B5	1388	U	O4'-C1'-N1	7.22	113.98	108.20
53	B5	1610	G	N1-C6-O6	7.22	124.23	119.90
53	B5	2730	G	N1-C6-O6	7.22	124.23	119.90
19	A7	35	A	C6-N1-C2	7.22	122.93	118.60
53	B5	494	G	N1-C6-O6	7.22	124.23	119.90
53	B5	999	G	N1-C6-O6	7.22	124.23	119.90
1	AA	942	C	O4'-C1'-N1	7.22	113.97	108.20
53	B5	890	C	O4'-C1'-N1	7.22	113.98	108.20
53	B5	2148	U	O4'-C1'-N1	7.22	113.97	108.20
1	AA	1605	G	N1-C6-O6	7.22	124.23	119.90
53	B5	286	U	P-O3'-C3'	7.22	128.36	119.70
1	AA	875	G	N1-C6-O6	7.22	124.23	119.90
19	A7	3	G	C5-C6-O6	7.22	132.93	128.60
53	B5	815	G	C5-C6-O6	-7.22	124.27	128.60
53	B5	2551	C	O4'-C1'-N1	7.22	113.97	108.20
53	B5	2834	G	N1-C6-O6	7.22	124.23	119.90
1	AA	1262	U	O4'-C1'-N1	7.21	113.97	108.20
53	B5	2110	G	C5-C6-O6	-7.21	124.27	128.60
53	B5	2254	U	O4'-C1'-N1	7.21	113.97	108.20
53	B5	491	C	O4'-C1'-N1	7.21	113.97	108.20
53	B5	2921	U	O4'-C1'-N1	7.21	113.97	108.20
53	B5	3124	G	N1-C6-O6	7.21	124.23	119.90
1	AA	598	U	O4'-C1'-N1	7.21	113.97	108.20
1	AA	668	C	O4'-C1'-N1	7.21	113.97	108.20
1	AA	781	U	O4'-C1'-N1	7.21	113.97	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	136	G	P-O3'-C3'	7.21	128.35	119.70
53	B5	2169	G	N1-C6-O6	7.21	124.23	119.90
53	B5	2353	G	C5-C6-O6	-7.21	124.27	128.60
53	B5	2451	G	N1-C6-O6	7.21	124.23	119.90
1	AA	1186	C	O4'-C1'-N1	7.21	113.97	108.20
53	B5	391	A	O4'-C1'-N9	7.21	113.97	108.20
53	B5	3258	U	O4'-C1'-N1	7.21	113.97	108.20
1	AA	844	A	P-O3'-C3'	7.21	128.35	119.70
1	AA	856	A	C5-C6-N6	-7.21	117.93	123.70
1	AA	1039	G	N1-C6-O6	7.21	124.22	119.90
1	AA	1430	G	O4'-C1'-N9	7.21	113.97	108.20
53	B5	500	C	O4'-C1'-N1	7.21	113.97	108.20
1	AA	237	C	O4'-C1'-N1	7.21	113.97	108.20
53	B5	2283	G	N1-C6-O6	7.21	124.22	119.90
1	AA	51	A	O4'-C1'-N9	7.21	113.96	108.20
1	AA	590	C	O4'-C1'-N1	7.21	113.96	108.20
1	AA	1005	C	O4'-C1'-N1	7.20	113.96	108.20
53	B5	1672	U	O4'-C1'-N1	7.20	113.96	108.20
53	B5	1810	A	P-O3'-C3'	7.20	128.34	119.70
53	B5	1875	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	3343	G	N1-C6-O6	7.20	124.22	119.90
1	AA	584	C	O4'-C1'-N1	7.20	113.96	108.20
53	B5	715	A	O4'-C1'-N9	7.20	113.96	108.20
1	AA	1127	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	136	G	N1-C6-O6	7.20	124.22	119.90
53	B5	674	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	745	C	O4'-C1'-N1	7.20	113.96	108.20
53	B5	1521	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	1753	G	N1-C6-O6	7.20	124.22	119.90
53	B5	1776	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	2412	G	N1-C6-O6	7.20	124.22	119.90
1	AA	872	G	C5-C6-O6	-7.20	124.28	128.60
53	B5	1239	C	O4'-C1'-N1	7.20	113.96	108.20
53	B5	2200	U	O4'-C1'-N1	7.20	113.96	108.20
53	B5	813	G	N1-C6-O6	7.20	124.22	119.90
53	B5	1766	G	N1-C6-O6	7.19	124.22	119.90
1	AA	763	G	N1-C6-O6	7.19	124.22	119.90
53	B5	3341	U	O4'-C1'-N1	7.19	113.95	108.20
1	AA	1538	G	N1-C6-O6	7.19	124.21	119.90
53	B5	1152	G	O4'-C1'-N9	7.19	113.95	108.20
53	B5	1234	G	N1-C6-O6	7.19	124.21	119.90
1	AA	6	G	N1-C6-O6	7.19	124.21	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1556	C	O4'-C1'-N1	7.19	113.95	108.20
53	B5	2132	C	O4'-C1'-N1	7.19	113.95	108.20
53	B5	299	G	N1-C6-O6	7.19	124.21	119.90
1	AA	1237	G	N1-C6-O6	7.19	124.21	119.90
1	AA	1374	U	O4'-C1'-N1	7.19	113.95	108.20
53	B5	412	G	N1-C6-O6	7.19	124.21	119.90
53	B5	579	G	N1-C6-O6	7.19	124.21	119.90
53	B5	1374	G	N1-C6-O6	7.19	124.21	119.90
1	AA	1244	C	O4'-C1'-N1	7.18	113.95	108.20
1	AA	1337	U	O4'-C1'-N1	7.18	113.95	108.20
1	AA	1545	A	OP1-P-OP2	7.18	130.38	119.60
1	AA	1647	G	N1-C6-O6	7.18	124.21	119.90
1	AA	373	G	N1-C6-O6	7.18	124.21	119.90
1	AA	1552	U	OP1-P-OP2	-7.18	108.83	119.60
53	B5	56	G	N1-C6-O6	7.18	124.21	119.90
53	B5	236	G	N1-C6-O6	7.18	124.21	119.90
53	B5	639	G	C5-C6-O6	-7.18	124.29	128.60
53	B5	2753	G	N1-C6-O6	7.18	124.21	119.90
53	B5	3291	G	O4'-C1'-N9	7.18	113.94	108.20
1	AA	16	G	N1-C6-O6	7.18	124.21	119.90
53	B5	2805	G	N1-C6-O6	7.18	124.21	119.90
51	B3	25	G	N1-C6-O6	7.18	124.21	119.90
53	B5	156	G	C5-C6-O6	-7.18	124.29	128.60
53	B5	661	G	N1-C6-O6	7.18	124.21	119.90
1	AA	1120	C	O4'-C1'-N1	7.18	113.94	108.20
19	A7	5	A	C5-N7-C8	-7.18	100.31	103.90
52	B4	15	G	C5-C6-O6	-7.18	124.29	128.60
53	B5	1088	U	O4'-C1'-N1	7.18	113.94	108.20
53	B5	1207	G	N1-C6-O6	7.18	124.21	119.90
53	B5	2115	G	N1-C6-O6	7.18	124.21	119.90
1	AA	1463	C	O4'-C1'-N1	7.17	113.94	108.20
1	AA	1648	U	O4'-C1'-N1	7.17	113.94	108.20
53	B5	514	G	N1-C6-O6	7.17	124.20	119.90
53	B5	1230	G	N1-C6-O6	7.17	124.20	119.90
53	B5	3025	C	O4'-C1'-N1	7.17	113.94	108.20
1	AA	273	G	N1-C6-O6	7.17	124.20	119.90
1	AA	1757	C	O4'-C1'-N1	7.17	113.94	108.20
51	B3	58	U	O4'-C1'-N1	7.17	113.94	108.20
51	B3	102	C	O4'-C1'-N1	7.17	113.94	108.20
53	B5	1425	U	O4'-C1'-N1	7.17	113.94	108.20
53	B5	3023	U	O4'-C1'-N1	7.17	113.94	108.20
1	AA	1277	G	C5-C6-O6	-7.17	124.30	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	450	G	N1-C6-O6	7.17	124.20	119.90
53	B5	1267	U	O4'-C1'-N1	7.17	113.94	108.20
1	AA	175	G	N1-C6-O6	7.17	124.20	119.90
1	AA	1305	G	N1-C6-O6	7.17	124.20	119.90
53	B5	2603	G	O4'-C1'-N9	7.17	113.94	108.20
53	B5	3173	U	O4'-C1'-N1	7.17	113.94	108.20
1	AA	1033	C	O4'-C1'-N1	7.17	113.94	108.20
1	AA	1119	G	N1-C6-O6	7.17	124.20	119.90
52	B4	72	G	N1-C6-O6	7.17	124.20	119.90
53	B5	950	G	C5-C6-O6	-7.17	124.30	128.60
53	B5	1574	C	O4'-C1'-N1	7.17	113.94	108.20
53	B5	1718	G	C5-C6-O6	-7.17	124.30	128.60
53	B5	2832	C	O4'-C1'-N1	7.17	113.94	108.20
19	A7	19	G	C5-N7-C8	-7.17	100.72	104.30
51	B3	90	C	O4'-C1'-N1	7.17	113.93	108.20
52	B4	68	G	C5-C6-O6	-7.17	124.30	128.60
53	B5	1155	C	O4'-C1'-N1	7.17	113.93	108.20
53	B5	1940	G	N1-C6-O6	7.17	124.20	119.90
53	B5	2877	G	N1-C6-O6	7.17	124.20	119.90
53	B5	230	U	O4'-C1'-N1	7.17	113.93	108.20
53	B5	277	G	O4'-C1'-N9	7.17	113.93	108.20
53	B5	2722	U	O4'-C1'-N1	7.17	113.93	108.20
1	AA	1510	G	N1-C6-O6	7.16	124.20	119.90
53	B5	543	C	O4'-C1'-N1	7.16	113.93	108.20
53	B5	856	G	N1-C6-O6	7.16	124.20	119.90
53	B5	875	G	N1-C6-O6	7.16	124.20	119.90
53	B5	1432	C	O4'-C1'-N1	7.16	113.93	108.20
1	AA	825	U	O4'-C1'-N1	7.16	113.93	108.20
1	AA	1195	G	N1-C6-O6	7.16	124.20	119.90
52	B4	91	C	O4'-C1'-N1	7.16	113.93	108.20
53	B5	583	G	N1-C6-O6	7.16	124.20	119.90
53	B5	277	G	N1-C6-O6	7.16	124.19	119.90
53	B5	292	U	O4'-C1'-N1	7.16	113.93	108.20
53	B5	526	C	O4'-C1'-N1	7.16	113.93	108.20
53	B5	1279	C	O4'-C1'-N1	7.16	113.93	108.20
53	B5	1320	C	O4'-C1'-N1	7.16	113.93	108.20
53	B5	2757	U	O4'-C1'-N1	7.16	113.93	108.20
1	AA	857	U	P-O3'-C3'	-7.16	111.11	119.70
53	B5	1854	C	O4'-C1'-N1	7.16	113.92	108.20
1	AA	1240	A	O4'-C1'-N9	7.16	113.92	108.20
52	B4	124	G	N1-C6-O6	7.16	124.19	119.90
1	AA	403	G	N1-C6-O6	7.15	124.19	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1404	U	O4'-C1'-N1	7.15	113.92	108.20
53	B5	781	G	N1-C6-O6	7.15	124.19	119.90
53	B5	854	G	O4'-C1'-N9	7.15	113.92	108.20
53	B5	1140	G	C5-C6-O6	-7.15	124.31	128.60
1	AA	1624	U	O4'-C1'-N1	7.15	113.92	108.20
53	B5	1041	U	O4'-C1'-N1	7.15	113.92	108.20
53	B5	1226	G	N1-C6-O6	7.15	124.19	119.90
53	B5	2700	G	N1-C6-O6	7.15	124.19	119.90
53	B5	3301	U	O4'-C1'-N1	7.15	113.92	108.20
1	AA	432	G	N1-C6-O6	7.15	124.19	119.90
1	AA	302	U	O4'-C1'-N1	7.15	113.92	108.20
1	AA	1698	C	O4'-C1'-N1	7.15	113.92	108.20
53	B5	24	G	N1-C6-O6	7.15	124.19	119.90
53	B5	1338	C	O4'-C1'-N1	7.15	113.92	108.20
53	B5	2450	G	N1-C6-O6	7.15	124.19	119.90
53	B5	2827	U	O4'-C1'-N1	7.15	113.92	108.20
52	B4	134	G	N1-C6-O6	7.15	124.19	119.90
53	B5	2287	C	O4'-C1'-N1	7.15	113.92	108.20
53	B5	1269	U	O4'-C1'-N1	7.14	113.92	108.20
53	B5	1514	G	O4'-C1'-N9	7.14	113.92	108.20
53	B5	2957	G	N1-C6-O6	7.14	124.19	119.90
53	B5	1542	G	N1-C6-O6	7.14	124.19	119.90
1	AA	1261	G	N1-C6-O6	7.14	124.18	119.90
19	A7	12	U	C4-C5-C6	7.14	123.98	119.70
19	A7	13	C	C6-N1-C2	-7.14	117.44	120.30
53	B5	869	G	N1-C6-O6	7.14	124.18	119.90
53	B5	1023	C	O4'-C1'-N1	7.14	113.91	108.20
1	AA	724	C	O4'-C1'-N1	7.14	113.91	108.20
1	AA	1782	C	O4'-C1'-N1	7.14	113.91	108.20
53	B5	675	C	O4'-C1'-N1	7.14	113.91	108.20
53	B5	2516	U	O4'-C1'-N1	7.14	113.91	108.20
1	AA	1295	U	O4'-C1'-N1	7.14	113.91	108.20
53	B5	1142	G	N1-C6-O6	7.14	124.18	119.90
1	AA	427	C	O4'-C1'-N1	7.13	113.91	108.20
1	AA	1363	U	O4'-C1'-N1	7.13	113.91	108.20
1	AA	1542	U	O4'-C1'-N1	7.13	113.91	108.20
1	AA	1633	A	C1'-O4'-C4'	-7.13	104.19	109.90
1	AA	1737	C	O4'-C1'-N1	7.13	113.91	108.20
53	B5	1310	G	N1-C6-O6	7.13	124.18	119.90
53	B5	1501	U	O4'-C1'-N1	7.13	113.91	108.20
53	B5	1758	G	N1-C6-O6	7.13	124.18	119.90
53	B5	3090	U	O4'-C1'-N1	7.13	113.91	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	929	A	O4'-C1'-N9	7.13	113.91	108.20
53	B5	1336	U	O4'-C1'-N1	7.13	113.91	108.20
1	AA	415	C	O4'-C1'-N1	7.13	113.90	108.20
53	B5	2796	G	N1-C6-O6	7.13	124.18	119.90
53	B5	3308	C	O4'-C1'-N1	7.13	113.90	108.20
1	AA	1562	U	O4'-C1'-N1	7.13	113.90	108.20
51	B3	105	A	O4'-C1'-N9	7.13	113.90	108.20
52	B4	35	C	O4'-C1'-N1	7.13	113.90	108.20
53	B5	934	G	N1-C6-O6	7.13	124.18	119.90
53	B5	1822	C	O4'-C1'-N1	7.13	113.90	108.20
53	B5	2585	G	N1-C6-O6	7.13	124.18	119.90
53	B5	2624	G	O4'-C1'-N9	7.13	113.90	108.20
19	A7	62	A	C6-N1-C2	-7.13	114.32	118.60
53	B5	1912	U	O4'-C1'-N1	7.13	113.90	108.20
1	AA	463	U	O4'-C1'-N1	7.12	113.90	108.20
1	AA	1495	U	O4'-C1'-N1	7.12	113.90	108.20
53	B5	1789	G	N1-C6-O6	7.12	124.17	119.90
53	B5	21	G	O4'-C1'-N9	7.12	113.90	108.20
53	B5	474	G	N1-C6-O6	7.12	124.17	119.90
53	B5	1629	U	O4'-C1'-N1	7.12	113.90	108.20
53	B5	1686	U	O4'-C1'-N1	7.12	113.90	108.20
53	B5	2658	G	N1-C6-O6	7.12	124.17	119.90
1	AA	1341	A	O4'-C1'-N9	7.12	113.90	108.20
1	AA	1630	C	P-O3'-C3'	-7.12	111.16	119.70
53	B5	851	C	O4'-C1'-N1	7.12	113.90	108.20
1	AA	710	U	O4'-C1'-N1	7.12	113.90	108.20
1	AA	1153	C	O4'-C1'-N1	7.12	113.90	108.20
1	AA	1239	G	N1-C6-O6	7.12	124.17	119.90
1	AA	97	C	O4'-C1'-N1	7.12	113.90	108.20
51	B3	117	C	O4'-C1'-N1	7.12	113.89	108.20
53	B5	1579	C	O4'-C1'-N1	7.12	113.89	108.20
53	B5	2150	G	C5-C6-O6	-7.12	124.33	128.60
53	B5	2543	U	O4'-C1'-N1	7.12	113.89	108.20
1	AA	941	G	N1-C6-O6	7.12	124.17	119.90
1	AA	1743	G	N1-C6-O6	7.12	124.17	119.90
53	B5	743	C	O4'-C1'-N1	7.12	113.89	108.20
53	B5	1237	G	O4'-C1'-N9	7.12	113.89	108.20
53	B5	1868	G	C5-C6-O6	-7.12	124.33	128.60
53	B5	3059	G	N1-C6-O6	7.12	124.17	119.90
1	AA	246	G	N1-C6-O6	7.11	124.17	119.90
19	A7	28	C	N1-C2-O2	7.11	123.17	118.90
53	B5	2286	U	P-O3'-C3'	7.11	128.24	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1087	C	O4'-C1'-N1	7.11	113.89	108.20
53	B5	3074	G	N1-C6-O6	7.11	124.17	119.90
1	AA	1032	C	O4'-C1'-N1	7.11	113.89	108.20
52	B4	136	G	N1-C6-O6	7.11	124.17	119.90
53	B5	96	G	C5-C6-O6	-7.11	124.33	128.60
1	AA	577	G	N1-C6-O6	7.11	124.17	119.90
19	A7	65	G	O4'-C1'-N9	7.11	113.89	108.20
1	AA	1292	G	N1-C6-O6	7.11	124.16	119.90
53	B5	835	G	N1-C6-O6	7.11	124.16	119.90
1	AA	1356	C	O4'-C1'-N1	7.11	113.88	108.20
1	AA	1784	G	N1-C6-O6	7.11	124.16	119.90
19	A7	18	G	O4'-C4'-C3'	7.11	111.78	106.10
53	B5	50	U	O4'-C1'-N1	7.11	113.89	108.20
53	B5	239	G	N1-C6-O6	7.11	124.16	119.90
53	B5	1561	G	N1-C6-O6	7.11	124.16	119.90
53	B5	1646	G	N1-C6-O6	7.11	124.16	119.90
53	B5	2155	G	N1-C6-O6	7.11	124.16	119.90
53	B5	118	U	O4'-C1'-N1	7.10	113.88	108.20
1	AA	459	G	N1-C6-O6	7.10	124.16	119.90
53	B5	1268	G	N1-C6-O6	7.10	124.16	119.90
53	B5	2525	G	C5-C6-O6	-7.10	124.34	128.60
1	AA	287	G	N1-C6-O6	7.10	124.16	119.90
1	AA	1115	G	N1-C6-O6	7.10	124.16	119.90
1	AA	1660	G	N1-C6-O6	7.10	124.16	119.90
53	B5	2133	U	O4'-C1'-N1	7.10	113.88	108.20
1	AA	183	U	O4'-C1'-N1	7.10	113.88	108.20
51	B3	34	C	O4'-C1'-N1	7.10	113.88	108.20
53	B5	79	U	O4'-C1'-N1	7.10	113.88	108.20
53	B5	2463	G	O4'-C1'-N9	7.10	113.88	108.20
53	B5	3361	G	N1-C6-O6	7.10	124.16	119.90
1	AA	573	C	O4'-C1'-N1	7.10	113.88	108.20
1	AA	1516	C	C4'-C3'-C2'	7.10	109.70	102.60
1	AA	242	U	O4'-C1'-N1	7.09	113.88	108.20
1	AA	380	U	O4'-C1'-N1	7.09	113.88	108.20
53	B5	1476	G	O4'-C1'-N9	7.09	113.88	108.20
1	AA	838	G	N1-C6-O6	7.09	124.16	119.90
51	B3	41	G	N1-C6-O6	7.09	124.16	119.90
53	B5	516	A	O4'-C1'-N9	7.09	113.87	108.20
1	AA	1434	U	O4'-C1'-N1	7.09	113.87	108.20
1	AA	1714	C	O4'-C1'-N1	7.09	113.87	108.20
53	B5	2503	G	N1-C6-O6	7.09	124.15	119.90
1	AA	858	G	N1-C2-N3	-7.09	119.65	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3298	C	O4'-C1'-N1	7.09	113.87	108.20
53	B5	724	U	O4'-C1'-N1	7.09	113.87	108.20
1	AA	227	U	O4'-C1'-N1	7.09	113.87	108.20
1	AA	935	G	N1-C6-O6	7.09	124.15	119.90
1	AA	1027	C	O4'-C1'-N1	7.09	113.87	108.20
1	AA	1785	C	O4'-C1'-N1	7.09	113.87	108.20
53	B5	1090	G	N1-C6-O6	7.09	124.15	119.90
53	B5	1832	C	O4'-C1'-N1	7.09	113.87	108.20
53	B5	2366	C	O4'-C1'-N1	7.09	113.87	108.20
1	AA	376	C	O4'-C1'-N1	7.08	113.87	108.20
1	AA	59	C	O4'-C1'-N1	7.08	113.87	108.20
1	AA	1102	C	O4'-C1'-N1	7.08	113.87	108.20
53	B5	682	U	O4'-C1'-N1	7.08	113.87	108.20
53	B5	1581	C	O4'-C1'-N1	7.08	113.87	108.20
53	B5	1784	G	N1-C6-O6	7.08	124.15	119.90
53	B5	1538	G	N1-C6-O6	7.08	124.15	119.90
53	B5	1824	U	O4'-C1'-N1	7.08	113.86	108.20
1	AA	865	A	C4'-C3'-O3'	7.08	127.16	113.00
53	B5	469	G	O4'-C1'-N9	7.08	113.86	108.20
53	B5	1831	U	O4'-C1'-N1	7.08	113.86	108.20
53	B5	2340	U	O4'-C1'-N1	7.08	113.86	108.20
53	B5	2749	G	N1-C6-O6	7.08	124.15	119.90
53	B5	776	U	O4'-C1'-N1	7.08	113.86	108.20
53	B5	1414	G	C5-C6-O6	-7.08	124.35	128.60
53	B5	1587	A	O4'-C1'-N9	7.08	113.86	108.20
53	B5	3121	U	P-O3'-C3'	7.08	128.19	119.70
1	AA	996	G	N1-C6-O6	7.08	124.15	119.90
1	AA	1350	U	O4'-C1'-N1	7.08	113.86	108.20
23	B8	18	TYR	CB-CG-CD2	-7.08	116.75	121.00
53	B5	1410	U	P-O3'-C3'	7.08	128.19	119.70
53	B5	1935	G	O4'-C1'-N9	7.08	113.86	108.20
53	B5	3140	G	N1-C6-O6	7.08	124.14	119.90
1	AA	1197	G	C5-C6-O6	-7.07	124.36	128.60
53	B5	654	C	O4'-C1'-N1	7.07	113.86	108.20
53	B5	1215	U	O4'-C1'-N1	7.07	113.86	108.20
1	AA	1104	G	C5-C6-O6	-7.07	124.36	128.60
1	AA	326	G	N1-C6-O6	7.07	124.14	119.90
53	B5	874	U	O4'-C1'-N1	7.07	113.86	108.20
53	B5	2248	C	O4'-C1'-N1	7.07	113.86	108.20
53	B5	2291	A	O4'-C1'-N9	7.07	113.86	108.20
52	B4	51	G	C5-C6-O6	-7.07	124.36	128.60
53	B5	127	G	C5-C6-O6	-7.07	124.36	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1059	G	N1-C6-O6	7.07	124.14	119.90
1	AA	666	U	O4'-C1'-N1	7.07	113.85	108.20
1	AA	1196	G	N1-C6-O6	7.07	124.14	119.90
1	AA	1522	A	C3'-C2'-C1'	-7.07	95.85	101.50
53	B5	690	A	O4'-C1'-N9	7.07	113.85	108.20
53	B5	1402	C	O4'-C1'-N1	7.07	113.86	108.20
53	B5	3003	G	N1-C6-O6	7.07	124.14	119.90
1	AA	818	C	O4'-C1'-N1	7.07	113.85	108.20
53	B5	137	G	N1-C6-O6	7.07	124.14	119.90
1	AA	209	U	O4'-C1'-N1	7.06	113.85	108.20
53	B5	1335	C	O4'-C1'-N1	7.06	113.85	108.20
53	B5	3280	U	O4'-C1'-N1	7.06	113.85	108.20
1	AA	127	G	N1-C6-O6	7.06	124.14	119.90
53	B5	356	C	O4'-C1'-N1	7.06	113.85	108.20
53	B5	600	G	N1-C6-O6	7.06	124.14	119.90
1	AA	384	G	N1-C6-O6	7.06	124.14	119.90
51	B3	9	C	O4'-C1'-N1	7.06	113.85	108.20
53	B5	256	G	N1-C6-O6	7.06	124.14	119.90
1	AA	1143	G	N1-C6-O6	7.06	124.14	119.90
1	AA	1600	C	O4'-C1'-N1	7.06	113.85	108.20
53	B5	635	G	N1-C6-O6	7.06	124.14	119.90
53	B5	3265	C	O4'-C1'-N1	7.06	113.85	108.20
1	AA	1286	U	O4'-C1'-N1	7.06	113.85	108.20
19	A7	11	C	O3'-P-O5'	7.06	117.41	104.00
53	B5	473	G	N1-C6-O6	7.06	124.13	119.90
53	B5	1265	U	O4'-C1'-N1	7.06	113.84	108.20
1	AA	1617	C	O4'-C1'-N1	7.05	113.84	108.20
53	B5	1266	G	N1-C6-O6	7.05	124.13	119.90
53	B5	1548	C	O4'-C1'-N1	7.05	113.84	108.20
53	B5	1684	U	O4'-C1'-N1	7.05	113.84	108.20
19	A7	70	C	N3-C2-O2	-7.05	116.96	121.90
52	B4	84	C	O4'-C1'-N1	7.05	113.84	108.20
53	B5	269	G	N1-C6-O6	7.05	124.13	119.90
53	B5	1083	G	N1-C6-O6	7.05	124.13	119.90
53	B5	2784	G	O4'-C1'-N9	7.05	113.84	108.20
53	B5	2878	G	N1-C6-O6	7.05	124.13	119.90
52	B4	147	U	O4'-C1'-N1	7.05	113.84	108.20
53	B5	1073	U	O4'-C1'-N1	7.05	113.84	108.20
53	B5	3124	G	O4'-C1'-N9	7.05	113.84	108.20
53	B5	891	G	N1-C6-O6	7.05	124.13	119.90
53	B5	2171	G	N1-C6-O6	7.05	124.13	119.90
1	AA	31	C	O4'-C1'-N1	7.05	113.84	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	250	C	O4'-C1'-N1	7.05	113.84	108.20
53	B5	1108	U	O4'-C1'-N1	7.05	113.84	108.20
53	B5	2804	A	O4'-C1'-N9	7.05	113.84	108.20
53	B5	2984	C	O4'-C1'-N1	7.05	113.84	108.20
53	B5	1907	C	O4'-C1'-N1	7.05	113.84	108.20
1	AA	214	G	N1-C6-O6	7.04	124.13	119.90
1	AA	314	C	O4'-C1'-N1	7.04	113.84	108.20
1	AA	481	A	O4'-C1'-N9	7.04	113.84	108.20
1	AA	1521	G	C8-N9-C4	7.04	109.22	106.40
1	AA	1545	A	P-O3'-C3'	7.04	128.15	119.70
53	B5	367	A	O4'-C1'-N9	7.04	113.83	108.20
1	AA	634	G	N1-C6-O6	7.04	124.12	119.90
1	AA	648	G	O4'-C1'-N9	7.04	113.83	108.20
53	B5	1192	C	O4'-C1'-N1	7.04	113.83	108.20
53	B5	1344	G	N1-C6-O6	7.04	124.12	119.90
1	AA	13	C	O4'-C1'-N1	7.04	113.83	108.20
1	AA	1254	U	O4'-C1'-N1	7.04	113.83	108.20
53	B5	208	C	O4'-C1'-N1	7.04	113.83	108.20
30	BF	138	TYR	CB-CG-CD2	-7.04	116.78	121.00
52	B4	31	G	N1-C6-O6	7.04	124.12	119.90
1	AA	454	U	O4'-C1'-N1	7.04	113.83	108.20
1	AA	792	U	O5'-P-OP1	7.04	119.14	110.70
1	AA	424	C	O4'-C1'-N1	7.04	113.83	108.20
1	AA	1447	U	O4'-C1'-N1	7.04	113.83	108.20
19	A7	65	G	C8-N9-C4	-7.04	103.59	106.40
53	B5	1440	G	N1-C6-O6	7.04	124.12	119.90
53	B5	2648	G	N1-C6-O6	7.04	124.12	119.90
53	B5	3067	C	O4'-C1'-N1	7.04	113.83	108.20
1	AA	404	G	O4'-C1'-N9	7.03	113.83	108.20
52	B4	114	G	N1-C6-O6	7.03	124.12	119.90
53	B5	1229	G	O4'-C1'-N9	7.03	113.83	108.20
1	AA	1077	U	O4'-C1'-N1	7.03	113.83	108.20
53	B5	955	U	O4'-C1'-N1	7.03	113.83	108.20
53	B5	1510	G	N1-C6-O6	7.03	124.12	119.90
53	B5	3239	G	N1-C6-O6	7.03	124.12	119.90
1	AA	1635	C	O4'-C1'-N1	7.03	113.82	108.20
19	A7	9	A	C4-C5-N7	-7.03	107.19	110.70
19	A7	71	G	N1-C2-N3	-7.03	119.68	123.90
52	B4	157	U	O4'-C1'-N1	7.03	113.83	108.20
53	B5	655	C	O4'-C1'-N1	7.03	113.82	108.20
1	AA	681	U	O4'-C1'-N1	7.03	113.82	108.20
53	B5	245	U	O4'-C1'-N1	7.03	113.82	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	590	G	N1-C6-O6	7.03	124.12	119.90
1	AA	1021	C	O4'-C1'-N1	7.03	113.82	108.20
1	AA	1291	G	N1-C6-O6	7.03	124.12	119.90
53	B5	1769	G	N1-C6-O6	7.03	124.12	119.90
53	B5	2977	G	N1-C6-O6	7.03	124.12	119.90
1	AA	383	G	N1-C6-O6	7.03	124.12	119.90
1	AA	890	C	O4'-C1'-N1	7.03	113.82	108.20
19	A7	31	A	N1-C6-N6	-7.03	114.38	118.60
53	B5	978	C	O4'-C1'-N1	7.03	113.82	108.20
53	B5	1736	G	O4'-C1'-N9	7.03	113.82	108.20
53	B5	1866	C	O4'-C1'-N1	7.03	113.82	108.20
53	B5	2615	G	N1-C6-O6	7.03	124.11	119.90
53	B5	2990	G	N1-C6-O6	7.03	124.11	119.90
19	A7	64	A	N7-C8-N9	-7.02	110.29	113.80
53	B5	1439	U	O4'-C1'-N1	7.02	113.82	108.20
1	AA	800	U	O4'-C1'-N1	7.02	113.82	108.20
51	B3	37	G	N1-C6-O6	7.02	124.11	119.90
53	B5	871	U	O4'-C1'-N1	7.02	113.82	108.20
1	AA	158	U	O4'-C1'-N1	7.02	113.81	108.20
1	AA	1468	C	O4'-C1'-N1	7.02	113.81	108.20
1	AA	1203	C	O4'-C1'-N1	7.02	113.81	108.20
1	AA	1210	U	O4'-C1'-N1	7.02	113.81	108.20
53	B5	149	U	O4'-C1'-N1	7.02	113.81	108.20
53	B5	176	G	N1-C6-O6	7.02	124.11	119.90
19	A7	18	G	C3'-C2'-C1'	7.02	107.11	101.50
53	B5	909	G	N1-C6-O6	7.02	124.11	119.90
53	B5	2611	U	O4'-C1'-N1	7.02	113.81	108.20
1	AA	572	C	O4'-C1'-N1	7.01	113.81	108.20
53	B5	2328	U	O4'-C1'-N1	7.01	113.81	108.20
1	AA	968	C	O4'-C1'-N1	7.01	113.81	108.20
53	B5	3268	G	N1-C6-O6	7.01	124.11	119.90
1	AA	281	G	P-O3'-C3'	7.01	128.11	119.70
53	B5	1106	G	N1-C6-O6	7.01	124.11	119.90
53	B5	3053	G	O4'-C1'-N9	7.01	113.81	108.20
53	B5	3144	G	N1-C6-O6	7.01	124.11	119.90
53	B5	605	U	O4'-C1'-N1	7.01	113.81	108.20
53	B5	1939	G	N1-C6-O6	7.01	124.11	119.90
53	B5	2126	A	O4'-C1'-N9	7.01	113.81	108.20
53	B5	3256	G	N1-C6-O6	7.01	124.11	119.90
1	AA	709	C	O4'-C1'-N1	7.01	113.81	108.20
53	B5	90	C	O4'-C1'-N1	7.01	113.81	108.20
53	B5	358	G	N1-C6-O6	7.00	124.10	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	35	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1755	G	N1-C6-O6	7.00	124.10	119.90
53	B5	754	G	N1-C6-O6	7.00	124.10	119.90
1	AA	677	G	N1-C6-O6	7.00	124.10	119.90
53	B5	834	U	O4'-C1'-N1	7.00	113.80	108.20
53	B5	1614	C	O4'-C1'-N1	7.00	113.80	108.20
1	AA	871	G	N1-C6-O6	7.00	124.10	119.90
1	AA	36	C	O4'-C1'-N1	7.00	113.80	108.20
1	AA	371	G	N1-C6-O6	7.00	124.10	119.90
1	AA	657	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1272	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1626	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1636	G	O4'-C4'-C3'	7.00	111.70	106.10
53	B5	723	U	O4'-C1'-N1	7.00	113.80	108.20
53	B5	2292	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	422	G	N1-C6-O6	7.00	124.10	119.90
1	AA	488	G	N1-C6-O6	7.00	124.10	119.90
1	AA	503	G	O4'-C1'-N9	7.00	113.80	108.20
1	AA	1435	G	N1-C6-O6	7.00	124.10	119.90
38	BN	4	TYR	CB-CG-CD2	-7.00	116.80	121.00
44	BT	60	TYR	CB-CG-CD1	7.00	125.20	121.00
53	B5	3328	G	N1-C6-O6	7.00	124.10	119.90
1	AA	92	A	O4'-C1'-N9	7.00	113.80	108.20
1	AA	194	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1654	U	O4'-C1'-N1	7.00	113.80	108.20
1	AA	1790	G	O4'-C1'-N9	7.00	113.80	108.20
53	B5	968	G	C5-C6-O6	-7.00	124.40	128.60
51	B3	106	G	O4'-C1'-N9	6.99	113.79	108.20
1	AA	151	G	N1-C6-O6	6.99	124.09	119.90
53	B5	540	U	O4'-C1'-N1	6.99	113.79	108.20
53	B5	819	U	O4'-C1'-N1	6.99	113.79	108.20
53	B5	2194	G	N1-C6-O6	6.99	124.09	119.90
53	B5	3309	G	O4'-C1'-N9	6.99	113.79	108.20
1	AA	123	G	N1-C6-O6	6.99	124.09	119.90
53	B5	2652	U	O4'-C1'-N1	6.99	113.79	108.20
1	AA	1565	U	O4'-C1'-N1	6.99	113.79	108.20
1	AA	1480	C	O4'-C1'-N1	6.98	113.79	108.20
53	B5	1843	C	O4'-C1'-N1	6.98	113.79	108.20
53	B5	2134	G	N1-C6-O6	6.98	124.09	119.90
53	B5	3274	G	C5-C6-O6	-6.98	124.41	128.60
19	A7	29	A	N1-C6-N6	-6.98	114.41	118.60
53	B5	196	G	C5-C6-O6	-6.98	124.41	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	575	G	N1-C6-O6	6.98	124.09	119.90
53	B5	2690	G	N1-C6-O6	6.98	124.09	119.90
1	AA	1512	U	O4'-C1'-N1	6.98	113.78	108.20
53	B5	126	U	O4'-C1'-N1	6.98	113.78	108.20
53	B5	831	G	N1-C6-O6	6.98	124.09	119.90
1	AA	624	G	N1-C6-O6	6.98	124.09	119.90
1	AA	1772	G	N1-C6-O6	6.98	124.09	119.90
53	B5	1213	G	N1-C6-O6	6.98	124.09	119.90
53	B5	2240	G	O4'-C1'-N9	6.98	113.78	108.20
53	B5	2850	G	O4'-C1'-N9	6.98	113.78	108.20
1	AA	1327	G	N1-C6-O6	6.97	124.08	119.90
53	B5	545	U	O4'-C1'-N1	6.97	113.78	108.20
53	B5	1615	C	O4'-C1'-N1	6.97	113.78	108.20
53	B5	1694	U	O4'-C1'-N1	6.97	113.78	108.20
51	B3	86	G	N1-C6-O6	6.97	124.08	119.90
53	B5	809	G	C5-C6-O6	-6.97	124.42	128.60
53	B5	826	G	C5-C6-O6	-6.97	124.42	128.60
1	AA	1383	G	N1-C6-O6	6.97	124.08	119.90
1	AA	1471	U	O4'-C1'-N1	6.97	113.78	108.20
53	B5	1807	G	O4'-C1'-N9	6.97	113.78	108.20
53	B5	2789	U	O4'-C1'-N1	6.97	113.78	108.20
53	B5	2914	G	N1-C6-O6	6.97	124.08	119.90
1	AA	589	C	O4'-C1'-N1	6.97	113.77	108.20
1	AA	1242	C	O4'-C1'-N1	6.97	113.77	108.20
53	B5	2728	G	N1-C6-O6	6.97	124.08	119.90
1	AA	1640	G	N1-C6-O6	6.97	124.08	119.90
53	B5	615	U	O4'-C1'-N1	6.97	113.77	108.20
53	B5	1768	U	O4'-C1'-N1	6.97	113.77	108.20
53	B5	394	G	C5-C6-O6	-6.96	124.42	128.60
53	B5	907	G	C5-C6-O6	-6.96	124.42	128.60
53	B5	1313	G	O4'-C1'-N9	6.96	113.77	108.20
53	B5	3116	G	C5-C6-O6	-6.96	124.42	128.60
53	B5	3303	G	N1-C6-O6	6.96	124.08	119.90
1	AA	276	C	O4'-C1'-N1	6.96	113.77	108.20
1	AA	1324	C	O4'-C1'-N1	6.96	113.77	108.20
53	B5	1898	G	N1-C6-O6	6.96	124.08	119.90
53	B5	2672	G	O4'-C1'-N9	6.96	113.77	108.20
1	AA	1547	C	O4'-C4'-C3'	-6.96	97.04	104.00
1	AA	1668	G	N1-C6-O6	6.96	124.08	119.90
53	B5	1044	U	O4'-C1'-N1	6.96	113.77	108.20
53	B5	1653	G	O4'-C1'-N9	6.96	113.77	108.20
53	B5	2619	G	C5-C6-O6	-6.96	124.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	796	A	C2'-C3'-O3'	6.96	124.84	113.70
1	AA	1470	C	O4'-C1'-N1	6.96	113.77	108.20
53	B5	678	G	C5-C6-O6	-6.96	124.42	128.60
53	B5	1367	G	N1-C6-O6	6.96	124.08	119.90
53	B5	3351	U	O4'-C1'-N1	6.96	113.77	108.20
1	AA	985	G	N1-C6-O6	6.96	124.08	119.90
1	AA	1680	U	O4'-C1'-N1	6.96	113.77	108.20
19	A7	51	G	C8-N9-C4	-6.96	103.62	106.40
53	B5	234	G	N1-C6-O6	6.96	124.08	119.90
53	B5	1377	G	C5-C6-O6	-6.96	124.42	128.60
53	B5	1448	U	O4'-C1'-N1	6.96	113.77	108.20
53	B5	1754	G	N1-C6-O6	6.96	124.08	119.90
53	B5	2655	U	O4'-C1'-N1	6.96	113.77	108.20
53	B5	3262	U	O4'-C1'-N1	6.96	113.77	108.20
1	AA	154	G	N1-C6-O6	6.96	124.07	119.90
1	AA	629	U	O4'-C1'-N1	6.96	113.77	108.20
53	B5	2585	G	O4'-C1'-N9	6.96	113.77	108.20
1	AA	1420	U	O4'-C1'-N1	6.96	113.76	108.20
53	B5	1063	G	N1-C6-O6	6.96	124.07	119.90
53	B5	2577	C	P-O3'-C3'	6.96	128.05	119.70
1	AA	499	U	O4'-C1'-N1	6.95	113.76	108.20
1	AA	560	U	O4'-C1'-N1	6.95	113.76	108.20
51	B3	112	G	N1-C6-O6	6.95	124.07	119.90
53	B5	432	G	N1-C6-O6	6.95	124.07	119.90
53	B5	700	C	O4'-C1'-N1	6.95	113.76	108.20
1	AA	329	G	N1-C6-O6	6.95	124.07	119.90
53	B5	3191	G	N1-C6-O6	6.95	124.07	119.90
1	AA	149	C	O4'-C1'-N1	6.95	113.76	108.20
1	AA	1290	U	O4'-C1'-N1	6.95	113.76	108.20
53	B5	740	G	N1-C6-O6	6.95	124.07	119.90
53	B5	1321	G	N1-C6-O6	6.95	124.07	119.90
53	B5	1745	C	O4'-C1'-N1	6.95	113.76	108.20
53	B5	2320	A	O4'-C1'-N9	6.95	113.76	108.20
1	AA	110	U	O4'-C1'-N1	6.94	113.75	108.20
53	B5	368	G	N1-C6-O6	6.94	124.07	119.90
53	B5	1680	G	N1-C6-O6	6.94	124.07	119.90
1	AA	704	C	O4'-C1'-N1	6.94	113.75	108.20
1	AA	1205	C	O4'-C1'-N1	6.94	113.75	108.20
1	AA	1618	C	O4'-C1'-N1	6.94	113.75	108.20
53	B5	2181	C	O4'-C1'-N1	6.94	113.75	108.20
1	AA	1451	G	N1-C6-O6	6.94	124.06	119.90
19	A7	38	A	C5-C6-N1	6.94	121.17	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	B3	59	G	N1-C6-O6	6.94	124.06	119.90
53	B5	124	U	O4'-C1'-N1	6.94	113.75	108.20
53	B5	2672	G	P-O3'-C3'	6.94	128.03	119.70
1	AA	798	C	C2'-C3'-O3'	6.94	124.80	113.70
1	AA	1666	G	N1-C6-O6	6.94	124.06	119.90
51	B3	76	U	O4'-C1'-N1	6.94	113.75	108.20
53	B5	2782	U	O4'-C1'-N1	6.94	113.75	108.20
19	A7	29	A	C4-C5-C6	-6.93	113.53	117.00
53	B5	785	G	C5-C6-O6	-6.93	124.44	128.60
53	B5	1013	G	N1-C6-O6	6.93	124.06	119.90
53	B5	1307	G	N1-C6-O6	6.93	124.06	119.90
53	B5	2530	G	N1-C6-O6	6.93	124.06	119.90
1	AA	229	U	O4'-C1'-N1	6.93	113.75	108.20
1	AA	1006	C	O4'-C1'-N1	6.93	113.75	108.20
53	B5	1883	A	O4'-C1'-N9	6.93	113.75	108.20
1	AA	282	C	O4'-C1'-N1	6.93	113.75	108.20
1	AA	750	U	O4'-C1'-N1	6.93	113.75	108.20
1	AA	64	U	O4'-C1'-N1	6.93	113.74	108.20
1	AA	759	U	O4'-C1'-N1	6.93	113.74	108.20
1	AA	1184	G	N1-C6-O6	6.93	124.06	119.90
1	AA	1474	C	O4'-C1'-N1	6.93	113.74	108.20
19	A7	20	G	N9-C1'-C2'	6.93	123.01	114.00
51	B3	88	G	C5-C6-O6	-6.93	124.44	128.60
53	B5	703	G	N1-C6-O6	6.93	124.06	119.90
53	B5	2920	U	O4'-C1'-N1	6.93	113.74	108.20
53	B5	850	U	O4'-C1'-N1	6.93	113.74	108.20
53	B5	1322	U	O4'-C1'-N1	6.93	113.74	108.20
53	B5	1936	A	O4'-C1'-N9	6.93	113.74	108.20
53	B5	5	G	N1-C6-O6	6.93	124.06	119.90
53	B5	2632	G	N1-C6-O6	6.93	124.06	119.90
53	B5	3153	U	O4'-C1'-N1	6.93	113.74	108.20
19	A7	41	U	N1-C2-N3	6.92	119.06	114.90
53	B5	1607	U	O4'-C1'-N1	6.92	113.74	108.20
1	AA	626	U	O4'-C1'-N1	6.92	113.74	108.20
1	AA	776	G	N1-C6-O6	6.92	124.05	119.90
52	B4	152	G	N1-C6-O6	6.92	124.05	119.90
53	B5	903	U	O4'-C1'-N1	6.92	113.74	108.20
53	B5	1363	A	O4'-C1'-N9	6.92	113.74	108.20
53	B5	1788	C	O4'-C1'-N1	6.92	113.74	108.20
53	B5	2940	A	O4'-C1'-N9	6.92	113.74	108.20
1	AA	953	G	N1-C6-O6	6.92	124.05	119.90
52	B4	140	G	N1-C6-O6	6.92	124.05	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	217	U	O4'-C1'-N1	6.92	113.74	108.20
53	B5	447	U	O4'-C1'-N1	6.92	113.74	108.20
53	B5	1138	U	O4'-C1'-N1	6.92	113.74	108.20
53	B5	3380	U	O4'-C1'-N1	6.92	113.74	108.20
1	AA	1425	G	C5-C6-O6	-6.92	124.45	128.60
53	B5	636	C	O4'-C1'-N1	6.92	113.73	108.20
53	B5	954	U	O4'-C1'-N1	6.92	113.73	108.20
53	B5	1897	G	N1-C6-O6	6.92	124.05	119.90
1	AA	146	U	O4'-C1'-N1	6.92	113.73	108.20
1	AA	297	U	O4'-C1'-N1	6.92	113.73	108.20
1	AA	1639	C	O4'-C1'-N1	6.92	113.73	108.20
53	B5	702	C	O4'-C1'-N1	6.92	113.73	108.20
53	B5	2754	G	N1-C6-O6	6.92	124.05	119.90
1	AA	94	U	O4'-C1'-N1	6.92	113.73	108.20
1	AA	243	G	N1-C6-O6	6.92	124.05	119.90
1	AA	823	G	N1-C6-O6	6.92	124.05	119.90
1	AA	1505	G	N1-C6-O6	6.92	124.05	119.90
53	B5	1618	G	N1-C6-O6	6.92	124.05	119.90
1	AA	715	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	1700	G	N1-C6-O6	6.91	124.05	119.90
53	B5	1889	G	N1-C6-O6	6.91	124.05	119.90
53	B5	2162	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	3238	G	N1-C6-O6	6.91	124.05	119.90
1	AA	1046	U	O4'-C1'-N1	6.91	113.73	108.20
1	AA	449	C	O4'-C1'-N1	6.91	113.73	108.20
1	AA	1531	C	O4'-C1'-N1	6.91	113.73	108.20
19	A7	64	A	C5-C6-N1	6.91	121.16	117.70
53	B5	52	A	C5-C6-N6	-6.91	118.17	123.70
53	B5	223	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	746	A	O4'-C1'-N9	6.91	113.73	108.20
53	B5	1078	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	833	G	N1-C6-O6	6.91	124.05	119.90
53	B5	1081	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	1092	C	O4'-C1'-N1	6.91	113.73	108.20
53	B5	1772	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	2981	U	O4'-C1'-N1	6.91	113.73	108.20
53	B5	2406	C	O4'-C1'-N1	6.91	113.72	108.20
1	AA	1243	U	O4'-C1'-N1	6.91	113.72	108.20
1	AA	1569	C	O4'-C1'-N1	6.91	113.72	108.20
53	B5	10	C	O4'-C1'-N1	6.91	113.72	108.20
53	B5	2704	A	O4'-C1'-N9	6.91	113.72	108.20
1	AA	102	U	O4'-C1'-N1	6.90	113.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	703	G	O4'-C1'-N9	6.90	113.72	108.20
1	AA	1007	G	N1-C6-O6	6.90	124.04	119.90
53	B5	231	G	O4'-C1'-N9	6.90	113.72	108.20
53	B5	1228	C	O4'-C1'-N1	6.90	113.72	108.20
53	B5	1775	G	N1-C6-O6	6.90	124.04	119.90
53	B5	2554	U	O4'-C1'-N1	6.90	113.72	108.20
53	B5	2937	G	N1-C6-O6	6.90	124.04	119.90
53	B5	3192	U	O4'-C1'-N1	6.90	113.72	108.20
53	B5	2396	G	N1-C6-O6	6.90	124.04	119.90
53	B5	2972	G	O4'-C1'-N9	6.90	113.72	108.20
1	AA	413	U	O4'-C1'-N1	6.90	113.72	108.20
53	B5	582	G	N1-C6-O6	6.90	124.04	119.90
53	B5	1121	U	O4'-C1'-N1	6.90	113.72	108.20
53	B5	2826	U	O4'-C1'-N1	6.90	113.72	108.20
1	AA	698	U	O4'-C1'-N1	6.89	113.72	108.20
53	B5	507	U	O4'-C1'-N1	6.89	113.72	108.20
53	B5	762	U	O4'-C1'-N1	6.89	113.72	108.20
1	AA	901	G	N1-C6-O6	6.89	124.03	119.90
53	B5	464	U	O4'-C1'-N1	6.89	113.71	108.20
53	B5	1478	C	O4'-C1'-N1	6.89	113.71	108.20
53	B5	2216	G	C5-C6-O6	-6.89	124.47	128.60
53	B5	362	U	O4'-C1'-N1	6.89	113.71	108.20
52	B4	74	U	O4'-C1'-N1	6.89	113.71	108.20
53	B5	2134	G	O4'-C1'-N9	6.89	113.71	108.20
53	B5	2998	U	O4'-C1'-N1	6.89	113.71	108.20
53	B5	3363	U	O4'-C1'-N1	6.89	113.71	108.20
53	B5	1817	G	N1-C6-O6	6.89	124.03	119.90
1	AA	1164	G	O4'-C1'-N9	6.89	113.71	108.20
1	AA	1602	U	O4'-C1'-N1	6.89	113.71	108.20
53	B5	1014	U	O4'-C1'-N1	6.89	113.71	108.20
1	AA	786	C	O4'-C1'-N1	6.88	113.71	108.20
53	B5	1127	G	C5-C6-O6	-6.88	124.47	128.60
52	B4	126	A	O4'-C1'-N9	6.88	113.71	108.20
53	B5	143	G	O4'-C1'-N9	6.88	113.71	108.20
53	B5	419	G	N1-C6-O6	6.88	124.03	119.90
53	B5	1591	G	N1-C6-O6	6.88	124.03	119.90
53	B5	756	U	O4'-C1'-N1	6.88	113.70	108.20
53	B5	892	U	O4'-C1'-N1	6.88	113.70	108.20
53	B5	1233	G	O4'-C1'-N9	6.88	113.70	108.20
53	B5	2555	G	N1-C6-O6	6.88	124.03	119.90
53	B5	3253	G	N1-C6-O6	6.88	124.03	119.90
1	AA	1472	G	C5-C6-O6	-6.88	124.47	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1555	U	O4'-C1'-N1	6.88	113.70	108.20
1	AA	1683	G	N1-C6-O6	6.88	124.03	119.90
53	B5	97	U	O4'-C1'-N1	6.88	113.70	108.20
53	B5	2604	U	O4'-C1'-N1	6.88	113.70	108.20
53	B5	2720	G	N1-C6-O6	6.88	124.03	119.90
53	B5	2762	A	O4'-C1'-N9	6.88	113.70	108.20
53	B5	3321	C	O4'-C1'-N1	6.88	113.70	108.20
1	AA	885	G	N1-C6-O6	6.88	124.03	119.90
1	AA	1483	C	O4'-C1'-N1	6.88	113.70	108.20
52	B4	116	G	N1-C6-O6	6.88	124.03	119.90
53	B5	512	U	P-O3'-C3'	6.88	127.95	119.70
53	B5	821	U	O4'-C1'-N1	6.88	113.70	108.20
53	B5	2791	G	N1-C6-O6	6.88	124.03	119.90
53	B5	3109	G	O4'-C1'-N9	6.88	113.70	108.20
53	B5	58	G	N1-C6-O6	6.88	124.03	119.90
53	B5	1700	G	O4'-C1'-N9	6.88	113.70	108.20
1	AA	1227	U	O4'-C1'-N1	6.87	113.70	108.20
1	AA	1264	G	N1-C6-O6	6.87	124.02	119.90
23	B8	43	LYS	CG-CD-CE	6.87	132.52	111.90
53	B5	1211	U	O4'-C1'-N1	6.87	113.70	108.20
53	B5	1427	U	O4'-C1'-N1	6.87	113.70	108.20
53	B5	1593	A	O4'-C1'-N9	6.87	113.70	108.20
1	AA	285	G	N1-C6-O6	6.87	124.02	119.90
53	B5	339	C	O4'-C1'-N1	6.87	113.70	108.20
1	AA	294	C	O4'-C1'-N1	6.87	113.70	108.20
1	AA	988	U	O4'-C1'-N1	6.87	113.69	108.20
1	AA	1478	G	N1-C6-O6	6.87	124.02	119.90
53	B5	779	G	N1-C6-O6	6.87	124.02	119.90
53	B5	786	A	O4'-C1'-N9	6.87	113.70	108.20
53	B5	1218	U	O4'-C1'-N1	6.87	113.69	108.20
53	B5	1902	G	C5-C6-O6	-6.87	124.48	128.60
53	B5	2706	G	N1-C6-O6	6.87	124.02	119.90
1	AA	612	U	O4'-C1'-N1	6.87	113.69	108.20
53	B5	546	C	O4'-C1'-N1	6.87	113.69	108.20
53	B5	798	G	N1-C6-O6	6.87	124.02	119.90
53	B5	1536	G	N1-C6-O6	6.87	124.02	119.90
53	B5	811	U	O4'-C1'-N1	6.87	113.69	108.20
53	B5	1157	G	C5-C6-O6	-6.87	124.48	128.60
53	B5	1661	G	N1-C6-O6	6.87	124.02	119.90
53	B5	2201	G	N1-C6-O6	6.87	124.02	119.90
1	AA	1438	C	O4'-C1'-N1	6.86	113.69	108.20
53	B5	261	U	O4'-C1'-N1	6.86	113.69	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	81	U	O4'-C1'-N1	6.86	113.69	108.20
53	B5	3259	U	O4'-C1'-N1	6.86	113.69	108.20
1	AA	121	U	O4'-C1'-N1	6.86	113.69	108.20
1	AA	1384	G	N1-C6-O6	6.86	124.02	119.90
1	AA	1557	A	O4'-C1'-N9	6.86	113.69	108.20
19	A7	60	C	O4'-C1'-N1	6.86	113.69	108.20
51	B3	10	C	O4'-C1'-N1	6.86	113.69	108.20
53	B5	1795	U	P-O3'-C3'	6.86	127.93	119.70
53	B5	937	G	N1-C6-O6	6.86	124.02	119.90
53	B5	1033	U	O4'-C1'-N1	6.86	113.69	108.20
1	AA	1063	C	O4'-C1'-N1	6.86	113.69	108.20
1	AA	1228	U	O4'-C1'-N1	6.86	113.69	108.20
51	B3	11	A	O4'-C1'-N9	6.86	113.69	108.20
53	B5	27	C	O4'-C1'-N1	6.86	113.69	108.20
53	B5	1634	G	N1-C6-O6	6.86	124.01	119.90
53	B5	1790	G	C5-C6-O6	-6.86	124.49	128.60
53	B5	2647	A	O4'-C1'-N9	6.86	113.69	108.20
53	B5	3065	G	N1-C6-O6	6.86	124.02	119.90
53	B5	160	G	N1-C6-O6	6.86	124.01	119.90
53	B5	220	G	N1-C6-O6	6.86	124.01	119.90
53	B5	1000	C	O4'-C1'-N1	6.86	113.68	108.20
1	AA	787	G	O4'-C1'-N9	6.85	113.68	108.20
19	A7	70	C	O4'-C1'-N1	6.85	113.68	108.20
53	B5	2177	G	C5-C6-O6	-6.85	124.49	128.60
1	AA	1347	U	O4'-C1'-N1	6.85	113.68	108.20
51	B3	56	G	O4'-C1'-N9	6.85	113.68	108.20
53	B5	587	U	O4'-C1'-N1	6.85	113.68	108.20
53	B5	2210	G	C5-C6-O6	-6.85	124.49	128.60
13	AN	16	LYS	N-CA-C	6.85	129.49	111.00
53	B5	120	G	C5-C6-O6	-6.85	124.49	128.60
53	B5	793	C	O4'-C1'-N1	6.85	113.68	108.20
53	B5	2436	U	O4'-C1'-N1	6.85	113.68	108.20
53	B5	3255	U	O4'-C1'-N1	6.85	113.68	108.20
1	AA	279	G	N1-C6-O6	6.85	124.01	119.90
1	AA	1614	G	N1-C6-O6	6.85	124.01	119.90
53	B5	84	U	O4'-C1'-N1	6.85	113.68	108.20
53	B5	204	A	O4'-C1'-N9	6.85	113.68	108.20
53	B5	601	U	O4'-C1'-N1	6.85	113.68	108.20
53	B5	995	G	N1-C6-O6	6.85	124.01	119.90
53	B5	1650	G	N1-C6-O6	6.85	124.01	119.90
53	B5	2843	U	O4'-C1'-N1	6.85	113.68	108.20
1	AA	1462	G	N1-C6-O6	6.85	124.01	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3026	G	N1-C6-O6	6.85	124.01	119.90
1	AA	785	U	O4'-C1'-N1	6.84	113.68	108.20
1	AA	1452	G	N1-C6-O6	6.84	124.01	119.90
19	A7	45	G	N9-C4-C5	6.84	108.14	105.40
51	B3	84	G	N1-C6-O6	6.84	124.01	119.90
53	B5	506	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	2111	G	C5-C6-O6	-6.84	124.49	128.60
53	B5	3102	G	C5-C6-O6	-6.84	124.49	128.60
1	AA	1365	G	N1-C6-O6	6.84	124.01	119.90
53	B5	1089	G	N1-C6-O6	6.84	124.00	119.90
53	B5	1126	G	N1-C6-O6	6.84	124.00	119.90
53	B5	1457	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	1710	C	O4'-C1'-N1	6.84	113.67	108.20
53	B5	1837	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	3071	U	O4'-C1'-N1	6.84	113.67	108.20
1	AA	336	G	N1-C6-O6	6.84	124.00	119.90
53	B5	1532	C	O4'-C1'-N1	6.84	113.67	108.20
53	B5	2270	A	O4'-C1'-N9	6.84	113.67	108.20
53	B5	1415	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	1894	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	2645	G	N1-C6-O6	6.84	124.00	119.90
1	AA	212	U	O4'-C1'-N1	6.84	113.67	108.20
53	B5	181	U	O4'-C1'-N1	6.84	113.67	108.20
1	AA	915	U	O4'-C1'-N1	6.83	113.67	108.20
1	AA	999	C	O4'-C1'-N1	6.83	113.67	108.20
53	B5	145	G	N1-C6-O6	6.83	124.00	119.90
53	B5	2112	U	O4'-C1'-N1	6.83	113.67	108.20
53	B5	2651	G	C5-C6-O6	-6.83	124.50	128.60
53	B5	445	G	N1-C6-O6	6.83	124.00	119.90
1	AA	1656	G	O4'-C1'-N9	6.83	113.67	108.20
53	B5	969	C	O4'-C1'-N1	6.83	113.67	108.20
53	B5	1274	A	O4'-C1'-N9	6.83	113.67	108.20
53	B5	2388	U	O4'-C1'-N1	6.83	113.67	108.20
1	AA	14	C	O4'-C1'-N1	6.83	113.66	108.20
1	AA	867	G	O4'-C4'-C3'	-6.83	97.17	104.00
1	AA	1008	U	O4'-C1'-N1	6.83	113.66	108.20
1	AA	1746	G	N1-C6-O6	6.83	124.00	119.90
53	B5	2207	A	O4'-C1'-N9	6.83	113.66	108.20
53	B5	2474	G	N1-C6-O6	6.83	124.00	119.90
1	AA	647	G	N1-C6-O6	6.83	124.00	119.90
1	AA	946	U	O4'-C1'-N1	6.83	113.66	108.20
53	B5	2506	U	O4'-C1'-N1	6.83	113.66	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	18	G	N1-C6-O6	6.83	124.00	119.90
53	B5	178	U	O4'-C1'-N1	6.83	113.66	108.20
53	B5	2322	C	O4'-C1'-N1	6.83	113.66	108.20
1	AA	842	C	O4'-C1'-N1	6.82	113.66	108.20
53	B5	1340	G	C5-C6-O6	-6.82	124.51	128.60
53	B5	2823	G	C5-C6-O6	-6.82	124.51	128.60
1	AA	1716	G	N1-C6-O6	6.82	123.99	119.90
53	B5	2454	G	N1-C6-O6	6.82	123.99	119.90
1	AA	888	U	O4'-C1'-N1	6.82	113.66	108.20
52	B4	133	G	N1-C6-O6	6.82	123.99	119.90
53	B5	1097	G	N1-C6-O6	6.82	123.99	119.90
53	B5	1748	G	C5-C6-O6	-6.82	124.51	128.60
1	AA	1051	U	O4'-C1'-N1	6.82	113.66	108.20
53	B5	1855	U	O4'-C1'-N1	6.82	113.66	108.20
53	B5	2369	G	N1-C6-O6	6.82	123.99	119.90
1	AA	120	U	O4'-C1'-N1	6.82	113.65	108.20
51	B3	1	G	C5-C6-O6	-6.82	124.51	128.60
53	B5	3231	U	O4'-C1'-N1	6.82	113.65	108.20
1	AA	185	U	O4'-C1'-N1	6.82	113.65	108.20
53	B5	1117	G	C5-C6-O6	-6.82	124.51	128.60
53	B5	2548	C	C6-N1-C2	-6.82	117.57	120.30
1	AA	1453	G	C5-C6-O6	-6.81	124.51	128.60
53	B5	838	G	N1-C6-O6	6.81	123.99	119.90
53	B5	2598	G	N1-C6-O6	6.81	123.99	119.90
53	B5	2829	U	O4'-C1'-N1	6.81	113.65	108.20
1	AA	858	G	C6-C5-N7	-6.81	126.31	130.40
53	B5	64	G	C5-C6-O6	-6.81	124.51	128.60
53	B5	2333	C	O4'-C1'-N1	6.81	113.65	108.20
53	B5	2394	G	O4'-C1'-N9	6.81	113.65	108.20
1	AA	1576	U	O4'-C1'-N1	6.81	113.65	108.20
1	AA	304	U	O4'-C1'-N1	6.81	113.65	108.20
52	B4	122	U	O4'-C1'-N1	6.81	113.65	108.20
52	B4	158	U	O4'-C1'-N1	6.81	113.65	108.20
53	B5	1370	G	N1-C6-O6	6.81	123.99	119.90
1	AA	1312	U	O4'-C1'-N1	6.81	113.65	108.20
53	B5	1833	G	C5-C6-O6	-6.81	124.52	128.60
53	B5	1844	C	O4'-C1'-N1	6.81	113.65	108.20
53	B5	2723	U	O4'-C1'-N1	6.81	113.65	108.20
53	B5	3232	G	N1-C6-O6	6.81	123.98	119.90
1	AA	468	A	O4'-C1'-N9	6.81	113.64	108.20
1	AA	1042	C	O4'-C1'-N1	6.81	113.64	108.20
1	AA	1076	U	O4'-C1'-N1	6.81	113.64	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1466	U	O4'-C1'-N1	6.81	113.64	108.20
53	B5	331	G	N1-C6-O6	6.81	123.98	119.90
53	B5	1673	G	N1-C6-O6	6.81	123.98	119.90
53	B5	2446	U	O4'-C1'-N1	6.81	113.64	108.20
53	B5	2776	C	O4'-C1'-N1	6.81	113.64	108.20
53	B5	3082	C	O4'-C1'-N1	6.81	113.64	108.20
1	AA	96	G	N1-C6-O6	6.80	123.98	119.90
53	B5	1848	G	N1-C6-O6	6.80	123.98	119.90
53	B5	2541	U	O4'-C1'-N1	6.80	113.64	108.20
53	B5	2745	G	N1-C6-O6	6.80	123.98	119.90
53	B5	2763	U	O4'-C1'-N1	6.80	113.64	108.20
1	AA	659	C	O4'-C1'-N1	6.80	113.64	108.20
51	B3	36	C	O4'-C1'-N1	6.80	113.64	108.20
51	B3	49	G	N1-C6-O6	6.80	123.98	119.90
53	B5	938	C	O4'-C1'-N1	6.80	113.64	108.20
53	B5	1242	G	N1-C6-O6	6.80	123.98	119.90
53	B5	1782	U	O4'-C1'-N1	6.80	113.64	108.20
53	B5	2581	U	O4'-C1'-N1	6.80	113.64	108.20
53	B5	3080	G	N1-C6-O6	6.80	123.98	119.90
53	B5	1186	G	C5-C6-O6	-6.80	124.52	128.60
53	B5	1417	G	N1-C6-O6	6.80	123.98	119.90
53	B5	1794	G	C5-C6-O6	-6.80	124.52	128.60
53	B5	3263	G	N1-C6-O6	6.80	123.98	119.90
53	B5	2411	U	O4'-C1'-N1	6.80	113.64	108.20
53	B5	3064	U	O4'-C1'-N1	6.80	113.64	108.20
19	A7	18	G	C2-N3-C4	-6.80	108.50	111.90
53	B5	641	C	O4'-C1'-N1	6.80	113.64	108.20
53	B5	1659	U	O4'-C1'-N1	6.80	113.64	108.20
53	B5	299	G	O4'-C1'-N9	6.79	113.64	108.20
53	B5	887	G	N1-C6-O6	6.79	123.98	119.90
19	A7	30	G	C2-N3-C4	6.79	115.30	111.90
19	A7	44	A	N1-C2-N3	-6.79	125.91	129.30
53	B5	2596	U	O4'-C1'-N1	6.79	113.63	108.20
53	B5	3100	U	O4'-C1'-N1	6.79	113.63	108.20
52	B4	55	U	O4'-C1'-N1	6.79	113.63	108.20
53	B5	1431	G	N1-C6-O6	6.79	123.97	119.90
53	B5	2983	C	O4'-C1'-N1	6.79	113.63	108.20
1	AA	447	U	O4'-C1'-N1	6.79	113.63	108.20
1	AA	575	C	O4'-C1'-N1	6.79	113.63	108.20
52	B4	100	U	O4'-C1'-N1	6.79	113.63	108.20
52	B4	123	G	N1-C6-O6	6.79	123.97	119.90
53	B5	17	G	N1-C6-O6	6.79	123.97	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1101	G	N1-C6-O6	6.79	123.97	119.90
53	B5	2219	A	P-O3'-C3'	6.79	127.85	119.70
1	AA	361	C	O4'-C1'-N1	6.79	113.63	108.20
1	AA	1545	A	C2'-C3'-O3'	6.79	124.56	113.70
53	B5	1769	G	O4'-C1'-N9	6.79	113.63	108.20
53	B5	1808	G	N1-C6-O6	6.79	123.97	119.90
53	B5	2668	U	O4'-C1'-N1	6.79	113.63	108.20
1	AA	1454	C	O4'-C1'-N1	6.78	113.63	108.20
19	A7	75	C	C5-C4-N4	-6.78	115.45	120.20
51	B3	67	C	O4'-C1'-N1	6.78	113.63	108.20
53	B5	41	G	N1-C6-O6	6.78	123.97	119.90
53	B5	168	U	O4'-C1'-N1	6.78	113.63	108.20
53	B5	322	U	O4'-C1'-N1	6.78	113.63	108.20
52	B4	20	U	O4'-C1'-N1	6.78	113.63	108.20
53	B5	588	G	N1-C6-O6	6.78	123.97	119.90
1	AA	240	U	C2-N1-C1'	6.78	125.84	117.70
53	B5	764	U	O4'-C1'-N1	6.78	113.62	108.20
53	B5	1113	G	N1-C6-O6	6.78	123.97	119.90
53	B5	2676	A	O4'-C1'-N9	6.78	113.62	108.20
1	AA	57	G	C5-C6-O6	-6.78	124.53	128.60
1	AA	1019	A	O4'-C1'-N9	6.78	113.62	108.20
1	AA	1274	G	C5-C6-O6	-6.78	124.53	128.60
1	AA	1497	G	C5-C6-O6	-6.78	124.53	128.60
53	B5	320	G	N1-C6-O6	6.78	123.97	119.90
53	B5	814	U	O4'-C1'-N1	6.78	113.62	108.20
53	B5	2105	G	N1-C6-O6	6.78	123.97	119.90
53	B5	2939	G	O4'-C1'-N9	6.78	113.62	108.20
53	B5	3339	A	O4'-C1'-N9	6.78	113.62	108.20
1	AA	588	U	O4'-C1'-N1	6.78	113.62	108.20
1	AA	635	A	O4'-C1'-N9	6.78	113.62	108.20
1	AA	1518	U	C4'-C3'-C2'	6.78	109.38	102.60
1	AA	1522	A	P-O3'-C3'	-6.78	111.57	119.70
1	AA	1547	C	C1'-C2'-O2'	6.78	130.92	110.60
1	AA	1681	C	O4'-C1'-N1	6.78	113.62	108.20
53	B5	141	C	O4'-C1'-N1	6.78	113.62	108.20
53	B5	3354	U	O4'-C1'-N1	6.78	113.62	108.20
1	AA	1484	G	N1-C6-O6	6.77	123.97	119.90
19	A7	3	G	C8-N9-C4	-6.77	103.69	106.40
19	A7	62	A	C5'-C4'-C3'	-6.77	105.17	116.00
53	B5	1528	G	N1-C6-O6	6.77	123.96	119.90
53	B5	1825	G	C5-C6-O6	-6.77	124.54	128.60
1	AA	1034	G	N1-C6-O6	6.77	123.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2614	G	C5-C6-O6	-6.77	124.54	128.60
1	AA	893	U	O4'-C1'-N1	6.77	113.61	108.20
53	B5	1877	U	O4'-C1'-N1	6.77	113.61	108.20
1	AA	660	G	N1-C6-O6	6.77	123.96	119.90
1	AA	1194	G	N1-C6-O6	6.77	123.96	119.90
52	B4	75	G	N1-C6-O6	6.77	123.96	119.90
53	B5	78	U	O4'-C1'-N1	6.77	113.61	108.20
53	B5	1058	U	O4'-C1'-N1	6.77	113.61	108.20
53	B5	1184	A	O4'-C1'-N9	6.77	113.61	108.20
53	B5	1141	C	O4'-C1'-N1	6.77	113.61	108.20
53	B5	1421	G	C5-C6-O6	-6.77	124.54	128.60
53	B5	2617	U	O4'-C1'-N1	6.76	113.61	108.20
53	B5	36	C	O4'-C1'-N1	6.76	113.61	108.20
53	B5	977	U	O4'-C1'-N1	6.76	113.61	108.20
53	B5	1319	G	C5-C6-O6	-6.76	124.54	128.60
53	B5	1365	G	C5-C6-O6	-6.76	124.54	128.60
1	AA	1209	G	O4'-C1'-N9	6.76	113.61	108.20
53	B5	727	G	C5-C6-O6	-6.76	124.54	128.60
53	B5	900	G	N1-C6-O6	6.76	123.96	119.90
53	B5	1411	C	P-O3'-C3'	6.76	127.81	119.70
53	B5	1581	C	P-O3'-C3'	6.76	127.81	119.70
53	B5	2499	U	O4'-C1'-N1	6.76	113.61	108.20
1	AA	87	C	O4'-C1'-N1	6.76	113.61	108.20
51	B3	111	U	O4'-C1'-N1	6.76	113.61	108.20
53	B5	712	G	O4'-C1'-N9	6.76	113.61	108.20
53	B5	994	G	O4'-C1'-N9	6.76	113.61	108.20
1	AA	1456	G	N1-C6-O6	6.76	123.95	119.90
19	A7	75	C	C4-C5-C6	-6.76	114.02	117.40
53	B5	1123	U	O4'-C1'-N1	6.76	113.61	108.20
53	B5	2426	U	O4'-C1'-N1	6.76	113.61	108.20
1	AA	722	G	N1-C6-O6	6.76	123.95	119.90
1	AA	1285	G	N1-C6-O6	6.76	123.95	119.90
52	B4	150	G	C5-C6-O6	-6.76	124.55	128.60
53	B5	800	G	C5-C6-O6	-6.76	124.55	128.60
53	B5	2693	C	O4'-C1'-N1	6.76	113.61	108.20
52	B4	1	A	O4'-C1'-N9	6.75	113.60	108.20
1	AA	944	U	O4'-C1'-N1	6.75	113.60	108.20
53	B5	749	C	O4'-C1'-N1	6.75	113.60	108.20
53	B5	1531	C	O4'-C1'-N1	6.75	113.60	108.20
53	B5	2121	G	N1-C6-O6	6.75	123.95	119.90
53	B5	2850	G	N1-C6-O6	6.75	123.95	119.90
1	AA	70	C	O4'-C1'-N1	6.75	113.60	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	426	G	N1-C6-O6	6.75	123.95	119.90
1	AA	747	C	O4'-C1'-N1	6.75	113.60	108.20
1	AA	826	U	O4'-C1'-N1	6.75	113.60	108.20
1	AA	903	G	N1-C6-O6	6.75	123.95	119.90
1	AA	1552	U	C4'-C3'-C2'	6.75	109.35	102.60
53	B5	897	U	O4'-C1'-N1	6.75	113.60	108.20
53	B5	2437	G	N1-C6-O6	6.75	123.95	119.90
1	AA	29	U	O4'-C1'-N1	6.75	113.60	108.20
53	B5	3088	G	C5-C6-O6	-6.75	124.55	128.60
1	AA	461	G	N1-C6-O6	6.75	123.95	119.90
1	AA	1426	G	N1-C6-O6	6.75	123.95	119.90
1	AA	1561	C	O4'-C1'-N1	6.75	113.60	108.20
51	B3	16	U	O4'-C1'-N1	6.75	113.60	108.20
1	AA	1516	C	O4'-C1'-N1	6.75	113.60	108.20
1	AA	1517	U	O4'-C4'-C3'	-6.75	97.25	104.00
53	B5	2173	U	O4'-C1'-N1	6.75	113.60	108.20
1	AA	1198	A	O4'-C1'-N9	6.74	113.59	108.20
1	AA	1208	G	N1-C6-O6	6.74	123.94	119.90
1	AA	667	U	O4'-C1'-N1	6.74	113.59	108.20
1	AA	895	G	N1-C6-O6	6.74	123.94	119.90
53	B5	1164	G	C5-C6-O6	-6.74	124.56	128.60
1	AA	768	C	O4'-C1'-N1	6.74	113.59	108.20
53	B5	631	U	O4'-C1'-N1	6.74	113.59	108.20
53	B5	2912	G	N1-C6-O6	6.74	123.94	119.90
1	AA	179	A	O4'-C1'-N9	6.74	113.59	108.20
1	AA	540	G	N1-C6-O6	6.74	123.94	119.90
1	AA	546	U	O4'-C1'-N1	6.74	113.59	108.20
1	AA	1013	G	C5-C6-O6	-6.74	124.56	128.60
1	AA	1582	G	N1-C6-O6	6.74	123.94	119.90
53	B5	616	G	N1-C6-O6	6.74	123.94	119.90
53	B5	1668	G	C5-C6-O6	-6.74	124.56	128.60
53	B5	2724	U	O4'-C1'-N1	6.74	113.59	108.20
53	B5	3107	U	O4'-C1'-N1	6.74	113.59	108.20
53	B5	1429	G	C5-C6-O6	-6.73	124.56	128.60
53	B5	1544	G	C5-C6-O6	-6.73	124.56	128.60
53	B5	2418	G	N1-C6-O6	6.73	123.94	119.90
1	AA	551	G	N1-C6-O6	6.73	123.94	119.90
1	AA	1144	A	C5-C6-N6	-6.73	118.32	123.70
52	B4	121	U	O4'-C1'-N1	6.73	113.58	108.20
53	B5	872	U	O4'-C1'-N1	6.73	113.58	108.20
53	B5	2234	G	N1-C6-O6	6.73	123.94	119.90
53	B5	2465	G	C5-C6-O6	-6.73	124.56	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	334	G	N1-C6-O6	6.73	123.94	119.90
1	AA	1221	U	O4'-C1'-N1	6.73	113.58	108.20
53	B5	101	G	N1-C6-O6	6.73	123.94	119.90
53	B5	176	G	O4'-C1'-N9	6.73	113.58	108.20
53	B5	946	U	O4'-C1'-N1	6.73	113.58	108.20
1	AA	347	G	C5-C6-O6	-6.72	124.56	128.60
1	AA	1755	G	O4'-C1'-N9	6.72	113.58	108.20
19	A7	47	U	C2-N3-C4	-6.72	122.97	127.00
53	B5	1530	U	O4'-C1'-N1	6.72	113.58	108.20
53	B5	2962	U	O4'-C1'-N1	6.72	113.58	108.20
1	AA	42	G	N1-C6-O6	6.72	123.93	119.90
51	B3	63	G	O4'-C1'-N9	6.72	113.58	108.20
53	B5	1568	U	O4'-C1'-N1	6.72	113.58	108.20
53	B5	2307	G	C5-C6-O6	-6.72	124.57	128.60
53	B5	2570	U	O4'-C1'-N1	6.72	113.58	108.20
1	AA	154	G	O4'-C1'-N9	6.72	113.58	108.20
1	AA	95	G	N1-C6-O6	6.72	123.93	119.90
1	AA	1146	G	N1-C6-O6	6.72	123.93	119.90
52	B4	94	C	O4'-C1'-N1	6.72	113.58	108.20
53	B5	83	U	O4'-C1'-N1	6.72	113.58	108.20
53	B5	280	U	O4'-C1'-N1	6.72	113.58	108.20
53	B5	742	G	N1-C6-O6	6.72	123.93	119.90
53	B5	1916	U	O4'-C1'-N1	6.72	113.58	108.20
53	B5	2623	G	C5-C6-O6	-6.72	124.57	128.60
53	B5	2760	C	O4'-C1'-N1	6.72	113.58	108.20
53	B5	3074	G	O4'-C1'-N9	6.72	113.58	108.20
53	B5	2374	C	O4'-C1'-N1	6.72	113.57	108.20
1	AA	411	C	O4'-C1'-N1	6.72	113.57	108.20
53	B5	1214	U	O4'-C1'-N1	6.72	113.57	108.20
53	B5	2227	C	O4'-C1'-N1	6.72	113.57	108.20
1	AA	958	U	O4'-C1'-N1	6.71	113.57	108.20
1	AA	1329	C	O4'-C1'-N1	6.71	113.57	108.20
53	B5	1517	G	N1-C6-O6	6.71	123.93	119.90
1	AA	571	G	N1-C6-O6	6.71	123.93	119.90
1	AA	586	G	N1-C6-O6	6.71	123.93	119.90
1	AA	1010	G	N1-C6-O6	6.71	123.93	119.90
1	AA	1053	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	1564	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	2125	A	O4'-C1'-N9	6.71	113.57	108.20
53	B5	509	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	549	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	2565	U	O4'-C1'-N1	6.71	113.57	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	196	G	N1-C6-O6	6.71	123.92	119.90
1	AA	1745	G	N1-C6-O6	6.71	123.92	119.90
52	B4	156	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	237	G	C5-C6-O6	-6.71	124.58	128.60
53	B5	591	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	2153	U	O4'-C1'-N1	6.71	113.57	108.20
53	B5	2992	U	O4'-C1'-N1	6.71	113.57	108.20
1	AA	1592	G	N1-C6-O6	6.71	123.92	119.90
1	AA	1645	U	O4'-C1'-N1	6.71	113.56	108.20
53	B5	1066	G	N1-C6-O6	6.71	123.92	119.90
53	B5	2592	G	N1-C6-O6	6.71	123.92	119.90
1	AA	921	G	N1-C6-O6	6.71	123.92	119.90
53	B5	2253	G	N1-C6-O6	6.71	123.92	119.90
53	B5	2699	G	N1-C6-O6	6.71	123.92	119.90
53	B5	2815	G	N1-C6-O6	6.71	123.92	119.90
53	B5	2875	U	O4'-C1'-N1	6.71	113.56	108.20
1	AA	292	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	1559	U	O4'-C1'-N1	6.70	113.56	108.20
53	B5	2429	G	N1-C6-O6	6.70	123.92	119.90
51	B3	103	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	778	G	N1-C6-O6	6.70	123.92	119.90
1	AA	831	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	1546	G	C2'-C3'-O3'	-6.70	94.76	109.50
1	AA	1769	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	1795	A	O4'-C1'-N9	6.70	113.56	108.20
53	B5	2607	G	N1-C6-O6	6.70	123.92	119.90
53	B5	2620	G	C5-C6-O6	-6.70	124.58	128.60
1	AA	797	G	OP1-P-OP2	-6.70	109.55	119.60
1	AA	1549	U	C2'-C3'-O3'	6.70	124.42	113.70
19	A7	65	G	N7-C8-N9	6.70	116.45	113.10
53	B5	505	G	O4'-C1'-N9	6.70	113.56	108.20
53	B5	2901	G	N1-C6-O6	6.70	123.92	119.90
53	B5	2266	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	268	C	O4'-C1'-N1	6.70	113.56	108.20
19	A7	14	A	C5-N7-C8	6.70	107.25	103.90
30	BF	138	TYR	CB-CG-CD1	6.70	125.02	121.00
52	B4	50	C	O4'-C1'-N1	6.70	113.56	108.20
53	B5	494	G	O4'-C1'-N9	6.70	113.56	108.20
53	B5	714	G	C5-C6-O6	-6.70	124.58	128.60
53	B5	1463	U	O4'-C1'-N1	6.70	113.56	108.20
53	B5	3061	G	C5-C6-O6	-6.70	124.58	128.60
53	B5	564	G	N1-C6-O6	6.69	123.92	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1577	U	O4'-C1'-N1	6.69	113.55	108.20
24	B9	14	TYR	CB-CG-CD2	6.69	125.02	121.00
53	B5	2190	U	O4'-C1'-N1	6.69	113.55	108.20
1	AA	857	U	O5'-C5'-C4'	6.69	124.41	111.70
1	AA	1540	G	N1-C6-O6	6.69	123.91	119.90
52	B4	29	U	O4'-C1'-N1	6.69	113.55	108.20
53	B5	2442	G	N1-C6-O6	6.69	123.91	119.90
53	B5	2880	U	O4'-C1'-N1	6.69	113.55	108.20
53	B5	3199	G	N1-C6-O6	6.69	123.91	119.90
1	AA	1260	G	N1-C6-O6	6.69	123.91	119.90
53	B5	1737	U	O4'-C1'-N1	6.69	113.55	108.20
53	B5	147	U	O4'-C1'-N1	6.69	113.55	108.20
53	B5	1487	G	C5-C6-O6	-6.69	124.59	128.60
53	B5	3116	G	O4'-C1'-N9	6.69	113.55	108.20
1	AA	484	C	O4'-C1'-N1	6.68	113.55	108.20
1	AA	907	U	O4'-C1'-N1	6.68	113.55	108.20
1	AA	1464	G	N1-C6-O6	6.68	123.91	119.90
1	AA	1690	G	N1-C6-O6	6.68	123.91	119.90
19	A7	14	A	N7-C8-N9	-6.68	110.46	113.80
53	B5	3264	G	C5-C6-O6	-6.68	124.59	128.60
1	AA	1161	G	N1-C6-O6	6.68	123.91	119.90
1	AA	1382	G	O4'-C1'-N9	6.68	113.55	108.20
1	AA	1671	G	N1-C6-O6	6.68	123.91	119.90
19	A7	4	G	C6-C5-N7	6.68	134.41	130.40
42	BR	94	TYR	CB-CG-CD1	-6.68	116.99	121.00
53	B5	354	U	O4'-C1'-N1	6.68	113.55	108.20
53	B5	1380	G	O4'-C1'-N9	6.68	113.55	108.20
53	B5	2534	G	N1-C6-O6	6.68	123.91	119.90
1	AA	1344	U	O4'-C1'-N1	6.68	113.55	108.20
53	B5	2618	G	C5-C6-O6	-6.68	124.59	128.60
1	AA	1506	U	O4'-C1'-N1	6.68	113.54	108.20
1	AA	1636	G	C1'-O4'-C4'	-6.68	104.56	109.90
53	B5	2158	A	P-O3'-C3'	6.68	127.72	119.70
53	B5	2809	C	O4'-C1'-N1	6.68	113.54	108.20
53	B5	3115	C	O4'-C1'-N1	6.68	113.54	108.20
53	B5	1172	G	N1-C6-O6	6.68	123.91	119.90
53	B5	1819	U	O4'-C1'-N1	6.68	113.54	108.20
53	B5	2986	U	O4'-C1'-N1	6.68	113.54	108.20
53	B5	3019	U	O4'-C1'-N1	6.68	113.54	108.20
1	AA	106	U	O4'-C1'-N1	6.68	113.54	108.20
53	B5	3098	G	C5-C6-O6	-6.68	124.59	128.60
1	AA	1632	C	P-O3'-C3'	-6.67	111.69	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	263	C	O4'-C1'-N1	6.67	113.54	108.20
53	B5	1408	G	N1-C6-O6	6.67	123.91	119.90
53	B5	1470	U	O4'-C1'-N1	6.67	113.54	108.20
53	B5	3284	G	C5-C6-O6	-6.67	124.60	128.60
53	B5	1612	A	O4'-C1'-N9	6.67	113.54	108.20
1	AA	1249	U	O4'-C1'-N1	6.67	113.54	108.20
1	AA	1448	U	O4'-C1'-N1	6.67	113.54	108.20
53	B5	410	U	O4'-C1'-N1	6.67	113.54	108.20
53	B5	996	U	O4'-C1'-N1	6.67	113.54	108.20
1	AA	496	G	N1-C6-O6	6.67	123.90	119.90
53	B5	155	G	C5-C6-O6	-6.67	124.60	128.60
53	B5	739	G	O4'-C1'-N9	6.67	113.54	108.20
53	B5	2469	G	C5-C6-O6	-6.67	124.60	128.60
51	B3	5	G	O4'-C1'-N9	6.67	113.53	108.20
53	B5	471	U	O4'-C1'-N1	6.67	113.53	108.20
53	B5	524	C	O4'-C1'-N1	6.67	113.53	108.20
53	B5	619	A	O4'-C1'-N9	6.67	113.53	108.20
53	B5	625	G	N1-C6-O6	6.67	123.90	119.90
53	B5	627	U	O4'-C1'-N1	6.67	113.53	108.20
53	B5	609	G	C5-C6-O6	-6.67	124.60	128.60
53	B5	2610	G	N1-C6-O6	6.67	123.90	119.90
53	B5	2806	U	O4'-C1'-N1	6.67	113.53	108.20
53	B5	733	G	N1-C6-O6	6.67	123.90	119.90
53	B5	2599	U	O4'-C1'-N1	6.67	113.53	108.20
1	AA	633	U	O4'-C1'-N1	6.66	113.53	108.20
1	AA	834	G	O4'-C1'-N9	6.66	113.53	108.20
51	B3	46	A	O4'-C1'-N9	6.66	113.53	108.20
53	B5	632	G	N1-C6-O6	6.66	123.90	119.90
1	AA	699	U	O4'-C1'-N1	6.66	113.53	108.20
1	AA	610	G	N1-C6-O6	6.66	123.90	119.90
16	AS	97	TYR	CB-CG-CD2	-6.66	117.00	121.00
53	B5	860	G	N1-C6-O6	6.66	123.90	119.90
53	B5	1651	U	O4'-C1'-N1	6.66	113.53	108.20
1	AA	1200	A	C6-C5-N7	6.66	136.96	132.30
52	B4	31	G	O4'-C1'-N9	6.66	113.53	108.20
53	B5	1683	A	O4'-C1'-N9	6.66	113.53	108.20
53	B5	1874	A	O4'-C1'-N9	6.66	113.53	108.20
53	B5	1942	U	O4'-C1'-N1	6.66	113.53	108.20
1	AA	1233	G	N1-C6-O6	6.66	123.89	119.90
53	B5	618	C	O4'-C1'-N1	6.66	113.53	108.20
1	AA	702	G	N1-C6-O6	6.66	123.89	119.90
19	A7	18	G	C6-C5-N7	6.66	134.39	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	B3	118	U	O4'-C1'-N1	6.66	113.52	108.20
53	B5	3045	G	N1-C6-O6	6.66	123.89	119.90
53	B5	3310	A	C5-C6-N6	-6.66	118.38	123.70
53	B5	2886	U	O4'-C1'-N1	6.65	113.52	108.20
53	B5	2915	U	O4'-C1'-N1	6.65	113.52	108.20
53	B5	3075	G	O4'-C1'-N9	6.65	113.52	108.20
1	AA	1723	U	O4'-C1'-N1	6.65	113.52	108.20
53	B5	58	G	O4'-C1'-N9	6.65	113.52	108.20
53	B5	2791	G	O4'-C1'-N9	6.65	113.52	108.20
53	B5	2839	G	N1-C6-O6	6.65	123.89	119.90
53	B5	3346	U	O4'-C1'-N1	6.65	113.52	108.20
51	B3	85	G	N1-C6-O6	6.65	123.89	119.90
53	B5	2945	G	C5-C6-O6	-6.65	124.61	128.60
1	AA	1750	U	O4'-C1'-N1	6.65	113.52	108.20
53	B5	137	G	O4'-C1'-N9	6.65	113.52	108.20
1	AA	830	U	O4'-C1'-N1	6.64	113.52	108.20
52	B4	153	U	O4'-C1'-N1	6.64	113.52	108.20
53	B5	2324	A	O4'-C1'-N9	6.64	113.52	108.20
53	B5	3286	G	N1-C6-O6	6.64	123.89	119.90
1	AA	23	G	N1-C6-O6	6.64	123.89	119.90
1	AA	822	U	O4'-C1'-N1	6.64	113.51	108.20
1	AA	886	U	O4'-C1'-N1	6.64	113.51	108.20
19	A7	15	G	C1'-O4'-C4'	-6.64	104.59	109.90
53	B5	189	G	O4'-C1'-N9	6.64	113.51	108.20
1	AA	1610	U	P-O3'-C3'	6.64	127.67	119.70
53	B5	1469	C	O4'-C1'-N1	6.64	113.51	108.20
53	B5	1570	U	O4'-C1'-N1	6.64	113.51	108.20
53	B5	1914	G	N1-C6-O6	6.64	123.88	119.90
53	B5	2300	G	N1-C6-O6	6.64	123.88	119.90
1	AA	73	U	O4'-C1'-N1	6.64	113.51	108.20
53	B5	301	G	O4'-C1'-N9	6.64	113.51	108.20
1	AA	404	G	N1-C6-O6	6.64	123.88	119.90
1	AA	554	C	O4'-C1'-N1	6.64	113.51	108.20
1	AA	48	G	O4'-C1'-N9	6.63	113.51	108.20
1	AA	1092	U	O4'-C1'-N1	6.63	113.51	108.20
18	AT	18	TYR	CB-CG-CD2	-6.63	117.02	121.00
53	B5	1379	G	C5-C6-O6	-6.63	124.62	128.60
53	B5	1387	G	C5-C6-O6	-6.63	124.62	128.60
53	B5	2470	C	C2-N1-C1'	6.63	126.10	118.80
53	B5	2883	U	O4'-C1'-N1	6.63	113.51	108.20
1	AA	289	U	O4'-C1'-N1	6.63	113.51	108.20
53	B5	70	A	P-O3'-C3'	6.63	127.66	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	91	G	N1-C6-O6	6.63	123.88	119.90
1	AA	1000	U	O4'-C1'-N1	6.63	113.50	108.20
1	AA	1150	G	N1-C6-O6	6.63	123.88	119.90
1	AA	1315	G	N1-C6-O6	6.63	123.88	119.90
1	AA	1706	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	328	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	632	G	O4'-C1'-N9	6.63	113.50	108.20
53	B5	1409	G	N1-C6-O6	6.63	123.88	119.90
53	B5	2343	C	O4'-C1'-N1	6.63	113.50	108.20
53	B5	2575	G	O4'-C1'-N9	6.63	113.51	108.20
1	AA	858	G	N7-C8-N9	6.63	116.42	113.10
53	B5	1811	G	O4'-C1'-N9	6.63	113.50	108.20
53	B5	2497	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	3149	G	C5-C6-O6	-6.63	124.62	128.60
1	AA	976	A	O4'-C1'-N9	6.63	113.50	108.20
1	AA	1224	G	N1-C6-O6	6.63	123.88	119.90
53	B5	795	G	C5-C6-O6	-6.63	124.62	128.60
53	B5	1122	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	1217	A	O4'-C1'-N9	6.63	113.50	108.20
53	B5	2427	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	2505	U	O4'-C1'-N1	6.63	113.50	108.20
1	AA	467	G	C5-C6-O6	-6.63	124.62	128.60
1	AA	1599	G	N1-C6-O6	6.63	123.88	119.90
53	B5	563	U	O4'-C1'-N1	6.63	113.50	108.20
53	B5	1339	C	O4'-C1'-N1	6.63	113.50	108.20
53	B5	1514	G	N1-C6-O6	6.62	123.88	119.90
52	B4	14	C	O4'-C1'-N1	6.62	113.50	108.20
53	B5	22	G	C5-C6-O6	-6.62	124.63	128.60
53	B5	1295	G	N1-C6-O6	6.62	123.87	119.90
53	B5	2559	A	P-O3'-C3'	6.62	127.65	119.70
1	AA	83	G	N1-C6-O6	6.62	123.87	119.90
1	AA	418	G	N1-C6-O6	6.62	123.87	119.90
1	AA	1549	U	C1'-C2'-O2'	6.62	130.46	110.60
52	B4	78	G	C5-C6-O6	-6.62	124.63	128.60
53	B5	286	U	O4'-C1'-N1	6.62	113.50	108.20
53	B5	601	U	P-O3'-C3'	6.62	127.64	119.70
53	B5	2252	A	O4'-C1'-N9	6.62	113.50	108.20
1	AA	1263	G	N1-C6-O6	6.62	123.87	119.90
51	B3	84	G	O4'-C1'-N9	6.62	113.50	108.20
53	B5	623	U	O4'-C1'-N1	6.62	113.49	108.20
53	B5	939	U	O4'-C1'-N1	6.62	113.50	108.20
53	B5	1400	G	N1-C6-O6	6.62	123.87	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1735	G	C5-C6-O6	-6.62	124.63	128.60
53	B5	1735	G	O4'-C1'-N9	6.62	113.50	108.20
53	B5	3359	A	O4'-C1'-N9	6.62	113.49	108.20
53	B5	3394	U	O4'-C1'-N1	6.62	113.50	108.20
1	AA	1572	G	N1-C6-O6	6.62	123.87	119.90
53	B5	1282	G	C5-C6-O6	-6.62	124.63	128.60
1	AA	1563	C	P-O3'-C3'	6.62	127.64	119.70
53	B5	74	G	O4'-C1'-N9	6.62	113.49	108.20
53	B5	620	U	O4'-C1'-N1	6.62	113.49	108.20
53	B5	212	G	O4'-C1'-N9	6.61	113.49	108.20
53	B5	1062	A	O4'-C1'-N9	6.61	113.49	108.20
53	B5	3278	U	O4'-C1'-N1	6.61	113.49	108.20
53	B5	1586	G	C5-C6-O6	-6.61	124.63	128.60
1	AA	671	G	N1-C6-O6	6.61	123.87	119.90
53	B5	857	G	N1-C6-O6	6.61	123.87	119.90
53	B5	1653	G	C5-C6-O6	-6.61	124.63	128.60
53	B5	2184	U	O4'-C1'-N1	6.61	113.49	108.20
19	A7	4	G	C4-C5-C6	-6.61	114.83	118.80
53	B5	218	G	C5-C6-O6	-6.61	124.64	128.60
53	B5	535	G	N1-C6-O6	6.61	123.86	119.90
53	B5	1485	G	N1-C6-O6	6.61	123.87	119.90
53	B5	2807	U	O4'-C1'-N1	6.61	113.49	108.20
1	AA	462	G	N1-C6-O6	6.61	123.86	119.90
53	B5	44	U	O4'-C1'-N1	6.61	113.48	108.20
53	B5	257	U	O4'-C1'-N1	6.61	113.48	108.20
53	B5	467	U	O4'-C1'-N1	6.61	113.48	108.20
53	B5	953	G	C5-C6-O6	-6.61	124.64	128.60
53	B5	1600	U	O4'-C1'-N1	6.61	113.48	108.20
53	B5	1880	U	O4'-C1'-N1	6.61	113.48	108.20
53	B5	2650	U	O4'-C1'-N1	6.61	113.48	108.20
1	AA	1182	U	O4'-C1'-N1	6.60	113.48	108.20
53	B5	258	G	C5-C6-O6	-6.60	124.64	128.60
53	B5	2391	G	N1-C6-O6	6.60	123.86	119.90
53	B5	3326	G	O4'-C1'-N9	6.60	113.48	108.20
1	AA	739	G	N1-C6-O6	6.60	123.86	119.90
53	B5	2591	A	O4'-C1'-N9	6.60	113.48	108.20
1	AA	12	U	O4'-C1'-N1	6.60	113.48	108.20
1	AA	24	U	O4'-C1'-N1	6.60	113.48	108.20
52	B4	58	G	N1-C6-O6	6.60	123.86	119.90
53	B5	940	G	N1-C6-O6	6.60	123.86	119.90
53	B5	3159	C	O4'-C1'-N1	6.60	113.48	108.20
1	AA	857	U	C5'-C4'-C3'	6.60	126.56	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	36	A	C4'-C3'-C2'	-6.60	96.00	102.60
53	B5	1845	G	C5-C6-O6	-6.60	124.64	128.60
1	AA	1178	U	P-O3'-C3'	6.60	127.62	119.70
53	B5	495	G	P-O3'-C3'	6.60	127.62	119.70
53	B5	1876	U	O4'-C1'-N1	6.60	113.48	108.20
53	B5	2537	U	O4'-C1'-N1	6.60	113.48	108.20
1	AA	357	G	O4'-C1'-N9	6.60	113.48	108.20
1	AA	1721	U	O4'-C1'-N1	6.60	113.48	108.20
53	B5	2522	G	N1-C6-O6	6.60	123.86	119.90
1	AA	496	G	O4'-C1'-N9	6.59	113.48	108.20
1	AA	971	G	N1-C6-O6	6.59	123.86	119.90
1	AA	1597	C	O4'-C1'-N1	6.59	113.48	108.20
52	B4	25	G	C5-C6-O6	-6.59	124.64	128.60
53	B5	429	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	2327	U	O4'-C1'-N1	6.59	113.48	108.20
53	B5	2874	G	N1-C6-O6	6.59	123.86	119.90
53	B5	1927	G	C5-C6-O6	-6.59	124.64	128.60
1	AA	21	U	O4'-C1'-N1	6.59	113.47	108.20
1	AA	874	C	O4'-C1'-N1	6.59	113.47	108.20
1	AA	1601	U	O4'-C1'-N1	6.59	113.47	108.20
1	AA	945	U	O4'-C1'-N1	6.59	113.47	108.20
1	AA	1256	U	O4'-C1'-N1	6.59	113.47	108.20
1	AA	1697	G	N1-C6-O6	6.59	123.85	119.90
16	AS	97	TYR	CB-CG-CD1	6.59	124.95	121.00
53	B5	456	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	1261	G	O4'-C1'-N9	6.59	113.47	108.20
53	B5	1716	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	1861	G	C5-C6-O6	-6.59	124.65	128.60
1	AA	1391	G	N1-C6-O6	6.59	123.85	119.90
1	AA	1558	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	487	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	520	U	O4'-C1'-N1	6.59	113.47	108.20
53	B5	3036	G	O4'-C1'-N9	6.59	113.47	108.20
1	AA	430	G	N1-C6-O6	6.58	123.85	119.90
53	B5	458	U	O4'-C1'-N1	6.58	113.47	108.20
53	B5	1139	G	C5-C6-O6	-6.58	124.65	128.60
53	B5	2586	G	N1-C6-O6	6.58	123.85	119.90
1	AA	703	G	C5-C6-O6	-6.58	124.65	128.60
1	AA	1725	G	N1-C6-O6	6.58	123.85	119.90
53	B5	517	G	N1-C6-O6	6.58	123.85	119.90
53	B5	1565	G	C5-C6-O6	-6.58	124.65	128.60
53	B5	2997	G	C5-C6-O6	-6.58	124.65	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	508	U	O4'-C1'-N1	6.58	113.47	108.20
49	BY	47	TYR	CB-CG-CD1	-6.58	117.05	121.00
53	B5	459	G	N1-C6-O6	6.58	123.85	119.90
53	B5	942	U	O4'-C1'-N1	6.58	113.46	108.20
1	AA	984	G	N1-C6-O6	6.58	123.85	119.90
53	B5	80	G	N1-C6-O6	6.58	123.85	119.90
53	B5	404	G	C5-C6-O6	-6.58	124.65	128.60
53	B5	2907	G	N1-C6-O6	6.58	123.85	119.90
1	AA	457	G	N1-C6-O6	6.58	123.84	119.90
53	B5	859	G	N1-C6-O6	6.58	123.84	119.90
53	B5	1158	A	O4'-C1'-N9	6.58	113.46	108.20
53	B5	2731	U	O4'-C1'-N1	6.58	113.46	108.20
53	B5	3387	U	O4'-C1'-N1	6.58	113.46	108.20
1	AA	296	U	O4'-C1'-N1	6.57	113.46	108.20
1	AA	1603	G	N1-C6-O6	6.57	123.84	119.90
53	B5	347	G	N1-C6-O6	6.57	123.84	119.90
53	B5	421	G	C5-C6-O6	-6.57	124.66	128.60
53	B5	2261	G	N1-C6-O6	6.57	123.84	119.90
1	AA	195	G	N1-C6-O6	6.57	123.84	119.90
1	AA	1409	G	C5-C6-O6	-6.57	124.66	128.60
1	AA	1715	G	N1-C6-O6	6.57	123.84	119.90
1	AA	828	U	O4'-C1'-N1	6.57	113.46	108.20
19	A7	12	U	O4'-C4'-C3'	6.57	111.36	106.10
19	A7	28	C	N3-C4-C5	6.57	124.53	121.90
53	B5	76	G	C5-C6-O6	-6.57	124.66	128.60
53	B5	139	G	C5-C6-O6	-6.57	124.66	128.60
53	B5	1269	U	P-O3'-C3'	6.57	127.59	119.70
53	B5	2481	G	O4'-C1'-N9	6.57	113.46	108.20
53	B5	2909	U	O4'-C1'-N1	6.57	113.46	108.20
44	BT	60	TYR	CB-CG-CD2	-6.57	117.06	121.00
52	B4	148	G	O4'-C1'-N9	6.57	113.45	108.20
53	B5	1692	U	O4'-C1'-N1	6.57	113.45	108.20
1	AA	205	U	O4'-C1'-N1	6.57	113.45	108.20
1	AA	1727	C	O4'-C1'-N1	6.57	113.45	108.20
53	B5	2154	U	O4'-C1'-N1	6.57	113.45	108.20
53	B5	2380	U	O4'-C1'-N1	6.57	113.45	108.20
53	B5	3040	A	O4'-C1'-N9	6.57	113.45	108.20
53	B5	1468	A	O4'-C1'-N9	6.56	113.45	108.20
1	AA	248	U	O4'-C1'-N1	6.56	113.45	108.20
1	AA	1713	G	N1-C6-O6	6.56	123.84	119.90
53	B5	1361	U	O4'-C1'-N1	6.56	113.45	108.20
53	B5	1505	C	O4'-C1'-N1	6.56	113.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1151	G	N1-C6-O6	6.56	123.84	119.90
1	AA	1402	G	N1-C6-O6	6.56	123.84	119.90
53	B5	421	G	P-O3'-C3'	6.56	127.57	119.70
53	B5	844	G	N1-C6-O6	6.56	123.84	119.90
53	B5	2379	U	O4'-C1'-N1	6.56	113.45	108.20
1	AA	727	U	O4'-C1'-N1	6.56	113.45	108.20
53	B5	1743	G	N1-C6-O6	6.56	123.84	119.90
1	AA	1048	G	O4'-C1'-N9	6.56	113.45	108.20
1	AA	1688	G	N1-C6-O6	6.56	123.83	119.90
1	AA	1763	A	O4'-C1'-N9	6.56	113.45	108.20
53	B5	2123	G	O4'-C1'-N9	6.56	113.45	108.20
53	B5	3247	G	N1-C6-O6	6.56	123.83	119.90
1	AA	330	G	N1-C6-O6	6.56	123.83	119.90
1	AA	1152	G	C5-C6-O6	-6.56	124.67	128.60
52	B4	102	U	O4'-C1'-N1	6.56	113.44	108.20
53	B5	167	U	O4'-C1'-N1	6.56	113.44	108.20
53	B5	592	G	C5-C6-O6	-6.56	124.67	128.60
1	AA	866	G	OP1-P-OP2	6.55	129.43	119.60
1	AA	1520	U	C5'-C4'-O4'	6.55	116.97	109.10
53	B5	1464	G	C5-C6-O6	-6.55	124.67	128.60
53	B5	2767	U	O4'-C1'-N1	6.55	113.44	108.20
53	B5	2854	U	O4'-C1'-N1	6.55	113.44	108.20
1	AA	561	G	N1-C6-O6	6.55	123.83	119.90
1	AA	959	U	O4'-C1'-N1	6.55	113.44	108.20
1	AA	1137	G	N1-C6-O6	6.55	123.83	119.90
1	AA	1482	G	N1-C6-O6	6.55	123.83	119.90
48	BX	7	TYR	CB-CG-CD1	6.55	124.93	121.00
53	B5	425	G	C5-C6-O6	-6.55	124.67	128.60
53	B5	110	G	N1-C6-O6	6.55	123.83	119.90
53	B5	304	G	N1-C6-O6	6.55	123.83	119.90
53	B5	581	U	O4'-C1'-N1	6.55	113.44	108.20
53	B5	1264	G	N1-C6-O6	6.55	123.83	119.90
53	B5	1466	G	C5-C6-O6	-6.55	124.67	128.60
53	B5	2575	G	P-O3'-C3'	6.55	127.56	119.70
53	B5	3200	G	N1-C6-O6	6.55	123.83	119.90
53	B5	169	U	O4'-C1'-N1	6.55	113.44	108.20
53	B5	1533	U	O4'-C1'-N1	6.55	113.44	108.20
53	B5	2696	A	O4'-C1'-N9	6.55	113.44	108.20
1	AA	975	G	N1-C6-O6	6.55	123.83	119.90
1	AA	1105	G	C5-C6-O6	-6.55	124.67	128.60
1	AA	1175	G	N1-C6-O6	6.55	123.83	119.90
1	AA	1553	A	P-O5'-C5'	-6.55	110.43	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	57	G	C5-N7-C8	-6.55	101.03	104.30
51	B3	30	G	C5-C6-O6	-6.55	124.67	128.60
53	B5	2816	G	N1-C6-O6	6.55	123.83	119.90
53	B5	3302	U	O4'-C1'-N1	6.55	113.44	108.20
1	AA	187	G	N1-C6-O6	6.54	123.83	119.90
53	B5	214	G	N1-C6-O6	6.54	123.83	119.90
1	AA	192	U	O4'-C1'-N1	6.54	113.44	108.20
1	AA	510	G	N1-C6-O6	6.54	123.83	119.90
1	AA	1486	G	C5-C6-O6	-6.54	124.67	128.60
53	B5	9	U	O4'-C1'-N1	6.54	113.43	108.20
53	B5	1641	U	O4'-C1'-N1	6.54	113.44	108.20
53	B5	2244	A	O4'-C1'-N9	6.54	113.44	108.20
53	B5	2482	U	O4'-C1'-N1	6.54	113.44	108.20
53	B5	528	U	O4'-C1'-N1	6.54	113.43	108.20
53	B5	1243	G	C5-C6-O6	-6.54	124.67	128.60
53	B5	1285	G	C5-C6-O6	-6.54	124.67	128.60
53	B5	2576	G	N1-C6-O6	6.54	123.83	119.90
53	B5	3344	A	O4'-C1'-N9	6.54	113.43	108.20
1	AA	920	U	O4'-C1'-N1	6.54	113.43	108.20
53	B5	783	A	O4'-C1'-N9	6.54	113.43	108.20
53	B5	1022	U	O4'-C1'-N1	6.54	113.43	108.20
1	AA	20	G	N1-C6-O6	6.54	123.82	119.90
1	AA	1271	A	O4'-C1'-N9	6.54	113.43	108.20
53	B5	651	G	N1-C6-O6	6.54	123.82	119.90
53	B5	1104	G	N1-C6-O6	6.54	123.82	119.90
53	B5	2138	A	P-O3'-C3'	6.54	127.54	119.70
1	AA	864	U	O4'-C1'-C2'	6.54	113.48	107.60
52	B4	6	U	O4'-C1'-N1	6.54	113.43	108.20
53	B5	935	U	O4'-C1'-N1	6.54	113.43	108.20
53	B5	2690	G	O4'-C1'-N9	6.54	113.43	108.20
1	AA	562	G	N1-C6-O6	6.53	123.82	119.90
53	B5	3272	U	O4'-C1'-N1	6.53	113.43	108.20
1	AA	1056	U	O4'-C1'-N1	6.53	113.43	108.20
53	B5	228	U	O4'-C1'-N1	6.53	113.43	108.20
53	B5	790	U	O4'-C1'-N1	6.53	113.42	108.20
1	AA	539	G	N1-C6-O6	6.53	123.82	119.90
1	AA	1586	G	O4'-C1'-N9	6.53	113.42	108.20
52	B4	87	G	C5-C6-O6	-6.53	124.68	128.60
53	B5	3046	A	O4'-C1'-N9	6.53	113.42	108.20
1	AA	274	G	N1-C6-O6	6.53	123.82	119.90
1	AA	1358	U	O4'-C1'-N1	6.53	113.42	108.20
51	B3	38	U	O4'-C1'-N1	6.53	113.42	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	531	G	O4'-C1'-N9	6.53	113.42	108.20
53	B5	777	U	O4'-C1'-N1	6.53	113.42	108.20
53	B5	1294	A	O4'-C1'-N9	6.53	113.42	108.20
1	AA	858	G	C8-N9-C4	-6.53	103.79	106.40
1	AA	941	G	O4'-C1'-N9	6.53	113.42	108.20
1	AA	1294	G	N1-C6-O6	6.53	123.81	119.90
53	B5	103	G	N1-C6-O6	6.53	123.82	119.90
53	B5	206	G	C5-C6-O6	-6.53	124.68	128.60
1	AA	1164	G	N1-C6-O6	6.52	123.81	119.90
53	B5	1389	G	C5-C6-O6	-6.52	124.69	128.60
53	B5	3181	G	N1-C6-O6	6.52	123.81	119.90
1	AA	1289	G	N1-C6-O6	6.52	123.81	119.90
1	AA	1380	G	N1-C6-O6	6.52	123.81	119.90
53	B5	532	A	O4'-C1'-N9	6.52	113.42	108.20
53	B5	1098	A	O4'-C1'-N9	6.52	113.42	108.20
53	B5	1512	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	1572	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2947	G	N1-C6-O6	6.52	123.81	119.90
53	B5	3277	C	O4'-C1'-N1	6.52	113.42	108.20
53	B5	1248	C	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2681	U	O4'-C1'-N1	6.52	113.42	108.20
1	AA	947	G	N1-C6-O6	6.52	123.81	119.90
1	AA	1346	G	O4'-C1'-N9	6.52	113.42	108.20
53	B5	451	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	1173	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2410	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2629	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2701	U	O4'-C1'-N1	6.52	113.42	108.20
53	B5	2849	C	P-O3'-C3'	6.52	127.52	119.70
53	B5	173	G	O4'-C1'-N9	6.52	113.41	108.20
53	B5	262	U	O4'-C1'-N1	6.52	113.41	108.20
53	B5	275	U	O4'-C1'-N1	6.52	113.41	108.20
53	B5	716	G	O4'-C1'-N9	6.52	113.41	108.20
53	B5	2421	U	O4'-C1'-N1	6.52	113.41	108.20
53	B5	2773	C	O4'-C1'-N1	6.52	113.41	108.20
1	AA	864	U	O4'-C1'-N1	6.52	113.41	108.20
1	AA	873	U	O4'-C1'-N1	6.52	113.41	108.20
1	AA	1101	U	O4'-C1'-N1	6.52	113.41	108.20
53	B5	849	C	C6-N1-C1'	-6.52	112.98	120.80
1	AA	979	G	N1-C6-O6	6.51	123.81	119.90
19	A7	75	C	P-O3'-C3'	6.51	127.52	119.70
53	B5	792	G	N1-C6-O6	6.51	123.81	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	899	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	3014	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	3356	G	O4'-C1'-N9	6.51	113.41	108.20
53	B5	2517	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	3252	G	N1-C6-O6	6.51	123.81	119.90
1	AA	712	G	N1-C6-O6	6.51	123.81	119.90
19	A7	24	G	N3-C4-N9	6.51	129.91	126.00
53	B5	1520	G	O4'-C1'-N9	6.51	113.41	108.20
51	B3	74	A	O4'-C1'-N9	6.51	113.41	108.20
53	B5	921	A	O4'-C1'-N9	6.51	113.41	108.20
53	B5	2819	A	O4'-C1'-N9	6.51	113.41	108.20
53	B5	2855	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	3030	G	C5-C6-O6	-6.51	124.69	128.60
53	B5	2486	A	P-O3'-C3'	6.51	127.51	119.70
19	A7	5	A	O4'-C4'-C3'	6.51	111.31	106.10
19	A7	66	A	C5-N7-C8	6.51	107.15	103.90
52	B4	93	U	O4'-C1'-N1	6.51	113.41	108.20
52	B4	146	U	O4'-C1'-N1	6.51	113.40	108.20
53	B5	1636	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	1947	G	C5-C6-O6	-6.51	124.70	128.60
53	B5	2735	U	O4'-C1'-N1	6.51	113.41	108.20
53	B5	3197	G	C5-C6-O6	-6.51	124.70	128.60
51	B3	13	A	P-O3'-C3'	6.50	127.51	119.70
53	B5	370	U	O4'-C1'-N1	6.50	113.40	108.20
53	B5	510	G	N1-C6-O6	6.50	123.80	119.90
1	AA	835	U	O4'-C1'-N1	6.50	113.40	108.20
1	AA	478	A	O4'-C1'-N9	6.50	113.40	108.20
1	AA	672	U	O4'-C1'-N1	6.50	113.40	108.20
19	A7	35	A	C8-N9-C4	-6.50	103.20	105.80
53	B5	173	G	N1-C6-O6	6.50	123.80	119.90
53	B5	531	G	N1-C6-O6	6.50	123.80	119.90
53	B5	930	U	O4'-C1'-N1	6.50	113.40	108.20
53	B5	2187	G	N1-C6-O6	6.50	123.80	119.90
53	B5	2770	G	C5-C6-O6	-6.50	124.70	128.60
53	B5	3188	G	N1-C6-O6	6.50	123.80	119.90
1	AA	783	G	N1-C6-O6	6.50	123.80	119.90
1	AA	1111	G	N1-C6-O6	6.50	123.80	119.90
1	AA	1643	G	N1-C6-O6	6.50	123.80	119.90
1	AA	805	U	O4'-C1'-N1	6.50	113.40	108.20
1	AA	1378	U	O4'-C1'-N1	6.50	113.40	108.20
19	A7	51	G	N9-C1'-C2'	-6.50	104.85	112.00
53	B5	878	G	N1-C6-O6	6.50	123.80	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1623	G	O4'-C1'-N9	6.50	113.40	108.20
53	B5	2470	C	O4'-C1'-N1	6.50	113.40	108.20
1	AA	234	G	N1-C6-O6	6.50	123.80	119.90
1	AA	1072	U	O4'-C1'-N1	6.50	113.40	108.20
1	AA	1313	G	N1-C6-O6	6.50	123.80	119.90
51	B3	79	U	O4'-C1'-N1	6.50	113.40	108.20
53	B5	947	G	N1-C6-O6	6.50	123.80	119.90
53	B5	1851	G	N1-C6-O6	6.50	123.80	119.90
1	AA	778	G	O4'-C1'-N9	6.49	113.39	108.20
1	AA	924	G	N1-C6-O6	6.49	123.80	119.90
53	B5	831	G	O4'-C1'-N9	6.49	113.39	108.20
53	B5	2945	G	O4'-C1'-N9	6.49	113.39	108.20
53	B5	3288	G	C5-C6-O6	-6.49	124.70	128.60
1	AA	743	U	O4'-C1'-N1	6.49	113.39	108.20
53	B5	2627	C	O4'-C1'-N1	6.49	113.39	108.20
1	AA	690	G	N1-C6-O6	6.49	123.79	119.90
1	AA	1399	G	N1-C6-O6	6.49	123.79	119.90
1	AA	1779	A	O4'-C1'-N9	6.49	113.39	108.20
53	B5	333	G	N1-C6-O6	6.49	123.79	119.90
53	B5	1719	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	1860	G	N1-C6-O6	6.49	123.79	119.90
1	AA	211	U	O4'-C1'-N1	6.49	113.39	108.20
1	AA	815	G	N1-C6-O6	6.49	123.79	119.90
1	AA	1718	G	N1-C6-O6	6.49	123.79	119.90
1	AA	1735	G	N1-C6-O6	6.49	123.79	119.90
53	B5	3289	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	59	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	712	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	1924	U	O4'-C1'-N1	6.49	113.39	108.20
1	AA	434	G	C5-C6-O6	-6.49	124.71	128.60
1	AA	1416	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	92	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	311	U	O4'-C1'-N1	6.49	113.39	108.20
53	B5	1061	A	O4'-C1'-N9	6.49	113.39	108.20
53	B5	1829	G	C5-C6-O6	-6.49	124.71	128.60
53	B5	1925	U	O4'-C1'-N1	6.49	113.39	108.20
1	AA	1080	G	C5-C6-O6	-6.48	124.71	128.60
53	B5	513	G	N1-C6-O6	6.48	123.79	119.90
53	B5	1174	G	O4'-C1'-N9	6.48	113.39	108.20
53	B5	1486	G	N1-C6-O6	6.48	123.79	119.90
53	B5	1727	G	N1-C6-O6	6.48	123.79	119.90
1	AA	79	C	O4'-C1'-N1	6.48	113.38	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	7	U	O4'-C1'-N1	6.48	113.39	108.20
53	B5	1479	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	1906	G	O4'-C1'-N9	6.48	113.38	108.20
53	B5	2349	U	O4'-C1'-N1	6.48	113.38	108.20
1	AA	45	U	O4'-C1'-N1	6.48	113.38	108.20
1	AA	375	U	O4'-C1'-N1	6.48	113.38	108.20
1	AA	565	C	O4'-C1'-N1	6.48	113.38	108.20
1	AA	1393	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	1732	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	3194	C	O4'-C1'-N1	6.48	113.38	108.20
1	AA	1011	U	O4'-C1'-N1	6.48	113.38	108.20
51	B3	33	U	C2-N1-C1'	6.48	125.47	117.70
53	B5	98	G	N1-C6-O6	6.48	123.79	119.90
53	B5	440	A	O4'-C1'-N9	6.48	113.38	108.20
53	B5	1008	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	1060	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	2376	G	N1-C6-O6	6.48	123.79	119.90
53	B5	3222	U	O4'-C1'-N1	6.48	113.38	108.20
1	AA	474	A	O4'-C1'-N9	6.48	113.38	108.20
53	B5	1125	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	1168	U	O4'-C1'-N1	6.48	113.38	108.20
53	B5	2663	G	N1-C6-O6	6.48	123.79	119.90
53	B5	274	G	C5-C6-O6	-6.47	124.72	128.60
53	B5	889	U	O4'-C1'-N1	6.47	113.38	108.20
53	B5	941	G	N1-C6-O6	6.47	123.78	119.90
53	B5	1368	U	O4'-C1'-N1	6.47	113.38	108.20
1	AA	122	U	O4'-C1'-N1	6.47	113.38	108.20
51	B3	3	U	O4'-C1'-N1	6.47	113.38	108.20
51	B3	14	U	O4'-C1'-N1	6.47	113.38	108.20
53	B5	162	G	P-O3'-C3'	6.47	127.47	119.70
53	B5	1627	U	O4'-C1'-N1	6.47	113.38	108.20
53	B5	2168	A	O4'-C1'-N9	6.47	113.38	108.20
53	B5	2428	U	O4'-C1'-N1	6.47	113.38	108.20
53	B5	2663	G	O4'-C1'-N9	6.47	113.38	108.20
1	AA	688	G	C5-C6-O6	-6.47	124.72	128.60
1	AA	1150	G	O4'-C1'-N9	6.47	113.38	108.20
53	B5	75	G	O4'-C1'-N9	6.47	113.38	108.20
53	B5	495	G	N1-C6-O6	6.47	123.78	119.90
53	B5	1030	A	O4'-C1'-N9	6.47	113.38	108.20
53	B5	3254	G	N1-C6-O6	6.47	123.78	119.90
53	B5	3369	G	C5-C6-O6	-6.47	124.72	128.60
53	B5	72	C	O4'-C1'-N1	6.47	113.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1617	G	N1-C6-O6	6.47	123.78	119.90
53	B5	2572	C	O4'-C1'-N1	6.47	113.37	108.20
53	B5	3016	A	O4'-C1'-N9	6.47	113.38	108.20
1	AA	199	G	N1-C6-O6	6.47	123.78	119.90
1	AA	246	G	O4'-C1'-N9	6.47	113.37	108.20
1	AA	277	U	O4'-C1'-N1	6.47	113.37	108.20
53	B5	865	U	O4'-C1'-N1	6.47	113.37	108.20
53	B5	2966	G	C5-C6-O6	-6.47	124.72	128.60
53	B5	3327	G	O4'-C1'-N9	6.47	113.37	108.20
53	B5	300	G	C5-C6-O6	-6.46	124.72	128.60
53	B5	558	U	O4'-C1'-N1	6.46	113.37	108.20
53	B5	2451	G	P-O3'-C3'	6.46	127.46	119.70
53	B5	2768	U	O4'-C1'-N1	6.46	113.37	108.20
1	AA	1322	A	O4'-C1'-N9	6.46	113.37	108.20
1	AA	1584	A	C8-N9-C4	-6.46	103.22	105.80
1	AA	1783	U	O4'-C1'-N1	6.46	113.37	108.20
52	B4	61	A	O4'-C1'-N9	6.46	113.37	108.20
52	B4	145	U	O4'-C1'-N1	6.46	113.37	108.20
53	B5	553	U	O4'-C1'-N1	6.46	113.37	108.20
53	B5	2684	C	O4'-C1'-N1	6.46	113.37	108.20
1	AA	656	G	N1-C6-O6	6.46	123.78	119.90
19	A7	15	G	N9-C1'-C2'	-6.46	104.89	112.00
19	A7	30	G	C8-N9-C4	-6.46	103.81	106.40
53	B5	2251	G	O4'-C1'-N9	6.46	113.37	108.20
1	AA	766	U	O4'-C1'-N1	6.46	113.37	108.20
53	B5	894	G	N1-C6-O6	6.46	123.78	119.90
1	AA	174	U	C2-N1-C1'	6.46	125.45	117.70
1	AA	232	U	O4'-C1'-N1	6.46	113.37	108.20
19	A7	27	C	C5'-C4'-O4'	6.46	116.85	109.10
19	A7	76	A	O4'-C1'-N9	6.46	113.37	108.20
53	B5	413	U	O4'-C1'-N1	6.46	113.37	108.20
1	AA	509	G	N1-C6-O6	6.46	123.77	119.90
1	AA	801	G	N1-C6-O6	6.46	123.77	119.90
1	AA	1229	G	N1-C6-O6	6.46	123.77	119.90
49	BY	47	TYR	CB-CG-CD2	6.46	124.87	121.00
1	AA	479	C	O4'-C1'-N1	6.45	113.36	108.20
53	B5	1674	G	N1-C6-O6	6.45	123.77	119.90
1	AA	231	U	O4'-C1'-N1	6.45	113.36	108.20
1	AA	839	U	O4'-C1'-N1	6.45	113.36	108.20
53	B5	541	U	O4'-C1'-N1	6.45	113.36	108.20
53	B5	2103	U	O4'-C1'-N1	6.45	113.36	108.20
1	AA	1724	G	N1-C6-O6	6.45	123.77	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	43	G	N1-C6-O6	-6.45	116.03	119.90
53	B5	2530	G	O4'-C1'-N9	6.45	113.36	108.20
1	AA	613	G	C5-C6-O6	-6.45	124.73	128.60
1	AA	760	A	O4'-C1'-N9	6.45	113.36	108.20
1	AA	902	U	O4'-C1'-N1	6.45	113.36	108.20
53	B5	1733	G	C5-C6-O6	-6.45	124.73	128.60
1	AA	238	U	O4'-C1'-N1	6.45	113.36	108.20
53	B5	1560	G	N1-C6-O6	6.45	123.77	119.90
53	B5	3366	G	C5-C6-O6	-6.45	124.73	128.60
53	B5	1445	U	O4'-C1'-N1	6.44	113.36	108.20
53	B5	713	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	2477	G	C5-C6-O6	-6.44	124.73	128.60
53	B5	3066	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	1430	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	1442	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	2974	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	3371	G	C5-C6-O6	-6.44	124.73	128.60
1	AA	884	G	N1-C6-O6	6.44	123.76	119.90
1	AA	1511	G	C5-C6-O6	-6.44	124.74	128.60
1	AA	882	U	O4'-C1'-N1	6.44	113.35	108.20
1	AA	1652	G	N1-C6-O6	6.44	123.76	119.90
53	B5	129	U	O4'-C1'-N1	6.44	113.35	108.20
53	B5	1853	U	O4'-C1'-N1	6.44	113.35	108.20
1	AA	258	C	O4'-C1'-N1	6.44	113.35	108.20
1	AA	1674	U	O4'-C1'-N1	6.43	113.35	108.20
53	B5	411	U	O4'-C1'-N1	6.43	113.35	108.20
53	B5	1109	U	O4'-C1'-N1	6.43	113.35	108.20
53	B5	1751	G	O4'-C1'-N9	6.43	113.35	108.20
53	B5	3069	G	N1-C6-O6	6.43	123.76	119.90
1	AA	1353	U	O4'-C1'-N1	6.43	113.35	108.20
52	B4	143	U	O4'-C1'-N1	6.43	113.35	108.20
53	B5	721	G	N1-C6-O6	6.43	123.76	119.90
53	B5	769	G	C5-C6-O6	-6.43	124.74	128.60
53	B5	802	C	O4'-C1'-N1	6.43	113.34	108.20
53	B5	1029	G	N1-C6-O6	6.43	123.76	119.90
1	AA	1138	G	N1-C6-O6	6.43	123.76	119.90
53	B5	787	G	C5-C6-O6	-6.43	124.74	128.60
53	B5	1611	G	O4'-C1'-N9	6.43	113.34	108.20
1	AA	675	U	O4'-C1'-N1	6.43	113.34	108.20
1	AA	1151	G	O4'-C1'-N9	6.43	113.34	108.20
53	B5	128	G	O4'-C1'-N9	6.43	113.34	108.20
1	AA	1361	G	N1-C6-O6	6.43	123.75	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B4	101	U	P-O3'-C3'	6.43	127.41	119.70
53	B5	123	A	O4'-C1'-N9	6.43	113.34	108.20
53	B5	1250	G	P-O3'-C3'	6.43	127.41	119.70
53	B5	1345	G	N1-C6-O6	6.43	123.76	119.90
53	B5	3081	C	O4'-C1'-N1	6.43	113.34	108.20
1	AA	465	G	C5-C6-O6	-6.42	124.75	128.60
1	AA	1560	G	N1-C6-O6	6.42	123.75	119.90
19	A7	33	U	N1-C2-N3	6.42	118.75	114.90
53	B5	1473	G	N1-C6-O6	6.42	123.75	119.90
53	B5	1717	U	O4'-C1'-N1	6.42	113.34	108.20
53	B5	2797	C	O4'-C1'-N1	6.42	113.34	108.20
1	AA	843	U	O4'-C1'-N1	6.42	113.34	108.20
1	AA	256	A	O4'-C1'-N9	6.42	113.34	108.20
1	AA	603	U	O4'-C1'-N1	6.42	113.34	108.20
1	AA	718	U	O4'-C1'-N1	6.42	113.34	108.20
1	AA	1739	U	O4'-C1'-N1	6.42	113.34	108.20
51	B3	13	A	O4'-C1'-N9	6.42	113.34	108.20
53	B5	243	G	O4'-C1'-N9	6.42	113.34	108.20
53	B5	988	U	O4'-C1'-N1	6.42	113.34	108.20
53	B5	2157	G	N1-C6-O6	6.42	123.75	119.90
53	B5	282	G	N1-C6-O6	6.42	123.75	119.90
1	AA	111	U	O4'-C1'-N1	6.42	113.34	108.20
1	AA	363	G	N1-C6-O6	6.42	123.75	119.90
1	AA	374	U	O4'-C1'-N1	6.42	113.33	108.20
53	B5	626	U	O4'-C1'-N1	6.42	113.33	108.20
53	B5	3189	G	N1-C6-O6	6.42	123.75	119.90
53	B5	3333	G	C5-C6-O6	-6.42	124.75	128.60
1	AA	58	U	O4'-C1'-N1	6.42	113.33	108.20
51	B3	81	U	O4'-C1'-N1	6.42	113.33	108.20
53	B5	688	G	N1-C6-O6	6.42	123.75	119.90
53	B5	772	U	O4'-C1'-N1	6.42	113.33	108.20
1	AA	155	U	O4'-C1'-N1	6.42	113.33	108.20
53	B5	2610	G	O4'-C1'-N9	6.42	113.33	108.20
1	AA	611	U	O4'-C1'-N1	6.41	113.33	108.20
1	AA	1386	C	C6-N1-C1'	-6.41	113.10	120.80
53	B5	444	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	652	G	N1-C6-O6	6.41	123.75	119.90
53	B5	852	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	1395	G	C5-C6-O6	-6.41	124.75	128.60
1	AA	1791	G	N1-C6-O6	6.41	123.75	119.90
53	B5	2509	U	O4'-C1'-N1	6.41	113.33	108.20
1	AA	318	U	O4'-C1'-N1	6.41	113.33	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1616	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	2124	G	O4'-C1'-N9	6.41	113.33	108.20
1	AA	719	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	441	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	750	G	N1-C6-O6	6.41	123.75	119.90
53	B5	2787	G	N1-C6-O6	6.41	123.75	119.90
53	B5	2842	U	O4'-C1'-N1	6.41	113.33	108.20
1	AA	797	G	O4'-C4'-C3'	-6.41	97.59	104.00
53	B5	1592	G	C5-C6-O6	-6.41	124.76	128.60
53	B5	2994	A	O4'-C1'-N9	6.41	113.33	108.20
1	AA	1736	U	O4'-C1'-N1	6.41	113.32	108.20
53	B5	183	G	N1-C6-O6	6.41	123.74	119.90
53	B5	449	U	O4'-C1'-N1	6.41	113.32	108.20
53	B5	1077	U	O4'-C1'-N1	6.41	113.33	108.20
53	B5	2659	G	C5-C6-O6	-6.41	124.76	128.60
53	B5	2698	G	N1-C6-O6	6.41	123.74	119.90
53	B5	470	G	O4'-C1'-N9	6.40	113.32	108.20
53	B5	1095	U	O4'-C1'-N1	6.40	113.32	108.20
1	AA	452	A	O4'-C1'-N9	6.40	113.32	108.20
1	AA	1619	U	O4'-C1'-N1	6.40	113.32	108.20
53	B5	584	G	N1-C6-O6	6.40	123.74	119.90
53	B5	643	U	O4'-C1'-N1	6.40	113.32	108.20
53	B5	1246	G	C5-C6-O6	-6.40	124.76	128.60
53	B5	1577	G	N1-C6-O6	6.40	123.74	119.90
53	B5	2694	A	O4'-C1'-N9	6.40	113.32	108.20
53	B5	2814	G	N1-C6-O6	6.40	123.74	119.90
53	B5	3348	G	N1-C6-O6	6.40	123.74	119.90
53	B5	32	U	O4'-C1'-N1	6.40	113.32	108.20
53	B5	162	G	O4'-C1'-N9	6.40	113.32	108.20
53	B5	2793	G	C5-C6-O6	-6.40	124.76	128.60
1	AA	912	G	N1-C6-O6	6.40	123.74	119.90
53	B5	2918	G	O4'-C1'-N9	6.40	113.32	108.20
23	B8	18	TYR	CB-CG-CD1	6.40	124.84	121.00
1	AA	459	G	O4'-C1'-N9	6.40	113.32	108.20
1	AA	1446	G	C5-C6-O6	-6.40	124.76	128.60
53	B5	1116	G	C5-C6-O6	-6.40	124.76	128.60
53	B5	172	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	669	U	O4'-C1'-N1	6.39	113.31	108.20
53	B5	1295	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	1624	G	C5-C6-O6	-6.39	124.76	128.60
53	B5	2442	G	O4'-C1'-N9	6.39	113.31	108.20
1	AA	48	G	N1-C6-O6	6.39	123.74	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1389	U	O4'-C1'-N1	6.39	113.31	108.20
1	AA	81	G	N1-C6-O6	6.39	123.73	119.90
1	AA	642	G	N1-C6-O6	6.39	123.73	119.90
53	B5	548	G	N1-C6-O6	6.39	123.73	119.90
53	B5	2122	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	2598	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	3202	G	N1-C6-O6	6.39	123.73	119.90
53	B5	1576	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	1689	U	O4'-C1'-N1	6.39	113.31	108.20
53	B5	3260	G	O4'-C1'-N9	6.39	113.31	108.20
51	B3	112	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	326	U	O4'-C1'-N1	6.39	113.31	108.20
53	B5	1422	G	C5-C6-O6	-6.39	124.77	128.60
53	B5	3101	G	C5-C6-O6	-6.39	124.77	128.60
1	AA	163	G	N1-C6-O6	6.39	123.73	119.90
53	B5	158	G	C5-C6-O6	-6.39	124.77	128.60
53	B5	2199	G	O4'-C1'-N9	6.39	113.31	108.20
53	B5	2236	G	N1-C6-O6	6.39	123.73	119.90
53	B5	2310	U	O4'-C1'-N1	6.39	113.31	108.20
53	B5	2908	G	N1-C6-O6	6.39	123.73	119.90
1	AA	487	G	N1-C6-O6	6.38	123.73	119.90
1	AA	1786	G	C5-C6-O6	-6.38	124.77	128.60
53	B5	297	G	C5-C6-O6	-6.38	124.77	128.60
53	B5	1752	A	O4'-C1'-N9	6.38	113.31	108.20
52	B4	5	U	O4'-C1'-N1	6.38	113.31	108.20
53	B5	1385	C	O4'-C1'-N1	6.38	113.31	108.20
1	AA	1054	U	O4'-C1'-N1	6.38	113.31	108.20
1	AA	1124	G	N1-C6-O6	6.38	123.73	119.90
51	B3	56	G	N1-C6-O6	6.38	123.73	119.90
53	B5	2923	U	O4'-C1'-N1	6.38	113.31	108.20
53	B5	3022	G	C5-C6-O6	-6.38	124.77	128.60
1	AA	27	U	O4'-C1'-N1	6.38	113.30	108.20
1	AA	63	G	N1-C6-O6	6.38	123.73	119.90
1	AA	1023	U	O4'-C1'-N1	6.38	113.30	108.20
53	B5	2423	U	O4'-C1'-N1	6.38	113.30	108.20
53	B5	2790	A	O4'-C1'-N9	6.38	113.30	108.20
1	AA	540	G	O4'-C1'-N9	6.38	113.30	108.20
53	B5	910	G	C5-C6-O6	-6.38	124.77	128.60
53	B5	739	G	N1-C6-O6	6.38	123.73	119.90
53	B5	879	U	O4'-C1'-N1	6.38	113.30	108.20
53	B5	2891	U	O4'-C1'-N1	6.38	113.30	108.20
53	B5	2964	G	C5-C6-O6	-6.38	124.78	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3111	U	O4'-C1'-N1	6.38	113.30	108.20
1	AA	652	G	N1-C6-O6	6.38	123.72	119.90
1	AA	1247	U	O4'-C1'-N1	6.38	113.30	108.20
53	B5	3077	A	O4'-C1'-N9	6.38	113.30	108.20
1	AA	200	A	O4'-C1'-N9	6.37	113.30	108.20
52	B4	103	G	C5-C6-O6	-6.37	124.78	128.60
53	B5	468	G	O4'-C1'-N9	6.37	113.30	108.20
53	B5	1928	G	C5-C6-O6	-6.37	124.78	128.60
53	B5	2725	U	O4'-C1'-N1	6.37	113.30	108.20
19	A7	22	G	P-O3'-C3'	6.37	127.35	119.70
19	A7	42	G	C5-N7-C8	-6.37	101.11	104.30
53	B5	400	G	N1-C6-O6	6.37	123.72	119.90
53	B5	2683	U	O4'-C1'-N1	6.37	113.30	108.20
1	AA	1241	G	C5-C6-O6	-6.37	124.78	128.60
1	AA	1575	A	O4'-C1'-N9	6.37	113.30	108.20
53	B5	317	A	P-O3'-C3'	6.37	127.34	119.70
53	B5	1289	G	N1-C6-O6	6.37	123.72	119.90
53	B5	1871	U	O4'-C1'-N1	6.37	113.30	108.20
1	AA	1533	U	O4'-C1'-N1	6.37	113.29	108.20
51	B3	2	G	N1-C6-O6	6.37	123.72	119.90
53	B5	21	G	N1-C6-O6	6.37	123.72	119.90
53	B5	1080	A	O4'-C1'-N9	6.37	113.29	108.20
53	B5	1467	A	O4'-C1'-N9	6.37	113.29	108.20
53	B5	3386	G	C5-C6-O6	-6.36	124.78	128.60
1	AA	1267	G	N1-C6-O6	6.36	123.72	119.90
19	A7	68	U	C4'-C3'-C2'	-6.36	96.24	102.60
53	B5	1174	G	N1-C6-O6	6.36	123.72	119.90
53	B5	3158	G	N1-C6-O6	6.36	123.72	119.90
1	AA	159	U	O4'-C1'-N1	6.36	113.29	108.20
53	B5	1720	U	O4'-C1'-N1	6.36	113.29	108.20
1	AA	676	G	N1-C6-O6	6.36	123.71	119.90
1	AA	1142	U	O4'-C1'-N1	6.36	113.29	108.20
53	B5	3356	G	N1-C6-O6	6.36	123.71	119.90
53	B5	1747	G	O4'-C1'-N9	6.36	113.28	108.20
53	B5	2882	U	O4'-C1'-N1	6.36	113.28	108.20
53	B5	3196	U	O4'-C1'-N1	6.36	113.28	108.20
53	B5	3212	U	O4'-C1'-N1	6.36	113.28	108.20
1	AA	1711	G	N1-C6-O6	6.35	123.71	119.90
52	B4	26	U	O4'-C1'-N1	6.35	113.28	108.20
53	B5	56	G	O4'-C1'-N9	6.35	113.28	108.20
53	B5	1021	G	N1-C6-O6	6.35	123.71	119.90
53	B5	1189	C	O4'-C1'-N1	6.35	113.28	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2833	A	C5-C6-N6	-6.35	118.62	123.70
53	B5	3241	G	C5-C6-O6	-6.35	124.79	128.60
1	AA	142	G	N1-C6-O6	6.35	123.71	119.90
1	AA	1539	G	C5-C6-O6	-6.35	124.79	128.60
19	A7	68	U	N1-C2-N3	6.35	118.71	114.90
53	B5	640	U	O4'-C1'-N1	6.35	113.28	108.20
53	B5	658	G	N1-C6-O6	6.35	123.71	119.90
53	B5	3384	U	O4'-C1'-N1	6.35	113.28	108.20
1	AA	1208	G	O4'-C1'-N9	6.35	113.28	108.20
1	AA	1415	G	N1-C6-O6	6.35	123.71	119.90
53	B5	2481	G	C5-C6-O6	-6.35	124.79	128.60
53	B5	2980	U	O4'-C1'-N1	6.35	113.28	108.20
53	B5	3246	G	N1-C6-O6	6.35	123.71	119.90
1	AA	1476	G	N1-C6-O6	6.34	123.71	119.90
19	A7	59	U	N3-C4-C5	-6.34	110.79	114.60
53	B5	1666	G	C5-C6-O6	-6.34	124.79	128.60
53	B5	2385	G	C5-C6-O6	-6.34	124.79	128.60
53	B5	3290	G	C5-C6-O6	-6.34	124.79	128.60
1	AA	1250	U	O4'-C1'-N1	6.34	113.28	108.20
1	AA	1375	U	O4'-C1'-N1	6.34	113.27	108.20
53	B5	2332	A	O4'-C1'-N9	6.34	113.27	108.20
53	B5	2355	G	C5-C6-O6	-6.34	124.79	128.60
1	AA	372	G	O4'-C1'-N9	6.34	113.27	108.20
1	AA	1166	G	N1-C6-O6	6.34	123.70	119.90
1	AA	1348	G	O4'-C1'-N9	6.34	113.27	108.20
53	B5	2342	U	O4'-C1'-N1	6.34	113.27	108.20
1	AA	291	G	N1-C6-O6	6.34	123.70	119.90
53	B5	2417	U	O4'-C1'-N1	6.34	113.27	108.20
53	B5	2498	U	O4'-C1'-N1	6.34	113.27	108.20
1	AA	595	G	O4'-C1'-N9	6.34	113.27	108.20
51	B3	21	G	C5-C6-O6	-6.34	124.80	128.60
52	B4	58	G	P-O3'-C3'	6.34	127.31	119.70
19	A7	66	A	C4-C5-C6	-6.34	113.83	117.00
53	B5	975	G	N1-C6-O6	6.34	123.70	119.90
53	B5	1677	G	N1-C6-O6	6.34	123.70	119.90
53	B5	3352	U	O4'-C1'-N1	6.34	113.27	108.20
53	B5	333	G	O4'-C1'-N9	6.33	113.27	108.20
1	AA	379	U	O4'-C1'-N1	6.33	113.27	108.20
1	AA	806	A	O4'-C1'-N9	6.33	113.27	108.20
1	AA	908	U	O4'-C1'-N1	6.33	113.27	108.20
1	AA	916	U	O4'-C1'-N1	6.33	113.27	108.20
53	B5	461	U	O4'-C1'-N1	6.33	113.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	760	G	N1-C6-O6	6.33	123.70	119.90
53	B5	1115	G	N1-C6-O6	6.33	123.70	119.90
53	B5	3325	G	O4'-C1'-N9	6.33	113.27	108.20
1	AA	648	G	C5-C6-O6	-6.33	124.80	128.60
19	A7	57	G	N1-C6-O6	-6.33	116.10	119.90
52	B4	10	A	O4'-C1'-N9	6.33	113.27	108.20
52	B4	42	G	N1-C6-O6	6.33	123.70	119.90
53	B5	281	G	C5-C6-O6	-6.33	124.80	128.60
53	B5	390	G	N1-C6-O6	6.33	123.70	119.90
53	B5	495	G	O4'-C1'-N9	6.33	113.27	108.20
53	B5	2574	G	O4'-C1'-N9	6.33	113.27	108.20
1	AA	1016	U	O4'-C1'-N1	6.33	113.26	108.20
19	A7	19	G	N3-C2-N2	-6.33	115.47	119.90
53	B5	164	A	O4'-C1'-N9	6.33	113.26	108.20
53	B5	2247	G	O4'-C1'-N9	6.33	113.26	108.20
53	B5	829	U	O4'-C1'-N1	6.33	113.26	108.20
53	B5	2864	A	P-O3'-C3'	6.33	127.29	119.70
53	B5	1498	A	O4'-C1'-N9	6.33	113.26	108.20
53	B5	564	G	O4'-C1'-N9	6.33	113.26	108.20
53	B5	878	G	O4'-C1'-N9	6.33	113.26	108.20
53	B5	1412	G	C5-C6-O6	-6.33	124.80	128.60
53	B5	1780	G	N1-C6-O6	6.33	123.70	119.90
1	AA	695	U	O4'-C1'-N1	6.32	113.26	108.20
1	AA	1001	G	C5-C6-O6	-6.32	124.81	128.60
1	AA	1583	U	O4'-C1'-N1	6.32	113.26	108.20
51	B3	82	A	O4'-C1'-N9	6.32	113.26	108.20
53	B5	87	U	O4'-C1'-N1	6.32	113.26	108.20
53	B5	314	U	O4'-C1'-N1	6.32	113.26	108.20
1	AA	1109	G	N1-C6-O6	6.32	123.69	119.90
1	AA	1433	A	O4'-C1'-N9	6.32	113.26	108.20
52	B4	98	U	O4'-C1'-N1	6.32	113.26	108.20
53	B5	924	G	N1-C6-O6	6.32	123.69	119.90
53	B5	2336	U	O4'-C1'-N1	6.32	113.26	108.20
1	AA	1259	G	N1-C6-O6	6.32	123.69	119.90
1	AA	1609	A	O4'-C1'-N9	6.32	113.26	108.20
1	AA	1267	G	O4'-C1'-N9	6.32	113.25	108.20
53	B5	1024	G	P-O3'-C3'	6.32	127.28	119.70
53	B5	2943	G	C5-C6-O6	-6.32	124.81	128.60
1	AA	368	U	O4'-C1'-N1	6.32	113.25	108.20
1	AA	858	G	C2-N3-C4	6.32	115.06	111.90
1	AA	1656	G	N1-C6-O6	6.32	123.69	119.90
53	B5	1718	G	P-O3'-C3'	6.32	127.28	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2317	A	O4'-C1'-N9	6.32	113.25	108.20
53	B5	3156	U	O4'-C1'-N1	6.32	113.25	108.20
53	B5	3390	G	C5-C6-O6	-6.32	124.81	128.60
53	B5	1393	A	O4'-C1'-N9	6.31	113.25	108.20
1	AA	564	G	C5-C6-O6	-6.31	124.81	128.60
52	B4	144	G	C5-C6-O6	-6.31	124.81	128.60
53	B5	512	U	O4'-C1'-N1	6.31	113.25	108.20
53	B5	2250	G	O4'-C1'-N9	6.31	113.25	108.20
53	B5	1927	G	O4'-C1'-N9	6.31	113.25	108.20
1	AA	960	U	O4'-C1'-N1	6.31	113.25	108.20
1	AA	1427	U	O4'-C1'-N1	6.31	113.25	108.20
1	AA	1759	U	O4'-C1'-N1	6.31	113.25	108.20
53	B5	1056	U	O4'-C1'-N1	6.31	113.25	108.20
1	AA	548	G	O4'-C1'-N9	6.31	113.25	108.20
1	AA	1550	U	C4'-C3'-C2'	6.31	108.91	102.60
52	B4	39	G	C5-C6-O6	-6.31	124.81	128.60
53	B5	2	U	O4'-C1'-N1	6.31	113.25	108.20
53	B5	853	G	O4'-C1'-N9	6.31	113.25	108.20
53	B5	1082	U	O4'-C1'-N1	6.31	113.25	108.20
53	B5	1134	G	O4'-C1'-N9	6.31	113.25	108.20
53	B5	1233	G	N1-C6-O6	6.31	123.69	119.90
53	B5	2534	G	O4'-C1'-N9	6.31	113.25	108.20
53	B5	2631	U	O4'-C1'-N1	6.31	113.25	108.20
53	B5	2787	G	O4'-C1'-N9	6.31	113.25	108.20
1	AA	52	U	O4'-C1'-N1	6.30	113.24	108.20
1	AA	643	G	N1-C6-O6	6.30	123.68	119.90
38	BN	4	TYR	CB-CG-CD1	6.30	124.78	121.00
53	B5	731	U	O4'-C1'-N1	6.30	113.24	108.20
53	B5	1036	A	O4'-C1'-N9	6.30	113.24	108.20
53	B5	1492	G	C5-C6-O6	-6.30	124.82	128.60
53	B5	1905	G	C5-C6-O6	-6.30	124.82	128.60
53	B5	1552	G	N1-C6-O6	6.30	123.68	119.90
1	AA	482	U	O4'-C1'-N1	6.30	113.24	108.20
1	AA	1732	U	O4'-C1'-N1	6.30	113.24	108.20
53	B5	244	G	N1-C6-O6	6.30	123.68	119.90
53	B5	3199	G	P-O3'-C3'	6.30	127.26	119.70
53	B5	3242	G	C5-C6-O6	-6.30	124.82	128.60
53	B5	3267	U	O4'-C1'-N1	6.30	113.24	108.20
1	AA	1520	U	O5'-P-OP1	-6.30	100.03	105.70
53	B5	20	A	O4'-C1'-N9	6.30	113.24	108.20
53	B5	355	A	O4'-C1'-N9	6.30	113.24	108.20
53	B5	2584	G	N1-C6-O6	6.30	123.68	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2907	G	O4'-C1'-N9	6.30	113.24	108.20
53	B5	673	U	O4'-C1'-N1	6.30	113.24	108.20
53	B5	1476	G	C5-C6-O6	-6.30	124.82	128.60
53	B5	2325	G	C5-C6-O6	-6.30	124.82	128.60
53	B5	2403	G	N1-C6-O6	6.30	123.68	119.90
53	B5	2968	G	N1-C6-O6	6.30	123.68	119.90
1	AA	327	U	O4'-C1'-N1	6.29	113.24	108.20
1	AA	1695	G	O4'-C1'-N9	6.29	113.24	108.20
53	B5	295	A	O4'-C1'-N9	6.29	113.24	108.20
1	AA	167	U	O4'-C1'-N1	6.29	113.23	108.20
1	AA	1321	G	N1-C6-O6	6.29	123.68	119.90
1	AA	1523	A	OP1-P-OP2	-6.29	110.16	119.60
51	B3	43	U	P-O3'-C3'	6.29	127.25	119.70
51	B3	109	G	O4'-C1'-N9	6.29	113.23	108.20
52	B4	82	U	O4'-C1'-N1	6.29	113.23	108.20
52	B4	128	U	O4'-C1'-N1	6.29	113.23	108.20
53	B5	104	G	O4'-C1'-N9	6.29	113.23	108.20
53	B5	705	A	C5-C6-N6	-6.29	118.67	123.70
53	B5	1331	U	O4'-C1'-N1	6.29	113.23	108.20
1	AA	669	G	N1-C6-O6	6.29	123.67	119.90
53	B5	55	G	N1-C6-O6	6.29	123.67	119.90
53	B5	413	U	P-O3'-C3'	6.29	127.25	119.70
53	B5	1329	U	O4'-C1'-N1	6.29	113.23	108.20
53	B5	1475	A	O4'-C1'-N9	6.29	113.23	108.20
53	B5	1630	U	O4'-C1'-N1	6.29	113.23	108.20
53	B5	2769	A	O4'-C1'-N9	6.29	113.23	108.20
1	AA	77	U	O4'-C1'-N1	6.29	113.23	108.20
19	A7	60	C	C3'-C2'-C1'	-6.29	96.47	101.50
53	B5	1222	G	C5-C6-O6	-6.29	124.83	128.60
1	AA	738	G	N1-C6-O6	6.29	123.67	119.90
1	AA	1255	U	O4'-C1'-N1	6.29	113.23	108.20
1	AA	1462	G	O4'-C1'-N9	6.29	113.23	108.20
19	A7	2	C	N3-C4-C5	6.29	124.42	121.90
53	B5	426	G	N1-C6-O6	6.29	123.67	119.90
53	B5	1131	G	C5-C6-O6	-6.29	124.83	128.60
53	B5	1229	G	N1-C6-O6	6.29	123.67	119.90
1	AA	1332	U	O4'-C1'-N1	6.29	113.23	108.20
19	A7	71	G	C4-C5-N7	-6.29	108.28	110.80
53	B5	1493	G	C5-C6-O6	-6.29	124.83	128.60
1	AA	89	G	C5-C6-O6	-6.29	124.83	128.60
1	AA	980	U	O4'-C1'-N1	6.29	113.23	108.20
53	B5	754	G	O4'-C1'-N9	6.29	113.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1114	U	O4'-C1'-N1	6.29	113.23	108.20
