Full wwPDB EM Validation Report

Nov 19, 2022 – 02:42 PM EST

PDB ID	:	4V71
EMDB ID	:	EMD-1717
Title	:	E. coli 70S-fMetVal-tRNAVal-tRNAfMet complex in intermediate pre-translocation state (pre2)
Authors	:	Blau, C.; Bock, L.V.; Schroder, G.F.; Davydov, I.; Fischer, N.; Stark, H.; Rodnina, M.V.; Vaiana, A.C.; Grubmuller, H.
Deposited on	:	2013-10-14
Resolution	:	20.00 Å(reported)
Based on initial models	:	3I1O, 2WRI, 2HGP, 2K4C

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 (i) 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 (i)) were used in the production of this report:

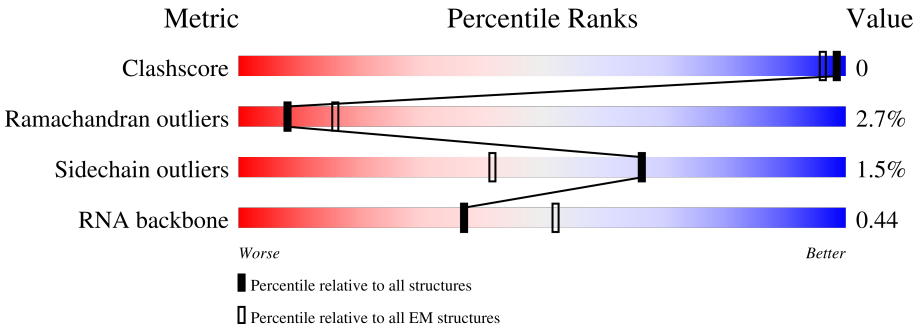
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al.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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 20.00 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	AB	220	56% 92% 7%
2	AC	208	36% 89% 11%
3	AD	206	49% 90% 9%
4	AE	152	16% 90% 10%
5	AF	101	28% 90% 10%
6	AG	152	53% 89% 11%
7	AH	130	22% 90% 9%

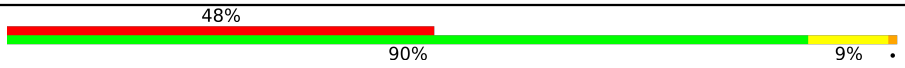
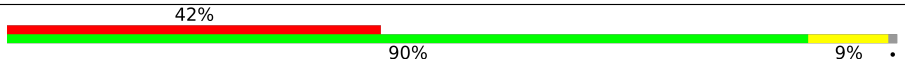
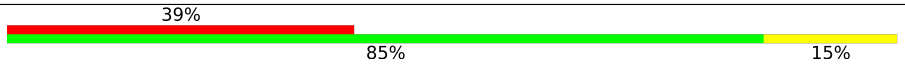
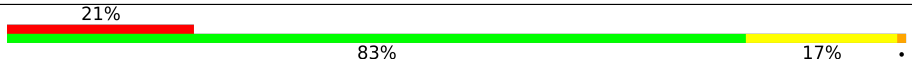
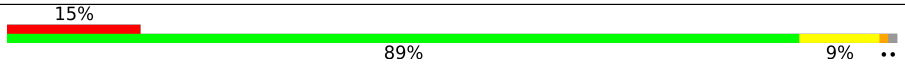
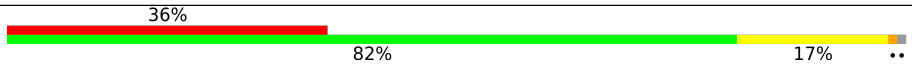
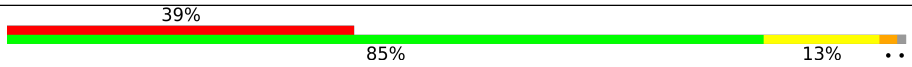
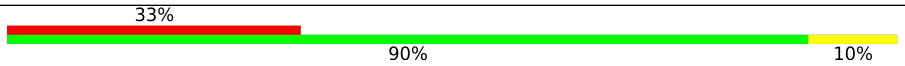
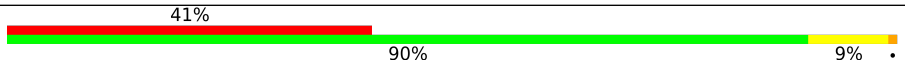
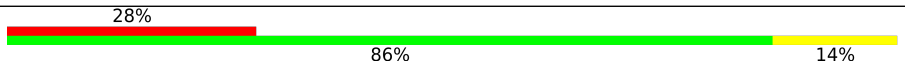
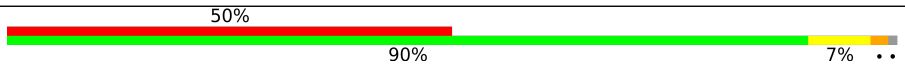
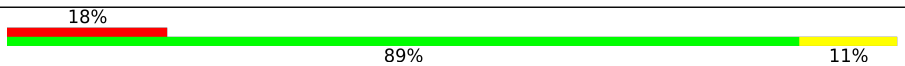
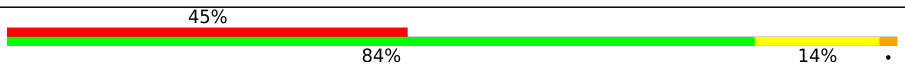
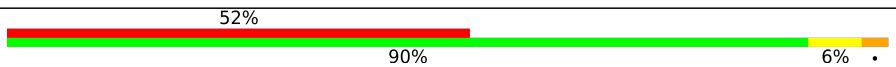
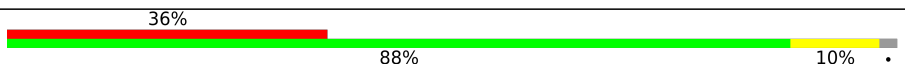
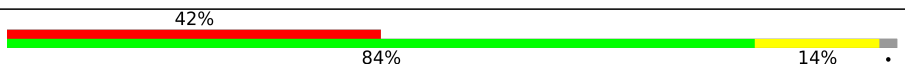
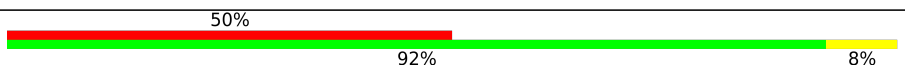
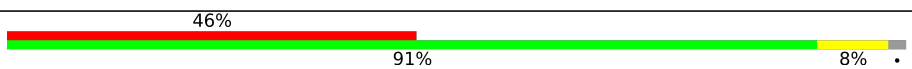
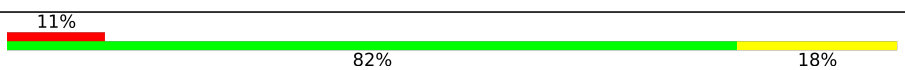
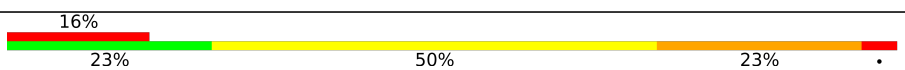
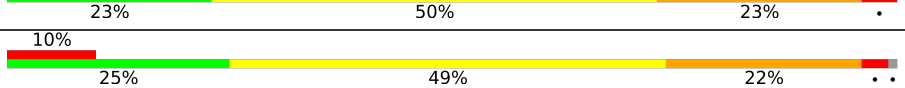
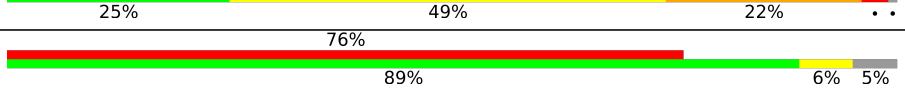
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
8	AI	128	36% 86% 12%
9	AJ	100	38% 85% 12%
10	AK	118	36% 86% 13%
11	AL	124	44% 87% 12%
12	AM	115	26% 85% 14%
13	AN	101	33% 88% 11%
14	AO	89	24% 87% 12%
15	AP	81	36% 85% 15%
16	AQ	82	39% 88% 12%
17	AR	57	44% 88% 12%
18	AS	81	26% 89% 9%
19	AT	86	16% 91% 9%
20	AU	53	49% 77% 23%
21	AA	1533	8% 25% 51% 20%
22	A1	76	50% 22% 46% 25% 7%
23	A2	15	33% 33% 33% 13% 20%
24	A3	77	22% 21% 55% 23%
25	BC	273	53% 88% 11%
26	BD	209	36% 89% 11%
27	BE	201	31% 92% 8%
28	BF	179	21% 88% 11%
29	BG	177	32% 92% 7%
30	BH	149	87% 95% 5%
31	BI	142	96% 95%
32	BJ	142	41% 89% 11%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
33	BK	123	
34	BL	144	
35	BM	136	
36	BN	121	
37	BO	117	
38	BP	115	
39	BQ	118	
40	BR	103	
41	BS	110	
42	BT	94	
43	BU	104	
44	BV	94	
45	BW	80	
46	BX	79	
47	BY	63	
48	BZ	59	
49	B0	57	
50	B1	52	
51	B2	46	
52	B3	65	
53	B4	38	
54	BA	2903	
55	BB	118	
56	B5	234	

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 147653 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 protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AB	220	Total	C	N	O	S	0	1
			1708	1083	306	312	7		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AB	7	ACE	-	acetylation	UNP P0A7V0
AB	226	NH2	-	amidation	UNP P0A7V0

- Molecule 2 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AC	207	Total	C	N	O	S	0	1
			1625	1028	306	288	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AC	207	NH2	-	amidation	UNP P0A7V3

- Molecule 3 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AD	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 4 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AE	152	Total	C	N	O	S	0	1
			1109	689	212	202	6		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AE	8	ACE	-	acetylation	UNP P0A7W1
AE	159	NH2	-	amidation	UNP P0A7W1

- Molecule 5 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AF	101	Total	C	N	O	S	0	1
			818	515	149	148	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AF	101	NH2	-	amidation	UNP P02358

- Molecule 6 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AG	152	Total	C	N	O	S	0	1
			1178	732	227	215	4		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AG	1	ACE	-	acetylation	UNP P02359
AG	152	NH2	-	amidation	UNP P02359

- Molecule 7 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AH	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 8 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AI	128	Total	C	N	O	S	0	0
			1025	636	206	180	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	2	ACE	-	acetylation	UNP P0A7X3

- Molecule 9 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AJ	100	Total	C	N	O	S	0	1
			790	495	151	143	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AJ	4	ACE	-	acetylation	UNP P0A7R5
AJ	103	NH2	-	amidation	UNP P0A7R5

- Molecule 10 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AK	118	Total	C	N	O	S	0	0
			880	542	174	161	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AK	11	ACE	-	acetylation	UNP P0A7R9

- Molecule 11 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 12 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AM	114	Total	C	N	O	S	0	1
			877	541	178	155	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AM	114	NH2	-	amidation	UNP P0A7S9

- Molecule 13 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AN	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 14 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 15 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AP	81	Total	C	N	O	S	0	1
			639	400	127	111	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AP	81	NH2	-	amidation	UNP P0A7T3

- Molecule 16 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AQ	82	Total	C	N	O	S	0	1
			652	413	122	114	3		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AQ	2	ACE	-	acetylation	UNP P0AG63
AQ	83	NH2	-	amidation	UNP P0AG63

- Molecule 17 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	AR	57	Total	C	N	O	0	1
			459	290	87	82		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AR	18	ACE	-	acetylation	UNP P0A7T7

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
AR	74	NH2	-	amidation	UNP P0A7T7

- Molecule 18 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AS	81	Total	C	N	O	S	0	1
			641	410	121	108	2		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AS	1	ACE	-	acetylation	UNP P0A7U3
AS	81	NH2	-	amidation	UNP P0A7U3

- Molecule 19 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AT	86	Total	C	N	O	S	0	0
			668	413	137	115	3		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AT	1	ACE	-	acetylation	UNP P0A7U7

- Molecule 20 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AU	53	Total	C	N	O	S	0	1
			429	267	87	74	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AU	2	ACE	-	acetylation	UNP P68679
AU	54	NH2	-	amidation	UNP P68679

- Molecule 21 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AA	1530	Total	C	N	O	P	0	0
			32828	14642	6024	10633	1529		

- Molecule 22 is a RNA chain called fMet-Val-tRNA-Val.

Mol	Chain	Residues	Atoms						AltConf	Trace
22	A1	76	Total	C	N	O	P	S	0	0
			1627	728	292	531	75	1		

- Molecule 23 is a RNA chain called 5'-R(*AP*CP*UP*AP*UP*GP*GP*UP*UP*UP*UP*UP*AP*UP*U)-3'.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	A2	15	Total	C	N	O	P	0	0
			309	140	46	109	14		

- Molecule 24 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						AltConf	Trace
24	A3	77	Total	C	N	O	P	S	0	0
			1642	734	297	534	76	1		

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BC	272	Total	C	N	O	S	0	1
			2083	1288	424	364	7		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BC	272	NH2	-	amidation	UNP P60422

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BD	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BE	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BF	178	Total	C	N	O	S	0	0
			1420	905	251	258	6		

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BG	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BH	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 31 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	BI	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 32 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BJ	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 33 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BK	123	Total	C	N	O	S	0	1
			939	587	181	165	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BK	123	NH2	-	amidation	UNP P0ADY3

- Molecule 34 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BL	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 35 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BM	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 36 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BN	121	Total	C	N	O	S	0	1
			961	593	197	166	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BN	121	NH2	-	amidation	UNP P0AG44

- Molecule 37 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
37	BO	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 38 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	BP	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 39 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
39	BQ	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 40 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	BR	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BS	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BT	94	Total	C	N	O	S	0	1
			739	466	140	131	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BT	94	NH2	-	amidation	UNP P0ADZ0

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	BU	103	Total	C	N	O	0	1
			780	492	147	141		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BU	103	NH2	-	amidation	UNP P60624

- Molecule 44 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	BV	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	BW	80	Total	C	N	O	S	0	0
			599	369	120	109	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BW	5	ACE	-	acetylation	UNP P0A7L8

- Molecule 46 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BX	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BX	-1	ACE	-	acetylation	UNP P0A7M2

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BY	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	BZ	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 49 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	B0	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

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

Mol	Chain	Residues	Atoms				AltConf	Trace
50	B1	52	Total	C	N	O	0	1
			413	265	76	72		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B1	2	ACE	-	acetylation	UNP P0A7N9
B1	53	NH2	-	amidation	UNP P0A7N9

- Molecule 51 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	B2	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 52 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	B3	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 53 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	B4	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 54 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BA	2903	Total	C	N	O	P	0	0
			62317	27801	11467	20147	2902		

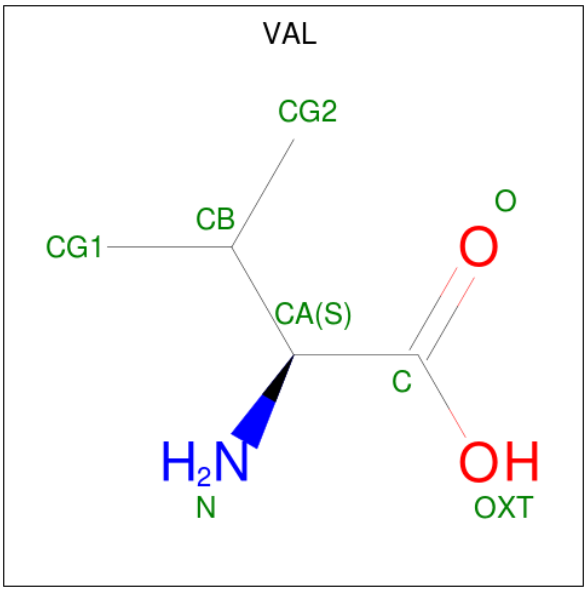
- Molecule 55 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	BB	117	Total	C	N	O	P	0	0
			2504	1116	459	813	116		

- Molecule 56 is a protein called 50S ribosomal protein L1.

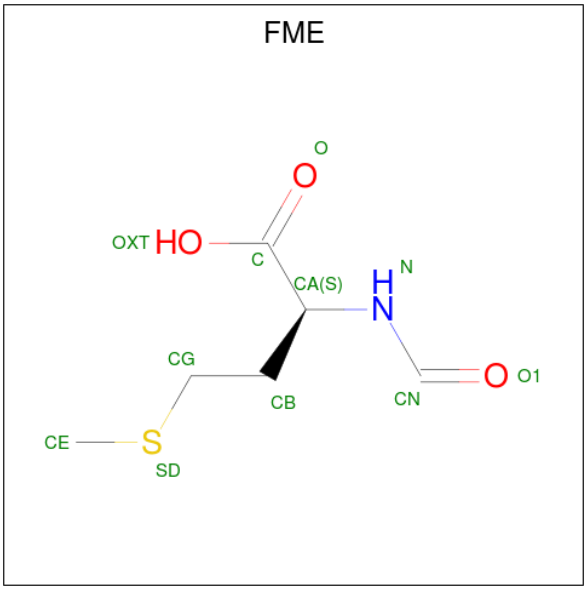
Mol	Chain	Residues	Atoms					AltConf	Trace
56	B5	223	Total	C	N	O	S	0	0
			1658	1038	302	312	6		

- Molecule 57 is VALINE (three-letter code: VAL) (formula: $C_5H_{11}NO_2$).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
57	A1	1	7	5	1	1	0

- Molecule 58 is N-FORMYLMETHIONINE (three-letter code: FME) (formula: $C_6H_{11}NO_3S$).



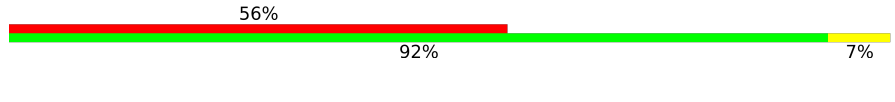
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	S	
58	A1	1	10	6	1	2	1	0

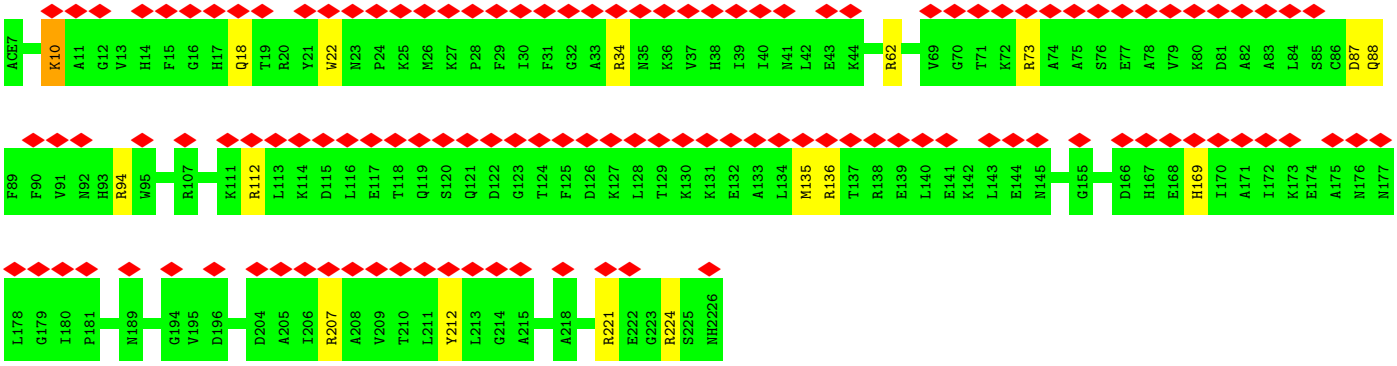
3 Residue-property plots (i)

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: 30S ribosomal protein S2

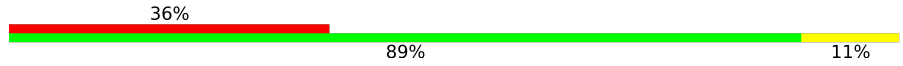
Chain AB:

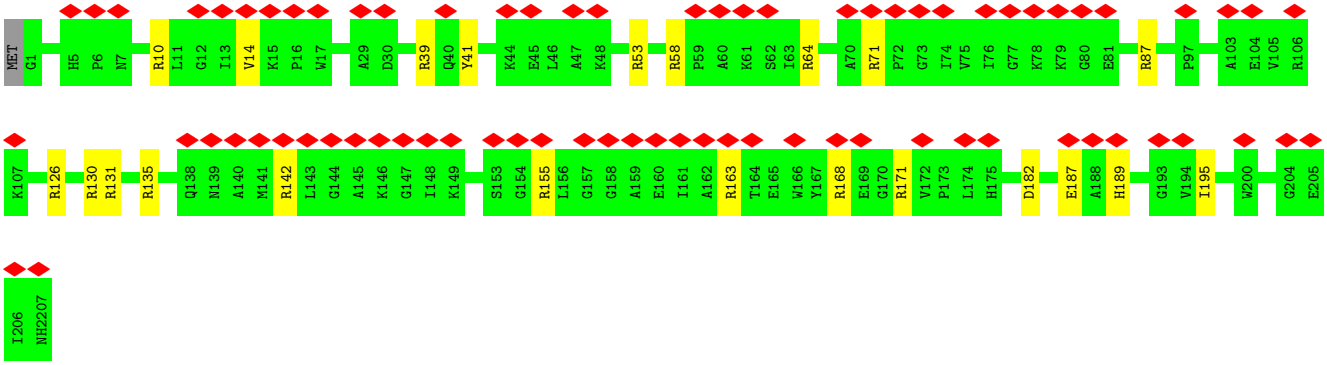




• Molecule 2: 30S ribosomal protein S3

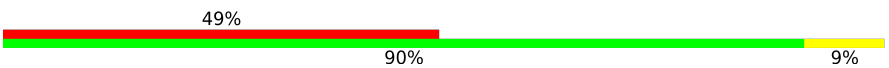
Chain AC:

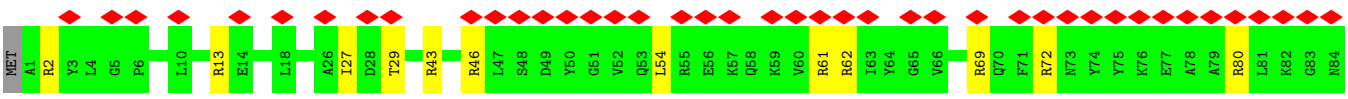


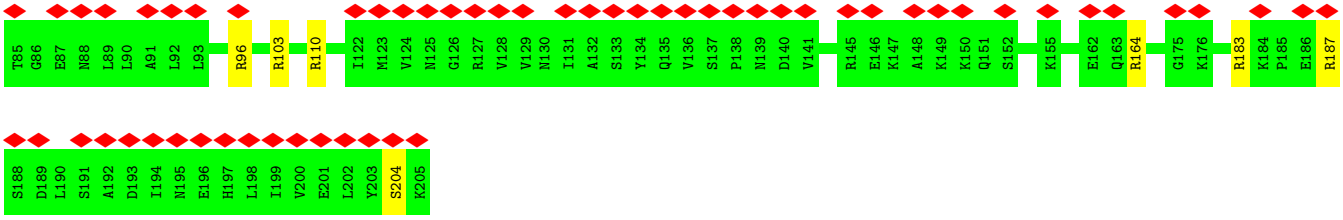


• Molecule 3: 30S ribosomal protein S4

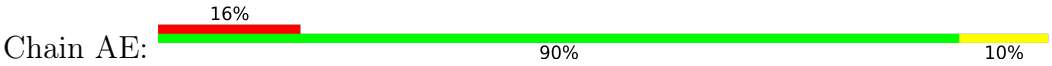
Chain AD:

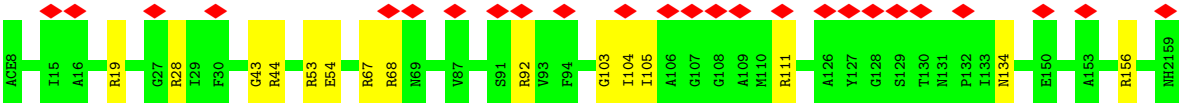




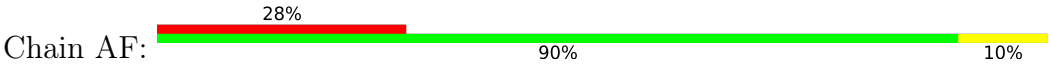


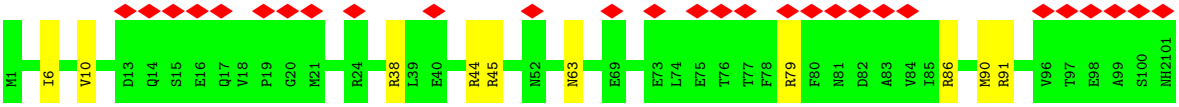
• Molecule 4: 30S ribosomal protein S5



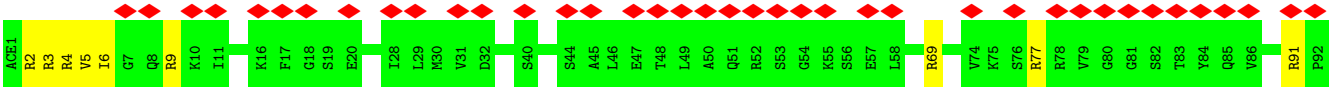


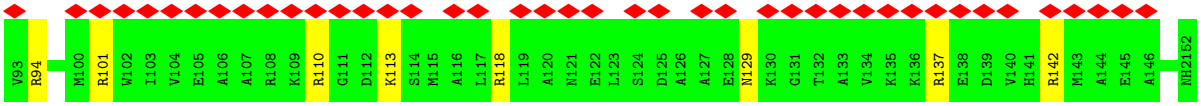
• Molecule 5: 30S ribosomal protein S6



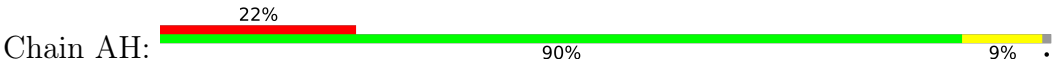


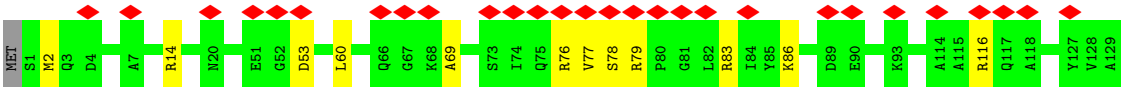
• Molecule 6: 30S ribosomal protein S7



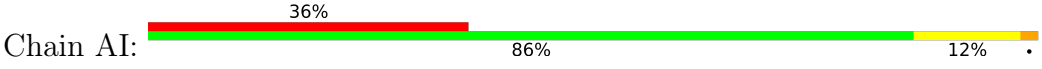


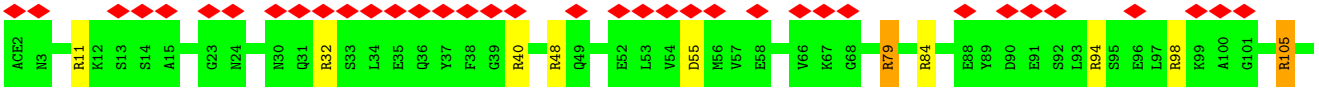
• Molecule 7: 30S ribosomal protein S8

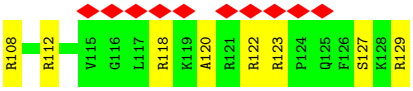




• Molecule 8: 30S ribosomal protein S9

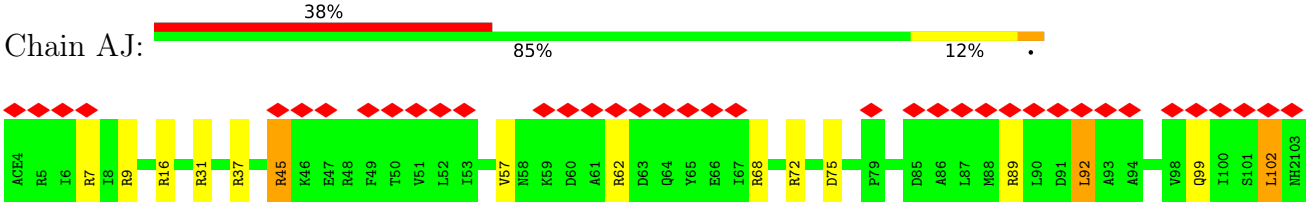






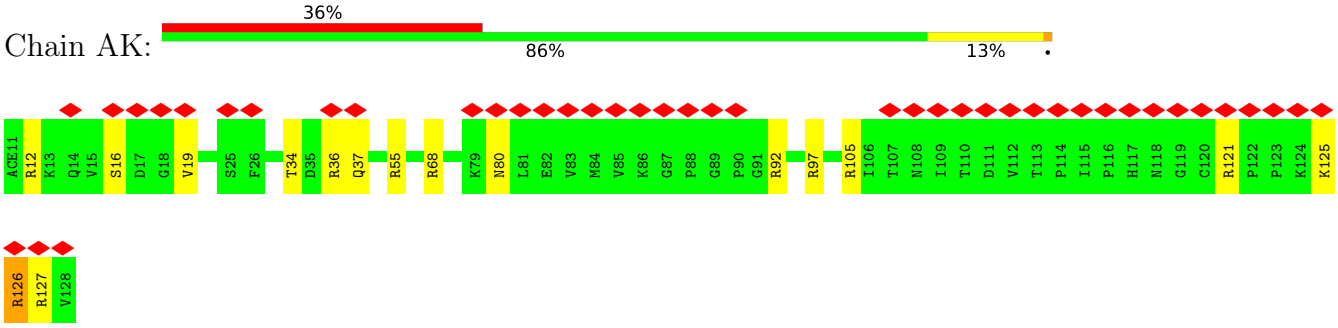
• Molecule 9: 30S ribosomal protein S10

Chain AJ:



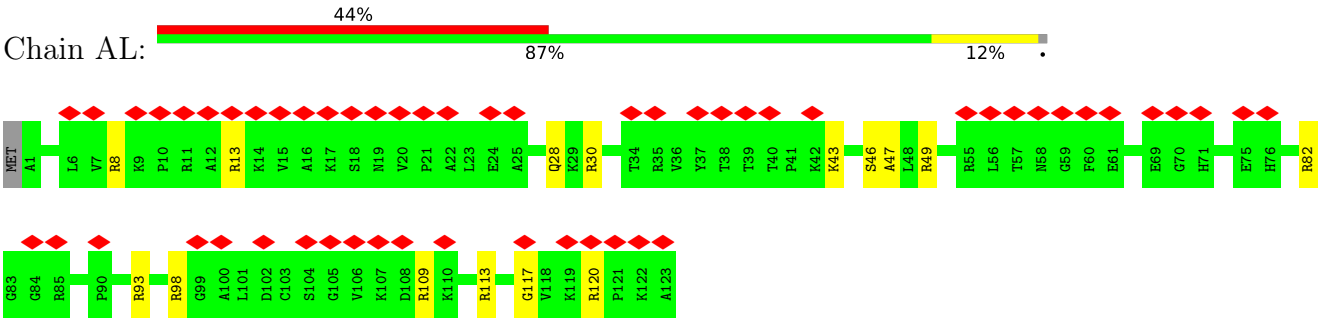
• Molecule 10: 30S ribosomal protein S11

Chain AK:



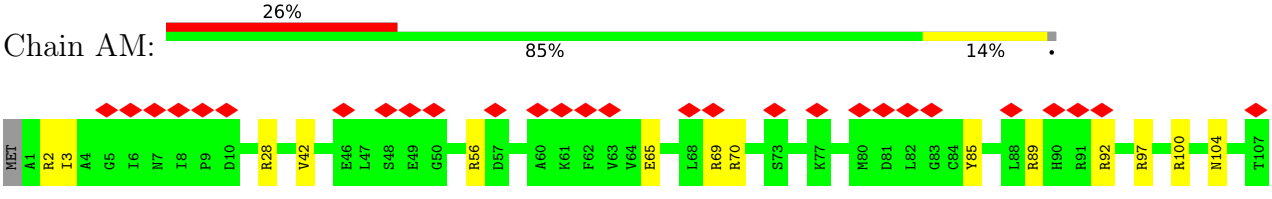
• Molecule 11: 30S ribosomal protein S12

Chain AL:



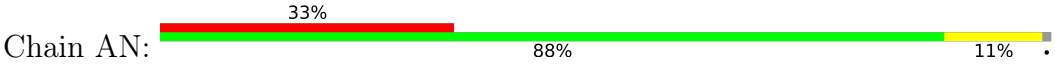
• Molecule 12: 30S ribosomal protein S13

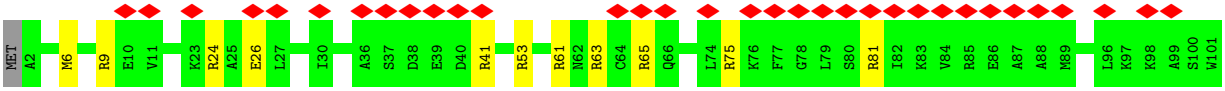
Chain AM:



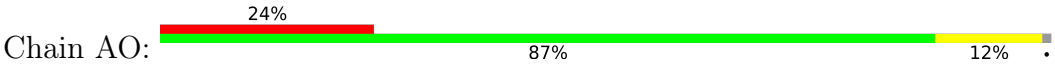
• Molecule 13: 30S ribosomal protein S14

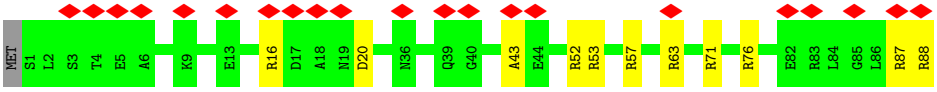
Chain AN:



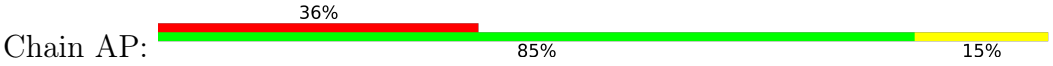


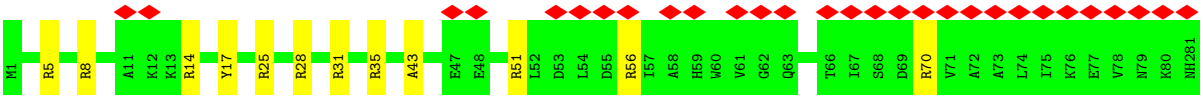
• Molecule 14: 30S ribosomal protein S15



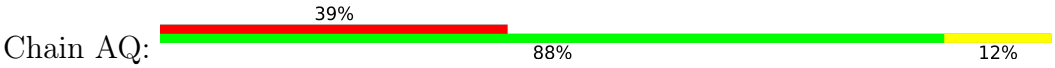


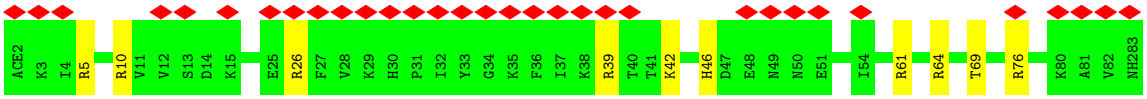
• Molecule 15: 30S ribosomal protein S16



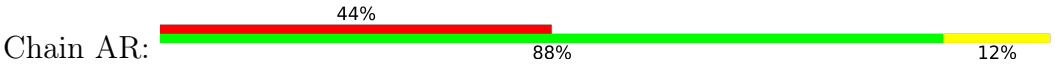


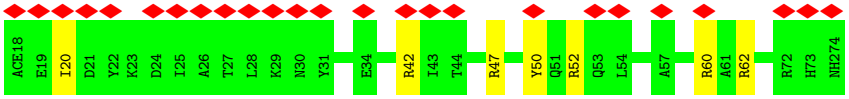
• Molecule 16: 30S ribosomal protein S17



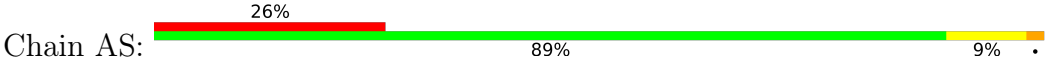


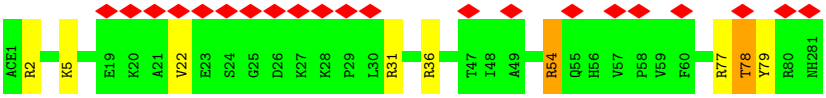
• Molecule 17: 30S ribosomal protein S18



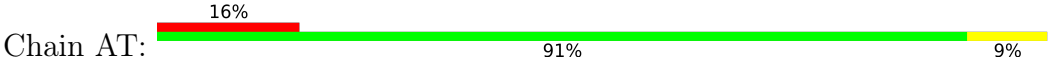


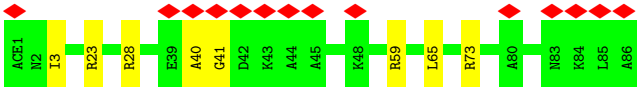
• Molecule 18: 30S ribosomal protein S19





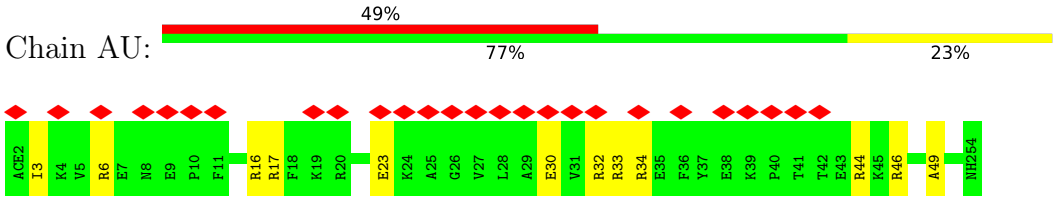
• Molecule 19: 30S ribosomal protein S20





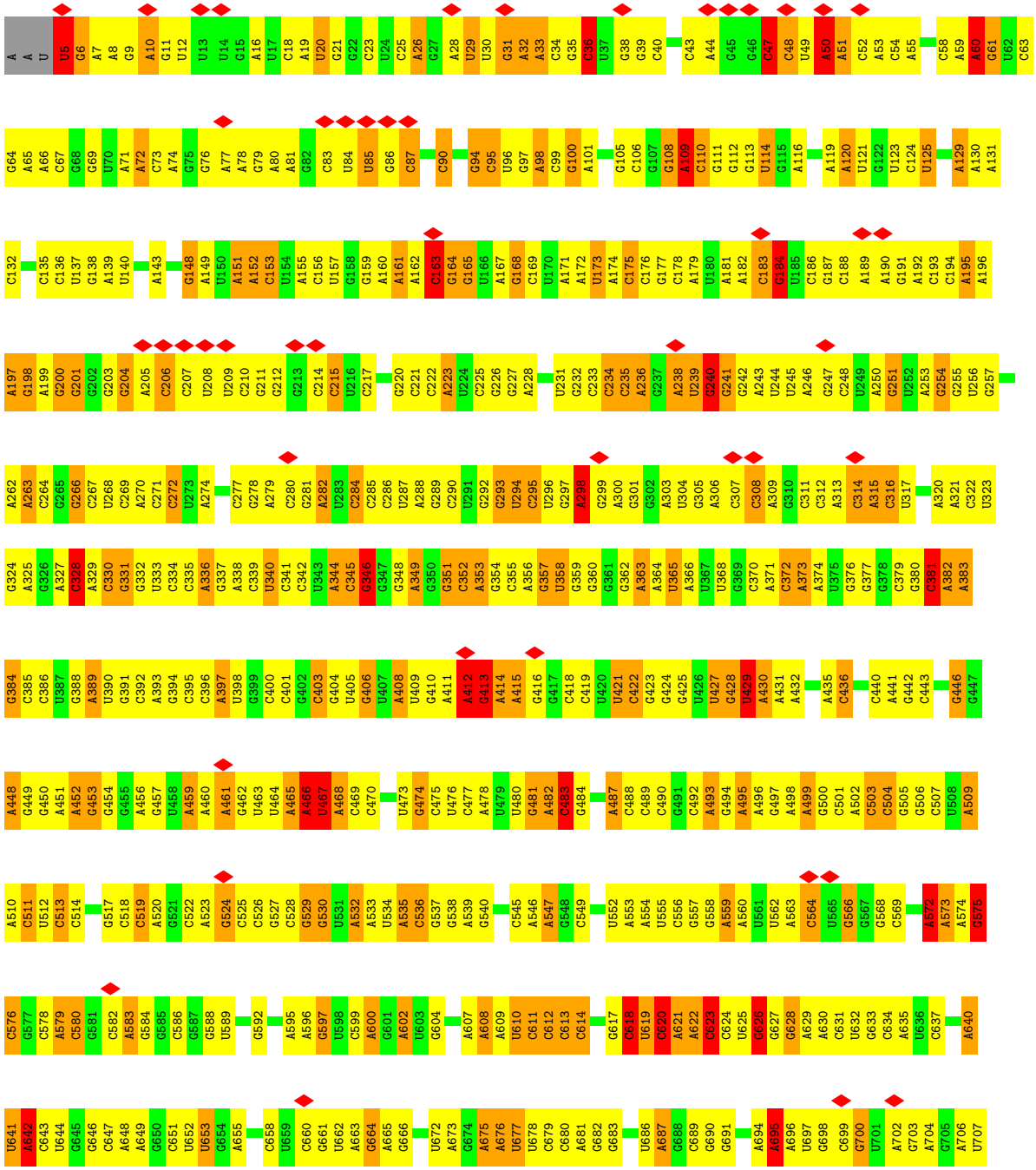
• Molecule 20: 30S ribosomal protein S21

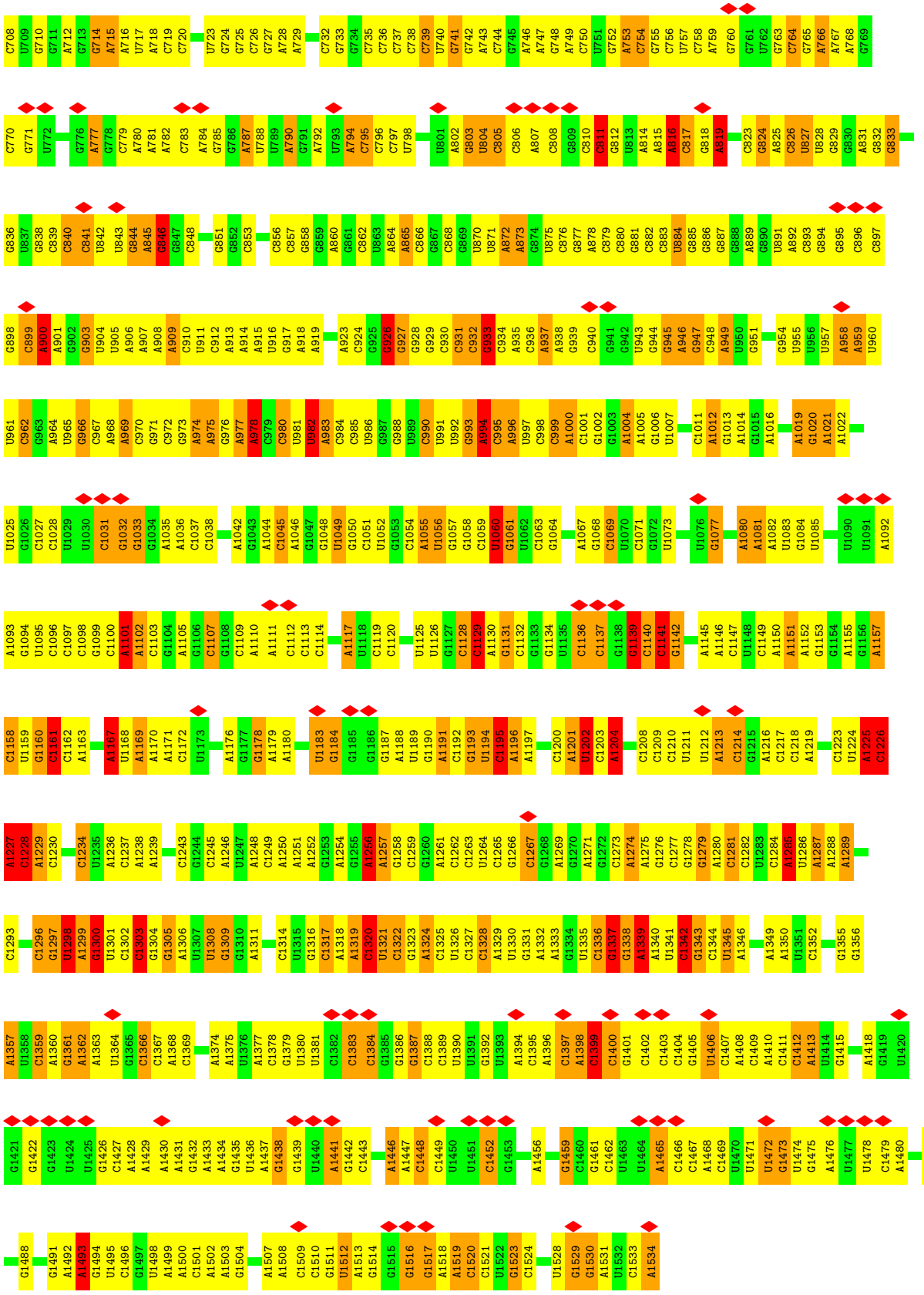
Chain AU:



• Molecule 21: 16S ribosomal RNA

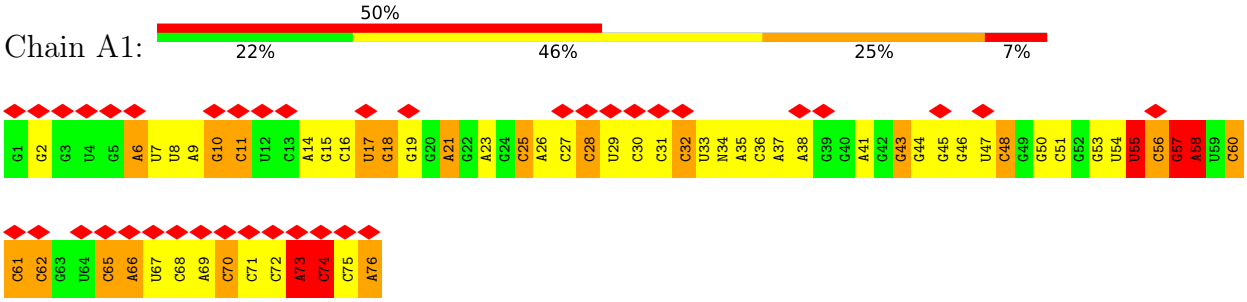
Chain AA:





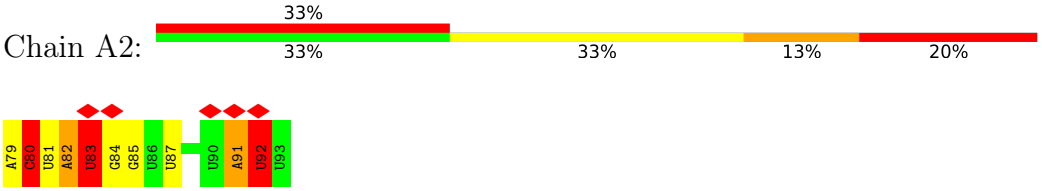
• Molecule 22: fMet-Val-tRNA-Val

Chain A1:



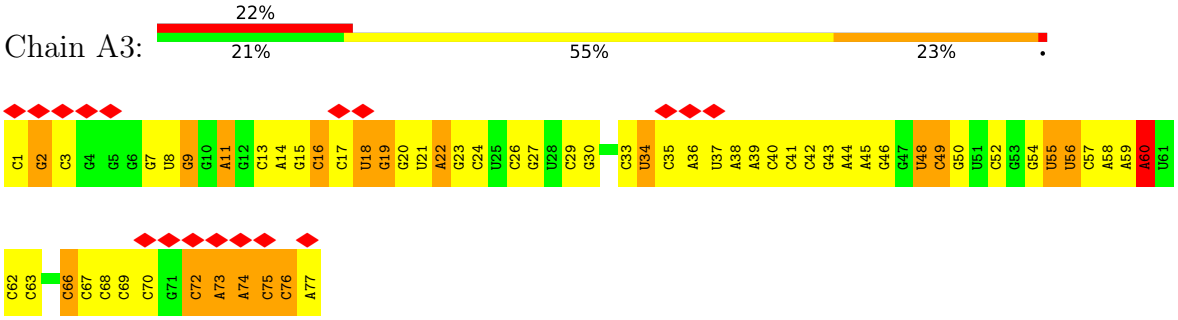
• Molecule 23: 5'-R(*AP*CP*UP*AP*UP*GP*GP*UP*UP*UP*UP*UP*AP*UP*U)-3'

Chain A2:



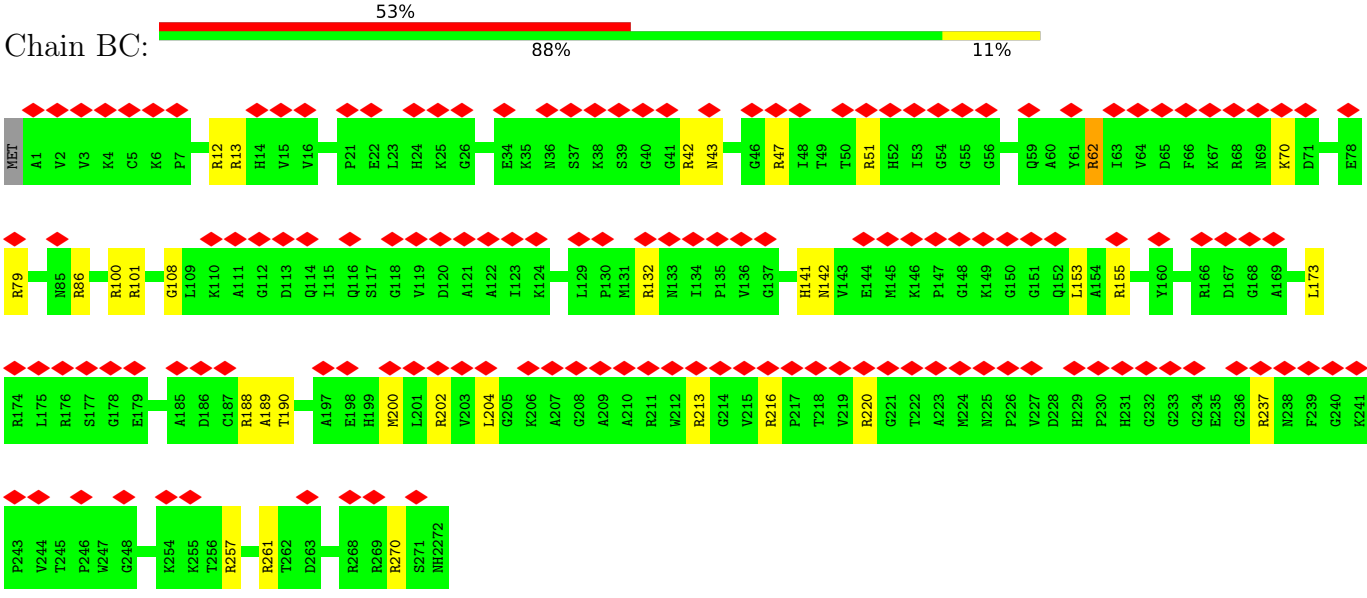
• Molecule 24: tRNA-fMet

Chain A3:



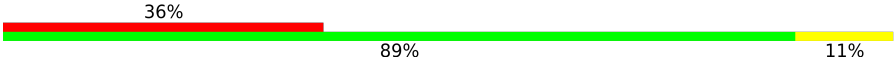
• Molecule 25: 50S ribosomal protein L2

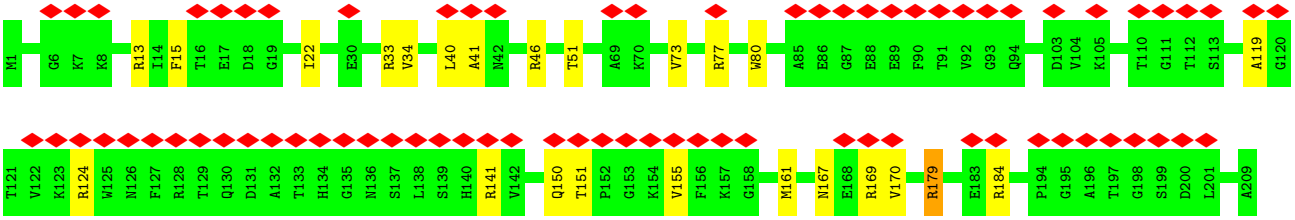
Chain BC:



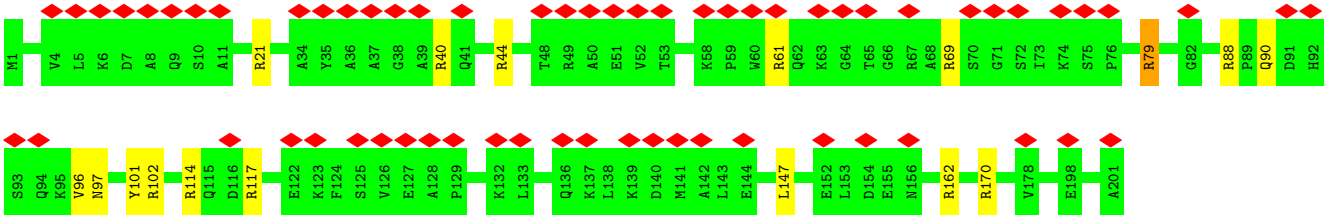
• Molecule 26: 50S ribosomal protein L3

Chain BD:

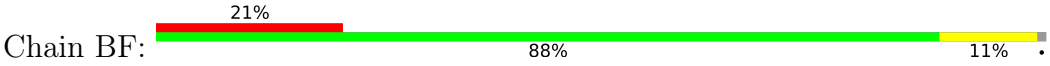


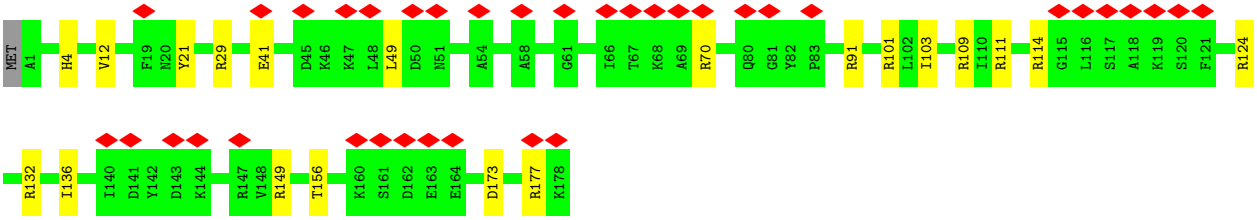


• Molecule 27: 50S ribosomal protein L4

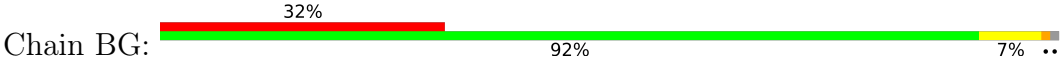


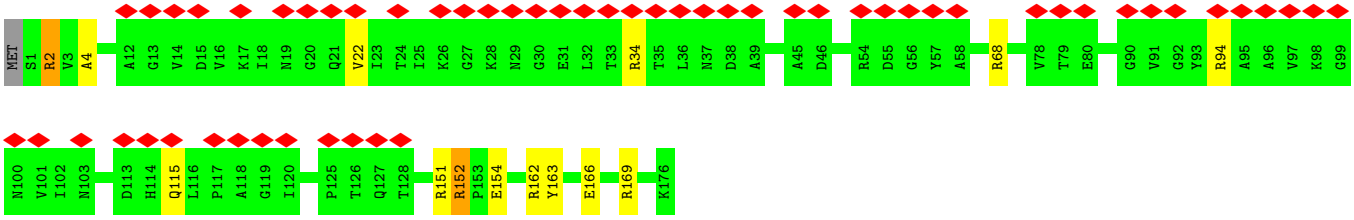
• Molecule 28: 50S ribosomal protein L5



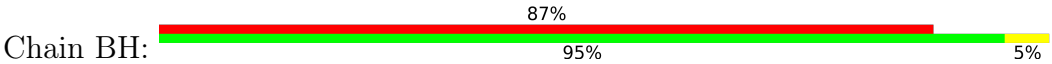


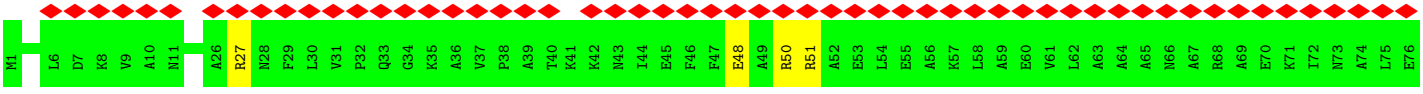
• Molecule 29: 50S ribosomal protein L6

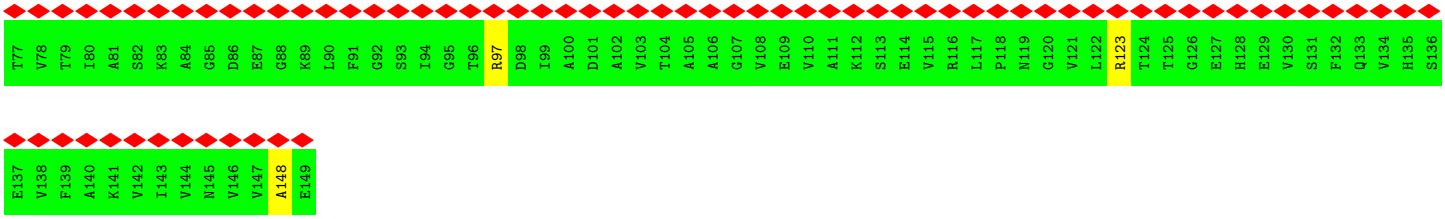




• Molecule 30: 50S ribosomal protein L9

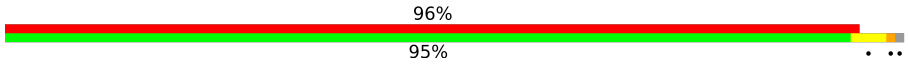


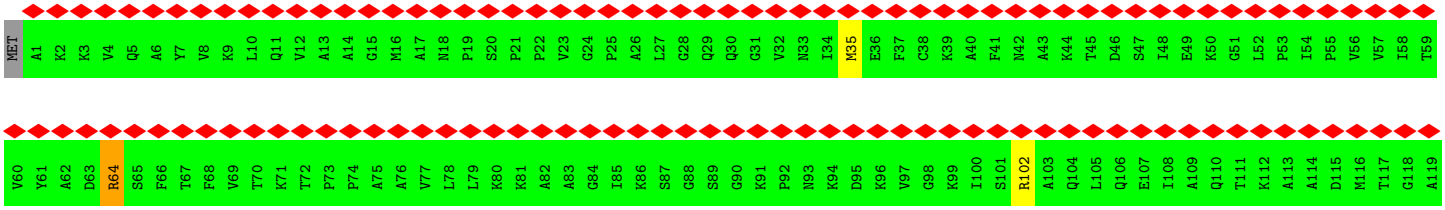




• Molecule 31: 50S ribosomal protein L11

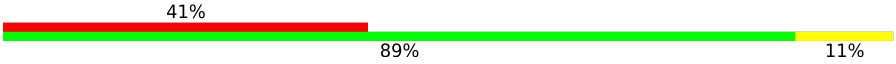
Chain BI:

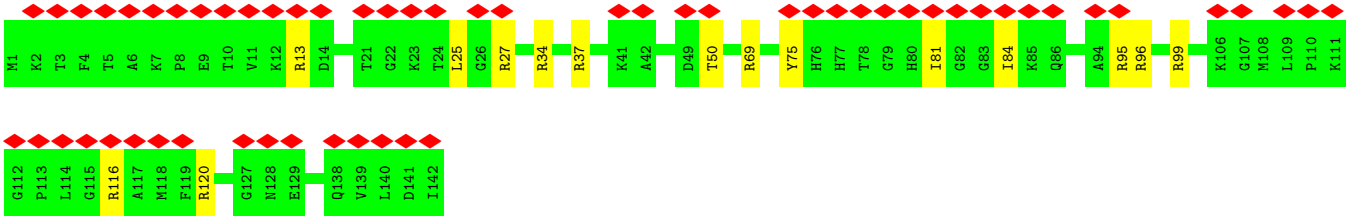




• Molecule 32: 50S ribosomal protein L13

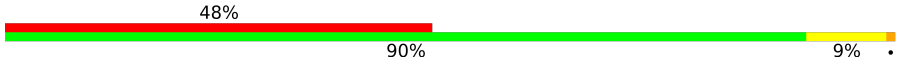
Chain BJ:

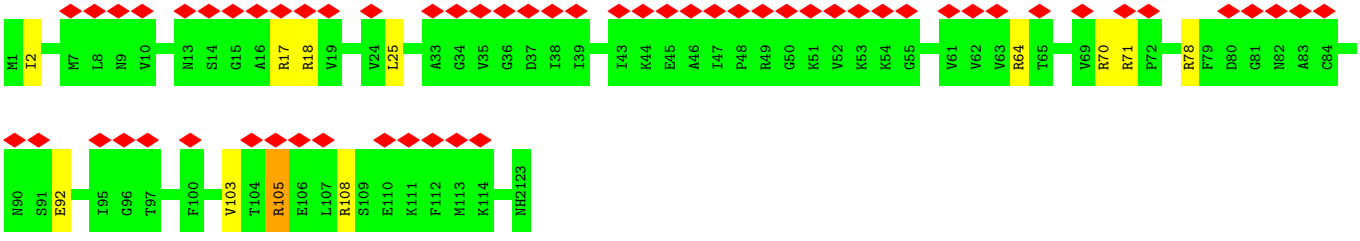




• Molecule 33: 50S ribosomal protein L14

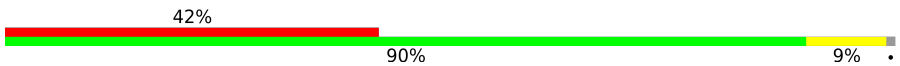
Chain BK:

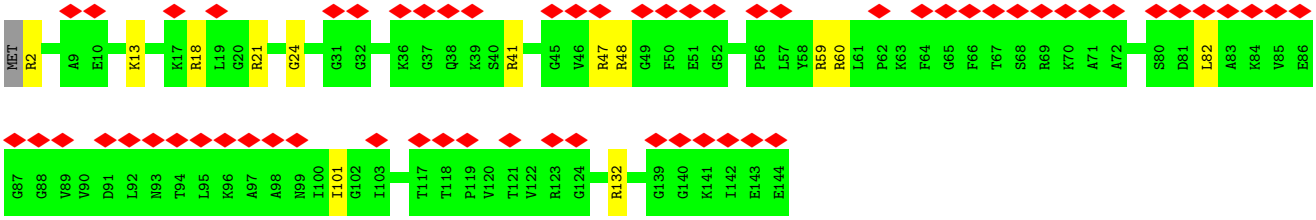




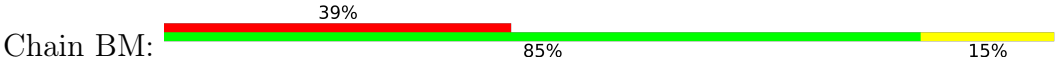
• Molecule 34: 50S ribosomal protein L15

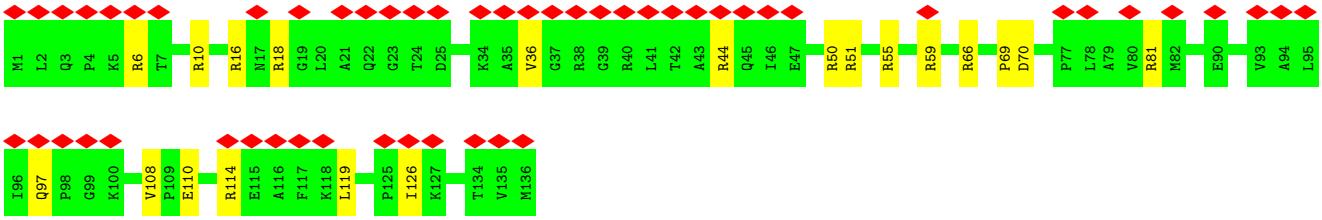
Chain BL:



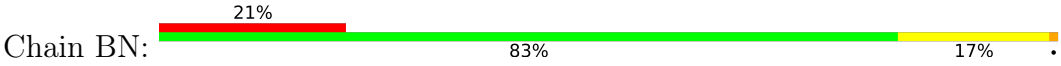


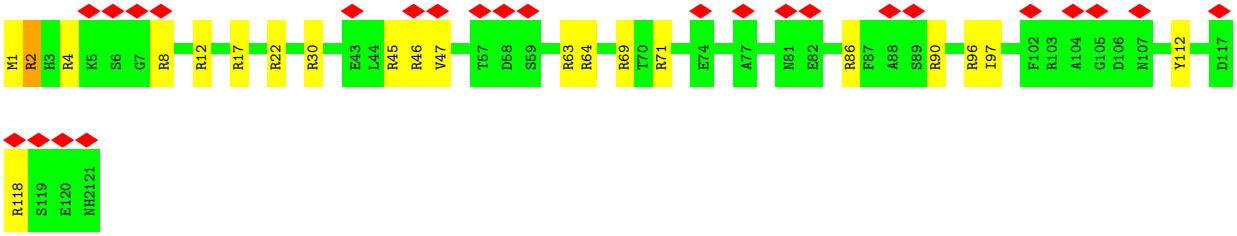
• Molecule 35: 50S ribosomal protein L16



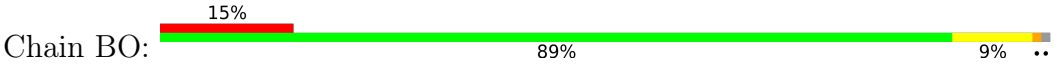


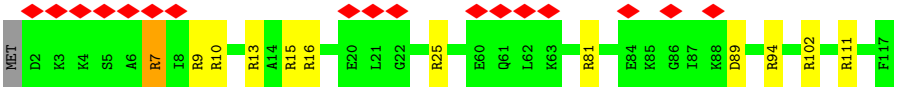
• Molecule 36: 50S ribosomal protein L17



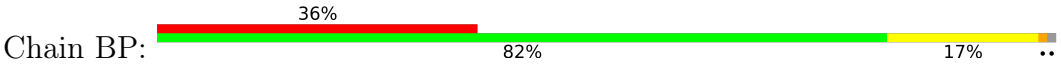


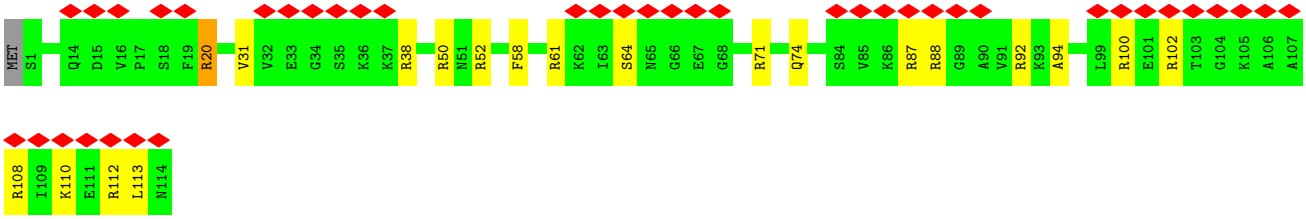
• Molecule 37: 50S ribosomal protein L18





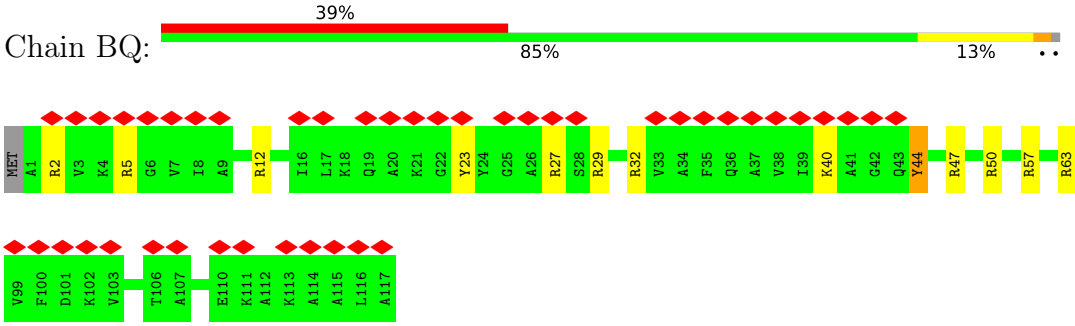
• Molecule 38: 50S ribosomal protein L19





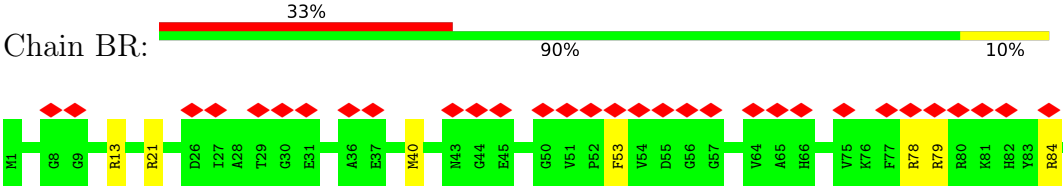
• Molecule 39: 50S ribosomal protein L20

Chain BQ:



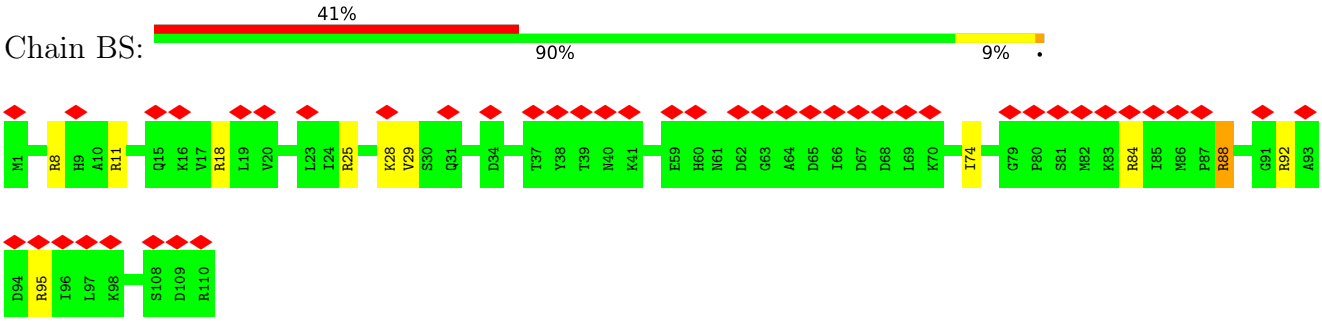
• Molecule 40: 50S ribosomal protein L21

Chain BR:



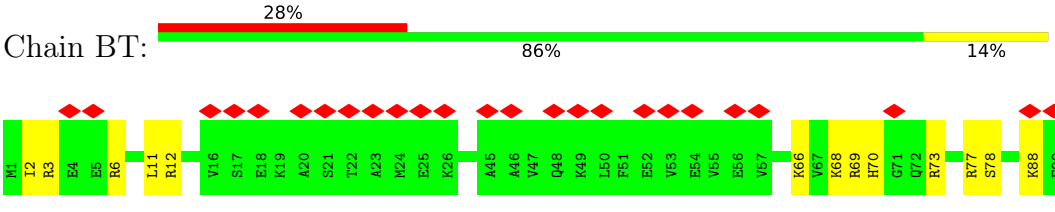
• Molecule 41: 50S ribosomal protein L22

Chain BS:



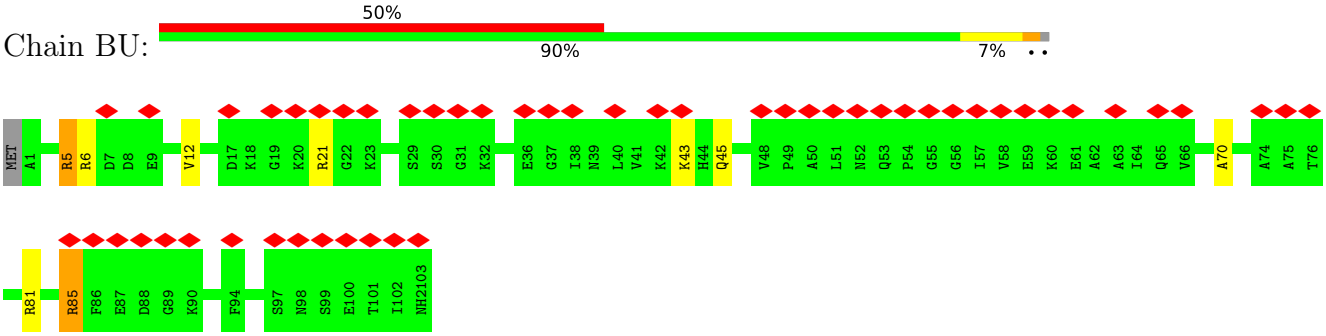
• Molecule 42: 50S ribosomal protein L23

Chain BT:



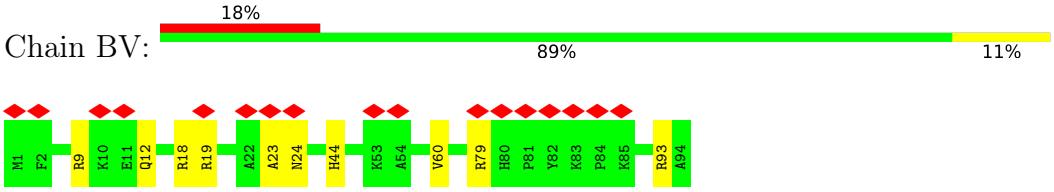
• Molecule 43: 50S ribosomal protein L24

Chain BU:



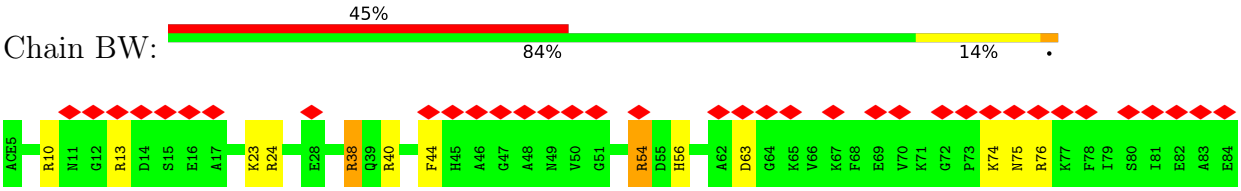
• Molecule 44: 50S ribosomal protein L25

Chain BV:



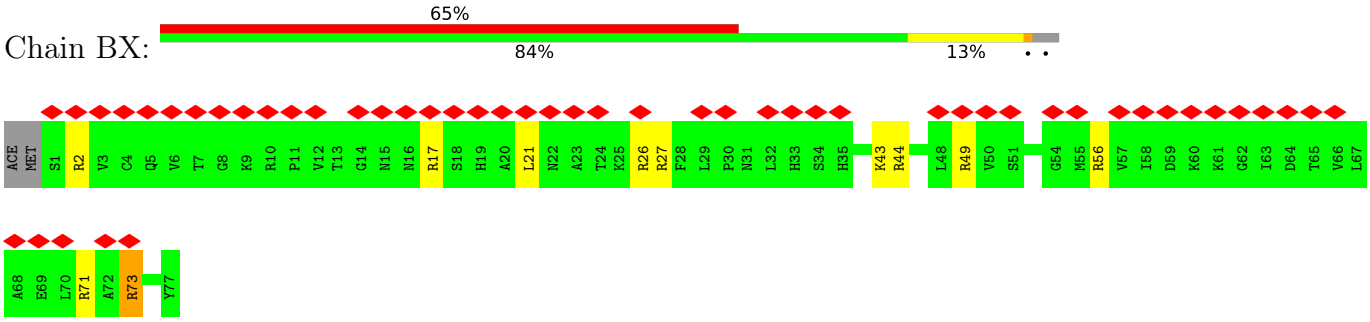
• Molecule 45: 50S ribosomal protein L27

Chain BW:



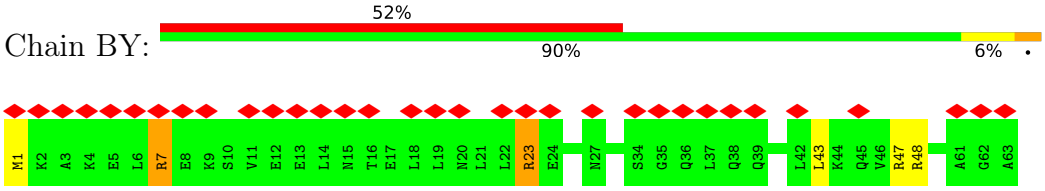
• Molecule 46: 50S ribosomal protein L28

Chain BX:



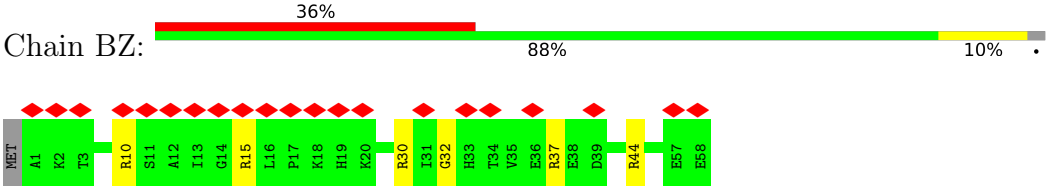
• Molecule 47: 50S ribosomal protein L29

Chain BY:



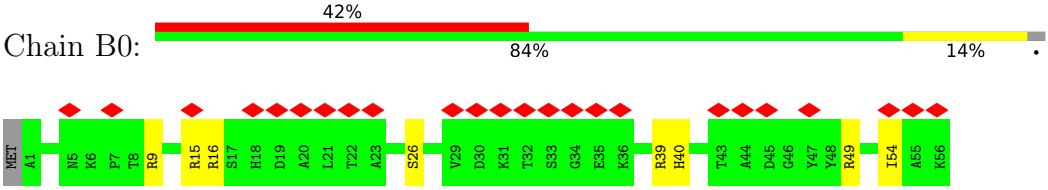
• Molecule 48: 50S ribosomal protein L30

Chain BZ:



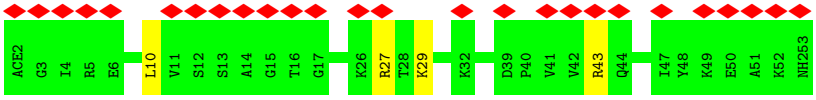
• Molecule 49: 50S ribosomal protein L32

Chain B0:



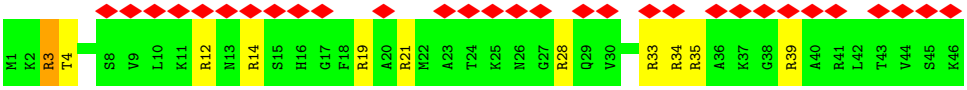
• Molecule 50: 50S ribosomal protein L33

Chain B1:



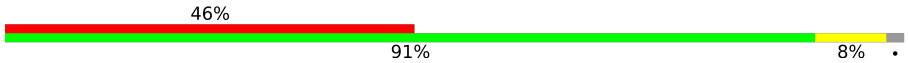
• Molecule 51: 50S ribosomal protein L34

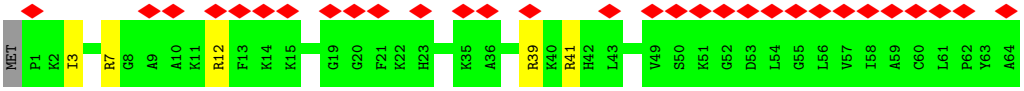
Chain B2:



• Molecule 52: 50S ribosomal protein L35

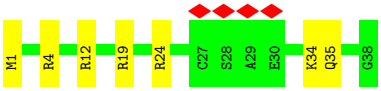
Chain B3:





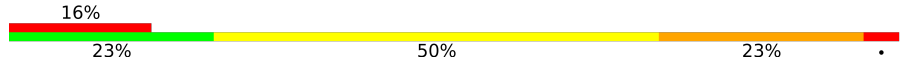
• Molecule 53: 50S ribosomal protein L36

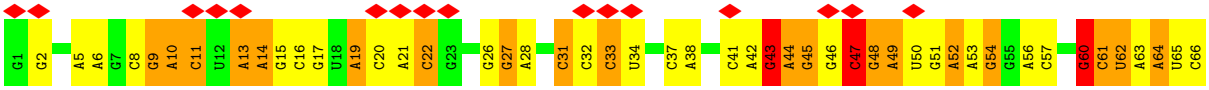
Chain B4:

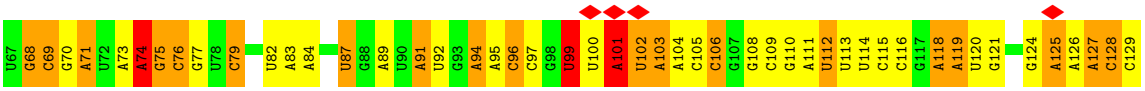


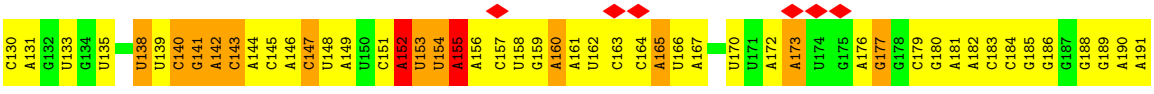
• Molecule 54: 23S ribosomal RNA

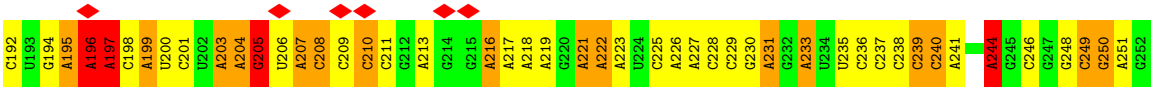
Chain BA:

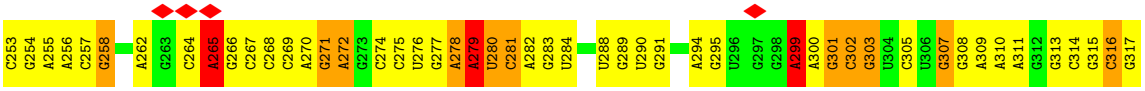


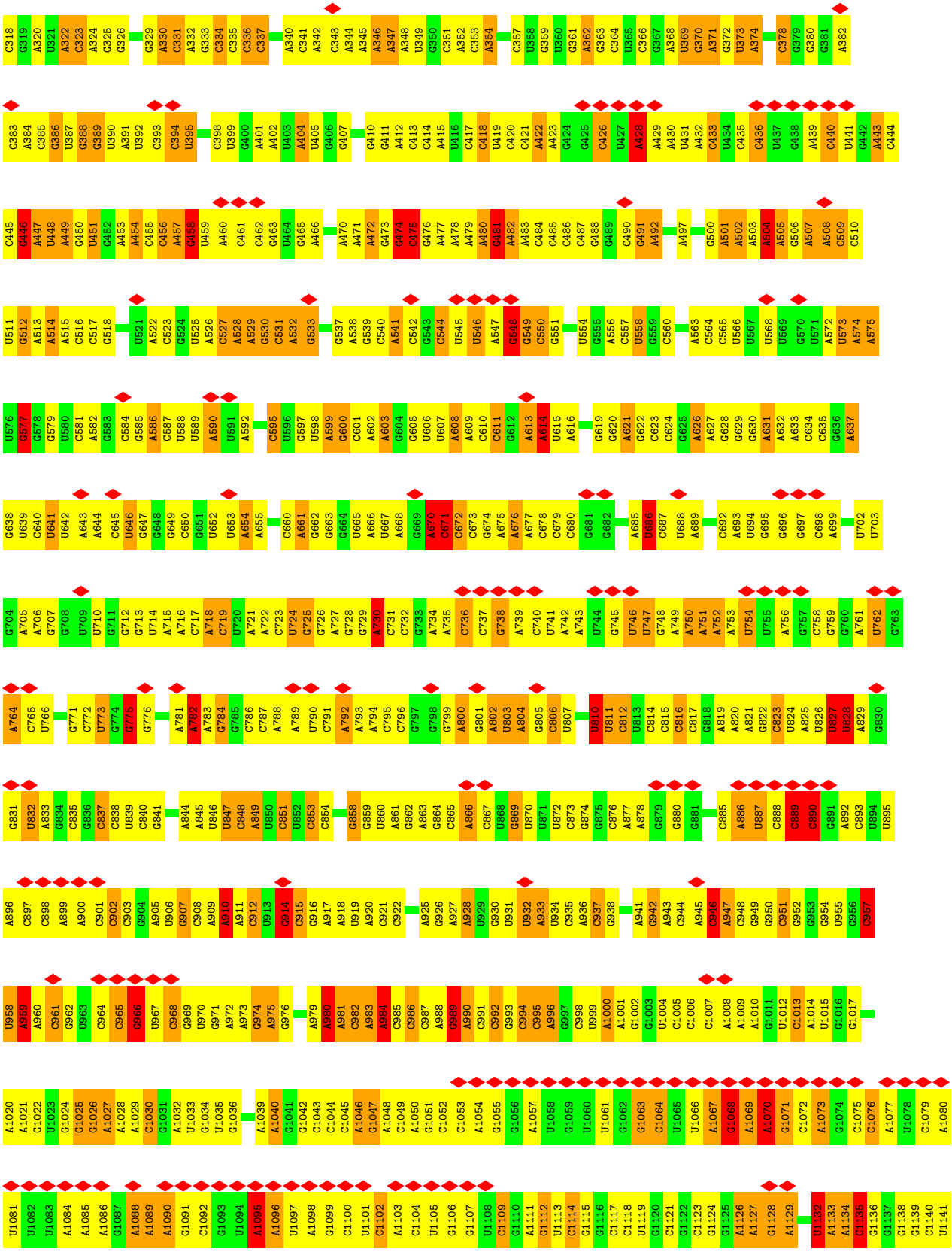


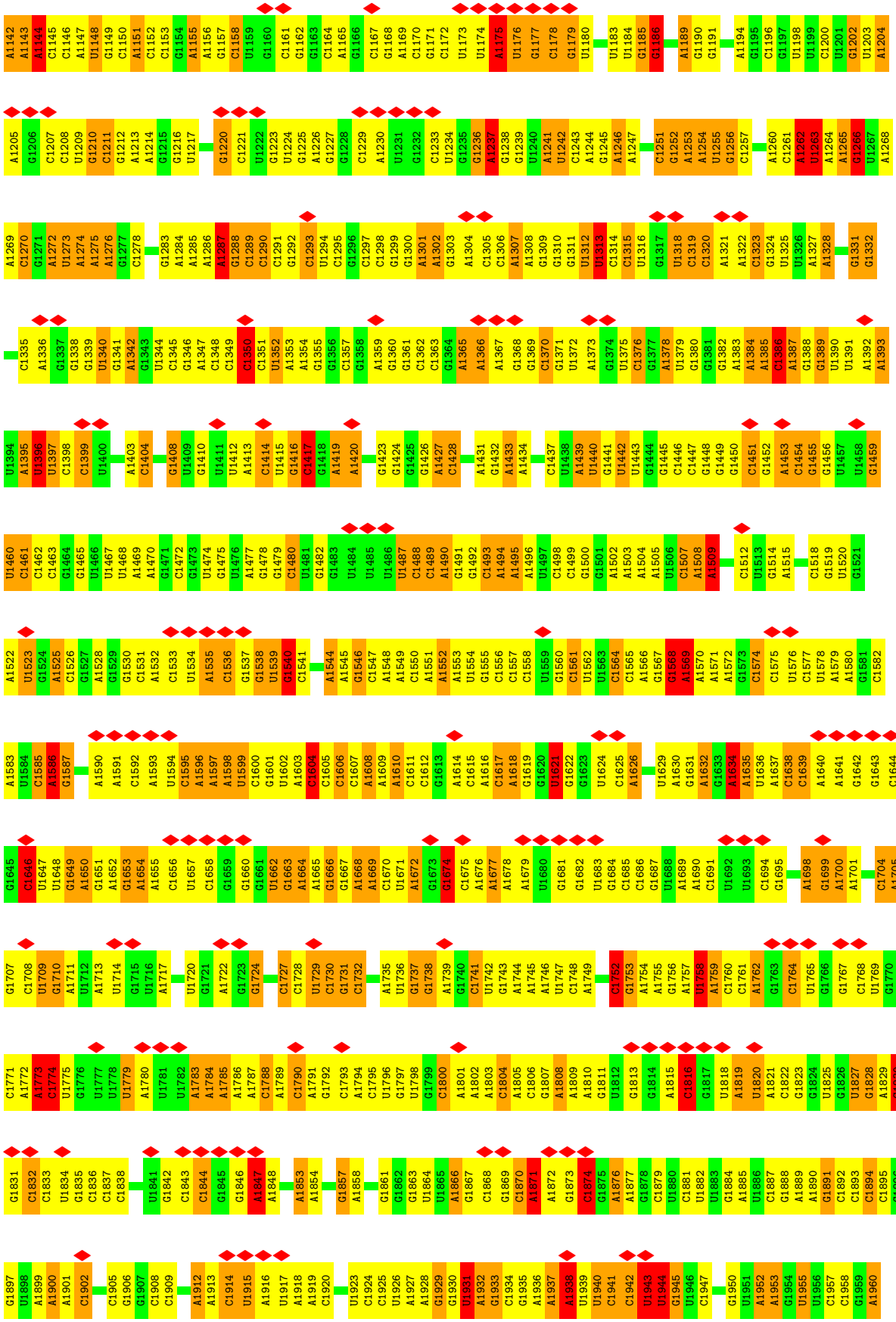


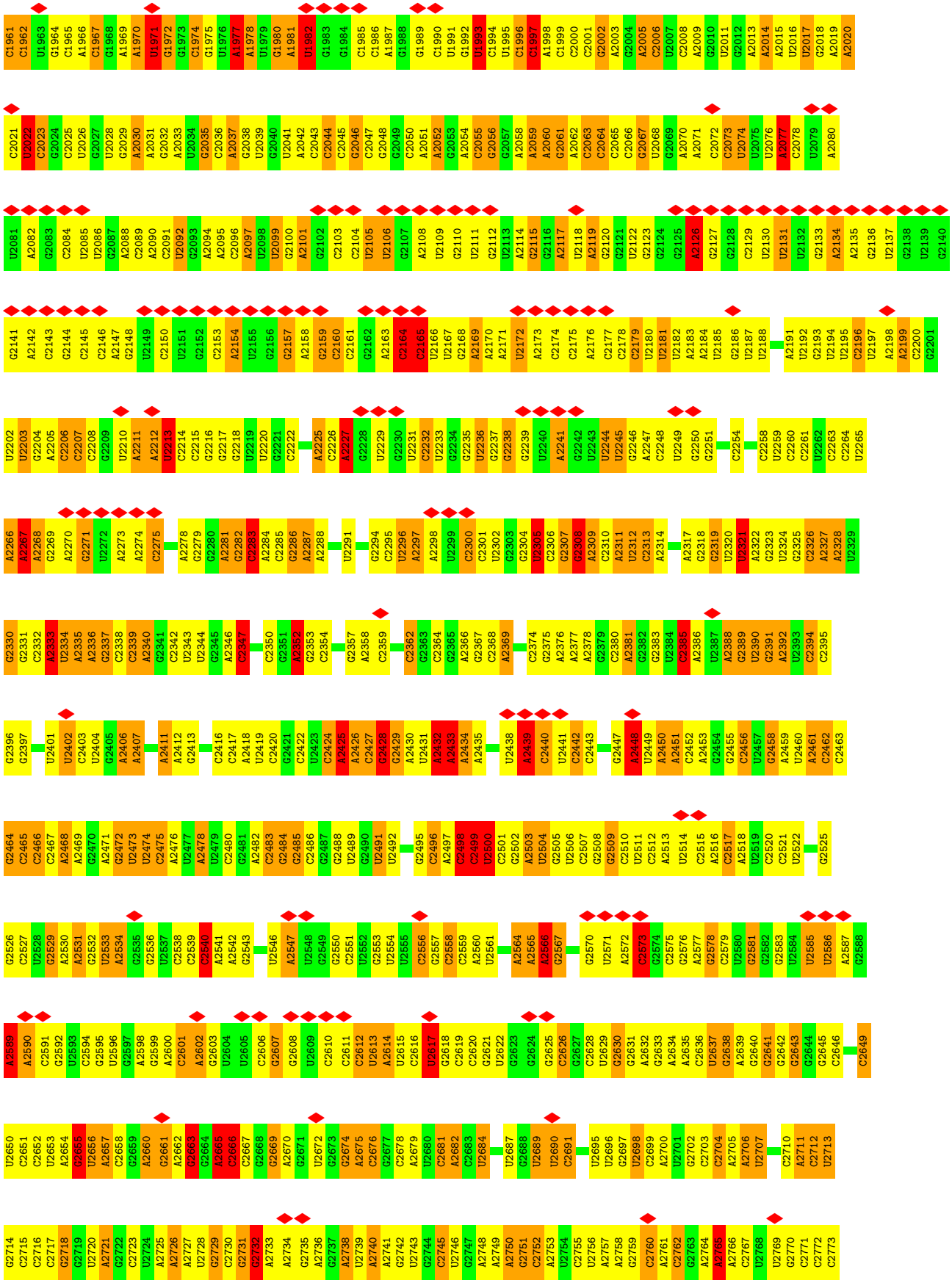


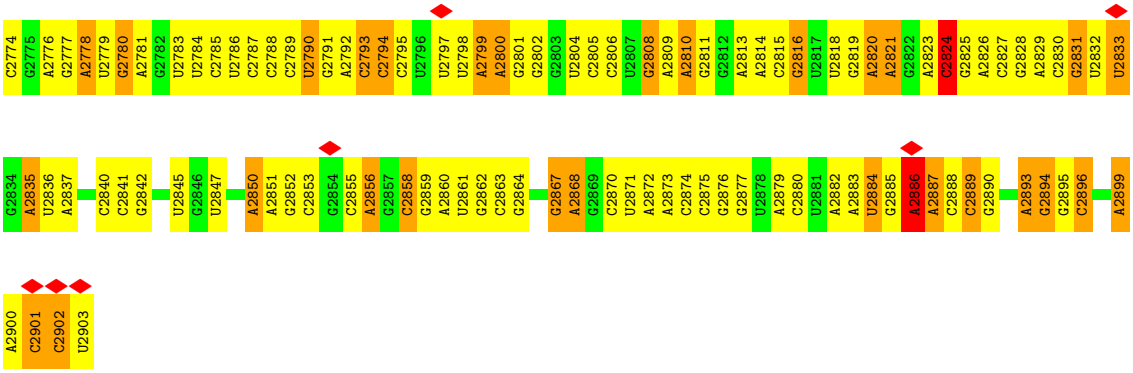






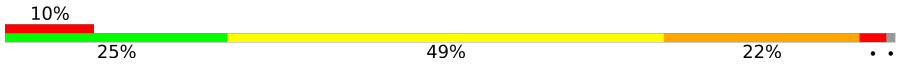


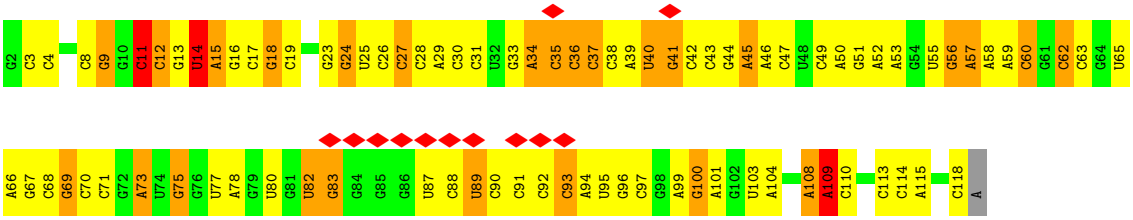




• Molecule 55: 5S ribosomal RNA

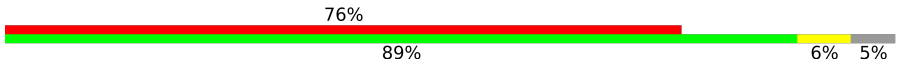
Chain BB:

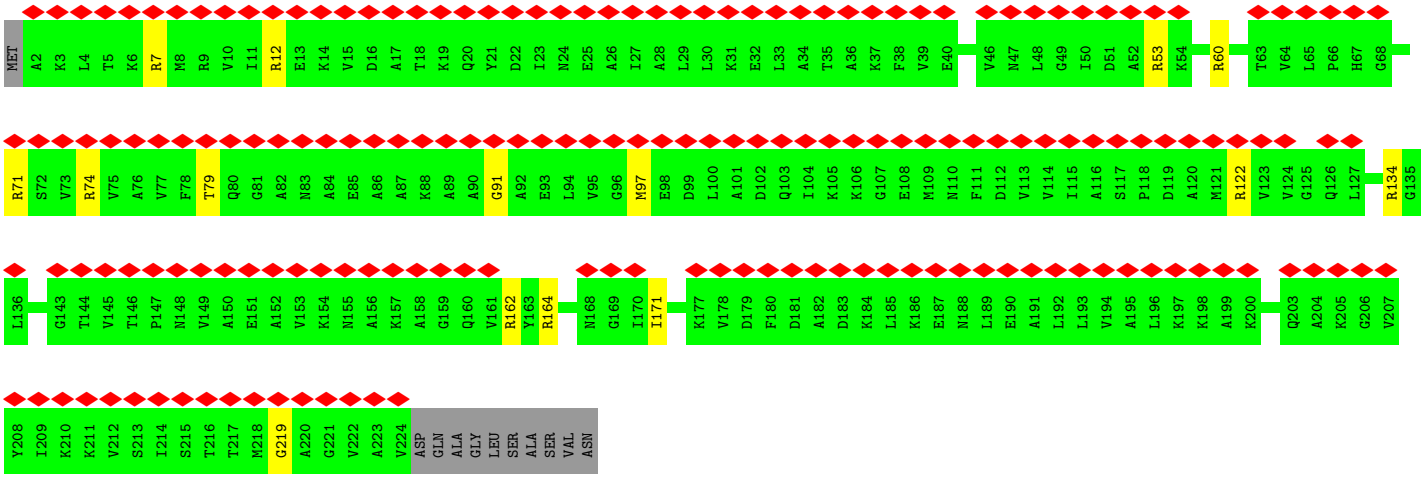




• Molecule 56: 50S ribosomal protein L1

Chain B5:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	1904	Depositor
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	local	Depositor
Microscope	FEI/PHILIPS CM200FEG	Depositor
Voltage (kV)	160	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	162740	Depositor
Image detector	GENERIC TVIPS (4k x 4k)	Depositor
Maximum map value	157.537	Depositor
Minimum map value	-94.382	Depositor
Average map value	-1.909	Depositor
Map value standard deviation	16.235	Depositor
Recommended contour level	22.0	Depositor
Map size (Å)	358.4, 358.4, 358.4	wwPDB
Map dimensions	128, 128, 128	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	2.8, 2.8, 2.8	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CM0, FME, PSU, 5MU, OMC, NH2, H2U, 7MG, 4SU, ACE, 6MZ

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	AB	0.71	0/1736	1.09	15/2340 (0.6%)
2	AC	0.72	0/1651	1.15	16/2225 (0.7%)
3	AD	0.76	0/1665	1.19	16/2227 (0.7%)
4	AE	0.71	0/1119	1.11	10/1506 (0.7%)
5	AF	0.73	0/835	1.12	7/1128 (0.6%)
6	AG	0.74	0/1188	1.23	14/1593 (0.9%)
7	AH	0.69	0/989	1.02	5/1326 (0.4%)
8	AI	0.81	0/1035	1.33	17/1377 (1.2%)
9	AJ	0.71	0/797	1.28	10/1079 (0.9%)
10	AK	0.75	0/894	1.23	11/1207 (0.9%)
11	AL	0.75	0/969	1.25	14/1300 (1.1%)
12	AM	0.73	0/884	1.22	11/1181 (0.9%)
13	AN	0.78	0/817	1.22	9/1088 (0.8%)
14	AO	0.71	0/722	1.15	8/964 (0.8%)
15	AP	0.74	0/648	1.35	12/870 (1.4%)
16	AQ	0.70	0/658	1.19	8/883 (0.9%)
17	AR	0.80	0/463	1.21	6/623 (1.0%)
18	AS	0.76	0/653	1.15	9/879 (1.0%)
19	AT	0.68	0/672	1.11	4/890 (0.4%)
20	AU	0.83	0/431	1.66	13/572 (2.3%)
21	AA	1.53	1/36759 (0.0%)	2.22	1937/57346 (3.4%)
22	A1	1.54	0/1668	2.21	86/2595 (3.3%)
23	A2	1.54	0/343	2.22	16/531 (3.0%)
24	A3	1.54	0/1722	2.22	99/2685 (3.7%)
25	BC	0.73	0/2121	1.23	23/2852 (0.8%)
26	BD	0.68	0/1586	1.12	8/2134 (0.4%)
27	BE	0.67	0/1571	1.16	12/2113 (0.6%)
28	BF	0.74	0/1444	1.17	11/1937 (0.6%)
29	BG	0.69	0/1343	1.14	9/1816 (0.5%)
30	BH	0.66	0/1122	1.11	5/1515 (0.3%)
31	BI	0.65	0/1046	1.07	4/1410 (0.3%)
32	BJ	0.73	0/1152	1.25	12/1551 (0.8%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	BK	0.70	0/947	1.21	9/1268 (0.7%)
34	BL	0.72	0/1054	1.22	10/1403 (0.7%)
35	BM	0.75	0/1093	1.27	11/1460 (0.8%)
36	BN	0.75	0/973	1.38	18/1301 (1.4%)
37	BO	0.72	0/902	1.26	13/1209 (1.1%)
38	BP	0.74	0/929	1.34	15/1242 (1.2%)
39	BQ	0.78	0/960	1.30	14/1278 (1.1%)
40	BR	0.70	0/829	1.19	6/1107 (0.5%)
41	BS	0.66	0/864	1.22	10/1156 (0.9%)
42	BT	0.64	0/744	1.18	6/994 (0.6%)
43	BU	0.68	0/787	1.07	5/1051 (0.5%)
44	BV	0.70	0/766	1.13	5/1025 (0.5%)
45	BW	0.75	0/604	1.32	8/799 (1.0%)
46	BX	0.73	0/635	1.34	10/848 (1.2%)
47	BY	0.69	0/510	1.23	4/677 (0.6%)
48	BZ	0.68	0/453	1.23	7/605 (1.2%)
49	B0	0.74	0/450	1.28	5/599 (0.8%)
50	B1	0.73	0/417	1.05	2/556 (0.4%)
51	B2	0.81	0/380	1.62	11/498 (2.2%)
52	B3	0.72	0/513	1.15	5/676 (0.7%)
53	B4	0.67	0/303	1.36	6/397 (1.5%)
54	BA	1.40	1/69796 (0.0%)	2.21	4031/108888 (3.7%)
55	BB	1.42	0/2800	2.15	146/4367 (3.3%)
56	B5	0.64	0/1673	1.09	11/2255 (0.5%)
All	All	1.28	2/160085 (0.0%)	2.00	6805/239402 (2.8%)

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
3	AD	0	1
8	AI	0	1
14	AO	0	1
21	AA	0	372
22	A1	0	21
23	A2	0	5
24	A3	0	7
27	BE	0	1
37	BO	0	1
39	BQ	0	1

Continued on next page...

