



# Full wwPDB NMR Structure Validation Report i

Jun 5, 2023 – 04:50 PM JST

PDB ID : 5YI9  
BMRB ID : 36120  
Title : Solution structure of the LEDGF/p75 IBD - JPO2 (aa 56-91) complex  
Authors : Veverka, V.  
Deposited on : 2017-10-03

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<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>.

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The following versions of software and data (see [references](#) ①) were used in the production of this report:

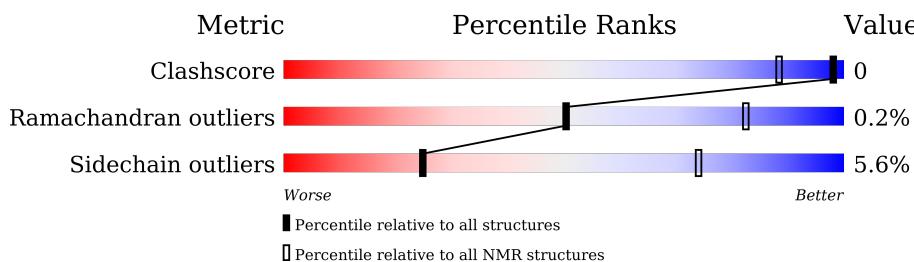
|                                |   |  |
|--------------------------------|---|--|
| MolProbitiy                    | : | 4.02b-467  |
| Percentile statistics          | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| wwPDB-RCI                      | : | v_1n_11_5_13_A (Berjanski 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 91%.

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



| Metric                | Whole archive (#Entries) | 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  $\geq 3$ , 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  $\leq 5\%$

| Mol | Chain | Length | Quality of chain  |
|-----|-------|--------|---|
| 1   | A     | 140    | <br>59% . 38% |

## 2 Ensemble composition and analysis i

This entry contains 40 models. Model 31 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *lowest energy*.

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:348-A:427, A:471-A:473, A:484-A:487 (87) | 0.34              | 31           |

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 6 clusters and 3 single-model clusters were found.

| Cluster number        | Models   |
|-----------------------|--|
| 1                     | 2, 3, 7, 9, 15, 16, 18, 19, 24, 30, 31, 36, 37, 40 |
| 2                     | 1, 4, 11, 12, 20, 22, 23, 25, 28, 29, 38, 39       |
| 3                     | 8, 10, 21, 27, 32                                  |
| 4                     | 13, 35   |
| 5                     | 5, 33  |
| 6                     | 6, 14  |
| Single-model clusters | 17; 26; 34   |

### 3 Entry composition [\(i\)](#)

There is only 1 type of molecule in this entry. The entry contains 2282 atoms, of which 1139 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein.

| Mol | Chain | Residues | Atoms |     |      |     |     |   | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|-------|
|     |       |          | Total | C   | H    | N   | O   | S |       |
| 1   | A     | 140      | 2282  | 712 | 1139 | 198 | 226 | 7 | 0     |

There are 6 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment        | Reference  |
|-------|---------|----------|--------|----------------|------------|
| A     | 339     | SER      | -      | expression tag | UNP O75475 |
| A     | 340     | ASN      | -      | expression tag | UNP O75475 |
| A     | 341     | ALA      | -      | expression tag | UNP O75475 |
| A     | 342     | ALA      | -      | expression tag | UNP O75475 |
| A     | 343     | SER      | -      | expression tag | UNP O75475 |
| A     | 344     | TRP      | -      | expression tag | UNP O75475 |

## 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: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



### 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

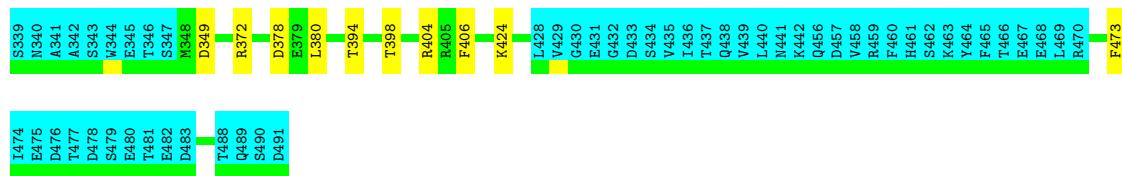
- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



#### 4.2.2 Score per residue for model 2

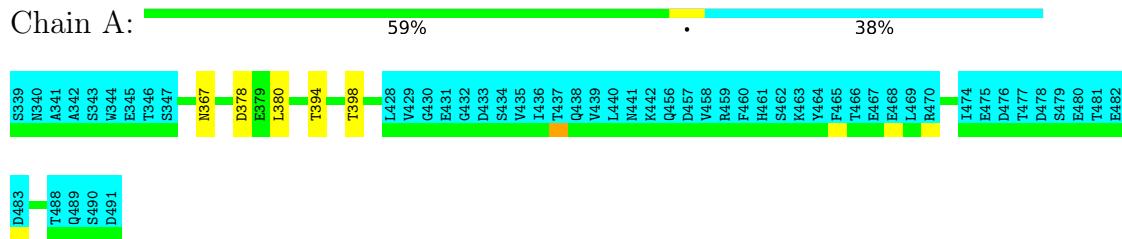
- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein





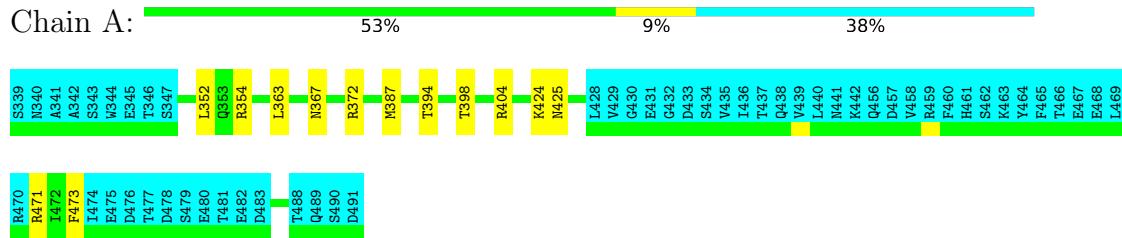
#### 4.2.3 Score per residue for model 3

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



#### 4.2.4 Score per residue for model 4

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



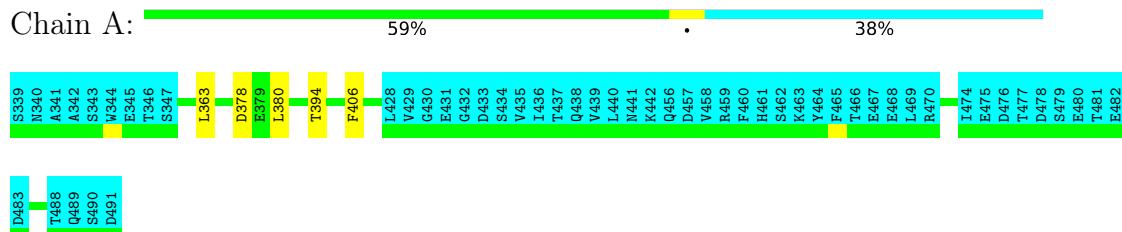
#### 4.2.5 Score per residue for model 5

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



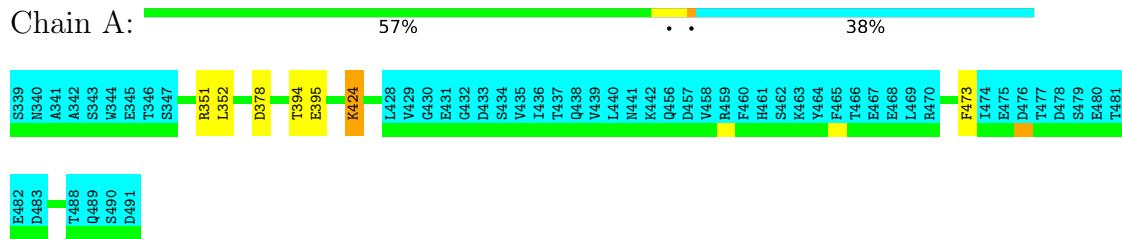
#### 4.2.6 Score per residue for model 6

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



#### 4.2.7 Score per residue for model 7

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



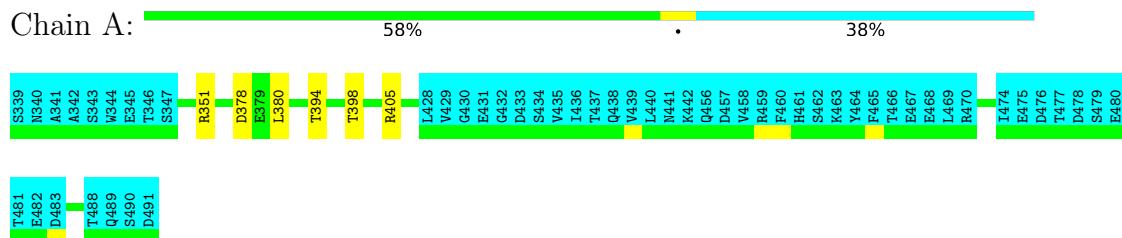
#### 4.2.8 Score per residue for model 8

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



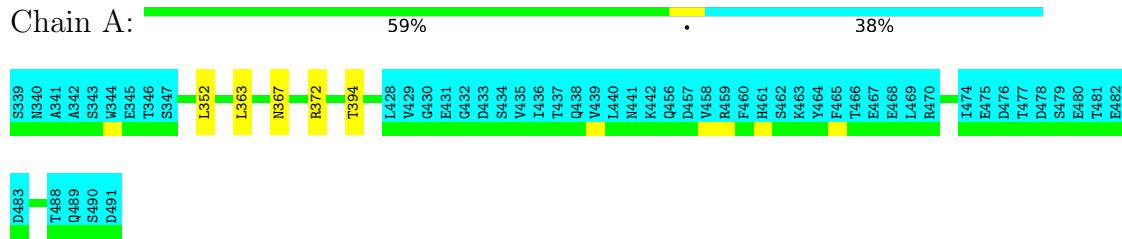
#### 4.2.9 Score per residue for model 9

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



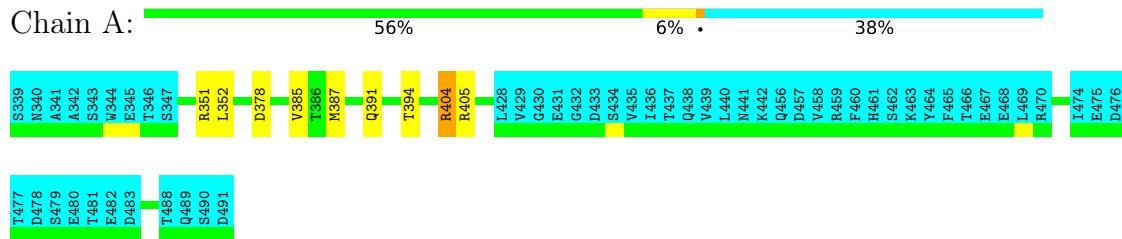
#### 4.2.10 Score per residue for model 10

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



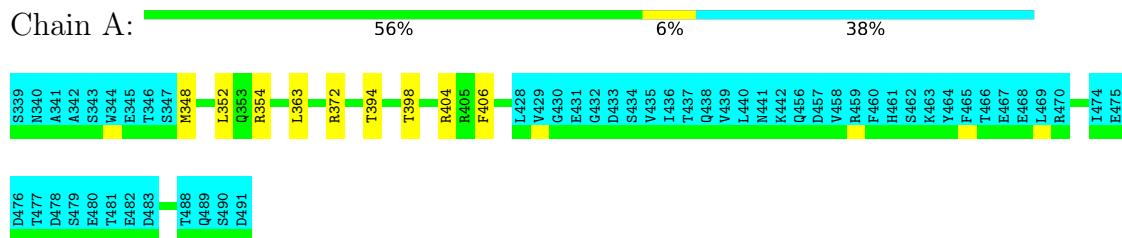
#### 4.2.11 Score per residue for model 11

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



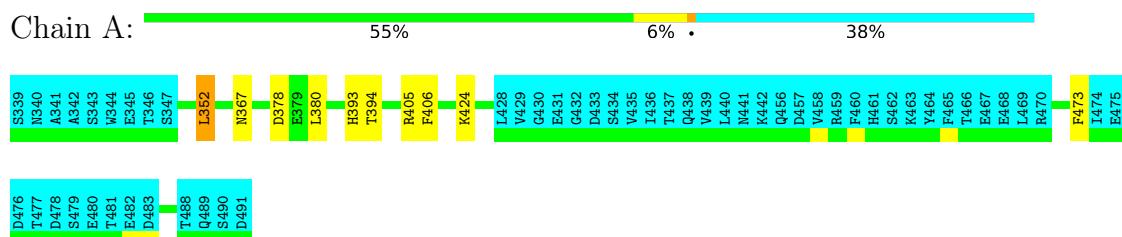
#### 4.2.12 Score per residue for model 12

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



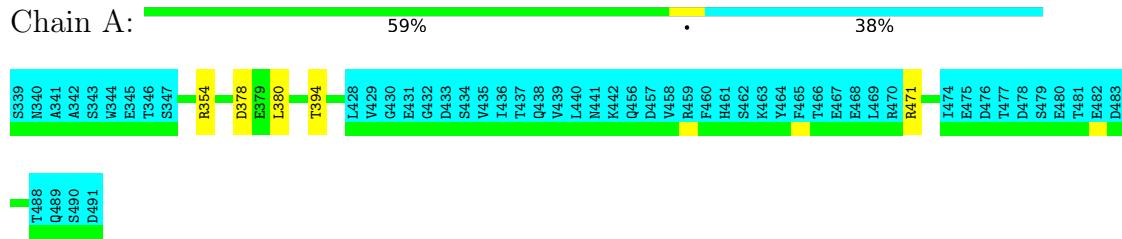
#### 4.2.13 Score per residue for model 13

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



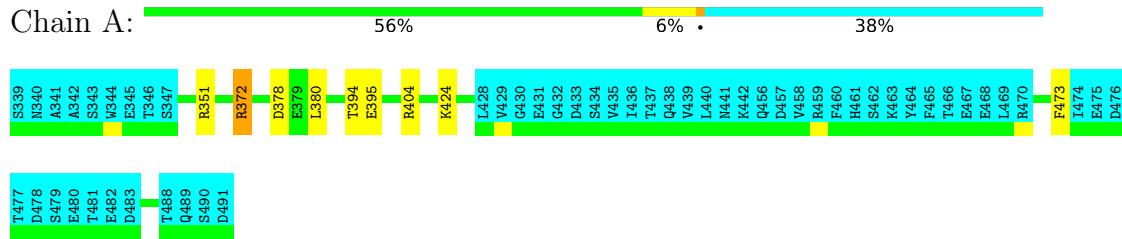
#### 4.2.14 Score per residue for model 14

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



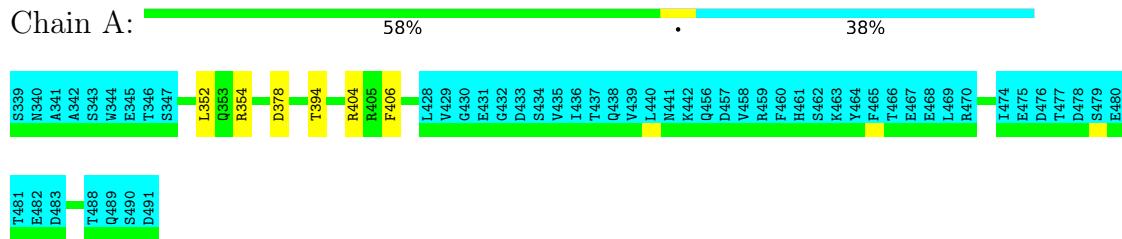
#### 4.2.18 Score per residue for model 18

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



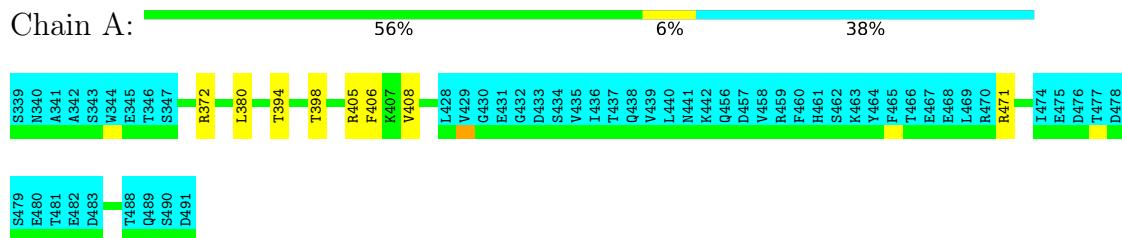
#### 4.2.19 Score per residue for model 19

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



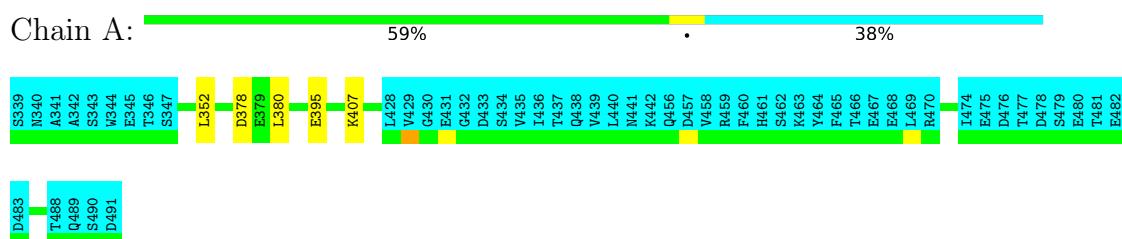
#### 4.2.20 Score per residue for model 20