53	B5	1486	G	O4'-C1'-N9	6.29	113.23	108.20
53	B5	1886	A	O4'-C1'-N9	6.29	113.23	108.20
53	B5	3389	U	O4'-C1'-N1	6.29	113.23	108.20
1	AA	306	U	O4'-C1'-N1	6.28	113.23	108.20
1	AA	423	G	N1-C6-O6	6.28	123.67	119.90
1	AA	511	A	O4'-C1'-N9	6.28	113.23	108.20
1	AA	774	A	O4'-C1'-N9	6.28	113.23	108.20
1	AA	1189	A	O4'-C1'-N9	6.28	113.23	108.20
1	AA	1269	G	O4'-C1'-N9	6.28	113.23	108.20
53	B5	222	A	O4'-C1'-N9	6.28	113.23	108.20
53	B5	726	G	N1-C6-O6	6.28	123.67	119.90
1	AA	1112	U	O4'-C1'-N1	6.28	113.22	108.20
1	AA	1777	U	O4'-C1'-N1	6.28	113.23	108.20
53	B5	1842	A	O4'-C1'-N9	6.28	113.22	108.20
1	AA	390	G	O4'-C1'-N9	6.28	113.22	108.20
52	B4	64	U	O4'-C1'-N1	6.28	113.22	108.20
53	B5	25	U	O4'-C1'-N1	6.28	113.22	108.20
53	B5	1249	G	O4'-C1'-N9	6.28	113.22	108.20
53	B5	1577	G	O4'-C1'-N9	6.28	113.22	108.20
53	B5	3306	U	O4'-C1'-N1	6.28	113.22	108.20
1	AA	714	G	O4'-C1'-N9	6.28	113.22	108.20
1	AA	900	G	N1-C6-O6	6.28	123.67	119.90
51	B3	8	G	C5-C6-O6	-6.28	124.83	128.60
53	B5	3083	G	N1-C6-O6	6.28	123.67	119.90
1	AA	115	G	O4'-C1'-N9	6.28	113.22	108.20
1	AA	663	U	O4'-C1'-N1	6.28	113.22	108.20
1	AA	1213	A	O4'-C1'-N9	6.28	113.22	108.20
36	BL	141	ALA	N-CA-CB	6.28	118.89	110.10
53	B5	161	G	O4'-C1'-N9	6.28	113.22	108.20
53	B5	383	G	C5-C6-O6	-6.28	124.83	128.60
53	B5	716	G	C5-C6-O6	-6.28	124.83	128.60
53	B5	1134	G	N1-C6-O6	6.28	123.67	119.90
53	B5	1483	G	N1-C6-O6	6.28	123.67	119.90
53	B5	2871	G	N1-C6-O6	6.28	123.67	119.90
1	AA	20	G	O4'-C1'-N9	6.28	113.22	108.20
1	AA	585	A	O4'-C1'-N9	6.28	113.22	108.20
1	AA	1114	U	O4'-C1'-N1	6.28	113.22	108.20
1	AA	1176	G	N1-C6-O6	6.28	123.67	119.90
1	AA	1252	A	O4'-C1'-N9	6.28	113.22	108.20
19	A7	18	G	C4'-C3'-C2'	-6.28	96.33	102.60
53	B5	3147	G	N1-C6-O6	6.28	123.67	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
17	AR	285	ALA	C-N-CA	6.27	137.38	121.70
52	B4	13	A	O4'-C1'-N9	6.27	113.22	108.20
1	AA	983	G	O4'-C1'-N9	6.27	113.22	108.20
53	B5	1890	U	O4'-C1'-N1	6.27	113.22	108.20
1	AA	1165	U	O4'-C1'-N1	6.27	113.22	108.20
53	B5	371	G	N1-C6-O6	6.27	123.66	119.90
53	B5	603	A	O4'-C1'-N9	6.27	113.22	108.20
53	B5	722	G	N1-C6-O6	6.27	123.66	119.90
53	B5	885	U	O4'-C1'-N1	6.27	113.22	108.20
53	B5	2454	G	O4'-C1'-N9	6.27	113.22	108.20
53	B5	2472	U	O4'-C1'-N1	6.27	113.21	108.20
53	B5	2800	G	N1-C6-O6	6.27	123.66	119.90
53	B5	1377	G	O4'-C1'-N9	6.27	113.21	108.20
53	B5	2253	G	O4'-C1'-N9	6.27	113.21	108.20
53	B5	3274	G	O4'-C1'-N9	6.27	113.21	108.20
1	AA	201	G	N1-C6-O6	6.26	123.66	119.90
1	AA	252	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	714	G	N1-C6-O6	6.26	123.66	119.90
53	B5	2105	G	O4'-C1'-N9	6.26	113.21	108.20
53	B5	2672	G	N1-C6-O6	6.26	123.66	119.90
53	B5	1649	U	O4'-C1'-N1	6.26	113.21	108.20
53	B5	1770	G	C5-C6-O6	-6.26	124.84	128.60
53	B5	3146	G	N1-C6-O6	6.26	123.66	119.90
1	AA	392	G	O4'-C1'-N9	6.26	113.21	108.20
1	AA	802	G	O4'-C1'-N9	6.26	113.21	108.20
1	AA	896	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	919	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	1107	G	N1-C6-O6	6.26	123.66	119.90
1	AA	1307	U	O4'-C1'-N1	6.26	113.21	108.20
53	B5	3058	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	1048	G	N1-C6-O6	6.26	123.66	119.90
1	AA	1443	A	O4'-C1'-N9	6.26	113.21	108.20
1	AA	1693	G	O4'-C1'-N9	6.26	113.21	108.20
1	AA	823	G	O4'-C1'-N9	6.26	113.21	108.20
1	AA	1532	G	N1-C6-O6	6.26	123.66	119.90
53	B5	3179	U	O4'-C1'-N1	6.26	113.21	108.20
1	AA	53	G	C5-C6-O6	-6.26	124.85	128.60
42	BR	94	TYR	CB-CG-CD2	6.26	124.75	121.00
52	B4	116	G	O4'-C1'-N9	6.26	113.20	108.20
53	B5	685	G	O4'-C1'-N9	6.26	113.20	108.20
1	AA	143	G	N1-C6-O6	6.25	123.65	119.90
1	AA	609	U	O4'-C1'-N1	6.25	113.20	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1103	U	O4'-C1'-N1	6.25	113.20	108.20
1	AA	1628	U	O4'-C1'-N1	6.25	113.20	108.20
1	AA	239	C	O4'-C1'-N1	6.25	113.20	108.20
1	AA	1091	G	N1-C6-O6	6.25	123.65	119.90
1	AA	1288	G	O4'-C1'-N9	6.25	113.20	108.20
1	AA	1488	C	O4'-C1'-N1	6.25	113.20	108.20
53	B5	972	G	N1-C6-O6	6.25	123.65	119.90
53	B5	1892	G	N1-C6-O6	6.25	123.65	119.90
53	B5	2249	G	O4'-C1'-N9	6.25	113.20	108.20
1	AA	1147	G	N1-C6-O6	6.25	123.65	119.90
53	B5	3309	G	C5-C6-O6	-6.25	124.85	128.60
1	AA	33	U	O4'-C1'-N1	6.25	113.20	108.20
1	AA	348	U	O4'-C1'-N1	6.25	113.20	108.20
53	B5	2975	U	O4'-C1'-N1	6.25	113.20	108.20
53	B5	3055	U	O4'-C1'-N1	6.25	113.20	108.20
1	AA	549	G	N1-C6-O6	6.25	123.65	119.90
1	AA	857	U	C5'-C4'-O4'	6.25	116.59	109.10
18	AT	18	TYR	CB-CG-CD1	6.25	124.75	121.00
53	B5	302	U	O4'-C1'-N1	6.25	113.20	108.20
53	B5	2191	U	O4'-C1'-N1	6.25	113.20	108.20
1	AA	641	G	C5-C6-O6	-6.25	124.85	128.60
53	B5	748	U	O4'-C1'-N1	6.25	113.20	108.20
53	B5	1753	G	O4'-C1'-N9	6.25	113.20	108.20
1	AA	1100	U	O4'-C1'-N1	6.24	113.19	108.20
1	AA	1167	G	N1-C6-O6	6.24	123.65	119.90
1	AA	1183	U	O4'-C1'-N1	6.24	113.19	108.20
1	AA	1380	G	O4'-C1'-N9	6.24	113.19	108.20
52	B4	85	G	O4'-C1'-N9	6.24	113.19	108.20
53	B5	2579	G	C5-C6-O6	-6.24	124.85	128.60
1	AA	1299	U	O4'-C1'-N1	6.24	113.19	108.20
1	AA	685	A	C5-C6-N6	-6.24	118.71	123.70
53	B5	215	G	N1-C6-O6	6.24	123.64	119.90
53	B5	671	U	O4'-C1'-N1	6.24	113.19	108.20
53	B5	2218	G	C5-C6-O6	-6.24	124.86	128.60
53	B5	2863	G	N1-C6-O6	6.24	123.64	119.90
1	AA	458	G	N1-C6-O6	6.24	123.64	119.90
19	A7	22	G	C5-N7-C8	-6.24	101.18	104.30
52	B4	3	A	O4'-C1'-N9	6.24	113.19	108.20
53	B5	542	G	N1-C6-O6	6.24	123.64	119.90
53	B5	898	U	O4'-C1'-N1	6.24	113.19	108.20
53	B5	1670	C	O4'-C1'-N1	6.24	113.19	108.20
53	B5	1677	G	O4'-C1'-N9	6.24	113.19	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2177	G	O4'-C1'-N9	6.24	113.19	108.20
53	B5	2221	G	C5-C6-O6	-6.24	124.86	128.60
53	B5	3283	U	O4'-C1'-N1	6.24	113.19	108.20
53	B5	171	G	O4'-C1'-N9	6.24	113.19	108.20
53	B5	2116	G	N1-C6-O6	6.24	123.64	119.90
1	AA	632	U	O4'-C1'-N1	6.24	113.19	108.20
1	AA	782	U	O4'-C1'-N1	6.24	113.19	108.20
1	AA	810	G	O4'-C1'-N9	6.24	113.19	108.20
1	AA	910	U	O4'-C1'-N1	6.24	113.19	108.20
53	B5	294	U	O4'-C1'-N1	6.24	113.19	108.20
53	B5	1634	G	O4'-C1'-N9	6.24	113.19	108.20
53	B5	2741	C	O4'-C1'-N1	6.24	113.19	108.20
53	B5	613	G	C5-C6-O6	-6.23	124.86	128.60
1	AA	1630	C	O5'-P-OP2	-6.23	100.09	105.70
53	B5	207	U	O4'-C1'-N1	6.23	113.19	108.20
53	B5	880	G	C5-C6-O6	-6.23	124.86	128.60
53	B5	1807	G	N1-C6-O6	6.23	123.64	119.90
53	B5	1828	A	O4'-C1'-N9	6.23	113.19	108.20
1	AA	1522	A	O4'-C1'-N9	-6.23	103.22	108.20
1	AA	1793	U	O4'-C1'-N1	6.23	113.19	108.20
19	A7	1	G	N3-C2-N2	-6.23	115.54	119.90
51	B3	109	G	N1-C6-O6	6.23	123.64	119.90
53	B5	536	U	O4'-C1'-N1	6.23	113.19	108.20
53	B5	1705	U	O4'-C1'-N1	6.23	113.19	108.20
53	B5	148	G	C5-C6-O6	-6.23	124.86	128.60
1	AA	1536	U	O4'-C1'-N1	6.23	113.18	108.20
1	AA	1734	G	O4'-C1'-N9	6.23	113.18	108.20
52	B4	58	G	O4'-C1'-N9	6.23	113.18	108.20
53	B5	231	G	N1-C6-O6	6.23	123.64	119.90
53	B5	341	G	N1-C6-O6	6.23	123.64	119.90
53	B5	2547	A	O4'-C1'-N9	6.23	113.18	108.20
53	B5	2662	G	O4'-C1'-N9	6.23	113.18	108.20
53	B5	3104	U	O4'-C1'-N1	6.23	113.18	108.20
1	AA	772	G	O4'-C1'-N9	6.23	113.18	108.20
53	B5	1747	G	C5-C6-O6	-6.23	124.86	128.60
53	B5	3076	C	O4'-C1'-N1	6.23	113.18	108.20
1	AA	1355	G	C5-C6-O6	-6.22	124.87	128.60
53	B5	979	G	O4'-C1'-N9	6.22	113.18	108.20
1	AA	952	G	C5-C6-O6	-6.22	124.87	128.60
1	AA	1257	G	N1-C6-O6	6.22	123.63	119.90
53	B5	992	G	C5-C6-O6	-6.22	124.87	128.60
53	B5	3149	G	O4'-C1'-N9	6.22	113.18	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3213	G	C5-C6-O6	-6.22	124.87	128.60
53	B5	3318	G	C5-C6-O6	-6.22	124.87	128.60
1	AA	913	G	N1-C6-O6	6.22	123.63	119.90
53	B5	488	U	O4'-C1'-N1	6.22	113.18	108.20
53	B5	2759	U	O4'-C1'-N1	6.22	113.18	108.20
1	AA	418	G	O4'-C1'-N9	6.22	113.18	108.20
1	AA	1573	G	N1-C6-O6	6.22	123.63	119.90
52	B4	148	G	N1-C6-O6	6.22	123.63	119.90
53	B5	3332	U	O4'-C1'-N1	6.22	113.18	108.20
53	B5	518	G	N1-C6-O6	6.22	123.63	119.90
53	B5	2394	G	N1-C6-O6	6.22	123.63	119.90
17	AR	286	GLU	CB-CA-C	-6.21	97.97	110.40
51	B3	80	G	N1-C6-O6	6.21	123.63	119.90
53	B5	301	G	N1-C6-O6	6.21	123.63	119.90
53	B5	1450	G	C5-C6-O6	-6.21	124.87	128.60
53	B5	1830	G	C5-C6-O6	-6.21	124.87	128.60
53	B5	2393	G	C5-C6-O6	-6.21	124.87	128.60
53	B5	3230	G	O4'-C1'-N9	6.21	113.17	108.20
53	B5	2483	G	C5-C6-O6	-6.21	124.87	128.60
53	B5	3224	G	O4'-C1'-N9	6.21	113.17	108.20
29	BE	224	LYS	N-CA-CB	6.21	121.78	110.60
53	B5	414	U	O4'-C1'-N1	6.21	113.17	108.20
53	B5	2726	C	O4'-C1'-N1	6.21	113.17	108.20
53	B5	3297	U	O4'-C1'-N1	6.21	113.17	108.20
1	AA	364	G	N1-C6-O6	6.21	123.63	119.90
1	AA	1360	U	O4'-C1'-N1	6.21	113.17	108.20
19	A7	38	A	C6-C5-N7	6.21	136.65	132.30
53	B5	3035	A	O4'-C1'-N9	6.21	113.17	108.20
1	AA	1790	G	C5-C6-O6	-6.21	124.88	128.60
19	A7	33	U	C6-N1-C2	-6.21	117.28	121.00
53	B5	1087	G	P-O3'-C3'	6.21	127.15	119.70
53	B5	1777	U	C2-N1-C1'	6.21	125.15	117.70
1	AA	1117	U	O4'-C1'-N1	6.21	113.17	108.20
1	AA	1282	U	O4'-C1'-N1	6.21	113.17	108.20
53	B5	246	U	O4'-C1'-N1	6.21	113.17	108.20
53	B5	2319	U	O4'-C1'-N1	6.21	113.17	108.20
1	AA	1740	U	O4'-C1'-N1	6.20	113.16	108.20
19	A7	42	G	C6-C5-N7	-6.20	126.68	130.40
53	B5	624	G	N1-C6-O6	6.20	123.62	119.90
53	B5	1576	G	N1-C6-O6	6.20	123.62	119.90
53	B5	2624	G	C5-C6-O6	-6.20	124.88	128.60
1	AA	1349	G	N1-C6-O6	6.20	123.62	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	644	G	C5-C6-O6	-6.20	124.88	128.60
1	AA	1047	G	O4'-C1'-N9	6.20	113.16	108.20
19	A7	2	C	C5'-C4'-O4'	6.20	116.54	109.10
53	B5	511	G	N1-C6-O6	6.20	123.62	119.90
53	B5	901	G	O4'-C1'-N9	6.20	113.16	108.20
53	B5	1536	G	O4'-C1'-N9	6.20	113.16	108.20
53	B5	3220	G	O4'-C1'-N9	6.20	113.16	108.20
1	AA	774	A	P-O3'-C3'	-6.20	112.26	119.70
1	AA	1702	U	O4'-C1'-N1	6.20	113.16	108.20
53	B5	212	G	C5-C6-O6	-6.20	124.88	128.60
53	B5	499	G	C5-C6-O6	-6.20	124.88	128.60
53	B5	833	G	O4'-C1'-N9	6.20	113.16	108.20
1	AA	517	U	O4'-C1'-N1	6.20	113.16	108.20
53	B5	1089	G	O4'-C1'-N9	6.20	113.16	108.20
1	AA	597	G	N1-C6-O6	6.20	123.62	119.90
1	AA	816	G	O4'-C1'-N9	6.20	113.16	108.20
1	AA	1044	G	O4'-C1'-N9	6.20	113.16	108.20
53	B5	92	G	O4'-C1'-N9	6.20	113.16	108.20
53	B5	651	G	O4'-C1'-N9	6.20	113.16	108.20
1	AA	165	G	N1-C6-O6	6.19	123.61	119.90
1	AA	834	G	N1-C6-O6	6.19	123.61	119.90
53	B5	1542	G	O4'-C1'-N9	6.19	113.15	108.20
53	B5	2127	U	O4'-C1'-N1	6.19	113.15	108.20
1	AA	201	G	O4'-C1'-N9	6.19	113.15	108.20
1	AA	783	G	O4'-C1'-N9	6.19	113.15	108.20
1	AA	1126	U	O4'-C1'-N1	6.19	113.15	108.20
1	AA	1708	U	O4'-C1'-N1	6.19	113.15	108.20
53	B5	203	G	N1-C6-O6	6.19	123.61	119.90
53	B5	1006	A	O4'-C1'-N9	6.19	113.15	108.20
53	B5	1460	A	O4'-C1'-N9	6.19	113.15	108.20
53	B5	2671	A	O4'-C1'-N9	6.19	113.15	108.20
53	B5	2870	C	O4'-C1'-N1	6.19	113.15	108.20
1	AA	30	G	C5-C6-O6	-6.19	124.89	128.60
51	B3	85	G	O4'-C1'-N9	6.19	113.15	108.20
53	B5	1152	G	C5-C6-O6	-6.19	124.89	128.60
1	AA	600	U	O4'-C1'-N1	6.19	113.15	108.20
52	B4	62	C	C2-N1-C1'	6.19	125.61	118.80
53	B5	250	U	O4'-C1'-N1	6.19	113.15	108.20
53	B5	1266	G	O4'-C1'-N9	6.19	113.15	108.20
1	AA	858	G	C5'-C4'-O4'	6.19	116.52	109.10
1	AA	1214	G	N1-C6-O6	6.19	123.61	119.90
1	AA	701	U	O4'-C1'-N1	6.18	113.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1238	A	C5-C6-N6	-6.18	118.75	123.70
1	AA	1426	G	O4'-C1'-N9	6.18	113.15	108.20
53	B5	1166	G	O4'-C1'-N9	6.18	113.15	108.20
53	B5	3343	G	O4'-C1'-N9	6.18	113.15	108.20
1	AA	1394	U	O4'-C1'-N1	6.18	113.15	108.20
53	B5	1447	G	C5-C6-O6	-6.18	124.89	128.60
53	B5	2973	G	O4'-C1'-N9	6.18	113.15	108.20
1	AA	1296	G	C5-C6-O6	-6.18	124.89	128.60
51	B3	116	U	O4'-C1'-N1	6.18	113.14	108.20
53	B5	1808	G	O4'-C1'-N9	6.18	113.14	108.20
1	AA	753	A	O4'-C1'-N9	6.18	113.14	108.20
1	AA	1069	C	O4'-C1'-N1	6.18	113.14	108.20
1	AA	1260	G	O4'-C1'-N9	6.18	113.14	108.20
1	AA	1504	G	N1-C6-O6	6.18	123.61	119.90
19	A7	66	A	O4'-C4'-C3'	6.18	111.04	106.10
53	B5	371	G	O4'-C1'-N9	6.18	113.14	108.20
53	B5	1148	G	O4'-C1'-N9	6.18	113.14	108.20
53	B5	1944	U	O4'-C1'-N1	6.18	113.14	108.20
1	AA	1500	G	N1-C6-O6	6.18	123.61	119.90
53	B5	597	G	C5-C6-O6	-6.18	124.89	128.60
1	AA	528	U	O4'-C1'-N1	6.18	113.14	108.20
1	AA	1521	G	C6-N1-C2	6.18	128.81	125.10
1	AA	1775	G	C5-C6-O6	-6.18	124.89	128.60
52	B4	24	G	C5-C6-O6	-6.18	124.89	128.60
53	B5	1673	G	O4'-C1'-N9	6.18	113.14	108.20
1	AA	223	U	O4'-C1'-N1	6.17	113.14	108.20
1	AA	272	U	O4'-C1'-N1	6.17	113.14	108.20
1	AA	307	G	C5-C6-O6	-6.17	124.89	128.60
1	AA	1776	G	C5-C6-O6	-6.17	124.90	128.60
53	B5	128	G	N1-C6-O6	6.17	123.61	119.90
53	B5	963	G	C5-C6-O6	-6.17	124.90	128.60
53	B5	1392	G	C5-C6-O6	-6.17	124.89	128.60
1	AA	833	U	O4'-C1'-N1	6.17	113.14	108.20
1	AA	1508	U	O4'-C1'-N1	6.17	113.14	108.20
53	B5	1901	A	O4'-C1'-N9	6.17	113.14	108.20
1	AA	392	G	N1-C6-O6	6.17	123.60	119.90
53	B5	2370	G	C5-C6-O6	-6.17	124.90	128.60
19	A7	75	C	N3-C2-O2	-6.17	117.58	121.90
53	B5	1838	G	C5-C6-O6	-6.17	124.90	128.60
1	AA	1685	U	O4'-C1'-N1	6.17	113.13	108.20
1	AA	1696	G	O4'-C1'-N9	6.17	113.13	108.20
19	A7	9	A	C8-N9-C4	-6.17	103.33	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	251	G	C5-C6-O6	-6.17	124.90	128.60
53	B5	1543	G	C5-C6-O6	-6.17	124.90	128.60
53	B5	2954	U	O4'-C1'-N1	6.17	113.13	108.20
1	AA	216	U	O4'-C1'-N1	6.17	113.13	108.20
1	AA	370	A	O4'-C1'-N9	6.17	113.13	108.20
1	AA	957	U	O4'-C1'-N1	6.17	113.13	108.20
1	AA	975	G	O4'-C1'-N9	6.17	113.13	108.20
1	AA	1606	U	O4'-C1'-N1	6.17	113.13	108.20
1	AA	986	G	C5-C6-O6	-6.16	124.90	128.60
19	A7	56	C	O4'-C1'-C2'	6.16	113.15	107.60
48	BX	7	TYR	CB-CG-CD2	-6.16	117.30	121.00
52	B4	71	G	C5-C6-O6	-6.16	124.90	128.60
53	B5	74	G	C5-C6-O6	-6.16	124.90	128.60
53	B5	472	A	O4'-C1'-N9	6.16	113.13	108.20
53	B5	1090	G	O4'-C1'-N9	6.16	113.13	108.20
53	B5	2475	G	C5-C6-O6	-6.16	124.90	128.60
53	B5	725	G	N1-C6-O6	6.16	123.60	119.90
53	B5	2712	U	O4'-C1'-N1	6.16	113.13	108.20
53	B5	272	G	N1-C6-O6	6.16	123.60	119.90
53	B5	2503	G	O4'-C1'-N9	6.16	113.13	108.20
53	B5	2533	G	N1-C6-O6	6.16	123.60	119.90
1	AA	351	C	O4'-C1'-N1	6.16	113.13	108.20
1	AA	1281	C	O4'-C1'-N1	6.16	113.13	108.20
53	B5	717	C	C2-N1-C1'	6.16	125.58	118.80
53	B5	990	A	O4'-C1'-N9	6.16	113.13	108.20
53	B5	1929	G	N1-C6-O6	6.16	123.59	119.90
1	AA	898	G	C5-C6-O6	-6.16	124.91	128.60
1	AA	1677	G	N1-C6-O6	6.16	123.59	119.90
19	A7	74	C	N1-C2-O2	6.16	122.59	118.90
43	BS	21	PHE	CB-CG-CD2	6.16	125.11	120.80
53	B5	55	G	O4'-C1'-N9	6.16	113.12	108.20
53	B5	139	G	O4'-C1'-N9	6.16	113.12	108.20
53	B5	283	G	C5-C6-O6	-6.16	124.91	128.60
53	B5	2314	U	O4'-C1'-N1	6.16	113.12	108.20
53	B5	2973	G	C5-C6-O6	-6.16	124.91	128.60
53	B5	1695	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	2182	A	O4'-C1'-N9	6.15	113.12	108.20
53	B5	210	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	1795	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	1873	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	3251	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	3340	G	C5-C6-O6	-6.15	124.91	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1169	G	C5-C6-O6	-6.15	124.91	128.60
1	AA	1187	U	O4'-C1'-N1	6.15	113.12	108.20
1	AA	1667	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	989	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	1441	G	C5-C6-O6	-6.15	124.91	128.60
53	B5	1920	U	O4'-C1'-N1	6.15	113.12	108.20
53	B5	2660	G	O4'-C1'-N9	6.15	113.12	108.20
53	B5	3137	C	O4'-C1'-N1	6.15	113.12	108.20
53	B5	2824	G	N1-C6-O6	6.15	123.59	119.90
53	B5	3226	A	O4'-C1'-N9	6.15	113.12	108.20
1	AA	495	C	C6-N1-C1'	-6.15	113.42	120.80
53	B5	2822	U	O4'-C1'-N1	6.15	113.12	108.20
1	AA	177	U	O4'-C1'-N1	6.15	113.12	108.20
1	AA	595	G	C5-C6-O6	-6.15	124.91	128.60
53	B5	504	A	O4'-C1'-N9	6.15	113.12	108.20
53	B5	1878	G	C5-C6-O6	-6.15	124.91	128.60
53	B5	2874	G	O4'-C1'-N9	6.15	113.12	108.20
53	B5	3009	G	O4'-C1'-N9	6.15	113.12	108.20
1	AA	548	G	N1-C6-O6	6.14	123.59	119.90
1	AA	856	A	O3'-P-O5'	6.14	115.68	104.00
1	AA	1289	G	O4'-C1'-N9	6.14	113.11	108.20
53	B5	345	G	N1-C6-O6	6.14	123.59	119.90
53	B5	678	G	O4'-C1'-N9	6.14	113.11	108.20
53	B5	3353	G	O4'-C1'-N9	6.14	113.12	108.20
1	AA	32	U	O4'-C1'-N1	6.14	113.11	108.20
53	B5	2302	G	C5-C6-O6	-6.14	124.91	128.60
53	B5	3158	G	O4'-C1'-N9	6.14	113.11	108.20
1	AA	430	G	O4'-C1'-N9	6.14	113.11	108.20
53	B5	1573	G	C5-C6-O6	-6.14	124.92	128.60
53	B5	3073	A	O4'-C1'-N9	6.14	113.11	108.20
53	B5	452	G	C5-C6-O6	-6.14	124.92	128.60
53	B5	799	G	N1-C6-O6	6.14	123.58	119.90
53	B5	2174	G	C5-C6-O6	-6.14	124.92	128.60
53	B5	3085	G	C5-C6-O6	-6.14	124.92	128.60
53	B5	2268	U	O4'-C1'-N1	6.14	113.11	108.20
53	B5	2858	U	O4'-C1'-N1	6.14	113.11	108.20
53	B5	2900	A	O4'-C1'-N9	6.14	113.11	108.20
53	B5	530	G	O4'-C1'-N9	6.14	113.11	108.20
53	B5	822	G	O4'-C1'-N9	6.14	113.11	108.20
1	AA	419	G	O4'-C1'-N9	6.13	113.11	108.20
1	AA	522	U	O4'-C1'-N1	6.13	113.11	108.20
1	AA	586	G	O4'-C1'-N9	6.13	113.11	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	624	G	O4'-C1'-N9	6.13	113.11	108.20
53	B5	825	U	O4'-C1'-N1	6.13	113.11	108.20
1	AA	15	U	O4'-C1'-N1	6.13	113.11	108.20
1	AA	25	C	O4'-C1'-N1	6.13	113.11	108.20
1	AA	516	G	O4'-C1'-N9	6.13	113.11	108.20
53	B5	2781	U	O4'-C1'-N1	6.13	113.11	108.20
1	AA	109	G	N1-C6-O6	6.13	123.58	119.90
1	AA	113	U	O4'-C1'-N1	6.13	113.10	108.20
1	AA	921	G	O4'-C1'-N9	6.13	113.10	108.20
1	AA	993	G	N1-C6-O6	6.13	123.58	119.90
1	AA	1452	G	O4'-C1'-N9	6.13	113.10	108.20
53	B5	216	G	O4'-C1'-N9	6.13	113.10	108.20
53	B5	685	G	N1-C6-O6	6.13	123.58	119.90
53	B5	1004	U	O4'-C1'-N1	6.13	113.10	108.20
53	B5	2400	G	C5-C6-O6	-6.13	124.92	128.60
1	AA	1268	U	O4'-C1'-N1	6.13	113.10	108.20
1	AA	1722	U	O4'-C1'-N1	6.13	113.10	108.20
53	B5	848	A	O4'-C1'-N9	6.13	113.10	108.20
53	B5	1206	G	O4'-C1'-N9	6.13	113.10	108.20
53	B5	2677	G	C5-C6-O6	-6.13	124.92	128.60
1	AA	1163	A	O4'-C1'-N9	6.12	113.10	108.20
53	B5	1547	G	N1-C6-O6	6.12	123.58	119.90
53	B5	2246	G	N1-C6-O6	6.12	123.58	119.90
53	B5	2573	G	N1-C6-O6	6.12	123.58	119.90
53	B5	3392	U	O4'-C1'-N1	6.12	113.10	108.20
1	AA	313	U	O4'-C1'-N1	6.12	113.10	108.20
1	AA	640	U	O4'-C1'-N1	6.12	113.10	108.20
1	AA	1311	U	O4'-C1'-N1	6.12	113.10	108.20
53	B5	35	A	O4'-C1'-N9	6.12	113.10	108.20
53	B5	267	G	N1-C6-O6	6.12	123.57	119.90
53	B5	1691	U	O4'-C1'-N1	6.12	113.10	108.20
53	B5	2605	G	C5-C6-O6	-6.12	124.93	128.60
1	AA	647	G	O4'-C1'-N9	6.12	113.10	108.20
1	AA	813	U	O4'-C1'-N1	6.12	113.10	108.20
1	AA	1002	G	O4'-C1'-N9	6.12	113.10	108.20
1	AA	1341	A	C1'-O4'-C4'	-6.12	105.00	109.90
1	AA	1521	G	C5-N7-C8	-6.12	101.24	104.30
1	AA	1551	G	O4'-C4'-C3'	-6.12	97.88	104.00
19	A7	48	C	N1-C2-O2	6.12	122.57	118.90
53	B5	1024	G	C5-C6-O6	-6.12	124.93	128.60
53	B5	2633	U	O4'-C1'-N1	6.12	113.10	108.20
53	B5	2660	G	N1-C6-O6	6.12	123.57	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	514	G	N1-C6-O6	6.12	123.57	119.90
1	AA	514	G	O4'-C1'-N9	6.12	113.09	108.20
1	AA	1031	G	N1-C6-O6	6.12	123.57	119.90
1	AA	1108	G	N1-C6-O6	6.12	123.57	119.90
1	AA	1553	A	O5'-P-OP2	6.12	118.04	110.70
1	AA	1756	U	O4'-C1'-N1	6.12	113.09	108.20
52	B4	116	G	C5-C6-O6	-6.12	124.93	128.60
53	B5	1382	G	O4'-C1'-N9	6.12	113.09	108.20
53	B5	3191	G	O4'-C1'-N9	6.12	113.09	108.20
1	AA	1043	G	C5-C6-O6	-6.12	124.93	128.60
53	B5	3209	U	O4'-C1'-N1	6.12	113.09	108.20
1	AA	845	G	N1-C6-O6	6.12	123.57	119.90
19	A7	75	C	C4'-C3'-C2'	-6.12	96.48	102.60
53	B5	2246	G	O4'-C1'-N9	6.12	113.09	108.20
1	AA	1367	U	O4'-C1'-N1	6.11	113.09	108.20
19	A7	74	C	O4'-C4'-C3'	6.11	110.99	106.10
53	B5	227	G	O4'-C1'-N9	6.11	113.09	108.20
53	B5	2687	G	C5-C6-O6	-6.11	124.93	128.60
53	B5	3091	A	O4'-C1'-N9	6.11	113.09	108.20
53	B5	3318	G	O4'-C1'-N9	6.11	113.09	108.20
1	AA	807	A	O4'-C1'-N9	6.11	113.09	108.20
53	B5	853	G	N1-C6-O6	6.11	123.57	119.90
1	AA	563	U	O4'-C1'-N1	6.11	113.09	108.20
1	AA	1523	A	N1-C6-N6	6.11	122.27	118.60
1	AA	1551	G	C2'-C3'-O3'	-6.11	96.06	109.50
53	B5	353	G	O4'-C1'-N9	6.11	113.09	108.20
53	B5	958	C	O4'-C1'-N1	6.11	113.09	108.20
53	B5	2922	G	O4'-C1'-N9	6.11	113.09	108.20
53	B5	3269	A	O4'-C1'-N9	6.11	113.09	108.20
53	B5	2369	G	O4'-C1'-N9	6.11	113.09	108.20
53	B5	197	G	O4'-C1'-N9	6.11	113.09	108.20
53	B5	2104	A	O4'-C1'-N9	6.11	113.09	108.20
53	B5	2922	G	C5-C6-O6	-6.11	124.94	128.60
53	B5	3177	U	O4'-C1'-N1	6.11	113.09	108.20
1	AA	860	U	C2'-C3'-O3'	-6.11	96.07	109.50
53	B5	530	G	N1-C6-O6	6.11	123.56	119.90
53	B5	568	G	C5-C6-O6	-6.11	124.94	128.60
53	B5	964	G	N1-C6-O6	6.11	123.56	119.90
53	B5	1222	G	O4'-C1'-N9	6.11	113.08	108.20
53	B5	2669	G	N1-C6-O6	6.11	123.56	119.90
53	B5	2938	G	N1-C6-O6	6.11	123.56	119.90
1	AA	859	A	C4-C5-C6	6.10	120.05	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	866	G	O4'-C4'-C3'	-6.10	97.90	104.00
53	B5	419	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	552	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	684	G	N1-C6-O6	6.10	123.56	119.90
53	B5	820	A	C5-C6-N6	-6.10	118.82	123.70
53	B5	2848	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	3260	G	N1-C6-O6	6.10	123.56	119.90
1	AA	140	A	O4'-C1'-N9	6.10	113.08	108.20
1	AA	450	U	O4'-C1'-N1	6.10	113.08	108.20
53	B5	2107	A	O4'-C1'-N9	6.10	113.08	108.20
53	B5	2433	U	O4'-C1'-N1	6.10	113.08	108.20
53	B5	2714	G	C5-C6-O6	-6.10	124.94	128.60
53	B5	510	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	2794	G	C5-C6-O6	-6.10	124.94	128.60
1	AA	74	U	O4'-C1'-N1	6.10	113.08	108.20
52	B4	135	G	C5-C6-O6	-6.10	124.94	128.60
53	B5	583	G	C5-C6-O6	-6.10	124.94	128.60
53	B5	986	U	O4'-C1'-N1	6.10	113.08	108.20
53	B5	1933	A	C5-C6-N6	-6.10	118.82	123.70
1	AA	429	G	N1-C6-O6	6.10	123.56	119.90
1	AA	981	U	O4'-C1'-N1	6.10	113.08	108.20
53	B5	604	G	C5-C6-O6	-6.10	124.94	128.60
53	B5	1598	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	1903	U	O4'-C1'-N1	6.10	113.08	108.20
53	B5	2608	G	O4'-C1'-N9	6.10	113.08	108.20
53	B5	1019	G	N1-C6-O6	6.10	123.56	119.90
1	AA	199	G	O4'-C1'-N9	6.09	113.08	108.20
52	B4	56	G	O4'-C1'-N9	6.09	113.08	108.20
53	B5	511	G	O4'-C1'-N9	6.09	113.07	108.20
53	B5	1413	G	C5-C6-O6	-6.09	124.94	128.60
53	B5	3044	G	N1-C6-O6	6.09	123.56	119.90
1	AA	597	G	O4'-C1'-N9	6.09	113.07	108.20
19	A7	11	C	C2-N3-C4	-6.09	116.85	119.90
53	B5	474	G	O4'-C1'-N9	6.09	113.07	108.20
53	B5	1178	G	C5-C6-O6	-6.09	124.94	128.60
53	B5	2713	U	O4'-C1'-N1	6.09	113.07	108.20
1	AA	331	A	O4'-C1'-N9	6.09	113.07	108.20
1	AA	761	G	C5-C6-O6	-6.09	124.95	128.60
1	AA	1251	G	N1-C6-O6	6.09	123.55	119.90
1	AA	1502	G	N1-C6-O6	6.09	123.55	119.90
1	AA	1661	G	N1-C6-O6	6.09	123.55	119.90
52	B4	95	G	N1-C6-O6	6.09	123.55	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1471	U	O4'-C1'-N1	6.09	113.07	108.20
53	B5	3205	U	O4'-C1'-N1	6.09	113.07	108.20
1	AA	762	A	O4'-C1'-N9	6.09	113.07	108.20
53	B5	3068	U	O4'-C1'-N1	6.09	113.07	108.20
1	AA	544	A	O4'-C1'-N9	6.09	113.07	108.20
1	AA	1584	A	C4-C5-C6	6.09	120.04	117.00
1	AA	1585	A	C5-C6-N6	-6.09	118.83	123.70
1	AA	1590	A	O4'-C1'-N9	6.09	113.07	108.20
1	AA	1694	G	N1-C6-O6	6.09	123.55	119.90
51	B3	64	A	O4'-C1'-N9	6.09	113.07	108.20
53	B5	1235	U	O4'-C1'-N1	6.09	113.07	108.20
53	B5	1400	G	O4'-C1'-N9	6.09	113.07	108.20
53	B5	1652	G	C5-C6-O6	-6.09	124.95	128.60
53	B5	2970	C	O4'-C1'-N1	6.09	113.07	108.20
53	B5	2997	G	O4'-C1'-N9	6.08	113.07	108.20
1	AA	1372	A	O4'-C1'-N9	6.08	113.07	108.20
1	AA	1635	C	C5'-C4'-O4'	-6.08	101.80	109.10
19	A7	62	A	C1'-O4'-C4'	-6.08	105.03	109.90
53	B5	229	G	N1-C6-O6	6.08	123.55	119.90
1	AA	75	U	O4'-C1'-N1	6.08	113.07	108.20
1	AA	576	G	N1-C6-O6	6.08	123.55	119.90
1	AA	592	A	O4'-C1'-N9	6.08	113.06	108.20
53	B5	1227	C	P-O3'-C3'	6.08	127.00	119.70
53	B5	2452	G	C5-C6-O6	-6.08	124.95	128.60
1	AA	744	U	O4'-C1'-N1	6.08	113.06	108.20
1	AA	1745	G	O4'-C1'-N9	6.08	113.06	108.20
53	B5	2315	G	O4'-C1'-N9	6.08	113.06	108.20
53	B5	3287	U	O4'-C1'-N1	6.08	113.06	108.20
1	AA	371	G	O4'-C1'-N9	6.08	113.06	108.20
1	AA	1724	G	O4'-C1'-N9	6.08	113.06	108.20
53	B5	2441	A	O4'-C1'-N9	6.08	113.06	108.20
1	AA	337	G	N1-C6-O6	6.08	123.55	119.90
53	B5	647	A	O4'-C1'-N9	6.08	113.06	108.20
53	B5	1341	U	O4'-C1'-N1	6.08	113.06	108.20
1	AA	608	U	O4'-C1'-N1	6.07	113.06	108.20
1	AA	1235	U	O4'-C1'-N1	6.07	113.06	108.20
53	B5	1241	U	O4'-C1'-N1	6.07	113.06	108.20
53	B5	1804	A	O4'-C1'-N9	6.07	113.06	108.20
53	B5	2193	U	O4'-C1'-N1	6.07	113.06	108.20
28	BD	194	TYR	CB-CG-CD1	-6.07	117.36	121.00
53	B5	770	G	O4'-C1'-N9	6.07	113.06	108.20
53	B5	1599	G	O4'-C1'-N9	6.07	113.06	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1655	G	C5-C6-O6	-6.07	124.96	128.60
1	AA	1377	U	O4'-C1'-N1	6.07	113.06	108.20
53	B5	2936	A	O4'-C1'-N9	6.07	113.06	108.20
53	B5	1262	G	N1-C6-O6	6.07	123.54	119.90
1	AA	810	G	N1-C6-O6	6.07	123.54	119.90
1	AA	1047	G	N1-C6-O6	6.07	123.54	119.90
1	AA	1460	G	O4'-C1'-N9	6.07	113.05	108.20
1	AA	1735	G	O4'-C1'-N9	6.07	113.05	108.20
50	BZ	43	TYR	CB-CG-CD2	-6.07	117.36	121.00
51	B3	107	G	C5-C6-O6	-6.07	124.96	128.60
53	B5	11	A	O4'-C1'-N9	6.07	113.05	108.20
53	B5	778	U	O4'-C1'-N1	6.07	113.06	108.20
1	AA	497	G	O4'-C1'-N9	6.07	113.05	108.20
1	AA	541	A	O4'-C1'-N9	6.07	113.05	108.20
1	AA	655	G	O4'-C1'-N9	6.06	113.05	108.20
19	A7	66	A	N1-C2-N3	-6.06	126.27	129.30
53	B5	1650	G	O4'-C1'-N9	6.06	113.05	108.20
1	AA	557	G	N1-C6-O6	6.06	123.54	119.90
1	AA	881	A	O4'-C1'-N9	6.06	113.05	108.20
38	BN	60	PHE	CB-CG-CD1	6.06	125.04	120.80
53	B5	805	G	C5-C6-O6	-6.06	124.96	128.60
53	B5	908	G	C5-C6-O6	-6.06	124.96	128.60
53	B5	1278	A	O4'-C1'-N9	6.06	113.05	108.20
53	B5	197	G	C5-C6-O6	-6.06	124.96	128.60
1	AA	1106	G	N1-C6-O6	6.06	123.54	119.90
52	B4	36	G	C5-C6-O6	-6.06	124.97	128.60
53	B5	468	G	N1-C6-O6	6.06	123.53	119.90
53	B5	770	G	C5-C6-O6	-6.06	124.96	128.60
53	B5	2121	G	O4'-C1'-N9	6.06	113.05	108.20
53	B5	2553	U	O4'-C1'-N1	6.06	113.05	108.20
53	B5	3199	G	O4'-C1'-N9	6.06	113.05	108.20
1	AA	9	U	O4'-C1'-N1	6.06	113.05	108.20
1	AA	290	G	N1-C6-O6	6.06	123.53	119.90
1	AA	466	U	O4'-C1'-N1	6.06	113.05	108.20
1	AA	739	G	O4'-C1'-N9	6.06	113.05	108.20
1	AA	918	A	O4'-C1'-N9	6.06	113.05	108.20
1	AA	923	A	O4'-C1'-N9	6.06	113.05	108.20
1	AA	1688	G	O4'-C1'-N9	6.06	113.05	108.20
53	B5	960	U	O4'-C1'-N1	6.06	113.05	108.20
53	B5	1288	U	O4'-C1'-N1	6.06	113.05	108.20
53	B5	2425	G	C5-C6-O6	-6.06	124.97	128.60
1	AA	332	U	O4'-C1'-N1	6.06	113.05	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1253	U	O4'-C1'-N1	6.06	113.05	108.20
53	B5	1897	G	O4'-C1'-N9	6.06	113.05	108.20
51	B3	49	G	O4'-C1'-N9	6.05	113.04	108.20
53	B5	244	G	O4'-C1'-N9	6.05	113.04	108.20
1	AA	336	G	O4'-C1'-N9	6.05	113.04	108.20
53	B5	1177	G	C5-C6-O6	-6.05	124.97	128.60
53	B5	1182	A	O4'-C1'-N9	6.05	113.04	108.20
53	B5	3131	U	O4'-C1'-N1	6.05	113.04	108.20
52	B4	132	G	O4'-C1'-N9	6.05	113.04	108.20
53	B5	1144	U	O4'-C1'-N1	6.05	113.04	108.20
1	AA	319	U	C2-N1-C1'	6.05	124.96	117.70
43	BS	21	PHE	CB-CG-CD1	-6.05	116.56	120.80
53	B5	1409	G	O4'-C1'-N9	6.05	113.04	108.20
1	AA	115	G	C5-C6-O6	-6.05	124.97	128.60
53	B5	445	G	O4'-C1'-N9	6.05	113.04	108.20
53	B5	1813	A	O4'-C1'-N9	6.05	113.04	108.20
53	B5	2535	A	O4'-C1'-N9	6.05	113.04	108.20
53	B5	998	A	O4'-C1'-N9	6.05	113.04	108.20
53	B5	2860	U	O4'-C1'-N1	6.05	113.04	108.20
1	AA	1108	G	O4'-C1'-N9	6.04	113.04	108.20
1	AA	808	U	O4'-C1'-N1	6.04	113.03	108.20
1	AA	998	U	O4'-C1'-N1	6.04	113.03	108.20
1	AA	1188	C	O4'-C1'-N1	6.04	113.03	108.20
53	B5	1021	G	O4'-C1'-N9	6.04	113.03	108.20
53	B5	2180	G	C5-C6-O6	-6.04	124.97	128.60
53	B5	2377	G	N1-C6-O6	6.04	123.53	119.90
53	B5	2573	G	O4'-C1'-N9	6.04	113.03	108.20
53	B5	2867	C	O4'-C1'-N1	6.04	113.03	108.20
1	AA	161	U	O4'-C1'-N1	6.04	113.03	108.20
1	AA	844	A	O4'-C1'-N9	6.04	113.03	108.20
19	A7	56	C	N1-C2-N3	-6.04	114.97	119.20
19	A7	61	C	C5'-C4'-O4'	6.04	116.35	109.10
1	AA	899	A	P-O3'-C3'	6.04	126.95	119.70
53	B5	514	G	O4'-C1'-N9	6.04	113.03	108.20
53	B5	2680	A	O4'-C1'-N9	6.04	113.03	108.20
1	AA	10	G	N1-C6-O6	6.04	123.52	119.90
1	AA	973	A	O4'-C1'-N9	6.04	113.03	108.20
1	AA	1655	U	O4'-C1'-N1	6.04	113.03	108.20
19	A7	57	G	N1-C2-N3	6.04	127.52	123.90
51	B3	51	G	C5-C6-O6	-6.04	124.98	128.60
52	B4	97	A	O4'-C1'-N9	6.04	113.03	108.20
53	B5	737	G	C5-C6-O6	-6.04	124.98	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1188	U	O4'-C1'-N1	6.04	113.03	108.20
53	B5	1934	G	O4'-C1'-N9	6.04	113.03	108.20
53	B5	3381	U	O4'-C1'-N1	6.04	113.03	108.20
1	AA	1453	G	O4'-C1'-N9	6.04	113.03	108.20
53	B5	864	G	C5-C6-O6	-6.04	124.98	128.60
53	B5	2278	C	C6-N1-C2	-6.04	117.89	120.30
53	B5	2390	A	O4'-C1'-N9	6.04	113.03	108.20
53	B5	2746	A	O4'-C1'-N9	6.04	113.03	108.20
53	B5	3075	G	C5-C6-O6	-6.04	124.98	128.60
53	B5	596	U	O4'-C1'-N1	6.03	113.03	108.20
19	A7	11	C	N3-C4-N4	-6.03	113.78	118.00
53	B5	1675	G	C5-C6-O6	-6.03	124.98	128.60
53	B5	1796	G	C5-C6-O6	-6.03	124.98	128.60
1	AA	395	U	O4'-C1'-N1	6.03	113.02	108.20
1	AA	1659	U	O4'-C1'-N1	6.03	113.03	108.20
53	B5	920	A	C5-C6-N6	-6.03	118.88	123.70
53	B5	2732	G	C5-C6-O6	-6.03	124.98	128.60
1	AA	879	G	N1-C6-O6	6.03	123.52	119.90
53	B5	252	U	O4'-C1'-N1	6.03	113.02	108.20
53	B5	595	A	O4'-C1'-N9	6.03	113.02	108.20
53	B5	1166	G	N1-C6-O6	6.03	123.52	119.90
53	B5	2796	G	O4'-C1'-N9	6.03	113.02	108.20
53	B5	629	U	O4'-C1'-N1	6.03	113.02	108.20
1	AA	1414	A	O4'-C1'-N9	6.02	113.02	108.20
53	B5	3266	G	O4'-C1'-N9	6.02	113.02	108.20
1	AA	801	G	O4'-C1'-N9	6.02	113.02	108.20
1	AA	1713	G	O4'-C1'-N9	6.02	113.02	108.20
53	B5	3395	G	N1-C6-O6	6.02	123.51	119.90
1	AA	221	A	O4'-C1'-N9	6.02	113.02	108.20
1	AA	676	G	O4'-C1'-N9	6.02	113.02	108.20
51	B3	88	G	O4'-C1'-N9	6.02	113.02	108.20
53	B5	915	A	O4'-C1'-N9	6.02	113.02	108.20
1	AA	1132	U	O4'-C1'-N1	6.02	113.02	108.20
1	AA	1788	A	C5-C6-N6	-6.02	118.88	123.70
53	B5	267	G	O4'-C1'-N9	6.02	113.02	108.20
53	B5	1534	A	O4'-C1'-N9	6.02	113.02	108.20
53	B5	1613	A	O4'-C1'-N9	6.02	113.02	108.20
53	B5	2470	C	C6-N1-C1'	-6.02	113.58	120.80
53	B5	2996	U	O4'-C1'-N1	6.02	113.02	108.20
1	AA	994	A	O4'-C1'-N9	6.02	113.02	108.20
1	AA	1748	A	O4'-C1'-N9	6.02	113.01	108.20
53	B5	1546	A	O4'-C1'-N9	6.02	113.01	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1661	G	O4'-C1'-N9	6.02	113.01	108.20
53	B5	2961	G	C5-C6-O6	-6.02	124.99	128.60
1	AA	497	G	N1-C6-O6	6.02	123.51	119.90
1	AA	44	U	O4'-C1'-N1	6.01	113.01	108.20
1	AA	1634	C	O4'-C1'-N1	6.01	113.01	108.20
1	AA	1711	G	O4'-C1'-N9	6.01	113.01	108.20
52	B4	92	A	C5-C6-N6	-6.01	118.89	123.70
53	B5	483	G	N1-C6-O6	6.01	123.51	119.90
53	B5	905	U	O4'-C1'-N1	6.01	113.01	108.20
53	B5	1736	G	C5-C6-O6	-6.01	124.99	128.60
53	B5	1823	A	P-O3'-C3'	6.01	126.92	119.70
53	B5	2576	G	O4'-C1'-N9	6.01	113.01	108.20
1	AA	512	A	O4'-C1'-N9	6.01	113.01	108.20
1	AA	1746	G	O4'-C1'-N9	6.01	113.01	108.20
53	B5	2275	A	O4'-C1'-N9	6.01	113.01	108.20
1	AA	670	U	O4'-C1'-N1	6.01	113.01	108.20
19	A7	41	U	N1-C2-O2	-6.01	118.59	122.80
53	B5	810	A	C5-C6-N6	-6.01	118.89	123.70
53	B5	1148	G	N1-C6-O6	6.01	123.51	119.90
53	B5	2739	A	O4'-C1'-N9	6.01	113.01	108.20
53	B5	3160	U	O4'-C1'-N1	6.01	113.01	108.20
53	B5	3281	U	O4'-C1'-N1	6.01	113.01	108.20
1	AA	1475	G	N1-C6-O6	6.01	123.50	119.90
1	AA	1225	G	O4'-C1'-N9	6.01	113.01	108.20
1	AA	1773	U	O4'-C1'-N1	6.01	113.00	108.20
53	B5	1012	G	C5-C6-O6	-6.01	125.00	128.60
53	B5	2361	A	O4'-C1'-N9	6.01	113.00	108.20
1	AA	1530	U	O4'-C1'-N1	6.00	113.00	108.20
19	A7	27	C	O4'-C1'-N1	6.00	113.00	108.20
53	B5	867	G	C5-C6-O6	-6.00	125.00	128.60
53	B5	1124	U	O4'-C1'-N1	6.00	113.00	108.20
1	AA	349	U	O4'-C1'-N1	6.00	113.00	108.20
1	AA	1515	U	O3'-P-O5'	-6.00	92.60	104.00
52	B4	73	U	O4'-C1'-N1	6.00	113.00	108.20
53	B5	1387	G	O4'-C1'-N9	6.00	113.00	108.20
53	B5	2158	A	O4'-C1'-N9	6.00	113.00	108.20
53	B5	2589	G	C5-C6-O6	-6.00	125.00	128.60
53	B5	300	G	O4'-C1'-N9	6.00	113.00	108.20
1	AA	1359	U	O4'-C1'-N1	6.00	113.00	108.20
53	B5	1133	A	O4'-C1'-N9	6.00	113.00	108.20
53	B5	1447	G	P-O3'-C3'	6.00	126.90	119.70
1	AA	233	C	O4'-C1'-N1	6.00	113.00	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	398	G	C5-C6-O6	-6.00	125.00	128.60
1	AA	749	U	O4'-C1'-N1	6.00	113.00	108.20
1	AA	1614	G	O4'-C1'-N9	6.00	113.00	108.20
53	B5	459	G	O4'-C1'-N9	6.00	113.00	108.20
1	AA	1516	C	O4'-C4'-C3'	-6.00	98.00	104.00
1	AA	617	U	O4'-C1'-N1	5.99	113.00	108.20
1	AA	725	U	O4'-C1'-N1	5.99	112.99	108.20
1	AA	1099	G	C5-C6-O6	-5.99	125.00	128.60
53	B5	870	G	N1-C6-O6	5.99	123.50	119.90
53	B5	1020	G	O4'-C1'-N9	5.99	113.00	108.20
53	B5	2276	G	O4'-C1'-N9	5.99	113.00	108.20
53	B5	2429	G	O4'-C1'-N9	5.99	113.00	108.20
1	AA	388	G	N1-C6-O6	5.99	123.50	119.90
1	AA	599	A	O4'-C1'-N9	5.99	112.99	108.20
53	B5	527	A	O4'-C1'-N9	5.99	112.99	108.20
53	B5	2955	U	O4'-C1'-N1	5.99	112.99	108.20
1	AA	198	A	O4'-C1'-N9	5.99	112.99	108.20
1	AA	1366	U	O4'-C1'-N1	5.99	112.99	108.20
53	B5	381	U	O4'-C1'-N1	5.99	112.99	108.20
53	B5	1018	G	O4'-C1'-N9	5.99	112.99	108.20
1	AA	355	G	O4'-C1'-N9	5.99	112.99	108.20
1	AA	738	G	O4'-C1'-N9	5.99	112.99	108.20
1	AA	757	A	O4'-C1'-N9	5.99	112.99	108.20
53	B5	812	G	N1-C6-O6	5.99	123.49	119.90
53	B5	1040	A	O4'-C1'-N9	5.99	112.99	108.20
53	B5	2856	G	O4'-C1'-N9	5.99	112.99	108.20
1	AA	117	U	O4'-C1'-N1	5.99	112.99	108.20
1	AA	406	U	O4'-C1'-N1	5.99	112.99	108.20
53	B5	316	U	O4'-C1'-N1	5.99	112.99	108.20
53	B5	360	G	O4'-C1'-N9	5.99	112.99	108.20
53	B5	1456	A	C4-C5-C6	5.99	119.99	117.00
53	B5	2950	G	N1-C6-O6	5.99	123.49	119.90
53	B5	947	G	O4'-C1'-N9	5.99	112.99	108.20
53	B5	1440	G	O4'-C1'-N9	5.99	112.99	108.20
1	AA	472	U	O4'-C1'-N1	5.98	112.99	108.20
53	B5	358	G	O4'-C1'-N9	5.98	112.99	108.20
1	AA	330	G	O4'-C1'-N9	5.98	112.99	108.20
1	AA	372	G	C5-C6-O6	-5.98	125.01	128.60
1	AA	356	G	O4'-C1'-N9	5.98	112.98	108.20
1	AA	476	U	O4'-C1'-N1	5.98	112.98	108.20
51	B3	98	G	C5-C6-O6	-5.98	125.01	128.60
53	B5	1599	G	N1-C6-O6	5.98	123.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1640	G	N1-C6-O6	5.98	123.49	119.90
53	B5	3258	U	P-O3'-C3'	5.98	126.88	119.70
1	AA	1141	U	O4'-C1'-N1	5.98	112.98	108.20
1	AA	1787	G	C5-C6-O6	-5.98	125.01	128.60
53	B5	1519	G	C5-C6-O6	-5.98	125.01	128.60
1	AA	118	U	O4'-C1'-N1	5.98	112.98	108.20
1	AA	537	G	O4'-C1'-N9	5.98	112.98	108.20
1	AA	767	U	O4'-C1'-N1	5.98	112.98	108.20
53	B5	216	G	N1-C6-O6	5.98	123.49	119.90
53	B5	721	G	O4'-C1'-N9	5.98	112.98	108.20
53	B5	3328	G	O4'-C1'-N9	5.98	112.98	108.20
1	AA	1018	A	O4'-C1'-N9	5.98	112.98	108.20
52	B4	101	U	O4'-C1'-N1	5.98	112.98	108.20
53	B5	1209	G	C5-C6-O6	-5.98	125.01	128.60
1	AA	7	G	C5-C6-O6	-5.97	125.02	128.60
1	AA	299	A	O4'-C1'-N9	5.97	112.98	108.20
1	AA	775	G	O4'-C1'-N9	5.97	112.98	108.20
1	AA	235	G	C5-C6-O6	-5.97	125.02	128.60
53	B5	1020	G	N1-C6-O6	5.97	123.48	119.90
53	B5	2278	C	O4'-C1'-N1	5.97	112.98	108.20
53	B5	2603	G	N1-C6-O6	5.97	123.48	119.90
53	B5	3224	G	N1-C6-O6	5.97	123.48	119.90
53	B5	30	G	O4'-C1'-N9	5.97	112.98	108.20
1	AA	280	U	O4'-C1'-N1	5.97	112.98	108.20
1	AA	656	G	O4'-C1'-N9	5.97	112.98	108.20
1	AA	772	G	N1-C6-O6	5.97	123.48	119.90
1	AA	983	G	N1-C6-O6	5.97	123.48	119.90
53	B5	745	C	N3-C4-N4	5.97	122.18	118.00
53	B5	1598	G	N1-C6-O6	5.97	123.48	119.90
53	B5	1818	U	O4'-C1'-N1	5.97	112.98	108.20
53	B5	1892	G	O4'-C1'-N9	5.97	112.97	108.20
53	B5	2376	G	O4'-C1'-N9	5.97	112.98	108.20
53	B5	2670	G	O4'-C1'-N9	5.97	112.98	108.20
1	AA	748	U	O4'-C1'-N1	5.97	112.97	108.20
53	B5	2602	G	O4'-C1'-N9	5.97	112.97	108.20
53	B5	3393	U	O4'-C1'-N1	5.97	112.97	108.20
53	B5	1	G	O4'-C1'-N9	5.97	112.97	108.20
53	B5	165	A	O4'-C1'-N9	5.97	112.97	108.20
53	B5	401	U	O4'-C1'-N1	5.97	112.97	108.20
53	B5	2918	G	N1-C6-O6	5.97	123.48	119.90
1	AA	356	G	N1-C6-O6	5.96	123.48	119.90
1	AA	712	G	O4'-C1'-N9	5.96	112.97	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	850	A	O4'-C1'-N9	5.96	112.97	108.20
1	AA	1273	G	C5-C6-O6	-5.96	125.02	128.60
51	B3	7	G	N1-C6-O6	5.96	123.48	119.90
51	B3	25	G	O4'-C1'-N9	5.96	112.97	108.20
53	B5	393	U	O4'-C1'-N1	5.96	112.97	108.20
53	B5	999	G	O4'-C1'-N9	5.96	112.97	108.20
53	B5	1750	A	O4'-C1'-N9	5.96	112.97	108.20
53	B5	2602	G	N1-C6-O6	5.96	123.48	119.90
53	B5	2606	G	N1-C6-O6	5.96	123.48	119.90
53	B5	3009	G	C5-C6-O6	-5.96	125.02	128.60
1	AA	577	G	O4'-C1'-N9	5.96	112.97	108.20
1	AA	728	U	O4'-C1'-N1	5.96	112.97	108.20
1	AA	730	G	C5-C6-O6	-5.96	125.02	128.60
53	B5	415	G	C5-C6-O6	-5.96	125.02	128.60
53	B5	726	G	O4'-C1'-N9	5.96	112.97	108.20
1	AA	593	U	O4'-C1'-N1	5.96	112.97	108.20
1	AA	1031	G	O4'-C1'-N9	5.96	112.97	108.20
53	B5	470	G	N1-C6-O6	5.96	123.48	119.90
53	B5	1242	G	O4'-C1'-N9	5.96	112.97	108.20
53	B5	2898	G	C5-C6-O6	-5.96	125.02	128.60
53	B5	3036	G	N1-C6-O6	5.96	123.48	119.90
53	B5	518	G	O4'-C1'-N9	5.96	112.97	108.20
1	AA	1522	A	O5'-P-OP2	-5.96	100.34	105.70
53	B5	2339	C	O4'-C1'-N1	5.96	112.97	108.20
53	B5	2536	A	O4'-C1'-N9	5.96	112.97	108.20
53	B5	2877	G	C5-C6-O6	-5.96	125.03	128.60
1	AA	98	U	O4'-C1'-N1	5.96	112.97	108.20
1	AA	1200	A	C5-N7-C8	5.96	106.88	103.90
1	AA	1219	A	O4'-C1'-N9	5.96	112.97	108.20
53	B5	575	G	O4'-C1'-N9	5.96	112.97	108.20
53	B5	1906	G	N1-C6-O6	5.96	123.47	119.90
53	B5	2238	G	C5-C6-O6	-5.96	125.03	128.60
53	B5	3315	G	C5-C6-O6	-5.96	125.03	128.60
53	B5	3353	G	N1-C6-O6	5.96	123.47	119.90
1	AA	790	U	O4'-C1'-N1	5.96	112.96	108.20
53	B5	392	G	C5-C6-O6	-5.96	125.03	128.60
53	B5	769	G	O4'-C1'-N9	5.96	112.96	108.20
53	B5	858	A	O4'-C1'-N9	5.96	112.96	108.20
53	B5	2947	G	O4'-C1'-N9	5.95	112.96	108.20
53	B5	1496	C	O4'-C1'-N1	5.95	112.96	108.20
53	B5	773	G	C5-C6-O6	-5.95	125.03	128.60
53	B5	1306	G	N1-C6-O6	5.95	123.47	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2206	G	C5-C6-O6	-5.95	125.03	128.60
53	B5	2751	G	C5-C6-O6	-5.95	125.03	128.60
53	B5	3178	U	O4'-C1'-N1	5.95	112.96	108.20
1	AA	1	U	C2-N1-C1'	5.95	124.84	117.70
1	AA	377	G	C5-C6-O6	-5.95	125.03	128.60
1	AA	503	G	C5-C6-O6	-5.95	125.03	128.60
1	AA	887	A	O4'-C1'-N9	5.95	112.96	108.20
1	AA	1411	U	O4'-C1'-N1	5.95	112.96	108.20
19	A7	9	A	C2-N3-C4	5.95	113.57	110.60
19	A7	56	C	C1'-O4'-C4'	-5.95	105.14	109.90
53	B5	619	A	C5-C6-N6	-5.95	118.94	123.70
53	B5	860	G	C4-N9-C1'	5.95	134.23	126.50
53	B5	1357	G	C5-C6-O6	-5.95	125.03	128.60
53	B5	2135	U	O4'-C1'-N1	5.95	112.96	108.20
53	B5	2142	A	O4'-C1'-N9	5.95	112.96	108.20
53	B5	2969	A	O4'-C1'-N9	5.95	112.96	108.20
1	AA	257	A	O4'-C1'-N9	5.95	112.96	108.20
1	AA	1263	G	O4'-C1'-N9	5.95	112.96	108.20
53	B5	364	G	O4'-C1'-N9	5.95	112.96	108.20
53	B5	1557	A	O4'-C1'-N9	5.95	112.96	108.20
1	AA	574	G	C5-C6-O6	-5.95	125.03	128.60
1	AA	578	U	O4'-C1'-N1	5.95	112.96	108.20
1	AA	876	G	N1-C6-O6	5.95	123.47	119.90
1	AA	1615	U	O4'-C1'-N1	5.95	112.96	108.20
19	A7	30	G	N9-C1'-C2'	-5.95	105.46	112.00
53	B5	552	G	N1-C6-O6	5.95	123.47	119.90
53	B5	1728	G	N1-C6-O6	5.95	123.47	119.90
53	B5	1896	A	O4'-C1'-N9	5.95	112.96	108.20
53	B5	2466	G	O4'-C1'-N9	5.95	112.96	108.20
1	AA	243	G	O4'-C1'-N9	5.94	112.95	108.20
1	AA	1570	G	C5-C6-O6	-5.94	125.03	128.60
52	B4	77	A	O4'-C1'-N9	5.94	112.95	108.20
53	B5	567	G	C5-C6-O6	-5.94	125.03	128.60
53	B5	1074	U	O4'-C1'-N1	5.94	112.95	108.20
53	B5	1326	A	O4'-C1'-N9	5.94	112.95	108.20
53	B5	1635	G	C5-C6-O6	-5.94	125.03	128.60
53	B5	1801	U	O4'-C1'-N1	5.94	112.95	108.20
1	AA	816	G	N1-C6-O6	5.94	123.46	119.90
1	AA	1123	G	C5-C6-O6	-5.94	125.04	128.60
1	AA	1496	G	C5-C6-O6	-5.94	125.03	128.60
53	B5	363	G	C5-C6-O6	-5.94	125.03	128.60
53	B5	1611	G	C5-C6-O6	-5.94	125.04	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1881	A	O4'-C1'-N9	5.94	112.95	108.20
53	B5	2247	G	N1-C6-O6	5.94	123.47	119.90
1	AA	335	U	O4'-C1'-N1	5.94	112.95	108.20
52	B4	135	G	O4'-C1'-N9	5.94	112.95	108.20
53	B5	382	U	O4'-C1'-N1	5.94	112.95	108.20
53	B5	415	G	O4'-C1'-N9	5.94	112.95	108.20
53	B5	1311	G	N1-C6-O6	5.94	123.46	119.90
53	B5	2102	U	O4'-C1'-N1	5.94	112.95	108.20
53	B5	416	A	O4'-C1'-N9	5.94	112.95	108.20
52	B4	132	G	N1-C6-O6	5.93	123.46	119.90
53	B5	608	A	P-O3'-C3'	5.93	126.82	119.70
53	B5	1063	G	O4'-C1'-N9	5.93	112.95	108.20
53	B5	1763	U	O4'-C1'-N1	5.93	112.95	108.20
53	B5	2844	C	O4'-C1'-N1	5.93	112.95	108.20
1	AA	706	A	O4'-C1'-N9	5.93	112.95	108.20
1	AA	713	A	O4'-C1'-N9	5.93	112.94	108.20
1	AA	841	U	O4'-C1'-N1	5.93	112.95	108.20
1	AA	1251	G	O4'-C1'-N9	5.93	112.94	108.20
1	AA	1620	G	C5-C6-O6	-5.93	125.04	128.60
1	AA	1699	A	O4'-C1'-N9	5.93	112.95	108.20
53	B5	364	G	N1-C6-O6	5.93	123.46	119.90
53	B5	664	U	O4'-C1'-N1	5.93	112.95	108.20
1	AA	108	A	O4'-C1'-N9	5.93	112.94	108.20
1	AA	832	U	O4'-C1'-N1	5.93	112.94	108.20
1	AA	1143	G	O4'-C1'-N9	5.93	112.94	108.20
51	B3	5	G	N1-C6-O6	5.93	123.46	119.90
53	B5	875	G	O4'-C1'-N9	5.93	112.94	108.20
1	AA	1529	G	C5-C6-O6	-5.93	125.04	128.60
19	A7	70	C	C3'-C2'-C1'	-5.93	96.76	101.50
53	B5	2851	A	O4'-C1'-N9	5.93	112.94	108.20
53	B5	3174	A	O4'-C1'-N9	5.93	112.94	108.20
1	AA	284	G	N1-C6-O6	5.93	123.46	119.90
1	AA	1044	G	N1-C6-O6	5.93	123.46	119.90
53	B5	1513	G	C5-C6-O6	-5.93	125.04	128.60
53	B5	1141	C	P-O3'-C3'	5.93	126.81	119.70
1	AA	764	U	O4'-C1'-N1	5.92	112.94	108.20
1	AA	1175	G	O4'-C1'-N9	5.92	112.94	108.20
52	B4	69	U	O4'-C1'-N1	5.92	112.94	108.20
53	B5	203	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	1186	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	1313	G	C5-C6-O6	-5.92	125.05	128.60
53	B5	3049	A	C5-C6-N6	-5.92	118.96	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3059	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	3220	G	C5-C6-O6	-5.92	125.05	128.60
1	AA	815	G	O4'-C1'-N9	5.92	112.94	108.20
1	AA	964	U	O4'-C1'-N1	5.92	112.94	108.20
53	B5	1029	G	O4'-C1'-N9	5.92	112.94	108.20
1	AA	365	G	C5-C6-O6	-5.92	125.05	128.60
1	AA	492	A	O4'-C1'-N9	5.92	112.94	108.20
1	AA	616	G	C5-C6-O6	-5.92	125.05	128.60
1	AA	1547	C	O3'-P-O5'	-5.92	92.75	104.00
1	AA	1716	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	1778	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	2419	A	C4-C5-C6	5.92	119.96	117.00
53	B5	24	G	O4'-C1'-N9	5.92	112.94	108.20
53	B5	718	G	N1-C6-O6	5.92	123.45	119.90
53	B5	2863	G	C1'-O4'-C4'	-5.92	105.16	109.90
53	B5	759	U	O4'-C1'-N1	5.92	112.93	108.20
53	B5	791	A	C5-C6-N6	-5.92	118.97	123.70
53	B5	854	G	N1-C6-O6	5.92	123.45	119.90
53	B5	1678	G	C5-C6-O6	-5.92	125.05	128.60
53	B5	1811	G	C5-C6-O6	-5.92	125.05	128.60
53	B5	2455	U	O4'-C1'-N1	5.92	112.94	108.20
53	B5	2775	U	O4'-C1'-N1	5.92	112.93	108.20
28	BD	50	TYR	CB-CG-CD1	-5.92	117.45	121.00
52	B4	56	G	C5-C6-O6	-5.92	125.05	128.60
53	B5	812	G	O4'-C1'-N9	5.92	112.93	108.20
53	B5	1590	G	N1-C6-O6	5.92	123.45	119.90
53	B5	3136	G	C5-C6-O6	-5.92	125.05	128.60
1	AA	1534	G	O4'-C1'-N9	5.91	112.93	108.20
52	B4	70	A	O4'-C1'-N9	5.91	112.93	108.20
53	B5	3141	A	O4'-C1'-N9	5.91	112.93	108.20
1	AA	249	U	O4'-C1'-N1	5.91	112.93	108.20
1	AA	1383	G	O4'-C1'-N9	5.91	112.93	108.20
53	B5	2937	G	O4'-C1'-N9	5.91	112.93	108.20
51	B3	65	G	C5-C6-O6	-5.91	125.05	128.60
53	B5	2609	A	O4'-C1'-N9	5.91	112.93	108.20
53	B5	219	A	C5-C6-N6	-5.91	118.97	123.70
1	AA	537	G	N1-C6-O6	5.91	123.44	119.90
1	AA	740	A	O4'-C1'-N9	5.91	112.93	108.20
1	AA	1498	C	O4'-C1'-N1	5.91	112.93	108.20
53	B5	1687	U	O4'-C1'-N1	5.91	112.93	108.20
1	AA	547	U	O4'-C1'-N1	5.91	112.92	108.20
1	AA	1294	G	O4'-C1'-N9	5.91	112.92	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1517	U	O4'-C1'-N1	5.91	112.92	108.20
1	AA	1766	G	C5-C6-O6	-5.91	125.06	128.60
53	B5	335	G	O4'-C1'-N9	5.91	112.92	108.20
53	B5	420	G	C5-C6-O6	-5.91	125.06	128.60
53	B5	916	G	C5-C6-O6	-5.91	125.06	128.60
53	B5	2587	U	O4'-C1'-N1	5.91	112.92	108.20
53	B5	2788	C	C2-N1-C1'	5.90	125.29	118.80
1	AA	1405	G	C5-C6-O6	-5.90	125.06	128.60
1	AA	1641	U	O4'-C1'-N1	5.90	112.92	108.20
53	B5	2185	G	C5-C6-O6	-5.90	125.06	128.60
1	AA	787	G	N1-C6-O6	5.90	123.44	119.90
1	AA	993	G	O4'-C1'-N9	5.90	112.92	108.20
1	AA	1349	G	O4'-C1'-N9	5.90	112.92	108.20
1	AA	1747	A	O4'-C1'-N9	5.90	112.92	108.20
53	B5	219	A	C4-C5-C6	5.90	119.95	117.00
53	B5	1357	G	O4'-C1'-N9	5.90	112.92	108.20
53	B5	2919	A	O4'-C1'-N9	5.90	112.92	108.20
1	AA	623	A	O4'-C1'-N9	5.90	112.92	108.20
1	AA	1002	G	C5-C6-O6	-5.90	125.06	128.60
1	AA	1266	G	O4'-C1'-N9	5.90	112.92	108.20
53	B5	3051	U	O4'-C1'-N1	5.90	112.92	108.20
1	AA	720	G	C5-C6-O6	-5.90	125.06	128.60
53	B5	101	G	O4'-C1'-N9	5.90	112.92	108.20
53	B5	964	G	O4'-C1'-N9	5.90	112.92	108.20
53	B5	1346	G	O4'-C1'-N9	5.90	112.92	108.20
53	B5	1434	G	N1-C6-O6	5.90	123.44	119.90
1	AA	837	G	N1-C6-O6	5.90	123.44	119.90
53	B5	3386	G	O4'-C1'-N9	5.90	112.92	108.20
1	AA	1705	A	O4'-C1'-N9	5.89	112.92	108.20
52	B4	104	A	O4'-C1'-N9	5.89	112.92	108.20
53	B5	610	G	N1-C6-O6	5.89	123.44	119.90
53	B5	1072	G	O4'-C1'-N9	5.89	112.92	108.20
53	B5	1271	A	O4'-C1'-N9	5.89	112.92	108.20
1	AA	752	A	O4'-C1'-N9	5.89	112.91	108.20
53	B5	1236	G	O4'-C1'-N9	5.89	112.91	108.20
53	B5	1473	G	O4'-C1'-N9	5.89	112.91	108.20
53	B5	2828	G	P-O3'-C3'	5.89	126.77	119.70
53	B5	2908	G	O4'-C1'-N9	5.89	112.91	108.20
1	AA	142	G	O4'-C1'-N9	5.89	112.91	108.20
1	AA	1666	G	O4'-C1'-N9	5.89	112.91	108.20
53	B5	2186	U	O4'-C1'-N1	5.89	112.91	108.20
1	AA	884	G	O4'-C1'-N9	5.89	112.91	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1694	G	O4'-C1'-N9	5.89	112.91	108.20
51	B3	63	G	C5-C6-O6	-5.89	125.07	128.60
53	B5	2131	A	C5-C6-N6	-5.89	118.99	123.70
19	A7	19	G	C6-C5-N7	-5.88	126.87	130.40
52	B4	85	G	N1-C6-O6	5.88	123.43	119.90
53	B5	837	A	O4'-C1'-N9	5.88	112.91	108.20
53	B5	1054	A	O4'-C1'-N9	5.88	112.91	108.20
53	B5	1106	G	O4'-C1'-N9	5.88	112.91	108.20
53	B5	2124	G	N1-C6-O6	5.88	123.43	119.90
53	B5	3155	U	O4'-C1'-N1	5.88	112.91	108.20
1	AA	234	G	O4'-C1'-N9	5.88	112.91	108.20
1	AA	651	G	N1-C6-O6	5.88	123.43	119.90
53	B5	1096	U	O4'-C1'-N1	5.88	112.91	108.20
1	AA	532	U	O4'-C1'-N1	5.88	112.91	108.20
1	AA	1526	U	O4'-C1'-N1	5.88	112.91	108.20
53	B5	1764	U	C2-N1-C1'	5.88	124.76	117.70
53	B5	2335	G	C5-C6-O6	-5.88	125.07	128.60
53	B5	2828	G	C5-C6-O6	-5.88	125.07	128.60
1	AA	1551	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	80	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	202	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	2280	A	O4'-C1'-N9	5.88	112.90	108.20
53	B5	3327	G	N1-C6-O6	5.88	123.43	119.90
1	AA	1346	G	N1-C6-O6	5.88	123.43	119.90
52	B4	123	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	2269	U	O4'-C1'-N1	5.88	112.90	108.20
1	AA	613	G	O4'-C1'-N9	5.88	112.90	108.20
1	AA	866	G	C3'-C2'-C1'	-5.88	96.80	101.50
1	AA	1082	G	C5-C6-O6	-5.88	125.07	128.60
1	AA	1109	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	579	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	583	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	2607	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	2895	G	O4'-C1'-N9	5.88	112.90	108.20
53	B5	219	A	O4'-C1'-N9	5.88	112.90	108.20
53	B5	1701	C	P-O3'-C3'	5.88	126.75	119.70
53	B5	2949	U	O4'-C1'-N1	5.88	112.90	108.20
1	AA	1487	U	O4'-C1'-N1	5.87	112.90	108.20
1	AA	1634	C	C4'-C3'-C2'	5.87	108.47	102.60
1	AA	1686	U	O4'-C1'-N1	5.87	112.90	108.20
53	B5	799	G	O4'-C1'-N9	5.87	112.90	108.20
53	B5	2615	G	O4'-C1'-N9	5.87	112.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2784	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	2786	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	3247	G	O4'-C1'-N9	5.87	112.90	108.20
1	AA	751	G	O4'-C1'-N9	5.87	112.90	108.20
1	AA	1522	A	O4'-C4'-C3'	-5.87	98.13	104.00
53	B5	2140	U	O4'-C1'-N1	5.87	112.90	108.20
53	B5	2371	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	2586	G	O4'-C1'-N9	5.87	112.90	108.20
53	B5	2815	G	O4'-C1'-N9	5.87	112.90	108.20
53	B5	2938	G	O4'-C1'-N9	5.87	112.90	108.20
53	B5	1371	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	1455	U	O4'-C1'-N1	5.87	112.89	108.20
53	B5	3003	G	C5-C6-O6	-5.87	125.08	128.60
1	AA	284	G	O4'-C1'-N9	5.87	112.89	108.20
1	AA	1288	G	N1-C6-O6	5.87	123.42	119.90
53	B5	590	G	O4'-C1'-N9	5.87	112.89	108.20
53	B5	2558	U	O4'-C1'-N1	5.87	112.89	108.20
1	AA	956	G	N1-C6-O6	5.87	123.42	119.90
1	AA	1265	U	O4'-C1'-N1	5.87	112.89	108.20
1	AA	1293	A	O4'-C1'-N9	5.87	112.89	108.20
53	B5	424	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	994	G	C5-C6-O6	-5.87	125.08	128.60
53	B5	2656	A	O4'-C1'-N9	5.87	112.89	108.20
53	B5	2978	U	O4'-C1'-N1	5.87	112.89	108.20
1	AA	516	G	N1-C6-O6	5.86	123.42	119.90
1	AA	1017	U	O4'-C1'-N1	5.86	112.89	108.20
1	AA	1720	A	O4'-C1'-N9	5.86	112.89	108.20
52	B4	49	G	C5-C6-O6	-5.86	125.08	128.60
53	B5	493	G	C5-C6-O6	-5.86	125.08	128.60
53	B5	2489	C	N3-C4-N4	5.86	122.10	118.00
1	AA	5	U	O4'-C1'-N1	5.86	112.89	108.20
1	AA	1014	U	O4'-C1'-N1	5.86	112.89	108.20
19	A7	9	A	N3-C4-C5	-5.86	122.70	126.80
53	B5	1135	A	O4'-C1'-N9	5.86	112.89	108.20
53	B5	1250	G	O4'-C1'-N9	5.86	112.89	108.20
53	B5	3045	G	O4'-C1'-N9	5.86	112.89	108.20
1	AA	165	G	O4'-C1'-N9	5.86	112.89	108.20
1	AA	498	G	O4'-C1'-N9	5.86	112.89	108.20
1	AA	771	A	O4'-C1'-N9	5.86	112.89	108.20
1	AA	853	G	O4'-C1'-N9	5.86	112.89	108.20
53	B5	566	G	C5-C6-O6	-5.86	125.08	128.60
53	B5	1374	G	O4'-C1'-N9	5.86	112.89	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	340	U	O4'-C1'-N1	5.86	112.88	108.20
1	AA	1402	G	O4'-C1'-N9	5.86	112.89	108.20
1	AA	1509	U	O4'-C1'-N1	5.86	112.88	108.20
52	B4	124	G	O4'-C1'-N9	5.86	112.89	108.20
53	B5	146	U	O4'-C1'-N1	5.86	112.89	108.20
53	B5	1852	G	C5-C6-O6	-5.86	125.09	128.60
53	B5	2728	G	O4'-C1'-N9	5.86	112.88	108.20
53	B5	3108	G	O4'-C1'-N9	5.86	112.88	108.20
1	AA	1343	A	O4'-C1'-N9	5.85	112.88	108.20
1	AA	1430	G	N1-C6-O6	5.85	123.41	119.90
53	B5	635	G	O4'-C1'-N9	5.85	112.88	108.20
53	B5	3250	U	O4'-C1'-N1	5.85	112.88	108.20
1	AA	123	G	O4'-C1'-N9	5.85	112.88	108.20
1	AA	765	G	N1-C6-O6	5.85	123.41	119.90
1	AA	824	G	O4'-C1'-N9	5.85	112.88	108.20
1	AA	1303	C	C6-N1-C2	-5.85	117.96	120.30
26	BB	156	LYS	N-CA-CB	5.85	121.13	110.60
53	B5	298	U	O4'-C1'-N1	5.85	112.88	108.20
53	B5	2199	G	C5-C6-O6	-5.85	125.09	128.60
6	AG	164	PRO	CA-N-CD	-5.85	103.31	111.50
28	BD	194	TYR	CB-CG-CD2	5.85	124.51	121.00
52	B4	9	A	O4'-C1'-N9	5.85	112.88	108.20
53	B5	1018	G	N1-C6-O6	5.85	123.41	119.90
53	B5	3031	G	C5-C6-O6	-5.85	125.09	128.60
53	B5	3291	G	N1-C6-O6	5.85	123.41	119.90
1	AA	677	G	O4'-C1'-N9	5.85	112.88	108.20
1	AA	1538	G	C5-C6-O6	-5.85	125.09	128.60
53	B5	430	U	O4'-C1'-N1	5.85	112.88	108.20
53	B5	2273	G	C5-C6-O6	-5.85	125.09	128.60
1	AA	889	U	O4'-C1'-N1	5.85	112.88	108.20
1	AA	1693	G	N1-C6-O6	5.85	123.41	119.90
53	B5	2239	G	C5-C6-O6	-5.85	125.09	128.60
53	B5	2297	U	C1'-O4'-C4'	-5.85	105.22	109.90
53	B5	2501	U	O4'-C1'-N1	5.85	112.88	108.20
1	AA	643	G	O4'-C1'-N9	5.84	112.88	108.20
19	A7	60	C	C4'-C3'-C2'	5.84	108.44	102.60
53	B5	360	G	C5-C6-O6	-5.84	125.09	128.60
53	B5	717	C	O4'-C1'-N1	5.84	112.88	108.20
53	B5	1944	U	P-O3'-C3'	5.84	126.71	119.70
1	AA	480	G	N1-C6-O6	5.84	123.41	119.90
1	AA	607	G	N1-C6-O6	5.84	123.41	119.90
1	AA	1534	G	C5-C6-O6	-5.84	125.09	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1208	U	O4'-C1'-N1	5.84	112.88	108.20
1	AA	779	U	C2-N1-C1'	5.84	124.71	117.70
1	AA	836	U	O4'-C1'-N1	5.84	112.87	108.20
1	AA	840	U	O4'-C1'-N1	5.84	112.87	108.20
1	AA	1500	G	O4'-C1'-N9	5.84	112.87	108.20
53	B5	372	A	O4'-C1'-N9	5.84	112.87	108.20
53	B5	882	A	C4-C5-C6	5.84	119.92	117.00
1	AA	524	U	O4'-C1'-N1	5.84	112.87	108.20
53	B5	774	G	C5-C6-O6	-5.84	125.10	128.60
53	B5	2492	C	O4'-C1'-N1	5.84	112.87	108.20
53	B5	2878	G	O4'-C1'-N9	5.84	112.87	108.20
53	B5	3015	G	C5-C6-O6	-5.84	125.10	128.60
1	AA	287	G	O4'-C1'-N9	5.84	112.87	108.20
1	AA	1406	G	C5-C6-O6	-5.84	125.10	128.60
53	B5	1253	U	P-O3'-C3'	5.84	126.71	119.70
53	B5	2209	U	O4'-C1'-N1	5.84	112.87	108.20
1	AA	1321	G	O4'-C1'-N9	5.84	112.87	108.20
53	B5	442	G	C5-C6-O6	-5.84	125.10	128.60
53	B5	1271	A	C5-C6-N6	-5.84	119.03	123.70
19	A7	11	C	C4'-C3'-C2'	-5.83	96.77	102.60
53	B5	215	G	O4'-C1'-N9	5.83	112.87	108.20
53	B5	336	A	O4'-C1'-N9	5.83	112.87	108.20
53	B5	1169	A	O4'-C1'-N9	5.83	112.87	108.20
53	B5	2917	G	O4'-C1'-N9	5.83	112.87	108.20
1	AA	1259	G	O4'-C1'-N9	5.83	112.87	108.20
1	AA	1351	G	N1-C6-O6	5.83	123.40	119.90
1	AA	1758	G	C5-C6-O6	-5.83	125.10	128.60
53	B5	1140	G	O4'-C1'-N9	5.83	112.87	108.20
53	B5	1489	A	O4'-C1'-N9	5.83	112.87	108.20
53	B5	2953	U	O4'-C1'-N1	5.83	112.87	108.20
53	B5	2999	U	O4'-C1'-N1	5.83	112.87	108.20
53	B5	3123	A	O4'-C1'-N9	5.83	112.87	108.20
1	AA	1696	G	N1-C6-O6	5.83	123.40	119.90
19	A7	15	G	N1-C6-O6	-5.83	116.40	119.90
19	A7	62	A	C4-C5-N7	5.83	113.62	110.70
53	B5	560	G	C5-C6-O6	-5.83	125.10	128.60
53	B5	822	G	N1-C6-O6	5.83	123.40	119.90
53	B5	1465	A	O4'-C1'-N9	5.83	112.86	108.20
53	B5	2434	U	O4'-C1'-N1	5.83	112.87	108.20
53	B5	2564	G	C5-C6-O6	-5.83	125.10	128.60
53	B5	2743	A	O4'-C1'-N9	5.83	112.87	108.20
53	B5	1851	G	O4'-C1'-N9	5.83	112.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3305	A	O4'-C1'-N9	5.83	112.86	108.20
52	B4	140	G	O4'-C1'-N9	5.83	112.86	108.20
53	B5	353	G	P-O3'-C3'	5.83	126.69	119.70
53	B5	1091	A	O4'-C1'-N9	5.83	112.86	108.20
53	B5	2435	G	C5-C6-O6	-5.83	125.10	128.60
53	B5	2914	G	O4'-C1'-N9	5.83	112.86	108.20
53	B5	3325	G	N1-C6-O6	5.83	123.40	119.90
53	B5	3345	G	O4'-C1'-N9	5.83	112.86	108.20
53	B5	53	G	N1-C6-O6	5.83	123.39	119.90
53	B5	827	A	C5-C6-N6	-5.83	119.04	123.70
53	B5	828	A	C5-C6-N6	-5.83	119.04	123.70
53	B5	926	A	C5-C6-N6	-5.83	119.04	123.70
53	B5	1171	G	C5-C6-O6	-5.83	125.11	128.60
53	B5	1247	U	O4'-C1'-N1	5.83	112.86	108.20
53	B5	1438	U	O4'-C1'-N1	5.83	112.86	108.20
53	B5	1469	C	C2-N1-C1'	5.83	125.21	118.80
53	B5	2262	A	O4'-C1'-N9	5.83	112.86	108.20
53	B5	306	A	O4'-C1'-N9	5.82	112.86	108.20
53	B5	538	G	C5-C6-O6	-5.82	125.11	128.60
53	B5	1052	U	O4'-C1'-N1	5.82	112.86	108.20
53	B5	1480	G	O4'-C1'-N9	5.82	112.86	108.20
1	AA	733	A	O4'-C1'-N9	5.82	112.86	108.20
19	A7	9	A	C5-N7-C8	5.82	106.81	103.90
51	B3	86	G	O4'-C1'-N9	5.82	112.86	108.20
53	B5	2559	A	O4'-C1'-N9	5.82	112.86	108.20
1	AA	1780	A	O4'-C1'-N9	5.82	112.86	108.20
53	B5	235	A	O4'-C1'-N9	5.82	112.86	108.20
53	B5	3015	G	O4'-C1'-N9	5.82	112.86	108.20
1	AA	1612	A	P-O5'-C5'	-5.82	111.59	120.90
1	AA	285	G	O4'-C1'-N9	5.82	112.86	108.20
1	AA	1481	A	O4'-C1'-N9	5.82	112.85	108.20
53	B5	1011	A	O4'-C1'-N9	5.82	112.85	108.20
53	B5	1321	G	O4'-C1'-N9	5.82	112.85	108.20
53	B5	2315	G	N1-C6-O6	5.82	123.39	119.90
53	B5	2462	A	O4'-C1'-N9	5.82	112.85	108.20
53	B5	2639	G	C5-C6-O6	-5.82	125.11	128.60
53	B5	3345	G	C5-C6-O6	-5.82	125.11	128.60
1	AA	400	A	O4'-C1'-N9	5.82	112.85	108.20
1	AA	751	G	N1-C6-O6	5.82	123.39	119.90
1	AA	846	G	C5-C6-O6	-5.82	125.11	128.60
1	AA	1278	U	O4'-C1'-N1	5.82	112.85	108.20
53	B5	1323	G	N1-C6-O6	5.82	123.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	631	G	C5-C6-O6	-5.81	125.11	128.60
1	AA	1066	A	O4'-C1'-N9	5.81	112.85	108.20
53	B5	2396	G	O4'-C1'-N9	5.81	112.85	108.20
53	B5	2457	G	O4'-C1'-N9	5.81	112.85	108.20
1	AA	507	U	O4'-C1'-N1	5.81	112.85	108.20
1	AA	1086	U	O4'-C1'-N1	5.81	112.85	108.20
53	B5	1270	A	O4'-C1'-N9	5.81	112.85	108.20
53	B5	1362	G	C5-C6-O6	-5.81	125.11	128.60
53	B5	845	G	P-O3'-C3'	5.81	126.67	119.70
1	AA	220	A	O4'-C1'-N9	5.81	112.85	108.20
1	AA	734	A	O4'-C1'-N9	5.81	112.85	108.20
1	AA	1478	G	O4'-C1'-N9	5.81	112.85	108.20
1	AA	1657	A	O4'-C1'-N9	5.81	112.85	108.20
19	A7	45	G	C8-N9-C4	-5.81	104.08	106.40
53	B5	1226	G	O4'-C1'-N9	5.81	112.85	108.20
53	B5	2311	G	N1-C6-O6	5.81	123.39	119.90
1	AA	875	G	C5-C6-O6	-5.81	125.12	128.60
53	B5	30	G	C5-C6-O6	-5.81	125.11	128.60
1	AA	1664	U	O4'-C1'-N1	5.81	112.84	108.20
53	B5	335	G	C5-C6-O6	-5.81	125.12	128.60
1	AA	206	A	O4'-C1'-N9	5.80	112.84	108.20
1	AA	606	A	O4'-C1'-N9	5.80	112.84	108.20
1	AA	689	G	N1-C6-O6	5.80	123.38	119.90
53	B5	213	G	C5-C6-O6	-5.80	125.12	128.60
53	B5	2661	G	N1-C6-O6	5.80	123.38	119.90
53	B5	3013	U	O4'-C1'-N1	5.80	112.84	108.20
53	B5	3363	U	P-O3'-C3'	5.80	126.66	119.70
53	B5	475	G	C5-C6-O6	-5.80	125.12	128.60
53	B5	2917	G	N1-C6-O6	5.80	123.38	119.90
1	AA	535	A	O4'-C1'-N9	5.80	112.84	108.20
17	AR	164	ASP	N-CA-C	-5.80	95.33	111.00
53	B5	269	G	C5-C6-O6	-5.80	125.12	128.60
53	B5	1375	G	C5-C6-O6	-5.80	125.12	128.60
53	B5	1742	U	O4'-C1'-N1	5.80	112.84	108.20
1	AA	3	U	O4'-C1'-N1	5.80	112.84	108.20
1	AA	236	A	O4'-C1'-N9	5.80	112.84	108.20
53	B5	1753	G	C5-C6-O6	-5.80	125.12	128.60
53	B5	2161	G	N1-C6-O6	5.80	123.38	119.90
19	A7	51	G	N1-C2-N3	5.80	127.38	123.90
53	B5	337	G	O4'-C1'-N9	5.80	112.84	108.20
53	B5	737	G	O4'-C1'-N9	5.80	112.84	108.20
53	B5	2748	A	C5-C6-N6	-5.80	119.06	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3320	A	C5-C6-N6	-5.80	119.06	123.70
53	B5	2766	U	O4'-C1'-N1	5.79	112.84	108.20
53	B5	2995	A	O4'-C1'-N9	5.79	112.84	108.20
1	AA	396	G	C5-C6-O6	-5.79	125.12	128.60
1	AA	1364	G	O4'-C1'-N9	5.79	112.83	108.20
1	AA	1430	G	P-O3'-C3'	5.79	126.65	119.70
1	AA	1678	G	N1-C6-O6	5.79	123.38	119.90
53	B5	1790	G	O4'-C1'-N9	5.79	112.83	108.20
53	B5	2968	G	O4'-C1'-N9	5.79	112.83	108.20
1	AA	1098	G	C5-C6-O6	-5.79	125.12	128.60
19	A7	43	G	C4-C5-N7	-5.79	108.48	110.80
19	A7	60	C	N1-C2-N3	5.79	123.25	119.20
51	B3	106	G	C5-C6-O6	-5.79	125.12	128.60
53	B5	1474	A	O4'-C1'-N9	5.79	112.83	108.20
53	B5	1581	C	N3-C4-N4	5.79	122.06	118.00
53	B5	2972	G	C5-C6-O6	-5.79	125.12	128.60
53	B5	3198	U	O4'-C1'-N1	5.79	112.83	108.20
1	AA	1588	G	C5-C6-O6	-5.79	125.13	128.60
1	AA	1535	C	O4'-C1'-N1	5.79	112.83	108.20
53	B5	766	U	O4'-C1'-N1	5.79	112.83	108.20
1	AA	533	U	O4'-C1'-N1	5.79	112.83	108.20
1	AA	1045	G	N1-C6-O6	5.79	123.37	119.90
1	AA	1586	G	C5-C6-O6	-5.79	125.13	128.60
19	A7	14	A	C5-C6-N1	5.79	120.59	117.70
1	AA	37	U	O4'-C1'-N1	5.79	112.83	108.20
1	AA	877	G	N1-C6-O6	5.79	123.37	119.90
53	B5	1635	G	O4'-C1'-N9	5.79	112.83	108.20
53	B5	1778	G	C5-C6-O6	-5.79	125.13	128.60
1	AA	308	C	O4'-C1'-N1	5.78	112.83	108.20
1	AA	1582	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	1670	G	N1-C6-O6	5.78	123.37	119.90
53	B5	534	U	O4'-C1'-N1	5.78	112.83	108.20
53	B5	1709	C	O4'-C1'-N1	5.78	112.83	108.20
53	B5	2240	G	C5-C6-O6	-5.78	125.13	128.60
53	B5	1443	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	311	U	O4'-C1'-N1	5.78	112.82	108.20
1	AA	602	U	O4'-C1'-N1	5.78	112.82	108.20
1	AA	1034	G	O4'-C1'-N9	5.78	112.82	108.20
53	B5	1048	A	C5-C6-N6	-5.78	119.08	123.70
53	B5	1591	G	O4'-C1'-N9	5.78	112.83	108.20
53	B5	2912	G	O4'-C1'-N9	5.78	112.83	108.20
53	B5	3223	A	O4'-C1'-N9	5.78	112.83	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3241	G	O4'-C1'-N9	5.78	112.82	108.20
19	A7	70	C	N1-C1'-C2'	-5.78	105.64	112.00
53	B5	24	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	969	A	O4'-C1'-N9	5.78	112.82	108.20
53	B5	273	A	O4'-C1'-N9	5.78	112.82	108.20
53	B5	2952	G	N1-C6-O6	5.78	123.37	119.90
1	AA	228	G	O4'-C1'-N9	5.78	112.82	108.20
1	AA	1489	U	O4'-C1'-N1	5.78	112.82	108.20
1	AA	1593	U	P-O3'-C3'	5.78	126.63	119.70
53	B5	2902	A	O4'-C1'-N9	5.78	112.82	108.20
53	B5	3229	G	C5-C6-O6	-5.78	125.13	128.60
1	AA	979	G	O4'-C1'-N9	5.77	112.82	108.20
52	B4	149	A	C5-C6-N6	-5.77	119.08	123.70
53	B5	842	G	C5-C6-O6	-5.77	125.14	128.60
53	B5	1537	A	O4'-C1'-N9	5.77	112.82	108.20
1	AA	428	A	O4'-C1'-N9	5.77	112.82	108.20
1	AA	984	G	O4'-C1'-N9	5.77	112.82	108.20
19	A7	42	G	O4'-C1'-N9	5.77	112.82	108.20
53	B5	2171	G	O4'-C1'-N9	5.77	112.82	108.20
53	B5	3087	A	C4-C5-C6	5.77	119.89	117.00
53	B5	3216	U	O4'-C1'-N1	5.77	112.82	108.20
1	AA	373	G	C5-C6-O6	-5.77	125.14	128.60
19	A7	73	A	N1-C6-N6	-5.77	115.14	118.60
53	B5	53	G	O4'-C1'-N9	5.77	112.82	108.20
1	AA	207	U	O4'-C1'-N1	5.77	112.82	108.20
1	AA	1050	G	N1-C6-O6	5.77	123.36	119.90
12	AM	85	PHE	CB-CG-CD1	5.77	124.84	120.80
19	A7	53	G	C8-N9-C4	-5.77	104.09	106.40
1	AA	1237	G	O4'-C1'-N9	5.77	112.81	108.20
1	AA	1679	A	O4'-C1'-N9	5.77	112.81	108.20
1	AA	1719	A	O4'-C1'-N9	5.77	112.81	108.20
52	B4	144	G	O4'-C1'-N9	5.77	112.81	108.20
53	B5	170	G	N1-C6-O6	5.77	123.36	119.90
53	B5	909	G	O4'-C1'-N9	5.77	112.81	108.20
53	B5	2194	G	C5-C6-O6	-5.77	125.14	128.60
18	AT	33	TYR	CB-CG-CD2	-5.77	117.54	121.00
53	B5	2278	C	C2-N1-C1'	5.77	125.14	118.80
1	AA	432	G	C5-C6-O6	-5.76	125.14	128.60
51	B3	30	G	O4'-C1'-N9	5.76	112.81	108.20
53	B5	710	A	C5-C6-N6	-5.76	119.09	123.70
1	AA	1678	G	O4'-C1'-N9	5.76	112.81	108.20
19	A7	4	G	C1'-O4'-C4'	5.76	114.51	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	34	G	N1-C6-O6	5.76	123.36	119.90
1	AA	558	U	O4'-C1'-N1	5.76	112.81	108.20
1	AA	1291	G	O4'-C1'-N9	5.76	112.81	108.20
1	AA	1733	U	O4'-C1'-N1	5.76	112.81	108.20
51	B3	96	G	C5-C6-O6	-5.76	125.14	128.60
53	B5	307	A	O4'-C1'-N9	5.76	112.81	108.20
53	B5	1915	A	C4-C5-C6	5.76	119.88	117.00
53	B5	2563	G	C5-C6-O6	-5.76	125.14	128.60
1	AA	1382	G	N1-C6-O6	5.76	123.36	119.90
19	A7	44	A	C5-C6-N6	5.76	128.31	123.70
53	B5	571	U	O4'-C1'-N1	5.76	112.81	108.20
53	B5	1206	G	C5-C6-O6	-5.76	125.14	128.60
53	B5	2622	C	N3-C4-N4	5.76	122.03	118.00
53	B5	2993	G	C5-C6-O6	-5.76	125.14	128.60
1	AA	1751	A	O4'-C1'-N9	5.76	112.81	108.20
53	B5	195	U	O4'-C1'-N1	5.76	112.81	108.20
53	B5	702	C	N3-C4-N4	5.76	122.03	118.00
53	B5	1799	A	O4'-C1'-N9	5.76	112.81	108.20
1	AA	143	G	O4'-C1'-N9	5.76	112.81	108.20
1	AA	1560	G	O4'-C1'-N9	5.76	112.81	108.20
53	B5	1010	G	C5-C6-O6	-5.76	125.15	128.60
53	B5	1310	G	C5-C6-O6	-5.76	125.15	128.60
53	B5	1604	G	O4'-C1'-N9	5.76	112.81	108.20
53	B5	2606	G	O4'-C1'-N9	5.76	112.81	108.20
53	B5	3270	A	O4'-C1'-N9	5.76	112.81	108.20
1	AA	359	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1556	U	O4'-C1'-N1	5.75	112.80	108.20
53	B5	1882	G	C5-C6-O6	-5.75	125.15	128.60
53	B5	2169	G	O4'-C1'-N9	5.75	112.80	108.20
1	AA	11	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	539	G	O4'-C1'-N9	5.75	112.80	108.20
1	AA	690	G	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1671	G	O4'-C1'-N9	5.75	112.80	108.20
53	B5	755	A	O4'-C1'-N9	5.75	112.80	108.20
53	B5	1039	U	O4'-C1'-N1	5.75	112.80	108.20
53	B5	1743	G	O4'-C1'-N9	5.75	112.80	108.20
51	B3	59	G	O4'-C1'-N9	5.75	112.80	108.20
53	B5	1010	G	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1229	G	O4'-C1'-N9	5.75	112.80	108.20
53	B5	714	G	O4'-C1'-N9	5.75	112.80	108.20
53	B5	2679	A	C5-C6-N6	-5.75	119.10	123.70
53	B5	2830	G	C5-C6-O6	-5.75	125.15	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1122	A	C5-C6-N6	-5.75	119.10	123.70
1	AA	1173	G	C5-C6-O6	-5.75	125.15	128.60
1	AA	1400	C	N3-C4-N4	5.75	122.02	118.00
1	AA	1574	A	O4'-C1'-N9	5.75	112.80	108.20
53	B5	1751	G	C5-C6-O6	-5.75	125.15	128.60
53	B5	2721	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1403	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	1767	U	O4'-C1'-N1	5.75	112.80	108.20
53	B5	1142	G	C5-C6-O6	-5.75	125.15	128.60
53	B5	1734	G	C5-C6-O6	-5.75	125.15	128.60
53	B5	2614	G	O4'-C1'-N9	5.75	112.80	108.20
53	B5	366	A	O4'-C1'-N9	5.75	112.80	108.20
53	B5	1766	G	O4'-C1'-N9	5.75	112.80	108.20
1	AA	8	U	O4'-C1'-N1	5.74	112.80	108.20
1	AA	175	G	C5-C6-O6	-5.74	125.15	128.60
1	AA	362	G	C5-C6-O6	-5.74	125.15	128.60
1	AA	855	A	C5-C6-N6	-5.74	119.11	123.70
1	AA	1423	C	O4'-C1'-N1	5.74	112.80	108.20
53	B5	1638	A	O4'-C1'-N9	5.74	112.80	108.20
53	B5	1509	A	O4'-C1'-N9	5.74	112.79	108.20
1	AA	153	G	C5-C6-O6	-5.74	125.16	128.60
1	AA	1665	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	1517	G	O4'-C1'-N9	5.74	112.79	108.20
53	B5	3170	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	3373	U	O4'-C1'-N1	5.74	112.79	108.20
1	AA	996	G	O4'-C1'-N9	5.74	112.79	108.20
1	AA	1238	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	182	U	O4'-C1'-N1	5.74	112.79	108.20
53	B5	662	U	O4'-C1'-N1	5.74	112.79	108.20
53	B5	1220	U	O4'-C1'-N1	5.74	112.79	108.20
53	B5	450	G	C5-C6-O6	-5.74	125.16	128.60
53	B5	505	G	C5-C6-O6	-5.74	125.16	128.60
53	B5	1529	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	2802	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	2864	A	O4'-C1'-N9	5.74	112.79	108.20
1	AA	168	A	O4'-C1'-N9	5.74	112.79	108.20
53	B5	75	G	C5-C6-O6	-5.74	125.16	128.60
53	B5	227	G	C5-C6-O6	-5.74	125.16	128.60
53	B5	1087	G	O4'-C1'-N9	5.74	112.79	108.20
53	B5	2160	G	N1-C6-O6	5.74	123.34	119.90
53	B5	2295	A	P-O5'-C5'	-5.74	111.72	120.90
53	B5	2347	U	O4'-C1'-N1	5.74	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1391	G	O4'-C1'-N9	5.73	112.79	108.20
53	B5	443	G	C5-C6-O6	-5.73	125.16	128.60
53	B5	3290	G	O4'-C1'-N9	5.73	112.79	108.20
1	AA	761	G	O4'-C1'-N9	5.73	112.79	108.20
53	B5	566	G	O4'-C1'-N9	5.73	112.79	108.20
53	B5	1259	A	O4'-C1'-N9	5.73	112.79	108.20
53	B5	1381	A	O4'-C1'-N9	5.73	112.79	108.20
53	B5	2738	A	O4'-C1'-N9	5.73	112.79	108.20
1	AA	1052	U	O4'-C1'-N1	5.73	112.78	108.20
1	AA	1591	A	O4'-C1'-N9	5.73	112.78	108.20
53	B5	189	G	N1-C6-O6	5.73	123.34	119.90
53	B5	229	G	P-O3'-C3'	5.73	126.58	119.70
53	B5	993	A	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1145	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1658	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1724	U	O4'-C1'-N1	5.73	112.78	108.20
53	B5	3147	G	O4'-C1'-N9	5.73	112.78	108.20
1	AA	281	G	C5-C6-O6	-5.73	125.16	128.60
53	B5	220	G	C5-C6-O6	-5.73	125.16	128.60
53	B5	1676	A	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1770	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	2699	G	O4'-C1'-N9	5.73	112.78	108.20
1	AA	324	U	O4'-C1'-N1	5.73	112.78	108.20
1	AA	1413	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	705	A	O4'-C1'-N9	5.73	112.78	108.20
53	B5	779	G	O4'-C1'-N9	5.73	112.78	108.20
1	AA	722	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	26	A	C5-C6-N6	-5.73	119.12	123.70
53	B5	513	G	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1699	A	O4'-C1'-N9	5.73	112.78	108.20
53	B5	1817	G	O4'-C1'-N9	5.73	112.78	108.20
1	AA	222	A	O4'-C1'-N9	5.72	112.78	108.20
1	AA	326	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	1460	G	C5-C6-O6	-5.72	125.17	128.60
19	A7	6	U	N1-C2-N3	5.72	118.33	114.90
53	B5	846	A	O4'-C1'-N9	5.72	112.78	108.20
53	B5	1590	G	O4'-C1'-N9	5.72	112.78	108.20
53	B5	2271	A	O4'-C1'-N9	5.72	112.78	108.20
1	AA	662	U	O4'-C1'-N1	5.72	112.78	108.20
53	B5	176	G	C5-C6-O6	-5.72	125.17	128.60
53	B5	2865	U	O4'-C1'-N1	5.72	112.78	108.20
1	AA	182	A	O4'-C1'-N9	5.72	112.78	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	228	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	732	G	N1-C6-O6	5.72	123.33	119.90
1	AA	1522	A	O5'-P-OP1	-5.72	100.55	105.70
19	A7	29	A	C5-C6-N1	5.72	120.56	117.70
53	B5	2273	G	O4'-C1'-N9	5.72	112.78	108.20
53	B5	2457	G	C5-C6-O6	-5.72	125.17	128.60
53	B5	2778	G	C5-C6-O6	-5.72	125.17	128.60
53	B5	1444	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	1178	U	O4'-C1'-N1	5.72	112.77	108.20
1	AA	1323	A	O4'-C1'-N9	5.72	112.78	108.20
1	AA	1712	A	O4'-C1'-N9	5.72	112.77	108.20
53	B5	701	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	464	A	O4'-C1'-N9	5.72	112.77	108.20
1	AA	552	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	937	G	C5-C6-O6	-5.72	125.17	128.60
1	AA	1778	G	C5-C6-O6	-5.72	125.17	128.60
52	B4	41	A	C5-C6-N6	-5.72	119.13	123.70
53	B5	213	G	O4'-C1'-N9	5.72	112.77	108.20
53	B5	483	G	O4'-C1'-N9	5.72	112.77	108.20
53	B5	722	G	O4'-C1'-N9	5.72	112.77	108.20
53	B5	2688	U	O4'-C1'-N1	5.72	112.77	108.20
53	B5	3033	A	O4'-C1'-N9	5.72	112.77	108.20
1	AA	95	G	O4'-C1'-N9	5.71	112.77	108.20
1	AA	386	G	C5-C6-O6	-5.71	125.17	128.60
1	AA	1388	A	O4'-C1'-N9	5.71	112.77	108.20
19	A7	21	A	N1-C6-N6	-5.71	115.17	118.60
53	B5	234	G	O4'-C1'-N9	5.71	112.77	108.20
1	AA	520	A	O4'-C1'-N9	5.71	112.77	108.20
53	B5	1726	C	O4'-C1'-N1	5.71	112.77	108.20
53	B5	2529	A	O4'-C1'-N9	5.71	112.77	108.20
1	AA	293	U	O4'-C1'-N1	5.71	112.77	108.20
1	AA	471	A	O4'-C1'-N9	5.71	112.77	108.20
1	AA	498	G	N1-C6-O6	5.71	123.33	119.90
1	AA	775	G	N1-C6-O6	5.71	123.33	119.90
19	A7	5	A	C5'-C4'-O4'	5.71	115.95	109.10
53	B5	426	G	O4'-C1'-N9	5.71	112.77	108.20
53	B5	1149	G	C5-C6-O6	-5.71	125.17	128.60
53	B5	2381	G	C5-C6-O6	-5.71	125.17	128.60
19	A7	30	G	C4-C5-N7	-5.71	108.52	110.80
53	B5	466	G	N1-C6-O6	5.71	123.33	119.90
53	B5	926	A	C4-C5-C6	5.71	119.86	117.00
53	B5	3049	A	O4'-C1'-N9	5.71	112.77	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	458	G	O4'-C1'-N9	5.71	112.77	108.20
1	AA	630	A	O4'-C1'-N9	5.71	112.77	108.20
1	AA	1345	A	O4'-C1'-N9	5.71	112.77	108.20
50	BZ	46	LYS	N-CA-CB	5.71	120.88	110.60
53	B5	96	G	O4'-C1'-N9	5.71	112.77	108.20
53	B5	494	G	C5-C6-O6	-5.71	125.17	128.60
53	B5	1258	U	O4'-C1'-N1	5.71	112.77	108.20
53	B5	2164	A	O4'-C1'-N9	5.71	112.77	108.20
53	B5	2414	G	C5-C6-O6	-5.71	125.17	128.60
53	B5	3157	U	O4'-C1'-N1	5.71	112.77	108.20
1	AA	721	U	O4'-C1'-N1	5.71	112.77	108.20
1	AA	1236	U	O4'-C1'-N1	5.71	112.77	108.20
53	B5	551	A	O4'-C1'-N9	5.71	112.77	108.20
53	B5	1318	A	O4'-C1'-N9	5.71	112.77	108.20
53	B5	1441	G	P-O3'-C3'	5.71	126.55	119.70
53	B5	1823	A	O4'-C1'-N9	5.71	112.76	108.20
53	B5	1935	G	N1-C6-O6	5.71	123.32	119.90
53	B5	2658	G	C5-C6-O6	-5.71	125.18	128.60
53	B5	2662	G	N1-C6-O6	5.71	123.32	119.90
1	AA	290	G	O4'-C1'-N9	5.70	112.76	108.20
1	AA	389	G	N1-C6-O6	5.70	123.32	119.90
1	AA	1758	G	O4'-C1'-N9	5.70	112.76	108.20
53	B5	318	A	C5-C6-N6	-5.70	119.14	123.70
53	B5	1526	U	O4'-C1'-N1	5.70	112.76	108.20
1	AA	515	A	O4'-C1'-N9	5.70	112.76	108.20
1	AA	1317	U	O4'-C1'-N1	5.70	112.76	108.20
51	B3	45	A	O4'-C1'-N9	5.70	112.76	108.20
53	B5	162	G	N1-C6-O6	5.70	123.32	119.90
53	B5	478	A	O4'-C1'-N9	5.70	112.76	108.20
53	B5	608	A	C5-C6-N6	-5.70	119.14	123.70
53	B5	2295	A	C5-C6-N6	-5.70	119.14	123.70
1	AA	125	U	O4'-C1'-N1	5.70	112.76	108.20
1	AA	577	G	C5-C6-O6	-5.70	125.18	128.60
1	AA	931	U	O4'-C1'-N1	5.70	112.76	108.20
1	AA	1149	A	O4'-C1'-N9	5.70	112.76	108.20
1	AA	1338	A	C5-C6-N6	-5.70	119.14	123.70
53	B5	241	G	N1-C6-O6	5.70	123.32	119.90
53	B5	800	G	C4-N9-C1'	5.70	133.91	126.50
53	B5	1333	C	N3-C4-C5	-5.70	119.62	121.90
53	B5	1493	G	O4'-C1'-N9	5.70	112.76	108.20
53	B5	1728	G	O4'-C1'-N9	5.70	112.76	108.20
53	B5	2279	A	C5-C6-N6	-5.70	119.14	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3213	G	O4'-C1'-N9	5.70	112.76	108.20
1	AA	763	G	C5-C6-O6	-5.70	125.18	128.60
1	AA	1524	A	O4'-C1'-N9	5.70	112.76	108.20
52	B4	79	A	O4'-C1'-N9	5.70	112.76	108.20
53	B5	3042	U	O4'-C1'-N1	5.70	112.76	108.20
1	AA	100	A	C5-C6-N6	-5.70	119.14	123.70
1	AA	488	G	O4'-C1'-N9	5.70	112.76	108.20
19	A7	70	C	N1-C2-O2	5.70	122.32	118.90
52	B4	60	U	C5'-C4'-C3'	5.70	125.11	116.00
53	B5	1019	G	O4'-C1'-N9	5.70	112.76	108.20
53	B5	1626	U	O4'-C1'-N1	5.70	112.76	108.20
53	B5	1788	C	N3-C4-N4	5.70	121.99	118.00
1	AA	255	U	O4'-C1'-N1	5.69	112.75	108.20
1	AA	804	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	1083	G	O4'-C1'-N9	5.69	112.76	108.20
53	B5	1859	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	1734	G	O4'-C1'-N9	5.69	112.75	108.20
53	B5	2316	G	N1-C6-O6	5.69	123.31	119.90
53	B5	2468	A	P-O3'-C3'	5.69	126.53	119.70
53	B5	2877	G	O4'-C1'-N9	5.69	112.75	108.20
1	AA	30	G	O4'-C1'-N9	5.69	112.75	108.20
1	AA	1585	A	C4-C5-C6	5.69	119.84	117.00
53	B5	209	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	1268	G	O4'-C1'-N9	5.69	112.75	108.20
53	B5	1667	A	P-O3'-C3'	5.69	126.53	119.70
1	AA	892	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	476	G	C5-C6-O6	-5.69	125.19	128.60
53	B5	554	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	999	G	C5-C6-O6	-5.69	125.19	128.60
53	B5	1485	G	O4'-C1'-N9	5.69	112.75	108.20
53	B5	1921	A	O4'-C1'-N9	5.69	112.75	108.20
53	B5	2801	A	O4'-C1'-N9	5.69	112.75	108.20
1	AA	16	G	C5-C6-O6	-5.69	125.19	128.60
1	AA	357	G	N1-C6-O6	5.69	123.31	119.90
1	AA	1305	G	O4'-C1'-N9	5.69	112.75	108.20
52	B4	63	G	C5-C6-O6	-5.69	125.19	128.60
53	B5	1244	A	C1'-O4'-C4'	-5.69	105.35	109.90
53	B5	1332	A	C4-C5-C6	5.69	119.84	117.00
53	B5	763	G	O4'-C1'-N9	5.68	112.75	108.20
53	B5	1766	G	C5-C6-O6	-5.68	125.19	128.60
53	B5	2895	G	C5-C6-O6	-5.68	125.19	128.60
1	AA	391	A	O4'-C1'-N9	5.68	112.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	720	G	O4'-C1'-N9	5.68	112.75	108.20
1	AA	788	A	O4'-C1'-N9	5.68	112.75	108.20
53	B5	547	G	C5-C6-O6	-5.68	125.19	128.60
53	B5	876	A	O4'-C1'-N9	5.68	112.75	108.20
53	B5	1669	C	N3-C4-N4	5.68	121.98	118.00
53	B5	2519	A	O4'-C1'-N9	5.68	112.75	108.20
1	AA	789	A	O4'-C1'-N9	5.68	112.75	108.20
53	B5	798	G	O4'-C1'-N9	5.68	112.75	108.20
53	B5	2375	G	C5-C6-O6	-5.68	125.19	128.60
1	AA	362	G	O4'-C1'-N9	5.68	112.74	108.20
1	AA	508	U	O4'-C1'-N1	5.68	112.74	108.20
1	AA	634	G	O4'-C1'-N9	5.68	112.74	108.20
1	AA	1620	G	O4'-C1'-N9	5.68	112.74	108.20
29	BE	142	PHE	CB-CG-CD1	5.68	124.78	120.80
53	B5	8	C	O4'-C1'-N1	5.68	112.74	108.20
53	B5	241	G	O4'-C1'-N9	5.68	112.74	108.20
53	B5	3214	U	O4'-C1'-N1	5.68	112.74	108.20
53	B5	3286	G	O4'-C1'-N9	5.68	112.74	108.20
1	AA	867	G	C2'-C3'-O3'	-5.68	97.01	109.50
1	AA	1734	G	N1-C6-O6	5.68	123.31	119.90
53	B5	684	G	O4'-C1'-N9	5.68	112.74	108.20
1	AA	486	G	N1-C6-O6	5.68	123.31	119.90
1	AA	951	A	O4'-C1'-N9	5.68	112.74	108.20
19	A7	64	A	C5-N7-C8	5.68	106.74	103.90
53	B5	542	G	O4'-C1'-N9	5.68	112.74	108.20
53	B5	617	G	N1-C6-O6	5.68	123.31	119.90
53	B5	1414	G	O4'-C1'-N9	5.68	112.74	108.20
53	B5	2440	G	O4'-C1'-N9	5.68	112.74	108.20
1	AA	291	G	O4'-C1'-N9	5.67	112.74	108.20
1	AA	838	G	C5-C6-O6	-5.67	125.19	128.60
53	B5	389	A	O4'-C1'-N9	5.67	112.74	108.20
53	B5	740	G	C5-C6-O6	-5.67	125.19	128.60
53	B5	1112	A	C5-C6-N6	-5.67	119.16	123.70
53	B5	2463	G	N1-C6-O6	5.67	123.30	119.90
53	B5	2491	A	O4'-C1'-N9	5.67	112.74	108.20
53	B5	3331	U	O4'-C1'-N1	5.67	112.74	108.20
1	AA	60	U	O4'-C1'-N1	5.67	112.74	108.20
53	B5	1813	A	C5-C6-N6	-5.67	119.16	123.70
1	AA	756	A	O4'-C1'-N9	5.67	112.74	108.20
1	AA	1238	A	C4-C5-C6	5.67	119.84	117.00
53	B5	1059	G	C5-C6-O6	-5.67	125.20	128.60
53	B5	1373	A	O4'-C1'-N9	5.67	112.74	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2897	A	C5-C6-N6	-5.67	119.16	123.70
50	BZ	43	TYR	CB-CG-CD1	5.67	124.40	121.00
53	B5	70	A	O4'-C1'-N9	5.67	112.74	108.20
53	B5	2734	A	O4'-C1'-N9	5.67	112.74	108.20
53	B5	2933	A	O4'-C1'-N9	5.67	112.74	108.20
1	AA	66	U	O4'-C1'-N1	5.67	112.74	108.20
1	AA	1635	C	C4'-C3'-C2'	-5.67	96.93	102.60
19	A7	3	G	N9-C4-C5	5.67	107.67	105.40
53	B5	1889	G	O4'-C1'-N9	5.67	112.73	108.20
53	B5	2749	G	C5-C6-O6	-5.67	125.20	128.60
52	B4	63	G	O4'-C1'-N9	5.67	112.73	108.20
53	B5	736	A	O4'-C1'-N9	5.67	112.73	108.20
53	B5	1072	G	C5-C6-O6	-5.67	125.20	128.60
1	AA	41	A	C5-C6-N6	-5.67	119.17	123.70
51	B3	55	A	C5-C6-N6	-5.67	119.17	123.70
53	B5	720	A	O4'-C1'-N9	5.66	112.73	108.20
53	B5	1552	G	O4'-C1'-N9	5.66	112.73	108.20
53	B5	1610	G	O4'-C1'-N9	5.66	112.73	108.20
53	B5	1940	G	C5-C6-O6	-5.66	125.20	128.60
1	AA	935	G	O4'-C1'-N9	5.66	112.73	108.20
1	AA	523	G	C5-C6-O6	-5.66	125.20	128.60
52	B4	107	G	C5-C6-O6	-5.66	125.20	128.60
53	B5	2258	U	O4'-C1'-N1	5.66	112.73	108.20
1	AA	755	A	O4'-C1'-N9	5.66	112.73	108.20
52	B4	80	A	O4'-C1'-N9	5.66	112.73	108.20
53	B5	1005	G	C5-C6-O6	-5.66	125.20	128.60
53	B5	2313	A	O4'-C1'-N9	5.66	112.73	108.20
1	AA	1643	G	O4'-C1'-N9	5.66	112.73	108.20
53	B5	6	A	O4'-C1'-N9	5.66	112.73	108.20
1	AA	363	G	O4'-C1'-N9	5.66	112.72	108.20
1	AA	1045	G	O4'-C1'-N9	5.66	112.72	108.20
1	AA	1111	G	O4'-C1'-N9	5.66	112.72	108.20
17	AR	284	ALA	C-N-CA	-5.66	107.56	121.70
53	B5	965	A	C5-C6-N6	-5.66	119.17	123.70
53	B5	600	G	O4'-C1'-N9	5.65	112.72	108.20
53	B5	1087	G	N1-C6-O6	5.65	123.29	119.90
53	B5	2964	G	O4'-C1'-N9	5.65	112.72	108.20
1	AA	1162	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	1261	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	1387	U	O4'-C1'-N1	5.65	112.72	108.20
53	B5	136	G	C5-C6-O6	-5.65	125.21	128.60
53	B5	1739	U	O4'-C1'-N1	5.65	112.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2226	U	O4'-C1'-N1	5.65	112.72	108.20
53	B5	2387	A	C5-C6-N6	-5.65	119.18	123.70
53	B5	2480	A	C5-C6-N6	-5.65	119.18	123.70
53	B5	3330	A	O4'-C1'-N9	5.65	112.72	108.20
1	AA	210	A	O4'-C1'-N9	5.65	112.72	108.20
1	AA	403	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	1269	G	N1-C6-O6	5.65	123.29	119.90
1	AA	1348	G	N1-C6-O6	5.65	123.29	119.90
1	AA	1413	G	N1-C6-O6	5.65	123.29	119.90
53	B5	604	G	O4'-C1'-N9	5.65	112.72	108.20
53	B5	1413	G	O4'-C1'-N9	5.65	112.72	108.20
53	B5	2409	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	1273	G	O4'-C1'-N9	5.65	112.72	108.20
1	AA	1308	U	O4'-C1'-N1	5.65	112.72	108.20
53	B5	2698	G	O4'-C1'-N9	5.65	112.72	108.20
53	B5	334	A	O4'-C1'-N9	5.65	112.72	108.20
53	B5	657	A	O4'-C1'-N9	5.65	112.72	108.20
53	B5	845	G	C5-C6-O6	-5.65	125.21	128.60
53	B5	2386	A	C5-C6-N6	-5.65	119.18	123.70
1	AA	869	A	O4'-C1'-N9	5.65	112.72	108.20
29	BE	207	TYR	CB-CG-CD2	-5.65	117.61	121.00
53	B5	2805	G	C5-C6-O6	-5.65	125.21	128.60
1	AA	456	A	C5-C6-N6	-5.64	119.18	123.70
1	AA	494	U	O4'-C1'-N1	5.64	112.72	108.20
53	B5	3	U	O4'-C1'-N1	5.64	112.72	108.20
19	A7	1	G	C8-N9-C4	5.64	108.66	106.40
53	B5	1679	A	C5-C6-N6	-5.64	119.19	123.70
53	B5	2503	G	C5-C6-O6	-5.64	125.22	128.60
53	B5	388	G	N1-C6-O6	5.64	123.28	119.90
1	AA	39	A	O4'-C1'-N9	5.64	112.71	108.20
1	AA	509	G	O4'-C1'-N9	5.64	112.71	108.20
1	AA	510	G	O4'-C1'-N9	5.64	112.71	108.20
1	AA	732	G	O4'-C1'-N9	5.64	112.71	108.20
1	AA	899	A	O4'-C1'-N9	5.64	112.71	108.20
1	AA	1502	G	O4'-C1'-N9	5.64	112.71	108.20
53	B5	1147	G	N1-C6-O6	5.64	123.28	119.90
53	B5	1428	A	O4'-C1'-N9	5.64	112.71	108.20
53	B5	3129	A	O4'-C1'-N9	5.64	112.71	108.20
1	AA	1258	U	O4'-C1'-N1	5.64	112.71	108.20
53	B5	236	G	O4'-C1'-N9	5.64	112.71	108.20
53	B5	717	C	C6-N1-C1'	-5.64	114.03	120.80
1	AA	1710	A	O4'-C1'-N9	5.64	112.71	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	91	G	C5-C6-O6	-5.64	125.22	128.60
53	B5	668	G	C5-C6-O6	-5.64	125.22	128.60
53	B5	817	A	C5-C6-N6	-5.64	119.19	123.70
53	B5	976	C	N3-C4-C5	-5.64	119.65	121.90
53	B5	1573	G	O4'-C1'-N9	5.64	112.71	108.20
53	B5	1744	G	O4'-C1'-N9	5.64	112.71	108.20
53	B5	2381	G	O4'-C1'-N9	5.64	112.71	108.20
53	B5	683	U	O4'-C1'-N1	5.63	112.71	108.20
1	AA	444	C	O4'-C1'-N1	5.63	112.71	108.20
1	AA	1548	A	C5'-C4'-C3'	-5.63	106.99	116.00
1	AA	1743	G	C5-C6-O6	-5.63	125.22	128.60
51	B3	114	A	O4'-C1'-N9	5.63	112.71	108.20
53	B5	2939	G	N1-C6-O6	5.63	123.28	119.90
1	AA	42	G	P-O3'-C3'	5.63	126.46	119.70
53	B5	3361	G	C5-C6-O6	-5.63	125.22	128.60
53	B5	1289	G	O4'-C1'-N9	5.63	112.70	108.20
1	AA	68	A	O4'-C1'-N9	5.63	112.70	108.20
1	AA	803	A	O4'-C1'-N9	5.63	112.70	108.20
51	B3	69	G	N1-C6-O6	5.63	123.28	119.90
53	B5	1249	G	N1-C6-O6	5.63	123.28	119.90
53	B5	1313	G	C5'-C4'-O4'	5.63	115.85	109.10
1	AA	105	A	O4'-C1'-N9	5.62	112.70	108.20
1	AA	127	G	O4'-C1'-N9	5.62	112.70	108.20
1	AA	1266	G	N1-C6-O6	5.62	123.27	119.90
53	B5	264	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	774	G	O4'-C1'-N9	5.62	112.70	108.20
53	B5	997	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	1273	A	O4'-C1'-N9	5.62	112.70	108.20
53	B5	1561	G	O4'-C1'-N9	5.62	112.70	108.20
53	B5	2232	A	O4'-C1'-N9	5.62	112.70	108.20
53	B5	2609	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	3256	G	O4'-C1'-N9	5.62	112.70	108.20
53	B5	3368	U	O4'-C1'-N1	5.62	112.70	108.20
1	AA	451	A	P-O3'-C3'	5.62	126.44	119.70
1	AA	1510	G	O4'-C1'-N9	5.62	112.70	108.20
53	B5	330	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	714	G	P-O3'-C3'	5.62	126.45	119.70
53	B5	1245	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	1300	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	1456	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	1654	A	C5'-C4'-O4'	5.62	115.84	109.10
1	AA	871	G	O4'-C1'-N9	5.62	112.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	956	G	O4'-C1'-N9	5.62	112.70	108.20
1	AA	1511	G	O4'-C1'-N9	5.62	112.70	108.20
19	A7	62	A	O4'-C1'-C2'	5.62	112.66	107.60
53	B5	3027	A	P-O3'-C3'	5.62	126.44	119.70
53	B5	3230	G	C5-C6-O6	-5.62	125.23	128.60
1	AA	1234	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	913	A	O4'-C1'-N9	5.62	112.69	108.20
53	B5	1602	A	C5-C6-N6	-5.62	119.20	123.70
53	B5	2460	U	O4'-C1'-N1	5.62	112.69	108.20
53	B5	2671	A	C5-C6-N6	-5.62	119.21	123.70
1	AA	235	G	O4'-C1'-N9	5.62	112.69	108.20
1	AA	853	G	C5-C6-O6	-5.62	125.23	128.60
1	AA	1647	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	412	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	473	G	C5-C6-O6	-5.62	125.23	128.60
53	B5	625	G	O4'-C1'-N9	5.62	112.69	108.20
1	AA	922	A	O4'-C1'-N9	5.61	112.69	108.20
53	B5	1488	G	O4'-C1'-N9	5.61	112.69	108.20
53	B5	1646	G	C5-C6-O6	-5.61	125.23	128.60
53	B5	2137	U	O4'-C1'-N1	5.61	112.69	108.20
53	B5	3052	G	O4'-C1'-N9	5.61	112.69	108.20
53	B5	3263	G	O4'-C1'-N9	5.61	112.69	108.20
19	A7	23	A	C5-C6-N1	5.61	120.50	117.70
53	B5	3119	U	O4'-C1'-N1	5.61	112.69	108.20
1	AA	1168	A	O4'-C1'-N9	5.61	112.69	108.20
1	AA	244	A	O4'-C1'-N9	5.61	112.69	108.20
1	AA	995	U	O4'-C1'-N1	5.61	112.69	108.20
1	AA	1784	G	C5-C6-O6	-5.61	125.24	128.60
53	B5	161	G	N1-C6-O6	5.61	123.26	119.90
53	B5	832	G	C5-C6-O6	-5.61	125.23	128.60
53	B5	902	G	O4'-C1'-N9	5.61	112.69	108.20
53	B5	2288	G	C5-C6-O6	-5.61	125.23	128.60
53	B5	2538	U	O4'-C1'-N1	5.61	112.69	108.20
53	B5	2661	G	O4'-C1'-N9	5.61	112.69	108.20
1	AA	28	A	O4'-C1'-N9	5.61	112.68	108.20
1	AA	273	G	C5-C6-O6	-5.61	125.24	128.60
1	AA	345	U	O4'-C1'-N1	5.61	112.69	108.20
1	AA	355	G	N1-C6-O6	5.61	123.26	119.90
1	AA	1107	G	O4'-C1'-N9	5.61	112.68	108.20
1	AA	1225	G	N1-C6-O6	5.61	123.26	119.90
1	AA	1521	G	N1-C6-O6	-5.61	116.54	119.90
53	B5	1212	A	O4'-C1'-N9	5.61	112.68	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2615	G	C5-C6-O6	-5.61	125.24	128.60
1	AA	829	A	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1697	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	136	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	2557	G	N1-C6-O6	5.60	123.26	119.90
1	AA	197	A	O4'-C1'-N9	5.60	112.68	108.20
1	AA	329	G	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1119	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	847	A	C5-C6-N6	-5.60	119.22	123.70
53	B5	1027	A	P-O3'-C3'	5.60	126.42	119.70
53	B5	2447	A	C5-C6-N6	-5.60	119.22	123.70
1	AA	1129	A	O4'-C1'-N9	5.60	112.68	108.20
19	A7	24	G	C8-N9-C4	-5.60	104.16	106.40
51	B3	78	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	170	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	1311	G	O4'-C1'-N9	5.60	112.68	108.20
1	AA	770	A	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1119	G	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1196	G	O4'-C4'-C3'	-5.60	98.40	104.00
53	B5	287	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	477	A	O4'-C1'-N9	5.60	112.68	108.20
53	B5	1207	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	2700	G	C5-C6-O6	-5.60	125.24	128.60
1	AA	538	A	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1115	G	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1143	G	C5-C6-O6	-5.60	125.24	128.60
1	AA	1392	G	O4'-C1'-N9	5.60	112.68	108.20
1	AA	1631	A	OP1-P-OP2	-5.60	111.20	119.60
52	B4	46	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	810	A	C4-C5-C6	5.60	119.80	117.00
53	B5	2289	U	O4'-C1'-N1	5.60	112.68	108.20
53	B5	2375	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	2730	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	2868	U	O4'-C1'-N1	5.60	112.68	108.20
1	AA	322	G	N1-C6-O6	5.60	123.26	119.90
53	B5	104	G	C5-C6-O6	-5.60	125.24	128.60
53	B5	400	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	887	G	O4'-C1'-N9	5.60	112.68	108.20
53	B5	3041	U	O4'-C1'-N1	5.60	112.68	108.20
1	AA	689	G	O4'-C1'-N9	5.59	112.67	108.20
1	AA	859	A	C8-N9-C4	-5.59	103.56	105.80
53	B5	3016	A	C4-C5-C6	5.59	119.80	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3146	G	C1'-O4'-C4'	-5.59	105.42	109.90
1	AA	845	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	133	U	O4'-C1'-N1	5.59	112.67	108.20
53	B5	2311	G	O4'-C1'-N9	5.59	112.67	108.20
19	A7	56	C	N1-C2-O2	5.59	122.25	118.90
53	B5	428	A	O4'-C1'-N9	5.59	112.67	108.20
53	B5	646	A	O4'-C1'-N9	5.59	112.67	108.20
53	B5	1213	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	2846	U	O4'-C1'-N1	5.59	112.67	108.20
53	B5	2957	G	O4'-C1'-N9	5.59	112.67	108.20
1	AA	1091	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	1099	A	O4'-C1'-N9	5.59	112.67	108.20
53	B5	1147	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	2488	A	C4-C5-C6	5.59	119.80	117.00
53	B5	2585	G	C5-C6-O6	-5.59	125.25	128.60
53	B5	2364	G	C5-C6-O6	-5.59	125.25	128.60
53	B5	2632	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	2749	G	O4'-C1'-N9	5.59	112.67	108.20
53	B5	2800	G	O4'-C1'-N9	5.59	112.67	108.20
1	AA	288	A	O4'-C1'-N9	5.59	112.67	108.20
1	AA	997	A	O4'-C1'-N9	5.59	112.67	108.20
1	AA	1364	G	N1-C6-O6	5.59	123.25	119.90
53	B5	387	A	O4'-C1'-N9	5.59	112.67	108.20
53	B5	1542	G	C5-C6-O6	-5.59	125.25	128.60
1	AA	259	U	O4'-C1'-N1	5.58	112.67	108.20
53	B5	1097	G	O4'-C1'-N9	5.58	112.67	108.20
53	B5	1237	G	N1-C6-O6	5.58	123.25	119.90
53	B5	1929	G	O4'-C1'-N9	5.58	112.67	108.20
53	B5	2818	U	O4'-C1'-N1	5.58	112.67	108.20
1	AA	390	G	N1-C6-O6	5.58	123.25	119.90
1	AA	419	G	C5-C6-O6	-5.58	125.25	128.60
1	AA	1162	G	O4'-C1'-N9	5.58	112.67	108.20
51	B3	75	G	O4'-C1'-N9	5.58	112.67	108.20
53	B5	341	G	O4'-C1'-N9	5.58	112.67	108.20
53	B5	628	A	C5-C6-N6	-5.58	119.23	123.70
53	B5	1446	A	O4'-C1'-N9	5.58	112.67	108.20
1	AA	898	G	O4'-C1'-N9	5.58	112.67	108.20
1	AA	947	G	O4'-C1'-N9	5.58	112.67	108.20
1	AA	1392	G	C5-C6-O6	-5.58	125.25	128.60
53	B5	16	A	P-O3'-C3'	5.58	126.40	119.70
53	B5	265	A	O4'-C1'-N9	5.58	112.66	108.20
53	B5	725	G	O4'-C1'-N9	5.58	112.67	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2160	G	O4'-C1'-N9	5.58	112.67	108.20
53	B5	3322	A	C5-C6-N6	-5.58	119.23	123.70
53	B5	145	G	C5-C6-O6	-5.58	125.25	128.60
1	AA	673	A	O4'-C1'-N9	5.58	112.66	108.20
1	AA	729	G	N1-C6-O6	5.58	123.25	119.90
53	B5	712	G	C4-N9-C1'	5.58	133.75	126.50
53	B5	1488	G	C5-C6-O6	-5.58	125.25	128.60
53	B5	2770	G	P-O3'-C3'	5.58	126.39	119.70
53	B5	902	G	N1-C6-O6	5.58	123.25	119.90
53	B5	1250	G	C5-C6-O6	-5.58	125.25	128.60
53	B5	2386	A	O4'-C1'-N9	5.58	112.66	108.20
1	AA	194	U	C2-N1-C1'	5.57	124.39	117.70
53	B5	33	G	O4'-C1'-N9	5.57	112.66	108.20
53	B5	206	G	O4'-C1'-N9	5.57	112.66	108.20
53	B5	1051	U	O4'-C1'-N1	5.57	112.66	108.20
53	B5	1083	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	3102	G	O4'-C1'-N9	5.57	112.66	108.20
52	B4	19	C	N3-C4-N4	5.57	121.90	118.00
53	B5	1480	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	2224	A	C5-C6-N6	-5.57	119.24	123.70
1	AA	971	G	O4'-C1'-N9	5.57	112.66	108.20
1	AA	1715	G	O4'-C1'-N9	5.57	112.66	108.20
1	AA	1744	A	O4'-C1'-N9	5.57	112.66	108.20
53	B5	406	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	1190	A	P-O3'-C3'	5.57	126.38	119.70
53	B5	1375	G	O4'-C1'-N9	5.57	112.66	108.20
53	B5	2560	U	O4'-C1'-N1	5.57	112.66	108.20
53	B5	2648	G	C5-C6-O6	-5.57	125.26	128.60
1	AA	300	A	O4'-C1'-N9	5.57	112.66	108.20
1	AA	438	A	O4'-C1'-N9	5.57	112.66	108.20
1	AA	982	A	O4'-C1'-N9	5.57	112.66	108.20
1	AA	996	G	C5-C6-O6	-5.57	125.26	128.60
19	A7	42	G	N9-C4-C5	5.57	107.63	105.40
53	B5	537	A	O4'-C1'-N9	5.57	112.66	108.20
53	B5	1252	A	O4'-C1'-N9	5.57	112.66	108.20
53	B5	1812	G	N1-C6-O6	5.57	123.24	119.90
53	B5	1888	U	O4'-C1'-N1	5.57	112.66	108.20
53	B5	2440	G	C5-C6-O6	-5.57	125.26	128.60
1	AA	763	G	O4'-C1'-N9	5.57	112.65	108.20
1	AA	1068	U	O4'-C1'-N1	5.57	112.65	108.20
1	AA	1660	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	277	G	C5-C6-O6	-5.57	125.26	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1385	C	N3-C4-C5	-5.57	119.67	121.90
53	B5	1637	A	O4'-C1'-N9	5.57	112.65	108.20
1	AA	1741	U	O4'-C1'-N1	5.57	112.65	108.20
18	AT	33	TYR	CB-CG-CD1	5.57	124.34	121.00
51	B3	25	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	1680	G	C5-C6-O6	-5.57	125.26	128.60
53	B5	1885	U	O4'-C1'-N1	5.57	112.65	108.20
53	B5	2634	U	O4'-C1'-N1	5.57	112.65	108.20
53	B5	2659	G	O4'-C1'-N9	5.57	112.65	108.20
53	B5	3078	U	O4'-C1'-N1	5.57	112.65	108.20
1	AA	865	A	OP1-P-OP2	5.56	127.95	119.60
53	B5	33	G	C5-C6-O6	-5.56	125.26	128.60
53	B5	900	G	O4'-C1'-N9	5.56	112.65	108.20
53	B5	2149	A	O4'-C1'-N9	5.56	112.65	108.20
53	B5	3069	G	O4'-C1'-N9	5.56	112.65	108.20
1	AA	642	G	O4'-C1'-N9	5.56	112.65	108.20
1	AA	1003	U	O4'-C1'-N1	5.56	112.65	108.20
53	B5	337	G	C5-C6-O6	-5.56	125.26	128.60
53	B5	835	G	C5-C6-O6	-5.56	125.26	128.60
53	B5	1528	G	C5-C6-O6	-5.56	125.26	128.60
53	B5	1575	A	O4'-C1'-N9	5.56	112.65	108.20
53	B5	659	G	C5-C6-O6	-5.56	125.26	128.60
53	B5	1571	A	O4'-C1'-N9	5.56	112.65	108.20
1	AA	6	G	C5-C6-O6	-5.56	125.26	128.60
1	AA	811	A	O4'-C1'-N9	5.56	112.65	108.20
19	A7	24	G	C4-C5-N7	5.56	113.02	110.80
53	B5	1271	A	C4-C5-C6	5.56	119.78	117.00
53	B5	2550	U	O4'-C1'-N1	5.56	112.65	108.20
1	AA	562	G	O4'-C1'-N9	5.56	112.65	108.20
1	AA	1039	G	C5-C6-O6	-5.56	125.27	128.60
1	AA	1179	A	O4'-C1'-N9	5.56	112.64	108.20
1	AA	1640	G	O4'-C1'-N9	5.56	112.65	108.20
51	B3	21	G	O4'-C1'-N9	5.56	112.65	108.20
53	B5	432	G	C5-C6-O6	-5.56	125.27	128.60
53	B5	2533	G	O4'-C1'-N9	5.56	112.65	108.20
53	B5	3124	G	C5-C6-O6	-5.56	125.27	128.60
53	B5	1789	G	C5-C6-O6	-5.56	125.27	128.60
53	B5	3266	G	N1-C6-O6	5.56	123.23	119.90
19	A7	67	A	C3'-C2'-C1'	5.55	105.94	101.50
53	B5	1	G	N1-C6-O6	5.55	123.23	119.90
53	B5	2395	G	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2451	G	C5-C6-O6	-5.55	125.27	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2747	A	O4'-C1'-N9	5.55	112.64	108.20
1	AA	1140	A	O4'-C1'-N9	5.55	112.64	108.20
1	AA	1194	G	P-O3'-C3'	5.55	126.36	119.70
53	B5	1849	C	O4'-C1'-N1	5.55	112.64	108.20
1	AA	821	U	O4'-C1'-N1	5.55	112.64	108.20
1	AA	895	G	O4'-C1'-N9	5.55	112.64	108.20
1	AA	1080	G	O4'-C1'-N9	5.55	112.64	108.20
1	AA	1491	A	C5-C6-N6	-5.55	119.26	123.70
1	AA	1772	G	C5-C6-O6	-5.55	125.27	128.60
51	B3	94	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	738	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2779	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	70	A	C4-C5-C6	5.55	119.77	117.00
53	B5	1057	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2221	G	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2281	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2754	G	C5-C6-O6	-5.55	125.27	128.60
53	B5	2814	G	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2896	A	O4'-C1'-N9	5.55	112.64	108.20
1	AA	723	G	C5-C6-O6	-5.55	125.27	128.60
1	AA	1518	U	O5'-P-OP2	5.55	117.36	110.70
53	B5	1673	G	P-O3'-C3'	5.55	126.36	119.70
53	B5	1727	G	O4'-C1'-N9	5.55	112.64	108.20
53	B5	3016	A	C5-C6-N6	-5.55	119.26	123.70
1	AA	1554	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	718	G	O4'-C1'-N9	5.55	112.64	108.20
53	B5	1236	G	N1-C6-O6	5.55	123.23	119.90
53	B5	1491	A	C5-C6-N6	-5.55	119.26	123.70
53	B5	2412	G	C5-C6-O6	-5.55	125.27	128.60
53	B5	2670	G	N1-C6-O6	5.55	123.23	119.90
53	B5	2780	A	O4'-C1'-N9	5.55	112.64	108.20
53	B5	2341	A	O4'-C1'-N9	5.54	112.64	108.20
53	B5	3252	G	O4'-C1'-N9	5.54	112.64	108.20
1	AA	1647	G	O4'-C1'-N9	5.54	112.64	108.20
19	A7	53	G	C4'-C3'-C2'	-5.54	97.06	102.60
53	B5	86	G	C5-C6-O6	-5.54	125.27	128.60
53	B5	866	A	O4'-C1'-N9	5.54	112.64	108.20
53	B5	870	G	O4'-C1'-N9	5.54	112.64	108.20
53	B5	1064	A	O4'-C1'-N9	5.54	112.64	108.20
53	B5	1798	A	O4'-C1'-N9	5.54	112.64	108.20
53	B5	2811	A	C5-C6-N6	-5.54	119.27	123.70
53	B5	3218	A	C5-C6-N6	-5.54	119.27	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	328	A	O4'-C1'-N9	5.54	112.63	108.20
1	AA	1220	A	O4'-C1'-N9	5.54	112.63	108.20
17	AR	286	GLU	CA-CB-CG	5.54	125.59	113.40
19	A7	68	U	N1-C2-O2	5.54	126.68	122.80
53	B5	13	A	C5-C6-N6	-5.54	119.27	123.70
53	B5	39	A	C4-C5-C6	5.54	119.77	117.00
53	B5	582	G	C5-C6-O6	-5.54	125.28	128.60
53	B5	1744	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	154	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	170	U	O4'-C1'-N1	5.54	112.63	108.20
53	B5	236	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	989	C	C1'-O4'-C4'	-5.54	105.47	109.90
53	B5	979	G	C5-C6-O6	-5.54	125.28	128.60
53	B5	1729	A	O4'-C1'-N9	5.54	112.63	108.20
53	B5	1775	G	O4'-C1'-N9	5.54	112.63	108.20
53	B5	3337	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	1729	A	O4'-C1'-N9	5.54	112.63	108.20
53	B5	160	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	247	A	O4'-C1'-N9	5.54	112.63	108.20
51	B3	41	G	C5-C6-O6	-5.54	125.28	128.60
51	B3	80	G	O4'-C1'-N9	5.54	112.63	108.20
53	B5	243	G	N1-C6-O6	5.54	123.22	119.90
53	B5	1230	G	C5-C6-O6	-5.54	125.28	128.60
53	B5	2665	U	O4'-C1'-N1	5.54	112.63	108.20
53	B5	2728	G	C5-C6-O6	-5.54	125.28	128.60
53	B5	3140	G	C5-C6-O6	-5.54	125.28	128.60
53	B5	3256	G	C5-C6-O6	-5.54	125.28	128.60
1	AA	1301	G	N1-C6-O6	5.53	123.22	119.90
53	B5	1384	U	C2-N1-C1'	5.53	124.34	117.70
53	B5	2235	C	N3-C4-N4	5.53	121.87	118.00
53	B5	2236	G	O4'-C1'-N9	5.53	112.63	108.20
53	B5	2753	G	C5-C6-O6	-5.53	125.28	128.60
1	AA	871	G	C5-C6-O6	-5.53	125.28	128.60
53	B5	324	A	C5-C6-N6	-5.53	119.28	123.70
53	B5	2669	G	O4'-C1'-N9	5.53	112.62	108.20
53	B5	386	A	C5-C6-N6	-5.53	119.28	123.70
53	B5	936	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	2283	G	C5-C6-O6	-5.53	125.28	128.60
53	B5	2377	G	O4'-C1'-N9	5.53	112.62	108.20
53	B5	2466	G	C5-C6-O6	-5.53	125.28	128.60
53	B5	3103	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	3239	G	C5-C6-O6	-5.53	125.28	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1195	G	C5-C6-O6	-5.53	125.28	128.60
1	AA	866	G	C6-C5-N7	-5.53	127.08	130.40