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
45	BW	0	1
54	BA	0	726
55	BB	0	20
All	All	0	1158

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	AA	1060	U	C5'-C4'	5.13	1.57	1.51
54	BA	2428	G	C2-N2	-5.06	1.29	1.34

All (6805) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	982	C	N3-C2-O2	-13.80	112.24	121.90
54	BA	574	A	N1-C6-N6	-13.05	110.77	118.60
21	AA	676	A	N1-C6-N6	-12.48	111.11	118.60
21	AA	964	A	N1-C6-N6	-12.38	111.17	118.60
54	BA	1932	A	N1-C6-N6	-12.22	111.27	118.60
54	BA	643	A	O4'-C1'-N9	12.01	117.81	108.20
21	AA	845	A	N1-C6-N6	-11.90	111.46	118.60
54	BA	666	A	N1-C6-N6	-11.89	111.47	118.60
54	BA	219	A	N1-C6-N6	-11.86	111.48	118.60
54	BA	119	A	N1-C6-N6	-11.84	111.50	118.60
54	BA	1352	U	O4'-C1'-N1	11.83	117.66	108.20
21	AA	630	A	N1-C6-N6	-11.71	111.57	118.60
54	BA	2654	A	N1-C6-N6	-11.64	111.61	118.60
54	BA	1780	A	N1-C6-N6	-11.64	111.61	118.60
54	BA	789	A	N1-C6-N6	-11.61	111.63	118.60
54	BA	1287	A	N1-C6-N6	-11.56	111.66	118.60
54	BA	2369	A	N1-C6-N6	-11.54	111.67	118.60
54	BA	1080	A	N1-C6-N6	-11.49	111.71	118.60
54	BA	1096	A	N1-C6-N6	-11.48	111.71	118.60
54	BA	932	U	O4'-C1'-N1	11.44	117.35	108.20
54	BA	2753	A	N1-C6-N6	-11.43	111.74	118.60
54	BA	481	G	O4'-C1'-N9	11.43	117.34	108.20
21	AA	493	A	N1-C6-N6	-11.40	111.76	118.60
54	BA	2435	A	N1-C6-N6	-11.38	111.77	118.60
21	AA	389	A	N1-C6-N6	-11.37	111.78	118.60
54	BA	2030	A	N1-C6-N6	-11.29	111.83	118.60
21	AA	109	A	N1-C6-N6	-11.28	111.83	118.60
55	BB	78	A	N1-C6-N6	-11.24	111.86	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	430	A	N1-C6-N6	-11.23	111.86	118.60
54	BA	982	C	N1-C2-O2	11.22	125.63	118.90
54	BA	1569	A	N1-C6-N6	-11.21	111.87	118.60
54	BA	699	A	N1-C6-N6	-11.21	111.87	118.60
54	BA	311	A	N1-C6-N6	-11.18	111.89	118.60
21	AA	1004	A	N1-C6-N6	-11.13	111.92	118.60
54	BA	2810	A	N1-C6-N6	-11.13	111.92	118.60
21	AA	432	A	N1-C6-N6	-11.09	111.95	118.60
54	BA	2850	A	N1-C6-N6	-11.07	111.96	118.60
21	AA	171	A	N1-C6-N6	-11.03	111.98	118.60
21	AA	1339	A	N1-C6-N6	-11.03	111.98	118.60
54	BA	1413	A	N1-C6-N6	-11.02	111.99	118.60
54	BA	1392	A	N1-C6-N6	-11.01	112.00	118.60
54	BA	2893	A	N1-C6-N6	-10.99	112.00	118.60
54	BA	2577	A	N1-C6-N6	-10.98	112.01	118.60
54	BA	1637	A	N1-C6-N6	-10.97	112.02	118.60
54	BA	1134	A	N1-C6-N6	-10.96	112.02	118.60
21	AA	1288	A	N1-C6-N6	-10.95	112.03	118.60
54	BA	2211	A	N1-C6-N6	-10.93	112.04	118.60
21	AA	1434	A	N1-C6-N6	-10.92	112.05	118.60
21	AA	1289	A	N1-C6-N6	-10.87	112.08	118.60
21	AA	1447	A	N1-C6-N6	-10.85	112.09	118.60
54	BA	2247	A	N1-C6-N6	-10.85	112.09	118.60
54	BA	1241	A	N1-C6-N6	-10.84	112.09	118.60
9	AJ	62	ARG	NE-CZ-NH1	10.79	125.69	120.30
54	BA	1494	A	N1-C6-N6	-10.79	112.13	118.60
21	AA	288	A	N1-C6-N6	-10.78	112.13	118.60
54	BA	739	A	N1-C6-N6	-10.77	112.14	118.60
54	BA	747	U	O4'-C1'-N1	10.75	116.80	108.20
54	BA	1634	A	N1-C6-N6	-10.75	112.15	118.60
54	BA	1610	A	N1-C6-N6	-10.71	112.17	118.60
54	BA	2386	A	N1-C6-N6	-10.66	112.20	118.60
54	BA	280	U	O4'-C1'-N1	10.66	116.72	108.20
54	BA	947	A	N1-C6-N6	-10.65	112.21	118.60
54	BA	1755	A	N1-C6-N6	-10.65	112.21	118.60
54	BA	497	A	N1-C6-N6	-10.64	112.21	118.60
54	BA	83	A	N1-C6-N6	-10.64	112.22	118.60
21	AA	1105	A	N1-C6-N6	-10.63	112.22	118.60
3	AD	110	ARG	NE-CZ-NH1	10.63	125.61	120.30
54	BA	71	A	N1-C6-N6	-10.62	112.22	118.60
54	BA	1027	A	N1-C6-N6	-10.62	112.23	118.60
21	AA	282	A	N1-C6-N6	-10.62	112.23	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2634	A	N1-C6-N6	-10.62	112.23	118.60
54	BA	507	A	N1-C6-N6	-10.60	112.24	118.60
47	BY	47	ARG	NE-CZ-NH1	10.59	125.60	120.30
54	BA	1175	A	N1-C6-N6	-10.57	112.26	118.60
21	AA	994	A	N1-C6-N6	-10.57	112.26	118.60
54	BA	1284	A	N1-C6-N6	-10.57	112.26	118.60
54	BA	2868	A	N1-C6-N6	-10.57	112.26	118.60
21	AA	98	A	N1-C6-N6	-10.56	112.27	118.60
54	BA	181	A	N1-C6-N6	-10.55	112.27	118.60
54	BA	1570	A	N1-C6-N6	-10.55	112.27	118.60
21	AA	461	A	N1-C6-N6	-10.54	112.28	118.60
54	BA	1260	A	N1-C6-N6	-10.53	112.28	118.60
54	BA	165	A	N1-C6-N6	-10.52	112.29	118.60
54	BA	592	A	N1-C6-N6	-10.51	112.29	118.60
54	BA	972	A	N1-C6-N6	-10.51	112.29	118.60
54	BA	2530	A	N1-C6-N6	-10.51	112.30	118.60
54	BA	984	A	N1-C6-N6	-10.51	112.30	118.60
54	BA	1046	A	N1-C6-N6	-10.50	112.30	118.60
54	BA	2473	U	O4'-C1'-N1	10.49	116.59	108.20
21	AA	270	A	N1-C6-N6	-10.49	112.31	118.60
38	BP	52	ARG	NE-CZ-NH1	10.47	125.54	120.30
54	BA	342	A	N1-C6-N6	-10.47	112.32	118.60
21	AA	1431	A	N1-C6-N6	-10.47	112.32	118.60
21	AA	1368	A	N1-C6-N6	-10.47	112.32	118.60
54	BA	2097	A	N1-C6-N6	-10.47	112.32	118.60
54	BA	1272	A	N1-C6-N6	-10.47	112.32	118.60
54	BA	1301	A	N1-C6-N6	-10.44	112.34	118.60
21	AA	1446	A	N1-C6-N6	-10.44	112.34	118.60
54	BA	456	C	O4'-C1'-N1	10.44	116.55	108.20
54	BA	2346	A	N1-C6-N6	-10.44	112.34	118.60
21	AA	8	A	N1-C6-N6	-10.43	112.34	118.60
54	BA	613	A	O4'-C1'-N9	10.43	116.54	108.20
21	AA	328	C	N3-C2-O2	-10.42	114.61	121.90
54	BA	1754	A	N1-C6-N6	-10.41	112.35	118.60
54	BA	125	A	N1-C6-N6	-10.41	112.35	118.60
54	BA	2867	G	O4'-C1'-N9	10.41	116.53	108.20
54	BA	2287	A	N1-C6-N6	-10.39	112.36	118.60
21	AA	179	A	N1-C6-N6	-10.38	112.37	118.60
54	BA	1086	A	N1-C6-N6	-10.38	112.37	118.60
21	AA	327	A	N1-C6-N6	-10.38	112.38	118.60
21	AA	579	A	N1-C6-N6	-10.37	112.38	118.60
21	AA	456	A	N1-C6-N6	-10.36	112.38	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BB	34	A	N1-C6-N6	-10.36	112.39	118.60
21	AA	1468	A	N1-C6-N6	-10.35	112.39	118.60
24	A3	73	A	N1-C6-N6	-10.34	112.40	118.60
21	AA	1201	A	N1-C6-N6	-10.33	112.40	118.60
21	AA	535	A	N1-C6-N6	-10.33	112.40	118.60
21	AA	621	A	N1-C6-N6	-10.32	112.41	118.60
54	BA	142	A	N1-C6-N6	-10.32	112.41	118.60
54	BA	2727	A	N1-C6-N6	-10.32	112.41	118.60
54	BA	74	A	N1-C6-N6	-10.29	112.42	118.60
15	AP	51	ARG	NE-CZ-NH1	10.29	125.44	120.30
54	BA	911	A	N1-C6-N6	-10.29	112.43	118.60
54	BA	2090	A	N1-C6-N6	-10.28	112.43	118.60
21	AA	236	A	N1-C6-N6	-10.27	112.44	118.60
21	AA	583	A	N1-C6-N6	-10.27	112.44	118.60
54	BA	750	A	N1-C6-N6	-10.27	112.44	118.60
54	BA	1789	A	N1-C6-N6	-10.26	112.44	118.60
54	BA	2170	A	N1-C6-N6	-10.26	112.45	118.60
54	BA	2478	A	N1-C6-N6	-10.26	112.45	118.60
54	BA	1439	A	N1-C6-N6	-10.25	112.45	118.60
24	A3	60	A	N1-C6-N6	-10.23	112.46	118.60
54	BA	892	A	N1-C6-N6	-10.21	112.47	118.60
54	BA	983	A	N1-C6-N6	-10.21	112.47	118.60
24	A3	36	A	N1-C6-N6	-10.18	112.49	118.60
54	BA	1632	A	N1-C6-N6	-10.18	112.49	118.60
54	BA	2267	A	N1-C6-N6	-10.18	112.49	118.60
21	AA	975	A	N1-C6-N6	-10.18	112.49	118.60
54	BA	602	A	N1-C6-N6	-10.16	112.51	118.60
21	AA	1374	A	N1-C6-N6	-10.14	112.52	118.60
54	BA	1916	A	N1-C6-N6	-10.14	112.52	118.60
21	AA	860	A	N1-C6-N6	-10.13	112.52	118.60
21	AA	681	A	N1-C6-N6	-10.13	112.52	118.60
21	AA	937	A	N1-C6-N6	-10.12	112.53	118.60
54	BA	2734	A	N1-C6-N6	-10.12	112.53	118.60
54	BA	1791	A	N1-C6-N6	-10.11	112.53	118.60
54	BA	2432	A	N1-C6-N6	-10.11	112.53	118.60
21	AA	766	A	N1-C6-N6	-10.11	112.53	118.60
54	BA	1328	A	N1-C6-N6	-10.11	112.54	118.60
54	BA	1591	A	N1-C6-N6	-10.10	112.54	118.60
54	BA	532	A	N1-C6-N6	-10.10	112.54	118.60
54	BA	1085	A	N1-C6-N6	-10.10	112.54	118.60
54	BA	1126	A	N1-C6-N6	-10.10	112.54	118.60
54	BA	2513	A	N1-C6-N6	-10.09	112.54	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1502	A	N1-C6-N6	-10.09	112.55	118.60
54	BA	2005	A	N1-C6-N6	-10.09	112.55	118.60
54	BA	2503	A	O4'-C1'-N9	10.08	116.27	108.20
21	AA	889	A	N1-C6-N6	-10.07	112.56	118.60
21	AA	1188	A	N1-C6-N6	-10.07	112.56	118.60
54	BA	1359	A	N1-C6-N6	-10.07	112.56	118.60
54	BA	2198	A	N1-C6-N6	-10.06	112.56	118.60
54	BA	1090	A	N1-C6-N6	-10.06	112.56	118.60
12	AM	97	ARG	NE-CZ-NH2	10.05	125.32	120.30
37	BO	25	ARG	NE-CZ-NH1	10.05	125.32	120.30
54	BA	1641	A	N1-C6-N6	-10.04	112.58	118.60
21	AA	19	A	N1-C6-N6	-10.03	112.58	118.60
54	BA	1395	A	N1-C6-N6	-10.03	112.58	118.60
54	BA	2564	A	N1-C6-N6	-10.03	112.58	118.60
54	BA	2134	A	N1-C6-N6	-10.01	112.59	118.60
21	AA	573	A	N1-C6-N6	-10.01	112.60	118.60
54	BA	1640	A	N1-C6-N6	-10.01	112.59	118.60
21	AA	50	A	N1-C6-N6	-10.01	112.60	118.60
8	AI	122	ARG	NE-CZ-NH2	10.00	125.30	120.30
21	AA	452	A	N1-C6-N6	-10.00	112.60	118.60
54	BA	933	A	N1-C6-N6	-10.00	112.60	118.60
54	BA	2307	G	O4'-C1'-N9	9.99	116.19	108.20
10	AK	55	ARG	NE-CZ-NH1	9.99	125.30	120.30
54	BA	2411	A	N1-C6-N6	-9.99	112.61	118.60
54	BA	1509	A	N1-C6-N6	-9.98	112.61	118.60
21	AA	78	A	N1-C6-N6	-9.98	112.61	118.60
54	BA	631	A	N1-C6-N6	-9.96	112.62	118.60
54	BA	309	A	N1-C6-N6	-9.96	112.62	118.60
21	AA	510	A	N1-C6-N6	-9.96	112.63	118.60
54	BA	144	A	N1-C6-N6	-9.96	112.63	118.60
21	AA	609	A	N1-C6-N6	-9.95	112.63	118.60
54	BA	2173	A	N1-C6-N6	-9.95	112.63	118.60
54	BA	2225	A	N1-C6-N6	-9.94	112.63	118.60
54	BA	2126	A	O4'-C1'-N9	9.94	116.15	108.20
54	BA	300	A	N1-C6-N6	-9.93	112.64	118.60
54	BA	2814	A	N1-C6-N6	-9.92	112.65	118.60
54	BA	959	A	N1-C6-N6	-9.92	112.65	118.60
39	BQ	69	ARG	NE-CZ-NH1	9.91	125.26	120.30
21	AA	279	A	N1-C6-N6	-9.91	112.65	118.60
54	BA	346	A	N1-C6-N6	-9.91	112.65	118.60
54	BA	1810	A	N1-C6-N6	-9.91	112.66	118.60
54	BA	800	A	N1-C6-N6	-9.90	112.66	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1829	A	N1-C6-N6	-9.90	112.66	118.60
21	AA	1227	A	N1-C6-N6	-9.90	112.66	118.60
54	BA	474	G	O4'-C1'-N9	9.90	116.12	108.20
21	AA	383	A	N1-C6-N6	-9.89	112.66	118.60
54	BA	2700	A	N1-C6-N6	-9.89	112.67	118.60
21	AA	665	A	N1-C6-N6	-9.89	112.67	118.60
21	AA	819	A	N1-C6-N6	-9.89	112.67	118.60
21	AA	325	A	N1-C6-N6	-9.89	112.67	118.60
21	AA	767	A	N1-C6-N6	-9.88	112.67	118.60
54	BA	861	A	N1-C6-N6	-9.88	112.67	118.60
54	BA	443	A	N1-C6-N6	-9.88	112.67	118.60
54	BA	936	A	N1-C6-N6	-9.88	112.67	118.60
54	BA	1459	G	O4'-C1'-N9	9.88	116.11	108.20
21	AA	408	A	N1-C6-N6	-9.87	112.68	118.60
54	BA	1427	A	N1-C6-N6	-9.87	112.68	118.60
21	AA	1067	A	N1-C6-N6	-9.86	112.68	118.60
21	AA	80	A	N1-C6-N6	-9.86	112.69	118.60
11	AL	8	ARG	NE-CZ-NH1	9.85	125.22	120.30
46	BX	27	ARG	NE-CZ-NH1	9.84	125.22	120.30
21	AA	116	A	N1-C6-N6	-9.84	112.70	118.60
54	BA	1084	A	N1-C6-N6	-9.84	112.70	118.60
21	AA	574	A	N1-C6-N6	-9.83	112.70	118.60
13	AN	53	ARG	NE-CZ-NH1	9.82	125.21	120.30
54	BA	1515	A	N1-C6-N6	-9.82	112.71	118.60
54	BA	1929	G	O4'-C1'-N9	9.82	116.06	108.20
54	BA	1378	A	C1'-O4'-C4'	-9.82	102.05	109.90
21	AA	1169	A	N1-C6-N6	-9.81	112.71	118.60
54	BA	182	A	N1-C6-N6	-9.81	112.71	118.60
54	BA	988	A	N1-C6-N6	-9.81	112.71	118.60
54	BA	2009	A	N1-C6-N6	-9.81	112.71	118.60
20	AU	44	ARG	NE-CZ-NH1	9.80	125.20	120.30
10	AK	126	ARG	NE-CZ-NH2	9.80	125.20	120.30
54	BA	2104	C	N3-C2-O2	-9.79	115.04	121.90
54	BA	1387	A	N1-C6-N6	-9.79	112.73	118.60
54	BA	1387	A	O4'-C1'-N9	9.78	116.02	108.20
21	AA	600	A	N1-C6-N6	-9.77	112.74	118.60
21	AA	915	A	N1-C6-N6	-9.77	112.74	118.60
21	AA	728	A	N1-C6-N6	-9.77	112.74	118.60
21	AA	28	A	N1-C6-N6	-9.76	112.74	118.60
54	BA	10	A	N1-C6-N6	-9.76	112.74	118.60
21	AA	841	C	N3-C2-O2	-9.76	115.07	121.90
21	AA	1014	A	N1-C6-N6	-9.76	112.74	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	747	A	N1-C6-N6	-9.75	112.75	118.60
54	BA	931	U	O4'-C1'-N1	9.75	116.00	108.20
21	AA	1396	A	N1-C6-N6	-9.74	112.76	118.60
21	AA	706	A	N1-C6-N6	-9.74	112.76	118.60
54	BA	1705	A	N1-C6-N6	-9.73	112.76	118.60
54	BA	2284	A	N1-C6-N6	-9.73	112.76	118.60
54	BA	404	A	N1-C6-N6	-9.72	112.77	118.60
54	BA	927	A	N1-C6-N6	-9.72	112.77	118.60
54	BA	1194	A	N1-C6-N6	-9.72	112.77	118.60
21	AA	782	A	N1-C6-N6	-9.72	112.77	118.60
54	BA	371	A	N1-C6-N6	-9.72	112.77	118.60
54	BA	1583	A	N1-C6-N6	-9.71	112.78	118.60
19	AT	59	ARG	NE-CZ-NH1	9.70	125.15	120.30
54	BA	213	A	N1-C6-N6	-9.70	112.78	118.60
54	BA	352	A	N1-C6-N6	-9.70	112.78	118.60
54	BA	1496	A	N1-C6-N6	-9.69	112.78	118.60
54	BA	2872	A	N1-C6-N6	-9.70	112.78	118.60
54	BA	161	A	N1-C6-N6	-9.69	112.79	118.60
54	BA	1597	A	N1-C6-N6	-9.69	112.79	118.60
21	AA	1280	A	N1-C6-N6	-9.68	112.79	118.60
21	AA	914	A	N1-C6-N6	-9.68	112.79	118.60
21	AA	55	A	N1-C6-N6	-9.67	112.80	118.60
54	BA	845	A	N1-C6-N6	-9.67	112.80	118.60
21	AA	815	A	N1-C6-N6	-9.66	112.80	118.60
32	BJ	95	ARG	NE-CZ-NH1	9.66	125.13	120.30
54	BA	1938	A	O4'-C1'-N9	9.66	115.92	108.20
21	AA	640	A	N1-C6-N6	-9.65	112.81	118.60
54	BA	1722	A	N1-C6-N6	-9.65	112.81	118.60
54	BA	155	A	N1-C6-N6	-9.64	112.81	118.60
54	BA	2792	A	N1-C6-N6	-9.64	112.82	118.60
21	AA	1251	A	N1-C6-N6	-9.63	112.82	118.60
54	BA	1746	A	N1-C6-N6	-9.63	112.82	118.60
54	BA	1927	A	N1-C6-N6	-9.62	112.83	118.60
21	AA	465	A	C1'-O4'-C4'	-9.62	102.21	109.90
54	BA	782	A	N1-C6-N6	-9.61	112.83	118.60
1	AB	207	ARG	NE-CZ-NH2	9.61	125.11	120.30
54	BA	1067	A	O4'-C1'-N9	9.61	115.89	108.20
21	AA	1152	A	N1-C6-N6	-9.60	112.84	118.60
54	BA	781	A	N1-C6-N6	-9.59	112.84	118.60
54	BA	241	A	N1-C6-N6	-9.59	112.85	118.60
9	AJ	7	ARG	NE-CZ-NH1	9.59	125.09	120.30
54	BA	821	A	N1-C6-N6	-9.58	112.85	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	831	A	N1-C6-N6	-9.58	112.85	118.60
21	AA	371	A	N1-C6-N6	-9.58	112.86	118.60
21	AA	1519	A	N1-C6-N6	-9.57	112.86	118.60
54	BA	532	A	O4'-C1'-N9	9.57	115.86	108.20
54	BA	878	A	N1-C6-N6	-9.57	112.86	118.60
21	AA	1239	A	N1-C6-N6	-9.57	112.86	118.60
54	BA	1504	A	N1-C6-N6	-9.57	112.86	118.60
21	AA	1269	A	N1-C6-N6	-9.56	112.86	118.60
21	AA	1060	U	P-O3'-C3'	9.56	131.17	119.70
21	AA	1311	A	N1-C6-N6	-9.56	112.86	118.60
54	BA	1365	A	N1-C6-N6	-9.56	112.87	118.60
54	BA	1142	A	N1-C6-N6	-9.55	112.87	118.60
54	BA	354	A	N1-C6-N6	-9.55	112.87	118.60
54	BA	432	A	N1-C6-N6	-9.55	112.87	118.60
21	AA	1081	A	N1-C6-N6	-9.55	112.87	118.60
21	AA	675	A	N1-C6-N6	-9.55	112.87	118.60
55	BB	50	A	N1-C6-N6	-9.55	112.87	118.60
21	AA	1214	C	N3-C2-O2	-9.54	115.22	121.90
54	BA	1739	A	N1-C6-N6	-9.54	112.88	118.60
54	BA	945	A	N1-C6-N6	-9.53	112.88	118.60
21	AA	223	A	N1-C6-N6	-9.53	112.88	118.60
34	BL	2	ARG	NE-CZ-NH1	9.52	125.06	120.30
54	BA	1089	A	N1-C6-N6	-9.52	112.89	118.60
54	BA	504	A	N1-C6-N6	-9.51	112.89	118.60
54	BA	752	A	N1-C6-N6	-9.51	112.89	118.60
54	BA	1819	A	N1-C6-N6	-9.51	112.89	118.60
21	AA	365	U	C1'-O4'-C4'	-9.51	102.29	109.90
54	BA	715	A	N1-C6-N6	-9.51	112.89	118.60
21	AA	969	A	N1-C6-N6	-9.50	112.90	118.60
55	BB	87	U	O4'-C1'-N1	9.50	115.80	108.20
54	BA	1230	A	N1-C6-N6	-9.49	112.90	118.60
54	BA	2199	A	N1-C6-N6	-9.49	112.91	118.60
21	AA	285	C	N3-C2-O2	-9.48	115.26	121.90
21	AA	1036	A	N1-C6-N6	-9.48	112.91	118.60
22	A1	6	A	N1-C6-N6	-9.48	112.91	118.60
54	BA	56	A	N1-C6-N6	-9.48	112.91	118.60
22	A1	38	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	429	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	941	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	909	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	1103	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	1244	A	N1-C6-N6	-9.47	112.92	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1246	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	1626	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	73	A	N1-C6-N6	-9.46	112.92	118.60
54	BA	1403	A	N1-C6-N6	-9.46	112.92	118.60
54	BA	1580	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	2309	A	N1-C6-N6	-9.47	112.92	118.60
54	BA	348	A	N1-C6-N6	-9.46	112.93	118.60
54	BA	2851	A	N1-C6-N6	-9.45	112.93	118.60
21	AA	1157	A	N1-C6-N6	-9.45	112.93	118.60
54	BA	975	A	N1-C6-N6	-9.45	112.93	118.60
54	BA	2274	A	N1-C6-N6	-9.45	112.93	118.60
21	AA	412	A	N1-C6-N6	-9.44	112.94	118.60
54	BA	1914	C	N3-C2-O2	-9.44	115.29	121.90
54	BA	1552	A	N1-C6-N6	-9.44	112.94	118.60
54	BA	1204	A	N1-C6-N6	-9.44	112.94	118.60
21	AA	74	A	N1-C6-N6	-9.43	112.94	118.60
54	BA	788	A	N1-C6-N6	-9.43	112.94	118.60
54	BA	2430	A	C5-C6-N1	9.43	122.42	117.70
54	BA	1630	A	N1-C6-N6	-9.43	112.94	118.60
54	BA	2051	A	N1-C6-N6	-9.43	112.94	118.60
54	BA	1889	A	N1-C6-N6	-9.42	112.94	118.60
54	BA	1953	A	N1-C6-N6	-9.42	112.95	118.60
21	AA	143	A	N1-C6-N6	-9.41	112.95	118.60
54	BA	2089	C	O4'-C1'-N1	9.41	115.73	108.20
6	AG	110	ARG	NE-CZ-NH1	9.41	125.00	120.30
21	AA	1100	C	N3-C2-O2	-9.41	115.31	121.90
21	AA	872	A	N1-C6-N6	-9.41	112.96	118.60
14	AO	71	ARG	NE-CZ-NH1	9.40	125.00	120.30
54	BA	1678	A	N1-C6-N6	-9.40	112.96	118.60
21	AA	1256	A	N1-C6-N6	-9.40	112.96	118.60
54	BA	14	A	N1-C6-N6	-9.40	112.96	118.60
21	AA	151	A	N1-C6-N6	-9.39	112.96	118.60
54	BA	1378	A	N1-C6-N6	-9.39	112.96	118.60
21	AA	1493	A	N1-C6-N6	-9.39	112.97	118.60
54	BA	1690	A	N1-C6-N6	-9.39	112.97	118.60
21	AA	1410	A	N1-C6-N6	-9.38	112.97	118.60
21	AA	559	A	N1-C6-N6	-9.37	112.97	118.60
21	AA	784	A	N1-C6-N6	-9.37	112.98	118.60
21	AA	807	A	N1-C6-N6	-9.37	112.98	118.60
21	AA	787	A	N1-C6-N6	-9.37	112.98	118.60
21	AA	841	C	N1-C2-O2	9.37	124.52	118.90
21	AA	16	A	N1-C6-N6	-9.37	112.98	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	AJ	37	ARG	NE-CZ-NH1	9.36	124.98	120.30
54	BA	1383	A	N1-C6-N6	-9.36	112.98	118.60
21	AA	1250	A	N1-C6-N6	-9.36	112.98	118.60
54	BA	1854	A	N1-C6-N6	-9.36	112.98	118.60
21	AA	792	A	N1-C6-N6	-9.35	112.99	118.60
54	BA	1586	A	N1-C6-N6	-9.35	112.99	118.60
54	BA	2335	A	N1-C6-N6	-9.35	112.99	118.60
54	BA	2448	A	N1-C6-N6	-9.34	113.00	118.60
54	BA	587	C	O4'-C1'-N1	9.34	115.67	108.20
21	AA	539	A	N1-C6-N6	-9.34	113.00	118.60
21	AA	900	A	N1-C6-N6	-9.33	113.00	118.60
54	BA	514	A	N1-C6-N6	-9.33	113.00	118.60
54	BA	439	A	N1-C6-N6	-9.33	113.00	118.60
54	BA	730	A	N1-C6-N6	-9.32	113.01	118.60
54	BA	118	A	N1-C6-N6	-9.32	113.01	118.60
54	BA	1610	A	O4'-C1'-N9	9.32	115.65	108.20
21	AA	60	A	N1-C6-N6	-9.31	113.01	118.60
22	A1	73	A	C5-C6-N1	9.31	122.35	117.70
54	BA	1608	A	N1-C6-N6	-9.31	113.02	118.60
54	BA	299	A	N1-C6-N6	-9.30	113.02	118.60
54	BA	1327	A	N1-C6-N6	-9.30	113.02	118.60
54	BA	743	A	N1-C6-N6	-9.30	113.02	118.60
54	BA	1420	A	N1-C6-N6	-9.29	113.02	118.60
54	BA	2311	A	N1-C6-N6	-9.29	113.02	118.60
54	BA	2317	A	N1-C6-N6	-9.30	113.02	118.60
54	BA	2288	A	N1-C6-N6	-9.29	113.03	118.60
54	BA	1858	A	N1-C6-N6	-9.29	113.03	118.60
54	BA	391	A	N1-C6-N6	-9.28	113.03	118.60
21	AA	728	A	C5-C6-N1	9.28	122.34	117.70
51	B2	21	ARG	NE-CZ-NH1	9.28	124.94	120.30
2	AC	131	ARG	NE-CZ-NH1	9.27	124.94	120.30
54	BA	84	A	N1-C6-N6	-9.27	113.04	118.60
54	BA	910	A	N1-C6-N6	-9.27	113.04	118.60
54	BA	63	A	N1-C6-N6	-9.27	113.04	118.60
54	BA	1593	A	N1-C6-N6	-9.27	113.04	118.60
21	AA	702	A	N1-C6-N6	-9.27	113.04	118.60
51	B2	12	ARG	NE-CZ-NH1	9.27	124.93	120.30
54	BA	2088	A	N1-C6-N6	-9.27	113.04	118.60
25	BC	51	ARG	NE-CZ-NH1	9.26	124.93	120.30
54	BA	218	A	N1-C6-N6	-9.26	113.04	118.60
54	BA	1490	A	N1-C6-N6	-9.26	113.05	118.60
54	BA	2879	A	O4'-C1'-N9	9.25	115.60	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2145	C	N3-C2-O2	-9.25	115.42	121.90
54	BA	1981	A	N1-C6-N6	-9.25	113.05	118.60
54	BA	522	A	N1-C6-N6	-9.24	113.05	118.60
54	BA	2330	G	O4'-C1'-N9	9.24	115.59	108.20
54	BA	21	A	N1-C6-N6	-9.24	113.06	118.60
54	BA	761	A	N1-C6-N6	-9.24	113.06	118.60
54	BA	847	U	O4'-C1'-N1	9.24	115.59	108.20
21	AA	10	A	N1-C6-N6	-9.23	113.06	118.60
22	A1	58	A	N1-C6-N6	-9.23	113.06	118.60
21	AA	1333	A	N1-C6-N6	-9.23	113.06	118.60
28	BF	111	ARG	NE-CZ-NH1	9.23	124.92	120.30
25	BC	62	ARG	NE-CZ-NH1	9.23	124.91	120.30
54	BA	478	A	N1-C6-N6	-9.23	113.06	118.60
54	BA	1057	A	N1-C6-N6	-9.23	113.06	118.60
54	BA	49	A	N1-C6-N6	-9.22	113.07	118.60
54	BA	272	A	N1-C6-N6	-9.22	113.07	118.60
24	A3	11	A	N1-C6-N6	-9.22	113.07	118.60
54	BA	382	A	N1-C6-N6	-9.22	113.07	118.60
54	BA	1067	A	N1-C6-N6	-9.21	113.07	118.60
54	BA	2281	A	N1-C6-N6	-9.22	113.07	118.60
54	BA	320	A	N1-C6-N6	-9.21	113.07	118.60
54	BA	2268	A	N1-C6-N6	-9.21	113.07	118.60
54	BA	2327	A	N1-C6-N6	-9.21	113.08	118.60
21	AA	397	A	N1-C6-N6	-9.21	113.08	118.60
55	BB	115	A	N1-C6-N6	-9.20	113.08	118.60
21	AA	1191	A	N1-C6-N6	-9.20	113.08	118.60
54	BA	575	A	N1-C6-N6	-9.20	113.08	118.60
21	AA	1180	A	N1-C6-N6	-9.20	113.08	118.60
54	BA	2614	A	N1-C6-N6	-9.20	113.08	118.60
21	AA	1418	A	N1-C6-N6	-9.19	113.08	118.60
54	BA	734	A	N1-C6-N6	-9.19	113.08	118.60
21	AA	1257	A	N1-C6-N6	-9.19	113.09	118.60
54	BA	1853	A	N1-C6-N6	-9.19	113.09	118.60
54	BA	925	A	N1-C6-N6	-9.18	113.09	118.60
54	BA	1677	A	N1-C6-N6	-9.18	113.09	118.60
54	BA	1654	A	N1-C6-N6	-9.17	113.10	118.60
54	BA	2541	A	N1-C6-N6	-9.17	113.09	118.60
54	BA	1919	A	N1-C6-N6	-9.16	113.10	118.60
21	AA	1132	C	N3-C2-O2	-9.16	115.49	121.90
21	AA	1429	A	N1-C6-N6	-9.16	113.11	118.60
54	BA	1871	A	N1-C6-N6	-9.16	113.10	118.60
54	BA	2761	A	N1-C6-N6	-9.16	113.11	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AC	135	ARG	NE-CZ-NH1	9.15	124.88	120.30
54	BA	2412	A	N1-C6-N6	-9.15	113.11	118.60
54	BA	1262	A	N1-C6-N6	-9.15	113.11	118.60
54	BA	2142	A	N1-C6-N6	-9.15	113.11	118.60
55	BB	52	A	N1-C6-N6	-9.15	113.11	118.60
54	BA	1784	A	N1-C6-N6	-9.14	113.11	118.60
19	AT	23	ARG	NE-CZ-NH1	9.14	124.87	120.30
54	BA	1505	A	N1-C6-N6	-9.14	113.11	118.60
21	AA	554	A	N1-C6-N6	-9.14	113.11	118.60
21	AA	1219	A	N1-C6-N6	-9.14	113.12	118.60
21	AA	139	A	N1-C6-N6	-9.14	113.12	118.60
54	BA	1966	A	N1-C6-N6	-9.14	113.12	118.60
54	BA	2033	A	N1-C6-N6	-9.14	113.12	118.60
54	BA	2450	A	N1-C6-N6	-9.14	113.12	118.60
21	AA	315	A	N1-C6-N6	-9.14	113.12	118.60
54	BA	783	A	N1-C6-N6	-9.13	113.12	118.60
54	BA	825	A	N1-C6-N6	-9.13	113.12	118.60
54	BA	2298	A	N1-C6-N6	-9.13	113.12	118.60
22	A1	69	A	N1-C6-N6	-9.13	113.12	118.60
54	BA	1783	A	N1-C6-N6	-9.13	113.12	118.60
35	BM	16	ARG	NE-CZ-NH1	9.12	124.86	120.30
2	AC	53	ARG	NE-CZ-NH1	9.12	124.86	120.30
54	BA	896	A	N1-C6-N6	-9.12	113.13	118.60
55	BB	104	A	N1-C6-N6	-9.12	113.13	118.60
21	AA	181	A	N1-C6-N6	-9.11	113.13	118.60
54	BA	1664	A	N1-C6-N6	-9.12	113.13	118.60
21	AA	1322	C	N3-C2-O2	-9.11	115.52	121.90
54	BA	1848	A	N1-C6-N6	-9.11	113.13	118.60
54	BA	1302	A	N1-C6-N6	-9.11	113.14	118.60
21	AA	353	A	N1-C6-N6	-9.10	113.14	118.60
21	AA	1111	A	N1-C6-N6	-9.10	113.14	118.60
54	BA	1808	A	N1-C6-N6	-9.10	113.14	118.60
54	BA	718	A	N1-C6-N6	-9.10	113.14	118.60
11	AL	82	ARG	NE-CZ-NH1	9.10	124.85	120.30
54	BA	626	A	N1-C6-N6	-9.09	113.14	118.60
54	BA	2158	A	N1-C6-N6	-9.09	113.14	118.60
21	AA	1492	A	N1-C6-N6	-9.09	113.14	118.60
54	BA	572	A	N1-C6-N6	-9.09	113.15	118.60
54	BA	1786	A	N1-C6-N6	-9.09	113.14	118.60
21	AA	1055	A	N1-C6-N6	-9.09	113.15	118.60
54	BA	368	A	N1-C6-N6	-9.08	113.15	118.60
54	BA	1353	A	N1-C6-N6	-9.08	113.15	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1534	A	N1-C6-N6	-9.08	113.15	118.60
21	AA	101	A	N1-C6-N6	-9.08	113.15	118.60
21	AA	1216	A	N1-C6-N6	-9.08	113.15	118.60
54	BA	529	A	N1-C6-N6	-9.08	113.15	118.60
55	BB	94	A	N1-C6-N6	-9.08	113.15	118.60
54	BA	1532	A	N1-C6-N6	-9.07	113.16	118.60
54	BA	1987	A	N1-C6-N6	-9.07	113.16	118.60
54	BA	2095	A	N1-C6-N6	-9.07	113.16	118.60
54	BA	2407	A	N1-C6-N6	-9.07	113.16	118.60
54	BA	1133	A	N1-C6-N6	-9.07	113.16	118.60
53	B4	19	ARG	NE-CZ-NH1	9.06	124.83	120.30
54	BA	1701	A	N1-C6-N6	-9.06	113.16	118.60
21	AA	414	A	N1-C6-N6	-9.06	113.17	118.60
27	BE	114	ARG	NE-CZ-NH1	9.06	124.83	120.30
21	AA	1080	A	N1-C6-N6	-9.05	113.17	118.60
24	A3	22	A	N1-C6-N6	-9.05	113.17	118.60
48	BZ	44	ARG	NE-CZ-NH1	9.05	124.83	120.30
54	BA	1126	A	C5-C6-N1	9.05	122.23	117.70
21	AA	1299	A	N1-C6-N6	-9.05	113.17	118.60
54	BA	2809	A	N1-C6-N6	-9.05	113.17	118.60
54	BA	960	A	N1-C6-N6	-9.04	113.18	118.60
21	AA	913	A	N1-C6-N6	-9.04	113.18	118.60
21	AA	1428	A	N1-C6-N6	-9.04	113.18	118.60
54	BA	2060	A	N1-C6-N6	-9.04	113.18	118.60
54	BA	749	A	N1-C6-N6	-9.04	113.18	118.60
54	BA	2518	A	N1-C6-N6	-9.04	113.18	118.60
54	BA	2062	A	N1-C6-N6	-9.03	113.18	118.60
54	BA	1111	A	N1-C6-N6	-9.03	113.18	118.60
36	BN	118	ARG	NE-CZ-NH1	9.03	124.81	120.30
54	BA	503	A	N1-C6-N6	-9.03	113.18	118.60
54	BA	2392	A	N1-C6-N6	-9.03	113.18	118.60
54	BA	1900	A	N1-C6-N6	-9.02	113.19	118.60
4	AE	111	ARG	NE-CZ-NH1	9.02	124.81	120.30
54	BA	1714	U	O4'-C1'-N1	9.02	115.42	108.20
54	BA	2418	A	N1-C6-N6	-9.02	113.19	118.60
6	AG	69	ARG	NE-CZ-NH1	9.01	124.81	120.30
54	BA	1008	A	N1-C6-N6	-9.01	113.19	118.60
54	BA	2471	A	N1-C6-N6	-9.01	113.19	118.60
55	BB	109	A	N1-C6-N6	-9.01	113.19	118.60
54	BA	586	A	N1-C6-N6	-9.01	113.19	118.60
54	BA	1169	A	N1-C6-N6	-9.01	113.19	118.60
21	AA	328	C	N1-C2-O2	9.00	124.30	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	655	A	N1-C6-N6	-9.00	113.20	118.60
22	A1	21	A	N1-C6-N6	-9.00	113.20	118.60
54	BA	1866	A	N1-C6-N6	-9.00	113.20	118.60
54	BA	1606	C	N3-C2-O2	-9.00	115.60	121.90
55	BB	45	A	N1-C6-N6	-8.99	113.20	118.60
6	AG	77	ARG	NE-CZ-NH1	8.99	124.80	120.30
31	BI	64	ARG	NE-CZ-NH1	8.99	124.80	120.30
21	AA	563	A	N1-C6-N6	-8.99	113.21	118.60
54	BA	849	A	N1-C6-N6	-8.98	113.21	118.60
54	BA	1431	A	N1-C6-N6	-8.98	113.22	118.60
21	AA	1155	A	N1-C6-N6	-8.97	113.22	118.60
54	BA	2117	A	N1-C6-N6	-8.97	113.22	118.60
21	AA	696	A	N1-C6-N6	-8.97	113.22	118.60
21	AA	1329	A	N1-C6-N6	-8.96	113.22	118.60
54	BA	965	C	N3-C2-O2	-8.96	115.63	121.90
21	AA	1513	A	N1-C6-N6	-8.96	113.23	118.60
21	AA	958	A	N1-C6-N6	-8.96	113.23	118.60
21	AA	1179	A	N1-C6-N6	-8.95	113.23	118.60
21	AA	802	A	N1-C6-N6	-8.94	113.23	118.60
54	BA	1815	A	N1-C6-N6	-8.94	113.23	118.60
54	BA	1070	A	N1-C6-N6	-8.94	113.24	118.60
54	BA	1847	A	N1-C6-N6	-8.94	113.24	118.60
22	A1	23	A	N1-C6-N6	-8.94	113.24	118.60
54	BA	2757	A	N1-C6-N6	-8.93	113.24	118.60
54	BA	2675	A	N1-C6-N6	-8.93	113.25	118.60
8	AI	118	ARG	NE-CZ-NH1	8.92	124.76	120.30
21	AA	1360	A	N1-C6-N6	-8.92	113.25	118.60
54	BA	1009	A	N1-C6-N6	-8.92	113.25	118.60
54	BA	1021	A	N1-C6-N6	-8.92	113.25	118.60
54	BA	2820	A	N1-C6-N6	-8.92	113.25	118.60
21	AA	1319	A	N1-C6-N6	-8.91	113.25	118.60
22	A1	41	A	N1-C6-N6	-8.91	113.25	118.60
21	AA	520	A	N1-C6-N6	-8.91	113.26	118.60
54	BA	160	A	N1-C6-N6	-8.90	113.26	118.60
21	AA	1093	A	N1-C6-N6	-8.90	113.26	118.60
21	AA	1101	A	N1-C6-N6	-8.90	113.26	118.60
54	BA	1885	A	N1-C6-N6	-8.90	113.26	118.60
54	BA	2212	A	N1-C6-N6	-8.90	113.26	118.60
54	BA	2665	A	N1-C6-N6	-8.90	113.26	118.60
24	A3	44	A	N1-C6-N6	-8.90	113.26	118.60
54	BA	1635	A	N1-C6-N6	-8.90	113.26	118.60
54	BA	262	A	N1-C6-N6	-8.89	113.26	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1156	A	N1-C6-N6	-8.89	113.26	118.60
10	AK	92	ARG	NE-CZ-NH1	8.89	124.75	120.30
54	BA	980	A	N1-C6-N6	-8.88	113.28	118.60
54	BA	693	A	N1-C6-N6	-8.87	113.28	118.60
45	BW	24	ARG	NE-CZ-NH1	8.87	124.74	120.30
21	AA	959	A	N1-C6-N6	-8.87	113.28	118.60
21	AA	487	A	N1-C6-N6	-8.87	113.28	118.60
54	BA	727	A	N1-C6-N6	-8.87	113.28	118.60
54	BA	1728	C	N3-C2-O2	-8.87	115.69	121.90
35	BM	55	ARG	NE-CZ-NH2	8.87	124.73	120.30
54	BA	156	A	N1-C6-N6	-8.87	113.28	118.60
54	BA	454	A	N1-C6-N6	-8.87	113.28	118.60
54	BA	1274	A	N1-C6-N6	-8.86	113.28	118.60
21	AA	509	A	N1-C6-N6	-8.85	113.29	118.60
54	BA	207	A	N1-C6-N6	-8.85	113.29	118.60
55	BB	46	A	N1-C6-N6	-8.85	113.29	118.60
54	BA	6	A	N1-C6-N6	-8.84	113.30	118.60
54	BA	195	A	N1-C6-N6	-8.84	113.30	118.60
21	AA	33	A	N1-C6-N6	-8.83	113.30	118.60
2	AC	71	ARG	NE-CZ-NH1	8.83	124.71	120.30
21	AA	946	A	N1-C6-N6	-8.82	113.31	118.60
54	BA	1073	A	N1-C6-N6	-8.82	113.31	118.60
21	AA	53	A	N1-C6-N6	-8.82	113.31	118.60
21	AA	345	C	N3-C2-O2	-8.82	115.73	121.90
16	AQ	5	ARG	NE-CZ-NH1	8.82	124.71	120.30
54	BA	2352	A	N1-C6-N6	-8.82	113.31	118.60
21	AA	1499	A	N1-C6-N6	-8.81	113.31	118.60
6	AG	91	ARG	NE-CZ-NH1	8.81	124.70	120.30
21	AA	546	A	N1-C6-N6	-8.81	113.31	118.60
21	AA	918	A	N1-C6-N6	-8.80	113.32	118.60
54	BA	1266	G	O4'-C1'-N9	8.80	115.24	108.20
54	BA	2070	A	N1-C6-N6	-8.80	113.32	118.60
54	BA	627	A	N1-C6-N6	-8.80	113.32	118.60
54	BA	1759	A	N1-C6-N6	-8.79	113.32	118.60
54	BA	2600	A	N1-C6-N6	-8.80	113.32	118.60
38	BP	100	ARG	NE-CZ-NH1	8.79	124.70	120.30
21	AA	1021	A	N1-C6-N6	-8.78	113.33	118.60
54	BA	2077	A	N1-C6-N6	-8.79	113.33	118.60
21	AA	919	A	N1-C6-N6	-8.78	113.33	118.60
21	AA	435	A	N1-C6-N6	-8.77	113.34	118.60
21	AA	523	A	N1-C6-N6	-8.77	113.34	118.60
54	BA	1077	A	N1-C6-N6	-8.77	113.34	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1020	A	N1-C6-N6	-8.77	113.34	118.60
54	BA	1729	U	O4'-C1'-N1	8.77	115.22	108.20
21	AA	243	A	N1-C6-N6	-8.77	113.34	118.60
51	B2	14	ARG	NE-CZ-NH1	8.76	124.68	120.30
54	BA	582	A	N1-C6-N6	-8.76	113.35	118.60
54	BA	1307	A	N1-C6-N6	-8.76	113.35	118.60
54	BA	2184	A	N1-C6-N6	-8.76	113.35	118.60
54	BA	1761	C	N3-C2-O2	-8.75	115.78	121.90
20	AU	6	ARG	NE-CZ-NH1	8.75	124.67	120.30
21	AA	983	A	N1-C6-N6	-8.75	113.35	118.60
54	BA	53	A	N1-C6-N6	-8.75	113.35	118.60
54	BA	1000	A	N1-C6-N6	-8.75	113.35	118.60
54	BA	1502	A	N1-C6-N6	-8.75	113.35	118.60
21	AA	1054	C	N3-C2-O2	-8.74	115.78	121.90
21	AA	1254	A	N1-C6-N6	-8.74	113.35	118.60
54	BA	199	A	N1-C6-N6	-8.74	113.35	118.60
40	BR	79	ARG	NE-CZ-NH1	8.74	124.67	120.30
54	BA	2565	A	N1-C6-N6	-8.74	113.36	118.60
21	AA	161	A	N1-C6-N6	-8.73	113.36	118.60
21	AA	441	A	N1-C6-N6	-8.73	113.36	118.60
21	AA	1363	A	N1-C6-N6	-8.73	113.36	118.60
21	AA	1102	A	N1-C6-N6	-8.73	113.36	118.60
54	BA	1821	A	N1-C6-N6	-8.73	113.36	118.60
54	BA	2733	A	N1-C6-N6	-8.73	113.36	118.60
21	AA	349	A	N1-C6-N6	-8.73	113.36	118.60
54	BA	1288	G	O4'-C1'-N9	8.73	115.18	108.20
54	BA	1668	A	N1-C6-N6	-8.72	113.36	118.60
55	BB	66	A	C5-C6-N1	8.72	122.06	117.70
23	A2	79	A	N1-C6-N6	-8.72	113.37	118.60
54	BA	2376	A	N1-C6-N6	-8.72	113.37	118.60
54	BA	2461	A	N1-C6-N6	-8.72	113.37	118.60
21	AA	1238	A	N1-C6-N6	-8.72	113.37	118.60
21	AA	415	A	N1-C6-N6	-8.71	113.37	118.60
21	AA	532	A	N1-C6-N6	-8.71	113.37	118.60
54	BA	1614	A	N1-C6-N6	-8.71	113.37	118.60
54	BA	1650	A	N1-C6-N6	-8.71	113.37	118.60
54	BA	71	A	C5-C6-N1	8.71	122.06	117.70
54	BA	979	A	C5-C6-N1	8.71	122.05	117.70
54	BA	197	A	N1-C6-N6	-8.70	113.38	118.60
54	BA	609	A	N1-C6-N6	-8.69	113.38	118.60
21	AA	466	A	N1-C6-N6	-8.69	113.39	118.60
54	BA	1367	A	N1-C6-N6	-8.69	113.38	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1489	C	N3-C2-O2	-8.69	115.82	121.90
54	BA	1872	A	N1-C6-N6	-8.68	113.39	118.60
54	BA	1451	C	N3-C2-O2	-8.68	115.82	121.90
54	BA	2119	A	N1-C6-N6	-8.68	113.39	118.60
51	B2	19	ARG	NE-CZ-NH1	8.68	124.64	120.30
9	AJ	89	ARG	NE-CZ-NH1	8.68	124.64	120.30
33	BK	105	ARG	NE-CZ-NH1	8.68	124.64	120.30
36	BN	90	ARG	NE-CZ-NH1	8.67	124.64	120.30
22	A1	73	A	N1-C6-N6	-8.67	113.40	118.60
21	AA	983	A	C5-C6-N1	8.66	122.03	117.70
54	BA	1914	C	N1-C2-O2	8.66	124.10	118.90
54	BA	2439	A	N1-C6-N6	-8.66	113.40	118.60
21	AA	373	A	N1-C6-N6	-8.65	113.41	118.60
21	AA	794	A	N1-C6-N6	-8.65	113.41	118.60
54	BA	2426	A	N1-C6-N6	-8.65	113.41	118.60
54	BA	2534	A	C5-C6-N1	8.65	122.02	117.70
10	AK	105	ARG	NE-CZ-NH1	8.64	124.62	120.30
21	AA	1060	U	O4'-C1'-N1	8.64	115.12	108.20
54	BA	2333	A	N1-C6-N6	-8.64	113.42	118.60
55	BB	101	A	N1-C6-N6	-8.64	113.42	118.60
54	BA	2476	A	N1-C6-N6	-8.64	113.42	118.60
21	AA	129	A	N1-C6-N6	-8.63	113.42	118.60
54	BA	2213	U	O4'-C1'-N1	8.63	115.11	108.20
54	BA	2358	A	N1-C6-N6	-8.63	113.42	118.60
21	AA	344	A	N1-C6-N6	-8.63	113.42	118.60
21	AA	1042	A	N1-C6-N6	-8.62	113.42	118.60
21	AA	1274	A	N1-C6-N6	-8.63	113.42	118.60
21	AA	1318	A	N1-C6-N6	-8.63	113.42	118.60
21	AA	329	A	N1-C6-N6	-8.62	113.43	118.60
21	AA	977	A	N1-C6-N6	-8.62	113.43	118.60
21	AA	1322	C	N1-C2-O2	8.62	124.07	118.90
21	AA	704	A	N1-C6-N6	-8.61	113.43	118.60
54	BA	1960	A	N1-C6-N6	-8.62	113.43	118.60
21	AA	130	A	C5-C6-N1	8.61	122.00	117.70
27	BE	170	ARG	NE-CZ-NH1	8.60	124.60	120.30
54	BA	2712	C	N3-C2-O2	-8.60	115.88	121.90
41	BS	18	ARG	NE-CZ-NH1	8.60	124.60	120.30
54	BA	2497	A	N1-C6-N6	-8.60	113.44	118.60
21	AA	573	A	C5-C6-N1	8.59	122.00	117.70
21	AA	1342	C	P-O3'-C3'	8.59	130.01	119.70
54	BA	2448	A	C5-C6-N1	8.59	122.00	117.70
9	AJ	68	ARG	NE-CZ-NH1	8.59	124.59	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	515	A	N1-C6-N6	-8.59	113.45	118.60
54	BA	616	A	N1-C6-N6	-8.59	113.45	118.60
54	BA	1354	A	N1-C6-N6	-8.59	113.45	118.60
21	AA	816	A	N1-C6-N6	-8.59	113.45	118.60
36	BN	8	ARG	NE-CZ-NH1	8.59	124.59	120.30
36	BN	17	ARG	NE-CZ-NH1	8.58	124.59	120.30
54	BA	10	A	C5-C6-N1	8.58	121.99	117.70
35	BM	44	ARG	NE-CZ-NH1	8.58	124.59	120.30
54	BA	2266	A	C5-C6-N1	8.58	121.99	117.70
21	AA	759	A	N1-C6-N6	-8.58	113.45	118.60
54	BA	2736	A	N1-C6-N6	-8.58	113.45	118.60
54	BA	1264	A	C5-C6-N1	8.57	121.99	117.70
54	BA	391	A	C5-C6-N1	8.57	121.98	117.70
54	BA	1246	A	N1-C6-N6	-8.57	113.46	118.60
54	BA	1749	A	N1-C6-N6	-8.57	113.46	118.60
54	BA	2287	A	O4'-C1'-N9	8.57	115.06	108.20
21	AA	1499	A	C5-C6-N1	8.56	121.98	117.70
54	BA	1936	A	N1-C6-N6	-8.56	113.46	118.60
44	BV	9	ARG	NE-CZ-NH1	8.56	124.58	120.30
54	BA	2741	A	N1-C6-N6	-8.56	113.46	118.60
54	BA	2406	A	N1-C6-N6	-8.56	113.47	118.60
40	BR	90	ARG	NE-CZ-NH1	8.56	124.58	120.30
54	BA	172	A	N1-C6-N6	-8.55	113.47	118.60
21	AA	790	A	N1-C6-N6	-8.55	113.47	118.60
54	BA	526	A	N1-C6-N6	-8.55	113.47	118.60
54	BA	2021	C	N3-C2-O2	-8.55	115.92	121.90
54	BA	2171	A	N1-C6-N6	-8.55	113.47	118.60
21	AA	1287	A	N1-C6-N6	-8.54	113.47	118.60
54	BA	502	A	N1-C6-N6	-8.54	113.47	118.60
54	BA	1937	A	N1-C6-N6	-8.54	113.47	118.60
54	BA	2312	U	O4'-C1'-N1	8.54	115.04	108.20
15	AP	14	ARG	NE-CZ-NH1	8.54	124.57	120.30
54	BA	64	A	N1-C6-N6	-8.54	113.48	118.60
54	BA	2749	A	N1-C6-N6	-8.54	113.48	118.60
54	BA	513	A	N1-C6-N6	-8.54	113.48	118.60
54	BA	456	C	N3-C2-O2	-8.53	115.93	121.90
54	BA	637	A	N1-C6-N6	-8.53	113.48	118.60
54	BA	1347	A	N1-C6-N6	-8.53	113.48	118.60
21	AA	1167	A	N1-C6-N6	-8.53	113.48	118.60
54	BA	1522	A	N1-C6-N6	-8.53	113.48	118.60
54	BA	975	A	C5-C6-N1	8.53	121.96	117.70
53	B4	12	ARG	NE-CZ-NH1	8.52	124.56	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	483	A	N1-C6-N6	-8.52	113.49	118.60
55	BB	58	A	N1-C6-N6	-8.52	113.49	118.60
4	AE	19	ARG	NE-CZ-NH1	8.52	124.56	120.30
21	AA	152	A	N1-C6-N6	-8.52	113.49	118.60
21	AA	715	A	N1-C6-N6	-8.52	113.49	118.60
21	AA	356	A	N1-C6-N6	-8.51	113.49	118.60
54	BA	44	A	N1-C6-N6	-8.51	113.49	118.60
54	BA	1237	A	N1-C6-N6	-8.51	113.49	118.60
54	BA	1816	C	N3-C2-O2	-8.51	115.94	121.90
54	BA	2900	A	N1-C6-N6	-8.51	113.49	118.60
54	BA	1762	A	N1-C6-N6	-8.51	113.50	118.60
54	BA	2154	A	N1-C6-N6	-8.50	113.50	118.60
21	AA	366	A	N1-C6-N6	-8.50	113.50	118.60
21	AA	1012	A	N1-C6-N6	-8.50	113.50	118.60
54	BA	2705	A	N1-C6-N6	-8.50	113.50	118.60
54	BA	1014	A	N1-C6-N6	-8.50	113.50	118.60
8	AI	11	ARG	NE-CZ-NH1	8.50	124.55	120.30
21	AA	1225	A	N1-C6-N6	-8.50	113.50	118.60
25	BC	216	ARG	NE-CZ-NH2	8.50	124.55	120.30
54	BA	139	U	O4'-C1'-N1	8.49	114.99	108.20
54	BA	2639	A	N1-C6-N6	-8.48	113.51	118.60
21	AA	1163	A	N1-C6-N6	-8.48	113.51	118.60
21	AA	964	A	C5-C6-N1	8.47	121.94	117.70
54	BA	443	A	C5-C6-N1	8.47	121.94	117.70
54	BA	1089	A	C5-C6-N1	8.47	121.93	117.70
54	BA	1590	A	N1-C6-N6	-8.47	113.52	118.60
24	A3	58	A	N1-C6-N6	-8.47	113.52	118.60
54	BA	233	A	N1-C6-N6	-8.47	113.52	118.60
54	BA	1548	A	N1-C6-N6	-8.46	113.52	118.60
54	BA	1728	C	O4'-C1'-N1	8.46	114.97	108.20
15	AP	8	ARG	NE-CZ-NH2	-8.46	116.07	120.30
54	BA	750	A	C5-C6-N1	8.46	121.93	117.70
21	AA	892	A	N1-C6-N6	-8.45	113.53	118.60
54	BA	1652	A	N1-C6-N6	-8.45	113.53	118.60
54	BA	2679	A	N1-C6-N6	-8.45	113.53	118.60
21	AA	533	A	N1-C6-N6	-8.45	113.53	118.60
54	BA	2748	A	N1-C6-N6	-8.45	113.53	118.60
21	AA	262	A	C5-C6-N1	8.44	121.92	117.70
54	BA	2241	A	N1-C6-N6	-8.44	113.53	118.60
21	AA	648	A	N1-C6-N6	-8.44	113.54	118.60
21	AA	729	A	N1-C6-N6	-8.44	113.54	118.60
54	BA	1829	A	C5-C6-N1	8.44	121.92	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	393	A	N1-C6-N6	-8.43	113.54	118.60
54	BA	2071	A	N1-C6-N6	-8.43	113.54	118.60
21	AA	363	A	N1-C6-N6	-8.43	113.54	118.60
54	BA	2886	A	C5-C6-N1	8.43	121.91	117.70
1	AB	221	ARG	NE-CZ-NH1	8.42	124.51	120.30
54	BA	1711	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	2758	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	981	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	1745	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	2667	C	N3-C2-O2	-8.42	116.00	121.90
21	AA	1441	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	28	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	621	A	N1-C6-N6	-8.42	113.55	118.60
54	BA	1571	A	N1-C6-N6	-8.41	113.55	118.60
21	AA	303	A	N1-C6-N6	-8.41	113.55	118.60
39	BQ	29	ARG	NE-CZ-NH1	8.41	124.50	120.30
21	AA	382	A	N1-C6-N6	-8.41	113.56	118.60
56	B5	71	ARG	NE-CZ-NH1	8.41	124.50	120.30
21	AA	397	A	C5-C6-N1	8.40	121.90	117.70
54	BA	1276	A	N1-C6-N6	-8.40	113.56	118.60
54	BA	2860	A	N1-C6-N6	-8.40	113.56	118.60
21	AA	768	A	C5-C6-N1	8.40	121.90	117.70
54	BA	1301	A	C5-C6-N1	8.40	121.90	117.70
21	AA	865	A	N1-C6-N6	-8.39	113.56	118.60
54	BA	131	A	N1-C6-N6	-8.39	113.56	118.60
54	BA	2020	A	N1-C6-N6	-8.39	113.56	118.60
54	BA	2711	A	N1-C6-N6	-8.39	113.56	118.60
47	BY	48	ARG	NE-CZ-NH1	8.38	124.49	120.30
21	AA	765	G	O4'-C1'-N9	8.38	114.91	108.20
54	BA	1001	A	N1-C6-N6	-8.38	113.57	118.60
54	BA	1572	A	C5-C6-N1	8.38	121.89	117.70
54	BA	2654	A	C5-C6-N1	8.38	121.89	117.70
54	BA	742	A	N1-C6-N6	-8.38	113.58	118.60
8	AI	79	ARG	NE-CZ-NH1	8.37	124.48	120.30
21	AA	149	A	N1-C6-N6	-8.37	113.58	118.60
54	BA	428	A	N1-C6-N6	-8.37	113.58	118.60
21	AA	607	A	N1-C6-N6	-8.37	113.58	118.60
54	BA	1700	A	N1-C6-N6	-8.37	113.58	118.60
54	BA	1871	A	O4'-C1'-N9	8.37	114.89	108.20
54	BA	2781	A	C5-C6-N1	8.37	121.88	117.70
54	BA	1616	A	C5-C6-N1	8.37	121.88	117.70
21	AA	1229	A	N1-C6-N6	-8.36	113.58	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	933	A	O4'-C1'-N9	8.36	114.89	108.20
21	AA	274	A	N1-C6-N6	-8.36	113.58	118.60
24	A3	59	A	N1-C6-N6	-8.36	113.58	118.60
21	AA	131	A	N1-C6-N6	-8.36	113.59	118.60
21	AA	499	A	N1-C6-N6	-8.36	113.59	118.60
54	BA	802	A	N1-C6-N6	-8.35	113.59	118.60
54	BA	877	A	N1-C6-N6	-8.35	113.59	118.60
54	BA	1265	A	N1-C6-N6	-8.35	113.59	118.60
54	BA	2829	A	N1-C6-N6	-8.35	113.59	118.60
24	A3	75	C	N3-C2-O2	-8.35	116.05	121.90
54	BA	347	A	N1-C6-N6	-8.35	113.59	118.60
21	AA	1508	A	N1-C6-N6	-8.34	113.59	118.60
54	BA	167	A	N1-C6-N6	-8.34	113.59	118.60
54	BA	384	A	N1-C6-N6	-8.34	113.59	118.60
54	BA	1999	C	O4'-C1'-N1	8.34	114.87	108.20
12	AM	69	ARG	NE-CZ-NH1	8.34	124.47	120.30
20	AU	46	ARG	NE-CZ-NH1	8.34	124.47	120.30
21	AA	1480	A	N1-C6-N6	-8.34	113.60	118.60
39	BQ	91	ARG	NE-CZ-NH1	8.34	124.47	120.30
21	AA	1056	U	O4'-C1'-N1	8.33	114.87	108.20
54	BA	1063	G	C1'-O4'-C4'	-8.33	103.23	109.90
55	BB	66	A	N1-C6-N6	-8.33	113.60	118.60
35	BM	114	ARG	NE-CZ-NH1	8.33	124.46	120.30
54	BA	532	A	C5-C6-N1	8.33	121.86	117.70
54	BA	1286	A	N1-C6-N6	-8.33	113.60	118.60
21	AA	129	A	C5-C6-N1	8.33	121.86	117.70
54	BA	1040	A	N1-C6-N6	-8.33	113.60	118.60
54	BA	2657	A	N1-C6-N6	-8.33	113.60	118.60
54	BA	1385	A	N1-C6-N6	-8.33	113.61	118.60
21	AA	1285	A	N1-C6-N6	-8.32	113.61	118.60
54	BA	2541	A	C5-C6-N1	8.32	121.86	117.70
21	AA	1275	A	N1-C6-N6	-8.32	113.61	118.60
54	BA	2646	C	N3-C2-O2	-8.32	116.08	121.90
54	BA	2825	G	O4'-C1'-N9	8.32	114.86	108.20
54	BA	322	A	N1-C6-N6	-8.32	113.61	118.60
21	AA	364	A	N1-C6-N6	-8.32	113.61	118.60
21	AA	1213	A	N1-C6-N6	-8.32	113.61	118.60
54	BA	2340	A	N1-C6-N6	-8.32	113.61	118.60
21	AA	1167	A	C5-C6-N1	8.31	121.86	117.70
21	AA	152	A	C5-C6-N1	8.31	121.85	117.70
21	AA	1336	C	N3-C2-O2	-8.31	116.09	121.90
54	BA	490	C	N3-C2-O2	-8.30	116.09	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1597	A	C5-C6-N1	8.30	121.85	117.70
54	BA	344	A	N1-C6-N6	-8.30	113.62	118.60
24	A3	39	A	N1-C6-N6	-8.29	113.62	118.60
54	BA	204	A	N1-C6-N6	-8.30	113.62	118.60
54	BA	1805	A	N1-C6-N6	-8.29	113.62	118.60
54	BA	477	A	N1-C6-N6	-8.29	113.62	118.60
55	BB	29	A	N1-C6-N6	-8.29	113.62	118.60
21	AA	465	A	N1-C6-N6	-8.29	113.63	118.60
21	AA	572	A	N1-C6-N6	-8.29	113.63	118.60
54	BA	514	A	C5-C6-N1	8.29	121.84	117.70
54	BA	1535	A	O4'-C1'-N9	8.29	114.83	108.20
44	BV	93	ARG	NE-CZ-NH1	8.29	124.44	120.30
54	BA	602	A	C5-C6-N1	8.29	121.84	117.70
54	BA	2205	A	N1-C6-N6	-8.29	113.63	118.60
54	BA	119	A	C5-C6-N1	8.28	121.84	117.70
21	AA	1357	A	N1-C6-N6	-8.28	113.63	118.60
21	AA	1016	A	N1-C6-N6	-8.27	113.64	118.60
21	AA	1196	A	N1-C6-N6	-8.27	113.64	118.60
21	AA	1400	C	N3-C2-O2	-8.27	116.11	121.90
54	BA	943	A	N1-C6-N6	-8.27	113.64	118.60
21	AA	190	A	N1-C6-N6	-8.27	113.64	118.60
32	BJ	34	ARG	NE-CZ-NH1	8.27	124.44	120.30
54	BA	1382	G	O4'-C1'-N9	8.27	114.81	108.20
12	AM	89	ARG	NE-CZ-NH1	8.27	124.43	120.30
54	BA	2270	A	N1-C6-N6	-8.26	113.64	118.60
21	AA	1092	A	N1-C6-N6	-8.26	113.64	118.60
21	AA	1492	A	C5-C6-N1	8.26	121.83	117.70
21	AA	1005	A	N1-C6-N6	-8.26	113.64	118.60
21	AA	352	C	N3-C2-O2	-8.26	116.12	121.90
54	BA	131	A	C5-C6-N1	8.26	121.83	117.70
21	AA	938	A	N1-C6-N6	-8.26	113.65	118.60
54	BA	716	A	N1-C6-N6	-8.26	113.65	118.60
54	BA	996	A	N1-C6-N6	-8.25	113.65	118.60
54	BA	1371	G	O4'-C1'-N9	8.25	114.80	108.20
21	AA	889	A	C5-C6-N1	8.25	121.83	117.70
21	AA	938	A	C5-C6-N1	8.25	121.83	117.70
54	BA	1508	A	N1-C6-N6	-8.25	113.65	118.60
54	BA	1618	A	N1-C6-N6	-8.25	113.65	118.60
21	AA	167	A	N1-C6-N6	-8.25	113.65	118.60
54	BA	2170	A	C5-C6-N1	8.25	121.83	117.70
21	AA	246	A	N1-C6-N6	-8.25	113.65	118.60
21	AA	373	A	C5-C6-N1	8.25	121.82	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	649	A	N1-C6-N6	-8.25	113.65	118.60
54	BA	984	A	C5-C6-N1	8.25	121.82	117.70
21	AA	279	A	C5-C6-N1	8.24	121.82	117.70
54	BA	95	A	N1-C6-N6	-8.24	113.65	118.60
21	AA	1000	A	N1-C6-N6	-8.24	113.66	118.60
54	BA	643	A	C5-C6-N1	8.24	121.82	117.70
54	BA	482	A	N1-C6-N6	-8.24	113.66	118.60
54	BA	1791	A	C5-C6-N1	8.24	121.82	117.70
54	BA	479	A	N1-C6-N6	-8.24	113.66	118.60
54	BA	1744	A	N1-C6-N6	-8.24	113.66	118.60
21	AA	50	A	C5-C6-N1	8.23	121.82	117.70
54	BA	38	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	346	A	C5-C6-N1	8.23	121.82	117.70
54	BA	1665	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	1978	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	2778	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	2799	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	1095	A	O4'-C1'-N9	8.23	114.78	108.20
54	BA	1809	A	N1-C6-N6	-8.23	113.66	118.60
54	BA	216	A	N1-C6-N6	-8.22	113.67	118.60
54	BA	456	C	N1-C2-O2	8.22	123.83	118.90
54	BA	2154	A	C5-C6-N1	8.22	121.81	117.70
21	AA	1054	C	O4'-C1'-N1	8.22	114.78	108.20
51	B2	34	ARG	NE-CZ-NH1	8.22	124.41	120.30
54	BA	2706	A	N1-C6-N6	-8.22	113.67	118.60
54	BA	1085	A	C5-C6-N1	8.22	121.81	117.70
54	BA	1583	A	C5-C6-N1	8.22	121.81	117.70
54	BA	2114	A	N1-C6-N6	-8.21	113.67	118.60
54	BA	1393	A	C5-C6-N1	8.21	121.81	117.70
54	BA	482	A	C5-C6-N1	8.21	121.80	117.70
21	AA	71	A	N1-C6-N6	-8.20	113.68	118.60
54	BA	1952	A	N1-C6-N6	-8.20	113.68	118.60
54	BA	2721	A	N1-C6-N6	-8.20	113.68	118.60
9	AJ	16	ARG	NE-CZ-NH2	8.20	124.40	120.30
54	BA	928	A	N1-C6-N6	-8.20	113.68	118.60
9	AJ	31	ARG	NE-CZ-NH1	8.20	124.40	120.30
54	BA	1815	A	C5-C6-N1	8.20	121.80	117.70
21	AA	1252	A	C5-C6-N1	8.19	121.80	117.70
54	BA	61	C	N3-C2-O2	-8.19	116.16	121.90
54	BA	2468	A	N1-C6-N6	-8.19	113.68	118.60
21	AA	482	A	N1-C6-N6	-8.19	113.68	118.60
54	BA	1342	A	N1-C6-N6	-8.19	113.69	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1349	A	N1-C6-N6	-8.19	113.69	118.60
37	BO	94	ARG	NE-CZ-NH1	8.19	124.39	120.30
54	BA	527	C	N1-C2-O2	8.19	123.81	118.90
54	BA	528	A	N1-C6-N6	-8.19	113.69	118.60
54	BA	1928	A	C5-C6-N1	8.19	121.79	117.70
54	BA	2800	A	N1-C6-N6	-8.19	113.69	118.60
54	BA	614	A	N1-C6-N6	-8.19	113.69	118.60
3	AD	62	ARG	NE-CZ-NH1	8.18	124.39	120.30
11	AL	30	ARG	NE-CZ-NH1	8.18	124.39	120.30
54	BA	1544	A	N1-C6-N6	-8.18	113.69	118.60
54	BA	2117	A	C5-C6-N1	8.18	121.79	117.70
54	BA	422	A	N1-C6-N6	-8.18	113.69	118.60
54	BA	621	A	C5-C6-N1	8.18	121.79	117.70
54	BA	2392	A	C5-C6-N1	8.18	121.79	117.70
21	AA	263	A	N1-C6-N6	-8.17	113.70	118.60
54	BA	1265	A	C5-C6-N1	8.17	121.79	117.70
54	BA	2309	A	C5-C6-N1	8.17	121.79	117.70
21	AA	906	A	N1-C6-N6	-8.17	113.70	118.60
54	BA	753	A	N1-C6-N6	-8.17	113.70	118.60
54	BA	103	A	N1-C6-N6	-8.16	113.70	118.60
54	BA	689	A	C5-C6-N1	8.16	121.78	117.70
54	BA	722	A	N1-C6-N6	-8.16	113.70	118.60
21	AA	65	A	N1-C6-N6	-8.16	113.70	118.60
54	BA	1551	A	N1-C6-N6	-8.16	113.71	118.60
54	BA	2821	A	N1-C6-N6	-8.15	113.71	118.60
21	AA	906	A	C5-C6-N1	8.15	121.78	117.70
21	AA	970	C	N3-C2-O2	-8.15	116.19	121.90
54	BA	863	A	C5-C6-N1	8.15	121.78	117.70
54	BA	1155	A	N1-C6-N6	-8.15	113.71	118.60
54	BA	227	A	N1-C6-N6	-8.15	113.71	118.60
2	AC	168	ARG	NE-CZ-NH1	8.15	124.37	120.30
15	AP	28	ARG	NE-CZ-NH1	8.15	124.37	120.30
21	AA	196	A	N1-C6-N6	-8.14	113.71	118.60
54	BA	2080	A	N1-C6-N6	-8.14	113.72	118.60
21	AA	182	A	N1-C6-N6	-8.14	113.72	118.60
21	AA	915	A	C5-C6-N1	8.14	121.77	117.70
21	AA	1158	C	N3-C2-O2	-8.14	116.20	121.90
54	BA	294	A	N1-C6-N6	-8.14	113.72	118.60
54	BA	911	A	C5-C6-N1	8.14	121.77	117.70
21	AA	1430	A	N1-C6-N6	-8.14	113.72	118.60
13	AN	81	ARG	NE-CZ-NH1	8.13	124.37	120.30
54	BA	2381	A	N1-C6-N6	-8.13	113.72	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BB	45	A	C5-C6-N1	8.13	121.77	117.70
54	BA	311	A	C5-C6-N1	8.13	121.76	117.70
54	BA	829	A	N1-C6-N6	-8.13	113.72	118.60
54	BA	2655	G	O4'-C1'-N9	8.13	114.70	108.20
12	AM	108	ARG	NE-CZ-NH1	8.13	124.36	120.30
54	BA	126	A	C5-C6-N1	8.13	121.76	117.70
1	AB	136	ARG	NE-CZ-NH1	8.13	124.36	120.30
54	BA	1384	A	N1-C6-N6	-8.12	113.73	118.60
54	BA	1434	A	O4'-C1'-N9	8.12	114.70	108.20
21	AA	814	A	N1-C6-N6	-8.12	113.73	118.60
24	A3	77	A	N1-C6-N6	-8.12	113.73	118.60
54	BA	527	C	N3-C2-O2	-8.12	116.22	121.90
54	BA	149	A	N1-C6-N6	-8.12	113.73	118.60
54	BA	1757	A	N1-C6-N6	-8.12	113.73	118.60
54	BA	2169	A	N1-C6-N6	-8.11	113.73	118.60
54	BA	2346	A	C5-C6-N1	8.12	121.76	117.70
54	BA	804	A	N1-C6-N6	-8.11	113.73	118.60
54	BA	2385	C	O4'-C1'-N1	8.11	114.69	108.20
21	AA	430	A	N1-C6-N6	-8.11	113.74	118.60
21	AA	451	A	C5-C6-N1	8.11	121.75	117.70
21	AA	978	A	N1-C6-N6	-8.11	113.74	118.60
30	BH	50	ARG	NE-CZ-NH1	8.11	124.35	120.30
54	BA	371	A	C5-C6-N1	8.11	121.75	117.70
54	BA	2003	A	N1-C6-N6	-8.11	113.74	118.60
54	BA	743	A	C5-C6-N1	8.10	121.75	117.70
54	BA	1773	A	N1-C6-N6	-8.10	113.74	118.60
54	BA	718	A	C5-C6-N1	8.09	121.75	117.70
54	BA	1938	A	N1-C6-N6	-8.09	113.75	118.60
21	AA	282	A	C5-C6-N1	8.09	121.74	117.70
54	BA	449	A	N1-C6-N6	-8.09	113.75	118.60
54	BA	2660	A	N1-C6-N6	-8.08	113.75	118.60
21	AA	1465	A	N1-C6-N6	-8.08	113.75	118.60
54	BA	2314	A	C5-C6-N1	8.08	121.74	117.70
54	BA	666	A	C4-C5-C6	-8.08	112.96	117.00
21	AA	1346	A	C5-C6-N1	8.07	121.74	117.70
45	BW	38	ARG	NE-CZ-NH1	8.07	124.34	120.30
21	AA	214	C	N3-C2-O2	-8.07	116.25	121.90
3	AD	61	ARG	NE-CZ-NH1	8.07	124.33	120.30
21	AA	1204	A	N1-C6-N6	-8.07	113.76	118.60
49	B0	15	ARG	NE-CZ-NH1	8.07	124.33	120.30
1	AB	224	ARG	NE-CZ-NH1	8.07	124.33	120.30
21	AA	712	A	N1-C6-N6	-8.07	113.76	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	262	A	N1-C6-N6	-8.06	113.76	118.60
54	BA	2058	A	N1-C6-N6	-8.06	113.76	118.60
21	AA	300	A	N1-C6-N6	-8.06	113.76	118.60
21	AA	1397	C	N3-C2-O2	-8.06	116.26	121.90
54	BA	1286	A	C5-C6-N1	8.06	121.73	117.70
21	AA	466	A	C5-C6-N1	8.06	121.73	117.70
21	AA	663	A	N1-C6-N6	-8.06	113.77	118.60
21	AA	228	A	N1-C6-N6	-8.05	113.77	118.60
21	AA	694	A	C5-C6-N1	8.05	121.73	117.70
54	BA	603	A	N1-C6-N6	-8.06	113.77	118.60
54	BA	1469	A	N1-C6-N6	-8.05	113.77	118.60
54	BA	2873	A	N1-C6-N6	-8.06	113.77	118.60
54	BA	1646	C	N3-C2-O2	-8.05	116.26	121.90
54	BA	676	A	N1-C6-N6	-8.05	113.77	118.60
54	BA	2879	A	N1-C6-N6	-8.05	113.77	118.60
21	AA	320	A	N1-C6-N6	-8.05	113.77	118.60
21	AA	510	A	C5-C6-N1	8.05	121.72	117.70
21	AA	547	A	N1-C6-N6	-8.05	113.77	118.60
54	BA	1453	A	N1-C6-N6	-8.04	113.77	118.60
54	BA	2369	A	C4-C5-C6	-8.05	112.98	117.00
32	BJ	96	ARG	NE-CZ-NH1	8.04	124.32	120.30
21	AA	1467	C	N3-C2-O2	-8.04	116.27	121.90
40	BR	13	ARG	NE-CZ-NH1	8.04	124.32	120.30
54	BA	2297	A	O4'-C1'-N9	8.04	114.63	108.20
54	BA	756	A	N1-C6-N6	-8.03	113.78	118.60
54	BA	423	A	N1-C6-N6	-8.03	113.78	118.60
21	AA	189	A	N1-C6-N6	-8.03	113.78	118.60
54	BA	1890	A	N1-C6-N6	-8.03	113.78	118.60
55	BB	108	A	N1-C6-N6	-8.03	113.78	118.60
54	BA	2590	A	N1-C6-N6	-8.02	113.79	118.60
21	AA	171	A	C5-C6-N1	8.02	121.71	117.70
54	BA	676	A	C5-C6-N1	8.02	121.71	117.70
54	BA	2740	A	N1-C6-N6	-8.02	113.79	118.60
22	A1	35	A	N1-C6-N6	-8.02	113.79	118.60
54	BA	2191	A	N1-C6-N6	-8.01	113.79	118.60
54	BA	833	A	N1-C6-N6	-8.01	113.79	118.60
21	AA	119	A	N1-C6-N6	-8.01	113.79	118.60
21	AA	1170	A	N1-C6-N6	-8.01	113.79	118.60
54	BA	1254	A	N1-C6-N6	-8.01	113.79	118.60
21	AA	777	A	N1-C6-N6	-8.01	113.80	118.60
54	BA	2781	A	N1-C6-N6	-8.01	113.80	118.60
54	BA	2814	A	C5-C6-N1	8.00	121.70	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	602	A	N1-C6-N6	-8.00	113.80	118.60
25	BC	12	ARG	NE-CZ-NH2	8.00	124.30	120.30
54	BA	2171	A	C5-C6-N1	8.00	121.70	117.70
55	BB	53	A	C5-C6-N1	8.00	121.70	117.70
25	BC	220	ARG	NE-CZ-NH1	8.00	124.30	120.30
54	BA	1451	C	N1-C2-O2	8.00	123.70	118.90
54	BA	613	A	N1-C6-N6	-7.99	113.81	118.60
21	AA	77	A	N1-C6-N6	-7.99	113.81	118.60
54	BA	460	A	N1-C6-N6	-7.99	113.81	118.60
16	AQ	39	ARG	NE-CZ-NH1	7.99	124.29	120.30
54	BA	1953	A	C5-C6-N1	7.99	121.69	117.70
55	BB	89	U	O4'-C1'-N1	7.99	114.59	108.20
24	A3	74	A	N1-C6-N6	-7.99	113.81	118.60
54	BA	501	A	N1-C6-N6	-7.99	113.81	118.60
54	BA	1165	A	N1-C6-N6	-7.99	113.81	118.60
16	AQ	61	ARG	NE-CZ-NH1	7.98	124.29	120.30
54	BA	2750	A	N1-C6-N6	-7.98	113.81	118.60
54	BA	752	A	C5-C6-N1	7.98	121.69	117.70
13	AN	65	ARG	NE-CZ-NH1	7.97	124.29	120.30
21	AA	819	A	C5-C6-N1	7.97	121.69	117.70
24	A3	39	A	C5-C6-N1	7.97	121.69	117.70
54	BA	1477	A	N1-C6-N6	-7.97	113.82	118.60
54	BA	2660	A	C5-C6-N1	7.97	121.69	117.70
54	BA	2835	A	N1-C6-N6	-7.97	113.82	118.60
21	AA	560	A	C5-C6-N1	7.97	121.68	117.70
54	BA	497	A	C5-C6-N1	7.97	121.68	117.70
54	BA	2635	A	N1-C6-N6	-7.97	113.82	118.60
21	AA	663	A	C5-C6-N1	7.97	121.68	117.70
21	AA	878	A	N1-C6-N6	-7.97	113.82	118.60
54	BA	265	A	C5-C6-N1	7.97	121.68	117.70
54	BA	2425	A	C5-C6-N1	7.97	121.68	117.70
21	AA	72	A	C5-C6-N1	7.96	121.68	117.70
22	A1	26	A	C5-C6-N1	7.96	121.68	117.70
49	B0	49	ARG	NE-CZ-NH1	7.96	124.28	120.30
54	BA	614	A	C5-C6-N1	7.96	121.68	117.70
21	AA	77	A	C5-C6-N1	7.96	121.68	117.70
54	BA	1287	A	C5-C6-N1	7.96	121.68	117.70
21	AA	1433	A	C5-C6-N1	7.96	121.68	117.70
21	AA	1197	A	N1-C6-N6	-7.96	113.83	118.60
54	BA	608	A	N1-C6-N6	-7.96	113.82	118.60
22	A1	76	A	O4'-C1'-N9	7.96	114.56	108.20
54	BA	2758	A	C5-C6-N1	7.96	121.68	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1129	A	N1-C6-N6	-7.95	113.83	118.60
54	BA	1871	A	C5-C6-N1	7.95	121.68	117.70
21	AA	1046	A	N1-C6-N6	-7.95	113.83	118.60
32	BJ	13	ARG	NE-CZ-NH1	7.95	124.28	120.30
54	BA	213	A	C5-C6-N1	7.95	121.67	117.70
54	BA	223	A	N1-C6-N6	-7.95	113.83	118.60
54	BA	1272	A	C5-C6-N1	7.95	121.67	117.70
54	BA	1537	G	O4'-C1'-N9	7.95	114.56	108.20
54	BA	574	A	C4-C5-C6	-7.95	113.03	117.00
54	BA	1392	A	C5-C6-N1	7.95	121.67	117.70
54	BA	632	A	N1-C6-N6	-7.95	113.83	118.60
54	BA	1785	A	N1-C6-N6	-7.95	113.83	118.60
21	AA	1044	A	N1-C6-N6	-7.94	113.83	118.60
14	AO	88	ARG	NE-CZ-NH1	7.94	124.27	120.30
21	AA	749	A	N1-C6-N6	-7.94	113.84	118.60
54	BA	1048	A	N1-C6-N6	-7.94	113.84	118.60
54	BA	2670	A	N1-C6-N6	-7.94	113.84	118.60
54	BA	558	U	O4'-C1'-N1	7.94	114.55	108.20
21	AA	937	A	C5-C6-N1	7.94	121.67	117.70
54	BA	84	A	C5-C6-N1	7.93	121.67	117.70
54	BA	2101	A	N1-C6-N6	-7.93	113.84	118.60
21	AA	560	A	N1-C6-N6	-7.93	113.84	118.60
21	AA	845	A	C4-C5-C6	-7.93	113.03	117.00
22	A1	26	A	N1-C6-N6	-7.93	113.84	118.60
21	AA	1531	A	N1-C6-N6	-7.93	113.84	118.60
21	AA	718	A	N1-C6-N6	-7.92	113.85	118.60
54	BA	899	A	N1-C6-N6	-7.92	113.85	118.60
54	BA	613	A	C5-C6-N1	7.92	121.66	117.70
54	BA	1189	A	N1-C6-N6	-7.92	113.85	118.60
54	BA	344	A	C5-C6-N1	7.92	121.66	117.70
54	BA	1336	A	N1-C6-N6	-7.92	113.85	118.60
54	BA	1515	A	C5-C6-N1	7.92	121.66	117.70
54	BA	547	A	N1-C6-N6	-7.91	113.85	118.60
54	BA	982	C	O4'-C1'-N1	7.91	114.53	108.20
54	BA	1434	A	C5-C6-N1	7.91	121.66	117.70
54	BA	2560	A	N1-C6-N6	-7.91	113.85	118.60
54	BA	670	A	C5-C6-N1	7.91	121.65	117.70
54	BA	13	A	N1-C6-N6	-7.91	113.86	118.60
21	AA	1214	C	N1-C2-O2	7.91	123.64	118.90
54	BA	1918	A	N1-C6-N6	-7.90	113.86	118.60
54	BA	1069	A	N1-C6-N6	-7.90	113.86	118.60
54	BA	1404	C	N3-C2-O2	-7.90	116.37	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2425	A	N1-C6-N6	-7.90	113.86	118.60
54	BA	2453	A	C5-C6-N1	7.90	121.65	117.70
54	BA	2037	A	N1-C6-N6	-7.90	113.86	118.60
54	BA	2587	A	N1-C6-N6	-7.90	113.86	118.60
21	AA	816	A	C5-C6-N1	7.89	121.65	117.70
21	AA	825	A	N1-C6-N6	-7.89	113.86	118.60
54	BA	1285	A	N1-C6-N6	-7.89	113.86	118.60
21	AA	1054	C	N1-C2-O2	7.89	123.64	118.90
54	BA	910	A	C5-C6-N1	7.89	121.65	117.70
21	AA	1082	A	N1-C6-N6	-7.89	113.86	118.60
24	A3	1	C	N3-C2-O2	-7.89	116.38	121.90
54	BA	49	A	C5-C6-N1	7.89	121.65	117.70
54	BA	2030	A	C4-C5-C6	-7.89	113.05	117.00
21	AA	792	A	C5-C6-N1	7.89	121.64	117.70
54	BA	685	A	C5-C6-N1	7.89	121.64	117.70
54	BA	2762	C	O4'-C1'-N1	7.88	114.51	108.20
21	AA	8	A	C5-C6-N1	7.88	121.64	117.70
54	BA	1775	U	O4'-C1'-N1	7.88	114.50	108.20
54	BA	1784	A	C5-C6-N1	7.88	121.64	117.70
54	BA	784	G	O4'-C1'-N9	7.88	114.50	108.20
54	BA	1545	A	N1-C6-N6	-7.87	113.88	118.60
54	BA	1847	A	C5-C6-N1	7.87	121.64	117.70
54	BA	1490	A	C5-C6-N1	7.87	121.64	117.70
54	BA	2267	A	C5-C6-N1	7.87	121.64	117.70
54	BA	1009	A	C5-C6-N1	7.87	121.64	117.70
21	AA	1261	A	N1-C6-N6	-7.87	113.88	118.60
54	BA	1054	A	N1-C6-N6	-7.87	113.88	118.60
21	AA	583	A	C5-C6-N1	7.87	121.63	117.70
54	BA	1126	A	C4-C5-C6	-7.87	113.07	117.00
21	AA	495	A	C5-C6-N1	7.87	121.63	117.70
21	AA	174	A	C5-C6-N1	7.86	121.63	117.70
27	BE	40	ARG	NE-CZ-NH1	7.86	124.23	120.30
54	BA	654	A	N1-C6-N6	-7.86	113.88	118.60
54	BA	1028	A	N1-C6-N6	-7.86	113.89	118.60
21	AA	51	A	C5-C6-N1	7.86	121.63	117.70
21	AA	253	A	N1-C6-N6	-7.86	113.89	118.60
21	AA	1534	A	C5-C6-N1	7.86	121.63	117.70
55	BB	41	G	O4'-C1'-N9	7.85	114.48	108.20
16	AQ	26	ARG	NE-CZ-NH1	7.85	124.23	120.30
21	AA	574	A	C5-C6-N1	7.85	121.62	117.70
54	BA	599	A	N1-C6-N6	-7.85	113.89	118.60
54	BA	2503	A	C5-C6-N1	7.85	121.63	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1456	A	N1-C6-N6	-7.85	113.89	118.60
54	BA	2598	A	C5-C6-N1	7.85	121.62	117.70
21	AA	964	A	C4-C5-C6	-7.84	113.08	117.00
54	BA	1773	A	C5-C6-N1	7.84	121.62	117.70
54	BA	2887	A	N1-C6-N6	-7.84	113.89	118.60
54	BA	1552	A	C5-C6-N1	7.84	121.62	117.70
21	AA	7	A	N1-C6-N6	-7.84	113.89	118.60
54	BA	196	A	N1-C6-N6	-7.84	113.90	118.60
21	AA	1256	A	C5-C6-N1	7.84	121.62	117.70
21	AA	197	A	C5-C6-N1	7.84	121.62	117.70
54	BA	1133	A	C5-C6-N1	7.84	121.62	117.70
54	BA	1147	A	N1-C6-N6	-7.84	113.90	118.60
54	BA	99	U	O4'-C1'-N1	7.83	114.47	108.20
46	BX	2	ARG	NE-CZ-NH1	7.83	124.22	120.30
54	BA	2682	A	N1-C6-N6	-7.83	113.90	118.60
54	BA	1264	A	N1-C6-N6	-7.83	113.90	118.60
21	AA	1110	A	N1-C6-N6	-7.82	113.91	118.60
54	BA	979	A	N1-C6-N6	-7.82	113.91	118.60
54	BA	2513	A	C5-C6-N1	7.82	121.61	117.70
54	BA	2872	A	C5-C6-N1	7.82	121.61	117.70
54	BA	1675	C	N3-C2-O2	-7.82	116.42	121.90
21	AA	468	A	N1-C6-N6	-7.82	113.91	118.60
54	BA	1008	A	C5-C6-N1	7.82	121.61	117.70
54	BA	1713	A	N1-C6-N6	-7.82	113.91	118.60
54	BA	2478	A	C5-C6-N1	7.82	121.61	117.70
54	BA	126	A	N1-C6-N6	-7.82	113.91	118.60
54	BA	226	A	C5-C6-N1	7.82	121.61	117.70
54	BA	1913	A	C5-C6-N1	7.82	121.61	117.70
54	BA	2381	A	C5-C6-N1	7.82	121.61	117.70
21	AA	1352	C	N3-C2-O2	-7.82	116.43	121.90
54	BA	718	A	O4'-C1'-N9	7.82	114.45	108.20
21	AA	33	A	C5-C6-N1	7.81	121.61	117.70
54	BA	472	A	C5-C6-N1	7.81	121.61	117.70
54	BA	844	A	N1-C6-N6	-7.81	113.91	118.60
21	AA	1377	A	N1-C6-N6	-7.81	113.91	118.60
54	BA	675	A	N1-C6-N6	-7.81	113.91	118.60
54	BA	2108	A	N1-C6-N6	-7.81	113.91	118.60
54	BA	111	A	C5-C6-N1	7.81	121.61	117.70
3	AD	187	ARG	NE-CZ-NH1	7.81	124.20	120.30
21	AA	687	A	N1-C6-N6	-7.81	113.92	118.60
54	BA	1669	A	N1-C6-N6	-7.81	113.91	118.60
54	BA	2738	A	N1-C6-N6	-7.81	113.91	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	547	A	C5-C6-N1	7.81	121.60	117.70
54	BA	972	A	C5-C6-N1	7.81	121.60	117.70
54	BA	278	A	C5-C6-N1	7.81	121.60	117.70
54	BA	2031	A	N1-C6-N6	-7.80	113.92	118.60
54	BA	2751	G	O4'-C1'-N9	7.80	114.44	108.20
21	AA	1329	A	C5-C6-N1	7.80	121.60	117.70
21	AA	1320	C	N3-C2-O2	-7.80	116.44	121.90
54	BA	2531	A	N1-C6-N6	-7.80	113.92	118.60
21	AA	1219	A	C5-C6-N1	7.79	121.60	117.70
54	BA	522	A	C5-C6-N1	7.79	121.60	117.70
54	BA	2278	A	C5-C6-N1	7.79	121.60	117.70
21	AA	702	A	C5-C6-N1	7.79	121.59	117.70
33	BK	71	ARG	NE-CZ-NH1	7.79	124.19	120.30
3	AD	183	ARG	NE-CZ-NH1	7.78	124.19	120.30
20	AU	16	ARG	NE-CZ-NH1	7.78	124.19	120.30
21	AA	1468	A	C5-C6-N1	7.78	121.59	117.70
54	BA	750	A	C4-C5-C6	-7.78	113.11	117.00
54	BA	988	A	C5-C6-N1	7.78	121.59	117.70
21	AA	980	C	N3-C2-O2	-7.78	116.45	121.90
54	BA	1354	A	C5-C6-N1	7.78	121.59	117.70
21	AA	1137	C	N3-C2-O2	-7.78	116.45	121.90
54	BA	104	A	C5-C6-N1	7.78	121.59	117.70
54	BA	751	A	N1-C6-N6	-7.78	113.93	118.60
54	BA	2211	A	C5-C6-N1	7.78	121.59	117.70
54	BA	5	A	N1-C6-N6	-7.78	113.93	118.60
54	BA	792	A	N1-C6-N6	-7.78	113.94	118.60
21	AA	413	G	O4'-C1'-N9	7.77	114.42	108.20
21	AA	451	A	N1-C6-N6	-7.77	113.94	118.60
21	AA	1110	A	C5-C6-N1	7.77	121.59	117.70
31	BI	102	ARG	NE-CZ-NH1	7.77	124.19	120.30
54	BA	1029	A	N1-C6-N6	-7.77	113.94	118.60
40	BR	78	ARG	NE-CZ-NH1	7.77	124.19	120.30
54	BA	740	C	N3-C2-O2	-7.77	116.46	121.90
54	BA	886	A	C5-C6-N1	7.77	121.58	117.70
54	BA	1596	A	N1-C6-N6	-7.77	113.94	118.60
54	BA	1213	A	N1-C6-N6	-7.76	113.94	118.60
54	BA	2602	A	C5-C6-N1	7.76	121.58	117.70
54	BA	1611	C	N3-C2-O2	-7.76	116.47	121.90
54	BA	1919	A	C5-C6-N1	7.76	121.58	117.70
21	AA	130	A	N1-C6-N6	-7.76	113.94	118.60
54	BA	279	A	N1-C6-N6	-7.76	113.94	118.60
54	BA	342	A	C4-C5-C6	-7.76	113.12	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1010	A	C5-C6-N1	7.76	121.58	117.70
54	BA	1912	A	N1-C6-N6	-7.76	113.94	118.60
55	BB	109	A	C5-C6-N1	7.76	121.58	117.70
44	BV	19	ARG	NE-CZ-NH1	7.76	124.18	120.30
54	BA	2273	A	C5-C6-N1	7.76	121.58	117.70
54	BA	177	G	O4'-C1'-N9	7.76	114.41	108.20
54	BA	2435	A	C5-C6-N1	7.76	121.58	117.70
21	AA	572	A	C5-C6-N1	7.75	121.58	117.70
54	BA	668	A	C5-C6-N1	7.75	121.58	117.70
54	BA	2411	A	C5-C6-N1	7.75	121.58	117.70
54	BA	1522	A	C5-C6-N1	7.75	121.58	117.70
54	BA	2453	A	N1-C6-N6	-7.75	113.95	118.60
22	A1	58	A	C5-C6-N1	7.75	121.58	117.70
21	AA	1126	U	O4'-C1'-N1	7.75	114.40	108.20
22	A1	11	C	N3-C2-O2	-7.75	116.48	121.90
37	BO	81	ARG	NE-CZ-NH1	7.75	124.17	120.30
54	BA	140	C	N3-C2-O2	-7.75	116.48	121.90
54	BA	203	A	N1-C6-N6	-7.75	113.95	118.60
54	BA	644	A	C5-C6-N1	7.75	121.57	117.70
54	BA	1050	A	C5-C6-N1	7.75	121.58	117.70
54	BA	2173	A	C5-C6-N1	7.75	121.57	117.70
54	BA	73	A	C5-C6-N1	7.75	121.57	117.70
54	BA	103	A	C5-C6-N1	7.75	121.57	117.70
54	BA	412	A	N1-C6-N6	-7.75	113.95	118.60
54	BA	945	A	C5-C6-N1	7.75	121.57	117.70
54	BA	2054	A	C5-C6-N1	7.75	121.57	117.70
21	AA	1100	C	N1-C2-O2	7.74	123.55	118.90
4	AE	67	ARG	NE-CZ-NH1	7.74	124.17	120.30
21	AA	1022	A	C5-C6-N1	7.74	121.57	117.70
54	BA	1610	A	C5-C6-N1	7.74	121.57	117.70
21	AA	1377	A	C5-C6-N1	7.74	121.57	117.70
24	A3	16	C	N3-C2-O2	-7.74	116.48	121.90
54	BA	2015	A	C5-C6-N1	7.74	121.57	117.70
21	AA	872	A	C5-C6-N1	7.74	121.57	117.70
54	BA	1632	A	C5-C6-N1	7.74	121.57	117.70
54	BA	64	A	C5-C6-N1	7.74	121.57	117.70
21	AA	498	A	C5-C6-N1	7.74	121.57	117.70
29	BG	162	ARG	NE-CZ-NH1	7.74	124.17	120.30
54	BA	1970	A	N1-C6-N6	-7.74	113.96	118.60
54	BA	866	A	N1-C6-N6	-7.73	113.96	118.60
21	AA	553	A	N1-C6-N6	-7.73	113.96	118.60
21	AA	1226	C	N3-C2-O2	-7.73	116.49	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	BP	50	ARG	NE-CZ-NH1	7.73	124.17	120.30
21	AA	1433	A	N1-C6-N6	-7.73	113.96	118.60
21	AA	1503	A	C5-C6-N1	7.73	121.56	117.70
54	BA	631	A	C5-C6-N1	7.73	121.56	117.70
54	BA	1127	A	N1-C6-N6	-7.73	113.96	118.60
21	AA	499	A	C5-C6-N1	7.73	121.56	117.70
21	AA	1218	C	N3-C2-O2	-7.73	116.49	121.90
54	BA	2882	A	N1-C6-N6	-7.73	113.96	118.60
54	BA	2542	A	C5-C6-N1	7.73	121.56	117.70
7	AH	76	ARG	NE-CZ-NH1	7.72	124.16	120.30
54	BA	1151	A	C5-C6-N1	7.72	121.56	117.70
56	B5	12	ARG	NE-CZ-NH1	7.72	124.16	120.30
21	AA	192	A	N1-C6-N6	-7.72	113.97	118.60
54	BA	1598	A	C5-C6-N1	7.72	121.56	117.70
21	AA	60	A	C5-C6-N1	7.72	121.56	117.70
21	AA	160	A	N1-C6-N6	-7.72	113.97	118.60
22	A1	75	C	N3-C2-O2	-7.72	116.50	121.90
54	BA	1789	A	C5-C6-N1	7.72	121.56	117.70
54	BA	2634	A	C5-C6-N1	7.72	121.56	117.70
21	AA	746	A	N1-C6-N6	-7.72	113.97	118.60
54	BA	1151	A	N1-C6-N6	-7.72	113.97	118.60
54	BA	2434	A	C5-C6-N1	7.72	121.56	117.70
21	AA	120	A	C5-C6-N1	7.71	121.56	117.70
21	AA	553	A	C5-C6-N1	7.71	121.56	117.70
54	BA	91	A	C5-C6-N1	7.71	121.56	117.70
54	BA	2826	A	N1-C6-N6	-7.71	113.97	118.60
21	AA	802	A	C5-C6-N1	7.71	121.56	117.70
21	AA	923	A	C5-C6-N1	7.71	121.56	117.70
21	AA	1246	A	C5-C6-N1	7.71	121.56	117.70
54	BA	2388	A	N1-C6-N6	-7.71	113.97	118.60
21	AA	320	A	C5-C6-N1	7.71	121.56	117.70
54	BA	889	C	N3-C2-O2	-7.71	116.50	121.90
54	BA	5	A	C5-C6-N1	7.71	121.55	117.70
54	BA	1230	A	C4-C5-C6	-7.71	113.15	117.00
54	BA	2019	A	N1-C6-N6	-7.71	113.98	118.60
54	BA	973	A	N1-C6-N6	-7.70	113.98	118.60
54	BA	2435	A	C4-C5-C6	-7.70	113.15	117.00
26	BD	179	ARG	NE-CZ-NH1	7.70	124.15	120.30
54	BA	1571	A	C5-C6-N1	7.70	121.55	117.70
30	BH	27	ARG	NE-CZ-NH1	7.70	124.15	120.30
21	AA	767	A	C5-C6-N1	7.70	121.55	117.70
24	A3	22	A	C5-C6-N1	7.70	121.55	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	356	A	C5-C6-N1	7.69	121.55	117.70
21	AA	1014	A	C5-C6-N1	7.69	121.55	117.70
54	BA	402	A	N1-C6-N6	-7.69	113.98	118.60
54	BA	689	A	N1-C6-N6	-7.69	113.98	118.60
21	AA	784	A	C5-C6-N1	7.69	121.54	117.70
54	BA	531	C	N3-C2-O2	-7.69	116.52	121.90
21	AA	523	A	C5-C6-N1	7.69	121.54	117.70
54	BA	2311	A	C5-C6-N1	7.69	121.54	117.70
21	AA	338	A	N1-C6-N6	-7.68	113.99	118.60
21	AA	502	A	C5-C6-N1	7.68	121.54	117.70
54	BA	716	A	C5-C6-N1	7.68	121.54	117.70
54	BA	2482	A	N1-C6-N6	-7.68	113.99	118.60
54	BA	1918	A	C5-C6-N1	7.68	121.54	117.70
54	BA	320	A	C5-C6-N1	7.68	121.54	117.70
54	BA	1096	A	C5-C6-N1	7.68	121.54	117.70
54	BA	161	A	C5-C6-N1	7.68	121.54	117.70
8	AI	48	ARG	NE-CZ-NH1	7.68	124.14	120.30
54	BA	1876	A	C5-C6-N1	7.68	121.54	117.70
54	BA	1050	A	N1-C6-N6	-7.67	114.00	118.60
54	BA	1211	C	N3-C2-O2	-7.67	116.53	121.90
54	BA	1324	G	O4'-C1'-N9	7.67	114.34	108.20
21	AA	1252	A	N1-C6-N6	-7.67	114.00	118.60
54	BA	222	A	N1-C6-N6	-7.67	114.00	118.60
54	BA	739	A	C5-C6-N1	7.67	121.54	117.70
21	AA	907	A	N1-C6-N6	-7.67	114.00	118.60
54	BA	2092	U	O4'-C1'-N1	7.67	114.33	108.20
21	AA	1418	A	C5-C6-N1	7.67	121.53	117.70
54	BA	1096	A	C4-C5-C6	-7.67	113.17	117.00
54	BA	1275	A	N1-C6-N6	-7.67	114.00	118.60
54	BA	2158	A	C5-C6-N1	7.67	121.53	117.70
54	BA	2468	A	C5-C6-N1	7.67	121.53	117.70
54	BA	447	A	N1-C6-N6	-7.66	114.00	118.60
21	AA	1398	A	N1-C6-N6	-7.66	114.00	118.60
21	AA	1476	A	N1-C6-N6	-7.66	114.00	118.60
39	BQ	5	ARG	NE-CZ-NH1	7.66	124.13	120.30
54	BA	1070	A	C5-C6-N1	7.66	121.53	117.70
54	BA	1237	A	C5-C6-N1	7.66	121.53	117.70
54	BA	749	A	C5-C6-N1	7.66	121.53	117.70
54	BA	1713	A	C5-C6-N1	7.66	121.53	117.70
21	AA	364	A	C5-C6-N1	7.66	121.53	117.70
54	BA	167	A	C5-C6-N1	7.66	121.53	117.70
54	BA	1998	A	N1-C6-N6	-7.66	114.01	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1503	A	N1-C6-N6	-7.66	114.01	118.60
54	BA	125	A	C5-C6-N1	7.66	121.53	117.70
21	AA	345	C	N1-C2-O2	7.65	123.49	118.90
56	B5	7	ARG	NE-CZ-NH1	7.65	124.12	120.30
21	AA	909	A	N1-C6-N6	-7.64	114.01	118.60
21	AA	1364	U	O4'-C1'-N1	7.64	114.31	108.20
54	BA	705	A	C5-C6-N1	7.64	121.52	117.70
21	AA	32	A	C5-C6-N1	7.64	121.52	117.70
30	BH	51	ARG	NE-CZ-NH1	7.64	124.12	120.30
54	BA	1759	A	C5-C6-N1	7.64	121.52	117.70
54	BA	453	A	N1-C6-N6	-7.64	114.02	118.60
54	BA	655	A	C5-C6-N1	7.64	121.52	117.70
54	BA	2169	A	C5-C6-N1	7.64	121.52	117.70
21	AA	336	A	N1-C6-N6	-7.64	114.02	118.60
21	AA	1188	A	C5-C6-N1	7.64	121.52	117.70
54	BA	793	A	N1-C6-N6	-7.64	114.02	118.60
54	BA	233	A	C5-C6-N1	7.63	121.52	117.70
54	BA	1698	A	C5-C6-N1	7.63	121.52	117.70
21	AA	196	A	C5-C6-N1	7.63	121.52	117.70
54	BA	661	A	N1-C6-N6	-7.63	114.02	118.60
54	BA	1383	A	C5-C6-N1	7.63	121.52	117.70
21	AA	1203	C	N3-C2-O2	-7.63	116.56	121.90
42	BT	69	ARG	NE-CZ-NH1	7.63	124.11	120.30
54	BA	1226	A	N1-C6-N6	-7.63	114.02	118.60
21	AA	1005	A	C5-C6-N1	7.63	121.51	117.70
54	BA	1626	A	C5-C6-N1	7.63	121.51	117.70
21	AA	794	A	C5-C6-N1	7.62	121.51	117.70
54	BA	219	A	C5-C6-N1	7.62	121.51	117.70
54	BA	362	A	N1-C6-N6	-7.62	114.03	118.60
54	BA	633	A	N1-C6-N6	-7.62	114.03	118.60
54	BA	838	C	N3-C2-O2	-7.62	116.56	121.90
21	AA	415	A	C5-C6-N1	7.62	121.51	117.70
54	BA	330	A	C5-C6-N1	7.62	121.51	117.70
54	BA	515	A	C5-C6-N1	7.62	121.51	117.70
54	BA	2015	A	N1-C6-N6	-7.62	114.03	118.60
54	BA	101	A	C5-C6-N1	7.62	121.51	117.70
54	BA	251	A	N1-C6-N6	-7.62	114.03	118.60
54	BA	2267	A	C4-C5-C6	-7.62	113.19	117.00
54	BA	1314	C	N3-C2-O2	-7.62	116.57	121.90
21	AA	1299	A	C5-C6-N1	7.61	121.51	117.70
21	AA	1447	A	C5-C6-N1	7.61	121.51	117.70
21	AA	712	A	C5-C6-N1	7.61	121.50	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1758	U	O4'-C1'-N1	7.61	114.29	108.20
28	BF	70	ARG	NE-CZ-NH1	7.61	124.10	120.30
54	BA	1453	A	O4'-C1'-N9	7.61	114.28	108.20
54	BA	1509	A	C5-C6-N1	7.61	121.50	117.70
54	BA	2883	A	C5-C6-N1	7.61	121.50	117.70
54	BA	1489	C	N1-C2-O2	7.60	123.46	118.90
54	BA	2761	A	C5-C6-N1	7.60	121.50	117.70
54	BA	961	C	N3-C2-O2	-7.60	116.58	121.90
54	BA	981	A	C5-C6-N1	7.60	121.50	117.70
54	BA	1420	A	C5-C6-N1	7.60	121.50	117.70
54	BA	526	A	C5-C6-N1	7.60	121.50	117.70
54	BA	1205	A	N1-C6-N6	-7.60	114.04	118.60
21	AA	1145	A	C5-C6-N1	7.60	121.50	117.70
21	AA	1196	A	C5-C6-N1	7.59	121.50	117.70
54	BA	2614	A	C5-C6-N1	7.59	121.50	117.70
24	A3	45	A	N1-C6-N6	-7.59	114.04	118.60
54	BA	1308	A	N1-C6-N6	-7.59	114.04	118.60
24	A3	38	A	C5-C6-N1	7.59	121.50	117.70
54	BA	2275	C	N3-C2-O2	-7.59	116.59	121.90
6	AG	94	ARG	NE-CZ-NH1	7.59	124.09	120.30
54	BA	614	A	O4'-C1'-N9	7.59	114.27	108.20
54	BA	1854	A	C5-C6-N1	7.59	121.49	117.70
21	AA	371	A	C5-C6-N1	7.58	121.49	117.70
54	BA	2376	A	C5-C6-N1	7.58	121.49	117.70
21	AA	923	A	N1-C6-N6	-7.58	114.05	118.60
21	AA	996	A	C5-C6-N1	7.58	121.49	117.70
21	AA	1332	A	N1-C6-N6	-7.58	114.05	118.60
54	BA	592	A	C4-C5-C6	-7.58	113.21	117.00
54	BA	1585	C	N3-C2-O2	-7.58	116.59	121.90
54	BA	1596	A	C5-C6-N1	7.58	121.49	117.70
21	AA	181	A	C5-C6-N1	7.58	121.49	117.70
21	AA	210	C	N3-C2-O2	-7.58	116.59	121.90
21	AA	768	A	N1-C6-N6	-7.58	114.05	118.60
54	BA	2126	A	C5-C6-N1	7.58	121.49	117.70
11	AL	113	ARG	NE-CZ-NH1	7.58	124.09	120.30
54	BA	374	A	N1-C6-N6	-7.58	114.06	118.60
54	BA	1269	A	C5-C6-N1	7.58	121.49	117.70
54	BA	1677	A	C5-C6-N1	7.58	121.49	117.70
38	BP	20	ARG	NE-CZ-NH1	7.57	124.09	120.30
54	BA	892	A	C4-C5-C6	-7.57	113.21	117.00
54	BA	1247	A	N1-C6-N6	-7.57	114.06	118.60
54	BA	1365	A	C5-C6-N1	7.57	121.49	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1470	A	N1-C6-N6	-7.57	114.06	118.60
54	BA	249	C	N3-C2-O2	-7.57	116.60	121.90
54	BA	1579	A	N1-C6-N6	-7.57	114.06	118.60
21	AA	635	A	N1-C6-N6	-7.57	114.06	118.60
37	BO	10	ARG	NE-CZ-NH1	7.57	124.08	120.30
54	BA	1757	A	C5-C6-N1	7.57	121.48	117.70
54	BA	2851	A	C5-C6-N1	7.57	121.48	117.70
54	BA	2858	C	N3-C2-O2	-7.57	116.60	121.90
54	BA	83	A	C5-C6-N1	7.56	121.48	117.70
54	BA	104	A	N1-C6-N6	-7.56	114.06	118.60
54	BA	582	A	C5-C6-N1	7.56	121.48	117.70
21	AA	640	A	C5-C6-N1	7.56	121.48	117.70
8	AI	129	ARG	NE-CZ-NH1	7.56	124.08	120.30
54	BA	1630	A	C5-C6-N1	7.56	121.48	117.70
21	AA	151	A	C5-C6-N1	7.55	121.48	117.70
54	BA	480	A	N1-C6-N6	-7.55	114.07	118.60
54	BA	1791	A	C4-C5-C6	-7.55	113.22	117.00
54	BA	2134	A	C5-C6-N1	7.55	121.48	117.70
21	AA	298	A	C5-C6-N1	7.55	121.48	117.70
54	BA	42	A	C5-C6-N1	7.55	121.48	117.70
54	BA	2432	A	C5-C6-N1	7.55	121.47	117.70
54	BA	2534	A	N1-C6-N6	-7.55	114.07	118.60
54	BA	1274	A	C5-C6-N1	7.55	121.47	117.70
21	AA	78	A	C4-C5-C6	-7.54	113.23	117.00
21	AA	320	A	C4-C5-C6	-7.54	113.23	117.00
21	AA	374	A	C5-C6-N1	7.54	121.47	117.70
21	AA	1011	C	N3-C2-O2	-7.54	116.62	121.90
54	BA	119	A	C4-C5-C6	-7.54	113.23	117.00
54	BA	988	A	C4-C5-C6	-7.54	113.23	117.00
54	BA	1508	A	C5-C6-N1	7.54	121.47	117.70
54	BA	693	A	C5-C6-N1	7.54	121.47	117.70
54	BA	1021	A	C5-C6-N1	7.54	121.47	117.70
54	BA	1739	A	C4-C5-C6	-7.54	113.23	117.00
54	BA	1803	A	C5-C6-N1	7.53	121.47	117.70
39	BQ	63	ARG	NE-CZ-NH1	7.53	124.07	120.30
54	BA	806	C	O4'-C1'-N1	7.53	114.23	108.20
21	AA	205	A	C5-C6-N1	7.53	121.47	117.70
54	BA	144	A	C5-C6-N1	7.53	121.47	117.70
54	BA	1378	A	C5-C6-N1	7.53	121.47	117.70
54	BA	2297	A	C5-C6-N1	7.53	121.47	117.70
54	BA	219	A	C4-C5-C6	-7.53	113.24	117.00
17	AR	62	ARG	NE-CZ-NH1	7.53	124.06	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1281	C	N3-C2-O2	-7.53	116.63	121.90
24	A3	73	A	C5-C6-N1	7.53	121.46	117.70
21	AA	728	A	C4-C5-C6	-7.53	113.24	117.00
54	BA	1808	A	C5-C6-N1	7.53	121.46	117.70
54	BA	2322	A	N1-C6-N6	-7.53	114.08	118.60
54	BA	2560	A	C5-C6-N1	7.53	121.46	117.70
54	BA	2753	A	C4-C5-C6	-7.53	113.24	117.00
21	AA	969	A	C5-C6-N1	7.52	121.46	117.70
54	BA	1029	A	C5-C6-N1	7.52	121.46	117.70
21	AA	1250	A	C5-C6-N1	7.52	121.46	117.70
54	BA	331	C	N3-C2-O2	-7.52	116.64	121.90
54	BA	1241	A	C5-C6-N1	7.52	121.46	117.70
54	BA	1694	C	O4'-C1'-N1	7.52	114.22	108.20
54	BA	1728	C	N1-C2-O2	7.52	123.41	118.90
54	BA	1634	A	C5-C6-N1	7.52	121.46	117.70
21	AA	1501	C	N3-C2-O2	-7.52	116.64	121.90
24	A3	60	A	C5-C6-N1	7.52	121.46	117.70
54	BA	936	A	C5-C6-N1	7.52	121.46	117.70
54	BA	2565	A	C5-C6-N1	7.52	121.46	117.70
54	BA	2856	A	C5-C6-N1	7.52	121.46	117.70
21	AA	1394	A	C5-C6-N1	7.52	121.46	117.70
21	AA	1394	A	N1-C6-N6	-7.52	114.09	118.60
54	BA	2104	C	N1-C2-O2	7.52	123.41	118.90
54	BA	2165	C	N3-C2-O2	-7.52	116.64	121.90
24	A3	36	A	C4-C5-C6	-7.51	113.24	117.00
54	BA	430	A	C4-C5-C6	-7.51	113.24	117.00
54	BA	706	A	N1-C6-N6	-7.51	114.09	118.60
51	B2	33	ARG	NE-CZ-NH1	7.51	124.06	120.30
54	BA	1269	A	N1-C6-N6	-7.51	114.09	118.60
54	BA	2054	A	N1-C6-N6	-7.51	114.09	118.60
21	AA	1502	A	C5-C6-N1	7.51	121.46	117.70
54	BA	917	A	C5-C6-N1	7.51	121.45	117.70
21	AA	596	A	C5-C6-N1	7.51	121.45	117.70
23	A2	79	A	C5-C6-N1	7.51	121.45	117.70
54	BA	1213	A	C5-C6-N1	7.51	121.45	117.70
54	BA	1618	A	C5-C6-N1	7.51	121.45	117.70
24	A3	49	C	N3-C2-O2	-7.50	116.65	121.90
25	BC	101	ARG	NE-CZ-NH1	7.50	124.05	120.30
54	BA	324	A	C5-C6-N1	7.50	121.45	117.70
54	BA	429	A	C5-C6-N1	7.50	121.45	117.70
54	BA	1553	A	N1-C6-N6	-7.50	114.10	118.60
21	AA	1152	A	C5-C6-N1	7.50	121.45	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1608	A	C5-C6-N1	7.50	121.45	117.70
54	BA	2412	A	C5-C6-N1	7.50	121.45	117.70
21	AA	48	C	N3-C2-O2	-7.50	116.65	121.90
21	AA	363	A	C5-C6-N1	7.50	121.45	117.70
21	AA	431	A	N1-C6-N6	-7.50	114.10	118.60
54	BA	1700	A	C5-C6-N1	7.50	121.45	117.70
54	BA	2163	A	N1-C6-N6	-7.50	114.10	118.60
21	AA	101	A	C5-C6-N1	7.49	121.45	117.70
54	BA	207	A	C5-C6-N1	7.49	121.45	117.70
54	BA	226	A	N1-C6-N6	-7.49	114.10	118.60
54	BA	415	A	N1-C6-N6	-7.49	114.10	118.60
54	BA	1801	A	N1-C6-N6	-7.49	114.10	118.60
22	A1	9	A	C5-C6-N1	7.49	121.45	117.70
54	BA	1142	A	C5-C6-N1	7.49	121.45	117.70
21	AA	78	A	C5-C6-N1	7.49	121.44	117.70
54	BA	196	A	C5-C6-N1	7.49	121.44	117.70
54	BA	1347	A	C5-C6-N1	7.49	121.44	117.70
54	BA	2611	C	N3-C2-O2	-7.49	116.66	121.90
54	BA	933	A	C5-C6-N1	7.49	121.44	117.70
53	B4	24	ARG	NE-CZ-NH1	7.49	124.04	120.30
54	BA	1321	A	C5-C6-N1	7.48	121.44	117.70
55	BB	101	A	C5-C6-N1	7.48	121.44	117.70
54	BA	1304	A	N1-C6-N6	-7.48	114.11	118.60
2	AC	10	ARG	NE-CZ-NH1	7.48	124.04	120.30
54	BA	1672	A	C5-C6-N1	7.48	121.44	117.70
54	BA	2147	A	N1-C6-N6	-7.48	114.11	118.60
21	AA	169	C	O4'-C1'-N1	7.48	114.18	108.20
54	BA	2868	A	C5-C6-N1	7.48	121.44	117.70
32	BJ	69	ARG	NE-CZ-NH1	7.47	124.04	120.30
54	BA	1913	A	N1-C6-N6	-7.47	114.11	118.60
54	BA	2476	A	C5-C6-N1	7.47	121.44	117.70
10	AK	97	ARG	NE-CZ-NH1	7.47	124.04	120.30
54	BA	2297	A	N1-C6-N6	-7.47	114.12	118.60
54	BA	2620	C	N3-C2-O2	-7.47	116.67	121.90
54	BA	1495	A	N1-C6-N6	-7.47	114.12	118.60
38	BP	61	ARG	NE-CZ-NH1	7.47	124.03	120.30
54	BA	752	A	O4'-C1'-N9	7.47	114.18	108.20
21	AA	382	A	C5-C6-N1	7.47	121.43	117.70
54	BA	176	A	C5-C6-N1	7.47	121.43	117.70
54	BA	574	A	C5-C6-N1	7.47	121.43	117.70
48	BZ	10	ARG	NE-CZ-NH1	7.46	124.03	120.30
54	BA	1275	A	C5-C6-N1	7.46	121.43	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AF	79	ARG	NE-CZ-NH1	7.46	124.03	120.30
21	AA	573	A	C4-C5-C6	-7.46	113.27	117.00
54	BA	1032	A	N1-C6-N6	-7.46	114.12	118.60
54	BA	1754	A	C5-C6-N1	7.46	121.43	117.70
21	AA	1403	C	N3-C2-O2	-7.46	116.68	121.90
21	AA	26	A	N1-C6-N6	-7.46	114.12	118.60
21	AA	209	U	O4'-C1'-N1	7.46	114.17	108.20
21	AA	432	A	C5-C6-N1	7.46	121.43	117.70
54	BA	788	A	C5-C6-N1	7.46	121.43	117.70
54	BA	897	C	N3-C2-O2	-7.46	116.68	121.90
21	AA	59	A	C5-C6-N1	7.46	121.43	117.70
21	AA	1362	A	N1-C6-N6	-7.45	114.13	118.60
54	BA	1780	A	C5-C6-N1	7.45	121.43	117.70
54	BA	2634	A	C4-C5-C6	-7.45	113.27	117.00
21	AA	814	A	C5-C6-N1	7.45	121.42	117.70
24	A3	36	A	C5-C6-N1	7.45	121.42	117.70
54	BA	71	A	O4'-C1'-N9	7.45	114.16	108.20
54	BA	508	A	C5-C6-N1	7.45	121.42	117.70
54	BA	2101	A	C5-C6-N1	7.45	121.42	117.70
54	BA	2059	A	N1-C6-N6	-7.45	114.13	118.60
54	BA	1044	C	N3-C2-O2	-7.45	116.69	121.90
56	B5	74	ARG	NE-CZ-NH1	7.45	124.02	120.30
54	BA	1247	A	C5-C6-N1	7.44	121.42	117.70
54	BA	2461	A	C5-C6-N1	7.44	121.42	117.70
21	AA	174	A	N1-C6-N6	-7.44	114.13	118.60
54	BA	1080	A	C4-C5-C6	-7.44	113.28	117.00
54	BA	2813	A	N1-C6-N6	-7.44	114.14	118.60
21	AA	468	A	C5-C6-N1	7.44	121.42	117.70
54	BA	1155	A	C5-C6-N1	7.44	121.42	117.70
55	BB	36	C	N3-C2-O2	-7.44	116.69	121.90
21	AA	611	C	N3-C2-O2	-7.44	116.69	121.90
21	AA	1251	A	C5-C6-N1	7.44	121.42	117.70
54	BA	1566	A	N1-C6-N6	-7.44	114.14	118.60
54	BA	2366	A	C5-C6-N1	7.44	121.42	117.70
21	AA	994	A	C5-C6-N1	7.44	121.42	117.70
54	BA	1819	A	C5-C6-N1	7.44	121.42	117.70
54	BA	2503	A	N1-C6-N6	-7.44	114.14	118.60
54	BA	1135	C	N3-C2-O2	-7.43	116.70	121.90
54	BA	1654	A	C5-C6-N1	7.43	121.42	117.70
54	BA	2060	A	C5-C6-N1	7.43	121.42	117.70
54	BA	1046	A	C5-C6-N1	7.43	121.41	117.70
54	BA	1389	G	O4'-C1'-N9	7.43	114.14	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1694	C	N3-C2-O2	-7.43	116.70	121.90
54	BA	685	A	N1-C6-N6	-7.43	114.14	118.60
21	AA	532	A	C5-C6-N1	7.42	121.41	117.70
54	BA	423	A	C5-C6-N1	7.42	121.41	117.70
54	BA	1387	A	C5-C6-N1	7.42	121.41	117.70
54	BA	2214	C	N3-C2-O2	-7.42	116.70	121.90
54	BA	2430	A	N1-C6-N6	-7.42	114.15	118.60
54	BA	2590	A	C5-C6-N1	7.42	121.41	117.70
21	AA	109	A	C5-C6-N1	7.42	121.41	117.70
21	AA	900	A	C5-C6-N1	7.42	121.41	117.70
54	BA	222	A	C5-C6-N1	7.42	121.41	117.70
21	AA	1236	A	N1-C6-N6	-7.42	114.15	118.60
54	BA	374	A	C5-C6-N1	7.42	121.41	117.70
21	AA	53	A	C4-C5-C6	-7.42	113.29	117.00
21	AA	574	A	C4-C5-C6	-7.42	113.29	117.00
21	AA	937	A	C4-C5-C6	-7.42	113.29	117.00
54	BA	1088	A	C5-C6-N1	7.42	121.41	117.70
21	AA	5	U	P-O3'-C3'	7.42	128.60	119.70
54	BA	1088	A	O4'-C1'-N9	7.42	114.13	108.20
21	AA	1136	C	N3-C2-O2	-7.41	116.71	121.90
54	BA	2706	A	C5-C6-N1	7.41	121.41	117.70
54	BA	447	A	C5-C6-N1	7.41	121.41	117.70
13	AN	9	ARG	NE-CZ-NH1	7.41	124.00	120.30
54	BA	228	C	N3-C2-O2	-7.41	116.71	121.90
54	BA	282	A	N1-C6-N6	-7.41	114.15	118.60
54	BA	422	A	C5-C6-N1	7.41	121.41	117.70
21	AA	59	A	N1-C6-N6	-7.41	114.16	118.60
21	AA	1251	A	C4-C5-C6	-7.41	113.30	117.00
21	AA	1410	A	C4-C5-C6	-7.41	113.30	117.00
54	BA	2516	A	C5-C6-N1	7.41	121.40	117.70
54	BA	2530	A	C5-C6-N1	7.41	121.40	117.70
54	BA	172	A	C5-C6-N1	7.41	121.40	117.70
23	A2	91	A	C5-C6-N1	7.41	121.40	117.70
54	BA	404	A	C5-C6-N1	7.41	121.40	117.70
54	BA	1103	A	C5-C6-N1	7.40	121.40	117.70
11	AL	13	ARG	NE-CZ-NH1	7.40	124.00	120.30
21	AA	1346	A	N1-C6-N6	-7.40	114.16	118.60
21	AA	1360	A	C5-C6-N1	7.40	121.40	117.70
54	BA	1014	A	C5-C6-N1	7.40	121.40	117.70
54	BA	2900	A	C5-C6-N1	7.40	121.40	117.70
54	BA	819	A	C5-C6-N1	7.40	121.40	117.70
54	BA	2762	C	N3-C2-O2	-7.40	116.72	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1525	A	N1-C6-N6	-7.40	114.16	118.60
3	AD	43	ARG	NE-CZ-NH1	7.40	124.00	120.30
21	AA	753	A	N1-C6-N6	-7.40	114.16	118.60
27	BE	162	ARG	NE-CZ-NH1	7.40	124.00	120.30
54	BA	644	A	N1-C6-N6	-7.40	114.16	118.60
54	BA	705	A	N1-C6-N6	-7.40	114.16	118.60
54	BA	2115	G	O4'-C1'-N9	7.40	114.12	108.20
21	AA	16	A	C4-C5-C6	-7.39	113.30	117.00
21	AA	595	A	N1-C6-N6	-7.39	114.16	118.60
21	AA	1195	C	N3-C2-O2	-7.39	116.72	121.90
21	AA	1288	A	C5-C6-N1	7.39	121.40	117.70
54	BA	470	A	C5-C6-N1	7.39	121.40	117.70
54	BA	666	A	C5-C6-N1	7.39	121.40	117.70
54	BA	1640	A	C5-C6-N1	7.39	121.40	117.70
54	BA	2284	A	C4-C5-C6	-7.39	113.30	117.00
21	AA	353	A	C5-C6-N1	7.39	121.40	117.70
21	AA	1158	C	N1-C2-O2	7.39	123.34	118.90
42	BT	12	ARG	NE-CZ-NH1	7.39	124.00	120.30
54	BA	2602	A	N1-C6-N6	-7.39	114.17	118.60
54	BA	626	A	C5-C6-N1	7.39	121.39	117.70
54	BA	1722	A	C5-C6-N1	7.39	121.40	117.70
21	AA	1271	A	C5-C6-N1	7.39	121.39	117.70
54	BA	1431	A	C5-C6-N1	7.39	121.39	117.70
21	AA	747	A	C4-C5-C6	-7.39	113.31	117.00
54	BA	101	A	N1-C6-N6	-7.39	114.17	118.60
54	BA	1936	A	C5-C6-N1	7.39	121.39	117.70
21	AA	493	A	C5-C6-N1	7.38	121.39	117.70
21	AA	1269	A	C5-C6-N1	7.38	121.39	117.70
54	BA	173	A	N1-C6-N6	-7.38	114.17	118.60
54	BA	1785	A	C5-C6-N1	7.38	121.39	117.70
54	BA	2452	C	N3-C2-O2	-7.38	116.73	121.90
21	AA	934	C	N3-C2-O2	-7.38	116.73	121.90
54	BA	586	A	C5-C6-N1	7.38	121.39	117.70
54	BA	1689	A	N1-C6-N6	-7.38	114.17	118.60
54	BA	927	A	C5-C6-N1	7.38	121.39	117.70
23	A2	82	A	N1-C6-N6	-7.38	114.17	118.60
32	BJ	99	ARG	NE-CZ-NH1	7.38	123.99	120.30
54	BA	2266	A	C4-C5-C6	-7.38	113.31	117.00
54	BA	2378	A	N1-C6-N6	-7.38	114.17	118.60
13	AN	75	ARG	NE-CZ-NH1	7.38	123.99	120.30
21	AA	1219	A	C4-C5-C6	-7.38	113.31	117.00
54	BA	1885	A	C5-C6-N1	7.38	121.39	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	195	A	C5-C6-N1	7.37	121.39	117.70
21	AA	1374	A	C5-C6-N1	7.37	121.39	117.70
21	AA	1409	C	N3-C2-O2	-7.37	116.74	121.90
21	AA	596	A	N1-C6-N6	-7.37	114.18	118.60
54	BA	794	A	C5-C6-N1	7.37	121.39	117.70
54	BA	1744	A	C5-C6-N1	7.37	121.39	117.70
54	BA	2336	A	N1-C6-N6	-7.37	114.18	118.60
33	BK	17	ARG	NE-CZ-NH1	7.37	123.98	120.30
54	BA	528	A	C5-C6-N1	7.37	121.38	117.70
54	BA	2577	A	C5-C6-N1	7.37	121.38	117.70
54	BA	2823	A	C5-C6-N1	7.37	121.38	117.70
54	BA	2879	A	C5-C6-N1	7.37	121.38	117.70
21	AA	66	A	N1-C6-N6	-7.37	114.18	118.60
54	BA	2612	C	N3-C2-O2	-7.37	116.74	121.90
54	BA	885	C	N3-C2-O2	-7.36	116.75	121.90
21	AA	1004	A	C5-C6-N1	7.36	121.38	117.70
54	BA	1783	A	C5-C6-N1	7.36	121.38	117.70
21	AA	44	A	N1-C6-N6	-7.36	114.18	118.60
21	AA	1216	A	C5-C6-N1	7.36	121.38	117.70
54	BA	1739	A	C5-C6-N1	7.36	121.38	117.70
55	BB	8	C	N3-C2-O2	-7.36	116.75	121.90
54	BA	1874	C	N3-C2-O2	-7.36	116.75	121.90
21	AA	914	A	C5-C6-N1	7.36	121.38	117.70
21	AA	1238	A	C5-C6-N1	7.36	121.38	117.70
24	A3	45	A	C5-C6-N1	7.36	121.38	117.70
54	BA	1606	C	N1-C2-O2	7.36	123.31	118.90
54	BA	57	C	O4'-C1'-N1	7.36	114.08	108.20
54	BA	2459	A	C5-C6-N1	7.36	121.38	117.70
21	AA	182	A	C5-C6-N1	7.35	121.38	117.70
21	AA	183	C	C1'-O4'-C4'	-7.35	104.02	109.90
54	BA	2163	A	C5-C6-N1	7.35	121.38	117.70
21	AA	55	A	C4-C5-C6	-7.35	113.33	117.00
54	BA	74	A	C5-C6-N1	7.35	121.38	117.70
54	BA	2274	A	C5-C6-N1	7.35	121.38	117.70
21	AA	250	A	C5-C6-N1	7.35	121.37	117.70
54	BA	909	A	C5-C6-N1	7.35	121.37	117.70
54	BA	990	A	C5-C6-N1	7.35	121.37	117.70
21	AA	321	A	N1-C6-N6	-7.35	114.19	118.60
21	AA	977	A	C5-C6-N1	7.34	121.37	117.70
54	BA	99	U	N3-C2-O2	-7.34	117.06	122.20
54	BA	1762	A	C5-C6-N1	7.34	121.37	117.70
54	BA	829	A	C5-C6-N1	7.34	121.37	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1603	A	N1-C6-N6	-7.34	114.19	118.60
15	AP	8	ARG	NE-CZ-NH1	7.34	123.97	120.30
54	BA	241	A	C5-C6-N1	7.34	121.37	117.70
54	BA	1147	A	C5-C6-N1	7.34	121.37	117.70
54	BA	1568	G	O4'-C1'-N9	7.34	114.07	108.20
54	BA	2080	A	C4-C5-C6	-7.34	113.33	117.00
54	BA	2352	A	C5-C6-N1	7.34	121.37	117.70
54	BA	2893	A	C5-C6-N1	7.34	121.37	117.70
54	BA	1803	A	N1-C6-N6	-7.34	114.20	118.60
54	BA	2071	A	C5-C6-N1	7.34	121.37	117.70
21	AA	1430	A	C5-C6-N1	7.34	121.37	117.70
16	AQ	64	ARG	NE-CZ-NH1	7.34	123.97	120.30
54	BA	1084	A	C5-C6-N1	7.34	121.37	117.70
54	BA	1672	A	N1-C6-N6	-7.34	114.20	118.60
54	BA	2440	C	N3-C2-O2	-7.34	116.76	121.90
28	BF	101	ARG	NE-CZ-NH1	7.33	123.97	120.30
54	BA	184	C	N3-C2-O2	-7.33	116.77	121.90
54	BA	430	A	C5-C6-N1	7.33	121.37	117.70
25	BC	155	ARG	NE-CZ-NH1	7.33	123.97	120.30
54	BA	457	A	N1-C6-N6	-7.33	114.20	118.60
21	AA	109	A	C1'-O4'-C4'	-7.33	104.04	109.90
21	AA	1180	A	C5-C6-N1	7.33	121.36	117.70
22	A1	76	A	N1-C6-N6	-7.33	114.20	118.60
54	BA	503	A	C5-C6-N1	7.33	121.36	117.70
54	BA	492	A	N1-C6-N6	-7.33	114.20	118.60
21	AA	1363	A	C5-C6-N1	7.33	121.36	117.70
21	AA	250	A	N1-C6-N6	-7.33	114.20	118.60
21	AA	414	A	C5-C6-N1	7.33	121.36	117.70
21	AA	1111	A	C5-C6-N1	7.33	121.36	117.70
21	AA	1395	C	N3-C2-O2	-7.33	116.77	121.90
54	BA	330	A	N1-C6-N6	-7.33	114.20	118.60
54	BA	1635	A	C5-C6-N1	7.33	121.36	117.70
56	B5	122	ARG	NE-CZ-NH1	7.33	123.96	120.30
55	BB	15	A	C5-C6-N1	7.32	121.36	117.70
54	BA	225	C	O4'-C1'-N1	7.32	114.06	108.20
54	BA	229	C	N3-C2-O2	-7.32	116.78	121.90
54	BA	599	A	C5-C6-N1	7.32	121.36	117.70
54	BA	1534	U	N3-C2-O2	-7.32	117.08	122.20
21	AA	864	A	N1-C6-N6	-7.32	114.21	118.60
21	AA	197	A	N1-C6-N6	-7.32	114.21	118.60
21	AA	576	C	N3-C2-O2	-7.32	116.78	121.90
54	BA	1439	A	C5-C6-N1	7.32	121.36	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AC	58	ARG	NE-CZ-NH1	7.32	123.96	120.30
21	AA	729	A	C5-C6-N1	7.32	121.36	117.70
54	BA	2198	A	C5-C6-N1	7.32	121.36	117.70
55	BB	52	A	C5-C6-N1	7.32	121.36	117.70
54	BA	943	A	C5-C6-N1	7.31	121.36	117.70
54	BA	984	A	C4-C5-C6	-7.31	113.34	117.00
54	BA	1668	A	C5-C6-N1	7.31	121.36	117.70
54	BA	2572	A	C5-C6-N1	7.31	121.36	117.70
38	BP	88	ARG	NE-CZ-NH1	7.31	123.96	120.30
41	BS	92	ARG	NE-CZ-NH1	7.31	123.95	120.30
54	BA	2094	A	N1-C6-N6	-7.31	114.21	118.60
21	AA	478	A	N1-C6-N6	-7.31	114.22	118.60
21	AA	1016	A	C5-C6-N1	7.31	121.35	117.70
54	BA	550	C	N3-C2-O2	-7.31	116.78	121.90
54	BA	920	A	N1-C6-N6	-7.31	114.22	118.60
54	BA	2482	A	C5-C6-N1	7.31	121.35	117.70
54	BA	1001	A	C5-C6-N1	7.31	121.35	117.70
54	BA	2328	A	N1-C6-N6	-7.31	114.22	118.60
21	AA	808	C	N3-C2-O2	-7.30	116.79	121.90
21	AA	1236	A	C5-C6-N1	7.30	121.35	117.70
54	BA	632	A	C5-C6-N1	7.30	121.35	117.70
54	BA	1156	A	C5-C6-N1	7.30	121.35	117.70
54	BA	2322	A	C5-C6-N1	7.30	121.35	117.70
54	BA	2598	A	N1-C6-N6	-7.30	114.22	118.60
54	BA	300	A	C5-C6-N1	7.30	121.35	117.70
54	BA	727	A	C5-C6-N1	7.30	121.35	117.70
54	BA	2097	A	C4-C5-C6	-7.30	113.35	117.00
54	BA	2327	A	C5-C6-N1	7.30	121.35	117.70
21	AA	629	A	N1-C6-N6	-7.30	114.22	118.60
54	BA	715	A	C4-C5-C6	-7.30	113.35	117.00
54	BA	1040	A	C5-C6-N1	7.30	121.35	117.70
54	BA	1546	G	O4'-C1'-N9	7.30	114.04	108.20
5	AF	45	ARG	NE-CZ-NH1	7.29	123.95	120.30
21	AA	968	A	O4'-C1'-N9	7.29	114.04	108.20
24	A3	77	A	C5-C6-N1	7.29	121.35	117.70
54	BA	125	A	O4'-C1'-N9	7.29	114.04	108.20
54	BA	1938	A	C5-C6-N1	7.29	121.35	117.70
21	AA	629	A	C5-C6-N1	7.29	121.35	117.70
21	AA	970	C	N1-C2-O2	7.29	123.28	118.90
21	AA	1274	A	C5-C6-N1	7.29	121.35	117.70
24	A3	14	A	C5-C6-N1	7.29	121.35	117.70
54	BA	1118	C	N3-C2-O2	-7.29	116.80	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1480	C	O4'-C1'-N1	7.29	114.03	108.20
54	BA	1603	A	C5-C6-N1	7.29	121.35	117.70
21	AA	892	A	C5-C6-N1	7.29	121.35	117.70
21	AA	1069	C	N3-C2-O2	-7.29	116.80	121.90
54	BA	1214	A	N1-C6-N6	-7.29	114.23	118.60
54	BA	1242	U	O4'-C1'-N1	7.29	114.03	108.20
21	AA	460	A	N1-C6-N6	-7.29	114.23	118.60
54	BA	1098	A	N1-C6-N6	-7.29	114.23	118.60
21	AA	749	A	C5-C6-N1	7.29	121.34	117.70
54	BA	309	A	C5-C6-N1	7.29	121.34	117.70
54	BA	2225	A	C5-C6-N1	7.29	121.34	117.70
54	BA	2564	A	C5-C6-N1	7.29	121.34	117.70
21	AA	1146	A	C5-C6-N1	7.29	121.34	117.70
21	AA	509	A	C5-C6-N1	7.29	121.34	117.70
21	AA	1004	A	C4-C5-C6	-7.29	113.36	117.00
21	AA	1067	A	C5-C6-N1	7.29	121.34	117.70
24	A3	58	A	C5-C6-N1	7.29	121.34	117.70
54	BA	715	A	C5-C6-N1	7.29	121.34	117.70
54	BA	2366	A	N1-C6-N6	-7.29	114.23	118.60
54	BA	2727	A	C5-C6-N1	7.28	121.34	117.70
22	A1	38	A	C5-C6-N1	7.28	121.34	117.70
54	BA	231	A	C5-C6-N1	7.28	121.34	117.70
54	BA	504	A	C5-C6-N1	7.28	121.34	117.70
54	BA	563	A	N1-C6-N6	-7.28	114.23	118.60
54	BA	802	A	C5-C6-N1	7.28	121.34	117.70
54	BA	457	A	C5-C6-N1	7.28	121.34	117.70
54	BA	529	A	C5-C6-N1	7.28	121.34	117.70
21	AA	673	A	C5-C6-N1	7.28	121.34	117.70
22	A1	16	C	N3-C2-O2	-7.28	116.81	121.90
28	BF	124	ARG	NE-CZ-NH1	7.28	123.94	120.30
54	BA	127	A	N1-C6-N6	-7.28	114.23	118.60
54	BA	782	A	C5-C6-N1	7.27	121.34	117.70
54	BA	197	A	C5-C6-N1	7.27	121.34	117.70
54	BA	781	A	C5-C6-N1	7.27	121.34	117.70
54	BA	1566	A	C5-C6-N1	7.27	121.34	117.70
21	AA	975	A	C5-C6-N1	7.27	121.33	117.70
54	BA	255	A	N1-C6-N6	-7.27	114.24	118.60
54	BA	2515	C	N3-C2-O2	-7.27	116.81	121.90
21	AA	263	A	C5-C6-N1	7.27	121.33	117.70
21	AA	374	A	C4-C5-C6	-7.27	113.37	117.00
55	BB	12	C	N3-C2-O2	-7.27	116.81	121.90
54	BA	213	A	C4-C5-C6	-7.26	113.37	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1428	C	N3-C2-O2	-7.26	116.82	121.90
21	AA	81	A	N1-C6-N6	-7.26	114.24	118.60
24	A3	14	A	N1-C6-N6	-7.26	114.24	118.60
54	BA	1310	G	O4'-C1'-N9	7.26	114.01	108.20
54	BA	2287	A	C5-C6-N1	7.26	121.33	117.70
21	AA	7	A	C5-C6-N1	7.26	121.33	117.70
21	AA	478	A	C5-C6-N1	7.26	121.33	117.70
21	AA	687	A	C5-C6-N1	7.26	121.33	117.70
54	BA	2749	A	C5-C6-N1	7.26	121.33	117.70
21	AA	958	A	C5-C6-N1	7.26	121.33	117.70
56	B5	162	ARG	NE-CZ-NH1	7.26	123.93	120.30
54	BA	1378	A	C4-C5-C6	-7.25	113.37	117.00
21	AA	313	A	C5-C6-N1	7.25	121.33	117.70
21	AA	313	A	N1-C6-N6	-7.25	114.25	118.60
21	AA	1246	A	C4-C5-C6	-7.25	113.38	117.00
54	BA	1802	A	N1-C6-N6	-7.25	114.25	118.60
54	BA	2590	A	C4-C5-C6	-7.25	113.38	117.00
54	BA	2632	A	C5-C6-N1	7.25	121.33	117.70
54	BA	2880	C	N3-C2-O2	-7.25	116.82	121.90
21	AA	607	A	C5-C6-N1	7.25	121.33	117.70
21	AA	696	A	C4-C5-C6	-7.25	113.38	117.00
54	BA	279	A	C5-C6-N1	7.25	121.33	117.70
54	BA	1794	A	N1-C6-N6	-7.25	114.25	118.60
21	AA	1022	A	N1-C6-N6	-7.25	114.25	118.60
54	BA	340	A	C5-C6-N1	7.25	121.33	117.70
54	BA	352	A	C5-C6-N1	7.25	121.32	117.70
54	BA	1609	A	O4'-C1'-N9	7.25	114.00	108.20
54	BA	2135	A	N1-C6-N6	-7.25	114.25	118.60
54	BA	2705	A	C5-C6-N1	7.25	121.32	117.70
21	AA	1155	A	C5-C6-N1	7.25	121.32	117.70
54	BA	262	A	C5-C6-N1	7.25	121.32	117.70
54	BA	1005	C	N3-C2-O2	-7.25	116.83	121.90
54	BA	2030	A	C5-C6-N1	7.25	121.32	117.70
54	BA	2126	A	N1-C6-N6	-7.25	114.25	118.60
1	AB	112	ARG	NE-CZ-NH1	7.24	123.92	120.30
21	AA	33	A	C4-C5-C6	-7.24	113.38	117.00
54	BA	1655	A	N1-C6-N6	-7.24	114.25	118.60
21	AA	80	A	C5-C6-N1	7.24	121.32	117.70
54	BA	2542	A	N1-C6-N6	-7.24	114.25	118.60
21	AA	119	A	C5-C6-N1	7.24	121.32	117.70
54	BA	794	A	N1-C6-N6	-7.24	114.26	118.60
54	BA	1786	A	C5-C6-N1	7.24	121.32	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2170	A	C4-C5-C6	-7.24	113.38	117.00
55	BB	73	A	N1-C6-N6	-7.24	114.25	118.60
54	BA	627	A	C5-C6-N1	7.24	121.32	117.70
54	BA	1393	A	N1-C6-N6	-7.24	114.26	118.60
16	AQ	10	ARG	NE-CZ-NH1	7.24	123.92	120.30
21	AA	1413	A	N1-C6-N6	-7.24	114.26	118.60
21	AA	889	A	C4-C5-C6	-7.23	113.38	117.00
54	BA	1536	C	N3-C2-O2	-7.23	116.84	121.90
56	B5	164	ARG	NE-CZ-NH1	7.23	123.92	120.30
21	AA	1410	A	C5-C6-N1	7.23	121.32	117.70
54	BA	111	A	N1-C6-N6	-7.23	114.26	118.60
54	BA	911	A	C4-C5-C6	-7.23	113.38	117.00
54	BA	1858	A	C5-C6-N1	7.23	121.32	117.70
54	BA	2589	A	C5-C6-N1	7.23	121.32	117.70
54	BA	176	A	N1-C6-N6	-7.23	114.26	118.60
54	BA	947	A	C4-C5-C6	-7.23	113.39	117.00
54	BA	2666	C	N3-C2-O2	-7.23	116.84	121.90
54	BA	2042	A	C5-C6-N1	7.23	121.31	117.70
54	BA	2764	A	N1-C6-N6	-7.23	114.26	118.60
3	AD	164	ARG	NE-CZ-NH1	7.23	123.91	120.30
21	AA	794	A	C4-C5-C6	-7.23	113.39	117.00
54	BA	2005	A	C5-C6-N1	7.23	121.31	117.70
54	BA	2063	C	N3-C2-O2	-7.23	116.84	121.90
54	BA	789	A	C5-C6-N1	7.23	121.31	117.70
21	AA	1324	A	N1-C6-N6	-7.22	114.27	118.60
54	BA	941	A	C5-C6-N1	7.22	121.31	117.70
54	BA	1600	C	N3-C2-O2	-7.22	116.84	121.90
54	BA	2662	A	N1-C6-N6	-7.22	114.27	118.60
54	BA	265	A	N1-C6-N6	-7.22	114.27	118.60
21	AA	609	A	C4-C5-C6	-7.22	113.39	117.00
21	AA	1383	C	N3-C2-O2	-7.22	116.85	121.90
38	BP	102	ARG	NE-CZ-NH1	7.22	123.91	120.30
54	BA	146	A	C5-C6-N1	7.22	121.31	117.70
24	A3	74	A	C5-C6-N1	7.22	121.31	117.70
54	BA	382	A	C5-C6-N1	7.22	121.31	117.70
54	BA	787	C	N3-C2-O2	-7.22	116.85	121.90
21	AA	695	A	C5-C6-N1	7.21	121.31	117.70
21	AA	1093	A	C5-C6-N1	7.21	121.31	117.70
34	BL	18	ARG	NE-CZ-NH1	7.21	123.91	120.30
21	AA	412	A	C5-C6-N1	7.21	121.31	117.70
21	AA	1155	A	C4-C5-C6	-7.21	113.39	117.00
21	AA	1368	A	C5-C6-N1	7.21	121.31	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	270	A	C5-C6-N1	7.21	121.30	117.70
21	AA	300	A	C5-C6-N1	7.21	121.30	117.70
38	BP	112	ARG	NE-CZ-NH1	7.21	123.91	120.30
11	AL	109	ARG	NE-CZ-NH1	7.21	123.90	120.30
20	AU	32	ARG	NE-CZ-NH1	7.21	123.90	120.30
21	AA	162	A	C5-C6-N1	7.21	121.30	117.70
21	AA	630	A	C5-C6-N1	7.21	121.30	117.70
21	AA	959	A	C5-C6-N1	7.21	121.30	117.70
54	BA	1698	A	N1-C6-N6	-7.21	114.28	118.60
21	AA	900	A	C4-C5-C6	-7.20	113.40	117.00
54	BA	1126	A	O4'-C1'-N9	7.20	113.96	108.20
54	BA	1336	A	C5-C6-N1	7.20	121.30	117.70
54	BA	2114	A	C5-C6-N1	7.20	121.30	117.70
21	AA	38	G	N1-C6-O6	-7.20	115.58	119.90
22	A1	76	A	O4'-C1'-C2'	-7.20	98.60	105.80
54	BA	1284	A	C5-C6-N1	7.20	121.30	117.70
54	BA	1496	A	C5-C6-N1	7.20	121.30	117.70
7	AH	14	ARG	NE-CZ-NH1	7.20	123.90	120.30
54	BA	947	A	C5-C6-N1	7.20	121.30	117.70
54	BA	1847	A	O4'-C1'-N9	7.20	113.96	108.20
54	BA	1924	C	O4'-C1'-N1	7.20	113.96	108.20
54	BA	2703	C	N3-C2-O2	-7.20	116.86	121.90
54	BA	2733	A	C5-C6-N1	7.20	121.30	117.70
54	BA	507	A	C5-C6-N1	7.19	121.30	117.70
54	BA	1469	A	C5-C6-N1	7.19	121.30	117.70
54	BA	1544	A	C5-C6-N1	7.19	121.30	117.70
54	BA	2388	A	C5-C6-N1	7.19	121.30	117.70
21	AA	495	A	N1-C6-N6	-7.19	114.28	118.60
21	AA	1306	A	C5-C6-N1	7.19	121.30	117.70
21	AA	1434	A	C5-C6-N1	7.19	121.30	117.70
41	BS	88	ARG	NE-CZ-NH1	7.19	123.90	120.30
54	BA	2321	U	O4'-C1'-N1	7.19	113.95	108.20
54	BA	2406	A	C5-C6-N1	7.19	121.30	117.70
54	BA	2518	A	C5-C6-N1	7.19	121.30	117.70
21	AA	1476	A	C5-C6-N1	7.19	121.30	117.70
54	BA	1899	A	C5-C6-N1	7.19	121.30	117.70
54	BA	1932	A	C5-C6-N1	7.19	121.30	117.70
54	BA	2090	A	C4-C5-C6	-7.19	113.41	117.00
54	BA	2288	A	C5-C6-N1	7.19	121.30	117.70
54	BA	2358	A	C5-C6-N1	7.19	121.30	117.70
21	AA	665	A	C5-C6-N1	7.19	121.30	117.70
54	BA	964	C	N3-C2-O2	-7.19	116.87	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2426	A	C5-C6-N1	7.19	121.29	117.70
21	AA	498	A	N1-C6-N6	-7.19	114.29	118.60
54	BA	1353	A	C5-C6-N1	7.19	121.29	117.70
54	BA	1676	A	N1-C6-N6	-7.19	114.29	118.60
54	BA	1965	C	N3-C2-O2	-7.19	116.87	121.90
21	AA	845	A	C5-C6-N1	7.18	121.29	117.70
21	AA	1398	A	C5-C6-N1	7.18	121.29	117.70
21	AA	298	A	N1-C6-N6	-7.18	114.29	118.60
54	BA	1327	A	C5-C6-N1	7.18	121.29	117.70
21	AA	1035	A	C5-C6-N1	7.18	121.29	117.70
54	BA	2082	A	N1-C6-N6	-7.18	114.29	118.60
54	BA	2497	A	C5-C6-N1	7.18	121.29	117.70
21	AA	968	A	C5-C6-N1	7.18	121.29	117.70
21	AA	1483	A	C5-C6-N1	7.18	121.29	117.70
54	BA	633	A	C5-C6-N1	7.18	121.29	117.70
54	BA	2135	A	C5-C6-N1	7.18	121.29	117.70
54	BA	973	A	C5-C6-N1	7.18	121.29	117.70
21	AA	754	C	N3-C2-O2	-7.18	116.88	121.90
21	AA	1082	A	C5-C6-N1	7.18	121.29	117.70
21	AA	1170	A	C5-C6-N1	7.18	121.29	117.70
54	BA	190	A	N1-C6-N6	-7.18	114.29	118.60
54	BA	191	A	N1-C6-N6	-7.18	114.29	118.60
54	BA	792	A	C5-C6-N1	7.18	121.29	117.70
54	BA	1359	A	C5-C6-N1	7.18	121.29	117.70
54	BA	1678	A	C5-C6-N1	7.18	121.29	117.70
21	AA	1396	A	C5-C6-N1	7.17	121.29	117.70
34	BL	41	ARG	NE-CZ-NH1	7.17	123.89	120.30
54	BA	322	A	C5-C6-N1	7.17	121.29	117.70
54	BA	362	A	C5-C6-N1	7.17	121.29	117.70
54	BA	1010	A	N1-C6-N6	-7.17	114.30	118.60
54	BA	2314	A	N1-C6-N6	-7.17	114.30	118.60
54	BA	2847	U	O4'-C1'-N1	7.17	113.94	108.20
54	BA	513	A	C5-C6-N1	7.17	121.29	117.70
54	BA	1204	A	C5-C6-N1	7.17	121.29	117.70
24	A3	35	C	N3-C2-O2	-7.17	116.88	121.90
54	BA	556	A	N1-C6-N6	-7.17	114.30	118.60
54	BA	751	A	C5-C6-N1	7.17	121.29	117.70
54	BA	788	A	C4-C5-C6	-7.17	113.41	117.00
54	BA	1579	A	C5-C6-N1	7.17	121.28	117.70
54	BA	2278	A	N1-C6-N6	-7.17	114.30	118.60
54	BA	2589	A	N1-C6-N6	-7.17	114.30	118.60
54	BA	844	A	C5-C6-N1	7.17	121.28	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	482	A	C5-C6-N1	7.17	121.28	117.70
21	AA	1227	A	C5-C6-N1	7.17	121.28	117.70
54	BA	1705	A	C5-C6-N1	7.17	121.28	117.70
54	BA	1932	A	C4-C5-C6	-7.17	113.42	117.00
24	A3	40	C	N3-C2-O2	-7.17	116.89	121.90
21	AA	1259	C	N3-C2-O2	-7.16	116.89	121.90
35	BM	81	ARG	NE-CZ-NH1	7.16	123.88	120.30
54	BA	1032	A	C5-C6-N1	7.16	121.28	117.70
54	BA	2483	C	N3-C2-O2	-7.16	116.89	121.90
54	BA	2820	A	C5-C6-N1	7.16	121.28	117.70
54	BA	985	C	N3-C2-O2	-7.16	116.89	121.90
21	AA	374	A	N1-C6-N6	-7.16	114.30	118.60
21	AA	673	A	N1-C6-N6	-7.16	114.31	118.60
21	AA	747	A	C5-C6-N1	7.16	121.28	117.70
54	BA	756	A	C5-C6-N1	7.16	121.28	117.70
54	BA	980	A	O4'-C1'-N9	7.16	113.93	108.20
54	BA	1679	A	N1-C6-N6	-7.16	114.31	118.60
54	BA	1830	C	N3-C2-O2	-7.16	116.89	121.90
54	BA	152	A	N1-C6-N6	-7.16	114.31	118.60
9	AJ	9	ARG	NE-CZ-NH1	7.16	123.88	120.30
54	BA	218	A	C5-C6-N1	7.16	121.28	117.70
54	BA	730	A	C5-C6-N1	7.16	121.28	117.70
54	BA	1641	A	C5-C6-N1	7.16	121.28	117.70
54	BA	2531	A	C5-C6-N1	7.16	121.28	117.70
21	AA	309	A	C5-C6-N1	7.15	121.28	117.70
21	AA	349	A	C5-C6-N1	7.15	121.28	117.70
54	BA	1879	C	N3-C2-O2	-7.15	116.89	121.90
21	AA	1201	A	P-O3'-C3'	7.15	128.28	119.70
25	BC	47	ARG	NE-CZ-NH1	7.15	123.87	120.30
55	BB	115	A	C5-C6-N1	7.15	121.28	117.70
21	AA	609	A	C5-C6-N1	7.15	121.27	117.70
54	BA	2433	A	N1-C6-N6	-7.15	114.31	118.60
21	AA	223	A	C5-C6-N1	7.14	121.27	117.70
21	AA	267	C	N3-C2-O2	-7.14	116.90	121.90
21	AA	909	A	C5-C6-N1	7.14	121.27	117.70
54	BA	91	A	N1-C6-N6	-7.14	114.31	118.60
54	BA	717	C	N3-C2-O2	-7.14	116.90	121.90
54	BA	2258	C	N3-C2-O2	-7.14	116.90	121.90