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



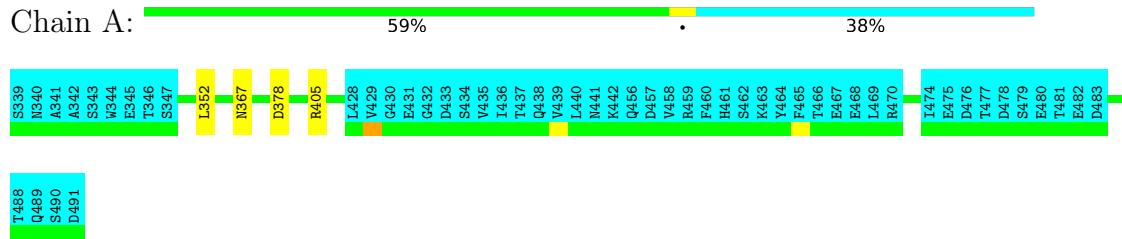
#### 4.2.21 Score per residue for model 21

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



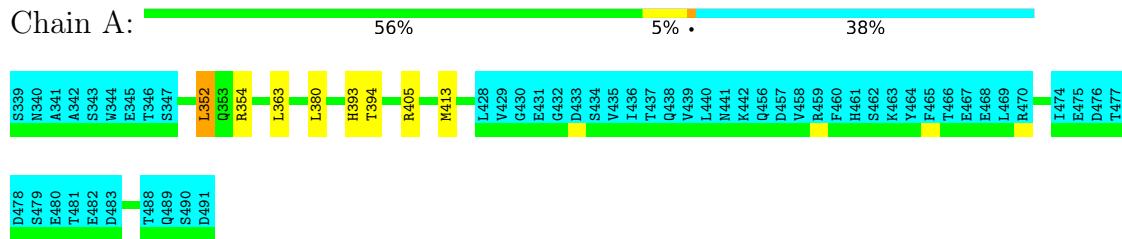
#### 4.2.22 Score per residue for model 22

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



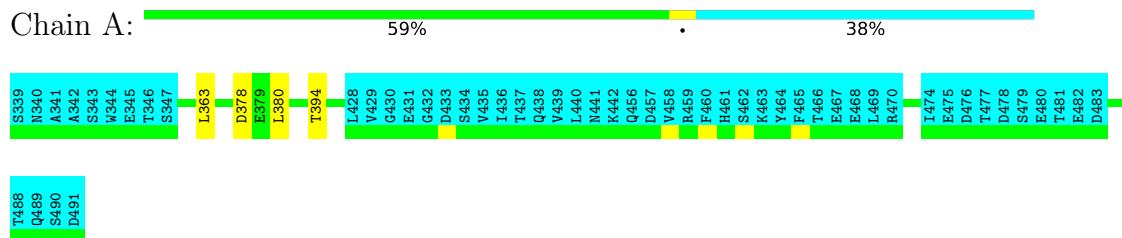
#### 4.2.23 Score per residue for model 23

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



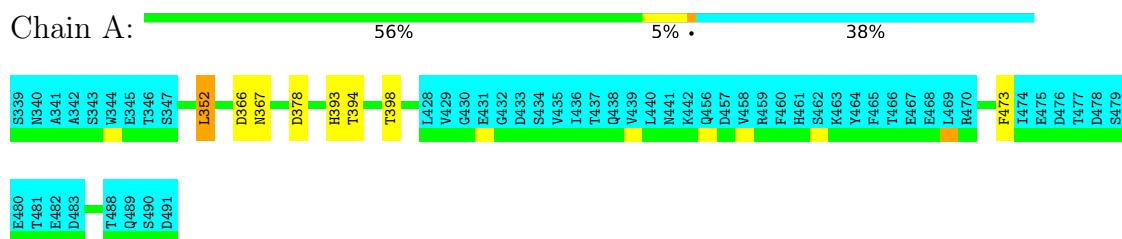
#### 4.2.24 Score per residue for model 24

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



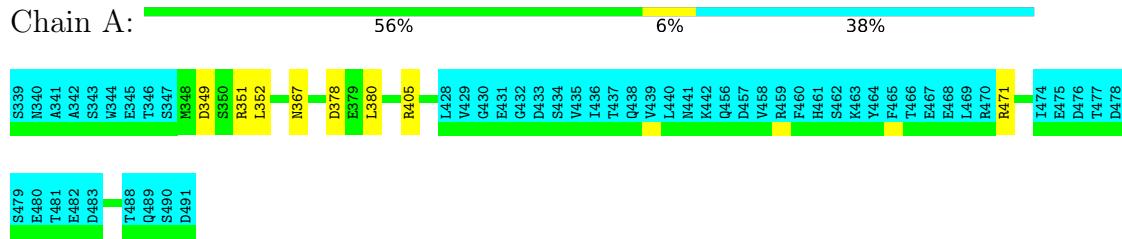
#### 4.2.25 Score per residue for model 25

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



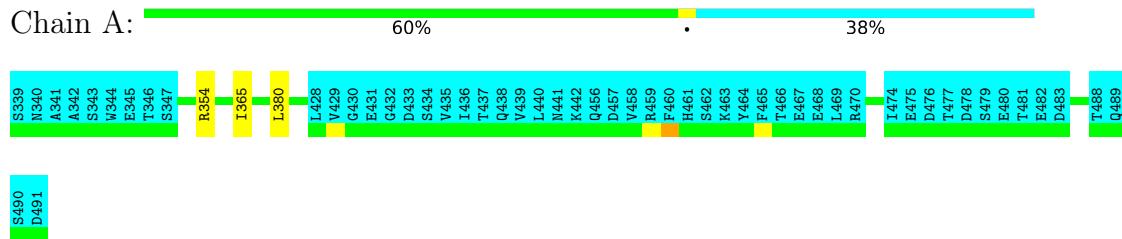
#### 4.2.26 Score per residue for model 26

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



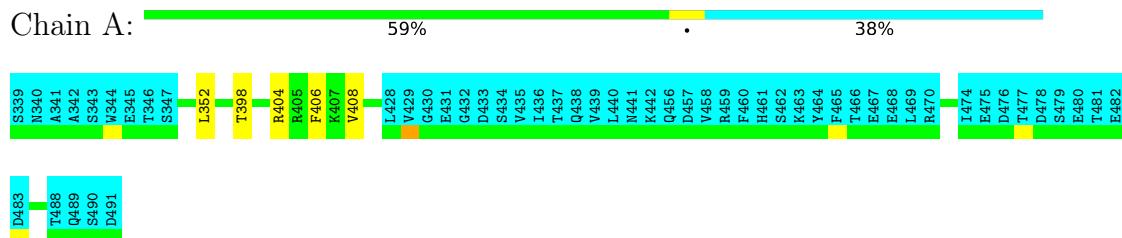
#### 4.2.27 Score per residue for model 27

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



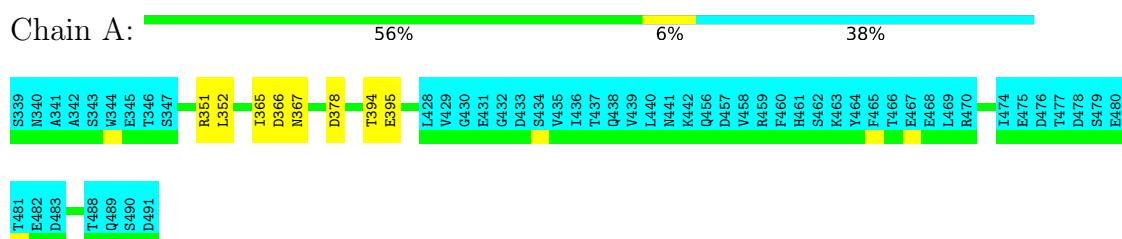
#### 4.2.28 Score per residue for model 28

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



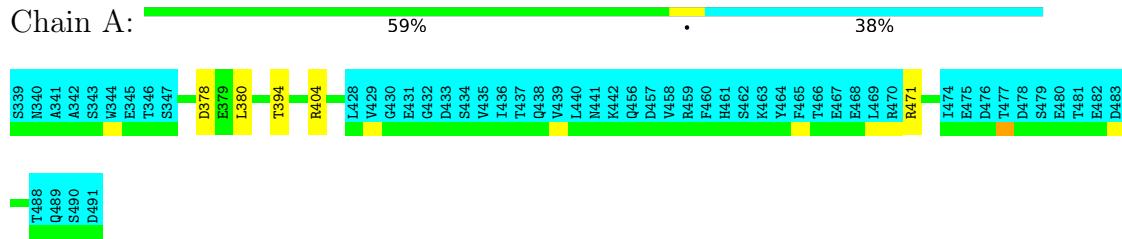
#### 4.2.29 Score per residue for model 29

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



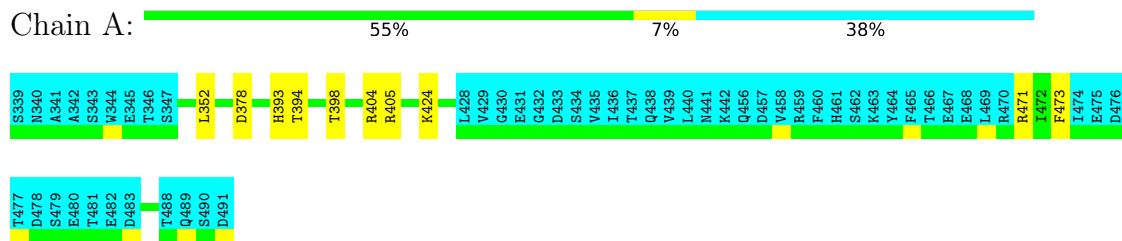
#### 4.2.30 Score per residue for model 30

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



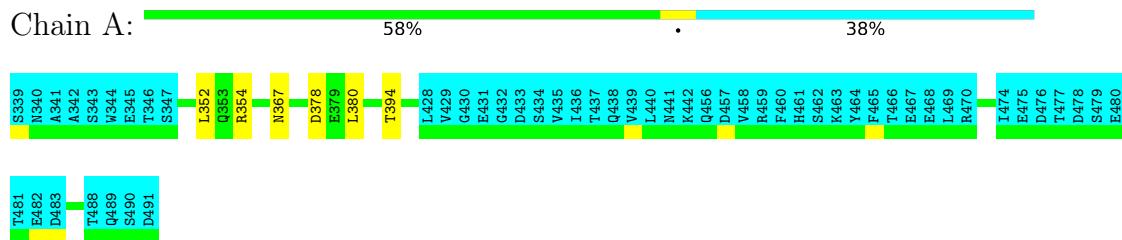
#### 4.2.31 Score per residue for model 31 (medoid)

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



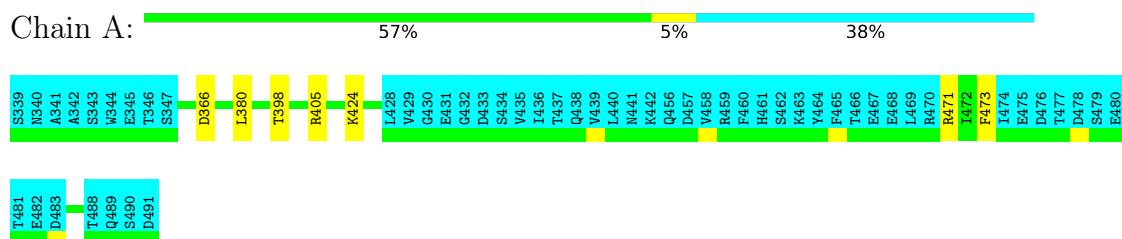
#### 4.2.32 Score per residue for model 32

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



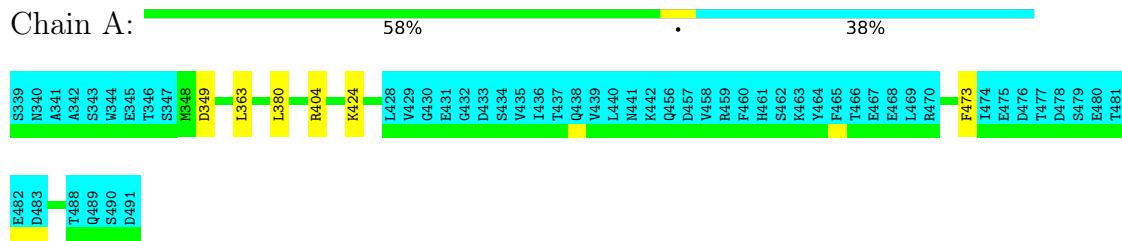
#### 4.2.33 Score per residue for model 33

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



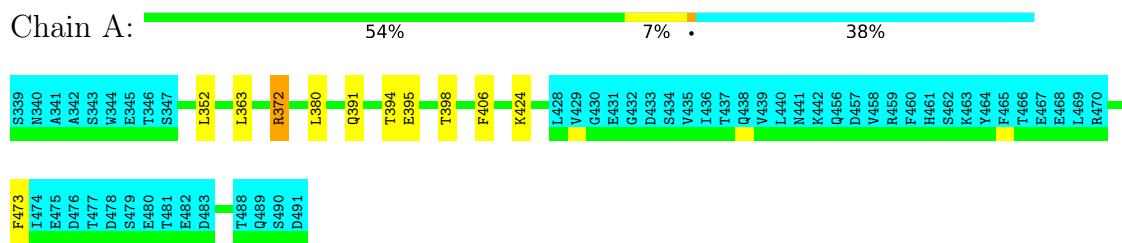
#### 4.2.34 Score per residue for model 34

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



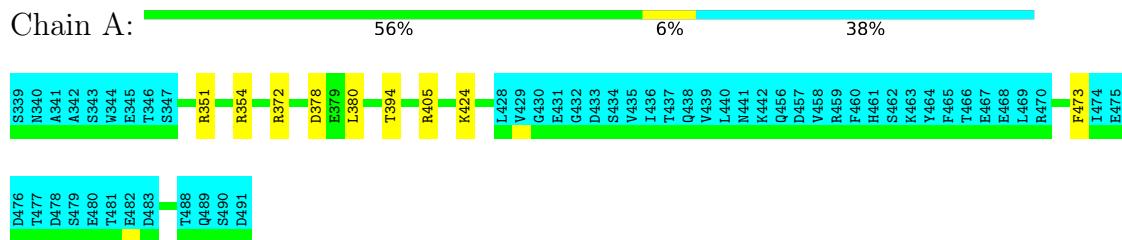
#### 4.2.35 Score per residue for model 35

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



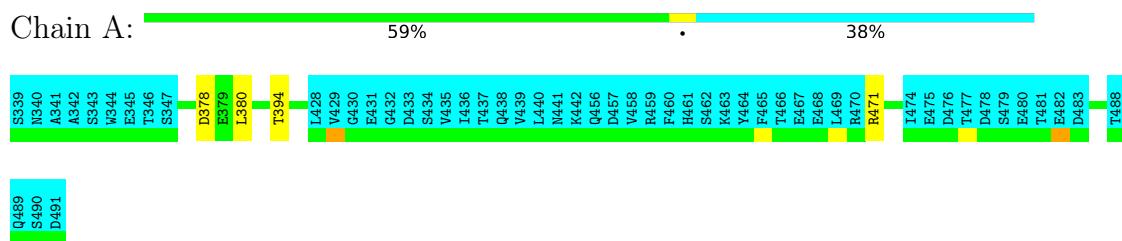
#### 4.2.36 Score per residue for model 36

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



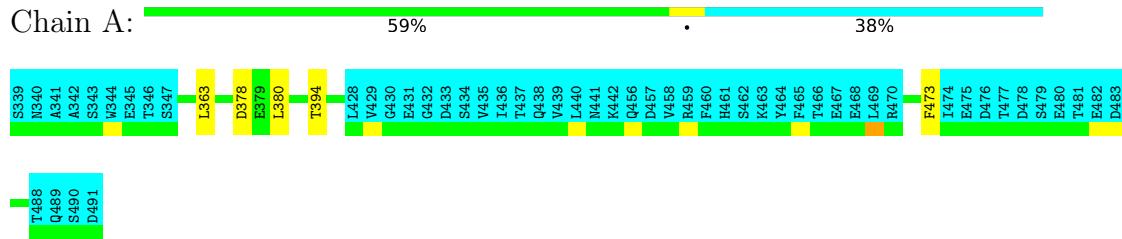
#### 4.2.37 Score per residue for model 37

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



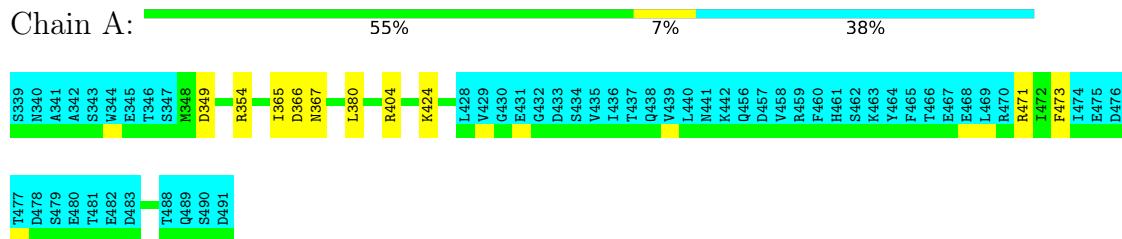
#### 4.2.38 Score per residue for model 38

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



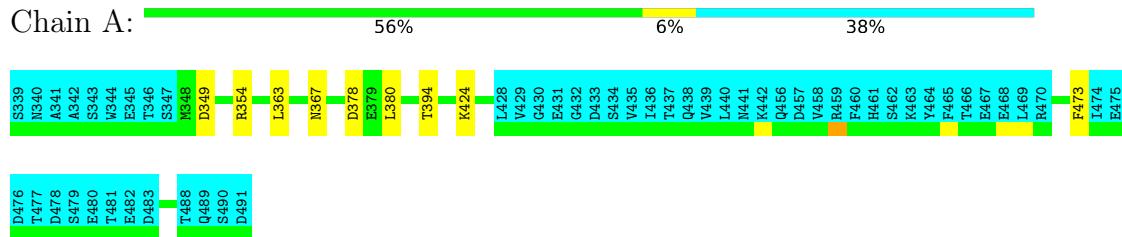
#### 4.2.39 Score per residue for model 39

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



#### 4.2.40 Score per residue for model 40

- Molecule 1: PC4 and SFRS1-interacting protein, Cell division cycle-associated 7-like protein



## 5 Refinement protocol and experimental data overview i

The models were refined using the following method: *simulated annealing*.