1	AA	1022	A	C5-C6-N6	-5.53	119.28	123.70
1	AA	1106	G	O4'-C1'-N9	5.53	112.62	108.20
53	B5	378	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	965	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	1401	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	1711	C	N3-C4-N4	5.53	121.87	118.00
53	B5	2279	A	C4-C5-C6	5.53	119.76	117.00
1	AA	180	A	O4'-C1'-N9	5.53	112.62	108.20
1	AA	549	G	O4'-C1'-N9	5.53	112.62	108.20
1	AA	950	A	O4'-C1'-N9	5.53	112.62	108.20
1	AA	992	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	57	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	187	A	O4'-C1'-N9	5.53	112.62	108.20
53	B5	1282	G	O4'-C1'-N9	5.53	112.62	108.20
1	AA	1399	G	O4'-C1'-N9	5.52	112.62	108.20
53	B5	2834	G	C5-C6-O6	-5.52	125.29	128.60
1	AA	1190	A	O4'-C1'-N9	5.52	112.62	108.20
1	AA	1292	G	C5-C6-O6	-5.52	125.29	128.60
53	B5	198	A	O4'-C1'-N9	5.52	112.62	108.20
53	B5	1234	G	C5-C6-O6	-5.52	125.29	128.60
53	B5	1623	G	C5-C6-O6	-5.52	125.29	128.60
53	B5	2367	A	O4'-C1'-N9	5.52	112.62	108.20
53	B5	3326	G	N1-C6-O6	5.52	123.21	119.90
1	AA	1545	A	C4'-C3'-C2'	-5.52	97.08	102.60
53	B5	365	A	O4'-C1'-N9	5.52	112.62	108.20
53	B5	1654	A	C4-C5-C6	5.52	119.76	117.00
1	AA	879	G	O4'-C1'-N9	5.52	112.62	108.20
1	AA	891	A	O4'-C1'-N9	5.52	112.62	108.20
53	B5	997	A	O4'-C1'-N9	5.52	112.62	108.20
53	B5	1059	G	O4'-C1'-N9	5.52	112.61	108.20
53	B5	1374	G	C5-C6-O6	-5.52	125.29	128.60
1	AA	116	U	O4'-C1'-N1	5.52	112.61	108.20
1	AA	383	G	O4'-C1'-N9	5.52	112.61	108.20
53	B5	1064	A	C5-C6-N1	-5.52	114.94	117.70
53	B5	1204	A	O4'-C1'-N9	5.52	112.61	108.20
53	B5	1287	A	O4'-C1'-N9	5.52	112.61	108.20
53	B5	1541	G	C5-C6-O6	-5.52	125.29	128.60
53	B5	1587	A	C4-C5-C6	5.52	119.76	117.00
53	B5	1784	G	C5-C6-O6	-5.52	125.29	128.60
1	AA	1658	A	O4'-C1'-N9	5.52	112.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BI	104	SER	N-CA-CB	5.52	118.77	110.50
52	B4	131	A	O4'-C1'-N9	5.52	112.61	108.20
53	B5	622	A	O4'-C1'-N9	5.52	112.61	108.20
53	B5	3008	A	O4'-C1'-N9	5.52	112.61	108.20
1	AA	506	A	O4'-C1'-N9	5.51	112.61	108.20
1	AA	1038	A	O4'-C1'-N9	5.51	112.61	108.20
1	AA	1205	C	N3-C4-N4	5.51	121.86	118.00
8	AI	97	VAL	CB-CA-C	5.51	121.88	111.40
52	B4	16	G	C5-C6-O6	-5.51	125.29	128.60
53	B5	521	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	904	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	1856	C	O4'-C1'-N1	5.51	112.61	108.20
53	B5	2395	G	C5-C6-O6	-5.51	125.29	128.60
1	AA	69	G	N1-C6-O6	5.51	123.21	119.90
53	B5	514	G	C5-C6-O6	-5.51	125.29	128.60
53	B5	917	A	C5-C6-N6	-5.51	119.29	123.70
53	B5	1084	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	1232	C	N3-C4-N4	5.51	121.86	118.00
53	B5	1249	G	P-O3'-C3'	5.51	126.31	119.70
1	AA	246	G	C5-C6-O6	-5.51	125.30	128.60
1	AA	746	A	O4'-C1'-N9	5.51	112.61	108.20
1	AA	1264	G	C5-C6-O6	-5.51	125.29	128.60
1	AA	1292	G	O4'-C1'-N9	5.51	112.61	108.20
53	B5	419	G	C5-C6-O6	-5.51	125.29	128.60
53	B5	607	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	771	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	1806	A	P-O3'-C3'	5.51	126.31	119.70
53	B5	1922	A	O4'-C1'-N9	5.51	112.61	108.20
53	B5	2290	C	O4'-C1'-N1	5.51	112.61	108.20
53	B5	3187	U	O4'-C1'-N1	5.51	112.61	108.20
1	AA	153	G	O4'-C1'-N9	5.51	112.61	108.20
53	B5	661	G	C5-C6-O6	-5.51	125.30	128.60
1	AA	1246	U	O4'-C1'-N1	5.51	112.61	108.20
19	A7	28	C	N3-C4-N4	-5.51	114.15	118.00
53	B5	608	A	O4'-C1'-N9	5.51	112.60	108.20
53	B5	2951	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	634	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	1196	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	1792	A	C5-C6-N6	-5.50	119.30	123.70
51	B3	70	A	C5-C6-N6	-5.50	119.30	123.70
52	B4	125	U	O4'-C1'-N1	5.50	112.60	108.20
53	B5	1261	G	N1-C6-O6	5.50	123.20	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1603	A	C5-C6-N6	-5.50	119.30	123.70
53	B5	1789	G	O4'-C1'-N9	5.50	112.60	108.20
53	B5	2172	A	C5-C6-N6	-5.50	119.30	123.70
1	AA	970	A	O4'-C1'-N9	5.50	112.60	108.20
1	AA	1137	G	O4'-C1'-N9	5.50	112.60	108.20
53	B5	813	G	C5-C6-O6	-5.50	125.30	128.60
53	B5	3189	G	O4'-C1'-N9	5.50	112.60	108.20
27	BC	129	ALA	N-CA-CB	5.50	117.80	110.10
53	B5	856	G	O4'-C1'-N9	5.50	112.60	108.20
53	B5	2574	G	N1-C6-O6	5.50	123.20	119.90
1	AA	173	A	O4'-C1'-N9	5.50	112.60	108.20
1	AA	287	G	C5-C6-O6	-5.50	125.30	128.60
53	B5	34	A	C4-C5-C6	5.50	119.75	117.00
53	B5	287	G	O4'-C1'-N9	5.50	112.60	108.20
53	B5	567	G	O4'-C1'-N9	5.50	112.60	108.20
53	B5	856	G	C5-C6-O6	-5.50	125.30	128.60
53	B5	1538	G	C5-C6-O6	-5.50	125.30	128.60
53	B5	2794	G	O4'-C1'-N9	5.50	112.60	108.20
1	AA	838	G	O4'-C1'-N9	5.50	112.60	108.20
19	A7	8	U	C5-C6-N1	-5.50	119.95	122.70
53	B5	66	A	O4'-C1'-N9	5.50	112.60	108.20
53	B5	77	A	C5-C6-N6	-5.50	119.30	123.70
53	B5	171	G	N1-C6-O6	5.50	123.20	119.90
53	B5	299	G	C5-C6-O6	-5.50	125.30	128.60
53	B5	2255	A	O4'-C1'-N9	5.50	112.60	108.20
53	B5	3017	A	O4'-C1'-N9	5.50	112.60	108.20
53	B5	3396	U	O4'-C1'-N1	5.50	112.60	108.20
1	AA	1518	U	C3'-C2'-C1'	-5.50	97.10	101.50
53	B5	2748	A	O4'-C1'-N9	5.50	112.60	108.20
19	A7	53	G	C2-N3-C4	5.49	114.65	111.90
53	B5	529	A	O4'-C1'-N9	5.49	112.59	108.20
1	AA	112	A	O4'-C1'-N9	5.49	112.59	108.20
1	AA	437	A	C5-C6-N6	-5.49	119.31	123.70
1	AA	925	A	O4'-C1'-N9	5.49	112.59	108.20
53	B5	3317	U	O4'-C1'-N1	5.49	112.59	108.20
1	AA	1435	G	C5-C6-O6	-5.49	125.31	128.60
53	B5	2623	G	O4'-C1'-N9	5.49	112.59	108.20
1	AA	457	G	O4'-C1'-N9	5.49	112.59	108.20
1	AA	601	A	O4'-C1'-N9	5.49	112.59	108.20
1	AA	1062	A	O4'-C1'-N9	5.49	112.59	108.20
1	AA	1415	G	P-O3'-C3'	5.49	126.28	119.70
1	AA	1567	A	O4'-C1'-N9	5.49	112.59	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	214	G	O4'-C1'-N9	5.49	112.59	108.20
53	B5	1418	A	C4-C5-C6	5.49	119.74	117.00
53	B5	3059	G	C5-C6-O6	-5.49	125.31	128.60
53	B5	3282	U	O4'-C1'-N1	5.49	112.59	108.20
52	B4	124	G	C5-C6-O6	-5.49	125.31	128.60
53	B5	188	U	O4'-C1'-N1	5.49	112.59	108.20
53	B5	689	U	O4'-C1'-N1	5.49	112.59	108.20
1	AA	429	G	O4'-C1'-N9	5.49	112.59	108.20
1	AA	432	G	O4'-C1'-N9	5.49	112.59	108.20
1	AA	1216	C	N3-C4-N4	5.49	121.84	118.00
52	B4	46	G	O4'-C1'-N9	5.49	112.59	108.20
53	B5	433	A	C5-C6-N6	-5.49	119.31	123.70
53	B5	517	G	O4'-C1'-N9	5.49	112.59	108.20
53	B5	960	U	C2-N1-C1'	5.49	124.28	117.70
53	B5	1139	G	O4'-C1'-N9	5.49	112.59	108.20
53	B5	2291	A	C5-C6-N1	-5.49	114.96	117.70
53	B5	2295	A	O4'-C1'-N9	5.49	112.59	108.20
53	B5	3322	A	O4'-C1'-N9	5.49	112.59	108.20
53	B5	838	G	O4'-C1'-N9	5.48	112.59	108.20
53	B5	2370	G	O4'-C1'-N9	5.48	112.59	108.20
1	AA	253	A	O4'-C1'-N9	5.48	112.59	108.20
1	AA	1765	G	N1-C6-O6	5.48	123.19	119.90
52	B4	42	G	O4'-C1'-N9	5.48	112.59	108.20
53	B5	279	U	O4'-C1'-N1	5.48	112.59	108.20
53	B5	987	U	O4'-C1'-N1	5.48	112.59	108.20
53	B5	1310	G	O4'-C1'-N9	5.48	112.59	108.20
53	B5	1610	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	3074	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	3305	A	C4-C5-C6	5.48	119.74	117.00
1	AA	39	A	C5-C6-N6	-5.48	119.31	123.70
1	AA	156	A	O4'-C1'-N9	5.48	112.58	108.20
1	AA	837	G	O4'-C1'-N9	5.48	112.58	108.20
1	AA	1116	G	C5-C6-O6	-5.48	125.31	128.60
1	AA	1407	A	O4'-C1'-N9	5.48	112.58	108.20
53	B5	616	G	O4'-C1'-N9	5.48	112.58	108.20
53	B5	875	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	3206	A	O4'-C1'-N9	5.48	112.58	108.20
1	AA	985	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	2718	U	C5'-C4'-O4'	5.48	115.67	109.10
1	AA	10	G	O4'-C1'-N9	5.48	112.58	108.20
1	AA	1610	U	O4'-C1'-N1	5.48	112.58	108.20
1	AA	1668	G	O4'-C1'-N9	5.48	112.58	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	781	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	891	G	O4'-C1'-N9	5.48	112.58	108.20
53	B5	1812	G	O4'-C1'-N9	5.48	112.58	108.20
53	B5	2294	U	O4'-C1'-N1	5.48	112.58	108.20
53	B5	2447	A	O4'-C1'-N9	5.48	112.58	108.20
53	B5	134	U	O4'-C1'-N1	5.48	112.58	108.20
53	B5	2169	G	C5-C6-O6	-5.48	125.31	128.60
53	B5	2326	A	C5-C6-N6	-5.48	119.32	123.70
53	B5	2984	C	N3-C4-N4	5.48	121.83	118.00
1	AA	195	G	O4'-C1'-N9	5.47	112.58	108.20
1	AA	264	G	N1-C6-O6	5.47	123.18	119.90
1	AA	383	G	C5-C6-O6	-5.47	125.31	128.60
53	B5	127	G	O4'-C1'-N9	5.47	112.58	108.20
53	B5	1207	G	O4'-C1'-N9	5.47	112.58	108.20
53	B5	2249	G	N1-C6-O6	5.47	123.19	119.90
53	B5	256	G	O4'-C1'-N9	5.47	112.58	108.20
1	AA	260	U	O4'-C1'-N1	5.47	112.58	108.20
1	AA	1234	A	O4'-C1'-N9	5.47	112.58	108.20
53	B5	3343	G	C5-C6-O6	-5.47	125.32	128.60
53	B5	3367	C	P-O3'-C3'	5.47	126.27	119.70
1	AA	650	U	O4'-C1'-N1	5.47	112.58	108.20
1	AA	978	A	O4'-C1'-N9	5.47	112.58	108.20
1	AA	1305	G	C5-C6-O6	-5.47	125.32	128.60
1	AA	1476	G	O4'-C1'-N9	5.47	112.58	108.20
28	BD	50	TYR	CB-CG-CD2	5.47	124.28	121.00
53	B5	1643	A	C5-C6-N6	-5.47	119.33	123.70
1	AA	437	A	O4'-C1'-N9	5.47	112.58	108.20
53	B5	65	A	P-O3'-C3'	5.47	126.26	119.70
1	AA	364	G	O4'-C1'-N9	5.47	112.57	108.20
53	B5	1382	G	C5-C6-O6	-5.47	125.32	128.60
53	B5	1497	C	N3-C4-N4	5.47	121.83	118.00
53	B5	1721	U	O4'-C1'-N1	5.47	112.57	108.20
53	B5	2385	G	O4'-C1'-N9	5.47	112.57	108.20
53	B5	2453	U	O4'-C1'-N1	5.47	112.57	108.20
53	B5	2847	A	C5-C6-N6	-5.47	119.33	123.70
1	AA	84	A	O4'-C1'-N9	5.46	112.57	108.20
1	AA	866	G	O5'-C5'-C4'	5.46	122.08	111.70
51	B3	99	A	O4'-C1'-N9	5.46	112.57	108.20
52	B4	18	U	O4'-C1'-N1	5.46	112.57	108.20
53	B5	635	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	1090	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	3061	G	O4'-C1'-N9	5.46	112.57	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	422	G	O4'-C1'-N9	5.46	112.57	108.20
53	B5	2987	A	O4'-C1'-N9	5.46	112.57	108.20
1	AA	1172	U	O4'-C1'-N1	5.46	112.57	108.20
1	AA	1634	C	C1'-O4'-C4'	-5.46	105.53	109.90
19	A7	21	A	P-O3'-C3'	5.46	126.25	119.70
19	A7	43	G	C5-C6-O6	5.46	131.88	128.60
53	B5	137	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	490	A	O4'-C1'-N9	5.46	112.57	108.20
53	B5	869	G	O4'-C1'-N9	5.46	112.57	108.20
53	B5	891	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	2115	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	2201	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	2368	A	O4'-C1'-N9	5.46	112.57	108.20
53	B5	2703	A	C5-C6-N6	-5.46	119.33	123.70
53	B5	3323	A	O4'-C1'-N9	5.46	112.57	108.20
1	AA	485	A	C5-C6-N6	-5.46	119.33	123.70
53	B5	1808	G	C5-C6-O6	-5.46	125.32	128.60
53	B5	2590	A	O4'-C1'-N9	5.46	112.57	108.20
53	B5	3150	A	O4'-C1'-N9	5.46	112.57	108.20
53	B5	3065	G	C5-C6-O6	-5.46	125.33	128.60
1	AA	551	G	O4'-C1'-N9	5.46	112.56	108.20
1	AA	824	G	C5-C6-O6	-5.46	125.33	128.60
1	AA	985	G	O4'-C1'-N9	5.46	112.56	108.20
1	AA	1240	A	C4-C5-C6	5.46	119.73	117.00
1	AA	1505	G	O4'-C1'-N9	5.46	112.56	108.20
52	B4	134	G	C5-C6-O6	-5.46	125.33	128.60
53	B5	550	A	O4'-C1'-N9	5.46	112.56	108.20
53	B5	2530	G	C5-C6-O6	-5.46	125.33	128.60
53	B5	2850	G	C5-C6-O6	-5.46	125.33	128.60
1	AA	885	G	O4'-C1'-N9	5.46	112.56	108.20
53	B5	347	G	O4'-C1'-N9	5.46	112.56	108.20
19	A7	15	G	C5-N7-C8	5.45	107.03	104.30
19	A7	20	G	C5-N7-C8	-5.45	101.57	104.30
53	B5	56	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	143	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	934	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	1908	A	O4'-C1'-N9	5.45	112.56	108.20
53	B5	2690	G	C5-C6-O6	-5.45	125.33	128.60
19	A7	76	A	C1'-O4'-C4'	-5.45	105.54	109.90
53	B5	3099	C	N3-C4-C5	-5.45	119.72	121.90
1	AA	461	G	O4'-C1'-N9	5.45	112.56	108.20
1	AA	1259	G	C5-C6-O6	-5.45	125.33	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	956	U	O4'-C1'-N1	5.45	112.56	108.20
53	B5	1431	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	3144	G	O4'-C1'-N9	5.45	112.56	108.20
53	B5	3348	G	O4'-C1'-N9	5.45	112.56	108.20
1	AA	23	G	O4'-C1'-N9	5.45	112.56	108.20
1	AA	1429	U	O4'-C1'-N1	5.45	112.56	108.20
33	BI	159	PHE	CB-CG-CD1	5.45	124.61	120.80
53	B5	353	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	433	A	C4-C5-C6	5.45	119.72	117.00
53	B5	711	A	C5-C6-N6	-5.45	119.34	123.70
53	B5	2201	G	O4'-C1'-N9	5.45	112.56	108.20
53	B5	2636	A	C5-C6-N6	-5.45	119.34	123.70
53	B5	2957	G	C5-C6-O6	-5.45	125.33	128.60
1	AA	1124	G	O4'-C1'-N9	5.45	112.56	108.20
53	B5	187	A	C4-C5-C6	5.45	119.72	117.00
53	B5	575	G	C5-C6-O6	-5.45	125.33	128.60
53	B5	1780	G	O4'-C1'-N9	5.45	112.56	108.20
53	B5	2129	U	O4'-C1'-N1	5.45	112.56	108.20
53	B5	2136	C	O4'-C1'-N1	5.45	112.56	108.20
1	AA	422	G	C5-C6-O6	-5.45	125.33	128.60
1	AA	655	G	N1-C6-O6	5.45	123.17	119.90
1	AA	1230	A	O4'-C1'-N9	5.45	112.56	108.20
1	AA	1683	G	O4'-C1'-N9	5.45	112.56	108.20
19	A7	72	C	O3'-P-O5'	5.45	114.35	104.00
53	B5	585	A	O4'-C1'-N9	5.45	112.56	108.20
53	B5	843	A	O4'-C1'-N9	5.45	112.56	108.20
1	AA	83	G	O4'-C1'-N9	5.44	112.56	108.20
1	AA	127	G	C5-C6-O6	-5.44	125.33	128.60
1	AA	171	A	O4'-C1'-N9	5.44	112.56	108.20
53	B5	1266	G	C5-C6-O6	-5.44	125.33	128.60
1	AA	100	A	C4-C5-C6	5.44	119.72	117.00
1	AA	1473	A	C5-C6-N6	-5.44	119.35	123.70
27	BC	116	ARG	NE-CZ-NH1	5.44	123.02	120.30
53	B5	2608	G	N1-C6-O6	5.44	123.17	119.90
53	B5	3232	G	C5-C6-O6	-5.44	125.33	128.60
1	AA	465	G	O4'-C1'-N9	5.44	112.55	108.20
53	B5	394	G	O4'-C1'-N9	5.44	112.55	108.20
1	AA	278	U	O4'-C1'-N1	5.44	112.55	108.20
1	AA	624	G	C5-C6-O6	-5.44	125.34	128.60
51	B3	96	G	O4'-C1'-N9	5.44	112.55	108.20
53	B5	3337	G	O4'-C1'-N9	5.44	112.55	108.20
53	B5	1394	A	O4'-C1'-N9	5.44	112.55	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1715	A	O4'-C1'-N9	5.44	112.55	108.20
53	B5	2592	G	O4'-C1'-N9	5.44	112.55	108.20
1	AA	1212	C	O4'-C1'-N1	5.44	112.55	108.20
1	AA	1338	A	O4'-C1'-N9	5.44	112.55	108.20
35	BK	121	PHE	CB-CG-CD2	-5.44	117.00	120.80
53	B5	72	C	N3-C4-N4	5.44	121.81	118.00
53	B5	692	A	O4'-C1'-N9	5.44	112.55	108.20
53	B5	2279	A	O4'-C1'-N9	5.44	112.55	108.20
53	B5	3310	A	C4-C5-C6	5.44	119.72	117.00
1	AA	373	G	O4'-C1'-N9	5.43	112.55	108.20
53	B5	331	G	O4'-C1'-N9	5.43	112.55	108.20
53	B5	374	A	O4'-C1'-N9	5.43	112.55	108.20
53	B5	932	U	P-O3'-C3'	5.43	126.22	119.70
53	B5	1048	A	C4-C5-C6	5.43	119.72	117.00
53	B5	1097	G	C5-C6-O6	-5.43	125.34	128.60
53	B5	1915	A	C5-C6-N6	-5.43	119.35	123.70
53	B5	3268	G	C5-C6-O6	-5.43	125.34	128.60
1	AA	283	U	O4'-C1'-N1	5.43	112.55	108.20
1	AA	1133	U	O4'-C1'-N1	5.43	112.55	108.20
1	AA	1135	A	O4'-C1'-N9	5.43	112.55	108.20
1	AA	1752	A	O4'-C1'-N9	5.43	112.55	108.20
19	A7	68	U	C4-C5-C6	5.43	122.96	119.70
53	B5	239	G	C5-C6-O6	-5.43	125.34	128.60
53	B5	1066	G	O4'-C1'-N9	5.43	112.55	108.20
53	B5	2902	A	C5-C6-N6	-5.43	119.35	123.70
53	B5	3054	U	O4'-C1'-N1	5.43	112.55	108.20
53	B5	2145	A	C4-C5-C6	5.43	119.72	117.00
1	AA	17	C	N3-C4-N4	5.43	121.80	118.00
1	AA	62	A	C5-C6-N6	-5.43	119.36	123.70
1	AA	1040	A	P-O3'-C3'	5.43	126.21	119.70
1	AA	1049	U	P-O3'-C3'	5.43	126.22	119.70
1	AA	1061	G	N1-C6-O6	5.43	123.16	119.90
1	AA	1660	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	350	C	N3-C4-C5	-5.43	119.73	121.90
53	B5	740	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	1113	G	C5-C6-O6	-5.43	125.34	128.60
53	B5	2192	C	N3-C4-N4	5.43	121.80	118.00
53	B5	2840	C	O4'-C1'-N1	5.43	112.54	108.20
53	B5	3188	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	3245	A	C4-C5-C6	5.43	119.72	117.00
1	AA	1646	A	O4'-C1'-N9	5.43	112.54	108.20
19	A7	73	A	C5-C6-N1	5.43	120.41	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	117	U	O4'-C1'-N1	5.43	112.54	108.20
1	AA	1653	A	O4'-C1'-N9	5.43	112.54	108.20
19	A7	6	U	C4'-C3'-C2'	-5.43	97.17	102.60
19	A7	45	G	C5'-C4'-C3'	-5.43	107.32	116.00
53	B5	538	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	617	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	1519	G	O4'-C1'-N9	5.43	112.54	108.20
53	B5	3142	A	O4'-C1'-N9	5.43	112.54	108.20
1	AA	262	U	O4'-C1'-N1	5.42	112.54	108.20
1	AA	608	U	P-O3'-C3'	5.42	126.21	119.70
1	AA	1754	A	O4'-C1'-N9	5.42	112.54	108.20
1	AA	1784	G	O4'-C1'-N9	5.42	112.54	108.20
29	BE	187	THR	C-N-CA	5.42	135.26	121.70
53	B5	1536	G	C5-C6-O6	-5.42	125.34	128.60
53	B5	3128	G	O4'-C1'-N9	5.42	112.54	108.20
53	B5	103	G	O4'-C1'-N9	5.42	112.54	108.20
53	B5	3294	A	O4'-C1'-N9	5.42	112.54	108.20
1	AA	47	A	C4-C5-C6	5.42	119.71	117.00
1	AA	953	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	1035	A	O4'-C1'-N9	5.42	112.54	108.20
1	AA	1522	A	C4'-C3'-C2'	5.42	108.02	102.60
1	AA	1522	A	N1-C6-N6	5.42	121.85	118.60
1	AA	1786	G	O4'-C1'-N9	5.42	112.54	108.20
19	A7	48	C	N3-C2-O2	-5.42	118.11	121.90
53	B5	719	U	O4'-C1'-N1	5.42	112.54	108.20
53	B5	3086	A	C5-C6-N6	-5.42	119.36	123.70
1	AA	913	G	O4'-C1'-N9	5.42	112.54	108.20
1	AA	1760	A	C5-C6-N6	-5.42	119.36	123.70
53	B5	2937	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	213	A	O4'-C1'-N9	5.42	112.53	108.20
1	AA	1226	A	C5-C6-N6	-5.42	119.36	123.70
1	AA	1239	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	1357	A	O4'-C1'-N9	5.42	112.53	108.20
9	AJ	72	ASN	N-CA-CB	5.42	120.35	110.60
53	B5	699	A	O4'-C1'-N9	5.42	112.53	108.20
53	B5	888	A	O4'-C1'-N9	5.42	112.53	108.20
53	B5	1093	A	O4'-C1'-N9	5.42	112.53	108.20
53	B5	1848	G	C5-C6-O6	-5.42	125.35	128.60
53	B5	2230	C	O4'-C1'-N1	5.42	112.53	108.20
53	B5	2337	C	N3-C4-N4	5.42	121.79	118.00
53	B5	2796	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	196	G	O4'-C1'-N9	5.42	112.53	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1426	G	C5-C6-O6	-5.42	125.35	128.60
1	AA	1510	G	C5-C6-O6	-5.42	125.35	128.60
53	B5	1157	G	O4'-C1'-N9	5.42	112.53	108.20
1	AA	1116	G	O4'-C1'-N9	5.42	112.53	108.20
52	B4	72	G	C5-C6-O6	-5.42	125.35	128.60
53	B5	709	A	O4'-C1'-N9	5.42	112.53	108.20
53	B5	1862	U	O4'-C1'-N1	5.42	112.53	108.20
1	AA	78	A	O4'-C1'-N9	5.41	112.53	108.20
1	AA	397	A	O4'-C1'-N9	5.41	112.53	108.20
1	AA	1491	A	C4-C5-C6	5.41	119.71	117.00
52	B4	112	U	C2-N1-C1'	5.41	124.20	117.70
53	B5	58	G	C5-C6-O6	-5.41	125.35	128.60
53	B5	1829	G	O4'-C1'-N9	5.41	112.53	108.20
53	B5	3340	G	O4'-C1'-N9	5.41	112.53	108.20
1	AA	389	G	O4'-C1'-N9	5.41	112.53	108.20
53	B5	775	A	O4'-C1'-N9	5.41	112.53	108.20
53	B5	2607	G	C5-C6-O6	-5.41	125.35	128.60
1	AA	865	A	N9-C4-C5	5.41	107.96	105.80
1	AA	1614	G	C5-C6-O6	-5.41	125.35	128.60
4	AD	79	ARG	NE-CZ-NH1	5.41	123.00	120.30
53	B5	1017	C	N3-C4-N4	5.41	121.79	118.00
53	B5	2528	G	O4'-C1'-N9	5.41	112.53	108.20
1	AA	628	G	C5-C6-O6	-5.41	125.36	128.60
19	A7	69	U	O5'-C5'-C4'	5.41	121.98	111.70
53	B5	481	U	O4'-C1'-N1	5.41	112.53	108.20
53	B5	557	A	O4'-C1'-N9	5.41	112.53	108.20
53	B5	754	G	C5-C6-O6	-5.41	125.36	128.60
53	B5	1813	A	C4-C5-C6	5.41	119.70	117.00
53	B5	2188	A	O4'-C1'-N9	5.41	112.53	108.20
53	B5	2412	G	O4'-C1'-N9	5.41	112.53	108.20
1	AA	1090	A	O4'-C1'-N9	5.41	112.53	108.20
53	B5	808	A	C5-C6-N6	-5.41	119.37	123.70
53	B5	1113	G	O4'-C1'-N9	5.41	112.53	108.20
1	AA	326	G	O4'-C1'-N9	5.41	112.52	108.20
1	AA	624	G	O4'-C1'-N9	5.41	112.52	108.20
1	AA	952	G	O4'-C1'-N9	5.41	112.53	108.20
52	B4	152	G	C5-C6-O6	-5.41	125.36	128.60
53	B5	733	G	O4'-C1'-N9	5.41	112.53	108.20
53	B5	869	G	C5-C6-O6	-5.41	125.36	128.60
53	B5	2362	C	N3-C4-N4	5.41	121.78	118.00
1	AA	457	G	C5-C6-O6	-5.40	125.36	128.60
53	B5	901	G	N1-C6-O6	5.40	123.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1860	G	O4'-C1'-N9	5.40	112.52	108.20
1	AA	366	A	O4'-C1'-N9	5.40	112.52	108.20
1	AA	901	G	C5-C6-O6	-5.40	125.36	128.60
1	AA	1280	U	O4'-C1'-N1	5.40	112.52	108.20
53	B5	308	A	O4'-C1'-N9	5.40	112.52	108.20
53	B5	579	G	C5-C6-O6	-5.40	125.36	128.60
53	B5	2316	G	O4'-C1'-N9	5.40	112.52	108.20
53	B5	3096	C	N3-C4-C5	-5.40	119.74	121.90
1	AA	1742	A	O4'-C1'-N9	5.40	112.52	108.20
53	B5	258	G	O4'-C1'-N9	5.40	112.52	108.20
19	A7	63	C	C5-C6-N1	5.40	123.70	121.00
52	B4	136	G	C5-C6-O6	-5.40	125.36	128.60
53	B5	141	C	P-O3'-C3'	5.40	126.18	119.70
53	B5	630	A	O4'-C1'-N9	5.40	112.52	108.20
53	B5	3292	A	C4-C5-C6	5.40	119.70	117.00
53	B5	864	G	O4'-C1'-N9	5.40	112.52	108.20
53	B5	1372	C	N3-C4-N4	5.40	121.78	118.00
53	B5	2425	G	O4'-C1'-N9	5.40	112.52	108.20
1	AA	865	A	C8-N9-C4	-5.39	103.64	105.80
53	B5	22	G	O4'-C1'-N9	5.39	112.52	108.20
53	B5	1025	A	O4'-C1'-N9	5.39	112.52	108.20
53	B5	1307	G	C5-C6-O6	-5.39	125.36	128.60
53	B5	2171	G	C5-C6-O6	-5.39	125.36	128.60
53	B5	2224	A	C4-C5-C6	5.39	119.70	117.00
1	AA	802	G	N1-C6-O6	5.39	123.14	119.90
1	AA	1209	G	N1-C6-O6	5.39	123.14	119.90
53	B5	932	U	O4'-C1'-N1	5.39	112.51	108.20
53	B5	1281	G	C5-C6-O6	-5.39	125.36	128.60
53	B5	2387	A	C4-C5-C6	5.39	119.70	117.00
1	AA	325	G	N1-C6-O6	5.39	123.14	119.90
1	AA	604	A	O4'-C1'-N9	5.39	112.51	108.20
1	AA	1123	G	O4'-C1'-N9	5.39	112.51	108.20
53	B5	2563	G	O4'-C1'-N9	5.39	112.51	108.20
53	B5	2745	G	O4'-C1'-N9	5.39	112.51	108.20
1	AA	953	G	O4'-C1'-N9	5.39	112.51	108.20
1	AA	1185	A	C5-C6-N6	-5.39	119.39	123.70
1	AA	1690	G	O4'-C1'-N9	5.39	112.51	108.20
52	B4	31	G	C5-C6-O6	-5.39	125.37	128.60
53	B5	937	G	C5-C6-O6	-5.39	125.37	128.60
1	AA	62	A	C4-C5-C6	5.39	119.69	117.00
1	AA	462	G	O4'-C1'-N9	5.39	112.51	108.20
1	AA	526	A	C4-C5-C6	5.39	119.69	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	23	A	O4'-C1'-N9	5.39	112.51	108.20
53	B5	385	A	C4-C5-C6	5.39	119.69	117.00
53	B5	3191	G	C5-C6-O6	-5.39	125.37	128.60
1	AA	756	A	C5-C6-N6	-5.39	119.39	123.70
1	AA	911	U	O4'-C1'-N1	5.39	112.51	108.20
1	AA	1083	A	O4'-C1'-N9	5.39	112.51	108.20
1	AA	1232	A	O4'-C1'-N9	5.39	112.51	108.20
52	B4	14	C	N3-C4-N4	5.39	121.77	118.00
53	B5	357	A	O4'-C1'-N9	5.39	112.51	108.20
53	B5	836	A	C5-C6-N6	-5.39	119.39	123.70
53	B5	1477	A	O4'-C1'-N9	5.39	112.51	108.20
53	B5	2215	A	C4-C5-C6	5.39	119.69	117.00
1	AA	151	G	O4'-C1'-N9	5.38	112.51	108.20
1	AA	878	G	N1-C6-O6	5.38	123.13	119.90
1	AA	1316	A	O4'-C1'-N9	5.38	112.51	108.20
53	B5	42	C	N3-C4-N4	5.38	121.77	118.00
53	B5	1026	A	O4'-C1'-N9	5.38	112.51	108.20
53	B5	2195	C	N3-C4-C5	-5.38	119.75	121.90
53	B5	2430	A	O4'-C1'-N9	5.38	112.51	108.20
1	AA	561	G	O4'-C1'-N9	5.38	112.50	108.20
1	AA	876	G	O4'-C1'-N9	5.38	112.50	108.20
1	AA	975	G	C5-C6-O6	-5.38	125.37	128.60
1	AA	1376	C	O4'-C1'-N1	5.38	112.51	108.20
19	A7	1	G	N1-C2-N3	5.38	127.13	123.90
19	A7	11	C	N1-C2-N3	5.38	122.97	119.20
53	B5	1769	G	C5-C6-O6	-5.38	125.37	128.60
1	AA	1128	A	O4'-C1'-N9	5.38	112.50	108.20
1	AA	1184	G	O4'-C1'-N9	5.38	112.50	108.20
53	B5	936	A	P-O3'-C3'	5.38	126.16	119.70
53	B5	2139	A	C5-C6-N6	-5.38	119.40	123.70
53	B5	2837	A	O4'-C1'-N9	5.38	112.50	108.20
53	B5	3362	A	C5-C6-N6	-5.38	119.40	123.70
1	AA	1233	G	O4'-C1'-N9	5.38	112.50	108.20
1	AA	1541	A	C4-C5-C6	5.38	119.69	117.00
53	B5	1492	G	O4'-C1'-N9	5.38	112.50	108.20
53	B5	2773	C	C2-N1-C1'	5.38	124.72	118.80
19	A7	5	A	C4-C5-N7	5.38	113.39	110.70
53	B5	1027	A	C5-C6-N6	-5.38	119.40	123.70
53	B5	1162	U	P-O5'-C5'	-5.38	112.30	120.90
53	B5	2312	A	C5-C6-N6	-5.38	119.40	123.70
1	AA	987	A	O4'-C1'-N9	5.38	112.50	108.20
53	B5	319	A	C4-C5-C6	5.38	119.69	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	373	A	C5-C6-N1	-5.38	115.01	117.70
53	B5	390	G	P-O3'-C3'	5.38	126.15	119.70
53	B5	773	G	O4'-C1'-N9	5.38	112.50	108.20
53	B5	1367	G	C5-C6-O6	-5.38	125.38	128.60
1	AA	1089	A	C4-C5-C6	5.37	119.69	117.00
1	AA	1505	G	C5-C6-O6	-5.37	125.38	128.60
19	A7	5	A	C2-N3-C4	5.37	113.29	110.60
51	B3	37	G	C5-C6-O6	-5.37	125.38	128.60
52	B4	37	A	C4-C5-C6	5.37	119.69	117.00
53	B5	474	G	C5-C6-O6	-5.37	125.38	128.60
53	B5	1884	A	O4'-C1'-N9	5.37	112.50	108.20
53	B5	2956	A	C5-C6-N6	-5.37	119.40	123.70
1	AA	924	G	O4'-C1'-N9	5.37	112.50	108.20
1	AA	938	A	C5-C6-N6	-5.37	119.40	123.70
1	AA	1515	U	O4'-C1'-N1	5.37	112.50	108.20
1	AA	1518	U	O4'-C1'-N1	5.37	112.50	108.20
53	B5	862	U	O4'-C1'-N1	5.37	112.50	108.20
53	B5	1817	G	C5-C6-O6	-5.37	125.38	128.60
53	B5	2149	A	C5-C6-N6	-5.37	119.40	123.70
53	B5	2172	A	C4-C5-C6	5.37	119.69	117.00
53	B5	2488	A	O4'-C1'-N9	5.37	112.50	108.20
53	B5	2903	A	O4'-C1'-N9	5.37	112.50	108.20
53	B5	3080	G	O4'-C1'-N9	5.37	112.50	108.20
53	B5	1914	G	O4'-C1'-N9	5.37	112.50	108.20
1	AA	219	A	O4'-C1'-N9	5.37	112.50	108.20
1	AA	951	A	C5-C6-N6	-5.37	119.41	123.70
1	AA	1115	G	C5-C6-O6	-5.37	125.38	128.60
1	AA	1257	G	O4'-C1'-N9	5.37	112.49	108.20
1	AA	1501	A	O4'-C1'-N9	5.37	112.50	108.20
51	B3	89	A	O4'-C1'-N9	5.37	112.50	108.20
53	B5	938	C	N3-C4-N4	5.37	121.76	118.00
53	B5	2260	U	O4'-C1'-N1	5.37	112.50	108.20
53	B5	2398	A	O4'-C1'-N9	5.37	112.50	108.20
53	B5	761	A	O4'-C1'-N9	5.37	112.49	108.20
53	B5	1213	G	C5-C6-O6	-5.37	125.38	128.60
53	B5	2185	G	O4'-C1'-N9	5.37	112.49	108.20
1	AA	885	G	C5-C6-O6	-5.37	125.38	128.60
1	AA	1007	G	C5-C6-O6	-5.37	125.38	128.60
1	AA	1060	U	O4'-C1'-N1	5.37	112.49	108.20
1	AA	1573	G	O4'-C1'-N9	5.37	112.49	108.20
1	AA	1700	A	C4-C5-C6	5.37	119.68	117.00
19	A7	2	C	C2-N3-C4	-5.37	117.22	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	9	A	C6-C5-N7	5.37	136.06	132.30
53	B5	522	A	O4'-C1'-N9	5.37	112.49	108.20
53	B5	1503	A	O4'-C1'-N9	5.37	112.49	108.20
53	B5	3044	G	O4'-C1'-N9	5.37	112.49	108.20
1	AA	163	G	O4'-C1'-N9	5.36	112.49	108.20
1	AA	243	G	C5-C6-O6	-5.36	125.38	128.60
1	AA	445	A	C5-C6-N6	-5.36	119.41	123.70
1	AA	905	A	O4'-C1'-N9	5.36	112.49	108.20
1	AA	972	A	O4'-C1'-N9	5.36	112.49	108.20
1	AA	1395	U	O4'-C1'-N1	5.36	112.49	108.20
52	B4	49	G	O4'-C1'-N9	5.36	112.49	108.20
53	B5	358	G	C5-C6-O6	-5.36	125.38	128.60
53	B5	1461	A	O4'-C1'-N9	5.36	112.49	108.20
53	B5	2730	G	O4'-C1'-N9	5.36	112.49	108.20
53	B5	3172	G	O4'-C1'-N9	5.36	112.49	108.20
53	B5	3285	C	N3-C4-N4	5.36	121.75	118.00
1	AA	460	A	O4'-C1'-N9	5.36	112.49	108.20
1	AA	1208	G	C5-C6-O6	-5.36	125.38	128.60
1	AA	1478	G	C5-C6-O6	-5.36	125.38	128.60
19	A7	2	C	C5-C4-N4	5.36	123.95	120.20
53	B5	2106	A	O4'-C1'-N9	5.36	112.49	108.20
53	B5	2805	G	O4'-C1'-N9	5.36	112.49	108.20
51	B3	46	A	C5'-C4'-C3'	5.36	124.58	116.00
52	B4	109	A	O4'-C1'-N9	5.36	112.49	108.20
53	B5	184	U	O4'-C1'-N1	5.36	112.49	108.20
53	B5	900	G	C5-C6-O6	-5.36	125.38	128.60
1	AA	1327	G	C5-C6-O6	-5.36	125.39	128.60
1	AA	1522	A	C1'-O4'-C4'	-5.36	105.61	109.90
1	AA	41	A	O4'-C1'-N9	5.36	112.49	108.20
1	AA	702	G	C5-C6-O6	-5.36	125.39	128.60
29	BE	22	ARG	NE-CZ-NH1	5.36	122.98	120.30
52	B4	22	U	O4'-C1'-N1	5.36	112.49	108.20
53	B5	1462	A	O4'-C1'-N9	5.36	112.49	108.20
53	B5	1510	G	C5-C6-O6	-5.36	125.39	128.60
53	B5	1901	A	P-O3'-C3'	5.36	126.13	119.70
53	B5	3039	C	N3-C4-C5	-5.36	119.76	121.90
1	AA	315	A	O4'-C1'-N9	5.36	112.48	108.20
19	A7	74	C	C4-C5-C6	5.36	120.08	117.40
53	B5	1419	A	C5-C6-N6	-5.36	119.42	123.70
53	B5	2161	G	O4'-C1'-N9	5.36	112.48	108.20
53	B5	2601	A	O4'-C1'-N9	5.36	112.48	108.20
53	B5	2656	A	C4-C5-C6	5.36	119.68	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2924	U	O4'-C1'-N1	5.36	112.48	108.20
1	AA	1222	A	O4'-C1'-N9	5.35	112.48	108.20
53	B5	5	G	O4'-C1'-N9	5.35	112.48	108.20
53	B5	1781	C	N3-C4-N4	5.35	121.75	118.00
53	B5	2331	C	N3-C4-C5	-5.35	119.76	121.90
1	AA	1319	A	C4-C5-C6	5.35	119.68	117.00
53	B5	602	A	C5-C6-N6	-5.35	119.42	123.70
53	B5	2234	G	O4'-C1'-N9	5.35	112.48	108.20
53	B5	2632	G	C5-C6-O6	-5.35	125.39	128.60
53	B5	3143	C	O4'-C1'-N1	5.35	112.48	108.20
1	AA	1730	A	C5-C6-N6	-5.35	119.42	123.70
53	B5	1622	U	O4'-C1'-N1	5.35	112.48	108.20
1	AA	279	G	C5-C6-O6	-5.35	125.39	128.60
1	AA	1192	A	O4'-C1'-N9	5.35	112.48	108.20
1	AA	1445	C	O4'-C1'-N1	5.35	112.48	108.20
1	AA	1550	U	C1'-C2'-O2'	5.35	126.64	110.60
1	AA	1761	A	O4'-C1'-N9	5.35	112.48	108.20
51	B3	8	G	O4'-C1'-N9	5.35	112.48	108.20
53	B5	254	A	C5-C6-N6	-5.35	119.42	123.70
53	B5	1661	G	C5-C6-O6	-5.35	125.39	128.60
53	B5	1835	A	C4-C5-C6	5.35	119.67	117.00
53	B5	3099	C	O4'-C1'-N1	5.35	112.48	108.20
53	B5	1898	G	C5-C6-O6	-5.35	125.39	128.60
53	B5	2897	A	C4-C5-C6	5.35	119.67	117.00
1	AA	96	G	O4'-C1'-N9	5.34	112.47	108.20
1	AA	687	G	O4'-C1'-N9	5.34	112.47	108.20
1	AA	940	A	C4-C5-C6	5.34	119.67	117.00
52	B4	44	A	C5-C6-N6	-5.34	119.42	123.70
53	B5	62	A	O4'-C1'-N9	5.34	112.48	108.20
53	B5	157	A	O4'-C1'-N9	5.34	112.48	108.20
53	B5	303	G	N1-C6-O6	5.34	123.11	119.90
53	B5	937	G	O4'-C1'-N9	5.34	112.48	108.20
53	B5	1203	A	C5-C6-N6	-5.34	119.42	123.70
53	B5	1306	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	1547	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	1634	G	C5-C6-O6	-5.34	125.39	128.60
53	B5	2251	G	N1-C6-O6	5.34	123.11	119.90
53	B5	3367	C	N3-C4-C5	-5.34	119.76	121.90
1	AA	367	A	O4'-C1'-N9	5.34	112.47	108.20
1	AA	1700	A	O4'-C1'-N9	5.34	112.47	108.20
53	B5	2645	G	C5-C6-O6	-5.34	125.39	128.60
53	B5	2943	G	O4'-C1'-N9	5.34	112.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3065	G	O4'-C1'-N9	5.34	112.47	108.20
1	AA	459	G	C5-C6-O6	-5.34	125.40	128.60
53	B5	373	A	O4'-C1'-N9	5.34	112.47	108.20
53	B5	1260	A	O4'-C1'-N9	5.34	112.47	108.20
1	AA	1435	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	597	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	600	G	C5-C6-O6	-5.34	125.40	128.60
53	B5	1264	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	2486	A	C4-C5-C6	5.34	119.67	117.00
53	B5	2691	A	C5-C6-N6	-5.34	119.43	123.70
53	B5	1926	C	O4'-C1'-N1	5.34	112.47	108.20
53	B5	2830	G	C5'-C4'-O4'	5.34	115.50	109.10
1	AA	865	A	C1'-O4'-C4'	-5.34	105.63	109.90
53	B5	98	G	O4'-C1'-N9	5.34	112.47	108.20
53	B5	833	G	C5-C6-O6	-5.34	125.40	128.60
53	B5	1153	A	C4-C5-C6	5.34	119.67	117.00
53	B5	2265	C	N3-C4-C5	-5.34	119.77	121.90
53	B5	3127	A	O4'-C1'-N9	5.34	112.47	108.20
53	B5	1242	G	C5-C6-O6	-5.33	125.40	128.60
1	AA	1085	A	C5-C6-N6	-5.33	119.43	123.70
1	AA	1139	A	O4'-C1'-N9	5.33	112.47	108.20
19	A7	64	A	C5-C6-N6	5.33	127.97	123.70
51	B3	20	A	O4'-C1'-N9	5.33	112.47	108.20
53	B5	116	A	P-O3'-C3'	5.33	126.10	119.70
53	B5	844	G	O4'-C1'-N9	5.33	112.47	108.20
53	B5	1540	U	O4'-C1'-N1	5.33	112.47	108.20
51	B3	52	U	O4'-C1'-N1	5.33	112.46	108.20
53	B5	708	G	C5-C6-O6	-5.33	125.40	128.60
53	B5	1333	C	N3-C4-N4	5.33	121.73	118.00
53	B5	1365	G	O4'-C1'-N9	5.33	112.47	108.20
53	B5	2399	A	O4'-C1'-N9	5.33	112.47	108.20
53	B5	2720	G	O4'-C1'-N9	5.33	112.47	108.20
1	AA	173	A	P-O3'-C3'	5.33	126.10	119.70
1	AA	1078	A	O4'-C1'-N9	5.33	112.46	108.20
1	AA	1274	G	O4'-C1'-N9	5.33	112.46	108.20
51	B3	7	G	O4'-C1'-N9	5.33	112.46	108.20
53	B5	568	G	O4'-C1'-N9	5.33	112.46	108.20
53	B5	2705	A	O4'-C1'-N9	5.33	112.46	108.20
51	B3	59	G	C5-C6-O6	-5.33	125.40	128.60
53	B5	4	U	O4'-C1'-N1	5.33	112.46	108.20
53	B5	499	G	O4'-C1'-N9	5.33	112.46	108.20
53	B5	813	G	O4'-C1'-N9	5.33	112.46	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1193	A	C5-C6-N6	-5.33	119.44	123.70
53	B5	1239	C	N3-C4-C5	-5.33	119.77	121.90
53	B5	1287	A	C5-C6-N6	-5.33	119.44	123.70
1	AA	1022	A	C4-C5-C6	5.33	119.66	117.00
53	B5	106	A	O4'-C1'-N9	5.33	112.46	108.20
53	B5	1804	A	P-O3'-C3'	5.33	126.09	119.70
1	AA	274	G	O4'-C1'-N9	5.33	112.46	108.20
1	AA	1361	G	O4'-C1'-N9	5.33	112.46	108.20
19	A7	70	C	O5'-P-OP2	-5.33	100.91	105.70
52	B4	114	G	P-O3'-C3'	5.33	126.09	119.70
53	B5	37	U	O4'-C1'-N1	5.33	112.46	108.20
53	B5	1025	A	C5-C6-N6	-5.33	119.44	123.70
53	B5	1101	G	C5-C6-O6	-5.33	125.41	128.60
53	B5	1516	C	N3-C4-N4	5.33	121.73	118.00
53	B5	2183	A	O4'-C1'-N9	5.33	112.46	108.20
53	B5	2222	A	O4'-C1'-N9	5.33	112.46	108.20
53	B5	2838	A	C5-C6-N6	-5.33	119.44	123.70
53	B5	3047	U	O4'-C1'-N1	5.33	112.46	108.20
1	AA	859	A	N9-C1'-C2'	5.32	120.92	114.00
53	B5	590	G	C5-C6-O6	-5.32	125.41	128.60
53	B5	1441	G	O4'-C1'-N9	5.32	112.46	108.20
53	B5	1504	A	O4'-C1'-N9	5.32	112.46	108.20
53	B5	2121	G	C5-C6-O6	-5.32	125.41	128.60
53	B5	2288	G	O4'-C1'-N9	5.32	112.46	108.20
1	AA	1136	A	O4'-C1'-N9	5.32	112.46	108.20
1	AA	1417	C	O4'-C1'-N1	5.32	112.46	108.20
53	B5	145	G	O4'-C1'-N9	5.32	112.46	108.20
53	B5	1440	G	C5-C6-O6	-5.32	125.41	128.60
1	AA	1383	G	C5-C6-O6	-5.32	125.41	128.60
52	B4	53	A	O4'-C1'-N9	5.32	112.46	108.20
53	B5	704	U	O4'-C1'-N1	5.32	112.46	108.20
53	B5	2528	G	C5-C6-O6	-5.32	125.41	128.60
53	B5	2592	G	C5-C6-O6	-5.32	125.41	128.60
53	B5	2977	G	O4'-C1'-N9	5.32	112.46	108.20
53	B5	1937	U	O4'-C1'-N1	5.32	112.45	108.20
1	AA	124	A	O4'-C1'-N9	5.32	112.45	108.20
53	B5	775	A	C5-C6-N6	-5.32	119.45	123.70
53	B5	830	A	O4'-C1'-N9	5.32	112.45	108.20
53	B5	1063	G	C5-C6-O6	-5.32	125.41	128.60
53	B5	1446	A	C5-C6-N6	-5.32	119.44	123.70
53	B5	1643	A	O4'-C1'-N9	5.32	112.45	108.20
53	B5	1910	A	O4'-C1'-N9	5.32	112.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2439	A	O4'-C1'-N9	5.32	112.45	108.20
1	AA	1129	A	C4-C5-C6	5.32	119.66	117.00
1	AA	1327	G	O4'-C1'-N9	5.32	112.45	108.20
1	AA	16	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	303	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	3031	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	61	A	C5-C6-N6	-5.31	119.45	123.70
1	AA	71	A	O4'-C1'-N9	5.31	112.45	108.20
1	AA	72	A	O4'-C1'-N9	5.31	112.45	108.20
1	AA	671	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	941	G	C5-C6-O6	-5.31	125.41	128.60
1	AA	1176	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	52	A	C4-C5-C6	5.31	119.66	117.00
53	B5	160	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	201	A	C5-C6-N6	-5.31	119.45	123.70
53	B5	613	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	1604	G	C5-C6-O6	-5.31	125.41	128.60
53	B5	2198	A	O4'-C1'-N9	5.31	112.45	108.20
53	B5	3238	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	63	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	384	G	C5-C6-O6	-5.31	125.41	128.60
1	AA	776	G	O4'-C1'-N9	5.31	112.45	108.20
53	B5	2321	A	O4'-C1'-N9	5.31	112.45	108.20
53	B5	3361	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	615	A	C5-C6-N6	-5.31	119.45	123.70
1	AA	1548	A	C4-C5-C6	5.31	119.66	117.00
1	AA	1640	G	C5-C6-O6	-5.31	125.41	128.60
1	AA	1718	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	1755	G	C5-C6-O6	-5.31	125.42	128.60
53	B5	319	A	C5-C6-N1	-5.31	115.05	117.70
53	B5	2450	G	C5-C6-O6	-5.31	125.41	128.60
53	B5	2847	A	C4-C5-C6	5.31	119.66	117.00
53	B5	2848	G	P-O3'-C3'	5.31	126.07	119.70
53	B5	2848	G	N1-C6-O6	5.31	123.09	119.90
53	B5	3144	G	C5-C6-O6	-5.31	125.41	128.60
1	AA	631	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	900	G	O4'-C1'-N9	5.31	112.45	108.20
1	AA	1291	G	C5-C6-O6	-5.31	125.42	128.60
1	AA	1428	C	O4'-C1'-N1	5.31	112.45	108.20
19	A7	7	U	N1-C2-N3	5.31	118.08	114.90
53	B5	1079	A	C5-C6-N6	-5.31	119.45	123.70
53	B5	2791	G	C5-C6-O6	-5.31	125.42	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3328	G	C5-C6-O6	-5.31	125.42	128.60
53	B5	319	A	O4'-C1'-N9	5.31	112.44	108.20
53	B5	2878	G	C5-C6-O6	-5.31	125.42	128.60
1	AA	81	G	O4'-C1'-N9	5.30	112.44	108.20
1	AA	1144	A	C4-C5-C6	5.30	119.65	117.00
51	B3	115	A	O4'-C1'-N9	5.30	112.44	108.20
53	B5	648	C	O4'-C1'-N1	5.30	112.44	108.20
53	B5	1136	A	O4'-C1'-N9	5.30	112.44	108.20
53	B5	1300	G	O4'-C1'-N9	5.30	112.44	108.20
53	B5	1385	C	N3-C4-N4	5.30	121.71	118.00
53	B5	1650	G	C5-C6-O6	-5.30	125.42	128.60
53	B5	3030	G	O4'-C1'-N9	5.30	112.44	108.20
1	AA	26	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	776	G	C5-C6-O6	-5.30	125.42	128.60
1	AA	92	A	C4-C5-C6	5.30	119.65	117.00
1	AA	809	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	1194	G	C5-C6-O6	-5.30	125.42	128.60
53	B5	707	U	O4'-C1'-N1	5.30	112.44	108.20
53	B5	997	A	C4-C5-C6	5.30	119.65	117.00
53	B5	2134	G	C5-C6-O6	-5.30	125.42	128.60
19	A7	9	A	N9-C1'-C2'	-5.30	106.17	112.00
53	B5	114	A	O4'-C1'-N9	5.30	112.44	108.20
53	B5	1344	G	C5-C6-O6	-5.30	125.42	128.60
53	B5	1380	G	N1-C6-O6	5.30	123.08	119.90
1	AA	488	G	C5-C6-O6	-5.30	125.42	128.60
53	B5	27	C	N3-C4-N4	5.30	121.71	118.00
1	AA	1421	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	1477	A	O4'-C1'-N9	5.30	112.44	108.20
29	BE	207	TYR	CB-CG-CD1	5.30	124.18	121.00
53	B5	196	G	O4'-C1'-N9	5.30	112.44	108.20
53	B5	234	G	C5-C6-O6	-5.30	125.42	128.60
53	B5	1165	A	C5-C6-N6	-5.30	119.46	123.70
53	B5	2575	G	N1-C6-O6	5.30	123.08	119.90
1	AA	1746	G	C5-C6-O6	-5.29	125.42	128.60
53	B5	1939	G	C5-C6-O6	-5.29	125.42	128.60
53	B5	2610	G	C5-C6-O6	-5.29	125.42	128.60
1	AA	215	A	O4'-C1'-N9	5.29	112.44	108.20
53	B5	476	G	O4'-C1'-N9	5.29	112.44	108.20
53	B5	700	C	N3-C4-N4	5.29	121.70	118.00
53	B5	831	G	C5-C6-O6	-5.29	125.42	128.60
53	B5	2366	C	N3-C4-N4	5.29	121.71	118.00
53	B5	3335	A	O4'-C1'-N9	5.29	112.44	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	470	A	O4'-C1'-N9	5.29	112.43	108.20
1	AA	684	A	O4'-C1'-N9	5.29	112.43	108.20
51	B3	54	A	C5-C6-N6	-5.29	119.47	123.70
53	B5	71	A	C4-C5-C6	5.29	119.65	117.00
53	B5	1155	C	N3-C4-N4	5.29	121.70	118.00
53	B5	2202	C	N3-C4-N4	5.29	121.70	118.00
53	B5	2901	G	O4'-C1'-N9	5.29	112.43	108.20
53	B5	3079	U	O4'-C1'-N1	5.29	112.43	108.20
1	AA	929	A	C5-C6-N6	-5.29	119.47	123.70
1	AA	935	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	1726	A	O4'-C1'-N9	5.29	112.43	108.20
53	B5	1171	G	O4'-C1'-N9	5.29	112.43	108.20
53	B5	2437	G	O4'-C1'-N9	5.29	112.43	108.20
1	AA	214	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	404	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	610	G	C5-C6-O6	-5.29	125.43	128.60
52	B4	62	C	C6-N1-C1'	-5.29	114.45	120.80
53	B5	201	A	C4-C5-C6	5.29	119.64	117.00
53	B5	584	G	C5-C6-O6	-5.29	125.43	128.60
53	B5	1075	A	O4'-C1'-N9	5.29	112.43	108.20
53	B5	2687	G	O4'-C1'-N9	5.29	112.43	108.20
53	B5	2820	A	O4'-C1'-N9	5.29	112.43	108.20
53	B5	2911	A	O4'-C1'-N9	5.29	112.43	108.20
53	B5	3284	G	O4'-C1'-N9	5.29	112.43	108.20
1	AA	723	G	O4'-C1'-N9	5.29	112.43	108.20
53	B5	312	C	N3-C4-N4	5.29	121.70	118.00
53	B5	2454	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	123	G	C5-C6-O6	-5.29	125.43	128.60
1	AA	669	G	O4'-C1'-N9	5.29	112.43	108.20
19	A7	21	A	C5'-C4'-C3'	-5.29	107.54	116.00
51	B3	24	A	O4'-C1'-N9	5.29	112.43	108.20
53	B5	1409	G	C5-C6-O6	-5.29	125.43	128.60
53	B5	1605	A	C5-C6-N6	-5.29	119.47	123.70
53	B5	1758	G	O4'-C1'-N9	5.29	112.43	108.20
53	B5	2612	U	O4'-C1'-N1	5.29	112.43	108.20
1	AA	647	G	C5-C6-O6	-5.28	125.43	128.60
1	AA	929	A	C4-C5-C6	5.28	119.64	117.00
1	AA	1087	C	N3-C4-N4	5.28	121.70	118.00
53	B5	15	C	N3-C4-N4	5.28	121.70	118.00
53	B5	109	A	O4'-C1'-N9	5.28	112.43	108.20
53	B5	264	G	O4'-C1'-N9	5.28	112.43	108.20
53	B5	274	G	O4'-C1'-N9	5.28	112.43	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	469	G	N1-C6-O6	5.28	123.07	119.90
53	B5	1182	A	C4-C5-C6	5.28	119.64	117.00
53	B5	1715	A	C5-C6-N1	-5.28	115.06	117.70
53	B5	1893	A	O4'-C1'-N9	5.28	112.43	108.20
53	B5	2515	A	C5-C6-N6	-5.28	119.47	123.70
53	B5	3027	A	O4'-C1'-N9	5.28	112.43	108.20
1	AA	1043	G	O4'-C1'-N9	5.28	112.43	108.20
1	AA	1605	G	C5-C6-O6	-5.28	125.43	128.60
53	B5	450	G	O4'-C1'-N9	5.28	112.42	108.20
53	B5	570	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	1079	A	C4-C5-C6	5.28	119.64	117.00
53	B5	1396	C	N3-C4-N4	5.28	121.70	118.00
53	B5	1618	G	C5-C6-O6	-5.28	125.43	128.60
1	AA	661	A	O4'-C1'-N9	5.28	112.42	108.20
19	A7	4	G	N3-C4-C5	5.28	131.24	128.60
51	B3	84	G	C5-C6-O6	-5.28	125.43	128.60
53	B5	5	G	C5-C6-O6	-5.28	125.43	128.60
53	B5	1879	A	C5-C6-N6	-5.28	119.48	123.70
1	AA	371	G	C5-C6-O6	-5.28	125.43	128.60
19	A7	25	C	O4'-C1'-N1	5.28	112.42	108.20
53	B5	3067	C	N3-C4-N4	5.28	121.69	118.00
1	AA	269	G	C5-C6-O6	-5.28	125.43	128.60
1	AA	384	G	O4'-C1'-N9	5.28	112.42	108.20
1	AA	399	A	O4'-C1'-N9	5.28	112.42	108.20
1	AA	1634	C	N1-C1'-C2'	5.28	120.86	114.00
53	B5	3101	G	O4'-C1'-N9	5.28	112.42	108.20
53	B5	3299	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	384	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	656	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	1932	A	C5-C6-N6	-5.28	119.48	123.70
53	B5	2208	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	2243	A	O4'-C1'-N9	5.28	112.42	108.20
53	B5	3279	A	C5-C6-N6	-5.28	119.48	123.70
1	AA	40	A	O4'-C1'-N9	5.27	112.42	108.20
1	AA	1007	G	O4'-C1'-N9	5.27	112.42	108.20
19	A7	18	G	N3-C4-C5	5.27	131.24	128.60
53	B5	703	G	C5-C6-O6	-5.27	125.44	128.60
53	B5	1760	A	O4'-C1'-N9	5.27	112.42	108.20
1	AA	651	G	O4'-C1'-N9	5.27	112.42	108.20
19	A7	44	A	C5-C6-N1	5.27	120.34	117.70
53	B5	17	G	O4'-C1'-N9	5.27	112.42	108.20
53	B5	89	A	C5-C6-N6	-5.27	119.48	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1071	U	O4'-C1'-N1	5.27	112.42	108.20
53	B5	1165	A	C4-C5-C6	5.27	119.64	117.00
53	B5	1648	A	O4'-C1'-N9	5.27	112.42	108.20
53	B5	3122	A	C4-C5-C6	5.27	119.64	117.00
53	B5	3316	A	O4'-C1'-N9	5.27	112.42	108.20
1	AA	729	G	O4'-C1'-N9	5.27	112.42	108.20
53	B5	931	C	N3-C4-N4	5.27	121.69	118.00
53	B5	2384	A	O4'-C1'-N9	5.27	112.42	108.20
53	B5	2523	A	O4'-C1'-N9	5.27	112.42	108.20
53	B5	3239	G	O4'-C1'-N9	5.27	112.42	108.20
1	AA	251	A	O4'-C1'-N9	5.27	112.42	108.20
1	AA	754	A	O4'-C1'-N9	5.27	112.42	108.20
52	B4	150	G	O4'-C1'-N9	5.27	112.42	108.20
53	B5	1131	G	O4'-C1'-N9	5.27	112.42	108.20
53	B5	1291	A	O4'-C1'-N9	5.27	112.42	108.20
53	B5	2557	G	O4'-C1'-N9	5.27	112.42	108.20
53	B5	71	A	C5-C6-N1	-5.27	115.07	117.70
53	B5	594	A	O4'-C1'-N9	5.27	112.41	108.20
53	B5	692	A	C4-C5-C6	5.27	119.63	117.00
53	B5	1163	A	C5-C6-N6	-5.27	119.48	123.70
53	B5	2684	C	N3-C4-C5	-5.27	119.79	121.90
1	AA	1240	A	C1'-O4'-C4'	-5.27	105.69	109.90
1	AA	1263	G	C5-C6-O6	-5.27	125.44	128.60
1	AA	1519	G	O4'-C1'-N9	5.27	112.41	108.20
1	AA	1446	G	O4'-C1'-N9	5.26	112.41	108.20
1	AA	1458	A	O4'-C1'-N9	5.26	112.41	108.20
52	B4	44	A	C4-C5-C6	5.26	119.63	117.00
53	B5	31	C	N3-C4-C5	-5.26	119.79	121.90
53	B5	393	U	P-O3'-C3'	5.26	126.02	119.70
53	B5	1226	G	C5-C6-O6	-5.26	125.44	128.60
53	B5	1404	G	C5-C6-O6	-5.26	125.44	128.60
53	B5	2445	A	O4'-C1'-N9	5.26	112.41	108.20
53	B5	2816	G	C5-C6-O6	-5.26	125.44	128.60
1	AA	1365	G	O4'-C1'-N9	5.26	112.41	108.20
53	B5	909	G	C5-C6-O6	-5.26	125.44	128.60
1	AA	545	A	O4'-C1'-N9	5.26	112.41	108.20
1	AA	664	U	O4'-C1'-N1	5.26	112.41	108.20
53	B5	95	A	O4'-C1'-N9	5.26	112.41	108.20
53	B5	859	G	C5-C6-O6	-5.26	125.44	128.60
53	B5	1688	U	O4'-C1'-N1	5.26	112.41	108.20
53	B5	1745	C	P-O3'-C3'	5.26	126.01	119.70
53	B5	2239	G	O4'-C1'-N9	5.26	112.41	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1041	U	O4'-C1'-N1	5.26	112.41	108.20
53	B5	1461	A	C5-C6-N1	-5.26	115.07	117.70
53	B5	2720	G	C5-C6-O6	-5.26	125.44	128.60
53	B5	2779	A	C5-C6-N6	-5.26	119.49	123.70
53	B5	3245	A	C5-C6-N6	-5.26	119.49	123.70
53	B5	3342	A	O4'-C1'-N9	5.26	112.41	108.20
1	AA	53	G	O4'-C1'-N9	5.26	112.41	108.20
1	AA	812	A	O4'-C1'-N9	5.26	112.41	108.20
1	AA	1386	C	O4'-C1'-N1	5.26	112.41	108.20
53	B5	2414	G	O4'-C1'-N9	5.26	112.41	108.20
1	AA	1384	G	C5-C6-O6	-5.26	125.45	128.60
1	AA	1424	A	C5-C6-N6	-5.26	119.49	123.70
1	AA	1519	G	OP1-P-OP2	-5.26	111.72	119.60
9	AJ	90	TYR	CB-CG-CD2	-5.26	117.85	121.00
29	BE	142	PHE	CB-CG-CD2	-5.26	117.12	120.80
53	B5	313	A	O4'-C1'-N9	5.26	112.41	108.20
53	B5	1423	C	N3-C4-N4	5.26	121.68	118.00
53	B5	1858	A	C4-C5-C6	5.26	119.63	117.00
53	B5	1882	G	O4'-C1'-N9	5.26	112.41	108.20
53	B5	2119	A	O4'-C1'-N9	5.26	112.40	108.20
1	AA	93	A	O4'-C1'-N9	5.25	112.40	108.20
1	AA	571	G	C5-C6-O6	-5.25	125.45	128.60
53	B5	3227	A	O4'-C1'-N9	5.25	112.40	108.20
1	AA	91	G	O4'-C1'-N9	5.25	112.40	108.20
1	AA	245	U	O4'-C1'-N1	5.25	112.40	108.20
1	AA	550	A	O4'-C1'-N9	5.25	112.40	108.20
1	AA	1300	U	O4'-C1'-N1	5.25	112.40	108.20
1	AA	1456	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	1003	A	C5-C6-N6	-5.25	119.50	123.70
53	B5	3026	G	C5-C6-O6	-5.25	125.45	128.60
1	AA	480	G	O4'-C1'-N9	5.25	112.40	108.20
19	A7	35	A	N9-C1'-C2'	-5.25	106.22	112.00
53	B5	67	A	C5-C6-N6	-5.25	119.50	123.70
53	B5	934	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	2302	G	O4'-C1'-N9	5.25	112.40	108.20
1	AA	804	A	C5-C6-N6	-5.25	119.50	123.70
1	AA	1669	A	O4'-C1'-N9	5.25	112.40	108.20
1	AA	1778	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	815	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	1005	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	2817	A	C4-C5-C6	5.25	119.62	117.00
53	B5	2990	G	C5-C6-O6	-5.25	125.45	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	580	A	O4'-C1'-N9	5.25	112.40	108.20
53	B5	330	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	348	A	O4'-C1'-N9	5.25	112.40	108.20
53	B5	375	A	C4-C5-C6	5.25	119.62	117.00
53	B5	1159	A	O4'-C1'-N9	5.25	112.40	108.20
53	B5	1758	G	C5-C6-O6	-5.25	125.45	128.60
53	B5	1933	A	O4'-C1'-N9	5.25	112.40	108.20
53	B5	2415	C	N3-C4-N4	5.25	121.67	118.00
53	B5	2467	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	3336	A	C5-C6-N6	-5.25	119.50	123.70
1	AA	914	A	C4-C5-C6	5.25	119.62	117.00
1	AA	1239	G	O4'-C1'-N9	5.25	112.40	108.20
53	B5	577	C	O4'-C1'-N1	5.25	112.40	108.20
53	B5	2597	U	O4'-C1'-N1	5.25	112.40	108.20
53	B5	2642	A	C4-C5-C6	5.25	119.62	117.00
1	AA	927	U	O4'-C1'-N1	5.25	112.40	108.20
1	AA	929	A	O4'-C1'-N9	5.25	112.40	108.20
53	B5	1934	G	N1-C6-O6	5.25	123.05	119.90
1	AA	204	G	N1-C6-O6	5.24	123.05	119.90
1	AA	1598	A	C4-C5-C6	5.24	119.62	117.00
53	B5	320	G	C5-C6-O6	-5.24	125.45	128.60
53	B5	789	A	O4'-C1'-N9	5.24	112.40	108.20
53	B5	991	U	O4'-C1'-N1	5.24	112.39	108.20
53	B5	1286	A	O4'-C1'-N9	5.24	112.39	108.20
53	B5	2257	C	O4'-C1'-N1	5.24	112.39	108.20
53	B5	2474	G	C5-C6-O6	-5.24	125.45	128.60
53	B5	3372	A	C4-C5-C6	5.24	119.62	117.00
1	AA	219	A	C5-C6-N6	-5.24	119.51	123.70
8	AI	126	PRO	C-N-CA	5.24	134.81	121.70
53	B5	820	A	C4-C5-C6	5.24	119.62	117.00
53	B5	1909	A	O4'-C1'-N9	5.24	112.39	108.20
53	B5	3186	A	O4'-C1'-N9	5.24	112.39	108.20
1	AA	417	A	C5-C6-N6	-5.24	119.51	123.70
1	AA	737	A	O4'-C1'-N9	5.24	112.39	108.20
1	AA	1439	U	O4'-C1'-N1	5.24	112.39	108.20
1	AA	1695	G	N1-C6-O6	5.24	123.04	119.90
51	B3	49	G	C5-C6-O6	-5.24	125.46	128.60
53	B5	668	G	O4'-C1'-N9	5.24	112.39	108.20
53	B5	1110	U	O4'-C1'-N1	5.24	112.39	108.20
53	B5	2396	G	C5-C6-O6	-5.24	125.46	128.60
53	B5	3168	A	C5-C6-N6	-5.24	119.51	123.70
1	AA	202	A	C5-C6-N6	-5.24	119.51	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	858	G	C4-N9-C1'	5.24	133.31	126.50
29	BE	22	ARG	NE-CZ-NH2	-5.24	117.68	120.30
53	B5	288	C	N3-C4-N4	5.24	121.67	118.00
53	B5	338	A	C4-C5-C6	5.24	119.62	117.00
53	B5	390	G	O4'-C1'-N9	5.24	112.39	108.20
53	B5	968	G	O4'-C1'-N9	5.24	112.39	108.20
53	B5	1202	A	C4-C5-C6	5.24	119.62	117.00
53	B5	1580	A	C4-C5-C6	5.24	119.62	117.00
53	B5	1889	G	C5-C6-O6	-5.24	125.46	128.60
53	B5	2172	A	P-O3'-C3'	5.24	125.99	119.70
1	AA	1521	G	P-O5'-C5'	-5.24	112.52	120.90
1	AA	505	A	C5-C6-N6	-5.24	119.51	123.70
53	B5	665	A	O4'-C1'-N9	5.24	112.39	108.20
53	B5	1776	G	O4'-C1'-N9	5.24	112.39	108.20
53	B5	1900	A	C4-C5-C6	5.24	119.62	117.00
53	B5	1921	A	C5-C6-N1	-5.24	115.08	117.70
53	B5	2113	A	C5-C6-N6	-5.24	119.51	123.70
53	B5	2562	G	O4'-C1'-N9	5.24	112.39	108.20
1	AA	164	A	O4'-C1'-N9	5.23	112.39	108.20
1	AA	707	A	C5-C6-N6	-5.23	119.51	123.70
1	AA	1668	G	C5-C6-O6	-5.23	125.46	128.60
53	B5	1756	C	N3-C4-N4	5.23	121.66	118.00
53	B5	2888	U	O4'-C1'-N1	5.23	112.39	108.20
1	AA	1184	G	C5-C6-O6	-5.23	125.46	128.60
1	AA	1419	A	C4-C5-C6	5.23	119.62	117.00
53	B5	183	G	O4'-C1'-N9	5.23	112.39	108.20
53	B5	523	A	O4'-C1'-N9	5.23	112.39	108.20
53	B5	614	C	N3-C4-N4	5.23	121.66	118.00
53	B5	1002	A	O4'-C1'-N9	5.23	112.39	108.20
53	B5	2198	A	P-O3'-C3'	5.23	125.98	119.70
53	B5	2458	A	O4'-C1'-N9	5.23	112.39	108.20
53	B5	2711	C	N3-C4-N4	5.23	121.66	118.00
53	B5	3183	A	O4'-C1'-N9	5.23	112.38	108.20
1	AA	1030	U	O4'-C1'-N1	5.23	112.38	108.20
52	B4	75	G	C5-C6-O6	-5.23	125.46	128.60
53	B5	2155	G	C5-C6-O6	-5.23	125.46	128.60
53	B5	3238	G	C5-C6-O6	-5.23	125.46	128.60
1	AA	685	A	O4'-C1'-N9	5.23	112.38	108.20
1	AA	687	G	N1-C6-O6	5.23	123.04	119.90
1	AA	966	A	C5-C6-N6	-5.23	119.52	123.70
1	AA	1024	A	O4'-C1'-N9	5.23	112.38	108.20
1	AA	1223	A	O4'-C1'-N9	5.23	112.38	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	417	A	C5-C6-N6	-5.23	119.52	123.70
53	B5	1203	A	O4'-C1'-N9	5.23	112.38	108.20
53	B5	2418	G	C5-C6-O6	-5.23	125.46	128.60
53	B5	2811	A	C4-C5-C6	5.23	119.61	117.00
53	B5	3202	G	O4'-C1'-N9	5.23	112.38	108.20
1	AA	440	U	O4'-C1'-N1	5.23	112.38	108.20
53	B5	1697	A	C5-C6-N6	-5.23	119.52	123.70
53	B5	2837	A	C4-C5-C6	5.23	119.61	117.00
1	AA	80	A	O4'-C1'-N9	5.22	112.38	108.20
1	AA	1173	G	O4'-C1'-N9	5.22	112.38	108.20
41	BQ	14	MET	CG-SD-CE	-5.22	91.84	100.20
53	B5	402	A	C4-C5-C6	5.22	119.61	117.00
53	B5	1491	A	C4-C5-C6	5.22	119.61	117.00
53	B5	1603	A	C4-C5-C6	5.22	119.61	117.00
53	B5	2325	G	O4'-C1'-N9	5.22	112.38	108.20
53	B5	2452	G	O4'-C1'-N9	5.22	112.38	108.20
53	B5	3126	C	C5'-C4'-O4'	5.22	115.37	109.10
53	B5	3200	G	O4'-C1'-N9	5.22	112.38	108.20
53	B5	3322	A	C4-C5-C6	5.22	119.61	117.00
1	AA	707	A	O4'-C1'-N9	5.22	112.38	108.20
1	AA	1521	G	C4-N9-C1'	5.22	133.29	126.50
1	AA	1548	A	C1'-O4'-C4'	-5.22	105.72	109.90
52	B4	92	A	O4'-C1'-N9	5.22	112.38	108.20
53	B5	967	A	O4'-C1'-N9	5.22	112.38	108.20
53	B5	995	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	1595	U	P-O3'-C3'	5.22	125.97	119.70
53	B5	2667	A	O4'-C1'-N9	5.22	112.38	108.20
1	AA	1303	C	N3-C4-N4	5.22	121.66	118.00
19	A7	70	C	N3-C4-N4	-5.22	114.34	118.00
53	B5	920	A	C4-C5-C6	5.22	119.61	117.00
53	B5	1245	A	C4-C5-C6	5.22	119.61	117.00
53	B5	2925	C	N3-C4-N4	5.22	121.66	118.00
53	B5	3099	C	C2-N1-C1'	5.22	124.54	118.80
1	AA	823	G	C5-C6-O6	-5.22	125.47	128.60
1	AA	937	G	O4'-C1'-N9	5.22	112.38	108.20
1	AA	1146	G	C5-C6-O6	-5.22	125.47	128.60
1	AA	1380	G	C5-C6-O6	-5.22	125.47	128.60
12	AM	85	PHE	CB-CG-CD2	-5.22	117.15	120.80
52	B4	140	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	256	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	917	A	C4-C5-C6	5.22	119.61	117.00
53	B5	2215	A	C5-C6-N6	-5.22	119.53	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2527	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	2926	A	C4-C5-C6	5.22	119.61	117.00
53	B5	3170	A	C4-C5-C6	5.22	119.61	117.00
1	AA	906	A	O4'-C1'-N9	5.22	112.37	108.20
19	A7	18	G	C5-C6-O6	5.22	131.73	128.60
19	A7	51	G	C4-C5-N7	-5.22	108.71	110.80
53	B5	632	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	1085	A	C5-C6-N6	-5.22	119.53	123.70
53	B5	1647	A	C4-C5-C6	5.22	119.61	117.00
1	AA	344	A	O4'-C1'-N9	5.22	112.37	108.20
1	AA	780	A	O4'-C1'-N9	5.22	112.37	108.20
1	AA	1073	A	C4-C5-C6	5.22	119.61	117.00
1	AA	1160	A	C5-C6-N1	-5.22	115.09	117.70
19	A7	66	A	C3'-C2'-C1'	5.22	105.67	101.50
38	BN	60	PHE	CB-CG-CD2	-5.22	117.15	120.80
53	B5	259	C	N3-C4-C5	-5.22	119.81	121.90
53	B5	841	A	O4'-C1'-N9	5.22	112.37	108.20
53	B5	925	A	C4-C5-C6	5.22	119.61	117.00
53	B5	1106	G	C5-C6-O6	-5.22	125.47	128.60
53	B5	1176	C	O4'-C1'-N1	5.22	112.37	108.20
53	B5	2564	G	O4'-C1'-N9	5.22	112.37	108.20
53	B5	2769	A	C5-C6-N1	-5.22	115.09	117.70
53	B5	189	G	P-O3'-C3'	5.21	125.96	119.70
53	B5	965	A	C4-C5-C6	5.21	119.61	117.00
53	B5	1418	A	O4'-C1'-N9	5.21	112.37	108.20
53	B5	2733	A	O4'-C1'-N9	5.21	112.37	108.20
53	B5	2752	U	O4'-C1'-N1	5.21	112.37	108.20
53	B5	2993	G	O4'-C1'-N9	5.21	112.37	108.20
53	B5	3391	A	O4'-C1'-N9	5.21	112.37	108.20
1	AA	1084	A	O4'-C1'-N9	5.21	112.37	108.20
51	B3	112	G	C5-C6-O6	-5.21	125.47	128.60
1	AA	1155	C	N3-C4-N4	5.21	121.65	118.00
1	AA	1761	A	C4-C5-C6	5.21	119.61	117.00
51	B3	92	A	O4'-C1'-N9	5.21	112.37	108.20
52	B4	120	C	N3-C4-N4	5.21	121.65	118.00
53	B5	1532	C	N3-C4-N4	5.21	121.65	118.00
53	B5	1805	C	O4'-C1'-N1	5.21	112.37	108.20
53	B5	1893	A	C5-C6-N6	-5.21	119.53	123.70
53	B5	2256	A	C5-C6-N6	-5.21	119.53	123.70
1	AA	67	A	O4'-C1'-N9	5.21	112.37	108.20
53	B5	39	A	C5-C6-N1	-5.21	115.09	117.70
53	B5	2770	G	O4'-C1'-N9	5.21	112.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	189	C	N3-C4-N4	5.21	121.65	118.00
1	AA	814	A	O4'-C1'-N9	5.21	112.37	108.20
1	AA	1233	G	C5-C6-O6	-5.21	125.47	128.60
1	AA	1716	G	C5-C6-O6	-5.21	125.47	128.60
19	A7	67	A	C5-C6-N6	5.21	127.87	123.70
53	B5	222	A	C5-C6-N6	-5.21	119.53	123.70
53	B5	783	A	C4-C5-C6	5.21	119.61	117.00
53	B5	1521	G	O4'-C1'-N9	5.21	112.37	108.20
53	B5	1538	G	O4'-C1'-N9	5.21	112.37	108.20
1	AA	264	G	O4'-C1'-N9	5.21	112.36	108.20
1	AA	576	G	O4'-C1'-N9	5.21	112.37	108.20
1	AA	1520	U	C5'-C4'-C3'	-5.21	107.67	116.00
53	B5	18	G	C5-C6-O6	-5.21	125.48	128.60
53	B5	809	G	O4'-C1'-N9	5.21	112.36	108.20
53	B5	1126	G	C5-C6-O6	-5.21	125.48	128.60
53	B5	1426	C	N3-C4-C5	-5.21	119.82	121.90
53	B5	2175	U	O4'-C1'-N1	5.21	112.37	108.20
1	AA	68	A	C4-C5-C6	5.21	119.60	117.00
1	AA	1717	A	O4'-C1'-N9	5.20	112.36	108.20
53	B5	51	A	O4'-C1'-N9	5.20	112.36	108.20
53	B5	383	G	O4'-C1'-N9	5.20	112.36	108.20
53	B5	588	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	1075	A	C5-C6-N6	-5.20	119.54	123.70
53	B5	1268	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	1618	G	O4'-C1'-N9	5.20	112.36	108.20
53	B5	2442	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	2539	A	C5-C6-N6	-5.20	119.54	123.70
53	B5	3193	C	N3-C4-C5	-5.20	119.82	121.90
1	AA	1028	U	O4'-C1'-N1	5.20	112.36	108.20
1	AA	1503	A	O4'-C1'-N9	5.20	112.36	108.20
8	AI	138	PHE	CB-CG-CD2	5.20	124.44	120.80
19	A7	73	A	N9-C1'-C2'	-5.20	106.28	112.00
53	B5	1841	A	O4'-C1'-N9	5.20	112.36	108.20
19	A7	25	C	C3'-C2'-C1'	-5.20	97.34	101.50
19	A7	57	G	N3-C2-N2	-5.20	116.26	119.90
53	B5	172	G	N1-C6-O6	5.20	123.02	119.90
53	B5	791	A	C4-C5-C6	5.20	119.60	117.00
53	B5	830	A	C5-C6-N6	-5.20	119.54	123.70
53	B5	1254	C	N3-C4-N4	5.20	121.64	118.00
53	B5	1754	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	2676	A	C4-C5-C6	5.20	119.60	117.00
53	B5	2697	A	O4'-C1'-N9	5.20	112.36	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3073	A	C5-C6-N1	-5.20	115.10	117.70
1	AA	1588	G	O4'-C1'-N9	5.20	112.36	108.20
53	B5	80	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	1370	G	C5-C6-O6	-5.20	125.48	128.60
53	B5	2903	A	C5-C6-N6	-5.20	119.54	123.70
53	B5	3029	A	O4'-C1'-N9	5.20	112.36	108.20
53	B5	2290	C	N3-C4-C5	-5.20	119.82	121.90
1	AA	240	U	C6-N1-C1'	-5.20	113.92	121.20
1	AA	336	G	C5-C6-O6	-5.20	125.48	128.60
1	AA	446	A	O4'-C1'-N9	5.20	112.36	108.20
53	B5	1149	G	P-O3'-C3'	5.20	125.93	119.70
53	B5	1787	A	C4-C5-C6	5.20	119.60	117.00
53	B5	2929	C	N3-C4-N4	5.20	121.64	118.00
1	AA	401	A	C4-C5-C6	5.19	119.60	117.00
53	B5	39	A	O4'-C1'-N9	5.19	112.36	108.20
53	B5	651	G	P-O3'-C3'	-5.19	113.47	119.70
53	B5	2489	C	N3-C4-C5	-5.19	119.82	121.90
53	B5	2745	G	C5-C6-O6	-5.19	125.48	128.60
53	B5	2801	A	C4-C5-C6	5.19	119.60	117.00
1	AA	1273	G	P-O3'-C3'	5.19	125.93	119.70
1	AA	1666	G	C5-C6-O6	-5.19	125.48	128.60
53	B5	61	A	P-O3'-C3'	5.19	125.93	119.70
53	B5	1132	C	N3-C4-N4	5.19	121.63	118.00
53	B5	1417	G	C5-C6-O6	-5.19	125.48	128.60
53	B5	1759	C	N3-C4-N4	5.19	121.64	118.00
53	B5	2367	A	C5-C6-N6	-5.19	119.55	123.70
53	B5	2674	A	O4'-C1'-N9	5.19	112.35	108.20
53	B5	3362	A	O4'-C1'-N9	5.19	112.35	108.20
1	AA	82	U	O4'-C1'-N1	5.19	112.35	108.20
1	AA	386	G	O4'-C1'-N9	5.19	112.35	108.20
1	AA	407	A	C5-C6-N1	-5.19	115.11	117.70
1	AA	1217	A	O4'-C1'-N9	5.19	112.35	108.20
1	AA	1592	G	C5-C6-O6	-5.19	125.49	128.60
19	A7	56	C	N3-C4-C5	-5.19	119.82	121.90
51	B3	34	C	N3-C4-N4	5.19	121.63	118.00
53	B5	247	C	N3-C4-C5	-5.19	119.82	121.90
53	B5	1145	G	N1-C6-O6	5.19	123.01	119.90
53	B5	1155	C	N3-C4-C5	-5.19	119.82	121.90
53	B5	1504	A	C4-C5-C6	5.19	119.59	117.00
53	B5	2116	G	O4'-C1'-N9	5.19	112.35	108.20
53	B5	2152	A	O4'-C1'-N9	5.19	112.35	108.20
53	B5	1793	C	N3-C4-N4	5.19	121.63	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2559	A	C4-C5-C6	5.19	119.59	117.00
1	AA	105	A	P-O3'-C3'	5.19	125.92	119.70
1	AA	187	G	O4'-C1'-N9	5.19	112.35	108.20
53	B5	1647	A	O4'-C1'-N9	5.19	112.35	108.20
53	B5	2813	A	O4'-C1'-N9	5.19	112.35	108.20
1	AA	1285	G	C5-C6-O6	-5.19	125.49	128.60
19	A7	74	C	C5-C6-N1	-5.19	118.41	121.00
1	AA	417	A	C4-C5-C6	5.18	119.59	117.00
1	AA	938	A	C4-C5-C6	5.18	119.59	117.00
1	AA	1398	A	C4-C5-C6	5.18	119.59	117.00
19	A7	3	G	C6-C5-N7	-5.18	127.29	130.40
19	A7	69	U	C4-C5-C6	5.18	122.81	119.70
24	B9	36	ARG	NE-CZ-NH1	5.18	122.89	120.30
52	B4	89	A	C5-C6-N6	-5.18	119.55	123.70
53	B5	77	A	O4'-C1'-N9	5.18	112.35	108.20
53	B5	100	A	C5-C6-N6	-5.18	119.55	123.70
53	B5	621	A	O4'-C1'-N9	5.18	112.35	108.20
53	B5	2253	G	C5-C6-O6	-5.18	125.49	128.60
53	B5	2864	A	C5'-C4'-O4'	5.18	115.32	109.10
53	B5	3021	A	C5-C6-N1	-5.18	115.11	117.70
1	AA	301	A	C4-C5-C6	5.18	119.59	117.00
1	AA	901	G	O4'-C1'-N9	5.18	112.34	108.20
53	B5	409	A	C5-C6-N6	-5.18	119.55	123.70
53	B5	432	G	O4'-C1'-N9	5.18	112.35	108.20
53	B5	1842	A	C4-C5-C6	5.18	119.59	117.00
53	B5	2839	G	O4'-C1'-N9	5.18	112.35	108.20
1	AA	468	A	C4-C5-C6	5.18	119.59	117.00
1	AA	1130	A	C4-C5-C6	5.18	119.59	117.00
53	B5	193	C	N3-C4-C5	-5.18	119.83	121.90
53	B5	940	G	O4'-C1'-N9	5.18	112.34	108.20
53	B5	1915	A	C5-C6-N1	-5.18	115.11	117.70
53	B5	2527	G	O4'-C1'-N9	5.18	112.34	108.20
1	AA	68	A	C5-C6-N6	-5.18	119.56	123.70
1	AA	1415	G	O4'-C1'-N9	5.18	112.34	108.20
1	AA	1416	G	O4'-C1'-N9	5.18	112.34	108.20
1	AA	1422	A	C5-C6-N6	-5.18	119.56	123.70
52	B4	52	A	C4-C5-C6	5.18	119.59	117.00
53	B5	102	C	N3-C4-N4	5.18	121.62	118.00
53	B5	787	G	O4'-C1'-N9	5.18	112.34	108.20
53	B5	1624	G	O4'-C1'-N9	5.18	112.34	108.20
52	B4	48	A	O4'-C1'-N9	5.18	112.34	108.20
1	AA	151	G	C5-C6-O6	-5.18	125.49	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	928	A	C5-C6-N6	-5.18	119.56	123.70
52	B4	37	A	O4'-C1'-N9	5.18	112.34	108.20
52	B4	110	C	N3-C4-C5	-5.18	119.83	121.90
53	B5	361	A	O4'-C1'-N9	5.18	112.34	108.20
53	B5	2540	A	C5-C6-N6	-5.18	119.56	123.70
53	B5	2691	A	O4'-C1'-N9	5.18	112.34	108.20
1	AA	1581	A	C4-C5-C6	5.17	119.59	117.00
53	B5	217	U	P-O3'-C3'	5.17	125.91	119.70
53	B5	573	C	N3-C4-C5	-5.17	119.83	121.90
53	B5	639	G	O4'-C1'-N9	5.17	112.34	108.20
53	B5	2961	G	O4'-C1'-N9	5.17	112.34	108.20
1	AA	671	G	C5-C6-O6	-5.17	125.50	128.60
1	AA	1226	A	O4'-C1'-N9	5.17	112.34	108.20
53	B5	194	U	O4'-C1'-N1	5.17	112.34	108.20
53	B5	1319	G	O4'-C1'-N9	5.17	112.34	108.20
1	AA	551	G	C5-C6-O6	-5.17	125.50	128.60
1	AA	820	U	O4'-C1'-N1	5.17	112.34	108.20
1	AA	1136	A	C4-C5-C6	5.17	119.59	117.00
1	AA	1730	A	O4'-C1'-N9	5.17	112.34	108.20
52	B4	43	A	C5-C6-N6	-5.17	119.56	123.70
53	B5	1469	C	C6-N1-C1'	-5.17	114.59	120.80
53	B5	2122	G	N1-C6-O6	5.17	123.00	119.90
53	B5	2330	C	N3-C4-C5	-5.17	119.83	121.90
1	AA	660	G	O4'-C1'-N9	5.17	112.34	108.20
19	A7	14	A	C6-N1-C2	-5.17	115.50	118.60
53	B5	806	A	C4-C5-C6	5.17	119.58	117.00
53	B5	2120	A	C4-C5-C6	5.17	119.58	117.00
1	AA	496	G	C5-C6-O6	-5.17	125.50	128.60
19	A7	73	A	C4-C5-C6	-5.17	114.42	117.00
53	B5	202	G	N1-C6-O6	5.17	123.00	119.90
53	B5	750	G	O4'-C1'-N9	5.17	112.33	108.20
53	B5	2419	A	C5-C6-N6	-5.17	119.56	123.70
53	B5	2682	C	N3-C4-N4	5.17	121.62	118.00
53	B5	2750	U	O4'-C1'-N1	5.17	112.33	108.20
1	AA	19	A	O4'-C1'-N9	5.17	112.33	108.20
1	AA	571	G	O4'-C1'-N9	5.17	112.33	108.20
1	AA	895	G	C5-C6-O6	-5.17	125.50	128.60
1	AA	949	C	N3-C4-N4	5.17	121.62	118.00
1	AA	1653	A	C4-C5-C6	5.17	119.58	117.00
51	B3	86	G	C5-C6-O6	-5.17	125.50	128.60
52	B4	40	A	C5-C6-N6	-5.17	119.57	123.70
52	B4	69	U	P-O5'-C5'	-5.17	112.63	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	12	A	C5-C6-N6	-5.17	119.57	123.70
53	B5	1787	A	O4'-C1'-N9	5.17	112.33	108.20
53	B5	1915	A	O4'-C1'-N9	5.17	112.33	108.20
53	B5	3004	C	N3-C4-C5	-5.17	119.83	121.90
53	B5	3366	G	O4'-C1'-N9	5.17	112.33	108.20
1	AA	1630	C	O5'-P-OP1	5.16	116.90	110.70
53	B5	100	A	O4'-C1'-N9	5.16	112.33	108.20
53	B5	910	G	O4'-C1'-N9	5.16	112.33	108.20
53	B5	1383	G	O4'-C1'-N9	5.16	112.33	108.20
53	B5	1390	A	O4'-C1'-N9	5.16	112.33	108.20
53	B5	2256	A	O4'-C1'-N9	5.16	112.33	108.20
53	B5	2649	A	O4'-C1'-N9	5.16	112.33	108.20
53	B5	2958	A	C5-C6-N6	-5.16	119.57	123.70
53	B5	1757	A	C4-C5-C6	5.16	119.58	117.00
1	AA	95	G	C5-C6-O6	-5.16	125.50	128.60
1	AA	1071	G	O4'-C1'-N9	5.16	112.33	108.20
52	B4	24	G	O4'-C1'-N9	5.16	112.33	108.20
52	B4	123	G	C5-C6-O6	-5.16	125.50	128.60
53	B5	763	G	C5-C6-O6	-5.16	125.50	128.60
53	B5	1203	A	C4-C5-C6	5.16	119.58	117.00
53	B5	1496	C	C2-N1-C1'	5.16	124.48	118.80
53	B5	2178	A	C4-C5-C6	5.16	119.58	117.00
53	B5	2219	A	C4-C5-C6	5.16	119.58	117.00
53	B5	2357	A	C5-C6-N6	-5.16	119.57	123.70
53	B5	2490	C	N3-C4-N4	5.16	121.61	118.00
1	AA	109	G	O4'-C1'-N9	5.16	112.33	108.20
1	AA	677	G	C5-C6-O6	-5.16	125.50	128.60
53	B5	285	A	C4-C5-C6	5.16	119.58	117.00
53	B5	418	A	C5-C6-N6	-5.16	119.57	123.70
53	B5	1776	G	P-O3'-C3'	5.16	125.89	119.70
52	B4	14	C	N3-C4-C5	-5.16	119.84	121.90
53	B5	2637	A	O4'-C1'-N9	5.16	112.33	108.20
1	AA	23	G	C5-C6-O6	-5.16	125.51	128.60
1	AA	273	G	O4'-C1'-N9	5.16	112.32	108.20
1	AA	962	A	O4'-C1'-N9	5.16	112.32	108.20
1	AA	1451	G	O4'-C1'-N9	5.16	112.33	108.20
53	B5	1013	G	O4'-C1'-N9	5.16	112.32	108.20
53	B5	1514	G	C5-C6-O6	-5.16	125.51	128.60
53	B5	1901	A	C4-C5-C6	5.16	119.58	117.00
53	B5	2353	G	O4'-C1'-N9	5.16	112.33	108.20
53	B5	2424	A	O4'-C1'-N9	5.16	112.32	108.20
53	B5	2640	A	C4-C5-C6	5.16	119.58	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3275	A	O4'-C1'-N9	5.16	112.32	108.20
1	AA	1761	A	C5-C6-N6	-5.15	119.58	123.70
53	B5	70	A	C5-C6-N6	-5.15	119.58	123.70
53	B5	157	A	C4-C5-C6	5.15	119.58	117.00
53	B5	593	A	O4'-C1'-N9	5.15	112.32	108.20
53	B5	695	C	N3-C4-C5	-5.15	119.84	121.90
53	B5	1704	A	C5-C6-N6	-5.15	119.58	123.70
53	B5	1787	A	C5-C6-N6	-5.15	119.58	123.70
1	AA	730	G	O4'-C1'-N9	5.15	112.32	108.20
1	AA	1217	A	C5-C6-N6	-5.15	119.58	123.70
53	B5	131	C	N3-C4-N4	5.15	121.61	118.00
53	B5	503	C	N3-C4-N4	5.15	121.61	118.00
53	B5	618	C	N3-C4-C5	-5.15	119.84	121.90
53	B5	621	A	C4-C5-C6	5.15	119.58	117.00
53	B5	697	A	O4'-C1'-N9	5.15	112.32	108.20
53	B5	1676	A	C5-C6-N6	-5.15	119.58	123.70
53	B5	3264	G	O4'-C1'-N9	5.15	112.32	108.20
1	AA	85	A	O4'-C1'-N9	5.15	112.32	108.20
1	AA	1006	C	N3-C4-N4	5.15	121.61	118.00
1	AA	1260	G	C5-C6-O6	-5.15	125.51	128.60
51	B3	46	A	C4-C5-C6	5.15	119.58	117.00
53	B5	1285	G	O4'-C1'-N9	5.15	112.32	108.20
53	B5	2947	G	C5-C6-O6	-5.15	125.51	128.60
1	AA	977	A	O4'-C1'-N9	5.15	112.32	108.20
1	AA	1484	G	C5-C6-O6	-5.15	125.51	128.60
53	B5	1454	A	C4-C5-C6	5.15	119.57	117.00
53	B5	3253	G	C5-C6-O6	-5.15	125.51	128.60
53	B5	810	A	O4'-C1'-N9	5.15	112.32	108.20
53	B5	1450	G	O4'-C1'-N9	5.15	112.32	108.20
53	B5	1872	C	N3-C4-C5	-5.15	119.84	121.90
53	B5	2398	A	C4-C5-C6	5.15	119.57	117.00
53	B5	2740	A	C4-C5-C6	5.15	119.57	117.00
1	AA	864	U	O3'-P-O5'	5.14	113.78	104.00
1	AA	903	G	C5-C6-O6	-5.14	125.51	128.60
1	AA	1475	G	O4'-C1'-N9	5.14	112.32	108.20
19	A7	69	U	C5-C6-N1	-5.14	120.13	122.70
53	B5	1825	G	O4'-C1'-N9	5.14	112.31	108.20
53	B5	1847	A	C4-C5-C6	5.14	119.57	117.00
53	B5	1918	C	N3-C4-C5	-5.14	119.84	121.90
53	B5	2689	A	C4-C5-C6	5.14	119.57	117.00
53	B5	3148	U	P-O3'-C3'	5.14	125.87	119.70
1	AA	529	A	O4'-C1'-N9	5.14	112.31	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	565	C	N3-C4-N4	5.14	121.60	118.00
53	B5	166	C	N3-C4-N4	5.14	121.60	118.00
53	B5	1120	A	O4'-C1'-N9	5.14	112.31	108.20
53	B5	1517	G	C5-C6-O6	-5.14	125.51	128.60
53	B5	2437	G	C5-C6-O6	-5.14	125.51	128.60
53	B5	2456	A	O4'-C1'-N9	5.14	112.31	108.20
53	B5	2736	A	C4-C5-C6	5.14	119.57	117.00
1	AA	412	A	O4'-C1'-N9	5.14	112.31	108.20
1	AA	1787	G	O4'-C1'-N9	5.14	112.31	108.20
52	B4	86	U	O4'-C1'-N1	5.14	112.31	108.20
53	B5	675	C	N3-C4-C5	-5.14	119.84	121.90
53	B5	1089	G	C5-C6-O6	-5.14	125.52	128.60
1	AA	1663	U	O4'-C1'-N1	5.14	112.31	108.20
1	AA	1792	A	C4-C5-C6	5.14	119.57	117.00
52	B4	67	U	O4'-C1'-N1	5.14	112.31	108.20
53	B5	961	C	O4'-C1'-N1	5.14	112.31	108.20
53	B5	2438	A	O4'-C1'-N9	5.14	112.31	108.20
53	B5	3076	C	N3-C4-N4	5.14	121.60	118.00
53	B5	3086	A	C5-C6-N1	-5.14	115.13	117.70
1	AA	1144	A	O4'-C1'-N9	5.14	112.31	108.20
52	B4	114	G	C5-C6-O6	-5.14	125.52	128.60
53	B5	718	G	C4-N9-C1'	5.14	133.18	126.50
53	B5	1013	G	C5-C6-O6	-5.14	125.52	128.60
53	B5	2448	G	N1-C6-O6	5.14	122.98	119.90
53	B5	2568	C	N3-C4-C5	-5.14	119.84	121.90
53	B5	2737	C	N3-C4-N4	5.14	121.60	118.00
53	B5	3140	G	O4'-C1'-N9	5.14	112.31	108.20
1	AA	933	C	O4'-C1'-N1	5.14	112.31	108.20
1	AA	940	A	O4'-C1'-N9	5.14	112.31	108.20
53	B5	1850	A	O4'-C1'-N9	5.14	112.31	108.20
53	B5	2371	G	O4'-C1'-N9	5.14	112.31	108.20
1	AA	1362	C	N3-C4-N4	5.13	121.59	118.00
53	B5	2958	A	C4-C5-C6	5.13	119.57	117.00
1	AA	484	C	N3-C4-N4	5.13	121.59	118.00
1	AA	1593	U	O4'-C1'-N1	5.13	112.31	108.20
1	AA	322	G	O4'-C1'-N9	5.13	112.31	108.20
1	AA	441	A	O4'-C1'-N9	5.13	112.31	108.20
1	AA	1089	A	C5-C6-N6	-5.13	119.59	123.70
1	AA	1462	G	C5-C6-O6	-5.13	125.52	128.60
1	AA	1676	A	O4'-C1'-N9	5.13	112.31	108.20
19	A7	1	G	C5'-C4'-C3'	5.13	124.21	116.00
53	B5	1843	C	N3-C4-C5	-5.13	119.85	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2120	A	O4'-C1'-N9	5.13	112.31	108.20
53	B5	3271	A	O4'-C1'-N9	5.13	112.31	108.20
52	B4	9	A	C4-C5-C6	5.13	119.56	117.00
53	B5	3235	C	N3-C4-N4	5.13	121.59	118.00
1	AA	46	A	O4'-C1'-N9	5.13	112.30	108.20
1	AA	939	A	C4-C5-C6	5.13	119.56	117.00
1	AA	1354	A	C5-C6-N6	-5.13	119.60	123.70
1	AA	1730	A	C4-C5-C6	5.13	119.56	117.00
53	B5	365	A	C5-C6-N6	-5.13	119.60	123.70
53	B5	710	A	C4-C5-C6	5.13	119.56	117.00
53	B5	784	A	C5-C6-N1	-5.13	115.14	117.70
53	B5	951	A	O4'-C1'-N9	5.13	112.30	108.20
53	B5	2867	C	N3-C4-C5	-5.13	119.85	121.90
53	B5	2914	G	C5-C6-O6	-5.13	125.52	128.60
1	AA	86	A	O4'-C1'-N9	5.13	112.30	108.20
1	AA	1661	G	O4'-C1'-N9	5.13	112.30	108.20
53	B5	845	G	O4'-C1'-N9	5.13	112.30	108.20
53	B5	2580	A	O4'-C1'-N9	5.13	112.30	108.20
53	B5	2676	A	C5-C6-N6	-5.13	119.60	123.70
53	B5	2963	C	N3-C4-C5	-5.13	119.85	121.90
1	AA	370	A	C4-C5-C6	5.12	119.56	117.00
51	B3	85	G	C5-C6-O6	-5.12	125.53	128.60
1	AA	279	G	O4'-C1'-N9	5.12	112.30	108.20
1	AA	638	U	O4'-C1'-N1	5.12	112.30	108.20
8	AI	142	TYR	CA-CB-CG	-5.12	103.66	113.40
53	B5	832	G	O4'-C1'-N9	5.12	112.30	108.20
53	B5	1656	A	O4'-C1'-N9	5.12	112.30	108.20
53	B5	3126	C	N3-C4-C5	-5.12	119.85	121.90
1	AA	285	G	C5-C6-O6	-5.12	125.53	128.60
1	AA	1313	G	O4'-C1'-N9	5.12	112.30	108.20
1	AA	1464	G	O4'-C1'-N9	5.12	112.30	108.20
53	B5	1504	A	C5-C6-N6	-5.12	119.60	123.70
53	B5	1670	C	N3-C4-N4	5.12	121.58	118.00
53	B5	2369	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	2479	C	N3-C4-N4	5.12	121.58	118.00
1	AA	646	C	N3-C4-N4	5.12	121.58	118.00
53	B5	826	G	O4'-C1'-N9	5.12	112.30	108.20
53	B5	1085	A	O4'-C1'-N9	5.12	112.30	108.20
53	B5	2555	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	2956	A	C4-C5-C6	5.12	119.56	117.00
1	AA	178	U	O4'-C1'-N1	5.12	112.30	108.20
1	AA	534	A	O4'-C1'-N9	5.12	112.30	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1368	A	O4'-C1'-N9	5.12	112.30	108.20
1	AA	1473	A	O4'-C1'-N9	5.12	112.30	108.20
52	B4	144	G	P-O3'-C3'	5.12	125.84	119.70
53	B5	251	G	O4'-C1'-N9	5.12	112.29	108.20
53	B5	603	A	C4-C5-C6	5.12	119.56	117.00
53	B5	1528	G	O4'-C1'-N9	5.12	112.30	108.20
53	B5	2961	G	P-O3'-C3'	5.12	125.84	119.70
1	AA	1078	A	C4-C5-C6	5.12	119.56	117.00
53	B5	435	C	P-O3'-C3'	5.12	125.84	119.70
53	B5	975	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	1741	A	C4-C5-C6	5.12	119.56	117.00
53	B5	2445	A	C5-C6-N6	-5.12	119.61	123.70
1	AA	1524	A	C5-C6-N6	-5.12	119.61	123.70
53	B5	798	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	838	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	1743	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	2421	U	P-O3'-C3'	5.12	125.84	119.70
53	B5	2706	G	C5-C6-O6	-5.12	125.53	128.60
53	B5	2741	C	N3-C4-N4	5.12	121.58	118.00
53	B5	3021	A	C4-C5-C6	5.12	119.56	117.00
53	B5	3081	C	N3-C4-N4	5.12	121.58	118.00
53	B5	3086	A	C4-C5-C6	5.12	119.56	117.00
1	AA	42	G	C5-C6-O6	-5.11	125.53	128.60
1	AA	388	G	O4'-C1'-N9	5.11	112.29	108.20
1	AA	467	G	O4'-C1'-N9	5.11	112.29	108.20
1	AA	1385	A	C5-C6-N6	-5.11	119.61	123.70
1	AA	1568	A	O4'-C1'-N9	5.11	112.29	108.20
1	AA	1763	A	C4-C5-C6	5.11	119.56	117.00
53	B5	2628	A	C5-C6-N6	-5.11	119.61	123.70
1	AA	1683	G	C5-C6-O6	-5.11	125.53	128.60
53	B5	1529	A	C5-C6-N6	-5.11	119.61	123.70
53	B5	1868	G	O4'-C1'-N9	5.11	112.29	108.20
53	B5	3299	A	C5-C6-N6	-5.11	119.61	123.70
1	AA	425	A	C4-C5-C6	5.11	119.56	117.00
1	AA	778	G	C5-C6-O6	-5.11	125.53	128.60
53	B5	318	A	O4'-C1'-N9	5.11	112.29	108.20
53	B5	417	A	O4'-C1'-N9	5.11	112.29	108.20
53	B5	1830	G	O4'-C1'-N9	5.11	112.29	108.20
53	B5	1946	A	C4-C5-C6	5.11	119.56	117.00
1	AA	160	C	N3-C4-N4	5.11	121.58	118.00
1	AA	649	U	O4'-C1'-N1	5.11	112.29	108.20
53	B5	16	A	C4-C5-C6	5.11	119.55	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1227	C	N3-C4-C5	-5.11	119.86	121.90
53	B5	1575	A	C5-C6-N6	-5.11	119.61	123.70
53	B5	1750	A	C4-C5-C6	5.11	119.55	117.00
53	B5	1883	A	C5-C6-N1	-5.11	115.14	117.70
53	B5	2360	C	O4'-C1'-N1	5.11	112.29	108.20
53	B5	3313	U	C5'-C4'-O4'	5.11	115.23	109.10
1	AA	490	C	N3-C4-N4	5.11	121.58	118.00
1	AA	500	C	N3-C4-C5	-5.11	119.86	121.90
1	AA	878	G	O4'-C1'-N9	5.11	112.29	108.20
1	AA	1001	G	O4'-C1'-N9	5.11	112.29	108.20
1	AA	1529	G	O4'-C1'-N9	5.11	112.29	108.20
53	B5	76	G	O4'-C1'-N9	5.11	112.29	108.20
53	B5	199	A	O4'-C1'-N9	5.11	112.29	108.20
53	B5	1332	A	O4'-C1'-N9	5.11	112.29	108.20
53	B5	1907	C	N3-C4-N4	5.11	121.58	118.00
53	B5	2733	A	C4-C5-C6	5.11	119.55	117.00
53	B5	3234	A	C4-C5-C6	5.11	119.55	117.00
51	B3	37	G	O4'-C1'-N9	5.11	112.28	108.20
53	B5	742	G	C5-C6-O6	-5.11	125.54	128.60
53	B5	796	U	O4'-C1'-N1	5.11	112.28	108.20
53	B5	1080	A	C5-C6-N6	-5.11	119.61	123.70
53	B5	1231	A	C5-C6-N6	-5.11	119.61	123.70
53	B5	2120	A	C5-C6-N6	-5.11	119.61	123.70
53	B5	2180	G	O4'-C1'-N9	5.11	112.28	108.20
53	B5	3218	A	O4'-C1'-N9	5.11	112.28	108.20
53	B5	3237	U	O4'-C1'-N1	5.11	112.28	108.20
53	B5	400	G	C5-C6-O6	-5.10	125.54	128.60
53	B5	2188	A	C5-C6-N6	-5.10	119.62	123.70
53	B5	2872	A	C4-C5-C6	5.10	119.55	117.00
1	AA	1133	U	C2'-C3'-O3'	5.10	121.86	113.70
52	B4	129	C	N3-C4-N4	5.10	121.57	118.00
53	B5	192	C	N3-C4-C5	-5.10	119.86	121.90
53	B5	1358	C	N3-C4-C5	-5.10	119.86	121.90
53	B5	2229	A	C5-C6-N6	-5.10	119.62	123.70
53	B5	2867	C	N3-C4-N4	5.10	121.57	118.00
1	AA	410	A	O4'-C1'-N9	5.10	112.28	108.20
1	AA	858	G	C4-C5-N7	5.10	112.84	110.80
8	AI	96	TYR	CB-CG-CD1	-5.10	117.94	121.00
19	A7	25	C	N3-C2-O2	-5.10	118.33	121.90
53	B5	45	A	O4'-C1'-N9	5.10	112.28	108.20
53	B5	547	G	O4'-C1'-N9	5.10	112.28	108.20
1	AA	329	G	C5-C6-O6	-5.10	125.54	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1467	A	O4'-C1'-N9	5.10	112.28	108.20
53	B5	151	A	C1'-O4'-C4'	-5.10	105.82	109.90
53	B5	355	A	C4-C5-C6	5.10	119.55	117.00
53	B5	368	G	C5-C6-O6	-5.10	125.54	128.60
53	B5	1066	G	C5-C6-O6	-5.10	125.54	128.60
53	B5	1574	C	N3-C4-N4	5.10	121.57	118.00
53	B5	1683	A	C4-C5-C6	5.10	119.55	117.00
53	B5	2825	C	N3-C4-N4	5.10	121.57	118.00
1	AA	438	A	C4-C5-C6	5.10	119.55	117.00
1	AA	1490	A	O4'-C1'-N9	5.10	112.28	108.20
1	AA	1537	G	N1-C6-O6	5.10	122.96	119.90
51	B3	101	A	C5-C6-N6	-5.10	119.62	123.70
53	B5	1726	C	N3-C4-N4	5.10	121.57	118.00
53	B5	1911	A	O4'-C1'-N9	5.10	112.28	108.20
53	B5	2494	A	O4'-C1'-N9	5.10	112.28	108.20
53	B5	535	G	O4'-C1'-N9	5.09	112.28	108.20
53	B5	1655	G	O4'-C1'-N9	5.09	112.28	108.20
53	B5	2710	C	N3-C4-N4	5.09	121.57	118.00
53	B5	3321	C	N3-C4-N4	5.09	121.57	118.00
1	AA	83	G	C5-C6-O6	-5.09	125.54	128.60
1	AA	1137	G	C5-C6-O6	-5.09	125.54	128.60
53	B5	2892	A	C5-C6-N6	-5.09	119.63	123.70
1	AA	67	A	C5-C6-N6	-5.09	119.63	123.70
1	AA	421	A	O4'-C1'-N9	5.09	112.27	108.20
1	AA	665	U	O4'-C1'-N1	5.09	112.27	108.20
1	AA	1333	A	O4'-C1'-N9	5.09	112.27	108.20
1	AA	1452	G	C5-C6-O6	-5.09	125.55	128.60
1	AA	1473	A	C4-C5-C6	5.09	119.55	117.00
53	B5	288	C	N3-C4-C5	-5.09	119.86	121.90
53	B5	402	A	C5-C6-N6	-5.09	119.63	123.70
53	B5	2146	C	N3-C4-N4	5.09	121.56	118.00
53	B5	2586	G	C5-C6-O6	-5.09	125.55	128.60
53	B5	2628	A	C4-C5-C6	5.09	119.55	117.00
53	B5	2869	U	O4'-C1'-N1	5.09	112.27	108.20
1	AA	96	G	C5-C6-O6	-5.09	125.55	128.60
1	AA	263	C	N3-C4-N4	5.09	121.56	118.00
1	AA	1026	A	C5-C6-N6	-5.09	119.63	123.70
1	AA	1692	A	C5-C6-N6	-5.09	119.63	123.70
19	A7	28	C	C1'-O4'-C4'	-5.09	105.83	109.90
53	B5	211	A	C4-C5-C6	5.09	119.55	117.00
53	B5	392	G	O4'-C1'-N9	5.09	112.27	108.20
53	B5	696	C	N3-C4-C5	-5.09	119.86	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1335	C	N3-C4-N4	5.09	121.56	118.00
53	B5	2143	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	2802	A	C4-C5-C6	5.09	119.55	117.00
53	B5	2958	A	O4'-C1'-N9	5.09	112.27	108.20
1	AA	860	U	C1'-C2'-O2'	5.09	125.86	110.60
53	B5	805	G	O4'-C1'-N9	5.09	112.27	108.20
53	B5	1674	G	O4'-C1'-N9	5.09	112.27	108.20
53	B5	2143	A	C5-C6-N6	-5.09	119.63	123.70
1	AA	582	U	O4'-C1'-N1	5.09	112.27	108.20
1	AA	866	G	C1'-C2'-O2'	5.09	125.86	110.60
53	B5	154	U	O4'-C1'-N1	5.09	112.27	108.20
53	B5	552	G	P-O3'-C3'	5.09	125.80	119.70
53	B5	1566	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	1615	C	N3-C4-N4	5.09	121.56	118.00
53	B5	2138	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	2348	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	2413	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	2666	C	N3-C4-N4	5.09	121.56	118.00
53	B5	2887	A	C4-C5-C6	5.09	119.54	117.00
53	B5	2946	A	O4'-C1'-N9	5.09	112.27	108.20
53	B5	3062	G	O4'-C1'-N9	5.09	112.27	108.20
1	AA	521	A	O4'-C1'-N9	5.08	112.27	108.20
1	AA	1670	G	O4'-C1'-N9	5.08	112.27	108.20
53	B5	1560	G	O4'-C1'-N9	5.08	112.27	108.20
53	B5	2788	C	C6-N1-C1'	-5.08	114.70	120.80
1	AA	341	A	O4'-C1'-N9	5.08	112.27	108.20
1	AA	399	A	C4-C5-C6	5.08	119.54	117.00
1	AA	531	C	O4'-C1'-N1	5.08	112.27	108.20
1	AA	1134	A	O4'-C1'-N9	5.08	112.27	108.20
52	B4	131	A	C4-C5-C6	5.08	119.54	117.00
53	B5	808	A	O4'-C1'-N9	5.08	112.27	108.20
53	B5	835	G	O4'-C1'-N9	5.08	112.27	108.20
53	B5	1254	C	N3-C4-C5	-5.08	119.87	121.90
53	B5	1291	A	C5-C6-N6	-5.08	119.63	123.70
53	B5	1434	G	O4'-C1'-N9	5.08	112.27	108.20
53	B5	1561	G	C5-C6-O6	-5.08	125.55	128.60
53	B5	2521	U	O4'-C1'-N1	5.08	112.27	108.20
53	B5	2801	A	C5-C6-N1	-5.08	115.16	117.70
53	B5	2984	C	N3-C4-C5	-5.08	119.87	121.90
53	B5	2988	C	N3-C4-C5	-5.08	119.87	121.90
1	AA	586	G	C5-C6-O6	-5.08	125.55	128.60
1	AA	817	A	O4'-C1'-N9	5.08	112.27	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1081	A	C5-C6-N6	-5.08	119.64	123.70
1	AA	1185	A	C4-C5-C6	5.08	119.54	117.00
1	AA	1522	A	C5-C6-N1	-5.08	115.16	117.70
1	AA	1599	G	C5-C6-O6	-5.08	125.55	128.60
19	A7	5	A	O3'-P-O5'	5.08	113.66	104.00
53	B5	248	U	O4'-C1'-N1	5.08	112.27	108.20
53	B5	844	G	C5-C6-O6	-5.08	125.55	128.60
53	B5	904	A	C5-C6-N1	-5.08	115.16	117.70
53	B5	2458	A	C4-C5-C6	5.08	119.54	117.00
53	B5	2988	C	N3-C4-N4	5.08	121.56	118.00
53	B5	3020	U	O4'-C1'-N1	5.08	112.27	108.20
1	AA	394	C	N3-C4-N4	5.08	121.56	118.00
51	B3	65	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	761	A	C4-C5-C6	5.08	119.54	117.00
53	B5	1719	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	2952	G	P-O3'-C3'	5.08	125.80	119.70
1	AA	145	A	O4'-C1'-N9	5.08	112.26	108.20
1	AA	179	A	C4-C5-C6	5.08	119.54	117.00
1	AA	502	U	C5'-C4'-C3'	5.08	124.13	116.00
1	AA	734	A	C5-C6-N6	-5.08	119.64	123.70
1	AA	1454	C	N3-C4-N4	5.08	121.56	118.00
1	AA	1788	A	C4-C5-C6	5.08	119.54	117.00
19	A7	71	G	N9-C1'-C2'	-5.08	106.41	112.00
53	B5	473	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	495	G	C5-C6-O6	-5.08	125.55	128.60
53	B5	1003	A	C4-C5-C6	5.08	119.54	117.00
53	B5	1531	C	N3-C4-C5	-5.08	119.87	121.90
53	B5	2833	A	C4-C5-C6	5.08	119.54	117.00
1	AA	1297	A	C5-C6-N1	-5.08	115.16	117.70
19	A7	35	A	O4'-C1'-C2'	5.08	112.17	107.60
53	B5	1302	A	O4'-C1'-N9	5.08	112.26	108.20
53	B5	1852	G	O4'-C1'-N9	5.08	112.26	108.20
1	AA	351	C	N3-C4-N4	5.08	121.55	118.00
1	AA	660	G	C5-C6-O6	-5.08	125.55	128.60
1	AA	1315	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	18	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	114	A	C5-C6-N6	-5.08	119.64	123.70
53	B5	397	A	C4-C5-C6	5.08	119.54	117.00
53	B5	659	G	O4'-C1'-N9	5.08	112.26	108.20
53	B5	1745	C	N3-C4-C5	-5.08	119.87	121.90
53	B5	1854	C	N3-C4-N4	5.08	121.55	118.00
53	B5	2443	A	C5-C6-N6	-5.08	119.64	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2705	A	C4-C5-C6	5.08	119.54	117.00
1	AA	218	A	O4'-C1'-N9	5.07	112.26	108.20
19	A7	3	G	C4-C5-C6	5.07	121.84	118.80
19	A7	45	G	N1-C6-O6	-5.07	116.86	119.90
53	B5	884	A	O4'-C1'-N9	5.07	112.26	108.20
53	B5	1408	G	C5-C6-O6	-5.07	125.56	128.60
53	B5	1896	A	C5-C6-N1	-5.07	115.16	117.70
53	B5	2256	A	C4-C5-C6	5.07	119.54	117.00
53	B5	2352	A	C5-C6-N1	-5.07	115.16	117.70
1	AA	594	A	O4'-C1'-N9	5.07	112.26	108.20
1	AA	1440	U	O4'-C1'-N1	5.07	112.26	108.20
1	AA	1524	A	C4-C5-C6	5.07	119.54	117.00
53	B5	349	A	C5-C6-N1	-5.07	115.16	117.70
53	B5	1055	A	O4'-C1'-N9	5.07	112.26	108.20
1	AA	1289	G	C5-C6-O6	-5.07	125.56	128.60
1	AA	1438	C	N3-C4-N4	5.07	121.55	118.00
53	B5	29	C	N3-C4-N4	5.07	121.55	118.00
53	B5	238	A	C5-C6-N6	-5.07	119.64	123.70
53	B5	329	U	O4'-C1'-N1	5.07	112.26	108.20
53	B5	1252	A	C5-C6-N1	-5.07	115.17	117.70
53	B5	1338	C	N3-C4-N4	5.07	121.55	118.00
53	B5	1588	A	C4-C5-C6	5.07	119.54	117.00
53	B5	3369	G	C4-N9-C1'	5.07	133.09	126.50
1	AA	771	A	C5-C6-N6	-5.07	119.64	123.70
1	AA	1365	G	C5-C6-O6	-5.07	125.56	128.60
53	B5	1248	C	N3-C4-N4	5.07	121.55	118.00
53	B5	1893	A	C4-C5-C6	5.07	119.53	117.00
53	B5	2879	C	N3-C4-N4	5.07	121.55	118.00
53	B5	3247	G	C5-C6-O6	-5.07	125.56	128.60
1	AA	350	U	O4'-C1'-N1	5.07	112.25	108.20
1	AA	365	G	O4'-C1'-N9	5.07	112.25	108.20
1	AA	445	A	C4-C5-C6	5.07	119.53	117.00
1	AA	903	G	O4'-C1'-N9	5.07	112.25	108.20
1	AA	954	A	C5-C6-N6	-5.07	119.65	123.70
1	AA	1150	G	C5-C6-O6	-5.07	125.56	128.60
1	AA	1319	A	O4'-C1'-N9	5.07	112.25	108.20
1	AA	1516	C	P-O5'-C5'	-5.07	112.79	120.90
1	AA	1612	A	C5-C6-N1	-5.07	115.17	117.70
52	B4	1	A	C4-C5-C6	5.07	119.53	117.00
53	B5	318	A	C4-C5-C6	5.07	119.53	117.00
53	B5	363	G	O4'-C1'-N9	5.07	112.25	108.20
53	B5	653	A	C4-C5-C6	5.07	119.53	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	1000	C	N3-C4-N4	5.07	121.55	118.00
53	B5	2658	G	O4'-C1'-N9	5.07	112.25	108.20
53	B5	2674	A	C5-C6-N6	-5.07	119.65	123.70
53	B5	2732	G	O4'-C1'-N9	5.07	112.25	108.20
53	B5	2857	C	N3-C4-N4	5.07	121.55	118.00
53	B5	2991	A	C5-C6-N1	-5.07	115.17	117.70
53	B5	3245	A	O4'-C1'-N9	5.07	112.25	108.20
1	AA	948	C	N3-C4-N4	5.07	121.55	118.00
1	AA	962	A	C4-C5-C6	5.07	119.53	117.00
1	AA	1148	A	O4'-C1'-N9	5.07	112.25	108.20
1	AA	1237	G	C5-C6-O6	-5.07	125.56	128.60
52	B4	40	A	C4-C5-C6	5.07	119.53	117.00
53	B5	304	G	O4'-C1'-N9	5.07	112.25	108.20
53	B5	711	A	C4-C5-C6	5.07	119.53	117.00
53	B5	1482	A	C4-C5-C6	5.07	119.53	117.00
53	B5	1490	A	O4'-C1'-N9	5.07	112.25	108.20
53	B5	1671	C	N3-C4-N4	5.07	121.55	118.00
53	B5	2656	A	C5-C6-N1	-5.07	115.17	117.70
53	B5	3308	C	N3-C4-N4	5.07	121.55	118.00
1	AA	962	A	C5-C6-N6	-5.06	119.65	123.70
1	AA	1451	G	C5-C6-O6	-5.06	125.56	128.60
19	A7	51	G	N9-C4-C5	5.06	107.43	105.40
53	B5	135	C	C6-N1-C2	-5.06	118.28	120.30
53	B5	728	G	O4'-C1'-N9	5.06	112.25	108.20
53	B5	1497	C	N3-C4-C5	-5.06	119.87	121.90
1	AA	199	G	C5-C6-O6	-5.06	125.56	128.60
1	AA	724	C	N3-C4-C5	-5.06	119.88	121.90
1	AA	1140	A	C4-C5-C6	5.06	119.53	117.00
1	AA	1310	A	C5-C6-N6	-5.06	119.65	123.70
53	B5	1673	G	C5-C6-O6	-5.06	125.56	128.60
53	B5	2267	C	N3-C4-C5	-5.06	119.88	121.90
53	B5	3279	A	C4-C5-C6	5.06	119.53	117.00
53	B5	3347	A	C4-C5-C6	5.06	119.53	117.00
1	AA	858	G	N9-C1'-C2'	5.06	120.58	114.00
1	AA	1649	A	O4'-C1'-N9	5.06	112.25	108.20
53	B5	2443	A	O4'-C1'-N9	5.06	112.25	108.20
1	AA	540	G	C5-C6-O6	-5.06	125.56	128.60
1	AA	731	C	N3-C4-N4	5.06	121.54	118.00
1	AA	1744	A	C4-C5-C6	5.06	119.53	117.00
52	B4	133	G	C5-C6-O6	-5.06	125.56	128.60
53	B5	268	A	C4-C5-C6	5.06	119.53	117.00
53	B5	781	G	O4'-C1'-N9	5.06	112.25	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2208	A	C5-C6-N1	-5.06	115.17	117.70
53	B5	2400	G	O4'-C1'-N9	5.06	112.25	108.20
53	B5	2646	C	N3-C4-C5	-5.06	119.88	121.90
53	B5	3179	U	P-O3'-C3'	5.06	125.77	119.70
1	AA	552	G	O4'-C1'-N9	5.06	112.25	108.20
1	AA	696	C	N3-C4-C5	-5.06	119.88	121.90
1	AA	1085	A	C4-C5-C6	5.06	119.53	117.00
52	B4	70	A	C4-C5-C6	5.06	119.53	117.00
52	B4	94	C	N3-C4-C5	-5.06	119.88	121.90
53	B5	61	A	C4-C5-C6	5.06	119.53	117.00
53	B5	101	G	C5-C6-O6	-5.06	125.57	128.60
53	B5	709	A	C5-C6-N6	-5.06	119.66	123.70
53	B5	1295	G	C5-C6-O6	-5.06	125.57	128.60
53	B5	1733	G	O4'-C1'-N9	5.06	112.25	108.20
53	B5	2178	A	C5-C6-N1	-5.06	115.17	117.70
53	B5	2469	G	O4'-C1'-N9	5.06	112.25	108.20
53	B5	3048	A	C5-C6-N1	-5.06	115.17	117.70
1	AA	518	A	O4'-C1'-N9	5.06	112.25	108.20
1	AA	1639	C	N3-C4-N4	5.06	121.54	118.00
4	AD	78	ARG	NE-CZ-NH2	-5.06	117.77	120.30
19	A7	52	U	C6-N1-C2	-5.06	117.97	121.00
52	B4	130	C	N3-C4-N4	5.06	121.54	118.00
53	B5	2645	G	O4'-C1'-N9	5.06	112.25	108.20
53	B5	2911	A	C4-C5-C6	5.06	119.53	117.00
53	B5	3112	G	O4'-C1'-N9	5.06	112.25	108.20
1	AA	188	A	C4-C5-C6	5.05	119.53	117.00
1	AA	1166	G	O4'-C1'-N9	5.05	112.24	108.20
1	AA	1682	U	O4'-C1'-N1	5.05	112.24	108.20
52	B4	54	A	C4-C5-C6	5.05	119.53	117.00
53	B5	701	G	O4'-C1'-N9	5.05	112.24	108.20
53	B5	1120	A	C4-C5-C6	5.05	119.53	117.00
53	B5	3374	U	O4'-C1'-N1	5.05	112.24	108.20
1	AA	338	C	N3-C4-C5	-5.05	119.88	121.90
51	B3	27	A	O4'-C1'-N9	5.05	112.24	108.20
52	B4	149	A	C4-C5-C6	5.05	119.53	117.00
53	B5	144	A	C4-C5-C6	5.05	119.53	117.00
53	B5	1193	A	O4'-C1'-N9	5.05	112.24	108.20
53	B5	1608	C	N3-C4-N4	5.05	121.54	118.00
53	B5	1857	C	N3-C4-C5	-5.05	119.88	121.90
53	B5	2901	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	2926	A	C5-C6-N1	-5.05	115.17	117.70
1	AA	226	A	O4'-C1'-N9	5.05	112.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1334	A	O4'-C1'-N9	5.05	112.24	108.20
1	AA	1572	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	445	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	978	C	P-O3'-C3'	5.05	125.76	119.70
53	B5	1086	C	N3-C4-N4	5.05	121.54	118.00
1	AA	295	A	O4'-C1'-N9	5.05	112.24	108.20
1	AA	605	A	O4'-C1'-N9	5.05	112.24	108.20
1	AA	859	A	C4'-C3'-C2'	5.05	107.65	102.60
1	AA	1224	G	O4'-C1'-N9	5.05	112.24	108.20
1	AA	1789	A	C5-C6-N6	-5.05	119.66	123.70
53	B5	973	A	C4-C5-C6	5.05	119.53	117.00
53	B5	1118	C	N3-C4-N4	5.05	121.53	118.00
53	B5	1487	G	O4'-C1'-N9	5.05	112.24	108.20
53	B5	1525	G	O4'-C1'-N9	5.05	112.24	108.20
53	B5	1700	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	3017	A	C4-C5-C6	5.05	119.53	117.00
53	B5	3169	U	O4'-C1'-N1	5.05	112.24	108.20
1	AA	188	A	C5-C6-N6	-5.05	119.66	123.70
53	B5	2225	U	O4'-C1'-N1	5.05	112.24	108.20
53	B5	2468	A	C5-C6-N6	-5.05	119.66	123.70
1	AA	89	G	O4'-C1'-N9	5.05	112.24	108.20
1	AA	274	G	C5-C6-O6	-5.05	125.57	128.60
1	AA	1201	C	N3-C4-N4	5.05	121.53	118.00
1	AA	1728	A	O4'-C1'-N9	5.05	112.24	108.20
19	A7	20	G	N9-C4-C5	5.05	107.42	105.40
53	B5	265	A	C4-C5-C6	5.05	119.52	117.00
53	B5	304	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	593	A	C5-C6-N1	-5.05	115.18	117.70
53	B5	739	G	C5-C6-O6	-5.05	125.57	128.60
53	B5	743	C	N3-C4-N4	5.05	121.53	118.00
53	B5	1236	G	N3-C2-N2	5.05	123.43	119.90
53	B5	1339	C	N3-C4-N4	5.05	121.53	118.00
53	B5	1704	A	O4'-C1'-N9	5.05	112.24	108.20
53	B5	1741	A	C5-C6-N6	-5.05	119.66	123.70
53	B5	1750	A	C5-C6-N6	-5.05	119.66	123.70
53	B5	2699	G	C5-C6-O6	-5.05	125.57	128.60
1	AA	755	A	C5-C6-N6	-5.04	119.66	123.70
53	B5	12	A	O4'-C1'-N9	5.04	112.24	108.20
53	B5	1238	C	N3-C4-N4	5.04	121.53	118.00
1	AA	510	G	C5-C6-O6	-5.04	125.57	128.60
1	AA	914	A	C5-C6-N6	-5.04	119.67	123.70
1	AA	1552	U	P-O5'-C5'	-5.04	112.83	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	15	G	C8-N9-C1'	5.04	133.56	127.00
52	B4	131	A	C5-C6-N1	-5.04	115.18	117.70
53	B5	808	A	C4-C5-C6	5.04	119.52	117.00
53	B5	3165	A	O4'-C1'-N9	5.04	112.23	108.20
1	AA	1	U	C6-N1-C1'	-5.04	114.14	121.20
1	AA	939	A	C5-C6-N1	-5.04	115.18	117.70
1	AA	1170	C	N3-C4-C5	-5.04	119.88	121.90
52	B4	45	C	N3-C4-C5	-5.04	119.88	121.90
53	B5	208	C	N3-C4-N4	5.04	121.53	118.00
53	B5	352	A	C4-C5-C6	5.04	119.52	117.00
53	B5	661	G	O4'-C1'-N9	5.04	112.23	108.20
53	B5	887	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	2243	A	C5-C6-N6	-5.04	119.67	123.70
53	B5	2622	C	N3-C4-C5	-5.04	119.88	121.90
53	B5	2721	A	C4-C5-C6	5.04	119.52	117.00
53	B5	2989	U	O4'-C1'-N1	5.04	112.23	108.20
53	B5	3303	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	533	A	O4'-C1'-N9	5.04	112.23	108.20
53	B5	1779	C	N3-C4-C5	-5.04	119.88	121.90
53	B5	2598	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	67	A	C4-C5-C6	5.04	119.52	117.00
51	B3	92	A	C5-C6-N6	-5.04	119.67	123.70
53	B5	347	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	715	A	C1'-O4'-C4'	-5.04	105.87	109.90
53	B5	1797	A	C4-C5-C6	5.04	119.52	117.00
1	AA	954	A	O4'-C1'-N9	5.04	112.23	108.20
1	AA	1281	C	N3-C4-C5	-5.04	119.89	121.90
1	AA	1456	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	1468	C	N3-C4-N4	5.04	121.53	118.00
1	AA	1725	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	17	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	878	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	1797	A	O4'-C1'-N9	5.04	112.23	108.20
53	B5	2196	C	N3-C4-C5	-5.04	119.89	121.90
1	AA	509	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	864	U	OP1-P-OP2	-5.04	112.05	119.60
1	AA	1245	U	O4'-C1'-N1	5.04	112.23	108.20
1	AA	1635	C	O3'-P-O5'	5.04	113.57	104.00
53	B5	255	A	C4-C5-C6	5.04	119.52	117.00
53	B5	690	A	C4-C5-C6	5.04	119.52	117.00
53	B5	1239	C	N3-C4-N4	5.04	121.53	118.00
53	B5	2144	A	C4-C5-C6	5.04	119.52	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2432	A	O4'-C1'-N9	5.04	112.23	108.20
53	B5	2491	A	C4-C5-C6	5.04	119.52	117.00
53	B5	2534	G	C5-C6-O6	-5.04	125.58	128.60
53	B5	2987	A	C4-C5-C6	5.04	119.52	117.00
53	B5	3254	G	C5-C6-O6	-5.04	125.58	128.60
1	AA	22	A	O4'-C1'-N9	5.03	112.23	108.20
1	AA	202	A	O4'-C1'-N9	5.03	112.23	108.20
1	AA	531	C	N3-C4-N4	5.03	121.52	118.00
19	A7	60	C	C4-C5-C6	-5.03	114.88	117.40
53	B5	229	G	O4'-C1'-N9	5.03	112.23	108.20
53	B5	975	G	O4'-C1'-N9	5.03	112.23	108.20
53	B5	1321	G	C5-C6-O6	-5.03	125.58	128.60
53	B5	2114	C	N3-C4-N4	5.03	121.52	118.00
53	B5	2479	C	N3-C4-C5	-5.03	119.89	121.90
1	AA	1279	U	O4'-C1'-N1	5.03	112.23	108.20
19	A7	14	A	O4'-C1'-N9	5.03	112.23	108.20
33	BI	159	PHE	CB-CG-CD2	-5.03	117.28	120.80
53	B5	397	A	C5-C6-N6	-5.03	119.67	123.70
53	B5	817	A	C4-C5-C6	5.03	119.52	117.00
53	B5	1225	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	3323	A	C5-C6-N6	-5.03	119.67	123.70
1	AA	202	A	C4-C5-C6	5.03	119.52	117.00
1	AA	783	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	1099	G	O4'-C1'-N9	5.03	112.22	108.20
1	AA	1580	U	O5'-P-OP2	-5.03	101.17	105.70
53	B5	807	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	842	G	O4'-C1'-N9	5.03	112.22	108.20
53	B5	1159	A	C5-C6-N6	-5.03	119.68	123.70
53	B5	1184	A	C5-C6-N1	-5.03	115.19	117.70
53	B5	1933	A	C4-C5-C6	5.03	119.52	117.00
53	B5	2798	C	N3-C4-N4	5.03	121.52	118.00
53	B5	2824	G	O4'-C1'-N9	5.03	112.22	108.20
53	B5	3210	U	P-O3'-C3'	5.03	125.74	119.70
1	AA	1088	A	C4-C5-C6	5.03	119.51	117.00
1	AA	1397	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	1133	A	C5-C6-N6	-5.03	119.68	123.70
53	B5	1496	C	N3-C4-N4	5.03	121.52	118.00
53	B5	2105	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	1328	A	C5-C6-N6	-5.03	119.68	123.70
1	AA	1631	A	C4'-C3'-C2'	5.03	107.63	102.60
1	AA	1690	G	C5-C6-O6	-5.03	125.58	128.60
18	AT	78	LYS	N-CA-C	5.03	124.57	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	578	A	C4-C5-C6	5.03	119.51	117.00
53	B5	1043	C	N3-C4-C5	-5.03	119.89	121.90
53	B5	1423	C	N3-C4-C5	-5.03	119.89	121.90
53	B5	2259	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	2356	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	3164	C	O4'-C1'-N1	5.03	112.22	108.20
1	AA	470	A	C4-C5-C6	5.03	119.51	117.00
1	AA	1485	A	C4-C5-C6	5.03	119.51	117.00
51	B3	71	C	N3-C4-N4	5.03	121.52	118.00
53	B5	41	G	C5-C6-O6	-5.03	125.58	128.60
53	B5	65	A	C5-C6-N6	-5.03	119.68	123.70
53	B5	578	A	C5-C6-N1	-5.03	115.19	117.70
53	B5	827	A	C4-C5-C6	5.03	119.51	117.00
53	B5	973	A	O4'-C1'-N9	5.03	112.22	108.20
53	B5	1221	A	C5-C6-N6	-5.03	119.68	123.70
53	B5	2156	C	N3-C4-N4	5.03	121.52	118.00
1	AA	928	A	O4'-C1'-N9	5.02	112.22	108.20
53	B5	1569	U	O4'-C1'-N1	5.02	112.22	108.20
1	AA	91	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	1215	A	C5-C6-N6	-5.02	119.68	123.70
1	AA	1294	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	1492	C	N3-C4-N4	5.02	121.52	118.00
53	B5	41	G	O4'-C1'-N9	5.02	112.22	108.20
53	B5	307	A	C5-C6-N1	-5.02	115.19	117.70
53	B5	1696	A	C5-C6-N6	-5.02	119.68	123.70
53	B5	2166	A	O4'-C1'-N9	5.02	112.22	108.20
53	B5	3184	U	O4'-C1'-N1	5.02	112.22	108.20
53	B5	238	A	O4'-C1'-N9	5.02	112.22	108.20
53	B5	1867	A	C4-C5-C6	5.02	119.51	117.00
53	B5	2220	A	C4-C5-C6	5.02	119.51	117.00
53	B5	2228	A	C4-C5-C6	5.02	119.51	117.00
1	AA	1772	G	O4'-C1'-N9	5.02	112.22	108.20
27	BC	67	PHE	CB-CG-CD2	5.02	124.31	120.80
51	B3	42	A	C4-C5-C6	5.02	119.51	117.00
51	B3	102	C	N3-C4-C5	-5.02	119.89	121.90
53	B5	278	U	O4'-C1'-N1	5.02	112.22	108.20
53	B5	625	G	C5-C6-O6	-5.02	125.59	128.60
53	B5	973	A	C5-C6-N1	-5.02	115.19	117.70
53	B5	2234	G	C5-C6-O6	-5.02	125.59	128.60
53	B5	2350	C	N3-C4-N4	5.02	121.51	118.00
53	B5	2708	C	N3-C4-C5	-5.02	119.89	121.90
53	B5	2847	A	O4'-C1'-N9	5.02	112.22	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	3018	C	N3-C4-C5	-5.02	119.89	121.90
53	B5	3032	A	C5-C6-N6	-5.02	119.68	123.70
53	B5	3033	A	C4-C5-C6	5.02	119.51	117.00
1	AA	965	A	C5-C6-N6	-5.02	119.69	123.70
1	AA	1122	A	C4-C5-C6	5.02	119.51	117.00
1	AA	1795	A	C4-C5-C6	5.02	119.51	117.00
19	A7	15	G	O4'-C4'-C3'	5.02	110.11	106.10
53	B5	26	A	C4-C5-C6	5.02	119.51	117.00
53	B5	717	C	N3-C4-N4	5.02	121.51	118.00
53	B5	1225	A	C5-C6-N6	-5.02	119.69	123.70
53	B5	1304	A	O4'-C1'-N9	5.02	112.21	108.20
53	B5	2874	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	190	C	N3-C4-N4	5.02	121.51	118.00
53	B5	745	C	N3-C4-C5	-5.02	119.89	121.90
53	B5	1205	A	O4'-C1'-N9	5.02	112.21	108.20
53	B5	1418	A	C5-C6-N6	-5.02	119.69	123.70
53	B5	1834	U	O4'-C1'-N1	5.02	112.21	108.20
53	B5	2932	U	O4'-C1'-N1	5.02	112.21	108.20
53	B5	3073	A	C4-C5-C6	5.02	119.51	117.00
1	AA	570	A	C4-C5-C6	5.01	119.51	117.00
1	AA	1503	A	C5-C6-N6	-5.01	119.69	123.70
4	AD	78	ARG	NE-CZ-NH1	5.01	122.81	120.30
51	B3	101	A	C4-C5-C6	5.01	119.51	117.00
53	B5	408	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	455	C	P-O3'-C3'	5.01	125.72	119.70
53	B5	735	A	C5-C6-N6	-5.01	119.69	123.70
53	B5	1804	A	C5-C6-N6	-5.01	119.69	123.70
53	B5	2736	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	2977	G	C5-C6-O6	-5.01	125.59	128.60
53	B5	3181	G	C5-C6-O6	-5.01	125.59	128.60
53	B5	3370	A	C4-C5-C6	5.01	119.51	117.00
1	AA	1315	G	C5-C6-O6	-5.01	125.59	128.60
1	AA	1540	G	C5-C6-O6	-5.01	125.59	128.60
1	AA	1770	C	N3-C4-N4	5.01	121.51	118.00
53	B5	963	G	O4'-C1'-N9	5.01	112.21	108.20
53	B5	1424	C	N3-C4-C5	-5.01	119.89	121.90
53	B5	2580	A	C5-C6-N6	-5.01	119.69	123.70
53	B5	2971	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	3168	A	C4-C5-C6	5.01	119.51	117.00
1	AA	6	G	O4'-C1'-N9	5.01	112.21	108.20
1	AA	301	A	C5-C6-N6	-5.01	119.69	123.70
1	AA	874	C	N3-C4-N4	5.01	121.51	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1038	A	C5-C6-N6	-5.01	119.69	123.70
51	B3	70	A	C4-C5-C6	5.01	119.50	117.00
53	B5	846	A	C5-C6-N6	-5.01	119.69	123.70
53	B5	923	C	N3-C4-N4	5.01	121.51	118.00
53	B5	1153	A	C5-C6-N6	-5.01	119.69	123.70
53	B5	1507	G	N1-C6-O6	5.01	122.91	119.90
53	B5	1835	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	2306	C	O4'-C1'-N1	5.01	112.21	108.20
53	B5	2649	A	C4-C5-C6	5.01	119.51	117.00
53	B5	3026	G	O4'-C1'-N9	5.01	112.21	108.20
53	B5	3135	U	P-O3'-C3'	5.01	125.71	119.70
1	AA	334	G	C5-C6-O6	-5.01	125.59	128.60
1	AA	696	C	N3-C4-N4	5.01	121.51	118.00
1	AA	1164	G	C5-C6-O6	-5.01	125.59	128.60
1	AA	1775	G	O4'-C1'-N9	5.01	112.21	108.20
1	AA	1791	G	C5-C6-O6	-5.01	125.59	128.60
19	A7	44	A	C6-C5-N7	5.01	135.81	132.30
53	B5	580	C	N3-C4-C5	-5.01	119.90	121.90
53	B5	1009	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	1290	A	O4'-C1'-N9	5.01	112.21	108.20
53	B5	1806	A	C4-C5-C6	5.01	119.50	117.00
53	B5	2703	A	C4-C5-C6	5.01	119.50	117.00
53	B5	3002	C	N3-C4-C5	-5.01	119.90	121.90
53	B5	3347	A	C5-C6-N6	-5.01	119.69	123.70
1	AA	1330	C	N3-C4-C5	-5.01	119.90	121.90
53	B5	2296	A	C5-C6-N1	-5.01	115.20	117.70
53	B5	3207	C	N3-C4-N4	5.01	121.50	118.00
53	B5	379	C	N3-C4-C5	-5.01	119.90	121.90
53	B5	1947	G	C4-N9-C1'	5.01	133.01	126.50
53	B5	2312	A	C4-C5-C6	5.01	119.50	117.00
53	B5	2779	A	C4-C5-C6	5.01	119.50	117.00
53	B5	2952	G	O4'-C1'-N9	5.01	112.20	108.20
53	B5	3016	A	P-O3'-C3'	5.01	125.71	119.70
53	B5	3133	C	N3-C4-C5	-5.01	119.90	121.90
53	B5	13	A	C4-C5-C6	5.00	119.50	117.00
53	B5	466	G	O4'-C1'-N9	5.00	112.20	108.20
53	B5	598	A	O4'-C1'-N9	5.00	112.20	108.20
53	B5	2106	A	C5-C6-N1	-5.00	115.20	117.70
53	B5	3218	A	C4-C5-C6	5.00	119.50	117.00
1	AA	341	A	C4-C5-C6	5.00	119.50	117.00
1	AA	1326	A	C5-C6-N6	-5.00	119.70	123.70
53	B5	408	A	C5-C6-N6	-5.00	119.70	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	B5	2157	G	C5-C6-O6	-5.00	125.60	128.60
1	AA	1160	A	C4-C5-C6	5.00	119.50	117.00
51	B3	2	G	C5-C6-O6	-5.00	125.60	128.60
51	B3	102	C	N3-C4-N4	5.00	121.50	118.00
53	B5	747	A	O4'-C1'-N9	5.00	112.20	108.20
53	B5	2251	G	P-O3'-C3'	5.00	125.70	119.70
53	B5	2447	A	C4-C5-C6	5.00	119.50	117.00
53	B5	3263	G	C5-C6-O6	-5.00	125.60	128.60
53	B5	3279	A	O4'-C1'-N9	5.00	112.20	108.20