54	BA	2778	A	C5-C6-N1	7.14	121.27	117.70
21	AA	1340	A	N1-C6-N6	-7.14	114.31	118.60
54	BA	936	A	C4-C5-C6	-7.14	113.43	117.00
54	BA	1570	A	C4-C5-C6	-7.14	113.43	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1916	A	C5-C6-N1	7.14	121.27	117.70
54	BA	546	U	N3-C2-O2	-7.14	117.20	122.20
20	AU	6	ARG	NE-CZ-NH2	-7.14	116.73	120.30
21	AA	314	C	N3-C2-O2	-7.14	116.90	121.90
21	AA	413	G	C1'-O4'-C4'	-7.14	104.19	109.90
54	BA	481	G	C1'-O4'-C4'	-7.14	104.19	109.90
54	BA	1971	U	C1'-O4'-C4'	-7.14	104.19	109.90
54	BA	2020	A	C5-C6-N1	7.14	121.27	117.70
21	AA	665	A	C4-C5-C6	-7.14	113.43	117.00
21	AA	873	A	C5-C6-N1	7.14	121.27	117.70
21	AA	1151	A	N1-C6-N6	-7.14	114.32	118.60
46	BX	17	ARG	NE-CZ-NH1	7.14	123.87	120.30
54	BA	21	A	C5-C6-N1	7.14	121.27	117.70
54	BA	2386	A	C5-C6-N1	7.14	121.27	117.70
54	BA	2533	U	O4'-C1'-N1	7.14	113.91	108.20
54	BA	2766	A	N1-C6-N6	-7.14	114.32	118.60
21	AA	1171	A	N1-C6-N6	-7.13	114.32	118.60
54	BA	587	C	N3-C2-O2	-7.13	116.91	121.90
10	AK	36	ARG	NE-CZ-NH1	7.13	123.87	120.30
21	AA	149	A	C5-C6-N1	7.13	121.27	117.70
54	BA	2013	A	C5-C6-N1	7.13	121.27	117.70
21	AA	282	A	C4-C5-C6	-7.13	113.44	117.00
21	AA	419	C	N3-C2-O2	-7.13	116.91	121.90
21	AA	676	A	C5-C6-N1	7.13	121.27	117.70
54	BA	347	A	C5-C6-N1	7.13	121.27	117.70
54	BA	1100	C	N3-C2-O2	-7.13	116.91	121.90
54	BA	1347	A	C4-C5-C6	-7.13	113.44	117.00
21	AA	1336	C	N1-C2-O2	7.13	123.18	118.90
54	BA	1591	A	C4-C5-C6	-7.13	113.44	117.00
54	BA	256	A	C5-C6-N1	7.13	121.26	117.70
54	BA	1892	C	N3-C2-O2	-7.13	116.91	121.90
54	BA	806	C	N3-C2-O2	-7.12	116.91	121.90
54	BA	959	A	C5-C6-N1	7.12	121.26	117.70
54	BA	1630	A	C4-C5-C6	-7.12	113.44	117.00
54	BA	2727	A	C4-C5-C6	-7.12	113.44	117.00
54	BA	1144	A	N1-C6-N6	-7.12	114.33	118.60
54	BA	1570	A	C5-C6-N1	7.12	121.26	117.70
54	BA	1597	A	C4-C5-C6	-7.12	113.44	117.00
54	BA	1877	A	C5-C6-N1	7.12	121.26	117.70
54	BA	2000	C	O4'-C1'-N1	7.12	113.90	108.20
54	BA	2145	C	N1-C2-O2	7.12	123.17	118.90
5	AF	38	ARG	NE-CZ-NH1	7.12	123.86	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1378	C	N3-C2-O2	-7.12	116.92	121.90
21	AA	1397	C	N1-C2-O2	7.12	123.17	118.90
54	BA	2776	A	N1-C6-N6	-7.12	114.33	118.60
54	BA	1872	A	C5-C6-N1	7.12	121.26	117.70
55	BB	34	A	C4-C5-C6	-7.12	113.44	117.00
21	AA	1456	A	C5-C6-N1	7.12	121.26	117.70
54	BA	668	A	N1-C6-N6	-7.12	114.33	118.60
54	BA	2439	A	C5-C6-N1	7.12	121.26	117.70
55	BB	97	C	N3-C2-O2	-7.12	116.92	121.90
25	BC	261	ARG	NE-CZ-NH1	7.11	123.86	120.30
54	BA	94	A	C5-C6-N1	7.11	121.26	117.70
54	BA	466	A	N1-C6-N6	-7.11	114.33	118.60
54	BA	1553	A	C5-C6-N1	7.11	121.26	117.70
54	BA	2652	C	N3-C2-O2	-7.11	116.92	121.90
54	BA	2821	A	C5-C6-N1	7.11	121.26	117.70
54	BA	1447	C	N3-C2-O2	-7.11	116.92	121.90
54	BA	2247	A	C4-C5-C6	-7.11	113.44	117.00
54	BA	2451	A	N1-C6-N6	-7.11	114.33	118.60
21	AA	422	C	N3-C2-O2	-7.11	116.92	121.90
21	AA	759	A	C5-C6-N1	7.11	121.25	117.70
21	AA	880	C	N3-C2-O2	-7.11	116.92	121.90
21	AA	1339	A	C5-C6-N1	7.11	121.25	117.70
54	BA	223	A	C5-C6-N1	7.11	121.25	117.70
54	BA	761	A	C5-C6-N1	7.11	121.25	117.70
54	BA	1952	A	C5-C6-N1	7.11	121.25	117.70
21	AA	131	A	C5-C6-N1	7.11	121.25	117.70
21	AA	383	A	C5-C6-N1	7.11	121.25	117.70
54	BA	637	A	C5-C6-N1	7.11	121.25	117.70
55	BB	39	A	C5-C6-N1	7.11	121.25	117.70
54	BA	231	A	N1-C6-N6	-7.10	114.34	118.60
54	BA	2513	A	C4-C5-C6	-7.10	113.45	117.00
11	AL	49	ARG	NE-CZ-NH1	7.10	123.85	120.30
21	AA	781	A	C5-C6-N1	7.10	121.25	117.70
54	BA	743	A	C4-C5-C6	-7.10	113.45	117.00
21	AA	805	C	N3-C2-O2	-7.10	116.93	121.90
21	AA	124	C	N3-C2-O2	-7.10	116.93	121.90
22	A1	21	A	C5-C6-N1	7.10	121.25	117.70
54	BA	886	A	N1-C6-N6	-7.10	114.34	118.60
54	BA	2062	A	C5-C6-N1	7.10	121.25	117.70
21	AA	1146	A	N1-C6-N6	-7.10	114.34	118.60
21	AA	1170	A	C4-C5-C6	-7.10	113.45	117.00
54	BA	345	A	C5-C6-N1	7.10	121.25	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	899	A	C5-C6-N1	7.10	121.25	117.70
54	BA	1669	A	C5-C6-N1	7.10	121.25	117.70
54	BA	1987	A	C5-C6-N1	7.10	121.25	117.70
21	AA	496	A	C1'-O4'-C4'	-7.10	104.22	109.90
21	AA	1408	A	C5-C6-N1	7.10	121.25	117.70
54	BA	1302	A	C5-C6-N1	7.10	121.25	117.70
21	AA	608	A	N1-C6-N6	-7.09	114.34	118.60
23	A2	80	C	N3-C2-O2	-7.09	116.93	121.90
54	BA	603	A	C5-C6-N1	7.09	121.25	117.70
54	BA	979	A	C4-C5-C6	-7.09	113.45	117.00
54	BA	1049	C	N3-C2-O2	-7.09	116.93	121.90
54	BA	1404	C	N1-C2-O2	7.09	123.16	118.90
54	BA	300	A	C4-C5-C6	-7.09	113.45	117.00
54	BA	2281	A	C5-C6-N1	7.09	121.25	117.70
21	AA	74	A	C4-C5-C6	-7.09	113.45	117.00
22	A1	14	A	N1-C6-N6	-7.09	114.34	118.60
54	BA	1342	A	C5-C6-N1	7.09	121.25	117.70
21	AA	303	A	C5-C6-N1	7.09	121.24	117.70
54	BA	190	A	C5-C6-N1	7.09	121.24	117.70
54	BA	2104	C	O4'-C1'-N1	7.09	113.87	108.20
17	AR	47	ARG	NE-CZ-NH1	7.08	123.84	120.30
21	AA	460	A	C5-C6-N1	7.08	121.24	117.70
54	BA	753	A	C5-C6-N1	7.08	121.24	117.70
54	BA	1140	C	N3-C2-O2	-7.08	116.94	121.90
21	AA	1441	A	C5-C6-N1	7.08	121.24	117.70
54	BA	719	C	N3-C2-O2	-7.08	116.94	121.90
54	BA	2386	A	C4-C5-C6	-7.08	113.46	117.00
54	BA	2591	C	N3-C2-O2	-7.08	116.94	121.90
21	AA	559	A	C5-C6-N1	7.08	121.24	117.70
21	AA	1298	U	N3-C2-O2	-7.08	117.25	122.20
54	BA	2654	A	C4-C5-C6	-7.08	113.46	117.00
21	AA	811	C	N3-C2-O2	-7.08	116.95	121.90
54	BA	2411	A	C4-C5-C6	-7.08	113.46	117.00
54	BA	1549	A	N1-C6-N6	-7.08	114.35	118.60
54	BA	514	A	C4-C5-C6	-7.07	113.46	117.00
54	BA	735	A	C5-C6-N1	7.07	121.24	117.70
54	BA	1569	A	C4-C5-C6	-7.07	113.46	117.00
54	BA	1690	A	C5-C6-N1	7.07	121.24	117.70
54	BA	2089	C	N3-C2-O2	-7.07	116.95	121.90
54	BA	2119	A	C5-C6-N1	7.07	121.24	117.70
55	BB	26	C	N3-C2-O2	-7.07	116.95	121.90
10	AK	126	ARG	NE-CZ-NH1	-7.07	116.77	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	238	A	C5-C6-N1	7.07	121.23	117.70
21	AA	325	A	C5-C6-N1	7.07	121.23	117.70
54	BA	2377	A	N1-C6-N6	-7.07	114.36	118.60
54	BA	2776	A	C5-C6-N1	7.07	121.23	117.70
54	BA	2734	A	C5-C6-N1	7.07	121.23	117.70
8	AI	108	ARG	NE-CZ-NH1	7.07	123.83	120.30
21	AA	51	A	N1-C6-N6	-7.07	114.36	118.60
21	AA	53	A	C5-C6-N1	7.07	121.23	117.70
21	AA	758	C	N3-C2-O2	-7.07	116.95	121.90
21	AA	1311	A	C5-C6-N1	7.07	121.23	117.70
21	AA	1437	A	N1-C6-N6	-7.07	114.36	118.60
54	BA	1901	A	N1-C6-N6	-7.07	114.36	118.60
54	BA	2042	A	N1-C6-N6	-7.07	114.36	118.60
54	BA	2541	A	C4-C5-C6	-7.07	113.47	117.00
21	AA	602	A	C5-C6-N1	7.07	121.23	117.70
54	BA	1569	A	C5-C6-N1	7.07	121.23	117.70
54	BA	2883	A	N1-C6-N6	-7.06	114.36	118.60
55	BB	78	A	C5-C6-N1	7.06	121.23	117.70
54	BA	1679	A	C5-C6-N1	7.06	121.23	117.70
21	AA	637	C	N3-C2-O2	-7.06	116.96	121.90
54	BA	2178	C	N3-C2-O2	-7.06	116.96	121.90
21	AA	1055	A	C5-C6-N1	7.06	121.23	117.70
21	AA	1150	A	N1-C6-N6	-7.06	114.36	118.60
21	AA	1197	A	C5-C6-N1	7.06	121.23	117.70
54	BA	76	C	N3-C2-O2	-7.06	116.96	121.90
54	BA	900	A	C5-C6-N1	7.06	121.23	117.70
54	BA	1614	A	C5-C6-N1	7.06	121.23	117.70
54	BA	2392	A	C4-C5-C6	-7.06	113.47	117.00
55	BB	115	A	C4-C5-C6	-7.06	113.47	117.00
21	AA	1228	C	N3-C2-O2	-7.06	116.96	121.90
55	BB	27	C	N3-C2-O2	-7.06	116.96	121.90
21	AA	189	A	C5-C6-N1	7.05	121.23	117.70
21	AA	315	A	C5-C6-N1	7.05	121.23	117.70
54	BA	282	A	C5-C6-N1	7.05	121.23	117.70
54	BA	2336	A	C5-C6-N1	7.05	121.23	117.70
54	BA	2657	A	C5-C6-N1	7.05	121.23	117.70
54	BA	2733	A	C4-C5-C6	-7.05	113.47	117.00
54	BA	2741	A	C5-C6-N1	7.05	121.23	117.70
39	BQ	12	ARG	NE-CZ-NH1	7.05	123.83	120.30
54	BA	6	A	C5-C6-N1	7.05	121.23	117.70
54	BA	983	A	C5-C6-N1	7.05	121.23	117.70
54	BA	1960	A	C5-C6-N1	7.05	121.23	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	462	G	N3-C2-N2	-7.05	114.96	119.90
21	AA	1229	A	C5-C6-N1	7.05	121.22	117.70
21	AA	1350	A	N1-C6-N6	-7.05	114.37	118.60
24	A3	38	A	N1-C6-N6	-7.05	114.37	118.60
54	BA	262	A	C4-C5-C6	-7.05	113.47	117.00
54	BA	765	C	N3-C2-O2	-7.05	116.97	121.90
54	BA	821	A	C4-C5-C6	-7.05	113.47	117.00
54	BA	1000	A	C5-C6-N1	7.05	121.23	117.70
54	BA	1453	A	C5-C6-N1	7.05	121.23	117.70
54	BA	2310	C	N3-C2-O2	-7.05	116.96	121.90
54	BA	990	A	N1-C6-N6	-7.05	114.37	118.60
21	AA	408	A	C5-C6-N1	7.05	121.22	117.70
54	BA	118	A	C5-C6-N1	7.05	121.22	117.70
54	BA	910	A	C4-C5-C6	-7.05	113.48	117.00
54	BA	1308	A	C5-C6-N1	7.05	121.22	117.70
54	BA	1395	A	C5-C6-N1	7.05	121.22	117.70
21	AA	199	A	N1-C6-N6	-7.04	114.37	118.60
33	BK	64	ARG	NE-CZ-NH1	7.04	123.82	120.30
54	BA	2675	A	C5-C6-N1	7.04	121.22	117.70
54	BA	2704	C	N3-C2-O2	-7.04	116.97	121.90
54	BA	2887	A	C5-C6-N1	7.04	121.22	117.70
54	BA	608	A	C5-C6-N1	7.04	121.22	117.70
54	BA	2082	A	C5-C6-N1	7.04	121.22	117.70
21	AA	80	A	C4-C5-C6	-7.04	113.48	117.00
54	BA	2212	A	O4'-C1'-N9	7.04	113.83	108.20
21	AA	172	A	N1-C6-N6	-7.04	114.38	118.60
49	B0	9	ARG	NE-CZ-NH1	7.04	123.82	120.30
21	AA	1107	C	N3-C2-O2	-7.04	116.97	121.90
21	AA	1302	C	N3-C2-O2	-7.04	116.97	121.90
21	AA	1446	A	C5-C6-N1	7.04	121.22	117.70
29	BG	2	ARG	NE-CZ-NH1	7.04	123.82	120.30
54	BA	1027	A	C5-C6-N1	7.04	121.22	117.70
54	BA	1200	C	N3-C2-O2	-7.04	116.98	121.90
54	BA	1322	A	N1-C6-N6	-7.04	114.38	118.60
54	BA	2823	A	N1-C6-N6	-7.04	114.38	118.60
21	AA	807	A	C5-C6-N1	7.03	121.22	117.70
21	AA	1105	A	C4-C5-C6	-7.03	113.48	117.00
54	BA	6	A	C4-C5-C6	-7.03	113.48	117.00
54	BA	643	A	N1-C6-N6	-7.03	114.38	118.60
54	BA	2711	A	C5-C6-N1	7.03	121.22	117.70
54	BA	2809	A	C5-C6-N1	7.03	121.22	117.70
8	AI	98	ARG	NE-CZ-NH1	7.03	123.81	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1134	A	C5-C6-N1	7.03	121.22	117.70
54	BA	1340	U	O4'-C1'-N1	7.03	113.83	108.20
54	BA	1413	A	C4-C5-C6	-7.03	113.48	117.00
21	AA	1169	A	C5-C6-N1	7.03	121.21	117.70
21	AA	1328	C	N3-C2-O2	-7.03	116.98	121.90
54	BA	1755	A	C5-C6-N1	7.03	121.21	117.70
54	BA	1900	A	C5-C6-N1	7.03	121.21	117.70
21	AA	465	A	C5-C6-N1	7.03	121.21	117.70
22	A1	14	A	C5-C6-N1	7.03	121.21	117.70
54	BA	890	C	N3-C2-O2	-7.03	116.98	121.90
54	BA	1020	A	C5-C6-N1	7.03	121.21	117.70
22	A1	66	A	C5-C6-N1	7.02	121.21	117.70
54	BA	1535	A	N1-C6-N6	-7.02	114.39	118.60
54	BA	1717	A	N1-C6-N6	-7.02	114.39	118.60
54	BA	2516	A	N1-C6-N6	-7.02	114.39	118.60
21	AA	595	A	C5-C6-N1	7.02	121.21	117.70
54	BA	782	A	C4-C5-C6	-7.02	113.49	117.00
54	BA	900	A	N1-C6-N6	-7.02	114.39	118.60
54	BA	2129	C	N3-C2-O2	-7.02	116.98	121.90
21	AA	341	C	N3-C2-O2	-7.02	116.99	121.90
21	AA	583	A	C4-C5-C6	-7.02	113.49	117.00
54	BA	631	A	C4-C5-C6	-7.02	113.49	117.00
54	BA	1102	C	N3-C2-O2	-7.02	116.99	121.90
21	AA	610	U	O4'-C1'-N1	7.02	113.81	108.20
54	BA	2579	C	N3-C2-O2	-7.02	116.99	121.90
21	AA	766	A	C5-C6-N1	7.02	121.21	117.70
21	AA	1320	C	N1-C2-O2	7.02	123.11	118.90
23	A2	80	C	C1'-O4'-C4'	-7.02	104.29	109.90
54	BA	270	A	C5-C6-N1	7.02	121.21	117.70
54	BA	920	A	C5-C6-N1	7.02	121.21	117.70
54	BA	2581	G	O4'-C1'-N9	7.02	113.81	108.20
21	AA	643	C	N3-C2-O2	-7.01	116.99	121.90
21	AA	1296	C	N3-C2-O2	-7.01	116.99	121.90
54	BA	730	A	C4-C5-C6	-7.01	113.49	117.00
21	AA	179	A	C5-C6-N1	7.01	121.21	117.70
54	BA	155	A	C4-C5-C6	-7.01	113.49	117.00
54	BA	2700	A	C4-C5-C6	-7.01	113.49	117.00
21	AA	288	A	C5-C6-N1	7.01	121.21	117.70
54	BA	1927	A	C5-C6-N1	7.01	121.20	117.70
54	BA	2814	A	C4-C5-C6	-7.01	113.49	117.00
36	BN	63	ARG	NE-CZ-NH1	7.01	123.80	120.30
54	BA	1305	C	N3-C2-O2	-7.01	116.99	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2566	A	N1-C6-N6	-7.01	114.39	118.60
21	AA	129	A	C4-C5-C6	-7.01	113.50	117.00
55	BB	15	A	O4'-C1'-N9	7.01	113.81	108.20
54	BA	675	A	C5-C6-N1	7.01	121.20	117.70
54	BA	2748	A	C5-C6-N1	7.01	121.20	117.70
54	BA	199	A	C5-C6-N1	7.00	121.20	117.70
54	BA	1367	A	C5-C6-N1	7.00	121.20	117.70
21	AA	489	C	N3-C2-O2	-7.00	117.00	121.90
24	A3	60	A	C4-C5-C6	-7.00	113.50	117.00
54	BA	352	A	C4-C5-C6	-7.00	113.50	117.00
54	BA	1253	A	N1-C6-N6	-7.00	114.40	118.60
54	BA	2268	A	C5-C6-N1	7.00	121.20	117.70
54	BA	2628	C	N3-C2-O2	-7.00	117.00	121.90
21	AA	1411	C	N3-C2-O2	-7.00	117.00	121.90
54	BA	654	A	C5-C6-N1	7.00	121.20	117.70
54	BA	1073	A	C5-C6-N1	7.00	121.20	117.70
54	BA	1652	A	C5-C6-N1	7.00	121.20	117.70
54	BA	1787	A	N1-C6-N6	-7.00	114.40	118.60
21	AA	298	A	C4-C5-C6	-7.00	113.50	117.00
21	AA	946	A	C5-C6-N1	7.00	121.20	117.70
51	B2	28	ARG	NE-CZ-NH1	7.00	123.80	120.30
54	BA	127	A	C5-C6-N1	7.00	121.20	117.70
54	BA	2443	C	N3-C2-O2	-7.00	117.00	121.90
54	BA	448	U	O4'-C1'-N1	7.00	113.80	108.20
54	BA	1080	A	C5-C6-N1	7.00	121.20	117.70
54	BA	181	A	C5-C6-N1	7.00	121.20	117.70
54	BA	1307	A	C4-C5-C6	-7.00	113.50	117.00
54	BA	217	A	C5-C6-N1	6.99	121.20	117.70
54	BA	678	C	O4'-C1'-N1	6.99	113.80	108.20
54	BA	863	A	N1-C6-N6	-6.99	114.40	118.60
50	B1	43	ARG	NE-CZ-NH1	6.99	123.80	120.30
54	BA	699	A	C5-C6-N1	6.99	121.20	117.70
21	AA	681	A	C5-C6-N1	6.99	121.19	117.70
22	A1	73	A	C4-C5-C6	-6.99	113.50	117.00
54	BA	348	A	C5-C6-N1	6.99	121.19	117.70
54	BA	1580	A	C5-C6-N1	6.99	121.20	117.70
54	BA	602	A	C4-C5-C6	-6.99	113.50	117.00
54	BA	1593	A	C5-C6-N1	6.99	121.19	117.70
54	BA	1737	G	O4'-C1'-N9	6.99	113.79	108.20
54	BA	945	A	C4-C5-C6	-6.99	113.51	117.00
54	BA	2632	A	N1-C6-N6	-6.99	114.41	118.60
55	BB	30	C	O4'-C1'-N1	6.99	113.79	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	72	A	N1-C6-N6	-6.99	114.41	118.60
54	BA	277	G	O4'-C1'-N9	6.99	113.79	108.20
54	BA	660	C	N3-C2-O2	-6.99	117.01	121.90
54	BA	1641	A	C4-C5-C6	-6.99	113.51	117.00
55	BB	78	A	C4-C5-C6	-6.99	113.51	117.00
54	BA	89	A	N1-C6-N6	-6.98	114.41	118.60
54	BA	170	U	O4'-C1'-N1	6.98	113.79	108.20
21	AA	19	A	C5-C6-N1	6.98	121.19	117.70
54	BA	1095	A	C5-C6-N1	6.98	121.19	117.70
54	BA	1260	A	C4-C5-C6	-6.98	113.51	117.00
54	BA	1320	C	N3-C2-O2	-6.98	117.01	121.90
54	BA	2077	A	C5-C6-N1	6.98	121.19	117.70
54	BA	2467	C	N3-C2-O2	-6.98	117.01	121.90
24	A3	42	C	N3-C2-O2	-6.98	117.01	121.90
54	BA	195	A	C5-C6-N1	6.98	121.19	117.70
54	BA	1175	A	C5-C6-N1	6.98	121.19	117.70
54	BA	2052	A	N1-C6-N6	-6.98	114.41	118.60
54	BA	2417	C	N3-C2-O2	-6.98	117.01	121.90
21	AA	448	A	C5-C6-N1	6.98	121.19	117.70
54	BA	820	A	N1-C6-N6	-6.98	114.41	118.60
21	AA	1179	A	C5-C6-N1	6.98	121.19	117.70
54	BA	1650	A	C4-C5-C6	-6.98	113.51	117.00
54	BA	1752	C	N3-C2-O2	-6.98	117.02	121.90
54	BA	1760	C	N3-C2-O2	-6.98	117.02	121.90
54	BA	2312	U	N3-C2-O2	-6.98	117.31	122.20
54	BA	2799	A	C5-C6-N1	6.98	121.19	117.70
22	A1	23	A	C5-C6-N1	6.98	121.19	117.70
21	AA	228	A	C5-C6-N1	6.97	121.19	117.70
54	BA	368	A	C5-C6-N1	6.97	121.19	117.70
54	BA	428	A	C5-C6-N1	6.97	121.19	117.70
54	BA	505	A	C5-C6-N1	6.97	121.19	117.70
54	BA	2427	C	N3-C2-O2	-6.97	117.02	121.90
21	AA	547	A	C5-C6-N1	6.97	121.19	117.70
21	AA	1375	A	C5-C6-N1	6.97	121.19	117.70
54	BA	2019	A	C5-C6-N1	6.97	121.19	117.70
41	BS	11	ARG	NE-CZ-NH1	6.97	123.79	120.30
52	B3	41	ARG	NE-CZ-NH1	6.97	123.78	120.30
54	BA	342	A	C5-C6-N1	6.97	121.18	117.70
54	BA	2903	U	O4'-C1'-N1	6.97	113.78	108.20
54	BA	19	A	C5-C6-N1	6.97	121.18	117.70
21	AA	160	A	C5-C6-N1	6.97	121.18	117.70
21	AA	1369	C	N3-C2-O2	-6.97	117.02	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2198	A	C4-C5-C6	-6.97	113.52	117.00
54	BA	2717	C	N3-C2-O2	-6.97	117.02	121.90
54	BA	2810	A	C5-C6-N1	6.97	121.18	117.70
54	BA	146	A	N1-C6-N6	-6.96	114.42	118.60
54	BA	323	C	N3-C2-O2	-6.96	117.03	121.90
55	BB	91	C	N3-C2-O2	-6.96	117.02	121.90
54	BA	203	A	C5-C6-N1	6.96	121.18	117.70
54	BA	1810	A	C5-C6-N1	6.96	121.18	117.70
54	BA	2498	C	O4'-C1'-N1	6.96	113.77	108.20
34	BL	59	ARG	NE-CZ-NH1	6.96	123.78	120.30
54	BA	251	A	C5-C6-N1	6.96	121.18	117.70
54	BA	819	A	N1-C6-N6	-6.96	114.42	118.60
54	BA	2815	C	N3-C2-O2	-6.96	117.03	121.90
21	AA	622	A	C5-C6-N1	6.96	121.18	117.70
54	BA	1551	A	C5-C6-N1	6.96	121.18	117.70
6	AG	2	ARG	NE-CZ-NH1	6.95	123.78	120.30
54	BA	471	A	C5-C6-N1	6.95	121.18	117.70
54	BA	1352	U	N3-C2-O2	-6.95	117.33	122.20
54	BA	2700	A	C5-C6-N1	6.95	121.18	117.70
54	BA	2176	A	N1-C6-N6	-6.95	114.43	118.60
16	AQ	76	ARG	NE-CZ-NH1	6.95	123.78	120.30
21	AA	1080	A	C5-C6-N1	6.95	121.17	117.70
21	AA	1277	C	N3-C2-O2	-6.95	117.04	121.90
21	AA	1483	A	N1-C6-N6	-6.95	114.43	118.60
54	BA	386	G	O4'-C1'-N9	6.95	113.76	108.20
54	BA	2333	A	C5-C6-N1	6.95	121.17	117.70
54	BA	131	A	C4-C5-C6	-6.95	113.53	117.00
54	BA	2740	A	C5-C6-N1	6.95	121.17	117.70
21	AA	325	A	C4-C5-C6	-6.95	113.53	117.00
22	A1	71	C	N3-C2-O2	-6.95	117.04	121.90
54	BA	1853	A	C5-C6-N1	6.95	121.17	117.70
54	BA	157	C	N3-C2-O2	-6.94	117.04	121.90
54	BA	1535	A	C5-C6-N1	6.94	121.17	117.70
21	AA	327	A	C4-C5-C6	-6.94	113.53	117.00
21	AA	718	A	C5-C6-N1	6.94	121.17	117.70
21	AA	1394	A	C4-C5-C6	-6.94	113.53	117.00
54	BA	42	A	N1-C6-N6	-6.94	114.43	118.60
54	BA	1165	A	C4-C5-C6	-6.94	113.53	117.00
21	AA	535	A	C5-C6-N1	6.94	121.17	117.70
36	BN	64	ARG	NE-CZ-NH1	6.94	123.77	120.30
54	BA	44	A	C4-C5-C6	-6.94	113.53	117.00
54	BA	2614	A	C4-C5-C6	-6.94	113.53	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	172	A	C5-C6-N1	6.94	121.17	117.70
36	BN	86	ARG	NE-CZ-NH1	6.94	123.77	120.30
54	BA	2547	A	C5-C6-N1	6.94	121.17	117.70
21	AA	777	A	C5-C6-N1	6.94	121.17	117.70
54	BA	2270	A	C5-C6-N1	6.94	121.17	117.70
51	B2	39	ARG	NE-CZ-NH1	6.94	123.77	120.30
21	AA	807	A	C4-C5-C6	-6.93	113.53	117.00
21	AA	872	A	C1'-O4'-C4'	-6.93	104.35	109.90
26	BD	33	ARG	NE-CZ-NH1	6.93	123.77	120.30
54	BA	492	A	C5-C6-N1	6.93	121.17	117.70
54	BA	2090	A	C5-C6-N1	6.93	121.17	117.70
14	AO	63	ARG	NE-CZ-NH1	6.93	123.77	120.30
21	AA	908	A	N1-C6-N6	-6.93	114.44	118.60
21	AA	1157	A	C4-C5-C6	-6.93	113.53	117.00
54	BA	432	A	C5-C6-N1	6.93	121.17	117.70
55	BB	35	C	N3-C2-O2	-6.93	117.05	121.90
54	BA	221	A	C5-C6-N1	6.93	121.17	117.70
54	BA	655	A	N1-C6-N6	-6.93	114.44	118.60
54	BA	1253	A	C5-C6-N1	6.93	121.16	117.70
54	BA	182	A	C4-C5-C6	-6.93	113.54	117.00
54	BA	749	A	C4-C5-C6	-6.93	113.54	117.00
54	BA	1383	A	C4-C5-C6	-6.93	113.54	117.00
54	BA	271	G	O4'-C1'-N9	6.93	113.74	108.20
54	BA	56	A	C5-C6-N1	6.92	121.16	117.70
54	BA	2035	G	O4'-C1'-N9	6.92	113.74	108.20
54	BA	2070	A	C5-C6-N1	6.92	121.16	117.70
54	BA	2369	A	C5-C6-N1	6.92	121.16	117.70
21	AA	1375	A	N1-C6-N6	-6.92	114.45	118.60
54	BA	2705	A	C4-C5-C6	-6.92	113.54	117.00
21	AA	924	C	N3-C2-O2	-6.92	117.06	121.90
21	AA	1263	C	N3-C2-O2	-6.92	117.06	121.90
54	BA	138	U	O4'-C1'-N1	6.92	113.74	108.20
54	BA	1085	A	C4-C5-C6	-6.92	113.54	117.00
54	BA	1780	A	C4-C5-C6	-6.92	113.54	117.00
21	AA	1101	A	P-O3'-C3'	6.92	128.00	119.70
54	BA	2726	A	N1-C6-N6	-6.92	114.45	118.60
21	AA	1036	A	C4-C5-C6	-6.92	113.54	117.00
37	BO	15	ARG	NE-CZ-NH1	6.92	123.76	120.30
54	BA	208	C	N3-C2-O2	-6.92	117.06	121.90
54	BA	2146	C	N3-C2-O2	-6.92	117.06	121.90
54	BA	2726	A	C5-C6-N1	6.92	121.16	117.70
54	BA	2736	A	C5-C6-N1	6.92	121.16	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1289	A	C5-C6-N1	6.92	121.16	117.70
54	BA	865	C	N3-C2-O2	-6.92	117.06	121.90
54	BA	1503	A	N1-C6-N6	-6.92	114.45	118.60
54	BA	1665	A	C5-C6-N1	6.92	121.16	117.70
54	BA	2899	A	N1-C6-N6	-6.92	114.45	118.60
54	BA	1194	A	C5-C6-N1	6.92	121.16	117.70
54	BA	2858	C	N1-C2-O2	6.92	123.05	118.90
22	A1	66	A	N1-C6-N6	-6.91	114.45	118.60
54	BA	236	C	N3-C2-O2	-6.91	117.06	121.90
21	AA	915	A	C4-C5-C6	-6.91	113.54	117.00
21	AA	162	A	N1-C6-N6	-6.91	114.45	118.60
21	AA	622	A	N1-C6-N6	-6.91	114.45	118.60
54	BA	1307	A	C5-C6-N1	6.91	121.16	117.70
21	AA	526	C	N3-C2-O2	-6.91	117.06	121.90
54	BA	2052	A	C5-C6-N1	6.91	121.15	117.70
22	A1	69	A	C5-C6-N1	6.91	121.15	117.70
24	A3	26	C	N3-C2-O2	-6.91	117.07	121.90
54	BA	32	C	N3-C2-O2	-6.91	117.07	121.90
54	BA	1548	A	C4-C5-C6	-6.91	113.55	117.00
54	BA	2639	A	C5-C6-N1	6.91	121.15	117.70
22	A1	72	C	N3-C2-O2	-6.90	117.07	121.90
21	AA	1434	A	C4-C5-C6	-6.90	113.55	117.00
54	BA	1276	A	C5-C6-N1	6.90	121.15	117.70
54	BA	1322	A	C5-C6-N1	6.90	121.15	117.70
54	BA	1866	A	C5-C6-N1	6.90	121.15	117.70
54	BA	540	C	N3-C2-O2	-6.90	117.07	121.90
54	BA	2428	G	N1-C6-O6	-6.90	115.76	119.90
12	AM	92	ARG	NE-CZ-NH1	6.90	123.75	120.30
21	AA	161	A	C5-C6-N1	6.90	121.15	117.70
21	AA	1225	A	C5-C6-N1	6.90	121.15	117.70
21	AA	815	A	C5-C6-N1	6.89	121.15	117.70
21	AA	1429	A	C5-C6-N1	6.89	121.15	117.70
24	A3	22	A	C4-C5-C6	-6.89	113.55	117.00
54	BA	155	A	C5-C6-N1	6.89	121.15	117.70
54	BA	927	A	C4-C5-C6	-6.89	113.55	117.00
54	BA	928	A	C5-C6-N1	6.89	121.14	117.70
21	AA	1518	A	N1-C6-N6	-6.89	114.47	118.60
54	BA	783	A	C5-C6-N1	6.89	121.14	117.70
54	BA	1366	A	C5-C6-N1	6.89	121.14	117.70
54	BA	2080	A	C5-C6-N1	6.89	121.14	117.70
54	BA	2510	C	N3-C2-O2	-6.89	117.08	121.90
21	AA	694	A	N1-C6-N6	-6.89	114.47	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2665	A	C4-C5-C6	-6.89	113.56	117.00
21	AA	136	C	N3-C2-O2	-6.88	117.08	121.90
21	AA	1332	A	C5-C6-N1	6.88	121.14	117.70
54	BA	63	A	C5-C6-N1	6.88	121.14	117.70
54	BA	541	A	C5-C6-N1	6.88	121.14	117.70
54	BA	1981	A	C5-C6-N1	6.88	121.14	117.70
21	AA	784	A	C4-C5-C6	-6.88	113.56	117.00
54	BA	1439	A	O4'-C1'-N9	6.88	113.71	108.20
54	BA	2496	C	N3-C2-O2	-6.88	117.08	121.90
54	BA	2837	A	N1-C6-N6	-6.88	114.47	118.60
21	AA	510	A	C4-C5-C6	-6.88	113.56	117.00
54	BA	1686	C	N3-C2-O2	-6.88	117.08	121.90
21	AA	288	A	C4-C5-C6	-6.88	113.56	117.00
21	AA	1492	A	C4-C5-C6	-6.88	113.56	117.00
54	BA	2142	A	C4-C5-C6	-6.88	113.56	117.00
54	BA	2147	A	C5-C6-N1	6.88	121.14	117.70
54	BA	2835	A	C5-C6-N1	6.88	121.14	117.70
54	BA	160	A	C5-C6-N1	6.88	121.14	117.70
54	BA	1609	A	C5-C6-N1	6.88	121.14	117.70
21	AA	1500	A	N1-C6-N6	-6.87	114.48	118.60
54	BA	1327	A	C4-C5-C6	-6.87	113.56	117.00
54	BA	227	A	C5-C6-N1	6.87	121.14	117.70
54	BA	451	U	O4'-C1'-N1	6.87	113.70	108.20
54	BA	983	A	C4-C5-C6	-6.87	113.56	117.00
54	BA	2041	U	O4'-C1'-N1	6.87	113.70	108.20
54	BA	2573	C	N3-C2-O2	-6.87	117.09	121.90
21	AA	1117	A	N1-C6-N6	-6.87	114.48	118.60
21	AA	1480	A	C5-C6-N1	6.87	121.14	117.70
45	BW	13	ARG	NE-CZ-NH1	6.87	123.73	120.30
54	BA	351	C	N3-C2-O2	-6.87	117.09	121.90
54	BA	460	A	C5-C6-N1	6.87	121.14	117.70
21	AA	379	C	N3-C2-O2	-6.87	117.09	121.90
54	BA	53	A	C5-C6-N1	6.87	121.13	117.70
54	BA	1254	A	C5-C6-N1	6.87	121.13	117.70
21	AA	32	A	N1-C6-N6	-6.87	114.48	118.60
21	AA	860	A	C4-C5-C6	-6.87	113.57	117.00
50	B1	27	ARG	NE-CZ-NH1	6.87	123.73	120.30
54	BA	1167	C	N3-C2-O2	-6.87	117.09	121.90
54	BA	152	A	C5-C6-N1	6.87	121.13	117.70
54	BA	905	A	C5-C6-N1	6.87	121.13	117.70
54	BA	1015	U	O4'-C1'-N1	6.87	113.69	108.20
54	BA	2254	C	N3-C2-O2	-6.87	117.09	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1191	A	C5-C6-N1	6.86	121.13	117.70
54	BA	382	A	C4-C5-C6	-6.86	113.57	117.00
54	BA	2850	A	C5-C6-N1	6.86	121.13	117.70
21	AA	1396	A	C4-C5-C6	-6.86	113.57	117.00
54	BA	878	A	C5-C6-N1	6.86	121.13	117.70
54	BA	2031	A	C5-C6-N1	6.86	121.13	117.70
54	BA	2503	A	C1'-O4'-C4'	-6.86	104.41	109.90
21	AA	19	A	C4-C5-C6	-6.86	113.57	117.00
21	AA	974	A	C5-C6-N1	6.86	121.13	117.70
21	AA	1035	A	N1-C6-N6	-6.86	114.48	118.60
22	A1	26	A	C4-C5-C6	-6.86	113.57	117.00
54	BA	310	A	C5-C6-N1	6.86	121.13	117.70
54	BA	1704	C	N3-C2-O2	-6.86	117.10	121.90
54	BA	2830	C	N3-C2-O2	-6.86	117.10	121.90
21	AA	706	A	C5-C6-N1	6.86	121.13	117.70
21	AA	1519	A	C5-C6-N1	6.86	121.13	117.70
54	BA	804	A	C5-C6-N1	6.86	121.13	117.70
54	BA	1593	A	C4-C5-C6	-6.86	113.57	117.00
19	AT	73	ARG	NE-CZ-NH1	6.86	123.73	120.30
21	AA	67	C	N3-C2-O2	-6.86	117.10	121.90
21	AA	441	A	C5-C6-N1	6.86	121.13	117.70
22	A1	35	A	C5-C6-N1	6.86	121.13	117.70
24	A3	11	A	C5-C6-N1	6.86	121.13	117.70
54	BA	699	A	C4-C5-C6	-6.86	113.57	117.00
54	BA	1265	A	C4-C5-C6	-6.85	113.57	117.00
54	BA	2404	U	O4'-C1'-N1	6.85	113.68	108.20
36	BN	2	ARG	NE-CZ-NH1	6.85	123.73	120.30
21	AA	16	A	C5-C6-N1	6.85	121.12	117.70
21	AA	225	C	N3-C2-O2	-6.85	117.10	121.90
54	BA	2003	A	C4-C5-C6	-6.85	113.58	117.00
54	BA	2827	C	N3-C2-O2	-6.85	117.10	121.90
21	AA	1339	A	C4-C5-C6	-6.85	113.58	117.00
54	BA	466	A	C5-C6-N1	6.85	121.12	117.70
54	BA	1616	A	N1-C6-N6	-6.85	114.49	118.60
21	AA	969	A	C4-C5-C6	-6.85	113.58	117.00
54	BA	1583	A	C4-C5-C6	-6.85	113.58	117.00
18	AS	31	ARG	NE-CZ-NH1	6.85	123.72	120.30
21	AA	1418	A	C4-C5-C6	-6.84	113.58	117.00
21	AA	370	C	N3-C2-O2	-6.84	117.11	121.90
54	BA	1086	A	C5-C6-N1	6.84	121.12	117.70
54	BA	1230	A	C5-C6-N1	6.84	121.12	117.70
54	BA	590	A	N1-C6-N6	-6.84	114.50	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	918	A	N1-C6-N6	-6.84	114.50	118.60
55	BB	52	A	C4-C5-C6	-6.84	113.58	117.00
21	AA	1054	C	C1'-O4'-C4'	-6.84	104.43	109.90
21	AA	716	A	C5-C6-N1	6.84	121.12	117.70
21	AA	1042	A	C5-C6-N1	6.84	121.12	117.70
21	AA	1093	A	C1'-O4'-C4'	-6.84	104.43	109.90
21	AA	1128	C	N3-C2-O2	-6.84	117.11	121.90
54	BA	2546	U	O4'-C1'-N1	6.84	113.67	108.20
21	AA	750	C	N3-C2-O2	-6.84	117.11	121.90
21	AA	1114	C	N3-C2-O2	-6.84	117.11	121.90
54	BA	52	A	N1-C6-N6	-6.84	114.50	118.60
54	BA	443	A	C4-C5-C6	-6.84	113.58	117.00
54	BA	845	A	C5-C6-N1	6.84	121.12	117.70
54	BA	1705	A	C4-C5-C6	-6.84	113.58	117.00
20	AU	34	ARG	NE-CZ-NH1	6.83	123.72	120.30
21	AA	502	A	C4-C5-C6	-6.83	113.58	117.00
54	BA	1434	A	N1-C6-N6	-6.83	114.50	118.60
54	BA	2142	A	C5-C6-N1	6.83	121.12	117.70
21	AA	8	A	O4'-C1'-N9	6.83	113.67	108.20
21	AA	270	A	C4-C5-C6	-6.83	113.58	117.00
54	BA	1090	A	C5-C6-N1	6.83	121.12	117.70
54	BA	2600	A	C5-C6-N1	6.83	121.12	117.70
54	BA	1977	A	N1-C6-N6	-6.83	114.50	118.60
21	AA	487	A	C5-C6-N1	6.83	121.11	117.70
21	AA	322	C	C1'-O4'-C4'	-6.83	104.44	109.90
21	AA	1092	A	C5-C6-N1	6.83	121.11	117.70
54	BA	441	U	O4'-C1'-N1	6.83	113.66	108.20
54	BA	1088	A	N1-C6-N6	-6.83	114.50	118.60
54	BA	1549	A	C5-C6-N1	6.83	121.11	117.70
21	AA	712	A	C4-C5-C6	-6.83	113.59	117.00
21	AA	1257	A	C5-C6-N1	6.83	121.11	117.70
54	BA	239	C	N3-C2-O2	-6.83	117.12	121.90
54	BA	849	A	C5-C6-N1	6.83	121.11	117.70
54	BA	1926	U	O4'-C1'-N1	6.82	113.66	108.20
54	BA	2669	G	O4'-C1'-N9	6.82	113.66	108.20
54	BA	739	A	C4-C5-C6	-6.82	113.59	117.00
54	BA	1325	U	O4'-C1'-N1	6.82	113.66	108.20
21	AA	411	A	C5-C6-N1	6.82	121.11	117.70
21	AA	634	C	N3-C2-O2	-6.82	117.12	121.90
54	BA	1027	A	C4-C5-C6	-6.82	113.59	117.00
21	AA	523	A	C4-C5-C6	-6.82	113.59	117.00
21	AA	1362	A	C5-C6-N1	6.82	121.11	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	BT	73	ARG	NE-CZ-NH1	6.82	123.71	120.30
21	AA	264	C	N3-C2-O2	-6.82	117.13	121.90
54	BA	470	A	N1-C6-N6	-6.82	114.51	118.60
54	BA	1351	C	O4'-C1'-N1	6.82	113.65	108.20
54	BA	1876	A	N1-C6-N6	-6.82	114.51	118.60
54	BA	2101	A	C4-C5-C6	-6.82	113.59	117.00
21	AA	932	C	N3-C2-O2	-6.82	117.13	121.90
54	BA	544	C	N3-C2-O2	-6.82	117.13	121.90
21	AA	459	A	C5-C6-N1	6.81	121.11	117.70
54	BA	2222	C	N3-C2-O2	-6.81	117.13	121.90
54	BA	2813	A	C5-C6-N1	6.81	121.11	117.70
6	AG	118	ARG	NE-CZ-NH1	6.81	123.71	120.30
21	AA	1318	A	C5-C6-N1	6.81	121.11	117.70
54	BA	676	A	C4-C5-C6	-6.81	113.59	117.00
54	BA	2028	U	O4'-C1'-N1	6.81	113.65	108.20
54	BA	2665	A	C5-C6-N1	6.81	121.11	117.70
54	BA	601	C	N3-C2-O2	-6.81	117.13	121.90
55	BB	3	C	N3-C2-O2	-6.81	117.13	121.90
42	BT	77	ARG	NE-CZ-NH1	6.81	123.70	120.30
21	AA	1067	A	C4-C5-C6	-6.81	113.60	117.00
55	BB	50	A	C4-C5-C6	-6.81	113.60	117.00
21	AA	1031	C	N3-C2-O2	-6.80	117.14	121.90
54	BA	2227	A	C5-C6-N1	6.80	121.10	117.70
54	BA	244	A	N1-C6-N6	-6.80	114.52	118.60
54	BA	1528	A	C5-C6-N1	6.80	121.10	117.70
21	AA	882	C	N3-C2-O2	-6.80	117.14	121.90
54	BA	1101	U	O4'-C1'-N1	6.80	113.64	108.20
20	AU	46	ARG	NE-CZ-NH2	-6.80	116.90	120.30
46	BX	56	ARG	NE-CZ-NH1	6.80	123.70	120.30
54	BA	201	C	N3-C2-O2	-6.80	117.14	121.90
21	AA	448	A	N1-C6-N6	-6.80	114.52	118.60
21	AA	546	A	C5-C6-N1	6.80	121.10	117.70
54	BA	128	C	N3-C2-O2	-6.80	117.14	121.90
54	BA	294	A	C5-C6-N1	6.80	121.10	117.70
54	BA	2622	U	O4'-C1'-N1	6.80	113.64	108.20
21	AA	1046	A	C5-C6-N1	6.79	121.10	117.70
23	A2	92	U	C5'-C4'-C3'	-6.79	105.13	116.00
54	BA	623	C	N3-C2-O2	-6.79	117.14	121.90
54	BA	2266	A	N1-C6-N6	-6.79	114.52	118.60
54	BA	2317	A	C5-C6-N1	6.79	121.10	117.70
21	AA	364	A	C4-C5-C6	-6.79	113.60	117.00
21	AA	790	A	C5-C6-N1	6.79	121.10	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	BF	114	ARG	NE-CZ-NH1	6.79	123.70	120.30
21	AA	840	C	N3-C2-O2	-6.79	117.15	121.90
21	AA	1306	A	N1-C6-N6	-6.79	114.53	118.60
21	AA	1357	A	C5-C6-N1	6.79	121.09	117.70
24	A3	58	A	C4-C5-C6	-6.79	113.61	117.00
54	BA	616	A	C5-C6-N1	6.79	121.09	117.70
54	BA	1941	C	N3-C2-O2	-6.79	117.15	121.90
54	BA	2676	C	N3-C2-O2	-6.79	117.15	121.90
24	A3	57	C	N3-C2-O2	-6.79	117.15	121.90
54	BA	1306	C	N3-C2-O2	-6.79	117.15	121.90
54	BA	2725	A	N1-C6-N6	-6.79	114.53	118.60
10	AK	127	ARG	NE-CZ-NH1	6.79	123.69	120.30
21	AA	149	A	C4-C5-C6	-6.79	113.61	117.00
21	AA	743	A	C5-C6-N1	6.79	121.09	117.70
21	AA	1465	A	C5-C6-N1	6.79	121.09	117.70
22	A1	9	A	N1-C6-N6	-6.79	114.53	118.60
54	BA	1398	C	N3-C2-O2	-6.79	117.15	121.90
54	BA	1890	A	C5-C6-N1	6.79	121.09	117.70
54	BA	2442	C	N3-C2-O2	-6.79	117.15	121.90
21	AA	55	A	C5-C6-N1	6.78	121.09	117.70
21	AA	152	A	C4-C5-C6	-6.78	113.61	117.00
21	AA	327	A	C5-C6-N1	6.78	121.09	117.70
21	AA	502	A	N1-C6-N6	-6.78	114.53	118.60
21	AA	696	A	C5-C6-N1	6.78	121.09	117.70
21	AA	753	A	C5-C6-N1	6.78	121.09	117.70
54	BA	38	A	C5-C6-N1	6.78	121.09	117.70
54	BA	888	C	N3-C2-O2	-6.78	117.15	121.90
54	BA	501	A	C5-C6-N1	6.78	121.09	117.70
54	BA	1966	A	C5-C6-N1	6.78	121.09	117.70
54	BA	2298	A	C5-C6-N1	6.78	121.09	117.70
54	BA	443	A	C1'-O4'-C4'	-6.78	104.47	109.90
54	BA	892	A	C5-C6-N1	6.78	121.09	117.70
54	BA	1129	A	C5-C6-N1	6.78	121.09	117.70
55	BB	31	C	N3-C2-O2	-6.78	117.15	121.90
54	BA	2013	A	N1-C6-N6	-6.78	114.53	118.60
54	BA	508	A	N1-C6-N6	-6.78	114.53	118.60
54	BA	609	A	C5-C6-N1	6.78	121.09	117.70
55	BB	104	A	C5-C6-N1	6.78	121.09	117.70
21	AA	356	A	C4-C5-C6	-6.78	113.61	117.00
21	AA	648	A	C4-C5-C6	-6.78	113.61	117.00
21	AA	781	A	N1-C6-N6	-6.78	114.53	118.60
21	AA	1140	C	N3-C2-O2	-6.78	117.16	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1226	A	C5-C6-N1	6.78	121.09	117.70
54	BA	1328	A	C5-C6-N1	6.78	121.09	117.70
54	BA	1504	A	C5-C6-N1	6.77	121.09	117.70
54	BA	2092	U	N3-C2-O2	-6.77	117.46	122.20
54	BA	2247	A	C5-C6-N1	6.77	121.09	117.70
1	AB	94	ARG	NE-CZ-NH1	6.77	123.69	120.30
54	BA	182	A	C5-C6-N1	6.77	121.09	117.70
54	BA	1057	A	C5-C6-N1	6.77	121.09	117.70
21	AA	465	A	O4'-C1'-N9	6.77	113.62	108.20
21	AA	579	A	C5-C6-N1	6.77	121.08	117.70
28	BF	109	ARG	NE-CZ-NH1	6.77	123.68	120.30
54	BA	1962	C	N3-C2-O2	-6.77	117.16	121.90
54	BA	2059	A	C5-C6-N1	6.77	121.08	117.70
21	AA	1012	A	C5-C6-N1	6.77	121.08	117.70
32	BJ	95	ARG	NE-CZ-NH2	-6.77	116.92	120.30
54	BA	2284	A	C5-C6-N1	6.77	121.08	117.70
54	BA	2723	C	N3-C2-O2	-6.77	117.16	121.90
21	AA	802	A	C4-C5-C6	-6.77	113.62	117.00
21	AA	1342	C	N3-C2-O2	-6.76	117.17	121.90
54	BA	433	C	N3-C2-O2	-6.76	117.17	121.90
54	BA	980	A	C5-C6-N1	6.76	121.08	117.70
54	BA	1095	A	N1-C6-N6	-6.76	114.54	118.60
21	AA	1280	A	C5-C6-N1	6.76	121.08	117.70
6	AG	142	ARG	NE-CZ-NH1	6.76	123.68	120.30
11	AL	49	ARG	NE-CZ-NH2	-6.76	116.92	120.30
21	AA	373	A	C4-C5-C6	-6.76	113.62	117.00
21	AA	1103	C	N3-C2-O2	-6.76	117.17	121.90
54	BA	485	C	N3-C2-O2	-6.76	117.17	121.90
54	BA	502	A	C5-C6-N1	6.76	121.08	117.70
54	BA	1505	A	C5-C6-N1	6.76	121.08	117.70
54	BA	1626	A	C4-C5-C6	-6.76	113.62	117.00
54	BA	2484	G	O4'-C1'-N9	6.76	113.61	108.20
21	AA	1229	A	C4-C5-C6	-6.76	113.62	117.00
21	AA	1248	A	C5-C6-N1	6.76	121.08	117.70
54	BA	439	A	C4-C5-C6	-6.76	113.62	117.00
54	BA	2730	C	N3-C2-O2	-6.76	117.17	121.90
55	BB	70	C	N3-C2-O2	-6.76	117.17	121.90
21	AA	408	A	C4-C5-C6	-6.76	113.62	117.00
21	AA	545	C	N3-C2-O2	-6.76	117.17	121.90
54	BA	753	A	C4-C5-C6	-6.76	113.62	117.00
54	BA	849	A	C4-C5-C6	-6.76	113.62	117.00
21	AA	1019	A	C5-C6-N1	6.75	121.08	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1012	A	C4-C5-C6	-6.75	113.62	117.00
54	BA	311	A	C4-C5-C6	-6.75	113.62	117.00
54	BA	1241	A	O4'-C1'-N9	6.75	113.60	108.20
54	BA	2767	C	N3-C2-O2	-6.75	117.17	121.90
21	AA	1180	A	C4-C5-C6	-6.75	113.62	117.00
21	AA	1287	A	C5-C6-N1	6.75	121.08	117.70
54	BA	998	C	N3-C2-O2	-6.75	117.17	121.90
54	BA	1532	A	C5-C6-N1	6.75	121.08	117.70
54	BA	1805	A	C4-C5-C6	-6.75	113.62	117.00
21	AA	913	A	C5-C6-N1	6.75	121.08	117.70
55	BB	108	A	C5-C6-N1	6.75	121.08	117.70
21	AA	383	A	C4-C5-C6	-6.75	113.63	117.00
21	AA	746	A	C5-C6-N1	6.75	121.08	117.70
54	BA	1503	A	C5-C6-N1	6.75	121.07	117.70
21	AA	120	A	N1-C6-N6	-6.75	114.55	118.60
21	AA	207	C	N3-C2-O2	-6.75	117.18	121.90
21	AA	520	A	C5-C6-N1	6.75	121.07	117.70
21	AA	1234	C	N3-C2-O2	-6.75	117.18	121.90
23	A2	82	A	C5-C6-N1	6.75	121.07	117.70
54	BA	975	A	C4-C5-C6	-6.75	113.63	117.00
21	AA	199	A	C5-C6-N1	6.75	121.07	117.70
21	AA	190	A	C5-C6-N1	6.74	121.07	117.70
21	AA	469	C	N3-C2-O2	-6.74	117.18	121.90
21	AA	1101	A	C5-C6-N1	6.74	121.07	117.70
54	BA	1676	A	C5-C6-N1	6.74	121.07	117.70
54	BA	2014	A	N1-C6-N6	-6.74	114.55	118.60
54	BA	2771	C	N3-C2-O2	-6.74	117.18	121.90
55	BB	8	C	O4'-C1'-N1	6.74	113.59	108.20
21	AA	841	C	O4'-C1'-N1	6.74	113.59	108.20
54	BA	1533	C	N3-C2-O2	-6.74	117.18	121.90
21	AA	511	C	N3-C2-O2	-6.74	117.18	121.90
21	AA	546	A	C4-C5-C6	-6.74	113.63	117.00
24	A3	1	C	N1-C2-O2	6.74	122.94	118.90
55	BB	57	A	C5-C6-N1	6.74	121.07	117.70
21	AA	231	U	O4'-C1'-N1	6.74	113.59	108.20
21	AA	918	A	C5-C6-N1	6.74	121.07	117.70
21	AA	1141	C	N3-C2-O2	-6.74	117.18	121.90
54	BA	908	C	N3-C2-O2	-6.74	117.18	121.90
54	BA	918	A	C5-C6-N1	6.74	121.07	117.70
54	BA	1067	A	C5-C6-N1	6.74	121.07	117.70
54	BA	1470	A	C5-C6-N1	6.74	121.07	117.70
54	BA	1477	A	C5-C6-N1	6.74	121.07	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2450	A	C5-C6-N1	6.74	121.07	117.70
54	BA	2753	A	C5-C6-N1	6.74	121.07	117.70
21	AA	1081	A	C4-C5-C6	-6.74	113.63	117.00
21	AA	1113	C	N3-C2-O2	-6.74	117.18	121.90
54	BA	1639	C	N3-C2-O2	-6.74	117.18	121.90
54	BA	1504	A	C4-C5-C6	-6.74	113.63	117.00
54	BA	1617	C	N3-C2-O2	-6.74	117.19	121.90
54	BA	1900	A	C4-C5-C6	-6.74	113.63	117.00
21	AA	1431	A	C5-C6-N1	6.73	121.07	117.70
21	AA	1507	A	C5-C6-N1	6.73	121.07	117.70
54	BA	1244	A	C4-C5-C6	-6.73	113.63	117.00
54	BA	620	G	O4'-C1'-N9	6.73	113.59	108.20
54	BA	661	A	C5-C6-N1	6.73	121.07	117.70
54	BA	1165	A	C5-C6-N1	6.73	121.07	117.70
54	BA	241	A	C4-C5-C6	-6.73	113.64	117.00
54	BA	1636	U	O4'-C1'-N1	6.73	113.58	108.20
54	BA	2469	A	N1-C6-N6	-6.73	114.56	118.60
54	BA	1502	A	C4-C5-C6	-6.73	113.64	117.00
54	BA	2716	C	N3-C2-O2	-6.73	117.19	121.90
18	AS	2	ARG	NE-CZ-NH1	6.73	123.66	120.30
21	AA	279	A	C4-C5-C6	-6.73	113.64	117.00
21	AA	1412	C	N3-C2-O2	-6.73	117.19	121.90
54	BA	613	A	C1'-O4'-C4'	-6.73	104.52	109.90
54	BA	1967	C	N3-C2-O2	-6.73	117.19	121.90
54	BA	1969	A	N1-C6-N6	-6.73	114.56	118.60
54	BA	2014	A	C5-C6-N1	6.73	121.06	117.70
54	BA	2682	A	C5-C6-N1	6.73	121.06	117.70
21	AA	194	C	N3-C2-O2	-6.73	117.19	121.90
21	AA	432	A	C4-C5-C6	-6.73	113.64	117.00
54	BA	255	A	C5-C6-N1	6.73	121.06	117.70
21	AA	222	C	N3-C2-O2	-6.72	117.19	121.90
54	BA	1403	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	2070	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	2459	A	N1-C6-N6	-6.72	114.56	118.60
55	BB	109	A	C4-C5-C6	-6.72	113.64	117.00
41	BS	84	ARG	NE-CZ-NH1	6.72	123.66	120.30
54	BA	14	A	C5-C6-N1	6.72	121.06	117.70
54	BA	915	C	N3-C2-O2	-6.72	117.19	121.90
54	BA	118	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	272	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	896	A	C5-C6-N1	6.72	121.06	117.70
54	BA	1028	A	C5-C6-N1	6.72	121.06	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	397	A	O4'-C1'-N9	6.72	113.58	108.20
21	AA	1384	C	N3-C2-O2	-6.72	117.20	121.90
54	BA	909	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	1205	A	C5-C6-N1	6.72	121.06	117.70
54	BA	2281	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	436	C	N3-C2-O2	-6.72	117.20	121.90
54	BA	1987	A	C4-C5-C6	-6.72	113.64	117.00
54	BA	354	A	C5-C6-N1	6.71	121.06	117.70
54	BA	483	A	C5-C6-N1	6.71	121.06	117.70
54	BA	540	C	O4'-C1'-N1	6.71	113.57	108.20
54	BA	563	A	C5-C6-N1	6.71	121.06	117.70
54	BA	702	U	O4'-C1'-N1	6.71	113.57	108.20
54	BA	1048	A	C4-C5-C6	-6.71	113.64	117.00
54	BA	2547	A	N1-C6-N6	-6.71	114.57	118.60
54	BA	2901	C	N3-C2-O2	-6.71	117.20	121.90
21	AA	329	A	C5-C6-N1	6.71	121.06	117.70
54	BA	11	C	N3-C2-O2	-6.71	117.20	121.90
54	BA	2211	A	C4-C5-C6	-6.71	113.64	117.00
21	AA	1150	A	C5-C6-N1	6.71	121.06	117.70
37	BO	16	ARG	NE-CZ-NH1	6.71	123.66	120.30
54	BA	218	A	C4-C5-C6	-6.71	113.64	117.00
54	BA	1335	C	N3-C2-O2	-6.71	117.20	121.90
21	AA	1529	G	O4'-C1'-N9	6.71	113.57	108.20
54	BA	281	C	N3-C2-O2	-6.71	117.20	121.90
54	BA	706	A	C5-C6-N1	6.71	121.05	117.70
21	AA	47	C	N3-C2-O2	-6.71	117.20	121.90
21	AA	878	A	C5-C6-N1	6.71	121.05	117.70
54	BA	320	A	C4-C5-C6	-6.71	113.65	117.00
54	BA	732	C	N3-C2-O2	-6.71	117.21	121.90
54	BA	1054	A	C5-C6-N1	6.71	121.05	117.70
54	BA	2089	C	C1'-O4'-C4'	-6.71	104.53	109.90
54	BA	348	A	C4-C5-C6	-6.71	113.65	117.00
54	BA	1711	A	C4-C5-C6	-6.71	113.65	117.00
54	BA	2388	A	C4-C5-C6	-6.71	113.65	117.00
21	AA	1169	A	C4-C5-C6	-6.70	113.65	117.00
54	BA	1572	A	N1-C6-N6	-6.70	114.58	118.60
54	BA	1809	A	C5-C6-N1	6.70	121.05	117.70
21	AA	435	A	C5-C6-N1	6.70	121.05	117.70
54	BA	432	A	C4-C5-C6	-6.70	113.65	117.00
21	AA	81	A	C5-C6-N1	6.70	121.05	117.70
21	AA	1239	A	C5-C6-N1	6.70	121.05	117.70
21	AA	1469	C	N3-C2-O2	-6.70	117.21	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1794	A	C5-C6-N1	6.70	121.05	117.70
21	AA	431	A	C5-C6-N1	6.70	121.05	117.70
54	BA	28	A	C5-C6-N1	6.70	121.05	117.70
54	BA	163	C	N3-C2-O2	-6.70	117.21	121.90
54	BA	1698	A	C4-C5-C6	-6.70	113.65	117.00
54	BA	2451	A	C5-C6-N1	6.70	121.05	117.70
54	BA	1689	A	C5-C6-N1	6.70	121.05	117.70
54	BA	2610	C	N3-C2-O2	-6.70	117.21	121.90
54	BA	1349	C	N3-C2-O2	-6.69	117.21	121.90
1	AB	221	ARG	NE-CZ-NH2	-6.69	116.95	120.30
21	AA	676	A	C4-C5-C6	-6.69	113.65	117.00
22	A1	6	A	C4-C5-C6	-6.69	113.65	117.00
54	BA	786	C	N3-C2-O2	-6.69	117.22	121.90
15	AP	56	ARG	NE-CZ-NH2	6.69	123.64	120.30
54	BA	742	A	C5-C6-N1	6.69	121.05	117.70
54	BA	1832	C	N3-C2-O2	-6.69	117.22	121.90
54	BA	2058	A	C5-C6-N1	6.69	121.05	117.70
54	BA	204	A	C5-C6-N1	6.69	121.04	117.70
54	BA	216	A	C5-C6-N1	6.69	121.04	117.70
54	BA	278	A	N1-C6-N6	-6.69	114.59	118.60
54	BA	332	A	N1-C6-N6	-6.69	114.59	118.60
54	BA	1744	A	C4-C5-C6	-6.69	113.66	117.00
54	BA	2327	A	C4-C5-C6	-6.69	113.66	117.00
21	AA	949	A	C5-C6-N1	6.69	121.04	117.70
21	AA	1274	A	C4-C5-C6	-6.69	113.66	117.00
54	BA	1145	C	N3-C2-O2	-6.68	117.22	121.90
55	BB	58	A	C5-C6-N1	6.68	121.04	117.70
24	A3	72	C	N3-C2-O2	-6.68	117.22	121.90
54	BA	972	A	C4-C5-C6	-6.68	113.66	117.00
54	BA	1650	A	C5-C6-N1	6.68	121.04	117.70
54	BA	2025	C	N3-C2-O2	-6.68	117.22	121.90
54	BA	2635	A	C4-C5-C6	-6.68	113.66	117.00
24	A3	67	C	N3-C2-O2	-6.68	117.22	121.90
54	BA	257	C	N3-C2-O2	-6.68	117.22	121.90
54	BA	670	A	N1-C6-N6	-6.68	114.59	118.60
6	AG	9	ARG	NE-CZ-NH1	6.68	123.64	120.30
54	BA	639	U	O4'-C1'-N1	6.68	113.54	108.20
21	AA	766	A	C4-C5-C6	-6.68	113.66	117.00
54	BA	368	A	C4-C5-C6	-6.68	113.66	117.00
55	BB	55	U	O4'-C1'-N1	6.68	113.54	108.20
21	AA	248	C	N3-C2-O2	-6.67	117.23	121.90
21	AA	271	C	N3-C2-O2	-6.67	117.23	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1300	G	O4'-C1'-N9	6.67	113.54	108.20
21	AA	1320	C	O4'-C1'-N1	6.67	113.54	108.20
54	BA	332	A	C5-C6-N1	6.67	121.04	117.70
54	BA	401	A	C5-C6-N1	6.67	121.04	117.70
54	BA	1304	A	C5-C6-N1	6.67	121.04	117.70
54	BA	2471	A	C4-C5-C6	-6.67	113.66	117.00
54	BA	2886	A	O4'-C1'-N9	6.67	113.54	108.20
54	BA	1013	C	N3-C2-O2	-6.67	117.23	121.90
54	BA	2176	A	C5-C6-N1	6.67	121.04	117.70
54	BA	435	C	N3-C2-O2	-6.67	117.23	121.90
54	BA	472	A	N1-C6-N6	-6.67	114.60	118.60
54	BA	2051	A	C5-C6-N1	6.67	121.03	117.70
54	BA	2882	A	C5-C6-N1	6.67	121.04	117.70
21	AA	1449	C	N3-C2-O2	-6.67	117.23	121.90
24	A3	72	C	O3'-P-O5'	6.67	116.67	104.00
12	AM	100	ARG	NE-CZ-NH1	6.67	123.63	120.30
21	AA	130	A	C4-C5-C6	-6.67	113.67	117.00
54	BA	478	A	C5-C6-N1	6.67	121.03	117.70
54	BA	2160	C	N3-C2-O2	-6.67	117.23	121.90
54	BA	2521	C	N3-C2-O2	-6.67	117.23	121.90
21	AA	306	A	C5-C6-N1	6.67	121.03	117.70
54	BA	156	A	C5-C6-N1	6.66	121.03	117.70
54	BA	572	A	C5-C6-N1	6.66	121.03	117.70
54	BA	825	A	C5-C6-N1	6.66	121.03	117.70
54	BA	1357	C	N3-C2-O2	-6.66	117.24	121.90
54	BA	2088	A	C4-C5-C6	-6.66	113.67	117.00
54	BA	2765	A	C5-C6-N1	6.66	121.03	117.70
36	BN	96	ARG	NE-CZ-NH1	6.66	123.63	120.30
54	BA	722	A	C5-C6-N1	6.66	121.03	117.70
21	AA	1342	C	O4'-C1'-N1	6.66	113.53	108.20
54	BA	1213	A	C4-C5-C6	-6.66	113.67	117.00
54	BA	1993	U	O4'-C1'-N1	6.66	113.53	108.20
54	BA	156	A	C4-C5-C6	-6.66	113.67	117.00
54	BA	1870	C	N3-C2-O2	-6.66	117.24	121.90
54	BA	2009	A	C4-C5-C6	-6.66	113.67	117.00
54	BA	2855	C	N3-C2-O2	-6.66	117.24	121.90
8	AI	123	ARG	NE-CZ-NH1	6.66	123.63	120.30
21	AA	1368	A	C4-C5-C6	-6.66	113.67	117.00
54	BA	105	C	N3-C2-O2	-6.66	117.24	121.90
21	AA	648	A	C5-C6-N1	6.65	121.03	117.70
21	AA	1340	A	C5-C6-N1	6.65	121.03	117.70
54	BA	902	C	N3-C2-O2	-6.65	117.24	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	A1	76	A	C8-N9-C4	-6.65	103.14	105.80
54	BA	142	A	C5-C6-N1	6.65	121.03	117.70
54	BA	1868	C	N3-C2-O2	-6.65	117.24	121.90
21	AA	879	C	N3-C2-O2	-6.65	117.25	121.90
21	AA	1000	A	C4-C5-C6	-6.65	113.67	117.00
54	BA	310	A	N1-C6-N6	-6.65	114.61	118.60
54	BA	1039	A	C5-C6-N1	6.65	121.03	117.70
54	BA	1433	A	C5-C6-N1	6.65	121.03	117.70
54	BA	1991	U	O4'-C1'-N1	6.65	113.52	108.20
54	BA	2065	C	N3-C2-O2	-6.65	117.25	121.90
21	AA	71	A	C5-C6-N1	6.65	121.03	117.70
21	AA	998	C	N3-C2-O2	-6.65	117.25	121.90
22	A1	61	C	N3-C2-O2	-6.65	117.25	121.90
54	BA	2097	A	C5-C6-N1	6.65	121.02	117.70
54	BA	2738	A	C5-C6-N1	6.65	121.02	117.70
21	AA	1303	C	N3-C2-O2	-6.65	117.25	121.90
54	BA	1592	C	N3-C2-O2	-6.65	117.25	121.90
54	BA	1787	A	C5-C6-N1	6.65	121.02	117.70
54	BA	2406	A	O4'-C1'-N9	6.65	113.52	108.20
54	BA	727	A	C4-C5-C6	-6.65	113.68	117.00
54	BA	1701	A	C5-C6-N1	6.65	121.02	117.70
54	BA	2679	A	C5-C6-N1	6.65	121.02	117.70
21	AA	901	A	N1-C6-N6	-6.64	114.61	118.60
54	BA	384	A	C5-C6-N1	6.64	121.02	117.70
54	BA	522	A	C4-C5-C6	-6.64	113.68	117.00
21	AA	272	C	N3-C2-O2	-6.64	117.25	121.90
21	AA	554	A	C4-C5-C6	-6.64	113.68	117.00
21	AA	649	A	C5-C6-N1	6.64	121.02	117.70
21	AA	1022	A	C4-C5-C6	-6.64	113.68	117.00
54	BA	299	A	C4-C5-C6	-6.64	113.68	117.00
54	BA	412	A	C5-C6-N1	6.64	121.02	117.70
54	BA	1392	A	C4-C5-C6	-6.64	113.68	117.00
54	BA	1547	C	N3-C2-O2	-6.64	117.25	121.90
54	BA	2009	A	C5-C6-N1	6.64	121.02	117.70
54	BA	2164	C	N3-C2-O2	-6.64	117.25	121.90
21	AA	461	A	C5-C6-N1	6.64	121.02	117.70
21	AA	1060	U	C5'-C4'-O4'	6.64	117.07	109.10
21	AA	1081	A	C5-C6-N1	6.64	121.02	117.70
21	AA	549	C	N3-C2-O2	-6.64	117.25	121.90
21	AA	1446	A	C4-C5-C6	-6.64	113.68	117.00
24	A3	24	C	N3-C2-O2	-6.64	117.25	121.90
54	BA	1384	A	C5-C6-N1	6.64	121.02	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2725	A	C5-C6-N1	6.64	121.02	117.70
21	AA	355	C	N3-C2-O2	-6.64	117.25	121.90
54	BA	1708	C	N3-C2-O2	-6.64	117.25	121.90
54	BA	1363	C	N3-C2-O2	-6.64	117.25	121.90
54	BA	2469	A	C5-C6-N1	6.64	121.02	117.70
4	AE	44	ARG	NE-CZ-NH1	6.63	123.62	120.30
21	AA	178	C	N3-C2-O2	-6.63	117.26	121.90
21	AA	315	A	C4-C5-C6	-6.63	113.68	117.00
21	AA	436	C	N3-C2-O2	-6.63	117.26	121.90
21	AA	1201	A	C5-C6-N1	6.63	121.02	117.70
54	BA	2534	A	C4-C5-C6	-6.63	113.68	117.00
21	AA	642	A	C5-C6-N1	6.63	121.02	117.70
32	BJ	37	ARG	NE-CZ-NH1	6.63	123.62	120.30
54	BA	2199	A	C5-C6-N1	6.63	121.02	117.70
54	BA	1244	A	C5-C6-N1	6.63	121.02	117.70
21	AA	1193	G	O4'-C1'-N9	6.63	113.50	108.20
21	AA	825	A	C5-C6-N1	6.63	121.01	117.70
21	AA	1230	C	N3-C2-O2	-6.63	117.26	121.90
54	BA	1938	A	C1'-O4'-C4'	-6.63	104.60	109.90
21	AA	866	C	N3-C2-O2	-6.62	117.26	121.90
48	BZ	15	ARG	NE-CZ-NH1	6.62	123.61	120.30
21	AA	675	A	C5-C6-N1	6.62	121.01	117.70
21	AA	883	C	N3-C2-O2	-6.62	117.26	121.90
48	BZ	37	ARG	NE-CZ-NH1	6.62	123.61	120.30
54	BA	471	A	N1-C6-N6	-6.62	114.63	118.60
54	BA	477	A	C5-C6-N1	6.62	121.01	117.70
54	BA	1143	A	C5-C6-N1	6.62	121.01	117.70
54	BA	1257	C	N3-C2-O2	-6.62	117.26	121.90
21	AA	695	A	N1-C6-N6	-6.62	114.63	118.60
54	BA	426	C	N3-C2-O2	-6.62	117.26	121.90
54	BA	2766	A	C5-C6-N1	6.62	121.01	117.70
21	AA	253	A	C5-C6-N1	6.62	121.01	117.70
21	AA	958	A	C4-C5-C6	-6.62	113.69	117.00
54	BA	1189	A	C5-C6-N1	6.62	121.01	117.70
21	AA	280	C	N3-C2-O2	-6.62	117.27	121.90
54	BA	960	A	C5-C6-N1	6.62	121.01	117.70
54	BA	2346	A	C4-C5-C6	-6.62	113.69	117.00
54	BA	2893	A	C4-C5-C6	-6.62	113.69	117.00
54	BA	68	G	N1-C6-O6	-6.62	115.93	119.90
21	AA	1314	C	N3-C2-O2	-6.62	117.27	121.90
21	AA	1327	C	N3-C2-O2	-6.62	117.27	121.90
54	BA	575	A	C4-C5-C6	-6.62	113.69	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1207	C	N3-C2-O2	-6.62	117.27	121.90
54	BA	2899	A	C5-C6-N1	6.62	121.01	117.70
55	BB	19	C	N3-C2-O2	-6.62	117.27	121.90
21	AA	994	A	C4-C5-C6	-6.61	113.69	117.00
54	BA	1262	A	C5-C6-N1	6.61	121.01	117.70
38	BP	92	ARG	NE-CZ-NH1	6.61	123.61	120.30
21	AA	303	A	C4-C5-C6	-6.61	113.69	117.00
21	AA	1059	C	N3-C2-O2	-6.61	117.27	121.90
39	BQ	2	ARG	NE-CZ-NH2	6.61	123.61	120.30
54	BA	429	A	C4-C5-C6	-6.61	113.69	117.00
54	BA	734	A	C5-C6-N1	6.61	121.00	117.70
54	BA	1194	A	C4-C5-C6	-6.61	113.69	117.00
54	BA	2667	C	N1-C2-O2	6.61	122.87	118.90
54	BA	1144	A	C5-C6-N1	6.61	121.00	117.70
24	A3	49	C	N1-C2-O2	6.61	122.86	118.90
54	BA	49	A	O4'-C1'-N9	6.61	113.49	108.20
54	BA	309	A	C4-C5-C6	-6.61	113.70	117.00
54	BA	1146	C	N3-C2-O2	-6.61	117.27	121.90
54	BA	1632	A	C4-C5-C6	-6.61	113.70	117.00
54	BA	1677	A	C4-C5-C6	-6.61	113.70	117.00
21	AA	311	C	N3-C2-O2	-6.61	117.28	121.90
21	AA	1217	C	N3-C2-O2	-6.61	117.28	121.90
21	AA	1531	A	C5-C6-N1	6.61	121.00	117.70
54	BA	1591	A	C5-C6-N1	6.61	121.00	117.70
54	BA	764	A	C5-C6-N1	6.60	121.00	117.70
54	BA	877	A	C5-C6-N1	6.60	121.00	117.70
54	BA	2153	C	N3-C2-O2	-6.60	117.28	121.90
3	AD	80	ARG	NE-CZ-NH1	6.60	123.60	120.30
21	AA	578	C	N3-C2-O2	-6.60	117.28	121.90
21	AA	819	A	C4-C5-C6	-6.60	113.70	117.00
54	BA	95	A	C5-C6-N1	6.60	121.00	117.70
54	BA	538	A	N1-C6-N6	-6.60	114.64	118.60
54	BA	1021	A	C4-C5-C6	-6.60	113.70	117.00
54	BA	1454	C	N3-C2-O2	-6.60	117.28	121.90
54	BA	2173	A	C4-C5-C6	-6.60	113.70	117.00
54	BA	2342	C	N3-C2-O2	-6.60	117.28	121.90
21	AA	872	A	O4'-C1'-N9	6.60	113.48	108.20
54	BA	455	C	N3-C2-O2	-6.60	117.28	121.90
54	BA	898	C	N3-C2-O2	-6.60	117.28	121.90
54	BA	1772	A	N1-C6-N6	-6.60	114.64	118.60
55	BB	29	A	C5-C6-N1	6.60	121.00	117.70
15	AP	31	ARG	NE-CZ-NH1	6.60	123.60	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1176	A	C5-C6-N1	6.60	121.00	117.70
54	BA	1745	A	C5-C6-N1	6.60	121.00	117.70
54	BA	839	U	O4'-C1'-N1	6.60	113.48	108.20
54	BA	2072	C	N3-C2-O2	-6.60	117.28	121.90
54	BA	2241	A	C5-C6-N1	6.60	121.00	117.70
54	BA	1805	A	C5-C6-N1	6.60	121.00	117.70
21	AA	366	A	C5-C6-N1	6.59	121.00	117.70
21	AA	635	A	C5-C6-N1	6.59	121.00	117.70
54	BA	1345	C	N3-C2-O2	-6.59	117.28	121.90
21	AA	1102	A	C5-C6-N1	6.59	121.00	117.70
54	BA	449	A	C5-C6-N1	6.59	121.00	117.70
55	BB	90	C	N3-C2-O2	-6.59	117.28	121.90
21	AA	764	C	N3-C2-O2	-6.59	117.29	121.90
22	A1	56	C	N3-C2-O2	-6.59	117.29	121.90
54	BA	453	A	C5-C6-N1	6.59	121.00	117.70
54	BA	1321	A	N1-C6-N6	-6.59	114.64	118.60
54	BA	2183	A	C5-C6-N1	6.59	121.00	117.70
54	BA	2711	A	C4-C5-C6	-6.59	113.70	117.00
41	BS	8	ARG	NE-CZ-NH1	6.59	123.59	120.30
54	BA	191	A	C5-C6-N1	6.59	121.00	117.70
54	BA	1735	A	C5-C6-N1	6.59	121.00	117.70
54	BA	1759	A	C4-C5-C6	-6.59	113.71	117.00
54	BA	1575	C	N3-C2-O2	-6.59	117.29	121.90
21	AA	962	C	N3-C2-O2	-6.59	117.29	121.90
21	AA	1021	A	C5-C6-N1	6.59	120.99	117.70
22	A1	76	A	C5-C6-N1	6.59	120.99	117.70
54	BA	2171	A	C4-C5-C6	-6.59	113.71	117.00
54	BA	2670	A	C5-C6-N1	6.59	120.99	117.70
21	AA	179	A	C4-C5-C6	-6.58	113.71	117.00
54	BA	1077	A	C5-C6-N1	6.58	120.99	117.70
21	AA	26	A	C5-C6-N1	6.58	120.99	117.70
21	AA	1324	A	C5-C6-N1	6.58	120.99	117.70
22	A1	25	C	N3-C2-O2	-6.58	117.29	121.90
54	BA	1264	A	C4-C5-C6	-6.58	113.71	117.00
54	BA	2231	U	O4'-C1'-N1	6.58	113.47	108.20
54	BA	2468	A	C4-C5-C6	-6.58	113.71	117.00
54	BA	2873	A	C5-C6-N1	6.58	120.99	117.70
21	AA	1014	A	C4-C5-C6	-6.58	113.71	117.00
21	AA	1092	A	C4-C5-C6	-6.58	113.71	117.00
26	BD	124	ARG	NE-CZ-NH1	6.58	123.59	120.30
32	BJ	120	ARG	NE-CZ-NH1	6.58	123.59	120.30
54	BA	272	A	C5-C6-N1	6.58	120.99	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	465	G	O4'-C1'-N9	6.58	113.47	108.20
54	BA	2317	A	C4-C5-C6	-6.58	113.71	117.00
21	AA	100	G	N1-C6-O6	-6.58	115.95	119.90
54	BA	637	A	O4'-C1'-N9	6.58	113.46	108.20
54	BA	2430	A	C4-C5-C6	-6.58	113.71	117.00
21	AA	1045	C	N3-C2-O2	-6.58	117.30	121.90
54	BA	764	A	N1-C6-N6	-6.58	114.65	118.60
54	BA	937	C	N3-C2-O2	-6.58	117.30	121.90
21	AA	1279	G	N3-C4-C5	-6.58	125.31	128.60
21	AA	1508	A	C5-C6-N1	6.58	120.99	117.70
54	BA	917	A	N1-C6-N6	-6.58	114.66	118.60
54	BA	1431	A	C4-C5-C6	-6.58	113.71	117.00
21	AA	171	A	C4-C5-C6	-6.57	113.71	117.00
21	AA	1063	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	209	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	385	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	440	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	2326	C	N3-C2-O2	-6.57	117.30	121.90
21	AA	715	A	C5-C6-N1	6.57	120.99	117.70
21	AA	335	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	796	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	1577	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	2169	A	O4'-C1'-N9	6.57	113.46	108.20
21	AA	277	C	N3-C2-O2	-6.57	117.30	121.90
20	AU	33	ARG	NE-CZ-NH1	6.57	123.58	120.30
21	AA	736	C	N3-C2-O2	-6.57	117.30	121.90
21	AA	892	A	C4-C5-C6	-6.57	113.72	117.00
54	BA	634	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	794	A	C4-C5-C6	-6.57	113.72	117.00
54	BA	1048	A	C5-C6-N1	6.57	120.98	117.70
54	BA	1848	A	C5-C6-N1	6.57	120.98	117.70
21	AA	857	C	N3-C2-O2	-6.57	117.30	121.90
21	AA	1287	A	C4-C5-C6	-6.57	113.72	117.00
22	A1	58	A	C4-C5-C6	-6.57	113.72	117.00
54	BA	41	C	N3-C2-O2	-6.57	117.31	121.90
54	BA	986	C	N3-C2-O2	-6.57	117.30	121.90
54	BA	1558	C	N3-C2-O2	-6.57	117.31	121.90
54	BA	1942	C	N3-C2-O2	-6.57	117.30	121.90
36	BN	30	ARG	NE-CZ-NH1	6.56	123.58	120.30
54	BA	1268	A	N1-C6-N6	-6.56	114.66	118.60
54	BA	1502	A	C5-C6-N1	6.56	120.98	117.70
54	BA	1793	C	N3-C2-O2	-6.56	117.31	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	554	A	C5-C6-N1	6.56	120.98	117.70
21	AA	1273	C	N3-C2-O2	-6.56	117.31	121.90
22	A1	41	A	C4-C5-C6	-6.56	113.72	117.00
54	BA	269	C	N3-C2-O2	-6.56	117.31	121.90
54	BA	2212	A	C5-C6-N1	6.56	120.98	117.70
54	BA	582	A	C4-C5-C6	-6.56	113.72	117.00
54	BA	835	C	N3-C2-O2	-6.56	117.31	121.90
54	BA	1274	A	C4-C5-C6	-6.56	113.72	117.00
54	BA	2601	C	N3-C2-O2	-6.56	117.31	121.90
21	AA	501	C	N3-C2-O2	-6.56	117.31	121.90
21	AA	978	A	C5-C6-N1	6.56	120.98	117.70
54	BA	237	C	N3-C2-O2	-6.56	117.31	121.90
54	BA	270	A	N1-C6-N6	-6.56	114.66	118.60
55	BB	113	C	N3-C2-O2	-6.56	117.31	121.90
43	BU	85	ARG	NE-CZ-NH1	6.56	123.58	120.30
54	BA	1494	A	C5-C6-N1	6.56	120.98	117.70
54	BA	2095	A	C4-C5-C6	-6.56	113.72	117.00
21	AA	1239	A	C4-C5-C6	-6.56	113.72	117.00
21	AA	143	A	C5-C6-N1	6.55	120.98	117.70
21	AA	188	C	N3-C2-O2	-6.55	117.31	121.90
21	AA	1236	A	C4-C5-C6	-6.55	113.72	117.00
21	AA	60	A	C4-C5-C6	-6.55	113.72	117.00
54	BA	1970	A	C5-C6-N1	6.55	120.98	117.70
3	AD	72	ARG	NE-CZ-NH1	6.55	123.58	120.30
54	BA	1901	A	C5-C6-N1	6.55	120.98	117.70
21	AA	181	A	C4-C5-C6	-6.55	113.72	117.00
21	AA	533	A	C5-C6-N1	6.55	120.97	117.70
21	AA	1308	U	C3'-C2'-C1'	-6.55	96.26	101.50
54	BA	502	A	C4-C5-C6	-6.55	113.72	117.00
54	BA	1109	C	N3-C4-N4	-6.55	113.42	118.00
54	BA	2088	A	C5-C6-N1	6.55	120.97	117.70
21	AA	1223	C	N3-C2-O2	-6.55	117.32	121.90
54	BA	1916	A	C4-C5-C6	-6.55	113.73	117.00
54	BA	2378	A	C5-C6-N1	6.55	120.97	117.70
21	AA	349	A	C4-C5-C6	-6.55	113.73	117.00
54	BA	142	A	C4-C5-C6	-6.55	113.73	117.00
54	BA	223	A	C4-C5-C6	-6.55	113.73	117.00
54	BA	505	A	N1-C6-N6	-6.55	114.67	118.60
54	BA	1522	A	C4-C5-C6	-6.55	113.73	117.00
54	BA	2033	A	C5-C6-N1	6.55	120.97	117.70
55	BB	108	A	C4-C5-C6	-6.55	113.73	117.00
21	AA	1534	A	O4'-C1'-N9	6.54	113.44	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1427	A	C5-C6-N1	6.54	120.97	117.70
54	BA	1609	A	N1-C6-N6	-6.54	114.67	118.60
54	BA	1885	A	C4-C5-C6	-6.54	113.73	117.00
21	AA	1176	A	N1-C6-N6	-6.54	114.67	118.60
21	AA	1404	C	N3-C2-O2	-6.54	117.32	121.90
54	BA	556	A	C5-C6-N1	6.54	120.97	117.70
54	BA	1800	C	N3-C2-O2	-6.54	117.32	121.90
54	BA	1958	C	N3-C2-O2	-6.54	117.32	121.90
54	BA	2795	C	N3-C2-O2	-6.54	117.32	121.90
21	AA	876	C	N3-C2-O2	-6.54	117.32	121.90
21	AA	1271	A	N1-C6-N6	-6.54	114.67	118.60
24	A3	29	C	N3-C2-O2	-6.54	117.32	121.90
54	BA	407	G	N1-C6-O6	-6.54	115.97	119.90
54	BA	1077	A	C4-C5-C6	-6.54	113.73	117.00
21	AA	1518	A	C5-C6-N1	6.54	120.97	117.70
36	BN	22	ARG	NE-CZ-NH1	6.54	123.57	120.30
54	BA	2792	A	C4-C5-C6	-6.54	113.73	117.00
54	BA	61	C	N1-C2-O2	6.54	122.82	118.90
54	BA	1742	U	O4'-C1'-N1	6.54	113.43	108.20
54	BA	2860	A	C5-C6-N1	6.54	120.97	117.70
21	AA	913	A	C4-C5-C6	-6.54	113.73	117.00
21	AA	1468	A	C4-C5-C6	-6.54	113.73	117.00
27	BE	61	ARG	NE-CZ-NH1	6.54	123.57	120.30
54	BA	421	C	N3-C2-O2	-6.54	117.33	121.90
54	BA	1691	C	O4'-C1'-N1	6.54	113.43	108.20
38	BP	108	ARG	NE-CZ-NH2	6.53	123.57	120.30
54	BA	820	A	C5-C6-N1	6.53	120.97	117.70
54	BA	1399	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	2418	A	C5-C6-N1	6.53	120.97	117.70
21	AA	1265	C	N3-C2-O2	-6.53	117.33	121.90
21	AA	513	C	N3-C2-O2	-6.53	117.33	121.90
21	AA	602	A	C4-C5-C6	-6.53	113.73	117.00
51	B2	3	ARG	NE-CZ-NH2	6.53	123.56	120.30
54	BA	575	A	C5-C6-N1	6.53	120.97	117.70
21	AA	823	C	N3-C2-O2	-6.53	117.33	121.90
24	A3	59	A	C5-C6-N1	6.53	120.97	117.70
54	BA	1385	A	C5-C6-N1	6.53	120.97	117.70
2	AC	163	ARG	NE-CZ-NH1	6.53	123.56	120.30
21	AA	856	C	N3-C2-O2	-6.53	117.33	121.90
21	AA	1038	C	N3-C2-O2	-6.53	117.33	121.90
21	AA	1117	A	C5-C6-N1	6.53	120.96	117.70
21	AA	1428	A	C5-C6-N1	6.53	120.96	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
28	BF	149	ARG	NE-CZ-NH1	6.53	123.56	120.30
54	BA	147	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	1607	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	1655	A	C5-C6-N1	6.53	120.96	117.70
22	A1	32	C	N3-C2-O2	-6.53	117.33	121.90
32	BJ	27	ARG	NE-CZ-NH1	6.53	123.56	120.30
54	BA	584	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	921	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	1404	C	O4'-C1'-N1	6.53	113.42	108.20
54	BA	1804	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	2091	C	N3-C2-O2	-6.53	117.33	121.90
54	BA	2712	C	N1-C2-O2	6.52	122.81	118.90
17	AR	60	ARG	NE-CZ-NH1	6.52	123.56	120.30
21	AA	393	A	C5-C6-N1	6.52	120.96	117.70
21	AA	1237	C	N3-C2-O2	-6.52	117.33	121.90
21	AA	1248	A	N1-C6-N6	-6.52	114.69	118.60
23	A2	91	A	O4'-C1'-N9	6.52	113.42	108.20
21	AA	1429	A	C4-C5-C6	-6.52	113.74	117.00
54	BA	149	A	C5-C6-N1	6.52	120.96	117.70
54	BA	793	A	C5-C6-N1	6.52	120.96	117.70
55	BB	95	U	O4'-C1'-N1	6.52	113.42	108.20
54	BA	688	U	O4'-C1'-N1	6.52	113.42	108.20
54	BA	1784	A	C4-C5-C6	-6.52	113.74	117.00
54	BA	2205	A	C5-C6-N1	6.52	120.96	117.70
21	AA	389	A	C5-C6-N1	6.52	120.96	117.70
21	AA	716	A	N1-C6-N6	-6.52	114.69	118.60
21	AA	735	C	N3-C2-O2	-6.52	117.34	121.90
21	AA	907	A	C5-C6-N1	6.52	120.96	117.70
54	BA	2501	C	O4'-C1'-C2'	-6.52	99.28	105.80
54	BA	2522	U	O4'-C1'-N1	6.52	113.41	108.20
54	BA	2731	G	O4'-C1'-N9	6.52	113.41	108.20
21	AA	163	C	N3-C2-O2	-6.52	117.34	121.90
54	BA	2471	A	C5-C6-N1	6.52	120.96	117.70
54	BA	1722	A	C4-C5-C6	-6.51	113.74	117.00
54	BA	1833	C	N3-C2-O2	-6.51	117.34	121.90
54	BA	2019	A	C4-C5-C6	-6.51	113.74	117.00
54	BA	2635	A	C5-C6-N1	6.51	120.96	117.70
54	BA	538	A	C5-C6-N1	6.51	120.96	117.70
54	BA	1069	A	C5-C6-N1	6.51	120.96	117.70
54	BA	1366	A	N1-C6-N6	-6.51	114.69	118.60
54	BA	2403	C	N3-C2-O2	-6.51	117.34	121.90
21	AA	984	C	N3-C2-O2	-6.51	117.34	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	84	A	C4-C5-C6	-6.51	113.75	117.00
54	BA	1446	C	N3-C2-O2	-6.51	117.34	121.90
54	BA	1882	U	O4'-C1'-N1	6.51	113.41	108.20
21	AA	553	A	C4-C5-C6	-6.51	113.75	117.00
54	BA	439	A	C5-C6-N1	6.51	120.95	117.70
54	BA	721	A	C5-C6-N1	6.51	120.95	117.70
54	BA	742	A	C4-C5-C6	-6.51	113.75	117.00
54	BA	1790	C	N3-C2-O2	-6.51	117.34	121.90
21	AA	1278	G	N3-C2-N2	-6.51	115.34	119.90
54	BA	83	A	C4-C5-C6	-6.51	113.75	117.00
54	BA	1912	A	C5-C6-N1	6.51	120.95	117.70
21	AA	28	A	C4-C5-C6	-6.51	113.75	117.00
21	AA	1071	C	N3-C2-O2	-6.51	117.34	121.90
21	AA	1163	A	C5-C6-N1	6.51	120.95	117.70
54	BA	1735	A	N1-C6-N6	-6.51	114.70	118.60
55	BB	62	C	N3-C2-O2	-6.51	117.34	121.90
21	AA	919	A	C5-C6-N1	6.50	120.95	117.70
54	BA	1877	A	N1-C6-N6	-6.50	114.70	118.60
54	BA	2175	C	N3-C2-O2	-6.50	117.35	121.90
37	BO	9	ARG	NE-CZ-NH1	6.50	123.55	120.30
54	BA	2888	C	N3-C2-O2	-6.50	117.35	121.90
24	A3	77	A	C4-C5-C6	-6.50	113.75	117.00
21	AA	186	C	N3-C2-O2	-6.50	117.35	121.90
21	AA	974	A	N1-C6-N6	-6.50	114.70	118.60
54	BA	1090	A	C4-C5-C6	-6.50	113.75	117.00
21	AA	1226	C	N1-C2-O2	6.50	122.80	118.90
54	BA	632	A	C4-C5-C6	-6.50	113.75	117.00
54	BA	791	C	N3-C2-O2	-6.50	117.35	121.90
54	BA	1472	C	N3-C2-O2	-6.50	117.35	121.90
54	BA	1749	A	C5-C6-N1	6.50	120.95	117.70
21	AA	401	C	N3-C2-O2	-6.50	117.35	121.90
21	AA	647	C	N3-C2-O2	-6.50	117.35	121.90
21	AA	1036	A	C5-C6-N1	6.50	120.95	117.70
8	AI	84	ARG	NE-CZ-NH1	6.49	123.55	120.30
21	AA	468	A	O4'-C1'-N9	6.49	113.39	108.20
21	AA	1282	C	N3-C2-O2	-6.49	117.35	121.90
54	BA	1637	A	C4-C5-C6	-6.49	113.75	117.00
21	AA	65	A	C5-C6-N1	6.49	120.95	117.70
21	AA	1318	A	C4-C5-C6	-6.49	113.75	117.00
54	BA	1111	A	C5-C6-N1	6.49	120.95	117.70
4	AE	53	ARG	NE-CZ-NH1	6.49	123.55	120.30
21	AA	394	G	N3-C2-N2	-6.49	115.36	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	613	C	N3-C2-O2	-6.49	117.36	121.90
21	AA	756	C	N3-C2-O2	-6.49	117.36	121.90
54	BA	184	C	N1-C2-O2	6.49	122.79	118.90
54	BA	721	A	N1-C6-N6	-6.49	114.71	118.60
54	BA	781	A	C4-C5-C6	-6.49	113.75	117.00
54	BA	833	A	C4-C5-C6	-6.49	113.75	117.00
54	BA	1634	A	C4-C5-C6	-6.49	113.75	117.00
21	AA	10	A	C4-C5-C6	-6.49	113.76	117.00
21	AA	1194	U	P-O3'-C3'	6.49	127.49	119.70
54	BA	497	A	C4-C5-C6	-6.49	113.76	117.00
54	BA	546	U	O4'-C1'-N1	6.49	113.39	108.20
55	BB	43	C	N3-C2-O2	-6.49	117.36	121.90
18	AS	36	ARG	NE-CZ-NH1	6.49	123.54	120.30
54	BA	517	C	N3-C2-O2	-6.49	117.36	121.90
21	AA	1204	A	C4-C5-C6	-6.49	113.76	117.00
54	BA	16	C	N3-C2-O2	-6.49	117.36	121.90
54	BA	2377	A	C5-C6-N1	6.49	120.94	117.70
9	AJ	45	ARG	NE-CZ-NH1	6.48	123.54	120.30
54	BA	371	A	C4-C5-C6	-6.48	113.76	117.00
21	AA	1080	A	C4-C5-C6	-6.48	113.76	117.00
21	AA	1465	A	C4-C5-C6	-6.48	113.76	117.00
21	AA	403	C	N3-C2-O2	-6.48	117.36	121.90
21	AA	767	A	C4-C5-C6	-6.48	113.76	117.00
21	AA	831	A	C4-C5-C6	-6.48	113.76	117.00
54	BA	635	C	N3-C2-O2	-6.48	117.36	121.90
54	BA	1022	G	O4'-C1'-N9	6.48	113.38	108.20
54	BA	2456	C	N3-C2-O2	-6.48	117.36	121.90
55	BB	99	A	C5-C6-N1	6.48	120.94	117.70
21	AA	642	A	N1-C6-N6	-6.48	114.71	118.60
24	A3	44	A	C5-C6-N1	6.48	120.94	117.70
54	BA	1757	A	C4-C5-C6	-6.48	113.76	117.00
24	A3	63	C	N3-C2-O2	-6.48	117.37	121.90
54	BA	1152	C	N3-C2-O2	-6.48	117.37	121.90
54	BA	2501	C	O4'-C1'-N1	6.48	113.38	108.20
21	AA	780	A	N1-C6-N6	-6.48	114.71	118.60
29	BG	68	ARG	NE-CZ-NH1	6.48	123.54	120.30
21	AA	556	C	N3-C2-O2	-6.47	117.37	121.90
46	BX	17	ARG	NE-CZ-NH2	-6.47	117.06	120.30
54	BA	756	A	C4-C5-C6	-6.47	113.76	117.00
54	BA	2646	C	O4'-C1'-N1	6.47	113.38	108.20
21	AA	139	A	C5-C6-N1	6.47	120.94	117.70
54	BA	1717	A	C5-C6-N1	6.47	120.94	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2416	C	N3-C2-O2	-6.47	117.37	121.90
21	AA	83	C	N3-C2-O2	-6.47	117.37	121.90
21	AA	313	A	C4-C5-C6	-6.47	113.77	117.00
21	AA	344	A	C5-C6-N1	6.47	120.94	117.70
54	BA	222	A	C4-C5-C6	-6.47	113.77	117.00
54	BA	1678	A	C4-C5-C6	-6.47	113.76	117.00
21	AA	411	A	N1-C6-N6	-6.47	114.72	118.60
21	AA	739	C	N3-C2-O2	-6.47	117.37	121.90
21	AA	865	A	C5-C6-N1	6.47	120.94	117.70
21	AA	985	C	N3-C2-O2	-6.47	117.37	121.90
21	AA	1188	A	C4-C5-C6	-6.47	113.77	117.00
24	A3	36	A	C1'-O4'-C4'	-6.47	104.72	109.90
54	BA	462	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	848	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	2207	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	516	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	1127	A	C5-C6-N1	6.47	120.93	117.70
21	AA	246	A	C5-C6-N1	6.47	120.93	117.70
21	AA	312	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	274	C	N3-C2-O2	-6.47	117.37	121.90
54	BA	1214	A	C5-C6-N1	6.47	120.93	117.70
54	BA	2826	A	C5-C6-N1	6.47	120.93	117.70
55	BB	88	C	N3-C2-O2	-6.47	117.37	121.90
3	AD	13	ARG	NE-CZ-NH1	6.46	123.53	120.30
21	AA	1319	A	C5-C6-N1	6.46	120.93	117.70
54	BA	2824	C	N3-C2-O2	-6.46	117.38	121.90
21	AA	853	C	N3-C2-O2	-6.46	117.38	121.90
21	AA	1019	A	N1-C6-N6	-6.46	114.72	118.60
22	A1	41	A	C5-C6-N1	6.46	120.93	117.70
37	BO	13	ARG	NE-CZ-NH1	6.46	123.53	120.30
54	BA	101	A	C4-C5-C6	-6.46	113.77	117.00
54	BA	1403	A	C5-C6-N1	6.46	120.93	117.70
54	BA	1098	A	C5-C6-N1	6.46	120.93	117.70
54	BA	2285	C	N3-C2-O2	-6.46	117.38	121.90
54	BA	2734	A	C4-C5-C6	-6.46	113.77	117.00
55	BB	87	U	N3-C2-O2	-6.46	117.68	122.20
21	AA	381	C	N3-C2-O2	-6.46	117.38	121.90
54	BA	782	A	O4'-C1'-N9	6.46	113.37	108.20
54	BA	2764	A	C5-C6-N1	6.46	120.93	117.70
21	AA	655	A	C5-C6-N1	6.46	120.93	117.70
54	BA	283	G	N1-C6-O6	-6.46	116.03	119.90
54	BA	541	A	N1-C6-N6	-6.46	114.73	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	586	A	C4-C5-C6	-6.46	113.77	117.00
54	BA	692	C	N3-C2-O2	-6.46	117.38	121.90
54	BA	1801	A	C5-C6-N1	6.46	120.93	117.70
54	BA	2306	C	N3-C2-O2	-6.46	117.38	121.90
21	AA	274	A	C5-C6-N1	6.46	120.93	117.70
52	B3	7	ARG	NE-CZ-NH1	6.46	123.53	120.30
54	BA	1076	C	N3-C2-O2	-6.46	117.38	121.90
21	AA	50	A	C4-C5-C6	-6.45	113.77	117.00
21	AA	108	G	O4'-C1'-N9	6.45	113.36	108.20
21	AA	167	A	C5-C6-N1	6.45	120.93	117.70
21	AA	221	C	N3-C2-O2	-6.45	117.38	121.90
32	BJ	75	TYR	CB-CG-CD2	-6.45	117.13	121.00
21	AA	1493	A	C5-C6-N1	6.45	120.93	117.70
21	AA	1516	G	N3-C2-N2	-6.45	115.38	119.90
54	BA	996	A	C5-C6-N1	6.45	120.93	117.70
54	BA	2433	A	C5-C6-N1	6.45	120.93	117.70
21	AA	95	C	N3-C2-O2	-6.45	117.39	121.90
21	AA	321	A	C5-C6-N1	6.45	120.93	117.70
21	AA	503	C	O4'-C1'-N1	6.45	113.36	108.20
54	BA	1293	C	N3-C2-O2	-6.45	117.39	121.90
21	AA	1151	A	C5-C6-N1	6.45	120.92	117.70
25	BC	42	ARG	NE-CZ-NH1	6.45	123.52	120.30
49	B0	39	ARG	NE-CZ-NH1	6.45	123.52	120.30
54	BA	104	A	C4-C5-C6	-6.45	113.78	117.00
54	BA	401	A	N1-C6-N6	-6.45	114.73	118.60
54	BA	1598	A	N1-C6-N6	-6.45	114.73	118.60
54	BA	2577	A	C4-C5-C6	-6.45	113.78	117.00
54	BA	2851	A	C4-C5-C6	-6.45	113.78	117.00
21	AA	564	C	N3-C2-O2	-6.45	117.39	121.90
22	A1	36	C	N3-C2-O2	-6.45	117.39	121.90
39	BQ	23	TYR	CB-CG-CD2	-6.45	117.13	121.00
54	BA	2902	C	N3-C2-O2	-6.45	117.39	121.90
21	AA	233	C	N3-C2-O2	-6.44	117.39	121.90
33	BK	17	ARG	NE-CZ-NH2	-6.44	117.08	120.30
54	BA	1768	C	N3-C2-O2	-6.44	117.39	121.90
54	BA	2374	C	N3-C2-O2	-6.44	117.39	121.90
54	BA	1755	A	C4-C5-C6	-6.44	113.78	117.00
21	AA	336	A	C5-C6-N1	6.44	120.92	117.70
21	AA	780	A	C5-C6-N1	6.44	120.92	117.70
21	AA	1145	A	N1-C6-N6	-6.44	114.74	118.60
21	AA	1157	A	C5-C6-N1	6.44	120.92	117.70
54	BA	792	A	C4-C5-C6	-6.44	113.78	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2196	C	N3-C2-O2	-6.44	117.39	121.90
54	BA	2305	U	O4'-C1'-N1	6.44	113.35	108.20
54	BA	2381	A	C4-C5-C6	-6.44	113.78	117.00
55	BB	73	A	C5-C6-N1	6.44	120.92	117.70
54	BA	1925	C	O4'-C1'-N1	6.44	113.35	108.20
21	AA	174	A	C4-C5-C6	-6.44	113.78	117.00
21	AA	1105	A	C5-C6-N1	6.44	120.92	117.70
21	AA	1308	U	P-O3'-C3'	6.44	127.43	119.70
54	BA	21	A	C4-C5-C6	-6.44	113.78	117.00
54	BA	948	C	N3-C2-O2	-6.44	117.39	121.90
54	BA	2765	A	N1-C6-N6	-6.44	114.74	118.60
54	BA	541	A	C4-C5-C6	-6.44	113.78	117.00
54	BA	1793	C	C4'-C3'-C2'	-6.44	96.16	102.60
54	BA	2350	C	O4'-C1'-N1	6.44	113.35	108.20
54	BA	2853	C	N3-C2-O2	-6.44	117.39	121.90
3	AD	96	ARG	NE-CZ-NH1	6.43	123.52	120.30
31	BI	126	ARG	NE-CZ-NH1	6.43	123.52	120.30
54	BA	161	A	C4-C5-C6	-6.43	113.78	117.00
54	BA	1287	A	C4-C5-C6	-6.43	113.78	117.00
54	BA	1304	A	C4-C5-C6	-6.43	113.78	117.00
54	BA	1545	A	C5-C6-N1	6.43	120.92	117.70
21	AA	529	G	N1-C6-O6	-6.43	116.04	119.90
21	AA	1408	A	C4-C5-C6	-6.43	113.78	117.00
21	AA	1507	A	N1-C6-N6	-6.43	114.74	118.60
54	BA	557	C	N3-C2-O2	-6.43	117.40	121.90
54	BA	783	A	C4-C5-C6	-6.43	113.78	117.00
54	BA	1802	A	C5-C6-N1	6.43	120.92	117.70
24	A3	44	A	C4-C5-C6	-6.43	113.78	117.00
54	BA	1586	A	C5-C6-N1	6.43	120.92	117.70
54	BA	2385	C	N3-C2-O2	-6.43	117.40	121.90
54	BA	2566	A	C5-C6-N1	6.43	120.92	117.70
54	BA	37	C	N3-C2-O2	-6.43	117.40	121.90
54	BA	1789	A	C4-C5-C6	-6.43	113.79	117.00
54	BA	10	A	C4-C5-C6	-6.43	113.79	117.00
54	BA	334	C	N3-C2-O2	-6.43	117.40	121.90
54	BA	398	C	N3-C2-O2	-6.43	117.40	121.90
54	BA	1312	U	P-O3'-C3'	6.43	127.41	119.70
1	AB	62	ARG	NE-CZ-NH1	6.42	123.51	120.30
21	AA	1152	A	C4-C5-C6	-6.42	113.79	117.00
54	BA	640	C	N3-C2-O2	-6.42	117.40	121.90
54	BA	1918	A	C4-C5-C6	-6.42	113.79	117.00
55	BB	94	A	C5-C6-N1	6.42	120.91	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	253	A	C4-C5-C6	-6.42	113.79	117.00
54	BA	944	C	N3-C2-O2	-6.42	117.40	121.90
12	AM	28	ARG	NE-CZ-NH1	6.42	123.51	120.30
21	AA	630	A	C4-C5-C6	-6.42	113.79	117.00
21	AA	167	A	C4-C5-C6	-6.42	113.79	117.00
54	BA	486	C	N3-C2-O2	-6.42	117.41	121.90
54	BA	1969	A	C5-C6-N1	6.42	120.91	117.70
21	AA	967	C	N3-C2-O2	-6.42	117.41	121.90
44	BV	79	ARG	NE-CZ-NH1	6.42	123.51	120.30
54	BA	549	G	N3-C2-N2	-6.42	115.41	119.90
54	BA	1350	C	N3-C2-O2	-6.42	117.41	121.90
54	BA	1819	A	C4-C5-C6	-6.42	113.79	117.00
21	AA	243	A	C5-C6-N1	6.41	120.91	117.70
21	AA	935	A	C5-C6-N1	6.41	120.91	117.70
54	BA	173	A	C5-C6-N1	6.41	120.91	117.70
54	BA	935	C	N3-C2-O2	-6.41	117.41	121.90
54	BA	1996	C	N3-C2-O2	-6.41	117.41	121.90
21	AA	475	C	N3-C2-O2	-6.41	117.41	121.90
21	AA	759	A	C4-C5-C6	-6.41	113.80	117.00
21	AA	1214	C	O4'-C1'-N1	6.41	113.33	108.20
46	BX	71	ARG	NE-CZ-NH1	6.41	123.51	120.30
54	BA	606	U	O4'-C1'-N1	6.41	113.33	108.20
54	BA	1086	A	C4-C5-C6	-6.41	113.79	117.00
14	AO	52	ARG	NE-CZ-NH1	6.41	123.50	120.30
54	BA	807	U	O4'-C1'-N1	6.41	113.33	108.20
54	BA	1126	A	P-O3'-C3'	6.41	127.39	119.70
54	BA	1608	A	C4-C5-C6	-6.41	113.80	117.00
54	BA	1749	A	C4-C5-C6	-6.41	113.80	117.00
54	BA	587	C	N3-C4-C5	6.41	124.46	121.90
54	BA	2354	C	N3-C2-O2	-6.41	117.42	121.90
54	BA	611	C	O4'-C1'-N1	6.40	113.32	108.20
54	BA	734	A	C4-C5-C6	-6.40	113.80	117.00
8	AI	32	ARG	NE-CZ-NH1	6.40	123.50	120.30
54	BA	221	A	N1-C6-N6	-6.40	114.76	118.60
54	BA	1014	A	C4-C5-C6	-6.40	113.80	117.00
54	BA	1354	A	C4-C5-C6	-6.40	113.80	117.00
56	B5	60	ARG	NE-CZ-NH1	6.40	123.50	120.30
1	AB	10	LYS	C-N-CA	6.40	137.70	121.70
6	AG	101	ARG	NE-CZ-NH1	6.40	123.50	120.30
21	AA	1300	G	N3-C4-C5	-6.40	125.40	128.60
54	BA	1233	C	N3-C2-O2	-6.40	117.42	121.90
54	BA	1246	A	C5-C6-N1	6.40	120.90	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1260	A	C5-C6-N1	6.40	120.90	117.70
54	BA	1821	A	C5-C6-N1	6.40	120.90	117.70
54	BA	2208	C	N3-C2-O2	-6.40	117.42	121.90
54	BA	2868	A	C4-C5-C6	-6.40	113.80	117.00
21	AA	155	A	C5-C6-N1	6.40	120.90	117.70
21	AA	430	A	C5-C6-N1	6.40	120.90	117.70
21	AA	1484	C	N3-C2-O2	-6.40	117.42	121.90
54	BA	1298	C	N3-C2-O2	-6.40	117.42	121.90
54	BA	2094	A	C4-C5-C6	-6.40	113.80	117.00
21	AA	223	A	C4-C5-C6	-6.39	113.80	117.00
21	AA	658	C	N3-C2-O2	-6.39	117.42	121.90
21	AA	777	A	C4-C5-C6	-6.39	113.80	117.00
22	A1	47	U	O4'-C1'-N1	6.39	113.32	108.20
54	BA	8	C	N3-C2-O2	-6.39	117.42	121.90
21	AA	58	C	O4'-C1'-N1	6.39	113.31	108.20
21	AA	73	C	N3-C2-O2	-6.39	117.43	121.90
21	AA	148	G	N3-C2-N2	-6.39	115.42	119.90
54	BA	60	G	N3-C2-N2	-6.39	115.42	119.90
54	BA	916	G	N1-C6-O6	-6.39	116.06	119.90
54	BA	1821	A	C4-C5-C6	-6.39	113.80	117.00
54	BA	299	A	C5-C6-N1	6.39	120.89	117.70
54	BA	2422	C	N3-C2-O2	-6.39	117.43	121.90
54	BA	2821	A	C4-C5-C6	-6.39	113.81	117.00
54	BA	480	A	C5-C6-N1	6.39	120.89	117.70
54	BA	1836	C	N3-C2-O2	-6.39	117.43	121.90
54	BA	2646	C	N1-C2-O2	6.39	122.73	118.90
23	A2	79	A	C4-C5-C6	-6.38	113.81	117.00
35	BM	18	ARG	NE-CZ-NH1	6.38	123.49	120.30
54	BA	179	C	N3-C2-O2	-6.38	117.43	121.90
54	BA	2020	A	C4-C5-C6	-6.38	113.81	117.00
54	BA	2810	A	C4-C5-C6	-6.38	113.81	117.00
21	AA	539	A	C5-C6-N1	6.38	120.89	117.70
54	BA	461	C	N3-C2-O2	-6.38	117.43	121.90
54	BA	2352	A	C4-C5-C6	-6.38	113.81	117.00
54	BA	2547	A	C4-C5-C6	-6.38	113.81	117.00
54	BA	2750	A	C5-C6-N1	6.38	120.89	117.70
54	BA	89	A	C5-C6-N1	6.38	120.89	117.70
54	BA	1662	U	O4'-C1'-N1	6.38	113.30	108.20
55	BB	93	C	N3-C2-O2	-6.38	117.44	121.90
21	AA	389	A	C4-C5-C6	-6.38	113.81	117.00
54	BA	1150	C	N3-C2-O2	-6.38	117.44	121.90
54	BA	2261	C	N3-C2-O2	-6.38	117.44	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2774	C	N3-C2-O2	-6.38	117.44	121.90
21	AA	499	A	C4-C5-C6	-6.37	113.81	117.00
21	AA	579	A	C4-C5-C6	-6.37	113.81	117.00
21	AA	796	C	N3-C2-O2	-6.37	117.44	121.90
54	BA	995	C	N3-C2-O2	-6.37	117.44	121.90
54	BA	2736	A	C4-C5-C6	-6.37	113.81	117.00
21	AA	726	C	N3-C2-O2	-6.37	117.44	121.90
21	AA	1044	A	C5-C6-N1	6.37	120.89	117.70
21	AA	1513	A	C5-C6-N1	6.37	120.89	117.70
54	BA	528	A	C4-C5-C6	-6.37	113.81	117.00
54	BA	592	A	C5-C6-N1	6.37	120.89	117.70
54	BA	687	C	N3-C2-O2	-6.37	117.44	121.90
3	AD	2	ARG	NE-CZ-NH1	6.37	123.48	120.30
21	AA	139	A	C4-C5-C6	-6.37	113.82	117.00
54	BA	276	U	O4'-C1'-N1	6.37	113.29	108.20
54	BA	2340	A	C4-C5-C6	-6.37	113.81	117.00
54	BA	2559	C	N3-C2-O2	-6.37	117.44	121.90
54	BA	1978	A	C5-C6-N1	6.37	120.88	117.70
6	AG	3	ARG	NE-CZ-NH1	6.37	123.48	120.30
33	BK	78	ARG	NE-CZ-NH1	6.37	123.48	120.30
54	BA	1268	A	C5-C6-N1	6.37	120.88	117.70
54	BA	1889	A	C5-C6-N1	6.37	120.88	117.70
54	BA	2362	C	O4'-C1'-N1	6.37	113.29	108.20
54	BA	2757	A	C5-C6-N1	6.37	120.88	117.70
21	AA	496	A	O4'-C1'-N9	6.36	113.29	108.20
22	A1	68	C	N3-C2-O2	-6.36	117.44	121.90
24	A3	73	A	C4-C5-C6	-6.36	113.82	117.00
54	BA	2498	C	N3-C2-O2	-6.36	117.44	121.90
54	BA	2887	A	C4-C5-C6	-6.36	113.82	117.00
12	AM	2	ARG	NE-CZ-NH2	6.36	123.48	120.30
55	BB	59	A	C5-C6-N1	6.36	120.88	117.70
21	AA	1055	A	C4-C5-C6	-6.36	113.82	117.00
54	BA	981	A	C4-C5-C6	-6.36	113.82	117.00
54	BA	1151	A	C4-C5-C6	-6.36	113.82	117.00
54	BA	1997	C	N3-C2-O2	-6.36	117.45	121.90
54	BA	2616	C	N3-C2-O2	-6.36	117.45	121.90
54	BA	2649	C	N3-C2-O2	-6.36	117.45	121.90
21	AA	680	C	N3-C2-O2	-6.36	117.45	121.90
54	BA	566	U	O4'-C1'-N1	6.36	113.29	108.20
54	BA	1161	C	N3-C2-O2	-6.36	117.45	121.90
21	AA	946	A	C4-C5-C6	-6.36	113.82	117.00
54	BA	2732	G	N3-C4-C5	-6.36	125.42	128.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2314	A	C4-C5-C6	-6.35	113.82	117.00
21	AA	286	C	N3-C2-O2	-6.35	117.45	121.90
21	AA	496	A	C5-C6-N1	6.35	120.88	117.70
54	BA	607	U	O4'-C1'-N1	6.35	113.28	108.20
54	BA	2191	A	C5-C6-N1	6.35	120.88	117.70
54	BA	2200	C	N3-C2-O2	-6.35	117.45	121.90
21	AA	98	A	C4-C5-C6	-6.35	113.82	117.00
21	AA	797	C	N3-C2-O2	-6.35	117.45	121.90
54	BA	2773	C	N3-C2-O2	-6.35	117.45	121.90
14	AO	53	ARG	NE-CZ-NH1	6.35	123.47	120.30
54	BA	1089	A	C4-C5-C6	-6.35	113.83	117.00
54	BA	1189	A	C4-C5-C6	-6.35	113.83	117.00
54	BA	1619	G	N3-C2-N2	-6.35	115.46	119.90
54	BA	1672	A	C4-C5-C6	-6.35	113.83	117.00
54	BA	2274	A	C4-C5-C6	-6.35	113.83	117.00
54	BA	2347	C	N3-C2-O2	-6.35	117.46	121.90
54	BA	2636	C	N3-C2-O2	-6.35	117.45	121.90
21	AA	845	A	C6-C5-N7	6.35	136.74	132.30
54	BA	815	C	N3-C2-O2	-6.35	117.46	121.90
15	AP	35	ARG	NE-CZ-NH1	6.35	123.47	120.30
45	BW	74	LYS	C-N-CA	6.35	137.56	121.70
54	BA	420	C	N3-C2-O2	-6.35	117.46	121.90
54	BA	951	C	N3-C2-O2	-6.35	117.46	121.90
54	BA	1299	G	O4'-C1'-N9	6.35	113.28	108.20
54	BA	2263	C	N3-C2-O2	-6.35	117.46	121.90
17	AR	52	ARG	NE-CZ-NH1	6.34	123.47	120.30
46	BX	44	ARG	NE-CZ-NH1	6.34	123.47	120.30
54	BA	94	A	N1-C6-N6	-6.34	114.79	118.60
54	BA	2861	U	O4'-C1'-N1	6.34	113.28	108.20
54	BA	903	C	N3-C2-O2	-6.34	117.46	121.90
2	AC	39	ARG	NE-CZ-NH1	6.34	123.47	120.30
21	AA	363	A	C4-C5-C6	-6.34	113.83	117.00
54	BA	2713	U	O4'-C1'-N1	6.34	113.27	108.20
3	AD	46	ARG	NE-CZ-NH1	6.34	123.47	120.30
21	AA	580	C	N3-C2-O2	-6.34	117.46	121.90
21	AA	1250	A	C4-C5-C6	-6.34	113.83	117.00
11	AL	30	ARG	NE-CZ-NH2	-6.34	117.13	120.30
21	AA	873	A	N1-C6-N6	-6.34	114.80	118.60
21	AA	968	A	N1-C6-N6	-6.34	114.80	118.60
54	BA	572	A	C4-C5-C6	-6.34	113.83	117.00
54	BA	610	C	N3-C2-O2	-6.34	117.46	121.90
21	AA	1101	A	C4-C5-C6	-6.34	113.83	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1137	C	N1-C2-O2	6.34	122.70	118.90
54	BA	1656	C	N3-C2-O2	-6.34	117.46	121.90
54	BA	2789	C	N3-C2-O2	-6.34	117.46	121.90
21	AA	116	A	C5-C6-N1	6.33	120.87	117.70
54	BA	238	C	N3-C2-O2	-6.33	117.47	121.90
21	AA	1204	A	C5-C6-N1	6.33	120.87	117.70
54	BA	337	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	1359	A	C4-C5-C6	-6.33	113.83	117.00
54	BA	1386	C	O4'-C1'-N1	6.33	113.27	108.20
54	BA	1495	A	C5-C6-N1	6.33	120.87	117.70
54	BA	1670	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	2512	C	N3-C2-O2	-6.33	117.47	121.90
21	AA	1389	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	84	A	O4'-C1'-N9	6.33	113.27	108.20
54	BA	2203	U	N3-C2-O2	-6.33	117.77	122.20
21	AA	316	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	1774	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	1378	A	O4'-C1'-N9	6.33	113.26	108.20
21	AA	1366	C	N3-C2-O2	-6.33	117.47	121.90
54	BA	644	A	C4-C5-C6	-6.33	113.84	117.00
21	AA	528	C	N3-C2-O2	-6.32	117.47	121.90
21	AA	635	A	C4-C5-C6	-6.32	113.84	117.00
21	AA	923	A	C4-C5-C6	-6.32	113.84	117.00
21	AA	1350	A	C5-C6-N1	6.32	120.86	117.70
54	BA	1565	C	N3-C2-O2	-6.32	117.47	121.90
21	AA	704	A	C5-C6-N1	6.32	120.86	117.70
21	AA	908	A	C5-C6-N1	6.32	120.86	117.70
21	AA	1254	A	C5-C6-N1	6.32	120.86	117.70
54	BA	302	C	N3-C2-O2	-6.32	117.47	121.90
54	BA	1211	C	N1-C2-O2	6.32	122.69	118.90
54	BA	1413	A	C5-C6-N1	6.32	120.86	117.70
54	BA	1548	A	C5-C6-N1	6.32	120.86	117.70
54	BA	1586	A	C4-C5-C6	-6.32	113.84	117.00
54	BA	2187	U	O4'-C1'-N1	6.32	113.26	108.20
54	BA	2395	C	N3-C2-O2	-6.32	117.48	121.90
54	BA	637	A	C4-C5-C6	-6.32	113.84	117.00
21	AA	723	U	N3-C2-O2	-6.32	117.78	122.20
21	AA	1413	A	C5-C6-N1	6.32	120.86	117.70
54	BA	38	A	C4-C5-C6	-6.32	113.84	117.00
21	AA	54	C	N3-C2-O2	-6.31	117.48	121.90
21	AA	1499	A	C4-C5-C6	-6.31	113.84	117.00
54	BA	1262	A	C4-C5-C6	-6.31	113.84	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	914	A	C4-C5-C6	-6.31	113.84	117.00
21	AA	1001	C	N3-C2-O2	-6.31	117.48	121.90
32	BJ	116	ARG	NE-CZ-NH1	6.31	123.46	120.30
33	BK	70	ARG	NE-CZ-NH1	6.31	123.46	120.30
54	BA	372	G	O4'-C1'-N9	6.31	113.25	108.20
54	BA	1902	C	N3-C2-O2	-6.31	117.48	121.90
54	BA	2720	U	O4'-C1'-N1	6.31	113.25	108.20
54	BA	2813	A	C4-C5-C6	-6.31	113.84	117.00
55	BB	114	C	N3-C2-O2	-6.31	117.48	121.90
21	AA	192	A	C5-C6-N1	6.31	120.86	117.70
54	BA	204	A	C4-C5-C6	-6.31	113.84	117.00
3	AD	69	ARG	NE-CZ-NH1	6.31	123.45	120.30
21	AA	135	C	N3-C2-O2	-6.31	117.48	121.90
21	AA	518	C	N3-C2-O2	-6.31	117.48	121.90
52	B3	12	ARG	NE-CZ-NH1	6.31	123.45	120.30
54	BA	1294	U	O4'-C1'-N1	6.31	113.25	108.20
21	AA	63	C	N3-C2-O2	-6.31	117.48	121.90
54	BA	616	A	C4-C5-C6	-6.31	113.85	117.00
54	BA	1974	C	N3-C2-O2	-6.31	117.48	121.90
54	BA	2527	C	N3-C2-O2	-6.31	117.48	121.90
55	BB	51	G	O4'-C1'-N9	6.31	113.25	108.20
21	AA	729	A	C4-C5-C6	-6.31	113.85	117.00
21	AA	631	C	N3-C2-O2	-6.30	117.49	121.90
21	AA	1311	A	C4-C5-C6	-6.30	113.85	117.00
54	BA	1908	C	O4'-C1'-N1	6.30	113.24	108.20
54	BA	2448	A	C4-C5-C6	-6.30	113.85	117.00
54	BA	2896	C	N3-C2-O2	-6.30	117.49	121.90
21	AA	948	C	N3-C2-O2	-6.30	117.49	121.90
54	BA	164	C	N3-C2-O2	-6.30	117.49	121.90
54	BA	2806	C	N3-C2-O2	-6.30	117.49	121.90
55	BB	80	U	O4'-C1'-N1	6.30	113.24	108.20
21	AA	1179	A	C4-C5-C6	-6.30	113.85	117.00
54	BA	458	G	O4'-C1'-N9	6.30	113.24	108.20
54	BA	1541	C	N3-C2-O2	-6.30	117.49	121.90
54	BA	1609	A	C1'-O4'-C4'	-6.30	104.86	109.90
27	BE	88	ARG	NE-CZ-NH1	6.30	123.45	120.30
21	AA	938	A	C4-C5-C6	-6.30	113.85	117.00
21	AA	1329	A	C4-C5-C6	-6.30	113.85	117.00
54	BA	1045	C	N3-C2-O2	-6.30	117.49	121.90
54	BA	2215	C	N3-C2-O2	-6.30	117.49	121.90
54	BA	2691	C	N3-C2-O2	-6.30	117.49	121.90
21	AA	182	A	C4-C5-C6	-6.29	113.85	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	624	C	N3-C2-O2	-6.29	117.50	121.90
21	AA	1131	G	N3-C2-N2	-6.29	115.49	119.90
54	BA	71	A	C4-C5-C6	-6.29	113.85	117.00
21	AA	910	C	N3-C2-O2	-6.29	117.50	121.90
25	BC	86	ARG	NE-CZ-NH1	6.29	123.45	120.30
54	BA	216	A	C4-C5-C6	-6.29	113.85	117.00
54	BA	946	C	N3-C2-O2	-6.29	117.50	121.90
54	BA	1419	A	C5-C6-N1	6.29	120.85	117.70
54	BA	1746	A	C5-C6-N1	6.29	120.85	117.70
54	BA	2043	C	N3-C2-O2	-6.29	117.50	121.90
54	BA	2829	A	C5-C6-N1	6.29	120.85	117.70
55	BB	104	A	C4-C5-C6	-6.29	113.86	117.00
54	BA	44	A	C5-C6-N1	6.29	120.84	117.70
21	AA	1171	A	C5-C6-N1	6.29	120.84	117.70
54	BA	1494	A	C4-C5-C6	-6.29	113.86	117.00
54	BA	2402	U	O4'-C1'-N1	6.29	113.23	108.20
54	BA	503	A	C4-C5-C6	-6.29	113.86	117.00
54	BA	1039	A	C4-C5-C6	-6.29	113.86	117.00
54	BA	1512	C	N3-C2-O2	-6.29	117.50	121.90
54	BA	2564	A	C4-C5-C6	-6.29	113.86	117.00
54	BA	2636	C	O4'-C1'-N1	6.29	113.23	108.20
54	BA	2825	G	N3-C2-N2	-6.29	115.50	119.90
21	AA	43	C	N3-C2-O2	-6.28	117.50	121.90
21	AA	177	G	O4'-C1'-N9	6.28	113.23	108.20
21	AA	536	C	N3-C2-O2	-6.28	117.50	121.90
21	AA	1216	A	C4-C5-C6	-6.28	113.86	117.00
54	BA	611	C	N3-C2-O2	-6.28	117.50	121.90
54	BA	2800	A	C5-C6-N1	6.28	120.84	117.70
54	BA	2818	U	O4'-C1'-N1	6.28	113.23	108.20
21	AA	262	A	C4-C5-C6	-6.28	113.86	117.00
21	AA	1243	C	N3-C2-O2	-6.28	117.50	121.90
22	A1	38	A	C4-C5-C6	-6.28	113.86	117.00
54	BA	1043	C	N3-C2-O2	-6.28	117.50	121.90
54	BA	1285	A	C5-C6-N1	6.28	120.84	117.70
54	BA	1571	A	C4-C5-C6	-6.28	113.86	117.00
54	BA	2006	C	N3-C2-O2	-6.28	117.50	121.90
55	BB	45	A	C4-C5-C6	-6.28	113.86	117.00
54	BA	624	C	N3-C2-O2	-6.28	117.50	121.90
54	BA	1564	C	N3-C2-O2	-6.28	117.50	121.90
2	AC	171	ARG	NE-CZ-NH1	6.28	123.44	120.30
21	AA	435	A	C4-C5-C6	-6.28	113.86	117.00
21	AA	1431	A	C4-C5-C6	-6.28	113.86	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	AP	70	ARG	NE-CZ-NH1	6.28	123.44	120.30
22	A1	31	C	N3-C2-O2	-6.28	117.51	121.90
54	BA	2179	C	N3-C2-O2	-6.28	117.51	121.90
54	BA	2368	C	O4'-C1'-N1	6.28	113.22	108.20
21	AA	1082	A	C4-C5-C6	-6.27	113.86	117.00
54	BA	1936	A	C4-C5-C6	-6.27	113.86	117.00
21	AA	58	C	N3-C2-O2	-6.27	117.51	121.90
21	AA	1028	C	N3-C2-O2	-6.27	117.51	121.90
21	AA	1346	A	C4-C5-C6	-6.27	113.86	117.00
54	BA	166	U	O4'-C1'-N1	6.27	113.22	108.20
54	BA	1986	C	N3-C2-O2	-6.27	117.51	121.90
54	BA	1053	C	N3-C2-O2	-6.27	117.51	121.90
21	AA	1437	A	C5-C6-N1	6.27	120.83	117.70
27	BE	79	ARG	NE-CZ-NH1	6.27	123.43	120.30
54	BA	165	A	C4-C5-C6	-6.27	113.87	117.00
54	BA	2199	A	C4-C5-C6	-6.27	113.87	117.00
21	AA	295	C	N3-C2-O2	-6.26	117.52	121.90
21	AA	74	A	C5-C6-N1	6.26	120.83	117.70
21	AA	461	A	C4-C5-C6	-6.26	113.87	117.00
54	BA	1158	C	N3-C2-O2	-6.26	117.52	121.90
54	BA	1773	A	C4-C5-C6	-6.26	113.87	117.00
55	BB	68	C	N3-C2-O2	-6.26	117.52	121.90
54	BA	800	A	C5-C6-N1	6.26	120.83	117.70
54	BA	2154	A	C4-C5-C6	-6.26	113.87	117.00
54	BA	2184	A	C5-C6-N1	6.26	120.83	117.70
54	BA	144	A	C4-C5-C6	-6.26	113.87	117.00
54	BA	1960	A	C4-C5-C6	-6.26	113.87	117.00
21	AA	1433	A	C4-C5-C6	-6.26	113.87	117.00
54	BA	1923	U	O4'-C1'-N1	6.26	113.21	108.20
54	BA	1977	A	C5-C6-N1	6.26	120.83	117.70
10	AK	68	ARG	NE-CZ-NH1	6.25	123.43	120.30
21	AA	611	C	N1-C2-O2	6.25	122.65	118.90
34	BL	60	ARG	NE-CZ-NH2	6.25	123.43	120.30
54	BA	1373	A	C5-C6-N1	6.25	120.83	117.70
54	BA	2278	A	C4-C5-C6	-6.25	113.87	117.00
21	AA	106	C	N3-C2-O2	-6.25	117.52	121.90
21	AA	664	G	O4'-C1'-N9	6.25	113.20	108.20
39	BQ	91	ARG	NE-CZ-NH2	-6.25	117.17	120.30
54	BA	1928	A	C4-C5-C6	-6.25	113.87	117.00
54	BA	2462	C	N3-C2-O2	-6.25	117.52	121.90
54	BA	2520	C	N3-C2-O2	-6.25	117.52	121.90
20	AU	30	GLU	C-N-CA	6.25	137.33	121.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	189	A	C4-C5-C6	-6.25	113.87	117.00
54	BA	2003	A	C5-C6-N1	6.25	120.83	117.70
55	BB	28	C	N3-C2-O2	-6.25	117.52	121.90
55	BB	66	A	C4-C5-C6	-6.25	113.87	117.00
54	BA	968	C	N3-C2-O2	-6.25	117.53	121.90
21	AA	269	C	N3-C2-O2	-6.25	117.53	121.90
54	BA	394	C	N3-C2-O2	-6.25	117.53	121.90
54	BA	1937	A	C5-C6-N1	6.25	120.82	117.70
6	AG	4	ARG	C-N-CA	6.25	137.31	121.70
21	AA	878	A	C4-C5-C6	-6.25	113.88	117.00
22	A1	48	C	N3-C2-O2	-6.25	117.53	121.90
54	BA	861	A	C4-C5-C6	-6.25	113.88	117.00
54	BA	1246	A	C4-C5-C6	-6.25	113.88	117.00
54	BA	2088	A	O4'-C1'-N9	6.25	113.20	108.20
54	BA	2264	C	N3-C2-O2	-6.25	117.53	121.90
54	BA	2482	A	C4-C5-C6	-6.25	113.88	117.00
54	BA	609	A	C4-C5-C6	-6.25	113.88	117.00
54	BA	2600	A	C4-C5-C6	-6.25	113.88	117.00
21	AA	706	A	C4-C5-C6	-6.24	113.88	117.00
21	AA	1510	C	N3-C2-O2	-6.24	117.53	121.90
54	BA	1322	A	C4-C5-C6	-6.24	113.88	117.00
21	AA	1330	U	O4'-C1'-N1	6.24	113.19	108.20
54	BA	1685	C	N3-C2-O2	-6.24	117.53	121.90
21	AA	681	A	C4-C5-C6	-6.24	113.88	117.00
21	AA	702	A	C4-C5-C6	-6.24	113.88	117.00
21	AA	860	A	C5-C6-N1	6.24	120.82	117.70
21	AA	1226	C	C5'-C4'-O4'	6.24	116.59	109.10
54	BA	325	G	N3-C2-N2	-6.24	115.53	119.90
54	BA	633	A	C4-C5-C6	-6.24	113.88	117.00
55	BB	69	G	N1-C6-O6	-6.24	116.16	119.90
21	AA	1400	C	N1-C2-O2	6.24	122.64	118.90
54	BA	861	A	C5-C6-N1	6.24	120.82	117.70
54	BA	1255	U	O4'-C1'-N1	6.24	113.19	108.20
54	BA	73	A	C4-C5-C6	-6.24	113.88	117.00
54	BA	415	A	C5-C6-N1	6.24	120.82	117.70
54	BA	1367	A	C4-C5-C6	-6.24	113.88	117.00
21	AA	108	G	N3-C2-N2	-6.24	115.54	119.90
54	BA	1057	A	C4-C5-C6	-6.24	113.88	117.00
54	BA	1386	C	N3-C2-O2	-6.24	117.53	121.90
54	BA	1748	C	N3-C2-O2	-6.24	117.54	121.90
54	BA	2539	C	N3-C2-O2	-6.24	117.54	121.90
54	BA	2662	A	C5-C6-N1	6.24	120.82	117.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	793	A	O4'-C1'-N9	6.23	113.19	108.20
54	BA	1746	A	C4-C5-C6	-6.23	113.88	117.00
21	AA	1225	A	C4-C5-C6	-6.23	113.88	117.00
54	BA	2060	A	C4-C5-C6	-6.23	113.88	117.00
21	AA	600	A	C5-C6-N1	6.23	120.82	117.70
21	AA	1213	A	C5-C6-N1	6.23	120.82	117.70
54	BA	1806	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	1924	C	N3-C2-O2	-6.23	117.54	121.90
21	AA	1408	A	N1-C6-N6	-6.23	114.86	118.60
54	BA	645	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	789	A	C4-C5-C6	-6.23	113.89	117.00
54	BA	823	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	845	A	C4-C5-C6	-6.23	113.89	117.00
54	BA	2071	A	C4-C5-C6	-6.23	113.89	117.00
21	AA	243	A	C4-C5-C6	-6.23	113.89	117.00
24	A3	45	A	C4-C5-C6	-6.23	113.89	117.00
54	BA	901	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	2837	A	C5-C6-N1	6.23	120.81	117.70
55	BB	71	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	69	C	N3-C2-O2	-6.23	117.54	121.90
54	BA	828	U	N3-C2-O2	-6.23	117.84	122.20
54	BA	832	U	O4'-C1'-N1	6.23	113.18	108.20
54	BA	2587	A	C5-C6-N1	6.23	120.81	117.70
21	AA	87	C	N3-C2-O2	-6.22	117.54	121.90
54	BA	677	A	C5-C6-N1	6.22	120.81	117.70
54	BA	1009	A	C4-C5-C6	-6.22	113.89	117.00
54	BA	1144	A	C4-C5-C6	-6.22	113.89	117.00
54	BA	1745	A	C4-C5-C6	-6.22	113.89	117.00
54	BA	1818	U	O4'-C1'-N1	6.22	113.18	108.20
24	A3	11	A	C4-C5-C6	-6.22	113.89	117.00
54	BA	22	C	N3-C2-O2	-6.22	117.55	121.90
54	BA	527	C	O4'-C1'-N1	6.22	113.18	108.20
21	AA	621	A	C5-C6-N1	6.22	120.81	117.70
21	AA	655	A	C4-C5-C6	-6.22	113.89	117.00
54	BA	2380	C	N3-C2-O2	-6.22	117.55	121.90
54	BA	2886	A	N1-C6-N6	-6.22	114.87	118.60
55	BB	60	C	N3-C2-O2	-6.22	117.55	121.90
21	AA	1184	G	N3-C2-N2	-6.22	115.55	119.90
54	BA	378	C	N3-C2-O2	-6.22	117.55	121.90
54	BA	1953	A	C4-C5-C6	-6.22	113.89	117.00
37	BO	102	ARG	NE-CZ-NH1	6.22	123.41	120.30
54	BA	680	C	N3-C2-O2	-6.22	117.55	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	795	C	N3-C2-O2	-6.22	117.55	121.90
54	BA	873	C	N3-C2-O2	-6.22	117.55	121.90
54	BA	2699	C	N3-C2-O2	-6.22	117.55	121.90
21	AA	618	C	N3-C2-O2	-6.21	117.55	121.90
21	AA	1398	A	C4-C5-C6	-6.21	113.89	117.00
54	BA	1319	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	1761	C	N1-C2-O2	6.21	122.63	118.90
54	BA	1919	A	C4-C5-C6	-6.21	113.89	117.00
54	BA	1998	A	C5-C6-N1	6.21	120.81	117.70
21	AA	1262	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	1668	A	C4-C5-C6	-6.21	113.89	117.00
35	BM	10	ARG	NE-CZ-NH1	6.21	123.41	120.30
54	BA	1164	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	2134	A	C4-C5-C6	-6.21	113.89	117.00
54	BA	2226	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	2463	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	2863	C	N3-C2-O2	-6.21	117.55	121.90
38	BP	87	ARG	NE-CZ-NH1	6.21	123.41	120.30
54	BA	91	A	O4'-C1'-N9	6.21	113.17	108.20
54	BA	2066	C	N3-C2-O2	-6.21	117.55	121.90
21	AA	1520	C	N3-C2-O2	-6.21	117.56	121.90
54	BA	203	A	C4-C5-C6	-6.21	113.90	117.00
54	BA	1072	C	N3-C2-O2	-6.21	117.55	121.90
54	BA	1109	C	N3-C2-O2	-6.21	117.56	121.90
54	BA	1971	U	O4'-C1'-N1	6.21	113.17	108.20
21	AA	996	A	N1-C6-N6	-6.21	114.88	118.60
29	BG	169	ARG	NE-CZ-NH1	6.21	123.40	120.30
54	BA	2706	A	C4-C5-C6	-6.21	113.90	117.00
54	BA	246	C	N3-C2-O2	-6.21	117.56	121.90
54	BA	1208	C	N3-C2-O2	-6.21	117.56	121.90
21	AA	1093	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	302	C	O4'-C1'-N1	6.20	113.16	108.20
54	BA	547	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1084	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1834	U	O4'-C1'-N1	6.20	113.16	108.20
54	BA	1895	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	2359	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	2850	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	817	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	1050	A	C4-C5-C6	-6.20	113.90	117.00
21	AA	459	A	N1-C6-N6	-6.20	114.88	118.60
21	AA	629	A	C4-C5-C6	-6.20	113.90	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	782	A	C5-C6-N1	6.20	120.80	117.70
21	AA	977	A	C4-C5-C6	-6.20	113.90	117.00
21	AA	1261	A	C5-C6-N1	6.20	120.80	117.70
54	BA	346	A	O4'-C1'-N9	6.20	113.16	108.20
54	BA	1353	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1952	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1982	U	C5'-C4'-O4'	6.20	116.54	109.10
21	AA	338	A	C5-C6-N1	6.20	120.80	117.70
54	BA	737	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	2362	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	79	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	1711	A	C5-C6-N1	6.20	120.80	117.70
54	BA	1838	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	478	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	693	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	878	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1092	C	N3-C2-O2	-6.20	117.56	121.90
54	BA	1387	A	C4-C5-C6	-6.20	113.90	117.00
54	BA	1694	C	N1-C2-O2	6.20	122.62	118.90
21	AA	290	C	N3-C2-O2	-6.19	117.56	121.90
21	AA	1149	C	N3-C2-O2	-6.19	117.56	121.90
54	BA	649	G	O4'-C1'-N9	6.19	113.16	108.20
54	BA	838	C	O4'-C1'-N1	6.19	113.16	108.20
54	BA	2117	A	O4'-C1'-N9	6.19	113.16	108.20
54	BA	885	C	O4'-C1'-N1	6.19	113.15	108.20
54	BA	2889	C	N3-C2-O2	-6.19	117.56	121.90
54	BA	1284	A	C4-C5-C6	-6.19	113.90	117.00
54	BA	1427	A	P-O3'-C3'	6.19	127.13	119.70
54	BA	1498	C	N3-C2-O2	-6.19	117.57	121.90
54	BA	2407	A	C5-C6-N1	6.19	120.80	117.70
21	AA	336	A	C4-C5-C6	-6.19	113.91	117.00
21	AA	414	A	C4-C5-C6	-6.19	113.91	117.00
54	BA	590	A	C5-C6-N1	6.19	120.80	117.70
54	BA	2062	A	C4-C5-C6	-6.19	113.91	117.00
21	AA	226	G	N3-C2-N2	-6.19	115.57	119.90
21	AA	1275	A	C5-C6-N1	6.19	120.79	117.70
54	BA	821	A	C5-C6-N1	6.19	120.79	117.70
54	BA	1169	A	C5-C6-N1	6.19	120.79	117.70
54	BA	1357	C	O4'-C1'-N1	6.19	113.15	108.20
54	BA	2773	C	O4'-C1'-N1	6.19	113.15	108.20
55	BB	99	A	N1-C6-N6	-6.19	114.89	118.60
54	BA	1532	A	C4-C5-C6	-6.19	113.91	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	264	C	N3-C2-O2	-6.18	117.57	121.90
21	AA	197	A	C4-C5-C6	-6.18	113.91	117.00
21	AA	490	C	N3-C2-O2	-6.18	117.57	121.90
54	BA	1771	C	N3-C2-O2	-6.18	117.57	121.90
54	BA	2350	C	N3-C2-O2	-6.18	117.57	121.90
21	AA	651	C	N3-C2-O2	-6.18	117.57	121.90
21	AA	839	C	N3-C2-O2	-6.18	117.57	121.90
36	BN	12	ARG	NE-CZ-NH1	6.18	123.39	120.30
54	BA	490	C	N1-C2-O2	6.18	122.61	118.90
4	AE	92	ARG	NE-CZ-NH1	6.18	123.39	120.30
54	BA	1611	C	N1-C2-O2	6.18	122.61	118.90
55	BB	94	A	C4-C5-C6	-6.18	113.91	117.00
21	AA	236	A	C4-C5-C6	-6.18	113.91	117.00
54	BA	211	C	O4'-C1'-N1	6.18	113.14	108.20
54	BA	1331	G	N1-C6-O6	-6.18	116.19	119.90
54	BA	1990	C	N3-C2-O2	-6.18	117.58	121.90
21	AA	285	C	N1-C2-O2	6.17	122.61	118.90
21	AA	371	A	C4-C5-C6	-6.17	113.91	117.00
54	BA	253	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	1104	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	1686	C	O4'-C1'-N1	6.17	113.14	108.20
54	BA	2340	A	C5-C6-N1	6.17	120.79	117.70
54	BA	2632	A	C4-C5-C6	-6.17	113.91	117.00
21	AA	400	C	N3-C2-O2	-6.17	117.58	121.90
21	AA	1046	A	C4-C5-C6	-6.17	113.91	117.00
54	BA	2900	A	C4-C5-C6	-6.17	113.91	117.00
21	AA	1466	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	2637	U	O4'-C1'-N1	6.17	113.14	108.20
55	BB	53	A	N1-C6-N6	-6.17	114.90	118.60
54	BA	1054	A	C4-C5-C6	-6.17	113.92	117.00
54	BA	1176	U	O4'-C1'-N1	6.17	113.14	108.20
54	BA	1615	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	2184	A	C4-C5-C6	-6.17	113.92	117.00
54	BA	2793	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	145	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	1302	A	C4-C5-C6	-6.17	113.92	117.00
21	AA	936	C	N3-C2-O2	-6.17	117.58	121.90
54	BA	1270	C	N3-C2-O2	-6.17	117.58	121.90
10	AK	12	ARG	NE-CZ-NH1	6.16	123.38	120.30
21	AA	143	A	C4-C5-C6	-6.16	113.92	117.00
21	AA	663	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	323	C	C1'-O4'-C4'	-6.16	104.97	109.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	196	A	O4'-C1'-N9	6.16	113.13	108.20
10	AK	121	ARG	NE-CZ-NH2	6.16	123.38	120.30
21	AA	77	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	172	A	C4-C5-C6	-6.16	113.92	117.00
21	AA	612	C	N3-C2-O2	-6.16	117.59	121.90
54	BA	343	C	N3-C2-O2	-6.16	117.59	121.90
54	BA	724	U	O4'-C1'-N1	6.16	113.13	108.20
54	BA	2787	C	N3-C2-O2	-6.16	117.59	121.90
21	AA	1428	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	227	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	581	C	N3-C2-O2	-6.16	117.59	121.90
54	BA	877	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	1175	A	C4-C5-C6	-6.16	113.92	117.00
54	BA	1999	C	N3-C2-O2	-6.16	117.59	121.90
21	AA	412	A	C4-C5-C6	-6.16	113.92	117.00
21	AA	1000	A	C5-C6-N1	6.16	120.78	117.70
54	BA	318	C	N3-C2-O2	-6.16	117.59	121.90
54	BA	1638	C	N3-C2-O2	-6.16	117.59	121.90
54	BA	1772	A	C5-C6-N1	6.16	120.78	117.70
54	BA	126	A	C4-C5-C6	-6.15	113.92	117.00
54	BA	1007	C	N3-C2-O2	-6.15	117.59	121.90
54	BA	1556	C	N3-C2-O2	-6.15	117.59	121.90
21	AA	18	C	N3-C2-O2	-6.15	117.59	121.90
21	AA	456	A	C4-C5-C6	-6.15	113.92	117.00
21	AA	507	C	N3-C2-O2	-6.15	117.59	121.90
21	AA	1293	C	N3-C2-O2	-6.15	117.59	121.90
54	BA	2078	C	N3-C2-O2	-6.15	117.59	121.90
54	BA	523	C	N3-C2-O2	-6.15	117.60	121.90
54	BA	800	A	C4-C5-C6	-6.15	113.93	117.00
54	BA	1397	U	O4'-C1'-N1	6.15	113.12	108.20
21	AA	339	C	N3-C2-O2	-6.15	117.60	121.90
54	BA	1008	A	C4-C5-C6	-6.15	113.93	117.00
54	BA	1674	G	O4'-C1'-N9	6.15	113.12	108.20
55	BB	47	C	N3-C2-O2	-6.15	117.60	121.90
54	BA	548	G	O4'-C1'-N9	6.15	113.12	108.20
21	AA	151	A	C4-C5-C6	-6.14	113.93	117.00
47	BY	7	ARG	NE-CZ-NH1	6.14	123.37	120.30
54	BA	482	A	C4-C5-C6	-6.14	113.93	117.00
54	BA	1866	A	C4-C5-C6	-6.14	113.93	117.00
22	A1	11	C	N1-C2-O2	6.14	122.59	118.90
21	AA	101	A	C4-C5-C6	-6.14	113.93	117.00
22	A1	74	C	N3-C2-O2	-6.14	117.60	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	346	A	C4-C5-C6	-6.14	113.93	117.00
54	BA	526	A	O4'-C1'-N9	6.14	113.11	108.20
54	BA	574	A	C1'-O4'-C4'	-6.14	104.99	109.90
54	BA	752	A	C4-C5-C6	-6.14	113.93	117.00
54	BA	1204	A	O4'-C1'-N9	6.14	113.11	108.20
54	BA	2332	C	N3-C2-O2	-6.14	117.60	121.90
54	BA	2760	C	N3-C2-O2	-6.14	117.60	121.90
21	AA	34	C	N3-C2-O2	-6.14	117.60	121.90
55	BB	46	A	C5-C6-N1	6.14	120.77	117.70
21	AA	382	A	C4-C5-C6	-6.14	113.93	117.00
21	AA	520	A	C4-C5-C6	-6.14	113.93	117.00
54	BA	723	C	N3-C2-O2	-6.13	117.61	121.90
54	BA	1644	C	N3-C2-O2	-6.13	117.61	121.90
54	BA	2715	C	N3-C2-O2	-6.13	117.61	121.90
21	AA	1197	A	C4-C5-C6	-6.13	113.93	117.00
55	BB	39	A	N1-C6-N6	-6.13	114.92	118.60
21	AA	393	A	C4-C5-C6	-6.13	113.93	117.00
21	AA	935	A	N1-C6-N6	-6.13	114.92	118.60
54	BA	652	U	O4'-C1'-N1	6.13	113.11	108.20
54	BA	1480	C	N3-C2-O2	-6.13	117.61	121.90
54	BA	1985	C	O4'-C1'-N1	6.13	113.11	108.20
54	BA	2077	A	C4-C5-C6	-6.13	113.93	117.00
54	BA	2766	A	C4-C5-C6	-6.13	113.94	117.00
54	BA	197	A	C4-C5-C6	-6.13	113.94	117.00
21	AA	572	A	C4-C5-C6	-6.13	113.94	117.00
54	BA	2800	A	C4-C5-C6	-6.13	113.94	117.00
21	AA	1267	C	N3-C2-O2	-6.13	117.61	121.90
54	BA	614	A	C4-C5-C6	-6.13	113.94	117.00
54	BA	2000	C	N3-C2-O2	-6.12	117.61	121.90
21	AA	284	C	N3-C2-O2	-6.12	117.61	121.90
22	A1	35	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	1605	C	N3-C2-O2	-6.12	117.61	121.90
54	BA	2119	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	2602	A	C1'-O4'-C4'	-6.12	105.00	109.90
21	AA	1333	A	C5-C6-N1	6.12	120.76	117.70
24	A3	68	C	N3-C2-O2	-6.12	117.61	121.90
54	BA	603	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	854	C	N3-C2-O2	-6.12	117.61	121.90
54	BA	1162	G	N1-C6-O6	-6.12	116.23	119.90
54	BA	1286	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	1579	A	C4-C5-C6	-6.12	113.94	117.00
30	BH	97	ARG	NE-CZ-NH1	6.12	123.36	120.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	66	C	N3-C2-O2	-6.12	117.62	121.90
54	BA	2678	C	O4'-C1'-N1	6.12	113.10	108.20
14	AO	76	ARG	NE-CZ-NH1	6.12	123.36	120.30
21	AA	743	A	N1-C6-N6	-6.12	114.93	118.60
54	BA	2205	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	2418	A	C4-C5-C6	-6.12	113.94	117.00