Of the 100 calculated structures, 40 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 |
|---------------|--------------------|---------|
| YASARA        | refinement         |         |
| TopSpin       | structure solution |         |
| Sparky        | structure solution |         |
| CYANA         | structure solution |         |

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               | 1              |
| Total number of shifts                       | 1782           |
| Number of shifts mapped to atoms             | 1782           |
| Number of unparsed shifts                    | 0              |
| Number of shifts with mapping errors         | 0              |
| Number of shifts with mapping warnings       | 0              |
| Assignment completeness (well-defined parts) | 91%            |

## 6 Model quality [\(i\)](#)

### 6.1 Standard geometry [\(i\)](#)

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

| Mol | Chain | Bond lengths |                      | Bond angles |                      |
|-----|-------|--------------|----------------------|-------------|----------------------|
|     |       | RMSZ         | #Z>5                 | RMSZ        | #Z>5                 |
| 1   | A     | 0.63±0.01    | 0±0/729 ( 0.0± 0.0%) | 0.71±0.02   | 2±1/972 ( 0.2± 0.1%) |
| All | All   | 0.63         | 0/29160 ( 0.0%)      | 0.71        | 60/38880 ( 0.2%)     |

There are no bond-length outliers.

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

| Mol | Chain | Res | Type | Atoms     | Z    | Observed(°) | Ideal(°) | Models |       |
|-----|-------|-----|------|-----------|------|-------------|----------|--------|-------|
|     |       |     |      |           |      |             |          | Worst  | Total |
| 1   | A     | 404 | ARG  | NE-CZ-NH1 | 6.87 | 123.74      | 120.30   | 31     | 10    |
| 1   | A     | 372 | ARG  | NE-CZ-NH1 | 6.84 | 123.72      | 120.30   | 10     | 8     |
| 1   | A     | 471 | ARG  | NE-CZ-NH1 | 6.34 | 123.47      | 120.30   | 33     | 9     |
| 1   | A     | 351 | ARG  | NE-CZ-NH1 | 6.32 | 123.46      | 120.30   | 11     | 7     |
| 1   | A     | 405 | ARG  | NE-CZ-NH1 | 5.99 | 123.29      | 120.30   | 33     | 14    |
| 1   | A     | 354 | ARG  | NE-CZ-NH1 | 5.85 | 123.22      | 120.30   | 17     | 12    |

There are no chirality outliers.

There are no planarity outliers.

### 6.2 Too-close contacts [\(i\)](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in 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     | 720   | 755      | 755      | 0±1     |
| All | All   | 28800 | 30200    | 30200    | 18      |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 0.

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

| Atom-1           | Atom-2          | Clash(Å) | Distance(Å) | Models |       |
|------------------|-----------------|----------|-------------|--------|-------|
|                  |                 |          |             | Worst  | Total |
| 1:A:424:LYS:HA   | 1:A:473:PHE:CE2 | 0.51     | 2.41        | 35     | 6     |
| 1:A:424:LYS:HA   | 1:A:473:PHE:CE1 | 0.51     | 2.40        | 31     | 6     |
| 1:A:352:LEU:HD23 | 1:A:393:HIS:CD2 | 0.42     | 2.50        | 31     | 4     |
| 1:A:406:PHE:CE2  | 1:A:408:VAL:HB  | 0.41     | 2.50        | 28     | 1     |
| 1:A:406:PHE:CE1  | 1:A:408:VAL:HB  | 0.40     | 2.52        | 20     | 1     |

## 6.3 Torsion angles [\(i\)](#)

### 6.3.1 Protein backbone [\(i\)](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all 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     | 87/140 (62%)    | 83±1 (96±1%) | 3±1 (4±1%) | 0±0 (0±0%) | 50 82       |
| All | All   | 3480/5600 (62%) | 3335 (96%)   | 139 (4%)   | 6 (0%)     | 50 82       |

All 1 unique Ramachandran outliers are listed below.

| Mol | Chain | Res | Type | Models (Total) |
|-----|-------|-----|------|----------------|
| 1   | A     | 406 | PHE  | 6              |

### 6.3.2 Protein sidechains [\(i\)](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all 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     | 81/130 (62%)    | 76±1 (94±2%) | 5±1 (6±2%) | 25 74       |
| All | All   | 3240/5200 (62%) | 3059 (94%)   | 181 (6%)   | 25 74       |

All 23 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) |
|-----|-------|-----|------|----------------|
| 1   | A     | 394 | THR  | 30             |
| 1   | A     | 380 | LEU  | 28             |
| 1   | A     | 378 | ASP  | 26             |
| 1   | A     | 352 | LEU  | 17             |
| 1   | A     | 398 | THR  | 13             |
| 1   | A     | 367 | ASN  | 13             |
| 1   | A     | 363 | LEU  | 12             |
| 1   | A     | 395 | GLU  | 6              |
| 1   | A     | 349 | ASP  | 5              |
| 1   | A     | 404 | ARG  | 4              |
| 1   | A     | 372 | ARG  | 4              |
| 1   | A     | 391 | GLN  | 4              |
| 1   | A     | 366 | ASP  | 4              |
| 1   | A     | 365 | ILE  | 3              |
| 1   | A     | 387 | MET  | 2              |
| 1   | A     | 425 | ASN  | 2              |
| 1   | A     | 348 | MET  | 2              |
| 1   | A     | 424 | LYS  | 1              |
| 1   | A     | 371 | ASN  | 1              |
| 1   | A     | 399 | THR  | 1              |
| 1   | A     | 385 | VAL  | 1              |
| 1   | A     | 407 | LYS  | 1              |
| 1   | A     | 413 | MET  | 1              |

### 6.3.3 RNA [\(i\)](#)

There are no RNA molecules in this entry.

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

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

### 6.5 Carbohydrates [\(i\)](#)

There are no monosaccharides in this entry.

### 6.6 Ligand geometry [\(i\)](#)

There are no ligands in this entry.

## 6.7 Other polymers [\(i\)](#)

There are no such molecules in this entry.

## 6.8 Polymer linkage issues [\(i\)](#)

There are no chain breaks in this entry.

## 7 Chemical shift validation i

The completeness of assignment taking into account all chemical shift lists is 91% for the well-defined parts and 90% for the entire structure.

### 7.1 Chemical shift list 1

File name: working\_cs.cif

Chemical shift list name: *p1281\_jpo2\_2\_chim.star*

#### 7.1.1 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                  | 1782 |
| Number of shifts mapped to atoms        | 1782 |
| Number of unparsed shifts               | 0    |
| Number of shifts with mapping errors    | 0    |
| Number of shifts with mapping warnings  | 0    |
| Number of shift outliers (ShiftChecker) | 5    |

#### 7.1.2 Chemical shift referencing i

The following table shows the suggested chemical shift referencing corrections.

| Nucleus                | # values | Correction $\pm$ precision, ppm | Suggested action        |
|------------------------|----------|---------------------------------|-------------------------|
| $^{13}\text{C}_\alpha$ | 137      | -0.45 $\pm$ 0.11                | None needed (< 0.5 ppm) |
| $^{13}\text{C}_\beta$  | 134      | 0.35 $\pm$ 0.11                 | None needed (< 0.5 ppm) |
| $^{13}\text{C}'$       | 138      | -0.26 $\pm$ 0.09                | None needed (< 0.5 ppm) |
| $^{15}\text{N}$        | 136      | 0.03 $\pm$ 0.14                 | None needed (< 0.5 ppm) |

#### 7.1.3 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 91%, i.e. 1180 atoms were assigned a chemical shift out of a possible 1293. 0 out of 12 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | Total         | $^1\text{H}$  | $^{13}\text{C}$ | $^{15}\text{N}$ |
|-----------|---------------|---------------|-----------------|-----------------|
| Backbone  | 432/436 (99%) | 173/175 (99%) | 174/174 (100%)  | 85/87 (98%)     |
| Sidechain | 686/774 (89%) | 471/501 (94%) | 203/235 (86%)   | 12/38 (32%)     |

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|          | Total           | <sup>1</sup> H | <sup>13</sup> C | <sup>15</sup> N |
|----------|-----------------|----------------|-----------------|-----------------|
| Aromatic | 62/83 (75%)     | 38/42 (90%)    | 24/39 (62%)     | 0/2 (0%)        |
| Overall  | 1180/1293 (91%) | 682/718 (95%)  | 401/448 (90%)   | 97/127 (76%)    |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 90%, i.e. 1775 atoms were assigned a chemical shift out of a possible 1972. 0 out of 19 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

|           | Total           | <sup>1</sup> H  | <sup>13</sup> C | <sup>15</sup> N |
|-----------|-----------------|-----------------|-----------------|-----------------|
| Backbone  | 687/703 (98%)   | 276/283 (98%)   | 275/280 (98%)   | 136/140 (97%)   |
| Sidechain | 992/1138 (87%)  | 682/732 (93%)   | 296/355 (83%)   | 14/51 (27%)     |
| Aromatic  | 96/131 (73%)    | 58/66 (88%)     | 37/61 (61%)     | 1/4 (25%)       |
| Overall   | 1775/1972 (90%) | 1016/1081 (94%) | 608/696 (87%)   | 151/195 (77%)   |

#### 7.1.4 Statistically unusual chemical shifts [\(i\)](#)

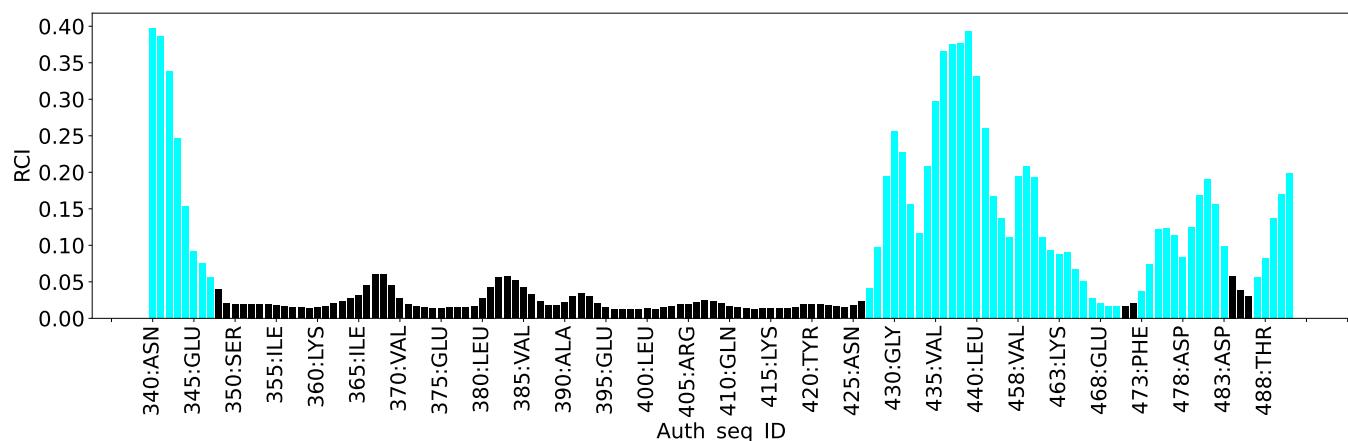
The following table lists the statistically unusual chemical shifts. These are statistical measures, and large deviations from the mean do not necessarily imply incorrect assignments. Molecules containing paramagnetic centres or hemes are expected to give rise to anomalous chemical shifts.

| List Id | Chain | Res | Type | Atom | Shift, ppm | Expected range, ppm | Z-score |
|---------|-------|-----|------|------|------------|---------------------|---------|
| 1       | A     | 417 | THR  | HG1  | 5.67       | 0.08 – 2.19         | 21.5    |
| 1       | A     | 386 | THR  | HG1  | 5.53       | 0.08 – 2.19         | 20.8    |
| 1       | A     | 398 | THR  | HG1  | 4.76       | 0.08 – 2.19         | 17.2    |
| 1       | A     | 399 | THR  | HG1  | 4.76       | 0.08 – 2.19         | 17.2    |
| 1       | A     | 360 | LYS  | HE2  | 1.94       | 1.95 – 3.88         | -5.0    |

#### 7.1.5 Random Coil Index (RCI) plots [\(i\)](#)

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:



## 8 NMR restraints analysis i

### 8.1 Conformationally restricting restraints i

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                                | 2936  |
| Intra-residue ( $ i-j =0$ )                              | 833   |
| Sequential ( $ i-j =1$ )                                 | 667   |
| Medium range ( $ i-j >1$ and $ i-j <5$ )                 | 698   |
| Long range ( $ i-j \geq 5$ )                             | 738   |
| Inter-chain  | 0     |
| Hydrogen bond restraints                                 | 0     |
| Disulfide bond restraints                                | 0     |
| Total dihedral-angle restraints                          | 192   |
| Number of unmapped restraints                            | 0     |
| Number of restraints per residue                         | 22.3  |
| Number of long range restraints per residue <sup>1</sup> | 5.3   |

<sup>1</sup>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 i

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 i

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)  | 7.7                                    | 0.2     |
| 0.2-0.5 (Medium) | 1.8                                    | 0.5     |
| >0.5 (Large)     | 0.6                                    | 1.3     |

### 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)   | 1.4                                    | 5.0     |
| 10.0-20.0 (Medium) | None                                   | None    |
| >20.0 (Large)      | None                                   | None    |

## 9 Distance violation analysis (i)

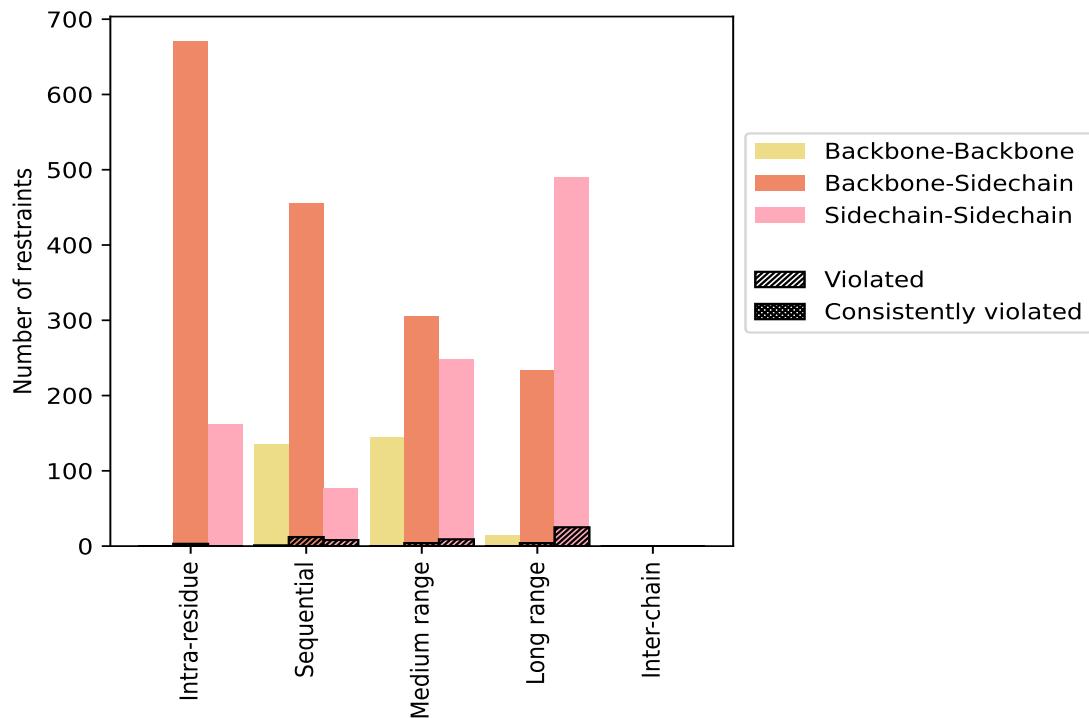
### 9.1 Summary of distance violations (i)

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 | % <sup>1</sup> | Violated <sup>3</sup> |                |                | Consistently Violated <sup>4</sup> |                |                |
|---|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
|   |       |                | Count                 | % <sup>2</sup> | % <sup>1</sup> | Count                              | % <sup>2</sup> | % <sup>1</sup> |
| Intra-residue ( $ i-j =0$ )                   | 833   | 28.4           | 3                     | 0.4            | 0.1            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 1     | 0.0            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 670   | 22.8           | 3                     | 0.4            | 0.1            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 162   | 5.5            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Sequential ( $ i-j =1$ )                      | 667   | 22.7           | 21                    | 3.1            | 0.7            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 135   | 4.6            | 1                     | 0.7            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 455   | 15.5           | 12                    | 2.6            | 0.4            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 77    | 2.6            | 8                     | 10.4           | 0.3            | 0                                  | 0.0            | 0.0            |
| Medium range ( $ i-j >1 \text{ & }  i-j <5$ ) | 698   | 23.8           | 13                    | 1.9            | 0.4            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 145   | 4.9            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 305   | 10.4           | 4                     | 1.3            | 0.1            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 248   | 8.4            | 9                     | 3.6            | 0.3            | 0                                  | 0.0            | 0.0            |
| Long range ( $ i-j \geq 5$ )                  | 738   | 25.1           | 29                    | 3.9            | 1.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 14    | 0.5            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 234   | 8.0            | 4                     | 1.7            | 0.1            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 490   | 16.7           | 25                    | 5.1            | 0.9            | 0                                  | 0.0            | 0.0            |
| Inter-chain                                   | 0     | 0.0            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 0     | 0.0            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 0     | 0.0            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 0     | 0.0            | 0                     | 0.0            | 0.0            | 0                                  | 0.0            | 0.0            |
| Hydrogen bond                                 | 0     | 0.0            | 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   | 2936  | 100.0          | 66                    | 2.2            | 2.2            | 0                                  | 0.0            | 0.0            |
| Backbone-Backbone                             | 295   | 10.0           | 1                     | 0.3            | 0.0            | 0                                  | 0.0            | 0.0            |
| Backbone-Sidechain                            | 1664  | 56.7           | 23                    | 1.4            | 0.8            | 0                                  | 0.0            | 0.0            |
| Sidechain-Sidechain                           | 977   | 33.3           | 42                    | 4.3            | 1.4            | 0                                  | 0.0            | 0.0            |

