WORLD WIDE wwPDB PROTEIN DATA BANK

Full wwPDB NMR Structure Validation Report (i)

Jun 6, 2023 – 01:00 PM EDT

PDB ID	:	2MKR
BMRB ID	:	19791
Title	:	Structural Characterization of a Complex Between the Acidic Transactivation Domain of EBNA2 and the Tfb1/p62 subunit of TFIIH.
Authors	:	Chabot, P.R.; Raiola, L.; Lussier-Price, M.; Morse, T.; Arseneault, G.; Archambault, J.; Omichinski, J.
Deposited on	:	2014-02-12

This is a Full wwPDB NMR Structure 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/NMRValidationReportHelp
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:

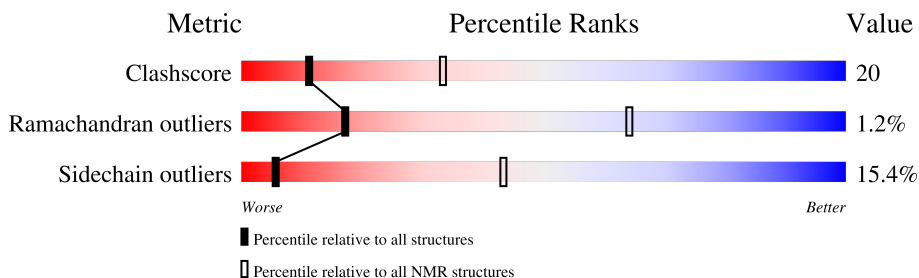|		
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
wwPDB-ShiftChecker	:	v1.2
BMRB Restraints Analysis	:	v1.2
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.33

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
SOLUTION NMR

The overall completeness of chemical shifts assignment is 82%.

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	Percentile Ranks	Value
Clashscore		20
Ramachandran outliers		1.2%
Sidechain outliers		15.4%

Worse   *Better*

▮ Percentile relative to all structures

▯ Percentile relative to all NMR structures

Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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%

Mol	Chain	Length	Quality of chain
1	A	115	50% 27% • 21%
2	B	13	23% 23% 54%

2 Ensemble composition and analysis ⓘ

This entry contains 20 models. Model 1 is the overall representative, medoid model (most similar to other models).

The following residues are included in the computation of the global validation metrics.

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:3-A:65, A:85-A:112, B:458-B:463 (97)	0.68	1

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 4 clusters and 3 single-model clusters were found.

Cluster number	Models
1	1, 3, 4, 5, 6, 8, 9, 18
2	2, 12, 16, 17
3	7, 15, 19
4	11, 20
Single-model clusters	10; 13; 14

3 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 2029 atoms, of which 1012 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called RNA polymerase II transcription factor B subunit 1.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	115	1821	559	919	161	177	5	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	PRO	MET	engineered mutation	UNP P32776

- Molecule 2 is a protein called Epstein-Barr nuclear antigen 2.

| Mol	Chain	Residues	Atoms					Trace
			Total	C	H	N	O	
2	B	13	208	74	93	14	27	0

4 Residue-property plots ⓘ

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

• Molecule 1: RNA polymerase II transcription factor B subunit 1
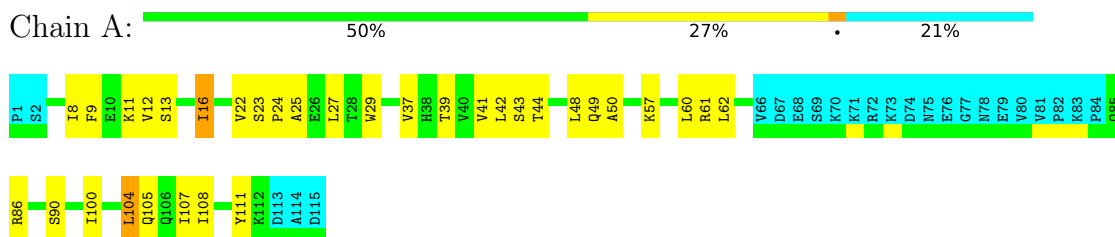
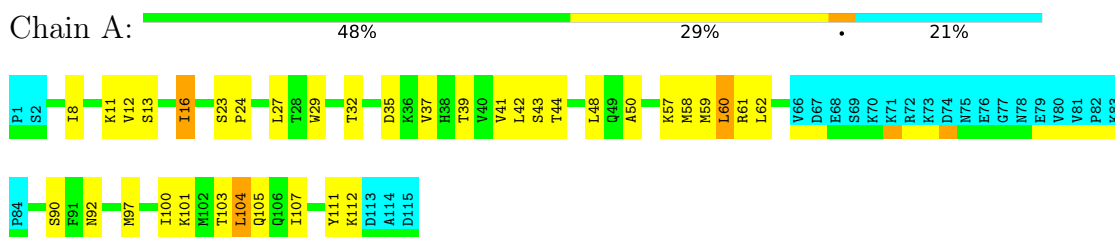

• Molecule 2: Epstein-Barr nuclear antigen 2
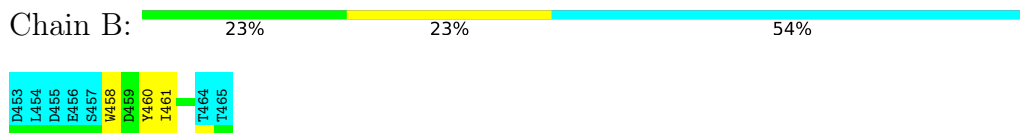
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1 (medoid)

• Molecule 1: RNA polymerase II transcription factor B subunit 1

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:
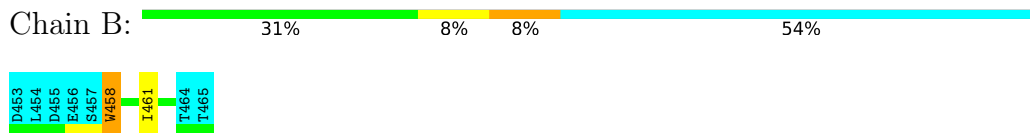
4.2.2 Score per residue for model 2

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:

4.2.3 Score per residue for model 3

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:

4.2.4 Score per residue for model 4

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:

4.2.5 Score per residue for model 5

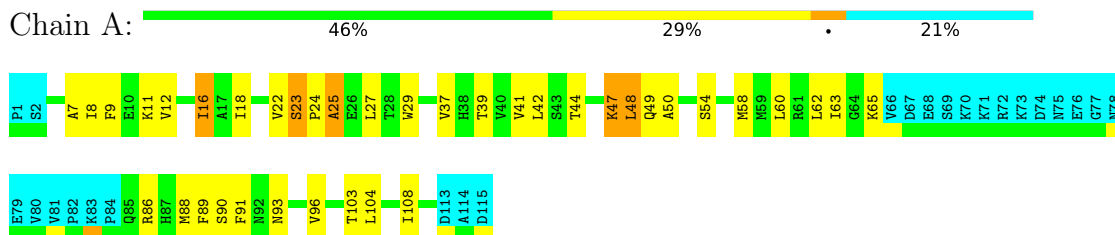• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:

4.2.6 Score per residue for model 6

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23% 23% 54%

4.2.7　Score per residue for model 7

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 45% 29% 5% 21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23% 8% 15% 54%

4.2.8　Score per residue for model 8

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 47% 30% • 21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23% 15% 8% 54%
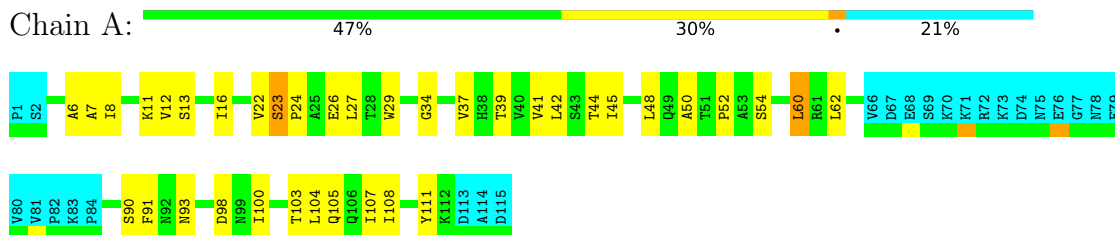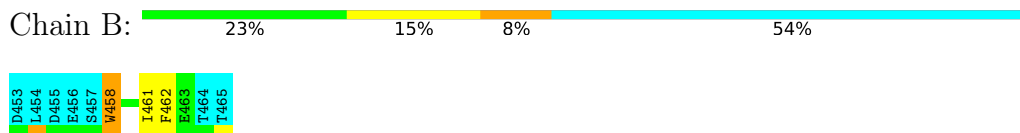
4.2.9　Score per residue for model 9

• Molecule 1: RNA polymerase II transcription factor B subunit 1
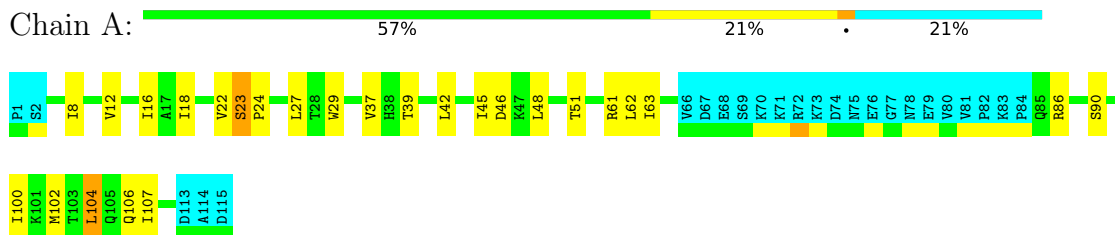
Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:
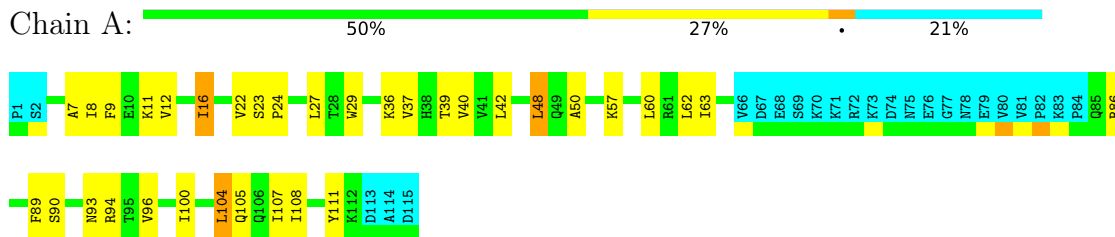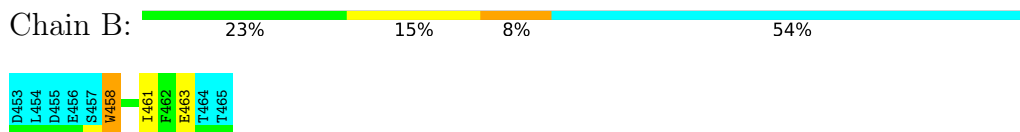
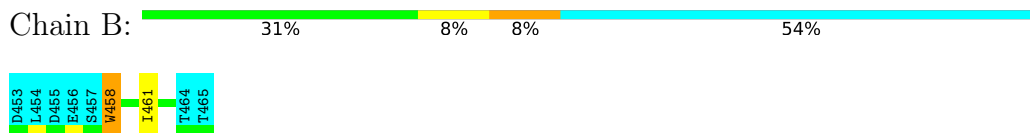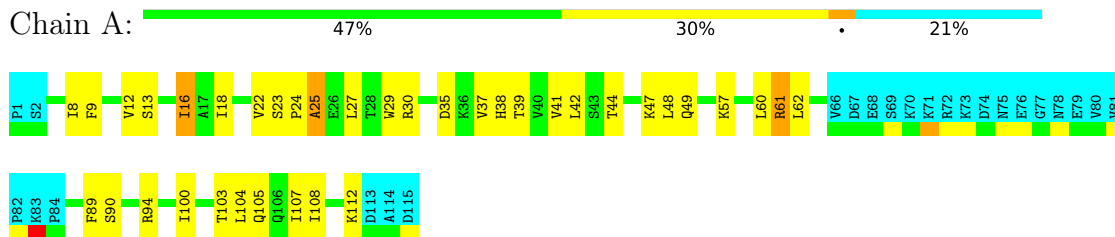### 4.2.10 Score per residue for model 10

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B:
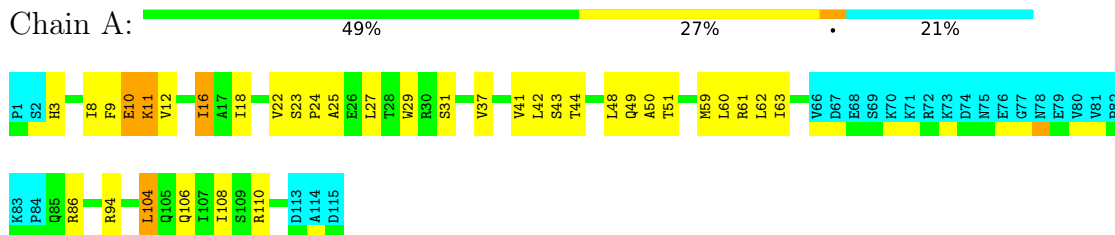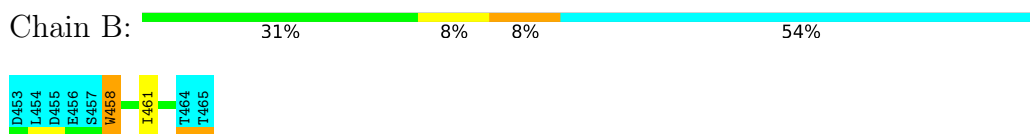
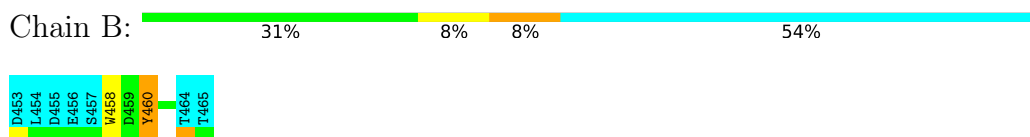### 4.2.11 Score per residue for model 11