All (45) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	109	G	C3'
1	AA	933	C	C2'
7	AH	34	ILE	CB
26	BB	161	ASP	CA
29	BE	216	GLU	CA
30	BF	83	LEU	CA
31	BG	141	ALA	CA
31	BG	142	LEU	CA
36	BL	56	LYS	CA
48	BX	70	ALA	CA
48	BX	80	ALA	CA
51	B3	70	A	C4'
53	B5	114	A	C3'
53	B5	279	U	C3'
53	B5	355	A	C4'
53	B5	477	A	C3'
53	B5	481	U	C3'
53	B5	554	A	C3'
53	B5	596	U	C3'
53	B5	705	A	C3'
53	B5	711	A	C2'
53	B5	735	A	C2',C3'
53	B5	786	A	C3'
53	B5	970	A	C3'
53	B5	1347	U	C3'
53	B5	1583	A	C2',C3'
53	B5	1590	G	C3'
53	B5	1644	C	C2'
53	B5	1737	U	C3'

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Mol	Chain	Res	Type	Atom
53	B5	1947	G	C1’
53	B5	2214	A	C3’
53	B5	2224	A	C3’
53	B5	2225	U	C3’
53	B5	2229	A	C3’
53	B5	2469	G	C1’,C2’
53	B5	2477	G	C1’
53	B5	2999	U	C2’
53	B5	3051	U	C4’
53	B5	3142	A	C3’
53	B5	3246	G	C4’
53	B5	3303	G	C2’
53	B5	3304	U	C3’