21	AA	1513	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	1342	A	C4-C5-C6	-6.12	113.94	117.00
54	BA	2465	C	N3-C2-O2	-6.12	117.62	121.90
1	AB	212	TYR	CB-CG-CD1	-6.11	117.33	121.00
54	BA	1595	C	N3-C2-O2	-6.11	117.62	121.90
54	BA	1879	C	N1-C2-O2	6.11	122.57	118.90
54	BA	2313	C	N3-C2-O2	-6.11	117.62	121.90
54	BA	1301	A	C4-C5-C6	-6.11	113.94	117.00
54	BA	1765	U	O4'-C1'-N1	6.11	113.09	108.20
21	AA	660	C	N3-C2-O2	-6.11	117.62	121.90
21	AA	1479	C	N3-C2-O2	-6.11	117.62	121.90
54	BA	931	U	C1'-O4'-C4'	-6.11	105.01	109.90
54	BA	995	C	N1-C2-O2	6.11	122.57	118.90
54	BA	2602	A	O4'-C1'-N9	6.11	113.09	108.20
8	AI	94	ARG	NE-CZ-NH1	6.11	123.36	120.30
21	AA	732	C	N3-C2-O2	-6.11	117.62	121.90
21	AA	1257	A	C4-C5-C6	-6.11	113.95	117.00
36	BN	69	ARG	NE-CZ-NH1	6.11	123.35	120.30
54	BA	2342	C	O4'-C1'-N1	6.11	113.09	108.20
21	AA	217	C	N3-C2-O2	-6.11	117.62	121.90
54	BA	1654	A	C4-C5-C6	-6.11	113.95	117.00
21	AA	575	G	N1-C6-O6	-6.11	116.24	119.90
24	A3	52	C	N3-C2-O2	-6.11	117.63	121.90
54	BA	804	A	C4-C5-C6	-6.11	113.95	117.00
54	BA	1551	A	C4-C5-C6	-6.11	113.95	117.00
54	BA	2052	A	C4-C5-C6	-6.11	113.95	117.00
21	AA	959	A	C4-C5-C6	-6.10	113.95	117.00
54	BA	141	G	N3-C2-N2	-6.10	115.63	119.90
54	BA	1920	C	N3-C2-O2	-6.10	117.63	121.90
54	BA	2448	A	O4'-C1'-N9	6.10	113.08	108.20
54	BA	896	A	C4-C5-C6	-6.10	113.95	117.00
54	BA	960	A	O4'-C1'-N9	6.10	113.08	108.20
54	BA	2336	A	O4'-C1'-N9	6.10	113.08	108.20
54	BA	2376	A	C4-C5-C6	-6.10	113.95	117.00
21	AA	930	C	N3-C2-O2	-6.10	117.63	121.90
21	AA	1524	C	N3-C2-O2	-6.10	117.63	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1111	A	C4-C5-C6	-6.10	113.95	117.00
54	BA	1706	C	N3-C2-O2	-6.10	117.63	121.90
54	BA	1894	C	N3-C2-O2	-6.10	117.63	121.90
55	BB	42	C	N3-C2-O2	-6.10	117.63	121.90
21	AA	241	G	C1'-O4'-C4'	-6.10	105.02	109.90
21	AA	1110	A	C4-C5-C6	-6.10	113.95	117.00
55	BB	29	A	C4-C5-C6	-6.10	113.95	117.00
21	AA	509	A	C4-C5-C6	-6.09	113.95	117.00
21	AA	983	A	C4-C5-C6	-6.09	113.95	117.00
54	BA	505	A	C4-C5-C6	-6.09	113.95	117.00
54	BA	670	A	C4-C5-C6	-6.09	113.95	117.00
54	BA	673	C	O4'-C1'-N1	6.09	113.08	108.20
54	BA	2792	A	C5-C6-N1	6.09	120.75	117.70
21	AA	1132	C	N1-C2-O2	6.09	122.56	118.90
21	AA	896	C	N3-C2-O2	-6.09	117.64	121.90
54	BA	1664	A	C5-C6-N1	6.09	120.75	117.70
54	BA	1247	A	C4-C5-C6	-6.09	113.96	117.00
21	AA	175	C	N3-C2-O2	-6.09	117.64	121.90
21	AA	238	A	N1-C6-N6	-6.09	114.95	118.60
54	BA	391	A	C4-C5-C6	-6.09	113.96	117.00
54	BA	422	A	C4-C5-C6	-6.09	113.96	117.00
54	BA	1822	C	N3-C2-O2	-6.09	117.64	121.90
25	BC	237	ARG	NE-CZ-NH1	6.09	123.34	120.30
26	BD	141	ARG	NE-CZ-NH1	6.09	123.34	120.30
54	BA	282	A	C4-C5-C6	-6.09	113.96	117.00
54	BA	515	A	C4-C5-C6	-6.09	113.96	117.00
54	BA	147	C	C1'-O4'-C4'	-6.08	105.03	109.90
54	BA	1783	A	C4-C5-C6	-6.08	113.96	117.00
54	BA	344	A	C4-C5-C6	-6.08	113.96	117.00
54	BA	2161	C	N3-C2-O2	-6.08	117.64	121.90
39	BQ	50	ARG	NE-CZ-NH1	6.08	123.34	120.30
21	AA	498	A	C4-C5-C6	-6.08	113.96	117.00
21	AA	1269	A	C4-C5-C6	-6.08	113.96	117.00
28	BF	91	ARG	NE-CZ-NH1	6.08	123.34	120.30
21	AA	209	U	N3-C2-O2	-6.08	117.95	122.20
21	AA	608	A	C5-C6-N1	6.08	120.74	117.70
21	AA	1320	C	C6-N1-C2	-6.08	117.87	120.30
54	BA	504	A	C4-C5-C6	-6.08	113.96	117.00
54	BA	965	C	N1-C2-O2	6.08	122.55	118.90
54	BA	1561	C	N3-C2-O2	-6.08	117.65	121.90
54	BA	2096	C	N3-C2-O2	-6.08	117.65	121.90
54	BA	2678	C	N3-C2-O2	-6.08	117.65	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2785	C	N3-C2-O2	-6.08	117.65	121.90
21	AA	452	A	C4-C5-C6	-6.07	113.96	117.00
21	AA	547	A	C4-C5-C6	-6.07	113.96	117.00
54	BA	1876	A	C4-C5-C6	-6.07	113.96	117.00
54	BA	2033	A	C4-C5-C6	-6.07	113.96	117.00
54	BA	2300	C	N3-C2-O2	-6.07	117.65	121.90
54	BA	2740	A	C4-C5-C6	-6.07	113.96	117.00
21	AA	1367	C	N3-C2-O2	-6.07	117.65	121.90
54	BA	146	A	C4-C5-C6	-6.07	113.97	117.00
54	BA	671	C	N3-C2-O2	-6.07	117.65	121.90
54	BA	905	A	N1-C6-N6	-6.07	114.96	118.60
55	BB	15	A	N1-C6-N6	-6.07	114.96	118.60
38	BP	38	ARG	NE-CZ-NH1	6.07	123.33	120.30
21	AA	539	A	C4-C5-C6	-6.07	113.97	117.00
21	AA	1344	C	N3-C2-O2	-6.07	117.65	121.90
21	AA	1352	C	N1-C2-O2	6.07	122.54	118.90
54	BA	1837	C	N3-C2-O2	-6.07	117.65	121.90
55	BB	4	C	O4'-C1'-N1	6.07	113.05	108.20
21	AA	525	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	1610	A	C4-C5-C6	-6.06	113.97	117.00
54	BA	819	A	C4-C5-C6	-6.06	113.97	117.00
54	BA	1552	A	O4'-C1'-N9	6.06	113.05	108.20
54	BA	1744	A	O4'-C1'-N9	6.06	113.05	108.20
54	BA	2054	A	C4-C5-C6	-6.06	113.97	117.00
54	BA	2890	G	N1-C6-O6	-6.06	116.26	119.90
54	BA	2158	A	C4-C5-C6	-6.06	113.97	117.00
54	BA	2268	A	C4-C5-C6	-6.06	113.97	117.00
21	AA	309	A	C4-C5-C6	-6.06	113.97	117.00
21	AA	687	A	C4-C5-C6	-6.06	113.97	117.00
21	AA	968	A	C1'-O4'-C4'	-6.06	105.05	109.90
54	BA	192	C	O4'-C1'-N1	6.06	113.05	108.20
54	BA	866	A	C5-C6-N1	6.06	120.73	117.70
54	BA	1488	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	1574	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	2143	C	N3-C2-O2	-6.06	117.66	121.90
21	AA	48	C	N1-C2-O2	6.06	122.53	118.90
21	AA	334	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	1156	A	C4-C5-C6	-6.06	113.97	117.00
54	BA	1376	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	1732	C	N3-C2-O2	-6.06	117.66	121.90
54	BA	2174	C	N3-C2-O2	-6.06	117.66	121.90
22	A1	62	C	C1'-O4'-C4'	-6.06	105.06	109.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BB	37	C	N3-C2-O2	-6.06	117.66	121.90
3	AD	103	ARG	NE-CZ-NH1	6.05	123.33	120.30
21	AA	116	A	C4-C5-C6	-6.05	113.97	117.00
21	AA	1097	C	N3-C2-O2	-6.05	117.66	121.90
21	AA	1448	C	N3-C2-O2	-6.05	117.66	121.90
54	BA	689	A	C4-C5-C6	-6.05	113.97	117.00
54	BA	1117	C	N3-C2-O2	-6.05	117.66	121.90
15	AP	5	ARG	NE-CZ-NH1	6.05	123.33	120.30
54	BA	47	C	N3-C2-O2	-6.05	117.66	121.90
54	BA	812	C	N3-C2-O2	-6.05	117.66	121.90
55	BB	77	U	O4'-C1'-N1	6.05	113.04	108.20
21	AA	999	C	N3-C2-O2	-6.05	117.67	121.90
46	BX	73	ARG	NE-CZ-NH1	6.05	123.32	120.30
54	BA	97	C	N3-C2-O2	-6.05	117.67	121.90
54	BA	1241	A	C4-C5-C6	-6.05	113.97	117.00
54	BA	2882	A	C4-C5-C6	-6.05	113.97	117.00
21	AA	473	U	O4'-C1'-N1	6.05	113.04	108.20
54	BA	793	A	C4-C5-C6	-6.05	113.98	117.00
54	BA	2805	C	N3-C2-O2	-6.05	117.67	121.90
54	BA	1995	U	O4'-C1'-N1	6.05	113.04	108.20
21	AA	990	C	N3-C2-O2	-6.04	117.67	121.90
21	AA	1162	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	13	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	787	C	N1-C2-O2	6.04	122.53	118.90
54	BA	1557	C	N3-C2-O2	-6.04	117.67	121.90
21	AA	456	A	C5-C6-N1	6.04	120.72	117.70
54	BA	1499	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	2742	G	O4'-C1'-N9	6.04	113.03	108.20
21	AA	28	A	C5-C6-N1	6.04	120.72	117.70
21	AA	1427	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	1328	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	1596	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	2273	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	2772	C	N3-C2-O2	-6.04	117.67	121.90
21	AA	972	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	668	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	1515	A	C4-C5-C6	-6.04	113.98	117.00
21	AA	71	A	C4-C5-C6	-6.04	113.98	117.00
21	AA	532	A	C4-C5-C6	-6.04	113.98	117.00
21	AA	737	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	28	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	961	C	O4'-C1'-N1	6.04	113.03	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	A3	3	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	1496	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	2051	A	C4-C5-C6	-6.04	113.98	117.00
54	BA	2538	C	N3-C2-O2	-6.04	117.67	121.90
54	BA	2672	U	O4'-C1'-N1	6.04	113.03	108.20
21	AA	877	G	N1-C6-O6	-6.04	116.28	119.90
54	BA	1499	C	O4'-C1'-N1	6.04	113.03	108.20
21	AA	621	A	C4-C5-C6	-6.03	113.98	117.00
54	BA	294	A	C4-C5-C6	-6.03	113.98	117.00
54	BA	324	A	N1-C6-N6	-6.03	114.98	118.60
54	BA	529	A	C4-C5-C6	-6.03	113.98	117.00
54	BA	967	U	O4'-C1'-N1	6.03	113.03	108.20
54	BA	1700	A	C4-C5-C6	-6.03	113.98	117.00
8	AI	40	ARG	NE-CZ-NH1	6.03	123.32	120.30
23	A2	91	A	N1-C6-N6	-6.03	114.98	118.60
24	A3	39	A	C4-C5-C6	-6.03	113.98	117.00
21	AA	10	A	C5-C6-N1	6.03	120.72	117.70
21	AA	23	C	N3-C2-O2	-6.03	117.68	121.90
22	A1	70	C	N3-C2-O2	-6.03	117.68	121.90
54	BA	152	A	C4-C5-C6	-6.03	113.98	117.00
54	BA	1493	C	N3-C2-O2	-6.03	117.68	121.90
54	BA	1419	A	N1-C6-N6	-6.03	114.98	118.60
55	BB	51	G	N1-C6-O6	-6.03	116.28	119.90
21	AA	306	A	N1-C6-N6	-6.03	114.98	118.60
54	BA	942	G	N3-C2-N2	-6.03	115.68	119.90
54	BA	989	G	C3'-C2'-C1'	6.03	106.32	101.50
54	BA	1170	C	N3-C2-O2	-6.03	117.68	121.90
54	BA	1652	A	C4-C5-C6	-6.03	113.99	117.00
54	BA	2165	C	N1-C2-O2	6.03	122.52	118.90
54	BA	2288	A	C4-C5-C6	-6.03	113.99	117.00
54	BA	454	A	C5-C6-N1	6.03	120.71	117.70
1	AB	73	ARG	NE-CZ-NH1	6.02	123.31	120.30
21	AA	720	C	N3-C2-O2	-6.02	117.68	121.90
31	BI	133	ARG	NE-CZ-NH1	6.02	123.31	120.30
54	BA	2055	C	N3-C2-O2	-6.02	117.68	121.90
21	AA	1213	A	C4-C5-C6	-6.02	113.99	117.00
24	A3	17	C	N3-C2-O2	-6.02	117.69	121.90
21	AA	916	U	O4'-C1'-N1	6.02	113.02	108.20
24	A3	9	G	N1-C6-O6	-6.02	116.29	119.90
54	BA	550	C	N1-C2-O2	6.02	122.51	118.90
54	BA	1508	A	C4-C5-C6	-6.02	113.99	117.00
54	BA	2368	C	N3-C2-O2	-6.02	117.69	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	120	A	C4-C5-C6	-6.02	113.99	117.00
54	BA	595	C	N3-C2-O2	-6.02	117.69	121.90
54	BA	1079	C	N3-C2-O2	-6.02	117.69	121.90
54	BA	1172	C	N3-C2-O2	-6.02	117.69	121.90
54	BA	1269	A	C4-C5-C6	-6.02	113.99	117.00
54	BA	2619	C	N3-C2-O2	-6.02	117.69	121.90
41	BS	11	ARG	NE-CZ-NH2	-6.02	117.29	120.30
21	AA	1172	C	N3-C2-O2	-6.01	117.69	121.90
22	A1	18	G	O4'-C1'-N9	6.01	113.01	108.20
45	BW	54	ARG	NE-CZ-NH1	6.01	123.31	120.30
54	BA	244	A	C5-C6-N1	6.01	120.71	117.70
54	BA	650	C	N3-C2-O2	-6.01	117.69	121.90
37	BO	81	ARG	NH1-CZ-NH2	-6.01	112.79	119.40
54	BA	574	A	C6-C5-N7	6.01	136.51	132.30
54	BA	919	U	O4'-C1'-N1	6.01	113.01	108.20
54	BA	2687	U	O4'-C1'-N1	6.01	113.01	108.20
21	AA	792	A	O4'-C1'-N9	6.01	113.01	108.20
54	BA	1912	A	O4'-C1'-N9	6.01	113.01	108.20
21	AA	397	A	C2-N3-C4	6.01	113.61	110.60
21	AA	1285	A	C4-C5-C6	-6.01	114.00	117.00
54	BA	455	C	N1-C2-O2	6.01	122.50	118.90
54	BA	2008	C	N3-C2-O2	-6.01	117.69	121.90
54	BA	2225	A	C4-C5-C6	-6.01	114.00	117.00
54	BA	2657	A	C4-C5-C6	-6.01	114.00	117.00
54	BA	1278	C	N3-C2-O2	-6.01	117.69	121.90
54	BA	2856	A	N1-C6-N6	-6.01	115.00	118.60
21	AA	443	C	N3-C2-O2	-6.01	117.69	121.90
54	BA	1113	U	O4'-C1'-N1	6.01	113.00	108.20
54	BA	1495	A	C4-C5-C6	-6.01	114.00	117.00
54	BA	2339	C	N3-C2-O2	-6.01	117.70	121.90
21	AA	192	A	C4-C5-C6	-6.00	114.00	117.00
21	AA	322	C	N3-C2-O2	-6.00	117.70	121.90
54	BA	52	A	C5-C6-N1	6.00	120.70	117.70
54	BA	833	A	C5-C6-N1	6.00	120.70	117.70
54	BA	1795	C	N3-C2-O2	-6.00	117.70	121.90
54	BA	2606	C	O4'-C1'-N1	6.00	113.00	108.20
54	BA	1947	C	N3-C2-O2	-6.00	117.70	121.90
54	BA	2565	A	C4-C5-C6	-6.00	114.00	117.00
54	BA	1590	A	C5-C6-N1	6.00	120.70	117.70
54	BA	2829	A	C4-C5-C6	-6.00	114.00	117.00
21	AA	1349	A	C5-C6-N1	6.00	120.70	117.70
21	AA	1360	A	C4-C5-C6	-6.00	114.00	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	22	C	C1'-O4'-C4'	-6.00	105.10	109.90
54	BA	2150	C	N3-C2-O2	-6.00	117.70	121.90
54	BA	2163	A	C4-C5-C6	-6.00	114.00	117.00
54	BA	2551	C	N3-C2-O2	-6.00	117.70	121.90
55	BB	49	C	N3-C2-O2	-6.00	117.70	121.90
55	BB	110	C	N3-C2-O2	-6.00	117.70	121.90
21	AA	1238	A	C4-C5-C6	-6.00	114.00	117.00
54	BA	1297	C	N3-C2-O2	-6.00	117.70	121.90
21	AA	1500	A	C5-C6-N1	5.99	120.70	117.70
54	BA	64	A	C4-C5-C6	-5.99	114.00	117.00
54	BA	2011	U	O4'-C1'-N1	5.99	113.00	108.20
54	BA	1899	A	N1-C6-N6	-5.99	115.00	118.60
54	BA	2428	G	O4'-C1'-N9	5.99	112.99	108.20
54	BA	994	C	N3-C2-O2	-5.99	117.71	121.90
54	BA	1540	G	O4'-C1'-N9	5.99	112.99	108.20
54	BA	1614	A	C4-C5-C6	-5.99	114.00	117.00
54	BA	2501	C	N3-C2-O2	-5.99	117.71	121.90
54	BA	2710	C	N3-C2-O2	-5.99	117.71	121.90
54	BA	205	G	N3-C4-C5	-5.99	125.61	128.60
54	BA	2227	A	N1-C6-N6	-5.99	115.01	118.60
5	AF	91	ARG	NE-CZ-NH1	5.99	123.29	120.30
40	BR	21	ARG	NE-CZ-NH1	5.99	123.29	120.30
54	BA	758	C	N3-C2-O2	-5.99	117.71	121.90
54	BA	1340	U	N3-C2-O2	-5.99	118.01	122.20
54	BA	278	A	N9-C1'-C2'	5.99	121.78	114.00
54	BA	1736	U	O4'-C1'-N1	5.99	112.99	108.20
54	BA	2802	G	N1-C6-O6	-5.99	116.31	119.90
54	BA	1323	C	N3-C2-O2	-5.98	117.71	121.90
21	AA	533	A	C4-C5-C6	-5.98	114.01	117.00
24	A3	69	C	N3-C2-O2	-5.98	117.71	121.90
54	BA	844	A	C4-C5-C6	-5.98	114.01	117.00
54	BA	1509	A	C4-C5-C6	-5.98	114.01	117.00
54	BA	1889	A	C4-C5-C6	-5.98	114.01	117.00
18	AS	78	THR	C-N-CA	5.98	136.65	121.70
21	AA	321	A	C4-C5-C6	-5.98	114.01	117.00
54	BA	1893	C	N3-C2-O2	-5.98	117.72	121.90
54	BA	384	A	C4-C5-C6	-5.98	114.01	117.00
54	BA	1385	A	C4-C5-C6	-5.98	114.01	117.00
21	AA	36	C	N3-C2-O2	-5.98	117.72	121.90
21	AA	195	A	N1-C6-N6	-5.98	115.01	118.60
54	BA	2202	U	O4'-C1'-N1	5.98	112.98	108.20
54	BA	747	U	N3-C2-O2	-5.97	118.02	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2507	C	N3-C2-O2	-5.97	117.72	121.90
16	AQ	26	ARG	NE-CZ-NH2	-5.97	117.31	120.30
54	BA	2283	C	N3-C2-O2	-5.97	117.72	121.90
54	BA	2359	C	O4'-C1'-N1	5.97	112.98	108.20
21	AA	190	A	C4-C5-C6	-5.97	114.01	117.00
22	A1	6	A	C5-C6-N1	5.97	120.69	117.70
21	AA	156	C	N3-C2-O2	-5.97	117.72	121.90
54	BA	76	C	N1-C2-O2	5.97	122.48	118.90
54	BA	165	A	C5-C6-N1	5.97	120.68	117.70
54	BA	532	A	C4-C5-C6	-5.97	114.02	117.00
54	BA	1121	C	N3-C2-O2	-5.97	117.72	121.90
54	BA	1531	C	N3-C2-O2	-5.97	117.72	121.90
54	BA	1927	A	C4-C5-C6	-5.97	114.02	117.00
54	BA	2749	A	C4-C5-C6	-5.97	114.02	117.00
21	AA	309	A	N1-C6-N6	-5.97	115.02	118.60
2	AC	87	ARG	NE-CZ-NH1	5.97	123.28	120.30
54	BA	1068	G	N1-C6-O6	-5.97	116.32	119.90
54	BA	1272	A	C4-C5-C6	-5.97	114.02	117.00
54	BA	1767	G	O4'-C1'-N9	5.97	112.97	108.20
21	AA	353	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	518	G	N1-C6-O6	-5.96	116.32	119.90
54	BA	1978	A	C4-C5-C6	-5.96	114.02	117.00
21	AA	199	A	C4-C5-C6	-5.96	114.02	117.00
21	AA	415	A	O4'-C1'-N9	5.96	112.97	108.20
54	BA	2500	U	C1'-O4'-C4'	-5.96	105.13	109.90
54	BA	2675	A	C4-C5-C6	-5.96	114.02	117.00
21	AA	385	C	N3-C2-O2	-5.96	117.73	121.90
21	AA	826	C	N3-C2-O2	-5.96	117.73	121.90
21	AA	899	C	N3-C2-O2	-5.96	117.73	121.90
54	BA	106	C	N3-C2-O2	-5.96	117.73	121.90
54	BA	526	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	2179	C	O4'-C1'-N1	5.96	112.97	108.20
27	BE	44	ARG	NE-CZ-NH1	5.96	123.28	120.30
21	AA	396	C	N3-C2-O2	-5.96	117.73	121.90
21	AA	1430	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	1461	C	N3-C2-O2	-5.96	117.73	121.90
54	BA	1787	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	2874	C	N3-C2-O2	-5.96	117.73	121.90
21	AA	933	G	N1-C6-O6	-5.96	116.33	119.90
21	AA	1508	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	2516	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	2461	A	C4-C5-C6	-5.96	114.02	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2530	A	C4-C5-C6	-5.96	114.02	117.00
54	BA	1109	C	N1-C2-O2	5.95	122.47	118.90
54	BA	1816	C	N1-C2-O2	5.95	122.47	118.90
54	BA	2815	C	O4'-C1'-N1	5.95	112.96	108.20
21	AA	1261	A	C4-C5-C6	-5.95	114.02	117.00
54	BA	2037	A	C5-C6-N1	5.95	120.68	117.70
54	BA	2067	G	P-O3'-C3'	5.95	126.84	119.70
54	BA	2626	C	N3-C2-O2	-5.95	117.73	121.90
2	AC	142	ARG	NE-CZ-NH1	5.95	123.28	120.30
21	AA	1192	C	N3-C2-O2	-5.95	117.73	121.90
21	AA	1447	A	C4-C5-C6	-5.95	114.03	117.00
54	BA	428	A	C4-C5-C6	-5.95	114.03	117.00
54	BA	1103	A	C4-C5-C6	-5.95	114.03	117.00
21	AA	1456	A	C4-C5-C6	-5.95	114.03	117.00
21	AA	749	A	C4-C5-C6	-5.95	114.03	117.00
54	BA	206	U	O4'-C1'-N1	5.95	112.96	108.20
54	BA	1906	G	N1-C6-O6	-5.95	116.33	119.90
21	AA	365	U	O4'-C1'-N1	5.94	112.96	108.20
39	BQ	57	ARG	NE-CZ-NH1	5.94	123.27	120.30
54	BA	2021	C	N1-C2-O2	5.94	122.47	118.90
21	AA	868	C	N3-C2-O2	-5.94	117.74	121.90
54	BA	305	C	N3-C2-O2	-5.94	117.74	121.90
54	BA	574	A	O4'-C1'-N9	5.94	112.95	108.20
21	AA	738	C	N3-C2-O2	-5.94	117.74	121.90
54	BA	160	A	C4-C5-C6	-5.94	114.03	117.00
54	BA	1874	C	N1-C2-O2	5.94	122.46	118.90
55	BB	118	C	N3-C2-O2	-5.94	117.74	121.90
21	AA	1357	A	C4-C5-C6	-5.94	114.03	117.00
25	BC	13	ARG	NE-CZ-NH1	5.94	123.27	120.30
46	BX	49	ARG	NE-CZ-NH1	5.94	123.27	120.30
35	BM	50	ARG	NE-CZ-NH1	5.94	123.27	120.30
54	BA	641	U	O4'-C1'-N1	5.94	112.95	108.20
54	BA	1808	A	C4-C5-C6	-5.94	114.03	117.00
54	BA	2273	A	N1-C6-N6	-5.94	115.04	118.60
54	BA	2761	A	C4-C5-C6	-5.94	114.03	117.00
21	AA	164	G	N3-C4-C5	-5.94	125.63	128.60
21	AA	600	A	C4-C5-C6	-5.93	114.03	117.00
27	BE	21	ARG	NE-CZ-NH1	5.93	123.27	120.30
54	BA	154	U	O4'-C1'-N1	5.93	112.95	108.20
54	BA	710	U	O4'-C1'-N1	5.93	112.95	108.20
54	BA	1119	U	O4'-C1'-N1	5.93	112.95	108.20
54	BA	1669	A	C4-C5-C6	-5.93	114.03	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	623	C	N3-C2-O2	-5.93	117.75	121.90
21	AA	1037	C	N3-C2-O2	-5.93	117.75	121.90
24	A3	37	U	O4'-C1'-N1	5.93	112.95	108.20
54	BA	147	C	O4'-C1'-N1	5.93	112.95	108.20
54	BA	1169	A	C4-C5-C6	-5.93	114.03	117.00
54	BA	1801	A	C4-C5-C6	-5.93	114.03	117.00
54	BA	2005	A	C4-C5-C6	-5.93	114.03	117.00
54	BA	1252	G	N1-C6-O6	-5.93	116.34	119.90
54	BA	2578	G	N1-C6-O6	-5.93	116.34	119.90
21	AA	1324	A	C4-C5-C6	-5.93	114.03	117.00
33	BK	18	ARG	NE-CZ-NH1	5.93	123.27	120.30
54	BA	840	C	N3-C2-O2	-5.93	117.75	121.90
54	BA	1073	A	C4-C5-C6	-5.93	114.03	117.00
54	BA	1966	A	C4-C5-C6	-5.93	114.03	117.00
54	BA	762	U	C1'-O4'-C4'	-5.93	105.16	109.90
54	BA	825	A	C4-C5-C6	-5.93	114.04	117.00
54	BA	2047	C	N3-C2-O2	-5.93	117.75	121.90
2	AC	130	ARG	NE-CZ-NH1	5.93	123.26	120.30
21	AA	535	A	C4-C5-C6	-5.93	114.04	117.00
21	AA	918	A	C4-C5-C6	-5.93	114.04	117.00
22	A1	21	A	C4-C5-C6	-5.93	114.04	117.00
54	BA	1172	C	O4'-C1'-N1	5.93	112.94	108.20
54	BA	2271	G	N1-C6-O6	-5.93	116.34	119.90
21	AA	176	C	N3-C2-O2	-5.92	117.75	121.90
54	BA	20	C	N3-C2-O2	-5.92	117.75	121.90
54	BA	460	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	1202	G	N3-C2-N2	-5.92	115.75	119.90
54	BA	1427	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	1507	C	N3-C2-O2	-5.92	117.75	121.90
55	BB	57	A	N1-C6-N6	-5.92	115.05	118.60
54	BA	130	C	N3-C2-O2	-5.92	117.75	121.90
54	BA	176	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	2746	U	O4'-C1'-N1	5.92	112.94	108.20
54	BA	2758	A	C4-C5-C6	-5.92	114.04	117.00
21	AA	483	C	N3-C2-O2	-5.92	117.76	121.90
54	BA	466	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	1764	C	N3-C2-O2	-5.92	117.76	121.90
35	BM	51	ARG	NE-CZ-NH1	5.92	123.26	120.30
54	BA	225	C	N3-C2-O2	-5.92	117.76	121.90
54	BA	2183	A	N1-C6-N6	-5.92	115.05	118.60
54	BA	2558	C	N3-C2-O2	-5.92	117.76	121.90
21	AA	1120	C	N3-C2-O2	-5.92	117.76	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1833	C	O4'-C1'-N1	5.92	112.93	108.20
54	BA	2721	A	C5-C6-N1	5.92	120.66	117.70
21	AA	183	C	N3-C2-O2	-5.92	117.76	121.90
54	BA	181	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	210	C	N3-C2-O2	-5.92	117.76	121.90
54	BA	1679	A	C4-C5-C6	-5.92	114.04	117.00
54	BA	2020	A	O4'-C1'-N9	5.92	112.93	108.20
21	AA	162	A	C4-C5-C6	-5.91	114.04	117.00
21	AA	205	A	C4-C5-C6	-5.91	114.04	117.00
21	AA	779	C	N3-C2-O2	-5.91	117.76	121.90
54	BA	900	A	C4-C5-C6	-5.91	114.04	117.00
54	BA	1064	C	N3-C2-O2	-5.91	117.76	121.90
54	BA	1426	G	O4'-C1'-N9	5.91	112.93	108.20
54	BA	1446	C	N1-C2-O2	5.91	122.45	118.90
54	BA	2884	U	O4'-C1'-N1	5.91	112.93	108.20
21	AA	234	C	P-O3'-C3'	5.91	126.80	119.70
21	AA	357	G	C3'-C2'-C1'	5.91	106.23	101.50
21	AA	599	C	N3-C2-O2	-5.91	117.76	121.90
21	AA	1111	A	C4-C5-C6	-5.91	114.05	117.00
22	A1	72	C	C5'-C4'-C3'	-5.91	106.54	116.00
42	BT	3	ARG	NE-CZ-NH2	5.91	123.26	120.30
54	BA	479	A	C5-C6-N1	5.91	120.66	117.70
54	BA	1226	A	C4-C5-C6	-5.91	114.04	117.00
54	BA	2103	C	N3-C2-O2	-5.91	117.76	121.90
54	BA	2738	A	C4-C5-C6	-5.91	114.05	117.00
21	AA	1016	A	C4-C5-C6	-5.91	114.05	117.00
54	BA	56	A	C4-C5-C6	-5.91	114.05	117.00
54	BA	587	C	C1'-O4'-C4'	-5.91	105.17	109.90
54	BA	965	C	C6-N1-C2	-5.91	117.94	120.30
54	BA	2497	A	C4-C5-C6	-5.91	114.05	117.00
21	AA	1208	C	N3-C2-O2	-5.91	117.77	121.90
21	AA	1134	G	N3-C2-N2	-5.91	115.77	119.90
54	BA	973	A	C4-C5-C6	-5.91	114.05	117.00
54	BA	1029	A	C4-C5-C6	-5.91	114.05	117.00
54	BA	1617	C	N1-C2-O2	5.91	122.44	118.90
8	AI	48	ARG	NE-CZ-NH2	-5.90	117.35	120.30
54	BA	1118	C	N1-C2-O2	5.90	122.44	118.90
54	BA	991	C	N3-C2-O2	-5.90	117.77	121.90
55	BB	34	A	C5-C6-N1	5.90	120.65	117.70
8	AI	105	ARG	NE-CZ-NH1	5.90	123.25	120.30
21	AA	566	G	N1-C6-O6	-5.90	116.36	119.90
54	BA	342	A	C6-C5-N7	5.90	136.43	132.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1070	A	C4-C5-C6	-5.90	114.05	117.00
54	BA	1114	C	N3-C2-O2	-5.90	117.77	121.90
21	AA	504	C	N3-C2-O2	-5.90	117.77	121.90
21	AA	607	A	C4-C5-C6	-5.90	114.05	117.00
21	AA	864	A	C5-C6-N1	5.90	120.65	117.70
21	AA	906	A	C4-C5-C6	-5.90	114.05	117.00
21	AA	982	U	P-O3'-C3'	5.90	126.78	119.70
21	AA	1363	A	O4'-C1'-N9	5.90	112.92	108.20
21	AA	1374	A	C4-C5-C6	-5.90	114.05	117.00
54	BA	507	A	C4-C5-C6	-5.90	114.05	117.00
54	BA	1489	C	O4'-C1'-N1	5.90	112.92	108.20
55	BB	63	C	N3-C2-O2	-5.90	117.77	121.90
21	AA	477	C	N3-C2-O2	-5.90	117.77	121.90
54	BA	1127	A	C4-C5-C6	-5.90	114.05	117.00
21	AA	949	A	N1-C6-N6	-5.89	115.06	118.60
54	BA	2037	A	C4-C5-C6	-5.89	114.05	117.00
17	AR	42	ARG	NE-CZ-NH1	5.89	123.25	120.30
21	AA	576	C	N1-C2-O2	5.89	122.44	118.90
54	BA	627	A	C4-C5-C6	-5.89	114.05	117.00
54	BA	1221	C	O4'-C1'-N1	5.89	112.91	108.20
54	BA	1938	A	C4-C5-C6	-5.89	114.05	117.00
55	BB	96	G	N1-C6-O6	-5.89	116.36	119.90
21	AA	1245	C	N3-C2-O2	-5.89	117.78	121.90
54	BA	198	C	N3-C2-O2	-5.89	117.78	121.90
54	BA	685	A	C4-C5-C6	-5.89	114.06	117.00
21	AA	465	A	C4-C5-C6	-5.89	114.06	117.00
21	AA	503	C	N3-C2-O2	-5.89	117.78	121.90
54	BA	1917	U	O4'-C1'-N1	5.89	112.91	108.20
54	BA	2476	A	C4-C5-C6	-5.89	114.06	117.00
21	AA	1227	A	C4-C5-C6	-5.89	114.06	117.00
54	BA	22	C	O4'-C1'-N1	5.89	112.91	108.20
54	BA	335	C	N3-C2-O2	-5.89	117.78	121.90
54	BA	886	A	C4-C5-C6	-5.89	114.06	117.00
54	BA	2232	C	N3-C2-O2	-5.89	117.78	121.90
54	BA	2835	A	C4-C5-C6	-5.89	114.06	117.00
21	AA	912	C	N3-C2-O2	-5.88	117.78	121.90
54	BA	231	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	922	C	N3-C2-O2	-5.88	117.78	121.90
54	BA	1479	G	O4'-C1'-N9	5.88	112.91	108.20
54	BA	1969	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	2883	A	C4-C5-C6	-5.88	114.06	117.00
21	AA	1248	A	C4-C5-C6	-5.88	114.06	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	565	C	N3-C2-O2	-5.88	117.78	121.90
12	AM	112	ARG	NE-CZ-NH1	5.88	123.24	120.30
21	AA	873	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	2051	A	C3'-C2'-C1'	5.88	106.20	101.50
54	BA	2328	A	C5-C6-N1	5.88	120.64	117.70
55	BB	36	C	N1-C2-O2	5.88	122.43	118.90
55	BB	82	U	P-O3'-C3'	5.88	126.76	119.70
21	AA	729	A	O4'-C1'-N9	5.88	112.90	108.20
21	AA	901	A	C5-C6-N1	5.88	120.64	117.70
21	AA	909	A	C4-C5-C6	-5.88	114.06	117.00
21	AA	931	C	N3-C2-O2	-5.88	117.78	121.90
21	AA	1069	C	N1-C2-O2	5.88	122.43	118.90
54	BA	336	C	N3-C2-O2	-5.88	117.79	121.90
54	BA	1305	C	O4'-C1'-N1	5.88	112.90	108.20
54	BA	1477	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	1690	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	2506	U	O4'-C1'-N1	5.88	112.90	108.20
54	BA	2870	C	N3-C2-O2	-5.88	117.79	121.90
21	AA	649	A	C4-C5-C6	-5.88	114.06	117.00
54	BA	116	C	N3-C2-O2	-5.88	117.79	121.90
21	AA	169	C	C1'-O4'-C4'	-5.88	105.20	109.90
21	AA	340	U	O4'-C1'-N1	5.88	112.90	108.20
54	BA	2871	U	O4'-C1'-N1	5.88	112.90	108.20
5	AF	44	ARG	NE-CZ-NH1	5.87	123.24	120.30
15	AP	25	ARG	NE-CZ-NH1	5.87	123.24	120.30
54	BA	57	C	N3-C2-O2	-5.87	117.79	121.90
54	BA	587	C	C3'-C2'-C1'	-5.87	96.80	101.50
54	BA	1762	A	C4-C5-C6	-5.87	114.06	117.00
54	BA	2094	A	C5-C6-N1	5.87	120.64	117.70
54	BA	2099	U	N3-C2-O2	-5.87	118.09	122.20
54	BA	2872	A	C4-C5-C6	-5.87	114.06	117.00
21	AA	467	U	N3-C2-O2	-5.87	118.09	122.20
21	AA	640	A	C4-C5-C6	-5.87	114.06	117.00
54	BA	1234	U	O4'-C1'-N1	5.87	112.90	108.20
54	BA	2369	A	C6-C5-N7	5.87	136.41	132.30
14	AO	16	ARG	NE-CZ-NH1	5.87	123.23	120.30
21	AA	897	C	N3-C2-O2	-5.87	117.79	121.90
21	AA	1160	G	O4'-C1'-N9	5.87	112.89	108.20
54	BA	217	A	N1-C6-N6	-5.87	115.08	118.60
54	BA	1315	C	N3-C2-O2	-5.87	117.79	121.90
54	BA	2745	C	N3-C2-O2	-5.87	117.79	121.90
54	BA	1079	C	O4'-C1'-N1	5.87	112.89	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	451	A	C4-C5-C6	-5.87	114.07	117.00
21	AA	743	A	C4-C5-C6	-5.87	114.07	117.00
24	A3	40	C	N1-C2-O2	5.87	122.42	118.90
24	A3	42	C	N1-C2-O2	5.87	122.42	118.90
54	BA	2036	C	N3-C2-O2	-5.87	117.79	121.90
54	BA	2014	A	C4-C5-C6	-5.86	114.07	117.00
54	BA	2860	A	C4-C5-C6	-5.86	114.07	117.00
54	BA	1096	A	C6-C5-N7	5.86	136.40	132.30
54	BA	2045	C	N3-C2-O2	-5.86	117.80	121.90
54	BA	13	A	C5-C6-N1	5.86	120.63	117.70
54	BA	96	C	N3-C2-O2	-5.86	117.80	121.90
54	BA	974	G	O4'-C1'-N9	5.86	112.89	108.20
54	BA	1727	C	N3-C2-O2	-5.86	117.80	121.90
54	BA	2845	U	O4'-C1'-N1	5.86	112.89	108.20
21	AA	99	C	N3-C2-O2	-5.86	117.80	121.90
21	AA	1129	C	N3-C2-O2	-5.86	117.80	121.90
54	BA	1505	A	C4-C5-C6	-5.86	114.07	117.00
54	BA	1957	C	N3-C2-O2	-5.86	117.80	121.90
21	AA	40	C	N3-C2-O2	-5.85	117.80	121.90
21	AA	1130	A	C5-C6-N1	5.85	120.63	117.70
21	AA	1462	C	N3-C2-O2	-5.85	117.80	121.90
54	BA	115	C	N3-C2-O2	-5.85	117.80	121.90
23	A2	79	A	O4'-C1'-N9	5.85	112.88	108.20
46	BX	26	ARG	NE-CZ-NH1	5.85	123.23	120.30
54	BA	87	U	O4'-C1'-N1	5.85	112.88	108.20
54	BA	1133	A	C4-C5-C6	-5.85	114.07	117.00
54	BA	1323	C	O4'-C1'-N1	5.85	112.88	108.20
54	BA	2726	A	C4-C5-C6	-5.85	114.07	117.00
21	AA	493	A	C3'-C2'-C1'	5.85	106.18	101.50
54	BA	1934	C	N3-C2-O2	-5.85	117.80	121.90
55	BB	58	A	C4-C5-C6	-5.85	114.07	117.00
21	AA	715	A	C4-C5-C6	-5.85	114.08	117.00
24	A3	16	C	N1-C2-O2	5.85	122.41	118.90
25	BC	188	ARG	NE-CZ-NH1	5.85	123.22	120.30
54	BA	353	C	N3-C2-O2	-5.85	117.81	121.90
54	BA	893	C	N3-C2-O2	-5.85	117.81	121.90
54	BA	1891	G	N3-C2-N2	-5.85	115.81	119.90
54	BA	2245	U	O4'-C1'-N1	5.85	112.88	108.20
21	AA	488	C	N3-C2-O2	-5.85	117.81	121.90
21	AA	787	A	C5-C6-N1	5.85	120.62	117.70
21	AA	1345	U	N3-C2-O2	-5.85	118.11	122.20
54	BA	417	C	N3-C2-O2	-5.85	117.81	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	472	A	C4-C5-C6	-5.85	114.08	117.00
54	BA	1001	A	C4-C5-C6	-5.85	114.08	117.00
54	BA	1209	U	O4'-C1'-N1	5.85	112.88	108.20
54	BA	1289	C	N3-C2-O2	-5.85	117.81	121.90
54	BA	1810	A	C4-C5-C6	-5.85	114.08	117.00
54	BA	2084	C	N3-C2-O2	-5.85	117.81	121.90
54	BA	366	C	O4'-C1'-N1	5.85	112.88	108.20
54	BA	716	A	C4-C5-C6	-5.85	114.08	117.00
54	BA	1431	A	O4'-C1'-N9	5.85	112.88	108.20
55	BB	92	C	N3-C2-O2	-5.85	117.81	121.90
21	AA	1035	A	C4-C5-C6	-5.84	114.08	117.00
21	AA	1051	C	N3-C2-O2	-5.84	117.81	121.90
21	AA	1285	A	C5-C6-N1	5.84	120.62	117.70
54	BA	1243	C	N3-C2-O2	-5.84	117.81	121.90
54	BA	2322	A	C4-C5-C6	-5.84	114.08	117.00
55	BB	50	A	C5-C6-N1	5.84	120.62	117.70
21	AA	351	G	O4'-C1'-N9	5.84	112.87	108.20
21	AA	927	G	O4'-C1'-N9	5.84	112.87	108.20
54	BA	718	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	1439	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	1965	C	O4'-C1'-N1	5.84	112.87	108.20
54	BA	2424	C	N3-C2-O2	-5.84	117.81	121.90
54	BA	2741	A	C4-C5-C6	-5.84	114.08	117.00
21	AA	608	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	1550	C	N3-C2-O2	-5.84	117.81	121.90
54	BA	2478	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	2820	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	1653	G	N1-C6-O6	-5.84	116.40	119.90
54	BA	2251	G	N3-C2-N2	-5.84	115.81	119.90
54	BA	2287	A	C2-N3-C4	5.84	113.52	110.60
21	AA	1289	A	C4-C5-C6	-5.84	114.08	117.00
54	BA	957	C	N3-C2-O2	-5.84	117.81	121.90
54	BA	2335	A	C5-C6-N1	5.84	120.62	117.70
54	BA	430	A	C6-C5-N7	5.83	136.38	132.30
54	BA	1410	G	O4'-C1'-N9	5.83	112.87	108.20
54	BA	1881	C	N3-C2-O2	-5.83	117.81	121.90
54	BA	2517	C	N3-C2-O2	-5.83	117.82	121.90
21	AA	164	G	O4'-C1'-N9	5.83	112.87	108.20
21	AA	429	U	P-O3'-C3'	5.83	126.70	119.70
44	BV	18	ARG	NE-CZ-NH1	5.83	123.22	120.30
54	BA	111	A	C4-C5-C6	-5.83	114.08	117.00
54	BA	2108	A	C4-C5-C6	-5.83	114.08	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2319	G	O4'-C1'-N9	5.83	112.87	108.20
54	BA	2788	C	N3-C2-O2	-5.83	117.82	121.90
21	AA	210	C	N1-C2-O2	5.83	122.40	118.90
54	BA	393	C	N3-C2-O2	-5.83	117.82	121.90
54	BA	1395	A	C4-C5-C6	-5.83	114.08	117.00
54	BA	1637	A	C5-C6-N1	5.83	120.62	117.70
21	AA	1359	C	N3-C2-O2	-5.83	117.82	121.90
21	AA	1443	C	N3-C2-O2	-5.83	117.82	121.90
21	AA	493	A	C4-C5-C6	-5.83	114.09	117.00
21	AA	1252	A	C4-C5-C6	-5.83	114.09	117.00
22	A1	27	C	N3-C2-O2	-5.83	117.82	121.90
54	BA	928	A	C4-C5-C6	-5.83	114.09	117.00
54	BA	1006	C	N3-C2-O2	-5.83	117.82	121.90
54	BA	1052	C	N3-C2-O2	-5.83	117.82	121.90
54	BA	1221	C	N3-C2-O2	-5.83	117.82	121.90
54	BA	2039	U	O4'-C1'-N1	5.83	112.86	108.20
21	AA	790	A	C4-C5-C6	-5.83	114.09	117.00
54	BA	310	A	C4-C5-C6	-5.83	114.09	117.00
54	BA	2108	A	C5-C6-N1	5.83	120.61	117.70
54	BA	2572	A	C4-C5-C6	-5.83	114.09	117.00
54	BA	643	A	C3'-C2'-C1'	5.83	106.16	101.50
54	BA	992	C	N3-C2-O2	-5.83	117.82	121.90
21	AA	366	A	C4-C5-C6	-5.82	114.09	117.00
21	AA	452	A	C5-C6-N1	5.82	120.61	117.70
21	AA	1388	C	N3-C2-O2	-5.82	117.82	121.90
54	BA	2540	C	N3-C2-O2	-5.82	117.82	121.90
21	AA	87	C	C1'-O4'-C4'	-5.82	105.24	109.90
54	BA	600	G	N1-C6-O6	-5.82	116.41	119.90
54	BA	1261	C	N3-C2-O2	-5.82	117.83	121.90
54	BA	2206	C	N3-C2-O2	-5.82	117.83	121.90
54	BA	2328	A	C4-C5-C6	-5.82	114.09	117.00
55	BB	30	C	N3-C2-O2	-5.82	117.83	121.90
55	BB	89	U	N3-C2-O2	-5.82	118.13	122.20
21	AA	357	G	O4'-C1'-N9	5.82	112.85	108.20
22	A1	65	C	N3-C2-O2	-5.82	117.83	121.90
24	A3	7	G	O4'-C1'-N9	5.82	112.85	108.20
27	BE	69	ARG	NE-CZ-NH1	5.82	123.21	120.30
54	BA	516	C	O4'-C1'-N1	5.82	112.86	108.20
54	BA	810	U	O4'-C1'-N1	5.82	112.85	108.20
54	BA	2117	A	C4-C5-C6	-5.82	114.09	117.00
54	BA	2602	A	C4-C5-C6	-5.82	114.09	117.00
21	AA	1306	A	C4-C5-C6	-5.82	114.09	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2074	U	O4'-C1'-N1	5.82	112.85	108.20
54	BA	2150	C	O4'-C1'-N1	5.82	112.85	108.20
54	BA	2752	C	N3-C2-O2	-5.82	117.83	121.90
21	AA	52	C	N3-C2-O2	-5.81	117.83	121.90
21	AA	1139	G	N3-C2-N2	-5.81	115.83	119.90
22	A1	23	A	C4-C5-C6	-5.81	114.09	117.00
34	BL	48	ARG	NE-CZ-NH1	5.81	123.21	120.30
11	AL	82	ARG	NE-CZ-NH2	-5.81	117.39	120.30
54	BA	2397	G	N1-C6-O6	-5.81	116.41	119.90
21	AA	1288	A	C4-C5-C6	-5.81	114.09	117.00
21	AA	1476	A	C4-C5-C6	-5.81	114.09	117.00
24	A3	72	C	C3'-C2'-C1'	-5.81	96.85	101.50
28	BF	177	ARG	NE-CZ-NH2	5.81	123.20	120.30
54	BA	1925	C	N3-C2-O2	-5.81	117.83	121.90
54	BA	2579	C	N1-C2-O2	5.81	122.39	118.90
54	BA	666	A	C6-C5-N7	5.81	136.37	132.30
54	BA	980	A	C4-C5-C6	-5.81	114.10	117.00
54	BA	2044	C	N3-C2-O2	-5.81	117.83	121.90
21	AA	723	U	O4'-C1'-N1	5.81	112.85	108.20
22	A1	69	A	C4-C5-C6	-5.81	114.10	117.00
54	BA	510	C	N3-C2-O2	-5.81	117.83	121.90
54	BA	772	C	N3-C2-O2	-5.81	117.83	121.90
54	BA	1994	C	N3-C2-O2	-5.81	117.83	121.90
54	BA	2050	C	N3-C2-O2	-5.81	117.83	121.90
21	AA	7	A	C4-C5-C6	-5.81	114.10	117.00
21	AA	44	A	C5-C6-N1	5.81	120.60	117.70
21	AA	995	C	N3-C2-O2	-5.80	117.84	121.90
54	BA	1132	U	P-O3'-C3'	5.80	126.67	119.70
54	BA	2335	A	C4-C5-C6	-5.80	114.10	117.00
54	BA	2655	G	N1-C6-O6	-5.80	116.42	119.90
54	BA	2681	C	N3-C2-O2	-5.80	117.84	121.90
13	AN	41	ARG	NE-CZ-NH1	5.80	123.20	120.30
21	AA	474	G	N1-C6-O6	-5.80	116.42	119.90
21	AA	768	A	C4-C5-C6	-5.80	114.10	117.00
21	AA	1475	G	N3-C2-N2	-5.80	115.84	119.90
54	BA	2653	U	O4'-C1'-N1	5.80	112.84	108.20
22	A1	60	C	N3-C2-O2	-5.80	117.84	121.90
21	AA	1218	C	N1-C2-O2	5.80	122.38	118.90
54	BA	5	A	C4-C5-C6	-5.80	114.10	117.00
54	BA	177	G	N1-C6-O6	-5.80	116.42	119.90
54	BA	806	C	C1'-O4'-C4'	-5.80	105.26	109.90
54	BA	811	U	O4'-C1'-N1	5.80	112.84	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	890	C	N1-C2-O2	5.80	122.38	118.90
54	BA	2473	U	N3-C2-O2	-5.80	118.14	122.20
21	AA	675	A	C4-C5-C6	-5.79	114.10	117.00
54	BA	63	A	C4-C5-C6	-5.79	114.10	117.00
54	BA	1129	A	C4-C5-C6	-5.79	114.10	117.00
54	BA	1905	C	N3-C2-O2	-5.79	117.84	121.90
21	AA	98	A	C5-C6-N1	5.79	120.60	117.70
21	AA	622	A	C4-C5-C6	-5.79	114.10	117.00
52	B3	39	ARG	NE-CZ-NH1	5.79	123.20	120.30
54	BA	82	U	O4'-C1'-N1	5.79	112.83	108.20
54	BA	2496	C	N1-C2-O2	5.79	122.38	118.90
21	AA	397	A	C4-C5-C6	-5.79	114.10	117.00
21	AA	1183	U	O4'-C1'-N1	5.79	112.83	108.20
21	AA	1480	A	C4-C5-C6	-5.79	114.11	117.00
54	BA	316	C	O4'-C1'-N1	5.79	112.83	108.20
54	BA	418	C	N3-C2-O2	-5.79	117.85	121.90
54	BA	741	U	O4'-C1'-N1	5.79	112.83	108.20
54	BA	2172	U	O4'-C1'-N1	5.79	112.83	108.20
54	BA	2336	A	C4-C5-C6	-5.79	114.11	117.00
21	AA	228	A	C4-C5-C6	-5.79	114.11	117.00
54	BA	2135	A	C4-C5-C6	-5.79	114.11	117.00
54	BA	404	A	C4-C5-C6	-5.79	114.11	117.00
54	BA	672	C	N3-C2-O2	-5.79	117.85	121.90
54	BA	1941	C	N1-C2-O2	5.79	122.37	118.90
55	BB	90	C	O4'-C1'-N1	5.79	112.83	108.20
54	BA	192	C	N3-C2-O2	-5.79	117.85	121.90
54	BA	679	C	N3-C2-O2	-5.79	117.85	121.90
54	BA	2260	C	N3-C2-O2	-5.79	117.85	121.90
54	BA	2366	A	C4-C5-C6	-5.79	114.11	117.00
54	BA	1069	A	C4-C5-C6	-5.78	114.11	117.00
54	BA	2512	C	O4'-C1'-N1	5.78	112.83	108.20
54	BA	2658	C	N3-C2-O2	-5.78	117.85	121.90
21	AA	1203	C	N1-C2-O2	5.78	122.37	118.90
21	AA	441	A	C4-C5-C6	-5.78	114.11	117.00
21	AA	689	C	N3-C2-O2	-5.78	117.85	121.90
22	A1	72	C	N1-C2-O2	5.78	122.37	118.90
54	BA	19	A	N1-C6-N6	-5.78	115.13	118.60
54	BA	590	A	C4-C5-C6	-5.78	114.11	117.00
54	BA	853	C	N3-C2-O2	-5.78	117.85	121.90
54	BA	2425	A	P-O3'-C3'	5.78	126.64	119.70
21	AA	195	A	C4-C5-C6	-5.78	114.11	117.00
54	BA	1590	A	C4-C5-C6	-5.78	114.11	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BB	4	C	N3-C2-O2	-5.78	117.86	121.90
21	AA	51	A	C4-C5-C6	-5.78	114.11	117.00
54	BA	1451	C	P-O3'-C3'	5.78	126.63	119.70
54	BA	1829	A	C4-C5-C6	-5.78	114.11	117.00
21	AA	945	G	N3-C4-C5	-5.78	125.71	128.60
21	AA	1044	A	C4-C5-C6	-5.78	114.11	117.00
21	AA	1201	A	C4-C5-C6	-5.78	114.11	117.00
54	BA	673	C	N3-C2-O2	-5.78	117.86	121.90
54	BA	694	U	N3-C2-O2	-5.78	118.16	122.20
54	BA	2809	A	C4-C5-C6	-5.78	114.11	117.00
21	AA	1210	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	660	C	N1-C2-O2	5.77	122.36	118.90
54	BA	1134	A	C4-C5-C6	-5.77	114.11	117.00
54	BA	661	A	C4-C5-C6	-5.77	114.11	117.00
54	BA	2096	C	O4'-C1'-N1	5.77	112.82	108.20
54	BA	2743	U	O4'-C1'-N1	5.77	112.82	108.20
21	AA	250	A	C4-C5-C6	-5.77	114.11	117.00
54	BA	1290	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	1586	A	O4'-C1'-N9	5.77	112.82	108.20
21	AA	478	A	C4-C5-C6	-5.77	114.11	117.00
21	AA	514	C	N3-C2-O2	-5.77	117.86	121.90
21	AA	108	G	N3-C4-C5	-5.77	125.72	128.60
54	BA	722	A	C4-C5-C6	-5.77	114.12	117.00
54	BA	1075	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	1908	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	2364	C	N3-C2-O2	-5.77	117.86	121.90
55	BB	113	C	N1-C2-O2	5.77	122.36	118.90
21	AA	808	C	N1-C2-O2	5.77	122.36	118.90
21	AA	1325	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	1255	U	C3'-C2'-C1'	5.77	106.11	101.50
54	BA	1658	C	N3-C2-O2	-5.77	117.86	121.90
54	BA	1909	C	N3-C2-O2	-5.77	117.86	121.90
5	AF	45	ARG	NE-CZ-NH2	-5.76	117.42	120.30
54	BA	1251	C	N3-C2-O2	-5.76	117.86	121.90
54	BA	1664	A	C4-C5-C6	-5.76	114.12	117.00
54	BA	444	C	N3-C2-O2	-5.76	117.87	121.90
54	BA	731	C	N3-C2-O2	-5.76	117.87	121.90
54	BA	1040	A	C4-C5-C6	-5.76	114.12	117.00
54	BA	2378	A	C4-C5-C6	-5.76	114.12	117.00
54	BA	31	C	N3-C2-O2	-5.76	117.87	121.90
54	BA	907	G	N1-C6-O6	-5.76	116.44	119.90
21	AA	109	A	O4'-C1'-N9	5.76	112.81	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2115	G	N3-C4-C5	-5.76	125.72	128.60
54	BA	2407	A	C4-C5-C6	-5.76	114.12	117.00
21	AA	1214	C	N3-C4-N4	-5.76	113.97	118.00
21	AA	1228	C	O4'-C1'-N1	5.76	112.81	108.20
54	BA	1646	C	N1-C2-O2	5.76	122.36	118.90
21	AA	137	U	O4'-C1'-N1	5.76	112.81	108.20
54	BA	1254	A	C3'-C2'-C1'	5.76	106.11	101.50
54	BA	1830	C	N1-C2-O2	5.76	122.35	118.90
54	BA	2001	C	N3-C2-O2	-5.76	117.87	121.90
54	BA	2594	C	N3-C2-O2	-5.76	117.87	121.90
54	BA	2781	A	C4-C5-C6	-5.76	114.12	117.00
54	BA	14	A	C3'-C2'-C1'	5.75	106.10	101.50
22	A1	17	U	N3-C2-O2	-5.75	118.17	122.20
54	BA	492	A	C4-C5-C6	-5.75	114.12	117.00
54	BA	1518	C	N3-C2-O2	-5.75	117.87	121.90
54	BA	1629	U	O4'-C1'-N1	5.75	112.80	108.20
54	BA	1640	A	C4-C5-C6	-5.75	114.12	117.00
21	AA	1196	A	C4-C5-C6	-5.75	114.12	117.00
21	AA	1509	C	N3-C2-O2	-5.75	117.87	121.90
24	A3	66	C	N3-C2-O2	-5.75	117.87	121.90
54	BA	446	G	O4'-C4'-C3'	5.75	110.70	106.10
54	BA	670	A	P-O3'-C3'	5.75	126.60	119.70
21	AA	1297	G	O4'-C1'-N9	5.75	112.80	108.20
21	AA	1438	G	N3-C2-N2	-5.75	115.88	119.90
54	BA	125	A	C4-C5-C6	-5.75	114.12	117.00
54	BA	2338	C	N3-C2-O2	-5.75	117.88	121.90
7	AH	83	ARG	NE-CZ-NH1	5.75	123.17	120.30
21	AA	25	C	N3-C2-O2	-5.75	117.88	121.90
21	AA	235	C	N3-C2-O2	-5.75	117.88	121.90
21	AA	1021	A	C4-C5-C6	-5.75	114.13	117.00
54	BA	887	U	O4'-C1'-N1	5.75	112.80	108.20
54	BA	1714	U	N3-C2-O2	-5.75	118.18	122.20
54	BA	2755	C	N3-C2-O2	-5.75	117.88	121.90
13	AN	61	ARG	NE-CZ-NH1	5.75	123.17	120.30
21	AA	975	A	C4-C5-C6	-5.75	114.13	117.00
54	BA	2301	C	N3-C2-O2	-5.75	117.88	121.90
36	BN	4	ARG	NE-CZ-NH1	5.75	123.17	120.30
54	BA	599	A	C4-C5-C6	-5.75	114.13	117.00
54	BA	889	C	N1-C2-O2	5.75	122.35	118.90
21	AA	177	G	N3-C4-C5	-5.74	125.73	128.60
54	BA	1287	A	O4'-C1'-N9	5.74	112.80	108.20
54	BA	1378	A	C5'-C4'-O4'	5.74	115.99	109.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2177	C	N3-C2-O2	-5.74	117.88	121.90
54	BA	2358	A	C4-C5-C6	-5.74	114.13	117.00
21	AA	487	A	C4-C5-C6	-5.74	114.13	117.00
22	A1	44	G	N1-C6-O6	-5.74	116.46	119.90
54	BA	941	A	C4-C5-C6	-5.74	114.13	117.00
54	BA	2486	C	N3-C2-O2	-5.74	117.88	121.90
21	AA	132	C	N3-C2-O2	-5.74	117.88	121.90
21	AA	825	A	C4-C5-C6	-5.74	114.13	117.00
21	AA	1042	A	C4-C5-C6	-5.74	114.13	117.00
55	BB	39	A	C4-C5-C6	-5.74	114.13	117.00
21	AA	1300	G	C8-N9-C4	-5.74	104.11	106.40
54	BA	268	C	O4'-C1'-N1	5.74	112.79	108.20
54	BA	925	A	C5-C6-N1	5.74	120.57	117.70
54	BA	1604	C	N3-C2-O2	-5.74	117.89	121.90
21	AA	460	A	C4-C5-C6	-5.73	114.13	117.00
21	AA	614	C	N3-C2-O2	-5.73	117.89	121.90
54	BA	1398	C	N1-C2-O2	5.73	122.34	118.90
21	AA	338	A	C4-C5-C6	-5.73	114.13	117.00
21	AA	586	C	N3-C2-O2	-5.73	117.89	121.90
21	AA	929	G	N1-C6-O6	-5.73	116.46	119.90
21	AA	1027	C	N3-C2-O2	-5.73	117.89	121.90
54	BA	275	C	N3-C2-O2	-5.73	117.89	121.90
54	BA	487	C	N3-C2-O2	-5.73	117.89	121.90
54	BA	1528	A	N1-C6-N6	-5.73	115.16	118.60
54	BA	2451	A	C4-C5-C6	-5.73	114.13	117.00
54	BA	446	G	C3'-C2'-C1'	5.73	106.08	101.50
54	BA	838	C	N1-C2-O2	5.73	122.34	118.90
54	BA	1123	C	N3-C2-O2	-5.73	117.89	121.90
21	AA	35	G	N3-C4-C5	-5.73	125.74	128.60
21	AA	234	C	N3-C2-O2	-5.73	117.89	121.90
21	AA	1258	G	N3-C2-N2	-5.73	115.89	119.90
54	BA	1503	A	C4-C5-C6	-5.73	114.14	117.00
54	BA	601	C	N1-C2-O2	5.72	122.33	118.90
36	BN	45	ARG	NE-CZ-NH1	5.72	123.16	120.30
54	BA	1032	A	C4-C5-C6	-5.72	114.14	117.00
54	BA	1351	C	N3-C2-O2	-5.72	117.89	121.90
54	BA	1441	G	N1-C6-O6	-5.72	116.47	119.90
54	BA	2309	A	C4-C5-C6	-5.72	114.14	117.00
54	BA	2799	A	C4-C5-C6	-5.72	114.14	117.00
21	AA	559	A	O4'-C1'-N9	5.72	112.78	108.20
21	AA	1362	A	C4-C5-C6	-5.72	114.14	117.00
54	BA	1487	U	O4'-C1'-N1	5.72	112.78	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	459	A	C4-C5-C6	-5.72	114.14	117.00
24	A3	59	A	C4-C5-C6	-5.72	114.14	117.00
54	BA	544	C	O4'-C1'-N1	5.72	112.78	108.20
54	BA	1616	A	C4-C5-C6	-5.72	114.14	117.00
54	BA	2030	A	C6-C5-N7	5.72	136.30	132.30
21	AA	1187	G	N1-C6-O6	-5.72	116.47	119.90
54	BA	249	C	N1-C2-O2	5.72	122.33	118.90
54	BA	820	A	C4-C5-C6	-5.72	114.14	117.00
21	AA	1461	G	N1-C6-O6	-5.71	116.47	119.90
43	BU	21	ARG	NE-CZ-NH1	5.71	123.16	120.30
54	BA	95	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	560	C	N3-C2-O2	-5.71	117.90	121.90
54	BA	634	C	O4'-C1'-N1	5.71	112.77	108.20
54	BA	847	U	N3-C2-O2	-5.71	118.20	122.20
54	BA	943	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	1000	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	1142	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	1525	A	C5-C6-N1	5.71	120.56	117.70
54	BA	2238	G	C3'-C2'-C1'	5.71	106.07	101.50
55	BB	68	C	O4'-C1'-N1	5.71	112.77	108.20
21	AA	575	G	P-O3'-C3'	5.71	126.56	119.70
54	BA	643	A	C1'-O4'-C4'	-5.71	105.33	109.90
54	BA	1854	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	2518	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	2542	A	C4-C5-C6	-5.71	114.14	117.00
54	BA	2561	U	O4'-C1'-N1	5.71	112.77	108.20
21	AA	131	A	C4-C5-C6	-5.71	114.15	117.00
21	AA	919	A	C4-C5-C6	-5.71	114.15	117.00
54	BA	445	C	N3-C2-O2	-5.71	117.91	121.90
54	BA	1607	C	O4'-C1'-N1	5.71	112.77	108.20
54	BA	1619	G	N1-C6-O6	-5.71	116.48	119.90
54	BA	1809	A	C4-C5-C6	-5.71	114.15	117.00
54	BA	2439	A	C4-C5-C6	-5.71	114.15	117.00
54	BA	362	A	C4-C5-C6	-5.70	114.15	117.00
54	BA	1196	C	N3-C2-O2	-5.70	117.91	121.90
54	BA	2123	G	O4'-C1'-N9	5.70	112.76	108.20
54	BA	1786	A	C4-C5-C6	-5.70	114.15	117.00
54	BA	1788	C	N3-C2-O2	-5.70	117.91	121.90
54	BA	1947	C	O4'-C1'-N1	5.70	112.76	108.20
21	AA	6	G	N1-C6-O6	-5.70	116.48	119.90
21	AA	281	G	N1-C6-O6	-5.70	116.48	119.90
54	BA	354	A	C4-C5-C6	-5.70	114.15	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	719	C	N1-C2-O2	5.70	122.32	118.90
54	BA	2267	A	O4'-C1'-N9	5.70	112.76	108.20
54	BA	2326	C	C1'-O4'-C4'	-5.70	105.34	109.90
55	BB	53	A	C4-C5-C6	-5.70	114.15	117.00
54	BA	402	A	C5-C6-N1	5.70	120.55	117.70
54	BA	675	A	C4-C5-C6	-5.70	114.15	117.00
54	BA	945	A	O4'-C1'-N9	5.70	112.76	108.20
54	BA	1525	A	C4-C5-C6	-5.70	114.15	117.00
54	BA	1558	C	N1-C2-O2	5.70	122.32	118.90
54	BA	2311	A	C4-C5-C6	-5.70	114.15	117.00
21	AA	492	C	N3-C2-O2	-5.69	117.91	121.90
21	AA	1237	C	N1-C2-O2	5.69	122.31	118.90
54	BA	1735	A	C4-C5-C6	-5.69	114.15	117.00
54	BA	2880	C	N1-C2-O2	5.69	122.31	118.90
55	BB	71	C	O4'-C1'-N1	5.69	112.75	108.20
21	AA	44	A	C4-C5-C6	-5.69	114.16	117.00
54	BA	162	U	O4'-C1'-N1	5.69	112.75	108.20
55	BB	17	C	N3-C2-O2	-5.69	117.92	121.90
54	BA	341	C	N3-C2-O2	-5.69	117.92	121.90
54	BA	1858	A	C4-C5-C6	-5.69	114.16	117.00
54	BA	2511	U	O4'-C1'-N1	5.69	112.75	108.20
5	AF	86	ARG	NE-CZ-NH1	5.69	123.14	120.30
21	AA	1263	C	N1-C2-O2	5.69	122.31	118.90
24	A3	62	C	N3-C2-O2	-5.69	117.92	121.90
54	BA	109	C	N3-C2-O2	-5.69	117.92	121.90
55	BB	101	A	C4-C5-C6	-5.69	114.16	117.00
25	BC	202	ARG	NE-CZ-NH1	5.69	123.14	120.30
54	BA	2268	A	O4'-C1'-N9	5.69	112.75	108.20
21	AA	1407	C	N3-C2-O2	-5.68	117.92	121.90
21	AA	1413	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	173	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	694	U	O4'-C1'-N1	5.68	112.75	108.20
54	BA	1204	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	1612	C	N3-C2-O2	-5.68	117.92	121.90
2	AC	64	ARG	NE-CZ-NH1	5.68	123.14	120.30
21	AA	1533	C	N3-C2-O2	-5.68	117.92	121.90
25	BC	270	ARG	NE-CZ-NH1	5.68	123.14	120.30
54	BA	386	G	N1-C6-O6	-5.68	116.49	119.90
54	BA	1362	C	N3-C2-O2	-5.68	117.92	121.90
54	BA	1785	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	960	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	1363	C	O4'-C1'-N1	5.68	112.74	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1002	G	N1-C6-O6	-5.68	116.49	119.90
21	AA	1107	C	N1-C2-O2	5.68	122.31	118.90
25	BC	216	ARG	NE-CZ-NH1	-5.68	117.46	120.30
54	BA	423	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	1372	U	O4'-C1'-N1	5.68	112.74	108.20
54	BA	2639	A	C4-C5-C6	-5.68	114.16	117.00
21	AA	872	A	C4-C5-C6	-5.68	114.16	117.00
21	AA	1098	C	N3-C2-O2	-5.68	117.93	121.90
22	A1	57	G	C3'-C2'-C1'	5.68	106.04	101.50
47	BY	23	ARG	NE-CZ-NH1	5.68	123.14	120.30
54	BA	1853	A	C4-C5-C6	-5.68	114.16	117.00
54	BA	2097	A	C6-C5-N7	5.68	136.27	132.30
54	BA	2254	C	N1-C2-O2	5.68	122.31	118.90
54	BA	2308	G	N1-C6-O6	-5.68	116.49	119.90
54	BA	2611	C	N1-C2-O2	5.68	122.31	118.90
21	AA	215	C	N3-C2-O2	-5.67	117.93	121.90
21	AA	1032	G	N3-C4-C5	-5.67	125.76	128.60
54	BA	2105	U	O4'-C1'-N1	5.67	112.74	108.20
21	AA	519	C	N3-C2-O2	-5.67	117.93	121.90
54	BA	2159	G	C5'-C4'-O4'	5.67	115.91	109.10
21	AA	522	C	N3-C2-O2	-5.67	117.93	121.90
21	AA	1191	A	C4-C5-C6	-5.67	114.17	117.00
21	AA	1254	A	C4-C5-C6	-5.67	114.17	117.00
25	BC	100	ARG	NE-CZ-NH1	5.67	123.14	120.30
54	BA	2440	C	N1-C2-O2	5.67	122.30	118.90
21	AA	1096	C	N3-C2-O2	-5.67	117.93	121.90
35	BM	59	ARG	NE-CZ-NH1	5.67	123.14	120.30
21	AA	300	A	C4-C5-C6	-5.67	114.17	117.00
54	BA	453	A	C4-C5-C6	-5.67	114.17	117.00
54	BA	1266	G	N3-C4-C5	-5.67	125.77	128.60
54	BA	2022	U	O4'-C1'-N1	5.67	112.73	108.20
55	BB	118	C	O4'-C1'-N1	5.67	112.73	108.20
54	BA	457	A	C4-C5-C6	-5.67	114.17	117.00
54	BA	996	A	C4-C5-C6	-5.67	114.17	117.00
54	BA	2191	A	C4-C5-C6	-5.67	114.17	117.00
21	AA	795	C	N3-C2-O2	-5.67	117.94	121.90
22	A1	28	C	N3-C2-O2	-5.67	117.93	121.90
54	BA	1752	C	N1-C2-O2	5.67	122.30	118.90
54	BA	2765	A	O4'-C1'-N9	5.67	112.73	108.20
55	BB	26	C	N1-C2-O2	5.67	122.30	118.90
21	AA	739	C	N1-C2-O2	5.66	122.30	118.90
21	AA	1502	A	C4-C5-C6	-5.66	114.17	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	196	A	C4-C5-C6	-5.66	114.17	117.00
54	BA	315	G	O4'-C1'-N9	5.66	112.73	108.20
54	BA	626	A	C4-C5-C6	-5.66	114.17	117.00
54	BA	2270	A	C4-C5-C6	-5.66	114.17	117.00
21	AA	1437	A	C4-C5-C6	-5.66	114.17	117.00
21	AA	1521	C	N3-C2-O2	-5.66	117.94	121.90
54	BA	827	U	O4'-C1'-N1	5.66	112.73	108.20
54	BA	1318	U	O4'-C1'-N1	5.66	112.73	108.20
36	BN	46	ARG	NE-CZ-NH1	5.66	123.13	120.30
54	BA	1153	C	N3-C2-O2	-5.66	117.94	121.90
54	BA	1928	A	N1-C6-N6	-5.66	115.20	118.60
54	BA	315	G	N1-C6-O6	-5.66	116.50	119.90
54	BA	933	A	C4-C5-C6	-5.66	114.17	117.00
21	AA	66	A	C5-C6-N1	5.66	120.53	117.70
21	AA	470	C	N3-C2-O2	-5.66	117.94	121.90
54	BA	195	A	C4-C5-C6	-5.66	114.17	117.00
21	AA	689	C	O4'-C1'-N1	5.66	112.72	108.20
21	AA	770	C	N3-C2-O2	-5.66	117.94	121.90
54	BA	2732	G	C8-N9-C4	-5.66	104.14	106.40
21	AA	196	A	C4-C5-C6	-5.65	114.17	117.00
21	AA	993	G	N3-C4-C5	-5.65	125.77	128.60
21	AA	1340	A	C4-C5-C6	-5.65	114.17	117.00
54	BA	1771	C	O4'-C1'-N1	5.65	112.72	108.20
24	A3	76	C	N3-C2-O2	-5.65	117.94	121.90
54	BA	740	C	N1-C2-O2	5.65	122.29	118.90
21	AA	67	C	N1-C2-O2	5.65	122.29	118.90
21	AA	392	C	N3-C2-O2	-5.65	117.94	121.90
21	AA	708	C	N3-C2-O2	-5.65	117.94	121.90
54	BA	190	A	C4-C5-C6	-5.65	114.17	117.00
54	BA	764	A	C4-C5-C6	-5.65	114.17	117.00
21	AA	1195	C	N1-C2-O2	5.65	122.29	118.90
54	BA	129	C	N3-C2-O2	-5.65	117.94	121.90
21	AA	274	A	C4-C5-C6	-5.65	114.18	117.00
21	AA	592	G	N1-C6-O6	-5.65	116.51	119.90
54	BA	165	A	C6-C5-N7	5.65	136.25	132.30
54	BA	323	C	O4'-C1'-N1	5.65	112.72	108.20
54	BA	1366	A	C4-C5-C6	-5.65	114.18	117.00
54	BA	1649	G	O4'-C1'-N9	5.65	112.72	108.20
18	AS	77	ARG	NE-CZ-NH1	5.65	123.12	120.30
21	AA	193	C	N3-C2-O2	-5.65	117.95	121.90
21	AA	160	A	C4-C5-C6	-5.64	114.18	117.00
21	AA	718	A	C4-C5-C6	-5.64	114.18	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1150	A	C4-C5-C6	-5.64	114.18	117.00
24	A3	70	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	233	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	374	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	1291	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	205	G	O4'-C1'-N9	5.64	112.71	108.20
54	BA	509	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	1254	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	1275	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	1961	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	2296	U	O4'-C1'-N1	5.64	112.72	108.20
54	BA	2587	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	2606	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	2670	A	C4-C5-C6	-5.64	114.18	117.00
55	BB	11	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	2794	C	N3-C2-O2	-5.64	117.95	121.90
21	AA	1275	A	C4-C5-C6	-5.64	114.18	117.00
21	AA	1467	C	N1-C2-O2	5.64	122.28	118.90
54	BA	269	C	O4'-C1'-N1	5.64	112.71	108.20
54	BA	345	A	N1-C6-N6	-5.64	115.22	118.60
54	BA	1135	C	N1-C2-O2	5.64	122.28	118.90
54	BA	2546	U	O3'-P-O5'	-5.64	93.28	104.00
54	BA	507	A	O4'-C1'-N9	5.64	112.71	108.20
54	BA	829	A	C4-C5-C6	-5.64	114.18	117.00
54	BA	1174	U	O4'-C1'-N1	5.64	112.71	108.20
54	BA	2598	A	C4-C5-C6	-5.64	114.18	117.00
21	AA	355	C	N1-C2-O2	5.64	122.28	118.90
22	A1	51	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	650	C	C2-N3-C4	-5.64	117.08	119.90
54	BA	2073	C	N3-C2-O2	-5.64	117.95	121.90
54	BA	2250	G	N1-C6-O6	-5.64	116.52	119.90
21	AA	1377	A	C4-C5-C6	-5.63	114.18	117.00
22	A1	71	C	N1-C2-O2	5.63	122.28	118.90
24	A3	26	C	N1-C2-O2	5.63	122.28	118.90
54	BA	149	A	C4-C5-C6	-5.63	114.18	117.00
54	BA	267	C	O4'-C1'-N1	5.63	112.71	108.20
54	BA	765	C	N1-C2-O2	5.63	122.28	118.90
54	BA	2241	A	C4-C5-C6	-5.63	114.18	117.00
54	BA	2258	C	N1-C2-O2	5.63	122.28	118.90
54	BA	2790	U	O4'-C1'-N1	5.63	112.71	108.20
54	BA	2837	A	C4-C5-C6	-5.63	114.18	117.00
21	AA	665	A	C6-C5-N7	5.63	136.24	132.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	746	A	C4-C5-C6	-5.63	114.19	117.00
54	BA	573	U	N3-C2-O2	-5.63	118.26	122.20
54	BA	2147	A	C4-C5-C6	-5.63	114.19	117.00
54	BA	211	C	N3-C2-O2	-5.63	117.96	121.90
54	BA	433	C	N1-C2-O2	5.63	122.28	118.90
21	AA	203	G	N1-C6-O6	-5.63	116.52	119.90
54	BA	11	C	N1-C2-O2	5.63	122.28	118.90
54	BA	1931	U	O4'-C1'-N1	5.63	112.70	108.20
54	BA	2617	U	O4'-C1'-N1	5.63	112.70	108.20
21	AA	805	C	N1-C2-O2	5.63	122.28	118.90
54	BA	388	G	N1-C6-O6	-5.63	116.52	119.90
54	BA	912	C	N3-C2-O2	-5.63	117.96	121.90
54	BA	989	G	O4'-C4'-C3'	5.63	110.60	106.10
21	AA	1402	C	N3-C2-O2	-5.62	117.96	121.90
25	BC	257	ARG	NE-CZ-NH1	5.62	123.11	120.30
54	BA	143	C	N3-C2-O2	-5.62	117.96	121.90
54	BA	564	C	N3-C2-O2	-5.62	117.96	121.90
54	BA	2229	U	C5'-C4'-C3'	-5.62	107.00	116.00
54	BA	2656	U	O4'-C1'-N1	5.62	112.70	108.20
21	AA	744	C	N3-C2-O2	-5.62	117.96	121.90
21	AA	1161	C	N3-C2-O2	-5.62	117.96	121.90
54	BA	761	A	C4-C5-C6	-5.62	114.19	117.00
54	BA	987	C	N3-C2-O2	-5.62	117.96	121.90
18	AS	54	ARG	NE-CZ-NH1	5.62	123.11	120.30
54	BA	821	A	C6-C5-N7	5.62	136.24	132.30
55	BB	59	A	N1-C6-N6	-5.62	115.23	118.60
21	AA	205	A	N1-C6-N6	-5.62	115.23	118.60
21	AA	372	C	N3-C2-O2	-5.62	117.97	121.90
21	AA	386	C	N3-C2-O2	-5.62	117.97	121.90
21	AA	620	C	N3-C2-O2	-5.62	117.97	121.90
54	BA	1080	A	C6-C5-N7	5.62	136.23	132.30
54	BA	1474	U	O4'-C1'-N1	5.62	112.70	108.20
21	AA	169	C	N3-C2-O2	-5.62	117.97	121.90
21	AA	858	G	N1-C6-O6	-5.62	116.53	119.90
54	BA	240	C	N3-C2-O2	-5.62	117.97	121.90
54	BA	1975	G	N1-C6-O6	-5.62	116.53	119.90
54	BA	2333	A	C4-C5-C6	-5.62	114.19	117.00
21	AA	1387	G	O4'-C1'-N9	5.62	112.69	108.20
54	BA	226	A	C4-C5-C6	-5.62	114.19	117.00
54	BA	784	G	N3-C4-C5	-5.62	125.79	128.60
21	AA	227	G	N1-C6-O6	-5.62	116.53	119.90
21	AA	673	A	C4-C5-C6	-5.62	114.19	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2899	A	C4-C5-C6	-5.62	114.19	117.00
54	BA	74	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	135	U	O4'-C1'-N1	5.61	112.69	108.20
54	BA	1046	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	2651	C	N3-C2-O2	-5.61	117.97	121.90
21	AA	816	A	C4-C5-C6	-5.61	114.19	117.00
21	AA	1281	C	C1'-O4'-C4'	-5.61	105.41	109.90
54	BA	2412	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	127	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	159	G	N7-C8-N9	5.61	115.91	113.10
54	BA	608	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	2207	C	N1-C2-O2	5.61	122.27	118.90
54	BA	91	A	C4-C5-C6	-5.61	114.19	117.00
54	BA	1730	C	N3-C2-O2	-5.61	117.97	121.90
54	BA	1998	A	C4-C5-C6	-5.61	114.20	117.00
54	BA	2307	G	N1-C6-O6	-5.61	116.54	119.90
21	AA	395	C	N3-C2-O2	-5.61	117.98	121.90
21	AA	482	A	C4-C5-C6	-5.61	114.20	117.00
21	AA	1004	A	C6-C5-N7	5.61	136.22	132.30
54	BA	89	A	C4-C5-C6	-5.61	114.20	117.00
54	BA	1229	C	N3-C2-O2	-5.61	117.98	121.90
54	BA	2526	G	N1-C6-O6	-5.61	116.54	119.90
55	BB	3	C	O4'-C1'-N1	5.61	112.69	108.20
21	AA	1209	C	N3-C2-O2	-5.60	117.98	121.90
54	BA	597	G	N1-C6-O6	-5.60	116.54	119.90
54	BA	749	A	C6-C5-N7	5.60	136.22	132.30
54	BA	53	A	C4-C5-C6	-5.60	114.20	117.00
54	BA	268	C	N3-C2-O2	-5.60	117.98	121.90
54	BA	1276	A	C4-C5-C6	-5.60	114.20	117.00
54	BA	240	C	O4'-C1'-N1	5.60	112.68	108.20
54	BA	538	A	C4-C5-C6	-5.60	114.20	117.00
54	BA	1769	U	O4'-C1'-N1	5.60	112.68	108.20
54	BA	2615	U	O4'-C1'-N1	5.60	112.68	108.20
55	BB	40	U	O4'-C1'-N1	5.60	112.68	108.20
21	AA	512	U	O4'-C1'-N1	5.60	112.68	108.20
54	BA	655	A	C4-C5-C6	-5.60	114.20	117.00
54	BA	2056	G	N1-C6-O6	-5.60	116.54	119.90
54	BA	474	G	P-O3'-C3'	5.60	126.42	119.70
54	BA	1796	U	O4'-C1'-N1	5.60	112.68	108.20
21	AA	297	G	N1-C6-O6	-5.59	116.54	119.90
21	AA	563	A	C4-C5-C6	-5.59	114.20	117.00
21	AA	1141	C	N1-C2-O2	5.59	122.26	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	BQ	50	ARG	NE-CZ-NH2	-5.59	117.50	120.30
54	BA	288	U	O4'-C1'-N1	5.59	112.68	108.20
54	BA	1887	C	N3-C2-O2	-5.59	117.98	121.90
21	AA	634	C	N1-C2-O2	5.59	122.26	118.90
21	AA	664	G	C3'-C2'-C1'	5.59	105.97	101.50
54	BA	357	C	N3-C2-O2	-5.59	117.99	121.90
54	BA	1428	C	N1-C2-O2	5.59	122.25	118.90
54	BA	1454	C	N1-C2-O2	5.59	122.25	118.90
21	AA	783	C	N3-C2-O2	-5.59	117.99	121.90
21	AA	1183	U	N3-C2-O2	-5.59	118.29	122.20
25	BC	79	ARG	NE-CZ-NH1	5.59	123.09	120.30
1	AB	10	LYS	CA-C-N	5.59	129.49	117.20
54	BA	872	U	O4'-C1'-N1	5.59	112.67	108.20
54	BA	2296	U	C3'-C2'-C1'	5.59	105.97	101.50
54	BA	2480	C	O4'-C1'-N1	5.59	112.67	108.20
54	BA	2666	C	N1-C2-O2	5.59	122.25	118.90
21	AA	440	C	N3-C2-O2	-5.58	117.99	121.90
54	BA	1147	A	C4-C5-C6	-5.58	114.21	117.00
55	BB	56	G	C3'-C2'-C1'	5.58	105.97	101.50
54	BA	698	C	N3-C2-O2	-5.58	117.99	121.90
54	BA	814	C	N3-C2-O2	-5.58	117.99	121.90
54	BA	2459	A	C4-C5-C6	-5.58	114.21	117.00
54	BA	2753	A	O4'-C1'-N9	5.58	112.67	108.20
21	AA	569	C	N3-C2-O2	-5.58	117.99	121.90
21	AA	1472	U	O4'-C1'-N1	5.58	112.67	108.20
54	BA	302	C	C1'-O4'-C4'	-5.58	105.44	109.90
54	BA	717	C	N1-C2-O2	5.58	122.25	118.90
54	BA	1398	C	N3-C4-C5	5.58	124.13	121.90
54	BA	1695	G	N3-C4-C5	-5.58	125.81	128.60
54	BA	1625	C	N3-C2-O2	-5.58	117.99	121.90
21	AA	355	C	N3-C4-C5	5.58	124.13	121.90
54	BA	167	A	C4-C5-C6	-5.58	114.21	117.00
54	BA	865	C	N1-C2-O2	5.58	122.25	118.90
54	BA	1437	C	N3-C2-O2	-5.58	118.00	121.90
4	AE	68	ARG	NE-CZ-NH1	5.58	123.09	120.30
20	AU	33	ARG	NE-CZ-NH2	-5.58	117.51	120.30
54	BA	1417	C	N3-C2-O2	-5.58	118.00	121.90
54	BA	1463	C	N3-C2-O2	-5.58	118.00	121.90
54	BA	1162	G	O4'-C1'-N9	5.58	112.66	108.20
54	BA	1384	A	C4-C5-C6	-5.58	114.21	117.00
21	AA	342	C	N3-C2-O2	-5.57	118.00	121.90
54	BA	1754	A	C4-C5-C6	-5.57	114.21	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2279	G	N1-C6-O6	-5.57	116.56	119.90
54	BA	2717	C	N1-C2-O2	5.57	122.24	118.90
54	BA	2504	U	N3-C2-O2	-5.57	118.30	122.20
4	AE	92	ARG	NE-CZ-NH2	-5.57	117.52	120.30
21	AA	172	A	C4-C5-C6	-5.57	114.22	117.00
21	AA	194	C	N1-C2-O2	5.57	122.24	118.90
21	AA	8	A	C4-C5-C6	-5.56	114.22	117.00
21	AA	1151	A	C4-C5-C6	-5.56	114.22	117.00
54	BA	526	A	C5'-C4'-O4'	5.56	115.78	109.10
24	A3	13	C	N3-C2-O2	-5.56	118.01	121.90
54	BA	45	G	C3'-C2'-C1'	5.56	105.95	101.50
54	BA	219	A	C6-C5-N7	5.56	136.19	132.30
54	BA	345	A	C4-C5-C6	-5.56	114.22	117.00
54	BA	729	G	N1-C6-O6	-5.56	116.56	119.90
54	BA	2114	A	C4-C5-C6	-5.56	114.22	117.00
21	AA	1005	A	C4-C5-C6	-5.56	114.22	117.00
25	BC	132	ARG	NE-CZ-NH1	5.56	123.08	120.30
54	BA	1642	G	O4'-C1'-N9	5.56	112.65	108.20
21	AA	1305	G	N1-C6-O6	-5.56	116.56	119.90
21	AA	1452	C	N3-C2-O2	-5.56	118.01	121.90
54	BA	119	A	C6-C5-N7	5.56	136.19	132.30
54	BA	816	C	N3-C2-O2	-5.56	118.01	121.90
54	BA	1576	U	O4'-C1'-N1	5.56	112.65	108.20
21	AA	65	A	C4-C5-C6	-5.56	114.22	117.00
21	AA	765	G	N3-C4-C5	-5.56	125.82	128.60
54	BA	1676	A	C4-C5-C6	-5.56	114.22	117.00
55	BB	18	G	N3-C2-N2	-5.56	116.01	119.90
21	AA	563	A	C5-C6-N1	5.55	120.48	117.70
21	AA	1338	G	N3-C2-N2	-5.55	116.01	119.90
54	BA	267	C	N3-C2-O2	-5.55	118.01	121.90
54	BA	1313	U	N3-C2-O2	-5.55	118.31	122.20
54	BA	1442	U	O4'-C1'-N1	5.55	112.64	108.20
21	AA	530	G	N3-C4-C5	-5.55	125.82	128.60
21	AA	1296	C	N1-C2-O2	5.55	122.23	118.90
54	BA	314	C	N3-C2-O2	-5.55	118.01	121.90
54	BA	746	U	O4'-C1'-N1	5.55	112.64	108.20
54	BA	1175	A	O4'-C1'-N9	5.55	112.64	108.20
21	AA	109	A	C4-C5-C6	-5.55	114.22	117.00
21	AA	940	C	N3-C2-O2	-5.55	118.02	121.90
21	AA	754	C	N1-C2-O2	5.55	122.23	118.90
54	BA	103	A	C4-C5-C6	-5.55	114.23	117.00
54	BA	966	G	N1-C6-O6	-5.55	116.57	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1324	G	N1-C6-O6	-5.55	116.57	119.90
21	AA	679	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	2585	U	O4'-C1'-N1	5.54	112.64	108.20
24	A3	74	A	C4-C5-C6	-5.54	114.23	117.00
54	BA	821	A	O4'-C1'-N9	5.54	112.64	108.20
54	BA	1462	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	1890	A	C4-C5-C6	-5.54	114.23	117.00
54	BA	2182	U	O4'-C1'-N1	5.54	112.63	108.20
21	AA	1523	G	N1-C6-O6	-5.54	116.58	119.90
21	AA	704	A	C4-C5-C6	-5.54	114.23	117.00
54	BA	316	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	540	C	N1-C2-O2	5.54	122.22	118.90
54	BA	1440	U	O4'-C1'-N1	5.54	112.63	108.20
54	BA	2247	A	C6-C5-N7	5.54	136.18	132.30
54	BA	2499	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	2840	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	265	A	C4-C5-C6	-5.54	114.23	117.00
54	BA	1140	C	O4'-C1'-N1	5.54	112.63	108.20
54	BA	1691	C	N3-C2-O2	-5.54	118.02	121.90
54	BA	1848	A	C4-C5-C6	-5.54	114.23	117.00
21	AA	699	C	N3-C2-O2	-5.54	118.03	121.90
21	AA	865	A	C4-C5-C6	-5.54	114.23	117.00
21	AA	1112	C	N3-C2-O2	-5.54	118.03	121.90
21	AA	1493	A	C4-C5-C6	-5.54	114.23	117.00
24	A3	34	U	C1'-O4'-C4'	-5.54	105.47	109.90
27	BE	102	ARG	NE-CZ-NH1	5.54	123.07	120.30
21	AA	267	C	N1-C2-O2	5.53	122.22	118.90
21	AA	723	U	C1'-O4'-C4'	-5.53	105.47	109.90
54	BA	1758	U	N3-C2-O2	-5.53	118.33	122.20
54	BA	2842	G	N1-C6-O6	-5.53	116.58	119.90
2	AC	126	ARG	NE-CZ-NH1	5.53	123.07	120.30
54	BA	990	A	C4-C5-C6	-5.53	114.23	117.00
21	AA	351	G	P-O3'-C3'	5.53	126.34	119.70
21	AA	496	A	N1-C6-N6	-5.53	115.28	118.60
24	A3	19	G	N1-C6-O6	-5.53	116.58	119.90
54	BA	256	A	N1-C6-N6	-5.53	115.28	118.60
54	BA	876	C	N3-C2-O2	-5.53	118.03	121.90
54	BA	2160	C	N1-C2-O2	5.53	122.22	118.90
6	AG	4	ARG	NE-CZ-NH2	5.53	123.06	120.30
21	AA	495	A	C4-C5-C6	-5.53	114.24	117.00
54	BA	577	G	C8-N9-C4	-5.53	104.19	106.40
54	BA	1363	C	N1-C2-O2	5.53	122.22	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	BB	88	C	N1-C2-O2	5.53	122.22	118.90
21	AA	272	C	N1-C2-O2	5.53	122.22	118.90
54	BA	157	C	O4'-C1'-N1	5.53	112.62	108.20
21	AA	728	A	C6-C5-N7	5.52	136.17	132.30
21	AA	811	C	N1-C2-O2	5.52	122.21	118.90
21	AA	1317	C	N3-C2-O2	-5.52	118.03	121.90
21	AA	1519	A	C4-C5-C6	-5.52	114.24	117.00
54	BA	1005	C	N1-C2-O2	5.52	122.21	118.90
54	BA	1665	A	C4-C5-C6	-5.52	114.24	117.00
21	AA	1256	A	C4-C5-C6	-5.52	114.24	117.00
54	BA	341	C	O4'-C1'-N1	5.52	112.62	108.20
54	BA	473	G	N1-C6-O6	-5.52	116.59	119.90
54	BA	477	A	C4-C5-C6	-5.52	114.24	117.00
54	BA	1022	G	C8-N9-C4	-5.52	104.19	106.40
54	BA	1152	C	O4'-C1'-N1	5.52	112.62	108.20
54	BA	1393	A	C4-C5-C6	-5.52	114.24	117.00
54	BA	1974	C	N1-C2-O2	5.52	122.21	118.90
54	BA	1981	A	C4-C5-C6	-5.52	114.24	117.00
20	AU	30	GLU	O-C-N	-5.52	113.87	122.70
54	BA	147	C	N1-C2-O2	5.52	122.21	118.90
54	BA	1102	C	O4'-C1'-N1	5.52	112.61	108.20
54	BA	253	C	O4'-C1'-N1	5.52	112.61	108.20
8	AI	79	ARG	NE-CZ-NH2	-5.51	117.54	120.30
45	BW	40	ARG	NE-CZ-NH1	5.51	123.06	120.30
54	BA	133	U	O4'-C1'-N1	5.51	112.61	108.20
54	BA	2575	C	N3-C2-O2	-5.51	118.04	121.90
21	AA	559	A	C4-C5-C6	-5.51	114.24	117.00
54	BA	16	C	O4'-C1'-N1	5.51	112.61	108.20
21	AA	1055	A	P-O3'-C3'	5.51	126.31	119.70
54	BA	622	G	N1-C6-O6	-5.51	116.59	119.90
54	BA	888	C	O4'-C1'-N1	5.51	112.61	108.20
54	BA	1180	U	O4'-C1'-N1	5.51	112.61	108.20
54	BA	1955	U	O4'-C1'-N1	5.51	112.61	108.20
54	BA	2042	A	C4-C5-C6	-5.51	114.25	117.00
54	BA	2453	A	C4-C5-C6	-5.51	114.24	117.00
21	AA	72	A	C4-C5-C6	-5.51	114.25	117.00
54	BA	2082	A	C4-C5-C6	-5.51	114.25	117.00
22	A1	9	A	O4'-C1'-N9	5.51	112.61	108.20
54	BA	92	U	O4'-C1'-N1	5.51	112.61	108.20
54	BA	340	A	N1-C6-N6	-5.51	115.30	118.60
54	BA	2456	C	N1-C2-O2	5.51	122.20	118.90
54	BA	542	C	N3-C2-O2	-5.50	118.05	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2620	C	N1-C2-O2	5.50	122.20	118.90
21	AA	431	A	C4-C5-C6	-5.50	114.25	117.00
21	AA	584	G	N3-C4-C5	-5.50	125.85	128.60
54	BA	50	U	O4'-C1'-N1	5.50	112.60	108.20
54	BA	1553	A	C4-C5-C6	-5.50	114.25	117.00
54	BA	2419	U	O4'-C1'-N1	5.50	112.60	108.20
54	BA	2435	A	C6-C5-N7	5.50	136.15	132.30
25	BC	213	ARG	NE-CZ-NH1	5.50	123.05	120.30
54	BA	395	U	O4'-C1'-N1	5.50	112.60	108.20
54	BA	413	C	N3-C2-O2	-5.50	118.05	121.90
54	BA	1790	C	N1-C2-O2	5.50	122.20	118.90
54	BA	1373	A	N1-C6-N6	-5.50	115.30	118.60
22	A1	18	G	N3-C4-C5	-5.50	125.85	128.60
54	BA	258	G	O4'-C1'-N9	5.50	112.60	108.20
54	BA	754	U	O4'-C1'-N1	5.50	112.60	108.20
54	BA	33	C	N3-C2-O2	-5.50	118.05	121.90
54	BA	1306	C	N1-C2-O2	5.50	122.20	118.90
54	BA	330	A	C4-C5-C6	-5.50	114.25	117.00
54	BA	330	A	O4'-C1'-N9	5.50	112.60	108.20
21	AA	810	C	N3-C2-O2	-5.49	118.05	121.90
54	BA	158	U	O4'-C1'-N1	5.49	112.59	108.20
54	BA	1344	U	N3-C2-O2	-5.49	118.35	122.20
54	BA	1382	G	N3-C4-C5	-5.49	125.85	128.60
55	BB	90	C	N1-C2-O2	5.49	122.20	118.90
21	AA	1167	A	C4-C5-C6	-5.49	114.25	117.00
54	BA	126	A	C5'-C4'-C3'	-5.49	107.21	116.00
54	BA	1877	A	C4-C5-C6	-5.49	114.25	117.00
21	AA	1249	C	N3-C2-O2	-5.49	118.06	121.90
54	BA	1794	A	C4-C5-C6	-5.49	114.25	117.00
54	BA	79	C	O4'-C1'-N1	5.49	112.59	108.20
54	BA	182	A	C6-C5-N7	5.49	136.14	132.30
54	BA	803	U	O4'-C1'-N1	5.49	112.59	108.20
54	BA	2267	A	C6-C5-N7	5.48	136.14	132.30
55	BB	82	U	O4'-C1'-N1	5.48	112.59	108.20
21	AA	59	A	C4-C5-C6	-5.48	114.26	117.00
41	BS	25	ARG	NE-CZ-NH1	5.48	123.04	120.30
54	BA	284	U	O4'-C1'-N1	5.48	112.59	108.20
54	BA	337	C	N1-C2-O2	5.48	122.19	118.90
54	BA	1115	G	N1-C6-O6	-5.48	116.61	119.90
54	BA	1981	A	O4'-C1'-N9	5.48	112.59	108.20
54	BA	2396	G	N1-C6-O6	-5.48	116.61	119.90
21	AA	932	C	N1-C2-O2	5.48	122.19	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	A3	38	A	C4-C5-C6	-5.48	114.26	117.00
21	AA	626	G	N3-C2-N2	-5.48	116.06	119.90
54	BA	1335	C	N1-C2-O2	5.48	122.19	118.90
21	AA	978	A	C4-C5-C6	-5.48	114.26	117.00
54	BA	421	C	N1-C2-O2	5.48	122.19	118.90
54	BA	1368	G	O4'-C1'-N9	5.48	112.58	108.20
54	BA	447	A	C4-C5-C6	-5.48	114.26	117.00
45	BW	24	ARG	NE-CZ-NH2	-5.47	117.56	120.30
54	BA	337	C	O4'-C1'-N1	5.47	112.58	108.20
54	BA	846	U	O4'-C1'-N1	5.47	112.58	108.20
54	BA	2732	G	N1-C6-O6	-5.47	116.62	119.90
21	AA	589	U	O4'-C1'-N1	5.47	112.58	108.20
39	BQ	47	ARG	NE-CZ-NH1	5.47	123.03	120.30
54	BA	1022	G	N3-C4-C5	-5.47	125.86	128.60
54	BA	1783	A	O4'-C1'-N9	5.47	112.58	108.20
54	BA	2238	G	N3-C4-C5	-5.47	125.86	128.60
54	BA	108	G	O4'-C1'-N9	5.47	112.58	108.20
54	BA	736	C	N3-C2-O2	-5.47	118.07	121.90
21	AA	271	C	O4'-C1'-N1	5.47	112.57	108.20
54	BA	289	G	N1-C6-O6	-5.47	116.62	119.90
54	BA	925	A	C4-C5-C6	-5.47	114.27	117.00
54	BA	2750	A	C4-C5-C6	-5.47	114.27	117.00
54	BA	2770	G	N1-C6-O6	-5.47	116.62	119.90
54	BA	2894	G	N1-C6-O6	-5.47	116.62	119.90
56	B5	53	ARG	NE-CZ-NH1	5.47	123.03	120.30
13	AN	24	ARG	NE-CZ-NH1	5.46	123.03	120.30
36	BN	71	ARG	NE-CZ-NH1	5.46	123.03	120.30
41	BS	18	ARG	NE-CZ-NH2	-5.46	117.57	120.30
54	BA	2401	U	O4'-C1'-N1	5.46	112.57	108.20
55	BB	75	G	N1-C6-O6	-5.46	116.62	119.90
21	AA	1441	A	C3'-C2'-C1'	5.46	105.87	101.50
25	BC	101	ARG	NE-CZ-NH2	-5.46	117.57	120.30
54	BA	991	C	O4'-C1'-N1	5.46	112.57	108.20
21	AA	48	C	O4'-C1'-N1	5.46	112.57	108.20
21	AA	469	C	N1-C2-O2	5.46	122.18	118.90
54	BA	587	C	N1-C2-O2	5.46	122.18	118.90
21	AA	242	G	N1-C6-O6	-5.46	116.62	119.90
54	BA	935	C	N1-C2-O2	5.46	122.17	118.90
54	BA	1253	A	C4-C5-C6	-5.46	114.27	117.00
54	BA	1348	C	N3-C2-O2	-5.46	118.08	121.90
54	BA	1937	A	O4'-C1'-N9	5.46	112.57	108.20
21	AA	1369	C	N1-C2-O2	5.46	122.17	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
52	B3	7	ARG	NE-CZ-NH2	-5.46	117.57	120.30
54	BA	28	A	O4'-C1'-N9	5.46	112.56	108.20
54	BA	1635	A	C4-C5-C6	-5.46	114.27	117.00
54	BA	2337	G	N3-C2-N2	-5.46	116.08	119.90
21	AA	741	G	N1-C6-O6	-5.46	116.63	119.90
21	AA	1223	C	N1-C2-O2	5.46	122.17	118.90
21	AA	415	A	C4-C5-C6	-5.45	114.27	117.00
21	AA	462	G	N9-C4-C5	5.45	107.58	105.40
54	BA	1544	A	C4-C5-C6	-5.45	114.27	117.00
54	BA	1982	U	N3-C2-O2	-5.45	118.38	122.20
54	BA	2200	C	O4'-C1'-N1	5.45	112.56	108.20
21	AA	411	A	O4'-C1'-N9	5.45	112.56	108.20
21	AA	1284	C	N3-C2-O2	-5.45	118.08	121.90
37	BO	81	ARG	NE-CZ-NH2	5.45	123.03	120.30
54	BA	114	U	O4'-C1'-N1	5.45	112.56	108.20
54	BA	331	C	N1-C2-O2	5.45	122.17	118.90
21	AA	1049	U	O4'-C1'-N1	5.45	112.56	108.20
22	A1	62	C	N3-C2-O2	-5.45	118.09	121.90
34	BL	2	ARG	NE-CZ-NH2	-5.45	117.58	120.30
54	BA	94	A	C4-C5-C6	-5.45	114.28	117.00
54	BA	2086	U	O4'-C1'-N1	5.45	112.56	108.20
21	AA	1145	A	C4-C5-C6	-5.45	114.28	117.00
36	BN	64	ARG	NE-CZ-NH2	-5.45	117.58	120.30
54	BA	102	U	N3-C2-O2	-5.45	118.39	122.20
54	BA	999	U	O4'-C1'-N1	5.45	112.56	108.20
54	BA	1701	A	C4-C5-C6	-5.45	114.28	117.00
54	BA	2284	A	C6-C5-N7	5.45	136.11	132.30
54	BA	826	U	N3-C2-O2	-5.44	118.39	122.20
54	BA	2458	G	N3-C4-C5	-5.44	125.88	128.60
54	BA	2589	A	C4-C5-C6	-5.44	114.28	117.00
54	BA	484	C	N3-C2-O2	-5.44	118.09	121.90
54	BA	2676	C	N1-C2-O2	5.44	122.17	118.90
21	AA	105	G	N1-C6-O6	-5.44	116.64	119.90
21	AA	1397	C	O4'-C1'-N1	5.44	112.55	108.20
54	BA	186	G	N1-C6-O6	-5.44	116.64	119.90
54	BA	516	C	C5'-C4'-O4'	5.44	115.63	109.10
54	BA	1321	A	C4-C5-C6	-5.44	114.28	117.00
54	BA	1572	A	C4-C5-C6	-5.44	114.28	117.00
54	BA	2153	C	O4'-C1'-N1	5.44	112.55	108.20
21	AA	1109	C	N3-C2-O2	-5.44	118.09	121.90
54	BA	1451	C	C2'-C3'-O3'	5.44	122.40	113.70
54	BA	2279	G	O4'-C1'-N9	5.44	112.55	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2621	G	N3-C2-N2	-5.44	116.09	119.90
21	AA	1019	A	C4-C5-C6	-5.44	114.28	117.00
21	AA	1102	A	C4-C5-C6	-5.44	114.28	117.00
21	AA	1126	U	N3-C2-O2	-5.44	118.39	122.20
54	BA	2422	C	O4'-C1'-N1	5.44	112.55	108.20
21	AA	60	A	P-O3'-C3'	5.44	126.22	119.70
21	AA	1171	A	C4-C5-C6	-5.44	114.28	117.00
21	AA	1184	G	C5-C6-N1	5.44	114.22	111.50
54	BA	2730	C	N1-C2-O2	5.44	122.16	118.90
21	AA	1530	G	C1'-O4'-C4'	-5.43	105.55	109.90
29	BG	163	TYR	CB-CG-CD1	-5.43	117.74	121.00
54	BA	318	C	O4'-C1'-N1	5.43	112.55	108.20
54	BA	1490	A	C4-C5-C6	-5.43	114.28	117.00
54	BA	1643	G	C5'-C4'-O4'	5.43	115.62	109.10
11	AL	82	ARG	CD-NE-CZ	5.43	131.21	123.60
21	AA	806	C	N3-C2-O2	-5.43	118.10	121.90
21	AA	980	C	N1-C2-O2	5.43	122.16	118.90
54	BA	140	C	N1-C2-O2	5.43	122.16	118.90
54	BA	2438	U	C3'-C2'-C1'	5.43	105.85	101.50
21	AA	1363	A	C4-C5-C6	-5.43	114.29	117.00
54	BA	449	A	C4-C5-C6	-5.43	114.28	117.00
54	BA	1346	G	O4'-C1'-N9	5.43	112.54	108.20
54	BA	2695	U	O4'-C1'-N1	5.43	112.54	108.20
21	AA	1441	A	O4'-C1'-N9	5.43	112.54	108.20
54	BA	721	A	C4-C5-C6	-5.43	114.29	117.00
8	AI	98	ARG	NH1-CZ-NH2	-5.42	113.43	119.40
21	AA	360	G	N3-C2-N2	-5.42	116.10	119.90
21	AA	1224	U	N3-C2-O2	-5.42	118.40	122.20
54	BA	723	C	O4'-C1'-N1	5.42	112.54	108.20
54	BA	899	A	C4-C5-C6	-5.42	114.29	117.00
54	BA	1603	A	C4-C5-C6	-5.42	114.29	117.00
54	BA	2026	U	O4'-C1'-N1	5.42	112.54	108.20
54	BA	2317	A	O4'-C1'-N9	5.42	112.54	108.20
54	BA	2875	C	N3-C2-O2	-5.42	118.10	121.90
54	BA	2016	U	N3-C2-O2	-5.42	118.40	122.20
54	BA	2183	A	C4-C5-C6	-5.42	114.29	117.00
54	BA	2572	A	N1-C6-N6	-5.42	115.35	118.60
21	AA	232	G	N1-C6-O6	-5.42	116.65	119.90
21	AA	1361	G	N3-C4-C5	-5.42	125.89	128.60
54	BA	1565	C	N1-C2-O2	5.42	122.15	118.90
54	BA	2556	C	N3-C2-O2	-5.42	118.11	121.90
54	BA	592	A	C6-C5-N7	5.42	136.09	132.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1375	U	O4'-C1'-N1	5.42	112.54	108.20
54	BA	1937	A	C4-C5-C6	-5.42	114.29	117.00
21	AA	1298	U	O4'-C1'-N1	5.42	112.53	108.20
54	BA	254	G	N1-C6-O6	-5.42	116.65	119.90
21	AA	595	A	C4-C5-C6	-5.42	114.29	117.00
21	AA	1105	A	C6-C5-N7	5.42	136.09	132.30
54	BA	1863	G	N1-C6-O6	-5.42	116.65	119.90
54	BA	860	U	O4'-C1'-N1	5.41	112.53	108.20
54	BA	1872	A	C4-C5-C6	-5.41	114.29	117.00
54	BA	2679	A	C4-C5-C6	-5.41	114.29	117.00
4	AE	156	ARG	NE-CZ-NH1	5.41	123.01	120.30
21	AA	307	C	N3-C2-O2	-5.41	118.11	121.90
21	AA	1277	C	N1-C2-O2	5.41	122.15	118.90
54	BA	443	A	C5'-C4'-O4'	5.41	115.59	109.10
21	AA	358	U	O4'-C1'-N1	5.41	112.53	108.20
21	AA	644	U	O4'-C1'-N1	5.41	112.53	108.20
21	AA	792	A	C4-C5-C6	-5.41	114.30	117.00
54	BA	188	G	N3-C2-N2	-5.41	116.11	119.90
54	BA	959	A	C4-C5-C6	-5.41	114.30	117.00
54	BA	1348	C	O4'-C1'-N1	5.41	112.53	108.20
54	BA	2753	A	C6-C5-N7	5.41	136.09	132.30
21	AA	90	C	N3-C2-O2	-5.41	118.11	121.90
54	BA	324	A	C4-C5-C6	-5.41	114.30	117.00
21	AA	833	G	N1-C6-O6	-5.41	116.66	119.90
54	BA	1243	C	O4'-C1'-N1	5.41	112.52	108.20
54	BA	2553	G	C3'-C2'-C1'	5.41	105.83	101.50
54	BA	557	C	O4'-C1'-N1	5.40	112.52	108.20
54	BA	817	C	N1-C2-O2	5.40	122.14	118.90
21	AA	512	U	C5-C6-N1	-5.40	120.00	122.70
21	AA	609	A	C6-C5-N7	5.40	136.08	132.30
21	AA	1193	G	N1-C6-O6	-5.40	116.66	119.90
22	A1	9	A	C4-C5-C6	-5.40	114.30	117.00
21	AA	124	C	N1-C2-O2	5.40	122.14	118.90
21	AA	428	G	N1-C6-O6	-5.40	116.66	119.90
21	AA	449	G	N3-C2-N2	-5.40	116.12	119.90
54	BA	1370	C	N3-C2-O2	-5.40	118.12	121.90
24	A3	57	C	N1-C2-O2	5.40	122.14	118.90
54	BA	892	A	C6-C5-N7	5.40	136.08	132.30
54	BA	2652	C	N1-C2-O2	5.40	122.14	118.90
54	BA	2295	C	O4'-C1'-N1	5.40	112.52	108.20
21	AA	419	C	N1-C2-O2	5.40	122.14	118.90
54	BA	1528	A	C4-C5-C6	-5.40	114.30	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	64	G	N1-C6-O6	-5.39	116.66	119.90
21	AA	110	C	N3-C2-O2	-5.39	118.12	121.90
21	AA	220	G	N1-C6-O6	-5.39	116.66	119.90
21	AA	1267	C	N1-C2-O2	5.39	122.14	118.90
24	A3	9	G	N3-C4-C5	-5.39	125.90	128.60
24	A3	27	G	N1-C6-O6	-5.39	116.66	119.90
54	BA	1128	G	N1-C6-O6	-5.39	116.66	119.90
54	BA	2432	A	O4'-C1'-N9	5.39	112.52	108.20
54	BA	2521	C	N1-C2-O2	5.39	122.14	118.90
30	BH	123	ARG	NE-CZ-NH1	5.39	123.00	120.30
54	BA	454	A	C4-C5-C6	-5.39	114.31	117.00
21	AA	1109	C	O4'-C1'-N1	5.39	112.51	108.20
54	BA	1332	G	N3-C2-N2	-5.39	116.13	119.90
54	BA	1470	A	C4-C5-C6	-5.39	114.31	117.00
54	BA	1847	A	C5'-C4'-C3'	-5.39	107.38	116.00
21	AA	782	A	C4-C5-C6	-5.39	114.31	117.00
54	BA	921	C	N1-C2-O2	5.39	122.13	118.90
54	BA	2023	C	O4'-C1'-N1	5.39	112.51	108.20
55	BB	35	C	N1-C2-O2	5.39	122.13	118.90
21	AA	998	C	N1-C2-O2	5.38	122.13	118.90
21	AA	1322	C	N3-C4-N4	-5.38	114.23	118.00
54	BA	11	C	O4'-C1'-N1	5.38	112.51	108.20
54	BA	715	A	C6-C5-N7	5.38	136.07	132.30
54	BA	1414	C	N3-C2-O2	-5.38	118.13	121.90
54	BA	1843	C	N3-C2-O2	-5.38	118.13	121.90
21	AA	578	C	N1-C2-O2	5.38	122.13	118.90
21	AA	814	A	C4-C5-C6	-5.38	114.31	117.00
54	BA	383	C	N3-C2-O2	-5.38	118.13	121.90
54	BA	654	A	C4-C5-C6	-5.38	114.31	117.00
54	BA	1179	G	N1-C6-O6	-5.38	116.67	119.90
54	BA	1245	G	N1-C6-O6	-5.38	116.67	119.90
54	BA	1625	C	O4'-C1'-N1	5.38	112.51	108.20
21	AA	815	A	C4-C5-C6	-5.38	114.31	117.00
54	BA	112	U	O4'-C1'-N1	5.38	112.50	108.20
54	BA	1469	A	C4-C5-C6	-5.38	114.31	117.00
54	BA	2462	C	N1-C2-O2	5.38	122.13	118.90
55	BB	78	A	C6-C5-N7	5.38	136.07	132.30
54	BA	1203	U	O4'-C1'-N1	5.38	112.50	108.20
54	BA	1378	A	C6-C5-N7	5.38	136.06	132.30
54	BA	2728	U	O4'-C1'-N1	5.38	112.50	108.20
21	AA	831	A	C5-C6-N1	5.38	120.39	117.70
21	AA	1271	A	C4-C5-C6	-5.38	114.31	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	399	U	O4'-C1'-N1	5.38	112.50	108.20
54	BA	2248	C	N3-C2-O2	-5.38	118.14	121.90
21	AA	1411	C	N1-C2-O2	5.38	122.12	118.90
21	AA	466	A	C4-C5-C6	-5.37	114.31	117.00
41	BS	95	ARG	NE-CZ-NH1	5.37	122.99	120.30
54	BA	1049	C	N1-C2-O2	5.37	122.12	118.90
54	BA	2275	C	N1-C2-O2	5.37	122.12	118.90
54	BA	2520	C	N1-C2-O2	5.37	122.12	118.90
54	BA	2721	A	C4-C5-C6	-5.37	114.31	117.00
54	BA	1365	A	C4-C5-C6	-5.37	114.31	117.00
54	BA	2215	C	O4'-C1'-N1	5.37	112.50	108.20
24	A3	44	A	O4'-C1'-N9	5.37	112.50	108.20
43	BU	5	ARG	NE-CZ-NH1	5.37	122.98	120.30
54	BA	1816	C	N3-C4-N4	-5.37	114.24	118.00
54	BA	1871	A	C4-C5-C6	-5.37	114.31	117.00
21	AA	765	G	C1'-O4'-C4'	-5.37	105.61	109.90
27	BE	117	ARG	NE-CZ-NH1	5.37	122.98	120.30
37	BO	111	ARG	NE-CZ-NH1	5.37	122.98	120.30
54	BA	426	C	N1-C2-O2	5.37	122.12	118.90
54	BA	2514	U	O4'-C1'-N1	5.37	112.50	108.20
21	AA	163	C	N1-C2-O2	5.37	122.12	118.90
21	AA	848	C	N3-C2-O2	-5.37	118.14	121.90
54	BA	2248	C	O4'-C1'-N1	5.37	112.49	108.20
54	BA	614	A	C1'-O4'-C4'	-5.37	105.61	109.90
54	BA	1173	U	O4'-C1'-N1	5.37	112.49	108.20
54	BA	1663	G	N1-C6-O6	-5.37	116.68	119.90
21	AA	308	C	N3-C2-O2	-5.36	118.15	121.90
21	AA	329	A	C4-C5-C6	-5.36	114.32	117.00
21	AA	579	A	O4'-C1'-N9	5.36	112.49	108.20
54	BA	2146	C	N1-C2-O2	5.36	122.12	118.90
54	BA	2427	C	N1-C2-O2	5.36	122.12	118.90
54	BA	2492	U	N3-C2-O2	-5.36	118.45	122.20
17	AR	50	TYR	CB-CG-CD1	-5.36	117.78	121.00
21	AA	114	U	O4'-C1'-N1	5.36	112.49	108.20
54	BA	359	G	N1-C6-O6	-5.36	116.68	119.90
54	BA	585	G	C5'-C4'-O4'	5.36	115.53	109.10
56	B5	134	ARG	NE-CZ-NH1	5.36	122.98	120.30
21	AA	395	C	O4'-C1'-N1	5.36	112.49	108.20
54	BA	485	C	N1-C2-O2	5.36	122.11	118.90
21	AA	254	G	C5'-C4'-O4'	5.36	115.53	109.10
21	AA	418	C	N3-C2-O2	-5.36	118.15	121.90
54	BA	1977	A	C4-C5-C6	-5.36	114.32	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2757	A	C5'-C4'-C3'	-5.36	107.43	116.00
54	BA	2833	U	N3-C2-O2	-5.36	118.45	122.20
54	BA	1582	C	N3-C2-O2	-5.36	118.15	121.90
54	BA	1815	A	C4-C5-C6	-5.36	114.32	117.00
54	BA	2420	C	N3-C2-O2	-5.36	118.15	121.90
24	A3	48	U	P-O3'-C3'	5.35	126.12	119.70
34	BL	21	ARG	NE-CZ-NH1	5.35	122.98	120.30
54	BA	601	C	C4'-C3'-C2'	-5.35	97.25	102.60
54	BA	705	A	C4-C5-C6	-5.35	114.32	117.00
54	BA	2525	G	N3-C2-N2	-5.35	116.15	119.90
21	AA	1119	C	N3-C2-O2	-5.35	118.15	121.90
22	A1	76	A	C4-C5-C6	-5.35	114.32	117.00
54	BA	49	A	C4-C5-C6	-5.35	114.32	117.00
54	BA	347	A	C4-C5-C6	-5.35	114.32	117.00
54	BA	828	U	N1-C1'-C2'	5.35	120.96	114.00
21	AA	422	C	N1-C2-O2	5.35	122.11	118.90
21	AA	427	U	N3-C2-O2	-5.35	118.45	122.20
54	BA	183	C	N3-C2-O2	-5.35	118.16	121.90
54	BA	895	U	N3-C2-O2	-5.35	118.46	122.20
54	BA	1552	A	C4-C5-C6	-5.35	114.33	117.00
54	BA	1792	G	N1-C6-O6	-5.35	116.69	119.90
51	B2	34	ARG	NE-CZ-NH2	-5.35	117.63	120.30
54	BA	2063	C	C1'-O4'-C4'	-5.35	105.62	109.90
20	AU	30	GLU	CA-C-N	5.34	128.96	117.20
29	BG	152	ARG	NE-CZ-NH1	5.34	122.97	120.30
54	BA	20	C	O4'-C1'-N1	5.34	112.48	108.20
54	BA	545	U	N3-C2-O2	-5.34	118.46	122.20
54	BA	961	C	N1-C2-O2	5.34	122.11	118.90
54	BA	2825	G	N3-C4-C5	-5.34	125.93	128.60
54	BA	2704	C	O4'-C1'-N1	5.34	112.47	108.20
24	A3	43	G	N1-C6-O6	-5.34	116.70	119.90
54	BA	824	U	O4'-C1'-N1	5.34	112.47	108.20
54	BA	1177	G	N3-C2-N2	-5.34	116.16	119.90
54	BA	1580	A	C4-C5-C6	-5.34	114.33	117.00
54	BA	2122	U	O4'-C1'-N1	5.34	112.47	108.20
54	BA	2185	U	O4'-C1'-N1	5.34	112.47	108.20
21	AA	66	A	C4-C5-C6	-5.34	114.33	117.00
54	BA	151	C	N3-C2-O2	-5.34	118.16	121.90
54	BA	598	U	N3-C2-O2	-5.34	118.46	122.20
54	BA	713	G	N1-C6-O6	-5.34	116.70	119.90
54	BA	1675	C	N1-C2-O2	5.34	122.10	118.90
54	BA	2621	G	N1-C6-O6	-5.34	116.70	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1251	A	C6-C5-N7	5.34	136.04	132.30
54	BA	1066	U	O4'-C1'-N1	5.34	112.47	108.20
54	BA	2757	A	C4-C5-C6	-5.34	114.33	117.00
54	BA	795	C	O4'-C1'-N1	5.34	112.47	108.20
54	BA	1185	G	N1-C6-O6	-5.34	116.70	119.90
54	BA	1901	A	C4-C5-C6	-5.34	114.33	117.00
21	AA	1168	U	N3-C2-O2	-5.33	118.47	122.20
21	AA	411	A	C4-C5-C6	-5.33	114.33	117.00
48	BZ	30	ARG	NE-CZ-NH2	-5.33	117.63	120.30
54	BA	678	C	N3-C2-O2	-5.33	118.17	121.90
54	BA	730	A	C6-C5-N7	5.33	136.03	132.30
54	BA	2148	G	N1-C6-O6	-5.33	116.70	119.90
21	AA	555	U	C1'-O4'-C4'	-5.33	105.64	109.90
21	AA	1459	G	N1-C6-O6	-5.33	116.70	119.90
54	BA	270	A	C4-C5-C6	-5.33	114.34	117.00
38	BP	52	ARG	NH1-CZ-NH2	-5.33	113.54	119.40
21	AA	501	C	N1-C2-O2	5.33	122.09	118.90
54	BA	1029	A	C4'-C3'-C2'	-5.33	97.28	102.60
54	BA	1587	G	N1-C6-O6	-5.33	116.70	119.90
21	AA	625	U	N3-C2-O2	-5.32	118.47	122.20
54	BA	37	C	O4'-C1'-N1	5.32	112.46	108.20
54	BA	228	C	N1-C2-O2	5.32	122.09	118.90
54	BA	2244	U	N3-C2-O2	-5.32	118.47	122.20
54	BA	2583	G	N1-C6-O6	-5.32	116.71	119.90
21	AA	1113	C	N1-C2-O2	5.32	122.09	118.90
54	BA	2697	G	N1-C6-O6	-5.32	116.71	119.90
55	BB	14	U	O4'-C1'-N1	5.32	112.46	108.20
21	AA	1449	C	N1-C2-O2	5.32	122.09	118.90
24	A3	50	G	N3-C2-N2	-5.32	116.18	119.90
54	BA	696	G	N1-C6-O6	-5.32	116.71	119.90
54	BA	2023	C	N3-C2-O2	-5.32	118.18	121.90
54	BA	2498	C	N1-C2-O2	5.32	122.09	118.90
21	AA	816	A	O4'-C1'-N9	5.32	112.45	108.20
54	BA	1205	A	C4-C5-C6	-5.32	114.34	117.00
54	BA	1704	C	O4'-C1'-N1	5.32	112.45	108.20
54	BA	2507	C	N1-C2-O2	5.32	122.09	118.90
54	BA	2612	C	N1-C2-O2	5.32	122.09	118.90
21	AA	1342	C	C5'-C4'-O4'	5.32	115.48	109.10
21	AA	1474	U	N3-C2-O2	-5.32	118.48	122.20
54	BA	249	C	P-O3'-C3'	5.32	126.08	119.70
54	BA	1010	A	C4-C5-C6	-5.32	114.34	117.00
54	BA	2434	A	N1-C6-N6	-5.32	115.41	118.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1468	A	C6-C5-N7	5.31	136.02	132.30
54	BA	1325	U	N3-C2-O2	-5.31	118.48	122.20
21	AA	406	G	N3-C4-C5	-5.31	125.94	128.60
54	BA	650	C	N3-C4-C5	5.31	124.03	121.90
54	BA	1844	C	N3-C2-O2	-5.31	118.18	121.90
54	BA	2460	U	O4'-C1'-N1	5.31	112.45	108.20
21	AA	493	A	O4'-C1'-N9	5.31	112.45	108.20
21	AA	658	C	N1-C2-O2	5.31	122.09	118.90
54	BA	513	A	C4-C5-C6	-5.31	114.34	117.00
21	AA	251	G	O4'-C1'-N9	5.31	112.45	108.20
21	AA	355	C	N3-C4-N4	-5.31	114.28	118.00
21	AA	1426	G	N3-C2-N2	-5.31	116.18	119.90
54	BA	2237	G	N1-C6-O6	-5.31	116.72	119.90
54	BA	1413	A	C6-C5-N7	5.31	136.01	132.30
54	BA	2634	A	C6-C5-N7	5.31	136.01	132.30
54	BA	2194	U	O4'-C1'-N1	5.31	112.44	108.20
54	BA	2841	C	N3-C2-O2	-5.31	118.19	121.90
21	AA	124	C	C3'-C2'-C1'	5.30	105.74	101.50
21	AA	949	A	C4-C5-C6	-5.30	114.35	117.00
55	BB	46	A	C4-C5-C6	-5.30	114.35	117.00
54	BA	2245	U	N3-C2-O2	-5.30	118.49	122.20
54	BA	2426	A	C4-C5-C6	-5.30	114.35	117.00
21	AA	862	C	N3-C2-O2	-5.30	118.19	121.90
21	AA	1406	U	O4'-C1'-N1	5.30	112.44	108.20
54	BA	584	C	N1-C2-O2	5.30	122.08	118.90
21	AA	119	A	C4-C5-C6	-5.30	114.35	117.00
21	AA	894	G	N1-C6-O6	-5.30	116.72	119.90
21	AA	968	A	C4-C5-C6	-5.30	114.35	117.00
54	BA	1739	A	C6-C5-N7	5.30	136.01	132.30
54	BA	34	U	N1-C2-N3	5.30	118.08	114.90
54	BA	159	G	C8-N9-C4	-5.30	104.28	106.40
54	BA	1594	U	O4'-C1'-N1	5.30	112.44	108.20
54	BA	2178	C	N1-C2-O2	5.30	122.08	118.90
18	AS	78	THR	CA-C-N	5.30	128.85	117.20
54	BA	1847	A	C4-C5-C6	-5.30	114.35	117.00
54	BA	2133	G	N1-C6-O6	-5.30	116.72	119.90
54	BA	2214	C	N1-C2-O2	5.30	122.08	118.90
21	AA	168	G	N1-C6-O6	-5.29	116.72	119.90
21	AA	719	C	N3-C2-O2	-5.29	118.19	121.90
54	BA	1720	U	O4'-C1'-N1	5.29	112.44	108.20
54	BA	1773	A	O4'-C1'-N9	5.29	112.44	108.20
54	BA	2628	C	N1-C2-O2	5.29	122.08	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	677	A	N1-C6-N6	-5.29	115.43	118.60
54	BA	870	U	O4'-C1'-N1	5.29	112.43	108.20
54	BA	2029	G	N1-C6-O6	-5.29	116.73	119.90
54	BA	2711	A	P-O3'-C3'	5.29	126.05	119.70
24	A3	18	U	O4'-C1'-N1	5.29	112.43	108.20
54	BA	1035	U	O4'-C1'-N1	5.29	112.43	108.20
22	A1	31	C	N1-C2-O2	5.29	122.07	118.90
54	BA	479	A	O4'-C1'-N9	5.29	112.43	108.20
54	BA	1088	A	C4-C5-C6	-5.29	114.36	117.00
54	BA	1713	A	C4-C5-C6	-5.29	114.36	117.00
54	BA	2386	A	C6-C5-N7	5.29	136.00	132.30
55	BB	90	C	N3-C4-C5	5.29	124.01	121.90
1	AB	34	ARG	NE-CZ-NH1	5.28	122.94	120.30
21	AA	390	U	N1-C2-N3	5.28	118.07	114.90
21	AA	1049	U	C1'-O4'-C4'	-5.28	105.67	109.90
21	AA	1176	A	C4-C5-C6	-5.28	114.36	117.00
54	BA	1828	G	N1-C6-O6	-5.28	116.73	119.90
54	BA	2175	C	N1-C2-O2	5.28	122.07	118.90
54	BA	2425	A	C4-C5-C6	-5.28	114.36	117.00
54	BA	2748	A	C4-C5-C6	-5.28	114.36	117.00
21	AA	694	A	C4-C5-C6	-5.28	114.36	117.00
22	A1	10	G	N1-C6-O6	-5.28	116.73	119.90
54	BA	1030	C	N3-C2-O2	-5.28	118.20	121.90
21	AA	893	C	N3-C2-O2	-5.28	118.20	121.90
54	BA	97	C	O4'-C1'-N1	5.28	112.42	108.20
54	BA	109	C	O4'-C1'-N1	5.28	112.42	108.20
54	BA	642	U	N3-C2-O2	-5.28	118.50	122.20
54	BA	2702	G	N3-C2-N2	-5.28	116.20	119.90
54	BA	2826	A	C4-C5-C6	-5.28	114.36	117.00
55	BB	34	A	C6-C5-N7	5.28	136.00	132.30
14	AO	57	ARG	NE-CZ-NH1	5.28	122.94	120.30
21	AA	951	G	N1-C6-O6	-5.28	116.73	119.90
54	BA	1210	G	N3-C4-C5	-5.28	125.96	128.60
7	AH	116	ARG	NE-CZ-NH1	5.28	122.94	120.30
21	AA	111	G	N3-C2-N2	-5.28	116.21	119.90
54	BA	2660	A	C4-C5-C6	-5.28	114.36	117.00
54	BA	2707	U	O4'-C1'-N1	5.28	112.42	108.20
49	B0	16	ARG	NE-CZ-NH1	5.28	122.94	120.30
54	BA	2776	A	O4'-C1'-N9	5.28	112.42	108.20
21	AA	239	U	N3-C2-O2	-5.27	118.51	122.20
21	AA	1202	U	O4'-C1'-N1	5.27	112.42	108.20
54	BA	837	C	N3-C2-O2	-5.27	118.21	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2332	C	O4'-C1'-N1	5.27	112.42	108.20
21	AA	728	A	C2-N3-C4	5.27	113.24	110.60
54	BA	640	C	N1-C2-O2	5.27	122.06	118.90
54	BA	775	G	O4'-C1'-N9	5.27	112.42	108.20
54	BA	1386	C	C5'-C4'-O4'	5.27	115.43	109.10
21	AA	817	C	N3-C2-O2	-5.27	118.21	121.90
54	BA	34	U	N3-C2-O2	-5.27	118.51	122.20
54	BA	516	C	N1-C2-O2	5.27	122.06	118.90
21	AA	628	G	N1-C6-O6	-5.27	116.74	119.90
35	BM	66	ARG	NE-CZ-NH1	5.27	122.93	120.30
54	BA	971	G	C5-C6-N1	5.27	114.14	111.50
54	BA	1184	U	O4'-C1'-N1	5.27	112.42	108.20
54	BA	1399	C	O4'-C1'-N1	5.27	112.42	108.20
54	BA	1668	A	O4'-C1'-N9	5.27	112.42	108.20
54	BA	1825	U	O4'-C1'-N1	5.27	112.42	108.20
54	BA	1892	C	N1-C2-O2	5.27	122.06	118.90
54	BA	2475	C	N3-C2-O2	-5.27	118.21	121.90
54	BA	2638	G	N1-C6-O6	-5.27	116.74	119.90
54	BA	737	C	O4'-C1'-N1	5.27	112.41	108.20
54	BA	2343	U	O4'-C1'-N1	5.27	112.42	108.20
21	AA	483	C	N1-C2-O2	5.27	122.06	118.90
21	AA	1280	A	C4-C5-C6	-5.27	114.37	117.00
21	AA	1507	A	C4-C5-C6	-5.27	114.37	117.00
54	BA	635	C	C5'-C4'-O4'	5.27	115.42	109.10
54	BA	718	A	C2-N3-C4	5.27	113.23	110.60
54	BA	2889	C	O4'-C1'-N1	5.27	112.41	108.20
21	AA	735	C	N1-C2-O2	5.26	122.06	118.90
21	AA	985	C	N1-C2-O2	5.26	122.06	118.90
21	AA	1130	A	N1-C6-N6	-5.26	115.44	118.60
54	BA	1724	G	N1-C6-O6	-5.26	116.74	119.90
54	BA	1729	U	N3-C2-O2	-5.26	118.52	122.20
55	BB	100	G	N1-C6-O6	-5.26	116.74	119.90
54	BA	2013	A	C4-C5-C6	-5.26	114.37	117.00
54	BA	2342	C	N1-C2-O2	5.26	122.06	118.90
54	BA	2771	C	N1-C2-O2	5.26	122.06	118.90
21	AA	271	C	C3'-C2'-C1'	5.26	105.71	101.50
21	AA	1333	A	C4-C5-C6	-5.26	114.37	117.00
21	AA	1441	A	C4-C5-C6	-5.26	114.37	117.00
54	BA	2406	A	C4-C5-C6	-5.26	114.37	117.00
54	BA	2823	A	C4-C5-C6	-5.26	114.37	117.00
21	AA	934	C	N1-C2-O2	5.26	122.06	118.90
21	AA	1163	A	C4-C5-C6	-5.26	114.37	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1256	A	C2-N3-C4	5.26	113.23	110.60
54	BA	2089	C	C5'-C4'-O4'	5.26	115.41	109.10
54	BA	2286	G	C3'-C2'-C1'	5.26	105.71	101.50
54	BA	2703	C	N1-C2-O2	5.26	122.06	118.90
21	AA	238	A	C4-C5-C6	-5.26	114.37	117.00
21	AA	534	U	N3-C2-O2	-5.26	118.52	122.20
54	BA	2394	C	N3-C2-O2	-5.26	118.22	121.90
29	BG	94	ARG	NE-CZ-NH1	5.26	122.93	120.30
54	BA	695	G	N3-C2-N2	-5.26	116.22	119.90
54	BA	958	U	N3-C2-O2	-5.26	118.52	122.20
54	BA	1652	A	O4'-C1'-N9	5.26	112.41	108.20
54	BA	2063	C	N1-C2-O2	5.26	122.05	118.90
21	AA	552	U	O4'-C1'-N1	5.25	112.40	108.20
54	BA	556	A	C4-C5-C6	-5.25	114.37	117.00
21	AA	78	A	C6-C5-N7	5.25	135.98	132.30
54	BA	1779	U	O4'-C1'-N1	5.25	112.40	108.20
54	BA	1932	A	C6-C5-N7	5.25	135.98	132.30
54	BA	2244	U	C3'-C2'-C1'	5.25	105.70	101.50
54	BA	970	U	O4'-C1'-N1	5.25	112.40	108.20
54	BA	1385	A	O4'-C1'-N9	5.25	112.40	108.20
54	BA	2195	U	O4'-C1'-N1	5.25	112.40	108.20
54	BA	2472	G	N3-C4-C5	-5.25	125.97	128.60
21	AA	278	G	N1-C6-O6	-5.25	116.75	119.90
21	AA	886	G	N1-C6-O6	-5.25	116.75	119.90
21	AA	664	G	N1-C6-O6	-5.25	116.75	119.90
54	BA	301	G	N1-C6-O6	-5.25	116.75	119.90
54	BA	302	C	N3-C4-C5	5.25	124.00	121.90
54	BA	885	C	N1-C2-O2	5.25	122.05	118.90
54	BA	1220	G	N1-C6-O6	-5.25	116.75	119.90
54	BA	2059	A	C4-C5-C6	-5.25	114.38	117.00
21	AA	1502	A	O4'-C1'-N9	5.25	112.40	108.20
54	BA	1618	A	C4-C5-C6	-5.25	114.38	117.00
54	BA	2855	C	O4'-C1'-N1	5.25	112.40	108.20
21	AA	579	A	C3'-C2'-C1'	5.25	105.70	101.50
54	BA	902	C	O4'-C1'-N1	5.25	112.40	108.20
54	BA	1443	U	O4'-C1'-N1	5.25	112.40	108.20
54	BA	279	A	C4-C5-C6	-5.24	114.38	117.00
54	BA	920	A	C4-C5-C6	-5.24	114.38	117.00
54	BA	1039	A	N1-C6-N6	-5.24	115.45	118.60
54	BA	1570	A	C6-C5-N7	5.24	135.97	132.30
54	BA	1670	C	O4'-C1'-N1	5.24	112.39	108.20
21	AA	330	C	N3-C2-O2	-5.24	118.23	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	BW	76	ARG	NE-CZ-NH1	5.24	122.92	120.30
54	BA	262	A	C6-C5-N7	5.24	135.97	132.30
54	BA	2795	C	N1-C2-O2	5.24	122.05	118.90
11	AL	98	ARG	NE-CZ-NH1	5.24	122.92	120.30
21	AA	80	A	C6-C5-N7	5.24	135.97	132.30
21	AA	630	A	C6-C5-N7	5.24	135.97	132.30
51	B2	35	ARG	NE-CZ-NH1	5.24	122.92	120.30
54	BA	531	C	N1-C2-O2	5.24	122.05	118.90
54	BA	1072	C	O4'-C1'-N1	5.24	112.39	108.20
54	BA	2046	G	C5-C6-N1	5.24	114.12	111.50
21	AA	236	A	C5-C6-N1	5.24	120.32	117.70
21	AA	1200	C	N3-C2-O2	-5.24	118.23	121.90
21	AA	1528	U	O4'-C1'-N1	5.24	112.39	108.20
54	BA	461	C	O4'-C1'-N1	5.24	112.39	108.20
54	BA	1805	A	C4'-C3'-C2'	-5.24	97.36	102.60
21	AA	993	G	C5-C6-N1	5.24	114.12	111.50
21	AA	1141	C	O4'-C1'-N1	5.24	112.39	108.20
54	BA	19	A	C4-C5-C6	-5.24	114.38	117.00
54	BA	1802	A	C4-C5-C6	-5.24	114.38	117.00
54	BA	2621	G	N9-C4-C5	5.24	107.49	105.40
54	BA	621	A	C4-C5-C6	-5.23	114.38	117.00
54	BA	1217	U	O4'-C1'-N1	5.23	112.39	108.20
54	BA	2828	G	N3-C2-N2	-5.23	116.24	119.90
21	AA	1501	C	N1-C2-O2	5.23	122.04	118.90
54	BA	191	A	C4-C5-C6	-5.23	114.38	117.00
54	BA	1944	U	O4'-C1'-N1	5.23	112.39	108.20
54	BA	2313	C	O4'-C1'-N1	5.23	112.39	108.20
21	AA	428	G	N3-C2-N2	-5.23	116.24	119.90
54	BA	2469	A	C4-C5-C6	-5.23	114.39	117.00
54	BA	2570	G	N3-C2-N2	-5.23	116.24	119.90
21	AA	200	G	N3-C4-C5	-5.23	125.98	128.60
23	A2	87	U	O4'-C1'-N1	5.23	112.38	108.20
54	BA	751	A	C4-C5-C6	-5.23	114.39	117.00
54	BA	998	C	C4'-C3'-C2'	-5.23	97.37	102.60
54	BA	2601	C	N1-C2-O2	5.23	122.04	118.90
54	BA	732	C	O4'-C1'-N1	5.23	112.38	108.20
54	BA	2084	C	O4'-C1'-N1	5.23	112.38	108.20
4	AE	28	ARG	NE-CZ-NH1	5.22	122.91	120.30
21	AA	26	A	C4-C5-C6	-5.22	114.39	117.00
21	AA	129	A	C6-C5-N7	5.22	135.96	132.30
53	B4	24	ARG	NE-CZ-NH2	-5.22	117.69	120.30
54	BA	528	A	O4'-C1'-N9	5.22	112.38	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2298	A	C4-C5-C6	-5.22	114.39	117.00
54	BA	2443	C	O4'-C1'-N1	5.22	112.38	108.20
21	AA	173	U	O4'-C1'-N1	5.22	112.38	108.20
21	AA	851	G	C5-C6-N1	5.22	114.11	111.50
55	BB	92	C	O4'-C1'-N1	5.22	112.38	108.20
21	AA	481	G	N3-C4-C5	-5.22	125.99	128.60
21	AA	714	G	N3-C4-C5	-5.22	125.99	128.60
21	AA	1077	G	C1'-O4'-C4'	-5.22	105.72	109.90
21	AA	1209	C	O4'-C1'-N1	5.22	112.38	108.20
54	BA	905	A	C4-C5-C6	-5.22	114.39	117.00
21	AA	1055	A	O4'-C1'-N9	5.22	112.37	108.20
21	AA	1136	C	N1-C2-O2	5.22	122.03	118.90
54	BA	2058	A	C4-C5-C6	-5.22	114.39	117.00
21	AA	312	C	N1-C2-O2	5.22	122.03	118.90
21	AA	856	C	O4'-C1'-N1	5.22	112.37	108.20
21	AA	1299	A	C4-C5-C6	-5.22	114.39	117.00
21	AA	1399	C	N3-C2-O2	-5.22	118.25	121.90
21	AA	1534	A	C1'-O4'-C4'	-5.22	105.73	109.90
54	BA	2450	A	C4-C5-C6	-5.22	114.39	117.00
54	BA	385	C	N1-C2-O2	5.21	122.03	118.90
54	BA	703	U	O4'-C1'-N1	5.21	112.37	108.20
54	BA	2867	G	N3-C4-C5	-5.21	125.99	128.60
21	AA	1341	U	N3-C2-O2	-5.21	118.55	122.20
54	BA	863	A	C4-C5-C6	-5.21	114.39	117.00
54	BA	1028	A	C4-C5-C6	-5.21	114.39	117.00
54	BA	41	C	N1-C2-O2	5.21	122.03	118.90
54	BA	1396	U	N3-C2-O2	-5.21	118.55	122.20
54	BA	1933	G	C4'-C3'-C2'	-5.21	97.39	102.60
54	BA	2192	U	O4'-C1'-N1	5.21	112.37	108.20
54	BA	2236	U	O4'-C1'-N1	5.21	112.37	108.20
54	BA	867	C	N3-C2-O2	-5.21	118.25	121.90
54	BA	1002	G	N1-C6-O6	-5.21	116.77	119.90
54	BA	1423	G	O4'-C1'-N9	5.21	112.37	108.20
34	BL	132	ARG	NE-CZ-NH1	5.21	122.90	120.30
54	BA	926	G	N1-C6-O6	-5.21	116.78	119.90
54	BA	1687	G	N1-C6-O6	-5.21	116.78	119.90
54	BA	2048	G	N1-C6-O6	-5.21	116.78	119.90
54	BA	2063	C	O4'-C1'-N1	5.21	112.37	108.20
21	AA	157	U	N3-C2-O2	-5.21	118.56	122.20
21	AA	311	C	N1-C2-O2	5.21	122.02	118.90
24	A3	21	H2U	O3'-P-O5'	-5.21	94.11	104.00
54	BA	280	U	N3-C2-O2	-5.21	118.56	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	745	G	N1-C6-O6	-5.21	116.78	119.90
54	BA	1585	C	N1-C2-O2	5.21	122.02	118.90
54	BA	2509	G	N1-C6-O6	-5.21	116.78	119.90
54	BA	2684	U	O4'-C1'-N1	5.21	112.36	108.20
21	AA	803	G	C8-N9-C4	-5.21	104.32	106.40
54	BA	300	A	C6-C5-N7	5.21	135.94	132.30
54	BA	2131	U	N3-C2-O2	-5.21	118.56	122.20
24	A3	29	C	N1-C2-O2	5.20	122.02	118.90
42	BT	6	ARG	NE-CZ-NH1	5.20	122.90	120.30
54	BA	1336	A	C4-C5-C6	-5.20	114.40	117.00
54	BA	1621	U	C3'-C2'-C1'	5.20	105.66	101.50
54	BA	2226	C	O4'-C1'-N1	5.20	112.36	108.20
21	AA	1146	A	C4-C5-C6	-5.20	114.40	117.00
21	AA	328	C	O4'-C1'-N1	5.20	112.36	108.20
54	BA	102	U	C3'-C2'-C1'	5.20	105.66	101.50
21	AA	811	C	C1'-O4'-C4'	-5.20	105.74	109.90
54	BA	398	C	N1-C2-O2	5.20	122.02	118.90
54	BA	475	C	N3-C4-C5	5.20	123.98	121.90
54	BA	613	A	C4-C5-C6	-5.20	114.40	117.00
54	BA	992	C	O4'-C1'-N1	5.20	112.36	108.20
55	BB	8	C	N1-C2-O2	5.20	122.02	118.90
21	AA	1049	U	N3-C2-O2	-5.20	118.56	122.20
54	BA	27	G	N1-C6-O6	-5.20	116.78	119.90
54	BA	766	U	O4'-C1'-N1	5.20	112.36	108.20
54	BA	1676	A	O4'-C1'-N9	5.20	112.36	108.20
21	AA	323	U	N3-C2-O2	-5.19	118.56	122.20
21	AA	1279	G	C8-N9-C4	-5.19	104.32	106.40
54	BA	462	C	O4'-C1'-N1	5.19	112.36	108.20
54	BA	2810	A	C6-C5-N7	5.19	135.94	132.30
21	AA	824	G	O4'-C1'-N9	5.19	112.35	108.20
54	BA	1591	A	C6-C5-N7	5.19	135.94	132.30
21	AA	528	C	N1-C2-O2	5.19	122.01	118.90
21	AA	1409	C	N1-C2-O2	5.19	122.01	118.90
40	BR	84	ARG	NE-CZ-NH1	5.19	122.89	120.30
54	BA	539	G	O4'-C1'-N9	5.19	112.35	108.20
54	BA	1230	A	C6-C5-N7	5.19	135.93	132.30
54	BA	2237	G	O4'-C1'-N9	5.19	112.35	108.20
21	AA	864	A	C4-C5-C6	-5.19	114.41	117.00
54	BA	2739	U	O4'-C1'-N1	5.19	112.35	108.20
21	AA	880	C	O4'-C1'-N1	5.19	112.35	108.20
54	BA	1126	A	C6-C5-N7	5.19	135.93	132.30
54	BA	1200	C	N1-C2-O2	5.19	122.01	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2464	G	N1-C6-O6	-5.19	116.79	119.90
54	BA	2888	C	N1-C2-O2	5.19	122.01	118.90
21	AA	19	A	C6-C5-N7	5.19	135.93	132.30
21	AA	757	U	N3-C2-O2	-5.19	118.57	122.20
54	BA	1738	G	N3-C2-N2	-5.19	116.27	119.90
21	AA	6	G	O4'-C1'-N9	5.18	112.35	108.20
21	AA	204	G	N1-C6-O6	-5.18	116.79	119.90
21	AA	871	U	O4'-C1'-N1	5.18	112.35	108.20
21	AA	1129	C	N1-C2-O2	5.18	122.01	118.90
21	AA	1194	U	N1-C2-N3	5.18	118.01	114.90
24	A3	9	G	C3'-C2'-C1'	5.18	105.65	101.50
26	BD	13	ARG	NE-CZ-NH1	5.18	122.89	120.30
54	BA	2539	C	N1-C2-O2	5.18	122.01	118.90
54	BA	2650	U	O4'-C1'-N1	5.18	112.35	108.20
54	BA	2896	C	N1-C2-O2	5.18	122.01	118.90
55	BB	12	C	N1-C2-O2	5.18	122.01	118.90
2	AC	155	ARG	NE-CZ-NH1	5.18	122.89	120.30
29	BG	151	ARG	NE-CZ-NH1	5.18	122.89	120.30
54	BA	380	G	N1-C6-O6	-5.18	116.79	119.90
54	BA	738	G	N1-C6-O6	-5.18	116.79	119.90
54	BA	1568	G	N3-C4-C5	-5.18	126.01	128.60
54	BA	2015	A	C4-C5-C6	-5.18	114.41	117.00
54	BA	2064	C	N3-C2-O2	-5.18	118.27	121.90
54	BA	2742	G	N1-C6-O6	-5.18	116.79	119.90
21	AA	528	C	N3-C4-C5	5.18	123.97	121.90
28	BF	29	ARG	NE-CZ-NH1	5.18	122.89	120.30
54	BA	491	G	N1-C6-O6	-5.18	116.79	119.90
54	BA	677	A	C4-C5-C6	-5.18	114.41	117.00
54	BA	2663	G	O4'-C1'-N9	5.18	112.34	108.20
21	AA	29	U	O4'-C1'-N1	5.18	112.34	108.20
24	A3	35	C	N1-C2-O2	5.18	122.01	118.90
54	BA	116	C	O4'-C1'-N1	5.18	112.34	108.20
54	BA	465	G	N1-C6-O6	-5.18	116.79	119.90
54	BA	2402	U	N3-C2-O2	-5.18	118.57	122.20
18	AS	78	THR	O-C-N	-5.18	114.42	122.70
21	AA	658	C	N3-C4-C5	5.18	123.97	121.90
54	BA	1639	C	N1-C2-O2	5.18	122.01	118.90
21	AA	38	G	C5'-C4'-C3'	-5.18	107.72	116.00
54	BA	1104	C	O4'-C1'-N1	5.18	112.34	108.20
54	BA	1827	U	O4'-C1'-N1	5.18	112.34	108.20
21	AA	597	G	N1-C6-O6	-5.17	116.80	119.90
21	AA	1225	A	C3'-C2'-C1'	5.17	105.64	101.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	A2	80	C	P-O3'-C3'	5.17	125.91	119.70
54	BA	2088	A	C6-C5-N7	5.17	135.92	132.30
21	AA	846	G	C5-C6-N1	5.17	114.09	111.50
54	BA	2260	C	O4'-C1'-N1	5.17	112.34	108.20
54	BA	2831	G	N1-C6-O6	-5.17	116.80	119.90
21	AA	191	G	N3-C4-C5	-5.17	126.01	128.60
21	AA	1364	U	N3-C2-O2	-5.17	118.58	122.20
54	BA	1100	C	N1-C2-O2	5.17	122.00	118.90
54	BA	1155	A	C4-C5-C6	-5.17	114.41	117.00
54	BA	1191	G	N1-C6-O6	-5.17	116.80	119.90
54	BA	2638	G	N3-C4-C5	-5.17	126.01	128.60
54	BA	2808	G	N1-C6-O6	-5.17	116.80	119.90
21	AA	85	U	N3-C2-O2	-5.17	118.58	122.20
54	BA	1541	C	O4'-C1'-N1	5.17	112.34	108.20
54	BA	1985	C	N3-C2-O2	-5.17	118.28	121.90
54	BA	2466	C	N3-C2-O2	-5.17	118.28	121.90
21	AA	161	A	C4-C5-C6	-5.17	114.42	117.00
21	AA	686	U	O4'-C1'-N1	5.17	112.33	108.20
54	BA	1624	U	O4'-C1'-N1	5.17	112.33	108.20
54	BA	1800	C	N1-C2-O2	5.17	122.00	118.90
54	BA	2344	U	N3-C2-O2	-5.17	118.58	122.20
3	AD	46	ARG	NE-CZ-NH2	-5.17	117.72	120.30
21	AA	99	C	N1-C2-O2	5.17	122.00	118.90
21	AA	179	A	C6-C5-N7	5.17	135.92	132.30
21	AA	353	A	O4'-C1'-N9	5.17	112.33	108.20
21	AA	1488	G	N1-C6-O6	-5.17	116.80	119.90
22	A1	16	C	N1-C2-O2	5.17	122.00	118.90
54	BA	2586	U	O4'-C1'-N1	5.17	112.33	108.20
18	AS	22	VAL	C-N-CA	5.17	134.61	121.70
54	BA	2626	C	O4'-C1'-N1	5.17	112.33	108.20
1	AB	136	ARG	NE-CZ-NH2	-5.16	117.72	120.30
7	AH	79	ARG	NE-CZ-NH1	5.16	122.88	120.30
21	AA	926	G	C3'-C2'-C1'	5.16	105.63	101.50
34	BL	47	ARG	NE-CZ-NH1	5.16	122.88	120.30
54	BA	503	A	C3'-C2'-C1'	5.16	105.63	101.50
54	BA	686	U	O4'-C1'-N1	5.16	112.33	108.20
54	BA	1044	C	O4'-C1'-N1	5.16	112.33	108.20
54	BA	2061	G	O4'-C1'-N9	5.16	112.33	108.20
54	BA	2164	C	N1-C2-O2	5.16	122.00	118.90
54	BA	2434	A	C4-C5-C6	-5.16	114.42	117.00
54	BA	2769	U	O4'-C1'-N1	5.16	112.33	108.20
22	A1	58	A	C6-C5-N7	5.16	135.91	132.30