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 8% 38% 54%

D453 L454 D455 E456 S457 W458 D459 Y460 I461 F462 E463 T464 T465
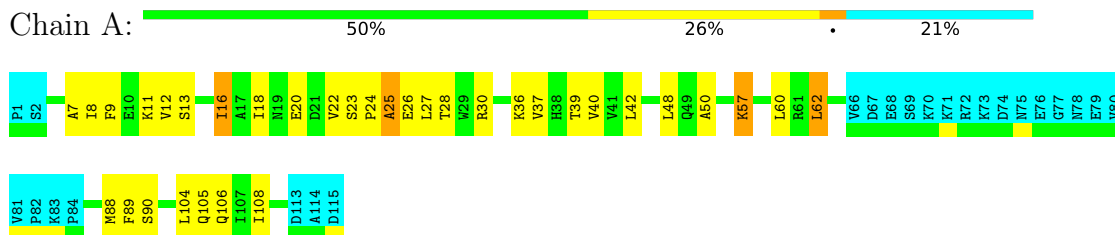
4.2.12 Score per residue for model 12

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 49% 27% • 21%

P1 S2 I8 F9 V12 S13 I16 V22 S23 P24 A25 E26 L27 T28 W29 T32 D33 K36 V37 H38 T39 V40 V41 L42 S43 T44 K47 L48 Q49 R61 L62 V66 D67 E68 S69 K70 K71 R72 K73 D74 N75 E76 G77 N78 E79 V80 V81 P82 K83 P84

F89 S90 K101 M102 T103 L104 Q105 Q106 I107 R110 Y111 K112 D113 A114 D115

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23% 23% 54%

D453 L454 D455 E456 S457 W458 D459 Y460 E463 T464 T465
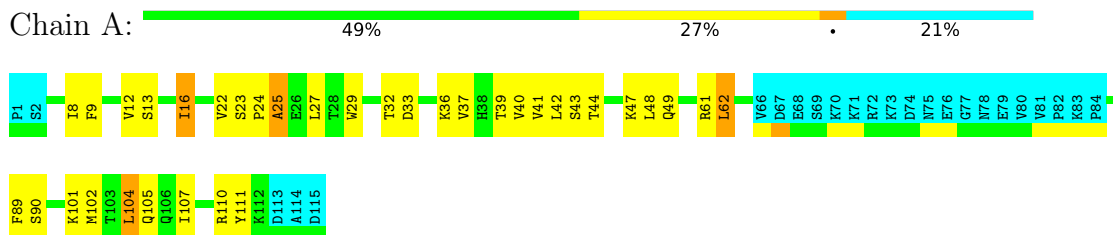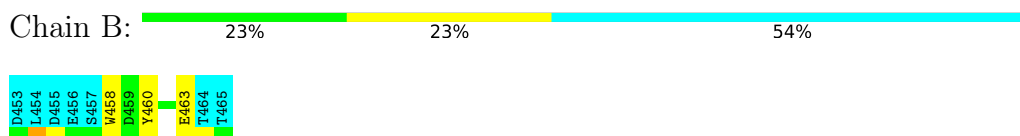
4.2.13 Score per residue for model 13

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 47% 26% 6% 21%

P1 S2 A6 A7 I8 F9 V12 I16 D21 V22 S23 P24 A25 E26 L27 T28 W29 R30 S31 K36 V37 V40 V41 L42 S43 T44 I45 L48 Q49 A50 K57 L60 R61 L62 V66 D67 E68 S69 K70 K71 R72 K73 D74 N75 E76 G77 N78 E79 V80 V81

P82 K83 P84 S90 F91 N92 N93 R94 T95 V96 M102 T103 L104 I108 Y111 K112 D113 A114 D115

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 31% 15% 54%

D453 L454 D455 E456 S457 W458 D459 Y460 T464 T465
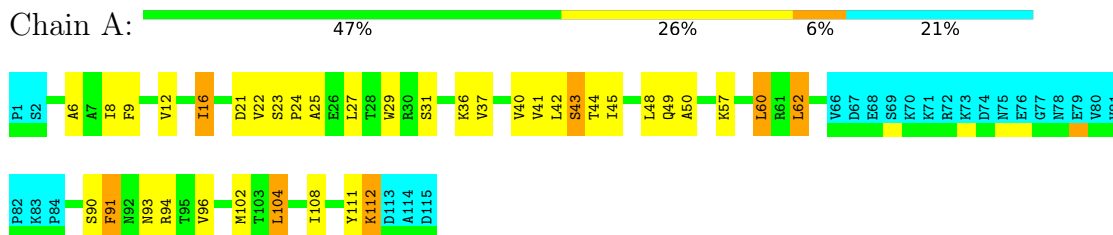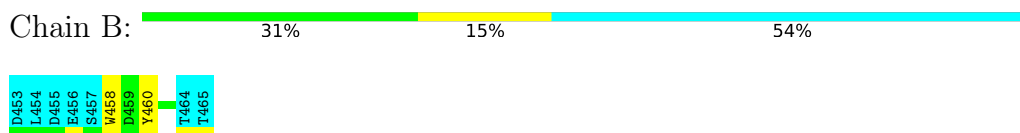
4.2.14 Score per residue for model 14

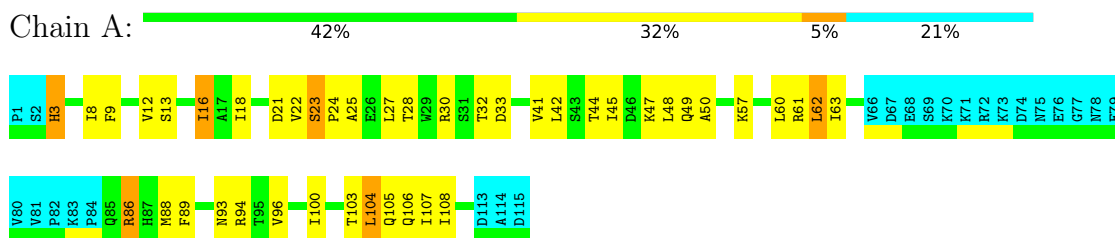• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2
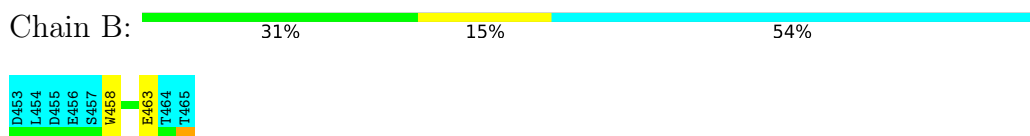
Chain B:
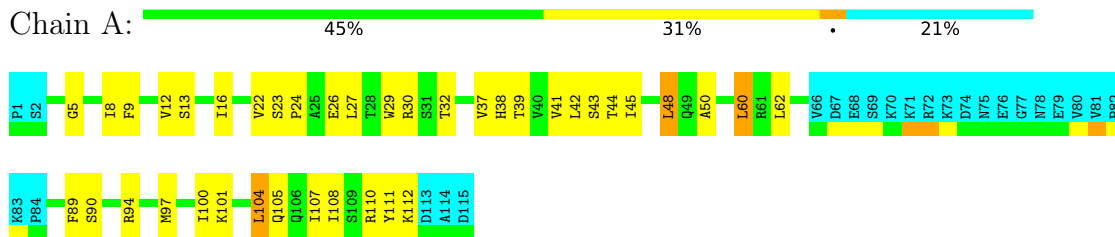
4.2.15   Score per residue for model 15

• Molecule 1: RNA polymerase II transcription factor B subunit 1
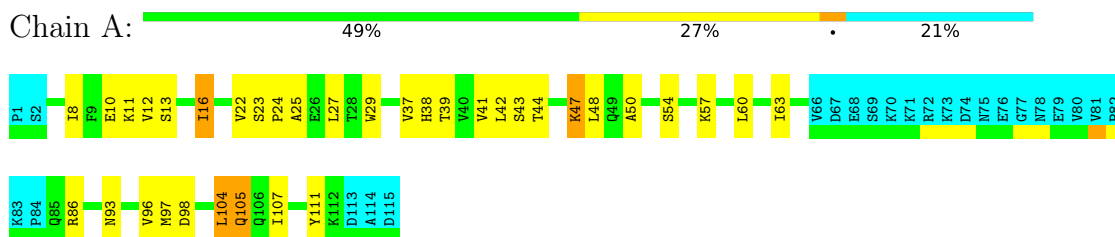
Chain A:

• Molecule 2: Epstein-Barr nuclear antigen 2
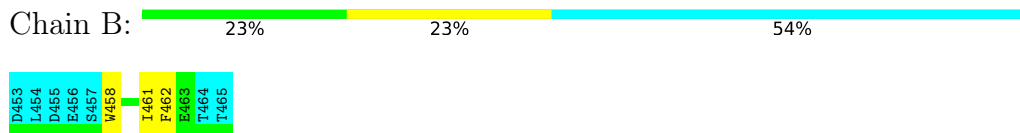
Chain B:
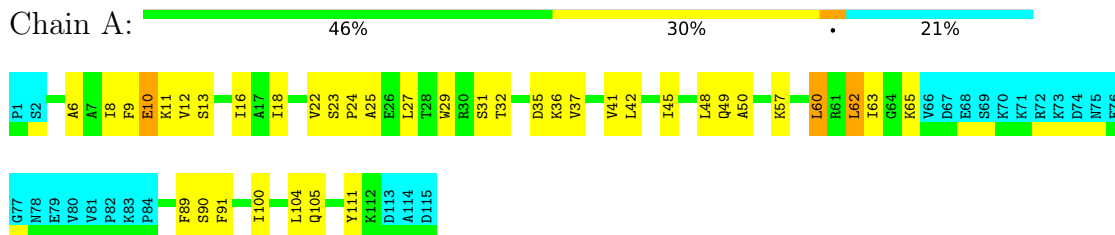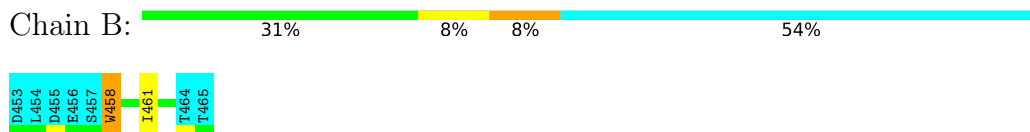
4.2.16   Score per residue for model 16

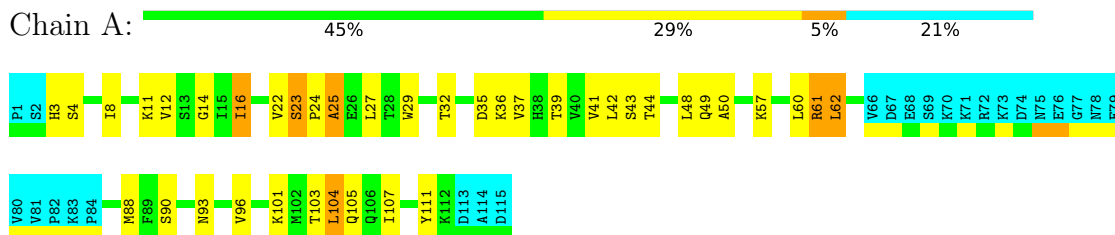• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A:

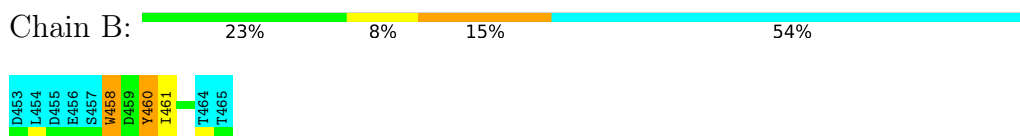• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 31%   15%   54%
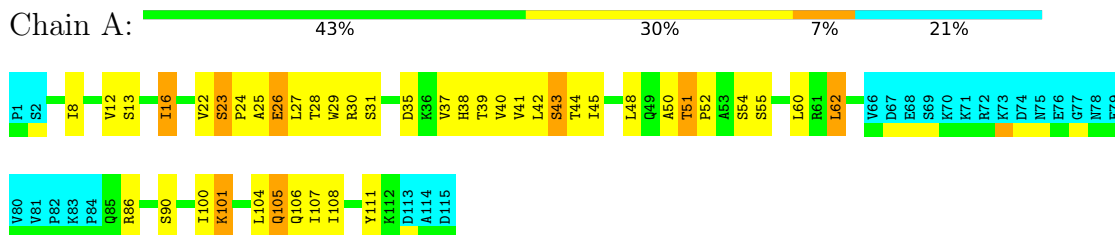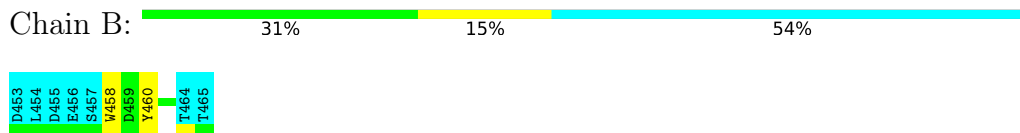
4.2.17 Score per residue for model 17

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 43%   33%   •   21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23%   15%   8%   54%
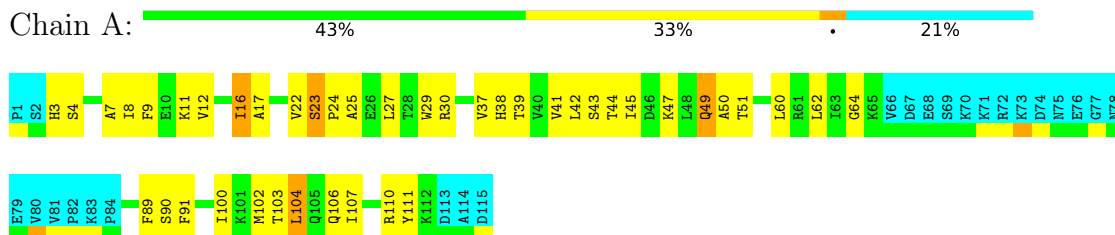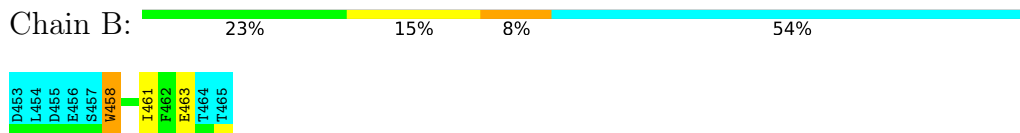
4.2.18 Score per residue for model 18