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

### 9.1.1 Bar chart : Distribution of distance restraints and violations [\(i\)](#)



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 [\(i\)](#)

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 <sup>6</sup> (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
|          | IR <sup>1</sup>      | SQ <sup>2</sup> | MR <sup>3</sup> | LR <sup>4</sup> | IC <sup>5</sup> | Total |          |         |                     |            |
| 1        | 0                    | 0               | 1               | 5               | 0               | 6     | 0.21     | 0.63    | 0.19                | 0.14       |
| 2        | 0                    | 2               | 3               | 6               | 0               | 11    | 0.22     | 0.76    | 0.18                | 0.17       |
| 3        | 0                    | 0               | 1               | 3               | 0               | 4     | 0.2      | 0.34    | 0.08                | 0.16       |
| 4        | 0                    | 1               | 2               | 5               | 0               | 8     | 0.33     | 1.04    | 0.3                 | 0.18       |
| 5        | 0                    | 1               | 3               | 7               | 0               | 11    | 0.3      | 1.24    | 0.33                | 0.17       |
| 6        | 0                    | 2               | 1               | 5               | 0               | 8     | 0.18     | 0.42    | 0.1                 | 0.14       |
| 7        | 0                    | 5               | 3               | 5               | 0               | 13    | 0.17     | 0.3     | 0.05                | 0.16       |
| 8        | 1                    | 0               | 2               | 7               | 0               | 10    | 0.17     | 0.32    | 0.06                | 0.16       |
| 9        | 0                    | 1               | 2               | 7               | 0               | 10    | 0.17     | 0.4     | 0.08                | 0.14       |
| 10       | 0                    | 1               | 2               | 8               | 0               | 11    | 0.16     | 0.36    | 0.07                | 0.13       |
| 11       | 0                    | 1               | 5               | 5               | 0               | 11    | 0.23     | 0.91    | 0.23                | 0.13       |

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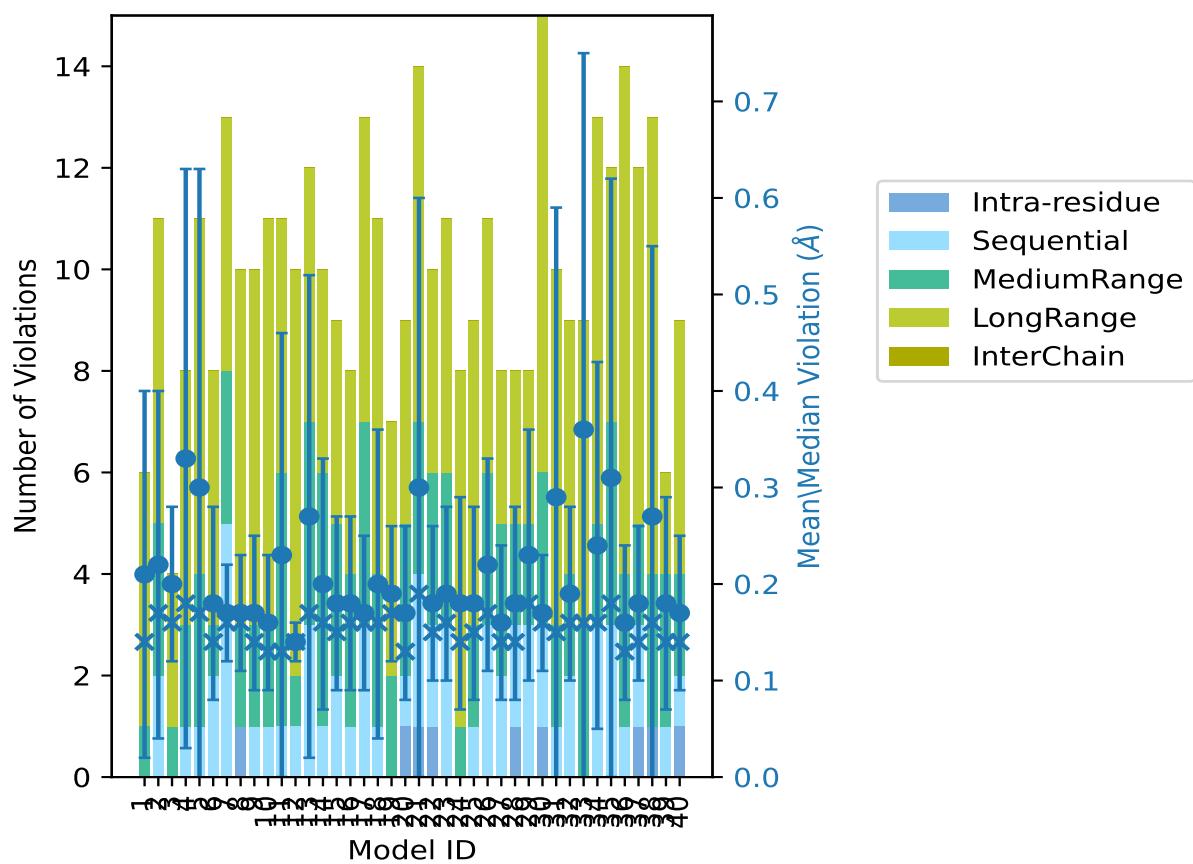
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| Model ID | Number of violations |                 |                 |                 |                 |       | Mean (Å) | Max (Å) | SD <sup>6</sup> (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
|          | IR <sup>1</sup>      | SQ <sup>2</sup> | MR <sup>3</sup> | LR <sup>4</sup> | IC <sup>5</sup> | Total |          |         |                     |            |
| 12       | 0                    | 1               | 1               | 8               | 0               | 10    | 0.14     | 0.17    | 0.02                | 0.14       |
| 13       | 0                    | 3               | 4               | 5               | 0               | 12    | 0.27     | 1.02    | 0.25                | 0.17       |
| 14       | 0                    | 1               | 5               | 4               | 0               | 10    | 0.2      | 0.58    | 0.13                | 0.16       |
| 15       | 0                    | 2               | 3               | 4               | 0               | 9     | 0.18     | 0.44    | 0.09                | 0.15       |
| 16       | 0                    | 1               | 3               | 4               | 0               | 8     | 0.18     | 0.4     | 0.09                | 0.16       |
| 17       | 0                    | 3               | 4               | 6               | 0               | 13    | 0.17     | 0.41    | 0.08                | 0.16       |
| 18       | 0                    | 1               | 3               | 7               | 0               | 11    | 0.2      | 0.71    | 0.16                | 0.16       |
| 19       | 0                    | 0               | 2               | 5               | 0               | 7     | 0.19     | 0.36    | 0.07                | 0.17       |
| 20       | 1                    | 1               | 3               | 4               | 0               | 9     | 0.17     | 0.42    | 0.09                | 0.13       |
| 21       | 1                    | 3               | 3               | 7               | 0               | 14    | 0.3      | 1.25    | 0.3                 | 0.19       |
| 22       | 1                    | 2               | 3               | 4               | 0               | 10    | 0.18     | 0.4     | 0.08                | 0.15       |
| 23       | 0                    | 3               | 3               | 5               | 0               | 11    | 0.19     | 0.42    | 0.09                | 0.16       |
| 24       | 0                    | 0               | 1               | 7               | 0               | 8     | 0.18     | 0.48    | 0.11                | 0.14       |
| 25       | 0                    | 1               | 2               | 6               | 0               | 9     | 0.18     | 0.45    | 0.1                 | 0.15       |
| 26       | 0                    | 3               | 3               | 5               | 0               | 11    | 0.22     | 0.46    | 0.11                | 0.17       |
| 27       | 0                    | 2               | 3               | 3               | 0               | 8     | 0.16     | 0.38    | 0.08                | 0.14       |
| 28       | 1                    | 2               | 2               | 3               | 0               | 8     | 0.18     | 0.45    | 0.1                 | 0.14       |
| 29       | 0                    | 3               | 2               | 3               | 0               | 8     | 0.23     | 0.45    | 0.13                | 0.18       |
| 30       | 1                    | 2               | 3               | 9               | 0               | 15    | 0.17     | 0.38    | 0.06                | 0.16       |
| 31       | 0                    | 1               | 2               | 7               | 0               | 10    | 0.29     | 1.1     | 0.3                 | 0.15       |
| 32       | 0                    | 2               | 2               | 5               | 0               | 9     | 0.19     | 0.38    | 0.09                | 0.16       |
| 33       | 0                    | 0               | 3               | 6               | 0               | 9     | 0.36     | 1.3     | 0.39                | 0.16       |
| 34       | 0                    | 3               | 2               | 8               | 0               | 13    | 0.24     | 0.78    | 0.19                | 0.16       |
| 35       | 0                    | 3               | 4               | 5               | 0               | 12    | 0.31     | 1.2     | 0.31                | 0.18       |
| 36       | 0                    | 1               | 3               | 10              | 0               | 14    | 0.16     | 0.41    | 0.08                | 0.13       |
| 37       | 1                    | 2               | 2               | 7               | 0               | 12    | 0.18     | 0.4     | 0.08                | 0.14       |
| 38       | 1                    | 0               | 3               | 9               | 0               | 13    | 0.27     | 1.14    | 0.28                | 0.16       |
| 39       | 0                    | 1               | 3               | 2               | 0               | 6     | 0.18     | 0.42    | 0.11                | 0.14       |
| 40       | 1                    | 1               | 2               | 5               | 0               | 9     | 0.17     | 0.4     | 0.08                | 0.14       |

<sup>1</sup>Intra-residue restraints, <sup>2</sup>Sequential restraints, <sup>3</sup>Medium range restraints, <sup>4</sup>Long range restraints,

<sup>5</sup>Inter-chain restraints, <sup>6</sup>Standard deviation

### 9.2.1 Bar graph : Distance Violation statistics for each model [\(i\)](#)



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, 2870(IR:830, SQ:646, MR:685, LR:709, IC:0) restraints are not violated in the ensemble.

| Number of violated restraints |                 |                 |                 |                 |       | Fraction of the ensemble |      |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|------|
| IR <sup>1</sup>               | SQ <sup>2</sup> | MR <sup>3</sup> | LR <sup>4</sup> | IC <sup>5</sup> | Total | Count <sup>6</sup>       | %    |
| 1                             | 10              | 5               | 5               | 0               | 21    | 1                        | 2.5  |
| 1                             | 2               | 2               | 4               | 0               | 9     | 2                        | 5.0  |
| 0                             | 1               | 1               | 5               | 0               | 7     | 3                        | 7.5  |
| 0                             | 2               | 0               | 0               | 0               | 2     | 4                        | 10.0 |
| 0                             | 3               | 0               | 3               | 0               | 6     | 5                        | 12.5 |
| 1                             | 1               | 1               | 2               | 0               | 5     | 6                        | 15.0 |

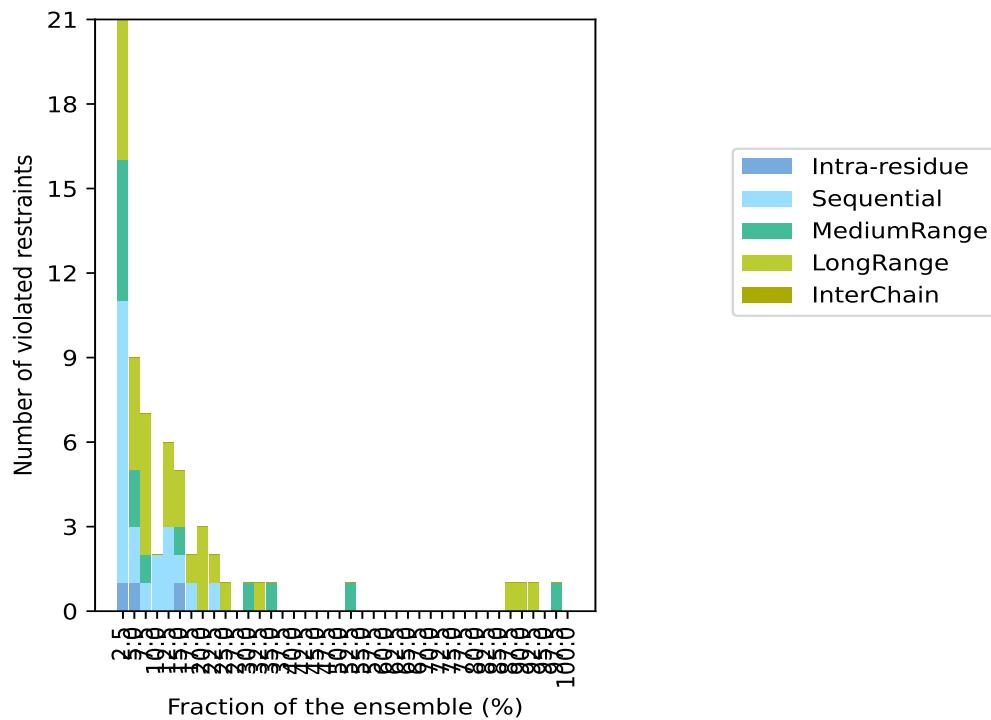
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| Number of violated restraints |                 |                 |                 |                 |       | Fraction of the ensemble |       |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|-------|
| IR <sup>1</sup>               | SQ <sup>2</sup> | MR <sup>3</sup> | LR <sup>4</sup> | IC <sup>5</sup> | Total | Count <sup>6</sup>       | %     |
| 0                             | 1               | 0               | 1               | 0               | 2     | 7                        | 17.5  |
| 0                             | 0               | 0               | 3               | 0               | 3     | 8                        | 20.0  |
| 0                             | 1               | 0               | 1               | 0               | 2     | 9                        | 22.5  |
| 0                             | 0               | 0               | 1               | 0               | 1     | 10                       | 25.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 11                       | 27.5  |
| 0                             | 0               | 1               | 0               | 0               | 1     | 12                       | 30.0  |
| 0                             | 0               | 0               | 1               | 0               | 1     | 13                       | 32.5  |
| 0                             | 0               | 1               | 0               | 0               | 1     | 14                       | 35.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 15                       | 37.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 16                       | 40.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 17                       | 42.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 18                       | 45.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 19                       | 47.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 20                       | 50.0  |
| 0                             | 0               | 1               | 0               | 0               | 1     | 21                       | 52.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 22                       | 55.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 23                       | 57.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 24                       | 60.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 25                       | 62.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 26                       | 65.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 27                       | 67.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 28                       | 70.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 29                       | 72.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 30                       | 75.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 31                       | 77.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 32                       | 80.0  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 33                       | 82.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 34                       | 85.0  |
| 0                             | 0               | 0               | 1               | 0               | 1     | 35                       | 87.5  |
| 0                             | 0               | 0               | 1               | 0               | 1     | 36                       | 90.0  |
| 0                             | 0               | 0               | 1               | 0               | 1     | 37                       | 92.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 38                       | 95.0  |
| 0                             | 0               | 1               | 0               | 0               | 1     | 39                       | 97.5  |
| 0                             | 0               | 0               | 0               | 0               | 0     | 40                       | 100.0 |

<sup>1</sup>Intra-residue restraints, <sup>2</sup>Sequential restraints, <sup>3</sup>Medium range restraints, <sup>4</sup>Long range restraints,  
<sup>5</sup>Inter-chain restraints, <sup>6</sup> Number of models with violations

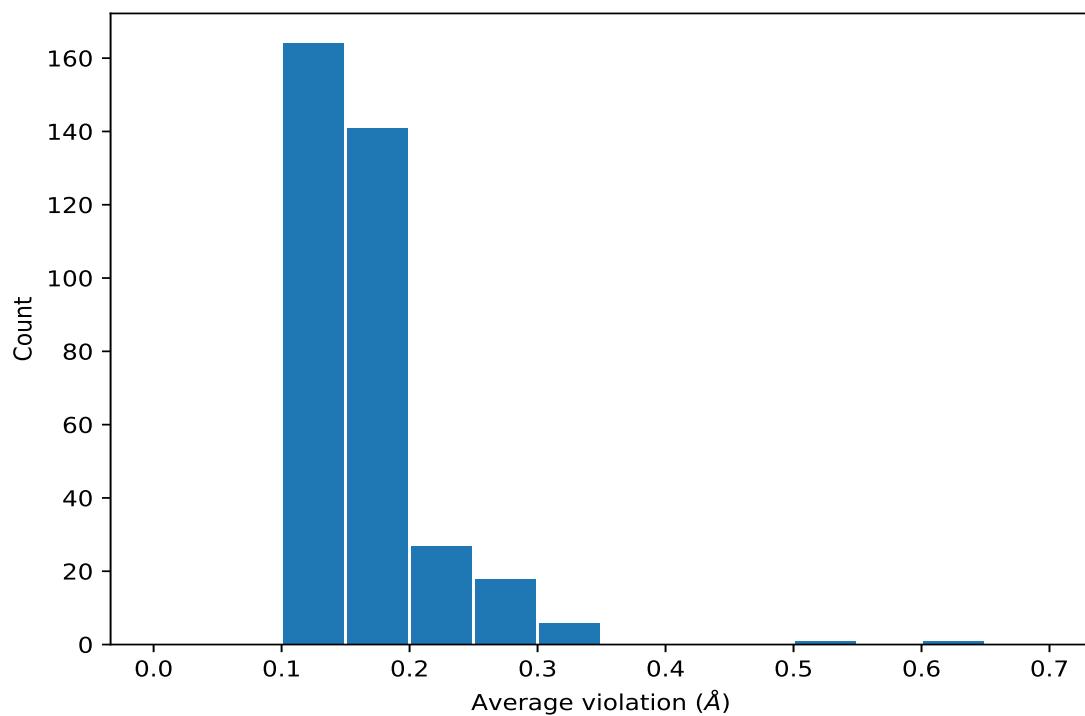
### 9.3.1 Bar graph : Distance violation statistics for the ensemble [\(i\)](#)