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	47	C	C3'-C2'-C1'	5.16	105.63	101.50
54	BA	735	A	N1-C6-N6	-5.16	115.50	118.60
54	BA	2480	C	N3-C2-O2	-5.16	118.29	121.90
21	AA	11	G	N1-C6-O6	-5.16	116.80	119.90
21	AA	314	C	N1-C2-O2	5.16	122.00	118.90
54	BA	253	C	N1-C2-O2	5.16	122.00	118.90
54	BA	786	C	N1-C2-O2	5.16	122.00	118.90
54	BA	1453	A	C4-C5-C6	-5.16	114.42	117.00
21	AA	453	G	C5-C6-N1	5.16	114.08	111.50
21	AA	827	U	N3-C2-O2	-5.16	118.59	122.20
21	AA	924	C	N1-C2-O2	5.16	122.00	118.90
29	BG	34	ARG	NE-CZ-NH1	5.16	122.88	120.30
54	BA	841	G	N1-C6-O6	-5.16	116.81	119.90
54	BA	2527	C	N1-C2-O2	5.16	122.00	118.90
21	AA	1099	G	C5-C6-N1	5.16	114.08	111.50
15	AP	8	ARG	CD-NE-CZ	5.16	130.82	123.60
21	AA	1473	G	N1-C6-O6	-5.16	116.81	119.90
54	BA	2334	U	N3-C2-O2	-5.16	118.59	122.20
54	BA	2491	U	O4'-C1'-N1	5.16	112.32	108.20
21	AA	1200	C	O4'-C1'-N1	5.15	112.32	108.20
54	BA	157	C	N1-C2-O2	5.15	121.99	118.90
54	BA	164	C	C4'-C3'-C2'	-5.15	97.45	102.60
54	BA	2176	A	C4-C5-C6	-5.15	114.42	117.00
54	BA	2858	C	O4'-C1'-N1	5.15	112.32	108.20
21	AA	964	A	C6-C5-N7	5.15	135.91	132.30
21	AA	1117	A	C4-C5-C6	-5.15	114.42	117.00
26	BD	184	ARG	NE-CZ-NH1	5.15	122.88	120.30
54	BA	70	G	N1-C6-O6	-5.15	116.81	119.90
54	BA	2145	C	C6-N1-C2	-5.15	118.24	120.30
21	AA	113	G	N1-C6-O6	-5.15	116.81	119.90
54	BA	791	C	N1-C2-O2	5.15	121.99	118.90
6	AG	137	ARG	NE-CZ-NH2	-5.15	117.72	120.30
54	BA	2295	C	N3-C2-O2	-5.15	118.30	121.90
21	AA	138	G	N1-C6-O6	-5.15	116.81	119.90
21	AA	468	A	C4-C5-C6	-5.15	114.43	117.00
21	AA	742	G	N1-C6-O6	-5.15	116.81	119.90
21	AA	1387	G	C1'-O4'-C4'	-5.15	105.78	109.90
23	A2	80	C	N3-C4-N4	-5.15	114.40	118.00
54	BA	239	C	O4'-C1'-N1	5.15	112.32	108.20
54	BA	624	C	N1-C2-O2	5.15	121.99	118.90
54	BA	866	A	C4-C5-C6	-5.15	114.43	117.00
54	BA	1708	C	N1-C2-O2	5.15	121.99	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	206	C	N3-C2-O2	-5.15	118.30	121.90
54	BA	199	A	C4-C5-C6	-5.15	114.43	117.00
54	BA	851	C	N3-C2-O2	-5.14	118.30	121.90
54	BA	2463	C	O4'-C1'-N1	5.14	112.32	108.20
54	BA	2515	C	N1-C2-O2	5.14	121.99	118.90
21	AA	683	G	N1-C6-O6	-5.14	116.81	119.90
21	AA	716	A	C4-C5-C6	-5.14	114.43	117.00
21	AA	947	G	N1-C6-O6	-5.14	116.81	119.90
54	BA	1146	C	N1-C2-O2	5.14	121.98	118.90
54	BA	1964	G	N3-C4-C5	-5.14	126.03	128.60
54	BA	2581	G	N3-C2-N2	-5.14	116.30	119.90
21	AA	331	G	C5-C6-N1	5.14	114.07	111.50
21	AA	1303	C	N1-C2-O2	5.14	121.98	118.90
54	BA	759	G	C5'-C4'-O4'	5.14	115.27	109.10
22	A1	53	G	N3-C2-N2	-5.14	116.30	119.90
54	BA	898	C	O4'-C1'-N1	5.14	112.31	108.20
54	BA	1730	C	N1-C2-O2	5.14	121.98	118.90
54	BA	2422	C	N3-C4-C5	5.14	123.96	121.90
54	BA	2607	G	N3-C2-N2	-5.14	116.30	119.90
21	AA	408	A	C6-C5-N7	5.14	135.90	132.30
54	BA	421	C	O4'-C1'-N1	5.14	112.31	108.20
54	BA	1067	A	C4-C5-C6	-5.14	114.43	117.00
54	BA	1699	G	C5-C6-N1	5.14	114.07	111.50
54	BA	2006	C	N1-C2-O2	5.14	121.98	118.90
21	AA	214	C	N1-C2-O2	5.14	121.98	118.90
24	A3	9	G	C5'-C4'-C3'	-5.14	107.78	116.00
54	BA	151	C	O4'-C1'-N1	5.14	112.31	108.20
54	BA	334	C	N1-C2-O2	5.14	121.98	118.90
54	BA	508	A	C4-C5-C6	-5.14	114.43	117.00
54	BA	1161	C	C4'-C3'-C2'	-5.14	97.46	102.60
54	BA	1185	G	C3'-C2'-C1'	5.14	105.61	101.50
54	BA	2396	G	O4'-C1'-N9	5.14	112.31	108.20
54	BA	2560	A	C4-C5-C6	-5.14	114.43	117.00
21	AA	1099	G	N1-C6-O6	-5.13	116.82	119.90
21	AA	1228	C	N1-C2-O2	5.13	121.98	118.90
54	BA	163	C	N1-C2-O2	5.13	121.98	118.90
54	BA	322	A	C4-C5-C6	-5.13	114.43	117.00
13	AN	81	ARG	NH1-CZ-NH2	-5.13	113.75	119.40
21	AA	16	A	C6-C5-N7	5.13	135.89	132.30
21	AA	832	G	C5-C6-N1	5.13	114.07	111.50
54	BA	290	U	O4'-C1'-N1	5.13	112.31	108.20
54	BA	1046	A	O4'-C1'-N9	5.13	112.31	108.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1339	G	N1-C6-O6	-5.13	116.82	119.90
21	AA	40	C	C1'-O4'-C4'	-5.13	105.80	109.90
24	A3	41	C	N3-C2-O2	-5.13	118.31	121.90
54	BA	998	C	N1-C2-O2	5.13	121.98	118.90
54	BA	2406	A	C2-N3-C4	5.13	113.17	110.60
21	AA	461	A	O4'-C1'-N9	5.13	112.30	108.20
21	AA	1142	G	N3-C4-C5	-5.13	126.03	128.60
54	BA	2002	G	C5-C6-N1	5.13	114.06	111.50
19	AT	28	ARG	NE-CZ-NH1	5.13	122.86	120.30
21	AA	96	U	O4'-C1'-N1	5.13	112.30	108.20
21	AA	792	A	C1'-O4'-C4'	-5.13	105.80	109.90
21	AA	1406	U	C5-C6-N1	-5.13	120.14	122.70
54	BA	281	C	O4'-C1'-N1	5.13	112.30	108.20
54	BA	547	A	O4'-C4'-C3'	5.13	110.20	106.10
54	BA	2300	C	N1-C2-O2	5.13	121.98	118.90
21	AA	631	C	N1-C2-O2	5.13	121.98	118.90
55	BB	17	C	O4'-C1'-N1	5.13	112.30	108.20
21	AA	788	U	O4'-C1'-N1	5.12	112.30	108.20
54	BA	31	C	N1-C2-O2	5.12	121.97	118.90
54	BA	440	C	O4'-C1'-N1	5.12	112.30	108.20
54	BA	479	A	C4-C5-C6	-5.12	114.44	117.00
54	BA	1214	A	O4'-C1'-N9	5.12	112.30	108.20
54	BA	2503	A	C5'-C4'-O4'	5.12	115.25	109.10
54	BA	623	C	N1-C2-O2	5.12	121.97	118.90
54	BA	796	C	N3-C4-N4	-5.12	114.42	118.00
54	BA	1639	C	O4'-C1'-N1	5.12	112.30	108.20
54	BA	1864	U	O4'-C1'-N1	5.12	112.30	108.20
54	BA	2025	C	N1-C2-O2	5.12	121.97	118.90
21	AA	1152	A	C6-C5-N7	5.12	135.88	132.30
54	BA	54	G	N3-C2-N2	-5.12	116.32	119.90
54	BA	1468	U	O4'-C1'-N1	5.12	112.30	108.20
54	BA	1634	A	C6-C5-N7	5.12	135.88	132.30
55	BB	23	G	N1-C6-O6	-5.12	116.83	119.90
21	AA	870	U	N3-C2-O2	-5.12	118.62	122.20
54	BA	331	C	O4'-C1'-N1	5.12	112.29	108.20
54	BA	486	C	N1-C2-O2	5.12	121.97	118.90
54	BA	1263	U	C3'-C2'-C1'	5.12	105.59	101.50
21	AA	240	G	C1'-O4'-C4'	-5.12	105.81	109.90
54	BA	364	C	O4'-C1'-N1	5.12	112.29	108.20
54	BA	2103	C	O4'-C1'-N1	5.12	112.29	108.20
26	BD	169	ARG	NE-CZ-NH1	5.12	122.86	120.30
54	BA	1015	U	N3-C2-O2	-5.12	118.62	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2559	C	O4'-C1'-N1	5.12	112.29	108.20
54	BA	2658	C	O4'-C1'-N1	5.12	112.29	108.20
54	BA	2757	A	C5'-C4'-O4'	5.12	115.24	109.10
21	AA	405	U	O4'-C1'-N1	5.11	112.29	108.20
21	AA	416	G	C5-C6-N1	5.11	114.06	111.50
21	AA	955	U	O4'-C1'-N1	5.11	112.29	108.20
22	A1	50	G	N3-C2-N2	-5.11	116.32	119.90
24	A3	17	C	N1-C2-O2	5.11	121.97	118.90
54	BA	32	C	N1-C2-O2	5.11	121.97	118.90
54	BA	458	G	C3'-C2'-C1'	-5.11	97.41	101.50
54	BA	1080	A	O4'-C1'-N9	5.11	112.29	108.20
54	BA	2783	U	O4'-C1'-N1	5.11	112.29	108.20
54	BA	2840	C	O4'-C1'-N1	5.11	112.29	108.20
54	BA	646	U	O4'-C1'-N1	5.11	112.29	108.20
21	AA	306	A	C4-C5-C6	-5.11	114.44	117.00
24	A3	30	G	N3-C4-C5	-5.11	126.05	128.60
54	BA	574	A	C5-C6-N6	5.11	127.79	123.70
54	BA	859	G	N1-C6-O6	-5.11	116.83	119.90
54	BA	987	C	O4'-C1'-N1	5.11	112.29	108.20
54	BA	1105	U	O4'-C1'-N1	5.11	112.29	108.20
54	BA	2842	G	O4'-C1'-N9	5.11	112.29	108.20
21	AA	785	G	N1-C6-O6	-5.11	116.83	119.90
54	BA	9	G	N1-C6-O6	-5.11	116.83	119.90
54	BA	1186	G	N1-C6-O6	-5.11	116.83	119.90
54	BA	1842	G	N3-C2-N2	-5.11	116.32	119.90
54	BA	2291	U	O4'-C1'-N1	5.11	112.29	108.20
21	AA	676	A	C6-C5-N7	5.11	135.88	132.30
54	BA	706	A	C4-C5-C6	-5.11	114.45	117.00
54	BA	1238	G	N1-C6-O6	-5.11	116.84	119.90
54	BA	1314	C	C6-N1-C2	-5.11	118.26	120.30
21	AA	1007	U	N3-C2-O2	-5.11	118.63	122.20
54	BA	501	A	C4-C5-C6	-5.11	114.45	117.00
54	BA	1549	A	C4-C5-C6	-5.11	114.45	117.00
54	BA	2090	A	C6-C5-N7	5.11	135.87	132.30
21	AA	1259	C	N1-C2-O2	5.10	121.96	118.90
54	BA	947	A	C6-C5-N7	5.10	135.87	132.30
54	BA	1051	G	N3-C2-N2	-5.10	116.33	119.90
54	BA	1846	G	N1-C6-O6	-5.10	116.84	119.90
54	BA	2699	C	N1-C2-O2	5.10	121.96	118.90
21	AA	1422	G	N3-C2-N2	-5.10	116.33	119.90
21	AA	818	G	N3-C2-N2	-5.10	116.33	119.90
21	AA	1114	C	N1-C2-O2	5.10	121.96	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	804	A	C3'-C2'-C1'	5.10	105.58	101.50
54	BA	911	A	C6-C5-N7	5.10	135.87	132.30
54	BA	1526	C	O4'-C1'-N1	5.10	112.28	108.20
54	BA	1981	A	C3'-C2'-C1'	5.10	105.58	101.50
54	BA	2181	U	O4'-C1'-N1	5.10	112.28	108.20
54	BA	2297	A	C1'-O4'-C4'	-5.10	105.82	109.90
21	AA	911	U	N1-C2-N3	5.10	117.96	114.90
21	AA	927	G	C5-C6-N1	5.10	114.05	111.50
54	BA	112	U	C5-C6-N1	-5.10	120.15	122.70
54	BA	645	C	N1-C2-O2	5.10	121.96	118.90
54	BA	699	A	C6-C5-N7	5.10	135.87	132.30
54	BA	2119	A	O4'-C1'-N9	5.10	112.28	108.20
33	BK	108	ARG	NE-CZ-NH1	5.10	122.85	120.30
54	BA	2727	A	C6-C5-N7	5.10	135.87	132.30
21	AA	794	A	C6-C5-N7	5.09	135.87	132.30
21	AA	1302	C	N1-C2-O2	5.09	121.96	118.90
48	BZ	15	ARG	NE-CZ-NH2	-5.09	117.75	120.30
54	BA	201	C	N3-C4-C5	5.09	123.94	121.90
54	BA	1183	U	O4'-C1'-N1	5.09	112.28	108.20
54	BA	1335	C	C3'-C2'-C1'	5.09	105.58	101.50
21	AA	295	C	N1-C2-O2	5.09	121.96	118.90
21	AA	557	G	N1-C6-O6	-5.09	116.84	119.90
21	AA	588	G	N1-C6-O6	-5.09	116.84	119.90
54	BA	1178	C	N3-C2-O2	-5.09	118.33	121.90
54	BA	1566	A	C4-C5-C6	-5.09	114.45	117.00
21	AA	1006	G	N3-C2-N2	-5.09	116.33	119.90
21	AA	1239	A	C3'-C2'-C1'	5.09	105.57	101.50
54	BA	2432	A	C4-C5-C6	-5.09	114.45	117.00
21	AA	1281	C	N1-C2-O2	5.09	121.95	118.90
22	A1	57	G	N7-C8-N9	5.09	115.64	113.10
24	A3	23	G	C1'-O4'-C4'	-5.09	105.83	109.90
54	BA	1036	G	N3-C4-C5	-5.09	126.06	128.60
54	BA	1779	U	C5'-C4'-O4'	5.09	115.21	109.10
54	BA	2566	A	C4-C5-C6	-5.09	114.46	117.00
54	BA	2759	G	C3'-C2'-C1'	5.09	105.57	101.50
1	AB	10	LYS	O-C-N	-5.09	114.56	122.70
21	AA	344	A	C4-C5-C6	-5.09	114.46	117.00
21	AA	860	A	C6-C5-N7	5.09	135.86	132.30
54	BA	712	G	N3-C2-N2	-5.09	116.34	119.90
54	BA	2714	G	N3-C2-N2	-5.09	116.34	119.90
56	B5	71	ARG	NE-CZ-NH2	-5.09	117.76	120.30
21	AA	379	C	N1-C2-O2	5.09	121.95	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1337	G	P-O3'-C3'	5.09	125.80	119.70
21	AA	1434	A	C6-C5-N7	5.09	135.86	132.30
24	A3	16	C	N3-C4-C5	5.09	123.93	121.90
54	BA	786	C	O4'-C1'-N1	5.09	112.27	108.20
54	BA	1609	A	C4-C5-C6	-5.09	114.46	117.00
54	BA	1931	U	N3-C2-O2	-5.09	118.64	122.20
54	BA	2591	C	N1-C2-O2	5.09	121.95	118.90
54	BA	1136	G	N3-C4-C5	-5.08	126.06	128.60
54	BA	1207	C	N1-C2-O2	5.08	121.95	118.90
54	BA	1434	A	C4'-C3'-C2'	-5.08	97.52	102.60
21	AA	903	G	O4'-C1'-N9	5.08	112.27	108.20
21	AA	1342	C	C3'-C2'-C1'	-5.08	97.43	101.50
21	AA	53	A	C6-C5-N7	5.08	135.86	132.30
54	BA	366	C	N3-C2-O2	-5.08	118.34	121.90
54	BA	372	G	C8-N9-C4	-5.08	104.37	106.40
54	BA	414	C	N3-C2-O2	-5.08	118.34	121.90
54	BA	2095	A	C5-C6-N1	5.08	120.24	117.70
54	BA	2212	A	C4-C5-C6	-5.08	114.46	117.00
54	BA	2435	A	O4'-C1'-N9	5.08	112.27	108.20
21	AA	99	C	N3-C4-C5	5.08	123.93	121.90
54	BA	440	C	N1-C2-O2	5.08	121.95	118.90
54	BA	1020	A	C4-C5-C6	-5.08	114.46	117.00
21	AA	346	G	N3-C4-C5	-5.08	126.06	128.60
21	AA	974	A	C4-C5-C6	-5.08	114.46	117.00
53	B4	19	ARG	NE-CZ-NH2	-5.08	117.76	120.30
54	BA	1523	U	O4'-C1'-N1	5.08	112.26	108.20
54	BA	2285	C	O4'-C1'-N1	5.08	112.26	108.20
21	AA	756	C	N1-C2-O2	5.08	121.94	118.90
54	BA	1420	A	C4-C5-C6	-5.08	114.46	117.00
54	BA	2106	U	O4'-C1'-N1	5.08	112.26	108.20
54	BA	2804	U	O4'-C1'-N1	5.08	112.26	108.20
11	AL	30	ARG	CD-NE-CZ	5.07	130.70	123.60
21	AA	582	C	N3-C2-O2	-5.07	118.35	121.90
21	AA	697	U	O4'-C1'-N1	5.07	112.26	108.20
21	AA	1286	U	N3-C2-O2	-5.07	118.65	122.20
21	AA	1415	G	N3-C4-C5	-5.07	126.06	128.60
54	BA	349	U	O4'-C1'-N1	5.07	112.26	108.20
54	BA	773	U	O4'-C1'-N1	5.07	112.26	108.20
54	BA	1592	C	N1-C2-O2	5.07	121.94	118.90
54	BA	1736	U	C5-C6-N1	-5.07	120.16	122.70
54	BA	2170	A	C6-C5-N7	5.07	135.85	132.30
54	BA	2543	G	N3-C2-N2	-5.07	116.35	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2674	G	N3-C2-N2	-5.07	116.35	119.90
54	BA	2824	C	O4'-C1'-N1	5.07	112.26	108.20
54	BA	2856	A	C4-C5-C6	-5.07	114.46	117.00
54	BA	1741	C	O4'-C1'-N1	5.07	112.26	108.20
54	BA	2596	U	C5-C6-N1	-5.07	120.16	122.70
21	AA	271	C	N1-C2-O2	5.07	121.94	118.90
21	AA	446	G	N1-C6-O6	-5.07	116.86	119.90
21	AA	1447	A	C5'-C4'-C3'	-5.07	107.89	116.00
54	BA	281	C	N1-C2-O2	5.07	121.94	118.90
54	BA	930	G	N1-C6-O6	-5.07	116.86	119.90
54	BA	1292	G	C3'-C2'-C1'	5.07	105.56	101.50
54	BA	1695	G	N1-C6-O6	-5.07	116.86	119.90
21	AA	1067	A	C6-C5-N7	5.07	135.85	132.30
43	BU	6	ARG	NE-CZ-NH1	5.07	122.83	120.30
54	BA	914	G	N1-C6-O6	-5.07	116.86	119.90
54	BA	1295	C	O4'-C1'-N1	5.07	112.25	108.20
54	BA	2331	G	N3-C4-C5	-5.07	126.07	128.60
54	BA	2430	A	C6-N1-C2	-5.07	115.56	118.60
54	BA	2649	C	N1-C2-O2	5.07	121.94	118.90
12	AM	70	ARG	NE-CZ-NH1	5.07	122.83	120.30
21	AA	6	G	N3-C4-C5	-5.07	126.07	128.60
21	AA	560	A	C4-C5-C6	-5.07	114.47	117.00
21	AA	1496	C	N3-C2-O2	-5.07	118.35	121.90
54	BA	602	A	C6-C5-N7	5.07	135.85	132.30
54	BA	806	C	N1-C2-O2	5.07	121.94	118.90
54	BA	1520	U	O4'-C1'-N1	5.07	112.25	108.20
54	BA	1806	C	C5'-C4'-O4'	5.07	115.18	109.10
54	BA	2474	U	N3-C2-O2	-5.07	118.65	122.20
21	AA	1308	U	C5'-C4'-O4'	5.06	115.18	109.10
21	AA	1410	A	C6-C5-N7	5.06	135.84	132.30
23	A2	83	U	N3-C2-O2	-5.06	118.66	122.20
54	BA	2306	C	N1-C2-O2	5.06	121.94	118.90
21	AA	410	G	N1-C6-O6	-5.06	116.86	119.90
21	AA	653	U	N3-C2-O2	-5.06	118.66	122.20
43	BU	81	ARG	NE-CZ-NH1	5.06	122.83	120.30
54	BA	512	G	O4'-C1'-N9	5.06	112.25	108.20
21	AA	973	G	N1-C6-O6	-5.06	116.86	119.90
21	AA	282	A	C6-C5-N7	5.06	135.84	132.30
54	BA	949	G	N1-C6-O6	-5.06	116.86	119.90
54	BA	988	A	C6-C5-N7	5.06	135.84	132.30
21	AA	165	G	N7-C8-N9	5.06	115.63	113.10
21	AA	284	C	N1-C2-O2	5.06	121.94	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	BO	7	ARG	NE-CZ-NH1	5.06	122.83	120.30
54	BA	917	A	C4-C5-C6	-5.06	114.47	117.00
54	BA	1004	U	O4'-C1'-N1	5.06	112.25	108.20
54	BA	1091	G	N1-C6-O6	-5.06	116.87	119.90
54	BA	1791	A	C6-C5-N7	5.06	135.84	132.30
54	BA	1940	U	C1'-O4'-C4'	-5.06	105.85	109.90
54	BA	2091	C	N1-C2-O2	5.06	121.94	118.90
54	BA	2214	C	O4'-C1'-N1	5.06	112.25	108.20
21	AA	148	G	C5-C6-N1	5.06	114.03	111.50
21	AA	677	U	O4'-C1'-N1	5.06	112.25	108.20
21	AA	1512	U	O4'-C1'-N1	5.06	112.25	108.20
54	BA	667	U	O4'-C1'-N1	5.06	112.25	108.20
54	BA	750	A	C6-C5-N7	5.06	135.84	132.30
54	BA	2220	U	O4'-C1'-N1	5.06	112.25	108.20
21	AA	270	A	C6-C5-N7	5.05	135.84	132.30
21	AA	584	G	C5-C6-N1	5.05	114.03	111.50
54	BA	2017	U	C3'-C2'-C1'	5.05	105.54	101.50
54	BA	2287	A	C4-C5-C6	-5.05	114.47	117.00
54	BA	2326	C	N1-C2-O2	5.05	121.93	118.90
21	AA	879	C	N1-C2-O2	5.05	121.93	118.90
21	AA	1155	A	C6-C5-N7	5.05	135.84	132.30
54	BA	141	G	N1-C6-O6	-5.05	116.87	119.90
21	AA	1267	C	C3'-C2'-C1'	5.05	105.54	101.50
22	A1	66	A	C4-C5-C6	-5.05	114.47	117.00
54	BA	271	G	O4'-C4'-C3'	5.05	110.14	106.10
54	BA	619	G	N3-C4-C5	-5.05	126.08	128.60
54	BA	1992	G	N1-C6-O6	-5.05	116.87	119.90
54	BA	2354	C	O4'-C1'-N1	5.05	112.24	108.20
21	AA	240	G	N3-C2-N2	-5.05	116.36	119.90
21	AA	945	G	C8-N9-C4	-5.05	104.38	106.40
21	AA	1479	C	N1-C2-O2	5.05	121.93	118.90
54	BA	985	C	N1-C2-O2	5.05	121.93	118.90
54	BA	994	C	O4'-C4'-C3'	5.05	110.14	106.10
54	BA	2643	G	N1-C6-O6	-5.05	116.87	119.90
54	BA	2698	U	N3-C2-O2	-5.05	118.67	122.20
21	AA	748	G	C5-C6-N1	5.05	114.02	111.50
54	BA	1107	G	N1-C6-O6	-5.05	116.87	119.90
54	BA	1731	G	N1-C6-O6	-5.05	116.87	119.90
11	AL	120	ARG	NE-CZ-NH2	5.05	122.82	120.30
21	AA	28	A	C6-C5-N7	5.05	135.83	132.30
21	AA	619	U	N3-C2-O2	-5.05	118.67	122.20
54	BA	351	C	N1-C2-O2	5.05	121.93	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	2380	C	O4'-C1'-N1	5.05	112.24	108.20
54	BA	2696	U	O4'-C1'-N1	5.05	112.24	108.20
21	AA	1503	A	C4-C5-C6	-5.04	114.48	117.00
55	BB	73	A	C4-C5-C6	-5.04	114.48	117.00
21	AA	341	C	N1-C2-O2	5.04	121.93	118.90
54	BA	217	A	C4-C5-C6	-5.04	114.48	117.00
54	BA	390	U	N3-C2-O2	-5.04	118.67	122.20
54	BA	554	U	O4'-C1'-N1	5.04	112.23	108.20
54	BA	878	A	O4'-C1'-N9	5.04	112.23	108.20
54	BA	1017	G	N1-C6-O6	-5.04	116.87	119.90
54	BA	1455	G	C5'-C4'-C3'	-5.04	107.93	116.00
55	BB	38	C	O4'-C1'-N1	5.04	112.23	108.20
54	BA	43	G	C3'-C2'-C1'	5.04	105.53	101.50
54	BA	1349	C	N1-C2-O2	5.04	121.92	118.90
22	A1	45	G	C5-C6-N1	5.04	114.02	111.50
54	BA	841	G	C4'-C3'-C2'	-5.04	97.56	102.60
54	BA	1044	C	N1-C2-O2	5.04	121.92	118.90
12	AM	56	ARG	NE-CZ-NH1	5.04	122.82	120.30
54	BA	986	C	N1-C2-O2	5.04	121.92	118.90
21	AA	348	G	N1-C6-O6	-5.04	116.88	119.90
54	BA	1467	U	O4'-C1'-N1	5.04	112.23	108.20
21	AA	171	A	C6-C5-N7	5.04	135.82	132.30
21	AA	263	A	C4-C5-C6	-5.04	114.48	117.00
21	AA	666	G	N3-C2-N2	-5.04	116.38	119.90
21	AA	1511	G	N1-C6-O6	-5.04	116.88	119.90
54	BA	2716	C	N1-C2-O2	5.04	121.92	118.90
54	BA	861	A	C6-C5-N7	5.03	135.82	132.30
54	BA	1857	G	N3-C4-C5	-5.03	126.08	128.60
54	BA	2120	G	N3-C4-C5	-5.03	126.08	128.60
54	BA	2416	C	N1-C2-O2	5.03	121.92	118.90
21	AA	277	C	N1-C2-O2	5.03	121.92	118.90
54	BA	185	G	O4'-C1'-N9	5.03	112.23	108.20
21	AA	173	U	N3-C2-O2	-5.03	118.68	122.20
48	BZ	30	ARG	NE-CZ-NH1	5.03	122.81	120.30
54	BA	479	A	C6-C5-N7	5.03	135.82	132.30
54	BA	1168	G	N3-C4-C5	-5.03	126.08	128.60
54	BA	2307	G	N3-C4-C5	-5.03	126.08	128.60
54	BA	2331	G	N1-C6-O6	-5.03	116.88	119.90
54	BA	2433	A	C4-C5-C6	-5.03	114.48	117.00
54	BA	1331	G	C5-C6-N1	5.03	114.01	111.50
54	BA	2126	A	C4-C5-C6	-5.03	114.48	117.00
21	AA	1518	A	C4-C5-C6	-5.03	114.49	117.00