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 50%   23%   6%   21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 23%   23%   54%
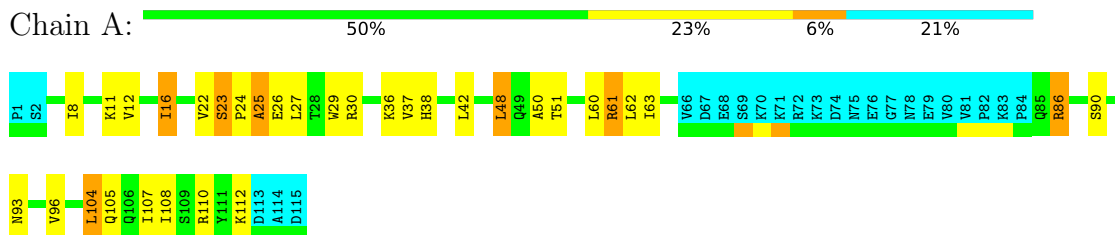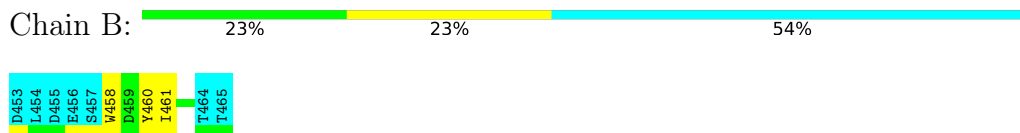
4.2.19 Score per residue for model 19

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 41% 33% 5% 21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 31% 15% 54%
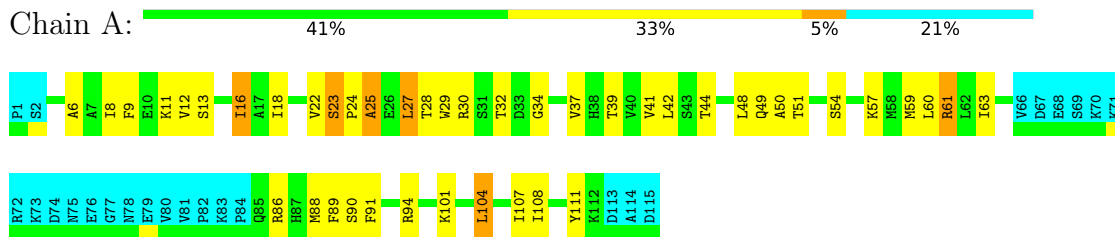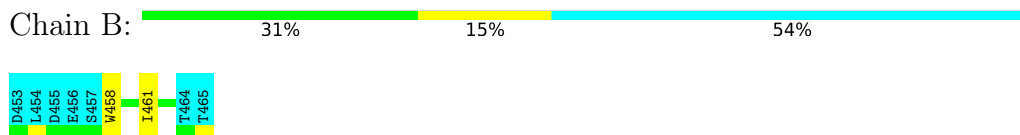
4.2.20 Score per residue for model 20

• Molecule 1: RNA polymerase II transcription factor B subunit 1

Chain A: 39% 37% • 21%

• Molecule 2: Epstein-Barr nuclear antigen 2

Chain B: 15% 23% 8% 54%
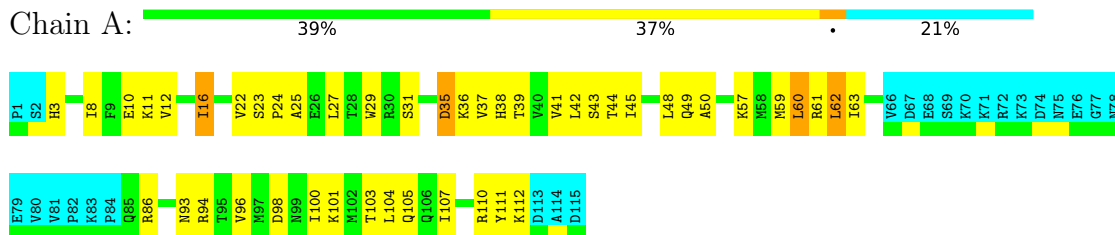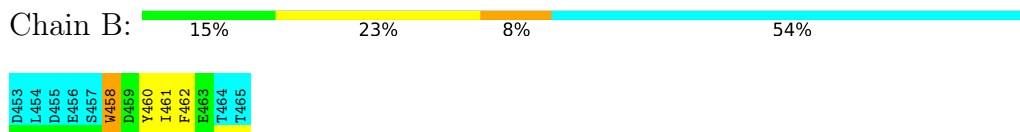
5 Refinement protocol and experimental data overview ⓘ

The models were refined using the following method: *DGSA-distance geometry simulated annealing.*

Of the 100 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy.*

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
CNS	structure solution	
TALOS	geometry optimization	TALOS-N
CNS	refinement	

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

Chemical shift file(s)	working_cs.cif
Number of chemical shift lists	2
Total number of shifts	1432
Number of shifts mapped to atoms	1432
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	82%

6 Model quality ⓘ

6.1 Standard geometry ⓘ

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	716	740	737	31±4
2	B	62	49	49	2±1
All	All	15560	15780	15720	635

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 20.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:16:ILE:HD11	1:A:27:LEU:HD21	1.12	1.20	3	15
1:A:42:LEU:HD22	1:A:104:LEU:HD21	1.08	1.22	12	13
1:A:103:THR:HG22	1:A:107:ILE:HD11	0.88	1.45	7	4
1:A:50:ALA:HB2	1:A:60:LEU:HD23	0.86	1.46	19	4
1:A:48:LEU:HD11	1:A:108:ILE:HD12	0.85	1.49	5	4
1:A:16:ILE:CD1	1:A:27:LEU:HD21	0.83	2.03	12	15
1:A:13:SER:O	1:A:32:THR:HG22	0.78	1.79	15	4
1:A:41:VAL:O	1:A:44:THR:HG22	0.77	1.79	12	11
1:A:103:THR:HG22	1:A:107:ILE:CD1	0.77	2.09	7	1
1:A:7:ALA:CB	1:A:16:ILE:HD12	0.76	2.10	11	3
1:A:42:LEU:HD22	1:A:104:LEU:CD2	0.76	2.10	17	13
1:A:100:ILE:HG22	1:A:104:LEU:HD12	0.75	1.58	9	6
1:A:45:ILE:HD12	1:A:62:LEU:HD23	0.75	1.56	15	3

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:27:LEU:HD13	1:A:42:LEU:HD21	0.75	1.59	19	1
1:A:50:ALA:HB2	1:A:60:LEU:HD12	0.74	1.57	9	3
1:A:42:LEU:HD22	1:A:104:LEU:HD11	0.74	1.58	13	1
1:A:22:VAL:HG22	1:A:24:PRO:HD2	0.72	1.61	14	16
1:A:42:LEU:CD2	1:A:104:LEU:HD11	0.71	2.15	13	1
1:A:18:ILE:HD12	1:A:103:THR:CG2	0.71	2.15	2	1
1:A:104:LEU:CD2	1:A:108:ILE:HD11	0.71	2.16	10	1
1:A:29:TRP:O	1:A:37:VAL:HG23	0.70	1.86	16	18
1:A:42:LEU:CD2	1:A:104:LEU:HD21	0.70	2.15	9	8
1:A:104:LEU:HA	1:A:107:ILE:HD12	0.70	1.63	1	8
1:A:50:ALA:HB2	1:A:60:LEU:CD2	0.70	2.16	6	3
1:A:48:LEU:HD12	1:A:108:ILE:HD12	0.70	1.64	14	3
1:A:8:ILE:HG23	1:A:12:VAL:O	0.68	1.88	3	20
1:A:27:LEU:CD1	1:A:42:LEU:HD21	0.68	2.18	19	2
1:A:16:ILE:HG12	1:A:27:LEU:HD21	0.68	1.65	9	4
1:A:16:ILE:HD11	1:A:27:LEU:CD2	0.67	2.11	8	5
1:A:48:LEU:HD11	1:A:108:ILE:CD1	0.67	2.19	5	4
1:A:62:LEU:HD22	1:A:62:LEU:O	0.67	1.90	15	1
1:A:48:LEU:HD21	1:A:104:LEU:HB3	0.66	1.67	16	7
1:A:45:ILE:HD12	1:A:62:LEU:HB3	0.66	1.67	14	2
1:A:7:ALA:HB2	1:A:91:PHE:CZ	0.66	2.26	17	3
1:A:10:GLU:O	1:A:12:VAL:HG23	0.66	1.90	15	2
1:A:62:LEU:N	1:A:62:LEU:HD13	0.66	2.06	15	1
1:A:16:ILE:HG12	1:A:27:LEU:HD23	0.66	1.67	19	1
1:A:48:LEU:HD13	1:A:105:GLN:HG3	0.65	1.69	9	2
1:A:48:LEU:HD13	1:A:101:LYS:HG3	0.64	1.68	12	2
1:A:51:THR:HG22	2:B:461:ILE:O	0.64	1.91	17	2
1:A:42:LEU:CD1	1:A:107:ILE:HD13	0.63	2.23	19	5
2:B:458:TRP:CE3	2:B:461:ILE:HD12	0.63	2.28	10	2
1:A:16:ILE:HG23	1:A:27:LEU:HD11	0.63	1.68	2	1
1:A:48:LEU:HD13	1:A:101:LYS:CG	0.63	2.24	7	1
1:A:62:LEU:HD21	1:A:104:LEU:HD13	0.62	1.71	2	3
1:A:13:SER:O	1:A:32:THR:HG23	0.61	1.96	5	1
1:A:104:LEU:HD22	1:A:108:ILE:HD11	0.61	1.71	10	1
1:A:107:ILE:HG22	1:A:111:TYR:CE2	0.61	2.30	20	5
1:A:60:LEU:HD12	1:A:91:PHE:CE2	0.61	2.31	19	1
1:A:100:ILE:HG22	1:A:104:LEU:HD13	0.61	1.73	5	4
1:A:60:LEU:HD23	1:A:61:ARG:N	0.60	2.09	18	3
1:A:16:ILE:CG1	1:A:27:LEU:HD21	0.60	2.26	13	6
1:A:27:LEU:HD23	1:A:27:LEU:O	0.60	1.96	4	12
1:A:103:THR:CG2	1:A:107:ILE:HD11	0.60	2.22	7	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:8:ILE:HG23	1:A:12:VAL:C	0.60	2.16	1	17
1:A:42:LEU:HD13	1:A:104:LEU:HG	0.60	1.72	13	2
2:B:458:TRP:O	2:B:461:ILE:HG22	0.59	1.96	7	7
1:A:48:LEU:HD21	1:A:104:LEU:CB	0.59	2.27	3	3
1:A:48:LEU:HD13	1:A:105:GLN:HG2	0.59	1.71	18	5
1:A:48:LEU:HD12	1:A:48:LEU:O	0.59	1.96	7	3
1:A:50:ALA:HB2	1:A:60:LEU:HG	0.59	1.74	18	7
1:A:41:VAL:CG1	1:A:44:THR:HG23	0.59	2.28	1	2
1:A:3:HIS:CG	1:A:103:THR:HG21	0.59	2.31	17	2
1:A:108:ILE:HG22	1:A:112:LYS:HE2	0.59	1.74	14	1
1:A:27:LEU:HB2	1:A:42:LEU:HD21	0.58	1.75	18	4
1:A:48:LEU:HD23	1:A:108:ILE:CD1	0.58	2.29	4	1
1:A:62:LEU:N	1:A:62:LEU:HD22	0.58	2.14	11	6
1:A:8:ILE:HD12	1:A:8:ILE:N	0.57	2.14	6	15
1:A:25:ALA:HB2	1:A:111:TYR:OH	0.57	1.99	20	1
1:A:50:ALA:CB	1:A:60:LEU:HD23	0.57	2.26	19	1
1:A:16:ILE:CG1	1:A:27:LEU:HD11	0.57	2.30	5	1
1:A:48:LEU:HD22	1:A:105:GLN:HG3	0.57	1.76	15	2
1:A:48:LEU:HD21	1:A:105:GLN:HB3	0.57	1.77	12	1
1:A:48:LEU:HD11	1:A:104:LEU:HB3	0.57	1.76	14	4
1:A:7:ALA:HB3	1:A:16:ILE:HD12	0.57	1.77	11	3
1:A:63:ILE:HD12	1:A:63:ILE:N	0.56	2.15	15	1
1:A:100:ILE:HG22	1:A:104:LEU:CD1	0.56	2.29	9	4
1:A:108:ILE:HG22	1:A:112:LYS:HG3	0.56	1.76	13	1
1:A:60:LEU:HD21	1:A:101:LYS:HG3	0.56	1.78	19	1
1:A:44:THR:HG23	1:A:45:ILE:HD12	0.56	1.77	16	2
1:A:45:ILE:HD12	1:A:45:ILE:N	0.55	2.16	13	1
1:A:60:LEU:HD21	1:A:101:LYS:HG2	0.55	1.78	20	1
1:A:16:ILE:CD1	1:A:27:LEU:HD11	0.55	2.32	5	1
1:A:22:VAL:HG11	1:A:26:GLU:OE2	0.55	2.01	18	1
1:A:22:VAL:HG23	1:A:25:ALA:H	0.55	1.62	7	2
1:A:63:ILE:HD12	1:A:86:ARG:HG2	0.55	1.76	10	3
1:A:93:ASN:OD1	1:A:96:VAL:HG23	0.55	2.02	5	1
1:A:41:VAL:HG12	1:A:43:SER:H	0.55	1.62	16	2
1:A:60:LEU:HD21	1:A:101:LYS:CG	0.54	2.32	19	2
1:A:60:LEU:HD11	1:A:101:LYS:HG3	0.54	1.79	20	1
1:A:48:LEU:HD11	1:A:105:GLN:HG2	0.54	1.79	7	1
1:A:48:LEU:HD23	1:A:62:LEU:HD23	0.54	1.80	1	2
1:A:50:ALA:CB	1:A:60:LEU:HD12	0.54	2.32	1	2
1:A:13:SER:C	1:A:32:THR:HG23	0.53	2.23	5	1
1:A:18:ILE:HG23	1:A:42:LEU:CD1	0.53	2.33	11	3