All (285) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
19	A7	1	G	Sidechain
19	A7	11	C	Sidechain
19	A7	14	A	Sidechain
19	A7	15	G	Sidechain
19	A7	18	G	Sidechain
19	A7	19	G	Sidechain
19	A7	2	C	Sidechain
19	A7	20	G	Sidechain
19	A7	21	A	Sidechain
19	A7	23	A	Sidechain
19	A7	24	G	Sidechain
19	A7	27	C	Sidechain
19	A7	29	A	Sidechain
19	A7	3	G	Sidechain
19	A7	30	G	Sidechain
19	A7	31	A	Sidechain
19	A7	36	A	Sidechain
19	A7	4	G	Sidechain
19	A7	41	U	Sidechain
19	A7	42	G	Sidechain
19	A7	43	G	Sidechain
19	A7	45	G	Sidechain
19	A7	47	U	Sidechain
19	A7	5	A	Sidechain
19	A7	50	U	Sidechain

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Mol	Chain	Res	Type	Group
19	A7	51	G	Sidechain
19	A7	52	U	Sidechain
19	A7	53	G	Sidechain
19	A7	56	C	Sidechain
19	A7	57	G	Sidechain
19	A7	59	U	Sidechain
19	A7	61	C	Sidechain
19	A7	63	C	Sidechain
19	A7	65	G	Sidechain
19	A7	66	A	Sidechain
19	A7	7	U	Sidechain
19	A7	70	C	Sidechain
19	A7	71	G	Sidechain
19	A7	72	C	Sidechain
19	A7	73	A	Sidechain
19	A7	74	C	Sidechain
19	A7	75	C	Sidechain
19	A7	76	A	Sidechain
19	A7	9	A	Sidechain
1	AA	1089	A	Sidechain
1	AA	1196	G	Sidechain
1	AA	1200	A	Sidechain
1	AA	1202	U	Sidechain
1	AA	1237	G	Sidechain
1	AA	1303	C	Sidechain
1	AA	1309	A	Sidechain
1	AA	1327	G	Sidechain
1	AA	1440	U	Sidechain
1	AA	1502	G	Sidechain
1	AA	1514	A	Sidechain
1	AA	1520	U	Sidechain
1	AA	1551	G	Sidechain
1	AA	1583	U	Sidechain
1	AA	1584	A	Sidechain
1	AA	1586	G	Sidechain
1	AA	1766	G	Sidechain
1	AA	225	A	Sidechain
1	AA	244	A	Sidechain
1	AA	474	A	Sidechain
1	AA	475	A	Sidechain
1	AA	476	U	Sidechain
1	AA	529	A	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	80	A	Sidechain
1	AA	843	U	Sidechain
1	AA	855	A	Sidechain
1	AA	856	A	Sidechain
1	AA	877	G	Sidechain
2	AB	84	ARG	Sidechain
4	AD	149	ARG	Sidechain
4	AD	78	ARG	Sidechain
4	AD	79	ARG	Sidechain
5	AE	226	THR	Peptide
8	AI	135	ARG	Sidechain
8	AI	142	TYR	Sidechain
8	AI	96	TYR	Sidechain
9	AJ	23	ARG	Sidechain
9	AJ	53	LYS	Peptide
9	AJ	90	TYR	Sidechain
10	AK	132	ARG	Sidechain,Peptide
10	AK	48	VAL	Peptide
10	AK	52	ARG	Sidechain
12	AM	120	ARG	Peptide
12	AM	137	HIS	Peptide
12	AM	143	ARG	Sidechain
13	AN	13	ARG	Sidechain
13	AN	14	PHE	Sidechain
14	AO	114	ARG	Sidechain
14	AO	121	ARG	Sidechain
14	AO	124	ARG	Sidechain
14	AO	135	LEU	Peptide
20	B0	45	ARG	Sidechain
52	B4	132	G	Sidechain
52	B4	147	U	Sidechain
52	B4	41	A	Sidechain
52	B4	44	A	Sidechain
52	B4	62	C	Sidechain
52	B4	64	U	Sidechain
53	B5	1	G	Sidechain
53	B5	10	C	Sidechain
53	B5	1005	G	Sidechain
53	B5	1026	A	Sidechain
53	B5	1104	G	Sidechain
53	B5	1132	C	Sidechain
53	B5	1169	A	Sidechain