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	908	C	O4'-C1'-N1	5.03	112.22	108.20
38	BP	71	ARG	NE-CZ-NH1	5.03	122.81	120.30
38	BP	102	ARG	NH1-CZ-NH2	-5.03	113.87	119.40
54	BA	307	G	N3-C2-N2	-5.03	116.38	119.90
54	BA	1270	C	O4'-C1'-N1	5.03	112.22	108.20
54	BA	2022	U	N3-C2-O2	-5.03	118.68	122.20
55	BB	114	C	N1-C2-O2	5.03	121.92	118.90
22	A1	53	G	N9-C4-C5	5.02	107.41	105.40
28	BF	111	ARG	NE-CZ-NH2	-5.02	117.79	120.30
54	BA	869	G	N1-C6-O6	-5.02	116.89	119.90
54	BA	1220	G	O4'-C1'-N9	5.02	112.22	108.20
54	BA	1943	U	N3-C2-O2	-5.02	118.68	122.20
21	AA	596	A	C4-C5-C6	-5.02	114.49	117.00
53	B4	4	ARG	NE-CZ-NH1	5.02	122.81	120.30
54	BA	506	G	O4'-C1'-N9	5.02	112.22	108.20
54	BA	2099	U	O4'-C1'-N1	5.02	112.22	108.20
54	BA	2321	U	N3-C2-O2	-5.02	118.68	122.20
54	BA	2391	G	C5-C6-N1	5.02	114.01	111.50
54	BA	2759	G	N1-C6-O6	-5.02	116.89	119.90
55	BB	24	G	O4'-C4'-C3'	5.02	110.12	106.10
55	BB	103	U	O4'-C1'-N1	5.02	112.22	108.20
21	AA	725	G	N1-C6-O6	-5.02	116.89	119.90
21	AA	945	G	N1-C6-O6	-5.02	116.89	119.90
54	BA	26	G	N1-C6-O6	-5.02	116.89	119.90
54	BA	643	A	C4-C5-C6	-5.02	114.49	117.00
54	BA	964	C	N1-C2-O2	5.02	121.91	118.90
54	BA	1630	A	C6-C5-N7	5.02	135.81	132.30
54	BA	2729	G	N1-C6-O6	-5.02	116.89	119.90
21	AA	268	U	C5-C6-N1	-5.02	120.19	122.70
21	AA	346	G	C5-C6-N1	5.02	114.01	111.50
21	AA	697	U	N3-C2-O2	-5.02	118.69	122.20
26	BD	46	ARG	NE-CZ-NH1	5.02	122.81	120.30
54	BA	873	C	N1-C2-O2	5.02	121.91	118.90
54	BA	1638	C	N1-C2-O2	5.02	121.91	118.90
54	BA	2244	U	O4'-C4'-C3'	5.02	110.12	106.10
21	AA	287	U	O4'-C1'-N1	5.02	112.22	108.20
21	AA	1020	G	N3-C4-C5	-5.02	126.09	128.60
54	BA	62	U	N3-C2-O2	-5.02	118.69	122.20
54	BA	159	G	N3-C2-N2	-5.02	116.39	119.90
54	BA	1514	G	N1-C6-O6	-5.02	116.89	119.90
54	BA	1593	A	O4'-C1'-N9	5.02	112.21	108.20
54	BA	1651	G	N1-C6-O6	-5.02	116.89	119.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	BA	1500	G	N3-C4-C5	-5.02	126.09	128.60
54	BA	1547	C	O4'-C1'-N1	5.02	112.21	108.20
54	BA	2137	U	N3-C2-O2	-5.02	118.69	122.20
54	BA	2265	U	O4'-C1'-N1	5.02	112.21	108.20
54	BA	2374	C	N1-C2-O2	5.02	121.91	118.90
21	AA	184	G	C8-N9-C4	-5.01	104.39	106.40
21	AA	610	U	N3-C2-O2	-5.01	118.69	122.20
39	BQ	27	ARG	NE-CZ-NH1	5.01	122.81	120.30
54	BA	179	C	N1-C2-O2	5.01	121.91	118.90
54	BA	1660	G	N1-C6-O6	-5.01	116.89	119.90
54	BA	2613	U	O4'-C1'-N1	5.01	112.21	108.20
21	AA	293	G	N7-C8-N9	5.01	115.61	113.10
54	BA	405	U	O4'-C1'-N1	5.01	112.21	108.20
55	BB	9	G	N1-C6-O6	-5.01	116.89	119.90
54	BA	660	C	C3'-C2'-C1'	5.01	105.51	101.50
54	BA	1225	G	C5-C6-N1	5.01	114.01	111.50
54	BA	1667	G	N1-C6-O6	-5.01	116.89	119.90
9	AJ	72	ARG	NE-CZ-NH2	5.01	122.81	120.30
21	AA	995	C	O4'-C1'-N1	5.01	112.21	108.20
24	A3	75	C	N1-C2-O2	5.01	121.91	118.90
54	BA	364	C	N3-C2-O2	-5.01	118.39	121.90
54	BA	1314	C	N1-C2-O2	5.01	121.91	118.90
54	BA	1357	C	N1-C2-O2	5.01	121.91	118.90
54	BA	1493	C	N1-C2-O2	5.01	121.91	118.90
54	BA	1520	U	C5-C6-N1	-5.01	120.19	122.70
54	BA	2157	G	N1-C6-O6	-5.01	116.89	119.90
54	BA	2618	G	N1-C6-O6	-5.01	116.89	119.90
21	AA	811	C	O4'-C1'-N1	5.01	112.21	108.20
54	BA	373	U	N3-C2-O2	-5.01	118.69	122.20
54	BA	1434	A	C4-C5-C6	-5.01	114.50	117.00
54	BA	1668	A	C6-C5-N7	5.01	135.81	132.30
54	BA	2167	U	C5-C6-N1	-5.01	120.20	122.70
54	BA	999	U	C5-C6-N1	-5.01	120.20	122.70
54	BA	1301	A	C1'-O4'-C4'	-5.01	105.89	109.90
54	BA	1306	C	O4'-C1'-N1	5.01	112.20	108.20
54	BA	1706	C	N1-C2-O2	5.01	121.90	118.90
54	BA	2065	C	N1-C2-O2	5.01	121.90	118.90
54	BA	2377	A	C4-C5-C6	-5.01	114.50	117.00
54	BA	1475	G	O4'-C1'-N9	5.00	112.20	108.20
54	BA	1738	G	O4'-C4'-C3'	5.00	110.10	106.10
54	BA	1798	U	O4'-C1'-N1	5.00	112.20	108.20
54	BA	1836	C	N3-C4-C5	5.00	123.90	121.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1528	U	N3-C2-O2	-5.00	118.70	122.20
54	BA	127	A	O4'-C1'-N9	5.00	112.20	108.20
54	BA	303	G	N1-C6-O6	-5.00	116.90	119.90
54	BA	1148	U	O4'-C1'-N1	5.00	112.20	108.20
54	BA	1256	G	N3-C4-C5	-5.00	126.10	128.60
54	BA	1408	G	N3-C4-C5	-5.00	126.10	128.60
54	BA	1813	G	N1-C6-O6	-5.00	116.90	119.90
54	BA	2308	G	O4'-C1'-N9	5.00	112.20	108.20
54	BA	2870	C	O4'-C1'-N1	5.00	112.20	108.20
21	AA	787	A	C4-C5-C6	-5.00	114.50	117.00
21	AA	948	C	N1-C2-O2	5.00	121.90	118.90
21	AA	1107	C	N3-C4-C5	5.00	123.90	121.90
24	A3	23	G	O4'-C1'-N9	5.00	112.20	108.20
54	BA	796	C	N1-C2-O2	5.00	121.90	118.90
54	BA	2735	G	C5-C6-N1	5.00	114.00	111.50