## 9.4 Most violated distance restraints in the ensemble [\(i\)](#)

### 9.4.1 Histogram : Distribution of mean distance violations [\(i\)](#)

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 [\(i\)](#)

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 <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 39                  | 0.61     | 0.31                | 0.42       |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 37                  | 0.2      | 0.04                | 0.2        |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 36                  | 0.15     | 0.02                | 0.15       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 36                  | 0.15     | 0.02                | 0.15       |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 35                  | 0.14     | 0.02                | 0.14       |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 21                  | 0.19     | 0.05                | 0.19       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 14                  | 0.17     | 0.04                | 0.16       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 13                  | 0.15     | 0.03                | 0.14       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 13                  | 0.15     | 0.03                | 0.14       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 13                  | 0.15     | 0.03                | 0.14       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 13                  | 0.15     | 0.03                | 0.14       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 13                  | 0.15     | 0.03                | 0.14       |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 13                  | 0.15     | 0.03                | 0.14       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 12                  | 0.52     | 0.2                 | 0.55       |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 10                  | 0.12     | 0.01                | 0.12       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 9                   | 0.17     | 0.06                | 0.16       |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 9                   | 0.12     | 0.01                | 0.12       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 8                   | 0.26     | 0.09                | 0.22       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 8                   | 0.26     | 0.09                | 0.22       |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 8                   | 0.15     | 0.04                | 0.14       |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 8                   | 0.12     | 0.01                | 0.12       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 7                   | 0.17     | 0.02                | 0.16       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 7                   | 0.17     | 0.02                | 0.16       |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 7                   | 0.13     | 0.02                | 0.13       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 6                   | 0.23     | 0.07                | 0.22       |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 6                   | 0.19     | 0.03                | 0.2        |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 6                   | 0.13     | 0.01                | 0.13       |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 6                   | 0.12     | 0.02                | 0.12       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 6                   | 0.12     | 0.02                | 0.12       |
| (1,2219) | 1:A:348:MET:HE1  | 1:A:384:GLN:H    | 6                   | 0.12     | 0.01                | 0.11       |
| (1,2219) | 1:A:348:MET:HE2  | 1:A:384:GLN:H    | 6                   | 0.12     | 0.01                | 0.11       |
| (1,2219) | 1:A:348:MET:HE3  | 1:A:384:GLN:H    | 6                   | 0.12     | 0.01                | 0.11       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 5                   | 0.19     | 0.08                | 0.13       |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.16       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 5                   | 0.15     | 0.02                | 0.14       |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 5                   | 0.13     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 5                   | 0.12     | 0.01                | 0.13       |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 5                   | 0.12     | 0.02                | 0.11       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG11 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG12 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG13 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG21 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG22 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG23 | 4                   | 0.31     | 0.13                | 0.32       |
| (1,2680) | 1:A:408:VAL:HG11 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,2680) | 1:A:408:VAL:HG12 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,2680) | 1:A:408:VAL:HG13 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,2680) | 1:A:408:VAL:HG21 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,2680) | 1:A:408:VAL:HG22 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,2680) | 1:A:408:VAL:HG23 | 1:A:409:SER:H    | 4                   | 0.12     | 0.0                 | 0.12       |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD1  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD2  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD1  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD2  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD1  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD2  | 3                   | 0.2      | 0.02                | 0.21       |
| (1,633)  | 1:A:439:VAL:HG11 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |
| (1,633)  | 1:A:439:VAL:HG12 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |
| (1,633)  | 1:A:439:VAL:HG13 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |
| (1,633)  | 1:A:439:VAL:HG21 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |
| (1,633)  | 1:A:439:VAL:HG22 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,633)  | 1:A:439:VAL:HG23 | 1:A:440:LEU:H    | 3                   | 0.17     | 0.02                | 0.17       |
| (1,2408) | 1:A:370:VAL:HG11 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2408) | 1:A:370:VAL:HG12 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2408) | 1:A:370:VAL:HG13 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2408) | 1:A:370:VAL:HG21 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2408) | 1:A:370:VAL:HG22 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2408) | 1:A:370:VAL:HG23 | 1:A:412:ILE:H    | 3                   | 0.15     | 0.03                | 0.16       |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD21 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD22 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD23 | 3                   | 0.14     | 0.0                 | 0.14       |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD1  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD2  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD1  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD2  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD1  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD2  | 3                   | 0.13     | 0.02                | 0.12       |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG21 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG22 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG23 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG21 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG22 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG23 | 3                   | 0.13     | 0.01                | 0.13       |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 3                   | 0.12     | 0.0                 | 0.12       |

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| Key      | Atom-1           | Atom-2           | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|------------------|---------------------|----------|---------------------|------------|
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 3                   | 0.12     | 0.0                 | 0.12       |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG11 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG12 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG13 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG11 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG12 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG13 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG11 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG12 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG13 | 2                   | 0.16     | 0.05                | 0.16       |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG2  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 2                   | 0.14     | 0.02                | 0.14       |
| (1,1929) | 1:A:439:VAL:HG11 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1929) | 1:A:439:VAL:HG12 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1929) | 1:A:439:VAL:HG13 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1929) | 1:A:439:VAL:HG21 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1929) | 1:A:439:VAL:HG22 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,1929) | 1:A:439:VAL:HG23 | 1:A:440:LEU:HA   | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG11 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG12 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG13 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG21 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG22 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG23 | 2                   | 0.12     | 0.01                | 0.12       |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD21 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG21 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG21 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG22 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG23 | 2                   | 0.12     | 0.0                 | 0.12       |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD21 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD22 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD23 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD21 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD22 | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD23 | 2                   | 0.11     | 0.0                 | 0.11       |

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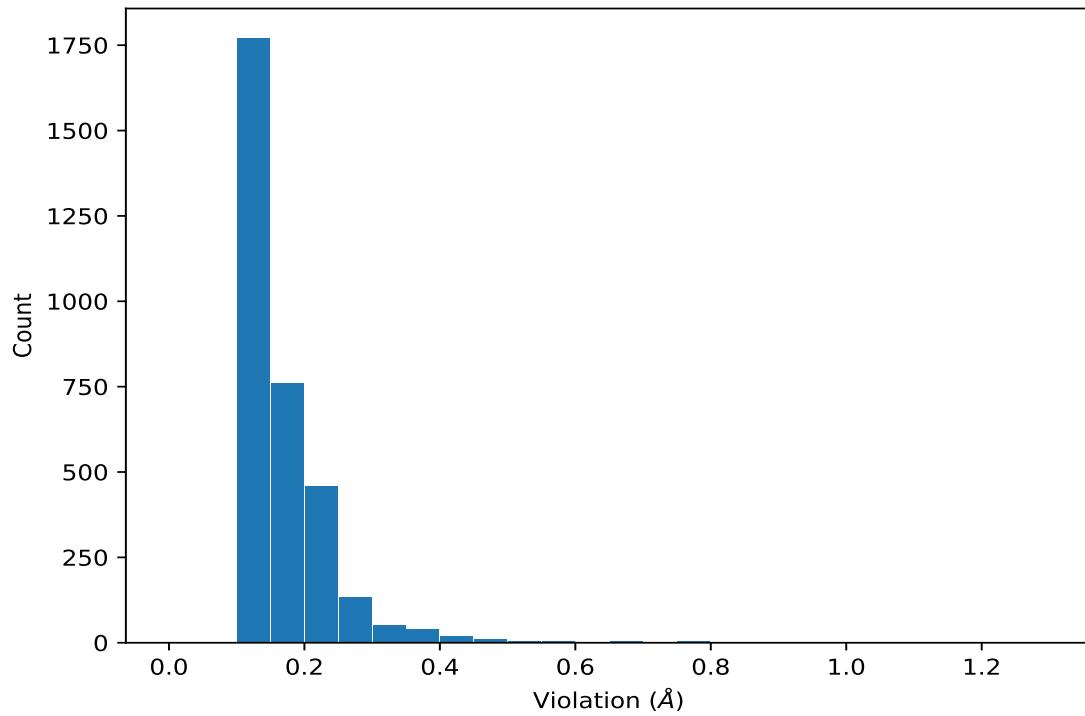
| Key      | Atom-1           | Atom-2         | Models <sup>1</sup> | Mean (Å) | SD <sup>1</sup> (Å) | Median (Å) |
|----------|------------------|----------------|---------------------|----------|---------------------|------------|
| (1,2354) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,2354) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,2354) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,2354) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,2354) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |
| (1,2354) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HA | 2                   | 0.11     | 0.0                 | 0.11       |

<sup>1</sup>Number of violated models, <sup>2</sup>Standard deviation

## 9.5 All violated distance restraints [\(i\)](#)

### 9.5.1 Histogram : Distribution of distance violations [\(i\)](#)

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 [\(i\)](#)

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) |
|----------|------------------|------------------|----------|---------------|
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 33       | 1.3           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 21       | 1.25          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 5        | 1.24          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 35       | 1.2           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 38       | 1.14          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 31       | 1.1           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 4        | 1.04          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 13       | 1.02          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 11       | 0.91          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 34       | 0.78          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 33       | 0.77          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 2        | 0.76          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 18       | 0.71          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 21       | 0.69          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 5        | 0.68          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 35       | 0.68          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 1        | 0.63          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 31       | 0.59          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 38       | 0.58          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 14       | 0.58          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 13       | 0.53          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 34       | 0.53          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 4        | 0.5           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 24       | 0.48          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 26       | 0.46          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG11 | 29       | 0.45          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG12 | 29       | 0.45          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG13 | 29       | 0.45          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG21 | 29       | 0.45          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG22 | 29       | 0.45          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG23 | 29       | 0.45          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 25       | 0.45          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 28       | 0.45          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 15       | 0.44          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 6        | 0.42          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 20       | 0.42          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 23       | 0.42          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 39       | 0.42          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG11 | 35       | 0.41          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG12 | 35       | 0.41          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG13 | 35       | 0.41          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG21 | 35       | 0.41          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG22 | 35       | 0.41          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG23 | 35       | 0.41          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 17       | 0.41          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 36       | 0.41          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 9        | 0.4           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 16       | 0.4           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 22       | 0.4           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 29       | 0.4           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 37       | 0.4           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 40       | 0.4           |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 26       | 0.39          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 32       | 0.38          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 32       | 0.38          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 32       | 0.38          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 27       | 0.38          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 30       | 0.38          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 11       | 0.36          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 10       | 0.36          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 19       | 0.36          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 3        | 0.34          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 32       | 0.33          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 4        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 4        | 0.32          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 29       | 0.32          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 29       | 0.32          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 21       | 0.32          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 21       | 0.32          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 21       | 0.32          |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 8        | 0.32          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 34       | 0.3           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 34       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG11 | 21       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG12 | 21       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG13 | 21       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG21 | 21       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG22 | 21       | 0.3           |
| (1,2217) | 1:A:438:GLN:H    | 1:A:439:VAL:HG23 | 21       | 0.3           |
| (1,1729) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HB2  | 7        | 0.3           |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 26       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 26       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 26       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 26       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 26       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 26       | 0.29          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 33       | 0.29          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 33       | 0.29          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 23       | 0.28          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 23       | 0.28          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 23       | 0.28          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 23       | 0.28          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 23       | 0.28          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 23       | 0.28          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 14       | 0.27          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 14       | 0.27          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 38       | 0.26          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 38       | 0.26          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 5        | 0.26          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 31       | 0.26          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 31       | 0.26          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 13       | 0.25          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 13       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 21       | 0.25          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 21       | 0.25          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 21       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 10       | 0.25          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 10       | 0.25          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 8        | 0.24          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 8        | 0.24          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 37       | 0.24          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 37       | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 2        | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 2        | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 2        | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 2        | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 2        | 0.24          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 2        | 0.24          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 35       | 0.24          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 35       | 0.24          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 26       | 0.23          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 26       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 37       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 38       | 0.23          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 38       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 38       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 30       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 30       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 30       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 30       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 30       | 0.23          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 30       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG11 | 23       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG12 | 23       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG13 | 23       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG21 | 23       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG22 | 23       | 0.23          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG23 | 23       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 35       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 36       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 36       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 36       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 36       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 36       | 0.23          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 36       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 11       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 17       | 0.23          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 17       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 21       | 0.23          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 21       | 0.23          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 7        | 0.22          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 15       | 0.22          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 15       | 0.22          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 15       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 21       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 21       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 21       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 21       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 21       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 21       | 0.22          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 34       | 0.22          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 34       | 0.22          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 34       | 0.22          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 34       | 0.22          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 34       | 0.22          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 34       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD1  | 38       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD2  | 38       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD1  | 38       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD2  | 38       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD1  | 38       | 0.22          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD2  | 38       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 6        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 9        | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 9        | 0.22          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 22       | 0.22          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 22       | 0.22          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 22       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 37       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 37       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 37       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 37       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 37       | 0.21          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 37       | 0.21          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD1  | 8        | 0.21          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD2  | 8        | 0.21          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD1  | 8        | 0.21          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD2  | 8        | 0.21          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD1  | 8        | 0.21          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD2  | 8        | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 13       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 20       | 0.21          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 20       | 0.21          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 20       | 0.21          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 30       | 0.2           |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 30       | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 2        | 0.2           |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 2        | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 16       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 16       | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 17       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 25       | 0.2           |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 25       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 40       | 0.2           |

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| Key      | Atom-1          | Atom-2           | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD11 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD12 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD13 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD21 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD22 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD23 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD11 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD12 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD13 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD21 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD22 | 40       | 0.2           |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD23 | 40       | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD11 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD12 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD13 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD21 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD22 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE1 | 1:A:380:LEU:HD23 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD11 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD12 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD13 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD21 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD22 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE2 | 1:A:380:LEU:HD23 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD11 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD12 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD13 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD21 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD22 | 7        | 0.2           |
| (1,2234) | 1:A:348:MET:HE3 | 1:A:380:LEU:HD23 | 7        | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG11 | 14       | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG12 | 14       | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG13 | 14       | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG21 | 14       | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG22 | 14       | 0.2           |
| (1,1898) | 1:A:425:ASN:HA  | 1:A:429:VAL:HG23 | 14       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG11 | 20       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG12 | 20       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG13 | 20       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG21 | 20       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG22 | 20       | 0.2           |
| (1,1896) | 1:A:429:VAL:H   | 1:A:429:VAL:HG23 | 20       | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG11 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG12 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG13 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG11 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG12 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG13 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG11 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG12 | 32       | 0.2           |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG13 | 32       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 2        | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 18       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 19       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 24       | 0.2           |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 24       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 26       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 36       | 0.2           |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 36       | 0.2           |
| (1,633)  | 1:A:439:VAL:HG11 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,633)  | 1:A:439:VAL:HG12 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,633)  | 1:A:439:VAL:HG13 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,633)  | 1:A:439:VAL:HG21 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,633)  | 1:A:439:VAL:HG22 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,633)  | 1:A:439:VAL:HG23 | 1:A:440:LEU:H    | 23       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG11 | 22       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG12 | 22       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG13 | 22       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG21 | 22       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG22 | 22       | 0.19          |
| (1,2847) | 1:A:457:ASP:H    | 1:A:458:VAL:HG23 | 22       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 7        | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 7        | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 13       | 0.19          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 13       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 5        | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 5        | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 30       | 0.19          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 30       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 33       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 33       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 33       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 33       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 33       | 0.19          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 33       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 16       | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 16       | 0.19          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 16       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 19       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 19       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 19       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 19       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 19       | 0.19          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 19       | 0.19          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 4        | 0.19          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 4        | 0.19          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 4        | 0.19          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 4        | 0.19          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 4        | 0.19          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 4        | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 16       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 34       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 37       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 37       | 0.19          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 40       | 0.19          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 40       | 0.19          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 17       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 36       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 36       | 0.18          |
| (1,658)  | 1:A:459:ARG:H    | 1:A:459:ARG:HG2  | 30       | 0.18          |
| (1,658)  | 1:A:459:ARG:H    | 1:A:459:ARG:HG3  | 30       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 14       | 0.18          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 14       | 0.18          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 14       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 11       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 35       | 0.18          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 35       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 28       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 28       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 28       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 28       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 28       | 0.18          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 28       | 0.18          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 13       | 0.18          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 13       | 0.18          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 13       | 0.18          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 13       | 0.18          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 13       | 0.18          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 13       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD1  | 29       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG21 | 1:A:406:PHE:HD2  | 29       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD1  | 29       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG22 | 1:A:406:PHE:HD2  | 29       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD1  | 29       | 0.18          |
| (1,1129) | 1:A:370:VAL:HG23 | 1:A:406:PHE:HD2  | 29       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 23       | 0.18          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 23       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 25       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 38       | 0.18          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 38       | 0.18          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 2        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 5        | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 5        | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 22       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 35       | 0.17          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG11 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG12 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG13 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG21 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG22 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,633)  | 1:A:439:VAL:HG23 | 1:A:440:LEU:H    | 35       | 0.17          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 2        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 9        | 0.17          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 9        | 0.17          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 17       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 17       | 0.17          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 17       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 11       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 18       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 18       | 0.17          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 18       | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 5        | 0.17          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 5        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG11 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG12 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG13 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG21 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG22 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2408) | 1:A:370:VAL:HG23 | 1:A:412:ILE:H    | 8        | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 19       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 19       | 0.17          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 19       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 2        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 6        | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 12       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 14       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 14       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 18       | 0.17          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 18       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 19       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 30       | 0.17          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 30       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 29       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 29       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 29       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 29       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 29       | 0.17          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 29       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 26       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 26       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 26       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 26       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 26       | 0.17          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 26       | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1897) | 1:A:429:VAL:HG11 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1897) | 1:A:429:VAL:HG12 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1897) | 1:A:429:VAL:HG13 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1897) | 1:A:429:VAL:HG21 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1897) | 1:A:429:VAL:HG22 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1897) | 1:A:429:VAL:HG23 | 1:A:431:GLU:H    | 10       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 3        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 4        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 7        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 8        | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 8        | 0.17          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 15       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 30       | 0.17          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 30       | 0.17          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 30       | 0.16          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 30       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 7        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 8        | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 8        | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 13       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 18       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 32       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 32       | 0.16          |
| (1,2924) | 1:A:480:GLU:HB2  | 1:A:481:THR:HG21 | 7        | 0.16          |
| (1,2924) | 1:A:480:GLU:HB2  | 1:A:481:THR:HG22 | 7        | 0.16          |
| (1,2924) | 1:A:480:GLU:HB2  | 1:A:481:THR:HG23 | 7        | 0.16          |
| (1,2924) | 1:A:480:GLU:HB3  | 1:A:481:THR:HG21 | 7        | 0.16          |
| (1,2924) | 1:A:480:GLU:HB3  | 1:A:481:THR:HG22 | 7        | 0.16          |
| (1,2924) | 1:A:480:GLU:HB3  | 1:A:481:THR:HG23 | 7        | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 26       | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 26       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 32       | 0.16          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 32       | 0.16          |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG2  | 33       | 0.16          |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 33       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 39       | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 39       | 0.16          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 39       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG11 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG12 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG13 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG21 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG22 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2408) | 1:A:370:VAL:HG23 | 1:A:412:ILE:H    | 38       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 34       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 34       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 34       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 34       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 34       | 0.16          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 34       | 0.16          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD1  | 38       | 0.16          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD2  | 38       | 0.16          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD1  | 38       | 0.16          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD2  | 38       | 0.16          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD1  | 38       | 0.16          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD2  | 38       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 17       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 21       | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 21       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 30       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 33       | 0.16          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 33       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 12       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 23       | 0.16          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 23       | 0.16          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 17       | 0.16          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 17       | 0.16          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 17       | 0.16          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 17       | 0.16          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 17       | 0.16          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 17       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 34       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 34       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 34       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 34       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 34       | 0.16          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 34       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 18       | 0.16          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 18       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 28       | 0.16          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 28       | 0.16          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 9        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 12       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 12       | 0.15          |