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Mol	Chain	Res	Type	Group
53	B5	118	U	Sidechain
53	B5	1181	U	Sidechain
53	B5	1200	A	Sidechain
53	B5	1236	G	Sidechain
53	B5	1239	C	Sidechain
53	B5	1240	A	Sidechain
53	B5	1257	C	Sidechain
53	B5	1290	A	Sidechain
53	B5	130	A	Sidechain
53	B5	1346	G	Sidechain
53	B5	1347	U	Sidechain
53	B5	135	C	Sidechain
53	B5	1357	G	Sidechain
53	B5	1362	G	Sidechain
53	B5	1368	U	Sidechain
53	B5	1378	U	Sidechain
53	B5	1385	C	Sidechain
53	B5	1417	G	Sidechain
53	B5	1421	G	Sidechain
53	B5	1496	C	Sidechain
53	B5	1510	G	Sidechain
53	B5	1544	G	Sidechain
53	B5	1558	A	Sidechain
53	B5	1622	U	Sidechain
53	B5	1658	G	Sidechain
53	B5	17	G	Sidechain
53	B5	1714	A	Sidechain
53	B5	1734	G	Sidechain
53	B5	1783	U	Sidechain
53	B5	1790	G	Sidechain
53	B5	18	G	Sidechain
53	B5	1811	G	Sidechain
53	B5	1812	G	Sidechain
53	B5	1831	U	Sidechain
53	B5	1874	A	Sidechain
53	B5	1896	A	Sidechain
53	B5	1927	G	Sidechain
53	B5	2112	U	Sidechain
53	B5	2130	G	Sidechain
53	B5	2133	U	Sidechain
53	B5	216	G	Sidechain
53	B5	2167	A	Sidechain

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Mol	Chain	Res	Type	Group
53	B5	2176	U	Sidechain
53	B5	2178	A	Sidechain
53	B5	2180	G	Sidechain
53	B5	2185	G	Sidechain
53	B5	2186	U	Sidechain
53	B5	2224	A	Sidechain
53	B5	2300	G	Sidechain
53	B5	2356	A	Sidechain
53	B5	2394	G	Sidechain
53	B5	2396	G	Sidechain
53	B5	2448	G	Sidechain
53	B5	2468	A	Sidechain
53	B5	2481	G	Sidechain
53	B5	2482	U	Sidechain
53	B5	251	G	Sidechain
53	B5	2548	C	Sidechain
53	B5	2586	G	Sidechain
53	B5	2593	A	Sidechain
53	B5	2607	G	Sidechain
53	B5	2621	G	Sidechain
53	B5	2677	G	Sidechain
53	B5	2681	U	Sidechain
53	B5	2696	A	Sidechain
53	B5	270	U	Sidechain
53	B5	2744	U	Sidechain
53	B5	2751	G	Sidechain
53	B5	2768	U	Sidechain
53	B5	2774	C	Sidechain
53	B5	2789	U	Sidechain
53	B5	2839	G	Sidechain
53	B5	2876	C	Sidechain
53	B5	2901	G	Sidechain
53	B5	2943	G	Sidechain
53	B5	2951	G	Sidechain
53	B5	3003	G	Sidechain
53	B5	3009	G	Sidechain
53	B5	3032	A	Sidechain
53	B5	3049	A	Sidechain
53	B5	3144	G	Sidechain
53	B5	3172	G	Sidechain
53	B5	3303	G	Sidechain
53	B5	3337	G	Sidechain

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Mol	Chain	Res	Type	Group
53	B5	337	G	Sidechain
53	B5	366	A	Sidechain
53	B5	40	A	Sidechain
53	B5	494	G	Sidechain
53	B5	495	G	Sidechain
53	B5	496	C	Sidechain
53	B5	498	A	Sidechain
53	B5	584	G	Sidechain
53	B5	619	A	Sidechain
53	B5	652	G	Sidechain
53	B5	662	U	Sidechain
53	B5	709	A	Sidechain
53	B5	8	C	Sidechain
53	B5	847	A	Sidechain
53	B5	855	U	Sidechain
53	B5	859	G	Sidechain
53	B5	860	G	Sidechain
53	B5	895	A	Sidechain
53	B5	975	G	Sidechain
53	B5	977	U	Sidechain
53	B5	992	G	Sidechain
23	B8	115	ALA	Peptide
23	B8	5	ARG	Sidechain
23	B8	61	ARG	Sidechain
24	B9	18	TYR	Sidechain
24	B9	34	HIS	Peptide
24	B9	43	GLY	Peptide
26	BB	150	LEU	Peptide
26	BB	161	ASP	Peptide
26	BB	163	ARG	Sidechain
26	BB	242	ARG	Sidechain
27	BC	117	ARG	Sidechain
28	BD	202	ARG	Sidechain
28	BD	31	ARG	Sidechain
28	BD	98	ARG	Sidechain
29	BE	112	ARG	Sidechain
29	BE	192	PRO	Peptide
29	BE	198	TYR	Sidechain
29	BE	213	ASP	Peptide
29	BE	219	PHE	Peptide
29	BE	85	ARG	Sidechain
29	BE	86	TYR	Sidechain

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Mol	Chain	Res	Type	Group
31	BG	142	LEU	Peptide
31	BG	173	MET	Peptide
32	BH	173	ARG	Sidechain
32	BH	23	ARG	Sidechain
32	BH	69	ARG	Sidechain
33	BI	69	ARG	Sidechain
33	BI	7	ARG	Sidechain
34	BJ	47	GLN	Peptide
34	BJ	61	ARG	Sidechain
34	BJ	92	ARG	Sidechain
35	BK	16	ARG	Sidechain
35	BK	90	ARG	Sidechain
36	BL	153	ASP	Peptide
36	BL	172	ARG	Sidechain
36	BL	174	ILE	Peptide
36	BL	33	LYS	Peptide
36	BL	38	ARG	Sidechain
36	BL	71	ARG	Sidechain
36	BL	81	TYR	Sidechain
37	BM	148	LYS	Peptide,Mainchain
37	BM	169	ALA	Mainchain
37	BM	84	LEU	Peptide
37	BM	85	ARG	Sidechain
38	BN	116	HIS	Peptide
38	BN	131	ARG	Sidechain
39	BO	72	LYS	Peptide
40	BP	110	ARG	Sidechain
40	BP	20	ARG	Sidechain
40	BP	38	ARG	Sidechain
40	BP	89	LEU	Peptide
42	BR	12	ARG	Sidechain
42	BR	32	ARG	Sidechain
42	BR	86	ARG	Sidechain
43	BS	47	ARG	Sidechain
44	BT	125	ARG	Sidechain
45	BU	63	LYS	Peptide
46	BV	112	LEU	Peptide
46	BV	12	ARG	Sidechain
46	BV	91	LYS	Peptide
47	BW	28	ARG	Sidechain
47	BW	74	ARG	Sidechain
48	BX	10	ARG	Sidechain

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Mol	Chain	Res	Type	Group
49	BY	47	TYR	Sidechain
50	BZ	32	LYS	Peptide
50	BZ	42	ARG	Sidechain
50	BZ	55	LYS	Peptide
50	BZ	56	PRO	Peptide
50	BZ	60	LYS	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	37458	0	18828	602	0
2	AB	1500	0	1524	1	0
3	AC	1469	0	1534	1	0
4	AD	1018	0	1067	1	0
5	AE	1207	0	1274	0	0
6	AG	1456	0	1523	2	0
7	AH	992	0	1027	39	0
8	AI	1087	0	1145	19	0
9	AJ	771	0	829	2	0
10	AK	924	0	949	0	0
11	AL	906	0	970	1	0
12	AM	1077	0	1107	19	0
13	AN	417	0	408	22	0
14	AO	694	0	740	13	0
15	AQ	643	0	688	2	0
16	AS	548	0	574	3	0
17	AR	2410	0	2367	538	0
18	AT	1102	0	1112	38	0
19	A7	1648	0	830	56	0
20	B0	881	0	926	1	0
21	B1	424	0	459	1	0
22	B2	752	0	803	1	0
23	B8	947	0	972	19	0
24	B9	539	0	555	1	0
25	BA	1683	0	1772	3	0
26	BB	1848	0	1908	16	0
27	BC	2887	0	2964	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	BD	1950	0	2019	3	0
29	BE	1913	0	1842	1	0
30	BF	1561	0	1633	1	0
31	BG	844	0	909	0	0
32	BH	1418	0	1483	4	0
33	BI	1326	0	1368	2	0
34	BJ	1195	0	1230	15	0
35	BK	1038	0	1110	23	0
36	BL	1618	0	1673	1	0
37	BM	1317	0	1407	63	0
38	BN	1189	0	1201	0	0
39	BO	931	0	1010	0	0
40	BP	1317	0	1389	113	0
41	BQ	893	0	924	0	0
42	BR	977	0	1026	15	0
43	BS	371	0	382	1	0
44	BT	642	0	679	0	0
45	BU	916	0	996	0	0
46	BV	1123	0	1160	2	0
47	BW	663	0	700	0	0
48	BX	605	0	661	1	0
49	BY	403	0	398	0	0
50	BZ	749	0	815	0	0
51	B3	2403	0	1219	0	0
52	B4	3329	0	1685	0	0
53	B5	67775	0	34047	227	0
All	All	165754	0	111821	1335	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 5.