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:42:LEU:HD13	1:A:107:ILE:HD13	0.53	1.80	20	3
1:A:16:ILE:HD11	1:A:27:LEU:HD11	0.53	1.79	5	1
1:A:48:LEU:HD23	1:A:62:LEU:HG	0.53	1.80	20	1
1:A:63:ILE:HG23	1:A:86:ARG:HG2	0.52	1.80	2	1
1:A:48:LEU:HD23	1:A:62:LEU:CD1	0.52	2.35	9	1
1:A:41:VAL:HB	1:A:44:THR:HG23	0.52	1.81	10	2
1:A:23:SER:CB	1:A:24:PRO:CD	0.51	2.88	3	18
1:A:50:ALA:HB2	1:A:60:LEU:CD1	0.51	2.35	16	7
1:A:7:ALA:HB1	1:A:16:ILE:HD12	0.51	1.82	11	2
1:A:27:LEU:C	1:A:27:LEU:HD13	0.51	2.26	5	1
1:A:40:VAL:HG13	1:A:40:VAL:O	0.51	2.04	11	4
1:A:48:LEU:HD21	1:A:105:GLN:HG2	0.51	1.82	4	2
1:A:25:ALA:HB3	1:A:107:ILE:HG21	0.51	1.82	18	1
1:A:42:LEU:HD22	1:A:104:LEU:CD1	0.50	2.34	13	1
1:A:93:ASN:HB3	1:A:96:VAL:HG23	0.50	1.82	7	7
1:A:60:LEU:HD11	1:A:101:LYS:HB2	0.50	1.82	1	1
1:A:48:LEU:HD22	1:A:104:LEU:HB3	0.50	1.82	4	1
1:A:18:ILE:HG12	1:A:27:LEU:HD23	0.50	1.84	5	1
1:A:60:LEU:HD12	1:A:97:MET:HB2	0.50	1.82	6	1
2:B:461:ILE:HD11	2:B:462:PHE:CE1	0.50	2.42	14	1
1:A:9:PHE:CD1	1:A:89:PHE:CD2	0.49	3.00	17	3
1:A:9:PHE:CD1	1:A:89:PHE:CE2	0.49	3.00	17	6
1:A:18:ILE:HG23	1:A:42:LEU:HD12	0.49	1.84	4	1
1:A:9:PHE:CD1	1:A:89:PHE:CD1	0.49	3.00	5	2
1:A:8:ILE:HA	1:A:12:VAL:O	0.49	2.07	10	1
1:A:42:LEU:HA	1:A:45:ILE:HD13	0.49	1.84	16	2
1:A:51:THR:HG22	2:B:461:ILE:HG12	0.49	1.83	3	3
1:A:16:ILE:CG1	1:A:27:LEU:HD23	0.49	2.38	19	1
1:A:10:GLU:O	1:A:11:LYS:CB	0.49	2.60	10	1
1:A:48:LEU:HD13	1:A:105:GLN:CG	0.49	2.38	9	1
1:A:5:GLY:HA3	1:A:100:ILE:HD11	0.49	1.84	14	1
1:A:42:LEU:HD22	1:A:104:LEU:CG	0.48	2.38	10	1
1:A:27:LEU:HD23	1:A:27:LEU:C	0.48	2.28	8	9
1:A:18:ILE:HG23	1:A:42:LEU:HD11	0.48	1.85	2	5
1:A:48:LEU:HD13	1:A:105:GLN:HB3	0.48	1.86	6	1
1:A:27:LEU:C	1:A:27:LEU:HD23	0.48	2.29	18	4
1:A:22:VAL:HG13	1:A:25:ALA:H	0.48	1.68	13	8
1:A:16:ILE:HG12	1:A:27:LEU:HD11	0.48	1.83	5	1
1:A:23:SER:CB	1:A:24:PRO:HD3	0.48	2.39	5	4
1:A:62:LEU:HD13	1:A:62:LEU:H	0.48	1.68	15	1
1:A:63:ILE:HD12	1:A:86:ARG:HD3	0.47	1.86	6	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:9:PHE:CG	1:A:89:PHE:CE2	0.47	3.02	19	2
1:A:9:PHE:CD1	1:A:89:PHE:CE1	0.47	3.03	5	2
1:A:30:ARG:HG2	1:A:37:VAL:HG12	0.47	1.86	11	1
1:A:51:THR:HG22	1:A:52:PRO:HD2	0.47	1.86	16	1
1:A:18:ILE:HD12	1:A:103:THR:HG21	0.47	1.83	2	1
1:A:51:THR:HG23	1:A:59:MET:O	0.47	2.10	10	1
1:A:62:LEU:N	1:A:62:LEU:CD1	0.47	2.78	15	1
1:A:62:LEU:O	1:A:63:ILE:HD13	0.47	2.10	3	1
1:A:48:LEU:HD13	1:A:108:ILE:HD12	0.47	1.87	19	1
1:A:60:LEU:HD12	1:A:91:PHE:CD1	0.47	2.44	2	1
1:A:16:ILE:CG2	1:A:27:LEU:HD11	0.46	2.39	2	1
1:A:48:LEU:HD12	1:A:105:GLN:HG2	0.46	1.86	20	1
1:A:63:ILE:HD12	1:A:86:ARG:CG	0.46	2.41	2	4
1:A:60:LEU:HD13	1:A:97:MET:HG2	0.46	1.87	1	1
2:B:458:TRP:CE3	2:B:461:ILE:CD1	0.46	2.99	10	2
1:A:22:VAL:HG13	1:A:25:ALA:HA	0.45	1.87	4	2
1:A:7:ALA:HB3	1:A:16:ILE:HB	0.45	1.88	2	2
1:A:110:ARG:NE	1:A:111:TYR:CE1	0.45	2.85	14	1
1:A:63:ILE:HD12	1:A:86:ARG:HG3	0.45	1.87	3	1
1:A:107:ILE:CG2	1:A:111:TYR:CE2	0.45	2.99	6	2
1:A:59:MET:CE	2:B:458:TRP:CZ2	0.45	3.00	20	1
1:A:22:VAL:HG13	1:A:25:ALA:N	0.45	2.26	17	7
1:A:48:LEU:HD22	1:A:104:LEU:CB	0.44	2.42	4	1
1:A:89:PHE:CD1	1:A:89:PHE:N	0.44	2.85	17	1
1:A:104:LEU:HD23	1:A:108:ILE:HD11	0.44	1.87	10	1
1:A:18:ILE:CG2	1:A:42:LEU:HD11	0.44	2.43	2	1
1:A:60:LEU:CD2	1:A:62:LEU:HD12	0.44	2.42	5	1
2:B:461:ILE:HG23	2:B:462:PHE:N	0.44	2.28	2	2
1:A:38:HIS:CD2	1:A:39:THR:N	0.44	2.86	4	3
1:A:25:ALA:O	1:A:41:VAL:HG23	0.43	2.12	13	1
1:A:60:LEU:HD21	1:A:101:LYS:HB2	0.43	1.90	14	1
1:A:110:ARG:CD	1:A:111:TYR:CE1	0.43	3.01	17	1
1:A:8:ILE:HD12	1:A:8:ILE:H	0.43	1.73	20	1
1:A:41:VAL:HG13	1:A:44:THR:HG23	0.43	1.90	1	2
1:A:62:LEU:CD2	1:A:104:LEU:HD13	0.43	2.40	2	1
2:B:458:TRP:HA	2:B:461:ILE:HG22	0.43	1.89	2	2
1:A:22:VAL:HG13	1:A:25:ALA:CA	0.43	2.43	10	2
1:A:42:LEU:HD13	1:A:107:ILE:CD1	0.43	2.43	5	1
1:A:48:LEU:CD2	1:A:62:LEU:HD23	0.43	2.44	18	1
1:A:41:VAL:HG22	1:A:43:SER:H	0.43	1.74	13	1
1:A:61:ARG:O	1:A:62:LEU:HD13	0.43	2.14	7	1

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:57:LYS:HB3	2:B:461:ILE:HD11	0.43	1.89	11	1
1:A:60:LEU:HD13	1:A:101:LYS:HB2	0.43	1.91	16	1
1:A:22:VAL:HG23	1:A:25:ALA:N	0.43	2.29	7	2
1:A:23:SER:O	1:A:111:TYR:CE2	0.42	2.72	8	4
1:A:50:ALA:HB2	1:A:60:LEU:CG	0.42	2.43	8	2
1:A:60:LEU:HD13	1:A:97:MET:CG	0.42	2.43	14	1
1:A:62:LEU:O	1:A:62:LEU:CD2	0.42	2.64	15	1
1:A:27:LEU:HD12	1:A:42:LEU:HD11	0.42	1.91	19	1
1:A:48:LEU:CD1	1:A:108:ILE:HD12	0.42	2.42	14	1
1:A:32:THR:HG23	1:A:33:ASP:OD1	0.42	2.15	12	1
1:A:63:ILE:N	1:A:63:ILE:CD1	0.42	2.82	15	1
1:A:45:ILE:HG22	1:A:46:ASP:N	0.42	2.30	3	1
1:A:42:LEU:HD12	1:A:107:ILE:HD13	0.42	1.91	14	1
1:A:23:SER:O	1:A:111:TYR:CZ	0.41	2.73	19	8
1:A:110:ARG:CZ	1:A:111:TYR:CE1	0.41	3.03	14	1
1:A:25:ALA:O	1:A:41:VAL:HG13	0.41	2.15	15	1
1:A:59:MET:CE	2:B:458:TRP:CH2	0.41	3.03	1	1
1:A:3:HIS:CD2	1:A:103:THR:HG21	0.41	2.51	5	1
1:A:60:LEU:HD12	1:A:91:PHE:CE1	0.41	2.51	2	1
1:A:45:ILE:HD12	1:A:62:LEU:CB	0.41	2.42	14	1
1:A:22:VAL:HG13	1:A:23:SER:H	0.41	1.74	18	1
1:A:107:ILE:O	1:A:111:TYR:CD2	0.41	2.73	17	4
1:A:48:LEU:HD23	1:A:108:ILE:HD12	0.41	1.91	4	1
1:A:59:MET:HE1	2:B:458:TRP:CZ2	0.41	2.50	20	1
1:A:100:ILE:HG22	1:A:104:LEU:HD11	0.41	1.93	4	1
1:A:29:TRP:CE3	1:A:38:HIS:CE1	0.41	3.09	18	1
1:A:9:PHE:O	1:A:11:LYS:N	0.41	2.54	10	1
1:A:18:ILE:CD1	1:A:104:LEU:HD12	0.41	2.45	11	1
2:B:461:ILE:HG13	2:B:462:PHE:CD1	0.41	2.50	14	1
1:A:88:MET:CB	2:B:462:PHE:CE2	0.41	3.03	2	1
1:A:104:LEU:O	1:A:108:ILE:HD12	0.41	2.15	2	1
1:A:57:LYS:CB	2:B:461:ILE:HD11	0.41	2.45	11	1
1:A:26:GLU:OE1	1:A:39:THR:HG21	0.41	2.16	14	1
1:A:9:PHE:O	1:A:29:TRP:CH2	0.41	2.74	9	2
1:A:6:ALA:O	1:A:91:PHE:CE1	0.41	2.74	13	2
1:A:91:PHE:CE1	1:A:96:VAL:CG1	0.41	3.04	13	1
1:A:62:LEU:HD12	1:A:89:PHE:CE1	0.41	2.51	2	1
1:A:27:LEU:CB	1:A:42:LEU:HD21	0.41	2.45	3	1
1:A:62:LEU:N	1:A:62:LEU:CD2	0.41	2.84	7	2
1:A:29:TRP:C	1:A:37:VAL:HG23	0.41	2.36	20	1
1:A:88:MET:HB2	2:B:462:PHE:CE2	0.40	2.52	2	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Models Total
1:A:47:LYS:CG	1:A:63:ILE:CG1	0.40	2.98	6	1
2:B:458:TRP:O	2:B:462:PHE:CD2	0.40	2.74	8	1
1:A:47:LYS:CD	1:A:48:LEU:N	0.40	2.84	2	1
1:A:27:LEU:O	1:A:27:LEU:HD23	0.40	2.16	3	1
1:A:14:GLY:HA2	1:A:32:THR:HG23	0.40	1.94	7	1
1:A:40:VAL:O	1:A:40:VAL:HG13	0.40	2.16	12	1
1:A:18:ILE:HD13	1:A:42:LEU:HD11	0.40	1.92	15	1
1:A:61:ARG:CD	2:B:462:PHE:CB	0.40	2.99	20	1
1:A:6:ALA:O	1:A:91:PHE:CD2	0.40	2.75	8	2
1:A:42:LEU:HD22	1:A:104:LEU:HG	0.40	1.93	8	1
1:A:38:HIS:CD2	1:A:39:THR:O	0.40	2.74	16	1
1:A:8:ILE:N	1:A:8:ILE:CD1	0.40	2.84	17	1
1:A:26:GLU:CG	1:A:39:THR:CG2	0.40	3.00	16	1
1:A:61:ARG:HD3	1:A:63:ILE:HD11	0.40	1.93	19	1

6.3 Torsion angles ⓘ

6.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR 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	A	91/115 (79%)	84±1 (92±2%)	6±2 (7±2%)	1±1 (1±1%)	16	63
2	B	6/13 (46%)	6±0 (98±5%)	0±0 (2±5%)	0±0 (0±0%)	100	100
All	All	1940/2560 (76%)	1789 (92%)	127 (7%)	24 (1%)	17	64

All 9 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	25	ALA	8
1	A	35	ASP	5
1	A	11	LYS	3
1	A	3	HIS	2
1	A	34	GLY	2
1	A	4	SER	1
1	A	10	GLU	1

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Models (Total)
1	A	64	GLY	1
1	A	23	SER	1

6.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all NMR 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	A	81/103 (79%)	69±3 (85±4%)	12±3 (15±4%)	6	45
2	B	6/13 (46%)	4±1 (74±13%)	2±1 (26±13%)	2	23
All	All	1740/2320 (75%)	1472 (85%)	268 (15%)	6	43

All 52 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
2	B	458	TRP	18
1	A	16	ILE	16
1	A	90	SER	16
1	A	104	LEU	13
1	A	39	THR	11
1	A	57	LYS	11
1	A	11	LYS	10
1	A	49	GLN	10
1	A	43	SER	9
1	A	62	LEU	9
1	A	61	ARG	8
1	A	23	SER	8
1	A	94	ARG	8
1	A	36	LYS	8
1	A	30	ARG	7
1	A	60	LEU	6
1	A	47	LYS	6
1	A	106	GLN	6
1	A	13	SER	6
2	B	460	TYR	6
1	A	112	LYS	5
1	A	54	SER	5

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Models (Total)
2	B	463	GLU	5
1	A	31	SER	5
1	A	48	LEU	4
1	A	102	MET	4
1	A	28	THR	4
1	A	86	ARG	4
1	A	88	MET	4
1	A	98	ASP	3
1	A	26	GLU	3
1	A	58	MET	2
1	A	65	LYS	2
2	B	459	ASP	2
1	A	35	ASP	2
1	A	21	ASP	2
1	A	38	HIS	2
1	A	105	GLN	2
1	A	110	ARG	2
1	A	10	GLU	2
1	A	92	ASN	1
1	A	33	ASP	1
1	A	93	ASN	1
1	A	20	GLU	1
1	A	9	PHE	1
1	A	91	PHE	1
1	A	51	THR	1
1	A	55	SER	1
1	A	101	LYS	1
1	A	4	SER	1
1	A	27	LEU	1
1	A	59	MET	1

6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.5   Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.6   Ligand geometry ⓘ

There are no ligands in this entry.