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| Key     | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 12       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 12       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 14       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 21       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 25       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 31       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 34       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 34       | 0.15          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 34       | 0.15          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 34       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 34       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 34       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 34       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 34       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 34       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 38       | 0.15          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 38       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 15       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD11 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD12 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD13 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD21 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD22 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE1  | 1:A:419:LEU:HD23 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD11 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD12 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD13 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD21 | 30       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD22 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE2  | 1:A:419:LEU:HD23 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD11 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD12 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD13 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD21 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD22 | 30       | 0.15          |
| (1,2743) | 1:A:418:MET:HE3  | 1:A:419:LEU:HD23 | 30       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 13       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 28       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 28       | 0.15          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 28       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD21 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD22 | 13       | 0.15          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD23 | 13       | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 3        | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 3        | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 3        | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 3        | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 3        | 0.15          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 3        | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD11 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD12 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD13 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD21 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD22 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE1  | 1:A:380:LEU:HD23 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD11 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD12 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD13 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD21 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD22 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE2  | 1:A:380:LEU:HD23 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD11 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD12 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD13 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD21 | 31       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD22 | 31       | 0.15          |
| (1,2234) | 1:A:348:MET:HE3  | 1:A:380:LEU:HD23 | 31       | 0.15          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 15       | 0.15          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 15       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 10       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 24       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 25       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 38       | 0.15          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 38       | 0.15          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 38       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 27       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 27       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 27       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 27       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 27       | 0.15          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 27       | 0.15          |
| (1,1484) | 1:A:399:THR:HG21 | 1:A:403:ILE:HG21 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG21 | 1:A:403:ILE:HG22 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG21 | 1:A:403:ILE:HG23 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG22 | 1:A:403:ILE:HG21 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG22 | 1:A:403:ILE:HG22 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG22 | 1:A:403:ILE:HG23 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG23 | 1:A:403:ILE:HG21 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG23 | 1:A:403:ILE:HG22 | 18       | 0.15          |
| (1,1484) | 1:A:399:THR:HG23 | 1:A:403:ILE:HG23 | 18       | 0.15          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 6        | 0.15          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 6        | 0.15          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 3        | 0.15          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 3        | 0.15          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 3        | 0.15          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 3        | 0.15          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 3        | 0.15          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 3        | 0.15          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 15       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 15       | 0.14          |

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| Key     | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|---------|------------------|-----------------|----------|---------------|
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 15       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 15       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 24       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 26       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 27       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3 | 33       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1 | 40       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2 | 40       | 0.14          |
| (1,923) | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3 | 40       | 0.14          |
| (1,923) | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1 | 40       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 40       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 40       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 40       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 40       | 0.14          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 40       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG11 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG12 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG13 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG21 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG22 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,633)  | 1:A:439:VAL:HG23 | 1:A:440:LEU:H    | 27       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 37       | 0.14          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 37       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 12       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 30       | 0.14          |

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| Key      | Atom-1          | Atom-2           | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD12 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD13 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD21 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD22 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD23 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD11 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD12 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD13 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD21 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD22 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD23 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD11 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD12 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD13 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD21 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD22 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD23 | 30       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD11 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD12 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD13 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD21 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD22 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD23 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD11 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD12 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD13 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD21 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD22 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD23 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD11 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD12 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD13 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD21 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD22 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3 | 1:A:469:LEU:HD23 | 31       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD11 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD12 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD13 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD21 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD22 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB1 | 1:A:469:LEU:HD23 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2 | 1:A:469:LEU:HD11 | 39       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 39       | 0.14          |
| (1,2537) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 39       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD22 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD22 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD22 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD22 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD21 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD22 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD23 | 23       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD21 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD11 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD21 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD12 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD21 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD13 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD21 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD21 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD21 | 35       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD22 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD21 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD22 | 35       | 0.14          |
| (1,2479) | 1:A:380:LEU:HD23 | 1:A:383:LEU:HD23 | 35       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 1        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 2        | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 40       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 40       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 40       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 40       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 40       | 0.14          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 40       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG11 | 37       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG12 | 37       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG13 | 37       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG21 | 37       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG22 | 37       | 0.14          |
| (1,2216) | 1:A:434:SER:H    | 1:A:435:VAL:HG23 | 37       | 0.14          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 34       | 0.14          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 7        | 0.14          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 7        | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 15       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 19       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 32       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 34       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 37       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 37       | 0.14          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 37       | 0.14          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG21 | 4        | 0.14          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG22 | 4        | 0.14          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG23 | 4        | 0.14          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG21 | 4        | 0.14          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG22 | 4        | 0.14          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG23 | 4        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 9        | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 15       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 16       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 39       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 39       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 39       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 39       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 39       | 0.14          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 39       | 0.14          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG11 | 40       | 0.14          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG12 | 40       | 0.14          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG13 | 40       | 0.14          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG21 | 40       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG22 | 40       | 0.14          |
| (1,1896) | 1:A:429:VAL:H    | 1:A:429:VAL:HG23 | 40       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 24       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 36       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 36       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 36       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 36       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 36       | 0.14          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 36       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 17       | 0.14          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 17       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 1        | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 10       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 12       | 0.14          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 12       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG21 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG22 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG21 | 1:A:488:THR:HG23 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG21 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG22 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG22 | 1:A:488:THR:HG23 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG21 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG22 | 32       | 0.14          |
| (1,1068) | 1:A:365:ILE:HG23 | 1:A:488:THR:HG23 | 32       | 0.14          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 11       | 0.13          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 11       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 1        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 6        | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 6        | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 10       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 20       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 28       | 0.13          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 28       | 0.13          |
| (1,839)  | 1:A:348:MET:HE1  | 1:A:383:LEU:HD11 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE1  | 1:A:383:LEU:HD12 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE1  | 1:A:383:LEU:HD13 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE2  | 1:A:383:LEU:HD11 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE2  | 1:A:383:LEU:HD12 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE2  | 1:A:383:LEU:HD13 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE3  | 1:A:383:LEU:HD11 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE3  | 1:A:383:LEU:HD12 | 10       | 0.13          |
| (1,839)  | 1:A:348:MET:HE3  | 1:A:383:LEU:HD13 | 10       | 0.13          |
| (1,2928) | 1:A:483:ASP:HB2  | 1:A:484:PHE:H    | 28       | 0.13          |
| (1,2928) | 1:A:483:ASP:HB3  | 1:A:484:PHE:H    | 28       | 0.13          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 34       | 0.13          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 34       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 34       | 0.13          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 34       | 0.13          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 34       | 0.13          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 34       | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG11 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG12 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG13 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG21 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG22 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB2  | 1:A:439:VAL:HG23 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG11 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG12 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG13 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG21 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG22 | 7        | 0.13          |
| (1,2836) | 1:A:438:GLN:HB3  | 1:A:439:VAL:HG23 | 7        | 0.13          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 24       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 30       | 0.13          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 30       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 20       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 20       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 23       | 0.13          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 23       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 36       | 0.13          |

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| Key      | Atom-1          | Atom-2           | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,2527) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD13 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD21 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD22 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD23 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD11 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD12 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD13 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD21 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD22 | 36       | 0.13          |
| (1,2527) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD23 | 36       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG11 | 22       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG12 | 22       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG13 | 22       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG21 | 22       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG22 | 22       | 0.13          |
| (1,2338) | 1:A:363:LEU:HB3 | 1:A:408:VAL:HG23 | 22       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD11 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD12 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD13 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD21 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD22 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD23 | 14       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD11 | 36       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD12 | 36       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD13 | 36       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD21 | 36       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD22 | 36       | 0.13          |
| (1,2250) | 1:A:352:LEU:HG  | 1:A:380:LEU:HD23 | 36       | 0.13          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 5        | 0.13          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 5        | 0.13          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 5        | 0.13          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 12       | 0.13          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 12       | 0.13          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD11 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD12 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD13 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD11 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD12 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD13 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD11 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD12 | 9        | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 9        | 0.13          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 12       | 0.13          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 12       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 4        | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 13       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 16       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 22       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 22       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 23       | 0.13          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 23       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG21 | 25       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG22 | 25       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG23 | 25       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG21 | 25       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG22 | 25       | 0.13          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG23 | 25       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG11 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG12 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG13 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG21 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG22 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1929) | 1:A:439:VAL:HG23 | 1:A:440:LEU:HA   | 21       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 17       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 36       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 37       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 37       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 37       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 37       | 0.13          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 37       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 37       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 40       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 40       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 40       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 40       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 40       | 0.13          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 40       | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 7        | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 26       | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 30       | 0.13          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 30       | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 30       | 0.13          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 30       | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 30       | 0.13          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 30       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 18       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 18       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 18       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 18       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 18       | 0.13          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 18       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 36       | 0.13          |
| (1,1629) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 36       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 21       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 21       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 27       | 0.13          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 27       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 9        | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 37       | 0.13          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 37       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG21 | 1:A:390:ALA:HB1  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG21 | 1:A:390:ALA:HB2  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG21 | 1:A:390:ALA:HB3  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG22 | 1:A:390:ALA:HB1  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG22 | 1:A:390:ALA:HB2  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG22 | 1:A:390:ALA:HB3  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG23 | 1:A:390:ALA:HB1  | 34       | 0.13          |
| (1,1295) | 1:A:385:VAL:HG23 | 1:A:390:ALA:HB2  | 34       | 0.13          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1295) | 1:A:385:VAL:HG23 | 1:A:390:ALA:HB3  | 34       | 0.13          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 7        | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 14       | 0.12          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 14       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 4        | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 23       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 29       | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 29       | 0.12          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 29       | 0.12          |
| (1,731)  | 1:A:482:GLU:HA   | 1:A:483:ASP:H    | 5        | 0.12          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG21 | 6        | 0.12          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG22 | 6        | 0.12          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG23 | 6        | 0.12          |
| (1,439)  | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 14       | 0.12          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD21 | 8        | 0.12          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD22 | 8        | 0.12          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD23 | 8        | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD11 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD12 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD13 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD21 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD22 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG2  | 1:A:469:LEU:HD23 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD11 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD12 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD13 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD21 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD22 | 14       | 0.12          |
| (1,2887) | 1:A:468:GLU:HG3  | 1:A:469:LEU:HD23 | 14       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG11 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG12 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG13 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG21 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG22 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2854) | 1:A:458:VAL:HG23 | 1:A:459:ARG:HA   | 31       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 29       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 29       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 29       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 29       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 29       | 0.12          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 29       | 0.12          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 9        | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 9        | 0.12          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 9        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG11 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG12 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG13 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG21 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG22 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG23 | 1:A:409:SER:H    | 6        | 0.12          |
| (1,2680) | 1:A:408:VAL:HG11 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2680) | 1:A:408:VAL:HG12 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2680) | 1:A:408:VAL:HG13 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2680) | 1:A:408:VAL:HG21 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2680) | 1:A:408:VAL:HG22 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2680) | 1:A:408:VAL:HG23 | 1:A:409:SER:H    | 21       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 31       | 0.12          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 31       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 5        | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 5        | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 5        | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 5        | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 5        | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 5        | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 17       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 24       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD11 | 37       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD12 | 37       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD13 | 37       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD21 | 37       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD22 | 37       | 0.12          |
| (1,2250) | 1:A:352:LEU:HG   | 1:A:380:LEU:HD23 | 37       | 0.12          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD1  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD2  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD1  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD2  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD1  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD2  | 21       | 0.12          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD1  | 25       | 0.12          |
| (1,2220) | 1:A:394:THR:HG21 | 1:A:473:PHE:HD2  | 25       | 0.12          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD1  | 25       | 0.12          |
| (1,2220) | 1:A:394:THR:HG22 | 1:A:473:PHE:HD2  | 25       | 0.12          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD1  | 25       | 0.12          |
| (1,2220) | 1:A:394:THR:HG23 | 1:A:473:PHE:HD2  | 25       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 5        | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 20       | 0.12          |

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| Key      | Atom-1           | Atom-2          | Model ID | Violation (Å) |
|----------|------------------|-----------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 20       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 28       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 31       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 36       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2 | 40       | 0.12          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3 | 40       | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 8        | 0.12          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 17       | 0.12          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 17       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 25       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 25       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 25       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 25       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 25       | 0.12          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 25       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 20       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 20       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 20       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 20       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 20       | 0.12          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 20       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG11 | 11       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG12 | 11       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG13 | 11       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG21 | 11       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG22 | 11       | 0.12          |
| (1,1898) | 1:A:425:ASN:HA   | 1:A:429:VAL:HG23 | 11       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 13       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 13       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 13       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 13       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 13       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 13       | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 17       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 22       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 32       | 0.12          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 32       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 32       | 0.12          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 32       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 32       | 0.12          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 32       | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 1        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 7        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 7        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 7        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 7        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 7        | 0.12          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 7        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 2        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 5        | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 5        | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 19       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 30       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 36       | 0.12          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 27       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 27       | 0.12          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE1  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE2  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD11 | 1:A:396:MET:HE3  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE1  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE2  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD12 | 1:A:396:MET:HE3  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE1  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE2  | 36       | 0.12          |
| (1,1419) | 1:A:352:LEU:HD13 | 1:A:396:MET:HE3  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 2        | 0.12          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 36       | 0.12          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 36       | 0.12          |
| (1,1279) | 1:A:385:VAL:HG11 | 1:A:386:THR:H    | 11       | 0.12          |
| (1,1279) | 1:A:385:VAL:HG12 | 1:A:386:THR:H    | 11       | 0.12          |
| (1,1279) | 1:A:385:VAL:HG13 | 1:A:386:THR:H    | 11       | 0.12          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG21 | 38       | 0.12          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG22 | 38       | 0.12          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG23 | 38       | 0.12          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 20       | 0.11          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD21 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD22 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE1  | 1:A:352:LEU:HD23 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD21 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD22 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE2  | 1:A:352:LEU:HD23 | 32       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD21 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD22 | 32       | 0.11          |
| (1,972)  | 1:A:348:MET:HE3  | 1:A:352:LEU:HD23 | 32       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 11       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB1  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB2  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG21 | 1:A:376:ALA:HB3  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB1  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB2  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG22 | 1:A:376:ALA:HB3  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB1  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB2  | 37       | 0.11          |
| (1,923)  | 1:A:359:ILE:HG23 | 1:A:376:ALA:HB3  | 37       | 0.11          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG21 | 34       | 0.11          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG22 | 34       | 0.11          |
| (1,711)  | 1:A:473:PHE:H    | 1:A:474:ILE:HG23 | 34       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG11 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG12 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG13 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG21 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG22 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,618)  | 1:A:435:VAL:HG23 | 1:A:437:THR:H    | 12       | 0.11          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD21 | 31       | 0.11          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD22 | 31       | 0.11          |
| (1,35)   | 1:A:351:ARG:H    | 1:A:383:LEU:HD23 | 31       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG11 | 39       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG12 | 39       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG13 | 39       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG21 | 39       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG22 | 39       | 0.11          |
| (1,2848) | 1:A:457:ASP:HA   | 1:A:458:VAL:HG23 | 39       | 0.11          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD1  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD11 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD1  | 6        | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2828) | 1:A:428:LEU:HD12 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD1  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD13 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD1  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD21 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD1  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD22 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD1  | 6        | 0.11          |
| (1,2828) | 1:A:428:LEU:HD23 | 1:A:473:PHE:HD2  | 6        | 0.11          |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG2  | 21       | 0.11          |
| (1,2695) | 1:A:410:GLN:HE21 | 1:A:414:GLU:HG3  | 21       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 27       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD11 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG11 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD11 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG12 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD11 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG13 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD11 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG21 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD11 | 39       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG22 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD11 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD12 | 39       | 0.11          |
| (1,2683) | 1:A:408:VAL:HG23 | 1:A:412:ILE:HD13 | 39       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG11 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG12 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG13 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG21 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG22 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG23 | 1:A:409:SER:H    | 2        | 0.11          |
| (1,2680) | 1:A:408:VAL:HG11 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG12 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG13 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG21 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG22 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2680) | 1:A:408:VAL:HG23 | 1:A:409:SER:H    | 10       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 25       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD21 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD22 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD23 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 33       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD21 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD22 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD23 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD21 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD22 | 33       | 0.11          |
| (1,2527) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD23 | 33       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD11 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD12 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD13 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD21 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD22 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2472) | 1:A:380:LEU:HD23 | 1:A:382:SER:H    | 22       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG11 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG12 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG13 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG21 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG22 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2408) | 1:A:370:VAL:HG23 | 1:A:412:ILE:H    | 29       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HA   | 23       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2354) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HA   | 24       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG11 | 35       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG12 | 35       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG13 | 35       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG21 | 35       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG22 | 35       | 0.11          |
| (1,2338) | 1:A:363:LEU:HB3  | 1:A:408:VAL:HG23 | 35       | 0.11          |
| (1,2235) | 1:A:348:MET:HE1  | 1:A:385:VAL:HG11 | 10       | 0.11          |