All (1335) 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)
35:BK:121:PHE:CZ	35:BK:121:PHE:CE1	1.78	1.71
35:BK:121:PHE:CZ	35:BK:121:PHE:CE2	1.79	1.69
35:BK:121:PHE:CE2	35:BK:121:PHE:CD2	1.76	1.69
35:BK:121:PHE:CE1	35:BK:121:PHE:CD1	1.80	1.69
35:BK:121:PHE:CD2	35:BK:121:PHE:CG	1.82	1.68
35:BK:121:PHE:CD1	35:BK:121:PHE:CG	1.81	1.67
1:AA:1501:A:H1'	1:AA:1546:G:C2	1.33	1.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1756:U:H5'	53:B5:2262:A:C2	1.34	1.62
8:AI:96:TYR:CE1	8:AI:96:TYR:CD1	1.89	1.59
8:AI:96:TYR:CD2	8:AI:96:TYR:CE2	1.88	1.58
8:AI:96:TYR:CD2	8:AI:96:TYR:CG	1.90	1.58
8:AI:96:TYR:CE1	8:AI:96:TYR:CZ	1.91	1.57
8:AI:96:TYR:CD1	8:AI:96:TYR:CG	1.91	1.56
1:AA:1200:A:C6	1:AA:1200:A:C5	1.87	1.56
8:AI:96:TYR:CE2	8:AI:96:TYR:CZ	1.90	1.55
1:AA:1200:A:C2	1:AA:1200:A:N3	1.75	1.54
1:AA:1200:A:C2	1:AA:1200:A:N1	1.74	1.54
37:BM:111:PRO:HA	37:BM:163:ALA:CB	1.36	1.52
12:AM:110:ARG:NE	34:BJ:116:TYR:CD1	1.76	1.52
1:AA:702:G:C4	40:BP:172:ALA:O	1.64	1.50
1:AA:856:A:C6	1:AA:856:A:C5	1.99	1.50
37:BM:111:PRO:CA	37:BM:163:ALA:HB1	1.04	1.50
1:AA:702:G:C6	40:BP:172:ALA:HB1	0.98	1.49
1:AA:1200:A:C5	1:AA:1200:A:C4	1.86	1.48
1:AA:1630:C:H4'	1:AA:1636:G:N2	1.16	1.48
1:AA:1776:G:C4'	53:B5:2194:G:H5"	1.43	1.48
1:AA:702:G:C6	40:BP:172:ALA:CB	1.93	1.48
1:AA:1200:A:C6	1:AA:1200:A:N1	1.82	1.48
1:AA:699:U:H3'	40:BP:169:ALA:CB	1.42	1.47
1:AA:856:A:N1	1:AA:856:A:C2	1.82	1.47
1:AA:1200:A:N3	1:AA:1200:A:C4	1.82	1.47
37:BM:111:PRO:HB3	37:BM:163:ALA:CA	1.41	1.47
1:AA:1501:A:C6	1:AA:1546:G:C8	2.02	1.46
1:AA:1200:A:C4	13:AN:16:LYS:HA	1.46	1.45
1:AA:701:U:C4	40:BP:169:ALA:O	1.67	1.44
1:AA:856:A:C5	1:AA:856:A:C4	1.97	1.44
1:AA:501:U:C4	1:AA:501:U:C5	2.04	1.43
1:AA:856:A:C2	1:AA:856:A:N3	1.84	1.43
12:AM:110:ARG:NH2	34:BJ:116:TYR:CZ	1.82	1.42
1:AA:1501:A:N7	1:AA:1546:G:H2'	1.29	1.42
1:AA:702:G:C8	40:BP:175:ALA:HB3	1.54	1.40
1:AA:501:U:C6	1:AA:501:U:N1	1.89	1.40
1:AA:856:A:C6	1:AA:856:A:N1	1.87	1.40
1:AA:1756:U:H5'	53:B5:2262:A:N1	1.17	1.39
1:AA:501:U:C4	1:AA:501:U:N3	1.89	1.38
1:AA:856:A:C4	1:AA:856:A:N3	1.91	1.38
1:AA:501:U:N3	1:AA:501:U:C2	1.91	1.38
1:AA:1776:G:OP1	53:B5:2193:U:C5'	1.71	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1755:G:N2	53:B5:2262:A:O2'	1.57	1.36
1:AA:1757:C:O4'	53:B5:2263:C:C5'	1.74	1.35
1:AA:1200:A:C5	13:AN:16:LYS:HA	1.58	1.35
1:AA:1501:A:C6	1:AA:1546:G:N7	1.93	1.35
1:AA:501:U:N1	1:AA:501:U:C2	1.94	1.34
1:AA:1756:U:C5'	53:B5:2262:A:C2	2.09	1.33
37:BM:169:ALA:C	37:BM:171:ALA:N	1.78	1.33
1:AA:702:G:O6	40:BP:172:ALA:CB	1.68	1.33
1:AA:1501:A:H1'	1:AA:1546:G:N2	1.43	1.33
12:AM:110:ARG:NE	34:BJ:116:TYR:CE1	1.74	1.33
14:AO:149:LEU:HD12	53:B5:847:A:OP1	1.22	1.33
1:AA:1521:G:H5"	1:AA:1522:A:P	1.68	1.32
1:AA:1630:C:C4'	1:AA:1636:G:N2	1.90	1.32
1:AA:702:G:N3	40:BP:176:ALA:HB3	1.44	1.32
1:AA:1665:A:OP1	53:B5:1936:A:C5'	1.78	1.32
1:AA:699:U:C3'	40:BP:169:ALA:HB3	1.60	1.31
1:AA:1501:A:N1	1:AA:1546:G:N7	1.77	1.31
1:AA:1756:U:O3'	53:B5:2263:C:C4'	1.64	1.31
1:AA:1502:G:C5	1:AA:1547:C:C4	2.17	1.30
1:AA:1501:A:C1'	1:AA:1546:G:C2	2.11	1.30
1:AA:1655:U:C4	53:B5:2329:C:H1'	1.50	1.30
1:AA:972:A:H5'	53:B5:848:A:C2	1.64	1.29
37:BM:108:ILE:HG23	37:BM:160:ALA:CB	1.60	1.28
1:AA:1755:G:O2'	53:B5:2262:A:C2	1.84	1.27
1:AA:972:A:H5'	53:B5:848:A:N3	1.48	1.27
1:AA:1521:G:C2	18:AT:78:LYS:CG	2.16	1.27
1:AA:858:G:C2	7:AH:61:ILE:CB	2.16	1.27
1:AA:858:G:C6	7:AH:61:ILE:CB	2.18	1.27
1:AA:1735:G:H4'	53:B5:1933:A:O2'	1.31	1.27
37:BM:108:ILE:CG2	37:BM:160:ALA:CB	2.11	1.27
1:AA:858:G:N1	7:AH:61:ILE:CB	1.99	1.26
1:AA:1501:A:C8	1:AA:1546:G:H2'	1.70	1.26
1:AA:1630:C:C4'	1:AA:1636:G:H21	1.46	1.26
1:AA:1501:A:C4	1:AA:1546:G:C4	2.16	1.26
1:AA:1521:G:C2	18:AT:78:LYS:HG3	1.68	1.25
1:AA:1776:G:OP1	53:B5:2193:U:H5"	1.14	1.25
1:AA:698:U:N1	40:BP:164:ALA:O	1.58	1.25
1:AA:698:U:C2	40:BP:164:ALA:O	1.90	1.24
37:BM:111:PRO:CA	37:BM:163:ALA:CB	2.01	1.24
1:AA:699:U:C3'	40:BP:169:ALA:CB	2.13	1.24
12:AM:110:ARG:NH2	34:BJ:116:TYR:CE2	2.04	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:123:HIS:ND1	53:B5:846:A:N3	1.84	1.23
1:AA:1502:G:N7	1:AA:1547:C:C2	2.07	1.23
1:AA:1776:G:H5"	53:B5:2194:G:C5'	1.69	1.22
1:AA:702:G:C5	40:BP:172:ALA:HB1	1.75	1.22
1:AA:698:U:C6	40:BP:164:ALA:O	1.91	1.22
1:AA:1574:A:N3	19:A7:41:U:O4'	1.70	1.21
1:AA:971:G:H21	53:B5:846:A:N6	1.37	1.21
1:AA:1574:A:N3	19:A7:41:U:C4'	1.84	1.21
1:AA:1653:A:C6	53:B5:2302:G:C5'	2.16	1.20
1:AA:1657:A:H5"	42:BR:67:PRO:CD	1.72	1.20
1:AA:702:G:O6	40:BP:172:ALA:HB1	1.02	1.19
1:AA:1776:G:O3'	53:B5:2194:G:C4'	1.90	1.19
37:BM:111:PRO:CB	37:BM:163:ALA:HB1	1.72	1.19
1:AA:799:A:N3	40:BP:161:ALA:CB	1.99	1.19
1:AA:1756:U:C1'	53:B5:2262:A:H2'	1.72	1.19
1:AA:1756:U:C3'	53:B5:2263:C:H4'	1.52	1.18
1:AA:1635:C:C4'	1:AA:1636:G:OP2	1.84	1.18
1:AA:1461:C:OP1	19:A7:30:G:H1'	1.40	1.17
1:AA:1757:C:O4'	53:B5:2263:C:H5'	1.31	1.17
1:AA:1776:G:O3'	53:B5:2194:G:H4'	0.99	1.17
1:AA:1630:C:C5'	1:AA:1636:G:H21	1.56	1.16
1:AA:921:G:H4'	26:BB:141:PRO:HD3	1.28	1.15
1:AA:1756:U:H1'	53:B5:2262:A:C2'	1.75	1.15
1:AA:1776:G:H4'	53:B5:2194:G:C5'	1.76	1.15
17:AR:34:LEU:HD21	17:AR:42:LEU:HD21	1.27	1.15
1:AA:1521:G:N1	18:AT:78:LYS:CG	2.01	1.15
1:AA:1635:C:H4'	1:AA:1636:G:OP2	1.43	1.15
17:AR:34:LEU:HG	17:AR:42:LEU:HD11	1.24	1.15
1:AA:1655:U:C4	53:B5:2329:C:C1'	2.26	1.15
1:AA:1121:A:C1'	53:B5:2191:U:C5'	2.24	1.14
1:AA:1776:G:C5'	53:B5:2194:G:C5'	2.23	1.14
17:AR:38:ARG:HA	17:AR:67:ILE:HG23	1.29	1.14
1:AA:1121:A:H1'	53:B5:2191:U:H5"	1.16	1.14
1:AA:1521:G:H1'	18:AT:86:ARG:NH2	1.63	1.14
37:BM:111:PRO:CB	37:BM:163:ALA:CA	2.26	1.14
1:AA:1502:G:C5	1:AA:1547:C:N3	2.14	1.13
1:AA:1653:A:H1'	53:B5:2302:G:OP2	1.45	1.13
1:AA:1502:G:C8	1:AA:1547:C:N3	2.17	1.13
1:AA:1521:G:N2	18:AT:78:LYS:CD	2.10	1.13
1:AA:1521:G:O2'	18:AT:83:ALA:HA	1.48	1.13
1:AA:1502:G:C6	1:AA:1547:C:C4	2.35	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BM:108:ILE:CG2	37:BM:160:ALA:HB1	1.72	1.13
1:AA:1521:G:N1	18:AT:78:LYS:HG3	1.28	1.13
1:AA:1200:A:C5	13:AN:16:LYS:CA	2.32	1.12
1:AA:1521:G:C5	18:AT:79:LEU:N	2.17	1.12
1:AA:1200:A:C4	13:AN:16:LYS:CA	2.32	1.12
1:AA:1502:G:N7	1:AA:1547:C:N3	1.97	1.12
1:AA:1200:A:C2	13:AN:16:LYS:CA	2.33	1.12
1:AA:1501:A:C5	1:AA:1546:G:C4	2.36	1.12
1:AA:1630:C:H4'	1:AA:1636:G:C2	1.83	1.12
1:AA:1757:C:O4'	53:B5:2263:C:H5"	1.50	1.12
1:AA:1776:G:C5'	53:B5:2194:G:H5'	1.78	1.12
17:AR:209:THR:HG23	17:AR:210:LEU:HD22	1.16	1.12
37:BM:108:ILE:CG2	37:BM:160:ALA:HB2	1.76	1.12
1:AA:1756:U:C5'	53:B5:2262:A:N1	2.07	1.12
1:AA:1665:A:OP1	53:B5:1936:A:H5'	0.94	1.12
1:AA:1776:G:C4'	53:B5:2194:G:C5'	2.26	1.12
1:AA:1778:G:OP1	53:B5:2274:U:H5'	1.44	1.11
1:AA:858:G:C5	7:AH:61:ILE:CB	2.31	1.11
37:BM:151:ALA:O	37:BM:155:ALA:CB	1.98	1.11
1:AA:1653:A:C1'	53:B5:2302:G:OP2	1.96	1.10
14:AO:149:LEU:CD1	53:B5:847:A:OP1	1.98	1.10
14:AO:149:LEU:HD13	53:B5:847:A:H5'	1.21	1.10
1:AA:1521:G:H5"	1:AA:1522:A:OP2	1.47	1.10
1:AA:1657:A:C5'	42:BR:67:PRO:HG2	1.81	1.09
1:AA:1665:A:O4'	53:B5:1935:G:H5'	1.52	1.09
1:AA:1574:A:H2'	19:A7:40:5MC:O2'	1.41	1.09
1:AA:699:U:O2	40:BP:170:ALA:HB3	1.35	1.09
37:BM:169:ALA:O	37:BM:170:ALA:C	1.79	1.09
1:AA:1501:A:N7	1:AA:1546:G:C2'	2.15	1.08
1:AA:1664:U:O3'	53:B5:1935:G:O2'	1.71	1.08
1:AA:1756:U:C3'	53:B5:2263:C:C4'	2.16	1.08
17:AR:211:ILE:HD11	17:AR:225:LEU:HD13	1.16	1.08
1:AA:1574:A:C2	19:A7:41:U:O4'	2.05	1.08
1:AA:856:A:C5	7:AH:33:VAL:N	2.22	1.08
1:AA:1200:A:C6	13:AN:16:LYS:CA	2.37	1.08
1:AA:1632:C:H4'	1:AA:1633:A:OP2	1.50	1.08
1:AA:1776:G:H5'	53:B5:2194:G:OP1	1.54	1.07
1:AA:1521:G:C5'	1:AA:1522:A:OP2	2.03	1.07
1:AA:1521:G:C2	18:AT:78:LYS:CB	2.38	1.07
1:AA:972:A:C5'	53:B5:848:A:N3	2.16	1.07
1:AA:1521:G:C5'	1:AA:1522:A:P	2.33	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:164:ASP:HB2	17:AR:168:THR:HA	1.09	1.06
1:AA:856:A:C4	7:AH:32:LYS:C	2.29	1.06
1:AA:1501:A:C5	1:AA:1546:G:C8	2.44	1.06
37:BM:108:ILE:HG23	37:BM:160:ALA:HB1	1.32	1.06
14:AO:149:LEU:HD12	53:B5:847:A:P	1.95	1.06
37:BM:111:PRO:CB	37:BM:163:ALA:CB	2.28	1.06
1:AA:702:G:N7	40:BP:172:ALA:HA	1.71	1.05
1:AA:1757:C:C4'	53:B5:2263:C:H5"	1.78	1.05
1:AA:699:U:O2	40:BP:170:ALA:CB	1.77	1.05
1:AA:699:U:C1'	40:BP:169:ALA:HB3	1.77	1.05
1:AA:800:U:OP1	40:BP:160:ALA:HB1	1.56	1.05
1:AA:858:G:C4	7:AH:61:ILE:CB	2.39	1.05
17:AR:260:ILE:HG13	17:AR:284:ALA:HB1	1.38	1.05
1:AA:1657:A:H5'	42:BR:67:PRO:HG2	1.33	1.05
17:AR:164:ASP:HB2	17:AR:168:THR:CA	1.87	1.05
17:AR:258:THR:HG21	17:AR:261:LYS:HE2	1.39	1.05
1:AA:856:A:C5	7:AH:32:LYS:C	2.30	1.05
1:AA:856:A:C4	7:AH:33:VAL:N	2.24	1.05
1:AA:1744:A:C2	53:B5:2302:G:O5'	2.09	1.05
1:AA:1200:A:C5	13:AN:16:LYS:N	2.25	1.04
1:AA:1734:G:H21	53:B5:1934:G:H4'	1.19	1.04
12:AM:110:ARG:CZ	34:BJ:116:TYR:CE1	2.40	1.04
23:B8:43:LYS:NZ	35:BK:121:PHE:CE1	2.25	1.04
1:AA:856:A:C6	7:AH:33:VAL:N	2.26	1.04
14:AO:149:LEU:HD13	53:B5:847:A:C5'	1.87	1.04
37:BM:111:PRO:CB	37:BM:163:ALA:HA	1.86	1.04
1:AA:702:G:C5	40:BP:172:ALA:O	2.10	1.03
1:AA:799:A:C4'	40:BP:161:ALA:O	2.04	1.03
1:AA:856:A:C2	7:AH:33:VAL:N	2.26	1.03
1:AA:1200:A:C4	13:AN:16:LYS:N	2.25	1.03
8:AI:93:HIS:CE1	17:AR:59:ARG:HH22	1.76	1.03
17:AR:83:ALA:HB2	17:AR:113:VAL:HG13	1.41	1.03
17:AR:257:ALA:HA	17:AR:283:LYS:HD2	1.07	1.03
1:AA:699:U:O4'	40:BP:166:ALA:HA	1.56	1.03
1:AA:922:A:H5'	26:BB:109:GLU:OE1	1.57	1.03
1:AA:1501:A:N6	1:AA:1546:G:C8	2.26	1.03
1:AA:1744:A:H4'	53:B5:2291:A:H1'	1.37	1.03
1:AA:856:A:C2	7:AH:32:LYS:C	2.32	1.03
1:AA:1630:C:C5'	1:AA:1636:G:N2	2.18	1.03
17:AR:93:ASP:HB3	17:AR:96:THR:HG22	1.41	1.03
37:BM:111:PRO:HB3	37:BM:163:ALA:HA	1.07	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1200:A:C2	13:AN:16:LYS:N	2.27	1.02
1:AA:699:U:C2'	40:BP:169:ALA:HB3	1.89	1.02
1:AA:699:U:H3'	40:BP:169:ALA:HB1	1.04	1.02
1:AA:701:U:C5	40:BP:169:ALA:O	2.11	1.02
1:AA:702:G:C8	40:BP:175:ALA:CB	2.41	1.02
1:AA:1521:G:N2	18:AT:78:LYS:HD2	1.73	1.02
19:A7:71:G:H5'	53:B5:2236:G:H4'	1.42	1.02
1:AA:702:G:C5	40:BP:172:ALA:CA	2.43	1.02
1:AA:1121:A:H1'	53:B5:2191:U:C5'	1.85	1.02
17:AR:286:GLU:HG2	17:AR:289:ALA:HA	1.41	1.02
1:AA:799:A:N3	40:BP:161:ALA:HB2	1.43	1.01
1:AA:1000:U:OP1	19:A7:38:A:H5'	1.58	1.01
1:AA:1520:U:H5"	1:AA:1522:A:OP2	1.59	1.01
1:AA:1653:A:C6	53:B5:2302:G:H5"	1.88	1.01
17:AR:210:LEU:HD12	17:AR:222:LEU:HD21	1.40	1.01
1:AA:699:U:O4'	40:BP:166:ALA:CA	2.07	1.01
1:AA:799:A:O4'	40:BP:161:ALA:O	1.71	1.01
1:AA:1574:A:C2	19:A7:41:U:C4'	2.42	1.01
1:AA:1755:G:O2'	53:B5:2262:A:H2	1.25	1.00
1:AA:1200:A:C6	13:AN:16:LYS:N	2.29	1.00
1:AA:1756:U:H1'	53:B5:2262:A:H2'	1.01	1.00
1:AA:1657:A:C5'	42:BR:67:PRO:CG	2.39	1.00
1:AA:856:A:C6	7:AH:32:LYS:C	2.35	1.00
1:AA:1501:A:C5	1:AA:1546:G:C5	2.44	1.00
1:AA:1756:U:O4'	53:B5:2262:A:N3	1.93	1.00
1:AA:1777:U:P	53:B5:2194:G:H4'	2.02	1.00
1:AA:912:G:O6	53:B5:2207:A:O5'	1.71	0.99
1:AA:1121:A:C4'	53:B5:2191:U:H5'	1.92	0.99
1:AA:1744:A:C4'	53:B5:2291:A:H1'	1.92	0.99
17:AR:12:THR:HG22	17:AR:311:ARG:HG2	1.40	0.99
1:AA:1574:A:C2'	19:A7:40:5MC:O2'	2.11	0.99
1:AA:1635:C:C5'	1:AA:1636:G:OP2	2.10	0.99
1:AA:702:G:H1'	40:BP:175:ALA:CB	1.78	0.99
1:AA:1501:A:C1'	1:AA:1546:G:N2	2.15	0.99
17:AR:259:GLY:HA2	17:AR:284:ALA:HA	1.41	0.99
1:AA:1756:U:C4'	53:B5:2262:A:C2	2.46	0.98
1:AA:1502:G:C6	1:AA:1547:C:C5	2.52	0.98
1:AA:1502:G:C8	1:AA:1547:C:C2	2.50	0.98
1:AA:1657:A:H5'	42:BR:67:PRO:CG	1.93	0.98
1:AA:1121:A:C1'	53:B5:2191:U:H5'	1.91	0.98
1:AA:993:G:H5"	53:B5:2195:C:OP2	1.64	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1460:G:H4'	19:A7:30:G:H5'	1.46	0.97
1:AA:1521:G:N2	18:AT:78:LYS:NZ	2.11	0.97
1:AA:1756:U:O3'	53:B5:2263:C:C1'	1.98	0.97
1:AA:1756:U:C2'	53:B5:2263:C:OP1	2.12	0.97
1:AA:1653:A:H2	53:B5:2301:U:HO2'	1.02	0.97
1:AA:1756:U:O2'	53:B5:2263:C:O5'	1.80	0.97
1:AA:971:G:N2	53:B5:846:A:N6	2.12	0.96
12:AM:110:ARG:CZ	34:BJ:116:TYR:CZ	2.48	0.96
1:AA:972:A:C5'	53:B5:848:A:C2	2.49	0.96
1:AA:1655:U:O2	53:B5:2124:G:N2	1.99	0.96
1:AA:701:U:O4	40:BP:169:ALA:O	1.80	0.96
1:AA:699:U:C2	40:BP:167:ALA:O	2.20	0.95
17:AR:40:LYS:HE2	17:AR:66:HIS:HA	1.48	0.95
1:AA:699:U:C2	40:BP:167:ALA:C	2.39	0.95
37:BM:111:PRO:HB3	37:BM:163:ALA:C	1.86	0.95
37:BM:108:ILE:HG22	37:BM:160:ALA:HB2	1.46	0.95
1:AA:1502:G:C4	1:AA:1547:C:N4	2.35	0.94
17:AR:34:LEU:CG	17:AR:42:LEU:HD11	1.97	0.94
17:AR:286:GLU:HG3	17:AR:305:TYR:CG	2.02	0.94
17:AR:164:ASP:CB	17:AR:168:THR:HA	1.97	0.94
37:BM:151:ALA:O	37:BM:155:ALA:HB3	1.66	0.94
37:BM:169:ALA:C	37:BM:171:ALA:H	1.68	0.94
17:AR:257:ALA:CA	17:AR:283:LYS:HD2	1.97	0.93
1:AA:1735:G:C4'	53:B5:1933:A:O2'	2.16	0.93
1:AA:1776:G:C5'	53:B5:2194:G:H5"	1.92	0.93
19:A7:63:C:H5"	25:BA:45:ARG:HD2	1.49	0.93
1:AA:1520:U:H4'	1:AA:1522:A:C8	2.03	0.93
1:AA:865:A:OP1	1:AA:865:A:H8	1.51	0.93
1:AA:1657:A:H5"	42:BR:67:PRO:HD2	1.48	0.93
1:AA:1735:G:H4'	53:B5:1933:A:HO2'	1.31	0.93
1:AA:1776:G:H5"	53:B5:2194:G:H5'	0.94	0.93
1:AA:1521:G:C2	18:AT:78:LYS:HB2	2.02	0.93
17:AR:46:LYS:HB2	17:AR:58:VAL:CG1	1.98	0.93
17:AR:164:ASP:HB3	17:AR:183:LEU:H	1.33	0.92
37:BM:155:ALA:O	37:BM:158:ALA:N	2.01	0.92
17:AR:36:ALA:HB1	17:AR:68:VAL:HG13	1.46	0.92
1:AA:993:G:C5'	53:B5:2195:C:OP2	2.17	0.92
1:AA:702:G:N9	40:BP:175:ALA:HB3	1.84	0.92
1:AA:1501:A:C5	1:AA:1546:G:N9	2.37	0.92
1:AA:702:G:N3	40:BP:176:ALA:CB	2.30	0.92
12:AM:110:ARG:CD	34:BJ:116:TYR:CD1	2.53	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:156:VAL:HB	17:AR:167:VAL:CG2	2.00	0.92
1:AA:1655:U:C5	53:B5:2329:C:H1'	2.05	0.92
17:AR:83:ALA:HB2	17:AR:113:VAL:CG1	1.99	0.92
1:AA:1501:A:C6	1:AA:1546:G:C5	2.57	0.92
1:AA:1756:U:C1'	53:B5:2263:C:OP1	2.18	0.92
23:B8:43:LYS:NZ	35:BK:121:PHE:CD1	2.38	0.92
1:AA:1755:G:C2'	53:B5:2262:A:H2	1.83	0.91
1:AA:1501:A:C2	1:AA:1546:G:N7	2.25	0.91
1:AA:1657:A:C5'	42:BR:67:PRO:CD	2.49	0.91
1:AA:1744:A:C5	53:B5:2303:A:OP2	2.24	0.91
1:AA:1460:G:O3'	19:A7:30:G:O4'	1.87	0.91
17:AR:258:THR:CG2	17:AR:261:LYS:HE2	2.00	0.91
17:AR:286:GLU:HB3	17:AR:288:HIS:H	1.36	0.91
19:A7:56:C:C5	53:B5:2484:A:H1'	2.06	0.91
1:AA:1521:G:H22	18:AT:78:LYS:NZ	1.69	0.90
1:AA:1756:U:O3'	53:B5:2263:C:H4'	1.42	0.90
17:AR:259:GLY:HA2	17:AR:284:ALA:CA	2.00	0.90
8:AI:93:HIS:CE1	17:AR:59:ARG:NH2	2.40	0.90
14:AO:149:LEU:CD1	53:B5:847:A:P	2.58	0.90
1:AA:1460:G:C4'	19:A7:30:G:H5'	2.02	0.90
23:B8:43:LYS:CE	35:BK:121:PHE:CD1	2.55	0.90
1:AA:1744:A:N7	53:B5:2303:A:OP2	1.89	0.90
1:AA:1756:U:O3'	53:B5:2263:C:O4'	1.89	0.89
17:AR:283:LYS:HD3	17:AR:288:HIS:HA	1.54	0.89
17:AR:61:PHE:CE2	17:AR:97:GLY:HA2	2.06	0.89
8:AI:93:HIS:HE1	17:AR:59:ARG:HH22	1.09	0.89
17:AR:266:ASP:HB3	17:AR:267:PRO:HD3	1.52	0.89
1:AA:1521:G:H1	18:AT:78:LYS:HG3	1.07	0.89
1:AA:800:U:OP1	40:BP:160:ALA:CB	2.21	0.89
1:AA:701:U:O2	40:BP:174:ALA:N	2.04	0.88
17:AR:93:ASP:HB3	17:AR:96:THR:CG2	2.03	0.88
1:AA:972:A:O4'	53:B5:847:A:H2	1.56	0.88
1:AA:972:A:O4'	53:B5:847:A:C2	2.25	0.88
1:AA:1520:U:H4'	1:AA:1522:A:N7	1.86	0.88
1:AA:1757:C:OP1	53:B5:2264:U:C5'	2.21	0.88
1:AA:1632:C:C4'	1:AA:1633:A:OP2	2.21	0.88
17:AR:257:ALA:HA	17:AR:283:LYS:CD	2.01	0.88
1:AA:922:A:C5'	26:BB:109:GLU:OE1	2.21	0.88
1:AA:1200:A:N1	13:AN:16:LYS:CA	2.37	0.88
1:AA:1502:G:C4	1:AA:1547:C:C4	2.62	0.88
1:AA:1121:A:O4'	53:B5:2191:U:H5'	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1756:U:H2'	53:B5:2263:C:C5'	2.02	0.88
37:BM:151:ALA:O	37:BM:155:ALA:HB2	1.73	0.88
1:AA:1521:G:H1'	18:AT:86:ARG:HH22	1.35	0.88
1:AA:702:G:C5	40:BP:172:ALA:C	2.47	0.88
1:AA:1521:G:H22	18:AT:78:LYS:HZ2	1.18	0.88
1:AA:1777:U:OP1	53:B5:2194:G:H1'	1.72	0.88
17:AR:283:LYS:HD3	17:AR:288:HIS:CA	2.04	0.88
17:AR:286:GLU:HG2	17:AR:289:ALA:CA	2.04	0.88
17:AR:38:ARG:HA	17:AR:67:ILE:CG2	2.03	0.88
23:B8:43:LYS:HB2	35:BK:121:PHE:CD1	2.10	0.87
1:AA:1121:A:C1'	53:B5:2191:U:H5"	1.77	0.87
1:AA:1501:A:N9	1:AA:1546:G:N3	2.23	0.87
17:AR:260:ILE:HG13	17:AR:284:ALA:CB	2.03	0.87
17:AR:197:SER:CB	17:AR:216:LYS:HB3	2.04	0.87
1:AA:1521:G:N2	18:AT:78:LYS:CG	2.34	0.87
17:AR:89:LEU:HD21	17:AR:124:SER:HB3	1.53	0.87
1:AA:856:A:C5	7:AH:32:LYS:HA	2.08	0.87
1:AA:1521:G:N2	18:AT:78:LYS:HG3	1.90	0.87
37:BM:108:ILE:HG23	37:BM:160:ALA:HB2	1.42	0.87
1:AA:1756:U:H2'	53:B5:2263:C:H5'	1.57	0.86
23:B8:43:LYS:HE3	35:BK:121:PHE:HD1	1.40	0.86
17:AR:283:LYS:CB	17:AR:288:HIS:HA	2.05	0.86
23:B8:43:LYS:CG	35:BK:121:PHE:CE1	2.58	0.86
1:AA:1757:C:OP1	53:B5:2264:U:H5'	1.76	0.86
17:AR:52:GLN:HE21	17:AR:52:GLN:HA	1.41	0.86
1:AA:702:G:C5	40:BP:172:ALA:CB	2.41	0.86
1:AA:865:A:OP1	1:AA:865:A:C8	2.28	0.86
1:AA:922:A:OP1	26:BB:109:GLU:OE2	1.93	0.86
1:AA:1516:C:OP2	1:AA:1516:C:H6	1.57	0.86
1:AA:1744:A:N3	53:B5:2302:G:O5'	2.04	0.86
37:BM:111:PRO:HB3	37:BM:163:ALA:CB	1.99	0.86
1:AA:1776:G:OP1	53:B5:2193:U:H5'	1.72	0.85
17:AR:164:ASP:O	17:AR:183:LEU:HB2	1.75	0.85
1:AA:699:U:H3	40:BP:171:ALA:H	1.24	0.85
1:AA:701:U:C2'	40:BP:176:ALA:O	2.23	0.85
1:AA:1574:A:C2	19:A7:41:U:H4'	2.08	0.85
12:AM:110:ARG:CZ	34:BJ:116:TYR:CD1	2.57	0.85
17:AR:165:ASP:HB2	17:AR:183:LEU:O	1.77	0.85
17:AR:281:TYR:O	17:AR:287:PRO:HA	1.76	0.85
17:AR:283:LYS:CG	17:AR:288:HIS:HA	2.06	0.85
1:AA:1000:U:OP1	19:A7:38:A:C5'	2.24	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1501:A:N9	1:AA:1546:G:C2	2.45	0.85
1:AA:1653:A:C5	53:B5:2302:G:H5"	2.08	0.85
17:AR:164:ASP:HB3	17:AR:183:LEU:N	1.91	0.84
1:AA:1777:U:OP1	53:B5:2194:G:C1'	2.24	0.84
17:AR:209:THR:HG23	17:AR:210:LEU:CD2	2.05	0.84
17:AR:29:GLN:HB2	17:AR:296:ALA:HB3	1.57	0.84
1:AA:1734:G:N2	53:B5:1934:G:H4'	1.91	0.84
17:AR:164:ASP:CB	17:AR:183:LEU:H	1.90	0.84
17:AR:193:ILE:HD13	17:AR:193:ILE:H	1.42	0.84
37:BM:150:ALA:O	37:BM:154:ALA:N	2.10	0.83
1:AA:702:G:H8	40:BP:175:ALA:HB3	1.36	0.83
17:AR:288:HIS:HB3	17:AR:306:THR:CG2	2.09	0.83
17:AR:33:LEU:CD2	17:AR:45:TRP:HB2	2.08	0.83
17:AR:164:ASP:CG	17:AR:182:ASN:HA	1.98	0.83
17:AR:197:SER:HB3	17:AR:216:LYS:HB3	1.59	0.83
1:AA:858:G:N3	7:AH:61:ILE:CB	2.41	0.83
17:AR:169:ILE:HG13	17:AR:183:LEU:HD21	1.60	0.83
1:AA:699:U:C4'	40:BP:169:ALA:HB3	2.09	0.83
19:A7:71:G:H5'	53:B5:2236:G:C4'	2.08	0.83
1:AA:1200:A:N3	13:AN:16:LYS:CA	2.42	0.82
1:AA:1653:A:H2	53:B5:2301:U:O2'	1.61	0.82
17:AR:262:VAL:HG23	17:AR:271:VAL:HG12	1.61	0.82
17:AR:133:VAL:HG13	17:AR:141:LEU:HB2	1.60	0.82
1:AA:1339:C:H5'	17:AR:102:ARG:NH2	1.94	0.82
1:AA:699:U:N3	40:BP:167:ALA:O	2.13	0.82
1:AA:921:G:H1'	26:BB:141:PRO:HG3	1.59	0.82
17:AR:21:THR:HG21	17:AR:68:VAL:O	1.79	0.82
23:B8:43:LYS:HE3	35:BK:121:PHE:CD1	2.14	0.82
17:AR:163:ASP:HB2	17:AR:165:ASP:O	1.80	0.82
17:AR:203:THR:HG22	17:AR:212:ALA:HB3	1.62	0.82
1:AA:799:A:C4'	40:BP:161:ALA:C	2.47	0.82
17:AR:276:PRO:N	17:AR:285:ALA:HA	1.95	0.82
12:AM:110:ARG:HE	34:BJ:116:TYR:HE1	1.18	0.81
17:AR:305:TYR:CZ	17:AR:311:ARG:HB2	2.15	0.81
1:AA:1665:A:O4'	53:B5:1935:G:C5'	2.28	0.81
17:AR:177:MET:SD	17:AR:191:ASP:HB2	2.20	0.81
17:AR:34:LEU:CD2	17:AR:42:LEU:HD21	2.10	0.81
1:AA:1573:G:N1	19:A7:41:U:O2'	1.93	0.81
1:AA:699:U:H2'	40:BP:169:ALA:C	2.00	0.81
1:AA:702:G:C1'	40:BP:175:ALA:CB	2.58	0.81
17:AR:38:ARG:HG2	17:AR:67:ILE:HG21	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:699:U:H2'	40:BP:170:ALA:N	1.95	0.80
37:BM:148:LYS:HB2	37:BM:149:ALA:CB	2.11	0.80
1:AA:702:G:N9	40:BP:172:ALA:O	2.14	0.80
1:AA:1501:A:C8	1:AA:1546:G:C2'	2.62	0.80
17:AR:164:ASP:HB3	17:AR:182:ASN:HA	1.62	0.80
1:AA:702:G:N7	40:BP:172:ALA:CA	2.42	0.80
1:AA:1501:A:H1'	1:AA:1546:G:N1	1.95	0.80
1:AA:1521:G:N3	18:AT:78:LYS:HB2	1.90	0.80
17:AR:283:LYS:CD	17:AR:288:HIS:HA	2.10	0.80
17:AR:164:ASP:CG	17:AR:168:THR:HG22	2.02	0.80
19:A7:56:C:C6	53:B5:2484:A:H1'	2.17	0.80
1:AA:1665:A:P	53:B5:1935:G:O2'	2.39	0.80
1:AA:1776:G:C5'	53:B5:2194:G:OP1	2.30	0.80
1:AA:700:C:C6	40:BP:173:ALA:HB3	2.17	0.80
17:AR:283:LYS:HD3	17:AR:288:HIS:CG	2.16	0.80
1:AA:1655:U:O4	53:B5:2328:U:O2	1.99	0.80
17:AR:96:THR:HG23	17:AR:98:GLU:H	1.45	0.80
1:AA:856:A:C5	7:AH:32:LYS:CA	2.66	0.79
1:AA:1653:A:C2'	53:B5:2302:G:OP2	2.29	0.79
17:AR:164:ASP:CB	17:AR:182:ASN:HA	2.11	0.79
1:AA:699:U:C2'	40:BP:169:ALA:CB	2.56	0.79
1:AA:856:A:N1	7:AH:33:VAL:N	2.31	0.79
1:AA:856:A:N1	7:AH:32:LYS:C	2.36	0.79
1:AA:1521:G:O2'	18:AT:83:ALA:CA	2.30	0.79
17:AR:285:ALA:HB3	17:AR:313:TRP:CZ2	2.17	0.79
1:AA:921:G:C4'	26:BB:141:PRO:HD3	2.09	0.79
23:B8:43:LYS:CD	35:BK:121:PHE:CE1	2.66	0.79
1:AA:1657:A:H5"	42:BR:67:PRO:HD3	1.64	0.79
17:AR:115:ILE:CG2	17:AR:119:ALA:HA	2.13	0.78
1:AA:1573:G:H1	19:A7:41:U:HO2'	0.80	0.78
1:AA:1775:G:O3'	53:B5:2193:U:OP1	2.00	0.78
1:AA:1776:G:P	53:B5:2193:U:H5"	2.23	0.78
17:AR:83:ALA:HB1	17:AR:110:VAL:CG1	2.12	0.78
1:AA:1516:C:OP2	1:AA:1516:C:C6	2.36	0.78
1:AA:1521:G:N2	18:AT:78:LYS:CE	2.46	0.78
37:BM:168:ALA:C	37:BM:171:ALA:HB3	2.04	0.78
17:AR:211:ILE:HD11	17:AR:225:LEU:CD1	2.09	0.78
1:AA:699:U:C3'	40:BP:169:ALA:HB1	1.94	0.77
17:AR:13:LEU:HD11	17:AR:54:PHE:HB3	1.64	0.77
1:AA:1744:A:H4'	53:B5:2291:A:C1'	2.13	0.77
1:AA:1200:A:N3	13:AN:16:LYS:N	2.33	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1756:U:O2'	53:B5:2263:C:P	2.42	0.77
8:AI:97:VAL:HG21	17:AR:59:ARG:CZ	2.14	0.77
1:AA:1745:G:O3'	53:B5:2303:A:H3'	1.81	0.77
19:A7:63:C:H5"	25:BA:45:ARG:CD	2.14	0.77
37:BM:108:ILE:HG22	37:BM:160:ALA:CB	2.03	0.77
1:AA:856:A:N3	7:AH:33:VAL:N	2.33	0.77
1:AA:1521:G:H5"	1:AA:1522:A:OP1	1.82	0.77
1:AA:1736:U:H5'	53:B5:1932:A:H61	1.48	0.77
1:AA:700:C:C5	40:BP:169:ALA:O	2.36	0.77
1:AA:1502:G:C2	1:AA:1547:C:N4	2.54	0.76
1:AA:1521:G:N2	18:AT:78:LYS:HZ2	1.78	0.76
1:AA:1573:G:C4	19:A7:42:G:OP1	2.34	0.76
17:AR:286:GLU:HA	17:AR:305:TYR:CD2	2.19	0.76
37:BM:111:PRO:HA	37:BM:163:ALA:HB3	1.60	0.76
17:AR:286:GLU:HG3	17:AR:305:TYR:CD2	2.20	0.76
1:AA:1501:A:N9	1:AA:1546:G:C4	2.53	0.76
1:AA:702:G:C1'	40:BP:175:ALA:HB3	2.16	0.76
1:AA:856:A:N3	7:AH:32:LYS:C	2.39	0.76
17:AR:173:GLY:H	17:AR:199:ILE:CG2	1.99	0.76
17:AR:286:GLU:HB3	17:AR:288:HIS:N	2.00	0.76
1:AA:702:G:N3	40:BP:172:ALA:O	2.18	0.76
17:AR:170:ILE:HG22	17:AR:202:LEU:HD13	1.68	0.76
1:AA:1200:A:N1	13:AN:16:LYS:N	2.33	0.76
1:AA:1338:A:O3'	17:AR:102:ARG:CZ	2.33	0.76
8:AI:97:VAL:HG21	17:AR:59:ARG:NH2	1.99	0.75
17:AR:164:ASP:CA	17:AR:183:LEU:H	1.98	0.75
17:AR:19:TRP:CB	17:AR:38:ARG:HD2	2.16	0.75
1:AA:1502:G:C4	1:AA:1547:C:N3	2.54	0.75
1:AA:1000:U:H5'	19:A7:38:A:OP1	1.86	0.75
1:AA:1521:G:H1'	18:AT:86:ARG:HH21	1.52	0.75
17:AR:172:ALA:CB	17:AR:199:ILE:HD12	2.16	0.75
1:AA:1520:U:C4'	1:AA:1522:A:N7	2.49	0.75
17:AR:164:ASP:HB3	17:AR:182:ASN:CA	2.16	0.75
17:AR:288:HIS:HB3	17:AR:306:THR:HG23	1.69	0.75
17:AR:305:TYR:OH	17:AR:311:ARG:HB2	1.86	0.75
17:AR:13:LEU:CD1	17:AR:54:PHE:HB3	2.16	0.75
17:AR:33:LEU:HD23	17:AR:45:TRP:HB2	1.66	0.75
1:AA:701:U:O4	40:BP:172:ALA:CB	2.26	0.75
1:AA:1776:G:H4'	53:B5:2194:G:H5"	0.79	0.75
17:AR:86:ASP:OD1	17:AR:88:THR:HG22	1.87	0.75
1:AA:1519:G:H4'	1:AA:1520:U:OP1	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1635:C:H5'	1:AA:1636:G:OP2	1.87	0.75
1:AA:1657:A:C4'	42:BR:67:PRO:HG2	2.17	0.75
1:AA:1756:U:C4'	53:B5:2262:A:N3	2.49	0.75
1:AA:701:U:O4	40:BP:169:ALA:HA	1.87	0.74
1:AA:1502:G:C5	1:AA:1547:C:N4	2.53	0.74
1:AA:1521:G:C2	18:AT:78:LYS:CD	2.66	0.74
17:AR:114:ASP:OD1	17:AR:123:ILE:HG13	1.87	0.74
17:AR:126:SER:HB3	17:AR:128:ASP:OD1	1.87	0.74
8:AI:93:HIS:HE1	17:AR:59:ARG:NH2	1.82	0.74
17:AR:173:GLY:O	17:AR:199:ILE:HG22	1.87	0.74
17:AR:46:LYS:HB2	17:AR:58:VAL:HG13	1.69	0.74
1:AA:1757:C:OP1	53:B5:2264:U:O5'	2.05	0.74
1:AA:1501:A:C4	1:AA:1546:G:C2	2.74	0.74
17:AR:41:THR:HG23	17:AR:61:PHE:O	1.88	0.74
1:AA:1665:A:P	53:B5:1936:A:H5'	2.27	0.74
1:AA:1756:U:H2'	53:B5:2263:C:OP1	1.87	0.74
17:AR:19:TRP:HB3	17:AR:38:ARG:HD2	1.70	0.74
1:AA:701:U:O4	40:BP:172:ALA:HB3	1.33	0.74
17:AR:44:SER:O	17:AR:58:VAL:HG22	1.87	0.74
14:AO:123:HIS:CE1	53:B5:846:A:N3	2.56	0.73
37:BM:147:TRP:CZ2	37:BM:153:ALA:CB	2.70	0.73
1:AA:1521:G:C4	18:AT:79:LEU:N	2.55	0.73
1:AA:1521:G:H4'	1:AA:1522:A:OP1	1.88	0.73
17:AR:36:ALA:HB1	17:AR:68:VAL:CG1	2.18	0.73
17:AR:42:LEU:HD13	17:AR:43:ILE:N	2.03	0.73
17:AR:40:LYS:HG2	17:AR:66:HIS:C	2.08	0.73
1:AA:702:G:O6	40:BP:172:ALA:HB2	1.82	0.73
1:AA:1521:G:C5'	1:AA:1522:A:OP1	2.34	0.73
17:AR:203:THR:HG23	17:AR:245:PHE:HE1	1.54	0.73
1:AA:799:A:N3	40:BP:161:ALA:HB3	1.99	0.73
1:AA:1200:A:C6	13:AN:16:LYS:C	2.62	0.73
37:BM:147:TRP:HZ2	37:BM:153:ALA:CB	2.02	0.73
1:AA:699:U:C2'	40:BP:170:ALA:N	2.50	0.72
1:AA:972:A:C1'	53:B5:847:A:H2	2.01	0.72
17:AR:262:VAL:HG22	17:AR:272:ASP:O	1.89	0.72
1:AA:700:C:H5	40:BP:169:ALA:O	1.55	0.72
17:AR:199:ILE:HD11	17:AR:201:THR:O	1.90	0.72
17:AR:222:LEU:HD13	17:AR:232:TYR:OH	1.89	0.72
1:AA:1501:A:C4	1:AA:1546:G:N3	2.57	0.72
1:AA:799:A:H4'	40:BP:161:ALA:O	1.87	0.72
1:AA:1653:A:H2	53:B5:2301:U:C2'	1.96	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:165:ASP:HB2	17:AR:183:LEU:C	2.10	0.72
23:B8:43:LYS:CE	35:BK:121:PHE:CE1	2.73	0.72
23:B8:43:LYS:CB	35:BK:121:PHE:CE1	2.73	0.72
17:AR:172:ALA:HB2	17:AR:202:LEU:HG	1.70	0.71
17:AR:34:LEU:CD2	17:AR:42:LEU:HD11	2.19	0.71
17:AR:34:LEU:HD11	17:AR:80:ALA:HB1	1.71	0.71
17:AR:172:ALA:HB1	17:AR:199:ILE:HD12	1.73	0.71
1:AA:698:U:C2	40:BP:164:ALA:C	2.57	0.71
12:AM:110:ARG:NH2	34:BJ:116:TYR:CE1	2.50	0.71
17:AR:164:ASP:OD2	17:AR:168:THR:HG22	1.90	0.71
17:AR:275:ARG:C	17:AR:285:ALA:HA	2.11	0.71
17:AR:283:LYS:HB3	17:AR:288:HIS:HA	1.73	0.71
17:AR:115:ILE:HG22	17:AR:116:ASP:O	1.90	0.71
17:AR:207:ASP:HB3	17:AR:209:THR:HG22	1.72	0.71
1:AA:1461:C:P	19:A7:30:G:H1’	2.31	0.71
1:AA:1633:A:O3’	1:AA:1634:C:H4’	1.91	0.71
1:AA:1657:A:H4’	42:BR:67:PRO:HG2	1.73	0.71
12:AM:110:ARG:CZ	34:BJ:116:TYR:CE2	2.71	0.71
17:AR:66:HIS:CE1	17:AR:67:ILE:HD13	2.26	0.71
1:AA:1756:U:O4’	53:B5:2262:A:C2	2.42	0.71
1:AA:1776:G:O3’	53:B5:2194:G:C5’	2.38	0.70
1:AA:702:G:H8	40:BP:175:ALA:CB	1.93	0.70
1:AA:698:U:C5	40:BP:164:ALA:O	2.43	0.70
1:AA:1573:G:N3	19:A7:41:U:H5”	2.06	0.70
1:AA:1501:A:C1’	1:AA:1546:G:N3	2.53	0.70
37:BM:108:ILE:HG21	37:BM:160:ALA:HB1	1.73	0.70
1:AA:1121:A:H4’	53:B5:2191:U:H5’	1.74	0.70
17:AR:96:THR:HG23	17:AR:98:GLU:N	2.05	0.70
17:AR:283:LYS:HD3	17:AR:288:HIS:CB	2.22	0.70
17:AR:285:ALA:HB3	17:AR:313:TRP:HZ2	1.54	0.70
1:AA:1461:C:OP1	19:A7:30:G:C1’	2.32	0.70
1:AA:702:G:OP1	40:BP:177:ALA:HA	1.91	0.70
1:AA:857:U:H2’	1:AA:858:G:O5’	1.91	0.70
1:AA:1502:G:O6	1:AA:1547:C:C5	2.45	0.70
17:AR:34:LEU:HG	17:AR:42:LEU:CD1	2.14	0.70
17:AR:263:PHE:CE1	17:AR:270:LEU:HG	2.26	0.70
1:AA:1502:G:C8	1:AA:1547:C:O2	2.45	0.69
1:AA:856:A:C2	7:AH:32:LYS:O	2.45	0.69
17:AR:275:ARG:HB3	17:AR:276:PRO:HD2	1.75	0.69
1:AA:1521:G:H22	18:AT:78:LYS:CE	2.04	0.69
1:AA:1756:U:H4’	53:B5:2262:A:C4	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:26:SER:HB2	17:AR:30:PRO:HD2	1.75	0.69
17:AR:34:LEU:HD12	17:AR:73:LEU:HD21	1.75	0.69
17:AR:26:SER:CB	17:AR:30:PRO:HD2	2.23	0.69
17:AR:170:ILE:CG2	17:AR:202:LEU:HD13	2.23	0.69
1:AA:1390:C:OP2	17:AR:281:TYR:OH	2.10	0.69
17:AR:135:THR:HG23	17:AR:137:LYS:H	1.58	0.69
17:AR:164:ASP:H	17:AR:168:THR:N	1.91	0.68
17:AR:203:THR:HG23	17:AR:245:PHE:CE1	2.28	0.68
23:B8:43:LYS:NZ	35:BK:121:PHE:HE1	1.88	0.68
17:AR:173:GLY:H	17:AR:199:ILE:HG23	1.57	0.68
1:AA:702:G:H1'	40:BP:175:ALA:HB1	1.70	0.68
14:AO:149:LEU:CD1	53:B5:846:A:O3'	2.42	0.68
1:AA:1630:C:H5"	1:AA:1636:G:H21	1.51	0.68
17:AR:283:LYS:HE2	17:AR:289:ALA:N	2.09	0.68
32:BH:40:HIS:CG	32:BH:41:ILE:H	2.11	0.68
1:AA:1521:G:C2	18:AT:78:LYS:HD2	2.29	0.68
17:AR:211:ILE:CD1	17:AR:225:LEU:HD13	2.09	0.68
17:AR:314:GLN:HG2	17:AR:315:VAL:N	2.09	0.68
1:AA:699:U:O4'	40:BP:169:ALA:HB3	1.93	0.68
17:AR:87:LYS:HD2	17:AR:106:HIS:O	1.93	0.68
17:AR:240:VAL:HG22	17:AR:256:THR:HG22	1.75	0.68
17:AR:276:PRO:CA	17:AR:285:ALA:HA	2.24	0.68
17:AR:170:ILE:HG22	17:AR:202:LEU:CD1	2.24	0.67
17:AR:34:LEU:HD21	17:AR:71:CYS:SG	2.33	0.67
17:AR:169:ILE:CG1	17:AR:183:LEU:HD21	2.25	0.67
17:AR:257:ALA:O	17:AR:283:LYS:HA	1.95	0.67
1:AA:1521:G:C4'	1:AA:1522:A:OP1	2.37	0.67
17:AR:33:LEU:HD23	17:AR:33:LEU:H	1.59	0.67
37:BM:107:GLY:HA3	37:BM:156:ALA:HB1	1.77	0.67
1:AA:1516:C:C2'	1:AA:1517:U:O5'	2.42	0.67
1:AA:1390:C:P	17:AR:281:TYR:OH	2.50	0.67
17:AR:259:GLY:HA2	17:AR:284:ALA:N	2.08	0.67
37:BM:168:ALA:O	37:BM:172:ALA:N	2.28	0.67
17:AR:199:ILE:HD11	17:AR:202:LEU:HD23	1.77	0.67
1:AA:698:U:C6	40:BP:164:ALA:C	2.62	0.66
17:AR:259:GLY:CA	17:AR:284:ALA:HA	2.22	0.66
17:AR:10:ARG:HG2	17:AR:54:PHE:CE1	2.30	0.66
17:AR:32:LEU:HD22	17:AR:32:LEU:O	1.95	0.66
37:BM:150:ALA:O	37:BM:154:ALA:HB3	1.96	0.66
17:AR:21:THR:HA	17:AR:290:VAL:HG11	1.78	0.66
17:AR:285:ALA:O	17:AR:305:TYR:HE2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:12:THR:HG22	17:AR:311:ARG:CG	2.23	0.66
17:AR:203:THR:CG2	17:AR:212:ALA:HB3	2.25	0.66
17:AR:286:GLU:CD	17:AR:289:ALA:HB2	2.15	0.66
1:AA:1502:G:N3	1:AA:1547:C:N4	2.44	0.66
1:AA:1756:U:H4'	53:B5:2263:C:H1'	1.77	0.66
17:AR:67:ILE:O	17:AR:84:SER:HB2	1.95	0.65
17:AR:83:ALA:HB1	17:AR:110:VAL:HG12	1.75	0.65
1:AA:921:G:C1'	26:BB:141:PRO:HG3	2.26	0.65
17:AR:93:ASP:CB	17:AR:96:THR:HG22	2.23	0.65
12:AM:110:ARG:NE	34:BJ:116:TYR:CG	2.60	0.65
17:AR:11:GLY:N	17:AR:312:VAL:HG23	2.11	0.65
17:AR:32:LEU:HD13	17:AR:32:LEU:N	2.11	0.65
17:AR:46:LYS:HB2	17:AR:58:VAL:HG11	1.76	0.65
17:AR:81:LEU:HD13	17:AR:91:LEU:HD23	1.78	0.65
1:AA:629:U:H5'	53:B5:846:A:H1'	1.78	0.65
23:B8:43:LYS:CE	35:BK:121:PHE:HD1	2.01	0.65
17:AR:260:ILE:CG1	17:AR:284:ALA:HB1	2.23	0.65
1:AA:1521:G:N7	18:AT:79:LEU:N	2.44	0.65
17:AR:209:THR:CG2	17:AR:210:LEU:HD22	2.10	0.65
17:AR:35:SER:O	17:AR:42:LEU:HD22	1.97	0.65
17:AR:196:ASN:HD21	17:AR:217:ASP:HB2	1.61	0.65
17:AR:38:ARG:O	17:AR:67:ILE:HG13	1.96	0.65
17:AR:283:LYS:HG2	17:AR:284:ALA:H	1.61	0.65
12:AM:110:ARG:CZ	34:BJ:116:TYR:CG	2.80	0.65
1:AA:799:A:H4'	40:BP:161:ALA:C	2.16	0.64
17:AR:33:LEU:HD22	17:AR:47:LEU:HD21	1.78	0.64
19:A7:19:G:N7	53:B5:2454:G:C8	2.65	0.64
1:AA:702:G:P	40:BP:177:ALA:HA	2.38	0.64
1:AA:1756:U:H1'	53:B5:2263:C:OP1	1.96	0.64
17:AR:34:LEU:HD21	17:AR:42:LEU:CD2	2.16	0.64
17:AR:74:THR:HG22	17:AR:79:TYR:H	1.61	0.64
1:AA:1502:G:C6	1:AA:1547:C:N4	2.65	0.64
1:AA:1736:U:C5'	53:B5:1932:A:H61	2.11	0.64
17:AR:7:LEU:HA	17:AR:315:VAL:HG22	1.78	0.64
17:AR:7:LEU:HA	17:AR:315:VAL:CG2	2.28	0.64
1:AA:1460:G:H4'	19:A7:30:G:C5'	2.26	0.64
1:AA:921:G:H5"	26:BB:140:ASN:HD21	1.62	0.64
17:AR:22:SER:O	17:AR:23:LEU:HD23	1.98	0.64
17:AR:90:ARG:NH1	17:AR:99:THR:HG21	2.12	0.64
17:AR:256:THR:O	17:AR:283:LYS:HE3	1.97	0.64
1:AA:1756:U:C2'	53:B5:2263:C:C5'	2.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:34:LEU:HD11	17:AR:80:ALA:CB	2.28	0.64
1:AA:1755:G:HO2'	53:B5:2262:A:H2	0.65	0.63
17:AR:262:VAL:HG23	17:AR:272:ASP:H	1.63	0.63
1:AA:1630:C:H5'	1:AA:1636:G:N2	2.08	0.63
17:AR:274:LEU:HD13	17:AR:313:TRP:CD2	2.33	0.63
17:AR:286:GLU:HA	17:AR:305:TYR:HD2	1.63	0.63
1:AA:1501:A:O4'	1:AA:1546:G:N2	2.31	0.63
1:AA:1636:G:O6	1:AA:1762:C:O2	2.16	0.63
17:AR:13:LEU:N	17:AR:13:LEU:HD22	2.13	0.63
17:AR:40:LYS:HG2	17:AR:66:HIS:O	1.96	0.63
17:AR:274:LEU:O	17:AR:284:ALA:HA	1.99	0.63
1:AA:1756:U:C4'	53:B5:2262:A:C4	2.81	0.63
17:AR:214:ALA:HB1	17:AR:240:VAL:HB	1.81	0.63
1:AA:701:U:O4	40:BP:169:ALA:C	2.35	0.63
1:AA:972:A:H5'	53:B5:848:A:H2	1.57	0.63
1:AA:1516:C:H2'	1:AA:1517:U:O5'	1.99	0.63
37:BM:168:ALA:O	37:BM:172:ALA:HB2	1.99	0.63
1:AA:1736:U:H5'	53:B5:1932:A:N6	2.13	0.63
17:AR:164:ASP:C	17:AR:183:LEU:HB2	2.19	0.63
1:AA:1776:G:C3'	53:B5:2194:G:H5"	2.26	0.62
17:AR:86:ASP:O	17:AR:87:LYS:HG2	1.99	0.62
17:AR:181:TRP:CZ3	17:AR:188:ILE:HB	2.34	0.62
1:AA:699:U:O2	40:BP:167:ALA:O	2.17	0.62
1:AA:699:U:N3	40:BP:167:ALA:C	2.50	0.62
1:AA:701:U:O4	40:BP:169:ALA:CA	2.47	0.62
17:AR:19:TRP:CZ3	17:AR:306:THR:HG22	2.34	0.62
17:AR:170:ILE:HD12	17:AR:170:ILE:N	2.14	0.62
1:AA:1120:C:O2'	53:B5:2190:U:H5"	1.99	0.62
1:AA:972:A:C4'	53:B5:847:A:C2	2.83	0.62
17:AR:238:ASP:OD2	17:AR:258:THR:HB	2.00	0.62
37:BM:168:ALA:CA	37:BM:171:ALA:HB3	2.29	0.62
1:AA:1460:G:O3'	19:A7:30:G:C4'	2.47	0.62
17:AR:178:VAL:HB	17:AR:192:PHE:HB2	1.81	0.62
1:AA:858:G:H3'	7:AH:27:ILE:HB	1.79	0.61
17:AR:86:ASP:CG	17:AR:88:THR:HG22	2.19	0.61
17:AR:175:ASP:O	17:AR:176:LYS:HG2	2.00	0.61
1:AA:921:G:H5"	26:BB:140:ASN:ND2	2.15	0.61
1:AA:1574:A:C2	19:A7:41:U:C1'	2.83	0.61
17:AR:286:GLU:HG2	17:AR:289:ALA:N	2.15	0.61
1:AA:1519:G:C4'	1:AA:1520:U:OP1	2.44	0.61
17:AR:283:LYS:HZ3	17:AR:288:HIS:CD2	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:131:ILE:CD1	17:AR:151:VAL:HG11	2.31	0.61
17:AR:100:TYR:CD2	17:AR:101:GLN:HG3	2.36	0.61
17:AR:242:SER:OG	17:AR:292:LEU:HD22	2.01	0.61
1:AA:1653:A:C2	53:B5:2301:U:C2'	2.82	0.61
17:AR:256:THR:O	17:AR:283:LYS:HG3	2.01	0.61
17:AR:288:HIS:HB3	17:AR:306:THR:HG21	1.82	0.61
1:AA:1121:A:H1'	53:B5:2191:U:OP1	2.01	0.61
17:AR:9:LEU:HD21	17:AR:311:ARG:HB3	1.83	0.61
17:AR:220:ILE:HD12	17:AR:220:ILE:N	2.16	0.61
17:AR:287:PRO:HG3	17:AR:307:ASP:HB3	1.83	0.61
1:AA:699:U:C4'	40:BP:166:ALA:HA	2.31	0.61
17:AR:276:PRO:HB2	17:AR:278:PHE:CE1	2.35	0.61
37:BM:111:PRO:HA	37:BM:163:ALA:HB1	0.62	0.61
37:BM:111:PRO:N	37:BM:163:ALA:HB1	2.04	0.61
1:AA:1665:A:OP1	53:B5:1935:G:O2'	2.19	0.61
23:B8:43:LYS:CD	35:BK:121:PHE:HE1	2.12	0.61
17:AR:8:VAL:HG12	17:AR:9:LEU:N	2.16	0.60
17:AR:164:ASP:HB2	17:AR:168:THR:N	2.16	0.60
14:AO:149:LEU:CD1	53:B5:847:A:H5'	2.14	0.60
17:AR:238:ASP:CG	17:AR:258:THR:HB	2.20	0.60
17:AR:144:LEU:N	17:AR:144:LEU:HD12	2.16	0.60
17:AR:30:PRO:HB2	17:AR:32:LEU:HD11	1.82	0.60
17:AR:222:LEU:HD23	17:AR:223:TRP:N	2.16	0.60
17:AR:223:TRP:CZ3	17:AR:230:ALA:HB2	2.37	0.60
17:AR:156:VAL:HB	17:AR:167:VAL:HG21	1.80	0.60
1:AA:701:U:H2'	40:BP:176:ALA:O	2.02	0.60
1:AA:1200:A:C2	13:AN:16:LYS:CB	2.84	0.60
17:AR:262:VAL:CG2	17:AR:271:VAL:HG12	2.31	0.60
17:AR:164:ASP:H	17:AR:167:VAL:C	2.05	0.59
17:AR:266:ASP:CB	17:AR:267:PRO:HD3	2.26	0.59
37:BM:111:PRO:HB3	37:BM:163:ALA:O	2.01	0.59
1:AA:1501:A:C8	1:AA:1546:G:C4	2.90	0.59
17:AR:41:THR:HG22	17:AR:42:LEU:N	2.17	0.59
17:AR:193:ILE:H	17:AR:193:ILE:CD1	2.12	0.59
1:AA:1579:C:H3'	8:AI:131:GLY:H	1.67	0.59
12:AM:110:ARG:CZ	34:BJ:116:TYR:CD2	2.86	0.59
17:AR:264:SER:HB3	17:AR:267:PRO:HD2	1.83	0.59
1:AA:1778:G:O5'	53:B5:2274:U:C5'	2.47	0.59
17:AR:11:GLY:O	17:AR:312:VAL:HG22	2.01	0.59
17:AR:33:LEU:HD23	17:AR:33:LEU:N	2.17	0.59
1:AA:699:U:C5'	40:BP:166:ALA:HA	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:703:G:OP2	40:BP:176:ALA:HB1	2.01	0.59
1:AA:1521:G:H21	18:AT:78:LYS:NZ	2.00	0.59
37:BM:111:PRO:CG	37:BM:163:ALA:HA	2.33	0.59
1:AA:864:U:H5"	1:AA:865:A:H5'	1.85	0.59
1:AA:995:U:OP1	53:B5:2197:C:OP2	2.21	0.59
17:AR:42:LEU:HD13	17:AR:43:ILE:H	1.68	0.59
17:AR:201:THR:O	17:AR:202:LEU:HD23	2.02	0.59
53:B5:1018:G:H1	53:B5:1034:U:H3	1.51	0.59
17:AR:199:ILE:HD11	17:AR:202:LEU:CD2	2.32	0.59
17:AR:284:ALA:HB3	17:AR:286:GLU:OE1	2.01	0.59
1:AA:971:G:H21	53:B5:846:A:H62	1.43	0.59
1:AA:856:A:C6	7:AH:32:LYS:CA	2.85	0.58
1:AA:1200:A:C6	13:AN:16:LYS:HA	2.37	0.58
1:AA:1573:G:N2	19:A7:42:G:P	2.57	0.58
1:AA:1574:A:C5	19:A7:41:U:H4'	2.23	0.58
1:AA:1775:G:H5"	53:B5:2193:U:OP1	2.03	0.58
1:AA:1746:G:P	53:B5:2303:A:H3'	2.43	0.58
1:AA:1777:U:P	53:B5:2194:G:C4'	2.82	0.58
1:AA:1502:G:N9	1:AA:1547:C:N3	2.51	0.58
1:AA:1637:C:C2'	1:AA:1638:C:O5'	2.49	0.58
1:AA:1744:A:C2	53:B5:2302:G:H8	2.21	0.58
17:AR:72:THR:HG22	17:AR:73:LEU:N	2.18	0.58
17:AR:197:SER:HB2	17:AR:216:LYS:HB3	1.83	0.58
37:BM:148:LYS:HB2	37:BM:149:ALA:HB3	1.85	0.58
17:AR:42:LEU:HD21	17:AR:71:CYS:CB	2.34	0.58
1:AA:972:A:P	53:B5:848:A:H2	2.27	0.58
1:AA:1637:C:H2'	1:AA:1638:C:O5'	2.04	0.58
17:AR:106:HIS:CE1	17:AR:132:LYS:HD2	2.39	0.58
17:AR:21:THR:HG22	17:AR:36:ALA:C	2.23	0.58
17:AR:114:ASP:OD1	17:AR:154:VAL:HG23	2.03	0.58
17:AR:224:ASN:ND2	17:AR:227:ALA:HB3	2.19	0.58
1:AA:698:U:N3	40:BP:164:ALA:O	2.35	0.57
17:AR:33:LEU:HD21	17:AR:45:TRP:HB2	1.86	0.57
1:AA:1573:G:N2	19:A7:41:U:O5'	2.37	0.57
17:AR:135:THR:HG23	17:AR:137:LYS:N	2.18	0.57
17:AR:283:LYS:HG2	17:AR:289:ALA:H	1.69	0.57
1:AA:1390:C:P	17:AR:281:TYR:HH	2.28	0.57
17:AR:166:SER:O	17:AR:167:VAL:HG13	2.05	0.57
17:AR:169:ILE:HD11	17:AR:181:TRP:CD1	2.40	0.57
1:AA:1501:A:N6	1:AA:1546:G:H8	1.97	0.57
17:AR:301:LEU:HB3	17:AR:313:TRP:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:702:G:C4	40:BP:176:ALA:HB3	2.32	0.57
17:AR:22:SER:HA	17:AR:291:SER:OG	2.04	0.57
17:AR:164:ASP:H	17:AR:167:VAL:CA	2.17	0.57
17:AR:283:LYS:HE2	17:AR:289:ALA:O	2.04	0.57
27:BC:99:LEU:HD21	27:BC:159:ARG:HH22	1.68	0.57
1:AA:702:G:C4	40:BP:176:ALA:CB	2.88	0.57
1:AA:1521:G:O5'	1:AA:1522:A:OP2	2.23	0.57
17:AR:21:THR:HG22	17:AR:36:ALA:O	2.05	0.57
17:AR:262:VAL:HG23	17:AR:271:VAL:CG1	2.34	0.57
17:AR:34:LEU:HD11	17:AR:71:CYS:SG	2.45	0.57
37:BM:148:LYS:HB2	37:BM:149:ALA:HB2	1.84	0.57
37:BM:150:ALA:O	37:BM:154:ALA:CB	2.53	0.57
1:AA:701:U:O2	40:BP:171:ALA:O	2.22	0.57
17:AR:286:GLU:CG	17:AR:305:TYR:CD2	2.87	0.57
17:AR:31:ASN:HA	17:AR:47:LEU:HD12	1.87	0.56
1:AA:1756:U:C2'	53:B5:2263:C:P	2.94	0.56
17:AR:106:HIS:HA	17:AR:132:LYS:HE3	1.87	0.56
1:AA:799:A:H5'	40:BP:165:ALA:N	2.20	0.56
17:AR:10:ARG:HB3	17:AR:312:VAL:HG23	1.88	0.56
17:AR:34:LEU:HD23	17:AR:35:SER:N	2.20	0.56
17:AR:83:ALA:CB	17:AR:113:VAL:HG13	2.25	0.56
17:AR:156:VAL:HB	17:AR:167:VAL:HG23	1.85	0.56
17:AR:141:LEU:HD12	17:AR:141:LEU:N	2.21	0.56
1:AA:972:A:C4'	53:B5:847:A:H2	2.18	0.56
17:AR:224:ASN:CG	17:AR:227:ALA:HB3	2.26	0.56
20:B0:38:ILE:HG23	20:B0:39:ASP:H	1.69	0.56
17:AR:163:ASP:HA	17:AR:167:VAL:HA	1.87	0.56
17:AR:284:ALA:HB3	17:AR:289:ALA:HB2	1.86	0.56
1:AA:858:G:O4'	1:AA:858:G:OP2	2.24	0.56
17:AR:237:GLN:O	17:AR:237:GLN:HG2	2.06	0.56
1:AA:1777:U:H5"	53:B5:2194:G:O2'	2.05	0.56
1:AA:1756:U:H4'	53:B5:2262:A:C5	2.41	0.56
1:AA:1776:G:C3'	53:B5:2194:G:C5'	2.82	0.56
17:AR:259:GLY:HA2	17:AR:283:LYS:C	2.25	0.56
26:BB:50:HIS:H	53:B5:1796:G:H5"	1.71	0.56
1:AA:867:G:H5"	1:AA:868:G:OP2	2.06	0.56
1:AA:1777:U:C5'	53:B5:2194:G:O2'	2.54	0.56
17:AR:275:ARG:HB3	17:AR:276:PRO:CD	2.35	0.56
17:AR:305:TYR:HB2	17:AR:309:VAL:O	2.06	0.56
37:BM:106:GLU:OE1	37:BM:153:ALA:O	2.24	0.56
1:AA:1461:C:P	19:A7:30:G:C1'	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1518:U:H5"	1:AA:1519:G:OP2	2.06	0.55
14:AO:149:LEU:HD12	53:B5:846:A:O3'	2.04	0.55
17:AR:179:LYS:HD3	17:AR:181:TRP:CZ2	2.41	0.55
17:AR:9:LEU:CD2	17:AR:311:ARG:HB3	2.36	0.55
17:AR:34:LEU:HD12	17:AR:73:LEU:CD2	2.35	0.55
1:AA:1631:A:OP1	1:AA:1636:G:O2'	2.13	0.55
7:AH:32:LYS:C	7:AH:33:VAL:N	2.59	0.55
17:AR:302:PHE:CD2	17:AR:312:VAL:HG12	2.42	0.55
1:AA:858:G:C4	7:AH:61:ILE:CG1	2.88	0.55
6:AG:72:HIS:CD2	6:AG:89:ILE:H	2.24	0.55
1:AA:972:A:H5"	53:B5:848:A:N3	2.14	0.55
17:AR:169:ILE:C	17:AR:169:ILE:HD12	2.27	0.55
17:AR:276:PRO:HB2	17:AR:278:PHE:CD1	2.40	0.55
18:AT:28:LEU:HD21	18:AT:111:ILE:HD11	1.88	0.55
17:AR:34:LEU:HD23	17:AR:34:LEU:C	2.27	0.55
1:AA:1734:G:H21	53:B5:1934:G:C4'	2.06	0.55
17:AR:210:LEU:HD12	17:AR:222:LEU:CD2	2.26	0.55
17:AR:283:LYS:CG	17:AR:284:ALA:H	2.19	0.55
1:AA:1756:U:H1'	53:B5:2262:A:O2'	2.05	0.55
17:AR:264:SER:CB	17:AR:267:PRO:HD2	2.37	0.55
23:B8:43:LYS:HB2	35:BK:121:PHE:CE1	2.41	0.55
1:AA:699:U:C2'	40:BP:169:ALA:C	2.72	0.55
17:AR:19:TRP:CG	17:AR:38:ARG:HD2	2.42	0.55
17:AR:315:VAL:HG12	17:AR:316:MET:N	2.22	0.55
17:AR:199:ILE:HD13	17:AR:199:ILE:C	2.28	0.54
1:AA:1521:G:N2	18:AT:78:LYS:HZ3	2.03	0.54
17:AR:250:TYR:O	17:AR:265:LEU:HG	2.06	0.54
17:AR:222:LEU:HD23	17:AR:222:LEU:C	2.27	0.54
19:A7:56:C:N4	53:B5:2484:A:N3	2.55	0.54
37:BM:155:ALA:O	37:BM:157:ALA:N	2.41	0.54
1:AA:1756:U:C5'	53:B5:2262:A:C6	2.88	0.54
17:AR:31:ASN:C	17:AR:32:LEU:HD13	2.28	0.54
17:AR:150:TRP:HB2	17:AR:174:ASN:ND2	2.22	0.54
1:AA:702:G:C5	40:BP:172:ALA:HA	2.23	0.54
1:AA:1501:A:C8	1:AA:1546:G:N3	2.76	0.54
1:AA:1521:G:C8	18:AT:79:LEU:N	2.75	0.54
17:AR:21:THR:HG23	17:AR:36:ALA:HB3	1.90	0.54
37:BM:111:PRO:CB	37:BM:163:ALA:C	2.68	0.54
17:AR:188:ILE:HG23	17:AR:188:ILE:O	2.07	0.54
1:AA:1200:A:C2	13:AN:16:LYS:HB2	2.42	0.54
1:AA:1735:G:C5'	53:B5:1933:A:O2'	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:276:PRO:HA	17:AR:285:ALA:CA	2.38	0.54
1:AA:799:A:O3'	40:BP:164:ALA:HB2	2.08	0.54
17:AR:262:VAL:HG23	17:AR:272:ASP:N	2.23	0.54
17:AR:199:ILE:HG23	17:AR:199:ILE:O	2.08	0.53
17:AR:248:ASN:ND2	17:AR:249:ARG:HG2	2.22	0.53
1:AA:858:G:C3'	7:AH:27:ILE:HB	2.38	0.53
1:AA:864:U:C5'	1:AA:865:A:H5'	2.37	0.53
1:AA:701:U:O2	40:BP:171:ALA:C	2.45	0.53
17:AR:13:LEU:HB2	17:AR:310:ILE:HB	1.89	0.53
1:AA:1664:U:H1'	53:B5:1934:G:O2'	2.09	0.53
17:AR:270:LEU:N	17:AR:270:LEU:HD12	2.24	0.53
1:AA:1521:G:H21	18:AT:78:LYS:HZ3	1.56	0.53
37:BM:111:PRO:CG	37:BM:163:ALA:CB	2.87	0.53
1:AA:701:U:C4'	40:BP:173:ALA:HB1	2.05	0.53
17:AR:263:PHE:HE1	17:AR:270:LEU:CD1	2.22	0.53
17:AR:136:ILE:HG23	17:AR:137:LYS:N	2.23	0.53
17:AR:193:ILE:O	17:AR:223:TRP:HH2	1.91	0.53
17:AR:220:ILE:HB	17:AR:234:LEU:HB2	1.90	0.53
17:AR:170:ILE:HG22	17:AR:171:SER:N	2.24	0.53
19:A7:19:G:N1	53:B5:2454:G:C6	2.69	0.53
1:AA:1339:C:H5'	17:AR:102:ARG:HH21	1.68	0.53
1:AA:1574:A:H2'	19:A7:40:5MC:HO2'	1.68	0.53
17:AR:98:GLU:HG2	17:AR:99:THR:N	2.24	0.53
17:AR:164:ASP:H	17:AR:167:VAL:HA	1.74	0.53
17:AR:178:VAL:HG13	17:AR:202:LEU:HD11	1.91	0.53
17:AR:276:PRO:HB3	17:AR:286:GLU:N	2.23	0.53
21:B1:40:LYS:H	53:B5:355:A:H4'	1.74	0.53
17:AR:284:ALA:C	17:AR:286:GLU:H	2.13	0.52
1:AA:858:G:C2	7:AH:61:ILE:CA	2.92	0.52
1:AA:1744:A:N3	53:B5:2302:G:C8	2.77	0.52
19:A7:56:C:N4	53:B5:2484:A:C2	2.77	0.52
17:AR:172:ALA:HB1	17:AR:199:ILE:CD1	2.40	0.52
40:BP:134:HIS:CG	40:BP:135:LYS:H	2.27	0.52
1:AA:1735:G:H4'	53:B5:1933:A:C2'	2.33	0.52
1:AA:1755:G:C2'	53:B5:2262:A:C2	2.70	0.52
17:AR:170:ILE:HG12	17:AR:211:ILE:HD13	1.90	0.52
17:AR:287:PRO:HG2	17:AR:306:THR:OG1	2.09	0.52
17:AR:85:TRP:HB3	17:AR:109:ASP:OD1	2.10	0.52
17:AR:263:PHE:HE1	17:AR:270:LEU:HD11	1.75	0.52
1:AA:1120:C:O2'	53:B5:2190:U:H4'	2.09	0.52
1:AA:1502:G:N1	1:AA:1547:C:N4	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:A7:59:U:C5	19:A7:60:C:C4	2.98	0.52
26:BB:5:ILE:HD13	26:BB:5:ILE:H	1.75	0.52
1:AA:722:G:H22	1:AA:732:G:H1	1.58	0.52
17:AR:74:THR:HG23	17:AR:77:GLY:H	1.75	0.52
17:AR:270:LEU:HD12	17:AR:270:LEU:H	1.75	0.52
17:AR:256:THR:OG1	17:AR:258:THR:HG22	2.10	0.52
19:A7:56:C:O4'	53:B5:2484:A:H4'	2.10	0.52
1:AA:1460:G:H5'	19:A7:29:A:O2'	2.10	0.52
17:AR:9:LEU:C	17:AR:9:LEU:HD13	2.29	0.52
17:AR:69:GLN:HG2	17:AR:85:TRP:CD1	2.45	0.52
17:AR:149:ASP:HB3	17:AR:174:ASN:HB2	1.92	0.52
1:AA:1657:A:C5'	42:BR:67:PRO:HD2	2.28	0.51
17:AR:285:ALA:CB	17:AR:313:TRP:CH2	2.93	0.51
1:AA:1777:U:OP1	53:B5:2194:G:O2'	2.22	0.51
17:AR:118:LYS:HD2	17:AR:118:LYS:N	2.25	0.51
17:AR:283:LYS:HD3	17:AR:288:HIS:CD2	2.44	0.51
1:AA:922:A:H5"	26:BB:109:GLU:OE1	2.06	0.51
17:AR:19:TRP:HE1	17:AR:290:VAL:HG21	1.76	0.51
17:AR:93:ASP:O	17:AR:96:THR:HG22	2.10	0.51
17:AR:26:SER:HB3	17:AR:30:PRO:HD2	1.92	0.51
17:AR:66:HIS:ND1	17:AR:67:ILE:HD13	2.25	0.51
37:BM:168:ALA:O	37:BM:172:ALA:CB	2.58	0.51
1:AA:1521:G:C6	18:AT:79:LEU:N	2.76	0.51
1:AA:1744:A:N3	53:B5:2302:G:H8	2.08	0.51
17:AR:89:LEU:HB2	17:AR:103:PHE:HB2	1.93	0.51
1:AA:1636:G:H2'	1:AA:1637:C:O4'	2.11	0.51
17:AR:30:PRO:HB2	17:AR:32:LEU:CD1	2.41	0.51
17:AR:292:LEU:HD23	17:AR:292:LEU:O	2.11	0.51
1:AA:699:U:C2	40:BP:168:ALA:N	2.79	0.50
1:AA:799:A:H4'	40:BP:164:ALA:H	1.76	0.50
1:AA:857:U:C2'	1:AA:858:G:O5'	2.59	0.50
1:AA:1501:A:N7	1:AA:1546:G:N9	2.59	0.50
17:AR:157:VAL:O	17:AR:167:VAL:HG21	2.11	0.50
23:B8:43:LYS:HG2	35:BK:121:PHE:CE1	2.45	0.50
15:AQ:131:ILE:HD13	15:AQ:131:ILE:H	1.74	0.50
17:AR:173:GLY:N	17:AR:199:ILE:HG23	2.26	0.50
17:AR:276:PRO:HA	17:AR:285:ALA:HA	1.93	0.50
17:AR:305:TYR:HD2	17:AR:311:ARG:HH21	1.56	0.50
1:AA:1460:G:C4'	19:A7:30:G:C5'	2.84	0.50
17:AR:290:VAL:O	17:AR:290:VAL:HG13	2.06	0.50
17:AR:81:LEU:HD21	17:AR:122:ILE:CG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:114:ASP:OD2	17:AR:156:VAL:HG13	2.11	0.50
1:AA:972:A:C1'	53:B5:847:A:C2	2.87	0.50
1:AA:1776:G:OP1	53:B5:2193:U:C4'	2.53	0.50
17:AR:19:TRP:CZ3	17:AR:306:THR:CG2	2.95	0.50
17:AR:99:THR:O	17:AR:99:THR:HG23	2.11	0.50
17:AR:176:LYS:HD3	17:AR:195:HIS:O	2.11	0.50
17:AR:285:ALA:HB3	17:AR:313:TRP:CH2	2.47	0.50
17:AR:314:GLN:HG2	17:AR:315:VAL:H	1.76	0.50
1:AA:971:G:N2	53:B5:846:A:H61	2.05	0.50
17:AR:7:LEU:HD12	17:AR:7:LEU:N	2.27	0.50
17:AR:89:LEU:HD21	17:AR:124:SER:CB	2.34	0.50
17:AR:169:ILE:CD1	17:AR:181:TRP:CD1	2.95	0.50
17:AR:305:TYR:N	17:AR:305:TYR:CD1	2.80	0.50
33:BI:121:LYS:H	33:BI:121:LYS:HD2	1.76	0.50
37:BM:147:TRP:HZ2	37:BM:153:ALA:HB1	1.73	0.50
17:AR:96:THR:CG2	17:AR:98:GLU:H	2.20	0.50
1:AA:701:U:C5'	40:BP:173:ALA:HB1	2.41	0.49
17:AR:256:THR:C	17:AR:283:LYS:HE3	2.32	0.49
17:AR:81:LEU:HD21	17:AR:122:ILE:HG21	1.93	0.49
17:AR:115:ILE:HG22	17:AR:119:ALA:HA	1.93	0.49
17:AR:164:ASP:HB3	17:AR:182:ASN:C	2.31	0.49
1:AA:699:U:C6	40:BP:165:ALA:O	2.66	0.49
1:AA:1744:A:C2	53:B5:2302:G:C5'	2.77	0.49
17:AR:44:SER:OG	17:AR:58:VAL:HG23	2.11	0.49
17:AR:277:GLU:O	17:AR:278:PHE:HB3	2.12	0.49
1:AA:1338:A:O3'	17:AR:102:ARG:NH2	2.44	0.49
17:AR:13:LEU:HD23	17:AR:310:ILE:CG2	2.43	0.49
1:AA:1665:A:OP1	53:B5:1936:A:O5'	2.28	0.49
17:AR:263:PHE:CE1	17:AR:270:LEU:CD1	2.95	0.49
1:AA:700:C:C5	40:BP:173:ALA:HB3	2.47	0.49
17:AR:69:GLN:CG	17:AR:85:TRP:HE1	2.26	0.49
17:AR:29:GLN:OE1	17:AR:297:ASP:HB3	2.12	0.49
17:AR:131:ILE:HD11	17:AR:151:VAL:HG11	1.94	0.49
17:AR:185:GLN:O	17:AR:186:PHE:HB2	2.12	0.49
53:B5:512:U:H3	53:B5:579:G:H1	1.61	0.49
1:AA:972:A:O4'	53:B5:847:A:N1	2.43	0.49
17:AR:52:GLN:HA	17:AR:52:GLN:NE2	2.20	0.49
17:AR:159:ASN:O	17:AR:167:VAL:HG12	2.13	0.49
17:AR:187:GLN:OE1	17:AR:187:GLN:HA	2.13	0.49
17:AR:8:VAL:HG12	17:AR:9:LEU:H	1.77	0.49
17:AR:34:LEU:CD2	17:AR:71:CYS:HB3	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:123:ILE:HG22	17:AR:133:VAL:HA	1.95	0.49
17:AR:131:ILE:HD13	17:AR:151:VAL:HG11	1.95	0.49
17:AR:258:THR:HG23	17:AR:261:LYS:HE2	1.90	0.49
17:AR:286:GLU:CA	17:AR:305:TYR:CD2	2.93	0.49
17:AR:9:LEU:HD13	17:AR:11:GLY:N	2.27	0.49
37:BM:147:TRP:CZ2	37:BM:153:ALA:HB2	2.48	0.49
16:AS:69:GLU:HG3	16:AS:70:ASN:H	1.78	0.48
17:AR:29:GLN:O	17:AR:29:GLN:HG2	2.13	0.48
17:AR:286:GLU:OE2	17:AR:289:ALA:HB2	2.12	0.48
17:AR:123:ILE:HD13	17:AR:169:ILE:HG21	1.95	0.48
17:AR:178:VAL:HG13	17:AR:202:LEU:CD1	2.43	0.48
1:AA:1460:G:O3'	19:A7:30:G:C1'	2.60	0.48
1:AA:1520:U:C2'	1:AA:1521:G:OP1	2.58	0.48
1:AA:1552:U:OP1	13:AN:14:PHE:CG	2.67	0.48
17:AR:54:PHE:CD1	17:AR:312:VAL:HG21	2.49	0.48
17:AR:87:LYS:HD3	17:AR:107:LYS:O	2.13	0.48
17:AR:33:LEU:HD13	17:AR:302:PHE:CD2	2.48	0.48
32:BH:40:HIS:CG	32:BH:41:ILE:N	2.78	0.48
1:AA:698:U:C4	40:BP:164:ALA:O	2.67	0.48
17:AR:183:LEU:N	17:AR:183:LEU:HD22	2.28	0.48
14:AO:149:LEU:HB2	53:B5:847:A:OP1	2.14	0.48
17:AR:41:THR:HG22	17:AR:42:LEU:O	2.13	0.48
17:AR:154:VAL:HG23	17:AR:154:VAL:O	2.12	0.48
17:AR:169:ILE:HG23	17:AR:183:LEU:CD2	2.43	0.48
17:AR:218:GLY:O	17:AR:236:ALA:HB3	2.14	0.48
17:AR:309:VAL:HG12	17:AR:310:ILE:N	2.29	0.48
1:AA:1779:A:H2'	1:AA:1780:A:C8	2.49	0.48
17:AR:100:TYR:CE2	17:AR:101:GLN:HG3	2.49	0.48
17:AR:286:GLU:HG2	17:AR:288:HIS:C	2.34	0.48
1:AA:698:U:C6	1:AA:799:A:OP2	2.67	0.47
1:AA:1520:U:O4'	1:AA:1522:A:N7	2.47	0.47
1:AA:1756:U:H4'	53:B5:2263:C:C1'	2.44	0.47
1:AA:1775:G:C4'	53:B5:2193:U:OP1	2.62	0.47
17:AR:83:ALA:HB2	17:AR:113:VAL:HG11	1.93	0.47
17:AR:109:ASP:HB2	17:AR:127:ARG:HD2	1.95	0.47
22:B2:104:LEU:HD13	22:B2:104:LEU:H	1.79	0.47
1:AA:858:G:N1	7:AH:61:ILE:CA	2.77	0.47
17:AR:146:GLY:C	17:AR:179:LYS:HE2	2.33	0.47
19:A7:62:A:H2'	19:A7:63:C:C6	2.50	0.47
1:AA:1200:A:C6	13:AN:15:GLY:HA2	2.48	0.47
17:AR:210:LEU:CD1	17:AR:222:LEU:HD21	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:702:G:C8	40:BP:172:ALA:HA	2.42	0.47
17:AR:81:LEU:HD13	17:AR:91:LEU:CD2	2.45	0.47
17:AR:221:MET:SD	17:AR:223:TRP:CZ2	3.07	0.47
1:AA:629:U:H5'	53:B5:846:A:C1'	2.44	0.47
17:AR:48:THR:HG22	17:AR:50:ASP:CG	2.35	0.47
1:AA:698:U:C6	40:BP:165:ALA:O	2.61	0.47
1:AA:856:A:C4	7:AH:33:VAL:CA	2.96	0.47
1:AA:1582:G:H21	8:AI:134:ALA:HB1	1.79	0.47
17:AR:10:ARG:NE	17:AR:54:PHE:HE1	2.13	0.47
17:AR:11:GLY:H	17:AR:312:VAL:HG23	1.79	0.47
17:AR:165:ASP:CB	17:AR:183:LEU:CB	2.93	0.47
17:AR:222:LEU:HD13	17:AR:232:TYR:CZ	2.49	0.47
17:AR:276:PRO:HB3	17:AR:286:GLU:O	2.15	0.47
37:BM:148:LYS:HB3	37:BM:149:ALA:H	1.28	0.47
37:BM:151:ALA:O	37:BM:155:ALA:N	2.46	0.47
17:AR:13:LEU:HD13	17:AR:54:PHE:HB3	1.94	0.47
17:AR:227:ALA:O	17:AR:228:LYS:HG3	2.15	0.47
1:AA:1120:C:O2'	53:B5:2190:U:C5'	2.62	0.47
1:AA:1520:U:C3'	1:AA:1520:U:C6	2.97	0.47
17:AR:34:LEU:HD21	17:AR:71:CYS:CB	2.45	0.47
17:AR:66:HIS:CE1	17:AR:85:TRP:CE3	3.03	0.47
28:BD:148:ILE:HD13	28:BD:148:ILE:H	1.79	0.47
17:AR:67:ILE:N	17:AR:67:ILE:HD12	2.30	0.46
17:AR:278:PHE:CD2	17:AR:279:ALA:N	2.83	0.46
17:AR:278:PHE:HZ	17:AR:287:PRO:CA	2.27	0.46
8:AI:42:GLU:HB3	8:AI:74:HIS:CE1	2.49	0.46
1:AA:1778:G:O5'	53:B5:2274:U:H5"	2.14	0.46
17:AR:164:ASP:OD2	17:AR:182:ASN:HA	2.15	0.46
17:AR:185:GLN:HB3	17:AR:187:GLN:HG2	1.96	0.46
17:AR:262:VAL:HG23	17:AR:262:VAL:O	2.16	0.46
17:AR:281:TYR:H	17:AR:281:TYR:HD1	1.61	0.46
17:AR:283:LYS:CD	17:AR:288:HIS:CA	2.81	0.46
17:AR:87:LYS:HA	17:AR:110:VAL:HG23	1.97	0.46
17:AR:93:ASP:HB3	17:AR:96:THR:HG21	1.95	0.46
19:A7:37:YYG:H31	19:A7:37:YYG:H1'	1.95	0.46
1:AA:1200:A:C2	1:AA:1200:A:C4	3.03	0.46
17:AR:283:LYS:CD	17:AR:288:HIS:CD2	2.98	0.46
17:AR:283:LYS:HB3	17:AR:288:HIS:CA	2.43	0.46
1:AA:1521:G:H22	18:AT:78:LYS:HG3	1.76	0.46
1:AA:1746:G:OP2	53:B5:2303:A:H3'	2.16	0.46
17:AR:19:TRP:HB3	17:AR:38:ARG:CD	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:274:LEU:HD13	17:AR:313:TRP:CE3	2.50	0.46
17:AR:285:ALA:CB	17:AR:313:TRP:CZ2	2.95	0.46
1:AA:866:G:OP1	1:AA:866:G:H8	1.98	0.46
12:AM:110:ARG:CD	34:BJ:116:TYR:HD1	2.23	0.46
19:A7:72:C:H5"	53:B5:2234:G:O6	2.16	0.46
24:B9:51:ALA:HB3	24:B9:54:ILE:HB	1.97	0.46
1:AA:702:G:C8	40:BP:172:ALA:O	2.69	0.46
1:AA:1547:C:H6	1:AA:1547:C:H2'	1.60	0.46
1:AA:1744:A:H3'	53:B5:2303:A:OP1	2.16	0.46
17:AR:48:THR:HG22	17:AR:50:ASP:H	1.81	0.46
17:AR:96:THR:HG23	17:AR:97:GLY:N	2.30	0.46
17:AR:157:VAL:HG12	17:AR:167:VAL:HB	1.97	0.46
17:AR:218:GLY:HA2	17:AR:238:ASP:O	2.16	0.46
19:A7:1:G:C6	19:A7:73:A:C2	3.04	0.46
1:AA:1521:G:HO2'	18:AT:83:ALA:HA	1.70	0.46
17:AR:10:ARG:HE	17:AR:54:PHE:HE1	1.60	0.46
1:AA:506:A:H3'	1:AA:507:U:C5'	2.46	0.46
1:AA:858:G:H1'	7:AH:34:ILE:HG21	1.97	0.46
1:AA:1460:G:H4'	19:A7:29:A:O2'	2.16	0.46
17:AR:134:TRP:CA	17:AR:141:LEU:HD13	2.46	0.46
17:AR:153:GLN:HG3	17:AR:154:VAL:N	2.31	0.46
1:AA:700:C:OP2	40:BP:169:ALA:HB1	2.15	0.45
1:AA:858:G:O3'	7:AH:29:PRO:HD2	2.17	0.45
17:AR:108:SER:OG	17:AR:127:ARG:HB2	2.16	0.45
1:AA:701:U:O2'	40:BP:176:ALA:O	2.34	0.45
1:AA:1121:A:C1'	53:B5:2191:U:OP1	2.64	0.45
15:AQ:82:ARG:HB3	15:AQ:110:HIS:CE1	2.51	0.45
17:AR:69:GLN:CG	17:AR:85:TRP:NE1	2.80	0.45
17:AR:156:VAL:HG12	17:AR:169:ILE:HG22	1.97	0.45
17:AR:276:PRO:CA	17:AR:285:ALA:CA	2.94	0.45
17:AR:276:PRO:HG3	17:AR:282:SER:HA	1.97	0.45
17:AR:286:GLU:HG3	17:AR:305:TYR:HA	1.97	0.45
23:B8:43:LYS:CB	35:BK:121:PHE:CD1	2.93	0.45
1:AA:1756:U:O2'	53:B5:2262:A:H3'	2.17	0.45
12:AM:119:ILE:HG22	16:AS:106:GLU:H	1.81	0.45
1:AA:701:U:C4	40:BP:169:ALA:C	2.71	0.45
12:AM:120:ARG:HD3	16:AS:103:ASN:H	1.80	0.45
17:AR:283:LYS:CG	17:AR:284:ALA:N	2.78	0.45
37:BM:155:ALA:O	37:BM:156:ALA:C	2.54	0.45
17:AR:284:ALA:CB	17:AR:289:ALA:HB2	2.46	0.45
46:BV:113:GLY:HA3	53:B5:716:G:C4	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:856:A:C6	7:AH:32:LYS:N	2.85	0.45
1:AA:1630:C:H5'	1:AA:1636:G:H22	1.82	0.45
17:AR:10:ARG:CG	17:AR:54:PHE:CE1	2.97	0.45
17:AR:31:ASN:HB3	17:AR:47:LEU:HB2	1.99	0.45
53:B5:1003:A:H61	53:B5:1046:A:H61	1.64	0.45
1:AA:1200:A:N3	13:AN:16:LYS:CB	2.79	0.45
1:AA:1584:A:C8	8:AI:127:LYS:HB2	2.52	0.45
17:AR:169:ILE:HD12	17:AR:169:ILE:O	2.17	0.45
17:AR:262:VAL:CG2	17:AR:271:VAL:CG1	2.94	0.45
26:BB:30:ARG:HG2	26:BB:31:THR:H	1.81	0.45
37:BM:37:ARG:NH2	37:BM:157:ALA:HA	2.32	0.45
17:AR:164:ASP:N	17:AR:167:VAL:HA	2.32	0.45
26:BB:77:ILE:HD11	26:BB:169:ILE:HD11	1.98	0.45
37:BM:111:PRO:CB	37:BM:163:ALA:O	2.65	0.45
1:AA:856:A:C2	7:AH:33:VAL:HB	2.52	0.45
1:AA:856:A:N3	7:AH:33:VAL:CA	2.79	0.45
1:AA:1521:G:H21	18:AT:78:LYS:HD2	1.69	0.45
3:AC:164:VAL:HG13	3:AC:165:ASN:H	1.82	0.44
17:AR:34:LEU:CD1	17:AR:80:ALA:HB2	2.47	0.44
17:AR:34:LEU:CD1	17:AR:73:LEU:CD2	2.95	0.44
1:AA:1777:U:OP1	53:B5:2194:G:C2'	2.65	0.44
17:AR:106:HIS:ND1	17:AR:126:SER:HB2	2.32	0.44
1:AA:972:A:H4'	53:B5:847:A:C2	2.52	0.44
17:AR:123:ILE:HA	17:AR:132:LYS:O	2.18	0.44
19:A7:73:A:OP1	53:B5:2603:G:OP1	2.36	0.44
30:BF:118:LYS:H	30:BF:118:LYS:HD3	1.82	0.44
1:AA:1756:U:C3'	53:B5:2263:C:C1'	2.89	0.44
17:AR:91:LEU:HG	17:AR:103:PHE:CE1	2.52	0.44
17:AR:133:VAL:CG1	17:AR:141:LEU:HB2	2.40	0.44
17:AR:259:GLY:HA2	17:AR:283:LYS:O	2.18	0.44
17:AR:278:PHE:CE2	17:AR:280:GLY:N	2.85	0.44
18:AT:22:LEU:HD12	18:AT:55:TYR:HA	2.00	0.44
35:BK:121:PHE:CD2	35:BK:121:PHE:CB	2.86	0.44
17:AR:172:ALA:HB1	17:AR:199:ILE:O	2.18	0.44
17:AR:286:GLU:CD	17:AR:305:TYR:CZ	2.91	0.44
17:AR:8:VAL:CG1	17:AR:9:LEU:N	2.80	0.44
17:AR:68:VAL:HA	17:AR:84:SER:HB3	2.00	0.44
17:AR:115:ILE:HG22	17:AR:116:ASP:N	2.32	0.44
19:A7:70:C:O2'	53:B5:2236:G:H4'	2.18	0.44
32:BH:129:ARG:H	32:BH:157:ASN:HD21	1.66	0.44
37:BM:108:ILE:HG23	37:BM:160:ALA:CA	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1778:G:OP1	53:B5:2274:U:C5'	2.34	0.44
17:AR:34:LEU:CD1	17:AR:80:ALA:CB	2.94	0.44
17:AR:38:ARG:CA	17:AR:67:ILE:HG23	2.22	0.44
17:AR:56:VAL:HB	17:AR:57:PRO:HD2	1.99	0.44
1:AA:1516:C:H6	1:AA:1516:C:O5'	2.01	0.44
17:AR:42:LEU:HD21	17:AR:71:CYS:SG	2.58	0.44
17:AR:91:LEU:HG	17:AR:103:PHE:HE1	1.83	0.44
1:AA:856:A:N3	7:AH:32:LYS:O	2.50	0.43
1:AA:1501:A:C4'	1:AA:1546:G:N2	2.81	0.43
17:AR:54:PHE:CE2	17:AR:302:PHE:CE2	3.06	0.43
1:AA:1776:G:P	53:B5:2193:U:C5'	2.94	0.43
17:AR:68:VAL:HG23	17:AR:84:SER:HB3	2.00	0.43
1:AA:1520:U:H1'	1:AA:1522:A:H62	1.82	0.43
1:AA:1581:A:C8	8:AI:137:ARG:HA	2.54	0.43
17:AR:47:LEU:HD22	17:AR:54:PHE:CE2	2.53	0.43
17:AR:161:LYS:HA	17:AR:161:LYS:HE2	2.00	0.43
17:AR:262:VAL:CG2	17:AR:272:ASP:N	2.81	0.43
27:BC:342:LEU:HD23	27:BC:342:LEU:H	1.83	0.43
17:AR:116:ASP:OD2	17:AR:166:SER:HB2	2.19	0.43
17:AR:193:ILE:HD13	17:AR:193:ILE:N	2.20	0.43
17:AR:196:ASN:OD1	17:AR:217:ASP:HB3	2.19	0.43
37:BM:155:ALA:C	37:BM:157:ALA:N	2.72	0.43
17:AR:41:THR:OG1	17:AR:62:LYS:HG2	2.18	0.43
42:BR:22:ILE:H	53:B5:1899:G:H5"	1.83	0.43
1:AA:699:U:N3	40:BP:171:ALA:N	2.57	0.43
1:AA:857:U:C6	7:AH:33:VAL:O	2.71	0.43
17:AR:48:THR:H	17:AR:55:GLY:HA2	1.84	0.43
17:AR:74:THR:HG23	17:AR:76:ASP:N	2.34	0.43
1:AA:858:G:C4	7:AH:61:ILE:HG12	2.53	0.43
17:AR:13:LEU:CD1	17:AR:55:GLY:N	2.82	0.43
17:AR:285:ALA:CB	17:AR:313:TRP:HH2	2.32	0.43
17:AR:300:THR:HG23	17:AR:313:TRP:O	2.19	0.43
1:AA:700:C:C6	40:BP:173:ALA:CB	2.98	0.43
1:AA:1777:U:OP1	53:B5:2194:G:C4'	2.66	0.43
33:BI:140:THR:HG22	33:BI:141:LYS:H	1.83	0.43
1:AA:1520:U:H4'	1:AA:1522:A:H8	1.75	0.43
17:AR:19:TRP:NE1	17:AR:290:VAL:HG21	2.34	0.43
17:AR:54:PHE:CE2	17:AR:302:PHE:HE2	2.36	0.43
37:BM:106:GLU:OE1	37:BM:156:ALA:CB	2.67	0.43
1:AA:796:A:C2'	1:AA:797:G:O5'	2.67	0.43
1:AA:1734:G:C2	53:B5:1934:G:H4'	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:133:VAL:HG12	17:AR:142:ALA:N	2.33	0.43
17:AR:240:VAL:HG22	17:AR:256:THR:CG2	2.46	0.43
1:AA:1755:G:H2'	53:B5:2262:A:H2	1.77	0.42
12:AM:39:GLY:H	12:AM:42:TYR:HB2	1.85	0.42
17:AR:10:ARG:HG2	17:AR:54:PHE:HE1	1.81	0.42
17:AR:71:CYS:SG	17:AR:80:ALA:HB1	2.59	0.42
17:AR:83:ALA:HB1	17:AR:110:VAL:HG11	1.95	0.42
17:AR:89:LEU:HD12	17:AR:89:LEU:N	2.33	0.42
17:AR:172:ALA:HB2	17:AR:199:ILE:HD12	1.96	0.42
17:AR:185:GLN:NE2	17:AR:187:GLN:HG3	2.34	0.42
17:AR:262:VAL:HG21	17:AR:272:ASP:HB3	2.01	0.42
17:AR:292:LEU:N	17:AR:292:LEU:CD2	2.82	0.42
42:BR:7:GLN:N	53:B5:3016:A:HO2'	2.17	0.42
1:AA:701:U:O5'	40:BP:173:ALA:HB1	2.18	0.42
1:AA:1664:U:O3'	53:B5:1935:G:C2'	2.62	0.42
17:AR:35:SER:CB	17:AR:45:TRP:HE1	2.33	0.42
17:AR:41:THR:CG2	17:AR:42:LEU:N	2.81	0.42
17:AR:134:TRP:C	17:AR:141:LEU:HD13	2.39	0.42
17:AR:263:PHE:CE1	17:AR:270:LEU:CG	2.99	0.42
17:AR:33:LEU:CD2	17:AR:33:LEU:N	2.82	0.42
17:AR:284:ALA:HB3	17:AR:286:GLU:CD	2.39	0.42
1:AA:1461:C:H4'	19:A7:31:A:O5'	2.20	0.42
1:AA:1573:G:N2	19:A7:41:U:C5'	2.39	0.42
17:AR:133:VAL:CG1	17:AR:142:ALA:N	2.82	0.42
23:B8:4:ILE:HG12	23:B8:6:GLU:H	1.84	0.42
53:B5:271:C:C5	53:B5:272:G:H1'	2.55	0.42
17:AR:106:HIS:NE2	17:AR:132:LYS:HD2	2.35	0.42
17:AR:118:LYS:O	17:AR:119:ALA:HB3	2.20	0.42
32:BH:40:HIS:CD2	32:BH:41:ILE:H	2.37	0.42
48:BX:81:ALA:HA	53:B5:17:G:C4	2.54	0.42
17:AR:147:HIS:CD2	17:AR:151:VAL:HG22	2.55	0.42
17:AR:288:HIS:O	17:AR:306:THR:HG23	2.19	0.42
27:BC:32:PHE:CD1	53:B5:3003:G:H4'	2.53	0.42
28:BD:208:VAL:HG11	28:BD:250:TRP:CZ3	2.55	0.42
29:BE:193:GLU:H	29:BE:213:ASP:H	1.68	0.42
53:B5:126:U:H2'	53:B5:127:G:C8	2.55	0.42
1:AA:115:G:H1	1:AA:302:U:H1'	1.85	0.42
17:AR:29:GLN:N	17:AR:30:PRO:CD	2.83	0.42
17:AR:285:ALA:C	17:AR:305:TYR:HE2	2.22	0.42
17:AR:96:THR:CG2	17:AR:97:GLY:N	2.82	0.42
17:AR:164:ASP:C	17:AR:183:LEU:H	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1574:A:C6	19:A7:41:U:H4'	2.54	0.42
17:AR:139:GLN:OE1	17:AR:139:GLN:HA	2.20	0.42
17:AR:33:LEU:HD21	17:AR:45:TRP:CB	2.50	0.42
17:AR:135:THR:N	17:AR:141:LEU:CD1	2.83	0.42
17:AR:165:ASP:CB	17:AR:183:LEU:HB3	2.50	0.42
17:AR:165:ASP:N	17:AR:184:ASN:N	2.68	0.42
17:AR:203:THR:CG2	17:AR:245:PHE:CE1	3.01	0.42
17:AR:260:ILE:HG13	17:AR:284:ALA:HB2	1.98	0.42
17:AR:313:TRP:O	17:AR:314:GLN:HB2	2.20	0.42
1:AA:865:A:H2'	1:AA:866:G:OP2	2.19	0.41
1:AA:1520:U:C5'	1:AA:1521:G:P	3.05	0.41
1:AA:1657:A:H4'	42:BR:67:PRO:CG	2.47	0.41
17:AR:172:ALA:CB	17:AR:199:ILE:CD1	2.94	0.41
1:AA:703:G:H4'	40:BP:176:ALA:HB2	2.02	0.41
17:AR:245:PHE:HE2	17:AR:265:LEU:HD11	1.84	0.41
37:BM:178:ALA:O	37:BM:181:ALA:HB3	2.21	0.41
1:AA:1502:G:O6	1:AA:1547:C:C6	2.72	0.41
1:AA:1520:U:C6	1:AA:1520:U:H3'	2.55	0.41
1:AA:1755:G:H2'	53:B5:2262:A:C2	2.54	0.41
17:AR:135:THR:N	17:AR:141:LEU:HD11	2.34	0.41
17:AR:157:VAL:O	17:AR:157:VAL:HG13	2.20	0.41
17:AR:224:ASN:OD1	17:AR:227:ALA:HB3	2.20	0.41
17:AR:262:VAL:CG2	17:AR:272:ASP:HB3	2.49	0.41
42:BR:48:ARG:HA	53:B5:2338:C:H4'	2.01	0.41
1:AA:1120:C:O2'	53:B5:2190:U:C4'	2.68	0.41
17:AR:79:TYR:HD2	17:AR:92:TRP:O	2.03	0.41
1:AA:1775:G:C5'	53:B5:2193:U:OP1	2.68	0.41
17:AR:13:LEU:N	17:AR:13:LEU:CD2	2.83	0.41
17:AR:243:LEU:HD23	17:AR:254:ALA:HA	2.01	0.41
53:B5:2621:G:C8	53:B5:2622:C:C5	3.09	0.41
1:AA:223:U:H3	1:AA:244:A:H61	1.68	0.41
1:AA:501:U:C6	1:AA:501:U:C1'	2.93	0.41
9:AJ:56:VAL:HG22	9:AJ:57:ARG:N	2.36	0.41
12:AM:92:ILE:H	12:AM:92:ILE:HD13	1.84	0.41
14:AO:149:LEU:HD13	53:B5:847:A:P	2.46	0.41
17:AR:131:ILE:HD12	17:AR:154:VAL:HG11	2.01	0.41
17:AR:233:THR:O	17:AR:234:LEU:HD23	2.21	0.41
17:AR:278:PHE:CZ	17:AR:281:TYR:O	2.73	0.41
17:AR:300:THR:HG22	17:AR:301:LEU:N	2.36	0.41
53:B5:1384:U:H1'	53:B5:1385:C:C2	2.55	0.41
1:AA:628:G:H4'	53:B5:846:A:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:23:HIS:HA	2:AB:48:ILE:HG22	2.03	0.41
17:AR:136:ILE:CG2	17:AR:137:LYS:N	2.83	0.41
17:AR:157:VAL:CG1	17:AR:167:VAL:HB	2.51	0.41
17:AR:256:THR:O	17:AR:283:LYS:CG	2.66	0.41
17:AR:267:PRO:O	17:AR:268:GLN:HB2	2.20	0.41
17:AR:305:TYR:CE2	17:AR:311:ARG:NE	2.85	0.41
17:AR:315:VAL:CG1	17:AR:316:MET:N	2.83	0.41
1:AA:799:A:O3'	40:BP:160:ALA:O	2.39	0.41
1:AA:921:G:O2'	26:BB:141:PRO:HG3	2.20	0.41
4:AD:155:HIS:CG	4:AD:156:ILE:H	2.39	0.41
6:AG:77:TYR:H	6:AG:191:ALA:HB2	1.85	0.41
8:AI:93:HIS:CE1	17:AR:59:ARG:CZ	3.03	0.41
8:AI:97:VAL:HG12	8:AI:98:ASP:N	2.36	0.41
17:AR:170:ILE:N	17:AR:170:ILE:CD1	2.82	0.41
19:A7:21:A:C6	19:A7:48:C:C6	3.09	0.41
1:AA:921:G:O3'	26:BB:140:ASN:ND2	2.54	0.41
1:AA:1573:G:N3	19:A7:41:U:C5'	2.67	0.41
17:AR:72:THR:CG2	17:AR:73:LEU:N	2.82	0.41
17:AR:219:GLU:HG2	17:AR:220:ILE:N	2.36	0.41
17:AR:276:PRO:N	17:AR:284:ALA:O	2.54	0.41
43:BS:49:ILE:H	43:BS:49:ILE:HD12	1.86	0.41
1:AA:1120:C:HO2'	53:B5:2190:U:C4'	2.34	0.41
19:A7:10:2MG:HM23	19:A7:11:C:H1'	2.03	0.41
37:BM:150:ALA:C	37:BM:154:ALA:HB3	2.41	0.41
1:AA:856:A:C2	7:AH:33:VAL:CA	3.04	0.40
1:AA:1430:G:H1'	13:AN:38:ILE:HD11	2.03	0.40
28:BD:55:LYS:HA	28:BD:58:HIS:CD2	2.56	0.40
36:BL:80:THR:HG23	53:B5:2607:G:H22	1.86	0.40
17:AR:13:LEU:HD23	17:AR:310:ILE:HG22	2.03	0.40
17:AR:37:SER:HB3	17:AR:39:ASP:OD1	2.21	0.40
17:AR:61:PHE:HE2	17:AR:97:GLY:HA2	1.73	0.40
17:AR:286:GLU:OE2	17:AR:305:TYR:CE1	2.74	0.40
17:AR:303:ALA:O	17:AR:305:TYR:CE1	2.74	0.40
25:BA:105:LYS:HE2	53:B5:2477:G:C5	2.57	0.40
46:BV:74:LEU:HD13	46:BV:74:LEU:H	1.86	0.40
17:AR:172:ALA:HB1	17:AR:199:ILE:HG23	2.02	0.40
17:AR:183:LEU:HD13	17:AR:183:LEU:HA	1.98	0.40
17:AR:285:ALA:HB2	17:AR:313:TRP:CH2	2.57	0.40
1:AA:701:U:C2	40:BP:171:ALA:C	2.91	0.40
1:AA:1744:A:C5'	53:B5:2291:A:H1'	2.47	0.40
9:AJ:30:LYS:HG3	9:AJ:31:VAL:H	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:62:LYS:HG2	11:AL:63:GLN:H	1.86	0.40
17:AR:34:LEU:CD1	17:AR:73:LEU:HD21	2.48	0.40
17:AR:42:LEU:CD2	17:AR:71:CYS:HB2	2.52	0.40
17:AR:68:VAL:HG21	17:AR:82:SER:HB2	2.04	0.40
17:AR:79:TYR:CD2	17:AR:93:ASP:HA	2.55	0.40
17:AR:133:VAL:HG12	17:AR:142:ALA:H	1.87	0.40
17:AR:199:ILE:CD1	17:AR:202:LEU:CD2	2.97	0.40
17:AR:234:LEU:HD13	17:AR:263:PHE:CD2	2.57	0.40
17:AR:285:ALA:HB2	17:AR:313:TRP:HH2	1.86	0.40
17:AR:286:GLU:CD	17:AR:305:TYR:CE2	2.95	0.40
37:BM:143:THR:HG23	37:BM:144:SER:H	1.86	0.40
1:AA:858:G:H2'	7:AH:28:ARG:N	2.37	0.40
17:AR:106:HIS:CD2	17:AR:132:LYS:HD2	2.56	0.40
17:AR:262:VAL:CG2	17:AR:272:ASP:H	2.30	0.40
23:B8:24:SER:HA	23:B8:115:ALA:H	1.86	0.40
23:B8:84:VAL:HG23	23:B8:110:ARG:HE	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	191/193 (99%)	173 (91%)	16 (8%)	2 (1%)	15 55
3	AC	186/188 (99%)	148 (80%)	28 (15%)	10 (5%)	2 19
4	AD	120/158 (76%)	97 (81%)	16 (13%)	7 (6%)	1 18
5	AE	160/162 (99%)	141 (88%)	13 (8%)	6 (4%)	3 24
6	AG	184/186 (99%)	156 (85%)	20 (11%)	8 (4%)	2 22
7	AH	121/125 (97%)	105 (87%)	11 (9%)	5 (4%)	3 23
8	AI	136/138 (99%)	106 (78%)	21 (15%)	9 (7%)	1 16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	AJ	94/96 (98%)	77 (82%)	14 (15%)	3 (3%)	4 26
10	AK	123/125 (98%)	99 (80%)	20 (16%)	4 (3%)	4 26
11	AL	116/118 (98%)	89 (77%)	25 (22%)	2 (2%)	9 42
12	AM	128/130 (98%)	103 (80%)	20 (16%)	5 (4%)	3 23
13	AN	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	1 12
14	AO	82/84 (98%)	68 (83%)	11 (13%)	3 (4%)	3 24
15	AQ	78/80 (98%)	66 (85%)	11 (14%)	1 (1%)	12 48
16	AS	69/71 (97%)	54 (78%)	12 (17%)	3 (4%)	2 22
17	AR	311/313 (99%)	282 (91%)	28 (9%)	1 (0%)	41 77
18	AT	137/141 (97%)	110 (80%)	21 (15%)	6 (4%)	2 22
20	B0	107/109 (98%)	75 (70%)	20 (19%)	12 (11%)	0 7
21	B1	46/48 (96%)	36 (78%)	9 (20%)	1 (2%)	6 35
22	B2	96/98 (98%)	87 (91%)	7 (7%)	2 (2%)	7 36
23	B8	116/118 (98%)	85 (73%)	25 (22%)	6 (5%)	2 19
24	B9	70/72 (97%)	48 (69%)	16 (23%)	6 (9%)	1 12
25	BA	211/213 (99%)	172 (82%)	30 (14%)	9 (4%)	2 22
26	BB	241/243 (99%)	174 (72%)	53 (22%)	14 (6%)	1 18
27	BC	360/362 (99%)	279 (78%)	68 (19%)	13 (4%)	3 25
28	BD	255/257 (99%)	208 (82%)	41 (16%)	6 (2%)	6 33
29	BE	235/237 (99%)	175 (74%)	47 (20%)	13 (6%)	2 19
30	BF	211/213 (99%)	150 (71%)	55 (26%)	6 (3%)	5 30
31	BG	111/113 (98%)	88 (79%)	20 (18%)	3 (3%)	5 31
32	BH	177/179 (99%)	146 (82%)	25 (14%)	6 (3%)	3 26
33	BI	163/165 (99%)	123 (76%)	31 (19%)	9 (6%)	2 19
34	BJ	149/151 (99%)	112 (75%)	33 (22%)	4 (3%)	5 31
35	BK	136/138 (99%)	107 (79%)	22 (16%)	7 (5%)	2 19
36	BL	190/192 (99%)	156 (82%)	29 (15%)	5 (3%)	5 31
37	BM	176/178 (99%)	134 (76%)	34 (19%)	8 (4%)	2 22
38	BN	148/150 (99%)	122 (82%)	23 (16%)	3 (2%)	7 38
39	BO	119/121 (98%)	92 (77%)	23 (19%)	4 (3%)	3 26
40	BP	174/176 (99%)	155 (89%)	15 (9%)	4 (2%)	6 34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
41	BQ	114/116 (98%)	94 (82%)	16 (14%)	4 (4%)	3 25
42	BR	129/131 (98%)	96 (74%)	28 (22%)	5 (4%)	3 23
43	BS	43/45 (96%)	33 (77%)	10 (23%)	0	100 100
44	BT	78/80 (98%)	59 (76%)	16 (20%)	3 (4%)	3 24
45	BU	114/116 (98%)	95 (83%)	15 (13%)	4 (4%)	3 25
46	BV	140/142 (99%)	98 (70%)	31 (22%)	11 (8%)	1 13
47	BW	77/79 (98%)	58 (75%)	16 (21%)	3 (4%)	3 23
48	BX	84/86 (98%)	63 (75%)	14 (17%)	7 (8%)	1 12
49	BY	50/52 (96%)	39 (78%)	10 (20%)	1 (2%)	7 38
50	BZ	90/92 (98%)	68 (76%)	18 (20%)	4 (4%)	2 22
All	All	6694/6830 (98%)	5337 (80%)	1095 (16%)	262 (4%)	5 23

All (262) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	81	PRO
3	AC	179	GLN
4	AD	96	VAL
5	AE	86	VAL
5	AE	226	THR
5	AE	227	PRO
6	AG	89	ILE
6	AG	164	PRO
7	AH	35	ILE
8	AI	97	VAL
8	AI	134	ALA
8	AI	136	SER
9	AJ	72	ASN
11	AL	53	VAL
12	AM	51	ASP
13	AN	16	LYS
14	AO	108	ASP
16	AS	104	GLN
18	AT	51	GLU
20	B0	38	ILE
20	B0	50	ILE
20	B0	64	LYS
24	B9	14	TYR

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Mol	Chain	Res	Type
24	B9	34	HIS
25	BA	60	ARG
26	BB	140	ASN
26	BB	161	ASP
26	BB	197	PRO
27	BC	168	LYS
27	BC	279	ASN
29	BE	188	GLU
29	BE	212	ALA
29	BE	216	GLU
30	BF	83	LEU
30	BF	123	THR
33	BI	18	PRO
33	BI	104	SER
35	BK	78	SER
35	BK	92	ARG
36	BL	56	LYS
37	BM	149	ALA
37	BM	170	ALA
46	BV	41	ARG
48	BX	68	ALA
48	BX	70	ALA
48	BX	80	ALA
50	BZ	46	LYS
50	BZ	57	VAL
2	AB	43	ASP
2	AB	68	PRO
3	AC	163	PRO
3	AC	164	VAL
4	AD	18	PRO
4	AD	148	VAL
5	AE	205	ARG
7	AH	58	SER
7	AH	98	GLN
8	AI	15	SER
11	AL	144	ARG
12	AM	137	HIS
14	AO	128	TYR
18	AT	37	VAL
20	B0	77	ALA
20	B0	116	GLY
23	B8	35	SER

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Mol	Chain	Res	Type
25	BA	36	VAL
25	BA	105	LYS
25	BA	162	VAL
26	BB	156	LYS
27	BC	128	LYS
27	BC	129	ALA
28	BD	180	LYS
29	BE	167	SER
29	BE	183	TRP
29	BE	224	LYS
31	BG	142	LEU
33	BI	142	ASP
35	BK	10	VAL
36	BL	40	ALA
37	BM	60	LYS
37	BM	156	ALA
40	BP	88	ARG
40	BP	143	ALA
42	BR	37	ILE
46	BV	52	PHE
46	BV	101	ILE
47	BW	61	LYS
48	BX	86	ALA
3	AC	83	THR
3	AC	112	GLY
3	AC	145	ALA
3	AC	148	LYS
4	AD	9	SER
4	AD	87	SER
4	AD	88	GLU
6	AG	66	GLN
6	AG	75	GLY
6	AG	85	ALA
6	AG	163	SER
7	AH	28	ARG
7	AH	84	GLY
8	AI	42	GLU
8	AI	139	GLN
17	AR	283	LYS
18	AT	53	TRP
18	AT	86	ARG
20	B0	48	GLY

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Mol	Chain	Res	Type
20	B0	62	LYS
20	B0	65	PHE
21	B1	40	LYS
23	B8	89	THR
24	B9	59	CYS
24	B9	66	GLY
26	BB	70	ARG
27	BC	38	SER
27	BC	46	PHE
27	BC	365	PHE
29	BE	36	LEU
29	BE	194	LEU
29	BE	219	PHE
30	BF	120	THR
31	BG	191	ASN
32	BH	22	SER
33	BI	105	CYS
33	BI	144	ASN
34	BJ	147	THR
35	BK	20	GLY
35	BK	88	PRO
37	BM	169	ALA
38	BN	122	ALA
39	BO	118	GLY
39	BO	122	ILE
40	BP	73	GLY
40	BP	133	LYS
41	BQ	10	ARG
44	BT	62	VAL
46	BV	14	HIS
47	BW	78	LYS
48	BX	48	ARG
50	BZ	35	LEU
3	AC	9	ARG
4	AD	19	TYR
8	AI	125	GLU
10	AK	97	GLY
12	AM	90	ASN
13	AN	39	CYS
14	AO	147	SER
20	B0	94	ALA
22	B2	82	GLY

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Mol	Chain	Res	Type
23	B8	116	PRO
24	B9	61	LYS
25	BA	58	CYS
25	BA	196	LYS
25	BA	208	SER
26	BB	73	GLU
26	BB	129	ALA
26	BB	153	GLY
26	BB	179	LEU
26	BB	221	LYS
26	BB	230	VAL
27	BC	102	LEU
27	BC	234	GLY
27	BC	272	TYR
28	BD	186	LYS
28	BD	213	ASN
28	BD	242	ALA
29	BE	227	LEU
30	BF	30	ALA
30	BF	177	GLY
30	BF	226	GLY
31	BG	126	SER
32	BH	129	ARG
33	BI	25	ALA
34	BJ	4	LYS
35	BK	26	ALA
37	BM	37	ARG
39	BO	74	GLU
41	BQ	18	ASP
41	BQ	69	LYS
42	BR	72	LYS
42	BR	96	GLU
44	BT	104	GLU
45	BU	59	VAL
46	BV	63	GLN
46	BV	114	LYS
47	BW	83	GLU
48	BX	38	ARG
48	BX	82	ALA
3	AC	152	PHE
6	AG	86	GLN
8	AI	32	ASN

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Mol	Chain	Res	Type
9	AJ	97	VAL
10	AK	47	LYS
10	AK	55	SER
13	AN	37	ASN
16	AS	51	SER
18	AT	89	ARG
23	B8	32	ASN
23	B8	46	ARG
26	BB	33	ASP
26	BB	180	LEU
28	BD	15	ALA
32	BH	50	ASN
32	BH	118	LEU
32	BH	122	LYS
33	BI	101	LYS
33	BI	111	LEU
41	BQ	17	ARG
42	BR	21	ALA
45	BU	46	LYS
46	BV	32	GLY
46	BV	102	ASP
46	BV	141	GLY
49	BY	36	SER
8	AI	126	PRO
18	AT	90	PRO
20	B0	97	ALA
25	BA	125	GLY
27	BC	29	VAL
29	BE	87	GLY
29	BE	201	GLY
29	BE	223	PHE
32	BH	106	LYS
34	BJ	12	LEU
35	BK	86	LYS
36	BL	173	GLY
36	BL	191	TRP
37	BM	58	LEU
38	BN	65	SER
42	BR	44	SER
45	BU	113	LYS
5	AE	145	GLY
12	AM	75	ASN

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Mol	Chain	Res	Type
15	AQ	111	VAL
16	AS	99	GLY
20	B0	96	ILE
24	B9	43	GLY
25	BA	37	GLY
34	BJ	58	GLY
39	BO	96	PHE
44	BT	86	VAL
46	BV	143	VAL
50	BZ	56	PRO
6	AG	162	VAL
9	AJ	91	ILE
22	B2	81	VAL
27	BC	260	VAL
37	BM	30	GLY
5	AE	109	GLY
12	AM	95	GLY
28	BD	139	GLY
38	BN	19	GLY
45	BU	44	GLY
46	BV	15	VAL
10	AK	35	GLY
13	AN	29	GLY
23	B8	70	LEU
26	BB	121	GLY
33	BI	114	GLY
36	BL	52	GLY
20	B0	79	VAL
27	BC	307	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	161/161 (100%)	160 (99%)	1 (1%)	86 92
3	AC	152/152 (100%)	149 (98%)	3 (2%)	55 74

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
4	AD	113/142 (80%)	103 (91%)	10 (9%)	10 31
5	AE	127/127 (100%)	122 (96%)	5 (4%)	32 56
6	AG	155/155 (100%)	150 (97%)	5 (3%)	39 61
7	AH	106/106 (100%)	100 (94%)	6 (6%)	20 45
8	AI	115/115 (100%)	107 (93%)	8 (7%)	15 40
9	AJ	90/90 (100%)	86 (96%)	4 (4%)	28 53
10	AK	95/95 (100%)	88 (93%)	7 (7%)	13 38
11	AL	98/98 (100%)	94 (96%)	4 (4%)	30 55
12	AM	115/115 (100%)	107 (93%)	8 (7%)	15 40
13	AN	45/45 (100%)	40 (89%)	5 (11%)	6 22
14	AO	74/74 (100%)	70 (95%)	4 (5%)	22 47
15	AQ	71/71 (100%)	68 (96%)	3 (4%)	30 54
16	AS	57/57 (100%)	56 (98%)	1 (2%)	59 77
17	AR	257/257 (100%)	246 (96%)	11 (4%)	29 53
18	AT	114/114 (100%)	102 (90%)	12 (10%)	7 24
20	B0	94/94 (100%)	89 (95%)	5 (5%)	22 47
21	B1	44/44 (100%)	41 (93%)	3 (7%)	16 41
22	B2	82/82 (100%)	80 (98%)	2 (2%)	49 69
23	B8	100/100 (100%)	87 (87%)	13 (13%)	4 18
24	B9	55/55 (100%)	52 (94%)	3 (6%)	21 47
25	BA	194/194 (100%)	183 (94%)	11 (6%)	20 45
26	BB	186/186 (100%)	176 (95%)	10 (5%)	22 47
27	BC	302/302 (100%)	282 (93%)	20 (7%)	16 41
28	BD	199/199 (100%)	188 (94%)	11 (6%)	21 47
29	BE	199/199 (100%)	187 (94%)	12 (6%)	19 44
30	BF	143/143 (100%)	135 (94%)	8 (6%)	21 46
31	BG	89/89 (100%)	82 (92%)	7 (8%)	12 35
32	BH	160/160 (100%)	151 (94%)	9 (6%)	21 46
33	BI	141/141 (100%)	134 (95%)	7 (5%)	24 49
34	BJ	129/129 (100%)	120 (93%)	9 (7%)	15 40
35	BK	112/112 (100%)	107 (96%)	5 (4%)	27 52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
36	BL	164/164 (100%)	157 (96%)	7 (4%)	29 53
37	BM	119/119 (100%)	108 (91%)	11 (9%)	9 29
38	BN	122/122 (100%)	118 (97%)	4 (3%)	38 61
39	BO	99/99 (100%)	96 (97%)	3 (3%)	41 63
40	BP	118/118 (100%)	113 (96%)	5 (4%)	30 54
41	BQ	87/87 (100%)	81 (93%)	6 (7%)	15 40
42	BR	102/102 (100%)	96 (94%)	6 (6%)	19 45
43	BS	38/38 (100%)	32 (84%)	6 (16%)	2 13
44	BT	71/71 (100%)	64 (90%)	7 (10%)	8 26
45	BU	100/100 (100%)	98 (98%)	2 (2%)	55 74
46	BV	113/113 (100%)	103 (91%)	10 (9%)	10 31
47	BW	69/69 (100%)	65 (94%)	4 (6%)	20 45
48	BX	55/55 (100%)	53 (96%)	2 (4%)	35 59
49	BY	42/42 (100%)	39 (93%)	3 (7%)	14 39
50	BZ	81/81 (100%)	76 (94%)	5 (6%)	18 43
All	All	5554/5583 (100%)	5241 (94%)	313 (6%)	25 46

All (313) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	179	ARG
3	AC	7	LYS
3	AC	132	LYS
3	AC	143	ARG
4	AD	8	TYR
4	AD	111	THR
4	AD	112	GLN
4	AD	120	LYS
4	AD	127	VAL
4	AD	138	LYS
4	AD	139	GLN
4	AD	146	PHE
4	AD	153	GLU
4	AD	154	LYS
5	AE	82	ASN
5	AE	111	VAL
5	AE	139	ILE

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Mol	Chain	Res	Type
5	AE	178	ILE
5	AE	204	THR
6	AG	106	LYS
6	AG	156	ARG
6	AG	180	ARG
6	AG	219	ARG
6	AG	224	ASN
7	AH	9	ASP
7	AH	27	ILE
7	AH	32	LYS
7	AH	35	ILE
7	AH	37	PHE
7	AH	50	PHE
8	AI	8	GLN
8	AI	43	ILE
8	AI	45	ARG
8	AI	89	LEU
8	AI	96	TYR
8	AI	98	ASP
8	AI	127	LYS
8	AI	142	TYR
9	AJ	21	LYS
9	AJ	43	LYS
9	AJ	74	GLU
9	AJ	91	ILE
10	AK	26	THR
10	AK	33	LEU
10	AK	39	ILE
10	AK	47	LYS
10	AK	66	ASP
10	AK	115	ILE
10	AK	128	LYS
11	AL	117	ILE
11	AL	136	TRP
11	AL	140	LYS
11	AL	141	GLU
12	AM	18	LEU
12	AM	54	LEU
12	AM	57	ARG
12	AM	66	LEU
12	AM	92	ILE
12	AM	116	LEU

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Mol	Chain	Res	Type
12	AM	125	ILE
12	AM	132	ARG
13	AN	14	PHE
13	AN	22	ARG
13	AN	31	VAL
13	AN	39	CYS
13	AN	44	ARG
14	AO	78	ASN
14	AO	114	ARG
14	AO	125	LEU
14	AO	134	VAL
15	AQ	67	ARG
15	AQ	80	MET
15	AQ	131	ILE
16	AS	97	TYR
17	AR	13	LEU
17	AR	32	LEU
17	AR	33	LEU
17	AR	52	GLN
17	AR	118	LYS
17	AR	193	ILE
17	AR	199	ILE
17	AR	228	LYS
17	AR	290	VAL
17	AR	292	LEU
17	AR	308	ASN
18	AT	6	VAL
18	AT	7	ARG
18	AT	24	ARG
18	AT	29	GLU
18	AT	77	ASN
18	AT	86	ARG
18	AT	89	ARG
18	AT	92	LYS
18	AT	94	ILE
18	AT	103	LYS
18	AT	123	ARG
18	AT	126	GLU
20	B0	21	HIS
20	B0	38	ILE
20	B0	39	ASP
20	B0	65	PHE

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Mol	Chain	Res	Type
20	B0	111	ARG
21	B1	9	ILE
21	B1	20	ASN
21	B1	49	MET
22	B2	28	LYS
22	B2	104	LEU
23	B8	14	LYS
23	B8	33	VAL
23	B8	36	GLN
23	B8	38	MET
23	B8	39	HIS
23	B8	43	LYS
23	B8	48	ARG
23	B8	51	VAL
23	B8	64	ARG
23	B8	75	LYS
23	B8	97	LYS
23	B8	98	ASN
23	B8	116	PRO
24	B9	22	LEU
24	B9	41	PHE
24	B9	45	LYS
25	BA	4	ILE
25	BA	12	HIS
25	BA	29	LEU
25	BA	31	THR
25	BA	45	ARG
25	BA	61	PRO
25	BA	76	ARG
25	BA	162	VAL
25	BA	199	GLN
25	BA	200	ASN
25	BA	214	PHE
26	BB	5	ILE
26	BB	42	ARG
26	BB	61	VAL
26	BB	64	ARG
26	BB	65	ASP
26	BB	75	ILE
26	BB	145	LYS
26	BB	155	LYS
26	BB	181	LYS

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Mol	Chain	Res	Type
26	BB	219	ILE
27	BC	20	LYS
27	BC	32	PHE
27	BC	37	ARG
27	BC	59	ASP
27	BC	121	ASN
27	BC	126	LYS
27	BC	127	LYS
27	BC	150	ARG
27	BC	153	LYS
27	BC	168	LYS
27	BC	215	ILE
27	BC	221	THR
27	BC	237	LYS
27	BC	240	ARG
27	BC	244	ARG
27	BC	317	ILE
27	BC	327	CYS
27	BC	332	ARG
27	BC	360	ASP
27	BC	364	LYS
28	BD	33	ASP
28	BD	50	TYR
28	BD	69	ARG
28	BD	113	VAL
28	BD	119	ARG
28	BD	126	ILE
28	BD	148	ILE
28	BD	170	LYS
28	BD	191	LYS
28	BD	194	TYR
28	BD	215	ILE
29	BE	23	ARG
29	BE	48	LYS
29	BE	50	ARG
29	BE	105	ILE
29	BE	131	LEU
29	BE	151	GLN
29	BE	173	VAL
29	BE	196	ARG
29	BE	213	ASP
29	BE	217	GLU

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Mol	Chain	Res	Type
29	BE	219	PHE
29	BE	247	ILE
30	BF	83	LEU
30	BF	84	VAL
30	BF	111	ILE
30	BF	118	LYS
30	BF	125	GLU
30	BF	129	LEU
30	BF	185	ILE
30	BF	244	ASN
31	BG	107	GLU
31	BG	134	TYR
31	BG	136	LEU
31	BG	146	LYS
31	BG	163	VAL
31	BG	172	LYS
31	BG	200	LEU
32	BH	11	GLU
32	BH	79	ILE
32	BH	116	ASN
32	BH	149	ASN
32	BH	167	VAL
32	BH	170	LYS
32	BH	172	ILE
32	BH	177	ASP
32	BH	183	HIS
33	BI	69	ARG
33	BI	82	ARG
33	BI	103	LEU
33	BI	115	MET
33	BI	121	LYS
33	BI	134	ILE
33	BI	159	PHE
34	BJ	10	ARG
34	BJ	44	THR
34	BJ	47	GLN
34	BJ	52	TYR
34	BJ	78	GLU
34	BJ	94	ARG
34	BJ	123	PHE
34	BJ	131	MET
34	BJ	137	ARG