There are no chirality outliers.

All (1158) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
22	A1	11	C	Sidechain
22	A1	15	G	Sidechain
22	A1	18	G	Sidechain
22	A1	19	G	Sidechain
22	A1	2	G	Sidechain
22	A1	25	C	Sidechain
22	A1	28	C	Sidechain
22	A1	29	U	Sidechain
22	A1	30	C	Sidechain
22	A1	33	U	Sidechain
22	A1	43	G	Sidechain
22	A1	58	A	Sidechain
22	A1	6	A	Sidechain
22	A1	65	C	Sidechain
22	A1	66	A	Sidechain
22	A1	67	U	Sidechain
22	A1	70	C	Sidechain
22	A1	73	A	Sidechain
22	A1	74	C	Sidechain
22	A1	76	A	Sidechain
22	A1	8	U	Sidechain
23	A2	80	C	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
23	A2	83	U	Sidechain
23	A2	84	G	Sidechain
23	A2	85	G	Sidechain
23	A2	92	U	Sidechain
24	A3	11	A	Sidechain
24	A3	2	G	Sidechain
24	A3	34	U	Sidechain
24	A3	46	G	Sidechain
24	A3	54	G	Sidechain
24	A3	60	A	Sidechain
24	A3	66	C	Sidechain
21	AA	10	A	Sidechain
21	AA	1000	A	Sidechain
21	AA	1012	A	Sidechain
21	AA	1013	G	Sidechain
21	AA	1019	A	Sidechain
21	AA	1021	A	Sidechain
21	AA	1025	U	Sidechain
21	AA	1033	G	Sidechain
21	AA	1048	G	Sidechain
21	AA	1049	U	Sidechain
21	AA	1052	U	Sidechain
21	AA	1055	A	Sidechain
21	AA	1057	G	Sidechain
21	AA	1058	G	Sidechain
21	AA	1060	U	Sidechain
21	AA	1061	G	Sidechain
21	AA	1064	G	Sidechain
21	AA	1069	C	Sidechain
21	AA	1073	U	Sidechain
21	AA	1077	G	Sidechain
21	AA	108	G	Sidechain
21	AA	1080	A	Sidechain
21	AA	1083	U	Sidechain
21	AA	1084	G	Sidechain
21	AA	1085	U	Sidechain
21	AA	109	A	Sidechain
21	AA	1101	A	Sidechain
21	AA	1107	C	Sidechain
21	AA	1117	A	Sidechain
21	AA	1125	U	Sidechain
21	AA	1128	C	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	1129	C	Sidechain
21	AA	1131	G	Sidechain
21	AA	1139	G	Sidechain
21	AA	114	U	Sidechain
21	AA	1141	C	Sidechain
21	AA	1147	C	Sidechain
21	AA	1153	G	Sidechain
21	AA	1158	C	Sidechain
21	AA	1161	C	Sidechain
21	AA	1167	A	Sidechain
21	AA	1178	G	Sidechain
21	AA	1184	G	Sidechain
21	AA	1193	G	Sidechain
21	AA	1195	C	Sidechain
21	AA	12	U	Sidechain
21	AA	1202	U	Sidechain
21	AA	1204	A	Sidechain
21	AA	121	U	Sidechain
21	AA	1211	U	Sidechain
21	AA	1212	U	Sidechain
21	AA	1225	A	Sidechain
21	AA	1226	C	Sidechain
21	AA	1227	A	Sidechain
21	AA	1228	C	Sidechain
21	AA	123	U	Sidechain
21	AA	1234	C	Sidechain
21	AA	125	U	Sidechain
21	AA	1256	A	Sidechain
21	AA	1264	U	Sidechain
21	AA	1266	G	Sidechain
21	AA	1276	G	Sidechain
21	AA	1279	G	Sidechain
21	AA	1285	A	Sidechain
21	AA	1289	A	Sidechain
21	AA	129	A	Sidechain
21	AA	1297	G	Sidechain
21	AA	1298	U	Sidechain
21	AA	1300	G	Sidechain
21	AA	1301	U	Sidechain
21	AA	1303	C	Sidechain
21	AA	1304	G	Sidechain
21	AA	1309	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	1316	G	Sidechain
21	AA	1320	C	Sidechain
21	AA	1321	U	Sidechain
21	AA	1324	A	Sidechain
21	AA	1326	U	Sidechain
21	AA	1328	C	Sidechain
21	AA	1331	G	Sidechain
21	AA	1335	U	Sidechain
21	AA	1336	C	Sidechain
21	AA	1337	G	Sidechain
21	AA	1339	A	Sidechain
21	AA	1342	C	Sidechain
21	AA	1343	G	Sidechain
21	AA	1356	G	Sidechain
21	AA	1357	A	Sidechain
21	AA	1359	C	Sidechain
21	AA	1361	G	Sidechain
21	AA	1366	C	Sidechain
21	AA	1386	G	Sidechain
21	AA	1387	G	Sidechain
21	AA	1390	U	Sidechain
21	AA	1392	G	Sidechain
21	AA	1397	C	Sidechain
21	AA	1398	A	Sidechain
21	AA	1399	C	Sidechain
21	AA	140	U	Sidechain
21	AA	1400	C	Sidechain
21	AA	1405	G	Sidechain
21	AA	1406	U	Sidechain
21	AA	1432	G	Sidechain
21	AA	1435	G	Sidechain
21	AA	1436	U	Sidechain
21	AA	1438	G	Sidechain
21	AA	1439	G	Sidechain
21	AA	1441	A	Sidechain
21	AA	1442	G	Sidechain
21	AA	1448	C	Sidechain
21	AA	1452	C	Sidechain
21	AA	1459	G	Sidechain
21	AA	1465	A	Sidechain
21	AA	1473	G	Sidechain
21	AA	1478	U	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	148	G	Sidechain
21	AA	1484	C	Sidechain
21	AA	1491	G	Sidechain
21	AA	1493	A	Sidechain
21	AA	1494	G	Sidechain
21	AA	1495	U	Sidechain
21	AA	1498	U	Sidechain
21	AA	1504	G	Sidechain
21	AA	1512	U	Sidechain
21	AA	1514	G	Sidechain
21	AA	1516	G	Sidechain
21	AA	1517	G	Sidechain
21	AA	1519	A	Sidechain
21	AA	152	A	Sidechain
21	AA	1523	G	Sidechain
21	AA	153	C	Sidechain
21	AA	159	G	Sidechain
21	AA	163	C	Sidechain
21	AA	168	G	Sidechain
21	AA	173	U	Sidechain
21	AA	175	C	Sidechain
21	AA	184	G	Sidechain
21	AA	187	G	Sidechain
21	AA	195	A	Sidechain
21	AA	197	A	Sidechain
21	AA	198	G	Sidechain
21	AA	20	U	Sidechain
21	AA	200	G	Sidechain
21	AA	201	G	Sidechain
21	AA	204	G	Sidechain
21	AA	206	C	Sidechain
21	AA	208	U	Sidechain
21	AA	211	G	Sidechain
21	AA	215	C	Sidechain
21	AA	223	A	Sidechain
21	AA	236	A	Sidechain
21	AA	238	A	Sidechain
21	AA	239	U	Sidechain
21	AA	240	G	Sidechain
21	AA	241	G	Sidechain
21	AA	254	G	Sidechain
21	AA	257	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	26	A	Sidechain
21	AA	263	A	Sidechain
21	AA	266	G	Sidechain
21	AA	282	A	Sidechain
21	AA	284	C	Sidechain
21	AA	29	U	Sidechain
21	AA	292	G	Sidechain
21	AA	294	U	Sidechain
21	AA	295	C	Sidechain
21	AA	296	U	Sidechain
21	AA	298	A	Sidechain
21	AA	299	G	Sidechain
21	AA	304	U	Sidechain
21	AA	305	G	Sidechain
21	AA	308	C	Sidechain
21	AA	31	G	Sidechain
21	AA	314	C	Sidechain
21	AA	315	A	Sidechain
21	AA	316	C	Sidechain
21	AA	317	U	Sidechain
21	AA	324	G	Sidechain
21	AA	328	C	Sidechain
21	AA	331	G	Sidechain
21	AA	333	U	Sidechain
21	AA	336	A	Sidechain
21	AA	337	G	Sidechain
21	AA	340	U	Sidechain
21	AA	346	G	Sidechain
21	AA	349	A	Sidechain
21	AA	359	G	Sidechain
21	AA	36	C	Sidechain
21	AA	362	G	Sidechain
21	AA	363	A	Sidechain
21	AA	368	U	Sidechain
21	AA	373	A	Sidechain
21	AA	376	G	Sidechain
21	AA	377	G	Sidechain
21	AA	380	G	Sidechain
21	AA	381	C	Sidechain
21	AA	382	A	Sidechain
21	AA	383	A	Sidechain
21	AA	384	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	388	G	Sidechain
21	AA	391	G	Sidechain
21	AA	397	A	Sidechain
21	AA	403	C	Sidechain
21	AA	404	G	Sidechain
21	AA	408	A	Sidechain
21	AA	409	U	Sidechain
21	AA	412	A	Sidechain
21	AA	413	G	Sidechain
21	AA	421	U	Sidechain
21	AA	423	G	Sidechain
21	AA	425	G	Sidechain
21	AA	427	U	Sidechain
21	AA	428	G	Sidechain
21	AA	429	U	Sidechain
21	AA	430	A	Sidechain
21	AA	436	C	Sidechain
21	AA	442	G	Sidechain
21	AA	446	G	Sidechain
21	AA	448	A	Sidechain
21	AA	450	G	Sidechain
21	AA	453	G	Sidechain
21	AA	454	G	Sidechain
21	AA	459	A	Sidechain
21	AA	461	A	Sidechain
21	AA	464	U	Sidechain
21	AA	466	A	Sidechain
21	AA	467	U	Sidechain
21	AA	47	C	Sidechain
21	AA	476	U	Sidechain
21	AA	480	U	Sidechain
21	AA	481	G	Sidechain
21	AA	483	C	Sidechain
21	AA	487	A	Sidechain
21	AA	494	G	Sidechain
21	AA	499	A	Sidechain
21	AA	5	U	Sidechain
21	AA	50	A	Sidechain
21	AA	500	G	Sidechain
21	AA	503	C	Sidechain
21	AA	504	C	Sidechain
21	AA	505	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	506	G	Sidechain
21	AA	513	C	Sidechain
21	AA	517	G	Sidechain
21	AA	519	C	Sidechain
21	AA	524	G	Sidechain
21	AA	530	G	Sidechain
21	AA	535	A	Sidechain
21	AA	536	C	Sidechain
21	AA	537	G	Sidechain
21	AA	538	G	Sidechain
21	AA	540	G	Sidechain
21	AA	558	G	Sidechain
21	AA	564	C	Sidechain
21	AA	568	G	Sidechain
21	AA	572	A	Sidechain
21	AA	575	G	Sidechain
21	AA	583	A	Sidechain
21	AA	597	G	Sidechain
21	AA	60	A	Sidechain
21	AA	600	A	Sidechain
21	AA	604	G	Sidechain
21	AA	608	A	Sidechain
21	AA	61	G	Sidechain
21	AA	610	U	Sidechain
21	AA	612	C	Sidechain
21	AA	613	C	Sidechain
21	AA	614	C	Sidechain
21	AA	617	G	Sidechain
21	AA	618	C	Sidechain
21	AA	620	C	Sidechain
21	AA	621	A	Sidechain
21	AA	623	C	Sidechain
21	AA	626	G	Sidechain
21	AA	628	G	Sidechain
21	AA	633	G	Sidechain
21	AA	640	A	Sidechain
21	AA	641	U	Sidechain
21	AA	642	A	Sidechain
21	AA	646	G	Sidechain
21	AA	652	U	Sidechain
21	AA	662	U	Sidechain
21	AA	672	U	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	675	A	Sidechain
21	AA	676	A	Sidechain
21	AA	677	U	Sidechain
21	AA	678	U	Sidechain
21	AA	682	G	Sidechain
21	AA	69	G	Sidechain
21	AA	690	G	Sidechain
21	AA	691	G	Sidechain
21	AA	695	A	Sidechain
21	AA	698	G	Sidechain
21	AA	700	G	Sidechain
21	AA	703	G	Sidechain
21	AA	710	G	Sidechain
21	AA	714	G	Sidechain
21	AA	715	A	Sidechain
21	AA	717	U	Sidechain
21	AA	727	G	Sidechain
21	AA	739	C	Sidechain
21	AA	740	U	Sidechain
21	AA	741	G	Sidechain
21	AA	752	G	Sidechain
21	AA	754	C	Sidechain
21	AA	76	G	Sidechain
21	AA	760	G	Sidechain
21	AA	763	G	Sidechain
21	AA	764	C	Sidechain
21	AA	766	A	Sidechain
21	AA	771	G	Sidechain
21	AA	79	G	Sidechain
21	AA	790	A	Sidechain
21	AA	795	C	Sidechain
21	AA	798	U	Sidechain
21	AA	803	G	Sidechain
21	AA	804	U	Sidechain
21	AA	805	C	Sidechain
21	AA	811	C	Sidechain
21	AA	816	A	Sidechain
21	AA	819	A	Sidechain
21	AA	824	G	Sidechain
21	AA	826	C	Sidechain
21	AA	827	U	Sidechain
21	AA	829	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	833	G	Sidechain
21	AA	836	G	Sidechain
21	AA	838	G	Sidechain
21	AA	840	C	Sidechain
21	AA	842	U	Sidechain
21	AA	844	G	Sidechain
21	AA	846	G	Sidechain
21	AA	865	A	Sidechain
21	AA	873	A	Sidechain
21	AA	875	U	Sidechain
21	AA	881	G	Sidechain
21	AA	884	U	Sidechain
21	AA	887	G	Sidechain
21	AA	891	U	Sidechain
21	AA	895	G	Sidechain
21	AA	898	G	Sidechain
21	AA	899	C	Sidechain
21	AA	90	C	Sidechain
21	AA	900	A	Sidechain
21	AA	903	G	Sidechain
21	AA	904	U	Sidechain
21	AA	905	U	Sidechain
21	AA	909	A	Sidechain
21	AA	917	G	Sidechain
21	AA	926	G	Sidechain
21	AA	928	G	Sidechain
21	AA	931	C	Sidechain
21	AA	933	G	Sidechain
21	AA	94	G	Sidechain
21	AA	943	U	Sidechain
21	AA	944	G	Sidechain
21	AA	947	G	Sidechain
21	AA	949	A	Sidechain
21	AA	954	G	Sidechain
21	AA	957	U	Sidechain
21	AA	961	U	Sidechain
21	AA	966	G	Sidechain
21	AA	97	G	Sidechain
21	AA	978	A	Sidechain
21	AA	981	U	Sidechain
21	AA	982	U	Sidechain
21	AA	986	U	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
21	AA	988	G	Sidechain
21	AA	990	C	Sidechain
21	AA	991	U	Sidechain
21	AA	994	A	Sidechain
21	AA	999	C	Sidechain
3	AD	204	SER	Mainchain
8	AI	105	ARG	Sidechain
14	AO	87	ARG	Sidechain
54	BA	1000	A	Sidechain
54	BA	101	A	Sidechain
54	BA	1025	G	Sidechain
54	BA	1026	G	Sidechain
54	BA	1027	A	Sidechain
54	BA	1030	C	Sidechain
54	BA	1034	G	Sidechain
54	BA	1040	A	Sidechain
54	BA	1042	G	Sidechain
54	BA	1047	G	Sidechain
54	BA	1055	G	Sidechain
54	BA	106	C	Sidechain
54	BA	1061	U	Sidechain
54	BA	1064	C	Sidechain
54	BA	1068	G	Sidechain
54	BA	1070	A	Sidechain
54	BA	1071	G	Sidechain
54	BA	1076	C	Sidechain
54	BA	1081	U	Sidechain
54	BA	1095	A	Sidechain
54	BA	1099	G	Sidechain
54	BA	11	C	Sidechain
54	BA	110	G	Sidechain
54	BA	1106	G	Sidechain
54	BA	1109	C	Sidechain
54	BA	1112	G	Sidechain
54	BA	1114	C	Sidechain
54	BA	112	U	Sidechain
54	BA	1124	G	Sidechain
54	BA	1128	G	Sidechain
54	BA	113	U	Sidechain
54	BA	1132	U	Sidechain
54	BA	1135	C	Sidechain
54	BA	1138	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1139	G	Sidechain
54	BA	1143	A	Sidechain
54	BA	1144	A	Sidechain
54	BA	1148	U	Sidechain
54	BA	1149	G	Sidechain
54	BA	1151	A	Sidechain
54	BA	1157	G	Sidechain
54	BA	1158	C	Sidechain
54	BA	1171	G	Sidechain
54	BA	1175	A	Sidechain
54	BA	1178	C	Sidechain
54	BA	1179	G	Sidechain
54	BA	1186	G	Sidechain
54	BA	1190	G	Sidechain
54	BA	1198	U	Sidechain
54	BA	1202	G	Sidechain
54	BA	121	G	Sidechain
54	BA	1210	G	Sidechain
54	BA	1212	G	Sidechain
54	BA	1216	G	Sidechain
54	BA	1220	G	Sidechain
54	BA	1223	G	Sidechain
54	BA	1224	U	Sidechain
54	BA	1236	G	Sidechain
54	BA	1237	A	Sidechain
54	BA	1239	G	Sidechain
54	BA	124	G	Sidechain
54	BA	1246	A	Sidechain
54	BA	1251	C	Sidechain
54	BA	1262	A	Sidechain
54	BA	1263	U	Sidechain
54	BA	1265	A	Sidechain
54	BA	1266	G	Sidechain
54	BA	1270	C	Sidechain
54	BA	1273	U	Sidechain
54	BA	1283	G	Sidechain
54	BA	1287	A	Sidechain
54	BA	1289	C	Sidechain
54	BA	1290	C	Sidechain
54	BA	1293	C	Sidechain
54	BA	1307	A	Sidechain
54	BA	1309	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1313	U	Sidechain
54	BA	1315	C	Sidechain
54	BA	1316	U	Sidechain
54	BA	1318	U	Sidechain
54	BA	1319	C	Sidechain
54	BA	1320	C	Sidechain
54	BA	1323	C	Sidechain
54	BA	1331	G	Sidechain
54	BA	1338	G	Sidechain
54	BA	1340	U	Sidechain
54	BA	1350	C	Sidechain
54	BA	1352	U	Sidechain
54	BA	1355	G	Sidechain
54	BA	1360	G	Sidechain
54	BA	1361	G	Sidechain
54	BA	1369	G	Sidechain
54	BA	1370	C	Sidechain
54	BA	1376	C	Sidechain
54	BA	1378	A	Sidechain
54	BA	138	U	Sidechain
54	BA	1386	C	Sidechain
54	BA	1387	A	Sidechain
54	BA	1389	G	Sidechain
54	BA	1391	U	Sidechain
54	BA	1393	A	Sidechain
54	BA	1395	A	Sidechain
54	BA	1396	U	Sidechain
54	BA	1397	U	Sidechain
54	BA	1399	C	Sidechain
54	BA	140	C	Sidechain
54	BA	1404	C	Sidechain
54	BA	1408	G	Sidechain
54	BA	141	G	Sidechain
54	BA	1412	U	Sidechain
54	BA	1414	C	Sidechain
54	BA	1415	U	Sidechain
54	BA	1416	G	Sidechain
54	BA	1417	C	Sidechain
54	BA	1419	A	Sidechain
54	BA	1424	G	Sidechain
54	BA	143	C	Sidechain
54	BA	1432	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1433	A	Sidechain
54	BA	1439	A	Sidechain
54	BA	1442	U	Sidechain
54	BA	1445	G	Sidechain
54	BA	1448	G	Sidechain
54	BA	1449	G	Sidechain
54	BA	1450	G	Sidechain
54	BA	1454	C	Sidechain
54	BA	1456	G	Sidechain
54	BA	1460	U	Sidechain
54	BA	1465	G	Sidechain
54	BA	1478	G	Sidechain
54	BA	1480	C	Sidechain
54	BA	1487	U	Sidechain
54	BA	1488	C	Sidechain
54	BA	1489	C	Sidechain
54	BA	1492	G	Sidechain
54	BA	1494	A	Sidechain
54	BA	1495	A	Sidechain
54	BA	1507	C	Sidechain
54	BA	1509	A	Sidechain
54	BA	1519	G	Sidechain
54	BA	152	A	Sidechain
54	BA	1525	A	Sidechain
54	BA	153	U	Sidechain
54	BA	1530	G	Sidechain
54	BA	1535	A	Sidechain
54	BA	1536	C	Sidechain
54	BA	1538	G	Sidechain
54	BA	1539	U	Sidechain
54	BA	154	U	Sidechain
54	BA	1540	G	Sidechain
54	BA	1544	A	Sidechain
54	BA	1546	G	Sidechain
54	BA	155	A	Sidechain
54	BA	1554	U	Sidechain
54	BA	1555	G	Sidechain
54	BA	1560	G	Sidechain
54	BA	1561	C	Sidechain
54	BA	1562	U	Sidechain
54	BA	1564	C	Sidechain
54	BA	1567	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1568	G	Sidechain
54	BA	1569	A	Sidechain
54	BA	1586	A	Sidechain
54	BA	1587	G	Sidechain
54	BA	1595	C	Sidechain
54	BA	1596	A	Sidechain
54	BA	1597	A	Sidechain
54	BA	1599	U	Sidechain
54	BA	160	A	Sidechain
54	BA	1601	G	Sidechain
54	BA	1602	U	Sidechain
54	BA	1604	C	Sidechain
54	BA	1606	C	Sidechain
54	BA	1610	A	Sidechain
54	BA	1621	U	Sidechain
54	BA	1631	G	Sidechain
54	BA	1632	A	Sidechain
54	BA	1634	A	Sidechain
54	BA	1638	C	Sidechain
54	BA	1646	C	Sidechain
54	BA	1649	G	Sidechain
54	BA	165	A	Sidechain
54	BA	1657	U	Sidechain
54	BA	1662	U	Sidechain
54	BA	1664	A	Sidechain
54	BA	1666	G	Sidechain
54	BA	1671	U	Sidechain
54	BA	1672	A	Sidechain
54	BA	1674	G	Sidechain
54	BA	1677	A	Sidechain
54	BA	1681	G	Sidechain
54	BA	1682	G	Sidechain
54	BA	1683	U	Sidechain
54	BA	1684	G	Sidechain
54	BA	1698	A	Sidechain
54	BA	17	G	Sidechain
54	BA	1700	A	Sidechain
54	BA	1704	C	Sidechain
54	BA	1705	A	Sidechain
54	BA	1709	U	Sidechain
54	BA	1710	G	Sidechain
54	BA	1724	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1727	C	Sidechain
54	BA	1730	C	Sidechain
54	BA	1731	G	Sidechain
54	BA	1732	C	Sidechain
54	BA	1741	C	Sidechain
54	BA	1743	G	Sidechain
54	BA	1747	U	Sidechain
54	BA	1752	C	Sidechain
54	BA	1753	G	Sidechain
54	BA	1756	G	Sidechain
54	BA	1758	U	Sidechain
54	BA	1759	A	Sidechain
54	BA	1762	A	Sidechain
54	BA	177	G	Sidechain
54	BA	1773	A	Sidechain
54	BA	1774	C	Sidechain
54	BA	1788	C	Sidechain
54	BA	1790	C	Sidechain
54	BA	1797	G	Sidechain
54	BA	180	G	Sidechain
54	BA	1807	G	Sidechain
54	BA	1816	C	Sidechain
54	BA	1820	U	Sidechain
54	BA	1823	G	Sidechain
54	BA	1827	U	Sidechain
54	BA	1830	C	Sidechain
54	BA	1831	G	Sidechain
54	BA	1832	C	Sidechain
54	BA	1844	C	Sidechain
54	BA	1847	A	Sidechain
54	BA	1853	A	Sidechain
54	BA	1857	G	Sidechain
54	BA	1861	G	Sidechain
54	BA	1866	A	Sidechain
54	BA	1867	G	Sidechain
54	BA	1871	A	Sidechain
54	BA	1874	C	Sidechain
54	BA	1876	A	Sidechain
54	BA	1884	G	Sidechain
54	BA	1888	G	Sidechain
54	BA	189	G	Sidechain
54	BA	1891	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	1894	C	Sidechain
54	BA	1897	G	Sidechain
54	BA	19	A	Sidechain
54	BA	1902	C	Sidechain
54	BA	1912	A	Sidechain
54	BA	1915	U	Sidechain
54	BA	1929	G	Sidechain
54	BA	1931	U	Sidechain
54	BA	1932	A	Sidechain
54	BA	1933	G	Sidechain
54	BA	1935	G	Sidechain
54	BA	1938	A	Sidechain
54	BA	1940	U	Sidechain
54	BA	1942	C	Sidechain
54	BA	1943	U	Sidechain
54	BA	1944	U	Sidechain
54	BA	1945	G	Sidechain
54	BA	195	A	Sidechain
54	BA	1950	G	Sidechain
54	BA	196	A	Sidechain
54	BA	1960	A	Sidechain
54	BA	1961	C	Sidechain
54	BA	1962	C	Sidechain
54	BA	197	A	Sidechain
54	BA	1971	U	Sidechain
54	BA	1972	G	Sidechain
54	BA	1974	C	Sidechain
54	BA	1977	A	Sidechain
54	BA	1980	G	Sidechain
54	BA	1982	U	Sidechain
54	BA	1989	G	Sidechain
54	BA	1993	U	Sidechain
54	BA	1997	C	Sidechain
54	BA	2	G	Sidechain
54	BA	2002	G	Sidechain
54	BA	2014	A	Sidechain
54	BA	2017	U	Sidechain
54	BA	2018	G	Sidechain
54	BA	2020	A	Sidechain
54	BA	2022	U	Sidechain
54	BA	203	A	Sidechain
54	BA	2030	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2037	A	Sidechain
54	BA	2038	G	Sidechain
54	BA	2046	G	Sidechain
54	BA	205	G	Sidechain
54	BA	2056	G	Sidechain
54	BA	2059	A	Sidechain
54	BA	2064	C	Sidechain
54	BA	2067	G	Sidechain
54	BA	207	A	Sidechain
54	BA	2073	C	Sidechain
54	BA	2074	U	Sidechain
54	BA	2077	A	Sidechain
54	BA	208	C	Sidechain
54	BA	2085	U	Sidechain
54	BA	2097	A	Sidechain
54	BA	2099	U	Sidechain
54	BA	210	C	Sidechain
54	BA	2100	G	Sidechain
54	BA	2101	A	Sidechain
54	BA	2105	U	Sidechain
54	BA	2106	U	Sidechain
54	BA	2109	U	Sidechain
54	BA	2115	G	Sidechain
54	BA	2126	A	Sidechain
54	BA	2130	U	Sidechain
54	BA	2131	U	Sidechain
54	BA	2134	A	Sidechain
54	BA	2136	G	Sidechain
54	BA	2144	G	Sidechain
54	BA	2154	A	Sidechain
54	BA	2164	C	Sidechain
54	BA	2165	C	Sidechain
54	BA	2166	U	Sidechain
54	BA	2168	G	Sidechain
54	BA	2179	C	Sidechain
54	BA	2180	U	Sidechain
54	BA	2181	U	Sidechain
54	BA	2186	G	Sidechain
54	BA	2188	U	Sidechain
54	BA	2193	G	Sidechain
54	BA	2196	C	Sidechain
54	BA	2197	U	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2199	A	Sidechain
54	BA	2204	G	Sidechain
54	BA	2206	C	Sidechain
54	BA	2207	C	Sidechain
54	BA	221	A	Sidechain
54	BA	2210	U	Sidechain
54	BA	2213	U	Sidechain
54	BA	2216	G	Sidechain
54	BA	2217	G	Sidechain
54	BA	2218	G	Sidechain
54	BA	2225	A	Sidechain
54	BA	2227	A	Sidechain
54	BA	2233	U	Sidechain
54	BA	2235	G	Sidechain
54	BA	2236	U	Sidechain
54	BA	2239	G	Sidechain
54	BA	2241	A	Sidechain
54	BA	2249	U	Sidechain
54	BA	2259	U	Sidechain
54	BA	2266	A	Sidechain
54	BA	2267	A	Sidechain
54	BA	2268	A	Sidechain
54	BA	2271	G	Sidechain
54	BA	2281	A	Sidechain
54	BA	2282	G	Sidechain
54	BA	2283	C	Sidechain
54	BA	2287	A	Sidechain
54	BA	2294	G	Sidechain
54	BA	2296	U	Sidechain
54	BA	2300	C	Sidechain
54	BA	2302	U	Sidechain
54	BA	2305	U	Sidechain
54	BA	2308	G	Sidechain
54	BA	231	A	Sidechain
54	BA	2321	U	Sidechain
54	BA	2323	G	Sidechain
54	BA	2324	U	Sidechain
54	BA	2327	A	Sidechain
54	BA	2328	A	Sidechain
54	BA	2330	G	Sidechain
54	BA	2333	A	Sidechain
54	BA	2336	A	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2337	G	Sidechain
54	BA	2339	C	Sidechain
54	BA	2340	A	Sidechain
54	BA	2347	C	Sidechain
54	BA	235	U	Sidechain
54	BA	2352	A	Sidechain
54	BA	2357	G	Sidechain
54	BA	2362	C	Sidechain
54	BA	2367	G	Sidechain
54	BA	2369	A	Sidechain
54	BA	2375	G	Sidechain
54	BA	2381	A	Sidechain
54	BA	2385	C	Sidechain
54	BA	2389	G	Sidechain
54	BA	239	C	Sidechain
54	BA	2390	U	Sidechain
54	BA	240	C	Sidechain
54	BA	2406	A	Sidechain
54	BA	2411	A	Sidechain
54	BA	2413	G	Sidechain
54	BA	2425	A	Sidechain
54	BA	2427	C	Sidechain
54	BA	2428	G	Sidechain
54	BA	2429	G	Sidechain
54	BA	2432	A	Sidechain
54	BA	2433	A	Sidechain
54	BA	2439	A	Sidechain
54	BA	244	A	Sidechain
54	BA	2442	C	Sidechain
54	BA	2448	A	Sidechain
54	BA	2450	A	Sidechain
54	BA	2451	A	Sidechain
54	BA	2455	G	Sidechain
54	BA	2456	C	Sidechain
54	BA	2458	G	Sidechain
54	BA	2461	A	Sidechain
54	BA	2462	C	Sidechain
54	BA	2464	G	Sidechain
54	BA	2465	C	Sidechain
54	BA	2466	C	Sidechain
54	BA	2468	A	Sidechain
54	BA	2472	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2475	C	Sidechain
54	BA	2484	G	Sidechain
54	BA	2485	G	Sidechain
54	BA	2488	G	Sidechain
54	BA	2489	U	Sidechain
54	BA	2498	C	Sidechain
54	BA	2499	C	Sidechain
54	BA	250	G	Sidechain
54	BA	2500	U	Sidechain
54	BA	2503	A	Sidechain
54	BA	2508	G	Sidechain
54	BA	2509	G	Sidechain
54	BA	2517	C	Sidechain
54	BA	2529	G	Sidechain
54	BA	2533	U	Sidechain
54	BA	2536	G	Sidechain
54	BA	2540	C	Sidechain
54	BA	2550	G	Sidechain
54	BA	2557	G	Sidechain
54	BA	2558	C	Sidechain
54	BA	2564	A	Sidechain
54	BA	2566	A	Sidechain
54	BA	2567	G	Sidechain
54	BA	2571	U	Sidechain
54	BA	2573	C	Sidechain
54	BA	2576	G	Sidechain
54	BA	2578	G	Sidechain
54	BA	2581	G	Sidechain
54	BA	2589	A	Sidechain
54	BA	2590	A	Sidechain
54	BA	2592	G	Sidechain
54	BA	2595	G	Sidechain
54	BA	2601	C	Sidechain
54	BA	2607	G	Sidechain
54	BA	2608	G	Sidechain
54	BA	2612	C	Sidechain
54	BA	2613	U	Sidechain
54	BA	2617	U	Sidechain
54	BA	2625	G	Sidechain
54	BA	2626	C	Sidechain
54	BA	2630	G	Sidechain
54	BA	2631	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2633	G	Sidechain
54	BA	2637	U	Sidechain
54	BA	2638	G	Sidechain
54	BA	2640	G	Sidechain
54	BA	2641	G	Sidechain
54	BA	2643	G	Sidechain
54	BA	2649	C	Sidechain
54	BA	265	A	Sidechain
54	BA	2655	G	Sidechain
54	BA	2656	U	Sidechain
54	BA	2657	A	Sidechain
54	BA	2661	G	Sidechain
54	BA	2663	G	Sidechain
54	BA	2665	A	Sidechain
54	BA	2666	C	Sidechain
54	BA	2674	G	Sidechain
54	BA	2675	A	Sidechain
54	BA	2681	C	Sidechain
54	BA	2682	A	Sidechain
54	BA	2689	U	Sidechain
54	BA	2690	U	Sidechain
54	BA	2698	U	Sidechain
54	BA	27	G	Sidechain
54	BA	2704	C	Sidechain
54	BA	2706	A	Sidechain
54	BA	271	G	Sidechain
54	BA	2718	G	Sidechain
54	BA	272	A	Sidechain
54	BA	2721	A	Sidechain
54	BA	2726	A	Sidechain
54	BA	2729	G	Sidechain
54	BA	2731	G	Sidechain
54	BA	2732	G	Sidechain
54	BA	2738	A	Sidechain
54	BA	2740	A	Sidechain
54	BA	2745	C	Sidechain
54	BA	2756	U	Sidechain
54	BA	2760	C	Sidechain
54	BA	2762	C	Sidechain
54	BA	2765	A	Sidechain
54	BA	2777	G	Sidechain
54	BA	2780	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	2784	U	Sidechain
54	BA	279	A	Sidechain
54	BA	2790	U	Sidechain
54	BA	2793	C	Sidechain
54	BA	2794	C	Sidechain
54	BA	2798	U	Sidechain
54	BA	2808	G	Sidechain
54	BA	281	C	Sidechain
54	BA	2810	A	Sidechain
54	BA	2811	G	Sidechain
54	BA	2816	G	Sidechain
54	BA	2819	G	Sidechain
54	BA	2824	C	Sidechain
54	BA	2831	G	Sidechain
54	BA	2832	U	Sidechain
54	BA	2833	U	Sidechain
54	BA	2835	A	Sidechain
54	BA	2836	U	Sidechain
54	BA	2852	G	Sidechain
54	BA	2856	A	Sidechain
54	BA	2859	G	Sidechain
54	BA	2862	G	Sidechain
54	BA	2864	G	Sidechain
54	BA	2868	A	Sidechain
54	BA	2876	G	Sidechain
54	BA	2877	G	Sidechain
54	BA	2886	A	Sidechain
54	BA	2889	C	Sidechain
54	BA	2896	C	Sidechain
54	BA	2899	A	Sidechain
54	BA	2901	C	Sidechain
54	BA	2902	C	Sidechain
54	BA	291	G	Sidechain
54	BA	295	G	Sidechain
54	BA	299	A	Sidechain
54	BA	303	G	Sidechain
54	BA	307	G	Sidechain
54	BA	308	G	Sidechain
54	BA	31	C	Sidechain
54	BA	313	G	Sidechain
54	BA	317	G	Sidechain
54	BA	326	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	33	C	Sidechain
54	BA	333	G	Sidechain
54	BA	334	C	Sidechain
54	BA	336	C	Sidechain
54	BA	337	C	Sidechain
54	BA	347	A	Sidechain
54	BA	354	A	Sidechain
54	BA	361	G	Sidechain
54	BA	362	A	Sidechain
54	BA	363	G	Sidechain
54	BA	369	U	Sidechain
54	BA	370	G	Sidechain
54	BA	378	C	Sidechain
54	BA	389	G	Sidechain
54	BA	392	U	Sidechain
54	BA	394	C	Sidechain
54	BA	395	U	Sidechain
54	BA	410	G	Sidechain
54	BA	418	C	Sidechain
54	BA	419	U	Sidechain
54	BA	422	A	Sidechain
54	BA	426	C	Sidechain
54	BA	428	A	Sidechain
54	BA	43	G	Sidechain
54	BA	431	U	Sidechain
54	BA	433	C	Sidechain
54	BA	436	C	Sidechain
54	BA	440	C	Sidechain
54	BA	446	G	Sidechain
54	BA	449	A	Sidechain
54	BA	450	G	Sidechain
54	BA	454	A	Sidechain
54	BA	456	C	Sidechain
54	BA	458	G	Sidechain
54	BA	459	U	Sidechain
54	BA	463	G	Sidechain
54	BA	47	C	Sidechain
54	BA	472	A	Sidechain
54	BA	474	G	Sidechain
54	BA	475	C	Sidechain
54	BA	476	G	Sidechain
54	BA	48	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	480	A	Sidechain
54	BA	481	G	Sidechain
54	BA	488	G	Sidechain
54	BA	49	A	Sidechain
54	BA	492	A	Sidechain
54	BA	500	G	Sidechain
54	BA	501	A	Sidechain
54	BA	502	A	Sidechain
54	BA	504	A	Sidechain
54	BA	505	A	Sidechain
54	BA	507	A	Sidechain
54	BA	508	A	Sidechain
54	BA	51	G	Sidechain
54	BA	511	U	Sidechain
54	BA	514	A	Sidechain
54	BA	525	U	Sidechain
54	BA	528	A	Sidechain
54	BA	530	G	Sidechain
54	BA	533	G	Sidechain
54	BA	537	G	Sidechain
54	BA	54	G	Sidechain
54	BA	541	A	Sidechain
54	BA	548	G	Sidechain
54	BA	551	G	Sidechain
54	BA	558	U	Sidechain
54	BA	568	U	Sidechain
54	BA	577	G	Sidechain
54	BA	586	A	Sidechain
54	BA	588	U	Sidechain
54	BA	589	U	Sidechain
54	BA	595	C	Sidechain
54	BA	599	A	Sidechain
54	BA	60	G	Sidechain
54	BA	600	G	Sidechain
54	BA	605	G	Sidechain
54	BA	608	A	Sidechain
54	BA	611	C	Sidechain
54	BA	614	A	Sidechain
54	BA	621	A	Sidechain
54	BA	626	A	Sidechain
54	BA	628	G	Sidechain
54	BA	629	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	630	G	Sidechain
54	BA	631	A	Sidechain
54	BA	638	G	Sidechain
54	BA	64	A	Sidechain
54	BA	641	U	Sidechain
54	BA	646	U	Sidechain
54	BA	65	U	Sidechain
54	BA	661	A	Sidechain
54	BA	662	G	Sidechain
54	BA	663	G	Sidechain
54	BA	665	U	Sidechain
54	BA	670	A	Sidechain
54	BA	671	C	Sidechain
54	BA	674	G	Sidechain
54	BA	676	A	Sidechain
54	BA	68	G	Sidechain
54	BA	686	U	Sidechain
54	BA	69	C	Sidechain
54	BA	697	G	Sidechain
54	BA	707	G	Sidechain
54	BA	71	A	Sidechain
54	BA	714	U	Sidechain
54	BA	718	A	Sidechain
54	BA	724	U	Sidechain
54	BA	725	G	Sidechain
54	BA	728	G	Sidechain
54	BA	730	A	Sidechain
54	BA	738	G	Sidechain
54	BA	74	A	Sidechain
54	BA	746	U	Sidechain
54	BA	75	G	Sidechain
54	BA	750	A	Sidechain
54	BA	754	U	Sidechain
54	BA	76	C	Sidechain
54	BA	771	G	Sidechain
54	BA	773	U	Sidechain
54	BA	775	G	Sidechain
54	BA	782	A	Sidechain
54	BA	79	C	Sidechain
54	BA	799	G	Sidechain
54	BA	800	A	Sidechain
54	BA	801	G	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	802	A	Sidechain
54	BA	803	U	Sidechain
54	BA	804	A	Sidechain
54	BA	810	U	Sidechain
54	BA	811	U	Sidechain
54	BA	816	C	Sidechain
54	BA	822	G	Sidechain
54	BA	823	C	Sidechain
54	BA	827	U	Sidechain
54	BA	828	U	Sidechain
54	BA	831	G	Sidechain
54	BA	832	U	Sidechain
54	BA	837	C	Sidechain
54	BA	848	C	Sidechain
54	BA	849	A	Sidechain
54	BA	851	C	Sidechain
54	BA	853	C	Sidechain
54	BA	858	G	Sidechain
54	BA	862	G	Sidechain
54	BA	864	G	Sidechain
54	BA	869	G	Sidechain
54	BA	87	U	Sidechain
54	BA	874	G	Sidechain
54	BA	880	G	Sidechain
54	BA	886	A	Sidechain
54	BA	887	U	Sidechain
54	BA	889	C	Sidechain
54	BA	902	C	Sidechain
54	BA	906	U	Sidechain
54	BA	910	A	Sidechain
54	BA	912	C	Sidechain
54	BA	914	G	Sidechain
54	BA	928	A	Sidechain
54	BA	934	U	Sidechain
54	BA	937	C	Sidechain
54	BA	938	G	Sidechain
54	BA	94	A	Sidechain
54	BA	942	G	Sidechain
54	BA	946	C	Sidechain
54	BA	947	A	Sidechain
54	BA	950	G	Sidechain
54	BA	951	C	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
54	BA	952	G	Sidechain
54	BA	954	G	Sidechain
54	BA	955	U	Sidechain
54	BA	957	C	Sidechain
54	BA	959	A	Sidechain
54	BA	96	C	Sidechain
54	BA	966	G	Sidechain
54	BA	968	C	Sidechain
54	BA	969	G	Sidechain
54	BA	975	A	Sidechain
54	BA	976	G	Sidechain
54	BA	980	A	Sidechain
54	BA	981	A	Sidechain
54	BA	982	C	Sidechain
54	BA	984	A	Sidechain
54	BA	986	C	Sidechain
54	BA	989	G	Sidechain
54	BA	99	U	Sidechain
54	BA	992	C	Sidechain
54	BA	993	G	Sidechain
55	BB	100	G	Sidechain
55	BB	108	A	Sidechain
55	BB	109	A	Sidechain
55	BB	11	C	Sidechain
55	BB	12	C	Sidechain
55	BB	14	U	Sidechain
55	BB	18	G	Sidechain
55	BB	27	C	Sidechain
55	BB	33	G	Sidechain
55	BB	34	A	Sidechain
55	BB	40	U	Sidechain
55	BB	41	G	Sidechain
55	BB	60	C	Sidechain
55	BB	62	C	Sidechain
55	BB	65	U	Sidechain
55	BB	69	G	Sidechain
55	BB	73	A	Sidechain
55	BB	75	G	Sidechain
55	BB	83	G	Sidechain
55	BB	93	C	Sidechain
27	BE	101	TYR	Sidechain
37	BO	7	ARG	Sidechain