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| Key      | Atom-1          | Atom-2           | Model ID | Violation (Å) |
|----------|-----------------|------------------|----------|---------------|
| (1,2235) | 1:A:348:MET:HE1 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE1 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE1 | 1:A:385:VAL:HG21 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE1 | 1:A:385:VAL:HG22 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE1 | 1:A:385:VAL:HG23 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG11 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG21 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG22 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE2 | 1:A:385:VAL:HG23 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG11 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG21 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG22 | 10       | 0.11          |
| (1,2235) | 1:A:348:MET:HE3 | 1:A:385:VAL:HG23 | 10       | 0.11          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 1        | 0.11          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 1        | 0.11          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 1        | 0.11          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 20       | 0.11          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 20       | 0.11          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 20       | 0.11          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 35       | 0.11          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 35       | 0.11          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 35       | 0.11          |
| (1,2219) | 1:A:348:MET:HE1 | 1:A:384:GLN:H    | 38       | 0.11          |
| (1,2219) | 1:A:348:MET:HE2 | 1:A:384:GLN:H    | 38       | 0.11          |
| (1,2219) | 1:A:348:MET:HE3 | 1:A:384:GLN:H    | 38       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD11 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD12 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD13 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD11 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD12 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD13 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD11 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD12 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3 | 1:A:469:LEU:HD13 | 11       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD11 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD12 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1 | 1:A:469:LEU:HD13 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2 | 1:A:469:LEU:HD11 | 13       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 13       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 18       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD11 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD12 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE1  | 1:A:469:LEU:HD13 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD11 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD12 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE2  | 1:A:469:LEU:HD13 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD11 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD12 | 36       | 0.11          |
| (1,2175) | 1:A:387:MET:HE3  | 1:A:469:LEU:HD13 | 36       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 8        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 9        | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB1  | 26       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB2  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD11 | 1:A:485:ALA:HB3  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB1  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB2  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD12 | 1:A:485:ALA:HB3  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB1  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB2  | 26       | 0.11          |
| (1,2100) | 1:A:365:ILE:HD13 | 1:A:485:ALA:HB3  | 26       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG21 | 10       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG22 | 10       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE1  | 1:A:474:ILE:HG23 | 10       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG21 | 10       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG22 | 10       | 0.11          |
| (1,2070) | 1:A:465:PHE:HE2  | 1:A:474:ILE:HG23 | 10       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD21 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD22 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD23 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD21 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD22 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD23 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD21 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD22 | 16       | 0.11          |
| (1,2023) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD23 | 16       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD11 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD12 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB1  | 1:A:469:LEU:HD13 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD11 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD12 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB2  | 1:A:469:LEU:HD13 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD11 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD12 | 26       | 0.11          |
| (1,2004) | 1:A:390:ALA:HB3  | 1:A:469:LEU:HD13 | 26       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 12       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 16       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 16       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 16       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 16       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 16       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 16       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG2  | 40       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG21 | 1:A:475:GLU:HG3  | 40       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG2  | 40       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG22 | 1:A:475:GLU:HG3  | 40       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG2  | 40       | 0.11          |
| (1,1982) | 1:A:474:ILE:HG23 | 1:A:475:GLU:HG3  | 40       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG11 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG12 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG13 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG21 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG22 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1929) | 1:A:439:VAL:HG23 | 1:A:440:LEU:HA   | 35       | 0.11          |
| (1,1918) | 1:A:436:ILE:HD11 | 1:A:437:THR:H    | 7        | 0.11          |
| (1,1918) | 1:A:436:ILE:HD12 | 1:A:437:THR:H    | 7        | 0.11          |
| (1,1918) | 1:A:436:ILE:HD13 | 1:A:437:THR:H    | 7        | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG11 | 18       | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG12 | 18       | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG13 | 18       | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG21 | 18       | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG22 | 18       | 0.11          |
| (1,1900) | 1:A:428:LEU:HB3  | 1:A:429:VAL:HG23 | 18       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD21 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD22 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD23 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD21 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD22 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD23 | 17       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD21 | 22       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD22 | 22       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE2  | 1:A:428:LEU:HD23 | 22       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD21 | 22       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD22 | 22       | 0.11          |
| (1,1882) | 1:A:424:LYS:HE3  | 1:A:428:LEU:HD23 | 22       | 0.11          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 15       | 0.11          |
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB2  | 27       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1759) | 1:A:417:THR:HG21 | 1:A:418:MET:HB3  | 27       | 0.11          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB2  | 27       | 0.11          |
| (1,1759) | 1:A:417:THR:HG22 | 1:A:418:MET:HB3  | 27       | 0.11          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB2  | 27       | 0.11          |
| (1,1759) | 1:A:417:THR:HG23 | 1:A:418:MET:HB3  | 27       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE1  | 38       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE2  | 38       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD2  | 1:A:413:MET:HE3  | 38       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE1  | 38       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE2  | 38       | 0.11          |
| (1,1714) | 1:A:407:LYS:HD3  | 1:A:413:MET:HE3  | 38       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 11       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG21 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG22 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD21 | 1:A:403:ILE:HG23 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG21 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG22 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD22 | 1:A:403:ILE:HG23 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG21 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG22 | 33       | 0.11          |
| (1,1535) | 1:A:363:LEU:HD23 | 1:A:403:ILE:HG23 | 33       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HG21 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HG22 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD11 | 1:A:403:ILE:HG23 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HG21 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HG22 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD12 | 1:A:403:ILE:HG23 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HG21 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HG22 | 12       | 0.11          |
| (1,1534) | 1:A:363:LEU:HD13 | 1:A:403:ILE:HG23 | 12       | 0.11          |
| (1,1468) | 1:A:398:THR:HG21 | 1:A:472:ILE:HG21 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG21 | 1:A:472:ILE:HG22 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG21 | 1:A:472:ILE:HG23 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG22 | 1:A:472:ILE:HG21 | 30       | 0.11          |

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| Key      | Atom-1           | Atom-2           | Model ID | Violation (Å) |
|----------|------------------|------------------|----------|---------------|
| (1,1468) | 1:A:398:THR:HG22 | 1:A:472:ILE:HG22 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG22 | 1:A:472:ILE:HG23 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG23 | 1:A:472:ILE:HG21 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG23 | 1:A:472:ILE:HG22 | 30       | 0.11          |
| (1,1468) | 1:A:398:THR:HG23 | 1:A:472:ILE:HG23 | 30       | 0.11          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 9        | 0.11          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE1  | 18       | 0.11          |
| (1,1382) | 1:A:394:THR:HG21 | 1:A:427:PHE:HE2  | 18       | 0.11          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE1  | 18       | 0.11          |
| (1,1382) | 1:A:394:THR:HG22 | 1:A:427:PHE:HE2  | 18       | 0.11          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE1  | 18       | 0.11          |
| (1,1382) | 1:A:394:THR:HG23 | 1:A:427:PHE:HE2  | 18       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG11 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD21 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG11 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD22 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG11 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG12 | 10       | 0.11          |
| (1,1287) | 1:A:352:LEU:HD23 | 1:A:385:VAL:HG13 | 10       | 0.11          |
| (1,1138) | 1:A:371:ASN:HB3  | 1:A:372:ARG:HB2  | 28       | 0.11          |
| (1,1138) | 1:A:371:ASN:HB3  | 1:A:372:ARG:HB3  | 28       | 0.11          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG21 | 8        | 0.11          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG22 | 8        | 0.11          |
| (1,1134) | 1:A:370:VAL:HA   | 1:A:370:VAL:HG23 | 8        | 0.11          |

## 10 Dihedral-angle violation analysis [\(i\)](#)

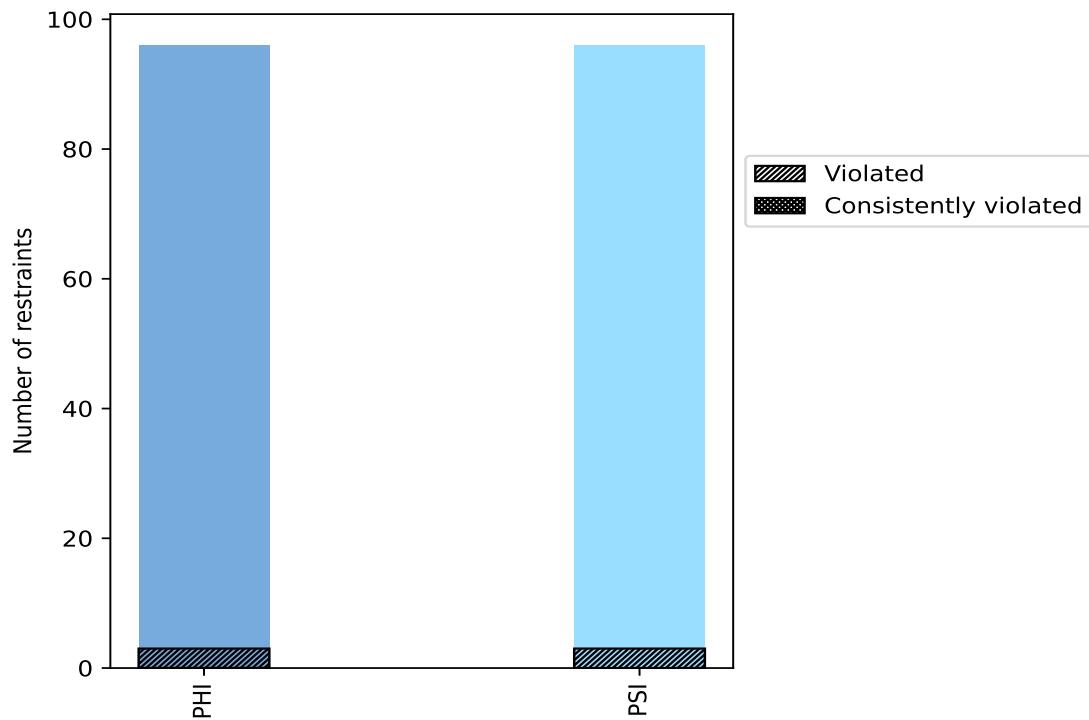
### 10.1 Summary of dihedral-angle violations [\(i\)](#)

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 | % <sup>1</sup> | Violated <sup>3</sup> |                |                | Consistently Violated <sup>4</sup> |                |                |
|------------|-------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
|            |       |                | Count                 | % <sup>2</sup> | % <sup>1</sup> | Count                              | % <sup>2</sup> | % <sup>1</sup> |
| PHI        | 96    | 50.0           | 3                     | 3.1            | 1.6            | 0                                  | 0.0            | 0.0            |
| PSI        | 96    | 50.0           | 3                     | 3.1            | 1.6            | 0                                  | 0.0            | 0.0            |
| Total      | 192   | 100.0          | 6                     | 3.1            | 3.1            | 0                                  | 0.0            | 0.0            |

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

#### 10.1.1 Bar chart : Distribution of dihedral-angles and violations [\(i\)](#)



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

## 10.2 Dihedral-angle violation statistics for each model [\(i\)](#)

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.

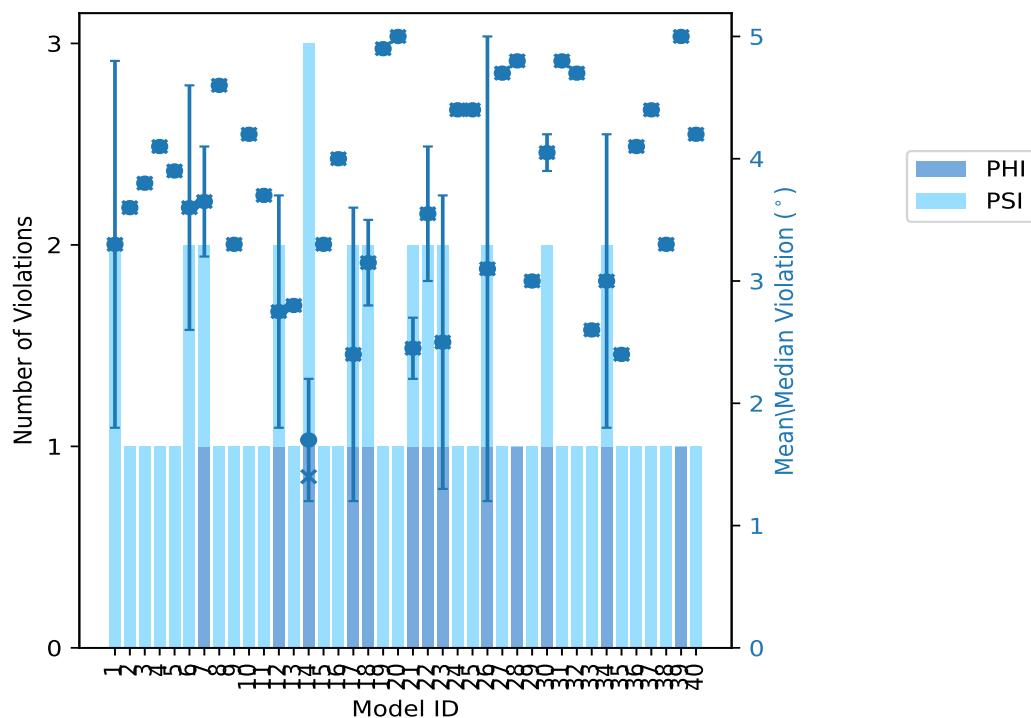
| Model ID | Number of violations |     |       | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|-------|----------|---------|--------|------------|
|          | PHI                  | PSI | Total |          |         |        |            |
| 1        | 0                    | 2   | 2     | 3.3      | 4.8     | 1.5    | 3.3        |
| 2        | 0                    | 1   | 1     | 3.6      | 3.6     | 0.0    | 3.6        |
| 3        | 0                    | 1   | 1     | 3.8      | 3.8     | 0.0    | 3.8        |
| 4        | 0                    | 1   | 1     | 4.1      | 4.1     | 0.0    | 4.1        |
| 5        | 0                    | 1   | 1     | 3.9      | 3.9     | 0.0    | 3.9        |
| 6        | 0                    | 2   | 2     | 3.6      | 4.6     | 1.0    | 3.6        |
| 7        | 1                    | 1   | 2     | 3.65     | 4.1     | 0.45   | 3.65       |
| 8        | 0                    | 1   | 1     | 4.6      | 4.6     | 0.0    | 4.6        |
| 9        | 0                    | 1   | 1     | 3.3      | 3.3     | 0.0    | 3.3        |
| 10       | 0                    | 1   | 1     | 4.2      | 4.2     | 0.0    | 4.2        |
| 11       | 0                    | 1   | 1     | 3.7      | 3.7     | 0.0    | 3.7        |
| 12       | 1                    | 1   | 2     | 2.75     | 3.7     | 0.95   | 2.75       |
| 13       | 0                    | 1   | 1     | 2.8      | 2.8     | 0.0    | 2.8        |
| 14       | 1                    | 2   | 3     | 1.7      | 2.4     | 0.5    | 1.4        |
| 15       | 0                    | 1   | 1     | 3.3      | 3.3     | 0.0    | 3.3        |
| 16       | 0                    | 1   | 1     | 4.0      | 4.0     | 0.0    | 4.0        |
| 17       | 1                    | 1   | 2     | 2.4      | 3.6     | 1.2    | 2.4        |
| 18       | 1                    | 1   | 2     | 3.15     | 3.5     | 0.35   | 3.15       |
| 19       | 0                    | 1   | 1     | 4.9      | 4.9     | 0.0    | 4.9        |
| 20       | 0                    | 1   | 1     | 5.0      | 5.0     | 0.0    | 5.0        |
| 21       | 1                    | 1   | 2     | 2.45     | 2.7     | 0.25   | 2.45       |
| 22       | 1                    | 1   | 2     | 3.55     | 4.1     | 0.55   | 3.55       |
| 23       | 1                    | 1   | 2     | 2.5      | 3.7     | 1.2    | 2.5        |
| 24       | 0                    | 1   | 1     | 4.4      | 4.4     | 0.0    | 4.4        |
| 25       | 0                    | 1   | 1     | 4.4      | 4.4     | 0.0    | 4.4        |
| 26       | 1                    | 1   | 2     | 3.1      | 5.0     | 1.9    | 3.1        |
| 27       | 0                    | 1   | 1     | 4.7      | 4.7     | 0.0    | 4.7        |
| 28       | 1                    | 0   | 1     | 4.8      | 4.8     | 0.0    | 4.8        |
| 29       | 0                    | 1   | 1     | 3.0      | 3.0     | 0.0    | 3.0        |
| 30       | 1                    | 1   | 2     | 4.05     | 4.2     | 0.15   | 4.05       |
| 31       | 0                    | 1   | 1     | 4.8      | 4.8     | 0.0    | 4.8        |
| 32       | 0                    | 1   | 1     | 4.7      | 4.7     | 0.0    | 4.7        |
| 33       | 0                    | 1   | 1     | 2.6      | 2.6     | 0.0    | 2.6        |
| 34       | 1                    | 1   | 2     | 3.0      | 4.2     | 1.2    | 3.0        |
| 35       | 0                    | 1   | 1     | 2.4      | 2.4     | 0.0    | 2.4        |
| 36       | 0                    | 1   | 1     | 4.1      | 4.1     | 0.0    | 4.1        |
| 37       | 0                    | 1   | 1     | 4.4      | 4.4     | 0.0    | 4.4        |
| 38       | 0                    | 1   | 1     | 3.3      | 3.3     | 0.0    | 3.3        |