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Mol	Chain	Res	Type
35	BK	18	VAL
35	BK	60	VAL
35	BK	87	GLU
35	BK	93	LYS
35	BK	96	LYS
36	BL	13	LYS
36	BL	56	LYS
36	BL	67	ARG
36	BL	77	LYS
36	BL	86	ASN
36	BL	122	ASN
36	BL	191	TRP
37	BM	14	HIS
37	BM	39	GLU
37	BM	42	ASN
37	BM	50	ASN
37	BM	58	LEU
37	BM	84	LEU
37	BM	96	LYS
37	BM	113	ASP
37	BM	114	LYS
37	BM	134	LYS
37	BM	140	LYS
38	BN	69	ARG
38	BN	118	GLN
38	BN	124	LYS
38	BN	153	LYS
39	BO	48	VAL
39	BO	72	LYS
39	BO	98	LYS
40	BP	20	ARG
40	BP	63	THR
40	BP	96	ILE
40	BP	111	ASP
40	BP	125	LYS
41	BQ	26	HIS
41	BQ	27	LEU
41	BQ	35	LYS
41	BQ	78	LYS
41	BQ	84	TYR
41	BQ	91	LEU
42	BR	11	PHE

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Mol	Chain	Res	Type
42	BR	36	ILE
42	BR	59	MET
42	BR	66	LYS
42	BR	88	ARG
42	BR	94	TYR
43	BS	14	TYR
43	BS	21	PHE
43	BS	28	ILE
43	BS	30	ARG
43	BS	43	ARG
43	BS	48	ARG
44	BT	60	TYR
44	BT	61	LYS
44	BT	67	ILE
44	BT	78	ASP
44	BT	89	LYS
44	BT	93	TYR
44	BT	95	ILE
45	BU	59	VAL
45	BU	97	ILE
46	BV	47	TYR
46	BV	62	LYS
46	BV	69	LYS
46	BV	74	LEU
46	BV	91	LYS
46	BV	97	THR
46	BV	127	ARG
46	BV	131	LYS
46	BV	137	ILE
46	BV	147	ILE
47	BW	11	GLU
47	BW	61	LYS
47	BW	70	ARG
47	BW	83	GLU
48	BX	43	LYS
48	BX	45	LYS
49	BY	12	HIS
49	BY	17	THR
49	BY	43	LYS
50	BZ	6	LYS
50	BZ	9	LYS
50	BZ	38	GLN

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Mol	Chain	Res	Type
50	BZ	40	LYS
50	BZ	83	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (47) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	23	HIS
3	AC	159	HIS
4	AD	124	HIS
5	AE	233	GLN
6	AG	66	GLN
6	AG	72	HIS
8	AI	74	HIS
8	AI	93	HIS
12	AM	78	HIS
12	AM	122	HIS
15	AQ	110	HIS
16	AS	79	HIS
16	AS	98	ASN
17	AR	31	ASN
17	AR	52	GLN
17	AR	101	GLN
17	AR	185	GLN
17	AR	198	ASN
20	B0	71	HIS
25	BA	12	HIS
25	BA	44	GLN
27	BC	173	GLN
27	BC	177	HIS
27	BC	313	HIS
28	BD	36	HIS
28	BD	58	HIS
30	BF	112	ASN
30	BF	194	HIS
30	BF	231	ASN
31	BG	191	ASN
32	BH	40	HIS
32	BH	116	ASN
32	BH	157	ASN
33	BI	92	HIS
33	BI	95	HIS
34	BJ	47	GLN

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Mol	Chain	Res	Type
36	BL	123	GLN
36	BL	138	GLN
36	BL	156	HIS
37	BM	14	HIS
39	BO	135	GLN
41	BQ	22	HIS
46	BV	14	HIS
46	BV	39	HIS
46	BV	119	ASN
49	BY	16	HIS
50	BZ	23	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1757/1761 (99%)	380 (21%)	79 (4%)
19	A7	75/76 (98%)	8 (10%)	3 (4%)
51	B3	112/113 (99%)	40 (35%)	4 (3%)
52	B4	156/157 (99%)	55 (35%)	10 (6%)
53	B5	3169/3170 (99%)	942 (29%)	139 (4%)
All	All	5269/5277 (99%)	1425 (27%)	235 (4%)

All (1425) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	2	A
1	AA	3	U
1	AA	4	C
1	AA	9	U
1	AA	27	U
1	AA	34	G
1	AA	42	G
1	AA	44	U
1	AA	46	A
1	AA	47	A
1	AA	48	G
1	AA	50	C
1	AA	51	A
1	AA	57	G
1	AA	60	U
1	AA	61	A

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Mol	Chain	Res	Type
1	AA	62	A
1	AA	65	A
1	AA	67	A
1	AA	68	A
1	AA	69	G
1	AA	81	G
1	AA	82	U
1	AA	83	G
1	AA	86	A
1	AA	90	C
1	AA	92	A
1	AA	100	A
1	AA	105	A
1	AA	106	U
1	AA	109	G
1	AA	110	U
1	AA	115	G
1	AA	116	U
1	AA	147	A
1	AA	161	U
1	AA	174	U
1	AA	176	C
1	AA	180	A
1	AA	188	A
1	AA	193	U
1	AA	200	A
1	AA	204	G
1	AA	208	U
1	AA	213	A
1	AA	230	C
1	AA	232	U
1	AA	233	C
1	AA	241	U
1	AA	243	G
1	AA	256	A
1	AA	257	A
1	AA	263	C
1	AA	264	G
1	AA	265	A
1	AA	266	A
1	AA	267	U
1	AA	279	G

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Mol	Chain	Res	Type
1	AA	280	U
1	AA	281	G
1	AA	282	C
1	AA	283	U
1	AA	284	G
1	AA	291	G
1	AA	295	A
1	AA	308	C
1	AA	309	C
1	AA	312	A
1	AA	313	U
1	AA	314	C
1	AA	316	A
1	AA	319	U
1	AA	322	G
1	AA	328	A
1	AA	329	G
1	AA	337	G
1	AA	351	C
1	AA	361	C
1	AA	365	G
1	AA	366	A
1	AA	373	G
1	AA	400	A
1	AA	401	A
1	AA	404	G
1	AA	419	G
1	AA	423	G
1	AA	424	C
1	AA	426	G
1	AA	429	G
1	AA	435	C
1	AA	439	U
1	AA	445	A
1	AA	451	A
1	AA	452	A
1	AA	462	G
1	AA	468	A
1	AA	469	C
1	AA	475	A
1	AA	478	A
1	AA	479	C

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Mol	Chain	Res	Type
1	AA	481	A
1	AA	493	U
1	AA	494	U
1	AA	495	C
1	AA	496	G
1	AA	501	U
1	AA	503	G
1	AA	512	A
1	AA	513	U
1	AA	530	C
1	AA	542	A
1	AA	543	C
1	AA	551	G
1	AA	558	U
1	AA	565	C
1	AA	568	G
1	AA	571	G
1	AA	574	G
1	AA	578	U
1	AA	579	A
1	AA	594	A
1	AA	609	U
1	AA	611	U
1	AA	613	G
1	AA	619	A
1	AA	620	A
1	AA	623	A
1	AA	624	G
1	AA	631	G
1	AA	638	U
1	AA	639	U
1	AA	648	G
1	AA	653	C
1	AA	666	U
1	AA	687	G
1	AA	693	U
1	AA	694	U
1	AA	695	U
1	AA	696	C
1	AA	698	U
1	AA	703	G
1	AA	729	G

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Mol	Chain	Res	Type
1	AA	730	G
1	AA	746	A
1	AA	749	U
1	AA	760	A
1	AA	765	G
1	AA	771	A
1	AA	774	A
1	AA	775	G
1	AA	776	G
1	AA	778	G
1	AA	779	U
1	AA	780	A
1	AA	781	U
1	AA	792	U
1	AA	797	G
1	AA	800	U
1	AA	818	C
1	AA	821	U
1	AA	822	U
1	AA	824	G
1	AA	844	A
1	AA	845	G
1	AA	853	G
1	AA	855	A
1	AA	856	A
1	AA	857	U
1	AA	858	G
1	AA	860	U
1	AA	864	U
1	AA	865	A
1	AA	866	G
1	AA	867	G
1	AA	868	G
1	AA	869	A
1	AA	877	G
1	AA	896	U
1	AA	898	G
1	AA	899	A
1	AA	900	G
1	AA	905	A
1	AA	923	A
1	AA	931	U

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Mol	Chain	Res	Type
1	AA	934	U
1	AA	957	U
1	AA	958	U
1	AA	961	C
1	AA	962	A
1	AA	963	U
1	AA	965	A
1	AA	971	G
1	AA	987	A
1	AA	989	C
1	AA	990	G
1	AA	993	G
1	AA	1003	U
1	AA	1004	A
1	AA	1022	A
1	AA	1025	A
1	AA	1027	C
1	AA	1029	A
1	AA	1031	G
1	AA	1036	C
1	AA	1038	A
1	AA	1039	G
1	AA	1040	A
1	AA	1041	U
1	AA	1042	C
1	AA	1049	U
1	AA	1050	G
1	AA	1056	U
1	AA	1058	A
1	AA	1059	A
1	AA	1060	U
1	AA	1074	C
1	AA	1090	A
1	AA	1092	U
1	AA	1098	G
1	AA	1099	G
1	AA	1110	A
1	AA	1127	G
1	AA	1134	A
1	AA	1135	A
1	AA	1148	A
1	AA	1152	G

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Mol	Chain	Res	Type
1	AA	1155	C
1	AA	1156	C
1	AA	1160	A
1	AA	1171	C
1	AA	1178	U
1	AA	1179	A
1	AA	1181	U
1	AA	1182	U
1	AA	1187	U
1	AA	1188	C
1	AA	1189	A
1	AA	1190	A
1	AA	1192	A
1	AA	1195	G
1	AA	1196	G
1	AA	1197	G
1	AA	1198	A
1	AA	1199	A
1	AA	1201	C
1	AA	1202	U
1	AA	1213	A
1	AA	1214	G
1	AA	1215	A
1	AA	1216	C
1	AA	1217	A
1	AA	1225	G
1	AA	1241	G
1	AA	1242	C
1	AA	1243	U
1	AA	1246	U
1	AA	1247	U
1	AA	1248	C
1	AA	1249	U
1	AA	1261	G
1	AA	1262	U
1	AA	1263	G
1	AA	1265	U
1	AA	1266	G
1	AA	1267	G
1	AA	1270	C
1	AA	1271	A
1	AA	1272	U

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Mol	Chain	Res	Type
1	AA	1274	G
1	AA	1281	C
1	AA	1282	U
1	AA	1318	A
1	AA	1319	A
1	AA	1325	G
1	AA	1329	C
1	AA	1341	A
1	AA	1342	A
1	AA	1350	U
1	AA	1351	G
1	AA	1355	G
1	AA	1366	U
1	AA	1378	U
1	AA	1379	A
1	AA	1386	C
1	AA	1387	U
1	AA	1396	C
1	AA	1402	G
1	AA	1409	G
1	AA	1410	U
1	AA	1411	U
1	AA	1416	G
1	AA	1424	A
1	AA	1425	G
1	AA	1430	G
1	AA	1431	U
1	AA	1438	C
1	AA	1443	A
1	AA	1444	A
1	AA	1445	C
1	AA	1446	G
1	AA	1447	U
1	AA	1452	G
1	AA	1455	C
1	AA	1456	G
1	AA	1457	C
1	AA	1458	A
1	AA	1459	C
1	AA	1471	U
1	AA	1472	G
1	AA	1479	C

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Mol	Chain	Res	Type
1	AA	1489	U
1	AA	1490	A
1	AA	1491	A
1	AA	1496	G
1	AA	1504	G
1	AA	1506	U
1	AA	1507	C
1	AA	1513	A
1	AA	1515	U
1	AA	1517	U
1	AA	1518	U
1	AA	1519	G
1	AA	1520	U
1	AA	1521	G
1	AA	1522	A
1	AA	1533	U
1	AA	1536	U
1	AA	1540	G
1	AA	1546	G
1	AA	1547	C
1	AA	1548	A
1	AA	1549	U
1	AA	1550	U
1	AA	1552	U
1	AA	1553	A
1	AA	1555	U
1	AA	1556	U
1	AA	1561	C
1	AA	1564	U
1	AA	1571	A
1	AA	1580	U
1	AA	1581	A
1	AA	1582	G
1	AA	1583	U
1	AA	1584	A
1	AA	1585	A
1	AA	1588	G
1	AA	1594	C
1	AA	1599	G
1	AA	1607	U
1	AA	1609	A
1	AA	1610	U

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Mol	Chain	Res	Type
1	AA	1612	A
1	AA	1613	C
1	AA	1614	G
1	AA	1615	U
1	AA	1631	A
1	AA	1633	A
1	AA	1634	C
1	AA	1635	C
1	AA	1636	G
1	AA	1637	C
1	AA	1638	C
1	AA	1640	G
1	AA	1655	U
1	AA	1656	G
1	AA	1676	A
1	AA	1753	A
1	AA	1760	A
1	AA	1764	A
1	AA	1766	G
1	AA	1767	U
1	AA	1778	G
1	AA	1779	A
1	AA	1780	A
1	AA	1781	C
1	AA	1790	G
1	AA	1791	G
1	AA	1794	C
1	AA	1795	A
19	A7	10	2MG
19	A7	11	C
19	A7	17	H2U
19	A7	20	G
19	A7	23	A
19	A7	44	A
19	A7	47	U
19	A7	76	A
51	B3	2	G
51	B3	7	G
51	B3	10	C
51	B3	11	A
51	B3	13	A
51	B3	14	U

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Mol	Chain	Res	Type
51	B3	24	A
51	B3	34	C
51	B3	36	C
51	B3	40	C
51	B3	41	G
51	B3	42	A
51	B3	43	U
51	B3	44	C
51	B3	45	A
51	B3	46	A
51	B3	48	U
51	B3	50	U
51	B3	56	G
51	B3	59	G
51	B3	61	U
51	B3	70	A
51	B3	71	C
51	B3	74	A
51	B3	81	U
51	B3	82	A
51	B3	84	G
51	B3	86	G
51	B3	88	G
51	B3	89	A
51	B3	90	C
51	B3	91	C
51	B3	92	A
51	B3	95	C
51	B3	98	G
51	B3	99	A
51	B3	101	A
51	B3	102	C
51	B3	105	A
51	B3	109	G
52	B4	4	C
52	B4	11	C
52	B4	12	A
52	B4	14	C
52	B4	18	U
52	B4	20	U
52	B4	22	U
52	B4	23	U

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Mol	Chain	Res	Type
52	B4	24	G
52	B4	34	U
52	B4	48	A
52	B4	55	U
52	B4	58	G
52	B4	59	A
52	B4	60	U
52	B4	61	A
52	B4	62	C
52	B4	63	G
52	B4	64	U
52	B4	68	G
52	B4	69	U
52	B4	70	A
52	B4	71	G
52	B4	72	G
52	B4	76	C
52	B4	88	A
52	B4	89	A
52	B4	92	A
52	B4	95	G
52	B4	99	C
52	B4	100	U
52	B4	102	U
52	B4	103	G
52	B4	104	A
52	B4	105	A
52	B4	106	C
52	B4	108	C
52	B4	109	A
52	B4	111	A
52	B4	114	G
52	B4	115	C
52	B4	118	C
52	B4	128	U
52	B4	133	G
52	B4	134	G
52	B4	135	G
52	B4	136	G
52	B4	137	C
52	B4	138	A
52	B4	139	U

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Mol	Chain	Res	Type
52	B4	140	G
52	B4	145	U
52	B4	147	U
52	B4	153	U
52	B4	156	U
53	B5	4	U
53	B5	6	A
53	B5	7	C
53	B5	13	A
53	B5	15	C
53	B5	16	A
53	B5	17	G
53	B5	19	U
53	B5	33	G
53	B5	39	A
53	B5	40	A
53	B5	43	A
53	B5	44	U
53	B5	46	U
53	B5	60	A
53	B5	62	A
53	B5	66	A
53	B5	68	C
53	B5	71	A
53	B5	74	G
53	B5	77	A
53	B5	85	A
53	B5	89	A
53	B5	92	G
53	B5	99	A
53	B5	108	A
53	B5	109	A
53	B5	110	G
53	B5	112	U
53	B5	114	A
53	B5	115	A
53	B5	118	U
53	B5	120	G
53	B5	125	C
53	B5	128	G
53	B5	129	U
53	B5	131	C

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Mol	Chain	Res	Type
53	B5	132	C
53	B5	133	U
53	B5	134	U
53	B5	135	C
53	B5	149	U
53	B5	150	A
53	B5	151	A
53	B5	160	G
53	B5	161	G
53	B5	163	C
53	B5	170	G
53	B5	171	G
53	B5	175	C
53	B5	186	U
53	B5	189	G
53	B5	199	A
53	B5	200	C
53	B5	202	G
53	B5	210	U
53	B5	211	A
53	B5	214	G
53	B5	216	G
53	B5	217	U
53	B5	218	G
53	B5	219	A
53	B5	220	G
53	B5	230	U
53	B5	240	U
53	B5	250	U
53	B5	251	G
53	B5	252	U
53	B5	265	A
53	B5	268	A
53	B5	269	G
53	B5	272	G
53	B5	274	G
53	B5	278	U
53	B5	279	U
53	B5	280	U
53	B5	281	G
53	B5	287	G
53	B5	288	C

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Mol	Chain	Res	Type
53	B5	291	C
53	B5	298	U
53	B5	304	G
53	B5	310	U
53	B5	315	C
53	B5	318	A
53	B5	330	G
53	B5	338	A
53	B5	341	G
53	B5	343	U
53	B5	352	A
53	B5	354	U
53	B5	355	A
53	B5	356	C
53	B5	362	U
53	B5	364	G
53	B5	368	G
53	B5	370	U
53	B5	372	A
53	B5	373	A
53	B5	375	A
53	B5	376	G
53	B5	384	A
53	B5	387	A
53	B5	391	A
53	B5	394	G
53	B5	398	A
53	B5	399	A
53	B5	402	A
53	B5	403	C
53	B5	404	G
53	B5	406	G
53	B5	411	U
53	B5	413	U
53	B5	414	U
53	B5	415	G
53	B5	423	A
53	B5	434	U
53	B5	438	A
53	B5	440	A
53	B5	441	U
53	B5	451	U

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Mol	Chain	Res	Type
53	B5	453	C
53	B5	455	C
53	B5	457	C
53	B5	465	U
53	B5	467	U
53	B5	471	U
53	B5	476	G
53	B5	477	A
53	B5	478	A
53	B5	479	U
53	B5	480	C
53	B5	481	U
53	B5	482	C
53	B5	483	G
53	B5	484	C
53	B5	485	A
53	B5	486	U
53	B5	492	U
53	B5	494	G
53	B5	496	C
53	B5	500	C
53	B5	513	G
53	B5	515	C
53	B5	532	A
53	B5	533	A
53	B5	547	G
53	B5	548	G
53	B5	553	U
53	B5	554	A
53	B5	555	U
53	B5	556	U
53	B5	570	A
53	B5	572	A
53	B5	576	C
53	B5	578	A
53	B5	585	A
53	B5	590	G
53	B5	592	G
53	B5	596	U
53	B5	597	G
53	B5	602	A
53	B5	604	G

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Mol	Chain	Res	Type
53	B5	605	U
53	B5	606	C
53	B5	607	A
53	B5	608	A
53	B5	609	G
53	B5	611	A
53	B5	612	U
53	B5	616	G
53	B5	619	A
53	B5	620	U
53	B5	621	A
53	B5	622	A
53	B5	627	U
53	B5	629	U
53	B5	636	C
53	B5	638	C
53	B5	639	G
53	B5	647	A
53	B5	648	C
53	B5	649	A
53	B5	652	G
53	B5	653	A
53	B5	654	C
53	B5	663	C
53	B5	664	U
53	B5	677	A
53	B5	678	G
53	B5	681	U
53	B5	688	G
53	B5	689	U
53	B5	690	A
53	B5	691	A
53	B5	695	C
53	B5	704	U
53	B5	705	A
53	B5	706	A
53	B5	708	G
53	B5	710	A
53	B5	711	A
53	B5	712	G
53	B5	713	U
53	B5	715	A

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Mol	Chain	Res	Type
53	B5	716	G
53	B5	717	C
53	B5	718	G
53	B5	735	A
53	B5	736	A
53	B5	742	G
53	B5	743	C
53	B5	744	A
53	B5	748	U
53	B5	766	U
53	B5	767	U
53	B5	783	A
53	B5	784	A
53	B5	785	G
53	B5	786	A
53	B5	787	G
53	B5	800	G
53	B5	801	A
53	B5	802	C
53	B5	808	A
53	B5	817	A
53	B5	819	U
53	B5	820	A
53	B5	833	G
53	B5	837	A
53	B5	844	G
53	B5	846	A
53	B5	848	A
53	B5	851	C
53	B5	856	G
53	B5	858	A
53	B5	860	G
53	B5	861	C
53	B5	879	U
53	B5	880	G
53	B5	882	A
53	B5	884	A
53	B5	894	G
53	B5	896	A
53	B5	907	G
53	B5	913	A
53	B5	914	A

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Mol	Chain	Res	Type
53	B5	915	A
53	B5	916	G
53	B5	917	A
53	B5	921	A
53	B5	923	C
53	B5	925	A
53	B5	932	U
53	B5	933	A
53	B5	934	G
53	B5	937	G
53	B5	944	C
53	B5	951	A
53	B5	959	C
53	B5	962	A
53	B5	963	G
53	B5	965	A
53	B5	970	A
53	B5	971	C
53	B5	972	G
53	B5	973	A
53	B5	978	C
53	B5	979	G
53	B5	987	U
53	B5	990	A
53	B5	994	G
53	B5	1009	A
53	B5	1011	A
53	B5	1017	C
53	B5	1024	G
53	B5	1025	A
53	B5	1027	A
53	B5	1029	G
53	B5	1030	A
53	B5	1033	U
53	B5	1034	U
53	B5	1035	G
53	B5	1036	A
53	B5	1041	U
53	B5	1047	A
53	B5	1054	A
53	B5	1056	U
53	B5	1065	A

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Mol	Chain	Res	Type
53	B5	1066	G
53	B5	1078	U
53	B5	1079	A
53	B5	1080	A
53	B5	1085	A
53	B5	1088	U
53	B5	1093	A
53	B5	1099	A
53	B5	1101	G
53	B5	1104	G
53	B5	1105	A
53	B5	1110	U
53	B5	1111	U
53	B5	1112	A
53	B5	1116	G
53	B5	1117	G
53	B5	1126	G
53	B5	1127	G
53	B5	1128	U
53	B5	1129	A
53	B5	1133	A
53	B5	1135	A
53	B5	1142	G
53	B5	1144	U
53	B5	1150	A
53	B5	1153	A
53	B5	1160	C
53	B5	1162	U
53	B5	1164	G
53	B5	1166	G
53	B5	1173	U
53	B5	1174	G
53	B5	1175	C
53	B5	1177	G
53	B5	1181	U
53	B5	1182	A
53	B5	1191	U
53	B5	1200	A
53	B5	1201	C
53	B5	1208	U
53	B5	1219	C
53	B5	1227	C

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Mol	Chain	Res	Type
53	B5	1228	C
53	B5	1229	G
53	B5	1231	A
53	B5	1232	C
53	B5	1235	U
53	B5	1236	G
53	B5	1237	G
53	B5	1238	C
53	B5	1244	A
53	B5	1245	A
53	B5	1248	C
53	B5	1250	G
53	B5	1251	A
53	B5	1253	U
53	B5	1254	C
53	B5	1257	C
53	B5	1258	U
53	B5	1263	A
53	B5	1264	G
53	B5	1268	G
53	B5	1273	A
53	B5	1274	A
53	B5	1279	C
53	B5	1282	G
53	B5	1287	A
53	B5	1291	A
53	B5	1298	C
53	B5	1303	A
53	B5	1304	A
53	B5	1305	U
53	B5	1306	G
53	B5	1307	G
53	B5	1308	A
53	B5	1309	U
53	B5	1311	G
53	B5	1313	G
53	B5	1318	A
53	B5	1319	G
53	B5	1347	U
53	B5	1357	G
53	B5	1358	C
53	B5	1359	C

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Mol	Chain	Res	Type
53	B5	1360	C
53	B5	1361	U
53	B5	1363	A
53	B5	1370	G
53	B5	1384	U
53	B5	1385	C
53	B5	1391	C
53	B5	1392	G
53	B5	1402	C
53	B5	1404	G
53	B5	1406	A
53	B5	1407	A
53	B5	1408	G
53	B5	1412	G
53	B5	1418	A
53	B5	1421	G
53	B5	1422	G
53	B5	1423	C
53	B5	1425	U
53	B5	1426	C
53	B5	1429	G
53	B5	1431	G
53	B5	1434	G
53	B5	1439	U
53	B5	1442	U
53	B5	1447	G
53	B5	1452	A
53	B5	1453	A
53	B5	1455	U
53	B5	1456	A
53	B5	1457	U
53	B5	1481	A
53	B5	1482	A
53	B5	1507	G
53	B5	1510	G
53	B5	1515	A
53	B5	1526	U
53	B5	1529	A
53	B5	1530	U
53	B5	1532	C
53	B5	1533	U
53	B5	1548	C

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Mol	Chain	Res	Type
53	B5	1550	C
53	B5	1554	U
53	B5	1555	U
53	B5	1571	A
53	B5	1572	U
53	B5	1580	A
53	B5	1582	C
53	B5	1583	A
53	B5	1584	U
53	B5	1588	A
53	B5	1590	G
53	B5	1591	G
53	B5	1592	G
53	B5	1593	A
53	B5	1598	G
53	B5	1602	A
53	B5	1607	U
53	B5	1617	G
53	B5	1622	U
53	B5	1623	G
53	B5	1624	G
53	B5	1627	U
53	B5	1628	C
53	B5	1637	A
53	B5	1639	C
53	B5	1640	G
53	B5	1642	A
53	B5	1644	C
53	B5	1647	A
53	B5	1648	A
53	B5	1649	U
53	B5	1650	G
53	B5	1657	C
53	B5	1658	G
53	B5	1666	G
53	B5	1668	G
53	B5	1669	C
53	B5	1670	C
53	B5	1671	C
53	B5	1672	U
53	B5	1681	U
53	B5	1682	U

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Mol	Chain	Res	Type
53	B5	1683	A
53	B5	1688	U
53	B5	1689	U
53	B5	1697	A
53	B5	1698	C
53	B5	1701	C
53	B5	1702	U
53	B5	1703	U
53	B5	1704	A
53	B5	1709	C
53	B5	1710	C
53	B5	1712	G
53	B5	1715	A
53	B5	1718	G
53	B5	1719	G
53	B5	1720	U
53	B5	1721	U
53	B5	1722	U
53	B5	1727	G
53	B5	1729	A
53	B5	1733	G
53	B5	1735	G
53	B5	1736	G
53	B5	1737	U
53	B5	1738	C
53	B5	1744	G
53	B5	1745	C
53	B5	1746	U
53	B5	1750	A
53	B5	1751	G
53	B5	1759	C
53	B5	1762	C
53	B5	1764	U
53	B5	1765	U
53	B5	1768	U
53	B5	1769	G
53	B5	1774	C
53	B5	1775	G
53	B5	1777	U
53	B5	1784	G
53	B5	1797	A
53	B5	1805	C

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Mol	Chain	Res	Type
53	B5	1806	A
53	B5	1813	A
53	B5	1814	A
53	B5	1817	G
53	B5	1819	U
53	B5	1824	U
53	B5	1826	C
53	B5	1830	G
53	B5	1832	C
53	B5	1840	U
53	B5	1841	A
53	B5	1842	A
53	B5	1849	C
53	B5	1853	U
53	B5	1855	U
53	B5	1859	A
53	B5	1864	A
53	B5	1866	C
53	B5	1867	A
53	B5	1880	U
53	B5	1886	A
53	B5	1889	G
53	B5	1890	U
53	B5	1892	G
53	B5	1895	A
53	B5	1900	A
53	B5	1901	A
53	B5	1902	G
53	B5	1906	G
53	B5	1909	A
53	B5	1918	C
53	B5	1919	G
53	B5	1927	G
53	B5	1932	A
53	B5	1933	A
53	B5	1934	G
53	B5	1935	G
53	B5	1946	A
53	B5	2102	U
53	B5	2103	U
53	B5	2104	A
53	B5	2114	C

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Mol	Chain	Res	Type
53	B5	2115	G
53	B5	2116	G
53	B5	2120	A
53	B5	2122	G
53	B5	2125	A
53	B5	2126	A
53	B5	2131	A
53	B5	2134	G
53	B5	2138	A
53	B5	2139	A
53	B5	2140	U
53	B5	2142	A
53	B5	2159	U
53	B5	2160	G
53	B5	2161	G
53	B5	2167	A
53	B5	2170	U
53	B5	2173	U
53	B5	2174	G
53	B5	2175	U
53	B5	2178	A
53	B5	2189	U
53	B5	2199	G
53	B5	2208	A
53	B5	2209	U
53	B5	2210	G
53	B5	2212	C
53	B5	2213	A
53	B5	2214	A
53	B5	2215	A
53	B5	2216	G
53	B5	2217	U
53	B5	2219	A
53	B5	2220	A
53	B5	2221	G
53	B5	2222	A
53	B5	2223	A
53	B5	2224	A
53	B5	2225	U
53	B5	2226	U
53	B5	2227	C
53	B5	2228	A

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Mol	Chain	Res	Type
53	B5	2229	A
53	B5	2230	C
53	B5	2237	C
53	B5	2242	A
53	B5	2244	A
53	B5	2249	G
53	B5	2252	A
53	B5	2255	A
53	B5	2256	A
53	B5	2257	C
53	B5	2259	A
53	B5	2263	C
53	B5	2273	G
53	B5	2279	A
53	B5	2285	C
53	B5	2286	U
53	B5	2287	C
53	B5	2288	G
53	B5	2297	U
53	B5	2298	U
53	B5	2301	U
53	B5	2303	A
53	B5	2306	C
53	B5	2308	C
53	B5	2309	A
53	B5	2310	U
53	B5	2313	A
53	B5	2314	U
53	B5	2315	G
53	B5	2317	A
53	B5	2319	U
53	B5	2326	A
53	B5	2335	G
53	B5	2336	U
53	B5	2340	U
53	B5	2347	U
53	B5	2350	C
53	B5	2355	G
53	B5	2360	C
53	B5	2362	C
53	B5	2363	A
53	B5	2365	C

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Mol	Chain	Res	Type
53	B5	2368	A
53	B5	2371	G
53	B5	2372	A
53	B5	2373	A
53	B5	2374	C
53	B5	2379	U
53	B5	2383	C
53	B5	2385	G
53	B5	2388	U
53	B5	2394	G
53	B5	2397	A
53	B5	2402	A
53	B5	2403	G
53	B5	2411	U
53	B5	2415	C
53	B5	2417	U
53	B5	2419	A
53	B5	2435	G
53	B5	2446	U
53	B5	2452	G
53	B5	2454	G
53	B5	2457	G
53	B5	2458	A
53	B5	2460	U
53	B5	2461	A
53	B5	2462	A
53	B5	2463	G
53	B5	2464	U
53	B5	2468	A
53	B5	2469	G
53	B5	2470	C
53	B5	2472	U
53	B5	2473	C
53	B5	2474	G
53	B5	2475	G
53	B5	2477	G
53	B5	2478	C
53	B5	2479	C
53	B5	2484	A
53	B5	2487	U
53	B5	2494	A
53	B5	2497	U

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Mol	Chain	Res	Type
53	B5	2498	U
53	B5	2499	U
53	B5	2506	U
53	B5	2510	U
53	B5	2514	U
53	B5	2515	A
53	B5	2521	U
53	B5	2524	A
53	B5	2539	A
53	B5	2540	A
53	B5	2541	U
53	B5	2542	U
53	B5	2543	U
53	B5	2546	C
53	B5	2548	C
53	B5	2550	U
53	B5	2551	C
53	B5	2552	C
53	B5	2556	U
53	B5	2560	U
53	B5	2561	A
53	B5	2562	G
53	B5	2570	U
53	B5	2572	C
53	B5	2573	G
53	B5	2575	G
53	B5	2576	G
53	B5	2577	C
53	B5	2578	U
53	B5	2585	G
53	B5	2586	G
53	B5	2593	A
53	B5	2596	U
53	B5	2606	G
53	B5	2607	G
53	B5	2608	G
53	B5	2610	G
53	B5	2618	G
53	B5	2619	G
53	B5	2623	G
53	B5	2638	C
53	B5	2652	U

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Mol	Chain	Res	Type
53	B5	2655	U
53	B5	2656	A
53	B5	2658	G
53	B5	2674	A
53	B5	2675	C
53	B5	2676	A
53	B5	2677	G
53	B5	2678	A
53	B5	2680	A
53	B5	2690	G
53	B5	2691	A
53	B5	2694	A
53	B5	2698	G
53	B5	2703	A
53	B5	2704	A
53	B5	2706	G
53	B5	2714	G
53	B5	2715	A
53	B5	2718	U
53	B5	2719	U
53	B5	2725	U
53	B5	2735	U
53	B5	2736	A
53	B5	2749	G
53	B5	2752	U
53	B5	2755	C
53	B5	2757	U
53	B5	2758	A
53	B5	2765	C
53	B5	2773	C
53	B5	2774	C
53	B5	2775	U
53	B5	2776	C
53	B5	2778	G
53	B5	2780	A
53	B5	2781	U
53	B5	2783	U
53	B5	2788	C
53	B5	2794	G
53	B5	2795	U
53	B5	2796	G
53	B5	2797	C

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Mol	Chain	Res	Type
53	B5	2799	A
53	B5	2800	G
53	B5	2801	A
53	B5	2802	A
53	B5	2809	C
53	B5	2810	C
53	B5	2816	G
53	B5	2817	A
53	B5	2818	U
53	B5	2827	U
53	B5	2829	U
53	B5	2830	G
53	B5	2837	A
53	B5	2838	A
53	B5	2839	G
53	B5	2840	C
53	B5	2841	G
53	B5	2842	U
53	B5	2845	A
53	B5	2849	C
53	B5	2850	G
53	B5	2852	C
53	B5	2853	A
53	B5	2860	U
53	B5	2863	G
53	B5	2864	A
53	B5	2865	U
53	B5	2866	U
53	B5	2867	C
53	B5	2868	U
53	B5	2872	A
53	B5	2874	G
53	B5	2875	U
53	B5	2877	G
53	B5	2882	U
53	B5	2887	A
53	B5	2888	U
53	B5	2899	C
53	B5	2902	A
53	B5	2904	U
53	B5	2905	U
53	B5	2910	A

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Mol	Chain	Res	Type
53	B5	2914	G
53	B5	2915	U
53	B5	2919	A
53	B5	2921	U
53	B5	2931	C
53	B5	2936	A
53	B5	2941	A
53	B5	2942	C
53	B5	2943	G
53	B5	2944	U
53	B5	2945	G
53	B5	2947	G
53	B5	2953	U
53	B5	2962	U
53	B5	2965	U
53	B5	2975	U
53	B5	2978	U
53	B5	2980	U
53	B5	2981	U
53	B5	2988	C
53	B5	2989	U
53	B5	2996	U
53	B5	2997	G
53	B5	3001	C
53	B5	3002	C
53	B5	3004	C
53	B5	3010	U
53	B5	3012	A
53	B5	3019	U
53	B5	3028	G
53	B5	3030	G
53	B5	3034	C
53	B5	3040	A
53	B5	3046	A
53	B5	3048	A
53	B5	3049	A
53	B5	3050	U
53	B5	3051	U
53	B5	3052	G
53	B5	3055	U
53	B5	3056	U
53	B5	3057	U

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Mol	Chain	Res	Type
53	B5	3058	U
53	B5	3061	G
53	B5	3062	G
53	B5	3081	C
53	B5	3083	G
53	B5	3084	C
53	B5	3086	A
53	B5	3088	G
53	B5	3100	U
53	B5	3112	G
53	B5	3113	A
53	B5	3114	A
53	B5	3116	G
53	B5	3120	C
53	B5	3121	U
53	B5	3122	A
53	B5	3123	A
53	B5	3124	G
53	B5	3126	C
53	B5	3134	A
53	B5	3136	G
53	B5	3139	A
53	B5	3140	G
53	B5	3141	A
53	B5	3142	A
53	B5	3143	C
53	B5	3144	G
53	B5	3149	G
53	B5	3151	U
53	B5	3152	U
53	B5	3154	C
53	B5	3158	G
53	B5	3159	C
53	B5	3160	U
53	B5	3161	C
53	B5	3162	C
53	B5	3165	A
53	B5	3166	C
53	B5	3167	A
53	B5	3170	A
53	B5	3171	U
53	B5	3174	A

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Mol	Chain	Res	Type
53	B5	3175	C
53	B5	3176	C
53	B5	3182	U
53	B5	3183	A
53	B5	3184	U
53	B5	3186	A
53	B5	3188	G
53	B5	3198	U
53	B5	3199	G
53	B5	3200	G
53	B5	3205	U
53	B5	3206	A
53	B5	3208	C
53	B5	3211	U
53	B5	3216	U
53	B5	3217	A
53	B5	3220	G
53	B5	3229	G
53	B5	3230	G
53	B5	3235	C
53	B5	3243	A
53	B5	3245	A
53	B5	3246	G
53	B5	3247	G
53	B5	3248	C
53	B5	3249	C
53	B5	3252	G
53	B5	3253	G
53	B5	3259	U
53	B5	3266	G
53	B5	3267	U
53	B5	3277	C
53	B5	3290	G
53	B5	3295	A
53	B5	3296	A
53	B5	3298	C
53	B5	3304	U
53	B5	3305	A
53	B5	3306	U
53	B5	3307	A
53	B5	3317	U
53	B5	3320	A

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Mol	Chain	Res	Type
53	B5	3325	G
53	B5	3326	G
53	B5	3327	G
53	B5	3328	G
53	B5	3330	A
53	B5	3331	U
53	B5	3332	U
53	B5	3333	G
53	B5	3334	U
53	B5	3337	G
53	B5	3338	C
53	B5	3354	U
53	B5	3355	U
53	B5	3364	C
53	B5	3368	U
53	B5	3369	G
53	B5	3374	U
53	B5	3385	U
53	B5	3386	G
53	B5	3389	U
53	B5	3391	A
53	B5	3395	G
53	B5	3396	U

All (235) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	2	A
1	AA	42	G
1	AA	47	A
1	AA	56	U
1	AA	60	U
1	AA	66	U
1	AA	109	G
1	AA	175	G
1	AA	199	G
1	AA	212	U
1	AA	229	U
1	AA	312	A
1	AA	350	U
1	AA	365	G
1	AA	400	A

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Mol	Chain	Res	Type
1	AA	438	A
1	AA	444	C
1	AA	461	G
1	AA	478	A
1	AA	502	U
1	AA	578	U
1	AA	652	G
1	AA	748	U
1	AA	759	U
1	AA	770	A
1	AA	796	A
1	AA	852	C
1	AA	857	U
1	AA	864	U
1	AA	922	A
1	AA	1049	U
1	AA	1055	U
1	AA	1090	A
1	AA	1098	G
1	AA	1133	U
1	AA	1134	A
1	AA	1159	U
1	AA	1181	U
1	AA	1192	A
1	AA	1196	G
1	AA	1199	A
1	AA	1216	C
1	AA	1240	A
1	AA	1241	G
1	AA	1265	U
1	AA	1281	C
1	AA	1318	A
1	AA	1328	A
1	AA	1341	A
1	AA	1378	U
1	AA	1429	U
1	AA	1457	C
1	AA	1478	G
1	AA	1488	C
1	AA	1520	U
1	AA	1521	G
1	AA	1535	C

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Mol	Chain	Res	Type
1	AA	1545	A
1	AA	1546	G
1	AA	1547	C
1	AA	1560	G
1	AA	1566	C
1	AA	1579	C
1	AA	1583	U
1	AA	1584	A
1	AA	1612	A
1	AA	1632	C
1	AA	1634	C
1	AA	1635	C
1	AA	1636	G
1	AA	1639	C
1	AA	1654	U
1	AA	1655	U
1	AA	1675	C
1	AA	1759	U
1	AA	1766	G
1	AA	1779	A
1	AA	1789	A
1	AA	1790	G
19	A7	10	2MG
19	A7	22	G
19	A7	41	U
51	B3	23	A
51	B3	70	A
51	B3	89	A
51	B3	91	C
52	B4	19	C
52	B4	21	C
52	B4	57	C
52	B4	60	U
52	B4	61	A
52	B4	69	U
52	B4	71	G
52	B4	102	U
52	B4	106	C
52	B4	152	G
53	B5	114	A
53	B5	119	U
53	B5	133	U

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Mol	Chain	Res	Type
53	B5	134	U
53	B5	210	U
53	B5	215	G
53	B5	239	G
53	B5	250	U
53	B5	251	G
53	B5	267	G
53	B5	277	G
53	B5	279	U
53	B5	355	A
53	B5	372	A
53	B5	374	A
53	B5	397	A
53	B5	475	G
53	B5	477	A
53	B5	481	U
53	B5	554	A
53	B5	596	U
53	B5	620	U
53	B5	621	A
53	B5	638	C
53	B5	677	A
53	B5	705	A
53	B5	711	A
53	B5	712	G
53	B5	714	G
53	B5	715	A
53	B5	735	A
53	B5	742	G
53	B5	786	A
53	B5	801	A
53	B5	860	G
53	B5	914	A
53	B5	932	U
53	B5	970	A
53	B5	977	U
53	B5	979	G
53	B5	1033	U
53	B5	1079	A
53	B5	1084	A
53	B5	1163	A
53	B5	1181	U

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Mol	Chain	Res	Type
53	B5	1200	A
53	B5	1235	U
53	B5	1240	A
53	B5	1244	A
53	B5	1258	U
53	B5	1263	A
53	B5	1302	A
53	B5	1303	A
53	B5	1318	A
53	B5	1331	U
53	B5	1347	U
53	B5	1390	A
53	B5	1514	G
53	B5	1549	U
53	B5	1553	U
53	B5	1582	C
53	B5	1583	A
53	B5	1590	G
53	B5	1623	G
53	B5	1626	U
53	B5	1643	A
53	B5	1648	A
53	B5	1654	A
53	B5	1666	G
53	B5	1720	U
53	B5	1721	U
53	B5	1737	U
53	B5	1776	G
53	B5	1818	U
53	B5	1842	A
53	B5	1900	A
53	B5	1925	U
53	B5	1947	G
53	B5	2138	A
53	B5	2174	G
53	B5	2177	G
53	B5	2214	A
53	B5	2219	A
53	B5	2224	A
53	B5	2225	U
53	B5	2229	A
53	B5	2283	G

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Mol	Chain	Res	Type
53	B5	2286	U
53	B5	2297	U
53	B5	2314	U
53	B5	2360	C
53	B5	2373	A
53	B5	2459	A
53	B5	2468	A
53	B5	2469	G
53	B5	2474	G
53	B5	2477	G
53	B5	2520	A
53	B5	2538	U
53	B5	2569	A
53	B5	2571	U
53	B5	2618	G
53	B5	2644	C
53	B5	2651	G
53	B5	2654	C
53	B5	2677	G
53	B5	2705	A
53	B5	2714	G
53	B5	2778	G
53	B5	2787	G
53	B5	2796	G
53	B5	2830	G
53	B5	2837	A
53	B5	2875	U
53	B5	2913	C
53	B5	2941	A
53	B5	2988	C
53	B5	3039	C
53	B5	3045	G
53	B5	3049	A
53	B5	3051	U
53	B5	3077	A
53	B5	3083	G
53	B5	3110	C
53	B5	3113	A
53	B5	3121	U
53	B5	3138	U
53	B5	3141	A
53	B5	3142	A

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Mol	Chain	Res	Type
53	B5	3143	C
53	B5	3160	U
53	B5	3195	U
53	B5	3219	U
53	B5	3246	G
53	B5	3304	U
53	B5	3313	U
53	B5	3330	A
53	B5	3384	U
53	B5	3385	U

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

14 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	$\#\|Z\| > 2$
19	5MC	A7	40	19	18,22,23	1.61	4 (22%)	26,32,35	2.38	12 (46%)
19	5MU	A7	54	19	19,22,23	1.37	2 (10%)	28,32,35	2.50	11 (39%)
19	YYG	A7	37	19	31,42,43	1.76	6 (19%)	33,62,65	3.51	12 (36%)
19	2MG	A7	10	19	18,26,27	1.75	7 (38%)	16,38,41	1.57	3 (18%)
19	PSU	A7	39	19	18,21,22	1.64	6 (33%)	22,30,33	1.77	6 (27%)
19	5MC	A7	49	19	18,22,23	1.03	1 (5%)	26,32,35	2.23	12 (46%)
19	H2U	A7	16	19	18,21,22	1.93	4 (22%)	21,30,33	1.82	6 (28%)
19	M2G	A7	26	19	20,27,28	2.10	6 (30%)	22,40,43	1.96	9 (40%)
19	OMG	A7	34	19	18,26,27	1.56	4 (22%)	19,38,41	1.43	3 (15%)
19	H2U	A7	17	19	18,21,22	2.55	7 (38%)	21,30,33	2.56	5 (23%)
19	OMC	A7	32	19	19,22,23	1.39	3 (15%)	26,31,34	1.95	8 (30%)
19	PSU	A7	55	19	18,21,22	1.72	3 (16%)	22,30,33	1.40	2 (9%)
19	7MG	A7	46	19	22,26,27	2.07	3 (13%)	29,39,42	2.46	10 (34%)
19	1MA	A7	58	19	16,25,26	1.44	3 (18%)	18,37,40	1.62	4 (22%)

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
19	5MC	A7	40	19	-	2/7/25/26	0/2/2/2
19	5MU	A7	54	19	-	0/7/25/26	0/2/2/2
19	YYG	A7	37	19	-	9/20/42/43	0/3/4/4
19	2MG	A7	10	19	-	0/5/27/28	0/3/3/3
19	PSU	A7	39	19	-	3/7/25/26	0/2/2/2
19	5MC	A7	49	19	-	0/7/25/26	0/2/2/2
19	H2U	A7	16	19	-	0/7/38/39	0/2/2/2
19	M2G	A7	26	19	-	0/7/29/30	0/3/3/3
19	OMG	A7	34	19	-	0/5/27/28	0/3/3/3
19	H2U	A7	17	19	-	0/7/38/39	0/2/2/2
19	OMC	A7	32	19	-	0/9/27/28	0/2/2/2
19	PSU	A7	55	19	-	1/7/25/26	0/2/2/2
19	7MG	A7	46	19	-	2/7/37/38	0/3/3/3
19	1MA	A7	58	19	-	0/3/25/26	0/3/3/3

All (59) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	46	7MG	C8-N9	-7.83	1.41	1.46
19	A7	17	H2U	C2-N3	-6.18	1.26	1.38
19	A7	17	H2U	C4-N3	-5.65	1.28	1.37
19	A7	26	M2G	C2-N3	4.82	1.36	1.30
19	A7	16	H2U	C2-N1	4.61	1.42	1.35
19	A7	37	YYG	C2-N1	-4.03	1.29	1.37
19	A7	34	OMG	C3'-C2'	3.84	1.61	1.52
19	A7	16	H2U	C2-N3	-3.82	1.31	1.38
19	A7	54	5MU	C6-N1	3.60	1.44	1.38
19	A7	55	PSU	C4-N3	-3.55	1.32	1.38
19	A7	26	M2G	O4'-C1'	-3.54	1.36	1.41
19	A7	17	H2U	C1'-N1	3.53	1.53	1.46
19	A7	40	5MC	C6-C5	3.45	1.40	1.34
19	A7	16	H2U	C4-N3	-3.42	1.31	1.37
19	A7	39	PSU	C6-N1	-3.38	1.30	1.36
19	A7	37	YYG	C4-N9	3.31	1.44	1.37
19	A7	40	5MC	C4-N3	-3.27	1.28	1.34
19	A7	26	M2G	C8-N7	-3.24	1.29	1.35
19	A7	26	M2G	C5-C6	-3.20	1.40	1.47
19	A7	37	YYG	C2'-C1'	-3.19	1.48	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	A7	34	OMG	O4'-C1'	-3.16	1.36	1.41
19	A7	32	OMC	O2'-C2'	-3.13	1.34	1.42
19	A7	58	1MA	CM1-N1	3.09	1.53	1.46
19	A7	49	5MC	CM5-C5	2.97	1.58	1.50
19	A7	46	7MG	C5-N7	2.96	1.39	1.35
19	A7	55	PSU	C6-N1	-2.95	1.31	1.36
19	A7	39	PSU	O2'-C2'	-2.94	1.36	1.43
19	A7	10	2MG	C5-C4	-2.89	1.35	1.43
19	A7	10	2MG	O2'-C2'	-2.89	1.36	1.43
19	A7	55	PSU	C6-C5	-2.76	1.32	1.35
19	A7	39	PSU	O4'-C1'	-2.66	1.40	1.43
19	A7	17	H2U	C2-N1	2.63	1.39	1.35
19	A7	10	2MG	C2'-C3'	2.62	1.60	1.53
19	A7	58	1MA	C2-N3	2.62	1.32	1.29
19	A7	37	YYG	C4-N3	-2.61	1.35	1.40
19	A7	17	H2U	C6-N1	2.59	1.51	1.47
19	A7	17	H2U	O4'-C4'	-2.58	1.39	1.45
19	A7	10	2MG	O4'-C1'	2.51	1.44	1.41
19	A7	26	M2G	C5'-C4'	2.48	1.59	1.51
19	A7	46	7MG	O5'-C5'	-2.46	1.38	1.44
19	A7	10	2MG	C8-N7	-2.45	1.30	1.35
19	A7	54	5MU	C6-C5	2.43	1.38	1.34
19	A7	32	OMC	O5'-C5'	-2.40	1.38	1.44
19	A7	37	YYG	C14-C15	2.40	1.59	1.53
19	A7	37	YYG	O4'-C1'	2.40	1.44	1.41
19	A7	39	PSU	O4'-C4'	-2.37	1.39	1.45
19	A7	58	1MA	C6-N6	2.31	1.33	1.27
19	A7	16	H2U	O5'-C5'	-2.27	1.39	1.44
19	A7	26	M2G	O5'-C5'	2.25	1.50	1.44
19	A7	40	5MC	O4'-C1'	2.23	1.47	1.42
19	A7	10	2MG	C2-N1	-2.18	1.33	1.36
19	A7	40	5MC	C2'-C1'	-2.13	1.46	1.53
19	A7	10	2MG	C4-N3	-2.10	1.32	1.37
19	A7	17	H2U	C2'-C1'	-2.07	1.46	1.53
19	A7	34	OMG	O5'-C5'	-2.05	1.39	1.44
19	A7	34	OMG	C8-N7	-2.05	1.31	1.35
19	A7	39	PSU	C4-N3	-2.03	1.35	1.38
19	A7	39	PSU	C2-N1	-2.01	1.34	1.36
19	A7	32	OMC	O4'-C1'	2.01	1.46	1.42

All (103) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	37	YYG	C11-C12-N1	-13.78	98.76	106.53
19	A7	17	H2U	N3-C2-N1	8.86	126.03	116.65
19	A7	54	5MU	C6-C5-C4	6.71	123.64	118.03
19	A7	40	5MC	C5-C6-N1	-6.70	116.45	123.34
19	A7	37	YYG	C24-O23-C21	6.65	123.52	115.66
19	A7	54	5MU	C5-C6-N1	-6.37	116.79	123.34
19	A7	46	7MG	N9-C8-N7	6.08	112.07	103.38
19	A7	37	YYG	C3-N3-C4	5.75	126.91	116.71
19	A7	46	7MG	N1-C2-N3	5.25	133.12	123.32
19	A7	16	H2U	N3-C2-N1	5.04	121.98	116.65
19	A7	37	YYG	C15-N20-C21	5.02	133.14	120.90
19	A7	46	7MG	C4-C5-N7	4.70	112.06	105.53
19	A7	49	5MC	C5-C6-N1	-4.51	118.70	123.34
19	A7	32	OMC	O2-C2-N3	-4.45	115.08	122.33
19	A7	55	PSU	O2'-C2'-C1'	-4.43	100.66	111.23
19	A7	37	YYG	C14-C15-C16	4.19	122.53	110.30
19	A7	49	5MC	C3'-C2'-C1'	4.17	109.34	101.43
19	A7	46	7MG	C6-C5-N7	-4.13	125.42	131.91
19	A7	17	H2U	O2-C2-N1	-4.06	118.01	123.11
19	A7	37	YYG	O23-C21-N20	4.03	117.88	110.80
19	A7	39	PSU	C4-N3-C2	-3.97	120.61	126.34
19	A7	46	7MG	C2-N1-C6	-3.97	117.85	125.10
19	A7	54	5MU	O2-C2-N3	-3.94	114.16	121.50
19	A7	40	5MC	N4-C4-N3	-3.86	111.44	118.48
19	A7	37	YYG	O23-C21-O22	-3.80	118.99	124.58
19	A7	46	7MG	CM7-N7-C5	3.76	136.12	126.40
19	A7	26	M2G	C3'-C2'-C1'	-3.72	95.38	100.98
19	A7	26	M2G	N1-C2-N2	3.72	121.20	118.04
19	A7	39	PSU	N1-C2-N3	3.55	119.15	115.13
19	A7	54	5MU	O2-C2-N1	3.47	127.39	122.79
19	A7	40	5MC	C4-N3-C2	-3.44	116.04	120.69
19	A7	40	5MC	CM5-C5-C6	-3.39	118.33	122.85
19	A7	32	OMC	N4-C4-N3	-3.39	112.02	117.97
19	A7	49	5MC	C2'-C3'-C4'	-3.28	96.27	102.64
19	A7	46	7MG	N2-C2-N3	-3.25	113.41	119.73
19	A7	49	5MC	C4'-O4'-C1'	3.22	116.58	109.47
19	A7	49	5MC	O4'-C1'-C2'	-3.21	99.64	106.64
19	A7	32	OMC	C4-N3-C2	-3.17	115.14	120.25
19	A7	39	PSU	O4'-C1'-C2'	3.10	109.52	105.14
19	A7	32	OMC	C1'-N1-C6	3.10	127.61	120.84
19	A7	17	H2U	O2-C2-N3	-3.09	115.75	121.50
19	A7	37	YYG	C19-O18-C16	3.08	122.90	115.94
19	A7	26	M2G	O6-C6-C5	3.05	130.34	124.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	40	5MC	C1'-N1-C6	-3.01	116.11	121.12
19	A7	16	H2U	O2'-C2'-C1'	-3.00	100.00	110.02
19	A7	32	OMC	N1-C2-N3	2.99	124.26	118.81
19	A7	40	5MC	O2-C2-N3	-2.96	117.51	122.33
19	A7	58	1MA	O4'-C1'-C2'	-2.95	102.61	106.93
19	A7	49	5MC	CM5-C5-C6	-2.95	118.91	122.85
19	A7	10	2MG	O6-C6-N1	-2.94	117.18	120.65
19	A7	54	5MU	C4'-O4'-C1'	-2.89	103.10	109.47
19	A7	17	H2U	C4-N3-C2	-2.87	123.42	125.79
19	A7	39	PSU	C6-C5-C4	2.84	120.19	118.20
19	A7	49	5MC	O2'-C2'-C1'	-2.81	100.61	110.02
19	A7	54	5MU	C5M-C5-C4	-2.81	115.68	118.77
19	A7	40	5MC	C4'-O4'-C1'	-2.81	103.28	109.47
19	A7	37	YYG	C3'-C2'-C1'	2.79	105.19	100.98
19	A7	58	1MA	CM1-N1-C6	-2.76	116.09	120.27
19	A7	10	2MG	CM2-N2-C2	2.74	129.93	123.86
19	A7	49	5MC	O3'-C3'-C4'	2.73	118.93	111.05
19	A7	46	7MG	O4'-C1'-N9	2.62	112.86	109.30
19	A7	26	M2G	CM2-N2-C2	2.60	125.99	120.55
19	A7	54	5MU	N3-C2-N1	2.58	118.31	114.89
19	A7	49	5MC	O2-C2-N3	-2.57	118.14	122.33
19	A7	49	5MC	O5'-C5'-C4'	2.55	117.65	108.99
19	A7	54	5MU	O4'-C4'-C3'	2.52	110.10	105.11
19	A7	16	H2U	C5-C4-N3	2.51	119.47	116.65
19	A7	40	5MC	N1-C2-N3	2.51	123.38	118.81
19	A7	32	OMC	C6-N1-C2	-2.50	116.15	120.49
19	A7	26	M2G	O6-C6-N1	-2.50	117.70	120.65
19	A7	34	OMG	C2'-C3'-C4'	-2.49	96.59	101.99
19	A7	39	PSU	O4-C4-N3	-2.47	115.39	120.12
19	A7	37	YYG	C4-N3-C2	-2.46	114.68	122.15
19	A7	40	5MC	C2'-C3'-C4'	-2.44	97.91	102.64
19	A7	54	5MU	O4'-C4'-C5'	2.43	117.38	109.37
19	A7	55	PSU	C2'-C3'-C4'	-2.43	97.92	102.64
19	A7	58	1MA	CM1-N1-C2	2.43	125.66	120.55
19	A7	17	H2U	C3'-C2'-C1'	-2.42	96.82	101.43
19	A7	49	5MC	N4-C4-N3	-2.42	114.06	118.48
19	A7	49	5MC	C5-C4-N4	2.42	125.09	121.48
19	A7	58	1MA	O2'-C2'-C1'	2.37	119.59	110.85
19	A7	40	5MC	O3'-C3'-C2'	-2.36	104.18	111.82
19	A7	40	5MC	C1'-N1-C2	2.36	123.68	118.42
19	A7	54	5MU	O4'-C1'-C2'	2.35	111.76	106.64
19	A7	34	OMG	N2-C2-N3	-2.31	115.25	119.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	A7	16	H2U	O4'-C4'-C3'	2.30	109.67	105.11
19	A7	26	M2G	O3'-C3'-C4'	-2.30	104.41	111.05
19	A7	32	OMC	CM2-O2'-C2'	-2.26	108.59	114.52
19	A7	54	5MU	C4-N3-C2	-2.24	124.45	127.35
19	A7	32	OMC	C5-C4-N4	2.18	124.00	120.57
19	A7	16	H2U	O2-C2-N3	-2.15	117.49	121.50
19	A7	37	YYG	O3'-C3'-C4'	2.15	117.27	111.05
19	A7	37	YYG	C14-C15-N20	-2.12	106.58	110.88
19	A7	39	PSU	C5-C6-N1	-2.10	118.96	122.11
19	A7	10	2MG	C5'-C4'-C3'	-2.08	107.39	115.18
19	A7	34	OMG	C5-C6-N1	-2.08	110.29	113.95
19	A7	26	M2G	C8-N7-C5	-2.08	99.04	102.99
19	A7	16	H2U	O2-C2-N1	-2.07	120.51	123.11
19	A7	46	7MG	C5-C4-N9	2.07	109.03	106.35
19	A7	46	7MG	C5-C4-N3	-2.05	124.23	128.13
19	A7	40	5MC	C5-C4-N3	2.04	123.88	121.67
19	A7	26	M2G	C2-N1-C6	2.04	127.11	123.71
19	A7	26	M2G	CM2-N2-CM1	-2.03	109.48	115.77

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
19	A7	39	PSU	O4'-C1'-C5-C4
19	A7	39	PSU	O4'-C1'-C5-C6
19	A7	40	5MC	O4'-C4'-C5'-O5'
19	A7	37	YYG	N20-C15-C16-O18
19	A7	37	YYG	N20-C15-C16-O17
19	A7	37	YYG	C12-C13-C14-C15
19	A7	40	5MC	C3'-C4'-C5'-O5'
19	A7	55	PSU	O4'-C1'-C5-C4
19	A7	37	YYG	C14-C15-C16-O18
19	A7	37	YYG	O23-C21-N20-C15
19	A7	37	YYG	O4'-C4'-C5'-O5'
19	A7	39	PSU	O4'-C4'-C5'-O5'
19	A7	37	YYG	O22-C21-N20-C15
19	A7	37	YYG	C14-C15-C16-O17
19	A7	46	7MG	O4'-C1'-N9-C8
19	A7	46	7MG	C2'-C1'-N9-C8
19	A7	37	YYG	C14-C15-N20-C21

There are no ring outliers.

3 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
19	A7	40	5MC	3	0
19	A7	37	YYG	1	0
19	A7	10	2MG	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
7	AH	1
18	AT	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AH	32:LYS	C	33:VAL	N	2.59
1	AT	78:LYS	C	79:LEU	N	2.49

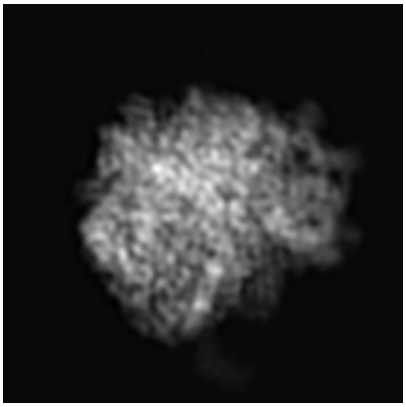
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1345. These allow visual inspection of the internal detail of the map and identification of artifacts.

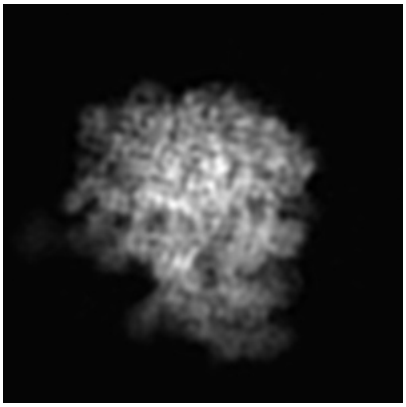
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

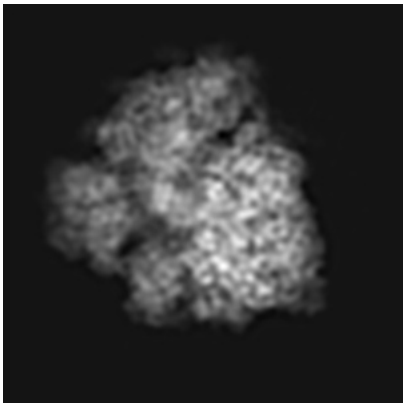
6.1.1 Primary map



X



Y

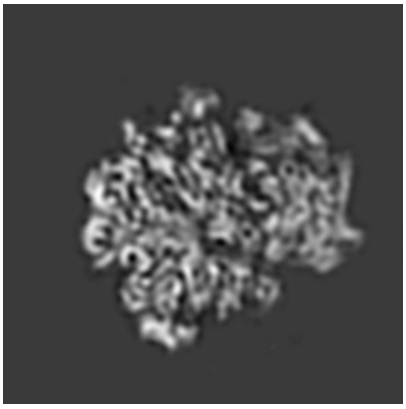


Z

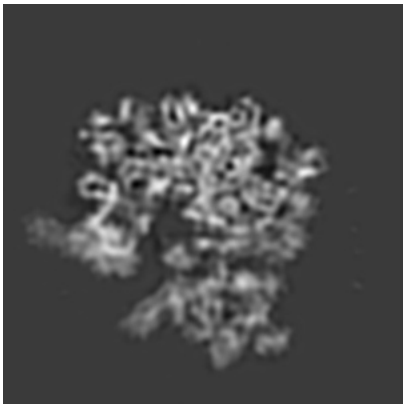
The images above show the map projected in three orthogonal directions.

6.2 Central slices

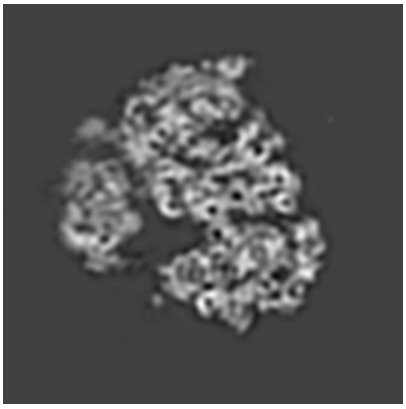
6.2.1 Primary map



X Index: 102



Y Index: 102

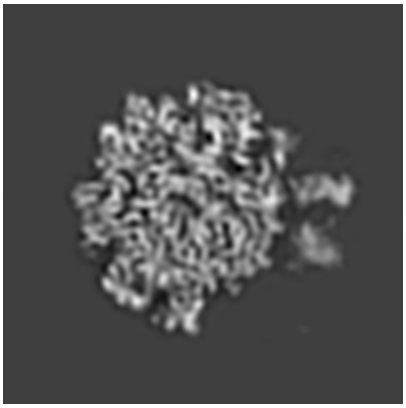


Z Index: 102

The images above show central slices of the map in three orthogonal directions.

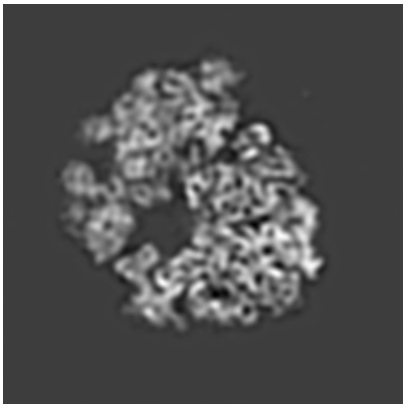
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 123

Y Index: 72

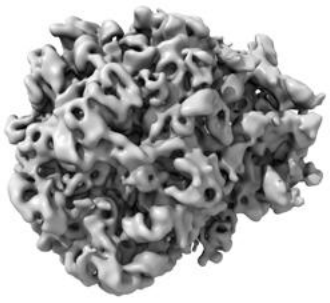


Z Index: 95

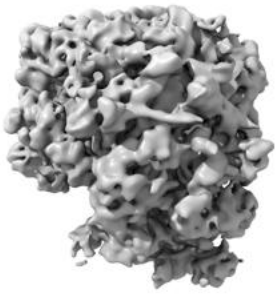
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

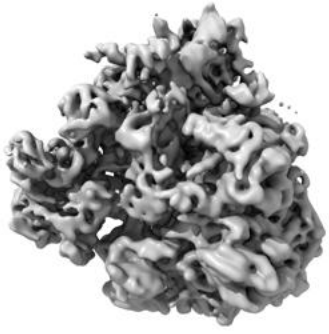
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 70.4. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

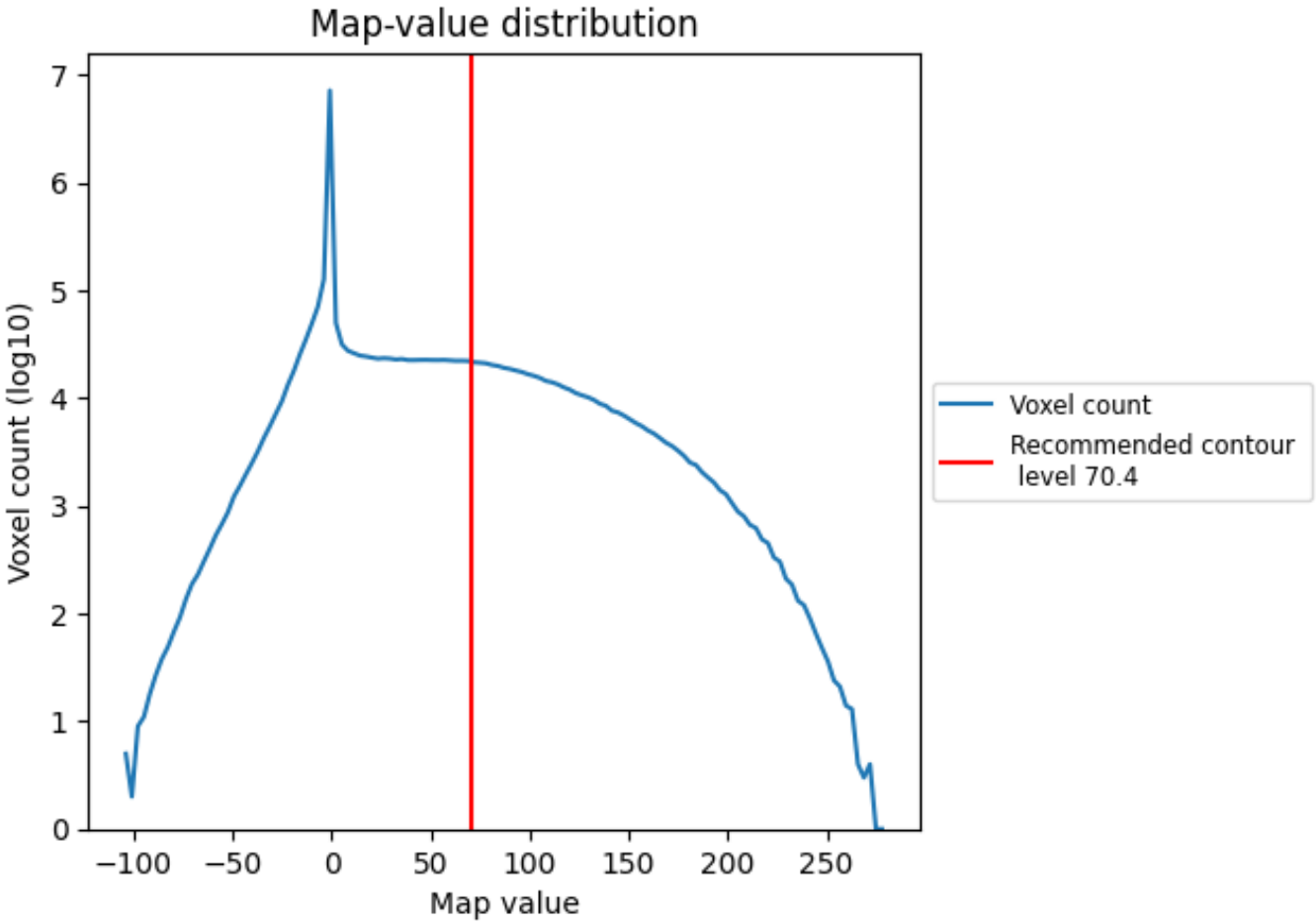
6.5 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

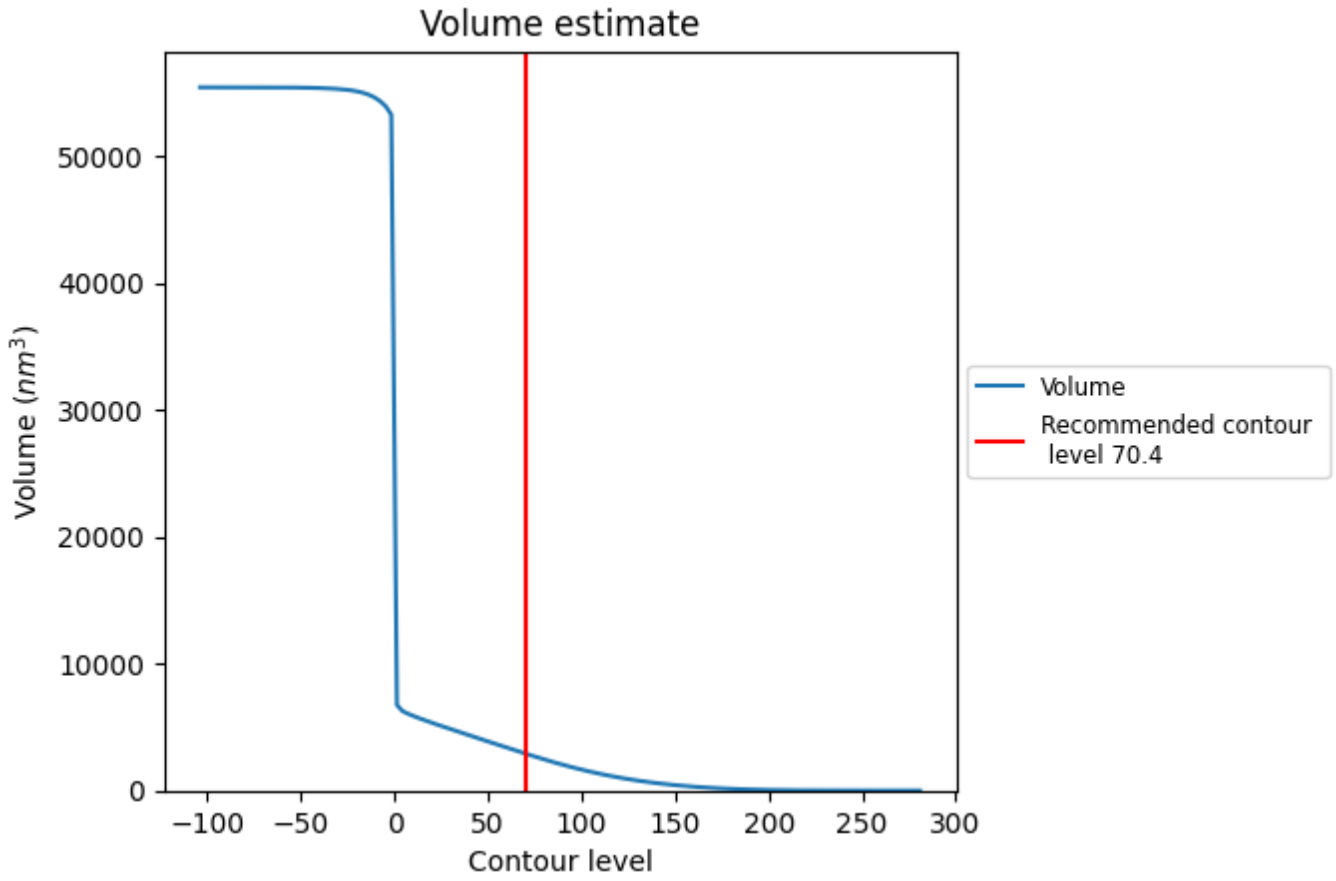
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

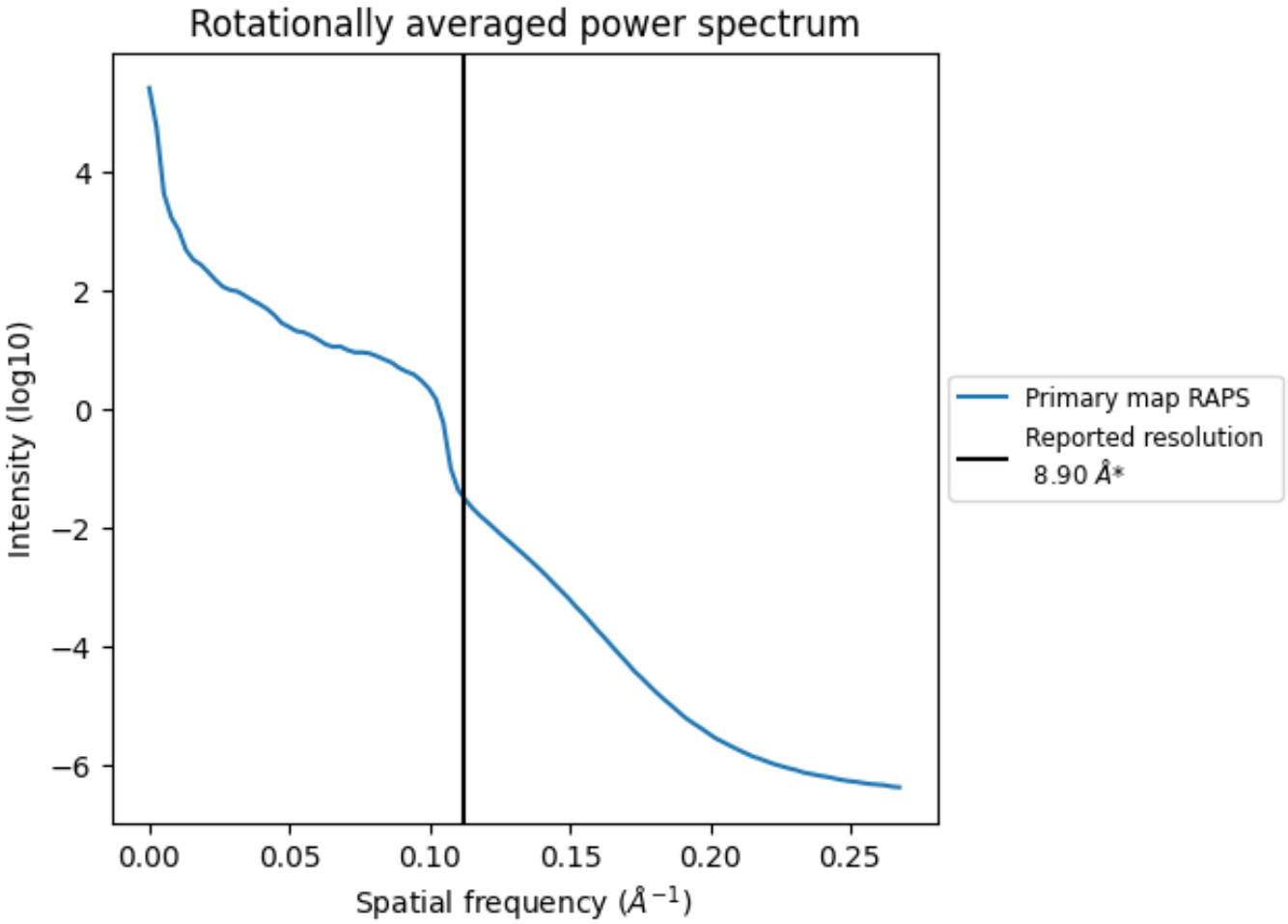
7.2 Volume estimate



The volume at the recommended contour level is 2899 nm^3; this corresponds to an approximate mass of 2619 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.112 Å^{-1}

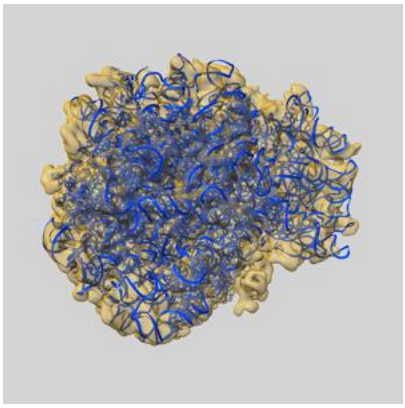
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

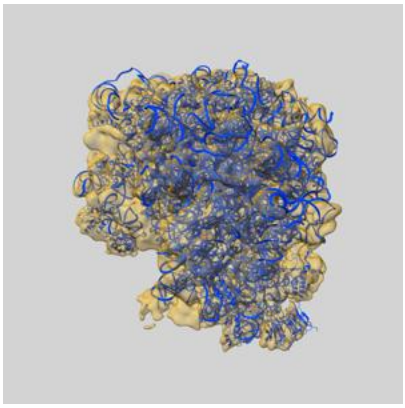
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1345 and PDB model 4V7H. Per-residue inclusion information can be found in section 3 on page 13.

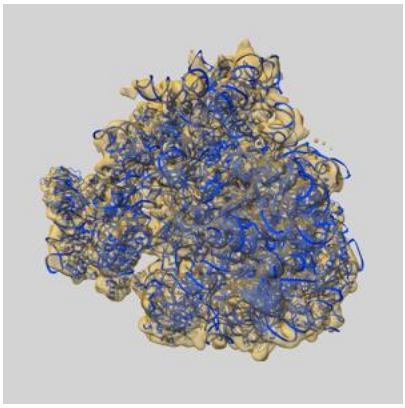
9.1 Map-model overlay



X



Y



Z

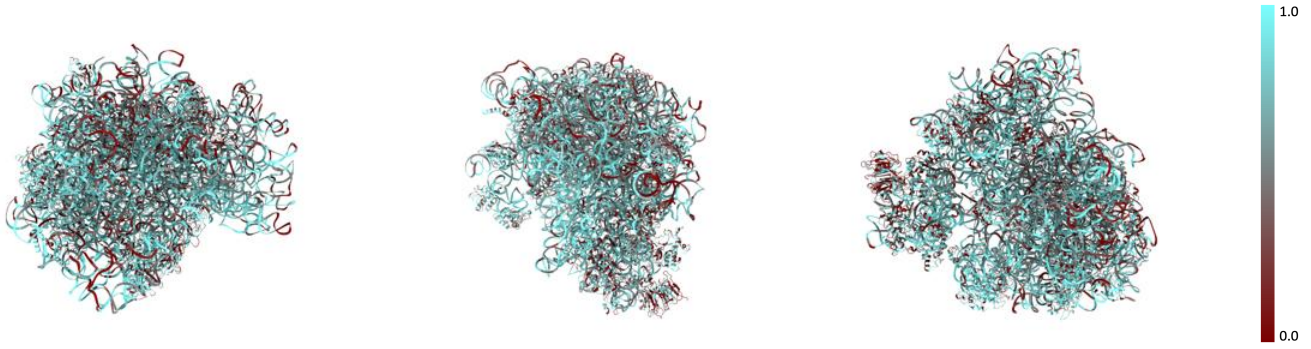
The images above show the 3D surface view of the map at the recommended contour level 70.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model

X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

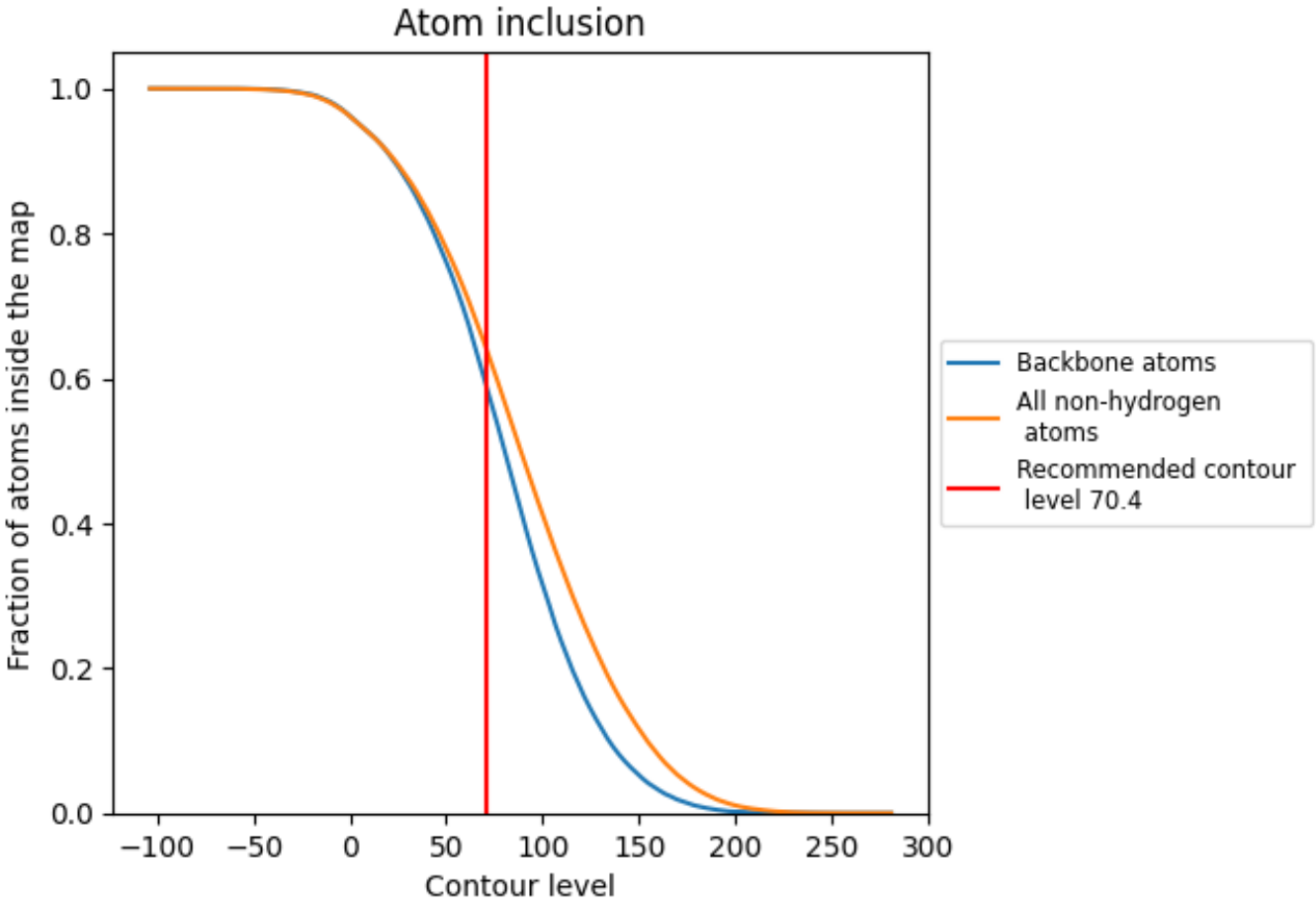
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (70.4).

9.4 Atom inclusion (i)



At the recommended contour level, 59% of all backbone atoms, 64% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (70.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6438	0.0590
A7	0.6250	0.0690
AA	0.7147	0.0810
AB	0.5863	0.0440
AC	0.4373	0.0790
AD	0.6272	0.0740
AE	0.4932	0.0380
AG	0.5127	0.0470
AH	0.4521	0.0510
AI	0.4307	0.0380
AJ	0.4365	0.0600
AK	0.5067	0.0250
AL	0.4451	0.0330
AM	0.6323	0.0330
AN	0.5586	0.0070
AO	0.3761	0.0450
AQ	0.4541	0.0400
AR	0.3516	0.0550
AS	0.5709	0.0410
AT	0.4883	0.0450
B0	0.4679	0.0460
B1	0.5211	0.0470
B2	0.6662	0.0540
B3	0.7915	0.0860
B4	0.5149	0.0090
B5	0.6860	0.0610
B8	0.6475	0.0680
B9	0.4464	0.0210
BA	0.5855	0.0200
BB	0.4575	0.0210
BC	0.5453	0.0230
BD	0.6213	0.0550
BE	0.7260	0.0290
BF	0.5322	0.0470
BG	0.6527	0.0250

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Chain	Atom inclusion	Q-score
BH	0.5830	0.0570
BI	0.4173	0.0070
BJ	0.7084	0.0700
BK	0.5706	0.0460
BL	0.5068	0.0290
BM	0.5467	0.0580
BN	0.5853	0.0310
BO	0.6282	0.0600
BP	0.6033	0.0800
BQ	0.5989	0.0300
BR	0.3652	0.0500
BS	0.5490	0.0290
BT	0.5166	0.0780
BU	0.6367	0.0850
BV	0.5748	0.0340
BW	0.7116	0.0670
BX	0.5117	0.0720
BY	0.5077	-0.0070
BZ	0.5466	0.0380