6.7   Other polymers ⓘ

There are no such molecules in this entry.

6.8   Polymer linkage issues ⓘ

There are no chain breaks in this entry.

7 Chemical shift validation ⓘ

The completeness of assignment taking into account all chemical shift lists is 82% for the well-defined parts and 82% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_ chem_ shift_ list_ 1*

7.1.1 Bookkeeping ⓘ

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	1268
Number of shifts mapped to atoms	1268
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	6

7.1.2 Chemical shift referencing ⓘ

The following table shows the suggested chemical shift referencing corrections.

Nucleus	# values	Correction ± precision, *ppm*	Suggested action
$^{13}C_{\alpha}$	113	-0.16 ± 0.07	None needed (< 0.5 ppm)
$^{13}C_{\beta}$	108	-0.14 ± 0.16	None needed (< 0.5 ppm)
$^{13}C'$	0	—	None (insufficient data)
^{15}N	107	-0.18 ± 0.36	None needed (< 0.5 ppm)

7.1.3 Completeness of resonance assignments ⓘ

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 76%, i.e. 1033 atoms were assigned a chemical shift out of a possible 1361. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	360/485 (74%)	182/196 (93%)	91/194 (47%)	87/95 (92%)
Sidechain	642/770 (83%)	439/502 (87%)	202/238 (85%)	1/30 (3%)

Continued on next page...

Continued from previous page...

	Total	**^{1}H**	**^{13}C**	**^{15}N**
Aromatic	31/106 (29%)	16/52 (31%)	15/46 (33%)	0/8 (0%)
Overall	1033/1361 (76%)	637/750 (85%)	308/478 (64%)	88/133 (66%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 73%, i.e. 1268 atoms were assigned a chemical shift out of a possible 1742. 0 out of 16 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	**^{1}H**	**^{13}C**	**^{15}N**
Backbone	445/635 (70%)	225/256 (88%)	113/256 (44%)	107/123 (87%)
Sidechain	792/1001 (79%)	541/646 (84%)	250/316 (79%)	1/39 (3%)
Aromatic	31/106 (29%)	16/52 (31%)	15/46 (33%)	0/8 (0%)
Overall	1268/1742 (73%)	782/954 (82%)	378/618 (61%)	108/170 (64%)

7.1.4   Statistically unusual chemical shifts ⓘ

The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

List Id	Chain	Res	Type	Atom	Shift, *ppm*	Expected range, *ppm*	Z-score
1	A	61	ARG	NE	114.92	76.53 − 92.65	18.8
1	A	10	GLU	HG2	0.63	1.24 − 3.30	-8.0
1	A	9	PHE	HB3	0.29	1.03 − 4.85	-7.0
1	A	10	GLU	HG3	0.99	1.20 − 3.30	-6.0
1	A	9	PHE	HB2	1.14	1.20 − 4.80	-5.1
1	A	43	SER	HB2	2.61	2.61 − 5.13	-5.0

7.1.5   Random Coil Index (RCI) plots ⓘ

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition.If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain A:

7.2 Chemical shift list 2

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_2*

7.2.1 Bookkeeping (i)

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	164
Number of shifts mapped to atoms	164
Number of unparsed shifts	0
Number of shifts with mapping errors	0
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

7.2.2 Chemical shift referencing (i)

No chemical shift referencing corrections were calculated (not enough data).

7.2.3 Completeness of resonance assignments (i)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 7%, i.e. 89 atoms were assigned a chemical shift out of a possible 1361. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	30/485 (6%)	12/196 (6%)	12/194 (6%)	6/95 (6%)

Continued on next page...

Continued from previous page...

	Total	^{1}H	^{13}C	^{15}N
Sidechain	31/770 (4%)	21/502 (4%)	10/238 (4%)	0/30 (0%)
Aromatic	28/106 (26%)	14/52 (27%)	14/46 (30%)	0/8 (0%)
Overall	89/1361 (7%)	47/750 (6%)	36/478 (8%)	6/133 (5%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 9%, i.e. 163 atoms were assigned a chemical shift out of a possible 1742. 0 out of 16 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	^{1}H	^{13}C	^{15}N
Backbone	64/635 (10%)	25/256 (10%)	26/256 (10%)	13/123 (11%)
Sidechain	71/1001 (7%)	48/646 (7%)	23/316 (7%)	0/39 (0%)
Aromatic	28/106 (26%)	14/52 (27%)	14/46 (30%)	0/8 (0%)
Overall	163/1742 (9%)	87/954 (9%)	63/618 (10%)	13/170 (8%)

7.2.4 Statistically unusual chemical shifts ⓘ

There are no statistically unusual chemical shifts.

7.2.5 Random Coil Index (RCI) plots ⓘ

The image below reports *random coil index* values for the protein chains in the structure. The height of each bar gives a probability of a given residue to be disordered, as predicted from the available chemical shifts and the amino acid sequence. A value above 0.2 is an indication of significant predicted disorder. The colour of the bar shows whether the residue is in the well-defined core (black) or in the ill-defined residue ranges (cyan), as described in section 2 on ensemble composition.If well-defined core and ill-defined regions are not identified then it is shown as gray bars.

Random coil index (RCI) for chain B:
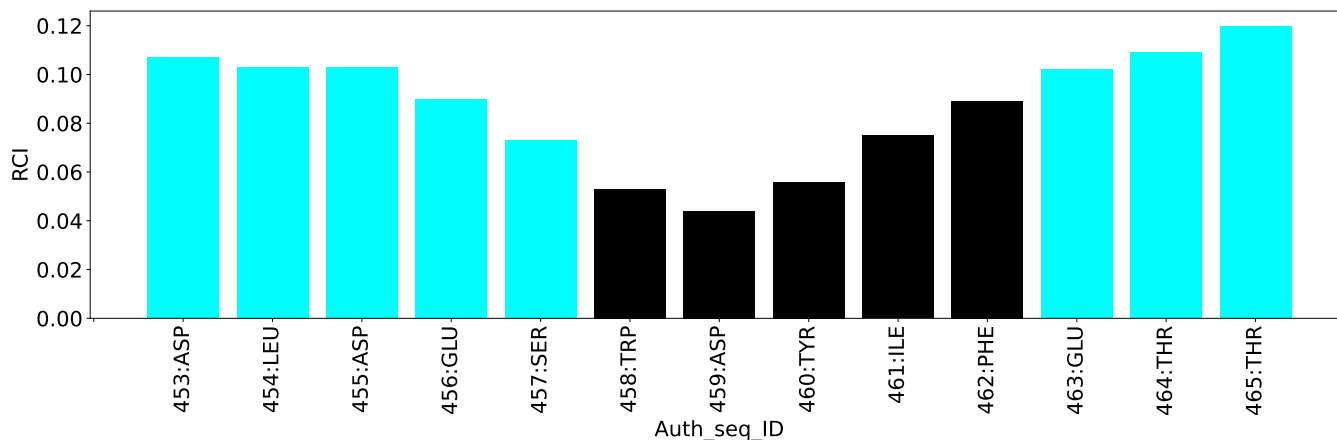
8 NMR restraints analysis ⓘ

8.1 Conformationally restricting restraints ⓘ

The following table provides the summary of experimentally observed NMR restraints in different categories. Restraints are classified into different categories based on the sequence separation of the atoms involved.

Description	Value
Total distance restraints	1718
Intra-residue ($\|i\text{-}j\|$=0)	733
Sequential ($\|i\text{-}j\|$=1)	359
Medium range ($\|i\text{-}j\|$>1 and $\|i\text{-}j\|$<5)	138
Long range ($\|i\text{-}j\|$≥5)	419
Inter-chain	49
Hydrogen bond restraints	20
Disulfide bond restraints	0
Total dihedral-angle restraints	145
Number of unmapped restraints	3
Number of restraints per residue	14.6
Number of long range restraints per residue[1]	3.4

[1]Long range hydrogen bonds and disulfide bonds are counted as long range restraints while calculating the number of long range restraints per residue

8.2 Residual restraint violations ⓘ

This section provides the overview of the restraint violations analysis. The violations are binned as small, medium and large violations based on its absolute value. Average number of violations per model is calculated by dividing the total number of violations in each bin by the size of the ensemble.

8.2.1 Average number of distance violations per model ⓘ

Distance violations less than 0.1 Å are not included in the calculation.

Bins (Å)	Average number of violations per model	Max (Å)
0.1-0.2 (Small)	2.6	0.2
0.2-0.5 (Medium)	0.4	0.26
>0.5 (Large)	0.8	0.71

8.2.2 Average number of dihedral-angle violations per model (i)

Dihedral-angle violations less than 1° are not included in the calculation.

Bins (°)	Average number of violations per model	Max (°)
1.0-10.0 (Small)	0.1	1.3
10.0-20.0 (Medium)	None	None
>20.0 (Large)	None	None

9 Distance violation analysis ⓘ

9.1 Summary of distance violations ⓘ

The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

Restraints type	Count	%[1]	Violated[3]			Consistently Violated[4]		
			Count	%[2]	%[1]	Count	%[2]	%[1]
Intra-residue (|i-j|=0)	733	42.7	1	0.1	0.1	0	0.0	0.0
Backbone-Backbone	107	6.2	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	442	25.7	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	184	10.7	1	0.5	0.1	0	0.0	0.0
Sequential (|i-j|=1)	359	20.9	3	0.8	0.2	0	0.0	0.0
Backbone-Backbone	196	11.4	3	1.5	0.2	0	0.0	0.0
Backbone-Sidechain	160	9.3	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	3	0.2	0	0.0	0.0	0	0.0	0.0
Medium range (|i-j|>1 & |i-j|<5)	138	8.0	1	0.7	0.1	0	0.0	0.0
Backbone-Backbone	41	2.4	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	68	4.0	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	29	1.7	1	3.4	0.1	0	0.0	0.0
Long range (|i-j|≥5)	419	24.4	15	3.6	0.9	0	0.0	0.0
Backbone-Backbone	96	5.6	1	1.0	0.1	0	0.0	0.0
Backbone-Sidechain	180	10.5	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	143	8.3	14	9.8	0.8	0	0.0	0.0
Inter-chain	49	2.9	0	0.0	0.0	0	0.0	0.0
Backbone-Backbone	2	0.1	0	0.0	0.0	0	0.0	0.0
Backbone-Sidechain	10	0.6	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	37	2.2	0	0.0	0.0	0	0.0	0.0
Hydrogen bond	20	1.2	0	0.0	0.0	0	0.0	0.0
Disulfide bond	0	0.0	0	0.0	0.0	0	0.0	0.0
Total	1718	100.0	20	1.2	1.2	0	0.0	0.0
Backbone-Backbone	462	26.9	4	0.9	0.2	0	0.0	0.0
Backbone-Sidechain	860	50.1	0	0.0	0.0	0	0.0	0.0
Sidechain-Sidechain	396	23.1	16	4.0	0.9	0	0.0	0.0

[1] percentage calculated with respect to the total number of distance restraints, [2] percentage calculated with respect to the number of restraints in a particular restraint category, [3] violated in at least one model, [4] violated in all the models

9.1.1 Bar chart : Distribution of distance restraints and violations ⓘ
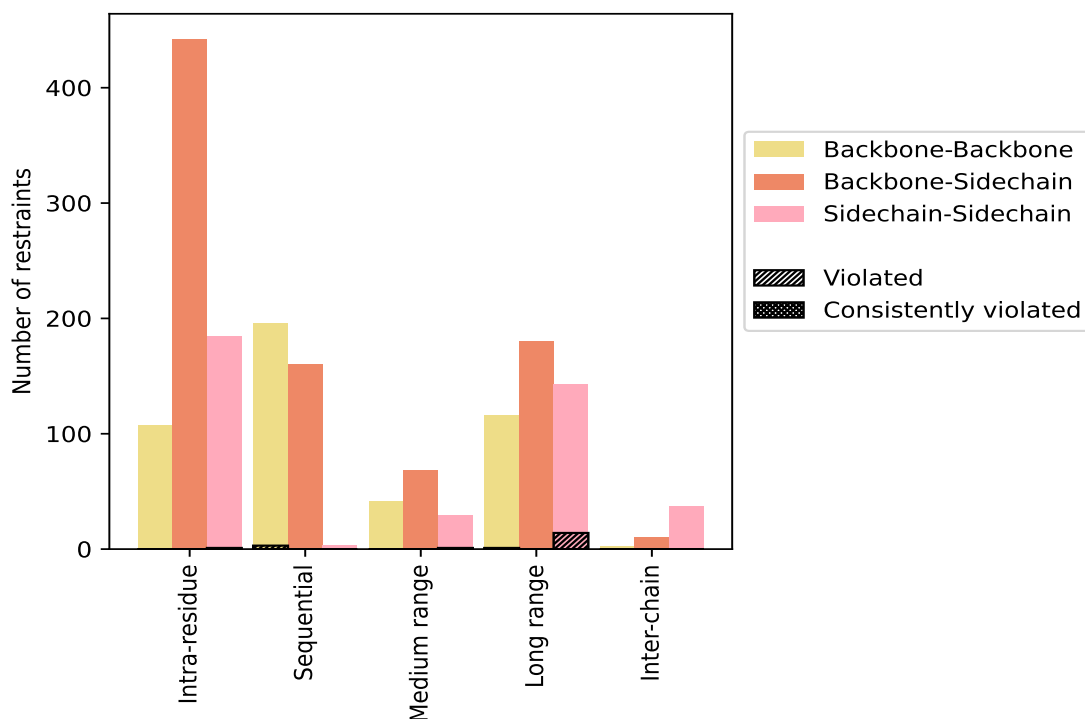
Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfied bonds are counted in their appropriate category on the x-axis

9.2 Distance violation statistics for each model ⓘ

The following table provides the distance violation statistics for each model in the ensemble. Violations less than 0.1 Å are not included in the statistics.

Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
1	0	0	0	5	0	5	0.26	0.7	0.22	0.17
2	0	0	0	3	0	3	0.32	0.71	0.28	0.13
3	1	0	0	3	0	4	0.31	0.7	0.23	0.2
4	0	0	0	3	0	3	0.38	0.71	0.24	0.23
5	0	0	0	5	0	5	0.26	0.71	0.23	0.15
6	0	0	0	3	0	3	0.33	0.7	0.26	0.18
7	1	0	1	2	0	4	0.15	0.23	0.04	0.13
8	0	0	0	4	0	4	0.28	0.7	0.24	0.16
9	0	0	0	4	0	4	0.3	0.7	0.24	0.18
10	1	0	0	3	0	4	0.28	0.7	0.24	0.16
11	0	0	0	3	0	3	0.31	0.7	0.27	0.13

Continued on next page...

Continued from previous page...

Model ID	Number of violations						Mean (Å)	Max (Å)	SD[6] (Å)	Median (Å)
	IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total				
12	0	0	0	3	0	3	0.34	0.65	0.22	0.21
13	0	0	0	1	0	1	0.26	0.26	0.0	0.26
14	0	0	0	7	0	7	0.15	0.19	0.03	0.14
15	0	1	0	4	0	5	0.24	0.64	0.2	0.14
16	0	0	0	3	0	3	0.31	0.7	0.28	0.11
17	0	1	0	5	0	6	0.25	0.7	0.2	0.16
18	0	0	0	2	0	2	0.44	0.7	0.25	0.44
19	0	1	0	3	0	4	0.26	0.7	0.25	0.12
20	1	0	0	3	0	4	0.29	0.7	0.24	0.18

[1]Intra-residue restraints, [2]Sequential restraints, [3]Medium range restraints, [4]Long range restraints,
[5]Inter-chain restraints, [6]Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model ⓘ
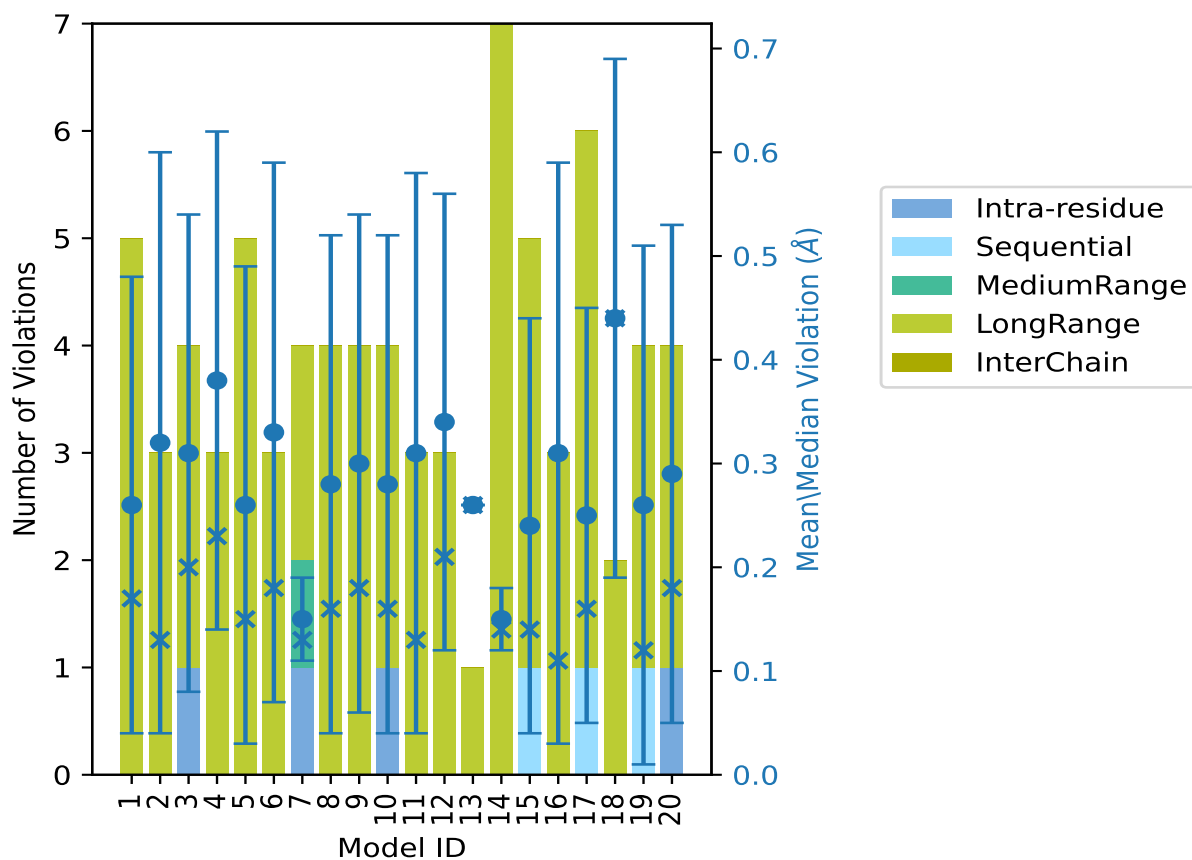
The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis
on the right

9.3　Distance violation statistics for the ensemble (i)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 1678(IR:732, SQ:356, MR:137, LR:404, IC:49) restraints are not violated in the ensemble.

Number of violated restraints						Fraction of the ensemble	
IR[1]	SQ[2]	MR[3]	LR[4]	IC[5]	Total	Count[6]	%
0	3	1	6	0	10	1	5.0
0	0	0	3	0	3	2	10.0
0	0	0	1	0	1	3	15.0
1	0	0	1	0	2	4	20.0
0	0	0	0	0	0	5	25.0
0	0	0	0	0	0	6	30.0
0	0	0	1	0	1	7	35.0
0	0	0	0	0	0	8	40.0
0	0	0	0	0	0	9	45.0
0	0	0	0	0	0	10	50.0
0	0	0	0	0	0	11	55.0
0	0	0	0	0	0	12	60.0
0	0	0	2	0	2	13	65.0
0	0	0	0	0	0	14	70.0
0	0	0	0	0	0	15	75.0
0	0	0	0	0	0	16	80.0
0	0	0	1	0	1	17	85.0
0	0	0	0	0	0	18	90.0
0	0	0	0	0	0	19	95.0
0	0	0	0	0	0	20	100.0

[1]Intra-residue restraints, [2]Sequential restraints, [3]Medium range restraints, [4]Long range restraints, [5]Inter-chain restraints, [6] Number of models with violations

WORLDWIDE
wwPDB
PROTEIN DATA BANK

9.3.1   Bar graph : Distance violation statistics for the ensemble ⓘ
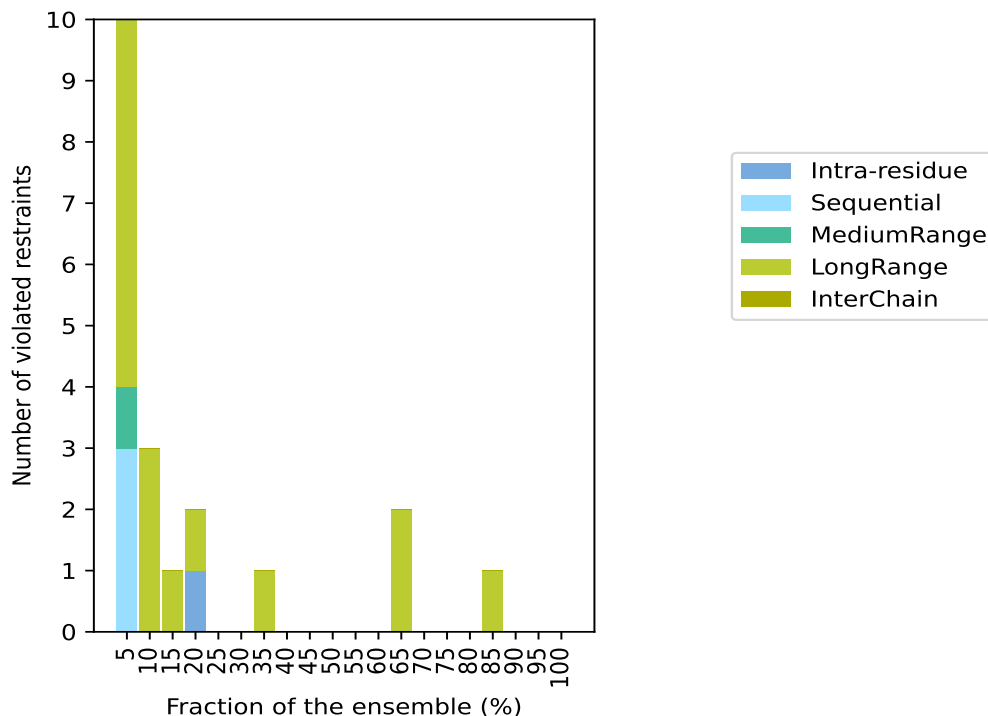
9.4   Most violated distance restraints in the ensemble ⓘ

9.4.1   Histogram : Distribution of mean distance violations ⓘ

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble
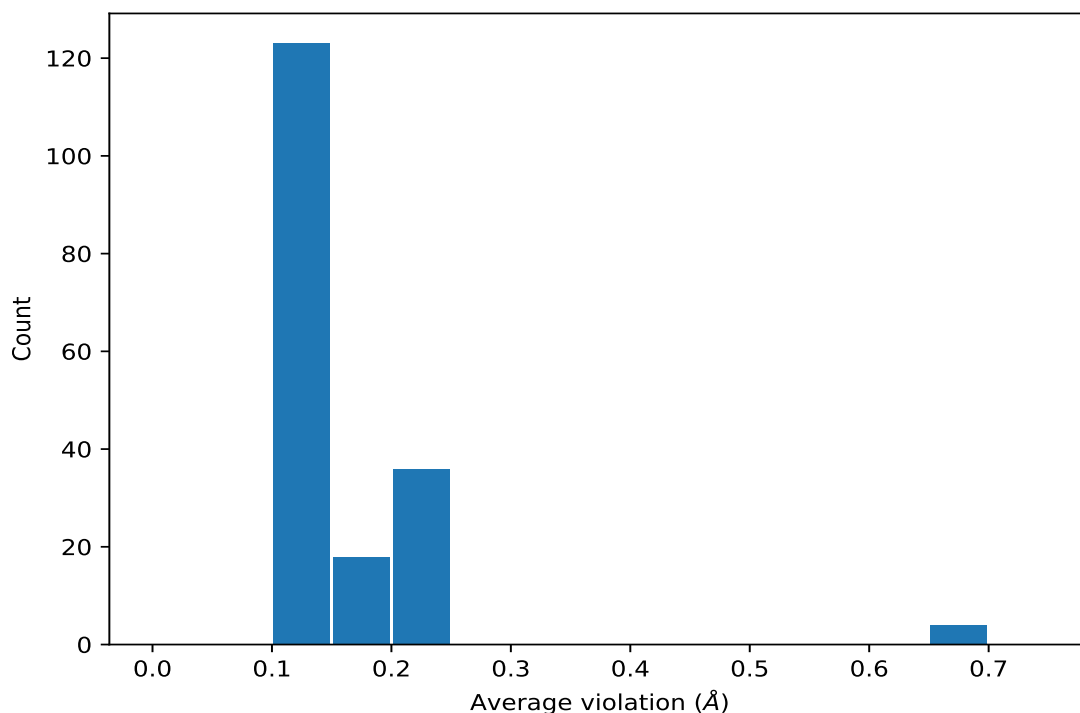
9.4.2　Table: Most violated distance restraints ⓘ

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	17	0.7	0.02	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	17	0.7	0.02	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	17	0.7	0.02	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	17	0.7	0.02	0.7
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	13	0.2	0.04	0.22

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	13	0.2	0.04	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	13	0.2	0.04	0.22
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	13	0.17	0.02	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	13	0.17	0.02	0.18

Continued from previous page...

Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	7	0.12	0.02	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	7	0.12	0.02	0.11
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD11	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD12	4	0.13	0.01	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD13	4	0.13	0.01	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD11	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD12	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD13	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD11	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD12	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD13	4	0.12	0.01	0.12

Continued from previous page...

Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD11	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD12	4	0.12	0.01	0.12
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD13	4	0.12	0.01	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD11	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD12	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD13	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD21	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD22	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD23	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD11	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD12	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD13	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD21	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD22	3	0.11	0.0	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD23	3	0.11	0.0	0.11
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD11	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD12	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD13	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD21	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD22	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD23	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD11	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD12	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD13	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD21	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD22	2	0.13	0.01	0.13
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD23	2	0.13	0.01	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD13	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD13	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD13	2	0.12	0.01	0.12

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Models[1]	Mean (Å)	SD[1] (Å)	Median (Å)
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD13	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD13	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD11	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD12	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD13	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD21	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD22	2	0.12	0.01	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG23	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG21	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG22	2	0.12	0.01	0.12
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG23	2	0.12	0.01	0.12

[1]Number of violated models, [2]Standard deviation

9.5 All violated distance restraints ⓘ

9.5.1 Histogram : Distribution of distance violations ⓘ

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.
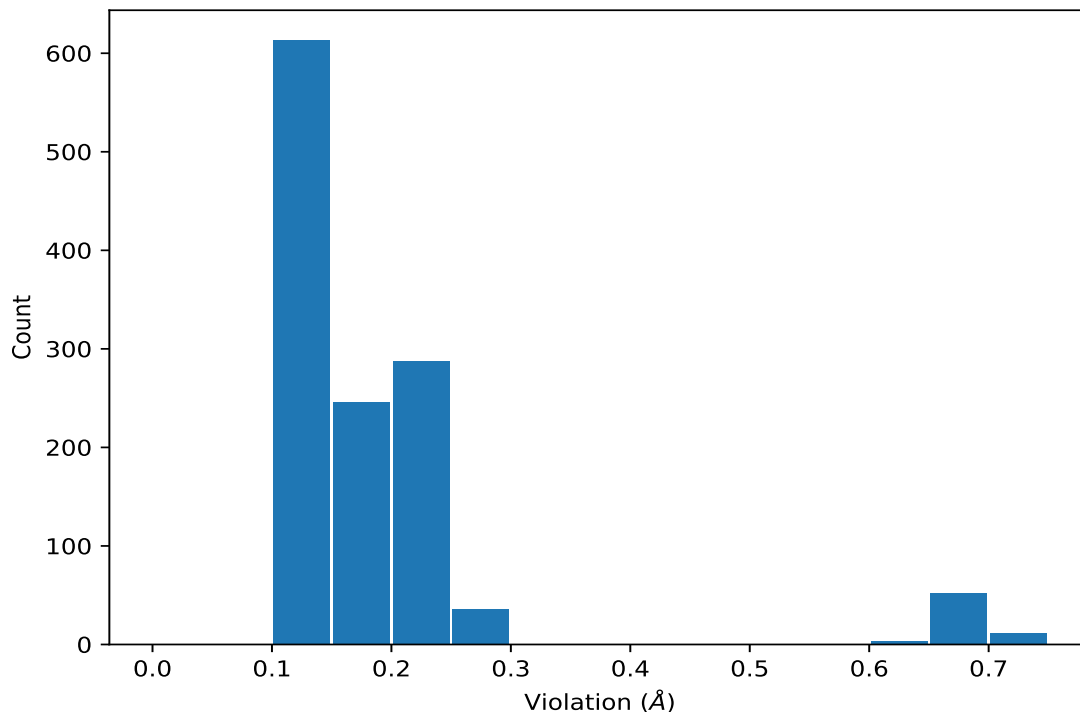
9.5.2 Table : All distance violations ⓘ

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	2	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	2	0.71
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	2	0.71
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	2	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	4	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	4	0.71
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	4	0.71
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	4	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	5	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	5	0.71

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	5	0.71
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	5	0.71
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	1	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	1	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	1	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	1	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	3	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	3	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	3	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	3	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	6	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	6	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	6	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	6	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	8	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	8	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	8	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	8	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	9	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	9	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	9	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	9	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	10	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	10	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	10	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	10	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	11	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	11	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	11	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	11	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	16	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	16	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	16	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	16	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	17	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	17	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	17	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	17	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	18	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	18	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	18	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	18	0.7

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	19	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	19	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	19	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	19	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	20	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	20	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	20	0.7
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	20	0.7
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	12	0.65
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	12	0.65
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	12	0.65
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	12	0.65
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB2	15	0.64
(1,866)	1:A:61:ARG:HB2	1:A:49:GLN:HB3	15	0.64
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB2	15	0.64
(1,866)	1:A:61:ARG:HB3	1:A:49:GLN:HB3	15	0.64
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	13	0.26

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	13	0.26
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	13	0.26
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	4	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	4	0.23

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	4	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	4	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	4	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	4	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	7	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	7	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	9	0.23

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	9	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	9	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	20	0.23

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	20	0.23
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	20	0.23
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	3	0.22

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	3	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	3	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	17	0.22

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	17	0.22
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	17	0.22
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	12	0.21

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	12	0.21
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	12	0.21
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	1	0.2
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	1	0.2

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	1	0.2
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	1	0.2
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	1	0.2
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	1	0.2
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	14	0.19
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	3	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	3	0.19

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	3	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	3	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	3	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	3	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	3	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	3	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	4	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	4	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	4	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	8	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	8	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	8	0.19

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	8	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	8	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	8	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	8	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	8	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	14	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	14	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	14	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	18	0.19
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	18	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	18	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	18	0.19

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	18	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	18	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	18	0.19
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	18	0.19
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	6	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	6	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	6	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	10	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	10	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	10	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	15	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	15	0.18

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	15	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	15	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	15	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	15	0.18
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	15	0.18
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	15	0.18
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	1	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	1	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	1	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	17	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	17	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	17	0.17

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	17	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	17	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	17	0.17
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	17	0.17
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	17	0.17
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	12	0.16
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	12	0.16
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	12	0.16
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	12	0.16
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	12	0.16
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	12	0.16
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	12	0.16
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	12	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD11	5	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD12	5	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD13	5	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD21	5	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD22	5	0.16
(1,212)	1:A:16:ILE:HG12	1:A:27:LEU:HD23	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD11	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD12	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD13	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD21	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD22	5	0.16
(1,212)	1:A:16:ILE:HG13	1:A:27:LEU:HD23	5	0.16
(1,850)	1:A:60:LEU:HD11	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD11	1:A:97:MET:HG3	14	0.15

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,850)	1:A:60:LEU:HD12	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD12	1:A:97:MET:HG3	14	0.15
(1,850)	1:A:60:LEU:HD13	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD13	1:A:97:MET:HG3	14	0.15
(1,850)	1:A:60:LEU:HD21	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD21	1:A:97:MET:HG3	14	0.15
(1,850)	1:A:60:LEU:HD22	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD22	1:A:97:MET:HG3	14	0.15
(1,850)	1:A:60:LEU:HD23	1:A:97:MET:HG2	14	0.15
(1,850)	1:A:60:LEU:HD23	1:A:97:MET:HG3	14	0.15
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD13	5	0.15
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD13	5	0.15
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD13	5	0.15
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD13	5	0.15
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD13	5	0.15
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD11	5	0.15
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD12	5	0.15
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	5	0.15
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	5	0.15
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	5	0.15
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	5	0.15
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	5	0.15

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	5	0.15
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	5	0.15
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	5	0.15
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	5	0.15
(1,1063)	1:A:80:VAL:H	1:A:73:LYS:HA	17	0.15
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	14	0.14
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	14	0.14
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	14	0.14
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	14	0.14
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	14	0.14
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	14	0.14
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	14	0.14
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	14	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD11	9	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD12	9	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD13	9	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD21	9	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD22	9	0.14
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD23	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD11	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD12	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD13	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD21	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD22	9	0.14
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD23	9	0.14
(1,1044)	1:A:78:ASN:H	1:A:79:GLU:H	17	0.14
(1,1015)	1:A:74:ASP:H	1:A:73:LYS:H	15	0.14
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD12	11	0.13
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD13	11	0.13
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD12	11	0.13

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD13	11	0.13
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD12	11	0.13
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD13	11	0.13
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD12	11	0.13
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD13	11	0.13
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD12	11	0.13
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD13	11	0.13
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD11	11	0.13
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD12	11	0.13
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD13	11	0.13
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG23	10	0.13
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG23	10	0.13
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG23	10	0.13
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG23	10	0.13
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG23	10	0.13
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG21	10	0.13
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG22	10	0.13
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG23	10	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	2	0.13

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	2	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	2	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	2	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	2	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	2	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	19	0.13
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	19	0.13
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	19	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	19	0.13

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	19	0.13
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	19	0.13
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	19	0.13
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	19	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD11	7	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD12	7	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD13	7	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD11	7	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD12	7	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD13	7	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD11	7	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD12	7	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD13	7	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD11	20	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD12	20	0.13
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD13	20	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD11	20	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD12	20	0.13
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD13	20	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD11	20	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD12	20	0.13
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD13	20	0.13
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	7	0.13
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	7	0.13
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	7	0.13
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	7	0.13
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	7	0.13

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	7	0.13
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	7	0.13
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	7	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD22	1	0.13
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD23	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD22	1	0.13
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD23	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD22	1	0.13
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD23	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD22	1	0.13
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD23	1	0.13
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD22	1	0.13

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD23	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD11	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD12	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD13	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD21	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD22	1	0.13
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD23	1	0.13
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD11	14	0.12
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD12	14	0.12
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD13	14	0.12
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD21	14	0.12
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD22	14	0.12
(1,749)	1:A:50:ALA:HB1	1:A:60:LEU:HD23	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD11	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD12	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD13	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD21	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD22	14	0.12
(1,749)	1:A:50:ALA:HB2	1:A:60:LEU:HD23	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD11	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD12	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD13	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD21	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD22	14	0.12
(1,749)	1:A:50:ALA:HB3	1:A:60:LEU:HD23	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD11	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD12	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD13	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD21	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD22	14	0.12
(1,745)	1:A:50:ALA:HB1	1:A:60:LEU:HD23	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD11	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD12	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD13	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD21	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD22	14	0.12
(1,745)	1:A:50:ALA:HB2	1:A:60:LEU:HD23	14	0.12
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD11	14	0.12
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD12	14	0.12
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD13	14	0.12
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD21	14	0.12
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD22	14	0.12

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,745)	1:A:50:ALA:HB3	1:A:60:LEU:HD23	14	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD13	14	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD13	14	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD13	14	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD13	14	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD13	14	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD11	14	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD12	14	0.12
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD13	14	0.12
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	2	0.12
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	2	0.12
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	2	0.12
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	2	0.12
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	2	0.12
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	2	0.12
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	2	0.12
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	2	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD11	3	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD12	3	0.12
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD13	3	0.12
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD11	3	0.12
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD12	3	0.12

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD13	3	0.12
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD11	3	0.12
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD12	3	0.12
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD13	3	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD11	15	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD12	15	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD13	15	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD21	15	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD22	15	0.12
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD23	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD11	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD12	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD13	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD21	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD22	15	0.12
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD23	15	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD12	8	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD11	1:A:62:LEU:HD23	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD12	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD12	1:A:62:LEU:HD23	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD12	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD13	1:A:62:LEU:HD23	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD12	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD21	1:A:62:LEU:HD23	8	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD12	8	0.12

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD22	1:A:62:LEU:HD23	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD11	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD12	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD13	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD21	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD22	8	0.12
(1,1384)	1:A:104:LEU:HD23	1:A:62:LEU:HD23	8	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD11	1	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD12	1	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD13	1	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD21	1	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD22	1	0.12
(1,1383)	1:A:104:LEU:HB2	1:A:48:LEU:HD23	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD11	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD12	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD13	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD21	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD22	1	0.12
(1,1383)	1:A:104:LEU:HB3	1:A:48:LEU:HD23	1	0.12
(1,1364)	1:A:103:THR:HG21	1:A:107:ILE:HD11	7	0.12
(1,1364)	1:A:103:THR:HG21	1:A:107:ILE:HD12	7	0.12
(1,1364)	1:A:103:THR:HG21	1:A:107:ILE:HD13	7	0.12
(1,1364)	1:A:103:THR:HG22	1:A:107:ILE:HD11	7	0.12
(1,1364)	1:A:103:THR:HG22	1:A:107:ILE:HD12	7	0.12
(1,1364)	1:A:103:THR:HG22	1:A:107:ILE:HD13	7	0.12
(1,1364)	1:A:103:THR:HG23	1:A:107:ILE:HD11	7	0.12
(1,1364)	1:A:103:THR:HG23	1:A:107:ILE:HD12	7	0.12
(1,1364)	1:A:103:THR:HG23	1:A:107:ILE:HD13	7	0.12
(1,1103)	1:A:86:ARG:HG2	1:A:63:ILE:HD11	5	0.12
(1,1103)	1:A:86:ARG:HG2	1:A:63:ILE:HD12	5	0.12
(1,1103)	1:A:86:ARG:HG2	1:A:63:ILE:HD13	5	0.12
(1,1103)	1:A:86:ARG:HG3	1:A:63:ILE:HD11	5	0.12
(1,1103)	1:A:86:ARG:HG3	1:A:63:ILE:HD12	5	0.12
(1,1103)	1:A:86:ARG:HG3	1:A:63:ILE:HD13	5	0.12
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD12	16	0.11
(1,725)	1:A:48:LEU:HD11	1:A:108:ILE:HD13	16	0.11
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD12	16	0.11

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,725)	1:A:48:LEU:HD12	1:A:108:ILE:HD13	16	0.11
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD12	16	0.11
(1,725)	1:A:48:LEU:HD13	1:A:108:ILE:HD13	16	0.11
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD12	16	0.11
(1,725)	1:A:48:LEU:HD21	1:A:108:ILE:HD13	16	0.11
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD12	16	0.11
(1,725)	1:A:48:LEU:HD22	1:A:108:ILE:HD13	16	0.11
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD11	16	0.11
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD12	16	0.11
(1,725)	1:A:48:LEU:HD23	1:A:108:ILE:HD13	16	0.11
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD11	1:A:18:ILE:HG23	11	0.11
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD12	1:A:18:ILE:HG23	11	0.11
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD13	1:A:18:ILE:HG23	11	0.11
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD21	1:A:18:ILE:HG23	11	0.11
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD22	1:A:18:ILE:HG23	11	0.11
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG21	11	0.11
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG22	11	0.11
(1,614)	1:A:42:LEU:HD23	1:A:18:ILE:HG23	11	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD22	8	0.11
(1,613)	1:A:42:LEU:HD11	1:A:104:LEU:HD23	8	0.11
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD22	8	0.11