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| Model ID | Number of violations |     |       | Mean (°) | Max (°) | SD (°) | Median (°) |
|----------|----------------------|-----|-------|----------|---------|--------|------------|
|          | PHI                  | PSI | Total |          |         |        |            |
| 39       | 1                    | 0   | 1     | 5.0      | 5.0     | 0.0    | 5.0        |
| 40       | 0                    | 1   | 1     | 4.2      | 4.2     | 0.0    | 4.2        |

#### 10.2.1 Bar graph : Dihedral violation statistics for each model [\(i\)](#)



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 [\(i\)](#)

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 <sup>1</sup>       | %    |
| 0                             | 0   | 0     | 1                        | 2.5  |
| 1                             | 2   | 3     | 2                        | 5.0  |
| 0                             | 0   | 0     | 3                        | 7.5  |
| 1                             | 0   | 1     | 4                        | 10.0 |

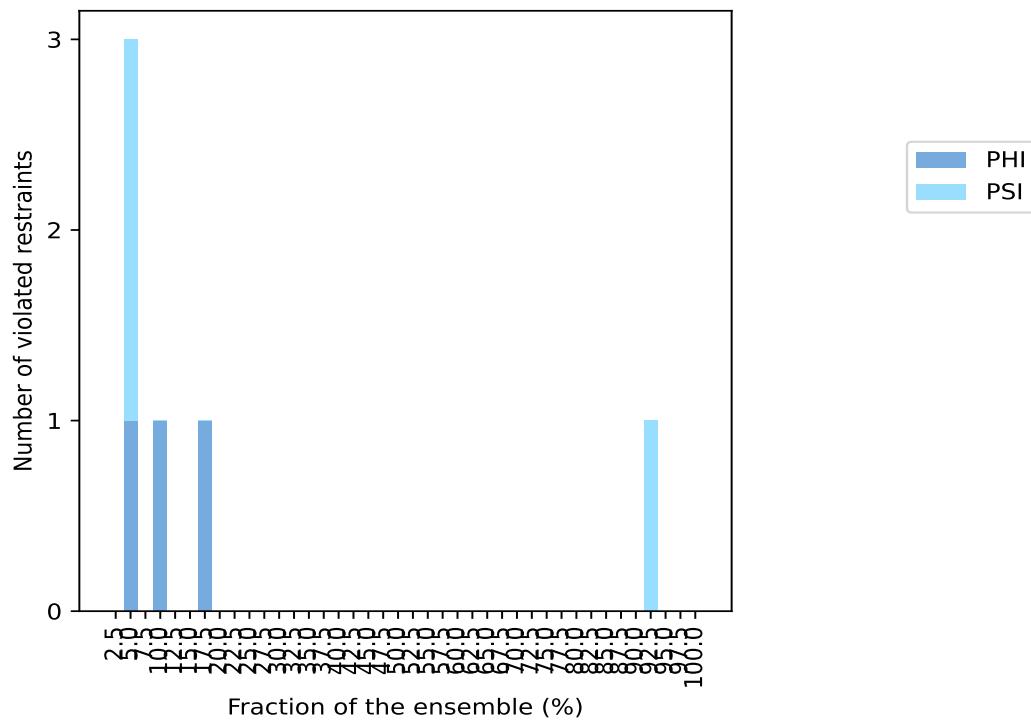
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| Number of violated restraints |     |       | Fraction of the ensemble |       |
|-------------------------------|-----|-------|--------------------------|-------|
| PHI                           | PSI | Total | Count <sup>1</sup>       | %     |
| 0                             | 0   | 0     | 5                        | 12.5  |
| 0                             | 0   | 0     | 6                        | 15.0  |
| 1                             | 0   | 1     | 7                        | 17.5  |
| 0                             | 0   | 0     | 8                        | 20.0  |
| 0                             | 0   | 0     | 9                        | 22.5  |
| 0                             | 0   | 0     | 10                       | 25.0  |
| 0                             | 0   | 0     | 11                       | 27.5  |
| 0                             | 0   | 0     | 12                       | 30.0  |
| 0                             | 0   | 0     | 13                       | 32.5  |
| 0                             | 0   | 0     | 14                       | 35.0  |
| 0                             | 0   | 0     | 15                       | 37.5  |
| 0                             | 0   | 0     | 16                       | 40.0  |
| 0                             | 0   | 0     | 17                       | 42.5  |
| 0                             | 0   | 0     | 18                       | 45.0  |
| 0                             | 0   | 0     | 19                       | 47.5  |
| 0                             | 0   | 0     | 20                       | 50.0  |
| 0                             | 0   | 0     | 21                       | 52.5  |
| 0                             | 0   | 0     | 22                       | 55.0  |
| 0                             | 0   | 0     | 23                       | 57.5  |
| 0                             | 0   | 0     | 24                       | 60.0  |
| 0                             | 0   | 0     | 25                       | 62.5  |
| 0                             | 0   | 0     | 26                       | 65.0  |
| 0                             | 0   | 0     | 27                       | 67.5  |
| 0                             | 0   | 0     | 28                       | 70.0  |
| 0                             | 0   | 0     | 29                       | 72.5  |
| 0                             | 0   | 0     | 30                       | 75.0  |
| 0                             | 0   | 0     | 31                       | 77.5  |
| 0                             | 0   | 0     | 32                       | 80.0  |
| 0                             | 0   | 0     | 33                       | 82.5  |
| 0                             | 0   | 0     | 34                       | 85.0  |
| 0                             | 0   | 0     | 35                       | 87.5  |
| 0                             | 0   | 0     | 36                       | 90.0  |
| 0                             | 1   | 1     | 37                       | 92.5  |
| 0                             | 0   | 0     | 38                       | 95.0  |
| 0                             | 0   | 0     | 39                       | 97.5  |
| 0                             | 0   | 0     | 40                       | 100.0 |

<sup>1</sup> Number of models with violations

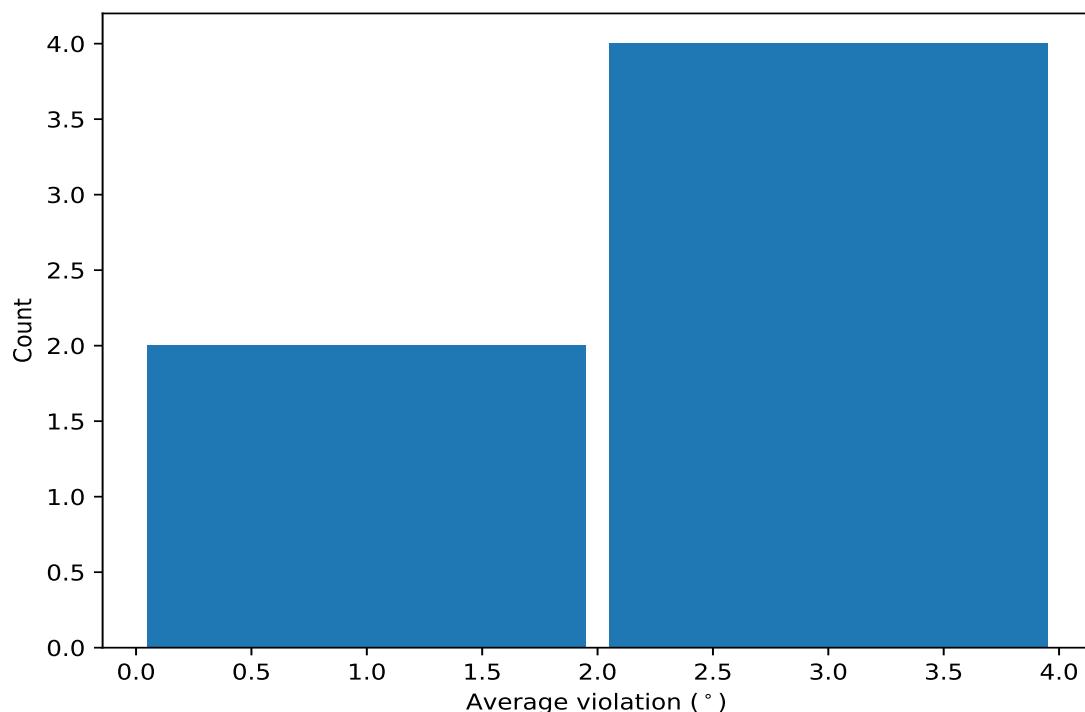
### 10.3.1 Bar graph : Dihedral-angle Violation statistics for the ensemble [\(i\)](#)



## 10.4 Most violated dihedral-angle restraints in the ensemble [\(i\)](#)

### 10.4.1 Histogram : Distribution of mean dihedral-angle violations [\(i\)](#)

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



#### 10.4.2 Table: Most violated dihedral-angle restraints [\(i\)](#)

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.

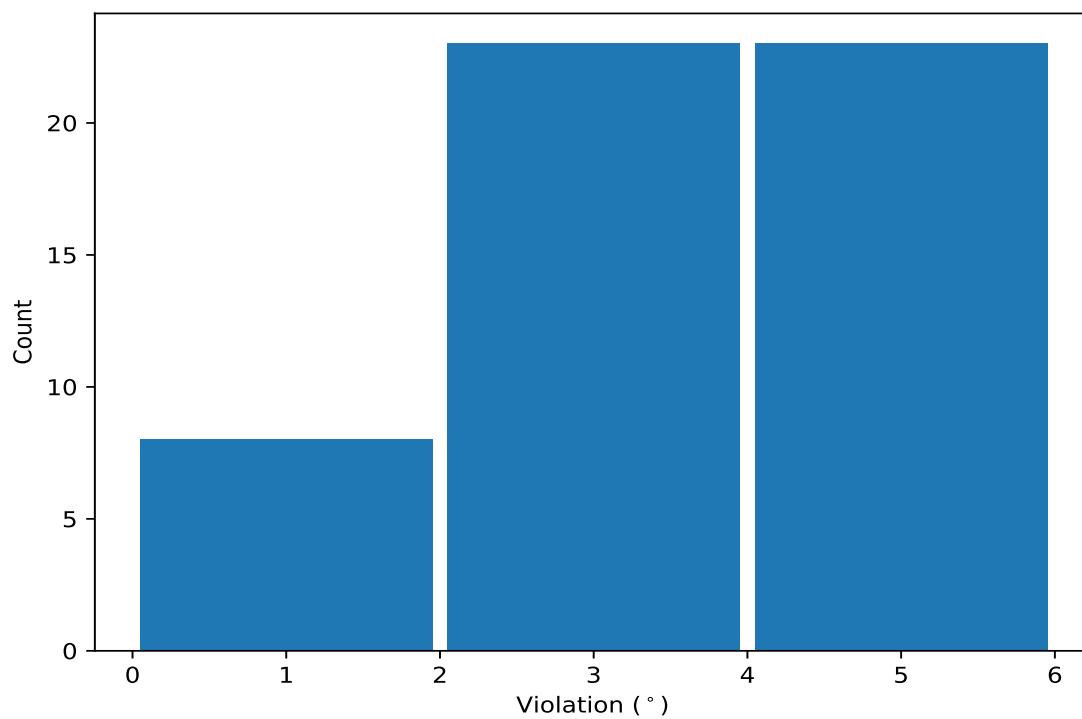
| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Models <sup>1</sup> | Mean | SD <sup>2</sup> | Median |
|---------|---------------|----------------|----------------|---------------|---------------------|------|-----------------|--------|
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 37                  | 3.82 | 0.75            | 3.9    |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 7                   | 3.16 | 1.54            | 3.9    |
| (1,93)  | 1:A:395:GLU:C | 1:A:396:MET:N  | 1:A:396:MET:CA | 1:A:396:MET:C | 4                   | 2.7  | 1.03            | 2.75   |
| (1,112) | 1:A:405:ARG:N | 1:A:405:ARG:CA | 1:A:405:ARG:C  | 1:A:406:PHE:N | 2                   | 3.8  | 1.2             | 3.8    |
| (1,33)  | 1:A:360:LYS:C | 1:A:361:ASN:N  | 1:A:361:ASN:CA | 1:A:361:ASN:C | 2                   | 1.6  | 0.2             | 1.6    |
| (1,130) | 1:A:415:LYS:N | 1:A:415:LYS:CA | 1:A:415:LYS:C  | 1:A:416:SER:N | 2                   | 1.55 | 0.25            | 1.55   |

<sup>1</sup> Number of violated models, <sup>2</sup>Standard deviation, All angle values are in degree (°)

#### 10.5 All violated dihedral-angle restraints [\(i\)](#)

##### 10.5.1 Histogram : Distribution of violations [\(i\)](#)

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



### 10.5.2 Table: All violated dihedral-angle restraints [\(1\)](#)

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 (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 39       | 5.0           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 20       | 5.0           |
| (1,112) | 1:A:405:ARG:N | 1:A:405:ARG:CA | 1:A:405:ARG:C  | 1:A:406:PHE:N | 26       | 5.0           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 19       | 4.9           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 28       | 4.8           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 1        | 4.8           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 31       | 4.8           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 27       | 4.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 32       | 4.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 6        | 4.6           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 8        | 4.6           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 24       | 4.4           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 25       | 4.4           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 37       | 4.4           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 10       | 4.2           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 30       | 4.2           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 34       | 4.2           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 40       | 4.2           |
| (1,93)  | 1:A:395:GLU:C | 1:A:396:MET:N  | 1:A:396:MET:CA | 1:A:396:MET:C | 7        | 4.1           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 22       | 4.1           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 4        | 4.1           |

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| Key     | Atom-1        | Atom-2         | Atom-3         | Atom-4        | Model ID | Violation (°) |
|---------|---------------|----------------|----------------|---------------|----------|---------------|
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 36       | 4.1           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 16       | 4.0           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 30       | 3.9           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 5        | 3.9           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 3        | 3.8           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 11       | 3.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 12       | 3.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 23       | 3.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 2        | 3.6           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 17       | 3.6           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 18       | 3.5           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 9        | 3.3           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 15       | 3.3           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 38       | 3.3           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 7        | 3.2           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 22       | 3.0           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 29       | 3.0           |
| (1,93)  | 1:A:395:GLU:C | 1:A:396:MET:N  | 1:A:396:MET:CA | 1:A:396:MET:C | 18       | 2.8           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 13       | 2.8           |
| (1,93)  | 1:A:395:GLU:C | 1:A:396:MET:N  | 1:A:396:MET:CA | 1:A:396:MET:C | 21       | 2.7           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 33       | 2.6           |
| (1,112) | 1:A:405:ARG:N | 1:A:405:ARG:CA | 1:A:405:ARG:C  | 1:A:406:PHE:N | 6        | 2.6           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 14       | 2.4           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 35       | 2.4           |
| (1,188) | 1:A:485:ALA:N | 1:A:485:ALA:CA | 1:A:485:ALA:C  | 1:A:486:GLY:N | 21       | 2.2           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 12       | 1.8           |
| (1,33)  | 1:A:360:LYS:C | 1:A:361:ASN:N  | 1:A:361:ASN:CA | 1:A:361:ASN:C | 34       | 1.8           |
| (1,130) | 1:A:415:LYS:N | 1:A:415:LYS:CA | 1:A:415:LYS:C  | 1:A:416:SER:N | 1        | 1.8           |
| (1,33)  | 1:A:360:LYS:C | 1:A:361:ASN:N  | 1:A:361:ASN:CA | 1:A:361:ASN:C | 14       | 1.4           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 23       | 1.3           |
| (1,130) | 1:A:415:LYS:N | 1:A:415:LYS:CA | 1:A:415:LYS:C  | 1:A:416:SER:N | 14       | 1.3           |
| (1,93)  | 1:A:395:GLU:C | 1:A:396:MET:N  | 1:A:396:MET:CA | 1:A:396:MET:C | 17       | 1.2           |
| (1,7)   | 1:A:347:SER:C | 1:A:348:MET:N  | 1:A:348:MET:CA | 1:A:348:MET:C | 26       | 1.2           |