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Group
39	BQ	44	TYR	Sidechain
45	BW	54	ARG	Sidechain

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	AB	1708	0	1736	0	0
2	AC	1625	0	1699	0	0
3	AD	1643	0	1710	0	0
4	AE	1109	0	1152	0	0
5	AF	818	0	808	0	0
6	AG	1178	0	1234	0	0
7	AH	979	0	1034	0	0
8	AI	1025	0	1074	0	0
9	AJ	790	0	832	0	0
10	AK	880	0	891	1	0
11	AL	955	0	1019	1	0
12	AM	877	0	937	0	0
13	AN	805	0	844	0	0
14	AO	714	0	737	0	0
15	AP	639	0	656	0	0
16	AQ	652	0	695	0	0
17	AR	459	0	482	0	0
18	AS	641	0	669	1	0
19	AT	668	0	718	2	0
20	AU	429	0	453	0	0
21	AA	32828	0	16522	3	0
22	A1	1627	0	832	1	0
23	A2	309	0	158	0	0
24	A3	1642	0	843	0	0
25	BC	2083	0	2157	0	0
26	BD	1565	0	1616	0	0
27	BE	1552	0	1619	0	0
28	BF	1420	0	1460	0	0
29	BG	1323	0	1374	0	0
30	BH	1111	0	1148	0	0
31	BI	1032	0	1088	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BJ	1129	0	1162	0	0
33	BK	939	0	1012	0	0
34	BL	1045	0	1117	0	0
35	BM	1074	0	1157	1	0
36	BN	961	0	1000	0	0
37	BO	892	0	923	0	0
38	BP	917	0	965	0	0
39	BQ	947	0	1022	1	0
40	BR	816	0	839	0	0
41	BS	857	0	922	0	0
42	BT	739	0	807	0	0
43	BU	780	0	834	0	0
44	BV	753	0	780	0	0
45	BW	599	0	614	0	0
46	BX	625	0	655	0	0
47	BY	509	0	543	0	0
48	BZ	449	0	491	0	0
49	B0	444	0	461	0	0
50	B1	413	0	444	0	0
51	B2	377	0	418	0	0
52	B3	504	0	574	0	0
53	B4	302	0	343	1	0
54	BA	62317	0	31343	6	0
55	BB	2504	0	1271	0	0
56	B5	1658	0	1751	0	0
57	A1	7	0	8	0	0
58	A1	10	0	10	0	0
All	All	147653	0	99663	16	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 0.

All (16) 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)
19:AT:40:ALA:HB1	19:AT:41:GLY:HA2	1.86	0.57
54:BA:1977:A:H2'	54:BA:1978:A:C8	2.51	0.46
54:BA:1709:U:H2'	54:BA:1710:G:C8	2.52	0.44
18:AS:78:THR:HB	18:AS:79:TYR:HA	1.99	0.44
39:BQ:40:LYS:HE2	39:BQ:44:TYR:CZ	2.53	0.44
53:B4:1:MET:HA	53:B4:34:LYS:O	2.17	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1412:C:H2'	21:AA:1413:A:C8	2.53	0.43
10:AK:34:THR:HG21	21:AA:707:U:H1'	1.99	0.43
54:BA:2318:G:H2'	54:BA:2319:G:C8	2.54	0.43
54:BA:889:C:H1'	54:BA:890:C:C6	2.54	0.43
19:AT:40:ALA:HB1	19:AT:41:GLY:CA	2.49	0.42
54:BA:1752:C:H2'	54:BA:1753:G:C8	2.56	0.41
22:A1:55:PSU:HO2'	22:A1:57:G:H8	1.65	0.41
54:BA:152:A:H2'	54:BA:153:U:C6	2.56	0.41
35:BM:119:LEU:H	35:BM:119:LEU:HD23	1.86	0.40
11:AL:47:ALA:HB3	21:AA:529:G:H22	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	
1	AB	218/220 (99%)	201 (92%)	14 (6%)	3 (1%)	11	46
2	AC	205/208 (99%)	189 (92%)	13 (6%)	3 (2%)	10	46
3	AD	203/206 (98%)	188 (93%)	13 (6%)	2 (1%)	15	55
4	AE	150/152 (99%)	135 (90%)	10 (7%)	5 (3%)	4	26
5	AF	99/101 (98%)	81 (82%)	14 (14%)	4 (4%)	3	23
6	AG	150/152 (99%)	134 (89%)	13 (9%)	3 (2%)	7	38
7	AH	127/130 (98%)	117 (92%)	5 (4%)	5 (4%)	3	23
8	AI	126/128 (98%)	106 (84%)	16 (13%)	4 (3%)	4	26
9	AJ	98/100 (98%)	91 (93%)	2 (2%)	5 (5%)	2	19
10	AK	116/118 (98%)	109 (94%)	4 (3%)	3 (3%)	5	31
11	AL	121/124 (98%)	109 (90%)	9 (7%)	3 (2%)	5	32
12	AM	112/115 (97%)	93 (83%)	14 (12%)	5 (4%)	2	22

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	AN	98/101 (97%)	88 (90%)	9 (9%)	1 (1%)	15	55
14	AO	86/89 (97%)	80 (93%)	5 (6%)	1 (1%)	13	50
15	AP	79/81 (98%)	71 (90%)	6 (8%)	2 (2%)	5	32
16	AQ	80/82 (98%)	74 (92%)	6 (8%)	0	100	100
17	AR	55/57 (96%)	50 (91%)	4 (7%)	1 (2%)	8	40
18	AS	79/81 (98%)	69 (87%)	9 (11%)	1 (1%)	12	48
19	AT	84/86 (98%)	73 (87%)	9 (11%)	2 (2%)	6	33
20	AU	51/53 (96%)	32 (63%)	15 (29%)	4 (8%)	1	13
25	BC	270/273 (99%)	236 (87%)	26 (10%)	8 (3%)	4	28
26	BD	207/209 (99%)	178 (86%)	15 (7%)	14 (7%)	1	15
27	BE	199/201 (99%)	187 (94%)	7 (4%)	5 (2%)	5	32
28	BF	176/179 (98%)	153 (87%)	18 (10%)	5 (3%)	5	30
29	BG	174/177 (98%)	160 (92%)	11 (6%)	3 (2%)	9	42
30	BH	147/149 (99%)	136 (92%)	9 (6%)	2 (1%)	11	46
31	BI	139/142 (98%)	127 (91%)	11 (8%)	1 (1%)	22	63
32	BJ	140/142 (99%)	131 (94%)	7 (5%)	2 (1%)	11	46
33	BK	121/123 (98%)	107 (88%)	10 (8%)	4 (3%)	4	26
34	BL	141/144 (98%)	122 (86%)	15 (11%)	4 (3%)	5	30
35	BM	134/136 (98%)	121 (90%)	8 (6%)	5 (4%)	3	24
36	BN	119/121 (98%)	107 (90%)	10 (8%)	2 (2%)	9	42
37	BO	114/117 (97%)	105 (92%)	8 (7%)	1 (1%)	17	57
38	BP	112/115 (97%)	94 (84%)	11 (10%)	7 (6%)	1	17
39	BQ	115/118 (98%)	106 (92%)	6 (5%)	3 (3%)	5	31
40	BR	101/103 (98%)	92 (91%)	7 (7%)	2 (2%)	7	38
41	BS	108/110 (98%)	100 (93%)	5 (5%)	3 (3%)	5	30
42	BT	92/94 (98%)	77 (84%)	8 (9%)	7 (8%)	1	13
43	BU	101/104 (97%)	85 (84%)	10 (10%)	6 (6%)	1	17
44	BV	92/94 (98%)	86 (94%)	3 (3%)	3 (3%)	4	26
45	BW	78/80 (98%)	56 (72%)	16 (20%)	6 (8%)	1	13
46	BX	75/79 (95%)	66 (88%)	7 (9%)	2 (3%)	5	31
47	BY	61/63 (97%)	54 (88%)	5 (8%)	2 (3%)	4	26

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
48	BZ	56/59 (95%)	50 (89%)	5 (9%)	1 (2%)	8 40
49	B0	54/57 (95%)	44 (82%)	9 (17%)	1 (2%)	8 38
50	B1	50/52 (96%)	47 (94%)	3 (6%)	0	100 100
51	B2	44/46 (96%)	42 (96%)	0	2 (4%)	2 22
52	B3	62/65 (95%)	57 (92%)	4 (6%)	1 (2%)	9 44
53	B4	36/38 (95%)	32 (89%)	4 (11%)	0	100 100
56	B5	221/234 (94%)	206 (93%)	13 (6%)	2 (1%)	17 57
All	All	5876/6008 (98%)	5254 (89%)	461 (8%)	161 (3%)	8 31

All (161) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	10	LYS
5	AF	90	MET
6	AG	5	VAL
7	AH	77	VAL
10	AK	125	LYS
11	AL	43	LYS
12	AM	85	TYR
26	BD	80	TRP
26	BD	170	VAL
27	BE	79	ARG
33	BK	103	VAL
43	BU	85	ARG
46	BX	43	LYS
1	AB	18	GLN
3	AD	29	THR
4	AE	105	ILE
5	AF	6	ILE
5	AF	10	VAL
6	AG	6	ILE
9	AJ	75	ASP
9	AJ	102	LEU
12	AM	3	ILE
12	AM	42	VAL
12	AM	104	ASN
17	AR	20	ILE
18	AS	5	LYS
20	AU	23	GLU
25	BC	189	ALA

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	BD	34	VAL
26	BD	41	ALA
26	BD	77	ARG
26	BD	119	ALA
26	BD	155	VAL
27	BE	90	GLN
27	BE	97	ASN
27	BE	147	LEU
28	BF	12	VAL
28	BF	103	ILE
29	BG	152	ARG
33	BK	25	LEU
34	BL	101	ILE
35	BM	70	ASP
36	BN	47	VAL
37	BO	89	ASP
39	BQ	87	VAL
39	BQ	91	ARG
40	BR	91	GLN
41	BS	88	ARG
42	BT	66	LYS
42	BT	68	LYS
42	BT	88	LYS
43	BU	45	GLN
45	BW	10	ARG
47	BY	23	ARG
48	BZ	32	GLY
51	B2	3	ARG
4	AE	54	GLU
6	AG	113	LYS
8	AI	127	SER
10	AK	126	ARG
11	AL	46	SER
13	AN	63	ARG
14	AO	43	ALA
15	AP	43	ALA
19	AT	3	ILE
19	AT	65	LEU
25	BC	43	ASN
25	BC	141	HIS
25	BC	142	ASN
25	BC	153	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	BD	40	LEU
26	BD	73	VAL
26	BD	150	GLN
28	BF	136	ILE
30	BH	148	ALA
32	BJ	81	ILE
34	BL	13	LYS
34	BL	82	LEU
35	BM	69	PRO
35	BM	110	GLU
38	BP	58	PHE
38	BP	113	LEU
42	BT	11	LEU
43	BU	5	ARG
43	BU	12	VAL
43	BU	43	LYS
45	BW	38	ARG
45	BW	44	PHE
52	B3	3	ILE
56	B5	91	GLY
56	B5	219	GLY
2	AC	195	ILE
7	AH	69	ALA
7	AH	78	SER
8	AI	120	ALA
9	AJ	45	ARG
9	AJ	57	VAL
9	AJ	92	LEU
10	AK	16	SER
20	AU	17	ARG
20	AU	49	ALA
25	BC	70	LYS
25	BC	204	LEU
26	BD	15	PHE
26	BD	51	THR
28	BF	132	ARG
28	BF	156	THR
29	BG	4	ALA
29	BG	22	VAL
30	BH	48	GLU
33	BK	92	GLU
36	BN	2	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
38	BP	74	GLN
41	BS	28	LYS
43	BU	70	ALA
44	BV	23	ALA
44	BV	24	ASN
45	BW	23	LYS
45	BW	56	HIS
46	BX	21	LEU
47	BY	7	ARG
51	B2	4	THR
1	AB	87	ASP
2	AC	189	HIS
5	AF	63	ASN
7	AH	2	MET
8	AI	55	ASP
8	AI	112	ARG
11	AL	117	GLY
12	AM	65	GLU
15	AP	17	TYR
31	BI	64	ARG
32	BJ	25	LEU
38	BP	31	VAL
38	BP	94	ALA
38	BP	110	LYS
41	BS	29	VAL
42	BT	70	HIS
45	BW	75	ASN
49	B0	26	SER
4	AE	103	GLY
7	AH	53	ASP
20	AU	3	ILE
26	BD	22	ILE
26	BD	167	ASN
33	BK	2	ILE
34	BL	24	GLY
35	BM	6	ARG
39	BQ	32	ARG
40	BR	53	PHE
42	BT	78	SER
44	BV	60	VAL
3	AD	27	ILE
4	AE	43	GLY

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
42	BT	2	ILE
27	BE	96	VAL
2	AC	14	VAL
4	AE	104	ILE
25	BC	108	GLY
35	BM	36	VAL
38	BP	20	ARG

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AB	180/180 (100%)	176 (98%)	4 (2%)	52 71
2	AC	170/171 (99%)	167 (98%)	3 (2%)	59 77
3	AD	172/173 (99%)	171 (99%)	1 (1%)	86 92
4	AE	113/113 (100%)	112 (99%)	1 (1%)	78 87
5	AF	87/87 (100%)	87 (100%)	0	100 100
6	AG	123/123 (100%)	122 (99%)	1 (1%)	81 89
7	AH	104/105 (99%)	102 (98%)	2 (2%)	57 75
8	AI	105/105 (100%)	104 (99%)	1 (1%)	76 86
9	AJ	86/86 (100%)	83 (96%)	3 (4%)	36 59
10	AK	90/90 (100%)	87 (97%)	3 (3%)	38 61
11	AL	103/104 (99%)	101 (98%)	2 (2%)	57 75
12	AM	91/92 (99%)	91 (100%)	0	100 100
13	AN	83/84 (99%)	81 (98%)	2 (2%)	49 69
14	AO	76/77 (99%)	75 (99%)	1 (1%)	69 81
15	AP	65/65 (100%)	65 (100%)	0	100 100
16	AQ	74/74 (100%)	71 (96%)	3 (4%)	30 55
17	AR	48/48 (100%)	48 (100%)	0	100 100
18	AS	70/70 (100%)	69 (99%)	1 (1%)	67 80

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	AT	65/65 (100%)	65 (100%)	0	100	100
20	AU	44/44 (100%)	44 (100%)	0	100	100
25	BC	216/217 (100%)	212 (98%)	4 (2%)	57	75
26	BD	164/164 (100%)	161 (98%)	3 (2%)	59	77
27	BE	165/165 (100%)	165 (100%)	0	100	100
28	BF	149/150 (99%)	144 (97%)	5 (3%)	37	60
29	BG	137/138 (99%)	133 (97%)	4 (3%)	42	64
30	BH	114/114 (100%)	114 (100%)	0	100	100
31	BI	109/110 (99%)	107 (98%)	2 (2%)	59	77
32	BJ	116/116 (100%)	114 (98%)	2 (2%)	60	78
33	BK	103/103 (100%)	102 (99%)	1 (1%)	76	86
34	BL	102/103 (99%)	102 (100%)	0	100	100
35	BM	109/109 (100%)	106 (97%)	3 (3%)	43	65
36	BN	100/100 (100%)	97 (97%)	3 (3%)	41	63
37	BO	86/87 (99%)	86 (100%)	0	100	100
38	BP	99/100 (99%)	98 (99%)	1 (1%)	76	86
39	BQ	89/90 (99%)	88 (99%)	1 (1%)	73	84
40	BR	84/84 (100%)	82 (98%)	2 (2%)	49	69
41	BS	93/93 (100%)	92 (99%)	1 (1%)	73	84
42	BT	80/80 (100%)	80 (100%)	0	100	100
43	BU	83/84 (99%)	83 (100%)	0	100	100
44	BV	78/78 (100%)	76 (97%)	2 (3%)	46	66
45	BW	59/59 (100%)	58 (98%)	1 (2%)	60	78
46	BX	67/68 (98%)	66 (98%)	1 (2%)	65	80
47	BY	55/55 (100%)	53 (96%)	2 (4%)	35	59
48	BZ	48/49 (98%)	48 (100%)	0	100	100
49	B0	47/48 (98%)	45 (96%)	2 (4%)	29	53
50	B1	45/45 (100%)	43 (96%)	2 (4%)	28	53
51	B2	38/38 (100%)	38 (100%)	0	100	100
52	B3	51/52 (98%)	51 (100%)	0	100	100
53	B4	34/34 (100%)	33 (97%)	1 (3%)	42	64

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
56	B5	173/181 (96%)	170 (98%)	3 (2%)	60 78
All	All	4842/4870 (99%)	4768 (98%)	74 (2%)	66 80

All (74) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	22	TRP
1	AB	88	GLN
1	AB	135	MET
1	AB	169	HIS
2	AC	41	TYR
2	AC	182	ASP
2	AC	187	GLU
3	AD	54	LEU
4	AE	134	ASN
6	AG	129	ASN
7	AH	60	LEU
7	AH	86	LYS
8	AI	79	ARG
9	AJ	92	LEU
9	AJ	99	GLN
9	AJ	102	LEU
10	AK	19	VAL
10	AK	37	GLN
10	AK	80	ASN
11	AL	28	GLN
11	AL	93	ARG
13	AN	6	MET
13	AN	26	GLU
14	AO	20	ASP
16	AQ	42	LYS
16	AQ	46	HIS
16	AQ	69	THR
18	AS	54	ARG
25	BC	62	ARG
25	BC	173	LEU
25	BC	190	THR
25	BC	200	MET
26	BD	151	THR
26	BD	161	MET
26	BD	179	ARG
28	BF	4	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	BF	21	TYR
28	BF	41	GLU
28	BF	49	LEU
28	BF	173	ASP
29	BG	2	ARG
29	BG	115	GLN
29	BG	154	GLU
29	BG	166	GLU
31	BI	35	MET
31	BI	131	THR
32	BJ	50	THR
32	BJ	84	ILE
33	BK	105	ARG
35	BM	97	GLN
35	BM	108	VAL
35	BM	126	ILE
36	BN	1	MET
36	BN	97	ILE
36	BN	112	TYR
38	BP	64	SER
39	BQ	96	ASP
40	BR	40	MET
40	BR	94	THR
41	BS	74	ILE
44	BV	12	GLN
44	BV	44	HIS
45	BW	63	ASP
46	BX	73	ARG
47	BY	1	MET
47	BY	43	LEU
49	B0	40	HIS
49	B0	54	ILE
50	B1	10	LEU
50	B1	29	LYS
53	B4	35	GLN
56	B5	79	THR
56	B5	97	MET
56	B5	171	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	17	HIS
1	AB	202	ASN
11	AL	45	ASN
36	BN	3	HIS
44	BV	44	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1530/1533 (99%)	237 (15%)	85 (5%)
22	A1	73/76 (96%)	12 (16%)	8 (10%)
23	A2	14/15 (93%)	5 (35%)	2 (14%)
24	A3	76/77 (98%)	15 (19%)	6 (7%)
54	BA	2902/2903 (99%)	487 (16%)	135 (4%)
55	BB	116/118 (98%)	17 (14%)	3 (2%)
All	All	4711/4722 (99%)	773 (16%)	239 (5%)

All (773) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	6	G
21	AA	9	G
21	AA	20	U
21	AA	21	G
21	AA	31	G
21	AA	32	A
21	AA	33	A
21	AA	36	C
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	49	U
21	AA	50	A
21	AA	51	A
21	AA	61	G
21	AA	72	A
21	AA	84	U
21	AA	85	U
21	AA	86	G
21	AA	87	C
21	AA	94	G
21	AA	95	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	100	G
21	AA	110	C
21	AA	112	G
21	AA	120	A
21	AA	125	U
21	AA	151	A
21	AA	153	C
21	AA	161	A
21	AA	163	C
21	AA	164	G
21	AA	165	G
21	AA	183	C
21	AA	198	G
21	AA	201	G
21	AA	212	G
21	AA	235	C
21	AA	240	G
21	AA	244	U
21	AA	245	U
21	AA	247	G
21	AA	251	G
21	AA	255	G
21	AA	256	U
21	AA	266	G
21	AA	272	C
21	AA	289	G
21	AA	293	G
21	AA	294	U
21	AA	298	A
21	AA	301	G
21	AA	328	C
21	AA	330	C
21	AA	332	G
21	AA	344	A
21	AA	345	C
21	AA	346	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	358	U
21	AA	365	U
21	AA	372	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	381	C
21	AA	384	G
21	AA	389	A
21	AA	398	U
21	AA	406	G
21	AA	412	A
21	AA	413	G
21	AA	414	A
21	AA	415	A
21	AA	421	U
21	AA	422	C
21	AA	424	G
21	AA	429	U
21	AA	452	A
21	AA	457	G
21	AA	463	U
21	AA	465	A
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	474	G
21	AA	482	A
21	AA	483	C
21	AA	484	G
21	AA	493	A
21	AA	495	A
21	AA	497	G
21	AA	509	A
21	AA	511	C
21	AA	524	G
21	AA	527	G
21	AA	532	A
21	AA	547	A
21	AA	559	A
21	AA	562	U
21	AA	566	G
21	AA	572	A
21	AA	573	A
21	AA	576	C
21	AA	580	C
21	AA	618	C
21	AA	619	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	620	C
21	AA	623	C
21	AA	627	G
21	AA	632	U
21	AA	642	A
21	AA	653	U
21	AA	661	G
21	AA	687	A
21	AA	695	A
21	AA	700	G
21	AA	724	G
21	AA	753	A
21	AA	755	G
21	AA	777	A
21	AA	787	A
21	AA	794	A
21	AA	812	G
21	AA	816	A
21	AA	817	C
21	AA	819	A
21	AA	828	U
21	AA	841	C
21	AA	843	U
21	AA	844	G
21	AA	845	A
21	AA	846	G
21	AA	885	G
21	AA	900	A
21	AA	926	G
21	AA	927	G
21	AA	933	G
21	AA	937	A
21	AA	939	G
21	AA	945	G
21	AA	946	A
21	AA	959	A
21	AA	960	U
21	AA	962	C
21	AA	965	U
21	AA	966	G
21	AA	969	A
21	AA	971	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	974	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	980	C
21	AA	983	A
21	AA	993	G
21	AA	994	A
21	AA	995	C
21	AA	996	A
21	AA	997	U
21	AA	1004	A
21	AA	1020	G
21	AA	1031	C
21	AA	1032	G
21	AA	1033	G
21	AA	1045	C
21	AA	1050	G
21	AA	1056	U
21	AA	1060	U
21	AA	1061	G
21	AA	1068	G
21	AA	1081	A
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1102	A
21	AA	1136	C
21	AA	1137	C
21	AA	1139	G
21	AA	1141	C
21	AA	1142	G
21	AA	1151	A
21	AA	1157	A
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1169	A
21	AA	1178	G
21	AA	1183	U
21	AA	1189	U
21	AA	1191	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	1194	U
21	AA	1195	C
21	AA	1196	A
21	AA	1202	U
21	AA	1204	A
21	AA	1213	A
21	AA	1225	A
21	AA	1226	C
21	AA	1227	A
21	AA	1228	C
21	AA	1229	A
21	AA	1256	A
21	AA	1257	A
21	AA	1274	A
21	AA	1285	A
21	AA	1287	A
21	AA	1300	G
21	AA	1303	C
21	AA	1305	G
21	AA	1308	U
21	AA	1309	G
21	AA	1317	C
21	AA	1320	C
21	AA	1321	U
21	AA	1323	G
21	AA	1337	G
21	AA	1338	G
21	AA	1339	A
21	AA	1342	C
21	AA	1343	G
21	AA	1345	U
21	AA	1355	G
21	AA	1362	A
21	AA	1379	G
21	AA	1381	U
21	AA	1383	C
21	AA	1384	C
21	AA	1399	C
21	AA	1401	G
21	AA	1446	A
21	AA	1472	U
21	AA	1493	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	1517	G
21	AA	1520	C
21	AA	1529	G
21	AA	1530	G
21	AA	1534	A
22	A1	10	G
22	A1	17	U
22	A1	21	A
22	A1	32	C
22	A1	48	C
22	A1	56	C
22	A1	57	G
22	A1	58	A
22	A1	61	C
22	A1	62	C
22	A1	73	A
22	A1	74	C
23	A2	81	U
23	A2	82	A
23	A2	83	U
23	A2	91	A
23	A2	92	U
24	A3	2	G
24	A3	9	G
24	A3	16	C
24	A3	18	U
24	A3	19	G
24	A3	20	G
24	A3	22	A
24	A3	48	U
24	A3	49	C
24	A3	55	5MU
24	A3	56	PSU
24	A3	60	A
24	A3	73	A
24	A3	75	C
24	A3	76	C
54	BA	10	A
54	BA	14	A
54	BA	15	G
54	BA	22	C
54	BA	43	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	44	A
54	BA	46	G
54	BA	48	G
54	BA	52	A
54	BA	60	G
54	BA	61	C
54	BA	62	U
54	BA	74	A
54	BA	75	G
54	BA	77	G
54	BA	91	A
54	BA	99	U
54	BA	100	U
54	BA	101	A
54	BA	102	U
54	BA	103	A
54	BA	119	A
54	BA	120	U
54	BA	127	A
54	BA	128	C
54	BA	142	A
54	BA	147	C
54	BA	148	U
54	BA	155	A
54	BA	173	A
54	BA	194	G
54	BA	196	A
54	BA	197	A
54	BA	199	A
54	BA	200	U
54	BA	204	A
54	BA	205	G
54	BA	216	A
54	BA	222	A
54	BA	230	G
54	BA	233	A
54	BA	244	A
54	BA	248	G
54	BA	249	C
54	BA	250	G
54	BA	258	G
54	BA	265	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	266	G
54	BA	278	A
54	BA	279	A
54	BA	280	U
54	BA	299	A
54	BA	301	G
54	BA	302	C
54	BA	316	C
54	BA	322	A
54	BA	323	C
54	BA	329	G
54	BA	330	A
54	BA	331	C
54	BA	346	A
54	BA	370	G
54	BA	371	A
54	BA	373	U
54	BA	374	A
54	BA	386	G
54	BA	387	U
54	BA	388	G
54	BA	389	G
54	BA	404	A
54	BA	411	G
54	BA	428	A
54	BA	443	A
54	BA	446	G
54	BA	447	A
54	BA	448	U
54	BA	451	U
54	BA	457	A
54	BA	458	G
54	BA	475	C
54	BA	481	G
54	BA	482	A
54	BA	491	G
54	BA	504	A
54	BA	509	C
54	BA	512	G
54	BA	527	C
54	BA	529	A
54	BA	530	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	531	C
54	BA	532	A
54	BA	533	G
54	BA	544	C
54	BA	546	U
54	BA	548	G
54	BA	549	G
54	BA	550	C
54	BA	573	U
54	BA	574	A
54	BA	575	A
54	BA	577	G
54	BA	579	G
54	BA	590	A
54	BA	603	A
54	BA	613	A
54	BA	614	A
54	BA	615	U
54	BA	637	A
54	BA	647	G
54	BA	653	U
54	BA	654	A
54	BA	671	C
54	BA	672	C
54	BA	686	U
54	BA	719	C
54	BA	725	G
54	BA	730	A
54	BA	736	C
54	BA	747	U
54	BA	748	G
54	BA	751	A
54	BA	752	A
54	BA	764	A
54	BA	775	G
54	BA	776	G
54	BA	782	A
54	BA	784	G
54	BA	790	U
54	BA	792	A
54	BA	805	G
54	BA	806	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	810	U
54	BA	812	C
54	BA	827	U
54	BA	828	U
54	BA	847	U
54	BA	858	G
54	BA	866	A
54	BA	889	C
54	BA	890	C
54	BA	907	G
54	BA	910	A
54	BA	914	G
54	BA	915	C
54	BA	932	U
54	BA	933	A
54	BA	946	C
54	BA	958	U
54	BA	959	A
54	BA	961	C
54	BA	962	G
54	BA	965	C
54	BA	966	G
54	BA	974	G
54	BA	983	A
54	BA	984	A
54	BA	989	G
54	BA	990	A
54	BA	995	C
54	BA	996	A
54	BA	1012	U
54	BA	1013	C
54	BA	1024	G
54	BA	1025	G
54	BA	1026	G
54	BA	1033	U
54	BA	1046	A
54	BA	1047	G
54	BA	1063	G
54	BA	1068	G
54	BA	1070	A
54	BA	1071	G
54	BA	1073	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	1088	A
54	BA	1089	A
54	BA	1090	A
54	BA	1095	A
54	BA	1096	A
54	BA	1097	U
54	BA	1102	C
54	BA	1112	G
54	BA	1127	A
54	BA	1129	A
54	BA	1132	U
54	BA	1133	A
54	BA	1134	A
54	BA	1135	C
54	BA	1142	A
54	BA	1144	A
54	BA	1155	A
54	BA	1176	U
54	BA	1177	G
54	BA	1186	G
54	BA	1189	A
54	BA	1204	A
54	BA	1211	C
54	BA	1227	G
54	BA	1236	G
54	BA	1237	A
54	BA	1241	A
54	BA	1242	U
54	BA	1252	G
54	BA	1253	A
54	BA	1254	A
54	BA	1255	U
54	BA	1256	G
54	BA	1262	A
54	BA	1263	U
54	BA	1266	G
54	BA	1272	A
54	BA	1273	U
54	BA	1274	A
54	BA	1275	A
54	BA	1276	A
54	BA	1287	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	1300	G
54	BA	1301	A
54	BA	1302	A
54	BA	1303	G
54	BA	1311	G
54	BA	1313	U
54	BA	1328	A
54	BA	1332	G
54	BA	1341	G
54	BA	1342	A
54	BA	1350	C
54	BA	1365	A
54	BA	1366	A
54	BA	1379	U
54	BA	1380	G
54	BA	1384	A
54	BA	1385	A
54	BA	1386	C
54	BA	1388	G
54	BA	1390	U
54	BA	1396	U
54	BA	1416	G
54	BA	1417	C
54	BA	1420	A
54	BA	1427	A
54	BA	1428	C
54	BA	1440	U
54	BA	1452	G
54	BA	1453	A
54	BA	1455	G
54	BA	1459	G
54	BA	1460	U
54	BA	1461	C
54	BA	1482	G
54	BA	1490	A
54	BA	1491	G
54	BA	1493	C
54	BA	1508	A
54	BA	1509	A
54	BA	1523	U
54	BA	1538	G
54	BA	1539	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	1540	G
54	BA	1568	G
54	BA	1569	A
54	BA	1574	C
54	BA	1578	U
54	BA	1585	C
54	BA	1586	A
54	BA	1599	U
54	BA	1604	C
54	BA	1608	A
54	BA	1617	C
54	BA	1618	A
54	BA	1621	U
54	BA	1622	G
54	BA	1626	A
54	BA	1635	A
54	BA	1639	C
54	BA	1646	C
54	BA	1647	U
54	BA	1648	U
54	BA	1650	A
54	BA	1653	G
54	BA	1654	A
54	BA	1663	G
54	BA	1666	G
54	BA	1668	A
54	BA	1669	A
54	BA	1674	G
54	BA	1707	G
54	BA	1729	U
54	BA	1738	G
54	BA	1758	U
54	BA	1764	C
54	BA	1773	A
54	BA	1783	A
54	BA	1784	A
54	BA	1785	A
54	BA	1800	C
54	BA	1804	C
54	BA	1808	A
54	BA	1811	G
54	BA	1819	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	1820	U
54	BA	1830	C
54	BA	1835	G
54	BA	1847	A
54	BA	1870	C
54	BA	1871	A
54	BA	1873	G
54	BA	1874	C
54	BA	1900	A
54	BA	1914	C
54	BA	1915	U
54	BA	1930	G
54	BA	1931	U
54	BA	1937	A
54	BA	1938	A
54	BA	1939	U
54	BA	1943	U
54	BA	1944	U
54	BA	1945	G
54	BA	1952	A
54	BA	1953	A
54	BA	1955	U
54	BA	1967	C
54	BA	1970	A
54	BA	1971	U
54	BA	1972	G
54	BA	1981	A
54	BA	1982	U
54	BA	1993	U
54	BA	1996	C
54	BA	1997	C
54	BA	2006	C
54	BA	2022	U
54	BA	2023	C
54	BA	2032	G
54	BA	2035	G
54	BA	2044	C
54	BA	2052	A
54	BA	2055	C
54	BA	2060	A
54	BA	2061	G
54	BA	2063	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	2068	U
54	BA	2076	U
54	BA	2077	A
54	BA	2092	U
54	BA	2111	U
54	BA	2112	G
54	BA	2117	A
54	BA	2118	U
54	BA	2119	A
54	BA	2126	A
54	BA	2127	G
54	BA	2157	G
54	BA	2159	G
54	BA	2160	C
54	BA	2165	C
54	BA	2169	A
54	BA	2172	U
54	BA	2203	U
54	BA	2211	A
54	BA	2212	A
54	BA	2213	U
54	BA	2232	C
54	BA	2238	G
54	BA	2245	U
54	BA	2246	G
54	BA	2267	A
54	BA	2269	G
54	BA	2275	C
54	BA	2283	C
54	BA	2297	A
54	BA	2305	U
54	BA	2307	G
54	BA	2308	G
54	BA	2309	A
54	BA	2312	U
54	BA	2313	C
54	BA	2320	U
54	BA	2321	U
54	BA	2325	G
54	BA	2326	C
54	BA	2333	A
54	BA	2334	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	2335	A
54	BA	2347	C
54	BA	2353	G
54	BA	2383	G
54	BA	2385	C
54	BA	2388	A
54	BA	2389	G
54	BA	2390	U
54	BA	2391	G
54	BA	2392	A
54	BA	2394	C
54	BA	2407	A
54	BA	2424	C
54	BA	2425	A
54	BA	2426	A
54	BA	2428	G
54	BA	2429	G
54	BA	2431	U
54	BA	2432	A
54	BA	2433	A
54	BA	2434	A
54	BA	2439	A
54	BA	2440	C
54	BA	2441	U
54	BA	2447	G
54	BA	2448	A
54	BA	2449	U
54	BA	2474	U
54	BA	2478	A
54	BA	2485	G
54	BA	2491	U
54	BA	2496	C
54	BA	2498	C
54	BA	2499	C
54	BA	2500	U
54	BA	2502	G
54	BA	2504	U
54	BA	2505	G
54	BA	2529	G
54	BA	2531	A
54	BA	2532	G
54	BA	2534	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	2540	C
54	BA	2547	A
54	BA	2554	U
54	BA	2556	C
54	BA	2565	A
54	BA	2566	A
54	BA	2567	G
54	BA	2573	C
54	BA	2585	U
54	BA	2586	U
54	BA	2589	A
54	BA	2599	G
54	BA	2602	A
54	BA	2603	G
54	BA	2614	A
54	BA	2617	U
54	BA	2629	U
54	BA	2630	G
54	BA	2642	G
54	BA	2655	G
54	BA	2660	A
54	BA	2661	G
54	BA	2663	G
54	BA	2665	A
54	BA	2666	C
54	BA	2669	G
54	BA	2676	C
54	BA	2684	U
54	BA	2689	U
54	BA	2690	U
54	BA	2691	C
54	BA	2707	U
54	BA	2712	C
54	BA	2713	U
54	BA	2718	G
54	BA	2732	G
54	BA	2750	A
54	BA	2751	G
54	BA	2752	C
54	BA	2765	A
54	BA	2778	A
54	BA	2779	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	2780	G
54	BA	2786	U
54	BA	2791	G
54	BA	2797	U
54	BA	2799	A
54	BA	2800	A
54	BA	2801	G
54	BA	2816	G
54	BA	2820	A
54	BA	2821	A
54	BA	2824	C
54	BA	2850	A
54	BA	2858	C
54	BA	2867	G
54	BA	2884	U
54	BA	2885	G
54	BA	2886	A
54	BA	2887	A
54	BA	2893	A
54	BA	2895	G
55	BB	9	G
55	BB	11	C
55	BB	13	G
55	BB	14	U
55	BB	15	A
55	BB	16	G
55	BB	25	U
55	BB	35	C
55	BB	36	C
55	BB	37	C
55	BB	44	G
55	BB	45	A
55	BB	57	A
55	BB	67	G
55	BB	83	G
55	BB	89	U
55	BB	109	A

All (239) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	5	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	30	U
21	AA	32	A
21	AA	49	U
21	AA	51	A
21	AA	60	A
21	AA	85	U
21	AA	94	G
21	AA	98	A
21	AA	109	A
21	AA	120	A
21	AA	184	G
21	AA	234	C
21	AA	244	U
21	AA	255	G
21	AA	293	G
21	AA	344	A
21	AA	345	C
21	AA	351	G
21	AA	353	A
21	AA	357	G
21	AA	384	G
21	AA	412	A
21	AA	414	A
21	AA	465	A
21	AA	482	A
21	AA	493	A
21	AA	559	A
21	AA	575	G
21	AA	579	A
21	AA	602	A
21	AA	611	C
21	AA	622	A
21	AA	626	G
21	AA	641	U
21	AA	664	G
21	AA	733	G
21	AA	753	A
21	AA	804	U
21	AA	811	C
21	AA	841	C
21	AA	872	A
21	AA	884	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
21	AA	926	G
21	AA	932	C
21	AA	945	G
21	AA	958	A
21	AA	975	A
21	AA	982	U
21	AA	983	A
21	AA	992	U
21	AA	994	A
21	AA	996	A
21	AA	1031	C
21	AA	1050	G
21	AA	1060	U
21	AA	1101	A
21	AA	1129	C
21	AA	1140	C
21	AA	1142	G
21	AA	1157	A
21	AA	1167	A
21	AA	1190	G
21	AA	1194	U
21	AA	1196	A
21	AA	1201	A
21	AA	1214	C
21	AA	1225	A
21	AA	1226	C
21	AA	1227	A
21	AA	1267	C
21	AA	1281	C
21	AA	1296	C
21	AA	1298	U
21	AA	1299	A
21	AA	1308	U
21	AA	1319	A
21	AA	1322	C
21	AA	1338	G
21	AA	1342	C
21	AA	1355	G
21	AA	1380	U
21	AA	1383	C
21	AA	1399	C
21	AA	1471	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
22	A1	10	G
22	A1	43	G
22	A1	48	C
22	A1	55	PSU
22	A1	57	G
22	A1	58	A
22	A1	60	C
22	A1	61	C
23	A2	80	C
23	A2	91	A
24	A3	15	G
24	A3	16	C
24	A3	19	G
24	A3	48	U
24	A3	72	C
24	A3	74	A
54	BA	9	G
54	BA	13	A
54	BA	14	A
54	BA	43	G
54	BA	45	G
54	BA	47	C
54	BA	60	G
54	BA	99	U
54	BA	101	A
54	BA	118	A
54	BA	119	A
54	BA	125	A
54	BA	127	A
54	BA	147	C
54	BA	196	A
54	BA	199	A
54	BA	233	A
54	BA	249	C
54	BA	278	A
54	BA	279	A
54	BA	323	C
54	BA	330	A
54	BA	369	U
54	BA	388	G
54	BA	443	A
54	BA	446	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	474	G
54	BA	481	G
54	BA	504	A
54	BA	529	A
54	BA	530	G
54	BA	532	A
54	BA	574	A
54	BA	614	A
54	BA	670	A
54	BA	726	G
54	BA	762	U
54	BA	790	U
54	BA	810	U
54	BA	827	U
54	BA	957	C
54	BA	961	C
54	BA	965	C
54	BA	980	A
54	BA	984	A
54	BA	989	G
54	BA	994	C
54	BA	1067	A
54	BA	1069	A
54	BA	1089	A
54	BA	1096	A
54	BA	1126	A
54	BA	1132	U
54	BA	1141	U
54	BA	1175	A
54	BA	1185	G
54	BA	1236	G
54	BA	1254	A
54	BA	1255	U
54	BA	1262	A
54	BA	1273	U
54	BA	1288	G
54	BA	1300	G
54	BA	1301	A
54	BA	1312	U
54	BA	1379	U
54	BA	1384	A
54	BA	1427	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	1451	C
54	BA	1453	A
54	BA	1490	A
54	BA	1508	A
54	BA	1539	U
54	BA	1552	A
54	BA	1598	A
54	BA	1621	U
54	BA	1634	A
54	BA	1668	A
54	BA	1699	G
54	BA	1706	C
54	BA	1737	G
54	BA	1774	C
54	BA	1779	U
54	BA	1783	A
54	BA	1784	A
54	BA	1816	C
54	BA	1819	A
54	BA	1828	G
54	BA	1869	G
54	BA	1930	G
54	BA	1938	A
54	BA	1941	C
54	BA	1943	U
54	BA	1945	G
54	BA	1952	A
54	BA	1970	A
54	BA	1971	U
54	BA	1980	G
54	BA	2005	A
54	BA	2035	G
54	BA	2076	U
54	BA	2110	G
54	BA	2117	A
54	BA	2141	G
54	BA	2164	C
54	BA	2211	A
54	BA	2227	A
54	BA	2244	U
54	BA	2245	U
54	BA	2275	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
54	BA	2282	G
54	BA	2286	G
54	BA	2304	G
54	BA	2311	A
54	BA	2352	A
54	BA	2389	G
54	BA	2391	G
54	BA	2402	U
54	BA	2425	A
54	BA	2439	A
54	BA	2473	U
54	BA	2483	C
54	BA	2495	G
54	BA	2565	A
54	BA	2585	U
54	BA	2602	A
54	BA	2641	G
54	BA	2645	G
54	BA	2665	A
54	BA	2690	U
54	BA	2711	A
54	BA	2712	C
54	BA	2780	G
54	BA	2799	A
54	BA	2894	G
55	BB	24	G
55	BB	56	G
55	BB	82	U

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

11 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	$\#\|Z\|>2$
24	OMC	A3	33	24	19,22,23	0.77	0	26,31,34	1.24	2 (7%)
22	4SU	A1	7	22	18,21,22	1.29	1 (5%)	26,30,33	0.92	2 (7%)
24	5MU	A3	55	24	19,22,23	0.69	0	28,32,35	1.43	5 (17%)
24	PSU	A3	56	24	18,21,22	0.80	0	22,30,33	1.02	2 (9%)
22	7MG	A1	46	22	22,26,27	5.03	2 (9%)	29,39,42	1.46	2 (6%)
22	CM0	A1	34	22,23	22,26,27	1.33	2 (9%)	28,37,40	1.41	3 (10%)
24	H2U	A3	21	24	18,21,22	1.33	2 (11%)	21,30,33	1.25	3 (14%)
22	6MZ	A1	37	22	18,25,26	0.99	1 (5%)	16,36,39	1.40	2 (12%)
24	4SU	A3	8	24	18,21,22	1.38	1 (5%)	26,30,33	0.80	1 (3%)
22	5MU	A1	54	22	19,22,23	0.72	0	28,32,35	1.18	3 (10%)
22	PSU	A1	55	22	18,21,22	1.37	4 (22%)	22,30,33	1.85	7 (31%)

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
24	OMC	A3	33	24	-	0/9/27/28	0/2/2/2
22	4SU	A1	7	22	-	0/7/25/26	0/2/2/2
24	5MU	A3	55	24	-	0/7/25/26	0/2/2/2
24	PSU	A3	56	24	-	2/7/25/26	0/2/2/2
22	7MG	A1	46	22	-	0/7/37/38	0/3/3/3
22	CM0	A1	34	22,23	-	2/12/30/31	0/2/2/2
24	H2U	A3	21	24	-	0/7/38/39	0/2/2/2
22	6MZ	A1	37	22	-	0/5/27/28	0/3/3/3
24	4SU	A3	8	24	-	0/7/25/26	0/2/2/2
22	5MU	A1	54	22	-	0/7/25/26	0/2/2/2
22	PSU	A1	55	22	-	1/7/25/26	0/2/2/2

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	A1	46	7MG	C8-N9	-23.28	1.33	1.46
24	A3	8	4SU	C5-C4	-4.83	1.36	1.42
22	A1	34	CM0	O5-C5	-4.77	1.25	1.36
22	A1	7	4SU	C5-C4	-4.53	1.36	1.42
22	A1	55	PSU	C2'-C1'	-3.38	1.49	1.53
24	A3	21	H2U	C2-N3	-3.38	1.31	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	A3	21	H2U	C4-N3	-3.29	1.32	1.37
22	A1	55	PSU	C1'-C5	2.62	1.56	1.50
22	A1	46	7MG	C5-N7	2.39	1.38	1.35
22	A1	37	6MZ	C8-N7	-2.18	1.30	1.34
22	A1	34	CM0	O8-C8	-2.16	1.23	1.30
22	A1	55	PSU	O4'-C1'	-2.16	1.40	1.43
22	A1	55	PSU	O4'-C4'	-2.02	1.40	1.45

All (32) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	A1	46	7MG	N9-C8-N7	5.80	111.67	103.38
22	A1	34	CM0	C7-O5-C5	5.00	124.12	117.58
22	A1	37	6MZ	C9-N6-C6	4.40	126.66	122.87
22	A1	55	PSU	C6-C5-C4	-4.14	115.30	118.20
24	A3	33	OMC	O2-C2-N3	-3.82	116.11	122.33
24	A3	21	H2U	N3-C2-N1	3.45	120.30	116.65
22	A1	54	5MU	C6-C5-C4	3.29	120.78	118.03
22	A1	55	PSU	C5-C6-N1	-3.23	117.27	122.11
22	A1	55	PSU	C6-N1-C2	-3.18	119.44	122.68
24	A3	55	5MU	C5M-C5-C6	-3.02	118.82	122.85
22	A1	55	PSU	O4'-C1'-C2'	2.98	109.35	105.14
24	A3	55	5MU	C6-C5-C4	2.95	120.50	118.03
22	A1	55	PSU	O2'-C2'-C1'	-2.87	104.39	111.23
22	A1	54	5MU	C5M-C5-C6	-2.77	119.14	122.85
24	A3	33	OMC	C2'-C1'-N1	-2.52	109.33	114.22
24	A3	55	5MU	C5-C6-N1	-2.49	120.78	123.34
24	A3	55	5MU	O4'-C4'-C3'	2.47	109.99	105.11
24	A3	21	H2U	O2-C2-N3	-2.46	116.91	121.50
24	A3	56	PSU	C6-C5-C4	2.32	119.82	118.20
24	A3	21	H2U	C5-C4-N3	2.32	119.25	116.65
22	A1	55	PSU	C4-N3-C2	-2.31	123.01	126.34
22	A1	7	4SU	C6-C5-C4	2.31	121.95	119.95
24	A3	55	5MU	C3'-C2'-C1'	2.29	105.78	101.43
22	A1	7	4SU	O4'-C4'-C3'	2.25	109.56	105.11
22	A1	37	6MZ	C2-N1-C6	2.18	118.46	116.59
22	A1	34	CM0	O8-C8-O9	-2.18	117.87	123.30
24	A3	8	4SU	C6-C5-C4	2.15	121.82	119.95
22	A1	54	5MU	C5-C6-N1	-2.15	121.13	123.34
22	A1	34	CM0	O4'-C4'-C3'	2.11	109.30	105.11
24	A3	56	PSU	O4'-C1'-C2'	2.07	108.06	105.14
22	A1	55	PSU	C5-C4-N3	-2.04	111.97	116.58

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	A1	46	7MG	N2-C2-N3	-2.03	115.78	119.73

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	A1	55	PSU	C2'-C1'-C5-C4
24	A3	56	PSU	O4'-C1'-C5-C4
24	A3	56	PSU	O4'-C1'-C5-C6
22	A1	34	CM0	O5-C7-C8-O8
22	A1	34	CM0	O5-C7-C8-O9

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	A1	55	PSU	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

2 ligands 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	$\#\|Z\| > 2$
58	FME	A1	102	57	8,9,10	0.82	0	7,9,11	2.17	3 (42%)
57	VAL	A1	101	22,58	4,6,7	0.60	0	6,7,9	1.77	1 (16%)

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
58	FME	A1	102	57	-	1/7/9/11	-
57	VAL	A1	101	22,58	-	0/5/6/8	-

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
57	A1	101	VAL	O-C-CA	-4.28	113.56	124.78
58	A1	102	FME	CA-N-CN	3.80	128.67	122.82
58	A1	102	FME	C-CA-N	3.58	116.19	109.73
58	A1	102	FME	O-C-CA	-2.28	118.80	124.78

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	A1	102	FME	N-CA-CB-CG

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

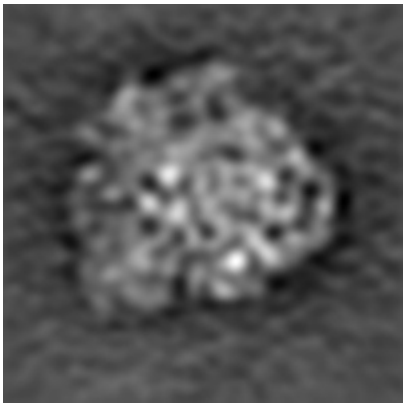
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1717. These allow visual inspection of the internal detail of the map and identification of artifacts.

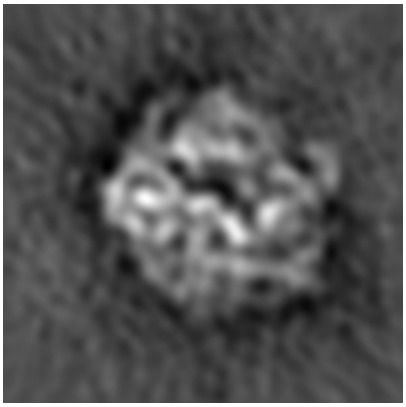
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

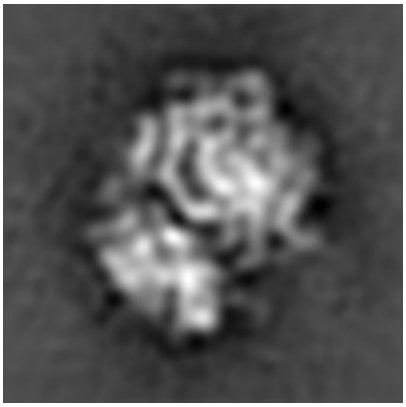
6.1.1 Primary map



X



Y



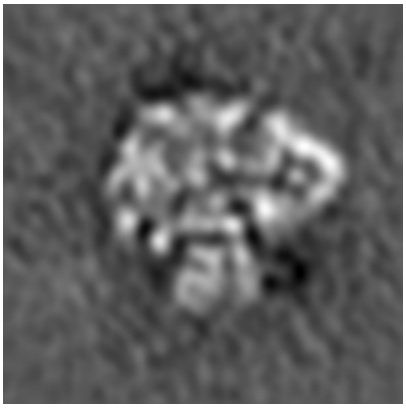
Z

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

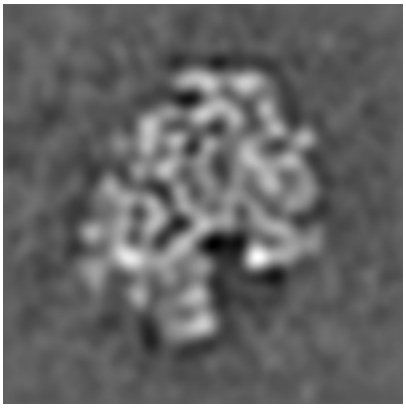
6.2 Central slices

6.2.1 Primary map

X Index: 64



Y Index: 64

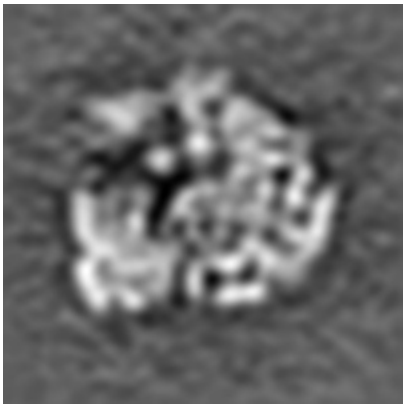


Z Index: 64

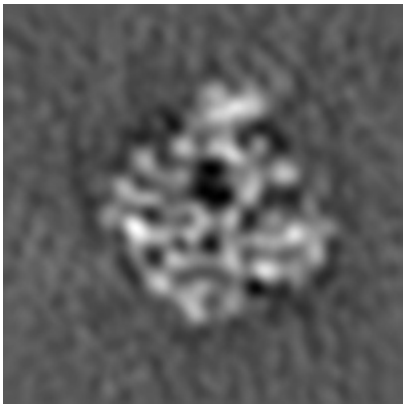
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

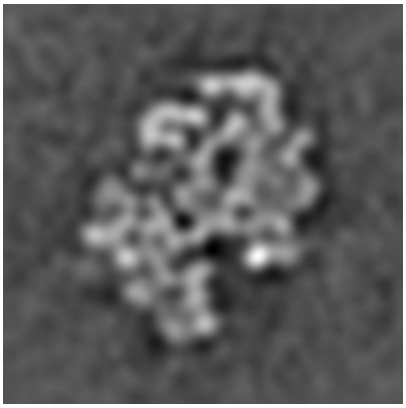
6.3.1 Primary map



X Index: 65



Y Index: 52

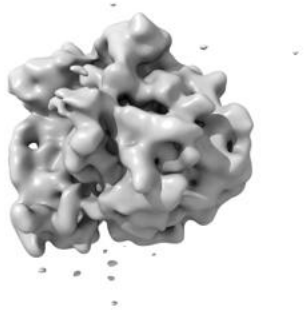


Z Index: 61

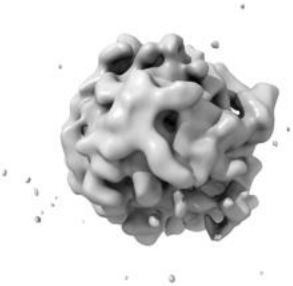
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

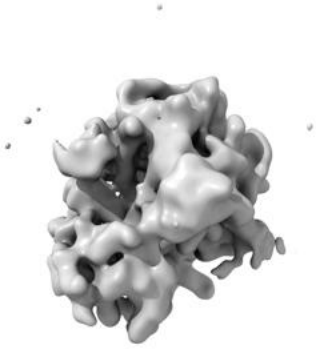
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 22.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

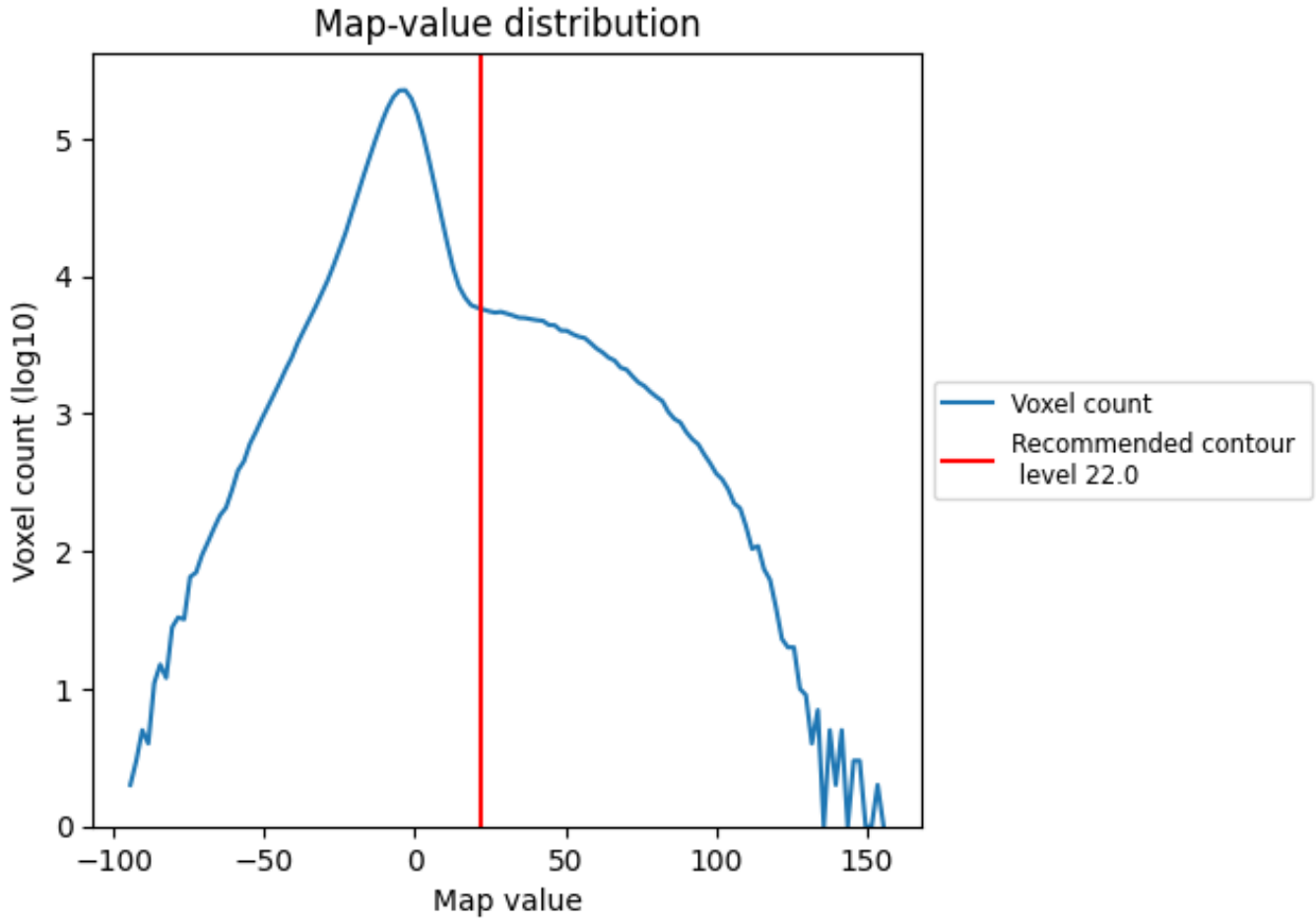
6.5 Mask visualisation (i)

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

7 Map analysis

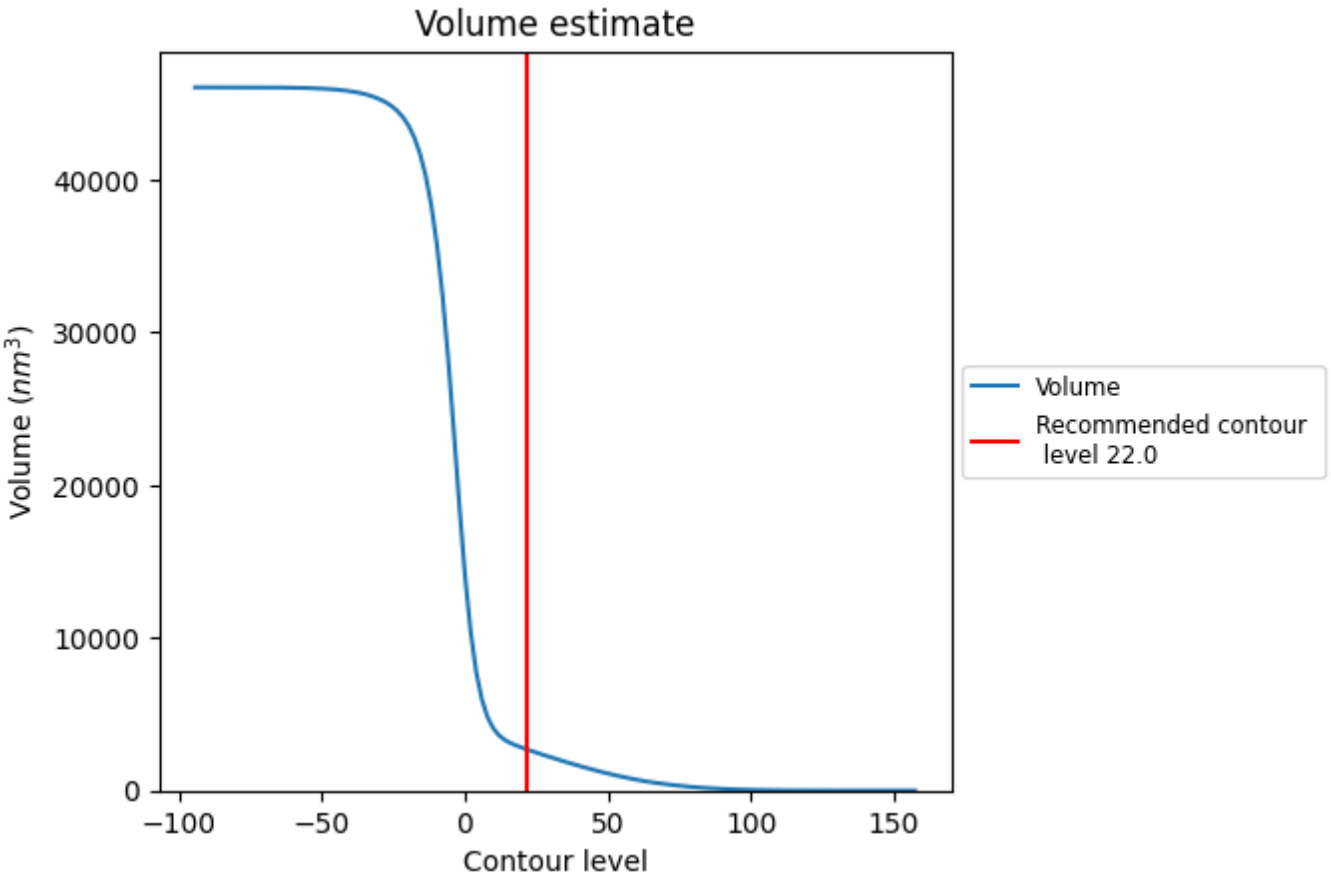
This section contains the results of statistical analysis of the map.

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.

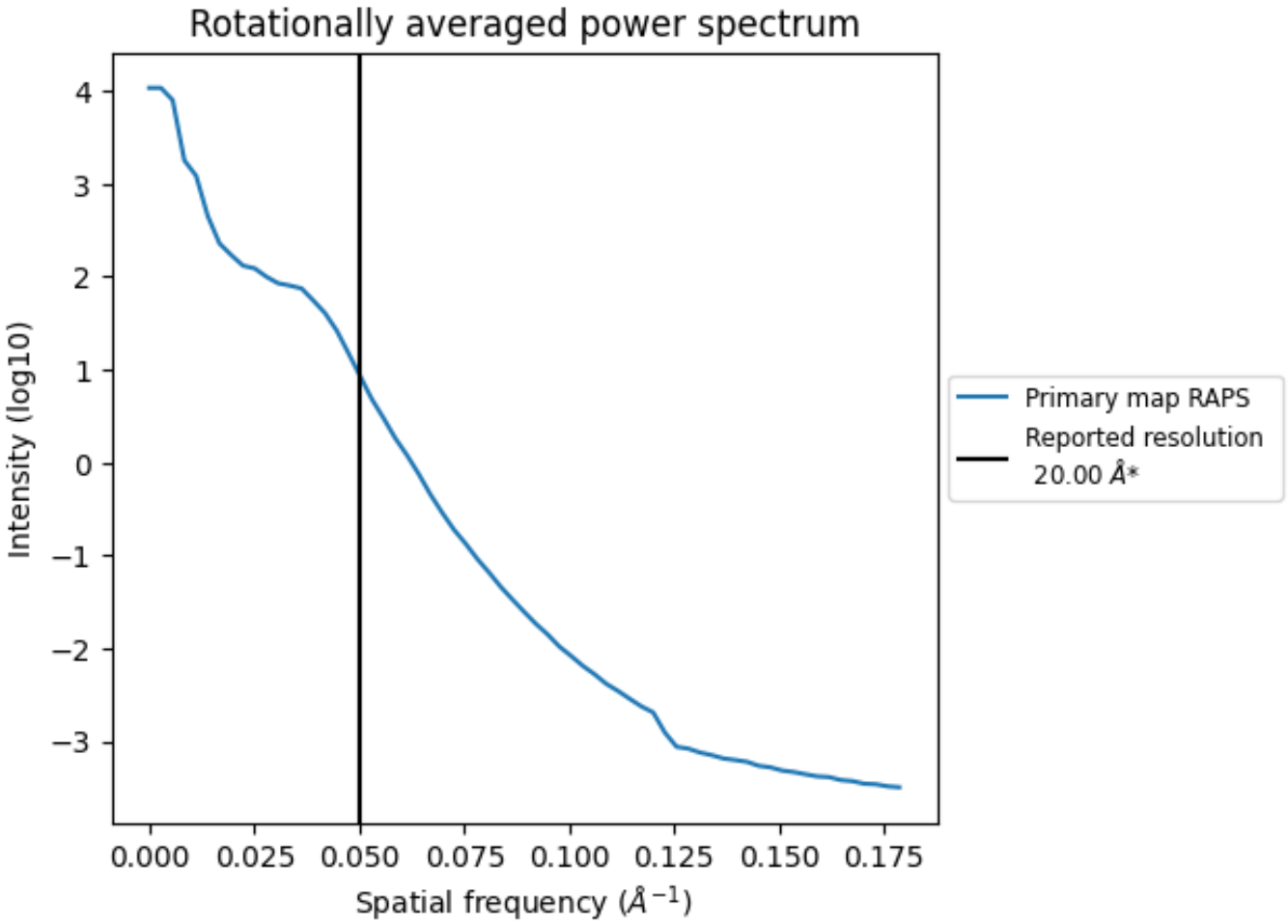
7.2 Volume estimate



The volume at the recommended contour level is 2675 nm^3; this corresponds to an approximate mass of 2416 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 0.050 $Å^{-1}$

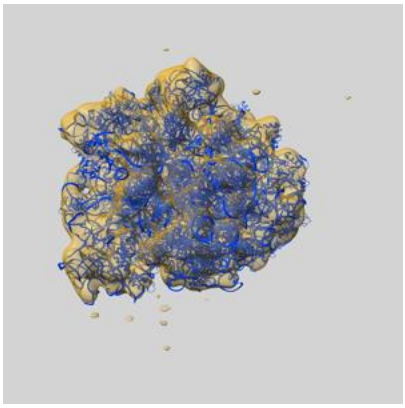
8 Fourier-Shell correlation

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

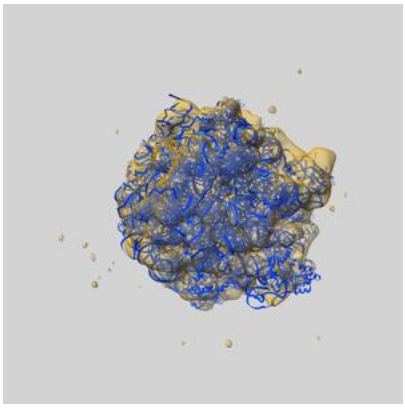
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1717 and PDB model 4V71. Per-residue inclusion information can be found in section 3 on page 17.

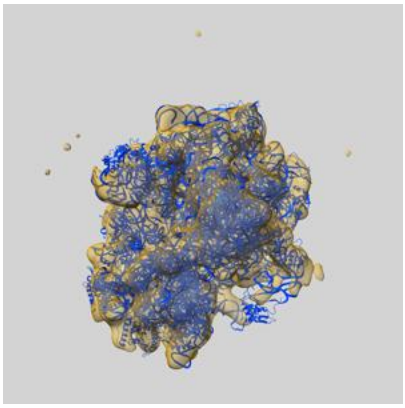
9.1 Map-model overlay



X



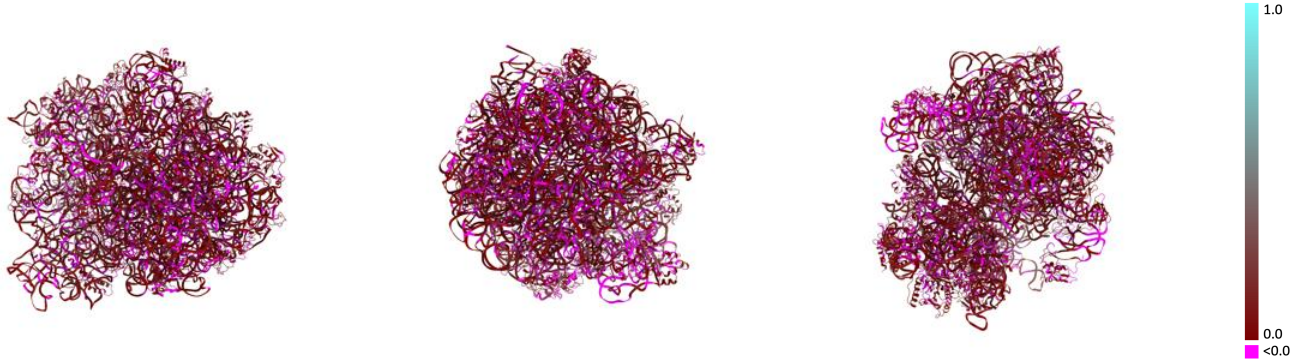
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 22.0 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.

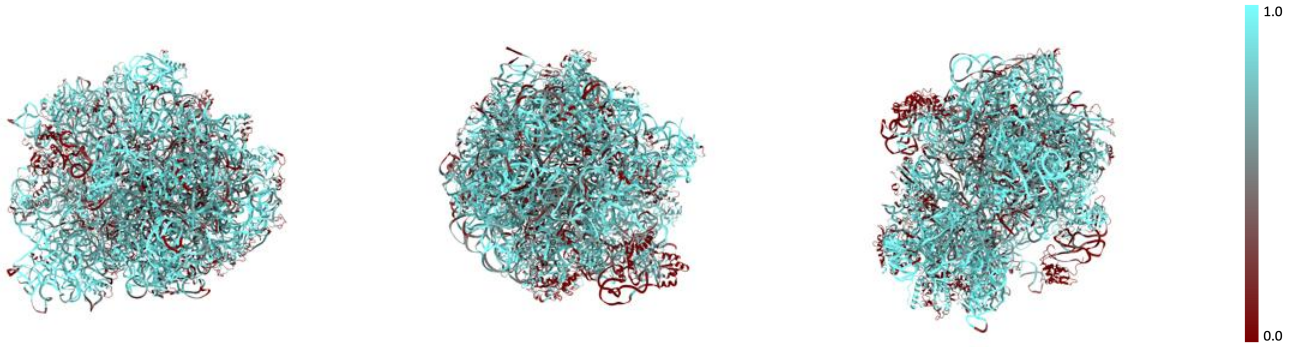
9.2 Q-score mapped to coordinate model



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.

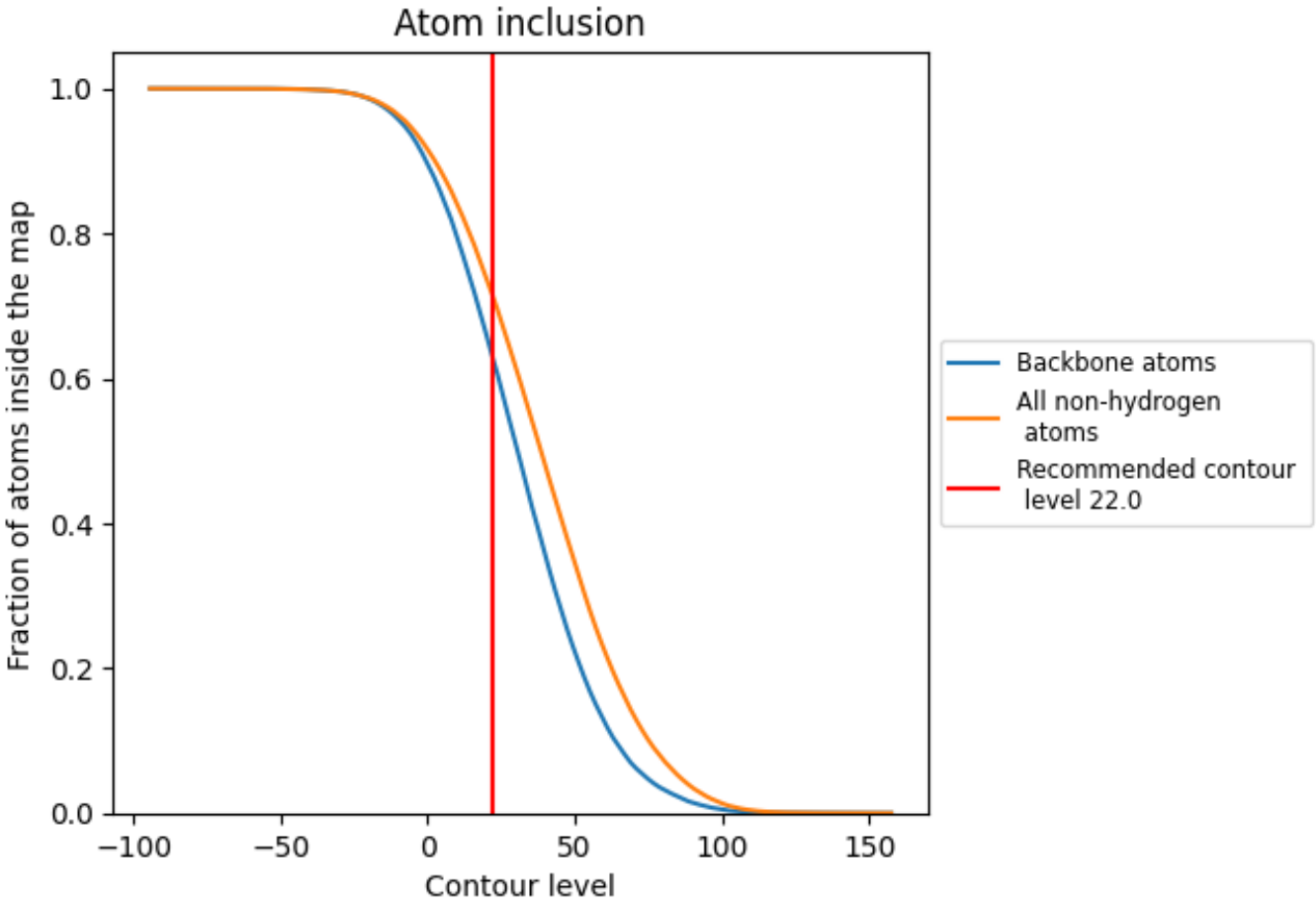
9.3 Atom inclusion mapped to coordinate model



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 (22.0).

9.4 Atom inclusion (i)



At the recommended contour level, 63% of all backbone atoms, 71% 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 (22.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7147	0.0490
A1	0.5049	0.0440
A2	0.6084	0.0130
A3	0.7278	0.0490
AA	0.8393	0.0680
AB	0.3963	0.0340
AC	0.5991	0.0420
AD	0.4553	0.0160
AE	0.7974	0.0450
AF	0.6888	0.0520
AG	0.4096	0.0370
AH	0.7615	0.0430
AI	0.6167	0.0220
AJ	0.5681	0.0070
AK	0.5848	0.0370
AL	0.4919	0.0200
AM	0.6497	0.0540
AN	0.6486	0.0150
AO	0.7116	0.0350
AP	0.6386	0.0420
AQ	0.5638	0.0150
AR	0.5239	0.0300
AS	0.7147	0.0290
AT	0.8298	0.0310
AU	0.4792	0.0220
B0	0.5654	0.0140
B1	0.5149	0.0330
B2	0.3859	-0.0040
B3	0.5071	-0.0550
B4	0.8459	0.0090
B5	0.1849	0.0130
BA	0.7678	0.0570
BB	0.8686	0.0660
BC	0.4294	0.0010
BD	0.6001	0.0030

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
BE	0.6329	0.0360
BF	0.7693	0.0510
BG	0.6291	0.0380
BH	0.1314	0.0160
BI	0.0225	0.0170
BJ	0.5782	0.0020
BK	0.4683	0.0250
BL	0.5207	-0.0070
BM	0.5701	0.0200
BN	0.7779	0.0210
BO	0.8297	0.0240
BP	0.5923	0.0360
BQ	0.5925	0.0090
BR	0.6349	0.0420
BS	0.5371	0.0120
BT	0.6819	0.0330
BU	0.4466	0.0190
BV	0.7737	0.0400
BW	0.4983	-0.0160
BX	0.3245	-0.0060
BY	0.4567	0.0120
BZ	0.5675	0.0300