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,613)	1:A:42:LEU:HD12	1:A:104:LEU:HD23	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD22	8	0.11
(1,613)	1:A:42:LEU:HD13	1:A:104:LEU:HD23	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD22	8	0.11
(1,613)	1:A:42:LEU:HD21	1:A:104:LEU:HD23	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD22	8	0.11
(1,613)	1:A:42:LEU:HD22	1:A:104:LEU:HD23	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD11	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD12	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD13	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD21	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD22	8	0.11
(1,613)	1:A:42:LEU:HD23	1:A:104:LEU:HD23	8	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	6	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	6	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	6	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	6	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	6	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	6	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	6	0.11

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	6	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	15	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	15	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	15	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	17	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	17	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	17	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD12	19	0.11
(1,604)	1:A:42:LEU:HD11	1:A:107:ILE:HD13	19	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD12	19	0.11

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,604)	1:A:42:LEU:HD12	1:A:107:ILE:HD13	19	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD12	19	0.11
(1,604)	1:A:42:LEU:HD13	1:A:107:ILE:HD13	19	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD12	19	0.11
(1,604)	1:A:42:LEU:HD21	1:A:107:ILE:HD13	19	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD12	19	0.11
(1,604)	1:A:42:LEU:HD22	1:A:107:ILE:HD13	19	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD11	19	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD12	19	0.11
(1,604)	1:A:42:LEU:HD23	1:A:107:ILE:HD13	19	0.11
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD11	10	0.11
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD12	10	0.11
(1,251)	1:A:18:ILE:HG21	1:A:18:ILE:HD13	10	0.11
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD11	10	0.11
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD12	10	0.11
(1,251)	1:A:18:ILE:HG22	1:A:18:ILE:HD13	10	0.11
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD11	10	0.11
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD12	10	0.11
(1,251)	1:A:18:ILE:HG23	1:A:18:ILE:HD13	10	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD11	16	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD12	16	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD13	16	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD21	16	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD22	16	0.11
(1,218)	1:A:16:ILE:HD11	1:A:27:LEU:HD23	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD11	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD12	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD13	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD21	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD22	16	0.11
(1,218)	1:A:16:ILE:HD12	1:A:27:LEU:HD23	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD11	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD12	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD13	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD21	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD22	16	0.11
(1,218)	1:A:16:ILE:HD13	1:A:27:LEU:HD23	16	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD11	9	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD12	9	0.11

Continued on next page...

Continued from previous page...

Key	Atom-1	Atom-2	Model ID	Violation (Å)
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD13	9	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD21	9	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD22	9	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD23	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD11	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD12	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD13	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD21	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD22	9	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD23	9	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD11	20	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD12	20	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD13	20	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD21	20	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD22	20	0.11
(1,1407)	1:A:105:GLN:HG2	1:A:48:LEU:HD23	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD11	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD12	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD13	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD21	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD22	20	0.11
(1,1407)	1:A:105:GLN:HG3	1:A:48:LEU:HD23	20	0.11
(1,1047)	1:A:79:GLU:H	1:A:78:ASN:HA	19	0.11

10   Dihedral-angle violation analysis ⓘ

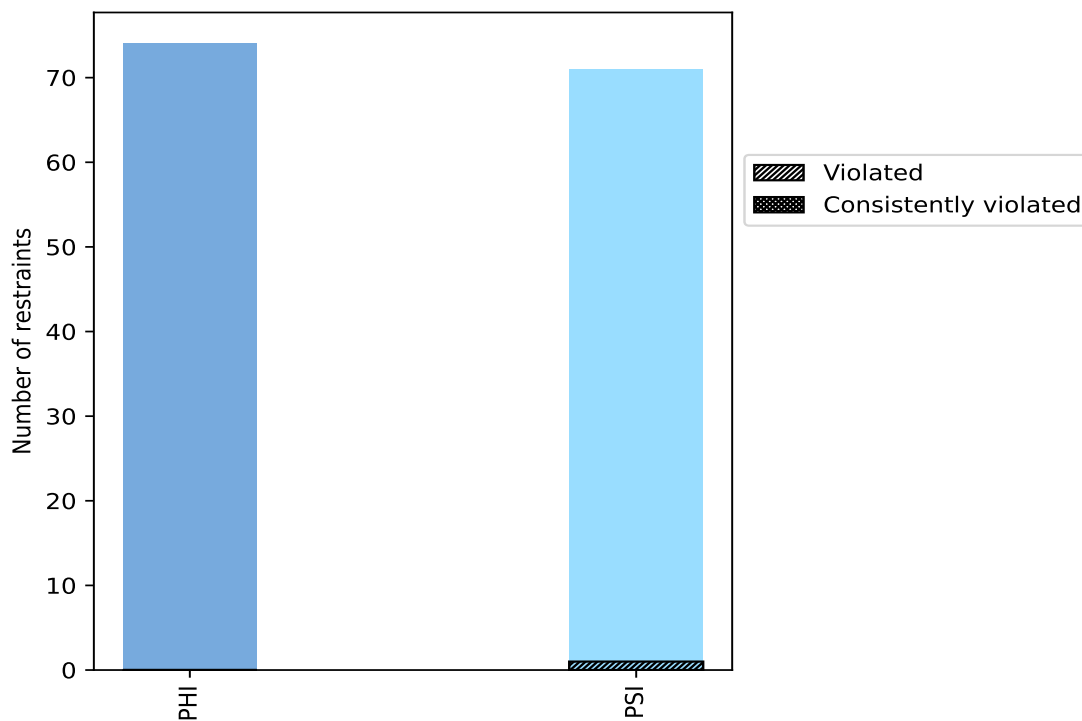## 10.1   Summary of dihedral-angle violations ⓘ

The following table provides the summary of dihedral-angle violations in different dihedral-angle types. Violations less than 1° are not included in the calculation.

Angle type	Count	$\%^1$	Violated[3]			Consistently Violated[4]		
			Count	$\%^2$	$\%^1$	Count	$\%^2$	$\%^1$
PHI	74	51.0	0	0.0	0.0	0	0.0	0.0
PSI	71	49.0	1	1.4	0.7	0	0.0	0.0
Total	145	100.0	1	0.7	0.7	0	0.0	0.0

[1] percentage calculated with respect to total number of dihedral-angle restraints, [2] percentage calculated with respect to number of restraints in a particular dihedral-angle type, [3] violated in at least one model, [4] violated in all the models

10.1.1   Bar chart : Distribution of dihedral-angles and violations ⓘ


Violated and consistently violated restraints are shown using different hatch patterns in their respective categories

10.2 Dihedral-angle violation statistics for each model ⓘ

The following table provides the dihedral-angle violation statistics for each model in the ensemble. Violations less than 1° are not included in the statistics.

Model ID	Number of violations			Mean (°)	Max (°)	SD (°)	Median (°)
	PHI	PSI	Total				
1	0	0	0	0.0	0.0	0.0	0.0
2	0	0	0	0.0	0.0	0.0	0.0
3	0	0	0	0.0	0.0	0.0	0.0
4	0	0	0	0.0	0.0	0.0	0.0
5	0	0	0	0.0	0.0	0.0	0.0
6	0	0	0	0.0	0.0	0.0	0.0
7	0	0	0	0.0	0.0	0.0	0.0
8	0	0	0	0.0	0.0	0.0	0.0
9	0	0	0	0.0	0.0	0.0	0.0
10	0	1	1	1.3	1.3	0.0	1.3
11	0	0	0	0.0	0.0	0.0	0.0
12	0	0	0	0.0	0.0	0.0	0.0
13	0	0	0	0.0	0.0	0.0	0.0
14	0	0	0	0.0	0.0	0.0	0.0
15	0	0	0	0.0	0.0	0.0	0.0
16	0	0	0	0.0	0.0	0.0	0.0
17	0	0	0	0.0	0.0	0.0	0.0
18	0	0	0	0.0	0.0	0.0	0.0
19	0	0	0	0.0	0.0	0.0	0.0
20	0	0	0	0.0	0.0	0.0	0.0

10.2.1   Bar graph : Dihedral violation statistics for each model ⓘ
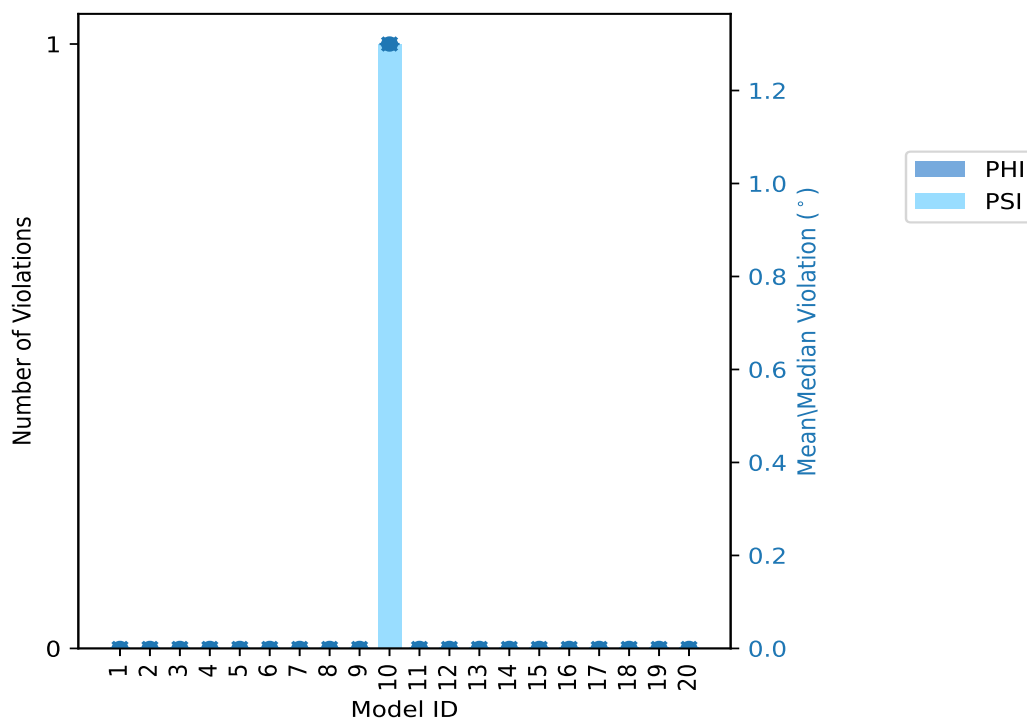
The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

10.3   Dihedral-angle violation statistics for the ensemble ⓘ

Violation analysis may find that some restraints are violated in very few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of ensemble.

Number of violated restraints			Fraction of the ensemble	
PHI	PSI	Total	Count[1]	%
0	1	1	1	5.0
0	0	0	2	10.0
0	0	0	3	15.0
0	0	0	4	20.0
0	0	0	5	25.0
0	0	0	6	30.0
0	0	0	7	35.0
0	0	0	8	40.0
0	0	0	9	45.0
0	0	0	10	50.0
0	0	0	11	55.0

Continued on next page...

Continued from previous page...

Number of violated restraints			Fraction of the ensemble	
PHI	PSI	Total	Count[1]	%
0	0	0	12	60.0
0	0	0	13	65.0
0	0	0	14	70.0
0	0	0	15	75.0
0	0	0	16	80.0
0	0	0	17	85.0
0	0	0	18	90.0
0	0	0	19	95.0
0	0	0	20	100.0

[1] Number of models with violations

10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble ⓘ
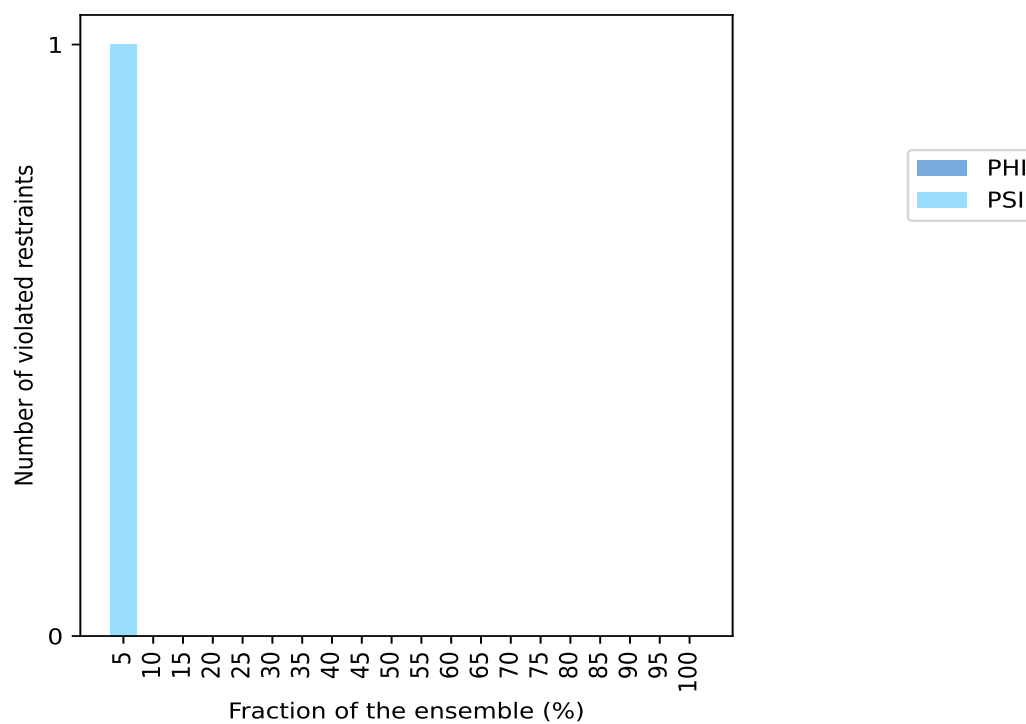
10.4 Most violated dihedral-angle restraints in the ensemble ⓘ

No violations found

10.5 All violated dihedral-angle restraints ⓘ

10.5.1 Histogram : Distribution of violations ⓘ

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.

Data insufficient to plot histogram

10.5.2 Table: All violated dihedral-angle restraints ⓘ

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint.

Key	Atom-1	Atom-2	Atom-3	Atom-4	Model ID	Violation (°)
(1,6)	1:A:9:PHE:N	1:A:9:PHE:CA	1:A:9:PHE:C	1:A:10:GLU:N	10	1.3